Q. (Reference Application)

a) How much benefit in terms of rate mitigation is Newfoundland Power's proposed electrification program expected to provide customers?

b) What level of accuracy does Newfoundland Power place on the estimated rate mitigation benefit, how much does the rate mitigation amount equate to annually, on average and in percentage terms, how does this compare to Newfoundland Power's revenue requirement proposed for the 2022 test year (in the NP 2022-2023 GRA)?

c) Please quantify the risk that the proposed charging station infrastructure program places on customers.

A. a) Electrification initiatives outlined in the *Electrification, Conservation and Demand Management Plan: 2021-2025* (the "2021 Plan") will provide additional net revenue of approximately $123 million over the period 2021 to 2034. On a net present value ("NPV") basis, this equates to approximately $62 million in additional net revenue over this period.[1]

Increased net revenue will provide a rate mitigating benefit for customers over the long term. For example, increased net revenue through electrification will provide a rate mitigating benefit for customers of approximately 0.5¢/kWh by 2034.[2] This equates to $100 in reduced electricity charges that year for an average residential customer with electric heating.[3]

b) See notes A through H of the NPV analysis for the basis of the inputs used in the NPV analysis.[4] Newfoundland Power considers these assumptions reasonable to estimate the rate mitigating benefits associated with the electrification initiatives outlined in the 2021 Plan.

See response to Request for Information PUB-NP-065 for a sensitivity analysis of the estimated rate mitigating benefits of electrification initiatives.[5]

See response to Request for Information PUB-NP-009 for the estimated rate mitigating benefits of electrification initiatives on an annual basis over the period 2021 to 2034.

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1 See the *2021 Electrification, Conservation and Demand Management Application,* Volume 1, Exhibit 2, Appendix A.

2 The customer rate impact of 0.5 cents/kWh was determined by dividing the net revenue impact of $33.9 million in 2034 by the projected Company energy sales, including energy sales from electrification, of 6,527 GWh.

3 The average annual usage of an all-electric residential customer was 17,412 kWh in 2019 ((17,412 kWh x 0.5¢/kWh) * 1.15 HST = $100).

4 See the *2021 Electrification, Conservation and Demand Management Application,* Volume 1, Exhibit 2, Appendix A, notes A through H.

5 See response to Request for Information PUB-NP-051 for information on the Provincial Government and the Federal Government announcement of an agreement-in-principle in June 2021 that will mitigate rate impacts associated with the Muskrat Falls Project.

In its 2*022/2023 General Rate Application*, Newfoundland Power is proposing a 0.8% increase in customer rates. This results in an increase in the domestic energy rate of 0.095 ¢/kWh.

The rate mitigation benefit of approximately 0.5¢/kWh would equate to a rate decrease of approximately 4%.

c) The proposed Electric Vehicle ("EV") Charging Network is designed to reduce risks to customers.

The EV Charging Network will address one of the primary barriers to customers' adoption of EVs. This, in turn, will enable the successful delivery of planned electrification initiatives and the associated rate mitigating benefits for customers.[6]

Without addressing barriers to EV adoption, there would be a risk of not achieving the associated rate mitigating benefit for customers.

Additionally, the market potential study completed by Dunsky Energy Consulting shows that system costs will increase without utility intervention.[7] This is largely due to an increase in capacity-related system costs resulting from the unmanaged charging of EVs. Increased system costs would put upward pressure on customer rates and would be inconsistent with provincial rate mitigation objectives.

[6] A 2019 survey completed by MQO showed that Newfoundland and Labrador residents ranked access to charging and concerns about reliability of range among the highest barriers to EV ownership.

[7] See the *2021 Electrification, Conservation and Demand Management Application,* Volume 1, Exhibit 2, page 2, Figure 1.