

1 Q. In relation to infrastructure investments required under increased load from
2 electrification, please provide any and all information Newfoundland Hydro
3 currently has in relation to future costs or estimated ranges of future costs for
4 capital/ratebase infrastructure spending in relation to potential transmission,
5 distribution, or new electric vehicle charging infrastructure costs. In the response
6 include explanatory detail on the range of cost variance that might accompany such
7 estimates and any information available on Newfoundland Hydro's plans over the
8 next few years to analyze or assess what these costs might be, for example if
9 specific studies are planned to inform estimates of such infrastructure costs.

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12 A. Hydro has not yet included any infrastructure investment explicitly resultant from
13 electrification in its planning.

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15 With respect to electric vehicle charging infrastructure, Hydro has conducted a
16 preliminary investigation into the cost of a fast charging electric vehicle network
17 across the island portion of the province. Specifically, Hydro's analysis indicates that
18 level 3 fast chargers would cost approximately \$150,000 per location.¹ Natural
19 Resources Canada (NRCan) recommends an optimal placement of a level 3 fast
20 charger every 65 kilometers.²

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22 Based on NRCan's recommendation, approximately 14 level three fast chargers
23 would be required from St. John's to Port aux Basques at an estimated cost of \$2.1

¹ This is a preliminary estimate for a single level 3 and a single level 2 charger at the same location. The cost of a 50kW level 3 charger is estimated to be \$50,000 with the cost of the level 2 charger and installation estimated to be approximately \$100,000.

² <https://www.nrcan.gc.ca/energy/alternative-fuels/fuel-facts/ecoenergy/20202>.

1 million. An additional seven level three fast chargers would be required from Deer
2 Lake to St. Anthony at an estimated cost of \$1.1 million.

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4 The cost of level two chargers is estimated to be approximately \$5,000 per unit,
5 with installation costs varying based on the installation location.³

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7 These estimates do not reflect any additional system upgrade costs. Hydro would
8 recommend that locations be strategically selected to avoid system upgrade costs
9 where possible.

³ Level 2 chargers are assumed to be 30 amp, 240 volts.