

1 Q. **Reference: 2026 GRA – Volume III: Exhibit 16 Effective Load Carrying Capability Study**

2 Citation #1:

3 2013 Amended GRA – Volume 1, page 4.15

4 “From a system planning perspective, Hydro no longer assumes that wind generation will be
5 available to supply system capacity requirements. Therefore, Hydro is proposing that the
6 purchased power costs related to wind be classified as 100% energy related. This proposal is
7 reflected in the 2015 Test Year Cost of Service Study.”

8 Citation #2:

9 2017 GRA LAB-NLH-61 Re: LAB-NLH-34

10 “e) Has Hydro explored the cost of service of installing wind generation to serve the winter peak
11 in the Labrador Interconnected System? Why or why not? What have been the results of such
12 exploration?”

13 [NLH Response:]

14 “e) Hydro has not explored the cost of installing wind generation to serve the winter peak in the
15 Labrador Interconnected System because wind generation is not a technically viable alternative
16 to provide reliable capacity during peak demand periods on the Labrador Interconnected
17 System. The issue with capacity in Labrador is that the transmission system is nearing its limits
18 during the winter months. In order to avoid transmission upgrades, generating capacity would
19 have to be built at the load centres in Labrador East (Happy Valley-Goose Bay) or Labrador West
20 (Labrador City/Wabush).

21 While wind may have some capacity value in areas where many wind farms can be constructed
22 over a large geographic area and where there are strong transmission ties, this is not the case in
23 Labrador. To avoid transmission upgrades, the wind farms would have to be built near the load
24 centres. Over long time scales, i.e. years, wind production is very consistent. However, as wind
25 has significant variability over short time periods, it cannot be depended on to be producing

1 power at any particular time, especially given one or two wind farms in a small geographic area.
2 As wind generation cannot be depended on to provide capacity at peak demand times, wind
3 generation has not been considered as a technically viable option to serve the winter peak in
4 the Labrador Interconnected System.”

5 Citation #3:

6 2026 GRA – Volume 1: s. 6.3.1, page 183 pdf.

7 “The 2019 Settlement Agreement for Hydro’s 2018 Cost of Service Methodology Review
8 provided for the purchase cost of wind generation on the Island Interconnected System to be
9 classified as 22% demand and 78% energy, based on Hydro’s Effective Load Carrying Capability
10 Study conducted by Hydro’s resource planning group at the time. ... The 2025 study found that
11 the marginal Effective Load Carrying Capability for 50 MW of wind is 43% demand, an increase
12 of approximately 20% from the previous 2018 study. ...

13 “Hydro is therefore proposing to classify purchases of wind generation on the Island
14 Interconnected System as 43% demand and 57% energy. This proposal is reflected in the 2027
15 Test Year Cost of Service Study.”

16 Citation #4

17 2026 GRA Volume 1, page 77-78 pdf.

18 “By combining, or “pooling,” generating sources and reservoirs, Hydro achieves the best
19 opportunity to maximize the value of resources and maximize rate mitigation for customers. For
20 instance, where appropriate and when there is excess available, Hydro will utilize Muskrat Falls
21 energy to supply the Labrador Interconnected System and export the Recapture Energy, which
22 would otherwise have been used to serve these customers. This approach enables additional
23 Recapture Energy exports to external markets and maximizes the value of Hydro’s hydrological
24 resources for customers.”

Preamble:

Over the past decade, Hydro's understanding of the capacity value of wind on the LIS has evolved from a 0% capacity contribution to a 43% capacity contribution. This suggests a higher capacity value to wind resources than modelled by Hydro in its prior submissions to the Board.

Since the 2017 GRA, the reliability of the LIS continues to improve due to prior and planned investments. Recent investments include the Labrador Transmission Assets, Labrador Island Transmission Link and the Muskrat Falls to Happy Valley Transmission Line. Hydro has also initiated the Labrador West Transmission Expansion Study (<https://nlhydro.com/about-us/our-electricity-system/major-projects/labrador-west-transmission-expansion/>), and additional 735 kV transmission is contemplated between Churchill Falls, a potential future Gull Island Project, and the Hydro-Québec system (<https://www.ourchapter.ca/files/NewfoundlandLabrador-Quebec-MOU-English-Dec12-2024.pdf>).

Like the Island, Labrador possesses high-quality wind resources and considerable wind development potential that could add value to existing or future hydroelectric resources with improvements to reliability, as well as the potential to reduce rates for existing Labrador customers or reduce increases in rates as load grows and the LIS expands.

- a) Since the 2017 GRA, has Hydro has explored the cost of service of installing wind generation on the LIS? Why or why not? What have been the results of such exploration?
- b) Since the 2017 GRA, has Hydro has explored the feasibility of installing wind generation as a complement to existing or future hydroelectric generation on the LIS? Why or why not? What have been the results of such exploration?
- c) Please clarify when NLH plans to undertake an ELCC study for LIS like that recently prepared for the IIS.
- d) Please indicate whether Hydro has explored the potential of developing wind resources on or near the Avalon Peninsula for the purposes of reducing reliance on energy and capacity provided by Muskrat Falls on the LIS?

1 e) If not in this proceeding, in which proceeding will these issues be addressed by NLH and
2 the Board?

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5 A. Newfoundland and Labrador Hydro (“Hydro”) assesses the operational considerations, benefits
6 and limitations of various renewable energy alternatives, including wind, as part of its plan to
7 meet resource adequacy and system reliability requirements within the ongoing *Reliability and*
8 *Resource Adequacy Study Review* proceeding (“*RRA Study Review*”) before the Board of
9 Commissioners of Public Utilities. Hydro is currently working with proponents and assessing
10 transmission expansion options in both western and eastern Labrador. Hydro will address
11 expansion requirements on the Labrador Interconnected System in a future filing as part of the
12 *RRA Study Review*.

13 Further, long-term supply options will be highly dependent on the outcome of ongoing
14 discussions with Hydro-Québec.