

- 1 Q. Hydro is proposing to calculate the non-firm rate using export market prices based on actual
2 information that occurred two months prior to the effective date of the rate. For example, the
3 rate for October would be based on the data for exports that occurred in August.
- 4 a) Please explain the logistics required for Hydro to set the market non-firm rate on a more
5 frequent basis, such as weekly or daily.
- 6 b) What are the challenges, including the risks and cost, of setting the rate more frequently
7 and using more recent data?
- 8 c) Did Hydro conduct analysis to support the frequency of its proposed rate design? If so,
9 please provide.
- 10 d) Further to Hydro's response to IC-NLH-006, why does Hydro require more experience before
11 considering revisions to the timing of price variations for the non-firm rate and possibly
12 provide a more frequent and timelier rate?
- 13 e) Does the commissioning of the Labrador Island Link on April 14, 2023 provide Hydro with
14 more certainty on the appropriate source of market data and frequency used to calculate a
15 rate to use for the provision of non-firm service?
- 16 f) Based on the actual weighted average of exports experienced in each of the last twelve
17 months, please calculate the rate that would have been set for each month under the
18 proposed rate design and compare it to the actual weighted average export price that
19 occurred for each of the months. Provide the monthly potential revenue impacts.
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- 22 A. a) Newfoundland and Labrador Hydro ("Hydro") has proposed to use the market price that is
23 set on the 21st day of the month preceding the month for which the rate will apply in
24 computing the non-firm rate. For example, the non-firm price for October would be based
25 on the October price forecast published in September. In this example, only the volumes to
26 determine the weighting applied to each market would use data from August (i.e., two
27 months prior) as August would be the latest actual data available to determine Hydro's
28 amounts sold to each market.

1 A monthly price is being proposed for the market prices as this data is publicly available;
2 weekly or daily prices are not believed to be publically available (i.e., to obtain the
3 information may require a subscription). Hydro has proposed to use a monthly rate with the
4 concept that it could potentially be moved to a more frequent basis in the future, depending
5 on customers' requirements and Hydro's ability to utilize this data for billing. The use of an
6 average monthly forecast in setting the non-firm rate provides more price certainty and less
7 rate volatility for customers for operational planning compared to the use of week-ahead
8 forecast or a day-ahead forecast.

9 Hydro would have to research and confirm its ability to source and provide daily or weekly
10 forward market prices to be able to update the non-firm price more frequently. Hydro
11 would also require additional time to implement a non-firm price that would be required to
12 be updated more frequently. There would be an increased administrative cost to providing
13 non-firm service reflecting this enhancement.

14 **b)** Please refer to part a) of this response.

15 **c)** Yes. Schedule 1 to the application details the analysis Hydro conducted to support the
16 frequency of its proposed rate design.¹ As part of its analysis, Hydro reviewed the
17 forecasting process of other utilities. BC Hydro² and Manitoba Hydro³ update their surplus
18 price daily providing a forecast price for the next day. Manitoba Hydro updates its forecast
19 price for surplus energy on a weekly basis, whereas the Hydro-Québec price for the
20 Additional Energy Option is updated monthly to reflect seasonal forecast differences of
21 incremental costs.

22 As stated in Schedule 1, the determination of the frequency in which the non-firm price gets
23 updated requires a balancing of customer rate stability with the degree of certainty desired
24 with respect to the market value of exports.⁴ Customers want to have certainty on the price

¹ "Application for a Non-Firm Rate for Labrador," Newfoundland and Labrador Hydro, rev. March 29, 2023 (originally filed September 15, 2022), sch. 1.

² The British Columbia Hydro and Power Authority ("BC Hydro").

³ The Manitoba Hydro-Electric Board ("Manitoba Hydro").

⁴ "Application for a Non-Firm Rate for Labrador," Newfoundland and Labrador Hydro, rev. March 29, 2023 (originally filed September 15, 2022), sch. 1, sec. 2.3.3, p. 8/13-14.

1 of electricity well in advance whereas the market value of exports varies by day and by hour.
2 Hydro believes a reasonable balance between efficient pricing and rate stability would be
3 achieved by updating the non-firm rate on a monthly basis.⁵ Timing of non-firm price
4 updates may need to become more frequent once more experience is gained.

5 **d)** Hydro would like to analyze the actual utilization of the non-firm rate based on market
6 prices before committing to a more frequent update of the rate to determine if it would
7 result in additional benefits for customers. As noted in part b) of this response, increasing
8 the frequency would add volatility to the prices for customers and increase the cost of
9 administration. Hydro will also have to assess if additional billing system investment would
10 be required to invoice customers for sales during different time periods at multiple rates.

11 **e)** The commissioning of the Labrador-Island Link (“LIL”) does not change Hydro’s current
12 export market price projections and does not change the source of data for the proposed
13 rate. Hydro will assess how the proposed price setting frequency is working for non-firm
14 supply customers and will consider the needs of non-firm customers to determine if any
15 adjustments need to be made to the proposed price setting frequency.

16 The commissioning of LIL does increase the likelihood the net market export price will
17 reflect the incremental cost of supply for the Island rather than the use of fuel at the
18 Holyrood Thermal Generating Station as the incremental cost.

19 **f)** Table 1 includes a high-level calculation of the proposed non-firm rate and the actual
20 average price that Hydro received in the markets for the past 28 months. The peak and off-
21 peak prices are not separated as this data is not currently available for actual prices.

⁵ Ibid., pp. 8–9.

Table 1: Comparison of Non-Firm Prices to Hydro’s Average Actual Prices

	Proposed Non-Firm Rate (cents per kWh)	Actual Prices (All Markets) (cents per kWh)
Jan-21	\$0.041	\$0.043
Feb-21	\$0.031	\$0.067
Mar-21	\$0.028	\$0.026
Apr-21	\$0.019	\$0.018
May-21	\$0.017	\$0.019
Jun-21	\$0.025	\$0.032
Jul-21	\$0.036	\$0.036
Aug-21	\$0.044	\$0.049
Sep-21	\$0.036	\$0.039
Oct-21	\$0.037	\$0.054
Nov-21	\$0.054	\$0.050
Dec-21	\$0.067	\$0.059
Jan-22	\$0.130	\$0.127
Feb-22	\$0.094	\$0.084
Mar-22	\$0.050	\$0.048
Apr-22	\$0.043	\$0.042
May-22	\$0.056	\$0.045
Jun-22	\$0.077	\$0.064
Jul-22	\$0.097	\$0.082
Aug-22	\$0.104	\$0.104
Sep-22	\$0.095	\$0.073
Oct-22	\$0.063	\$0.054
Nov-22	\$0.064	\$0.042
Dec-22	\$0.156	\$0.088
Jan-23	\$0.158	\$0.049
Feb-23	\$0.104	\$0.050
Mar-23	\$0.041	\$0.029
Apr-23	\$0.026	\$0.031

1 Hydro notes the following regarding this data: Firstly, the non-firm rate is based on the forecast
 2 incremental cost basis for the month, while the actual prices are weighted throughout the
 3 month’s peak and off-peak times. Secondly, over the past 12 months, market prices have been
 4 volatile and the forward price for the month has varied significantly from how the actual prices
 5 have averaged over the course of the month at these hubs. Finally, in 2022, geopolitical risks

1 have had a significant impact to the volatility prices of fuel including oil and natural gas. Due to
 2 this volatility, Hydro has provided a longer historical view in order to provide a longer-term view
 3 of price comparisons. In general, electricity prices are highly influenced by weather and fuel
 4 prices. Average market prices through a given month can vary significantly from the forwards
 5 going into that month. Over the 2022–2023 winter, the weather was warmer than average,
 6 impacting the expected marginal supply of fuel for electricity generation in the markets which
 7 impacts the reliability of the price forecast over this period.

8 As a high-level concept, the potential revenue impact could be calculated during this time frame
 9 by using the demand from the non-firm customer multiplied by the variance between the
 10 forecast prices and the actual prices (i.e., the price had the rate been retroactively set based on
 11 actual market experience). The non-firm customer demand and hourly profile would also be a
 12 primary contributor to any variance in revenue. Table 2 is an example of the revenue impact to
 13 Hydro (to be credited to the Supply Cost Variance Deferral Account) based on a 50 MW of
 14 demand with a 50% load factor for the given time period.

**Table 2: Impact to Hydro’s Revenue
 (Based on 50 MW of Load Using a 50% Capacity Factor)**

	Impact to Hydro's Revenue (\$)
Jan-21	(22,711)
Feb-21	(592,952)
Mar-21	44,948
Apr-21	17,785
May-21	(41,766)
Jun-21	(128,052)
Jul-21	390
Aug-21	(89,806)
Sep-21	(50,781)
Oct-21	(326,005)
Nov-21	78,787
Dec-21	144,379
Jan-22	60,764
Feb-22	156,931
Mar-22	41,142
Apr-22	6,598

Impact to Hydro's Revenue (\$)	
May-22	209,991
Jun-22	239,008
Jul-22	264,456
Aug-22	12,165
Sep-22	399,637
Oct-22	161,403
Nov-22	395,623
Dec-22	1,273,218
Jan-23	2,031,165
Feb-23	906,576
Mar-23	219,073
Apr-23	(95,976)

- 1 In Table 2, positive numbers reflect additional revenue and negative numbers reflect the
- 2 decrease in revenue based on setting the price utilizing the proposed methodology, using a
- 3 forecast monthly price.