

1 **Q. Reference: Volume I, Section 4.2; NP-NLH-064, and NP-NLH-065, Issue Topic: Operational**
2 **Plans for Muskrat Falls Assets; and NP-NLH-066, Issue Topic: Operational Plans for the**
3 **Holyrood Thermal Generating Station.**

4 At the time of Hydro's last GRA, the Holyrood Thermal Generating Station ("Holyrood") was
5 anticipated to not be required to generate electricity by March 31, 2021 due to the
6 commissioning of Muskrat Falls Project.

7 Are fuel costs used to generate electricity at Holyrood following the commissioning of the
8 Muskrat Falls Project in 2023 considered to be additional costs incurred by customers beyond
9 those originally anticipated? If not, why not?

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12 A. The power system has undergone significant changes since Newfoundland and Labrador Hydro's
13 ("Hydro") 2017 General Rate Application, during which Hydro relied heavily on the Holyrood
14 Thermal Generating Station ("Holyrood TGS") for both capacity and energy.

15 The years since have seen a transition towards increased integration of Muskrat Falls and the
16 Labrador-Island Link ("LIL"), beginning with the gradual commissioning of Muskrat Falls
17 generating units from December 22, 2020, to November 25, 2021. The LIL was energized on
18 October 15, 2021¹ and was commissioned on April 13, 2023. LIL high-power testing was
19 successfully completed in late March 2026, and the LIL is now able to operate at its full capacity
20 of 900 MW.²

21 Since the full commissioning of the Muskrat Falls Assets in April 2023, Hydro has been working
22 to increase the amount of energy that can be delivered to the Island Interconnected System
23 over the LIL, which is a function of Island Interconnected System load and how much energy is

¹ The LIL and Maritime Link have been available to deliver energy to the Island since 2019.

² Prior to the completion of high-power testing, the LIL was rated at a base capacity of 700 MW.

1 flowing over the LIL and Maritime Link. While the LIL has a rating of 900 MW, actual flows on the
2 LIL are governed by operating procedures that ensure system stability is maintained for any
3 contingency involving the LIL or the Maritime Link.

4 For the loss of the LIL bipole,³ there will be an immediate loss of supply that would have the
5 potential to impact system frequency. To ensure system stability, Maritime Link exports are
6 immediately curtailed to offset the loss of imports at Soldiers Pond. Often, this curtailment
7 alone is insufficient to maintain system frequency within acceptable limits and UFLS⁴ is required.

8 At elevated LIL power flows, the amount of load shedding can be substantial. Further, the UFLS
9 schedule primarily consists of blocks of residential feeders, and the amount of load available for
10 UFLS is therefore largely dependent on home heating load. For this reason, operational limits for
11 LIL power flows can fluctuate depending on ambient temperatures on the Island and are directly
12 linked to system load.

13 To summarize the above, the amount of power that can be delivered to the Island
14 Interconnected System over the LIL is a function of the UFLS that is available or permitted. Since
15 the LIL has been in operation, Hydro has monitored its performance, and reliability has been
16 demonstrated, which has increased the amount of permissible UFLS.

17 As described in Hydro's Final Lower Churchill Project Operational (Stage 4F) Study,⁵ as part of
18 the *Reliability and Resource Adequacy Study Review*, Hydro has recently implemented the final
19 UFLS scheme to allow increased LIL bipole transfer limits. With these new limits, more energy
20 delivered over the LIL can be absorbed by the Island Interconnected System. This change in the
21 UFLS scheme has greatly reduced constraints.⁶

22 Collectively, these changes to the system have caused a shift from a thermally dominated supply
23 mix in the 2019 Test Year to a 2027 Test Year characterized by reduced thermal output and

³ The LIL is a bipole line consisting of two poles operating together. A LIL bipole outage means loss of the entire line.

⁴ Under Frequency Load Shedding ("UFLS") is the automatic or manual actions required to shed system load when the system frequency falls below a defined acceptable parameter.

⁵ "LCP Operational Study: Final LCP Operational Study ("Stage 4F") Report," TransGrid Solutions Inc., June 26, 2025. Provided in "Final LCP Operational (Stage 4F) Study – Overview," Newfoundland and Labrador Hydro, August 11, 2025, att. 1.

⁶ For clarity, the final UFLS scheme was not reflected in the 2027 Test Year as it was implemented after the production plan was developed, however the draft UFLS scheme used was very close to what became the final UFLS scheme.

1 increased reliance on LIL imports to the Island, enabled by the integration of hydroelectric
2 generation in Labrador.

3 While Holyrood TGS was originally designed and operated as a baseload plant, its current role is
4 primarily to provide system reliability and backup generation until new resources are
5 commissioned, which is anticipated to occur beyond the 2027 Test Year.⁷ Therefore, fuel costs
6 in relation to Holyrood TGS following the commissioning of the Muskrat Falls Project in 2023 are
7 essential to ensure reliable operation of the power system in light of the evolving electricity
8 landscape.

⁷ As per "Reliability and Resource Adequacy Study Review – 2022 Update," Newfoundland and Labrador Hydro, October 3, 2022, the Holyrood TGS shall remain available for a "Bridging Period" until 2030, or until such time that sufficient alternative generation is commissioned, adequate performance of the Labrador-Island Link is proven, and generation reserves are met.