

**COMMERCIAL ENERGY CONSUMERS ASSOCIATION
OF BRITISH COLUMBIA (“CEC”)**

REPLY - INFORMATION REQUEST NO. 1 TO DONALD FLINTOFF

**British Columbia Utilities Commission – Inquiry into the Regulation of Electric Vehicle
Charging Service ~ Project No. 1598941**

Tuesday, June 05, 2018

1. Reference: Exhibit C4-2, Page 6

Clearly, the operators of the DCFC charging stations are a public utility. Through the Commission, the operators of DCFC stations may be able to seek a ministerial exemption from regulation which can be withheld/cancelled on complaint. Any exemptions should expire after five years and another inquiry should be held to determine if the exemptions are working in the public interest. Further discussion on this matter assumes the Commission can obtain the necessary exemption from the Ministry.

- 1.1 Would it make sense for the exemption period to be matched to the expected useful life of the charging station equipment so that a reversal of exemption does not compromise the economic assumptions made by the party investing in the EV charging station business?
- 1.2 Would it make sense for a broader exemption to a class of non-regulated EV station providers be established with an ability to step up regulation if and only if serious problems were developing for the EV charging driver customers?

RESPONSE

- 1.1. I would not support to withholding, reversing or cancelling a DCFC station’s exemption. Rather, I would prefer a per diem penalty be levied against the operator for safety, reliability and billing issues. A per diem penalty could be levied against the operator of a group of stations for which he has an exemption.
- 1.2. I would prefer an exemption by operator rather than a broader exemption to a class of non-regulated EV station providers and prefer a per diem penalty be levied against the operator for safety, reliability and billing issues.

2. Reference: Exhibit C4-2, Page 14

No, the DCFC supply charging station rate should not be based on public utility's existing rates. Instead, a new tariff should be established that bills the DCFC charging stations on demand (kW), energy (kWh), and time-of-use power factor, etc.

- 2.1 Do you expect that such a rate should be a mandatory time of use rate and therefore be a rate within the normal commercial rate class?

RESPONSE

- 2.1. I believe that BC Hydro is proposing using the General Service rate to supply charging stations. This rate compares favorably to Hydro-Quebec's rate, and BC Hydro's rate includes demand, energy and power factor but does not include a TOU component. I would not support TOU rates unless the other ratepayers are also exposed to TOU rates.

3. Reference: Exhibit C4-2, Page 15

the capital expenditure side. There is a financial risk of substation, and distribution upgrades that most likely to occur since the EV charging stations will add significant load on the system which, in some cases, has not been designed to accommodate the new load. Because of the high power requirements of up to 240 kWatts per station, they can't just be connected to the grid anywhere. The electricity generating utility must provide a dedicated supply line capable of delivering the very high currents demanded.

- 3.1 Do you know what the range of commercial service sizes is for BC Hydro and FortisBC and if so could you provide them?
- 3.2 If not, would it not be expected that commercial services of 240kW would not be outside of the range of commercial service rates in general?
- 3.3 Why would one subset of the larger general service class of customers need different treatment with the possible exception of time of use rates, which is now under consideration by the Commission in BC Hydro's module 2 stage of rate design?

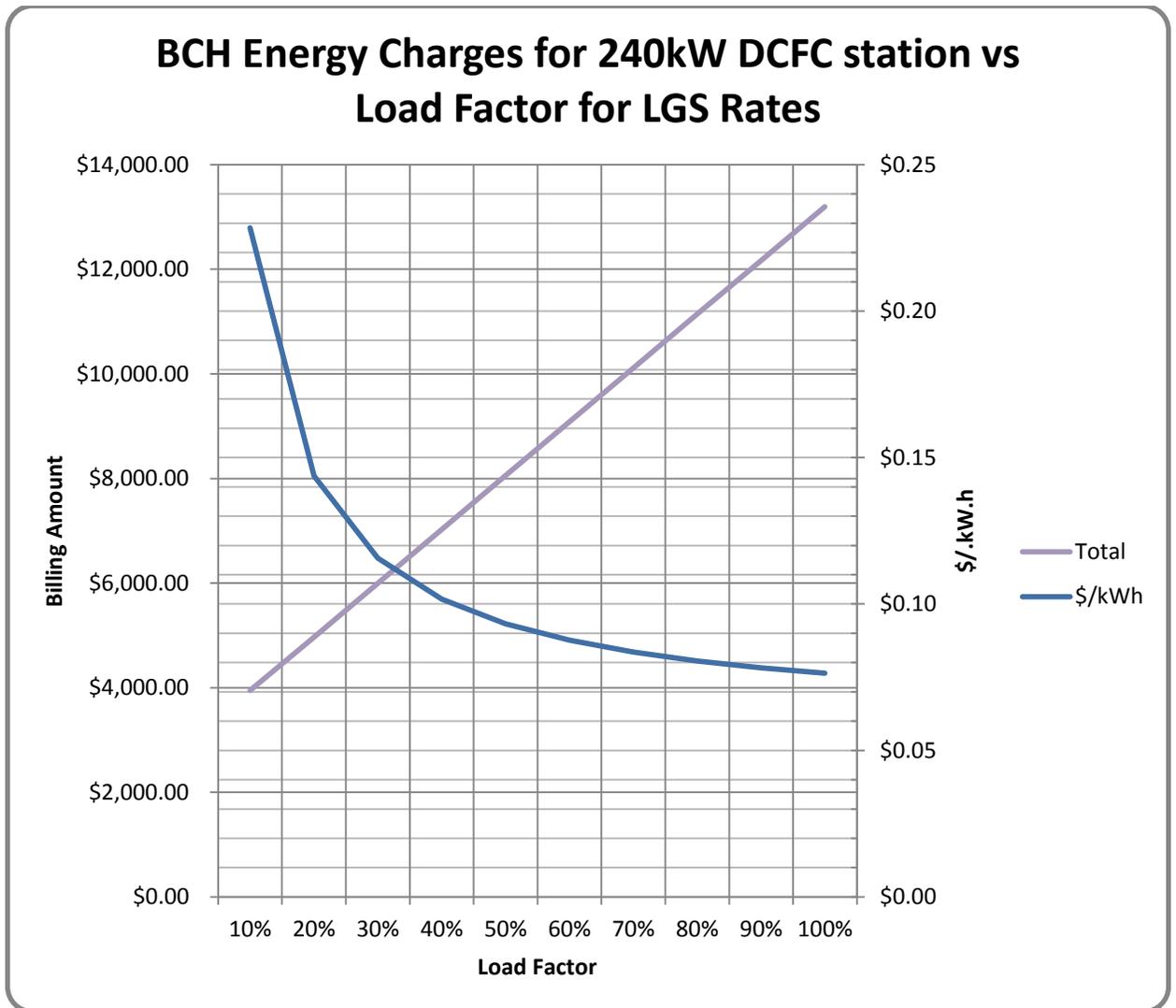
RESPONSE

- 3.1. For BC Hydro, the medium general service is sized for customers with an annual peak demand **between 35 and 150 kW**, and that use less than 550,000 kWh of electricity per year and the large general service rate is sized for customers with an annual peak demand **of at least 150 kW**, or that use more than 550,000 kWh of electricity per year.

FortisBC only has one Commercial Service rate is for non-residential customers whose electrical demand is **generally greater than 40 kW but less than 500 kW** and can be supplied through one meter. This rate would be the one most likely used to supply DCFC stations.

- 3.2. Commercial Services of 240kW would not be outside of the range of commercial service rates as the large general services rate would accommodate a demand of 240kW.
- 3.3. One subset of the larger general service class of customers may need different treatment to avoid coincident demand (peak demand situation) within the charging stations. However, I do not support this approach. Some charging stations may have charging demand control in their charging management equipment, in which case, they can avoid coincident demand. Those that don't have charging management equipment can pass the increase energy charges from low demand along to their customers much like the gasoline stations in remote areas will charge higher rates.

Below is a graph showing BC Hydro's LGS rate vs. Load Factor for DCFCs @240kW.



This graph shows the impact of load factor versus cost for energy. DCFC stations operating below say 50% LF will have to charge higher rates than those having greater than 50% LF. Thus, the urban DCFCs should prosper while the remote/rural DCFCs should languish.

The Commission should consider permitting the existing General Service rates to be employed when selling energy to DCFCs and let the operators/owners of the DCFCs determine the actual rate charged to the EV owners.

4. Reference: Exhibit C4-2, Page 17

As the battery and charging technology changes, there may even be more and better Level 4+ charging stations available. New higher capacity charging stations⁴ are already being built by BMW, who is leading the project through the 'FastCharge' consortium in partnership with other companies, like Porsche, Allego, Siemens and others, to charge EVs in 15 minutes at a charge rate of 450kW.

Fastned is a fast growing, private sector group, that is already offering these high capacity charging services in Europe. Fastned has two plans: Pay as you go at 0.59€/kWh or a fixed cost of 9.99€/month plus 0.35€/kWh.

- 4.1 Do you have any views with respect to the provision of DCFC services between the present time and the time at which other service providers would be enticed to move into the province?
- 4.2 Do you think that DCFC charging services from other market providers would enter BC more quickly if they were to receive the same subsidy treatment from all electricity ratepayers that the public electric utilities are seeking through inclusion of EV charging stations in their rate base?

RESPONSE

- 3.4. If the public utilities acquire all the high value locations then the other service providers may not have sufficient interest to move into the province.
- 3.5. Yes, but I'm not in favour of the ratepayers subsidizing the DCFC charging stations which may become obsolete through better batteries (solid state) and charging station technology (450kW).