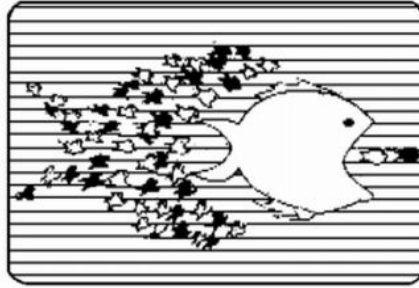


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Our File: 7380

July 17, 2008

Erica Hamilton
Commission Secretary
BC Utilities Commission
Sixth Floor - 900 Howe Street
Vancouver, BC V6Z 2N3

VIA EMAIL

Dear Ms. Hamilton:

Re: FortisBC Certificate of Public Convenience and Necessity for the Okanagan Transmission Reinforcement Project ("OTR Project") - Project No. 3698488 Final Submissions of BCOAPO *et al.*

1. We are writing to provide our final submission in this proceeding on behalf of the BC Old Age Pensioners' Organization, BC Coalition of People with Disabilities, Council of Senior Citizens' Organizations of BC, federated anti-poverty groups of BC, and Tenant Resource and Advisory Centre (collectively referenced as "BCOAPO *et al.*").

1. Overview of the Project

2. On December 14, 2007, FortisBC applied to the BC Utilities Commission ("the Commission") for a Certificate of Public Convenience and Necessity ("CPCN") for the Okanagan Transmission Reinforcement Project ("OTR Project").

3. The OTR Project involves a number of new and upgraded facilities that will result in a complete 230 kV transmission system between Kelowna and Oliver in the South Okanagan. FortisBC states that the Project is needed to alleviate system constraints, to serve the growing load, and to enhance reliability in the Okanagan. Principal elements of the Project are as follows:

- Modifying the BCTC and FortisBC portions of Vaseux Lake Terminal station to facilitate the conversion from 161 kV to 230 kV;
- Installing 28 km of two new parallel (double circuit) 230 kV transmission lines (75 Line/76 Line) from the Vaseux Lake Terminal station north of Oliver to RG Anderson Terminal station on the east side of Penticton;

- Replacing 11 km of 161 kV line with 230 kV (40 Line) from the Vaseux Lake Terminal station to the new Bentley Terminal station;
- Building the Bentley Terminal station in Oliver, which will connect to the new 230 kV line as well as existing lines including 11 Line (161 kV) from Warfield, 43 Line (138 kV) to Princeton as well as area 63 kV sub-transmission lines;
- Installing capacitor banks at both the FA Lee and DG Bell Terminal stations in Kelowna; and
- Converting the Oliver Terminal station to a distribution substation

4. The most critical issue that has emerged through FortisBC consultations with stakeholders and at the Oral Hearing is the appropriate route for the double circuit 230 kV line segment between the Vaseux Lake Terminal station near Oliver, and the RG Anderson Terminal station in Penticton. FortisBC is proposing to keep the lines on the existing right of way ("ROW"). South Okanagan For Alternate Route ("SOFAR") would like FortisBC to secure a new ROW upland, and for the lines to be taken off their properties and moved to this upland route.

5. FortisBC residential ratepayers are facing significant rate increases, and we are concerned that increased costs related to selecting an upland route for the 75 and 76 Lines will further burden low-income customers. We are also aware of the need to avoid interference with First Nations claims, of which there are some on the land proposed for the alternative upland route. If it was possible for the Commission to mitigate concerns of low-income ratepayers, First Nations, and SOFAR members in a cost-effective and timely manner, then we would support such an option.

2. Project Need

6. According to FortisBC, the Project is to be completed in 2010 and has a 2010 need date, in order to accommodate load growth in the Penticton area, provide full supply to Kelowna under normal and single-contingency conditions, and enhance double-contingency reliability for the Kelowna area. The specific issues the Project is meant to address include:

- Both the normal capacity and the maximum capacity ratings of the RG Anderson Transformer 2 have been exceeded (in 2006), an event that was not forecast to occur until 2011 (Exhibit B-1-1, Section 3, page 5);
- Capacity limitations on the existing 76 Line between Vaseux Lake and RG Anderson (Exhibit B-1-1, Section 3, page 7);
- The inability of supply to the area to currently meet single contingency (N-1) capacity requirements (Exhibit B-1-1, Section 3, pages 3 & 19); and
- The obsolescence of the Oliver Transformer 1 supply (Exhibit B-1-1, Section 3, page 20).

7. In 2003, at the time of the South Okanagan Supply Reinforcement Project approval (Commission Order C-3-03) it was recognized that future facilities would be

needed to alleviate potential overloading at the RG Anderson Terminal station, and installation was forecast to begin in 2012 (Exhibit B-1-1, Section 3, page 2). However Okanagan area load growth has outpaced previous forecasts (BCOAPO IR1.4.1) resulting in a need to advance the in-service date of the required facilities. For example, the winter peak demand is forecast to exceed system capacity in 2009 (BCUC IR1.5.3).

8. With the upgrade to 230 kV transmission there is a need to reconfigure transformation in the Oliver area to accept 230 kV supply. There is inadequate space at the current Oliver Terminal station site to accept a 230 kV circuit from Vaseux Lake (Exhibit B-1-1, Section 3, page 21, Section 4, page 4, and BCUC IR1.43.13). This has led to the need for the new Bentley Terminal station. (BCUC IR1.43.1) IR responses address the option of also locating the distribution substation functionality of the Oliver Station at Bentley and decommissioning the station entirely. However, FortisBC has concluded that this alternative would not be cost effective (BCUC IR 1.43.9 & 1.43.10).

9. Fortis BC also addressed the issue of the multiple voltages involved with the Bentley Terminal station, concluding that the proposal represented the preferred option on a reliability and net present value cost basis (BCUC IR1.43.5; BCUC IR2.75.2, Wait IR1.13 & 1.14; BCUC IR3.107.1; and Wait IR2.18a, b & c.

10. The infrastructure that is being added through this Project has significant long-term capacity to meet demand until at least 2026 (Transcript Volume 2 pages 224 line 9 – 225 line 17).

11. It does appear that the OTR Project is needed to meet system demands in the Okanagan, and that the Project has been planned to include the capacity to meet long-term demand.

3. Timing of the Project

12. Fortis BC's investigative and conceptual feasibility work on the Project began in 2005 and some of the final engineering design work is currently underway (Exhibit B-1-1, Section 5, page 5). The OTR Project is scheduled for completion in the fourth quarter of 2010 (Exhibit B-1-1, Section 5, page 6).

13. There have been power outages in the South Okanagan, supply facilities to the area are overloaded, and supply to the Okanagan does not currently meet N-1 capacity criteria. As load in the area grows, the number of hours in the year that these conditions exist will increase. Also, running equipment in excess of accepted capacity ratings shortens the life expectancy of the equipment and advances the need for repair and replacement.

14. There are several key factors that could lead to delays in Project completion (Exhibit B-1-1, Section 5, page 7):

- Changes to the route that require the acquisition of new ROWs and/or further consultation with First Nations and other stakeholders. This could delay the in-service date to 2012. The current route does not require any additional ROWs (Exhibit B-1-1, Section 4, pages 11 & 18 and BCOAPO IR1.3.1). Furthermore, existing ROWs allow for the installation of a second line and the increase in voltage (BCUC IR1.25.4 and 1.25.5)
- Unforeseen environmental or archaeological discoveries. Risk is considered low due to early public consultation and use of existing ROWs.
- Narrow construction windows for environmental impact mitigation and transmission equipment outages.
- Shortage of qualified contractors and materials due to market conditions

15. If FortisBC had applied to the Commission at an earlier date for this Project, then consideration of the alternative upland routes would have been viable, and the possibility of accommodating the need for the Project, First Nations interests, local ROW residents' concerns, and environmental approvals, may have been possible.

4. Project Cost

16. The overall capital cost of project is projected to be \$141.4 million. This estimate is expressed in nominal (as spent) dollars (BCUC IR1.29.1). The Project costs contain a 15% contingency (Exhibit B-1-1, Appendix G, page 3). There are different costs associated with the various route options between Vaseux Lake and RG Anderson Terminals.

17. Cost escalation for the Project was assumed to be 6% for the remainder of 2007, 5% for 2008 and 2009 and 4% for 2010. This is consistent with the construction cost trends outlook used by BCHydro. FortisBC has entered into an Engineering, Procurement and Construction Management contract with BCHydro Engineering. The contract was not tendered (BCUC IR1.60.1 and 1.60.2). FortisBC notes that 85% of all the OTR Project costs will fall under fixed price agreements.

18. The cost estimate would be classified as an ACE Class 3 estimate with a definition of 20% (BCUC IR1.31.6). Fortis BC states that it has a +20%/-10% level of confidence in the cost estimates. (BCUC IR1.33.1.1). The cost estimate was subjected to an internal review, but no third party review was undertaken (BCUC IR1.31.7 and 1.31.8).

19. There are a number of cost risks associated with the Project that could have a material impact due to current market conditions with respect to material and labour – despite risk mitigation efforts by FortisBC (BCUC IR1.34.3). Some of these are addressed by the contingency allowance (BCUC IR1.39.2).

20. The FortisBC application does not include a “cost capping” mechanism (BCUC IR1.60.6) FortisBC states that it does not favour a cost collar, and if one was imposed, would have to assess whether it was willing to proceed with the Project (BCUC IR1.60.7). FortisBC plans to manage the cost of Project through an internal Quality, Schedule and Cost monitoring methodology (BCUC IR1.60.6 and 1.72.4).

21. We expect that FortisBC will be regularly advising the BCUC, as part of the Capital Expenditures Plan approval process, about the status of the OTR Project cost outlook and reasons for variance from the CPCN Application. We submit that FortisBC should be directed, as part of its next Capital Expenditures Plan filing with the Commission, to report on the specific measures it has or will be taking to control the costs of the OTR Project.

5. Route Selection for 75 and 76 Lines between Vaseaux Lake and RG Anderson Terminal stations

a. FortisBC’s proposed and alternative routes

22. The OTR Project includes replacing the existing 28 km of 161 kV transmission line between Vaseux Lake and RG Anderson Terminal stations with two 230 kV transmission lines (double circuit). This is the same plan as contained in the 2005 System Development Plan (BCUC IR1.29.5). The cost of this portion of the Project is projected to be \$55.527 million.

23. The existing route crosses approximately 2 km of farm acreage, 0.8 km of vineyards, and 1.6 km of the Heritage Hills residential area. The existing ROW was established in 1965 and is 40 meters wide. This upgrade will involve single steel pole construction so that the two lines will fit within the existing ROW.

24. FortisBC’s Application includes consideration of one main alternative route, which involves an Upland greenfield route through tenured Crown land. The variations included putting two lines on the preferred (Alternative 1) route, putting two lines on the Upland route (Alternative 2) and putting one line on each route (Alternative 3)

Aspect	Alternative 1A	Alternative 1B	Alternative 2A	Alternative 2B	Alternative 3
Completion	2010	2010	2012	2012	2012
Cost (NPV)	\$60.1 M (2012 I/S) \$69.4 M (2010 I/S)	\$53.3 M (2012 I/S) \$61.8 M (2010 I/S)	\$68.7M (2012 I/S)	\$60.8M (2012 I/S)	\$64.3 M (2012 I/S)
Rate Impact	1.97%	1.75%	2.26%	2.00%	2.11%
Non-Financial	First	Second	Fifth	Fourth	Third

Factors					
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25. The Application considers different pole configurations for each alternative, with Alternatives 1A and 2A using 30.5 meter poles on the existing ROW (vs. the existing 15.8 meter poles); Alternative 1B using 26.85 meter poles (on the existing ROW); Alternative 2B using two 18.6 meter poles on a 51-60 meter right of way, and Alternative 3 using a single 17.2 meter pole on each route with 40 meter ROWs.

b. FortisBC, First Nations, and stakeholder concerns about the various routes

26. FortisBC undertook an analysis of alternative routes following consultation with First Nations, local residents and other stakeholders. There appear to be no contentious issues regarding the initial part of the route from Vaseaux Lake to Shuttleworth Creek. The issues arise only with regard to the portion of the route between Shuttleworth Creek and RG Anderson Terminal station.

27. Some of the owners of properties along the ROWs, represented by SOFAR, have expressed concern that their views of Skaha Lake will be adversely affected by the upgraded poles and lines. However, the ROWs that cross their properties allow for the upgrade, and most, if not all, of SOFAR and affected ROW property holders bought their properties after the existing line was in full operation.

28. FortisBC submits that Alternative 1 has a lower risk of delay (relative to Alternatives 2 & 3), is supported by affected First Nations, and does not involve a greenfield route. FortisBC is recommending Alternative 1A over 1B, even though 1A it is not the lowest cost option. This alternative is being proposed in order to mitigate health, environmental and aesthetic concerns, and significant increased costs associated with implementing Alternatives 2A and 2B by the Project need date of 2010.

29. Further, FortisBC has committed to reviewing opportunities to optimize pole locations within the ROWs, but not to the extent that siting would affect adjacent stakeholders (SOFAR/Wiltse Holdings IR1.10.1, SOFAR IR2.22.1).

30. The ROWs run mostly through rural and single family residential properties, and do not cross any schools or hospitals. Some of the properties that will be affected by the OTR Project, such as properties in the Heritage Hills area, have high property values and contain many acres of land. Below is a summary of MLS list and sale prices for a few of the affected properties over the past year (SOFAR Undertaking to BCOAPO – Transcript Volume 3, pages 512 to 516):

	Address and MLS Number	List Price	Status	Lot sq ft	Site Influences
1.	264 Heritage #46866	\$698,000	Active	23,086	Lake view, Rural setting, Landscaped
2.	296 Heritage	\$889,900	Active	24,393	Lake view, Cul de sac,

	#45294				Landscaped
3.	312 Heritage #44234	\$1, 490, 000	Active	23, 958	Lake view, Rural setting, Landscaped
4.	385 Matheson Road #43224	\$1, 495, 000	Active	387, 248	Lake view, Private setting, No thru road
5.	345 Parsons Road #44365	\$2, 349, 000	Active	665,596	Not Specified
6.	325 Parsons Road #44428	\$4, 900, 000	Active	1, 041,955	Not Specified
7.	271 Heritage #40243	\$559, 900	Sold \$550, 000	21, 780	Lake view, Park setting, Private setting
8.	215 Sunnybrook Drive #42853	\$599, 000	Sold \$600, 000	54, 450	Lave view, Park setting, Cul de sac
9.	276 Heritage #43828	\$674, 000	Sold \$668, 000	24, 829	Lake view, Rural setting, Handicapped adap.
10.	434 Panorama Cres #40560	\$675, 000	Sold \$642, 500	28, 314	Lake view, Park setting, Landscaped
11.	135 Christie Mtn Lane #40135	\$684, 900	Sold \$670, 000	24, 393	Lake View
12.	226 Heritage #42560	\$689, 900	Sold \$645, 000	21, 780	Lake view, Park setting, Private setting
13.	280 Heritage #42979	\$689, 900	Sold \$679, 000	23, 958	Lake View, Park setting, Private setting
14.	308 Heritage #40520	\$749, 800	Sold \$720, 000	67, 953	Lake View, Park setting, Private setting

31. BCOAPO acknowledges that the above list does not reflect all of the affected SOFAR properties. However, the properties described above have been listed/sold at very high prices. SOFAR witnesses acknowledged that if an Upland route was chosen by the Commission, this would likely result in an increase in value for the properties along the ROW (Transcript page 560 lines 4 – 17).

32. While selling properties may not be an acceptable or feasible option for some property owners along the existing FortisBC ROW, this could be an option for owners who are concerned about the effect of the upgraded lines and increased pole height associated with Alternative 1A.

33. If an upland route was to be approved by the BCUC, then BCOAPO supports the collection of mandatory community contributions in aid of construction (CIAC) and/or a rate rider from owners of ROW properties between Shuttleworth Creek and RG Anderson Terminal station, in order to cover increased costs related to moving the route upland. Our concern is that SOFAR has not put forward a concrete proposal about what CIAC or a rate rider would be, or whether its members would be willing to make such a contribution. At most, it appears that 40 members of SOFAR have said that they would be willing to contribute \$25 a month for an unspecified time period (Transcript Volume 2

page 259 line 25 – page 262 line 1; 267 line 14 – page 268 line 22; Transcript Volume 3 page 505 line 9 – page 509 line 11).

6. EMF Levels for 75 Line and 76 Line

34. SOFAR members expressed concern at the Oral Hearing and at the Community Input Session on June 23, 2008 that electric magnetic field (“EMF”) levels from the upgraded lines that will cross through the ROWs will result in negative health consequences for them. According to FortisBC, however, EMF levels associated with Route Alternative 1A will decrease from levels under the currently operating 161kV lines, and will be one milliGauss at the edge of the 40 meter ROWs. FortisBC also states that these levels are well within International Commission on Nonionizing Radiation Protection and World Health Organization guidelines, and at the edge of the ROW, will be approximately 1/800 of the 2007 Guidelines.

35. According to material filed in this proceeding, scientific research into potential health consequences of EMF is ongoing. FortisBC recognizes customer concerns about EMF, and has stated that anyone who has concerns can ask FortisBC to come to their home or school or anywhere else and measure EMF levels using a milliGauss meter (Transcript Volume 3 lines 8 – 14).

36. BCOAPO is mindful of the concerns of local property owners who are worried about the effects of EMF levels on their health. However, since FortisBC is recommending pole configurations that will result in a decrease to EMF levels at the edge of the ROWs, it is our view that this should mitigate some of the owners’ concerns.

37. And again, while selling properties may not be an acceptable or feasible option for some property owners along the existing FortisBC ROW, this could be a choice for owners who are concerned about health and safety concerns associated with the upgraded lines.

7. Wiltse Property

38. Two proposals have been put forward in the course of this proceeding to move the existing line off of the ROW on Wiltse Holdings Ltd. lands to some extent (BCUC IR2.83.1). The incremental costs of moving the line are estimated to be \$1.55 million (for the proposed route) and 3.7 million (for the preferred route): (BCUC IR2.83.2). Both of the Wiltse route options involve new ROWs over land that is not owned by Wiltse (BCUC IR2.83.4 and BCUC IR3.93.2 & 3).

39. BCOAPO does not support moving the line off of the Wiltse property unless Wiltse Holdings covers the entire cost of relocating the lines and the relocation does not result in any delays to completion of the Project.

8. Conclusion

40. We therefore submit that the OTR Project should be approved, with Route Alternative 1A on the existing ROW.

ALL OF WHICH IS RESPECTFULLY SUBMITTED.

BC Public Interest Advocacy Centre

Original signed by

Sarah Khan
Barrister & Solicitor
Counsel for BCOAPO *et al.*

c: FortisBC
Registered Intervenors