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July 12, 2021

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VIA ELECTRONIC DDS

83862/709

British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, BC V6Z 2N3

Attention: Patrick Wruck, Commission Secretary

Re: British Columbia Hydro and Power Authority – Public Electric Vehicle Fast Charging Rate Application – Project No. 1599190 ("Proceeding")
Suncor Energy Inc. Questions in Advance of Streamlined Review Process on British Columbia Hydro and Power Authority ("BC Hydro") Evidence

Dear Mr. Wruck:

We act on behalf of Suncor Energy Inc. ("Suncor") in connection with the above noted Proceeding. On June 4, 2021, the British Columbia Utilities Commission issued Order G-176-21 establishing a regulatory timetable for the Proceeding.[1] Please find enclosed Suncor's questions in advance of the Streamlined Review Process ("SRP") on BC Hydro's evidence for its response to the SRP.

Should you have any questions or require any additional information, please do not hesitate to contact the undersigned.

Sincerely,

Terri-Lee Oleniuk

cc. Chris Hustwick, GM Legal Affairs Downstream Canada, Suncor Energy

[1] Exhibit A-7, BCUC Order G-176-21, June 4, 2021.

SUBMISSION ON BEHALF OF

SUNCOR ENERGY INC.
("SUNCOR")

BRITISH COLUMBIA UTILITIES COMMISSION ("BCUC")
BRITISH COLUMBIA HYDRO AND POWER AUTHORITY ("BC HYDRO")
PUBLIC ELECTRIC VEHICLE (EV) FAST CHARGING RATE APPLICATION

SUNCOR QUESTIONS IN ADVANCE OF STREAMLINED REVIEW PROCESS ON BC HYDRO'S EVIDENCE

JULY 12, 2021

1.0 Issue: Demand Charges

Reference: Exhibit B-1, BC Hydro Application, page 27 (PDF page 32) and Section 4.2 Cost Recovery Calculations
Exhibit C20-4, Suncor Intervener Evidence, PDF page 9, paragraph 22

BC Hydro states at page 27 (PDF page 32) of its Application:

> "Other fast charging operators (i.e., exempt utilities) in BC Hydro's service territory take General Service and are charged under the applicable General Service Rate Schedule based on their electricity Demand. Adopting General Service rates as the basis for the Proposed Rates in the Application ensures that BC Hydro's rate for fast charging service is not lower than the Energy and Demand rates BC Hydro charges to other fast charging station operators."

The cost recovery calculations provided by BC Hydro in Section 4.2 of the Application apply demand charges under the Medium General Service (MGS) Rate Schedule.

At paragraph 22 of Suncor's Intervener Evidence, it confirms that "the demand charges categorized as 'Large General Service' and assessed from BC Hydro constitutes over 80% of Suncor's basic utility costs as compared to other electricity charges, energy charges, power factors and taxes".

1.1 Does BC Hydro agree that demand charges constitute the majority of electricity charges to EV consumers?

1.2 What is the average ratio of demand charges vs. electricity cost for BC Hydro's EV fast charging stations?

1.3 Based on BC Hydro's experience as an EV fast charging station operator, would the elimination of demand charges currently assessed on EV fast charging stations reasonably be expected to result in the following outcomes:

1.3.1 Encourage greater public and private investment in EV fast charging stations?

1.3.2 Reduce overall cost to EV drivers?

1.3.3 Facilitate Clean BC's goal to accelerate the adoption of EVs in British Columbia?

1.4 Does BC Hydro agree that existing demand charges risk limiting future infrastructure investment to <150kW (for a total system which may include multiple posts) in order remain within the medium general service?

1.4.1 If yes, does BC Hydro believe this is in the best interests of EV adoption and driver experience? Please provide a detailed explanation.

2.0 Issue: Siting Criteria

Reference: Exhibit B-1, BC Hydro Application, page 2 (PDF page 7)

BC Hydro confirms at page 2 (PDF page 7) of its Application that "BC Hydro will have approximately 96 fast charging stations in operation by the end of fiscal 2021 (i.e., March 31, 2021)".

2.1 What objective criteria or metric does BC Hydro use to site the locations of its EV fast chargers and why?

3.0 Issue: Consumer knowledge, experience and utilization

Reference: Exhibit B-1, BC Hydro Application, pages 10 to 11 (PDF page 15 to 16)

At page 10 of its Application, BC Hydro states:

> "The time required to charge an electric vehicle is dependent on the vehicle battery size, battery charge level when fast charging commences, and the outdoor air temperature. A 50 kW fast charging station can charge an electric vehicle to 80 per cent within 30 to 40 minutes, depending on the size of the battery and how depleted the battery is when charging commences. A 25 kW charging station can take up to twice as long to charge as a 50 kW station, depending on the starting state of charge and the electric vehicle make and model. A 100 kW fast charging station may not double the charging speed of a 50 kW station unless the vehicle is capable of being charged at this higher power level."

On the following page 11, BC Hydro confirms that "[t]he majority of BC Hydro's fast charging stations have a nameplate capacity of 50 kW, though BC Hydro will be providing 25 kW and 100 kW stations in some locations."

3.1 Given the variation in charging experience due to EV capability and other considerations, does BC Hydro believe that an EV driver will differentiate the total cost of charging when comparing 50kW, 100kW, and greater levels of charging to make an informed decision on their best option? Please provide details including evidence and data in support.

3.2 Consistent with the goals of Clean BC, does BC Hydro believe that either a single post (single charge chord), 50kW or 100kW model will sustain the necessary increase in consumer demand required for on-the-go charging, or would such an approach risk causing backlogs at charging stations? Please explain fully.

3.3 What is BC Hydro's rationale for not installing EV fast chargers with more than a single charger post as opposed to multiple charger post offerings to reduced overhead capital (e.g., construction, utility upgrade, etc.)?

3.4 To ensure consumer fairness and equity, would BC Hydro support billing by the kWh instead of per minute, or some combination therein for EV charging? Please explain fully.

3.5 Would BC Hydro support dynamic pricing models such that EV fast charging station operators can bill by the kWh and transition to per minute billing when a vehicle's charging capacity begins to peak or during congestion times? Please explain fully.

4.0 Issue: Monitoring and Evaluation

Reference: Exhibit B-1, BC Hydro Application, page 36 (PDF page 41)

BC Hydro states at page 36 (PDF page 41) of its Application:

> "BC Hydro proposes to monitor several aspects of the fast charging service, including station utilization (at different power levels), revenue collected under the applicable Rate Schedules, costs incurred, and customer feedback, and provide to the BCUC by March 31, 2024 an evaluation report and recommendations for fast charging service rates going forward."

4.1 Would BC Hydro support greater transparency to BC ratepayers by providing an annual per site breakdown of their EV fast charging stations utilization and costs including permitting fees, utility upgrades, electricity, demand, maintenance, upgrades, software fees, license fees, network fees and percentage rate of return on capital deployed compared against their total capital investment?

5.0 Issue: Unfair competition, level playing field, and monopoly advantage

Reference: Exhibit B-1, BC Hydro Application, page 26 (PDF page 31)
Exhibit B-1, BC Hydro Application, Appendix D (PDF page 79)

On page 25 (PDF page 31) of the Application, BC Hydro states:

> "[…] To encourage station utilization while maintaining a level playing field with other fast charging station operators, the Proposed Rates are

designed to align with prices of other operators, to fall within the range of prices that research indicates customers are willing to pay, and to collect sufficient revenue to recover at least the cost of electricity based on BC Hydro's General Service rate schedules as further described below. Higher rates would reduce initial station utilization and BC Hydro expects this would reduce revenue recovery.

While BC Hydro presents the full cost of service-based rate under various utilization scenarios in section 4.2 below, at this time we do not believe that the station utilization is high enough to make such a rate feasible. Our Proposed Rates recover at least the cost of electricity (Energy and Demand) but are not expected to recover all of the station capital and maintenance costs at this time. Costs not recovered by the Proposed Rates will be recovered from all ratepayers."

In Appendix D of the Application (at PDF page 79), BC Hydro presents the results of its EV Charging Stations Survey and lists "On-site amenities (e.g. food / drinks)" under "Key attributes in the design of future BC Hydro stations".

5.1 BC Hydro's proposed rates will cross-subsidize the costs of its EV charging infrastructure by burdening all ratepayers to pay costs associated with infrastructure and services for the benefit of a much smaller demographic of EV users. Why did BC Hydro approve capital at this level of expansion knowing that costs could not be recovered at the point of sale?

5.2 Does BC Hydro's proposal to recover costs from ratepayers help ensure the playing field remains as level as possible and exempt utility investments are not crowded out? Please explain fully.

5.3 Did BC Hydro conduct any independent research or consult with private EV station operators to confirm that current rates being charged by exempt utilities such as Tesla and Petro Canada are sufficient to cover all station capital and maintenance costs or, at minimum, the cost of electricity?

5.4 Please explain BC Hydro's plans to provide on-site amenities as a key attribute in the design of future BC Hydro EV charging stations, including a description of the types of amenities to be offered.