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Senate Committee on Transportation
State House
Montpelier, Vermont

Subject: Electric Vehicle Supply Equipment (charging stations)
and S.213 Payment options at electric vehicle supply equipment

Dear Committee:

As you discuss charging stations Wednesday and in the future, please keep in mind that they have barriers that prevent some people from getting or using electric vehicles. (I use the term "charging stations" because I find it more understandable than "ev-see" or "ee-vee-ess-ee".)

My survey of four charging stations in Montpelier found that none meets the definition of "EVSE available to the public".

I do not use a plug-in electric vehicle. The last vehicle I had with a plug was for the headbolt heater. I looked into a plug-in hybrid a couple years ago and did not buy one for multiple reasons. One of the reasons was the barriers imposed by charging stations. For these comments, I looked into charging stations again. I found the same barriers.

Legal requirements

First, I looked into the legal requirements for charging stations. I include this so we have a common understanding of the background of these comments.

23 V.S.A. Chapter 1

§4(85) "A 'plug-in electric vehicle' includes both a 'battery electric vehicle' and a 'plug-in hybrid electric vehicle'.

30 V.S.A. Chapter 5

§201(2). " 'Electric vehicle supply equipment available to the public' shall

(A) be located at a publicly available parking space, which does not include a parking space that is part of or associated with a private residence or a parking space that is reserved for the exclusive use of an individual driver, vehicle, or group of drivers or vehicles including employees, tenants, visitors, residents of a common interest development, residents of an adjacent building, or customers of a business whose primary business is not electric vehicle charging;

(B) disclose all charges for the use of the electric vehicle supply equipment at the point of sale; and

(C) provide multiple payment options that allow access by the public, if a fee is required, and shall not require persons desiring to use such public electric vehicle supply equipment to pay a subscription fee or otherwise obtain a membership in any club, association, or organization as a condition of using such electric vehicle supply equipment, but may have different price schedules that are conditioned on a subscription or membership in a club, association, or organization."

Status of third-party charging stations

Then I looked at four charging stations in Montpelier that have locations familiar to me. I found that none of the four meets the definition of "being available to the public".

I use the term "third-party" because they are an intermediary between the distribution utility and the user of the vehicle.

Here are the findings from my observations (and a bit of internet research).

<u>Location</u>	<u>Brand</u>	<u>(A) publicly available parking space?</u>	<u>(B) disclose charges?</u>	<u>(C) provide multiple payment options?</u>	<u>meet definition?</u>
Governor Aiken Avenue, three chargers	Chargepoint	yes (1st charger) no (2nd and 3rd chargers reserved for legislators)	yes (free)	no (smartphone only)	no
behind City Hall	Semaconnect ChargePro	yes	yes (\$1.00 per hour)	no (smartphone or Semaconnect RFID card)	no
private parking lot between 543 and 535 Stonecutters Way	Eaton	possibly (a sign on Stonecutters way indicates a charging station in the lot)	no	no (credit card swipe reader only)	no
Hunger Mountain Co-op	Clipper Creek	no (reserved for customers)	no (but if one goes in and asks one learns it is free)	yes (one merely plugs in and uses it)	no

Barriers to use of third-party charging stations

It appears that current practices at these stations is a barrier to some potential users even acquiring a plug-in electric vehicle.

Disclosure of all charges at the point of sale is lacking. The stations require users to pull up and get out of their vehicles to learn the rates. Even then, maybe, they can't learn the rates. I suggest that the disclosures be large enough so that EV users can see the rates from the road as they drive by. The EV user needs to know what the rates are before pulling into the charging station.

The stations are unstaffed and do not accept cash or check. So those who do not have the devices needed for payment cannot use third-party charging stations that require payment.

Each station uses a different brand of equipment. It appears that each company that requires smartphones has its own app for payment.

Recommendations

Require each charger .to allow multiple payment options. The standard options are cash, check, credit card, and smartphone app. I acknowledge that it is difficult for unattended locations to accept cash or checks. However, there need to be enough locations, conveniently situated, that accept all four forms of payment.

Require disclosure of all charges to be something larger than peering into a little screen that might or might not be legible depending on the sun's angle.

Require a common smartphone app among all brands of charger.

I hope that you find these comments useful and that you include my suggestions in any legislation that you work on.

Sincerely,
Thomas Weiss

cc: Sen. Corey Parent