In the Matter of the Utilities Commission Act

R.S.B.C. 1996, c. 473

And

A Filing by British Columbia Hydro and Power Authority Call for Tenders for Capacity on Vancouver Island Review of Electricity Purchase Agreement

Argument on Behalf of Green Island Energy Ltd. ("Green Island")

February 4, 2005

1. Introduction

Green Island Energy Ltd. ("Green Island") chose to participate in this proceeding with the belief that the Gold River Power Project could and should be part of an on-Island capacity and generation solution, either with the Duke Point Power Limited Partnership ("DPP") project or in combination with other viable projects/proposals. However, BC Hydro appears to have ignored the Commission's encouragement to consider portfolios as low as 115 MW and has resisted suggestions to evaluate a portfolio of slightly more than 300 MW. Notwithstanding that the CFT expressly provided for full consideration of portfolios anywhere in the 150 to 300 MW range, incredibly but predictably BC Hydro's final arguments focus on a much narrower range of 252 to 280 MW, which not coincidentally corresponds precisely to the output of the DPP project. That leaves the troubling impression that BC Hydro was only interested in DPP or another VIGP type project, and designed and carried out the CFT process to ensure that desired outcome was obtained. That view is consistent with the actual outcome - of the 6 final bids submitted, 4 were VIGP type bids and the other 2 bids (after a third bid was eliminated from consideration) resulted in a portfolio that was not evaluated.

2. The Most Cost-Effective Options

The record in this proceeding established that there are at least four possible portfolios of projects that can be available in time for the anticipated capacity shortfall on Vancouver Island at significantly lower cost than the DPP project. Green Island's evidence (Ex. C9-10), which clearly identified the significant cost advantages of those portfolios, was uncontroverted and undisputed by the evidence in this proceeding. Green Island's testimony in that regard was not challenged on cross-examination or by any questions from the Commission Panel, nor was it rebutted by any evidence from BC Hydro or DPP.

In argument, BC Hydro and DPP attempt to minimize that evidence by largely ignoring the relevant cost comparisons and suggesting that none of the four Green Island portfolios need be considered. As discussed below, there are compelling reasons why the Commission Panel should consider each of those portfolios, notwithstanding the apparent challenges.

3. Green Island Portfolio Options

BC Hydro's argument implies that Green Island assembled "hypothetical" portfolios. That assertion is simply wrong – none of the projects discussed by Green Island's evidence is hypothetical. The record is clear that the Gold River Power Project, the Ladysmith Peaker and the Campbell River Cogen Expansion were all fully pre-qualified and bid in the CFT. Further, EPCOR in its letter dated 12 January 2005 letter (Ex. E-122) confirmed that is ready willing and able to proceed with the Ladysmith Peaker and Calpine in its letter dated 6 January 2005 (Exhibit E-123) confirmed the same for its Campbell River Cogen Expansion project.

The second Ladysmith Peaker – referenced in Tier 2 Option C of Green Island's evidence – is identical to what was bid and fully qualified in the CFT, and its timing and availability at the CFT bid price was confirmed in EPCOR's 12 January 2005 letter (Ex. E-122). Details of the NorskeCanada Demand Management Proposal ("Norske DMP") were well known to BC Hydro and the Commission before this proceeding, and additional information was provided through Norske's evidence in this proceeding.

Every one of the projects/proposals and portfolios in the four Tier 2 portfolios presented by Green Island is a sensible, viable and lower cost alternative than DPP. All of these Tier 2 alternatives remain ready, willing, and available to execute an EPA with BC Hydro and all of them can be ready in less time than the DPP project.

In contrast, BC Hydro's hastily completed Cost Effectiveness "Analysis" used a Tier 2 portfolio that included hypothetical new mainland generation and temporary generators, based on a series of unsupported assumptions about energy backfill, firm gas tolls, avoided transmission losses and energy volume differences (Ex. B-1, App. J, p. 2). Over the space of just 5 days beginning on or after October 14 and completed by the morning of October 19, which included a weekend, BC Hydro initiated and completed a Cost Effectiveness "Analysis". Mr. Sanderson noted that calling it a Cost Effectiveness "Study" would probably be putting too grand a word on it – he suggested it was merely a "check" (T6, 1076/13-16)

BC Hydro's five-day check on the CFT outcome adjusted the sizes of the portfolios until they were "capacity equalized" and concluded that the results favoured Tier 1. Of course, such results depend heavily on what else was added to accomplish the equalization.

But why was this novel concept of "capacity equalization" introduced at all, and why more than two months after the bidding process had closed? BC Hydro maintained throughout the CFT process and in this proceeding that any portfolio of 150 MW to 300 MW was acceptable, even going so far as suggesting that the CFT design favoured portfolios aggregating closer to 150 MW. There was not so much as a hint in the voluminous CFT documentation of any independent test of "capacity equalization". The Independent Reviewer issued its final report on 29 October 2004, so the Independent Reviewer had at most five days in which to be advised of the introduction of a significant new test and consider its fairness or lack thereof. Not surprisingly, there is no indication in that report or elsewhere that the Independent Reviewer was ever aware of the "capacity equalization" test specifically or the Cost Effectiveness "Check" generally. Yet BC Hydro now insists that it is critical to a fair analysis to force the capacity to a new level of about 280 MW and to equalize capacity (BCH Argument, Paras.97-98). If that is so, why was there no mention whatsoever of those "important elements" in the CFT process so that bidders could evaluate and address those impacts and adapt their bid strategies, and the Independent Reviewer could assess the fairness of those elements?

The QEM recognized that there would most likely be energy associated with proposed alternatives and accordingly subtracted the value of energy from the cost of capacity

when evaluating different alternatives. Therefore, in evaluating the cost to ratepayers of meeting a short-term capacity shortfall it is not appropriate to compare projects on an equal energy and capacity basis over a 25-year term.

There is no fair or reasonable basis for BC Hydro to have introduced "capacity equalization" at all, without any bidder consultation or input, and certainly not so late in the process that the outcome had already been determined. However, having quite improperly done so, the Commission must ask why BC Hydro would presume to only add MW equal to the cost of DPP to the Tier 2 portfolio, particularly when the industry trend is moving away from gas fired generation in combined cycle units. Adding MW at a cost equal to DPP might have been acceptable if there were no alternatives. However, Green Island's evidence established that Tier 2 Option A, with just a modest amount of support from Norske, would be able to serve the suggested loads much more cost effectively and reliably than Tier 1. BC Hydro's cursory "Cost Effectiveness Check" was fatally flawed by forcing a mixed solution, advocated by no one, as the means of comparing Tier 2 to Tier 1.

The nature of the "Cost Effectiveness Check", the lack of transparency, the absence of bidder awareness or input, the inclusion of detailed "black box" calculations that cannot be tested or verified, the unexplained introduction of the "capacity equalization" test, the speed with which it was carried out, the failure to identify and address the fundamental cost effectiveness element of the privative clause, the overvaluing of the backfill, the refusal to acknowledge that the Green Island and Ladysmith Peaker portfolio yielded a superior outcome in the QEM, and the total silence on the fact that DPP *without* duct firing was **not** the most cost effective option relative to DPP *with* duct firing all lead to the inescapable conclusion that the "Cost Effectiveness Check" was built for the sole purpose of creating justification for the desired Tier 1 outcome.

BC Hydro suggests that the Norske DMP cannot be considered as part of any portfolio because it is not N-1 compliant. However, Green Island's evidence illustrated that excluding the Norske DMP from consideration will lead to an inferior system being implemented. Consider that if forced to serve the loads directly the Norske DMP, with its limitations, results in substandard reliability characteristics. On that basis, BC Hydro suggests that the Norske DMP then be set aside and not considered for inclusion within such a portfolio. However, going one step further in the reliability analysis and looking at the number of hours of expected usage explained in Green Island's evidence it is readily apparent that in Tier 2 Option A the Green Island and the Ladysmith Peaker plants carry most of the hours of need. The Norske DMP is principally required only for hours above the 122 MW level. Since the Load Duration Curve clearly shows there to be relatively few hours of such load levels on Vancouver Island, the Norske DMP in fact serves such needs very nicely. It is also clear that in combination with appropriate generation resources such as Green Island, the Norske DMP may be used to its maximum load carrying benefits as a support to other system components. Under this type of use, the limitations within the Norske DMP hamper its effectiveness very little, if at all. Such a creative "sculpted" portfolio makes the best use of each of its resources to augment superior service from the whole at lower cost than the DPP project. Evidence on this point was not challenged in cross-examination or rebutted in evidence by BC Hydro or DPP.

Under such a plan, the carbon neutral Green Island plant, with no fuel risk, would run most of the time. The Ladysmith Peaker would run to suit specific load needs, perhaps 3 to 30% of the time. Then the AC overload and Norske DMP would combine to serve what little remaining hours the system was still short. These latter two resources would both be available on very short notice and rapid response times – perfectly suited for such top end dispatch use.

4. Reliability

BC Hydro takes the view that the reliability criterion from one combined cycle plant – DPP - is sufficient for the system needs and hence they should proceed with the EPA. Not surprisingly, that view is consistent with the way BC Hydro defined reliability criterion in the CFT. However, that is not justification for accepting an inferior product when a better one is available.

DPP meets the reliability criterion set by BC Hydro, but Tier 2 Option A meets it better and at lower cost. If the Tier 2 Option A portfolio offers ratepayers a premium product at less cost, isn't it incumbent upon BC Hydro to obtain that product on their behalf, or at least explore that option?

Green Island's evidence regarding the relative reliability of the proposed Tier 2 portfolios was uncontroverted and undisputed by the evidence in this proceeding. That testimony was not challenged on cross-examination or by questions from the Panel, nor was it rebutted by any evidence from BC Hydro or DPP.

5. Determination of the Public Interest

The Commission Panel ruled that the principal issue in this proceeding "Is Tier 2, Tier 1 or the No Award option the most cost-effective option to meet the capacity deficiency on Vancouver Island commencing in the winter of 2007/2008?" (T2, 314) That determination must be made in accordance with the test of the "public interest" pursuant to section 71of the *Utilities Commission Act*. Specifically, the Commission Panel may find that the DPP EPA is **not** in the public interest by reason of the price and availability of any other form of energy, including but not limited to petroleum products, coal or biomass, that could be used instead of the energy from DPP (section 71(2)(c)) or by reason of any other factor that the Commission Panel considers relevant to the public interest (section 71(2)(e)).

The portfolios discussed in Green Island's evidence would be just 50%, 45%, 65% and 62% respectively of the cost of the DPP project, expressed in NPV in 2006 beginning of the year dollars (Ex. C9-20). Significantly, those figures result from an application of the

very same QEM model that BC Hydro and DPP rely upon for identifying the DPP project as the winning CFT bid. Moreover, the QEM model was specifically designed to account for differences in portfolio size so there is no reasonable basis to claim that portfolios smaller that the DPP project are in any way inferior or that the cost comparisons require further adjustment.

6. Definition of the Portfolios

"Tier 1" refers to the portfolio having the lowest Net Portfolio Cost NPV based on application of the QEM outlined in the CFT." (Ex.B-1, page 13, lines 16 -17) Properly applied, that definition would necessarily result in the selection of the portfolio Green Island has identified as Tier 2 Option B because its NPV cost is only 45% of the DPP project. Green Island's Tier 2 Option A portfolio would be second in line to legitimately claim the "Tier 1" designation, followed by Tier 2 Option D, then Tier 2 Option C, and finally the DPP project.

"Tier 2" arises from the exercise of the privative clause 17.3 of the CFT whereby BC Hydro had the right to select tenders aggregating less than 150 MW of bid capacity on the basis of lowest-cost Net Tender Cost per MW, adjusted for gas transportation costs and network upgrade costs." (Ex.B-1, page 13, lines 17 - 20) To minimize the potential for confusion, Green Island has identified each of the four portfolios in its evidence as "Tier 2" options, notwithstanding that some or all of those portfolios may be Tier 1 under BC Hydro's definition.

7. Validity of the QEM Evaluation

In the design of the CFT process, BC Hydro and the Commission both recognized that to determine the cost-effectiveness of proposed alternatives it would be useful to develop a transparent NPV model.

"The Commission Panel commends BC Hydro for providing many opportunities to potential bidders and other stakeholders to comment on and provide input to the CFT process. BC Hydro has made a considerable effort to reduce the "black box" aspect of its Net Present Value ("NPV") model and to increase the transparency of its CFT process. However, as suggested in the VIGP Decision, it should be possible to develop a simplified NPV model specifically for the CFT and Commission Panel intends that its comments below will be helpful to that end." (Ex. B-1, App. F, p. 2)

It is important to observe that determining the cost-effectiveness of different alternatives does involve considering the cost of resolving a short-term capacity need along with the value of energy that may or not come with resolving the capacity issue. BC Hydro developed the QEM model, which was transparent in that it was used by a number of bidders and was overseen by the Independent Reviewer.

Green Island used the QEM model to evaluate four "Tier 2" portfolio alternatives relative to the Tier 1 outcome. That detailed analysis was set out in Green Island's Evidence (Ex. C9-10) enabling BC Hydro, DPP and the Commission Panel to independently test and verify that analysis. BC Hydro and DPP, during the hearing or in their final arguments did **not** challenge Green Island's evidence with respect to the analysis using the QEM model. Green Island's undisputed evidence, determined using the QEM model, of the relative cost to ratepayers of different portfolios is summarized as follows:

Alternative	Rate Payer Cost Relative to Duke Point
Duke Point Power	Base
Tier 2A	50% less expensive
Tier 2B	55% less expensive
Tier 2C	35% less expensive
Tier 2D	38% less expensive

It is disconcerting that after developing the QEM model, which was specifically designed to compare different size of projects and different technologies, that BC Hydro would completely abandon the use of the QEM model and resort to a "black box" cost effectiveness approach. The detailed calculations of the "Cost Effectiveness Check" are not transparent and cannot be verified by Intervenors.

Also troubling is the transcript of the 19 January 2004 in-camera discussion between the Commission Chair and Ms. Hemmingsen during which both individuals appear to discredit the QEM model on which the CFT was based. They appear to have come to that conclusion because it was intuitively obvious to them that the only calculation of importance was the \$/MW of capacity calculation. Considering that the capacity shortfall on Vancouver Island is likely to be a concern for only 2 to 3 years, it is not obvious when comparing 25 year projects that the \$/MW capacity calculation is the only one that needs to be considered.

The "gap" and the duration of the forecast shortfall on Vancouver Island are uncertain. Although Green Island's proposed Tier 2 Option A portfolio assumes that Norske's curtailable capacity will only be required for two years, it is important to note that the capacity shortfall also will probably only be for 2 years. In any event, Norske's curtailable capacity could be available for as long as it is required. One of the main advantages of the Tier 2 Option A portfolio is that ratepayers will not have to pay for much of the capacity after it is no longer required.

In argument, BC Hydro claims that "it is inappropriate to compare the QEM-generated NPV of portfolios that have different capacity in the context of cost-effectiveness analysis." BC Hydro has apparently entirely lost sight of its own view, in BC Hydro's QEM issued on 6 August 2004, Section 1.1 Background which stated:

"The quantitative evaluation methodology ("*QEM*") is designed to identify the most cost effective method, consistent with the BCUC decision on the VIGP project, of meeting the capacity shortfall on Vancouver Island arising from the retirement, for planning purposes, of the existing high-voltage direct-current ("HVDC") cables." (emphasis added)

The QEM model is the most legitimate, appropriate, and transparent method available to the Commission for determining cost-effectiveness of different portfolios with respect to this CFT.

8. Privative Clause – CFT Section 17.3

CFT Addendum Number 10, issued 5 March 2004, amended the privative clause "In order to optimize the benefit of the CFT process to BC Hydro's ratepayers and to optimize the opportunities available to bidders under the CFT process." (Ex. B-1, App. G, page 4, section 11) The amendment added a new section 17.3 that specifically provided for the acceptance of tenders aggregating less than 150 MW under certain conditions.

BC Hydro chose not to invoke the privative clause so it apparently never evaluated Green Island's project using the formula set out in section 17.3, leaving ratepayers and bidders alike wondering how the privative clause *optimized* benefits and opportunities as expressly intended.

The privative clause is sufficiently detailed that it merits further consideration by the Commission Panel. It states:

"17.3 Acceptance of Tenders Aggregating less than 150 MW: The CFT invites Tenders to satisfy all or part of a requirement of a minimum of 150 MW and a maximum of 300 MW in the aggregate. If Tenders received pursuant to the CFT, which meet the Mandatory Criteria and are assessed not to have a high development risk (i) aggregate less than 150 MW of Bid Capacity, or (ii) aggregate 150 MW or more of Bid Capacity, but BC Hydro determines, in its sole and unfettered discretion, that acceptance of any such portfolio is not the most cost effective solution having regard to BC Hydro's ratepayers, then BC Hydro reserves the right to accept one or more Tenders comprising in the aggregate less than 150 MW of Bid Capacity. This right is exercisable in BC Hydro's sole discretion with a view to procuring the most cost-effective Dependable Capacity meeting its requirements on Vancouver Island. If BC Hydro exercises its right to accept one or more Tenders under this section, Tenders will be accepted in the order of lowest to highest cost to BC Hydro determined as an amount per MW derived from the average of the Net Tender Cost for each electricity price forecast, after giving effect to the impact of (i) gas transportation costs to be borne by BC Hydro for a gas-fired tolling plant, if applicable and (ii) Network Upgrade Costs to be borne by BC Hydro". (emphasis added)

DPP's argument, referring to Ms. Van Ruyven's evidence, makes the incredible claim that BC Hydro attempted to remove as much discretion as possible from the CFT process. (DPP Argument, page 4-5) The privative clause is irrefutable evidence to the contrary.

BC Hydro's argument, boldly contradicts Ms. Van Ruyven's testimony, by insisting that the privative clause granted BC Hydro discretion *without obligation*. (BCH Argument, page 35) BC Hydro accuses Green Island of trying to subvert the intention of the Tier 2 category by elevating a right to an obligation.

BC Hydro also argues that the discretionary right was introduced to protect ratepayers, not bidders. That flies in the face of the second express intent of the privative clause – "to optimize the opportunities available to bidders under the CFT process."

BC Hydro ignores that there is indeed an obligation upon it – to exercise its discretion reasonably and consistently with the intent of the privative clause. It is abundantly clear that BC Hydro's discretion was to be exercised in the pursuit of procuring the most cost-effective Dependable Capacity on Vancouver Island. Whatever arguments can be made about the other portfolios proposed by Green Island, it is beyond dispute that the Green Island and Ladysmith Peaker projects that comprise portfolio Tier 2 Option B met all Mandatory Criteria, were assessed not to have a high development risk, aggregated 122 MW, and was the lowest cost portfolio (45% of NPV cost of DPP) under the QEM evaluation.

Lest there be any remaining doubt, Ms. Hemmingsen testified that DPP was not the most cost effective outcome. (T8, 1751/16-19) That is precisely the determination expressly contemplated in the privative clause. The discretion afforded to BC Hydro was the discretion to make that determination. Having made that threshold determination, BC Hydro obliged itself to invoke the privative clause, complete the necessary calculations and accept one or more Tenders as identified by the prescribed calculation.

In those circumstances, it was patently unreasonable of BC Hydro not to exercise a discretion granted for the very purpose of providing the most cost effective solution to ratepayers.

Under oath, Mr. Sorensen made the surprising assertion that the Independent Reviewer was completely satisfied that the rules for moving from a consideration of Tier 1 to Tier 2 were complete and appropriate. (T8, 1778) In a full paragraph of discussion on page 4 its 11 March 2004 report, the Independent Reviewer advised:

"BC Hydro *will need to clearly define and apply* appropriate processes to give effect to this second tier of decision making. Specifically, the IR intends to review the decision rules for moving from the first tier to the second tier." (emphasis added) (Ex. B-35, Sched. C)

Five months later on 12 August 2004, late in the afternoon the day before CFT bids were due, no less than three of the Independent Reviewer personnel attended a meeting with BC Hydro staff for the stated purpose to "review and approve the processes and procedures relating to the tender evaluation phase of the CFT." (Ex. B-65, p. 1)

The clearly defined decision rules and appropriate processes developed by BC Hydro and reviewed and approved by the Independent Reviewer are reproduced *in their entirety* as follows:

"Privative right could be invoked upon receipt of tenders if there is collusion among bidders or if it is clear that the process is non-competitive Once the CFT moves to the QEM stage, *BC Hydro does not intend to invoke the* " 2^{nd} tier" privative clause as long as the Tenders are competitive and there remains no evidence of collusion" (emphasis added) (Ex. B-65, p. 2)

Mr. Sorensen testified that the Independent Reviewer "would wish to see the prescribed or pre-established decision rules." (T8, 1775/18-19) He agreed that those decision rules were an *essential* part of the CFT process. (T8, 1776/3-5) He testified that "we did not want to get to a position that rules were made up after consideration of Tier 1." (T8, 1776/8-9) Mr. Sorenson helpfully confirmed that the only written record of the decision rules was in the Project Management Office minutes (subsequently produced in Ex. B-65).(T8, 1777-8)

Notwithstanding the gravity of the consequences, it is difficult not to laugh at BC Hydro's and the Independent Reviewer's slapstick bungling of this "essential part of the CFT process."

The privative clause contains no reference, express or implied, to either collusion, "noncompetitive process" or "competitive tenders." Those were the only decision rules and processes developed for moving from consideration of Tier 1 to Tier 2 and they bear no relationship whatsoever to the issues that properly arise from the privative clause. It is a fair assumption that whoever developed those four lines of "decision rules and appropriate processes" had no understanding of the privative clause. What was the process to determine whether it was "clear that the process is non-competitive"? What rules were to be applied to determine if "tenders are competitive"? How could bidders possibly know the criteria for moving from consideration of Tier 1 to Tier 2 and understand how their projects would be evaluated, as DPP asserts at page 5 of its argument, when BC Hydro itself didn't know?

What is the consequence of BC Hydro's determination, made the day before bids were due, that "once the CFT moves to the QEM stage, BC Hydro does not intend to invoke the "2nd tier" privative clause as long as the Tenders are competitive and there remains no evidence of collusion"? Given the total absence of any defined rules or appropriate processes to determine whether tenders were competitive, it was predetermined, agreed and approved by the Independent Reviewer that BC Hydro would not invoke the privative clause. That decision was made even before all the bids were received.

Ironically, the one "benefit" of BC Hydro deciding in advance that it would not invoke the privative clause was that it fully addressed Mr. Sorensen's concern about avoiding a situation where "rules were made up after consideration of Tier 1."

Having determined that DPP was "not the most cost effective solution having regard to BC Hydro's ratepayers", BC Hydro's predetermined and unreasonable refusal to exercise its discretion to invoke the privative clause for the benefit of its ratepayers is more than sufficient reason for the Commission Panel to deny the EPA pursuant to section 71(2) (c) and (e) of the Utilities Commission Act. Further, in the interests of fairness the Commission Panel should direct BC Hydro to complete the calculations prescribed by the privative clause and make the results available to the Commission and to Intervenors.

As a final point on the subject of the privative clause, we note that the prescribed calculation includes Network Upgrade Costs. Mr. Mansour testified that "the Gold River proposal did not attract upgrades of any significant measure." (T10, 2403/18-19)

9. Unduly Stringent or Inflexible Requirements

The Commission's 23 January 2004 letter listed eight examples of provisions that BC Hydro should review and further stated:

"The Commission Panel will be concerned if such requirements are more stringent or less flexible than the minimums that are needed, thereby increasing costs for ratepayers by disqualifying otherwise worthwhile projects or by increasing bid prices." (Ex. B-1, App. F)

Green Island's evidence established that the CFT requirements precluded some non-gas bids from offering more generation at reduced rates. (Ex.C9-10) In particular, by holding all projects to an availability standard typical only for a gas fired plant regardless of the resource, Green Island was forced to hold back some of its production in its tender (bidding only 75 MW instead of 85 MW) in order to meet the 97% availability requirement for 9 months of the year. In turn, bidders of non-gas projects were forced to bid a slightly higher price on their power in order to meet mandatory debt coverage ratios for project financing. BC Hydro has failed to explain why it needs 9 months of 97% availability on a gas project that by its own admission is dispatchable when gas prices are highest (typically in winter peak months). Under a more traditional, less stringent CFT, Green Island would have been able to offer 85 MW of output available all 12 months of the year at 92% availability. The issue of 97% availability was specifically identified by the Commission in its 23 January 2004 letter as a potential concern. The requirement for guaranteed availability of 97% was more stringent then needed and resulted in increased bid prices.

The net result for Green Island and its lenders is the same for 75 MW at 97% availability as for 85 MW at 92% availability. Unfortunately, the net result of the CFT criteria for

the ratepayers is a higher energy price and less output than what otherwise could be made available, as demonstrated by a comparison of Green Island's Term Sheet (Ex. C9-3) to its confidential Tender Price Information Form (Ex. C9-14).

BC Hydro acknowledges that when the QEC opened the price envelopes for the four eligible tenders and assembled all possible portfolios aggregating between 150 MW and 300 MW, one of the tenders did not qualify for inclusion in any portfolio because its bid capacity did not conform to the prescribed portfolio size." (Ex. B-1, p.13) At that point, it was clear to BC Hydro that Green Island's Gold River Power Project was "stranded". With that realization, why didn't BC Hydro seek the Commission's guidance for how best to deal with a "stranded" project or seek some flexibility in accommodating such a project in an energy portfolio of slightly less than 150 MW or slightly more than 300 MW. If the requirements of the CFT prohibited such an approach, then such requirements were more stringent or less flexible than needed and resulted in effectively disqualifying an otherwise worthwhile project.

BC Hydro disqualified the Campbell River Cogen Expansion bid. Calpine proposed a provision in the EPA that would allow termination of the EPA in 2029 if Calpine was unable to extend its lease through the full 25 year term of the EPA or 2032. (Ex. E-123)

Bear in mind that the CFT originally allowed bidders to choose a term ranging from 10 to 25 years. The purpose of the CFT – to secure dependable capacity on Vancouver Island – did not change throughout the long process. The change in term had nothing to do with any necessity to extend it to serve the capacity needs of Vancouver Island, for BC Hydro had been content to obtain capacity for as little as 10 years. As explained by the Independent Reviewer the change in the EPA term was merely intended to simplify the QEM and contribute to the fairness of the process. (Ex. B-35, Sched. C)

The QEM is fully capable of adjusting for a difference in the length of term of a single project - there was no evidence in this proceeding that suggested otherwise.

Twenty two years seems to be more than adequate time for Calpine to negotiate an extension of the lease. BC Hydro and DPP both had the opportunity to cross-examine the Norske witness panel about whether Norske was willing to extend the lease. Unremarkably, neither party had the desire or boldness to explore that with Norske. In the scheme of things, the prospect of negotiating a 3 year extension on a 22 year lease seems no more uncertain than today's CCGT technology being rendered obsolete or gas commodity or transportation costs rising dramatically well before the EPA expires.

The rules governing "Non-Compliant Tenders" are set out in section 18.17 of the CFT. (Ex. B-1, App. B) The tricky part is defining what amounts to a material non-conformity. For the answer to that, one must look to BC Hydro's own definition:

""Material" is defined as anything that renders BCH unable to assess the mandatory criteria, fuel risk certainty, development risk, run the Qualitative Evaluation Model or complete the Electricity Purchase Agreement." (Ex. B-69)

BC Hydro offered no evidence in this proceeding identifying which if any of those items it was unable to do in respect of Calpine's non-compliance related to its lease term. BC Hydro has failed to prove that it reasonably exercised its discretion pursuant to section 18.17 in accordance with its own definition of "material".

The Commission Panel should also note that Ex. B-69, which contains the only definition of "material" in the context of section 18.17, is dated August 12, 2004. That was the day before bids were due. Therefore it was impossible for bidders to know and understand how "material" non-compliance would be determined.

On the issue of "material" non-conformity BC Hydro also sought to rely on material from the Bidders' Tender Workshop held 7 July 2004.(Ex. B-60) Buried in slide 77 of an unknown number of slides, there is the wholly unhelpful statement that "material non-conformity = rejection". Notably, the disclaimer on the first page of Ex. B-60 makes clear that the slides are only a summary, are not intended to provide legal advice, and any conflicts will be governed not by the slides but by the provisions of the CFT.

In all the circumstances, a contingent renewal of a lease in 22 years hardly seems material when less than a year ago BC Hydro was willing to award EPAs for terms as short as 10 years. There is no question that the 25 year term requirement was more stringent and less flexible than required, and it disqualified an otherwise worthwhile project.

BC Hydro also asserts that the term of Calpine's tender security was 6 days too short – 114 days rather than 120. BC Hydro's VI CFT Tender Phase Completeness and Conformity Procedure provided an opportunity for BC Hydro to send clarification requests to bidders if tenders were not complete or required clarification. (Ex. B-69) There is no evidence that BC Hydro contacted Calpine for such clarification. More significantly, the non-conformity of the tender security is not included in any of the items defining "material" in Ex. B-69. The term of tender security was not included in the mandatory criteria. By our calculations, Calpine's tender security would not have expired until December 6, 2004 – more than ample time for BC Hydro to evaluate its bid and execute a binding EPA. In the absence of a material non-conformity, BC Hydro had no right to disqualify Calpine's bid notwithstanding the shorter term of the tender security.

10. Minimum and Maximum Portfolio Size

By designing the CFT with a floor too high and a ceiling too low, BC Hydro custom built a house to suit the specific attributes of just one possible occupant – a VIGP like project.

The Commission's 23 January 2004 letter stated:

"The Commission Panel encourages BC Hydro to accept a cost-effective portfolio with dependable capacity as low as 115 MW before considering "other resource additions" than on-Island generation." (Ex. B-1, App. F)

As discussed above, the privative clause bestowed upon BC Hydro the discretion to consider portfolios of less than 150 MW. That begs the question why it was necessary or appropriate for the CFT to establish a minimum of 150 MW that BC Hydro could disregard entirely at its option.

Addendum No. 10, issued on 5 March 2004, in section 8, authorized BC Hydro to amend the minimum portfolio size any time up to 30 days prior to Tender Closing Time based on any information BC Hydro considered appropriate in its sole discretion. So up until at least 13 July 2004 it was open to BC Hydro to raise or lower the minimum portfolio size but BC Hydro did not do so.

A common theme in BC Hydro's evidence is that the Vancouver Island load forecast has been increasing. If the consequences of a rising load forecast were considered at all, they should have been reflected in the CFT. BC Hydro issued no less than 23 Addenda to the CFT – surely one of those could have addressed the apparent need for a ceiling higher than 300 MW and possible need for direction from the Commission in that regard. Raising concern about a rising load forecast only *after* the CFT process has been concluded is unhelpful – it does absolutely nothing to confirm the appropriateness of the Tier 1 outcome determined in the express absence of that consideration.

The "Cost Effectiveness Check", conveying an eagerness to confirm the Tier 1 CFT outcome, speculates that if the load requirement in Fiscal 2007/2008 is 350 MW, in general the savings of Tier 1 relative to other outcomes will be increased. (Ex. B-1, App. J, p. 3). If BC Hydro forecasts and expects a load requirement of 350 MW then it should have exercised its judgment to increase the maximum portfolio size for the CFT. If it is not convinced that the load requirement will be 350 MW, then the authors of the "Cost Effectiveness Check" engaged in idle speculation for no purpose other than to justify a conclusion they had already reached.

BC Hydro claims that the Green Island Tier 2 Option A portfolio of 252 MW is too small to meet the load demand of F2008. (BCH Argument, Para. 97) If that is true, then the DPP project must also be too small, for it is also 252 MW and offers no size or shaping advantages that the Tier 2 options provide. If 252 MW is too small, then the VI CFT was fundamentally flawed. The process clearly stated that any portfolio of 150 – 300 MW was acceptable, insofar as size was concerned. If 252 MW is indeed too small, then most of the range of formerly acceptable portfolios no longer are acceptable. Bidders were seriously misled as they most certainly would have bid differently with accurate information that portfolios of 280 MW and higher were much more desirable. Also, a new limit of 280 MW biases the possible acceptable outcome toward the larger project, as it can just barely get above the "magic line" of somewhere around 280 MW. Note that Norske's DMP is actually for more than 130 MW (210 MW was their maximum), which means that the Tier 2A portfolio, with an expanded Norske component, could easily make 280 MW. BC Hydro's own data shows that load levels above 252 MW would occur for only a very few hours per year, so the additional resource above 252 MW would seem to be required for only a very few hours per year, certainly not enough to use it as a criterion for selection.

Forecasting is at best an estimate. No one can say for sure if 252 MW is too little, or that 280 MW is sufficient. All that can really be said is that the likelihood of not serving some of the load may appear to be reduced if extra resources are available. Green Island's evidence showed that due to the number of hours from 0 - 122 MW, the Green Island Tier 2 portfolios provide much better reliability – that is less likelihood of unserved load – than does Tier 1 just because it allows much better coverage of the lower load levels, while still meeting the higher load levels of 200+ MW with a limited use resource that matches that relatively rare need. In other words, the Green Island Tier 2 portfolios serve the needs of Vancouver Island load much more effectively than does Tier 1.

It should also be noted that BC Hydro strongly bolsters their arguments by pushing for the full 280 MW of stated need in F2008. If such a larger need has now been identified, then why not look to the most obvious way to install additional MW for such seldom used capacity peaks, that is, install more peaking plants. The additional cost of extra peaking is quite noticeably smaller than installing more combined cycle capacity to meet such a peak. Indeed, it can be seen from the BC Hydro load duration curve that they expect the peak of 280 MW to be required only as little as 1 hour per year, perhaps 2 hours at most. Why would anyone install highly efficient and expensive capacity of the DPP type to serve such limited-time loads? Throughout North America that type of usage is best served, as stated above, by peaking or by DSM proposals – both of which have been bid or proposed but have been systematically rejected by BC Hydro in support of their own flawed preference for a project such as DPP.

11. Resource Option Bias

The record is clear that all bidders in the CFT were not "on an equal footing."

The evidence establishes that if the CFT had required DPP to demonstrate fuel supply certainty, it would have been unable to satisfy that requirement. Unfortunately, the risks associated with gas price and gas transportation will be borne not by DPP, but by BC Hydro's ratepayers. BC Hydro's assumption of those risks was not quantified, so the cost effectiveness of the DPP project can not be determined with any reasonable level of confidence.

In contrast, the Tier 2 portfolios advocated by Green Island provide much lower risk. Green Island bears all of its own fuel risk -100%. The fact that Green Island was the only final round bidder that was responsible for its own fuel and transportation costs is fundamental proof that the CFT was resource biased.

The CFT could have required gas project bidders to submit two bids. One with BC Hydro assuming fuel risk for gas price and transportation. The other, without BC Hydro assuming the fuel risk. That way the market would establish a value for the otherwise

unquantifiable benefit to gas project bidders and there would be a reasonable basis for extending some form of credit, of equivalent value, to non gas project bidders.

Mr. Lewis' cross-examination explored BC Hydro's unique ability to provide an abundant source of wood from its right of way clearing operations. Despite the obvious value to both BC Hydro and Green Island, BC Hydro apparently never considered that possibility.

The amount of fuel Green Island could securely procure, and the performance risk for not delivering, was a major factor in Green Island's decision to bid only 75 MW. If BC Hydro had made an equivalent accommodation on fuel risk to non gas projects, Green Island would have been in a position to bid additional project phases totaling more than 150 MW.

Fuel supply certainty assessment was specifically identified in the Commission's 23 January 2004 letter as a discretionary judgment that required careful consideration. The gross inequity of extending a significant benefit – by assuming all fuel risk – to gas projects but not to non gas projects such as Green Island was fundamentally unfair and effectively disqualified Green Island from being able to bid additional project phases that may well have aggregated more than 150 MW.

12. Outcome Absent the CFT Rules

The transcript of the 19 January 2004 in-camera session leaves no doubt that the Commission Panel and BC Hydro are actively considering whether there is some way to approve the DPP *with* duct firing project. Ms. Hemmingsen's evidence is that it is impossible to do so within the CFT rules.

The Commission Panel has already ruled that it will not make determinations or grant approvals for energy supply contracts in relation to other potential projects. (Ex. A-36, p. 3) The matter before the Commission Panel is an EPA related to the DPP *without* duct firing project. The DPP *with* duct firing project is clearly an "other potential project."

The DPP *with* duct firing project does not fit within BC Hydro's definition of Tier 1 - that is narrowly defined as the portfolio having the lowest Net Portfolio Cost NPV based on application of the QEM outlined in the CFT.

The DPP with duct firing project does not fit within BC Hydro's definition of Tier 2 - BC Hydro asserts that category arises only from the exercise of the privative clause in section 17.3 of the CFT.

The Commission Panel's ruling characterizing the principal issue as choosing the most cost effective option among the Tier 1, Tier 2 and No award options, in combination with BC Hydro's own restrictive definitions of Tier 1 and Tier 2, preclude the Commission

Panel in this proceeding from making any determinations or granting approval for an energy supply contract in relation to the DPP *with* duct firing project.

Further, in light of BC Hydro's unchallenged testimony that the DPP *without* duct firing project is **not** the most cost effective option, Tier 1 DPP *with* duct firing, is necessarily excluded as a potential outcome in this proceeding. Tier 1 can not be found to be in the public interest if it is not the most cost effective option. The Commission Panel's own scope ruling now requires it to select either the Tier 2 or No Award options.

If Commission Panel anticipates or intends that after this proceeding BC Hydro will file an EPA or EPA amendment in respect of the DPP *with* duct firing project, it will also recognize that at that point it must necessarily open up the evaluation to all other options absent the CFT rules. Once the CFT rules are no longer in effect, there is no basis to distinguish DPP *with* duct firing from any combination of Green Island, EPCOR, Calpine and Norske – which BC Hydro claims it couldn't consider because of the CFT rules.

13. Competitive Process

DPP was identified as the CFT winning bid on the basis of the QEM evaluation. There is no evidence refuting Green Island's assertion that each of Tier 2 Options A through D, as evaluated under the QEM, are significantly lower cost. If the Commission Panel accepts the QEM as the relevant test, it must conclude that DPP is far from being the most cost effective option. On the other hand, if the Commission Panel has concerns that the QEM was significantly flawed, it must reject the CFT outcome and direct BC Hydro to forthwith undertake a new process to obtain sufficient capacity to meet the anticipated shortfall.

It would be great folly to dismiss the outcomes of the QEM evaluation in favour of the outcomes of the seriously flawed "Cost Effectiveness Check". The QEM was transparent and developed with bidder input – it was at the very heart of the CFT process. BC Hydro's concern about the confidentiality of the QEM stemmed from its view that it was such a significant work product that it didn't want its competitors to benefit from BC Hydro's substantial development efforts. On the other hand, the "Cost Effectiveness Check" was cobbled together and completed in the space of a few days. Bidders had no foreknowledge of its existence, no input into its development, and it yielded a "black box" outcome that could not be independently tested or verified.

Bidders fully expected that the CFT outcome would be determined by the QEM evaluation. BC Hydro changed the game entirely by introducing its "Cost Effectiveness Check" at the eleventh hour. If the Commission Panel condones that approach it will have serious negative implications for future competitive processes.

14. Conclusion

In retrospect, it appears that the CFT was set up in such a way that the eventual selection of a VIGP type project at Duke Point was inevitable. In many ways the process more closely resembled an auction for the VIGP assets than a fair, unbiased and competitive capacity call. Competing against 50 million dollars in recovery of sunk costs would be difficult under any circumstances; unduly stringent criteria and resource option bias made effective competition nearly impossible. Yet, against those odds, the portfolios proposed by Green Island nevertheless yield the greatest cost savings under the QEM evaluation.

BC Hydro and DPP have created all sorts of arguments why the Green Island portfolios should not be evaluated using the QEM. Notably, however, those parties have not challenged Green Island with respect to the QEM outcomes when those evaluations are undertaken. They have not denied that the QEM yields outcomes for the four Tier 2 portfolios that are 35 to 55% less expensive than the DPP project.

The Commission Panel has available to it the tender price information for Green Island's and EPCOR's projects. Norske's evidence enables the Commission Panel to make a very accurate estimate of the cost of the DMP. The only unknown is the cost of Calpine's project, but the familiar technology will also enable the Commission Panel to very accurately estimate the cost of that project. In any event, the Tier 2 Option D portfolio that includes Calpine's project is 38% lower cost than DPP so there is a very wide margin for error in estimating Calpine's bid price and still coming up with a lower portfolio cost than DPP.

If the Commission Panel accepts the QEM model as sound then it is in the public interest to fully evaluate each of the proposed Tier 2 portfolios under the QEM to determine the most cost effective outcome. If the Commission Panel opts to disregard the QEM model then the entire CFT process must be rejected because it was based upon and inextricably linked to the QEM model.

As for the "Cost Effectiveness Check" and the resulting conclusions discussed in the in-Green Island submits that the lack of transparency, absence of bidder awareness or input, inclusion of detailed "black box" calculations that cannot be tested, the unexplained introduction of the "capacity equalization" test, the speed with which this "check" was initiated and completed, the failure to identify and address the fundamental cost effectiveness element of the privative clause, the overvaluing of the Tier 2 backfill, the refusal to acknowledge that the Green Island and Ladysmith Peaker portfolio yielded a superior outcome in the QEM, and the total silence on the fact that DPP without duct firing was not the most cost effective option relative to DPP with duct firing all lead to the inescapable conclusion that the "Cost Effectiveness Check" served the sole purpose of creating justification for the desired Tier 1 outcome.

If the Commission Panel determines that even one of the above arguments has validity, fairness will require that it evaluate Green Island's project in some combination with the EPCOR and Calpine project bids and Norske DMP in that new light. That is the only way to ensure that all possible portfolios that should have been evaluated will be

evaluated. Doing so is an essential step for the Commission Panel to determine whether the EPA is in fact in the public interest.

ALL OF WHICH IS RESPECTFULLY SUBMITTED this 4th day of February, 2005.

per Fred J. Weisberg Weisberg Law Corporation Counsel for Green Island Energy Ltd.