

1 Q. **Reference: Attachment 1- Long-Term Supply for Southern Labrador - Economic and Technical**
2 **Assessment**

3 Table 7 on page 33, Attachment 1, shows that Alternative 1 has a cost of \$10.4 million to
4 enclose the existing mobile diesel gensets in Charlottetown in 2023. Subsequent investments to
5 complete Alternative 1 would be completed in 2030, 2035, and 2045. The same table shows that
6 Alternative 3a has a cost of \$39.4 million by 2024 in order to complete Phase 1 with subsequent
7 phases in 2030 and 2045. Given the rapidly evolving technology advances being made in
8 renewable energy technology such as wind and solar as well as the increases in battery capacity
9 while battery costs are decreasing, has Hydro considered just completing the Charlottetown
10 portion of Alternative 1 to address the immediate concerns in Charlottetown while allowing
11 Hydro time to evaluate continually-improving renewable energy options for the region before
12 the next scheduled upgrade to the region in 2030 given the resultant \$29 million capital
13 expenditure avoidance/deferral. Note that, depending on the response to PUB-NLH-027, this
14 \$29 million figure could be significantly higher.

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17 A. Newfoundland and Labrador Hydro (“Hydro”) did consider completing only the upgrades
18 required to the mobile generators in Charlottetown at this time; however, to fully study all
19 alternatives to determine the least-cost alternative requires Hydro to take a longer-term view
20 which takes into account the needs of the entire southern Labrador region.

21 Based on the technologies which are currently available, Hydro does not foresee a scenario
22 whereby diesel generation equipment will not be required in some form to support firm
23 generation during periods when renewable energy sources (run-of-river hydro, wind, and solar)
24 are unable to generate. As the development of technologies to firm up renewable energy
25 resources takes time and Hydro would not be able to implement such technologies in its
26 isolated communities until they are proven to be reliable and are the most cost-effective
27 solution for the provision of reliable power, Hydro does not expect a complete transition from
28 diesel generation in its isolated communities in the foreseeable future.

1 Hydro believes the risk that the industry will transition from diesel generation in isolated
2 communities to firm, renewable generation within the next 15 years is very low. As Hydro's
3 analysis indicates that Alternative 3a is the least-cost alternative and its benefits are realized at
4 approximately 15 years into the study period, it would not be beneficial to rate payers to defer
5 interconnection on the basis that future climate policies, regulations, and/or renewable
6 technologies may materialize as doing so requires Hydro to continue to invest in individual,
7 community-based isolated diesel systems which are not the least-cost alternative and which
8 would still be subject to the same policies, regulations and technological advances.

9 Further, the proposed regional interconnection will create a system that will better attract and
10 allow for economically feasible renewable energy projects, providing up to 11.2 GWh of medium
11 scale¹ renewable energy potential compared to up to 9.7 GWh if the region remains isolated and
12 lowering the levelized costs of energy for renewable energy generation projects.

13 Please refer to Hydro's response to PUB-NLH-001 for further information regarding the required
14 study period, the potential for future climate policies, regulations, and/or renewable
15 technologies to impact Hydro's proposal, and the increased potential for integration of
16 renewable energy associated with a regional interconnection.

¹ Medium scale renewable energy refers to renewable energy systems that requires some level of diesel generation to be online at all time.