

November 21, 2022

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

Attention: Jo-Anne Galarneau
Executive Director & Board Secretary

Re: 2024 Capital Budget Application – Hydro's Final Written Submission

Newfoundland and Labrador Hydro ("Hydro") filed its 2024 Capital Budget Application ("2024 CBA") with the Board of Commissioners of Public Utilities ("Board") on July 12, 2023,¹ seeking approval of \$96.5 million in capital expenditures for 2024. In that filing, Hydro also sought approval of its 2022 average rate base in the amount of \$2,334,120,000.

Legislative Framework

Section 37 of the *Public Utilities Act* ("Act") requires Hydro to provide electrical service and facilities that are reasonably safe and adequate and just and reasonable.² Section 41 of the Act requires Hydro to obtain approval from the Board for its annual capital budget.³ In addition, Section 3 of the *Electrical Power Control Act, 1994* ("EPCA") requires that Hydro provide electrical service that is efficient, that allows for its customers to have equitable access to an adequate supply of power, and that is provided at the lowest possible cost in an environmentally responsible manner consistent with reliable service.⁴

Hydro submits that the projects included in its 2024 CBA are required to meet Hydro's obligations under the Act and the EPCA. Hydro further submits—and will discuss in more detail herein—that all projects proposed in the 2024 CBA are justified through the inclusion of all necessary and applicable evidence.

Cost Management

Hydro strives to operate in a manner that results in power being delivered to consumers at the lowest possible cost in an environmentally responsible manner consistent with reliable service. Cost management is an area of focus within all stages of Hydro's capital program, including planning, capital budget proposals, and execution. In its aim to balance the provision of reliable service with cost management and environmental considerations, Hydro focuses on sound utility asset management practices, condition-based investments (versus age-based investments) where appropriate, and operational and system requirements.

Hydro also seeks to engage with stakeholders and customers to inform its capital investment considerations. Hydro appreciates that its actions impact its customers and strives to balance reliability performance and costs to provide reasonable electrical service to its customers. In preparing the 2024 CBA, Hydro took deliberate action to ensure its proposals reflect a level of investment that

¹ "2024 Capital Budget Application," Newfoundland and Labrador Hydro, rev. September 21, 2023 (originally filed July 12, 2023).

² *Public Utilities Act*, RSNL 1990, c P-47, s 37(1).

³ *Public Utilities Act*, RSNL 1990, c P-47, s 41(1).

⁴ *Electrical Power Control Act, 1994*, SNL 1994, c E-5.1, s 3(b).

appropriately balances reliability and cost concerns,⁵ particularly in light of increasing rate pressures and other planned capital work.

As in previous years, Hydro evaluated each project to determine whether deferral was an option, resulting in the deferral of capital projects totalling approximately \$11 million.⁶ Where deferral of a program or project is determined to be low risk, that option is selected to balance the cost impact to customers with the level of reliability required.

Upon further assessment of planned capital expenditures, Hydro also cancelled capital projects or programs totalling approximately \$3.6 million.⁷

Intervenor Written Submissions

Hydro notes that Newfoundland Power Inc. (“Newfoundland Power”) and the Consumer Advocate filed submissions; no submissions were received from the Island Industrial Customer Group or the Labrador Interconnected Group. Newfoundland Power advised that it does not object to any of the capital expenditures proposed in Hydro’s 2024 CBA. Similarly, the Consumer Advocate did not oppose the specific capital expenditures detailed in the 2024 CBA; however, it noted certain specific matters for the Board’s consideration. Hydro’s reply to issues raised by the Consumer Advocate is provided herein.

The Consumer Advocate’s submission referenced “four points of broader concern.”⁸ These points addressed the following:

- 1) Finalization of provisional Capital Budget Application Guidelines;⁹
- 2) Project execution improvement;
- 3) An asset management plan for the refurbishment of the Bay d’Espoir Hydroelectric Generating Facility (“Bay d’Espoir Facility”); and
- 4) Integration of intermittent renewable sources.

Finalization of Provisional Capital Budget Application Guidelines

As Hydro noted in its responses to certain requests for information, the process to finalize the Capital Budget Application Guidelines is underway in a process separate from the 2024 CBA. Hydro does not have any further response regarding these guidelines as part of this proceeding.

Project Execution Improvement

The Consumer Advocate’s submission expressed concern with Hydro’s project execution practices, particularly as they relate to capital expenditure carryover and the perceived impact of carryover on

⁵ Hydro’s response to CA-NLH-009 of this proceeding provides an overview of steps taken to manage costs.

⁶ A listing of deferred projects is provided in the “2024 Capital Budget Application,” Newfoundland and Labrador Hydro, rev. September 21, 2023, vol. I., sch. 1, Table 6.

⁷ A listing of cancelled projects is provided in the “2024 Capital Budget Application,” Newfoundland and Labrador Hydro, rev. September 21, 2023, vol. I., sch. 1, Table 7. In addition to those listed in Table 7, in Revision 2 to its 2024 CBA, Hydro cancelled its project to purchase accommodations trailers in isolated systems—Project 8: Purchase Accommodations Trailers (2024–2025).

⁸ “Newfoundland and Labrador Hydro 2024 Capital Budget Application,” Office of the Consumer Advocate, November 14, 2023, p. 2.

⁹ “Capital Budget Application Guidelines (Provisional),” Board of Commissioners of Public Utilities, January 2022.

<[http://pub.nl.ca/PU/guidelines/Capital%20Budget%20Application%20Guidelines%20\(Provisional\)%20-%202021-12-20.PDF](http://pub.nl.ca/PU/guidelines/Capital%20Budget%20Application%20Guidelines%20(Provisional)%20-%202021-12-20.PDF)>.

system reliability. The Consumer Advocate requested that the Board “. . . encourage Hydro to address project execution issues to ensure certainty of supply for customers.”¹⁰

As described by Hydro in its responses to NP-NLH-001 and PUB-NLH-076 of this proceeding, and as acknowledged by the Consumer Advocate in its submission, the causal factors of capital expenditure carryover are varied and must be considered when assessing the impact of carryover on system reliability. In its response to PUB-NLH-076 of this proceeding, Hydro categorized the cause of significant carryover, organized by project. Of the projects with significant carryover, approximately half reflect changes in cash flow within the years of a multi-year project and have no impact on asset in-service date or system reliability. Carryover for the remaining projects was generally due to supply chain constraints outside of Hydro’s control or due to strategic decisions made in the best interest of ratepayers and system reliability. For example, Hydro’s decision to defer the completion of upgrades to enable the retirement of the Stephenville Gas Turbine was necessary to enable the continued operation of the generator in light of growing system demand and the need for supply, as outlined in the *Reliability and Resource Adequacy Study Review* proceeding (“*RRA Study Review*”).¹¹

In evaluating carryover and the deferral of project completion, whether within or outside of Hydro’s control, Hydro evaluates the risks associated with deferral and project carryover and applies mitigations where necessary and appropriate; as such, Hydro has been successful in minimizing the impacts of carryover on system reliability. Hydro believes that carryover cannot be fully avoided, given the size and complexity of its capital program; therefore, Hydro is making efforts to manage and reduce carryover while minimizing impacts.

Bay d’Espoir Facility Refurbishment Plan

The Consumer Advocate has expressed concern over the perceived lack of an overall plan for the refurbishment of the Bay d’Espoir Facility and challenged Hydro’s response that an overall condition assessment would provide generalized results. The Consumer Advocate noted that, in its opinion, such an assessment is necessary to evaluate whether sustaining investments are prudent, compared to the replacement of the energy and capacity provided by the Bay d’Espoir Facility with an alternate source.

Hydro disagrees that an overall condition assessment, such as that undertaken for the Holyrood Thermal Generating Station (“Holyrood TGS”) in 2021–2022,¹² is necessary or beneficial for making informed and prudent asset management decisions as they relate to its hydraulic generating assets. Hydro maintains asset management plans for each asset across its hydraulic generating facilities, including but not limited to the Bay d’Espoir Facility.

A hydraulic generating facility is made up of thousands of individual components, each with unique asset management considerations, such as design life, maintenance routines, and replacement or refurbishment criteria. Hydro’s existing asset management plans for its hydraulic generating assets are tailored to each asset, enable fulsome evaluation of asset condition, and enable prudent and informed decision-making. Hydraulic generating facilities are designed with an expected life of up to and, in many

¹⁰ “Newfoundland and Labrador Hydro 2024 Capital Budget Application,” Office of the Consumer Advocate, November 14, 2023, p. 3.

¹¹ “Reliability and Resource Adequacy Study Review 2023 Near-Term Reliability Report – November Report,” Newfoundland and Labrador Hydro, November 15, 2023.

¹² “*Reliability and Resource Adequacy Study Review - Assessment to Determine the Potential Long-Term Viability of the Holyrood Thermal Generating Station*,” Newfoundland and Labrador Hydro, March 31, 2022.

<<http://pub.nl.ca/applications/NLH2018ReliabilityAdequacy/reports/From%20NLH%20-%20Assessment%20to%20Determine%20the%20Potential%20Long-Term%20Viability%20of%20the%20Holyrood%20Thermal%20Generating%20Station%20-%202022-03-31.PDF>>.

cases, exceeding 100 years.¹³ Sustaining capital investments, such as those proposed by Hydro in its 2024 CBA, are necessary and expected to realize the design life of the overall facility.

In contrast, the Holyrood TGS is nearing end-of-life; a thorough and holistic condition assessment was required to inform the viability of extending the life of that generating station. Furthermore, a detailed condition assessment of the Bay d’Espoir Facility that prescribes a detailed assessment of each individual component may require an extensive plant outage, rendering the facility unavailable to the system for an extended period, as opposed to evaluating each asset during its planned preventive maintenance routines and inspections.

Given the extensive life of hydraulic generating facilities and the performance of the Bay d’Espoir Facility, Hydro does not believe that replacement of Bay d’Espoir energy and capacity presents a reasonable alternative to sustaining capital that warrants further exploration at this time.

Integration of Intermittent Renewable Sources

The Consumer Advocate expressed concern over Hydro’s response to CA-NLH-121 of this proceeding. In CA-NLH-121, the Consumer Advocate cited text from the U.S. Energy Information Administration (“EIA”), in which the EIA notes that the penetration of utility-scale solar increased year-over-year in 2022; the question posed to Hydro asked, “How are these jurisdictions combining non-dispatchable resources with other generation and ancillary service resources to compensate for production variability and non-dispatchability?”¹⁴ In its response, Hydro stated that it “. . . does not have the information necessary to comment on how other jurisdictions, either in Canada or in the United States of America, plan on combining non-dispatchable resources with other generation resources.”¹⁵

The Consumer Advocate questioned how Hydro is conducting a Reliability and Resource Adequacy Study without such information. Hydro notes that its response was specific to the Consumer Advocate’s question regarding the integration of intermittent renewable sources in other jurisdictions and should not be mistaken as Hydro indicating that it is not exploring such technologies in the context of their potential integration with the Island Interconnected and Labrador Interconnected Systems.

In February 2023, Hydro filed a wind integration study¹⁶ that assessed the amount of additional, non-dispatchable wind generation that can be added, economically and technically, to the Newfoundland and Labrador power system. In September and October 2023, Hydro filed studies assessing the viability of Battery Energy Storage Systems (“BESS”)¹⁷ and pumped storage at Hydro’s existing reservoirs.¹⁸ In

¹³ “5 Things You Need to Know About Hydropower Canada’s Number One Electricity Source,” Canadian Hydropower Association.

<https://natural-resources.canada.ca/sites/www.nrcan.gc.ca/files/energy/energy-resources/5_things_you_need_to_know_about_hydropower.pdf>.

¹⁴ “Newfoundland and Labrador Hydro 2024 Capital Budget Application,” Office of the Consumer Advocate, November 14, 2023, p. 4.

¹⁵ Hydro’s response to CA-NLH-121 of this proceeding, p. 1/13–15.

¹⁶ “Wind Power Integration Study,” Hatch Ltd., October 24, 2022 was provided as Attachment 1 to Hydro’s response to PUB-NLH-232 from the *RRA Study Review* proceeding.

<<http://pub.nl.ca/applications/NLH2018ReliabilityAdequacy/rfis/PUB-NLH-232.PDF>>.

¹⁷ “Battery Energy Storage System Report Overview,” Newfoundland and Labrador Hydro, September 29, 2023.

<<http://pub.nl.ca/applications/NLH2018ReliabilityAdequacy/reports/From%20NLH%20-%20Battery%20Energy%20Storage%20System%20Study%20-%202023-09-29.PDF>>.

¹⁸ “Pumped Storage at Existing Hydro Sites Overview,” Newfoundland and Labrador Hydro, October 31, 2023.

<<http://pub.nl.ca/applications/NLH2018ReliabilityAdequacy/correspondence/From%20NLH%20-%20Pumped%20Storage%20at%20Existing%20Hydro%20Sites%20-%20REDACTED%20-%202023-10-31.PDF>>.

2024, Hydro plans to file an additional study on the viability of pumped storage at greenfield sites in the province.¹⁹

Hydro is giving full consideration to all viable sources of capacity and energy through its Reliability Adequacy Plan²⁰ and is basing decisions on the analysis of these technologies and their viability on Hydro's specific system. As a system with a relatively low load and constrained interconnections to neighbouring systems, Hydro must evaluate generating sources within this context; as a result, information on the integration of renewable sources in other jurisdictions is considered but provides limited value when considering their integration on Hydro's systems.

Conclusion

Hydro submits that the capital work for which Hydro has sought approval in its 2024 CBA is necessary to ensure that it can continue to provide service that is reasonably safe and adequate and just and reasonable as required by Section 37 of the *Act*. Hydro further submits that, as illustrated through the information provided in the 2024 CBA and the process that followed, the proposed projects are necessary to enable its customers to have equitable access to an adequate supply of power and that the proposed projects are the lowest possible cost options consistent with reliable service in an environmentally responsible manner, as required by the *EPCA*.²¹ Hydro notes that none of the intervenors took issue with the projects proposed by Hydro in its 2024 CBA and that many of the issues raised have been addressed throughout the process, as noted herein.

Hydro respectfully requests that the Board approve the 2024 CBA as submitted.

Should you have any questions, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO



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¹⁹ As committed in the "Reliability and Resource Adequacy Study Review – Listing of Planned Reports, Studies, and Analyses," Newfoundland and Labrador Hydro, May 25, 2023.

<<http://pub.nl.ca/applications/NLH2018ReliabilityAdequacy/correspondence/From%20NLH%20-%20Listing%20of%20Planned%20Reports,%20Studies%20and%20Analyses%20-%202023-05-25.PDF>>.

²⁰ The filing of Hydro's next Resource Adequacy Plan is scheduled for the spring of 2024.

²¹ *Electrical Power Control Act, 1994*, SNL 1994, c E-5.1, s 3(b).