Questions to Ask When Selecting an EV Charging Station

This document is courtesy of Leviton & ChargePoint

Below is a list of questions every future EV charging station host/owner should ask before purchasing and installing a charging station. This document is designed to help hosts/owners understand all the intricacies of EV charging stations, as well as help determine what is most important, and least important, to them.

The list is separated by 'Hardware' (the actual EV charger) and 'Network' considerations.

"Hardware" Considerations:

-Connectors: Do I want the connector to be locked to the station when not in use? (Security and safety issue.)

-Cable: How long is the cable? Does the length of the cable enable flexibility on where I can mount the station?

-Safety Compliance: Are your stations cUL certified for Canada?

-Consider size with respect to venue: Will this unit fit in my chosen location? Do I want to wall mount or post mount it, or do I want a stand-alone unit

-What are the stations made from? Plastic, steel, aluminum? How will each of these handle inclement weather in the next 5-15 years? How do they hold up to reasonable abuse? ('reasonable' because no station is indestructible)

-Displays: Do I want a display on the unit, and what information do I want displayed? How robust are the displays? Can they be seen in bright sunlight? Can I control the message on the display? How? What if just the display malfunctions? Can I replace w/o replacing the entire unit? How easy/difficult is it to physically replace just that part?

-Dealing with malfunctions: If there is a malfunction, how do I find out? How is the malfunction diagnosed? If the fault is internal, how is it fixed and who fixes it? *What is the lead time on diagnosis and replacement of faulty systems?*

-Communications: How can I as an owner receive information from the unit? Do I need to run an internet connection cable to the unit as well as power? What if the internet connection goes down?

-General Maintence: What maintenance is required?

-General Support: What in-province support is available for these units, and how do I access that support?

-Payment: Do I want the station to process payments, or do I want to do that separately (e.g. through parking meters)? If I do want a station that processes payments, how does the unit process payments (e.g. through credit card, RFID or other)?

Multi-Charger Stations: Do I want a dual charger station option, or single charger station? For the dual charger option, do I want to control each charger /port separately, do I want to be able to charge two vehicles simultaneously or is one at a time sufficient?

Network/Software Considerations:

-IT Considerations: Do I need to get my IT organization involved? Are there Firewall Issues? Do I need to upload any software (or updates) myself? How is that done? Is there any other hardware (ie. Servers) that I need to purchase, run and/or maintain? For hosted/SAAS networks, are you PCI compliant?

-User Interface: Is the UI easy to learn and navigate? Do I need to have a technical IT resource to use the system?

-Reporting: What data can I see realtime and track? Am I able to understand usage at each location? How easy is it to see data by station and/or station groups? Can I pull the data myself, or do I have to request it from somewhere else?

-Training: Is training needed? If so, how will my team be trained, and how long will it take?

-Support: If I have an issue, who do I call? What are the hours of operation? How enabled is the support team to fix any issues or bugs? Can they fix 'software' issues over the internet directly? Or will I have to upload new software fixes myself? Does your company actively monitor the network for issues?

-Control: Do I want to control who can access my stations and NOT access? Do I want to control pricing? Do I want to create different groups and control how each group is charged (or not charged) separately? Do I want to change pricing (and control groups) based on the time of day? Do I want to do all this individually at each station, or with a group of stations? How?

-Charging: What different ways can I charge drivers? (As of 1/18/2012 it is currently illegal to charge per kW in BC).

-Station Display: Do I want to control the messaging on the display? When/how can I change it?

-Network map: Do I want to control if my stations are visible/not visibly on the network map? Do I want to control how they are labeled on the network map? What other data is displayed?

-Demand Reponse/Power Control: Do I want to control the power output of each charging station?