

- 1 Q. **a)** Further to the response to PUB-NLH-012, would the criteria for additional generation be
2 met if an alternative non-electric heating system or a heat-pump with a non-electric back-up
3 system (e.g., high efficiency oil furnace) was installed?
- 4 **b)** Please provide an estimate of the customer load requirements and the isolated system
5 forecast peak load if (i) an alternative non-electric heating system or (ii) a dual heating
6 system not requiring electric heating backup was installed.
- 7 **c)** Please provide an estimate of the cost to install an alternative non-electric heating system
8 or a dual heating system, for example a high efficiency oil furnace as a backup heating
9 supply to the heat pump system
- 10 **d)** Are rebates or Conservation Demand Management initiatives available to customers on
11 isolated systems to incent the installation of heating systems other than electric heating
12 systems? If not, why not?
- 13
- 14
- 15 A. **a)** Table 1 contains an analysis that compares a load forecast scenario (which assumes the
16 customer has a non-electric heating system) against Newfoundland and Labrador Hydro's
17 ("Hydro") Firm Capacity planning criteria. As shown in Table 1, under this scenario, the gross
18 peak is forecast to exceed the firm capacity by 2034, as opposed to 2030 in the baseline
19 forecast presented in the application.

Table 1: Rigolet Peak Demand and Fuel Forecast – Spring 2023

Year	Firm Capacity Requirement		
	Gross Peak (kW)	Firm Capacity (kW)	Rated Capacity (%)
2023	696	775	89.8
2024	722	775	93.2
2025	746	775	96.3
2026	748	775	96.5
2027	751	775	96.9
2028	753	775	97.2
2029	757	775	97.7
2030	761	775	98.2
2031	765	775	98.7
2032	768	775	99.1
2033	772	775	99.6
2034	776	775	100.1

1 **b)** Please refer to Hydro's response to part a).

2 **c)** Hydro does not have the information required to respond to this request for information. As
3 noted in Hydro's response to part b) of PUB-NLH-012 of this proceeding, Hydro understands
4 that the Nunatsiavut Government is looking to move away from fossil fuel-based heating
5 sources; therefore, alternative heating sources are more likely to be biomass-based rather
6 than oil furnaces. Hydro discussed the potential for alternative heating sources at the
7 Department of Health and Social Development facility; however, the building plan was
8 sufficiently advanced to the point that significant design changes were impractical. Please
9 refer to Hydro's response to part b) of PUB-NLH-012 of this proceeding for further
10 discussion. As such, no estimate was developed to determine the cost of alternate heating
11 systems.

12 Hydro has a legislative obligation to provide customers with equitable access to an adequate
13 supply of power, provided that the customer's requests are compliant with legislation and
14 established approved rules and regulations. Although Hydro may use incentives to attempt
15 to influence customer behaviour to the benefit of the electrical system, whether isolated or
16 interconnected, the decisions an individual customer makes regarding how they utilize the
17 power they receive, including the heating infrastructure they will use, are not within Hydro's

1 purview. Please refer to Hydro’s response to part d) for further information regarding
2 incentive programs.

3 **d)** Hydro is in the process of refining existing and developing new Conservation and Demand
4 Management (“CDM”) programming to promote non-electric heating alternatives in its
5 isolated systems, consistent with our Strategic Plan.¹ This work began in 2023 with Hydro’s
6 first ‘Innovation Day,’ a two-day collaborative event to support future planning for the
7 Isolated Communities Energy Efficiency Program. This event brought together many
8 interested parties including those from Indigenous governments, the provincial government,
9 private sector representatives, and program delivery specialists.

10 Several key themes emerged from the Innovation Day event, including programming to
11 increase wood space heating, a ‘One Window Approach’ where all homes in a given
12 community are eligible to participate in programming,² and increased levels of community
13 ownership associated with new program offerings. Hydro is aware from its discussions with
14 Indigenous groups and governments that oil-based space heating is not a preferred solution
15 and has declining social acceptability. With this information, Hydro has begun to refine and
16 develop programming for both residential and general service customers in its Isolated
17 Communities.

18 **General Service Programming**

19 Hydro’s current CDM programming would provide incentives for alternative (non-electric)
20 space heating systems for general service customers in Isolated Systems, provided the
21 project passed utility cost-effectiveness tests.³ In recent years, customers have not taken
22 advantage of this offering; in fact, many customers are looking to move away from oil-based
23 space heating due to maintenance and operating cost issues and replacing these systems
24 with air source heat pumps with electric backup.

¹ Goal 9: Advance Electrification and Demand Management, Objective 4 seeks to promote the use of alternate sources of heat for customers in isolated diesel communities.

² In order to deliver programming which passes utility cost-effectiveness testing, non-electrically heated homes can be excluded from certain programs. This creates an incentive for more customers to switch to electric space heating in order to avail of utility energy efficiency programming.

³ Order No. P.U. 18(2016) approved the use of the Total Resource Cost Test and the Program Administrator Cost Test.

1 In response to this, Hydro is taking a more direct approach to promoting non-electric space
2 heating alternatives for general service customers. Hydro is currently working with a
3 General Service customer who wants to transition an existing facility from oil to electric-
4 based space heating. Hydro provided an incentive for this customer to complete an energy
5 model to understand the energy impact of several space heating alternatives (including
6 biomass and high-efficiency heat pumps). The results of this work are ongoing and will help
7 inform the type of future programming and level of incentives Hydro should provide to
8 further promote the use of non-electric space heating alternatives for general service
9 customers in isolated communities.

10 **Residential Programming**

11 Hydro does not currently offer CDM programming for Residential customers in isolated
12 communities to install non-electric space heating systems. Consistent with the findings of
13 the Innovation Day event, Hydro is currently in the process of developing a pilot program to
14 promote biomass heat (either high efficiency wood stoves or pellet stoves) to these
15 customers.

16 Hydro's intent is to offer this program to all customers, regardless of their existing heat
17 source.⁴ There is a consistent trend of customers moving from oil to electric in isolated
18 communities; making the program available to oil-based heating customers will provide
19 long-term benefits to the electrical system, and prevent a scenario where customers are
20 incentivized to install electric space heating to avail of the program.

21 Hydro continues to work closely with both the Nunatsiavut Government and the
22 NunatuKavut Community Council regarding this potential program and will look to engage
23 the local communities wherever possible.

⁴ Hydro is currently seeking external funding sources in order to subsidize the costs associated with oil-heated customers participating in this program.