

1 Q. **Reference: Response to Request for Information PUB-NLH-001, Attachment 1, Page 3 of 10,**
2 **Lines 1 - 8**

3 On Page 3 of 10 at Lines 1 - 8, Hydro states:

4 The construction of a direct replacement plant (i.e., like for like) with the
5 deficiencies listed above would cost approximately \$10.2 million. Despite it
6 being an initial lower capital cost option, such a solution would result in an
7 increased lifecycle cost for the supply of the region when compared to a
8 regional interconnection due to the relatively higher operating, fuel and
9 overhaul costs associated with the continued use of four individual, community-
10 based isolated diesel generating systems. On this basis, a direct replacement
11 would not be consistent with Hydro's mandate to supply electricity at the
12 lowest possible cost, consistent with reliable service.

13 Assuming that Hydro completed a like-for-like replacement of the Charlottetown Diesel
14 Generating Station that addressed previously existing deficiencies (i.e., lack of fire suppression),
15 would it then be technically possible to interconnect the replacement station with the diesel
16 stations in the other 3 southern Labrador communities at the distribution level? If not, please
17 explain why it would not be technically possible.

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20 A. There are system stability considerations that would need to be addressed relating to the
21 interconnection of the replacement station with the diesel generating stations in the other three
22 southern Labrador communities at the distribution level. This is due to geographic separation.
23 Studies would need to be undertaken to understand the system impact of events such as
24 distribution line faults and diesel generating station trips. These studies would need to be
25 completed to confirm the technical feasibility of such a configuration.

26 Completing this form of an interconnection would be similar to completing Alternative 2 (the
27 highest-cost option considered with "Long-Term Supply Study for Southern Labrador: Economic
28 & Technical Assessment"¹), but with the added interconnection and protection, control, and

¹ "Long-Term Supply for Southern Labrador – Phase 1," Newfoundland and Labrador Hydro, July 16, 2021, sch. 1, att. 1.

1 communication costs necessary to allow all the diesel generating stations to work together.
2 Under this scenario Hydro would also have to adjust its planning criteria to design diesel
3 generating station auxiliary equipment such that the equipment is rated for the full installed
4 diesel generating station capacity instead of net peak load of each community. This would likely
5 result in the requirements for additional capital upgrades. As indicated in Hydro's response to
6 NP-NLH-062 of this proceeding, only minimal savings would be expected if this scenario was
7 pursued as future diesel generating station replacements would still be required, and only
8 minimal changes in the total number of diesel generators would be expected.