

DOCKETED	
Docket Number:	22-EVI-04
Project Title:	Electric Vehicle Charging Infrastructure Reliability
TN #:	255946
Document Title:	CEC - Revised Proposed Regulations for Tracking and Improving Reliability of California's EV Chargers Presentation
Description:	N/A
Filer:	Spencer Kelley
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	4/25/2024 1:52:44 PM
Docketed Date:	4/25/2024



California Energy Commission

Revised Proposed Regulations for Tracking and Improving Reliability of California's
EV Chargers

Michael Dioha, Energy Commission Specialist II
Dustin Schell, Air Resources Engineer

April 30th, 2024



Agenda

1. Introduction & Background Information

- Opening Remark – Lead Commissioner
- Overview of Initial Proposed Regulatory Framework
- Impact of AB 126 & comments from stakeholders

2. Revised Proposed Regulatory Framework

3. Questions & Answers and Public Comment

4. Close and Next Steps



Housekeeping

- Workshop is being recorded on Zoom
- Written comments to docket 22-EVI-04

<https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=22-EVI-04>

Deadline for Written Comments: May 15, 2024

Workshop event page: https://www.energy.ca.gov/event/workshop/2024-04/workshop-revised-proposed-regulations-tracking-and-improving-reliability?utm_medium=email&utm_source=govdelivery



Commitment to Diversity

The CEC adopted a resolution strengthening its commitment to diversity in our funding programs.

To meet this commitment, CEC staff conducts outreach efforts and activities to:

- Engage with disadvantaged and underrepresented groups
- Notify potential new applicants about the CEC's funding opportunities
- Assist applicants in understanding how to apply for funding
- Survey participants to measure progress in diversity outreach efforts



Diversity Survey

One Minute Survey



Scan the code on a phone or tablet with a QR reader to access the survey.

The information supplied will be used for public reporting purposes to display anonymous overall attendance demographics.

Zoom Participants, please use the link in the chat to access the survey or scan the QR code on the left of the screen with a phone or tablet to access the survey.

Survey will be closed at the end of the day.

Survey Link:

<https://forms.office.com/Pages/ResponsePage.aspx?id=RBI6rPQT9k6NG7qicUgZTtQ-G7GrbGJFmZJPv38ckjJUQUNMQjJFRzhNSkY2Q0ZJSjFORkMwSU5MSS4u>



Opening Remark



Patty Monahan
Lead Commissioner, Transportation

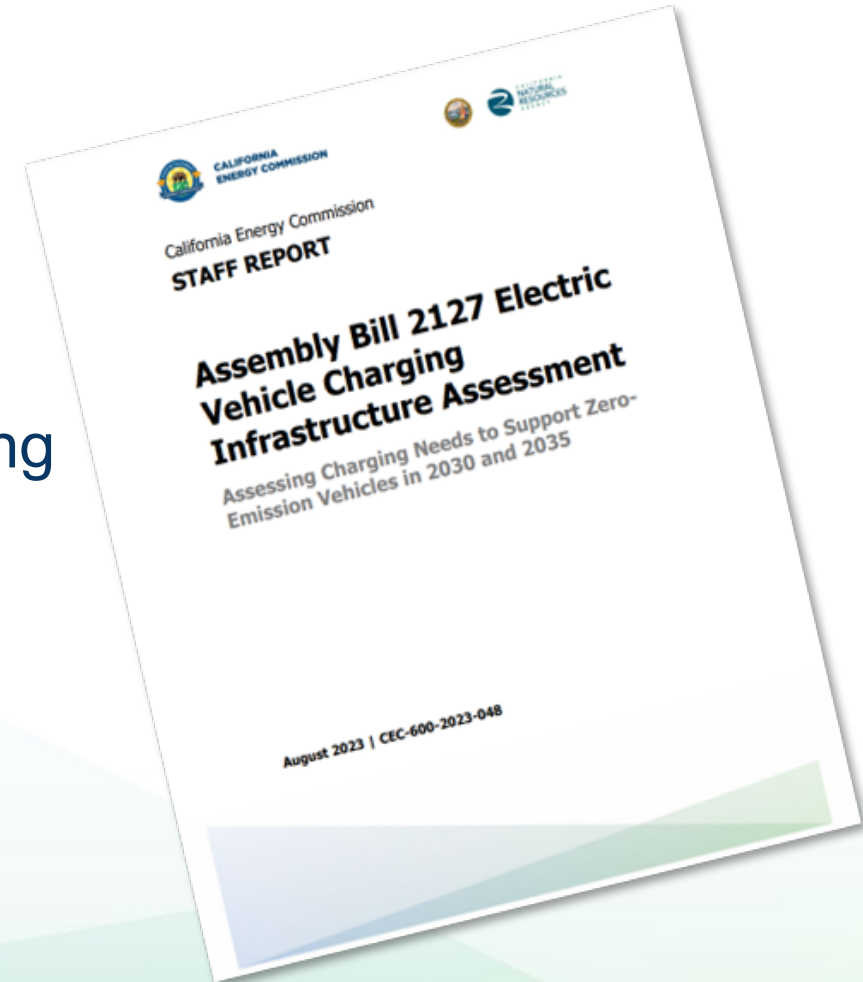


Background



CEC Lacks Data On EV Charger Inventory & Utilization

- All new passenger vehicle sales must be zero-emission by 2035
- MDHD vehicles are increasingly electrifying
- State law tasks the CEC with assessing EV charging infrastructure
- The number of chargers needed will vary depending on average utilization
- CEC lacks sufficient information on charger inventory and utilization





EV Charger Reliability is a Barrier

Feb 13, 2024

Los Angeles Times

CALIFORNIA

LA Times Today: Why are so many EV charging stations broken in California?

Feb 13, 2023



Kelley Blue Book
THE TRUSTED RESOURCE

J.D. Power: Electric Car Charging Getting Worse

POLICY BRIEF | FEBRUARY 2024

Stanford | Institute for Economic Policy Research (SIEPR)

Overcoming roadblocks to California's public EV charging infrastructure

By Esther Conrad, Preeti Hehmeyer, and Bruce Cain

April 27, 2023

Los Angeles Times

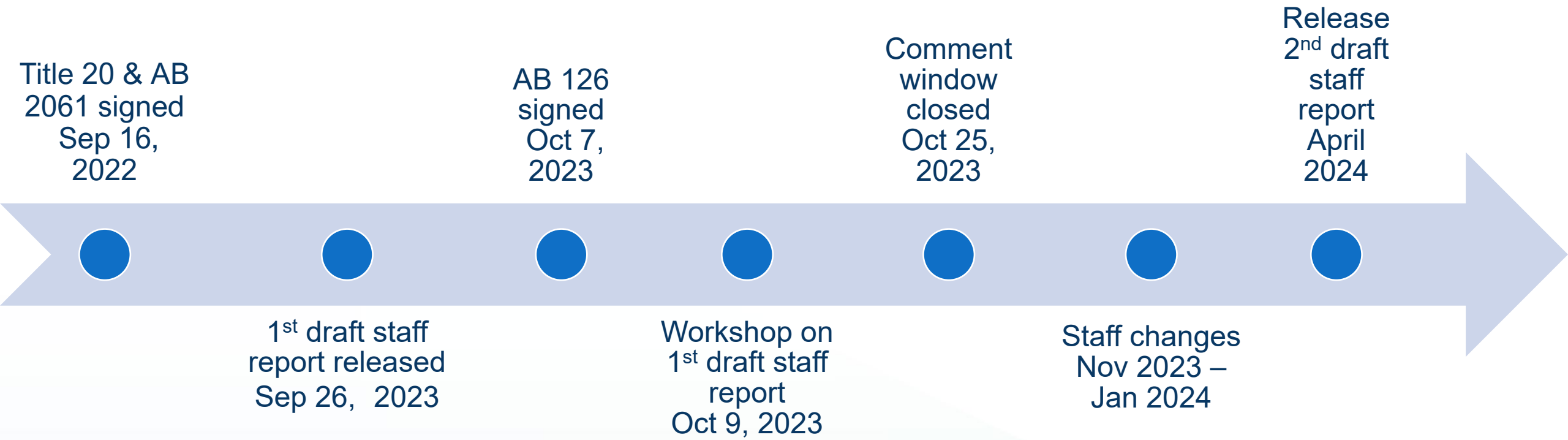
CLIMATE & ENVIRONMENT

Public EV chargers: Will they ever be as reliable as a gas pump?

- EV charging stations must be reliable



Sequence of Events: Background





Summary of Initial Draft Recordkeeping & Reporting Regulations

<u>Regulation</u>	<u>Requirement</u>	<u>Applies to</u>	<u>Authority</u>
Reliability reporting	<ul style="list-style-type: none"> Charging networks report charger uptime, successful charges¹ <u>and</u> provide near real-time uptime data² Operators of nonnetworked chargers must report charger uptime quarterly 	<ul style="list-style-type: none"> Publicly and / or ratepayer funded chargers installed on or after 1/1/2024³ 	<ul style="list-style-type: none"> AB 2061
Charger Inventory	<ul style="list-style-type: none"> Operators must report the location, number, and other characteristics of chargers quarterly 	<ul style="list-style-type: none"> All EV chargers operating in California³ 	<ul style="list-style-type: none"> Title 20
Utilization reporting	<ul style="list-style-type: none"> Charging networks must report utilization of chargers quarterly 	<ul style="list-style-type: none"> All networked chargers operating in California³ 	<ul style="list-style-type: none"> Title 20

1. Successful charge data is only required from publicly funded networked chargers

2. Near-real time data transmission will only be required from publicly funded chargers installed on or after 1/1/2026

3. Excludes chargers installed solely for private use at a single-family home or a multifamily dwelling with four or fewer dwelling units.



AB 126 & Stakeholder Response to Initial Proposed Regulations

AB 126 mandates that:

- The CEC will implement measures to boost charging station uptime, such as uptime and operation/maintenance requirements
- By January 1, 2025, the CEC will set standards for how charging stations communicate publicly about availability and accessibility

Utilization and Location Data

- Several industry commenters expressed concerns on these unless made confidential

Reliability Data

- Most commenters advocated for 97% uptime requirement
- Limited pushback on technical requirements



Key Changes to Initial Proposed Regulations

- 1) 97% uptime requirement, effective 2024.
- 2) 90% successful charge rate requirement, effective 2026.
- 3) Data-sharing requirement with third parties, effective 2024.

All requirements applicable to state and ratepayer funded chargers.



Revised Proposed Regulatory Framework



Overview

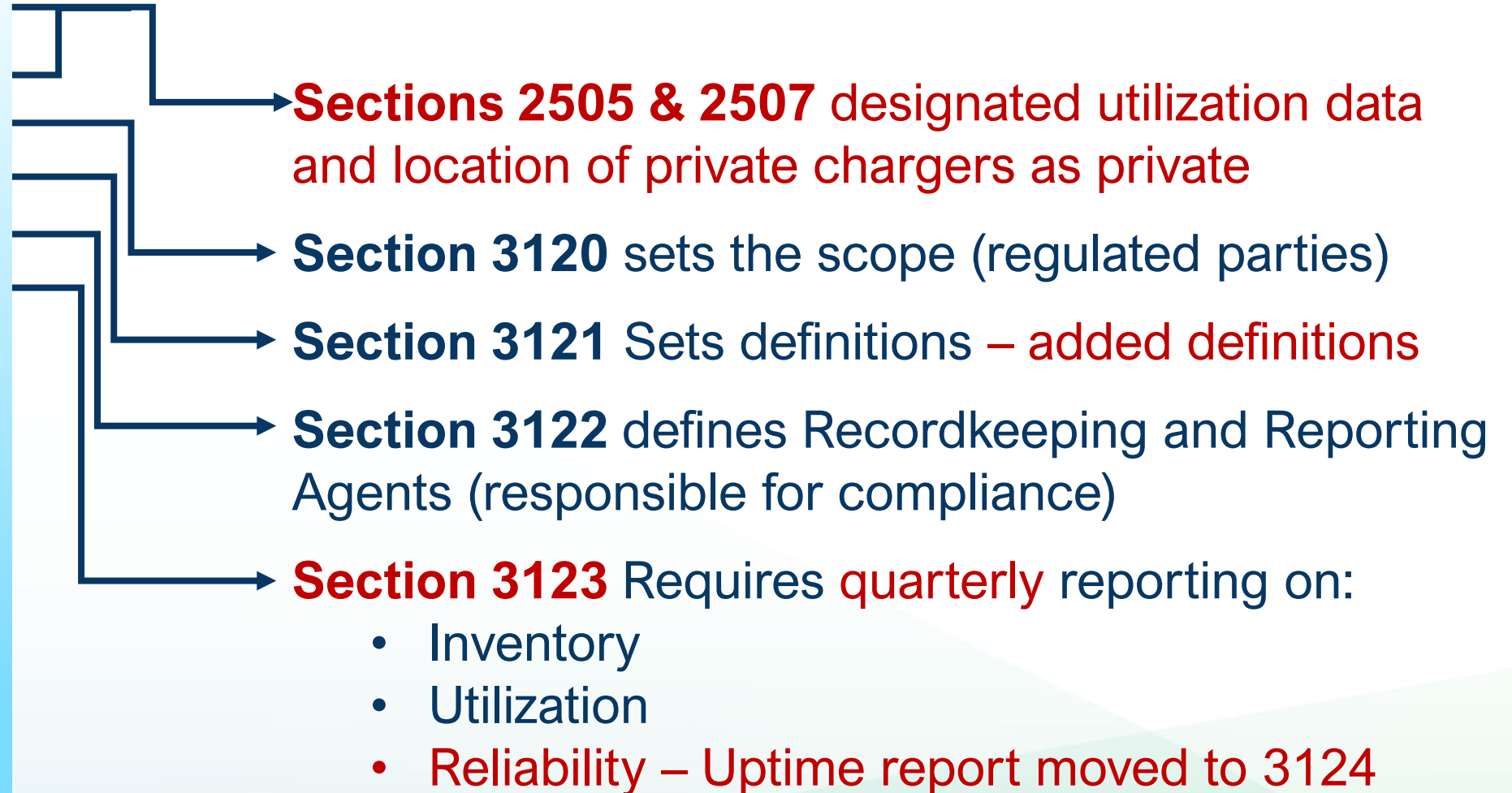
This presentation covers the second draft of the staff report and focuses on edits made to the first draft of the staff report, released in September 2023.

- The first draft of the staff report and accompanying presentation can be downloaded on the [October 09, 2023 Workshop webpage](https://www.energy.ca.gov/event/workshop/2023-10/workshop-proposed-regulations-electric-vehicle-charger-inventory-utilization). <https://www.energy.ca.gov/event/workshop/2023-10/workshop-proposed-regulations-electric-vehicle-charger-inventory-utilization>
- Edits are indicated by **red font**



Appendix A Framework

- Section 2505
- Section 2507
- Section 3120
- Section 3121
- Section 3122
- Section 3123
- Section 3124
- Section 3125
- Section 3126
- Section 3127
- Section 3128
- Section 3129
- Section 3130
- Section 3131
- Section 3132
- Section 3133
- Section 3134





Appendix A Framework

- Section 2505
- Section 2507
- Section 3120
- Section 3121
- Section 3122
- Section 3123
- Section 3124
- Section 3125
- Section 3126
- Section 3127
- Section 3128
- Section 3129
- Section 3130
- Section 3131
- Section 3132
- Section 3133
- Section 3134

Section 3124 Added requirements for uptime report and definitions and requirements for Successful Charge Attempt Rate (SCAR)

Sections 3125 & 3126 Recordkeeping, retention, and data transmission (publicly funded chargers) – Added data requirements for SCAR

Section 3127 Customer Service Requirements (publicly funded chargers)

Section 3128 Performance Standards for Publicly Funded Chargers

Section 3129 Requirements for Funding Entities



Appendix A Framework

- Section 2505
- Section 2507
- Section 3120
- Section 3121
- Section 3122
- Section 3123
- Section 3124
- Section 3125
- Section 3126
- Section 3127
- Section 3128
- Section 3129
- Section 3130
- Section 3131
- Section 3132
- Section 3133
- Section 3134

Section 3130 Data-Sharing Requirements for Publicly Available, Publicly Funded Chargers

Section 3131 Enrolled Charging Network Providers

Section 3132 Disclosure

Section 3133 General Administration

Section 3134 Application for Confidentiality

**Sections 3131 – 3134 are new section numbers but the content is largely unchanged*



Disclaimer

- This presentation is intended to be an overview of the changes between the first and second draft of the proposed regulation
- Nothing in this presentation supersedes the proposed regulation in Appendix A
- Staff strongly encourage stakeholders to read Appendix A



Confidentiality

- **Section 2505**
- **Section 2507**
- Section 3120
- Section 3121
- Section 3122
- Section 3123
- Section 3124
- Section 3125
- Section 3126
- Section 3127
- Section 3128
- Section 3129
- Section 3130
- Section 3131
- Section 3132
- Section 3133
- Section 3134

Section 2505 – Designation of Confidential Records

- Expanded automatic designation of confidentiality to include location data of private chargers. Utilization data is still automatically designated as confidential

Section 2507 – Disclosure of Confidential Records

- Expanded aggregation levels to either:
 - County level
 - To such a level that data from three or more entities is included



Scope

Section 3120 – Scope

- Minor, non-substantive edits

Section 3121 – Rules of Construction (Definitions)

- Added / modified definitions for:
 - Charge attempt
 - Publicly available
 - Uninstalled

3122 – Recordkeeping & Reporting Agent

- Minor, non-substantive edits

- Section 2505
- Section 2507
- **Section 3120**
- **Section 3121**
- **Section 3122**
- Section 3123
- Section 3124
- Section 3125
- Section 3126
- Section 3127
- Section 3128
- Section 3129
- Section 3130
- Section 3131
- Section 3132
- Section 3133
- Section 3134



New / Modified Definitions

“**Charge attempt**” means an attempt to initiate a charging session as determined by the transmission of one or more OCPP protocol data units between the Central Management System and the charger as specified in section 3124(e)(1). “Charge attempt” is an attempt to initiate a charging session, whether successful or unsuccessful.

“**Publicly available charger**” means a charger and associated parking space or spaces designated by a property owner or lessee to be available to, and accessible by, the public for any period of time...

- Section 2505
- Section 2507
- Section 3120
- Section 3121
- **Section 3122**
- Section 3123
- Section 3124
- Section 3125
- Section 3126
- Section 3127
- Section 3128
- Section 3129
- Section 3130
- Section 3131
- Section 3132
- Section 3133
- Section 3134



New / Modified Definitions

- Section 2505
- Section 2507
- Section 3120
- **Section 3121**
- Section 3122
- Section 3123
- Section 3124
- Section 3125
- Section 3126
- Section 3127
- Section 3128
- Section 3129
- Section 3130
- Section 3131
- Section 3132
- Section 3133
- Section 3134

"Uninstalled" means the charging station operator took affirmative steps to make the charger unavailable for a charging session with intent to make it permanently unavailable, such that the number of chargers at the charging station is reduced by the number of uninstalled chargers for at least one year...



Semiannual Reporting Requirements

- Section 2505
- Section 2507
- Section 3120
- Section 3121
- Section 3122
- **Section 3123**
- Section 3124
- Section 3125
- Section 3126
- Section 3127
- Section 3128
- Section 3129
- Section 3130
- Section 3131
- Section 3132
- Section 3133
- Section 3134

Section 3123(a) – Report Periods and Reporting Deadlines

- Updated to quarterly reporting
 - Q1 = January 1 – March 31
 - Q2 = April 1 – June 30
 - Q3 = July 1 – September 30
 - Q4 = October 1 – December 31

Section 3123(b) – Reporting requirements

- Added “Uninstalled” as a data field
- This section requires the uptime report to be submitted quarterly but the details of the uptime report have been moved to Section 3124



Semiannual Reporting Requirements

Section 3123(c) & (d) – Exceptions to Quarterly Reporting

- Uninstalled chargers
- All reporting can be deferred to Q4 (annual reporting) if:
 - It is not a publicly funded charger
 - Inventory reporting would be identical to the previous report
- Title 23 funded chargers required to report can optionally report NEVI data.

- Section 2505
- Section 2507
- Section 3120
- Section 3121
- Section 3122
- **Section 3123**
- Section 3124
- Section 3125
- Section 3126
- Section 3127
- Section 3128
- Section 3129
- Section 3130
- Section 3131
- Section 3132
- Section 3133
- Section 3134



Uptime Reporting Requirements

- Section 2505
- Section 2507
- Section 3120
- Section 3121
- Section 3122
- Section 3123
- **Section 3124**
- Section 3125
- Section 3126
- Section 3127
- Section 3128
- Section 3129
- Section 3130
- Section 3131
- Section 3132
- Section 3133
- Section 3134

3124(a) – Uptime Report

- Uptime and excluded downtime
- Itemized summary of excluded downtime
- **Total charge attempts**
- **Total successful charge attempts**
- **Total failed charge attempts**
- **Successful charge attempt rate**

3124(b) – Uptime calculation (unchanged)

3124(c) – Categories of Downtime (unchanged)

3124(d) – Categories of Excluded Downtime

- **Removed “Vehicle Fault”**



Uptime Reporting Requirements

3124(e) – Successful Charge Attempt Rate

- Networked, publicly funded chargers installed on or after January 1, 2026.
- Defines parameters in terms of OCPP
 - Charge Attempt
 - Charging Session
 - Successful Charge Attempt
- Successful Charge Attempt Calculation:
 - $SCAR = \frac{CA - FCA}{CA} * 100\%$
 - Where:
 - SCAR = Successful Charge Attempt Rate
 - CA = Total Charge Attempts for the Reporting Period
 - FCA = Total Failed Charge Attempts

- Section 2505
- Section 2507
- Section 3120
- Section 3121
- Section 3122
- Section 3123
- **Section 3124**
- Section 3125
- Section 3126
- Section 3127
- Section 3128
- Section 3129
- Section 3130
- Section 3131
- Section 3132
- Section 3133
- Section 3134



Recordkeeping & Data Transmission for Publicly Funded Chargers

- Section 2505
- Section 2507
- Section 3120
- Section 3121
- Section 3122
- Section 3123
- Section 3124
- **Section 3125**
- **Section 3126**
- Section 3127
- Section 3128
- Section 3129
- Section 3130
- Section 3131
- Section 3132
- Section 3133
- Section 3134

3125(a) – OCPP requirements for networked chargers

- Added successful charge attempt rate messages to list of required messages

3125(b) – Data transmission requirements for networked chargers

- Added successful charge attempt rate messages to list of required messages

3125(c) – Record retention requirements for networked chargers (**unchanged**)

3126 – Recordkeeping and retention requirements for nonnetworked chargers (**unchanged**)



Customer Service Requirements

3127 – Customer service requirements

- Applicable to publicly funded chargers installed on or after January 1, 2024
- Charging station operators must ensure customers have a mechanism to report outages, malfunctions, etc.

- Section 2505
- Section 2507
- Section 3120
- Section 3121
- Section 3122
- Section 3123
- Section 3124
- Section 3125
- Section 3126
- **Section 3127**
- Section 3128
- Section 3129
- Section 3130
- Section 3131
- Section 3132
- Section 3133
- Section 3134



Performance Standards

- Section 2505
- Section 2507
- Section 3120
- Section 3121
- Section 3122
- Section 3123
- Section 3124
- Section 3125
- Section 3126
- Section 3127
- **Section 3128**
- Section 3129
- Section 3130
- Section 3131
- Section 3132
- Section 3133
- Section 3134

3128 – Performance standards

- Publicly funded chargers installed on or after January 1, 2024 shall maintain a minimum annual average **uptime percentage of 97%**
- Publicly funded chargers installed on or after January 1, 2026 shall maintain a minimum annual **successful charge attempt rate of 90%**



Requirements for Funding Entities

3129 – Requirements for funding entities

- Beginning January 1, 2026, all funding entities shall consider reliability metrics published by the CEC prior to application approval
- The CEC may assess and publicly report reliability metrics
- The subject of reliability metrics may request a correction

- Section 2505
- Section 2507
- Section 3120
- Section 3121
- Section 3122
- Section 3123
- Section 3124
- Section 3125
- Section 3126
- Section 3127
- **Section 3128**
- Section 3129
- Section 3130
- Section 3131
- Section 3132
- Section 3133
- Section 3134



Data-Sharing Requirements

- Section 2505
- Section 2507
- Section 3120
- Section 3121
- Section 3122
- Section 3123
- Section 3124
- Section 3125
- Section 3126
- Section 3127
- Section 3128
- Section 3129
- **Section 3130**
- Section 3131
- Section 3132
- Section 3133
- Section 3134

3130 – Data-sharing requirements

- Applicable to chargers that are:
 - Networked
 - Publicly available
 - Publicly funded
- Chargers meeting this criteria must make location, availability, and pricing data available to third-parties via API free of charge.
- The list of data points mirrors the list in the NEVI minimum standards



Enrolled Charging Network Provider, Disclosure, General Administration, Confidentiality

3131 – Enrolled charging network provider

- New section number, otherwise unchanged

3132 – Disclosure of Reporting Requirements

- New section number, otherwise unchanged

3133 – General Administration

- New section number and minor, non-substantive edits

3134 – Application for confidentiality

- New section number and minor, non-substantive edits

- Section 2505
- Section 2507
- Section 3120
- Section 3121
- Section 3122
- Section 3123
- Section 3124
- Section 3125
- Section 3126
- Section 3127
- **Section 3128**
- Section 3129
- Section 3130
- Section 3131
- Section 3132
- Section 3133
- Section 3134



Recap

Recordkeeping and Reporting Agent

Charger Details

- Networked
- Non-publicly funded
- Nonnetworked
- Non-publicly funded

- Networked
- Publicly funded
- Installed Jan. 1, 2024 – Dec. 31, 2025

- Networked
- Publicly funded
- Installed on / after Jan. 1, 2026

- Nonnetworked
- Publicly funded

Recordkeeping and Reporting Agent

➤ Charging Network Provider

➤ Charging Station Operator

➤ Charging Network Provider

➤ Enrolled Charging Network Provider

➤ Site Host



Recap

Reporting Requirements

Charger Details

Semiannual Reporting Requirements

- Networked
- Non-publicly funded
- Nonnetworked
- Non-publicly funded

- Inventory
- Utilization
- Inventory

- Networked
- Publicly funded
- Installed Jan. 1, 2024 – Dec. 31, 2025

- Inventory
- Utilization
- Uptime

- Networked
- Publicly funded
- Installed on / after Jan. 1, 2026

- Inventory
- Utilization
- Uptime

- Nonnetworked
- Publicly funded

- Inventory
- Uptime



Recap

Recordkeeping Requirements

Charger Details	Recordkeeping Requirements
<ul style="list-style-type: none">• Networked• Non-publicly funded	➤ None
<ul style="list-style-type: none">• Nonnetworked• Non-publicly funded	➤ None
<ul style="list-style-type: none">• Networked• Publicly funded• Installed Jan. 1, 2024 – Dec. 31, 2025	➤ 15-minute operative status (6-yr retention) OR ➤ OCPP messages with automatic data transmission to CEC (2-yr retention)
<ul style="list-style-type: none">• Networked• Publicly funded• Installed on / after Jan. 1, 2026	➤ OCPP messages with automatic data transmission to CEC (2-yr retention)
<ul style="list-style-type: none">• Nonnetworked• Publicly funded	➤ Maintenance Records (6-yr retention)



Recap

Performance Standards

Charger Details

Performance Standards

- Networked
- Non-publicly funded

➤ None

- Nonnetworked
- Non-publicly funded

➤ None

- Networked
- Publicly funded
- Installed Jan. 1, 2024 – Dec. 31, 2025

➤ **Minimum 97% uptime for 6 years from date of installation unless uninstalled**

- Networked
- Publicly funded
- Installed on / after Jan. 1, 2026

➤ **Minimum 97% uptime for 6 years from date of installation unless uninstalled**

➤ **Minimum 90% successful charge attempt rate for 6 years from date of installation unless uninstalled**

- Nonnetworked
- Publicly funded

➤ **Minimum 97% uptime for 6 years from date of installation unless uninstalled**



Question & Answer / Public Comment



Question & Answers / Public Comments

Zoom Participants

- Use “raise hand” feature to make verbal comments
- Use the “Q&A” feature to type your questions
- The chat feature has been disabled

Telephone Participants

- Dial *9 to raise your hand
- Dial *6 to mute / unmute you phone line

Three minute limit for spoken comments.



Next Steps



Next Steps

- **Written Comments – May 15, 2024**
- Docket: 22-EVI-04
- [E-Comment Submission](#)

<https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=22-EVI-04>

CEC staff will incorporate workshop feedback and written comments into a Final Staff Report. Revised proposed regulations may be adopted by the California Energy Commission.



Thank You!

