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 Newfoundland and
Labrador Hydro's Reliability and Supply
Adequacy Study.

PUBLIC UTILITIES BOARD
REQUESTS FOR INFORMATION

PUB-NLH-311 to PUB-NLH-323

Issued: May 8, 2024

Newfoundland and Labrador Hydro - Long-Term Load Forecast Report, filed March 28, 2024

PUB-NLH-311 Regarding Appendix B to the 2023 Long-term Load Forecast Report (LTLFR), please provide the following for each of the five referenced regressions:

a. F-values for each regression
b. Significance statistics for each parameter estimate, specifically the t-statistic and p-value
c. Descriptions of the justification and data basis for each regression variable
d. Values applied in each forecast for each variable, X1, X2.Xn.

PUB-NLH-312 With respect to internal models that Hydro uses and that relate to load forecasting, but that are not explicitly documented in the LTLFR (see, for example, the statement "Hydro has developed multiple internal models that provide a greater array of outcomes," Daymark, "R&RA 2024: Independent Load Forecasting Process Review," March 22, 2024):

a. Please provide a description of these internal models, their purpose, and the associated results relative to the scenarios in Hydro's LTLFR.
b. Does Hydro intend to follow the recommendation in the Daymark review that "these additional scenarios should be documented and included as part of the standard load forecasting process"?

PUB-NLH-313 Please clarify and elaborate upon the statement in the LTLFR that the transmission system in Labrador is "fully maximized."

PUB-NLH-314 Please refer to the LTLFR at page 16 line 12 to page 17 line 13.

a. Please provide all assumptions regarding the customer incentives for the adoption of heat pumps (e.g., tax credits, direct subsidies, etc.).
b. Are the incentives in (a) contingent on customer adoption of 100% electric heat, or are customers able to maintain backup sources of heat? Please explain, and please describe how the forecast incorporates any requirements for qualifying for incentives.

PUB-NLH-315 Please refer to the LTLFR at page 21.

a. Please provide the current list of requests for power in Labrador, as referenced in lines 2-3.
b. Please identify the two major industrial customers in line 9. If not a specific set of customers, please explain how this assumption (explained at lines 9 through 13) was developed.

PUB-NLH-316 Please refer to the LTLFR at section 3.3.1.3.

a. Please provide the year-by-year carbon pollution price per tonne assumed in all load forecast cases.
b. Please identify all "government policy (including mandates and regulations)" (page 9, line 14) assumed in each load forecast case.

c. Are the "available incentives" referenced at page 14, line 9, limited to the programs listed in footnotes 32 and 33? If not, please identify other incentives modeled in the load forecast.

PUB-NLH-317 Please refer to the EV Adoption and Impacts Study. At page 9, please explain the discrepancy in the LDVs share of the vehicle stock in Newfoundland and Labrador between that stated in: "81% of vehicles are passenger/personal light-duty vehicles (LDVs)" and the one stated in "LDVs make up 90% of vehicles on the road…".

PUB-NLH-318 Please refer to the EV Adoption and Impacts Study. To what factors do the Study's authors attribute the lagging EV adoption in NL with respect to other Canadian provinces?

PUB-NLH-319 Please refer to the EV Adoption and Impacts Study. Please characterize the Dunsky's Electric Vehicle Adoption (EVA) model: diffusion, discrete choice, mixed?

PUB-NLH-320 Please refer to the EV Adoption and Impacts Study. A literature survey of EV adoption modeling techniques found diffusion modeling being used in a small minority of the studies (2/53). Please explain the advantages of diffusion modeling technique over agent based or discrete choice modeling approaches.

PUB-NLH-321 Please refer to the EV Adoption and Impacts Study. At page 12, please explain:

a. How was the maximum theoretical potential for deployment, including market size and composition and model availability determined.
b. What was the basis for calculating the unconstrained economic potential uptake in particular the incremental purchase cost of PHEV/BEV over ICE vehicles.
c. How were the NL-specific barriers and constraints to EV adoption incorporated, in particular how they are expected to change over time and what drives the change.
d. How the EVA Model approaches solving the non-trivial issue of jointly modelling the factors that induce diffusion and the factors that might favor adoption considering the available EV alternatives.

PUB-NLH-322 Please refer to the EV Adoption and Impacts Study. Please explain how the model was calibrated using "historical inputs on vehicle sales, energy prices, vehicle costs, incentive programs and infrastructure deployment to benchmark the model to historical adoption and calibrate key model parameters to local market conditions", if only approximately 400 EVs have been purchased in the province since 2017.

a. Was data from other provinces further along in transportation electrification used, or only NL specific data?

b. If the answer to a. is yes, how were province-specific characteristics, such as typical driving distances, disposable income, and colder climate, considered?

PUB-NLH-323 Has the EVA model been calibrated through backcasting EV adoption rates in other Canadian provinces further ahead than NL in transportation electrification?

DATED at St. John's, Newfoundland and Labrador, this 8th day of May 2024.

BOARD OF COMMISSIONERS OF PUBLIC UTILITIES

Per

Jo-Anne Galarneau
Board Secretary