

**BRITISH COLUMBIA
UTILITIES COMMISSION**

**ORDER
NUMBER C-6-09A**

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

and

An Application by the British Columbia Transmission Corporation
for a Certificate of Public Convenience and Necessity
for the Market Operations and Development Project

BEFORE: P.E. Vivian, Commissioner December 16, 2009

CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

WHEREAS:

- A. On August 14, 2009 the British Columbia Utilities Commission (the "Commission") received an Application for a Certificate of Public Convenience and Necessity ("CPCN") from British Columbia Transmission Corporation ("BCTC") for the Market Operations and Development ("MOD") Project (the "Application"), pursuant to sections 45 and 46 of the *Utilities Commission Act* (the "Act") and compliance with the BCTC Transmission System Capital Plan F2010 and F2011 Decision ("F2010-F2011 TSCP Decision") (Directive 35); and
- B. The estimated cost of the MOD Project is \$10.1million with a required in service date of March 31, 2011; and
- C. BCTC also requested an expedited review of the Application; and
- D. BCTC expected approval of the MOD Project in the F2010-2011 TSCP Decision and entered into a fixed price contract with the preferred vendor on May 15, 2009. The Application states that the contract may be fully suspended on September 30, 2009 if BCTC is unable to proceed with the project at that time; and
- E. The Commission issued Information Request No. 1 on September 11, 2009 and BCTC responded on September 18, 2009; and
- F. In response to BCUC 14.6, BCTC states that customers supporting the MOD Project do not directly contribute to the cost or provide contribution in aid of construction to the MOD Project. BCTC also states that it expects to recover costs for the MOD Project through customer rates; and

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- G. The Commission has considered the Application; the evidence adduced in relation thereto and finds that approval is warranted.

NOW THEREFORE the Commission orders with Reason to follow that:

1. A Certificate of Public Convenience and Necessity is granted for the MOD Project. BCTC is to report within 90 days from the date of the completion of the MOD Project the actual cost of the MOD Project in the same format as Confidential BCUC 1.12.2.
2. The \$10.1million estimated cost of the MOD Project is accepted; however, should the MOD need replacement before 5 years, BCTC will be at risk for a portion of the costs.
3. If the contract with the preferred vendor was suspended on September 30, 2009, BCTC is to inform the Commission of the cost of remobilizing MOD Project resources. The cost of remobilizing resources is to be recovered from BCTC.
4. BCTC is to provide the name of the vendor performing system integration activities in the MOD Project to the Commission.
5. BCTC is to provide a report to the Commission regarding the allocation of MOD Project costs to FortisBC Inc. and other BCTC customers.

DATED at the City of Vancouver, in the Province of British Columbia, this 16th day of December 2009.

BY ORDER

Original signed by:

P.E. Vivian
Commissioner

Attachment

BRITISH COLUMBIA TRANSMISSION CORPORATION
CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY
FOR THE MARKET OPERATIONS AND DEVELOPMENT PROJECT

REASONS FOR DECISION

1.0 INTRODUCTION

1.1 Application

On August 14, 2009 the British Columbia Utilities Commission (the “Commission”) received a Certificate of Public Convenience and Necessity (“CPCN”) Application from British Columbia Transmission Corporation (“BCTC”) for the Market Operations Development (MOD”) Project (the “Application”). The estimated cost of the MOD Project is \$10.1 million with a required in service date of March 31, 2011. BCTC states that the MOD Project replaces obsolete technology with a new consolidated business system that will reduce Total Cost of Ownership (“TCO”), streamline business information management, and allow BCTC to continue to meet regulatory and tariff requirements (Application, p. 8). On September 4, 2009, BCTC amended the Application and filed Appendix F, Project Capital Cost Detail on a confidential basis with the Commission.

1.2 Background and Regulatory Process

On November 21, 2008, BCTC filed its Transmission System Capital Plan F2010 and F2011 (“F2010-F2011 TSCP”) with the Commission. In the F2010-F2011 TSCP, BCTC requested the approval of \$13.1 million for Exceptional Projects including the Market Operations and Development (“MOD”) Project. The BCTC TSCP F2010-F2011 Decision (Directive 35) directed BCTC to apply for a CPCN for the MOD Project. BCTC expected approval of the MOD Project in the F2010-2011 TSCP Decision and entered into a fixed price contract with the preferred vendor on May 15, 2009 (BCUC 1.2.1). The Application states that the contract may be fully suspended on September 30, 2009 if BCTC is unable to proceed with the project at that time (Application, p. 9). As a result, BCTC requested an expedited review of the Application.

In determining the appropriate process to review the Application, the Commission considered the complexity of the Application, the need for public participation and the cost associated with the process selected. The Application is not complex and the BCTC TSCP F2010-F2011 Intervenor comments did not provide specific comments regarding the MOD Project (BCTC TSCP F2010-F2011 Decision, p. 96). Given the absence of Intervenor comments and BCTC’s request for an expedited review of the Application, the Commission determined that an expedited process was appropriate for the review of the Application.

2.0 MARKET OPERATIONS AND DEVELOPMENT AND EXISTING APPLICATIONS

2.1 Role Market Operations and Development

The MOD Department is primarily responsible for providing fair and open access to the transmission grid, interconnection services as required under BCTC's Open Access Transmission Tariff ("OATT"), business processes for administration of the OATT, transmission and energy scheduling, tariff and contract compliance, and customer service (Application, p. 4). To support its various business functions and processes, the MOD Department relies on a portfolio of integrated and stand-alone applications: the Transmission Scheduling System ("TSS"), the Settlements and Billing Application ("S&B"), Market Operations Data Warehouse ("MODW"), Pricing Application and the Interconnection Workflow Application ("K2 / SGIP") (collectively, the "Existing Applications") (Application, pp. 19-20).

2.2 Assessment of Existing Applications

BCTC states that the Existing Applications were developed in the late 1990's and have changed over time in order to meet changing regulatory, industry standards, and customer needs. Furthermore, the core TSS and S&B applications are highly customized applications constructed in development environments and architectural platforms that are no longer supported. BCTC believes that the Existing Applications can no longer adequately support the current MOD Department's needs and will be unable to meet the future requirements of the various regulatory entities such as the North American Electric Reliability Corporation, Federal Energy Regulatory Commission, Western Electricity Coordinating Council, and the North American Energy Standards Board (Application, p. 5). As a result BCTC undertook a definition project to help determine the best future direction for MOD business applications.

The definition project was completed in 2008 and the results are included as Appendix B - Assessment Report and Gap Analysis (the "Assessment Report") of the Application. The Assessment Report identified nine major gaps in the Existing Applications:

- (a) Lacks flexibility and scalability;
- (b) Lacks accurate and up to date data for customers, as well as internal BCTC staff for the management of rates, forecasts and refunds;
- (c) Lacks automated processes for consolidating and integrating existing functionality;
- (d) Lacks integration with other business areas;

- (e) Lacks robust decision support for reporting and forecasting;
- (f) Lacks granularity on curtailments, outages and TTC information;
- (g) The stand-alone nature of existing tools is an impediment to optimal efficiency;
- (h) Data must be manually transferred from one application to another; and
- (i) Processes require manual intervention and are prone to error.

(Application, pp. 24-25)

3.0 IDENTIFICATION AND ASSESSMENT OF ALTERNATIVES

3.1 Identification of Alternatives

To address the gaps in the Existing Applications, BCTC initiated a three phases an open bid process:

1. A Request for Information,
2. A Request for Qualification, and
3. A Request for Proposals.

The open bid process allowed BCTC to confirm possible solutions and provided BCTC with additional information to justify the business case, define the financial benefits and to select a preferred solution (Application, p. 36).

BCTC identified three alternatives for addressing the MOD Department's business requirements. The analysis of alternatives included consideration of several criteria including capital cost, Operations, Maintenance and Administration ("OMA") impact, technical risk, business risk, benefits and customer impact (Application, p. 40)

Alternative	Total Cost of Ownership to F2016 (\$ Million) (Note 1)	BCTC Hard and Soft Benefit F2012-F2016 (\$ Million) (Note 2)
Do Nothing	\$14.80	\$0
Replace TSS Only	\$9.20	\$1.60
Full Replacement (Note 3)	\$11.50	\$4.80

Note 1: The total cost of ownership includes the capital and sustainment dollars, present value

Note 2: Hard and soft benefits are related to reductions in staff and support costs, present value

Note 3: See Appendix H for supporting information

(Application, p. 39)

3.2 Alternatives

3.2.1 Do Nothing Alternative

Under the Do Nothing alternative (“Alternative 1”), the Existing Applications would continue to be maintained through ongoing OMA and BCTC would make no provision for the replacement of the TSS or other existing applications in F2010/2011. The implementation of new business requirements would be assessed for implementation feasibility on a case-by-case basis and the cost of maintaining Existing Applications would be an OMA expense (Application, p. 38). BCTC also notes that the time and expense needed to enhance and sustain the Existing Applications would continue to increase, possibly leading to non-compliance with the OATT (Application, pp. 38, 40).

3.2.2 Replace TSS Only Alternative

The Application states that the Replace TSS Only alternative (“Alternative 2”) has lower technical risk than Alternative 1, due to the replacement of the TSS, but the integration of the new TSS to other applications could increase the TCO. The TSS is the core technology for the Existing Applications; therefore any changes to its base architecture would require modifications to S&B, Pricing Application, MODW, EIDE, and web services. BCTC states that uncertainty in the amount of work required to re-integrate new TSS into the other applications could increase the TCO by 50 percent. Furthermore, BCTC notes that Alternative 2 has a high degree of technical risk compared to Alternative 3. In addition to the financial risk and technical risk, BCTC also states that Alternative 2 would still not support many of the identified business benefits and would not allow for reduction of costs spent on the Existing Applications over the next 5 years (Application, pp. 40-41).

3.2.3 Full Replacement Alternative

The Full Replacement alternative (“Alternative 3”) proposes to replace the Existing Applications with Commercial Off-The-Shelf (“COTS”) products that require minimal configuration and customization to meet BCTC’s needs (Application, pp. 6-7). Alternative 3 will include:

- (a) Standard off-the-shelf products that are in use throughout North America for Scheduling, Settlements, and Reporting.

- (b) Full integration with current Open Access Technology International Inc. (“OATI”) products that are currently hosted using SaaS for BCTC [e.g. OASIS (“open access same-time information system”) and eTag]. BCTC will not incur any system replacement or integration costs for these applications.
 - (c) A standard off-the-shelf product for integration of the MOD System with other applications and data in BCTC (the Enterprise Service Bus).
- (Application, p. 44)

The total capital cost of Alternative 3 is \$10.1 million with an accuracy of +10 / -10 percent, including AFUDC and overhead (Application, p. 47).

3.3 Assessment of Alternatives

BCTC states that Alternative 1 has the highest cost (\$14.8 million), technical, business and financial risk, since the TSS is no longer supported by Microsoft and does not adhere to BCTC’s Enterprise Architecture. In addition to having the highest costs, BCTC is also of the view that Alternative 1 will have the greatest adverse impact on BCTC’s customer base and on its operations staff (Application, p. 40).

BCTC notes that Alternative 2 has lower costs (\$9.2 million) than Alternative 1, but the integration of the new TSS with the other applications could increase the TCO by 50 percent. Furthermore, BCTC states that Alternative 2 has a high degree of technical risk due to the modifications to S&B, Pricing Application, MODW, EIDE, and web services. Given the technical risks, the lack of support for identified business benefits, and no reduction in the cost of Existing Applications over the next 5 years, BCTC did not recommend Alternative 2 (Application, p. 41).

Alternative 3 has a higher TCO than Alternative 2, but Alternative 3 also has the highest amount of soft and hard benefits (\$4.8 million). BCTC states that the full replacement of the Existing Applications with COTS products would reduce the technical risk and the cost of implementing changes (Application, p. 41). BCTC is also of the view that Alternative 3 would allow BCTC to meet its current and future business and regulatory requirements while providing a more robust and streamlined process for its customers (Application, p. 42). The Application recommends Alternative 3, Full System Replacement, as the preferred solution.

COMMISSION DETERMINATION

Given the technical risk and uncertainty regarding the cost of Alternatives 1 and 2, the Commission accepts BCTC's recommendation that Alternative 3 is the preferred solution. **A Certificate of Public Convenience and Necessity is granted for the MOD Project. The \$10.1million estimated cost of the MOD Project is accepted; however, should the MOD need replacement before 5 years, BCTC will be at risk for a portion of the costs. BCTC is to report within 90 days from the date of the completion of the MOD Project the actual cost of the MOD Project in the same format as Confidential BCUC 1.12.2.**

Given that BCTC entered into a fixed price contract with the preferred vendor on May 15, 2009, prior to Commission approval of the MOD Project, BCTC should be a risk for the cost of remobilizing resources (if any). **If the contract with the preferred vendor was suspended on September 30, 2009, BCTC is to inform the Commission of the cost of remobilizing MOD Project resources. The cost of remobilizing resources is to be recovered from BCTC.**

4.0 PREFERRED SOLUTION

The preferred solution will result in the replacement of the Existing Applications with a single, consolidated and fully integrated system (Application, p. 47). The total capital cost of the preferred solution is \$10.1 million and the costs will be depreciated over five years (Application, p. 47 and Appendix G, Tab Depreciation). Prior to the Commission's review of the Application, BCTC entered into a fixed price contract on May 15, 2009 with OATI to implement the preferred solution (Application, p. 43 and BCUC 1.2.1). The Application states that the contract with OATI may be fully suspended on September 30, 2009 if BCTC is unable to proceed with the project at that time. BCTC estimates direct remobilization costs in the range of \$300,000 to \$400,000 (Application, p. 9 and BCUC 1.2.2). Furthermore, BCTC states that the delay and related costs associated with a suspension beyond BCTC's control are inherently a project risk not a reasonable operational risk in the normal course of business (BCUC 1.2.3).

The fixed price contract with OATI includes system implementation services, hardware, software and support and hosting of the new system over the first five years (Application, p. 43). OMA expenditures of \$200,000 will be incurred during implementation and the sustainment cost for the new system will be \$545,000/year as established under the contract (Application, p. 47). The F2012 the impact of the \$10.1 million MOD Project on the Transmission Revenue Requirements ("TRR") is forecast to be \$2.5 million or 0.42 percent of the F2010 TRR.

The impact on the F2010 Network Integration Transmission Services Revenue is 0.49 percent (Application, Table 5-2, p. 50). In response to BCUC Confidential 6.2, BCTC stated that the vendor to perform system integration activities in the MOD Project has not been determined and will not be required until October 2009.

COMMISSION DETERMINATION

BCTC is to provide the name of the vendor performing system integration activities in the MOD Project to the Commission.

5.0 MOD PROJECT COST ALLOCATION

The review of the MOD Project raised cost recovery issues that are not directly related to the Application. The May 6, 2009 Amend Section 2.1 of Rate Schedule 3808 Power Purchase Agreement Decision ("Schedule 3808 PPA Decision") included BC Hydro's question regarding whether FortisBC Inc. ("FortisBC") ought to be required to provide, on its own website or on an OASIS, its transmission transactions. The Schedule 3808 PPA Decision directed FortisBC to file a written statement regarding FortisBC's intentions to provide such transparency (Schedule 3808 PPA Decision, p. 34). On September 9, 2009, FortisBC submitted a letter to the Commission stating:

"It appears that the transactions of interest to BC Hydro are those to a point of delivery external to the FortisBC system. These transactions use the BCTC System and are therefore tagged and available for viewing on the BCTC OASIS. In FortisBC's view, a redundant OASIS site is simply not required."

BCTC states that customers supporting the MOD Project do not directly contribute to the cost or provide contribution in aid of construction to the MOD Project (BCUC 14.6). The cost of the MOD Project is recovered in Network Integrated Transmission Service customer rate charged to BC Hydro (Application, Appendix G).

If the MOD Project allows FortisBC and other BCTC customers to avoid implementing their OASIS sites, it may be appropriate to allocate a portion of the MOD Project costs to FortisBC and other BCTC customers. **BCTC is to provide a report to the Commission regarding the possible allocation of MOD Project costs to FortisBC and other BCTC customers.**