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Buying power from Quebec: Opportunity mugged by reality

Nuclear-generated electricity was the right choice for Ontario decades ago and is the right choice today, writes the head of the Canadian Nuclear Association.

By: John Barrett Published on Wed Jul 23 2014

At first glance, the idea of bringing electricity from Quebec into Ontario makes sense. After all, Ontario's electricity prices are rising; Quebec already exports vast quantities of electricity to the New England states.

However, the <u>Ontario Clean Air Alliance</u> (OCAA) and its Quebec ally, Equiterre need to do their homework before pressing this case much farther. Their argument to replace Ontario nuclear power with Quebec hydroelectric power ignores the value that nuclear power provides to the province. It also overlooks the realities of Ontario's power system.

Ontario's nuclear plants produce power safely and reliably every day around the clock. Refurbishing the Bruce and Darlington plants will extend their lives for decades, providing an economical, long-term supply of clean electricity for Ontario. Refurbishing 10 reactors also means Ontario will create thousands of jobs within the province.

The reality of an Ontario-Quebec power deal is that it will be purely commercial. Quebec is a very sharp and tough contractor for whom electric power is a rock-hard commercial business. There will not be any nation-building discounts or new Fathers of Confederation.

If you doubt this, consult the power authorities in Newfoundland and Labrador. In 1969, they signed a generation contract with Hydro-Québec that drove power prices steadily lower over 65 years. Even the onset of massive inflation – the general price level has jumped more than 500 per cent since 1969, according to the Bank of Canada – brought no upward adjustment in the price Newfoundland receives for its power.

The six New England states buy electricity from Hydro-Québec through their Independent System Operator (ISO-NE). Since the start of this year, wholesale power contracts for this New England grid have averaged \$100 per megawatt-hour – roughly a dime per kilowatt-hour. OCAA and Equiterre suggest that Hydro-Québec would sell power to Ontario at 5.7 cents per kilowatt-hour. Why should Hydro-Québec accept that price when it can get almost twice as much from New England?

Even if Hydro-Québec cut a special deal for Ontario, the needed infrastructure does not exist. Ontario built its electrical grid with self-sufficiency in mind, and its ability to meet electrical demand in Toronto depends on the wires that would carry power from Quebec.

Imagine that Ontario imported all the electricity from Quebec that it could. Interprovincial connections can carry 2,545 MW, or about 70 per cent of the capacity of the Darlington nuclear generating station. But once it crossed the provincial border, Quebec's electricity would travel through Ottawa on power lines that more resemble a one-lane cart path than a four-lane highway. Upgrading these lines would cost hundreds of millions of dollars, and raise power bills accordingly.

Even if Ontario upgraded its lines, however, there remains the issue of Quebec's export reliability. Hydro-Québec would not meet Ontario's needs year-round.

In a May 22 letter to Ontario's system operator, Hydro-Québec writes, "commitment periods need to take seasonal diversity into account." Quebecers heat with electricity, making winter the season of peak power demand. Feeling a capacity squeeze last winter, and the winter before, Hydro-Québec asked its customers to turn down their thermostats. Even now, Hydro-Québec is issuing contracts to buy power for the next four winters. This hardly sounds like a reliable, year-round power supplier.

What can we learn from these realities? Do the homework, and don't jump at too-good-to-be-true options.

There are reasons Ontario built its power system the way it did. It sought energy security and self-sufficiency. Ontario could have built a grid that relied on Quebec imports. Instead, it chose nuclear. Along the way, it gained a nuclear industry that has created thousands of jobs in Ontario.

Nuclear-generated electricity was the right choice for Ontario decades ago. It remains the right choice today.

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