

3CE Reach Codes Program

Advancing safer, healthier and more affordable
buildings and vehicles

CentralCoastReachCodes.org



Reach Codes 101

- What are reach codes?
- Why should we implement reach codes?
- What's the process?

What are Reach Codes?

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

Types of Reach Codes:

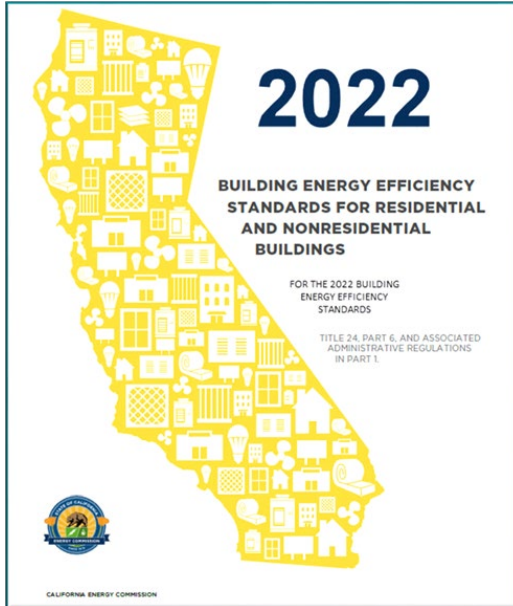


**Building Decarbonization
New & Existing Buildings**



Electric Vehicle Infrastructure (EVI)

2022 Energy Code



Other names:

- Title 24, Part 6
- Building Energy Efficiency Standards

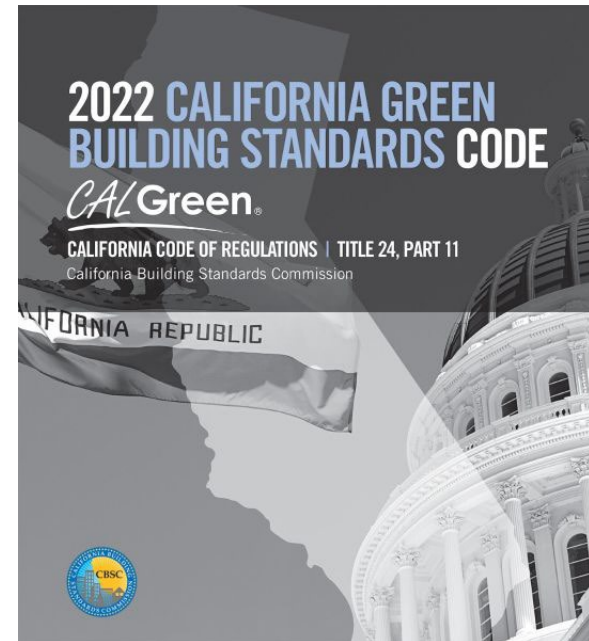
Scope:

- 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.

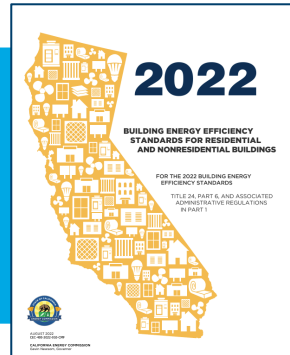
Performance: Think “modeling”. Requires buildings to meet an energy budget/performance score through a custom design, allowing applicants flexibility.

Reach Code Context in 2024



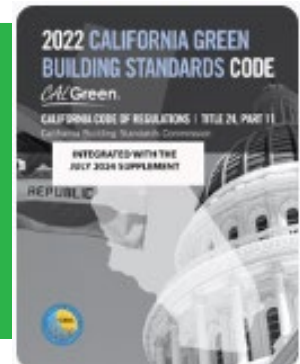
Buildings

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.

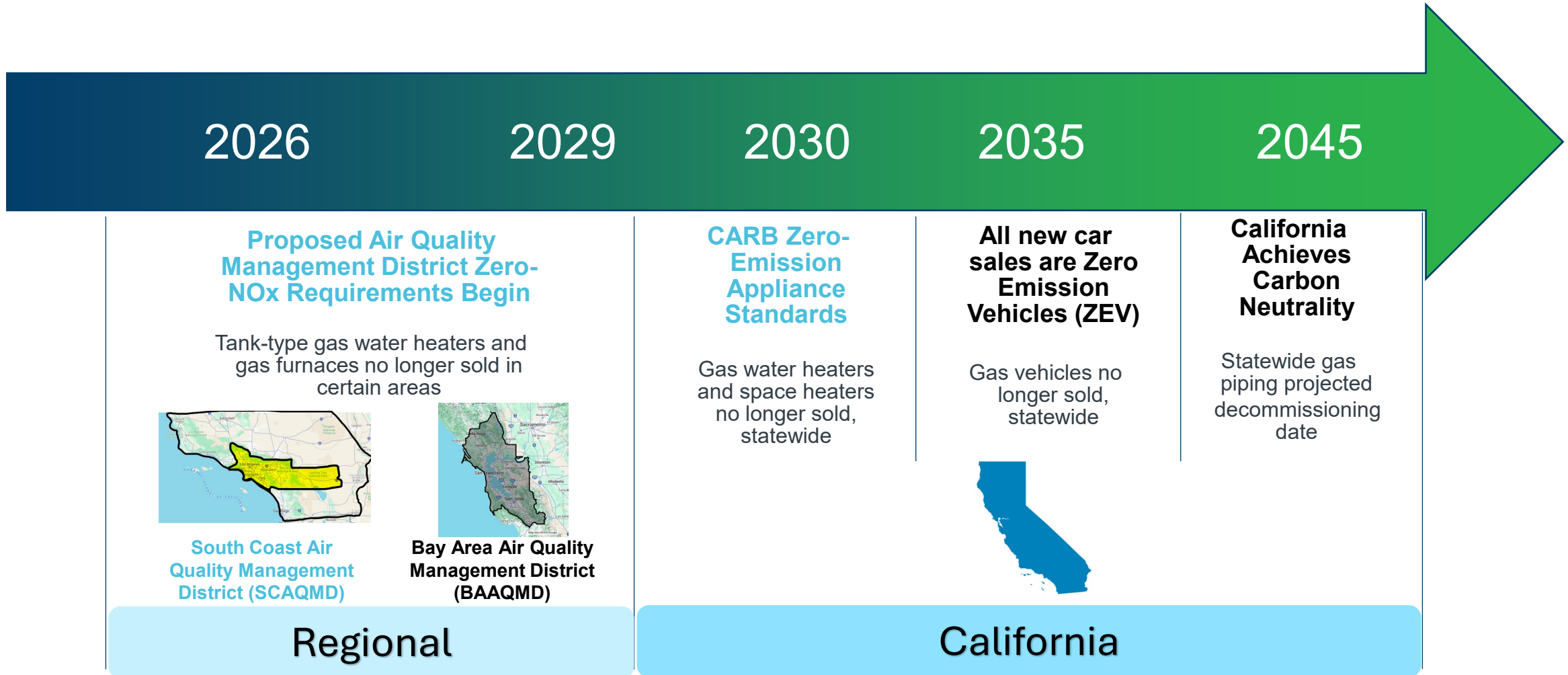


Electric Vehicle Infrastructure (EVI)

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.



California's Upcoming Electrification Changes



-Text in blue is proposed.
-Text in black is adopted.

Reach Code Litigation

California Restaurant Association v. City of Berkeley





July 2019	Nov 2019	July 2021	April 2023	May 2023	January 2024
<p>The City of Berkeley adopts a municipal gas ban/all-electric Ordinance.</p> <p>The Ordinance prohibits, with some exceptions, natural gas infrastructure in newly constructed buildings.</p>	<p>The California Restaurant Association sued the City of Berkeley...</p> <p>...on the grounds that the Ordinance was preempted by the federal Energy Policy and Conservation Act (EPCA).</p>	<p>The District Court originally rejected the CRA challenge...</p> <p>...because the ordinance does not directly regulate either energy use or energy efficiency of covered appliances.</p> <p>The CRA appealed that decision.</p>	<p>The Ninth Circuit reversed the District Court decision, concluding that EPCA preempted Berkeley's ban...</p> <p>...because it prohibited the onsite installation of natural gas infrastructure necessary to support covered natural gas appliances.</p>	<p>The City of Berkeley filed a petition for an En Banc rehearing.</p>	<p>The Ninth Circuit denied an En Banc rehearing.</p> <p>Berkeley has decided to repeal their natural gas ban.</p> <p>Some jurisdictions are evaluating new building reach code approaches.</p>

Ruling Takeaway: Natural gas appliances can't be directly prohibited from use based on the Energy Policy and Conservation Act (EPCA).

Existing Buildings

- What are the choices for existing buildings?
- What are the pros and cons?
- What is the FlexPath approach?
- What is an electric readiness approach?

Existing Building Approaches

	Description	Advantages	Challenges	Who's done it?
Time of Replacement 	Require that property owners at the time of equipment replacement (upgrades or burnouts) abide by zero-NOx requirements and/or electric readiness requirements.	<ul style="list-style-type: none"> • Simple policy • Replacements occur more frequently than major renovations 	<ul style="list-style-type: none"> • Emergency replacements • May result in some bypassing the permit process 	San Mateo, Portola Valley, Marin County, Palo Alto
Time of Renovation 	Require applicants that are already pulling a permit for a renovation project to abide by certain energy efficiency measures and/or electric readiness requirements.	<ul style="list-style-type: none"> • Customizable triggers • Unlikely to impact small or low-cost renovation projects • Unlikely to bypass the permit process 	<ul style="list-style-type: none"> • More complex policy • Clarity of permit data • Low permit/renovation rates can increase time to make impact 	San Mateo, Portola Valley, Piedmont, Marin County, San Luis Obispo
BPS 	Require property owners to regularly report energy- or emissions- use intensity (EUI). In addition, the policies require incremental reductions in EUI over a set time horizon.	<ul style="list-style-type: none"> • Monitor building stock • Customizable triggers • Regular enforcement cycles 	<ul style="list-style-type: none"> • Large administrative burden (cost/time) 	Cities: Denver, Reno, Chula Vista, St. Louis, etc. States: Oregon, Washington, Maryland, Colorado
Time of Property Transfer 	Leverage real estate transactions to disclose relevant information on, incentivize, or require, certain home improvements. <i>We do not recommend policies which inhibit or delay the sale of a property.</i>	<ul style="list-style-type: none"> • Leverages major financial transaction • Allows responsibility to be shared between buyer and seller 	<ul style="list-style-type: none"> • Limited precedence for jurisdictional authority • Jurisdiction regulation of property transfer process • Low transfer rates can increase time to make impact 	Piedmont, Berkeley, Davis

How Does a FlexPath Approach Work?

What is it?



Major residential addition and alteration projects must include energy efficiency and/or electrification measures.



Existing buildings are a huge opportunity for emissions reduction as they are the majority of the housing stock.



The goal is to reduce emissions while improving the quality, comfort and health of buildings and residents.

How does it work?



Typically takes effect through amendments to the Energy Code, Title 24, Part 6.



Flexible compliance options are available through a menu of measures.



Some measures may be included as mandatory, such as LED lighting and rewiring.

What support is available?



Technical Assistance



Model Code Language



Staff Report Templates



Council Meeting Support

FlexPath – Example

Requirements for major residential addition and/or alteration projects to include energy efficiency or electrification measures.

What is a “major” addition or alteration as proposed?

- An addition of **300 or more square feet** of floor area.
- Any addition and alteration combination with an impacted area of 300 or greater square feet.

What would a project applicant have to do?

- Pick from a menu of energy efficiency measures and in some cases provide outlets for future zero emission appliances.

Would this apply to small projects, appliance replacements, window projects, roof projects, cosmetic changes, work that doesn't require a permit, kitchen appliances, or gas stoves?

- No, no, no, no, no and no.

The ordinance is projected to impact **200 permits a year** with a **median project valuation of \$150k**

FlexPath – Measures Menu Example

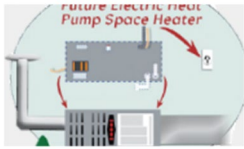




Requirements:

1. Install any number of the measures from the table that add up to a total score of 9 or greater. Many combinations possible
2. Complete all mandatory requirements.

There are at least 5 cost effective combinations.

Measures	Points
Water Heating Package	1
Induction Cooktop	1
Heat Pump Clothes Dryer	1
Air Sealing	2
Duct Sealing	3
R-49 Attic Insulation	4
Windows	4
R-13 Wall Insulation	5
New Ducts + Duct Sealing	6
R-19 Floor Insulation	9
R-30 Floor Insulation	10
Heat Pump Water Heater (HPWH)	12
Solar PV + Electric Ready Pre-Wire	13
Heat Pump Space Heater	18
LED lamps and Exterior Photocells	Mandatory
Panel-related Pre-wiring	Mandatory
Mechanical, Kitchen & Laundry Room Electric Ready Pre-Wire	Mandatory

Electric-Readiness Reach Code

	Retrofit Category	Details
	Heating, Ventilation and Air Conditioning	For alterations and additions that include an HVAC system, the jurisdiction could require an outlet for a future electric heat pump.
	Water heating	For alterations and additions that include a water heating system, the jurisdiction could require an outlet for a future water heater heat pump.
	Pool and Spas	For alterations and additions that include pool or spa equipment, the jurisdiction could require an outlet for a future electric pool heater.
	Installing 240V outlet when renovating the following areas:	Laundry room (an outlet for a future electric clothes dryer) Kitchen (an outlet for future electric oven/stove)
	Panel	When planning an electrical panel replacement and electrical panel upgrade, the jurisdiction could require the electrical panel to include panel capacity and breaker space for future electrification of building systems.

Photos: [Energy Code Ace](#)

An **exception** can be offered if, as a result of these requirements, an increase in any of the following is needed (that is not part of the appliance upgrade scope):

- Capacity upgrade for an electrical panel
- Feeder upgrade
- Transformer upgrade
- Electrical service upgrade

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