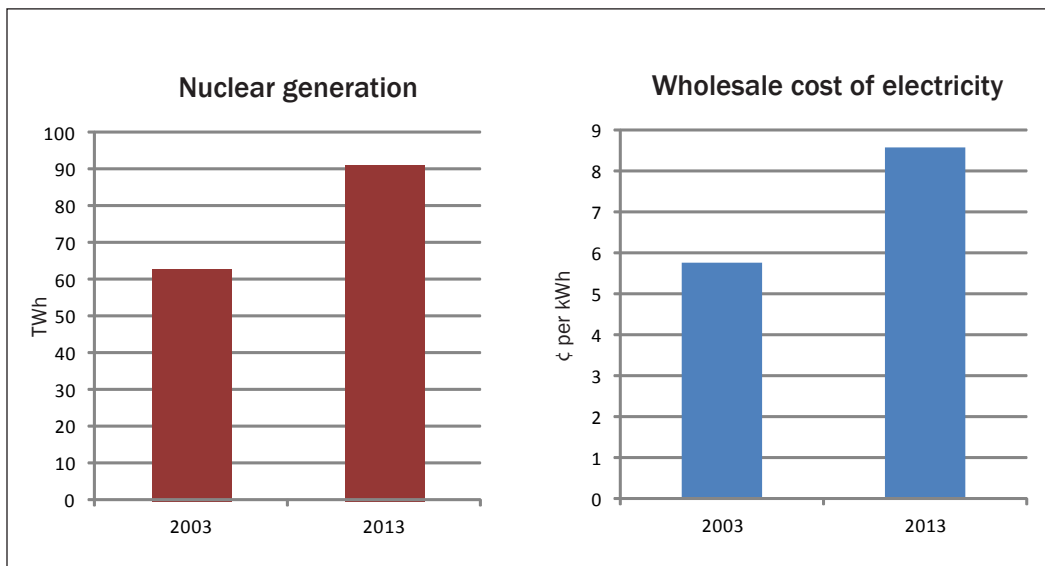


# Nuclear power production up, electricity prices up

The output of Ontario's nuclear reactors has increased by 44% since 2003. As Figure 1 shows, nuclear electricity generation has risen from 63 billion kilowatt-hours (kWh) in 2003 to 91 billion kWh in 2013.<sup>1</sup>

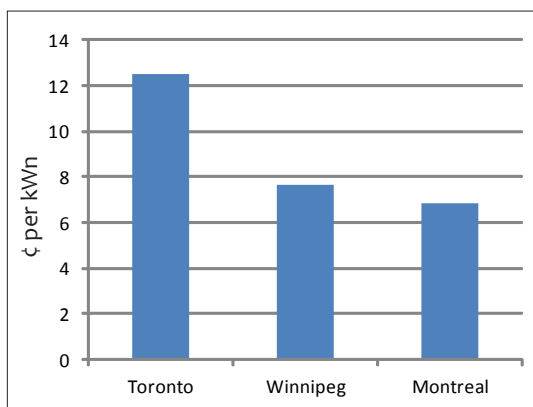
**Figure 1: Ontario's nuclear electricity generation and wholesale cost of electricity generation: 2003 and 2013<sup>1,2</sup>**



The rise in nuclear generation over the past decade has been matched by a rise in the wholesale cost of electricity generation

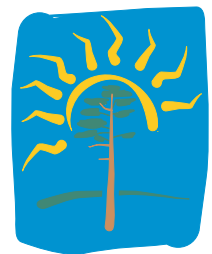
The rise in Ontario's nuclear generation has also been matched by a rise in Ontario's wholesale cost of electricity generation. Specifically, as Figure 1 reveals, our cost of electricity generation has risen by 50% from 5.76 cents per kWh in 2003 to 8.57 cents in 2013.<sup>2</sup>

**Figure 2: Residential electricity rates in Toronto, Winnipeg and Montreal in 2013<sup>3</sup>**



our cost of electricity generation has risen by 50% from 5.76 cents per kWh in 2003 to 8.57 cents in 2013.<sup>2</sup>

Ontario's electricity prices are dramatically higher than those of Manitoba and Quebec. As Figure 2 shows Toronto's residential rates are 64% higher than Winnipeg's and 82% greater than those of Montreal.



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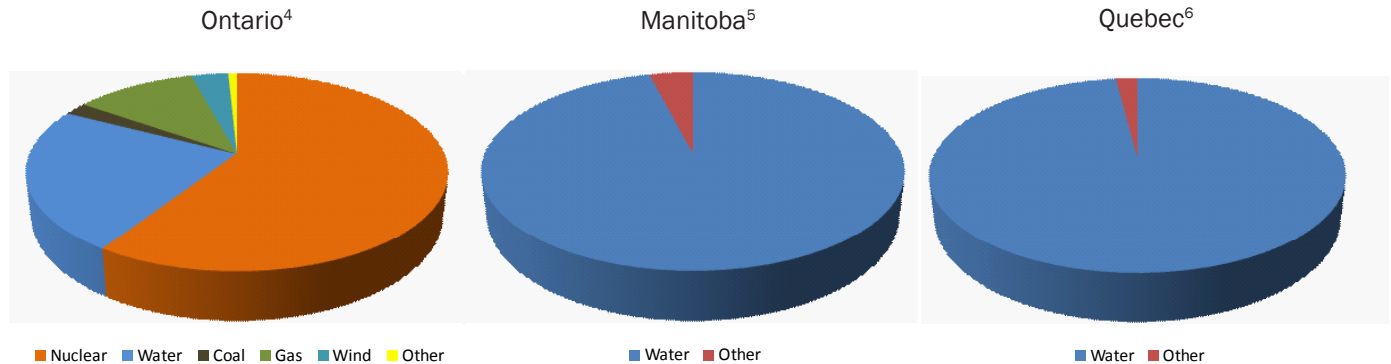
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Manitoba’s and Quebec’s low electricity rates are due to their large supply of low cost water power. Water power supplies Manitoba and Quebec with 96% and 98% of their electricity needs respectively. In contrast, only 23% of Ontario’s electricity needs are met by water power, compared to the 59% supplied by nuclear energy.

**Figure 3: Ontario’s, Manitoba’s and Quebec’s electricity supply mixes in 2013**



**Hydro Quebec has been exporting electricity at an average price of only 4.1 cents per kWh**

## Water power imports from Quebec can lower our electricity bills by more than \$1 billion per year

Ontario Power Generation (OPG) is proposing to re-build its aging Darlington Nuclear Station at an estimated cost of \$14 billion. According to OPG, the rebuilt Darlington station will produce electricity at a cost of 8.6 cents per kWh. However, the accuracy of this estimate is highly doubtful since every nuclear project in Ontario’s history has gone massively over budget – on average by 2.5 times.

On the other hand, Hydro Quebec is exporting electricity at an average price of only 4.1 cents per kWh – less than half the estimated cost of power from a rebuilt Darlington. Therefore, even if we assume that electricity from Darlington would only cost 8.6 cents per kWh, we can lower our electricity bills by more than \$1 billion per year by importing water power from Quebec instead of re-building the Darlington Nuclear Station.<sup>7</sup>

### Endnotes

- 1 Independent Electricity System Operator (IESO) News Release, “IESO Releases Generation and Consumption Figures”, (January 25, 2005); IESO, News Release, “Independent Electricity System Operator Releases 2013 Ontario Electricity Data” (January 8, 2014).
- 2 In 2003 Ontario’s wholesale cost of electricity generation equaled the annual average hourly Ontario energy price (HOEP), namely, 5.76 cents per kWh. In 2013, Ontario’s wholesale cost of electricity equaled HOEP (2.65 cents per kWh) plus the Global Adjustment rate (5.92 cents per kWh), i.e., 8.57 cents per kWh. <http://www.ieso.ca/Pages/Power-Data/Price.aspx>; and IESO, *Monthly Market Report*, (December 2013), page 21.
- 3 Hydro Quebec, *Comparison of Electricity Prices in Major North American Cities, Rates in effect April 1, 2013*, page 20.
- 4 IESO, News Release, “Independent Electricity System Operator Releases 2013 Ontario Electricity Data”, (January 8, 2014).
- 5 [https://www.hydro.mb.ca/environment/energy\\_sources/water.shtml](https://www.hydro.mb.ca/environment/energy_sources/water.shtml)
- 6 Hydro Quebec, *Sustainability Report 2012*, page 18.
- 7 Ontario Clean Air Alliance Research Inc., *Hydro imports can lower our electricity bills by \$1 billion per year*, (Revised October 2, 2013).

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