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April 20, 2006

By email and courier

B.C. Utilities Commission  
Box 250  
6th floor, 900 Howe Street  
Vancouver, BC  
V6Z 2N3

Attention: Robert Pellatt, Commission Secretary

Dear Sir:

Re: BC Transmission Corporation  
Application for CPCN for Vancouver Island  
Transmission Reinforcement Project  
Project No. 3698395  
Order No. G-70-05  
Our File No. 3727

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Please find enclosed the Submission of the Corporation of Delta in this matter. We will forward a copy of the authorities referred to in the Submission under separate cover.

Yours truly,

MURDY & McALLISTER

James G. Yardley

JGY/kc  
Enclosure

- c. Marcelle Reghelini, BCTC (by courier)
- Sandy Carpenter, Fasken Martineau DuMoulin LLP (by email)
- Registered Intervenors

In the Matter of the *Utilities Commission Act*, RSBC 1996, c. 473, and in the  
matter of an

Application for Certificate of Public Convenience & Necessity  
("CPCN") for Vancouver Island Transmission  
Reinforcement Project ("VITR") by

BRITISH COLUMBIA TRANSMISSION CORPORATION  
("BCTC")

to

British Columbia Utilities Commission

Project No. 3698395 / BCUC Order No. G-70-05

**Final Argument of the  
Corporation of Delta**

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## **Introduction**

1. The following submissions are made on behalf of the Corporation of Delta (“Delta”).
2. These submissions will focus on those matters for which Delta believes it can provide the greatest assistance to the Commission. They do not attempt to address all of the issues raised in the Commission’s Revised Hearing Issues List (Ex. A-71), and in general relate to issues of direct concern to Delta. A table of concordance will be provided that cross-references the issues from the Revised Hearing List with this submission.

## **Summary and Overview**

3. Taken as a whole, this hearing shows that from a number of perspectives, BCTC has squandered an opportunity given to it. BCTC’s approach to this application is perhaps best summed up in the following exchange between Mr. Carpenter and Dr. Gregory (T.22, p. 4156, line 25 – p. 4157, lines 6 – 13):

“MR. CARPENTER: Q: We’re now at the point where I wanted to talk to you about decision-making, and since we’ve launched into the topic, I guess we can just carry on. Just in case you’re misunderstanding my question, I’m not looking for any sympathy here, but I think the question’s still useful in setting the stage.

Can you agree with me that a party, and I’ll even use the specific example, like BCTC, who is responsible for something like the upgrade of high voltage transmission facilities, has a pretty thankless task on their hands?

MR GREGORY: A: Well, since this is the kind of work that I do for my living and I enjoy it, I would say no – you’ve got the opportunity of a lifetime.”

4. The presence of the existing transmission lines through Tsawwassen is an undesirable aberration. Presented with an opportunity to correct this situation, and even though BCTC recognizes (reluctantly, it seems) that transmission lines should not be located in residential areas, let alone physically in people’s backyards, BCTC instead put forward an archaic proposal to perpetuate the existing aberration. Viewed as a whole, the record shows that BCTC undertook a superficial and non-transparent examination of options, producing alternatives with obvious, yet easily corrected, defects. It has taken hard positions on the basis of minimal evidence. Throughout the process, BCTC has been either unresponsive to or dismissive of suggested alternatives, whether VIC, JDF, or those suggested by Delta or Mr. Holmsen. This was often without having undertaken reasonable examinations to determine whether the alternatives are or could be viable. Considered as a whole, this hearing leaves one with the impression of BCTC as a closed minded organization that is determined to follow its agenda only. Despite the invitation given to it by the Commission in the OATT Decision (BCUC Order No. G-58-05), BCTC has not pursued a proactive or innovative approach to dealing with the need for additional transmission to Vancouver Island. This does not bode well for future undertakings involving BCTC.
  
5. Delta has not taken issue with the need for additional supply on Vancouver Island, and has assumed that some form of new transmission connection is required to provide Vancouver Island with additional capacity. However, Delta has significant concerns with

BCTC's VITR application, both in terms of its substance, and the manner in which it has been undertaken and presented.

6. Delta does not believe that the VITR, as proposed by BCTC, is in the public convenience and necessity. In particular, Options 1 through 3, as well as 7, have significant drawbacks, as well as costs that have not been properly considered by BCTC.
7. Delta believes that should this Commission conclude that the VITR is in the public convenience and necessity, and should be approved, the routing of the VITR in Delta should not follow the routings contemplated in Options 1 – 3, or 7.
8. Instead, high voltage electric transmission lines should be recognized as a land use that is fundamentally incompatible with residential uses and, as such, should be located in utility or infrastructure corridors that are separate from residential and other areas with non-compatible uses. If the VITR is generally found to be in the public convenience and necessity, Delta submits that the evidence supports modified versions of Options 4 or 5 as having the greatest relative merit of the VITR options presented.
9. The evidence indicates that a version of Option 4 modified to reflect the proposal by Mr. Laprade in Exhibit C5-10, Tab 3, Ex. B (response to BCTC IR 1.7.1) would be seismically equal to Options 1 – 3, with no significant disadvantages. When the other evidence concerning Option 4 is considered, Delta submits that this alternative is preferable to Options 1 – 3, and 7.
10. Similarly, the evidence shows that a modified version of Option 5, in which the VITR follows the alignment proposed by BCTC onshore, but

then heads in a southwest direction from where the Deltaport causeway meets the shoreline, and proceeds under the BC Ferries causeway to meet the Option 4 alignment suggested by Mr. LaPrade, has merit, and should be further considered by BCTC.

11. There was a dearth of supporting material used by BCTC to evaluate or compare the VITR options (for example, there were no materials backing up or explaining the conclusions in Ex. B1-1, Table 4-2, Ranking of Tsawwassen Route Alternatives).
12. BCTC overestimated the obstacles and costs of alternatives to Options 1 and 2, and underestimated the costs, burdens and obstacles of Options 1 and 2.
13. Delta submits that when the full range of costs and benefits of the various VITR options are considered, and the evidence properly evaluated concerning their alleged limitations, Options 4 or 5 are more consistent with the public convenience and necessity than are Options 1 – 3. Bearing in mind the undesirability of having transmission lines in residential areas, Options 4 or 5, whether modified as suggested in this submission, or as proposed by BCTC, are superior to BCTC's preferred alternative.
14. There appeared to be some chaos within BCTC that is associated with what it has admitted is a high level of recent turnover. A prime example of this was the confusing and inconsistent evidence about the composition and division of responsibilities within BCTC's project team, including the role Mr. Barratt (T. 16, p. 2724, 2778 - 2781). While this alone should not be determinative of the outcome of this proceeding, it suggests the Commission should be cautious in relying on BCTC's

assurances about the diligence it has brought and intends to bring to this matter.

15. Delta believes that both the JDF and a “VIC-like” proposal offer promise, and that either is preferable to the VITR. Delta believes that it would be appropriate and in the public convenience and necessity to order BCTC to undertake good faith negotiations with Sea Breeze, as sought by Sea Breeze in paragraphs 2 and 3 of Exhibit C31-21.

16. Finally, BCTC states in its argument at paragraph 96:

“BCTC has attempted to address what it considers to be the main issues with respect (*sic.*) these matters. However, it has not attempted to address every issue that has been raised during the hearing in this context. BCTC will respond to any other issues raised by Intervenors regarding alternative means of carrying out the Project in South Delta in its Reply.”

17. With respect, it appears that BCTC is seeking to split its case on these matters. As the proponent, BCTC has the onus to present its case in full in its argument. BCTC may only reply to matters that it could not have, through reasonable due diligence, adduced at first instance. Delta will object to the receipt by the Commission of any argument by BCTC in reply that seeks to address matters that could or should have been addressed in BCTC’s initial argument. Alternatively, Delta will be seeking the right to file sur-reply to any matter raised by BCTC in its reply that should have been raised in BCTC’s initial argument.

### **Delta's Position on BCTC's Preferred Alternative**

18. Delta is very concerned about what BCTC describes in its argument as its proposed alternative. In March 2005, Mr. Costello of BCTC advised Mayor Jackson of Delta, and the public generally, that BCTC “will not recommend construction of new overhead 230 kV lines on the existing right-of-way in Tsawwassen” (Ex. B 1-1, App. D). Throughout the hearing, BCTC went to great lengths to explain why it had advanced Option 2 as being preferable to Option 1 in terms of their respective merits and the overall public convenience and necessity.
19. Ms. Peverett of BCTC was specifically invited to confirm to the Commission that BCTC “was asking and seeking approval for something that [BCTC] truly want approved” (T. 16, p. 2711, lines 11 – 17). Ms. Peverett responded in the affirmative, and further confirmed that while BCTC understood that it could change its recommendation, it had “put a very high hurdle against going back” on its commitment to not recommend Option 1, that it would not do so lightly, and that she continued to believe that “Option 2 is the right recommendation to be making” (T. 16, pp. 2712 – 13, p. 2758, lines 4 - 6).
20. BCTC states at paragraph 197 of its final argument that it “continues to believe that Option 2 should be the preferred alternative”. However, BCTC then states that because there is no evidence of support for Option 2, and because participants have not expressed a preference between Option 1 and Option 2, it cannot justify the cost of Option 2 over Option 1. BCTC then proposes that Option 1 be in essence the default proposal unless 51 percent of landowners along the VITR's

Tsawwassen right-of-way (the “ROW”) negotiate an exchange of rights with it within 90 days of a CPCN order.

21. Delta has several comments about BCTC’s proposal. First, if BCTC’s rationale is to be accepted as to why it is now proposing Option 1 as the default, the question has to be asked: what has changed to justify that BCTC “go back” to Option 1? Ms. Peverett testified that a recommendation for Option 1 would be done “very reluctantly, after great consideration, and it would have to be for reasons that we found highly persuasive (T. 16, p. 2712, lines 11 – 14). However, neither the evidence at the hearing nor BCTC’s argument reveal persuasive reasons for recommending Option 1.

22. BCTC knew going into the hearing that there was no local support for Option 2, and that there was significant, if not unanimous, local opposition to it. Likewise, it knew that there was little or no likelihood that Tsawwassen residents were interested in undertaking BCTC’s proposed exchange. Finally, the evidence did not show any expression of preference prior to the hearing between Option 1 or 2 among property owners along the ROW. Taken at face value, there is no substantive change in conditions between the time the application was filed, and the date BCTC filed its final argument.

T. 11, pp. 1793 – 94, T. 16, p. 2753

23. BCTC either knew or should have known that local residents and others believed that Option 1 was off the table. Mr. Costello’s March 17, 2005 letter to Mayor Jackson and MLA Roddick is unambiguous: “we will not recommend construction of new 230 kV lines . . .”.

24. BCTC's evidence on its post-March 2005 position on the status of Option 1 is unsettling. Despite Mr. Costello's letter, Ms. Peverett testified that "we have not taken it off the table totally. It has remained in front of us" (T. 16, p. 2712, lines 18 – 20). It should be apparent that this was news to property owners along the ROW and residents in Delta generally. Although BCTC was aware in March 2005 of press coverage stating that Option 1 would not be pursued, and BCTC believed that coverage to that effect was "misleading", it took no steps to correct the public record, or otherwise advise the parties of its position until during this proceeding (T. 16, p. 2775).
25. Neither the evidence nor BCTC's argument provide any justification for why or how the factor of community opposition (or indifference) it cites in argument outweighs the factors BCTC apparently used in the first place to justify Option 2 over Option 1: visual impacts, infrastructure access, and (possibly) property value impacts (T. 16, pp. 2746 – 2748, 2752).
26. Parties have expended significant time and resources participating in this proceeding on the basis of the material contained in BCTC's application, and the position it has taken. Delta is concerned that some may be perceive this hearing to be a sham because of the approach now taken by BCTC. BCTC's approach reinforces doubts about the bona fides it has brought to its consideration of VITR alternatives, both before and during this proceeding. Delta submits that this is a disservice to the Commission, the parties, and the hearing process generally.
27. BCTC's proposal concerning Option 1 not only ignores, but is actually contrary to the test to be used for evaluating its application: public convenience and necessity. BCTC has argued that Option 2 is the

preferred alternative, which means that, to BCTC, Option 2 is in the public convenience and necessity (otherwise, it would not be the preferred alternative). While Delta does not agree with BCTC's conclusion on that point, BCTC has outlined its position. However, for BCTC to then say that Option 2 would not be in the public convenience and necessity just because BCTC is unable to negotiate a certain number of property exchanges highlights the tenuous nature of BCTC's arguments in favour of Option 2. BCTC was clear throughout its evidence that it was prepared to resort to expropriation if it could not secure access rights through negotiation (and generally dismissive of the costs and challenges inherent in expropriation). In substance, to accept BCTC's alternative in favour of Option 1 would require the Commission to accept that all of BCTC's arguments in favour of Option 2 are outweighed by the simple failure of BCTC to reach agreements with property owners that was not ever a requirement of its original proposal.

28. There are practical issues related to BCTC's proposal concerning Option 1. BCTC says that it should be given 90 days to negotiate exchanges with 52 property owners along the Tsawwassen ROW. Notwithstanding what Delta submits is the lack of a workable definition of what would be entailed in such an exchange, and assuming that the concept is accepted to be viable, the proposal does not require good faith negotiation on the part of BCTC. In essence, BCTC would be able to present its proposal to the property owners, and say "its my way or the highway". There would be no way of determining whether BCTC was acting reasonably in its negotiations or in response to legitimate concerns of Tsawwassen property owners. It would allow BCTC to continue to ignore what it should have done in the first place, which is to propose a realistic transmission right of way that takes into account the interests of those affected by its actions. BCTC has failed

to meaningfully consider the alternatives to the existing ROW. It has given lip service to the process by proposing alternatives with obvious deficiencies that were seemingly set up to fail, but which could be vastly improved with minor variations.

29. In essence, BCTC is asking the Commission to assume the risk of the VITR for BCTC.

### **The Test of Public Convenience and Necessity**

30. A threshold matter for consideration is the legal framework that governs this proceeding. In its application, BCTC states that it is applying for a Certificate of Public Convenience and Necessity (“CPCN”) for the VITR, pursuant to sections 45 and 46 of the *Utilities Commission Act*, R.S.B.C. 1996, c. 473.

31. Courts and tribunals have resisted strict definitions of what constitutes public convenience and necessity. Thus, definitions of the term “public convenience and necessity” have been unfixed and elastic. Generally, it has been held that the meaning of the term is to be ascertained by reference to the context of the application, and the objects and purposes of the statute in which it is found.

*Memorial Gardens Association (Canada) Ltd. v. Colwood Cemetery Co.* 13 D.L.R. (2d) 97 (S.C.C.)

32. Section 45(1) of the *Utilities Commission Act* states that, except as otherwise provided, a person must not construct or operate an extension of a public utility system without first obtaining from the Commission a certificate “that public convenience and necessity require or will require the construction . . .”.

33. Section 46 of the *Utilities Commission Act* outlines the process for consideration of a CPCN. Section 46(3) states:

“The commission may issue or refuse to issue the certificate, or may issue a certificate of public convenience and necessity for the construction or operation of a part only of the proposed facility . . . and may attach to the exercise of the right or privilege granted by the certificate, terms . . . as in its judgment, the public convenience or necessity may require.”

34. Thus, under sections 45 and 46,

- the specific construction being applied for must be required for the public convenience and necessity,
- the Commission may issue or refuse to issue the certificate sought, and
- the Commission may attach terms to the certificate that, in the judgment of the Commission, are required by the public convenience or necessity.

35. Guidance on the matters to be considered in determining the public convenience and necessity is found in the decision of the Federal Court of Appeal in *Nakina (Township) v. Canadian National Railway Co.* [1986] F.C.J. No. 426. The case involved an appeal from a decision of the Railway Transport Commission allowing the closing of a railway station. The Commission had concluded that it lacked jurisdiction to consider the effect of the closure on the community. Speaking for the Federal Court, Hugessen J. stated the following (at p. 2):

“I find this conclusion startling. The Committee concedes that it must have regard to the public interest. I would have thought that, by definition, the term “public interest” includes the interests of all the affected members of the public. The determination of what is in the public interest involves the weighing and balancing of competing considerations. Some may be given little or no weight; others much. But surely a body charged with deciding in the public interest is “entitled”

to consider the effects of what is proposed on all members of the public. To exclude from consideration any class or category of interests which form part of the totality of the general public interest is accordingly, in my view, an error of law justifying the intervention of this Court.

...

(at p. 3) While it is true, of course, that the Railway Act gives the Commission special responsibilities in the three areas identified by the Committee, namely, technical operation, safety and service, its powers of decision making is by no means limited to a narrow consideration of these matters only. Indeed in some cases the Commission is directed to decide in only the most general terms such as in accordance with the public convenience and necessity. To put the matter another way, while the Commission may have the jurisdiction, in the public interest, to regulate questions of technical operation, safety and service, those fields of jurisdiction do not themselves constitute either a limitation or a definition of what the public interest is, either generally or with regard to any particular case.”

36. Thus, public convenience and necessity is a broad concept that may encompass a wide variety of issues. Delta submits that the issues canvassed during the hearing come within the scope of factors that should be considered as part of the public convenience and necessity in this proceeding.

37. The onus of showing that a proposed project is in the public convenience and necessity is on the applicant, which in this case is BCTC. Conversely, there is no onus on intervenors or opponents of an application to prove that a proposed work is not in the public convenience and necessity.

*Westcoast Energy Inc.* (NEB Reasons for Decision GH-1-2002)

38. Likewise, the onus of providing sufficient information to evaluate the application rests with the applicant, in this case, BCTC.

*Athabasca Chipewyan First Nation v. British Columbia Hydro and Power Authority* [2001] 3 F.C. 412 at p. 6, para. 23

39. A recent application for a CPCN in a similar, although not identical, factual context is found in the Reasons for Decision of the National Energy Board in its consideration of the application by Sumas Energy 2.

*Sumas Energy 2, Inc.* (NEB Reasons for Decision EH-1-2000); affirmed, 2005 FCA 3778 (Fed. C.A.) (hereafter, “SE2”)

40. In SE2, the NEB was considering an application for a CPCN for an international power line under section 58.16 of the *National Energy Board Act*. Section 58.16(1)(b) of the *NEB Act* provided that the NEB could issue a CPCN for the line if the NEB was satisfied that the line “is and will be required by the present and future public convenience and necessity”. Section 58.16(2) of the *NEB Act* stated that, in deciding whether to issue a CPCN, the NEB “shall have regard to all considerations that appear to it to be relevant”.

41. In SE2, the NEB held the following:

(at p. 11): “the factors to be considered and the criteria to be applied in coming to a decision on public interest or public convenience and necessity may vary with the application, the location, the commodity involved, the various segments of the public affected by the decision and the purpose and applicable section of the NEB Act.”

42. A similar outcome to SE2 occurred in *Gananoque Extension Facilities Review Application* (GH-4-90). In that case, the NEB rejected an application for a CPCN for a pipeline, even though the NEB found that the applicant could adequately mitigate most potentially adverse

environmental effects and that the pipeline would not pose an unacceptable safety risk. In its Reasons for Decision (page 69), the NEB found that the evidence on a number of environmental and socio-economic matters was inconclusive, and was not satisfied that the applicant had adequately assessed potential alternative routes.

43. The scope of this Commission's authority when considering an application for a CPCN is further set out in Part 6 of the *Utilities Commission Act*. Section 89 states the following:

“On an application under this Act, the commission may make an order granting the whole or part of the relief applied for or may grant further or other relief, as the commission considers advisable.”

44. Delta submits that, both on the face of the language in section 89, and the language of section 72(2)(a) and (b) this authority extends to the consideration and issuance of a certificate of public convenience and necessity.

45. As was discussed above, the Courts have been clear that the impacts of a proposed project on those that may be affected by it are proper matters for consideration in an application for a CPCN.

*Nakina v. Canada* (supra)

46. The absence of language in the *Utilities Commission Act* that the Commission may consider a matter does not mean that the Commission cannot consider that matter.

*SE2*, 2005 FCA 377 at para. 25

### **Questions Posed by the Commission**

47. At T. 40, pp. 7542 – 43, the Commission Chair posed several specific questions for the parties. Delta's response to some of these questions will be expanded elsewhere in this submission. However, in summary, Delta's responses are as follows:

Q: What are the interests that can be considered as part of the public interest in respect of the matters to be decided in this proceeding? For example, property values and stigma.

A: Delta submits that both the wording of the *Utilities Commission Act* and the caselaw noted above supports that a broad range of interests can and must be considered as part of the public interest. Indeed, the decisions of the Federal Court of Appeal in *Nakina* and *SE2* indicate that it would be an error of law to exclude matters related to the impacts of a proposed project on the community affected by the project.

Q: Should we be concerned with achieving equity among private interests?

A: Delta submits that this Commission has jurisdiction to consider equity among private interests, and that it would be appropriate to do so in this proceeding.

Q: Does the Commission have jurisdiction to order a public utility to compensate property owners for adverse impacts of utility

plant or system in respect of both conforming and non-conforming improvements?

A: The Commission clearly has jurisdiction to order BCTC to compensate property owners for the adverse impacts of its operations, including transmission line construction and replacement, on conforming improvements in the ROW. With respect to non-conforming improvements in the ROW, as the successor to BC Hydro's as a provider of transmission services, BCTC has an obligation to maintain the ROW in accordance with the terms of the instruments defining the ROW. The evidence from the hearing is that BCTC, through BC Hydro, has monitored the Tsawwassen ROW on an annual or biannual basis, has been aware of the encroachments on the ROW, and has taken few steps to limit the establishment of those encroachments (T. 19, p. 3403 – 07). Likewise, BCTC has taken few or no steps to explain to property owners the obligations they face concerning their use of the ROW. Under VITR Options 1, 2 and 7, property owners face the loss of conforming and non-conforming improvements of significant financial and non-financial value. Bearing in mind the availability of suitable alternatives to Options 1, 2 and 7, Delta submits that it would be appropriate for the Commission to order BCTC to compensate property owners for the loss of conforming and non-conforming improvements on the ROW.

Q: If the Commission finds that either VIC or JDF may be more cost-effective than VITR, can the Commission grant the CPCN to VITR subject to directions similar to those found in Exhibit C31-21?

A: Delta is not aware of any binding authority on this point. However, to the extent that BCTC's application sought (Ex. B1-1, p. 6, lines 23 – 26) that the Commission “approve the Project as proposed, or with modifications considered to be in the public convenience and necessity and supported by the evidence, rather than denying the Project if it finds that the Project, as proposed, is not in the public interest” (underlining added), BCTC has invited the Commission to use its discretion liberally, so long as the exercise of discretion is determined by the Commission to be “in the public convenience and necessity and supported by the evidence”. Delta submits that such an outcome would be within the Commission's jurisdiction in any event, and would not be a case where jurisdiction is being “created” by the parties.

Q: Can the Commission grant to BCTC a CPCN for a revised VIC proposal?

A: As noted above, Delta submits that on the basis of BCTC's application, the Commission has a broad discretion in this case that would include granting a CPCN to BCTC for a revised VIC proposal.

Q: Has B.C. Hydro met the obligation to consult with First Nations in regard to each of the VITR route options? Does B.C. Hydro have an obligation to accommodate First Nations, and when does the obligation arise?

A: Delta agrees with and adopts the position of BCTC as stated in paragraph 102 of BCTC's argument.

Q: Given the evidence and matters to be decided in this proceeding, should this Panel review the cost of service analysis of capital projects conclusions found at page 35 of the VIGP decision dated December the 8<sup>th</sup>, 2003?

A: Delta has no submission on this issue.

### **Evaluation of BCTC VITR Routing Options**

48. Seven alternative routes were proposed by BCTC in its application for the VITR. BCTC initially sought approval for Option 2, but left open the possibility that the Commission might approve the VITR in a modified form, which BCTC has now sought with the contingent approval of Option 1.

49. In considering Options 1 and 2, Delta submits that the Commission should begin by asking whether, in this day and age, the existing Tsawwassen ROW is an appropriate location for a high voltage transmission facility. Put another way, but for the existence of the ROW, are Options 1 and 2 something that BCTC and this Commission should point to as an example of appropriate transmission line planning?

50. The answer to this question is so obvious that even BCTC had to agree with it. As was noted by Mr. Gable, all things being equal, if you had a non-residential route and a residential route, you “might” elect to choose the non-residential route because it would be less disruptive.

T 9, p. 1306, lines 21 – 26

51. A useful summary of current “best practices” for electric utilities and regulators is found in the article from *Transmission Watch* attached to the Opening Statement of Sea Breeze (Ex. B2-45). Starting on page 9, the article notes how transmission planning and regulatory practices are changing to address, among other things, community opposition and local concerns about transmission lines. This may entail the use of higher cost, non-traditional approaches to transmission line siting, such as undergrounding, use of alternative technologies, and changes to routes to avoid sensitive areas (such as with PG&E’s Jefferson-Martin line (Ex. C3-50)). The outcome of the *SE2* hearing is also consistent with the need for project proponents and regulators to be mindful of community views and concerns in the development and approval of regulated projects. This does not mean that applications are to be determined by plebiscite, or be hijacked by community opposition; however, it does not also mean that the concerns of affected communities are to be ignored.

52. Delta submits that that VITR Options 1 to 3 (and 7) fail to meet a standard of “best practices” in transmission line planning. Instead, they appear to be driven by expediency and BCTC’s intention to steadfastly hold on to the benefits provided by the existing ROW. The latter point was made by BCTC on a number of occasions.

e.g., T. 16, p. 2824, lines 3 - 8

53. To the extent that BCTC might argue that its proposal to underground in Option 2 is consistent with current best practices, this ignores the very reason for undergrounding being proposed in the first place for Option 2, which was to minimize the concerns related to the presence of a transmission line in an area unsuitable to that use. BCTC's initial proposal to expend an additional \$14 million for undergrounding in Tsawwassen was an acknowledgment that the routing is problematic; however, it did not address the concerns related to EMF's, construction, and property value impacts. As such, Option 2 could only be looked at as a partial step towards best practices. The better approach would have been to avoid altogether a routing that involved the residential areas of Delta.

### **Option 1**

54. Under Option 1, the existing 138 kV lines would be replaced with new 230 kV transmission lines. The existing 15 meter high wooden frame poles would be replaced with taller single pole steel structures that are double the height. As a result, the towers and transmission line would be more visible than the existing transmission line.

Ex. B1-6, BCTC response to BCUC IR 1.105.5

55. In its argument, BCTC acknowledges that, of the Tsawwassen alternatives, Option 1 has the greatest impacts during operation because of its visual impacts, would result in greater restrictions on the types of vegetation that can be planted on the ROW, and would require access by BCTC to the properties on the ROW for ongoing maintenance. BCTC does not appear to discount the validity of those concerns. As such, Delta does not propose to add any further discussion on that point.

56. In its submission, BCTC also states that Option 1 would be the least cost alternative, would be the least disruptive of the Tsawwassen alternatives to Tsawwassen homeowners, and has the least risk of delay from unidentified risks.

57. In saying that Option 1 is the least cost alternative, BCTC is saying that the option is the least cost alternative to BCTC. Delta submits that on a full evaluation of the costs, Option 1 does not fare so well. Beyond the matters identified by BCTC as disadvantages of Option 1, there are at least three significant disadvantages to the option for which BCTC has not given appropriate consideration:

- Restrictions on future use of properties along the ROW;
- Resident concerns over health impacts associated with EMF's from increased voltage; and
- Impacts on land values.

58. BCTC takes the position that Option 1 has the least risk of delay of the alternatives presented. Delta submits that Option 1 faces some risk that the existing access rights do not encompass the proposed works in Option 1. Unlike the rights found in BC Hydro's current right of way documents, in the agreements governing overhead access along the Tsawwassen ROW, the grantors did not agree to allow replacement or upgrades of the existing works. Regardless of whether it is ultimately determined that there is any merit to this arguments, there is some risk of delay should this issue be litigated in the B.C. Supreme Court and Court of Appeal.

Ex. B1-6, BCTC response to BCUC IR's 1.3.2 (clause 1(a)) and 1.3.3 (clause 1(a)(i))

### Restrictions on Future Use of Properties

59. If Option 1 is approved, use of the properties along the Tsawwassen ROW would continue to be subject to legal and *de facto* restrictions set out in the ROW documents and the Partners in Use document.

Ex. B1-6, BCTC response to BCUC IR 1.3.2 (ROW instrument)

Ex. B1- 6, BCTC response to BCUC IR 1.14.1 (Partners in Use document)

60. BCTC, and prior to that, BC Hydro, has not required strict compliance with either the instruments creating the ROW, or the Partners in Use document. It is unclear what BCTC's intentions are as to how the use of the Tsawwassen ROW would be regulated in the future. At a minimum, these documents establish significant *prima facie* restrictions on the use of land in the ROW. In many cases, the entire back yards of properties along the Tsawwassen ROW are within the ROW. Bearing in mind that the previous relaxation in restricting and regulating uses along the ROW has contributed to the problems BCTC currently faces with access through the Tsawwassen ROW properties, it is to be expected that BCTC will likely monitor and enforce the use of those properties more closely. That would not likely be the preference of the property owners along the ROW. In *de facto* terms, this represents a net social loss from the current situation.

61. The properties along the Tsawwassen ROW will also continue to face the restriction of up to a 4.5 - 5.5 meter "limit to approach" being applied to vegetation from the power line

T. 19, pp. 3397 – 3400, 3402

62. In practice, BCTC will have to “convince” property owners of the need to remove vegetation and replant with something more suitable to the use of the land as ROW. While this may make perfectly good sense in terms of transmission line management, it highlights the restrictions that are faced by the property owners, and which are not faced by others in the use of their property.

T. 19, p. 3406, lines 1 - 12

### Concerns Over Health Effects of EMF's

63. It should be apparent from the hearing record that, if nothing else, EMF's are a source of controversy. From a decision making standpoint, the basic problem with EMF's is that there is still uncertainty over what levels of exposure they may be associated with adverse health effects.

64. While much of the focus of the discussion during the hearing was on EMF concerns in the context of VITR Option 2, those concerns are equally applicable to Option 1.

65. Delta submits that the issue for consideration by the Commission should not so much be whether there is validity to the concerns that EMF's do or may adversely affect health, but on how to address the concerns and uncertainty that has been raised in this proceeding. While the Commission has considered EMF's in the past, (Ex. A2-1 to A2 – 7), Delta submits that it would be appropriate to reassess the matter in terms of the current state of scientific knowledge, the level of “comfort” provided by BCTC to those facing risk associated with EMF's, the recent practices of other regulatory commissions, and the externalities associated with community concern encountered in this case.

66. Regardless of how honestly held the assurances made by and on behalf of BCTC to the public and the Commission may be about risks to health (or lack thereof) associated with EMF's, those assurances are outweighed by the simple fact that no one can provide an assurance that there is nothing to worry about. Delta submits that the value of BCTC's arguments and evidence concerning the ICNIRP guidelines is outweighed by other statements made by or on behalf of BCTC, such as the statement of Richard Gallagher to residents at the May 31, 2005 Community Information Session (Ex. B1-57 at page 58, lines 6 - 23):

“The things that we have to remember is that the twofold risk was based on a time-weighted average of exposure in these kids. In other words, these are kids constantly exposed to an average of 4 miligauss. Whether or not the exposure they will suffer walking back and forth across the buried cable would in fact amount to 4 miligauss over a 24-hour or 12-hour period is a question and it's a question that I can't answer, and I can understand the concern.

The other thing we have to mention in that particular pooled analysis, the study done, is that the authors were very careful to say at the end of their study that they weren't sure that the elevated risk, the twofold risk, was due to the exposure to magnetic fields or due to bias in the selection of cases and controls, or confounding. So what I'm trying to say is yes, this is a concern. Is it real? We really don't know.”

(underlining added; see also page 98, lines 11 – 20))

67. The May 31 community information session was organized by BCTC. Mr. Gallagher was invited by BCTC to attend the session, and was described by BCTC in its Application as “a recognized expert on EMF issues”. Delta submits that when someone described by BCTC as a “recognized expert” on EMF cannot provide a more categorical (or less equivocal) comment on EMF health effects at a meeting where it is

clear the attendees are concerned about those effects, it should not be surprising that concern persists among residents.

Ex. C1-36 (Gallagher CV)

68. What Mr. Gallagher could have said at the community information session, but did not, was that there is no basis for concern, and that that is something that he and the scientific community know with confidence. A similar sentiment was expressed in Mr. Gallagher's testimony before the Commission in the *West-Kootenay* hearing, and in the NEB hearing on *SE2*, where he agreed that there was some concern that continuous exposure of children to magnetic fields above 3 to 4 miligauss placed them at increased risk of leukemia.

Ex. C1-23, C1-37 (Gallagher testimony)

69. BCTC has framed much of its evidence and argument on EMF's in terms of whether the results of scientific investigation supported the concerns expressed about EMF's and health effects. To that end, BCTC refers to the ICNIRP guidelines.

70. However, as BCTC notes in its argument, the ICNIRP guidelines deal with short-term effects. As such, the guidelines would not necessarily be applicable to the type and nature of EMF exposures experienced by residents and others along the VITR ROW. BCTC notes that the ICNIRP has not issued long term guidelines for EMF exposure, and at paragraph 113 of its submission, references a statement from the Federal-Provincial Territorial Radiation Protection Committee ("FRTRPC"). The problem with the FRTRPC statement relied upon by BCTC is that its conclusions are stated to be within the context that "the scientific evidence is not strong enough to conclude that typical exposures can cause health problems", and that "adverse health effects from exposure to power frequency EMF's at levels normally

encountered in homes . . . have not been established” (underlining added).

71. The evidence is clear that EMF levels along the ROW with Options 1 and 2 would be significant and clearly in excess of levels that are “typical” or are “normally encountered”. Thus, the assumption underlying the ICNIRP statement on long-term guidelines is inapplicable to VITR Options 1 and 2.

Ex. C3-35

T. 28, pp. 5262 - 5268

72. On behalf of BCTC, Dr. Erdreich agreed that there was a body of literature that observed an association between exposure to EMF at levels starting at 3 to 4 miligauss, and an increased chance of childhood leukemia; she just had difficulty with whether the conclusion was “generally accepted” Dr. Erdreich was also unable to identify any study that concluded that exposure to EMF’s was not the cause of an adverse health outcome.

T. 28, p. 5239 - 5240

T. 27, pp. 5133 – 5136

73. There is no doubt from the record that the EMF levels associated with the VITR Options 1 and 2 would increase over presently experienced levels, and that significant portions of the properties along the Tsawwassen ROW will continually be exposed to levels far in excess of 4 miligauss, whether in the case of Option 1 or Option 2.

Ex. B1-7, B1-77, B1-101

74. According to a 2002 report by the International Agency for Research on Cancer (IARC) of the World Health Organization, extremely low-frequency magnetic fields are possibly carcinogenic to humans (IARC

Group 2B). This designation by IARC can be contrasted with categories for agents that are not classifiable as carcinogenic (Group 3), or that are probably not carcinogenic (Group 4). A significant feature of the IARC guidelines is their conservatism, which is reflected in the consensus-building process adopted in their creation.

Ex.C3-53

T. 27, pp. 5159 - 5160

75. The issue of EMF's has begun to receive serious consideration by regulators, including in the State of California. Three scientists - each of whom had a background in epidemiology - concluded after an exhaustive review of the literature (the "California EMF Report") that: "to one degree or another, EMFs can cause some degree of increased risk of childhood leukemia, adult brain cancer, Lou Gehrig's Disease and miscarriage".

Ex. C3-49 (California EMF Report)

76. Dr. Erdreich's treatment of the California EMF Report was interesting. The California EMF Report was undertaken to assist the California PUC in its consideration of power line routings. As such, the omission of the Report from Dr. Erdreich's evidence is striking. Dr. Erdreich's testimony on why she did not include it in her evidence was, at best, unclear. At a minimum, the omission of the Report casts some doubt on Dr. Erdreich's impartiality, and the weight that should be attached to her conclusions.

T. 27, pp. 5141 - 54

77. Dr. Erdreich's view that the California PUC had not changed its position to reflect the conclusions of the California EMF report missed the point that the California PUC is already requiring power line applications to take EMF concerns into account. In the *Jefferson-*

*Martin* case, the California PUC specifically acknowledged the need to “proceed with the knowledge that EMF exposure may increase the risk of certain health effects.” The PUC ordered the applicant PG&E to undertake several changes to its plan in order to address and mitigate EMF’s in meeting the 4 percent of budget EMF mitigation “benchmark” required by the PUC. Dr. Erdreich acknowledged that it was a fair inference to conclude that the California PUC took into account the results of the California EMF Report when it issued its decision in *Jefferson-Martin*.

Ex. C3-50

T. 28, pp. 5219 – 5231

78. Notwithstanding that the EMF levels associated with the Jefferson Martin proposal were, on the evidence in this proceeding, within the range commonly encountered in everyday life, the California PUC ordered changes to the routing proposed by PG&E.

79. The decision in *Jefferson-Martin* is consistent with the proper application of the precautionary principle. BCTC’s proposal on how to address the health concerns associated with EMF’s is at odds with the basic premise of the precautionary principle, as the principle has been accepted by the Supreme Court of Canada:

"Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation."

*114957 Canada v. Hudson (Ville)*, (2001) 19 M.P.L.R. (3d) 1 at 24 (SCC) (“*Hudson*”)

80. This issue should not be seen as an abstract discussion about risk. At the end of the day, the residents along the ROW believe, whether rightly or wrongly, they will have the equivalent of a ticking time bomb. In the aftermath of society’s experience with thalidomide, exploding

Ford Pinto's, and the long campaign to get tobacco companies to acknowledge the health impacts of cigarette smoking, it should be understandable that BCTC's assurances about EMF's are met with skepticism by residents and others who would have in their backyards, and perhaps residences, EMF levels far in excess of what most people experience, and that are above levels where scientists, including Mr. Gallagher, express uncertainty. After this proceeding has ended and the Commission issues its decision, it is those residents who will face the prospect of living with a power line in their back yards, and the uncertainty over its health effects. Delta submits that this is not a desirable outcome, or consistent with public convenience and necessity.

81. While the existing power line may have simply been seen as odd or unsightly when the ROW properties were developed and purchased by the residents, it is now increasingly seen as unsafe and as a place where people should not spend time, whether doing gardening, having dinner, or playing with their children.

82. Delta submits that the proper application of the decision in Hudson to BCTC's application would include the following:

- taking preventive action in the face of uncertainty;
- shifting the burden of proof to the proponents of an activity;
- exploring a range of alternatives to possibly harmful actions;
- increasing public participation in decision-making.

83. Delta submits that circumstances that should influence whether a risk is acceptable include:

- whether the impacted people can avoid the risk;
- whether the people taking the risk derive any benefit from the risk (i.e., the exposure); and

- whether the risk is under the control of the affected people.

In the present case, it is apparent that the answers to these questions are in the negative.

84. Delta submits that it would be prudent and appropriate for this Commission to adopt a precautionary response to the concerns raised about EMF health impacts for the following reasons:

- the expected EMF levels along the ROW for VITR Options 1 and 2 are significant;
- the EMF levels are above levels in which an association with adverse health impacts have been observed, even if not proven;
- should adverse health results exist, its cost in terms of mortality and morbidity would be significant;
- no convincing response has been provided by BCTC to these concerns, other than reliance on the ICNIRP guidelines, which on their face do not apply to chronic exposure levels;
- the concerns about EMF have been translated into other costs borne by the community that include reduced property values, and increased levels of anxiety;
- there are viable alternatives to the Tsawwassen routings available.

85. Delta submits that, on their own, the concerns expressed by the community about EMF health effects should be sufficient to deny a CPCN in Delta for Options 1 and 2. To the extent there is uncertainty over the nature of the relationship between exposure to EMF's and adverse health effects, when one considers the potential personal, social and medical cost of the apparent increase in miscarriage that could accompany the operation of the VITR, the prudent and proper

course would be to deny routings that include the residential areas of Tsawwassen.

### Impacts on Land Values

86. The focus of much of the evidence at the hearing on land values was related to the impacts of Option 2 on the value of properties along the Tsawwassen ROW.
87. The only party to specifically focus on Option 1 valuations issues was BCTC, though the evidence of Mr. Dybvig. BCTC argues at paragraph 131 of its submission that there was no evidence contradicting Mr. Dybvig's opinion. Presumably, that was because Mr. Dybvig's evidence was tendered as "rebuttal evidence". Considering the timing of Mr. Dybvig's report, its discussion about property value impacts of Option 1, and BCTC's present proposed alternative involving Option 1, one now wonders at what stage BCTC determined that the benefits of Option 1 should be revisited.
88. Under Option 1, the VITR towers will be taller and visible to more people and over a larger area than is the case with the present works. There was no evidence that increased visibility provides any social or visual benefit. The literature referenced in Dr. Gregory's evidence indicates that the visual impact of power lines is a contributing factor to their negative impact on property values. Likewise, Option 1 will result in an increase in EMF levels experienced by the properties along the ROW. The same issues related to stigma involving EMF's, and the resulting negative effect on property values that would occur with Option 2, would also apply in the case of Option 1 (this will be discussed in further detail below).

Ex. C5-6, Tab 3, Q. 6 (p. 3)

89. Delta submits that the evidence does not support any conclusion that Option 1 will have a neutral or mildly positive impact on property values when compared to the present. To the extent that Mr. Dybvig's report said anything on the matter, it was that at 95 percent confidence levels, a change to taller transmission poles resulted in coefficients "anywhere from strongly positive to strongly negative". All this shows is that the results were inconclusive. Similarly, Mr. Dybvig's examination of exposure to power lines on property values showed a range over impacts that varied between a decrease of over \$60,000, and an increase of \$34,000. Again, this just shows inconclusive results that are at odds with the literature that indicates a negative impact on value.

Ex. B1-37, Tab 1, p. 34, lines 961 – 966; p. 38, lines 1013 - 1016

## **Option 2**

90. There are several reasons why Option 2 does not meet the test of public convenience and necessity:

- It is the most disruptive option in terms of construction;
- The inadequacy of BCTC's proposed restoration plan;
- It will continue to limit the use of properties along the ROW;
- It would increase fears related to EMF health effects;
- It will negatively affect property values along the ROW;
- It will likely entail significant expropriation related costs;
- The availability of suitable alternatives.

91. When the above factors are properly applied, BCTC's conclusions about the relative ranking of Option 2 in terms of both financial and non-financial factors are not supportable. Delta submits that, rather

than being the preferred alternative, Option 2 falls behind both Options 4 and 5.

#### Disruption During Construction

92. The evidence from the hearing is abundantly clear that Option 2 would have significant negative construction effects, involving heavy machinery cutting a “swath” (also described as a one way street) through a mature residential neighbourhood. BCTC does not seem to dispute this.

T. 9, pp. 1270 – 1292

Ex. B1-11, BCTC response to BCUC IR 2.127.1

#### Restoration Costs

93. Construction of Option 2 will essentially result in the destruction of the backyards along the Tsawwassen right of way. The vegetation “restoration” envisaged by BCTC will not, in many cases, involve replacement of removed specimens in terms of size and maturity. As such, the proposed restoration cannot be considered to be a true mitigation of the loss to be suffered by the Tsawwassen residents along the ROW.

T. 17, p. 2910, lines 10 - 26

94. BCTC estimates that the cost of restoring the backyards and other spaces in Tsawwassen would be \$1.3 million. As noted above, that figure was based on nursery costs that do not reflect the value of the specimen that was removed. Likewise, BCTC did not follow its usual practice when valuing trees on the basis of their landscape value, which relies on the guidelines of the International Society of

Aboriculture. Thus, BCTC's estimated restoration costs do not reflect the actual value of the vegetation to be removed.

T. 17, pp. 2912 – line 18 – p 2913, line 26

95. Further, BCTC's estimated cost of restoration was based on a review of aerial photographs. For this reason alone, Delta submits that little confidence can be attributed to that estimate.

T. 9, p. 1222, lines 8 - 20

96. TRAVHOL's witness on restoration costs, Cheryl Clark, was not challenged or cross-examined on her evidence. Delta submits that TRAVHOL's evidence on restoration costs is to be preferred to that of BCTC in the case of any inconsistency.

97. One significant example of a difference was for the Mattei property at 1170, 53A Street. Ms. Clark estimated the restoration cost at \$153,331, and BCTC estimated it at only \$47,140. While there does not seem to be disagreement that the Mattei property is exceptional, it was not the only instance where BCTC's estimated cost of restoration was less than that determined on behalf of TRAVHOL.

Ex. B1-63

#### Limits on Property Use Along the ROW

98. Option 2 will perpetuate the limits placed on the use of property along the ROW. As with Option 1, this may be perfectly reasonable in terms of utility operation, but the suitability of that operation must be viewed in the societal context in which it operates. As such, limitations on use should be seen as a social cost that could be avoided by selection of a more appropriate transmission alternative.

99. The extent to which the restrictions in use that are identified in BCTC's sample ROW agreement and Partners in Use would apply to Option 2 is unclear. At a minimum, Dr. Wells confirmed that restrictions on vegetation would continue to apply to the overhead line, and that deep tap rooted species of vegetation would not be permitted within 5 meters of the centerline of the underground ductbank.

T. 19, p. 3407, lines 11 – 26

#### Concerns About EMF Health Effects

100. The concerns noted above in the discussion on the possible health effects of EMF's also apply to the case of Option 2, except that they are magnified by the increase in EMF levels that would be experienced in Option 2 over those in Option 1. Those concerns will not be repeated here.

#### Property Value Impacts

101. The evidence of Dr. Gregory showed a clear basis for concluding that, regardless of whether Option 1 or 2 is chosen, the VITR would have a negative effect on the value of property in Tsawwassen.

Ex. C5 – 6, Tab 3

102. Dr. Gregory has considerable experience in evaluating this issue, and was the author of several journal articles on the topic. It was Dr. Gregory's evidence that electric transmission lines can have a negative effect on property values for a variety of reasons, including:

- Health effects associated with EMF concerns;
- Visual impacts of the power lines;
- Noise from discharges;
- Ecological effects; and

- Construction-related effects.  
Ex. C5-6, p. 3, A. 6.

103. Much of Dr. Gregory's evidence was directed to the impacts on property values of stigma associated with power lines. Dr. Gregory noted that as perception of risk changes, so can the resulting stigma, and its impact on property values. Dr. Gregory cited a review he did of studies from the 1980's and early 1990's attributing a loss of between 5 and 10 percent in values of property adjacent to high-voltage transmission lines, and concluded that fear of health effects related to EMF exposure played a major role in the decrease in values. A more recent study co-authored by Dr. Gregory found property reductions of between 0 percent and 20 percent, with a base case decline of 10 percent, half of which was due to EMF effects, and half due to other causes.

Ex. C5-6, p. 5, A. 8

104. There was considerable comment by local residents throughout the hearing expressing concern that the VITR would affect their health, quality of life and general well being. As such, it is reasonable to conclude that the VITR will create a stigma in the area.

105. Dr. Gregory's conclusions were supported by the outcome of a number of legal proceedings he cited in which compensation was awarded for loss of value to property due to concerns about the safety of power lines. Dr. Gregory was not questioned or challenged in relation to those cases, which include:

- *Houston Lighting & Power Co. v. Klein Independent School District*, (1987) 739 S.W. 2d 508
- *Criscuola v. Power Authority of the State of New York*, (1993) 81 N.Y. 2d 649

- *San Diego Gas & Electric Company v. Daley* (1988) 253 Cal. Rptr. 144
  - *Tennessee Valley Authority* (1968) 405 F. 2d 305
  - *Lazar v. Hydro One* (2002) Ontario Municipal Board Decision 0781
- Ex. C5 – 10, Ex. E and F

106. In *San Diego Gas & Electric Company v. Daley et al*, 253 Cal. Rptr. 144, the California Court of Appeal upheld a lower court award of compensation that was based, in part, on community fears of the health effects of EMF's. The Appeal Court held that compensation could be ordered payable, notwithstanding uncertainty about the objective validity of the concerns in question (at page 152):

"The trial court was correct in its analysis and determination that the truth or lack of truth in whether electromagnetic projections caused a health hazard to humans or animals was immaterial. Rather the question was whether the fear of the danger existed and would affect market value."

107. Mr. Dybvig's evidence did not explicitly consider the property value impacts of stigma associated with power lines. Indeed, much of the literature he relied upon was published before concerns about the EMF impacts of power lines had reached levels presently experienced in Tsawwassen.

108. Instead, Mr. Dybvig's evidence was based largely on a statistical analysis of power line related property impacts that, interestingly, did not show any statistically significant outcomes, other than to confirm that "the presence of the ROW has a negative impact on property values", while the value impact on nearby properties is "much lower".

Ex. B1-37, Tab 1, p. 34, lines 963 – 972, p. 40, lines 1041-43, lines 1050 – 56

109. Notwithstanding the limited value of Mr. Dybvig's evidence, it was still methodologically curious. For example, despite acknowledging the importance of actually knowing the condition of the improvements of land, such as buildings and structures, Mr. Dybvig managed to ignore those conditions in his analysis of rural Nanaimo properties. Instead, he simply assumed that the improvements all had a similar contribution to value.

T. 24, p. 5 – 25

110. Mr. Dybvig was clear in his testimony that his conclusions on property value impacts of the power line were based on aesthetic matters related to the power line, and that he did not have any basis for considering impacts associated with EMF's.

T. 24, p. 4643, lines 14 – 20, pages 4643 – 4647

111. However, Mr. Dybvig agreed that concerns over EMF will have a negative effect on the size of the market for properties in proximity to a transmission line, which is why those properties have a lesser value than do similar properties that are not in proximity to a power line.

T. 24, p. 4602, lines 1 – 15

112. Mr. Dybvig agreed that he did not have any evidence to suggest how people would respond to changes in EMF levels.

T. 24, p. 4616, lines 3 – 15

113. Further, Mr. Dybvig testified that consideration of the effects of concerns about EMF's on property values was "far beyond my expertise."

T. 24, p. 4648, lines 22 – 24

114. This is to be contrasted with the evidence of Mr. Gregory, which was directed specifically to the impacts of sources of stigma, such as EMF, on property values.

Ex. C5 – 6

115. The “impairment” effect of EMF’s on property values would be exacerbated in a falling market. That is, there would be even fewer potential buyers for the impaired properties.

T. 24, p. 1 – 14

116. Mr. Dybvig concluded that any negative effect from stigma would disappear over time. However, this conclusion was not based on anything other than Mr. Dybvig’s belief that there would be no stigma effect in the first place.

T. 24, p. 4617, line 18 to p. 4619, line 11

117. Considering the property value impact evidence as a whole, it is reasonable to conclude that the existing power lines have a negative impact of the value of the properties along the Tsawwassen ROW, and that this impact will be increased by the proposed VITR options in Tsawwassen. The best available evidence on the value of the Tsawwassen properties was from the BC Assessment Authority, which showed a combined assessment for land and improvements for 6006 at \$52,641,800. The BCAA had reduced this assessment by approximately \$5.9 million from the previous year. Regardless of the precise figures, in terms of scale of magnitude, the available evidence suggests that the VITR may have a depressing effect on property values in Delta of up to approximately \$10 million. Properly accounted for in terms of costs to ratepayers and stakeholders, this places VITR Option 2 behind Option 4 and almost equal to Option 5 in terms of overall cost.

Ex. C3-42B (p. 7)

ROW Acquisition Related Issues and Costs

BCTC's Proposed Rights Exchange

118. A key aspect of Option 2 is the “exchange” of BCTC’s existing overhead rights of access for the underground rights it does not currently possess. There was considerable discussion and questioning about this during the hearing. Unfortunately, BCTC’s proposed “exchange” remains unclear. While BCTC has spoken about making commitments to not build future overhead lines along the ROW, it has also stated that it considers its existing rights of ways “permanent and valuable assets”, and that “BCTC is not in a position to provide guarantees that further upgrades to facilities on its rights of way will not be needed in the future”.

Ex, B1-17, BCUC response to TRAVHOL IR 1.6.4

119. Again, in response to BCUC IR 1.5.3 (Ex. B1-6), BCTC stated:

“BCTC does not consider it desirable to reduce the ROW width given the difficulties of obtaining new right of ways and the long-term growth in electricity demand resulting in the need for expanded transmission facilities.”

120. BCTC was unable to commit during the hearing if or when the remaining overhead line on the Tsawwassen ROW would be removed.

T. 8, p. 1183, lines 10 – 21

121. Under BCTC’s proposal for Option 2, there would be at least some period of time, probably at least 10 years, perhaps longer, during which BCTC would have transmission works both above ground and underground along portions of the Tsawwassen ROW. In some

properties, BCTC would have two ductbanks underground, together with one overhead line for that duration.

T. 15, pp. 2607 – 08, line 15

122. Bearing in mind the proposed 175 foot width of the underground ROW, in the above case, BCTC would simultaneously require access over all of that underground portion of the ROW, and a significant portion of the overhead portion of the ROW.

T. 19, p. 2905, lines 17 – 26

123. Thus, to the extent that an “exchange” would be said to be occurring, BCTC will be giving up very little, if anything, for an unknown, and possibly protracted period of time. The Tsawwassen property owners have every reason to be skeptical of the efficacy of such an arrangement, and should not be faulted for the position they have taken.

124. BCTC will continue to require legal rights of access to its overhead ROW in Tsawwassen. BCTC has not unambiguously spoken about surrendering its overhead rights. As such, the only conclusion that can be reached is that BCTC would end up having to acquire additional rights that it does not presently have.

125. The question arises as to how it will acquire those rights, and at what cost. Despite all of the questioning that occurred on that topic, we are no closer to having an answer.

126. BCTC’s intention is that the proposed underground ROW would be 175 feet wide, the same as its existing ROW. The evidence shows that there are numerous instances where improvements, including residences, have been built on the ROW. A comparison of the 17

properties with encroachments for which letters of permission have been issued (as seen in Ex. B1-71) with the over 70 properties with encroachments identified in “Reference 3” to Ex. B1-63, shows that there are numerous non-permitted encroachments on the ROW, including many residences.

127. BCTC was unclear on how it would treat that part of its proposed underground ROW that would be encumbered by improvements such as residences. Strictly speaking, such encumbrances would presumably be prohibited by both the ROW agreement, and BCTC’s Partners in Use document. BCTC’s evidence was that while it has allowed encroachments on rights of way, “(g)enerally the practice has been to say no to such requests.

T. 17, p. 2909, lines 4 – 8

Ex. B1-6, BCTC response to BCUC IR 1.3.3 (ROW agreement)

Ex. B1-6, BCTC response to BCUC IR 1.14.1 (Partners in Use document)

#### Expropriation Related Costs

128. Delta believes that Option 2 will ultimately require BCTC to expropriate at least some of the access rights it needs, and that BCTC has not properly taken into account the cost of expropriation. When that amount is properly accounted for, the cost of Option 2 will likely be significantly higher than estimated by BCTC, making other options, particularly Option 4, more compelling.

129. The role of expropriation in the VITR remains uncertain. While there is an argument that the issue might be moot if BCTC is granted a CPCN for Option 1, Delta submits that it is still relevant for the following reasons:

- If a majority of Tsawwassen ROW residents agree to the proposed exchange as part of Option 2, BCTC will still have to acquire underground rights from the remainder; this discussion will assist the Commission to determine the potential cost to acquire rights from those other property owners;
- It helps to establish scale of magnitude valuations of the property interest that BCTC is seeking to obtain from the property owners as part of the exchange along the ROW;
- It shows the inaccuracy of BCTC's assumptions and testimony about the cost of acquiring the ROW being nominal; and
- Should the Commission conclude that a CPCN should be issued for the VITR, it gives a more accurate assessment of the likely true cost of Option 2 that can be used in comparing its financial cost to the other VITR options.

130. There are four types of costs that BCTC would incur in relation to expropriation:

- The transaction costs related to actually undertaking the expropriation (e.g., Land Title Office filing fees, surveys);
- Compensation to owners for the interest in land acquired;
- BCTC's legal, appraisal and other fees in relation to defending any claim for additional compensation;
- The legal, appraisal and other fees of property owners who make claims for additional compensation.

131. BCTC appears to have only considered the first and third of the above items. BCTC has budgeted \$400,000 for survey, legal and other costs "to exchange rights of way". It is unclear if this is intended to include the transactional costs of expropriations, such as obtaining surveys and preparing the various documents required by the *Expropriation Act*, or just the transactional costs associated with

voluntary “exchanges”, such as preparing new or modified documents to be filed in the Land Title Office. BCTC estimates that its costs to resolve any compensation claims may be \$250,000. BCTC states that the latter figure consists of legal fees and expert’s fees.

Ex. B1-6, BCTC Response to BCUC IR’s 1.86.1 and 1.108.2

Ex. B1-11, BCTC Response to Delta IR 1.18.0

132. BCTC has not determined the level of compensation that would be required should expropriation be necessary, other than to say that it believes that it would be “nominal”.

Ex. B1-19, BCTC Response to Holmsen IR 2.44.1

133. BCTC does not have legal authority to expropriate land. Instead, that would have to be done by BC Hydro. For the purpose of this submission, Delta will assume that BC Hydro’s expropriation authority would extend to BCTC’s undertaking. However, Delta submits that point to be open to dispute, and a source of risk that BCTC has not adequately considered.

Ex. B1-70

134. The procedures and legal principles governing any expropriations by BC Hydro for the VITR are governed by the *Expropriation Act*, R.S.B.C., 1996, c. 125, as amended by the *Expropriation Amendment Act, 2004*.

135. Under section 20 of the *Expropriation Act*, the entity doing the expropriation (the “expropriating authority”) must make a payment of compensation to the owner or owners of the land being expropriated and provide the owner or owners with a copy of all appraisal or other reports upon which the value of the payment is based. Thus, BC

Hydro will be required to undertake appraisals of each interest being expropriated.

136. If the property owner is not satisfied with the amount of the section 20 payment, the owner has one year to commence a claim in B.C. Supreme Court for additional compensation.

137. Section 45 of the *Expropriation Act* provides that the owner's costs to assert a claim for additional compensation is to be paid by the expropriating authority, that is BC Hydro, subject to certain conditions. So long as the compensation ordered payable in that claim is greater than 115 percent of the amount of the advance payment, under section 45(3) of the *Expropriation Act*, the owner is entitled to be paid by the expropriating authority its costs of asserting its claim. Put another way, if the owner receives \$100 at the time of expropriation as advance compensation from the expropriating authority (whether BCTC or BC Hydro), and it is ultimately determined that the market value of the interest taken is \$116 or more (including the amount of the advance payment), the owner is entitled to recover from the expropriating authority all of its legal, appraisal, and other costs incurred for the purpose of asserting its claim.

138. The legal and appraisal costs that an owner is entitled to recover is based on the *Tariff of Costs Regulation* (B.C. Reg. 189/99), established under the *Expropriation Act* (the level of "other" costs recoverable, which typically may include planning consultants or, in the case of businesses, business valuers, are not governed by the Tariff). Under the *Tariff of Costs Regulation*, recoverable costs are based on units for specified steps on a list, similar to that established under the *Supreme Court Rules*. Thus, for example, the legal costs payable for a two day trial (the minimal realistic duration of an

expropriation claim; most are considerably longer) with no examinations for discovery, and no interlocutory motions would be probably based on 50 – 60 units, or \$7,000 to \$8,400, before taxes, appraisal costs, and other disbursements.

139. Appraisal fees are also governed by the *Tariff of Costs Regulation*. Assuming one day of court attendance by an appraiser, and using the mid point of the discretionary items in the Tariff would result in appraisal costs of \$7,500 before taxes and appraisal related disbursements.

140. Thus, in the case of a hypothetical owner along the ROW who had been paid \$100 in advance compensation, but who is found to be entitled to compensation of \$116 or more (including the \$100 advance compensation payment), that owner would have an absolute entitlement under section 45 of the *Expropriation Act* to recover at least \$14,500 in legal and appraisal costs, plus other disbursements and taxes (plus the additional \$16 or more in compensation for the taking). This assumes a short trial with no pre-trial steps being taken. Delta submits that this scenario is unrealistically optimistic and that in all likelihood a compensation trial would be longer (probably at least four to five days), and the costs to which the owner would be entitled would be correspondingly higher.

141. The above figures do not include the legal, appraisal and other fees that BCTC or BC Hydro would pay its lawyers and appraisers to prepare for and defend the claim. While BCTC and its legal advisors can determine the actual legal fees that would be incurred in defending a claim, Delta submits that those fees would likely be somewhat higher than \$7,000 per claim. Similarly, fees will have to be paid for the evidence of the appraiser at the trial. Again, Delta submits that those

fees would likely be higher than the \$7,000 per claim that would likely be recoverable by the owner for its appraisal costs.

142. Adding up the above figures, the actual costs incurred by BCTC or BC Hydro to defend any single expropriation claim will likely be at least \$29,000 before taxes, assuming a two day trial with no pre-hearing steps (\$7,000 in claimant's legal costs, plus \$7,500 in claimant's appraisal costs, plus at least the equivalent in costs for BCTC or BC Hydro). In reality, Delta submits that actual costs incurred per claim would be significantly greater.

143. To the extent that more than one claim for compensation is made, the potential costs to the expropriating authority increase accordingly. There was no evidence to support a conclusion that any of the over 100 owners of property along the VITR right-of way were interested in BCTC's proposed exchange. Indeed, taken as a whole, the evidence from the hearing shows opposition to BCTC's proposal. However, if BCTC obtains exchanges from 52 owners, it will face potential expropriation claims from perhaps up to 50 other property owners. This could easily result in at least \$1.5 million in legal and appraisal fees and costs payable by BCTC, without any allowance for additional compensation that would be payable if any of the owners are successful in their claims.

144. Should BCTC argue that economies of scale in hearing costs might be achieved by consolidating claims, Delta submits that consolidation can just as easily cause a matter to bog down in delays and increases in hearing time arising from the multiplicity of parties, issues, and associated matters (including motions for severance). In any event, Delta submits that the hearing costs discussed above are very conservative, that a more realistic conclusion is that any claim would

take longer and be more costly for BCTC/BC Hydro to resolve, and that the figures cited above for legal and appraisal costs could easily double or triple.

145. If the compensation awarded to an owner is 115 percent or less of the advance compensation payment, the court has a discretion under section 45(5) of the *Expropriation Act* to award an owner some or all of its costs. In practice, this discretion is rarely exercised against property owners asserting unsuccessful claims.

For example, see *Demosten v. Her Majesty the Queen in Right of British Columbia* (1996) 60 L.C.R. 68 at p. 5 of 6 (BCECB)

146. As noted above, these figures do not include actual compensation awarded to an owner for the property interest taken (and which BCTC says would be nominal). The compensation payable on an expropriation is governed by Part 6 of the *Expropriation Act*. Section 31 sets as the basis for compensation the market value of the owner's interest in the land or interest in land taken. Thus, the compensation payable under the *Expropriation Act* would not necessarily be the same as the loss of property value discussed above and in the evidence of Dr. Gregory.

147. Section 33(d) requires that in determining market value of the land, no consideration be given to any decrease in the value of the land resulting from the development for which the expropriation is made. This is sometimes known as the "project influence" rule. Put another way, any negative effect on the value of the expropriated land that arises from the presence of the power line has to be excluded when determining the market value of the land taken. This has the effect of increasing the base price of the land when determining the compensation payable for the interest taken. As noted above, there

was evidence of the existence of such a negative effect for the Tsawwassen ROW properties in a variety of sources, including the assessment records of the BC Assessment Authority.

Ex. C3-41 (Affidavit of Marcia Newman)

Ex. C3-42 A – C, Ex. C3-43 (notes of Neil Atchison)

Ex. C1-25, C1-29 (Holmsen evidence and worksheets)

148. Section 40 of the *Expropriation Act* deals with the expropriation of only a portion of a property, such as would be the case with Option 2 of the VITR. Section 40(3) states that in no case must the compensation taken be less than the market value of the ratio of the land taken to the area of all of the land before the taking occurred, with an appropriate deduction if the interest expropriated is an easement, right-of-way or other less than fee simple interest.

149. In the case of the VITR, it was BCTC's evidence that it wished to acquire underground rights over the same area as it held in its existing ROW. The evidence shows that, in most cases, the ROW covers at least one half of each of the properties upon which it is situated in Tsawwassen.

Ex. B1-11, BCTC response to TRAVHOL IR 1.159.2 (typical cross sections)

Ex. B1-63

150. Exhibit C5-18 estimated the area of the ROW in Tsawwassen to be approximately 48.6 acres. At T. 17, p. 3022, lines 11 – 26, BCTC suggested that 44 acres was the more accurate figure.

151. Thus, to the extent that BCTC achieves exchanges with a bare majority of property owners, it may have to still acquire underground

rights over perhaps one half of the area of the Tsawwassen ROW, conservatively estimated at 20 acres.

152. The question arises as to what might be the value of those rights under the *Expropriation Act*. Although there was some evidence suggesting that BCTC had estimated a value of \$244 per square meter for easement acquisition, BCTC's evidence was that it has not determined the market value of the interest in land that it might have to acquire, or the market values generally of the properties subject to the Tsawwassen ROW.

T. 15, p. 2604 – 05, Ex. C4-4

T. 24, p. 4628, lines 1 – 9

153. The starting point is the market value of the properties. The best evidence in the hearing on the market value of those lands is from the BC Assessment Authority. According to BCAA valuations, the 2006 assessed value of the land only (i.e., excluding value of improvements) along the ROW is \$36,895,000.

Ex. C3-42-B (page 7 of 9, 3<sup>rd</sup> column from right at bottom)

154. Using the assumption that approximately one half of the area of the properties along the ROW is actually in the ROW (which appears to be conservative), then the market value of the land portion only of the properties in the ROW would be approximately one-half of the \$36,895,000 assessment, or perhaps \$18,400,000. Subtracting another half of that value to represent the land held by the minimum number of owners required to reach an exchange of rights reduces the value of the fee simple interest in lands to be acquired to perhaps \$9 million. If more owners agree to the exchange, the value of the lands to be acquired decreases accordingly.

155. Under section 40 of the *Expropriation Act*, the compensation for a partial taking is to be adjusted if an interest less than fee simple, such as an easement, is taken.

156. Delta acknowledges that the precise valuation will be based on the facts and evidence of the case. However, the available evidence in this proceeding allows some determination of potential compensation payable for easements in terms of scale of magnitude.

157. Reported decisions of compensation tribunals and courts show that easements for underground access rights are frequently valued at 50 percent of the fee simple value of that land (and sometimes more).

*Cokato Dairy v. Fernie Dairy and Stock Farms Limited v. City of Fernie* (1994) 54 L.C.R. 199 (BCECB)

*Talisman Energy Inc. v. Fay and Fay* (February 10, 2006) E.C.B. No. 09/04/264, at paras. 7, 48, and 53

*Demosten* (supra)

158. Applying the 50 percent figure to the market value of the approximately \$9 million value of fee simple land in the Tsawwassen ROW that might need to be acquired for Option 2 leads to potential compensation of up to \$4.5 million for those underground access rights.

159. Mr. Dybvig was unable to agree with the suggestion put to him in cross examination that compensation for expropriations of underground easements for linear developments is often made at 50 percent of the fee simple value of that land. He pointed out that decisions of the BC Expropriation Compensation Board or the courts did not form part of his analysis. Similarly, he testified that he doesn't "make a point" of reading the Land Compensation Reports, which is a

legal journal that reports decisions of courts and tribunals concerning compensation on expropriations.

T. 24, p. 4631, lines 14 – 25

T. 24, p. 4632, lines 2 – 14

160. A further basis for compensation for the expropriation of a partial interest in land is provided by section 40(1)(b)(i) of the *Expropriation Act*, which permits compensation for

“ . . . the reduction in the market value of the remaining land . . . attributable to the taking or that result from the construction or use of the works for which the land is acquired.”

161. That is, to the extent that there is any negative effect on the value of that part of land along the VITR ROW that is not expropriated, compensation is also payable to the owner of that land by the expropriating authority. This is known as injurious affection. Delta submits that both the caselaw and the evidence in the hearing supports a conclusion that, for Option 2 expropriations, the remaining portions of those properties in Tsawwassen crossed by, but not actually in the VITR ROW, will also suffer a loss of value. While the precise of this loss of value is not important for the entitlement to compensation, Delta submits this loss would be mainly attributable to EMF-related stigma, and that this could reasonably form the basis for additional compensation payable by BCTC/BC Hydro.

162. A recent example of compensation being awarded for injurious affection to the unexpropriated remainder of a parcel of land that was expropriated for a transmission line is the decision of the Ontario Municipal Board (“OMB”) in *Lazar v. Hydro One Networks Inc.* (June 11, 2002) OMB Decision 0781. In *Lazar*, Hydro One expropriated an easement over a portion of a 90 acre rural property to construct a

transmission line. While there was already an existing transmission line easement on the land, the easement did not allow the towers proposed by Hydro One. The claimant sought compensation of \$130,000, based on the value of the easement, and injurious affection to the unexpropriated remainder of the parcel. Hydro One took the position that no injurious affection existed on the remainder, and that compensation of only \$3,000 should be awarded for the easement. The OMB held that the easement was worth \$8,000, and awarded \$77,751 for injurious affection to the unexpropriated remainder. It concluded that the non-expropriated portion of the property suffered a loss of value of 30 percent due to the presence of the towers on the easement. In that case, the impact on the remainder appeared to be due mainly to visual impacts.

See Ex. C5-10 (Delta Response to BCTC IR 1.15.0 (Ex. E, last case))

163. An example in British Columbia of compensation being awarded for injurious affection based partly on stigma, this time involving property adjacent to a sewage treatment plant, is *Reti v. District of Sicamous* (1999) 68 L.C.R. 296, where compensation consisting of 30 percent of the pre-construction value of a residential property was awarded to a property owner.

164. Delta does not propose to estimate any range of potential compensation for injurious affection in the case of Option 2, but only wishes to observe that the case law suggests that this is matter that could be significant, and should not be discounted or ignored.

165. Section 40 is subject to section 44, which allows for deductions for works that are of special benefit to the owner. Delta submits that there is no evidence that section 44 would reduce the compensation payable for the acquisition of underground rights for the VITR.

166. Should the section 20 advance payment be less than 90 percent of the compensation awarded, section 46 of the *Expropriation Act* requires additional interest be paid on the amount of the difference at an annual rate of five percent.

167. As a corporate entity, BCTC does not have any direct experience in the expropriation of land. Instead, BCTC would be relying on BC Hydro. However, and somewhat surprisingly, the evidence at the hearing on the knowledge and experience of BC Hydro in the expropriation land was unclear. Mr. Barrett testified in cross examination as follows:

“BCTC, of course, is a relatively new organization and as we’ve testified before, we don’t – this panel isn’t aware if we’ve actually completed an expropriation since BCTC was formed. But I can assure you that we have a large number of people who have been involved in such actions in the past”.

T. 10, p. 1442, lines 15 – 21

168. However, when this issue was discussed with Mr. Dunne, who was identified as the appropriate respondent for such matters, Mr. Dunne testified that, to his knowledge, the last time that BC Hydro had been involved in an expropriation of land was in “the early 90’s”.

T. 17, p. 3001, lines 12 – 25

169. Thus, on the evidence, BCTC has no experience with the expropriation of land and BC Hydro has had no experience expropriating land in at least 12 or 13 years. BCTC did not call any witness with experience in expropriation to speak to expropriation matters. Mr. Dybvig testified that he was not called to speak to

expropriation related matters, and had not been retained for such advice.

170. Mr. Dybvig's report did not report on the compensation that would be expected for any expropriation and, in cross examination, Mr. Dybvig confirmed that he had not been asked to consider the matter. As was noted by Mr. Barratt, BCTC had no other material to support its conclusion that only nominal compensation would have to be paid.

Ex. B1-37

T. 24, p. 4623, lines 12 – 20

171. Delta submits that this Commission should consider BCTC's evidence and any submissions on expropriation related issues with considerable caution. Notwithstanding the confidence expressed by Mr. Barrett, neither BCTC nor BC Hydro seem to have had any real work experience dealing with expropriation issues or claims in British Columbia in recent years.

### **Option 3**

172. BCTC does not, in its final argument, determine that Option 3 is the preferred alternative for the VITR. Indeed, BCTC's comments on Option 3 are brief and essentially recount some of the relative impacts of the option. The evidence does not support a conclusion that Option 3 meets the test of public convenience and necessity, and, on its face, BCTC's argument does not actually take the position that Option 3 is in the public convenience and necessity.

173. Delta is opposed to Option 3. Contrary to BCTC's argument, Delta does not acknowledge or believe that Option 3 "is, in fact, feasible".

BCTC cites Mr. Reid's testimony to support its argument. However, Mr. Reid's testimony was that feasibility is site specific. Indeed, at Volume 23, page 4254 of the transcript, Mr. Reid again testified that while in some circumstances room for additional underground utilities can be found, it would not occur in each of the streets proposed for Option 3. The evidence shows that certain locations, such as the cul de sac at the north end of 53A Street, are particularly problematic in having the required room for the underground infrastructure associated with the VITR.

Ex. C5 - 6, Tab 1, Ex. D, page 4 of 6

174. More fundamental, however, is the overall lack of development of the proposal by BCTC. BCTC seeks to take Delta to task for "refusing" to explore Option 3 in further detail. This distorts the nature and context of the communications between BCTC and Delta. BCTC made limited contact with Delta (Ex. C5 – 6, Tab 1, Ex. A). BCTC did not pursue the matter, although it could have if it thought it was preferable or even viable, but did not do so. At most, BCTC's communications with Delta appeared to be in the nature of general questions.

T. 19, p. 3410, lines 3 - 20

175. BCTC has estimated that the underground ductworks for Option 3 would cost approximately \$14.9 million. This estimate is at a planning level, with a level of uncertainty of plus or minus 30 percent.

Ex. B1-54, BCTC response to BCUC IR 4.203.1

Ex. B1-113, BCTC undertaking response to Commissioner Hobbs

176. Delta believes that BCTC's costing of Option 3 is unrealistic and understates the likely actual cost. BCTC has assumed that the ducts would be buried at a depth of 2 meters below grade (Ex. C5-6, Tab 2,

Ex. A, p. 4). BCTC confirmed the depth of the ducts in VITR Option 3 would be dependent on the depth of existing utilities in Delta streets. Mr. MacPhail confirmed that BCTC had not done a detailed investigation of the utilities that VITR Option 3 would have to cross.

T. 17, p. 2924, lines 10 – 23

177. The evidence of Trent Reid shows numerous actual and potential conflicts with existing underground utilities in Delta streets for water, gas, telecommunications and electrical systems. These are typically found at depths of between 1 and 3.3 meters. Mr. MacPhail conceded that BCTC might have to relocate conflicting utilities. As BCTC did not do any detailed examination of utility locations and conflicts, it is reasonable to conclude that BCTC has not budgeted for the cost of relocating utility works that it would encounter in Option 3.

Ex. C5-8, Delta response to BCUC IR 1.2.1

T. 19, p. 3411, lines 19 - 26

178. Delta submits that it is likely that the ducts in Option 3 would be buried at depths greater than 2 meters. That would result in corresponding increases in construction cost. BCTC was unable to estimate costs for excavations as deep as 4 meters, noting that this would require engineering review. Delta submits that little confidence can be given to the BCTC's projected cost of Option 3.

T. 16, p. 2686 - 87

179. Using BCTC's own range of uncertainty, the underground portion of Option 3 in Delta streets could be up to \$4.47 million higher than estimated, or \$19.4 million. This would easily put the direct financial cost of phase 1 of Option 3 over that of Option 4, and close to that of Option 5.

Ex. B1-113

180. A comparison of the existing underground utilities along the potential Option 3 alignments in Delta, with the utilities in place along BCTC's Newall and Horne-Payne powers lines, shows that in many instances, Delta's streets have more existing underground utility works than was the case with the Newall and Horne-Payne lines (Ex. B1-19, BCTC response to Holmsen IR 3.54.1). However, significant portions of the latter two lines still had to be buried at depths greater than 2 meters. Indeed, portions of the Horne-Payne line where significant existing utility infrastructure was in place (e.g., intersection of Rupert and William Streets), were buried at depths of up to 6 meters below grade (Ex. B1-19, IR 3.54.1, sheet 8).

181. Thus, it is reasonable to conclude that in order to ensure minimal future interference with underground utilities in Delta streets, the VITR would have to be buried at a greater depth than that proposed by BCTC. Mr. MacPhail confirmed that it preferred to have a relatively constant depth to its conduit. This means that the ductbank's depth would be established for extended stretches by the greatest ductbank depth required by the presence of other utilities, and would not, for example, use minor adjustments to go deeper for short stretches where it met obstacles, such as other utilities.

T. 19, p. 3411, lines 3 - 18

182. Trent Reid's evidence was clear that Option 3 will result in significant and long term direct costs to Delta due to the presence of the VITR in its streets and other public places. The uncontradicted evidence of Mr. Reid was that those costs could be as high as \$420 per meter for road repairs, and \$200 meter for installation of underground works (Ex. C5-8, Delta response to BCUC IR 1.2.3).

183. BCTC has not proposed a means to address the additional costs that Delta would incur due to the presence of VITR Option 3. The decision of the CRTC in *Ledcor Industries v. City of Vancouver* (2001) 16 M.P.L.R. (2d) 22 (affirmed, 2002 FCA 500 (Fed. Court of Appeal)) supports the proposition that Delta would be entitled to recover from BCTC the causal costs Delta incurs due to the installation of the VITR in its streets, and subsequent maintenance. As noted in the preceding paragraph, those costs may be significant. BCTC has not made any provision for this in its overall costing for Option 3. While this cost might not be a capital cost for the purposes of this proceeding (about which Delta takes no position), it is a cost that would be incurred under Option 3, and is of a magnitude that would not be found with the other VITR options, and is relevant for consideration by the Commission.

184. The construction of Option 3 will result in significant disruption for Delta residents. At a minimum, this would involve temporary closures, especially in the case of residential streets, and interruption in provision of utilities to property owners.

T. 19, p. 3412, line 17 – p. 3413, line 16

185. While such disruption is a fact of life in urban society, it is not justified in the case of the VITR, which does not provide any benefit to the ratepayers of Delta, and for which there are viable alternatives available.

#### **Option 4**

186. Should the Commission conclude that a CPCN should be issued for the VITR, Delta submits that Option 4 is a viable and preferable routing alternative to Options 1 – 3 and 7.

187. Delta submits that there are several benefits to Option 4 over the routings in Tsawwassen:

- The line would avoid a residential area;
- The line would be located in a linear corridor containing transportation and other utility uses;
- Concerns over potential health effects of EMF's (and the potential health effects themselves) would be significantly reduced;
- The negative impacts on property values would be minimized.

188. BCTC raises three main arguments in opposition to Option 4: impacts on and opposition from the Tsawwassen First Nation ("TFN"), seismic conditions, and inter-tidal concerns.

189. Either in combination or individually, these issues (and especially the first two) formed the basis for BCTC's conclusion that a Highway 17 routing was undesirable, although not infeasible (e.g., see discussion at T. 16, p. 2658, line 1 – page 2659, line 22). The actual evidence supporting BCTC's position was, however, sparse and elusive.

#### TFN and Archaeological Issues

190. Despite being apparently aware of this proceeding (as confirmed repeatedly by Mr. Fralick in his testimony at T. 25) the TFN did not intervene in this proceeding, appear at the hearing, or otherwise communicate with this Commission. As such, there is no direct evidence of whatever concerns the TFN have about the VITR, or Option 4.

191. While Delta acknowledges that this Commission has the discretion to relax the rules of evidence before it, Delta also submits that when

making a determination on a substantive matter of significance to the outcome of a proceeding, more than simple (and often unattributed) hearsay, or second or third hand commentary should be required.

192. Regardless, Mr. Fralick confirmed that the TFN had been advised as early as December 2, 2005 that Option 4 might be approved by the Commission.

T. 25, p. 4758, lines 18 – 26

193. In its argument, BCTC relies on the testimony of Mr. Barratt concerning the relative impacts of Options 2 and 4 on archaeological resources. Mr. Barratt's response relied on second hand advice from others not at the hearing. As such, there was no way to determine the assumptions held by those individuals, including about the extent to which any potential impacts could be avoided or mitigated. However, and perhaps more fundamentally, the actual evidence introduced from the archaeological consultant retained by BCTC contradicts Mr. Barratt's testimony. The reports by Millennia Research Limited state that while 1.3 km of the Option 4 route has what is described as "high archaeological potential" (Ex. B1-57, Attachment 1, p. 6), in the case of Option 2, 1.6 km of that route has high archaeological potential (Ex. B1-57, Attachment 2, p. 48). Similarly, in terms of "medium" archaeological potential, the Millennia reports state that in the case of Option 4, only 0.9 km has potential, while the Option 2 route has 2.2 km of potential (*ibid.*).

194. According to Mr. Fralick, the TFN were concerned about a route option on TFN land or along Highway 17 "if it could disturb the archeological site which is known to be there". Accepting, for the sake of argument, that to be an accurate statement of TFN concerns, the evidence of Mr. Nelson for BCTC was very clear that horizontal direct

drilling (“HDD”) could be used “to go below the remains”. Thus, HDD could be used to avoid any interference with areas of archaeological concern along the Option 4 route.

T. 25, p. 4722, lines 16 - 23

T. 16, p. 2637, Lines 1 - 17

195. Further, Mr. Nelson confirmed that cables installed by HDD would be protected because of their depth and by a casing pipe.

T. 19, p. 3422

196. Although it was difficult to get a clear answer on the point, it appears that the position of the TFN on archeological issues related to Highway 17 did not consider the use of HDD, or the ability of HDD to avoid contact with the archaeological site.

T. 25, p. 4722 - 4723

197. Mr. Barratt’s testimony about his experiences in Port Angeles (referenced at paragraph 162 of BCTC’s argument) is simply irrelevant to this proceeding.

198. BCTC argues that it would have to acquire a right-of-way for Option 4 that is either through or adjacent to the TFN lands. Considering the significance of the matter, BCTC’s evidence on the nature of the existing transmission right of way through the TFN lands is distressingly vague and totally unsupported. While Mr. Dunne testified that he believed that the existing rights only allowed for overhead access, he also testified that he was relying on verbal advice received from an unattributed source at BC Hydro, and that had not actually seen the document in question.

T. 17, page 3015, line 10 – page 3019, line 9

199. Mr. Dunne’s evidence on that point is hearsay, and should not be relied on. No one from BC Hydro was called to confirm Mr. Dunne’s advice. Perhaps more important, BCTC has not produced the actual right of way document, despite being requested to do so (Ex. B1-134). Delta asks that an adverse inference be drawn against BCTC on this issue. This is information that is within the control of BCTC, and not within the control of Delta. BCTC should be able to support the basis for the testimony of its witness. Delta finds it surprising that BCTC’s position on this point would be based on second hand advice and submits that no weight should be given to BCTC’s evidence in that regard.

200. BCTC’s arguments about the lands in the existing right of way over the TFN lands having value for the treaty negotiating process are both speculative and irrelevant. Under the TFN AIP, the existing BC Hydro right of way along Highway 17 will continue to exist, post treaty.

T. 25, p. 4735, lines 1 – 14

Ex. B1 - 89, Chapter 3, clauses 7, 8

Ex. B1-134, April 12, 2006 response No. 2 by BCTC to undertaking at T. 17, p. 3027, line 21 to page 3028, line 5

### Seismic Issues

201. BCTC raises seismic issues as a concern for Option 4, although it clarifies this in its argument at paragraph 165 by stating that actual seismic conditions near the BC Ferries causeway “are not known with sufficient certainty to design stable foundations”. That is, BCTC did not actually do any independent investigations to confirm the basis for its professed belief. Thus, the evidence is not that Option 4 would not work from a seismic perspective, but that BCTC simply does not know.

T. 9, p. 1212, lines 9 - 18

202. The short answer to BCTC's concerns about seismic conditions is that it could go out and do the investigations. In response to a question from Commissioner O'Hara, Mr. Laprade for Delta testified that it would take about six weeks to do the required studies to assess the matter. This is an aspect of due diligence that BCTC should have undertaken in any event. The omission of such work highlights the superficial manner in which BCTC has examined and evaluated the VITR options. For example, the witnesses on BCTC's geological panel confirmed that they were not asked by BCTC to suggest any changes to improve the routings proposed by BCTC.

T. 23, p. 4272 - 4273

T. 20, p. 3641, lines 7 – 12

203. It was the evidence of Mr. Laprade for Delta that a combination of the Option 4 and Option 1 – 3 routes would be equal in terms of their geologic hazards (Ex. C5-6, Tab 1, Q. 6). This route was shown by Mr. Laprade in his response to BCTC IR 1.7.0. Mr. Laprade confirmed in cross examination that his views had not changed on the matter.

Ex. C5-10, Ex. B

T. 23, p. 4274

204. Mr. Atukorala confirmed that the concerns BCTC originally raised about the effects of gaseous soils on BCTC's proposed route for Option 4 did not exist in the case of the modification proposed by Mr. Laprade.

T. 20, p. 3644, lines 12 – 26

205. It is interesting that, despite BCTC's various protestations about the poor soil conditions along Highway 17, its lack of knowledge of actual conditions, and the need to conduct costly and time-consuming work,

BCTC had in its possession information that does not support its conclusions about the geologic conditions along Highway 17, and which should have justified further investigations by it. The National Harbours Board test holes from the BC Ferries causeway (Ex. B1- 57, Attachment 3) show that the soil at the area where the causeway meets the shoreline is not significantly susceptible to liquefaction. Delta submits that this evidence at least supports the feasibility of the modification to Option 4 proposed by Mr. Laprade. At a minimum, BCTC's failure to include or discuss (even discount) this information in its application materials is troubling. More to the point, the National Harbours Board testholes would have justified BCTC undertaking further examination of the matter prior to reaching any conclusions on the matter.

Ex. B1-11, BCTC response to Delta IR 1.9.0

206. Delta submits that no weight can be given to the evidence of Mr. Williams on this point. It was vague, inconsistent, and unsupported by any corroborating evidence or materials, which is surprising considering the significance of the matter to the evaluation of Option 4.

T. 23, pp. 4293 - 4296

207. With respect to the seismic risks associated with the water portion of Option 4, as that route was proposed by BCTC, the evidence was clear that the submarine cable would withstand any deflections that would be expected with seismic events.

Ex. B1-1, Vol. 2, Ex. F, pp. 37 – 49, 57 (2<sup>nd</sup> to last bullet)

T. 20, pp. 3627 - 3629

### Intertidal Areas

208. BCTC argues that Option 4 would have an increased impact in the offshore wetlands. However, the evidence was also clear that this was a matter that could be mitigated with a high degree of success. On balance, Delta submits that the severity of the environmental concerns suggested by BCTC is not supported by the evidence.

T. 16, p. 2808, line 20 – p. 2810, line 26

### Option 5

209. Should the Commission conclude that a CPCN should be issued for the VITR, Delta submits that Option 5 appears to be a viable and preferable routing alternative to Options 1 – 3. Delta agrees that further examination is likely required for Option 5, but does not believe that the option generally is infeasible, as stated by BCTC.

210. There are several prima facie benefits to Option 5 over the VITR routings proposed in Tsawwassen:

- The line would avoid the Tsawwassen residential area;
- The line would avoid the developed area of the TFN lands;
- The line would be located in a linear corridor containing transportation uses;
- Concerns over potential health effects of EMF's (and the potential health effects themselves) would be reduced, if not eliminated;
- The negative impacts on property values would be minimized, if not eliminated.

211. BCTC was dismissive of Option 5, labeling it as infeasible. Two primary concerns were raised by BCTC: (1) seismic risk north of Deltaport, and (2) risk from ships and anchors near Deltaport.

T. 9, p. 1202

212. However, the evidence was very clear that BCTC did not, in fact, undertake appropriate studies to support its conclusions. This was seen by the lack of costing provided for Option 5, although Mr. Barratt conceded that BCTC could have provided a cost for its best possible configuration.

T. 19, p. 3414, lines 17 - 26

213. BCTC's consideration of Option 5 was with only respect to a routing north of Deltaport, and focused on geophysical risks associated with Canoe Pass, and anchor damage associated with Deltaport.

T. 9, p. 1202, line 15 – page 1203 , line 14

214. Delta submits that the evidence supports a conclusion that a superior alternative exists to BCTC's proposed routing for Option 5 if instead the routing is modified so that rather than going north from the point where it meets the shoreline, toward Canoe Pass, it instead goes southwest from the point the Deltaport causeway meets the shore, to a point where it would meet the Option 4 alignment proposed by Mr. Laprade (the "Modified Option 5"). Mr. Atukorala confirmed that such a change in routing would negate the concerns raised about Option 5 in relation to its crossing the Roberts Bank Failure Complex.

T. 3642, line 6 – page 3643, line 10

215. BCTC relied on Ex. B1-66, the Robert Allen study, to support its concerns about the non-natural hazards facing Option 5. However, the Robert Allen study did not examine or purport to examine the area

between Deltaport and the B.C. Ferries causeway, which would be traversed by the Modified Option 5.

T. 17, pp. 2947, line 17 – p. 2948, line 4

216. The main non-natural marine concerns identified in the Robert Allen study were with respect to bottom trawl fisheries, tugboat towlines and anchors. There was no evidence that any of those would occur along the marine portion of the Modified Option 5 route.

Ex. B1-66, “Summary”

217. The risk from anchors was in the “Romeo” anchorage, which is 1.5 nautical miles to the west of Deltaport.

T. 16, p. 2677, lines 1 - 7

T. 17, p. 2952 - 53

218. BCTC refers at paragraph 177 of its argument to testimony from Mr. Barratt that includes a statement that

“ . . . the whole area is seismically unstable. There are soils in that area which are gaseous soils, and that’s covered in our geotechnical/geophysical report. That whole area is very very weak soils.”

219. However, there was no evidence to support that conclusion in the context of the Modified Option 5 route. Mr. Atukorala confirmed that any geologic concerns with gaseous soils were only applicable to slopes, and that there are no such slopes on the marine portion of Modified Option 5.

T. 20, p. 3643, line 12 – p. 3644, line 8

220. Delta repeats its response to BCTC’s concerns about eelgrass with Option 4 in response to any concerns BCTC may have about eelgrass or the intertidal area related to Modified Option 5.

221. On the evidence, Mr. Barratt's testimony that Modified Option 5 would pass through TFN lands along the shore (repeated in BCTC's argument at para. 177) appears to be incorrect.

Ex. B1-89, App. B

### **Option 6**

222. There was little discussion about Option 6 during the hearing. While Delta believes the option has merit, Delta recognizes that its cost will likely be significant. Bearing in mind the potential of Options 4 and 5 as well as VIC and JDF, Delta has no further position on the option.

### **Option 7**

223. There was little discussion about Option 7 during the hearing, and it does not appear that BCTC is recommending it. Delta does not believe that Option 7 is in the public convenience and necessity.

### **BCTC's Costing of VITR Options**

224. Delta does not have confidence in the costing by BCTC of the various options for the VITR.

225. The evidence from the hearing showed that in many instances, there was little or no back up for BCTC's cost estimates. Three areas related to costs that are considered in this submission are:

- restoration costs for Option 2
- expropriation costs for Option 2
- excavation costs for Option 3

226. In each case, a more detailed review of the costs indicates that BCTC's estimates had significant shortcomings. While some uncertainty is to be expected, the deficiencies observed should be enough to determine that BCTC has not done the due diligence that is required for the VITR.

#### Cable Costs

227. Delta is not in a position to conclude whether BCTC's estimated cost of submarine cable is reasonable. Delta is troubled by the delays in the tender process, but wishes to reserve its right to comment further on the matter, as provided for by the Commission in Exhibit A-76.

228. On balance, the underestimation of costs by BCTC is significant enough to (1) put into doubt BCTC's diligence in undertaking this matter, and (2) when considered at face value, make other VITR options, and Option 4 in particular, preferable to Option 2 when considered in financial terms.

#### **BCTC's Consultation with the Public and First Nations**

229. BCTC has not adequately consulted with the public. The evidence clearly shows that BCTC provided minimal information to the public and interested parties upon which to evaluate the alternative routings for the VITR. For example, the only information upon which the actual routes of Options 4 – 6 can be determined is Fig. 4-4 on page 101 of the Application (Ex. B-1).

230. In terms of the reporting by BCTC of its public consultation efforts, it is interesting to note that BCTC did not report on the response of the public to the VITR, despite having provided surveys at open houses that asked whether respondents were “supportive”, “unsupportive”, or “neutral or uninterested” in the VITR.

T. 9, pp. 1348 - 1351

231. BCTC has not taken appropriate steps to modify its application in light of public input it has received.

232. The only real modification made by BCTC to the VITR is it's on again, off again proposal to underground a portion of the VITR through Delta. As was observed on numerous occasions, this is not a modification that meets the concerns expressed by stakeholders about the VITR. Despite its hefty price tag, the proposal to underground is, in substance, window dressing.

233. The irrelevance of this modification is made all the more apparent by BCTC's attempts to have parties advise whether they preferred Option 1 or Option 2. While BCTC seeks to exploit this, the simple fact is that to these parties, the difference between Options 1 and 2 does not amount to a real choice, but is a choice between two undesirable outcomes. The parties are entitled to be cynical about BCTC's pursuit of that issue.

234. The emptiness of Option 2 became all the more apparent in the evidence of Jane Peverett, who testified that BCTC felt (and continued to believe) that the incremental cost of Option 2 over Option 1 was justifiable because of concerns that it perceived would arise over the visual impacts of Option 1 in Tsawwassen. It is simply inconceivable that BCTC finds it justifiable for its ratepayers to incur an additional cost of over \$12 million that is said to be based on visual impacts (for which there was little

evidence that this was of concern to the community), but would not spend any additional funds to address the very real concern in the community about EMF's, or, perhaps more fundamentally, the practice of locating transmission voltage power lines in residential areas, which was admitted by Mr. Gable to not be "preferable".

T. 9, pp. 1269 - 70.

235. While not determinative of the matter, community opposition to a proposed project "is not irrelevant". Delta submits that the only conclusion that can be reached about the views of the communities along the VITR routes is that the communities are opposed to the project. There is no evidence that supports a different conclusion.

*SE2* (supra) at p. 97

### **Position on Sea Breeze Proposals**

236. Delta believes that both JDF or a "VIC-like" proposal offer are innovative proposals that show much promise, and that either are preferable over any version of the VITR. Delta believes that there are many aspects of the JDF that warrant further consideration, including its potential benefits for trade, that the JDF has sufficient potential benefits to make it more in the public convenience and necessity than any version of the VITR, and that it would be appropriate for the Commission to order BCTC to undertake good faith negotiations, as sought by Sea Breeze in paragraphs 2 and 3 of Exhibit C31-21.

237. In that connection, BCTC testified that it can rely on bridging measures until sometime in mid to late October 2010, albeit with declining reliability. The evidence indicates that this would give a

sufficient cushion to Vancouver Island consumers while BCTC and Sea Breeze undertake negotiations.

T. 8, p. 1058, lines 1 – 10

### **Conclusion and Order Sought**

238. For all of the reasons discussed above, Delta submits that the appropriate Order should be as follows:

- Deny BCTC's request to approve the VITR as not being in the public convenience and necessity;
- Direct BCTC to negotiate in good faith with Sea Breeze to facilitate development of the JDF or VIC proposal;
- In the alternative, if the Commission finds the VITR to be in the public convenience and necessity, issue a CPCN for either of VITR Options 4 or 5, as those Options have been modified as described in this submission.

All of which is respectfully submitted, this 19<sup>th</sup> day of April, 2006

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