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February 11, 2021

Ms. Marija Tresoglavic
Acting Commission Secretary and Manager
Regulatory Support
British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, BC V6Z 2N3

Dear Ms. Tresoglavic:

**RE: Project No. 3698674
British Columbia Utilities Commission (BCUC or Commission)
British Columbia Hydro and Power Authority (BC Hydro)
John Hart Generating Station Replacement Project
Project Completion and Evaluation Report (PCER) Methodology**

BC Hydro writes in compliance with Commission Order No. C-2-13, to provide its proposed methodology for the Project Completion and Evaluation Report (**PCER**) for the John Hart Generating Station Replacement Project (**the Project**). This submission responds to the Commission's reporting requirements, as set out in Directive No. 5 of the Order. The final reporting requirements, along with BC Hydro's responses, are listed below:

- 1. BC Hydro, either concurrently with the semi-annual report workshop or in a separate workshop, is to host a workshop with interveners of this proceeding and with BCUC staff to develop a detailed methodology for the final report to be filed with the Commission upon Project Completion. The methodology developed is to be submitted to the Commission for approval.**

In compliance with this directive, BC Hydro proposes to hold a web based workshop on March 2, 2021 at 1:30 P.M., followed by a written comment process, to obtain input and feedback on the proposed methodology from BCUC staff and the interveners in the CPCN proceeding. BC Hydro will consider the input received from the workshop and written comments, and then file a final proposed PCER template with the BCUC for approval. An invitation to the March 2, 2021 workshop will be sent to all participants of the proceeding, on February 16, 2021.

In addition, participant written comments on the proposed PCER methodology can be submitted to BC Hydro until March 16, 2021, via email to:

bchydroregulatorygroup@bchydro.com

BC Hydro is submitting the attached PCER template as the basis for the workshop and written comment process to determine the detailed methodology for the final report. This is the same approach used to determine the detailed methodology for semi-annual reporting (as directed by BCUC Order No. G-68-14).

The proposed PCER template includes sections for the content that was directed to be included in the final Project report, content directed to be included in the methodology for semi-annual reporting, and additional content required in accordance with BC Hydro's current PCER template. Regarding the first point, Order No. C-2-13 stated the following:

- 2. The final report should include an assessment of the Design-Build-Finance-Rehabilitate methodology relative to a Design-Bid-Build approach, lessons learned in implementing the Project and recommendations for the use of Design-Build-Finance-Rehabilitate in future projects. The methodology developed is to be submitted to the Commission for approval. The final report will be filed within six months of the end or substantial completion of the Project. The final report is to include a complete breakdown of the final costs of the Project, a comparison of these costs to the DBFR P50 Expected Amount in the Application, and an explanation and justification of all material cost variances.**

The assessment of the Design-Build-Finance-Rehabilitate (**DBFR**) methodology relative to a Design-Bid-Build (**DBB**) approach, lessons learned in implementing the Project and recommendations for the use of DBFR in future projects are included in the PCER template.

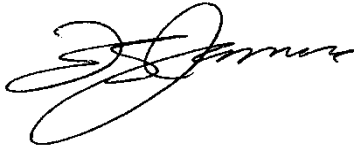
The PCER reporting on final cost and variance information will follow the same approach as that provided in the semi-annual progress reports.

As noted in Semi-Annual Progress Report No. 13, due to the COVID-19 pandemic, some deficiency close-out work planned for summer 2020 has been deferred to summer 2021, with final documentation from Project Co., the third party responsible for project design, construction and asset management, to follow in late 2021/early 2022. Close out reporting to BC Hydro's Board of Directors is expected to follow receipt of the final reports from Project Co. BC Hydro will file the PCER within three months of the date of Board review of the PCER summary, as required under the 2018 Capital Filing Guidelines (per BCUC Order No. G-313-19).

February 11, 2021
Ms. Marija Tresoglavic
Acting Commission Secretary and Manager
Regulatory Support
British Columbia Utilities Commission
John Hart Generating Station Replacement Project
Project Completion and Evaluation Report (PCER) Methodology

For further information, please contact Chris Sandve at 604-974-4641 or by email at bchydroregulatorygroup@bchydro.com.

Yours sincerely,



Fred James
Chief Regulatory Officer

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Enclosure

John Hart Generating Station Replacement Project

Project Completion and Evaluation Report Template

February 2013 to March 2021

PROPOSED TEMPLATE

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Attachments

1 Board of Directors Summary

This section will be submitted to BC Hydro's Board of Directors (the **Board**); the Board does not receive the full Project Completion and Evaluation Report (**PCER**). Section 1's sub-sections, identified below, reflect the general structure for Board reporting for Capital Project Delivery PCERs for large and complex projects. Sub-sections may be added if requested by the executive closer to the Board date, after their review of the draft document.

Section 1 content will be at a summary level. Some of this information is repeated in subsequent sections. In those cases, the first section summarizes key outcomes and the following sections provide additional detail. The BCUC will receive all sections, including Section 1.

Section 1 contents are listed below.

- 1.1 **Executive Summary**
- 1.2 **Background Information**
- 1.3 **Project Objectives**
- 1.4 **Scope and Scope Variance**

This sub-section will summarize the planned scope in the Application and material scope changes that occurred during the implementation phase of the project. This sub-section will draw on content previously included in the following Semi-Annual Progress Report (**SAPR**) sections: '*Construction and Commissioning*'; '*Decommissioning and Restoration*'; and '*BC Hydro Initiated Changes and Impact to Cost and Schedule*'.

1.5 **Procurement Strategy and Outcomes**

This sub-section will summarize the Design-Build-Finance-Rehabilitate (**DBFR**) procurement approach and key outcomes. Further detail will be provided in the

following sub-sections: 1.15 '*Key Lessons Learned*'; 3.1 '*DBFR Procurement Strategy*'; and 13 '*Assessment of DBFR and Recommendations*'.

This sub-section will draw on previously filed information from the following SAPR sections: '*BC Hydro Contract Management*'; '*Procurement and Manufacturing*'; '*Material Changes to the Project Agreement and Exercise of Project Agreement Rights*'; and '*Changes to Project Financing Arrangements*'.

1.6 Schedule Variance

This sub-section will summarize the content from the SAPR section '*Project Schedule*'.

1.7 Cost Variance

This sub-section will summarize the content from the SAPR '*Project Costs*' section and Appendix D, '*Detailed Project Expenditures*'.

1.8 Deficiencies

A summary of any material outstanding deficiencies will be provided.

1.9 Ongoing Commitments

This sub-section will summarize ongoing Indigenous Relations (IR), environmental, contractual, or other commitments (such as a summary of the remaining payments related to the fifteen-year Service Period outlined in SAPR Appendix E).

1.10 Regulatory Approvals

This sub-section will summarize the content from the SAPR section '*Government Agency Approvals*'.

1.11 Indigenous Relations

The Commission's determination on the adequacy of consultation will be noted. This sub-section will also summarize BC Hydro's IR activities and the important

contributions of the We Wai Kai Nation, Campbell River Indian Band and K'ómoks First Nation (First Nations) to the Project.

1.12 Environment and Archaeology

This sub-section will summarize content from the SAPR section '*Material Environmental Incidents*'. This will include summary of the environmental and archaeological performance of the Project; and any significant issues or challenges; and the mitigations and outcomes.

1.13 Stakeholder Engagement

This sub-section will summarize the Project's stakeholder engagement activities.

1.14 Safety

This sub-section will summarize the content from SAPR section '*Material Safety Incidents*'. This will include summary of the safety performance of the Project; and any significant issues or challenges; and the mitigations and outcomes.

1.15 Key Lessons Learned

This sub-section will summarize learnings from the Project, including those learned from the procurement approach, for possible use by future projects.

2 BCUC Application, Decision and Progress Reporting

This section will provide the main points of the BCUC Certificate of Public Convenience and Necessity (**CPCN**) Application (**the Application**), a summary of the decision and Directives, and a summary of BC Hydro's actions to comply with the Directives.

This section will also discuss the \$940 million procurement target which had been included in the Application and the revised \$1,050 million P50 baseline presented in SAPR No 1 following the procurement process, which was used for all subsequent

BCUC SAPR and BC Hydro Board reporting. This section will re-iterate the reason why the Project was managed against the revised baseline and the rest of the PCER will follow the same cost reporting methodology as in the SAPRs.

3 Procurement Strategy

This section provides a discussion on the Project procurement strategy.

3.1 DBFR Procurement Approach

This sub-section will expand on the supply chain strategy and procurement process. It will include the background information from the Application and SAPR No 1 on the drivers for choosing the DBFR procurement model, the procurement process followed, and the anticipated outcomes.

BC Hydro's assessment of the DBFR outcomes as compared to the anticipated benefits will be included in section 13.

3.2 Key Contractual Terminology

This sub-section will mirror SAPR Appendix F, '*Key Contractual Terminology*'.

4 Engineering and Construction Management

Section 4 will discuss developments from an engineering or construction means-and-methods perspective.

4.1 Project Co Management, Engineering and Design

Content in this sub-section will correspond to the following SAPR sections: '*Construction*'; and '*Project Co Management, Engineering and Design*'. Issues encountered during construction and mitigations responses and outcomes will be discussed in this section.

4.2 Procurement and Manufacturing

Content will correspond to the SAPR section, '*Procurement and Manufacturing*'.

4.3 BC Hydro Contract Management

This sub-section will correspond to the SAPR section, '*BC Hydro Contract Management*'. This will summarize quality management, Innovation Proposals, other changes, and claims issues and resolutions.

5 Project Implementation Cost Variance Explanation

Content in this section will correspond to the SAPR section, '*Project Costs*'; and SAPR Appendix D '*Detailed Project Expenditures*'.

The \$3 million threshold for variance explanations described in the SAPR will apply.

6 Schedule

This section will present the original schedule, the schedule revised after acceptance of Innovation Proposal #1, and the actual dates achieved. Challenges to schedule and Project Co and BC Hydro responses and outcomes will be expanded on from the Board summary in section 1.6 if required. The In-Service-Date outcomes will be those previously reported in SAPR section 3 *Project Schedule*.

7 Indigenous Relations Engagement Activities

This section will expand on the summary included in the Board section 1.11. A high-level summary of the consultation and engagement activities undertaken throughout the Project and a summary of the value of sub-contracts, direct employment, and employment hours will be provided.

8 Stakeholder Engagement Activities

This section will summarize the Commission conclusions on Stakeholder engagement. It will also describe BC Hydro's stakeholder engagement activities during implementation of the Project.

9 Environmental and Archaeological Management

This section will expand on the Board summary in section 1.12.

9.1 Project Permits and Approvals

This sub-section will summarize the approvals for construction and decommissioning. Content will correspond to the SAPR section, '*Government Agency Approvals*'.

9.2 Environmental Management and Outcomes

This sub-section will summarize key environmental management activities and outcomes. This sub-section will correspond to the SAPR section, '*Material Environmental Incidents*'.

9.3 Archaeological Management and Outcomes

This sub-section will expand on the Board section 1.12. It will summarize the outcomes of the Archaeological Impact Assessment and whether there were any chance finds encountered during Project execution.

10 Safety Activities

Content in this section will correspond to the SAPR section, '*Material Safety Incidents*'.

10.1 Safety Risk Management

This sub-section will describe Project safety management activities.

10.2 Safety Inspections and Orders

This sub-section will note inspections done and Orders made by WorkSafeBC. It will also summarize resolution to any Orders.

10.3 Incident Summary

This sub-section will provide a summary of major or moderate safety incidents.

11 Risk Management

This section provides discussion on the material Project implementation risk management and residual risks related to the services period.

11.1 Implementation Risk Management

Content in this sub-section will correspond to SAPR section *Material Project Risks*.

11.2 Residual Risks Related to the Services Period

This sub-section will outline residual contractual risks related to the Services Period.

12 Availability Payments

Content in this section will correspond to SAPR Appendix E, '*Progression of Availability Payments*'.

13 Assessment of DBFR and Recommendations

This section will provide an assessment of the DBFR methodology relative to a DBB approach for this Project as directed in BCUC's Directive 5 in Order C-2-13.

This section will:

- provide an assessment of whether the anticipated benefits of the DBFR (versus DBB) approach described in section 3 were realized;
- identify challenges with the procurement model if applicable; and

-
- include a comparison of the Project implementation costs against the DBB procurement alternative as laid out in the Application.

Directive 5 of Order C-2-13 also requires lessons learned related to the DBFR approach and recommendations for the use of DBFR in future projects. These lessons are summarized in sub-section 1.15.

BC Hydro's response will focus on lessons learned from this Project, including the use of DBFR. Procurement model decisions on future BC Hydro capital-Project-Delivery projects will follow the normal BC Hydro Project Delivery Procurement, PPM and BCUC Application practices and processes to evaluate and select appropriate procurement models. Lessons learned from this Project are expected to be included in future evaluations for similar types of projects.

14 Photographs

Photographs of the Project will be included.