Customer Bill Reduction Opportunities
Briefing Note to the Deputy Minister of Energy
December 12, 2016

Overview

OPG generates half the power used in Ontario but accounts for less than 20% of the customer's bill. We currently receive 40% less for our power than other generators. We understand customer concerns with energy prices and remain focused on continuing to drive more cost efficiencies to ensure our ongoing role in helping moderate the overall cost of electricity in Ontario. In this respect we offer a series of opportunities that can result in material customer bill reductions. The savings provided here are preliminary estimates particularly those related to the broader market. Refinement of the estimate and path to achieve the result can be done once a broad, full assessment as to the impact and implications of each is complete. We would be pleased to discuss any or all of these options in greater detail at your earliest convenience.

Some of the opportunities presented in this memo relate directly to OPG while others relate to the broader electricity sector.

- **OPG Opportunities:** OPG has the ability to achieve a rate freeze at 2016 customer rate levels for the five year 2017-21 period. Rather than a $1.05/month annual increase as requested in OPG's current rate application to the OEB, a rate freeze can be achieved by implementing a revised rate smoothing proposal (Option 1a), a flow through to customers of a partial reduction of the Gross Revenue Charge (GRC) (Option 1b, which shows the value of a full elimination of the GRC) and an alternative financing approach (Option 1c). This would require a change in regulation to allow for further rate smoothing, a change to the GRC mechanism and refinancing the Darlington Refurbishment project at the Provincial short term debt rate.
- **Broader Electricity Sector Opportunities:** There are also opportunities for material customer bill reductions in the broader electricity sector, three of which are detailed further in this memo (Options 2, 3 and 4).

If all of these opportunities were implemented they would result in estimated savings to residential electricity customers as follows:

	2017	**2018**	**2019**
Typical Residential Customer Bill Reduction ($/month)			
Option 1a - OPG: Revised Rate Smoothing Proposal	$ 0.43	$ 0.86	$ 1.29
Option 1b - OPG: Gross Revenue Charge	0.69	1.38	2.07
Option 1c - OPG: Alternative Financing Options	0.40	0.80	1.20
Option 2 - Renewable Contracts Mark to Market	6.43	6.56	6.31
Option 3 - Government Trading Entity	-	0.62	0.62
Option 4 - Rebalance Gas Portfolio	2.37	2.81	4.00
Overall Approximate Savings	$10.32	$13.03	$15.49
Estimated residential customer savings, based on a typical monthly bill of $142.40/month, approximate range pre-tax (%)	7.3%	9.2%	10.9%

In total these proposals would amount to initial annual savings of $125 for a typical residential customer increasing to annual savings of $185 by 2019. Combined with the elimination of the 8% provincial portion of the HST, annual savings could begin at $255 increasing to $315 by 2019, a material reduction in the customer bill. The opportunities are described in more detail below.

Option 1a: OPG: Revised Rate Smoothing Proposal

There is an opportunity to implement a revised rate smoothing proposal that would further reduce OPG rates requested in its current application before the Ontario Energy Board. OPG's current submission is based on a smoothing of nuclear payments as is required under Regulation 53/05 under the *Ontario Energy Board Act, 1998*. This revised proposal would seek to smooth the customer bill impact arising from changes in OPG's combined nuclear and hydro payments. The resulting smoothed payments would start from the total regulated payments currently being paid by consumers for OPG generation, without differentiation between a hydroelectric and nuclear rate. An amendment to Regulation 53/05 would be required to implement this customer bill smoothing approach instead. The chart shows the average annual cost savings for the customer bill smoothing approach compared to OPG's current rate submission.

	2017	**2018**	**2019**
Total electricity system cost savings ($M)	72	144	216
Estimated residential customer savings ($/mo)	$0.43	$0.86	$1.29

Option 1b: OPG: Gross Revenue Charge

OPG pays the Province a Gross Revenue Charge (GRC) on hydroelectric generation covering water rentals and property taxes. The GRC on the hydro generation from the OPG stations ranges from $5 - $14/MWh depending on the station output. If OPG were exempted from the GRC, the OEB would determine how this was flowed through in rates. Should these charges be waived by the Province and flowed directly to electricity customers they would benefit as follows:

	2017	**2018**	**2019**
Total electricity system cost savings ($M)	340	350	360
Estimated residential customer savings ($/mo)	$0.69	$1.38	$2.07

Option 1c: OPG: Alternate Financing

OPG could reduce its financing costs through refinancing its long term debt for Darlington Refurbishment with short term notes, thereby reducing annual interest costs. OPG would need to work with the Ministry of Finance to implement this option. Refinancing could be challenged by intervenors, the OEB and others as a major structural change, conflicting with the stand alone principle and OPG's commercial mandate, introducing procedural delay risk. Electricity customers could benefit from this as follows:

	2017	**2018**	**2019**
Total electricity system cost savings ($M)	150	200	250
Estimated residential customer savings ($/mo)	$0.40	$0.80	$1.20

The impact of lower interest costs on the total project cost is expected to be $1 billion, which is flowed into system cost saving over the entire period. We do not believe this financing option impacts the provincial debt or OPG's net income which is consolidated by the Province.

Option 2: Renewable Energy Contracts – Mark to Market

In Ontario, the full cost of being an early mover towards renewable energy development has been funded by electricity customers. Conversely, in many jurisdictions, such as the U.S. at the federal level, implementation of programs that support renewable energy development are funded by taxpayers through corporate tax credits or other means.

Wind and solar generation procured through competitive processes, including the recently awarded Large Renewable Procurement I, have resulted in power procurement costs well below those provided to renewable generators through the earlier feed in tariff and standard offer programs. An opportunity exists to use a mark to market approach for Ontario's renewable energy contracts. The market value of the existing renewable energy contracts would be set at the average price of wind and solar for LRP I, reflecting the current competitive cost of procuring wind and solar, and would be funded by electricity customers. The excess would be funded by tax payers. Consideration could be given to applying some of the Cap and Trade revenue, over and above that attributable to electricity generators, to cover the above market costs of renewable generation. This would reflect the contribution to decarbonising the electricity sector that has already been made by Ontario electricity consumers through higher rates. This construct would have the following impacts:

	2017	**2018**	**2019**
Total electricity system cost savings ($M)	$1,030	$1,050	$1,010
Estimated residential customer savings ($/mo)	$6.43	$6.56	$6.31

Option 3: Government Trading Entity (longer term option)

In order to capture most of the economic rents from exporting out of and importing into the Ontario market, an opportunity exists to restructure the Ontario electricity market to create a Government Trading Entity (GTE). The GTE would be the only authorized exporter of electricity from generation assets in the province that are regulated by the OEB and from generation capacity contracted by the IESO. Any merchant generator would continue to be free to export outside of the GTE. The GTE would also be the only authorized importer of electricity for sale to Ontario retail customers.

The GTE should be able to obtain better pricing for export sales and revenues and improve the benefits to Ontario consumers of operating in interconnected markets. Conservatively, it is estimated that a GTE would be able to return approximately $100 million/year to customers to reduce their electricity costs. This is a longer term option that would take some time to implement, consequently, annual savings could take longer to materialize. This proposal would ensure that ratepayers obtain the financial benefits for the market risks they have taken.

	2017	**2018**	**2019**
Total electricity system cost savings ($M)	-	$100	$100

Estimated residential customer savings ($/mo)	-	$0.62	$0.62

Option 4: Rebalance Gas Portfolio

Over the past 5 years, there has been significant shift in the electricity demand in the province, both baseload energy as well as peak requirements. Due to the long lead time for construction of new generation assets, Ontario's forward looking planning process set the needs for new generation based on expectations of demand growth that did not materialize. Actual growth has been less than anticipated. Ontario annual electricity demand is 10% below the level of annual demand in 2005. As a result, the ratepayer carries a burden for assets that are not required for current levels of demand.

There is an opportunity to recognize the "current need" component of the gas relating system costs as continuing to be funded by electricity customers, while the excess would be funded by taxpayers.

	2017	**2018**	**2019**
Total electricity system cost savings ($M)	$380	$450	$640
Estimated residential customer savings ($/mo)	$2.37	$2.81	$4.00

The cost burden transferred to the taxpayer could be reduced by negotiating with contract counterparties to temporarily idle certain gas plants, allowing the life of the plants to be extended to a period post-2024 when additional power would be required. The avoided costs may vary greatly; however, there could be savings from labour costs, maintenance costs, fuel management costs and deferred capital payments. Overall, depending on size of the facility, savings of $50-75 million could be achieved for each plant that is idled, or in the order of $150 million assuming 3 plants are idled.

Each of these options (except Option 3) is executable with customer impacts achieved in 2017.

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