

SHOULD THE TAXPAYER PICK UP THE TAB FOR SITE C?

In 2017, a decision on whether to proceed with the Site C hydroelectric dam project was one of the first major decisions to confront the NDP government in its first months in power. Now a similar question faces the re-elected government. Because of geotechnical issues, new questions have been raised about the future of the dam. In the next few weeks the government will be presented with the report of special advisor Peter Milburn, then it must decide whether to proceed or cancel the project.

Regardless of whether the Site C project continues or is cancelled, the annual operating cost (primarily debt servicing) will require either a major increase in BC Hydro's electricity rates or the assumption by the government (taxpayer) of the cost. If the government is genuinely concerned about the affordability of BC Hydro's power it should cover the projects losses, or assume the debt if the project is cancelled.

This paper attempts to estimate the operating impact of proceeding with a higher priced dam, or cancelling the project. It is based on a paper I prepared in June 2017 on the hypothetical cost of Site C.¹ Many of the assumptions in the two scenarios have been developed by the writer as BC Hydro has not provided a financial estimate of either a continuation or shutdown option.

Scenario 1 – Proceed with the Project After Additional Geotechnical Work

During a 31 July 2020 media event announcing that the project now may face serious geotechnical delays and cost over-runs, minister responsible Bruce Ralston stated that cancelling the project was not being considered.² What might a geotechnical fix to the foundation cost? Some observers have speculated that the current budget may increase by \$1.3 billion to \$12.0 billion.³

If the government proceeds with completion of the Site C project I have estimated the cumulative operating losses for the first decade will total approximately \$4.0 billion (\$395 million annually). This would require a ten-year rate surcharge of approximately

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http://www.bcpolicy Perspectives.com/media/attachments/view/doc/occasional_paper_no_33_cost_estimates_of_site_c_24_june_2017/pdf/occasional_paper_no_33_cost_estimates_of_site_c_24_june_2017.pdf

² <https://www.timescolonist.com/covid-19/b-c-appoints-special-adviser-to-site-c-after-bc-hydro-reports-serious-cost-schedule-concerns-1.24179574#:~:text=Previous%20estimates%20have%20put%20the,of%20up%20to%20%202412%20billion.>

³ <https://www.cbc.ca/news/canada/british-columbia/site-c-letter-1.5741443>

7.9% to cover the operating losses for these years. I have provided my specific assumptions in the Appendix.

Loading these losses into a deferral account places an undue burden on future generations of ratepayers and violates a key principle of the cost of service method for setting rates.

Scenario 2 – Cancel the Project

The second scenario assumes that the government decides to cancel the Site C project. It is assumed that the cost, including remediation work, will total \$8.5 billion. An additional \$650 million is included to pay for the Site C portion of the future interest rate hedging losses. All the \$9.2 billion will be borrowed over 30 years, with the annual principal and interest cost estimated at approximately \$490 million per year. A loss of this magnitude will require a rate increase of almost 10% to cover the annual debt servicing cost. (see Appendix for more detail).

It is likely that additional electricity generation will be required in 10 to 15 years if Site C is cancelled. No allowance has been made in this estimate for the cost of this power.

The Ratepayers Cannot Afford to Pay for Site C

Could BC Hydro's customers afford an 8% to 10% rate increase to pay for the cost of Site C? It is highly likely that such an increase in the cost of electricity would result in the loss of a significant number of customer accounts, especially in the Large Industrial sector, and the resulting increase in unemployment.

BC Hydro ratepayers have been saddled with large cost increases, and even greater debt loads resulting from previous cabinet directives and orders from the nominal independent regulator. In the last 10 years (2011 to 2020) BC Hydro's rates have increased by some 46% on a cumulative basis, while the total domestic power sold has increased by only 2.9%. During this period BC Hydro's long-term debt increased by \$11.8 billion or 102.7%. A lowering of interest rates in recent years has helped moderate the increase in costs and debt.

The transfer of some \$2.85 billion in cost (and some revenue) variances to a variety of regulatory accounts during these years allowed BC Hydro to avoid even higher rate increases (and report high profits). BC Hydro's Q1 report for 30 June 2020 shows that the net regulatory assets of \$5.85 billion exceeded the corporations' reported equity by \$175 million.⁴

⁴ <https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/accountability-reports/financial-reports/quarterly-reports/BCHydro-F21-Q1-Report.pdf> p. 13.

The Association of Major Power Consumers (AMPC) has been warning the government that its corporate members (sawmills, pulp and paper producers, mines, and other major power consumers) cannot afford further increases in a major component of their costs. “Increasingly uncompetitive electricity rates heighten the risk of existing customers scaling or shutting down their operations, or transferring production to other jurisdictions, which slows new industrial investment in BC. Any such “demand destruction” will negatively affect all BC Hydro ratepayers, who will have to bear a greater proportion of costs.”⁵

In the event that the government decides to proceed with the Site C project it should not expect ratepayers (or future generations through a deferral of the annual losses) to fund the large losses anticipated, particularly in the first 10 years. The government should provide an annual subsidy equivalent to the net operating loss, perhaps using the revenue from the planned increase in the carbon tax.⁶

If the decision is made to cancel the project the government should transfer all of the current and future Site C debt from BC Hydro’s books to those of the government. This approach recognizes that the original decision to build Site C, as well as the 2017 decision to continue with the project, were political decisions. Therefore, the taxpayer should bear the cost rather than BC Hydro’s ratepayers.

While this option would increase the taxpayer-supported debt by approximately \$9.2 billion, the total provincial debt (taxpayer-supported and self-supported) would only increase by some \$3.2 billion over the total reported for 31 March 2020.⁷

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The writer is a retired senior BC government public servant whose paper describing the BC government’s manipulation of the finances of BC Hydro from 2008 to 2014 was published by *BC Studies* in November 2016. *BC Studies* published his paper on the 40-year financial history of ICBC in 2013. He was an intervener in the BC Utilities Commission’s recent reviews of ICBC’s and B.C. Hydro’s rate requests.

⁵ https://www.bcuc.com/Documents/Arguments/2017/DOC_49473_06-13-2017-AMPC-Final-Argument.pdf p. 1; see also https://www.bcuc.com/Documents/Arguments/2020/DOC_57997_2020-05-04-AMPC-Final-Argument.pdf p. 11.

⁶ Another approach is to lower the mandated net income by some \$400 million per year, but this amounts to an indirect way for the ratepayer to cover the loss.

⁷ The Site C borrowing to 31 March 2020 is included in the government’s total debt to that date.

APPENDIX

SITE C: COSTING OF SCENARIOS

Scenario 1 – Complete project with new budget of \$12.0 billion for geological work, and add \$650 million for Site C portion of hedging losses.⁸

Scenario 2 – Cancel with total cost of \$9.2 billion, which includes the hedging losses.

Scenario 1 – Complete the Project with Higher Costs

Assumptions

Amortization of \$12.65 billion (\$12.0 billion plus \$650 million for hedging losses) for 70 years, with bonds issued in two tranches of 25 years, and one of 20 years.

Average interest rate of 4%. In its annual report BC Hydro reported that as of 31 March 2020 its weighted average interest rate for bonds of 26 to 30 years duration was 3.2% (3.5% for 2019 and 3.7% for 2018).⁹ In using an average of 4% for the 70 years I have assumed about 3.5% for the first tranche, and an average of 4.5% for the remaining 45 years.

As of 31 March 2020, BC Hydro had spent (and borrowed) \$5.57 billion on Site C, with \$5.07 billion in Property, Plant and Equipment assets and \$508 million in the Site C Regulatory Account.

Interest rate hedge loss add-back; assumes \$650 million of the \$1.0 billion loss as of 30 June 2020 is attributable to the Site C project. This is added to the total cost.

No BC Hydro equity – all debt financed

Annual generation of 5,100 GWh

Total Annual Cost of \$575 Million

Total principal and interest at 70 years \$37,725 million (including \$650 million for interest rate hedge loss) divided by 70 years equals approximately \$540 million per year. Add \$32 million in annual water rental and \$3.0 million in operating costs results in annual total cost of \$575 million.

⁸ <http://www.bcpolicyperspectives.com/blog/posts/losses-on-bc-hydros-interest-rate-hedging-gamble-n>

⁹ <https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/accountability-reports/financial-reports/annual-reports/BCHydro-Annual-Service-Plan-Report-2019-2020.pdf> p. 74.

Annual Revenue Offset

BC Hydro is about to file a new long-term domestic load forecast. In its F20 to F21 Rate Request Application it had a load (GWh) forecast to 2038/39,¹⁰ with the 5,100 GWh of power from Site C coming onstream starting in late 2023/24. Excluding Site C, the mid-range forecast shows a deficit of domestically-produced power by approximately 2030/31; all the Site C power is surplus to domestic requirements until then. The Site C power surplus is slowly reduced after 2030 as the domestic demand grows.

I have assumed a more conservative increase in domestic demand, with Years 1-10 showing no demand for Site C, Years 11-30 at 80% average, and the final 40 years at 100% demand.

I have assumed a blended residential and commercial selling price of \$110/MWh (the actual for 2019/20 was \$120.55 for domestic and \$103.89 for commercial).

I have assumed an export price of \$35/MWh (CAN).

Annual Profit/Loss

Scenario 1 (\$575 million annual cost) assumes none of the power is sold domestically in the first decade, 80% average in the next 20 years is required for the domestic market, and all is required for the last 40 years. The loss in the first 10 years is \$3.46 billion, and the gain over the balance of the 70 years is \$400 million, for a cumulative loss of \$3.06 billion.

	Domestic		Export		Total	
	GWh	\$=mil	GWh	\$=mil	Total \$	P/(Loss)
Years 1-10	nil	nil	5,100	180	180	(395)
Years 11-30	4,100	450	1,000	35	490	(90)
Years 31 to 70	5,100	560	nil	nil	560	(15)

Currently a 1% increase in rates equates to approximately \$50,000. **To fund the \$395 million annual loss in the first decade would require a 7.9 % rate increase (surcharge) for 10 years.** The surcharge could be reduced by approximately 6.0% starting in year 11.

¹⁰ https://www.bcuc.com/Documents/Proceedings/2019/DOC_55779_B-15-BCH-20Year-Load-Forecast.pdf
Appendix D, page 3.

Scenario 2 – Cancel at a Cost of \$9.2 Billion

Assumptions for Scenario 2

Decision to cancel comes by 31 February 2021, with \$7.2 billion spent. In its 2020/21 to 2023/24 service plan BC Hydro said \$1.6 billion would be spent on Site C during 2020/21, resulting in about \$7.2 billion by 31 March 2021, so my estimate has a contingency margin. Wind-up and reclamation costs add another \$1.3 billion for total of \$8.5 billion. Add \$650 million for the Site C portion of the \$1.0 billion in losses from interest rate hedging. This brings the total to \$9.2 billion.

For ease of calculation I have assumed that the total \$9.2 billion cost would be borrowed with a 30 year amortization at 3.4%. Some \$7.0 billion would have been already borrowed by the time the cancel decision was made, at a slightly higher rate.

Currently, BC Hydro is accumulating the carrying cost of the borrowed \$5.5 billion (as of 31 March 2020), and this is part of the estimated current \$10.7 billion project budget. More carrying cost will be accumulated until the project is complete and operational, then the total cost is amortized into the rates.

Eliminating the Site C assets from the “Property, Plant and Equipment” category on BC Hydro’s statement of financial position for 2019/20, as well as the \$508 million in the regulatory account assets, would reduce BC Hydro’s equity as of 31 March 2020 from \$5.6 billion to practically zero.

The 30 year amortized cost of the \$9.2 billion is approximately \$490 million per year in additional debt service costs. Assuming a 1% increase in rates generates \$50 million, the \$490 million **would require a surcharge of 9.8% for 30 years to pay off the debt obligation.**