

1 Q. **Tab D; Volume 1: Capital Projects over \$200,000 and less than \$500,000 (Level 2 Chargers for**
2 **Electric Vehicles)**

3 Please perform a similar analysis as requested in PUB-NLH-020 in the absence of the
4 approximate 30% government funding for the project.

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7 A. Attachment 1 to this response includes a ten-year net present value analysis of Newfoundland
8 and Labrador Hydro's ("Hydro") proposed Level 2 Charger Project ("Project"), assuming Hydro's
9 application for funding is not successful. As Hydro has taken the approach of proposing the
10 construction of 18 chargers in a single year because it is a funding requirement, if the funding is
11 not successful Hydro would instead complete the construction over a five-year period.

12 This analysis has been completed with no change to the overall Project budget for comparison
13 purposes; however, completing construction over a five-year period increases the risk of
14 inflationary cost increases and lost economies of scale when compared to construction in 2021.
15 Similar to Hydro's analysis completed in its response to PUB-NLH-020 of this proceeding, the
16 analysis provided in PUB-NLH-021, Attachment 1 assumes that battery electric vehicles reach
17 price parity with their gasoline powered counterparts by 2030.

18 The analysis indicates that, without funding, the project will achieve a positive net present value
19 if Hydro acquires a total of 42 electric vehicles over the ten-year analysis period.

Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Level 2 Charger Install	(66,622)	(66,622)	(66,622)	(66,622)	(33,311)	-	-	-	-	-	-	-
Forecast Funding	-	-	-	-	-	-	-	-	-	-	-	-
Charger Operations and Maintenance	(400)	(800)	(1,200)	(1,600)	(1,800)	(1,800)	(1,800)	(1,800)	(1,800)	(1,800)	(1,800)	(1,800)
Electric Vehicle Cost Differential	(25,768)	(22,905)	(30,063)	(25,768)	(28,631)	(22,905)	(17,179)	(14,316)	(7,158)	-	-	-
Electric Vehicle Operations and Maintenance Savings	6,107	12,214	21,375	30,535	42,749	54,963	67,177	82,445	97,712	112,980	128,247	128,247
Total	(86,683)	(78,113)	(76,510)	(63,455)	(20,993)	30,258	48,198	66,329	88,754	111,180	126,447	

Net Present Value 874

Weighted Average Cost of Capital 5.65%

Electric Vehicles	2	2	3	3	4	4	4	5	5	5	5	42
Installed Chargers (locations)	2	2	2	2	1							

Notes

1. Charger operations and maintenance consists of network fees for smart chargers, estimated at \$100 per charger per year
2. Electric Vehicle Cost Differential is the average price differential as outlined in Table 1 of the project description
3. Electric Vehicle operations and maintenance savings is the average gasoline savings net of electricity costs as outlined in Table 1 of the project description
4. The discount rate used is Hydro's forecast incremental Weighted Average Cost of Capital