



333 W El Camino Real, Suite 290 | Sunnyvale, CA 94087 | 1-844-474-SVCE (7823) | SVCleanEnergy.org

Silicon Valley Transportation Electrification Clearinghouse Meeting

December 17, 2020

10 AM-12 PM

Notes

Welcome, Agenda Overview, Introductions, & Recap of September Meeting

Don Bray, Director of Account Services and Community Relations

Don welcomed participants to this fifth meeting of SVTEC and reminded them of the group's purpose: creating a forum that brings together stakeholders to reduce transportation emissions and address barriers to the adoption of EV infrastructure. Don then reviewed the agenda and called on participants to introduce themselves:

Adam Borinson, Nathan Inc.
Aimee Bailey, SVCE
Anil Babbar, CAA Tri-County
Anthony Eulo, City of Morgan Hill
Don Bray, SVCE
George Lee, Powerflex
Gilee Corral, City of Cupertino
James Russell, CLEAResult
Jason Lester, 23andMe
Jessica Cornejo, SVCE
Justin Zagunis, SVCE

Kara Gross, JVSV
Kenji Tabery, Paired Power
Kristel Wickham, community member
Ky Gruenfeldt-Roy, CLEAResult
Nupur Hiremath, City of Sunnyvale
Peri Newby, City of Campbell
Raymond Qi, City of Sunnyvale
Sherry Bryan, Ecology Action
Tom McCalmont, Paired Power
Wyatt Kozelka, Powerflex
Zoe Elizabeth, SVCE

Don briefly recapped the September meeting: we had over 30 participants from 20+ public, private, and nonprofit organizations. Topics included: funding and financing survey results & an associated breakout discussion, an industry update from EVgo about their partnership with GM, and a regulatory update from County of Santa Clara's weighmaster about their upcoming role in certifying new charging stations.

CALeVIP Update

Justin Zagunis, Senior Decarbonization and Grid Innovation Analyst

The application window opened yesterday (12/16), and funds are expected to go quickly. In SVCE's service territory, at least 25% of L2 funds will be directed towards MUDs.

Multi-Unit Dwelling (MUD) “Deep Dive”

Zoe Elizabeth, Senior Energy Consultant, & Ky Gruenfeldt-Roy, CLEAResult

The focus for SVCE is on learning what solutions might work to increase MUD EV infrastructure adoption. The lack of penetration in this sector is a major obstacle to widespread transportation electrification in the service territory: while 39% of residents live in apartments, only 9% of EVs are registered to apartment dwellers. Looking forward, in a carbon (and land) constrained future, the percentage of MUD residents could increase, further exacerbating the problem if we can't solve it.

What are the barriers to adoption?

- High cost
- Site constraints
 - Expensive electric system upgrades
 - ADA compliance, especially in older buildings
 - Parking regulation/parking demand
- Perceived or real lack of demand
- Concerns about “stranded” assets
- Future charging behavior patterns unclear
- Funding is competitive and complicated, additional policies/standards may be necessary

There are currently 6 programs at SVCE to impactfully address the MUD challenges:

1. **CALeVIP** – as mentioned previously, at least 25% of SVCE’s \$6M L2 CALeVIP funds are targeted to MUDs, and FutureFit Assist (discussed later) will help site hosts apply for funds.
2. **Priority Zone DCFC** – this program identified clusters of MUDs where there are the greatest barriers to, and potential for, fast charging as a solution (but where the market was unlikely to deliver). It provides \$10k on top of other incentives. Two or possibly 3 initial sites have been selected, and if approved will get that added to stack onto CALeVIP.
3. **EV Reach Codes** – in 5 jurisdictions in the service territory, the requirements for EV charging infrastructure in new multi-family construction are greater than required by CalGREEN, the state’s mandatory minimum code – more information here ([LINK](#)).

Two of the current **Innovation Onramp** pilots are focused on business models to improve cost effectiveness in the MUD environment.

4. Ecology Action:

- Low-cost equipment configurations
- Business model for low- and moderate-income multifamily properties
- Two pilot sites

5. EVMatch:

- Reservation-based EV charging at multifamily properties
- Offer chargers to the public as well
- Four pilot sites

6. **FutureFit Assist** is a comprehensive, free technical assistance program - funded by SVCE and administered by CLEAResult - which provides individualized charging solutions and support and unbiased technology recommendations, as well as incentive application assistance.

Leading in to the launch of FutureFit, the team has run a campaign for the past several months:

- 282 MUD sites targeted - email, phone, direct mail
- 82 engaged (43% small/med, 57% large/X-large)
- 63 uninterested/solid no
- 12 participating (*mix of geography & size*)

Ky from CLEAResult walked through the process his company takes with clients which leads to a tailored site analysis and scoping: remote and in-person assessment, parking layout, electrical demand/capacity/availability, and operational issues. They then offer 3 solution options with cost and revenue scenarios, including incentives.

FutureFit Assist lessons learned:

- Of those who chose not to participate, a large majority indicated there was no interest or demand from their tenants, while smaller numbers felt the timing was wrong or that they had financial concerns
- Multiple layers to get to a decision maker
- Property managers/owners report a lack of demand
- Property managers/owners have limited EV infrastructure experience
- MUD properties are old by electrical standards (85% built before 1980)
- Assigned parking poses functional complexities
- Transformer capacity information is not readily available
- Service upgrade costs are hard to estimate (new tariffs may soon change this)

To wrap up the discussion on getting EVCI into MUDs, Zoe posed a question to the group:

Are local policies/mandates/ordinances necessary?

- *Yes – all respondents (7 votes)*



333 W El Camino Real, Suite 290 | Sunnyvale, CA 94087 | 1-844-474-SVCE (7823) | SVCleanEnergy.org

Regional Recognition Awardees

Justin Zagunis

This program is intended to highlight innovation in charging and in use cases for EV infrastructure. The first two awardees under this program are:

Off-Grid Charging – Paired Power’s charging technology is solar-powered and direct-current. This installation is at their headquarters in Campbell, which they share with 2 other companies, and is California-made. Tom McCalmont accepted the recognition and spoke to the future of his product as they move towards fast charging.

Charging at Scale – 23andMe was able to increase from less than 30 to more than 100 L2 chargers, plus a DCFC, at their corporate headquarters through the use of Powerflex’s technology. Jason Lester of 23andMe spoke to the user experience and Wyatt Kozelka and George Lee of Powerflex spoke to the technical solution.

Interest Group Updates

Zoe Elizabeth

In the interest of time, Zoe did not go into detail, but emphasized that the work of SVTEC continues between the quarterly meetings with focused activities on identified barriers, including Interconnection and Permitting & Funding and Finance (see slides for more info).

The meeting adjourned with holiday well-wishes from all!

MEETING CHAT:

Adam Borison: Long question about MUD charger installation cost. It seems clear that it is costly to install a few chargers in an MUD versus a few chargers at individual homes. But what about installing many chargers? Is it more expensive or difficult to install say 100 chargers in a big apartment building versus 100 chargers at 100 single family homes, particularly if you consider the necessary panel and grid upgrades? If the costs at scale are favorable for MUD installations, then how do we overcome this "market failure?"

Kristel Wickham: Sunnyvale EV Reach that was actually passed is a little different than depicted in the chart. No exemption for affordable housing and no distinction between < 20 units and > 20 units.

Nupur Hiremath: Can you speak to the geographic distribution of the MUD sites you have enrolled in the FutureFit program? Also, you referred to the size of the MUD sites. Can you also



333 W El Camino Real, Suite 290 | Sunnyvale, CA 94087 | 1-844-474-SVCE (7823) | SVCleanEnergy.org
speak to whether these are large developers, small developers, property owners, etc. who are interacting with the program?

Sherry Bryan: Ky - To determine available power, are you doing power studies with data loggers at the house meter(s), or load calculations?

Gilee Corral: Glad to hear the technical assistance includes surveying the tenants. Will the survey also explore how much the tenant can afford to pay per kWh, if they can afford to purchase an EV with Level 3 capability?

Kristel Wickham: Are the MUD decision makers concerned about who will pay for the power that tenants use to charge or how the systems will work to allocate fees to the people who are using the chargers?

Sherry Bryan: Regarding Kristel's comment. In our experience, many MUD operators prefer 3rd party payment systems and don't want their property managers to experience any hassles with collecting money from tenants. They are already familiar with revenue sharing models for laundry services such as WASH and Coinmach.

Kristel Wickham: Thinking to a future of 'virtual power plants' and 'vehicle to grid' technology, are there any infrastructure concerns that we need to be thinking about now for MUD to ensure compatibility with those kinds of things in future?

Adam Borison: Question for later. Is there a successful "model" or "demonstration" MUD EVSE project that one can point to? Both for our own purposes and to inform MUD etc. stakeholders. I'm thinking of an apartment building that went ahead with a major EVSE installation and is happy they did so. Or maybe it's too early for this.

Anil Babbar: I have to leave for another call. But on behalf of the California Apartment Association, I would be happy to engage more of my members on utilizing this program. thank you

Sherry Bryan: Tony - For older buildings, unless a new service is dropped in by the utility, or a main panel upgrade is paid for, electrification initiatives such as heat pump heaters will be in competition with EV charging for available house power.

Gilee Corral: @Tony +1 on this point. There is so much cost burden shifted to tenants already. My concern is that the cost modeling may be another way to shift the installation costs to tenants, who will be trapped into a higher cost per kWh than a SF resident might pay.



333 W El Camino Real, Suite 290 | Sunnyvale, CA 94087 | 1-844-474-SVCE (7823) | SVCleanEnergy.org
Ky Gruenfeldt-Roy: @Adam, to your earlier comment, this is a key component of the FutureFit program. We have identified several early "champions" that we are working with to develop charging projects and then will be sharing their success with other MUDs to drive engagement. We will be developing case studies in 2021 once these projects are complete and will share with the group.

Zoe Elizabeth: Feel free to post questions here about the two winning projects.

Kristel Wickham: Congratulations award winners! Can you give specifics of the load management methods used?

Kara Gross: Learn more about both of the projects! <https://www.svcleanenergy.org/regional-recognition/>

Ky Gruenfeldt-Roy: Great to hear about the increased EV adoption with 23andMe employees!

Kara Gross: Funding Opportunities - <https://www.svcleanenergy.org/svtec/#1585072543807-5adf92fd-7510>