



Tesla Motors Canada ULC
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June 06, 2018

Via Email
don_flintoff@hotmail.com

RE: **British Columbia Utilities Commission – An Inquiry into the Regulation of Electric Vehicle Charging Service – Project Number 1598941 – Information Request No. 1**

Dear Mr. Donald Flintoff:

Attached please find Tesla Motors Canada ULC Information Request on written evidence with respect to the British Columbia Utilities Commission – An Inquiry into the Regulation of Electric Vehicle Charging Service – Project Number 1598941.

For any clarifications or further information please do not hesitate to contact the undersigned.

Yours Sincerely,

A handwritten signature in blue ink that appears to read "Iain Myrans".

Iain Myrans
Manager, Government Relations, Canada.

cc: BCUC - Atten: Patrick Wruck, Commission Secretary
cc: Registered Intervenors

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

RESPONSES TO INFORMATION REQUEST NO. 1
MADE OF TESLA MOTORS CANADA ULC BY D.F. FLINTOFF (C4-6)

1.0 Reference: Commission Question 2
 Exhibit C28-2, p. 4
 EV Customers Captive or Choice

Tesla states, "...consumers in remote areas of the province have seen less privately funded charging infrastructure developed."

1.1 Does Tesla consider it prudent for consumers in remote areas of BC to purchase an EV considering the lack of DCFC charging infrastructure or would a PHEV be a more reasonable acquisition?

1.1 RESPONSE

Tesla believes full battery electric vehicles can provide more economic benefits to a consumer in remote areas than a PHEV or gasoline power vehicle, but ultimately it is up to an individual consumer to make the determination about the best vehicle option to purchase based on their situation, driving needs, availability of charging, vehicle range, and other factors.

1.2 Considering that less than 2% of all vehicles in BC are EVs, please explain why the ratepayers should provide DCFC charging stations for the EV owners rather than the private or nonregulated business?

1.2 RESPONSE

Tesla has not proposed that ratepayers provide DCFC charging stations for EV owners. Notably, Tesla makes significant investments to develop and connect charging stations in BC. Further, Tesla is also a rate-paying customer.

2.0 Reference: Commission Question 3
 Exhibit C28-2, pp. 4-6
 Regulation, & Benefits and Detriments

Tesla states, "...Ontario's utility commission, the Ontario Energy Board (OEB), issued a staff guidance bulletin on July 7, 2016, related to EV charging services and the role of the energy regulator in that province."

2.1 Does Tesla agree that under the BC Utilities Act (the Act), that the Commission has the ability to regulate public utilities or others engaged in providing DCFC charging services and set the rates? If not, please explain.

2.1 RESPONSE

If regulated utilities are offering DCFC charging services, such as owning or operating a charging station, it is appropriate for the BCUC to regulate that activity. If a competitive affiliate of the regulated utility is offering the service, it would not be appropriate for the BCUC to regulate the activity beyond ensuring adequate protections are in place that prevent the competitive affiliate from benefit or utilizing market information or assets from the regulated utility. Tesla operates EV charging stations in a manner that provides a complete end-use service of charging for which a service fee is levied.

Entities that provide DCFC services are customers of public utilities and themselves pay rates regulated by the BCUC. Those entities should not be subject to rate regulation from the BCUC because competitive EV charging providers are not exercising market power or providing a monopoly service.

Tesla states, “In those few situations where the competitive market is not providing an adequate supply of EV charging infrastructure (such as in remote communities and multi-unit dwellings) it may be appropriate for regulated utilities to participate more actively in the EV charging market. Unlike competitive charging companies which do not use ratepayer funds, a regulated utility that participates in the EV charging market with ratepayer funds should have their activities overseen by the Commission.”

2.2 In the statement above, it appears that Tesla supports public utilities providing DCFC charging services in remote areas where the competitive market may not deem it profitable.

2.2.1 Why should the ratepayers not the taxpayers bear this cost/risk? Please explain.

2.2.1 RESPONSE

The question posed does not accurately reflect the statement referenced. Tesla takes no position on this issue in British Columbia. However, Tesla opines that if regulated utilities are permitted to invest through their regulated businesses, it is appropriate for the commission to oversee those activities.

2.2.2. Why do the manufacturers not provide these much needed DCFCs?

2.2.2 RESPONSE

Tesla does provide DCFCs. Tesla cannot speak for other manufacturers and their positions on DCFCs.

3.0 Reference: Commission Question 5
 Exhibit C28-2, pp. 7-8
 Wholesale or Commercial Retail Rate, or Some Other Rate

Tesla states, “Addressing demand charges could be particularly effective in improving the business case to develop privately funded, competitive, charging infrastructure – particularly in seasonal or remote locations.”

3.1 If demand charges are required for grid infrastructure improvements since the location may be a seasonal or remote location, please explain why the cost of these improvements should be borne by the ratepayers instead of the EV industry.

3.1 RESPONSE

Many of these costs are borne by the EV industry (i.e.-station operators, like Tesla) at the time of construction through fees levied by the utility in the form of an Offer to Connect and Extension Fees. These fees are substantial and are intended to pay for connection and upstream costs so that they are not paid by the ratepayer.

3.2. Does Tesla agree that by lowering the demand charge to the DCFC charging stations that additional cost may be borne by the ratepayers?

3.2 RESPONSE

Not necessarily. It would be entirely dependent on decisions made by the BCUC regarding the associated change in the volumetric rate structure for DCFCs, the cost to serve the stations, and the types and the intended use of the significant fees that are already levied to charging operators at time of construction. Moreover, the majority of EV charging occurs at home. If that charging also happens to occur during off-peak times, including nights, there is more throughput consumption to spread out fixed costs of the electric system.

4.0 Reference: Commission Question 6
 Exhibit C28-2, pp. 8-9
 Regulated Rate Base or through a Separate Non-Regulated Entity

Tesla states, “it is appropriate for regulated utilities to recover their EV market expenses through their regulated rate base.”

4.0 Tesla states, “Increasing the deployment of electric vehicles and charging stations provides benefits for all ratepayers, and not just the EV owners or charging station site hosts. Therefore, it is appropriate to recover their EV market expenses through their regulated rate base.”

4.1 Based on the above statement, can one assume the Tesla supports the full recovery of any costs associated with the provision of energy from the regulated rate base including location considerations, demand charges, infrastructure upgrade costs, power factor and harmonic correction considerations?

4.1 RESPONSE

The answer depends on a number of variables, including customer specific-costs and what is included in the company's line extension policy.

Tesla states, “The United States National Renewable Energy Laboratory conducted a survey about charging stations along routes they frequented...”

4.2 Based on the above statement, can one assume that 82% of the respondents relied on homebased Level 1 or Level 2 charging stations to meet their charging requirements?

4.2 RESPONSE

Please refer to the original NREL report for more details about the survey's methodology and findings.

5.0 Reference Commission Question 7
 Exhibit c28-2, pp.9-10
 Cross Subsidization & Potentially Unduly Discriminatory Rates

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?

Tesla states, “..electric vehicles provide benefits to all ratepayers, including higher revenues for utilities that puts downward pressure on rates...”; “...keep “fueling” revenues in the provincial economy contributing significantly economic development...”; and “...The overall economic and public health benefits to all ratepayers of accelerated EV adoption will far exceed any costs associated with utility investment in charging infrastructure as EV adoption accelerates...”

5.1 As you did not respond directly to the Commission's question, is there cross subsidization of the utility rates if public utilities provide EV charging services within their regulated businesses.

5.1 RESPONSE

Tesla does not have data or information available to conclusively determine whether current public utility charging services would be cross subsidized, but maintains its position that the overall economic and public health benefits to all ratepayers of accelerated EV adoption will far exceed any costs associated with utility investment in charging infrastructure as EV adoption accelerates.

5.2 As you did not respond directly to the Commission's question, is the proposed rate design potentially unduly discriminatory if public utilities provide EV charging services within their regulated businesses?

5.2 RESPONSE

Tesla is unaware of a proposed rate design in this proceeding.

5.3 As the EV promotion is supported by BC Government policy, why should the taxpayers not be providing the funding for EV charging stations, rather than the ratepayers? charging stations rather than ratepayers?

Tesla states, "...the International Institute for Sustainable Development has reported that local air pollution, much of which is caused by mobile emission sources such as cars, resulted in 7,700 premature deaths and as much as \$36-billion is lost productivity and health care expenditures in Canada in 2015 alone "

5.3 RESPONSE

This question is outside the scope of the proceeding and respectfully declines a response.

5.4 As the data in the above report is Canada-wide, is there comparable motor vehicle emission data for British Columbia? If so, please provide a reference.

5.4 RESPONSE

Tesla is not aware of a local health impacts study at the provincial level.

5.4.1 As the airport and ports are also major contributors of air pollution in the lower mainland, is there comparable motor vehicle emission data for the lower mainland and Fraser Valley? If so, please provide a reference.

5.4.1 RESPONSE

Tesla did not provide specific comments on these regions and does not have a reference.

6.0 Reference: Commission Question 8
 Exhibit C28-2, p. 10
 Other Matters that assist in the Review

Tesla states, "Ontario's utility regulator released a guidance document on July 7, 2016..."

6.1 Please confirm that the above document is an OEB staff Bulletin and the views expressed in this Bulletin are those of OEB staff and are not binding on the OEB.

6.1 RESPONSE

Confirmed.

Tesla states, "It is suggested that the BCUC review time-series data for DC fast charging station expansion in the province on Ontario both before and after the release of the 2016 guidance document."

6.2 Please provide the time-series data for DC fast charging station expansion referred to above.

6.2 RESPONSE

This data is available at Natural Resources Canada's website, see

<http://www.nrcan.gc.ca/energy/transportation/personal/20487#/find/nearest>

- Select "Analyze & Download Data"
- Download the data file with all of the station points. You will be able to filter by station open date.

6.3 If the public utilities acquire most of the preferred DCFC locations, will this not present a barrier for other when the private companies attempt to enter the BC DCFC market?

6.3 RESPONSE

It is not possible to give a definitive answer to this question given the lack of information, including whether the public utility would have an exclusive arrangement with the site host that prohibits others from also developing chargers at the location. Tesla strongly opposes any contractual arrangements between site hosts and charging operators, whether they are regulated utilities or not, that grant exclusivity to any one charging partner. However, in the interests of increasing EV adoption, the more charging options available, the better.