

SUBMISSION ON BEHALF OF

**THE CLEAN ENERGY ASSOCIATION OF
BRITISH COLUMBIA (“CEABC”)**

**BRITISH COLUMBIA UTILITIES COMMISSION
PART 2 OF THE INQUIRY INTO THE REGULATION OF
ELECTRIC VEHICLE CHARGING SERVICE**

RESPONSES TO PANEL QUERIES

January 28, 2019

Summary

In Phase 2 of the BCUC Inquiry into the Regulation of Electric Vehicle Charging Service the British Columbia Utilities Commission (“BCUC”) is seeking comments on what are essentially economic or market problems. The seemingly most complex problem is that in certain parts of the Province, deemed “*remote geographic locations*” (“*Remote Geographical Locations*” or “*Undersized Market Areas*”) the perception is that there isn’t sufficient business to attract investment in EV charging services on a market basis¹.

As noted below, the Clean Energy Association of B.C. (“CEABC”) is very skeptical that the optimal solution to the economic or market problems can be solved by the use of the BCUC’s regulatory powers. The preferred option would be for senior governments as a matter of policy to provide whatever financial assistance that may be required to provide EV charging services and leave the non-exempt utilities (“*Non-Exempt Utilities*” or “*Existing Public Utilities*”) such as BC Hydro and FortisBC Energy Inc. (“*Fortis*”) to carry on their core business of generating, transmitting and distributing electricity (“*Electric Grid*”).

The provision of EV charging services² is in its infancy and the technology is rapidly evolving. All the more reason that Non-Exempt Utilities, who more often than not make long term investment decisions regarding electrical equipment that isn’t undergoing rapid technological change, should stick to their core business. The market should be allowed to do its work and the winners and losers decided accordingly.

Alternatively if the BCUC decides that the participation of Existing Public Utilities is required in the market, these utilities could provide loans to exempt public utilities (“*Exempt Public Utilities*” or “*Market Providers*”) and existing utility customers such as businesses and homeowners to purchase and install EV charging equipment. BC Hydro has had a loan program for funding investment energy conservation measures as part of its Power Smart Program. The investment risk would rest with the borrower and not the Existing Public Utility except in the case of default.

¹ If there wasn’t enough business to attract a gas station to a remote geographic location the matter wouldn’t even be under consideration by the BCUC. It is only because the “*transportation fuel*” is electricity that it is being reviewed.

² If an electric vehicle can be charged by plugging it into a standard electrical outlet, then the CEABC does not view this as the provision of an EV charging service. It is only when some electrical “*apparatus*” or “*appliance*” is required to transform the electricity into a product that can be used to charge an electric vehicle e.g. a “*charger*” that there is an EV charging service.

CEABC Responses to Panel Queries

1. (a) Can both regulatory models – little or no regulation for those exempt public utilities and the participation of non-exempt utilities co-exist?

No, they should not co-exist in any market areas, because the Non-Exempt Utilities would be entitled to what amounts to a guaranteed rate of return on their investment³ and the exempt public utilities whatever return the market will provide. This is not a level playing field.

The only exception, where Non-Exempt Utilities could provide charging services, would be on a last resort basis in remote geographic locations⁴ (“*Geographically Remote Areas*” or “*Undersized Market Areas*”) where Market Providers are totally absent, and with the caveats described below.

Existing Public Utilities are also in a position of conflict of interest. They own the regulated Electric Grids that Market Providers will have to interconnect to and purchase electricity from. These providers are not much different than owners of laundromats that purchase electricity for electric dryers that provide heat to dry clothes. These owners are paid for this heat by their customers.

Existing Public Utilities aren’t in the laundromat business nor should they be.

If the Existing Public Utilities (i.e. the non-exempt utilities) are allowed to directly compete with the Market Providers they are supplying, then they could, either advertently or inadvertently, skew the interconnection process in their own favour⁵ by making it more expensive and time consuming for the Market Providers that they would be competing with for market share.

The CEABC has assumed that the capital investment required for “*slow charging*” e.g. Level 2 or below is not going to be difficult to attract to any part of the Province. The capital required is relatively small and is not a barrier to providing this type of charging service. The investment can be made by individual home and business owners or third parties. It is not a market segment that Existing Public Utilities should be involved in with the possible exception of providing loans to those that want to invest in the slow charging.

³ UCA, Section 59(5).

⁴ The term “*remote geographic locations*” may not adequately describe the cause of why investment in “*fast charging*” facilities (e.g. what is currently described as a “*level 3 charger*”) is not being made in a particular area of the Province. Some of the main highways in B.C. traverse remote geographic areas but the volume of traffic is sufficient to attract investment in fast charging facilities. In other areas the volume might not be sufficient even though they are not geographically remote (e.g. the Gulf Islands). The central issue is not the remoteness but the amount of potential EV traffic.

⁵ See <http://www.courts.gov.bc.ca/jdb-txt/sc/18/09/2018/BCSC0971.htm> where the Court in paragraphs 5,6,35 and 40 made some comments about the BC Hydro interconnection process with respect to a specific request for interconnection.

If for whatever reason, such as senior government policy, it is decided that Existing Public Utility participation is required in market areas that aren't undersized, then this participation should consist of loans to Market Providers and existing utility customers such as businesses and homeowners to purchase and install EV charging equipment. BC Hydro has had a loan program for funding investment energy conservation measures as part of its Power Smart Program. The investment risk would rest with the borrower and not the Existing Public Utility except in the case of default.

The provision of EV charging services in Undersized Market Areas should be a matter of senior government policy and not be dealt with by BCUC regulatory oversight. If a market is undersized, then it won't be able to support fast charging facilities. Financial assistance will be required and in this particular instance it doesn't make sense to contort the regulatory process so that Existing Public Utilities customers provide it.

The financial assistance should come directly from senior governments, and it should be equally available to Existing Public Utilities and Market Providers so that the best solution is chosen. Given the advances in EV charging and electric vehicle technology that the CEABC is expecting, any solution will be short term.

If senior government financial assistance is not available then Existing Public Utilities could provide loans in a similar manner as in areas that aren't undersized.

As a last resort EV charging services in Undersized Market Areas could be provided on a regulated basis with all the inherent problems. Mainly a subsidy will be required and it will have to come from someplace.

(b) In the absence of price regulation, how can EV charging providers who are not otherwise public utilities be protected from being undercut by existing otherwise public utilities?

By restricting the otherwise public utilities to providing charging services only in Under Sized Markets and only as a last resort.

(c) 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?

Yes. See also the CEABC's response to 1(a).

2. (a) If the provision of EV charging is exempt from regulation, is there any justification for otherwise public utilities to provide EV charging services?

No, other than in Undersized Market Areas or by providing loans both as noted in the CEABC's response to 1(a).

EV charging services are one step removed from the Electric Grids owned and operated by entities such as BC Hydro and Fortis. The entities that take the electricity provided by this grid and convert it into a product that can be readily used by electric vehicles are very different than Electric Grid owners. These owners could easily cross subsidize charging services from their regulated Electric Grid rate base.

Ironically up until the 1980's BC Hydro provided bus and rail services including electric trolleys. The genesis of these services was that BC Hydro's predecessors were in the transportation business because they were markets for the electricity that these predecessors generated. The question that was asked in the 1980's was: "*What is BC Hydro doing in the transportation business?*" The answer was that it was not part of its core business activities and the transportation services including the electric trolleys were divested. A similar question should be asked with respect to charging services. With the possible exception of Undersized Market Areas, it is the CEABCs view that these services are not part of the core activities of otherwise public utilities.

In relation to BC Hydro there is another matter that goes beyond cross-subsidization from its regulated Electric Grid rate base. Namely the return on equity it provides to its sole shareholder – the Province of B.C. This shareholder is committed to raising its equity contribution to BC Hydro from the existing 20% to 40% and that this additional equity contribution will be made without any corresponding increase in net income to be derived from this increasing investment.

The impact of these two government initiatives is to effectively reduce to zero, any requirement for BC Hydro to pay returns on (or of) any of the Government's new equity contributions. The result is that BC Hydro assumes an artificial cost of capital of 100% debt in its pre-investment decisions. Distorting this financial analysis to the detriment of its competitors such as Market Providers who require a return on equity commensurate with the risk.

There would also be a detrimental impact on Fortis should it wish to provide EV charging services in BC Hydro's service territory or BC Hydro in Fortis' service territory. They aren't monopoly services and the concept of service territories isn't relevant in the absence of the requirement for a monopoly.

Clearly this is not what the CEABC is suggesting as evidenced elsewhere in its responses to the Panel's queries. However it wishes to draw this matter to the attention of the Panel should it determine that BC Hydro and Fortis are allowed to provide EV charging services.

(b) 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?

There is no evidence that Non-Exempt Utilities are needed to kick start the market, particularly for sufficiently sized market areas. The biggest barrier to securing investment on a market basis has been the uncertainty surrounding whether these services would be fully regulated by the BCUC. Once this barrier is dismantled, a competitive market should be given a reasonable opportunity to develop. If it doesn't then the matter could be reconsidered.

The outlier will be Undersized Market Areas. As described above the market in some areas may not be large enough to attract Market Providers. A “kick start” in the form of financially assisted EV charging services will be required. The kick start would no longer be required when the volume of charging services sold and revenue received is sufficient to attract a Market Provider.

(c) What is the role of those utilities once the kick start is completed? If there are stranded assets at that time how should they be dealt with?

If as suggested by the CEABC, Undersized Market Areas are serviced in whole or in part with the provision of senior government financial assistance there should be no stranded assets. The risk of stranded assets should be incorporated into the government financial assistance model so there shouldn't be any stranded assets.

If loans are provided as described in the CEABC's response to 1(a) the risk of stranded assets will be limited to instances of default.

If Existing Public Utilities provide EV charging services on a regulated basis in Undersized Market Areas, the existing customers of these utilities will bear the risk of stranded assets.

3. (a) If non-exempt public utilities participate in the EV charging market, should EV charging customers constitute a separate class from which costs associated with EV charging infrastructure is recovered?

The only reason that Non-Exempt Public Utilities should be participating in EV charging markets is with respect to Undersized Market Areas and with financial assistance from senior governments. If this model is adhered to there is no need to create a separate ratepayer class.

If they participate in Undersized Market Areas on a regulated basis, the probability that they will generate sufficient revenue to recover their cost and earn a return is extremely low. Putting all the EV charging customers in one class might be positive from the perspective of financial transparency but will accomplish nothing if losses start to mount. The Non-Exempt Public Utilities other customers will have to cross-subsidize the losses.

(b) Or should the service be offered in a separate non-regulated business?

Entities such as BC Hydro and Fortis should concentrate on their core business of managing their respective Electric Grids and leave the provision of EV charging services to Market Providers, unless government policy specifically directs them to serve an Undersized Market Area. The preferred option will be for senior government to provide the necessary financial assistance which would be available equally to Market Providers and Existing Public Utilities. See also the CEABC's comments about loans and provision of services as a last resort in its response to 1(a).

(c) What are the implications of each of these regulatory models?

Regulatory models shouldn't be contorted to provide non-market solutions to the provision of EV charging services. They are supposed to be used to regulate monopoly energy providers (e.g. electric utilities).

4. (a) Should other customer classes of non-exempt public utilities subsidize costs associated with the provision of charging services that can't be recovered from EV charging customers?

No. Any required subsidies/financial assistance should be provided by senior governments. Any subsidies should only be necessary as a result of serving specific government policy directions, so accordingly the government should cover the cost of those subsidies.

(b) How much of the cost is it appropriate to them to subsidize – should there be a cap?

None. Any losses should be subsidized directly by senior governments and they can decide if any cap is required.

5. If assets are stranded as a result of changing technology or other factors who should pay for the potential stranded EV charging assets which may be in the non-exempt public utility's rate base?

Senior governments, for the same reasons as stated in the CEABC's response to 4(b).

6. (a) In the context of BCUC economic regulation, what regulatory justification is required to allow existing utilities to cross subsidize EV charging services?

There isn't any justification. Providing EV charging services is too far removed from BC Hydro's and Fortis' core business of managing their respective grids. These services/appliances convert the electricity from the Electric Grid into a product that can be used to charge electric vehicles.

(b) If EV charging adds incremental load, does that justify cross-subsidization.

No. The incremental load should not be that material because most electric vehicle owners can conveniently and economically charge their vehicles at their homes and businesses. However, as the number of electric vehicles grows, the utilities' loads should increase, but that is no reason to cross-subsidize.

(c) Would the incremental load appear without the subsidization?

Yes. Subsidization will only be required in Undersized Market Areas but only for fast charging services. Some incremental load in these areas might not appear but, in any event, will be very small. Most electric vehicle owners can conveniently and economically charge their vehicles at their homes and businesses.

7. (a) What are the implications of the province’s energy objectives, as stated in the *Clean Energy Act*, with respect to entities that are otherwise public utilities providing potentially subsidized EV charging services?

There are next to no implications because the need for subsidized EV charging services, consisting of fast charging services, will be restricted to Undersized Market Areas. The total amount of electricity that could be sold in these subsidized markets, and greenhouse gas emissions reduced and fuel switching⁶, which are the primary and relevant objectives in the Clean Energy Act with respect to EV charging services, will be very small.

As noted in the CEABC’s response to 1(a) senior governments should provide any required subsidies/financial assistance and in the absence of this assistance, otherwise public utilities could attempt to minimize their financial risk through the provision of loans. The result will be no loss in the total greenhouse gas reductions.

It should be noted that the largest opportunity for reducing greenhouse gas emissions in the road transportation sector is with respect to passenger and freight light trucks and medium duty trucks⁷. Once manufacturers start to make these vehicles available, the size of the market for EV charging services will increase perhaps eliminating the concerns about Undersized Market Areas.

(b) Are there non-economic justifications such as environmental benefits or meeting GHG reduction targets?

Yes for example see the CEABC’s response to 7(a).

8. If non-exempt public utilities participate in the EV charging market, do they have any obligation to serve EV charging customers?

There is no absolute obligation to serve because it is subject to BCUC regulatory oversight. It is the BCUC that would decide the scope of the obligation to serve.

9. Should non-exempt public utilities be provided the same exemptions in regard to EV charging services as other EV charging market participants? This includes exemption from Part 3 of the UCA, with similar retentions of certain sections by the BCUC.

No. The danger is that the owners of the Electric Grid that provide EV charging services might give themselves preferential treatment, for example with respect to grid connection including the payment of associated costs. They are in a conflict of interest. They might also inadvertently or intentionally use services provided by their regulated operations to operate in part their non-

⁶ Clean Energy Act (B.C.) sections 2(g) and (h)

⁷ <https://www.cleanenergybc.org/wp-content/uploads/2018/10/Electrification-of-BC.-CEBC-White-Paper-Oct-2018.pdf> pg. 14

regulated EV charging services. With respect to BC Hydro, no return on new equity is a material problem.

10. Is EV charging infrastructure considered “distribution of electrical energy” for the purpose of section 3(1) of the Electrical Safety Regulation? In responding Interveners are requested to consider the status of the provider – for example is the interpretation different for a non-exempt public utility than it would be for an exempt utility or a provider excluded from the definition of a public utility?

No it is not and it doesn't matter what the status of the provider is. In its reply argument⁸ the Ministry of Energy Mines and Petroleum Resources (“MEMPR”) said:

“Section 3 of the Electrical Safety Regulation states that the regulation “does not apply to a public utility as defined in the UCA in the exercise of its function as a utility with respect to the generation, transmission and distribution of electrical energy” (underlining added). Technical Safety BC has advised MEMPR that it considers EV charging stations to fall outside of a public utility’s generation, transmission and distribution system and therefore the requirements of the Electrical Safety Regulation always apply to the installation and the operation of an EV charging station. Technical Safety BC also advises that delegated local governments share this interpretation.”

The CEABC agrees with the MEMPR’s interpretation and wishes to add that in the case of EV charging services the electricity provided at the customer’s side of the meter has to be converted by an electrical “appliance” or “apparatus” into a product that can be used to charge an electric vehicle e.g. a “charger”. It is this apparatus that is subject to the Electrical Safety Regulation and not the Electric Grid.

11. Any other comments that may be helpful to the Panel.

In its Phase 1 Report⁹ the Panel said:

“Therefore in Phase 2 of this Inquiry, the Panel invites submissions from interveners on the following:

- 1. Is there a need for a specific tariff provision for the wholesale provision of electricity for the purposes of EV charging” And if so, should there be any differences depending on the type of EV charging – Level 1, Level 2, and/or DCFC stations?*
- 2. If so, how should this wholesale tariff be designed? Is a time of use rate appropriate?”*

There is no need for a specific tariff provision or a new wholesale tariff. The existing commercial tariff is adequate. EV charging services are no different than any other use of electricity for other commercial purposes such as electric dryers in a laundromat.

⁸ Exhibit C19-11, Reply Argument, page 2, BCUC Phase 1 – The Regulation of Electric Vehicle Charging Service.

⁹ November 26, 2018, page 56

The Panel also indicated it would invite submissions on whether amendments to the GRR to allow public utilities to own and operate EV charging stations as a “*prescribed*” undertaking are appropriate.

No amendments are appropriate because except as a last resort public utilities shouldn’t be owning and operating EV charging stations. If these stations are modelled after existing gas stations the selling of snacks, beverages, lottery tickets etc. will be part of the business. These functions are well beyond the core business of Existing Public Utilities.