

[DRAFT] Rate Mitigation Measures

Presentation for Ministry of Energy

December , 2016



Overview of Rate mitigation options

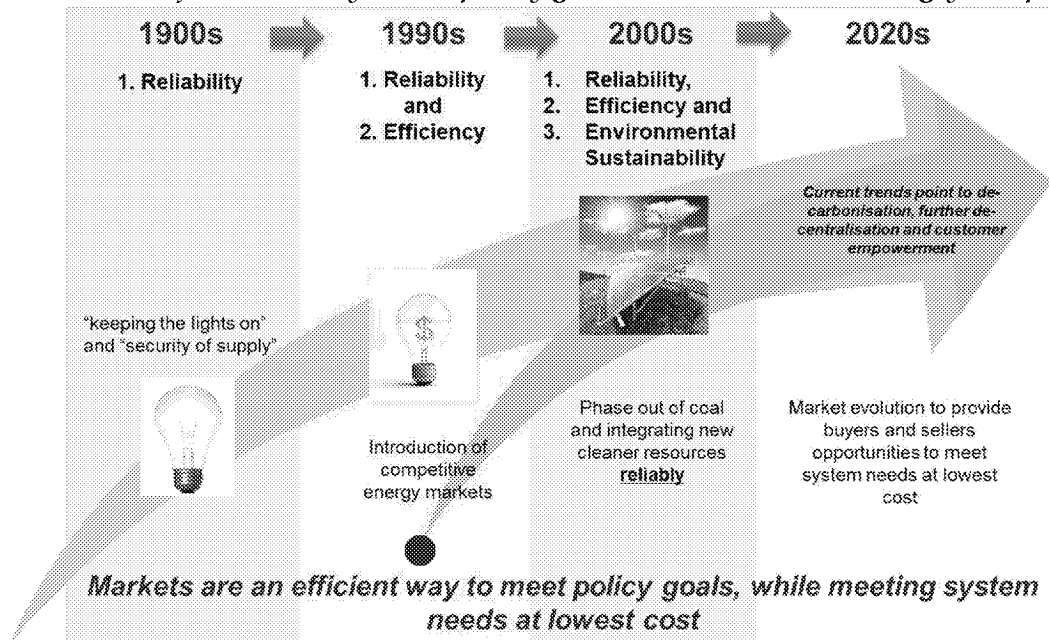
- Over the past decade Ontario has experienced yearly electricity rate increases averaging 5.1 percent, peaking at 18 percent in 2016.
- However, rates are expected to stabilize and remain flat in real dollars and increase by 2.1 percent annually in nominal dollars from 2016 to 2020.
- The IESO has ongoing initiatives, like Market Renewal and Non Utility Generator (NUG) renegotiations, that will help minimize rate increases.
- In addition, the IESO has identified a number of measures that could be taken to help reduce or defer future rate increases, including:
 1. Amortization of conservation costs
 2. Eliminate planned and directed standard offer procurements

Current State of Ontario's Markets

- Ontario's current electricity market was designed in the 1990s primarily to dispatch coal, nuclear and hydroelectric
- It was based on a simple *real time energy market*
- As Ontario's supply mix radically changed the challenge of managing resources in real time has increased exponentially
- The current design has reached the limit of its capability
- Structural changes are required to ensure we continue to have an efficient market that reflects the changes we have gone through and that we will continue to experience

The Evolution of the Sector

The context for electricity sector policy goals has become increasingly complex



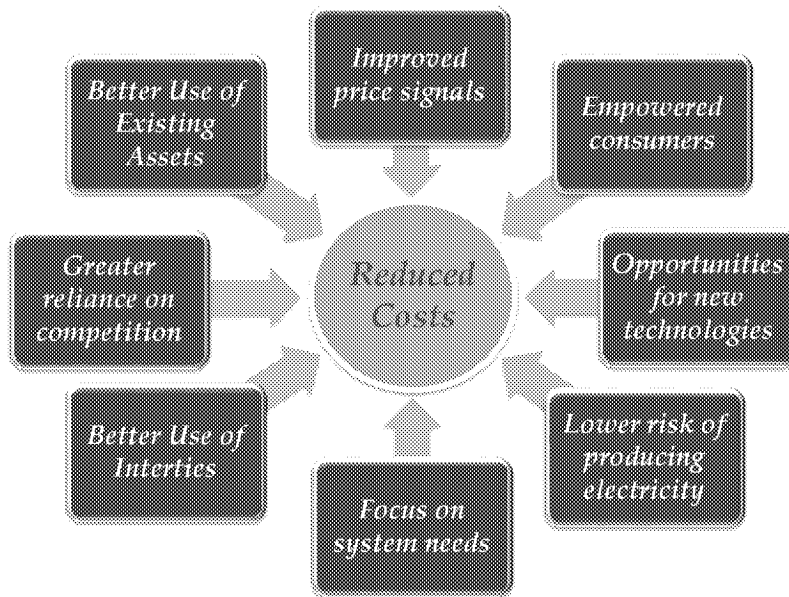
Market Renewal Project

- Ontario's electricity sector has gone, and continues to go through significant changes
- The IESO is working with its stakeholders to consider important enhancements to Ontario's wholesale electricity market, and introducing a technology agnostic and competitive procurement of resources
- Market Renewal will draw on lessons learned and best practices in Ontario and elsewhere to achieve material efficiencies in the near and longer term
- The IESO is in the process of quantifying the expected benefits before committing to developing and implementing the various projects
- The Market Renewal Project aligns with many of the priorities outlined in the Minister's mandate letter, including mitigating the impact of electricity prices on consumers and businesses, driving efficiencies, and developing a level playing field to source affordable, clean, innovative, and reliable electricity in the future.

Market Renewal Benefits: Initial Findings

- Analysis is being conducted by an independent third party (the Brattle Group) to quantify the potential benefits of Market Renewal
- Initial findings show there could be around \$3 billion in consumer savings between 2021 and 2030
- Potential savings could be higher or lower depending on final market design and future electricity market conditions (ie. demand)
- Further analysis and stakeholder input is required before the IESO is able to finalize the benefits case
 - The final benefits case is expected to be completed in Q1 2017

Where are the Benefits Expected to Come From?



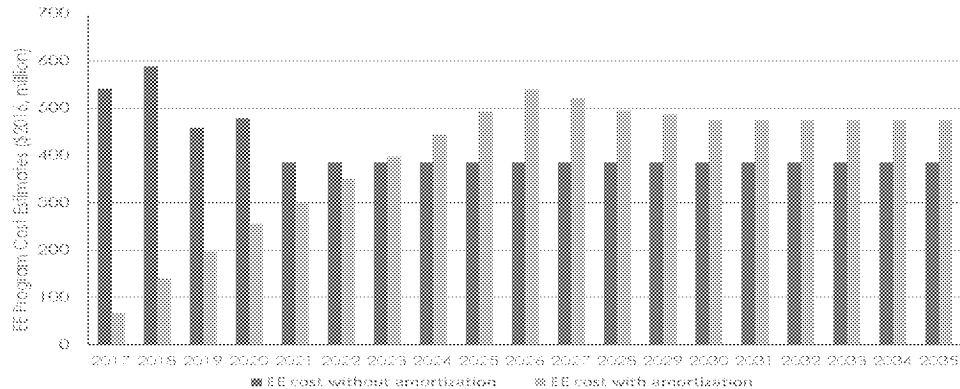
Re-negotiate NUG contracts

- Re-negotiating NUG contracts to seek greater flexibility from the resources and no longer operate as base load generators
- This will also have the effect of reducing surplus base load generation
- As the facilities will no longer operate 24/7 there will be an expected reduction in GHG emissions

Option	2016 \$ Million			
	2017	2018	2019	2020
Savings Through Re-negotiating NUG contracts	\$60	\$45	\$15	\$15
% of Total Cost of Electricity Service	0.29%	0.22%	0.07%	0.07%
Monthly Residential Bill Savings, assuming 750 kWh/month (\$ Nominal/mth)	-\$0.43	-\$0.33	-\$0.11	-\$0.11

Amortization of conservation costs

- Conservation program expenditures are approximately \$500 M/year
- Treat conservation cost recovery consistent with generation and transmission
- A 10 year amortization period would decrease near-term ratepayer impacts , while increasing longer term rate impacts. The overall cost to ratepayers will be higher due to borrowing costs.



Option	2016 \$ Million			
	2017	2018	2019	2020
Savings Through Conservation Amortization	\$473	\$448	\$263	\$223
% of Total Cost of Electricity Service	2.26%	2.15%	1.30%	1.05%
Monthly Residential Bill Savings, assuming 750 kWh/month (\$ Nominal/mth)	-\$3.45	-\$3.35	-\$2.04	-\$1.77

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Conservation delivers savings over several years (approximately 10 years on average) but costs are incurred in the first year

Costs could be amortized to more closely align costs and benefits over time

This approach is used in some jurisdictions

Could create regulatory risk and uncertainty related to cost recovery that might discourage LDC participation

Some measures (i.e. Demand Response) have shorter persistence (1-5 years) than energy efficiency (up to 20 years) leading to some accounting complexity

Some conservation programs have long term contracts (i.e. Industrial Accelerator) that may be better aligned with this approach than residential programs where incentives are paid up front.

Costs are managed by the OPA and also by the OEB for LDC programs that are OEB approved, both are charged to the Global Adjustment

Eliminate standard offer procurements (Planned and Directed only)

- The elimination of remaining renewable target would help reduce rate increases with minimal impact on future capacity and reliability forecasts
- The majority of this capacity reduction will be achieved in the later part of the forecast, beyond 2020
- Other reductions in generation currently under contract were also considered but are not recommended

Option	2016 \$ Million					
	2017	2018	2019	2020	2021	2022
Installed Capacity	0	0	50	50	50	50
Savings Through Elimination of Remaining Renewables			\$18	\$18	\$18	\$18
% of Total Cost of Electricity Service	0.00%	0.00%	0.09%	0.08%	0.08%	0.08%
Monthly Residential Bill Savings, assuming 750 kWh/month (\$ Nominal/Mth)	\$0.00	\$0.00	-\$0.13	-\$0.13	-\$0.14	-\$0.14

Option	2016 \$ Million					
	2023	2024	2025	2026	2027	2028
Installed Capacity	318	377	613	652	652	845
Savings Through Elimination of Remaining Renewables	\$48	\$57	\$92	\$98	\$98	\$127
% of Total Cost of Electricity Service	0.23%	0.27%	0.43%	0.48%	0.46%	0.61%
Monthly Residential Bill Savings, assuming 750 kWh/month (\$ Nominal/Mth)	-\$0.39	-\$0.47	-\$0.77	-\$0.84	-\$0.85	-\$1.12

Residential Monthly Bill Impact with Rate Mitigating Options

Residential Monthly Bill, includes taxes in Nominal \$, assuming 750 kWh/month

\$ Nominal / Month	2017	2018	2019	2020	2021
Residential Monthly Bill before Rate Mitigating Options	\$ 160.57	\$ 163.39	\$ 166.39	\$ 177.10	\$ 173.82
Standard Offer Procurements	\$0.00	\$0.00	-\$0.13	-\$0.13	-\$0.14
Renegotiating NUGs	-\$0.43	-\$0.33	-\$0.11	-\$0.11	-\$0.12
Conservation amortization	-\$3.45	-\$3.35	-\$2.04	-\$1.77	-\$0.64
Total Cost Savings for all Rate Mitigating Options	-\$3.88	-\$3.68	-\$2.28	-\$2.02	-\$0.90
Residential Monthly Bill after all Rate Mitigating Options	\$ 156.70	\$ 159.71	\$ 164.11	\$ 175.08	\$ 172.92
% Decline	-2.4%	-2.3%	-1.4%	-1.1%	-0.5%

