

W E I S B E R G L A W
C O R P O R A T I O N

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BY E-MAIL

December 8, 2004

Mr. Richard Stout
Chief Regulatory Officer
British Columbia Hydro and Power Authority
17th Floor, 333 Dunsmuir Street
Vancouver, B.C. V6B 5R3

Dear Mr. Stout:

**Re: BCUC Project No. 3968354
British Columbia Hydro and Power Authority
Call for Tenders for Capacity on Vancouver Island
Review of Electricity Purchase Agreement**

Attached please find Green Island Energy Ltd. Information Request No. 1 to BC Hydro in the above captioned proceeding.

Yours truly,
Original signed by:
Fred J. Weisberg

Weisberg Law Corporation
Counsel for Green Island Energy Ltd.

Attachment

cc: British Columbia Utilities Commission
British Columbia Transmission Corporation
Registered Intervenors

**GREEN ISLAND ENERGY LTD.
Information Request No. 1**

**British Columbia Hydro and Power Authority (“BC Hydro”)
Call for Tenders for Capacity on Vancouver Island (“CFT”)
Report on the CFT Process dated November 19, 2004 (“CFT Report”)**

Bias Against Resource Options Other Than Gas

1.0 Reference: Call for Tender, Appendix 1, definition of Dependable Capacity

1.1 Does BC Hydro recognize that for most of the non-gas generation options proposed at the VIGP hearing achieving 97% availability for 6 months is not feasible? If no, please explain why not.

2.0 Reference: Electricity Purchase Agreement, Appendix 1, definition of “Scheduled Planned Outage”

2.1 Does BC Hydro recognize that for such non-gas generation projects achieving 97% availability for 9 months is virtually impossible? If no, please explain why not.

2.2 On what basis did BC Hydro require an extended peak season of 9 months?

3.0

3.1 BC Hydro is absorbing all of the availability, reliability and scheduling risks and costs associated with transporting gas to the Duke Point Power plant. Does BC Hydro plan to off-load any of these risks and costs to Terasen or Williams with respect to the construction of transportation infrastructure (i.e. if cost estimates turn out to be too low)?

3.2 If so how will this be accomplished?

4.0 Reference: Electricity Purchase Agreement, Appendices 1 and 11

4.1 The EPA allows gas turbine plants to have availability and delivery adjustments for temperature and humidity conditions with no payment penalties. Please confirm that gas turbine technology is susceptible to temperature and humidity variations.

4.2 Does providing an Average Ambient Condition adjustment constitute a bias in favor of gas-fired plants? If no, please explain why with reference to equivalent adjustments available to non-gas projects.

5.0

5.1 Please explain why variations in availability and delivery were only allowed with respect to conditions that specifically affect gas fired technology.

6.0

6.1 Please confirm that other generation technologies, such as biomass, are less susceptible to air temperature and humidity variations but are more susceptible to fuel quality variations, including humidity.

7.0

7.1 Please explain why the CFT process and the EPA did not provide any flexibility for fuel quality variation.

8.0

8.1 Does BC Hydro recognize that biomass plants for a specific dependable capacity must be designed with spare capacity, so that when adverse fuel conditions occur the dependable capacity limit can still be met?

8.2 For example, does BC Hydro recognize that a biomass plant may be designed to generate 85 MW with a fuel moisture content of 40% but if and when the moisture content is 50% the plant may only be able to generate 75 MW?

8.3 In such a case, if the fuel moisture content limit was 50% would BC Hydro consider that the dependable capacity of the plant was only 75 MW?

8.4 Why was an adjustment similar to the Average Ambient Condition adjustment offered to Bidders of gas fired projects not made available to bidders of non-gas fired projects?

8.5 Did BC Hydro recognize that the absence of an equivalent adjustment would drive up the cost of non-gas fired projects?

9.0

9.1 Please confirm that in order to accommodate fuel variability, in the Customer Based Generation RFP BC Hydro allowed for a plant output variability of 90% to 110%.

9.2 Has BC Hydro, in other RFPs, ever previously required plant output variability of 95% to 105%?

- 9.3 Why did BC Hydro believe that a narrower plant output variability band of 95% to 105% was required for the CFT?
- 9.4 On what basis did BC Hydro refuse Green Island's request for a plant output variability band of 95% to 115%?
- 9.5 What is the benefit to BC Hydro or its ratepayers of limiting plant output to 105%?
- 9.6 Does BC Hydro recognize that this narrow window of 95% to 105% plant output variability makes it more difficult for a biomass project to compete with a gas fired project and still meet the required 97% availability?
- 9.7 Please confirm that if a plant was running at 115% BC Hydro would simply transmit slightly less power to the Island over the ties.
- 9.8 Would gas fired plants be able to maintain a plant output variability band of 95% to 105% if they were not allowed to have temperature and humidity adjustments? Please explain.

Discretion To Reject Tenders

10.0 Reference: Call for Tenders October 31, 2003, page 19, section 17.2

- 10.1 Please provide the rationale for BC Hydro retaining the sole and unfettered discretion to reject any and all Tenders, or portfolio of Tenders, regardless of whether they have the lowest price or the lowest cost to BC Hydro.

Load and Generation Forecasts

11.0

- 11.1 Please provide hourly load data forecasts for Vancouver Island for a "typical" year. Please provide the data for an actual year that is considered reasonable representative of the average or typical year. Please do not provide a year of "averaged" data taken from several years.
- 11.2 Please provide a forecast of yearly energy used from the BC Hydro system on Vancouver Island, including losses to transmit energy within the grid on the Island for Vancouver Island for 25 years. If BC Hydro can't provide a 25-year forecast please explain why not and provide the forecast for as many years as possible.

- 11.3 Please provide hourly generation supply data forecasts for Vancouver Island for a "typical" year.
- 11.4 Please provide a forecast of yearly generation for each BC Hydro unit on Vancouver Island for each of the 25 years, including possible retirements, derates or uprates in this time. If this is not possible, please provide data for the total generation from all BC Hydro units on Vancouver Island instead.
- 11.5 Please provide a forecast of the range of generation of the hydro systems on Vancouver Island, for "low" and "high" years as well as average production. If this is expected to change over the 25 year forecast period, please provide a 25 year forecast or explain why this is not available and provide the forecast for as many years as possible.
- 11.6 Please provide the load and generation data requested in 11.5 above in Excel spreadsheet format for each of the 8760 hours per year with Vancouver Island load and generation supply data in appropriate columns. Please provide this requested data in electronic form only.
- 11.7 Please provide overall annual percentage availability and reliability (expressed as forced outage rate or hours) statistics for each unit of BC Hydro's Vancouver Island generation supply and a breakdown of annual percentage availability and reliability by type of supply (e.g. hydro, gas-fired, etc.)
- 11.8 Please prepare a series of graphs that clearly show Vancouver Island's unserved load (i.e. those bits of load through the year for which BC Hydro believes there will be insufficient generation to serve) for each of the next 25 years. If BC Hydro is unable to provide graphs for that entire period then please provide them for as many years as possible.
- 11.9 As a companion to the graphs requested in 11.8 above, please explain BC Hydro's methodology for estimating maintenance and forced outages and explain how those factors are reflected in the graphs. Please provide the graphs in both paper and electronic form.
- 11.10 Please prepare a second series of graphs that begins with the graphs requested in 11.8 above and overlays the Tier 2 portfolio of new supply.
- 11.11 Please provide the Expected Energy Not Served, or the Loss of Load Probability, or any other reliability index used by BC Hydro, for the Vancouver Island load and generation mix described above for each of the 25 years of the forecast period.

Cost Effectiveness

12.0 Reference: CFT Report, page 22, Figure 2

- 12.1* Please confirm that the \$65.6/MWh figure is the value that applies to the Duke Point Power plant. If it is not, please identify the levelized cost for the Duke Point Power plant.
- 12.2* Please provide the rationale for stating that the levelized cost of the Duke Point Power plant in \$2002? What would that \$65.6/MWh levelized cost be in \$2005?
- 12.3* Please provide and explain the calculation(s) used to arrive at \$65.6/MWh.
- 12.4 Were nominal dollar costs over the period converted to real dollars by using an assumed CPI of 2% and then the NPV of the cash flow in real dollars calculated by using a 6% discount rate?
- 12.5 Was the NPV of the energy calculated using a 6% discount rate?

13.0

- 13.1 The CFT Portfolio analysis was designed to evaluate Portfolios from 150 MW to 300 MW in size. Due to one tender being disqualified there were no Portfolios in the 150 MW range. To determine the cost effectiveness of a Portfolio in the 150 MW range using the CFT model please conduct and provide a cost effectiveness analysis of the Tier 2 Portfolio of 122 MW with an additional identical Peaking Plant. In other words, a Portfolio consisting of the 75 MW biomass plant and two 47 MW speakers.
- 13.2 To determine the cost effectiveness of an alternative Portfolio in the 150 MW range using the CFT model please conduct and provide a cost effectiveness analysis of the 75 MW biomass project in combination with Norske curtailable load under the conditions of the proposal that Norske submitted to the BCUC as an intervenor in the BCTC Capital Plan proceeding.

Gas Price Forecast and Risk

14.0

- 14.1 Did BC Hydro consider avoiding all concerns regarding gas price forecast and gas price risk by requiring all bidders, for gas fired and non-gas projects alike, to bear their own fuel price risk relative to the CPI index? If no, why not?

Environmental Cost

15.0 Reference: BC Hydro November 3, 2004 Press Release

- 15.1 Please provide a copy of BC Hydro's November 3, 2004 press release regarding the Duke Point Power plant.
- 15.2 In the press release requested in 15.1 above BC Hydro committed to offset the environmental impacts of the Duke Point Power plant. Please elaborate upon how BC Hydro will fulfill this commitment.
- 15.3 As precisely as possible please provide details of the cost impacts of that commitment for BC Hydro's ratepayers?

Witness Panels

16.0

- 16.1 Will the individuals, whether BC Hydro employees or outside consultants, responsible for the development of the CFT model be available for cross-examination in this hearing? If no, why not?
- 16.2 Will all of the witnesses who appeared on BC Hydro's panels in the VIGP hearing be made available for cross-examination in this hearing? If no, why not?