Janet L. Fraser  
Director, Regulatory Affairs  
Phone: 604-699-7318  
Fax: 604-699-7229  
E-mail: janet.fraser@bctc.com

21 May 2010

Ms. Erica Hamilton  
Commission Secretary  
British Columbia Utilities Commission  
900 Howe Street, Sixth Floor  
Vancouver BC, V6Z 2N3

Dear Ms. Hamilton:

Re: British Columbia Transmission Corporation (BCTC)  
Application for a Certificate of Public Convenience and Necessity (CPCN)  
for the Columbia Valley Transmission (CVT) Project  
Project 3698591  
Responses to Commission Information Request No 3 (IR-3)

BCTC hereby files its responses to Commission IR-3 and further information requests received from Intervenors.

Sincerely,

Original signed by

Janet L. Fraser  
Director, Regulatory Affairs
3.126.0 Reference: Ex. B-8, Evidence on Adequacy of First Nations Consultation, Sec. 2.6, p. 9
Archaeological Consultation and Accommodation

BCTC states “Both the [Ktunaxa Nation Council] KNC and the [Shuswap Indian Band] SIB will be offered the opportunity to be involved in ‘walking the line’ with BC Hydro and BCTC and reviewing reports and other information.”

3.126.1 What specific activities does BCTC expect to take place when “walking the line” with the KNC and the SIB? Please explain how these activities will constitute First Nations consultation.

RESPONSE:

BCTC forwarded this question to BC Hydro for response. The following is BC Hydro’s response:

It is BC Hydro’s expectation that the firm chosen to do the Archaeological Impact Assessment (AIA) will walk the entire length of the proposed transmission line route while conducting the AIA. The KNC and the SIB will be provided the opportunity to participate in this field reconnaissance. As noted in section 2.6 of the Evidence (Exhibit B-8), the KNC and the SIB provided input into the Terms of Reference for the AIA. While the chosen firm will have the appropriate experience to conduct this study, it is anticipated that the Project will benefit from having the First Nations assist in identifying areas of heritage resources to be avoided or mitigated when undertaking detailed design work. The First Nations will benefit by gaining a better understanding of the precise location of the transmission line within their asserted traditional territories.
BCTC states “There are overlapping First Nation claims in the Project area. BC Hydro’s preliminary analysis, based on the information reviewed by BC Hydro as of May 7, 2010, is that the KNC and SIB probably have reasonable claims but the asserted claims of the other identified First Nations are relatively weak.”

3.127.1 Please list the specific information that was reviewed by BC Hydro as of May 7, 2010 to determine the strength of claims for all the identified First Nations. For each information source, please indicate whether it was found, provided or commissioned by BC Hydro/BCTC or by the identified First Nation.

RESPONSE:

BCTC forwarded this question to BC Hydro for response. The following is BC Hydro’s response:

The specific information BC Hydro reviewed as of 7 May 2010 to determine the strength of claims is described in the Application (Exhibit B-1) and the 7 May 2010 Evidence on Adequacy of First Nations Consultation (Exhibit B-8).

BC Hydro commissioned the Bouchard and Kennedy Research Consultants report included in Appendix A of Exhibit B-8 for the purpose of this Project. All other information referenced in the Application and Exhibit B-8 was either already known to BC Hydro through its consultations with First Nations on other projects, publicly available, or, in the case of the Robertson report, provided to BC Hydro by KNC.
3.127.0 Reference: Ex. B-8, Evidence on Adequacy of First Nations Consultation, Sec. 3.1, p. 12
Strength of Claim Analysis

BCTC states “There are overlapping First Nation claims in the Project area. BC Hydro’s preliminary analysis, based on the information reviewed by BC Hydro as of May 7, 2010, is that the KNC and SIB probably have reasonable claims but the asserted claims of the other identified First Nations are relatively weak.”

3.127.1.1 Did BC Hydro inform each identified First Nations of its strength of claim determination? If so, when and in what format? If not, why not?

RESPONSE:

BCTC forwarded this question to BC Hydro for response. The following is BC Hydro’s response:

BC Hydro did not inform each identified First Nation of its strength of claim determination. BC Hydro is of the view that there is no duty upon the Crown to share with First Nations its strength of claim during the course of a consultation process. BC Hydro is of the further view that informing First Nations of its strength of claim determination would be detrimental to the consultation process and is not supported by case law.
3.127.0 Reference: Ex. B-8, Evidence on Adequacy of First Nations Consultation, Sec. 3.1, p. 12

Strength of Claim Analysis

BCTC states “There are overlapping First Nation claims in the Project area. BC Hydro’s preliminary analysis, based on the information reviewed by BC Hydro as of May 7, 2010, is that the KNC and SIB probably have reasonable claims but the asserted claims of the other identified First Nations are relatively weak.”

3.127.2 Please provide a definition of the term “reasonable” as it relates to an Aboriginal strength of claim. How does the term reasonable relate to more commonly used determinations of strength of claim, such as weak or strong?

RESPONSE:

Based on the information it reviewed, BC Hydro concluded that the claims for both the SIB and the KNC were “reasonable”, particularly in view of the overlapping claims in the Project area.

The terms “reasonable” and “reasonable prima facie” claim have been used by the courts (see, for example, *Klahoose First Nation v Sunshine Coast Forest District (District Manager)*, 2008 BSCS 1642 at paragraph 58). “Reasonable” implies that a claim is not a weak claim but the available information may not be sufficient to conclude that a claim is a “strong prima facie” claim.
3.127.0 Reference: Ex. B-8, Evidence on Adequacy of First Nations Consultation, Sec. 3.1, p. 12
   Strength of Claim Analysis

BCTC states “There are overlapping First Nation claims in the Project area. BC Hydro’s preliminary analysis, based on the information reviewed by BC Hydro as of May 7, 2010, is that the KNC and SIB probably have reasonable claims but the asserted claims of the other identified First Nations are relatively weak.”

3.127.3 Lines 19-23 of page 12 refer to the September 2009 Bouchard and Kennedy draft report (also attached to Exhibit B-8). Was this report provided to the identified First Nations before it was submitted as part of BCTC’s Evidence on Adequacy of First Nations Consultation? If not, why not?

RESPONSE:

The identified First Nations were not provided a copy of the September 2009 Bouchard and Kennedy draft report prior to BCTC’s Evidence on Adequacy of First Nations Consultation (Exhibit B-8) being submitted to the Commission.

Please also refer to BCTC’s response to BCUC IR 3.127.1.1.
3.128.0 Reference: Ex. B-8, Evidence on Adequacy of First Nations Consultation, Sec. 3.1.1, p. 12 and Exhibit B-3, Response to BCUC IR 1.52.1.1 Consultation with the KNC

BCTC states “The information BC Hydro considered suggests that the KNC has a reasonable aboriginal rights claim in the Project area.”

BCTC states “BC Hydro’s preliminary assessment is that the Akisq’nuk First Nation (AFN) has a reasonable claim...BC Hydro is also of the view that the other three KNC First Nations have arguable claims, although perhaps not as good as AFN.”

3.128.1 Please explain why the strength of claim determinations of reasonable and arguable for the KNC member bands was changed to reasonable for the KNC as a whole. What factors were considered to make this change?

RESPONSE:

BCTC forwarded this question to BC Hydro for response. The following is BC Hydro’s response:

BC Hydro did not intend to imply in Exhibit B-8 that there was a change in strength of claim determinations. The four member bands of the KNC have consistently engaged in consultations, and negotiations, with BC Hydro as a collective represented by the KNC. In Exhibit B-3, response to BCUC IR 1.52.1.1, BC Hydro reviewed the claims of each member band and it was reasonable, in that context, to concluded that the AFN may have a stronger claim than the other three bands because of their proximity to the Project, including a reserve. However, in Exhibit B-8 BC Hydro expressed its view of the claims as a collective (that is, the Ktunaxa Nation rather than each individual bands that make up the KNC). BC Hydro is of the view that it is appropriate to consider the claims of the four member bands as a collective and that, as a collective, the Aboriginal rights claims of the KNC to the Project area are “reasonable.”
3.128.0 Reference: Ex. B-8, Evidence on Adequacy of First Nations Consultation, Sec. 3.1.1, p. 12 and Exhibit B-3, Response to BCUC IR 1.52.1.1 Consultation with the KNC

BCTC states “The information BC Hydro considered suggests that the KNC has a reasonable aboriginal rights claim in the Project area.”

BCTC states “BC Hydro’s preliminary assessment is that the Akisq’nuk First Nation (AFN) has a reasonable claim...BC Hydro is also of the view that the other three KNC First Nations have arguable claims, although perhaps not as good as AFN.”

3.128.2 Studies by Bouchard and Kennedy and Robertson are referenced in Exhibit B-8. Were these studies used to determine the KNC’s strength of claim?

RESPONSE:

BCTC forwarded this question to BC Hydro for response. The following is BC Hydro’s response:

BC Hydro reviewed the draft study by Bouchard and Kennedy as part of its preliminary analysis of the strength of claim of the Ktunaxa Nation Council (KNC). As noted in section 2.1 of the Evidence on Adequacy of First Nations Consultation (Exhibit B-8), the KNC provided the Robertson study to BC Hydro on 30 April 2010. BC Hydro reviewed the Robertson study and concluded that it supported BC Hydro’s assessment of the strength of claim of the KNC as a collective.

Please also refer to the response to BCUC IR 3.128.1.
3.129.0 Reference: Ex. B-8, Evidence on Adequacy of First Nations Consultation, Sec. 3.5.1, pp. 17-18
Adequacy of Consultation with the KNC

BCTC states “BC Hydro remains optimistic that the negotiations will result in benefits, impact management and procurement agreements.”

BCTC states “BC Hydro is of the view that most, if not all, of the material concerns have been largely addressed.”

3.129.1 What does BC Hydro plan to do if negotiations with the KNC do not result in benefits, impact management and procurement agreements? How would this change BC Hydro’s view of the adequacy of consultation?

RESPONSE:

BCTC forwarded this question to BC Hydro for response. The following is BC Hydro’s response:

As noted in section 2.8 of the Evidence (Exhibit B-8), if negotiations with the KNC do not result in benefits, impact management and procurement agreements, BC Hydro will continue to make reasonable efforts to address KNC’s concerns. Specifically, BC Hydro will:

(a) continue to look for ways of providing benefits during construction of the Project to the KNC and its member First Nations, including employment and procurement opportunities;

(b) continue to work towards avoiding or mitigating impacts to the extent reasonably possible; and

(c) continue information sharing and dialogue with the KNC through studies such as the Archaeological Impact Assessment (AIA) and the Aboriginal Use and Interest Study (AUIS), as well as the construction Environmental Management Plan (EMP) in order to assist in the detailed design process and Project implementation. BC Hydro will fully examine the studies provided by the KNC to determine if any impacts have been identified, and will work with the KNC to avoid, mitigate, or otherwise accommodate those impacts as necessary.

BC Hydro’s view of the adequacy of consultation with the KNC would not change if negotiations with the KNC do not result in benefits, impact management and procurement agreements.
3.129.0  Reference:  Ex. B-8, Evidence on Adequacy of First Nations Consultation, Sec. 3.5.1, pp. 17-18
Adequacy of Consultation with the KNC

BCTC states “BC Hydro remains optimistic that the negotiations will result in benefits, impact management and procurement agreements.”

BCTC states “BC Hydro is of the view that most, if not all, of the material concerns have been largely addressed.”

3.129.2  What are the KNC’s outstanding concerns or issues to be resolved?

RESPONSE:

BCTC forwarded this question to BC Hydro for response. The following is BC Hydro’s response:

Access Management

The KNC has expressed concerns about the potential transmission line impacts on wildlife populations and Ktunaxa hunting availability. As noted in section 2.7 of BCTC’s Evidence on Adequacy of First Nations Consultation (Exhibit B-8), BCTC and/or BC Hydro do not have the authority to grant or deny access on a statutory right of way. BC Hydro has made four commitments (listed in that same section) and has continued to work towards those goals. BC Hydro, BCTC and the KNC met with the Ministry of Environment on 6 May 2010. BC Hydro has also arranged a meeting with BCTC, the Integrated Land Management Bureau (ILMB) and the KNC for 27 May 2010. BC Hydro will continue to work towards the commitments it has made with respect to access management.

Riparian Areas

The KNC and BC Hydro have yet to finalize plans on dealing with tall trees in riparian areas that may need to be removed or topped for the safe installation and operation of the transmission line. In discussions with the Department of Fisheries and Oceans, BC Hydro has developed best management practices for vegetation clearing in riparian areas. BC Hydro will continue to work with the KNC to apply the approved best management practices in the areas of concern.

Potential Archaeological Impacts

The KNC has expressed concerns about how the transmission line could impact archaeological resources. An Archaeological Overview Assessment has been completed, and an Archaeological Impact Assessment will be completed with the KNC’s involvement.
Environmental Overview Assessment

The KNC has indicated that they are not satisfied with an unidentified number of the BC Hydro/BCTC responses to the KNC concerns regarding the Environmental Overview Assessment. The KNC has yet to provide this information to BC Hydro. Once received, BC Hydro will consider these concerns and respond accordingly.

Traditional Use

The KNC have raised a concern about the potential scarcity of important food, medicinal and material plants. Revegetation options are being discussed with the KNC through the development of the construction Environmental Management Plan, which BCTC and BC Hydro have committed to having the KNC review in draft form. The issue will also be addressed through the Aboriginal Use and Interest Studies (AIUSs).
3.129.0 Reference: Ex. B-8, Evidence on Adequacy of First Nations Consultation, Sec. 3.5.1, pp. 17-18
Adequacy of Consultation with the KNC

BCTC states “BC Hydro remains optimistic that the negotiations will result in benefits, impact management and procurement agreements.”

BCTC states “BC Hydro is of the view that most, if not all, of the material concerns have been largely addressed.”

3.129.2.1 How do BCTC/BC Hydro plan to address these concerns?

RESPONSE:

BCTC forwarded this question to BC Hydro for response. The following is BC Hydro’s response:

Please refer to the response to BCUC IR 3.129.2.
3.130.0 Reference: Ex. B-8, Evidence on Adequacy of First Nations Consultation, Sec. 3.1.4, p. 13
Consultation with Shuswap – Arrow Lakes Division (SALD)

BCTC states “In the specific context of SALD, BC Hydro is of the view the asserted claims are comparatively weaker.”

3.130.1 Please explain why the SALD’s strength of claim is comparatively weaker. What specific factors were considered to make this determination? Please describe the decision-making process that was used to make this determination.

RESPONSE:

The information BC Hydro reviewed (e.g. the Bouchard and Kennedy reports) supports the preliminary view that the SIB and the KNC have reasonable Aboriginal rights claims in the Project area. There is, in general, reasonable evidence of the SIB and the KNC presence and interest in the area of the Project, including reserves.

By contrast, the three SALD communities are a significant distance from the Project area. This distance, combined with the lack of available information on the exercise of Aboriginal rights in the Project area by the SALD, suggests a comparatively weaker Aboriginal rights claim in the Project area on the part of the SALD. It is notable that, until recently, the SALD deferred to the leadership role of the SIB with respect to the Project. Splatsin (a member of SALD) recently confirmed its support for the SIB in relation to the Project, which supports BC Hydro’s assessment that the SALD members have a lesser interest in the Project area.

In terms of the decision-making process, if it is determined that some level of consultation may be necessary for a particular project, BC Hydro may undertake a preliminary strength of claim analysis. A preliminary strength of claim analysis may include a review of legal opinions, area specific reports, publicly available information and maps, and any information provided by First Nations. If necessary and appropriate, more detailed project area specific opinions and reports may be commissioned (as it was in the case of this Project with the Bouchard and Kennedy reports). BC Hydro may revise its view on the strength of a First Nation’s claim as a result of the information obtained through its consultations with First Nations (the SALD has not provided BC Hydro with any new information as part of the consultations related to this Project). The strength of claim analysis informs BC Hydro’s assessment of whether or not consultation has been reasonable and adequate at a particular stage of a project or regulatory decision.
3.131.0 Reference: Ex. B-8, Evidence on Adequacy of First Nations Consultation, Sec. 3.5.4, p. 19
Adequacy of Consultation with Shuswap – Arrow Lakes Division (SALD)

BCTC states “Until very recently, the SALD clearly deferred to the leadership of SIB in consultation with BC Hydro, but has since changed their position... BC Hydro is willing to meet with the SALD to discuss any concerns they may have about the project.”

3.131.1 Does BC Hydro anticipate the SALD will raise any serious concerns about the project and its impacts?

RESPONSE:

BCTC forwarded this question to BC Hydro for response. The following is BC Hydro’s response:

As noted in the evidence provided in the Application (Exhibit B-1), the response to BCUC IR 1.51.1 (Exhibit B-3), and the Evidence on Adequacy of First Nations Consultation (Exhibit B-8), BC Hydro has been attempting to engage the SALD and/or its member bands since December of 2008. The SALD has been provided with funding and opportunities to identify project specific impacts related to the SALD’s interest, and the SALD has yet to do so. SALD advised BC Hydro that SIB would have a leadership role in respect of the Project. BC Hydro learned at the 17 March 2010 Procedural Conference that SALD was of the view that it had not been adequately consulted. BC Hydro has yet to hear back from the SALD in response to BC Hydro’s request for possible meeting dates. BC Hydro will continue its efforts to engage SALD.

As indicated in the Application (Exhibit B-1) and the Evidence on Adequacy of First Nations Consultation (Exhibit B-8), BC Hydro will continue to offer the identified First Nations opportunities to consult with BC Hydro through the project design and implementation phases.

As noted in the 7 May 2010 Evidence on Adequacy of First Nations Consultation, BC Hydro is of the view that the obligation to consult with SALD is at the low end of the Haida spectrum and that consultation has been adequate to this stage.
3.131.0 Reference: Ex. B-8, Evidence on Adequacy of First Nations Consultation, Sec. 3.5.4, p. 19
Adequacy of Consultation with Shuswap – Arrow Lakes Division (SALD)

BCTC states “Until very recently, the SALD clearly deferred to the leadership of SIB in consultation with BC Hydro, but has since changed their position...BC Hydro is willing to meet with the SALD to discuss any concerns they may have about the project.”

3.131.2 How does BC Hydro plan to continue consultations with the SALD to acquire adequate information on SALD’s concerns and impacts before Tuesday, June 8 when the BCTC Written Final Submission is due to the Commission?

RESPONSE:

BCTC forwarded this question to BC Hydro for response. The following is BC Hydro’s response:

Please refer to the response to BCUC IR 3.131.1.
3.132.0 Reference: Ex. B-8, Evidence on Adequacy of First Nations Consultation, Sec. 3.2, p. 14
Project Impacts

BCTC states “BC Hydro is of the view that the overall long-term impacts of the Project are likely to be low to medium with appropriate mitigation measures...The impacts will effectively be permanent...”

3.132.1 In BC Hydro’s view, at what level are the overall long-term impacts of the Project without appropriate mitigation measures? Please provide justification for the determination given that the impacts will effectively be permanent.

RESPONSE:

BCTC forwarded this question to BC Hydro for response. The following is BC Hydro’s response:

BCTC would not build the Project without the appropriate mitigation measures in place.

As noted in section 3.2 of the Evidence (Exhibit B-8), the permanent impacts of the Project will be geographically limited to the physical footprint of the Project (e.g. the approximately 50 metre wide transmission line right-of-way), which is why BC Hydro has concluded that the long-term impacts on asserted Aboriginal rights, while permanent, are probably in the low to medium range with appropriate mitigation measures.
3.133.0 Reference: Ex. B-8, Evidence on Adequacy of First Nations Consultation, Sec. 3.5, p. 17

Adequacy of Consultation

BCTC states “All First Nations identified by BC Hydro have received notice of the Project and other Project information, access to funding, a copy of the Application and related materials, and information regarding the BCUC application hearing process.”

3.133.1 Please explain why BC Hydro offers access to funding for First Nations it deems to have a consultation requirement at the low end of the Haida spectrum.

RESPONSE:

BCTC forwarded this question to BC Hydro for response. The following is BC Hydro’s response:

Where BC Hydro determines that the consultation requirement for a particular First Nation lies at the low end of the Haida spectrum, BC Hydro provides the First Nation with notice of the project. If a First Nation replies to the notice and informs BC Hydro that they have Aboriginal interests that could be impacted by the project, BC Hydro may offer access to capacity funding for the First Nation to bring forward their specific concerns.
Concern 1  Why is the cost of the 230 kv. alternate from Mica to Golden so much more than the 138 kv proposal when the difference in the line alternates from Inv. To Golden from 138kv to 230 kv is only 1 million? We would expect it would be more than one million due to the distance but not almost double.

RESPONSE:

The cost difference of 138 kV and 230 kV alternatives from Mica to Golden is relatively large primarily because there are no existing 230 or 138 kV transformation facilities in the Mica area and the clearing cost estimate for the construction of a 138 kV Mica to Golden transmission line was understated. The cost difference of 138 kV and 230 kV alternatives from Invermere to Golden is relatively small because there is an existing 230 kV transformation at Invermere. No additional 230 kV transformers and associated equipment and work are required at Invermere to connect a new 230 kV transmission line. For a 138 kV transmission line, however, additional transformation, including 230/138 kV transformers and associated equipment, will be required. Other minor differences are primarily a function of the line length.
Concern 3  The CVTP as proposed would cross over or near many Back Country Recreation Sites and Lakes. Can these lakes and Recreation sites be avoided entirely by slight deviations around to avoid sightability from the lakes or rec sites?

RESPONSE:

BCTC is aware of the recreational sites and lakes in the area and used this information to identify the proposed corridor, which minimizes or avoids impacting the major recreational sites and lakes in the area such as areas around Mitten Lakes, Cedar Lakes and Moonraker Trails.

The proposed corridor was selected after receiving input during the various open-houses in the area.
Concern 4 The CVTP as proposed would cross over 120 km of prime wildlife habitat and the noxious weeds that will follow in the disturbed areas.

Will there be a weed control program put in place to take care of this for the first few years until the grasses are reestablished?

Can all new access roads built to construct this line be not continuous so as to not allow continuous road travel along the power line? Can the line follow existing roads as much as possible?

RESPONSE:

Regarding the weed control program, please refer to BCTC’s response to Lake Windermere District Rod and Gun Club IR 1.17.

Regarding access, please see Exhibit B-1, Section 5.2.1.4, page 57, and BCTC’s response to Paul Bauman IR 1.2.
2.3 Reference:  
CPCN - 3.0 - Page 27, Line 2  
CPCN - 4.4 - Page 53, Line 14

Please explain why the Project Justification for the CVT line is stated to
be to meet load growth in the Upper Columbia Valley, while the
Preferred Alternative discusses connecting the line into the Beaver
River IPP cluster. How is the development of the Beaver River cluster
consistent with the project’s goals?

RESPONSE:

The existing transmission system serving Golden cannot meet the load demands of the area. Therefore the goal of the CVT Project is to provide transmission capacity to serve long term energy needs of the Golden area and increase reliability of supply to the upper Columbia Valley. (Please see Exhibit B-1 (CPCN Application), Section 3).

IPP development is discussed in the Application to demonstrate that the CVT Project is not inconsistent with the objectives of the Transmission Expansion Policy.
2.4 Reference: CPCN - Figure - 3.1 - Page 28, Line 1

Please explain why the 69kv transmission line that runs both east and west of Golden cannot be used to meet load growth needs in the Upper Columbia Valley. Can Alberta’s electricity or a line from Revelstoke augment supply constraints?

RESPONSE:

There is no 69 kV transmission line that runs east or west of Golden. The only 69 kV transmission line in the vicinity of Golden is its supply circuit, 60L271, which runs southeast to Invermere. (Please note that the legend in referenced Figure 3-1 does not adequately reflect a dark line for 69 kV transmission lines. The grey lines on the map depict roads.)

Alberta’s electricity cannot be used for upper Columbia Valley supply purposes without the construction of a long transmission line through Banff and Yoho National Parks. A line from Revelstoke was considered and dismissed for a number of reasons including its high capital cost and reliability concerns. Please refer to Exhibit B-1, Appendix B: Upper Columbia Valley Transmission System Reinforcement Study for the Columbia Valley Transmission (CVT) Project – System Planning Report, Appendix A: Dismissed Alternatives, pages 59-61.
2.5 Reference: CPCN - 3.2 - Page 28, Line 11

Please explain the variables that are used to calculate the Town of Golden’s projected load growth for the next 30 years.

RESPONSE:

BCTC forwarded this question to BC Hydro for response. BC Hydro’s response is as follows:

BC Hydro does not forecast projected load growth solely for the Town of Golden. Rather, BC Hydro forecasts projected load for the Golden substation, which serves the Town of Golden and other customers in the vicinity of the town of Golden.

Individual substation load forecasts take into account local developments, local load increase plans and municipal plans. As described in the response to Lake Windermere District Rod and Gun Club IR 1.2, the load forecast as shown in Exhibit B-1, Appendix C of Appendix B included known spot loads (identifiable larger customers) in the Columbia Valley, including major anticipated developments. With respect to the development of the load forecast for Golden Substation, spot loads are considered in addition to the general load growth in the load forecast. Average annual growth for Golden is 2.9% for the study period and the load forecast is updated on an annual basis with recent growth trends considered.
2.6 Reference: CPCN - Figure - 3.2 - Page 29, Line 6

Does the future forecast load factor in the development of Kicking Horse Mountain Resort as a variable that will skew projected growth rates?

RESPONSE:

BCTC forwarded this question to BC Hydro for response. BC Hydro’s response is as follows:

The load forecast for the Columbia Valley (Exhibit B-1, Appendix C of Appendix B) includes general load growth and specific (spot) loads including the forecast load for the development of the Kicking Horse Mountain Resort. If the specific load forecast amount for the development of the Kicking Horse Mountain Resort is removed from the overall Columbia Valley Load Forecast (Exhibit B-1, Appendix C of Appendix B), a need would still exist to resolve the transmission system capacity constraint that is addressed by the Project. Also, the removal of the forecast load associated with the development of the Kicking Horse Mountain Resort from the Columbia Valley Load Forecast would not materially affect the overall timing of the Project.
2.7 Reference: CPCN - Table - 3-1 - Page 31, Line 6

Has there been an attempt to measure how much it costs the Town of Golden for the 5.9 hours per year of unavailable power? Similarly, has there been an assessment how much the number of 5.9 will grow in coming years if nothing is done, and how much it will cost the Town Golden in the future?

RESPONSE:

BCTC did not attempt to measure the cost of 5.9 hours of unavailability of electrical power. Translating unavailable power to a cost is difficult and imprecise because there is no consensus on how to quantify the socio-economic impact associated with supply unavailability.

With respect to continuing impacts of outages, conceptually, if the reliability of the existing circuit 60L271 remains the same as that of the past 20 years, the unavailability (hours/year) will remain the same (5.9 hours/year). However, if nothing is done to address the transmission constraints and, despite that, demand for electricity continues to grow, the expected energy not supplied (EENS) will continue to increase as the size of the load increases, and the load growth beyond the existing circuit 60L271 capability will have to be curtailed as the maximum supply capability of 60L271 is exceeded. The combined EENS based on the circuit 60L271 unavailability and the load curtailment when exceeding the circuit capability over the 30-year planning period is 475,700 MWh.
2.8 Reference: CPCN - 3.5.2 - Page 32, Line 10

Does the Kerr Wood Leidal Associates Ltd. (KWL) study represent the best source of information for gauging the possibilities of alternative energy solutions given the fact that Golden Area Initiatives (GAI) and the Columbia Shuswap Regional District (CSRD) have recently commissioned Dr. Mory Ghomshei to conduct a prefeasibility study for geothermal potential in the region?

RESPONSE:

Please see BCTC’s response to BCUC IR 1.62.2.

As stated in the CPCN Application Exhibit B-1, Section 3.5.2, page32, the scope of KWL study was to provide an assessment of whether potential generation projects in an area within 140 km of Golden (excluding Alberta) could provide dependable capacity and be in service by October 2012.

BCTC has been recently made aware of the pre-feasibility study commissioned by Golden Area Initiatives (GAI) and the Columbia Shuswap Regional District (CSRD). BCTC is not aware of the study’s terms of reference nor of the scope of work proposed. BCTC has no reason to believe that the prefeasibility initiative can or will yield information that would defer the need for timely development of a transmission solution.
2.9 Reference: CPCN - 3.5.3 - Page 32, Line 16

Does the in-service date of October 2012 preclude the possibility of finding better alternative solutions?

RESPONSE:

In the upper Columbia Valley area, demand for electricity presently exceeds the capacity of the transmission system. The in-service date of October 2012 represents the earliest date that a transmission solution capable of meeting the immediate and long term power needs of the area can be implemented.

BCTC’s evaluation of needs and alternatives, as demonstrated in the evidence in this proceeding, has not identified a solution preferable to the CVT Project, nor has one been demonstrated by any other party.
2.10 Reference: CPCN - 3.5.3 - Page 32, Line 16

Could the Upper Columbia Valley region take a short term period of less power availability in order to find alternative power solutions that may take approximately 5-7 years to bring online. What are the costs associated with waiting?

RESPONSE:

BCTC’s role is to ensure the transmission system has the capacity to continue to meet the demand in a safe, reliable manner.

BC Hydro has provided BCTC with load forecasts that demonstrate that the need for power in the upper Columbia Valley will exceed the capacity of the existing 69 kV transmission line by winter of 2010/11. (Exhibit B-1, Section 3.3.1, page 29). Possible interim measures to meet immediate peak supply needs are not adequate for dependable longer term supply. Viable alternative power solutions to meet demand, which might allow deferral of the CVT Project, have not been identified.

Please see BCTC’s responses to BCUC IR 1.53.6, BCUC IR 2.115.2, and BCUC IR 2.115.3.
2.11 Reference: CPCN - 3.5.3 - Page 32, Line 19

Since run-of-the-river power generation produces only marginal power in the wintertime, when Golden’s power needs are at its peak, will any of the power from proposed IPP developments be used to supply local power needs?

RESPONSE:

Power from potential run-of-the-river IPP developments, if or when available, may be used to supply power to the transmission system and thus help meet local power needs.
Please explain why BCTC’s System Planning and Performance Assessment department did not complete the study that assessed whether local power needs could be met through industrial load curtailment, IPPs, a biomass generated facility, planned battery bank storage facilities and diesel generators before it considered the development of the CVT line?

RESPONSE:

As noted at Exhibit B-1, page 32, options such as possible industrial load curtailment, increased supply from a distribution IPP (a biomass generated facility), battery bank storage facilities and temporary diesel generators, are being considered at this time as a means to meet peak demand in the interim period before the CVT Project can be implemented. Such options do not meet the long-term load growth and supply requirements in the upper Columbia Valley.
2.13 Reference: CPCN - 3.6 - Page 32, Line 29

Please explain why BCTC’s System Planning and Performance Assessment did not finish its study before proceeding with the CPCN to BCUC.

RESPONSE:

Please refer to BCTC’s response to Wildsight IR 2.12.
2.14 Reference: CPCN - 3.6 - Page 32, Line 29

Please explain how all the current options discussed, in terms of alternative routes and local power generation capabilities, have been sufficiently studied when a study involving industrial load curtailment, IPPs, a biomass generated facility, planned battery bank storage facilities and diesel generators as local solutions has not been completed.

RESPONSE:

Please refer to BCTC’s response to Wildsight IR 2.12.
2.15 Reference: CPCN - 4.0 - Page 34, Line 1

Please explain why the Transmission Expansion Policy (TEP) was not presented at the community consultations along with the results from the KWL report given the fact that the results of the TEP study were a factor in the choice of route that BCTC selected.

RESPONSE:

Information on the potential for local generation alternatives was presented in the community input sessions.

The TEP study is an analytical framework used to assess the information in a way to determine whether the Transmission Expansion Policy may impact the selection and scope of the CVT Project. This analytical assessment was prepared and included with the CPCN Application, as directed by the Commission. It was not available at the time of the community open houses, but is on the record in this proceeding. (Please also refer to BCTC’s response to Wildsight IR 2.17).

The preliminary results of the KWL report were highlighted in public consultation sessions and the public informed that the report would be completed in time for inclusion with the CPCN Application. It too is on the record in this proceeding.
2.16 Reference: CPCN - 4.0 - Page 34, Line 1
Please explain the necessity to conduct a parallel report to the KWL, one that assesses the same route options but for different variables. Why were the two reports not combine into one?

RESPONSE:

The two reports were not combined because they serve very different functions. With respect to the KWL report, please refer to BCTC’s response to Wildsight IR 2.8. With respect to BCTC’s Transmission Expansion Policy and the TEP report, please see Exhibit B-1, page 47.
2.17 Reference: CPCN - 4.3.1 - Page 47, Line 6

Please explain how B.C. Government Special Direction No.9 (SD9) affects the decision of whether to choose option 1,2 or 3 from the TEP study.

RESPONSE:

The BC Government Special Direction No.9 (SD-9) authorizes the Commission to consider, as part of the justification for investment in new transmission facilities, the advancement of transmission projects in the absence of committed contracts for transmission service where demand and positive ratepayer impact are anticipated. BCTC’s Transmission Expansion Policy (TEP) was developed consistent with SD-9.

In the context of this CPCN Application, the TEP study is an examination of the transmission investment required and associated potential benefit of a transmission project to support the integration of potential IPPs in the region. As explained in Exhibit B-1, Appendix D, none of the TEP alternatives can be justified under the policy because each would require significant investment that would exceed the expected benefits to ratepayers. BCTC is not seeking a decision on TEP investment in this Application.
2.18 Reference: CPCN - 4.3.2 - Page 47, Line 24

Will the power from the Goldstream and Beaver River clusters be sent south on the CVT line?

RESPONSE:

The CVT Project as proposed is a new transmission line that will terminate in the Golden area. Integration of potential IPP projects at Beaver River would require additional transmission infrastructure to connect to the proposed CVT Project facilities.

Integration of potential generation from IPP projects in the Goldstream cluster would likely be best addressed through other connection alternatives.
2.19 Reference: CPCN - 4.3.3.2 - Page 49, Line

Did the economic benefit analysis used for the connection of IPPs contained within the TEP study have any bearing as to the selection the route for the CVT?

RESPONSE:

The TEP study did not alter the selection of the CVT Project as the preferred solution. The TEP analysis demonstrated that BCTC need not alter or vary the proposed CVT Project in order to meet the objectives of the Transmission Expansion Policy.
2.20 Reference: CPCN - 4.3.3.2 - Page 49, Line 15

Please explain how a project that is intended to supply the Upper Columbia Valley with power is related to cross-border energy trading.

RESPONSE:

The CVT Project is proposed to meet the supply needs in the upper Columbia Valley.

As part of an interconnected North American grid, any generation connected to the BC transmission system may serve load within BC or any other region. Any generator, including an IPP, has the opportunity to deliver energy to serve domestic load or trade in the wholesale electricity market.
2.21 Reference: CPCN - Figure 4-1 - Page 51, Line 5

Please translate IPP development that is calculated in the graph in terms of percentage by the number of specific projects it will take to achieve that percentage.

RESPONSE:

BCTC cannot allocate specific projects to align with specific percentages as this would be arbitrary. BCTC cannot predict which individual or combination of IPP generation opportunities will be pursued nor when.

BCTC conducted a high level regional economic analysis using various percentages of identified generation potential in the region to assess the benefit of potential IPP development under each TEP alternative. Note that the number and size of potential small hydro projects in the Goldstream and Beaver River clusters are listed in Exhibit B-1, Appendix D, Table 3-2.

How was the 30-year time period set as the date for the long-term planning period? What factors make 30-years a sensible time frame for looking at the future power needs in the Upper Columbia Valley? Was a longer time frame considered?

RESPONSE:

The 30-year period is typically used by BCTC for long-term planning purposes. It is meant to balance the benefit of long-term economic assessment with the uncertainty that is inevitably associated with prediction over long periods of time.

A 30-year planning period is sufficiently long to capture the system facilities required to meet the level of long-term area load growth that can be reasonably forecast.

A planning period that is too short is exposed to the risk that upgrades may not meet substantial load growth in a cost-effective manner. In such a scenario system facilities may be required soon after the horizon year of the study which could have a significant impact on the total present value cost of an option. However, as the length of the planning period increases the uncertainty in the forecast load also increases. Planning periods longer than 30 years contain considerable uncertainty resulting from factors such as: the saturation of load growth in developed areas; the timing and location of significant economic development in the rural areas; new types of technology changing electric consumer behaviour, etc. With the use of planning periods longer than 30 years, these uncertainties introduce the risk of stranded assets.

A longer time frame was not considered.
2.23 Reference: CPCN – 5.3.3.3- Page 73, Line 9

Please explain if a decision date has been set for the finalization of the route for the 69kV transmission line?

RESPONSE:

Please see BCTC’s response to BCOAPO IR 1.9.1.
2.24 Reference: CPCN - 6.1 - Page 85, Line 1

What are the specific locations that AECOM identified as site specific areas that will by impacted by the construction of the CVT Project?

RESPONSE:

AECOM conducted an Environmental Overview Assessment for the project and concluded that with mitigation, the CVT Project was unlikely to result in a significant adverse environmental effect. No specific areas that might be adversely impacted by the construction of the CVT Project were identified in the EOA report.

A survey to identify site specific impacts will be conducted at the time of final design and development of the construction Environmental Management Plan.
2.25 Reference: CPCN – Page 96, Line 23

How can we be assured that all public access is deactivated under the CVT line after construction, to limit additional disturbance to wildlife and ecosystems, reduce increased pressures from hunting and also to limit further introductions of invasive plant species. How can we be sure that motorized activities under the transmission line will not be increased and cause the above effects?

RESPONSE:

Please see Exhibit B-1, Section 5.2.1.4, page 57 and BCTC’s response to Paul Bauman IR 1.2.
2.26 Reference: CPCN - Table 6.1 - Mitigation Measure 3

Can we receive written assurances that no part of the Columbia Wetlands WMA or any wetland or riparian area located on the West Bench will be impacted by the construction of the line? Can this protection be included in the terms of reference for the Construction Environmental Management Plan (Construction EMP) and the site-specific Environmental Protection Plan (EPP). What kind of compensation measures are planned for incidental destruction of the WMA or any wetland or riparian area?

RESPONSE:

The 230 kV transmission corridor as proposed does not cross any part of the Columbia Wetlands WMA.

Where the Project crosses wetlands or riparian areas, BCTC will follow the mitigation measures identified in the Exhibit B-1, Table 6-1. Summary of Potential Impacts and Recommended Mitigation Measures, page 85.

BCTC does not anticipate any compensation measures would be required.
2.27 Reference: CPCN - Table 6.1 - Mitigation Measure 11

Can we receive assurances that there will be no removal of old age class forest? Can this protection be included in the terms of reference for the Construction Environmental Management Plan (Construction EMP) and the site-specific Environmental Protection Plan (EPP).

RESPONSE:

As stated in Mitigation Measure 11, BCTC will, where possible and practical, minimize removal of old age class forest.

This approach will be incorporated into the construction Environmental Management Plan and implemented at the time of finalization of the alignment of the 230 kV transmission line.
2.28 Reference: CPCN - Table 6.1 - Mitigation Measure 12

Can we receive assurances that no clearing of trees and vegetation will take place during bird breeding/nesting season (May to August)? Can this protection be included in the terms of reference for the Construction Environmental Management Plan (Construction EMP) and the site-specific Environmental Protection Plan (EPP).

RESPONSE:

Due to schedule constraints for the Project, BCTC plans to continue clearing of trees and vegetation during the bird breeding/nesting season.

BCTC is committed conduct nest surveys and to follow the requirements of BMP guidelines where nests are identified, as noted in the above reference. BCTC will include this mitigation measure in the construction EMP and in EPPs.
2.29 Reference: AECOM - Table 4-4. Page 48
AECOM – Table 5-13. Page 79
AECOM – Table 6-9. Page 101

There are a high number of red and blue listed species and ecosystems located on the Columbia Valley’s west bench. There are numerous mitigation measures/recommendations for fish and aquatic habitat, wildlife and wildlife habitat, and for vegetation. How can we be assured that all mitigation measures will be adhered to?

RESPONSE:

BCTC will follow the mitigation measures identified in Exhibit B-1, Table 6-1 Summary of Potential Impacts and Recommended Mitigation Measures, page 85.

Construction contractors will be required to retain Environmental Monitor(s) during construction of the Project. The environmental monitors will provide weekly reports of all activities that could have an impact to the environment including mitigation measures applied.

BCTC will also retain Environmental Officer(s) during the construction.

The Environmental Officer(s) are expected to:

1. Review and advice BCTC on
   (a) the construction contractor’s environmental protection plan (EPP) to ensure compliance with construction EMP;
   (b) the construction contractor’s environmental reports including weekly monitoring reports for completeness and factual accuracy; and
   (c) the construction contractor’s environmental monitoring completion reports for completeness and factual accuracy.

2. Contractor Auditing
   (a) Auditing the environmental performance of the construction contractors and their environmental monitors for compliance with the construction EMP and the EPP through their environmental reports and field inspections;
(b) Audit and evaluate compliance of work practices, procedures and effectiveness of mitigation measures with the terms and conditions of regulatory approvals, the Environmental Management Plan and applicable Environmental Protection Plans;

(c) Audit environmental training and orientation sessions delivered to the construction contractors’ staff by the contractors’ environmental monitors; and

(d) Report deficiencies to BCTC.

3. Reporting and Communication

(a) Ongoing communication regarding the effectiveness of mitigation measures being implemented, difficulties encountered, and how they are managed;

(b) Ongoing communication regarding compliance with terms and conditions of regulatory approvals, issues encountered and how they are managed; and

(c) Preparation of monthly environmental audit reports summarizing the results of field audit inspections, review of constructions contractors’ weekly environmental monitoring reports, and environmental issues tracking in a format suitable for distribution to regulatory agencies and First Nations.
There are 62 invasive plant species growing in the Columbia Valley, which have huge potential to be introduced and spread on to the West Side of the Columbia Valley with the building/maintenance of the CVT line. When would a detailed invasive plant management strategy be developed? Can you assure that local invasive plant groups receive adequate funding from BCTC to deal with new invasive plant introductions?

RESPONSE:

Please see BCTC’s responses to Lake Windermere Rob and Gun Club IR 1.17 and to Paul Bauman IR 1.3.