ONTARIO POWER GENERATION INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

DECEMBER 31, 2017

[DRAFT]

2017 YEAR-END REPORT

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ONTARIO POWER GENERATION INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the audited consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the year ended December 31, 2017. OPG's consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario) (FAA), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. In 2014, the Ontario Securities Commission (OSC) approved an exemption which allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the section, *Critical Accounting Policies and Estimates* under the heading, *Exemptive Relief for Reporting under US GAAP*. This MD&A is dated March 8, 2018.

FORWARD-LOOKING STATEMENTS

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

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

THE COMPANY

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

As at December 31, 2017, OPG's electricity generation portfolio had an in-service capacity of 16,210 megawatts (MW). OPG operates two nuclear generating stations, 66 hydroelectric generating stations, three thermal generating stations, and one wind power turbine. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). OPG's 50 percent share of the in-service capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income from the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented as income from investments subject to significant influence in the Contracted Generation Portfolio segment.

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

All of OPG's owned and co-owned generating facilities are located in Ontario. OPG does not operate PEC, Brighton Beach, the Bruce A GS and the Bruce B GS.

OPG's Reporting Structure

Effective in the fourth quarter of 2017, following the establishment of the Fair Hydro Trust (the Trust) as the financing entity to implement the Fair Hydro Plan under the *Ontario Fair Hydro Plan Act, 2017* (the Fair Hydro Act or the Act), OPG has modified its reportable business segments to include the Fair Hydro Trust segment. Through its control over the key activities of the Trust and its obligation to absorb losses through ownership of the Trust's subordinated debt, the Company consolidates the financial results of the Trust in accordance with US GAAP. The Fair Hydro Trust segment reports the income related to OPG's role as Financial Services Manager under the Act and holder of subordinated debt issued by the Trust, including the financial results of the Trust. The Fair Hydro Plan and the Fair Hydro Trust are discussed in the section, *Recent Developments* and in the section, *Core Business, Strategy, and Outlook* under the heading, *Business Segments*.

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

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

OPG receives regulated prices for electricity generated from most of its hydroelectric facilities and all of the nuclear facilities that it operates (collectively, prescribed facilities or regulated facilities). The regulated facilities comprise 54 hydroelectric generating stations across a number of major river systems in the province, the Pickering Nuclear GS (Pickering GS) and Darlington Nuclear GS (Darlington GS).

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

In-Service Generating Capacity

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

(MW)	**2017**	**2016**
Regulated – Nuclear Generation [1]	**5,728**	5,728
Regulated – Hydroelectric	**6,426**	6,421
Contracted Generation Portfolio [2]	**4,056**	4,028
Total	**16,210**	16,177

[1] The in-service generating capacity as of December 31, 2017 and December 31, 2016 excludes Unit 2 of the Darlington GS. The unit, which has a generating capacity of 878 MW, was taken offline in mid-October 2016 and is currently undergoing refurbishment.

[2] Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach.

The total in-service capacity as at December 31, 2017 increased by 33 MW compared to 2016. The increase was primarily due to the completion of the 28 MW Peter Sutherland Sr. hydroelectric GS, which was placed in-service in the first quarter of 2017, and the upgrade of Unit 10 of the Sir Adam Beck 1 hydroelectric GS, which was completed in June 2017. Further details on the Peter Sutherland Sr. GS project are found in the section, *Core Business, Strategy, and Outlook* under the heading, *Project Excellence*.

REVENUE MECHANISMS FOR REGULATED AND NON-REGULATED GENERATION

Regulated Generation

The OEB sets the prices for electricity generated from OPG's regulated nuclear and regulated hydroelectric facilities. The following table presents the OEB-authorized regulated prices for electricity generated from these facilities during the periods from January 1, 2016 to May 30, 2017, as well as new regulated prices retrospectively effective June 1, 2017 that OPG has calculated and submitted to the OEB, based on the OEB's decision on OPG's 2017-2021 application for new regulated prices issued on December 28, 2017:

($/MWh)	**2017**		**2016**
	January 1 to May 31	**June 1 to December 31** [1]	
Regulated – Nuclear Generation			
Base regulated price	**59.29**	**80.65**	59.29
Variance and deferral account rate rider	**-**	**-**	10.84 [2]
	59.29	**80.65**	70.13
Regulated – Hydroelectric			
Base regulated price	**40.72**	**41.67**	40.72
Variance and deferral account rate rider	**-**	**-**	3.19 [2]
	40.72	**41.67**	43.91

[1] Regulated prices for the June 1, 2017 to December 31, 2017 period were calculated and submitted to the OEB by OPG in January 2018 based on the OEB's December 28, 2017 decision on OPG's 2017-2021 application for new regulated prices. The final regulated prices will be determined by the OEB as part of the final payment amounts order process, which is expected to be completed in the first half of 2018. As part of the process, the OEB is expected to authorize separate rate riders to allow for the recovery of the shortfall between the new regulated prices and the previous regulated prices that OPG continues to receive during the period between June 1, 2017 and the implementation date of the new regulated prices pending the issuance of the final payment amounts order. The incremental revenue for the period between June 1, 2017 and December 31, 2017 arising from this retrospective application of new regulated prices was accrued in 2017. **[MONITOR]**

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

Based on the OEB's December 2017 decision, the new base regulated prices are determined on an incentive ratemaking methodology for the hydroelectric operations and under a custom incentive regulation framework for the nuclear operations. For the hydroelectric facilities, the new base regulated price is determined using a formula that annually escalates the previous regulated prices, subject to some adjustments, based on inflation less a stretch factor to incent additional innovation and efficiency. For the nuclear facilities, the new regulated price is determined under a rate smoothing approach that defers a portion of the approved nuclear revenue requirement for future collection, with the aim of making more stable changes in OPG's production-weighted regulated prices year over year. The nuclear revenue requirement is based on the OEB-approved forecasts of operating costs as reduced by a stretch factor and a return on rate base. Rate base for OPG represents the average net level of investment in regulated fixed and intangible assets in service and an allowance for working capital. The OEB's December 2017 decision and OPG's new regulated prices are discussed further in the section, *Recent Developments*.

The base regulated prices in effect during 2016 were established by the OEB's November 2014 decision and December 2014 order, effective November 1, 2014, using a forecast cost-of-service methodology based on the OEB-approved revenue requirements for the 2014 to 2015 period, taking into account the OEB-approved forecasts of production and operating costs for the regulated facilities and a return on rate base.

The increase in base regulated prices for the Regulated – Nuclear Generation segment from those last approved in 2014 is impacted by lower production for Darlington GS for the duration of Unit 2's refurbishment. The increase also reflects OPG's ability to earn a return on higher in-service capital and recover costs to enable Pickering to operate beyond 2020 in line with the Long-Term Energy Plan (LTEP).

Rate riders for OPG are typically established to recover or repay approved balances in OEB-authorized regulatory variance and deferral accounts (regulatory accounts). Variance and deferral accounts typically capture, for subsequent review and approval, differences between actual costs and revenues and the corresponding forecast amounts approved by the OEB in setting regulated prices, or record the impact of items not reflected in the approved regulated prices. The rate riders in effect to the end of 2016 were established by the OEB's October 2015 order on OPG's 2014 application to recover the December 31, 2014 variance and deferral account balances. Revenue received from the recovery of variance and deferral account balances is largely offset by amortization expense related to these balances.

Non-Regulated Generation

Electricity generated from most of OPG's non-regulated assets is subject to Energy Supply Agreements (ESAs) with the Independent Electricity System Operator (IESO).

During 2017, ESAs were in effect for the following thermal generating facilities:

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

In addition, long-term hydroelectric ESAs are in place for the following facilities, with expiry dates ranging from 2059 to 2067:

- Lac Seul and Ear Falls generating stations
- Healey Falls GS
- Sandy Falls, Wawaitin, Lower Sturgeon, and Hound Chute generating stations
- Little Long, Harmon, Smoky Falls, and Kipling generating stations (collectively the Lower Mattagami River generating stations)
- Peter Sutherland Sr. GS, which was placed in-service in March 2017.

HIGHLIGHTS

Overview of Results

This section provides an overview of OPG's operating results for the years ended December 31, 2017 and December 31, 2016.

(millions of dollars – except where noted)	2017	2016
Revenue	**5,158**	5,653
Fuel expense	**689**	727
Gross margin	**4,469**	4,926
Operations, maintenance and administration	**2,824**	2,747
Depreciation and amortization	**679**	1,257
Accretion on fixed asset removal and nuclear waste management liabilities	**960**	929
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(801)**	(746)
Earnings from Fair Hydro Trust	**(1)**	-
Income from investments subject to significant influence	**(38)**	(37)
Property taxes	**40**	46
Restructuring	**-**	6
	3,663	4,202
Income before other gains, interest, and income taxes	**806**	724
Other gains	**379**	17
Income before interest and income taxes	**1,185**	741
Net interest expense	**95**	120
Income before income taxes	**1,090**	621
Income tax expense	**209**	168
Net income	**881**	453
Net income attributable to the Shareholder	**860**	436
Net income attributable to non-controlling interest [1]	**21**	17
Electricity production (TWh) [2]	**74.1**	78.2
Cash flow		
Cash flow provided by operating activities	**944**	1,817

[1] Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership, the 33 percent interest of Coral Rapids Power Corporation (CRP), a corporation wholly owned by the Taykwa Tagamou Nation, in the PSS Generating Station Limited Partnership (PSS), and the 10 percent interest of a corporation wholly owned by the Six Nations of Grand River Development Corporation in the Nanticoke Solar LP. CRP increased its partnership interest to 33 percent in April 2017.

[2] Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach and excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS was excluded from the measure effective October 15, 2016, when the unit was taken offline for refurbishment.

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Net income attributable to the Shareholder was $860 million for 2017, representing an increase of $424 million compared to 2016. Income before interest and income taxes was $1,185 million for 2017, representing an increase of $444 million compared to 2016. The following summarizes the significant factors which contributed to the variance:

Significant factors that increased income before interest and income taxes:

- Higher revenue from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments of approximately $480 million recorded in the fourth quarter of 2017 to reflect the OEB's decision on OPG's application for new regulated rates issued in December 2017 with a retrospective effective date of June 1,

2017. This revenue increase for the June 1, 2017 to December 31, 2017 period was recorded as an increase in regulatory assets, based on new regulated prices for that period proposed in OPG's January 2018 submission to the OEB based on the findings in the December 2017 decision, net of a regulatory liability recognized in relation to OPG's nuclear rate smoothing proposal included in that submission. The new regulated prices, the future collection period for the retrospective revenue increase, and the rate smoothing proposal are pending the OEB's approval through the payment amounts order process, which typically follows the OEB's issuance of a decision on a major rates application. The OEB's approval of the final payment amounts order, including determinations on the new regulated prices and rate smoothing, are not expected to have a material impact on the total revenue recorded for the June 1, 2017 to December 31, 2017 period. The OEB is expected to issue the final payment amounts order in the first half of 2018. **[MONITOR]**

- Higher earnings of $377 million from the Services, Trading, and Other Non-Generation segment, primarily as a result of the gain on sale of OPG's head office premises and associated parking facility, a non-core asset of the business. A gain on sale of $283 million, which is net of tax effects of $95 million, was recognized in net income upon completion of the transaction in the second quarter of 2017. The sale was undertaken pursuant to a Shareholder Declaration and a Shareholder Resolution. Further details can be found under the heading, *Recent Developments – Shareholder Declarations and Shareholder Resolutions to Sell Certain Non-Core Real Estate Properties*.
- Higher earnings of $24 million from the Regulated – Nuclear Waste Management segment, primarily due to higher earnings from the nuclear fixed asset removal and nuclear waste management funds (Nuclear Segregated Funds), partially offset by an increase in accretion expense on the nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities).

Significant factors that reduced income before interest and income taxes:

- Lower revenue of approximately $285 million, partially offset by a decrease in fuel expense of $31 million, reflecting lower electricity generation of 4.9 terawatt hours (TWh) from the Regulated – Nuclear Generation segment. The lower nuclear generation was primarily due to the ongoing refurbishment of Unit 2 at the Darlington GS since October 2016, partially offset by an increase in generation from the Pickering GS. The increase in generation from the Pickering GS was primarily due to outage cycle optimization, favourable unit conditions and execution of planned outage work resulting in fewer unplanned and planned outage days at the station.
- Higher operations, maintenance and administration (OM&A) expenses of $77 million, mainly in the Regulated – Nuclear Generation segment, reflecting planned expenditures related to the major maintenance activities occurring at the nuclear stations.
- Higher depreciation and amortization expense of $22 million in the Regulated – Nuclear Generation segment, excluding amortization expense related to balances in regulatory accounts, primarily due to new assets in service.
- A gain of $22 million recorded in the first quarter of 2016 to reflect the OEB's decision on OPG's motion asking the OEB to review and vary parts of its November 2014 decision on OPG's regulated prices.

The expiry of rate riders for the recovery of OEB-approved balances in regulatory accounts on December 31, 2016 contributed to the decrease in revenue in 2017, compared to 2016, but was largely offset by a decrease in the amortization expense related to regulatory account balances.

Net interest expense decreased by $25 million in 2017, compared to 2016, primarily due to a higher amount of interest costs capitalized for the Darlington Refurbishment project.

Income tax expense increased by $41 million in 2017, compared to 2016, primarily due to higher income before income taxes, partially offset by a higher amount of income tax expense deferred in regulatory assets in 2017.

Segment Results

The following table summarizes OPG's income before interest and income taxes by business segment. Significant factors which contributed to the higher income during 2017, compared to 2016, are discussed above. A detailed discussion of OPG's performance by reportable segment is included in the section, *Discussion of Operating Results by Business Segment*.

(millions of dollars)	**2017**	**2016**
Income (loss) before interest and income taxes		
Regulated – Nuclear Generation	**57**	4
Regulated – Hydroelectric	**614**	642
Contracted Generation Portfolio	**300**	282
Total electricity generation business segments	**971**	928
Regulated – Nuclear Waste Management	**(150)**	(174)
Services, Trading, and Other Non-Generation	**364**	(13)
Fair Hydro Trust	**-**	-
	1,185	741

Electricity Generation

Electricity generation for 2017 and 2016 was as follows:

(TWh)	**2017**	**2016**
Regulated – Nuclear Generation	**40.7**	45.6
Regulated – Hydroelectric	**30.7**	29.5
Contracted Generation Portfolio [1]	**2.7**	3.1
Total OPG electricity generation	**74.1**	78.2
Total electricity generation by other generators in Ontario [2]	**70.5**	72.7

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

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

Total OPG electricity generation decreased by 4.1 TWh in 2017, mainly due to lower electricity generation of 4.9 TWh from the Regulated – Nuclear Generation segment. As expected, this was primarily the result of the removal from service of Unit 2 at the Darlington GS for the duration of the unit's refurbishment, which began in October 2016. This decrease in electricity generation was partially offset by an increase in generation from the Pickering GS, primarily due to outage cycle optimization, favourable unit conditions and execution of planned outage work resulting in a lower number of outage days at the station, as well as higher electricity generation from the Regulated – Hydroelectric segment.

The higher electricity generation from the Regulated – Hydroelectric segment in 2017 was due to higher water flows primarily on the eastern Ontario river systems, net of forgone electricity generation as a result of SBG conditions, discussed below.

The lower electricity generation from the Contracted Generation Portfolio segment was primarily due to higher SBG conditions.

OPG's operating results are affected by changes in grid-supplied electricity demand resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Ontario's electricity demand as reported by the IESO was 132.1 TWh in 2017 and 137.0 TWh and 2016, respectively, which excludes electricity exports out of the province.

Power that is surplus to the Ontario market is managed by the IESO, mainly through generation reductions at hydroelectric and nuclear stations and other grid-connected renewable resources. Reducing hydroelectric production is a measure used by the IESO to manage SBG conditions. Baseload generation supply surplus in Ontario was more prevalent in 2017 than in 2016, mainly due to higher water flows and reduced electricity demand in the province during 2017. During 2017 and 2016, OPG lost 5.9 TWh and 4.7 TWh of hydroelectric generation due to SBG conditions, respectively. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions in 2017 and 2016 was offset by the impact of a regulatory variance account authorized by the OEB. OPG did not forgo any electricity production at its nuclear stations due to SBG conditions.

Average Sales Prices

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

The average sales price for the Regulated – Nuclear Generation segment during 2017 was 7.1 cents per kilowatt hour (¢/kWh), compared to 6.9 ¢/kWh during 2016. The increase in this average sales price was primarily due to an increase in revenue for the period June 1, 2017 to December 31, 2017 recorded in the fourth quarter of 2017 to reflect the OEB's December 2017 decision on OPG's application for new regulated prices, with an effective date of June 1, 2017. The increase was partially offset by the expiry of an OEB-authorized nuclear rate rider of $10.84 per MWh, on December 31, 2016, for the recovery of variance and deferral account balances. The average sales price for the Regulated – Hydroelectric segment during 2017 was 4.2 ¢/kWh, compared to 4.4 ¢/kWh during 2016. The decrease in this average sales price was primarily due to the expiry, on December 31, 2016, of an OEB-authorized regulated hydroelectric rate rider of $3.19/MWh for the recovery of variance and deferral account balances, partially offset by the impact of an increase in revenue for the period June 1, 2017 to December 31, 2017 recorded in the fourth quarter of 2017 to reflect the OEB's December 2017 decision. The rate riders that expired on December 31, 2016 were established to recover approved balances recorded in the variance and deferral accounts in prior years. As such, the year-over-year changes in revenue from the rate riders were largely offset by changes in amortization expense related to these balances.

Cash Flow from Operations

Cash flow provided by operating activities for 2017 was $944 million, compared to $1,817 million for 2016. The decrease in cash flow provided by operating activities was expected and primarily due to lower generation revenue receipts reflecting lower generation from the Regulated – Nuclear Generation segment as a result of the ongoing refurbishment of Unit 2 at the Darlington GS and the expiry, on December 31, 2016, of the OEB-authorized rate riders for nuclear and regulated hydroelectric generation. The decrease in cash flow was also due to higher income tax instalments during 2017, compared to 2016.

The decrease in cash flow provided by operating activities was partly offset by lower contributions to the Used Fuel Segregated Fund in 2017. Both the Used Fuel Segregated Fund and the Decommissioning Segregated Fund were determined to be fully funded based on an updated estimate of OPG's nuclear waste management and nuclear facilities decommissioning obligations pursuant to an Ontario Nuclear Funds Agreement (ONFA) reference plan approved by the Province, effective January 1, 2017. Pursuant to the ONFA, the reference plan is required to be updated at least once every five years. Contributions to either or both of the Nuclear Segregated Funds may be required in the future should the funds be in an underfunded position at the time of the next ONFA reference plan update. The decrease in cash flow compared to the prior year also was partially offset by the payment of a supplemental rent rebate to Bruce Power in the first quarter of 2016 in relation to a period in 2015. The lease agreement for the Bruce nuclear generating stations was amended in late 2015 to eliminate this rebate provision going forward.

Funds from Operations Adjusted Interest Coverage

FFO Adjusted Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flow. The indicator is measured over a 12-month period. The FFO Adjusted Interest Coverage was 3.3 times for 2017 compared to 5.1 times for 2016. FFO Adjusted Interest Coverage in 2017 reflected a year-over-year decrease in FFO before interest due to lower cash flow provided by operating activities and changes to non-cash working capital balances, offset by the impact of a lower adjusted interest expense due to a decrease in the excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets.

The decrease in the excess of interest on pension and OPEB benefit obligations over expected return on pension plan assets in 2017 was primarily due to the change in the method used to estimate the interest cost and service cost component of pension and OPEB costs prospectively adopted as of January 1, 2017. The change in the method is discussed in the section, *Critical Accounting Policies and Estimates* under the heading, *Pension and Other Post-Employment Benefits*.

Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with the Company's strategy to provide value to the Shareholder. ROE Excluding AOCI is measured over a 12-month period. ROE Excluding AOCI for 2017 was 7.5 percent, compared to 4.2 percent for 2016. ROE Excluding AOCI increased for 2017, compared to 2016, primarily due to higher net income attributable to the Shareholder as a result of the gain on the sale of OPG's head office premises and associated parking facility recorded during the second quarter of 2017 and an increase in revenue for the period June 1, 2017 to December 31, 2017 recorded in the fourth quarter of 2017 to reflect the OEB's December 2017 decision on OPG's application for new regulated prices, with an effective date of June 1, 2017. The increase in net income attributable to the Shareholder was partially offset by the impact of lower nuclear electricity generation reflecting the Unit 2 refurbishment outage at the Darlington GS.

Enterprise Total Generating Cost per Megawatt-Hour

The Enterprise TGC per megawatt-hour (MWh) was $50.66 for the year ended December 31, 2017, compared to $48.45 for the same period in 2016. The increase in Enterprise TGC per MWh was expected and primarily due to lower nuclear electricity generation as a result of the Unit 2 refurbishment outage at the Darlington GS and higher sustaining capital expenditures, partially offset by higher SBG-adjusted hydroelectric electricity generation reflecting higher water flows.

If Unit 2 at the Darlington GS was not currently undergoing refurbishment and had continued to operate in a manner consistent with the performance of the remaining units at the station, adjusting for generation constraints on these units related to the transition of the station toward refurbishment, the Enterprise TGC would have been approximately $4 to $5 per MWh lower for the year ended December 31, 2017. This sensitivity was calculated using the estimated incremental electricity generation and associated fuel cost that are expected to have had resulted in the absence of the refurbishment.

Nuclear Total Generating Cost per Megawatt-Hour

The Nuclear TGC per MWh was $70.95 for the year ended December 31, 2017, compared to $62.30 for the same period in 2016. The increase in Nuclear TGC per MWh was expected and primarily due to the decrease in nuclear electricity generation primarily as a result of the Unit 2 refurbishment outage at the Darlington GS and higher sustaining capital expenditures.

Hydroelectric Total Generating Cost per Megawatt-Hour

The Hydroelectric TGC per MWh was $23.91 for the year ended December 31, 2017, compared to $25.49 for the same period in 2016. The improvement in the Hydroelectric TGC per MWh was primarily due to higher SBG-adjusted hydroelectricity generation reflecting higher water flows.

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

Recent Developments

OEB's Decision on OPG's Application for New Regulated Prices

The OEB's decision on OPG's May 2016 five-year application for new regulated prices for its nuclear and regulated hydroelectric generation was issued on December 28, 2017, following a public hearing process. The OEB set an effective date for OPG's new regulated prices of June 1, 2017. OPG had requested an effective date of January 1, 2017. The decision reflected the terms of an OEB-approved partial settlement agreement reached by OPG and intervenors on a limited set of issues in the first quarter of 2017 (Settlement Agreement). For the first time since OPG's prescribed facilities became subject to rate regulation, the new prices have been determined on an incentive ratemaking methodology for the hydroelectric operations and a custom incentive regulation framework for the nuclear operations.

For the hydroelectric facilities, effective June 1, 2017, the base regulated prices in effect prior to June 1, 2017, with some adjustments, will be escalated for each of years 2017 to 2021 using a formula equal to an industry-specific weighted inflation factor based on indices published annually by the OEB for use in incentive regulation formulas, less a stretch factor adjustment. The OEB accepted OPG's proposal to set the annual stretch factor adjustment at 0.3 percent. Based on the approved formula, the 2017 increase in the base regulated price for the regulated hydroelectric facilities is 1.4 percent as of June 1, 2017 and the 2018 increase is 0.9 percent as of January 1, 2018. For the 2019-2021 period, the base regulated price for the regulated hydroelectric facilities will be determined annually before the beginning of each year using the approved formula and inflation indices published by the OEB.

For the nuclear operations, a revenue requirement is determined for each of the years 2017 to 2021 based on the OEB-allowed level of OPG's forecast operating costs, reduced by a stretch factor amount, as well as a return on rate base determined using OEB's generic prescribed rate of return and an OPG-specific deemed capital structure. OPG has calculated that the findings of the OEB's December 2017 decision with respect to the forecast operating costs, rate base and deemed capital structure for the nuclear generating facilities will result in nuclear revenue requirements totalling $15.9 billion over the five years.

The OEB's findings with respect to the nuclear revenue requirement include approval for inclusion in rate base of in-service amounts related to the Darlington Refurbishment of $5.5 billion by 2021, including $4.8 billion forecast in the first quarter of 2020 upon return to service of Unit 2, $0.4 billion forecast for pre-requisite projects excluding the Heavy Water Storage and Drum Handling Facility (HWSF) over the 2016-2021 period and $0.3 billion for pre-requisite projects placed in service prior to 2016. The OEB is expected to review the HWSF project as part of a future application. In the decision, the OEB concluded that it is appropriate to evaluate OPG's performance on the Darlington Refurbishment project at an overall level rather by individual cost component, with recovery of any increases over the approved in-service amounts subject to a future prudence review. The revenue requirement impact of differences between the approved in-service additions and the actual in-service additions will be recorded in the Capacity Refurbishment Variance Account authorized by the OEB pursuant to *Ontario Regulation 53/05*. The $4.8 billion forecast in-service amount upon return to service of Unit 2 includes expenditures incurred during the definition and planning phase of the project.

The OEB also approved OPG's requested forecast costs of approximately $292 million for activities to enable Pickering operations beyond 2020 and agreed to inclusion of operating cost and generation impacts associated with continued operation of Pickering in 2021 in nuclear regulated prices. The differences between approved forecast enabling costs for continued Pickering operations and the actual amounts will be recorded in the Capacity Refurbishment Variance Account for future review and disposition by the OEB.

Excluding amounts that otherwise would have been recorded in OEB-authorized regulatory accounts for repayment to, or recovery from, customers in the future, the OEB's decision reduced OPG's proposed five-year nuclear revenue requirement by $0.6 billion. The main adjustments made by the OEB included a reduction of $100 million per year to requested OM&A costs, a reduction of 10 percent per year to forecast non-Darlington refurbishment capital in-service additions entering rate base over the 2017-2021 period, an increase and expansion of the scope of the stretch factor for nuclear costs that further reduced the revenue requirement, and a rejection of OPG's request to increase the equity component of the existing deemed capital structure of 45 percent equity and 55 percent debt. The OEB increased and expanded the annual stretch factor to 0.6 percent to most of OPG's OM&A expenses incurred directly for, or allocated to, the nuclear facilities, as well as to non-Darlington refurbishment capital in-service additions. The stretch factor is applied starting in 2018 and compounds in each year to 2021.

In accordance with *Ontario Regulation 53/05*, the nuclear revenue requirement continues to be adjusted by the amount of OPG's revenues, net of costs, from leasing the Bruce nuclear generating stations to Bruce Power. As directed by the OEB, OPG's revenues and costs related to the Bruce nuclear generating stations continue to be determined in accordance with US GAAP for the purposes of establishing the nuclear revenue requirement and are subject to the Bruce Lease Net Revenues Variance Account in accordance with *Ontario Regulation 53/05*. This includes costs related to the portion of the Nuclear Liabilities associated with the Bruce nuclear generating stations. The OEB's decision maintained the previously approved cost recovery methodology for the costs of the Nuclear Liabilities for the prescribed facilities and for the Bruce facilities, directing OPG to file a future study examining such methodologies jurisdictionally and for OPG's assets specifically. The decision fully incorporated the impacts of the updated estimate of OPG's obligations for nuclear waste management and nuclear facilities decommissioning as at December 31, 2016, including through a new ONFA reference plan effective January 1, 2017 and the change in the Nuclear Liabilities recorded on December 31, 2016.

As proposed by OPG, the OEB set recovery of pension and OPEB costs in the nuclear revenue requirement on the basis of OPG's cash payments for pension and OPEB plans, with differences between pension and OPEB accrual costs and cash payments continuing to be recorded in the Pension & OPEB Cash to Accrual Differential Deferral Account. The regulatory treatment of pension and OPEB costs is discussed further under the heading, *OEB's Report on Regulatory Treatment of Pension and OPEB Costs*.

The OEB accepted all variance and deferral account balances proposed for recovery that were not already accepted as part of the Settlement Agreement, resulting in approval of recovery of $305 million recorded in variance and deferral variance accounts as at December 31, 2015, without adjustments. The Settlement Agreement provided for the continuation of all applicable existing variance and deferral accounts. In addition to the Rate Smoothing Deferral Account discussed below, the OEB established, as of the effective date of the new regulated prices, new variance and deferral accounts to record costs related to implementing the Canadian Nuclear Safety Commission's (CNSC) Fitness for Duty program and to record differences between forecast and actual amount of Scientific Research & Experimental Development investment tax credits attributable to the nuclear facilities.

Consistent with the requirements of *Ontario Regulation 53/05*, OPG's overall production-weighted regulated prices will be smoothed, with a resulting portion of the approved annual nuclear revenue requirements for the 2017-2021 period deferred in the Rate Smoothing Deferral Account for future collection. The non-deferred portion of each year's nuclear revenue requirement is divided by the OEB-approved forecast of OPG's nuclear electricity generation for the corresponding year to determine the base nuclear regulated price. The OEB approved the nuclear electricity generation forecast as requested by OPG.

As amended in March 2017, *Ontario Regulation 53/05* requires rate smoothing to be applied in a manner that makes changes in OPG's weighted-average nuclear and hydroelectric regulated prices more stable year over year. Previously, the regulation required that rate smoothing be applied with a view of making more stable year-over-year changes in OPG's nuclear regulated prices only. Per the regulation, the deferral account records interest at a long-term debt rate reflecting OPG's cost of long-term borrowing approved by the OEB, compounded annually. The regulation requires the OEB to authorize recovery of the balance in the account on a straight line basis over a period not to exceed ten years following the end of the Darlington Refurbishment project. OPG recognizes positive amounts deferred under rate smoothing as an increase in net regulatory assets and an increase in revenue in the period to which the underlying approved revenue requirement relates. Negative amounts determined under rate smoothing are correspondingly recorded as a decrease in net regulatory assets and a decrease to revenue.

On January 17, 2018, OPG submitted a draft payment amounts order to the OEB that proposed nuclear base regulated prices for each year of the 2017-2021 period, including a rate smoothing proposal, based on the December 2017 decision's findings. The rate smoothing proposal takes into account the near-term and future impacts on customers, while seeking to ensure that resulting nuclear regulated prices allow for sufficient cash flow to maintain the Company's investment grade credit rating and support availability of cost effective funding, while taking into account both near-term and future impacts on customers. Based on the OEB's direction, the draft payment amounts order also included proposed periods for recovery, through interim period shortfall rate riders, of the retrospective revenue shortfall for the period between June 1, 2017 and the implementation date of the new regulated prices based on proposed new regulated prices that would have been in effect during that period. The draft payment amounts also included proposed recovery periods, through variance and deferral account rate riders, for regulatory account balances approved for recovery in this application. **[MONITOR]**

To reflect the OEB's decision, in the fourth quarter of 2017, OPG recorded incremental revenue of approximately $480 million for the period June 1, 2017 to December 31, 2017 based on the draft payment amounts order. The revenue was recorded as an increase in regulatory assets for the June 1, 2017 to December 31, 2017 revenue shortfall based on proposed new regulated prices for nuclear facilities and regulated hydroelectric facilities, net of a regulatory liability recognized in relation to OPG's rate smoothing proposal. The OEB's approval of the final payment amounts order, including the allocation of the approved revenue requirement between nuclear regulated prices and rate smoothing deferrals, is not expected to have a material impact on the net revenue increase recorded in the fourth quarter of 2017. The OEB is expected to issue the final payment amounts order and implement new regulated prices in the first half of 2018. **[MONITOR]**

Consistent with the effective date of the OEB's December 2017 decision, for the period from January 1, 2017 to May 31, 2017, OPG continued to record additions to the existing variance and deferral accounts for the nuclear and regulated hydroelectric facilities pursuant to the OEB's previous decisions and orders. These additions reflected differences between actual and forecast amounts embedded in the regulated prices in effect prior to the June 1, 2017 effective date.

In January 2018, OPG filed a motion asking the OEB to review and vary the effective date of the new regulated prices to January 1, 2017. The motion did not impact OPG's financial results for the year ended December 31, 2017.

<u>Ontario's 2017 Long-Term Energy Plan</u>

On October 26, 2017, Ontario's Ministry of Energy issued the 2017 LTEP that outlines the Province's plans for the future development of Ontario's electricity system. The 2017 LTEP focuses on the affordability, reliability and flexibility of a clean energy supply in the province. The 2017 LTEP replaces the previous LTEP issued in 2013.

As it relates to the supply of electricity, the 2017 LTEP recognizes the refurbishment of Ontario's nuclear generating stations as the most cost-effective option for producing emission-free baseload generation to meet Ontario's needs and reaffirms the Province's support for the refurbishment of the four units at the Darlington GS and the six units at the Bruce generating stations, subject to the principles established in the 2013 LTEP. The 2017 LTEP also recognizes the value to customers of continuing to operate the Pickering GS until 2024, as planned. With respect to hydroelectric electricity generation, the 2017 LTEP highlights the opportunity to continue to invest in optimizing existing hydroelectric facilities, noting that pumped hydroelectric storage could play an important role in the reliability of the electricity system.

Additionally, the 2017 LTEP discusses the potential impact of a number of innovative technologies on the future of the electricity system. Among others, these include the increased electrification of the transportation sector, the emergence of energy storage, and the opportunity for Ontario to foster nuclear innovation technologies. OPG continues to assess how best to capitalize on potential business opportunities in these and other areas. The 2017 LTEP also recognizes the importance of Indigenous peoples' continuing role in shaping Ontario's energy planning, projects and policies.

Darlington Refurbishment

In October 2016, OPG commenced the refurbishment of the first Darlington GS unit, Unit 2, as part of the Darlington Refurbishment project. The de-fuelling of the reactor and islanding of Unit 2, the physical separation of the unit under refurbishment from the three operating units, were completed in the first half of 2017.

The disassembly of reactor components commenced in the third quarter of 2017, with the removal of feeder tubes completed in September 2017. The removal of fuel channel assemblies commenced in October 2017. As part of the fuel channel assemblies, the removal of pressure tubes is in progress and will be followed by the removal of calandria tubes. The second major segment and the removal of all reactor components is expected to be completed by mid-2018.

All of the pre-requisite projects, including construction of facilities, infrastructure upgrades and installation of safety enhancements, with the exception of the HWSF, have been completed and placed in service. The completion of the HWSF has been delayed due to challenges with construction, with construction activities suspended for a portion of 2017. Construction to complete the facility recommenced in the fourth quarter of 2017, including work to preserve and protect the facility during winter. The HWSF is expected to be completed by the second quarter of 2019 and is not on the critical path for the Darlington Refurbishment project, which continues to track on schedule. The increase in the cost estimate for the HWSF will be accommodated within the overall Darlington Refurbishment budget of $12.8 billion. Taking into account the execution performance of the Unit 2 refurbishment, the overall Darlington Refurbishment project continues to track on budget.

On November 21, 2017, the Financial Accountability Office of Ontario issued a report, "*An Assessment of the Financial Risks of the Nuclear Refurbishment Plan*". The report assesses the impact of OPG and Bruce Power's nuclear refurbishments on customers and the Province based on mechanisms in place for the recovery of the costs to refurbish and subsequently operate the nuclear stations. The report concludes that refurbishment of the four units at the Darlington GS and the six units at the Bruce nuclear generating stations provides the most cost effective, low emission generation source available to meet Ontario's baseload electricity requirements.

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

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

The CNSC publishes an annual report on the safety performance of Canada's nuclear power plants. The report assesses how well plant operators are meeting regulatory requirements and program expectations in the areas of operational performance, safety analysis, radiation protection, waste management and conventional health and safety. On September 8, 2017, the CNSC issued an executive summary of its 2016 annual report, giving both the Darlington GS and the Pickering GS the highest possible safety rating of "Fully Satisfactory". The Darlington GS achieved this rating for the eighth consecutive year, while the Pickering GS achieved this rating for the second consecutive year.

Ontario's Fair Hydro Plan

On March 2, 2017, the Province announced the Fair Hydro Plan aimed at reducing electricity bills for residential, farm, small businesses and other eligible consumers (Specified Consumers) in the province by refinancing a portion of the Global Adjustment costs over a longer period of time. The Global Adjustment includes the difference between Ontario's electricity market clearing price used to dispatch generation and the prices paid to contracted and regulated generators in the province, and the cost of conservation and demand management programs. On June 1, 2017, the Fair Hydro Act received Royal Assent and the associated general regulation came into force in June 2017. The Act established a framework under which the costs and benefits associated with the Government of Ontario's clean energy initiatives are to be allocated between present and future consumers of electricity under the Fair Hydro Plan. The general regulation provides details on the structural, operational and financial elements required to implement the Fair Hydro Plan.

Pursuant to the Act, effective May 1, 2017, the IESO began to defer a portion of the Global Adjustment costs. The Act allows the IESO to transfer a portion of the deferred balance to a financing entity that would fund the deferral in exchange for an irrevocable right to recover the balance and associated financing and other costs from Specified Consumers in the future (Investment Interest). The legislation appointed OPG as the Financial Services Manager under the Act and conveyed upon the Financial Services Manager statutory obligations, including the creation of one or more financing entities that may acquire Investment Interests from the IESO.

In November 2017, OPG's Board of Directors provided its final approval regarding OPG's involvement with the Trust on commercial terms following the fulfilment of all conditions it established in May 2017. Accordingly, the Fair Hydro Trust was established as the financing entity contemplated by the Act in December 2017. The majority unitholder and beneficiary of the Trust is a wholly-owned subsidiary of OPG. The Trust is structured to be bankruptcy remote and ring fenced from OPG in order to protect the Company's assets and operations.

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In order for the Trust to finance the Investment Interest acquired from the IESO, it will incur senior debt from capital markets and subordinated debt from OPG. The Trust's investment will attract financing amounts and other related fees, which, under the general regulation, will be payable by the IESO as carrying costs until July 2021 and by Specified Consumers through the Clean Energy Adjustment to be invoiced by local distribution companies commencing in May 2021, with the three-month lag in 2021 intended to cover the billing and collection lag from the introduction of the Clean Energy Adjustment. The carrying costs include all financing and third-party costs other than payment of principal on debt.

Concurrent with every issuance of the Trust's senior notes, it is expected that OPG will purchase subordinated debt of the Trust in an aggregate amount not to exceed 49 percent of the Trust's total outstanding debt, with 44 percent of the funding to be provided by the Province through equity injections and five percent to be provided by OPG. The subordination level may vary over time, but must at least equal to, or be greater than 35 percent of all outstanding debt. Through OPG's control over the key activities of the Trust and its obligation to absorb losses through ownership of the Trust's subordinated debt, the Company consolidates the financial results of the Trust in accordance with US GAAP.

On December 21, 2017, the Trust purchased its first tranche of Investment Interest from the IESO in the amount of approximately $1.18 billion. Fifty-one percent of the funding requirement or $601 million was financed by the Trust through a revolving warehouse facility ranked as senior notes, and the remaining 49 percent was funded through the issuance of short-term subordinated debt to OPG. The Investment Interest has been classified as a financing receivable on OPG's consolidated balance sheet.

OPG's subordinated debt investment in the Trust was funded through the following sources:

- The Province provided 44 percent of the total funding requirement or $519 million, through an equity injection in OPG in exchange for approximately 12.2 million non-voting Class A common shares at a price of $42.46 per share. The Company's Articles of Amalgamation were amended effective December 1, 2017 to allow for the creation and issuance of Class A shares. Refer to Note 14 of OPG's 2017 audited consolidated financial statements for further details; and
- OPG provided five percent of the total funding requirement or approximately $60 million.

In February 2018, the Trust issued $500 million of senior notes payable with a coupon interest rate of 3.36 percent and an effective interest rate of 3.42 percent, payable semi-annually until maturity on May 15, 2033. The proceeds were used to repay the majority of the outstanding balance of the revolving warehouse facility issued in December 2017. By the end of the first quarter of 2018, the Trust is expected to acquire another tranche of Investment Interest from the IESO, which it expects to fund using its revolving warehouse facility.

Refer to the section, *Liquidity and Capital Resources* under the heading, *Financing Activities* for further details on the Trust's financing arrangements and OPG's public debt offering.

OEB's Report on Regulatory Treatment of Pension and OPEB Costs

On September 14, 2017, the OEB issued its final report on the guiding principles and policy for recovery mechanisms of pension and OPEB costs of rate regulated utilities in the Ontario electricity and natural gas sectors. The report establishes the accrual basis of accounting as the method of determining pension and OPEB amounts for rate-setting purposes, unless the OEB finds that this method does not result in just and reasonable rates in the circumstances of a particular utility. The report also provides for the establishment of a generic variance account to record asymmetric carrying charges in favour of ratepayers on the differences between the accrual costs recovered and cash payments made by a utility in respect of pension and OPEB plans. Carrying charges on this differential are to be assessed at the OEB's prescribed interest rate, on a prospective basis from the effective date of the new variance account. For OPG, this differential will include amounts going back to November 1, 2014, with the charges calculated on the portion of the differential that has been recovered through regulated prices. None of this differential has been recovered to date. The prescribed interest rate is set quarterly by the OEB based on the quarterly return of a mid-term corporate bond index yield.

The OEB's September 2017 report and the OEB's December 2017 decision on OPG's application for new regulated prices require OPG to continue to record differences between pension and OPEB accrual costs and cash payments in the Pension & OPEB Cash to Accrual Differential Deferral Account in effect since November 1, 2014, until such time as the OEB approves resumption of the accrual basis of recovery for OPG. The future recovery of amounts recorded in the account will be subject to this approval. The OEB's report did not impact OPG's financial results for the year ended December 31, 2017.

The Company recognizes the amount set aside in the Pension & OPEB Cash Versus Accrual Differential Deferral Account as a regulatory asset. As at December 31, 2017, the regulatory asset had a balance of $614 million. Consistent with the expectations set out in the OEB's December 2017 decision, in 2018, OPG plans to file an application with the OEB requesting disposition of the Pension & OPEB Cash Versus Accrual Differential Deferral Account balance as well as balances accumulated since December 31, 2015 in other regulatory accounts.

Shareholder Declarations and Shareholder Resolutions to Sell Certain Non-Core Real Estate Properties

In December 2015, OPG received a Shareholder Declaration and a Shareholder Resolution requiring the Company to sell its head office premises and associated parking facility located at 700 University Avenue and 40 Murray Street in Toronto, Ontario. The sale was completed in April 2017, with a gain on sale of $283 million, which is net of tax effects of $95 million, recognized in net income in the second quarter of 2017. The pre-tax gain on sale was recorded as an item of Other gains in the consolidated statement of income in the Services, Trading and Other Non-Generation segment. Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act, 2014*, OPG is required to transfer the proceeds from this disposition, net of prescribed deductions under the Act, into the Province's Consolidated Revenue Fund. The amount of designated proceeds transferred into the Consolidated Revenue Fund will be equal to the after-tax gain on sale. The transfer is expected to take place as early as in the first quarter of 2018, through a special dividend authorized by OPG's Board of Directors in March 2018. **[MONITOR]**

In June 2016, OPG received a Shareholder Declaration and a Shareholder Resolution that requires the Company to sell its former Lakeview GS site located in Mississauga, Ontario. OPG has entered into a purchase and sale agreement with a purchaser with the sale scheduled to close in March 2018. An estimated after-tax gain on sale of approximately $200 million is expected to be recognized in net income upon completion of the transaction in the first quarter of 2018. **[MONITOR]** Pursuant to the Shareholder Declaration and Shareholder Resolution, and as prescribed in the *Trillium Trust Act, 2014*, OPG is required to transfer the proceeds from this disposition, net of prescribed deductions under the Act, into the Province's Consolidated Revenue Fund. OPG anticipates the amount of designated proceeds transferred into the Consolidated Revenue Fund to approximate the after-tax gain on the sale. In accordance with the Shareholder Resolution, approximately one-third of the site is to be transferred to the City of Mississauga, by the purchaser, for parkland, institutional, and cultural uses.

CORE BUSINESS, STRATEGY, AND OUTLOOK

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

OPG's four key strategic imperatives are as follows:

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

Operational Excellence

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

Workplace Safety and Public Safety

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

In the area of workplace safety, OPG is committed to achieving excellent performance through continuous improvement and a strong safety culture, with the ultimate goal of zero injuries. OPG utilizes an integrated health and safety management system and a set of operational risk control procedures to ensure continued monitoring of health and safety performance and to support continuous learning and improvement in this area. Over the past five years, OPG has repeatedly stood in the top quartile of its comparator Canadian electrical utilities in various safety performance metrics.

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

	2017	2016
AIR *(injuries per 200,000 hours worked)*	**0.48**	0.56
ASR *(days lost per 200,000 hours)*	**3.57**	2.59

In 2017, OPG's AIR improved from 2016 and was the third-best performance year in the Company's history. For those employee injuries that caused lost time from work, the total time lost from work in 2017 was greater than the previous year. OPG's analysis of the underlying safety events indicated that major contributors to the injuries and near misses included inadequate situational awareness and attention to detail, and suboptimal risk-based decisions, rather than missing or inadequate standards or programs. OPG continues to implement a number of initiatives to target the injury trends based on the analysis of the safety events, with a focus on the use of human performance tools including increased field supervisory oversight, situational awareness, communication, and procedural use and adherence.

In order to strengthen its safety performance, OPG continues to progress an organization-wide "iCare Enough to Act" initiative launched in 2016 and aimed at renewing employees' commitment to their own and each other's safety and well-being. Approaches to supervisory oversight, communication and safe work planning are being modified and updated to further strengthen safety as a foundational element of the Company's values-based culture.

Contractors are required to conduct work safely at OPG sites. In support of this requirement, OPG utilizes an independent contractor pre-qualification process, provides on-site safety support for many of its major projects, and works with contract partners to improve their health and safety programs to meet OPG's requirements. In the past nine years, OPG has consistently shown a Construction Contractor AIR that is markedly better than the Infrastructure Health and Safety Association Contractor AIR, a metric of construction contractor safety performance across Ontario. OPG has maintained this performance while engaging in the refurbishment of the Darlington GS, one of the largest infrastructure projects in Canada. The hours worked by contractors in 2017 were the largest in OPG's history, largely attributable to this project.

OPG continues to maintain a strong focus on the nuclear safety program and to invest in nuclear safety systems. To ensure continued public safety, radiation exposure to members of the public resulting from the operation of OPG's nuclear generating stations is estimated on an annual basis for individuals living or working near the stations. The annual dose to the public resulting from operations of each nuclear facility is expressed in microsieverts (μSv), which is an international unit of radiation dose measurement. For 2016, the annual public doses resulting from the Darlington GS operations and the Pickering GS operations were 0.6 μSv and 1.5 μSv, respectively, which is less than 0.1 and 0.2 percent of the annual legal limit of 1,000 μSv, respectively. While the public doses from OPG's nuclear operations for the 2017 operating year will not be finalized until the second quarter of 2018, they are not expected to differ significantly from the 2016 levels.

In June 2016 and August 2016, the CNSC released sampling results from its independent environmental monitoring program, which confirmed that the public and the environment around OPG's nuclear generating stations continued to be safe. In September 2017, the CNSC issued an executive summary of its 2016 annual report on the safety performance of Canada's nuclear power plants, which gave both the Pickering GS and the Darlington GS the highest possible safety rating of "Fully Satisfactory". For further details, refer to the CNSC safety rating discussion in the section, *Highlights* under the heading, *Recent Developments*.

OPG remains committed to high standards of public safety on waterways around hydroelectric generating stations and dams, and continues to make investments in waterway and dam safety upgrades. The Company's practices in this area are routinely reviewed by an independent panel comprised of internationally recognized experts, who have concluded that OPG's Dam Safety Program is industry leading in a number of areas. During 2017, OPG continued its water safety campaign with a series of public service announcements illustrating the danger of water near hydroelectric dams and hydroelectric generating stations.

Electricity Generation Production and Reliability

Key strategic initiatives in support of operational excellence, specific to each of OPG's core generating operations, are discussed below. Generation and reliability performance for 2017 is discussed by operating segment in the section, *Discussion of Operating Results by Business Segment*.

Nuclear Operations

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

OPG's objective is to maximize the safe and reliable operating life of the Pickering units. As announced in 2016 and approved by the Province, OPG is continuing to execute on a plan to extend safe and reliable operation of the Pickering GS to 2024. In addition to providing Ontario with a clean, reliable source of baseload electricity during nuclear unit refurbishments at the Darlington GS and the Bruce nuclear generating stations, extending operations at the Pickering GS will provide continued employment for up to 4,000 full-time employees at OPG and help to reduce approximately 17 million tonnes of carbon dioxide emissions, which is equivalent to removing approximately 3.4 million cars from Ontario's roads.

As part of the plan to extend Pickering operations, OPG has been continuing to undertake the required technical work to confirm that the station's pressure tubes, a key life-limiting component of the station, will remain fit for service for operation to 2024. In the fourth quarter of 2017, OPG has confirmed that technical assessments completed to date provide sufficient confidence in the programs and provisions in place to assure fitness-for-service of fuel channel components in line with the planned extended operations period. This evaluation is consistent with the safety case reflected in OPG's operating licence renewal application for the Pickering GS submitted to the CNSC in 2017, discussed below. Taking these factors into account, OPG revised the accounting end-of-life assumptions for the Pickering GS from December 31, 2020 for all units to December 31, 2022 for Units 1 and 4 and December 31, 2024 for Units 5 to 8, effective December 31, 2017.

The change in the Pickering GS accounting end-of-life assumptions did not impact OPG's net income in 2017. The change is expected to decrease depreciation expense by $77 million in 2018, including the associated impact on the nuclear asset retirement obligation (ARO) recorded as of December 31, 2017 but before the impact of regulatory accounts. Regulatory accounts, including a new deferral account proposed by OPG in a December 2017 application to the OEB, are expected to largely offset the decrease in depreciation expense. The change in the nuclear ARO recorded in the fourth quarter of 2017 is discussed in the section, *Critical Accounting Policies and Estimates* under the heading, *Asset Retirement Obligation*. On December 29, 2017, OPG applied for an accounting order to establish a variance account to record, from January 1, 2018 until the effective date of the OEB's next payment amounts order, the revenue requirement impact of changes to nuclear liabilities and depreciation and amortization expense resulting from changes to station end-of-life dates for OPG's Pickering prescribed nuclear facilities that will be effective December 31, 2017. Pending the OEB's review of the application, an interim order was issued January 31, 2018 establishing the proposed variance account effective January 1, 2018. The OEB's final decision for the account is expected later in 2018.

OPG's current five-year operating licence for the Pickering GS was approved by the CNSC in 2013 and expires on August 31, 2018. This current licence was issued assuming that the station would shut down in 2020. On June 28, 2017, OPG confirmed to the CNSC that it intends to cease commercial operation of all Pickering units on December 31, 2024. On August 28, 2017, OPG submitted a ten-year licence renewal application to the CNSC. The requested licence term spans the planned extended commercial operations period, through to the planned period of de-fuelling, de-watering and beginning to place the station in a safe storage state in 2028. In support of the licence renewal, OPG undertook a Periodic Safety Review (PSR), a comprehensive assessment of the station's design and operation to confirm that there is a high level of safety throughout the operating life and to determine what reasonable and practical enhancements can be made to further improve safety. The PSR also includes a component condition assessment of the station to identify the work required to support the station's continued operation. The PSR has confirmed that extending operations of the Pickering units will continue to pose minimal risk to the health, safety and security of workers, the public and the environment. The final major component of the PSR was submitted to the CNSC in November 2017. The CNSC's review of the PSR submission and licence application is in progress. Based on the evidence and documentation submitted to the CNSC, OPG is confident in obtaining a licence renewal that would support its extended operations plan for Pickering GS.

OPG's nuclear operations are regularly benchmarked against top performing nuclear facilities around the world. This allows OPG to identify, develop and implement initiatives to further improve performance. In September 2016, OPG hosted a team of experts from the International Atomic Energy Agency (IAEA) at the Pickering GS to conduct a standard Operational Safety Review Team mission. The team conducted an in-depth review of performance and adherence to international safety standards. In the second quarter of 2017, the IAEA's Operational Safety Review Team released the final report and confirmed that the Pickering GS demonstrates strong commitment to safety. In December 2017, OPG hosted a World Association of Nuclear Operators (WANO) peer evaluation for the Pickering GS, which focused on the safe and reliable operation of the station while evaluating the plant material condition, functional and cross-functional areas of the organization. Pickering showed significant improvement since its last review and has sustained its strong rating in 2018, resulting in its best ever WANO peer review.

OPG remains focused on improving reliability and increasing electricity generation output from its nuclear fleet. This includes improving equipment reliability, optimizing outages, implementing integrated asset management planning and enhancing maintenance programs. Improved equipment reliability generally results in fewer generation interruptions. Nuclear inspection and testing programs are largely driven by maintenance and regulatory requirements, and are designed to ensure that equipment is performing safely and reliably. Execution of this and other outage work continues to be a high priority. As part of its commitment to operational excellence, OPG continues to focus on improving the planning, execution, monitoring, and reporting of outage work.

OPG continues to make investments in the performance of the Pickering GS, with a focus on improving plant reliability and maximizing the value of the asset over its remaining life through implementing equipment modifications and fuel handling reliability improvements, reducing equipment maintenance backlogs, and completing critical and high priority work. OPG also continues to make investments in the Darlington GS necessary to sustain safe and reliable operations for the next three decades and aimed at positioning the station for industry-leading operating and cost performance in the longer term. This includes investments in life cycle and aging management projects, facility upgrades as well as work in support of regulatory commitments.

Delivering solutions that provide the best combination of safety, cost and effectiveness, as well as establishing challenging financial targets based on comprehensive benchmarking and taking into account the operating environment of the nuclear stations, continues to be a vital part of OPG's strategy to improve performance of the nuclear business unit. Financial and staffing targets continue to be reviewed and adjusted where necessary to reduce operating costs, while ensuring safety and reliability are not compromised.

In 2016, OPG submitted applications with the CNSC seeking a ten-year licence renewal for the Western Waste Management Facility (WWMF), located at the Bruce generating stations' site, to May 31, 2027, and a ten-year licence renewal for the Pickering Waste Management Facility (PWMF) to August 31, 2028. The licence renewal applications were presented to the CNSC at public hearings in April 2017. On May 30, 2017, the CNSC announced that the WWMF licence was renewed for a ten-year period and will be valid until May 31, 2027. On February 7, 2018, the CNSC announced that the PWMF licence was renewed for a ten-year period and will be valid until August 31, 2028.

In 2017, the CNSC approved regulatory document *REGDOC 2.2.4 – Fitness for Duty – Managing Alcohol and Drug Use* for use at Canadian nuclear power plants. This document sets out requirements for managing fitness for duty of workers in relation to alcohol and drug use at high-security sites, including for-cause alcohol and drug testing for workers in positions identified as safety-sensitive or safety-critical and random alcohol and drug testing for workers holding safety-critical positions. OPG intends to enhance its existing Fitness for Duty program to comply with these new requirements. OPG is working with its partners in the Canadian nuclear industry to develop a program suitable for Canada and its workers.

Hydroelectric Operations

The objectives of OPG's hydroelectric operations include operating and maintaining the generating facilities in a safe, efficient and cost-effective manner, while increasing the output from the facilities and pursuing opportunities to increase capacity. OPG aims to increase the facilities' output by improving operational flexibility, enhancing reliability, optimizing outage planning and, subject to water conditions, increasing availability to meet electricity system demand. OPG continues to evaluate and implement plans to increase capacity, maintain and improve operational performance, and extend the operating life of its hydroelectric generating assets.

OPG's hydroelectric operations are regularly benchmarked against peer utilities in North America. Based on 2016 data, 19 of the OPG's 25 large regulated hydroelectric facilities benchmarked in the top two quartiles for unit energy costs. This group of 19 facilities represents 94 percent of the energy delivered from the regulated hydroelectric fleet. Similarly, 18 of 25 large regulated hydroelectric facilities benchmarked in the top two quartiles for availability based on 2016 data. OPG continues to pursue innovation and technology-based improvements in its asset management and equipment maintenance strategies in order to increase reliability and further reduce costs of the hydroelectric fleet.

As part of OPG's ongoing strategy to reduce costs and increase operational efficiency, the operations of the Company's hydroelectric and thermal assets were previously combined into one organization, with five regional operations groups. In 2017, OPG reduced the number of regional operations groups to four, by integrating the Central Operations work centres into three of the other existing regional operations groups. In addition, during the third quarter of 2017, OPG opened an amalgamated control room located at the Saunders hydroelectric GS, combining the Chenaux and Saunders control rooms. The amalgamated control room will control all operational activities at the ten hydroelectric stations along the Madawaska, Ottawa and St. Lawrence rivers.

OPG's plans for its existing hydroelectric generating stations are accomplished through multi-year capital investment and other programs, including replacements and upgrades of turbine runners, and refurbishment or replacement of existing generators, transformers, and controls. The aim of OPG's runner replacement and upgrade program is to increase hydroelectric station capacity by leveraging efficiency enhancements in runner design. Where economical and practical, OPG also pursues opportunities to refurbish, expand or redevelop its existing hydroelectric stations. Over the next four years, OPG plans to increase the total capacity of its hydroelectric generating fleet by approximately 150 MW, which, in addition to the runner replacement and upgrade program, includes the Ranney Falls GS and Sir Adam Beck frequency conversion projects. OPG is also planning to repair, rehabilitate, or replace a number of aging civil hydroelectric structures.

As part of its commitment to operational excellence, OPG continues to make investments in its existing hydroelectric generating fleet. During 2017, OPG continued to execute a number of projects, including:

- Completion of the overhaul and upgrade of Unit 10 of the Sir Adam Beck 1 GS, which increased the station's capacity by 6 MW
- Continued work on the overhaul and rehabilitation of Unit 1 of the Sir Adam Beck Pump GS to ensure reliable unit operation for approximately the next 20 years
- Completion of the replacement of the Shebandowan Lake Control Dam at the Kakabeka Falls GS, which will maintain structural integrity and enhance dam safety for another 100 years

- Continued work on the overhaul and upgrade of Unit 1 of the Harmon GS with completion of the turbine upgrade, generator rehabilitation and upgrade of protection and control systems
- Continued work on the overhaul and upgrade of Unit 2 of the DeCew Falls GS, with turbine and generator rehabilitation and upgrade of protection and control systems completed during the year, and, in the fourth quarter of 2017, commencement of the overhaul and upgrade of Unit 2 of the Little Long GS
- Continued work on the overhaul and rehabilitation of Unit 2 of the Lower Notch GS, with generator rehabilitation completed during the year, and in the fourth quarter of 2017, commencement of the overhaul and rehabilitation of Unit 6 of the Sir Adam Beck Pump GS
- Commencement of definition phase work for the Water Conveyance System project to rehabilitate the Sir Adam Beck 1 GS canal and associated structures, ensuring their continued safe and reliable operations for approximately the next 50 years.

In 2018, OPG plans to commence execution of several major sustaining projects across the hydroelectric fleet, including the overhaul and upgrade of Unit 5 of the Sir Adam Beck 1 GS, the rehabilitation of Caribou Falls Block Dam No.2, and automatic sluicegates system replacement at the Whitedog Falls GS. Definition phase activities on several other major projects are also expected to commence in 2018, including frequency conversion of Units 1 and 2 of the Sir Adam Beck 1 GS and the overhaul and upgrade of the R.H. Saunders GS units.

Thermal Operations

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

These stations, which operate as peaking facilities under their respective energy supply requirements, provide Ontario's electricity system with the flexibility to meet changing daily system demand and capacity requirements and enable the system to accommodate the expansion of Ontario's renewable generation portfolio. The continued operation of these stations will continue to provide Ontario with over 2,000 MW of peaking generation capacity. The stations operate under their respective ESAs.

OPG's biomass-fuelled generating units are among the world's leading in their innovation. The Atikokan GS is the largest generating station in North America fuelled by 100 percent biomass, while the Thunder Bay GS unit uses advanced biomass that is thermally treated to allow it to be stored outdoors and withstand exposure to the weather.

Former thermal stations that are no longer available to generate electricity are included in the Services, Trading, and Other Non-Generation segment once they are removed from service. This includes the Lambton GS and Nanticoke GS sites, which ceased operations in 2013. Over 2015 and 2016, OPG announced that these stations would be decommissioned safely, securely and in an environmentally responsible manner. The costs of the decommissioning are charged to a previously established decommissioning provision.

During 2017, OPG substantially completed the demolition of the Nanticoke coal yard equipment and structures and issued a contract for the demolition of the Nanticoke powerhouse and associated structures. In the fourth quarter of 2017, the demolition contractor had been mobilized to prepare for the removal of the powerhouse and associated structures and initiated the preparatory work for the demolition of the stacks. The demolition of the stacks took place in February 2018. **[MONITOR]** A competitive bidding process for the demolition of the Lambton GS is in progress, with a contract for the removal of the powerhouse and associated structures expected to be issued during 2018. The decommissioning plan for the Nanticoke GS accommodates the construction and operation of the Nanticoke solar facility.

An update of the asset retirement obligations related to the Nanticoke and Lambton sites has been completed. For a discussion of the revaluation of this liability for non-nuclear fixed asset removal as at December 31, 2017, refer to the section, *Critical Accounting Policies and Estimates* under the heading, *Asset Retirement Obligations*.

Environmental Performance

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

- maintain an ISO 14001-registered environmental management system (EMS)
- work to prevent or mitigate adverse impacts on the environment with a long-term objective of continual improvement
- strive to be a leader in climate change mitigation
- manage sites in a manner that strives to maintain, or enhance where it makes business sense, significant natural areas and associated species of concern.

In 2017, OPG maintained the ISO 14001 registration of its company-wide EMS. Within the EMS, OPG has planning, operational control, and monitoring programs to manage the Company's positive and negative impacts on the environment. Significant environmental aspects of OPG's operations include: spills, chemical and thermal emissions to water, water flow and level changes, radiological emissions, low and intermediate level radioactive waste (L&ILW), enhancement and disruption of wildlife habitat, displacement of fossil fuels, and fish impingement and entrainment. Further details regarding OPG's environmental risks can be found in the section, *Risk Management* under the heading, *Environmental Risk*.

Environmental performance targets are set as part of the annual business planning process. These targets are based on past performance and external benchmarking to promote continual improvement. OPG met or outperformed its 2017 targets for spills, environmental infractions, carbon-14 emissions to air, and L&ILW. Targets for tritium emissions to air and water were not achieved due to equipment performance issues; however, emissions remained less than one percent of the regulatory limit. There were no significant environmental events during 2017.

In 2016, the Government of Ontario passed the *Climate Change Mitigation and Low-Carbon Economy Act, 2016* and the associated *Cap and Trade Program Regulation*. The legislation provides the foundation for regulating greenhouse gas (GHG) emissions in Ontario and establishes a cap and trade program, with the first compliance period being from January 1, 2017 to December 31, 2020.

The cap and trade program is a market mechanism intended to give Ontarians an incentive to reduce GHG emissions by putting a price on carbon. OPG has an internal program to meet its GHG emissions compliance obligations. With OPG's low GHG emitting fleet, these obligations are not expected to have a material financial impact on the Company.

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

OPG has developed biodiversity management plans that identify priority natural areas, conservation goals, threats, and proposed actions to sustain biodiversity at its properties. To maximize benefits and manage impacts, initiatives include biodiversity monitoring, site naturalization, habitat creation, and control of invasive species.

OPG works with community partners to support regional ecosystems and biodiversity across Ontario. In 2017, OPG continued efforts to protect and restore habitat, promote biodiversity education and awareness, and help the recovery of species at risk. In November 2017, OPG's biodiversity program was recognized by the Canadian Electricity Association with the 2017 Sustainable Electricity award for Commitment to Continuous Performance Improvement.

OPG communicates its environmental performance internally to employees and to external stakeholders, including the Ontario Ministry of the Environment and Climate Change (MOECC), Environment and Climate Change Canada, the CNSC, and local communities. Details of OPG's environmental performance and initiatives to fulfill the Company's Environmental Policy can be found in OPG's 2016 Sustainability Report, available on the Company's website at www.opg.com.

Improving Efficiency and Reducing Costs

As part of its commitment to operational excellence, OPG remains strongly focused on reducing costs by pursuing sustainable efficiency and productivity improvements across operating business units and support functions, while ensuring that there is no adverse impact on the safety, reliability and environmental sustainability of the Company's operations. Building on significant efficiency achieved since 2011 under a more scalable, centre-led organizational model, this includes streamlining of processes, simplifying governance, upgrading technology, optimizing service delivery models, and continuing to leverage attrition to achieve human resource targets aligned with business requirements. Strategies to improve cost performance and organizational capability are being implemented at the enterprise and business unit level. These strategies are supported by continuing to embed an outcomes-driven culture that reinforces cost effectiveness, efficiency and organizational agility as part of business decision-making.

OPG is proceeding with an enterprise-wide process to evaluate the impact of the eventual shutdown of the Pickering GS on the Company's operating cost structure. This multi-year initiative, known as OPG25, involves identifying and implementing a coordinated set of plans and targets to ensure the optimization of the Company's longer-term operating model, business strategies and organizational design between now and the planned end of Pickering commercial operations. The overall aim of the initiative is to ensure ongoing cost effectiveness of the Company's operations after the eventual shutdown of the Pickering GS and to mitigate the cost impacts associated with the shutdown. Through this work and a continued focus on productivity enhancements, OPG expects to deliver increased value to customers and achieve improvement in outcomes of future applications for regulated prices under the OEB's incentive regulation framework.

In 2017, OPG also launched a strategy to accelerate the pace of digital transformation across the enterprise. The strategy is focused on making investments to modernize information technology infrastructure, enhance mobility, connectivity and field and office productivity, and improve equipment reliability and station performance through data management and data analysis. The strategy will increase operational efficiency, reduce operating costs and help to enable optimization initiatives in support of OPG25.

People and Culture

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

The Company continues to focus on improving the capability of its workforce through leadership development, knowledge management, diversity and inclusion programs, and hiring in critical areas. Ability to secure the right talent mix in order to effectively meet the Company's immediate and longer term business needs on a timely basis is supported through workforce planning, resourcing and on-boarding strategies, both to acquire external talent into the organization and to develop existing employees. The goal of workforce planning and resourcing strategies is to ensure that the Company has a diverse workforce with the right skill set and capability for the safe and effective operation of the generating facilities and successful delivery of major projects, including the Darlington Refurbishment. These strategies take into account changes in anticipated staffing requirements leading up and subsequent to the end of planned commercial operations of the Pickering GS and the period to de-fuel, de-water and place the station in a safe state condition after shutdown. The end of commercial operations at the Pickering GS is expected to lead to a significant reduction in OPG's workforce.

As part of the strategy to develop and engage employees and to build leadership talent in support of the Company's long-term success, OPG has an active succession planning program with a focus on accelerating development. This includes a company-wide high-potential leadership development program for qualified internal candidates. This 14-month cross-functional, competitive-entry program is designed to identify and develop candidates for future leadership positions while they are relatively early in their careers. OPG also has a talent management monitoring process to proactively assess staffing risks, challenges and opportunities.

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

Effective January 1, 2017, OPG implemented an Executive Compensation Program that is compliant with *Ontario Regulation 304/16: Executive Compensation Framework*, introduced in September 2016. While the Province released two subsequent amendments, *Ontario Regulation 187/17* and *Ontario Regulation 400/17* in June 2017 and November 2017, respectively, OPG's Executive Compensation Program continues to be subject to the original regulation's requirements. The regulation sets out how all employers designated under the *Broader Public Sector Executive Compensation Act, 2014*, including OPG, must establish and post compensation programs for executives. The program must include the compensation philosophy, salary and performance-related pay caps, comparative analysis details, and a description of other elements of compensation. OPG's Executive Compensation Program, which applies to employees at the Vice President level and higher, is designed to provide compensation that is at the 50^{th} percentile of the market and focused on at-risk, performance based pay. The program will better enable OPG to attract, align and retain the executive talent critical to delivering Shareholder and customer value, while ensuring continued safe and reliable operations.

Project Excellence

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

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

The status updates for OPG's major projects as of December 31, 2017 are outlined below.

Project *(millions of dollars)*	**Capital expenditures** Year-to-date	Life-to-date	**Approved budget**	**Expected in-service date**	**Current status**
Darlington Refurbishment	1,249	4,434	12,800 [1]	First unit - 2020 Last unit - 2026	All Unit 2 feeder tubes were removed safety in the fourth quarter of 2017 and the removal of fuel channel assemblies is in progress. Construction activities on the HWSF have recommenced in the fourth quarter. Planning and procurement activities for the refurbishment of Unit 3 are continuing. The overall project is tracking on schedule and on budget.
Peter Sutherland Sr. Hydroelectric GS	41	277	300	2017	The station was placed in-service on March 31, 2017, ahead of the originally planned schedule, and is expected to close below the approved budget. Project close-out activities are in progress.
Sir Adam Beck Pump GS Reservoir Refurbishment	3	49	58	2017	The refurbishment was completed and the reservoir was returned to service in February 2017, ahead of the originally planned in-service date and below the approved budget.
Ranney Falls Hydroelectric GS	25	28	77	2019	Excavation has been completed and construction is continuing in the expanded forebay, powerhouse and spillway area. Concrete placement of the new powerhouse and the spillway integrated structure is in progress. The project is tracking on schedule and on budget.
Nanticoke Solar Facility	2	3	107	2019	Significant contracts for equipment and engineering construction services have been executed, with construction planned to commence in the first quarter of 2018. **[MONITOR]**
Deep Geologic Repository (DGR) for L&ILW	9 [2]	204 [2]			On August 21, 2017, the federal Minister of Environment and Climate Change requested further information related to the project's environmental assessment (EA). OPG is working on a response to this information request.

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

Darlington Refurbishment

The Darlington generating units are approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the station by approximately 30 years. The approved budget for the four-unit refurbishment is $12.8 billion, which includes the costs of the pre-requisite projects in support of the execution phase of the refurbishment. The first refurbished unit is scheduled to be returned to service in the first quarter of 2020 and the last unit is scheduled to be completed by 2026. The project continues to track on schedule.

The Darlington Refurbishment project is a multi-phase program comprising the following five major sub-projects:

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

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG commenced the refurbishment of the first unit, Unit 2, in October 2016 as planned. The unit was taken offline on October 15, 2016. De-fuelling of the reactor was completed in January 2017, with a total of 480 fuel channels de-fuelled. Islanding of Unit 2, the physical separation of the unit under refurbishment from the three operating units, was completed in April 2017, signifying the completion of the first major segment of the project.

The second major segment includes preparatory work to support the removal of feeder tubes and fuel channel assemblies, followed by the removal of reactor components. The preparatory work was completed in the second quarter of 2017. The Re-tube Tooling Platform for hosting the tooling for the removal, inspection and installation activities, and the setup of specialized tooling and equipment needed for the removal and replacement of the reactor components were completed in the third quarter of 2017. The disassembly of reactor components commenced in August 2017, with the removal of all 960 feeder tubes completed safely in September 2017. The removal of fuel channel assemblies commenced in October 2017. As part of the fuel channel assemblies, the removal of pressure tubes is in progress and will be followed by the removal of calandria tubes. The second major segment and the removal of all reactor components is expected to be completed by mid-2018. Key projects in the second major segment finished in 2018 include the completion of the primary side steam generator layup and installation of steam generator access ports to support future inspections. Other key project activities being executed during the second segment include the continuation of the major turbine generator overhaul, which will be completed in the second quarter of 2018, and continued execution of the major electrical scope. OPG is also continuing to execute work to support the requirements set out in the CNSC-approved Integrated Implementation Plan for the station.

Most of the pre-requisite projects, including construction of facilities, infrastructure upgrades and installation of safety enhancements, have been completed and placed in-service. The Re-tube Waste Processing Building was completed in November 2017. Completion of the HWSF has been delayed due to challenges with construction. OPG suspended the project in the second quarter of 2017 to evaluate the best approach to optimize cost and schedule and complete the project. Construction to complete the facility recommenced in the fourth quarter of 2017. The HWSF is expected to be completed by the second quarter of 2019 and is not on the critical path for the Darlington Refurbishment project, which continues to track on schedule. The increase in the cost estimate for the HWSF will be accommodated within the overall Darlington Refurbishment budget of $12.8 billion. Taking into account the execution performance of the Unit 2 refurbishment, the overall Darlington Refurbishment project continues to track on budget.

In addition to the execution of refurbishment activities on Unit 2, OPG is continuing planning activities for the refurbishment of the second unit, Unit 3, and is entering into associated commitments to procure major components that require long lead times. As of December 31, 2017, $93 million has been invested in planning activities related to the refurbishment of the second unit, Unit 3. These planning activities are being undertaken in accordance with the refurbishment project schedule. In February 2018, the Province confirmed its commitment to proceed with Darlington's Unit 3 refurbishment in 2020. **[MONITOR]**

Peter Sutherland Sr. Hydroelectric GS

In March 2017, the project to construct the 28 MW two-unit Peter Sutherland Sr. hydroelectric GS successfully completed final testing and commissioning of the turbine and generator units, and both units were declared substantially complete. On March 31, 2017, the project received a permit from the MOECC to take water for operations to allow the station to operate commercially. This in-service date was well ahead of the originally planned schedule of the first half of 2018. The project's schedule was accelerated to take advantage of favourable weather conditions. The project is expected to close below the approved budget of $300 million. Project close-out activities are in progress. OPG began to receive contracted revenue for the project following the IESO's confirmation of the station's commercial operations as of March 31, 2017, under a hydroelectric ESA.

Under the partnership agreement, as the unit is placed in-service, the CRP, a corporation wholly owned by the Taykwa Tagamou Nation, may acquire up to a 33 percent partnership interest through its investment in PSS. In April 2017, the CRP acquired a 33 percent interest in PSS.

Sir Adam Beck Pump GS Reservoir Refurbishment

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

Ranney Falls Hydroelectric GS

In 2017, OPG began construction work on a 10 MW single-unit powerhouse on the existing Ranney Falls GS site, as part of the Regulated – Hydroelectric segment. The new unit will replace an existing unit that reached its end of life in 2014. The existing forebay structure has been demolished and the new concrete structure has been completed. Excavation has been completed and construction continues in the expanded forebay, powerhouse and spillway area. The new forebay concrete wall has been completed, and concrete placement of the new powerhouse and the spillway integrated structure is in progress. The project's expected in-service date is in the fourth quarter of 2019, with a budget of $77 million. The project is tracking on schedule and on budget.

Nanticoke Solar Facility

The construction of a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands under a Large Renewable Procurement contract with the IESO, through Nanticoke Solar LP, a partnership between OPG and a subsidiary of the Six Nations of Grand River Development Corporation, is planned to commence in the first quarter of 2018. During 2017, the partnership continued work to obtain approvals and permits required to enable the commencement of construction. Significant contracts for equipment and engineering construction services were executed in the first quarter of 2018. The facility is expected to be completed in the first quarter of 2019, with a budget of $107 million. **[MONITOR]**

Deep Geologic Repository for Low and Intermediate Level Waste

OPG has proposed a deep geologic repository as the preferred solution for the safe long-term management of the L&ILW produced from the continued operation of OPG-owned nuclear generating stations. Agreement has been reached with local municipalities for OPG to develop the L&ILW DGR on lands adjacent to the WWMF in Kincardine, Ontario. The environmental effects of the proposed L&ILW DGR were examined by the CNSC and Canadian Environmental Assessment Agency (CEAA)-appointed Joint Review Panel (JRP) to meet the requirements of the *Canadian Environmental Assessment Act*. The JRP submitted its report on the EA to the federal Minister of Environment in May 2015, concluding that, given mitigation, there is unlikely to be significant environmental impact from the project and recommending that the Minister approve the EA. In December 2016, at the request of the federal Minister of Environment and Climate Change, OPG submitted additional information on certain aspects of the EA, including information related to alternate locations for the project. Following its review of OPG's submission and a period of public comment, the CEAA requested further information that OPG subsequently provided in May 2017. In June 2017, the CEAA notified OPG that it had sufficient and adequate information to proceed with the next step of the environmental assessment process and advised that a draft report and updated terms and conditions would be prepared for public review.

On August 21, 2017, the federal Minister of Environment and Climate Change requested OPG to update its analysis of potential cumulative effects of the project on the Saugeen Ojibway Nation's (SON) physical and cultural heritage, including a description of the potential effects of the project on the Nation's spiritual and cultural connection to the land, taking into account the results of the SON Community Process. OPG is working closely with the SON to formulate a response to the information request.

The L&ILW DGR at the WWMF site remains OPG's preferred solution for the safe long-term management of the L&ILW. The in-service date of the L&ILW DGR is expected to be approximately six to seven years from the start of construction.

Financial Strength

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

- Increasing revenue, reducing costs and achieving appropriate return
- Ensuring availability of cost effective funding for operational needs, generation development projects and other business opportunities, and long-term obligations
- Pursuing opportunities to expand the existing core business and capitalize on new growth paths
- Managing risks, which is discussed in the section, *Risk Management*.

Increasing Revenue, Reducing Costs and Achieving Appropriate Return

In line with its commercial mandate, OPG is focused on increasing revenue and net income and achieving an appropriate rate of return on the Shareholder's investment, while taking into account the impact on Ontario electricity customers by seeking further efficiencies in the Company's cost structure.

For the regulated operations, achievement of the above objectives is largely dependent on outcomes of rate applications to the OEB and growth of the asset base earning a return as part of the regulated prices.

With respect to rate application outcomes, OPG has been focused on demonstrating in its rate applications that the costs required to operate and invest in the assets are reasonable and being prudently incurred, and should be fully recovered, and that the Shareholder's investment in these assets should earn an appropriate rate of return. While the OEB's decision on OPG's 2017-2021 application for new regulated prices reduced OPG's forecasted costs used to set new regulated prices, the decision will result in a substantial increase in revenue and net income compared to existing regulated prices. The existing base regulated prices were set in 2014 to allow the Company to recover its approved nuclear costs over a higher nuclear production volume, based on the 2014 and 2015 outage profile that did not include a Darlington refurbishment outage.

The OEB's decision to reduce recovery of OPG's forecasted cost levels, including through the use of stretch factors under an incentive rate-making model, will negatively impact OPG's ability to earn an appropriate return on the Shareholder's investment in the regulated assets. To improve the financial strength of the regulated operations, OPG will continue to focus on optimizing operational performance and outage plans across the generating fleet and on pursuing further efficiency improvements in the Company's cost structure and operating model. OPG's cost and productivity improvement strategies are discussed further in the section, *Core Business, Strategy and Outlook* under the heading, *Operational Excellence – Improving Efficiency and Reducing Costs*.

OPG continues to invest in the regulated asset base, with the Darlington Refurbishment project being the single largest such capital investment. In its decision on OPG's 2017-2021 application for new regulated prices, the OEB has allowed inclusion of a total of $5.5 billion in Darlington Refurbishment in-service capital additions by 2021, including pre-requisite projects other than HWSF and including in-service amounts upon planned return to service of Unit 2 in the first quarter of 2020. Once in-service, these assets will attract a return on equity of approximately 8.8 percent during the 2017-2021 period set by the OEB, based on a deemed capital structure of 45 percent equity and 51 percent debt. The average OEB-approved cost of deemed debt for the 2017-2021 period is approximately 4.6 percent. OPG also continues to pursue an extensive capital program across its regulated hydroelectric operations that includes expansion, redevelopment and life extension of the generating facilities, where economic. These renewable assets have long service lives and, with either maintenance efforts or rebuilding, will continue to supply electricity for the foreseeable future. The OEB's decision on OPG's application for new regulated prices is discussed further in the section, *Highlights* under the heading, *Recent Developments*.

For generation assets that do not form part of the assets regulated by the OEB, OPG's strategy has been to secure appropriate long-term revenue arrangements. In line with this strategy, virtually all of OPG's non-regulated operating facilities and assets under construction are subject to long-term ESAs or other long-term contracts with the IESO. This includes the Peter Sutherland Sr. GS, which was placed in service and began receiving contracted revenue under a hydroelectric ESA as of March 31, 2017. The Peter Sutherland Sr. GS ESA expires in 2067.

OPG's capital structure currently reflects lower levels of debt than the deemed capital structure reflected in the Company's existing regulated prices and maintained by the OEB's December 2017 decision on new regulated prices. OPG continues to evaluate strategies to enhance Shareholder returns by optimizing the Company's capital structure through better alignment with the deemed capital structure, taking into account the overall financial strength of the Company and the potential impact on the Company's investment grade credit rating.

Ensuring Availability of Cost Effective Funding

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

In April 2017, DBRS Limited (DBRS) re-affirmed the long-term credit rating on OPG's debt at 'A (low)' and OPG's commercial paper rating at 'R-1 (low)'. All ratings from DBRS have a stable outlook. In July 2017, S&P Global

Ratings (S&P) re-affirmed OPG's long-term credit rating at 'BBB+' with a stable outlook. S&P's commercial paper rating for OPG is 'A-1 (low)'.

OPG intends to continue to access the capital markets, where appropriate, to obtain cost effective financing for future generation development projects. The Company continues to evaluate arrangements that would appropriately support its financing needs, its capital expenditure programs, its financing of OPG's subordinated debt investment in the Trust, and the Trust's acquisition of Investment Interest from the IESO. OPG's liquidity and capital resources are discussed in the section, Liquidity and Capital Resources.

<u>Building Our Business</u>

Through pursuit of commercial-based opportunities to expand its business, OPG strives to be a leader in the North American transition toward a low carbon future while maintaining and expanding the Company's scale and energy industry leadership. This strategy considers the Company's financial position and anticipated future changes in the generating fleet, including the eventual end of Pickering commercial operations. The strategy is also informed by industry, technological, environmental, social, and economic external factors. Opportunities are evaluated using financial and risk-based analyses as well as strategic considerations.

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

OPG also actively seeks to expand beyond its core generation business through investments in innovation and emergent low-carbon technologies, including selective solar generation, nuclear innovation, energy storage, distributed generation, electric vehicle infrastructure and other development. Additionally, OPG continues to consider potential paths to extend its business through broader electricity sector opportunities, within and outside Ontario. Business expansions opportunities may be pursued in partnership with other commercial entities where appropriate synergies exist and are aligned with OPG's business objectives.

Social Licence

As the largest electricity generator in Ontario with diverse operations across the province, OPG holds itself accountable to the public and its employees, and continues to focus on maintaining public trust. OPG is committed to maintaining high standards of public safety and corporate citizenship, including environmental stewardship, transparency, community engagement, and Indigenous relations. OPG works to maintain public trust with stakeholders by engaging site communities, sharing information, and being transparent about performance. In addition, OPG's operations are subject to extensive regulatory oversight, with public participation, by the CNSC, the OEB, and other bodies. OPG's commitment to safety is discussed in the section, *Core Business, Strategy, and Outlook* under the heading, *Workplace and Public Safety*.

OPG is focused on building long-term, mutually beneficial working relationships with Indigenous communities, businesses and organizations across Ontario, and continues to support procurement, employment and educational opportunities with its Indigenous community partners. The Company seeks to establish these relationships based on a foundation of respect for the languages, customs, and political, social and cultural organizations of the Indigenous communities.

OPG's commitment in this area includes pursuing generation-related development partnerships on the basis of long-term commercial arrangements, such as the construction of the Peter Sutherland Sr. GS in partnership with Taykwa Tagamou Nation and the development of the Nanticoke solar facility in partnership with the Six Nations of the Grand

River. During 2017, OPG also continued to engage with Indigenous communities regarding the Company's nuclear waste management operations, through regularly scheduled meetings and ongoing dialogue in connection with OPG's proposed L&ILW DGR, the re-licensing of the PWMF and the WWMF, and the Pickering GS re-licensing. Engagement was also conducted with First Nations in southwestern Ontario regarding the demolition of the Lambton and Nanticoke generating stations and with the Mississaugas of New Credit regarding the Shareholder-directed sale of the former Lakeview GS site.

OPG is also committed to improving Indigenous access to procurement and employment opportunities, including increasing the profile of the nuclear generation industry in Indigenous communities. In 2017, OPG launched an Indigenous Business Engagement (IBE) Initiative. The purpose of this initiative is to increase access to procurement opportunities for Indigenous businesses interested in supplying materials and services to OPG. The IBE Initiative is based on a strategy that will identify opportunities in contracts, scopes of work and business plans for potential Indigenous business engagement; include criteria related to suppliers' ability to engage or partner with Indigenous people or businesses in assessing procurement proposals; and invest in relationships with Indigenous communities by increasing outreach efforts to enhance understanding of how to do business with OPG. OPG has been engaging with Indigenous businesses and communities as well as its suppliers to promote the IBE Initiative, including the Mohawk Council of Akwesasne as well as the Williams Treaties First Nations, located proximate to the Pickering and Darlington nuclear generating stations.

OPG has been actively developing recruitment plans targeting Indigenous peoples. As part of this initiative, during the fourth quarter of 2017, OPG participated in several Indigenous-specific career fairs, hosted a Day in the Trades event for Indigenous students and job seekers as part of an open house at the Darlington Energy Centre, and approved plans aimed at increasing the number of Indigenous apprentices as part of the nuclear operations' recruitment program.

OPG also contributes to the well-being of its host communities through the Company's Corporate Citizenship Program (CCP), which supports charitable and non-profit grassroots initiatives in the areas of environment, education, and community involvement, including support for Indigenous initiatives. In 2017, OPG's CCP provided support to over 800 initiatives, of which 84 were Indigenous.

OPG has a strategy to help position the Company as a leader in transportation electrification in the province. The strategy aims to leverage the Company's clean, reliable and cost-effective electricity to power transportation, capitalize on future commercial growth opportunities, and enhance the Company's social licence. OPG is pursuing initiatives to increase the use of electric vehicles within its operations, and is assessing vehicle grid integration and hydrogen applications for the transportation sector. Ontario's climate change plan aims for electric and hydrogen passenger vehicles to represent five percent of new vehicle sales in the province by 2020.

As part of its commitment to help de-carbonize Ontario's transportation sector, OPG is a founding sponsor of Plug'n Drive, a non-profit organization working to accelerate the adoption of electric vehicles and to maximize their environmental and economic benefits. In May 2017, Plug'n Drive announced the opening of the world's first experiential learning facility dedicated to electric vehicle education and awareness, with OPG sponsoring the Centre's training facility.

Further details regarding OPG's commitment to sustainable development, including information regarding the Company's environmental and social performance and initiatives, are provided in OPG's 2016 Sustainability Report available on the Company's website at www.opg.com.

Outlook

The financial performance of OPG's regulated operations is driven, in large part, by the outcome of applications for regulated prices to the OEB. Subject to the OEB's issuance of the final payment amounts order expected in the first half of 2018, the OEB's December 2017 decision on OPG's application for new regulated prices provides substantial price certainty for the regulated business for the 2017 to 2021 period. During this period, OPG will continue to focus on optimizing operational performance and outage plans across the generating fleet and on pursuing further efficiency improvements in the Company's cost structure and operating model.

The OEB's decision established June 1, 2017 as the effective date of the new regulated prices, which negatively affected OPG's net income and ROE Excluding AOCI in 2017 relative to OPG's requested effective date of January 1, 2017. The full-year effect of new regulated prices in 2018 is expected to contribute to an improvement in net income and ROE Excluding AOCI over the 2017 results.

Subject to the OEB's final determination on nuclear rate smoothing as part of the payment amounts order process, OPG expects an improvement in cash flow from operating activities in 2018, compared to 2017. This will reflect OPG beginning to receive revenue from the IESO based on new regulated prices following the OEB's implementation of these prices, expected in the first half of 2018. Additionally, the Fair Hydro Trust segment will begin to contribute positive cash flow from operating activities in 2018. OPG expects to continue to have the necessary financial capacity and sufficient access to cost effective financing sources to continue to fund its capital requirements and other disbursements, including the financing of the Fair Hydro Trust.

Several OEB-authorized regulatory variance and deferral accounts currently in place contribute to reducing the relative variability of the Company's net income and ROE Excluding AOCI. Among others, the regulatory accounts include those related to the revenue impact of variability in water flows and forgone production due to SBG conditions at the regulated hydroelectric stations. As there are no variance or deferral accounts in place related to the impact of generation performance of the nuclear stations on revenue from base regulated prices, the Regulated – Hydroelectric segment generally is expected to produce overall more predictable earnings. OPG continues to operate and maintain its nuclear facilities with a view to optimize their performance and availability, while focusing on improving the overall reliability and predictability of the fleet.

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

Lower nuclear generation due to the Darlington Refurbishment outages will continue, as planned, to negatively impact the Enterprise TGC and Nuclear TGC metrics for the duration of the refurbishment project. Lower hydroelectric generation due to outages related to various refurbishment and operational projects may negatively impact Enterprise TGC and Hydroelectric TGC for the duration of these projects. Variability in sustaining capital investment expenditures and nuclear outage profile may also impact TGC metrics in future periods.

OPG's total forecast capital expenditures for the 2018 year are approximately $2.1 billion. **[CONFIRM]** This includes amounts for the Darlington Refurbishment project, hydroelectric and other development projects including the Ranney Falls GS redevelopment and construction of the Nanticoke solar facility, and sustaining capital investments across the generating fleet. OPG's major projects are discussed in the section, *Project Excellence*.

In addition to the operating and financial performance of the electricity generation business, OPG's results are affected by the earnings on the Nuclear Segregated Funds, which are reported in the Regulated – Nuclear Waste Management segment. While the Nuclear Segregated Funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, the rates of return earned in a given period can be subject to various external factors including financial market conditions and, for the portion of the Used Fuel Segregated Fund guaranteed by the Province under the ONFA, changes in the Ontario consumer price index (CPI). In the near term, these factors can be volatile and cause fluctuations in the Company's income. This volatility is partially mitigated by the impact of the OEB-authorized Bruce Lease Net Revenues Variance Account and the funded status of the two segregated funds, discussed below.

As OPG does not have the right to withdraw surplus amounts from the Nuclear Segregated Funds, OPG limits the amount of Nuclear Segregated Funds assets reported on the balance sheet to the present value of the underlying life cycle funding liabilities per the most recently approved ONFA Reference Plan. This reduces the volatility of earnings on the Nuclear Segregated Funds reflected in net income when the funds are in a fully funded or overfunded position. As at December 31, 2017, the Decommissioning Segregated Fund was overfunded by approximately 27 percent, and the Used Fuel Segregated Fund was marginally overfunded, by less than one percent, based on the 2017 ONFA Reference Plan. Variability in asset performance due to volatility inherent in financial markets and changes in Ontario CPI, or changes in funding liability estimates, may result in either or both funds becoming underfunded in the future.

OPG's results are also affected by the earnings from the Fair Hydro Trust segment. Management expects an increase in 2018 earnings from the segment, primarily related to interest income from OPG's investment in subordinated debt of the Trust. OPG's involvement with the Fair Hydro Plan over time is expected to put downward pressure on ROE Excluding AOCI as a result of increases in shareholder's equity through future issuances of Class A common shares to partially fund OPG's subordinated debt investment in the Trust.

KEY OPERATING AND FINANCIAL PERFORMANCE INDICATORS

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

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

Enterprise Total Generating Cost per Megawatt-Hour

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

Nuclear Total Generating Cost per Megawatt-Hour

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

Hydroelectric Total Generating Cost per Megawatt-Hour

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

Nuclear Unit Capability Factor

OPG's nuclear stations are baseload facilities that are not designed for fluctuating production levels to meet peaking demand. The nuclear Unit Capability Factor is a key measure of nuclear station performance. It measures the amount of energy that the unit(s) generated over a period of time, adjusted for externally imposed constraints such as transmission or demand limitations, as a percentage of the amount of energy that would have been produced over the same period had the unit(s) produced maximum generation. Capability factors are primarily affected by planned and unplanned outages. By industry definition, capability factors exclude production losses beyond plant management's control, such as grid-related unavailability. The nuclear Unit Capability Factor also excludes unit(s) during the period in which they are undergoing refurbishment. Accordingly, Unit 2 of the Darlington GS is excluded from the measure effective October 15, 2016, when the unit was taken offline as part of the Darlington Refurbishment project.

Hydroelectric Availability

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

Thermal Equivalent Forced Outage Rate

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

Return on Common Equity Excluding Accumulated Other Comprehensive Income

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

Funds from Operations Adjusted Interest Coverage

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

Other Key Indicators

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

BUSINESS SEGMENTS

Effective in the fourth quarter of 2017, OPG has the following six reportable business segments:

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

Regulated – Nuclear Generation Segment

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

Regulated – Nuclear Waste Management Segment

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

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

The Regulated – Nuclear Waste Management segment is considered rate regulated because OPG's costs associated with the Nuclear Liabilities are included in the OEB's determination of regulated prices for production from the Pickering and Darlington nuclear generating stations.

Regulated – Hydroelectric Segment

OPG's Regulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from most of the Company's hydroelectric generating stations. The business segment comprises the results of 54 hydroelectric generation stations across a number of major river systems in the province.

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

Contracted Generation Portfolio Segment

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

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

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

Services, Trading, and Other Non-Generation Segment

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

In addition, the segment includes revenue from real estate rentals and non-regulated services, gains or losses on disposition of non-regulated real estate assets, costs associated with non-regulated business development activities, and costs related to the Lambton GS and Nanticoke GS sites.

Fair Hydro Trust Segment

The Fair Hydro Trust segment is a non-generation segment that is not subject to rate regulation. It includes OPG's earnings from the Fair Hydro Trust, which includes the financial results of the Trust, as well as income related to OPG's role as Financial Services Manager of the Fair Hydro Trust and holder of subordinated debt issued by the Trust. Earnings include interest income from OPG's investment in subordinated debt of the Trust of up to 49 percent of the Trust's total outstanding debt, recovery of third-party costs and fees for financial management and ongoing administration services, partially offset by interest costs on debt issued by OPG to fund five percent of the subordinated investment in the Trust, incurred third-party costs, and other incurred costs related to the management and administration of the Trust.

Commented [BJ(3]: Explanation of what is meant by "earnings" from the Trust – what would be considered within this envelope of earnings? is OPG expected to return this to ratepayers?

DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

Regulated – Nuclear Generation Segment

(millions of dollars)	**2017**	**2016**
Revenue	**3,095**	3,481
Fuel expense	**284**	315
Gross margin	**2,811**	3,166
Operations, maintenance and administration	**2,293**	2,210
Depreciation and amortization	**431**	925
Property taxes	**26**	26
Income before other losses, interest, and income taxes	**61**	5
Other gains	**4**	1
Income before interest and income taxes	**57**	4

Income before interest and income taxes from the segment increased by $53 million in 2017, compared to 2016. Segment earnings were favourably affected by the OEB's decision on OPG's application for new regulated prices issued in December 2017 with a retrospective effective date of June 1, 2017. The revenue increase of approximately $465 million in relation to the June 1, 2017 to December 31, 2017 period resulting from the OEB's decision was recorded as an increase in net regulatory assets in the fourth quarter of 2017. This revenue increase was based on new regulated prices for that period proposed in OPG's January 2018 submission to the OEB based on the findings in the decision and is net of a regulatory liability recognized in relation to OPG's nuclear rate smoothing proposal in that submission.

Segment earnings were unfavourably affected by a reduction in electricity generation of 4.9 TWh in 2017, compared to 2016. This reduced revenue by approximately $285 million, partially offset by a decrease in fuel expense. The lower electricity generation was primarily due to the ongoing Unit 2 refurbishment outage at the Darlington GS that began in October 2016, partially offset by the higher electricity generation from the Pickering GS. The income impact of OEB-approved regulatory accounts also contributed to the decrease in income for the year.

The increase in OM&A expenses of $83 million in 2017, compared to 2016, reflected planned expenditures related to the major maintenance activities and higher project expenditures occurring at the nuclear stations. Depreciation and amortization expenses, excluding amortization expense related to regulatory account balances, increased by $22 million primarily due to new assets in service in 2017.

The expiry of a nuclear rate rider for the recovery of OEB-approved balances in regulatory accounts on December 31, 2016 contributed to the decrease in segment revenue in 2017, compared to 2016, but was largely offset by a decrease in amortization expense related to these balances.

The Unit Capability Factors for the Darlington GS and Pickering GS for 2017 and 2016 were as follows:

	2017	2016
Unit Capability Factor *(%)* [1]		
Darlington GS	**85.2**	89.5
Pickering GS	**80.0**	75.2

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

The lower Unit Capability Factor at the Darlington GS in 2017, compared to 2016, reflected the higher number of planned outage days in 2017, largely driven by constraints related to the transition of the station's operating units toward refurbishment.

The increase in the Unit Capability Factor at the Pickering GS in 2017, compared to 2016, was primarily due to outage cycle optimization, favourable unit conditions and execution of planned outage work resulting in a lower number of unplanned and planned outage days at the station compared to 2016.

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

Regulated – Nuclear Waste Management Segment

(millions of dollars)	2017	2016
Revenue	**121**	138
Operations, maintenance and administration	**129**	146
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	**943**	912
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(801)**	(746)
Loss before interest and income taxes	**(150)**	(174)

Earnings from the segment improved by $24 million in 2017 compared to 2016. The improvement was primarily due to higher earnings from the Nuclear Segregated Funds, partially offset by an increase in accretion expense on the Nuclear Liabilities. Accretion expense represents a financing cost due to the increase in the present value of the underlying liabilities with the passage of time.

The year-over-year increase in the earnings from the funds was primarily due to a reduction in the earnings recorded in the fourth quarter of 2016 to reflect an accounting adjustment to limit Nuclear Segregated Funds assets reported on the consolidated balance sheet to the underlying funding liabilities based on an updated ONFA reference plan approved by the Province. The updated ONFA reference plan resulted in a reduction in the funding liabilities. As both the Decommissioning Segregated Fund and the Used Fuel Fund have been in an overfunded position since the beginning of 2017, the earnings on the funds recognized in net income during the year reflected the growth rate in the present value of the funding liabilities and were not impacted by market returns and the rate of return guaranteed by the Province for the portion of the Used Fuel Segregated Fund. Further details on the accounting for the Nuclear Segregated Funds can be found in the section, *Critical Accounting Policies and Estimates* under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

The year-over-year increase in accretion on nuclear fixed removal and nuclear waste management liabilities in 2017, compared to 2016, was primarily due to the impact on accretion expense related to the increase in asset retirement obligation associated with the life extension of the Bruce nuclear assets from the agreement executed between Bruce Power and the Province in late 2015. This increase was offset in 2016 due to the Bruce Lease Net Revenues Variance Account but is reflected in accretion with the resetting of base rates in 2017. This increase was partially offset by the impact of the decrease in Nuclear Liabilities to reflect an updated estimate as part of the ONFA reference plan update process.

As of December 31, 2016, OPG recorded a decrease of approximately $1,570 million to the Nuclear Liabilities and associated asset retirement costs capitalized as part of the carrying value of the nuclear generating stations to reflect an updated estimate of OPG's obligations for nuclear waste management and nuclear facilities decommissioning determined as part of the ONFA reference plan update process. The resulting year-over-year decreases in accretion expense recorded in the Regulated – Nuclear Waste Management segment and depreciation and fuel expenses recorded in the Regulated – Nuclear Generation segment were offset by the impact of the OEB-authorized Bruce Lease Net Revenues Variance Account and Nuclear Liability Deferral Account recorded in the corresponding segments for the period up to May 31, 2017, and by the retrospective revenue impact of the OEB's decision for the period from June 1, 2017 to December 31, 2017 recorded in the Regulated – Nuclear Generation segment.

Regulated – Hydroelectric Segment

(millions of dollars)	**2017**	**2016**
Revenue [1]	**1,436**	1,527
Fuel expense	**351**	353
Gross margin	**1,085**	1,174
Operations, maintenance and administration	**330**	325
Depreciation and amortization	**139**	225
Property tax	**1**	1
Income before other gains, interest and income taxes	**615**	623
Other losses (gains)	**1**	(19)
Income before interest and income taxes	**614**	642

[1] During 2017 and 2016, the Regulated – Hydroelectric segment revenue included incentive payments of $12 million and $14 million, respectively, related to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The decrease in income before interest and income taxes of $28 million in 2017, compared to 2016, was primarily due to a gain of $22 million recognized during the first quarter of 2016 to reflect the OEB's January 2016 decision reversing a portion of an earlier capital cost disallowance related to the Niagara Tunnel project expenditures, in response to a motion by OPG. The income impact of OEB-approved regulatory accounts and higher OM&A expenses also contributed to the decrease in income for the year. The higher OM&A expenses were primarily related to overhaul work and civil repairs completed during the year.

These factors were partially offset by the recognition of a revenue increase of approximately $15 million in the fourth quarter of 2017 to reflect the OEB's decision on OPG's application for new regulated prices. This incremental revenue was in relation to the June 1, 2017 to December 31, 2017 period based on the June 1, 2017 retrospective effective date of the new regulated prices and was recorded as an increase to regulatory assets.

The decrease in revenue from the segment for the year ended December 31, 2017, compared to the same period in 2016, was largely due to the expiry of an OEB-authorized hydroelectric rate rider on December 31, 2016. As the rate rider allowed for the recovery of approved balances in OEB-authorized regulatory accounts, this decrease in revenue was largely offset by lower amortization expense related to these balances.

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

	2017	2016
Hydroelectric Availability *(%)*	**88.0**	89.0

The Hydroelectric Availability decreased during 2017, compared to 2016, primarily due to a higher number of unplanned outage days at the Northwestern Ontario, Niagara, and Eastern Ontario regions' hydroelectric stations, partially offset by higher availability from the Sir Adam Beck Pump GS due to a higher number of planned outages days in 2016 as a result of the refurbishment of the station's reservoir.

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

Contracted Generation Portfolio Segment

(millions of dollars)	2017	2016
Revenue	**579**	573
Fuel expense	**53**	58
Gross margin	**526**	515
Operations, maintenance and administration	**169**	178
Depreciation and amortization	**79**	75
Accretion on fixed asset removal liabilities	**9**	9
Property taxes	**7**	7
Income from investments subject to significant influence	**(38)**	(37)
Income before other losses, interest, and income taxes	**300**	283
Other losses	**-**	1
Income before interest and income taxes	**300**	282

Income before interest and income taxes increased by $18 million during 2017, compared to 2016. The increase in earnings primarily resulted from revenues from the Peter Sutherland Sr. GS that was placed in-service at the end of the first quarter of 2017 and lower OM&A expenses, partially offset by lower revenues from the Lower Mattagami River hydroelectric generating stations and Atikokan GS. The lower OM&A expenses were mainly due to the prospective adoption of the full yield curve approach to the estimation of the service and interest cost components of pension and OPEB costs starting in 2017.

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

	2017	2016
Hydroelectric Availability *(%)*	**74.6**	77.3
Thermal EFOR *(%)*	**2.4**	1.6

Lower Hydroelectric Availability during 2017, compared to 2016, was primarily due to an increase in the number of planned outage days at the Lower Mattagami River hydroelectric generating stations.

The higher thermal EFOR in 2017, compared to 2016, was primarily due to a higher number of unplanned outage days at a Lennox GS unit as a result of a transmission outage and a generator-related outage in 2017.

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

Services, Trading, and Other Non-Generation Segment

(millions of dollars)	**2017**	**2016**
Revenue	**43**	68
Fuel expense	**1**	1
Gross margin	**42**	67
Operations, maintenance and administration	**18**	22
Depreciation and amortization	**30**	32
Accretion on fixed asset removal liabilities	**8**	8
Property taxes	**6**	12
Restructuring	**-**	6
Loss before other gain, interest, and income taxes	**(20)**	(13)
Other gains	**(384)**	-
Income before interest and income taxes	**364**	(13)

Segment earnings improved by $377 million in 2017 compared to 2016. The increase in earnings mainly reflected the gain on the sale of OPG's head office premises and associated parking facility recorded during the second quarter of 2017 of $283 million, which is net of tax effects of $95 million, partially offset by a decrease in rental revenue due to the sale of the head office premises.

The year-over-year decrease in OM&A expenses in 2017 reflected higher expenses incurred in 2016 prior to the decision taken in the fourth quarter of 2016 to proceed with the decommissioning of the Lambton GS, largely offset by a higher write-off of previously incurred project expenditures in 2017.

During the fourth quarter of 2017, OPG recorded $12 million in Other gains related to the revaluation of the asset retirement obligations for Lambton and Nanticoke generating stations in line with the current decommissioning plans and cost estimates. During each of 2017 and 2016, OPG recorded a charge against earnings to adjust the scrap value estimate for the Lambton GS, as a reduction to Other gains.

Fair Hydro Trust Segment

(millions of dollars)	**2017**
Operations, maintenance and administration	**1**
Earnings from Fair Hydro Trust	**(1)**
Income before interest and income taxes	**-**

Commented [BJ(4]: This was a wash ie equal expenditure to income? Can this be explained?

The Fair Hydro Trust was established on December 20, 2017. The Fair Hydro Trust segment includes the revenue and expenses related to OPG's role as Financial Services Manager of the Fair Hydro Trust and holder of subordinated debt issued by the Trust, including the financial results of the Trust. Earnings from Fair Hydro Trust were $1 million in 2017, primarily due to net interest income earned on OPG's subordinated debt investment for the 11-day period following the acquisition of the first tranche of Investment Interest from the IESO on December 21, 2017. The earnings were offset by an allocation of OM&A expenses for labour costs relating to OPG's employees that are not exclusively dedicated to the segment but who provided services to set up the Trust during the year. Pursuant to the general regulation of the Fair Hydro Act, such labour costs are not recoverable as part of OPG's fees for 2017. Refer to the section, *Recent Developments* under the heading, *Ontario's Fair Hydro Plan* and the section, *Business Segments* under the heading, *Fair Hydro Trust Segment* for further details on the Fair Hydro Trust.

Commented [BJ(5]: Trying to understand this one. Did OPG staff receive bonuses/additional salary to support the set-up of the Fair Hydro Trust?

LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the Ontario Electricity Financial Corporation (OEFC), long-term corporate debt, including public debt offerings and notes payable to the OEFC, private placement project financing, and equity issuance. These sources are used for multiple purposes including: to invest in plants and technologies, to undertake major projects, to fund long-term obligations such as contributions to the pension fund and the Nuclear Segregated Funds, to make payments under the OPEB plans, to fund expenditures on Nuclear Liabilities not eligible for reimbursement from the Nuclear Segregated Funds, and to service and repay long-term debt, to provide general working capital, and to fund a portion of OPG's subordinated debt investment in the Fair Hydro Trust and the Trust's acquisition of Investment Interest from the IESO.

Changes in cash and cash equivalents for 2017 and 2016 were as follows:

(millions of dollars)	**2017**	**2016**
Cash and cash equivalents, beginning of period	**186**	464
Cash flow provided by operating activities	**944**	1,817
Cash flow used in investing activities	**(2,478)**	(1,919)
Cash flow provided by (used in) financing activities	**1,582**	(176)
Net increase (decrease) in cash and cash equivalents	**48**	(278)
Cash and cash equivalents, end of period	**234**	186

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

Investing Activities

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

Cash flow used in investing activities in 2017 increased by $834 million compared to 2016. The increase in net cash flow used in investing activities was primarily due to the Trust's acquisition of the first tranche of Investment Interest from the IESO in the amount of approximately $1.18 billion in December 2017 and higher expenditures on the Darlington Refurbishment project in 2017.

The increase in net cash flow used in investing activities was partially offset by the receipt of proceeds from the sale of OPG's head office premises and associated parking facility in 2017 and the acquisition of nine million common shares of Hydro One Limited (Hydro One) in 2016. OPG acquired the Hydro One shares for investment purposes, to mitigate the risk of future price volatility related to the Company's future share delivery obligations under the current collective agreements with the Power Workers' Union (PWU) and The Society of Energy Professionals (The Society).

Financing Activities

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. In the second quarter of 2017, OPG renewed and extended the expiry date of both tranches from May 2021 to May 2022. There were no amounts outstanding under the bank credit facility as at December 31, 2017.

There was $100 million of commercial paper outstanding under OPG's commercial paper program as at December 31, 2017.

As at December 31, 2017, OPG also maintained $25 million of short-term, uncommitted overdraft facilities, and a further $468 million of short-term, uncommitted credit facilities which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at December 31, 2017, a total of $390 million of Letters of Credit had been issued under these facilities. This included $353 million for the supplementary pension plans, $36 million for general corporate purposes, and $1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust, expiring on November 30, 2018. The maximum amount of co-ownership interest that can be sold under this agreement is $150 million. As at December 31, 2017, no borrowings were issued under this agreement and there were Letters of Credit outstanding under this agreement of $150 million, which were issued in support of OPG's supplementary pension plans.

As at December 31, 2017, Lower Mattagami Energy Limited Partnership (LME) maintained a $400 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility consists of a $300 million tranche maturing in August 2022 and a $100 million tranche maturing in August 2018. As at December 31, 2017, there was $160 million commercial paper outstanding under LME's commercial paper program. A letter of credit of $55 million was issued in July 2017 and remains outstanding as at December 31, 2017 under the $300 million tranche of LME's credit facility.

In June 2016, OPG entered into a $700 million general corporate credit facility agreement with the OEFC, with an expiry date of December 31, 2017. During 2017, the agreement was amended to increase the credit facility to $2,350 million and to extend its expiry date to December 31, 2018. As at December 31, 2017, there were outstanding long-term borrowings of $800 million under this credit facility.

In February 2017, OPG issued senior notes payable to the OEFC totalling $200 million and maturing in February 2047. The effective interest rate and coupon interest rate of these notes was 4.12 percent. In June 2017, OPG issued senior notes payable to the OEFC totalling $100 million and maturing in June 2047. The effective interest rate and coupon interest rate of these notes was 3.65 percent. In August 2017, OPG issued senior notes payable to the OEFC totalling $100 million and maturing in August 2047. The effective interest rate and coupon interest rate of these notes was 3.86 percent. In September 2017, OPG issued senior notes payable to the OEFC totalling $400 million and maturing in September 2047. The effective interest rate and coupon interest rate of these notes was 4.07 percent.

In October 2017, OPG issued $500 million of senior notes payable under a Medium Term Note Program. The notes bear a coupon interest rate of 3.32 percent and an effective rate of 3.43 percent, payable semi-annually until maturity on October 4, 2027. The offering was made under OPG's $2 billion short form base shelf prospectus dated September 12, 2017. The net proceeds will be used for general corporate purposes.

In December 2017, the Fair Hydro Trust entered into an $800 million revolving warehouse facility agreement with an expiry date of December 21, 2019. As at December 31, 2017, there were outstanding senior notes of $601 million under this credit facility, which were used to finance 51 percent of the Trust's funding requirement for the acquisition of the first tranche of Investment Interest from the IESO in December 2017.

In February 2018, the Trust issued $500 million of senior notes payable with a coupon interest rate of 3.36 percent and an effective interest rate of 3.42 percent, payable semi-annually until maturity on May 15, 2033. The proceeds were used to repay the majority of the outstanding balance of the revolving warehouse facility issued by the Trust in December 2017. By the end of the first quarter of 2018, the Trust is expected to acquire another tranche of Investment Interest from the IESO, which it expects to fund using its revolving warehouse facility.

As at December 31, 2017, OPG's long-term debt outstanding was $5,735 million, including $398 million due within one year and excluding Fair Hydro Trust's senior debt included in OPG's consolidated balance sheets. The Fair Hydro Trust's senior debt outstanding was $601 million as at December 31, 2017.

Contractual Obligations

OPG's contractual obligations as at December 31, 2017, are as follows:

(millions of dollars)	**2018**	**2019**	**2020**	**2021**	**2022**	**Thereafter**	**Total**
Fuel supply agreements	158	125	115	88	67	67	620
Contributions to the OPG registered pension plan [1]	215	219	-	-	-	-	434
OPG long-term debt repayment	398	368	663	413	172	3,721	5,735
Interest on OPG long-term debt	244	226	204	175	161	3,006	4,016
Fair Hydro Trust senior debt repayment [2]	-	601	-	-	-	-	601
Interest on Fair Hydro Trust senior debt	15	15	-	-	-	-	30
Commitments related to Darlington Refurbishment project [3]	473	-	-	-	-	-	473
Commitments related to Ranney Falls GS project	29	5	-	-	-	-	34
Operating licences	40	41	24	28	28	87	248
Operating lease obligations	28	24	24	22	22	79	199
Unconditional purchase obligations	59	58	56	5	-	-	178
Accounts payable and accrued charges	957	8	-	-	-	16	981
Other	57	30	2	1	1	64	155
Total	2,673	1,720	1,088	732	451	7,040	13,704

[1] The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2017. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2020. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2019 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

[2] The notes were issued by the Fair Hydro Trust under an $800 million two-year revolving warehouse facility in December 2017. In February 2018, the Trust issued $500 million of senior notes payable to repay the majority of the outstanding balance of the revolving warehouse facility.

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

Other Commitments

Collective Agreements

As of December 31, 2017, OPG had approximately 9,200 regular employees. Most of OPG's regular employees are represented by two unions:

- The PWU – This union represents approximately 4,850 OPG employees or approximately 53 percent of OPG's regular workforce as at December 31, 2017. Union membership includes operators, technicians, skilled trades, clerical, and security personnel. The current collective agreement between OPG and the PWU has a three-year term, expiring on March 31, 2018. Negotiations for a new labour agreement with the PWU are underway. **[MONITOR]**
- The Society – This union represents approximately 3,250 OPG employees or approximately 35 percent of OPG's regular workforce as at December 31, 2017. Union membership includes supervisors, professional engineers, scientists, and other professionals. The current collective agreement between OPG and The Society has a three-year term, expiring on December 31, 2018.

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

BALANCE SHEET HIGHLIGHTS

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

(millions of dollars)	**2017**	**2016**
Property, plant and equipment – net	**21,322**	19,998
The increase was primarily due to capital expenditures on the Darlington Refurbishment project, partially offset by depreciation expense.		
Nuclear fixed asset removal and nuclear waste management funds *(current and non-current portions)*	**16,724**	15,984
The increase was primarily due to earnings on the Nuclear Segregated Funds, partially offset by reimbursement of eligible expenditures on nuclear fixed asset removal and nuclear waste management activities.		
Regulatory assets and liabilities – net *(current and non-current portions)*	**6,637**	5,545
The increase was primarily due to the addition of the Interim period revenue shortfall account, increases in the Pension & OPEB Cash Versus Accrual Differential Deferral Account and the Pension & OPEB AOCI regulatory asset. In addition, there was no amortization recorded in 2017 consistent with OPG's proposal in the Draft Payment Amounts Order filed with the OEB in January 2018.		
Long-term debt *(current and non-current portions)*	**6,319**	5,520
The increase was primarily due to the issuance of senior notes payable by the Trust to finance the acquisition of an Investment Interest in the shortfall from the rate reductions mandated by the Fair Hydro Act of $601 million, issuance of senior notes payable totaling $804 million during 2017 primarily with the OEFC, and issuance of senior notes totaling $500 million under the Medium Term Note Program. The balance is offset by the debt repayment of $1 billion in 2017.		
Fixed asset removal and nuclear waste management liabilities	**20,421**	19,484
The increase was primarily a result of accretion expense representing the increase in the present value liabilities due to the passage of time, and an increase in the estimate for the nuclear ARO of $188 million recorded in 2017, which is discussed in *Critical Accounting Policies and Estimates* under the heading, Asset Retirement *Obligation*. The increase was partially offset by expenditures on nuclear fixed asset removal and waste management activities.		
Pension liabilities	**3,423**	3,012
The increase was primarily due to the re-measurement of the liabilities at the end of 2017 reflecting lower discount rates, partially offset by the excess of actual returns on pension plan assets over interest costs on the liabilities during 2017, as discussed in the section, *Critical Accounting Policies and Estimates* under the *heading, Pension and Other Post-Employment Benefits.*		
Other post-employment benefit liabilities	**3,092**	2,897
The increase was primarily due to the remeasurement of the liabilities at the end of 2017 reflecting lower discount rates, partially offset by the updated lower per capital health care claims costs assumption as part of the 2017 actuarial valuation.		

Off-Balance Sheet Arrangements

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

Guarantees

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

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

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

Exemptive Relief for Reporting under US GAAP

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

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

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

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

Rate Regulated Accounting

The *Ontario Energy Board Act, 1998* and *Ontario Regulation 53/05* provide that OPG receives regulated prices for electricity generated from 54 hydroelectric generating stations and the Pickering and Darlington nuclear generating stations. OPG's regulated prices for these facilities are determined by the OEB.

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

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

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

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery or repayment periods.

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

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

Since November 1, 2014, the OEB has limited amounts for pension and OPEB costs included in the approved revenue requirements and regulated prices to the regulated business portion of the Company's cash expenditures for its pension and OPEB plans. The difference between actual pension and OPEB costs determined using the accrual method applied in OPG's audited consolidated financial statements and OPG's corresponding actual cash expenditures for these plans is captured in OEB-authorized Pension & OPEB Cash Versus Accrual Differential Deferral Account for future consideration. In 2017, the OEB issued a report outlining the guiding principles and policy for recovery mechanisms of pension and OPEB costs of rate regulated utilities in the Ontario electricity and natural gas sectors. The report establishes the accrual basis of accounting as the method of determining pension and OPEB amounts for rate-setting purposes, unless the OEB finds that this method does not result in just and reasonable rates in the circumstances of a particular utility. The OEB's report and the OEB's December 2017 decision on OPG's application for new regulated prices require OPG to continue to record differences between pension and OPEB accrual costs and cash payments in the existing deferral account, until such time as the OEB approves resumption of the accrual basis of recovery for OPG. The future recovery of amounts recorded in the account will be subject to this approval. Further details on the OEB's 2017 report can be found in the section, *Highlights* under the heading, *Recent Developments – OEB's Decision on OPG's Application for New Regulated Prices*.

It remains the Company's position that, taken collectively, OEB's decisions on OPG's applications for regulated prices and the OEB's 2017 report in this area do not constitute a change in the basis of OPG's rate recovery of pension and OPEB costs. The Company continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices, or in an OEB-authorized regulatory account for future recovery, as they are recognized in benefit costs. Similarly, the Company continues to believe that there is sufficient likelihood that amounts recorded in the Pension & OPEB Cash Versus Accrual Differential Deferral Account will be recovered, and consistent with the expectations set out in the OEB's December 2017 decision, plans to file an application with the OEB in 2018 requesting recovery of the account balance. Therefore, the Company continues to recognize regulatory assets for the above amounts.

See Notes 3, 5, 8, 9, and 11 of OPG's 2017 audited consolidated financial statements for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

Useful Lives of Long-Lived Assets

OPG reviews estimated station useful lives for its generating assets on a regular basis.

Nuclear Generating Stations

For the nuclear stations, this process involves reviewing major life limiting components (such as pressure tubes, feeders and steam generators) to determine an appropriate end-of-life date for the station. Useful lives are set such that, with normal and customary maintenance activities, stations are expected to be operational until such time as their life-limiting component's threshold is expected to be reached.

Hydroelectric and Thermal Generating Stations

Although there is a link between the age of a facility and the capital investment required to maintain that facility, age does not establish an upper limit on the expected useful life of hydroelectric facilities and dams. Regular maintenance and the replacement of specific components typically allow hydroelectric stations to operate for very long periods. For hydroelectric generating stations, an upper age limit of 100 years have been set.

Thermal generating stations reported in the Contracted – Generation Portfolio business segment primarily have useful lives that are in line with the term of the Energy Supply Agreements with the IESO.

Financing Receivables

Financing receivables consist of the current and irrevocable right of the Fair Hydro Trust to collect payments from Specified Consumers in the future in accordance with the Fair Hydro Act and associated general regulation. These amounts are measured at the transaction price entered into with the IESO on market terms upon acquisition and subsequently measured on an amortized cost basis. The basis of amortization follows the effective interest method.

Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

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

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

Decommissioning Segregated Fund

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

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

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

Used Fuel Segregated Fund

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

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

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

Provincial Guarantee

In accordance with the *Nuclear Safety and Control Act* (Canada), the CNSC requires OPG to have sufficient funds available to discharge its existing nuclear waste management and nuclear decommissioning obligations. The CNSC process requires the CNSC financial guarantee requirement to be updated once every five years and for OPG to provide an annual report to the CNSC on the assumptions, asset values, and resulting financial guarantee requirements. The CNSC financial guarantee requirement calculation takes into account nuclear waste expected to be generated to the end of each year.

In November 2017, the CNSC accepted OPG's proposed 2018-2022 CNSC financial guarantee requirement to be satisfied by the forecast fair market value of the Nuclear Segregated Funds without the requirement of a Provincial Guarantee for the 2018-2022 period. As required by the terms of the ONFA, the Province is committed to provide a Provincial Guarantee to the CNSC, on behalf of OPG, should there be a shortfall between the CNSC financial guarantee requirement and the fair market value of the Nuclear Segregated Funds in the 2018-2022 period, as it has done in the past. OPG pays the Province an annual guarantee fee equal to 0.5 percent of the outstanding amount, if any, of the Provincial Guarantee.

The value of the Provincial Guarantee in effect through to the end of 2017 was $1,551 million. Based on this guarantee amount, OPG paid a guarantee fee of $8 million to the Province for each of 2016 and 2017.

Pension and Other Post-Employment Benefits

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

Accounting Policy

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

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

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

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

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

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

As at December 31, 2017, the unamortized net actuarial loss and unamortized past service costs for the pension and OPEB plans totalled $4,148 million (2016 – $3,668 million). Details of the unamortized net actuarial loss and unamortized past service costs as at December 31, 2017 and 2016 are as follows:

(millions of dollars)	Registered Pension Plans 2017	Registered Pension Plans 2016	Supplementary Pension Plans 2017	Supplementary Pension Plans 2016	Other Post-Employment Benefits 2017	Other Post-Employment Benefits 2016
Net actuarial gain not yet subject to amortization due to use of market-related values	**(418)**	(570)	**-**	-	**-**	-
Net actuarial loss not subject to amortization due to use of the corridor	**1,735**	1,619	**36**	34	**299**	267
Net actuarial loss subject to amortization	**2,333**	2,238	**80**	72	**79**	3
Unamortized net actuarial loss	**3,650**	3,287	**116**	106	**378**	270
Unamortized past service costs	**-**	-	**-**	-	**4**	5

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

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

Accounting Assumptions

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

The discount rates, which are representative of the AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date in order to determine the projected benefit obligations for the Company's employee benefit plans. A lower discount rate increases the benefit obligations. The weighted-average discount rate used to determine the projected pension and OPEB benefit obligations as at December 31, 2017 was 3.6 percent. This represents a decrease compared to the 3.9 percent discount rate that was used to determine the obligations as at December 31, 2016.

In 2016 and prior years, benefit costs were calculated using the same single weighted-average discount rates as reflected in the calculation of the benefit obligations. Effective January 1, 2017, OPG adopted a full yield curve approach to the estimation of the service and interest cost components of pension and OPEB costs, by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligations to the relevant projected cash flows. The change improves the correlation between projected benefit cash flows and the corresponding yield curve spot rates, and provides a more precise measurement of service and interest costs. This change in the method was accounted for prospectively, as a change in estimate. The resulting reduction in pension and OPEB costs is estimated at approximately $135 million for the twelve months ended December 31, 2017. Approximately 90 percent of this reduction in pension and OPEB costs was attributed to the Company's regulated business segments and therefore was offset by the impact of OEB-authorized regulatory accounts. The change does not affect the measurement of the total benefit obligation as the change in the current service and interest cost components from the previous method is offset by a corresponding change in the actuarial gain or loss recorded in AOCI.

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

A new actuarial valuation of the OPG registered pension plan was filed with the Financial Services Commission of Ontario in September 2017 with an effective date of January 1, 2017. The annual funding requirements in accordance with the new actuarial valuation are outlined in the section, *Liquidity and Capital Resources* under the heading, *Contractual and Commercial Commitments*. OPG conducted a comprehensive actuarial valuation for accounting purposes of its pension and OPEB plans in 2017, using demographic data as at January 1, 2017 consistent with the new funding valuation and using assumptions as at December 31, 2017. As part of the valuation, the plans' demographic and other assumptions were reviewed and revised, as necessary, by independent actuaries.

The deficit for the registered pension plan, for accounting purposes, increased from $2,693 million as at December 31, 2016 to $3,081 million as at December 31, 2017. This increase was largely due to a re-measurement of the liabilities at the end of 2017 reflecting lower discount rates, partially offset by the excess of actual returns on the pension plan assets over interest costs on the liabilities during the year.

The projected benefit obligations for OPEB increased from $2,992 million as at December 31, 2016 to $3,190 million as at December 31, 2017. This increase was largely due to a re-measurement of the liabilities at the end of 2017 reflecting a decrease in the discount rates, partially offset by the updated, lower per capita health care claims costs assumption as part of the 2017 actuarial valuation.

A change in the following assumptions, holding all other assumptions constant, would increase (decrease) pension and OPEB costs for the year ended December 31, 2017 as follows:

(millions of dollars)	**Registered Pension Plans** [1]	**Supplementary Pension Plans** [1]	**Other Post-Employment Benefits** [1]
Expected long-term rate of return			
0.25% increase	(32)	n/a	n/a
0.25% decrease	32	n/a	n/a
Discount rate			
0.25% increase	(56)	(1)	(2)
0.25% decrease	59	1	13
Inflation			
0.25% increase	98	1	-
0.25% decrease	(91)	(1)	-
Salary increases			
0.25% increase	22	3	-
0.25% decrease	(20)	(2)	-
Health care cost trend rate			
1% increase	n/a	n/a	77
1% decrease	n/a	n/a	(29)

n/a – change in assumption not applicable.

[1] Excludes the impact of regulatory accounts.

Asset Retirement Obligation

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

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

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

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

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

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

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

As of December 31, 2017, OPG recorded an increase of $188 million in the Nuclear Liabilities and associated asset retirement costs capitalized as part of carrying value of property, plant and equipment (PP&E) reflecting the change in the Pickering GS accounting end-of-life assumptions from December 31, 2020 for all operating units to December 31, 2022 for Units 1 and 4 and December 31, 2024 for Units 5 to 8. The increase in the liabilities is primarily due to higher fixed costs associated with the Used Fuel Disposal and L&ILW Storage programs, discounted using the current credit-adjusted risk-free rate of 2.94 percent. The adjustment did not impact net income for 2017. The adjustment is not expected to have a material impact on net income in 2018 as the associated impact on expenses is expected to be largely offset by OEB-authorized regulatory accounts. The change in accounting end-of-life assumptions for the Pickering GS are discussed in further detail in the section, *Core Business, Strategy, and Outlook* under the heading, *Operational Excellence – Electricity Generation Production and Reliability*.

For the purposes of calculating OPG's Nuclear Liabilities, as at December 31, 2017, consistent with the current accounting end-of-life assumptions, nuclear station decommissioning activities are projected to occur over approximately the next 80 years.

The liability for nuclear fixed asset removal and nuclear waste management on a present value basis as at December 31, 2017 was $20,077 million (2016 – $19,103 million). As at December 31, 2017, the undiscounted cash flows of expenditures for OPG's Nuclear Liabilities in 2017 dollars are as follows:

(millions of dollars)	**2018**	**2019**	**2020**	**2021**	**2022**	**Thereafter**	**Total**
Expenditures for nuclear fixed asset removal and nuclear waste management [1]	323	326	323	311	598	40,513	42,394

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

The liability for non-nuclear fixed asset removal was $344 million as at December 31, 2017 (2016 – $381 million). This liability primarily represents the present value of estimated costs of decommissioning OPG's thermal generating stations at the end of their service lives. OPG has updated the asset retirement obligations for the thermal generating stations as of December 31, 2017, based on a review of required decommissioning, clean-up and restoration activities, underlying economic assumptions and anticipated timing of these activities in line with current accounting end-of-life assumptions for the operating sites. For the shutdown Nanticoke and Lambton generating stations, the update reflects the estimated cost of executing current decommissioning plans. For the currently operating sites, OPG recognized a decrease of $18 million in the non-nuclear fixed asset removal liabilities and associated asset retirement costs capitalized as part of the carrying value of PP&E as at December 31, 2017. For the Nanticoke and Lambton sites, a reduction in the non-nuclear fixed asset removal liabilities and a gain of approximately $12 million was recorded in net income in the fourth quarter of 2017, in the, Services, Trading, and Other Non-Generation segment.

For the purpose of measuring the non-nuclear fixed asset removal liability, asset removal activities are assumed to take place approximately over the next one to 12 years. The amount of undiscounted estimated future cash flows associated with the thermal liabilities is approximately $400 million.

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

Fair Value Measurements

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

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

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

For the financing receivables related to the Investment Interest acquired from the IESO, fair value is estimated to equal the fair value of the underlying debt due to the direct relationship of the asset, and the debt instruments that financed the acquisition.

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

Recent Accounting Pronouncements Not Yet Adopted

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

<u>Revenue from Contracts with Customers</u>

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

OPG has assessed the impact of the standard on accounting for the Company's revenue streams and consolidated financial statements. OPG's major revenue streams include regulated generation revenue from base regulated prices and rate riders established by the OEB, as well as revenue from generation assets under long-term contractual arrangements with the IESO. OPG has completed its analyses of the impact of Topic 606 on all of its revenue streams, and has not identified any material differences in the timing or amount of revenue recognition for these streams.

The Company will apply the new revenue standard in its 2018 first quarter interim financial statements and is in the process of evaluating the additional disclosures required under the new standard.

Lease Accounting

In February 2016, the FASB issued ASU No. 2016-02, *Leases* (Topic 842). The update includes comprehensive changes to existing guidance for lease accounting, particularly for lessees, and aims to increase transparency and comparability among organizations by requiring the recognition of lease assets and lease liabilities on the balance sheet. The standard is effective for annual periods beginning after December 15, 2018, including interim periods within that year.

Under the current guidance, entities are required to use a modified retrospective approach for leases that exist, or are entered into, after the beginning of the earliest comparative period presented in the financial statements of the period of adoption. Under this method, Topic 842 would effectively be implemented by recognizing any adjustments stemming from the transition, as of beginning of the earliest comparative period presented in the entities' financial statements. Full retrospective application is prohibited. In January 2018, the FASB issued a proposed ASU wherein entities would be able to utilize an additional optional transition method of recording the cumulative impact of adopting the new lease standard to the opening balance in the initial period of adoption; with comparative periods continuing to be presented in accordance with the existing leasing standard, Topic 840 - *Leases*, including disclosures. [**MONITOR**] The Company will continue to monitor the status of this proposed ASU.

The FASB also issued ASU No. 2018-01, *Land Easement Practical Expedient for Transition to Topic 842* in January 2018. The amendments therein allows an entity to choose not to evaluate under Topic 842 land easements that exist or expired before the entity's adoption of the new leasing standard and that were not previously accounted for as leases under Topic 840.

The Company continues to implement and execute a comprehensive project governance framework, which comprises a Steering Committee, Implementation & Stakeholder Committee, Project Management Office, and various working groups in order to evaluate the implement the new standard. The working groups are represented by cross functional finance and non-finance stakeholders who will support the financial and operational implementation of the standard. The Company continues to evaluate the impact of the new leasing standard on its consolidated financial statements.

Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities*. Under the updated guidance, entities will have to measure equity investments at fair value and recognize any changes in fair value in net income. The update will be effective for OPG's 2018 fiscal year, including interim periods. As a result of this update, effective January 1, 2018, the available-for-sale (AFS) classification for equity securities will no longer be available, with any unrealized gains and losses related to such securities recognized in net income instead of OCI. Any unrealized gains and losses for AFS securities reported by OPG in AOCI as of the end of 2017 will be reclassified to retained earnings as of January 1, 2018. OPG's equity shareholdings in Hydro One are currently the Company's only AFS securities. As at December

31, 2017, these shares are valued on the consolidated balance sheet at $188 million, for which a loss of $8 million has been recorded in AOCI. OPG does not expect the new standard to have any other significant impact on its consolidated financial statements.

Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost

In March 2017, the FASB issued ASU No. 2017-07, *Compensation – Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*. Under the new guidance, employers that sponsor defined benefit plans for pensions and/or other postretirement benefits are required to present the service cost component of net periodic benefit cost in the same statement of income line item as other employee compensation costs arising from services rendered during the period. The other components of the net periodic benefit cost are to be presented separately from the line item that includes the service cost and outside of any subtotal of income from operations, if such a subtotal is presented. In addition, the new guidance requires that only the service cost component of net benefit cost be eligible for capitalization.

This guidance is effective for fiscal years beginning after December 15, 2017, including interim periods of those years. The guidance is not expected to have a material impact on OPG's consolidated financial statements, as OPG currently capitalizes only the service cost component of post-retirement benefits costs. Additionally, OPG already includes the service cost component of post-retirement benefit costs with other compensation costs, within the operations, maintenance and administration expenses line item in the consolidated statements of income, and does not show a subtotal of income from operations. As such, the new guidance is not expected to affect the presentation of OPG's consolidated financial statements.

RISK MANAGEMENT

Overview

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

The Audit and Risk Committee is mandated to fulfill the oversight responsibilities of the Board of Directors for matters relating to the identification and management of the Company's key business risks. OPG's Enterprise Risk Management framework is designed to identify and evaluate risks on the basis of their potential impact on the Company's strategic imperatives and business plan objectives. Formal risk management policies, procedures and systems are in place to identify, assess and mitigate risks to the Company. Senior management also establishes set limits for the market risk, credit risk and energy trading activities of the Company.

The key risks to OPG's strategic imperatives are briefly described below. These are key risks that management believes could materially affect its business, revenues, net income, assets or capital resources. There may be further risks and uncertainties that are not presently known, or that are not currently believed to be material, that may in the future adversely affect the Company's performance or financial condition.

Risks to Achieving Operational Excellence

OPG is exposed to variable output from its existing generating stations that could adversely impact its financial performance. The operational risks of a station are generally a function of its age, human performance, and the technology used.

Asset Conditions and Generation Variability

The uncertainty associated with electricity production by OPG's generating units is primarily driven by the condition of station components and systems, which are subject to the effects of aging and the manner in which the units operate. To safely operate the units to meet electricity system requirements, a unit could be derated resulting in reduced generation. The primary implications of these risks may include additional safety requirements, lower than expected generation and revenues, and higher operating or capital costs. To respond to this risk, OPG continues to:

- monitor performance, implement extensive inspection and maintenance programs;
- identify future work required to sustain and, as appropriate, upgrade a station equipment; and
- undertake projects required to reliably operate within design and operating parameters.

Extension of Commercial Operations at Pickering to 2024

In January 2016, the Province of Ontario announced its approval of OPG's plan to pursue the continued safe and reliable operation of the Pickering GS to 2024. Under OPG's plan, the six operating units at the Pickering GS would operate until 2022, at which point two units would be shut down and the remaining four units would continue to operate until 2024. The current operating licence for the Pickering GS, which expires in August 2018, was issued in 2013 assuming that the station would shut down in 2020. Technical assessments have been completed to determine the ability of the Pickering units to continue to be fit for service to support extended operations. There is high technical confidence in the programs and provisions in place to operate the station to the end of 2024.

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

Risk factors for extended operations include the discovery of unexpected conditions, equipment failures, the state of critical plant components that are reaching end-of-life and a requirement for significant plant modifications. To mitigate these risks, OPG has implemented actions recommended from the technical assessments as part of the outage work program. OPG has also incorporated those actions into the comprehensive inspection and maintenance program under the Life Cycle Management Plan.

Supply Chain

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

Cyber Security

OPG's operations depend in part, on the efficient operation and management of the Company's complex information technology and operational systems in a secure, vigilant and resilient manner that minimizes cyber risks. Cyber security incidents may have an adverse impact on OPG's reputation, energy production, and public and employee safety.

Cyber security incidents have been on the rise for the past few years and this trend is only expected to intensify as global reliance on technology increases. OPG has strategies in place to prepare for, respond to, and recover from cyber security incidents. OPG continuously monitors, assesses, and improves the effectiveness of its strategies and program considering leading industry practices and remains proactive in information and intelligence sharing to learn and adapt to the changing cyber environment. In 2017, the media reported several worldwide cyber-attacks, such as WannaCry and Petya, which impacted multiple sectors including power and utilities. OPG's operational responses to those cyber-attacks were timely and effective resulting in no or low operational impact to OPG.

As a registered Ontario market participant, OPG must comply with reliability standards that apply to the Bulk Electric System elements specified under North American Electric Reliability Corporation and the relevant Bulk Power System facilities as determined by the Northeast Power Coordinating Council. In addition, OPG's nuclear cyber assets are subject to CNSC licensing conditions and regulatory requirements. For other cyber assets not subject to applicable regulatory requirements, OPG has adopted a risk-based approach based on the National Institute of Standards and Technology cyber security framework to manage its cyber security. Policies are in place to manage the Company's cyber risks and programs which are subject to oversight by management and the Board.

Regulatory Compliance

OPG is subject to extensive federal and provincial legislation and regulations by various entities such as the OEB, CNSC and the IESO.

The uncertainty associated with nuclear regulatory compliance is driven by plant aging, changes to technical codes, and challenges raised by the public at regulatory hearings, particularly in the areas of safety, environment and emergency preparedness. Addressing these requirements could add to the cost of operations, including replacement or modification of a station component or additional requirements for waste management. In some instances, these requirements may result in a reduction or elimination of the productive capacity of a station.

The Provincial agency, Office of the Fire Marshal and Emergency Management (OFMEM) is required to periodically update the Provincial Nuclear Emergency Response Plan (PNERP). In 2016, the CNSC advised the OFMEM to consider more severe accidents in the update to the PNERP, which may result in potential changes to the planning basis. Potentially, these changes may include new protective requirements and expansion of the emergency plan requirements for Pickering. In December 2017, the Province approved the updated PNERP Master Plan. The development of a detailed Implementing Plan for the Pickering GS is in progress. To date, there is no significant impact on OPG from the updated PNERP.

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

Nuclear Waste Management

The handling, storage and disposal of nuclear waste exposes OPG to various risks that it manages in accordance with the applicable regulatory requirements. Additionally, the interim storage of nuclear waste is subject to rigorous oversight and monitoring.

Currently, there are no licenced facilities in Canada for the permanent disposal of used nuclear fuel or L&ILW. The risks to OPG's proposed L&ILW DGR for the safe long-term management of L&ILW are discussed below under the heading, *Risks to Achieving Project Excellence – Deep Geologic Repository for Low and Intermediate Level Waste*.

Human Resources and Organizational Structure

The development of new leaders and retention of staff in critical roles is a key factor to OPG's success. The risk associated with the alignment and availability of skilled and experienced resources continues to exist for OPG in specific areas, including leadership and project management positions. To mitigate this risk, OPG continues to focus on succession planning, leadership development and knowledge management programs to improve the capability of its workforce. OPG expects to meet the human resource needs of the business by developing existing employees and hiring in specific areas, while continuing to leverage attrition through realignment of work and streamlining of processes, where appropriate.

Labour Relations

As of December 31, 2017, approximately 88 percent of OPG's regular labour force was represented by a union. The collective agreements with the PWU and The Society are due for renewal in 2018. There is a risk that OPG may not be able to negotiate terms that allow for compensation levels consistent with its rate orders.

OPG's current collective agreements with the PWU expires on March 31, 2018 and renewal negotiations began in early 2018. In the event of a labour disruption by the PWU, OPG could face financial or reputational implications. OPG has contingency plans in place to minimize the impact. **[MONITOR]**

The collective agreement between OPG and The Society expires on December 31, 2018 and renewal negotiations are expected to begin in mid-2018. The parties do not have the right to strike or lock-out. If the parties are unable to reach an agreement, the terms of the new collective agreement would be decided through interest mediation/arbitration.

Health and Safety

OPG's operations involve inherent occupational safety risks and hazards that could impact the achievement of the Company's health and safety goals. OPG is committed to continuous improvement and achievement of its ultimate goal of zero injuries through a formal enterprise-wide safety management system and by continuing to foster a strong health and safety culture among its employees and contractors. The safety management system serves to focus the Company on proactively managing safety risks and hazard exposures to employees and contractors. OPG also strategically engages with external parties for benchmarking and auditing. This ensures that OPG's management system achieves its intended results and maximizes the opportunity to incorporate program improvements.

Business Continuity and Emergency Management

OPG may be exposed to natural, technological or human-caused hazards including significant events against which it is not fully insured or indemnified; or to parties that fail to meet their indemnification obligations. These hazards have the potential to disrupt operations resulting in decreased generation revenue or additional costs to repair damages and restore operations.

OPG's business continuity program provides a framework to build resilience into critical business processes to ensure continued operation of critical business functions. OPG's emergency management program is designed to ensure that the Company can manage an emergency in a timely and effective manner. OPG's plans and implementation procedures identify immediate response actions to be taken to protect the health and safety of workers and the public, and to limit the impact of the incident on site security, production capability and the environment. The program elements are designed to meet legal and regulatory requirements.

Risks to Achieving Project Excellence

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

Darlington Refurbishment

There are financial and reputational risk exposures for OPG if actual costs exceed the budget or if OPG does not meet the project schedule. In addition, failure to achieve the objectives of the refurbishment project may result in future forced outages and more complex planned outages, potentially impacting the post-refurbishment performance or useful life of the units. Failure to carry out the refurbishment of the first unit as planned may result in the Province exercising an off-ramp for the refurbishment of the remaining units. In January 2018, Refurbishment senior management met with the Minister of Energy, Cabinet and Treasury Board to provide an update on the status of the Darlington Refurbishment project and to request a decision to not exercise the Unit 3 off-ramp. The request was based on the performance to date on the Unit 2 project. Additionally, OPG continues to apply lessons learned that have been captured on the execution of Unit 2 into the planning of future units.

There are a number of specific risks that OPG is managing and mitigating in relation to the Darlington Refurbishment project, which include OPG and vendor performance risks, delay or productivity risks, financial risks related to escalation of costs, technical risks such as equipment conditions resulting in additional scope and execution risks. A large portion of the costs for the Darlington Refurbishment project is being paid to contractors and suppliers, including vendors that will engineer, procure and construct components of the project. There is a risk that, as the volume of work increases significantly, vendor capability, capacity and performance shortfalls may impact project objectives and deliverables.

OPG systematically manages the risks associated with the Darlington Refurbishment project through robust risk management practices to achieve project deliverables on time and budget with quality. OPG engaged in an extensive five-year project planning phase to determine the project scope and to rigorously estimate costs. During this phase, OPG also took into account major lessons learned from other nuclear refurbishments and large scale, complex projects. In order to fully define the scope and material requirements for the project, the planning phase included the completion of detailed designs before proceeding with the execution of the unit refurbishments. Further risk mitigation has been implemented through the construction of a full scale model training reactor, which allows for simulations and training for unit refurbishment execution tasks.

OPG's risk management strategy aims to ensure that contractors are held accountable and appropriate incentives and disincentives are in place. There is also an increased risk of contractor initiated safety events, which may impact OPG's reputation. Mitigating actions include:

- Collaborative training and planning with vendors on executing work safely;
- An enhanced human performance program;
- Increased field presence by supervisory staff; and
- Collaboration with Bruce Power to streamline processes and reduce burden on vendors.

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

Both management and Board of Directors have engaged Independent, third-party oversight for the execution phase of the project.

<u>Deep Geologic Repository for Low and Intermediate Level Waste</u>

OPG, with the support of Bruce County municipalities, is proposing to construct and operate a deep geologic repository for the safe long-term management of L&ILW. While broad local community support for the proposed L&ILW DGR is stable, OPG continues its engagement with the SON towards securing support for the project.

In August 2017, the federal Minister of Environment and Climate Change wrote to OPG and commended OPG for its collaborative work with the SON and for the practical demonstration of reconciliation practises. In light of that work, the Minster requested OPG to update its analysis of the potential cumulative effects of the DGR project on the physical and cultural heritage of the SON, taking into account the results of the SON Community Process. OPG continues to work with the SON, however the timing and outcome of the SON Community Process and the EA decision by the Minister are uncertain.

Risks to Maintaining Financial Strength

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

Rate Regulation

There is an inherent risk that regulated prices established by the OEB may not provide for the recovery of actual costs incurred by OPG's regulated operations or allow the regulated operations to earn an appropriate rate of return. This could occur if, in setting regulated prices, the OEB makes adjustments to forecasts submitted by OPG, if actual production and costs significantly differ from the forecasts approved by the OEB, or if OPG is unable to achieve OEB-approved stretch factors included in regulated prices under incentive ratemaking. Differences between OPG's actual and forecast production and costs could be due to factors such as outages or project execution risks. In providing evidence in support of its applications for regulated prices, OPG aims to clearly demonstrate to the OEB that the costs for the regulated operations are reasonable, prudently incurred and should be fully recovered from customers.

Certain differences between elements of OEB-approved revenue requirements and OPG's actual results are recorded in OEB-approved variance and deferral accounts for future review by the OEB. Additionally, these accounts may be subject to an OEB prudence review. There is uncertainty associated with the outcomes of future proceedings for the recovery or refund of these balances.

Nuclear Rate Smoothing Proposal

Consistent with the requirements of *Ontario Regulation 53/05*, OPG's nuclear rates will be smoothed as a result of OPG deferring a portion of the approved annual nuclear revenue requirements during the period from January 1, 2017 to the end of the Darlington Refurbishment project in a Rate Smoothing Deferral Account.

There is a risk that the magnitude of the deferral ordered by the OEB will result in regulated prices that do not provide sufficient cash flow to the Company for meeting its financial objectives in an optimal manner, including ensuring sufficient liquidity, cost effectively funding the Darlington Refurbishment project and other expenditures and maintaining the Company's investment grade credit rating. Maintaining adequate levels of credit metrics will support OPG's investment grade credit rating. As such, OPG requested the OEB to consider the impact on its credit rating when smoothing the nuclear base rates. **[MONITOR]**

Post-Employment Benefit Obligations Risk

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

The OPG registered pension plan, which covers most of OPG's employees and retirees, is a contributory defined benefit plan that is indexed to inflation up to a certain maximum. Contributions to the OPG registered pension plan are determined by actuarial valuations, which are filed with the appropriate regulatory authorities at least every three years. Future actuarial valuations could increase OPG's funding requirements due to market and economic-related conditions. A significant decline in the financial markets could trigger an immediate requirement to update the actuarial valuation based on declines in the funded status. OPG continues to assess the requirements for contributions to the registered pension plan, including the timing of future actuarial valuations. OPG's OPEB obligations are not funded and the associated employee benefits are paid from cash flows provided by operating activities or other sources of liquidity.

Nuclear Liabilities and Nuclear Segregated Funds

As required by the CNSC, OPG is responsible for the management of used nuclear fuel and L&ILW and the decommissioning of its nuclear stations and waste management facilities. The cost estimates for OPG's nuclear waste management and decommissioning obligations are based on multiple underlying assumptions and estimates that are inherently uncertain and may evolve over time. The assumptions include station end-of-life dates, waste volumes, waste disposal methods, the timing of construction of assumed waste disposal facilities, waste packaging systems, decommissioning strategy and financial indicators. To address the inherent uncertainty, OPG undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates at least once every five years, in line with the required ONFA Reference Plan update process.

The most recent comprehensive update of the nuclear waste management and decommissioning obligations was approved by the Province in December 2016 as part the 2017 ONFA Reference Plan. An approved ONFA Reference Plan determines OPG's contributions to the Nuclear Segregated Funds. Based on the 2017 ONFA Reference Plan, no contributions are currently required to the Nuclear Segregated Funds. Additional contributions may be required should the Nuclear Segregated Funds be in an underfunded position in the future.

Nuclear Funds are segregated under ONFA in order to fund the long-term waste management, used fuel management and decommissioning expenditures. These funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA. Investments in the Nuclear Segregated Funds are allocated to certain asset classes including fixed income securities, domestic and international equity securities, pooled funds, infrastructure, agriculture and real estate. The rates of return earned on these segregated funds may vary depending on current and future financial market conditions. The asset mix of the funds is determined jointly by OPG and the Province in accordance with the ONFA.

Under ONFA, OPG bears the market risk related to the portion of the Nuclear Segregated Funds set aside for:

- decommissioning of Pickering and Darlington nuclear generating stations; and
- long-term management of the irradiated used fuel bundles in excess of the first 2.23 million bundles and L&ILW after the respective Pickering GS and Darlington GS shut down.

A significant drawdown in the Nuclear Funds would first reduce the surplus in the respective funds before impacting OPG's net income. As such, the income statement impact of this risk is reduced when the Nuclear Segregated Funds are in a fully funded position.

Liquidity

OPG operates in a capital intensive business. Significant financial resources are required to fund major development and other capital improvement projects, including the Darlington Refurbishment project. In addition, the Company has other significant disbursement requirements including pension contributions, payments towards OPEB and other benefit plans, funding ongoing operations, debt maturities with the OEFC, OPG's investment in the Fair Hydro Plan and investments in new generating capacity and other business development opportunities. OPG must ensure that it has the financial capacity and sufficient access to cost effective financing sources to fund its capital requirements and other disbursements. In support of this objective, OPG utilizes multiple sources and forecasts availability of funds, actively monitors funding requirements and is focused on maintaining its investment grade credit rating. The Company's ability to arrange sufficient and cost-effective debt financing could be adversely affected by a number of factors, including, financial market and general economic conditions, the regulatory environment in Ontario, the Company's results of operations and financial conditions, the ratings assigned to the Company by credit rating agencies and the current timing of debt maturities.

A discussion of corporate liquidity is included in the section, *Liquidity and Capital Resources*.

Commodity Markets

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

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

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

	2018	**2019**	**2020**
Estimated fuel requirements hedged [1]	72.9%	68.2%	65.3%

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

Foreign Exchange

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to US dollars (USD). To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at December 31, 2017, OPG had total foreign exchange contracts outstanding with a notional value of USD $5 million.

Trading

OPG's financial performance can be affected by its trading activities. OPG's electricity trading operations are closely monitored, with total exposures measured and reported to senior management on a daily basis. The main metric used to measure the financial risk of trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio based on normal market conditions over a set period of time. During 2017, the VaR utilization ranged between $0.1 million and $0.4 million, compared to between nil and $1.5 million in 2016.

Credit

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

The following table summarizes OPG's credit exposure to all counterparties from electricity transactions and trading as at December 31, 2017:

	All Counterparties		Largest Counterparties	
Credit Rating [1]	**Number of Counterparties** [2]	**Potential Exposure** [3] *(millions of dollars)*	**Number of Counterparties**	**Potential Exposure** *(millions of dollars)*
Investment grade	15	18	5	14
IESO [4]	1	360	1	360
Total	16	378	6	374

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

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

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

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

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

Contracted Generation

The Company's generating stations that operate under ESAs with the IESO or other long-term contracts are subject to several obligations, including but not limited to:

- availability targets;
- monthly and annual reporting; and
- must offer obligations, as specified in their respective contracts.

OPG could incur penalties up to and including termination of the respective contract if these facilities fail to meet their contractual obligations. This risk is mitigated through:

- education of staff who work with these facilities;
- continuous communication between staff managing the contracts and staff managing the stations;
- processes that monitor and address contractual obligations and milestones; and
- the implementation of maintenance, capital investment (approved by the IESO when required by the contracts) and other programs.

OPG's owned and co-owned thermal generating stations operate under ESAs with the IESO or other long-term agreements. While OPG expects that its thermal generating stations will continue to provide capacity to the market over the term of the respective agreements, there is a risk that, upon expiry of the current agreements, subsequent contracts for these stations may not be available or may not be financially viable. The Thunder Bay Biomass ESA is the first such contract to reach the end of its term, scheduled for early 2020.

Ontario Electricity Market

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

The IESO is in the preliminary stages of a Market Renewal Program, which is expected to result in a fundamental redesign of Ontario's electricity markets and may impact OPG depending on the market design that is implemented. To mitigate this risk, OPG is actively participating in Market Renewal stakeholder committees as well as continuing to collaborate with the IESO.

Ownership by the Province

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

Government Legislation and Regulation Change

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

The next Ontario provincial election is set to take place in June 2018 and electricity rates are a focus of each party's platform. Depending on the outcome of the election, there may be significant legislative changes that could impact OPG.

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

Litigation

OPG or its subsidiaries are involved in various legal proceedings covering a range of matters arising out of their business activities. Each of these matters is subject to various uncertainties and some of these matters may be resolved unfavourably. Refer to Note 16 of OPG's 2017 audited consolidated financial statements under the heading, *Litigation* for further details.

Risks to Maintaining Social Licence

OPG is exposed to risks associated with its social licence and public profile due to changes in the opinions of:

- Various stakeholders, including Ontario electricity customers, local communities, government agencies; and
- Indigenous communities.

Maintaining public trust and meeting stakeholders and Indigenous communities' expectations are critical to OPG's success. OPG focuses on building and maintaining its social licence and corporate reputation through safe, reliable, environmentally-responsible operations as well as corporate citizenship initiatives across the province. The inability to maintain safe, reliable operations could negatively impact OPG's reputation and result in a loss of public support.

Ontario Fair Hydro Plan Act

The Fair Hydro Act received Royal Assent and came into force on June 1, 2017. As the Financial Services Manager under the Act, OPG's reputation could potentially be adversely impacted through this involvement and through stakeholder opinions related to this involvement.

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Indigenous Communities

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

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

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

Environmental Risks

OPG's operations and facilities are subject to environmental compliance obligations at the municipal, provincial and federal levels that include protection of land, water, air, living organisms and natural systems. A failure to comply with applicable environmental laws may result in enforcement actions, remediation actions or restrictions to operations. Changes in compliance obligations can result in new operational requirements and increased costs.

OPG has an ISO 14001 registered EMS to manage its environmental responsibilities. For further information, see discussion in the section, *Core Business, Strategy, and Outlook* under the heading, *Environmental Performance*.

OPG recognizes that efforts are required to plan for the impacts of climate change and has identified climate change adaptation as a strategic priority for the company. OPG monitors developments in climate science, adaptation activities, and potential changes to policy and regulatory requirements. OPG continues to work with stakeholders to better define adaptation requirements through analysis and understanding of impacts on watersheds, equipment and the electricity market. OPG undertakes a risk-based analysis to determine the extent of adaptation requirements to reduce the impact of climate change on its operations, and also collaborates with all levels of government and industry to increase the resiliency of the electricity infrastructure.

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

RELATED PARTY TRANSACTIONS

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

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

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

	2017		**2016**	
(millions of dollars)	**Revenue**	**Expense**	**Revenue**	**Expense**
Hydro One				
Electricity sales	**8**	**-**	6	-
Services	**1**	**10**	1	5
Dividends	**7**	**-**	6	-
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province [1]	**-**	**456**	-	192
Change in Used Fuel Segregated Fund amount due to Province [1]	**-**	**591**	-	235
Hydroelectric gross revenue charge	**-**	**110**	-	120
ONFA guarantee fee	**-**	**8**	-	8
Other	**-**	**2**	-	-
OEFC				
Hydroelectric gross revenue charge	**-**	**216**	-	203
Interest expense on long-term notes	**-**	**158**	-	169
Income taxes, net of investment tax credits	**-**	**246**	-	104
IESO				
Electricity related revenue	**4,802**	**-**	5,082	-
Fair Hydro Trust	**4**	**3**	-	-
	4,822	**1,800**	5,095	1,036

[1] The Nuclear Segregated Funds are reported on the consolidated balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at December 31, 2017 and December 31, 2016, the Nuclear Segregated Funds were reported net of amounts due to the Province of $4,462 million and $3,415 million, respectively.

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

(millions of dollars)	**December 31 2017**	**December 31 2016**
Receivables from related parties		
Hydro One	**1**	1
IESO – Electricity related receivables	**354**	421
IESO – Fair Hydro Trust [1]	**7**	-
OEFC	**-**	1
PEC	**4**	4
Province of Ontario	**3**	2
Financing receivables		
IESO – Fair Hydro Trust	**1,179**	-
Available-for-sale securities		
Hydro One shares	**188**	212
Accounts payable and accrued charges		
Hydro One	**1**	-
OEFC	**52**	61
Province of Ontario	**9**	2
IESO – Electricity-related payables	**5**	2
IESO – Fair Hydro Trust	**3**	-
Long-term debt (including current portion)		
Notes payable to OEFC	**3,195**	3,295

[1] Balance consists of unbilled revenue.

OPG holds interest-bearing Province of Ontario bonds in the Nuclear Segregated Funds and the OPG registered pension fund. As at December 31, 2017, the Nuclear Segregated Funds held $1,503 million of interest-bearing Province of Ontario bonds. As at December 31, 2016, the Nuclear Segregated Funds and the registered pension fund held $1,652 million and $284 million of interest-bearing Province of Ontario bonds, respectively. These bonds are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

In December 2017, the Trust purchased its first tranche of Investment Interest from the IESO for an exchange amount of $1.18 billion, which has been classified as a financing receivable on OPG's consolidated balance sheet. The transaction was settled in cash using proceeds from the Trust's issuance of senior and subordinated debt. Pursuant to the general regulation of the Act, the IESO is required to pay and remit carrying costs of the Trust, excluding repayment of principal on any debt obligations, up to July 31, 2021. Commencing May 1, 2021, Specified Consumers will be invoiced by their local distribution company for the Clean Energy Adjustment to pay financing and other costs of the Trust. These funds will be remitted to the Trust through the IESO and will be used to settle all funding and other related expenses of the Trust that underlie the financing receivable.

As at December 31, 2017, OPG's consolidated balance sheet included approximately $7 million of unbilled revenue from the IESO primarily for OPG's general fee for 2017 as Financial Services Manager relating to incurred third-party and certain direct labour costs. In February 2018, OPG submitted to the OEB its proposed general fee for 2017 in the amount of approximately $6 million for review pursuant to the requirements of the general regulation of the Fair Hydro Act. Once approved, the fees will be remitted to the Trust by the IESO and the Trust will pay OPG's fees as Financial Services Manager.

INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

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

There were no changes in OPG's ICOFR during the year ended December 31, 2017 that have materially affected or are reasonably likely to materially affect OPG's ICOFR.

Management, including the President and CEO and the CFO, concluded that, as of December 31, 2017, OPG's DC&P and ICOFR (as defined in National Instrument 52-109 – *Certification of Disclosure in Issuers' Annual and Interim Filings*) were effective.

FOURTH QUARTER

Discussion of Results

(millions of dollars) (unaudited)	Three Months Ended December 31 2017	2016
Revenue	**1,619**	1,388
Fuel expense	**171**	186
Gross margin	**1,448**	1,202
Operations, maintenance and administration	**770**	686
Depreciation and amortization	**162**	316
Accretion on fixed asset removal and nuclear waste management liabilities	**251**	233
Earnings on nuclear fixed asset removal and nuclear waste management funds	**(222)**	(126)
Earnings from Fair Hydro Trust	**(1)**	-
Income from investments subject to significant influence	**(9)**	(9)
Property taxes	**10**	11
Restructuring	**-**	6
Income before other losses, interest, and income taxes	**487**	85
Other losses	**1**	6
Income before interest and income taxes	**486**	79
Net interest expense	**39**	28
Income before income taxes	**447**	51
Income tax expense	**81**	59
Net income (loss)	**366**	(8)
Net income (loss) attributable to the Shareholder	**362**	(13)
Net income attributable to non-controlling interest	**4**	5

Net income attributable to the Shareholder for the fourth quarter was $362 million, compared to a net loss of $13 million for the same quarter in 2016.

Income before interest and income taxes was $486 million during the fourth quarter of 2017, an increase of $407 million compared to income before interest and income taxes of $85 million during the same period in 2016. The following summarizes the significant factors which contributed to the variance:

Significant factors that increased income before interest and income taxes:

- Higher revenue from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments totaling approximately $480 million recorded in the fourth quarter of 2017 to reflect the OEB's decision on OPG's application for new regulated rates issued in December 2017 with a retrospective effective date of June 1, 2017.
- Higher earnings of $77 million from the Regulated – Nuclear Waste Management segment, primarily due to higher earnings from the Nuclear Segregated Funds reflecting the growth rate in the present value of the funding liabilities, partially offset by an increase in accretion expense on the Nuclear Liabilities.

Significant factors that decreased income before interest and income taxes:

- Lower revenue from the nuclear base regulated price of approximately $55 million, partially offset by a decrease in fuel expense of $9 million, reflecting lower electricity generation of 0.9 terawatt hours (TWh) from the Regulated – Nuclear Generation segment. The lower nuclear generation was primarily due to the ongoing refurbishment of Unit 2 at the Darlington GS since October 2016, partially offset by an increase in generation from the Pickering GS. The increase in generation from the Pickering GS was primarily due to outage cycle optimization, favourable unit conditions and execution of planned outage work resulting in fewer unplanned and planned outage days at the station.
- Higher OM&A expenses of $55 million, mainly in the Regulated – Nuclear Generation segment, reflected planned expenditures related to the major maintenance expenditures occurring at the nuclear stations.

The increase in income tax expense during the fourth quarter of 2017, compared to the same quarter in 2016, was primarily due to higher income before income taxes, partially offset by a higher amount of tax expense deferred in regulatory assets in 2017.

Average Sales Prices

The average sales price for the Regulated – Nuclear Generation segment during the fourth quarter of 2017 was 11.0 ¢/kWh, compared to 6.9 ¢/kWh during the same quarter in 2016. The increase in the average sales price was primarily due to the OEB ruling issued in December 2017, in which OPG received a base rate increase, retroactive to June 1, 2017. The average sales price for the Regulated – Hydroelectric segment during 2017 was 4.3 ¢/kWh, compared to 4.4 ¢/kWh during 2016. The decrease in this average sales price was primarily due to the expiry, on December 31, 2016, of an OEB-authorized regulated hydroelectric rate rider of $3.19/MWh for the recovery of variance and deferral account balances. The rate riders were established to recover approved balances recorded in the variance and deferral accounts in prior years. As such, the year-over-year changes in revenue from the rate riders were largely offset by changes in amortization expense related to these balances.

Electricity Generation

OPG's electricity generation for the three months ended December 31, 2017 and 2016 was as follows:

(TWh)	Three Months Ended December 31 2017	2016
Regulated – Nuclear Generation	**10.1**	11.0
Regulated – Hydroelectric	**7.2**	6.7
Contracted Generation Portfolio [1]	**0.8**	0.6
Total OPG electricity generation	**18.1**	18.3
Total electricity generation by all other generators in Ontario [2]	**18.8**	18.9

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

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

The decrease in OPG's electricity generation of 0.2 TWh during the fourth quarter of 2017, compared to the same quarter in 2016, was mainly due to lower electricity generation of 0.9 TWh from the Regulated – Nuclear Generation segment. This was mainly the result of more planned outage days at Pickering in 2017 as well as the refurbishment of Unit 2 at the Darlington GS, which began in mid-October 2016 and continued for all of 2017. This was largely offset by higher production from the Regulated - Hydroelectric and Contracted Generation Portfolio segments mainly due to higher water flows on the eastern Ontario river systems.

Ontario's electricity demand as reported by the IESO was 33.6 TWh during the fourth quarter of 2017, compared to 33.2 TWh during the fourth quarter of 2016.

Liquidity and Capital Resources

Cash flow provided by operating activities during the three months ended December 31, 2017 was $246 million, compared to $606 million for the same period in 2016. The decrease in cash flow was primarily due to lower generation revenue receipts and higher OM&A expenditures during the fourth quarter of 2017.

Cash flow used in investing activities during the three months ended December 31, 2017 was $1,758 million, compared to $666 million during the same period in 2016. The increase was primarily due to the acquisition of the Fair Hydro Trust financing receivables and higher expenditures on the Darlington Refurbishment project in 2017.

Cash flow provided by financing activities during the three months ended December 31, 2017 was $1,466 million, compared to cash flow used in financing activities of $180 million for the same period in 2016. The increase in cash flow provided by financing activities was primarily due to higher net issuance of long-term debt and short-term notes by the Trust, as well as issuance of Class A shares in the four quarter of 2017. The increase was partially offset by the repayment of short term notes.

QUARTERLY FINANCIAL HIGHLIGHTS

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

Annual Financial Information

(millions of dollars – except where noted)	2017	2016	2015
Revenue	**5,158**	5,653	5,476
Net income attributable to the Shareholder	**860**	436	402
Earnings per common share *(dollars)*	**$3.35**	$1.70	$1.57
Total assets	**48,822**	44,372	44,250
Total long-term liabilities	**34,933**	31,460	32,404
Weighted average common shares outstanding *(millions)*	**256.7**	256.3	256.3

Quarterly Financial Information

(millions of dollars – except where noted) (unaudited)	2017 Quarters Ended				
	December 31	September 30	June 30	March 31	Total
Revenue	**1,619**	**1,217**	**1,146**	**1,176**	**5,158**
Net income	**366**	**140**	**307**	**68**	**881**
Less: Net income attributable to non-controlling interest	**4**	**9**	**4**	**4**	**21**
Net income attributable to the Shareholder	**362**	**131**	**303**	**64**	**860**
Earnings per common share, attributable to the Shareholder *(dollars)*	**$1.41**	**$0.51**	**$1.18**	**$0.25**	**$3.36**

Quarterly Financial Information

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

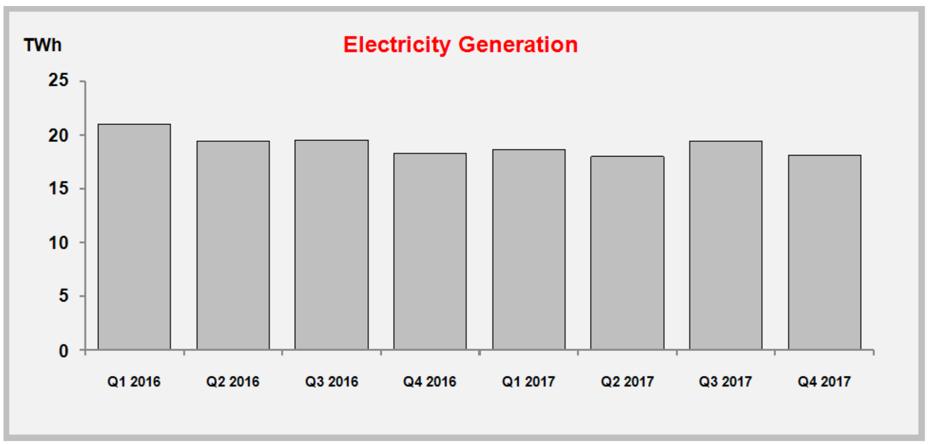
Trends

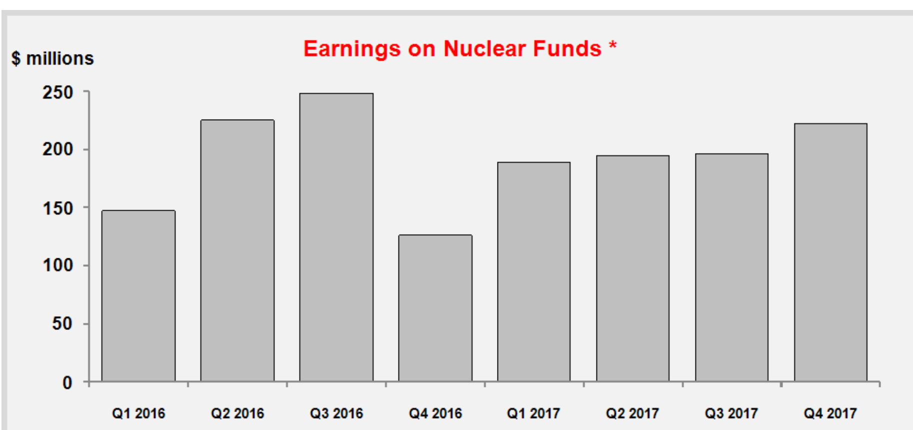
OPG’s quarterly results are affected by changes in grid-supplied electricity demand, primarily resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the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

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

OPG's electricity generation was reduced as a result of the Unit 2 refurbishment outage at the Darlington GS, which began in October 2016 and is expected to continue until early 2020.

OPG’s financial results are also affected by the earnings on the Nuclear Segregated Funds, net of the impact of the Bruce Lease Net Revenues Variance Account. The volatility of the earnings on the Nuclear Segregated Funds is mitigated by their funded status.





*net of regulatory variance account

SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

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

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

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

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

(millions of dollars – except where noted) (unaudited)	**2017**	**2016**
ROE Excluding AOCI		
Net income attributable to the Shareholder	**860**	436
Divided by: Average equity attributable to the Shareholder, excluding AOCI	**11,498**	10,442
ROE Excluding AOCI *(percent)*	**7.5**	4.2

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

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

(millions of dollars – except where noted) (unaudited)	**2017**	**2016**
FFO before interest		
Cash flow provided by operating activities	**944**	1,817
Add: Interest paid	**258**	269
Less: Interest capitalized to fixed and intangible assets	**(162)**	(141)
Less: Changes to non-cash working capital balances	**(54)**	(180)
FFO before interest	**986**	1,765
Adjusted interest expense		
Net interest expense	**95**	120
Add: Interest income	**9**	7
Add: Interest capitalized to fixed and intangible assets	**162**	141
Add: Interest related to regulatory assets and liabilities	**30**	30
Add: Excess of interest on pension and OPEB projected benefit obligations over expected return on pension plan assets [1]	**-**	45
Adjusted interest expense	**296**	343
FFO Adjusted Interest Coverage *(times)*	**3.3**	5.1

[1] A value of nil is used in the calculation when interest on pension and OPEB projected benefit obligations is equal to, or lower than, expected return on pension plan assets.

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

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

(millions of dollars – except where noted)	**2017**	**2016**
Enterprise TGC		
Total OM&A expenses	**2,824**	2,747
Total fuel expense	**689**	727
Total capital expenditures	**1,926**	1,704
Less: Darlington Refurbishment capital and OM&A costs	**(1,285)**	(1,022)
Less: Other generation development project capital and OM&A costs	**(65)**	(163)
Add: OM&A and fuel expenses (refundable through) deferred in regulatory variance and deferral accounts	**(1)**	62
Less: Nuclear fuel expense for non OPG-operated stations	**(57)**	(67)
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**69**	49
Less: OM&A expenses ancillary to electricity generation business	**(18)**	(28)
Other adjustments	**(43)**	(19)
	4,039	3,990
Adjusted electricity generation *(TWh)*		
Total OPG electricity generation	**74.1**	78.2
Adjust for electricity generation forgone due to SBG conditions and OPG's share of electricity generation from co-owned facilities	**5.6**	4.1
	79.7	82.3
Enterprise TGC per MWh *($/MWh)* [1]	**50.66**	**48.45**

[1] Amounts may not calculate due to rounding.

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

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

(millions of dollars – except where noted)	**2017**	**2016**
Nuclear TGC		
Regulated – Nuclear Generation OM&A expenses	**2,293**	2,210
Regulated – Nuclear Generation fuel expense	**284**	315
Regulated – Nuclear Generation capital expenditures	**1,631**	1,338
Less: Darlington Refurbishment capital and OM&A costs	**(1,285)**	(1,022)
Add: Regulated – Nuclear Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	**35**	81
Less: Nuclear fuel expense for non OPG-operated stations	**(57)**	(67)
Less: Regulated – Nuclear Generation OM&A expenses ancillary to electricity generation business	**(6)**	(10)
Other adjustments	**(10)**	(4)
	2,885	2,841
Nuclear electricity generation *(TWh)*	**40.7**	45.6
Nuclear TGC per MWh ***($/MWh)*** [1]	**70.95**	62.30

[1] Amounts may not calculate due to rounding.

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

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

(millions of dollars – except where noted)	**2017**	**2016**
Hydroelectric TGC		
Regulated – Hydroelectric OM&A expenses	**330**	325
Regulated – Hydroelectric fuel expense	**351**	353
Contracted Generation Portfolio OM&A expenses	**169**	178
Contracted Generation Portfolio fuel expense	**53**	58
Regulated – Hydroelectric and Contracted Generation Portfolio capital expenditures	**226**	330
Less: Regulated – Hydroelectric and Contracted Generation Portfolio Generation Portfolio generation development project capital and OM&A costs	**(63)**	(158)
Less: Thermal OM&A and fuel expenses and capital expenditures in the Contracted Generation Portfolio	**(166)**	(177)
Less: Regulated – Hydroelectric OM&A and fuel expenses refundable through regulatory variance and deferral accounts	**(36)**	(24)
Add: Hydroelectric gross revenue charge and water rental payments for electricity generation forgone due to SBG conditions	**69**	49
Other adjustments	**(1)**	(1)
	932	933
Adjusted hydroelectric electricity generation *(TWh)*		
Regulated – Hydroelectric electricity generation	**30.7**	29.5
Contracted Generation Portfolio electricity generation	**2.7**	3.1
Adjust for hydroelectric electricity generation forgone due to SBG conditions and non-hydroelectric electricity generation of the Contracted Generation Portfolio, including OPG's share of electricity generation from co-owned facilities	**5.5**	4.0
	38.9	36.6
Hydroelectric TGC per MWh *($/MWh)* [1]	**23.91**	25.49

[1] Amounts may not calculate due to rounding.

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

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