

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

AND IN THE MATTER OF the Non-Firm Rate Application, filed by Hydro.

**Request for Information
by the Labrador Interconnected Group**

Application for Non-Firm Rate Application

LAB-NLH-001 to LAB-NLH-011

December 8, 2022

Request for Information Regarding the Application for Non-Firm Rate Application

LAB-NLH-1. **Re: Non-Firm Rate Presentation, page 13**

Citation:

Non-Firm Energy in NL

- Non-firm energy price has historically been more costly than the firm energy price.
- Linkage of non-firm price to Holyrood TGS fuel has made non-firm energy materially higher than firm industrial price.
- Imbalance Rate in Labrador has been normally higher than Labrador Industrial firm energy rate.

Please provide a table comparing the Labrador “Imbalance Rate” to the industrial firm energy rate and to the largest general service rate, for each month since 2018.

LAB-NLH-2. **Re: Non-Firm Rate Presentation, page 15; Non-Firm Rate Application, pages 22 (pdf) and 38-39 (pdf)**

Citation 1 (presentation):

Non-firm energy use does not contribute to investments in common system capacity; therefore, no demand charge proposed.

Citation 2 (p. 22):

While the non-firm customers will not pay explicitly for the use of the common transmission facilities system through customer rates, they will be subject to the pricing variability in the energy markets and may at times pay charges for non-firm energy in excess of the published firm energy rates. This would be expected to occur frequently in Labrador where the firm electricity rates are among the lowest in North America. Therefore, Hydro is proposing not to apply a demand charge for the use of non-firm service. This approach is consistent with the pricing for surplus/additional energy in other Canadian jurisdictions. The proposed approach will provide for increased revenue from non-firm sales to offset the estimated reduction in net exports due to those increased non-firm sales. (underlining added)

Citation 3 (application pp. 38-39):

As the non-firm customers would use the transmission system, Hydro believes it would be appropriate for the customers to pay a transmission demand charge based on the average embedded cost of demand. This is currently \$1.08 per kW on the Labrador Interconnected System. As this service is non-firm, the rate would apply to the maximum monthly demand and would not apply to the maximum annual demand as is the case for firm demand. (underlining added)

- a) **Please explain the apparent contradiction between the quoted passages which state that non-firm customers should pay a transmission demand charge based on the average embedded cost of demand, and those that state that there will be no demand charge.**
- b) **If no demand charge is proposed, does this imply that non-firm service would be less expensive than firm service? Please explain in the detail the implications of the absence of a demand charge.**
- c) **If no demand charge is proposed, please explain why, in Hydro's view, non-firm customers should not pay for the use of common transmission facilities.**

LAB-NLH-3. Re: Non-Firm Rate Presentation, page 8

Citation:

Non-firm service is commonly viewed as two types:

- Interruptible load/capacity assistance; and
- Non-firm or surplus/excess energy.
- Material differences in service obligations.

Please confirm that BlockLab's existing contract is of the first type, meaning that:

- **it can be required to curtail load at Hydro's request,**
- **these requests are relatively rare,**
- **compensation takes the form of a contractual payment, rather than a modification of rates.**

LAB-NLH-4. Re: Non-Firm Rate Presentation, page 18

Citation:

The table below presents the calculation of forecast on-peak and off-peak prices for February 2023 and July 2023.

- Assumes 75% export deliveries to New York and 25% to New England.
- Actual rate will not be established until 21st day preceding the billing month.

- a. **Please provide monthly export volumes to New York and New England, from 2018 through the present.**

b. Does Hydro also make short-term energy sales to Quebec? If not, why not?

LAB-NLH-5. Re: Non-Firm Rate Presentation, page 11

Citation:

Non-Firm or Surplus/Excess Energy

- Enables the utility to increase sales without additional system investments.
- Utility does not consider non-firm energy sales in system planning to determine additional transmission or generation investments.
- The amount of non-firm energy available fluctuates as firm load requirements change on the system by hour, day, week, month or year.
- Customer interruptions can be frequent (i.e., not just system peak times).

- a. Does Hydro reserve the right to cease deliveries altogether to a non-firm customer? Does it reserve the right to cease deliveries permanently?**
- b. In the event of substantial firm load growth in Labrador (e.g. as a result of new mining projects), it is plausible to expect that, at some point, there would not be significant amounts of non-firm energy available?**
- c. Given the responses to the previous questions, please explain why Hydro considers it plausible that new customers meeting the established criteria (minimum 1.5 MW at transmission voltage) would set up shop in Labrador to take service under the non-firm rate. Or does Hydro believe that the rate will only be used by existing customers who are unable to meet their energy needs, in whole or in part, through firm service?**

LAB-NLH-6. Re: Non-Firm Rate Application, page 18

Citation:

To reliably meet projected customer non-firm load requirements in the Happy Valley-Goose Bay area, the system needs to be upgraded, which would likely include a new terminal station and new transmission line. On the basis of preliminary estimates, these upgrades could cost in excess of \$17 million. Given the magnitude of these upgrades and the high cost and time frame required to construct them, Hydro is also studying the feasibility of connecting non-firm customers at a location outside the town of Happy Valley-Goose Bay and closer to the Muskrat Falls Terminal Station. The non-firm applicants have been informed of Hydro's approach and are in support of this additional analysis.

- a) **Please provide additional information regarding Hydro’s study of the feasibility of connecting non-firm customers near the Muskrat Falls Terminal Station, including:**
- **The size of the facilities envisioned (in MW and in GWh/yr),**
 - **The order of magnitude of the capital investments expected to be required,**
 - **The expected annual revenues, and**
 - **The amount of time over which Hydro expects to be able to provide these customers with non-firm energy.**
- b) **Please describes the benefits, if any, for Labrador ratepayers and for Labrador society in general, of having surplus Recapture Energy consumed by cryptocurrency miners in Labrador, under the proposed non-firm rate, and exporting the power.**

LAB-NLH-7. Re: Non-Firm Rate Presentation, page 23

Citation:

Since OC, Hydro has had an additional cryptocurrency operation requesting non-firm service; this applicant initially applied for firm service only. Given the change in supply availability, Hydro believes the request is not unreasonable.

Has Hydro made any representations to this customer, or to other customers, regarding the likely extent of availability of non-firm energy over the coming years? If so, please summarize the representations that have been made.

LAB-NLH-8. Re: Non-Firm Rate Presentation, page 5

Citation:

Load would be served in the following priority:

- First –Firm Town Loads
 - Second –Firm Industrial Customer Loads up to the contracted Power on Order
 - Third –Interruptible Industrial Customer Loads up to contracted amounts (5 MW each)
 - Fourth –Non-Firm Customers
- The implementation of the non-firm service would limit the ability of the mines to exceed their contracted interruptible load availability.

- a) **Please elaborate on the significance of this limitation of the ability of the mines to exceed their contracted interruptible load availability, if the non-firm service were to be implemented. Specifically, please speak to:**
- **The extent to which, in the past, Labrador mines have exceeded their contracted interruptible load availability,**
 - **The extent to which Labrador mines have indicated the likelihood that, in the future, they might wish to exceed their contracted interruptible load availability,**
- b) **Please confirm that, if the non-firm service were to be implemented as proposed, any energy consumption by Labrador mines in excess of their contracted interruptible load availability would be based on equal sharing of available excess energy with other non-firm rate customers.**

LAB-NLH-9. Re: Non-Firm Rate Presentation, page 5

Citation:

Objective: To provide non-firm service on the LIS without requiring capital investments on common grid so that the provision such service could: (i) enable use of surplus Recapture Energy in Labrador, but (ii) would not negatively impact existing customers in the delivery of service and the cost of firm service.

- a. **Please confirm that the availability of Recapture Energy is computed and accounted for on an annual basis. If not, please explain in detail, how the amount of Recapture Energy available to Hydro is calculated.**
- b. **Consider a hypothetical situation in which significant amounts of non-firm energy are sold early in the year, based on forecasts of the amount of Recapture Energy to be used by firm customers later in the year, and those customers then exceed their forecast energy usage. How would the shortfall of Recapture Energy be met, and from what source?**

LAB-NLH-10.Re: Non-Firm Rate Application, page 32

Citation:

Presently, Hydro has two contracts with Churchill Falls to supply power to customers on the Labrador Interconnected System. First, Churchill Falls sells up to 225 MW (TwinCo₂ Block) to Hydro for sale to Labrador West customers, with first priority given to industrial customers in Labrador West. Second, Churchill Falls sells 300 MW to Hydro for use in the province (Recapture Block) with no limitations on location of use. There is currently more Recapture Energy available than what is currently needed to serve Hydro's existing customers in Labrador. Hydro currently sells the surplus to Nalcor Energy Marketing for export. Table 3 summarizes the average surplus Recapture Energy available by season.

- a) **Please explain in the TwinCo Block and the Recapture Block have energy components, or if they simply consist of a power entitlement available at all times.**
- b) **More specifically, if Hydro uses less than its allotment of 225 + 300 MW during some hours for Labrador loads and for export, can it recover those amounts during other hours?**
- c) **Please describe the current corporate relationships between NLH, Nalcor, and Nalcor Energy Marketing.**

LAB-NLH-11.Re: Non-Firm Rate Application, page 33

Citation:

For preliminary planning purposes, available surplus Recapture Energy may be approximated to be 60 MW over peak. The average available surplus recapture capacity over the past three years is provided in Table 4. This capacity could be used to serve non-firm load in Labrador rather than be exported. As indicated, the ability to support incremental load is restricted by transmission system limitations. Under the current load requirements for the Labrador Interconnected System, even if the available transmission capacity were fully utilized at a 100% capacity factor, surplus Recapture Energy would not be exhausted.

- a) **Does the statement that “even if the available transmission capacity were fully utilized at a 100% capacity factor, surplus Recapture Energy would not be exhausted” take into account potential non-firm sales located near Churchill Falls or near the Muskrat Falls Terminal Station, in order to avoid transmission constraints?**
- b) **Please indicate the total amount of energy that could be used in Labrador, taking into account existing transmission constraints as well as potential consumption at these sites, in relation to the total amount of Recapture Energy available.**