

1 Q. **Reference: Application Volume 1, 2022 Capital Budget Application – Holyrood Thermal**  
2 **Generating Station Overview – Future Operation and Capital Expenditure Requirements**

3 a) Would it be less expensive to install new combustion turbine unit(s) at the Holyrood site  
4 than to maintain Holyrood in a backup mode going forward, particularly if generation is  
5 needed anyway (depending on the results of the Reliability and Supply Adequacy  
6 Study)?

7 b) Could combustion turbines be used to replace the requirement for Holyrood Unit 3  
8 synchronous condenser operation?

9 c) If the Reliability and Supply Adequacy study shows that new generating capacity is  
10 needed, is it likely to be installed at the Holyrood site?

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13 A. a) Newfoundland and Labrador Hydro (“Hydro”) is currently undertaking a condition  
14 assessment of the Holyrood Thermal Generating Station (“Holyrood TGS”) to assess the  
15 potential long-term viability of the Holyrood TGS and determine what role, if any, the  
16 Holyrood TGS could play, if required, as a backup facility. If it is determined that additional  
17 resources are required on the Island Interconnected System through the ongoing regulatory  
18 process addressing Hydro’s Reliability and Resource Adequacy Study, Hydro will determine  
19 the least-cost option for providing the required level of system reliability. Hydro’s analysis  
20 will consider viable resources including both gas turbines and the continued operation of  
21 the Holyrood TGS, pending outcomes of the ongoing condition assessment.

22 b) It is possible that gas turbines could be used to replace the requirement for the Holyrood  
23 TGS Unit 3 synchronous condenser operation; however, such a replacement would not be  
24 considered the least-cost option. At the time of design for the Lower Churchill Project, the  
25 decision to retain Unit 3 was based on the fact that continued operation of Unit 3 would be  
26 less expensive than the construction of an additional new synchronous condenser facility,  
27 given that the systems required for continued operation of Unit 3 would largely be in place

1           and that required capital investments would be less than the cost of a new facility. If, in  
2           future, additional gas turbines are required to be constructed on the Island Interconnected  
3           System or newer technology options emerge that can provide low-cost synchronous  
4           condense capabilities, Hydro would consider the synchronous condenser capability and cost  
5           of operations associated with the proposed units as compared to system requirements and  
6           determine if continued operation of Unit 3 remains the least-cost option to meet system  
7           reliability requirements.

8           c) The requirement for, and siting of, any incremental generation requirements would be  
9           determined through the Reliability and Resource Adequacy Study.