



January 28, 2019

BY EMAIL: Commission.secretary@bcuc.com

British Columbia Utilities Commission ("BCUC")

Suite 410, 900 Howe Street

Vancouver, BC Canada V6Z 2N3

Attention: Commission Secretary - Mr. Patrick Wruck

RE: The City of Vancouver's Submission to the British Columbia Utilities Commission "Inquiry into the Regulation of Electric Vehicle Charging Service" (the "Inquiry") – Phase 2 ("Phase 2")

The City of Vancouver (the "City") makes the following submissions in response to the questions raised by the BCUC in Order G-231-18 in Phase 2 of the Inquiry.

Vancouver City Council recently recognized that a global state of climate emergency that constitutes a crisis for Vancouver including costs related to more extreme weather events, air quality deterioration and sea level rise. City staff are presently identifying measures that can be taken to accelerate mitigation and adaptation to the climate crisis, in line with achieving the significant emissions reductions that the Intergovernmental Panel on Climate Change states are required to limit global warming to 1.5°C.

While many of the responses below were previously submitted to the BCUC during various parts of Phase 1 of the Inquiry, the climate emergency and the recently released Clean BC plan have changed the City's perspectives on some issues that we responded to during Phase 1 of the Inquiry.

An emergency of the scale that climate change represents warrants strong, decisive actions. The overarching goals of policies that result from this Inquiry should, in the view of City staff, result in maximizing access to electric vehicle charging infrastructure so as to stimulate the

fastest possible transition to zero emissions transportation. As such, while free market principles should be maintained where possible, they should not take precedence over actions that would accelerate this transition to the greatest extent possible. Furthermore, issues relating to lifecycle costs for charging infrastructure should be balanced relative to the long-run costs of climate change.

The City submits responses to the BCUC's questions 1, 2, 9, 10, 11, 12, and 14 as set out in Appendix A to Order G-231-18:

1. *Can both regulatory models – little or no regulation for those exempt public utilities and the participation of non-exempt utilities – co-exist? In the absence of price regulation, how can EV charging providers that are not otherwise public utilities (which would be exempt from regulation in accordance with the Panel's recommendation) be protected from being undercut by non-exempt public utilities? Should non-exempt public utilities be restricted to participate only in remote geographical locations that are currently uneconomical for exempt EV charging providers to serve?*
 - a) The City's overarching goal is to see the EV and EV charging market expand in line with the City's and the Province's climate change objectives, and in as economically efficient manner as possible. The City supports a robust and competitive market with a diverse range of EV charging services and operators to give EV owners competitive options.
 - b) The City sees a role for traditional "non-exempt" electric utilities as EV charging service providers in this market and thinks that role can coexist with the entry and growth of other competitive participants in the market.
 - c) Areas of importance for non-exempt utilities should include, but not be limited to, ensuring that EV charging infrastructure is installed in remote geographic areas and in low income communities that are unlikely to be well-served by a competitive market in the near term.
2. *If the provision of EV charging is exempt from regulation, is there any justification for non-exempt public utilities to provide EV charging services? If the role of non-exempt public utilities is to kick start the market, how can the BCUC determine when the kick start is no longer needed? What is the role of those utilities once that kick start is completed? If there are stranded assets at that time how should they be dealt with?*
 - a) The City believes that non-exempt utilities are critical to the creation of an effective province-wide charging network. It is unlikely that private investment will occur rapidly enough to align with the Province's climate change objectives if left solely to market forces.
 - b) Furthermore, the transition to electric vehicles relies on the network effect of charging infrastructure that is as widely available as conventional fossil fuel

infrastructure. Concentration of charging infrastructure only in areas where a competitive market exists will not meet the needs of the public.

- c) While beyond the mandate of the BCUC, we see value in the provincial government offering guidance on the density of public charging that will be needed to support the province's climate change and EV objectives.
 - d) Any guidance on station density and availability should account for the:
 - i. different needs in rural and urban areas and for longer driving distances; and
 - ii. growing network of home and workplace charging stations that will likely be the predominant mode of charging for most users.
 - e) The Province, as part of the Clean BC plan, has created a Zero Emissions Vehicle standard that will require an increasing market share for electric vehicles over time.
 - f) As a result of the Zero Emissions Vehicle standard, the City considers the risk of stranded electric vehicle charging assets to be very low.
9. *Should non-exempt public utilities be provided the same exemptions in regard to EV charging services as are other EV charging market participants? This includes exemption from Part 3 of the UCA, with similar retentions of certain sections by the BCUC.*
- a. Where the market segment is competitive, the BCUC should forbear from regulation and let the market set the terms and price for service. This approach will allow for flexibility and responsiveness in the service offerings.
 - b. For market segments where competitive alternatives are constrained, the traditional cost of service model is a reasonable proxy for a competitive model. The BCUC could establish this traditional approach as the default approach since it has been proven effective in setting just and reasonable rates for public utilities in a variety of situations for many years. The BCUC should also leave open the possibility of other pricing options that may be proposed as an alternative to the traditional cost of service model default position. The goal should be to allow innovation and foster greater adoption to support the growth of the market.
 - c. For example, the City has chosen to set time-based rates to keep them simple, and aligned with our parking rates and support the City's transportation demand management needs. We have also decided to allow those rates to vary from station to station depending on how busy it is – if a station is under-utilized, we will reduce the rate and if it is over-utilized, we will increase the rate and/or add additional EV charging infrastructure. Most feedback we received from

stakeholders was supportive of this direction, although some EV users have been critical of any rates and some would have preferred an energy-based rate.

10. *Any other comments that may be helpful to the Panel.*

- a. The City understands that residential rate structures are considered out of scope for Phase 2 of the Inquiry.
- b. However, for reference purposes, the City sees a need for specific tariff provisions with regards to EV charging because current rate structures present barriers to the rapid deployment of EV charging. In the interest of furthering the deployment of EV charging infrastructure in residential settings, the City submits that the consideration of residential rate structures is very important to meeting the Province's zero emission vehicle and climate goals.
- c. The City is concerned that several elements of BC Hydro's current rate structure may impede the deployment of EV charging infrastructure. The City supports the use of public utility rates as a tool to encourage energy efficiency, but we think those signals should be aligned with the Province's climate change objectives related to EVs as well.
- d. Examples include:
 - i. The City suggests that the BCUC review the BC Hydro Electric Tariff, to ensure it aligns with the findings of Phase 1 of the Inquiry. . Currently, the BC Hydro tariff prohibits resale to a Tenant at a marked-up rate. The City understands BC Hydro is reviewing its Electric Tariff to assess whether EV charging service requires new terms and conditions for service to avoid restrictions on marking up the resale of electricity. Owners, as defined in the Electric Tariff, should be allowed to charge a reasonable mark-up to recover their investment in EV charging infrastructure and their operating costs.
 - ii. The current tiered residential rate structure creates an unintended disincentive for switching to EVs because residents that are using electricity efficiently can still consistently be billed at the Tier 2 rate. This challenge is exacerbated in homes that are using heat-pumps, which is another energy-efficient technology that the provincial government is rightly encouraging people to use to reduce their carbon pollution.
 - iii. The current residential rate structures do not provide any incentive to shift demands to off-peak times, which is a missed opportunity for BC Hydro to avoid the costs associated with increasing capacity. EVs are a particularly good opportunity where the timing of demand is relatively flexible. For home charging, a typical time for an EV user to begin their charge would be when they get home around 6pm, which coincides with the current

system peaks. However, with rate signals such as time of use pricing, EV users could be encouraged to delay the start of their charge until later in the evening, which would still allow them to return to a full charge while saving themselves and the system money.

- iv. Many municipalities, including the City of Vancouver, encourage the use of EV energy management systems in multi-unit residential buildings. These systems are designed to spread load over a longer time period and reduce peak demand and decrease the total load of a building. The interaction between energy management systems and the constraints of BC Hydro's local distribution system should be considered during development of residential electricity rates.

Wholesale rate (p. 49 of the Phase 1 Report)

11. Is there a need for a specific tariff provisions for the wholesale provision of electricity for the purpose of EV charging?

- a. The current demand charge structure is a barrier to the deployment of public charging infrastructure. For example, a Large Commercial customer pays approximately \$11/kW for their peak monthly demand. For a site with a single 50kW DC Fast Charger, this represents a \$550 cost for the first charging session each month.

12. If so, how should this wholesale tariff be designed? Is a time of use rate appropriate? Should there be any differences depending on the type of EV charging – Level 1, Level 2, and/or DCFC stations?

- a. For the supply of electricity to stand-alone EV charging equipment, the rate should align with the load characteristics and reflect the cost and effort of providing the service, rather than with a specific charging type.
- b. In all cases, the public utility terms of service and rates should be designed to support the provincial policy objectives and encourage the development of EV infrastructure development and EV use in preference to fossil fuel vehicles.

Greenhouse Gas Reduction Regulation (p. 52 of the Phase 1 Report)

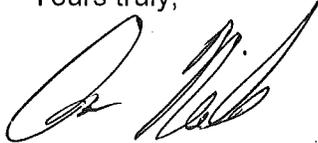
14. In Phase 2, the Panel invites submissions from Interveners on whether amendments to the Greenhouse Gas Reduction Regulation to allow public utilities to own and operate EV charging stations as a “prescribed undertaking” are appropriate and if so, the appropriate extent and scope of such undertaking.

- a. The City supports BC Hydro and Fortis BC being allowed to invest in EV charging infrastructure as a prescribed undertaking under section 18 of the Clean Energy Act and section 4 of the Greenhouse Gas Reduction Regulation (“GGRR”).

- b. Section 4 of the GGRR is not currently suited to EV charging services:
 - i. the requirement for “cost-effectiveness” in Section 4 of the GGRR would likely disqualify the deployment of DC Fast Charging in most locations at this early stage of the market, especially in areas with the least competitive choices such as remote, rural and low-income communities. This outcome would work against the public interest for early investment in EV charging services in less economic areas; and
 - ii. section 4 should be amended to enable greater investment in EV charging services. Doing so would enable BC Hydro and FortisBC to continue investing in EV charging services throughout the Province without reliance on provincial and/or federal grants.
- c. If the Province amends section 4 of the GGRR, the City suggests the following:
 - i. consult key stakeholders on any proposed amendments;
 - ii. create an initial prescribed undertaking in the near term (e.g. by the end of Q2 2019) that allows FortisBC and BC Hydro to invest up to a specified cost threshold in EV infrastructure that meets specified expectations for the reliability of EV charging service and redundancy at individual charging locations;
 - iii. when the Province establishes service density goals for the EV charging network, amend the prescribed undertaking to refer to service density thresholds rather than cost thresholds, so that BC Hydro and FortisBC are required to invest in the EV charging network until those goals are met. The service density goals could be specific to rural, suburban, and urban communities, key transportation corridors, low income neighborhoods, disadvantaged communities, or other contexts that would benefit from an equity perspective and/or may not be otherwise competitive; and,
 - iv. when the investment thresholds are shifted to service density goals, update the prescribed undertaking to require BC Hydro and FortisBC to upgrade their infrastructure that is upstream of revenue meters in a timely manner if other operators of EV charging services require such upgrades to be able to help meet the Province’s service density goals.

The City appreciates this opportunity to provide input to the Inquiry.

Yours truly,

A handwritten signature in black ink, appearing to read 'Ian Neville', written in a cursive style.

Ian Neville,
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