

1 Q. **Reference: Overhaul Generator - Unit 3 (2027) – Holyrood**

2 a) Given Hydro's plan to use Unit 3 only as a synchronous condenser after 2030, why is the  
3 overhaul generator project necessary just three years prior to that?

4 b) If the current generator is to be utilized as a synchronous condenser post 2030, as of  
5 2026, what is its expected remaining useful life?  
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8 A. a) As identified through the *Reliability and Resource Adequacy Review ("RRA Study Review")*,<sup>1</sup>  
9 the Holyrood Thermal Generating Station ("Holyrood TGS") shall remain available for a  
10 Bridging Period until 2030 as a critical part of the Island Interconnected System, required to  
11 provide safe and reliable electricity.<sup>2</sup> As a result, capital investment related to the  
12 generation function of the Holyrood TGS is necessary to support system reliability and  
13 maintain Newfoundland and Labrador Hydro's ("Hydro") ability to meet customer demand  
14 during peak periods.

15 As noted in the Holyrood TGS Overview,<sup>3</sup> the plant's annual operation schedule is assumed  
16 to remain consistent with recent operations, with the critical winter period from December  
17 1 to March 31 ("Operating Months") annually and time available for capital upgrades and  
18 maintenance outside of this operating period. Since units are assumed to be mostly online  
19 during the winter Operating Months, it is assumed there will be no reduction in  
20 maintenance philosophy, including preventative maintenance programs, which will not  
21 materially change other than continuous improvements through annual reviews completed  
22 by Hydro. Current reliability targets, derated adjusted forced outage rate ("DAFOR"), and

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<sup>1</sup> "2024 Resource Adequacy Plan – An Update to the Reliability and Resource Adequacy Study," Newfoundland and Labrador Hydro, rev. August 26, 2024 (originally filed July 9, 2024).

<sup>2</sup> Hydro considers the Bridging Period to be from the present to 2030. During the Bridging Period, the system would rely primarily on existing sources of generation capacity to maintain reliability while new generation capacity is being built. The primary, readily available supply options in this period are extending the retirements of the Holyrood TGS, Stephenville Gas Turbine and the Hardwoods Gas Turbine until their capacities can be adequately replaced.

<sup>3</sup> "2027 Capital Budget Application", Newfoundland and Labrador Hydro, July 14, 2026, Sch. 3.

1 derated adjusted utilization forced outage probabilities (“DAUFOP”) of 20% (as noted in the  
2 *RRA Study Review*) will continue to be maintained through capital investment.

3 In the case of the Overhaul Generator - Unit 3 (2027) – Holyrood project specifically, if an  
4 overhaul is not completed at this time, the generator could fail while in operation. Such  
5 failure could result in unsafe operating conditions and forced unit outages, resulting in the  
6 loss of up to 150 MW for a period of several weeks, up to several months in duration,  
7 depending on the magnitude of the failure. Hydro’s historical experience at the Holyrood  
8 TGS has demonstrated that an overhaul on a six-year cycle for the generators is  
9 appropriate, based on the observations made during previous overhauls, third-party  
10 assessments,<sup>4,5</sup> and the original equipment manufacturer recommendations.

- 11 **b)** Hydro’s planning assumptions assume that Holyrood TGS Unit 3 will remain as a  
12 synchronous condenser post-steam. Through the *RRA Study Review*, Hydro is evaluating  
13 post-steam Avalon synchronous condenser requirements, which will inform the future role  
14 of Holyrood TGS Unit 3. Please refer to the Life Extension Condition Assessment Study, filed  
15 with Hydro’s response to CA-NLH-030 of this proceeding, for further discussion on  
16 remaining service life.

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<sup>4</sup> “*Reliability and Resource Adequacy Study Review – Assessment to Determine the Potential Long-Term Viability of the Holyrood Thermal Generating Station*,” Newfoundland and Labrador Hydro, March 31, 2022, att. 2.

<sup>5</sup> “*Reliability and Resource Adequacy Study Review – Holyrood Thermal Generating Station Capital Plan Refresh*,” Newfoundland and Labrador Hydro, March 7, 2025, att. 1.