



**Atlantic Pacific
Spaceline Enterprise
Incorporated**

To:

Mr. David M. Morton, Commissioner/Panel Chair

Mr. Dennis A. Cote, Commissioner

Ms. Karen A. Keilty, Commissioner

Mr. Richard I. Mason, Commissioner

c/o

Commission Secretary

British Columbia Utilities Commission (BCUC)

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Date: 2017.10.18th (Wednesday)

Hello Mr. Morton and Panel Commissioners,

Subject: Comments on Alternative Portfolio for Site C Dam Inquiry

First, a major short coming in the BCUC portfolio model relates to the principles of ‘fairness’ and ‘level-playing-field’. If BCUC is going to use the assumptions that it made in constructing, operating, and analyzing its portfolio model, then BCUC should have disclosed these assumptions at the very start of the Inquiry process so that the other various parties that made submissions would have been able to have incorporated the same assumptions and information in their interpretation and analysis in order to present a ‘standardized’ assessment on equal footing and equal terms. In a sense then, what we have is a hodgepodge array of different models being submitted to the BCUC. This situation leads to the charge of an ‘apprehension-of-bias’ being possible. For example, this situation might have occurred if in the case of the Commissioners possibly either knowingly or unknowingly favouring one portfolio over another by their preference of assumptions.

Second, we believe it is fairly safe to assume that most of the participants who made submissions did not have access to the BC Hydro portfolio model and cannot verify either the ‘correctness’ or ‘accuracy’ of the presented BCUC portfolio model.

Third, in the short time that the October 11, 2017 BCUC Inquiry Respecting Site A-22 document has been released, we believe there has not been sufficient time for the general public to understand and absorb the full content of the Alternative Portfolios. (Some general descriptive and explanatory interpretation should have been release with the documentation. An Index page of the components and a Glossary of the Acronyms and Terms would have helped. Also, for those who are not familiar with Excel Spreadsheet a reference to the Tabs located at the bottom of the Spreadsheet.)

Page 1 of 3.



**Atlantic Pacific
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Fourth, we do not believe we have seen directly the BC Hydro's July 2016 load forecasts. We may have paged over it while briefly scanning the documentation, but have not had time to fully review this matter in detail. Further analysis is required.

With regards to the 'Tab' model sections, we will just make the following two comments.

- 1.) Under the 'Energy and capacity gap' Tab, BCUC bases their model on the data taken from the BC Hydro's F2017 to F2019 Revenue Requirement Application (RRA) which is stated as running only until 2036, yet the BCUC model extends out seventy – five (75) years. We believe this extended financial project is a bit of an 'overstretch' and should be based on more objective evidence.
- 2.) The layering on of each of the 'resources' to cover the projected 'gaps' sounds rather subjective. In reality, a planned resource may end up being put in place when it is not needed, or conversely, may not be built (i.e., wind) or applied (i.e., DSM) when it is actually required. This problem is (or can be) avoided by a large project like the Site C dam with overcapacity.

Now, as our time is running out, we will focus on the Key Assumptions used in the model.

- 1.) For Discount Rate and Financing costs, taxes, we find we have to disagree with Mr. Arthur A. Hadland (Ref. 1). The situation as we understand it is that neither the province of British Columbia nor BC Hydro can afford to assume the risk and carry the debt load for Site C dam (or its equivalent) on their financial statements. On the other hand, whatever projects were to go ahead, the financing requirement will need to have credit capacity of the province in order to secure low cost financing. From classical theory of financial management, the **Modigliani and Miller Theorem** employing a 'Trade-off Theory of Leverage' point to using a **Public – Private-Partnership (PPP)** Capital Structure with a 'Weighted Average Cost of Capital' (WACC) composed of non – voting ninety – nine point nine nine nine percent (99.999%) debt held by the private sector with all voting point zero zero one percentage (0.001%) equity held by the province via BC Hydro would appear to be the most suitable financing model for the Alternative Portfolios to use where taxes are involved. With the backing of the province, there is no bankruptcy risk or associated agency costs, and no 'pecking order' problems. The onus however is on BC Hydro to ensure that either Site C Dam or the Alternative Portfolios are fully utilized.
- 2.) Under Assumption 5 Location of the Alternative Portfolio, the 'Wind Build' location selected was the Peace Region. For this type of energy generation, we cite the 'offshore' region of the northwest B.C. coast as a better location as given by GEC (Ref 2.)

Page 2 of 3.



**Atlantic Pacific
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The problem with this region is that it is off shore from the BC coast and there are few transmission lines in this region due the low population and economic activity. These factors will add significantly to the cost.

- 3.) Under Assumption 6 Energy surplus to BC Hydro need, we agree with the premise; however, we take this explanation as a reason for ‘transferring’ the electricity to Alberta to avoid losses and extra charges as was stated in our submission (F101-2) to BCUC.
- 4.) We are having trouble understanding Assumptions 7, 8, 9. Further study of this issue is required and further explanation would be helpful.

Over all then, the model appears to be reasonably strait forward and appears to cover everything; however, as noted in BC Hydro’s own submission to BCUC, their **Figure 1** shows that there are a number of other issues that need to be considered.

Once again, thank you for your time, attention and patience.

Respectfully submitted and signed,
Yours truly,
Keith William Steeves
Pres. & CEO
A.P.S.E. Inc.

References

- 1.) BCUC submissions by Mr. Author A. Hadland:
 - A.) DOC_90120_F103-2
 - B.) DOC_90121_F103-3
 - C.) DOC_90122_F103-4
 - D.) DOC_90121_F103-5
- 2.) GEC (a NVV company), *Fig. 5 Vancouver Island Domain and Figure 6 North Coast Domain, BC Hydro Wind Data Study* (CSRP0009-A) P. 24 & 25, May 1st, 2009.
- 3.) **Figure 1 System Optimizer Input and Output**, (1) System Optimizer Inputs and Assumptions, (Page 2 of 10) BCUC Inquiry Respecting Site C (F1-11)