Bay d'Espoir Unit 8 Project
Early Execution Update

Period Ended April 30, 2025

June 18, 2025

A report to the Board of Commissioners of Public Utilities

newfoundland labrador hydro

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1.0 Background

Newfoundland and Labrador Hydro's ("Hydro") application for approval of capital expenditures for early execution work for the Avalon Combustion Turbine ("Avalon CT") Project and the Bay d'Espoir Unit 8 ("BDE Unit 8") Project ("Early Execution Application") was approved by the Board of Commissioners of Public Utilities ("Board") in Order No. P.U. 17(2025). In its Order, the Board directed Hydro to provide monthly updates on the early execution work for the respective projects beginning on June 16, 2025.

1.1 Report Timing

Hydro contractually requires reports from its contractors regarding their progress; each report provides details for the previous month. Upon receipt of the report, Hydro reviews and assesses the information to confirm that the work is being completed pursuant to the project's approved milestones, overall timeline, and contractual requirements. These are standard contracting and evaluation procedures that ensure the accuracy and reliability of the information provided between Hydro and the contractor. The time necessary for the contractor to prepare and provide its report, in addition to the time necessary for Hydro to complete its review and prepare this required report, allows Hydro to provide the enclosed monthly report for the period ended April 30, 2025.[1] A similar reporting timeline will continue for future reports.

2.0 Project Scope

The Bay d'Espoir Hydroelectric Generating Facility ("Bay d'Espoir") consists of upstream storage reservoirs, a forebay, a spillway, and two powerhouses. BDE Unit 8 will supplement the existing Bay d'Espoir Hydroelectric Development, by adding a new 150 MW generating unit, increasing the overall plant capacity to 750 MW.

As identified in the Early Execution Application, certain advance work and analysis is required to protect the necessary timelines for construction and protect the project budget; this will mitigate the impact to ratepayers as a result of higher project costs associated with delays and ensure project continuity through year-end 2025.

[1] If Hydro becomes aware of a material change (as defined in the provisional Capital Budget Guidelines) that has occurred since the report cut-off date, then Hydro will include it in the report.

For BDE Unit 8, the critical activities to accomplish early execution work include:

- Engage EPCM[2] contractor to support the following activities:
    - Complete geotechnical investigations and surveys that are needed to support execution phase. Engineering and specifications for long lead or early equipment, such as turbine and generator package, Generator Step-Up ("GSU") Transformer, draft tube stop logs, and 230 kV breakers; and
    - Detailed execution planning activities, such as establishing project execution plan, contracting plan, and other planning documentation.
- Engage turbine generator original equipment manufacturers to complete Computational Fluid Dynamics modeling and model testing. The work would also include confirmation of the final supply and install pricing and schedule.
- Complete Environmental Assessment ("EA") registration and continue with the stakeholder engagement process.

The following update outlines the current status of the ongoing early execution activities.

3.0 Progress to Date

3.1 Engage EPCM Consultant

In April 2025, Hydro decided to combine the EPCM services for the major projects that are planned to be executed at Bay d'Espoir between 2025 and 2031. The planned major projects include:

- Penstock 3 Repair and Replacement;
- Unit 7 Life Extension;
- Unit 8 Construction; and
- Penstock 2 Repair and Replacement.

[2] Engineering, Procurement and Construction Management ("EPCM").

This presents a significant opportunity to improve interface management and optimize EPCM services, which would reduce schedule risks and associated cost risks for each of the projects. The primary benefits include:

- Simplified interface management;
- Simplified procurement process;
- Optimization of EPCM service personnel (reduced duplication of personnel positions);
- Optimization of efforts related to specific scopes (e.g., Health and Safety Services, Emergency Services, site access and security);
- Simplified contract administration;
- Simplified project controls coordination; and
- Coordinated construction management.

The impact of this decision was a change to the procurement timeline to engage the EPCM consultant, as additional time is required to prepare the Request for Proposal ("RFP"). This is reflected in the Project Milestone Schedule Table in Appendix A and has no impact on the overall project timeline. As a result, this defers a portion of the costs associated with the EPCM scope into 2026, as reflected in the updated project spend forecast, as shown in Appendix B.

The RFP for EPCM services was prepared for issuance in the next reporting period. As each project has a separate regulatory submission schedule and are each subject to separate regulatory processes, the RFP identifies the scope of services for each project separately. The decision to proceed with and release the EPCM scope for each project would be contingent on Board approval.

3.2 Engage Turbine Generator Suppliers

The process of engaging with turbine generator suppliers is ongoing. The contracting approach for the turbine generator was finalized in March 2025. A phased contracting approach is being followed with the following planned phases:

- Phase 1: Request for Supplier Qualification ("RFSQ") – prequalification process.
- Phase 2: Preliminary engineering and RFP.

- Phase 3: Contract award for detailed design, model testing, manufacturing, delivery, installation and commissioning.

Phase 1 RFSQ for the supply and installation of 150 MW turbine and generator has been issued and is scheduled to close in the next reporting period.

This contracting approach varies from what was considered during the front-end planning phase, and was budgeted for in early execution, as the physical model test will only be completed by the successful proponent who is awarded the contract for Phase 3. This approach maintains the overall project timeline but reduces the procurement phase costs by reducing the number of physical model tests. This also reduces the burden on proponents during the RFP phase (Phase 2), as physical model tests generally take one year to complete. In a competitive and limited market, the previous approach would be less attractive to proponents as they would expend significant effort but could be unsuccessful in their bid for the work.

3.3 Environmental Assessment Registration

EA registration and associated Environmental Protection Plan are in preparation for issue at end of the second quarter of 2025, as planned.

4.0 Project Risks and Mitigations

A summary of key risks pertaining to BDE Unit 8 identified during the planning and execution of the project, as well as associated mitigations and status, are provided in Table 1.

Table 1: Key Risks[3,4]

Risk Title/Description	Mitigations	Status
Supply chain pressures may increase the cost of goods and increase delivery times. Global supply chain delays caused by global energy demand increases, green	• Maintain the planned project schedule. • Early procurement of long-lead or critical items. • Pursue early engagement and secure manufacturing slots in advance of contract award.	Open – Project schedule is being maintained and early procurement of the turbine generator is progressing.

[3] This table considers the whole scope of the BDE Unit 8 Project, not only early execution activities. It is intended to highlight only key risks that may impact project success. Hydro uses a more comprehensive project risk register to facilitate risk management. Hydro regularly updates the risk register, and should a risk escalate in ranking, or a new high risk be identified, it will be added to this table in future updates.

[4] Risks which are shown as closed will be removed in the next report.

Risk Title/Description	Mitigations	Status
projects, etc. may impact schedule and cost. The recently announced planned work for the New Energy Partnership will introduce market pressures on labour, engineering, equipment, and materials.	• Consider appropriate Management Reserve for strategic risks.	Management reserve included in the overall project budget to address strategic risks.
Limited number of hydro turbine suppliers results in schedule delays and increased costs. As a result of competition from other projects, there may be limited supplier resources, added complexities in the international supply chain and a potential "seller's market" resulting in higher costs, and extended delivery schedule.	• Engage with suppliers in model testing scope as soon as possible. • Enhanced oversight during the design and manufacturing process. • Engage with suppliers to explore contracting models and risk allocation strategies. • Execute procurement in Early Execution phase.	Open – Engaging with turbine generator suppliers in early execution phase. Phased procurement process being followed to allow for model testing as soon as practical.
Regulatory (Board) approval process extends beyond the assumed timeline. If the regulatory approval process extends beyond the assumed timeline, the project schedule will be delayed and the ability to make contract commitments to support the project schedule will be impacted. This will have both a schedule and cost impact due to cost escalation and loss of project momentum.	• Produce a robust Board application and work closely with the Board during the application process. • Receive timely Board approval of Early Execution Application.	Open – 2025 Build Application has been submitted to Board. Approval of early execution received.
Interface risks with other work in Bay d'Espoir (Unit 7 Life Extension, Penstock Replacements, etc.). Other work at the BDE site may be ongoing at the same time as BDE Unit 8 construction. The execution plan for BDE Unit 8 may need to change to accommodate the other	• Ensure that the execution plan considers the potential impacts of other adjacent projects. • Evaluate potential synergies and opportunities. • Establish an overarching/integrated plan to identify interfaces, risks, and opportunities.	Open – Decision to combine the EPCM services for the major projects that are planned to be executed at Bay d'Espoir between 2025 and 2031 presents a significant opportunity to improve interface management and optimize EPCM services, which would reduce schedule risks

Risk Title/Description	Mitigations	Status
planned projects. This may have impacts on cost and schedule.		and associated cost risks for each of the projects.
If internal decision-making processes are not efficient, it can lead to project execution delays and schedule and cost impacts. For example, time-sensitive decisions such as awarding of contracts (e.g., equipment and construction) and proceeding with early execution. Cost impact of a one-year delay estimated at $30 million to $50 million.	• Established Project Governance structure, project steering committee, and project leadership team with clear limits of authority. • Established processes and systems to facilitate effective decision making including a review of existing authority levels. • Developing contingency plans for key personnel so decisions can be made when there are competing priorities or absences. • Corporate Interface Manager in place to manage all interfaces between Major Projects and Corporate Groups.	Open – Governance structure established. Authority levels are suited to current project phase. Interface manager established for internal interface resolution. Continue to monitor for efficient decision making as early execution progresses.
Failure to complete early execution. Early execution will provide risk mitigation by maintaining the overall project schedule and budget that were established during FEED.[5] If planned early execution is not advanced as planned, the overall project will be delayed and project costs will increase.	• Sought approval to proceed with required early execution to maintain the current project schedule.	Closed – Early execution approval received and is progressing.

5.0 Project Schedule

The Project Milestone Schedule Table is provided in Appendix A. The BDE Unit 8 early execution scope remains on track to meet schedule targets.

[5] Front-End Engineering Design ("FEED").

6.0 Project Budget

The Board approved an early execution budget of $16,670,000. Hydro is progressing the work within the approved budget, and Hydro continues to actively manage risks to maintain compliance with all regulatory requirements.

As of April 30, 2025, the expenditure forecast is tracking below the approved budget. Expenditures are tracking less than planned due to the change in schedule for engagement of the EPCM consultant described in Section 3.1, and a variation to the contracting approach for the turbine generator described in Section 3.2. As the procurement process advances and bid pricing is received for these packages, the expenditure forecast will be updated. Appendix B provides further detailed cost information, including an overview of costs incurred to April 30, 2025.

7.0 Conclusion

As of the end of the reporting period, the BDE Unit 8 early execution remains on track to meet the cost and schedule targets, and Hydro continues to actively manage risks to maintain compliance with all regulatory requirements.

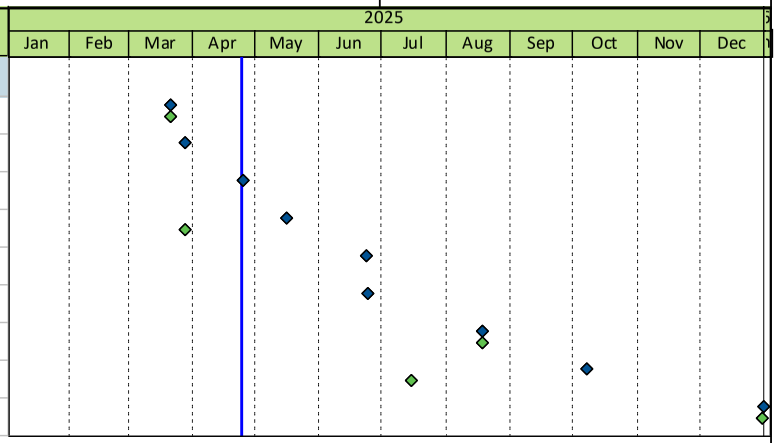
Appendix A

Project Schedule Milestone Table

BDE Unit 8 Project Schedule - April 2025
Early Execution / 2025 Milestones

Data Date: 25-Apr-25

Activity Name	Baseline	Forecast	Variance
Bay d'Espoir Unit 8			
PUB Submission	21-Mar-25	21-Mar-25 A	0
T/G - Phase 1 - RFSQ Issued		28-Mar-25 A	
Early Execution Approval by PUB		25-Apr-25	
EPCM RFP Issued	28-Mar-25	16-May-25	-49
T/G - Phase 1 - RFSQ Vendors Selected		23-Jun-25	
T/G - Phase 2 - Contract for Preliminary Engr and RFP Issued		24-Jun-25	
Environmental Assessment Release	18-Aug-25	18-Aug-25	0
EPCM Consultant Selection	15-Jul-25	07-Oct-25	-84
Public Utilities Board Approval	31-Dec-25	31-Dec-25	-1



Notes:

1 The forecasted Commercial Operation Date (COD) for Bay d'Espoir Unit 8 remains unchanged from the Project Control Schedule Baseline (PCSBL), included with the build application, with COD forecasted for April 30, 2031. Schedule variances noted elsewhere pertain to non-critical path activities, which have sufficient float to absorb any changes without impacting the overall project timeline.
2 The forecast date for Public Utilities Board Approval is showing a variance of -1. Due to the complexities of the critical path method used in schedule calculations, a slight variance appears in the approval date. This is a result of the planning application's calculation method and does not reflect any material change.
3 Blue line in the milestone schedule represents the project status date.

Appendix B

Detailed Cost Information

Redacted

Redacted