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January 31, 2023

Board of Commissioners
of Public Utilities
P.O. Box 21040
120 Torbay Road
St. John's, NL A1A 5B2

Attention: G. Cheryl Blundon
Director of Corporate Services
and Board Secretary

Dear Ms. Blundon:

Re: NLH – Application for Approval of Capital Expenditures for Section Replacement and Weld Refurbishment for Bay d’Espoir Hydroelectric Generating Facility Penstock 1 – Newfoundland Power’s Comments

Introductory

Newfoundland and Labrador Hydro’s (“Hydro”) *Application for Approval of Capital Expenditures for Section Replacement and Weld Refurbishment for Bay d’Espoir Hydroelectric Generating Facility (“Bay d’Espoir”) Penstock 1* (the “Application”) was filed with the Newfoundland and Labrador Board of Commissioners of Public Utilities (the “Board”) on December 7, 2022. Newfoundland Power Inc. (“Newfoundland Power” or the “Company”) filed Requests for Information on January 10, 2023 on the Application. Responses were received from Hydro on January 25, 2023.

In its revised review schedule for the Application, the Board set today’s date as the deadline for comments from parties. These are Newfoundland Power’s comments with respect to the Application.

Hydro’s Application

Bay d’Espoir provides 613 MW of electrical capacity and 2,560 GWh of energy annually to the Island Interconnected System. The facility includes four penstocks that supply water to seven hydroelectric generating units.¹ Penstock 1 is 1,200m in length and consists of 17-foot, 15-foot, and 13.5-foot diameter sections. It provides water to generating Units 1 and 2 and is an integral component of 153 MW of generation from these units. From 2016 to 2019, Bay d’Espoir Penstock 1 experienced four ruptures within the 17-foot diameter section, resulting in Bay d’Espoir Units 1 and 2 being unavailable for service for extended periods.² The operation

¹ Application, Paragraph 2.

² Application, Paragraph 3.

Newfoundland Power Inc.

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of Bay d’Espoir Units 1 and 2 is currently restricted. As a result, they cannot be utilized for economic dispatch, potentially resulting in the less efficient operation of Bay d’Espoir.³

A review by Hydro’s consultant identified 15 alternatives to address the issues associated with Penstock 1. Hydro’s chosen alternative includes: (i) replacement of the 331m long, 17-foot diameter section of Penstock 1; and (ii) weld refurbishment and interior recoating of the remainder of the 1,200m penstock.⁴ The estimated cost of the work is \$50,606,700.⁵ Hydro states that the chosen alternative was deemed the only technically feasible alternative to return Penstock 1 to safe and reliable operation.⁶ Hydro also indicates that its consultant, Kleinschmidt Associates, is currently finalizing a report (the “Kleinschmidt Report”) to document its findings on the suitability of fibre wrap alternatives and why they are not preferred alternatives for Bay d’Espoir Penstock 1.⁷

Based on Hydro’s project schedule, once construction and refurbishment activities are complete, commissioning of Penstock 1 is scheduled to occur in November 2025 in advance of the 2025-2026 winter peak season.⁸ To mitigate project risk, Hydro plans to conduct a risk workshop with its contractor and will assess schedule risk prior to penstock disassembly. In the event that Penstock 1 cannot be returned to service in advance of the 2025-2026 winter season, Hydro states that it may need to avail of the Holyrood Thermal Generating Station (“Holyrood”) and/or standby generation to support system conditions as required.⁹

In addition to the proposed expenditures related to Penstock 1, Hydro indicates that it is planning for similar expenditures for Bay d’Espoir Penstocks 2 and 3. Hydro states that it will continue to assess the timing of such work, taking into consideration the condition of Penstocks 2 and 3. Once the timing is determined, Hydro anticipates that the project would be proposed in the appropriate capital budget application corresponding to the commencement of the project (e.g. the 2026 Capital Budget Application).¹⁰

Newfoundland Power’s Comments

Newfoundland Power purchases approximately 93% of the energy required to supply its customers from Hydro. Wholesale supply costs from Hydro represent the single largest cost recovered from Newfoundland Power’s customers. The reliability and cost of supply from Hydro directly affects Newfoundland Power customers.

Hydro’s Application outlines approximately \$51 million in capital expenditures for section replacement and weld refurbishment of Bay d’Espoir Penstock 1. The Application does not

³ NP-NLH-001.

⁴ *Schedule 1: Upgrade Report, Penstock 1 Life Extension*, page 10, lines 21-23.

⁵ Application, Paragraph 10.

⁶ NP-NLH-009 (a).

⁷ NP-NLH-009 (d).

⁸ *Schedule 1: Upgrade Report, Penstock 1 Life Extension*, page 24, Table 8: Project Schedule.

⁹ NP-NLH-005.

¹⁰ NP-NLH-012 (b).

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include expenditures associated with Bay d'Espoir Penstocks 2 and 3 which are included in Hydro's capital planning. The Application expenditures are also in addition to costs associated with the Muskrat Falls Project and other supply costs that were recently presented in Hydro's *Reliability and Resource Adequacy Study – 2022 Update*. These include: (i) approximately \$1 billion to operate Holyrood until 2030; (ii) approximately \$522 million associated with the potential construction of Bay d'Espoir Unit 8; and (iii) costs associated with new alternative generation to potentially provide backup to the Labrador Island Link ("LIL") transmission line.

This multi-year project to complete the section replacement and weld refurbishment of Penstock 1 is substantial and could be subject to delays and cost overruns. Similar cost risk would be introduced should Hydro proceed with additional phases of its Bay d'Espoir Penstock Life Extension plan. Expenditures proposed in Hydro's Application and any delays and cost overruns will further increase supply cost pressure for Newfoundland Power customers.

Hydro's Penstock 1 section replacement and weld refurbishment project is scheduled to conclude in November 2025 in advance of the 2025-2026 winter peak season. Potential delays in completing the work would result in 153 MW of capacity being unavailable to supply customers on the Island Interconnected System. If any delays were to materialize, Hydro would be required to rely more heavily on the LIL transmission line and Holyrood to serve the needs of customers on the Island Interconnected System. The reliability of the LIL and Holyrood are both being assessed as a part of the Board's review of Hydro's *Reliability and Resource Adequacy Study – 2022 Update*.

Hydro's Application introduces new supply risk to Newfoundland Power customers in the coming years; both in terms of cost and reliability. In Newfoundland Power's submission, if the Board is to approve the Application, Hydro should be directed to provide sufficient reporting to allow the Board to monitor the supply cost and reliability risk associated with this project. Newfoundland Power further submits that Hydro should place the final Kleinschmidt Report on the record as part of this proceeding.

We trust this is in order. If you have any questions regarding the enclosed, please contact the undersigned.

Yours truly,



Dominic Foley
Legal Counsel

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