

1 Q. **Reference: 2022 Update Vol. I, Tables 4 and 5**

2 The figures in Table 5 show an improvement over Table 4's results due to the retention of the
3 Hardwoods Gas Turbine in addition to the Holyrood TGS; notably the LOLH figures for scenarios
4 6 and 7 are now largely within the $LOLH \leq 2.8$ criterion except for 2030.

5 a) Has Hydro completed a benefit-cost study of the cost of maintaining Hardwoods versus the
6 benefits of the marginal improvements in the LOLH results in scenarios 6 and 7? If so, please
7 provide that study.

8 b) In Table 4, are the excesses of the LOLH in scenarios 6 and 7 similar to any LOLH results that
9 Hydro has experienced in the past?

10 c) Instead of maintaining Hardwoods, has Hydro considered any alternatives (either in capacity
11 additions, demand management or rate design) that would be sufficient to reduce the LOLH
12 projections to the 2.8 criterion for scenarios 6 and 7?

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15 A. a) Please refer to Newfoundland and Labrador Hydro's ("Hydro") response to PUB-NLH-250 of
16 this proceeding, which includes corrections to Table 4 and Table 5 from the "Reliability and
17 Resource Adequacy Study – 2022 Update," ("2022 Update")¹ for the years 2023 and 2024.

18 At this time, Hydro has not completed a benefit-cost study of the cost of maintaining the
19 Hardwoods Gas Turbine versus the benefit of meeting reliability criteria. Scenarios 6 and 7
20 in Table 4 show that if the LIL bipole forced outage rate is as high as 10%, the LOLH²
21 planning criteria are violated beginning in 2025 and all subsequent years of the Bridging
22 Period,³ despite the continued availability of the Holyrood Thermal Generating Station
23 ("Holyrood TGS"). As the Labrador-Island Link ("LIL") bipole forced outage rate increases,
24 the risk to system reliability increases as it is a key driver impacting Island Interconnected
25 System reliability. Table 5 shows that extending both the Holyrood TGS and the Hardwoods
26 Gas Turbine through 2030, further mitigates the risk of lost load, deferring the need for

¹ "Reliability and Resource Adequacy Study - 2022 Update," Newfoundland and Labrador Hydro, October 3, 2022, vol. I, sec. 5.2, p. 27, Table 4 and p. 28, Table 5.

² Loss of load hours ("LOLH").

³ The Bridging Period is defined as the period from 2023 to 2030.

1 additional resources until 2029 at the earliest even with an assumed 10% bipole forced
2 outage rate for the LIL. These results support continued investment to maintain both the
3 Holyrood TGS and the Hardwoods Gas Turbine in the interim until new resources can be
4 added to the system. As stated in the 2022 Update,⁴ the estimated annualized capital cost
5 for the continued operation of the Hardwoods Gas Turbine to 2030 is approximately
6 \$2.5 million. The estimated annual operating costs, excluding fuel, are \$450,000.

7 **b)** Hydro publishes a Near-Term Reliability Report twice per year, in May and November. This
8 report contains LOLH projections on the five-year horizon, similar to Tables 4 and 5 in the
9 2022 Update.⁵ Since May 2020, there have been scenarios in these reports that exceed the
10 2.8 LOLH criteria in some or all years.

11 **c)** Hydro recognizes that capacity additions, demand management, and rate design are all
12 important contributions to meeting reliability criteria on the Newfoundland and Labrador
13 Interconnected System. As such, these options are included in the 2022 Update as
14 expansion resource options under consideration.⁶

15 As indicated in Table 4,⁷ without retaining the Hardwoods Gas Turbine in addition to the
16 Holyrood TGS, planning criteria violations could occur as early as next year if the LIL has a
17 forced outage rate of 10% or more.

18 Given the time to approve and construct new generation capacity additions and to design
19 and implement demand management and rate design, Hydro recommends that the
20 Hardwoods Gas Turbine remains in service until 2030 to support the Island Interconnected
21 System in the event of a LIL outage or until such time that sufficient alternative generation is
22 commissioned and both the Holyrood TGS and Hardwoods Gas Turbine are no longer
23 required to support generation reserves in a contingency scenario.

⁴ "Reliability and Resource Adequacy Study - 2022 Update," Newfoundland and Labrador Hydro, October 3, 2022, vol. III, p. 27/15–16.

⁵ "Reliability and Resource Adequacy Study - 2022 Update," Newfoundland and Labrador Hydro, October 3, 2022, vol. I, sec. 5.2, p. 27, Table 4 and p. 28, Table 5.

⁶ Additional details on each option can be found in the "Reliability and Resource Adequacy Study - 2022 Update," Newfoundland and Labrador Hydro, October 3, 2022, vol. III, sec. 7.1, p. 42.

⁷ "Reliability and Resource Adequacy Study - 2022 Update," Newfoundland and Labrador Hydro, October 3, 2022, vol. I, sec. 5.2, p. 27, Table 4.

1 Hydro remains committed to investigating resource alternatives to the Holyrood TGS and
2 the Hardwoods Gas Turbine as a means of ensuring the reliability of the Island
3 Interconnected System.