

Electric Vehicle (EV) Focus Group

May 9th 2017

Session 1: 11:30am – 12:30pm

Session 2: 12:45pm - 1:45pm

AVAILABILITY

Q1: *How often have you wanted to use a campus charging station, but could not because it was already in use by another electric vehicle (EV)?*

Responses

- Almost daily, but the supercharger has helped.
- Definitely common in the Pearl Garage. All of the spaces are taken.
- This is a common occurrence. Usually have to try to seek availability at another garage
- Very rare. EV Charging spaces are usually taken and I will just park in another regular parking space.
- I have an early morning commute so I do not really have a problem finding a space.

Suggestions

- *Provide EV reserved parking spaces with no stations*
- *Parker should move their car once it's been fully charged*

LIMITATIONS

Q2: *Are there specific aspects of the EV Charging Station that you dislike? If so, please describe.*

Responses

- The availability to move a fully charged vehicle once a notification has been received due to work schedule.
- Receiving tickets/citations from the Campus Police because someone has unplugged a vehicle after it has been fully charged and the parker does not have the time to move their vehicle in a timely manner.
- In order for 2 cars to be charged at once, the parker must bring their power cord with the older EV Charging Stations.

Suggestions

- *Develop a community database with other EV parkers*

- *Once the remaining older stations are upgraded a power cord will no longer be needed. This should also allow more EV parking spaces to become available*

OVERFLOW

Q3: *What could we do to more effectively to ensure that everyone gets an opportunity to charge their vehicles?*

Responses

- There could be multiple floors in garages that are dedicated only to EV or LEFE parking.
- Keep the monthly parking fee the same as encouragement to get other people to “go green”.
- Start to charge a fee when parkers go over the charging time limit
- The department should invest in future federal programs.
- Parkers should develop the etiquette of knowing a parker should not keep their vehicle charging all day.
- The department could have overflow spaces in lower levels of garages.
- Modify the EV Station cord length.

Suggestions

- *Develop a community database with other EV parkers*
- *In the future, users could be charged a fee once vehicle has charged completely and has not been moved.*
- *In the future, possibly convert LEFE spaces to EV overflow parking spaces*

CONCERNS

Q4: *An ongoing concern is that once and EV is charged, the cars are not moved out the spots to allow others in need of a charge to use the station. Since we installed the EV units, we have received a number of suggestions on how we can alleviate parkers not moving their vehicles after charging. We would like to gauge your opinion on their suggestions:*

- Charge a fee when a parker’s vehicle is fully charged*
- Utilize an agreement system whereby someone can unplug your vehicle if a space is available and the vehicle is charged*

- c. *Designate reserved spaces for charged vehicles to relocate once charging is completed. (Spaces would be located on the rooftop levels in the garages.)*

Responses

(A)

- Give a grace period and a good relocation to park vehicle in garages
- Although charging a fee may not be an issue it may be difficult for a hospital/clinical staff to relocate their vehicle
- Sometimes a parker aren't aware if the vehicle is fully charges
- Tesla is charging \$1.00 a minute when a vehicle is overcharging
- Some company's charge a customer as soon as the vehicle is plugged in
- Parkers receive an alert once their vehicle is fully charged through an app
- The Cashier's need to be made aware/reminded that EV parkers can utilize other garages when assigned garage is full
- The 5 hour time limit needs to be enforced
- Signage displayed stating the parker should move their vehicle once it's fully charged
- If charging for electricity, create an EV program where the fees could go towards purchasing new EV stations. Charging would take affect after 3 hours.
- Paying extra money may discourage parkers to utilize EV

(B)

- Some car charging indicators are different and some people may/may not realize a car is fully charged. This is where the community database will come into play.
- It may not always be possible to unplug a vehicle because not all cars have locks
- If not careful, someone could rip the adapter
- Some people may not want anyone to touch their vehicle

(C)

- The more convenient, the better for the parker
- We are willing to pay for spaces depending on the location
- It costs more to move EV stations higher in garages
- Solar charging is very expensive
- Keep EV Charging the way it is, however in a year or two from now EV charges will increase by 5 times (on campus)
- The infrastructure cost to add more EV Charging Stations is approximately \$80K. A different monthly cost and/or flat fee would need to happen

GENERAL DISCUSSION

Q5: What other topics regarding EV Charging would you like to discuss?

Responses

- The future of EV vehicles increase

SUMMARY

Parking and Transportation Services (PTS) met with some of the Electric Vehicle Drivers during the Focus Groups sessions. It has been determined that all of the drivers would like to work with PTS on solving the EV Parking issue. What I will do in the coming months to help alleviate some of their concern is as follows.

1. PTS will be upgrading the remaining 2000 series to the 4000 series in the garages. By doing this it allows both cars to share charging and eliminates the driver from having to use their power cord. Using the power cord can take up to 7-8 hours to charge a vehicle. Once the units is installed, 3-4 hours will be enough to charge the vehicle and the driver can move their vehicle when notified. This will ensure that all 16 stations (32 available spaces) will be utilized.
2. It was mentioned that purchasing additional charging stations would help EV parkers with their space availability issue, however the cost of installing new stations can be excessive therefore adding additional stations is not considered in the near future.
3. PTS will investigate a reasonable overage charge (using kilowatts for electricity) for parkers who do not move their vehicle once the charge is complete.
4. Encourage the EV parkers to communicate with other EV parker when they notice a vehicle is fully charged
5. PTS is having a parking consultant evaluate our PTS program to include TDM. We are currently developing and RFP/PTS Master Plan in which the TDM program will be reviewed. We will move forward after recommendation from the consultant and make necessary changes as it affects the TDM Program/EV Stations.

Electric Vehicle Charging Stations

The University of Maryland, Baltimore Parking and Transportation Services Department is pleased to provide the EV parkers with the installation of 16 new electric vehicle charging stations. The stations, CT 4000 are manufactured by ChargePoint Inc. with dual ports. The 16 stations are located at the seven UMB garages (Baltimore Grand Garage, Pratt Garage, Pearl Garage, Plaza Garage, Saratoga Garage, Penn Garage, and Lexington Garage) and are open to students, faculty staff and campus visitors. For more information about station locations, please visit the website: <http://www.umaryland.edu/parking/alternative-transportation/electric-charging-stations>



UMB EV Charging Stations

Name of Garage	Number of Parking Spaces	Number of EV Charging Station
Baltimore Grand Garage	989	3
Plaza Garage	534	2
Pratt Garage	1001	4
Penn Garage	975	1
Saratoga Garage	919	2
Pearl Garage	739	3
Lexington Garage	803	1
TOTAL 16 EV Charging Stations = 32 spaces (each EV Charging Unit is equivalent to two spaces)		

Charging Your Vehicle

There is no fee for charging your vehicle. The service is covered through your parking payroll deduction, monthly payment, or payment of the posted hourly parking rate.

You can access the charging stations by three methods:

1. With a RFID enabled credit card
2. By phone at 1-888-758-4389
3. With a ChargePoint Charge Pass



To receive a Charge Pass stop by the Cashiers Office (SMC Campus Center, 621 W. Lombard Street, Lower Level) with a photo ID and your electric vehicle registration during business hours, Monday – Friday 8:00am – 5:00pm. Once you receive your charge pass and instruction booklet you must log on to www.mychargepass.net to activate your pass. Charge passes are issued at no cost.

BENCHMARKING

Facility	Issue	Solution
University of California, Riverside (UCR)	Difficulty with availability	Our decision is to charge users for the length of time their vehicle is connected to a charger regardless of its electrical usage. After a vehicle is connect to a charger for two hours we increase the price per hour from \$1 to \$3 per hour. We do give a \$1 per hour discount to our campus community (Faculty, Staff and Students) resulting in the first two hours being free for them. Almost all users are removing their vehicles from the charging spaces before they accrue any actual charges and we have driven our EV parking space occupation during business hours from 94% down to 50%. This allows EV users to find a space available in any of the five lots where we have charges.
Off-Street Operations (Denver, CO)	Difficulty with availability	In our high demand EV charging public locations, we have placed time restrictions on the use of the chargers. In most cases, it's a "4-hour limit." The EV community totally understands and appreciates the policy. Less than 4-hours at a Level-2 is all they need to top-off their battery
University of Arkansas (UA)	Difficulty with availability	We limit parking in the spaces with charging stations to four hours
Virginia Commonwealth University (VCU)	Difficulty with availability	Parkers will swap the charger when one car is done to another vehicle. Our chargers are set up so they can charge vehicles in 2 spaces so swapping has worked as we have 6 spaces available for charging up to six vehicles with a swap occurring during a day. Suggest to make charging station users pay by the hour spaces or have some type of extra charge if they are staying all day, essentially charge a premium rate for the charging stations that people won't agree to move from.
Mass General Hospital (MGH)	Difficulty with availability	We have decided not to install EV charging stations in any of our facilities
University of Pittsburg Medical Center (UPMC)	Difficulty with availability	We do not require those using the EV charging stations to move their vehicle when the charging phase is completed. We look at it as a way of supporting the use of alternate fuel vehicles by our physicians and staff. We've never come up with a good way to actually control and monitor the EV vehicle charging process. If we receive feedback from our staff that the EV spaces are always occupied we use that as justification to add additional EV charging stations.
George Washington University (GWU)	Difficulty with availability	We currently have six (6) EV stations on campus and are experiencing similar user behavior (i.e. not moving their vehicle when fully charged) as other universities. Some users communicate amongst themselves regarding unplugging a vehicle when charging is completed. At this time, the demand for additional stations are being discussed.
Johns Hopkins University (JHU)	Difficulty with availability	Currently have a total of six (6) EV stations and is experiencing the same user behaviors regarding unit availability. Johns Hopkins has reached out to Tony Green, TDM Manager at UMB, to inquire how we are dealing with users not moving their vehicles after charging is complete.
University of Maryland, Baltimore County (UMBC)	Difficulty with availability	We currently have a total of 2 stations on campus that are free to use. We have not experienced a heavy usage demand from our EV users.
University of Maryland, College Park (UMCP)	Difficulty with availability	The campus has 17 EV Stations that are located at 7 locations on campus. They have a moderate usage demand on campus. There have been discussion regarding upgrading the stations in the future.
University of Baltimore (UB)	Difficulty with availability	We have a total of 5 EV stations and have had not had a high usage demand on campus.
George Mason University (GMU)	Parking Ticket Appeals/Citations	<p>We require appeals to be filed online within 7 days of citation issuance. Occasionally, we will allow a late appeal which must be done in person, but charge a \$15 fee. We have a 1st level appeal that is done and then if the appellant wants a 2nd level appeal, they can appear in person in front of a volunteer board comprised of students(for student appeals) and faculty/staff(for employees and visitors) appeals.</p> <p>If the citation is not entirely dismissed, a \$15 fee is added to the citation balance if a 2nd level appeal is made. That has helped reduce frivolous appeals, i.e. ones where they get a no permit citation and don't own a permit.</p> <p>We used to not allow appeals for booting and towing but now we don't restrict ones' ability to appeal in the off chance we made a mistake.</p> <p>For repeat offenders, if one receives more than 5 citations in a semester, they can be towed and booted for each offense after the 5th one.</p>
Virginia Commonwealth University (VCU)	Parking Ticket Appeals/Citations	Enforcement with citations and make the charging spaces a limited duration, unless the premium full time permit is purchased.
Virginia Commonwealth University (VCU)	Charging for electricity	We are not sure if there is technology available yet to charge for the use of electricity. By charging parkers they may choose to free up the spaces, or just charge at home.

INSTALLATION OF AN EV CHARGING STATION

New EV Charging Station Costs (Estimated)	
Cost of New Charging Station	\$6,900.00
Software	\$560.00
Installation (entails running new conduit from electrical room to location in garage)	\$1,200.00
*Station Subscriptions (entails monitor system, troubleshooting and customer service)	\$1,000.00
	*(The total subscription fee for 16 stations for 3 years is \$15, 956.18. The subscription fee for 1 station for 3 years is \$1000.00)
TOTAL	\$9,660.00