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British Columbia Utilities Commission
Sixth Floor, 900 Howe Street, Box 250
Vancouver, BC, V6Z 2N3
Attn: Erica Hamilton, Commission Secretary
By Web Posting

Dear Madam:

Re: British Columbia Hydro and Power Authority
Dawson Creek/Chetwynd Area Transmission Project (DCAT),
Certificate of Public Convenience and Necessity Application
Project No.3698640/Order G-132-11
BCSEA-SCBC final submission

This is the final submission of the intervenors B.C. Sustainable Energy Association and Sierra Club of British Columbia. This submission responds to the July 24, 2012 Final Written Submission filed by BC Hydro.

I. Summary

With two caveats,[1] BCSEA-SCBC oppose BC Hydro's application for a CPCN for the Dawson Creek/Chetwynd Area Transmission (DCAT) Project.

BCSEA-SCBC's conclusion is that the filed evidence is insufficient to make a clear determination that DCAT would or would not result in an overall decrease in GHG emissions, either within B.C. or globally.

However, BCSEA-SCBC's position is that DCAT is not in the public interest, because the Project as defined does not provide for a substantial contribution by the new industrial customers that would be served by DCAT. This is contrary to the principle established in the Commission's System Extension Test Guidelines that "the costs of system extensions be allocated to those customers who cause them."[2] As a result, approval of DCAT without financial contributions by the new industrial customers would not provide an economically efficient price signal regarding the use of electricity. This is especially important regarding the four prospective new customers in the natural gas production sector that have self-supply (using natural gas) as a potential alternative to electricity.

While BC Hydro says that the main issue in this application is whether the DCAT Project is the appropriate way to meet the need for system reinforcement in the area, BCSEA-SCBC say that the main issue is 'who pays?'

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[1] The caveats are that BCSEA-SCBC take no position regarding the Commission's assessment of the adequacy of the Crown's consultation with First Nations concerning the Project, or the location of the Bear Mountain substation.
[2] SET Guidelines, p.31.

II. The legal test

The legal test for whether the Commission ought to approve this CPCN application by BC Hydro is a public interest test under the *Utilities Commission Act.* In determining whether DCAT meets the public convenience and necessity standard, subsection 46(3.3) of the *Act* provides that:

(a) the Commission must consider "the interests of person in British Columbia who receive or may receive service from the authority [BC Hydro]," and

(b) "must consider and be guided by" British Columbia's "energy objectives" defined in the *Clean Energy Act*.

In addition, the Commission must consider BC Hydro's obligation to serve and to meet mandatory reliability standards, and section 2.1 of Special Direction 9.

Further, the courts have determined that the Commission has the authority and the responsibility to assess whether the Crown has met its constitutional duty to consult and, if necessary, accommodate First Nations whose asserted or proven aboriginal rights or title may be adversely affected by the Project.[3] The Commission cannot find that the Project is in the public interest unless the Commission is satisfied with the adequacy of the Crown's consultation with First Nations regarding the Project. Given that BCSEA-SCBC take no position on the adequacy of the Crown's consultation with First Nations regarding the Project, these submissions concerning whether the Project is in the public interest relate only to the aspects of the public interest other than the consultation with First Nations. This caveat will not be repeated *ad nauseam*, but it does apply throughout.

BC Hydro also applies for an amendment to Tariff Supplement 6, which is discussed further, below.

III. B.C. Energy Objectives

In this section, BCSEA-SCBC offer three general comments regarding DCAT and GHG emissions and then discuss the merits of DCAT in relation to the B.C. energy objectives set out in section 2 of the *Clean Energy Act*.

First, BCSEA-SCBC's interpretation is that BC Hydro's final argument de-emphasizes the claimed B.C. GHG emissions reductions benefits of DCAT in comparison with the original DCAT application (Exhibit B-1). In its Final Written Submission, BC Hydro states only:

> "The DCAT Project supports the objectives set out at paragraphs 2(g) [B.C. GHG emissions reduction targets], 2(h) [energy switching to reduce GHG emissions in B.C.] and 2(k) [economic development and jobs] of the *Clean Energy Act* and does not detract from any of the other British Columbia's energy objectives."[4]

In contrast, the original application claimed "avoided/reduced GHG reductions... in the range of 1 million tonnes per year in B.C." due to the Project.[5] The quantitative validity of this assertion is

[3] *Rio Tinto Alcan v. Carrier Sekani Tribal Council*, 2010 SCC 43.
[4] BC Hydro Final Written Submission, p.3.
[5] Exhibit B-1, p.2-16; and see p.2-9. BC Hydro also asserted that DCAT would reduce GHG emissions in other jurisdictions to which natural gas from the Montney basis was exported. Exhibit B-6, BCSEA IR 1.10.6.

addressed below. However, the point here concerns *causation*: to what extent can GHG emissions implications – whether positive or negative – of the natural gas production loads to be served by DCAT be attributed to DCAT?

BCSEA-SCBC's interpretation is that beginning with its responses to information requests and continuing through its Supplementary Evidence, responses to further information requests and final argument BC Hydro began to reposition DCAT as a "relatively routine" upgrade of the existing system[6] confined by BC Hydro's obligation to serve new customers[7] and to comply with mandatory reliability standards (MRS).[8] Notably, in final argument, BC Hydro argues that the potential ability of four of the five new customers to self-supply power from natural gas should *not* be considered an alternative to DCAT because those customers are entitled to electrical service pursuant to BC Hydro's obligation to serve.[9] BC Hydro says that "the issue on this application is whether the DCAT Project is the appropriate way to meet this need."[10]

Second, BC Hydro's argument that the 'need' for DCAT is defined by the obligation to serve the new natural gas production load logically precludes consideration of the 'pros and cons' of the load to be served by DCAT. In particular, if self-supply is not to be considered an alternative to DCAT then the GHG emissions consequences of DCAT cannot be compared meaningfully to the GHG emissions consequences of self-supply.

Third, while it is clear that, other things being equal, natural gas compression driven by electricity from the BC Hydro system would have lower carbon emissions than if driven by natural gas, BC Hydro's claim, referred to above, that DCAT would produce "avoided/reduced GHG reductions... in the range of 1 million tonnes per year in B.C."[11] is not quantitatively supportable. In particular, as BC Hydro acknowledges, the estimation is based on the full 30-year build out of natural gas electrical load in the Groundbirch/Dawson Creek areas of the Montney gas basin,[12] which would require transmission reinforcement over and above DCAT.[13] In addition, the estimation methodology does not take into account any incremental GHG emissions from the end use of natural gas the production of which was incented by the availability of low-cost electricity.[14]

In the following paragraphs, DCAT is examined in relation to B.C. energy objectives (a), (b), (c), (e), (f), (g), (h), and (k). DCAT does not engage energy objectives (d), (i), (j), (l), (m), (n), (o) and (p).

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[6] BC Hydro Final Written Argument, p.1.
[7] BC Hydro Final Written Argument, p.4.
[8] BC Hydro Final Written Argument, p.3; and Exhibit B-6, BCSEA IR 1.6.1.
[9] BC Hydro Final Written Argument, p.18.
[10] BC Hydro Final Written Argument, p.3. This statement is made under the heading of "The Interests of Existing Customers" but it apparently applies as well to BC Hydro's analysis of the interests of new customers.
[11] Exhibit B-1, p.2-16.
[12] Exhibit B-6, BCSEA IR 1.8.1.
[13] Exhibit B-6, BCSEA IR 1.9.1.
[14] The original application asserted that DCAT would foster natural gas development in the Montney basin by making a "positive contribution to the overall economics of development." Exhibit B-1, p.2-17.

(a) to achieve electricity self-sufficiency

DCAT would make it more difficult for BC Hydro to achieve electricity self-sufficiency, because DCAT facilitates substantial incremental demand for firm energy.

(b) to take demand-side measures and to conserve energy, including the objective of the authority reducing its expected increase in demand for electricity by the year 2020 by at least 66%

Regarding the DSM objective, BC Hydro says that "DSM for natural gas production load is included within the scope of the Power Smart New Plant Design program which is available to eligible BC Hydro customers."[15] BC Hydro states:

> "BC Hydro is unable to provide assurances that natural gas production electrical load will be met with the most efficient machinery possible. However, BC Hydro aims to influence customer decisions about energy efficiency through its DSM programs and in this case by interacting with customers at the earliest design stage possible. In particular, the New Plant Design program encourages new and existing industrial customers to use energy efficient equipment in new plants and plant expansions."[16]

Regarding the objective of BC Hydro reducing its expected increase in demand for electricity by the year 2020 by at least 66%, DCAT would impede achievement of this objective by facilitating increased load.

(c) to generate at least 93% of the electricity in British Columbia from clean or renewable resources and to build the infrastructure necessary to transmit that electricity;

DCAT impedes achievement of the '93% clean or renewable' objective, because DCAT facilitates increased load that would have to be met with new generation that is inherently more expensive than generation from the Heritage assets.

DCAT does foster the objective to build the infrastructure necessary to transmit electricity generated in B.C. On this point, DCAT is also consistent with SD 9.

(e) to ensure the authority's ratepayers receive the benefits of the heritage assets and to ensure the benefits of the heritage contract under the* BC Hydro Public Power Legacy and Heritage Contract Act *continue to accrue to the authority's ratepayers;

It is acknowledged that "the authority's ratepayers" includes potential customers who are willing and able to meet the Commission-approved criteria to receive service from BC Hydro pursuant to BC Hydro's obligation to serve. In that sense, DCAT fosters receipt of the Heritage benefits by the five new industrial customers and the existing customers who would be served by DCAT.

[15] Exhibit B-6, BCSEA IR 1.1.1.
[16] Exhibit B-6, BCSEA IR 1.1.2.

However, new customers are entitled to the Heritage benefits only to the extent that they meet the terms and conditions for service including any applicable customer contribution requirements. And "the authority's ratepayers" entitlement to the Heritage benefits means that new customers must make customer contributions for new service where appropriate. This is discussed further, below.

(f) to ensure the authority's rates remain among the most competitive of rates charged by public utilities in North America

DCAT puts upward pressure on rates because it facilitates new load on the BC Hydro system.

BC Hydro argues that DCAT does not "detract" from objective (f) because objective (f) assumes BC Hydro's obligation to serve eligible new customers and thus "the question then becomes whether the Project has an acceptable impact on rates as compared to other feasible project alternatives."[17]

In response, the key is that "other feasible project alternatives" include alternatives in which the five new customers make a substantial contribution toward system reinforcement costs. BCSEA-SCBC's view is that the Project as defined has an *unacceptable* impact on rates because it does not provide for a substantial contribution by the new customers.

(g) to reduce BC greenhouse gas emissions [by various dates in certain amounts]

BCSEA-SCBC's view is that there is insufficient evidence on which to make a clear determination that DCAT would or would not result in an overall decrease in GHG emissions, either within B.C. or globally.

On one level, if BC Hydro's position that self-supply is not to be considered an alternative to DCAT due to the obligation to serve is accepted, then, as noted above, DCAT cannot be considered to have any positive or negative impact on B.C. GHG emissions reductions.

If DCAT is considered an alternative to self-supply by the prospective natural gas production loads, then determination of the *net* impact of DCAT on B.C. GHG emissions reductions requires a quantitative balancing of both the positive and negative impacts. The positive impact would be due to displacement of natural gas with lower-carbon electricity from the BC Hydro system. However, as argued above, BC Hydro's quantitative estimate in this regard is not supportable. The negative impact would be from the end-use and upstream GHG emissions due to induced natural gas production in B.C. However, BC Hydro did not have an estimate of induced gas production or the GHG emissions impact.[18] Accordingly, even if DCAT is considered an alternative to self-supply the GHG emissions implications are mixed (both positive and negative) at a conceptual level and there is no reliable quantitative evidence on the *net* impact.

BC Hydro was unable to provide information about B.C.'s estimated GHG emissions with and without DCAT in relation to the B.C. GHG emissions reduction targets:

> "BC Hydro does not know how GHG emissions associated with gas sector activity in the Montney region are being accounted for in the provincial GHG

[17] BC Hydro Final Written Argument, p.4.
[18] Exhibit B-6, BCSEA IR 1.10.1.

> emissions forecast. As such, GHG emissions related to providing electric service to the gas sector via the DCAT Project have been characterized as reduced emissions or avoided emissions."[19]

BC Hydro also asserted that DCAT would have GHG emissions reduction benefits outside of B.C. BCSEA-SCBC asked the following IR:

> "Given that BC Hydro justifies the Project in part by the avoided/reduced GHG emissions due to electrification of natural gas production load, how does BC Hydro reconcile that GHG benefit with the negative GHG emissions consequences of fostering a vast shale gas development?"[20]

BC Hydro's response was:

> "The production from the Montney gas basin is likely to be exported to other jurisdictions (U.S., Asia) and the utilization (combustion) of the increased production is unlikely to have any impact on GHG emissions in British Columbia. There are likely to be positive GHG consequences in other jurisdictions as the increased availability of natural gas will enable the displacement of higher emission energy sources (coal in the U.S. and coal and oil in Asia)."[21]

BCSEA-SCBC's response is that while at a conceptual level there *may* be "positive GHG consequences in other jurisdictions as the increased availability of natural gas will enable the displacement of higher emission energy sources," two other consequences are also conceptually possible. First, the increased availability of natural gas from B.C. in other jurisdictions may displace *lower*-GHG-emission energy sources such as wind or solar energy, demand-side management savings, or nuclear energy. Second, the increased availability of natural gas from B.C. in other jurisdictions may simply displace natural gas from other jurisdictions and have no effect on energy choices outside of B.C.

(h) to encourage the switching from one kind of energy source or use to another that decreases greenhouse gas emissions in British Columbia

BC Hydro argues that DCAT supports energy objective (h).[22] This would be correct if DCAT is considered an alternative to self-supply; but incorrect if DCAT is not considered an alternative to self-supply.

(k) to encourage economic development and the creation and retention of jobs

BC Hydro asserts that DCAT "will make a positive contribution to the overall economics of development in the Montney basin," making "investment in the Montney and its reserves more attractive to them and make the realization of the significant economic benefits identified above more likely."[23] Presumably this is the rationale for its argument that DCAT supports energy objective (k).[24]

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[19] Exhibit B-6, BCSEA IR 1.8.4.
[20] Exhibit B-6, BCSEA IR 1.10.6.
[21] *Ibid.*
[22] BC Hydro Final Written Argument, p.3.
[23] Exhibit B-1, p.2-17.
[24] BC Hydro Final Written Argument, p.3.

However, when asked to provide an estimate of the incremental gas production that would be induced by embedded cost electricity provided by the Project, BC Hydro said that "BC Hydro does not have such an estimate. The statement was intended to be conceptual in nature."[25] So the economic development benefits of DCAT are at most "conceptual" rather than empirically established. In addition, acceptance of BC Hydro's position that self-supply is not to be considered an alternative to DCAT is accepted would appear to negate the concept that DCAT would promote the gas production industry by providing lower-cost power.

IV. The interests of current and future ratepayers – SET Guidelines and TS 6

BCSEA-SCBC's position is that the question of whether DCAT is in the interests of current and future BC Hydro ratepayers is largely dependent on an examination of 'who pays' for DCAT. In particular, the issue is whether the five new industrial customers to be served by DCAT should be required to make a financial contribution (beyond financial security) to the system reinforcement required by their connection to the system.

BCSEA-SCBC's view is that the Commission's System Extension Test Guidelines apply to the DCAT CPCN application. The SET Guidelines are based appropriately on the principle that the costs of system extensions should be allocated to those customers who cause them.[26] It is submitted that the Commission should consider DCAT in light of the SET Guidelines and that doing so results in the conclusion that the industrial customers should make a financial contribution. Tariff Supplement 6 (TS 6) does not preclude this result.

The crucial concern is for the Commission to ensure that proper price signals are provided. In the SET Guidelines, the Commission describes the importance of sending economically efficient price signals in the following terms:

> Additionally, even where elements of natural monopoly remain, there is an argument for regulated monopolies basing investment decisions on incremental costs and revenues in order to promote economic efficiency. Although public utilities commissions have several goals, they seek competitive-like outcomes. This approach attempts to minimize the market failures of natural monopoly and ensure that consumers face price structures which reflect marginal costs, just as they would in competitive markets. In this way, regulated prices are not a barrier to economic efficiency.[27]

By letter of June 15, 2012,[28] the Commission asked participants to address certain questions regarding Tariff Supplement 6 (TS 6) and the Commission's 1996 System Extension Test Guidelines (SET Guidelines). BC Hydro responded to the questions in its Final Written Submission. In this section, BCSEA-SCBC respond to those questions and to BC Hydro's responses.

> *"1. Should the Guidelines apply to TS 6? If so, does TS 6 reasonably reflect the Guidelines?"*

[25] Exhibit B-6, BCSEA IR 1.10.1.
[26] SET Guidelines, p.31.
[27] SET Guidelines, p.12.
[28] Exhibit A-31.

The SET Guidelines guide the Commission's public interest review of BC Hydro's proposal to apply TS 6 in DCAT.

The 1996 System Extension Test Guidelines resulted from a generic hearing on system extension policies of electric and gas regulated utilities in B.C., including of course BC Hydro. The purpose was "to look broadly at the system extension policies of the Utilities to determine if opportunities existed to improve the fairness and efficiency of these policies and to make them more consistent with one another."[29] BC Hydro's Tariff Supplement 6 had been approved by the Commission in 1991.[30] TS 6 was in effect at the time of the SET hearing and remains unchanged.[31] TS 6 was one of the disparate system extension policies that the Guidelines were intended to improve and make more consistent.

The SET Guidelines do not purport to replace or supersede any of the various then-existing utility system extension policies, including TS 6. Rather, the Guidelines are cast in terms of "amended filing requirements for information regarding planned extensions to the facilities of each utility."[32] The Guidelines contemplated that utilities "may wish to ask the Commission for review and commentary on their individual System Extension Tests so as to reduce regulatory uncertainty,"[33] however BC Hydro apparently did not do so regarding TS 6. In any event, the Guidelines state that where a CPCN is required for a system extension the Guidelines will "provide utilities and interested parties with an indication of the Commission's likely information requirements."[34]

Thus, it is submitted that the Commission intended that the Guidelines would be implemented in either of two ways: the Commission would consider the Guidelines in deciding a utility's application for approval of a proposed system extension policy (which did not occur regarding TS 6); or the Commission would consider the Guidelines in the course of reviewing a utility's system extension policy within a CPCN application for a particular system extension (which is the DCAT case).

BC Hydro's submission is simply that the SET Guidelines are not relevant to TS 6 and DCAT:

> "In BC Hydro's view, the SET Guidelines are not a useful guide to the proper interpretation of TS 6 and have no independent relevance in the context of BC Hydro's existing rate schedules."[35]

BCSEA-SCBC respectfully disagree. The Commission states expressly in the Guidelines themselves that it anticipates using the Guidelines in its review of system extension applications:

> "In order to facilitate a degree of consistency and to assist Utilities with regard to approaches the Commission anticipates using in its reviews of system extensions or extension tests, the Commission has provided the following guidelines in order

[29] SET Guidelines, p.1.
[30] Exhibit B-22, Attachment 2, p.75
[31] *Ibid.*
[32] SET Guidelines, p.2.
[33] *Ibid.*
[34] *Ibid.*, p.3.
[35] BC Hydro Final Written Submission, p.19.

> to indicate the type and format of the information which it may require in its reviews."[36]

Evaluating TS 6 in light of the SET Guidelines in the DCAT case, BCSEA-SCBC's view is that either TS 6 should be interpreted in a manner consistent with the Guidelines or TS 6 should be amended so as to be consistent with the Guidelines. In this respect, the important point is the general principle enunciated in the Guidelines:

> "The Commission also recommends that, as a general principle, <u>the costs of system extensions be allocated to those customers who cause them</u>."[37]

> *"2. The Guidelines recommend that, as a general principle, the costs and benefits to be considered in the analysis of proposed system extensions include "... net revenues from the system extension (i.e. customer payments <u>less revenues to provide for commodity purchases and upstream transmission charges</u>)." (p. 32)* [underline added]
>
> *2.1 How does this section of the Guidelines apply to the determination of the Maximum Offset as calculated in TS 6, Appendix 1, clause 5(c)(ii)?"*

The preamble to this question highlights that the SET Guidelines provide that the assessment of a utility's costs of a system extension should include incremental power requirements, whereas TS 6 recognizes the utility's cost of incremental power requirements only in the exceptionally large (150 MV.A) case. TS 6 is inconsistent with the SET Guidelines in this respect.

> *"2.2 Assuming it is applicable, what is an appropriate cost for commodity purchases and upstream transmission charges to use in the calculation of the Maximum Offset?"*

In BCSEA-SCBC's submission the appropriate measure of BC Hydro's cost of incremental electricity required by the DCAT system extension is the long run marginal cost of firm energy (LRMC). In particular, it is appropriate that the utility's cost of incremental electricity required by the proposed system extension be determined on a "planning" basis and not merely on an "operating" basis.

> *"3. TS 6, Appendix 1, clause 2 defines System Reinforcement such that it does not include any "additions or alterations to generation plant and associated transmission, or transmission lines at 500 kV and over," unless the new or incremental loads exceed 150 MV.A.*
>
> *BC Hydro states that "System Reinforcement includes all costs BC Hydro will need to incur to permit its transmission system to provide service. It does not include any incremental generation costs incurred to provide service unless the customer load exceeds 150 MV.A. None of the DCAT Project customers has a load exceeding 150 MV.A." (Exhibit B-22, Q 102)*
>
> *3.1 TS 6 states "additions or alterations to generation plant" while BC Hydro refers to it as "any incremental generation costs." Do "additions or alteration to generation plant" and/or "incremental generation costs" include costs for all potential sources of supply*

[36] SET Guidelines, p.31.
[37] SET Guidelines, p.31, underline added.

> *including the incremental costs to obtain electric energy from Independent Power Producers if required?*

Yes, in BCSEA-SCBC's submission the reference in TS 6 to "additions or alteration to generation plant" and/or "incremental generation costs" means the incremental cost of firm energy. The wording of TS 6 should be understood in the context that it was written at a time when BC Hydro's load was met substantially by its own generation. There would be no valid rationale for attempting to distinguish different costs for different sources of incremental firm energy. The cost of incremental firm energy is relevant at a system level and cannot be meaningfully separated by type of source.

> *"3.2 Would it be appropriate to aggregate the five new customers identified in the Application for the purpose of interpreting the definition of System Reinforcement in TS 6, Appendix 1, clause 2, and consequently the inclusion of any "additions or alterations to generation plant" and/or "incremental generation" costs incurred to provide service to the new customer in the System Reinforcement calculation?"*

Yes, in BCSEA-SCBC's submission TS 6 should be interpreted to include *aggregate* new or incremental firm energy costs of a system extension for purpose of determining the amount of customer contributions.

BC Hydro argues that TS 6 applies exclusively to customers on an individual basis and therefore the 'exceptionally large' criterion in the customer contribution clause cannot be interpreted as applying to the system extension's aggregate incremental firm energy cost.[38]

In response, BCSEA-SCBC respectfully disagree. The definition of "System Reinforcement" in TS 6 refers to "new or incremental loads" in the plural. It is submitted that TS 6 is capable of being interpreted to include aggregated new or incremental firm energy costs required by a particular system extension. It would be inconsistent with the purpose of the 'exceptionally large' criterion to exclude the possibility of aggregation. For instance, the criterion could be avoided by the simple expedient of splitting a new or incremental load into two or more parts or phases.

Moreover, if TS 6, properly interpreted, does *not* allow aggregation of new or incremental firm energy costs for the purpose of determining customer contributions, then it *should*. This is where the SET Guidelines come in. As noted above, the principle is that "the costs of system extensions be allocated to those customers who cause them."

> *"3.3 Assuming it is appropriate to aggregate the five customers identified in the Application, what would the appropriate cost be for of [sic] any "additions or alterations to generation plant" and/or "incremental generation" costs incurred to provide service to the new customers?"*

The appropriate cost of incremental firm energy required by the system extension is the LRMC, as argued above. At the present time, $129/MWh is the value used by BC Hydro, described as follows:

> "The $129/MWh value is the weighted-average levelized and adjusted firm energy price from the 2010 Clean Power Call. The $129/MWh value reflects the

[38] BC Hydro Final Written Submission, p.20.

cost of acquiring and integrating firm energy and delivering it to the Lower Mainland load centre. In BC Hydro's view, the value of energy reflects the total cost that will be borne by BC Hydro ratepayers (i.e., the cost of new firm energy to meet customers' needs), as further explained below."[39]

"4. TS 6, Appendix 1, clause 5(c)(ii) requires that the "first year of normal operation" be used to calculate the estimated incremental revenue and incremental operating and maintenance expenses. The System Extension Guidelines state that " ... where customer contributions are required, the Commission recommends that the utilities develop a policy which requires at a minimum all customers who attach within the first five years to contribute to system extensions." (p. 26) The Systems Reinforcement definition in TS 6, Appendix 1, clause 2 does not specify a period of time for determining the 150 MV.A load threshold.

4.1 What period of time would be appropriate to ascertain if the 150 MV.A threshold is met; the first year of normal operations, the largest forecast load within five years of the system reinforcement being complete, the full 30-year forecast, or some other point/range of time?"

In BCSEA-SCBC's submission, a single year is not sufficient for determining whether the 'exceptionally large' criterion for customer contribution should apply.

BC Hydro argues that it does and should take a "pragmatic approach to determining what constitutes the 'Customer's Plant' for the purposes of the application of TS 6 and the determination of system reinforcements."[40] In response, BC Hydro's argument here is heavily dependent on its assumption that there is and should be no aggregation of new loads to be served by the system extension. This point is addressed above.

Further, BC Hydro notes that "a customer has a disincentive to circumvent the 150 MV.A provision by underestimating its load because this increases the risk that BC Hydro will be unable to provide adequate service on a timely basis."[41] In response, this point is counterbalanced by a customer's incentive to circumvent the 150 MV.A provision in order to avoid a substantial customer contribution.

"5. When interpreting System Reinforcement in TS 6, Appendix 1, clause 2, should any <u>subsequent</u> reinforcement costs to the <u>transmission system</u>, such as the F2016 Stage GDAT Project (which is required to provide N-l service to the new customers) be considered? [underline added]

5.1 Assuming yes, how should the costs of these subsequent reinforcements be determined in the absence of firm project estimates?"

It is noted that the question refers to "reinforcement costs to the <u>transmission</u> system" – as distinct from costs of incremental firm <u>energy</u> due to the system extension.

[39] Exhibit B-15, CEBC IR 2.2.4.
[40] BC Hydro Final Written Submission, p.21.
[41] *Ibid.*

BCSEA-SCBC's response to the question is, yes, the customer contribution determination should take into account the cost of transmission reinforcement sufficient to provide the acceptable degree of reliability. On the evidence, and as contemplated in the question, providing service to the five new customers at the N-1 reliability standard will require not only DCAT but the proposed second stage of transmission reinforcement as well.

BC Hydro argues that it has not required security under TS 6 from the five new customers to be served by DCAT for transmission reinforcement costs associated with GDAT because the five customers will be existing customers by the time GDAT is proposed.[42] In response, this reasoning is inconsistent with "System Reinforcement" defined in TS 6 to include "Additions and alterations to existing B.C. Hydro Facilities, required to supply the Electricity to a Transmission Connection..." Presumably, this means additions and alternations required to supply the Electricity at the required degree of reliability.

> *"6. TS 6, Appendix 1, clause 3(a) states that it is the primary responsibility of the Customer to establish that the provision of electrical service by BC Hydro to the Customer's Plant, is in the public interest.*
>
> *6.1 Have the five customers demonstrated that the system reinforcement is in the public interest?"*

No, BCSEA-SCBC's position is that neither the five customers nor BC Hydro have demonstrated that the DCAT system reinforcement is in the public interest.

> *"6.2 What public interest issues should the Commission consider in the application of TS 6 in this proceeding?"*

The Commission's SET Guidelines set out public interest issues the Commission should consider its review of BC Hydro's proposed implementation of TS 6 for the DCAT project (in addition to the other public interest factors).

BC Hydro argues:

> "What should not be considered as part of the public interest is the rate impact of the proposed project as compared to the rate impact of not serving these customer loads at all. Rather, when considering whether the service will be adequate, safe, efficient, fair and reasonable, an aspect of the reasonableness consideration is how the rate impact of this project compares to the rate impact of other reasonable alternatives for serving this load."

In response, BCSEA-SCBC submit that the rate impact of serving versus not serving the five new customer loads is within the scope of the public interest factors that the Commission can and should consider in determining whether to issue a CPCN for DCAT. In particular, one of the reasonable alternatives for serving the five new customers' loads is an alternative in which the five new customers contribute a substantial share of the full costs of DCAT according to the SET Guidelines' principle that "the costs of system extensions be allocated to those customers who cause them."

> *6.2.1 Should consideration be given to the total rate impact including the incremental capital and operating costs associated with the project, plus any cost of energy to service*

[42] BC Hydro Final Written Submission, p.22.

> *the incremental customer loads, or should consideration be limited to the rate impact caused by the incremental capital and operating costs only?"*

BCSEA-SCBC's view is that per the SET Guidelines the Commission should give consideration to "the total rate impact including the incremental capital and operating costs associated with the project, plus any cost of energy to service the incremental customer loads." The Commission should do so in the context of the SET Guidelines' principle that "the costs of system extensions be allocated to those customers who cause them."

BC Hydro argues that "It is reasonable to expect that BC Hydro's cost of energy to serve the incremental customer loads will be the same regardless of what transmission project alternative is used, and therefore the cost of that energy will have no influence on the decision among transmission project alternatives."[43] In response, this does not address the rate impact of alternative approaches to the customer contribution toward DCAT.

> *"6.2.2 Should consideration be limited to the DCAT Project or should consideration also be given to the 2016 Stage GDAT Project which is required to provide N-l service."*

As stated above, BCSEA-SCBC submit that the Commission's determination of whether DCAT is in the public interest should include consideration the cost of transmission reinforcement sufficient to provide the acceptable degree of reliability (N-1 service) to the five new customers.

> *"7. Any other issue related to the Guidelines or the interpretation of TS 6 that may be applicable to the DCAT proceeding."*

BCSEA-SCBC support BC Hydro's proposal to amend TS 6 to make it applicable to new customers taking service at distribution voltages so that BC Hydro could obtain financial security in applicable cases from such new customers.

However, it is submitted that BC Hydro's request to amend TS 6 in this respect is inconsistent with its general position that would effectively put TS 6 beyond review by the Commission in this proceeding.

V. Conclusion and remedy requested

For the reasons set out above, BCSEA-SCBC respectfully request that the Commission conclude that DCAT is not in the public interest because the Project as defined does not provide for a substantial contribution by the new industrial customers that would be served by DCAT.

All the above is respectfully submitted.

Yours truly,

William J. Andrews

Barrister & Solicitor

cc. Distribution list by email

[43] BC Hydro Final Written Submission, p.24.