

Electricity Relief Scenarios

Item/Description	Ratepayer Benefits	Fiscal Impacts	Considerations
Capping Distribution Costs* *To the simple average of \$30.86 per month across all rate zones based on 2016 rates. ¹ As of Jan 1 2017, it can be assumed the benefit to R2 customers will be roughly equivalent to R1 customers due to the increase in RRRP funding.	- For 2016, about 2 million residential customers in 23 LDCs across 32 rate zones see benefit. - About 1.7 million customers, or 85% of total, are served by 2 LDCs - Hydro One and Toronto Hydro. - If rates are capped to ~\$30.86/month then Hydro One and Toronto Hydro will see the savings below (at 750Kwh): - Hydro One R2: \$45.28¹ - Hydro One R1: \$23.16 - Hydro One Norfolk: \$8.42 - Hydro One UR: \$4.79 - Hydro One Haldimand: \$4.49 - Hydro One Woodstock: \$0.89 - Toronto: \$6.71 - The remaining approximately 300,000 residential customers served by the remaining 21 LDCs across 25 rate zones see an average benefit of \$5.21 per month ranging from \$0.23 per month for Westario to \$17.87 per month for Algoma. - There are roughly 4.6 million residential customers in Ontario as of Dec.31, 2015. Approximately 2.6 million customers see no benefit. - Benefit levels and affected customers would change year-to-year as new rates change the average.	- If the entire RRRP program was to be moved to the taxbase and the distribution cost was capped, the fiscal impact is approximately \$490 million. - However the yearly fiscal impacts will be varied and likely to grow. For example, in order to set rates for 2018, Hydro One will likely be submitting a cost-of-service application to the OEB in 2017. Although subject to OEB approval, this could result in significant rate increases. - There is also potential for escalation with Toronto Hydro distribution costs. - These 2 LDCs comprise the majority of the costs and their rates are expected to grow faster than the growth in the simple provincial average.	- LDCs with above average rates (e.g above the \$30.86 cap) have costs driven by characteristics unique to their organizations and service territories and are not uniform in their geographic or customer profiles. - Costs are driven by 2 LDCs: the most urban (Toronto) and the most rural (Hydro One). - Program may pose challenges to the effective regulation of the sector: - Potentially rewards least efficient LDCs and incents LDCs to get rates above the average. - Weakens OEB's ability to review rate cases in the interest of customers; - Would require OEB to be given a taxpayer protection mandate. - LDCs could fluctuate above and below the subsidy threshold year-to-year and this could cause extensive variation in rates. - Taxpayer subsidization of Hydro One may be controversial following the broadening of ownership.

Shifting the higher than market price for FIT contracts to the tax base	Would represent an estimated average residential ratepayer savings of \$1.38/month relative to OPO forecasts. Would represent an estimated average industrial ratepayer savings of \$1.15/MWh relative to OPO forecasts.	Would represent a total shift of approximately \$3.1 billion (NPV 2017) in large FIT value from the rate-base to the tax-base from 2017 to 2033.	Estimates based on 1860 MW of large (>500 kW) FIT wind and 915 MW of large FIT ground mount solar projects in commercial operation. RES I,II,III weighted average wind price of \$95.1/MWh was used as a proxy for a competitive market price for wind. Ontario did not procure solar PV competitively prior to LRP I in 2016. As a result, a proxy price of \$462/MWh has been developed. This is based on the annual price digression of large-scale solar PV PPAs procured competitively in the US market between 2009 and 2015, applied as an annual increase to the LRP I weighted average solar PV price.
Fund up to 20% of electricity infrastructure from the capital plan	• Cost for transmission infrastructure projects that are under development could be offset from capital funding to lower costs to ratepayers when transmitters seek to recover costs through rates. • A fund could also be developed to target projects where current cost responsibility rules force certain customers (e.g. a small Local Distribution Company, a mining project) to carry the majority of costs for the project. In some cases cost impacts are preventing projects with good rationale from moving forward. Offsetting costs for these ratepayers or customers would advance transmission investments in areas that are	• Scale of fiscal impact would depend on program design, which requires careful consideration. • 20% of the capital plan expenses estimated for 2016/2017 (\$11.2B) is ~\$2.2B. For context, Hydro One's annual capital budget for transmission is approximately \$1 billion per year. • ENERGY is aware of a number of projects under development that could be supported with under \$800M (e.g. provincial contribution to the Remote First Nations Connections project, Line in Greenstone, Line and station in Leamington, Red Lake upgrades) and this total value could flow over	• Transmission infrastructure is owned by private entities (e.g. Hydro One) who are motivated to capitalize assets to earn a return. Offsetting capital costs from the capital plan would need to be considered in this unique context to avoid unintended consequences. • Investments beyond transmission, such as microgrids or other system upgrades to support grid modernization should also be considered. • The current IESO regional planning process should be leveraged. For instance, the funding program could require a proposal to be consistent with the regional plan

	underserved, have lower system reliability or would create a platform for economic growth.	the next 5 years or amortized over the life of these projects (50+ years). In addition to projects currently under development, a fund could target transmission lines where reliability performance is substandard, for instance on areas within the transmission system serviced by single-circuit (no redundancy, prevalent in rural and northern areas). Another opportunity would be to target communities seeking to upgrade from single-phase to 3-phase power to attract economic development.	where it is located. - The funding program could target infrastructure investments that support government policy objectives, such as those for which government has deemed the project a priority through an Order-In-Council or where the project is consistent with the Climate Change Action Plan. - One concept that could be considered is that the funding program would advance transmission investments to promote economic growth, but that when new customers connect to the facilities, the fund would be rebalanced by payments from those customers. There already exists a framework under the Ontario Energy Board for this rebalancing when a private entity builds facilities and subsequent customers connect.
Fund Ontario's 2017-2020 electricity conservation programs (as part of the Conservation First Framework and the Industrial Accelerator Program) through the Greenhouse Gas Reduction Account (GGRA)	- Total program cost for 2017-2020 electricity conservation programs is expected to be ~2.1 billion dollars. Residential Customers - The average residential electricity consumer could see an electricity bill reduction of ~\$3 per month, between 2017 and 2020. Industrial Customers - The average industrial electricity consumer could see a reduction	Not applicable	- Further analysis is required to assess legal feasibility of this option within climate change legislative framework. Changes to ENERGY legislation would be required. - The Minister of Energy issued directions and a directive, respectively, to the IESO and OEB in 2014 to establish the Conservation First Framework and Industrial Accelerator Program. - The Crown Law Office at the

	of ~\$2.5 per MWh of electricity consumption		Ministry of Attorney General has indicated that the <i>Climate Change Mitigation and Low-Carbon Economy Act, 2016</i> only allows for incremental greenhouse reduction initiatives to be funded through the GGRA. Moreover, the regulatory framework of the Western Climate Initiative (WCI) also requires that funding generated through a cap and trade program be directed to incremental GHG reduction initiatives. • To facilitate GGRA funding into the global adjustment, legislative changes would need to be made to section 25.33 of the <i>Electricity Act, 1998</i>. • Electricity conservation programs result in reduced GHG emissions by avoiding emissions from peaking natural gas generation. • Electricity conservation programs between 2015 and 2020 are expected to result in 1.3 Mt of GHG reduction in 2020, equivalent to taking 300,000 cars off the road in that year. • Funding conservation programs through GGRA could provide short term relief to consumers while other electricity rate
--	--	--	--

			mitigation initiatives are developed (e.g. market renewal, LDC efficiencies).
Fund Ontario's 2017-2020 natural gas conservation programs (as part of the Demand Side Management Framework) through the GGRA Note: this would have no impacts to electricity rates	- Total program cost for 2017-2020 natural gas conservation programs is expected to be ~\$600 million dollars. Residential Customers - The average residential natural gas customer could see a natural gas bill reduction of ~\$1.9 per month, between 2017 and 2020. Industrial Customers - Consultation with the Ontario Energy Board (OEB) is required to assess the impact of decision on industrial rates.	Not applicable	- Further analysis is required to assess legal feasibility of this option within the climate change legislative framework. Changes to ENERGY legislation may be required. - The Minister of Energy issued a directive in 2014 to the OEB to establish the DSM Framework. - The Crown Law Office at the Ministry of Attorney General has indicated that the <i>Climate Change Mitigation and Low-Carbon Economy Act, 2016</i> only allows for incremental greenhouse reduction initiatives to be funded through the GGRA. Moreover, the regulatory framework of the Western Climate Initiative (WCI) also requires that funding generated through a cap and trade program be directed to incremental GHG reduction initiatives. - Further analysis is need on changes to the OEB Act. - Ontario's natural gas energy efficiency programs are Ontario's second largest GHG reduction initiative to date, after coal phase-out.

			Natural gas conservation programs between 2015 and 2020 are expected to result in 2.5 Mt of GHG reduction in 2020, equivalent to taking 650,000 cars off the road in that year.
Funding ICI through the Tax Base	\$/month* 2017 6.76 2018 6.62 2019 6.50 2020 6.85 2021 6.10 *750 kWh monthly consumption	\$millions 2017 1,056 2018 1,032 2019 1,011 2020 1,065 2021 946	- Based on Ministry of Energy forecast for electricity prices and demand. 2017 expansion of ICI will put some upward pressure on these benefits and impacts. - There is significant uncertainty on the benefits and impacts due to the dependence of Global Adjustment on the fluctuating wholesale electricity market.