TREASURY BOARD / MANAGEMENT BOARD OF CABINET
REQUEST ASSESSMENT NOTE

Ontario

Ministry:	Energy
Meeting Date:	March 1, 2017
Agenda Class:	Major
Last reviewed by: N/A	**Tracking to:** Cabinet – March 1, 2017

SUBMISSION TITLE:	Electricity Price Mitigation

Based on Cabinet Submission

I. DECISION BEFORE THE BOARD

The Ministry of Energy is requesting approval of a suite of initiatives providing relief to various electricity consumer classes.

II. RECOMMENDATIONS:

• Approve a suite of initiatives to provide relief to various electricity consumer classes (pending Cabinet policy approval): ○ Enhance existing Electricity Support and move existing programs to government funding: – Broaden Rural or Remote Electricity Rate Program (RRRP) – Expand the Ontario Electricity Support Program (OESP) – Create an LDC Affordability Fund – Provide On-Reserve First Nations Delivery Credit ○ On-going activities to bend the costs curve of electricity (Ontario Energy Board, Independent Electricity System Operators) ○ Providing significant and immediate rate relief through cost deferral of the Global Adjustment (Smoothing the Global Adjustment) ○ Lowering eligibility threshold for Industrial Conservation Initiative	*Board Judgment*

III. FINANCIAL SUMMARY

$ Millions	**2016-17**	**2017-18**	**2018-19**
Initiative cost requested – Social Programs	200.0	665.0	753.0
– Global Adjustment Smoothing*	0.0	2,534.0	2,668.0
Initiative cost recommended	0.0	0.0	0.0
Recommended program base (Ontario Rebate for Electricity Consumers)	300.0	1006.0	1004.0
Offset Recommended	0.0	0.0	0.0
Total Fiscal Impact	200.0	3,199.0	3,421.0

*Assumes Global Adjustment smoothing impacts the deficit

IV. KEY COMMENTS AND CONSIDERATIONS

Since 2010, electricity costs have increased as the province has made investments in clean energy generation and modernized electricity infrastructure. Electricity bills are expected to continue to increase as more renewable energy projects come online. Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period. Appendix C provides supporting background information.

Ontario currently provides rate mitigation to various electricity consumers through a combination of government funded and rate-based programs. Rate-based programs are funded by shifting costs from one electricity consumer group to another.

The government has committed to providing electricity cost relief to consumers. Since the 2016 Throne Speech, the government has taken a number of actions to further reduce electricity costs, including:

- Providing an 8% rebate on the pre-tax cost of electricity to consumers eligible for the Regulated Price Plan (i.e., residential, small business and farms), equivalent to the provincial portion of HST, effective January 1, 2017.
- Expanding support available to eligible rural ratepayers by updating Rural or Remote Rate Protection (RRRP) with additional relief, decreasing total electricity bills by an average of $45 each month when combined with the 8% rebate.
- Expanding Industrial Conservation Initiative (ICI) eligibility by lowering the threshold to 1 MW, to provide support to additional commercial, institutional and small industrial consumers.

The Ministry of Energy is proposing additional electricity price mitigation initiatives that will provide additional rate relief across all residential and small business electricity consumers, providing up to 25% rate relief in aggregate, by helping the most vulnerable Ontarians through enhancements to existing support programs, smoothing the impacts of the global adjustment and working to bend the future cost curve of electricity.

1) Helping the most vulnerable Ontarians (Customers who are disproportionately affected by increased electricity costs) by enhancing electricity support programs and shifting cost onto the tax-base:
    a) Enhance the Rural or Remote Electricity Rate Protection (RRRP including harmonizing distribution cost for customers with the highest distribution rates)
    b) Expand the Ontario Electricity Support Program (OESP)
    c) Establish a new one-time Local Distribution Company (LDC) Affordability Fund in 2016-17
    d) Delivery charge relief for on-reserve First Nations customers

2) Ongoing activities to bend the future cost curve of electricity:
    a) Ontario Energy Board (OEB) – Identify opportunities for future LDC efficiencies and rates;
    b) Independent Electricity System Operator (IESO) – Modernize Ontario's electricity market through electricity Market Renewal initiatives.
    c) Explore additional cost savings to future electricity rates as part of the 2017 Long-Term Energy Plan to help offset the impact of GA recoveries.

3) Refinancing Global Adjustment assets in order to smooth the impacts of the Global Adjustment across ratepayers over a longer period of time.

4) Support for tenants (under development) & Supports for smaller Class B consumers – the Ministry is exploring options to extend electricity support programs to those who do not qualify for existing programs, either because they do not pay for their own electricity bills or because they are too large for the RPP (and associated support programs) but too small to qualify for the ICI for large consumers.

<u>1) Enhancing electricity support programs and shifting cost onto the tax-base</u>

To date, a number of electricity support programs are funded through the electricity rate-base. The Ministry is proposing to shift these costs to government funding and to enhance these programs to provide additional support to a subset of customers who are disproportionately affected by increased electricity costs.

The Ministry estimates that proceeding with the enhancement of the electricity support programs and shifting cost onto government funding would cost $200M in 2016-17 and increasing to $892M by 2020-21. Moving existing program costs to the tax base would result in a small cost reduction for other ratepayers (approximately $2 for the average residential consumer), but represents more than half of the fiscal impact associated with these proposals.The following table shows the fiscal impact of the proposals (Note: 2017-18 figures are full year, however programs would require implementation period estimated 3-6 months):

SUPPORT PROGRAMS TARGETTING MOST VULNERABLE USERS:						
($M)		**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**
1A. RRRP	**Status Quo[1,2]**	-	243	250	256	263
	Enhancement[2]	-	216	222	228	234
	TOTAL[2]	-	**459**	**472**	**484**	**497**
1B. OESP	**Status Quo[1,2]**	-	118	159	193	222
	Enhancement[2]	-	67	102	132	153
	TOTAL	-	**186**	**261**	**325**	**375**
1C. Establishing a New LDC Affordability Fund		200	-	-	-	-
1D. On-Reserve First Nations Delivery Credit		-	20	20	20	20
TOTAL FISCAL IMPACT:		**200**	**665**	**753**	**829**	**892**

1. Currently funded by the Rate Base.
2. Status Quo and Enhancement amounts are sourced from previous Ministry decks; Totals from the Cabinet Submission.

Appendix D provides details on each of the programs and their enhancement.

<u>2) Ongoing activities to bend the future cost curve of electricity</u>

The Ministry is proposing a number of ongoing activities to bend the future cost of electricity. This includes leveraging the Ontario Energy Board (OEB) to identify opportunities for red-tape reduction and future LDC efficiencies. In addition, the Ministry will continue to move forward with Independent Electricity System Operator's (IESO) Market Renewal initiatives.

Details of these activities can be found in Appendix E.

<u>3) Global Adjustment Smoothing</u>

The Global Adjustment (GA) accounts for the fixed costs, including capital costs, of running Ontario's generation fleet, as well as the cost of conservation programs. The GA has risen over the past decade as the province's electricity system has decarbonized. The vast majority of GA costs now stem from greenhouse gas (GHG) emissions-free renewable and nuclear generation facilities, as well as natural gas plants that were constructed to restore system reliability and replace coal-fired capacity.

The Ministry indicates the majority of the province's electricity generators are under 20-year contracts and some of the assets are expected to continue to provide value to the electricity system beyond their contract lives (i.e., beyond 20-years). Similarly, conservation costs are recovered annually on an 'as incurred basis' through the GA while conservation initiatives can reasonably be expected to provide benefits to the electricity system over many years.

The Ministry is proposing to recognize the long-term benefit of these assets to the electricity system and "bring forward" that benefit for ratepayers today by deferring some of the current costs. Through GA Smoothing, these costs would be spread over a longer period and provide immediate ratepayer relief. The result of this GA proposal is that cost to ratepayers remains lowered in the short term reducing projected after-tax electricity costs for a typical customer consuming 750kWh per month in 2017 by up to $26/month. Bill increases will be kept in line with the Consumer Price Index (CPI) until the end of 2021, and from 2022 onwards, bills will increase at a rate that ensures recovery of the accumulated debt, interest costs and administrative costs by 2048 without exceeding 10% of total electricity costs.

The Ministry continues efforts to identify an effective business structure to support:

- Required increase in provincial borrowing
- No increase in net debt,
- No impact on annual surplus/deficit, but depending on funding to OPG/Trust from Province, an increase in interest on debt and an increase in income from OPG.

Based on the current stage of the analysis of the accounting, legal and financing risks, it is possible that the deferral of the GA will be recognized as an expense in the fiscal plan. The table below shows the projected fiscal impact:

($M)	2017-18	2018-19	2019-20	2020-21
GA Smoothing for RPP Eligible Only – Residential Bills Lowered 25% (with Government Funded 8% Rebate and Social Programs, 2% increase)	2,534	2,668	2,942	3,420
Interest Portion	*32*	*162*	*298*	*449*

Note: Potential to avoid fiscal impact would depend heavily on decision on finalization of the accounting, legal and financing analysis. Based on an annual interest rate of 5% compounded monthly.

Analysis conducted by the Ontario Financing Authority, MOF indicates that over the 30-year GA smoothing period, estimated total accumulated interest costs exceed the estimated total cumulative savings produced under each option. Interest costs are also highly sensitive to interest rate assumptions and actual borrowing costs.

- In an effort to smooth out the GA, ratepayers will incur interest costs that over a 30-year period, will be added to the GA payments ratepayers make. Under the options above, interest costs exceed the amount being financed (i.e. benefit being provided) over the 30-year periods.

$ millions	Total Cumulative Savings	Total Accumulated Interest Costs
Option 1	$24,977	$35,542

Assumes an annual interest rate of 5% (compounded monthly).

The Ministry will report back to TB/MBC in Spring 2017 on a recommended approach, with an objective of addressing legal, financing and accounting challenges while minimizing fiscal risks. If unsuccessful in identifying an effective transaction design which avoids significant fiscal impacts, it is reasonable to require the Ministry to return with results of further analysis of alternative approaches to mitigate fiscal impacts versus adding GA smoothing directly to the deficit.

More details can be found in Appendix F.

4) Supports for non-RPP Class B consumers

Class B electricity consumers are too large for the RPP and too small to be Class A, and therefore do not qualify for price mitigation programs available to those consumers. The Ministry is proposing to expand ICI by extending eligibility to large Class B consumers with average monthly peak demand over 500 kWh in order to encourage consumers to shift electricity use away from peak hours.

The Ministry is also considering supports for renters/tenants that do not pay their own electricity bills, but it is not making recommendations at this time. The Ministry will report back in 2017-18 on additional options. Appendix G provides more information.

Monthly Electricity Bill Impact

Appendix H illustrates expected impacts of the above proposals on electricity bills. An average residential customer bill in July 2017 is expected to see a 25% decrease, which will vary based on usage and on the local distribution company. This includes the 8% rebate that came into effect on January 1 2017. Enhanced RRRP initiative and expanded OESP will provide additional bill savings for certain consumers:

- Enhanced RRRP – An estimated 800,000 customers would benefit seeing additional savings in the range of $3-$22 on their monthly bill.
- Expanded OESP – OESP consumers would see savings of approximately $40 – $113 on their monthly bill (up from the current $30 - $75).

The LDC Affordability Fund will produce bill savings once installation of energy efficiency measures is completed for targeted consumers.

The On-reserve First Nations Delivery Credit could result in an $85 monthly savings if Ontario Energy Board's recommendations are implemented.

Key Risks and Considerations

Electricity Support Programs - Cost Projection, Program Effectiveness and Fiscal Impact

The Ministry of Energy is bringing forward a suite of initiatives to address the impact of rising electricity prices. The sector is complex and a number of key assumptions used as inputs into the model are variables/forecasts themselves. As such, there is an inherent risk in the cost estimates that are provided. Hence, it is important to ensure the models and assumptions are stress tested. Sensitivity analysis, which would allow the government to develop a risk based outlook to manage potential fluctuations in the cost of these initiatives, would support better decision making and support meeting the government's fiscal targets.

Cost projections may also need to be refined as program details are finalized. This is similar to the initial projections for the cost of the 8% rebate in September 2016. At the time of the briefings in advance of the initial approval, the cost projection for the 8% rebate was $1B for the first year. The projections were refined, resulting in a revised estimate of $1.1B for the first year, rising to $1.2 B in the out years.

Program costs are also highly dependent on uptake and electricity usage and as such, can fluctuate from year to year. For example, the OESP currently has an uptake rate of 30%, the Ministry's cost estimates assume ramping up to 100% over four years (i.e., moving to 100% participation), there is potential for significant underspending if participation rate is between 30% and 100%. It is also important to understand how these enhanced electricity programs may impact the behaviour of various key stakeholders going forward with regard to program uptake and electricity usage and hence the assumptions built into the models and the financial estimates.

As there is no sunset date for the proposals, it is important to understand the full cost of the initiatives for the longer term, beyond the year 2021-22 as outlined in the submission. Furthermore, electricity prices are projected to increase above inflation for the foreseeable future. It is unclear if the initiatives proposed in the submission would be sufficient to bring the cost increases to be at or below inflation. Otherwise, the gap could continue to increase/widen and may necessitate further action and supports by the government.

It is also important to note that the effectiveness of the existing suite of electricity support programs (e.g. OESP, Home Assistance Program, RRRP) could also be evaluated to ensure that they are meeting program objectives and outcomes prior to enhancement and expansion. Key risks to highlight with individual program proposals:

- RRRP - the proposal is likely to create disincentives from the eligible LDCs towards productivity and performance improvements to drive down delivery costs/changes. In addition, the proposal may create an incentive for LDCs that fall just outside the cut-off to drive up their distribution costs to gain eligibility into the program. It is also important to note that the fiscal impact of this initiative is projected to increase beyond 2023 due to regular rate increases. It is recommended that the Ministry provide a long term forecast along with underlying assumptions, with risk bands that account for variability of distribution costs and the proposed distribution charge cap, to show the full expected financial impact of this initiative on the long term fiscal plan.

- OESP - the OESP currently has low uptake, consideration could be given to focussing efforts on increasing the take-up of the existing program, and seeing the effectiveness of the supports, before benefits are further enhanced. This approach may not only lower the fiscal impact in the short-term, but ensure that the effectiveness of the program can be assessed before it is scaled up.

- Affordability Fund – as program development continues to be finalized, the Ministry should continue to work with Treasury Board Secretariat and the Ministry of Finance on considerations around eligibility, relief amounts, fiscal impacts under different administration/delivery options (eg program delivery by outside entities through a trust structure vs ministry delivery), and key implementation risks.

  Considerations should be given to the development of performance metrics, including methods to evaluate whether the program is meeting its objectives and outcomes, to ensure the program is responding to the right elements and doesn't inadvertently incent adverse behaviour regardless of the capacity to pay.

  To be accounted for as a non-controlled trust, several elements must be addressed including who really controls the trust, who are the beneficiaries and whether unused funds are to be returned to the Province in the event of a windup.

As such, it is recommended that the Ministry of Energy work with Treasury Board Secretariat (Centre of Excellence for Evidence-Based Decision Making) and the Ministry of Finance as program development is finalized in order to better assess program costs projections, forecasting models, program effectiveness and performance metrics and outcomes and report back to TB/MBC.

Global Adjustment - Accounting Implications and Fiscal Impacts

There remains continued uncertainty around effective transaction design and related accounting treatment for a number of the initiatives (the Global Adjustment (GA) Smoothing and the New Affordability Fund). The risk exists that the fiscal impact of the proposals may be significantly higher than currently contemplated and estimated. The cost projections in this proposal are highly sensitive to interest rates, and Energy's and IESO's 30-year forecast of GA costs.

The intent is to establish a structure where the entity that takes on the GA and the debt required to smooth rates over a period of time would be a trust consolidated by Ontario Power Generation and thus reflected on the Province's books through modified equity consolidation.

If all the requirements can be met, an accounting analysis is expected to support: 1) increase in provincial borrowing; 2) no increase in net debt; 3) no impact on reported annual surplus/deficit, but depending on funding to OPG/Trust from the province, an increase in interest on debt and an increase in offsetting income reported for from the province's investment in OPG.

To date, the Ontario Auditor General (OAG) opinion on the proposal has not been sought. TBS will work with AG on the transaction. The auditors of OPG and IESO are providing their preliminary assessments and the Office of the Provincial Controller (OPCD) has been engaged.

The Ministry's submission assumes that the proposed GA smoothing will receive a favourable accounting treatment; hence it will not impact the provincial net debt and fiscal plan (For prudence, until there is legal, financing and accounting risk assessment, GA smoothing is shown as impacting the deficit). Should the favourable accounting treatment not be received, the impacts would be significant and variable depending on market changes (interest rates and cost of generation). In addition to having a significant fiscal impact, the proposed plan would also introduce significant volatility to the medium- to long-term fiscal plan as interest rates, energy prices, and consumer behaviour change.

The current cost estimates assume that the GA smoothing is provided to RPP Eligible participants. Given the reduction in the RPP in the initial years, and ability to opt out later, applying the GA smoothing impact to RPP eligible participants is appropriate; otherwise, consumers would have an incentive to opt out of the RPP costs when costs begin to increase and it would be challenging to fully recover the debt, or charge remaining RPP consumers proportionately more.

<u>Implementation/Legal/Other Considerations</u>

- Legal advice on the constitutional risk posed by the proposal to defer the current costs to consumers of the global adjustment, to be paid for by consumers in future years, noted a moderately high constitutional risk of resulting in an unconstitutional tax. It creates a refinancing structure which results in future consumers paying disproportionately more of the GA cost and therefore cross-subsidizing near-term consumers.

    - This advice was based on a review of the proposal from February 9, 2017. The Ministry's draft Cabinet submission indicates this risk could be eliminated, either up front or retroactively, by the imposition of a valid tax.

Name of analyst:	James Strang With input from COE, OPCD and OFA	**Phone number:**	416-327-2071
Date:	February 26, 2017	**Log number:**	
Branch / Division:	GGPR/ PEMD/ Treasury Board Secretariat Tax Policy Division/ Ministry of Finance Ontario Financing Authority/ Ministry of Finance		

APPENDIX A: PROPOSED MINUTE (DRAFT)

Should TB/MBC wish to proceed with the Ministry's request, the following minute could be considered:

Approve electricity rate mitigation actions that support up to a 25% electricity bill reduction (including the 8% reduction announced in 2016) for an average household in 2017.

In this regard, the Board:

i. Direct the Ministry of Energy to implement electricity rate mitigation for all electricity consumers eligible to be billed under the Ontario Energy Board's Regulated Price Plan (RPP) and any other consumers who would be eligible for RPP if their electricity account was with a licensed distributor by:

   a) Subject to completed legal, accounting and financing risk assessments, refinance the Global Adjustment (GA) in order to partially defer RPP-eligible ratepayer GA costs by reducing projected after-tax electricity costs for a typical customer consuming 750kWh per month in 2017 by up to 15%. Total projected bill increases will be kept in line with CPI until the end of 2021. From 2022 onwards, bills will increase at a rate that ensures gradual recovery of the accumulated debt by 2048.

   b) Direct the Ministry to report back to TB/MBC by Spring 2017, prior to going to LRC with any legislation, on the approach to refinance Global Adjustment , including, but not limited to:

      - Formal accounting opinions from OPG and IESO auditors.
      - Completed legal, financing and accounting risk assessments. Assessments to include, but not limited to proposed legislation, technical aspects such as Eurig analysis, and risk to borrowing (in discussion with the OFA).
      - Report on the multi-year profile of GA smoothing, identifying specific assumptions.
      - Report on sensitivity analysis completed as assumptions vary, such as under different recovery rates and periods.
      - Overall risk mitigation plan addressing completed legal, accounting and financing risk assessments.

   c) If a non-fiscal mechanism cannot be established:
      1. Direct the Ministry to report back to Cabinet and TB/MBC with options for achieving a comparable level of electricity rate mitigation in the most cost effective way, in order to minimize the impact on the province's fiscal plan.
      2. Note costs to government of proceeding if cost of refinancing of Global Adjustment is recognized as an expense in the fiscal plan of up to $2,534,000,000 in 2017-18, $2,668,000,000 in 2018-19, $2,942,000,000 in 2019-20, $3,420,000,000 in 2020-21 and $3,232,000,000 in 2021-22.

ii. Broadening the Rural or Remote Rate Protection (RRRP) program to mitigate distribution charges for customers of Local Distribution Companies (LDC) with some of the highest distribution rates, and moving the program from a ratepayer funded program to a government funded program beginning in 2017, including:

a) Harmonizing distribution cost for customers with the highest distribution rates (Hydro One (R1 and R2 rate classes), Algoma Power, Atikokan Hydro, InnPower, Chapleau Public Utilities Commission, Sioux Lookout Hydro, Lakeland Power (Parry Sound service territory) and Northern Ontario Wires Inc) at the lowest distribution rate paid by the average consumer of the LDCs noted by fall 2017.

b) Note costs estimated at up to $459,000,000 in 2017-18, $472,000,000 in 2018-19, $484,000,000 in 2019-20, and $497,000,000 in 2020-21 and on-going as part of the 2017-18 PRRT planning process.

c) Direct that any underspending related to any of the initiatives be returned to Treasury Board/Management Board of Cabinet and not be reallocated within the Ministry.

d) Direct the Ministry to report back to TB/MBC by Spring 2017 with final program details, including fiscal plan implications to broaden RRRP.

e) Direct the Ministry to report back to TB/MBC in 2017-18 on the program's effectiveness, efficiency, and sustainability. Report back to include, but not limited to:

- Current program outcomes identified and results achieved to date.
- Establishing program performance management framework including targets for the broadened program now government funded
- Report on and assessment of impacts of consolidation of LDCs
- Assessment of distribution rates and implications for the program

iii. Expanding every benefit level of the Ontario Electricity Support Program by 50%, moving the program from a ratepayer funded program to a government funded program beginning in 2017 and pursuing additional measures to substantially increase take-up.

f) Note costs estimated at up to $186,000,000 in 2017-18, $261,000,000 in 2018-19, $325,000,000 in 2019-20, and $375,000,000 in 2020-21 and on-going as part of the 2017-18 PRRT planning process.

g) Direct that any underspending related to any of the initiatives be returned to Treasury Board/Management Board of Cabinet and not be reallocated within the Ministry.

h) Direct the Ministry to work Treasury Board Secretariat (Behavioural Insights Unit, Centre of Excellence for Evidence-Based Decision Making) to accelerate/ maximize program uptake.

i) Direct the Ministry to report back to TB/MBC by Spring 2017 with final program details, including fiscal plan implications to expand OESP.

j) Direct the Ministry to report back to TB/MBC in 2017-18 on the program's effectiveness, efficiency, and sustainability. Report back to include, but not limited to:

- Identify eligibility criteria, and refinements being made.
- Current program outcomes identified and results achieved to date.
- Establishing program performance management framework including targets for the expanded program now government funded.

iv. Establishing a new government funded Affordability Fund to provide energy efficiency measures to electricity customers who do not qualify for existing low income conservation programs and who have difficulty paying their electricity bills.

a) Approve to commit up to $200,000,000 on a multi-year basis to support the Affordability Fund.

b) Direct the Ministry to report back to TB/MBC with program details, including performance management framework, and multi-year funding profile, and fiscal plan implications.

v. Establishing a new province-wide government funded program beginning in 2017 that would eliminate the delivery charge for First Nations customers on reserve.

k) Note costs estimated at up to $20,000,000 in 2017-18, $20,000,000 in 2018-19, $20,000,000 in 2019-20, and $20,000,000 in 2020-21 and on-going as part of the 2017-18 PRRT planning process.

a) Direct the Ministry to report back to TB/MBC by Spring 2017 with final program details, including performance management framework, and clarifying how the programs aligns with the significant Ontario Energy Board estimate of program costs, from $13M to $20M.

b) Direct that any underspending related to any of the initiatives be returned to Treasury Board/Management Board of Cabinet and not be reallocated within the Ministry.

vi. Expanding the Industrial Conservation Initiative (ICI) by reducing the eligibility threshold to 500kW to enhance competitiveness for Class B electricity consumers beginning July 2017.

a) Direct the Ministry to report back to TB/MBC by Spring 2017 with final program details, results achieved to date versus expectations, impacts of the change for participation, and impact for ratepayers as costs are recovered from ratepayers.

vii. Direct the Ministry:

a) To work with Treasury Board Secretariat and the Ministry of Finance on the development of a comprehensive risk-based costing, including forecast models and sensitivity tests on assumptions and financial estimates, for the electricity mitigation initiatives.

b) To report back to TB/MBC through regular updates including quarterly reports and the 2018-19 Program Review, Renewal and Transformation (PRRT) on the status of implementation, and revised out-year expenditure requirements if applicable.

c) To continue to work with the Ontario Energy Board, the Independent Electricity System Operator and Ontario Power Generation, through the Long-Term Energy Plan 2017, to further reduce electricity rates across the system.

d) To work with the Ministry of Finance, Treasury Board Secretariat, Cabinet Office and Office of the Premier on an integrated communications strategy.

APPENDIX B: FINANCIAL TABLES

FINANCIAL IMPACTS: CHANGES TO EXPENSE AND REVENUE					TABLE B1
			Fiscal Plan Basis		*Appropriations Basis*
$ Millions		**2016-17**	**2017-18**	**2018-19**	**2016-17**
Initiative cost		200.00	3,199.000	3,421.0000	
Expense changes:					
Social Programs	Oper	0.0000	665.0000	753.0000	200.0000
Global Adjustment Smoothing (Contributing towards up to 25% bill reduction)(Assumes it impacts the deficit)	Oper	0.0000	2,534.0000	2,668.0000	0.0000
Total Fiscal Impact		**200.0000**	**3,199.0000**	**3,421.0000**	**200.0000**

APPENDIX C: ELECTRICITY SECTOR BACKGROUND

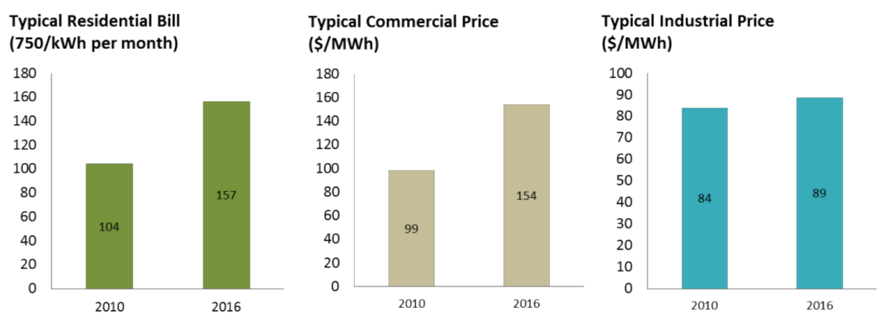
The Ministry has provided the following information to provide electricity sector context this item.

There are three classes of electricity consumers:

	Regulated Price Plan	Class B	Class A
Consumer Types	• Residential • Small Business • Farms	• Commercial • Institutional • Small industrial	• Large commercial • Large industrial
Load Size	Below 0.05 MW	Between 0.05 MW and 3 MW	Above 3 MW*
Total Consumption	58 TWh	57 TWh	26 TWh
Share of Consumption	41.1%	40.4%	18.4%

*** Note:** Consumers with peak demand between 3-5 MW in the manufacturing, mining, refrigerated warehousing, greenhouses and data-processing industries are currently eligible for Class A. All other 3-5MW consumers are Class B.

Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50%. Rates paid by commercial and industrial electricity consumers have increased by 56% and 6% respectively over the same period.



Note: 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

Existing Rate Mitigation efforts are on-going:

- Ontario currently provides rate mitigation to various electricity consumer classes through a combination of tax-based and rate-based programs.
  - For example, Northern Ontario residential electricity consumers receive tax credits in recognition of higher electricity costs in the north and rural consumers receive a subsidy funded through the rate-base due to the higher cost of delivering power to rural areas.
  - As of 2016, the government removed the Debt Retirement Charge (DRC) from residential electricity bills. While this saves a typical residential electricity ratepayer about $60 per year, it is less than the benefit previously provided through the Ontario Clean Energy Benefit (OCEB).
  - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers.
  - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods while reducing system costs.

– The Rural or Remote Rate Protection (RRRP) program is provided to rural or remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.

- Currently, electricity costs must be fully recovered from electricity consumers, rate mitigation funded through the rate-base often represents a shifting of costs from one consumer group to another (i.e., industrial to residential and commercial consumers).
  – Rate-based initiatives are generally associated with incenting changes in behaviour that provide electricity system benefits (i.e., shifting electricity consumption from on-peak to off-peak periods).

The table below shows the estimated cost shifts in the province's electricity system that result from three existing government programs (i.e., ICI, RRRP and OESP):

Cost Shift Impact	2011	2012	2013	2014	2015	2016
Residential Bill ($/month for 750 kWh)	3.55	4.07	3.85	4.46	5.68	6.55
Commercial – Class B ($/MWh)	4.74	5.43	5.14	5.94	7.57	8.73
Industrial – Class A ($/MWh)	-20.97	-25.26	-22.38	-24.68	-32.56	-31.55

Note: Negative values indicate a benefit; positive values denote an incremental charge.

Since 2013, a number of actions have and are being taken to reduce overall electricity system costs. Despite these actions to reduce system costs, electricity rates continue to increase for consumers:

- Renegotiating the Green Energy Investment Agreement, reducing contract costs by $3.7 billion;
- Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated $15 billion in new construction costs;
- Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as $600 million.
- Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least $1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
- Removing an expected $3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.

The existing program costs are summarized in the table below:

($M)	2014-15	2015-16	2016-17[1]	2017-18[1]	2018-19[1]	2019-20[1]	2020-21[1]
OCEB	1,078	860	-	-	-	-	-
OREC	-	-	300	1,100*	1,200	1,200	1,200
Ending DRC[2]	-	85	330	330			
NIERP	108	120	120	120	120	120	120
NOEC	24	26	25	25	25	25	25
OEPTC[3]	429	444	450	460	470	481	481
TOTAL	1,639	1,535	1,225	2,035	1,815	1,826	1,826

1. 2016-17, 2017-18 based on forecasted numbers
2. Effective January 1, 2016. 2015-16 estimated for 3 months of reduced DRC revenue
3. OEPTC amounts in all years based on energy component of the rebate.

* Sourced from Energy PRRT submission

OCEB – Ontario Clean Energy Benefit, NIERP – Northern Industrial Electricity Rate program, DRC – Debt Retirement Charge, OREC – Ont. Rebate for Electricity Consumers, NOEC – Northern Ontario Energy Credit, OEPTC – Ont. Energy & Property Tax Credit

APPENDIX D: DETAILED INFORMATION SUPPORTING PROPOSED INITIATIVES

The Ministry is proposing the following to further mitigate electricity prices for consumers:

1. Targeted initiatives helping the most vulnerable Ontarians (Customers who are disproportionately affected by increased electricity costs) by enhancing electricity support programs and shifting cost onto the tax-base:

   - Targeted customers:
     - High Delivery Cost Customers – Some customers in rural areas where the cost to delivery electricity is high can experience difficulty in reducing their electricity bill through conservation, particularly when reliant on electric heating.
     - Low-Income Customers: Rising electricity costs make up a disproportionally large amount of the household expenditures for low-income households.
     - First Nation On-Reserve Customers: On-Reserve First Nations customers experience challenges with energy affordability and are seeking to address historical grievances associated with electricity system infrastructure.

   - Initiatives providing targeted assistance to ease the electricity cost burden:
     1a. Enhance the Rural or Remote Electricity Rate Protection (RRRP);
     1b. Expand the Ontario Electricity Support Program (OESP);
     1c. Establish a Local Distribution Company (LDC) Affordability Fund; and
     1d. Delivery charge relief for on-reserve First Nations customers.

2. Ongoing activities to bend the future cost curve of electricity:
   - Ontario Energy Board (OEB) – Identify opportunities for future LDC efficiencies and rates;
   - Independent Electricity System Operator (IESO) – Modernize Ontario's electricity market through electricity Market Renewal initiatives.

3. Refinancing Global Adjustment assets in order to smooth the impacts of the Global Adjustment across ratepayers over a longer period of time.

4. Support for tenants & Supports for non-RPP Class B consumers.

1) Enhancing electricity support programs and shifting cost onto the tax-base

1a) Rural or Remote Rate Protection (RRRP) Enhancement

The Rural or Remote Rate Protection (RRRP) program mitigates some of the high costs of electricity distribution in rural or remote areas of the Province. It is a legacy program of the old Ontario Hydro and has existed in its current form since 2001.

The program, which costs approximately $242M/year is currently funded by other ratepayers. For an average residential customer, the cost of supporting RRRP is roughly $1.58 per month. For other customers, the cost to support the RRRP can range from $65 for a greenhouse to $8,000 for a medium industrial.

Part of the program helps fund the costs of Hydro One customers classified in the "R2" low density residential rate class. There are 335,000 R2 customers across the Province. These customers have some of the highest delivery costs in the Province.

- From 2001-2016 the program provided $125.4M annually to help defray these costs.

- In the 2016 Speech from the Throne, this funding was expanded by $116.4M to a total of $241.9 million.
- As of Jan 2017, R2 customers receive $60.50/month off their distribution costs.

While the RRRP helps mitigate some of the higher distribution costs for Hydro One R2 customers, there is an opportunity to provide further relief to consumers in relatively high-distribution cost outlier LDCs (e.g. Northern Ontario Wires, Lakeland Parry Sound, Chapleau, Sioux Lookout, InnPower, Atikokan and Algoma) and Hydro One R1 customers (medium density).

The Ministry is proposing to enhance RRRP by:

- harmonizing the fixed distribution rates at $38/month for R2, R1 and the next seven highest cost LDCs (enhanced benefits for ~280,000 consumers and new cost decreases for ~420,000 consumers)
- funding its costs through the tax base from the rate base;

For this proposal, targeted RRRP consumers (an estimated 800,000 customers would benefit from this enhancement) would see additional savings in the range of $3-$22 on their monthly bill. The fiscal impact of this program is approximately $459M in 2017-18.

Implementation considerations:

- The Ministry will need to ensure that only the high distribution cost LDCs are captured within the program framework
- LDCs will need to change their billing and customer information systems. OEB estimates that the implementation would take at least 6 months or more, following finalized regulations
- New legislation would be required to establish this program. Legal and regulatory risks (particularly with regards to legal authority and to the Ontario Energy Board's role in setting rates and incenting efficiencies) require further analysis
- Providing a tax-based subsidy outside of exiting rate setting mechanism reduces incentives for customers and distributors to engage on operating costs and capital planning.
- A mechanism will need to be created to ensure that LDCs/OEB/IESO/Province are aligned in the year-to-year forecasting and costing of the RRRP program and the enhancements.

Fiscal considerations:

- Distribution costs vary year to year.
  - Hydro One is expected to submit its cost of service application for 2018 and beyond (3-5 years) in spring 2017. The rate increases requested in this application could potentially increase the proposed fixed rate which could have a significant impact on fiscal requirements and ratepayer impacts.
  - The other high distribution cost LDCs generally have lower distribution cost increases, however, it is difficult to forecast fiscally the impact of the program until LDCs submit their cost of service applications to the Ontario Energy Board.

Fiscal Impact ($M)	16-17	17-18	18-19	19-20	20-21
TOTAL	-	459	472	484	497

1b) Ontario Electricity Support Program (OESP) Expansion

The OESP is an income-tested, application based program that lowers electricity costs of the most vulnerable consumers by a rebate directly on bills. The OESP is currently funded by the rate base. OESP credits vary by income level and family size, and there are two credit scales that include:

- The basic program credit ranges from $30/month to $50/month.
- An enhanced credit that ranges from $45/month to $75/month for consumers that are either Indigenous, use electric heat or have certain medical devices.

The OESP was launched on January 1, 2016, and in just over a year:

- Almost 180,000 have been enrolled in the program representing 30% of the total targeted low-income population and some 278,000 applications have been received.
- Almost $50 million in credits have been provided to vulnerable consumers.
- Some 172 intake agencies have been mobilized to assist low income consumers to apply for the OESP.

The Ministry is proposing to enhance OESP and fund its costs through the tax base by:

- increasing the existing benefit scales by an additional 50%;
- expanding the categories of OESP credits

The tables below outline the existing OESP credit scales and how the scales would be enhanced if increased by 50% and credits are extended to additional groups (represented in the circled boxes – greater access to OESP credits at smaller family sizes at different income levels)::

Existing OESP Credit Scales

Sliding Scale #1	Household Size						
Income Bracket	1	2	3	4	5	6	7 +
< $28,000	$30	$30	$34	$38	$42	$50	$50
$28,001 - $39,000			$30	$34	$38	$42	$50
$39,001 - $48,000					$30	$34	$38
$48,001 - $52,000							$30

Sliding Scale #2	Household Size						
Income Bracket	1	2	3	4	5	6	7 +
< $28,000	$45	$45	$50	$55	$60	$75	$75
$28,001 - $39,000			$45	$50	$55	$60	$75
$39,001 - $48,000					$45	$50	$55
$48,001 - $52,000							$45

Proposed +50% OESP Credit Increase*

Sliding Scale #1	Household Size						
Income Bracket	1	2	3	4	5	6	7 +
< $28,000	$45	$45	$51	$57	$63	$75	$75
$28,001 - $39,000		$40	$45	$51	$57	$63	$75
$39,001 - $48,000			$35	$40	$45	$51	$57
$48,001 - $52,000					$35	$40	$45

Sliding Scale #2	Household Size						
Income Bracket	1	2	3	4	5	6	7 +
< $28,000	$68	$68	$75	$83	$90	$113	$113
$28,001 - $39,000		$60	$68	$75	$83	$90	$113
$39,001 - $48,000			$52	$60	$68	$75	$83
$48,001 - $52,000					$52	$60	$68

For this proposal, OESP consumers would see savings of approximately $40 – $113 on their monthly bill (up from the current $30 - $75). This proposal would have a fiscal impact of approximately $186M in 2017-18 increasing to $375M by 2020-21.

Implementation and fiscal considerations:

- Changes to legislation / regulation may be required to establish and define the parameters for OESP to receive funding from the tax-base. The scope of changes would depend on the implementation / delivery mechanisms.
- The OESP regulation will likely require changes to enable OW and ODSP recipients to be "deemed eligible" for the OESP.
- Financial flow-through mechanisms would need to be considered in consultation with IESO and LDCs. Likely to be modeled after processes used for the Ontario Rebate for Electricity Consumers (OREC).

- The OEB has been collecting program funding in excess of program costs and has accrued a positive balance. This balance must be addressed when moving to the tax base.
- If OESP amounts are increased, it will need to be confirmed that the credit is not treated as taxable income. This was addressed in the current iteration of the OESP.
- Adding additional categories to the OESP matrix require will take time to implement as it will require changes to the central system as well as LDCs' billing systems. As well, the matrix will no longer follow the Low Income Measure (LIM), which could put additional pressure on the OESP and other provincial programs.

Fiscal Impact ($M)	16-17	17-18	18-19	19-20	20-21
Existing OESP credits	–	118	159	193	222
Incremental Enhance OESP credits by +50%	–	59	80	97	111
Incremental additional OESP categories	–	8	22	35	42
Total	–	**186**	**261**	**325**	**375**

Note:OESP participation ramps up to 100% year 4

1c) LDC Affordability Fund

The existing Home Assistance Program (HAP), delivered by LDCs under the Conservation First Framework, provides efficiency upgrades and education, at no cost, to help improve the energy efficiency and comfort of their homes and help customers manage their electricity bills. Program eligibility is aligned with other low-income support programs such as the OESP.

The Ministry is proposing to establish an Affordability Fund which would be available to LDCs only to provide similar energy efficiency measures as provided under HAP to targeted customers (i.e., those who are most in need, such as those who are facing disconnection and who cannot qualify for the low-income programs).

To establish the Fund, the government would enter into a TPA with Hydro One. The TPA would include terms for Hydro One to establish a non-controlled Trust to administer and distribute funds to LDCs across the province on the basis of principles established by the Province and implemented at the discretion of the Trustees. The Trust would distribute funds to LDCs across the province including, Hydro One, at the direction of the Trustees.

The Ministry indicates the Affordability Fund would not be used to provide grants or financial assistance to customers to forgive all or a portion of their arrears or electricity bill. It is not clear how the non-controlled independent entity (the AF Trust) would be blocked from a decision to cover arrears.

LDCs would apply for funding to the Fund administrator (Hydro One) to offer energy efficiency measures to its customers that meet the targeted eligibility criteria. Determination of eligibility could involve a number of factors and metrics:

- Do not meet the definition of "low-income";
- May have triggered action by an LDC collection department (e.g., are in arrears, have been placed on one or more payment plans, are due to be disconnected, etc.);
- Priority could be given to eligible customers in electrically-heated homes, or other unique circumstances; and
- Require financial assistance to pay for energy efficiency measures.

Recipients could receive measures (e.g. energy-saving light bulbs, programmable thermostats, cold climate air source heat pumps) ranging from $3,000 to $5,000 per customer, at no or minimal cost. As an illustration, with $200M, the estimated reach of the fund could be 15,000 to 65,000 households, depending on measures and uptake.

The Ministry is proposing that the Fund be provided through a one-time payment of $200M in 2016-17. Administration expense estimated to be 10% of the fund $20M, including expenses related to the Trust, Hydro One and LDCs. It is expected that the funds through the Affordability Fund will be deployed within a year (funds are expected to be exhausted by March 31, 2018). The TPA will include the option to extend the original funding amount into future years in the event of under spending. The TPA will also include the option to incorporate potential future funding from the tax base.

The Ministry indicates providing the $200M immediately provides LDCs with the required upfront commitment to apply for funding and initiate planning and implementation activities.

Figure 1: Summary of Roles and Responsibilities

Ministry of Energy	• Enter into a transfer payment agreement (TPA) with Hydro One. • Flow upfront funding to Hydro One and oversee spending in accordance with TPA
Hydro One	• Establish a Trust to administer the Affordability Fund- draft Trust deed and select board of trustees • Flow funding to Trust • Report to Ministry of Energy in accordance with TPA
Trust	• Affordability Fund administrator and manages funds • Administer LDC application and selection process • Enter into contracts with LDCs • Administer funding to LDCs and reporting requirements
LDCs	• Apply to the Affordability Fund • Deliver program to eligible electricity customers (intake, funding and installation of eligible measures, report on results)

Implementation and fiscal considerations:
- An illustration, with $200 million, the estimated reach of the fund could be 15,000 to 65,000 households (having met targeted eligibility criteria), depending on measures and uptake.
- Administration expense estimated to be 10% of the fund $20M, including expenses related to the Trust, Hydro One and LDCs.
- The LDC Affordability Fund would be a fiscal impact of $200 million in fiscal year 2016-17.
- The TPA will include the option to extend the original funding amount into future years in the event of under spending. The TPA will also include the option to incorporate potential future funding from the tax base.

1d) On-reserve First Nations Delivery Credit

On-reserve First Nations customers face unique challenges that impact electricity affordability, such as the poor quality of the housing stock on-reserve, average income is considerably lower, lower employment rates, historical grievances related to energy development on reserve lands and traditional territories, and impacts of energy infrastructure either present or due to connection delays. These challenges result in significantly higher electricity consumption levels and costs.

At the request of the Minister of Energy, the OEB worked with the Chiefs of Ontario to develop options to address these issues.

The ministry is proposing to implement the recommendations of the OEB's report:

- Eliminate the delivery charge for all on-reserve First Nations residential customers and eliminate the monthly service charge for customers of licensed distributors which charge a bundled rate.
- Automatically qualify on-reserve First Nations residential customers (~21,500 customers)
- Enable greater information sharing between distributors and band councils to identify all on-reserve First Nations customers; and
- Continue to provide assistance through OESP and LEAP to eligible on-reserve First Nations customers.

The rebate will appear on customer's electricity bills, either as a specific line item or a communicated call-out. The OEB estimates this would provide residential customers an average monthly benefit of $85 at a total annual cost of up to $20 million (21,494 total customers across 9 distributors). OEB notes total annual costs could range between $13M to $20M.

Implementation and fiscal considerations:

- Legislative and regulatory will be required to implement this program.
- The OEB will need to work with the LDCs to identify on-reserve consumers to administer the delivery rebate.
- Development of a communications plan
- Rebate will appear on customer's electricity bills, either as a specific line item or a communicated call-out.
- There is a risk that either non-status Indigenous communities without reserves or Métis could challenge the program on the grounds that it discriminates against them contrary to section 15 of the Charter. This risk is mitigated by the ameliorative purpose of the program and because targeting First Nations communities for a reserve-based program corresponds to the distinct circumstances of reserve-based communities, relative to other Indigenous communities

Fiscal Impact ($M)	16-17	17-18	18-19	19-20	20-21
On-Reserve First Nation Delivery Credit	-	20	20	20	20

Appendix E: Ongoing Activities to Bend the Future Cost Curve of Electricity

Ontario Energy Board (OEB)

The Ontario Energy Board (OEB) has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.

The OEB, through the Renewed Regulatory Framework for Energy (RRFE), has since 2012 attempted to move the distribution sector towards a performance/outcomes-based regulatory framework.
While new reporting requirements such as the LDC performance scorecard are positive developments, RRFE does not tie these system performance expectations to LDC financial performance. Encouraging shared partnerships on services between utilities will help reduce costs in the back end and encourage further innovation for small to medium sized utilities.

In 2012, the government asked the Ontario Distribution Sector Review Panel to make recommendations about how the distribution sector could become more efficient. The Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities.

The Ministry is proposing to help promote and accelerate these efforts by asking the OEB to look at opportunities to further drive LDC efficiencies and productivity. This may indirectly incent LDC consolidation. In parallel, the OEB could be instructed to review business cases behind its own regulatory requirements to reduce “red tape” and eliminate costs that LDCs indicate are creating pressures on operating expenses. This could be done through the Minister's letter, the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and/or the 2017 Mandate Letter and other agency business planning processes.

Independent Electricity System Operator (IESO)

The Ministry will continue to move forward with Independent Electricity System Operator’s (IESO) Market Renewal initiatives:

- Moving to “technology-agnostic” procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
- Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.

Changes related to IESO’s Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
- About $1/month or less than 1% at current retail prices for a typical residential bill; and
- About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.

Appendix F: Refinancing Global Adjustment Assets To Smooth the Global Adjustment Across Ratepayers Over a Longer Time Period

At this time, the Ministry continues to work towards finalizing a structure for this initiative and plans to return to TB/MBC in Spring 2017.

The Global Adjustment (GA) has risen over the past decade as the province's electricity system has decarbonized. The majority of GA costs now stem from greenhouse gas (GHG) emissions-free renewable and nuclear generation facilities, as well as natural gas plants that were constructed to restore system reliability and replace coal-fired capacity.

To enable this transition, generators in Ontario received contracted or regulated rates, which are typically designed to recover capital, financing (including returns to shareholders), and fixed operations costs. The GA recovers these fixed costs of running the province's generation fleet, as well as the cost of conservation programs. The majority of the province's electricity generators are under 20-year contracts and account for less than half of the GA. Some of these generators will continue to provide value to the electricity system beyond their contract lives (i.e., beyond 20-years).

The Ministry indicates there is an opportunity to recognize the long-term benefit of these assets to the electricity system and "bring forward" that benefit for ratepayers today by deferring some of the current costs. In 2016, GA costs were $12.3 billion.

GA Smoothing would spread these costs over a longer period and provide immediate ratepayer relief. By recognizing that generation assets are expected to continue to provide residual benefit to future ratepayers, beyond the term of current contracts, future ratepayers are expected to be able to utilize these assets and reduce the need to finance the development of new generation assets.

The result of this GA proposal is that cost to ratepayers remains lowered in the short term reducing projected after-tax electricity costs for a typical customer consuming 750kWh per month in 2017 by up to $26/month. Bill increases will be kept in line with the Consumer Price Index (CPI) until the end of 2021, and from 2022 onwards, bills will increase at a rate that ensures recovery of the accumulated debt, interest costs and administrative costs by 2048 without exceeding 10% of total electricity costs.

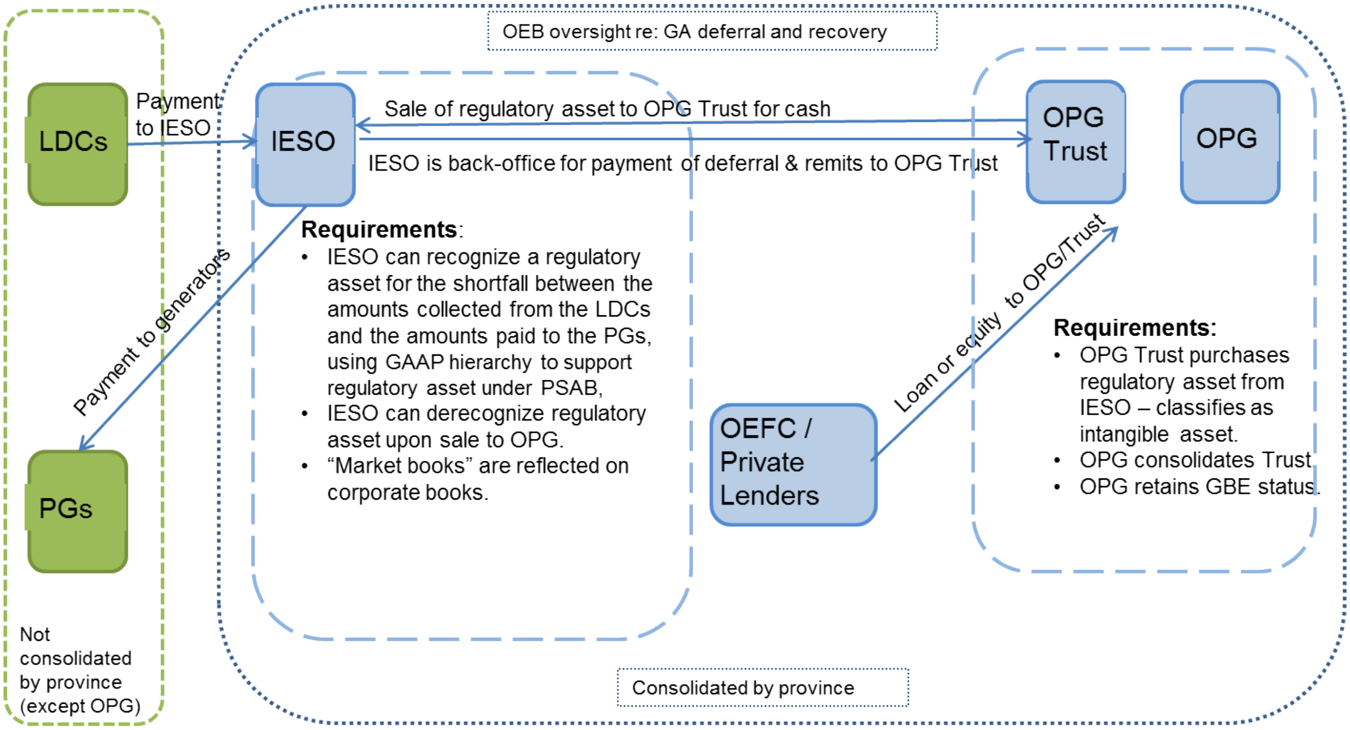
The GA Smoothing options under consideration are illustrative, the Ministry notes, targeted to RPP eligible participants, and show potential rate mitigation measures to meet a total bill savings of 25%, 20% and 18% reduction from the projected residential bill in 2017 requires a significant GA subsidy. These residential impacts are based on a forecast for a household connected to Toronto Hydro that consumes 750 kWh per month. Actual ratepayer savings would vary due to differences in consumption patterns. Graphics for 25% and 18% appear at the end of this section.

The Ministry is working through different implementation options so as to mitigate negative fiscal plan implications GA smoothing. The following table shows the projected fiscal costs related to GA smoothing without legal and accounting treatments.

Fiscal Impact ($M)	2017-18	2018-19	2019-20	2020-21	2021-22
Bills Lowered by 25%, RPP-Eligible Only*	2,534	2,668	2,942	3,420	3,232

*Numerical values represent amount borrowed in indicated fiscal year plus accumulated interest from previous year's accumulated debt

The Ministry has put forward a potential GA smoothing structure, as well as interactions between the sector entities and elements required to meet accounting objectives. The Proposed structure is still subject to legal, financing and accounting confirmation, and absent confirmation there would be a fiscal impact to the province.



The Ministry acknowledges analysis of the proposed structure is not complete and that there are several requirements still pending related to IESO and OPG that are high risk regarding resolution.

If all requirements can be met, an accounting analysis is expected to support: (1) increase in provincial borrowing (2) no increase in net debt, and (3) no impact on annual surplus/deficit, but depending on funding to OPG/Trust from Province, an increase in interest on debt and an increase on income from OPG.

- IESO requirements – IESO Finance, KPMG (Energy advisor and IESO auditor), OPCD and EY (OPCD advisor) are evaluating accounting risks:
    - IESO can recognize a regulatory asset for the shortfall between the amounts collected from the LDCs and the amounts paid to the PGs using GAAP hierarchy to support regulatory asset under PSAB
    - IESO can derecognize regulatory asset upon sale to OPG; and
    - "Market books" are reflected on corporate books.
- OPG requirements – OPG Finance, EY (OPG auditor), PwC (OPG Advisor), and OPCD are evaluating accounting risks:
    - OPG Trust purchases regulatory asset from IESO – classifies as intangible asset;
    - OPG consolidates Trust; and
    - OPG retains GBE status.

Policy, Legal, Fiscal, Accounting considerations:

- Borrowing money to smooth the Global Adjustment (GA), while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.
    - In addition, should Ontario electricity demand be lower than forecasted, the cost of paying off the debt will be spread over a smaller pool of consumers, further increasing future costs for individual ratepayers.

- Since the GA fluctuates, actuals will vary based on demand, the addition of new generation and natural gas prices. A "true-up" mechanism will be required to account for the difference between the "estimate" and "actual" GA costs

- If Class B electricity consumers, such as commercial and small industries, do not receive the benefit of GA Smoothing (i.e., because it is only targeted to RPP consumers) – consideration could be given to provide tax-based measures to off-set electricity costs (e.g., tax-credits, programs, etc).

- Given the legal framework the amount of GA smoothing needs to be proportionate to the generating contracts (i.e., 20-year) and the additional years of generation services still available (i.e., additional 10-years of service).

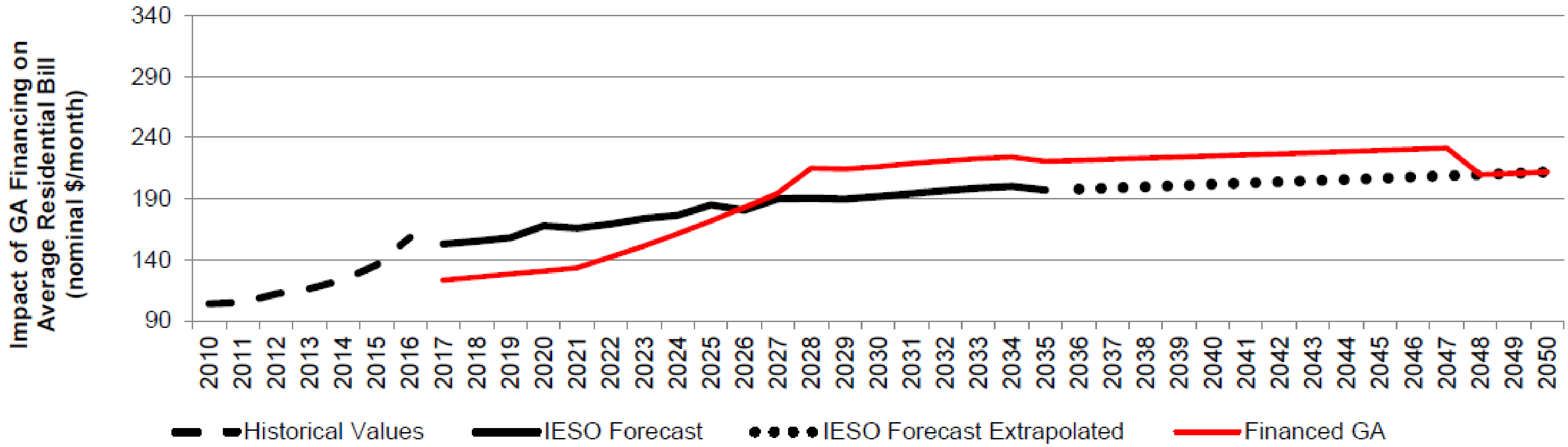
- Rating agencies and investors in the Province's debt may view this borrowing as an obligation of the Province, regardless of accounting treatment. Depending on the magnitude of the debt to be incurred could have an impact on the Province's borrowing cost.

- The current GA amount paid by consumers is a regulatory charge. One of the requirements of a valid regulatory charge (as opposed to a tax) is that the person paying the charge either benefits from the regulatory scheme or causes the need for regulation.
    - A proposal for refinancing the GA that appears to cross-subsidize near-term consumers at the expense of long-term consumers by back-loading costs more than if costs were spread equally over the estimated lifespan of generation and conservation assets presents a moderately high risk (more likely than not) of constituting a tax.

      Were the charge characterized as a tax, in the event of a challenge, it would be struck down by a court as unconstitutional and consumers would be entitled to recover their payments. This risk could be eliminated, either up front or retroactively, by the imposition of a valid tax.

- There is risk for any potential no fiscal impact implementation structure for GA smoothing given that the Ontario Auditor General has raised concerns about recognizing rate regulated assets and liabilities in previous Annual Reports.

A. GA Smoothing for RPP-Eligible Only (Borrow $2.5 billion in 2017, Residential Bills Lowered 25%, Lower Total Debt)



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Average monthly residential bill w GA financing impact and tax *($/month)*	104	105	112	116	124	136	158	123	126	128	131	133	142	151	161	172	183	195	215	214
Year-over-year change in bill *(%)*	-	1.0	6.7	3.9	6.1	9.8	16.7	-22.1	2.0	2.0	2.0	2.0	6.5	6.5	6.5	6.5	6.5	6.5	10.5	-0.4
Impact of GA financing pre-tax *($/month)*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-26.1	-26.1	-26.2	-32.8	-28.7	-23.9	-19.9	-13.5	-11.8	2.0	4.2	21.8	21.8
Total Accumulated Debt *($ billion)*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	5.1	7.9	11.4	14.6	17.8	20.8	23.2	25.6	26.7	27.7	26.8	26.0
Total Change in Accumulated Debt *($ billion)*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.6	2.8	3.5	3.2	3.2	2.9	2.4	2.4	1.1	0.9	-0.8	-0.9

	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Average monthly residential bill w GA financing impact and tax *($/month)*	216	219	221	223	224	221	222	222	223	224	225	226	227	228	229	230	230	231	210
Year-over-year change in bill *(%)*	0.9	1.2	1.0	0.8	0.6	-1.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	-9.3
Impact of GA financing pre-tax *($/month)*	21.7	21.7	21.5	21.4	21.3	21.0	20.9	20.8	20.7	20.6	20.5	20.4	20.4	20.3	20.2	20.1	20.0	19.9	0.0
Total Accumulated Debt *($ billion)*	25.1	24.1	23.1	22.0	20.9	19.7	18.5	17.2	15.9	14.4	12.9	11.3	9.7	7.9	6.1	4.2	2.1	0.0	0.0
Total Change in Accumulated Debt *($ billion)*	-0.9	-1.0	-1.0	-1.1	-1.1	-1.2	-1.2	-1.3	-1.4	-1.4	-1.5	-1.6	-1.7	-1.7	-1.8	-1.9	-2.0	-2.1	0.0

Notes: Assumes 30 year financing period and a nominal interest rate of 5% (compounded monthly). Ratepayer GA payments increase annually beyond 2021 such that the average monthly residential electricity bill increases by 6.5% per year with a limit of $2.2 billion above the true cost of GA in any given year to cap repayment charges at around 10% of total bill. IESO forecast is based on IESO's revised OPO forecast as of February 2017. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer.

Appendix G: Support for Tenants & Supports for Class B – Conservation Efforts

Support for Tenants:

The Ministry of Energy and the Ministry of Housing have explored whether it is possible to extend these programs to tenants who do not pay their own electricity bills.

The Residential Tenancies Act (RTA) governs the relationship between landlords and tenants. While it may be possible to use the RTA to direct landlords to pass on savings such as the 8% Rebate to tenants, there would be significant complexities with such an approach (E.g., different metering configurations including bulk metering, individual, both combined in a building; enforcement to ensure rebates based on; and to distinction if it only applies to pre-1991 buildings that are covered by rent controls)

The Ministry of Energy and the Ministry of Housing have concluded that the most vulnerable consumers in the province in social housing do benefit indirectly from the existing mitigation measures such as the 8% Rebate. Social housing providers do receive the 8% Rebate, which allows them to offset some of their electricity costs, and can use these savings for other issues related to the building.

Support for non-RPP Class B electricity consumers

Non-RPP Class B electricity consumers comprise about 50,000 customers, including many mid-size manufacturers (i.e., automotive parts suppliers, plastics manufacturers), large commercial buildings (i.e., office blocks, mid-sized shopping malls) and broader public sector facilities (i.e., hospitals, college campuses).

Non-RPP Class B consumers are too large for the Regulated Price Plan (so do not qualify for the 8% rebate for small businesses or Time-Of-Use pricing) and too small to be Class A (so do not qualify for the Industrial Conservation Initiative (ICI) for large consumers). The Ministry notes, the cost of electricity for Class B consumers has risen faster than CPI.

- Further lower the threshold for participation in the Industrial Conservation Initiatives (ICI) below the current 1MW, which was recently approved – takes effect July 2017. Sector restrictions would be included. It could be narrowed to a specific sector – allow only manufacturers below 1 MW to participate.
    - Cost would be covered by other ratepayers. Ministry's preliminary analysis notes an increase of just over $1/month increase for a typical residential bill.
    - Regulatory amendments need to be made before end of April 2017 (due to putting it in place before next 12 month billing period beginning Jul 1 ,2017)
- Eliminate DRC earlier than scheduled April 2018 for all non-RPP Class B consumers (Saves $7/MWh)
    - Shift Class B DRC to Class A consumers
    - Partially reduce Class B DRC (A $148M fiscal impact if lowered by 50% to $3.50/MWh)
    - Remove DRC completely for Class B (fiscal impact estimated at $295M in 2017-18)

- DRC Benefit Voucher – Class B customers would receive a voucher equivalent to all or a portion of their DRC charges on their electricity bills. The customer would use this voucher to increase or ‘top-up’ incentive amounts available through the Ontario Climate Change Solutions Deployment Corporation (OCCSDC). Vouchers could incent higher participation towards OCCSDC programs, helping these customers transition to a low-carbon economy.
    - Vouchers could be funded either through the GGRA if the voucher can be linked to GHG reductions, or the tax base. It is estimated that the outstanding balance for DRC relating to Class B customers from April 1, 2017 to March 31, 2018 is approximately $295M.
    - Not all Class B customers may be able to benefit from the vouchers (e.g. a facility with limited ability to implement new energy efficiency measures).
    - LDCs may need to make changes to their administrative processes and billing systems in order to confirm value of voucher.

APPENDIX H: ILLUSTRATIVE BILL IMPACT

The follow table show electricity bill impact of 25% reduction..

GA Smoothing for RPP Eligible Only – Residential Bills Lowered 25% (with Government Funded 8% Rebate and Social Programs, 2% increase)

- Total bill below is based on a revised IESO forecast. See footnotes for more information.

Residential (750 kWh/month)	Actual 2016	2017	2018	2019	2020	2021
Total Bill (includes HST)	**158**	**164**	**167**	**170**	**181**	**178**
Total Bill (excludes HST)	140	145	148	150	160	158
Impact of GA Financing		-26	-26	-26	-32	-28
Impact of Tax-Basing Social Programs		-2	-2	-2	-3	-3
Subtotal		117	120	122	125	127
8% rebate		-9	-10	-10	-10	-10
HST		15	16	16	16	17
Revised Bill (includes HST)	**158**	**123**	**126**	**128**	**131**	**133**
Year-over-Year Change		-22%	2%	2%	2%	2%
Change from Forecast		**-25%**	**-25%**	**-25%**	**-28%**	**-25%**

Commercial & Small Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class B Total (excludes HST)	**160**	**165**	**160**	**162**	**173**	**169**
Class B Revised Total (excludes HST)	**160**	**162**	**157**	**159**	**170**	**166**
Year-over-Year Change		1%	-3%	1%	7%	-2%
Change from Forecast		-2%	-2%	-2%	-2%	-2%

Large Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class A Total (excludes HST)	**90**	**91**	**93**	**88**	**95**	**96**
Class A Revised Total (excludes HST)	**90**	**88**	**90**	**84**	**92**	**93**
Year-over-Year Change		-2%	2%	-6%	9%	1%
Change from Forecast		-4%	-4%	-4%	-4%	-4%

Notes: Based on IESO's revised OPO forecast as of February 2017. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. Above Class B estimate based on a 1 MW customer connected to Toronto Hydro, assumes delivery charge escalates as per residential forecast. "Social programs" refers to existing RRRP and OESP. While initiatives would take several months to implement, the above estimate for 2017 reflects a full-year impact. The 8% rebate above represents savings compared to status quo due to the reduction in the sub-total from GA financing.