

Reference: Schedule B, Page 19: Electric Vehicle Charging Network (\$594,000)

Q. In Order No. P.U. 30 (2021) – Reasons for Decision, on page 13, lines 31-34, the Board stated “Future EV charging station capital expenditure requests should be supported with updated information, including information relating to the actual and forecast EV uptake in the province and forecast load as well the planned approach to load management.

Please provide the supporting updated information requested by the Board for the EV charging station capital expenditures.

A. A. General

Newfoundland Power filed its *2021 Electrification, Conservation and Demand Management Application* (the “2021 ECDM Application”) with the Board on December 16, 2020. The 2021 ECDM Application proposed, among other items, that the Board approve supplemental capital expenditures for 2021 totaling \$1,538,000 to commence construction of an *EV Charging Network*. The Board issued Order No. P.U. 30 (2021) approving the proposed expenditures on September 29, 2021. Other proposals contained in the 2021 ECDM Application remain under review by the Board.

There has been no material change in EV uptake in the province, forecast load or the Company’s planned approach to load management since the Board approved the 2021 capital expenditures for the *EV Charging Network*. The construction of Newfoundland Power’s charging stations concluded in August 2022. While there has been uptake in the usage of these charging stations since their installation, achieving market transformation takes time and it is too early to attribute a meaningful impact on EV adoption to this investment. EV adoption in Newfoundland and Labrador continues to be low and lag behind other Canadian provinces. Additionally, there has been no change to the Company’s EV load forecast or planned approach to load management.

The information requested by the Board, as well as other relevant information, is provided below.

B. Requested Update***Rate Mitigating Benefit***

The electrification initiatives included in the 2021 ECDM Application seek to accelerate the province’s adoption of EVs in order to provide a rate mitigating benefit for customers over the longer term.

At the time of filing the 2021 ECDM Application, the rate mitigating benefit of planned electrification initiatives was estimated at approximately 0.5 ¢/kWh by 2034. The rate mitigating benefit has since increased to approximately 0.9 ¢/kWh by 2034 due to

1 changes in marginal costs and an updated rate mitigation target from the Provincial
2 Government.¹

3
4 Achieving this rate mitigating benefit for customers will require strategically addressing
5 barriers to customers' adoption of EVs. Newfoundland and Labrador residents have
6 consistently indicated the primary barriers to EV adoption are the upfront cost of
7 purchasing an EV and access to public charging. For example, in a 2021 survey
8 conducted by MQO Research, customers identified access to publicly available charging
9 as the top barrier to EV adoption.²

10
11 Access to publicly available EV charging infrastructure in Newfoundland and Labrador
12 lags behind other provinces. At the time of filing the 2021 ECDM Application,
13 Newfoundland and Labrador ranked last among Canadian provinces with respect to
14 access to publicly available charging services.³ There has been no private sector
15 investment in publicly available fast charging infrastructure since the filing of the 2021
16 ECDM Application. The Provincial Government announced a \$1 million EV charging
17 infrastructure investment on April 22, 2022. While details of the Provincial
18 Government's planned investment are not yet available, it is intended to complement
19 the EV Charging Network.⁴

20 21 **Current and Forecast EV Adoption**

22
23 There are over 300,000 total passenger vehicles in Newfoundland and Labrador. EVs
24 continue to account for only a small fraction of total vehicles. Based on data provided
25 by the Provincial Government, there were approximately 195 EVs in the province at the
26 time of filing the 2021 ECDM Application in 2020. The number of EVs in the province
27 remains low, increasing to 284 in 2021 and 439 as of June 2022.

28
29 The limited adoption of EVs in Newfoundland and Labrador can be observed in a
30 comparison of annual EV sales by province.

¹ See the response to Request for Information TC-PUB-NP-005 (1st Revision), Attachment B, page 1, Table 1, filed as part of the 2021 ECDM Application.

² See the response to Request for Information TC-CA-NP-036 filed as part of the 2021 ECDM Application.

³ See the 2021 ECDM Application, Volume 1, Exhibit 2, page 4, footnote 19.

⁴ See correspondence from the utilities to the Board regarding *Response to Request for Market Conditions Update*, dated June 17, 2022, page 5.

1 Table 1 provides EV adoption rates across Canada over the last three years.

Table 1 Share of Canadian ZEV New Vehicle Registrations ⁵			
Province	Q1 2022	Q1 2021	Q1 2020
British Columbia	17.1%	13.6%	10.1%
Quebec	13.6%	8.6%	8.3%
Ontario	5.7%	2.5%	1.6%
Prince Edward Island	3.8%	1.2%	0.7%
Alberta	3.1%	1.2%	0.7%
Manitoba	2.4%	0.9%	0.7%
New Brunswick	2.3%	0.9%	0.6%
Nova Scotia	2.1%	1.3%	0.5%
Saskatchewan	1.5%	1.0%	0.6%
Newfoundland and Labrador	1.4%	0.2%	0.2%

2 Annual EV sales continue to be lower in Newfoundland and Labrador than in any other
3 Canadian province. EVs accounted for only 1.4% of annual vehicle sales in the province
4 in the first quarter of 2022, as compared to 17.1% in British Columbia and 13.6% in
5 Quebec.

6
7 The market potential study completed by Dunskey Energy Consulting (the “Dunskey
8 Study”) included with the 2021 ECDM Application determined that, without market
9 intervention, there are forecast to be approximately 41,000 EVs in Newfoundland and
10 Labrador by 2034. Implementation of the proposals included in the 2021 ECDM
11 Application could increase this number to approximately 140,000 EVs over the same
12 time horizon.⁶

13
14 A delay in implementing the proposals in the 2021 ECDM Application could result in a
15 delay in achieving this result. An updated forecast of EV adoption will be developed as
16 part of the next market potential study, which is currently planned for 2024.

17 **EV Load and Load Management**

18
19 The customer benefits of accelerating EV adoption are long term in nature. Since filing
20 the 2021 ECDM Application, there has been no change in forecast increases in EV load
21 that would be expected from accelerating the province’s adoption of EVs. With
22 implementation of the proposals in the 2021 ECDM Application, EVs are forecast to add
23 approximately 0.5 GWh and 2.4 GWh of load in the first two years of implementation,
24

⁵ See correspondence from the utilities to the Board regarding *Response to Request for Market Conditions Update*, dated June 17, 2022, page 7, Table 1.

⁶ See the 2021 ECDM Application, Volume 1, Exhibit 2, page 4.

1 and 657 GWh of energy usage over the longer term.⁷ An updated forecast of EV load
2 will be developed as part of the next market potential study planned for 2024.

3
4 Newfoundland Power's approach to managing EV load remains consistent with that
5 described in the 2021 ECDM Application. The application outlines three initiatives to lay
6 the foundation for effective load management over the longer term:
7

8 (i) *Incentivizing EV chargers capable of load management.*

9 The 2021 ECDM Application includes incentive programs for "smart" EV chargers
10 for residential and commercial customers. These programs are designed to
11 cover the incremental cost of installing chargers with load management
12 capabilities. As such, only chargers that are capable of load management would
13 qualify for the incentives.⁸
14

15 (ii) *Piloting options for load management.*

16 The *EV Demand Response Pilot Program* is designed to study the most effective
17 options to manage the peak demand impacts of EVs. The pilot program will
18 examine options such as monthly participation credits for customers who shift
19 their charging to off-peak times.⁹
20

21 (iii) *Assessing options to manage the load of commercial vehicles.*

22 A significant portion of forecast electricity demand associated with EVs is
23 expected to come from commercial vehicles. The Custom Fleet Pilot Program will
24 pilot initiatives to encourage off-peak charging for commercial vehicles.¹⁰
25

26 The implementation of these load management initiatives is pending the Board's review
27 of the 2021 ECDM Application.
28

29 **C. Conclusion**

30
31 Local market conditions continue to support Newfoundland Power's proposed
32 investments in the *EV Charging Network* in 2023. The rate mitigating benefit of
33 accelerating the province's adoption of EVs has increased since the Board issued Order
34 No. P.U. 30 (2021). At the same time, without utility intervention, EV adoption
35 continues to lag behind in comparison to other provinces and there has been no
36 additional private sector investment in EV charging services.
37

38 The expenditures proposed for 2023 for the *EV Charging Network* are necessary to meet
39 Newfoundland Power's objective of establishing the minimum charging infrastructure
40 necessary to support EV adoption in the province. For more information, see the
41 response to Request for Information PUB-NP-010.

⁷ See correspondence from Newfoundland Power to the Board regarding 2021 ECDM Application, dated July 29, 2022, page 20.

⁸ See the response to Request for Information PUB-NP-037, filed as part of the 2021 ECDM Application.

⁹ See the 2021 ECDM Application, Volume 2, Schedule K, pages 1 to 2.

¹⁰ See the 2021 ECDM Application, Volume 2, Schedule K, page 1.