Q. **Reference: Application**

a) How do customers benefit from this partnership between Hydro and Newfoundland Power with respect to construction, ownership and operation of charging station infrastructure over the private sector, if Government, Hydro or Newfoundland Power provide incentives such as low interest loans, capital contributions, etc. to promote private sector participation?

b) Would this approach be similar to the approach followed for CDM programs?

c) Does Hydro construct, own and operate infrastructure for any of its CDM programs?

d) If so, please provide details.

A. *This Request for Information relates to the Electrification, Conservation and Demand Management Plan: 2021-2025 (the "2021 Plan") developed in partnership by Newfoundland and Labrador Hydro and Newfoundland Power ("Hydro" or, collectively, the "Utilities"). Accordingly, the response reflects collaboration between the Utilities.*

a) Investment in electric vehicle ("EV") charging infrastructure by the Utilities is necessary to enable the successful delivery of customer electrification programs contained in the Electrification, Conservation and Demand Management Plan 2021–2025 (the "2021 Plan").[1] The electrification programs contained in the 2021 Plan will provide a rate mitigating benefit for the Utilities' customers over the longer term. This rate mitigating benefit is consistent with the least-cost delivery of reliable service to customers.

The 2020–2034 Potential Study ("Study") conducted by Dunsky Energy Consulting addressed the appropriateness of utility intervention in transportation electrification. The Study found that private sector investment in fast charging infrastructure is currently constrained by a

[1] In a 2019 survey completed by MQO, Newfoundland and Labrador residents ranked access to charging and concerns about reliability of range among the highest barriers to EV ownership. Access to fast charging infrastructure is limited in Newfoundland and Labrador and lags behind that of other Canadian provinces.

weak business case. The weak business case reflects both the cost of charging infrastructure and the relatively small number of EVs in the province. Without investment in adequate charging infrastructure, customers' adoption of EVs will be limited, thus limiting the associated rate mitigating benefits for customers.[2]

The 2021 Plan encourages private sector investment in EV charging infrastructure through appropriate incentives. Specifically, the 2021 Plan includes a make-ready investment model to encourage private sector investment in EV charging infrastructure. The make-ready model includes the installation of electrical infrastructure to enable private sector entities to purchase and install fast chargers. The costs to get a site ready for charger installation are typically a large percentage of the capital required for an installation, at approximately 30% to 40%. This model lowers upfront capital costs which, in turn, improves the business case for private sector entities when installing, owning and operating EV charging stations.[3] In North American jurisdictions that are pursuing transportation electrification, it is commonplace to see a combination of a make-ready model and a utility investment model.[4]

Even with sizable incentives, participation in the make-ready model is expected to be limited. This reflects the weak business case for private sector investment in EV charging infrastructure. The business case for private sector investment is expected to improve as EV adoption increases. The 2021 Plan will increase EV adoption in the province, thereby improving the business case for future private sector investment in EV charging infrastructure. The Utilities do not currently plan to install EV charging infrastructure beyond what is outlined in the 2021 Plan.

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[2] The Study states: "Because the LDV market is severely constrained by the lack of public charging infrastructure, investments in DCFC will be the most impactful and cost-effective lever. The current lack of a solid business case for DCFC charging stations for third-party market actors suggests that DCFC deployment in the province will be limited in the absence of utility or government intervention." See "Application for Approvals Required to Execute Programming Identified in the Electrification, Conservation and Demand Management Plan 2021–2025," Newfoundland and Labrador Hydro, rev. 1, July 8, 2021 (originally filed June 16, 2021), sch. 3, sch. C, p. 145 of 325.

[3] "Application for Approvals Required to Execute Programming Identified in the Electrification, Conservation and Demand Management Plan 2021–2025," Newfoundland and Labrador Hydro, rev. 1, July 8, 2021 (originally filed June 16, 2021), sch. 3, pp. 14–15.

[4] "Application for Approvals Required to Execute Programming Identified in the Electrification, Conservation and Demand Management Plan 2021–2025," Newfoundland and Labrador Hydro, rev. 1, July 8, 2021 (originally filed June 16, 2021), sch. 3, sch. B.

Additionally, the Utilities are coordinating in the installation of EV charging infrastructure throughout the province. Coordination between the Utilities will optimize the number and location of charging stations in the province.[5] Optimizing the number and location of charging stations will support achieving the associated rate mitigating benefits for customers and avoid additional infrastructure upgrades on the electrical system.[6] Relying solely on private sector investment would pose risks that the charging infrastructure would be insufficient or too sporadically located to adequately address this barrier to EV adoption. This, in turn, would create risks that the associated rate mitigating benefits would not be achieved for customers.

Please refer to Hydro response to CA-NLH-009 for information related to customer benefits to customers of the utility-led investment in the charging station infrastructure.

b) Yes, this approach would be similar to the approach followed by conservation and demand management ("CDM") programs. CDM programs have been delivered jointly by the Utilities under the takeCHARGE partnership since 2009.

All programs implemented since 2009 have been responsive to customers' expectations and consistent with the provision of least-cost, reliable service. Over 60,000 customers have participated in programs since 2009. These customers have saved approximately $131 million on their electricity bills. System costs have been reduced by approximately $142 million since 2009 as a result of these programs.

These results have been achieved by strategically removing barriers to energy conservation in Newfoundland and Labrador. Incentives have addressed customer cost barriers. Education initiatives have addressed gaps in customer awareness and knowledge. By addressing barriers, the Utilities have supported market transformation for products such as energy-efficient windows.

[5] Please refer to Hydro's response to PUB-NLH-015.
[6] The Study states: "Additionally, utility deployment of charging infrastructure would also lead to benefits from optimizing station placement within the distribution system to avoid infrastructure upgrades." See "Application for Approvals Required to Execute Programming Identified in the Electrification, Conservation and Demand Management Plan 2021–2025," Newfoundland and Labrador Hydro, rev. 1, July 8, 2021 (originally filed June 16, 2021), sch. 3, sch. C, p. 145 of 325.

The 2021 Plan is consistent with the Utilities' long-term history of delivering customer programs.

c) Generally, Hydro does not construct, own, or operate infrastructure as part of its CDM programs. Energy conservation measures that are installed in customer homes and businesses, such as insulation and lighting, are purchased and owned by the customer.