Ontario's Rising Electricity Rates: The Role of Nuclear Power

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As Figure 1 reveals, between 2002 (market opening) and 2016, Ontario's wholesale cost of electricity has risen by 71% from 7.95 cents to 13.57 cents per kWh.[1]

Figure 1: Ontario's Wholesale Cost of Electricity: 2002 vs. 2016[2]

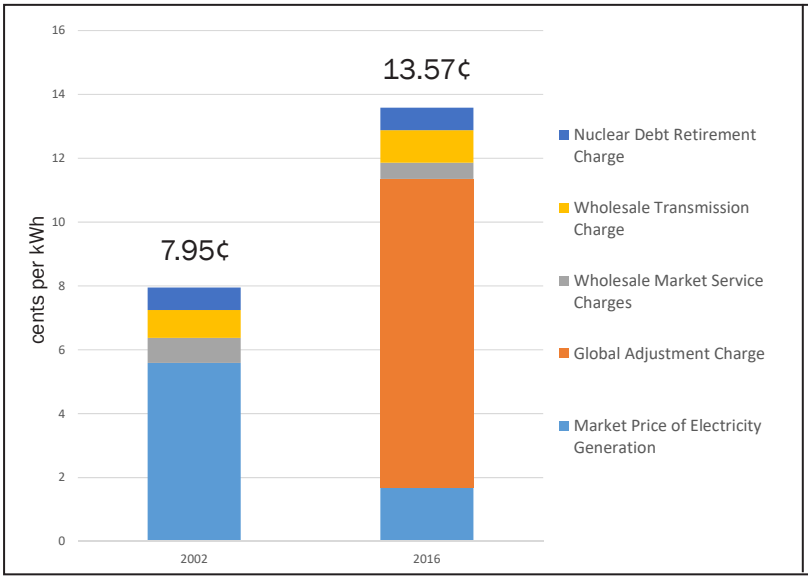
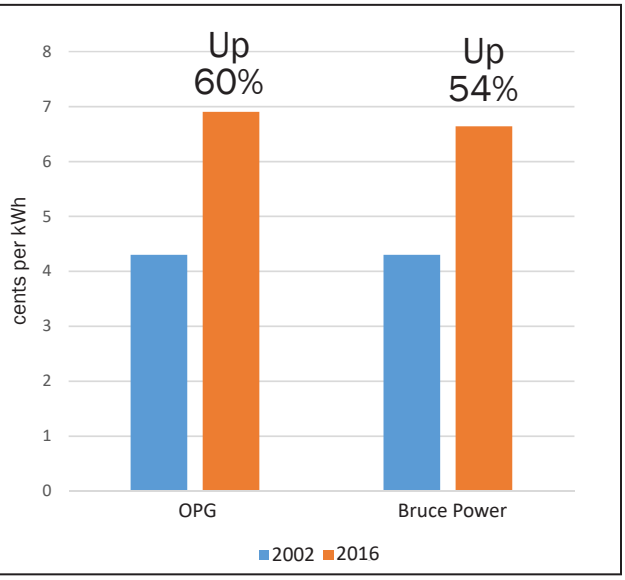


Figure 2: Nuclear Prices: 2002 vs. 2016



Ontario has two companies that generate nuclear electricity: Ontario Power Generation (OPG) and Bruce Power. Their rising costs are the single largest contributor to our rising wholesale electricity costs.

Specifically, between 2002 and 2016, OPG's price of nuclear power increased by 60% from 4.3 to 6.9 cents per kWh.[3] During the same time period, Bruce Power's rates rose by 54% from 4.3 to 6.638 cents per kWh pursuant to contracts that it signed with the Government of Ontario.[4]

As a result of Ontario's large electricity surplus, Ontario's wholesale *market* price of electricity generation is now dramatically lower than our actual cost of electricity generation. Specifically, in 2016, Ontario's average wholesale *market* price of electricity was only 1.695 cents per kWh.

The Independent Electricity System Operator (IESO - an agency of the Government of Ontario) provides payments to Ontario's electricity generators to compensate them for the difference between their costs and the *market* price of electricity. Declining market prices have led to a growing gap between the rates guaranteed to these electricity generators and the actual market price of electricity. The IESO has therefore had to increase out-of-market payments to electricity generators, which, in turn, has driven up the cost of the Global Adjustment fee added to wholesale electricity bills and passed on to consumers.

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According to the Ontario Energy Board, Global Adjustment payments for nuclear power are

responsible for 40% of the rise in the cost of electricity generation in Ontario. Similar payments for wind and solar generators are responsible for 18% and 14% respectively of the rise in cost of electricity generation.[5]

OPG's proposal to increase its nuclear rate by an additional 180%

OPG's proposed nuclear rate would be three times higher than what Ontario is paying to import water power from Quebec

OPG has announced that it is seeking permission from the Ontario Energy Board to raise its price of nuclear power by an additional 180% to 16.5 cents per kWh in 2025.[6] According to OPG, the price increase is needed to finance the continued operation of its high-cost Pickering Nuclear Station and the re-building of the Darlington Nuclear Station.

OPG's proposed price increase is based on the assumption that its $12.8 billion Darlington Re-Build Project[7] will be completed on time and on budget despite the fact that every nuclear project in Ontario's history has been late and has gone massively over budget – on average by 2.5 times.[8] If history repeats itself, OPG's rates will rise by much more than 180%.

A lower cost alternative

In October 2016, Ontario signed an electricity contract with Hydro Quebec. The new contract provides us with 2 billion kWh of water power per year at a price of 5 cents per kWh for seven years.[9] This contract demonstrates that Ontario's electricity needs can be met at a much lower cost by importing water power from Quebec while closing the Pickering Nuclear Station and cancelling the Darlington Re-Build Project. It simply doesn't make sense to pay 16.5 cents for nuclear power when Quebec water power can keep our lights on at less than one-third the cost.

Today, with our existing transmission lines we can import sufficient power from Quebec to displace all of Pickering's production that is consumed in Ontario (half of Pickering's output is exported at a large financial loss since it is surplus to our domestic needs).[10]

According to the Independent Electricity System Operator, it would cost Ontario approximately $2 billion to upgrade its transmission system to enable us to import enough power to also avoid the need for the Darlington Re-Build Project which will cost at least $12.8 billion.[11]

Endnotes

1 According to the Independent Electricity System Operator, local distribution costs are responsible for 18% of the total cost of electricity service. Independent Electricity System Operator, *Module 1: State of the Electricity System: 10-Year Review*, (August 2016), page 42.

2 Independent Electricity Market Operator, *Monthly Market Report: December 2002*, page 16; and Independent Electricity System Operator, *Monthly Market Report: December 2016*, page 22.

3 Ontario Power Generation, *Ontario Power Generation Reports 2002 Earnings*, (March 31, 2003), pages 7 & 8; and *OPG Reports 2016 Third Quarter Financial Results*, (November 11, 2016), page 7.

4 Bruce Power, *2004 Year In Review*, page 34; and TransCanada, *TransCanada Reports Third Quarter 2016 Financial Results*, (November 1, 2016), page 22.

5 Ontario Energy Board, *Regulated Price Plan Price Report: May 1, 2017 to April 30, 2018*, (April 20, 2017), page 21.

6 Ontario Energy Board Docket No. EB-2016-0152, Exhibit N3, Tab 1, Schedule 1, Attachment 2, Table 14.

7 Ontario Energy Board Docket No. EB-2016-0152, Exhibit D2, Tab 2, Schedule 8, Attachment 1, Page 2.

8 Ontario Clean Air Alliance Research Inc., *The Darlington Re-Build Consumer Protection Plan*, (September 23, 2010), Appendix A.

9 Ontario Clean Air Alliance Research Inc., *Ontario's Electricity Options: A Cost Comparison*, (December 6, 2016).

10 Ontario Clean Air Alliance Research Inc., *How we can close the Pickering Nuclear Station and lower bills*, (September 27, 2016).

11 Equiterre and Ontario Clean Air Alliance Research Inc., *The Benefits and Costs of Increased Electricity Trade Between Quebec and Ontario*, (February 17, 2016).

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