

1 Q. The Dunsky report states at page 111 that the light-duty vehicle market is severely constrained  
2 by the lack of public charging infrastructure and there is currently a lack of a solid business case  
3 for DCFC charging stations in the third-party market. Please provide any analysis conducted of  
4 the optimal number of utility DCFC charging stations of each year over the period 2021 to 2025.

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

11 The Utilities’ level of investment in direct current fast charger (“DCFC”) charging stations was  
12 informed by three factors.

13 The first factor was the 2019 survey completed by MQO Research. The survey results showed  
14 that access to electric vehicle (“EV”) charging stations and concerns about reliability of range are  
15 among the primary barriers to EV adoption in Newfoundland and Labrador.<sup>1</sup>

16 The second factor was the recommendations from the 2020–2034 Conservation Potential Study  
17 (the “Study”).<sup>2</sup> The Study assessed charging infrastructure deployment under baseline, low and  
18 high investment scenarios.<sup>3</sup>

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<sup>1</sup> The primary barriers to EV adoption reported by Newfoundland and Labrador residents were access to charging and concerns about reliability of range and vehicle cost.

<sup>2</sup> “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.

<sup>3</sup> Under the baseline scenario, there is no further investment in fast charging infrastructure beyond the 14 fast chargers installed by Newfoundland and Labrador Hydro (“Hydro”). The low scenario assumes \$5 million investment in EV infrastructure and EV incentives. The high scenario assumes \$20 million investment in EV infrastructure and EV incentives. 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. 276 of 325, table E-49.

1 Table 1 summarizes the DCFC charging infrastructure deployment scenarios outlined in the  
 2 Study.<sup>4</sup>

**Table 1: Charging Infrastructure Deployment Scenarios**

Investment Scenario	By 2020		By 2025	
	Stations	Ports	Stations	Ports
Baseline	14	14	14	14
Low	16	16	21	21
High	22	22	42	84

3 The Study, in effect, recommends increasing the number of charging stations to ensure  
 4 sufficient geographical coverage and then considering an increase in the number of ports to  
 5 ensure adequate availability.<sup>5</sup>

6 The third factor was guidance from Natural Resources Canada (“NRCan”). NRCan recommends  
 7 an optimal distance between charging stations of 65 km.

8 Based on these factors, the Utilities have planned to have 45 charging stations with 45 charging  
 9 ports provincially by the end of 2022.<sup>6</sup>

10 Of the 45 charging stations, 42 will be located on the Island Interconnected System. The primary  
 11 purpose of this initial investment is to optimize the distribution of charging stations on the  
 12 Trans-Canada Highway and other highways across the province.<sup>7</sup> This approach is consistent  
 13 with the NRCan funding guidelines and addresses customer concerns of charging station access

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<sup>4</sup>“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. 276 of 325, table E-50.

<sup>5</sup> A charging port is the device that connects the charging station to the EV. The Study recommends increasing the number of charging ports per charging station beyond 2025 in both the low and high scenario. “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. 276 of 325, table E-50.

<sup>6</sup> Of the 45 planned charging stations by year end 2022, 14 have been installed, 19 are planned for 2021 and 12 are planned for 2022.

<sup>7</sup> The other provincial highways on the Island Interconnected System include: Argentia Access Road, Burin Peninsula Highway, Bonavista Peninsula Highway, Road to the Beaches, Road to the Shore East Side, Road to the Shore West Side, Road to the Isles, Bay d’Espoir Highway and the Viking Trail.

1 and range anxiety. For example, the average distance between the 42 charging stations located  
2 on the Island Interconnected System is estimated to be approximately 60 km.

3 Figure 1 provides the location of charging stations planned to be installed by the end of 2022 on  
4 the Island Interconnected System.

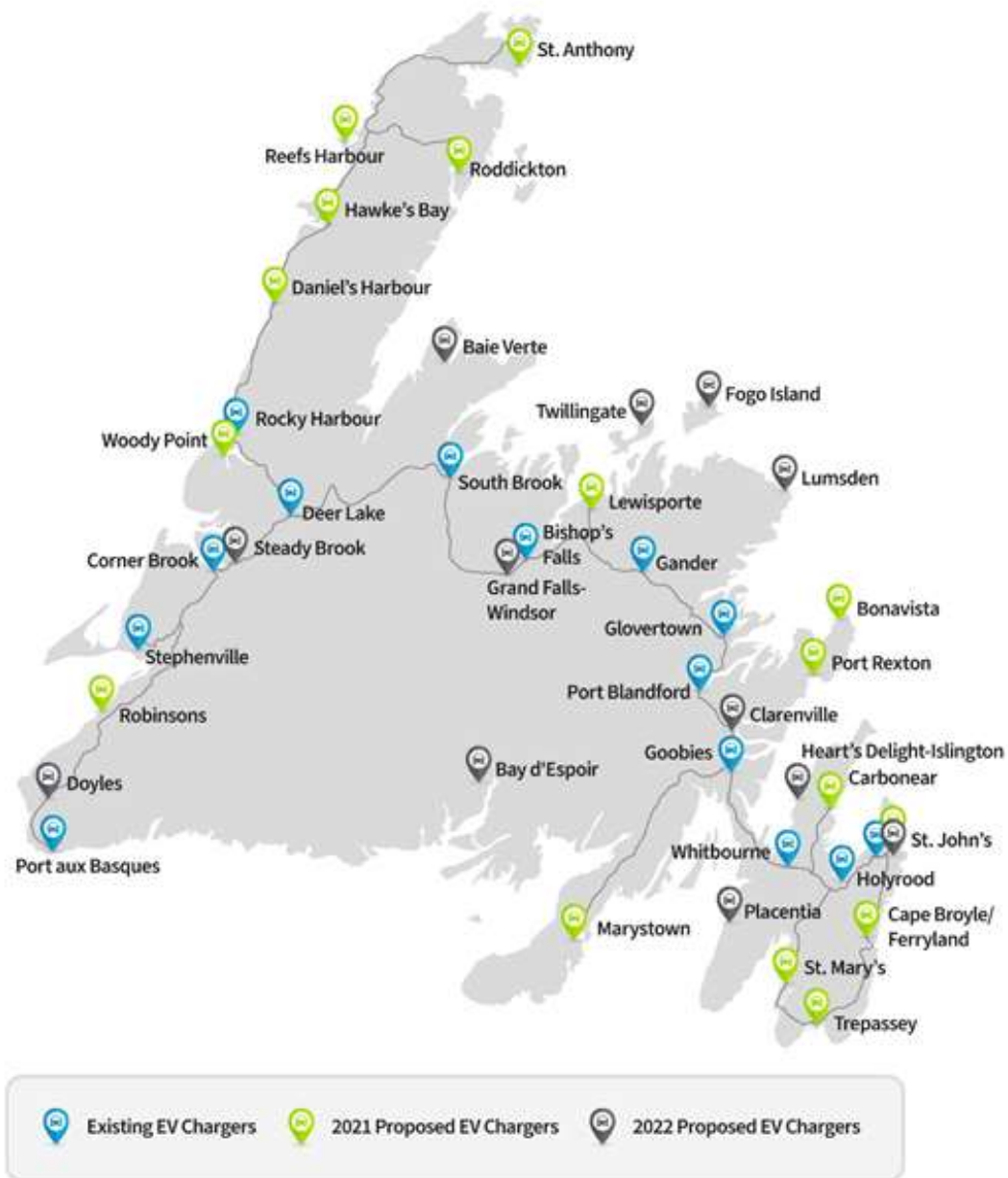


Figure 1: Charging Station Locations on the Island Interconnected System  
By Year End 2022

1           From 2023 to 2025, 12 charging ports are planned to be added to the Island Interconnected  
2           System.<sup>8</sup> It is expected that the 12 additional charging ports will be added to existing charging  
3           station locations based on usage data and customer wait times. Adding charging ports to  
4           existing locations after addressing distance gaps is consistent with both the NRCan guidelines  
5           and the DCFC deployment scenarios outlined in the Study.

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<sup>8</sup> Planned charging ports by year: 2023 – 3; 2024 – 5; and 2025 – 4.