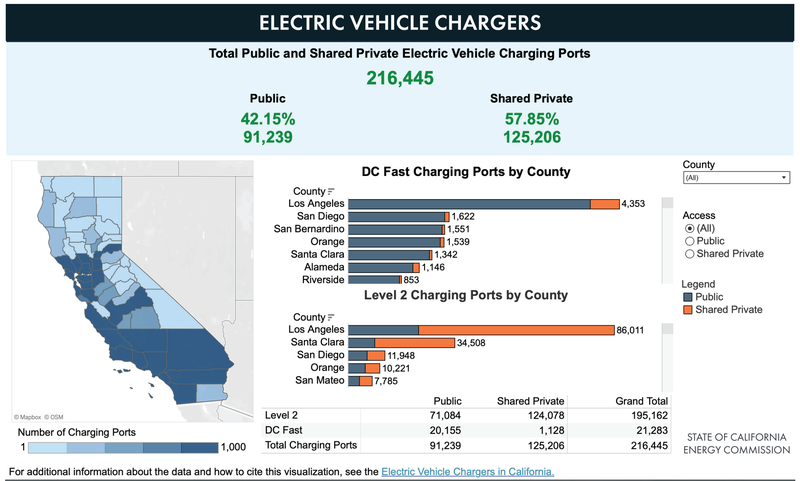
FROM POLICY TO PAVEMENT:
IS EV CHARGING INFRASTRUCTURE ADOPTION KEEPING PACE?

CALIFORNIA ENERGY CODES & STANDARDS
A STATEWIDE UTILITY PROGRAM

BIG QUESTIONS

Are there barriers reducing uptake of EV Charging Infrastructure (EVCI) requirements in CALGreen?

How de we more effectively require new EV infrastructure in existing buildings?



Snapshot of CEC's Dashboard of Electric Vehicle Chargers in California
(https://www.energy.ca.gov/data-reports/energy-almanac/zero-emission-vehicle-and-infrastructure-statistics-collection/electric)

GIS Map of All Installed Public Chargers in CA, as of 2025

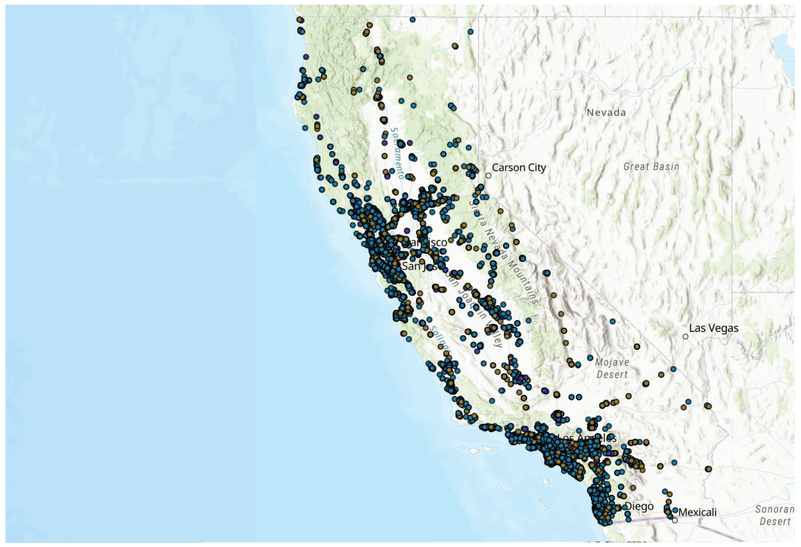


Image courtesy https://caenergy.maps.arcgis.com/apps/mapviewer/index.html?

What are our detailed research questions?

Where are definitions and thresholds unclear or interpreted differently across jurisdictions? (e.g., EV-capable vs. EV-ready vs. EVSE -installed)

Equity and access:
Which communities see delayed or deferred charger deployment, and what practices contribute to inequitable outcomes?

Developer decision-making:
When and why do developers and property owners choose to install fewer chargers than the infrastructure allows, or postpone activation?

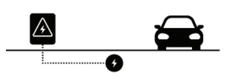
Real-world uptake:
In completed projects, how does required infrastructure compare with installed and activated charging, and what are the most frequent and severe barriers along that path?

EVCI data:
Do stakeholders collect data on charger counts, exceptions, or other important quantitative metrics? If so, where does it go?

Current triggers:
How well are alteration/addition triggers working today to increase levels of EV infrastructure in the 98% of buildings which are already built?

Trigger exceptions:
Out of the exceptions, does one stand out as frequently requested? Is data collected on frequency of exception?

EV CAPABLE

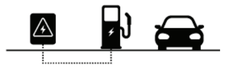


Install electrical panel capacity and run conduit to parking spaces

EV READY

Run wiring through conduit ending with an outlet

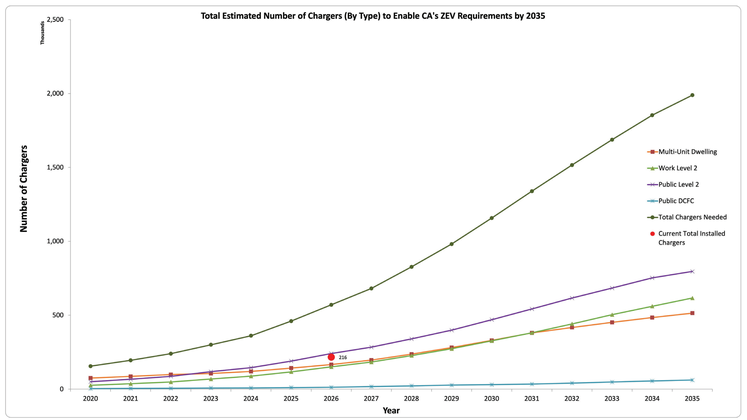
EVSE INSTALLED



Install a minimum number of Level 2 EV charging stations

Total Estimated Number of Chargers (By Type) to Enable CA's ZEV Requirements by 2035

(Joint Study from CEC/NREL in 2020)



https://www.energy.ca.gov/data-reports/reports/electric-vehicle-charging-infrastructure-assessment-ab-2127
AB 2127 Commission Report, "Assembly Bill 2127 Electric Vehicle Charging Infrastructure Assessment - Analyzing Charging Needs to Support Zero-Emission Vehicles in 2030 by "

Projected Installed Counts for 2025 (2020 EVI-Pro 2 Study)
417,000 L2
10,700 DCFC

Actual Installed Counts as of September 2025
183,193 L2 (~44% of predicted target)
18,632 DCFC (~173% of predicted target)

CURRENT TRIGGERS

Code

5.106.5.4 Additions or alterations to existing buildings or parking facilities
Existing buildings or parking facilities being modified by one of the following shall comply with Section 5.106.5.4.1 or 5.106.5.4.2. When EVSE is installed, accessible EVCS shall be provided in accordance with the California Building Code, Chapter 11B, Section 11B-228.3

1. **Increase in power supply to an electric service panel (parking facility work)**
When the scope of construction work includes an increase in power supply to an electric service panel as part of a parking facility addition or alteration.

2. **New photovoltaic system over existing parking**
When a new photovoltaic system is installed covering existing parking spaces.

3. **Additions or alterations that increase power to an electric service panel**
When additions or alterations to existing buildings are triggered pursuant to code Section 301.3 and the scope of work includes an increase in power supply to an electric service panel.

EXCEPTIONS

Code

1. **Case-by-case: compliance not feasible (no or inadequate utility power / cost impact / utility issues)**
On a case-by-case basis where the local enforcing agency has determined compliance with this section is not feasible based upon one of the following conditions:
   a. Where there is no local utility power supply.
   b. Where the local utility is unable to supply adequate power.
   c. Where there is evidence suitable to the local enforcement agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.
   d. Where demonstrated as impracticable excluding local utility service or utility infrastructure issue

2. **Remote parking: no access to building service panel**
Remote parking facilities that do not have access to the building service panel.

3. **Lighting-only upgrades (no trenching)**
Parking area lighting upgrades where no trenching is part of the scope of work.

4. **Emergency repairs (e.g., water line break, disaster damage)**
Emergency repairs, including but not limited to water line break in parking facilities, natural disaster repairs, etc.

Please reach out to discuss!

We want to learn from you! Some sample interview and discussion questions:

How quickly do code changes go from in the code to the inspectors learning about them?
What part of the EV infrastructure code gets the most questions?
Which types of buildings have the most trouble adopting these requirements?
Is a category of stakeholder most or least adept at navigating the code?
What else do you want us to know?

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