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February 2, 2024

Patrick Wruck
Commission Secretary and Manager
Regulatory Services
British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, BC V6Z 2N3

Dear Patrick Wruck:

RE: Project No. 1599273
British Columbia Utilities Commission (BCUC or Commission)
British Columbia Hydro and Power Authority (BC Hydro)
Mainwaring Substation Upgrade Project (Project)
Errata to Material Change Report filed on January 17, 2024

BC Hydro writes to provide Errata No.1 to the Material Change Report filed on January 17, 2024.

For further information, please contact Joe Maloney at
bhydroregulatorygroup@bchydro.com.

Yours sincerely,



Chris Sandve
Chief Regulatory Officer

kd/tl

Enclosure

BC Hydro Mainwaring Substation Upgrade Project (Project)

Compliance with BCUC Order No. C-4-22 to file Material Change Reports

ERRATA – February 2, 2024

REMOVE	INSERT	NOTE
Page 2	Page 2 – Revision 1 – January 30, 2024	1
Page 5	Page 5 – Revision 1 – January 30, 2024	2

Notes:

1. Page 2 corrects an error in the Material Change Report filed on January 17, 2024. The correct amount remaining in the Project Reserve is \$5.8 million, consistent with BC Hydro’s internal approval documents for the change.
2. Page 5 corrects an error in the Material Change Report filed on January 17, 2024. The sentence should state “add one feeder section with seven feeder positions to the Project scope to support customer load connection requests in the Mainwaring area.”

Chris Sandve
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January 17, 2024

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Regulatory Services
British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, BC V6Z 2N3

Dear Patrick Wruck:

**RE: Project No. 1599273
British Columbia Utilities Commission (BCUC or Commission)
British Columbia Hydro and Power Authority (BC Hydro)
Mainwaring Substation Upgrade Project (Project)
Compliance with BCUC Order No. C-4-22 to file Material Change Reports**

BC Hydro writes in accordance with BCUC Order No. C-4-22 (**Order**) to file a Material Change report for the Project.

1 Background

On November 2021, BC Hydro filed an application with the BCUC seeking a Certificate of Public Convenience and Necessity (**CPCN**) for the Project (Application). On August 16, 2022, the BCUC issued an Order granting the CPCN to BC Hydro for the Project.

In the Order, the BCUC directed BC Hydro to file Material Change reports within 30 days of the date of the Material Change occurring. A Material Change was defined as:

[A] change in BC Hydro's plan for the Project that would reasonably be expected to have a significant impact on the schedule, cost or scope, such that:

- There is a schedule delay of greater than six months compared to the schedule provided in Table 4-4 of the Application;
- The total Project cost exceeds 10 percent of the estimated Project cost provided in Table 4-2 of the Application; or
- There is a change to the Project scope provided in Chapter 4 of the Application.

2 Material Change Report

BC Hydro reports on a Material Change to the Project scope provided in Chapter 4 of the Application. As described in section 2.2 below, this report is being filed within 30 days of the date of the Material Change occurring, as required by the August 16, 2022 Order.

BC Hydro expects to implement the scope change discussed below without impacting the Project In-Service Date or the Authorized Amount. As such, there is no Material Change to Project schedule or cost. The change is being funded through a \$21.0 million draw from the Project Reserve, increasing the Project's Expected Amount by \$21.0 million and leaving \$~~6.75.8~~ million in Project Reserve. The Authorized Cost of the Project remains at \$156.3 million.¹

BC Hydro expects that the remaining \$~~6.75.8~~ million in Project Reserve will be adequate for unknown risks that may arise, as over 85% of procurement is now complete, construction is slightly ahead of schedule, and around \$10 million of contingency remains².

2.1 Project Scope Change

As described in section 4.2.1 of the Application, the Project scope includes replacing the T1 and T3 power transformers with two new 150 MVA transformers and replacing the existing 50/60 feeder section of 20 feeder positions with three new indoor gas insulated feeder sections with a total of 21 feeder positions and all associated equipment.³

The change to the Project scope is to add one more feeder section with seven feeder positions to the Project to support customer load connection requests in the Mainwaring area, thereby increasing the number of feeder positions to 28. Accordingly, the objective of and scope of the Project are revised to:

¹ The Authorized Cost of \$156.3 million was reported in the Mainwaring Progress Report No. 1 that was filed on October 14, 2023. As reported therein, an updated preliminary estimate was completed on August 31, 2022, and had an updated Authorized Cost of \$156.3 million, an increase of 9% of the Authorized Cost of \$143.3 million presented in Table 4-2 in the Application. A Material Change report was not provided for the increase in the Authorized Cost because the increase was less than 10% of the Application amount. The Authorized Cost of \$156.3 million was approved by the BC Hydro Board of Directors in December 2022, as the first approval of these amounts for the purpose of completing the Implementation phase, as reported in Mainwaring Progress Report No. 2 that was filed on October 13, 2023.

² The \$10 million of contingency that remains is in addition to the \$21.0 million increase in contingency from the Project Reserve draw for the scope change.

³ BC Hydro's current design standard is to construct feeder sections in multiples of seven feeder positions.

connection requests in the Mainwaring area, as well as to address safety, environmental and reputational risks at the substation by replacing the T1 and T3 power transformers with two new 150 MVA transformers and replacing the existing 50/60 feeder section of 20 feeder positions with four new indoor gas insulated feeder sections with a total of 28 new feeder positions and all associated equipment.

In the Application, BC Hydro noted space for future addition of a feeder section of seven feeder positions was included in the scope of Project. For instance, in section 3.4.2 of the Application, BC Hydro noted that:

[It] would construct a new building to house the new gas insulated feeders and include space in the new building and distribution infrastructure to add seven feeders in the future.

In section 4.2.1.7 of the Application, BC Hydro further noted the future expansion as follows:

The gas insulated switchgear feeder building (4.2.1.1) and distribution scope (4.2.1.3) will be designed such that the Project maximizes future upgradability as set out in section 3.4 of Chapter 3. However, this Project will only construct future expansion scope necessary to ensure that future expansion is not precluded.

Although the space for the additional feeder section was included in the Project scope, the actual installation of the additional feeder section was not included because the load forecast at the time of the Application did not justify adding additional feeders to the station. As noted in section 2.2.2 of the Application, “[a]dditional feeder positions are expected to be required around fiscal 2030.” The installation of the feeder section was therefore deferred until growth-driven need was identified.

Since the Application, the timing of the need for the additional feeder section has advanced because load connection requests from customers have increased, many of which are driven by customers transitioning towards electrification. BC Hydro now has approximately 40 MW of requests for customer load connections to be in service by 2028 in the Mainwaring area, which could be accommodated by the addition of the fourth feeder section.

An addition to the Project scope provides the opportunity to add the feeder section more quickly and more cost-effectively than initiating a separate project.⁴ This is because BC Hydro can issue change orders to the existing contracts for the three feeder sections that are already part of the Project more quickly, locking in equipment prices and a delivery schedule in a very tight supply chain market. Further, adding one feeder section to the current Project scope avoids the time and cost associated with initiating a new

⁴ Adding the further feeder section at a later date, aligned with the initial load forecast, was included in BC Hydro's Capital Plan as a separate project.

project. For example, the time and cost associated with a new procurement process is avoided.

2.2 Timing of the Material Change

In accordance with BC Hydro's internal governance policies, the above Project scope change required approvals from the Project Initiator, the Project Sponsor, and the BC Hydro Board of Directors.

- On December 13, 2023, the Project Initiator and Project Sponsor approved the addition of the seven feeder positions to the Project scope, and the increase in the Expected Amount and the Reserve Draw, subject to the BC Hydro Board of Directors' approval of the varied use of the Project Reserve; and
- On December 20, 2023, the BC Hydro Board of Directors approved varying the use of the Project Reserve for the purposes of adding seven additional feeder positions to the Project scope. Approval from BC Hydro's Board of Directors was needed due to the varied use of the Project Reserve for the new scope of seven additional feeder positions.

This report is filed within 30 days of the BC Hydro Board of Directors' approval, pursuant to the Order of August 16, 2022.

While BC Hydro is taking advantage of the opportunity to order the equipment now, delivery of the equipment and subsequent installation costs will not occur until 2025. BC Hydro will report on progress in future progress reports.

2.3 Summary of the Material Change

Pursuant to the requirements set out in BCUC Order No. C-4-22, Table 1 below provides a description of the Material Change, the reasons for the Material Change, and a discussion of any risk, opportunity, and action resulting from the Material Change, summarizing the discussion above.

Table 1 Summary of Material Change

Nature of the Change	Description of the Material Change	Date Change Occurred	Reason for the Material Change	Risk, Opportunity, or Action Resulting from the Material Change
Scope	Add one feeder position <u>section</u> with seven feeder sections-positions to the Project scope to support customer load connection requests in the Mainwaring area.	December 20, 2023	The timing of the need for the additional feeder section has advanced because load connection requests from customers have increased, many of which are driven by customers transitioning towards electrification. BC Hydro now has approximately 40 MW of requests for customer load connections to be in service by 2028 in the Mainwaring area, which could be accommodated by the addition of the fourth feeder section.	<p>An addition to the Project scope provides the opportunity to add the feeder section more quickly and more cost-effectively than initiating a separate project because:</p> <ul style="list-style-type: none"> • Change orders to the existing contracts for the three feeder sections already part of the Project can be issued more quickly, locking in equipment prices and a delivery schedule in a very tight supply chain market; and • Adding one feeder section to the current Project avoids the time and cost associated with initiating a new project. For example, the time and cost associated with a new procurement process is avoided. <p>While BC Hydro is taking advantage of the opportunity to order the equipment now, delivery of the equipment and subsequent installation costs will not occur until 2025. There is no change to the Project In-Service Date or the Authorized Amount as a result of this change. The change is being funded through a \$21.0 million draw from the Project Reserve, increasing the Project's Expected Amount by \$21.0 million.</p>

January 17, 2024
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