

From: [Brian Holl](#)
To: [Site C Submissions BCUC:EX](#)
Subject: BCUC Inquiry Respecting Site C
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I appreciate the opportunity to make a submission to the BCUC review of this project. As a Professional Agrologist, one of my major concerns regarding the Site C development is its negative impact on the critical agricultural land base in British Columbia. Although the loss of agricultural land is a significant negative consequence of the project, it does not easily fall within the limited terms of reference of this review except economically; the long-term value of that loss to the province has, to my knowledge, never been internalized as a factor in BC Hydro's estimates of the real costs of building this dam.

There are a number of additional issues that are more directly relevant to the terms of reference for this review.

- From the outset, the business case for this project has been both suspect and deficient. A significant element of that weakness was highlighted in the 1980's BCUC review of the proposed dam in which it was noted that there were significant issues with Hydro's forecast methodology. Those deficiencies continue to be reflected in the most recent proposals - of more than 80 load forecasts between 1980 and 2016, 85% were overestimates of growth, particularly with respect to domestic energy consumption.
- Under the conditions of the *Clean Energy Act* development of Site C has been justified on the basis of offering energy efficiency and capacity at lower GHG emissions and lower costs than available alternatives. Those data considered only the GHG emissions from construction and not from operating costs over the life of the dam, or the associated ecological damage. Costs associated with available alternatives have also continued to decrease in recent years, making such options more competitive with the Hydro proposal.
- Regardless of the current budgetary status of the project (80% of the costs have yet to be incurred), there is ample historical evidence to suggest that there will be cost over runs to the existing budgeted capital cost. Experience with similar dam projects in other jurisdictions, as well as that of recent BC Hydro transmission projects, suggests that significant cost overruns (>50%) are the rule rather than the exception.

A major potential cause of increased cost is directly related to the geological instability of the dam site as noted in a 2009 report by Klohn Crippen Berger Ltd. and SNC-Lavalin Inc. The consequences of this instability have already

been noted by BC Hydro when 'unexpected' geotechnical problems were encountered early in the construction process. Had proponents of the dam read the 2009 engineering report, those geotechnical problems might have been less unexpected! The potential for slope failure along the banks of the eastern Peace River region and a recommendation for extreme caution in exploiting these areas was also noted in a 1991 report by N. R. Catto (Quaternary Geology and Landforms of Eastern Peace River Region, British Columbia NTS 94A/1,2,7,8). Catto wrote "*...all of the major terrain slopes present in the eastern Peace River Region are subject to slope failure. Extreme caution should therefore be observed in any effort to exploit or use river valley slopes*" (page 15). The extensive construction impact on these slopes associated with the development of the dam establish a significant risk that has not, to my knowledge been accounted for economically in any Hydro documentation for this project. The impact of these geotechnical issues has a significant potential to contribute to cost overruns, if not complete failure of the project.

- An important component of the BCUC review will be to determine the relative costs to ratepayers of continuing/postponing or cancelling the Site C project. Critically, it should be recognized that this project is not past the point of no return. A detailed and persuasive assessment of the Site C development has been published by R. Hendriks, P. Raphals and K. Bakker (2017) *Reassessing the need for Site C*. Program on Water Governance University of British Columbia. (accessed 29 August 2017 at: <https://watergovernance.ca/projects/sitec/>). This analysis provides cogent economic data to support cancellation of the project while using very conservative (25%) estimates for potential cost over runs.

The Site C dam is a mega-project of dubious benefit. The business case has been suspect from the onset and has failed to make use of total cost accounting reveal the true costs of the development, particularly social and environmental costs that are generally externalized as well as uncertain or less quantifiable costs such as the potential long-term impact on the biosphere.

I am writing to express my support for the cancellation of this project.

Yours sincerely,

F. Brian Holl Ph.D.P.Ag.
Professor Emeritus
Faculty of Land & Food Systems
The University of British Columbia

Lamorna Enterprises Ltd.

Victoria BC Canada
Independent Advice - Sustainable Solutions
Tel: 250-370-9308
Mobile: 250-885-0523
E-mail: fbholl@hotmail.com

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