

1 **Q. (Reference slide 8)**

- 2 **a) Please explain the statement that unmanaged EV charging results in a negative**
 3 **NPV of \$22 million.**
- 4 **b) If the Board were not to approve the proposed electrification program, would**
 5 **there be no options available to Newfoundland Power to manage EV charging and**
 6 **avoid additional capacity costs owing to EV charger demand?**
- 7 **c) Does management of electricity demand fall under Newfoundland Power's**
 8 **responsibility with or without approval of the electrification program?**

9

10 **A.** *This Request for Information relates to the Electrification, Conservation and Demand*
 11 *Management Plan: 2021-2025 (the "2021 Plan") developed in partnership by*
 12 *Newfoundland Power Inc. ("Newfoundland Power") and Newfoundland and Labrador*
 13 *Hydro ("Hydro") (collectively, the "Utilities") and the related Technical Conference*
 14 *presented by the Utilities on February 1, 2022. Accordingly, the response reflects*
 15 *collaboration between the Utilities.*

- 16
- 17 a) Under baseline conditions (i.e. without utility intervention), the market potential
 18 study completed by Dunsky Energy Consulting (the "Study") projects approximately
 19 41,000 EVs in the province by 2034.¹ The Study shows that system costs will
 20 increase without utility intervention, largely due to an increase in capacity-related
 21 system costs resulting from the unmanaged charging of EVs. This increase in system
 22 costs, net of additional revenues from electrification, is estimated to result in a
 23 negative NPV of approximately \$22 million in 2034.²
- 24
- 25 b) The 2021 Plan lays the foundation for effective load management consistent with the
 26 recommendations of the Study. This includes incentivizing the purchase of EV
 27 chargers capable of load management, piloting options for load management and
 28 assessing options to manage the load of commercial vehicles.

29

30 If the electrification initiatives in the 2021 Plan did not proceed, the Utilities' would
 31 be limited in their ability to implement effective load management initiatives prior to
 32 EV adoption driving significant increases in system load.³ For example, a customer
 33 would have no financial incentive to purchase and install a costlier network capable
 34 EV charger required to participate in effective load management initiatives. This
 35 scenario would limit customer participation in future EV load management programs
 36 and may result in higher capacity-related system costs for customers.

¹ The baseline scenario forecasted EV adoption assuming no incentives and no installed charging infrastructure beyond current levels. See Newfoundland Power's Application, Volume 2, Schedule C, page 97 of 325. Current levels in the Study included the 14 Level 3 fast chargers installed by Hydro across the province.

² The negative NPV of approximately \$22 million in 2034 reflects incremental revenues from electrification of approximately \$41 million, net of incremental energy supply costs of approximately \$17 million and incremental capacity costs of approximately \$46 million (\$41 million - \$17 million - \$46 million = -\$22 million).

³ The Utilities have proposed the approval of the modified Total Resource Cost test to evaluate the cost-effectiveness of electrification programs. The approval of an economic test, rather than specific programs, allows the Utilities to adapt to changing market conditions while ensuring programs remain cost-effective for customers. This is consistent with the Utilities' longstanding approach to delivering CDM programs. For more information, see response to Request for Information TC-CA-NP-002.

1 See response to Request for Information PUB-NP-037 for further information on the
2 load management initiatives included in the 2021 Plan.

3
4 c) Yes, the provincial power policy requires, in effect, that customers be provided with
5 reliable service at the lowest possible cost.⁴ This includes management of system
6 load and associated costs. This requirement would continue to apply if the Board did
7 not approve the electrification initiatives outlined in the 2021 Plan.

8
9 The electrification initiatives in the 2021 Plan will help maximize domestic load
10 while providing for the assessment and implementation of effective EV load
11 management programs. In the Utilities' view, the 2021 Plan provides the best
12 outcomes for customers through lower electricity rates over the long term and is
13 therefore consistent with the Utilities' requirement to provide reliable service at the
14 lowest possible cost.⁵ The electrification initiatives in the 2021 Plan are also
15 consistent with the Board's findings as part of the Reference on Rate Mitigation
16 Options and Impacts.⁶

⁴ See Section 3(b)(iii) of the *Electrical Power Control Act, 1994*.

⁵ See the response to Request for Information PUB-NP-067 for further information.

⁶ See the response to Request for Information TC-CA-NP-001 for further information.