

**NEWFOUNDLAND AND LABRADOR
BOARD OF COMMISSIONERS OF PUBLIC UTILITIES**

AN ORDER OF THE BOARD

NO P.U. 23(2023)

1 **IN THE MATTER OF** the **Electrical Power**
2 **Control Act, 1994**, SNL 1994, Chapter E-5.1
3 (the “**EPCA**”) and the **Public Utilities Act**,
4 RSNL 1990, Chapter P-47 (the “**Act**”), as
5 amended, and regulations thereunder; and
6

7 **IN THE MATTER OF** an application by
8 Newfoundland Power Inc. for approval
9 to recover the costs of a pilot project to
10 assess load management strategies for
11 electric vehicles through its Electrification
12 Cost Deferral Account pursuant to section
13 80 of the **Act**.

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16 **DECISION SUMMARY**

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18 The Board will approve the application filed by Newfoundland Power Inc. (“Newfoundland
19 Power”) for approval to recover costs through its Electrification Cost Deferral Account to
20 complete a pilot project (“Pilot Project”) to assess load management strategies for electric
21 vehicles (“EVs”).

22

23 **APPLICATION**

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25 On June 2, 2023, Newfoundland Power filed an application proposing to recover costs through
26 its Electrification Cost Deferral Account to complete an EV Load Management Pilot Project (the
27 “Application”). The Application provides a total budget estimate for the EV Load Management
28 Pilot Project of \$1,504,000.

29

30 The proposed Pilot Project would collect information on local EV owners’ charging behaviours,
31 the effectiveness of various strategies for shifting load to off-peak periods, and the costs and
32 challenges of implementing these strategies.

33

34 The Consumer Advocate, Dennis Browne, K.C. (the “Consumer Advocate”), Newfoundland and
35 Labrador Hydro (“Hydro”), and Drive Electric NL (“Drive Electric”) participated in the Application.

1 On June 29, 2023, Newfoundland Power responded to 27 Requests for Information filed by the
2 Board and the Consumer Advocate.

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4 On July 5, 2023, Hydro filed comments in support of the Application. Hydro forecasts material
5 growth in EV ownership in the province over the next ten years and submitted that it is prudent
6 to understand how this technological change will impact the electrical system. On July 5, 2023
7 Drive Electric filed an intervenor submission providing information about the demographics and
8 interests of EV owners and individuals considering purchase of an EV.

9

10 On July 13, 2023, the Consumer Advocate submitted that ratepayers should not pay any of the
11 costs associated with those who choose to purchase EVs and that the Board should reject the
12 Application.

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14 On July 19, 2023, Newfoundland Power filed its reply requesting that the Board approve the
15 Application.

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17 **BOARD DECISION**

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19 The Application seeks approval to recover expenditures associated with an EV load management
20 pilot project through the approved Electrification Cost Deferral Account, pursuant to section 80
21 of the **Act**. The proposed Pilot Project would provide information on EV charging behaviours, the
22 potential to shift EV load based on passive and active load management strategies and the costs
23 and challenges of implementing load management strategies in this province. Newfoundland
24 Power states that it needs the information before the expected widespread adoption of EVs in
25 the province so that it may develop cost-effective customer programs to manage EV load in a
26 manner that is consistent with sound public utility practice.

27

28 In considering this Application the Board must, pursuant to sections 3 and 4 of the **EPCA**,
29 implement the power policy of the province which requires all sources and facilities be managed
30 and operated to result in the most efficient production, transmission and distribution of power
31 in a manner that delivers power to consumers at the lowest possible cost, in an environmentally
32 responsible manner, consistent with reliable service.

33

34 Utility involvement in electrification initiatives in this province has been an issue in a number of
35 recent applications before the Board. In Order No. P.U. 33(2022) the Board stated that
36 appropriate electrification initiatives combined with measures to reduce peak load are likely to
37 lead to positive outcomes for customers in the long term. While EV adoption continues to lag in
38 this province compared to other regions, the evidence is clear that it is projected to increase in
39 the coming years.¹ Without demand management, light-duty EV usage is expected to contribute
40 170 MW to 340 MW of peak demand by 2040 which would result in a need to create additional
41 capacity on the electrical system, leading to higher overall costs for electricity customers.²
42 Programs to manage EV load would impact peak demand substantially over time with the

¹ The independent study conducted by Dunsy Energy filed on October 3, 2022 as part of Hydro's Reliability and Resource Adequacy Study.

² Schedule A, Application, page 8.

1 estimated potential for peak demand savings of approximately 70 MW to 140 MW by 2040.³ The
2 Board is satisfied that it is appropriate for the utilities to undertake initiatives to gather
3 information to better understand the opportunities and challenges associated with EV load
4 management in this province.

5
6 The Board notes that the Pilot Project was developed in consultation with Hydro. In Hydro's view
7 the Pilot Program is the most cost-effective approach to understanding how EV load can best be
8 managed in the province. Hydro expects there to be in excess of 65,000 EVs in the province by
9 2033 and, without intervention by the utilities, this is forecast to contribute over 100 MW to the
10 system peak. The information provided by Drive Electric also confirms the potential value of
11 obtaining information from EV owners and purchasers. Drive Electric explained that consumers
12 now have more options to fit a larger range of needs, enabling options for EV adoption that didn't
13 exist just a year ago.⁴ According to Drive Electric there are now 82 EV models listed as available
14 in Canada from 18 manufacturers. Drive Electric explained that its resource centre sells Level 2
15 chargers and, in the last 12 months, 116 smart chargers were sold with the ability to connect to
16 the internet and allow the owners to monitor and control usage and generate reports. According
17 to Drive Electric's survey of its members, they usually charge at night and a financial incentive to
18 offset charging costs would influence their charging habits.

19
20 The Consumer Advocate did not support the Pilot Project on the basis that Newfoundland Power
21 failed to provide convincing evidence that it would be beneficial to all ratepayers. The Consumer
22 Advocate submitted that the Application should not be approved for three reasons:

- 23 • Other studies would address near-term capacity and peak-demand issues.
- 24 • There will be relatively few EVs in the province over the period 2026 to 2030.
- 25 • The Pilot Project design is not representative of EV owners/purchasers.

26
27 The Consumer Advocate submitted that the objectives of the Pilot Project are very similar to
28 those of the on-going load research and rate design studies. The Board does not agree that these
29 studies would provide the necessary information with respect to EV load management costs and
30 benefits. The Pilot Project would provide in-depth information on EV owners' charging
31 behaviours and the costs and benefits of strategies to shift EV charging to off-peak periods. In
32 contrast, the load research and rate design studies take a broad view of load, demand, and rate
33 impacts and were not designed to pilot strategies to manage end-uses of electricity.⁵

34
35 The Consumer Advocate also submitted that the Pilot Project should be deferred until more EVs
36 are on the road. The Board believes the information to be gathered through the Pilot Project will
37 be useful in the near term and will be informative as to load management strategies as EV uptake
38 increases in this province in the coming years. The evidence demonstrates that delaying the Pilot
39 Project would expose customers to risks of higher system costs due to EV adoption and may
40 result in lost opportunities to manage electrification as it increases.⁶ The Board accepts the

³ CA-NP-004.

⁴ Drive Electric Submission, July 5, 2023, page 2.

⁵ CA-NP-001.

⁶ CA-NP-010 and CA-NP-004.

1 evidence that there is an opportunity for measurable load management and that the impact of
2 the programs would be substantially less if delayed.⁷

3
4 Finally, the Consumer Advocate submitted that Level 2 smart chargers should not be funded
5 because a sample of customers composed entirely of owners of Level 2 chargers is not a
6 representative sample. The Board accepts that the design of the project is appropriate and
7 consistent with good utility practice. The proposed Pilot Project targets at-home charging and
8 would involve up to 200 residential owners of light-duty EVs with priority given to participants
9 who have either vehicle telematics or Level 2 smart chargers.⁸ Level 1 chargers are not capable
10 of collecting data about participants' charging behaviours.⁹ This approach is consistent with the
11 approach taken by the 10 utilities that have recently been involved in EV load management pilot
12 projects.¹⁰ These projects had 20 to 600 participants, involving both active and passive load
13 management strategies, including up-front incentives such as Level 2 charger rebates as well as
14 participation incentives. Level 2 smart chargers were the most commonly used technology with
15 vehicle telematics used in the more recent projects.

16
17 The Board finds that it is appropriate for Newfoundland Power to undertake initiatives to assess
18 EV load management strategies given the projected increases in EV adoption and the potential
19 for substantial impacts on peak demand and system costs. The Board is satisfied that the Pilot
20 Project will provide valuable information with respect to the measures which are appropriate to
21 manage EV load in this province and that it is consistent with sound public utility practice in
22 Canada. The Board finds that approval of the Pilot Project would support the delivery of reliable
23 service in an environmentally responsible manner at the lowest possible cost to consumers, as
24 required by the provincial power policy set out in **EPCA**. The Board will approve Newfoundland
25 Power's request to recover the costs of the Pilot Project through the Electrification Cost Deferral
26 Account.

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29 **IT IS THEREFORE ORDERED THAT:**

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31 1. Recovery through the Electrification Cost Deferral Account of costs to complete an EV Load
32 Management Pilot Project is approved.
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34 2. Newfoundland Power shall pay all expenses of the Board arising from this Application.

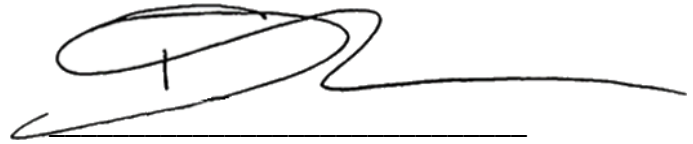
⁷ CA-NP-004.

⁸ Schedule A, Application, pages 13 and 14.

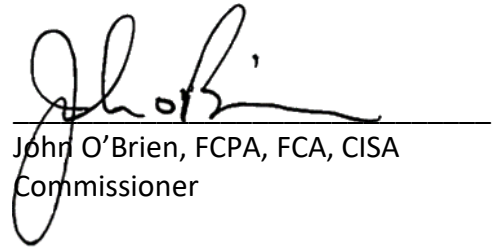
⁹ CA-NP-010.

¹⁰ Schedule A, Application, pages 11 and 12 and Attachment B.

DATED at St. John's, Newfoundland and Labrador, the 31st day of August 2023.



Dwanda Newman, LL.B.
Vice-Chair



John O'Brien, FCPA, FCA, CISA
Commissioner



Christopher Pike, LL.B., FCIP
Commissioner



Sara Kean
Assistant Board Secretary