Q. **Reference: Schedule 1 – Evidence, page 11, July 8, 2021 Revision**

It is stated

> Hydro's proposals to enable infrastructure investment and ECDM programs are projected to provide more than $0.7 million in rate mitigation benefits to customers on the Island Interconnected System over a 15-year period and are consistent with the provision of least-cost, reliable service to customers.

a) What level of accuracy does Hydro place on the $0.7 million in rate mitigation benefits over a 15-year period? Does this equate to less than $50,000 annually, on average, less than 0.01% of the 2019 test year revenue requirement filed with Hydro's 2017 GRA ($692.7 million, page 4-3 of Application)?

b) What rate mitigation impact would the infrastructure investment and ECDM programs have over the next 5 years, and over the next 10 years? Will the program result in any customer rate increase over the next 5 years, and over the next 10 years?

c) In this calculation, what does Hydro assume with respect to customer rates, Muskrat Falls impacts and Government rate mitigation?

d) How will this impact rates?

e) The $0.7 million estimate appears dependent on growing incremental revenues after 2030 (see Appendix A). Is the revenue growth expectation realistic considering that there could be competition from private sector providers by that time?

f) How much risk is Hydro placing on customers to derive what appears to be minimal benefit falling well within the level of accuracy of the estimate?

A. a) Newfoundland and Labrador Hydro's ("Hydro") forecast rate mitigation benefit of $0.7 million represents the forecast incremental revenues from its retail customers on the Island Interconnected System as a result of electrification initiatives, less the incremental costs of delivering those same electrification initiatives over the long term. Hydro notes that while this analysis is limited to the revenue impacts associated with sales to its customers only

[(i.e., excluding increased sales to those customers served by Newfoundland Power Inc. ("Newfoundland Power")], such a clear delineation of rate mitigation benefits by company is unlikely. For example, Hydro's investment in public electric vehicle ("EV") charging infrastructure will serve to promote EV ownership and rate mitigation efforts throughout the province, not solely from those customers who live near the proposed chargers in Hydro's service territory. For forecast rate mitigation impacts by year please refer to Appendix A of Schedule 1 to Hydro's application.

b) As shown in Appendix A of Schedule 1 to Hydro's application, rate mitigation benefits arising from increased revenues from Hydro's customers only will begin in 2029, growing to $1.5 million annually by 2034.[1] Prior to 2029, investments in electrification outstrip incremental revenues. This outcome is not unexpected given the long-term nature of vehicle purchases and the requirement for upfront investment in supporting EV infrastructure.

Hydro notes that growth in unmanaged home charging of EVs is forecast to materially contribute to system peak, which has the potential to increase capacity-related costs to ratepayers placing upward pressure on electricity rates which will outstrip any electrification benefits.[2,3]

On balance, Hydro's proposal for electrification initiatives on the Island Interconnected System will reduce the risk of increasing capacity-related costs associated with EV ownership, increase rate mitigation benefits to all customers, and is consistent with Hydro's statutory obligation to provide reliable at the lowest possible cost consistent with reliable service.

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[1] "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. 1, app. A, col. G Net Revenues.

[2] "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, p. 12, table 1, Upper Scenario. Unmanaged Charging = ($114M) net present value ("NPV") vs. Managed Charging = $170M NPV.

[3] Due to the system costs associated with unmanaged EV charging, which is forecast to take place under the base case scenario, rates are expected to increase regardless of the Utilities' (Hydro and Newfoundland Power) electrification programming. While the plan proposed by the Utilities may increase rates in the early years, the increase would be less than those associated with unmanaged EV charging, and it will provide long-term rate mitigation opportunities for customers along with the avoidance of the system related-costs associated with unmanaged EV charging.

c) The revenue figures are based on rates approved by the Board in Order No. P.U. 31(2019) AMENDED and annual increases in electricity rates of 2.25%.

d) The actual impact on customer rates will depend on the timing and implementation of customer rates and the impact of the Muskrat Falls Project and corresponding rate mitigation efforts by the Government of Newfoundland and Labrador.

e) Unlike gasoline-powered vehicles where users must refuel at a public station, over 95% of EV charging takes place at user's home or work. As such, private investment in public fast chargers will not pose a risk to the forecast revenues as shown in Appendix A.

f) Due to the interconnected nature of the provincial electricity system, with service territories belonging to both Hydro and Newfoundland Power, it is reasonable to expect that Hydro's investment in electrification initiatives, such as public charging infrastructure along the Trans-Canada Highway or the Great Northern Peninsula, will also contribute to increased energy sales to customers in Newfoundland Power's service territory.

It is important to recognize that EV adoption is being mandated by the Government of Canada. As demonstrated in Hydro's application,[4] if the increased use of EVs is not managed effectively to limit the effects on peak demand (i.e., scenario with no utility intervention), system costs are expected to increase by approximately $163 million as a result of consumer adoption of EVs under the baseline scenario and result in a negative NPV of approximately $44 million. The effective management of EV peak demand through the use of smart chargers in combination with promotion of accelerated EV adoption to increase electricity sales is projected to avoid the projected cost impact on customers as provide savings to support rate mitigation. In this regard, the Electrification, Conservation and Demand Management Plan 2021–2025 provides material benefits to customers both through avoided system costs and rate mitigation benefits.

[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, p. 12, table 1.