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May 15, 2018

Ms. Diane Roy
Vice President, Regulatory Affairs
FortisBC Inc.
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Dear Ms. Roy:

Re: BCUC Inquiry into the Regulation of Electric Vehicle Charging Service,
Project No.1598941
BCSEA and SCBC Information Request to FortisBC Inc.

Further to your filing of written evidence in this proceeding, enclosed please find Information Request No. 1 by BC Sustainable Energy Association and Sierra Club BC to FortisBC Inc. Please file your responses in accordance with the regulatory timetable.

If you have any questions about the meaning of these information requests, please do not hesitate to contact the undersigned.

Yours truly,

William J. Andrews



Barrister & Solicitor

Encl.

REQUESTOR NAME: **BC Sustainable Energy Association and Sierra Club BC**

INFORMATION REQUEST ROUND NO: 1

TO: **FortisBC Inc. (FBC)**

DATE: **May 15, 2018**

PROJECT NO: **1598941**

APPLICATION NAME: **British Columbia Utilities Commission Inquiry into the Regulation of Electric Vehicle Charging Service**

1.0 Topic: AES Inquiry principles

Reference: Exhibit A2, p.1

“In 2012, the Commission issued a Report on the Inquiry into the Offering of Products and Services in Alternative Energy Solutions and Other New Initiatives (AES Report)¹ for regulated public utilities who provide products and services outside traditional utility activities. Principles were established in that inquiry in which the Commission would only regulate where necessary, and regulation should not impede competitive markets. The Commission intends to adopt these key principles in this Inquiry.”

- 1.1 Would FBC agree that the context of the EV charging inquiry is somewhat different than the context of the AES inquiry in that the underlying need for EV charging service by EV drivers is very small and is expected to quickly grow substantially, whereas the need for thermal energy services (e.g., space and water heating within buildings) is already a fully developed existing need and what was addressed in the AES Inquiry was new methods of meeting the need?
- 1.2 Would FBC agree that the EV charging inquiry differs from the AES Inquiry in that in the EV charging situation there is arguably a strong public interest in facilitating and encouraging the growth of overall demand for the EV charging services, whereas in the AES Inquiry there was no corresponding public interest objective in increasing the overall demand for, e.g., space and water heating within buildings?
- 1.3 Would FBC agree that the Commission’s AES Inquiry Report does not directly address how regulatory principles ought to apply where growing the end use of the energy, e.g., charging EVs, is itself a public interest objective and there are insufficient existing non-regulated services to meet the need?

2.0 Topic: Emerging market

Reference: Exhibit C12-2, FBC Evidence, p.11

“EV charging and the adoption of EVs can be characterized as being in an emerging market that is closely connected to public utility activity by virtue of using electricity from the grids of public utilities such as FBC and BC Hydro.

The market is emerging (and not competitive) because:

- There are financial barriers to entities entering the market due to demand being low and therefore infrastructure is not cost effective, even when considering subsidies and incentives from government and other agencies;

- There are few buyers and sellers; and
- The few customers have limited choice in who they buy from.

“To promote the development and growth of the deployment of EVs and EV charging infrastructure in BC, electric utilities are playing an important role. This is evidenced by the current ownership of existing stations in the Province, and in particular the ownership of Level 3 charging stations. Table 3-1 below shows that of the Level 3 or DCFC stations in the Province, 74.5 percent are owned by a Utility and 19.6 percent owned by Tesla. After removing Tesla’s stations (which can only be utilized by Tesla vehicles), virtually all stations are owned by utilities.”

- 2.1 Does FBC foresee a future transition from DCFC stations in B.C. being generally provided by either public utilities or Tesla to a situation in which DCFC stations are also provided by other parties?
- 2.2 If so, in FBC’s view, would one approach to the transition be for the public utility to play a larger role in providing ‘make-ready’ service and the private sector to play a larger role in the public-facing component?

3.0 Topic: Revenue grade DC metering
Reference: Exhibit C12-2, pp.18-19

“Customer Pricing Options

The possible rate structures for EV charging could include time-based, energy-based, demand based or customer-based components. However, the energy-based and demand-based options are limited at this time, particularly since FBC is not aware of any station vendors that have Measurement Canada accreditation for metering internal to EV charging stations. Once an accredited Measurement Canada meter becomes available, an energy-based or demand-based rate, possibly in combination with a time-based rate, would be a preferred solution. As described in an information bulletin issued by Measurement Canada (provided as Appendix 6), charging stations using an energy or demand based rate must use a meter that is approved by Measurement Canada: [...]

With this background, FBC believes that the time-based rate structure is the most reasonable and practical option at this time. For time-based rates, the charging fee is based on the length of time a station is occupied (i.e. the time connected to the charger). Charging a rate for the amount of time the space is occupied generally encourages turnover and increases availability so that charging stations are used by those who need them for EV charging and not simply as parking spaces. Hourly fees are simple to understand by customers, and mirror existing rate structures for parking meters. However, time-based rates may result in more costly charging on an energy consumed-basis for vehicles with a lower charging capacity.”

- 3.1 If not addressed in FBC’s responses to the Commission’s questions about the absence of a process for certification of revenue grade DC metering, is there any ‘work around’ that would enable the operator of a DCFC service in B.C. to charge customers on the basis of kilowatt-hours pending resolution of the issue through Measurement Canada?

3.2 To FBC’s knowledge, do any DCFC stations in other provinces sell charging service by the kWh? If so, how do they deal with the Measurement Canada requirement for a revenue grade DC meter?

4.0 Topic: Market Share and Growth

Reference: Exhibit C12-2, FBC evidence, Appendix 1, 2016 Powertech Labs EV Technology and Market Overview:

Table 1: BC and Lower Mainland EV sales estimates based on Navigant Research forecast for Canadian EV sales through to 2024, p.17, pdf p.46;

Table 2: BC and Lower Mainland EV sales estimates based on SFU forecast for EV market share in BC, p.18, pdf p.47

Table 1: BC and Lower Mainland EV sales estimates based on Navigant Research forecast for Canadian EV sales through to 2024.

Year 2024	Canada		BC		Lower Mainland	
	Low	High	Low	High	Low	High
Annual EV sales	74,000	91,000	12,000	14,500	8,300	10,000
Market Share	3.7%	4.6%	5.4%	6.6%	6.3%	7.8%
Cumulative EV sales	350,000	420,000	56,000	67,000	39,000	47,000
Percent of Fleet	1.8%	2.1%	2.5%	3.1%	3.0%	3.6%

Numbers in bold are directly pulled from Navigant Research’s forecast, all other values are derived.

Table 2: BC and Lower Mainland EV sales estimates based on SFU forecast for EV market share in BC.

Year		BC		Lower Mainland	
		Low	High	Low	High
2024	Annual EV sales	13,000	35,000	9,300	25,000
	Market Share	6%	16%	7.1%	19%
	Cumulative EV sales	56,000	120,000	40,000	85,000
	Percent of Fleet	2.6%	5.5%	3.0%	6.4%
2030	Annual EV sales	44,000	50,000	30,000	35,000
	Market Share	20%	23%	24%	27%
	Cumulative EV sales	224,000	380,000	160,000	270,000
	Percent of Fleet	10%	17%	12%	20%

Numbers in bold are directly pulled from SFU’s forecast, all other values are derived.

4.1 Does FBC expect that 2024 and 2030 EV sales within its service territory will approximate, *pro rata*, the 2024 and 2030 EV sales estimates made by Powertech Labs based on forecasts from Navigant Research and SFU researchers?

5.0 Topic: Proponents of DCFC infrastructure

Reference: Exhibit C12-2, FBC Evidence, pp.2, 13

“Additional EV charging infrastructure is important in advancing the adoption of EVs in the province. Without adequate charging infrastructure deployed throughout the province, it is unlikely that the progression of EVs market share will progress quickly.” [Exhibit C12-2, p.2, pdf p.7]

“Achieving BC’s energy objectives will require continued cooperation and collaboration between utilities and municipalities, but must also include businesses who so far have largely been limited to only supporting Level 2 charging infrastructure, primarily due to the significant costs involved in installing and operating Level 3 charging stations. Despite this, and as demonstrated by Tesla’s supercharger siting model, businesses can play a critical role in facilitating cost-effective siting options for both Level 2 and Level 3 charging sites, the continued deployment of which are critical to accelerating EV adoption in support of BC’s energy objectives.” [p.13, underline added]

- 5.1 With reference to the Tesla model of EV charging stations aimed at providing service to owners of Tesla EVs, is FBC aware of any other EV manufacturers who are participating in developing EV charging networks?
- 5.2 Apart from the Tesla EV charging network, is FBC aware of any business, other than BC Hydro and FBC, facilitating the development of a network of Level 3 charging stations in B.C.?
- 5.3 In FBC’s view, is the Tesla DCFC network sufficient to achieve the additional charging infrastructure that FBC says is necessary to allow the EV market share to progress quickly in B.C.? What is FBC’s understanding of the availability of the Tesla charging network to drivers of non-Tesla EVs?
- 5.4 Setting aside Tesla EVs and the Tesla charging network, if additional DCFC infrastructure is to be deployed in B.C. to the extent necessary to allow the non-Tesla EV market share to progress quickly, is FBC aware of any feasible alternative to BC Hydro and FBC as the proponents of DCFC infrastructure development?

6.0 Topic: MURBs
Reference: Exhibit C19-2, MEMPR Evidence, p.10

“...there are well-documented hurdles for residents of multi-unit residential buildings to install and access charging facilities in their buildings.”

- 6.1 What measures is FBC taking to help overcome the barriers to the provision of EV charging infrastructure in strata corporation buildings and multiple unit rental buildings.