Q. Reference: Application Schedule 1, pages 6 and 7.

Hydro states "the CT market has accelerated even more than anticipated,…" and "This unprecedented demand has created multi-year wait times,…" Hydro also states that it is "actively working to revise its estimate…" and it "will provide an updated cost estimate to the Board once Hydro has fully reviewed vendor pricing and updated its Monte Carlo analysis."

a) Please provide the date that Hydro anticipates providing its updated cost estimate to the Board.

b) In light of these cost pressures,

(i) will Hydro consider delaying the Avalon CT project; and,

(ii) will Hydro consider other projects such as wind and battery storage in light of new advances in those technologies?

c) Is there a cost level greater than the current estimated cost of $891 million at which Hydro would halt the Avalon CT project?

A. **a)** Newfoundland and Labrador Hydro ("Hydro") is currently reviewing and will provide an updated cost estimate to the Board of Commissioners of Public Utilities ("Board") once Hydro has fully reviewed vendor pricing and updated its Monte Carlo analysis. Hydro is targeting this updated cost estimate to be complete in February 2026. The updated cost estimate will be provided to the Board and intervenors on the 2025 Build Application[1] record.

b) In Hydro's 2024 Resource Adequacy Plan[2] and the 2025 Build Application, Hydro's expansion planning model determined that Bay d'Espoir Unit 8 and Avalon Combustion Turbine

[1] "2025 Build Application – Bay d'Espoir Unit 8 and Avalon Combustion Turbine," Newfoundland and Labrado Hydro, March 21, 2025.
[2] "2024 Resource Adequacy Plan – An Update to the Reliability and Resource Adequacy Study," Newfoundland and Labrador Hydro, rev. August 26, 2024 (originally filed July 9, 2024).

("Avalon CT") were the least-cost options as first steps to meet future demand requirements**.** Hydro's Expansion Plan analysis included consideration of wind and batteries, and recommended wind as the least-cost source of firm energy. Hydro's analysis finds that while battery energy storage systems ("BESS") were examined, they are not a direct substitute for on-Avalon dispatchable generation to meet Island Interconnected System reliability needs, particularly under Labrador–Island Link ("LIL") shortfall conditions, or other significant loss of generation event. Capacity expansion modelling that relaxed combustion turbine sizing constraints and allowed 4-hour and 8-hour BESS with assumed Effective Load Carrying Capability ("ELCC") values of up to 60–80% showed that Bay d'Espoir Unit 8 is consistently selected first, with BESS only displacing the Avalon CT in a high-cost (P85) sensitivity.[3] Even under those assumptions, detailed LIL shortfall analysis demonstrated that replacing firm thermal capacity with BESS results in more outage hours, greater unserved energy, and higher peak shortfalls during prolonged winter events, reflecting the energy-limited nature of storage and limited surplus energy available for recharging during cold periods. Subsequent ELCC analysis filed with the Board reinforces and strengthens this conclusion, finding that while initial tranches of storage can provide capacity value, the marginal ELCC for batteries declines rapidly with penetration in Newfoundland and Labrador's system, falling well below the higher ELCC values assumed in earlier sensitivities and dropping to low levels as reliability risks extend over multi-hour and multi-day winter peaks.[4] Taken together, these results indicate that prior modelling assumptions were optimistic and that BESS would likely contribute even less dependable capacity than previously assumed with regards to the minimum investment, underscoring Hydro's conclusion that the Avalon CT remains necessary to meet reliability requirements, and the need for further assessment of BESS as resource options to meet the reference case. In their Expert Addendum Report filed with the Board, Bates White agreed with Hydro's conclusion, stating "*We therefore take no issue with Hydro not including BESS resources in its Minimum*

[3] "2025 Build Application – Request to Hydro to Provide Additional Information – Hydro's Reply," Newfoundland and Labrador Hydro, September 11, 2025.
[4] "Newfoundland & Labrador Hydro ELCC Study – Evaluating Effective Load Carrying Capability," Energy and Environmental Economics, Inc., November 2025, filed as an attachment to "Evaluating Effective Load Carrying Capability – Overview," Newfoundland and Labrador Hydro, December 9, 2025.

Investment Portfolio but reiterate that BESS resources should be included as viable resource options in all of Hydro's resource planning efforts going forward."[5]

Based on the above and the evidence presented in this proceeding, wind and battery storage solutions cannot feasibly supplant the capacity solutions proposed in the Minimum Investment Portfolio.

When considering the outcomes of the Monte Carlo cost analysis, Hydro will assess any cost increases, along with the significant implications and costs of a project delay. Continued supply from Holyrood Thermal Generating Station ("Holyrood TGS") is not possible beyond 2035 in accordance with the federal *Clean Electricity Regulations*,[6] and every year of plant operation beyond 2030 would come at an annual cost exceeding $100 million. In addition, costs associated with any proposed solutions will continue to escalate during the years that would be required for a new alternatives analysis, as well as the feasibility and front-end engineering of a new solution.

Continued operation of the Holyrood TGS beyond 2030 could also come at a reliability cost to customers as the plant continues to age. This is demonstrated in all analyses when the DAUFOP[7] of the plant could be as high as 34%.[8] This level of unreliability in a given year is plausible, as demonstrated by the performance of the generating units in recent years. As per the results of the near-term reliability analyses performed as part of this proceeding, such a level of unreliability at Holyrood results in violations of planning criteria.

In summary, there would be no benefit to customers by delaying the approval of the construction of the Minimum Investment Portfolio to perform further analysis or to select another alternative. The 2024 Resource Adequacy Plan and all subsequent analysis forms a robust review, and the specified solutions continue to be demonstrated to be the least cost. Delay, or the pursuit of any other solutions, would be detrimental to customers due to the

[5] "Expert Addendum Report of Vincent Musco and Collin Cain," Bates White Economic Consulting, LLC, November 6, 2025.
[6] SOR/2024-26.
[7] Derated Adjusted Utilization Forced Outage Probability ("DAUFOP").
[8] "Reliability and Resource Adequacy Study Review – 2025 Near-Term Reliability Report," Newfoundland and Labrador Hydro, November 20, 2025.

associated cost and continued Holyrood TGS operation, as well as the continued escalation of costs due to market conditions, such as those described, no matter the supply alternative.

c) Please refer to Hydro's response to b).