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File: 071994.0001

February 4, 2005

Delivered by Email and Hand

British Columbia Utilities Commission Box 250 Sixth Floor 900 Howe Street Vancouver, BC V6Z 2N3

Attention: Mr. Robert J. Pellatt

Dear Mr. Pellatt:

Re: Project No. 3698354 British Columbia Hydro and Power Authority Call for Tenders for Capacity on Vancouver Island Review of Electricity Purchase Agreement ("EPA") NorskeCanada's Final Submissions

Please find enclosed NorskeCanada's Final Submissions with respect to the Commission's Review of the proposed EPA.

Yours truly MILLER THOMSON LLP Per: Charles W. Bois CWB/ht Enclosures c. BC Hydro Intervenors and Interest Parties

cwbicwb06932

BRITISH COLUMBIA UTILITIES COMMISSION

IN THE MATTER OF THE UTILITIES COMMISSION ACT

S.B.C 1996, CHAPTER 473

AND

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY CALL FOR TENDERS FOR CAPACITY ON VANCOUVER ISLAND REVIEW OF ELECTRICITY PURCHASE AGREEMENT

"DUKE POINT POWER EPA APPROVAL"

FINAL ARGUMENT

ON BEHALF OF

NORSKE SKOG CANADA LIMITED

("NORSKECANADA")

FEBRUARY 4, 2005

INTRODUCTION¹

Norske Skog Canada Limited ("NorskeCanada") appreciates the opportunity to participate in the review of the proposed Electricity Purchase Agreement ("EPA") between BC Hydro and Duke Point Power Project Limited Partnership ("DPP").²

Confidence in the effectiveness of the regulation by the Commission to provide stable and predictable rates for electric power over the long term is important. NorskeCanada acknowledges that the present proceedings were not focused on rates per se; however, the costs of DPP will ultimately be passed on to ratepayers through the rates charged by BC Hydro. NorskeCanada is especially concerned that the impact of DPP on rates is expected to be in the range of 2% - 3%, that increase will translate into an increase of \$5,000,000 annually in NorskeCanada's operating costs.³

NorskeCanada has reviewed BC Hydro's and DPP's final arguments and offers the following comments. While these comments deal specifically with concerns of NorskeCanada, the lack of any comment responding to any issue or comment contained in either of those arguments should not be considered to be an acceptance or endorsement of either the evidence filed or the EPA, or those final arguments. NorskeCanada has also made a concerted effort during these proceedings, to avoid duplicating areas of debate and argument that will be dealt with in detail by other interveners.

NorskeCanada is BC Hydro's largest industrial user of power on Vancouver Island and accounts for approximately 25% of the power demand on Vancouver Island. As a member of the Vancouver Island community, NorskeCanada has repeatedly offered to be part of the solution for what is a short-term capacity shortfall. It is from that perspective that NorskeCanada prepared and filed, in both the present proceedings and in BCTC Capital Plan proceeding a demand management proposal ("NCDMP") that NorskeCanada believes is a practical, environmentally sound and cost-effective component to a localized and duration limited issue. NorskeCanada has stated in these proceedings that it is prepared to work with BC Hydro and BCTC to structure NCDMP so that it can comply with required planning standards.

¹ In this Argument, Norske has attempted to adopt the referencing style of BC Hydro with respect to exhibits and transcripts.

² In this argument, Norske does for the sake of convenience uses "DPP" to refer to both the project and the proponent of the Duke Point Power Plant

³ Exhibit C2-9, Norske Response to GSXCCC IR 1.1.3

SUMMARY

NorskeCanada recommends that the British Columbia Utilities Commission ("BCUC") deny the request of British Columbia Hydro and Power Authority ("BC Hydro") to approve the Electricity Purchase Agreement ("EPA") between BC Hydro and Duke Point Power Project Limited Partnership for the Duke Point Power Project ("DPP"). NorskeCanada's recommendation results from the following assessment of the evidence:

- 1. NorskeCanada submits that there is ample evidence before the Commission that identifies lower cost options to manage and satisfy the capacity shortfall on Vancouver Island in comparison to DPP. These options were identified by BCTC, BC Hydro and intervenors during these proceedings. NorskeCanada submits that expediting approval and construction of the first 230 kV line will provide the most reliable and cost-effective solution to the capacity issues on Vancouver Island. The evidence before the Commission suggests that from a realistic perspective there is a very low probability of power shortages on the Island during the period following the retirement of the HVDC lines and the installation of the 230 kV line. NorskeCanada submits that if NCDMP is combined with one or more of the lower cost options there can and will be cost-effective and reliable capacity to bridge the gap until the transmission line is installed. The legacy of such an approach would be to minimize overall costs to ratepayers and encourage BC Hydro to issue a province wide call for energy in a manner that is consistent with the intent of the Province's Energy Policy.
- 2. The cost of the power from DPP is too expensive and DPP is not necessary. When estimated costs are adjusted for current forward prices for natural gas, reasonable capital cost structures, and an on-Island toll for gas transportation, it is NorskeCanada's view that the power produced by DPP will be significantly more costly than the price of energy acquired through bids for energy throughout the province that use a variety of fuels.
- 3. Approving the EPA will be a costly decision that will be borne by all ratepayers. NorskeCanada's ability to produce paper in a global marketplace is dependant in part upon the competitive power prices that now exist in BC. NorskeCanada submits that competitive power prices are essential to industrial and core market consumers alike. BC Hydro has estimated the rate impact of the DPP at over 2%; while others have estimated the impact to be in the order of 3%. NorskeCanada is concerned that the rate impact of approving DPP will increase power prices generally, and could increase NorskeCanada's annual operating costs by as much as \$5,000,000 per year.

- 4. NorskeCanada submits that the Commission must consider the EPA with a very long range perspective. If built, DPP would have a contract life of potentially 35 years. Based on the operating profile of ICP, NorskeCanada is concerned that DPP will not operate as frequently as BC Hydro has projected and ratepayers will have to bear the fixed costs of that plant for the term of the EPA. That concern also raises the question as to why is BC Hydro recommending approval of an "energy" contract that relies on an increasingly expensive and high risk fuel for a term that could exceed the term of BC Hydro's current EPAs.
- 5. Constructing DPP ties the power supply on Vancouver Island to natural gas, the price of which is determined by supply and demand forces throughout North America and in the future may be more impacted by global supply and demand factors. Although BC Hydro has attempted to incorporate gas price risk in its forecast, NorskeCanada is concerned that its forecasting methodology is extremely optimistic and as a result, the forecasted energy margins and cost of power from DPP will not be achievable.

CAPACITY SHORTFALL ON VANCOUVER ISLAND

BC Hydro has indicated throughout these proceedings that primary purpose of the CFT was to obtain "capacity" for Vancouver Island⁴ and the need to have dependable capacity in place by 2007⁵ in order to meet a project shortfall in the supply demand balance. That shortfall is primarily the result of BC Hydro's decision to de-rate the HVDC link to zero capacity in 2007. NorskeCanada respectfully reminds the Commission that the decision to de-rate the HVDC link is a judgment call on the part of BC Hydro. The decision to de-rate those lines simply means that from a "planning perspective" those lines are no longer considered to provide reliable capacity. However, there is no evidence of an intention to decommission or remove the de-rated HVDC lines from service. NorskeCanada submits that given the conservative nature of the planning criteria, it is quite likely that the HVDC line will continue to provide power to the Island for some time. However, even if the HVDC lines were out of service, the evidence adduced during the VIGP hearings was that customers would only be affected if one of the northern 500 kV lines <u>also</u> went out of service <u>and</u> that happens during the coldest days of the year.⁶

NorskeCanada does not dispute that there may be a capacity short fall on the Island in 2007/2008. NorskeCanada does however have concerns about the stated magnitude and duration of that shortfall.

5 T6/1236

⁴ T9/2160

⁶ VIGP Transcript, T4/801-802

Although BC Hydro and to some degree DPP argue that the shortfall on the Island is not of a short term nature, the evidence of BC Hydro confirms that it is a short term problem. During cross-examination by Mr. Andrews, Ms. Hemmingsen confirmed that the capacity deficiency on Vancouver Island exists only between the time the HVDC lines are zero-rated and the in-service date of the first 230 kV transmission line. Outlined below is the relevant exchange between Mr. Andrews and Ms. Hemmingsen:

Mr. Andrews: Q: Now I just wanted to confirm that the capacity deficiency which Hydro is proposing this plant to address, is that deficiency on Vancouver Island between the time of the zero rating of the HVDC system and the in service date of the proposed 240 kilovolt transmission line, is that correct? Not stating what those dates are, but that's a way to describe the duration of the capacity deficiency.

Ms. Hemmingsen: A: Yes, the deficiency is driven by the de-rating of the cable.

Mr. Andrews: Q: And ends when the 230 kV line comes into service?

Ms. Hemmingsen: A: Correct.

NorskeCanada agrees that the on Island capacity short fall will be resolved with the installation of the 230 kV lines. Despite the overwhelming evidence that the 230 kV line will resolve the capacity issues on Vancouver Island, BC Hydro insists on pursuing an expensive long term capital project to resolve a short term problem.

DEMAND SIDE MANAGEMENT

In VIEC's Reply Argument, BC Hydro indicated that the CFT would accommodate a range of product options, including: dependable capacity and associated energy, dependable peaking capacity, and demand side management (load displacement, scheduling and management)⁷. In addition, during the VIGP hearings the Commission considered evidence with respect to load management and agreed that BC Hydro should explore load management with its customers. The Commission indicated that:

The Commission Panel agrees with the analyses of CBT, JIESC, and NorskeCanada that BC Hydro should explore load management with its customers to reduce the peaks and defer or negate the need for new facilities. At the same time, a contract with

⁷ VICE Reply Argument, Section 2.3 Product Options, p. 40

NorskeCanada for load curtailment will involve negotiations with respect to acceptable levels of compensation. Due to the investment cost involved and the issues on pricing of curtailable energy, the compensation issue should first be mutually resolved by BC Hydro and NorskeCanada (Exhibit 10A, BCUC IR 3.1, IR 4.3). The Commission Panel concludes that no contracted demand reductions should be added to dependable supply for the purposes of the Application. Nevertheless, arrangements with NorskeCanada for short-term load curtailments are an attractive option in the event that BC Hydro needs to bridge a period until a resource like a 230 kV transmission line, other on-Island generation, or even VIGP can be completed.⁸

NorskeCanada was encouraged by the Commission's comments and the commitments of BC Hydro in its reply argument. NorskeCanada was hopeful that BC Hydro would initiate discussions with NorskeCanada regarding NorskeCanada's load management capabilities and ways that BC Hydro could take advantage of those capabilities. Regrettably, the CFT, as issued, was a call for generation capacity only and did not fulfill BC Hydro's commitment to accommodate a range of product options.

Undaunted, NorskeCanada pressed on and prepared the NCDMP. Reproduced below are several key paragraphs from the summary of the NorskeCanada proposal that the Commission might wish to consider:

Our proposal allows for the broadest range of capacity and flexibility, and/or for bridging the F2007 to F2009 capacity shortfall until the new 230 kV transmission link can be in service. NCDMP is the best alternative for reliable supply to VI by providing a very cost effective and reliable solution. We believe that the transmission solution should be pursued to provide the security that VI customers need, and within a low cost portfolio to all ratepayers.

The intended design of this proposal is to make NCDMP appear, from a power system operator's perspective, very similar to a medium capacity (30 to 140MW) Simple Cycle (SC) peaking power station, with high reliability and relatively low utilization for energy, due to the relatively high cost of natural gas, or even higher distillate costs. This proposal, coupled with the anticipated 230 kV link from the Mainland, will provide enhanced system reliability and flexibility to meet foreseeable contingencies.

⁸ VIGP Decision, p. 22

In summary, NorskeCanada believes that it can provide a Demand Management service which in most respects is equal or superior to an SC peaking plant, with the advantage of short term flexible capacity contracts, and is the least cost solution to capacity issues facing VI. It is imperative that NCDMP be evaluated as a flexible optional resource at the same time as commitments are made in regards to VI CFT and the 230 kV link schedule, so that a least cost and holistic solution for a localized VI issue is derived.

NCDMP is an effective reliability tool that BCTC [and BC Hydro] may use in solving the issues identified in their capital plan submissions and the EPA submissions for Vancouver Island.

NorskeCanada also urges the Commission to review the tables set out in NorskeCanada's evidence as these tables highlight the relative cost of and the significant contribution that NCDMP provides.

NorskeCanada initially filed the NCDMP in the proceedings dealing with BCTC's Capital Plan. As a result of that filing, the Commission directed BCTC, in conjunction with BC Hydro if necessary, to evaluate the NorskeCanada proposal and file a report with the Commission within 30 days of the Commission's decision.⁹ NorskeCanada was again encouraged by the Commission's direction to BCTC to consider and evaluate NorskeCanada's load management options.¹⁰ BCTC filed its report as mandated by the Commission and that report was introduced into evidence in the present proceedings.¹¹ In its report, BCTC supports the efforts of NorskeCanada, but states that for prudent long-term planning purposes, it did not support the use of customer curtailment to meet minimum reliability standards.¹² BCTC also states that NCDMP by itself is unable to resolve the capacity shortfall on Vancouver Island, but if NCDMP were combined with other stopgap measures, it would be sufficient to resolve the "short term capacity shortfall" on the Island. Those views were confirmed by Mr. Mansour in cross-examination by NorskeCanada counsel¹³ and Mr. Wallace.

In its report, BCTC also refers to the N-1 planning criteria as being a key deterministic regarding supply to Vancouver Island. The footnote on page 2 of the BCTC report states that criteria as meaning Category

⁹ BCTC Capital Plan Decision, p. 34

¹⁰ Exhibit C2-3; T11 2437/L22 to 2437/L1

¹¹ Exhibit A-43

¹² Exhibit A-43, p.6

¹³ T10/2297L23 to 2298/L7

B of Table 1, WECC Reliability Criteria.¹⁴ It is NorskeCanada's submission that the table referenced by BCTC also contains a footnote that suggests that planned or controlled interruption of electrical supplies to radial customers or local network customers may occur in areas without impacting overall security of the interconnected transmission systems. NorskeCanada submits that its proposal could be used by BC Hydro and BCTC to avoid the loss of other load on Vancouver Island and not violate the criteria. NorskeCanada submits that Mr. Mansour confirmed NorskeCanada's submission in part when he testified that working with NorskeCanada on a demand management or load shedding program would be acceptable in "the short term" given NorskeCanada's sophistication and understanding of the issues.¹⁵

NorskeCanada does not dispute that by itself, the NCDMP is not the solution to the capacity issues on Vancouver Island. Rather, it has been and continues to be NorskeCanada's position that the transmission solution, with cost-effective on-Island generation is the best solution to meeting the capacity and energy needs of Vancouver Island. NorskeCanada considers NCDMP to be a pragmatic and practical part of the solution¹⁶ until such time as the new transmission lines are installed. NorskeCanada is encouraged by the support of Mr. Mansour and his testimony that NCDMP is a suitable component of a number of options capable of helping to resolve the capacity shortfall on the Island. NorskeCanada submits that its proposal, combined with efficiency improvements and the lower cost alternatives identified in these proceedings, including cost effective on-Island generation, is a more appropriate solution to the capacity issues on the Island than the DPP.

Although not introduced for this purpose, BC Hydro provided information regarding Vancouver Island's Daily Peak for the period during January 1, 2005 through January 15, 2005 to indicate that the peak volumes were increasing.¹⁷ That same exhibit illustrates the benefits that the NCDMP can provide to BC Hydro. That exhibit indicates that on January 6, 2005, an industrial customer (NorskeCanada) experienced a shut down of one of its paper machines. As a result the demand on that day dropped approximately a nominal 225 MW. While NorskeCanada does not attribute the entire drop in demand to the loss of its machine, it is noteworthy that BC Hydro indicates that "one of its customers" reduced its load by over 100 MW due to a mechanical failure. In cross-examination, Ms. Hemmingsen confirmed that the January 6th drop illustrated the <u>potential benefit</u> arising out of the NCDMP¹⁸ to assist with the

- 15 T11/2311/L20 to 2314/L23
- 16 Exhibit C2-13; T11/2439
- 17 Exhibit B-68
- ¹⁸ T11/1982/1983

¹⁴ Exhibit A-43, page 2, footnote 1

capacity problems. NorskeCanada submits that the Commission can conclude, based on the evidence of Mr. Mansour, and this one day change in demand that NorskeCanada can and is prepared through NCDMP to provide immediate and significant reductions to its power demands and thereby increase the reliable capacity available to BC Hydro to meet its requirements on Vancouver Island.

In contrast to the willingness of BCTC to consider and work with NorskeCanada, NorskeCanada cannot help but notice the unwillingness of BC Hydro to discuss the proposal. NorskeCanada is disappointed by the lack of communication or interest from BC Hydro regarding the NCDMP proposal.¹⁹ BC Hydro has expressed concerns about the reliability and certainty of NCDMP and has done nothing with NorskeCanada to resolve either those concerns or refute the evidence of NorskeCanada as to the value of NCDMP. NorskeCanada has stated that it considers NCDMP more reliable than DPP given the uncertainty arising from the lack of a long term firm gas transportation contract between Terasen and BC Hydro²⁰ and future gas prices. Additionally, and more importantly, in the opening statement of Mr. Lindstrom he made it absolutely clear that NorskeCanada stands behind its proposal with the full commitment of the corporation.²¹

BC Hydro has also chosen to illustrate reasons why NCDMP can't or won't work to ease the problems on the Island. It has attempted to assert that operational contingencies could be a barrier to utilizing NCDMP. NorskeCanada submits that this argument has no merit²² in light of the overall evidence. Additionally, NorskeCanada is entitled to receive its full contracted power load in an N-1 condition and BC Hydro is well aware of that. NorskeCanada submits that by offering reliable capacity of 140 MW it will still have enough capacity to deal with operational contingencies should they arise.

NorskeCanada submits that the Commission should also not accept BC Hydro's assertions that it could not discuss the proposal with NorskeCanada because of the CFT requirements²³ or the alternative suggestion that because BC Hydro did not know whether NorskeCanada was going to submit a bid under the CFT it could not discuss the bid.²⁴ BC Hydro's position is unsupportable for two reasons. The first reason is that BC Hydro knew or ought to have known that NorskeCanada was no longer participating in

¹⁹ T11/2437/L26

²⁰ Exhibit C2-9, Norske Response to GSXCCC IR 1.91

²¹ T11/2439/L24-26

²² T9/1972/L9 to 1974/L11

²³ See for example, T71366/5-15

²⁴ Inference drawn from cross-examination of Norske Panel by BC Hydro T11/2443/L9 to 2448/L20

the CFT when NorskeCanada failed to file documents by the dates specified in the CFT.²⁵ The second reason is if there was any doubt in BC Hydro's mind about NorskeCanada's continued participation in the CFT that doubt ought to have ceased to exist in July 2004, when NorskeCanada met with senior executives of BC Hydro to discuss the NCDMP. At that meeting, NorskeCanada informed BC Hydro that it would not be submitting a bid in response to the CFT.²⁶

Notwithstanding the meeting between NorskeCanada and BC Hydro executives, in cross-examination of the NorskeCanada panel, BC Hydro tried to suggest that BC Hydro could not have known for sure that NorskeCanada was not going to submit a bid because NorskeCanada did not formally notify BC Hydro of its intention not to bid. With respect, that argument also holds no merit. NorskeCanada is not aware of any requirement in the CFT, and BC Hydro did not present any evidence that the CFT required a bidder to formally notify BC Hydro of its intention not to bid.

NorskeCanada submits that there is no legitimate reason for BC Hydro to not speak with NorskeCanada about the NCDMP. Had BC Hydro discussed the NCDMP with NorskeCanada, it could have developed a better understanding of why NCDMP offers a cost effective, completely reliable and dependable part of the solution.²⁷ Additionally, had BC Hydro discussed the proposal with NorskeCanada, any uncertainty with respect to risks, timing and costs of the NCDMP could have been clarified so that the value of the NCDMP could be properly assessed in the Cost-effectiveness analysis.

Additionally, once the CFT closed on August 14, 2004, and right up to the present date BC Hydro has been able to discuss NCDMP with NorskeCanada, but for reasons that remain unclear to NorskeCanada, it has continued to avoid any discussions with NorskeCanada either on its proposal or demand management generally. BC Hydro's lack of interest in discussing demand management options is surprising and is of particular concern to NorskeCanada. During these proceedings, NorskeCanada became aware of a report entitled *Exploring Vancouver Island's Energy Future.*²⁸ That report summarizes the results of an internal workshop held by BC Hydro in July 2003 to brainstorm contingency options, including demand management that BC Hydro could use to address the problems on Vancouver

²⁵ T11/2444/L10-L15

²⁶ T11 2446L4 to 2448/L20

²⁷ T11 2451/L5-25

²⁸ Exhibit C2-10, and in particular, pages 3-5, 22, 23, 25, and 29; and T9/1959/20 to 1976/L17, and 1998/15 to 2000/L5

Island. Disappointingly, and contrary to BC Hydro's assertion²⁹ that stakeholders participated in this review, a review of the list of attendees suggests little, if any, stakeholder participation. NorskeCanada also notes the Commission's direction to BC Hydro after VIGP regarding demand management and the suggestion in the Commission's letter of January 23, 2004, to BC Hydro that Demand Side Management should be considered as "a bridge" if the alternatives did not meet the MW floor. In light of those facts, NorskeCanada would have expected BC Hydro to initiate some dialogue with NorskeCanada, or other customers capable of supplying Demand Side Management options in preparation of the CFT analysis. NorskeCanada submits that had BC Hydro undertaken discussions with NorskeCanada regarding its demand management capabilities prior to issuing the CFT, BC Hydro would have had a better understanding of those issues it now considers risks and uncertainties and perhaps it would have received better recognition and treatment in the Cost-Effectiveness Analysis.

Finally, NorskeCanada has indicated that it would welcome a dialogue about its proposal³⁰ and that it is prepared to review, and modify if necessary, its proposal to meet the needs of BC Hydro and/or BCTC. NorskeCanada has significant capacity and flexibility in its operations and is willing to work with BC Hydro and/or BCTC to provide reliable capacity to help bridge the capacity shortfall gap between F2007 to F2009 until such time as the new 230 kV transmission line is in service.

NorskeCanada is extremely encouraged by BCTC's proposal for a trial of NCDMP in the summer of 2005. NorskeCanada intends to work closely with BCTC to demonstrate the benefits of demand management.

TIMING OF 230 KV TRANSMISSION LINE

Transmission links to Vancouver Island have a significant advantage over DPP in that it is capable of providing flexibility of supply and source. With transmission capacity installed, BC Hydro has the flexibility to dispatch its resources and purchase power from outside the province when cost effective and deliver it to the Island. NorskeCanada submits that such flexibility provides a significant cost advantage that is inappropriately evaluated in the analysis conducted by BC Hydro to prove that DPP is the most cost-effective solution.

²⁹ Exhibit B-86: BC Hydro response to an undertaking given to file any studies relating to n-1 planning criteria that looked at resources other than generation or transmission options for serving load. In that response, BC Hydro suggests that stakeholders participated in the workshop.

³⁰ T11/2450/L4 to 2455/L19

NorskeCanada notes that in their final arguments, both BC Hydro and DPP argue that the in-service date of the 230 kV transmission line is not certain. The evidence from BCTC is overwhelmingly to the contrary. The evidence before the Commission by both Mr. Mansour and Mr. Barrett is that BCTC has an extremely high degree of confidence that it can meet an in-service date of F2009. It should also be noted that despite extensive cross-examination by DPP that involved almost a line-by-line critique of BCTC's analysis of risks that could delay the 230 kV line, BCTC's witnesses held firm and testified that all of the issues described in that assessment had been dealt with, resolved, or were not longer considered high risk issues that could delay the installation of the line. BCTC's witnesses solidly maintained that the in-service date of the 230 kV line would be October 2008 and that BCTC was planning to file a CPCN application in June of 2005.³¹

In an effort to minimize the significance of BCTC's evidence BC Hydro has chosen to characterize BCTC's efforts to expedite the in-service date of that line as using their "best efforts" to plan installation for F2008. NorskeCanada suggests that it is inconsistent for BC Hydro to argue on that basis given that BC Hydro appears to be "using its best efforts" to secure a gas transportation agreement with Terasen.

Furthermore, despite BCTC's high degree of confidence and the expedited planning work undertaken by BCTC, BC Hydro nevertheless considered the installation date of October 2008 as being uncertain and chose to use an in-service date of F2010 in the cost-effectiveness analysis. NorskeCanada contends that it is incorrect for BC Hydro to use an in-service date of F2010 in light of the very consistent and confident evidence of BCTC and suggests that the Cost-Effectiveness Analysis be assessed by the Commission using the F2009 in-service date. Additionally, NorskeCanada believes that is inconsistent for BC Hydro to adopt an extremely conservative approach with respect to the in-service date of the transmission line and not do so with respect to the uncertainties arising from BC Hydro's lack of a gas transportation agreement, or the needed capital improvements on Terasen's system.

NorskeCanada submits that the testimony of BCTC's witnesses ought to provide the Commission the confidence to conclude that BCTC has assessed all the risks associated with the construction of the line and the installation date. In contrast, we are not aware of any evidence that suggests that either BC Hydro or DPP have undertaken a risk assessment that compares to that undertaken by BCTC regarding the outstanding issues and risks associated with entering into the EPA or the lack of a gas transportation agreement. NorskeCanada hopes that BC Hydro and DPP have prepared a similar assessment.

³¹ T10/2331/L21 to 2388/L12

NorskeCanada suggests that the Commission ought to assume that the 230 kV line will be in service in October 2008 and that the capacity shortfall on the Island will be resolved at that time.

NorskeCanada notes that an additional benefit to the installation of the 230 kV line is that will it enable BC Hydro to optimize existing unused capacity within the overall grid to meet the needs on Vancouver Island. Additionally, Ms Hemmingsen³² indicated that a further 325 MW of capacity could be economically achieved at the Shrum facility, which NorskeCanada submits will benefit the system overall including Vancouver Island.

CONCERNS REGARDING BC HYDRO FORECASTS

An area of particular concern to NorskeCanada is that the shortfall on the Island has grown from 116 MW as identified by the Commission in the VIGP Hearings to a projected 280MW. At paragraph 51 of its final argument BC Hydro attempts to characterize the 280 MW shortfall as being a conservative forecast. However, the difference between Commission adjusted forecast and the new BC Hydro forecast represents an increase of 250% in less than one and half years. The magnitude of that change alone is cause for concern and leads to questions regarding BC Hydro's forecasting methodology.

In the VIGP decision, the Commission did not accept BC Hydro's evidence with respect to then projected shortfall and adjusted BC Hydro's forecast to conclude that there was a shortfall of only 116 MW.³³ NorskeCanada suggests that the problems that plagued BC Hydro's forecasts during VIGP continue to impact on BC Hydro's current forecasting techniques. At the commencement of the present proceedings, BC Hydro initially projected a shortfall of 262 MW. BC Hydro subsequently produced a new forecast that projected a new shortfall on Vancouver Island of 280 MW. The new forecast apparently incorporated the impact of the recently approved rate increase, changes in methodology, and changes in economic assumptions. NorskeCanada, and others, question the assumptions and reliability of these forecasts and commends the evidence of Steve Miller and Associates, as well as the cross-examinations of intervenors on matters relating to BC Hydro's forecasts and underlying assumptions.

COST EFFECTIVENESS OF DPP VERSUS TIER 2 AND NO AWARD

In 2003, BC Hydro filed its application to support the construction of VIGP, which BC Hydro stated at that time was the most cost effective solution to resolve the capacity shortfall on Vancouver Island. After considering the evidence in the VIGP proceedings the Commission determined that BC Hydro had failed

³² T8/1726/L22 to 1727/23

³³ VIGP Decision, p. 26

to prove that VIGP was in fact the most cost effective solution. Arising out of those proceedings were discussions and directions that lead to the Call for Tenders and the proposed EPA. Coincidently, the proposed project supporting the EPA is a natural gas fired CCGT plant that is a clone of VIGP. BC Hydro is again before the Commission seeking approval of an EPA for a project that BC Hydro asserts is the most cost-effective solution.

During the course of the present proceedings interveners and residents alike reiterated many of the concerns and comments expressed in the VIGP Hearings. It is important that the Commission consider that the lack of support from BC Hydro's customers for DPP is deafening by its silence. In its final argument³⁴ BC Hydro concedes that DPP is not the preferred choice among intervenors and other parties. Further, BC Hydro relies on the evidence of Ms. Van Ruyven to suggest that BC Hydro management have considered the concerns expressed by opponents but continues to believe that DPP is the most cost-effective solution to resolve the capacity shortfall issues on Vancouver Island. NorskeCanada submits that there is substantial evidence on the record that DPP is not the most cost-effective solution. In particular, NorskeCanada reminds the Commission of Ms. Hemmingsen's admission during the in-camera session that DPP was not the most cost-effective solution. NorskeCanada also commends the evidence filed by the JIESC as well as evidence garnered by Mr. Wallace under cross-examination³⁵ to the Commission.

Throughout these proceedings and in their final arguments both DPP and BC Hydro have repeatedly referred to the Commission's determination in the VIGP proceedings that the "appropriate next resource addition should be on-Island generation, provided the cost of the proponents projects can be confirmed near their expected values"³⁶ to support the CFT and ultimately argue that DPP is the most cost effective solution available to rebalance supply and demand and resolve the capacity shortfall on Vancouver Island. NorskeCanada does not dispute that at the end of the VIGP proceedings the Commission was of the view that on-Island generation was the next appropriate resource. However, NorskeCanada respectfully submits that the Commission made that finding in the context of its other findings, including but not limited to a determination that it was unreasonable for BC Hydro to invest nearly \$400 million to replace the HVDC system³⁷ and the uncertainties then espoused by BC Hydro regarding whether the 230 kV line

³⁴ BC Hydro Final Argument, paragraphs 8 and 9

³⁵ In particular, the CFT, Appendix A; T9/1909 to 1914; Evidence of L. Guenther; and Cross-Examination of Mr. Simpson by Mr. Wallace

³⁶ VIGP Decision, p. 78

³⁷ VIGP Decision, p. 55

could be in-service by 2008 due to the regulatory and scheduling hurdles. NorskeCanada respectfully reminds the Commission that it also found that the 230 kV may be the best reliability reinforcement if on-Island generation becomes prohibitively expensive.³⁸ The Commission also indicated that the EENS Study filed by BC Hydro indicated not only that the largest overall reduction in expected energy not served was realized by the 230 kV option in 2008, but also that that supply to Vancouver Island would not deteriorate significantly or suddenly in 2007 if VIGP is not built.³⁹ NorskeCanada submits that these latter findings of the Commission are of particular importance and must be considered by the Commission in its deliberations regarding whether to accept the EPA under review.

NorskeCanada also submits that the picture has changed from the evidence considered in the VIGP proceedings. First of all, there is solid evidence before the Commission with respect to the timing of the 230 kV line.

Additionally, BCTC has stated that:

When running, DPP would have a positive impact on transmission reliability on Vancouver Island by increasing the reserve capacity under normal operating circumstances and by reducing the risk of load shedding under severe circumstances. It would have no material effect on mainland transmission reliability. It is not required to maintain compliance with WECC/NERC planning and operating standards.⁴⁰

The foregoing response was put to Mr. Mansour in cross-examination by Mr. Wallace who sought to break the answer down into its constituent parts. With respect to the issue of enhancing system reliability, Mr. Mansour confirmed that <u>any</u> generation on Vancouver Island will add to the capacity and increase system reserves on the Island⁴¹ Mr. Mansour also confirmed that BCTC did not mean to suggest that on-Island generation meant DPP, but rather it was just meant to mean generation.⁴² Mr. Mansour also testified that a loss of a limited amount of megawatts or load on Vancouver Island is not necessarily, or not highly likely to impact the security of the [interconnection] and that the WECC/NERC standards are less definitive in this particular situation. NorskeCanada's suggests that Mr. Mansour's evidence

³⁸ VIGP Decision, p. 57

³⁹ VIGP Decision, p. 57

⁴⁰ Exhibit C6-6, BCTC Response to DPP IR 6.1

⁴¹ T10/2283

⁴² T10/2304

indicates that a short duration, limited loss of load on Vancouver Island will not impact system reliability or violate WECC/NERC guidelines.⁴³ However, to construct DPP to deal with such a possibility, in light of the evidence regarding the transmission line seems unnecessarily expensive, especially in light of other options available to BC Hydro and BCTC.

Finally, NorskeCanada's experience after installation of the ICP natural gas fired turbine project became operational is that there has been a decrease in maintaining delivery of reliable power to customers in upset conditions. That decrease in reliability has lead to modifications of BC Hydro's remedial action schemes and control changes at ICP, all of which have yet to be tested. NorskeCanada submits that since DPP also uses a gas-fired turbine, it too may experience similar operational problems and wonders how BC Hydro will avoid such issues. NorskeCanada submits that the installation of the 230 kV transmission line would not subject Island customers to such unreliability. If the Commission accepts the EPA, NorskeCanada requests that the Commission direct that BC Hydro be required to report as to how problems experienced at ICP will be avoided with respect to DPP so Island customers are not subjected to "experimentation" on how gas turbines react in upset conditions.

LACK OF A GAS TRANSPORTATION AGREEMENT

NorskeCanada, like other intervenors is concerned that BC Hydro does not have a long term or even a short term firm gas transportation agreement with Terasen to transport natural gas to DPP. Although BC Hydro asserts that the risk of no agreement is minimal, the evidence suggests something more. It is noteworthy that while Commission Counsel was cross-examining Mr. Simpson about gas transportation issues, Mr. Sanderson objected to the line of questioning because it was premised on the assumption that BC Hydro required a long term firm contract. Mr. Sanderson stated that the legal position of BC Hydro was that such an agreement was not required, especially in light of the contingency plans espoused by BC Hydro.⁴⁴

The evidence clearly indicates that there is a live dispute between BC Hydro and Terasen, of which the Commission is aware, as to the appropriateness of the tolling charges and the term attached to any gas transportation agreement. Terasen has also indicated that it would not make any capital cost investment to their system to supply gas to DPP until a firm contract is in place. Additionally, NorskeCanada commends to the Commission, generally the testimony of Mr. Simpson and Ms. Hemmingsen with respect to contingency plans that BC Hydro asserted to mitigate the risk of no transportation agreement.

⁴³ T10/2284/L20 to 2285/L18

⁴⁴ T8/1687/L18 to 1688/L11

These plans included offshore LNG, distillate fuels, and others including regulatory intervention. Many of the options asserted by BC Hydro require contracts, permitting, regulatory or environmental processes and to use BC Hydro's words, "none of which are in place and as a result are uncertain and are not reliable".

During the in-camera session BC Hydro suggested a number of potential amendments to the EPA that it might seek or that the Commission might direct be included in the EPA. In particular, NorskeCanada draws the Commission's attention to the testimony of Ms. Hemmingsen in which she raises the issue of duct firing and dual fueling. NorskeCanada assumes that the testimony regarding dual fuel was proffered in the context of mitigating the risk of BC Hydro not having a gas transportation contract with Terasen. NorskeCanada suggests that in light of Ms. Hemmingsen's testimony BC Hydro considers the risk of no gas transportation agreement to be greater than the minimal risk they suggested. NorskeCanada suggests that the installation of the 230 kV line would enhance transmission system reliability on Vancouver Island and the Lower Mainland and assist BCTC in remaining compliant with WECC/NERC planning standards.⁴⁵ In contrast, a gas fired generator incapable of receiving fuel provides no resolution to the capacity shortfall on Vancouver Island and does nothing to enhance system reliability. NorskeCanada submits that the lack of a fixed term gas transportation agreement renders BC Hydro's ability to supply fuel to DPP suspect.

In BC Hydro's CFT report Exhibit B1, Appendix J, page 3, BC Hydro states that in comparing the Tier 1 with the Tier 2 and No Award options, it believed that in addition to the quantitative results, there are number of non-quantitative considerations worth highlighting. Included in those non-quantitative considerations was the fact that cost information relating to temporary generators and demand management was still at the preliminary stages, whereas the costs relating to the CFT bids were firm and legally binding. NorskeCanada notes that the non-quantitative considerations did not include any assessment of the risk of a lack of a gas transportation agreement with Terasen. NorskeCanada is surprised that BC Hydro did not adopt a conservative stance in its evaluations of the Tier 1, Tier 2 and No Award options with respect to the uncertainties arising from the lack of a gas transportation agreement given the foregoing evidence.

NorskeCanada submits that the Cost Effectiveness Analysis does not properly assess the implications arising out of a situation where no gas transportation agreement exists. NorskeCanada submits that the analysis ought to have quantified that risk and made some determinations as to the availability of the

⁴⁵ Exhibit C6-6, BCTC Response to DPP IR 5.0

DPP. Further, BC Hydro ought to have considered some measure of the risk and costs of the alternatives options it identified to fuel DPP in the event it did not manage to secure a transportation agreement. NorskeCanada also submits that the risk of having no gas transportation agreement and the use of the alternative options, such as dual fueling, LNG, etc, are far more problematic and uncertain than the implications of delaying the installation date of the 230 kV line or adopting the NCDMP. In NorskeCanada's view, NCDMP is more certain than DPP given the uncertainty arising from the lack of a firm gas transportation agreement between BC Hydro and Terasen.⁴⁶ NorskeCanada submits that the Commission ought to consider the lack of a gas transportation agreement a significant risk when assessing whether it should approve the EPA.

SECTION 71 OF UCA AND APPROVAL OF EPA

NorskeCanada disagrees with the position of DPP that the Commission ought to direct that the EPA be amended to include duct firing. NorskeCanada agrees with BC Hydro's view that the Commission ought to either approve or not approve the EPA as filed, and issue directions regarding amendments. NorskeCanada does not think it would be helpful in the present proceedings for the Commission to direct that amendments be made to the EPA or that it ought to encourage the parties to amend the EPA and refile it for approval. NorskeCanada believes that the EPA and the project submitted by BC Hydro ought to stand as they are, with all the attributes and warts that have been debated throughout these proceedings.

NorskeCanada also notes however that BC Hydro argues that it is not under an obligation to establish beyond a reasonable doubt or to any other evidentiary standard that DPP is the best solution, but rather it must demonstrate that DPP is in the public interest.⁴⁷ With all due respect to BC Hydro, NorskeCanada does not accept that position. Section 71(2) of the *Utilities Commission Act* provides in part that:

(2) The commission may make an order under subsection (3) if the commission, after a hearing, finds that a contract ... is not in the public interest by reason of

(c) 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 referred to in paragraph (a),

⁴⁶ Exhibit C2-9, Norske Response to GSXCCC IR 1.9

⁴⁷ BC Hydro Final Argument para. 2

- (d) in the case only of an energy supply contract that is entered into by a public utility, the price of the energy referred to in paragraph (a), or
- (3) If subsection (2) applies, the commission may
 - (a) by order, declare the contract unenforceable, either wholly or to the extent the commission considers proper, and the contract is then unenforceable to the extent specified, or
 - (b) make any other order it considers advisable in the circumstances.

NorskeCanada submits that sections 71(2) (c) and (d) require BC Hydro to demonstrate to the Commission that the costs of the proposed EPA are not only reasonable and necessary, but that they can be justified when measured and compared against the costs and availability of other alternatives so that the Commission can ascertain whether the proposed EPA is in fact in the public interest. It is in that context that NorskeCanada submits that BC Hydro has not met its burden with respect to the present EPA. There is evidence before the Commission of other options that are more cost-effective and reliable than the EPA. It is also evident that both BCTC and BC Hydro⁴⁸ are preparing a number of contingency options should the Commission not approve this EPA. NorskeCanada submits that not only do those options include reliance on load curtailment by NorskeCanada, but they also include transmission line upgrades, and temporary generation that, NorskeCanada submits will be ultimately more cost effective solutions in both the short and long term than the cost of DPP over the long term.

NATURAL GAS AND ELECTRICITY PRICE RISK

NorskeCanada is generally concerned that BC Hydro has underestimated the price of gas and overstated the off-Island price of electricity in its forecasts. NorskeCanada acknowledges that it did not crossexamine BC Hydro on this issue. NorskeCanada is aware that other intervenors prepared and conducted extensive cross-examination on these forecasts. NorskeCanada has also assumed that those same intervenors will make detailed submissions regarding these forecasts in final argument.

CFT PROCESS

In the Commission's letter of January 23, 2004, the Commission identified a number of issues regarding the CFT. Notwithstanding BC Hydro efforts to address those issues, either in workshops or through a Q & A process, it is clear that throughout these proceedings a number of issues continue to exist, some of

⁴⁸ Exhibit B-1, page 17 - 18, and Appendix J, p. 2

which are the same as those expressed in the Commission's letter. Although NorskeCanada did not crossexamine witnesses extensively on the CFT process or terms and conditions, it suggests that the Commission direct BC Hydro to conduct a post-mortem on the CFT to gain a better understanding of all the issues raised by bidders, intervenors, ratepayers and BC Hydro and file a "post-mortem report" with the Commission highlighting and responding to the issues. NorskeCanada would be prepared to participate in such a post-mortem.

CONCLUSION

The recommendation of NorskeCanada is that the Commission ought not to approve the EPA as it is not the most cost-effective or desirable solution to resolve the capacity shortfall on Vancouver Island. NorskeCanada submits that it could be helpful to all parties for the Commission to direct BC Hydro and/or BCTC to work together to resolve the capacity shortfall on Vancouver Island by using a variety of the short term options, identified in these proceedings, including NCDMP. NorskeCanada is not advocating that BC Hydro or BCTC discontinue using their long term planning criteria. However, NorskeCanada submits that criteria permits the use of demand management to ease capacity shortfalls in unique situations like those on Vancouver Island. If however demand management does not fall within the existing criteria, then NorskeCanada encourages the Commission to consider whether that "planning criteria" ought to include the use of demand management options to bridge short term capacity shortfalls in circumstances like those on Vancouver Island.

All of which is respectfully submitted this 4 day of February, 2005.

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