

July 12 2021

British Columbia Utilities Commission
6th Floor – 900 Howe Street
Vancouver, BC V6Z 2V3

Attention: Patrick Wruck, Commission Secretary

RE: BRITISH COLUMBIA HYDRO AND POWER AUTHORITY – PUBLIC ELECTRIC VEHICLE FAST CHARGING RATE APPLICATION – PROJECT NO. 1599190

Please find attached ChargePoint's questions to BC Hydro in advance of the Streamlined Review Process (SRP). Please contact me if you have any questions.

Respectfully,

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BRITISH COLUMBIA HYDRO AND POWER AUTHORITY – PUBLIC ELECTRIC VEHICLE FAST CHARGING RATE APPLICATION – PROJECT NO. 1599190

**CHARGE POINT
SRP QUESTIONS
TO BRITISH COLUMBIA HYDRO AND POWER AUTHORITY (BC HYDRO)**

July 12th 2021

Reference: Rate Application, Exhibit B-1

1. Support for EV adoption and Clean BC Greenhouse Gas Reduction goals

BC Hydro notes in its workshop associated with this rate case that BC Hydro is positioned to help support the provinces greenhouse gas (“GHG”) reduction goals and support customers switch to electric vehicles (“EVs”).¹ Both reducing GHG emissions and increasing EV adoption reflect the goals outlined the in CleanBC² and the ZEV Act³.

- 1.1. Does BC Hydro agree that supporting EV adoption and increasing the number of EVs on the road supports the government’s CleanBC and GHG reduction goals?
- 1.2. Does BC Hydro agree that deployment of fast charging infrastructure in BC by any party supports the adoption of EVs in BC?
- 1.3. Does BC Hydro agree that significant investment in fast charging is needed to meet the government’s CleanBC goals and ZEV Act targets?
- 1.4. Does BC Hydro agree that investment from the private sector will be important in supporting the government’s CleanBC goals and ZEV Act targets? Please explain why or why not.
- 1.5. Do BC Hydro’s Fleet Electrification rates⁴ support and encourage fleets switching to EVs? Please explain why or why not.
- 1.6. Are BC Hydro’s rates to EV drivers for the fast charging stations it owns and operates designed to support EV adoption? Please explain why or why not.

2. Station Utilization and Rates

- 2.1. Does BC Hydro agree that it is challenging to recover all capital and operating costs, even with rebates, from drivers when fast charging stations have low utilization rates? Please explain why or why not?
- 2.2. Does BC Hydro agree that it is challenging to recover all operating costs from drivers when fast charging stations have low utilization rates?
- 2.3. Can BC Hydro confirm that its fast charging rates were not set with the intention of recovering all capital and operating costs?
 - 2.3.1. Can BC Hydro confirm that consideration for station utilization was a part of this decision?

¹See Exhibit B-1, p.102/185 (Appendix E).

² BC Government, *CleanBC*, <https://cleanbc.gov.bc.ca/>.

³ BC Government, *Zero-Emission Vehicle Act*, <https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/transportation-energies/clean-transportation-policies-programs/zero-emission-vehicles-act>.

⁴ British Columbia Hydro and Power Authority Fleet Electrification Rate Application ~ Project No. 1599032, Exhibit B-1, page 2.

2.3.2. Can BC Hydro confirm that setting rates to recover all capital and operating costs – as outlined in Scenario 3 below and in Appendix E of Exhibit B-1 – would discourage utilization⁵?

Illustrative Rate model outcomes at 50kW

| Utilization rate | Scenario 1 | Scenario 2 | Scenario 3 | Comments |
|------------------|--------------------------|--|--|---|
| | Electricity supply costs | Electricity supply + station operating costs | Electricity supply + station operating + capital costs | |
| | (\$/min) | (\$/min) | (\$/min) | |
| 3% | \$0.25 | \$0.90 | \$1.30 | <ul style="list-style-type: none"> A 3 to 5% utilization rate aligns with published market studies Comparable service providers charge 20 to 30 cents/minute BC Hydro customers reported a willingness to pay 17-20 cents/minute |
| 5% | \$0.17 | \$0.57 | \$0.81 | |
| 10% | \$0.11 | \$0.31 | \$0.43 | |
| 15% | \$0.09 | \$0.23 | \$0.31 | |
| 20% | \$0.07 | \$0.18 | \$0.24 | |

- 2.4. Does BC Hydro agree that internal combustion vehicle drivers are price sensitive, largely choosing gasoline station locations based on price? If not, please explain why not.
- 2.5. Does BC Hydro agree that EV drivers are more likely to use fast charging stations with low charging prices?
- 2.6. Does BC Hydro agree that EV drivers are more likely to choose fast charging stations with lower prices when there are other stations with higher prices located in close proximity?
- 2.7. Does BC Hydro agree that lower charging prices attract more EV drivers overall?
- 2.8. Does BC Hydro agree that station utilization is a key factor in fast charging investment decisions? Please explain why or why not.
- 2.9. Are BC Hydro's fast charging rates designed to encourage EV adoption? Please explain why or why not.
- 2.10. Are BC Hydro's fast charging rates designed to attract EV drivers away from other operators' charging facilities? Please explain why or why not.
- 2.11. Does BC Hydro agree that below-cost fast charging rates offered by non-exempt utilities is a disincentive for exempt utilities to invest in fast charging infrastructure? Why or why not?

3. Demand Charges

- 3.1. Can BC Hydro confirm that its Medium General Service ("MGS") and Large General Service ("LGS") commercial rates were not designed with the EV charging use case in mind?
- 3.2. As noted in Tesla's, Electrify Canada's, ChargePoint's and Suncor's letters of comment and submissions in this rate case, demand charges can represent a significant portion of costs and revenue. For example, in Tesla's letter of comment in this proceeding⁶, Tesla gave the following example of:

⁵ See Exhibit B-1, p.127/185 (Appendix E).

⁶ Tesla Motors Canada letter of comment, Exhibit E-141.

Appendix 1: illustrative example of lower utilization charging stations using BC's current rate structure are impacted by demand charges without a special opt-in EV charging rate.

| | Scenario 1 | Scenario 2 | Scenario 3 |
|-----------------------------------|-------------|-------------|-------------|
| Demand Charge (kW) | \$ 12.2800 | \$ 12.2800 | \$ 12.2800 |
| Energy Charge (kWh) | \$ 0.0603 | \$ 0.0603 | \$ 0.0603 |
| Peak monthly demand (kW) | 250 | 250 | 400 |
| Energy per session (kWh) | 35 | 35 | 35 |
| Monthly charge sessions | 100 | 389 | 389 |
| Monthly Demand Cost | \$ 3,070.00 | \$ 3,070.00 | \$ 4,912.00 |
| Monthly Energy Cost | \$ 211.05 | \$ 820.98 | \$ 820.98 |
| Total Monthly Cost | \$ 3,281.05 | \$ 3,890.98 | \$ 5,732.98 |
| Cost per charge session | \$ 32.81 | \$ 10.00 | \$ 14.74 |
| Demand as % of total monthly cost | 94% | 79% | 86% |

Further, Suncor's evidence has identified that demand charges associated with the LGS rate could be over 80% of Suncor's basic utility costs at its EV charging stations.

Would BC Hydro agree that in both of these examples, demand charges represent a significant portion of operational costs?

- 3.3. Would BC Hydro agree this issue of disproportionately high demand charges is exacerbated at lower utilization levels? Please explain why or why not?
- 3.4. Can BC Hydro confirm that the Fleet Electrification Rates it recently introduced were designed with the EV charging use case in mind? Please explain why or why not?
 - 3.4.1. Can BC Hydro confirm these rates were designed to support investment in charging and uptake of EVs? Please explain why or why not?
- 3.5. In BC Hydro's research for the Fleet Electrification rate they did a jurisdictional scan of demand charges in utilities across North America⁷. Can BC Hydro confirm the majority of rates reviewed in its jurisdiction scan reflected rates that were either specific to public fast charging or the fast charging use case in general?
- 3.6. Does BC Hydro agree that barriers to investment in fast charging will inhibit the buildout for charging stations?
- 3.7. Does BC Hydro agree that demand charges can be a barrier to investment in fast charging stations?
- 3.8. Does BC Hydro agree that removing barriers to investment in fast charging stations would help spur EV charging deployment and help accelerate EV adoption in the province?

⁷ British Columbia Hydro and Power Authority Fleet Electrification Rate Application ~ Project No. 1599032, Exhibit B-1, p. 20.