

- 1 Q. **Reference: 2021 Capital Budget Supplemental Application Approval of the Construction of**  
2 **Hydro’s Long-term Supply Plan for Southern Labrador – Revision 1 – Safe and Reliable Power**  
3 **Supply to Charlottetown – Reply, Attachment 2, Summary of Technical Note RP-TN-089,**  
4 **page 7 of 25, Table 6 and the response to Request for Information PUB-NLH-045.**

**Table 6: Capital Costs of Diesel Plant Construction (\$000)<sup>3</sup>**

	Regional	CHT	MSH	PHS	SLE
Total Costs	49,010	40,384	37,413	37,296	36,546

5 Hydro’s Alternative 2 includes the cost to construct a new Charlottetown diesel generating  
6 station which was destroyed by fire and new individual diesel generating stations in each of the  
7 other communities over the period 2030 to 2045 at an estimated capital cost of between  
8 \$36 million to \$40 million.

- 9 a) How does Hydro determine when it would be appropriate to refurbish an existing diesel  
10 generating station as opposed to constructing a new diesel station at an approximate  
11 cost of between \$36 million to \$40 million?
- 12 b) Is it appropriate for Hydro’s Alternative 2 to include the capital costs associated with  
13 new diesel generating stations in Mary’s Harbour, Port Hope Simpson, and St. Lewis as  
14 opposed to sustaining capital expenditures that would allow for the continued  
15 operation of the existing facilities? Please explain.

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- 18 A. a) Newfoundland and Labrador Hydro (“Hydro”) continuously monitors the condition of its  
19 diesel generating stations and the customer loads in the communities it serves. When a  
20 diesel generating station is approaching the 40-year lifespan, its condition and design  
21 capacity is evaluated and Hydro assesses whether the diesel generating station is adequate  
22 to meet the needs of those communities.

1 As stated in Hydro Long-Term Supply Study for Southern Labrador: Economic & Technical  
2 Assessment:

3 The Mary's Harbour and Port Hope Simpson Diesel Generating Stations are  
4 currently designed to accommodate the installation of 500 kW class diesel units,  
5 which would yield a designed firm capacity of 1,000 kW. The diesel generating  
6 station in Mary's Harbour has exceeded its design capacity and therefore mobile  
7 gensets have been installed outside of the diesel generating station to help  
8 support peak demand conditions...<sup>1</sup>

9 The Port Hope Simpson Diesel Generating Station is at its design capacity and has little space  
10 to increase capacity if required.

11 The costs included in Hydro's response to PUB-NLH-099 of this proceeding and the costs to  
12 upgrade auxiliary equipment to facilitate the implementation of Alternative 6  
13 (Interconnection of Existing Plants) in Summary of Technical Note RP-TN-089<sup>2</sup> do not  
14 provide any increase to the design capacity in the Mary's Harbour, Port Hope Simpson, or  
15 St. Lewis Diesel Generating Stations.

16 Hydro assesses all options on a case-by-case basis to determine the least-cost alternative to  
17 meet its obligation to provide reliable service to its customers on isolated systems in an  
18 environmentally responsible manner. In instances where the existing plant is adequately  
19 sized and well suited for the community it serves, but in deteriorated condition,  
20 refurbishment may be more cost effective. In instances where the plant requires extension  
21 to meet forecasted load or other substantial modifications, reconstruction is often more  
22 cost effective.

23 **b)** Yes, Hydro believes it is appropriate to include the costs to replace these diesel generating  
24 stations in Alternative 2 (Islanded Operation). In the case of Mary's Harbour and Port Hope  
25 Simpson, the existing diesel generating stations are not well suited to reliably meet the  
26 needs of customers in the communities, as they require significant upgrades to address  
27 condition and space constraints over the study period. The projected replacement of the St.

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<sup>1</sup> "Long-Term Supply for Southern Labrador," Newfoundland and Labrador Hydro, rev. October 5, 2023 (originally filed July 16, 2021), sch. 1, att. 1, sec. 2.1.1, p. 2/7-11.

<sup>2</sup> "Newfoundland and Labrador Hydro – 2021 Capital Budget Supplemental Application Approval of the Construction of Hydro's Long-term Supply Plan for Southern Labrador – Revision 1 – Safe and Reliable Power Supply to Charlottetown – Reply," Newfoundland and Labrador Hydro, October 5, 2023, att. 2.

1            Lewis Diesel Generating Station in 2045 is 22 years away. Hydro cannot accurately predict  
2            the condition or suitability of the plant at that time; however, Hydro must include  
3            reasonable assumptions and has projected its replacement date based on Hydro’s historical  
4            experience operating and maintaining its diesel generating stations on isolated systems.  
5            Hydro also notes, throughout this proceeding, it has provided a robust sensitivity analysis  
6            accounting for inherent uncertainties across numerous factors that have consistently  
7            demonstrated that its proposed solution for long-term supply for southern Labrador is the  
8            least-cost alternative to meet its obligation to provide reliable service to its customers on  
9            isolated systems in an environmentally responsible manner.