



Electricity Price Mitigation

Ministry of Energy

March 1, 2017



Minister

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Deputy Minister

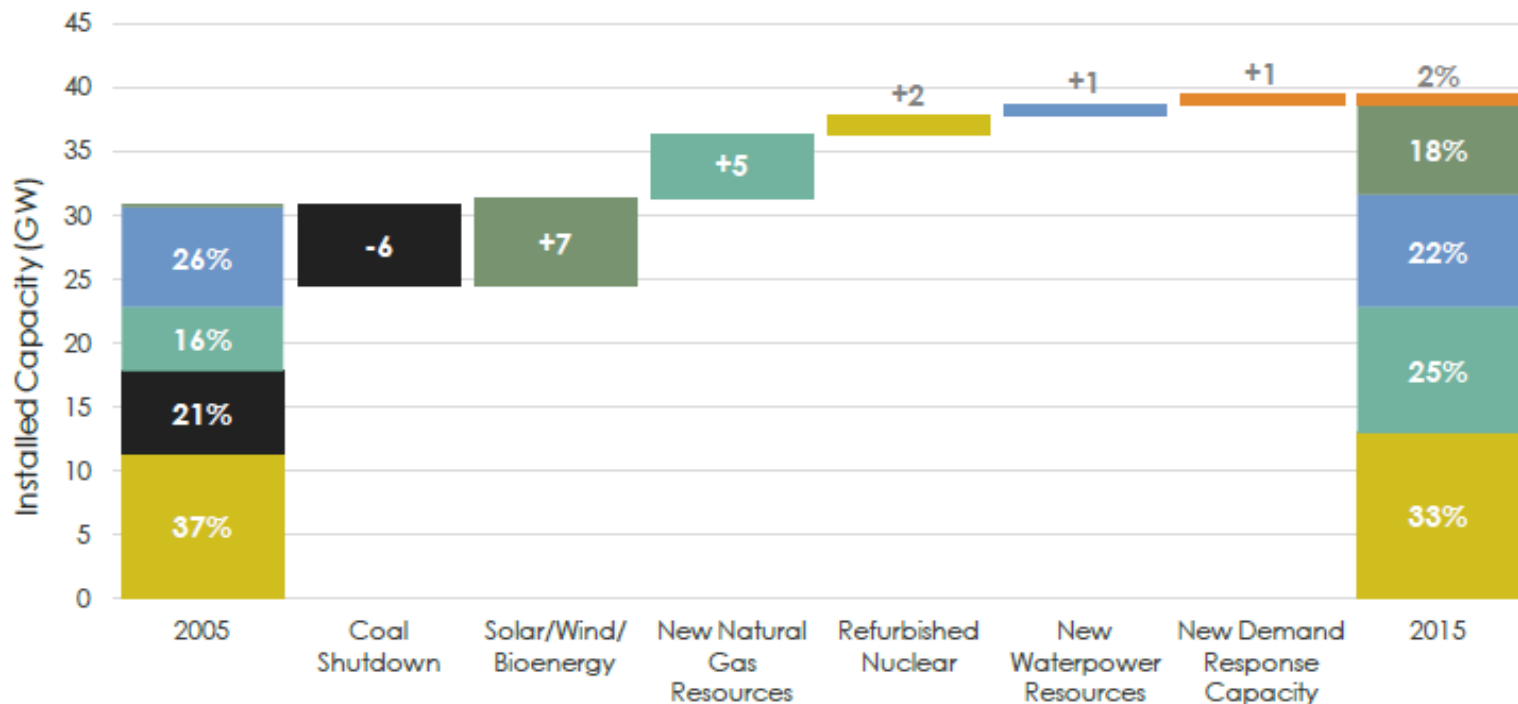
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Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., \$35 billion+ investment in cleaner generation and \$15.5 billion investment in transmission and local distribution systems).
- Ontario has taken a number of actions to lower electricity costs for all consumers by:
 - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., Green Energy Investment Agreement (GEIA) renegotiation, decreasing Feed-In Tariff (FIT) prices, competitive Large Renewable Procurement (LRP)).
 - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., no new NUG contracting and demand response).
- On November 28, 2016, the Minister of Energy announced the need for changes in how electricity resources are procured, the need for wholesale market renewal and greater electricity consumer choice.
- The Ministry of Energy is currently updating its Long-Term Energy Plan (LTEP), which provides an opportunity to consider a range of policy changes to how the Ontario energy sector operates.
- On a number of occasions the Premier has indicated publicly that further relief on electricity prices will be provided to consumers in the near term.

Context – Infrastructure Investments

- In the eleven year period between 2005 and 2015, government added new electrical capacity to Ontario's grid to restore reliability, replace coal and meet environmental objectives.



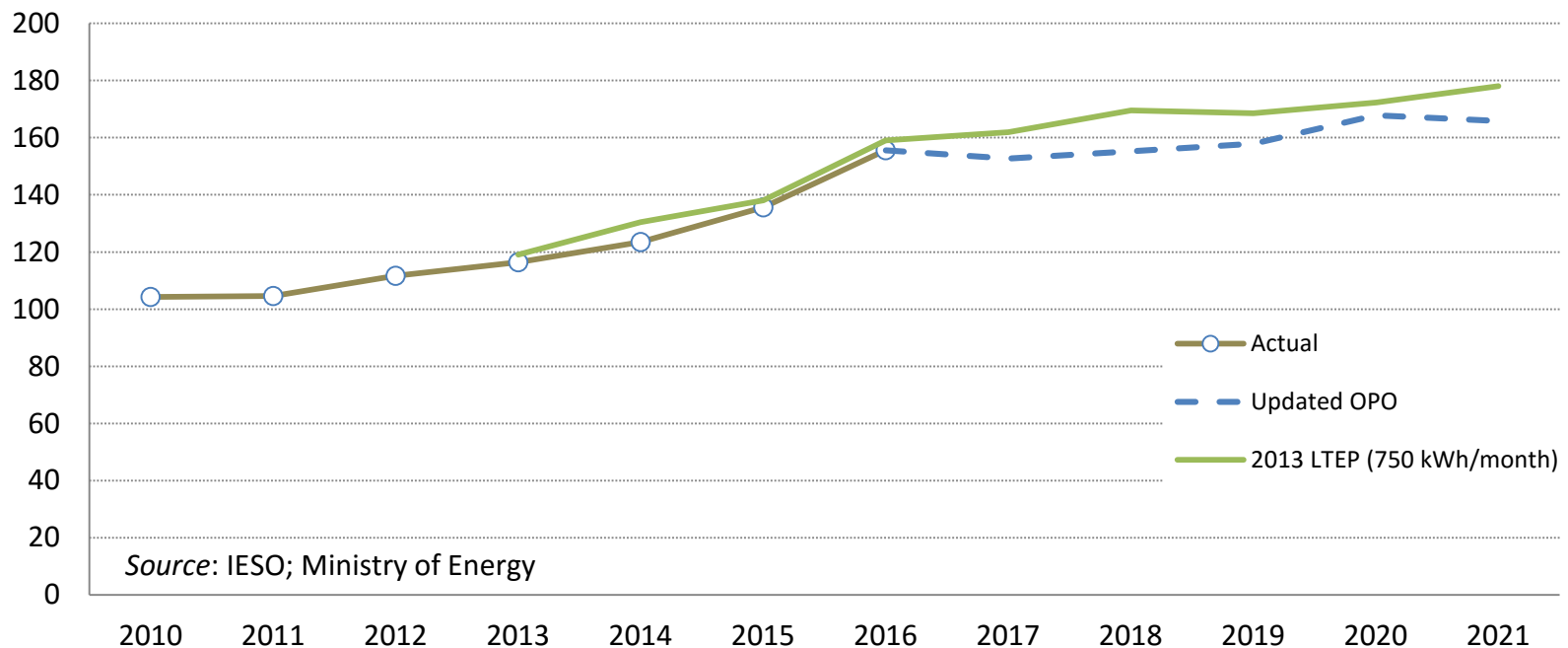
Source: IESO Ontario Planning Outlook

Context – Electricity Prices

- Electricity price increases have generally outpaced inflation. There have been several government policies that have impacted electricity prices over the past several years, including: HST, the Industrial Conservation Initiative, the Ontario Clean Energy Benefit (OCEB) and the Debt Retirement Charge (DRC).

Illustrative Typical Residential Electricity Bills

Historical and Forecast in \$/month



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Context – Recent and Existing Government Funded Electricity Cost Mitigations

(\$Millions)	14-15	15-16	16-17 ¹	17-18 ¹	18-19 ¹	19-20 ¹	20-21 ¹	Who Benefits
Ontario Clean Energy Benefit (OCEB) ²	1,078	860	OCEB ended on December 31, 2015					• Residential customers, farms, small business (i.e., 10% off, on up to 3,000 kWh/month)
Ontario Rebate for Electricity Consumers (OREC or 8% rebate)*	-	-	300	1,100	1,200	1,200	1,200	• Residential customers, farms, small business (i.e., amount equal to the 8% Provincial portion of HST)
Ending Debt Retirement Charge (DRC) for Residential ³	-	85	330	330	--	--	--	• Residential customers (i.e., saves about \$70 per year for a typical residential consumer)
Northern Ontario Energy Credit (NOEC) ⁴	24	26	25	25	25	25	25	• For eligible northern Ontario residents (i.e., for 2017, single people can receive up to \$148, and families up to \$227, depending on adjusted family income)
Ontario Energy and Property Tax Credit (OEPTC) (Energy component only) ⁴	429	444	450	460	470	481	481	• For eligible low-to moderate-income individuals and families, & qualifying seniors (i.e., for 2017, up to \$227, depending on adjusted family income)
Northern Industrial Electricity Rate Program (NIERP)	108	120	120	120	120	120	120	• Qualifying northern Ontario large industrial electricity consumers (i.e., rebate of 2cents/kilowatt-hour)
TOTAL	1,639	1,535	1,225	2,035	1,815	1,826	1,826	

Notes:

1. 2016-17 to 2020-21 based on forecasted numbers
2. OCEB ended December 31, 2015
3. 2015-16 estimated for 3 months of reduced DRC revenue. Estimated impact up to March 31, 2018.
4. Part of the Ontario Trillium Benefit. While related to energy generally, key policy driver for OEPTC when introduced in 2010 was electricity, as prices were forecast to rise, while fossil fuel prices, particularly natural gas, were low and falling.

* Sourced from Energy PRRT submission

Context – Recent Actions Taken To Mitigate Electricity Rates

- Following the 2016 Throne Speech, the several actions were announced to further reduce electricity costs.
 1. As of January 1, 2017, Ontario is rebating an amount equal to the provincial portion of the HST to reduce eligible residential, small business and farm electricity bills by 8%.
 2. Expanded 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.
 3. Expanding the Industrial Conservation Initiative (ICI) – up to one-third savings for participants.
 4. Suspending the LRP II and the Energy from Waste Standard Offer Program (EFWSOP) – up to \$3.8 billion in cost savings.
 5. Limiting the Feed-In Tariff (FIT) 5 procurement target to 150 MW and suspending future FIT procurements – an average annual savings of \$15 million.

Rate Mitigation Proposal

- The following approaches are proposed:
 - 1) Smoothing the global adjustment (GA) to provide significant and immediate rate relief through cost deferral of the GA:
 - Smoothing Mechanism (i.e., 25% reduction); and
 - Implementation Model.
 - 2) Enhancing competitiveness for Class B electricity consumers (i.e. manufacturing) by lowering the eligibility threshold for Industrial Conservation Initiative (ICI).
 - 3) Helping vulnerable electricity consumers by enhancing electricity support and conservation programs and shifting cost onto the tax-base:
 - Rural or Remote Electricity Rate Protection (RRRP) Enhancement (Delivery Charge Relief);
 - Ontario Electricity Support Program (OESP) Expansion;
 - New Affordability Fund; and
 - On-Reserve First Nations Delivery Credit.
 - 4) 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.

GLOBAL ADJUSTMENT (GA) SMOOTHING

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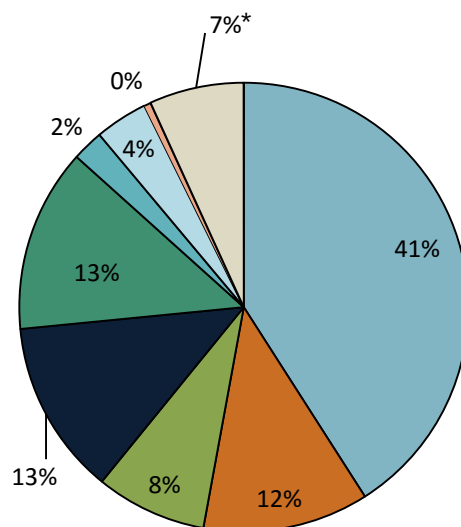
Overview – GA Smoothing

- The Global Adjustment (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.
 - Generators in Ontario received contracted or regulated rates, which are typically designed to recover capital, financing, 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).
 - 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.
 - GA Smoothing would spread these costs over a longer period and provide immediate ratepayer relief (i.e., similar to re-financing a mortgage). 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 GA Smoothing option under consideration is illustrative and show potential rate mitigation measures to meet a targeted 25% reduction from the projected residential bill in 2017.
 - 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.
 - Targeted to Regulated Price Plan (RPP) -eligible;
 - Rate increases would be capped at Consumer Price Index (CPI) for the first four years. Subsequent years would be set above CPI in order to ensure that bill increases due to repayments are capped at around 10% of the total bill.

GA Smoothing – Cost Breakout

- 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 is instrumental in maintaining a reliable electricity system by ensuring that sufficient generating capacity is available.
 - Generators in Ontario received contracted or regulated rates, which are typically designed to recover capital, financing and fixed operations costs. Most generators are on 20-year contracts with the exception of hydroelectric and nuclear plants. They operate on longer contracts (or are regulated on a cost-of-service basis by the OEB) in recognition of the much longer operating lives of these facilities.
- Chart below shows the breakout of the GA by generator and program types. In 2016, the GA costs were \$12.3 billion. These costs will evolve over time as 2,181 MW of previously contracted generation comes online in the coming years.

2016 GA Cost: \$12.3 billion



Nuclear
Hydro
Natural Gas
Wind
Solar
Biomass, Landfill and Byproduct
Conservation
IEI Program
OEFC*

GA (\$M)
5,053
1,473
985
1,552
1,630
278
467
60
842

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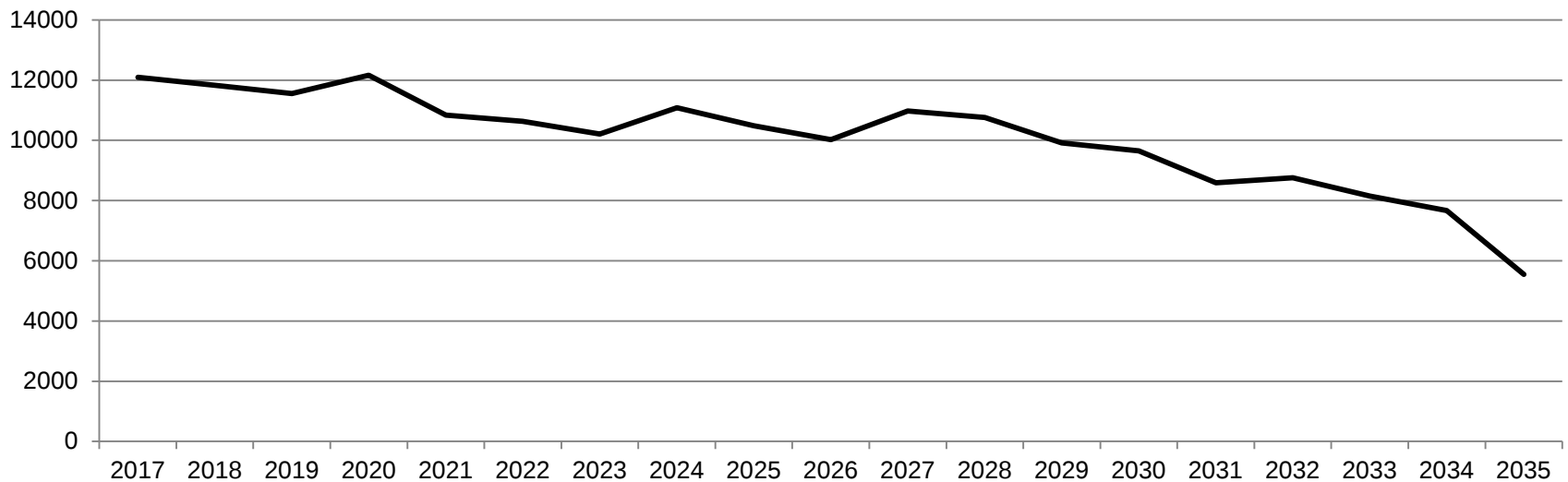
*Note: OEFC indicates the cost of generator contracts managed by the OEFC which include contracts for natural gas, hydro and biomass generators.

** Note: Conservation measures, not quantified here, serve to reduce Ontario energy demand. Actual electricity generation would be larger than 155 TWh in the absence of conservation programs.

GA Smoothing – Global Adjustment Forecast

- The amount of Global Adjustment (GA) is forecast to decrease through the forecast period. Several factors contribute to the decline of GA, including:
 - Expiry of electricity generation contracts;
 - Cost of existing contracts reduced due to Inflation; and
 - Higher wholesale electricity prices due to higher natural gas/carbon prices, higher demand and reduced nuclear generating capacity.

Forecast Global Adjustment Cost (nominal \$ million)



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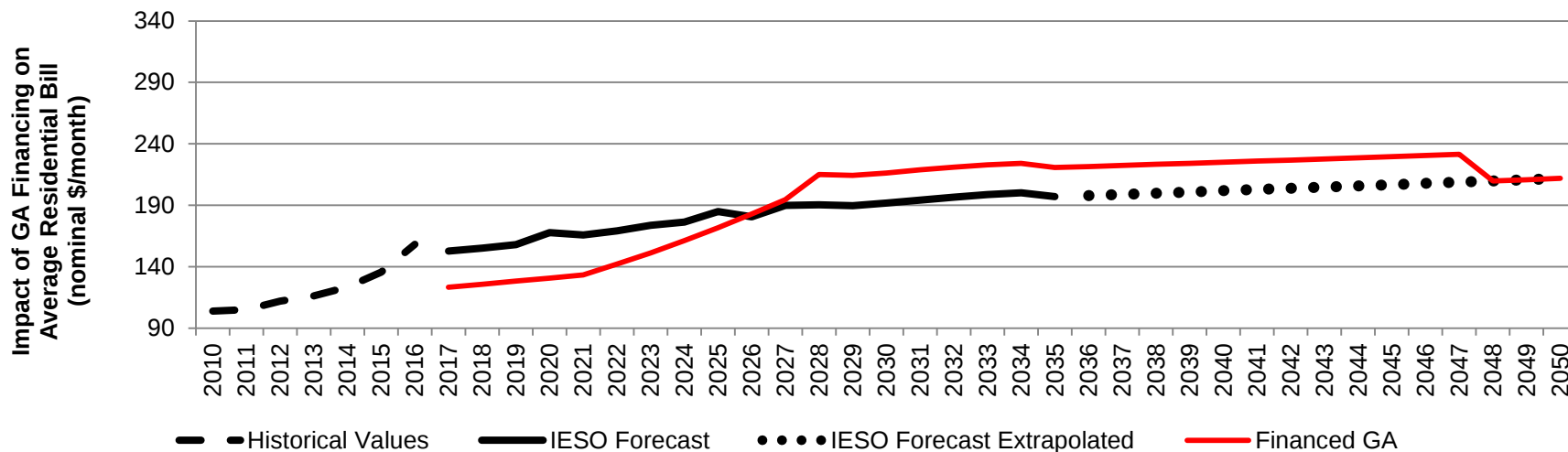
GA Smoothing – Expected Life of Electricity Generating Assets

- Gas, wind and solar generators are typically contracted for a 20-year period (e.g., with the Ontario Electricity System Operator (IESO), etc).
 - Nuclear and hydroelectric generators are contracted for a much longer period or regulated by the Ontario Energy Board (OEB) on a cost-of-service basis.
- While it is likely that gas, wind and solar generators will be able to operate beyond their current contracts, IESO advises that generators will need to decide what level of capital investment is appropriate for ongoing operations (i.e., by replacing and/or refurbishing major facility components).
 - In IESO's 2016 Ontario Planning Outlook (OPO), it was assumed that the service lives of generators could be extended beyond their contract term based on additional investments and ongoing costs. **Note:** This was not an assessment of the cost/benefits or a prediction of what the generators would actually do at the end of their contracts.
- The table below outlines IESO's current estimates for service lives of gas, wind and solar facilities. The ongoing service lives of these facilities depend on: initial facility design & build, operating activities (e.g., hours of operation, etc.) and level of facility maintenance (i.e., ongoing component repair and replacement).

Technology	Contract Life (yrs)	Expected Life (yrs)	Expected Cost Post-Contract Life
Gas	20	Up to 30	Life varies with initial design, how it is operated and maintained.
Wind	20	Up to 30	Older technologies may deteriorate faster. Elements such as foundations and electrical integration can last longer.
Solar	20	Up to 30	Performance deteriorates to about 80% by end of contract. Some facilities built in the initial contract periods may deteriorate more; however, technology is improving rapidly. Components need to be replaced 5 to 30 years depending on design.

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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	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)	104	105	112	116	124	136	158	123	126	128	131	133	142	151	161	172	183	195	215	214	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 (%)	-	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	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	-9.3	
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	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)	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	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)	0.0	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	-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.

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A. GA Smoothing for RPP-Eligible Only – Residential Bills Lowered 25% (with Tax-base 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%

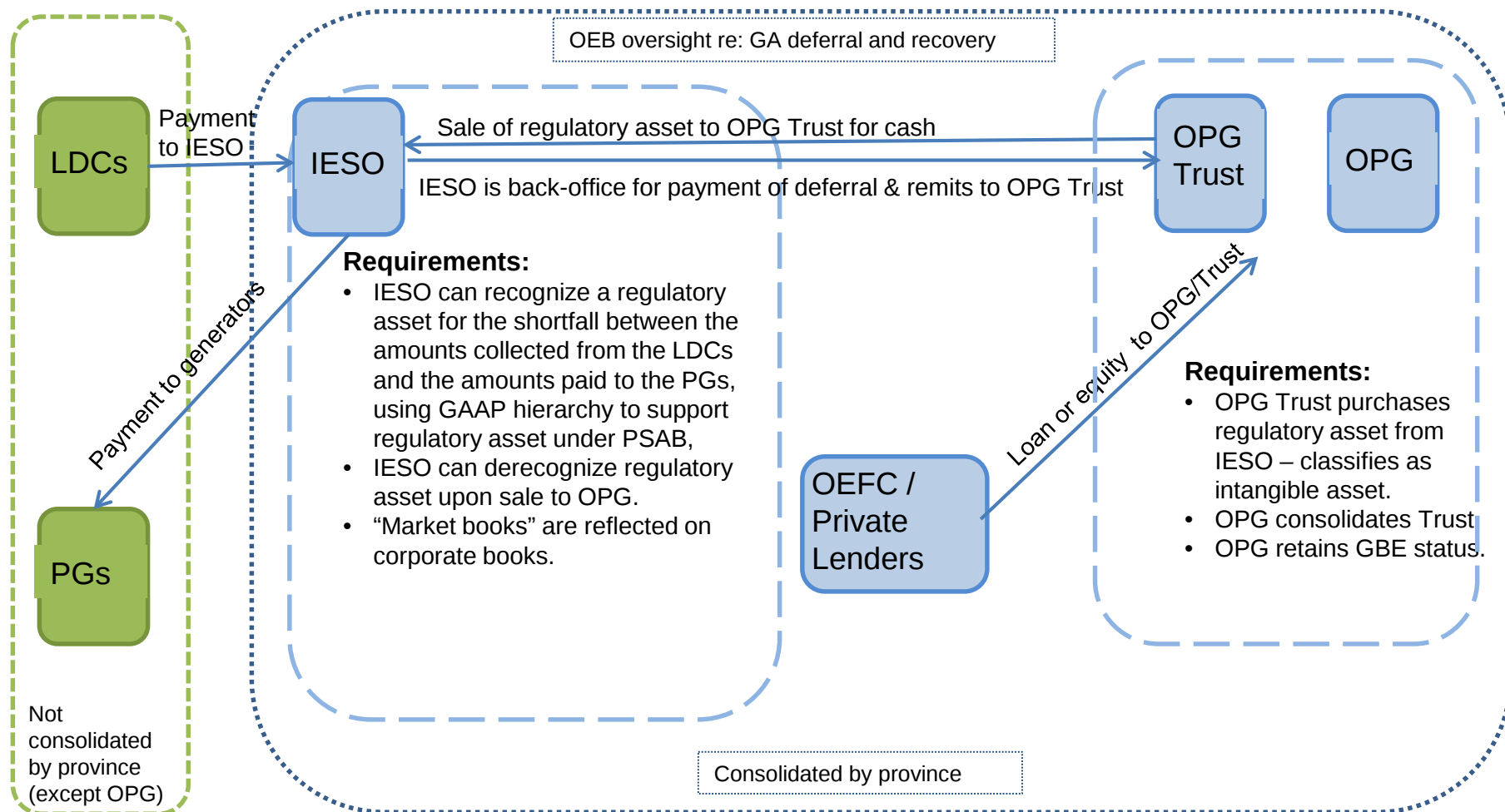
Commercial & Small Industrial (\$/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class B Total (excludes HST)	160	165	160	162	173	169
Class B Revised Total (excludes HST)	160	162	157	159	170	166
Year-over-Year Change		1%	-3%	1%	7%	-2%
Change from Forecast		-2%	-2%	-2%	-2%	-2%

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.

B. GA Smoothing – Potential Structure

- The following diagram provides an overview of a potential GA smoothing structure, as well as interactions between sector entities and elements required to meet accounting objectives.



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Note: Proposed structure is subject to legal and accounting confirmation, absent that confirmation, there would be a fiscal impact to the province.

B. GA Smoothing – Accounting Considerations

- OPCD advises that analysis is not complete; several requirements (below) are high risk re: satisfactory resolution.
- Complexity of the structure and length of deferral/recovery increase risk and decrease transparency
- 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 in income from OPG will result.
- 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.
- No discussion with OAG; in previous Annual Reports, the OAG has raised concerns about the appropriateness of recognizing rate regulated assets and liabilities.

B. GA Smoothing – IESO Considerations

- The Electricity Act enables the Independent Electricity System Operator (IESO) to recover from ratepayers the amounts paid to generators, distributors or other contracted entities.
- The accounting advice received by IESO is that reflecting market balances and regulated assets is a more appropriate presentation for its financial statements going forward.
- IESO is characterized as an “Other Government Organization” (OGO) and consolidated on a line-by-line basis into the Provincial books.

Issue	Response
1. Can IESO adopt regulatory accounting?	• Public sector accounting does not address regulated assets. • Guidance can be drawn from other accounting bodies. • US Federal Accounting Standards Advisory Board (FASB), US Governmental Accounting Standards Board (GASB) and International Accounting Standards Board (IASB) do provide guidance. • FASB accounting standard 980 and IASB have specific references that support the adoption of regulatory accounting. Conclusion: There is a hierarchy of accounting principles that support this approach.

B. GA Smoothing – IESO Considerations

Issue	Response
2. Can IESO recognize the GA deferral as a regulatory variance account?	Criteria for recognition are: • Rates are established by or are subject to approval by an independent, third-party regulator or by its own governing board empowered by statute or contract to establish rates that bind customers. • Rates are designed to recover the specific costs of regulated business-type activities. • In view of demand, it is reasonable to assume that rates will be set to recover the regulated business-type and can be collected from customers. Conclusion: Legislation creates the right to collection, currently and in the future. With either OEB or IESO board involvement a regulatory asset can be recognized.
3. Can IESO sell the variance account related to the deferral of the annual Global Adjustment account?	• The sale of the variance account to OPG Trust must be structured as an absolute assignment of future economic benefits of the Asset with no obligations, rights or benefits remaining of IESO. • In that case, this would represent a sale of the future right to collect these amounts from the ratepayer. Conclusion: Based upon proposed terms of the sale agreement, there would be no future economic benefit for IESO. Risk and rewards are entirely transferred to OPG Trust.

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B. GA Smoothing – OPG Accounting Considerations

- OPG's Special Purpose Vehicle (SPV)/Trust is a stand-alone entity able to conduct business separately under a Trust agreement. **Note:** The conditions required for OPG to consolidate the SPV/Trust are outlined in the following table:

Issue	Response
1. Decision Making	- OPG must have decision making authority on the operation of the SPV/Trust (without a veto right by the Province), including naming of trustees, establishing operating plans and budgets, setting or changing financing policies. - The SPV/Trust while operating within the legislation, must be controlled by OPG to operate freely and to alter terms and conditions not specified in the legislation to ensure recovery of the deferred amounts.
2. Business Risk	The SPV/Trust must have variability of returns as a normal business enterprise would, including such things as interest charged on deferred amounts, decisions on how to finance these deferred amounts, the ability to make / lose and keep any spread from financing.
3. Funding	- The Province cannot directly or indirectly fund more than 50% of SPV/Trust or any investment in the SPV/Trust. - OPG must own at least 50% of the most exposed equity /sub-debt in the SPV/Trust.
4. Directive	Directive that is issued should not be prescriptive or direct OPG to set up this business. The directive should only be "guiding" i.e. to allow OPG to evaluate options and put forward to the OPG Board a recommended plan for Shareholder approval.

B. GA Smoothing – OPG Accounting Considerations (cont'd)

Issue	Response
5. Other required Attributes	• The legislation that supports the formation of the SPV/Trust must have the following attributes: – Must require interest, carrying and administrative costs be paid to the Trust to allow for Revenue recognition; – The amount to be deferred must either be specified or be calculated based on a specific formula that is not subject to ongoing decision making by the Province. <u>The Province cannot have the ability to override this formula;</u> – SPV/Trust and its debt holders will require their capital guaranteed and paid for directly by the Province if the Province revokes the legislation; and – The spirit of the legislation should be reflected in the Trust Indenture Agreement.

B. GA Smoothing – OPG's Financing Structure Requirements

KEY ELEMENTS REQUIRED TO ENSURE THE DEFERRAL OF GA CHARGES CAN BE FINANCED:

Creating the Right to Recover Deferred GA

- Legislation enshrines the ability of the IESO to create a Right to charge customers in the future for the Global Adjustment (GA) deferred today including principal amount deferred, interest and other financing costs on the amount deferred and fees, expenses and other administrative costs.
- The Right can be sold to an appropriate Trust or Special Purpose Vehicle (SPV) to obtain funds to pay amounts due to generators under contracts or regulation. These SPVs are generally single purpose entities with no other operations that could add risk to the entity, dilute debt holder rights, allow parties from other operations to claim rights to the future recovery from customers or allow these other parties to initiate bankruptcy proceedings.
- Right must be irrevocable and if the Right is amended by future governments the debt holders have the right of action against the government to recover the amount outstanding including interest, fees, expenses and any damages resulting from the amendment.
- Right must specify the recovery period or the mechanism for setting the recovery rate including true up of the rate to ensure all amounts are recovered.

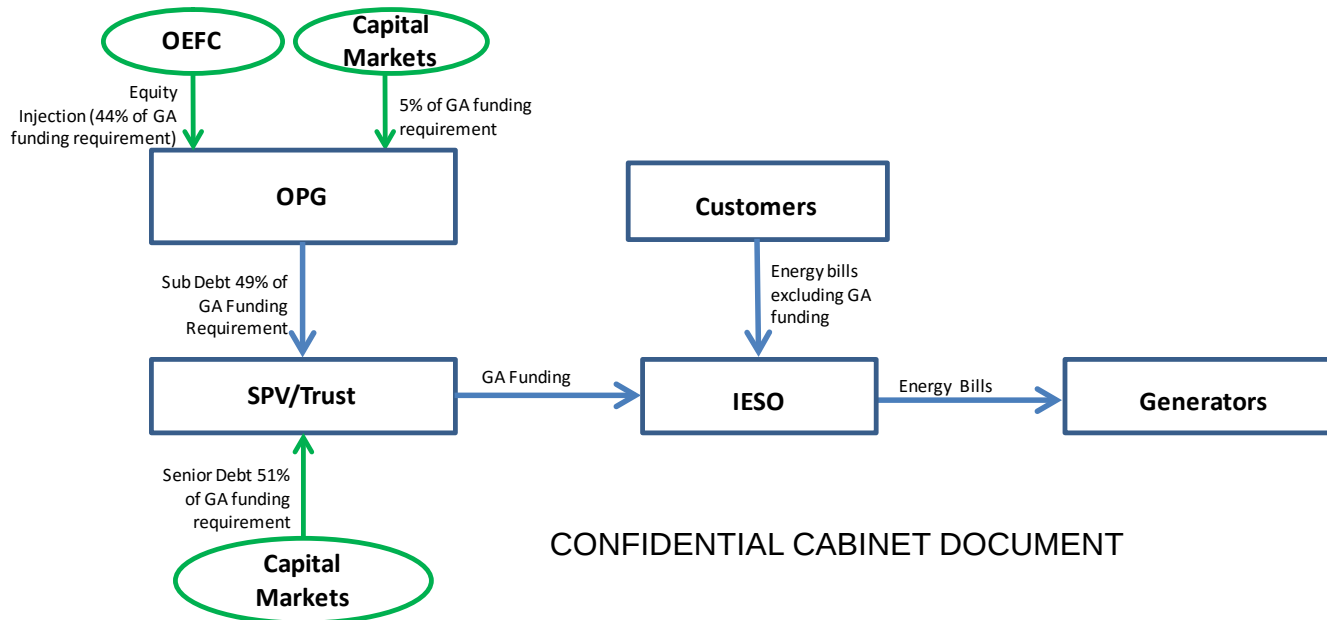
Economic Factors

- Limits on the recovery amount (principal, interest, fees and expenses) charged to customers in future periods must have compensating elements such as longer recovery period to ensure the full amount deferred plus interest, financing and other administration costs is recovered from customers.
- Need to balance customer relief with debt holder risk. Longer recovery periods and larger deferred balances increase risk to the debt holder of future government intervention.
- The amount required by the SPV to purchase and service the Right will be funded 51% from debt holders, 5% from OPG through capital markets and 44% from OPG via equity injection to OPG from the Province. The funding from OPG will be loaned to the SPV as subordinated debt.

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B. GA Smoothing – OPG’s Financing Structure Requirements (cont’d)

- Special Purpose Vehicle (SPV) will be used to raise the GA financing and ring fence OPG from its legal obligations
- SPV will be structured to allow for GBE accounting consolidation into OPG
- Given that SPV will be consolidated into OPG for accounting purposes, the significant amount of debt required to fund the GA deferral will have a severe impact on OPG’s credit rating. If 100% of the requirement is funded by debt OPG would be downgraded.
- To manage this exposure and minimize the cost of funding. The required funding would be split into 2 buckets:
 1. 56% from capital markets; and
 2. The remainder provided by the Province via equity injection, which would be loaned to SPV as subordinated debt.
- The use of equity to fund a portion of the GA deferral also allows for an improvement in both Net Income and EBITDA as incremental revenue is captured by the increase in the value of the deferral which would offset the fiscal impact of the borrowing at Province level.
- Credit rating metrics are generally maintained within established limits.



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GA Smoothing – OEB Considerations

- Ontario Energy Board (OEB) oversight may be required as part of creating a regulatory asset.
- Subject to final confirmation, there are several other spheres for possible OEB oversight:
 - The rate payer impact of IESO deferral account and eventual repayment of the deferred Global Adjustment (GA), within pre-defined legislative parameters;
 - The administrative costs of the OPG's Special Purpose Vehicle (SPV) /Trust (e.g., as the OEB reviews and approves IESO's expenditure and revenue requirements and makes orders fixing just and reasonable rates for the Smart Metering Entity);
 - The SPV/Trust's returns (e.g., as the OEB does with OPG's regulated assets) and whether any income to OPG can be used for the benefit of rate payers;
 - The review of the final structure of the debt issuance for the limited purpose of ensuring requirements of law have been met; and
 - In out years, review of the collection of charges to ensure that collection is sufficient, and not greater than necessary, to pay debt service.
- The scope of OEB oversight will ultimately need to balance the interests and needs of rate payers, the market, OPG and the Province.

B. GA Smoothing – Ontario Financing Authority (OFA) Considerations

- Under the proposed structure, the financing of the deferred Global Adjustment (GA) costs would be effectively done in part by each of the OPG Special Purpose Vehicle (SPV)/Trust, the Province and OPG: the OPG SPV/Trust would borrow 51%, the Province 44% and OPG 5% of the required GA amounts needed to be financed.
 - In the alternative, the Province (through the OFA/OEFC) could borrow the required amounts each year, likely at a lower cost. However, the target for an arms-length trust and potential risk transfer would not be achieved.

	OPG Structured Financing	OFA/OEFC/Provincial Financing
Financing Considerations	- As the OPG SPV/Trust would be borrowing in its own corporate capacity from the public markets, it will likely incur a higher interest cost compared to the Province's borrowing. - This would increase the cost of GA smoothing and the ultimate rate impact on future consumers. - The Trust would be exposed to interest rate changes. - Availability of debt financing may also be limited, depending on the overall amount of deferral, and the subsequent rate impact during the recovery period. OPG has cited examples of a 10% threshold on overall rate impacts of the deferral recovery amounts. - With a potential guarantee from the Province for the borrowing of the OPG SPV/Trust, OPG could see borrowing costs closer to the Province. However, this would redirect the risk back to the Province, removing the intended benefits of using this particular structure, and could add risk to the targeted accounting treatment. - With, or potentially even without a provincial guarantee, OPG SPV/Trust's borrowing could be seen as debt effectively supported by the Province by credit rating agencies and included in their analysis and determination of the Province's ratings. - If a Provincial guarantee endangers the targeted accounting treatment, it may be hard to justify the higher cost borrowing by OPG SPV/Trust to be passed through to ratepayers.	- Province's borrowing from the public markets would add to the borrowing program and the Province's gross debt. - The Province would expect to be able to finance the GA deferral at a lower financing cost than the OPG SPV/Trust, but would likely not achieve the targeted accounting treatment based on OPG's analysis. - Net debt would not increase, to the extent supported by increased equity in OPG under that model, and/or if the accounting treatment can be achieved as backed by a GA-related asset (OPG does not consider that the accounting can be achieved if the SPV/Trust is financed by the Province). - The Province's interest on debt (IOD) cost would need to be effectively recovered through the GA. - E.g., an OPG equity return to cover the cost of borrowing for the equity injection. - Or more directly if the Province is providing financing directly to the GA entity. - The cost of borrowing for the Province could change: - The Province's credit rating could be at risk of being re-evaluated by Rating Agencies, which may negatively impact the cost at which the Province borrows and - An increase in the Province's borrowing rates, as a result of increased borrowing. The market may not have adequate demand for the Province to carry-out these borrowings without increasing the interest rate on the debt issues for GA financing and for all of the Province's borrowings. - The interest cost of GA deferral would be exposed to changes in the interest rate environment generally.

GA Smoothing – Legal Considerations

- In principle, refinancing the Global Adjustment (GA) to spread the costs of generation and conservation assets over the useful life of the assets presents only a low risk of being a tax, as each cohort of consumers pays for a proportion of the GA cost roughly equal to the proportion of the benefit they receive from the useful life of the assets.
- Legal risk arises if it becomes apparent that the Government is not spreading cost so that it is shared proportionately by future consumers who cause a need for or benefit from the generation asset, but rather is doing so in order to lower the price in the short term by increasing the price in the long term. If the proposed financing served to encumber future consumers with a premium payment to cover the GA financing in order to subsidize current ratepayers, then there would be a moderately high constitutional risk that the financing proposal would result in an unconstitutional tax.
- Former Supreme Court Justice Ian Binnie has provided a legal opinion concluding that the current proposal is at a moderately high risk of being a tax, for the following reasons:
 - The degree of constitutional risk is in direct proportion to the extent the government is not able to show a proper match between the cost of providing facilities for electricity generation and the group of consumers who benefit year to year from electricity generated by those facilities.
 - If the government fails to establish that the relevant electricity generating assets will continue to perform economically over the 30 year period, or if the GA charge is in the opinion of the Court disproportionately backend loaded, the GA will not qualify as a regulatory charge (and would be characterized as a tax).
 - By shifting costs to the 20-30 year customers, the government may in reality be disproportionately back-end loading the GA with the effect that the 20-30 year consumers will be subsidizing the 1-20 year consumers.
 - The judges can be expected to be aware of the difficult political problem of high energy costs in Ontario, and will take a careful look at the government's evidence in support of the re-allocation of the GA.

GA Smoothing – Policy 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 consumption, further increasing future costs for individual ratepayers.
- The impacts are also based on a GA forecast. 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.
- Although 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), the Ministry has a proposal later in the submission to address competitiveness for Class B consumers (i.e., targeted lowering of the Industrial Conservation Initiative (ICI) eligibility threshold from 1 MW to 500 kW).
 - Class B consumers have raised concerns about the cost of electricity and its impact on their business competitiveness.
 - **Note:** Although Class B and Class A consumers will not receive the rate relief benefits of GA smoothing, both consumers will benefit from tax-basing the electricity social programs.
- 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 GA smoothing proposal will accrue total interest of \$25 billion based on the proposed option. This amount of interest is sensitive to many factors, including interest rate, natural gas and carbon prices, generation costs and demand levels.
 - An increase in the borrowing rate from 5% to 6% would increase the total interest costs by almost \$9 billion and would require an extension of the financing term beyond 30 years.

GA Smoothing – Fiscal Considerations

- If the proposed legal and accounting treatment of the GA financing smoothing proposal is not implemented, there would be a negative impact on the province's fiscal plan, as shown below.

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

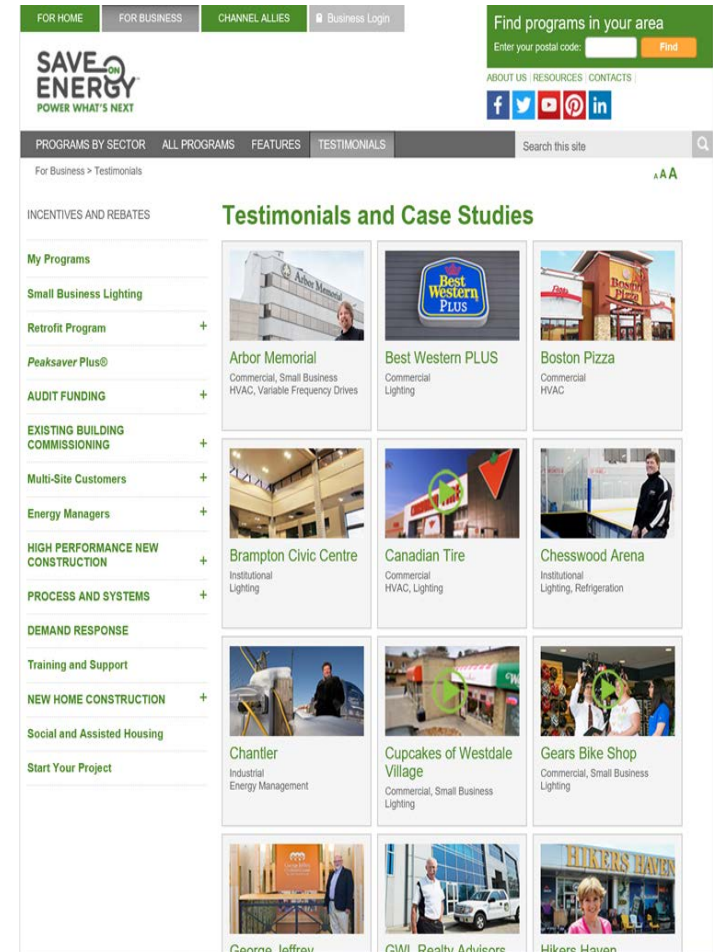
*Numerical values represent amount borrowed in indicated fiscal year plus accumulated interest from previous year's accumulated debt

Source: Ministry of Energy

ENHANCING COMPETITIVENESS FOR CLASS B ELECTRICITY CONSUMERS

Support for Class B Consumers

- 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).
- Through saveONenergy, many Class B consumers have already taken advantage of energy efficiency programs.
 - Although saveONenergy programs like Process and Systems Upgrade Incentive exist, these programs generally require significant investment on behalf of the customer in addition to the incentives and therefore may be difficult to take advantage of.
 - For Class B manufacturers whose electricity consumption is primarily based on process activities (e.g., injection moulding, welding, etc), traditional conservation measures like lighting and ventilation upgrades have limited benefit.

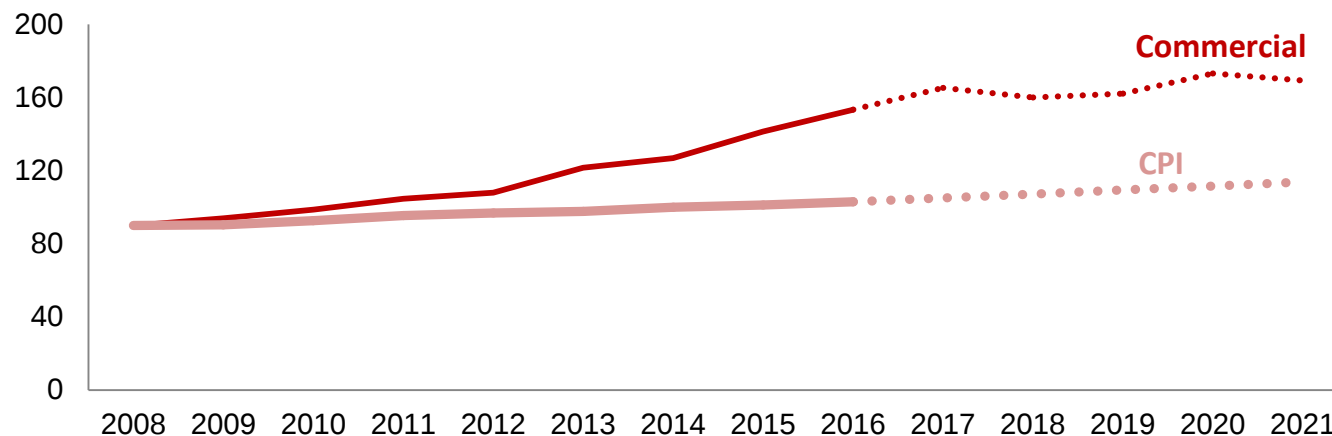


Support for Class B Consumers (cont'd)

- 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).
- Price mitigation initiatives could be provided to Class B to address stakeholders' concerns (e.g., Coalition of Concerned Manufacturers of Ontario, etc).
- The chart below highlights that the cost of electricity for Class B consumers has risen faster than CPI.

Illustrative Electricity Prices

in \$/MWh



Source: IESO; OEB; Ministry of Energy

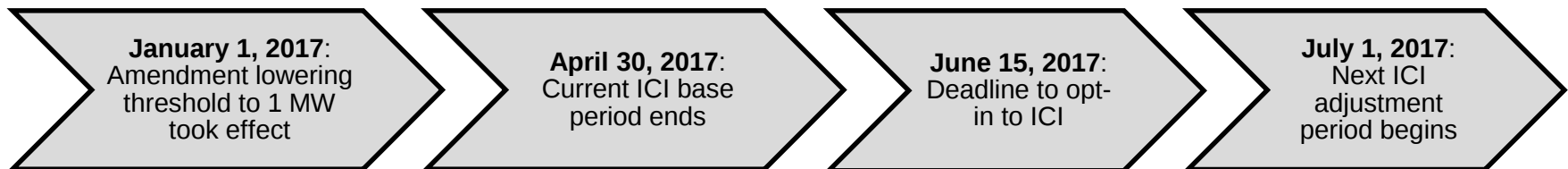
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Lower ICI Threshold Below 1 MW for Energy Intensive Industry

- The Industrial Conservation Initiative's (ICI) eligibility threshold for participation was recently lowered to 1 MW. The lowering of the ICI eligibility threshold provides an opportunity for additional Class B consumers to save on their electricity costs if they choose to opt-in to ICI (i.e., and become new Class A consumers):
 - Beginning in July 2017, new participants will be billed Global Adjustment (GA) on the basis of their contribution to province-wide peak demand.
 - Prior to lowering the ICI eligibility threshold, electricity consumers with peak demand between 3 and 5 MW could only participate in ICI if they belonged to the following sectors: manufacturing, mining, data processing, refrigerated warehousing and greenhouses. **Note:** To achieve the benefits of ICI, participants must reduce their electricity demand during the five system peak hours.
- To enhance the competitiveness of larger Class B consumers whose electricity demand are too low to currently qualify for ICI, the Ministry proposed to:
 1. Expand ICI by extending eligibility to larger Class B consumers with average monthly peak demand over 500 kilowatts; and
 2. Target the expansion to energy intensive industries with the North American Industry Classification System (NAICS) codes 31 - 33 (i.e., Manufacturing).
- In addition, the Ministry will assist Class B participation in ICI through a targeted outreach campaign delivered by the Ontario Chamber of Commerce (OCC).

Lower ICI Threshold Below 1 MW – Considerations

- A targeted lowering of the ICI eligibility threshold from 1 MW to 500 kW provides benefit to larger Class B consumers (i.e., manufacturing) while limiting the cost shift to other electricity consumers.
 - **Note:** A Class B consumer that run only a day shift, resulting in fairly peaky load profiles would need to adjusted its behaviour to maximize the benefits of ICI.
- Preliminary analysis by ENERGY staff show that the estimated impact of a targeted lowering of the ICI eligibility threshold from 1 MW to 500 kW would increase a typical residential bill by up to 0.66% or just over \$1/month based on a 2016 bill of about \$158.
 - The actual impact would vary depending on uptake and consumer responsiveness.
 - With the recent lowering of the ICI eligibility threshold to 1 MW, there is no information available regarding the actual impact on new participants and the electricity system.
- In order for any changes to ICI eligibility to take effect before the next 12-month billing period beginning July 1, 2017, regulatory amendments would have to be made before the end of April 2017.



Lower ICI Threshold Below 1 MW – Legal Considerations

- The quantum of a regulatory charge may be set at different rates within a regulatory structure where the differential prices are intended to serve other regulatory goals including an intention to modify the behavior of persons within the scheme.
- Expanding access to the Class A pricing regime is intended to serve regulatory goals by encouraging consumers to shift their electricity use away from peak hours, which benefits the electricity system as a whole. While Class B consumers will have to pay more of the GA cost in order to finance the reduction for Class A consumers, this is generally permissible since Class B consumers are not modifying their behaviour and the total amount recovered for the GA does not exceed its cost. CLB has previously advised that the differential pricing structure generally only attracts a **moderately low risk** of being a tax, and this risk level does not change if the option of Class A pricing is extended to a broader class of consumers.
- It is more difficult to justify a differential regulatory charge on the basis of behavioral modification when the lower charge is not available to some participants in the regulatory scheme whose conduct could equally serve the same goals. To the extent that there is not a regulatory rationale for extending the new class A option only to certain sectors, risk increases. The amount of risk in this scenario will vary depending on the quantum of the premium that Class B consumers pay to create the behavior modification incentive for Class A and the degree to which the excluded sectors can credibly claim to be able to achieve the same outcome were they permitted to participate in this aspect of the program.

ELECTRICITY SUPPORT AND CONSERVATION PROGRAMS TO HELP VULNERABLE ELECTRICITY CONSUMERS

Electricity Support and Conservation Programs to Help Vulnerable Electricity Consumers

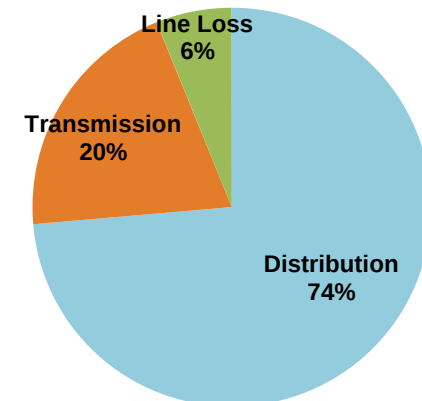
- To date, a number of electricity support programs are funded through the electricity rate-base. There is opportunity to provide support to a more targeted subset of customers who are disproportionately affected by increased electricity costs and to shift these costs to the tax base.
- These customers include:
 - **High Delivery Cost Customers:** Some customers in rural areas where the cost to deliver 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 disproportionately 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.
- To provide targeted assistance to the customers and alleviate electricity cost burden, ENERGY proposes to:
 - A. **Enhance Rural or Remote Rate Protection (RRRP)** by funding its costs through the tax base and providing additional support to customers of designated Hydro One rate classes and other high distribution cost Local Distribution Companies (LDCs).
 - B. **Enhance Ontario Electricity Support Program (OESP)** by funding its costs through the tax base and increasing eligible benefits by 50%.
 - C. **Establish a new Affordability Fund**, providing energy efficiency measures at no or minimal cost to those who are ineligible for low-income conservation programs, have difficulty paying their electricity bills and who cannot make energy efficiency upgrades without financial assistance.
 - D. **Implementing On-Reserve First Nations Delivery Credit**, to remove Delivery charges for on-reserve First Nations customers.

A. Delivery and Distribution Charge – Background

- The **Delivery** line on a typical consumer bill is specific to a consumer's Local Distribution Company (LDCs) and accounts for roughly 25-35% of the total bill before taxes.
- Delivery covers the costs of getting electricity from generating stations across the province to homes and businesses and combines three cost components of the electricity sector into one line item charge:
 - Transmission:** The costs of moving electricity across high voltage lines from generating stations to the distribution system. This cost is recovered through a variable charge that is approved by the OEB.
 - Distribution:** The costs of moving electricity from the transmission system to homes and businesses. Depending on the LDC, distribution costs makes up about 60% to 80% of the Delivery line.
 - This cost is currently recovered through both a variable charge and fixed charge, approved by the OEB. Distribution rates are moving to a fully-fixed charge over next 5 years.
 - Line Loss:** The costs to recover electricity that is lost as heat when its delivered over a power line. Each LDC is assigned by the OEB a specific line-loss adjustment factor to reflect their losses particular to their assets. This factor is multiplied against the monthly electricity cost to determine the monthly cost.

SAMPLE MONTHLY BILL STATEMENT Anytown Hydro-Electric Limited	
Account Number:	000 000 000 000 0000
Meter Number:	00000000
Your Electricity Charges	
Electricity	
Off-Peak @ 8.700 ¢/kWh	41.20
Mid-Peak @ 13.200 ¢/kWh	16.35
On-Peak @ 18.00 ¢/kWh	23.60
Delivery	53.07
Regulatory Charges	4.79
Debt Retirement Charge	0.00
Total Electricity Charges	\$139.00
HST	18.07
8% Provincial Rebate	(11.12)
Total Amount	\$145.95

Cost breakdown of Delivery Line for an Average Residential Bill*

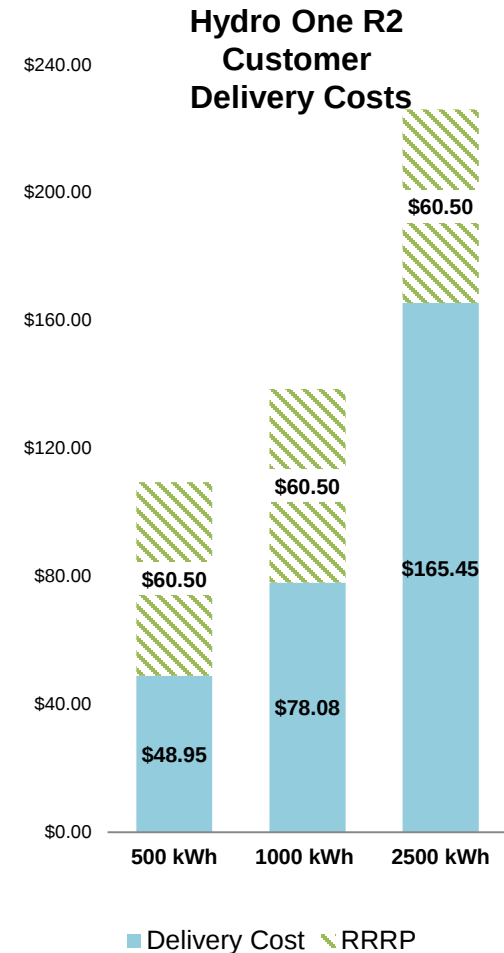


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* Toronto Hydro Bill @ 750kWhs

A. Rural or Remote Rate Protection Program – Background

- Rural or Remote Rate Protection (RRRP) 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.
 - RRRP is funded by ratepayers in Ontario and funded through the regulatory line of the electricity bill. Currently costs \$1.58/month for a 750kWh consumer.
- Part of the program helps fund the costs of Hydro One customers classified into the “R2” 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 \$125.4 million 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.
- These customers still have high delivery and high distribution costs and are often faced with significantly higher than average bills.
 - The higher than average consumption patterns coupled with higher than average distribution rates has resulted in monthly bills many view as no longer affordable or equitable.

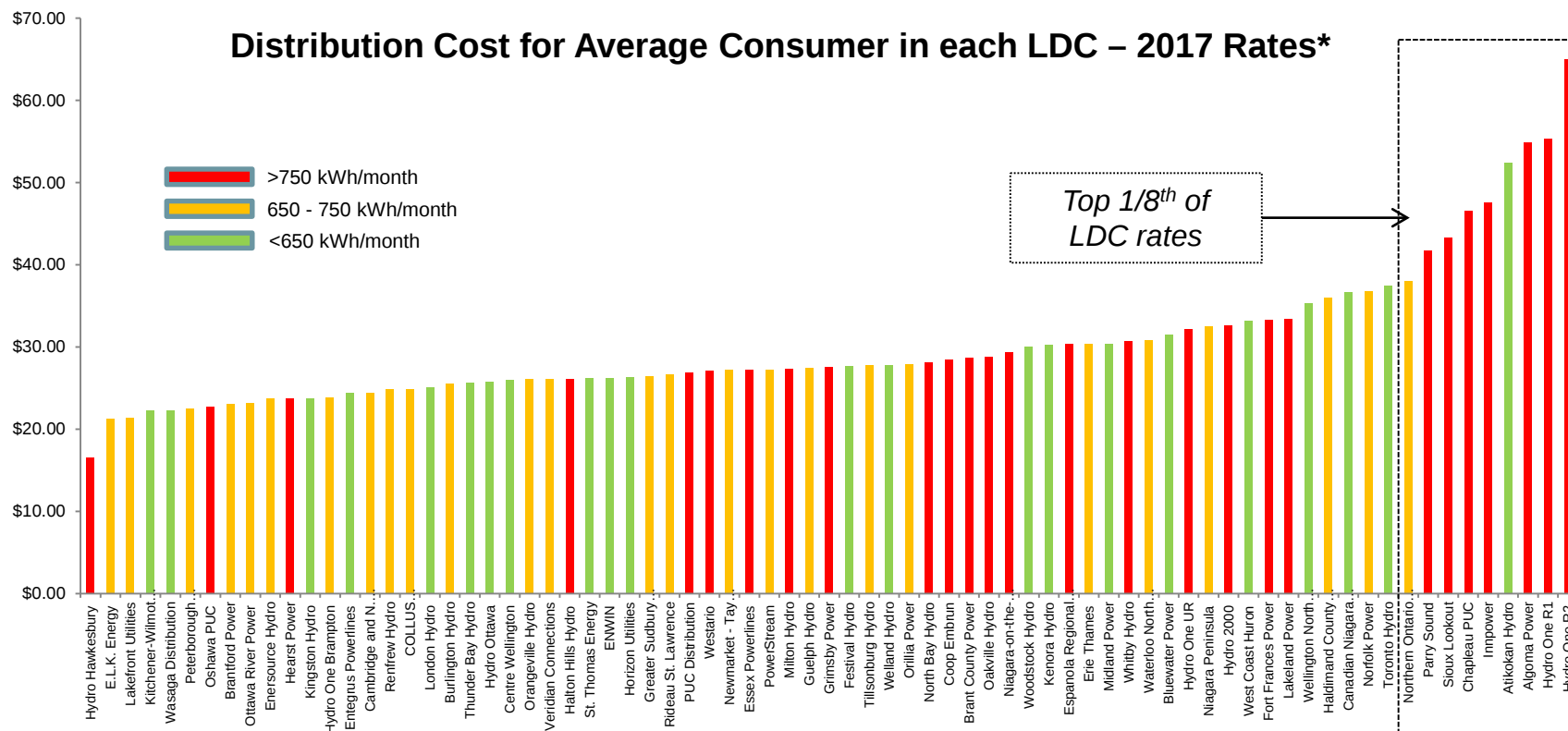


A. Enhancing the Rural or Remote Protection Program (RRRP)

- 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 (top ~1/8th of distribution rate classes).
 - If expanded to the top 1/8th of distribution costs, this enhancement would also include Hydro One R1 customers (medium density), as well as LDCs with high distribution costs including: Northern Ontario Wires, Lakeland Parry Sound, Chapleau, Sioux Lookout, InnPower, Atikokan and Algoma.
- Mitigation could be provided by harmonizing distribution rates for these LDCs at the lowest distribution rate paid by an average consumer in this group.
 - Based on projected 2017 LDC rates, the lowest distribution rate paid by an average consumer in this group would be ~\$38/month (with the highest being \$65).
 - Is consistent with the OEB's mandated move to fully fixed distribution rates for all LDCs.
 - Roughly 800,000 customers would receive benefits from the current RRRP program and from these additional enhancements.
 - Setting a lowest distribution rate across these LDCs would help mitigate geographic-based differences in rates for the consumers who are most impacted and often see such differences as inequitable.
- Mitigation for all electricity consumers would be provided by moving the existing RRRP program costs and the proposed enhancements from the electricity rate base to the tax-base.

A. Enhancing the Rural or Remote Protection Program (RRRP)

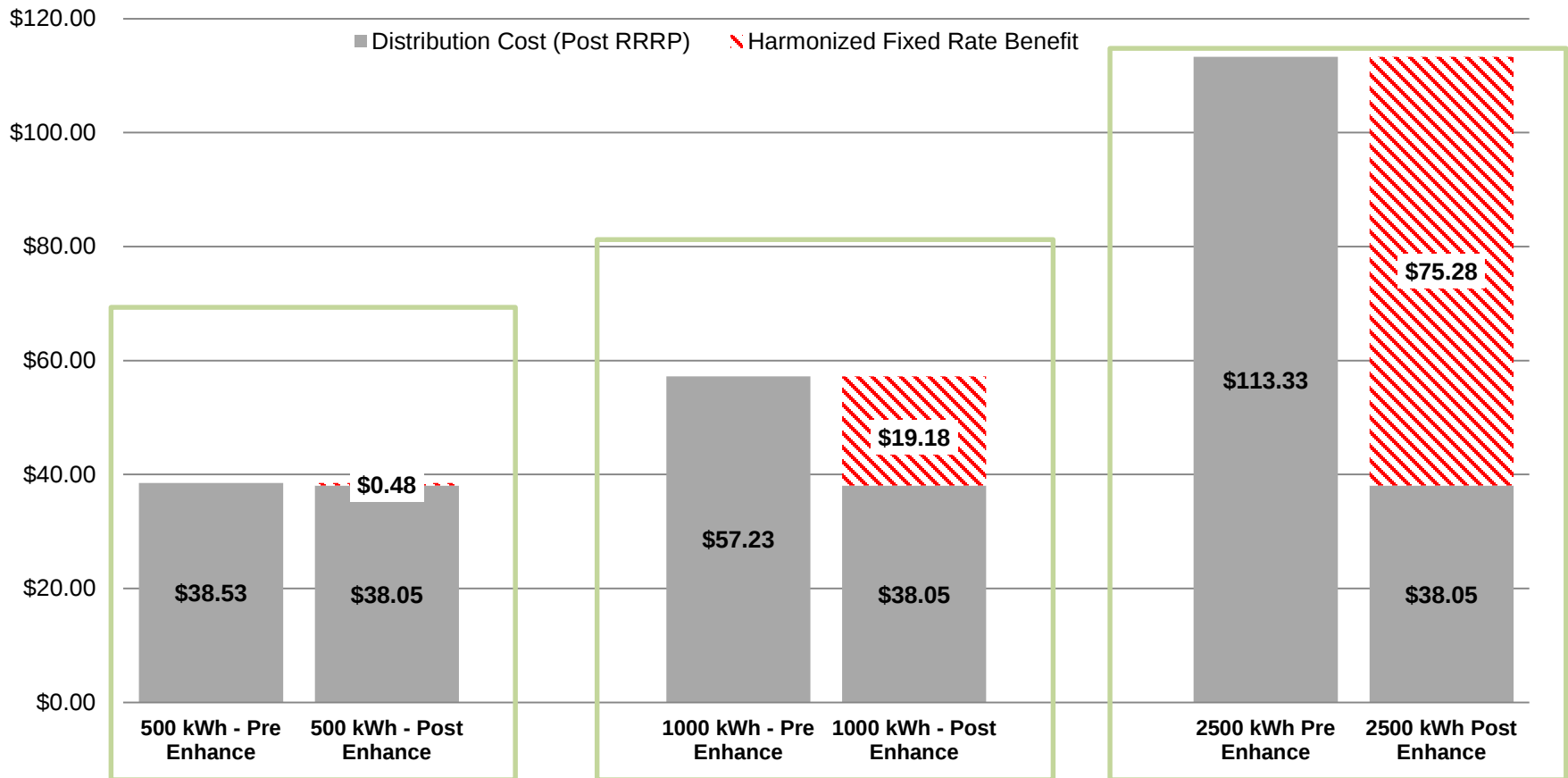
- The table below shows what 2017 distribution costs are projected to be for the average consumer within each LDC across the province, and highlights the highest-cost distribution rates.
- The charts on the following slides show what the benefits would be in each LDC if the fiscal plan was used to support harmonizing distribution costs for customers of the LDCs in the top ~1/8th of rate classes at \$38/month.



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A. Harmonized Distribution Cost – Ratepayer Impact (Hydro One R2)

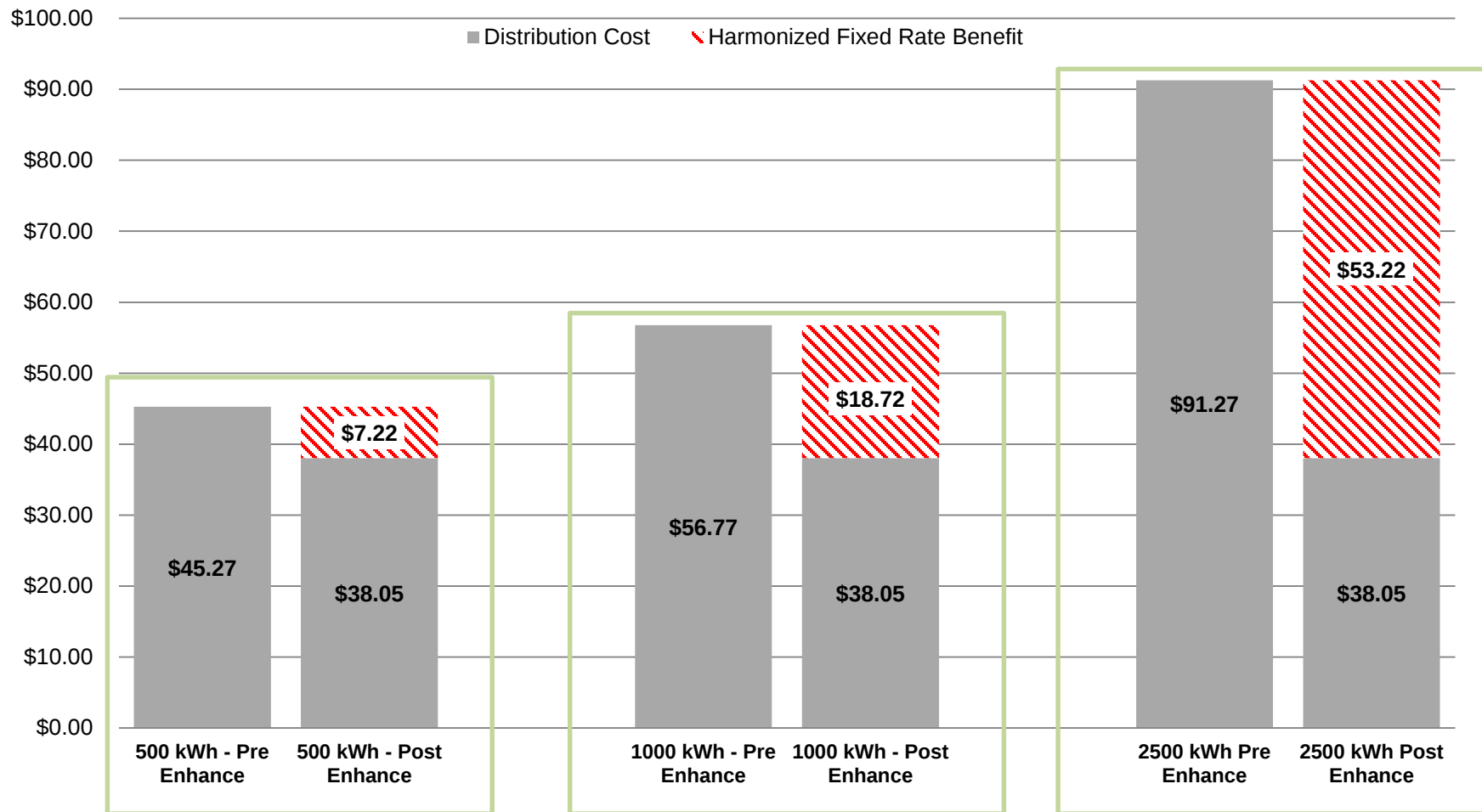
- For Hydro One R2 customers, the enhanced benefits below are in addition to the \$60.50 they already receive through the existing RRRP.



Note: Rates are for 2017 (either approved or proposed).
Distribution is one component of Delivery line charge.
Transmission and line loss charges not shown.

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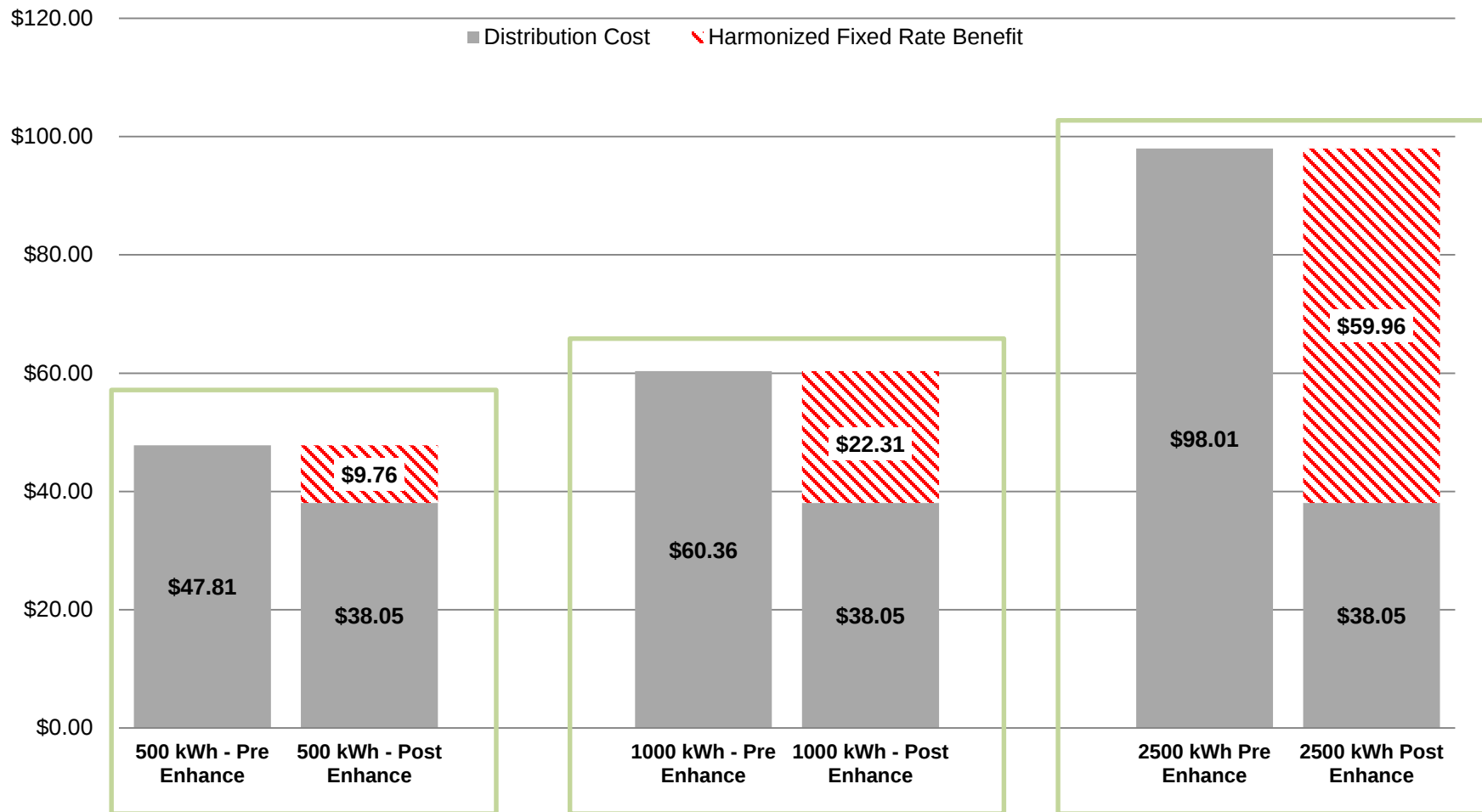
A. Harmonized Distribution Cost – Ratepayer Impact (Hydro One R1)



Note: Rates are for 2017 (either approved or proposed)
 Distribution is one component of Delivery line charge.
 Transmission and line loss charges not shown.

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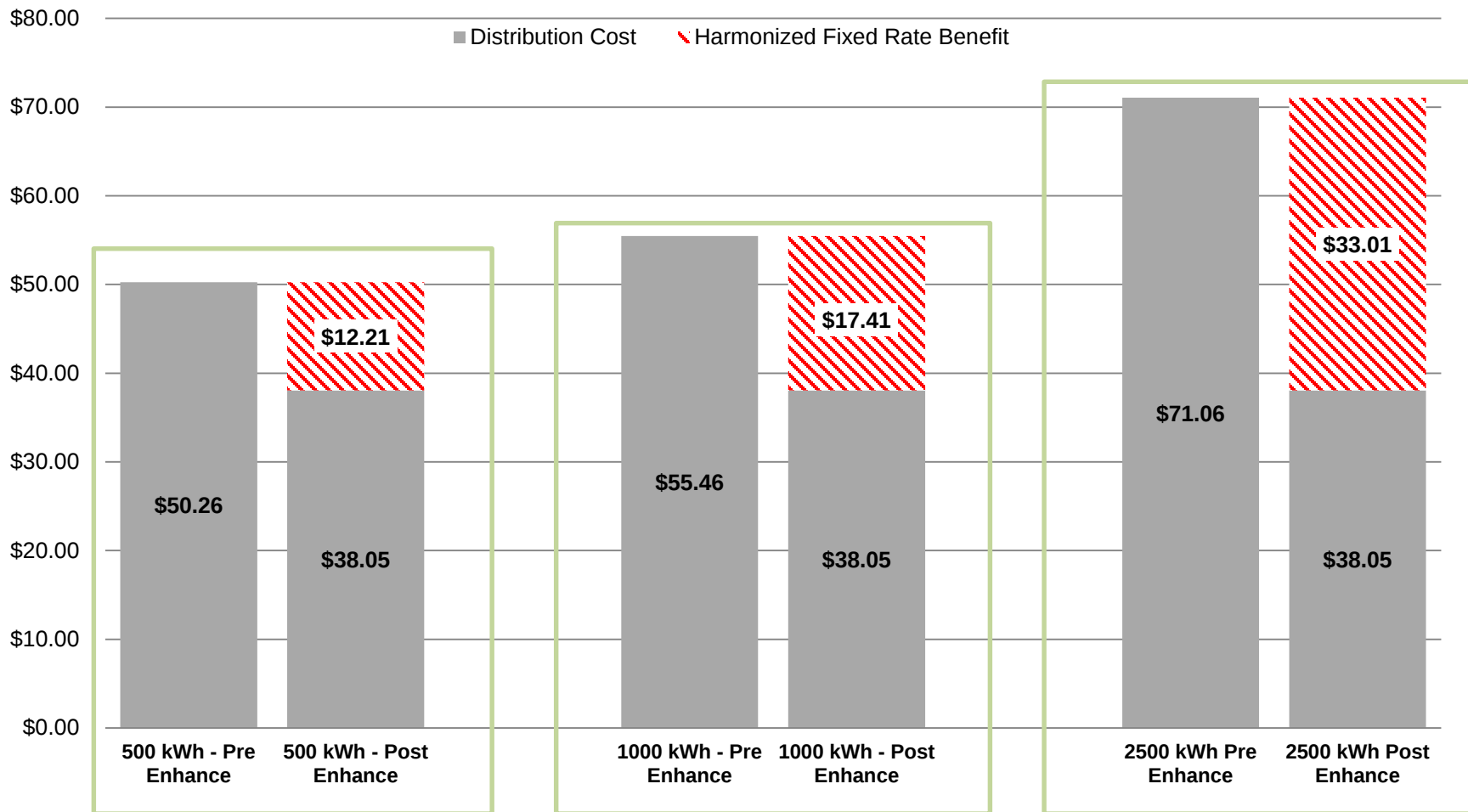
A. Harmonized Distribution Cost – Ratepayer Impact (Algoma Power)



Note: Rates are for 2017 (either approved or proposed).
 Algoma Power receives RRRP to support operational costs.
 Distribution is one component of Delivery line charge.
 Transmission and line loss charges not shown.

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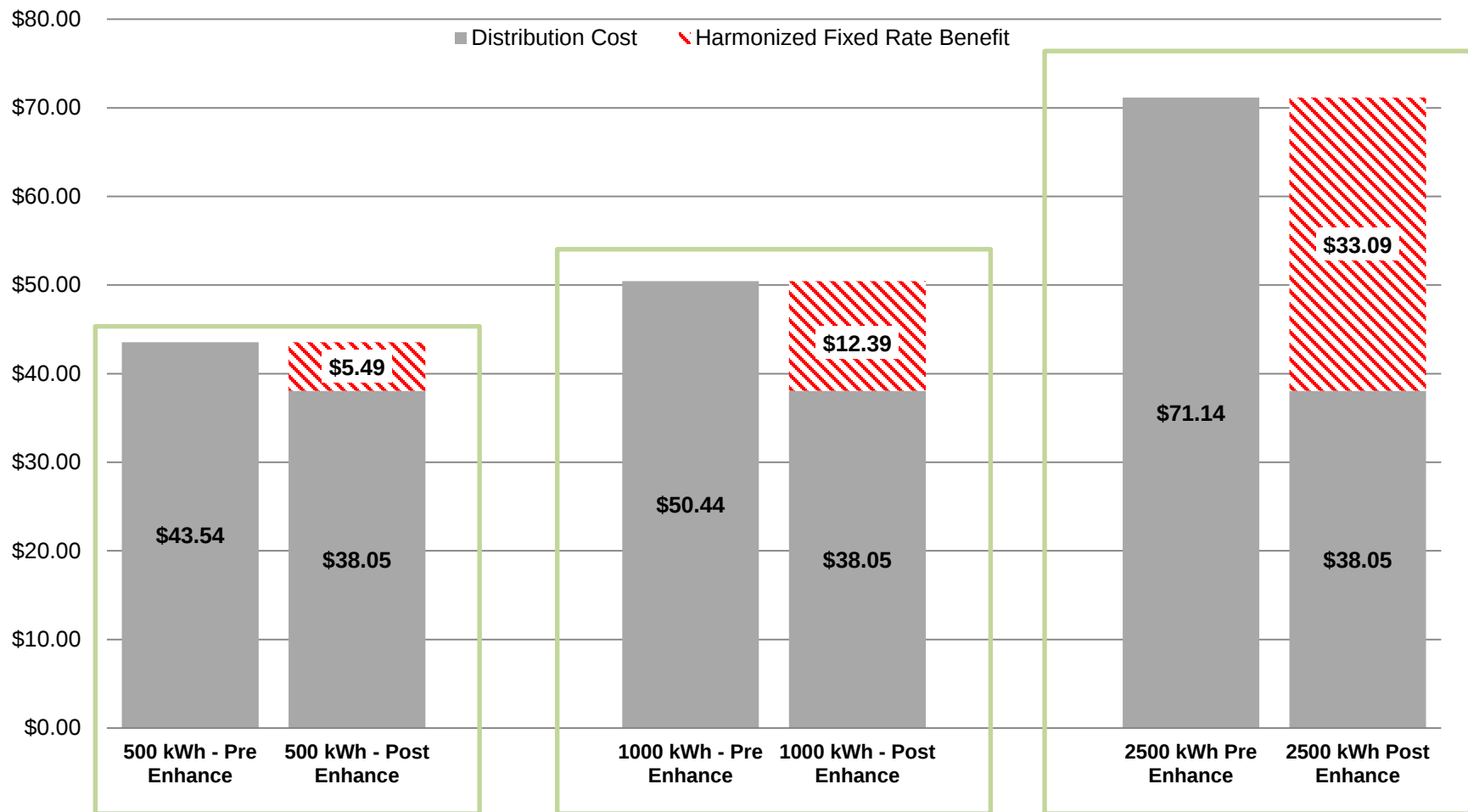
A. Harmonized Distribution Cost – Ratepayer Impact (Atikokan Hydro)



Note: Rates are for 2017 (either approved or proposed)
 Distribution is one component of Delivery line charge.
 Transmission and line loss charges not shown.

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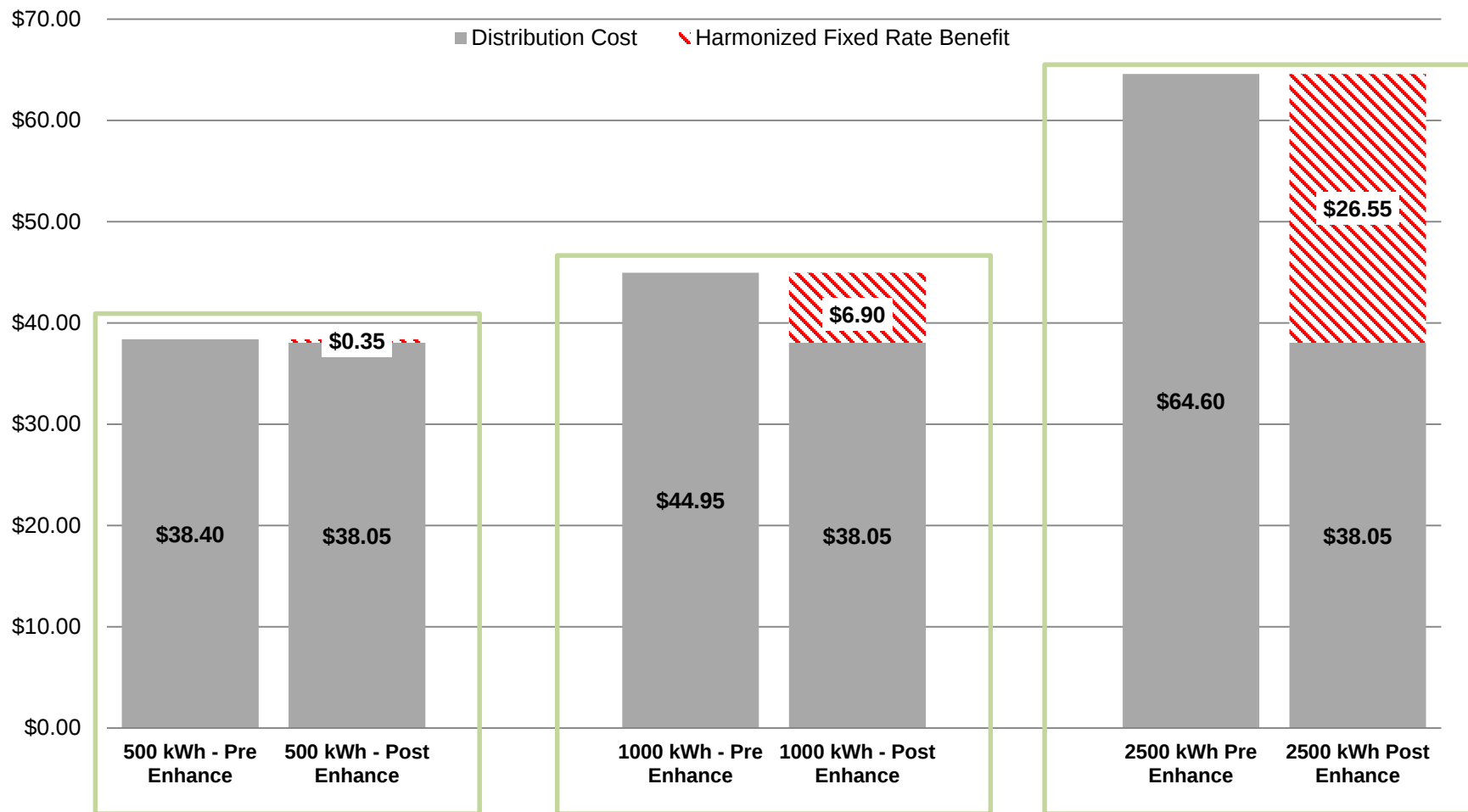
A. Harmonized Distribution Cost – Ratepayer Impact (InnPower)



Note: Rates are for 2017 (either approved or proposed)
Distribution is one component of Delivery line charge.
Transmission and line loss charges not shown.

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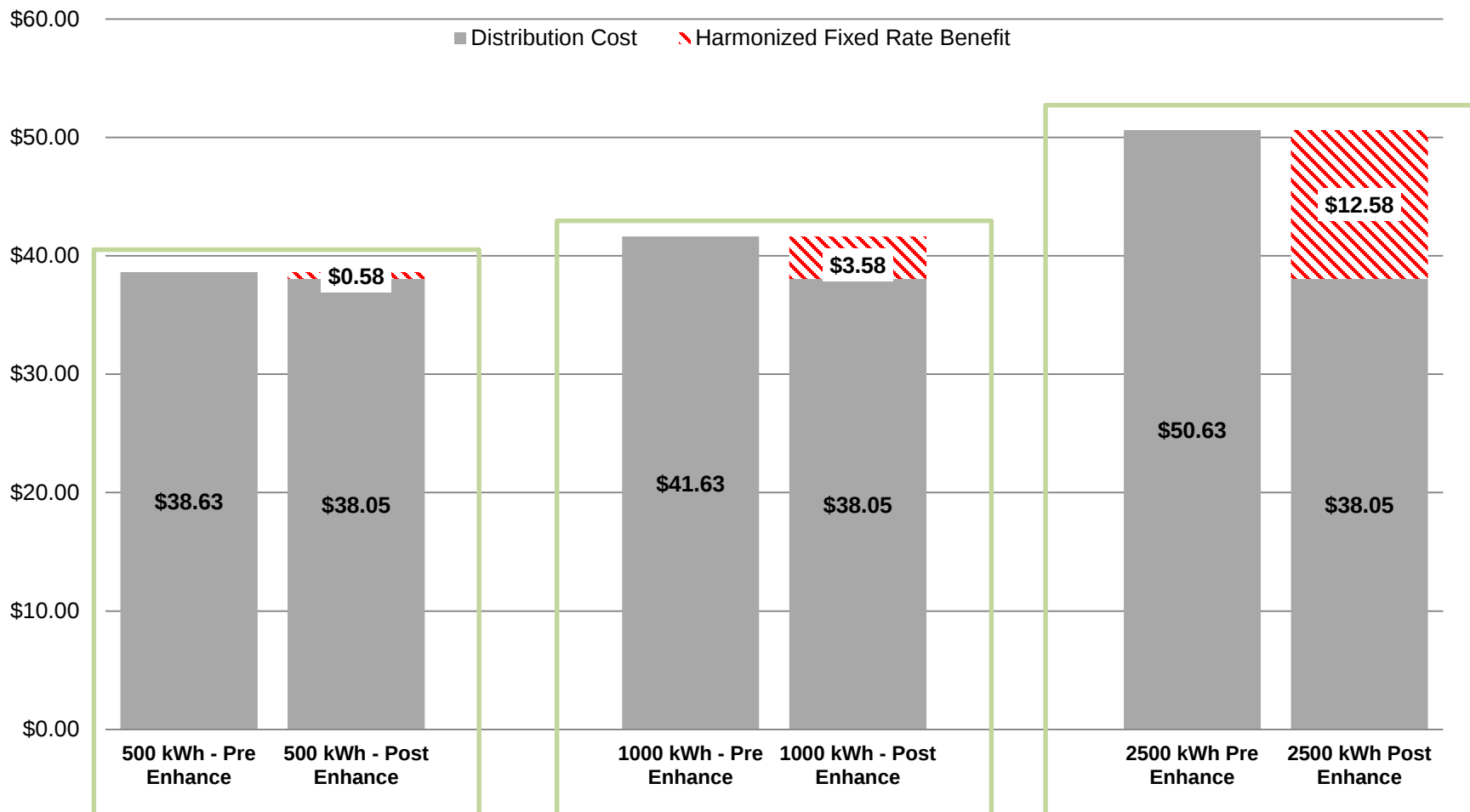
A. Harmonized Distribution Cost – Ratepayer Impact (Chapleau PUC)



Note: Rates are for 2017 (either approved or proposed)
 Distribution is one component of Delivery line charge.
 Transmission and line loss charges not shown.

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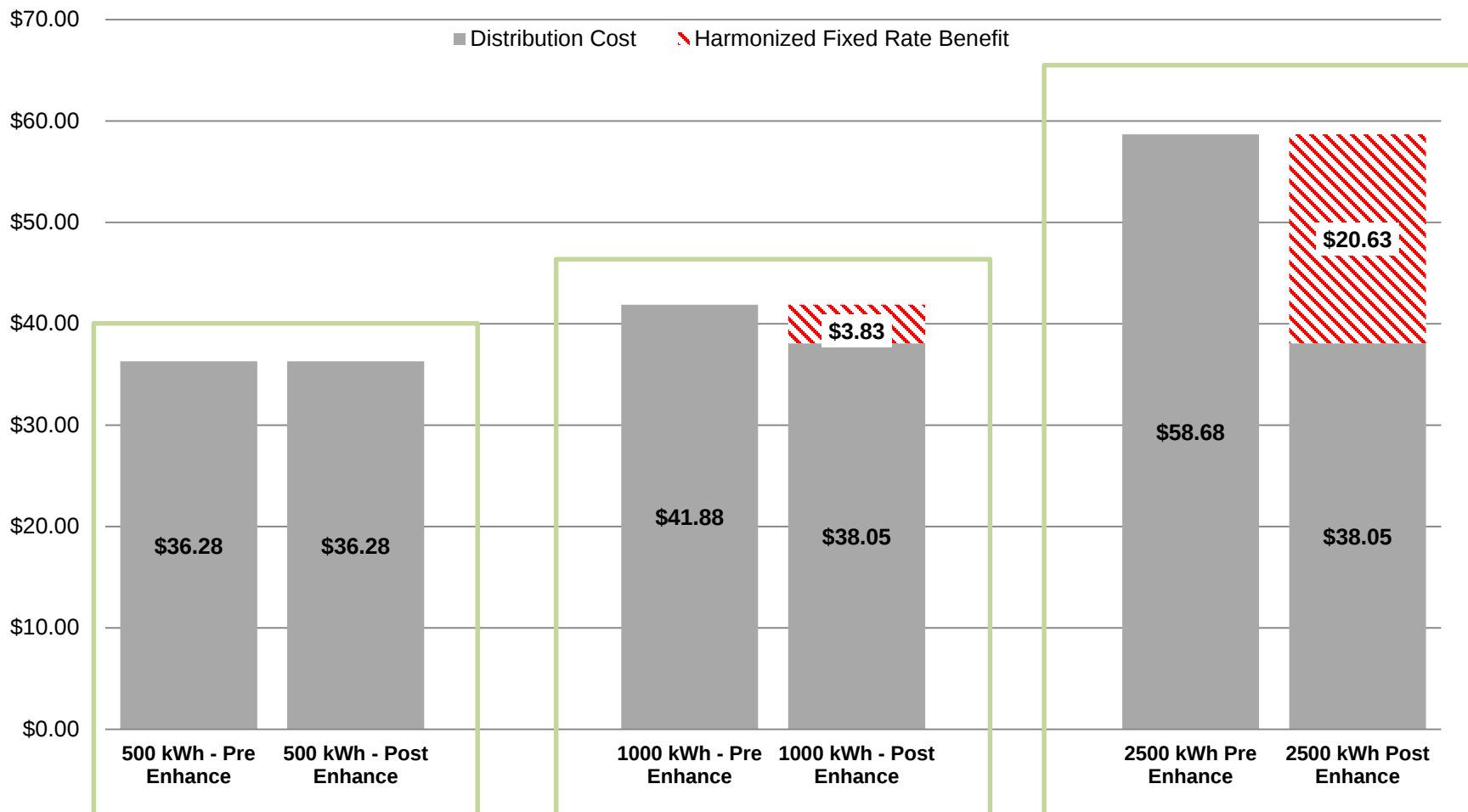
A. Harmonized Distribution Cost – Ratepayer Impact (Sioux Lookout Hydro)



Note: Rates are for 2017 (either approved or proposed)
 Distribution is one component of Delivery line charge.
 Transmission and line loss charges not shown.

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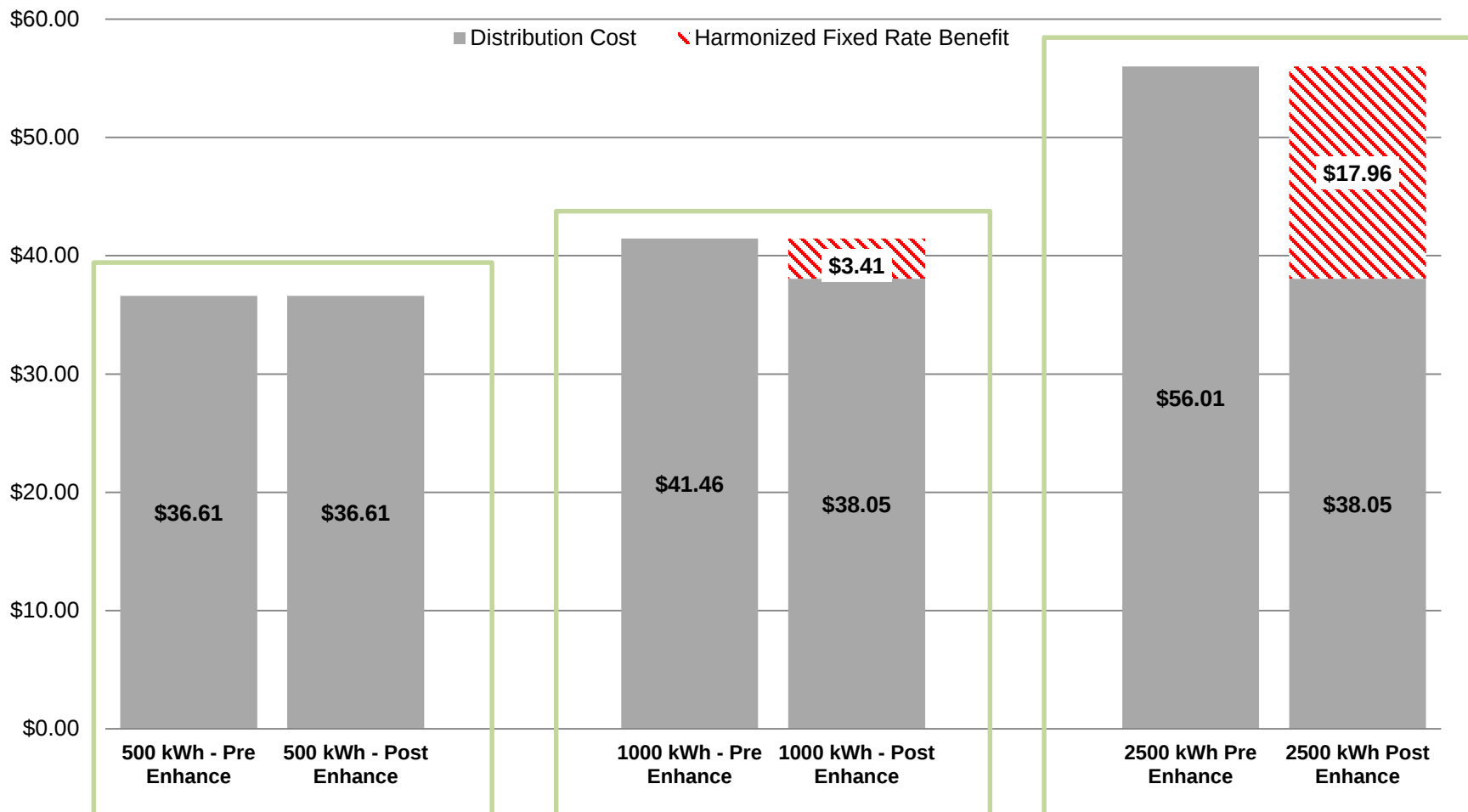
A. Harmonized Distribution Cost – Ratepayer Impact (Lakeland Power – Parry Sound)



Note: Rates are for 2017 (either approved or proposed). Rates are for the Parry Sound territory within Lakeland Power. Other Lakeland Power customers (Huntsville area) not impacted. Distribution is one component of Delivery line charge. Transmission and line loss charges not shown.

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A. Harmonized Distribution Cost – Ratepayer Impact (Northern Ontario Wires Inc.)



Note: Rates are for 2017 (either approved or proposed)
 Distribution is one component of Delivery line charge.
 Transmission and line loss charges not shown.

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A. RRRP Enhancement – Considerations

Implementation

- The Ministry will need to ensure that only the high distribution cost LDCs are captured within the program framework
 - LDCs may need to be named explicitly in the legislation/regulation
 - A mechanism would also need to be created to ensure the level of benefit changes year to year
- 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.
- 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.

A. RRRP Enhancement – Considerations (cont'd)

Fiscal

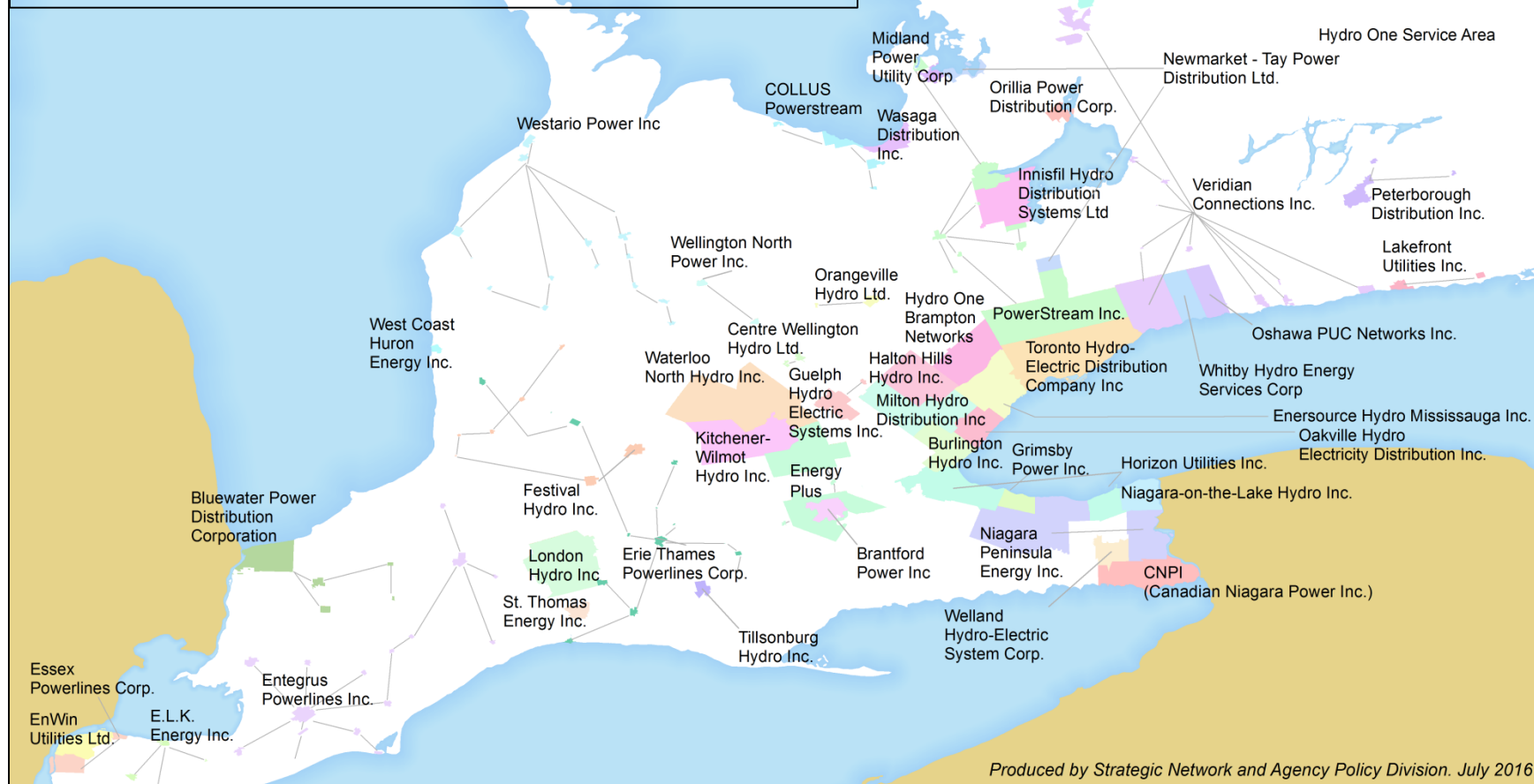
- As distribution costs vary year to year, forecasting fiscal impacts are challenging:
 - Hydro One is expected to submit its cost of service application for 2018 and beyond (3-5 years) in spring 2017. The rate increases requested in this application could potentially increase the proposed fixed rate 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 (OEB).

Fiscal Impact (\$M)	16-17	17-18	18-19	19-20	20-21
Legacy RRRP to Hydro One R2 Customers	-	126	130	133	136
2016 Speech from the Throne Enhancements to R2 Customers	-	117	120	123	127
Proposed Enhancements to Hydro One and Identified LDCs	-	216	222	228	234
TOTAL	-	459	472	484	497

Note: Current regulatory framework calls for RRRP to increase by average distribution rate increase. Forecast assumes 2.6% annually though is subject to OEB proceedings. Fiscal projection is subject to consumer consumption patterns that may change due to extreme weather or other factors. Does not include Algoma Power or Hydro One Remotes, which would continue to be on the rate-base.

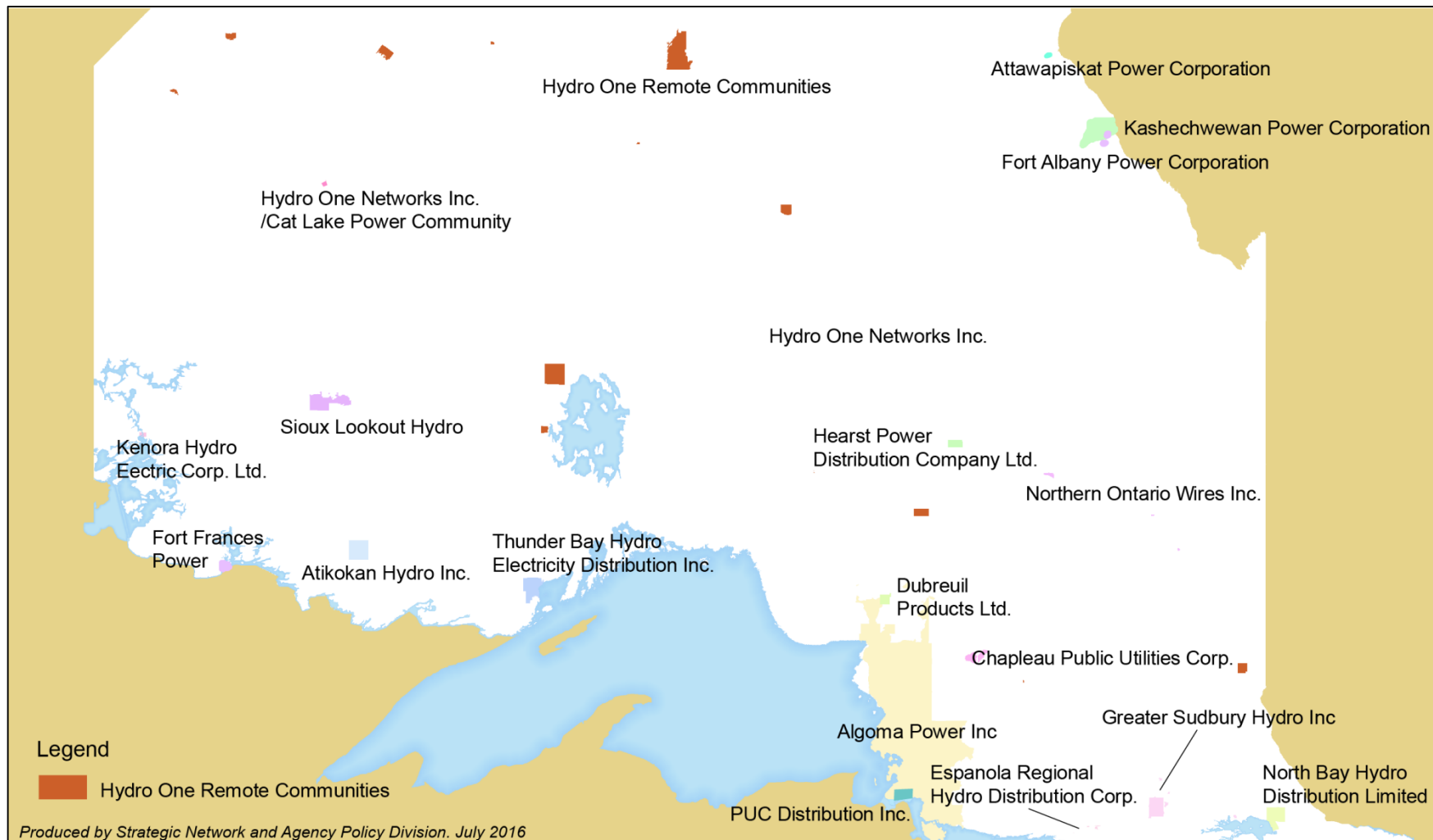
A. RRRP Enhancement – LDC Service Territory (Southwestern Ontario)

Maps in the next few slides show LDCs across Ontario. There are approximately 70 LDCs in Ontario. **Note:** White area shows service area for Hydro One.

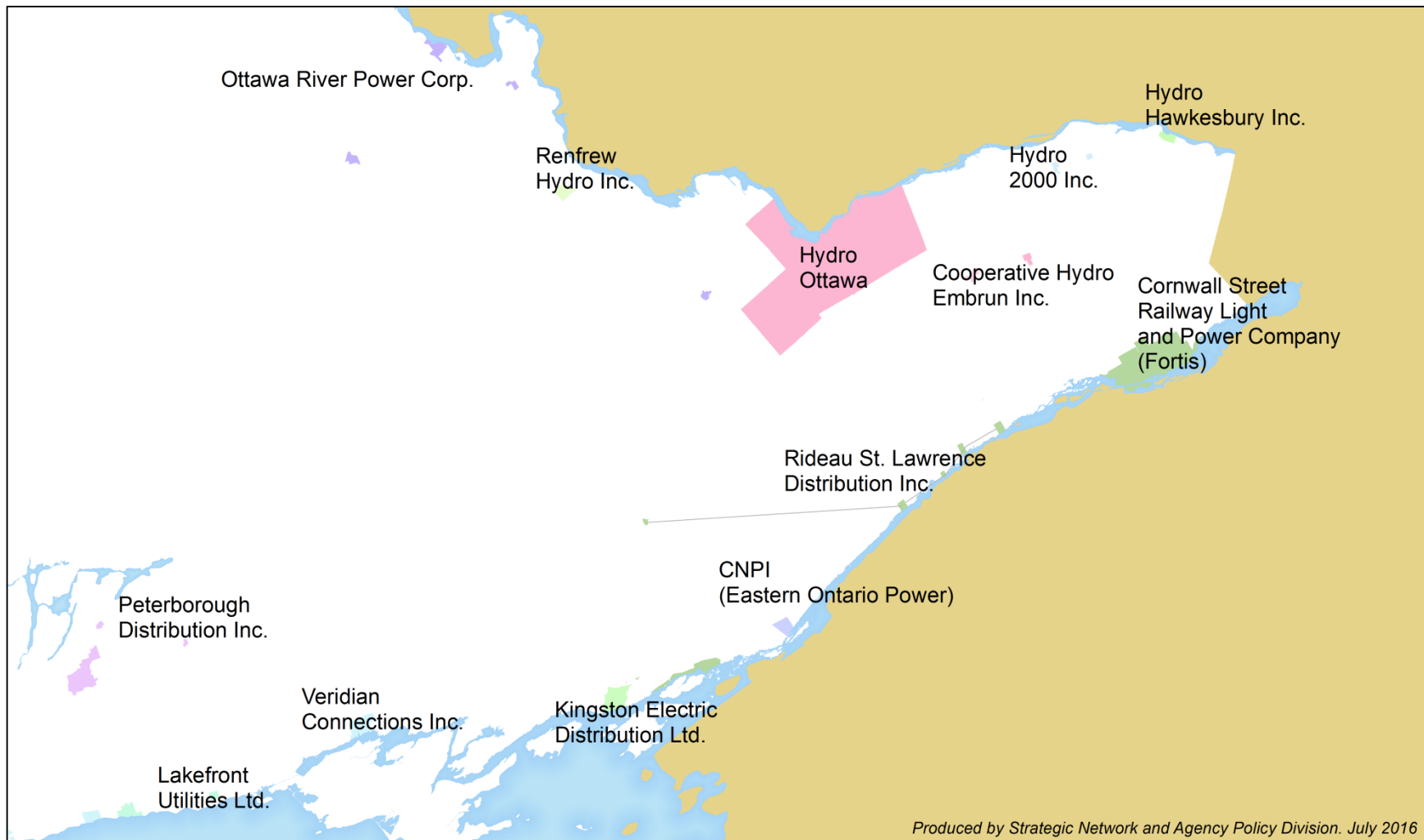


Produced by Strategic Network and Agency Policy Division. July 2016

A. RRRP Enhancement – LDC Service Territory (Northern Ontario)



A. RRRP Enhancement – LDC Service Territory (Eastern Ontario)



B. Ontario Electricity Support Program (OESP)

- 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 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.
- To drive this uptake, the OEB has engaged in extensive outreach, including advertising in multiple languages, and continuing to work with partner agencies to develop a model for “application clinics” across the province to increase program awareness and uptake across the province.



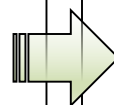
B. Ontario Electricity Support Program (OESP) (cont'd)

- There are a numbers of ways that the OESP program can be enhanced:
 - Streamline the OESP process to drive participation toward 100%:
 - o ENERGY and the Ministry of Community and Social Services (MCSS) have been working on automatic OESP qualification for Ontario Works (OW) and Ontario's Disability Support Program (ODSP) recipients who pay electricity bills.
 - MCSS estimates some 110,000 OW and ODSP recipients pay electricity bills;
 - This process could follow the "deemed eligibility" model used for the Healthy Smiles program. Using an existing model should simplify the implementation process.
 - The qualification process may have to be done manually at first, with a more automated IT solution in the longer-term.
 - o Working with the CRA to make the application process easier / quicker to get through by finding an alternative to the requirement to mail-in signed consent forms;
 - o Putting in place a more aggressive communications strategy and application intake clinics across the Province to increase awareness of/enrollment in the OESP.
 - Increasing the existing OESP credit scales by an additional 50%; and
 - Expanding the categories of OESP credits.
- It is also recommended that the OESP be supported from the tax-base as part of the rate mitigation package.

B. Ontario Electricity Support Program (OESP) (cont'd)

- 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):

Existing OESP Credit Scales



Proposed +50% OESP Credit Increase*

Sliding Scale #1		Household Size						
		1	2	3	4	5	6	7 +
Income Bracket	< \$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						
		1	2	3	4	5	6	7 +
Income Bracket	< \$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

Sliding Scale #1		Household Size						
		1	2	3	4	5	6	7 +
Income Bracket	< \$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						
		1	2	3	4	5	6	7 +
Income Bracket	< \$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

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*Note: The proposed higher scale, including the amounts in circles are proposed and will be refined in consultation with the OEB.

B. Ontario Electricity Support Program (OESP) – Considerations

Fiscal Impact

- 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 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

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C. Establishing a New Affordability Fund

- For eligible low-income customers, the 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.
- HAP does not address the needs of those customers that do not qualify as “low-income” but could benefit from conservation programs.
 - At the end of 2015, there were over 560,000* residential electricity accounts in arrears; of these about 19,900** (~3.6%) accounts were eligible to participate in low-income conservation and support programs.
 - According to the Ontario Energy Board (OEB), in 2015 about 60,000 customers had their electricity service disconnected.

Proposal: Establish Affordability Fund to Provide Existing Low-Income Conservation Program to Other Electricity Customers

- The Ministry proposes establishing an Affordability Fund which would be available to LDCs to provide similar energy efficiency measures as provided under HAP to targeted customers.

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* **Note:** Unverified numbers reported by LDCs to the OEB

** **Note:** Low-income customers identified through participation in LEAP

C. Establishing a New Affordability Fund (cont'd)

Fund Details:

- An Affordability Fund would be accessible to LDCs only, and would target those customers who cannot qualify for low-income conservation programs and are in need, such as those who are facing disconnection.
 - By providing support for energy efficiency improvements, the Fund could help these customers reduce their future bills and avoid future disconnections.
 - The Fund would provide LDCs with an additional tool to provide assistance to their customers.

Eligibility Criteria/Fund Principles:

- 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.

C. Establishing a New Affordability Fund (cont'd)

Implementation

- ENERGY is currently in discussions with several large LDCs to determine the principles of the Fund and is working with Hydro One to set up an independent Trust to serve as the Fund Administrator.
 - The Fund Administrator would manage the flow of funds to LDCs based on principles set by the province, and be responsible for establishing processes, administration, and criteria for funding applications, thereby ensuring the program is managed on a consistent basis across the province.
 - LDCs would apply for funding to the Fund administrator, to offer energy efficiency measures to those customers in their service territories that meet the targeted eligibility criteria.
 - LDCs have over 10 years of experience in delivering conservation programs, including experience specific to contracting for programs that target low-income customers.
 - LDCs are best positioned to identify and target their customers who are most in need.
- Given the scope of the Fund, an LDC would need a firm financial commitment up front before implementation. LDCs rely on rate-payer funding for most of their activities. The Affordability Fund would be a unique venture from an LDC perspective given that it is tax funded.

C. Establishing a New Affordability Fund (cont'd)

Implementation (cont'd)

- Recipients could receive measures ranging from an average of \$3,000 to \$5,000 per customer, at no or minimal cost. For example, measures available in the Home Assistance Program include:
 - Energy-saving light bulbs (LEDs); power bars; energy efficient window ACs, refrigerators, freezers, dehumidifiers; low-flow showerheads, hot water blankets, pipe wrap and faucet aerators (in homes with electric water heating); and
 - Programmable thermostats, weather stripping, insulation (in homes with electric heating).
- Cold climate air source heat pumps would also be an eligible measure under the Affordability Fund. Heat pumps range in cost from \$7,000 to \$13,000.
- As an illustration, with \$200 million, the estimated reach of the fund could be 15,000 to 65,000 households, depending on measures and uptake.

C. Establishing a New Affordability Fund – Considerations

Considerations

- The Affordability Fund addresses a real need.
 - LDCs have expressed the need for an additional tool to provide assistance to their customers.
- Determining allocation of funds to LDCs:
 - Some LDCs may have a disproportionate number of customers in need of assistance; and
 - ENERGY is proposing to seek input from the OEB, LDCs and potentially low income organizations to help develop funding allocation and eligibility principles for the Trust.
- While eligibility principles will be established, LDCs will need a degree of flexibility to target customers:
 - Not all customers who are in need will actively seek help;
 - Some customers in arrears may be “gaming the system” and not truly in need; and
 - LDCs recommend targeted outreach as opposed to broad marketing; a high volume of applications would limit the ability to deliver assistance to customers who need it most.

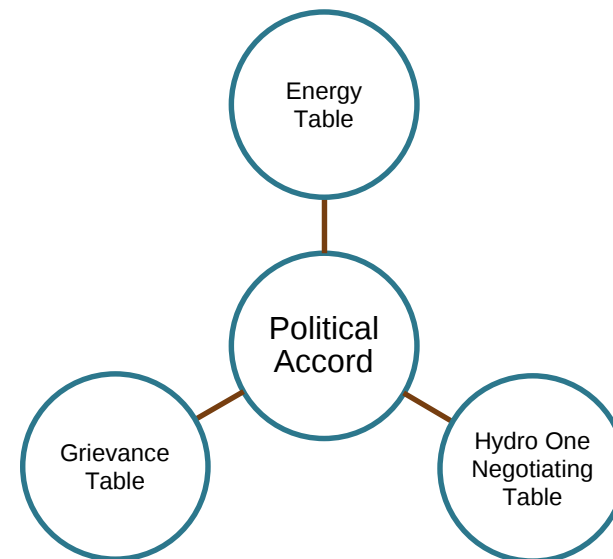
Fiscal Impact

- The Affordability Fund would represent a fiscal impact of \$200 million in fiscal year (FY) 2016/17.
- To allow for funds to flow in FY 2016/17, ENERGY would sign a Transfer Payment Agreement (TPA) with Hydro One and transfer money before end of fiscal year to ensure Hydro One can establish the Trust and the Trust can begin operation as the Fund Administrator.
- There is a fiscal risk if monies used for the Fund do not flow before FY year-end 2016/17 and for monies that are sitting in Hydro One at year-end (because of consolidation with province), and a corresponding fiscal pressure in the following years when the funds are flowed from Hydro One (H1) to ratepayers.

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D. Implementing On-Reserve First Nations Delivery Credit

- ENERGY has a number of Tables with the Chiefs of Ontario (COO) and First Nations that include the Energy Table to discuss policy issues, the Hydro One Negotiating Table to discuss Hydro One shares, and the Grievance Table.
- The Grievance Table process was established at the request of COO as a means to avoid litigation to resolve historic grievances related to the energy sector and prevent these issues from impeding progress on broadening the ownership of Hydro One (H1).
- The cost of electricity and delivery charges were identified as the prevailing grievance at the First Nations-Ontario Energy Table meeting in Timmins in 2016, and the Minister of Energy agreed to explore options for a First Nations Rate through the Grievance Table process.
- On June 27, 2016, following discussions on Hydro One shares and rates at COO's All Chiefs Conference, the Minister of Energy issued a letter directing the OEB to prepare a report providing *"advice on options for an appropriate electricity rate (or rate assistance) for on-reserve First Nations electricity consumers"*.
 - OEB engaged with First Nations, including remote communities, the distributors serving them, and consumer groups such as the Low Income Energy Network. It also established an Advisory Committee with the Chiefs of Ontario's Grievance Committee.
- The Ontario Energy Board (OEB) has worked with COO to engage with First Nations to develop options for a First Nations electricity rate. The OEB provided a report to the Minister on December 29, 2016.



D. Implementing On-Reserve First Nations Delivery Credit (cont'd)

- On-reserve First Nations customers face unique challenges that impact electricity affordability, such as the poor quality of the housing stock on-reserve. These challenges result in significantly higher electricity consumption levels and costs.
- First Nations living on reserve are particularly vulnerable low-income consumers: the average income is considerably lower compared to First Nations living off reserve and compared to non-Indigenous populations:
 - Average income of First Nations on reserve in Ontario: \$21,100;
 - Average income of First Nations off reserve in Ontario: \$31,527;
 - Average income of Non-Indigenous people in Ontario: \$42,506; and
 - Median incomes on smaller reserves can fall below \$10,000 (e.g., Cat Lake FN).
- Employment rates also differ between on-reserve First Nations, off-reserve First Nations and Non-Indigenous individuals, as well as other indices of social vulnerability:
 - 54% of Indigenous people over 15 years old and living on-reserve in Ontario are unemployed or not in the labour force;
 - The on-reserve unemployment rate is 18.3% compared to 6.4% in Ontario generally; and
 - 67% of families residing on-reserve are single parent families, compared to the Canadian equivalent of 19%.
- First Nations are seeking redress for historic grievances related to lands affected by energy developments, such as transmission or distribution infrastructure built on reserve lands and traditional territories where, in some cases, they may not have been appropriately consulted.
- Further, in some circumstances, linear infrastructure corridors cut First Nation reserves in half, significantly disturbing the use and management of an already small land base; the First Nation communities disturbed by energy infrastructure report having experienced long wait times (e.g., 20 years) for their communities to get connected and receive the benefits of the energy derived from the local infrastructure.

D. Implementing On-Reserve First Nations Delivery Credit (cont'd)

- The OEB report to the Minister of Energy on a First Nation on-reserve rate recommended:
 - 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;
 - o The OEB estimates this would provide residential customers an average monthly benefit of \$85 at a total annual cost of \$13 to \$20 million.
 - 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 OEB suggested the program should be funded from the tax base as it is targeted to a particular segment of the provincial population, or, if rate based, to use a province-wide charge.
- ENERGY recommends moving forward with the implementation of the OEB's recommendations as part of the wider electricity rate relief package and as the Hydro One share agreement with COO continues to be implemented.

Distributor	Number of On-Reserve Residential Customers
Algoma Power Inc.	473
Attawapiskat Power Corporation	336
Bluewater Power Distribution Corporation	237
Cat Lake Power Utility Ltd.	80
Cornwall Electric Distribution	514
Hydro One Networks Inc.	16,679
Hydro One Remote Communities Inc.	2,579
PUC Distribution Inc. (Sault Ste. Marie)	264
Thunder Bay Hydro Electricity Distribution	332
Total Number of Customers	21,494

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Source: OEB Report to Minister: Options for an Appropriate Rate Assistance Program for On-Reserve First Nations Electricity Consumers (Page 5).

D. Implementing On-Reserve First Nations Delivery Credit – 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 containing the following elements:
 - Public release of the OEB report;
 - Commitment to working with LDCs on implementation details; and
 - Advanced notice to the OEB and COO regarding the ministry's decision to move forward on the OEB's recommendation and indicate a willingness to work collaboratively with COO on ways in improve community-LDC communication to ease implementation.
- The rebate will appear on customer's electricity bills, either as a specific line item or a communicated call-out.
- Recipients would continue to be eligible for programs such as the Ontario Electricity Support Program (OESP) and the Low-Income Electricity Assistance Program (LEAP).
- 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. A genuinely ameliorative program that targets some people but excludes others is shielded from a s. 15 challenge if it serves or advances the ameliorative goal. The proposal has an ameliorative purpose as it targets First Nations communities for a reserve-based program corresponds to the distinct circumstances of reserve-based communities, relative to other Indigenous communities, that affect electricity affordability.

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

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Fiscal Roll-Up

Fiscal Impact (\$M)	16-17	17-18	18-19	19-20	20-21
RRRP Enhancements*	-	459	472	484	497
Ontario Electricity Support Program, including the 50% Enhancement & New Matrix Categories	-	186	261	325	375
On-Reserve First Nation Delivery Credit	-	20	20	20	20
Affordability Fund**	200	-	-	-	-
Total	200	665	753	829	892

***Note:** Current regulatory framework calls for RRRP to increase by average distribution rate increase. Forecast assumes 2.6% annually though is subject to OEB proceedings. Fiscal projection is subject to consumer consumption patterns that may change due to extreme weather or other factors. Does not include Algoma Power or Hydro One Remotes, which would continue to be on the rate-base.

****Note:** Funding for the Affordability Fund is one-time in 2016/17.

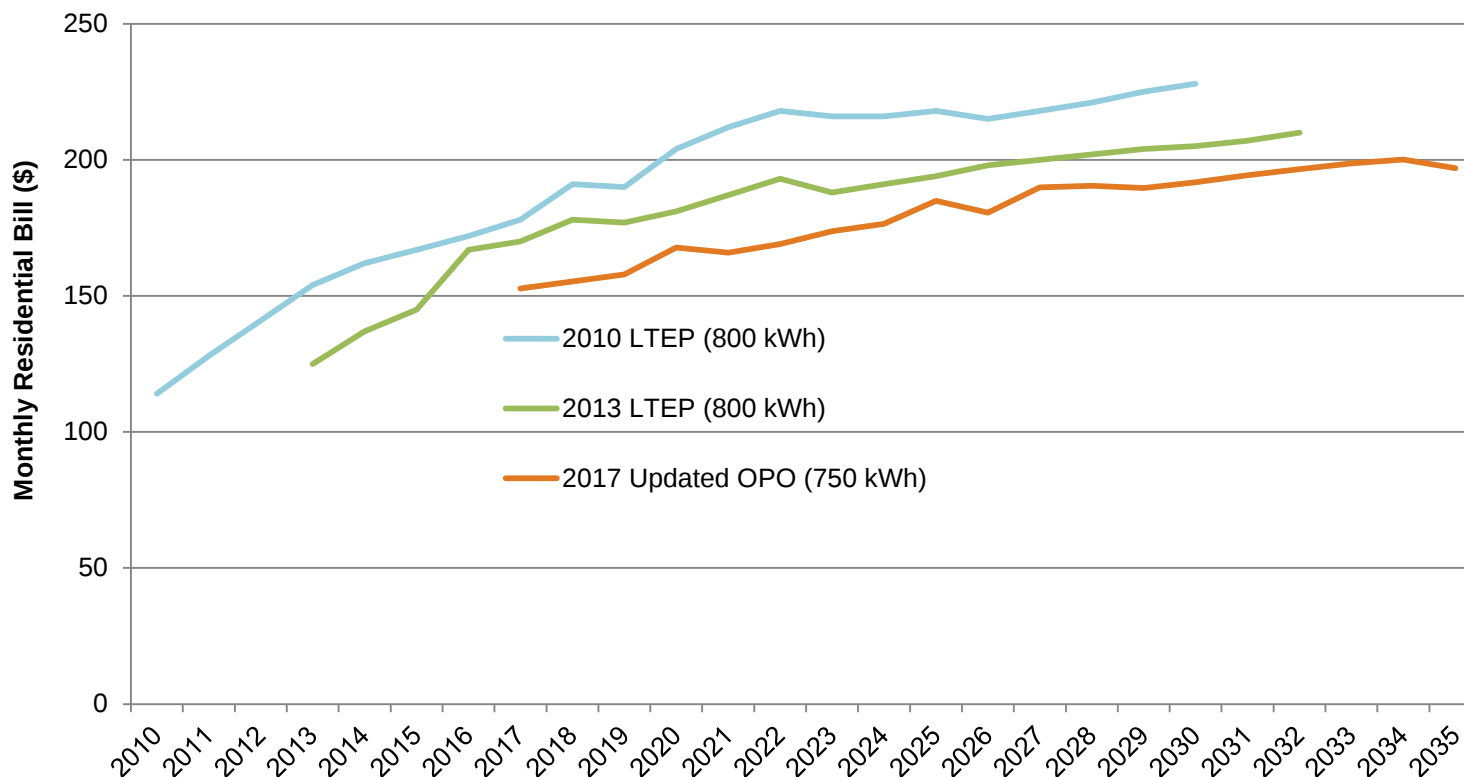
BENDING THE FUTURE COST CURVE OF ELECTRICITY

Existing Rate Mitigation Actions To Bend The Cost Curve

- Since 2013, the government has taken a number of actions to reduce electricity ratepayer costs, including:
 - Renegotiating the Green Energy Investment Agreement to reduce contract costs by \$3.7 billion.
 - Reducing Feed-In Tariff (FIT) prices saving ratepayers at least \$1.9 billion.
 - Introducing a competitive Large Renewable Procurement (LRP) process to drive down costs approximately \$1.5 billion lower than the 2013 LTEP forecast.
 - Deferring the construction of two new nuclear reactors at Darlington, avoiding an estimated \$15 billion in new construction costs.
 - Maximizing the value of our existing nuclear fleet by starting Bruce refurbishments in 2020 instead of 2016, thus helping to achieve \$1.7 billion in savings and by continuing to operate Pickering up to 2024, pending regulatory approvals, which could save ratepayers about \$600 million.
 - Suspending the second round of the LRP process and the Energy-from-Waste Standard Offer Program, which is expected to save up to \$3.8 billion in costs.
 - Limiting the Feed-In Tariff (FIT) 5 procurement target to 150 MW and suspending future FIT procurements – up to [\$xx] cost savings.

Existing Rate Mitigation Actions To Bend The Cost Curve (cont'd)

- The chart below shows how electricity rate forecasts have trended down over time.



Sources: 2010 LTEP (800 kWh/month); 2013 LTEP (800 kWh/month); Revised Ontario Planning Outlook (750 kWh/month as of February 2017) which includes: ICI expansion, RRRP update, 8% rebate, HQ agreement, suspension of LRP II and EFWSOP.

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A. OEB – LDC Efficiencies and Rates

Leveraging the OEB

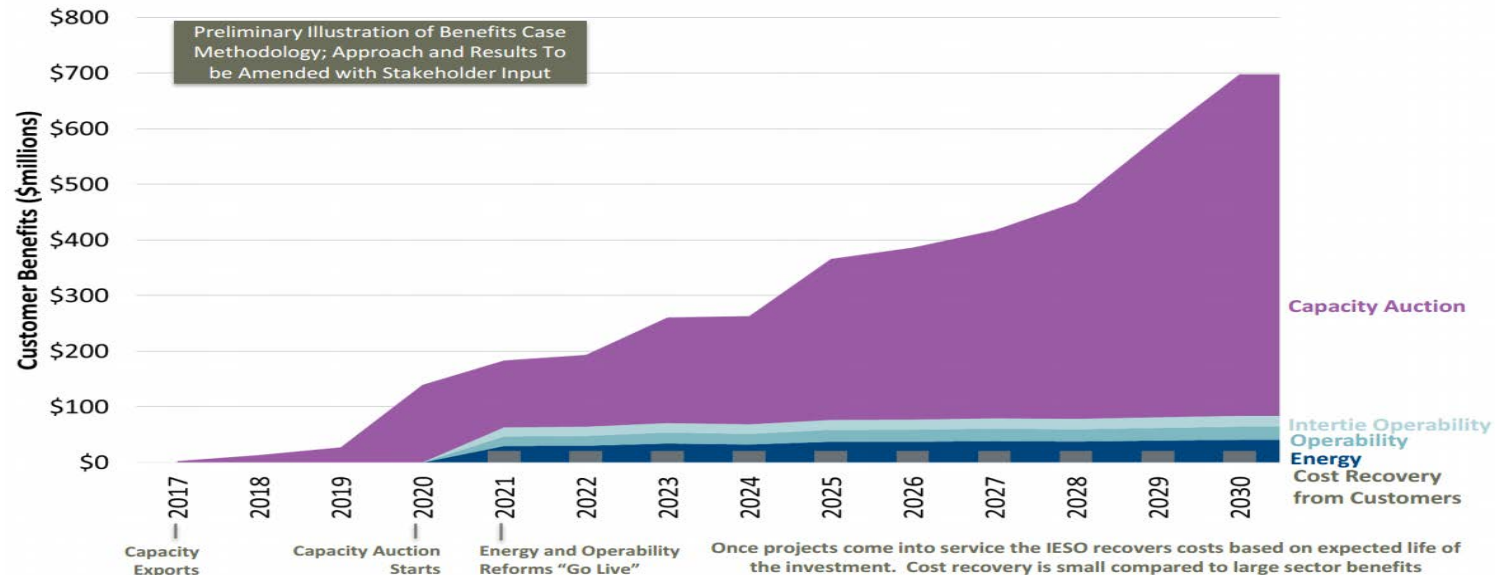
- The Ontario Energy Board (OEB) has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- The OEB, through the Renewed Regulatory Framework for Energy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

Opportunities

- ENERGY could 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.

B. IESO – Market Renewal

- 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.



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SUPPORT FOR TENANTS

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Support for Tenants – Context

- The government is considering measures to provide relief from high electricity prices, and is interested in ensuring that tenants also receive electricity cost reductions and/or relief.
- Currently, tenants generally either pay for their own electricity use through suite meters (i.e., sub-meters or direct arrangements with hydro providers) or pay for electricity indirectly as a service included in their rent:
 - Tenants who pay for their own electricity will receive electricity costs savings directly through their bills; and
 - Low-income tenants who pay own electricity bills can access energy support programs such as the Ontario Electricity Support Program administered by the Ontario Energy Board (OEB).
- Any potential initiatives could focus on the following options:

For tenants who pay own electricity bills

1. Expand OESP to increase relief or raise income thresholds.

For tenants whose electricity is included in rent

2. Require that landlords pass savings on to tenants (could be addressed by MHO through RTA amendments).
 - Options could include requiring landlords to automatically reduce rents, or allow tenants to apply the Landlord and Tenant Board for relief.
3. Provide energy rebates directly to tenants whose rent includes electricity.

Support for Tenants – Potential RTA Hydro Relief Measures / Considerations

- RTA amendments with respect to tenant relief, remedies, and enforcement would be complex, and unable to provide immediate, direct and transparent cost remedies to tenants:
 - Impact of hydro relief measures and electricity cost savings for landlords may vary depending on size of rental building and location (urban/rural):
 - o One size fits all approaches would not match actual landlord savings to direct tenant relief; and
 - o More targeted approaches would add extreme complexity, leading to greater confusion for landlords and tenants, and difficulty administering enforcement.
 - Passing on actual savings could likely only be done after landlords have experienced decreased costs for a period of time (i.e. one year).
 - Difficulty in informing landlords of their responsibilities and enforcing reductions; would likely have significant resource implications for the Landlord & Tenant Board/Ministry of Attorney General.
 - Difficult for tenants to understand, with the most vulnerable tenants potentially less able to pursue remedies through the LTB.
- The kinds of potential RTA remedies would depend on various specifics regarding the way in which relief was being provided to landlords including whether:
 - The actual electricity cost savings for landlords are transparent to facilitate easy calculation of rent reductions or relief;
 - Hydro relief measures are permanent or temporary; and
 - All relief should be passed on to tenants, or just a portion of the relief (e.g., global adjustment fund, 8% rebate, any other relief).

Support for Tenants – Potential RTA Hydro Relief Measures / Other Considerations (cont'd)

- As part of Climate Change Action Plan, MHO has been directed to mitigate the impact of carbon costs on tenants, and is proposing to prevent landlords from charging above-guideline rent increases for extraordinary utility costs increases.
 - May seem unfair that landlords are required to reduce rents or provide relief when utility costs decrease but cannot increase rents when utility costs increase.
- Relief would be limited to certain segments of tenant population:
 - Post-1991 buildings are exempt from the Rent Increase Guideline and landlords could negate any savings to tenants in these buildings through a higher subsequent rent increase.
 - o Over 19% of tenant households are estimated to live in post-1991 private rental units including individually rented condos; a high proportion may already pay for electricity separately.
 - Relief may not be required for social housing tenants:
 - o Most social housing tenants (80%) pay as per utility scales, which covers electricity usage other than electric heat; and
 - o Utility scales were last updated in 2000 and are reflective electricity prices at that time.
- MHO, working with ENERGY and MAG will report back in Spring 2017 with options for electricity rate mitigation for tenants.

Legislative Authority – Considerations

GA Smoothing

- **Amendments to *Electricity Act, 1998 (EA)* and *Ontario Energy Board Act, 1998 (OEBA)***
 - The OPG Trust will require authority to recover principle, interest and administrative costs through GA from customers.
 - Legislation would authorize IESO to collect amounts on behalf of the OPG's SPV/Trust and settle accounts with the OPG Trust as a service provider. Regulatory amendments to GA Regulations would require IESO to:
 - o Separately settle and track amounts received from the SPV/Trust to lower GA (including maintaining variance accounts).
 - o Separately settle and track amounts paid back to the SPV/Trust (including maintaining variance accounts).
 - o Distributors would continue to collect from consumers and settle with IESO. Generators would continue to be paid by IESO.
 - OEBA-related amendments would allow for OEB oversight. Light touch would focus on the borrowing entity's recovery of administrative costs and its calculation of amounts owing in a period. Heavy touch would give OEB the discretion to determine repayment over time.
 - The certainty of the legislative mechanism to recover the debt and interest, and the extent of discretion of the OEB to alter either amount over time, will have impacts on the availability and cost of capital.
 - Further legal analysis is required as the GA option is developed.

Class B

- **Targeted Lowering ICI Threshold Below 1 MW (to 500kW):** Regulatory amendments (O.Reg. 429/04) will be required to address program details.

Legislative Authority – Considerations (cont'd)

Electricity Support Programs

- **RRRP, OESP and First Nations Rate:** Moving costs to the tax base and creating a First Nations rate will require amendments to OEBA. Regulatory amendments (442/01, 314/15, 275/04) will be required to address program details.
- **Affordability Fund:** In order to implement new affordability fund the Province would need to enter into Transfer Payment Agreements with qualified third parties to administer the fund.

Bending the Future Cost Curve of Electricity

- No specific legislative or regulatory amendments identified. IESO may need to amend market rules. Agency MOUs/MOAs may require amendment.

Communication Plan

Objective:

- Demonstrate Ontario's commitment to lower electricity costs for ratepayers through new rate relief initiatives.

Strategic Approach

- High-profile Premier's announcement and Technical Briefing
- News release, backgrounders, QA's are being prepared.
- A multimedia marketing and advertising campaign is being prepared on the topic of rate mitigation for electricity consumers.

**APPENDIX: SEE MINISTRY OF ENERGY'S
ELECTRICITY PRICE MITIGATION –
APPENDIX**

Electricity Price Mitigation – Appendix

Ministry of Energy

March 1, 2017

Electricity Bonds - Asset Securitization Transactions in U.S.: Long Island Power Authority and Duke Energy

	Long Island Power Authority (LIPA)	Duke Energy
Key Terms	Up to \$4.5 billion, in one or more series/tranches, with maturity no longer than 30 years. Fixed interest rates for each tranche. Estimated net present value savings to ratepayers from securitization: \$446 million.	\$1.283 billion plus bond issuance costs, in one or more series/tranches, with maturity up to 23 years. Fixed interest rates for each tranche. Estimated total savings to ratepayers from securitization: \$708 million.
Bond Issuer	Special-purpose "public benefit" corporation created by statute.	Wholly owned "limited liability corporation" (structure not available in Ontario) of investor-owned Utility.
Covered Costs	Outstanding debt arising mostly from the closing of Shoreham nuclear power plant.	Costs from early retirement or abandonment of nuclear power plants and ongoing financing costs.
Collateral Property	Revenues from usage-based "transition charges" (part of delivery charge) on all customer bills.	Revenues from usage-based Asset Securitization Charge (separate line item on all customer bills.
Covered Customers	All existing and future grid-connected customers; charges not by-passable.	All existing and future customers; charges not by-passable.
Issuance Approval Process	Financing order issued by LIPA setting out the amount and terms of bond. Public hearings must be held before order finalized.	Utility petitions for financing order from Florida Public Service Commission (FPSC), which sets out details of bond issuance, including amount and terms. Final structure of transaction reviewed by FPSC for limited purpose of ensuring all requirements of law and financing order are met.
Status of Bond	Not debt of the State, although State provides statutory pledge not to impair the value of the collateral property.	Not debt of the State, although State provides statutory pledge not to impair the value of the collateral property.
Governance of Bond Issuer	Board of Trustees appointed by Governor	"Bond team" is established by order of the FPSC, which is "visibly involved".
Adjustment Mechanisms	"Transition charges" adjusted annually based on mathematical formula in financing order, to ensure charges are adequate for servicing the bond; transitions charges may increase or decrease depending on variations in consumption.	Mandatory biannual petition by Utility to FPSC to adjust charges for any over or under collection, based on mathematical formula provided in the financing order and estimates of consumption for each rate class.

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IESO Memo



Independent Electricity System Operator
1800-120 Adelaide Street West
Toronto, ON M5H 1T1
1 416 595 2800
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February 28, 2017

Deputy Minister Serge Imbrogno
Ontario Ministry of Energy
900 Bay Street
Hearst Block, 4th Floor
Toronto, ON M7A 2E1

Dear Deputy Imbrogno:

Attached are two documents prepared in conjunction with our KPMG advisors. The first outlines the proposed adoption by the IESO of the guidance in *ASC980 Regulated Operations* and the recognition of regulatory assets, as a more appropriate and transparent presentation in our financial statements.

The second is associated with the potential recognition and de-recognition of the regulatory assets associated with the IESO's role under the Global Adjustment Smoothing Account.

The conclusions of the second analysis are based on the structure of the account as the IESO currently understands it, and may vary depending on the final legislative materials.

We are available to address any questions you may have on these matters.

Sincerely,

Bruce B. Campbell

Attach.

Bruce B. Campbell
President and CEO
bruce.campbell@ieso.ca
1 416 595 2800

White Paper - Adoption of the guidance in ASC 980 Regulated Operations

Independent Electricity System Operator ("IESO" or the "Company") is considering making changes in its accounting policies to reflect the balances of market participants within the IESO-administered markets (see separate technical analysis) and the economic impacts of rate regulation, as the changes would result in a more appropriate presentation of events or transactions in its financial statements.

Issue being considered in this document is: Can the IESO adopt the guidance in ASC 980 *Regulated Operations* (*US GAAP in FASB*)?

Background and Assumptions

The facts, circumstances, and assumptions relevant to the specific transactions are as follows:

1. The IESO's legal status is a not-for-profit, non-taxable, corporation established pursuant to Part II of the *Electricity Act, 1998*. IESO is classified as an Other Governmental Organization and prepares its financial statements in accordance with Canadian public sector accounting standards (PSAB).
2. IESO is rate regulated by the OEB in accordance with the *Electricity Act, 1998* and the Ontario Energy Board ("OEB") Act, 1998 but currently does not recognize the economic impacts of rate regulation in its general purpose financial statements.
3. The IESO is required to obtain approval from the OEB under s. 25(1) of the *Electricity Act, 1998* for the approval of its own expenditures, revenue requirement and fees. The last rate approval was obtained on December 29, 2016¹.
4. The OEB issued a Decision and Order on March 28, 2013 that permits IESO to recover the MDMR costs (the Smart Metering Charge) (see Appendix A). *(i.e. Costs incurred in the past will be fully recovered through future rates)*
5. Furthermore, in accordance with the *Electricity Act, 1998* and the *OEB Act, 1998*, the IESO has approved variance accounts to record all amounts payable or receivable by it in connection with the amounts paid to generators, the Financial Corporation, distributors and to entities with whom the IESO has a procurement contract. (i.e. costs incurred in the past will be fully recovered through future rates)
6. The IESO would change its accounting policies to permit the recognition of the economic impacts of rate regulation as from the 2016 financial year. IESO would adopt the guidance of ASC 980 *Regulated Operations* to better reflect the economic substance of its operations and enhance the transparency and accountability of its financial reporting.

Appropriate Accounting Principle

FS2120.02, "a change in an accounting policy may be made... if it is considered that the change would result in a more appropriate presentation of events or transactions in the financial statements of the government."

FS1150.05 "When the primary sources of GLAP do not deal with the accounting and reporting in financial statements of transactions or events encountered by the public sector reporting entity, or additional guidance is needed to apply a primary source to specific circumstances, the selection of an appropriate accounting policy requires the exercise of professional judgment. In these circumstances, a public sector reporting entity should adopt accounting policies and disclosures that are consistent with:

¹http://www.ieso.onarioregulatoryboard.ca/webdavtr/webdavtr/all/webdavtr/tes/556699/view/Doc_Order_IESO_20161229_FDE

- (a) *the primary sources of GAAP; and*
- (b) *the application of the concepts described in FINANCIAL STATEMENT CONCEPTS, Section PS 1000.*

PS150.19 "Pronouncements issued by other bodies authorized to issue accounting standards may be useful sources to consult. For example, accounting pronouncements published with the authority of the Canadian Accounting Standards Board (AcSB), International Accounting Standards Board (IASB), US Federal Accounting Standards Advisory Board (FASB), US Governmental Accounting Standards Board (GASB), or International Public Sector Accounting Standards Board (IPSASB) are often important sources to consult on matters not covered by primary sources of GAAP or for assistance in applying a primary source of GAAP to specific circumstances."

PS150.08 "A public sector reporting entity consults sources other than primary sources of GAAP to assist in selecting accounting policies and disclosures only when these sources comply with paragraph PS150.05. The public sector reporting entity evaluates sources in selecting the appropriate accounting policies and disclosures based on all of the following criteria:

- (a) *The specificity of the source — A source that deals with the specific circumstances is likely to be more relevant than one from which the public sector reporting entity must analogize.*
- (b) *The authority of the issuer or author — A source issued by an accounting standard setter in its own jurisdiction is likely to be more relevant than a source issued by others in the same jurisdiction.*
- (c) *The continued relevance of the source — The passage of time may diminish the relevance of certain sources.*
- (d) *The development process for the source — A source developed after extensive consultation and debate is likely to be more relevant than a source developed without such discipline."*

PS150.10 "PSAB considers a source to be consistent with the concepts in paragraph PS150.05(b) when the guidance in that source is compatible with the (i) qualitative characteristics of financial information, (ii) the elements of financial statements, and (iii) the recognition and measurement criteria in paragraph PS150.05(b)."

PS1000.58 "In the absence of appropriate public sector recognition and measurement criteria for intangibles, all intangibles, including those that have been purchased, developed, constructed or inherited in right of the Crown, are not recognized as assets in government financial statements. The intangible often called "human capital" that embodies the talent or intellectual capital of government employees is not recognized as an asset under existing accounting principles."

PS3210.03 "Assets are economic resources controlled by a public sector entity as a result of past transactions or events and from which future economic benefits are expected to be obtained."

PS3210.04 "Assets have three essential characteristics:

- (a) *They embody future economic benefits that involve a capacity, singly or in combination with other assets, to provide goods and services, to provide future cash inflows, or to reduce cash outflows.*
- (b) *The public sector entity can control the economic resource and access to the future economic benefits.*
- (c) *The transaction or event giving rise to the public sector entity's control has already occurred."*

Issue: Can the IESO adopt the guidance in ASC 980 *Regulated Operations*?

In accordance with PS210.02, the IESO can reflect the economic impacts of rate regulation only if it is considered that the change of accounting policy would result in a more appropriate presentation of events or transactions in the financial statements of the government. As mentioned in the Agenda ref. 9A of the IASB meeting of February 2017², rate regulated entities have long argued that, without recognizing regulatory assets and regulatory liabilities, the entity's performance is distorted by the rate regulator's intervention in the imposition of performance obligations on the entity and the timing of cash flows from the ratepayers.

² <http://www.ieso.org/Meetings/MeetingDocs/IASB/2017/February/AP09-Rate-regulated-Activities.pdf>

The recognition of regulatory assets and liabilities would better reflect the economic substance of IESO's operations and enhance the transparency and accountability of its financial reporting. For example, during the period from 2007 to April 2013 the IESO incurred costs relating to the Smart Meter Program amounting to \$90.9 million, and these costs were expensed and are included in the accumulated deficit. In the absence of applicable regulatory accounting under PSAS, the IESO was unable to recognize a regulatory asset for this charge, despite receiving a rate order to recover it over the period from May 1, 2013 to October 31, 2018. Should the IESO choose to adopt ASC 980, a regulatory asset for the Smart Metering Charge would be recognized at December 31, 2016 for an amount of approximately \$21.6 million, which would represent the remaining unamortized amount that would have been reported if the asset was recognized originally in 2013.

PSAS does not address accounting concepts in a rate regulated environment. Since there is no guidance in PSAS regarding the recognition and measurement of regulatory assets and liabilities, IESO may consider other sources based upon PSAS 1150.05 in the GAAP hierarchy to determine appropriate accounting policies in a rate regulated environment.

Within AesB, Accounting Standards for Private Enterprises (ASPE) defines a rate regulated entity but provides no guidance on regulatory assets and liabilities however requires disclosure of such balances if they are recognized. IASB has not completed their project on rate regulated activities and current standards only include a holding standard based upon what was done under previous GAAP. It will be important for the IESO to monitor the IASB's ongoing project on rate regulated activities as this may affect the recognition, measurement, presentation and disclosures of the regulatory assets and liabilities. Both FASB and GASB have guidance on accounting in a regulatory environment. IPSASB does not provide any guidance on accounting by rate regulated entities.

It is important to note that rate regulated entities in Canada that prepare their general purpose financial statements in accordance with US GAAP (e.g. Hydro One and Ontario Power Generation), ASPE (e.g. the three Fortis subsidiaries in Ontario), as well as those rate regulated entities that are eligible to elect to apply the requirements of IFRS 14 and elected to do so when they adopted IFRS (e.g. over 80 LDCs in Ontario), generally all recognize regulatory deferral and variance accounts in accordance with US GAAP accounting principles set out ASC 980 *Regulated Operations*.

Statement 62 issued by GASB in December 2010 is effective for financial statements for periods beginning after December 15, 2011. The objective of the Statement is to incorporate into the GASB's authoritative literature certain accounting and financial reporting guidance that is included in the Financial Accounting Standards Board (FASB) Statements and Interpretations issued on or before November 30, 1989, which does not conflict with or contradict GASB pronouncements. Paragraphs 476–500 may be applied to activities reported in business-type activities that have regulated operations that meet all of the three criteria in paragraph 476 as follows:

- (a) The regulated business-type activity's rates for regulated services provided to its customers are established by or are subject to approval by an independent, third-party regulator or by its own governing board empowered by statute or contract to establish rates that bind customers.
- (b) The regulated rates are designed to recover the specific regulated business-type activity's costs of providing the regulated services.
- (c) In view of the demand for the regulated services or products and the level of competition, direct and indirect, it is reasonable to assume that rates set at levels that will recover the regulated business-type activity's costs can be charged to and collected from customers. This criterion requires consideration of anticipated changes in levels of demand or competition during the recovery period for any capitalized costs.

The criteria above and the guidance in paragraphs 476–500 are based on ASC 980 *Regulated Operations*.

It is also important to note that in its statement of financial position, the Ontario Electricity Financial Corporation ("OEFPC"), which reports under Canadian public sector accounting standards, recognizes a net unamortized liability balance for power purchase contracts, as detailed in the summary of significant accounting policies:

"The liability for power purchase contracts was originally calculated by discounting estimated losses over the life of the contracts. Under the *Electricity Restructuring Act, 2004*, OIEFC began receiving actual contract prices for power from electricity consumers, effective January 1, 2005, and no longer incurs losses on those power purchase contracts. At that time, the Ministry of Finance estimated that the bulk of the liability would be eliminated over 12 years as existing electricity contracts expire. As a result, the bulk of the liability is being amortized to revenue over that period."

Although this liability is not defined as a regulatory liability in the OIEFC's financial statements, the argument can be made that it substantively meets the definition under ASC 980 of a regulatory liability, as the OIEFC had no further obligation and should have reversed the liability into income. After consultation with the AG at that time, it was decided to amortize the gain over the remaining term of the contracts.

In summary

Rate regulated entities in North America reporting under US GAAP, ASPE, IFRS (entities which have elected to use IFRS 14) and GASB generally all recognize regulatory deferral and variance accounts in accordance with US GAAP accounting principles based on ASC 980 *Regulated Operations* (see Appendix B for the accounting framework used by the Canadian rate regulated entities).

Evaluation of Other Sources of GAAP

When looking to other sources of GAAP, PSAS requires the other sources of GAAP to be evaluated

1. *as to whether they are consistent with accounting policies and disclosure within PSAS*
2. *as to whether they are consistent with the application of concepts in PS 1000 and*
3. *as to all of the following criteria:*

- (a) *Source deals with the specific circumstance*
- (b) *Source is issued by an accounting standard setter*
- (c) *Source continues to be relevant*
- (d) *Source uses a consultative process and deliberation when developing policies*

As required by PS 1150.05(b), we need to analyze whether the concepts in the other source (i.e. ASC 980) are compatible with the (i) qualitative characteristics of financial information, (ii) the elements of financial statements, and (iii) the recognition and measurement criteria in PS 1000.

(i) Qualitative Characteristics of Financial Information

FASB	PSAS 1000	Evaluation
Concepts and objectives are for both business and non-business organizations as well as governmental units (Concept #4.3 to 4.5)	Public, legislators, counselors, investors, analysts, other governments (par. 14)	FASB considers governmental units
Financial reporting should: – Be useful in making resource allocation decisions – Be useful in assessing services and ability to provide services – Be useful in assessing management stewardship and performance – Provide information about economic resources, obligations, net resources and changes in them (Concept #4.33–54)	Financial statements should be relevant to the needs of the users and reliable. Relevance is achieved through timeliness, predictability and accountability value. Reliable information has the following characteristics: representational faithfulness, completeness, neutrality, conservatism and verifiability. (par. 28-29)	Similar

(ii) *Elements of Financial Statements*

FASB	PSAS	Evaluation
Assets		
Probable future economic benefits obtained or controlled by the entity as a result of past transactions or events. (Concept #6.25-.34)	Economic resources controlled by a government as a result of past transactions or event and from which future economic benefits are expected to be obtained. (par. 35)	Essential characteristics similar
Liabilities		
Probable future sacrifices of economic benefits arising from present obligations of the entity to transfer assets or provide services in the future as a result of past transactions or events. (Concept #6.35-.43)	Present obligations to others arising from past transactions or events, the settlement of which is expected to result in the future sacrifice of economic benefits with little or no discretion to avoid settlement. (par. 44)	Essential characteristics similar
Revenues		
Inflows from delivering or producing goods, rendering services or other activities that constitute the entity's central operations. (Concept #6.78-79)	Increases in economic resources resulting from operations, transactions and events of the accounting period. (par. 46)	Similar
Expenses		
Outflows from delivering or producing goods, rendering services or carrying out other activities that constitute the entity's central operations. (Concept # 6.80-81)	Decreases in economic resources resulting from operations, transactions and events of the accounting period. (par. 49)	Similar

(iii) *Recognition Criteria*

FASB	PSAS	Evaluation
To be recognized, an item must meet the definition of an element of the financial statements, must be measurable with sufficient reliability, be relevant and be reliable. (Concept # 5.64)	Item must have an appropriate basis of measurement, a reasonable estimate can be made of the amount and if the item involves obtaining or giving up future economic benefits, it is expected those benefits will be obtained or given up. (par. 55)	Similar

(iii) *Measurement Criteria*

FASB	PSAS	Evaluation
Measurement basis dependent upon nature of item. Historical cost basis, replacement cost, market value. (Concept # 5.65-.70)	Primarily using historical cost basis. Replacement cost and realizable value are also used, but in limited circumstances. (par. 60)	Similar

Criteria of PS 1150.08

Criteria	Evaluation
Source deals with the specific circumstance	Yes, ASC 980 Regulated Operations
Source is issued by an accounting standard setter	Yes, FASB
Source continues to be relevant	Yes, still used by rate regulated entities
Source uses a consultative process and deliberation when developing policies	Yes, comprehensive consultative process and deliberation

Evaluation whether regulatory assets meet the definition of Assets as per Section PS3210

PS3210 defines assets as “economic resources controlled by a public sector entity as a result of past transactions or events and from which future economic benefits are expected to be obtained.” (par. 03)

The analysis of the three essential characteristics as defined by PS3210.4 are analyzed in the next table.

Characteristics	Additional guidance	Comments
They embody future economic benefits that involve a capacity, singly or in combination with other assets, to provide goods and services, to provide future cash inflows, or to reduce cash outflows. (par. 4(a))	The essence of assets are their future economic benefits. Assets embody future economic benefits that allow public sector entities to achieve their objectives. The future economic benefits embodied in assets involve a capacity, singly or in combination with other assets, to provide goods and services, to provide future cash inflows or to reduce cash outflows. (par. 11) The future economic benefits embodied in an asset may also be in the form of generating future cash inflows. Cash inflows benefit the public sector entity because cash can be used to purchase or to provide goods and services, redistribute wealth or settle liabilities. (par. 13)	The economic benefit embodied in the variance accounts (i.e. regulatory asset) is the right to collect the incurred costs from ratepayers in order to settle the liability for the energy already consumed by the ratepayers. The electricity Act, 1998 (“EA”) section 25.33(1) states: “The IESO shall, through its billing and settlement systems, make adjustments in accordance with the regulations that ensure that, over time, payments by classes of market participants in Ontario that are prescribed by regulation reflect, a) amounts paid to generators, the Financial Corporation and distributors, whether the amounts are determined under the market rules or under section 78.1, 78.2 or 78.5 of the Ontario Energy Board Act, 1998; and b) amounts paid to entities with whom the IESO has a procurement contract, as determined under the procurement contract.”
The public sector entity can control the economic resource and access to the future economic benefits. (par. 4(b))	Economic resources can arise from, but are not limited to, the following: government's own legislation (for example, taxes, fines and penalties); (par. 08(c)) A public sector entity controls the economic resource and access to the	The economic resources is the right created by the legislation that the energy costs IESO incurs will result in future cash flows. In the regulatory environments, incurring costs creates an enforceable right to set rates at a level that permits

The transaction or event giving rise to the public sector entity's control has already occurred. (par. 4(c))	future economic benefits when it: a. can benefit from the economic resource through its capacity to provide goods and services, to provide future cash inflows or to reduce cash outflows; b. can deny or regulate access to those benefits by others; and c. is exposed to the risks associated with the economic resource. (par. 16)	IESO to recover those costs. The adjustment of future rates is the mechanism the OEB uses to implement the right. Currently, the EA section 25.33(5) states: <i>"The IESO shall establish and maintain such variance accounts as may be necessary to record all amounts payable or receivable by it under this section."</i> The legislation would be amended to permit IESO to collect specifically the deferral of the energy costs and the related interest and administrative costs.
The transaction or event that gives rise to control of an economic resource resulting from exchange agreements or contracts usually occurs at the point of exchange. This arises when substantially all the benefits and risks of ownership have been transferred to the public sector entity and normally coincides with the disbursement of funds, exchange of other assets or assumption of liabilities. (par. 26)		The past event giving rise to IESO's control occurs as the energy cost is incurred, as IESO has a right to collect it from the ratepayers.
Conclusion: The right to collect the deferral of the energy costs and the related interest and administrative costs meets the definition of assets.		

When concepts are in conflict with PSAS then PSAS prevails (PS 1150.12). For example, PSAS does not recognize intangible assets (PS 3150.03, .14 and PS1000.58). So if regulatory assets are considered to be intangible assets, they would not be allowed to be recognized through another source of GAAP.

It is worth noting that the economic impacts of rate regulation are not recognized under US GAAP as intangible assets as the FASB has specific guidance to deal with this type of asset. It is also worth noting that the IASB has an ongoing project on rate regulated activities and are currently developing an accounting model based on the principles of IFRS 15 *Revenue from contracts with customers* to provide a principle-based framework for recognizing regulatory assets (see Agenda Ref. 9 for the IASB meeting on February 23, 2017). Furthermore, the Summary Comment Letter Analysis related to the E/D/2009/8 on Rate Regulated Activities published by the IASB in July 2009 states on page 2 of 50:

"The International Financial Reporting Interpretations Committee ("IFRIC") observed that it had previously discussed whether a regulatory asset should be recognized in the context of service concession arrangements, either as deferred costs or as an intangible asset to reflect an expectation that the entity will

recover these costs as part of the price charged in future periods. It had concluded that entities applying IFRSs should recognize only assets that qualified for recognition in accordance with the IASB's *Framework for the Preparation and Presentation of Financial Statements* and relevant accounting standards, such as IAS 11 *Construction Contracts*, IAS 18 *Revenue*, IAS 16 *Property, Plant and Equipment* and IAS 38 *Intangible Assets*."

Entities that are not eligible to elect to apply the requirements of IFRS 14 do not recognize regulatory assets because in 2009 the IFRIC determined they did not meet the criteria for recognition of an intangible asset under IAS 38.

"Therefore, we can conclude that ASC 980 is NCYT in conflict with PS 3150.03, 14 and PS1000.58 with respect to intangible assets.

Conclusion:

FASB is appropriate to use as "other source of GAAP". FASB standard ASC 980 has extensive guidance for rate regulated entities including the recognition of regulatory assets and use of rate regulated accounting by IESO would be consistent with current reporting practices of H1, OPG and OHEC.

Appendix A:

Extract from the "DECISION and ORDER issued by the OEB on March 28, 2013" available on the IFRS website

Proceeding on the Ontario Energy Board's own motion to review the options for and ultimately determine the appropriate allocation and recovery of the Smart Metering Charge pursuant to section 19 of the Ontario Energy Board Act, 1998.

THE BOARD ORDERS THAT:

Effective May 1, 2013, the Smart Metering Entity charge to be levied and collected by the Smart Metering Entity from all Distributors identified in the Board's annual Yearbook of Electricity Distributors shall be \$0.788 per month for each Residential and General Service <50kW customers for each distributor. The Smart Metering Entity charge shall be in effect from May 1, 2013 to October 31, 2018. The number of Residential and General Service <50kW customers to which the Smart Metering Entity charge will be applied to shall be in accordance with the methodology set forth in the Settlement Agreement attached as Appendix A.

http://www.ontarioenergyboard.ca/web/ Documents/EB-2012-0100/dec_order_IFSO-SME_20130328.pdf

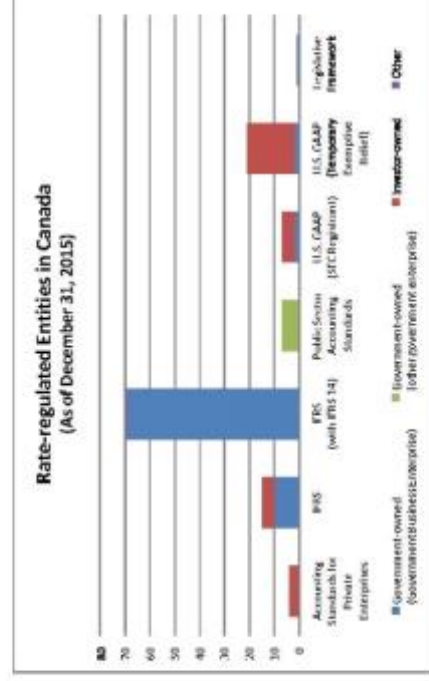
Appendix B:

Extract from the "Accounting Standards Advisory Forum Agenda Ref: 3A dated September 29, 2016" available on the IFRS website

Canadian Rate-regulated Entities

18. The accounting framework landscape for Canadian rate-regulated entities is currently diverse. For annual periods beginning on or after January 1, 2015, rate-regulated entities that are Canadian publicly accountable enterprises are required to apply IFRS. Rate-regulated entities that adopted IFRS for the first time after *IFRS 14 Regulatory Deferral Accounts* was issued continue to recognize these balances. Government Business Enterprises (which operate to generate a profit or on a break-even basis) that are also rate-regulated entities are also directed to apply standards applicable to for-profit entities, and thus apply IFRS. Canadian securities legislation permits dual-listed entities (i.e., Canadian entities also registered with the U.S. Securities and Exchange Commission) to apply U.S. GAAP in the normal course. Temporary exemptive relief is also available from the Canadian Securities Administrators that permits rate-regulated entities that are not dual-listed to apply U.S. GAAP in place of IFRS. If a rate-regulated entity is not a publicly accountable enterprise or a Government Business Enterprise, additional accounting framework options may also include Accounting Standards for Private Enterprises or Public Sector Accounting Standards. A non-GAAP reporting framework is used when legislated by the provincial owner of a government-owned rate-regulated entity.

19. As of December 31, 2015, there were approximately 125 rate-regulated entities in Canada. These entities mainly range in size from small entities owned by municipal governments to large investor-owned entities or entities owned by provincial governments.



Source: Information compiled based on audited financial statements for fiscal year 2015, or information from rate filings that confirmed the accounting framework used by these entities. Due to data collection constraints, the population could be slightly larger.

20. The chart above highlights two key points:

- (a) The majority of investor-owned entities have chosen U.S. GAAP over IFRS. A few entities that are not reporting issuers apply Accounting Standards for Private Enterprises. Both U.S. GAAP and Accounting Standards for Private Enterprises permit the recognition of balances arising from rate regulation. Several entities that apply U.S. GAAP have told us this choice was influenced by the need to provide their users with financial statements that accurately reflect the economics of their business. Further, some entities presently using the temporary exemptive relief described in paragraph 8 have said they are considering incurring the cost and effort necessary to become a registrant of the U.S. Securities and Exchange Commission in order to have the permanent ability to apply U.S. GAAP. While such a decision could be primarily for business reasons such as the entity expanding its operations into the U.S., it could also be attributed to the continuing uncertainty about the ultimate outcome of the IASB's Rate-regulated Activities project and the approaching expiry date of the securities regulators' exemptive relief.
- (b) Public sector entities that are Government Business Enterprises tend to apply IFRS. The majority of these entities is made up of several large provincially-owned utilities, and many small municipally-owned local distribution utilities that do not issue debt or list in the U.S. stock market, and are not subject to Canadian securities legislation. As a result, they cannot apply U.S. GAAP. As shown in the chart, many of these entities adopted IFRS for the first time after the IASB issued IFRS 14, which allowed them to continue their previous accounting practices for rate-regulated activities.
21. Within the pool of government-owned rate-regulated entities, there are entities that do not meet the characteristics of Government Business Enterprises and are required to apply Public Sector Accounting Standards.
22. The data on the different accounting frameworks in Canada is unique. It demonstrates that when given a choice, rate-regulated entities select an accounting framework that captures the effects of rate regulation on their financial position and financial performance in order to communicate more decision-useful information to users.

<http://www.ifrs.org/Meetings/MeetingDocs/ASAF/2016/September/1609-ASAF-03-A-Rate-regulated-Activities-Canada.pdf>

White Paper on the Province's proposed Global Adjustment Smoothing Account

Below is a summary of IESO's preliminary views on the implementation of the Province's proposed Global Adjustment Smoothing Account.

Understanding that the finalization of the legal terms, the financing structure and other detailed terms will take several months and will involve collaboration between legal counsel, parties involved and other stakeholders, this letter is intended to provide the guideline and framework which could form the foundation of the plan.

Issues being considered in this document are:

- Issue #1:** Can the IESO recognize deferral or variance accounts related to the annual Global Adjustment Smoothing Account as a regulatory asset on its statement of financial position?
- Issue #2:** Can the IESO derecognize the deferral or variance accounts related to the Global Adjustment Smoothing Account upon sale to the OPG Trust?

1. Recognition of regulatory assets (deferral and variance accounts)

Background and Assumptions for Issue #1

The facts, circumstances, and assumptions relevant to the specific transactions are as follows:

1. The IESO's legal status is a not-for-profit, non-taxable, corporation established pursuant to Part II of the *Electricity Act, 1998*. IESO is classified as an Other Governmental Organization and prepares its financial statements in accordance with Canadian public sector accounting standards (PSAB).
2. IESO is rate regulated by the OEB in accordance with the Electricity Act, 1998 and the Ontario Energy Board ("OEB") Act, 1998 but currently does not recognize the economic impacts of rate regulation in its general purpose financial statements.
3. The IESO is required to obtain approval from the OEB under s. 25(1) of the Electricity Act, 1998 for the approval of its own expenditures, revenue requirement and fees. The last rate approval was obtained on December 29, 2016¹.
4. The OEB issued a Decision and Order on March 28, 2013 that permits IESO to recover the MDMR costs (the Smart Metering Charge) (see Appendix A). *(i.e. Costs incurred in the past will be fully recovered through future rates)*
5. Furthermore, in accordance with the *Electricity Act, 1998* and the *OEB Act, 1998*, the IESO has approved variance accounts to record all amounts payable or receivable by it in connection with the amounts paid to generators, the Financial Corporation, distributors and to entities with whom the IESO has a procurement contract. (i.e. costs incurred in the past will be fully recovered through future rates)
6. The province is contemplating deferring the recovery of a portion of the annual Global Adjustment Smoothing Account (comprised primarily of the electricity costs paid to the generators) over a period of 25-30 years, so that costs incurred would be fully recovered through future rates.
7. The *Electricity Act, 1998* and the *OEB Act, 1998* would be amended through legislation to require the deferral of the recovery of the Global Adjustment Smoothing Account and the future recovery in rates charged to customers.

¹http://www.ieso.ca/webdav/site/ieso/main_site/webdav/site/ieso/main_site/files/2016/12/29/P16

8. The OEB would grant generic deferral or variance accounts to capture the difference between the amounts paid to generators and others, and the amounts collected in rates. Furthermore, the interest and ancillary costs related to the contemplated transaction would also be included in future rates charged to customers. In summary, the legislation would create a right to collect the incurred cost.
9. The IESO would change its accounting policies to permit the recognition of the economic impacts of rate regulation as from the 2016 financial year. IESO would adopt the guidance of ASC 980 *Regulated Operations* to better reflect the economic substance of its operations and enhance the transparency and accountability of its financial reporting.

Appropriate Accounting Principle for issue #1

ASC 980 Regulated Operations

- 980-10-15-2: *"The guidance in the Regulated Operations Topic applies to general-purpose external financial statements of an entity that has regulated operations that meet all of the following criteria:*
 - (a) The entity's rates for regulated services or products provided to its customers are established by or are subject to approval by an independent, third-party regulator or by its own governing board empowered by statute or contract to establish rates that bind customers,*
 - (b) The regulated rates are designed to recover the specific entity's costs of providing the regulated services or products. This criterion is intended to be applied to the substance of the regulation, rather than its form. If an entity's regulated rates are based on the costs of a group of entities and the entity is so large in relation to the group of entities that its costs are, in essence, the group's costs, the regulation would meet this criterion for that entity,*
 - (c) In view of the demand for the regulated services or products and the level of competition, direct and indirect, it is reasonable to assume that rates set at levels that will recover the entity's costs can be charged to and collected from customers. This criterion requires consideration of anticipated changes in levels of demand or competition during the recovery period for any capitalized costs."*
- 980-10-20 Glossary, Definition of incurred costs: *"A cost arising from cash paid out or obligation to pay for an acquired asset or service, a loss from any cause that has been sustained and has been or must be paid for."*
- 980-10-05-8: *"Unless an accounting order indicates the way a cost will be handled for rate-making purposes, it causes no economic effects that would justify deviation from the GAAP applicable to business entities in general. The mere issuance of an accounting order not tied to rate treatment does not change an entity's economic resources or obligations. In other words, the economic effect of regulatory decisions – not the mere existence of regulation—is the pervasive factor that determines the application of GAAP. 980-340 – Other Assets and Deferred Costs."*
- 980-340-25-1: *"Rate actions of a regulator can provide reasonable assurance of the existence of an asset. An entity shall capitalize all or part of an incurred cost that would otherwise be charged to expense if both of the following criteria are met:*
 - (a) It is probable (as defined in Topic 450) that future revenue in an amount at least equal to the capitalized cost will result from inclusion of that cost in allowable costs for rate-making purposes,*
 - (b) Based on available evidence, the future revenue will be provided to permit recovery of the previously incurred cost rather than to provide for expected levels of similar future costs. If the revenue will be provided through an automatic rate-adjustment clause, this criterion requires that the regulator's intent clearly be to permit recovery of the previously incurred cost*

A cost that does not meet these asset recognition criteria at the date the cost is incurred shall be recognized as a regulatory asset when it does meet those criteria at a later date."
- 980-340-40-1: *"If at any time an entity's incurred cost no longer meets the criteria for the capitalization of an incurred cost (see paragraph 980-340-25-1), that cost shall be charged to earnings."*

- 980-350-50-1: "In some cases, a regulator may permit an entity to include a cost that would be charged to expense by an unregulated entity as an allowable cost over a period of time by amortizing that cost for rate-making purposes, but the regulator does not include the unrecovered amount in the rate base. That procedure does not provide a return on investment during the recovery period. If recovery of such major costs is provided without a return on investment during the recovery period, the entity shall disclose the remaining amounts of such assets and the remaining recovery period applicable to them."
- 980-340-55-2: "In some cases, a regulator may approve rates that are intended to recover an incurred cost over an extended period without a return on the unrecovered cost during the recovery period."
- 980-340-55-3: "The regulator's action provides reasonable assurance of the existence of an asset (see paragraph 980-340-25-1). Accordingly, the regulated entity would capitalize the cost and amortize it over the period during which it will be allowed for rate-making purposes. That cost would not be recorded at discounted present value. An exception to this general rule is provided for costs of abandoned plants."

Issue #1: Can the IESO recognize deferral or variance accounts related to the annual Global Adjustment Smoothing Account as a regulatory asset on its statement of financial position?

US GAAP includes special accounting provisions that are applicable to entities with activities that are subject to rate regulation (see White Paper - Adoption of the Guidance in ASC 980 Regulated Operations). The result is that rate regulated entities are required to recognize regulatory assets and liabilities provided the following three criteria are met:

Criteria	Comment	Evaluation
The entity's rates for regulated services or products provided to its customers are established by or are subject to approval by an independent, third-party regulator or by its own governing board empowered by statute or contract to establish rates that bind customers.	IESO has unrecognized variance accounts related to the MDXMR (smart meters), that have been approved by the OEB in accordance with the Electricity Act and the OEB Act (see Appendix A). It is important to note that Hydro One and OPG are both consolidated into the province's books, are both regulated by the OEB and their respective regulatory assets and liabilities are reported in the province's books.	Met
The regulated rates are designed to recover the specific entity's costs of providing the regulated services or products.	Currently, the rates approved by the OEB are designed to recover the IESO's costs of providing the regulated services and the pass-through related to the energy purchased from the generators. The contemplated transaction is based on the fact that the OEB would grant generic deferral or variance accounts to capture the difference between the amounts paid to generators and others, and the amounts collected in rates. Furthermore, the interest and ancillary costs related to the contemplated transaction would also be included in future rates charged to customers. In summary, the legislation would create a right to collect the incurred costs.	Met

In view of the demand for the regulated services or products and the level of competition, direct and indirect, it is reasonable to assume that rates set at levels that will recover the entity's costs can be charged to and collected from customers. This criterion requires consideration of anticipated changes in levels of demand or competition during the recovery period for any capitalized costs."	Since the deferral or variance accounts would be sold to the OPG Trust at least on a monthly basis and cash would be received on the same day, this criteria would be met. This criteria would need to be monitored on a yearly basis to ensure that IESO and the OPG Trust would be able to recover the <u>future</u> deferred amount taking into account the levels of demand or competition during the recovery period.	Met
Conclusion: The three criteria would be met.		

Conclusion: Based on the assumptions mentioned above, IESO should be able to recognize a regulatory asset for the deferral of the annual Global Adjustment Smoothing Account. As mentioned in the ASC 980 guidance above, it is important that an accounting order be issued by the OEB which indicates the way the incurred costs would be handled for rate-making purposes as the OEB's action provides reasonable assurance of the existence of a regulatory asset.

2. Derecognition of regulatory assets (deferral and variance accounts)

Background and Assumptions for Issue #2

The facts, circumstances, and assumptions relevant to the specific transactions are as follows:

1. The annual Global Adjustment Smoothing Account that would be deferred in the deferral or variance accounts (the "Asset") would be significant.
2. The IESO does not currently have the financial capability to finance the Asset and is contemplating selling the Asset to a Trust to be set-up by OPG (the "OPG Trust").
3. The OPG Trust would be consolidated by OPG.
4. Proposed terms of the sale agreement between the IESO and the OPG Trust:
 - The sale contract would be structured as an absolute sale, which would assign future economic benefits or cash flows related to the Asset exclusively to the OPG Trust.
 - The arrangement would be structured whereby there is no recourse or obligations remaining of IESO related to the Asset.
 - The arrangement is not considered to be a financing transaction as IESO would have no obligations to the OPG Trust after the Asset is sold to the OPG Trust.
 - IESO would not retain any rights or benefits from the Asset.
 - IESO would not have any rights to interest or penalties on the Asset once it has been transferred to the OPG Trust.
 - The contract would be clear that IESO cannot pledge the Asset as collateral to obtain future cash flows or financing.
 - IESO would continue to collect related cash flows on the OPG Trust's behalf and remit those cash flows to the OPG Trust without material delay. In addition, IESO would not be entitled to reinvest such cash flows, except for investments in cash or cash equivalents during the short settlement period from the collection date to the date of required remittance to the OPG Trust, and interest earned on such cash and cash equivalents is passed to the OPG Trust. The contract would define IESO's role strictly as that of agent, under a pass-through arrangement.
 - Servicing, origination, and arrangement fees, would be collected by IESO in rates charged to ratepayers as part of its market dealings.
 - The Asset would be sold to the OPG Trust at least, on a monthly basis and cash would be received on the same day.

Appropriate Accounting Principles for Issue #2

Public Sector Accounting Standard ("PSAS") 3210, *Assets*, defines an asset as "... economic resources controlled by a government as a result of past transactions or events and from which future economic benefits are expected to be obtained." [par. 3]

.04 "Assets have three essential characteristics:

- (a) they embody future economic benefits that involve a capacity, singly or in combination with other assets, to provide goods and services, to provide future cash inflows, or to reduce cash outflows;
 - (b) the public sector entity can control the economic resource and access to the future economic benefits; and
 - (c) the transaction or event giving rise to the public sector entity's control has already occurred."
- .22 "Control of an economic resource and of access to the future economic benefits are essential characteristics of an asset, whereas possession or ownership is not."
- .24 "A public sector entity may act as trustee when it administers trusts on behalf of the beneficiaries specified in the agreement or statute. As trustee, the public sector entity merely administers the assets, following the terms

and conditions set out in the agreement. It does not control the asset because it does not have access to the future economic benefits. Those benefits flow to the beneficiaries."

As noted in PS1000 Financial statement concepts:

.37 "An item is not an asset of a government if it lacks one or more of the essential characteristics listed in the preceding paragraph. Thus, for example, an item does not qualify as an asset of a government if the item involves:

- (a) no future economic benefit;
- (b) no future economic benefit, but the government cannot obtain it; or
- (c) future economic benefit that the government may obtain, but the events or circumstances that give the government control of the benefit have not yet occurred."

As noted in PS3430, derecognition of a financial liability:

.042 "A government should remove a financial liability (or part of a financial liability) from its statement of financial position when, and only when, it is extinguished (i.e., when the obligation specified in the contract is discharged or cancelled, or expires)."

.043 "A financial liability (or part of a financial liability) is extinguished when the debtor either:

- (a) discharges the liability (or part of it) by paying the creditor, normally with cash, other financial assets, goods or services; or
- (b) is legally released from primary responsibility for the liability (or part of it) either by process of law or by the creditor. (When the debtor has given a guarantee, this condition may still be met.)"

.046 "Payment to a third party, including a trust (sometimes called "in-substance defeasance"), does not, by itself, relieve the debtor of its primary obligation to the creditor in the absence of legal release."

.047 "If a debtor pays a third party to assume an obligation and notifies its creditor that the third party has assumed its debt obligation, the debtor does not derecognize the debt obligation, unless the condition in paragraph PS 3430.043(b) is met. If the debtor pays a third party to assume an obligation and obtains a legal release from its creditor, the debtor has extinguished the debt. However, if the debtor agrees to make payments on the debt to the third party or direct to the original creditor, the debtor recognizes a new debt obligation to the third party."

Issue #2: Can the IESO derecognize the deferral or variance accounts related to the annual Global Adjustment Smoothing Account upon sale to the OPG Trust?

PS3210 does not specifically address the derecognition of a regulatory asset as the concept of a regulatory asset does not exist under PSAS.

As mentioned above, regulatory assets do not meet the definition of intangible asset or financial asset. Specifically, regulatory assets do not meet the definition of financial asset because they are imposed on customers through the tariff (i.e., imposed by the OHEB) and do not represent a right to receive payments from another party as a result of a contract.

More generally, PSAS 3210.37 suggests that an asset would no longer be recognized when it fails to meet the definition of an asset.

Based on PS1000.37(b), an item does not qualify as an asset of a government if the item involves future economic benefit, but the government cannot obtain it.

Based on the assumptions mentioned above, the legal title of the Asset would be transferred to the OPG Trust, as well as, ALL risks and rewards, including the following:

- the contract would define IESO's role strictly as that of agent, under a pass-through arrangement;
- all cash flows related to the Asset would be transferred without material delay to the OPG Trust;
- rights to interest or penalties on the Asset would be for the benefits of the OPG Trust;
- IESO cannot pledge the Asset; and
- no recourse or obligations remaining of IESO related to the Asset.

IESO should also evaluate whether the sale of the Asset should in fact be considered as a borrowing arrangement. In the absence of detailed guidance on this subject, we can analogize to the guidance in PS3450 *Financial Instruments* for the derecognition of a financial liability. Par. 43 states that “*A financial liability (or part of a financial liability) is extinguished when the debtor is legally released from primary responsibility for the liability (or part of it) either by process of law or by the creditor. (When the debtor has given a guarantee, this condition may still be met.)*”

Based on the assumptions mentioned above, since the legal title of the Asset would be transferred to the OPG Trust, as well as, ALL risks and rewards, it can be concluded that the sale of the Asset is not a borrowing arrangement.

Conclusion: Based on the proposed terms of the sale agreement between the IESO and OPG Trust mentioned above, the deferral or variance accounts would be derecognized at the point where the IESO would derive no future economic benefit from it. This would occur where the IESO ultimately transfers the rights, risk and rewards related to those deferral or variance accounts to the OPG Trust. This would occur on the receipt of cash from the OPG Trust.

Appendix A:

Extract from the "DECISION and ORDER issued by the OEB on March 28, 2013" available on the IFRS website

Proceeding on the Ontario Energy Board's own motion to review the options for and ultimately determine the appropriate allocation and recovery of the Smart Metering Charge pursuant to section 19 of the Ontario Energy Board Act, 1998.

THE BOARD ORDERS THAT:

Effective May 1, 2013, the Smart Metering Entity charge to be levied and collected by the Smart Metering Entity from all Distributors identified in the Board's annual Yearbook of Electricity Distributors shall be \$0.788 per month for each Residential and General Service <50kW customers for each distributor. The Smart Metering Entity charge shall be in effect from May 1, 2013 to October 31, 2018. The number of Residential and General Service <50kW customers to which the Smart Metering Entity charge will be applied to shall be in accordance with the methodology set forth in the Settlement Agreement attached as Appendix A.

http://www.ontarioenergyboard.ca/ceb/Documents/HE-2012-010/dec_order_IFRS-SME_20130328.pdf

OPG Memo



February 27, 2017

Mr. Serge Imbrigno
Deputy Minister,
Ministry of Energy
4th Floor, Hearst Block
900 Bay Street
Toronto, Ontario
M7A 2E1

Dear Deputy:

Below is a summary of OPG's preliminary views on the implementation of the Province's proposed Global Adjustment Smoothing Account and financing structure. These views are contingent on the proposed terms and conditions that were sent to the Ministry of Energy on February 21, 2017.

Understanding that the finalization of the legal terms, the Trust indentures, financing structure and other detailed terms will take several months and will involve collaboration between legal counsel, input from capital markets, parties involved and other stakeholders, this letter is intended to provide the guideline and framework which could form the foundation of the plan.

Please do not hesitate to contact me if you have any questions regarding this summary.

Sincerely,

Mr. Ken Harwick
Chief Financial Officer and Senior Vice President, Finance
Ontario Power Generation
W: 416-592-6985
C: 647-544-6985
ken.harwick@opg.com

cc: Jeff Lyash, President and CEO, OPG

Background:

The Province has indicated that it will take steps to reduce electricity bills in the near term. It has identified reductions in the Global Adjustment Charge (GAC) charged to electricity customers as a means to achieve its policy goals. The Province is proposing to temporarily reduce the amount of the GAC charged to electricity customers (primarily RPP-eligible customers). The exact quantum and duration of the program is still not known but based on discussions with the Province GAC charges of approximately \$2.58 per year for the next 5-10 years would be deferred and collected over future periods commencing after the deferral period. A combination of senior debt and subordinated debt (mainly sourced by additional equity from the shareholder) would be issued to fund the amount deferred. The financing cost of the debt and other costs of running the program would form part of the amounts recovered from customers over the term of the program.

The Province has requested that OPG administer the GAC deferral, because of OPG's participation in the market, regulatory knowledge and the potential ability to consolidate the activity and accounting with OPG. Given the significant amount of financing required for the GAC deferral, OPG has developed a financing structure (depicted below) to:

- restrict the risk to OPG;

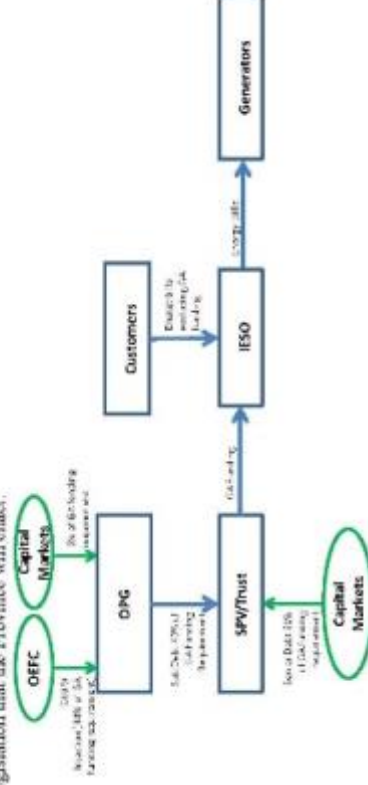
**White Paper
Global Adjustment Deferral - Discussion Paper
Ontario Power Generation (OPG)**

- maximize the cost-effectiveness of the Trust or the Special Purpose Vehicle ("SPV") financing vehicle, and
- allow for consolidation into OPG financial statements.

The success of this structure is dependent on achieving a number of objectives which are reviewed in the following sections:

- Ability to Recognize an Asset and Record Revenue
- Ability to Consolidate the SPV into OPG
- Ability to Finance
- External Assessment
- Risk Summary

All of the percentages shown in the graphic below are indicative and will be highly dependent on the legislation that the Province will enact:



Process:

The IESO will effectively sell the 'right to collect' deferred future revenue from ratepayers (G.A. Recovery Right asset) to the SPV in return for cash proceeds. In order for the SPV to purchase this asset the SPV will obtain the financing from two key sources: 51% directly from capital markets and 49% as subordinated debt from OPG. OPG will obtain 49% of this financing as an equity injection from the Province and 5% from capital markets.

A. Ability to Recognize an Asset and Record Revenue

Accounting Requirements under International Financial Reporting Standards (IFRS)

- It is our understanding that the IESO and KPMG have concluded that the sale of this 'right to collect' future revenue (or regulatory asset) is not a financing transaction and will not be recorded as a financial liability. Based on that conclusion, the right to collect will be accounted for as an intangible asset in the SPV.
- In order to the SPV to record this right as an intangible asset, the right must meet the following conditions:
 - The intangible asset must be separable and arise from a contractual or legal right (i.e. mandated by the Legislation and SPV Indenture Agreement).
 - The SPV must have the control and power to obtain future economic benefits from the intangible asset.
 - The SPV must be able to demonstrate that the intangible asset is purchased at fair value.

- 3) In order for the SPV to recognize appropriate revenues to offset any ongoing costs, the Legislation must require interest, carrying and administrative costs to be paid to the SPV on a monthly basis. This may result in additional amounts to be deferred to achieve the desired customer impact. Payment of revenue to the SPV is also important to service the interest expenses of the debt.

B. Ability to Consolidate the SPV into OPG under IFRS OPG 'Control' of the SPV - Accounting Requirements

- 1) In order to meet the accounting definition of 'control', accounting guidance must be considered. There are no bright lines to determine whether OPG has exposure, or rights, to variable returns from its involvement with the SPV, or whether it has the ability to affect the returns of the SPV through its power over the SPV. Rather, all facts and circumstances are considered when assessing whether an entity has control over another entity. Based on the relevant accounting guidance under IFRS, OPG has proposed terms necessary to demonstrate that OPG has control over the SPV. OPG's external auditors, Ernst & Young, has provided their concurrence that based on the information provided to them to date that the following conditions should permit consolidation of the SPV by OPG.

Directive:

1. The SPV must be undertaken by OPG as a business initiative on its merits. A Shareholder Directive is to be limited to direct OPG to investigate the option of establishing a SPV vehicle to administer, finance and operate the Global Adjustment plan. The control, risk and rewards of that SPV will determine its consolidation into OPG as a business enterprise.

SPV:

2. The SPV should not operate in a predetermined way such that OPG does not have decision-making authority over the SPV's ongoing activities after its formation (i.e. should not operate on 'autopilot').
3. OPG must have the ability to appoint and remove the Trustee (or Board of Trustees), with no veto right by the Province. No party shall have the ability to remove OPG from its role and authority in the SPV.
4. The Province cannot have the right to veto OPG's decisions about the relevant activities of the SPV. OPG must have the power over the relevant activities of the SPV and be compensated. The relevant activities of the SPV include (but are not limited to) the evaluation and decisions on financing alternatives, duration, and the strategy to minimize financing costs. OPG must have the power to establish operating and capital budgets of the SPV.
5. OPG must have the power to determine or change operating and financing policies of the SPV, which will affect the variability of risks and returns.
6. The Province or its agencies must not directly or indirectly fund (through debt or equity) more than 50% of the following:
 - The SPV
 - Any of OPG's investments in the most subordinated debt of the Trust
7. OPG must own greater than 50% of the most subordinated debt and targeted to be no less than 5%¹ of the total debt of the SPV. Such ownership must be financed entirely by OPG through operating cash flows or external debt, without assistance from Provincial sources. A quantitative analysis should be performed at a later date to corroborate the appropriateness of the 5% threshold to support that the 5% subordinated debt investment is sufficient to absorb most of the expected variability in the SPV.
8. OPG must have the ability to earn variable returns by exercising its authority, which shall be accomplished as follows:

¹ While the rest of the letter refers to a 10% investment in the most junior subordinated debt with OPG owning 5%, it should be noted that OPG should own more than 50% of the most subordinate debt. For simplicity, the degree to which OPG's ownership beyond 50% is not shown in this letter.

- a. The cash flow from the restructured asset shall include interest determined based on a relevant benchmark that is appropriate relative to the restructured asset, plus an appropriate margin consistent with the relevant market and other risks
- b. OPG shall have the authority to determine the financing strategy, which will vary the financing costs with the objective of enabling the SPV to achieve a more favourable return compared to the return from the restructured asset
- c. The SPV shall establish classes of liabilities (senior, subordinated and the most subordinated). The classes would allow the SPV to delineate financing of lower risk investment and investment that would bear higher residual risk. The delineation would limit OPG's self-funded investment to a reasonable level in order to allow OPG to remain a self-sustaining entity
- d. OPG shall, through its ownership of the most subordinated liability, be able to capture and retain the pricing difference between cost of financing and benchmark for interest on the restructured asset, or any residual risk of restructured asset. The targeted return of the subordinated liability should be reflective of the underlying risks and compensate holders for active management that would be required
- e. OPG should participate in the detailed design of the above and the SPV documentation to ensure that it has substantive power and variability, which will allow OPG's Board of Directors to evaluate the opportunity as a business initiative instead of through a shareholder directive

Notwithstanding the above, under certain Defined Forced Majore for emergency events (e.g. unlikely credit market event or disruption where it is not possible to borrow from the market at a reasonable rate), the OEEFC may provide bridge financing beyond the designated percentage for a defined period. The relevant terms should ensure that this temporary measure does not detract from the rights of OPG to direct all of the relevant activities of the SPV. Additionally, OPG should not be protected from risk of loss by the OEEFC with respect to its subordinated investment, nor should it lose its right to derive the residual returns should such bridge financing be required

Legislation

9. The Legislation must require interest, carrying and administrative costs to be paid to the SPV on a monthly basis, so that the SPV is able to recognize appropriate revenue to offset any ongoing costs.
10. The Legislation must dictate the manner in which the restructured asset would be determined, collected, and the period of collection, so that the determination of the restructured asset will not be subject to the Province's decisions on an ongoing basis, but determined based on a formula. Alternatively, the Legislation may allow for an adjustment to the pre-determined deferral formula based on specific parameters that would limit the adjustment to the restructured asset. Adjustments beyond the specific parameters would require approval by the Board of Trustees.
11. The Legislation must be written to avoid legal or constitutional challenges and be irrevocable to reduce the cost of borrowing and with a specific formula which determines the deferral amount. As irrevocability would be difficult under Canadian law one mitigation would be to provide a Provincial guarantee which only applies with cancellation or amendment of the Legislation
12. The spirit of the above terms should be reflected in the SPV Indenture Agreement as well as Legislation, wherever possible.

2) The Trust is expected to be financed as follows:

- 51% senior secured debt from external markets
- 39% senior subordinated debt from OPG (via Province equity injection into OPG)

- 10% junior subordinated debt from OPG (5% from external markets and 5% from Province equity injection into OPG).

When assessing control, an investor shall consider the nature of its relationship with other parties and whether those parties are acting on the investor's behalf (i.e. they are 'de facto agents'). If OPG is assessed to be a 'de facto agent' of the Province, it will compromise the ability for OPG to consolidate the Trust. The split above is to meet the following conditions to ensure that OPG is not considered a 'de facto agent' of the Province:

- The Province or its agencies must not directly or indirectly fund (through debt or equity) more than 50% of the following:
 - c. The Trust
 - c. Any of OPG's investments in the most subordinated debt of the Trust
- OPG must own greater than 50% of the most subordinated debt and targeted to own no less than 5% of the total debt of the Trust. Such ownership must be financed entirely by OPG through operating cash flows or external debt, without assistance from Provincial sources.

- 3) The Province will need to conclude on whether OPG still meets the definition of a Government Business Enterprise as defined under Public Sector Accounting Board standards in order to obtain the preferred consolidation treatment after the transaction. We also recommend that the Province undertake the analysis deemed necessary to confirm the accounting treatment in its consolidated Public Accounts, including if the recognition of the intangible asset would result in an offsetting liability in the Public Accounts.

C. Ability to Finance

Property Right or Right to Collect

Legislative Requirements for Financing

The GA Recovery Right must be structured to encompass the following elements:

- Right to recover from and bill Ontario electricity customers for (1) the principal amount of GA that is being deferred, (2) all interest and other financing costs incurred in respect of the deferral of the GA, (3) all fees, expenses and other administrative costs associated with such financing;
- Repayment/amortization schedule as agreed by the IESO and any purchaser of such GA Recovery Right (or pursuant to a pre-defined schedule/formula that covers all of the purchaser's principal, interest and ongoing financing costs on a monthly basis);
- Repayment/amortization schedule must include a true up mechanism to ensure all costs associated with the deferral can be recovered from customers;
- IESO may dispose of the GA Recovery Right, provided that any such disposition shall be a true sale and absolute transfer to the purchaser of the IESO's right, title and interest in and to the GA Recovery Right;
- Purchaser will have the right to require the IESO (or any successor) to collect the principal amount of GA Recovery Right, together with interest, financing and administration costs, on the agreed repayment/amortization schedule;
- Right must be irrevocable and, if amended by future governments, debt holders have the right of action against the government to recover the amount outstanding including interest, fees, expenses and any damages resulting from the amendment;
- GA Recovery Right will not be subject to any set-off, counterclaim or other defence by the IESO or any successor or affiliated entity; and
- Make certain amendments to the Electricity Act to allow OPG to implement the SPV financing structure (e.g. allowing OPG to create subsidiaries and holding companies, and to have a beneficial interest in the SPV, etc). This would provide flexibility to accommodate possible variations to the financing structure that may be desirable over time.

Detailed legislative requirements are specified in the attachments as follows:

**White Paper
Global Adjustment Deferral - Discussion Paper
Ontario Power Generation (OPG)**

Attachment 1 Legislative requirements to allow deferral of global adjustment amounts to be financeable

Attachment 2 Statutory amendments

The proposed financing structure for the SPV is:

	Risk Profile	Source	% of Total Funding Requirements
Tranche A Senior Debt	The least risky	Capital Markets	51%
Tranche B Sub Debt	In between A&C	OPG via OEFC	39%
Tranche C Sub Debt)	The most risky	OPG via OEFC	8%
		OPG via Capital Markets	5%

SPV structure is used to accomplish the following:

- SPV holds right to change customers for the benefit of debt holders.
- Allows the financing vehicle to be ring-fenced from OPG as an SPV structure is set up as generally single purpose entities with no other operations that could add risk to the SPV, dilute debt holder rights, allow parties from other operations to claim rights to the future recovery from customers or allow these other parties to initiate bankruptcy proceedings.
- Enables SPV to potentially get a higher credit rating than OPG.
- Supports consolidation with OPG provided accounting requirements are satisfied.

This approach supports a number of objectives of the GA Recovery Right:

- 51% external senior debt supports separation of the SPV from the Province
- 5% junior subordinated debt establishes OPG's "at risk" equity which supports separation of the SPV from the Province
- Subordinated debt provides flexibility to the financing structure and additional credit support to external debt holders
- Subordinated debt sourced from OPG (mainly funded by equity injection from the Province) minimizes impact on OPG credit metrics reducing risk of an OPG rating downgrade that could result in the SPV being consolidated directly with the Province as the SPV would be considered an arm of the Province.

Recent transactions used as precedents are:

Duke Energy Florida Project Finance LLC

June 2016

5 series of bonds totalling USD\$1.3B

Weighted average life from 2 to 19 years with interest rates from 1.2% to 3.1%

Credit rating AAA

Utility Debt Securitization Authority

Sponsored by Long Island Power Authority

March 2016

Amount issued USD\$0.6B

Weighted average life of 12 years and weighted average yield of 2.7%

August 2016

Amount issued USD\$0.5B

Weighted average life of 7 years and weighted average yield of 2.0%

Credit rating AAA

Cumulative outstanding (including previous issuances): USD\$4.2B

D. External Assessment

Shakerhill Partners, an external advisor, identified the following items in an assessment of the structure and financability of the structure:

- The structure is financeable however there are a number of significant risks to the structure:
 - Canadian and Ontario law does not provide the same protection to property right as exists in the US federal and state constitutions to limit the ability of governments to adversely impair contracts to the detriment of the holder;
 - Legislation could mitigate some of the risks – deferred recovery asset to be “uncapped”, regular semi-annual true up to ensure recovery, Province provides sufficient committed liquidity to the IESO so that temporary shortfall in recovery does not affect payments to SPV, term of the deferral recovery substantially exceeds the longest maturity of debt of the SPV and that true-up mechanism take account of potential for currency, interest rate and duration mismatch between the debt of the SPV and the recovery mechanism;
 - Size of the program may be too large for Canadian securitization market requiring access to the US securitization market;
- Final maturity of debt should not exceed 30 years from inception of the program
- True up mechanism should be designed such that the forecast of recovery is less than 10% of the customer bill under downside scenarios to limit growth of the deferral balance as a higher portion of the customer bill increases the political risk to debt holders which could result in a lower credit rating and potential impact on financability
- Securitised debt products are specialized and price at a premium to other fixed rate instruments however a successful program supported by a strong credit rating this premium could shrink over time to a minor spread over Provincial debt
- OPG’s credit rating should be maintained provided sufficient equity is injected to maintain credit metrics
- While the structure is not expected to impact the Province there are risks that the program could negatively impact the rating agencies view of the Province’s financial management.

E. Risk Summary

i. Consolidation

- Elements of the proposed structure were established to support consolidation of the SPV into OPG. These items may not be sufficient to establish OPG as risk owner of the SPV and the SPV may need to be consolidated directly with the Province.

ii. Financability

- The legislation establishing the structure and the property rights for recovering the financing and associated costs may not be adequate for financing purposes resulting in more expensive financing or an inability to obtain the required external financing.

iii. Cost of Financing

- Future governments may enact legislation that changes the right of the SPV to recover amounts from customers.
- The right to recover amounts from future customers must be irrevocable and subject to full recovery from the government in the event that future governments reduce or eliminate the recovery. A legal structure that is weaker than the precedent US transactions increases the risk to debt holders and the cost of financing.
- Interest rates on bonds in the securitization market are higher than equivalent rated bonds. Rate for a AAA securitization credit is about 50 bps higher than GOC (rated AAA) for a 5 year term. This difference is attributable to the specialized structure of the bond, smaller investor pool for this bond, smaller size of the market and higher perceived risks of the bond.
- Any regulator involvement must not be seen to modify any terms of debt issued or the property right securing the debt as this would increase risk to debt holders.

- It may not be possible to issue debt to match the terms of the deferred asset so shorter term debt would be used which raises risk to re-finance the maturing debt as the market may no longer be interested in this product. As well, underlying reference interest rates may be higher and the market may require a higher spread to invest in this product.
- With the G.A. Recovery Right program continuing for 10 years, debt issued over this period is subject to changes in both the underlying reference interest rates and appetite of the market for this product.

iv. OPG Credit Rating

- Minimizing the impact of significant additional debt on OPG's credit rating is dependent on higher EBITDA arising from earned income on the G.A. Recovery Right in excess of external debt. Ability of the SPV to record revenue reflecting the growth in asset value.
- Potential OPG credit rating downgrade if legislative structure is not adequate to support long term recoverability, inability to record revenue from growth in asset value or agencies view equity injection as debt.
- OPG credit rating downgrade could result in loss of GBE status or result in SPV being consolidated directly with the Province.

LEGISLATIVE REQUIREMENTS TO ALLOW DEFERRAL OF

GLOBAL ADJUSTMENT AMOUNTS TO BE FINANCEABLE

The IESO currently has a right to collect GA monthly from ratepayers through provisions in the *Electricity Act, 1998*. It is proposed that collection of a certain portion of the monthly GA be deferred for collection in the future, and that the right to recover the deferred GA from ratepayers be used as a basis for structured financing/securitization.

The current proposal is for a trust to be created as a financing vehicle (the "Trust") in connection with the deferred GA. The Trust will finance the deferral of the GA by purchasing the right to recover such deferred GA from the IESO for the principal amount of the GA being deferred. For example, if the amount of GA that is being deferred is \$200 million in a given month, the Trust will purchase from the IESO the right to future recovery of the deferred GA and the associated financing costs (including interest and transaction costs) for \$200 million in cash.

The Trust is expected to finance these purchases from the IESO through a combination of senior secured financing raised in the capital markets and subordinated financing from OPG (the funding for which will mostly be from equity injections from the OPG/Province).

For accounting purposes, OPG will need to have the ability to direct the activities of the Trust, through a services agreement and/or through the Trust's constituting document.

Based on securitized financing raised by utilities in the US (backed by utility cost recovery orders) and the current regulatory framework in Ontario, the legislation in Ontario would need to be amended to provide the following, at a minimum:

1. The IESO will be empowered to create an asset (the "**Regulatory Asset**") consisting of all right, title and interest in and to:

(a) right to recover from and bill Ontario electricity ratepayers for:

- (i) the principal amount of GA that is being deferred for collection;
- (ii) all interest and other financing costs incurred in respect of the deferral of the GA (whether through senior debt raised in the public markets or subordinated debt raised from OPG or others); and
- (iii) (subject to the comments in paragraph 5 below in respect of OPG's internal administrative costs only) all fees, expenses and other administrative costs associated with such financing, including up-front and ongoing financing costs and any indemnity payments;

all on such repayment/amortization schedule as agreed by the IESO and any purchaser of such right (or pursuant to a pre-defined schedule/formula in the legislation that covers all of the purchaser's principal, interest and ongoing financing costs on a monthly basis); and

(b) all revenues, collections, claims, rights to payments, money or proceeds arising from the rights and interests set out in paragraph (a) above, regardless of whether such revenues, collections, claims, rights to payments, money or proceeds are imposed, billed, received, collected or maintained together with or commingled with other revenues, collections, rights to payments, payments, money or proceeds.

2. The IESO may dispose of the Regulatory Assets created from time to time on such terms as the IESO determines in accordance with the terms of directives to be issued to the IESO from time to time by the Minister, provided that any such disposition shall be a true sale and absolute transfer of the IESO's right, title and interest in and to a Regulatory Asset to the purchaser of the Regulatory Asset.

3. The Regulatory Assets will not be subject to any set-off, counterclaim or other defence by the IESO or any successor or affiliated entity thereof.

4. The legislation will need to recognize the Regulatory Assets as amounts that may be recovered by the IESO (e.g. it could be designated as a "GA Deferral" and would be included in the amounts collectible by the IESO through the GA collection mechanism, and would include interest and financing costs).

5. The purchaser of the Regulatory Asset will have the right to require the IESO (or any successor) to collect the principal amount of GA deferred, together with interest, financing and administration costs, on the agreed repayment/amortization schedule. **[NTD: In the LIPA securitization rate order, if the entity that is authorized to collect rates to service the bonds ends up defaulting, there is the ability to request a court to order "sequestration" and payments of amounts owing to the owner of the Regulatory Asset. Consider whether to include a similar right here. Alternatively, consider whether a security interest over the moneys collected by the IESO could be provided to the purchaser.]**

OEB would be provided with oversight over the internal administrative costs collected by the Financing Trust. This could be accomplished by (a) providing the purchaser of the Regulatory Asset with the right to require

the IESO or a successor to collect only the principal amount of G/A together with interest and financing costs and third party fees and expenses, and (b) requiring the IESO to collect amounts through the global adjustment and make payments to the purchaser of the Regulatory Asset with respect to the internal administrative costs incurred by the purchaser in connection with the purchase and management of the Regulatory Asset and the Financing Trust, in accordance with the order of the OEB then in effect. Under this mechanism, the OEB would be required to review the purchaser's internal administrative costs through a streamlined process and issue such orders in accordance with rules to be prescribed under a new regulation under the OEB Act, which would clearly limit the OEB's scope of review and could establish the basis for the purchaser to receive an appropriate fee for its services.

6. In the event that any action is taken or permitted by the Province or any regulatory authority that limits, alters, or impairs the value of a Regulatory Asset or reduces the ability of the IESO or the purchaser of the Regulatory Asset to collect or recover the costs associated therewith, the owner of the Regulatory Asset and the holders of any bonds or other securities issued to finance the purchase of the Regulatory Asset, will have a right of action against the Province for any damages suffered as a result of such amendment.

STATUTORY AMENDMENTS

The following is preliminary and is based on our current understanding of the proposed structure and objectives. For example, we have assumed that the structure will not entail the insertion of a new Holdco between OPG and the Province. As these aspects are refined, some of the suggested amendments described below may not be needed and other aspects that we are not aware of may need to be considered. Accordingly, these suggested amendments are provided for discussion purposes and are subject to change. We would welcome the opportunity to work with OPG and the Ministry on refining the scope and substance of required legislative and regulatory amendments.

A. Amendments to Implement Structure

Certain *Electricity Act*, 1998 amendments would be needed to implement the anticipated structure (which we understand, as noted above, would not include a Holdco), as follows:

- **Section 53.1(1):** Amend to permit owning and operating generation facilities through subsidiaries (not only directly through OPG). In addition, amend to permit OPG to administer, manage, loan moneys to and have a beneficial interest in, if applicable, Financing Trust.
- **Section 53.2:** Amend to permit the Minister to acquire, hold, dispose of or otherwise deal with securities or debt obligations of, or any other interest in, OPG or any subsidiaries. This is to accommodate possible variations to the financing structure that may be desirable over time.
- **Section 53.1 (new):** New statutory section to permit the Minister to enter into arrangements relating to an exercise of powers under 53.2.
- **Section 53.1 (new):** New statutory section providing that creditors of Financing Trust have no recourse to the assets of OPG or any of its subsidiaries (other than Financing Trust, if applicable). In addition, consideration should be given as to whether the Act should be amended so that the Financing Trust cannot be wound up or liquidated.

B. Miscellaneous Corporate Items to Address

- **OPG Articles:** Amend the OPG's articles to remove the private company restrictions.
- **MOA with Province:** Consider whether any amendments to OPG's MOA with the Province are required to contemplate the Financing Trust.

C. Amendments Under Electricity Act to Implement GA Smoothing

Based on our understanding that the global adjustment smoothing mechanism is intended to benefit residential and small business customers only and that the Minister will be responsible for determining how much global adjustment smoothing is to be applied in a given month, if any, amendments to the *Electricity Act, 1998* and Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) would be needed to implement the mechanism, as follows:

(i) **Electricity Act:**

Section 25.33(1) (New): Establish a new power for the Minister to make directives to the IESO in relation to the global adjustment smoothing mechanism and, particularly, for purposes of establishing global adjustment smoothing amounts from time to time (expected to be monthly). To the extent possible, the directive power should be drafted so as to limit the ability for a future Minister to require the IESO to do anything that would materially and adversely affect the Financing Trust or its lenders. **[NTD: While our understanding is that the Minister would direct this, we note from other materials we have seen that OPG may instead be recommending a formula approach. It is not clear what the formula would look like, where it would be set out or how it would be applied and by whom]**

Paragraph 25.33(1): This section says that IESO shall make adjustments in accordance with the regulations to ensure that, over time, payments by prescribed classes of market participants reflect amounts paid to OPG, OEPFC and distributors, as well as amounts paid to entities with whom IESO has a procurement contract. Add new subsection (c) so as to require IESO to ensure that, over time, payments by prescribed classes of market participants also reflect amounts paid to Financing Trust. **[NTD: Not certain this is needed if only to benefit residential and small business consumers, who are not market participants. May be needed in reference to payments from distributors and retailers]**

Paragraph 25.33(2): This section says that distributors and retailers shall make adjustments in accordance with the regulations to ensure that, over time, payments by prescribed classes of consumers reflect amounts paid to OPG, OEPFC and distributors, as well as amounts paid to entities with whom IESO has a procurement contract. Add new subsection (c) so as to require distributors and retailers to ensure that, over time, payments by prescribed classes of consumers also reflect amounts paid to Financing Trust.

Note: As described below, the regulation will need to include new requirements for the IESO to record the global adjustment smoothing amounts in one or more variance accounts and to use those amounts to offset amounts otherwise recorded in the variance accounts under Section 25.33(3) of the Act. For context, we note:

- Section 25.33(3) says that adjustments under (1) or (2) relating to electricity consumed by consumers whose rates are determined by

the OEB under s. 79.16 of the OEB Act (i.e. RPP Customers) shall instead be made in accordance with the regulations to one or more variance accounts established and maintained by the IESO.

- Section 25.33(4) says IESO, distributors and retailers shall make and receive such payments, set-offs and credits as may be required or permitted by the regulations with respect to consumers described in (3), i.e. RPP Customers.
- Section 25.33(5) says that IESO shall establish and maintain such variance accounts as may be needed to record all amounts payable or receivable by it under 25.33.

(ii) **O. Reg. 429/04 (Adjustments Under Section 25.33 of the Act):**

- **Section 1(1):** Consider adding definitions for “Financing Trust” and “global adjustment smoothing amount” or such other terms as may be preferred.
- **Section 1.2(1) (New):** Add section providing that, for the purposes of this Regulation, the global adjustment smoothing amount for a month is the amount determined by the IESO in accordance with a directive from the Minister under section 10.1 of the Electricity Act in respect of the month.
[NTD: See above note re use of Minister directives]
- **Section 1.2(2) (New):** Consider adding a section providing that the IESO shall publish the global adjustment smoothing amount for a month by no later than the 10th business day of the following month [to align with general publication requirements for global adjustment under s. 1.1(2)].
- **Section 10(1):** Amend formula for calculating Class B GA rate by subtracting the global adjustment smoothing amount for a month from “M”, which is the total amount of the global adjustment for the month. The global adjustment smoothing amount could be designated as “N”, such that the formula would be (M-X-N)/(P-Q). Define “N” as the global adjustment smoothing amount for the month as determined by the IESO in accordance with the Minister’s directive under section 10.1 of the Electricity Act for the month. [NTD: See above note re use of Minister directives]
- **Section 10.1 (New):** Add new section to deal with adjustments under subsection 25.33(3) of the Act, i.e. in respect of RPP consumers. This section should require the IESO to establish, within the variance account(s) it maintains pursuant to subsection 25.33(3) of the Act, one or more subaccounts in which it shall record the global adjustment smoothing amounts applicable to the classes of consumers described in subsection 25.33(3) of the Act. This section must also specify that the IESO shall apply the amounts recorded in the subaccounts against the balances in the variance accounts for purposes of section 79.16(3) of the OEB Act.

- **Note:** This is a key aspect because, when the OEB determines RPP rates, it must take into account the balances in the variance

accounts established by the IESO under s. 25.33 of the Electricity Act and make adjustments with a view to eliminating the balances within 12 months. This proposed new section 10.1 causes the

IESO to reduce (in the near term) the variance account balances by the global adjustment smoothing amounts, as provided by the Financing Trust, thereby enabling the OEB to determine RPP rates that, despite being lower for RPP consumers in the near term, still eliminate the relevant variance account balances within 12 months.

- **Paragraph 11(2).ii:** Amend the formula for calculating the allocation of global adjustment for a month to a licensed distributor that is a market participant by subtracting the global adjustment smoothing amount for a month from "M", which has the same meaning as under section 10(1). The global adjustment smoothing amount could be designated as "X", such that the formula would be $[(M-X-N) \times (R+S-T)]/(P-Q)$. Define "X" as suggested under section 10(1).

- **Paragraph 11(2).3:** Amend the formula for calculating the allocation of global adjustment for a month to each Class B market participant by subtracting the global adjustment smoothing amount for a month from "M", which has the same meaning as under section 10(1). The global adjustment smoothing amount could be designated as "X", such that the formula would be $[(M-X-N) \times U]/(P-Q)$. Define "X" as suggested under section 10(1).

- **Paragraph 16(7).4:** Consider amending the description of "Global Adjustment" that is required to be included on certain invoices so as to inform consumers that their portion of the global adjustment for the month (i) may have been reduced by the application of a global adjustment smoothing amount from the Financing Trust, or (ii) may include amounts payable to the Financing Trust in respect of global adjustment smoothing amounts previously applied.

- **Section 20(1):** This section establishes an obligation for the Ontario Electricity Financial Corporation and every licensed distributor that is a market participant to give the IESO such information as the IESO may require for the purposes of the Regulation in the form specified by the IESO and before the expiry of the period specified by the IESO. Consider amending to extend this obligation to the Financing Trust.

- **Section 20(6):** This section provides that on request by the OEB, the IESO, a licensed distributor, an embedded generator, a retailer or the OEFC shall give the OEB such information relating to this Regulation as the OEB may require, in the form and within the period specified by the OEB. Consider amending to extend this obligation to the Financing Trust.

D. Amendments Under OEB Act to Implement Cost Recovery for Financing Trust

Amendments to the *Ontario Energy Board Act*, including amendments to O. Reg. 95/05 (Classes of Consumers and Determination of Rates) and the introduction of a new regulation, would be needed to implement a cost recovery process for the Financing Trust in relation to the global adjustment smoothing mechanism, potentially with limited OEB oversight, as follows:

(i) Ontario Energy Board Act:

- **Section 78(3.3):** This provision establishes an obligation for the OEB, when determining rates for the retailing of electricity, to take into account balances in variance accounts established under section 25.33 of the Electricity Act and to make adjustments "with a view to eliminating those balances within 12 months or such shorter time periods as the Minister may direct." Consider whether any amendments are needed, and confirm this works with the framework being proposed.
- **Section 78.7 (New):** We understand that the Province may want the OEB to have an oversight role. One possible approach would be to establish a new statutory section establishing that the IESO shall make payments to the Financing Trust with respect to the internal administrative costs incurred by the Financing Trust in connection with the purchase and management of the Regulatory Asset and the Financing Trust. Such payments by the IESO would need to be made in accordance with the order of the OEB then in effect, which orders shall be made by the OEB in accordance with rules prescribed under a new regulation.
 - o The new regulation would need to be clear that the OEB does not have jurisdiction to consider the principal amount or any interest, financing costs, third party fees or expenses. Rather, OEB's role would be limited to considering the internal administrative costs of the Financing Trust and ensuring the Financing Trust receives an appropriate fee for its services, all of which would be recovered by the Financing Trust from the IESO, which would collect those amounts in the global adjustment. Note that, if this approach is accepted, the IESO and distributors and retailers would need the authority to collect such amounts as part of the GA and IESO would need the authority to pay such amounts to the Financing Trust. As such, additional amendments would be needed under O. Reg. 429/04.
- **Note:** Section 79.16 of the OEB Act does not require changes, but the significance of this provision should be understood.
 - o Section 79.16 gives the OEB responsibility for determining electricity commodity prices for eligible consumers. Eligibility is determined under Reg. 95/05 (Classes of Consumers and Determination of Rates), which is also known as the Regulated Price Plan (RPP) Regulation.
 - o Section 4(2) of the RPP Regulation defines RPP-eligible consumers as low volume consumers (i.e. those who annually use less than 150,000 kWh

or such other amount as prescribed), consumers with demand of 50 kW or less, residential consumers that have accounts with distributors, consumers who annually use 150,000 to 250,000 kW of electricity, and consumers who have accounts with distributors if in the farming business.

- Paragraph 6(1)3 of the RPP Regulation provides that “in determining the rates (for RPP-eligible consumers), the Board shall forecast the cost of electricity to be consumed by the consumers to whom the rates apply, taking into consideration adjustments required under section 25.33 of the Electricity Act, 1998 and shall ensure that the rates reflect those costs.”
- The Ontario Energy Board has developed a Regulated Price Plan Manual (revised February 16, 2016) to describe the processes and methodologies it uses for determining electricity commodity prices that are charged to RPP consumers pursuant to Section 79.16 of the OEB Act and paragraph 6(1)3 of the RPP Regulation.

(ii) **O. Reg. 95/05 (Classes of Consumers and Determination of Rates)**

Paragraph 6(1)3: Amend so as to require the Board, when forecasting the cost of electricity to be consumed by the consumers to whom the rates apply, to take into consideration not only the adjustments required under section 25.33 of the Electricity Act but also the application or prior application of global adjustment smoothing amounts determined by the IESO in accordance with Minister directives under section 25.33 of the Electricity Act, and to ensure that the RPP rates reflect those amounts.

[NTD: See above note re use of Minister directives]

(iii) **New Regulation (Payments to the Financing Trust)**

If the OEB is to be given the role of reviewing and approving the recovery of OPG's internal administrative costs for the Financing Trust under the potential section 78.7 (see above), then this regulation should describe the process and criteria pursuant through which the OEB would determine the amounts that the IESO would be required to collect through the global adjustment, in accordance with section 25.33 of the Electricity Act, and pay to the Financing Trust in respect of the provision of global adjustment smoothing amounts. This part of the regulation should establish:

- any reporting requirements from the Financing Trust and/or the IESO to the OEB in connection with the global adjustment smoothing mechanism;
- the frequency of the OEB making determinations under this part of the regulation;
- the process through which the OEB shall make these determinations, which should be a streamlined administrative process rather than a public hearing process or, if a hearing is needed, then the scope of the proceeding should be clearly and narrowly constrained so as to deter intervenor involvement, lengthy proceedings and reduce/eliminate risk to recovery by Financing Trust;

- the basis for the OEB's determinations as to the payments that shall be made to the Financing Trust, which should specify that:
 - the Financing Trust shall recover its prudently incurred internal administrative costs on a forecast basis each year;
 - the Financing Trust shall receive an appropriate fee each year (with some guidance as to what would be appropriate); and
 - the approved payment amounts shall be collected by the IESO through the global adjustment and paid to the Financing Trust in accordance with the order of the OEB then in effect. Note that O. Reg. 429/04 would likely need amendments to permit IESO (and distributors and retailers) to collect these amounts through the global adjustment.

Legal Memo



February 27, 2017

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BY E-MAIL & REGULAR MAIL

Mr. Patrick Monahan
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Ministry of the Attorney General
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Dear Mr. Deputy Attorney General:

RE: Proposal to Reconfigure Global Adjustment Charges

You have asked for my opinion on the degree of constitutional risk if the government were to reconfigure the Global Adjustment Charge to residential and small business users so as to pay down the debt over 30 years instead of the current 20 year period. The 20 year period was designed to coincide with the duration of current contracts between ISEO and the relevant electrical generation companies. The 30 year period is the assumed useful life of 30 years of the relevant electricity generating equipment.

To the extent either the 1 to 20 year consumer group or the 20-30 year consumer group is subsidizing one or other, there will be a mismatch between the cost of facilities and those whom the facilities benefit, which may attract a constitutional challenge on the basis that the Global Adjustment has become a tax rather than a regulatory charge.

The degree of constitutional risk, in my opinion, is in direct proportion to the extent the government is **not** able to show a proper match between the cost of providing facilities

for electricity generation and the group of consumers who benefit year to year from electricity generated by those facilities.

The legal principles applicable to regulatory charges are quite straight-forward (although there is not much jurisprudence in the area). The hurdle for the government in any constitutional challenge will be to assemble credible expert evidence to demonstrate that (1) indeed the relevant electricity generating facilities *do* have a useful life of 30 years or more, subject to maintenance and refurbishment costs, and (2) that the allocation of the Global Adjustment aligns, to the extent practicable, with the costs and benefits of the electricity generators and avoids cross-subsidization of current consumers by future consumers.

In terms of Risk Assessment, I understand the government has not yet obtained an expert opinion from outside experts on the expected economic lifetime of the electrical generators now subject to the Global Assessment. I suspect there may be difficulty in obtaining such a comprehensive opinion from credible experts for the reasons discussed below. On that basis, I would assess the current proposal as **moderately high risk**, defined as being an outcome difficult to predict because there are good arguments on both sides, but in the end the Supreme Court of Canada would be more likely than not to find *against* constitutional validity.

If the government were able to assemble the necessary expert evidence, of course, the risk would be re-assessed at a lower level, but how much lower depends on the quality of the expert evidence and the extent to which the Global Adjustment is shifted, i.e. reduced

to current consumers at the expense of the back end (20 to 30 year) consumers, who are assumed to be still benefitting from the current generating equipment.

Overview

The Global Adjustment Charge reflects all of the fixed costs, including capital costs, of Ontario's electrical generation facilities subject to 20 year contracts¹, as well as the premium paid to renewal energy producers and the cost of conservation programs (such as subsidies to small scale manufacturers to replace inefficient equipment with more efficient equipment). In 2016, the Global Adjustment Charge, allocated in different amounts to different classes of consumer, stood at \$12.3 billion dollars.

Much of the Global Adjustment was necessitated by substantial capital investment promoted by the Province with financial incentives to reduce greenhouse gas emissions and decarbonize and modernize Ontario's electricity infrastructure.

The Global Adjustment paid by consumers is a regulatory charge. Residential and small business users [class B consumers] pay the Global Adjustment based on the volume of electricity they use each month. 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 facilities that are subject to the regulatory scheme or they create the need for (and benefit from) those facilities in the future.

¹ Most generators in Ontario are on 20 year contracts. Assets with longer operating lives are provided longer term contracts in recognition of their extended benefit. These longer term assets are not part of the current proposal.

The Ministry of Energy is concerned that the present allocation of the Global Adjustment over 20 years is “front-end loaded” in that the consumers in the initial 20 year period are paying upfront for facilities that will still be utilized to provide electricity to consumers in the 20-30 period who will, to that extent, get a free ride. There is an equal and opposite concern that by shifting costs to the 20-30 year customers, the government may in reality be disproportionality *back-end* loading the Global Adjustment with the effect that the 20-30 year users will be subsidizing the 1-20 year users.

Accordingly, the Ministry of Energy anticipates a constitutional challenge based on the shifting of a portion of the existing Global Adjustment charges from current users to the 20-30 year group.

The judges can be expected to be aware of the difficult political problem of high energy costs in Ontario, and will therefore take a careful look at the government’s evidence in support of the re-allocation of the Global Adjustment.

The Elements of a Proper Regulatory Scheme

In *Westbank First Nation vs. British Columbia Hydro and Power Authority*, 1999 [3 SCR] 134 at para. 30, the Supreme Court of Canada grappled with the distinction between a tax, a user fee and a regulatory charge. This was said to depend on:

...whether the levy’s primary purpose is, in pith and substance; (1) to tax, i.e. to raise revenue for general purposes; (2) to finance or constitute a regulatory scheme i.e. to be a regulatory charge or to be ancillary or adhesive to a regulatory scheme; or (3) to charge for services directly rendered i.e. to be a user fee

In a regulatory scheme, as stated, the regulator is expected to align costs and benefits. While this can rarely be done with precision, and the courts will defer to some extent to

the regulator's attempt to approximate a "smoothing out" of the allocation of the costs associated with the regulatory scheme, nevertheless a court would have to be satisfied that the regulator is attempting in good faith to match the cost of facilities with the class of consumers who will benefit from the generation capacity of those facilities, or whose energy needs have required their creation. As Gonthier J. stated in *Westbank* at para. 28:

Finally, the individual subject to the regulatory charge will usually either benefit from the regulation, or cause the need for the regulation: *Magnet*, supra at page 459. In *Allard*, supra, the gravel trucks caused the need for the repair to the roads; in *Ontario Home Builders*, supra, the developers and the new homeowners caused the need for the new schools. In both cases, the individuals being charged also benefited from the regulation. (emphasis added)

A levy will be held to be a **regulatory charge** where there is:

- (i) A complete, complex and detailed code of regulation;
- (ii) A regulatory purpose which seeks to affect some behaviour;
- (iii) The presence of actual or properly estimated costs of the regulation;
- and
- (iv) A relationship between the person being regulated and the regulation, where the person being regulated either benefits from, or causes the need for, the regulation.

See: *620 Connaught Limited vs. Canada (Attorney General)*, 2008 SCC 7, 2008 1 SCR

132 While each of these four elements would have to be addressed in the evidence, the third and fourth elements can be expected to be the most contentious.

On the other hand, a levy will be held to be a **tax** if it is:

- (i) Enforceable by law;
- (ii) Imposed under the authority of the legislature;

- (iii) Levied by a public body;
- (iv) Intended for a public purpose; and
- (v) *Unconnected to any form of regulatory scheme.*

Re: Eurig Estate, [1998] 2 SCR 565 at paras. 15 and 43. The anticipated constitutional challenge is expected to argue that the Global Adjustment imposed on the 20-30 year consumers is a direct tax beyond the legislative competence of the Province.

The Estimated Costs and Useful Life of the Generating Facilities

(i) "Smoothing" the Charges Over 30 Years

The Global Adjustment would be funded by loans. The OPG or OPG Trust would need to borrow an additional amount each year equivalent to the shortfall brought about by the reduction in the Global Adjustment charge to current consumers. If for example the OPG Trust were to borrow \$2.2 billion dollars in the current year, and transfer that amount to ISEO, the need to impose a Global Adjustment for 2017 would be reduced by that amount, and the charge to the 2017 consumer would be lowered. However, the shortfall will have to be recouped from future consumers to repay the loan. In other words, the total debt shifted into the 20-30 year period would be increased by a like amount (plus accumulating interest). The court would require an explanation of how the debt is created, financed, and allocated year by year to year 30.

Of course the lower the amount of Global Adjustment allocated in the early years, the higher the borrowings that will have to be paid off in subsequent years and the greater the need to demonstrate that consumers in those later years will still benefit economically and proportionally from the current generating equipment.

In the figures I have been shown, the borrowings necessary to defray part of the Global Adjustment otherwise to be imposed on Ontario Consumers in years 1 to 20 would peak around the midpoint of the 30 year period and thereafter decline to zero.

(ii) Impact of Projections of Potential Reductions in the Cost of Generating Electricity in years 1 to 20

The Ministry of Energy has projected electricity demand over the 30 year period. It is noted that if energy demand in Ontario is not as great in year 25 as predicted, there will be fewer consumers paying higher electricity bills than anticipated. Equally, of course, there could be developments (a drop in the price of natural gas for example) that will reduce the actual cost of generating electricity (as represented in the wholesale "spot" market). Such forecasts are inevitably somewhat speculative over this period. Such speculation is **not** relevant to the Global Adjustment analysis, in my opinion, because the Global Adjustment will be paid *in addition to* the cost of generation, whether the cost of generation is eventually shown to be higher or lower than anticipated. Declining costs would not affect the Global Adjustment levy, but would bring the overall burden on the consumer in year 25 below the currently anticipated level.

(iii) Useful Life of the Assets Financed by the General Adjustment

I am asked to assume that the bulk of the electricity generating assets have a useful life well beyond 20 years, but if (as expected) there is a challenge to the provincial re-allocation of the Global Adjustment, the Province will of course have to call expert evidence on that point.

It may be a very complicated calculus to address the relative useful lifetimes of different types of electrical generators including wind, solar and biomass. There seem to be a number of question marks in this respect. Renewable energy technology is advancing rapidly. Prices of solar panels, it seems, have dropped over 20% in the last year. How much will 25 year old wind turbine technology be worth in 2040? Who can say? Developers of solar and wind power are obliged to put in place a “decommissioning” plan backed up (at least in some cases) by a performance bond. It will have to be established that the decommissioning is not triggered at the conclusion of the 20 year FIT plan (and the use of the land then restored to landowners). Much of Ontario’s renewable energy facilities may have little economic value to consumers in the 20-30 year period, even though still able to produce electricity inefficiently.

If the government fails to establish that the relevant electricity generating assets will continue to perform economically over the 30 year period, thereby failing to justify the imposition of an amortization of current equipment cost over the extended 30 year period, or if the Global Adjustment Charge is in the opinion of the Court disproportionality backend loaded in light of that declining benefit to future consumers, the Global Adjustment will not qualify as a regulatory charge.

(iv) *Impact of Choosing Option 1 (Residential Bills Lowered 25%), Option 2 (20%) or Option 3 (18%)*

The choice of option is significant because the greater the reduction of bills to current residential consumers, the greater the debt load pushed onto future consumers, and the more the Ministry’s 30 year projections will attract judicial scrutiny. I expect the

Province's expert would have to concede that projections into the 20-30 year time frame are inherently speculative (as to the useful economic life of the current renewable energy technology for example).

The constitutional issue remains the same: can it be demonstrated that the Global Adjustment will match costs and benefits as closely as is practicable, and not operate as a cross-subsidy of present consumers, who are the source of considerable political pressure. Judges do, as we know, read newspapers. The more the debt load is pushed onto future consumers based on 20-30 year projections, the bigger the challenge to the Province's experts to satisfy a court that the reduction is based on sound economics and a realistic appraisal of the future value of the current electrical generation facilities. In short, the bigger the reduction in charges to current consumers, the greater the constitutional risk, in my opinion.

Conclusion

If it can be established that the underlying electricity generating assets have useful life-expectancies beyond the terms of their 20 year contracts, with the result that future consumers whose electricity needs require the existence of the electricity generating infrastructure put in place in the initial 1 to 20 year period, and who will benefit from the existence of that capacity, I believe a Court would, in those circumstances, conclude that the consumers in the 20 to 30 year period could constitutionally be required to share equitably and proportionately in the cost of financing the required assets.

The challenge, in my view, is not with establishing the legal principles. The problem will be to find leading experts to convincingly establish the necessary facts.

I would be glad to expand on this analysis or respond to any questions.

Yours truly,



Hon. Ian Binnie, C.C., Q.C.

IB/pc/kb