Ontario Energy Board
Commission de l'énergie de l'Ontario

Rate Mitigation

Briefing - Ministry of Energy

Presented by: Ontario Energy Board

December 2, 2016

Introduction – Topics to be covered

- Typical Bills for Urban and Rural Electric Heat Residential Customers
- Generation Supply
- Current Relief
- Upcoming changes to the Bill
- OEB initiatives
- Other agency initiatives

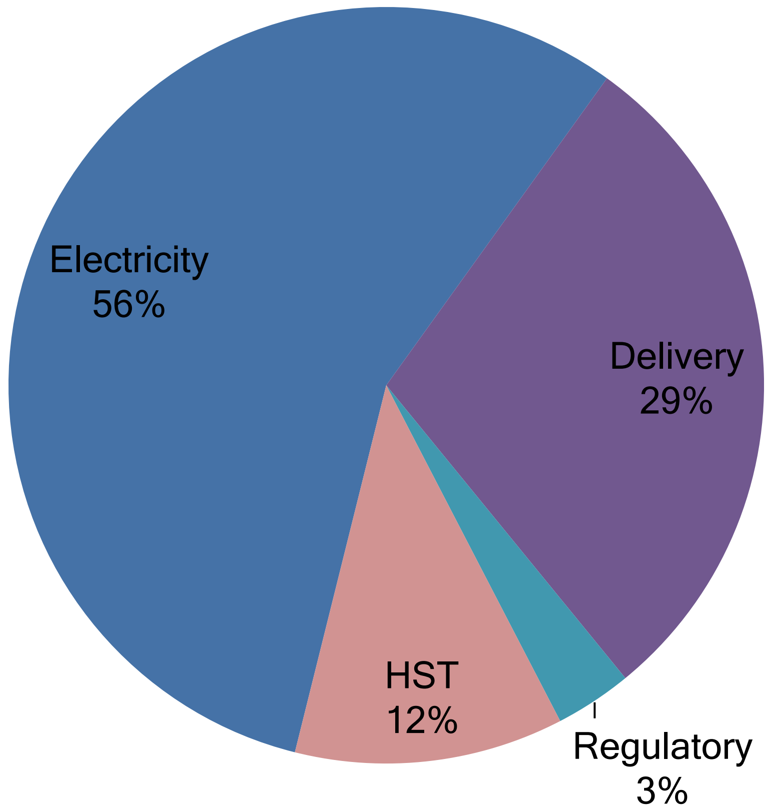
Elements of Ontario Residential Electricity Bill

There are four line items on a Residential bill.

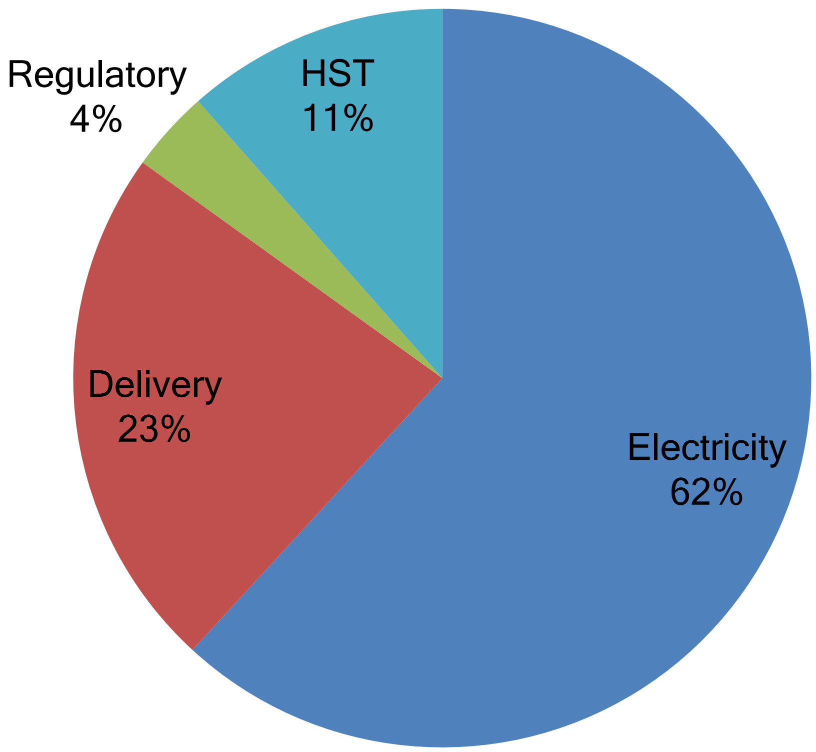
1. **Electricity – cost of power (i.e. generation)**
   - Most residential customers pay RPP prices. RPP includes both market electricity costs (HOEP) and cost recovered through Global Adjustment (GA)
   - OEB sets RPP but does not control all cost components within it.
2. **Delivery – cost of getting power to where it is used**
   - Distribution – OEB sets rates for 70+ LDCs
   - Transmission – OEB sets transmission rates
   - Losses – difference between distributor electricity purchases and what it sells to customers
3. **Regulatory Charges – costs of running the system**
   - Includes cost of operating the wholesale market, and cost of programs such as OESP and RRRP
   - Wholesale market costs are established in IESO market and passed through to customers.
4. **Debt Retirement Charge - $0 for residential**
   - No longer applies to residential customers as of January 1, 2016.
   - Appears as a separate line item of $0 on bill.

Average Ontario Residential Electricity Bill – Breakdown

Typical Residential Electricity Customer (750 kWh) about $150 / month

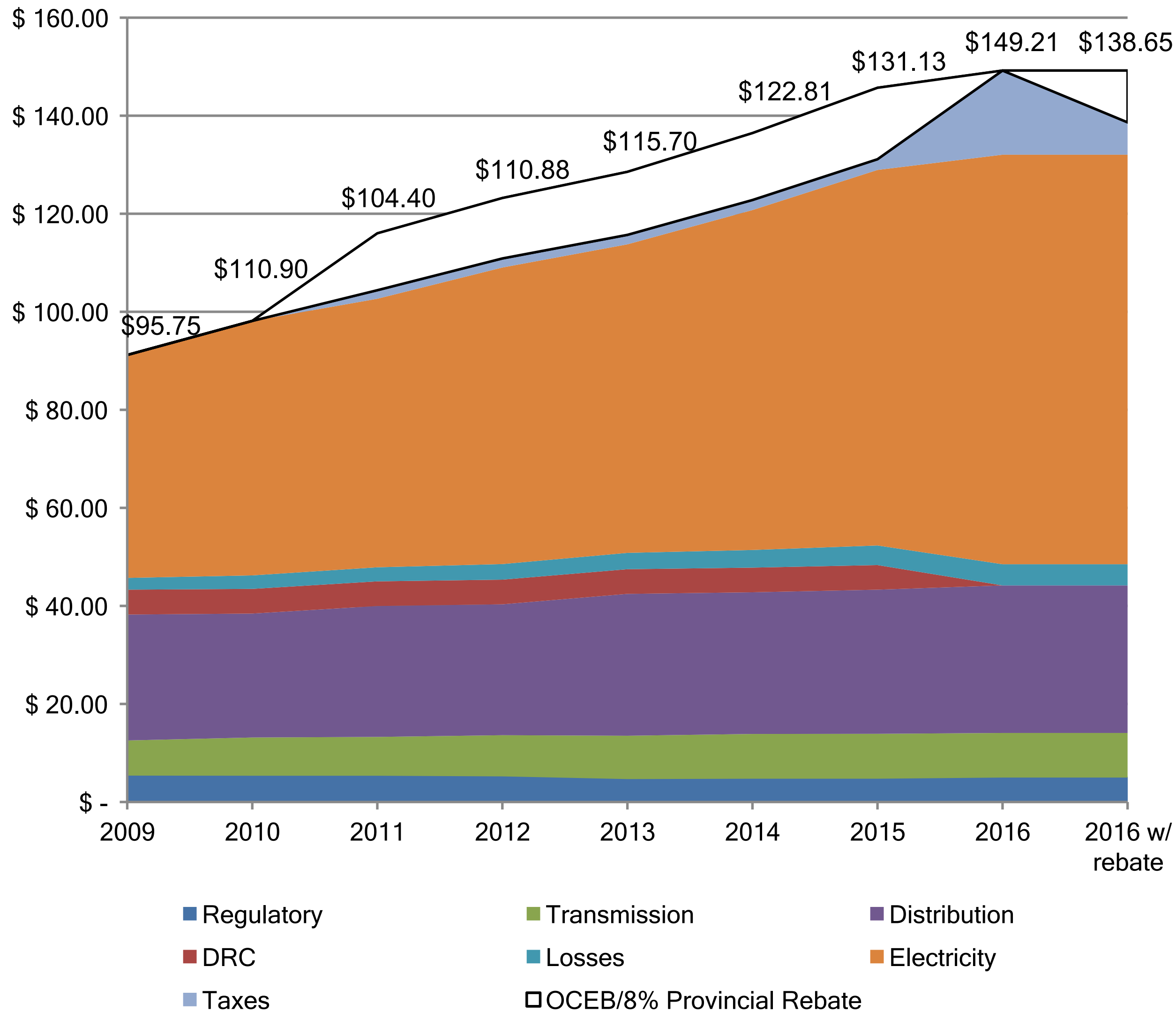


High Volume Residential Electricity Customer (2,000 kWh) about $360 / month (typically a customer with electric heating)



Values based as of May 1, 2016 but RPP price has not changed since then.

Average Ontario Electricity Bill - Trends



	Total Change 2009-16 ($)	Average Increase (%/Year)
Electricity	$ 38.06	12%
Distribution	$ 4.42	2%
Transmission	$ 1.93	4%
Total Bill Increase	$ 53.46	8%

- Bills shown for a typical electricity customer consuming 750 kWh per month.
- OCEB/8% Provincial Rebate shows amount of credits that were provided to customers during each year.
  - OCEB expired Dec. 31, 2015.
  - 8% Provincial Rebate in effect Jan. 1, 2017

Typical Current Customer Bills

750 kWh/month

SAMPLE MONTHLY BILL STATEMENT
Toronto Hydro-Electric System Limited - Main

Account Number:
000 000 000 000 0000

Meter Number:
00000000

Your Electricity Charges

Electricity (what is this charge?)	
Off-Peak @ 8.700 ¢/kWh	42.41
Mid-Peak @ 13.200 ¢/kWh	16.83
On-Peak @ 18.00 ¢/kWh	24.30
Delivery (what is this charge?)	53.94
Regulatory Charges (what is this charge?)	4.92
Debt Retirement Charge (what is this charge?)	0.00
Debt Retirement Charge exemption saved you $X.XX	
Total Electricity Charges	**$142.40**
HST	18.51
Total Amount	**$160.91**

1200 kWh/month

SAMPLE MONTHLY BILL STATEMENT
Hydro One Networks Inc. - Residential - Low Density (R2) - Residential - Low Density (R2)

Account Number:
000 000 000 000 0000

Meter Number:
00000000

Your Electricity Charges

Electricity (what is this charge?)	
Off-Peak @ 8.700 ¢/kWh	67.86
Mid-Peak @ 13.200 ¢/kWh	26.93
On-Peak @ 18.00 ¢/kWh	38.88
Delivery (what is this charge?)	124.10
Regulatory Charges (what is this charge?)	8.21
Debt Retirement Charge (what is this charge?)	0.00
Debt Retirement Charge exemption saved you $X.XX	
Total Electricity Charges	**$265.98**
HST	34.58
Total Amount	**$300.55**

2000 kWh/month (electric heat)

SAMPLE MONTHLY BILL STATEMENT
Hydro One Networks Inc. - Residential - Low Density (R2) - Residential - Low Density (R2)

Account Number:
000 000 000 000 0000

Meter Number:
00000000

Your Electricity Charges

Electricity (what is this charge?)	
Off-Peak @ 8.700 ¢/kWh	113.10
Mid-Peak @ 13.200 ¢/kWh	44.88
On-Peak @ 18.00 ¢/kWh	64.80
Delivery (what is this charge?)	177.43
Regulatory Charges (what is this charge?)	13.51
Debt Retirement Charge (what is this charge?)	0.00
Debt Retirement Charge exemption saved you $X.XX	
Total Electricity Charges	**$413.72**
HST	53.78
Total Amount	**$467.51**

- For Hydro One R2 customers, RRRP fixed credit of $31.50 included.
- As of January 1, 2017, RRRP fixed credit will increase to $60.50.
- For all customers, 8% credit will apply to total bill as of January 1, 2017

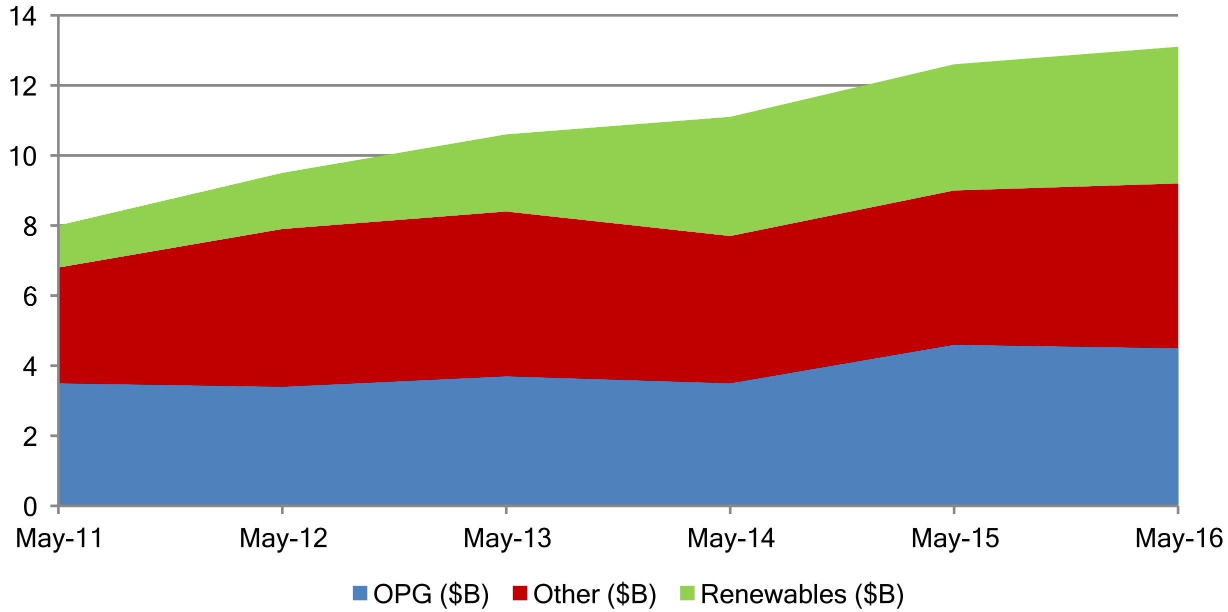
Electricity: Cost as at May 1, 2016
for 750kWh/mo, typical consumption pattern

Policy Changes - Impact

- The impact of recent and currently proposed policy changes is summarized below.

			Typical Ontario Customer (750 kWh/month)	Hydro One – R2 Customer (2,000 kWh)
		Total Bill ($/month)	$150	$468
Timing	**Policy Change**	**Description**		
2016	OCEB	10% credit removed	$15	$47
	DRC	No longer charged to residential	$(5)	$(14)
	OESP	Funding for low-income assistance	83 cents	$2
2017	RRRP Rate	Increased assistance to rural/remote customers	60 cents	$2
	FN Relief (charge)	Proposed charge to fund relief for first nations (FN) customers	11 cents	29 cents
	RRRP Credit	Proposed increase to RRRP credit for R2 customers.	n/a	$(29)
	FN Credit	Proposed relief of delivery line credit for first-nations customers.	n/a	$(177)
	8% Provincial Rebate	Refund of PST portion of HST	$(12)	$(35) rural and $(23) FN
	Overall Impact		(71 cents)	$(27) rural and $(163) FN

Drivers of Supply Cost Increase



Forecast Supply Cost		
	2011	2016
OPG	$3.5B	$4.5B
Renewables	$1.2B	$3.9B
Total	$8B	$13B
OPG % of Total	44%	34%
Renewables % of Total	15%	30%

- The OEB oversight over supply costs is limited to OPG's payment amounts.
- Since 2011, supply cost has increase by 63%.
  - 54% due to renewables
  - 20% due to OPG
  - 26% from other sources (e.g. Bruce nuclear, conservation)
- OPG now represents a smaller percentage of total RPP cost pool than in 2011.
- RPP consumers (residential and small business) are responsible for about 50% of the total supply cost even though they only represent about 40% of total Ontario consumption.
  - This is due to the difference in allocation of the GA between Class A and B customers.

Values based on RPP forecasted costs in RPP Price Reports for May 1, 2011 and May 1, 2016 RPP prices.

Impact of Current Major Applications

Impact as filed by applicants for typical residential customer (750 kWh/month), based on proposed rates if approved

- OPG (includes smoothing and riders)

2017	2018	2019	2020	2021
(0.9%)	1.1%	0.7%	1.2%	1.3%
($1.29)	$1.73	$1.07	$1.86	$1.89

- HONI Transmission
  - 0.2% in 2017, 0.3% in 2018

2017	2018	2019	2020	2021
0.2%	0.3%	New 5-year application	New 5-year application	New 5-year application
$0.41	$0.48			

Return on Equity

- Utilities rely on profits for the purpose of investing in infrastructure and modernizing their grids, a key component is the Return on Equity
  - OEB sets the RoE for ALL utilities at the same level currently 8.9%
  - North American regulated return on equity currently ranges form 7.2% - 10.3%
  - 1% reduction in RoE equates to approx. $150 million or ≈ $1/month for avg residential
    - ➢ $70MM for LDCs (0.5% decrease on total residential bill)
    - ➢ $40MM for transmitters (0.1% decrease on total residential bill)
    - ➢ $41MM for OPG (0.2% decrease on total residential bill)

- Considerations:
  - Any change would need to be evidence based – need to consider current interest rate climate
    - – OEB relies on a formula to set RoE that considers risk profile and LTD rates
  - Potential for significant utility/shareholder backlash due to impact on returns
    - – Legal challenge over Fair Return Standard
  - Impact on utility borrowing costs if lenders see greater risk due to reduced equity and financial flexibility, affect utility requirements for refurbishment and meeting public policy objectives
  - Potential impact on province’s investment profile, concerns about arbitrary changes
  - Impact on Hydro One and on Enbridge/Spectre (all Ontario utilities are subject to same RoE)

Flat Rate Time of Use RPP

- Eliminate mandatory RPP time of use pricing. Offer flat rate pricing on an opt-in basis for TOU customers for a limited time (2-3 years) until a wider range of price plans is available.

Current TOU	New Flat Rate
On: 18.0 ¢/kWh	11.1 ¢/kWh
Mid: 13.2 ¢/kWh	
Off: 8.7 ¢/kWh	

- Price would be established equal to the RPP Average price that is the basis for TOU and tiered price calculations.

- Customer impact:
  - Would benefit any customer with peak and mid-peak use that is higher than average.
    - Small buiness customers, who typically use most power at peak times.
    - Retired/stay at home customers
  - Review of one small sample of electric heat customers' usage patterns indicates ~8% electricity line reduction under flat rate. (Further study required)
  - No impact to customer whose usage pattern matches that of the average Time of Use customer (ie, 65% of consumption is in off-peak periods, 17% mid and 18% on peak).
  - Opt-in basis retains ability to stay on time of use for any customer that benefits from it.

- Considerations
  - Off-peak (weekend and overnight) prices would rise for those who opt for flat rate.
  - System could withstand effects of less demand response from RPP customers who opted out of TOU
  - Small risk of short term under/over recovery of costs in RPP if customer reaction leads to marked shift in behaviour (requires study)
  - Distributors would have to design and implement an opt-in procedure and supporting billing system
  - Detractors would argue that sunk costs of smart metering implementation are wasted.
  - No overall change in system costs.
  - Once offered, there will be significant opposition to any return to mandatory TOU.
  - Implementation via amendment to TOU regulation.

Create a Time-Sensitive GA for Class B

- GA is a volumetric charge ($/MWh) determined monthly for all Class B customers and has represented the large majority of the commodity cost of electricity since 2012. Their cost of consumption therefore does not change much between peak and off peak periods, dulling any incentive to shift electricity use to off-peak.

- The OEB's regulated price plan (RPP) restores a time-shifting incentive for RPP time of use customers by selectively allocating certain GA costs into peak and mid-peak periods, generally in accordance with the associated system value being provided at those times.

- For any customer not on the regulated price plan, no such incentive exists. To restore an incentive to provide price-responsive behaviour across all Class B customers, a time-varying GA cost for all Class B customers could be instituted. This would:
  - Increase demand responsive behaviour among Class B without the need for further incentives
  - Provide a more equitable treatment across RPP and non-RPP
  - End the cross subsidy between RPP and non-RPP when RPP customers reduce their peak demand
  - Potentially provide more opportunity for retailers to offer value through their products.

- Class B GA could be shaped to an annual hourly profile or shaped to a simple set of TOU periods. Amendment to O. Reg. 429/04 required.

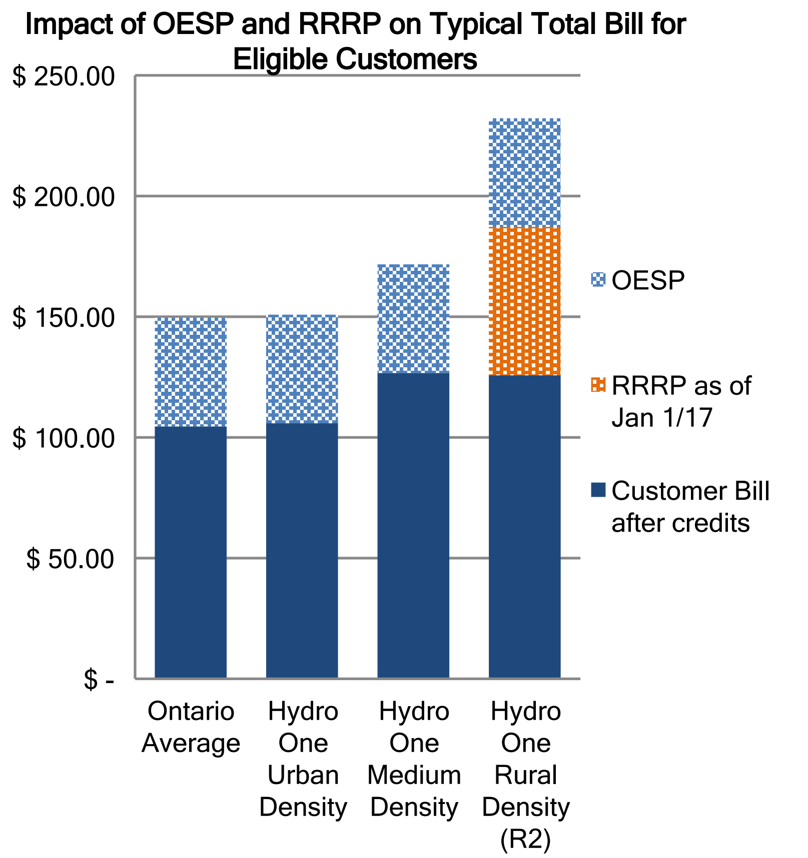
- Expected benefits: Based on 2015/16YTD costs, a 1 percentage point lower GA share for Class B leads to an est. $100M lower annual system costs for the class as a whole; individual customer benefits from greater shifting/conservation would also be expected. Costs likely to rise for customers who cannot shift/reduce demand. (Further study required).

Considerations

- Little work has been done to understand the price responsiveness of non-RPP Class B customers; their overall diversity may complicate the determination of an optimal outcome.
- Methodology for allocation of system costs can be contentious
- Further study required to assess degree of change in risk to overall cost recovery

Programs Providing Rate Relief

- Two programs provide about $325M in relief for electricity customers:
  - Ontario Electricity Support Program (OESP) and Rural and Remote Electricity Rate Protection (RRRP)
  - Revenue for programs is collected from all Ontario customers.
  - Combined cost for a typical residential customer about $2/month.
- Introduced in 2016, OESP forecast to provide about $145M in credits to low income customers.
  - Monthly credit to qualified electricity customers range from $30 to $75 per month.
- In 2016, RRRP will provide about $176M in rate relief to rural and remote customers.
  - Eligible areas are defined in legislation (Hydro One R2 and Remotes, Algoma, First Nations Distributors).
  - Hydro One benefit is fixed by regulation at $127M annually. Credit is currently $31.50/month per customer; benefit is included in distribution charge.
  - To increase by approx. $30/month on January 1, 2017
- Low Income Emergency Assistance Program
  - One-time grant to qualified electricity and natural gas customers
  - (LEAP) Provided $7.4M in financial assistance in 2014 ($2.6M to 6,100 natural gas customers and $4.8M to 9,600 electricity customers)



OESP credit shown here is $45
Sources: EB-2013-0416, Hydro One Networks 2015-2019 Distribution Rates

Greater Assistance to Low Income Consumers

- To address concerns from low income electricity consumers and advocates improvements to OESP could be implemented (1-3 months):
  - Increase credits by 50% - double the current credits
  - Can be done using current OESP charge including expected increase in participation

- Implementation/bill impacts
  - Would mean no impact on consumer bills and no change to current OESP charge
  - Single low income consumer would see a change from $30 to $45/ month ($540/year)
  - Family of four with electric heat could see a credit of $82.50/month ($990/year)

- Considerations
  - Rural and electric heat consumers complain the OESP credit is too small to help
  - LEAP agencies are urging increase, that current OESP credits not sufficient
  - One time forgiveness of LI consumers' arrears may be possible with current variance, use of LEAP agencies to target and manage so that greater assistance is provided
  - Implementation by LDCs and OESP systems would require some time for adjustments
  - Would need to consider mitigating rules for very low bill consumers, i.e. sub-metered consumers
  - Low Income consumers that have large arrears don't see OESP as any help
  - Potential backlash from consumers regarding cost of program and providing even larger credits
  - Alternative funding through Income Tax base would provide relief to all consumers of approx $10/yr

Customer Service Rules

- Disconnections and arrears payments are major concerns for consumers
- OEB is in initial planning for a review to consider whether the current rules are effective and identify possible changes
- This review could be accelerated and consider the following:
  - Restrict winter disconnections especially for electric heat consumers
  - Setting longer terms for arrears management plans to provide greater flexibility for consumers
  - Implementing more stringent notice periods regarding disconnections, including setting minimum period of arrears/longer notice
- Considerations
  - No immediate impact on bills
  - Potential for increased costs for utilities, requests for deferral accounts to manage added costs
  - Implementation of new rules would arrears rules would require LDC system changes
  - Potential for some negative consumer views
  - Likely cannot implement disconnection restriction until Bill 27 passed

Protecting Low Income Consumers

- Prohibit electricity retail contracting to low income consumers
- Currently Low Income consumers are some of the most disadvantaged in terms of retail contracting, according to our ECPA Report
- Considerations
  - Other jurisdictions have implemented moratoriums on contracting with LI consumers as a protective measure
  - Implementing such a ban would likely require legislation
  - Protects LI consumers from high prices, makes OESP credits more relevant

Options That Other Agencies/Ministry Could Lead

- Cancellation of large renewable procurement – on assumption that cancellation penalties are small relative to contract revenues.

- Continue only with targeted conservation – eliminate energy efficiency programs given supply conditions; focus only on targeted DR where near-term capital needs can be avoided, including in distribution system.

- Evaluate recommendations of Market Surveillance Panel for any cost efficiencies not yet adopted by IESO

- Net metering – accelerated implementation could reduce costs under FIT