

1 Q. The Dunsky report states on page 30 that incentive programs could accelerate adoption in the
2 short-term, but have a limited long term impact compared to infrastructure deployment and
3 may not be a suitable approach for intervention.

4 In response to PUB-NLH-004 Hydro stated that EV incentives are not expected to be required
5 over the longer term and incentives are effective in overcoming barriers to the adoption of new
6 technologies in this province.

7 (a) Please explain on what basis Hydro has chosen to adopt incentive programs, even on a
8 short term basis, when Dunsky has questioned whether they are a suitable approach for
9 intervention.

10 (b) Please provide further explanation addressing why Hydro has chosen to adopt incentive
11 programs when such incentives are already being offered by the provincial and federal
12 governments.

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

20 The market potential study (“Study”) completed by Dunsky Energy Consulting (“Dunsky”) is
21 designed to identify the theoretical potential for electrification in the province. The Study also
22 provides a high-level assessment of the practical means through which that potential could be
23 achieved.¹ The Study is not designed to identify the specific programs that should be
24 implemented by the Utilities.

25 This view is shared by Dunsky as it states:

¹ Please refer to "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, p. 16 of 325.

1 The potential study is *not* intended to give granular information about measures
2 in specific segments, but rather give a macro view of efficiency potential.
3 Moreover, it is not a program design document that accurately forecast savings
4 achieved through Utility programs in a given future year, but rather quantify the
5 total potential opportunities that exist under specific parameters.²

6 Dunsky assessed the potential effectiveness of three levers available to the Utilities to increase
7 electric vehicle (“EV”) adoption in the province: (i) Direct Current Fast Charger (“DCFC”)
8 deployment, (ii) Level 2 charger deployment, and (iii) vehicle incentives.³ Each lever was
9 assessed based on two different investment levels to provide an indication of how varying levels
10 of investment in these areas could increase EV adoption and electrical system load.⁴

11 The Study found that DCFC and Level 2 charger deployment could be expected to have the
12 highest impact on EV adoption and electrical system load. The Study suggested that DCFC
13 deployment should be a priority to increase EV load growth in the province, but also noted that
14 over-investment could have diminishing returns. The Study, therefore, recommended the
15 Utilities consider a diversified portfolio of investments to complement DCFC investment,
16 including Level 2 charging, load management programs, commercial fleet programs, and
17 education and awareness initiatives.⁵

18 The electrification initiatives included in the 2021 Plan are broadly consistent with the
19 recommendations of the Study, including the recommendation for a diversified portfolio of
20 complementary initiatives.⁶

² Ibid.

³ Please refer to "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, pp. 138–140 of 325.

⁴ Each lever was assessed based on a low investment scenario of \$5 million and a high investment scenario of \$20 million. Please refer to Please refer to "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, p. 140 of 325.

⁵ Please refer to "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, p. 138 of 325.

⁶ As examples, the following were included in the Study’s diversified investment scenario and are also included in the 2021 Plan: (i) DCFC deployment focused on achieving geographic coverage across the Island of Newfoundland through an EV charging network; (ii) public DCFC and Level 2 charger deployment through the Utilities’ make-ready model; (iii) Level 2 charger incentives to address the upfront cost of installing Level 2 chargers that are capable of demand management; (iv) commercial fleet and EV demand response pilot programs; and (v) education and awareness initiatives.

1 (a) The Utilities have been jointly delivering programs to increase customers’ adoption of new
2 technologies for over a decade. The 2021 Plan was developed following the same approach
3 the Utilities have applied in developing all prior plans. Plan development commenced with
4 the Study to identify the theoretical potential to increase electrification in the province and
5 opportunities to achieve that potential. Further research was then conducted to identify
6 which practical measures would be appropriate and cost-effective in this jurisdiction. This
7 research was informed by the Utilities’ long-term experience in delivering customer
8 programs and included customer surveys, stakeholder consultations, assessments of
9 industry best practices, and cost-effectiveness testing.⁷

10 In the Utilities’ experience, there are often multiple barriers to increasing customers’
11 adoption of new technologies. Typical barriers include upfront costs and customer
12 awareness of the benefits of those technologies. Successfully increasing customer adoption
13 of these technologies requires strategically addressing each barrier.

14 Ultimately, there are only three types of levers available to the Utilities to increase EV
15 adoption in the province: (i) incentive programs, (ii) public charging investment, and (iii)
16 education and awareness. The 2021 Plan includes investments in each of these levers, as
17 each lever is necessary to address a distinct barrier to customer adoption of EVs.

18 EV incentive programs for residential and commercial customers are included in the 2021
19 Plan on the basis that:

20 (i) Incentives are essential to addressing a primary barrier to customer adoption of EVs.
21 Annual surveys completed by MQO Research show vehicle cost and access to public
22 charging are the two primary barriers to EV adoption in Newfoundland and Labrador. In
23 three of the last four years, the cost of an EV was the top barrier identified. Incentives
24 will address this barrier by reducing the upfront cost of purchasing an EV.

⁷ For example, in the Study, Dunsky outlined an opportunity to offer customers an appliance recycling program, which upon further analysis by the Utilities’ was deemed to be cost prohibitive. Dunsky also identified an opportunity for a residential new construction program through incentivizing the use of more energy efficient materials. Following consultation with local builders and trade associations, the Utilities determined that most local builders were already building to the standard suggested by Dunsky and the program was ruled out.

- 1 (ii) Incentives have proven effective in achieving market transformation. In the Utilities’
2 long-term experience, incentive programs are effective in increasing the adoption of
3 new technologies.⁸ Industry research has shown that incentives have increased EV
4 adoption in other jurisdictions.⁹ Consultations with local stakeholders, including the
5 Automobile Dealership Association of Newfoundland and Labrador, have validated the
6 Utilities’ view that incentives would be effective in increasing EV adoption.¹⁰
- 7 (iii) Incentives can provide a meaningful contribution towards maximizing domestic load in
8 the province. The Study shows that EV incentives could increase EV load by 16% to 32%
9 over the short term and 8% to 9% over the long term. While the Study observed that EV
10 adoption is impacted more by access to public charging, a long-term contribution of 8%
11 to 9% is meaningful in maximizing domestic load in the province.¹¹
- 12 (iv) Incentives are a cost-effective means of increasing EV adoption. The Study showed
13 incentive programs can be implemented in a cost-effective manner when done at
14 investment levels included in the 2021 Plan.¹² All incentive programs included in the
15 2021 Plan have been assessed to ensure they are designed in a manner that is cost-
16 effective for customers.
- 17 (v) Incentives would provide a rate mitigating benefit for customers. A *pro forma* analysis
18 indicates that removing EV incentives would reduce the rate mitigating benefit provided
19 by the 2021 Plan.¹³
- 20 Overall, the EV incentive programs included in the 2021 Plan have been judged to be
21 appropriate, cost-effective, and consistent with provincial rate mitigation objectives as they

⁸ For example, incentive programs have proven to be effective for customers for energy efficiency technologies such as insulation, thermostats and heat recovery ventilators.

⁹ Please refer to "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. D, p. 5 of 5.

¹⁰ For example, Drive Electric NL provided, in their view, that incentives would be effective. Discussions with the Automobile Dealership Association of Newfoundland and Labrador indicated that commitments to EV purchase incentive programs could influence the supply of EVs in the market.

¹¹ Please refer to "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, p. 139 of 325.

¹² Dunsky found that over-investment in one area, such as charging infrastructure or EV incentives may not be cost-effective. For example, utility investment proposed in the Plan is closer to the \$5 million investment scenario assessed by Dunsky which provided a positive NPV and thus was shown to be cost-effective. See Hydro’s Application, Schedule 3, Schedule C, page 143 of 325.

¹³ Please refer to Hydro’s response to TC-PUB-NLH-001.

1 will support maximizing domestic load. This is consistent with the least-cost delivery of
2 reliable service to the Utilities’ customers.

3 (b) The upfront cost of purchasing an EV is currently approximately \$20,000 higher than the
4 cost of purchasing an internal combustion engine vehicle. This is a substantial price
5 differential.

6 The federal government currently offers an incentive that reduces this price differential by
7 \$5,000, or approximately 25%. Even with the \$5,000 federal incentive, which has existed
8 since 2019, residents of Newfoundland and Labrador continue to identify the cost of an EV
9 as a primary barrier to adoption.

10 The \$2,500 EV incentive included in the 2021 Plan was designed to work in conjunction with
11 the \$5,000 federal incentive to provide a total reduction in the upfront cost of an EV of
12 \$7,500. Combining provincial and federal incentives for EVs is commonplace across Canada.

13 Table 1 shows the total EV incentive amounts offered across Canada, including both
14 provincial and federal incentive amounts.

Table 1: Total EV Purchase Incentive Amounts in Canada (\$)

| Province | Total EV Incentive |
|-----------------------|---------------------------|
| Quebec | 13,000 |
| Prince Edward Island | 10,000 |
| New Brunswick | 10,000 |
| Northwest Territories | 10,000 |
| Yukon | 10,000 |
| British Columbia | 8,000 |
| Nova Scotia | 8,000 |

15 The median total EV incentive amount offered in other provinces across Canada is \$10,000,
16 within a range of \$8,000 to \$13,000.¹⁴ The total combined incentive in Newfoundland and
17 Labrador as a result of the 2021 Plan was designed to be \$7,500, slightly below the range
18 observed across Canada. The EV incentive amount included in the 2021 Plan appears
19 reasonable in the Canadian context.

¹⁴ Please refer to Hydro’s response to TC-PUB-NLH-004, Attachment 2 for the provincial incentive amounts only.

1 On May 31, 2021, the provincial government announced the EV Adoption Accelerator
2 program to encourage the purchase of EVs.¹⁵ In March 2022, the provincial government
3 announced the continuation of this program with an estimated budget of approximately
4 \$0.9 million. Effective April 1, 2022, the program will provide a \$2,500 rebate for EV
5 purchases and \$1,500 for plug-in hybrid vehicle purchases.¹⁶ The program is currently
6 expected to end in March 2023.

7 The EV incentives in the 2021 Plan continue to be appropriate to offer following
8 announcement of the provincial program because:

9 (i) The provincial program is designed to be complementary to the Utilities’ 2021 Plan. For
10 example, the provincial program could increase cumulative net revenues estimated in
11 the 2021 Plan by approximately \$1.3 million by 2034, thereby increasing the associated
12 rate mitigating benefit for customers.¹⁷

13 The provincial government provided letters of support in March 2022 that confirm their
14 continued support of the Utilities’ 2021 Plan, which are provided as TC-PUB-NLH-002,
15 Attachment 1.

16 (ii) The combined incentive amount would continue to be reasonable when combined with
17 the provincial program. Under this scenario, the total incentive available in
18 Newfoundland and Labrador would be \$10,000, which is consistent with the median
19 throughout Canada. The incremental cost of purchasing an EV would be \$10,000 under
20 this scenario.

21 (iii) The provincial program is short term in nature and is scheduled to end in March 2023.

22 By comparison, the Utilities’ longer-term commitment could help influence the supply of

¹⁵ Please refer to “Budget 2021 Change Starts Here – Budget 2021 Technical Briefing,” Government of Newfoundland and Labrador, May 31, 2021, slide 19.

<<https://www.gov.nl.ca/budget/2021/wp-content/uploads/sites/5/Budget-2021-Overview.pdf>>.

¹⁶ Please refer to “Government Announces Five-point Plan to Help Newfoundlanders and Labradorians with the High Cost of Living,” Government of Newfoundland and Labrador, March 15, 2022.

<<https://www.gov.nl.ca/releases/2022/exec/0315n03/>>.

¹⁷ Please refer to TC-PUB-NP-005, Attachment H for further information.

- 1 EVs in the province, as indicated by the Automobile Dealership Association of
- 2 Newfoundland and Labrador.¹⁸

¹⁸ A report by Dunskey Energy Consulting produced for Transport Canada in March 2021 shows that, while inventory levels in Canada are increasing, Newfoundland and Labrador continues to be under supplied. This is due, in part, to automakers continuing to focus their inventory in Quebec, British Columbia, and, to a lesser extent, Ontario. For example, in February 2021, 36 EV models were available in Quebec compared to 7 EV models in Newfoundland and Labrador. Please refer “Zero Emission Vehicle Availability Estimating Inventories in Canada: 2020/2021 Update,” Dunskey Energy Consulting, March 2021. <https://www.dunskey.com/wp-content/uploads/2021/12/DunskeyZEVAvailabilityReport_2021-04-1.pdf>.



Government of Newfoundland and Labrador
Environment and Climate Change
Office of the Minister

MAR 18 2022

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Vice President
Newfoundland and Labrador Hydro
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Dear Byron Chubbs and Kevin Fagan:

Re: Electrification, Conservation and Demand Management Plan: 2021-2025

Passenger vehicles account for about 16 percent of total greenhouse gas emissions in Newfoundland and Labrador. The electric vehicle initiatives and charging infrastructure proposed in Newfoundland Power and Newfoundland and Labrador Hydro's **Electrification, Conservation and Demand Management Plan: 2021-2025** will assist with emission reduction efforts and meeting our collective goal of net zero emissions by 2050.

In 2021, the Government announced a rebate program to support increased adoption of electric vehicles in our province. On March 15, 2022 the Government announced an additional \$1.9 million investment for electric vehicle charging infrastructure and the continuation of rebates into 2022-23 to encourage further electric vehicle adoption.

These initiatives were and continue to be designed to complement the utilities' Management Plan. We are committed to continue working with the utilities to advance electrification of the transportation sector and ensure our combined initiatives achieve maximum benefits for the people of Newfoundland and Labrador.

I sincerely appreciate your efforts in these areas and look forward to our continued collaboration.

Sincerely,

A handwritten signature in blue ink, appearing to read "Bernard Davis".

HON. BERNARD DAVIS, MHA
District of Virginia Waters – Pleasantville
Minister



March 21, 2022

Mr. Byron Chubbs
Vice President
Newfoundland Power

Mr. Kevin Fagan
Vice President
Newfoundland and Labrador Hydro

Dear Mr. Chubbs and Mr. Fagan:

Re: Electrification, Conservation and Demand Management Plan: 2021-2025

On December 16, 2020, I wrote you in support of Newfoundland Power and Newfoundland and Labrador Hydro's "Electrification, Conservation and Demand Management Plan: 2021-2025". My letter noted the actions in that plan can assist with the Government of Newfoundland and Labrador's rate mitigation efforts. This government continues to implement policies and programs to support rate mitigation and continues to support the utilities' 2021-2025 electrification and CDM plan.

In 2021, our government announced the Electric Vehicle Adoption Accelerator program to support increased adoption of electric vehicles in our province. On March 15, 2022, we announced an additional \$1.9 million for electric vehicle charging infrastructure, as well as a \$2,500 rebate for consumers and \$1,500 rebate for the purchase of plug-in hybrid vehicles to help encourage the purchase of electric vehicles. Government is also seeking \$1 million in federal support. These initiatives complement the utilities' plan.

We appreciate the utilities' efforts and remain committed to working together to advance transportation electrification and maximizing the benefits of our energy resources for the people of the province.

Sincerely,

A handwritten signature in blue ink, appearing to read "Andrew Parsons".

ANDREW PARSONS, QC
Minister of Industry, Energy and Technology

c. Hon. Bernard Davis
Minister, Environment & Climate Change