Central Coast Community Energy
CLEAN ENERGY. LOCAL CONTROL.

3CE Reach Codes Program

Advancing safer, healthier and more affordable buildings and vehicles

CentralCoastReachCodes.org

What are Reach Codes?

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Local ordinances adopted by the local government that exceed and enhance the state's green building standards.

Types of Reach Codes:

Building Decarbonization

New & Existing Buildings

Electric Vehicle Infrastructure (EVI)

Introduction to State Codes

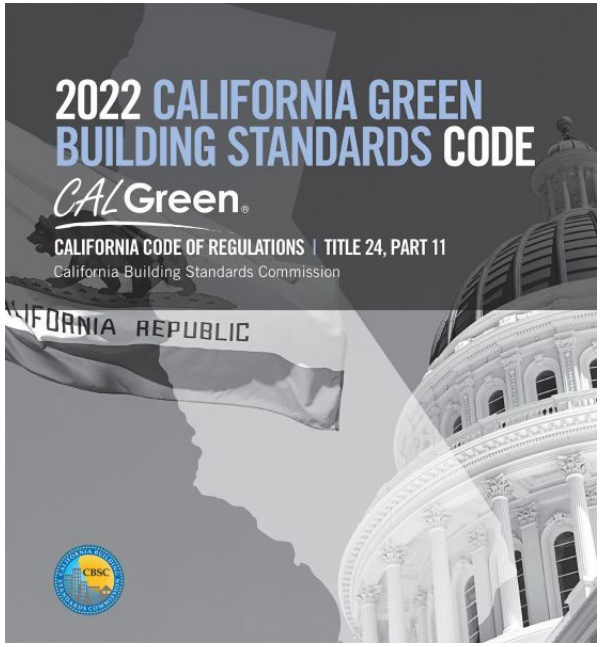
2022 Energy Code

Other names:
- Title 24, Part 6
- Building Energy Efficiency Standards

Scope:
- Energy efficiency
- Load flexibility (PV, battery)
- Single Family, Multifamily, and Nonresidential

Pathways to amend:
- Mandatory
- Prescriptive
- Performance

2022 CALGreen Code



Other names:
- Title 24, Part 11
- Green Building Standards

Scope:
- EVI, water use, waste, pollution, etc.
- Residential and Nonresidential

Pathways to amend:
- Mandatory
- Voluntary

Prescriptive: Think "checklist". Requires specific energy efficiency or renewable energy pathways.

Performance: Think "modeling". Requires buildings to meet an energy budget/performance score through a custom design, allowing applicants flexibility.

What are the Main Benefits?

Reduce Greenhouse Gas Emission in line with state/agency goals and Climate Action Plans.

Provide Financial Benefits related to lower-cost electric construction.

Support Public Health by improving indoor air quality and decreasing air pollution emissions.

Fulfill Local Goals by providing custom reach code options to meet goals that can be adopted at any time.

Reach Code Context in 2024

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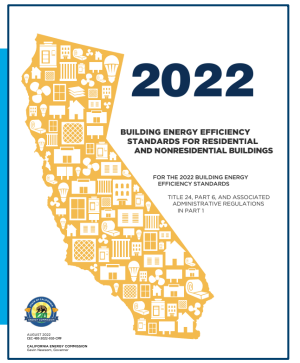
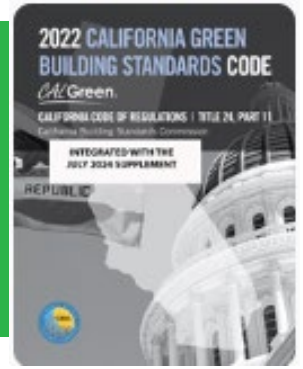
Buildings

Due to the latest decision for the CRA v Berkeley Ruling, some jurisdictions are re-assessing their approach to building electrification reach codes to mitigate the risk of litigation.



Electric Vehicle Infrastructure (EVI)

The CALGreen code goes through triennial updates (2022, 2025, etc.) and intervening updates at the mid point between triennial updates. The CALGreen code has intervening updates to the 2022 code that went into effect on July 1, 2024.



EVI Reach Code

- What EVI code terminology do I need to know?
- What are the CALGreen requirements?
- What is the new construction model code?
- What is the alterations & additions model code?

What is Electric Vehicle Infrastructure (EVI)?

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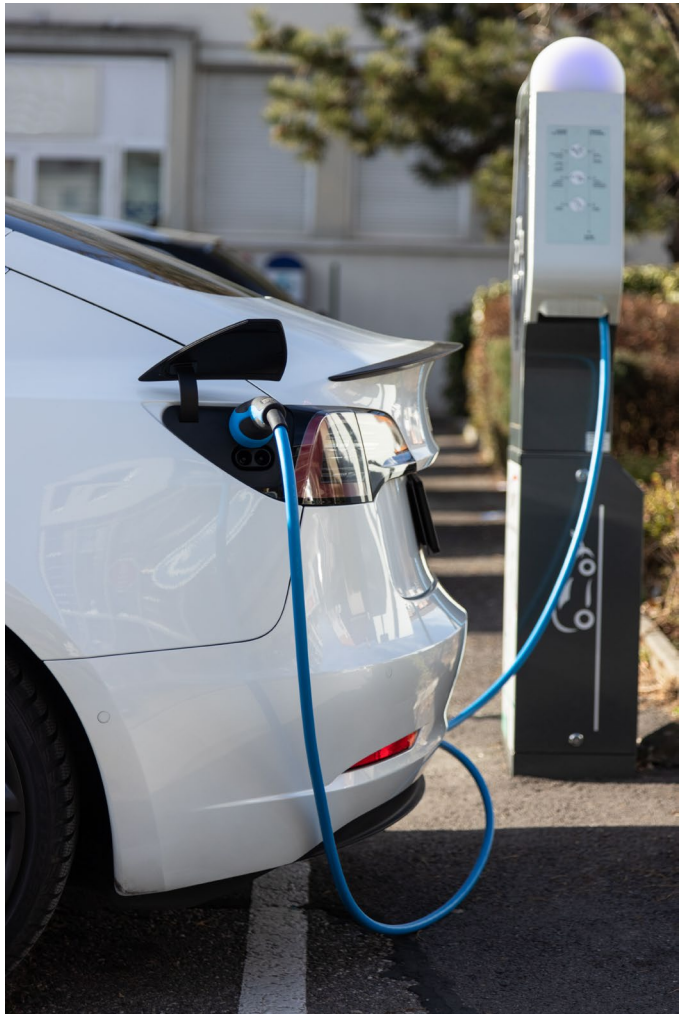
- The integral equipment and materials necessary to support Electric Vehicle (EV) charging.

- This includes:
  - Electrical capacity (utility service, transformers, and feeders)
  - Panel space for EV dedicated breaker
  - Conduit/Raceway/Pathways for circuits
  - Wiring (circuits) for EV charger
  - EV dedicated receptacles or charging equipment
  - EV charging plug and cord
  - Energy management software



EVI Code Terminology

Speed

Level 1
3-4 miles per charging hour

Level 2
10-20 miles per charging hour

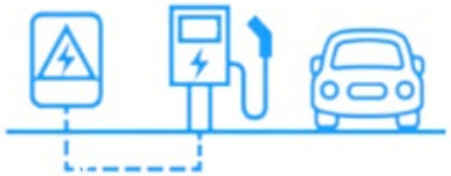
Level 3
150+ miles per charging hour

Readiness

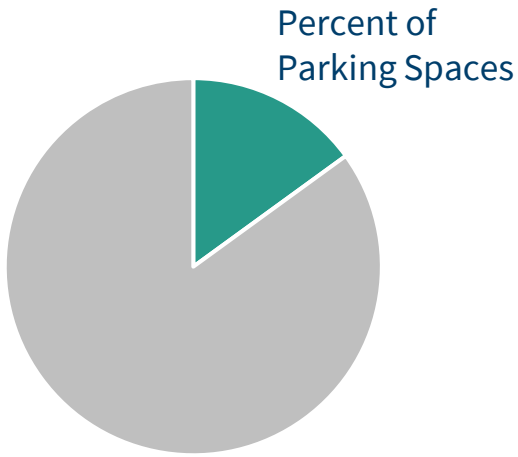
EV **Capable**

EV **Ready**

EV **Charging Station Installed**



Number

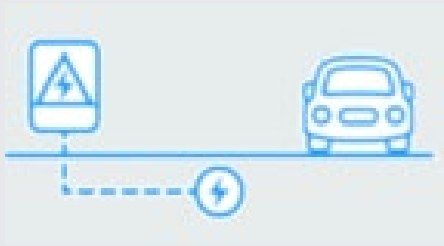


Total kVA =
L2 EV Capable +
LP L2 EV Ready +
L2 EV Ready +
L2 EVCS

Source: Cleanenergy.org EV Readiness

New Construction

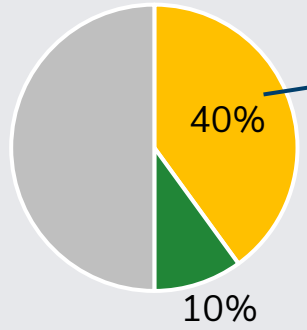
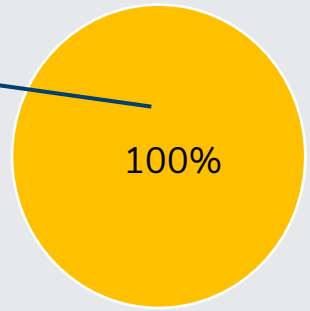
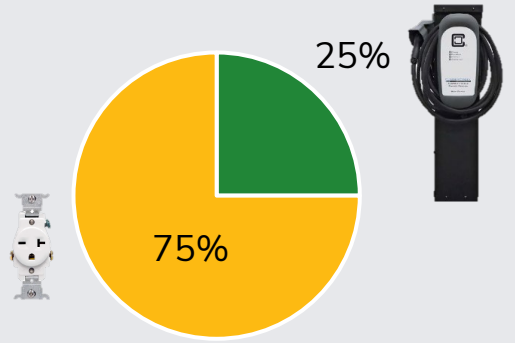
Single Family Homes and Two-Family Townhomes

2022 CALGreen Intervening (July 1st 2024)	Proposed Reach Code
Mandatory	
(1) Level 2 EV Capable for one parking space per dwelling unit 	2 EV spaces total:  • 1 Level 2 EV Ready circuit  • 1 Level 1 EV Ready circuit 

Takeaway: The proposed code modifies the L2 EV Capable requirement to be a L2 EV Ready circuit and adds 1 L1 EV Ready circuit (if there is a second parking space).

New Construction

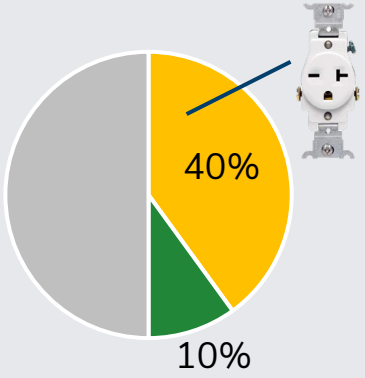
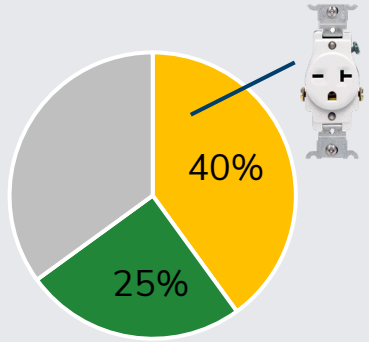
Multifamily

2022 CALGreen Intervening (July 1st 2024)	Proposed Reach Code (*Proposed* 2025 CALGreen)	
Mandatory		
	 	
40% Level 2 EV Ready (low-power) + Direct Wiring **10%** Level 2 EVCS	**100%** Level 2 EV Ready (low-power) + Direct Metering	**25%** Level 2 EVCS **75%** Level 2 EV Ready (low-power)
% of Parking Spaces	% of Spaces for Residents	% of Spaces for Common Use Parking

Takeaway: The proposed reach code increases the amount of LP L2 EV Ready (for resident spaces). The proposed reach code aligns with proposed 2025 CALGreen code.

New Construction

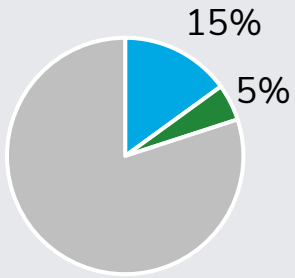
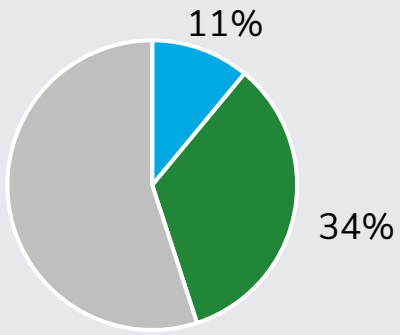
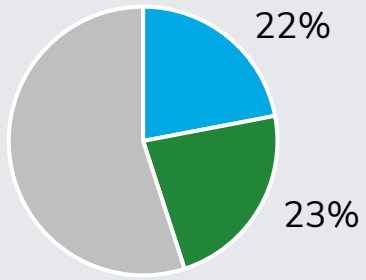
Hotels/Motels

2022 CALGreen Intervening (July 1st 2024)	Proposed Reach Code (*Proposed* 2025 CALGreen)
Mandatory	
	
40% Level 2 EV Ready (low-power) **10%** Level 2 EVCS	**40%** Level 2 EV Ready (low-power) **25%** Level 2 EVCS
% of Parking Spaces	% of Parking Spaces

Takeaway: The proposed reach code increases the amount of EVCS, in alignment with the proposed 2025 CALGreen code.

New Construction

Non-residential

2022 CALGreen Intervening (July 1st 2024)	Proposed Reach Code (Based on *Proposed* 2025 CALGreen Tier 2)	
Mandatory		
		
15% Level 2 EV Capable **5%** Level 2 EVCS	**Offices & Retail (45%):** **11%** Level 2 EV Capable **34%** Level 2 EVCS	**All other (45%):** **22%** Level 2 EV Capable **23%** Level 2 EVCS
% of Parking Spaces		

Takeaway: The reach code splits nonres into two categories with distinct requirements based on the proposed 2025 CALGreen code, but converting the EV Capable requirement to a Level 2 EV Ready requirement. Both of these requirements are increased from previous code cycles.

EVI Requirements for Alterations & Additions

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1 to 2 FAMILY	2022 CALGreen	None
	Reach Code	**Parking additions and panel upgrades triggers** Meet new construction EVI requirements for parking additions or electrical panel upgrades.

EVI Requirements for Alterations & Additions

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MULTIFAMILY

2022 CALGreen

When new parking facilities are added, or electrical systems or lighting of existing parking facilities are added/altered and the work requires a permit:

1. 10% of the total number of parking spaces added or altered shall be L2 EV Capable.
2. Identify reserved panel space for overcurrent device as “EV Capable”

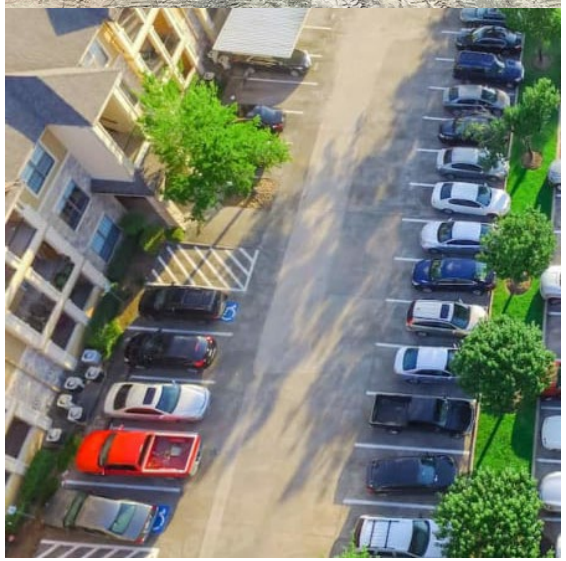
Reach Code

Meet the new construction EVI requirements under the following situations:

1. Increasing power supply as part of a parking facility addition or alteration.
2. Adding new PV added over existing parking.
3. Triggered pursuant to Code Section 301.3 & Increasing power supply to an electric service panel.

New construction EVI requirements:

- Increases percentages compared to CALGreen minimum
- Requires EV Ready instead of EV Capable



EVI Requirements for Alterations & Additions

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NON-RESIDENTIAL

2022 CALGreen

Meet the new construction EVI requirements under the following situations:

1. Increasing power supply as part of a parking facility addition or alteration.
2. Adding new PV added over existing parking.
3. Triggered pursuant to Code Section 301.3 & Increasing power supply to an electric service panel.

Reach Code

Increase new construction EVI requirements compared to CALGreen minimum.

Adds a trigger for breaking ground (like trenching).

Amends exception 1(c) to include a maximum utility service cost of $4,500/space.

EVI Exceptions

1. **Infeasibility:** No local utility power supply.
2. **Timeline:** Where there is no local utility power supply or local utility is unable to supply adequate power.
3. **Utility Infrastructure Cost:** Where evidence suitable to the local enforcing agency shows that requirements may increase construction cost associated with utility-owned infrastructure by an <u>average of $4,500 per parking space</u>. EV infrastructure shall be provided up to the level that would not exceed this cost for utility service.

Underline indicates added with reach code

EVI Exceptions
(Added for Additions & Alterations)

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1. **Remote parking facilities** that do not have access to the building service panel.
2. **Parking area lighting upgrades** where no trenching is part of the scope of work.
3. **Emergency repairs**, including but not limited to water line break in parking facilities, natural disaster repairs, etc.
4. **Where demonstrated as impracticable** excluding local utility service or utility infrastructure issues.

Added with Reach Code:

5. **Alterations that solely add Level 1 EV charging receptacles** or Level 1 EV chargers, and no other addition or alteration is performed within the parking facility.

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