

Ontario's **Fair Hydro** Plan

Technical Briefing

March 2017

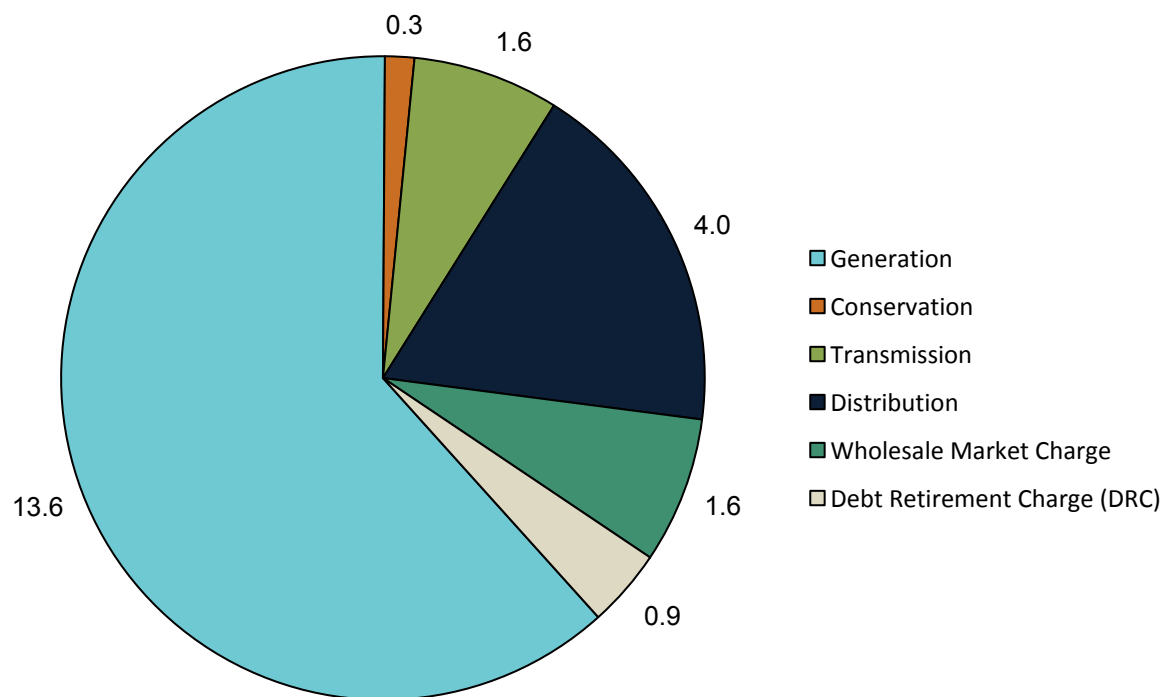
Working Draft

Outline of Technical Briefing

1. Overview of Ontario's Electricity Market
2. Fair Hydro Plan
3. Questions

Ontario's Electricity Market

2016 Electricity System Cost
Projection, in 2016\$ billions

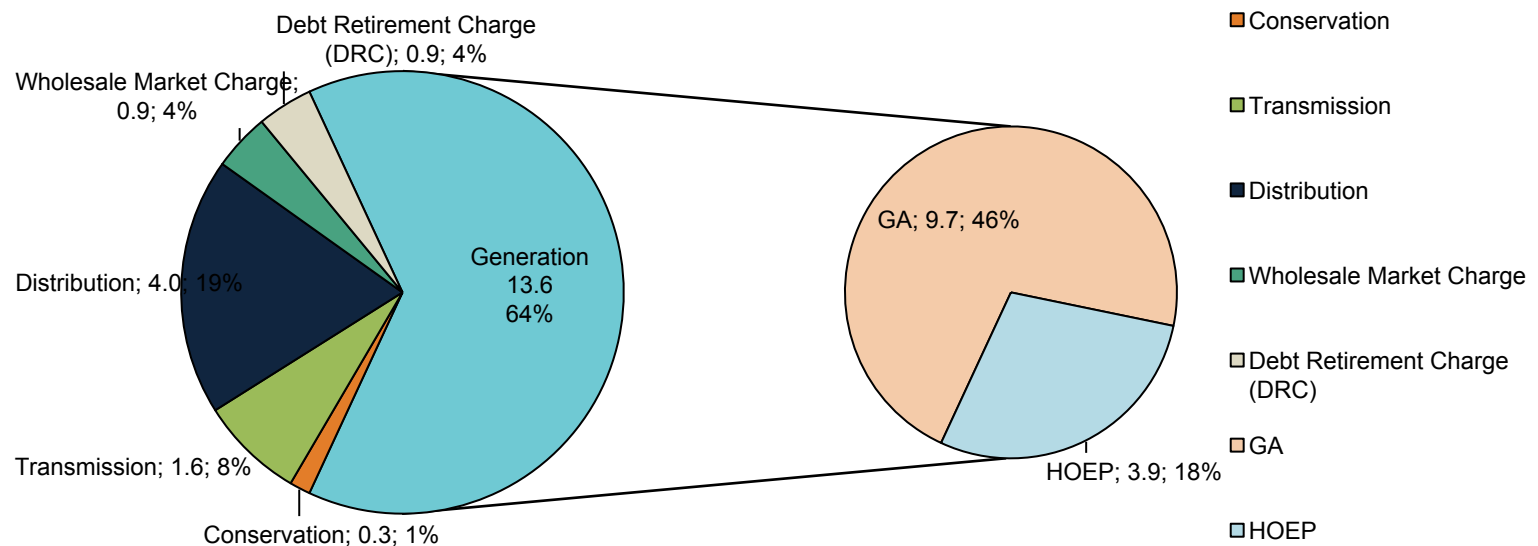


Source:

Commodity Cost of Electricity

- Electricity generators in Ontario received contracted or regulated rates, which are designed to recover the cost of building and operating generation facilities.
 - The GA recovers the fixed costs of running the province's generation fleet, including capital costs, as well as the cost of conservation programs.

2016 Electricity System Cost *Projection in 2016\$ billions*

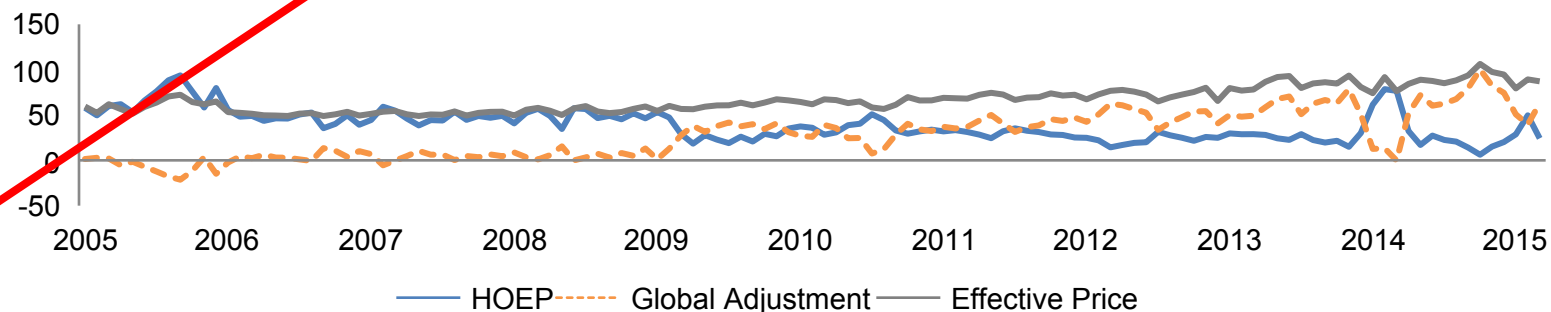


Source:

Relationship between GA and HOEP

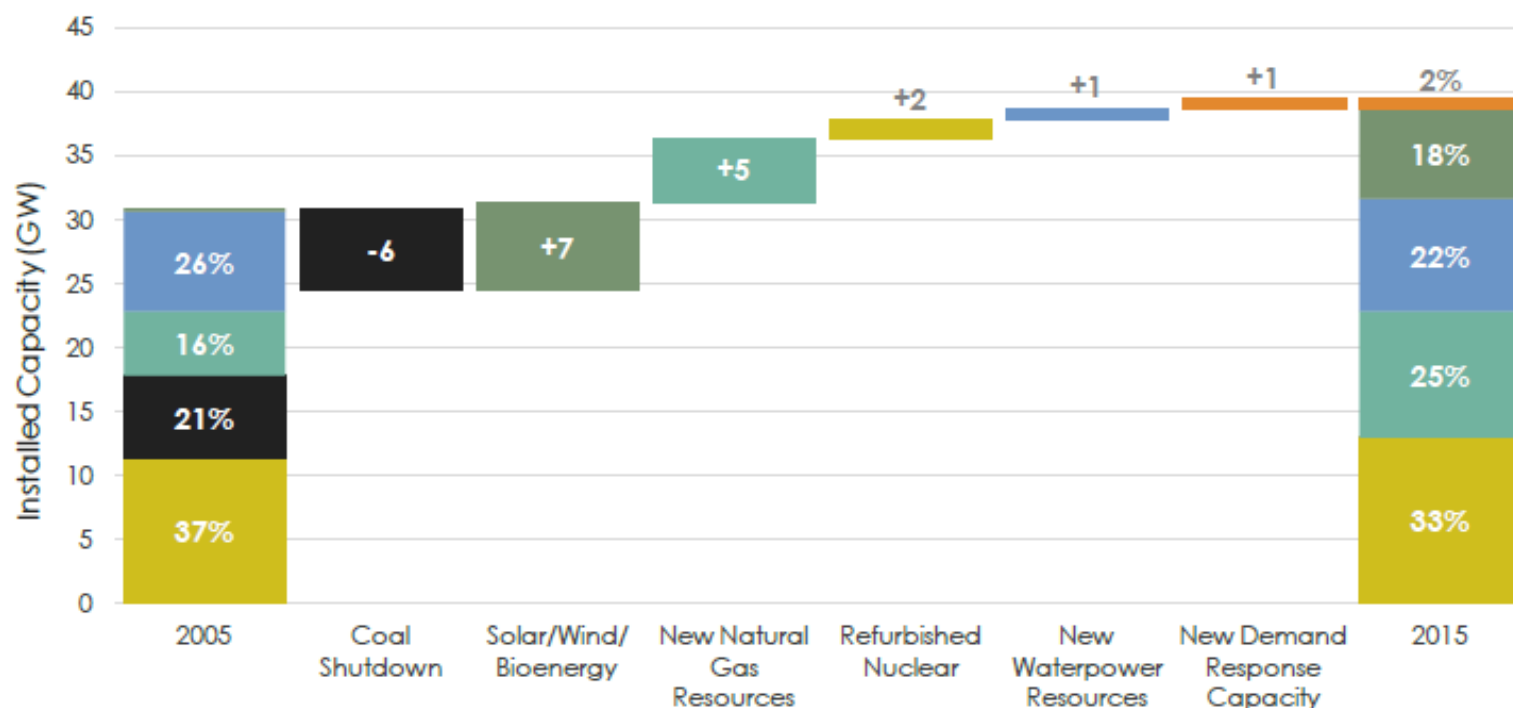
- Payments to generators are made up of two components:
 1. Hourly Ontario Energy Price (HOEP)
 - All generators receive HOEP for the electricity they supply. HOEP is determined by supply and demand conditions in the wholesale market. It generally reflects the marginal cost of electricity generation in the province.
 2. Global Adjustment (GA)
 - Contracted/regulated generators receive additional payments to make up the difference between the revenue generated through the wholesale market and their expected contracted/regulated revenue. This difference is recovered from/returned to the Global Adjustment (GA).
 - Conservation costs and funds such as the Aboriginal, Municipal and Community Fund are also paid for from GA.
- HOEP and GA are inversely related; as the market price increases, the GA payments decrease. HOEP is influenced by supply, demand and fuel costs.

Commodity Cost of Electricity (\$/MWh)



Significant Change in Supply Mix

- Between 2005 and 2015, government invested more than \$35 billion in electricity generation to restore reliability, replace coal and meet environmental objectives.
 - Electricity costs are increasing as necessary investments are made to decarbonize and modernize the province's electricity infrastructure.



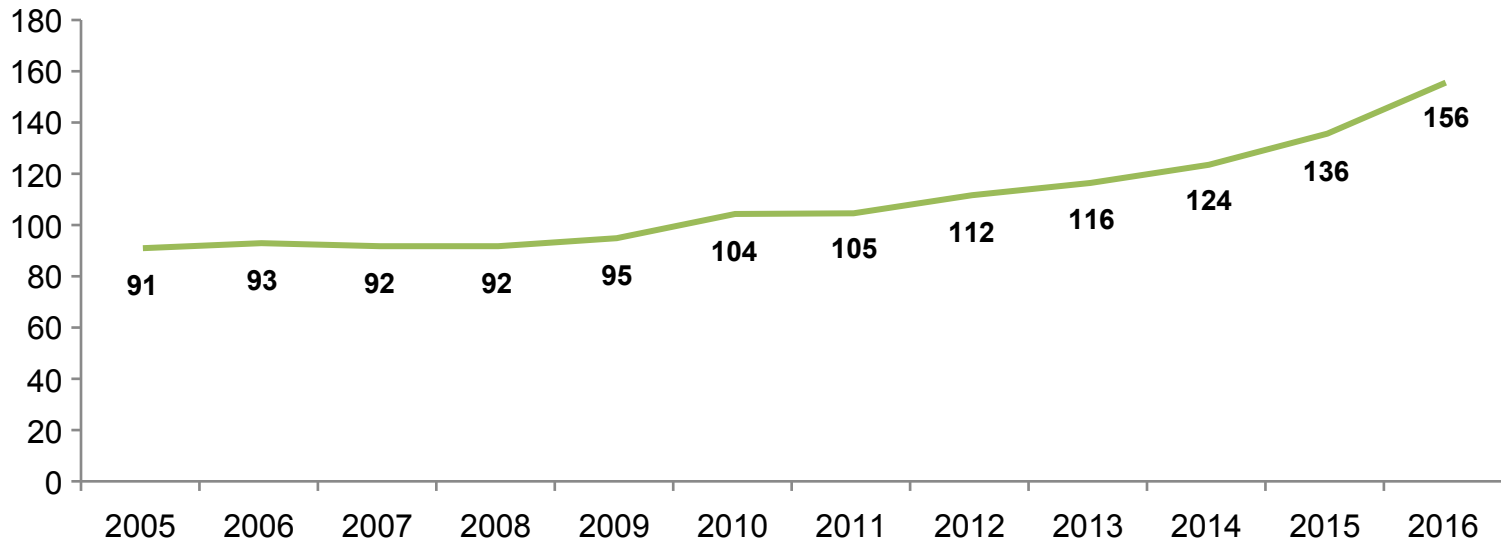
Source:

Electricity Prices Have Increased

- Since 2010, electricity prices have increased at a rate higher than the Consumer Price Index (CPI).
 - The Ontario Energy Board (OEB) sets Regulated Price Plan (RPP) prices every six months to provide price certainty for residential consumers, farms and small businesses.
 - RPP prices are based on a projection of the cost to supply electricity and a forecast of electricity consumption over a 12-month period.

Typical Residential Electricity Bills

in \$ per month, 750 kWh consumption



Source:

Recent Actions ~~Taken~~ To Mitigate Electricity Rates

- Following the 2016 Throne Speech, the several actions were announced to further reduce electricity costs.
 - 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%.
 - 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.
 - Expanding the Industrial Conservation Initiative (ICI) – up to one-third savings for participants.
 - Suspending the LRP II and the Energy from Waste Standard Offer Program (EFWSOP) – up to \$3.8 billion in cost savings.
 - Limiting the Feed-In Tariff (FIT) 5 procurement target to 150 MW and suspending future FIT procurements – up to **\$129 million in** cost savings.

Fair Hydro Plan

Fair Hydro Plan

- ~~The plan will build the measures recently taken to mitigate electricity prices.~~
- The Fair Hydro Plan has the following major components:
 1. Refinancing the Global Adjustment (GA) over a longer time period for Regulated Price Plan (RPP) eligible consumers, including families, farms and small businesses.
 2. Helping vulnerable electricity consumers by enhancing electricity support and conservation programs, **ensuring fairness and saving people money** ~~and removing costs from electricity bills~~. Eligible consumers will receive additional funding through assistance programs including:
 - Establishing a new Affordability Fund which will support Ontarians who have difficulty paying their electricity bills to be able to access energy efficiency improvements.
 - Broadening Rural or Remote Rate Protection (RRRP) to provide distribution charge relief for the customers of the costliest local distribution companies (LDC's).
 - Expanding the Ontario Electricity Support Program (OESP) to ensure the program uptake is as close as possible to 100%.
 - Establishing a new On-Reserve First Nations Delivery Rate.
 3. Enhancing competitiveness for **small manufacturers and industrials** ~~Class B electricity consumers (i.e. manufacturing)~~ by lowering the eligibility threshold for Industrial Conservation Initiative (ICI).
 4. Improving sector efficiency and modernizing Ontario's electricity market, working in collaboration with the Independent Electricity System Operator (IESO) and the Ontario Energy Board (OEB).

1. Refinancing Global Adjustment

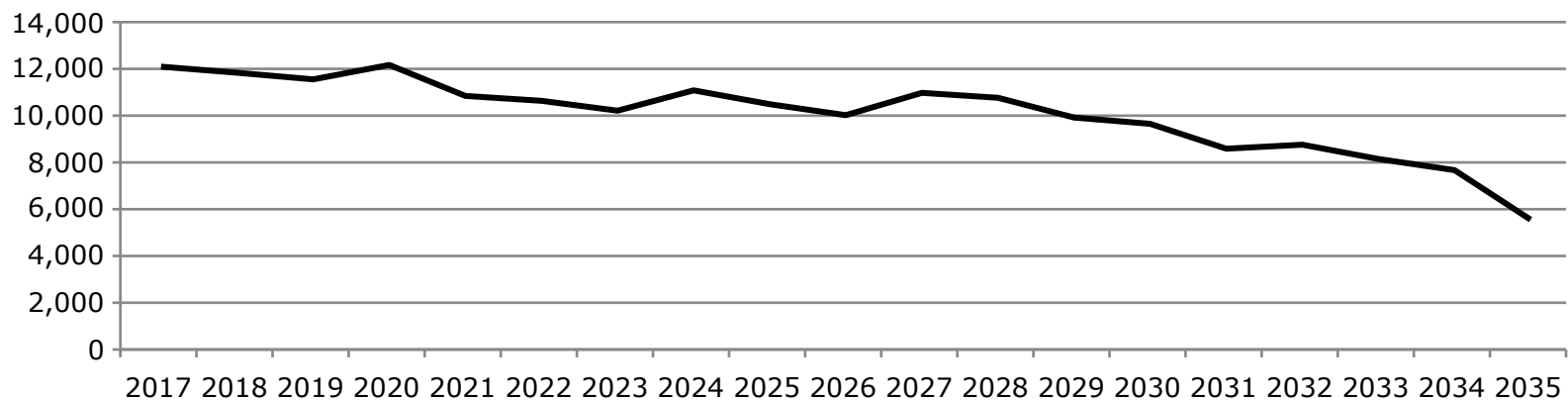
Refinancing the Global Adjustment ~~—Approach~~ (~~cont'd~~)

- Refinancing the Global Adjustment (GA) will provide significant and immediate rate relief by spreading the cost of electricity investments over a longer period of time.
 - A typical Toronto Hydro consumer, using 750 kWh per month, would see an immediate savings of about \$26/month. Rates would follow inflation for 4 years, before increasing to repay financed GA costs levels above those currently forecast.
- In the early years, a portion of the costs covered by the GA would be financed to reduce pressure on electricity ratepayers.
- In the later years, when some system costs are expected to be reduced due to continued operation of existing assets under 20-year contracts, the cost of financing would be added to the GA costs recovered from ratepayers.
- Under current forecasts, the immediate reduction (i.e., the financed portion) in the GA would be about \$2.5 billion per year on average over the first ten years.

Policy Rationale

- The majority of the province's electricity generators are under 20-year contracts. Many of these generators will be able to operate past their contract life.
- ~~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.~~
- By recognizing that generation assets are expected to continue to provide 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.
- This measure will share the associated costs more fairly.

Forecast Global Adjustment Cost (nominal \$ million)



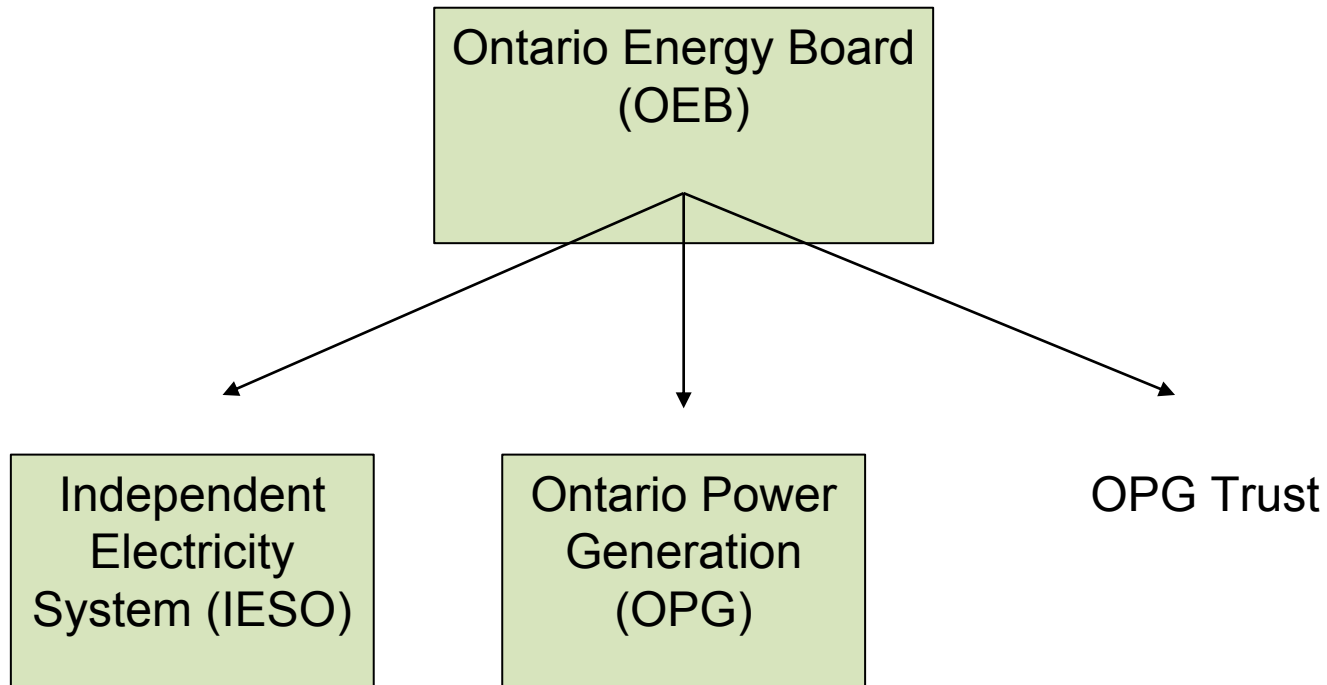
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~~Refinancing the Global Adjustment~~—Implementation

- The following entities would implement the Global Adjustment smoothing mechanism:
 - The Independent Electricity System Operator (IESO) would establish the GA Smoothing regulatory account: IESO as the administrator of the Global Adjustment, would establish a new deferral account enabled in legislation
 - Ontario Power Generation (OPG) would buy the GA Smoothing account from IESO: OPG has experience working with large financial assets and liabilities including jointly managing nuclear funds. That expertise, combined with its strong balance sheet allows OPG to effectively to manage this mechanism
 - OPG would borrow from Ontario Electricity Financial Corporation (OEFC) and from outside lenders to fund GA smoothing: OPG would be provided with flexibility to find the least cost and most effective method and source of financing including OEFC and external lenders.
 - Ontario Energy Board (OEB) would oversee the GA smoothing profile for the benefit of ratepayers [tbd]: as the independent regulator, OEB would review customer bill impacts resulting from this mechanism

Implementation

- The following entities would implement the Global Adjustment smoothing mechanism:



2. Helping Vulnerable Consumers

Helping Vulnerable Electricity Consumers

- Initiatives to help vulnerable consumers:
 - ~~Establishing a new “Affordability Fund” which will support Ontarians who have difficulty paying their electricity bills to be able to access energy efficiency improvements.~~
 - Broadening Rural or Remote Rate Protection (RRRP) to provide distribution charge relief for the customers of the costliest local distribution companies (LDC’s).
 - Expanding the Ontario Electricity Support Program (OESP) to ensure the program uptake is as close as possible to 100%.
 - Establishing a new Affordability Fund which will support Ontarians who have difficulty paying their electricity bills to be able to access energy efficiency improvements.
 - Establishing a new On-Reserve First Nations Delivery Rate.

Broadening Rural or Remote Electricity Rate Protection (RRRP)

- The RRRP is provided to a number of rural residential customers in Ontario.
- The Province is moving forward in broadening the RRRP to provide delivery charge relief to not only the current customers but also to those LDCs with some of the highest rates.
 - With this new proposal, about 800,000 customers will benefit from the enhanced RRRP program.
- The Province is also moving forward in having these RRRP costs be funded by the tax base, reducing regulatory charges for all Ontario ratepayers.
 - This is projected to cost approximately \$500 million in the coming fiscal year.

Expanding the Ontario Electricity Support Program (OESP)

- The OESP is an income-tested, application based program that lowers electricity costs for the most vulnerable consumers, providing a rebate directly on bills.
- Increasing the OESP credits by 50% would mean that single, low-income consumers who receive the lowest credit amount would get an increase from \$30 to \$45 per month (\$540 per year, an increase of \$180), and the lowest credit for the enhanced scale would increase from \$45 to \$68 (\$816 per year, an increase of \$276).
- The Province is expanding the OESP to ensure the program uptake is as close as possible to 100% by:
 - Streamlining the application process to make it easier and quicker to get approval;
 - Increasing awareness of the program to eligible recipients;
 - Exploring automatic qualifications for customers that are enrolled in other low-income support programs; and
 - Expanding eligibility for more low-income Ontarians.
- The Province is also moving forward in having the OESP funded by the tax base, reducing regulatory charges for all Ontario ratepayers.
 - This is projected to cost approximately \$185 million in the coming fiscal year.

Expanding the Ontario Electricity Support Program (OESP)

- The OESP is an income-tested, application-based program that lowers electricity costs for the most vulnerable consumers by providing a rebate directly on their bills.
- The current proposal would;
 - Increase the OESP credits by 50%, meaning that single, low-income consumers who receive the lowest credit amount would get an increase from \$30 to \$45 per month (\$540 per year, an increase of \$180), and the lowest credit for the enhanced scale would increase from \$45 to \$68 (\$816 per year, an increase of \$276). See the following side for details.
 - Expanding eligibility for more low-income Ontarians.
- In addition, the Province will also work to increase program uptake to as close as possible to 100% by:
 - Streamlining the application process to make it easier and quicker to get approval;
 - Increasing eligible recipients' awareness of the program; and
 - Exploring automatic qualifications for customers that are enrolled in other provincial low-income social programs.
- The Province is also moving forward in having the OESP funded by provincial revenues, reducing regulatory charges for all Ontario ratepayers.
 - This is projected to cost approximately \$185 million in the coming fiscal year.

Expanding the Ontario Electricity Support Program (OESP)

- 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

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

Proposed +50% OESP Credit Increase*

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

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

Establishing a First Nations On-Reserve Rate

- In 2016, the Ontario Energy Board (OEB) engaged with First Nations, including remote communities, the distributors serving them, and consumer groups such as the Low Income Energy Network.
- Following the engagement process the OEB recommends:
 - Eliminating the delivery charge for all on-reserve First Nations residential customers and removing the monthly service charge for customers of licensed distributors which charge a bundled rate. The OEB estimates this would provide residential customers an average monthly benefit of \$85.
 - 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.
- Government intends to introduce legislation to implement this recommendation.
- The Province is also moving forward in having the First Nations On-Reserve Rate funded by the tax base, reducing regulatory charges for all Ontario ratepayers.
 - This is projected to cost approximately \$20 million in the coming fiscal year.

First Nations On-Reserve Delivery Credit

- In 2016, the Minister of Energy asked the Ontario Energy Board (OEB) to develop options for a First Nation delivery credit for households.
- The OEB, engaging with First Nations, including remote communities, the distributors serving them, and consumer groups such as the Low Income Energy Network developed the following recommendations:
 - Eliminating the delivery charge for all on-reserve First Nations households and removing the monthly service charge for customers of licensed distributors which charge a bundled rate. The OEB estimates this would provide residential customers an average monthly benefit of \$85.
 - Automatically qualify on-reserve First Nations households (~21,500 customers).
- The Province plans to move forward in implementing the First Nations On-Reserve Delivery Credit, including funding it through provincial revenues to avoid increasing regulatory charges for all Ontario ratepayers.
 - This is projected to cost approximately \$20 million in the coming fiscal year.

Establishing a New Affordability Fund

- The Affordability Fund **will** assist electricity customers who cannot qualify for low-income conservation programs.
- The Affordability Fund **will** provide LDCs with an additional tool to help customers in need. LDCs will use the Fund to provide support to customers for energy efficiency improvements to help reduce their future electricity bills.
- The Province will work with Hydro One, in consultation with all other LDCs, to establish an independent Trust to serve as the administrator of the Affordability Fund.
- The Province will pay for the Fund through provincial revenues. This is projected to cost \$200 million in the current fiscal year.

3. Enhancing Competitiveness for Small Manufacturers and Industrials

Industrial Conservation Initiative

- The Industrial Conservation Initiative (ICI) provides a strong incentive for large electricity consumers to shift their electricity consumption to off-peak hours to reduce their bills by about one-third.
- By reducing the province's peak demand, ICI has the added benefit of deferring the need to build peaking generation.
- Currently, eligible ICI participants include those consumers with monthly peak demand exceeding one megawatt.
- Under ICI, these consumers are charged Global Adjustment on the basis of their share of the total system demand during the highest five peak hours of the year.
- Participating consumers collectively reduced Ontario's peak demand by an estimated 1,000 MW in 2015.

Enhancing Competitiveness for ~~Class B Electricity Consumers~~ Small Manufacturers and Industrials

- Expanding the eligibility threshold for Industrial Conservation Initiative (ICI) will provide ~~small manufacturers and industrials Class B consumers~~ the opportunity to save on their electricity costs. The expanded ICI would include
 - Extending eligibility to ~~small manufacturers and industrials larger Class B consumers~~ with average monthly peak demand over 500 kilowatts; and
 - Targeting eligibility to energy intensive industries with the North American Industry Classification System (NAICS) codes 31 - 33 (i.e., Manufacturing).
- Under the expanded ICI, ~~small manufacturers and industrials larger Class B consumers~~ whose electricity demand is currently too low to qualify for ICI, would now be eligible for the expanded ICI if they wish to participate.
- In addition, the Ministry will assist ~~small manufacturers and industrials' Class B consumers~~ participation in ICI through a targeted outreach campaign delivered by the Ontario Chamber of Commerce (OCC).

4. Market Efficiencies / Bending the Cost Curve

Ongoing Efforts To Bend The Cost Curve of Ontario's Electricity System

- Since 2010, the government has taken a number of important actions to reduce electricity system 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.

Improving Electricity Sector Efficiency

The Ontario Energy Board (OEB)

- The Ontario Energy Board (OEB) regulates and licences more than 70 Local Distribution Companies (LDCs) in the province.
- The OEB will identify opportunities for cost efficiencies by:
 - Encouraging shared partnerships on services between utilities, which will help reduce costs and encourage further innovation for small to medium sized utilities
 - Reviewing regulatory requirements to reduce “red tape” and eliminate unnecessary costs on LDCs
 - Looking at opportunities to further drive transmitter and LDC efficiencies and productivity improvements, including the use of innovative technologies and business processes.

Improving Electricity Sector Efficiency (cont'd)

Independent Electricity System Operator

- The IESO plans for the province's electricity needs, balances the supply and demand for electricity in Ontario in real time and administers conservation programs.
- The IESO and stakeholders have begun a Market Renewal Project that is intended to enhance the efficiency and performance of the wholesale electricity market.
- The IESO's Market Renewal initiatives include:
 - Developing a capacity auction process;
 - Introducing a day-ahead energy market, and
 - Switching to a single-schedule energy dispatch algorithm.
- Changes related to IESO's Market Renewal initiatives are estimated to save at least \$200 million per year, starting in 2021.

2017 Long-Term Energy Plan

- The Ministry of Energy is developing the next Long-Term Energy Plan (LTEP) after receiving feedback from the public, stakeholders and indigenous communities during the engagement process that took place from October to January 2017.
- The LTEP process is designed to be iterative and flexible and only commit resources as demand needs become clearer.
- The Ministry of Energy anticipates that the next LTEP will be published in spring 2017.

