
Encouraging Greater Customer Choice

January 19, 2017, Version v2.1

CONFIDENTIAL DRAFT

Outline

- Background
 - 2013 LTEP Commitments
 - Achievements since 2013 LTEP
 - Current Context
 - Stakeholder Feedback
- Proposed Initiatives
 1. Providing greater electricity rate choice to consumers
 - a. Regulated Price Plan (Residential and Small Business Customers)
 - b. Non-Regulated Price Plan Class B (Commercial and Small Industrial)
 - c. Class A (Large Industrial)
 2. Widening consumer energy choices
 - d. Broadening opportunities to participate in net metering
 - e. Programs and pilots under the electricity and natural gas energy efficiency frameworks (details in Enhancing our Commitment to Conservation deck)
 - f. Planned programs under the Ontario Climate Change Solutions Deployment Corporation (details in Climate Change Action Plan deck)
 - g. Natural gas expansion (details in Reduce Energy Costs and Promote Equitable Energy Access deck)
- Next Steps

Background

LTEP 2013 Commitments

- The 2013 LTEP stated that customers will be given more program choice under the new Conservation and Demand Management Framework, but otherwise broadening customer energy choices was not a core theme.
- The government will work with gas distributors and municipalities to pursue options to expand natural gas infrastructure to service more communities in rural and northern Ontario.

Achievements since 2013 LTEP

- In November 2015, the OEB issued the RPP Roadmap, setting out a five-point plan to be implemented over the course of the next three to five years. In July 2016, the OEB issued its Pilot Guidelines for price and non-price pilots to be delivered by LDCs; submissions were due in August 2016.
- The Ministry conducted extensive stakeholder consultation to inform proposed updates to the province's net metering program. The updated net metering program will allow customers, including large commercial and industrial customers, to meet their annual electricity needs with clean, renewable energy. Updates are proposed to be in force July 1st, 2017. *(All statements pending LRC and Cabinet decision)*.
 - Proposed updates to the net metering program will clarify that customers are able to pair energy storage systems with renewable energy generation, for purposes such as reliability, resilience, or demand-shifting.
- Programs and pilots under the 2015-2020 electricity and natural gas energy efficiency frameworks will continue to expand customer choice.
 - Under the Conservation First Framework, 12 province-wide programs are in place; 37 unique new programs are included in CDM Plans, and 11 pilots have been completed with 20 more currently under development or in market.
 - CFF programs and the Industrial Accelerator Program are available for all customer segments.
- The IESO and distributors are working to include heat pump incentives for electrically-heated homes in province-wide programs building on pilots completed or in market.
- Ontario has provided funding through the Green Investment Fund (GIF) to Enbridge Gas and Union Gas to expand and enhance their respective home energy audit and retrofit programs, including to offer air source heat pumps for homes heated with other fuels (propane, oil and wood).
- In November 2016, the OEB issued a decision on a generic hearing regarding natural gas expansion. The decision gives more flexibility to utilities (by allowing stand-alone rates and surcharges) to make expansion to unserved communities more economically feasible and encourages competition to service communities.
- Natural gas access grant program (TBC pending announcement).

Current Context – Increasing Energy Choice

- Minister's November 28, 2016 speech at the Empire Club spoke of need to enable "enhanced end-customer engagement and choice."
- Affordable access to electricity, for families, farms and businesses in every part of Ontario, remains a significant concern for many. The Minister indicated that Ontario is taking action to reduce electricity bills.
- The OEB's five-point plan is intended to redesign the RPP to respond to policy objectives, improve system efficiency and give consumers greater choice. One of the major elements of the RPP Roadmap is implementing pilots for new pricing options and structures.
- The RPP has achieved some demand shifting, but analysis has shown that TOU pricing plans have not created the price signals for some small business and residential customers to shift demand away from peak periods
 - According to analysis by the Auditor General, 35 per cent of households changed their behaviour in response to TOU rates and price controls.
 - The IESO commissioned study by the Brattle Group (May 2016) found that residential consumers have reduced usage during peak periods in the summer by one to two percent:

	2012	2013	2014
Percent (%) Decrease During Summer Peak Periods	2.27	2	1.18

- Although customers have been able to shift some demand, residential and small business customers have raised concerns about their ability to shift demand away from peak periods.
- The OEB is currently working with interested electricity distributors to develop and deploy RPP pilots throughout the province. The results of the pilots will help inform future OEB decisions on the RPP pricing plans and potentially will allow the OEB to offer multiple pricing plans.

Current Context – Increasing Energy Choice (cont'd)

- The 2016 Minister's mandate letter to the Minister of Energy instructed the Minister to continue:
“Working with local distribution companies and natural gas utilities to offer more choice for customers and help customers reduce their energy use”
- The 2016-2020 Climate Change Action Plan (CCAP) identified the need to increase the use of low-carbon technologies and increase customer choices for energy use.
- The priority to offer more customer choice was carried through the 2016 LTEP discussion guide:
“Ontario's Climate Change Action Plan points to a need to increase the use of low-carbon technology in Ontario homes and businesses, such as solar, battery storage, advanced insulation, and heat pumps. A number of programs funded by the proceeds from the cap and trade program will also be introduced to increase the choices that Ontarians have to use energy wisely.” – Conservation and Energy Efficiency Section
- The electricity sector is moving towards a customer-centric approach in their business models.
 - Hydro One's 2016-2020 Strategic Direction outlines a customer-centric service strategy.
 - The OEB has repeatedly talked about the role of the regulator in setting a customer-centric approach to modernizing the grid.
- As a part of these commitments, and in recognition of the challenges ratepayers face, the Premier of Ontario and the Ministry of Energy have identified energy rate mitigation as a priority, and increasing customer choice as one strategy to help ratepayers manage their energy costs.
- The LTEP provides an opportunity to reaffirm the commitment to increasing consumer choice, and provide direction on actionable steps to be taken by the government and its agencies.

Stakeholder Consultation Feedback

- A common issue heard throughout LTEP stakeholder engagement was that of high electricity prices (review of LTEP stakeholder submissions is in progress).
 - This feedback was heard from Hydro One, the City of London, Grey Bruce Labour Council, the Canadian Council for Public-Private Partnerships, the EDA and 20+ individuals identified electricity prices as a key priority for the 2017 LTEP.
 - Hydro One expressed support for the RPP pilots and future changes to the RPP pricing plans. Hydro One administered a price pilot in 2015/2016, and has applied to the OEB to administer a RPP pilot under the RPP review in 2017/2018.
- Another common theme among stakeholders was a desire for increased customer choice. Common examples cited were enabling micro-grids and solar panels, energy storage and low-carbon technologies.
 - CanSIA, Algoma Power, Enwin Utilities and the EDA all highlighted the need to create greater customer choice through the programs and policies enabled by the 2017 LTEP.
- Stakeholders identified that access to natural gas is urgently needed in rural Ontario to lower energy costs for homes and businesses, to facilitate industrial expansions and to attract investment

Proposed LTEP Initiatives

Summary of Proposed LTEP Initiatives

Initiative

1. Providing greater electricity rate choice to consumers
 - a. Regulated Price Plan (Residential and Small Business Customers)
 - b. Non-Regulated Price Plan Class B (Commercial and Small Industrial)
 - c. Class A (Large Industrial)
2. Widening consumer energy choices
 - a. Broadening opportunities to participate in net metering
 - b. Programs and pilots under the electricity and natural gas energy efficiency frameworks (details in Enhancing our Commitment to Conservation deck)
 - c. Planned programs under the Ontario Climate Change Solutions Deployment Corporation (details in Climate Change Action Plan deck)
 - d. Natural gas expansion (details in Promote Equitable Energy Access deck)

1. a) Regulated Price Plan (RPP) – Residential and Small Business Customers

Recommendation:

- **Direction:** Direct the OEB to report back with an investigation and implementation plan for an enhanced RPP Roadmap which investigates a wider array of pricing plans, including exploring a potential role for retailers to deliver pricing programs.-
 - OEB to also explore the use of a flat or tiered rate that could be offered on an interim basis while the RPP pilots are underway and results are analyzed.

Considerations:

- OEB sets the price for electricity commodity (i.e., HOEP and GA) for all consumers with demand of 50 kW or less and use less than 250,000 kWh/year. Residential consumers and small businesses can pay the prices established through the OEB's Regulated Price Plan (RPP) or can opt to sign up with an electricity retailer.
- Consumers with a retail contract pay an agreed upon rate for HOEP, and continue to pay GA.
- Consumers are also able to opt-out of RPP and retail contracts, instead pay HOEP and GA. Very few customers are aware of this option.

When	How much electricity you use	Price (¢ per kWh)
Residential (effective November 1, 2016)		
Summer (May 1 - Oct 31)	Up to 600 kWh	--
	More than 600 kWh	--
Winter (Nov 1 - Apr 30)	Up to 1,000 kWh	10.3
	More than 1,000 kWh	12.1
Non-residential (effective November 1, 2016)		
All seasons	Up to 750 kWh	10.3
	More than 750 kWh	12.1

Current Tiered Pricing rates for RPP customers. The OEB could explore alternate tiered rates or expanded participation in the current tiered rate structure on an interim basis. About 1 in 10 Ontario electricity customers are still billed according to tiered prices. Consumers on this plan can use a certain amount of energy each month at a lower price. When they pass that level, their rate goes up for all additional electricity. Tiers are different for home and business customers.

1. a) Regulated Price Plan (RPP) – Residential and Small Business Customers (cont'd)

Considerations (cont'd):

- Research commissioned by the OEB indicated that different customers likely need different pricing design choices in order to respond to TOU.
- OEB has proposed an interim opt-in RPP flat pricing plan that could be in place as the OEB completes its RPP review and prior to the implementation of new pricing plans.
- **Cost impact:** Customers that chose to opt-in to new programs would do so because of the potential benefit (e.g., a flat or tiered rate would benefit any customer with peak and mid-peak use that is higher than average). There is the risk of short-term under recovery of costs in RPP as consumers would likely only change pricing plans if there was a financial benefit. Rate design that shifts the risk away from the OEB could be considered (e.g., OEB could consider the role of retailers to deliver pricing programs).
 - Energy recommends consideration of a tiered rate based on electricity consumption as opposed to the interim flat rate to maintain the conservation signal to customers and align with the government's Conservation First principle (see figure on previous slide).
- **Electricity literacy:** Survey conducted by the OEB suggests that the majority of small and medium businesses have taken no action to shift consumption from high to low peak times. OEB recognizes the benefits of improved energy literacy as part of its RPP Roadmap and has included non-price elements in the upcoming RPP Pilots.

1. b) Non-Regulated Price Plan (RPP) Class B – Commercial and Small Industrial Customers

Recommendation:

- **Direction:** Direct OEB to report back with further analysis and a proposed implementation plan for regulating GA recovery for non-RPP Class B consumers by giving them similar incentives as a TOU structure. Note: this would require amendments to O. Reg. 429/04.

Considerations:

- Currently, non-RPP Class B electricity consumers pay HOEP and a flat volumetric GA rate.
- As part of the RPP Road Map, OEB has proposed to offer a time-sensitive GA to non-RPP Class B which they believe would provide a stronger time-shifting incentive and enhance system efficiency by providing a better alignment between the cost and value of power in each hour.
- **Improved alignment with system cost:** Selectively allocating certain GA costs into different time periods could be contentious as peak rates would likely increase. As well it would provide an additional price signal for demand shifting.
- **Cost impacts:** Customers that chose to opt-in to new programs would do so because of the potential benefit. Costs are likely to rise for customers who cannot shift/reduce demand. Further study and analysis is required to understand the price responsiveness of non-RPP Class B consumers.

1. c) Class A – Large Industrial Customers

Recommendation:

- **Decision:** Reference existing industrial price mitigation initiatives, and that government will continue to monitor industrial electricity prices for further opportunities.
- **Decision:** ENERGY to assist in providing greater awareness of available energy efficiency programs for Class A customers.

Considerations:

- Class A electricity consumers pay HOEP and GA based on their contribution to peak demand during the top five peak hours of a year as part of the Industrial Conservation Initiative (ICI).
- There is a high degree of differentiation amongst consumers within the commercial and industrial sectors in terms of size and consumption patterns which is reflected in the prices they pay.
- Based on stakeholder interest and feedback, Ontario recently expanded ICI to open it to consumers with monthly peak demand greater than one megawatt, down from the 3 MW threshold.
- **Cost impacts:** Participants in the ICI program can reduce electricity bills by one-third by reducing their electricity consumption during peak demand periods. Since electricity system costs must be fully recovered, what Class A would otherwise would have paid absent of ICI will be shifted to all non-ICI participants. Providing further relief to Class A would increase costs for all other electricity consumers.

2. a) Broadening Opportunities to Participate in Net Metering

Recommendation:

- **Decision:** Pending Cabinet approval, ENERGY can announce amendments to the 2005 Net Metering Regulation (541/05) that broaden program eligibility.*
- **Exploratory:** ENERGY can provide an update on consultations and analysis on third-party ownership and virtual net metering – additional program design elements that would broaden the participation in the net metering program.*

Considerations:

- Amendments to the 2005 Net Metering Regulation (541/05) were informed by extensive stakeholder consultation and will meet the 2013 LTEP commitment to examine the evolution of the microFIT program to a net metering program. Updates will also support initiatives under the 2016-2020 CCAP. Proposed amendments, and include:
 - Clarifying the carryover period for bill credits for surplus electricity sent to the grid at 12 months. This change would support homeowners in achieving near net zero and net zero energy homes, a key CCAP element.
 - Allowing larger commercial, institutional and industrial customers who have peak electricity demand greater than 500 kW to meet their annual electricity needs with renewable energy by participating in net metering, by removing the 500 kW project capacity size limit.
 - Enabling customers to pair energy storage systems with renewable energy systems for reliability, resiliency, demand-shifting and/or to further offset their draw from the electricity grid

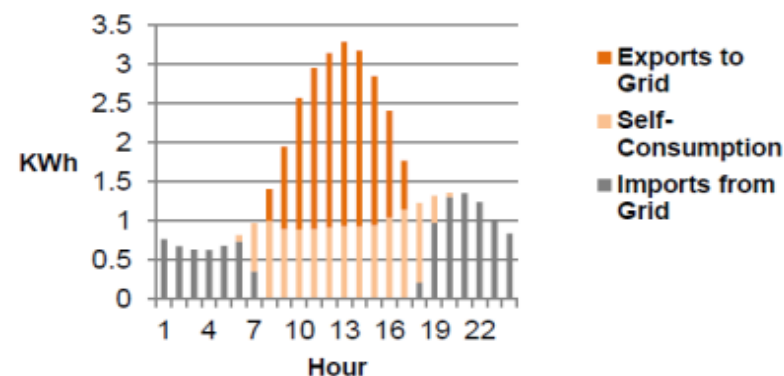
* (Also discussed in the Renewable Energy LTEP deck).

2. a) Broadening Opportunities to Participate in Net Metering (cont'd)

Considerations (cont'd):

- The proposed amendments are intended to increase energy choice for consumers, provide opportunities for customers to offset electricity bills, and enables innovative technologies and customer-utility relationships. In terms of giving customers choice over their energy sources and a means to offset their electricity bills:
 - Residential customers may self-consume 30 to 40% of annual generation onsite (offsetting this amount of their annual grid consumption), commercial and industrial customers may self-consume 75 to 100% (based on IEA 2014 and 2016 Residential and Commercial Renewable Energy Prosumers reports).
- The graph to the right shows a sample load profile of a net-metered residential customer. The light beige portion of the columns show the portion of generated electricity that is self-consumed by the customer.
- ENERGY can work to update this graph and prepare a similar graph for a sample commercial/industrial net metering customer for inclusion in the LTEP.

Hourly Electricity Demand and Yield for an Average Ontario Household with a 4 kW Solar PV System



Source: 2014. IEA-RETD. Residential Prosumers – Drivers and Policy Options – Ontario Case Study. Available here: http://iea-retd.org/wp-content/uploads/2014/09/RE-PROSUMERS_IEA-RETD_2014.pdf

2. a) Broadening Opportunities to Participate in Net Metering (cont'd)

- Since the launch of the microFIT and FIT programs there has been relatively limited uptake of net metering, with distributors reporting a total of 9 megawatts (MW) of net metering capacity installed in 2015.

Net Metering Facilities and Installed Capacity in Ontario by Renewable Energy Type (2015)

Type	Number of Net Metering Facilities (2015)	Total Net Metering Installed Capacity (kW, 2015)
Biomass	3	100
Solar PV	550	6,191
Water	2	10
Wind	129	2,771
TOTAL	684	9,072

Source: OEB data, as reported by LDCs for the year ending December 31, 2015

- The Ministry began consulting in January 2017 on additional program design elements that would broaden participation in the net metering program through third-party ownership and virtual net metering.
 - These new net metering approaches could provide more options for consumers, greater access to net metering for different customer types (e.g. multi-unit residential) and opportunities for industry to pursue innovative and value-added approaches to net metering projects.

2. b) Programs and Pilots under the Electricity and Natural Gas Energy Efficiency Frameworks

- Programs and pilots will continue to be developed and offered under the electricity and natural gas energy efficiency frameworks.
 - For example, electricity distributors are currently developing a business plan to offer Air-Source Heat Pumps as a part of the Heating and Cooling Initiative. (Pending IESO approval of the business case, this could be referenced in the 2017 LTEP).

* Details in Enhancing our Commitment to Conservation deck

2. c) Planned Programs under the Ontario Climate Change Solutions Deployment Corporation

- Reference to Climate Change Strategy and update on planned initiatives under the Ontario Climate Change Solutions Deployment Corporations (Low-Carbon Deployment Entity). (Also discussed in the Climate Change Strategy and Enhancing Commitment to Conservation LTEP decks).

* Details in Climate Change Action Plan deck

2. d) Natural Gas Expansion

- Support for natural gas expansion noting the OEB decision and [pending] grant funding.

* Details in Promote Equitable Energy Access deck

Next Steps

Next Steps

- LDCs are expected to launch the RPP Pilots by May 2017, and run them for 12 and 18 months. Verified results of the pilots are expected to be made public by December 2018.
- OEB to report back on analysis related to additional pricing plans and implementation plans including the potential role of retailers.
- The Ministry is consulting with stakeholders on additional program elements for the net metering program and will conduct further analysis to inform policy options/recommendations.
- Confirmation of natural gas expansion grant program.