Intelligence MEMOS

From: Blake Shaffer

To: John Horgan, Premier of British Columbia

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Re: **DAM(NED) IF YOU DO, DAM(NED) IF YOU DON'T**

The B.C. government has a tough decision to make. What to do about Site C?

Should it continue with its 1,100-megawatt hydro project on the Peace River? Or should it walk away, despite having sunk $2.1 billion and facing another $1.8 billion if it shuts it down? A new report by the B.C. Utilities Commission, the provincial electricity regulator, has not made the decision any easier.

The report estimates the total cost of the project will exceed $10 billion (the original price tag was $8.3 billion). While this is not yet like Labrador's Muskrat Falls overruns, it's a warning that things may yet get worse.

The report also says B.C. Hydro's demand forecasts are overly optimistic. The commission, instead favours a low growth scenario, and calls into question B.C.'s need for new supply. This is reasonable, given the history of over-forecasting by B.C. Hydro (and most utilities) over the past decade. However, if Canada is serious about climate action, massive electrification will be required.

Where things get interesting is the report's comparison between Site C and an 'Alternative Portfolio,' consisting of wind, geothermal, batteries and demand-side resources. The commission finds that the cost to ratepayers of these two alternatives is roughly equal.

However, a closer look shows that some of the commission's assumptions undersell the benefits of Site C while being generous in regards to the alternative.

The report values Site C's surplus energy at $25 per megawatt hour. This price is far too low for the type of power Site C will be able to provide on demand. The commission has chosen the low end of US market price forecasts for flat delivery, ignoring Site C's ability to shape power into the highest valued hours and provide firm capacity. It also ignores the Alberta market entirely, a rich potential destination for clean electricity.

The report also denigrates B.C. Hydro's trading arm, Powerex, saying it doubts its ability to market the excess capacity. Yet this is precisely what Powerex (where I once worked) has done with great proficiency since its inception 30 years ago. It also ignores the fact B.C. Hydro is set to improve its link to California's electricity market. Nor does it acknowledge Alberta's pending market reform. Both changes increase the value of Site C's flexible power.

As for the Alternative Portfolio, the report assumes wind and other renewables will have equivalent firmness to Site C, when combined with demand-side management programs. While that can help manage intermittency, equivalent firmness to a hydro facility is a stretch.

In short, the report grossly underestimates the value of Site C's flexible generating capacity and tends to be generous with the alternative.

The report also assigns no greenhouse gas benefits from exports displacing fossil fuel generation in neighbouring regions. If B.C. and Alberta were one province, Site C would be a no-brainer. Its energy would offset pending coal retirements, and its capacity would enable greater penetration of Alberta's superior wind resources.

The tragedy here is that Site C completion remains a debatable issue, despite $2 billion in sunk costs and needing $2 billion more to terminate. It speaks to the flaws in the initial decision to proceed without B.C. Utilities Commission oversight. But the present-day decision requires looking forward, not backward. Everyone is building wind and other renewables. Should B.C. go all-in with that herd? Or should it use its comparative advantage and enhance its flexible resources that will be in even greater demand in a world replete with intermittent generation?

Victoria must now decide. And it won't be easy.

Blake Shaffer is a Ph.D. candidate at the University of Calgary, fellow-in-residence at the C.D. Howe Institute, and former director of energy trading for Transalta Corporation

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