

Rate Mitigation Measures

Presentation for Ministry of Energy

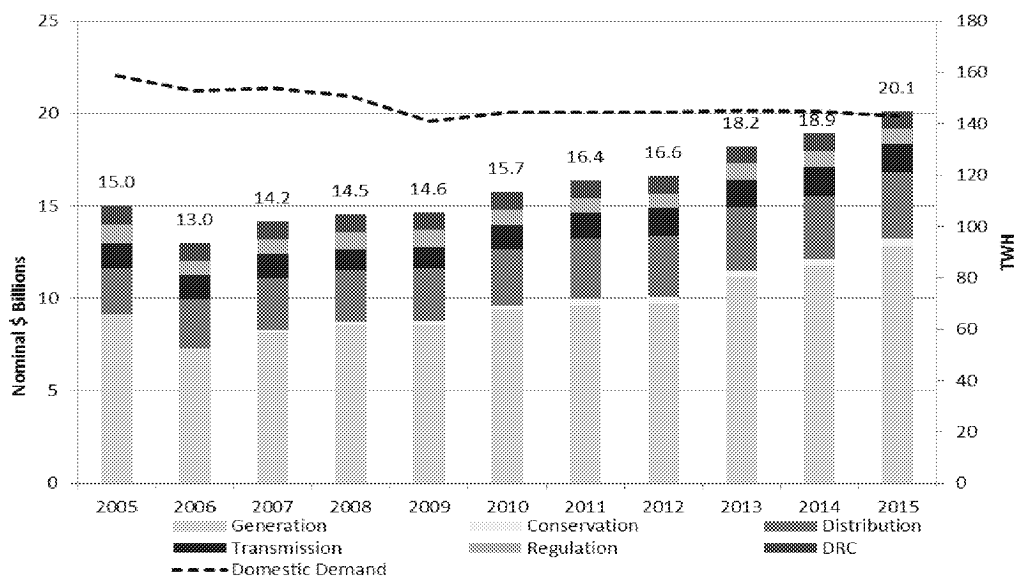
December 2, 2016



Overview

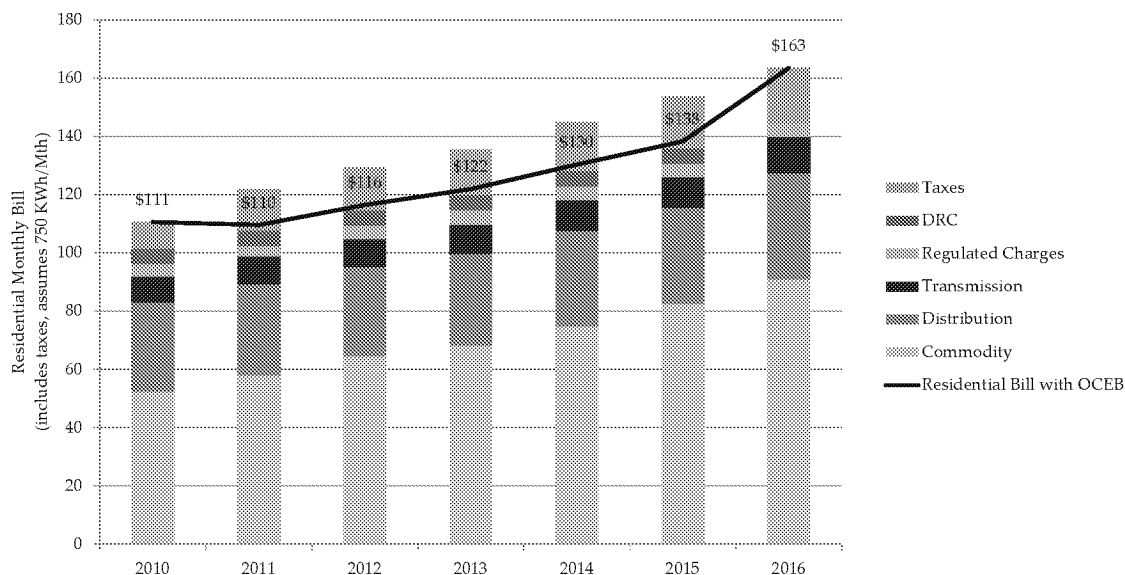
- Over the past decade Ontario has experienced yearly electricity rate increases averaging 5.1 percent, peaking at 18 percent in 2016.
- However, rates are expected to stabilize and increase by 2.1% annually in nominal dollars from 2016 to 2020 in nominal dollars (*0.1% per year in 2016\$ Real*).
- The IESO has ongoing initiatives, like Market Renewal and Non Utility Generator renegotiations, that will continue to help further minimize rate increases.
- There remain additional options that could be considered by the government to reduce rate increases further, but these rate mitigating measures predominantly occur beyond a 5-year timeframe.
- The IESO has assessed the impact of a number of potential rate mitigation measures. The analysis provided in the following slides is preliminary and should be used only as directional indicators.

Historical Total Cost of Electricity Service



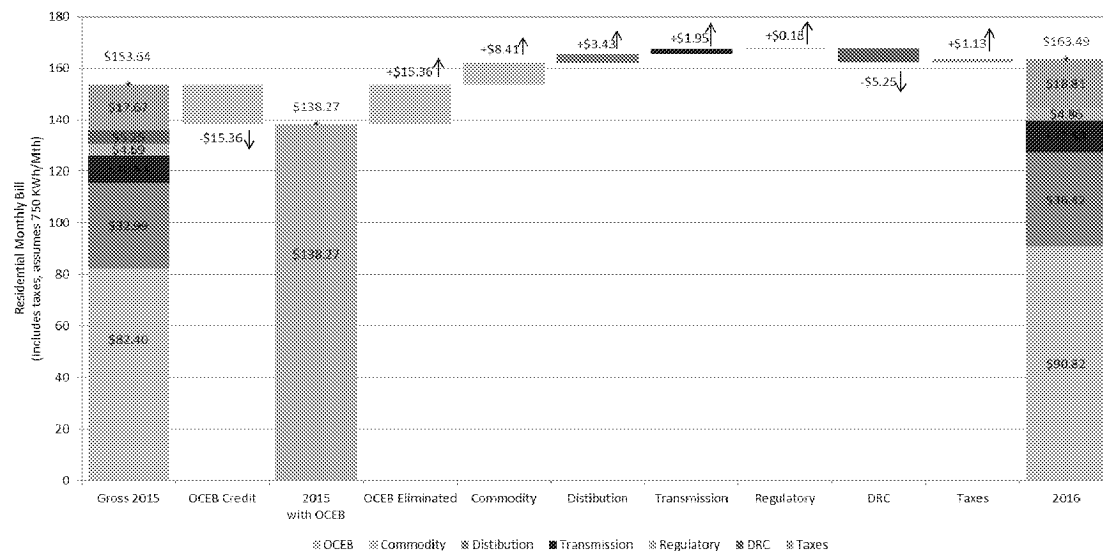
- From 2006 to 2015 the total cost of electricity has increased about 54%
- Average annual increases of about 5%/Yr (Inflation has been about 1.8% per year during this period)
- Domestic electricity demand dropped about 11% from 2005 to 2009 or 1% per year when averaged over the period. About 6.3% of this decrease occurred between 2008/09
- From 2010 to 2015, the domestic demand has remained relatively flat

Historical Toronto Hydro Residential Monthly Bill



- The residential monthly bill included the Ontario Clean Energy Benefit (OCEB) during 2011 to 2015, in 2016 the OCEB was removed
- The annual increase from 2015 to 2016 was 18% which is a period the OCEB was eliminated
- The annual average increase from 2010 to 2015 was 4.6% per year

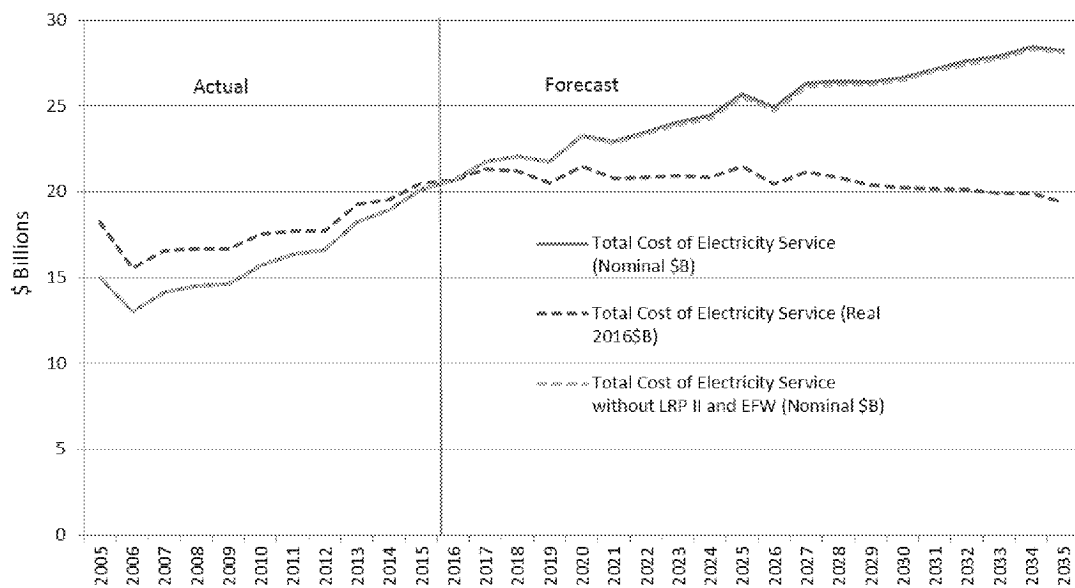
Drivers for the 2016 Rate Increase



- Monthly bill increase is 18% for 2016 compared to 2015; of which the elimination of the OCEB is responsible for 60% of is 18% increase (10.8% of the 18%), with the remaining 40% (or 7.2%) of the increase due other factors.
- The commodity and regulatory costs increased by 10% and 4%, respectively from the prior year. This amounts to a \$8.60 increase that would have been a 6.2% increase experienced by all residential customers.

Residential Monthly Bill is based on the monthly average bill for a Toronto Hydro customer using 750 kWh/Mth during the 2015 and 2016 calendar year

Total Cost of Electricity Service Trends



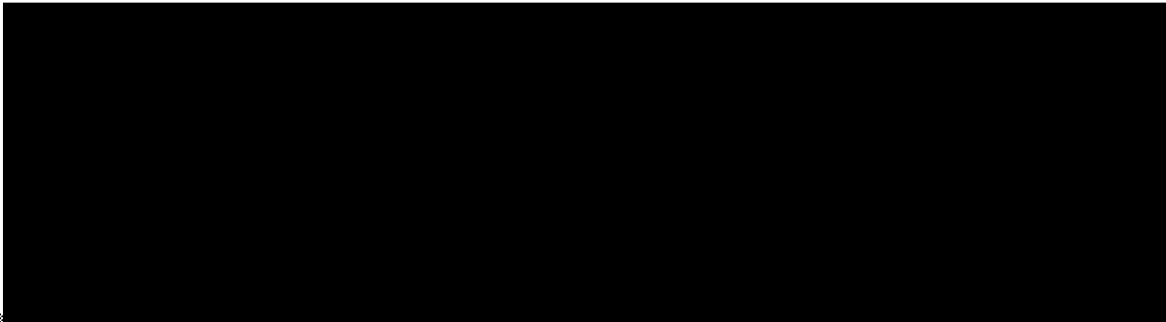
- The projected total cost for electricity service is expected to increase at a slower rate than experienced over the last ten years

Cost of electricity service as per OPO projection Outlook B, and estimated cost without LRP II and Energy from Waste

Ongoing IESO initiatives that will help further reduce future rate increases

- **The Market Renewal Project**

- The IESO is working with its stakeholders to consider important enhancements to Ontario's wholesale electricity market
- Market Renewal will draw on lessons learned and best practices in Ontario and elsewhere to achieve material efficiencies in the near and longer term with minimal disruption to market participants
- The IESO is in the process of quantifying the expected benefits before committing to developing and implementing the various projects. The Benefits Case is expected to be completed in Q1 2016

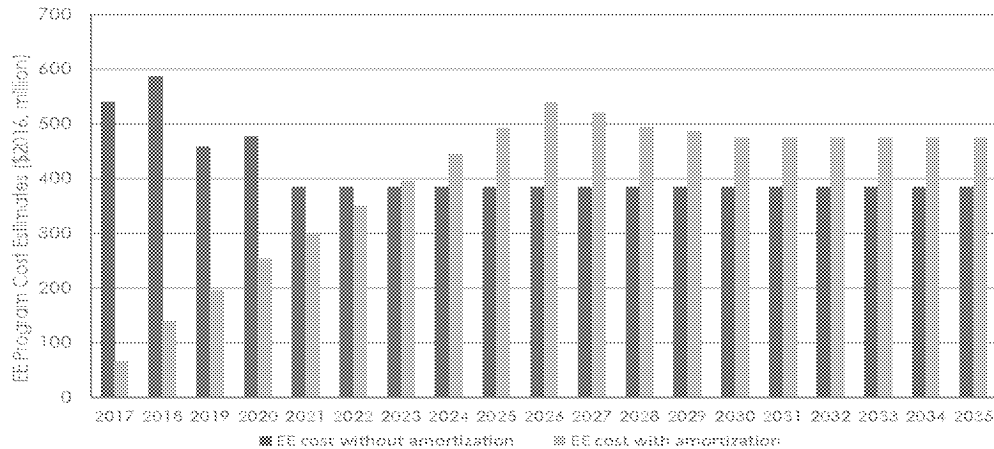


Possible Additional Rate Mitigation Measures

- The IESO has included a number of additional measures that could be taken to help reduce or defer future rate increases, including:
 1. Conservation amortization
 2. Eliminate or defer planned and directed renewables procurements
 3. Halt the procurement of further gas Combined Heat and Power (CHP) projects allowed through the Conservation First Framework
 4. Transferring certain electricity costs from the rate base to the tax base
- Each of these measures could have ancillary impacts on stakeholder groups and emissions

1. Conservation amortization

- Conservation Energy Efficiency Program expenditures are approximately \$500 M/year
- Amortization could more closely align cost recovery with generation assets and consider the benefits that are achieved over time
- A 10 year amortization period would decrease near-term ratepayer impacts , while increasing longer term rate impacts, but the overall cost to ratepayers will be higher due to borrowing costs.



\$2016 Real Millions	2017	2018	2019	2020	2021
EE cost without amortization	540	588	459	478	385
EE cost with amortization	67	139	196	254	302
Cost Savings	473	448	263	223	83



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

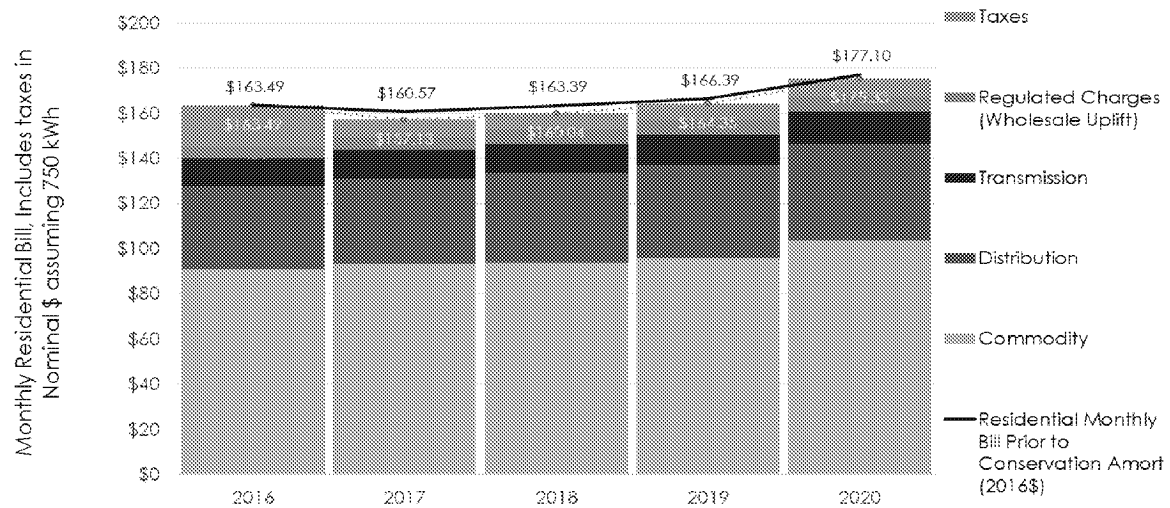
Could create regulatory risk and uncertainty related to cost recovery that might discourage LDC participation

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

Conservation Amortization cont'd

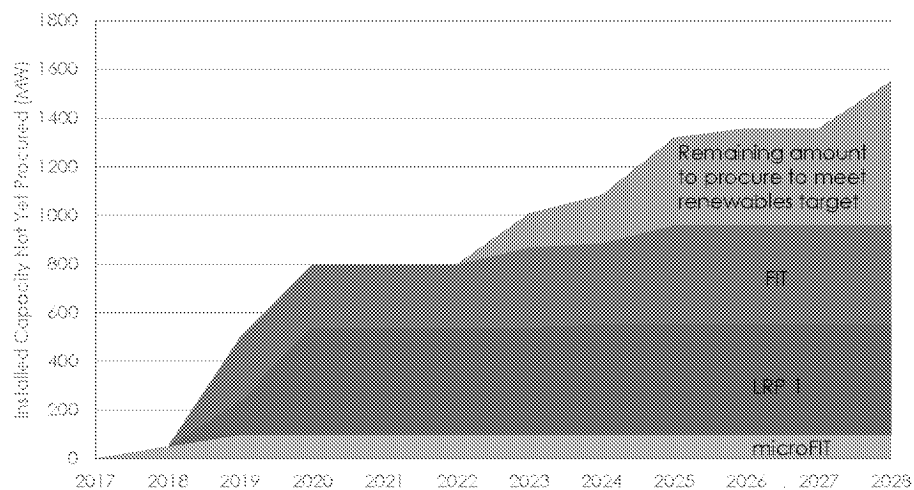


- Assumes implementation is January 2017
- 4% decline in residential bill in 2017 over 2016, as opposed to a 2% decline without the conservation amortization

\$ Nominal/Mth	2017	2018	2019	2020
Residential Monthly Bill Prior to Conservation Amortization				
Residential Monthly Bill After to Conservation Amortization	\$ 160.57	\$ 163.39	\$ 166.39	\$ 177.10
Monthly Bill Savings	-\$ 3.45	-\$ 3.35	-\$ 2.04	-\$ 1.77

2. Eliminate or defer planned and directed renewables procurements

- The elimination or deferral of remaining renewable target would help reduce rate increases with minimal impact on future capacity and reliability forecasts
- The elimination of these procurements has the potential to reduce ratepayer costs by X
- The majority of this capacity reduction will be achieved in the later part of the forecast, beyond 2020



Eliminate or defer planned and directed renewables procurements cont'd

Option	2016 \$ Million				
	2017	2018	2019	2020	2021
LRP II (includes extension) and EFW	\$ -	\$ 27	\$ 27	\$ 27	\$ 62

PLACEHOLDER for
Renewable Cost
Impact

3. Halt Procurement of Further Gas CHP projects

- The Conservation First Framework currently allows for the procurement of gas CHP facilities for the purpose of conservation, which could also increase GHG emissions.
- The government could remove these types of facilities from the CFF and reduce costs and emissions from the electricity sector.
- Halting the procurement of these facilities would also impact the overall CFF target

Option	Energy Saved (GWh)	2016 \$ Million				
		2018	2019	2020	2021	Total
Disallowing Future CHP (Gas)	700	\$60	\$60			\$120
No Grace Period						
Disallowing Future CHP (Gas)	550	\$45	\$45			\$90
With Grace Period						
Reducing LDC Performance Incentives	--				\$40	\$40
Total	1250	\$105	\$105	\$0	\$40	\$250
% of Total Cost of Electricity Service		0.50%	0.52%	0.00%	0.19%	

4. Transferring Costs to Taxpayers

- Over the past decade certain investments have been made in the electricity sector that achieve certain policy objectives beyond meeting electricity system reliability needs.
- The costs of some of these policy based initiatives could be transferred to the tax base, like the Industrial Electricity Incentive program,
- Every \$XXX million transferred from the tax base would reduce electricity system costs by X percent.

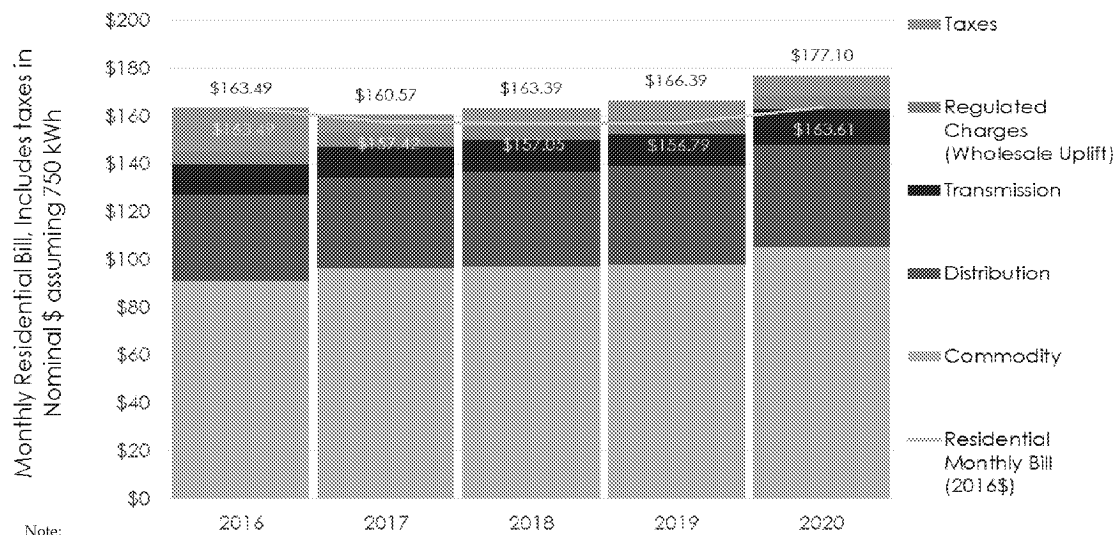
Overall Ratepayer Impact of Individual Initiatives

- placeholder

Appendix

Average Residential Electricity Bill

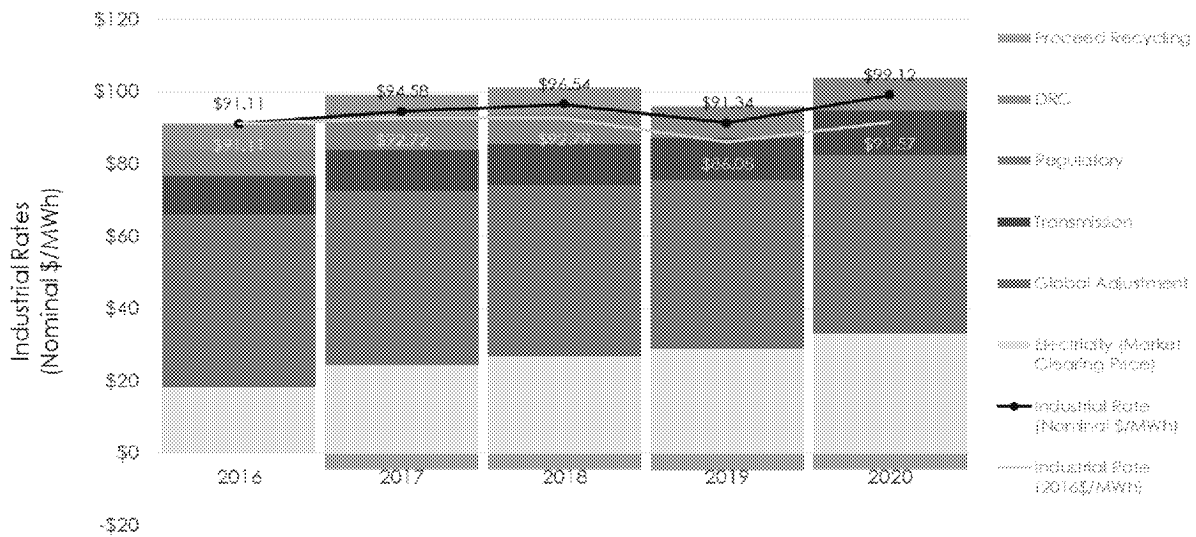
- Minor impact on upcoming residential bills
- The monthly residential bill assuming consumption of 750kWh/month will increase in nominal terms from \$163.49/month in 2016 to \$177.10/month by 2020, an annual average increase of 2.02% per year (0.02% per year in real).
- Includes 8% Rebate, and MOE's estimated ICI Expansion, RRRP costs increase



Note:
EB-2012-0410 proposing changes to residential distribution rates, transitioning from a mixed fixed/volumetric charge to a pure fixed charge. This change is not assumed in the above analysis

Industrial Electricity Rate

- Proceed Recycling estimate from MOE provides a benefit for industrial rates
- Increases by 2.1% annually in nominal dollars from 2016 to 2020 in nominal dollars (0.1% per year in 2016\$ Real).
- In 2019, the upward trend is interrupted when the debt retirement charge is assumed to be eliminated for all remaining consumers.
- Includes MOE's estimated cost for Proceed Recycling and RRRP rate increase
- MOE assumes no impact on this "implied" Class A rate for expansion of the Class A customers (from >3MW to 1MW)



Note:
Industrial Customer assumes a direct connect customer, so no distribution costs are included