

**DOCKETED**

<b>Docket Number:</b>	22-EVI-04
<b>Project Title:</b>	Electric Vehicle Charging Infrastructure Reliability
<b>TN #:</b>	253622
<b>Document Title:</b>	EVCA - Draft UC Davis EV Field Protocol Comments
<b>Description:</b>	Electric Vehicle Charging Association (EVCA)
<b>Filer:</b>	System
<b>Organization:</b>	EVCA/Megan Mekelburg
<b>Submitter Role:</b>	Other Interested Person
<b>Submission Date:</b>	12/14/2023 2:23:39 PM
<b>Docketed Date:</b>	12/14/2023

*Comment Received From: Megan Mekelburg  
Submitted On: 12/14/2023  
Docket Number: 22-EVI-04*

**EVCA - Draft UC Davis EV Field Protocol Comments**

*Additional submitted attachment is included below.*



December 14, 2023

California Energy Commission  
Docket Unit, MS-4  
Docket No. 22-EVI-04  
715 P Street  
Sacramento, California 95814

**RE: 22-EVI-04 and Electric Vehicle Charging Infrastructure Reliability - Comments In Response to UC Davis EV Field Testing Protocol**

Dear California Energy Commissioners and Staff,

The Electric Vehicle Charging Association (EVCA) appreciates the opportunity to submit comments in response to the UC Davis Electric Vehicle (EV) Field Testing Protocol Workshop held on November 30, 2023.

EVCA is a not-for-profit trade organization of 22 leading EV charging industry member companies and two zero-emission autonomous fleet operators. The association was established in 2015 to comprehensively represent the entire EV charging value chain and provide a collective industry voice for decision-makers in California.

We appreciate UC Davis for their proposal and willingness to work with charging companies to conduct this study. EVCA and its members are working diligently to improve charger reliability across California and looks forward to understanding the driver experience based on the information gathered by this study. In order to improve transparency and help ensure the study's results reflect real-world conditions, EVCA has prepared the following feedback and suggestions for your consideration:

**Complete Draft Protocol**

We understand that the protocol is still in development as of the workshop last month. Therefore, we would request that UC Davis release a complete final draft protocol and methodology for additional stakeholder feedback.

### **Provide Clarity Regarding Use of Adapters**

As a part of the complete draft protocol, we would like to understand how adapters will be utilized as a part of the study. Should adapters be utilized, we strongly recommend only using those that have been approved for usage by the vehicle OEM. UC Davis should also monitor adapter developments as the study progresses and use Underwriter Laboratory (UL) certified adapters when they become available. The use of adapters should be clearly identified in the final protocol and study methodology.

### **Require Sufficient Training for EV Testers**

We appreciate your intent to ensure that EV drivers participating in the study are adequately trained. We believe sharing publicly available information from EV charging companies about the charging experience with testers is a critical element of the study to ensure that testers avoid charge session failures driven by user error or other issues. For example, education is essential to ensure that drivers:

- Avoid timeout issues by initiating a charge promptly after plugging in their vehicle.
- Are made aware that they must pause and unplug, then re-plug an EV between charge initiation attempts.
- Ensure that the battery state of charge is below 80% before attempting to initiate a fast charge.

EVCA encourages UC Davis to collect, review, and train all EV drivers participating in the study with publicly available resources on EV charging to facilitate a more seamless testing experience. UC Davis should document in the study methodology which resources it required drivers to review prior to launching the testing phase of the study.

### **Consider Reframing or Removal of the Cable Length Question**

We suggest appropriately caveating or removing the question about cable length from the protocol as it may cause confusion and result in inaccurate data collection. We are concerned that cable length may be quantified as a failed charging session when charger reach is the more applicable data point. Put more simply, cable length is irrelevant if the charger is able to reach the port. Many charging stations include mechanical arms or other design elements that extend a cable's ability to reach the charge port without adding length to the cable itself. By including a question about cable length, data collection may fail to account for issues unrelated to the cable's length that prevent adequate reach, such as the vehicle's parking position. While there is not a standardized port location on vehicles, the question of cable reach data can provide more clarifying information across the test vehicles.

### **Defer Collection of Peak Power Data**

We recommend that you consider appropriately caveating or removing data collection questions regarding peak power because testers will not have the full context necessary to assess such data accuracy. More specifically, testers will only see the power output, but they will not be aware of the power being requested by the vehicle which can be dependent on a variety of factors including temperature, type of vehicle, status of charge, etc.

### **Consider Additional Study on ADA Compliance**

EVCA members strive to provide inclusive charging opportunities for drivers of all abilities. However, evaluating ADA compliance at an EV charging station is a complex, multifaceted topic governed by California accessibility codes and may not be easily understood by volunteer EV drivers. EV charging station accessibility requirements have been developed in an iterative code cycle process that may make it challenging to assess ADA compliance over time. While the US Access Board has prepared design recommendations for accessible mobility and communication features for EV chargers, federal policymakers have yet to finalize these recommendations in a formal rulemaking. It is therefore premature to utilize the US Access Board's recommendations to assess ADA compliance, though we look forward to meeting the finalized federal ADA requirements once they are established. Given this complexity, we encourage the CEC to consider deferring the question of ADA compliance within this study and support a more in-depth study at a later time.

### **Develop Objective Consumer Experience Questions In the Testing Protocol**

The draft protocol includes a variety of multiple-choice questions that are subjective in nature, including questions about sufficient lighting, navigation, customer experience, safety, and other factors. Given the small sample size of drivers in the study, it seems unlikely that questions of this nature will result in data that is applicable across demographic groups in the state. Moreover, it is unclear whether these subjective questions can be used to consistently and reasonably evaluate the charging experiences of many volunteer drivers across thousands of chargers. Therefore, we suggest that data collection using objective criteria may provide a more valuable data set when it comes to consumer experience. When it comes to consumer satisfaction, we believe a survey of the broader EV driver population will provide more value.

EVCA appreciates the opportunity to provide feedback on this protocol as a part of the work being done by both UC Davis and the CEC to assess the charging experience across the state. EVCA and its membership looks forward to coordinating with UC Davis and CEC to support the successful completion of this study and

developing solutions that continue to improve EV charging for all California EV drivers.

Thank you for the consideration of our points. Should further clarification be necessary, please reach out to Megan Mekelburg at [megan@caleec.com](mailto:megan@caleec.com).

Sincerely,

Reed Addis  
Governmental Affairs  
Electric Vehicle Charging Association