

Electricity Price Mitigation

Ministry of Energy

WORKING DRAFT

Date: September 14, 2016

Minister

Deputy Minister

Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure.
- Ontario has taken action to replace coal-fired generation with cleaner sources of energy. Since 2003, the Province has invested more than \$35 billion in over 16,000 megawatts (MW) of new and refurbished clean generation, including nuclear, natural gas and renewables.
 - This investment represents about 40% of our current supply and has helped decrease electricity sector emissions by approximately 80%.
- Over the same period, Hydro One has invested \$15.5 billion to enhance and renew its transmission and distribution systems.
- Since 2010, electricity prices have risen considerably, particularly for households and small businesses. Prices are forecast to continue to increase as additional generation comes online.
- The Ministry of Energy and Ministry of Finance were asked to develop a proposal to provide rate relief to Ontario electricity consumers.

Electricity Consumer Classes

- There are three classes of electricity consumers:

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

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

Current Rate Base Mitigation Programs

- Ontario has implemented several programs to help electricity consumers:
 - The Ontario Electricity Support Program (OESP) provides ongoing assistance directly on the bills of eligible low-income electricity consumers;
 - The Industrial Conservation Initiative (ICI) encourages Ontario's largest consumers to reduce consumption during peak periods; and
 - The Rural or Remote Rate Protection (RRRP) program is provided to rural and remote residential and farm customers because the cost of distributing power to remote areas is much higher than for urban areas.
- These programs have shifted costs amongst electricity consumer classes (i.e., residential, commercial and industrial) as shown in the table below:

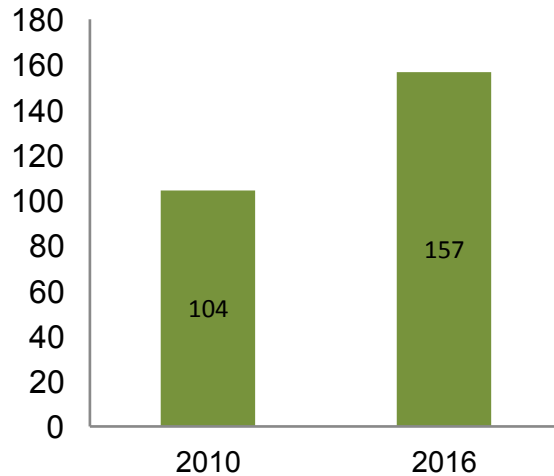
Cost Shift Impact	2011	2012	2013	2014	2015	2016
Residential Bill (\$/month for 750 kWh)	3.55	4.07	3.85	4.46	5.68	6.55
Commercial – Class B (\$/MWh)	4.74	5.43	5.14	5.94	7.57	8.73
Industrial – Class A (\$/MWh)	-20.97	-25.26	-22.38	-24.68	-32.56	-31.55

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

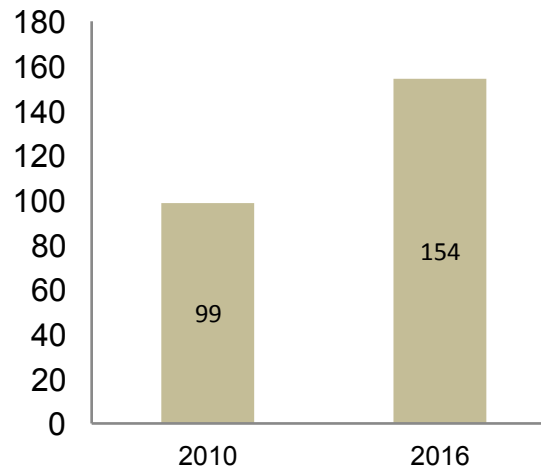
Prices by Electricity Consumer Class

- Since 2010, average bills for residential consumers (i.e., using 750 kWh/month) have increased by over 50% and rates paid by commercial have increased by 56%.
- Industrial electricity rates have remained relatively flat over the same time period, due primarily to the Industrial Conservation Initiative (ICI). ICI represents a cost shift of about \$5/month for residential electricity consumers.

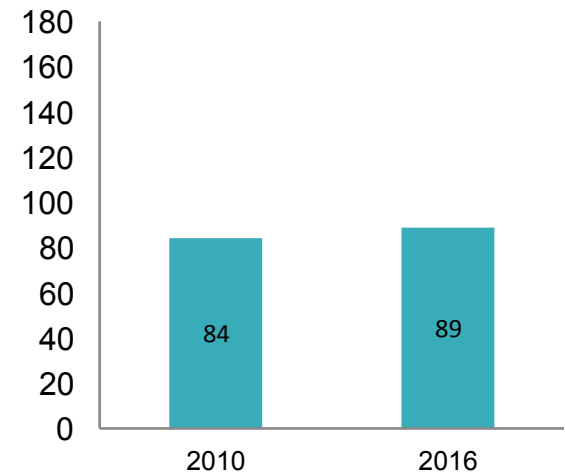
**Typical Residential Bill
(750/kWh per month)**



**Typical Class B (Commercial)
Price (\$/MWh)**



**Typical Class A (Industrial)
Price (\$/MWh)**

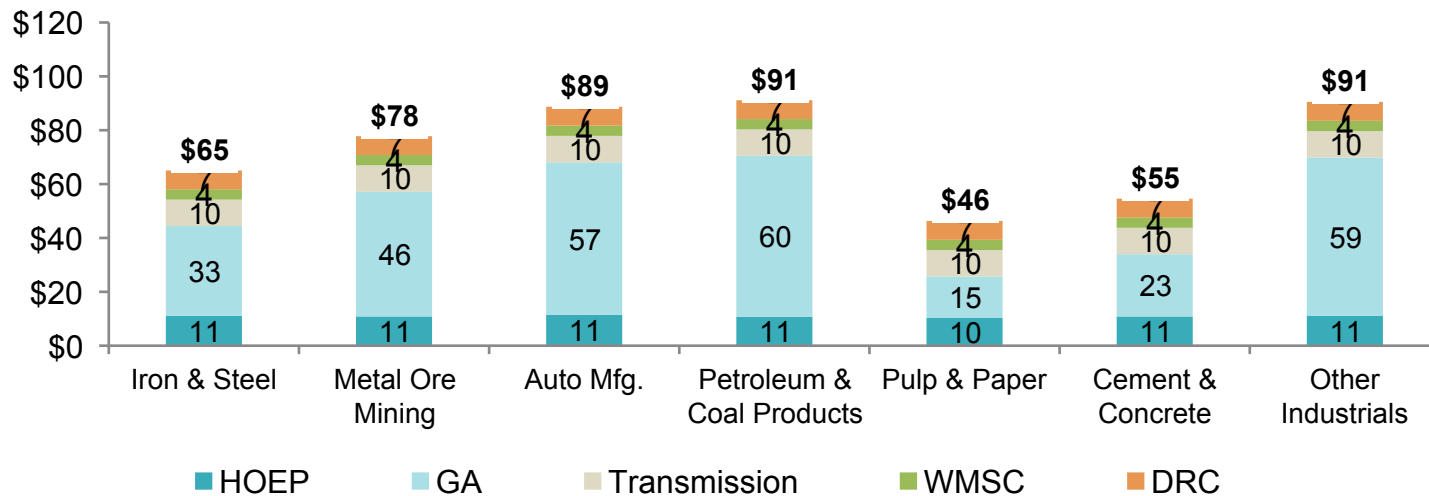


Note: 2016 represents May 2016 for residential and YTD June 2016 for commercial and industrial.

Industrial Electricity Prices Vary by Sector

- While Class A (industrial consumers) benefit from participation in the ICI program, there is a significant amount of variability in the ability to shift away from peak periods across customer classes, impacting the savings achieved.
- The below chart shows the prices paid in 2015 across a number of industrial sectors. Consumers in the north that receive rebates under the Northern Industrial Electricity Rate Program (NIERP) achieve rates that are \$20/MWh lower than the below.

**Average all-in Class A, Transmission-connected Electricity Prices by Industrial Sector
(estimated \$/MWh), Year-to-Date June 2016**



Note: HOEP = Hourly Ontario Energy Price, GA = Global Adjustment, WMSC = Wholesale Market Service Charges, DRC = Debt Retirement Charge

Recent Actions to Bend the Cost Curve

- Since 2010, a number of actions have been taken to reduce overall electricity system costs:
 - Renegotiating the Green Energy Investment Agreement, reducing contract costs by \$3.7 billion;
 - Deferring the construction of two new nuclear reactors at Ontario Power Generation's Darlington facility, avoiding an estimated \$15 billion in new construction costs;
 - Approving Ontario Power Generation's plans to enable the ongoing operation of Pickering up to 2024, which is expected to save ratepayers as much as \$600 million.
 - Reducing Feed-In-Tariff (FIT) prices through annual price reviews, saving ratepayers at least \$1.9 billion relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast; and
 - Removing an expected \$3.3 billion in Large Renewable Procurement (LRP) costs relative to the 2013 Long-Term Energy Plan (2013 LTEP) forecast, based on the results of the first phase of the LRP.
- Despite these actions to reduce system costs, electricity rates continue to increase for consumers.

Rate Mitigation

- The 2016 Budget committed to offset the impact of cap and trade in Ontario for commercial and industrial electricity consumers, while also providing a benefit of up to \$2 per month for residential electricity consumers. The Climate Change Action Plan (CCAP) committed \$1.3 billion from the Greenhouse Gas Reduction Account (GGRA) over the first compliance period (2017-2020).
- To provide further rate relief to Ontario electricity consumers, the government can use one or more of the levers outlined below:
 - **Tax-based Lever:**
 - Provide an on-bill rebate funded from the tax-base to all consumers or specific classes of consumers (i.e., the Ontario Clean Energy Benefit (OCEB) provided a rebate for eligible electricity consumers).
 - **Rate-based Lever:**
 - Shifts costs within the rate-base from one customer group to another to achieve electricity system benefits and/or policy goals.
 - **Cap and Trade Proceeds Lever:**
 - Redirect cap and trade proceeds to offset the cost of existing initiatives that help reduce greenhouse gas (GHG) emissions (i.e., the CCAP committed to offset the impact of cap and trade and to keep electricity rates affordable).

Rate Mitigation Proposal

- The Ministry of Energy is proposing to implement the following electricity price mitigation initiatives. The approach identified below would provide relief across all electricity consumer classes:
 - 1) Provide an 8% rebate equal to the provincial portion of HST to consumers eligible for the Regulated Price Plan* (i.e., residential, small business and farms) and update the Rural and Remote Rate Protection (RRRP) program, to provide relief to rural customers
 - 2) Expand ICI eligibility by lowering the threshold to 1 MW, to provide support to Class B electricity consumers (i.e., commercial, institutional and small industrial) and redirect cap and trade proceeds to commercial and industrial electricity consumers to provide a modest reduction in rates.
- The following slides provide additional information on the above initiatives.

***Notes:** Eligibility for the 8% rebate would be similar to OCEB and include some customers not on the Regulated Price Plan (RPP), such as Independent Power Authority consumers and consumers that have opted-out of RPP. See Appendix for discussion on HST considerations.

Rate Mitigation Proposal – Illustrative Impacts

	Average Annual Fiscal Impact	Average Annual Greenhouse Gas Reduction Account (GGRA) Proceeds Impact	Regulated Price Plan (Residential) Impact		Class B (Commercial) Impact*	Class A (Industrial) Impact*	
			Average (750 kWh/month)**	Rural*** (1000 kWh/month)		Existing	New
8% rebate to Regulated Price Plan eligible consumers - ICI Expansion - RRRP Update - Proceeds Recycling	\$1.0 billion annually	\$0.27 billion annually (Reduction of \$0.06 billion annually or \$0.24 billion total from the CCAP commitment)	-\$11/month (-6%) (-8%)	-\$46/month (-18%) -\$44/month (-19%)	-\$1/MWh (-1%)	-\$1/MWh (-1%)	Up to -\$52/MWh (-34%)

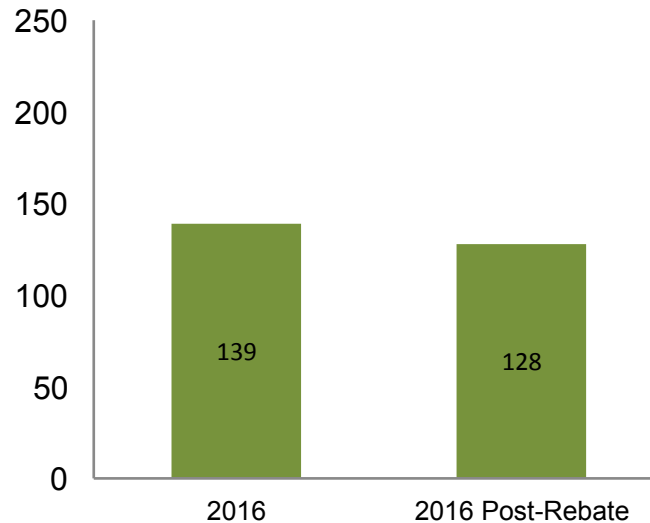
***Note:** The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes.

**** Note:** Average Regulated Price Plan Impact represents a pre-tax value of the rate mitigation proposal and does not include the impact of new programs.

*****Note:** Rural customers refers to customers of Hydro One eligible to receive RRRP (R2 rate class customers). Impact shown is pre-tax and does not include the cost of ICI expansion.

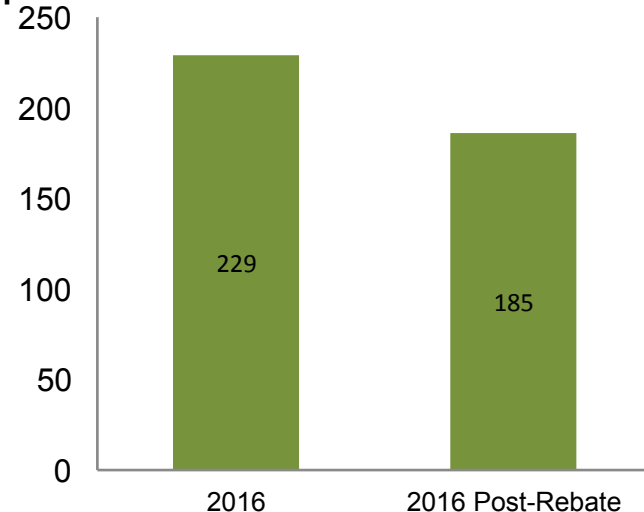
Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class

Typical Residential Bill
750/kWh per month, 8% only



The pre-tax impact of a 8% reduction.

Rural (R2) Residential Bill
1,000/kWh per month, 8% and RRRP update

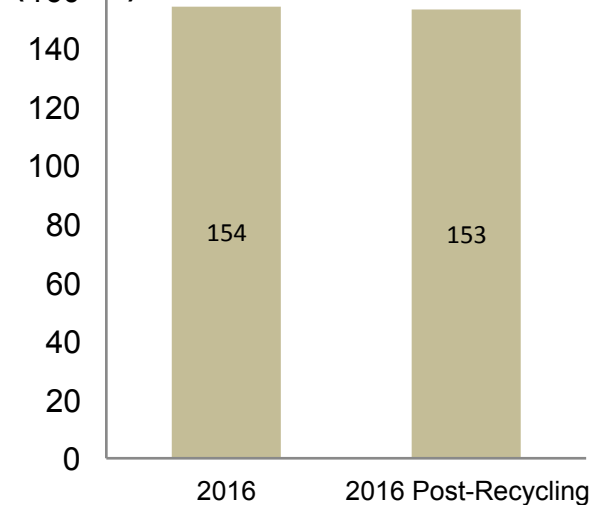


The pre-tax impact of the rate mitigation initiatives is a 19% reduction.

Note: Residential bills reflect electricity rates as per the Regulated Rate Plan (RRP) which came into effect on May 1, 2016. Commercial and industrial electricity prices reflect YTD June 2016.

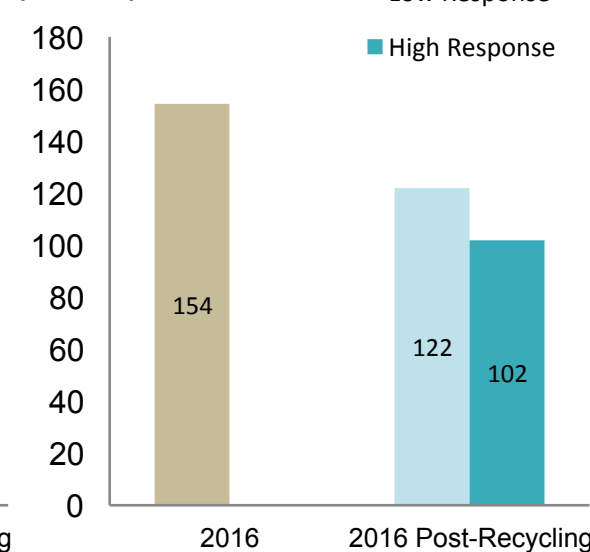
Rate Mitigation Proposal – Illustrative Bill Impacts by Electricity Consumer Class (cont'd)

Typical Class B (Commercial) Price (\$/MWh)



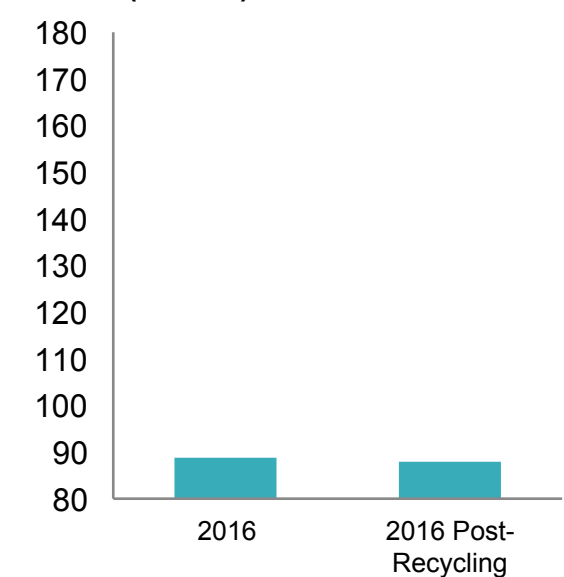
Class B: The net impact of the rate mitigation initiatives is a 1% reduction.

Typical New Class A Price (\$/MWh)



New Class A: The net impact of the rate mitigation initiatives is a reduction of up to 21% and 34% for low and high response respectively.

Typical Class A (Industrial) Price (\$/MWh)



Existing Class A: The net impact of the rate mitigation initiatives is a 1% reduction.

Note: Residential bills reflect electricity rates as per the Regulated Rate Plan (RRP) which came into effect on May 1, 2016. Commercial and industrial electricity prices reflect YTD June 2016. The impact of cap and trade would not be added to electricity bills until 2017 and the impact of ICI would not be added to bills until 2018 due to the time required to implement the expansion and for billing changes. However, both the impact of cap and trade and ICI have been included above for illustrative purposes.

1) Regulated Price Plan Eligible Consumers and Rural or Remote Rate Protection Update

8% Rebate to Regulated Price Plan Eligible Consumers

- Legislation/regulation will be introduced to provide a rebate of 8% to consumers eligible for the Regulated Price Plan. The below table indicates which consumers would or would not receive the benefit.
 - This would be equivalent to the provincial portion of the HST*.

Eligible for the 8% rebate (< 50 kW or $< 250,000$ kWh/year)	Not eligible for the 8% rebate (> 50 kW or $> 250,000$ kWh/year)
- Residential Regulated Price Plan consumers - Residential retail consumers - Multi-unit residential buildings and other facilities used as residential rental units - Long-term care homes and school residences - Regulated Price Plan eligible farms - Small businesses - Coffee / snack retailer - Convenience store - Apparel store - Hair salon - Small insurance office	- Class A consumers - Manufacturer - Large grocery store - Mines - Auto assembly plants - Class B consumers (except farms that have opted out of the Regulated Price Plan) - Commercial offices (low rise) - Hotel - General warehousing

- Those ineligible to receive the 8% rebate will benefit from one or more of the other initiatives under this proposal (e.g., ICI expansion, proceeds recycling, etc).

***Note:** An HST exemption would require federal approval. Engaging in discussions with the federal government would take time and would likely result in not meeting the targeted implementation date.

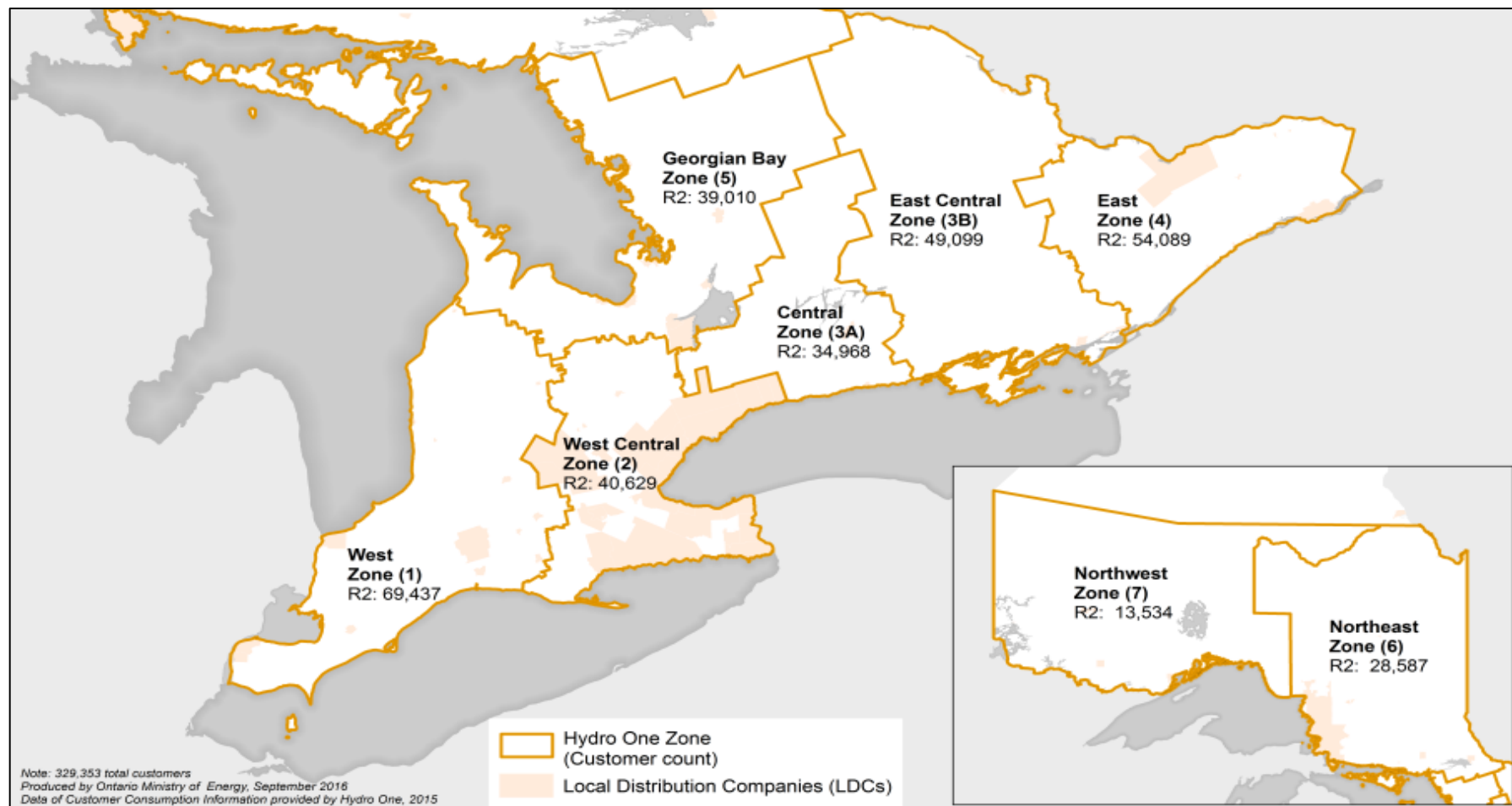
Placeholder – Electricity Bill Mock-Up

Moved up from Appendix

Rural or Remote Rate Protection (RRRP) Update

- ENERGY is proposing to amend O.Reg 442/01 to provide an additional \$110 million in rate protection to eligible rural or remote electricity consumers, and consider options to periodically adjust the amount of rate protection available to these consumers going forward.
- RRRP is a rate-based funded subsidy program that helps offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations all across the Province.
 - Today, RRRP is a \$175-million program. For an average residential customer, the cost of supporting RRRP is roughly \$1 per month. For other customers, the cost can range from \$65 for a greenhouse to \$8,000 for a medium industrial.
 - The majority of the program funding (\$125.5 million) provides a subsidy to Hydro One's lowest-density customers – classified as R2 customers. There are approximately 329,000 R2 customers. The current program provides a monthly subsidy for R2 customers of \$31.50.
 - RRRP funding supporting R2 customers has been capped at the current level since 2004. As a result, the impact of its assistance has diluted over time as electricity costs have risen.
- An additional \$110 million in program funding would see an increased subsidy of ~\$28 /month. This would bring R2 bills in line with Hydro One R1 (medium density) bills at 1000kWh.
 - This would increase the R2 portion of the RRRP to \$235 million with a monthly impact on an average residential consumer of ~\$0.60.
 - The RRRP could be indexed at inflation or “trued up” on a regular basis to ensure the subsidy remains constant.

Rural or Remote Rate Protection (RRRP) Update – R2 Customers by Region



2) Expand Industrial Conservation Initiative and Redirect Cap and Trade Proceeds

Industrial Conservation Initiative (ICI) Expansion

- ENERGY is proposing to amend O. Reg. 429/04 to expand ICI eligibility effective [X placeholder date].
- Currently, electricity consumers over 5 MW and consumers from 3-5 MW in certain energy intensive sectors are eligible for ICI (i.e., approximately 300 Class A consumers).
 - Consumers participating in ICI include the following sectors: pulp and paper, auto, manufacturing, chemicals and mines.
- ICI would be expanded so that all consumers over 1 MW are eligible for the program, which would:
 - Reduce electricity peak demand by incenting more consumers to lower their electricity demand during peak periods;
 - Reduce electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods; and
 - Increase the electricity bills for non-ICI participants to ensure full cost recovery in the electricity system.

ICI Expansion – Projected Impact

	Benefit to New ICI Participants	System Benefit	Financial Impact	Residential Bill Impact
	Bill Savings	Peak Demand Reduction (MW)	GA shifted to Class B (\$M)	
Short-term	Up to 21%	80	47	Increase of \$0.42/month
Long-term	Up to 34%	165	82	Increase of \$0.74/month

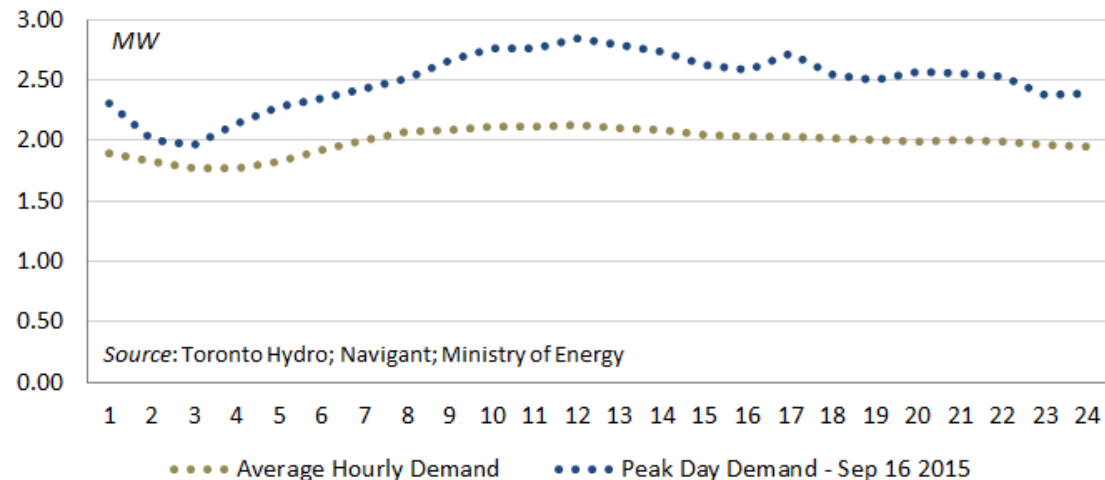
- The different impacts refer to the amount of time it takes for new Class A consumers to respond to the expanded ICI eligibility
 - Short-term refers to the expected impact once ICI billing begins for new Class A consumers (one year after expanded eligibility takes place).
 - Long-term is the expected impact once new Class A consumers have had time to significantly change their behaviour and investment decisions in response to the ICI.
- The bill impacts assume a 25% uptake, which would increase Class A consumption by roughly 3 TWh, leaving an estimated 54 TWh in Class B that are either between 0.05-1 MW or choose not to opt in to ICI. This would represent an estimated 300 additional consumers in ICI, though they would represent a much smaller share of the consumption than the 300 consumers currently participating.
- Newly eligible consumers in the program would mostly fall into the small industrial, institutional and commercial category, including: automotive supply chain companies, office tower, large shopping mall, greenhouses and others.
 - A few examples of companies that would become eligible under such an expansion would be Kellogg, Canlan Ice Sports, Cambridge Towel, SLACAN and Casino Rama.

ICI Expansion – Illustrative Example of Newly Eligible Consumer

- Plastics manufacturers, such as Poly Five Plastics in Toronto, are among the consumers that would become eligible if the threshold was lowered.
- Such manufacturers fall under NAICS* code 32 and have relatively flat load profiles, reflecting around the clock production. This means they would be beneficiaries of ICI even with no change in consumption behaviour.
- Companies like Poly Five Plastics could expect to see greater savings if they are willing and able to respond to the higher prices during high demand hours.

Typical Demand Profile, 2-3 MW Consumer

Manufacturer, NAICS Code 32 - Nov 2014 to Oct 2015



Illustrative Bill Savings, 2-3 MW Consumer

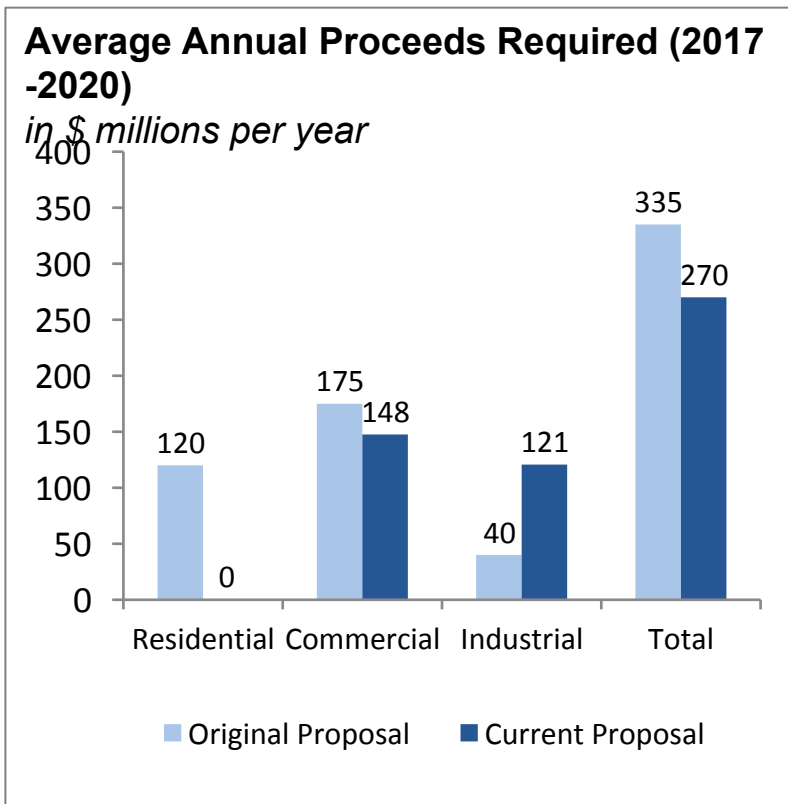
	Status Quo	No Price Response	Short Term Response	Long Term Response
	Class B	Class A	Class A	Class A
GA	75.26	58.06	43.55	32.03
Total bill	126.28	109.09	94.58	83.06
Savings		-14%	-25%	-34%

Source: Navigant; Ministry of Energy

* **Note:** North American Industry Classification System (NAICS) is the standard used by statistical agencies in classifying business establishments.

Redirect Cap and Trade Proceeds Recycling

- The 2016 Budget committed to offset the impact of cap and trade for commercial and industrial consumers, while also providing a benefit of up to \$2 per month for residential consumers.
 - To meet the 2016 Budget commitment, the Climate Change Action Plan (CCAP), committed \$1.3 billion from the GGRA over the first compliance period (2017-2020).
- However, providing a 8% rebate to Regulated Price Plan consumers would allow for GGRA proceeds previously committed to residential consumers to be redirected to other consumers classes and/or GHG reduction initiatives in the fiscal plan.
- The current proposal would provide additional recycling to commercial and industrial consumers, while requiring an estimated \$60 million less per year (i.e., a reduction of \$0.24 billion over the first compliance period).



Note: The original proposal was to offset the impact of cap and trade via GA to the average industrial, and would provide a benefit to commercial and residential consumers. Current proposal would recycle proceeds volumetrically to industrial and commercial consumers.

Redirect Cap and Trade Proceeds Recycling

- Redirecting cap and trade auction proceeds to lower the cost of electricity would offset consumers' contributions to non-emitting generation.
- Redirecting helps pay for committed investments/initiatives which reduce GHGs (e.g., non-emitting generation and conservation programs).
 - Due to the long-term nature (typically 20 years) of electricity generation contracts and conservation programs, the associated costs are ongoing and are expected to be about \$7 billion dollars annually during the first cap and trade compliance period. These costs will continue well beyond the timelines described in the CCAP.
- Redirecting cap and trade auction proceeds volumetrically to Class B (commercial) and Class A (industrial) consumers maintains the incentive to shift consumption from on-peak to off-peak hours.
- Using cap and trade auction proceeds to lower the cost of electricity would make it more competitive with traditionally cheaper fossil fuels.
- By using the proceeds to lower the cost of electricity, there is potential to incent fuel-switching away from fossil fuels toward much cleaner grid-connected electricity and support CCAP goals of electrification.

Considerations

Implementation

- New legislation would be required to enable the 8% rebate proposal. Legislation would closely mirror the Ontario Clean Energy Benefit Act, 2010.
 - If passed, the legislation would require a general regulation.
 - Amendments would also be required to various regulations to expand ICI and RRRP.
- On-bill rebate delivery would likely require adjustments to LDC billing systems, which could impact delivery costs and timelines. ENERGY (possibly through Ontario Energy Board) will consult with LDCs to accurately assess these impacts once the program has been announced.
 - In the past, LDCs have asked for at least six months' notice when implementing billing system changes.
 - Timing concerns may be alleviated by allowing LDCs to provide retroactive rebates if their systems cannot be updated in time for January 1, 2017. This was done with the OCEB.
- Detailed messaging on bills (for “low-volume” consumer bills) could be implemented by amending O. Reg. 275/04 (made under the Ontario Energy Board Act, 1998).
 - The rebate would not be directly linked to HST.
 - With electricity invoices containing multiple line items and LDC bill presentment varying widely, direction on rebate presentment will need to be flexible to allow LDCs to incorporate easily while ensuring government-preferred branding and messaging is conveyed.
- While the impact of cap and trade would be added to electricity bills as of January 2017, the offsetting effect of proceeds recycling may not occur immediately depending on implementation and potential alignment with the first auction expected in March 2017.
- ENERGY will need to continue to consult with the Independent Electricity System Operator (IESO), Ontario Energy Board (OEB) and LDCs regarding implementation of proceeds recycling.

Fiscal

- The Climate Change Action Plan (CCAP) committed about \$1.3 billion over four years for electricity mitigation for industrial, commercial and residential consumers from GGRA proceeds.
 - The current rate mitigation proposal requires approximately 20% less in proceeds, saving approximately \$240 million relative to the CCAP commitment over the first compliance period (2017-2020).
- The 8% rebate is expected to cost about \$1 billion per year (i.e., \$4 billion from 2017-2020), representing an additional pressure on the fiscal plan.
 - Consideration could be given to allocating the \$240 million in reduced proceeds required towards other existing initiatives in the fiscal plan that also reduce greenhouse gas (GHG) emissions, thereby providing an overall fiscal plan offset.
- In the absence of any offset strategies, the full cost of the rate mitigation approach would add to the pressures and risks that need to be managed in order for the government to balance the budget in 2017-18 and stay balanced in 2018-19 and beyond.

Legal

- In order to avoid characterization as an unconstitutional tax, a non-tax levy must have a sufficient nexus between those who pay and the regulatory scheme in the sense that those who pay have caused the need for or benefit from the regulatory scheme. Although the case law is not developed on the extent to which some regulated actors can be required to subsidize others, risk is reduced to the extent that any cross-subsidization serves true regulatory goals rather than revenue re-distribution goals.
- HST Rebate (shift costs from rate-base to tax base by providing a rebate equal to the provincial portion of HST):
 - Providing the contemplated rebate under the proposed Bill does not, in and of itself, give rise to legal issues. As policy direction is given on the specifics of supporting regulations, any associated legal risks can be identified.
- ICI Expansion (shift costs within rate-base by expanding eligibility for the ICI program to consumers of >1 MW):
 - Shifting costs to some consumers to lower rates for others without more carries the risk that the charge would be characterized as an unconstitutional tax. To establish that the charge is legitimate, it must be established that the purpose and effect of the charge is to facilitate the maintenance of a financially viable electricity system by way of load management or some other feature under which those who are subsidized provide an overall system benefit enjoyed by those who subsidize them.
- RRRP Update (shift costs within the rate-base by increasing the RRRP benefit paid to rural and remote customers):
 - Increasing the amount of revenue devoted to the RRRP or expanding the scope of consumers eligible for the program does not raise new legal risk. There is a good argument that the RRRP is a regulatory charge, as it socializes some of the costs of distributing electricity to rural consumers. Overall the risk that the RRRP would be characterized as a tax is assessed as moderate (meaning equally good arguments on both sides).
- Cap and Trade Proceeds Recycling (reduce impact on rate base and tax base by directing cap and trade auction proceeds to industrial consumers):
 - To be characterized as regulatory charges under the cap and trade program, auction revenues should be spent on programs that reduce GHGs.

Communications

- Public high-profile communications would coincide with introduction of legislation (September 2016).
 - Stakeholder outreach/technical briefings with LDCs, Ontario Chamber of Commerce, AMPCO, OEB low-income table, AMO, etc.
 - Echo public announcements in southwest and north; proactive provincial/local media.
- **Positioning:**
 - A fiscally prudent plan to benefit all ratepayers in a lasting, meaningful way.
 - Rural customers will receive the largest single rate relief ever.
 - Businesses across Ontario will have even more opportunity to be competitive and manage their energy costs.
- **Issues Considerations:**
 - Significant benefit for rural and remote residential customers; net gain for all residential customers.
 - More complex to communicate, but can be presented as a full plan that includes reforms and improvements to the system.
 - Consistent with cap-and-trade commitment that no business sector will be left worse off, though small businesses outside ICI will benefit the least.

Key Messages

- [Placeholder]

Proposed Cabinet Minute

PLACEHOLDER

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Appendix

Illustrative Bill Impacts

	Current Bill (after tax) (before tax)	Current Rate mitigation initiatives*	New Rate Mitigation initiatives	New Bill (after tax) (before tax)
Average Residential (Toronto – 750 kWh/month)	\$139 /month	N/A	8% pre-tax rebate: - \$11	\$128 /month
Rural Residential (Hydro One R2 – 1000 kWh/month)	\$229 /month	RRRP: -\$32	8% pre-tax rebate: - \$16 Updated RRRP: - \$28	\$185 /month
Low-income Residential ** (Toronto – 750 kWh/month)	\$101 /month	OESP: -\$38	8% pre-tax rebate: - \$8	\$93 /month
Small Business (Toronto – 403,200 kWh/month)	\$148 /MWh	N/A	8% pre-tax rebate: - \$12/MWh	\$136 /MWh
Small Farm (Hydro One R1 – 4,000 kWh/month)	\$202 /MWh	N/A	8% pre-tax rebate: - \$16/MWh	\$186 /MWh

***Note:** Some residential consumers can also receive tax credits based on income, age and geography (Northern Ontario Energy Credit and Ontario Energy and Property Tax Credit). These credits are delivered through the Trillium Tax Credit and can be as high as **\$1,332** per year **for a family**.

** income of less than \$28,000, family of 4.

Totals may not add due to rounding. -

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Illustrative Bill Impacts (cont'd)

	Current Rate	Current Rate mitigation initiatives*	Cost of new initiatives (RRRP and ICI)	New Rate Mitigation initiatives	Net Impact	New Rate
Large Institutional (Toronto – distribution-connected, 10 MW)	\$108 /MWh	ICI: -\$49/MWh	\$1.74 /MWh	Proceeds Recycling: -\$2.60/MWh (2017-2020 average)	-\$0.90 /MWh (-1%)	\$107 /MWh
Large Industrial (Timmins – transmission-connected, 10 MW)	\$69 /MWh	ICI: -\$49/MWh NIERP: -\$20/MWh	\$1.74 /MWh	Proceeds Recycling: -\$2.60/MWh	-\$0.90 /MWh (-1%)	\$68 /MWh
Small Industrial – opt-in to ICI (Toronto – 2 MW)	\$152 /MWh	N/A	\$1.74 /MWh	Proceeds Recycling: -\$2.60/MWh ICI: -\$51.30/MWh	-\$52 /MWh (-34%)	\$100 /MWh
Large Commercial – does not opt-in to ICI (Toronto – 2 MW)	\$152 /MWh	N/A	\$1.74 /MWh	Proceeds Recycling: -\$2.60/MWh	-\$0.90 /MWh (-1%)	\$151 /MWh
Small Institutional (Toronto – 500 kw)	\$154 /MWh	N/A	\$1.74 /MWh	Proceeds Recycling: -\$2.60/MWh	-\$0.90 /MWh	\$153 /MWh

Notes:

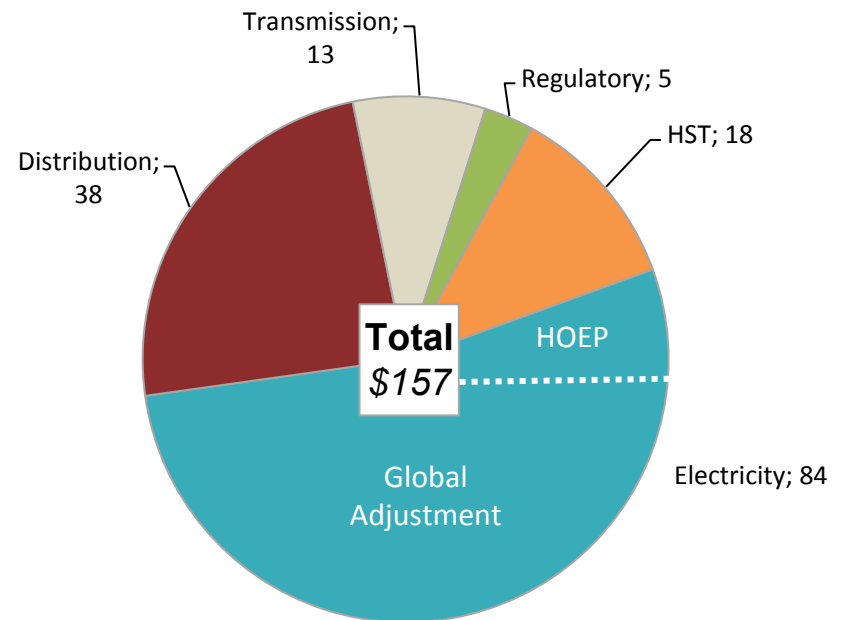
- 1) There is the potential for a consumer eligible for the Regulated Price Plan to opt-out of the Regulated Price Plan to opt-in to Class A and receive all three benefits (i.e., Regulated Price Plan, ICI, proceeds recycling).
- 2) The impact of cap and trade would not be added to electricity bills until 2017 and varies per year over the course of the first compliance period. For illustrative purposes, the estimated average benefit of proceeds recycling is shown above.

Residential Electricity Prices

- There are approximately 5 million residential consumers in Ontario.
- The Regulated Price Plan includes nearly all residential consumers, as well as small businesses. Regulated Price Plan consumers pay a blended commodity rate regulated by the OEB, which is set every six months.
- For households, the Debt Retirement Charge (DRC) was removed from residential electricity bills as of January 1, 2016.
- In addition, the Ontario Electricity Support Program (OESP) provides an ongoing rate reduction directly on the bills of low-income electricity consumers who have applied and meet the eligibility requirements. The program is funded through the rate base.
- Rural customers, in particular those with electrical heating, pay higher monthly bills.

Typical Residential Monthly Bills (\$)

As of May 1, 2016 (750 kWh/month)



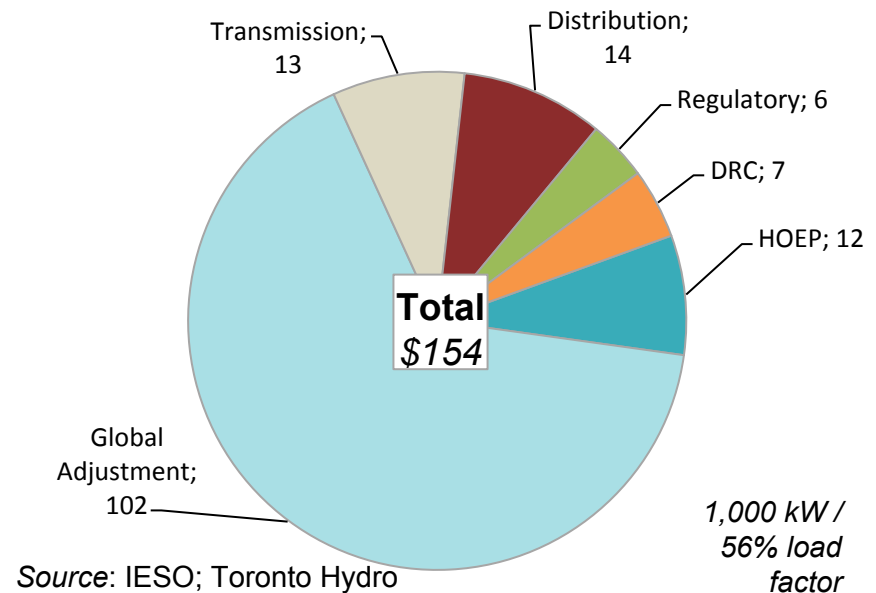
Source: OEB, Toronto Hydro

Commercial Electricity Prices

- There are approximately 400,000 commercial and institutional consumers in the province. These consumers are Class B consumers, and have separate line items on the electricity bill for HOEP and GA.
- There is a high degree of differentiation amongst consumers within the commercial sector in terms of size and consumption patterns. For example, an elementary school has a much different hourly load profile compared to a full service restaurant. This is an important consideration when looking at the bill impacts of policy options.

Typical Commercial Price (\$/MWh)

YTD June 2016 (Non-RPP Class B)



- Consumers in the commercial sector do not pay time-of-use prices and have little incentive to shift demand away from high demand hours.
- Targeted pricing programs are currently not available for Class B consumers.

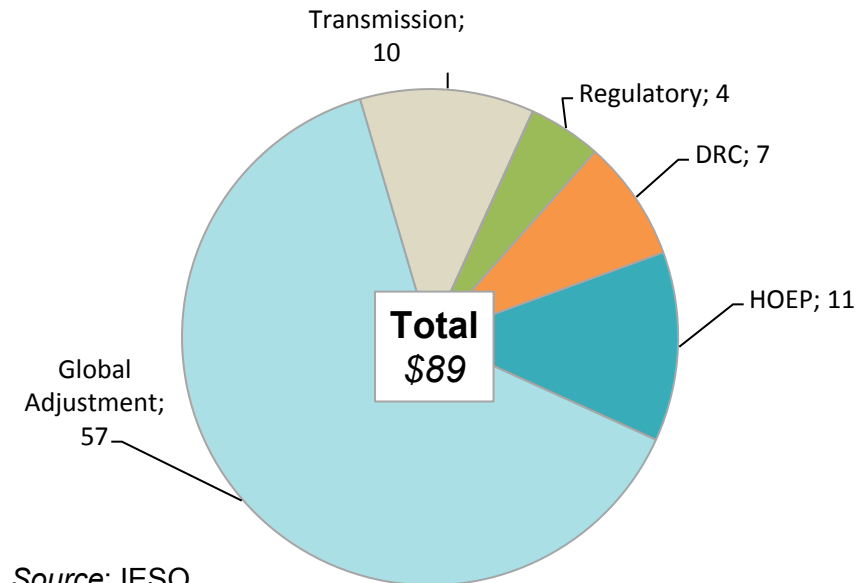
* **Note:** Most commercial consumers receive input tax credits for their HST.

Industrial Electricity Prices

- There are about 300 large industrial consumers in Ontario.
- Measures in place to mitigate industrial electricity prices include ICI and NIERP.
- ICI lowers costs for eligible large electricity consumers (i.e., those with monthly peak demand exceeding 3 MW) that reduce consumption during peak periods.
 - ICI consumers reduce their electricity rates by 25% on average.

Typical Large Industrial Price (\$/MWh)

YTD June 2016



- Participants in NIERP receive a rebate of \$20/MWh. On average, industrial electricity prices are reduced by about 20% through the program, reducing all-in prices to \$64/MWh for these consumers. The program is funded through the tax base.

* **Note:** Industrial consumers receive input tax credits for their HST.

Sales Tax Treatment in Other Jurisdictions

Jurisdiction	Tax	Tax Paid by Business Consumers	Tax Paid by Residential Consumers	Comment
British Columbia	PST	Yes – 7%	No	- PST does not apply to residential energy, including electricity, acquired solely for residential use in a residential dwelling - BC's carbon tax does not apply to electricity bills.
Alberta	None	N/A	N/A	Alberta does not have a provincial sales tax.
Saskatchewan	PST	Yes – 5% Except for electricity purchased to heat a building.	No	- PST does not apply to electricity purchased for use in a residential dwelling. - PST does not apply to electricity purchased for use in heating a building that is heated solely by the electricity.
Manitoba	PST	Yes – 8% Reduced rate of 1.6% applies to electricity used by a qualifying business to operate machinery	Yes – 8% Electricity purchased for mixed use, 80% of which is home heating, has a reduced rate of 1.4%. Electricity solely to heat the purchaser's home is exempt.	Winnipeg also applies a tax of 2.5% on residential and 5% on commercial.
Ontario	HST	Yes (less ITC (input tax credits))	Yes – 8%	
Quebec	QST	Yes (less ITCs)	Yes – 9.975%	
Nova Scotia	HST	Yes (less ITCs)	Yes – 10% less provincially administered rebate.	Rebate is equal to the provincial portion of the HST, and is administered similar to OCEB, but applies to many energy sources.
New Brunswick	HST	Yes (less ITCs)	Yes – 10%	
Prince Edward Island	HST	Yes (less ITCs)	Yes – 9% (10% beginning Oct 1, 2016)	
Newfoundland and Labrador	HST	Yes (less ITCs)	Yes – 10%	Had a provincially administered Home Heating Rebate program until July 2015.
Federal	GST	Yes (less ITCs)	Yes – 5%	