

**BRITISH COLUMBIA UTILITIES COMMISSION**  
**IN THE MATTER OF THE *UTILITIES COMMISSION ACT***  
**R.S.B.C. 1996, Chapter 473**

**and**

**Re British Columbia Transmission Corporation**  
**Project No. 3798395/Order No. G-70-05**  
**Certificate of Public Convenience and Necessity Application**  
**Vancouver Island Transmission Reinforcement Project**

**REPLY SUBMISSION OF**  
**TSAWWASSEN RESIDENTS AGAINST**  
**HIGHER VOLTAGE OVERHEAD LINES SOCIETY**  
**TO OTHER INTERVENORS**

**April 26, 2006**

## A. INTRODUCTION

1. While a number of intervenors recognize that BCTC's proposal to put new, higher voltage transmission lines directly under (or over) a large number of residential properties is inconsistent with modern day standards and a progressive energy policy (see, for example, the Final Arguments of Delta, Seabreeze and IRAHVOL), at least three intervenors take the parochial position that the public interest is essentially defined by the "lowest cost" option, and advocate for the Commission to approve VITR with overhead lines through the community of Tsawwassen (Option 1). (See the Final Arguments of BCOAPO et al. ("BCOAPO"), the Joint Industry Electricity Steering Committee ("JIESC") and the Commercial Energy Consumers of BC ("CEC")(collectively, the "Ratepayer Intervenors")).
2. It is telling, however, that, for a variety of different reasons, none of the intervenors appear to support Option 2, BCTC's "preferred" routing alternative under the backyards of the Tsawwassen residents. The fact that virtually all of the intervenors have concluded that Option 2 is not in the public interest further calls into question BCTC's insistence that Option 2 remains their preferred alternative, and reinforces TRAHVOL's belief that Option 1 is in reality the alternative that BCTC wishes BCUC to approve.
3. Indeed, it is apparent that TRAHVOL is not the only intervenor which has serious concerns with the *bona fides* of the new "proposal" introduced in BCTC's final argument, and which questions whether it is a transparent attempt on the part of BCTC to retreat to Option 1 without being seen to break its promise to the community of Tsawwassen (*see, for example, Corporation of Delta Final Argument, paras. 18-29*). Even the CEC acknowledges the "ill will" that is likely to be generated by BCTC's "Hail Mary" proposal from the Tsawwassen residents, who would "rightly perceive that a gun was being held to their head in an unfair negotiation" (*CEC Final Argument, paras. 226, 228*). At the least, there is absolutely no support for BCTC's new proposal from any of the intervenors, reinforcing TRAHVOL's submission that it must be categorically rejected.

4. Some of the intervenors, including Karsten Holmsen and Delta, have raised issues and arguments for and against the route alternatives through South Delta other than Options 1 and 2. Those arguments reinforce TRAHVOL's position that it cannot be determined whether any of Options 3, 4 or 5 are in the public convenience and necessity, and that BCTC must be required to undertake a proper and thorough examination of the route alternatives. BCTC's lack of due diligence, and the resulting "uncertainty" surrounding route alternatives other than Options 1 or 2, cannot form the basis for a conclusion that "the only debate is between Options 1 and 2" (*BC Hydro Final Argument, para. 19, JIESC Final Argument, paras. 74, 75*).

5. In this submission, TRAHVOL will reply, in the main, to the final arguments of the Ratepayer Intervenors to the extent that they advocate for this Commission to approve VITR with overhead transmission lines through the community of Tsawwassen (Option 1). In short, TRAHVOL submits that the final arguments of the Ratepayer Intervenors should be afforded little or no weight by this Commission as they did not lead any evidence or make any witnesses available for cross-examination. The arguments offer no meaningful analysis of the public interest, as they do not attempt to achieve any balance, within the context of the overall cost of the project, between the legitimate health and property devaluation concerns raised by Option 1, and the actual rate impact of measures or alternatives which might mitigate those concerns. There is no opportunity for this Commission to assess what the position of the Ratepayer Intervenors might be when presented with the competing issues and interests under cross-examination, including the specific rate impacts of alternatives to Option 1. Accordingly, their arguments are of little assistance to the Commission in determining the public convenience and necessity in this proceeding.

## **B. REPLY TO RATEPAYER INTERVENERS**

6. Perhaps not surprisingly, the Ratepayer Intervenors all point to the at least \$13 million cost differential between Option 1 and the other route alternatives through South Delta, and essentially argue that any of the more costly alternatives cannot be justified and would have an

unacceptable impact on rate payers. (*BCOAPO Final Argument, pp.7-8, 14-17, JIESC Final Argument, paras. 11, 23-24, CEC Final Argument, paras. 14, 212-218*)

7. But what is surprising is that none of the Ratepayer Intervenors actually address the rate impacts associated with the other route alternatives through South Delta, and whether those impacts are unreasonable in light of overall cost of the project (and the contingency), and the public health and property devaluation issues associated with Option 1. Put another way, the Ratepayer Intervenors do not meaningfully address the issue of whether alternatives to Option 1 might properly be considered “low cost” measures justified by the scientific uncertainty surrounding EMF and all of its attendant negative impacts on the residents along the ROW.

8. As set out in TRAHVOL’s final argument, the record before the Commission reveals the following:

(a) the overall cost of the VITR project is approximately \$250 million (*TRAHVOL Final Argument (“TFA”), para. 73*);

(b) the contingency for the project is approximately \$19 million (*TFA, para. 75*);

(c) An increase in project costs of approximately \$20 million would translate into a rate impact of approximately 0.1% (*TFA, para. 75 and cited references*);

(d) All major international organizations have acknowledged an association between EMF and childhood leukemia, and EMF is considered to be a “possible carcinogen” by the WHO.<sup>1</sup> Scientific studies have also demonstrated an association between EMF and

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<sup>1</sup> The media is now reporting that it is expected that the British Stakeholder Advisory Group on Extremely Low Frequency Electromagnetic Fields will recommend in June of this year that new homes not be built within 230 feet of power lines. This further reinforces the need for this Commission to take seriously the application of the precautionary principle with respect to the adverse health effects associated with EMF. TRAHVOL seeks leave to rely on the newspaper article, dated April 26, 2006, in

adult brain cancer, Lou Gehrig's disease, miscarriage and breast cancer (*TFA, paras. 43-51*);

(e) there are no scientific studies which address the long term health impacts of exposure to the uniquely high levels of EMF that would be experienced under Option 1 (or under the existing lines for that matter) (*TFA, para. 52*);

(f) the uncertainty around the health effects associated with EMF is causing considerable stress, anxiety and guilt within the community of Tsawwassen (*TFA, para. 54-61*);

(g) the uncertainty around the health effects of EMF, and the stigma associated with it, is having an impact on property values in Tsawwassen (*TFA, paras. 77-85*);

(h) this Commission has taken the position that "low cost attenuation" may be appropriate in mitigating the risks associated with EMF (*TFA, para. 72*); and

(i) Measures aimed at mitigating exposure to EMF which cost in the area of 4% of the cost of a project are considered "low cost measures" in California (*TFA, paras. 73-74*);

9. While the CEC seems to want to assign a monetary value to the life of a child living under the lines in Tsawwassen (see CEC Final Argument, paras. 178-185), and attempts to measure the reasonable cost of mitigation by that means (the merits (not to mention the ethics) of which are entirely questionable given, *inter alia*, that the health risk has apparently only been assessed for a one year period), the true question that should be asked of the membership of the Ratepayer Intervenors (and must ultimately be answered by this Commission) is, taking into account all of the above-cited facts, what impact on rates is reasonable to mitigate the issues and concerns associated with Option 1. Put another way, what would the Ratepayer Intervenors consider a "low cost measure" to mitigate EMF concerns?

10. With respect, it is entirely reasonable to question the position of the Ratepayer Intervenor in the absence of any witnesses being put before this Commission. What are members of the BCOAPO willing to pay to avoid exposing future generations to the risks associated with EMF? (it should be noted that the BCOAPO does not in any way represent the class of “residential customers”, as is suggested at p. 2 of the BCOAPO Final Argument) If the cost of a particular measure or alternative fell within the project’s contingency, would they still maintain an objection? Given that the CEC’s membership includes several municipalities (including Delta itself), what specific rate impacts will the CEC consider reasonable to mitigate EMF concerns in BC’s communities?

11. For its part, the BCOAPO seeks to characterize TRAHVOL as merely another example of the “*N*(ot) *I*(n) *M*(y) *B*(ackyard) *Y*(ard)” phenomenon (*BCOAPO Final Argument, p. 3, 1<sup>st</sup> paragraph*).<sup>2</sup> In fact, TRAHVOL’s position is more accurately captured by the expression “*Not In Anyone’s Backyard*”. TRAHVOL does not believe that it is in the public interest to put high voltage transmission lines in the backyards of any residents in British Columbia, and for that reason has consistently advocated for a proper examination of route alternatives that would avoid placing lines directly over or under residential properties.

12. The BCOAPO also places considerable emphasis on the fact that there is an existing right of way (which it notes BCTC has described as a “very significant public asset”), which was “known” to the residents when they purchased their homes. (*BCOAPO Final Argument, pp. 12, 18*)

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<sup>2</sup> At p. 16 of its Final Argument, the BCOAPO errs in suggesting that TRAHVOL interpreted BCTC’s commitment in March of 2005 to be a commitment to remove the existing lines. TRAHVOL has not taken any such position at any time in these proceedings, including in the Opening Statement cited by BCOAPO. There is similarly no merit in the suggestion later on p. 16 that TRAHVOL, in refusing to express a preference between Options 1 and 2, has been hoping that the Commission would “ignore the possibility of the existing right of way being used” – see para. 19 of the TRAHVOL Final Argument.

13. First, even the BCOAPO would be forced to agree that, if there was no existing right of way, it would not be in the public interest to put 230 kV transmission lines directly over or under 150 private backyards. Such a project cannot become in the public interest simply because there is an existing right of way, and this Commission should direct itself to the question of whether, in the year 2006, it is in the public convenience and necessity to put high voltage transmission lines directly through 150 residential properties.

14. In any event, the record is clear that the residents knew little or nothing of the possible risks associated with EMF (and in some cases were told there was nothing to worry about by BC Hydro<sup>3</sup>), and they do not consider it a “windfall” to be relieved of a lifetime of stress and anxiety about the impact of the transmission lines on their families. This Commission should also have regard for the evidence that neither BCTC nor BC Hydro took any steps to inform potential purchasers, or the community as a whole, of this pending project, despite the fact that it has been “in the works” since the early 1990s (indeed, there is evidence that BC Hydro perpetuated the understanding in the community that the existing lines were simply a “back up” system and, if there were to be any changes, the existing lines would be retired<sup>4</sup>). It simply cannot be said that any of the residents along the ROW were “fully informed” purchasers such that the Commission should adopt the “too bad, you bought it” approach of the BCOAPO.

15. To the extent that the Ratepayer Intervenor also cite Option 1 as being the most “reliable and “timely” of the route alternatives through South Delta (and in comparison point to the possible legal obstacles and challenges that Option 2 may face) (*see BCOAPO Final Argument, pp. 13-14, JIESC Final Argument, paras. 12-13, CEC Final Argument, para. 208*), other intervenors have raised the spectre that Option 1 may face similar hurdles before it is successfully

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<sup>3</sup> See, for example, Ex. C3-19B, Parhar Affidavit, para. 4, Childs Affidavit, para. 4, Dunstan Affidavit, para. 3, Schallig Affidavit, paras. 5-7

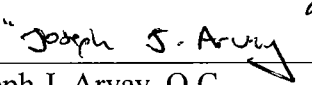
<sup>4</sup> See TR 12, p. 2027, line 21 to p. 2029, line 24, and Ex. C3-19B, Childs Affidavit, para. 4, Malzseniczky Affidavit, paras. 4-7, Parhar Affidavit, para. 3, Schallig Affidavit, paras. 5-7; Sutherland Affidavit, para. 3

implemented (*Delta Final Argument, para. 58, TRAHVOL Final Argument, paras. 8-22*)

16. Finally, the Ratepayer Intervenors raise, in one form or another, a classic “floodgates” argument, cautioning this Commission about setting a “precedent” by selecting any alternative other than the lowest cost option (*see BCOAPO Final Argument, p. 18, JIESC Final Argument, paras. 39-42, CEC Argument, para. 197 (in respect of the complaint)* ). The Commission should assign no weight to such arguments. First, it is completely unprincipled to determine the public interest by reference to the undefined fear of what others may do in the future. Second, and in any event, the record is clear that this proceeding presents this Commission with an entirely unique situation in British Columbia, with a large number of residential properties fully within a transmission line corridor (*see TRAHVOL Final Argument, paras 35-40*).

ALL OF WHICH IS RESPECTFULLY SUBMITTED

Dated at Vancouver this 26<sup>th</sup> day of April, 2006.

  
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Joseph J. Arvay, Q.C.

  
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Mark G. Underhill

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# Appendix "A"

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## Experts rule out houses near pylons

By Nic Fleming, Medical Correspondent  
(Filed: 26/04/2006)

Homes should not be built near overhead power lines because of possible links with childhood leukaemia, Government-appointed experts are expected to conclude.

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They are likely to recommend a change in planning guidelines so that new homes cannot be built either within 230ft of power lines or in a location that exposes inhabitants to electromagnetic fields (EMFs) of a certain strength.

A report by Dr Gerald Draper, of the Oxford childhood cancer research group, published two years ago, suggested that children under 15 living near high-voltage power cables may have double the risk of getting leukaemia. The seven-year study was commissioned by the Department of Health.

However, while the research found a statistical association, it did not establish a causal link and other scientists were sceptical of the findings.

Two reports containing recommendations on the proximity of power lines to both new and existing houses, as well as advice on electrical wiring in the home, will now be presented in June.

They are being drawn up by the Stakeholder Advisory Group on Extremely Low Frequency Electromagnetic Fields (Sage), an advisory group set up by ministers in October 2004, following the publication of Dr Draper's research.

The group includes representatives of the Department of Health, the National Grid, the Health Protection Agency, the Office of the Deputy Prime Minister and the Council of Mortgage Lenders.

Academics from Bristol University and Nottingham Trent are also members, as well as a number of campaigners from groups committed to highlighting what they believe are the potential dangers of EMFs.

Alasdair Philips, of the consumer group Powerwatch and a member of Sage, said that a large majority of those drawing up the reports was in favour of recommending

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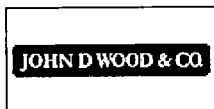
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precautionary advice.

"The link between childhood leukaemia and power lines is accepted pretty much worldwide.

"There is almost certainly going to be some precautionary guidance coming out of the report in June.

"There is a lot of agreement that we need to offer more precautionary advice on the siting of new house - 90 per cent of the advisory group agree with this line.

"I think it is highly likely we will see a recommendation that we change the way we wire our houses. There is no real opposition to that."

Representatives of the National Grid and Ofgen, the industry regulator, are understood to favour a recommendation that new homes should not be built within a specific distance - likely to be 230ft - of power lines.

Others in the group, including Mr Phillips, are pushing for the ban to be based on homes being exposed to a certain level of strength of EMFs.

While initial advice will be to do with restrictions on the building of new homes, Sage members will include in their supporting material an analysis of the costs of knocking down and replacing homes thought to be exposed to potential harmful field strengths.

Starting this summer two more sub groups of Sage, looking at electricity distribution and electric transport, will begin drawing up reports.


A spokesman for the Department of Health said: "There is no new evidence to suggest a link between power lines and childhood cancers.

"However, we realise there is more research to be done. We have been closely following developments in this area for many years.

"Ministers will consider the group's recommendations."

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