

1 Q. **Reference: Application, Attachment 1, Appendix A**

2 Please provide a sensitivity analysis for both high and low load forecasts.

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5 A. Newfoundland and Labrador Hydro (“Hydro”) did not prepare high and low load forecasts for
6 the referenced application. However, to demonstrate the impact of a change in forecasted fuel
7 expenditure (which could be caused by either a change in fuel price, or change in amount of fuel
8 required due to forecast change) [] a sensitivity analysis for both high and low [] fuel price
9 forecasts and are provided in Table 1 and Table 2, respectively. In both circumstances,
10 Alternative 3a (phased regional interconnection) remains the least-cost alternative.

11 As included in Hydro’s response to LAB-NLH-13, Hydro did consider a substantial reduction in
12 demand in the four communities at a high level. Hydro concluded that reductions in demand
13 would not influence the results of the cumulative present worth analysis as the decrease in cost
14 associated with de-rating equipment is not material in relation to the total capital cost of a new
15 diesel plant. Additional details can be found in Hydro’s response to LAB-NLH-13.

16 If there was an increase in demand in the four communities, there would be no impact to the
17 conclusion that Alternative 3a would be the least-cost alternative as interconnection would only
18 would only provide additional benefits if community load increases. Additional details as to why
19 an interconnection provides greater flexibility to adapt to potential future changes is included in
20 Hydro’s response to PUB-NLH-001.

Table 1: CPW¹ - High Fuel Price Forecast

Alternative	CPW (\$ millions)
Alternative 1	
<ul style="list-style-type: none"> • Upgrade existing mobile gensets in 2023 • Replace Mary's Harbour ("MSH"), Port Hope Simpson ("PHS"), and St. Lewis ("SLE") diesel generating stations in 2030, 2035, and 2045, respectively. 	229
Alternative 2	
<ul style="list-style-type: none"> • Replace Charlottetown ("CHT"), MSH, PHS, and SLE diesel generating stations in 2024, 2030, 2035, and 2045, respectively. 	236
Alternative 3a	
<ul style="list-style-type: none"> • Phased regional interconnection • Phase 1 – Construct regional diesel facility in PHS & interconnect CHT in 2024 • Phase 2 – Interconnect MSH in 2030 • Phase 3 – Interconnect SLE in 2045 	201
Alternative 3b	
<ul style="list-style-type: none"> • Full regional interconnection • Construct regional diesel facility in PHS and interconnect CHT, MSH, and SLE in 2024 	202

¹ Cumulative Net Present Value ("CPW").

Table 2: CPW - Low Fuel Price Forecast

Alternative	CPW (\$ millions)
Alternative 1 <ul style="list-style-type: none"> • Upgrade existing mobile gensets in 2023 • Replace MSH, PHS, and SLE diesel generating stations in 2030, 2035, and 2045, respectively. 	159
Alternative 2 <ul style="list-style-type: none"> • Replace CHT, MSH, PHS, and SLE diesel generating stations in 2024, 2030, 2035, and 2045, respectively. 	167
Alternative 3a <ul style="list-style-type: none"> • Phased regional interconnection • Phase 1 – Construct regional diesel facility in PHS & interconnect CHT in 2024 • Phase 2 – Interconnect MSH in 2030 • Phase 3 – Interconnect SLE in 2045 	137
Alternative 3b <ul style="list-style-type: none"> • Full regional interconnection • Construct regional diesel facility in PHS and interconnect CHT, MSH, and SLE in 2024 	139