

Sanford, Donna L GCPE:EX

From: Sanford, Donna L GCPE:EX
Sent: Tuesday, November 28, 2017 1:24 PM
To: Lilly, Liz LASS:EX
Cc: Sanderson, Melissa EMPR:EX
Subject: Response to questions
Attachments: Site C Green Party Qs 17-11-19.docx

Hello Liz. Attached please find responses prepared by Ministry of Energy, Mines and Petroleum Resources.
Regards,
Donna

Site C/BC Hydro Questions

Ministry of Energy Mines and Petroleum Resources Responses

Site C/BCUC report

Impact of different continuation and cancellation scenarios on ratepayers

- Continuation
 - What would be the rate impact of continuing with Site C at the \$8.9 billion, \$10 billion, \$12 billion, and \$15 billion cost levels?

The BCUC's report sets out the revenue requirement impacts of moving from \$10 billion to \$12 billion as the total capital cost for Site C (see page 17 in the Executive Summary). Rate impacts are being calculated.

- Cancellation
 - BCUC determines that termination costs would be \$1.8 billion, and notes 10, 30, and 70-year amortization periods
 - It has been claimed that cancellation with the costs amortized over 10 years would result in a 9.5% rate increase next year. Can you confirm this?

Putting a 9.5% increase in place for a period of ten years to cover sunk and termination costs is consistent with BC Hydro's submissions to the BCUC Inquiry.

- What would be the rate impact of cancellation with costs amortized over 30 years? Over 70 years?

The Ministry has similar questions and has asked the BCUC for clarification in a letter sent on November 15, 2017.

Cost per MWh from Site C and alternative portfolio

- What is BC Hydro's current estimate of \$ cost per MWh from Site C? Why did it decline from \$83/MWh in 2013 to now?

See Table 31 in the BCUC's Final report for the factors leading from \$83/MW.h to the current Site C cost.

- It's unclear to me how specific numbers were reached by the BCUC on \$/MWh for Site C and the alternative portfolio under different scenarios. Could you clarify how they came up with their figures?

The Ministry has also asked for clarification from the BCUC in our November 15 letter.

BCUC's illustrative alternative portfolio

- BCUC raised a number of concerns with BC Hydro's alternative portfolio and found it could not be relied upon because of opaque and insufficiently robust assumptions. They found that BC Hydro's alternative portfolio was not the lowest cost portfolio.
 - Could you expand on the differences of opinion between BCUC and BC Hydro on the alternative portfolio and why BCUC rejected BC Hydro's portfolio?

The BCUC's views are set out in Section 6.3 of the Final Report, and Appendix A. We are not willing to speculate on any differences of opinion.

- BCUC stressed that their alternative portfolio was "illustrative only" - is the Ministry undertaking their own development of an alternative portfolio, or is BC Hydro adjusting their portfolio to respond to the Panel's concerns? What work is being done to ensure the alternative portfolio is robust and costed accurately?

The Ministries of Energy, Mines and Petroleum Resources and Finance are doing due diligence to support Cabinet decision making on the future of Site C. The BCUC has been asked by the Ministries and BC Hydro to clarify a number of issues identified in their Final Report. The BCUC's responses will be considered in the advice we develop for Cabinet.

- How did BCUC's modelling deal with the declining costs and uncertainty regarding alternative energy development? How did it differ from BC Hydro's modelling?

BC Hydro's October 14 technical presentation to the Site C Panel noted that BCUC's assumptions for cost declines were below the median forecast. The views of BC Hydro and the findings of the BCUC are set out in Appendix A to the Final Report.

BC Hydro forecasting and BCUC's choice of low load scenario

- BCUC found that Hydro systematically over estimated future electricity demand and under estimated the value of alternative sources of power. They also found that BC Hydro's industrial forecasts have been considerably below industry benchmarks.
 - Where has actual demand historically landed relative to BC Hydro's forecasts?
 - Commercial, residential, and industrial?
 - Why have BC Hydro's industrial load forecasts been inaccurate to this degree?

Appendix I to BC Hydro's August 30, 2017 filing in the BCUC Site C Inquiry includes a third-party assessment of BC Hydro's load forecasting. The assessment includes a table on page 24 that compares BC Hydro's load forecasting for its different customer segments across various time periods against industry benchmarks. For residential and commercial loads, BC Hydro's forecasts have less variance than the benchmarks. The assessment notes:

Variances for the Industrial class have been higher than those for the Residential and Commercial classes; however, this is expected given the volatility of loads and the uncertainties of future economic activity in the forestry, oil and gas, and mining sectors, which comprise the significant portion of total energy sales for the industrial class.

- How confident are you in the Panel's analysis and assumptions that led them to select the low load forecast?
- What are the risks BCUC references that would bring the forecast below the low load scenario? How likely are these risks to materialize?

We are seeking further clarification from the BCUC on their load forecast assumptions as set out in the November 15 letter.

- BCUC found that the alternative portfolio has a relatively high rate impact sensitivity to the magnitude of the load forecast.
 - What is the range of potential ratepayer impacts if an alternative portfolio is developed in place of Site C and we reach a mid or high-load scenario?

We do not yet have this specific information. As you can see from the BCUC's analysis (e.g., page 17 of the Executive Summary to the Final Report), the NPV of ratepayer costs increases for the Alternative Portfolio when moving from the BCUC's low-load assumption to the mid-load and high-load forecast.

- Electrification was not incorporated into the load forecast because of high uncertainties on timeline and scale.
 - How would different levels and timelines for electrification affect the load forecasts?
 - How would high levels of electrification affect the ratepayer impacts of the alternative portfolio and its ability to meet demand?
 - Could our GHG reduction targets be used in developing a proxy for electrification estimates?

Increased load associated with electrification would represent a move toward the mid- or high load forecast, and increase the benefits to ratepayers of Site C relative to the Alternative Portfolio. A review of electricity demand implications of climate policy and electrification can be

found in the paper prepared by Dr. Mark Jaccard for the BC Sustainable Energy Association (Exhibit F-29-8 on the BCUC's Site C website).

Site C budget

- BCUC says “given the nature of this type of project and what has occurred to date, total costs for the project may be in excess of \$10 billion and there are significant risks that could lead to further budget overruns”
 - Could you give any more detail on what makes up the difference between BC Hydro's estimate from Oct 4th that the current expected budget is \$8.945 billion (after the missed 2019 river diversion), and BCUC's estimation of at least \$10 billion?
- BCUC found that in a “high impact” scenario the budget may be exceeded by between 20 and 50 percent
 - What further risks make up the potential cost overruns beyond \$10 billion?
 - What is the likelihood of reaching the “high impact” scenario?

The BCUC appears to have relied on the analysis performed by Deloitte LLP on the impacts of delay of river diversion to the capital cost of Site C (Exhibit A-8). As noted in the November 9 Green Caucus briefing, the \$610M cost associated with a one year delay in river diversion was BC Hydro's submission in response to a BCUC information request. This cost is before any mitigation through accessing contingencies, the Project Reserve, and any recourse BC Hydro may have under its contract for the Main Civil Works. In the event that a decision is made to proceed with Site C, we would anticipate that both the BC Hydro Board of Directors and government would approve a revised budget.

BC Hydro debt

- What is the risk to BC's credit rating from cancelling Site C? What is the risk to BC's credit rating from continuing with Site C under different cost projections?
- How will the debt be accounted for between BC Hydro's accounts and broader provincial management of debt?
- What is included in the \$2.1 and \$1.8 billion sunk and termination costs?
 - Do the figures include the costs of cancelling the impact benefit agreements and/or cancelling contracts?

The transparent nature of the BCUC's process means that credit rating agencies are fully aware of the government's pending decision on Site C. On November 16, Standard and Poors affirmed the Province's AAA credit rating, noting “We view the BC Hydro as self-supporting and expect that financial support would be unlikely, given the utility's strong demand profile and supportive regulation.” BC Hydro's borrowing, including borrowing for Site C, is classified as self-supporting or commercial debt in the Province's Summary Financial Statements.

The \$2.1 billion in sunk costs is the forecast of actual expenditures on the Site C project to December 31, 2017. The \$1.8 billion in termination costs, as noted in the BCUC's report, includes the costs of exiting the existing contracts for construction of the project, and remediating the site. No determination has been made with respect to the benefit agreements.

Construction delay

- The Panel finds that further delays are more likely than an in-service date of November 2024, and says it does not share BC Hydro's confidence that the river diversion will be achieved by September 2020.
 - What are the cost implications of BC Hydro missing the 2020 river diversion, and missing the 2024 in-service date? What would the ratepayer impacts be?
 - What is the likelihood of missing this in-service date, and what are the main contributing factors?

The factors and potential costs associated with further delay are set out in the Deloitte report commissioned by the BCUC. If the project proceeds, BC Hydro has stated at this time it is working to an in-service date of November 2024. We are unwilling to speculate on the likelihood of missing this date.

Uncertainties and risks

- BCUC notes that there are uncertainties and risks with both the scenarios of continuing with Site C (e.g. being over budget), and pursuing an alternative portfolio (e.g. higher than predicted load forecast).
 - What is the likelihood of the risks materializing, and if they do, what are the magnitude of those risks (on ratepayers etc.)?
 - How do the likelihood and the magnitude of the risks identified by the Panel compare, for continuing with and cancelling Site C?

This is analysis we are preparing for Cabinet. We are unable to comment.

Columbia River Treaty entitlement

- What are the benefits and drawbacks of using the Columbia River treaty entitlement, recognizing a legislative change would be needed to do so?

A discussion of the Canadian Entitlement (CE) and other potential market supply is included in section 6.3.3 of Appendix L to BC Hydro's August 30 submission in the Site C proceeding. A further limitation of the CE is that it is not dispatchable, but rather is prescheduled daily for the hours of the following day. This means the CE cannot be ramped up and down to match changes in load or intermittent generation.

BC Hydro

BC Hydro debt

- How much is BC Hydro's total debt, including deferral accounts?
 - How much does BC Hydro hold in its deferral accounts?
 - How much has it grown over the last 5 years? 10 years?
 - How does BC's use of deferral accounts compare to other jurisdictions?

Information related to BC Hydro debt can be found in its audited financial statements (http://www.bchydro.com/about/accountability_reports/financial_reports/annual_reports.html). The notes to the financial statements include full disclosure related to regulatory accounts. We have not undertaken recent research related to the use of regulatory accounts in other jurisdictions. The Auditor General is currently reviewing the use of regulatory accounts, and we expect a report in that regard next spring.

Rate freeze

- What will freezing BC Hydro rates mean in terms of lost revenue to BC Hydro?
- Will the rate freeze add to BC Hydro's debt burden? If so, by how much?

BC Hydro's application to the BCUC to change its applied for 3% rate increase effective April 1, 2018 to 0% can be found at http://www.bcuc.com/Documents/Proceedings/2017/DOC_50292_B-23_BCH-Requesting-Rate-Freeze.pdf. Minister Mungall's mandate letter includes direction to "freeze BC Hydro rates while undertaking a comprehensive review of the Crown corporation." The extent of the savings or incremental revenues identified through that review will determine the impact of the rate freeze, and are not known at this time.

Sanford, Donna L GCPE:EX

From: Nash, Amber PREM:EX
Sent: Friday, December 1, 2017 1:50 PM
To: Meggs, Geoff PREM:EX; Dewar, Bob PREM:EX; Aaron, Sage PREM:EX; Hannah, Matt GCPE:EX
Cc: Wong, Tamarra PREM:EX; Sanford, Donna L GCPE:EX; Van Meer-Mass, Kate PREM:EX
Subject: Green Caucus Letter
Attachments: Scan_20171201.pdf

Importance: High

Hi All,

Attached letter from the Green Caucus regarding Decision on Site C – they will be putting out a press release in 30 mins on this as well

Amber

From: AMBNASH [<mailto:Amber.Nash@gov.bc.ca>]
Sent: Friday, December 1, 2017 1:47 PM
To: Nash, Amber PREM:EX
Subject: Scan From



LEGISLATIVE ASSEMBLY

of BRITISH COLUMBIA

December 1, 2017

Premier John Horgan
Office of the Premier
Parliament Buildings, B.C. Legislature
Victoria, B.C.
V8V 1X4

cc: Hon. Michelle Mungall
Minister of Energy, Mines and Petroleum Resources

Dear Premier Horgan,

As we near cabinet's decision on Site C, we write to you today to urge you to stop construction of the Site C dam.

Our Confidence and Supply Agreement committed government to sending Site C to the BC Utilities Commission (BCUC), BC's independent regulatory agency, for an independent review of the project. In undertaking this review, the BCUC marshalled significant evidence and undertook an analysis of the implications of pursuing completion, suspension, and termination scenarios; the implications for ratepayers of different scenarios; and the potential for a portfolio of alternative sources of energy to meet demand.

The resulting report was comprehensive and provided a strong, evidence-based rationale for cancelling Site C. This rationale is founded in a number of key findings presented in the report, including:

- a. Site C is already over budget, and is beset by considerable risks of further costly overruns and delays;
- b. An alternative portfolio can meet future demand requirements, at the same or lower prices than Site C.

The BC Green Caucus believes that the findings of the report more than make the case that the best course of action for government is to cancel the project, remediate the land and begin the work of developing a 21st century energy system based on options presented in the alternative portfolio.

This argument is laid out in greater detail below.

Legislative Office

Room 028 Parliament Buildings
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Costs and risks of Site C

The estimated cost of Site C has escalated throughout its lifespan. Just last month, when the river diversion deadline was missed, the cost increased again from \$8.3 to \$8.9 billion, accompanying a year-long delay to the construction schedule.

It was therefore unsurprising to see the BCUC Panel determine that Site C will be behind schedule and substantially over budget. In the BCUC Panel's words, "given the nature of this type of project and what has occurred to date, total costs for the project may be in excess of \$10 billion and there are significant risks that could lead to further budget overruns". The Panel found that these remaining risks include unresolved tension cracks and disputes with contractors. As such, the Panel found that it is unlikely that Site C will be completed on schedule by 2024, and even that construction costs could escalate even further beyond \$10 billion.

This cost escalation is significant, and will have substantial impacts on British Columbia ratepayers. Given that we are only 2 years into what is supposed to be a 9-year construction project, we are gravely concerned about the impact on British Columbians of further expected delays and cost overruns.

As cabinet makes its decision, we hope they will also heed the lessons learned from another large-scale dam under construction, Muskrat Falls, in Newfoundland and Labrador. When the Muskrat Falls Project was sanctioned, it was estimated to cost \$6.2 billion plus financing. The costs have since ballooned to more than \$12 billion. The impact of this cost increase on rates in Newfoundland is profound. Nalcor Hydro now estimates that costs from the Muskrat Falls dam will result in rates almost doubling.

The lessons from this project are significant and relevant. Just last week the Newfoundland and Labrador government initiated a public inquiry into what happened with Muskrat Falls. Richard LeBlanc, the provincial Supreme Court judge leading the independent inquiry, has said "while we cannot undo the past we can learn from it". While it may have been too late for their government to cancel their project, it is not too late for BC. We hope this government heeds his words and chooses a different path.

The potential of alternatives to meet demand

As part of its review, the BCUC was also mandated to analyze the ability of an alternative portfolio of commercially feasible projects and demand-side initiatives to provide similar energy benefits to Site C, including their potential to meet demand and their costs to ratepayers.

The Panel found that not only could an alternative portfolio of conservation, wind energy, and geothermal energy meet demand and provide similar benefits to ratepayers as Site C, but that it could do so with an equal or lower unit energy cost.

In addition to recognizing the current viability of alternative energy in BC, the Panel found that disruptive trends in technology pose one of the most significant risks to continuing with Site C. Evidence from around the world substantiates the Panel's warning about technological trends. Prices for wind, solar, and

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geothermal energy have plummeted year by year. The pace and scope of technological advance have exceeded even the most optimistic predictions.

Instead of locking ourselves into the path of the Site C Dam, we should seize this opportunity to build clean, distributed power that puts us on the cutting edge of innovation, and provides jobs and benefits to local communities.

In addition, though beyond the scope of the BCUC review, it is critically important that government also consider the impacts that this project has on First Nations, particularly in light of our collective commitment to implementing UNDRIP. Government must also consider the project's impact on the environment of the Peace River valley. Through pursuing an alternative energy portfolio instead of Site C, BC can partner with First Nations, industry and local communities to build clean, distributed power across BC. These alternatives will employ more people than Site C and provide local jobs and benefits to local communities.

In the face of these developments, it would be irresponsible for government to continue down the path of Site C. We do not require Site C to meet our future energy needs – alternative sources of energy are more than able to meet demand, and they will enable us to adapt to changing needs, as they provide flexible sources of energy. In contrast, Site C locks us into an energy future that could impose significant burdens on future ratepayers, and we would be forced to sell any surplus power at a loss.

Final considerations

Laid out in front of this government is a choice. The previous government chose to forgo evidence and due diligence, and pushed forward irresponsibly with a project that it is clear should never have been started. What the BCUC report tells us is that it is not too late to correct this mistake.

However, the choice facing your government is not simply about which option will save ratepayers the most money. It's a choice about what type of province we want to build. All around the world jurisdictions are embracing a modern, 21st century approach to energy policy. Pursuing this future would see the creation of a distributed, integrated power grid where the economic and employment benefits are shared by communities throughout the province.

Site C puts this future further out of reach, doubling down on the energy projects of the last century and undermining our ability to embrace the future.

We hope, as cabinet considers this decision, that they properly weigh this information contained within the BCUC report. Your government made the right decision in agreeing to commission an independent review before we crossed the point of no return. You need now to be guided by the evidence that this report puts forward.

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LEGISLATIVE ASSEMBLY of BRITISH COLUMBIA

This government has an opportunity to undo the mistakes of the last administration and chart a new, modern path for energy policy in BC. We hope you will seize this opportunity.

Sincerely,

Andrew Weaver
Leader, B.C. Green Party
MLA, Oak Bay-Gordon Head

Sonia Furstenau
MLA, Cowichan Valley

Adam Olsen
MLA, Saanich North & the Islands

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Sanford, Donna L GCPE:EX

From: Stefan Jonsson <stefan.jonsson@greenparty.bc.ca>
Sent: Monday, December 11, 2017 2:28 PM
To: Miller, Sarah LASS:EX
Subject: Re: Advisory: Weaver to hold availability on Site C decision
Attachments: 171211-BCGreenPressConf.m4a

Hi everyone,

Here is the recording of Andrew Weaver's press conference today at the BC Legislature. Please let me know if you have any questions or concerns.

Apologies again for the wrong information in the advisory.

Stefan Jonsson
Director of Communications
+1 888-473-3686 ext. 3

BC Greens. [Sign up to learn more](#)
[Website](#) | [Facebook](#) | [Twitter](#)

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On Mon, Dec 11, 2017 at 1:56 PM, Miller, Sarah <Sarah.Miller@leg.bc.ca> wrote:
Dear all,

Apologies, the call in details are wrong.

If you want to call in now, the correct details are below:

s.15,s.17

We will distribute the recording immediately after the availability.

Best wishes,
Sarah

From: Miller, Sarah <Sarah.Miller@leg.bc.ca>

Sent: 11 December 2017 09:30:18

Subject: Advisory: Weaver to hold availability on Site C decision

B.C. GREEN CAUCUS

For immediate release
December 11, 2017

Advisory: Weaver to hold availability on Site C decision

VICTORIA, B.C. - B.C. Green Party leader Andrew Weaver will hold a media availability on Monday December 11 to respond to the government's Site C decision.

WHEN: Monday, December 11th at 1:45pm

WHERE: Blue curtain, B.C. Legislature, Victoria

s.15,s.17

-30-

Media contact

Sarah Miller, Acting Press Secretary

+1 778-650-0597 | sarah.miller@leg.bc.ca