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

Further to the response to NP-NLH-024, page 2 of 2, Table 1:

a) Please provide a similar analysis in the event that two of the three generating stations remain.

b) Please provide a similar analysis in the event that one of the three generating stations remains.

A. a) The following are the assumptions made for this analysis:

- The St. Lewis and Mary's Harbour Diesel Generation Stations are not decommissioned and remain as emergency/standby generation (for interconnection options—Alternatives 3a and 3b);
- The standby diesel generating stations at St. Lewis and Mary's Harbour would require capital upgrades to prolong their life to the end of the 50-year study. For this sensitivity analysis, Newfoundland and Labrador Hydro assumed a $2 million capital investment for each diesel generating station every five years. This cost would include scheduled genset overhauls/replacements, fuel tank inspections, fuel tank replacements, building envelope upgrades, etc. A condition assessment would be required to provide an accurate estimate of future capital expenditures associated with extending the life of each diesel generating station as a standby;
- A high-level cost estimate for a fixed operations and maintenance ("O&M") cost for a standby diesel generating station was assumed to be $200,000 per year; and
- The standby diesel generating stations would not have any variable O&M costs and would not supply any of the energy requirements for the four communities. Given that all of the generation sources are diesel generation (comparable cost per kWh) and the requirement of backup supply would be a rare event, it is reasonable to assume there

would an insignificant incremental fuel cost associated with the operation of standby generation.

Table 1: Economic Analysis – Sensitivity Case
St. Lewis and Mary's Harbour Diesel Generating Stations Remaining in Service for all Scenarios ($)

Alternative	Cumulative Net Present Worth ("CPW")	CPW Difference between Alternative and the Least- Cost Alternative
Alternative 3a (St. Lewis and Mary's Harbour as Standby Diesel Generating Stations)	167,200,000	0
Alternative 3b	174,500,000	7,400,000
Alternative 1	177,400,000	10,300,000
Alternative 2	184,700,000	17,500,000

This sensitivity analysis demonstrates that if two of the three existing diesel generating stations remain in service for the purpose of providing standby generation, Alterative 3a would remain the least-cost alternative.

b) The assumptions made for this analysis are the same as part a) with the exception that only the St. Lewis Diesel Generating Station remains in service as standby or back-up generation.

Table 2: Economic Analysis – Sensitivity Case
St. Lewis Diesel Generating Station Remaining in Service for all Scenarios ($)

Alternative	CPW	CPW Difference between Alternative and the Least- Cost Alternative
Alternative 3a (St. Lewis as Standby Diesel Generating Station)	157,800,000	0
Alternative 3b	164,300,000	6,500,000
Alternative 1	177,400,000	19,600,000
Alternative 2	184,700,000	26,800,000

This sensitivity analysis demonstrates that if one of the three existing diesel generating stations remain in service for the purpose of providing standby generation, Alterative 3a would remain the least-cost alternative.