

1 Q. **Reference: PUB-NLH-016**

2 The question relates to Hydro's proposed metering project.

3 a) Please confirm, or deny with reasons, that Hydro believes that its partner on the
4 electrification effort, Newfoundland Power, should take the lead on advanced metering
5 infrastructure (AMI) and EV charger load management because Newfoundland Power
6 serves the vast majority of electricity consumers in the Province (86% of the forecast
7 Island Interconnected System peak demand in the winter of 2021/22).

8 b) Please confirm, or deny with reasons, that if it is determined in the Reliability and
9 Supply Adequacy study that capacity additions are necessary on the Island
10 Interconnected System, the next additions are likely to be commissioned prior to 2030
11 and the proposed electrification program will be a contributor to this need.

12 c) Please provide an economic analysis of the proposed electrification program including:
13 1) the cost of capacity to supply electrification prior to 2034, 2) the cost of the EV
14 charger demand management pilot programs, 3) the cost of an AMI program for both
15 Hydro and Newfoundland Power customers, and 4) the cost of all of the above. Please
16 include the cost of utility-owned EV charger infrastructure.

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19 A. a) Newfoundland and Labrador Hydro ("Hydro") believes that it would be appropriate for
20 Newfoundland Power Inc. ("Newfoundland Power") to take the lead on implementation of
21 advanced metering infrastructure ("AMI") in advance of Hydro transitioning to AMI.
22 Newfoundland Power serves the vast majority of the customers and the vast majority of the
23 load in the province. Newfoundland Power has recently implemented drive-by automated
24 meter reading ("AMR") for use in serving its customers. This AMR technology provides a
25 large portion of the customer service savings that could be achieved through the
26 implementation of AMI. In its Conservation Potential Study, Dunsky Energy Consulting

1 estimated that full scale AMI deployment would cost between \$85 million and \$105 million.¹
2 Dunsy Energy Consulting concluded that the benefits of dynamic pricing alone could not
3 justify the additional costs incurred for the full deployment of AMI to implement dynamic
4 rate designs at this time.

5 Hydro is required to establish its rates for its rural customers on the Island Interconnected
6 System to equal those of Newfoundland Power. The lifeline block pricing for Domestic
7 customers on Hydro's isolated diesel systems is also set to equal the Domestic rate for
8 Newfoundland Power customers. Therefore, Hydro is limited in its ability to adjust its rates
9 to include dynamic rate designs for its customers without Newfoundland Power
10 implementing such rate designs. As explained in part d) of Hydro's response to PUB-NLH-016
11 of this proceeding, given the magnitude of the Newfoundland Power load requirements
12 relative to the load requirements of Hydro Rural interconnected and the uncertainty on the
13 timing and magnitude of benefits of implementing dynamic rates for Hydro Rural customers,
14 Hydro is not recommending proceeding with investing in the higher cost AMI system (i.e., \$7
15 million higher) for its Hydro Rural customers well in advance of being certain that that the
16 benefits will exceed the cost of the additional investment.

17 Hydro and Newfoundland Power plan to partner in the load management of Electric Vehicle
18 ("EV") charging infrastructure, as Hydro is responsible for ensuring resource adequacy in
19 Newfoundland and Labrador and Newfoundland Power will have to work directly with the
20 vast majority of the customers on the Island Interconnected System to manage EV charging
21 demand requirements. Hydro will also need to work directly with its customers in managing
22 EV charging load for its rural customers. Hydro notes that an AMI system is not required to
23 manage peak load for EV smart chargers.

24 b) Should it be determined through the ongoing *Reliability and Resource Adequacy Study*
25 *Review* proceeding that resource expansion is required to satisfy immediate system
26 reliability requirements for the provincial electricity system, Hydro anticipates such
27 additional capacity requirements would likely be commissioned prior to 2030. It is not

¹ "Application for Approvals Required to Execute Programming Identified in the Electrification, Conservation and Demand Management Plan 2021–2025," Newfoundland and Labrador Hydro, rev. July 8, 2021 (originally filed June 16, 2021), Source: Newfoundland and Labrador Conservation Potential Study (2020-2034), sch. 3, sch. C, at page 264 of 325.

1 confirmed that Hydro’s electrification initiatives will materially contribute to capacity
2 resource additions. Hydro’s electrification initiatives are focused on maximizing electricity
3 sales while minimizing impact on additional capacity requirements. Please refer to part c) of
4 Hydro’s response to CA-NLH-075 of this proceeding.

5 c) Hydro notes that the proposed EV Demand Response Program does not require the
6 implementation of an AMI program. As noted in Hydro’s joint Electrification, Conservation
7 and Demand Management Plan 2021–2025:

8 The EV Demand Response Pilot Program will consider various technologies
9 that help reduce charging at times of system peak such as smart chargers
10 and direct load controllers. Vehicle analytics will be used to understand
11 charging behaviour and the impact of EV charging demand on the electrical
12 system. Incentives may be a combination of equipment purchase and a
13 monthly participation credit, based on allowing the utility to manage EV
14 charging. The pilot program will provide EV charging information showing
15 the load profile of charging operations.²

16 Hydro notes that the information requested on electrification is available in its “Approvals
17 Required to Execute Programming Identified in the Electrification Conservation and Demand
18 Management Plan 2021–2025” application; references to the requested information are as
19 follows:³

- 20 ● The cost of capacity to supply electrification prior to 2034 (Schedule 1, Appendix A,
21 Column D);⁴
- 22 ● The cost of the EV charger demand management pilot programs (Schedule 3,
23 Schedule K, Page 2 of 3);⁵ and

² “Application for Approvals Required to Execute Programming Identified in the Electrification, Conservation and Demand Management Plan 2021–2025,” Newfoundland and Labrador Hydro, rev. July 8, 2021 (originally filed June 16, 2021), sch. 3, app. K, at p. 2 of 3.

³ Excluding Newfoundland Power Inc.’s Net Present Value Analysis.

⁴ “Application for Approvals Required to Execute Programming Identified in the Electrification, Conservation and Demand Management Plan 2021–2025,” Newfoundland and Labrador Hydro, rev. July 8, 2021 (originally filed June 16, 2021), sch. 1, app. A, at p. 1 of 1, col. D.

⁵ “Application for Approvals Required to Execute Programming Identified in the Electrification, Conservation and Demand Management Plan 2021–2025,” Newfoundland and Labrador Hydro, rev. July 8, 2021 (originally filed June 16, 2021), sch. 3, app. K, at p. 2 of 3.

- 1 • The cost of an AMI program for both Hydro and Newfoundland Power customers
2 (Schedule 3, Schedule C, Page 264 of 325).⁶

⁶ “Application for Approvals Required to Execute Programming Identified in the Electrification, Conservation and Demand Management Plan 2021–2025,” Newfoundland and Labrador Hydro, rev. July 8, 2021 (originally filed June 16, 2021), sch. 3, sch. C, at p. 264 of 325.