

1 Q. **Reference: Application Volume 1, 2022 Capital Budget Application – Five-year Capital Plan**
2 **(2022 – 2026)**

3 It is stated (page 2) “General Plant (\$66 million): Driven primarily by the requirement to install
4 plant heating at the Holyrood Thermal Generating Station (“Holyrood TGS”) following the
5 transition to a synchronous condensing facility, along with renewal of Hydro’s information
6 systems, transportation, and telecontrol assets.” Specifically, how much is the cost to install
7 heating equipment at Holyrood TGS and was this considered in the assessment to convert Unit 3
8 to synchronous condenser operation?

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11 A. There are a number of possible alternative solutions to provide plant heating for the Holyrood
12 Thermal Generating Station (“Holyrood TGS”) following the transition to a synchronous
13 condensing facility. Options include: i) the purchase and installation of auxiliary boilers with oil
14 or electric heating sources and ii) the purchase and installation of air handling units, again with
15 oil or electric heating sources. Based on studies completed by Stantec Inc. in 2015 and 2016,
16 Newfoundland and Labrador Hydro (“Hydro”) completed a cost-benefit analysis of options in
17 2018 and determined that installation of electrically heated air handling units would result in
18 the lowest overall long-term cost when considering both capital and operating costs in the
19 analysis.

20 As presented in the Five-Year Capital Plan (2022–2026) in the 2022 Capital Budget Application,¹
21 the estimated cost to purchase and install this heating system is approximately \$7.5 million. This
22 solution would ensure the lower life cycle cost on the basis of the cost of fuel/electricity and
23 staffing requirements (e.g., an auxiliary boiler would require operation by certified Power
24 Engineers).

25 Plant heating is also being reviewed as part of the ongoing Assessment to Determine the
26 Potential Long-Term Viability of the Holyrood Thermal Generating Station (“Holyrood TGS”).

¹ “2022 Capital Budget Application,” Newfoundland and Labrador Hydro, rev. September 17, 2021 (originally filed August 2, 2021), vol. I, sch. 2, app. A, at p. A-4.

1 Should it be determined through the *Reliability and Resource Adequacy Study Review*
2 proceeding that additional backup generation is required and if the Holyrood TGS was found to
3 be the most viable option, then a supply of auxiliary steam would be required for the Holyrood
4 TGS as well as Power Engineers to operate the generating units; in such a case, Hydro would
5 revisit the plant heating options.

6 The basis of design for the Lower Churchill Project included the addition of 3 x 175 MVar²
7 synchronous condensers at Soldiers Pond with the assumption that reactive support would be
8 available from the long term operation of the Holyrood TGS Unit 3 as a synchronous condenser.
9 Given the capital costs associated with the construction of these additional assets in
10 combination with the required sustaining capital and the operating expenses associated with
11 the additional facilities, the continued operation of the Holyrood TGS Unit 3 remains the least-
12 cost alternative for customers.

² Mega Volt Amps (reactive).