Break-Out Sessions on Statewide PEV Charging Infrastructure Plan

MBEVA/Montery Bay PEV Coordinating Council

1/16/13 conference call
Attendees: Alan Romero (MBUAPCD), Anais Schenk and Paul Hierling (AMBAG), Cheryl Schmitt (City of Santa Cruz), Kristi Markey (Monterey County Supervisor Jane Parker), Mike Zeller (TAMC), Sharon Sarris (Green Fusion), Piet Canin (EA) and Megan Tolbert (CSUMB)

#1: Supporting Regional Plans

Key Questions:

1. What material should be included in the Statewide Plan in order to coordinate and enhance the Regional Plans?

• all previous EVSE siting work should be evaluated for inclusion such as well AMBAG study.
• Legislative, financial, and policy actions to address obstacles to installation
• Rest stops as siting options, signs on interstate highways, public as well as private businesses locations.
• define region: SC to SJ airport (one region driving distance for EV), destination for 4 hour recharge. Eye opener experience for EV driver in what it takes to plan trip around charge time factors.
• Topography impacts EV range for example hills decrease range.
• Major routes: gaps in charging stations. Very uncoordinated at this point. 50 mile radius realistic distance for EV drivers.
• Gap analysis for EVSE infrastructure and need, travel routes, and ID characteristics of early adopters
• EVSE installation obstacles and funding issues need help with. Difficulty because of zoning, parking issues.
• difference btw. Private and public charging/locations. Logistics have to be worked out such at airport. Airport key location. Valet parking for airport and hotels.
• standard 110 outlets for locations such as airports.
• Recognition of the differences of each region for PEV readiness
• Serving specific CA populations (economic, demographic, rural, urban, suburban)
• Recognition the constraints of public agencies who need to be a part of PEV infrastructure implementation especially from less populated and less urban regions.
• Best practices for a variety of populations, settings (urban, suburban, rural, medium/small cities)

2. What information can be provided to CEC/NREL from Regional Planning activities to improve the Statewide Plan?

• Obstacles to EVSE installations: public, private, residential.
• Locations of the charging stations (some websites – hard to find ones that are up to date)

• State can provide a repository for online database of locations for local agencies/groups to update.
• Identify state owned properties with good locations for charging stations within our region: State parks, in good locations. Point Lobos, local features where you can hang out for a few hours.
• Streamline approval process for EVSE installations at state owned facilities such as Asilimar
• Tourist destination of state owned property.
• Home owner associations shouldn't prohibit EVSE installations.

3. Are there particular metrics that should be established to assess progress and guide deployment programs?
• Number of EV owners
• Number of EV rentals and carsharing
• Number of staff working on EV issues: public, private, and non profit
• Visibility of PEV's in region (marketing and outreach)
• Preferential EV parking (maybe not last)
• More street signs for EV chargers
• public vs privately owned EVSE
• Cost of EVSE for EV Driver use (range of cost, free)
• Convenience, how long it takes, cost, etc to obtain permit for EVSE public, business, and residential
• Number of EVSE level 1, 2, DCFC installed.
• Measure usage if networked
• Streamline accessing for PEV ownership data

#2: Statewide and Inter-regional

Key Questions:

1. *What are critical issues requiring coordination between regions?*
   • Inter region roadway EVSE infrastructure
   • standardizing access to EVSE's – RFID cards to start chargers
   • Range issue.
   • Sacramento to SF.
   • EVSE siting plans coordinated esp at the regional borders such as SLO to Monterey County along Hwy 101.
   • gap analysis: commuter routes.
   • Standardize local gov't policy as much as possible
   • Standardize EVSE charging signs
   • Standardize promotional materials if possible

2. *How can state agencies identify key corridors between regions (or major urban areas) that might warrant EVSE coverage?*
   • Seeks input from regional groups: Monterey Bay's suggestions:
   Monterey Bay: Highway 1, 17 and 101 are main corrdiors

• use commuter data from current public agency sources. Air Sage? Data can be used pretty cutting edge, not that many regions are using the data. GPS tracking for travel corridors tracking cell phones.
• pinpointing likely EV driver locations/routes with this GPS tracking data.

3. *How can state agencies identify corridors to other states that might warrant EVSE coverage? For example, Oregon and Washington's I-5 corridor.*
• Pick the major north, south and east to other states.
Traffic volume

#3: Cost-effective Coverage

Key Questions:

1. *How can state agencies determine the best use of public funds to support an evolving EVSE network serving multiple vehicle markets? How would this support vary between EVSE applications: residential, multi-unit dwellings, commercial, workplace, DC fast chargers. (discuss each in turn):*
Residential: low cost level 1 and 2.
Multi-unit dwelling: low cost level 1 and 2 help with separating metering.
Commercial: help with PGE rates so they don't get penalized for higher energy use.
Workplace: Look at 110v outlets, less expensive options
DC Fast Charger: help with PGE rates so EVSE owners/host don't get penalized for higher energy use from charger use.

   General input:
   • Survey driver to see where they want to see chargers. Hard to gauge the most bang for your bucks. What are the obstacles and how can you incentivize.
   Get public agencies to put in certain number of chargers.
   • Survey work is expensive but it is necessary. State wide travel survey through household travel survey to include PEV questions.
   • hard for state to tell locals what to do.
   • need assessment: see what the current status is and then make decisions.
   • Build for current technology and future technology upgrades
   • Cost effective is a hard matrix since the EVSE technology is so fluid and ever changing
   • make short term as well as long term investments
   • investments at hotels for tourist centric region such as Monterey Bay region.

2. *How might measures of cost-effectiveness vary as applied across regions?*
   • smaller regions like Monterey might not serve as many drivers but provides a crucial link to SF Bay especially for commuters and visitors.
   • issue of high cost of some installations vs the locations
   • need to assure prime travel route/activity centers are served even if the installation cost is higher than average. Need to address gap in EVSE coverage. If data shows this location is optimal then allocate extra funds for that installation.

• look at need/demand, location, number of early adopters, and to determine cost effectiveness.

3. *What existing or new research or analysis capabilities can state agencies employ to effectively evaluate cost-effectiveness for particular EVSE installations?*
   • information that provides future cost effectiveness with bigger picture benefits
   • Use rates of EVSE
   • How EVSE connects major travel routes
   • forecasting tools for determining future EV drivers
   • Data is the heart of any travel demand model – back to survey data. Need to make an extrapolation of future drivers.

#4: Interoperability (Open Access)

Key Questions:

1. *Should measures be taken (at the state agency level) to ensure that any PEV driver can use any charging station, regardless of their network membership? If so, what measures could ensure such access and how should they be addressed in the Statewide Plan?*
   • **YES!** Big issue for many ev drivers with Blink card to use station. Attached card to the station to make it easier for free station users.
   • Adopt manufacturing standards for access
   • Get industry to consolidate access to their products: provide incentives and pressure.
   • Market forces control this issue and let it play it out as it should.
   • Local dealer need to be more educated to provide info to EV drivers so they know how to order the card. Cost to buy card.
   • CA rebate provide educational access information.
   • incentivize getting cards to all new EV buyers or when the register their EV with DMV
   • Grants only for EVSE manufacturers who provide open access such has to be started with a standard credit card.

2. *What guidance can be provided to ensure that drivers receive enhanced performance from California's EVSE network?*
   • reliability of operations
   • how do I know if it is working, is it available, how much does it cost, is it open to the public.
   • speed of charging
   • strategic placement of DCFC
   • Cost control and reliability
   • Easy to find via online tools and on street signage
   • assure enforcement so EV charging spaces aren't occupied by ICE vehicles.
   • Contact information to report downed stations
   • Assure limited down time and durations of those down time.
   • Free training to repair EVSE units for faster response
   • Have electrician to take care of repair

3. *Are there other measures that should be taken in order to provide interoperability or open access in a way that protects consumers?*
   See above.

- Know when the station is broken
- protect from over charge
- protect from damage to EV cars from charger

Other points for the CEC to consider:

- EVSE and PV connections incentives and assistance as well as battery storage systems.
- issue of multi-unit dwelling with no EVSE installation because no garage, no driveway, etc.
- priority is gap analysis, funding for DCFC charger
- Assure early adoption goes on an upward trend
- Issue of eV drivers paying their fair share of the road tax and impact. Make sure ev drivers aren't disincentivized.

Also:

- Green Business and Green building should include installation of charging stations for Cal Green. LEED took it out? (not sure).