

1 **Q. When estimating the impacts and benefits of the electrification program, are impacts**
2 **such as the 0.5 cents/kWh rate mitigation effect based on the electrification**
3 **applications that are now before the Board, or do they include any additional**
4 **electrification initiatives will be the subject of future applications?**

5 **(a) What is assumed with respect to the baseline scenario; i.e., does it reflect the**
6 **scenario where the Board does not approve the proposed electrification program?**

7 **(b) Further, in the baseline scenario is Newfoundland Power assuming to continue to**
8 **provide household service entrance upgrades needed to support EV charging,**
9 **generation, transmission and distribution system upgrades needed to support and**
10 **EV charging, load management/rate design to manage EV charging impacts on**
11 **capital and O&M costs while ensuring rates are fair and cost reflective, and**
12 **customer education relating to use of electricity including EV charger use?**

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

20
21 The customer rate mitigating benefit of 0.5¢/kWh in 2034 is based on the additional net
22 revenues associated with electrification initiatives included in the 2021 Plan.¹

23
24 Following 2025, program costs included in NPV analysis are related to costs associated
25 with future load management programs.² It is expected that future load management
26 programs associated with EV charging would be assessed using the Program
27 Administrator Cost test approved by the Board for CDM programs. This is consistent
28 with Dunskey Energy Consulting’s (“Dunskey”) approach to assessing the cost-
29 effectiveness of demand response programs in their market potential study.³ Ultimately,
30 the assessment used will depend on the EV load management initiative that is
31 implemented.

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33 See the response to Request for Information TC-CA-NP-024 for further information.

34
35 (a) Dunskey’s market potential study projects approximately 41,000 EVs in the province
36 by 2034 under its baseline scenario. The baseline scenario forecasts EV adoption
37 assuming no electrification incentives and no additional charging infrastructure
38 beyond current levels.⁴ See part (a) to the response to Request for Information
39 TC-CA-NP-016 for further information.

¹ The customer benefits of electrification programs are assessed through the modified Total Resource Cost (“mTRC”) test and a net present value (“NPV”) analysis. The mTRC test ensures programs are sufficiently economic to enable customer participation. The NPV analysis assesses the rate mitigating benefit to be provided to all ratepayers. See response to Request for Information TC-CA-NP-002 for more information.

² See Newfoundland Power’s Application, Volume 1, Exhibit 2, Appendix A for a copy of the NPV analysis.

³ See Newfoundland Power’s Application, Volume 2, Schedule E, page 10 of 25.

⁴ See Newfoundland Power’s Application, Volume 2, Schedule C, page 131 of 325. Current levels in the market potential study included the 14 Level 3 fast chargers installed by Hydro across the province.

1 (b) Incremental generation, transmission and distribution system costs related to EV
2 charging, including the impact on local distribution assets, are included in the
3 baseline scenario.
4

5 Dunsky assessed the impacts of both unmanaged and managed charging of EV load
6 under the baseline scenario.⁵ The unmanaged charging baseline scenario reflects no
7 utility intervention.⁶
8

9 Customer education to help inform customer decisions regarding electrification will
10 occur under baseline conditions. These costs are included in Newfoundland Power's
11 2022 and 2023 revenue requirements approved by the Board in Order No.
12 P.U. 3 (2022) associated with the Company's *2022/2023 General Rate Application*.

⁵ See Newfoundland Power's Application, Volume 1, 2021 Plan, pages 11 and 12.

⁶ For example, the baseline scenario shown in Figure 6 on page 27 in the 2021 Plan reflects the unmanaged EV load scenario (i.e. without utility intervention).