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BRITISH COLUMBIA UTILITIES COMMISSION

ORDER NUMBER C-5-06

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IN THE MATTER OF
the Utilities Commission Act, R.S.B.C. 1996, Chapter 473

and

An Application by FortisBC Inc.
for a Certificate of Public Convenience and Necessity
for the Kettle Valley Distribution Source Project

BEFORE: L.F. Kelsey, Commissioner
L.A. Boychuk, Commissioner August 9, 2006

CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

WHEREAS:

A. On October 11, 2005, FortisBC Inc. ("FortisBC") applied (the "Application") to the Commission for a Certificate of Public Convenience and Necessity ("CPCN") for the Kettle Valley Distribution Source Project ("the Project"); and

B. In the 2005 Revenue Requirements, 2005-2024 System Development Plan and 2005 Resource Plan Decision approved by Order No. G-52-05, the Commission had designated the Project as requiring a CPCN; and

C. The Commission by Order No. G-114-05, ordered that a Written Public Hearing be held to review the Application and established a regulatory timetable; and

D. The Commission completed the Written Public Hearing process with FortisBC providing its Final Argument on May 19, 2006; and

E. The Commission has considered the Application and the evidence, and submission presented on the Application and has determined that it is in the public interest that a CPCN be issued to FortisBC for the project.

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NOW THEREFORE the Commission orders as follows:

1. The Commission grants a CPCN to FortisBC for the Project as described in Option 2, in accordance with the Commission's Determination set out in the Reasons for Decision attached as Appendix A to this Order.

2. Upon commencement of construction, FortisBC is required to file quarterly reports regarding the progress of the Project relative to schedule and estimated cost, and to advise the Commission of any variances or difficulties that the project may be encountering. FortisBC will file a final report upon completion of the Project that includes a discussion of any significant cost variance.

DATED at the City of Vancouver, in the Province of British Columbia, this 9th day of August 2006.

BY ORDER

Original signed by:

L.F. Kelsey
Commissioner

Attachment

FortisBC Inc.
Application for a Certificate of Public Convenience and Necessity
for the Kettle Valley Distribution Source Project

REASONS FOR DECISION

1.0 BACKGROUND

On November 26, 2004, FortisBC Inc. ("FortisBC") submitted its 2005 Revenue Requirements Application, which also included its Transition Plan and 2005 Capital Plan. On the same date, under separate cover, FortisBC also filed its 2005-2024 System Development Plan ("SDP"). On December 21, 2004, FortisBC submitted its 2005 Resource Plan (collectively referred to as the "Application and Plans").

FortisBC identified the Kettle Valley Project in its SDP as required to address system reliability for the Boundary Area. After an oral hearing reviewing the Application and Plans, the Commission, by Order No. G-52-05 required that FortisBC submit an application for a Certificate of Public Convenience and Necessity ("CPCN") for this project.

FortisBC applied to the Commission, pursuant to Sections 45 and 46 of the Utilities Commission Act ("UCA"), for a CPCN for the Kettle Valley Project on October 11, 2005 ("the Application"). On November 8, 2005, the Commission issued Order No. G-115-05 that set down the review of the Application by a written hearing process and established a regulatory timetable for registration of Intervenors and Interested Parties, the filing of Information Requests ("IR's"), and submissions by FortisBC. On April 13, 2006, the Commission determined that additional information was required before it could come to a decision and amended Order No. G-115-05 by Letter No. L-14-06 to provide for another round of IR's and extended the regulatory timetable to allow FortisBC to make a Final Argument by May 19, 2006. FortisBC responded to the second round of Commission and Intervenor IR's on May 5, 2006 and submitted a Final Argument on May 19, 2006.

2.0 FORTISBC APPLICATION

In its Application FortisBC submitted three options for the solution to reliability and supply problems for the Boundary Area. The preferred option was listed as Option 2 which consists of:

- Construction of the Kettle Valley Substation;
- Sectionalizing 11W Line (from Oliver to Grand Forks) into two segments (48 Line, Oliver to Kettle Valley and 11W Line, Kettle Valley to Grand Forks);

- Installation of a high speed communication system;
- Conversion of the 13 kV distribution circuits currently served by the Rock Creek, Midway and Greenwood substations to 25 kV;
- Salvage of the Rock Creek, Midway and Greenwood substations; and
- Salvage or partial conversion to 25 kV of the existing 63 kV circuits 9 Line and 10 Line between Greenwood and Oliver.

For Option 2 the Kettle Valley substation would consist of two parallel transformers and a 161 kV (rated at 230 kV) breaker. The protection scheme would rely on transfer tripping between Kettle Valley and Grand Forks Terminal and would require a fiber optic communications link for reliability (Exhibit B-1, p. 36).

The total cost of Option 2 is estimated by FortisBC to be $21.48 million.

Option 1 is similar to Option 2 but would have a four breaker ring bus associated with the Kettle Valley Substation. The advantage of the four breaker ring bus would be to reduce the communication costs for protection purposes by allowing the teleprotection to be over a power line carrier. However, this option has the disadvantage of overbuilding the high voltage equipment (at 230 kV), which would be stranded in the event the 11 Line were eventually standardized at 138 kV (Exhibit B-1, p. 33). FortisBC estimated the cost for this option to be $23.12 million.

Option 3 is proposed as an upgrade/rebuild of the present configuration and would involve upgrading the Greenwood, Midway, Rock Creek, Baldy, and McKinney Substations, adding a second transformer to the Grand Forks terminal station and a complete rebuild of 63 Line. It would also entail a high capacity communications link and a rehabilitation of a 13 kV line. FortisBC estimates the cost for this solution to be $41.2 million.

2.1 Rate Impacts

FortisBC has calculated the one time equivalent rate impacts for each of the options (Exhibit B-1, p. 37). The one time equivalent rate impact for Option 1 is 1.0 percent, for Option 2 is 0.93 percent, and for Option 3 is 1.60 percent.

2.2 Project Schedule and Project Management

FortisBC has identified the following milestones for the completion of this project.

1. BC Utilities Commission approval Winter 2005.
2. Substation construction to start Late Spring 2006.
3. Major equipment arrives Late Summer 2006.
4. Substation construction commissioned and energized Winter 2006.
5. Distribution line work commences Summer 2006.
6. Distribution line work completed Fall 2008.

The Commission notes that due to extended process to review the Application, these milestones are no longer realistic.

FortisBC is intending to contract out all major components of the project, with FortisBC retaining project management and supervision responsibilities (Exhibit B-1, pp 19, 21).

3.0 PROJECT JUSTIFICATION

The SDP identified service reliability in the Boundary Area as being below system average, in part due to the deteriorated condition of the sub-transmission facilities and the extreme geography which they traverse. The SDP also identified difficulties in restoring service to the region (particularly west of Grand Forks) in the event of an extended 11 Line outage (SDP, p. 40). The SDP priority matrix identified the project as a high priority with a rating of 26 out of a maximum 33 points. An update of the SDP priority Matrix for the Application increased the weighting to 30 points (Exhibit B-3, BCUC IR-2, A1.1).

In the Application and in response to an IR, FortisBC states that the Kettle Valley Project is required on an imminent basis to address the system reliability risks in the entire Boundary area and the service restoration times and safety issues arising from the aged transmission, substation and distribution facilities in the Kettle Valley Area (Exhibit B-3, preamble to BCUC IR-2).

3.1 Reliability

Reliability statistics for SAIFI, SAIDI, and CAIDI indicate a lower than average reliability level, particularly with respect to duration of outages (Exhibit B-1, p. 31). However, the largest risk for reliability problems originates with the single 161/63 kV Transformer at the Grand Forks terminal. If this transformer fails, no mobile 161/63 kV transformer is available and there is only a limited back up from the 63 kV system from Warfield. This situation could require significant load shedding for customers west of Grand Forks (Exhibit B-3, preamble to BCUC IR-2).

3.2 Facility Condition

With regard to the 63 kV transmission Lines 9 and 10, FortisBC notes that these facilities were originally constructed in 1919 and, although they have received extensive maintenance, many sections are at the end of their useful life (SDP, p. 41). In addition, system condition reports for the substations indicated numerous deficiencies and deteriorated equipment (Exhibit B-3, BCUC IR-2, 2.1 and Appendices thereto).

3.3 Safety Issues

FortisBC identifies a number of safety issues associated with the substations being proposed for replacement. These issues are primarily associated with the condition of each station and restricted access and clearances to energized equipment (Exhibit B-1, p. 27).

3.4 Load Growth

FortisBC forecasts a load growth for the area at an average 5.2 percent yearly from 2004 to 2011/12 (Exhibit B-3, BCUC IR-2, 3.1). This forecast is largely driven by the expectations for development at the Mt. Baldy ski resort ("Baldy"). Although the Baldy load increase is not a project driver for the overall project (Exhibit B-3, BCUC IR-2, 5.2), it is expected to impact the capacity of the Rock Creek substation (Exhibit B-1, p 30; Exhibit B-3, BCUC IR-2, 6.1).

4.0 OTHER ISSUES

4.1 EMF

FortisBC states that the proposed substation will be connected to 11 Line via a short tap and will not have a measurable impact or magnetic field level and there are no buildings within 120 meters of the station (Exhibit B-2, Karow IR-1, 4a).

4.2 Environmental

FortisBC and its consultant identified that the environmental impacts will be minimal and will mostly pertain to construction impacts and the removal of land from the agricultural land reserve. Construction impacts are proposed to be mitigated by vegetation restoration and construction scheduling (Exhibit B-1, p. 44 and Appendix D).

4.3 Permits

The permits required for this project include permits from Land and Water BC, Ministry of Sustainable Resources, Ministry of Transportation, the Regional District and the Agricultural Land Commission (Exhibit B-1, p. 40).

4.4 First Nations

FortisBC states that there is no Aboriginal Title or Values impact from this project (Exhibit B-1, pp. 40, 44).

5.0 ARGUMENTS

5.1 Intervenor Arguments

The Commission received comments from Mr. Alan Wait (Exhibit C-4). Mr. Wait submits that the consequences of the failure of the transformer at Grand Forks is overstated and could be minimized by reconnecting 11 Line to a 63 kV source at Mawdsley and feeding Lines 9 and 10 at Grand Forks. He also suggests that the capital expenditures should be spread out to lessen the impact on customer rates.

5.2 FortisBC Final Argument

In reply to Mr. Wait, FortisBC states that in the event of a transformer failure at Grand Forks, Lines 9 and 10 would be unable to maintain system voltages and to utilize 11 Line at 63 kV would involve significant substation bus work and the installation of modified protection and control for the line and the station. This solution would also impact the Trail-Oliver transmission corridor by reducing power transfers to Oliver from the Trail source of generation. FortisBC further submits that a delay does not address the safety and deteriorated condition of the existing facilities. FortisBC maintains its view that Option 2 presents the least cost option to the supply and reliability problems for the Boundary Area.

COMMISSION DETERMINATION

The Commission notes that although the number of customers being served in the Boundary area is relatively low, Option 2 offers the opportunity to increase the utilization of 11 Line at a considerable saving for the ratepayers of FortisBC (in comparison to rebuilding the existing facilities) and will provide the necessary capacity for the electricity supply of the Boundary area in the long term. The Commission also agrees with FortisBC that temporary solutions do not appropriately address the requirements for this area.

The Commission finds that public convenience and necessity requires that the Kettle Valley Distribution Source Project should proceed and approves Options 2.

FortisBC is to file, within 60 days of this Decision, a project plan setting out revised milestones for the completion of the project.