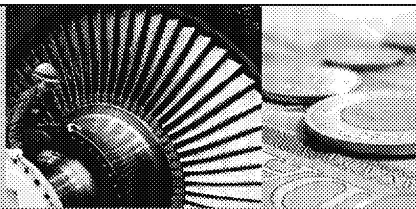

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Risk Analysis –
Ministry of Energy GA Smoothing Proposal

February 17, 2017

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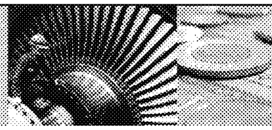
Context

- The Ministry of Energy has proposed a variety of scenarios for reducing electricity bills.

- This analysis focuses on the Ministry's proposal to borrow funds to smooth the Global Adjustment overtime. OPG assumes the base case is the Ministry scenario with an initial 25% reduction in bills, increasing by 2% thereafter.
  - Note, the following analysis only includes GA smoothing. Other initiatives that the Ministry is proposing to get to the total 25% bill reduction are not included in the analysis.

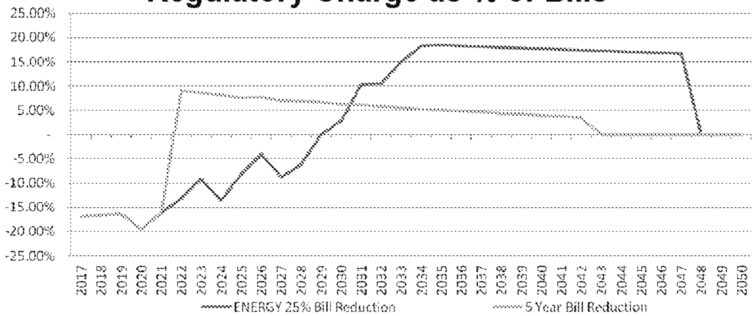
- The following sensitivity analyses maintain the Ministry's proposed near-term savings using debt to cover any increased costs. The debt is then recovered over the period from 2030 to 2047 as in the Ministry's original proposal.



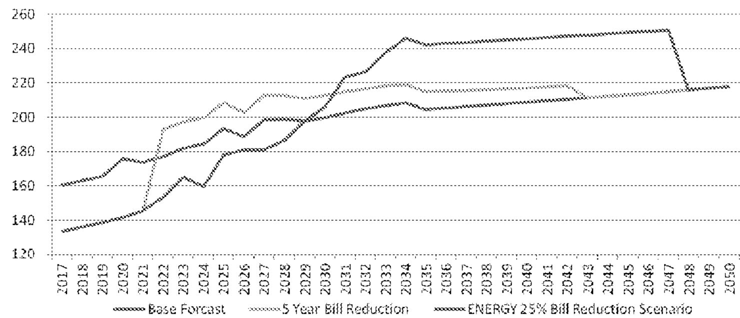
ENERGY 25% Reduction Base Case

- The Ministry of Energy's base case is a 25% reduction in RPP bills, increasing at 2% thereafter.
- For similar regulatory debts in the US, the regulatory recovery charge has been limited at 10% of bills in order to secure debt.
- The ENERGY base case leads to a charge of almost 20% of bills and would not be financeable using debt markets.
- Reducing bills by 25%, and keeping them low for 5 years would be a more manageable level of debt to finance publicly.

Regulatory Charge as % of Bills



RPP Bills (nominal $/month)



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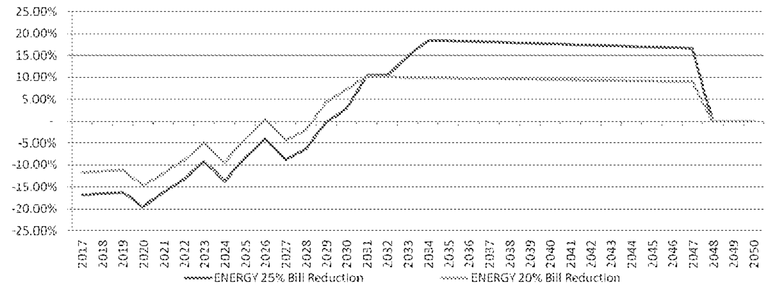
ENERGY 20% Reduction Case

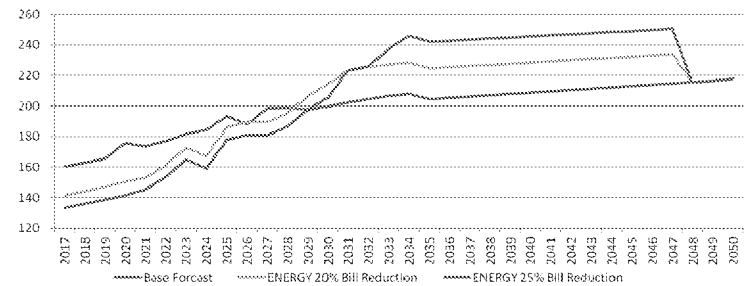
- Alternatively, a 20% reduction in residential bills, increasing at 2% thereafter would also make the debt more likely to be finance in the public market.

- The regulatory charge would peak at 10.3% of bills.

Regulatory Charge as % of Bills



RPP Bills (nominal $/month)



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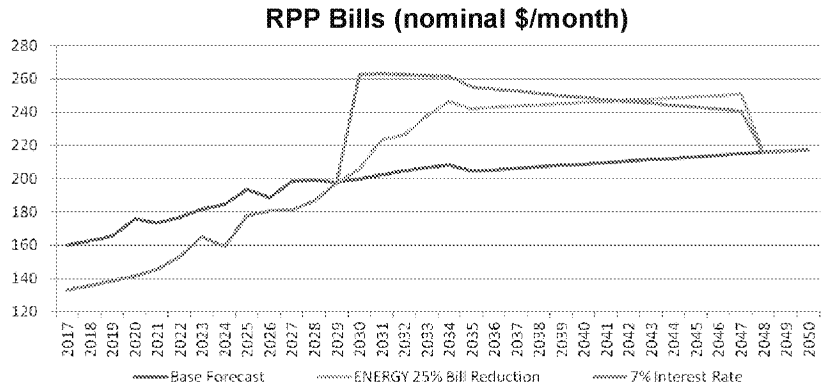
Interest Rate Increase

- An increase of the interest rate from 5% to 7% for the debt used to fund the bill reductions would have a significant impact on future bills.
- Smoothing the repayment could reduce the initial spike in prices, but would still lead to much higher prices in the long-term.



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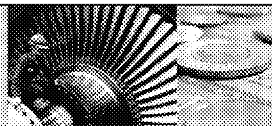
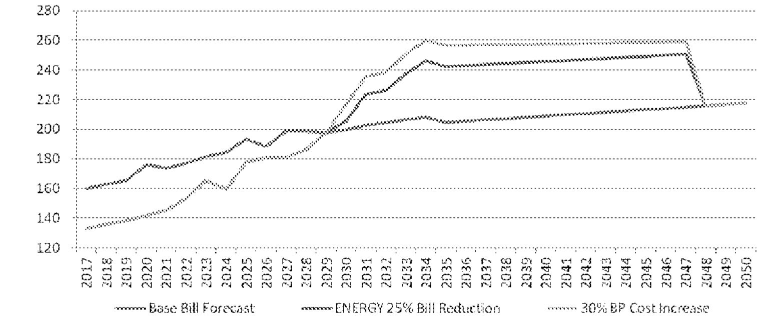


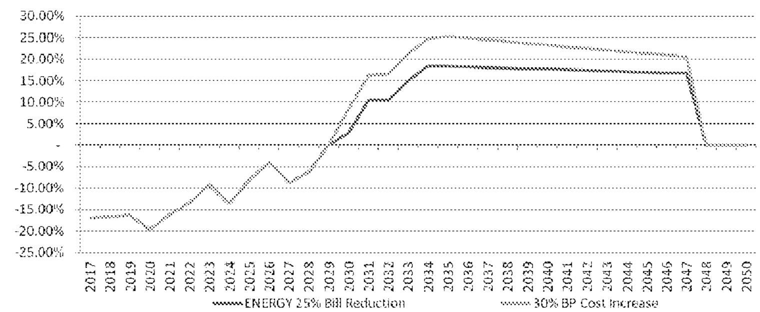
Increase in Generator Costs

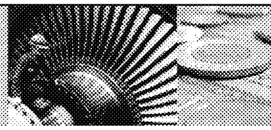
- An increase in the cost of generation could have a significant impact on bills.
- For example, a 30% increase in the cost of generation from the Bruce Nuclear Generating Station would cause the regulatory charge to make up 25% of bills in the future.

RPP Bills (nominal $/month)



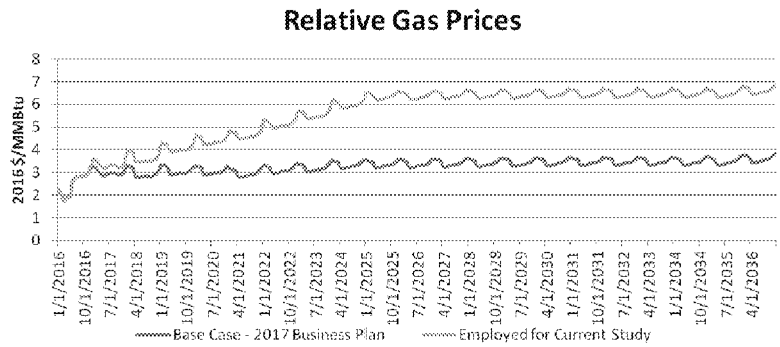
Regulatory Charge as % of Bills

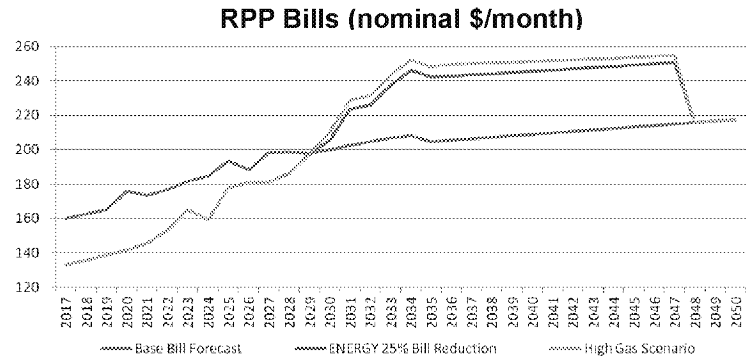




High Gas Price Sensitivity

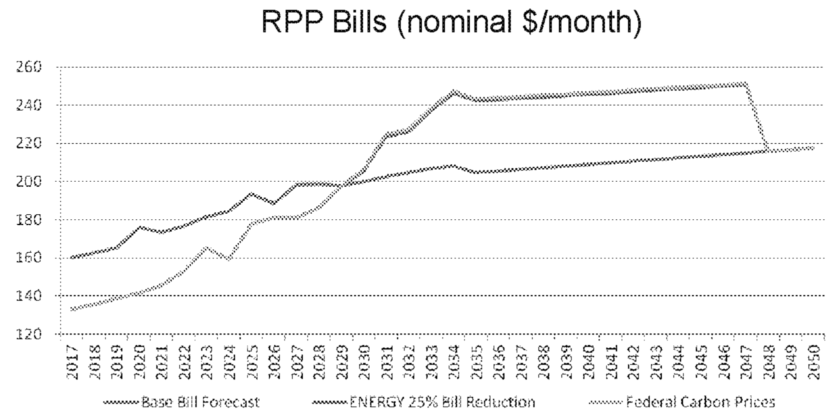
- An increase in natural gas prices would increase bills up to $7 dollar per month compared to ENERGY's 25% reduction scenario.





Carbon Price Sensitivity

- Moving to the proposed Federal carbon prices from forecast Ontario cap-and-trade carbon prices would have a minimal impact on bills.



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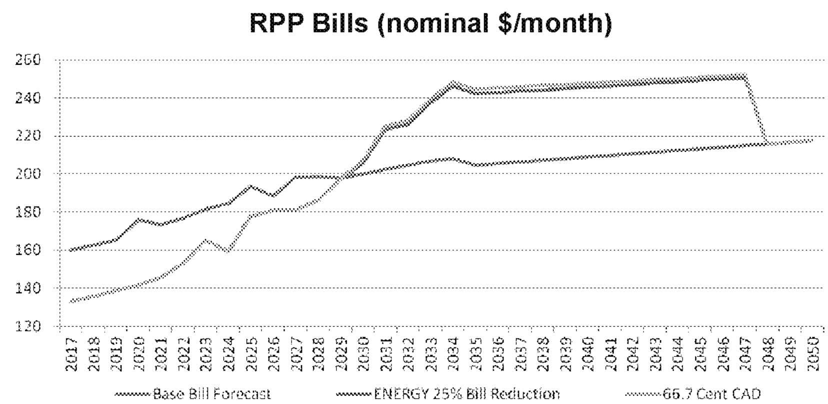
Exchange Rate Sensitivity

- A decrease in the Canadian dollar relative to the USD would have a minimal impact on bills.



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