

**DOCKETED**

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*Comment Received From: Enel X North America, Inc.  
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## **Enel X Comments on EV Charging Reliability Standards**

*Additional submitted attachment is included below.*



April 4, 2022

California Energy Commission  
Docket Unit, MS-4  
715 P Street  
Sacramento, CA 95814

Docket: 21-TRAN-03  
Project Title: Zero Emission Vehicle Infrastructure Barriers and Opportunities

**Re: Enel X Comments on Electric Vehicle Charging Infrastructure Reliability Workshop**

Dear Commissioner Monahan and Staff:

Enel X North America, Inc. (Enel X) respectfully submits the below comments on the California Energy Commission's (CEC's) March 11, 2022 workshop on Electric Vehicle (EV) Charging Infrastructure Reliability. Enel X is a multi-faceted provider of clean energy technologies and services spanning demand response, behind-the-meter battery storage and solar PV, and EV charging.

Enel X appreciates the CEC launching an inquiry into reliability standards for EV charging and agrees that this is a critical subject to address if the EV market is to successfully transition from early adopters to mainstream acceptance. Given that the Federal Highway Administration (FHWA) is simultaneously considering EV charging station reliability for formula and grant funding from the Infrastructure Investment and Jobs Act, with expected guidance released in May 2022, the CEC should strive to hone metrics and reporting requirements with those determined by the FHWA to the greatest extent possible. Enel X recommends at least one additional revised proposal, workshop, and comment round before moving to finalize requirements.

Enel X responds to select prompts from the workshop presentation, as follows:

**1. How to define and measure reliability and how to publish metrics**

Enel X agrees with the floated definition of charging station reliability to mean, "any element that must be operational to successfully charge an EV at a publicly available EV charging station. This includes hardware and software."<sup>1</sup> "Reliability" should be measured by a calculation of station Uptime, which can be impacted by several factors: equipment failure due to wear and tear or acute physical damage, back-end software and network issues that impact system availability of either the primary network service provider or third-party vendors, poor local connectivity (e.g., cellular, WiFi), communications network outages, grid outages, and Operations and Maintenance (O&M)-related outages.

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<sup>1</sup> Workshop Presentation, slide 9



Uptime calculations will require collection and submission of granular outage data that adequately characterize the source and duration of outages. This in turn will require new tools and processes between EV service providers, site hosts, or other asset owners / operators to identify and record outages in a timely manner (and work to expeditiously resolve them). Not all causes of downtime can be diagnosed remotely, meaning that it will be incumbent upon parties that discover an outage to promptly report it.

Detailed outage data should be submitted annually. The asset owner / operator or primary funding recipient should hold the ultimate reporting responsibility, with assistance from all relevant project partners (EV service providers, hardware vendors, site hosts, and O&M partners). Aside from Uptime calculations, the CEC could also calculate SAIDI (outage duration), SAIFI (outage frequency), and CAIDI (duration per outage) metrics for different outage causes across several relevant variables: charging level, customer segment, site host type, site host geography (urban / rural / climate), site host environmental factors, etc. Aggregated, anonymized statewide metrics could be published in ongoing AB 2127 reports.

## **2. How to set reliability standards in funding opportunities**

Enel X supports a greater-than-97% Uptime requirement for newly-installed, publicly accessible chargers that receive incentive funds from the CEC, consistent with the initial guidance from the FHWA.<sup>2</sup> Uptime calculations should exclude causes of outages that can be reasonably deemed beyond the asset owner or EV service provider's ability to control, such as acute physical damage and grid / communications / third-party network outages. Ongoing O&M to prevent forced outages due to equipment or network failure should also be removed from the calculation of Uptime.

Reliability standards should not go into effect until at least one year following adoption, to allow the industry to implement needed data collection and reporting frameworks. Establishing reliability standards should also be accompanied by requiring detailed O&M plans from program applicants as a pre-condition of receiving funding, to ensure reported outages are swiftly addressed and downtime is minimized.

In terms of enforcement, Enel X does not believe penalties are an appropriate way to drive accountability for meeting reliability standards at this point in time. Given that EV charging installations can span multiple project partners, assessing penalties could complicate the contracting process and assignment of liability and could lead to messy disputes surrounding the "cause" of outages. Instead, Enel X recommends setting aside a portion of incentives to be awarded on a pay-for-performance basis for achieving minimum Uptime requirements, over the minimum operational term.<sup>3</sup>

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<sup>2</sup>

[https://www.fhwa.dot.gov/environment/alternative\\_fuel\\_corridors/nominations/90d\\_nevi\\_formula\\_program\\_guidance.pdf](https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/nominations/90d_nevi_formula_program_guidance.pdf), p. 22

<sup>3</sup> E.g., for the Southern California Level 2 CALeVIP project: "Applicants participating in the Project are required to keep the equipment operational and meet all applicable Project requirements for a minimum of two years after the installation date for Level 2 equipment."



Enel X thanks the CEC for its consideration of these comments and looks forward to further conversations and workshops on the subject. Please do not hesitate to reach out should there be any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "M. Monbouquette".

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