bcuc
British Columbia Utilities Commission

Patrick Wruck
Commission Secretary

Commission.Secretary@bcuc.com
bcuc.com

Suite 410, 900 Howe Street
Vancouver, BC Canada V6Z 2N3
P: 604.660.4700
TF: 1.800.663.1385
F: 604.660.1102

May 3, 2018

Sent via email/eFile

BCUC REGULATION OF ELECTRIC VEHICLE CHARGING SERVICE INQUIRY EXHIBIT A-22

Mark Grist
President
BrightSide Solutions Inc.
2855 128 Street
Surrey, BC V4A 3W9
mark.grist@brightsidesolutions.ca

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

Dear Mr. Grist:

Further to your March 6, 2018 filing of written evidence with respect to the above-noted Inquiry, enclosed please find British Columbia Utilities Commission (BCUC) Information Request No. 1. In accordance with the regulatory timetable, please file your responses on or before Wednesday, June 6, 2018.

The BCUC's Rules of Practice and Procedure (Rules) set out in Order G-1-16 provide guidance and establish requirements for participants in BCUC proceedings. Subject to section 14 of the Rules, all parties that receive an information request must provide full and adequate response to each question.

The BCUC's Rules of Practice and Procedure can be viewed here:
https://www.ordersdecisions.bcuc.com/bcuc/orders/en/127520/1/document.do

If you have any questions regarding the information request process, please contact Commission Secretary.

Sincerely,

Original signed by:

Patrick Wruck
Commission Secretary

/dg
Enclosure

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

INFORMATION REQUEST NO. 1 TO BRIGHTSIDE SOLUTIONS INC.

A. INVESTMENT DECISION

1.0 Reference: Exhibit C23-2, p. 4
Competitiveness

On page 4 of Exhibit C23-2, BrightSide Solutions Inc. (BrightSide) states:

> Regulated utilities should not be involved in providing EV Charging stations or in the ownership and operation of such facilities. The involvement of utilities presents challenges re fair competition with private sector participants.

1.1 Please elaborate further, in the view of Brightside, the reasons that public utilities' involvement in EV charging owning/operating would constitute unfair competition.

1.2 Does BrightSide view that private third-party investments will favour a certain level of charging (e.g. Level 1, 2, and/or 3)? Please explain the investment considerations for each.

1.3 Which market segment will be better served by private third-party investments as opposed to public utilities? Market segments may be considered as shopping malls, fueling stations, apartment buildings, rural highways, etc. Please explain.

1.3.1 Conversely, which market segments will be better served by government spending and/or utility investments? Please explain.

1.4 In BrightSide's view, if the regulatory definition of public utility did not apply to EV charging infrastructure to site hosts/third-parties, would private investors be able to charge a fee for EV charging services and still successfully compete with free EV charging from entities such as municipalities? Please provide any supporting evidence available.

2.0 Reference: Exhibit C20-2, p. 6
Exhibit C15-2, p. 2
Exhibit C23-2, p. 2
DCFC - third-party investment

On page 6 of Exhibit C20-2, AddÉnergie Technologies Inc. (AddÉnergie) states:

> That the major barrier to EV charging station competitiveness is that British Columbia lacks a comprehensive network of charging stations and that one is unlikely to be developed by [third-party] investment alone.

On page 2 of Exhibit C15-2, Greenlots states:

> [Unfortunately] a sustainable, competitive market is aspirational, and is unlikely to arise prior to the adoption of a critical mass of electric vehicles. This is primarily on account of a lack of a business model for the ownership and operation of public charging stations based on sustainable revenues from charging activities, and this has thus far resulted in a fundamentally inadequate amount of [third-party] investment in such charging infrastructure.

2.1 Please comment on AddÉnergie and Greenlots' statements with regard to a lack of private third-party investment.

On page 2 of Exhibit C23-2, BrightSide states:

> There are no significant barriers to entry into this market, other than the present regulatory barrier and there are a number of [third-party] entities that wish to provide this service.

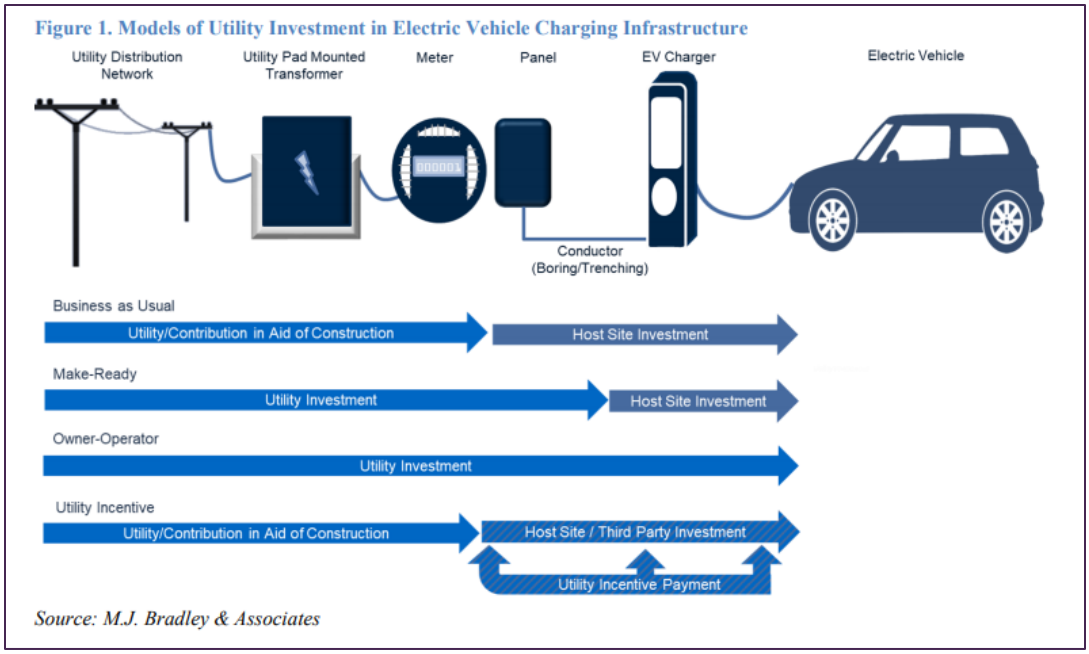
2.2 Please discuss the investment returns and risks for private third-party entities to enter into the EV charging market.

2.3 In a competitive market, there are low barriers to enter and exit. Please discuss the potential issues, if any, should EV charging service providers freely exit the market at any time. For example, are there concerns that certain market segments (e.g. low density areas) may be underserved by private third-party entities if those markets tend to be uneconomical or unprofitable? If there are concerns, how could they be resolved? If no concerns, please explain why.

2.4 What regulatory barrier do private third-party entities face when owning or operating the various levels of charging stations? Please elaborate.

In a report authored Georgetown Climate Center and by M.J. Bradley & Associates, titled "Utility Investment in the Electric Vehicle Charging Grid: Key Regulatory Considerations" dated November 2017[1] (GCC-MJBA Report), on page 9, Figure 1 provides the models of utility investment in EV charging infrastructure: (i) business as usual, (ii) make-ready, (iii) owner-operator, and (iv) utility incentive.

[1] http://www.georgetownclimate.org/files/report/GCC-MJBA_Utility-Investment-in-EV-Charging-Infrastructure.pdf



2.1 Please discuss the pros and cons of the four business models that are noted in the GCC-MJBA Report. Include considerations such as market growth, business sustainability, customer impacts, public interest, competition, and appropriate level of utility regulation.

B. TECHNOLOGY

3.0 Reference: Exhibit C23-2, p. 2
Safety of EV charging

On page 2 of Exhibit C23-2, BrightSide states:

> The ownership and operation of the charging stations, however, is a completely separate matter. BrightSide submits that there is no need for utility involvement or economic regulation of EV charging services downsteam of the main meter for the following reasons:
>
> vi. The safety of EV charging has been demonstrated to be at least equivalent to the dispensing of conventional vehicle fuels.

3.1 Are there any reports and/or studies to support that the "safety of charging has been demonstrated to be at least equivalent to the dispensing of conventional vehicle fuels"?

C. RATES

4.0 Reference: Exhibit C23-2, p. 3
Rate design

On page 3 of Exhibit C23-2, BrightSide states:

> EV's on the other hand have high efficiency (~90%) and low (often free) energy charging costs. If we assume a COS based electricity rate of $0.15/kWh, the cost of useful energy for an EV is $46/GJ. (Not including amortization of charging station capital, which may or may not be free to the end user depending on the business model of the station operator. In any event amortization of this cost will not significantly reduce the competitive advantage of electricity as a vehicle fuel)

From this high-level assessment, it is clear that even with a [Cost of Service] COS based rate, EV's will enjoy a very large operating cost advantage over conventional fuels. There is no pressing need to artificially increase this advantage through free or subsidized charging rates.

4.1 Please explain what considerations BrightSide has made regarding capital expenditures and other operating costs outside of fuel costs when assessing a COS based rate.

D. HYDROGEN FUEL CELL TECHNOLOGY

5.0 Reference: Exhibit C23-2, p. 1
Fuel Cell Electric Vehicle (FCEV)

On page 1 of Exhibit C23-2, BrightSide states:

> BrightSide Solutions is a clean energy consulting and project development company that focuses on advancing clean energy projects in BC. BrightSide works with customers to help them make informed decisions regarding adoption of clean energy fuels and technologies. BrightSide's customers are involved in transportation applications using a variety of fuels including Compressed Natural Gas, Liquefied Natural Gas, Hydrogen and Electricity, in addition to conventional fuels.

5.1 Please discuss whether BrightSide has involvement in FCEV and/or FCEV fueling infrastructure.

5.1.1 To the best of BrightSide's knowledge, what is the typical business model of public hydrogen fueling stations? How are they owned and operated?

5.2 In BrightSide's view, from a charging infrastructure perspective, please compare and contrast the pros and cons of FCEVs relative to battery electric and plug-in hybrid electric vehicles.

5.3 In BrightSide's view, from a user perspective, please compare the pros and cons of FCEVs relative to battery electric and plug-in hybrid electric vehicles.