Q. (Reference Application Clause 8) It is stated "*There are unique challenges associated with deploying DCFC infrastructure in Southern Labrador due to its reliance on remote diesel generation. To address the service gap while minimizing impact on the electrical system and rural deficit, Hydro intends to pair each of the proposed chargers in this region with solar generation and battery storage. This configuration is designed to allow charging to over 100 vehicle charges annually with minimal grid demand, necessary only for reliability.*"

a. Please quantify "over 100". Is it 101 to 120 or 150 or 200?
b. How many vehicle charges are possible weekly "with minimal grid demand"?
c. If, during summer time, 20 BEVs a week were to stop to charge at one of these locations, how many could be charged via solar/battery power and how many would rely on diesel generated electricity?
d. If 300 vehicles charges were sought at each of these locations over the course of a year and in a monthly pattern consistent with Chart 1, what would be the impact on their respective diesel systems?
e. Please provide Hydro's projected annual demand for charging sessions at these charging stations.
f. What portion of the total Southern Labrador project cost relates to the solar/battery storage installations and how much of this cost will be funded by government?
g. Please provide an analysis that compares the cost of the proposed solar/battery storage system to the alternative of running these stations with electricity generated by diesel.
h. What price would Hydro set for charging sessions at these locations? Would it be sufficient to cover all of Hydro's related costs?
i. How would investment in and operation of these charging stations affect the rural deficit?

A. a. Newfoundland and Labrador Hydro's ("Hydro") application seeks to install an approximately 8 kW solar array with each site in Southern Labrador. The exact amount of production will vary based on the exact location of these sites. Assuming a 12.5%

capacity factor, an 8 kW solar array would produce 8,760 kWh annually – enough energy for 135 charging sessions at 65 kWh each.[1]

b. Each charging site in Southern Labrador will have a grid connection not exceeding 40 kW. This demand is fixed, regardless of the number of electric vehicles ("EV") that charge in a single week. The number of weekly charges that are possible will depend on the type of vehicle, size of battery, starting and ending state of charge, and solar potential for a given week.

The site is designed to ensure that, on an annual basis, the energy supplied to EVs is less than or equal to solar production. In that circumstance, there is limited to no impact on the diesel system or the rural deficit.

c. Please refer to Hydro's response to part b) of this request for information.

d. Please refer to Hydro's responses to part c) of PUB-NLH-001 and PUB-NLH-002 of this proceeding. Hydro does not expect usage to exceed approximately 100 vehicles in the early years of in-service. If EV charging needs exceed solar generation throughout the life of the asset, Hydro will have the option to add more solar generation to better match the growth in EV charging in the region.

e. As outlined in part b), the demand is fixed, regardless of the number of EVs that charge in a single week. However, the two interconnected chargers nearest to the proposed isolated sites are located in Port Au Choix and Happy Valley-Goose Bay, and saw annual Direct Current Fast Chargers sessions of 103 and 84, respectively. Please refer to Hydro's responses to part c) of PUB-NLH-001 and PUB-NLH-002 of this proceeding for further information.

f. Please refer to Hydro's response to PUB-NLH-004 for the portion of the total Southern Labrador project cost that relates to the solar/battery storage installations, and PUB-NLH-005 for how much of this cost will be funded by the Government of Newfoundland and Labrador.

[1] The actual number of vehicle charges will vary with annual solar production, charging losses, and the quantity of energy for each charging session.

g. Hydro does not consider this to be a viable alternative. Increasing the quantity of fuel consumed at its diesel plants to serve EV chargers would increase the rural deficit and result in recovery from ratepayers (primarily on the Island). Hydro's application seeks approval of capital expenditures with no recovery sought from ratepayers at this time.

h. Please refer to Hydro's response to part c) of PUB-NLH-001 of this proceeding.

i. Please refer to Hydro's response to part b) of PUB-NLH-003 and part c) of PUB-NLH-001 of this proceeding.