

1 Q. In response to PUB-NLH-002, Hydro states that it “considers it prudent to apply a buffer
2 between the minimum capacity required to achieve its planning criteria and the additional
3 capacity gained by completing the upgrades, particularly on systems displaying consistent load
4 growth and when the marginal cost of providing an incremental capacity buffer is low compared
5 to the cost of addressing unforeseen growth after the fact.”

6 a) Please advise when Hydro initiated the practice of applying a buffer in its planning
7 criteria.

8 b) Please provide details of other times Hydro has applied a buffer in its planning criteria.

9 c) Please advise if Hydro has previously applied a buffer in its planning criteria to support
10 the choice of a higher cost alternative.

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13 A. As stated in Newfoundland and Labrador Hydro’s (“Hydro”) response to PUB-NLH-002 of this
14 proceeding, Hydro’s planning criteria are used as general rules to guide Hydro’s planning activity
15 in determining the timing of system upgrades necessary to ensure adequate electricity supply to
16 its customers. Hydro has not routinely applied a buffer between its planning criteria (e.g., a
17 diesel plant’s firm capacity) and its load forecast when determining the timing of systems
18 upgrades. When Hydro determines which alternative solutions are technically feasible, Hydro
19 must ensure that the potential upgrades will increase system capacity to levels higher than the
20 load forecast. This naturally results in some excess system capacity occurring due to standard
21 equipment sizes not specifically matching Hydro’s load forecast.

22 Examples of naturally occurring excess capacity include the selection of particular transformers
23 to upgrade capacity in projects such as Cartwright in the 2016 Capital Budget Application¹ or
24 Jean Lake in the 2023 Capital Budget Application.² These decisions were not made to

¹ The existing transformer bank in Cartwright had a capacity of 989 kW, and Hydro proposed to increase the capacity of the transformer bank to 1,485 kW. In this case, proposed system upgrades exceeded the forecasted load by approximately 442 kW, or 30% at the end of the forecast period.

² The existing Jean Lake Terminal Station had a firm transformation capacity of 24.94 MVA, and Hydro proposed to increase the firm transformation capacity to 33.3 MVA. In this case, system upgrades exceeded the forecasted load by approximately 5.8 MVA or 21% at the end of the forecast period.

1 economically reduce the risk of future shortfalls; rather, they were a result of transformer
2 design specifications.

3 Like the upgrade recommended for Rigolet Unit 2065, the installation of larger capacity
4 transformers may provide the opportunity to reduce the risk of future shortfalls on a more
5 economic basis. In this case, where increased capacity could be achieved for approximately
6 \$126,000 versus a projected future cost estimated to be in excess of \$2 million, Hydro
7 believes it is prudent to mitigate the risk of capacity shortfalls by purchasing the larger unit, as it
8 has indication from the Nunatsiavut Government through its working group that future
9 upgrades for capacity may be required.