

British Columbia Hydro and Power Authority ("BC Hydro")  
Call for Tenders for Capacity on Vancouver Island  
Review of Electricity Purchase Agreement

**Final Argument of Shadybrook Farm**

**A. Origin and Objectives of the Hearing**

Shadybrook Farm concurs with BC Hydro<sup>1</sup> that this hearing was not a usual one under S. 71 of the UCA. Rather, it finds its origin in the hearing into the VIGP, and specifically in the resolution of that proceeding. In that resolution, the Commission found that VIGP was not the most cost effective solution for the supply needs of Vancouver Island. It encouraged BC Hydro to initiate a process that would, in fact, identify the most cost effective solution. The result was the Call for Tenders for Capacity on Vancouver Island (CFT).

The CFT established some stringent, and in the submission of some, biased eligibility criteria ("mandatory requirements"). Subject to these criteria, its objective was to identify the most cost effective portfolio. However, because of the criteria, the determination of the overall "most cost effective" solution became a two step process. The first step was to determine the CFT "winner". The second step was to compare the CFT "winner" to other possibilities not contemplated within the CFT framework. This produced the "Tier2" and "No Award" options which the Commission established as alternatives to be considered in its decision on whether to approve the EPA that had been executed with the CFT "winner".

The argument that follows addresses each of the two steps in turn.

**B. The CFT Winner and the EPA**

As described above, the CFT was established to identify the "most cost effective" portfolio. The EPA with Duke Point Power for a 252 MW plant followed directly on that, and hence was presented as the most cost effective solution.

However the record is now clear that the 252 MW Duke Point Power EPA is not the most cost effective solution.<sup>2</sup> It follows inexorably that the EPA must be rejected by the Commission.<sup>3</sup>

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<sup>1</sup> Final Argument, paragraph 1

<sup>2</sup> T8:1751/16-20 Hemmingsen: "I agree that we all have a concern that it didn't produce the cost effective – the most cost effective outcome in terms of what was bid in. That was a bit of a trade-off in the simplification of the model".

<sup>3</sup> T8:1744/15-23 The Chairman: "...you'd be asking the panel to approve a sub-optimal portfolio ...And that seems somewhat abhorrent to me."

The record also shows that the Commission is contemplating ways that another bid into the CFT, a 280 MW plant, could be declared “ex post” the CFT winner and by some route to be developed, awarded an EPA. That 280 MW plant is now declared by BC Hydro to be the most cost effective solution.

Shadybrook Farm submits that to award the EPA to a project other than the one identified by BC Hydro as the CFT “winner” is to reopen the CFT process. If the CFT process is to be reopened, then all its provisions must be subject to reevaluation. To reopen it for the sole purpose of ramming through a particular project, in the absence of a full and public evaluation of that project, would be a subversion of the mandate and duties of the Utilities Commission. The Commission has already established an apprehension of bias in the submission of many intervenors, and it has amplified that apprehension by refusing to subject BC Hydro to open cross examination concerning the nature of the 280 MW project and the reasons for which Hydro belatedly identifies it as a preferred option.<sup>4</sup>

An unbiased approach is to assess whether the EPA **as submitted** is the most cost effective solution. Hydro, the proponent, has clearly declared that it is not. Therefore rejection of the EPA is the obvious and only outcome. Following such rejection, it would fall to BC Hydro to determine its next course of action, and to bring the necessary projects or steps to the Commission when and as required.

Shadybrook Farm cautions that it is not the proper role of the Commission to “make the deal” or be concerned about “losing” the project.<sup>5</sup> The Commission must only rule on the evidence before it. That evidence in this case is unequivocal, and the Commission must respond accordingly.

### **C. Cost Effectiveness Analysis**

Shadybrook Farm concurs with Duke Point Power that

“the primary purpose of the CFT was to obtain "capacity" for Vancouver Island (9T2160). The CFT was driven by the need to have dependable capacity in place by 2007 (6T1236). DPP submits that it is crucial not to lose sight of this overall objective of the CFT when assessing the various positions that have been advocated by parties to this proceeding”<sup>6</sup>

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<sup>4</sup> T14:2887 Andrews: “I do have a motion to make, which is that the Panel recall Ms. Hemmingsen to be available for cross examination regarding the comments that she made in the in camera session to the effect that the DPP without duct firing is not the most cost-effective means of meeting the perceived capacity shortfall on Vancouver Island, and that DPP with cost -- with duct firing is the most cost-effective means of meeting the capacity shortfall on Vancouver Island.” This motion was subsequently denied.

<sup>5</sup> T8:1749/22-24 The Chairperson: “there was less risk to Dr. Jaccard that he was going to lose the deal altogether than there might be here...” (underlining added).

<sup>6</sup> DPP final argument, A. Introduction

The Vancouver Island focus was reinforced by the Commission, which excluded consideration of Mainland generation from the scope of the proceeding.<sup>7</sup>

Notwithstanding this context, the “cost effectiveness analysis” performed by BC Hydro relies heavily on forecasts of Mainland capacity and energy shortfalls. The dates and extent of such shortfalls are completely untested in the evidence, because they are out of scope. Nevertheless, the conceptual purchase of energy on the Mainland to meet Mainland requirements is presented as a major cost factor of the “No Award” option in Hydro’s portrayal of cost effectiveness.<sup>8</sup> Given the relatively low cost and early availability of the 230 kV link, this is the only device by which the immense financial commitment to Duke Point Power could be presented as a cost effective solution to the 2007 Vancouver Island capacity issue that DPP reminds us to “crucially” keep in sight.

Shadybrook Farm also submits that even if the Commission is prepared to conceptually consider a 35 year solution to a 1-2 year problem, and even if the Commission is prepared to entertain the left and right hand side concepts proposed by BC Hydro in the NPV calculation, the Commission must take into consideration the forecast risk involved in a 35 year time horizon. A 1-2 year solution to a 1-2 year problem has the advantage of being relatively predictable. A 35 year solution may give the appearance of superiority (under carefully chosen assumptions) on a NPV basis, but the **probability** that the costs and benefits will actually obtain in time are necessarily low.

#### **D. Are DPP and the 230kV Link Competing Projects?**

Ms. Van Ruyven contends that DPP and the 230kV Link are not competing projects<sup>9</sup>, citing a 20, 30, or 40 year time horizon for having made that assessment. Ms. Van Ruyven knows, or ought to know, that decisions are made to advance or put off capital investments based on load balances in each year, and that horizons of 2, 3, or 4 years can have significant effects on costs to be borne by the ratepayers. It is not sufficient to suggest that given the 230kV link, DPP may be needed in 20, 30, or 40 years, so why not build it now!

BC Hydro has argued that that an “N-1” criterion ought to be applied to Vancouver Island load balance determinations. WECC requirements are often cited in support of this proposal. However, no conclusive evidence has ever been brought that WECC would impose any penalty on BC Hydro for failure to comply with this criterion. Nevertheless, the BCUC has generally endorsed the N-1 criterion for reasons of its own.

In arguing that DPP and the 230 kV Link are not competing projects, Hydro seeks to go beyond the N-1 criterion, to an even stronger (and more expensive) position.

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<sup>7</sup> Pre-hearing Conference, Vol. 2:307/21-26 The Chairperson: “The NPV model should be available to bidders in advance, and the Commission Panel believes it should be limited to on-Island generation costs without the need to consider future impacts to electricity transmission or generation on the mainland.”

<sup>8</sup> Exhibit B-16 (BCUC IR 2.46.6) A “cost of mainland generation” of \$997 million NPV is charged against the “no award” bridging solution, and a “net cost” of energy of \$997-802 million NPV = \$195 million is assessed. This quantity alone is sufficient to bias the calculation in favour of Tier1.

<sup>9</sup> T6:1099/7-15

For example, assuming a F2009 in-service date for the 230kV link, and assigning a 200 MW rating to the HVDC reinforcement and related measures<sup>10</sup>, the F2009 load balances are as follows:

Description	Load	Supply
F2009 Hydro Dec 2004 ELF with Powersmart	2450	
On-island hydro		450
500 kV AC (1/2)		1300
500 kV AC (1/2)		1300
ICP		266
DPP		252
230 kV AC		600
HVDC		200
Load Balance		1244
Load Balance at N-1		744
Load Balance at N-2		- 556
Load Balance at N-1 and no DPP		492

This table demonstrates that under an N-1 criterion, the load balance with both DPP and 230kV projects is +744 MW. Should both sides of the 500 kV Link go down, then Vancouver Island would still be insecure, even with both new projects in place. However, with DPP not built, an N-1 condition still leaves Vancouver Island with a positive (+492 MW) load balance.

Clearly, DPP plus 230kV does not improve VI security in an N-2 situation involving both sides of the 500 kV AC, while either DPP or 230kV is not needed in an N-1 situation.

The desire of Hydro or BCTC engineers to load in as much transmission and generation as possible is understandable, because their focus is often purely technical. However, executives like Ms. Van Ruyven must be cautious to avoid the costs of premature investment. The responsibility of the Commission, moreover, is greater again. The Commission must attend to the public interest. To do this, it must ensure that the benefit to the public of the last (or “marginal”) dollar spent on security of supply must not be less than the benefit to the public of spending that same dollar on other forms of security. Competing for that last dollar are the needs of security (for example) of the medical system (where waiting lists threaten well being) and security of the education system (where lack of classrooms threaten well being) and even security of food (where the ratepayers may require their money to buy food, rather than EPA's).

The duty of the Commission is to shun waste in the premature advancement of projects . The DPP and the 230kV projects are not both immediately required. Given one, the other is not justified. Shadybrook Farm submits that the 230kV Link (plus F2008 bridging solutions) is cheaper and more effective for the purpose of maintaining a positive Vancouver Island load balance in the medium term than the DPP EPA. The DPP EPA must therefore be denied or deferred.

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<sup>10</sup> T10:2295/5-7

## **E. Gas Supply Risk**

The evidence of Mr. Simpson was that no agreement has been reached with TGVI for supply of gas to DPP. This is exactly the same testimony that was provided at the VIGP hearing, a year and half ago. Despite this dramatic lack of progress, Mr. Simpson apparently remains confident that a solution will be found by November 2005. This confidence was not substantiated by reference to resolution of any outstanding issues, or to any interim stages of agreement.

In addition, the recent cancellation of the GSX project removes a supply alternative from BC Hydro, both weakening its practical supply possibilities and its negotiating position.

For the BCUC to endorse an EPA that exposes the ratepayers to both the risk of non-performance by BC Hydro on gas supply or to the unknown costs of reaching an agreement and a technical solution with TGVI would be extremely irresponsible. DPP is justified as a reliable solution to a N-1 supply gap for F2008, while the 230 kV Link is characterized as subject to timing risk. However the gas supply situation for DPP opens the significant risk that any claimed advantage it possesses in terms of early availability is illusory.

## **F. Conclusion**

The DPP EPA was not awarded to the most cost effective project in the CFT, and should be rejected on that basis alone. In addition, the availability of the 230kV Link and various bridging solutions offer a dramatically lower risk resolution to any medium term supply deficiency for Vancouver Island, and are to be strongly preferred for that reason.

Mainland supply issues are out of scope for the present proceeding<sup>11</sup>. The “Cost Effectiveness Analysis” introduced these issues inappropriately by the back door. If BC Hydro requires Mainland capacity or energy, it must justify that assessment by subjecting its BC peak load and energy forecasts to examination. If shown to be required, a province wide CFT is needed to yield the most cost effective solution to a province wide requirement. The Vancouver Island CFT is not an acceptable substitute for these steps, and the EPA stemming from it is not in the public interest.

Shadybrook Farm therefore strongly concludes that the only appropriate action for the Commission to take in regards to the EPA presently before it is to refuse to approve it in its entirety. Shadybrook Farm further feels that it would be inappropriate for the Commission to indicate in its reasons for decision any alternatives that would be more likely to meet with Commission approval or to make any promises (explicit or implied) about approval or conduct of a Hearing related to any future projects or EPA's which might be brought to the Commission for consideration.

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<sup>11</sup> See footnote 7.