

WHENEVER. WHEREVER.
We'll be there.



October 1, 2021

Board of Commissioners
of Public Utilities
P.O. Box 21040
120 Torbay Road
St. John's, NL A1A 5B2

Attention: G. Cheryl Blundon
Director of Corporate Services
and Board Secretary

Dear Ms. Blundon:

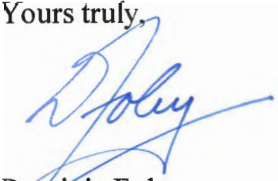
**Re: Newfoundland and Labrador Hydro – Application for Approval to Construct
Phase 1 of Hydro's Long-Term Supply Plan for Southern Labrador**

Please find enclosed Newfoundland Power's Requests for Information NP-NLH-049 to
NP-NLH-062 in relation to the above noted Application.

In accordance with the Board's February 12, 2021 notice regarding the activation of its Business
Continuity Plan to address the COVID-19 pandemic, these Requests for Information are
provided in electronic format only.

If you have any questions please contact the undersigned at your convenience.

Yours truly,



Dominic Foley
Legal Counsel

Enclosures

ec. Shirley A. Walsh
Newfoundland and Labrador Hydro

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Newfoundland Power Inc.

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IN THE MATTER OF the *Electrical Power Control Act, RSNL 1994*, Chapter E-5.1 (the “*EPCA*”) and the *Public Utilities Act, RSNL 1990*, Chapter P-47 (the “*Act*”), and regulations thereunder; and

IN THE MATTER OF an Application by Newfoundland and Labrador Hydro (“Hydro”) for an Order approving the Construction of Phase 1 of Hydro’s Long-Term Supply Plan for Southern Labrador, pursuant to Section 41(3) of the *Act*.

**Requests for Information by
Newfoundland Power Inc.**

NP-NLH-049 to NP-NLH-062

October 1, 2021

Requests for Information

Reference: **Response to Request for Information LAB-NLH-001, Page 2 of 2, Lines 3 - 5**

NP-NLH-049 On Page 2 of 2 at Lines 3 - 5, Hydro states:

“With the smallest unit sized at 1,000 kW, the minimum diesel generation would be approximately 400 kW, potentially allowing for the remaining load to be served by renewable energy sources.”

What is the efficiency of a diesel generating unit typically used by Hydro when operating at 40% of its rated capacity? In the response, provide an operating curve showing fuel consumption versus output for the typical diesel generator set.

Reference: **Response to Request for Information LAB-NLH-007, Page 2 of 2, Lines 14 – 15 and NP-NLH-027, Attachment 1**

NP-NLH-050 LAB-NLH-007, Page 2 of 2 at Lines 14 - 15, Hydro states:

“The average annual O&M cost over the 50-year study for the status quo option (Alternative 1) was estimated to be \$2.15 million per year.”

Please reconcile the \$2.15 million per year in the reference above with the information provided in NP-NLH-027, Attachment 1.

Reference: **Response to Request for Information NP-NLH-014, Page 2 of 2, Lines 1 – 3**

NP-NLH-051 On Page 2 of 2 at Lines 1 - 3, Hydro states:

“If approved, the work is scheduled for completion in September 2023 instead of during execution of phase 2 of the long-term supply plan for southern Labrador (currently expected to be 2030).”

Is the Mary’s Harbour Voltage Conversion required to be completed in 2023 or 2030? In the response please indicate if the work is required in 2023 due to additional customer load requirements and whether the customer will be required to make a contribution in aid of construction.

Reference **Response to Request for Information NP-NLH-020.**

NP-NLH-052 Please provide a complete listing of all of Hydro’s diesel generating stations and indicate the current age of each and whether Hydro has plans for the replacement of each. How many of these replacements are included in Hydro’s 5-year capital plan?

Reference	Response to Request for Information NP-NLH-025, Table 1
NP-NLH-053	Can Hydro confirm that if, after completion of the centralized plant, system reliability concerns arise for the affected communities, the continued use of the local diesel generating stations as back-up generation will not occur in the future. If not, why not?
Reference:	Response to Request for Information NP-NLH-027, Attachment 1
NP-NLH-054	Please provide in detail the reason for the increase in O&M costs when plants are replaced in Alternative 1. In the response please provide a breakdown of O&M costs prior to plant replacement and what is included in O&M costs after replacement.
NP-NLH-055	Please confirm that the Total (Present Worth) column is the Total column increased to include inflationary impacts, not the present worth of the Total column.
Reference:	Response to Request for Information NP-NLH-040, Page 1 of 2, Lines 10 - 12
NP-NLH-056	On Page 1 of 2 at Lines 10 - 12, Hydro states: <i>“The St. Lewis Diesel Generating Station is the newest of the four diesel generating stations (2006) and it has, on average, an approximately 4.2% higher efficiency than the other diesel generating stations.”</i> The higher efficiency experienced at the St. Lewis Diesel Generating Station is attributed to the more recent technology in service. If diesel gensets were replaced in the other diesel generating stations, would Hydro expect that efficiency improvements similar to those in St. Lewis would be achieved? If not, why not?
Reference:	Response to Request for Information NP-NLH-041, Page 2 of 3, Table 1
NP-NLH-057	Table 1 provides a capital cost estimate of \$10.2 million for the direct rebuild of the Charlottetown Diesel Generating Station with similar specifications to the pre-fire facility. Please revise this estimate to include the cost of fire suppression.
NP-NLH-058	Table 1 provides a capital cost estimate of \$10.2 million for the direct rebuild of the Charlottetown Diesel Generating Station with similar specifications to the pre-fire facility. Please reconcile the differences between capital cost estimate of \$10.2 million for the direct rebuild and the \$18.4 million estimate provided in the response to NP-NLH-020 and the \$21.4 million estimates provided in the response to PUB-NLH-001. In the response include specific details on the differences in work scope included in each estimate.

Reference: **Response to Request for Information NP-NLH-045 and Application, Attachment 1, Appendix A, Table A-1**

NP-NLH-059 NP-NLH-045, Page 1 of 2 at Lines 5 - 6, Hydro states:

“The results of the requested analysis for both high and low load forecasts are provided in Table 1 and Table 2, respectively.”

Please provide the high and low load forecasts used in the analysis in a format similar to that provided in Table A-1 Baseline Demand and Energy Forecast (Net).

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

NP-NLH-060 On Page 3 of 10 at Lines 1 - 8, Hydro states:

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

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

NP-NLH-061 If multiple diesel generating stations were interconnected at the distribution level, for each of the following considerations, please separately indicate if sharing available spare capacity:

- could reduce or eliminate the need for the mobile generation;
- could potentially address the capacity constraints of each individual diesel generating station;
- could improve diesel generating station operating efficiency;
- could provide additional ability to add renewable generation; and
- could provide future options to reduce future generating station replacement costs; and/or reduce the total number of diesel units on the system?

In the response please provide details on each of these potential impacts.

Reference: **Response to Request for Information PUB-NLH-001, Attachment 1, Page 9 of 10, Lines 9 - 14**

NP-NLH-062 On Page 9 of 10 at Lines 9 - 14, Hydro states:

“The Labrador Interconnection Option Study demonstrates that connecting isolated systems in groups allows development of larger scale wind turbines and battery energy storage systems that have a lower levelized cost of energy. These studies show that the single, larger regional diesel generation source supplying the four southern Labrador communities would be a more favorable and cost-effective configuration for maximizing renewable energy potential in the region.”

Is the single, larger regional diesel generation source supplying the four southern Labrador communities the basis for a more favorable and cost-effective configuration for maximizing renewable energy potential in the region, or is it the interconnection of the four southern Labrador communities that maximizes the renewable energy potential?

RESPECTFULLY SUBMITTED at St. John’s, Newfoundland and Labrador, this 1st day of October 2021.



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