

DOCKETED

Docket Number:	22-EVI-04
Project Title:	Electric Vehicle Charging Infrastructure Reliability
TN #:	261794
Document Title:	Tesla Comments - RFI Response on EV Charger Vandalism
Description:	N/A
Filer:	System
Organization:	Tesla
Submitter Role:	Public
Submission Date:	2/17/2025 1:16:47 PM
Docketed Date:	2/18/2025

Comment Received From: Tesla
Submitted On: 2/17/2025
Docket Number: 22-EVI-04

RFI Response on EV Charger Vandalism

Additional submitted attachment is included below.

February 17, 2025

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

RE: Electric Vehicle Charger Vandalism and Cable Theft – Request for Information

Tesla appreciates the opportunity to respond to the California Energy Commission ("CEC") request for information ("RFI") regarding charger vandalism and cable theft. We thank CEC staff for its effort to better understand how EV drivers in California are affected by vandalism and offer these responses to provide insight on the issue.

I. Introduction

Tesla owns and operates an extensive network of Direct Current fast chargers ("DCFCs") known as the Supercharger network. Tesla Superchargers are conveniently located near desirable amenities like restaurants, shops and WiFi hot spots across the state. Each station contains multiple Superchargers to get EV drivers back on the road quickly and to minimize wait time. With more than 8,000 Supercharger ports at over 500 sites, Tesla owns and operates the largest fast charging network in California. There are also over 2,000 Level 2 charging ports available to drivers at nearly 800 locations via the Tesla Destination network in California.

II. Response to RFI Questions

1. Please describe you or your organization's experience with charger vandalism and cable theft.

a. Is vandalism a chronic issue for you or your organization, or more episodic?

Charger vandalism is chronic in the sense that Superchargers have been the target of vandalism incidents for many years. Most instances of vandalism tend to be one-off incidents, i.e., a site is vandalized once, and the incident does not reoccur. In a small but increasing number of cases, repeated incidents of vandalism occur at the same site or occur in a concentrated area. Vandalism is a growing issue; however, Tesla expects some level of vandalism to occur across the network as a cost of doing business.

b. Do you or your organization view vandalism as a minor issue or a more serious issue that is affecting the reliability of your network and your drivers' charging experiences?

Tesla does not currently view vandalism as broadly affecting the reliability of our network. Our Network Operation Center (NOC) for Supercharger monitors network status 24/7 and

responds to driver reports to dispatch service to address all on-site issues, including vandalism. We have prioritized fast response times for repairs to ensure high reliability, which we believe limits the impact to drivers at the current frequency of incident occurrence. We are continually monitoring and assessing the effect vandalism has on driver experience and on our business.

c. If a chronic issue, is it widely and randomly distributed, or is it focused in particular geographic area(s)? If it occurs in specific geographic area(s), please describe the types of locations and the types of vandalism. Are there common characteristics (location, charger, type, and so forth) among chargers that are more frequently vandalized? Does the vandalism include theft of equipment to sell, such as charger cables and associated copper? Or is vandalism typified by malicious damage?

Vandalism has affected Superchargers in at least 18 states over the last several years, but the majority of incidents are clustered in a few specific geographies. Notable hot spots for vandalism include the Seattle, WA and Houston, TX metro areas. By state, California has the largest number of vandalism incidents, likely due to the higher number of Superchargers deployed in California relative to other states. Repeated instances of vandalism in California have been concentrated to a small number of sites. Both urban and remote rural areas have been targets for repeated incidents in California.

Depending on the incident, we believe vandalism may be motivated by intent to re-sell or to cause damage. Breaker theft from switchgear at sites under construction, for example, is plainly done with the intent to re-sell breakers, whereas graffiti on charger posts is meant to cause damage. On a case-by-case basis, connector/cable theft may be done either to re-sell copper wiring or to cause damage. However, it is challenging to assess the motivation behind a cable cutting incident due to the variability of each incident. In some cases, connectors are cut but left on-site, which may mean a vandal intended only to cause damage or was interrupted and fled without the cables. In many cases, not all connectors on-site are cut, or only some of the cut connectors are stolen.

d. What are the most frequent targets of vandalism? Cables, connectors, power cabinets, or other components?

For sites in operation, the most common target of vandalism is the connector including cut cables and stolen adapters. For sites under construction, breakers in switchgear and other electrical equipment on-site, such as conductors, are the primary target.

e. Do you systematically track vandalism incidents as part of your maintenance and operations? If so, do you maintain data on the frequency, distribution, and severity of such incidents? Is your organization willing to share this data with the CEC publicly or privately?

Tesla systematically flags vandalism incidents as part of service response calls. We are willing to provide more information to the CEC privately regarding incidents and trends.

f. What is the average time to repair vandalized chargers?

Tesla does not track average time to repair for vandalism separately from other service calls. We have no reason to believe that the time to respond to service calls related to vandalism differs from other service calls.

g. On a percentage basis, what portion of your network has been unavailable to drivers due to vandalism over the past 12 months? Please specify your calculation basis, for example, in terms of the number of ports or sites, and specify your definition of "available." Are there regions of the state where these percentages are greater and the problem more acute?

1% of Supercharger stalls, by total number of posts in California, were affected by vandalism in 2024.

h. How many charging ports (number rather than percentage) in your network have been unavailable to drivers due to vandalism over the past 12 months? Are there regions of the state where the quantity is greater and the problem more acute?

No response. We are willing to provide more information to the CEC privately.

i. What are the financial impacts to your organization's network from vandalism? How much does it cost to repair and replace vandalized equipment, such as cables that have been cut and stolen for their copper? Please delineate the costs between AC and DC chargers.

No response. We are willing to provide more information to the CEC privately.

j. Please describe any approaches you have used to mitigate vandalism.

Supercharger sites that are impacted by repeat incidents of vandalism are reviewed for temporary or permanent camera solutions. Tesla has taken steps to improve lighting to discourage vandalism, especially for sites that have had a previous incident. To reduce the occurrence of breaker theft, Tesla has begun to lock switchgear for all sites under construction, which has been extremely effective.

2. How do you recommend the CEC support the prevention and remediation of EV charger cable theft and vandalism?

a. Are there site designs or security measures that you have found to be effective?

Tesla has found that good site lighting and cameras may be effective initial tools to prevent or mitigate vandalism. The effectiveness of signs and greater law enforcement or security presence should be further evaluated. Additionally, greater tracking and penalties for junk dealers and recyclers handling potentially stolen charging equipment material should be considered.

b. Are there equipment modifications or re-designs that you have found to be effective? For example, are aluminum conductors a plausible option?

Tesla has considered a variety of redesigns to discourage vandalism that we do not intend to apply to all chargers for cost and/or driver usability reasons. For example, Tesla has considered measures to discourage cable-cutting that add additional weight to the cable and make cable handling more difficult.

c. Are there best practices you would recommend?

For thieves that cut cables with the intent to resell copper, Tesla believes the best solution is to do what other industries in the copper and metal business do — add clear branding on the copper so wiring cannot easily be resold at scrapyards. We are in process of operationalizing this as a long term, scalable, and cost-effective solution to discourage theft that does not add weight to charging cables or sacrifice customer experience.

d. Are there security measures, design considerations, or best practices you would recommend that the CEC could require for publicly funded chargers?

Tesla does not recommend that the CEC require any specific security measures as a condition to receive funding. Because the occurrence of vandalism varies widely, a one-size-fits-all solution applied to all funding programs is not appropriate and could apply upward pressure to EV charging deployment costs.

e. Please provide any other comments, data, information, or recommendations for CEC that would help address this issue.

No response.

3. Please identify key partners and working groups engaged in addressing and solving charger vandalism and cable theft.

a. Do you or your organization work with local law enforcement? If so, has this proven effective at reducing or eliminating vandalism events?

Tesla files police reports for instances of suspected vandalism, which may include security camera footage if it is available. To our knowledge, these reports have not successfully identified any vandals in California.

b. Are you aware of any public or private organizations conducting systematic investigations on the frequency, severity, and distribution of EV charger vandalism? If so, please identify any such studies.

No response.

III. Conclusion

Tesla appreciates the opportunity to respond to this RFI on EV charger vandalism. As discussed in this response, charger vandalism is a problem that is unevenly affecting sites across our network. We believe the issue should be mitigated in a targeted way with solutions that are driver-centric, cost-effective, practical, and scalable.

Please do not hesitate to reach out with any additional questions.

Sincerely,

Mal Skowron
Sr. Policy Analyst
Tesla, Inc.