Avalon Combustion Turbine 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 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 Avalon CT will supplement system capacity by adding a new multi-unit 150 MW nominal generating facility, with supporting infrastructure and transmission interconnection that will provide peaking power support and standby generation in line with the 2024 Resource Adequacy Plan.

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 the Avalon CT, the critical activities to accomplish early execution work include:

- Critical Path Request for Proposal ("RFP") preparation, issuance and award for combustion turbine (“CT”) and Generator Step-Up (“GSU”) Transformers. This entails the detailed engineering and fabrication scheduling necessary to complete the work and includes firm confirmation of the final supply and install pricing and schedule.
- Complete Environmental Assessment (“EA”) report and registration and continue with the stakeholder engagement process.
- Engage Engineering Support from an EPCM[2] contractor to support the following activities:
    - Complete geotechnical investigations and surveys needed to support the execution phase; and
    - Detailed execution planning activities, such as establishing project execution plan, contracting plan, and other planning documentation.
- Avalon CT interface optimization assessments in areas such as fire water supply, overall site fuel utilization, etc.
- Preparation of Early Execution RFP and engage with Early Execution contractors to complete initial geotechnical work and minor excavations in preparation to support line relocation and new line installations to ensure the overall schedule can be maintained.

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

3.0 Progress to Date

3.1 Engage Combustion Turbine Suppliers

The process of engaging with CT suppliers is ongoing. A RFP for the supply of a nominal 150 MW CT package(s) has been prepared for issuance in the next reporting period.

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

3.2 Engage Transformer Suppliers

The process of engaging with transformer suppliers is ongoing. A RFP for the supply of four GSU Transformers and one Station Service Transformer has been issued and is scheduled to close in June 2025.

3.3 Environmental Assessment Registration

The emissions modelling, in support of the EA, was completed in March 2025. The associated EA registration was prepared and filed in April 2025.[3]

3.4 Engage EPCM Consultant

The RFP for EPCM Services was prepared for issuance in the next reporting period.

3.5 Geotechnical Investigation

Hydro plans to complete initial geotechnical activities separate from the EPCM award. The RFP for geotechnical investigation was prepared for issuance in the next reporting period.

3.6 Miscellaneous Engineering Studies

Hydro awarded the first study to Hatch Ltd. ("Hatch") to investigate the fire water tie-in to the existing Holyrood site infrastructure and investigate the use of CT1 black start diesel for starting the new Avalon CT. The anticipated completion of this design study is in the next reporting period. A second study RFP has been awarded to Hatch to investigate the wastewater tie-in to the existing Holyrood site infrastructure, interconnection of the CT1 and CT2 fuel systems, and bulk fuel storage assessment for optimization, inventory management and segregation of storage for third-party access. The RFP was developed to be issued in the next reporting period.

3.7 Early Execution Civil Works

The RFP for Early Execution Civil Works was prepared for issuance in the next reporting period.

3.8 Transmission Line Relocations with Newfoundland Power Inc.

Hydro is currently collaborating with Newfoundland Power Inc. ("Newfoundland Power") for the development, design and execution of relocating Transmission Line 38L and 39L, two transmission lines

[3] The environmental release was subsequently provided by the Minister on May 30, 2025.

that are within the project footprint, at the Holyrood site. Newfoundland Power is developing the engineering scope of work and Contribution in Aid of Construction submission for the Board.

4.0 Project Risks and Mitigations

A summary of key risks 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[4,5]

Risk Title/Description	Mitigations	Status
Supply chain pressures may increase the cost of goods and increase delivery times.	• Prepare separate RFPs for turbines and transformers such that requirements for sparage, life of fields services, etc. are established right from the beginning with the original equipment manufacturers. • Given the state of the supply within the market, it is essential that the right prioritizing in terms of the overall schedule is established for critical path long lead items.	Open – Project schedule is being maintained and early procurement of the CT's and transformers is progressing. Management reserve included in the overall project budget to address strategic risks.
CT supplier backlog as a result of competition from other projects there may be limited supplier resources, added complexities in international supply chain, and a potential sellers' market resulting in higher costs and extended delivery schedule.	• Enhanced oversight during design and manufacturing process. • Engage with suppliers to explore contracting models and risk allocation strategies. • Execute procurement in early execution phase.	Open – Engaging with CT and transformer suppliers in early execution phase.
Regulatory (Board) approval process extends beyond the assumed timeline. If the regulatory approval process extends beyond the assumed timeline, the project	• 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.

[4] This table considers the whole scope of the Avalon CT 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.

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

Risk Title/Description	Mitigations	Status
schedule will be delayed and the ability to make contract commitments to support project schedule will be impacted. This will have both a schedule and cost impact due to cost escalation and loss of project momentum.		
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.[6] 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.

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

5.0 Project Schedule

The Project Milestone Schedule is provided in Appendix A. The Avalon CT early execution scope remains on track to meet schedule targets.

6.0 Project Budget

The Board approved an early execution budget of $30,710,000. Hydro is progressing the work in alignment with the approved budget, with no deviations noted for the reporting period. The project remains on track to meet approved cost targets, and Hydro continues to actively manage risks to maintain compliance with all regulatory requirements.

As of April 30, 2025, the expenditure forecast remains consistent with the approved budget; however, expenditures to date are tracking less than planned. 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 Avalon CT early execution remains on track to meet the approved cost and schedule targets, and Hydro continues to actively manage risks to maintain compliance with all regulatory requirements.

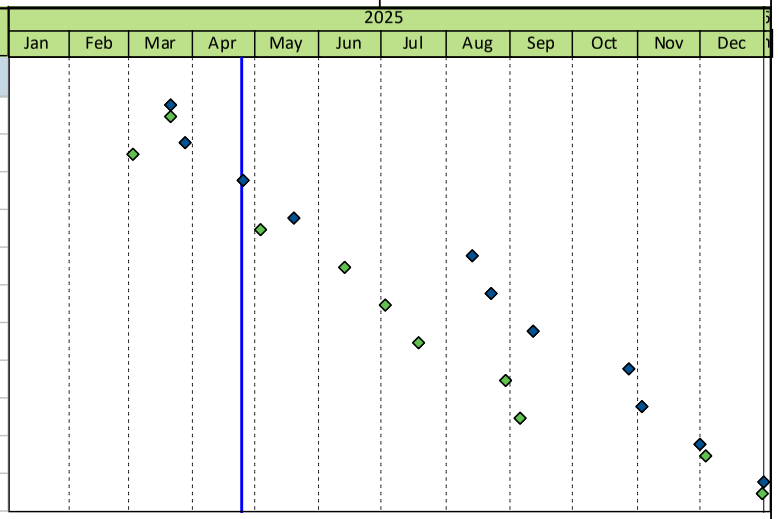
Appendix A

Project Schedule Milestone Table

Avalon Combustion Turbine Project Schedule - April 2025
Early Execution / 2025 Milestones

Data Date: 25-Apr-25

Activity Name	Baseline	Forecast	Variance
Avalon Combustion Turbine			
PUB Submission	21-Mar-25	21-Mar-25 A	0
Environmental Assessment Registration Submission	03-Mar-25	28-Mar-25 A	-24
Early Execution Approval by PUB		25-Apr-25	
Environmental Assessment Release	03-May-25	19-May-25	-16
GSU Transformer Contract Award	13-Jun-25	13-Aug-25	-61
Start of Site Early Execution	02-Jul-25	22-Aug-25	-51
PM001 Combustion Turbine Generator Package Award	18-Jul-25	11-Sep-25	-55
EPCM Contract Award	29-Aug-25	27-Oct-25	-59
EPCM Project Kickoff	05-Sep-25	03-Nov-25	-59
NF Power 39L Relocated	03-Dec-25	01-Dec-25	3
PUB Approval	31-Dec-25	31-Dec-25	-1



Notes:

1 The forecasted Commercial Operation Date (COD) for Avalon Combustion Turbine (CT) has changed compared to the Project Control Schedule Baseline (PCSBL), which was included with the build application. The original PCSBL target COD was 12-Oct-2029 and the current forecast is 06-Dec-2029 resulting in a variance of 55 days. This variance is directly attributable to the revised CT Package Award forecast. All other noted schedule variances relate to non-critical path activities. These activities currently have sufficient float and do not impact the overall COD forecast.
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.

◆ Milestone
◆ Baseline MS

Layout:MP: 2025 Milestone Report
Filter:TASK filter: MP_PUB MS Table.

Appendix B

Detailed Cost Information

Redacted

Redacted