

**Questions and Answers from Paying For Juice webinar
August 25, 2015**

1. Can a State vehicle use the State Fleet card (Voyager) to pay for a charge? The main use would be at DC Fast Charging (DCFC).
 - a. PEVC: No, Voyager cards cannot be used at DC Fast Chargers at this time.
 - b. ChargePoint: ChargePoint has integrated with government fuel cards in the past. If you are interested in having ChargePoint integrate with your fleet's provider, please contact me and I will put you in touch with the correct point-person.
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2. How do you handle non-chargers/non-EV cars that use the charging spaces?
 - a. PEVC: This depends on how the specific location and how the site host wants to handle it. In some cases, a site host may choose to have a non-EV car towed and in other cases, they will have a more hands off approach and let the EV drivers handle it. Drivers will sometimes leave notes on non-EV cars.
 - b. ChargePoint: ChargePoint recommends signage that says "EV Parking While Charging Only." You not only want to prevent internal combustion engine cars from charging, you also don't want EVs that are not charging to take up the parking space.
3. Does the property manager still assume the costs of the station if the utility owns the station?
 - a. PEVC: Currently, utilities do not own EV charging stations that are available to the public other than what might be at their own facility/office for their own fleets and employees.
4. What factors should be taken into consideration when adding a fee for charging at public stations? For example, how can fees be levied that balance a public agency's need to cover electricity and maintenance costs, but also provide customers a reasonable rate with regard to consumption of electricity and time for taking up a parking/charging space? Is there a benefit to placing more weight on time over consumption, or vice versa?
 - a. PEVC: As was mentioned during the webinar, there are many different ways to implement a fee for charging and this should be done based on the hosts' goals for the chargers. The State of California has come out with the statement that providing electricity for employees to charge their cars is not a gift of public funds, but you may have other reasons you would like to add a fee. The PEV Collaborative is developing more detailed guidance in this area and we will let you know when it available later this year.
5. Why use the term "electron" rather than kWh?
 - a. PEVC: Both refer to the electricity used for charging the vehicle. Site hosts and EV charging/network providers can assess a fee for charging in a number of different ways that can include by the kWh but can also be by the hour, by the month or by the charging session so using the word kWh is too narrow a term for this webinar.
6. AeroVironment - How is the West Coast Electric Highway rollout for California coming? Is there a timeframe for completion? What corridors will be covered?
 - a. AeroVironment: California didn't participate in the original West Coast Electric Highway build out. The California Energy Commission (CEC) recently released a solicitation to provide funding to develop up to nine DC Fast Charging corridors in California. See <http://www.energy.ca.gov/contracts/transportation.html#GFO-15-601> for details on this program.
7. ChargePoint - What is the cost of installing the individual ChargePoint unit?

- a. ChargePoint: It depends. It can range anywhere from \$1,000-\$10,000 per port depending on how far away the unit is from the electrical room, whether there is room on the existing panel/infrastructure, and if there is a need for trenching in a surface lot location, and how many units you are installing. The best way to find out is to get an electrician to come out and give you a quote. ChargePoint can connect you with certified installers and can give you advice on how to minimize those costs. Note, when we say installation we mean both the infrastructure and mounting the station. The way that some of the other panelists defined "installation" is just wiring the station to existing pre-wired infrastructure, and that cost is very small-- several hundred dollars at most.
8. ChargePoint - If a renter purchases the ChargePoint Home station and they move apartments, can they take it with them to the next place? If they rent can they do the same?
 - a. ChargePoint: The ChargePoint Home station is not suitable for an apartment complex because there is no way to authenticate and reimburse the property for electricity usage, or to "power-manage" the stations off of the common power. If you are talking about ChargePoint's multifamily home service -- a station that is purchased by an individual renter -- can in theory be uninstalled and re-installed elsewhere; however, there is no guarantee the new apartment complex will allow the station to be installed. That is why we do not recommend purchasing a station for renters.
9. Evercharge - It appears that charging amongst stations is "managed" whereby if there is a limit of the amperage available, car charging is turned off when done, but if there are more vehicles plugged in than amperage available, there is no guarantee that your vehicle will be charged in the time that you are connected. How is that handled (if I understand it correctly)
 - a. EverCharge: Great question. As a data-driven company we look at the demographics and driving behaviors of your area and owners to understand the charging demand of the property. By understanding this data we will never allow a property to power manage beyond its capabilities to ensure residents are all able to obtain full charge in a timely manner. Since EV owners only need 1-3 hours each day on average, arrive at staggered times and remain parked for a minimum of 8 hours we have ample time daily to complete charging for all EV owners.
10. Evercharge - What level of charging does EverCharge offer?
 - a. PEVC: Level 2
11. NRG - Do you provide insurance on your units?
 - a. NRG: Yes, we are a service provider and will replace or repair the units and we have insurance provisions in our agreement.
12. NRG - If I am someone who drives 1,000 miles per month, then, assuming that leads to 350 kWh per month, that's \$35 at \$0.10/kWh for charging on top of your \$40/month multi-unit fee. Why shouldn't I just buy a Prius instead, which would cost \$60/month at 50 mpg and \$3/gal? The Prius would save me more money than buying an EV!
 - a. PEVC: You have a good point and this may be better for you financially, but gas prices usually fluctuate a lot and this cost analysis would be a lot different if gas were at or above \$4/gallon. Also, there are many other benefits to driving an EV such as air quality, reduced greenhouse gas emissions, carpool stickers.
13. Doesn't a flat monthly fee like AeroVironment suggests encourage drivers to overuse the EVSEs so that they "get their money's worth"?
 - a. AeroVironment: A flat monthly fee:
 - i. Is a low-administrative cost way to apply a fee if an employer or an HOA feels the need to do so.

- ii. Reduces infrastructure build requirements when compared with no-fee EV charging. Otherwise, the EV driver will truly try to “get their money’s worth” when it’s free. Many companies provide no-fee charging as an amenity because the “money’s worth” is so small, something on the order of a dollar per day. Applying a nominal fee of say, \$20/month, covers that dollar per day.
 - iii. Serves the purpose of addressing employee equity with ICE drivers
 - iv. Removes the issue of IRS “benefit” given to an EV driver if no fee is applied
- b. ChargePoint: The biggest advantage of pricing EV charging for usage (especially by time) is so that you can encourage sharing so that more people can use a single station. If you set a flat fee, there is no incentive for anyone to move from the station when they are done charging.

14. How do you manage multiple installations when building power is finite?

- a. EverCharge: Every building has a limitation at some point. EverCharge manages these limitations through power management and resident surveys. Once we have an understanding of available power and number of interested residents we can create a short and long-term plans for the association to maximize their existing infrastructure and plan for future upgrades.

15. How do you avoid demand charges?

- a. AeroVironment: Demand charges can be minimized by using two (dual) non-networked EVSE with dynamic current sharing

16. What are the monthly site costs for networked stations?

- a. ChargePoint: approximately \$25 per month (for a commercial station)

17. I am the energy supervisor for a school district. We want to put charging stations at our school sites, and we have solar at all of the sites for us to tie into. What do we need to know to be able to do that? Which one of the presenter's companies has worked with school districts or public entities in the past?

- a. ChargePoint: ChargePoint has worked with numerous educational organizations and we can help you set up charging so that it takes advantage of charging when the solar energy is at its most productive. You do not, however, need to tie directly in to the solar to achieve this.

18. If two cars are plugged in to the dual port, does it automatically begin charging the second car when the first is full?

- a. AeroVironment: Using dual EVSE with dynamic current sharing, both cars would charge at 16 amps at the beginning. As one EV satisfies its charge, the charge rate ramps down, which then allows the other EV to pick up its charge rate (to 30 amps).

19. There was mention of studies regarding pricing showing how high prices reduced usage. Can someone provide details?

- a. PEVC: One study we can refer you was done by UC Davis and can be found at: http://www.its.ucdavis.edu/research/publications/publication-detail/?pub_id=1919

20. What is typical installation cost of 2-10 chargers? What will you need to charge to recoup total cost over 5 years given typical usage?

- a. EverCharge: While the charging rates can help mitigate the costs, setting charging rates to fully recoup the total costs will often create cost prohibitive charging rates preventing EVs from charging at all, diminishing the value add the station can provide.

21. Why isn't energy storage an integral part of DFC infrastructure in mitigating peak demand charges for electricity?

- a. AeroVironment: The economics don't provide a return on investment except for very high demand charge utilities such as SDG&E and SCE.

22. Please define "ADR"

- a. AeroVironment: ADR is Automated Demand Response. Many utilities use Open ADR communications protocol to send signals to commercial or residential devices (air conditioners, EVSE) to reduce electricity demand on high load periods (e.g., hot August afternoons.)