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INFORMATION REQUEST BC HYDRO NO. 1

British Columbia Hydro and Power Authority, (BC Hydro)
BCUC Regulation of Electric Vehicle Charging Services

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A. MANDATE

- 1.0 **Reference: Mandate**
Exhibit C1-2, p. 15
Non-Traditional Services

BC Hydro acknowledges that an implication of this principle may be that ratepayers should not bear risks resulting from a public utility investing in non-traditional services like DC fast charging and that the Commission’s recent decisions underscore this concern.

- 1.1 As BC Hydro acknowledges that there may be some risks resulting from a public utility investing in non-traditional services like DC fast charging, where does BC Hydro derive its mandate to participate in providing DCFCs from?
 - 1.1.1 Does the mandate come from BC legislation or regulations?
 - 1.1.2 Does the mandate originate from other sources? If so, please specify.
- 1.2 Why should BC Hydro participate in providing non-traditional services such as DC fast charging when it may incur a financial risk to the ratepayer, not the taxpayer?
 - 1.2.1 Explain why it is necessary for the BC Hydro ratepayers to bear the financial risks rather than the taxpayers?

B. OVERVIEW

- 2.0 **Reference: Overview**
Exhibit C1-2, Section 2, pp. 2-4
Regulatory Regime

The existing regulatory regime may also present barriers to public utilities. BC Hydro is of the view that public utilities should be able to recover costs on the basis that installing fast charging stations will remove a key barrier to EV adoption and will deliver benefits to all ratepayers, including lowering greenhouse gases (GHG) and increasing utility revenue through additional electricity sales. BC [BCH C1-2, p. 4]

2.1 Does BC Hydro not rely on the Clean Energy Act and its amendment for installing DCFCs in its service area?

2.1.1 If not, why not? Please explain.

2.2 Please provide a legal opinion of the Clean Energy Act and its amendment as it applies to the provision DCFCs especially section 18 of the Clean Energy Act and sections 3 & 4 of the amendment (OIC 101).

Subject then to acceptance of the benefits to all ratepayers of developing the market for EV charging services in B.C., this Inquiry may provide evidence to allow the Commission to consider i) whether the principles that were established in the AES Inquiry ought to be applicable in the emerging marketplace for electric vehicle charging services, or ii) whether Commission recommendations on regulations that may modify those principles should be considered to allow for cost recovery of public utility investments in this market development. [BCH C1-2, p. 4]

2.3 In light of the Clean Energy Act and its amendment and in BC Hydro's opinion, is not the Commission bound to follow the Clean Energy Act and its amendment?

2.4 Does not section 18 of the Clean Energy Act allow for full cost recovery of public utility investments in providing DCFCs?

2.4.1 If not, please explain why not.

BC Hydro does not believe that private sector persons (not otherwise public utilities) who wish to resell electricity need to be regulated. Rather, the focus should be on eliminating this barrier, recognizing however that the Commission may want to retain some flexibility, such as a role to adjudicate customer complaints regarding service, for example. . [BCH C1-2, p. 3]

2.5 Does BC Hydro believe that all private sector persons capture by the definition in the Utilities Commission Act (the Act) of a public utility be granted an exemption that allows light-handed regulation (i.e. "on complaint") for any level of EV charging station?

2.6 Does BC Hydro agree that the BCUC has the obligation to regulate "hydrogen" used in fuel cells to power EVs?

2.7 Does BC Hydro agree that the BCUC has the obligation to regulate "compress natural gas" used for the production of light, heat, cold or power to or for the public or a corporation for compensation, such as powering motor vehicles as an alternative to using gasoline/diesel?

Municipalities have done so because they are exempt from being defined as a public utility. [C1-2, p.3]

2.1 In BC Hydro's opinion, is a municipality still exempt from the UCA if it owns or operates a DCFC station through its municipal corporation or wholly owned government business enterprise (GBE)?

C. EV CHARGING SERVICES IN B.C. AND BC HYDRO INVOLVEMENT

3.0 **Reference:** **Level 2 Charging**
Exhibit C1-2, Section 3.1, p. 5
Level 2 Public Charging

3.1 Of the over 1000 public charging stations, would any of these fall within the definition of a public utility in the Act?

4.0 **Reference:** **DCFC Stations**
Exhibit C1-2, Section 3.2, p. 6
DCFC

BC Hydro initiated the “Electric Vehicle Smart Infrastructure Project”, which included the deployment of 30 DCFC stations on a pilot basis. BC Hydro owns each of these 30 stations and leases them for a nominal amount to the respective station host/operator. and Station hosts/operators are responsible for the cost of electricity provided to the station (through, for example, BC Hydro’s Medium General Service tariff), and for the collection of any revenues from fees for vehicle charging. [BCH C1-2, p. 6]

4.1 Would any of these Station hosts/operators fall within the definition of a public utility in the Act?

4.1.1 If not, why not?

4.2 Are there any federal or provincial taxes payable on the energy sold similar to those on gasoline?

4.2.1 If not, what is the estimate loss of revenue to the BC government and the federal government?

4.3 Has the Medium General Service tariff been approved by the Commission to supply DCFCs?

4.3.1 If not, please explain BC Hydro choice of using this tariff.

Sites for the 30 stations under Phase I deployment were selected with the objective of extending the useful range of EVs by providing fast charging opportunities along highway corridors at intervals that would allow inter-city travel by EVs (e.g., Vancouver to Kamloops). Site selection for the Phase II deployment of 21 stations relied on a “gap analysis” prepared by the Fraser Basin Council. This study reviewed the Phase I sites and recommended potential “infill” locations along corridors (e.g., Horseshoe Bay, Britton Creek on the Coquihalla Highway) together with additional corridor locations (e.g., stations north of Nanaimo to Campbell River, Port Alberni, Ucluelet). [BCH C1-2, pp. 7-8]

4.4 Assuming the Phase I and Phase II deployment of DCFCs have taken the best possible sites for DCFC revenues; then what lucrative sites, in BC Hydro’s opinion, would remain available for private sector development?

5.0 **Reference: Future Involvement
Exhibit C1-2, Section 3.3, p. 8
Future Involvement by BC Hydro**

While in the longer term the private sector is expected to play a much larger role in DCFC charging market, the current financial context likely requires that governments and utilities continue to actively support the deployment of DCFC infrastructure. [BCH C1-2, p. 8]

5.1 As the public utilities are gaining control of the more lucrative DCFC sites, would not this action increase the amount of funding being requested from all levels of government before investing in any additional DCFC sites and create additional barriers for the private sector?

D. SCOPE A

6.0 **Reference: Competitive Environment
Exhibit C1-2, Section 4.1, pp. 8-9
Competitive or Natural Monopoly Service?**

First, in part due to generally low penetration of electric vehicles presently, there is relatively low utilization of DC fast charging stations and thus the costs of owning and operating a DC fast charging station are expected to exceed direct revenues received. Related, limited private sector investment and resulting low market penetration of EV charging services will further impede adoption of EVs and achieving higher utilization rates for charging services, creating additional lag in market development; [BCH C1-2, p. 9]

6.1 What is the estimated number of EVs within the BC Hydro service area for the lower mainland and southern Vancouver Island?

6.1.1 What is the estimated number of EVs within the remaining BC Hydro service area?

6.2 Is there a possibility that public utility involvement in DCFC charging will add more impediments to private sector investment in this market?

7.0 **Reference: Rate Design
Exhibit C1-2, Section 4.4, pp. 12-13
Reasonable Rates**

At this early stage of market development, an objective of rate setting may be to set the rate at a reasonable level to recover costs to the extent possible while not discouraging charging service utilization. [BCH C1-2, p. 12]

7.1 If the DCFCs are installed under the Clean Energy and full cost recovery must occur in each fiscal year, is BC Hydro installing the DCFCs under the Clean Energy Act or some other mandate? Please explain.

7.2 Will the equivalent federal and provincial taxes be included in the rates?

7.2.1 If not, why not?

7.3 Why does BC Hydro consider the Medium General Service tariff a reasonable rate for DCFC charging to recover BC Hydro's costs?

8.0 **Reference: Charging Station Service Rate
Exhibit C1-2, Section 4.5, p. 14
General Service Rates**

For customers who install a stand-alone fast charging station, BC Hydro charges them under general service rates. [BCH C1-2, p. 14]

8.1 As there are four BC Hydro General Service Rates, please specify which rate is being applied to DCFCs?

8.1.1 Based on the demand load, please provide rationale for applying the selected rate.

9.0 **Reference: Public Utility DCFC Stations
Exhibit C1-2, Section 4.6, pp. 14-15
Non-Regulated vs Regulated**

BC Hydro appreciates that this question concerns whether it is appropriate and necessary to segregate investments in non-traditional utility services into a non-regulated entity. We discuss above that DC fast charging is not a true monopoly service, and thus the question would suggest therefore that these activities may be more appropriately operated through a non-regulated entity. [BCH C1-2, p. 14]

and

However, BC Hydro is of the view that utilities should be able to include EV charging stations in their regulated rate base and be able to recover the capital and operating costs of these stations in rates. [BCH C1-2, p. 14]

9.1 If DC fast charging is not a true monopoly service and is a non-traditional service, then this would suggest therefore that these activities may be more appropriately operated through a non-regulated entity; and does BC Hydro have a non-regulated entity to provide this service?

9.1.1 If BC Hydro has a non-regulated business, would it be prepared to use the non-regulated business to provide DCFCs?

10.0 **Reference: Cross Subsidization**
Exhibit C1-2, Section 4.7 p. 15
Regulated Business

Including fast charging service in a utility's rate base could result in cross subsidization and unduly discriminatory rates when viewed with a narrow lens.

As discussed, BC Hydro raises the possibility that those principles could be revisited on the basis of the evidence gained through this Inquiry, including in respect of the benefits of public utilities such as BC Hydro operating in this market as well as the magnitude of the costs being considered. [BCH C1-2, p. 15]

10.1 If full cost recovery is achieved in each fiscal year (Clean Energy Act section 18), what is the risk of cross subsidization?

10.1.1 If there is a risk of cross subsidization, please explain the nature of the of cross subsidization and the amount of risk (in dollars) that may occur.