DOCKETED	
Docket Number:	22-TRAN-02
Project Title:	ZEV Signage Initiative
TN #:	245895
Document Title:	Coltura Comments - EV charging highway and directional signage
Description:	N/A
Filer:	System
Organization:	Coltura
Submitter Role:	Public
Submission Date:	9/7/2022 11:51:59 AM
Docketed Date:	9/7/2022

Comment Received From: Coltura Submitted On: 9/7/2022 Docket Number: 22-TRAN-02

EV charging highway and directional signage

Additional submitted attachment is included below.



September 7, 2022

Re: Docket # 22-TRAN-02, Initiative to Increase the Visibility of EV Charging Stations

Coltura's comments addresses the following areas for which input was sought:

- 1. Provide stakeholder feedback on the **utility of increasing the visibility of EV charging stations through installation of informational and locational signage**
- 2. Identify issues and **challenges for signage installation** projects that should be considered as part of a grant program.

California is spending hundreds of millions of dollars to install fast charging. It should maximize the impact of this spending by taking the final step of letting gas-vehicle drivers know the EV charging is there by installing highly visible highway signage.

- 1. Utility of increasing visibility of EV charging stations through highway signage
 - a. Informing all gas-vehicle drivers of charging availability: Increasing the visibility of EV charging highway signage is critical to increase EV adoption among drivers who do not currently drive an EV, for these reasons:

Perceived lack of charging is one of the <u>main barriers</u> to EV adoption, and studies <u>have shown</u> that freeway charging is critical for many drivers to consider an EV. A <u>2019 study</u> showed that 47% of those who recalled seeing EV charging signage or a charging station would consider getting an EV, vs 15% of those who did not.

The drivers of the 96% of cars that are powered by gasoline in California can see signs for gasoline all along the highway, and in many cases can see the gas station itself from the highway. They have come to expect that widely available fuel is indicated by highly visible signage and fueling stations. In contrast, these drivers don't see any highway signage for EV charging and are unlikely to use the EV charging locator apps since they don't drive an EV. Therefore they continue to perceive that there is insufficient public charging for them to switch to an EV, especially since much EV charging is located in difficult-tosee places

b. <u>Special Focus: Gasoline Superusers:</u> Prioritizing placement of EV charging signage where the biggest gasoline users can see it will help cut vehicle emissions faster.

EV adoption is a poor proxy for the key metric for cutting vehicle emissions: gasoline displacement. As <u>Coltura's research</u> shows, drivers use widely different amounts of gasoline. Using millions of California DMV and Bureau of Automotive Research vehicle records and odometer readings, Coltura has been able to identify the zip codes that have the highest concentrations of "Gasoline Superusers" (defined as those

drivers in the top 10% in terms of gasoline consumption). In California, Superusers consume 24% of all the gasoline.

Shifting Superusers to EVs has a much bigger impact on gasoline displacement and vehicle emissions than shifting an average driver. Superusers need to see evidence of EV charging to have the confidence to make the switch to an EV.

Prioritizing placement of EV charging signage should be prioritized for areas with high concentrations of Superusers. Doing so would likely increase the perception of these gas car drivers that there is sufficient public EV charging for them to switch to an EV, with an outsized impact on vehicle emissions cuts.

2. Challenge for signage installation projects that should be considered as part of a grant program

A major challenge for highway EV signage installation projects is the burden placed on local jurisdictions and/or charging station developers to install the "follow-up" or "directional" signage – the little arrow signs at every intersection between the highway exit and the EV charging station that show the driver where to go.

<u>First</u>, there is confusion over which entity is on point to install the directional signage. The MUTCD says it's the local agency; the EV Charging Station Permitting Guidebook says it's the charging station developer.

- MUTCD: The <u>MUTCD</u> states at page 557 that "Follow-up signing, if necessary, *shall be placed by local agencies (city or county)* before signs are placed on the State highway." This is repeated in the <u>ZEV Signage Installation Guide</u>.
- Guidebook: In contrast, the <u>EV Charging Station Permitting Guidebook</u> (Guidebook) provides at
 page 54 "When advertising the presence of the station, chargers that are accessible to the
 public 16 or more hours per day and located within three miles driving distance of a state
 highway are eligible for free highway signage, providing the station developer purchases and
 installs directional signage from the freeway to the site (also known as trailblazer signs) on the
 local streets and roadways.

Second, regardless of whether it's the local agency or the charging station developer who is currently responsible for placing the directional signage, neither of those parties should be on point. Instead, the state should assume responsibility for funding and placing directional signage.

Local agencies are under a variety of budgetary and staffing constraints. The directional signage may cover multiple cities, requiring excessive coordination to get all the signs installed. And EV charging station developers generally are not in the business of installing street signs.

Moreover it is the state, not the local jurisdictions or charging station developers, that has the strongest incentive to get the signage put up, as it's the state that must meet the 5 million EVs by 2030 goal and the carbon neutral by 2045 goal.

<u>Solution</u>: The state/Caltrans should take over the entire process of installing directional signage. Caltrans already pays for and installs the highway signage; it would be relatively easy for it to also install the directional signage. Caltrans would enjoy economies of scale and improved coordination and standardization of efforts if it took over the whole of the signage responsibilities from the highway to the EV charging station.

3. Conclusion

Highly visible EV charging highway exit signage is critical for gas-powered vehicle drivers, to give them sufficient confidence about the availability of EV charging to switch to an EV. Such signage will have the biggest impact in areas with high concentrations of Gasoline Superusers.

The state should assume full responsibility for funding and placing directional signage in order to gain economies of scale and ensure the signage is installed efficiently and expeditiously.