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**BRITISH COLUMBIA
UTILITIES COMMISSION**

**ORDER
NUMBER C-8-07**

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

and

**An Application by British Columbia Hydro and Power Authority
for Approval of a Certificate of Public Convenience and Necessity
for the Revelstoke Unit 5 Project**

BEFORE: R.H. Hobbs, Chair
A.J. Pullman, Commissioner July 12, 2007

CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

WHEREAS:

- A. On April 13, 2007, British Columbia Hydro and Power Authority ("BC Hydro") applied (the "Application") pursuant to Sections 45 and 46 of the Utilities Commission Act (the "Act") for a Certificate of Public Convenience and Necessity ("CPCN") for the installation of the Revelstoke Unit 5 Project (the "Project");
and
- B. The Project is located at the Revelstoke Dam and Generating Station ("GS") located on the Columbia River, five kilometres ("km") upstream from the City of Revelstoke and 130 km downstream from the Mica Dam and Generating Station; and
- C. The Project includes the installation of a 500 MW fifth turbine/generator set in the existing empty turbine bay immediately east of Unit 4 at the Revelstoke GS, the extension of the penstock for Unit 5, a generator transformer and related upgrades to transmission equipment located in the existing powerhouse; and
- D. The Project has an P50 estimated cost of \$280 million and a target in-service date of October 2010; and

**BRITISH COLUMBIA
UTILITIES COMMISSION**

**ORDER
NUMBER C-8-07**

2

- E. The British Columbia Transmission Corporation (“BCTC”) has identified a need for a system upgrade as a result of the Project, which consists of one new 250 Megavolt-Ampere Reactive ("MVar") capacitor at the Ashton Creek Substation. As this is a transmission system upgrade, the cost is not included in the estimated cost of the Project but ultimately will be reflected in BC Hydro’s payments to BCTC; and
- F. By Order No. G-43-07, the Commission established a written public hearing process and Regulatory Timetable for the review of the Application; and
- G. By letter dated May 24, 2007, the Commission responded to a submission dated May 15, 2007 from the Shuswap Indian Band (“Shuswap”) and Simpcw First Nation (“SimpCW”) regarding the obligation to consult and accommodate, and denied requests for an oral hearing and an extension of the Regulatory Timetable; and
- H. By letter dated June 7, 2007, the Commission responded to submissions dated June 1, June 5 and June 6, 2007 from the Shuswap and Simpcw, denying a further request for an extension of the Regulatory Timetable and determining that other issues raised in the submissions may be considered in the Commission’s decision on the Application; and
- I. BC Hydro, the Independent Power Producers Association of British Columbia, the British Columbia Old Age Pensioners’ Organization et al. and the Joint Industry Electricity Steering Committee filed Final Submissions; and
- J. BC Hydro filed its Reply Submission on June 12, 2007; and
- K. BC Hydro proposed a progress reporting format in response to BCUC IR 1.16.1 in Exhibit B-3, and amended the proposal in paragraph 14 of its Final Submission and paragraph 10 of its Reply Submission; and

**BRITISH COLUMBIA
UTILITIES COMMISSION**

**ORDER
NUMBER C-8-07**

3

- L. The Commission has considered the Application and the evidence and submissions presented on the Application, and has determined that it is in the public interest that a CPCN be issued to BC Hydro for the Project subject to the conditions and directions set out in this Order and the Decision that is issued concurrently with it.

NOW THEREFORE pursuant to Sections 45 and 46 of the Act, the Commission orders as follows:

1. A CPCN is granted to BC Hydro for the Revelstoke Unit 5 Project as set out in the Application, with a targeted in-service date of October 2010.
2. BC Hydro is directed to file with the Commission Quarterly Progress Reports on the Project showing planned vs. actual schedule, planned vs. actual costs, and any variances or difficulties that the project may be encountering. The Quarterly Progress Reports will be filed within 30 days of the end of each reporting period.
3. The progress report format will be generally as set out in Appendix A to this Order.
4. BC Hydro is directed to file with the Commission a Final Report within six months of the end or substantial completion of the Project that provides a complete breakdown of the final costs of the Project, compares these costs to the P50 cost estimate and provides a detailed explanation and justification of all material cost variances.
5. Subject to paragraphs 2, 3 and 4 of this Order, the format and content of the reports required by this Order will be determined by BC Hydro in consultation with Commission staff, or by determination of the Commission.
6. BC Hydro will comply with the directions of the Commission in the Decision that is issued concurrently with this Order.

DATED at the City of Vancouver, in the Province of British Columbia, this 12th day of July 2007.

BY ORDER

Original signed by:

Robert H. Hobbs
Chair

Attachment

British Columbia Hydro and Power Authority
Application for a Certificate of Public Convenience and Necessity
Revelstoke Unit 5 Project

Project Quarterly Progress Report Format

Table of Contents

1. Project Status

- 1.1.1 General Project Status
- 1.1.2 Major Accomplishments, Work Completed and Key Decisions Made
- 1.1.3 Project Challenges and Issues; Issues Currently Open, Date Opened, Dated Closed, Those Issues that are Past Due
- 1.1.4 Plans for Next Period
- 1.1.5 Site Photographs
- 1.1.6 Status of BCTC Ashton Creek Upgrade Project

2. Project Earned Value – Schedule and Cost

- 2.1.1 Project “S” Curve showing the budget at completion, earned value to date, actual cost to date, planned value, estimate to completion, estimate at completion, cost variance between actual cost and budgeted cost to date, schedule variance, cost performance index, schedule performance index, status (average of cost performance index and schedule performance index). All values are to be shown in each report throughout the duration of the project.

3. Project Schedule

- 3.1.1 Milestone Summary with the planned finish date, actual finish date, variance in days, status
- 3.1.2 Procurement Summary with the planned finish date, actual finish date, variance in days, status
- 3.1.3 Contract Summary with the planned finish date, actual finish date, variance in days, status
- 3.1.4 Current Schedule
- 3.1.5 Schedule Summary
 - 3.1.5.1 Schedule Performance to Date
 - 3.1.5.2 Schedule Projection Going Forward
 - 3.1.5.3 Schedule Difficulties and Variances
- 3.1.6 Design Scope Change Summary with Description of Request, Explanation for Request, Request Amount, Approved Amount, Deferred Amount, Reject Amount, Under Investigation Amount.
- 3.1.7 Construction Scope Change Summary with Description of Request, Explanation for Request, Request Amount, Approved Amount, Deferred Amount, Reject Amount, Under Investigation Amount.

4. Project Costs

- 4.1.1 Project Cost Summary including explanation of variances
- 4.1.2 Financial Summary including explanation of variances
- 4.1.3 Summary of Individual Contracts (Construction and Procurement) Exceeding \$3M with Budget Amount, Award Amount, Approved Change Orders
- 4.1.4 Project Cost Summary for BCTC Ashton Creek Upgrade Project.

5. Project Resource Management

- 5.1.1 Engineering Resources (Man-hours, Planned vs. Actual – non- cumulative) both in chart and table format. Provide explanation for variance and corrective action taken.
- 5.1.2 Construction Resources (Man-hours, Planned vs. Actual – non-cumulative) both in chart and table format. Provide explanation for variance and corrective action taken.

6. Project Risks

- 6.1.1 Current Project Risks
- 6.1.2 Risks Going Forward

7. Stakeholder or First Nation Issues

- 7.1.1 An ongoing cost report of all existing and new issues using Table 3-9 in Exhibit B-1 as a budget. The columns of “spent to date”, “estimate to complete”, “forecast total to complete”, and “variance” are to be added.
- 7.1.2 An Explanation of new issues and variances will be provided.

LIST OF TABLES

Table 1	Project Milestones
Table 2	Project Expenditure Summary, Table & Chart of CAPEX Cumulative Distribution Function showing an October 2010 ISD P50 Approved, Upper Bound (October 2010 ISD P90), Current Forecast to Complete, Spent to Date (Escalation and Contingency are to be identified separately).
Table 3	Summary of Variances Greater than \$3M
Table 4	Summary of Contracts exceeding \$3M
Table 5	Summary of Outstanding Claims greater than \$3M
Table 6	Table of Project Risks including Risk Description & Explanation, Date Risk Originated, Date Risk Last Reviewed, Level/Severity of Risk, Mitigation Plan, Contingency Plan, Mitigation Cost Amount (including schedule delay), Contingency Reserve Amount Required, Total Contingency Reserve Required to Date, Contingency Reserve Remaining.