

1 Q. **Reference: Volume I, Section 2.3.4**

2 Is Hydro pursuing opportunities on isolated systems for the use of battery storage technology,
3 wind and solar, and non-wires solutions that may be of benefit in serving load growth? Explain.

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6 A. Newfoundland and Labrador Hydro (“Hydro”) is committed to providing least-cost,
7 environmentally responsible, and reliable service to its customers across all systems in
8 accordance with Section 3 of the *Electrical Power Control Act, 1994*. Part of achieving this
9 mandate includes the purchase and interconnection of renewable energy within Hydro’s
10 isolated diesel-powered electricity systems.

11 As noted in Hydro’s response to NP-NLH-116 of this proceeding, approximately 34% of the
12 isolated system supply included in the 2027 Test Year is forecast to be from non-emitting
13 generating sources such as hydro, wind, and solar. Further, please refer to Hydro’s response to
14 PUB-NLH-063 of this proceeding regarding its solar heat pump pilot program in isolated systems.

15 Further details around Hydro’s work with respect to isolated system renewables are provided
16 below.

17 ***Ramea Wind***

- 18 ● In Ramea, since 2004, Hydro has been purchasing power from an Independent Power
19 Producer (“IPP”), Frontier Power Systems Inc. (“Frontier”), which supplied power from
20 six wind turbines, with a total of 390 kW of wind power.
- 21 ● In 2007, the Board of Commissioners of Public Utilities (“Board”) approved the
22 construction of a Wind-Hydrogen Diesel System on the Town of Ramea’s isolated diesel
23 system as a research and development project (“Wind-Hydrogen Diesel Project”).¹ The
24 hydrogen portions of the Wind-Hydrogen Diesel Project were approved for

¹ Please refer to Board Order No. P.U. 31(2007).

decommissioning and removal by the Board in 2023.² The wind assets at the Northwind Site, which have not operated since 2019, were approved for sale to Frontier or its successor company in 2024.³

- In 2025, the Board approved the construction of the interconnection and integration of Frontier's successor company Puffin Wind Inc.'s ("Puffin") Renewable energy project in Ramea. This project will improve and expand the renewable energy system in Ramea by proceeding with an expansion and upgrade project that will provide a total of approximately 900 kW of wind power and 1,000 kW of battery energy storage. This project includes an upgrade to Frontier's existing turbines from 65 kW to 100 kW per turbine, as well as the purchase from Hydro of the three 100 kW wind turbines that formed part of Hydro's Wind-Hydrogen Diesel System. The Board approved the sale of those wind assets ("Northwind Site") in 2024. This project is currently in the execution phase.

Mary's River Energy

- Since 2019, Hydro has been purchasing power from IPP St. Mary's River Energy LLP's ("SMRE") hydro plant. In 2020, the Board approved the construction of the interconnection of the SMRE Photovoltaic ("PV") and Battery Energy Storage System ("BESS") to complement the hydro plant. The SMRE PV and BESS project included 188 kW of PV generation with 334.5 kW/669kWh of BESS.

L'Anse-au-Loup Power Purchase Agreement ("PPA")

- Hydro has a power purchase agreement with Hydro-Québec for the L'Anse-au-Loup System. This agreement enables the purchase of surplus hydroelectric energy from Hydro-Québec's Lac Robertson Generating Station to supply Hydro's customers in the L'Anse-au-Loup area. This agreement enables Hydro to supply the majority of customer load in L'Anse-au-Loup with deliveries from Hydro-Québec at 50% of the cost of diesel generation.

² Please refer to Board Order No. P.U. 10(2023).

³ Please refer to Board Order No. P.U. 30(2024).

1 ***Nain Wind Micro-Grid***

- 2 • Hydro continues to work with the Nunatsiavut Government and its development
3 partner on the proposed Nain Wind Micro-Grid Project. This project will involve two
4 2.35 MW wind turbines, rated at a combined 3.0 MW output coupled with a 2.5 MW,
5 5.0 MWh BESS. The project is estimated to produce 50%-60% of Nain's electricity
6 demand. Hydro expects to submit an application for the interconnection and integration
7 of the Nain Wind Micro-grid in 2026.

8 ***Other Solar PPAs***

- 9 • Hydro has connected nine behind-the-meter PV systems governed through PPAs and
10 one behind-the-meter PV system through Hydro's net metering program.

11 ***Renewable Energy Studies***

12 Hydro has completed numerous studies on renewable energy in its isolated systems. The goal of
13 these studies is to inform Hydro, potential IPPs, and government bodies about renewable
14 energy potential in its isolated systems and serve as the foundation for more detailed project
15 exploration. Some of these studies include:

- 16 • In 2009, Hydro completed a Preliminary Assessment of Alternative Energy Potential in
17 Coastal Labrador. This study involved eight weather stations in Nain, Hopedale,
18 Makkovik, Cartwright, Port Hope Simpson, and Mary's Harbour. This study also included
19 Phase 1 of a Hydraulic Potential of Coastal Labrador Study.
- 20 • In 2013, Hydro completed the Hydraulic Potential of Coastal Labrador Phase 2 Study.
21 This study that investigated in greater detail the hydraulic potential identified in the
22 Preliminary Assessment of Alternative Energy Potential in Coastal Labrador.
- 23 • In November 2015, Hydro completed a Coastal Labrador Wind Monitoring Program,
24 which included more accurate wind monitoring for sites with the most potential as
25 identified in the Preliminary Assessment of Alternative Energy Potential in Coastal
26 Labrador.

- In 2020, Hydro completed the Labrador Interconnection Options Study, which assessed different interconnection and renewable energy options as a means to reduce fuel consumption in Hydro's isolated systems.
- Additional studies are ongoing as part of Hydro's New Integrated Resource Plan for Southern Labrador.

Expression of Interest ("EOI") Process

In 2019, Hydro and the Department of Natural Resources jointly issued a Request for EOI for Renewable Energy Solutions for Isolated Coastal Diesel-Powered Electricity Systems in Newfoundland and Labrador. The responses received from interested parties in July 2019 helped Hydro identify the activities required to advance renewable energy integration in its isolated communities.

Industry and Government study participation

Hydro actively participates in the Off Grid Utilities Association ("OGUA") and its Prime Power Diesel Inter-Utility Conference ("PPDIUC"). The OGUA is a group of all major Canadian utilities that operate isolated diesel-powered electrical systems for remote communities across Canada. The interconnection of renewable energy is a significant topic discussed during committee meetings and presented during the PPDIUCs.

In 2022, Hydro was a member of the Advisory Committee for the federal government study titled "Utility Impact of Clean Energy Projects in Remote Communities." The goal of that study was to detail barriers and broad recommendations for different stakeholder groups to advance clean energy projects in remote communities.

Conclusion

Consistent with Newfoundland and Labrador Hydro's 2026–2030 Strategic Plan and its focus on committing to Indigenous relationships, while navigating the energy transition, Hydro will continue to work with Indigenous and community groups, potential IPPs, industry, and all levels of government to study and implement renewable energy opportunities in its isolated diesel-powered electricity systems. These efforts support Hydro's strategic priorities of Sustainable

- 1 Value Generation by supporting Indigenous-led energy projects and partnerships, as well as
- 2 projects that support local priorities and long-term well-being.