FINANCIAL POST

How Alberta can hurt B.C.'s anti-pipeline NDP with a painful electric shock

Alberta's need to gain leverage in the pipeline war could result in moves that will either impoverish BC Hydro or hike power prices in the province

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Alberta's suspension of talks on electricity purchases from B.C. — a response to B.C.'s threat to limit the volume of diluted bitumen Alberta may ship through the Kinder Morgan pipeline running to the West Coast — could inflict more pain on B.C.'s electricity users than may be obvious. That's because B.C. is unique among Canadian provinces in not just exporting a lot of its electricity production but also in importing a lot of its requirements. Alberta could therefore ramp up pressure on B.C. by curtailing not just purchases but also sales of electricity to its neighbour.

National Energy Board and BC Hydro records show, for example, that in 2012, BC Hydro generated 57 terawatt-hours (TWh) of power, exported 11.1 TWh and imported 11 TWh. Thus, close to 20 per cent of BC Hydro's production was exported and 20 per cent of B.C.'s needs were imported. By contrast, in that same year, Manitoba's electricity exports were 30 per cent and imports only two per cent, which is more typical across Canada.

Yet in both B.C. and Manitoba, external electricity trade has historically accounted for 20 to 25 per cent of total revenue. In Manitoba's case, the external revenue comes from exporting generated electricity surplus. In B.C., there is no such surplus; imports are essentially equal to exports and generation output is right-sized to in-province needs. Instead, B.C.'s external electricity revenue comes from importing when prices are low, exporting when they are high and using water stored behind its dams to bridge the timing differences between market-price changes and the daily rise and fall of in-province electricity use.

BC Hydro's 2012 annual report indicates that 21 per cent of its revenue came from just the part of this trading that is equivalent to day-trading on the stock market (additional undisclosed revenue was earned from exports under long-term contracts). Put another way, if BC Hydro didn't engage in this "arbitrage" trading, customer bills would have to rise by 21 per cent.

While Alberta is not B.C.'s only major electricity trading partner and so can't exert quite this much pressure on B.C. rates by curtailing both imports and exports, Alberta is particularly important to B.C. because the different types of generation in their respective electricity systems complement each other so well.

B.C. relies almost completely on hydroelectric generating stations while Alberta, with its different geography and weather patterns, has had to rely primarily on coal- and gas-fired "thermal" generation. Each type of generation has its particular limitations and the hour-by-hour interplay of these limitations with customers' varying consumption patterns creates the short-term surpluses and deficiencies in both provinces that result in the arbitrage trading opportunities. Each province has a monoculture in electricity generation and interprovincial trading creates economic value through newfound diversity. Of all B.C.'s neighbours in both Canada and the U.S., Alberta's generating mix creates the most valuable trading opportunities.

Alberta could curtail exports to B.C. by simply adding a carbon tax. This would reduce the margin available to BC Hydro in its electricity trading activities and the tax collected could be used to compensate Albertan generators for the inevitable drop in their export volumes. Given that the dispute between the two provinces revolves around fossil fuels, and carbon taxes are central to the current policies of both provincial governments, it is hard to see how B.C. could object with any conviction or credibility.

This is all a simplified analysis useful only for general direction and lacking the detail necessary to predict results with any confidence. For example, electricity prices in Alberta and the U.S. inherently follow fossil-fuel prices so have been falling in recent years and are now at historic lows. This means that the import-export price margin that underpins the profitability of BC Hydro's trading has shrunk considerably, and flows on the transmission line connecting B.C. and Alberta are presently much lower than their historic norms.

But a more serious objection should be that restricting and curtailing interprovincial electricity trade is taking both provinces, and indeed the whole country, in the wrong direction. Both provinces could reap massive economic benefits from closer integration of their electricity systems because the fundamental science and economics behind their respective electricity-generating resources make them perfect dance partners. The long-range objective should be to increase the capacity and number of transmission lines connecting the provinces.

But in the short term Alberta needs to establish leverage to negotiate its fair share of Canada's energy resource endowment and that could result in moves that will either impoverish BC Hydro or increase electricity prices in B.C. above the annual three to four per cent already planned for each of the next three years.

Jan Carr was founding CEO of the Ontario Power Authority and a board member of the Alberta Electric System Operator.