

1 Q. **Reference: 2024 Resource Adequacy Plan**

2 Please explain in detail the actions that Hydro is taking to ensure readiness to pursue the
3 Reference Plan expansion requirements and how it will monitor and evaluate the need for and
4 timing of additional generation requirements assuming the approval by the Board of the
5 Minimum Investment Required Expansion Plan. In the response provide a schedule that lists all
6 key activities and expected completion dates, including the date for the next update to the
7 Resource Adequacy Plan.

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10 A. Newfoundland and Labrador Hydro (“Hydro”) remains committed to continuing to assess the
11 trajectory of future resource requirements to ensure the reliability of the Island Interconnected
12 System. This assessment will be prepared and provided through continued updates of the
13 Resource Adequacy Plan, which could lead to additional build application requirements over and
14 above what is recommended in the 2024 Resource Adequacy Plan. Hydro is also ensuring the
15 readiness of the organization to execute major projects by implementing a key governance
16 structure that includes a staged approval process and maturing cost estimating practices.

17 **Minimum Investment Required**

18 In addition, Hydro is pursuing further studies in support of the Minimum Investment Required
19 Expansion Plan, specifically potential mitigations for the Labrador-Island Link (“LIL”) to Maritime
20 Link relationship¹ to maximize power sunk to the Island and to relieve transmission constraints
21 within the Bay d’Espoir (“BDE”) to Soldiers Pond (“SOP”) corridor.² These outcomes will inform
22 the evaluation of the Supply Expression of Interest (“EOI”) process, which will be conducted in
23 parallel in 2025 to help determine resource options and Power Purchase Agreement (“PPA”) costs to meet the Island Interconnected System energy requirements.

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¹ As discussed in Hydro’s response to IC-NLH-014 of this proceeding.

² As discussed in Hydro’s response to NP-NLH-099 of this proceeding.

1 Hydro will file a build application in March 2025 that is based on good industry practices,
 2 incorporates lessons learned from the Muskrat Falls Inquiry, and incorporates what other
 3 Canadian utilities are doing for major projects. Hydro is in the process of preparing an
 4 application seeking the approval of BDE Unit 8 and the On-Avalon Combustion Turbine (“CT”),
 5 which are the resource options that form the basis of both the Minimum Investment and
 6 Reference Case expansion requirements as shown in Figure 1. Hydro is confident in the ability of
 7 its Major Projects department to deliver these projects, utilizing lessons learned from previous
 8 experiences and a robust risk management strategy in place to mitigate common risks to project
 9 cost and schedule within industry.

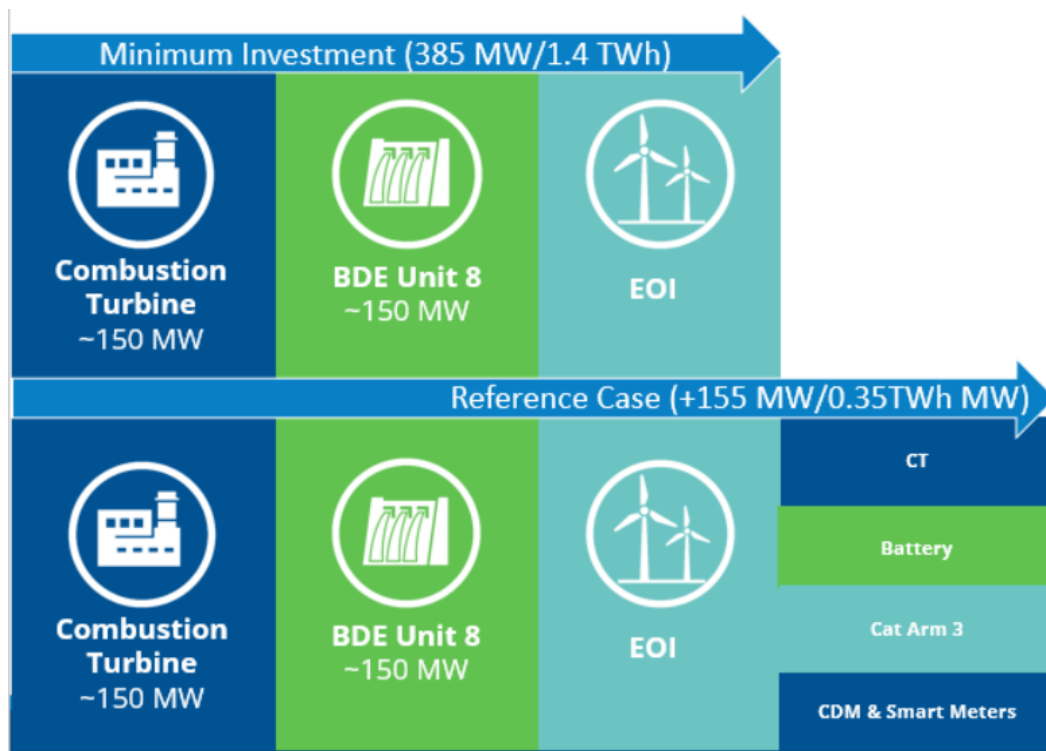


Figure 1: Minimum Investment and Reference Case Requirements

10 **Reference Case**

11 To assess the need and timing for further supply expansion to meet the Reference Case, Hydro
 12 will continue the annual update of the load forecast that will be incorporated into planning
 13 analysis and closely monitor demand and energy requirements. Hydro will also advance work on
 14 the next potential options in its supply stack, by undertaking multiple feasibility studies through
 15 2025 to determine reference case resource options, driven by the outcome of the 2024

1 Resource Adequacy Plan. Hydro will use the outputs of these feasibility studies and incorporate
2 them into the 2026 Resource Adequacy Plan analysis.

3 This feasibility work consists of an assessment of Hydro’s long-term strategy and constraints
4 regarding fuel availability and logistics for additional thermal resources beyond the 150 MW On-
5 Avalon CT that is proposed,³ assessment of Electrification, Conservation and Demand
6 Management (“ECDM”) potential, and feasibility and supporting studies on Cat Arm Unit 3,
7 battery energy storage systems (“BESS”), and transmission expansion options. As part of this
8 analysis, an ELCC⁴ study for batteries, wind, solar, and possibly demand response measures will
9 be completed; this is anticipated to begin early in 2025.

10 In line with its legislated mandate, Hydro is currently prioritizing activities and focusing its
11 efforts based on the resource options that its analysis indicates are the next least-cost options
12 for reliable service. Hydro’s approach is data-driven and, as a result, the activities and studies
13 listed below are organized by driver, and are subject to change in scope, reprioritization or
14 cancellation, should the outcome of the analysis indicate that the applicable resource option(s)
15 are not a feasible or a least-cost option to meet Hydro’s needs for the Reference Case. For
16 instance, Hydro had previously indicated that it would study the incremental capacity/efficiency
17 potential of its hydraulic units in the BDE System; however, Hydro has determined that the cost
18 of that study is not cost-competitive with other options that require additional study within
19 Hydro’s supply stack, such as batteries. As a result, the analysis has been reprioritized to enable
20 Hydro to focus on Reference Case resource selection options.

21 Similarly, Hydro may pursue additional and/or complementary studies not yet identified based
22 on the outcome of the feasibility studies to further refine the data required to inform the 2026
23 Resource Adequacy Plan. To maintain project teams and schedules, Hydro will continue to
24 progress work for the BDE Unit 8 and Avalon CT projects through 2025. This work has been
25 excluded from Table 1. The majority of the work scopes within Table 1 have not yet been
26 tendered; therefore, anticipated completion dates are estimated based on Hydro’s timelines for
27 consultants to issue draft reports and ultimately, subject to the availability of qualified
28 consultants to perform the work. Additional time would be required for Hydro’s internal review,

³ Please refer to Hydro’s response to NP-NLH-102 of this proceeding for further discussion on fuel supply.

⁴ Effective Load Carrying Capability (“ELCC”).

1 feedback, and acceptance of such reports. As a result, Hydro has indicated which filing it intends
2 to include the reports within as supporting evidence or documentation for its
3 recommendations.

4 Hydro anticipates further applications for supply expansion may be necessary subsequent to the
5 next Resource Adequacy Plan, which is expected to be filed mid-November 2026. To enable
6 consideration of viable resource options within Hydro's refreshed supply stack, outputs from
7 each feasibility study must be understood by year-end 2025 for inclusion within models and
8 analysis within the 2026 Resource Adequacy Plan.

9 Activities that Hydro is taking to ensure the readiness to pursue the Minimum Investment
10 Required and Reference Case Expansion Plans are summarized in Table 1. As aforementioned,
11 the studies and dates below are subject to change based on feasibility study results and Hydro's
12 informed decision making process.

Table 1: Key Activities to Meet Reference Case Requirements

Driver	Key Activity	Description	Anticipated Completion Date	Included in Filing
Minimum Investment Expansion Plan	BDE Unit 8 and On-Avalon CT Capital Budget Application	The application to build BDE Unit 8 and the On-Avalon CT form the baseline to meet the Reference Case requirements.	Q1 2025	Independent Capital Application ⁵
	Supply EOI Process	This process, which encompasses both the Supply EOI and a Request for Proposal process, is anticipated to be a multi-year process, depending on the number of applicants, and commercial negotiations. However, it is anticipated that by Q1 2026, PPA cost information will be available for inclusion into the 2026 Reliability and Resource Adequacy analysis.	Q4 2026	Supply EOI Evaluation ⁶
Bridging Period Timeline	Holyrood Thermal Generating Station Bridging Plan Refresh	This study will provide a refresh on the capital and operating costs for Holyrood up to 2035.	Q1 2025	Independent Filing ⁷
Transmission Planning	The Final Lower Churchill Project Operational Study (Stage 4F)	This study is the final stage of a series of studies with the primary objective of establishing the “Final UFLS ⁸ Scheme” and developing the LIL transfer limits based on this proposed scheme	Q2 2025	Supply EOI Evaluation ⁹
	Evaluation of BESS for Frequency Support	This study will evaluate the feasibility of a BESS in the their ability to provide frequency support to the Island system in an attempt to improve the LIL to Maritime Link relationship	Q4 2025	Supply EOI Evaluation

⁵ As per Hydro’s response to PUB-NLH-336 of this proceeding, Hydro intends to file the application no later than March 31, 2025.

⁶ Due to commercial considerations, Hydro does not intend to file its Supply EOI Evaluation on the record; however, it will ensure the Board of Commissioners of Public Utilities and the parties are informed of the outcomes and next steps.

⁷ As per Hydro’s response to NP-NLH-097 of this proceeding, Hydro intends to file this report within the first quarter of 2025.

⁸ Under Frequency Load Shedding (“UFLS”).

⁹ *Supra*, f.n. 6.

Driver	Key Activity	Description	Anticipated Completion Date	Included in Filing
	Evaluation of a Remedial Action Scheme (“RAS”) for the Avalon 230 kV Corridor	This study will evaluate the feasibility of a RAS that aims at mitigating thermal overloads and low voltage conditions that limit BDE to SOP flow when the LIL is out of service.	Q4 2025	Transmission Expansion Application
	Transmission Expansion Feasibility Study	BDE to SOP Transmission Capacity Expansion	Q4 2025	Transmission Expansion Application ¹⁰
Long-Term Fuel Supply Security	Marine Terminal Station FEED ¹¹ and Capital Budget Application	FEED work to support a capital budget application for a Marine Terminal. Such FEED work could (i) reduce fuel supply constraints for a future CT addition within the Reference Case Expansion Plan; and, (ii) provide increased efficiency in fuel delivery for Hydro’s recommended 150 MW CT as a part of the Minimum Investment Expansion Plan.	Q3 2025	Independent Capital Application
Reference Case Expansion Plan	CDM Potential Study	To inform the 2026 Resource Adequacy Plan supply stack, Hydro will assess the recommendations of the 2024 CDM Potential Study to develop the next multi-year plan for ECDM and incorporate CDM programming as a supply stack option in the next Resource Adequacy Plan. ¹²	Q1 2025	Joint Utility ECDM 2026–2030 Plan ¹³
	ELCC Study	To inform the 2026 Resource Adequacy Plan supply stack, the ELCC Study will determine the ELCC of batteries, wind, solar, and may also include demand response measures.	Q3 2025	2026 Resource Adequacy Plan
	2025 Load Forecast Update	The 2025 load forecast will form the baseline for the next Resource Adequacy Plan analysis and the Reference Case Expansion Plan.	Q4 2025	2026 Resource Adequacy Plan

¹⁰ This Transmission Planning Application may not be required depending on the outcome of the study, “Evaluation of Remedial Action Scheme for Avalon 230 kV Corridor.”

¹¹ Front-End Engineering and Design (FEED”).

¹² The feasibility of ECDM as a supply stack option is dependent on the findings of the ECDM Potential Study.

¹³ Anticipated to be filed in the fourth quarter of 2025.

Driver	Key Activity	Description	Anticipated Completion Date	Included in Filing
	Battery Feasibility Study	To inform the 2026 Resource Adequacy Plan supply stack, Hydro will advance the BESS project to the feasibility stage. The practicality and viability of the project will be examined and engineering will be advanced to a level appropriate to commence FEED if the project is deemed viable.	Q4 2025	2026 Resource Adequacy Plan
	Cat Arm Unit 3 Feasibility Study	To inform the 2026 Resource Adequacy Plan supply stack, Hydro will advance the Cat Arm Unit 3 project to the feasibility stage. The practicality and viability of the project will be examined and engineering will be advanced to a level appropriate to commence FEED if the project is deemed viable.	Q4 2025	2026 Resource Adequacy Plan