Office of the Consumer Advocate

March 13, 2026

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

Attention: Colleen Jones, Assistant Board Secretary

Dear Ms. Jones:

Re: NL Hydro - Application for Capital Expenditures for the Life Extension of Bay d'Espoir Unit 7 – Comments of the Consumer Advocate

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On June 20, 2025 Newfoundland and Labrador Hydro ("Hydro") submitted to the Public Utilities Board (the "Board") an Application for Capital Expenditures for the Life Extension of Bay d'Espoir Unit 7 (the "Application").

The proposed Bay d'Espoir Unit 7 Life Extension Project ("Unit 7" or the "Project") provides 154 MW of hydro-generating capacity. The Project is a multi-year capital investment with the purpose of ensuring the continued operation of Hydro's largest hydroelectric generating unit on the Island System. Much of the scope is based on a condition assessment performed in 2023 by Hydro's consultant, Hatch Ltd. Hydro's Application requests approval of $85,346,227 inclusive of the base cost estimate (which includes a found work allowance), contingency, escalation, interest during construction, and a management reserve. The schedule proposed by Hydro seeks to minimize adverse reliability impacts and takes into consideration the long lead time for the procurement of turbine components.

On October 6, 2025, the Board requested additional information on the Application pertaining to an uprate to the capacity of Unit 7. Hydro complied on October 16, 2025. In a letter dated October 20, 2025, the Board established a schedule for a review of the Application with submissions by the parties due November 21, 2025. The Board and Newfoundland Power submitted Requests for Information (RFIs) on the Application on October 30, 2025, and Hydro provided responses on November 17, 2025. However, on November 17, 2025, the Board issued another letter to the parties indicating that it was reviewing the RFI responses and would provide further correspondence on the schedule and process.

Hydro has indicated that an award of the Unit 7 life extension work must be made by the end of March 2026 to maintain the proposed schedule and avoid delays that might result in additional project costs (February 20, 2026 email from Board to Consumer Advocate). On March 4, 2026, the Board issued another schedule for the review process, requiring intervenor comments by March 13, 2026. The Board specifically requested that the parties comment on the:

> *…application, including issues related to the proposed amounts for found work, contingency and Management Reserve. Specifically:*
>
> *i. are the elements of each reasonable and well-defined;*
>
> *ii. are the distinctions between these items clear; and*
>
> *iii. is the method of calculation of each reasonable.*

The Board further noted that a management reserve "*has never been approved in this jurisdiction and the amount of the proposed management reserve is significant.*" The Board requested that the parties address the following:

> *i. is a management reserve appropriate for this project;*
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> *ii. is the amount of the proposed management reserve reasonable;*
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> *iii. is there adequate oversight of the management reserve or should there be additional oversight by the Board; and*
>
> *iv. should a management reserve be included in the approved capital expenditures or, alternatively, should there be an opportunity for an expedited approval process to address significant changes which arise after approval.*

This document conveys the comments of the Consumer Advocate.

I. COST AND TIMING

The Consumer Advocate supports the Unit 7 life extension scope of work and schedule as proposed by Hydro in the Application.

It makes economic sense for Hydro to maintain its existing assets as the cost of doing so is far less than the very high cost of new facilities. Hydro's proposed budget for the 154 MW life extension work on Unit 7 is $85.3 million, which is about $552/kW ($85 million /154 MW). By comparison, in its Build Application, Hydro proposes to construct a new 150 MW Bay d'Espoir Unit 8 at a cost of more than $1 billion, or $6050/kW (PUB-NLH-021). Hydro's Build Application also includes a new 150 MW Avalon Combustion Turbine with a proposed budget of nearly $1 billion. Further, Hydro indicates that keeping Holyrood TGS in service requires up to $120 million annually in operating cost (PUB-NLH-021). Clearly, it is desirable to extend the life of Unit 7 to defer the need for new capacity additions and maintain the possibility of retiring the high-cost Holyrood TGS in the early 2030s.

According to the Application (Schedule 1, page 9), Unit 7 has operated reliably since it was commissioned in 1977. However, based on Hydro's 2019 turbine refurbishment project, which provided the "*opportunity for detailed inspection and measurement of critical equipment*" (Schedule 1, page 3), and the results of a subsequent 2023 Condition Assessment by its consultant, Hatch, Hydro has concluded that it is the appropriate time to proceed with the life extension project.

As noted in PUB-NLH-019, Hydro's consultant recommended that the life extension work be completed by 2029, suggesting that the Unit 7 life extension work could be delayed by a year. In fact, a project delay could become a reality if the Board does not soon issue an Order on the Application. However, as noted in PUB-NLH-018:

> *Hydro identified 2028 as the appropriate window for construction when weighing asset health as presented in Hatch Ltd.'s Bay d'Espoir Unit 7 Condition Assessment Condition Report ("2023 Condition Assessment), known planned work required in the five-year capital plans, and overall system reliability.*

Deferring the life extension work would expose Unit 7 to an increased number of outages and a deterioration in the reliability of supply to Island customers.

Given the age of the facility, its important role in the Island Interconnected System, and the risks of continuing reliance on the aging Holyrood TGS beyond 2030, Hydro's plan to proceed now with completion by the year-end 2028 (Schedule 1, Table 2, page 23) is appropriate.

II. MANAGEMENT RESERVE

The Contingency and Found Work allowances for Unit 7 are [redacted] and [redacted] of the proposed Authorized Budget, respectively (PUB-NLH-013). We take no exception to the inclusion of these allowances in capital cost estimates. Contingency has been part of the estimation process in this jurisdiction for many years and, given the nature of the project, an allowance for found work is reasonable. The greater concern is the Management Reserve.

Hydro defines Management Reserve as follows (PUB-NLH-013a):

> *"Management reserve is a separate budget allocation established to address unknown unknowns, events that are unforeseen and outside the identified risk profile, or strategic risk events. Examples might include regulatory or code changes, major supplier insolvency, geopolitical events, or a significant change in project execution strategy.*
>
> *Management reserve may cover both direct and indirect impacts, depending on the nature of the event. Direct costs could include new scope or redesign work, while indirect costs might involve extended project management or additional engineering oversight. The allocation of direct and indirect costs is not known at the time that the management reserve is established, and would be determined at the time of utilization. The value of the management reserve is*

also determined through the statistical risk modelling process, typically representing the upper range of potential cost outcomes at a chosen confidence level (e.g., P85)."

Appropriateness of Management Reserve:

Based on the filed record, Hydro has not sufficiently justified the use of a management reserve for Unit 7, which is relatively low risk project of this type.

The use of management reserves is not common in the industry and, as the Board points out, its use is new to this jurisdiction. Management reserves may help to avoid project delays and resulting cost increases owing to the need for funding requests during project execution. However, when they are used, management reserves are typically used in high-risk projects with long lead-times or novel scopes.

We acknowledge that the use of management reserves was referenced in the Muskrat Falls Inquiry Final Report, however, this was not included as a key finding in Justice LeBlanc's final report (PUB-NLH-008). The Muskrat Falls Project qualifies as a high-risk, long lead time project as its cost came in around $13.5 billion and took about eleven years to complete. The Muskrat Falls Project included development of a hydropower facility at a greenfield site and 1100 km of new transmission lines. The Muskrat Falls development had much higher risk than Unit 7. Unit 7 has a proposed budget estimate of $85.3 million and a construction schedule of three or four years for modifications at a site that Hydro has owned and operated for decades.

The British Columbia Hydro example cited by Hydro in its response to PUB-NLH-007 ("BC Hydro Project") was a larger project with a wider scope than Unit 7. The BC Hydro Project had an "authorized cost" of $147.1 million which included an "expected cost" of $123.6 million and "special reserve of $23.5 million". The Expected Cost is:

> *the estimated cost at the P50 confidence level, as defined in AACE International Recommended Practice 10S 90, which indicates "an expected 50% probability that the final result will be less than (more favorable) or equal to the P50 value." The Authorized Cost is defined as "the estimated cost at the P90 confidence level, plus the Special Reserve. A P90 confidence level indicates an expected 90% probability that the final result will be less than or equal to the P90 value."*[1]

The BC Hydro Project's construction schedule was expected to take six years and included three main components. For comparison purposes, the following project risks were identified (pages 15 and 16 of 34):

Definition phase risks:

1. *A BCUC order granting a CPCN for the Project being issued later than anticipated resulting in increased costs and/or schedule delays: after*

[1] See page 16 of 34: <https://docs.bcuc.com/documents/proceedings/2024/doc_77349_b-1-bch-1l243-transmissionloadincreasehighlandvalleycopper-project-application-public.pdf>

treatment plans, this reputational risk remains at a level of possible with the potential effect of criticism from a small but vocal minority of customers; and

2. *Private landowners could oppose definition phase activities that require access across private lands: this risk could impact the Project schedule and have a financial impact. After treatment plans, the financial risk remains at a level of possible and the financial impact has been calculated to be in the $100 thousand to $1 million range.*

Implementation phase risks:

1. *Construction worker activities in close proximity to energized lines and equipment could result in worker injury or fatality: after treatment plans, the residual risk is deemed very unlikely;*

2. *Wildfire, flood or mudslide impacts during field work or construction: after treatment plans, the residual risk is at a level of possible with a financial impact estimated at $1 million to $10 million;*

3. *Emergency work impacting other parts of BC Hydro's system diverting construction crews: after treatment plans, the residual risk is at a level of remote with a financial impact estimated at $1 million to $10 million;*

4. *First Nations not accepting BC Hydro archaeological study results: this potential event is a risk of reputational damage to BC Hydro as well as Project delays. The residual risk is at a level of possible with the potential effect of criticism from a small but vocal minority of customers;*

5. *Global supply chain issues causing delay in delivery of equipment could impact the Project schedule and may also increase costs: the residual risk is assessed at a level of possible with the main consequence being reputational; and*

6. *Cost escalation is higher than expected: due to the unique current market conditions, there is a likelihood that cost escalation exceed the forecast escalation rates in the Application. BC Hydro has included a special reserve in the project reserves, which is intended in part to address the potential impact of higher cost escalations than expected. There is a residual risk is considered possible with a financial impact estimated at $1 million to $10 million.*

Unlike Unit 7, the BC Hydro Project impacts numerous landowners and land uses and has higher project costs and a longer construction schedule. A management reserve may well be reasonable and appropriate in this case.

Unit 7, by contrast, is not a new build and its existing condition should be well-known. It has been owned and operated by Hydro for several decades and Hydro has in-depth knowledge of the facility. Hydro has made many capital investments since 1982 (Schedule 1, Table 1, page 7), including the 2019 turbine upgrade that involved full disassembly and inspection of the unit.

Hydro's consultant also carried out the 2023 Condition Assessment and Hydro is further planning an overhaul for Unit 7 in 2026 (Schedule 1, page 7).

Hydro's proposed Authorized Budget includes an allowance for Found Work in its base estimate and beyond the base estimate there are, appropriately, allowances for contingency and escalation. Considering Hydro's familiarity with the facility, it is reasonable to expect a higher level of precision in estimation and project management than for a new and substantially larger project.

For this Application, a management reserve has not been adequately justified. Both in this case and in general, if management reserves are to be included, they should be assessed on a project-specific basis and supported by benchmarking to comparable projects of a similar type, scale, and complexity.

Proposed Management Reserve Amount:

Based on the filed record, Hydro has not sufficiently justified a management reserve that is [redacted] of the proposed Unit 7 budget.

Hydro indicates that [redacted] of the proposed Authorized Budget is attributable to Management Reserve (PUB-NLH-013c, Table 1), amounting to [redacted] out of the requested budget of $85.3 million. Schedule 1 of Attachment 1 of the Application indicates that this amount was calculated for a P85 probability, as per the recommendations of the Muskrat Falls Inquiry Report.

[redacted]

Similar to the determination of whether a management reserve is appropriate, the amount of the management reserve should be supported by benchmarking with comparable projects (eg. benchmarking study). [redacted] Hydro's management reserve proposal should include an explanation of the specific aspects of the Project [redacted]

Additional Board Oversight:

If the Board approves a management reserve for Unit 7, additional Board oversight of the management reserve should be established.

Subject to confidentiality considerations, and where the use of a management reserve is justified, additional Board oversight would ensure critical transparency in determining whether the "unknown unknown" expenditure(s) should be recovered in rates. Particularly where there is a lack of regulatory precedent for management reserves, the concept of an "unknown unknown" may be difficult to ascertain. It may prove difficult to determine if an "unknown" should or should not have been known in advance and whether the "unknown" should be more appropriately classified as "found work allowance" or "contingency". Over time and across projects, oversight and transparency in the utilization of the management reserve would help to identify patterns that may suggest that a given risk should be included as a contingency item.

In acknowledgement that additional oversight may create delays and project cost increases, any additional Board oversight mechanism or process should be designed as an expedited approval process. Significant unforeseen events that arise after project approval should be brought before the Board, with short timelines for intervenor and stakeholder comments.

Management Reserve Inclusion as Capital Expenditure:

A management reserve for Unit 7 should not be included in the approved capital expenditures.

As discussed above, while it is desirable to avoid delays owing to unforeseen events, mitigation of delays can be achieved by implementation of an expedited approval process for significant unforeseen events that arise following project approval.

RECOMMENDATIONS

Based on the preceding, the Consumer Advocate recommends that the Board

1. approve the Bay d'Espoir Unit 7 life extension scope of work and schedule as proposed by Hydro in the Application;
2. approve a project expenditure of [redacted] which is the requested Authorized Budget minus the Management Reserve; and
3. determine the Application as soon as possible to avoid any schedule delays.

Please contact the undersigned if you have any questions relating to this submission.

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