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June 17, 2022

Board of Commissioners  
of Public Utilities  
P.O. Box 21040  
120 Torbay Road  
St. John's, NL A1A 5B2

Attention: G. Cheryl Blundon  
Director of Corporate Services  
and Board Secretary

Dear Ms. Blundon:

**Re: Newfoundland and Labrador Hydro – Application for Approvals Required to Execute Programming Identified in the Electrification, Conservation and Demand Management Plan 2021-2025; and Newfoundland Power Inc. - 2021 Electrification, Conservation and Demand Management Application – Response to Request for Market Conditions Update**

## A. INTRODUCTION

Newfoundland Power filed its *2021 Electrification, Conservation and Demand Management Application* with the Board of Commissioners of Public Utilities (“Board”) on December 16, 2020. On June 16, 2021, Newfoundland and Labrador Hydro (“Hydro”) filed its *Application for Approvals Required to Execute Programming Identified in the Electrification, Conservation and Demand Management Plan 2021-2025*.<sup>1</sup> Newfoundland Power’s application and Hydro’s application are collectively referred to as the “Applications.” The Applications reflect the utilities’ continued collaboration in developing and delivering customer programs as outlined in the *Electrification, Conservation and Demand Management Plan: 2021-2025* (“2021 Plan”). On August 30, 2021, the Board advised the Applications would be joined and proceed as one matter.

On June 3, 2022, the Board requested that the utilities provide an update on any changes in market conditions that may affect the information filed in support of the Applications, including changes to any Federal or Provincial Government funding or programs.

For continuity purposes, the following response provides an update on market conditions since the utilities’ last update, which was filed on March 25, 2022 in the responses to Requests for Information TC-PUB-NP-005 (1<sup>st</sup> Revision) and TC-PUB-NLH-004.

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<sup>1</sup> *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).

## **B. MARKET CHANGES**

The primary changes in market conditions since March 25, 2022 relate to electrification initiatives announced by the Federal and Provincial Governments. Both governments extended their electric vehicle (“EV”) incentive programs and announced further funding of EV charging infrastructure. The Federal Government also announced its intention to implement a sales mandate to accelerate the manufacturing and adoption of cleaner cars.<sup>2</sup>

These initiatives support the utilities’ efforts in the 2021 Plan to maximize domestic energy usage in a cost-effective manner, primarily through increasing the province’s adoption of EVs. Extensions of the federal EV incentive and infrastructure programs were anticipated by the utilities when developing the 2021 Plan. The Provincial Government’s EV incentive and infrastructure programs were designed to be complementary to the utilities’ 2021 Plan and will increase rate mitigating benefits for customers.<sup>3</sup> The Federal Government’s sales mandate may also increase the supply of EVs available for purchase in the province and, in conjunction with the initiatives in the 2021 Plan, help increase EV adoption in the province. The market changes related to government initiatives are detailed in sections C, D and E to this letter.

Certain market conditions, such as the price of EVs and delays in EV adoption, whether due to delayed implementation of the 2021 Plan or local EV availability, remain relatively unchanged since the utilities’ assessment of those factors on March 25, 2022. While fuel prices have continued to increase since that time, changes in fuel prices must be considered in the context of the barriers to EV adoption that the 2021 Plan aims to address.<sup>4</sup>

The Potential Study completed by Dunsky found that residential customers are more likely to consider the upfront cost of an EV rather than the total cost of ownership when making a purchase decision.<sup>5</sup> For example, in a focus group completed by MQO Research in April 2022, customers indicated that, while rising fuel prices and environmental benefits were factors when considering purchasing an EV, the upfront cost to purchase an EV and the availability of charging stations continue to be barriers to EV adoption.<sup>6</sup>

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<sup>2</sup> Initially, the Federal Government had a voluntary target that light-duty cars and passenger truck sales be zero-emission by 2035. In June 2021, the Federal Government made the target mandatory.

<sup>3</sup> For example, when combined, provincial and utility incentive amounts are comparable to rebate amounts offered elsewhere in Canada. See part (b) to the response to Request for Information TC-PUB-NP-003. Increased rate mitigating benefits would result from higher cumulative net revenues from those estimated in the 2021 Plan. See Attachment H of the response to Request for Information TC-PUB-NP-005.

<sup>4</sup> Gasoline prices have increased by approximately 18% based on the change in Regular, Self-Serve fuel price on the Avalon Peninsula from 189.3 cents per litre on March 25, 2022 to 224.0 cents per litre on June 9, 2022.

<sup>5</sup> See the *2021 Plan, Schedule C*, page 136.

<sup>6</sup> The example illustrates that customers continue to highlight the upfront cost of EV as a primary barrier to EV adoption, even while fuel prices have increased thereby lowering the total cost of ownership for an EV.

Evolving and changing market conditions were anticipated by the utilities when the 2021 Plan was developed, particularly as it relates to market transformation of the transportation sector.<sup>7</sup> Similar to the approach taken for the utilities' Conservation and Demand Management ("CDM") programs, the electrification initiatives in the 2021 Plan are designed to be flexible to enable the utilities to react to changing market conditions.<sup>8</sup> For example, global supply chain disruptions have affected the availability of vehicles in the province, including EVs.<sup>9</sup> In detailed program design, the utilities will exclude customers from program eligibility who have already placed deposits on EVs to limit free ridership in advance of the launch of the EV incentive programs.<sup>10</sup>

All electrification initiatives will be evaluated for participation levels and cost effectiveness on an annual basis. Formal evaluations will be conducted by a third party following the first year of operation and biannually during operation. Similar to the utilities' CDM programs, changes to program design and delivery, including incentive amounts, will occur as required.

Regulatory oversight of customer electrification initiatives is anticipated to be achieved in a manner consistent with the Board's approach to overseeing customer CDM programs. The utilities will outline the costs and benefits of electrification program delivery and any impact of changing market conditions through their annual reporting requirements to the Board, as well as through general rate and capital budget application processes when applicable.

## **C. GOVERNMENT EV REBATE INITIATIVES**

### **(i) Federal Government Initiatives**

On April 22, 2022, the Federal Government announced an extension of the *Incentives for Zero-Emission Vehicles ("iZEV") Program* to March 31, 2025. This program provides a \$5,000 rebate for EVs. The program was also amended to increase the rebate amount from \$2,500 to \$5,000 for plug-in hybrid electric vehicles ("PHEV") with an electric range of 50 kilometers or more.<sup>11</sup>

<sup>7</sup> See, for example, the *2021 Plan, Section 6.0 Outlook*, page 30.

<sup>8</sup> For example, takeCHARGE launched the Instant Rebates Program in 2014 with a focus on LED light bulbs. At that time, incandescent and compact fluorescent were standard, with a large incremental cost to purchase an LED. Initially higher levels of incentives were required to drive LED adoption. As the price gap closed between the categories of light bulbs, incentive levels were lowered.

<sup>9</sup> Vehicle availability is a barrier to EV adoption. Current market conditions associated with vehicle availability further substantiate the need for market intervention in the province to help address customer barriers to EV adoption.

<sup>10</sup> Free ridership occurs when participants would have chosen the technology without availing of the program. Given the customer barriers associated with EV adoption, free ridership in the electrification transformation marketplace is low. For example, the EV adoption rate in the province is 1.4%, among the lowest in Canada. See Section F of this letter for further information.

<sup>11</sup> In this response, PHEVs with an electric range of 50 kilometers are referred to as long-range PHEVs.

The 2021 Plan was developed under the assumption that the iZEV program would run until 2025. Therefore, the announced extension would not impact the information filed on March 25, 2022. The utilities expect that the enhanced rebate for PHEVs could result in a modest increase in the number of PHEVs rebated throughout the plan period, thereby providing rate mitigating benefits for customers.<sup>12</sup>

**(ii) Provincial Government Initiatives**

On March 15, 2022, the Provincial Government announced the extension of its existing EV rebate program, which provides a \$2,500 rebate for the purchase of an EV.<sup>13</sup> The program was expanded effective April 1, 2022, to include leases of EVs and a \$1,500 rebate for PHEVs. The deadline for applications under this program is March 15, 2023.

The Provincial Government's program is complementary to the utilities' 2021 Plan.<sup>14</sup> The potential impact of the program on the 2021 Plan was outlined in the information filed on March 25, 2022. Therefore, there is no further update associated with this initiative.<sup>15</sup>

**D. GOVERNMENT EV INFRASTRUCTURE INITIATIVES**

**i) Federal Government Initiatives**

On May 5, 2022, Natural Resources Canada opened another round of funding for public EV charging infrastructure under its *Zero Emission Vehicle Infrastructure Program*. This funding is similar in scope to the funding the utilities received for their 2021 charging network of \$50,000 per Direct Current Fast Charger ("DCFC") and \$5,000 per Level 2 charger.<sup>16</sup> The deadline for funding applications is August 11, 2022.

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<sup>12</sup> For the purposes of this response, it was assumed that the enhanced rebate for PHEVs could increase the adoption of PHEVs by 4.7% over the period to 2034. The 4.7% estimate is based the adoption of long-range PHEVs, which represent 52% of all PHEVs, increasing by 9% over the long-term [9% x 52% = 4.7%]. The 9% increase is based on long-term impacts that EV incentives could have on EV adoption as outlined in the Potential Study.

<sup>13</sup> See <https://www.gov.nl.ca/releases/2022/exec/0315n03/>.

<sup>14</sup> See Attachment A to the response to Request for Information TC-PUB-NP-003.

<sup>15</sup> For example, in that response, it was estimated that the provincial program could increase cumulative net revenues estimated in the 2021 Plan by approximately \$1.3 million by 2034, thereby increasing the associated rate mitigating benefit for customers. See Attachment H of the response to Request for Information TC-PUB-NP-005 for further information.

<sup>16</sup> For DCFCs with charging rates between 50 - 99 kW.

The utilities plan to apply for this funding to help offset costs related to their 2022 EV charging infrastructure expenditures.<sup>17</sup> The utilities do not include potential funding amounts in their net present value (“NPV”) analyses. Therefore, there is no further update to the information filed on March 25, 2022 associated with this funding.

Further, Hydro has received funding from Natural Resources Canada to provide rebates to commercial customers who are installing networked EV charging infrastructure. This funding could enable the adoption of up to 110 Level 2 chargers and 3 DCFCs in the province. Customers can avail of a rebate of 50% of their eligible costs, up to \$5,000 for a Level 2 charger and up to \$50,000 for DCFC. The funding is available until February 15, 2024.

This funding would complement the commercial Level 2 charging incentive proposed in the 2021 Plan, allowing commercial customers to receive up to \$8,000 in incentives toward the installation of an eligible Level 2 charger, and will help support the utilities’ custom fleet pilot.<sup>18</sup>

## **ii) Provincial Government Initiatives**

On April 22, 2022, the Provincial Government announced a \$1 million EV charger investment as part of Budget 2022.<sup>19</sup> Details of the Provincial Government’s planned investment are not yet available, but is intended to complement the utilities’ 2021 Plan.<sup>20</sup> The utilities will continue working with the Provincial Government to ensure the planned investment maximizes potential benefits for customers.<sup>21</sup>

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<sup>17</sup> The application for Newfoundland Power’s 2022 EV chargers was bifurcated from Newfoundland Power’s 2022 *Capital Budget Application* and is being evaluated by the Board. The application proposed 10 DCFCs and 10 Level 2 chargers. The credit of any Government funding received associated with EV charging infrastructure is consistent with the definition of Newfoundland Power’s Electrification Cost Deferral Account approved by the Board in Order No. P.U. 3 (2022). Potential funding against Newfoundland Power’s EV charging infrastructure expenditures could total \$550,000.

<sup>18</sup> Additional charging incentives will help commercial customers add EVs to their fleet in conjunction with the custom fleet pilot. The pilot program components may include support through feasibility and fleet optimization studies, financial support for EVs and charging infrastructure, and technical advice.

<sup>19</sup> See <https://www.gov.nl.ca/releases/2022/ecc/0422n03/>.

<sup>20</sup> See Attachment A to the response to Request for Information TC-PUB-NP-003.

<sup>21</sup> With respect to potential impacts on information filed since March 25, 2022, the additional Level 2 and DCFC government funding being leveraged is viewed by the utilities’ to be within the context of the \$20 million investment scenario contemplated in the Potential Study and discussed in the response to Request for Information TC-PUB-NP-004. Therefore, the ability to determine specific impacts for this investment is limited. However, any impact is not expected to be material with respect to cost effectiveness outlined in the 2021 Plan. As an example, the utilities’ estimate increased commercial load associated with the Level 2 investments could increase cumulative net revenues by 2034 by \$3 million to \$4 million, which would translate to an increase in the 2034 rate mitigation benefit of 0.01¢/kWh.

## **E. FEDERAL ZEV SALES MANDATE**

On April 22, 2022, the Federal Government announced a future sales mandate for zero-emission vehicles so that at least 20% of new passenger vehicles sold in Canada will be zero emission by 2026, at least 60% by 2030, and 100% by 2035.<sup>22</sup>

Details on how the planned federal zero-emission vehicle sales mandate will function are not yet available. For example, it is unclear if auto manufacturers will be required to have 20% of sales be zero-emission nationally or within each province. *Canada's Electric Vehicle Policy Report Card* provides that while mandates can increase supply of EVs, other investments, such as charging infrastructure and EV incentives, are required to help increase demand.<sup>23</sup>

In Canada, both British Columbia and Quebec have each successfully combined sales mandates and vehicle incentives to support EV growth in their jurisdictions. In 2021, 71% of EV sales in Canada took place in these two provinces.<sup>24</sup> This is a long-standing trend, with 3 of every 4 EVs in Canada being registered in Quebec or British Columbia in the last 5 years.<sup>25</sup>

Experience in these provinces show that measures that increase both the supply and demand of EVs work in conjunction to increase EV adoption.

## **F. LOCAL CONTEXT**

In the utilities' view, it is important to consider changes in market conditions within the local context of electrification transportation in Newfoundland and Labrador.

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<sup>22</sup> See <https://www.canada.ca/en/transport-canada/news/2022/04/minister-of-transport-announces-the-expansion-of-the-incentives-for-zero-emission-vehicles-program.html>. Typically, zero-emission vehicle mandates set sales targets and manufacturers that do not meet those targets are required to pay royalties as a penalty.

<sup>23</sup> For example, Canadian automakers have voiced concerns with the EV sales mandate, suggesting that without larger purchase incentives, mandates will not have the desired effect. Further, the Canadian Vehicle Manufacturers' Association noted the success in Quebec and British Columbia, along with the decline seen in EV sales in Ontario when the vehicle rebate was cancelled in 2018.

<sup>24</sup> According to Statistics Canada, Quebec and British Columbia made up 36% of total vehicle sales in Canada in 2021.

<sup>25</sup> See, for example, <https://globalnews.ca/news/8776540/canada-electric-vehicle-popularity-federal-sales-target/>.

Table 1 provides EV adoption rates across Canada over the last 3 years

**Table 1:**  
**Share of Canadian ZEV New Vehicle Registrations<sup>26</sup>**

<b>Province/Territory</b>	<b>Q1 2022</b>	<b>Q1 2021</b>	<b>Q1 2020</b>
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%
Yukon Territory	3.3%	3.5%	0.8%
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%
Northwest Territories	1.2%	0.6%	0.0%
Nunavut	0.0%	0.0%	0.0%

The current EV adoption rate in Newfoundland and Labrador is 1.4%. The province has among the lowest EV adoption rates in Canada, with only the Northwest Territories and Nunavut having lower adoption rates. In contrast, British Columbia and Quebec, which have EV sales mandates and EV incentives, continue to lead the country in the adoption of EVs.<sup>27</sup>

The opportunity to increase EV adoption in the province is substantial. Current Federal and Provincial Government initiatives act to support and complement the utilities' efforts to reduce customer barriers to EV adoption and lay the foundation for a market transformation that will provide long-term benefits to customers.

With respect to EV incentives, the combined incentive available in Newfoundland and Labrador would total as much as \$10,000, which is consistent with the average across Canada.<sup>28</sup> This incentive would help address the upfront cost barrier to adopting an EV by reducing the

<sup>26</sup> See <https://cdn.ihsmarket.com/www/prot/pdf/0522/Canada-EV-Newsletter-Q1-2022.pdf>.

<sup>27</sup> This trend also appears to affect EV availability. For example, it was reported that in 2021 a consumer in Quebec could choose between 36 EV models, whereas in Newfoundland and Labrador, buyers only had access to 7 models.

<sup>28</sup> See part (b) to the response to Request for Information TC-PUB-NP-003.

incremental cost by half.<sup>29</sup> The incremental cost of purchasing an EV would still be \$10,000 under this scenario.

With respect to EV charging infrastructure, the utilities' 2021 Plan includes the construction of a DCFC charging network to achieve the minimum geographic coverage necessary to permit travel across the island. The 2021 Plan provides that, by 2025, the charging network will consist of 57 charging ports.<sup>30</sup> The Potential Study indicated that investments of 50 to 200 DCFC and 500 to 2,000 Level 2 charging ports over that same time period would increase EV adoption in the province.<sup>31</sup>

The installation of additional EV charging infrastructure in the province will assist in reducing barriers to EV adoption.<sup>32</sup> As such, investment from other entities, such as the government or the private sector, will continue to complement the utilities' planned investment in charging infrastructure, increase EV adoption, and thereby increase the associated rate mitigating benefit for customers.

Further, as EVs adoption increases in the province, the utilities' load management initiatives outlined in the 2021 Plan will be critical to limiting the peak demand impacts associated with EVs.<sup>33</sup> For example, as more EVs are sold in the province without the utilities' *Residential EV & Charging Infrastructure* program in place, the risk increases that customers install home charging technology that is not capable of demand response. This could expose customers to increased system costs due to unmanaged charging.

## G. CONCLUSION

On March 25, 2022, the utilities provided an update to the electrification cost-effectiveness testing included in the 2021 Plan for material changes that have occurred since the filing of the Applications. These changes were: (i) an updated rate mitigation target announced by the Provincial Government; (ii) an updated marginal cost forecast; and (iii) a delay in executing the electrification initiatives included in 2021 Plan.

Changes in market conditions since March 25, 2022 have not materially affected the information filed at that time and do not affect the business case for proceeding with electrification initiatives included in the 2021 Plan. Electrification initiatives announced by the Federal and Provincial

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<sup>29</sup> The upfront cost of purchasing an EV is currently approximately \$20,000 higher than the cost of purchasing an internal combustion engine vehicle.

<sup>30</sup> See the response to Request for Information PUB-NP-046.

<sup>31</sup> See the *2021 Plan, Schedule C*, page 139.

<sup>32</sup> For example, public Level 2 charging infrastructure is expected to reduce barriers to EV adoption by facilitating travel within municipalities.

<sup>33</sup> See the response to Request for Information PUB-NP-037 for further information.

Governments since March 25, 2022 will support and complement the utilities' efforts to reduce customer barriers to EV adoption and lay the foundation for market transformation in the province.

Given current adoption levels in Newfoundland and Labrador, significant opportunity exists to leverage these initiatives when executing the 2021 Plan in order to maximize domestic energy usage and provide long-term rate mitigating benefits for customers.

The electrification initiatives in the 2021 Plan are designed to be flexible to enable the utilities to react to changing market conditions. The customer benefits and costs of the utilities' electrification initiatives will be evaluated and reported to the Board on an annual basis to ensure they remain cost-effective for customers and reflective of current market conditions.

Should you have any questions, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO



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