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Our File No.: 05497-181

December 5, 2008

BY EMAIL AND COURIER

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

Attention: Erica M. Hamilton
Commission Secretary

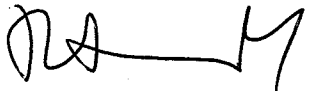
Dear Sirs/Mesdames:

Re: FortisBC Inc. Project No. 3698529 / Order G-146-08
Application for a Certificate of Public Convenience and Necessity for the Benvoulin Substation Project

Please find enclosed 20 copies of FortisBC's Final Written Argument in regard to the above captioned Application.

Yours truly,

FARRIS, VAUGHAN, WILLS & MURPHY LLP

Per: 

Robert J. McDonell

RJM/jss
Enclosures
c.c.: Intervenors

FORTISBC INC. FINAL SUBMISSION

A. INTRODUCTION

1. On September 24, 2008, FortisBC Inc. ("FortisBC" or "the Company") applied to the British Columbia Utilities Commission ("the Commission") for a Certificate of Public Convenience and Necessity ("CPCN") for the Benvoulin Substation Project ("the Project").

2. On September 26, 2008, the Commission issued Order G-146-08, wherein the Commission stated that it considered that a Procedural Conference was required to hear submissions on the regulatory process for review of the Application. The Procedural Conference was held in Kelowna on Tuesday, October 28, 2008.

3. Order G-146-08 also called for the Commission's Information Request #1, which the Commission issued on October 15, 2008 (Exhibit A-2). FortisBC responded to the Commission's Information Request #1 on October 29, 2008 (Exhibit B-3).

4. Following the Procedural Conference, the Commission issued Order G-161-08, dated November 3, 2008, which established a Written Public Hearing for review of the Application and scheduled a Community Input Session, to be held on December 2, 2008. As there was insufficient interest in the Community Input Session, it was cancelled by the Commission letter dated November 27, 2008 (Exhibit A-6).

5. Order G-161-08 also called for the Commission's Information Request #2 and for Intervenor Information Request #1. On November 12, 2008, the Commission delivered its Information Request #2 (Exhibit A-5), and two Intervenors, the BC Old Age Pensioners Organization (the "BCOAPO") and Tantalus Vineyards ("Tantalus"), delivered their Information Requests #1 (Exhibit C2-2 and Exhibit C4-2 respectively). FortisBC responded to the Commission's Information Request #2 and the Intervenors' Information Requests #1 on November 26, 2008 (Exhibit B-4).

6. For the reasons described in the Application and as further detailed below, FortisBC submits that the evidence before the Commission establishes that a CPCN for the Project should be approved as proposed in the Application.

B. DESCRIPTION OF THE PROJECT

7. The Project consists of construction of a new 138/13 kV, 32 MVA distribution source substation in the central/south Kelowna area on Casorso Road, southeast of the intersection of Swamp Road and Casorso Road, together with a transmission line connecting the new substation to the existing 138 kV 51 Line and the necessary distribution facilities to tie the substation into the existing distribution network (Exhibit B-1, at pp. 7 and 22).

8. The Project has an estimated cost of approximately $17.7 million (Exhibit B-1, at p. 23).

9. The new substation will initially include a single 32 MVA transformer with four feeder terminations. One feeder will support the existing Hollywood Substation; one will support both the Hollywood and OK Mission substations, one will support the OK Mission Substation; and one will support the DG Bell Terminal station (Exhibit B-1, at pp. 3-4).

10. The Project is planned for 2009/2010, to enter service in the fourth quarter of 2010 (Exhibit B-1, at pp. 54-55).

11. The components of the Project are further outlined below.

(i) Benvoulin Substation

The Benvoulin Substation will consist of:

- One 138 kV/13 kV, 32 MVA transformer with on-load tap changer with +/- 10% regulation and surge arrestors;
- Two 138 kV, SF6 Dead Tank, 1200A breakers with associated line protection and control;

- Four outdoor rated circuit breakers: one 15 kV, 2000A, SF6/Vacuum main breaker, and four 15 kV, 600A SF6/Vacuum feeder breakers;
- Mobile transformer access bay with isolation switches;
- Four 13 kV distribution egress cables out of the substation and a new 13 kV overhead and underground distribution line to connect to the existing distribution network.

(Exhibit B-1, at p. 28)

12. The new substation will be constructed on a site approximately 5.0 acres in size. The site is located in a significant topographical depression, which, together with the tree line, greatly limits the visibility of the site from surrounding properties (Exhibit B-1, at pp. 25-26).

13. The new substation will include space for the future installation of two additional 32 MVA distribution transformers and eight additional 13 kV feeder breakers, if and when customer demand for service requires.

(ii) Transmission

14. The Benvoulin Substation will be connected to the existing transmission line, 51 Line.

(iii) Distribution

15. The proposed substation will tie into the existing distribution network, with the following additions:

- Installation of six new overhead 13 kV gang operated load break switches (normally open points and tie points between feeders);
- Construction of an underground duct bank approximately 1.6 kilometres in length to accommodate feeders egressing the substation and running along Casorso Road;

- Rebuilding of the existing distribution circuit along Benvoulin Road (between Casorso Road and KLO Road) to accommodate a new 13 kV double circuit overhead line (approximately 1.6 kilometres); and

- Rebuilding the existing distribution circuit along DeHart Road between Casorso and Gordon Roads (approximately 2.4 kilometres).

(Exhibit B-1, at p. 30).

16. The proposed alignment for the four feeders from the new substation would be:

- Feeder 1: heading south on Casorso Road, west on DeHart Road and north and south on Gordon Road;

- Feeder 2: heading north on Casorso and Benvoulin Roads and terminating at Springfield Road;

- Feeder 3: heading north on Casorso and Benvoulin Roads and then east on KLO Road; and

- Feeder 4: heading north on Casorso Road, then north up Gordon Road, then east on KLO Road and north on Burtch Road, with a small section heading west on Springfield Road.

(Exhibit B-1, at p. 32).

C. ISSUES ARISING ON THE APPLICATION

17. At the Procedural Conference on October 28, 2008, FortisBC suggested the issues arising in this Application were justification, alternative solutions, land acquisition, specifically the grant of a certificate of non-farm use and other required zoning approvals, aesthetics, and the impact of the current and anticipated downturn in the economy (Transcript, at pp. 9-10). In its Information Requests, the Commission raised the issue of overhead lines versus duct banks for feeders three and four in the proposed Project. In the sections below, FortisBC discusses the evidence with respect to each of these issues.

(i) Justification

18. The proposed Benvoulin Substation will support load growth in the central/south Kelowna area. It will also alleviate the need for capacity upgrades to other substations in the region that would have been otherwise required, and it will provide required back-up support to the region, including back-up for the DG Bell Terminal station.

19. The central/south Kelowna area is served primarily by the Hollywood Substation and the OK Mission Substation. The DG Bell Terminal station in upper Mission also serves south Kelowna, however, in cases of emergency it receives back up from the OK Mission Substation (Exhibit B-1, at p. 10).

20. FortisBC's 2005 System Development Plan (2005 SDP) identified a need to add capacity in the central Kelowna area to meet increasing load growth, due primarily to commercial development and construction of high density housing (Exhibit B-1, at pp. 3 and 16).

21. Demand in this region for electricity peaks during the summer. In 2008, the Hollywood Substation transformers would have been overloaded but for the transfer of approximately 2.7 MVA of distribution load to the Glenmore Substation. Notwithstanding this transfer, increasing demand is expected to overload the Hollywood Substation in 2010 (Exhibit B-1, at p. 12). The OK Mission Substation is also expected to become overloaded in 2010 (Exhibit B-1, at p. 14).

22. The OK Mission and Hollywood substations' ability to back up the DG Bell Terminal station is currently at 55 percent, below FortisBC's minimum requirements. As load growth continues, the ability to provide back up will decrease (Exhibit B-1, at p. 21).

23. Maximum available backup capacity for OK Mission and Hollywood is also less than FortisBC's guidelines (Exhibit B-1, at p. 21).

24. FortisBC submits that the need to support existing capacity in the region, to meet increasing load, and to improve the reliability of back-up for, in particular, the DG Bell Terminal, but also for the Hollywood and OK Mission Substations, justifies the Project.

25. The evidence pertaining to the timing of the Project is found under the heading "Project Schedule" in the Application at pages 54 and 55. It is intended that the Project will be completed and energized in the fourth quarter of 2010.

26. There were no concerns raised by the Commission or by Intervenors with respect to the Project schedule.

(ii) Economic Considerations

27. The Commission and the BCOAPO in their Information Requests raised concerns as to whether expected load growth still supports the need for the Project in light of the current and anticipated economic downturn. FortisBC has reviewed the Application in this context and submits that the evidence shows that the ability of existing area substations to meet current demand is narrowing, the ability to provide back-up is insufficient, and while the economy is forecast to slow in year over year percentage terms, growth is still positive and contributing to an imminent overload of the Hollywood Substation (contrast Exhibit B-1, Table 3.1.1, with Exhibit B-4, Table A48.3). FortisBC submits it is not prudent to delay the proposed Project.

(iii) Alternative Solutions

(a) Technological Alternatives

28. During the development of FortisBC's 2005 SDP, it was anticipated that the load increases in the central/south Kelowna could be accommodated through an additional transformer planned for the existing Hollywood Substation in 2008, a third transformer for the existing OK Mission Substation in 2011, and a new distribution source in southwest Kelowna by approximately 2015 (the Braeloch Substation) (Exhibit B-1, at p. 62).

29. The other potential solution was a new distribution source in the central/south Kelowna area along with the infrastructure to tie in to the existing network, which became the preferred Project in this Application.

30. Analysis indicated that the addition of transformers to Hollywood and OK Mission, as anticipated in the 2005 SDP, would not be the most cost-effective solution to meet increasing load from an economic, technical and environmental perspective. The evidence on this point is set out at pp. 62-63 of the Application.

31. In particular, FortisBC estimates that the cost of the transformer additions to the Hollywood and OK Mission substations would be at least three times as much as the $17.7 million estimated for the Project (Exhibit B-3, A38.3 and A38.4).

32. In Information Request #2, the Commission queried the possibility of ameliorating the Hollywood and OK Mission substations' capacity to meet increasing load by installing reactor banks at both stations that would allow the existing transformers at each station to operate in parallel, which they cannot presently do (generally, Exhibit B-4, at Q42.1 to Q44.3). FortisBC submits that although this option may present as a current least-cost alternative, it is not the most cost-effective solution because:

    (i) it is very likely that acquisition of adjacent land and further construction on the Hollywood and OK Mission substations will meet with substantial resistance from neighbouring residents (Exhibit B-4, A43.3 and 43.4);

    (ii) this option will only delay the need for a new distribution source in the central/south Kelowna area for another three years (Exhibit B-4, A44.1), and;

    (iii) the existing deficiency in backup reliability for the region would continue for another three years (Exhibit B-4, A44.3).

33. Although it will still be necessary to commission the Braeloch Substation, the construction of the Benvoulin Substation also has the potential ability to postpone the Braeloch project for a further one to three years depending on load growth in the south Kelowna area (Exhibit B-1, at p. 63).

(b) Location of the substation

34. In the public consultation process preceding the Application, FortisBC initially investigated seventeen sites for the new substation.

35. Through consultation with stakeholders and two open houses, FortisBC selected Site 7 as the best location for the Project. A third open house was held on April 9, 2008, to ensure that all interested parties had the opportunity to be informed and comment upon the selection of Site 7 for the Project.

36. Broadly, the evidence of FortisBC's decision path for this selection is set out at Part 5.5 of the Application (Exhibit B-1, at pp. 36-50).

37. Site 7, the preferred site, and Site 2 received the greatest support during public consultation, primarily due to their greater distance from populated areas relative to the other investigated sites (Exhibit B-1, at p. 42).

38. The cost for Site 7 is estimated to be slightly higher than for Site 2 (Exhibit B-1, at pp. 51-52).

39. However, FortisBC submits that the benefits accruing from the natural topography at Site 7, which will be discussed further under the heading "Aesthetic Impacts" below, as well as the lower agricultural value of Site 7, which will be discussed further under the heading "Land Acquisition" below, make Site 7 the most cost-effective location for the Project (Exhibit B-1, at pp. 52-53).

40. On April 14, 2008, FortisBC executed an option to purchase agreement that will allow FortisBC to acquire a fee simple ownership interest and any required access rights to the required portion of the lands located at Site 7, subject to obtaining, among other things, any required regulatory approvals.

(iv) Aesthetic Impacts

(a) Visual

41. The evidence supports Site 7 as the site with the least visual impact arising from the substation. Site 7 is bounded by steep slopes on its east and west, which, together with the tree line creates a buffer effectively shielding the site from neighbouring residents and approaching traffic. Site 7 is located 20 metres below Casorso Road, and the tallest structure at the site will be approximately 10 metres (Exhibit B-1, at p. 25-26).

42. Site 2 is adjacent to a busy road, and would have a higher degree of visibility (Exhibit B-1, at p. 49).

43. The Intervenor Tantalus in its Information Request #1 raised concerns about the aesthetic impact of the proposed substation in light of its plans to expand its agri-tourism business in proximity to Site 7. FortisBC believes that its response (per Exhibit B-4) and the site plan as proposed address Tantalus' concerns regarding maintenance of visual aesthetics.

(b) Noise

44. Although noise was an issue of some discussion at the pre-hearing open houses, neither the Commission nor any Intervenor has raised this issue in Information Requests. FortisBC submits that Site 7's location as the site furthest south from the populated areas of central/south Kelowna meets concerns expressed about noise during pre-hearing consultation.

(c) Light

45. No party has raised concerns about light emission from the proposed substation at any time.

(d) Property Values

46. No party has raised concerns about property values, and FortisBC submits that the electrical facilities contemplated in the Application will not affect adjacent property values or property values at greater distances from the substation.

(e) Possible Mitigation Measures

47. Given that there is no evidence of any aesthetic impact other the concerns of Tantalus addressed above, it is submitted there is no need for any mitigation measures beyond what is contemplated in the Application.

(v) Land Acquisition and Necessary Regulatory Approvals

48. As stated above, on April 14, 2008, FortisBC acquired an option to purchase the property at Site 7.

49. The land is currently zoned "Agricultural" and is within the Agricultural Land Reserve (the "ALR"). It will be necessary to have the land rezoned to a use permitting the operation of a substation and also to apply for a certificate of non-farm use. FortisBC is confident that the land will be rezoned for use as a substation and the certificate granted.

50. Additionally, both Site 7, the preferred site, and Site 2, the alternate site, are within the ALR and, accordingly, both sites present the risk involved in an application to the Agricultural Land Commission. However, given its pre-existing use as a gravel pit, Site 7 has the best chance of obtaining the necessary approvals as it has much less remaining agricultural potential relative to Site 2.

51. In response to the Commission's Information Request #1, Q32.5, FortisBC ranked the risk associated with the ALR process for Site 2 as "High" (Exhibit B-3, A32.5).

52. Furthermore, there was also public opposition to the selection of Site 2 due to its greater potential to return to active agricultural use (Exhibit B-1, at p. 43).

(vi) Overhead lines versus underground duct banks

53. In Information Request #2, the Commission queried the necessity of constructing underground duct banks for Feeder 2 and Feeder 3 egressing the proposed Substation, as opposed to all four feeders egressing the Substation by overhead lines (generally, Exhibit B-4, at Q45.7 to Q45.11). FortisBC believes it has addressed this option in its response, and in particular notes that the addition of more distribution feeders to the Benvoulin

Substation in the future will necessitate the same underground duct bank as is proposed in this Application (Exhibit B-4, A45.11). FortisBC believes it is prudent and cost-effective to address this in this Project.

54. The Intervenor Tantalus in its Information Request #1 (Exhibit C4-2, Q5 and Q9) clearly indicated a concern with the visual appearance of overhead lines in the area of the substation which FortisBC believes would be best ameliorated by underground construction.

(vii) Project Compliance with the WHO and ICNIRP EMF Standards

55. FortisBC submits that the evidence is that all facilities associated with this project will meet the standards set by the World Health Organization ("WHO") and the International Commission on Non-Ionizing Radiation Protection ("ICNIRP") (Exhibit B-1, at p. 35).

D. PROVINCIAL GOVERNMENT'S ENERGY OBJECTIVES

56. The *Utilities Commission Amendment Act,* S.B.C. 2008, c. 13, requires that this Application consider the Provincial Government's energy objectives and its' goal of electricity self-sufficiency by 2016. FortisBC submits that, in the circumstances set out above, the Project addresses these objectives insofar as is feasible given the imminent need for greater capacity and back-up support in the region, and submits that no alternative solution or Site better addresses these objectives.

E. CONCLUSION

57. The evidence in this proceeding establishes the justification and need for the Project to service increasing load, support existing capacity, and increase backup reliability for the region. FortisBC has acknowledged the current economic slowdown, however, recent analysis demonstrates the continued need for the Project and that no change in the in-service date should be made. No alternative solution of greater merit has been identified. It is submitted that the pre-hearing process has acted effectively to identify the best site for the new substation. In regard to potential aesthetic impacts, there is no evidence of significant aesthetic impacts to any stakeholder or Intervenor. There is no evidence of

any factors of sufficient concern to outweigh the need for the Project as proposed. It is submitted that the Commission should approve the CPCN as proposed.

ALL OF WHICH IS RESPECTFULLY SUBMITTED

Robert J. McDonell

Counsel for FortisBC Inc.