

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-012 to LAB-NLH-018

May 11, 2023

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

LAB-NLH-12.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)

Citation 4 (PUB-NLH-006):

Newfoundland and Labrador Hydro (“Hydro”) changed its position on whether it should apply a demand charge for non-firm service based on the review of the pricing approach of surplus/additional energy conducted by Christensen Associates Energy Consulting, LLC (“CA Energy Consulting”) which is provided in Schedule 1, Attachment 2.1 The CA Energy Consulting review indicated that no demand charges are applied in the sale of surplus/additional energy by BC Hydro, Manitoba Hydro, NB Power and Hydro-Québec. Hydro also notes that the application of a demand charge is not consistent with an incremental cost approach to pricing for non-firm energy. There are no incremental common transmission or generation capacity costs as a result of the provision of the proposed non-firm service.

- a) Does the reference in Citation 4 to BC Hydro, Manitoba Hydro, NB Power and Hydro-Quebec refer to Table 1 of the Christensen report (Application, p. 60 of pdf)? If not, please specify the source(s) of the statement.
- b) Please confirm that the incremental rate structures referred to in Citation 4 of in Table 1 apply only, or primarily, to incremental energy for existing firm customers. If any of them apply to new, “incremental energy only” customers, please provide additional details.
- c) Please elaborate on Hydro’s view “that the application of a demand charge is not consistent with an incremental cost approach to pricing for non-firm energy”. Is this view expressed by Christensen?
- d) Please confirm that, unlike a firm customer taking additional energy at an incremental rate, a non-firm customer under the proposed non-firm tariff would make no contribution to system fixed costs.
- e) What economic benefits, if any, would be provided to existing ratepayers by the provision of service to new customers under the proposed non-firm rate?

LAB-NLH-13.Re: Non-Firm Rate Application, page 38-38 (pdf)

Citation:

5.2 Potential Rate Structure

Based on the foregoing, Hydro believes the following rate design approach would be appropriate for non-firm service on the Labrador Interconnected System.

Table 6: Potential Labrador Interconnected System Non-Firm Rate Structure

Rate	Details
Demand Charge	Demand charge based on transmission costs ⁹ (non-ratcheted)
Energy Charge	Greater of market-based energy charge ¹⁰ or incremental energy supply cost ¹¹ (updated monthly) Plus: an administrative and variable operating and maintenance charge (10.0%)

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.

- a) Is Hydro open to the possibility of returning to the potential rate structure originally presented on pages 38-39 (pdf) of the Application? If not, why not?

LAB-NLH-14.Re: Non-Firm Rate Presentation, page 18

Citation 1 (Presentation, page 18):

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.

Citation 2 (LAB-NLH-001, Table 1):

**Table 1: Monthly Export Volumes (MWh)
2018–November 2022**

	New England (MWh)				New York (MWh)					
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
January	28,714	5,193	28,889	28,472	26,868	54,491	3,162	20,354	19,442	11,066
February	24,138	18,616	29,012	27,046	23,259	47,217	14,955	10,651	18,827	54,738
March	29,040	20,138	31,228	31,047	26,993	75,343	10,217	18,710	18,233	124,649
April	31,754	23,435	30,672	36,860	28,303	79,571	17,870	61,575	44,916	101,680
May	41,760	36,019	34,097	33,511	29,158	101,999	81,483	84,525	67,759	73,224
June	27,896	33,356	36,462	33,729	26,451	111,183	106,921	106,679	97,643	130,160
July	37,135	34,880	35,357	34,064	37,867	117,364	123,963	131,898	116,543	114,982
August	31,819	34,801	35,349	37,376	41,147	132,632	125,760	125,617	116,364	114,197
September	34,093	29,354	21,066	17,675	24,664	119,704	121,187	132,483	131,160	122,763
October	30,520	26,973	32,424	30,288	42,538	57,065	85,335	86,136	97,448	86,452
November	38,330	30,234	38,108	28,895	39,149	56,917	69,172	20,582	24,301	87,064
December	29,952	29,393	29,978	29,126		14,170	45,674	24,097	23,645	

- a) Please confirm that, for many months in the historical record provided in Citation 2, sales to New England account for considerably more than 25% of monthly export volumes.
- b) Please confirm that, for most winter months in the historical record provided in Citation 2, sales to New England are actually greater than sales to New York.
- c) Please confirm that actual non-firm prices will be derived from actual sales prices and from actual weightings between the different export markets for the month prior.

LAB-NLH-15.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. (underlining added)

- a) **Please explain why Hydro would choose to implement upgrades to its transmission system “to reliably meet projected customer non-firm load requirements”. Doesn't the very notion of a non-firm rate imply that there is no commitment to reliable service?**

LAB-NLH-16.Re: LAB-NLH-005 (b)

Q. 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?

R. Yes, if there is growth in the firm load in Labrador then there will be less non-firm energy available for non-firm customers. However, if additional firm transmission capacity is added to serve the growth in firm load, the amount of non-firm capacity available could be replenished.

- a) **In the scenario described in the response, is it correct to conclude that non-firm rate customers would benefit materially from transmission capacity additions to which they make no contribution? If so, please explain why this is a desirable outcome. If not, please explain why not.**

LAB-NLH-17.Re: LAB-NLH-006 (b)

Citation 1:

Q. 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.

R. Hydro has not conducted a review of societal benefits of selling surplus energy to cryptocurrency customers on a non-firm basis. Whether there are benefits to Labrador ratepayers of selling surplus energy to cryptocurrency customers on a non-firm basis would depend on the allocation approach approved for disposition of future Labrador Interconnected System non-firm revenues. Please refer to Hydro's response to PUB-NLH-004 of this proceeding with respect to Hydro's position on the approach to disposition of non-firm revenues on the Labrador Interconnected System.

Citation 2 (Presentation, p. 5):

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 describes the economic benefits, if any, for Labrador ratepayers of having surplus Recapture Energy consumed by cryptocurrency miners in Labrador under the proposed non-firm rate, as opposed to exporting the power.**
- b) **Please confirm that provision of non-firm service as proposed would not positively impact existing customers.**

LAB-NLH-18.Re: LAB-NLH-008

Citation:

Q. 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.

R. Hydro does not confirm this statement.

Hydro proposes the non-firm service be implemented via the following:

Any demand usage by Labrador mines in excess of their contracted interruptible load availability would be based on equal sharing of available excess capacity with other non firm rate customers after the non-firm rate customers have had the opportunity to fully use their allotments.

Load would be served in the following priority:

Firm Town Loads.

Firm Industrial Customer Loads up to the contracted Power on Order.

Interruptible Industrial Customer Loads up to contracted amounts.

Non-Firm Rate Customer Loads up to their allocations.

Equal sharing of any additional excess capacity between Industrial customers and non-firm rate customers.

- a) **Please confirm that 1) in the absence of non-firm customers, Labrador mines would have access to all available excess energy, above and beyond their contracted interruptible load, and 2) with non-firm customers, the excess energy available to**

them would be reduced by a) the allocations made to non-firm rate customers, and b) the sharing with those customers of any additional excess capacity.

- b) Please describe any benefits to firm industrial customers that would result from the presence of non-firm rate customers, that might offset this potential negative impact.**