

OPTIONS FOR FINANCING SITE C

This paper reviews estimated preliminary costs of either proceeding or suspending the Site C project, and provides some financing options. The government has a difficult decision to make regarding the go/no go status, and little time to make that decision, as an extended delay will add significantly to the ultimate cost of a cancel/suspend decision.

But the decision on the future of Site C must be made in the broader context of restoring BC Hydro's finances to a healthy condition. Essentially, the choice of a mechanism to fund the cost of the decision on Site C should not preempt what fiscal capacity remains at BC Hydro to moderate the growth in debt, improve the solvency of the pension fund, and reduce BC Hydro's reliance on dubious regulatory/deferral accounts to inflate its net income.

1.0 THE BROADER CONTEXT

Using generally accepted accounting principles (GAAP) for the private sector, BC Hydro would have become insolvent sometime in 2013. Its balance sheet liabilities would have exceeded its assets, resulting in negative shareholder equity.

BC Hydro, however, has used the regulatory (or deferral) accounting rules to convert some of its liabilities into assets, thereby inflating equity. All regulated power utilities use regulatory accounting to help smooth significant annual fluctuations in costs, thereby keeping changes in the rates charged to customers more stable and predictable.

Since the 2008/09 recession, the provincial government has abused the accounting opportunities made available by regulatory accounting to artificially increase BC Hydro's net income, and allow dividends to be paid. It also allowed the corporation to seriously underfund its pension obligations to inflate the equity.¹ By year-end 2015/16, the net balance in the regulatory accounts (\$5.9 billion) represented some 131% of BC Hydro's recorded equity (\$4.5 billion).

The Liberal government hollowed out of the finances of our public power corporation by reducing the role of the formerly independent regulator, the BC Utilities Commission, to

¹ http://www.bcpolicyperspectives.com/media/attachments/view/doc/occasioal_paper_no_20_january_14_2017/pdf

that of an agent of the government.² Detailed prescriptive cabinet orders expanded the number and scope of the deferral accounts and, since the 10-year plan of 2014, have even required BC Hydro to record unapproved and unbilled revenue to suppress rate increases and still produce record profits.³

These practices (including paying dividends from borrowed funds) have increased BC Hydro's debt to the point that Moody's is warning that this trend may threaten the province's credit rating.

The government's reckless decision to proceed with the \$8.8 billion Site C dam project, without a proven medium term domestic need for the additional power, will seriously weaken BC Hydro's already poor financial outlook.

Possible options to finance the dam must not preclude the fiscal capacity of BC Hydro to reform and restore its existing financial situation, within the context of future affordable rate increases.

2.0 WHAT WILL SITE C COST?

The following is in two parts; the first assumes that the dam will come onstream in 2024/25, while the second assumes that a decision is made to suspend all work for an indefinite period. These scenarios focus on the operating budget.

2.1 COMPLETE SCENARIO

BC Hydro has not released any detailed calculations of the annual operating impact, therefore the following has been inferred from the information available. BC Hydro has said that the all the cost will be borrowed, and that the financing (amortization) period will be 70 years at an assumed 5% rate.

BC Hydro has also stated that there will not be a positive return until Year 71,⁴ which I have interpreted as there will be a significant number of years of net operating losses followed by annual operating profits, which eventually net to zero by Year 70. Including estimated debt service, water rental fees, grants in lieu and operating costs, the annual gross increase in BC Hydro's annual operating cost is estimated at \$500 million.

² See

http://www.bcpolicyperspectives.com/media/attachments/view/doc/occasional_paper_no_15_bcuc_independence_27_october_2016/pdf

³http://www.bcpolicyperspectives.com/media/attachments/view/doc/occasional_paper_no_15_bcuc_independence_27_october_2016/pdf

⁴ This is important, as the net operating losses in the early years of operation will not be fully recovered until year 70, see <https://thetyee.ca/Opinion/2016/10/12/Christy-Clark-Site-C/>

Appendix A shows the detail of the calculation, where the net losses for the first 10 years of operation are estimated at \$3.0 billion, while the second 10-year period would losses would total \$1.125 billion.

Who will pay the \$4.125 billion in BC Hydro's operating losses during the first 20 years?

Ratepayer Option

A rate increase of 7% (2016 dollars) would be required on April 1, 2024 to cover the \$300 million annual net cost for 10 years. The scenario assumes improved domestic sales revenue during the second decade, which allows for an approximate 4% reduction in the rates to reflect the improved revenue.

This option would prevent BC Hydro's debt from increasing, but a 7% shock would likely cause financial hardship, and may result in some mines and wood product plants becoming uncompetitive.

Ratepayer Option with Deferral

The scenario described in Appendix A assumes that Site C power would generate net operating profits from Year 26 to Year 70. Deferring the net losses incurred in the first two decades (\$4.125 billion) to be repaid from the anticipated future profits is not recommended, as it transfers an undue burden to future ratepayers, and clearly violates the intent of the regulatory accounting rules (to recover variances in the next rate period).

Taxpayer Grant

The government could fund the net operating shortfall for the first 20 years, thereby avoiding the 7% rate increase. Over the period, this option would increase the taxpayer direct debt by \$4.125 billion, and likely result in a downgrade of the province's credit rating.

Carbon Tax and 1% Rate Increase

Under this option, rates would increase by 1% on April 1, 2018, and the province would dedicate \$2.50 of the planned 2018 increase to the Carbon Tax (with a further \$2.50 of the 2021 increase) directed to BC Hydro. These funds would be accumulated in a liability account and paid out over the first 10 years to avoid the 7% rate shock. In this option BC Hydro would raise rates by 1% beginning in April 2018.

2.2 SUSPEND/CANCEL SCENARIO

The financing impact of this scenario is more difficult to estimate, because the individual cancellation cost (if any) in each of the construction and supply contracts has not been made public.

For the sake of simplicity, I have assumed that an indefinite suspension or cancellation will entail the same cost, which I have assumed at \$4.0 billion. This includes some site remediation.

While it is probable that some of the work to date will be a credit to the project budget if the project is later restarted, I have assumed that an indefinite postponement will be treated as a write-off for accounting purposes.

Since there is no asset that may produce some future income stream, the \$4.0 billion would not qualify as a regulatory asset. It would be equivalent to a debt, which would be paid-off over 10 or 20 years. Since the decision to suspend or cancel would be made within the next 10 months, the borrowing cost should be less than the 5% used to calculate the cost of borrowing in 2023, when Site C is planned to enter service and amortization of the capital cost begins.

The annual payment on the loan would begin in 2018/19.

Table 1 shows the total annual principal and interest cost using a 4% borrowing rate paid over 10 years, and over 20 years, at a total loan of \$4.0 and \$4.5 billion.

**TABLE 1 Impact of 10 and 20 Year Debt Cost at 4 Percent
(Cost=millions)**

	----- 10 Year Plan -----		----- 20 Year Plan -----	
	ANNUAL COST	RATE Δ	ANNUAL COST	RATE Δ
Debt of \$4.0 Billion	486	11.3	290	6.7
Debt of \$4.5 Billion	546	12.7	328	7.6

Table 1 shows that paying down a suspension/cancellation cost of \$4.0 billion over 20 years only saves \$10 million per year, assuming 20 years financing, compared to the net annual cost of \$300 million if the project proceeds to completion. Total savings over 20 years is \$200 million.

Repaying the suspension/cancellation cost over 10 years (\$486 million/year) would result in annual costs much higher than proceeding, although the debt obligation would be cleared much sooner.

The Rate Δ is the increase in BC Hydro rates that would be required to pay the principal and interest, based on the 2016 average of a 1% rate increase generating \$43 million in new revenue.

Excluding the deferral option, the funding options outlined in Section 2.1, such as rate increases or dedicating some of the planned Carbon Tax increase, would apply.

3.0 OTHER CONSIDERATIONS

The liberal government's budget for 2017/18 included the phase-out of the provincial tax on electricity sales to major corporate users. This elimination would be phased in over two years, ultimately saving businesses and large industrial users 7%, or approximately \$150 million by 2019/20.⁵ Residential customers do not pay the sales tax on electricity.

The government must also consider the impact that a decision on whether to proceed or cancel/suspend will have on its reputation in the major financial markets.

Ultimately, it is the responsibility of the provincial government to decide. The NDP intends to refer the question to the BC Utilities Commission for an expedited financial review of Site C. It is hoped that the review will include the total cost of the proceed or cancel/suspend options.

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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 has been an intervener in the BC Utilities Commission's recent reviews of ICBC's rate requests, and is an intervener in the Commission's current review BC Hydro's rate requests.

⁵ See page 73 in http://bcbudget.gov.bc.ca/2017/bfp/2017_Budget_and_Fiscal_Plan.pdf

APPENDIX A

I PROCEED WITH SITE C – OPERATING COST AND FINANCING OPTIONS

Key Assumptions:

- 1) BC Hydro annual profit approximately \$700 million/year as per current plan pre-Site C
- 2) No dividend paid.
- 3) Total Project Cost of \$9.0 billion, includes interest during construction and current Site C regulatory/deferral account.
- 4) Amortization over 70 years at 5% borrowing cost.
- 5) No equity investment.
- 6) No profit until Year 71.

Assumption 3 Detail:

December 2015 Estimate from BC Hydro Site C web site.

Direct Construction Cost	\$5.695 billion
Indirect Cost	\$1.235 billion
Construction and Development Cost	\$6.930 billion
Interest During Construction	<u>\$1.405 billion</u>
Total Project Cost	\$8.335 billion
Treasury Board Reserve	<u>\$0.440 billion</u>
Total	\$8.775 billion

Assumption 4 Source:

https://www.bchydro.com/news/press_centre/news_releases/2016/70-year-economic-life-site-c.html

OPERATING BUDGET IMPACT OF SITE C

Annual Cost Increase	Debt Service	\$465 million
	Water Rental/Grants	\$ 32 million
	Operating Costs	<u>\$ 3 million</u>
	Total	\$500 million

Cost per MWh is \$98.00

Average Annual Revenue Increase

<u>PERIOD</u>	<u>REVENUE/YEAR</u>	<u>NET PROFIT/(LOSS)</u>
Year 1 to Y10	\$200 million	(\$300 million) -- 10 years (\$3.00 billion)
Year 11 to Y20	\$375 million	(\$125 million) -- 10 years \$1.25 billion
Year 21 to Y25	\$500 million	None – 5 years nil
Year 26 to Y36	\$550 million	\$ 50 million -- 11 years \$0.55 billion
Year 37 to Y70	\$610 million	\$110 million -- 34 years \$3.74 billion

Net position over 70 years is zero.

Sales growth after Year 10 assumes growing domestic demand displaces lower revenue export sales. The growth in sales may be optimistic, but the 70-year break-even seems to match to BC Hydro's assumption.

FINANCING OPTIONS

1. New Carbon Tax Revenue – Portion to Fund Site C Losses

Beginning in 2018, the NDP/Green agreement calls for the Carbon Tax (CT) to be increased by \$5 increments, reaching \$50/tonne by 2021. By dedicating a portion of the new revenue to BC Hydro to cover the Site C operating shortfall the government would avoid the rate shock facing BC Hydro customers if no subsidy was provided.

Using a regulatory account, CT funding should be accumulated prior to the new Site C costs being included on BC Hydro's income statement. With the CT annual subsidy, the regulatory balance would be paid down during the first decade of Site C losses.

2. Ratepayer -- Site C Regulatory Deferral Account

I believe BC Hydro intends to defer the Y1 to Y20 loss of \$4.25 billion, and pay down the regulatory account from Y26 to Y70. This is in keeping with its response to David Austin's question about the 0-year paydown, and its November 21, 2017 response to the AMPC (RRA F17 to F19, IR 1.1.5) where it said the impact of Site C may be smoothed into the rates over "a number of years."

This option will significantly increase BC Hydro's debt, which would likely prompt a downgrade of the province's credit rating.

3. Ratepayer -- Reduce Net Income

Reduce BC Hydro's net income by the equivalent annual net loss. This will reduce the annual revenue from BC Hydro, which will reduce the government's budgeted revenue.

This option would avoid a 7% rate increase (2016 dollars) to fund the \$300 million annual loss for the first 10 years.

However, it would preclude using the current net income to restore BC Hydro's existing financial problems, and leave the previous 10-year plan assumptions, such as reporting and deferring unbilled revenue (the Rate Smoothing Regulatory Account), in place. This would leave the government vulnerable to charges of abusing the GAAP accounting rules.

4. Ratepayer -- Increase Rates, Then Reduce Later

To fund the shortfall for Y1 to Y10, rates would need to increase by about 7% (2016 dollars). This increase would be in the base rate. [$7\% \times \$43\text{m} = \301m]

In Y11, the rates could be reduced by about 2.9%. [$4.1\% \times 43\text{m} = \176m]

In Y21, the rates could be reduced by 4.1%.

In Y26 the annual profit would be \$50 million, allowing for a 1.16% rate reduction.

In Y37 the annual profit would be \$110 million, allowing for a 2.6% rate reduction.

This option would preserve the province's credit rating, but hurt the competitiveness of customers, and may lead to the closure of some marginal mines and wood/pulp mills.

It would allow for the phase-out of questionable deferral/regulatory accounts by reducing the current level of net income. This would help more closely align BC Hydro's accounting policies to national GAAP standards.

Electricity prices would, over time, better reflect the true cost of production.

5. Taxpayer -- Province to Absorb Initial Loss (with payback starting Y26)

This option sees the government loaning BC Hydro the \$3.25 billion net loss from Y1 to Y20, and being paid back in the later years (Y26 on).

The taxpayer would fund the interest costs.

This may lead to a downgrade of the province's credit rating, but avoid the sharp increase in rates in Y1, with the downsides involved.

In the 2017/18 budget the government announced a phased elimination of the 7% PST on industrial user's electricity purchases. A smaller reduction would pay some of the interest cost on the loan to BC Hydro.

II STOP OR SUSPEND SITE C – OPERATING COST AND FINANCING OPTIONS

This option reviews the annual cost to pay off a loan to cover the one-time cost of the costs incurred, including the cancellation costs and site remediation.

The final costs will not be known until a decision is made, and the cost of the cancellation clauses in each contract can be determined.

Key Assumptions:	<u>Option A</u>	<u>Option B</u>
Total Cost (billion)	\$4.0	\$4.5
Term	20 years	20 years
Rate (percent)	4%	4%
Total 20-year expenditure	\$5.82 billion	\$6.54 billion
Annual principal and Interest	\$290 million	\$328 million
Rate increase (2016) required	6.7%	7.6%

Note 1) Assumes borrowing rate as of early 2018. The proceed option uses a 5% rate assuming conversion to long-term debt in some five years later.

2) If the term was 10 years, the annual cost of Option A would be \$486 million (requiring an 11% rate increase), while the annual cost of Option B would be \$546 million (requiring a 12.7% rate increase).

FINANCING OPTIONS

The financing options are similar to those shown in the proceed option.

However, as there will be no income producing asset, it is not possible to use regulatory accounting to defer the cost.

III SUMMARY OF FUTURE IMPACTS

The following table summarizes the cost and required rate increase for the proceed and the cancel/suspend options during the key periods of the 70-year proceed option. The table uses the 20-year loan option for the cancel/suspend decision.

		Years 1-10	Years 11-20	Years 21-25	Years 26-70
A	Profit(Loss) Proceed	(3.00) Billion	(1.13) Billion	None	4.13 Billion
	Cancel/Suspend	(2.90) Billion	(2.90) Billion	None	None
B	Rate Change Proceed	7.0	(4.0)	(3.0)	None
	Cancel/Suspend	6.7	None	(6.7)	None

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