



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

## Silicon Valley Transportation Electrification Clearinghouse Meeting

April 27, 2021

10 AM-12 PM

### Notes

#### Welcome & Objectives

*Don Bray, Director of Account Services and Community Relations & Zoe Elizabeth, Manager of Account Service*

Don welcomed participants to the first meeting of SVTEC in 2021 and reminded them of the group's origins in the Electric Vehicle Infrastructure Joint Action Plan as a forum that brings together stakeholders to reduce transportation emissions and address barriers to the adoption of EV infrastructure.

Zoe spoke with optimism about the state of transportation electrification and touched on the organizations attending the meeting. She then gave an overview of the agenda and what objectives we were gathering to address:

- Where we are today & where we need to go in the next 5 years:
  - *Tyson Eckerle, GO-Biz*
- EVSE, Equity, and Employer Perspectives on the path ahead:
  - *Dedrick Roper, ChargePoint*
  - *Leslie Aguayo, Greenlining Institute*
  - *Christian Costello, Google/Alphabet*
- How can we leverage better data to accelerate action? (local statistics & data)
  - *Zoe*
- Discussion

#### Opening Remarks

Tyson began by recapping the Governor's Executive Order declaring that no new internal combustion engine cars will be sold in California by 2035 and his agency's directive from that order to develop a Zero Emission Vehicle (ZEV) Market Development Strategy. The Strategy looks not only at the 29 state agencies with some role to play in advancing this directive & how they will do it, but also at all the actors in the ecosystem. The graphic below gives an overview of the Strategy:



GO-Biz has developed a [website](#) that hosts the Strategy document and links to Action Plans at the state agencies, which will be updated annually. The final step is to develop “Pillar Priority Action Plans” around the four market development pillars: vehicles, infrastructure, end users, and workforce.

Tyson then drilled into local data and a snapshot of Santa Clara County’s progress in adopting EVs and EV infrastructure. He highlighted the Permit Streamlining Olympics, where about 24% of jurisdictions statewide have adopted streamlined regulations; in Santa Clara County, 6 agencies have, 7 are in the process, and 3 (Mt. View, Los Altos, and Los Altos Hills) have not. As a state, last year 7.78% of the new car sales share were ZEVs. There is detailed data on the California Energy Commission's website ([ZEV stats on the CEC website](#)). Santa Clara County ZEV sales are 10.5% of the California total, but the County has about 4.8 percent of the state’s population; ZEVs are 0.82 % of all cars cumulatively. The County has the 2<sup>nd</sup> highest number of both DC fast chargers and Level 2 chargers overall (behind Los Angeles), but clearly much higher numbers per capita. The County is particularly high in Shared Private (aka workplace) charging. We are also tied for 2<sup>nd</sup> in number of hydrogen fueling stations in the state.

Vince Wong: Just curious if this data is publicly available somewhere?

Tyson Eckerle: <https://www.energy.ca.gov/data-reports/energy-insights/zero-emission-vehicle-and-charger-statistics>



333 W El Camino Real, Suite 290 | Sunnyvale, CA 94087 | 1-844-474-SVCE (7823) | [SVCleanEnergy.org](https://business.ca.gov/industries/zero-emission-vehicles/plug-in-readiness/)  
<https://business.ca.gov/industries/zero-emission-vehicles/plug-in-readiness/>

Vince: Thank you!

In response to a question from Dedrick, Tyson reported that the reasons that more agencies have not streamlined seem to be: lack of awareness; lack of prioritization; planning not wanting to give up their power over approvals; and COVID.

Don Bray: can you say a bit more about the 'shared private' data, and how this is gathered?

Tyson: There's two separate things that we've tried: the energy commission is doing quarterly surveys, but the shared private number has been the same for some time; and possibly the Alternative Fuels Data Center can share it, protecting the shared private part.

Don: There's also just been such a linkage between the availability of workplace charging and someone's likelihood to buy an EV, plus you're charging during the middle of the day typically, so there's just a lot of great aspects to it.

Tyson: great discussion today - thanks for having me. here's my email for reference:  
[tyson.eckerle@gobiz.ca.gov](mailto:tyson.eckerle@gobiz.ca.gov)

## **Panel Discussion: Perspectives on the Path Ahead**

*EVSE Provider: Dedrick Roper, Director of Public-Private Partnerships, Chargepoint*

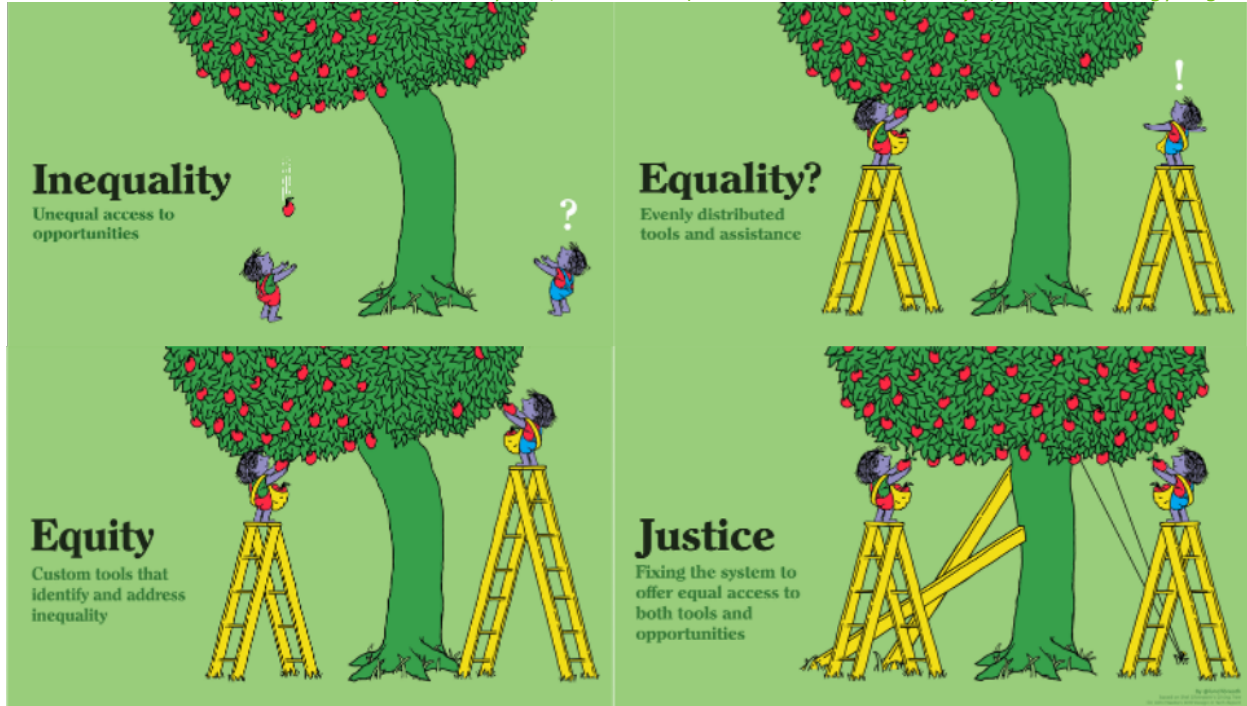
Key Issues for the Five Years:

- Vehicle model availability - moving limited light duty vehicles into more models, light duty trucks and medium- and heavy-duty electric vehicles.
- New vehicle types mean new locations will be suitable for charging - what are the charging opportunities like soccer fields?
- Infrastructure incentives are going to play a massive role over the next year, but site hosts really need to have skin in the game so that revenues will at least support operation of those charges beyond the initial support from the grant funding.
- The pandemic highlighted the importance of home charging: where does that leave residents of multi-family?
  - It can't be all DC fast charging, that's not cost effective, it's not good on your battery.
  - We need level 2 community hubs, on-street charging, and innovative business models that makes it accessible and affordable for drivers so that they don't lose the total cost of ownership benefits of EV.
- Fleet issues:
  - Charging at the depot versus on route

- Going to electrify fast open up opportunities for grid services and other opportunities for monetization: what are the appropriate charging profiles for that?
- Where are the appropriate locations for charging infrastructure ?
- The Volkswagen settlement has moved charging into the fueling and convenience space; these locations provide a great opportunity for others to see that fueling behavior and see how easy it is, which will really promote adoption down the line.
- Resiliency for mission critical infrastructure is going to be increasingly important: powering chargers when the when the grid is out & when we need to get people evacuated.
- As other states electrify, with great leadership from the federal government, it's going to strain the supply chain and affect product availability.
- California needs to keep jobs and manufacturing facilities.
- Workforce & workforce development: with more chargers being in more rural areas, having the workforce available install & maintain those chargers is going to be critically important.
- Keeping the technology development here while supporting the export of technology to other parts of the nation and the world.

*Equity: Leslie Aguayo, Program Manager of Transportation Equity, Greenlining Institute*

Leslie began by sharing Greenlining's definition of equity: transforming the behaviors, institutions and systems that disproportionately harm people of color. Equity means increasing access to power, redistributing, providing additional resources and eliminating barriers to opportunity in order to empower low-income communities of color to thrive and reach their full potential. Equity is not the same as equality; equality is the assumption that the playing field is level, whereas equity acknowledges that people are starting from different places.



What do we need to measure and understand to ensure transportation electrification is equitable?

- Accessibility vs. Deployment - the deployment of charging infrastructure geographically may be perceived as equitable due to its location, but it might not be serving priority populations
- Maybe it's zoned as industrial or commercial with very few people, so it's low income and therefore a DAC, but not easily accessible by the people that live in that area
- Or, it's located where high-income populations have the most access due to proximity to job centers or shopping centers

What are key issues in ensuring transportation electrification is equitable?

- Focusing on people must be central
- Policy makers and key stakeholders have to both define and codify terms such as equity, disadvantage communities and low income
- Recommend a minimum standard of investment be codified: a consistent percentage of funding to targeting disadvantaged communities

Metrics: consider additional data sets that speak to relevant deployment - public health, diversity, land use and climate change.

1. COVID-19 data: the pandemic resulted in unprecedented and disproportionate infection and death rates in low income and communities of color across the U.S.
2. land use zoning and climate change: sea level rise data, flood maps, and climate projections along with storm and fire risk data



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

3. demographic data: understanding where populations are moving to in the face of gentrification, economic and climate displacement, land use speculation and the suburbanization of poverty

Finally, the transition of medium- and heavy-duty fleets: they play a large role in our state's air quality goals and they particularly have a larger impact on communities of color.

*Employer: Christian Costello, Transportation Project Manager, Google/Alphabet*

Google's goal is to reduce friction as possible. The vision is to enable growth by providing innovative and user-focused mobility options that foster seamless intercampus connectivity and reduce the carbon footprint. Free charging is a recruiting perk that keeps Google competitive with other large Silicon Valley employers. When you offer workplace charging, however, there is potential conflict with reducing the number of SOV trips, as the HOV sticker serves as an incentive from the state while the cities have trip caps.

They leverage data to optimize their EV charging strategy, account for higher demand than supply and close the gap between charge and dwell time. They are using Chargepoint with services like valet management and power management.

Where they see the EV charging program going in the next five years:

- balance SOV trip reductions and goals to be a green company
- meet or exceed local Reach Codes in new construction
- applying installation standards during a tenant improvement or a building refresh:
  - 10% of the total parking inventory
  - ability to expand at 20 % on day two - through cord sharing or running conduit
- a little over 20% of Googlers were driving EVs prior to COVID
- assess demand based on the driver to port ratio

Don: for Christian, do you have a recommended driver to port ratio these days? is this changing as car batteries are generally getting larger?

Christian Costello: Hey Don, I think the experience is generally more positive when the driver:port ratio has been below 6:1. When it is higher, we try to lobby for expansion. Granted, most of the sites that have higher than 6:1 ratios are some of the 'legacy' sites that were installed to the old 5% standard at Google.

Don: interesting - thanks - 6 to 1 a good threshold ratio.

### **Local Statistics: What is the EV landscape in Silicon Valley today?**

Zoe began by explaining DAISY, SVCE's data platform, and providing a high-level overview of where and how charging happens today via the EV Charging Use Case Pyramid (a vast majority is at home or in the workplace, but there is little data on either). EV registrations are



333 W El Camino Real, Suite 290 | Sunnyvale, CA 94087 | 1-844-474-SVCE (7823) | [SVCleanEnergy.org](http://SVCleanEnergy.org)  
disproportionately skewed to single family homeowners in the service territory. Using the Social Economic Vulnerability Index (SEVI), the top 20% most advantaged community members are responsible for 30% of PEVs.

In individual jurisdictions:

- EVs correlate heavily to higher income communities and individuals
- Most DC fast charging is concentrated in Sunnyvale, Cupertino & Mt. View
- Two-thirds of the registered EVs are Teslas or Chevys.
- Charging is concentrated in higher-VMT cities.

**Facilitated Discussion:**

*How do we accelerate action in the next five years?*

*What data do we need that we don't have?*

*How can data support action?*

Big Themes:

- Adequate charging at both market-rate and affordable multifamily housing continues to defy simple solutions
- Desire for better models of what works and what is equitable in charging and in increasing ownership of PEVs among less affluent residents
- Data about frequency and length of charging at public stations would be helpful
- Public agency members would like the types of data Zoe demonstrated shared with them to assist with their Climate Action Plan progress reports
- Data about private/workplace charging is scarce and desirable