

***BC Hydro Public Electric Vehicle Fast Charging
Service Rates Application***

Submission by

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Electrical vehicle use is going to be a game changer and the Provincial Government and other governments are projecting a society where electric vehicle use will be dominant compared to gasoline vehicles. Accordingly, the utility should be looking towards the future in its policy and in its rates. One of the issues that is going to be difficult to deal with is the public versus private, use of transportation. In general BCH policy and rates are based on private ownership in industry, commercial and residential sectors however, the electric vehicle situation is going to change this because vehicles involve private and public ownership of assets. For example, vehicles are privately owned but, their use is heavily subsidized by public infrastructure such as roads and bridges. In the sections below suggestions are being made as to how to deal with this aspect of private and public ownership of infrastructure.

1/ Future EV Owners

In the survey material that BCH provided in their submission it seemed to be focused on individuals who already have EVs and did not pay much consideration to people who did not have EVs. It is important to note that at present a relatively small percentage of the population are EV owners. However, over time probably a significant segment of the populace will be EV users. It can be misleading to pay so much attention to the present group of EV devotees.

It is suggested that most current electric vehicle owners live in their own single family residents. They are generally independently, wealthy, and are older and do not depend on an EV to get to work or school on a daily basis. I have attended a number of EV events and this is my observation. I do not believe that BCH's survey work did a good job of characterising the present and future EV landscape.

BC Hydro should be encouraging small and medium size industry to be moving towards electric vehicles. They do have rates for general service customers, but these rates are not very promotionally oriented. Electricity is BCH's business, and they have a monopoly hold on it and they should be encouraging industry to use more electric vehicles. For example, BC Hydro does not have any program that encourages industry to use electric vehicles. I suspect that small and medium size industry are not even aware of BCH's new rates for electric vehicles in industry. At any rate, the rates being proposed by BCH are not very promotional with respect to EV's in industry. I suggest that BCH should have a discount rate which will encourage an increase in use of electric vehicles.

The Provincial Government is promoting EV use and more attention in surveys should be spent on individuals that will probably be EV users. BCH should be working with the government to encourage and promote electric vehicles in industry. For example, BCH has spent considerable funds in promoting conservation activities and they should be spending an effort to promote

EV's in industry. B.C. is relatively unique in that its major energy source is hydro electricity which is clean with no GHG's attached.

2/ Present Versus Future Cost of EV Charging

BCH 's cost of EV charging appears to be based on the cost of charging at today's prices. However, the number of people using public charging stations is far less than what it will be in the future and the cost of charging should be based on a much higher percentage of usage than the current usage of public stations. The cost of public charging stations should be forward looking as opposed to the existing usage level.

Commercial and small/medium size industry rates are already higher than they should be because the general service customers pay more than their fair share of electricity costs. This is an opportunity for the utility to even up the playing field to a certain extent by offering attractive rates for EV charging. It does not make sense for BCH to extend its overcharging of the general service category by charging high levels for EV use in medium and small size industry.

3/ Sporadic versus Continuous Users

Individuals who rarely use public charging stations should pay a lot more than people who are using public stations on a continuous basis. There should be a system set up so that people who use public charging stations on a continuous basis should be able to purchase ongoing charging at a subscription price. This is common practice in most retail operations where people who use a service on an ongoing continuous basis get a subscription price that is lower than people who rarely use the system.

4/ Standby Charging

BCH should make sure that stations are available for individuals who rarely use public stations. For example, in some neighbourhoods most people will have charging at their residence, however, public stations should be available for them on a standby basis. It is important to note that BCH will earn significant revenue from people who normally charge their vehicles at their home, however individuals would like to have public stations available for them on a

standby basis. These standby units may not earn enough revenue to pay for themselves, but BCH will be compensated by additional revenue from home charging.

There seems to be some confusion between the revenue that BCH will earn from home charging stations and revenue that they will earn from public charging. There needs to be a recognition that home charging is an additional revenue for BCH and that this additional revenue should pay for some of the public charging costs.

5/ Survey for Future Users

The Provincial Government has established targets with respect to EV use, BCH should establish surveys based on these targets and the cost of charging should not be based on the current usage level but rather on the target levels indicated by the Provincial Government.

BCH should organize a survey system that will help them determine what the future EV usage levels will be.

6/ Time of Use Charging

The cost to BCH of electricity varies significantly with the time when it is being used. For example, BCH's system is set up to provide enough electricity to handle the peak periods between 3:00 PM and 7:00 PM. However, EV charging can be readily done during off peak periods. Probably it would be practical to have charging cost at three different times during a 24-hour period. One period could be between 10:00 PM and 6:00 AM, another period could be between 10:00 AM and 2:00 PM, and the peak period could be between 2:00 PM and 10:00 PM.

7/ Environmental Benefits

The use of electric vehicles reduces pollution significantly and people who use electric vehicles should be compensated in some way for their lack of pollution causing activity. However, road tax is an item that needs to be considered and the Government needs to consider the balance between reduced pollution and the cost of public roads. It is recognized that public roads are a major cost to the public which is presently paid for with gasoline tax.

8/ Public versus Private Use

EV's are currently operated and owned by private individuals who seldom use public charging stations but, public stations are a safety element for private EV owners. Public stations,

provide private owners with extra security due to the existence of public charging outlets. The question, of public versus private is a significant issue. It is anticipated that eventually many EV users will not have their own place of residence and will be renters. Therefore, the EV charging system should anticipate many EV users who will not have their own residence. However, the rates BCH proposes are heavily weighted towards people who own their own house. For example, the electric rate for 50 KW chargers is double the price that homeowners pay.