

**July 11, 2013 MEETING SUMMARY**

ATTENDEES:

***Video Teleconference (VTC): Fresno (Central), Modesto (North), and Bakersfield (South)***

July Meeting – Notes

<b>Central Office Attendees:</b>			
<b>CCSE</b>	<b>CCSE</b>	<b>City of Clovis</b>	<b>San Joaquin Valley Clean Energy Organization</b>
Tyler Petersen	Jessica Jinn	Kendall Cook	Courtney Kalashian
<b>Fresno COG</b>	<b>Fresno County</b>	<b>Merced County</b>	<b>PG&amp;E</b>
Lauren Dawson	Patrick Starkey	Jeff Fugelsang	Bob Riding
<b>SJVAPCD</b>	<b>SJVAPCD</b>	<b>SJVAPCD</b>	<b>SJVAPCD</b>
Nhia Vu	Colette Kincaid	Juan Cano	Lisa Van de Water

<b>North Office Attendees:</b>
<b>City of Stockton</b>
David Stagnaro

<b>South Office Attendees:</b>
<b>SJV Clean Cities/Kern COG</b>
Linda Urata

<b>Conference Call Attendees:</b>		
<b>UPS</b>	<b>City of Lodi Electric Utility</b>	<b>Turlock Irrigation District</b>
Michael Britt	Rob Lechner	Chris Poley

Agenda Notes:

**ITEM #1: WELCOME AND INTRODUCTIONS**

Nhia Vu, San Joaquin Valley Air Pollution Control District (SJVAPCD), welcomed the group to the fifth San Joaquin Valley Plug-in Electric Vehicle Coordinating Council (SJVPEVCC) meeting. Ms. Vu opened up the meeting for introductions for all attendees on the phone, as well as those at the Fresno, Modesto and Bakersfield District offices.

## **ITEM #2: ANNOUNCEMENTS AND PUBLIC COMMENTS**

There were no announcements or public comments.

## **ITEM #3: SUMMARY OF MAY 2, 2013 MEETING**

Jessica Jinn, California Center for Sustainable Energy (CCSE), stated that there have been no changes made in the presentation from the June 10, 2013 meeting summary and a copy of the presentation can be found online at [www.energycenter.org/pluginready](http://www.energycenter.org/pluginready).

### **A. Electric Vehicle Supply Equipment (EVSE) 101**

It was concluded that PEV owners are very knowledgeable about their vehicles and, thus, about the technology that comes with it. The next step is to educate consumers about charging infrastructure and cost savings.

Types of Electric Vehicle Supply Equipment (EVSE) installed at public sites generally do not concern the public, but what matters are PEV-designated spots being taken by non-PEVs. The group had decided that there needs to be a penalty (or enforcement) designed to discourage this action.

To facilitate the expansion of PEV adoption, it is necessary that there be a universal card system in place so consumers can easily charge at different charging stations.

### **B. EVSE at Multi-unit Dwelling (MUDs)**

The group decided that there is no need formally define a multi-unit dwelling (MUD) in terms of PEV readiness. The issue that arises when discussing EVSE in MUDs is the large amount of parking spaces MUDs have. It is recommended that property managers be well-informed about EVSE installations and usage. Further, when considering a public use charger at an MUD, implementing a pay-per-use method (such as that of a laundry machine) is a plausible option.

### **C. EVSE Installation and Inspection Guidelines**

It was largely agreed that in the preliminary steps of the EVSE installation process (no matter if it is a public agency, private company, or resident), speaking with the EVSE providers is a necessary task along with contacting the utility and finding funding (as in the case for public or workplace installations).

The agriculture sector in the San Joaquin Valley was noted as being very diverse and therefore solutions are not transferrable throughout industries within agriculture. It is important to make distinctions between different industries and vehicle fleet types in the agriculture sector.

When considering whether or not the agriculture sector will be willing to convert to an electric fleet, it was noted that they have been able to pick up quickly on new technology in the past, but a clear benefit should be apparent to incentivize new technology adoption. Therefore, it is recommended that Valley-based incentives be developed for the electrification of agricultural equipment and transportation.

#### **ITEM #4: PLANS TO ATTRACT PEV MANUFACTURING, PRODUCTION, INFRASTRUCTURE, AND SERVICES OF PEV DEVELOPMENT IN THE REGION**

Tyler Petersen, California Center for Sustainable Energy (CCSE), introduced Mike Britt, UPS.

Mr. Britt introduced UPS and its history with sustainability and electric fleets. Notably, UPS delivered 26 million packages on Christmas Day and is the 9<sup>th</sup> largest airline in the United States. Through the years, the company has been recognized by several environmental groups for successfully deploying new technology.

The company was described as being “energy agnostic”. There is not one overarching fuel type that the company uses; CNG, hydraulic hybrids, propane, and electricity are all utilized by the UPS fleet. Mr. Britt further added that the company has approximately 2,500 alternative fuel vehicles, which is the largest number in the industry.

Alongside Electric Vehicle International (EVI), UPS was able to conduct the largest major deployment of EVs in the industry. With the help of the California Energy Commission (CEC) and the San Joaquin Valley Air Pollution Control District (SJVAPCD) funding, 100 EVs delivery trucks have been added to the California fleet.

Mr. Britt provided the following comments about the EV deployment.

- At first there were some stumbling blocks because the equipment needed fine tuning;
- Different testing environments were needed to ensure vehicles performed well;
- Currently, the delivery trucks are performing very well. The electric trucks are averaging over one mile per kilowatt hour, which exceeded normal expectations;
- Training drivers is a very important facet of maximizing vehicle range;
- There was a big learning curve to make sure drivers don't waste energy and plug in on time;
- Overall, the facilities have successfully deployed their electric fleets;
- All safety processes have been implemented among drivers and facilities.
- The drivers enjoy the new electric trucks and are happy to give back to the environment.

The floor opened for questions and comments.

- Lisa Van de Water, SJVAPCD, asked where UPS is testing their hybrid hydraulic vehicles.
- Mr. Britt replied that they are being tested in Laguna with the help of a CalStart CEC grant.
- Ms. Van de Water asked if the company has a formalized feedback process from drivers about the trucks.
- Mr. Britt responded that drivers receive training with the new technology, then staff goes on ride-along with drivers, from which drivers receive immediate feedback. There are periodic check-ins and feedback daily that UPS requires of their drivers regarding vehicle performance. Each truck has a form of telemetry installed and performance is gauged from truck to truck.
- Mr. Petersen asked if Mr. Britt could share some feedback processes.

- Mr. Britt responded that local depots retain the driver feedback, but he could share feedback from the drivers.
- Jeff Fugelsang, Merced County, asked how long it took for administration to support this idea of an electric fleet.
- Mr. Britt responded that the project began in 2009, first as a contact with EVI. In the following couple of years, the technology needed to be validated and built into a delivery platform. Then, a test vehicle needed to be created. After validation on the test vehicle is when management committee needed to be informed and involved. The South Coast Air Quality Management District, SJVAPCD, and CEC offered funding programs for UPS to pursue this project further.
- Mr. Petersen asked if Mr. Britt could expand on the charging infrastructure and deployment efforts.
- Mr. Britt said that the company had EVSE custom built, “dumb” chargers with no communication capabilities. Now UPS is in the process of working with Clipper Creek to build smart chargers. Smart chargers will be able to collect data on the delivery truck and determine how long it will take to charge the vehicle to be ready for the next delivery day.
- Mr. Britt provided a smart charging example in which Truck 1 were plugged in and needed six hours of charging, the computer will see that the truck is scheduled for the next morning, and will subsequently choose the best period of time in which to charge the vehicle. A payment system was not installed. Further, if a truck completed its deliveries for the day and still had 50% of its battery left, the residual energy will be provided back to the grid. In essence, they will “sell back” any energy that is left.
- Mr. Petersen asked what type of chargers UPS has (Level 1, Level 2, or DC Fast Charger).
- Mr. Britt said that they are all Level 2 chargers. Commercial batteries are not allowed to be charged with a DC Fast Charger. It breaks the warranty of the battery. Further, there is no reason for Level 1 chargers since the facilities have a Level 2 set-up.
- Nhia Vu, SJVAPCD, asked what challenges were faced in deployment.
- Mr. Britt answered that having ample power is an issue. When delivery trucks come back to the facilities at night, power is still needed for sorting packages. It is important for UPS to supply its own power and maintain dedicated servers. Mr. Britt further mentioned that trenching for EVSE wiring has been an expensive under-taking.
- Mr. Britt added that each EVSE has a loaded platform, which enables safe movement of the EVSEs around the facility. Safety measures have been fully implemented in the facilities and among employee training.
- Bob Riding, Pacific Gas & Electric (PG&E), commented that PG&E had worked with UPS prior, supporting them with natural gas for their fleet vehicles. Mr. Riding asked what UPS plans to do with natural gas being cheaper these days.
- Mr. Britt responded that they want the natural gas fleet to continue and expand in California. The only difficult thing is building infrastructure. Because of the high cost for new natural gas stations, it is hard to justify constructing a new station. UPS will still maintain its current natural gas fleet and bring in new Class 8 CNG vehicles.
- Mr. Petersen asked if Mr. Britt could provide the group with best practices or lessons learned.

- Mr. Britt responded that the average electric vehicle that travels 10-12 miles a day maybe displaces a gallon of gas. However, with UPS electric trucks, about 100 miles a day displaces a noticeable amount of fuel and electric adoption becomes worth it.
- Mr. Britt commented that with the adoption of EVs, the maintenance issues and waste stream from gas trucks were eliminated. With that, there are significant cost savings. Further, there can be a 30-35% improvement in fuel efficiency for internal combustion engines depending on driver performance. Therefore it is important that drivers know how to properly use the electric technology so they can get back to facilities at the end of the day. Knowing the cost benefit of the switch from gas to electric is vital.
- Mr. Petersen thanked Mr. Britt for his participation.

Mr. Petersen moved Agenda Topic 5 with Mr. Lechner to follow Mr. Britt's presentation.

#### **ITEM #5: CITY OF LODI PUBLIC EVSE INSTALLATIONS**

Rob Lechner presented information about the City of Lodi's experience installing EVSE. Mr. Lechner described that the process began ten years ago when Lodi had two entry-level EV chargers installed at city hall and four installed at their municipal service center.

Early in 2012, EVSE vendor Clipper Creek contacted the City of Lodi and was promoting a CEC grant in which they were serving as contractor to provide replacement charging heads for old Level 2 Legacy chargers. The company would provide the upgrade at no cost for the municipality.

At the time, the City of Lodi was developing their Climate Action Plan (CAP). Mr. Lechner added that a good way to complement their plan would be to install more stations around town. Therefore, the city contacted Clipper Creek and was able to have five more stations installed for free. The new stations were installed at the city library, finance office, parking garage (transit center), community center, and animal shelter.

Currently, everyone in Lodi can charge for free. Later this summer, Clipper Creek has plans to add a card-swipe device to these chargers. The chargers will have a credit or debit capability and then people will pay to use these charging stations. Further, there is an ordinance that allows towing of vehicles that are parked in EV-designated parking spaces.

PEVCC members provided the following comments:

- Ms. Kincaid asked when installing a card swipe on them, can drivers use any credit card?
- Mr. Lechner answered that any credit or debit card will work. By October, the charging stations will be retrofitted and the Finance department is already set-up to receive revenue from use of the chargers.
- Mr. Riding asked whether or not these public stations were subject to Time-of-Use (TOU) rates.
- Mr. Lechner responded that PEV drivers cannot charge for more than four hours at any given time. Clipper Creek will have a shut-off device installed for that purpose. Mr. Lechner expects charging to cost somewhere between one to two dollars.

- Mr. Riding asked if he knows how much revenue Clipper Creek will receive from the charging.
- Mr. Lechner responded that he does not know, but he's been informed that it is a "nominal" amount.
- Mr. Riding asked if the city has any planned EV rates.
- Mr. Lechner responded that residential TOU rates began July 1. It is a flat rate of 14.2 cents for charging between 8pm and 2am. Any time after that is 33 cents per kilowatt hour. PEV owners are not required to adopt the TOU rate.
- Linda Urata, SJV Clean Cities/Kern Council of Governments, asked if the payment for public charging is just to recover electric rates.
- Mr. Lechner affirmed.
- Mr. Petersen reaffirmed whether or not the city has a parking ordinance.
- Mr. Lechner replied that the ordinance goes to council next week. But since there's no card-swipe device installed yet, it isn't a priority. The ordinance will become official in the first week of August 2013.

### **Electric Vehicle International**

Mr. Petersen provided the group with a brief overview of the company Electric Vehicle International (EVI). The company is a manufacturer of EVs and alternative fuel vehicles. They assemble EV delivery trucks and have been working with the SJPAPCD for years. Ricky Hanna, Chief Executive Officer of EVI, will present next month about their operations.

No comments from the floor.

### **RFP Template for Public Agencies Interested in EVSE Installations**

Mr. Petersen presented a template for a request for proposal (RFP) for public agencies interested in EVSE installations. An RFP is another method public agencies may utilize when all EVSE subsidies expire and jurisdictions are searching for methods to reach their CAP goals. A turn-key solution is promoted in the RFP. This means jurisdictions can sign a lease agreement with an EVSE vendor while the vendor still owns, operates, maintains and retains the revenue from the EVSE.

PEVCC members provided the following comments:

- Mr. Riding commented that local governments need relationships with these vendors.
- Mr. Petersen said that another option is that when an RFP is issued by a regional agency or jurisdiction, there is standard legal information added. Mr. Petersen asked if anyone has information that they are willing to share.
- Ms. Kincaid responded that in an RFP there are always pages and pages of requirements that federal or state governments like to add. Most of this is standard information, which can be included in the document.
- Mr. Riding said that he thinks the City of Fresno may have a great deal to contribute to this topic.

- Ms. Urata said that there are language requirements listing all vocabulary that is necessary for federal or state requirements. Ms. Urata said that she will send over as an attachment necessary language for RFPs.
- Ms. Urata then asked whether or not it is an RFP for services. If so, that language doesn't necessarily apply.
- Mr. Petersen stated that this RFP example had language adopted from the City of Long Beach and Chula Vista and will review the original RFPs.
- Ms. Van der Water asked if there a statement of liabilities that is assumed and if it comes at the RFP level or with the contracting.
- Mr. Petersen responded it's likely at the discretion of the jurisdiction. Many jurisdictions would include their general liability contracting language at the RFP level. Mr. Petersen stated that at the very least, once the city selects a vendor, additional documents such as the contracting agreements will come forth.
- Ms. Kalashian said that she is not sure if listing liabilities is necessary in the RFP process. Some cities will take some liabilities, but some will not at all. So it is probably important for these cities to note all possibilities.
- Mr. Riding said that each utility has a different process. Each vendor might not know each process unless they've worked with them before. Additionally, the costs are unknown until the actual job is complete.
- Mr. Petersen stated that another point that has been brought up is the issue of term/leasing agreements. Vendors seem to be attracted to longer term agreements. Mr. Petersen asked if any group member has ever been subject to service agreements such as this and what the general length of time the contract agreement.
- Kendall Cook, City of Clovis, said that they have several different agreements. It usually starts with a couple of years and that can be extended or reinitiated before they solicit other bids. They don't experience many long-term projects or contracts because of their low budget. This varies from city to city.
- Ms. Urata asked if Section 3 "Scope of Project" is for EVSE in public places.
- Mr. Petersen confirmed.
- Ms. Urata said that the text "if we comply with all building code, ADA, and global requirements" should be added, with particular emphasis on the ADA requirements. It is a possibility to have vendors send cities their ten most recent projects, for example, to act as a qualifier. Additionally, she said that in Kern County there are few cities with multi-year leases or contracts.
- Mr. Riding said that local governments own public and private areas. There may be private sites that are publicly accessible, which need to be differentiated from public sites for private use.
- Ms. Kincaid added that it would be necessary to ask for the vendor's employer/ID number and DUNS number for safety.
- Mr. Petersen added that included in the packet is also an evaluation proposal template and a criteria used for evaluating proposal.

## TASK #6: REGIONAL PLANNING FOR EVSE SITING

Mr. Petersen presented the preliminary outline of an EVSE siting model developed by the Institute of Transportation Studies at the University of California, Irvine. This siting model will be implemented into the final plan and presented at the next meeting. Mr. Petersen asked the group for their input.

PEVCC members provided the following comments:

- Mr. Poley would like cooperation with local municipalities incorporated into the EV siting model.
- Mr. Petersen responded that that is a very realistic approach. This siting model was developed to find out the optimal locations for charging stations.
- Mr. Riding commented that interacting with local utility should be considered.
- Mr. Petersen moved on to the next slide of the siting analysis and asked if there are any specific preferences where Level 1 is more realistic as opposed to Level 2 or DC Fast Charging (DC FC)
- Ms. Kincaid said that there was a comment earlier about the DC FC and how commercial vehicles can't use it at all. She said that if very few people can use DC FC or if they use it when they shouldn't, there might be issues that arise.
- Ms. Van der Water asked why commercial vehicles can't use DC FC.
- Mr. Cook responded that there are structural issues in the battery that makes fast charging stressful on the battery.
- Mr. Petersen asked if information like this would be useful for the regional Councils of Governments for planning purposes
- Ms. Dawson replied that her colleagues would benefit. Member agencies would have to tweak the UC-Irvine model.
- Mr. Riding said that it is an assumption that most public charging would be Level 2 charging.
- Ms. Dawson asked if DC FCs would be installed at major corridors and interstates.
- Mr. Petersen said that that is a reasonable assumption.
- Mr. Riding said that DC FCs can help people get from community to community, and then Level 2s can help you move around within the community.
- Mr. Petersen stated that there are differences between plug-in hybrid vehicles (PHEVs) and battery electric vehicles (BEVs) and their charging activities. For instance, drivers for the PHEV Chevy Volt will try to maximize their charging experiences outside of home because they want to maximize their electric miles. The Volt driver, their cost comparison is gasoline. Whereas, BEVs will charge predominately at home, usually overnight. BEV drivers will compare their public charging rates to the much cheaper TOU rates they receive at home.
- Mr. Fugelsang asked if Level 1 charging can be used at home for longer periods, whereas Level 2 is likely to be available in public places for shorter durations, 3-4 hours, then DC FC is for quick charges.
- Mr. Petersen confirmed. He also stated that Level 2 residential chargers are common, while Level 1 charging is a cheap option for workplace charging, where people tend to park their car 8-9 hours.
- Ms. Urata asked what "SOC" stands for.



- Mr. Riding and Mr. Petersen both respond that it means State of Charge.
- Ms. Urata commented that she will also take this siting model to the modeling group at COG ask for their comments.
- Mr. Riding said to link utility to electricity and the location. They are most interested in new business, cost, and location.

## **ADDITIONAL COMMENTS**

PEVCC members provided the following comments:

- Mr. Riding commented that one reason why fewer people are coming to the meetings is because it's not on group members' outlook calendars. Mr. Riding suggested if it can be an Outlook calendar invite in the future.
- Mr. Petersen said that he wants as many people participating as possible and will send out an invite. The goal is to have the plan developed by the end of the year to be presented to the air district board by December or January; therefore the next two-three months will be critical.
- Ms. Kincaid said that it is great to have people attend in person or in the webcasts because it really encouraged discussion. Feedback is very important.
- Ms. Kalashian said that her organization is receiving calls from Blood Banks and offices of education to move forward in such a way. But these people are meeting some barriers from local governments. She asks whether or not these people should be included in the conversation.
- Mr. Petersen commented that the goal of the group is to have every local jurisdiction come together and learn more.
- Ms. Urata commented that the group needs to reach out to local governments to ask them if they need help. It is important to give tools to local governments and get people to advocate for their local communities. Even just directing them to CCSE's website is helpful.
- Mr. Petersen said that this is a good reminder to mention that the CCSE will be revamped soon.
- Ms. Dawson asked if there are any reactions to the public outreach template she had shared last time.
- Mr. Petersen used the presentation and presented to a group of city planners in Visalia last month.