NEWFOUNDLAND AND LABRADOR
BOARD OF COMMISSIONERS OF PUBLIC UTILITIES
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2023-10-24

Shirley Walsh
Senior Legal Counsel, Regulatory
Newfoundland and Labrador Hydro
P.O. Box 12400
Hydro Place, Columbus Drive
St. John's, NL A1B 4K7

Dear Ms. Walsh:

Re: Newfoundland and Labrador Hydro - 2021 Capital Budget Supplemental Application Approval of the Construction of Hydro's Long-term Supply Plan for Southern Labrador - Requests for Information

Enclosed are Requests for Information PUB-NLH-091 to PUB-NLH-101 regarding the above- noted application.

If you have any questions, please do not hesitate to contact the Board Legal Counsel, Ms. Jacqui Glynn, by email jglynn@pub.nl.ca or by telephone 709-726-6781.

Yours truly,

Jo-Anne Galarneau
Board Secretary

CB/cj

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

IN THE MATTER OF an application by
Newfoundland and Labrador Hydro for an
order approving the construction of Hydro's
long-term supply plan for southern Labrador,
pursuant to section 41(3) of the **Act**.

PUBLIC UTILITIES BOARD
REQUESTS FOR INFORMATION

PUB-NLH-091 to PUB-NLH-101

Issued: October 24, 2023

PUB-NLH-091 Please provide an update on the development of new wind projects in the southern Labrador region as well as with respect to the potential development of hydroelectric sites at 5B and 8C-2.

PUB-NLH-092 Application, Revision 2, page 4. Although there is currently use for only four bays, paragraph 17 states "Additionally, maintaining the initial design plan for the regional diesel generating station with six engine bays will ensure sufficient footprint to accommodate future load growth and allow for N-2 redundancy if deemed necessary. While the provision of an extra engine bay to accommodate N-2 redundancy has an incremental cost of approximately $700,000, this is significantly less than the cost of expanding the building footprint in the event that an additional engine bay is required. This additional footprint could also be utilized for equipment to support the integration of renewable energy or storage technologies in the future."

Does Hydro intend to include the cost of the extra two bays in its rate base? Please explain.

PUB-NLH-093 Hydro's correspondence dated October 5, 2023, Attachment 1, Midgard Consulting Inc's Report, page 13 of 74 states: "The existing powerhouses were designed to serve their local loads and were not intended to be interconnected to serve multiple communities. As such, these powerhouses were designed and constructed to output their firm (N-1) capacity rather than their installed (sum of all generators) capacity."

a) What is the wire size and amperage capacity of the existing and proposed system bus and service conductors for each of the diesel generating stations at Mary's Harbour, St. Lewis, and Port Hope Simpson?

b) Is it consistent with industry standards to design and construct a diesel generating station, particularly the main system bus, for its firm load capacity rather than the capacity of the installed generation at the plant?

PUB-NLH-094 Hydro's correspondence dated October 5, 2023, Attachment 1, Midgard Consulting Inc's Report, page 19 of 74, Table 5 lists the capital cost of replacing each of the diesel generating stations. Midgard confirmed that "the costs are in line with its own observations of the market and notes that these costs are in many cases significantly higher than projected in the model generated in late 2022 for the IRP."

a) Please describe the process by which Hydro's updated costs were vetted by Midgard in arriving at the conclusion that the costs are in line with its own observations (e.g., a survey of vendors, review of recent tenders for similar work, etc.).

b) In response to PUB-NLH-054, Hydro stated that the cost of the regional diesel plant was estimated at $49 million. Table 5 lists the updated cost of the regional diesel plant as $49 million. Please confirm that the cost of the regional diesel plant has not increased from the estimate provided in late 2022 for the IRP. If not confirmed, please explain.

c) Original Application dated July 16, 2023, Attachment 1, page 33, Table 7. The capital cost of replacing the Charlottetown diesel generating station ("DGS") is listed as $21.4 million. Please confirm the capital cost estimate that was used by Midgard for the Charlottetown DGS replacement in its March 28, 2023 Southern Labrador Communities - Integrated Resource Plan report and explain the reasons for any changes to that estimate in comparison to the Midgard's updated estimate of $40.4 million shown in Table 5.

d) Original Application dated July 16, 2023, Attachment 1, page 33, Table 7. The capital cost of replacing the Mary's Harbour DGS is listed as $18.9 million. The spreadsheet (worksheet Option A_H, cell P11) included in Hydro's response to PUB-NLH-081 indicates a capital cost of just under $24 million for the replacement of the Mary's Harbour DGS. Please confirm or clarify the capital cost estimate that was used by Midgard for the Mary's Harbour DGS replacement in its March 28, 2023 Southern Labrador Communities - Integrated Resource Plan report and explain the reasons for any changes to that estimate in comparison to the Midgard's updated estimate of $37.4 million shown in Table 5.

e) Original Application dated July 16, 2023, Attachment 1, page 33, Table 7. The capital cost of replacing the Port Hope Simpson DGS is listed as $17.0 million. The spreadsheet (worksheet Option A_H, cell P16) included in Hydro's response to PUB-NLH-081 indicates a capital cost of just under $20 million for the replacement of the Port Hope Simpson DGS. Please confirm or clarify the capital cost estimate that was used by Midgard for the Mary's Harbour DGS replacement in its March 28, 2023 Southern Labrador Communities - Integrated Resource Plan report and explain the reasons for any changes to that estimate in comparison to the Midgard's updated estimate of $37.3 million shown in Table 5.

f) Original Application dated July 16, 2023, Attachment 1, page 33, Table 7. The capital cost of replacing the St. Lewis DGS is listed as $14.2 million. The spreadsheet (worksheet Option A_H, cell P26) included in Hydro's response to PUB-NLH-081 indicates a capital cost of just under $16 million for the replacement of the Port Hope Simpson DGS. Please confirm or clarify the capital cost estimate that was used by Midgard for the Mary's Harbour DGS replacement in its March 28, 2023 Southern Labrador Communities - Integrated Resource Plan report and

explain the reasons for any changes to that estimate in comparison to the Midgard's updated estimate of $36.5 million shown in Table 5.

g) Please explain why the costs associated with the construction of the regional DGS appear to have not increased in comparison to the cost estimate previously supplied in Midgard's late 2022 IRP analyses whereas the construction costs associated with the individual community diesel generating stations appear to have increased significantly.

PUB-NLH-095 Hydro's correspondence dated October 5, 2023, Attachment 1, Midgard Consulting Inc's Report, page 20 of 74, states "Beyond the upgrades identified in Table 7 and potential interconnection upgrades it is not anticipated that any further work will be required on the MSH facility to ensure the reliable operation of the plant if its life is extended from 2027 to 2030 (or 2034 if the Interconnection of Existing Plants scenario is selected)."

a) Why was 2034 selected as the year for the replacement of the Mary's Harbour DGS in the interconnection of existing plants alternative (Option 6)?

b) Please explain why the same repairs to the same facility will allow the Mary's Harbour DGS to have a service life expectancy that is four years longer for Option 6 when compared to the other alternatives reviewed?

PUB-NLH-096 Hydro's correspondence dated October 5, 2023, Attachment 1, Midgard Consulting Inc's Report, pages 23 of 74, Figure 2, outlines a comparison of the project schedules for the various alternatives reviewed by Midgard.

a) The 'environmental assessment' process is shown as 15 months for all scenarios. Please explain why the environmental assessment process timeline for a replacement of the Charlottetown diesel generating plant would take the same amount of time as Hydro's proposed solution that would involve a new centralized diesel generating station as well as the interconnection of four communities.

b) The 'preliminary engineering and project approval' process is shown as 15 months for all scenarios except Hydro's proposed solution. Given the technical complexity associated with the interconnection of existing plants alternative (Option 6) and the 2-Community alternative (Option 7) in comparison to that of replacing the Charlottetown DGS (Option 2), please explain why an equivalent amount of time is allocated for each.

PUB-NLH-097 Hydro's correspondence dated October 5, 2023, Attachment 1, Midgard Consulting Inc's Report, pages 29-30 of 74, states "simplicity of modelling and ease of data audit, costs are assigned when the bulk of the costs are

anticipated to occur, rather than breaking up total costs into annual phases. As an example, the costs for the regional powerhouse are incurred in 2028, rather than spread from 2023 to 2029 since the plurality of costs will occur in this year." Application, Revision 2, Schedule 3, page 1, Table 1 shows that 93% of the $88 million will be spent in years 2027 and prior, 7% forecast to be spent in 2028, and 0% in 2029. Please repeat the requested analyses using the forecasted annual spend detailed within Schedule 3.

PUB-NLH-098 Hydro's correspondence dated October 5, 2023, Attachment 1, Midgard Consulting Inc's Report, pages 31-34 of 74.

a) Why is the retrofit scheduled for 2026 in the replacement of the Charlottetown DGS alternative (Option 2) whereas it is scheduled for 2028 in Options 6 and 7?

b) Please explain why an additional external building is required to house the fire suppression system in St. Lewis. Please provide the analysis and/or schematics.

c) Were other alternatives considered (e.g., building extension, etc.)? If so, please identify them and the reason(s) for not implementing them. If not, please explain.

PUB-NLH-099 Hydro's correspondence dated October 5, 2023, Attachment 1, Midgard Consulting Inc's Report, Appendix E. The August 1, 2023 correspondence from the Board (Item 5) requested that Hydro/Midgard provide the same analysis using a 50-year life expectancy for the diesel generating stations rather than the approximate 40-year life expectancy that is currently used in the analysis. The years of construction for the diesel generating stations located at Mary's Harbour, Port Hope Simpson, and St. Lewis are 1994, 1995, and 2006 respectively.

a) With respect to the 50-year life expectancy analysis contained within Appendix E, please explain why the replacement dates for the Mary's Harbour, Port Hope Simpson and St. Lewis diesel generating stations remain at 2030, 2035 and 2045 rather than being moved to 2044, 2045 and 2056 respectively so as to correspond with a 50-year life expectancy.

b) Please complete the analysis requested within Item 5 of the August 1, 2023 correspondence from the Board using the 2044, 2045 and 2056 retirement dates for Mary's Harbour, Port Hope Simpson, and St. Lewis diesel generating stations respectively.

PUB-NLH-100 Hydro's correspondence dated October 5, 2023, Attachment 2, page 9 of 25. Table 9 outlines the $35 million cost estimate for the auxiliary upgrades to the diesel generating plants that Hydro has determined will be required in

order to facilitate the interconnection of existing plants alternative (Option 6).

a) Please provide a breakdown of the cost estimates for each site location as well as a detailed description of the work and why it is necessary.

b) Please confirm that engineering site visits to each of the diesel generating stations were undertaken as part of the determination of these upgrade costs. If not confirmed, please detail the process by which these estimates were generated.

PUB-NLH-101 Hydro's correspondence dated October 5, 2023, Attachment 2, page 13 of 25. Table 14 outlines the schedule for interconnection of existing plants (Option 6) with commissioning occurring in Q4 2030. The schedule depicts only one of the DGS Auxiliary Equipment Upgrades being completed per year beginning with Port Hope Simpson in 2026. Please detail the advantages and disadvantages of completing two or more of the Auxiliary Equipment Upgrades in a one-year timeframe rather than the three-year time frame currently allocated.

BOARD OF COMMISSIONERS OF PUBLIC UTILITIES

Per

Jo-Ann Galarneau
Board Secretary