British Columbia Utilities Commission

Inquiry into the Regulation of Electric Vehicle Charging Service ~ Project No.1598941

Intervener Reply Argument

August 22, 2018
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Chapter 1. Introduction

This Inquiry has received a lot of information related to EVs, batteries and charging systems. However, I believe it is prudent to refocus on the purpose of this Inquiry. That is to decide the DCFC rate to be charged to EV customers and is the rate in compliance with the Clean Energy Act and the Greenhouse Gas Reduction Regulation (CEA/GGRR) and the Utilities Commission Act (UCA).

1.1. Original Scope of Inquiry

Order G-10-18 establishing this Inquiry was carried forward from Order G-9-18 dated January 12, 2018. Order G-9-18 is a FortisBC Inc. (FBC) application for Approval of Rate Design and Rates for Electric Vehicle (EV) Direct Current Fast Charging (DCFC) Service (Application) pursuant to sections 59 to 61 and 90 of the Utilities Commission Act (UCA). The Level 1(L1) and Level 2 (L2) EV charging stations were not part of the Application. At that time, FBC was of the view that the EV charging initiative is consistent with government policy contained in the Greenhouse Gas Reduction (Clean Energy) Regulation (GGRR), the Clean Energy Act (CEA) and climate action objectives and the Commission Order G-9-18 did not challenge FBC's view.

In Order g-10-18, the Commission provides a list of potential regulatory issues that were noted in Order G-9-18. These are:

- Do EV charging stations operate in a competitive environment in BC or are they a natural monopoly service?
- Are the customers of EV charging stations captive or do they have a choice?
- Should the Commission regulate the services provided by EV charging stations? What are benefits and detriments to such regulation?

- Should the rate design of EV charging stations be established under a public utility's traditional cost of service model or some other model? And within that context, what are the customer pricing options (e.g. energy-based rate vs. time-based rate)?

- Should the EV charging station service rate be based on a public utility's existing wholesale or commercial retail rate or some other rate?

- Should public utilities include EV charging stations in their regulated rate base or through a separate non-regulated entity?

- If public utilities provide EV charging services within their regulated business, is there a risk of cross subsidization from other rate classes to support this new service and if so, is the proposed rate design potentially unduly discriminatory.

1.2. The Salient Points

Although implied, but not specifically stated, the scope of the Inquiry is the regulation of DCFC EV charging stations; whether the service providers meet the test of being found to be a public utility; how the rates should set; whether cross subsidization needs to be avoided; and safety. In Order G9-18, the Commission seems to have accepted FBC's view that the CEA/GGRR apply to DCFC charging stations in that it did not seek further comment on the applicability of the CEA/GGRR to FBC's Application at the commencement of this Inquiry.

Chapter 2. Discussion on Issues

2.1. The differences between L1, L2 and DCFC charging stations

A lot of discussion has occurred related to L1, L2 and DCFC charging stations with comparisons to other services such as those provided in Wi-Fi cafes, etc. Since our primary focus is DCFC charging stations, let's examine some of the differences of the types of EV charging systems. L1 & L2 use traditional alternating current (AC) energy (120/240VAC voltage) to provide AC energy to an EV. So let's set that aside for the moment. A DCFC charging system supplies converted direct current (DC) energy to the EV. This is a value added product similar to turning a saw log into 2"x4" lumber. For this reason, L1 and L2 charging stations should be treated differently than DCFC charging stations that convert AC energy into DC energy.

2.1.1. DCFC Service Providers are public utilities

The non-traditional DC energy supplied to EVs differs from that of the traditional AC energy of L1 and L2 EV charging systems; and these two differ services should not be lumped together, but treated separately.

All DCFC charging station service providers should be public utilities under the UCA as the definition has been met. As public utilities, the DCFC service providers can proceed under the CEA/GGRR to provide DCFC charging services and the Panel must set the rates accordingly.

The DCFC service providers should receive tailored exemptions from Part 3 of the UCA to reduce the regulatory burden, maintain control of safety, and regulate rates to prevent "rate gouging".

2.1.2. Exemption for L1 and L2 charging stations.

Returning to the traditional AC energy L1 and L2 charging stations, the Panel must decide if they are public utilities or not. The simplest approach would be to ignore the matter which has been the Commission's approach in the past.

Since this is a sale (even if it is free?) of traditional AC energy, the Panel could find that very light-handed regulation may be in order. However, this light-handed regulation must address safety matters,

> "MEMPR suggests that no regulatory oversight by the Commission is required for Level 1 and Level 2 charging services provided by entities that are not otherwise public utilities. MEMPR recommends that the Panel make an order exempting those entities from all provisions of the UCA at the conclusion of this phase of the Inquiry."

MEMPR has pointed the way for the Panel to proceed for L1 and L2 EV charging stations.

2.2. Who pays?

The matter of who pays for these DCFC charging stations remains. Should it be the taxpayer or the ratepayer?

If these DCFC charging stations fall under BC Government Policy or Mandate, then the taxpayers should pay.

However, if it is to be found that the CEA/GGRR applies, then a public utility can access its rate base provided the rates set by the Commission allow for full recovery of all its costs within each fiscal year thus eliminating the risk of cross subsidization to the ratepayers and a future risk of needing to increase the general rates to the ratepayers.

2.2.1. Income vs. Ratepayer Taxation

As BC Hydro wishes to finance the DCFCs from the rate-base, all ratepayers will pay the same cost per kWh increase regardless of their income but not all ratepayers will be able to participate in the DCFC program. First one must be able to afford an electric car. Currently, the purchase cost of an EV is about 1.5 to 2 times that of an ICE. The EV purchase is already heavily subsidised by the government.

Only Tesla provides its customers with DCFC stations and it should be applauded for taking the initiative. The other EV manufactures are quite happy to receive government support (funding) and enjoy the profit from the sale of their EVs that is being subsidised by others. It's time for the other car manufacturers to step forward and put serious money on the table for these charging stations rather than using the BC Hydro and their ratepayers as another financial institution. For these reasons, I'm opposed to BC Hydro accessing the rate base to provide DCFC charging without significant contribution by the automobile industry.

2.2.2. Intergenerational Equity

The older and more affluent generation can afford to pay not only for these EVs and but also the cost of charging them. The following generations are moving away from personal ownership of automobiles to car sharing programs (Evo, Modo, etc,), taxi and Uber based transportation, bikes and bike sharing (Shaw bikes), walking and affordable public transit.

Our focus should be on high capacity electrified transit systems if we are to use the rate base to finance the greenhouse gas reduction programs. The personal automobile may become an object of the past. We may not eliminate all the ICEs but they are becoming cleaner all the time so by reducing the numbers and increasing transit options for the next generation of city dwellers seems the better option.

2.3. CEA/GGRR

As the CEA/GGRR was not originally part of the scope of Order G-10-18 but has been raised as part of this Inquiry and is part of Order G-9-18, I would like to examine it further as there are differing views on whether it applies.

2.3.1. Is this a Prescribed Undertaking?

The provision DCFC charging stations are a prescribed undertaking is a key point in FBC's Application and Order G-9-18. It seems the Commission has already accepted this point in its Order G-9-18 and not sought any additional clarity in its Order G-10-18. Now this point lies before us again. However, not all parties agree on this point.

MEMPR's Position

MEMPR only provided its position on "interpretation of section 18 of the *Clean Energy Act* and section 4 of the GGRR as a prescribed undertaking, thereby enabling existing public utilities such as BC Hydro and FBC to provide EV charging services with the inclusion of EV charging stations in their regulated rate base."

> "MEMPR notes that, in its application for approval of rate design and rates for its DC fast-charging service, FBC has suggested that its planned investments can be considered as a prescribed undertaking under section 4(3) of the GGRR.[17] MEMPR believes that it is appropriate for the Commission to consider the merits of this argument based upon the information presented in FBC's application."

Ex. C19-10, MEMPR Final Argument, Submission on Issue 3, para. 34, p. 7

In this instance, MEMPR has not provided direction to the Panel but has asked the Panel to suggest to the Province "…objectives that would guide determinations of whether or not particular EV charging infrastructure investments could be recovered from ratepayers. This could be done through an amendment to the GGRR[1]." From this comment, one might gather

[1] Ex. C19-10, MEMPR Final Argument, Submission on Issue 3, para. 35, p. 7

that MEMPR is concerned that the investments might not be recoverable from the ratepayers under the current regulation.

A key focal point in this Inquiry is “Who pays?”

BC Hydro’s Position

Without elaborating the point, BC Hydro states, “In summary, the GGRR currently has relatively little application to the EV charging sector.” Maybe this is so, but it does have some critical and salient application in this instance and it is not none. For instance, the Commission must not interfere using the UCA when it is a prescribed undertaking, and must set rates that allow for sufficient revenue so that the public utility’s costs can be recovered in each fiscal year. This is not - relatively little application.

BC Hydro’s Mandate

BC Hydro believes it has a mandate from the Provincial Government to proceed with DCFC EV charging stations. Below is BCH’s response to one of my IRs:

> There is no enactment that obliges BC Hydro to provide EV charging services. As a public utility, BC Hydro has an obligation to serve that is largely established by Commission orders, including for example the establishment of rates, terms and conditions that allow for or require particular services including, potentially, EV charging services.
>
> Notwithstanding the above, the Minister's Mandate Letter to BC Hydro dated February 16, 2017 indicates that BC Hydro was directed to take a number of strategic actions, including:
>
> - Support the delivery of the Government's Climate Leadership Plan with clean electricity to power natural gas production, processing, liquefaction, efficient electrification programs; and encourage electric vehicles and charging stations, and more efficient buildings.
>
> Following the provincial election and in the subsequent and revised Mandate Letter dated August 24, 2017, Government's expectations regarding the principles which are to be considered in the development of BC Hydro's Service Plan include the following:
>
> - Providing Leadership in advancing government's climate action strategies, including through:
> - fuel switching and electrification initiatives in the transportation, oil and gas, and other sectors.
>
> These Mandate Letters can be found on BC Hydro's website at https://www.bchydro.com/about/accountability_reports/openness_accountability.html.[2]

However, this mandate was dated prior to a more recent mandate. The new mandate letter[3] is dated April 18, 2018. The new mandate does not specifically reference DCFCs but does include the following goals and objectives:

> - Provide leadership in advancing the Government's climate action strategies, including through electrification, fuel switching, and energy efficiency initiatives in the built environment, transportation, oil and gas, and other sectors;

[2] Ex. C1-4, BCH Response to Flintoff IR 1.1.1

[3] https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/accountability-reports/openness-accountability/2018-2019-bc-hydro-mandate-letter.pdf

and

- Implement affordability measures, such as low income rates and expanded demand-side management programs targeted to low income ratepayers;

and

- Develop, in cooperation with the Ministry of Energy, Mines and Petroleum Resources (EMPR), a refreshed plan to keep electricity rates low and predictable over the long-term while making significant investments to expand the system and maintain aging infrastructure;

Above excerpts are from Minister's Mandate Letter to BC Hydro dated April 18, 2018[4]

Considering that BC Hydro wishes to proceed only in a regulated environment (access to rate base), BCH is not likely to recover its costs in each fiscal year, and lacks a business plan, it is understandable that it wishes to proceed under a previous mandate.

However, is BC Hydro meeting its updated new government's mandate of keeping electricity rates low over the long-term or should it be proceeding in a manner similar to FBC - that is under a prescribed undertaking? In my opinion, BCH should be proceeding with DCFCs as a prescribed undertaking under the current CEA/GGRR legislation as is FBC.

The key point is - can BC Hydro fully recover its costs in each fiscal year? If not, then could those costs overruns be held in a deferral account so that those costs (however small) do not impact the ratepayers?

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[4] https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/accountability-reports/openness-accountability/2018-2019-bc-hydro-mandate-letter.pdf

BC Hydro's Amendment to GGRR

BC Hydro states,

> "In response to BCUC IR 4.3, MEMPR invited the Commission to offer advice on the language of potential amendments to the GGRR. BC Hydro submits that the Commission should accept this invitation, and offer potential changes to the GGRR that would serve the Province's stated electrification objectives. BC Hydro has provided draft language for this purpose at Appendix B." [5]

MEMPR has suggested amendment to the CEA/GGRR and BC Hydro has provided it. While these amendments are interesting, they are currently not in effect for this Inquiry as they have only been submitted at the time of interim final argument and not vetted by the other Interveners. Further, the amendment has been filed outside of the evidentiary record.

Now what will the Panel do with this amendment since it came from an Intervener in this Inquiry? As funds for this undertaking will most likely come from the rate base, Appendix B needs to be approved by the Commission in a rate hearing or some other type of hearing. Since this amendment did not come from MEMPR, should this suggested BC Hydro amendment be subject to further review by the Interveners and BCUC staff in this Inquiry as well as additional IRs?

I oppose this amendment in Appendix B being forwarded to the Province until it has been vetted by these Interveners and others in a separate hearing to determine the rate impact and whether it requires a separate deferral account to capture losses that could impact ratepayers.

FortisBC's Position

"FBC submits that the DCFC charging stations that it has deployed to date under the EV DCFC Stations Project are consistent with the definition of a prescribed undertaking under the

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[5] Ex. C1-5, BCH Final Argument, para. 29

GGRR as set out above."[6] From the foregoing statement, FBC appears to have no issues with the current CEA/GGRR. I support FBC's position.

2.4. DCFC Business Cases/Plans

2.4.1. CCME/Marcon Business Case

The Canadian Council of Ministers of the Environment (CCME) is an inter-governmental organization in Canada with members from the federal government, ten provincial governments and three territorial governments. A "Business Case for Investing in Electric Vehicle Direct Current Fast Charge Station Infrastructure[7]" (the Document) was prepared in 2016 by Marcon Consulting for CCME. The Document covers several topics that may be of interest to the Panel and other Interveners in this Inquiry. These are rates (Urban and En route), consumer willingness to pay, funding, issuance of permits (BC Hydro's avoidance of any building or development permits), business case evaluation, acquisition and operation costs of DC fast chargers, EV sales forecasts, DC fast charger requirements for the number of EVs forecasted, road/fuel taxes and a myriad of other information that may have been useful to the Interveners in this Inquiry.

The Panel may wish to use this document in reviewing the evidence and formulating its decisions on rates to be set and other matters.

2.4.2. BC Hydro Business Case

BC Hydro did not provide a business case/plan in its evidence but did provide a footnote[8] to the above Document by Marcon which is extremely informative.

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[6] Ex. C12-4, FBC Final Argument, para. 20.

[7] https://www.ccme.ca/files/Resources/air/mobile_sources/Final%20DCFC%20Report.pdf

[8] Ex. C1-2, BCH, bottom of page 4

2.4.3. FBC Hydro Business Case

In FBC's response to IR1, it states:

> 1.8 Does FBC have a business case for the installation of DCFCs in their service area?
>
> **Response:**
>
> Please refer to FBC's Application for Approval of Rate Design and Rates for Electric Vehicle Direct Current Fast Charging Service (the FBC EV Application), provided in Appendix 3 to Exhibit C12-2, for detail on FBC's business case for installing DCFCs in FBC's service territory.

Again, the Panel may wish to use this Document in reviewing the evidence in its previous decision on FBCs interim rates in Order G-9-18 and other matters in the future.

2.5. Compensation

The concept of free is discussed in "No Free Lunch"[9]. Unless the individual is capable of creating, nothing he can supply as a service is truly free. So, I believe that compensation is clearly defined in the UCA. Regardless, I prefer to adhere to the definition as stated. So, keeping in mind that I am not a lawyer, I support FBC's reference of Rizzo & Rizzo Shoes Ltd[10] where "Today there is only one principle or approach, namely, the words of an Act are to be read in their entire context and in their grammatical and ordinary sense harmoniously with the scheme of the Act, the object of the Act, and the intention of Parliament."- Elmer Dreiger.

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[9] https://www.phrases.org.uk/meanings/tanstaafl.html

[10] Rizzo & Rizzo Shoes Ltd *[1998] 1 S.C.R. 27, at para 21, quoting E. A. Driedger, The Construction of Statutes (2nd ed 1983), at p. 87*

2.6. Safety

In the Document by Marcon, BC Hydro is referred to as saying the stations are generally "treated as a utility installation, avoiding any building or development permits", in most cases, the only permit required is an electrical one. If this is the current case, then any exemption provide must include safety oversight by the Commission since the installation may not come under the Safety Standards Act, Electrical Safety Regulation Section 3 and the Technical Safety BC "Directive[11], Exemptions to public utilities" needs further clarification by the Panel as to whether a DCFC charging station is truly a utility installation as it may affect the scope of the exemption. As the role of DCFCs is described as non-traditional are the DCFC charging stations still exempt under the Electrical Safety Regulations?

The Panel should make a determination of whether DCFC charging stations are truly traditional utility installations or not.

2.7. Exemption

2.7.1. DCFC Charging Stations

Assuming entities not otherwise public utilities but may be found to be public utilities should be granted an exemption from Part 3 of the UCA except for the following sections:

2.7.2. L1 and L2 Charging Stations

Assuming entities not otherwise public utilities but may be found to be public utilities should be granted an exemption from Part 3 of the UCA except for the following sections:

[11] https://www.technicalsafetybc.ca/alerts/directive-exemptions-public-utilities

2.8. Rates

Rate setting is more difficult. Let's begin with the Document from Marcon that I am attaching to this submission.

2.8.1. Marcon Document

First of all Marcon establishes two rates: one for urban use and another for En route use.

Pricing assumptions were also made to anticipate market behaviour. These are presented in Table 23.

Table 23. Pricing forecasts by station location

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Average price of charging (80% of battery capacity)											
Urban station	$ 7.00	$ 7.50	$ 8.00	$ 10.00	$ 11.00	$ 15.00	$ 17.50	$ 20.00	$ 22.50	$ 25.00	$ 30.00
En route station	$ 10.00	$ 11.00	$ 12.00	$ 15.00	$ 20.00	$ 25.00	$ 30.00	$ 35.00	$ 40.00	$ 45.00	$ 50.00

Figure 1 Average Pricing Forecasts for Urban and En Route Stations - Marcon

In 2018, the urban charging station will have an average price of $10.00 and En route charging station will have an average price of $15.00. The table below shows the rates going forward.

Table 1 Forecast of Average Price of charging 2018 - 2025 - Marcon

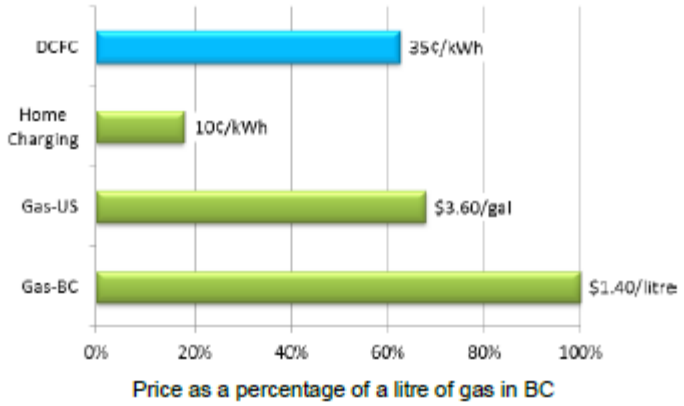
Marcon's Average price of charging (80% of battery capacity)		
Year	Urban Station	En route Station
2018	10.00	15.00
2019	11.00	20.00
2020	15.00	25.00
2021	17.50	30.00

2022	20.00	35.00
2023	22.50	40.00
2024	25.00	45.00
2025	30.00	50.00

The follow excerpt shows the relationship between the DCFC charging, home charging and gasoline. It should be notice that the home charging rate of 10 ¢/kWh is now 13.26 ¢/kWh (an increase of 32.6%). Therefore, one might expect the DCFC rate to increase by the same amount or 35¢/kWh to 46.41¢/kWh. This increase would also affect the pricing in the previous excerpt such that the 2018 Urban pricing would be $13.26 for an 80% charge and the 2018 En route pricing would be $19.89 for an 80% charge or approximately twice the $9.00/30 minute rate in Order G-9-18.

- **kWh based**: In BC, the rate is $0.35 per kWh, with a minimum charge of $2.00. As presented in Figure 15, the DCFC price remains competitive with the price of gasoline[112]. At a price of $1.40 per litre of gas, the DCFC recharge price of $0.35 per kWh is slightly more than 60% (fuel equivalent).

Figure 15. BC Hydro DCFC Price Comparison



Source: BC Hydro (based on cost per distance travelled)

Figure 2 BC Hydro DCFC Price Comparison (@Home Pricing 10¢/kWh)

For the Panel to set the DCFC charging rates for Urban and En route stations it should use the 2016 10¢/kWh (step 2) and 35¢/kWh for DCFC charging and maintain the ratio going forward. A fully developed Marcon-style business plan/case needs to be submitted by BC Hydro and FBC.

2.8.2. Oregon's Road Tax

The excerpt below shows how Oregon handles road taxes – user fees per mile driven.

> The state of Oregon[190], for example, will apply a $0.0156 per-mile fee to EVs[191]. This suggested fee is considered to be the equivalent to what the average ICE vehicle owner would pay in gas taxes.

The current Oregon user fee system is outlined below.

- OReGO volunteers will pay a road usage charge for the amount of miles they drive, instead of the fuel tax.
- The OReGO road usage charge is set at 1.7 cents per mile.
- Volunteers will receive credits on their bill for the fuel tax they pay at the pump.
- Volunteers will have their choice of secure mileage reporting options offered by OReGO's private-sector partners.
- Volunteers' personal information will be kept secure and private.
- The first phase of OReGO is limited to 5,000 cars and light-duty commercial vehicles.

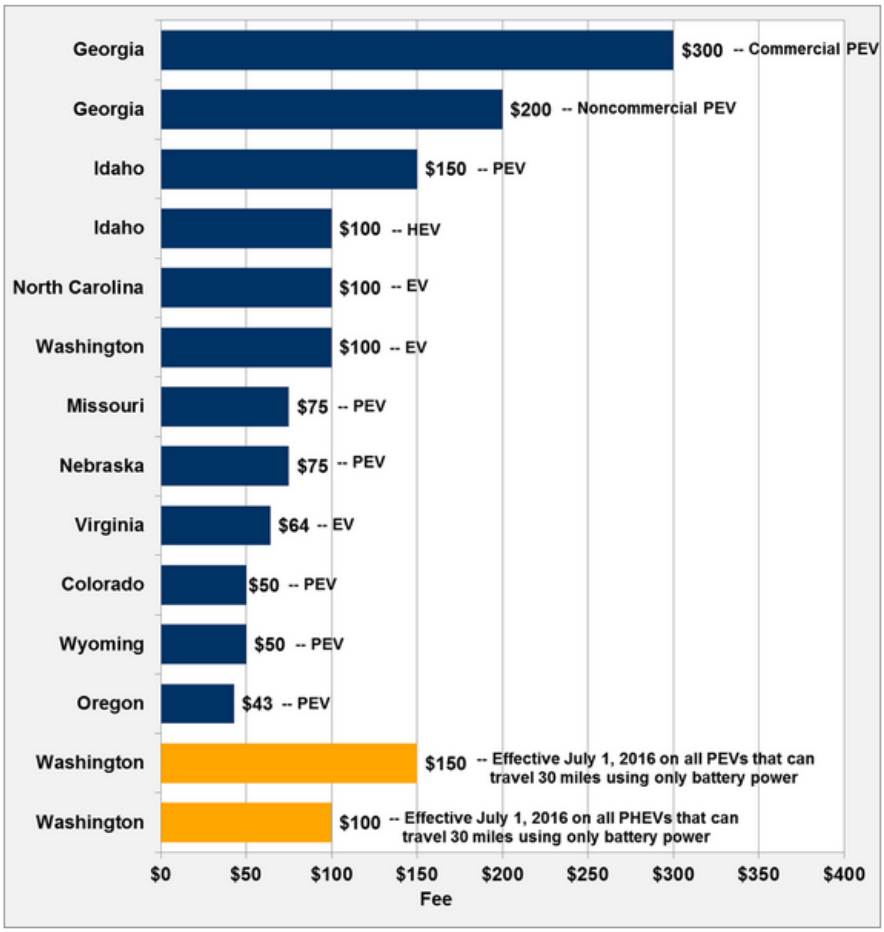
Oregon's Road Usage Charge,The OReGO Program, Final Report[12] – April 2017 shows a widening funding gap starting about 2020 without implementation of this program. The Panel should address this matter in its Decision and consult with the MEMPR as to how the government will address this matter. The additional estimated cost would be about $1.13 per 80% charge at 1.7¢/mile range for a Nissan Leaf.

2.8.3. Other States' Fuel Tax Issues

Other USA states have devised or are addressing how to collect fuel tax from zero emission vehicles. From the graphs below, there are fuel taxes losses to consider when setting the charging rates for EVs, & PHEVs.

[12] https://www.oregon.gov/ODOT/Programs/RUF/IP-Road%20Usage%20Evaluation%20Book%20WEB_4-26.pdf

These U.S. States Charge Electric Car Fees To Make Up For Lost Gas Tax Revenue



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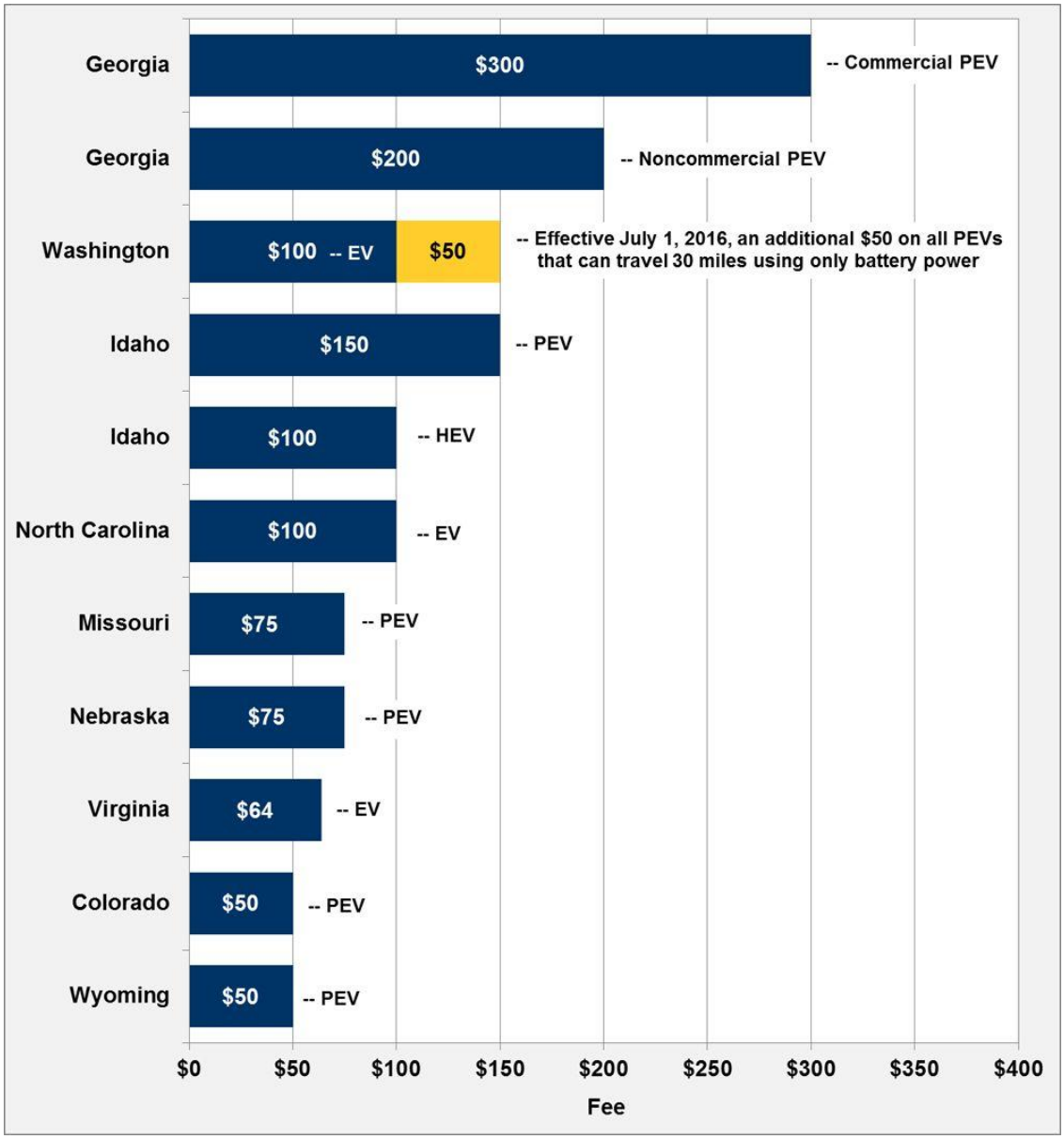
https://insideevs.com/u-s-states-charge-electric-car-fees-make-lost-gas-tax-revenue/

and

https://www.energy.gov/eere/vehicles/fact-901-november-30-2015-states-assessing-fees-electric-vehicles-make-lost-fuel-tax

Annual State Fees for EV Owners as of September 2015



Source: U.S. Department of Energy

**This story was updated to include a list of states that have implemented EV fees and a list of states considering EV fees. The article initially cited 13 states with EV fees, but we have since confirmed additional states.*

Since the Americans have already determined that the shortfall in fuel tax will have a negative impact, I suggest we follow the lead of our neighbours and levy an equivalent fuel tax through ICBC that could be an amount similar to the State of Washington.

2.8.4. Rate Considerations

The Marcon Document and the BC Hydro information contained within provide the Panel with the data necessary to determine rates in the short-to-long term DCFC rates until the receipt of business plans/cases from those public utilities wishing to become DCFC charging station service providers have been filed with the Commission.

The Document establishes a relationship in 2016 dollars between the cost of home energy, Average price of charging an EV to 80% of battery capacity (or the price per ½ hour of charge) , and the urban to En route pricing ratio. The ratio of $0.35/$0.10 or 3.5 represents the 2016 kWh price divided by the cost of step 2 kWh for the residential rate. The other ratio of interest is the average price of charging (80% of battery capacity) or the ½ hour price. Using the information in the Document, the Panel can adjust these prices into 2018 pricing and forward.

The ongoing forward adjustment for the Charging price in kWh would be:

Equation 1: Current DCFC Charging Price Adjustment Factor

The average price of charging (80% of battery capacity) would be:

Equation 2: Current Urban DCFC Charging Price Adjustment Factor

and

Equation 3: Current En route DCFC Charging Price Adjustment Factor

These equations will maintain the ratio between home charging costs to DCFC pricing (Urban & En route) without further consideration of BCCPI, CPI or other indices.

2.8.5. Payback and Deferrals

In the Document, it states the anticipated payback period for an Urban DCFC is just under 8 years and for an En route DCFC is just less than 7 years. It should be noted that the financial calculations are based on a 10% interest rate for the borrowed money. As BCH is seeking to access the rate base for financing, one could assume the payback would be sooner and therefore the need for the deferral account should be for a shorter term.

Chapter 3. Conclusions

3.1. Position

I oppose the funding of DCFCs by the ratepayers, cross-subsidization, intergenerational inequity and subsidised charging rates.

I support a fuel tax equivalent, the recovery of all DCFC costs within the fiscal year through the use of deferral accounts, exemptions for L1 and L2 charging stations that are different than DCFC charging stations, conditional exemptions for DCFC charging stations and escalating rates tied to the Step 2 residential rate going forward.

Although I'm still very interested in the vehicles, my support for EVs has diminished since the demise of GM's EV1 (1996-1999). Rather, I firmly support electrified-rail public transit as a solution that will remove more ICE vehicles from the roadways, provide greater benefits by the reduction of greenhouse gas, and improved mass public transit. I believe that personal transportation vehicles will only be available to those who can afford EVs and therefore the money should be spent on public transit.

3.2. CEA/GGRR & Deferral Accounts

I believe the proper way to proceed with the DCFC program is by way of a prescribed undertaking in the CEA/GGRR legislation. However, the catch is that the rates have to be high enough to recover the cost of the program within each fiscal year. However, if the Panel accepts the use of deferral accounts, ratepayer risk and cross-subsidization are avoided.

After reviewing the Marcon Document, the paybacks are something less than 8 years. If the public utilities non-recoverable costs are captured and held in a deferral account until such time deferral amounts are eliminated, then the intent of the CEA/GGRR may be met.

I am uncertain as to whether BC Hydro's previous mandate is an acceptable approach since more recent mandates exist and a change in the provincial government has occurred. It may be preferable for BC Hydro to also proceed by way of a prescribed undertaking as per the CEA/GGRR legislation.

3.3. Rates

Using the information from the Marcon Document, the FBC interim Order G-9-18 that establishing DCFC pricing at $9.00 per ½ hour should be adjusted upwards to En route 2018 pricing of $15.00 + (32.6% x $15.00) = $19.89 per ½ hour of charging; and for Urban 2018 pricing of $10.00 + (32.6% x $10.00) = $13.26 per ½ hour of charging.

By Order G-71-16, EcoDairy's DCFC station charges a $0.35 per kilowatt-hour fee for the provision of EV charging services to the public, EcoDairy's EV DCFC station will then be operating for resale of electricity to the public for compensation. It will therefore be a public utility as defined by the UCA. Should the Panel make adjustments to the $0.35 per kilowatt-hour fee to bring the pricing forward to the 2018 pricing of $0.4641 per kilowatt-hour fee?

Using the ratio of the Step 2 residential rate to the 35¢/kWh charging price (EcoDairy), will allow the Comission to maintain the relationships of today well into the future without considering CPI or other indexes.

3.4. Fuel Tax Revenue Gap

The loss of fuel tax revenue should be addressed by the government and MEMPR should provide direction on this matter. Another option would be to have a special charge added through ICBC when the EV or PHEV insurance is renewed. In the interim, this charge of $131/yr for EVs and $66/yr for PHEVs could be added to the ICBC insurance upon annual renewal.

3.5. Exemptions

As L1 and L2 EV charging stations are different then DCFC EV charging stations, their exemptions will differ slightly. The emphasis should be on safety and rate setting.

Exemptions from Part 3 of the UCA should be sought for all L1 and L2 EV charging stations and for those entities not already a public utility but may be included by the definition - a public utility in the UCA. The exemption should be from all of Part 3 of the UCA except for the following sections: 23, 25, 26, 38, 42, and 49 (c). These excluded sections will address the safety issues and significantly reduce the regulatory burden.

Exemptions from Part 3 of the UCA should be sought for all DCFC EV charging stations and for those entities not already a public utility but are included by the definition - a public utility in the UCA. The exemption should be from all of Part 3 of the UCA except for the following sections: 23, 25, 26, 38, 42, 49 (c), and 58. These excluded sections will address the safety issues, rate setting concerns of MEMPR, and significantly reduce the regulatory burden.

Appendix A - Document - Business Case for Investing in Electric Vehicle Direct Current Fast Charge Station Infrastructure, MARCON, PN 1567.

This Document was submitted by BC Hydro as part of its evidence in Ex. C1-2. However, a link to the report was not provided.

[3] Business Case for Investing in Electric Vehicle Direct Current Fast Charging Station Infrastructure. MARCON. Prepared for the Canadian Council of Ministers of the Environment 2016.

British Columbia Utilities Commission
Inquiry into the Regulation of Electric Vehicle Charging Service

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Figure 3 BCH Exhibit C1-2

As the link below may not work directly from Word, you may have to paste it into your browser and hit search.

https://www.ccme.ca/files/Resources/air/mobile_sources/Final%20DCFC%20Report.pdf

Just in case, I'm including a copy of the Document in this Appendix.