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**Energy and Water Consulting Comments on Funding Allocations
for Future Electric**

Additional submitted attachment is included below.



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Re: Docket 20-Tran-04. Energy and Water Consulting Comments on Funding Allocations for Future Electric Vehicle Infrastructure Projects

Dear Mr. Alexander, Ms. Purewal, and Ms. Allen:

Thank you for the opportunity to provide comments to the California Energy Commission (CEC) regarding the Staff Workshop on Funding Allocations for Future Electric Vehicle Infrastructure Projects (Docket # 20-TRAN-04) that took place on December 17, 2020. My specific area of comments focuses on rural impacts of EV chargers.

Summary

Resilient Electric Vehicle (EV) chargers are needed in rural and low-income areas. The chargers should exhibit the following characteristics:

- Ubiquitous
- Resilient
- Fast
- Safe
- Environmentally benign

Ubiquitous

As noted in the CEC workshops, EV chargers are sparse in rural areas (pg. 38 of CEC presentation). EV chargers are needed to electrify the California transportation system by 2035. This is based on the September of 2020 Executive Order from Governor Newsom (<https://www.gov.ca.gov/2020/09/23/governor-newsom-announces-california-will-phase-out-gasoline-powered-cars-drastically-reduce-demand-for-fossil-fuel-in-californias-fight-against-climate-change/>). The deficit of chargers in rural and low-income areas will severely hamper this effort. Equity and equal access to EVs is needed.

Currently, the 4,900 fast charging stations in California are focused in wealthier, urban areas. California will have to concentrate on improving access to EV charges in rural and low-income communities in order meet state goals.

Resilient

EV chargers should be resilient. A specific example is EV chargers availability during Public Safety Power Shutoffs (PSPS) events. Rural areas fear the brunt of PSPS event outages in California. The ability to charge EVs when the grid is de-energized (often for days or even weeks) is imperative if EVs are going to replace traditional vehicles in rural areas. As EVs replace piston engines, the ability to get a charge and escape wildfires will become more important.

Fast

Fast chargers (up to 350 kW of DCDC power) are being installed in urban areas. Comparable high capacity EV chargers should be available in rural areas.

Safe

EV charging technology should not have explosion, fire, or leakage risks. Safety is an important issue in rural and low-income communities. If an alternative EV charging technology were developed in these areas that created a safety risk, an environmental justice concern may emerge.

Environmentally benign

Life cycle environmental impacts of EV chargers should be a significant consideration. This involves the environmental impacts associated with the creation of the EV charging materials and technology, operation, and any disposal/end-of-life impacts.

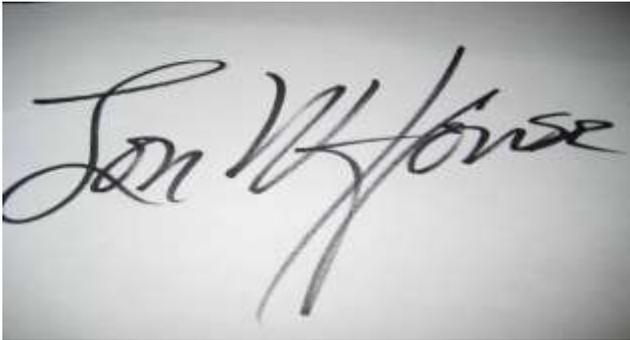
Recommendation

A focused effort will be necessary to EV chargers in rural areas. Rural EV chargers should be available when the grid is de-energized. I urge the CEC to adopt the following evaluation criteria for EV chargers in rural areas and use them for funding allocations for future electric vehicle infrastructure projects.

Evaluation Criteria for electric vehicle infrastructure projects:

- Ubiquitous
- Resilient
- Fast
- Safe
- Environmentally benign.

Thank you for your consideration.

A black and white photograph of a handwritten signature in cursive script. The signature reads "Lon W. House". The ink is dark and the background is light and slightly textured.

Lon W. House, Ph.D.

January 8, 2021