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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?

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

Types of Reach Codes:

Building Decarbonization

New & Existing Buildings

Electric Vehicle Infrastructure (EVI)

Introduction to State Codes

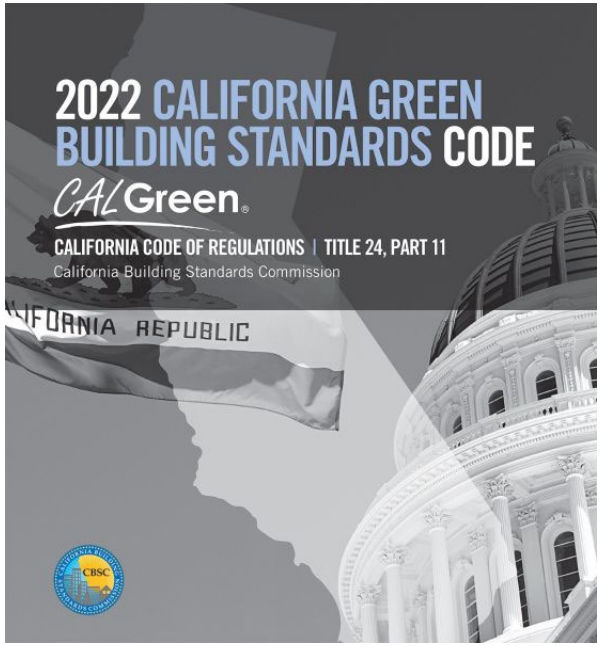
2022 Energy Code

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

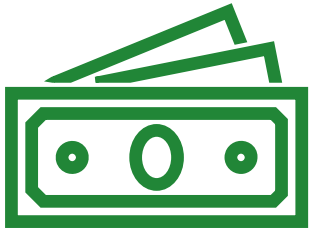
Pathways to amend:
- Mandatory
- Voluntary

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.

Reach Code Requirements

1. **Must use no more energy than the Energy Code**
2. Energy efficiency/conservation measures **must be cost-effective**
3. Local governments must make findings that the reach code is needed for local climatic, geological, or topographical reasons and must file with the California Building Standards Commission (CBSC)
4. Can't require equipment that exceeds federal standards (federal preemption)



Key Points of Cost-Effectiveness

- Something is cost-effective when the value of benefits exceeds the costs
- Must be approved by the California Energy Commission (CEC) (when cost-effectiveness required)
- Can be cost-effective on-bill or using the CEC's societal metric (TDV or LSC)
- Can be used to assess policy impacts as well as to document legal compliance
- Can mean different things to different stakeholders (developers, building owners, tenants, society)
- Studies available at Local Energy Codes and through the Cost-Effectiveness Explorer

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.

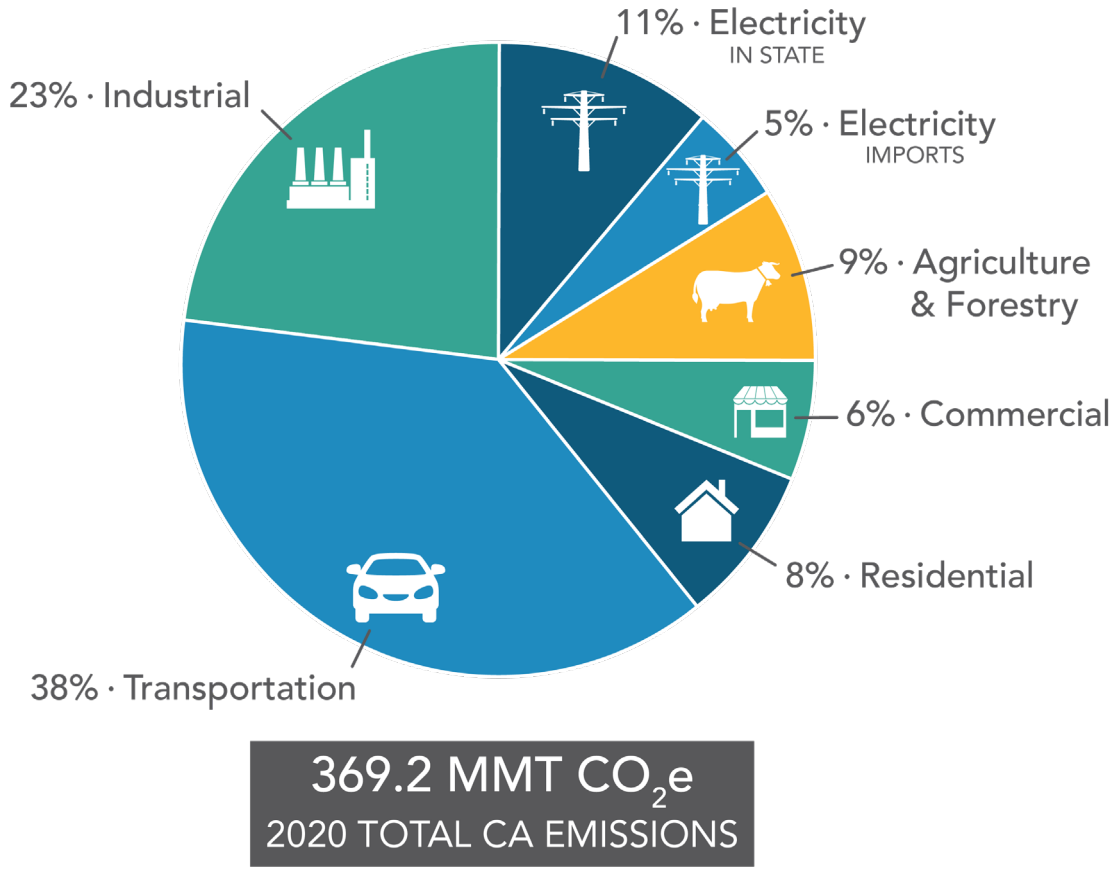
Support Public Health by improving indoor air quality and decreasing air pollution emissions.

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

California Carbon Emissions by Economic Sector

- **Emissions from Transportation and Commercial and Residential buildings account for 52% of the CA inventory in 2020**
  - Mainly from the fossil fuel combustion
  - Nearly all gas appliances can be electrified, except some high-temperature industrial applications.

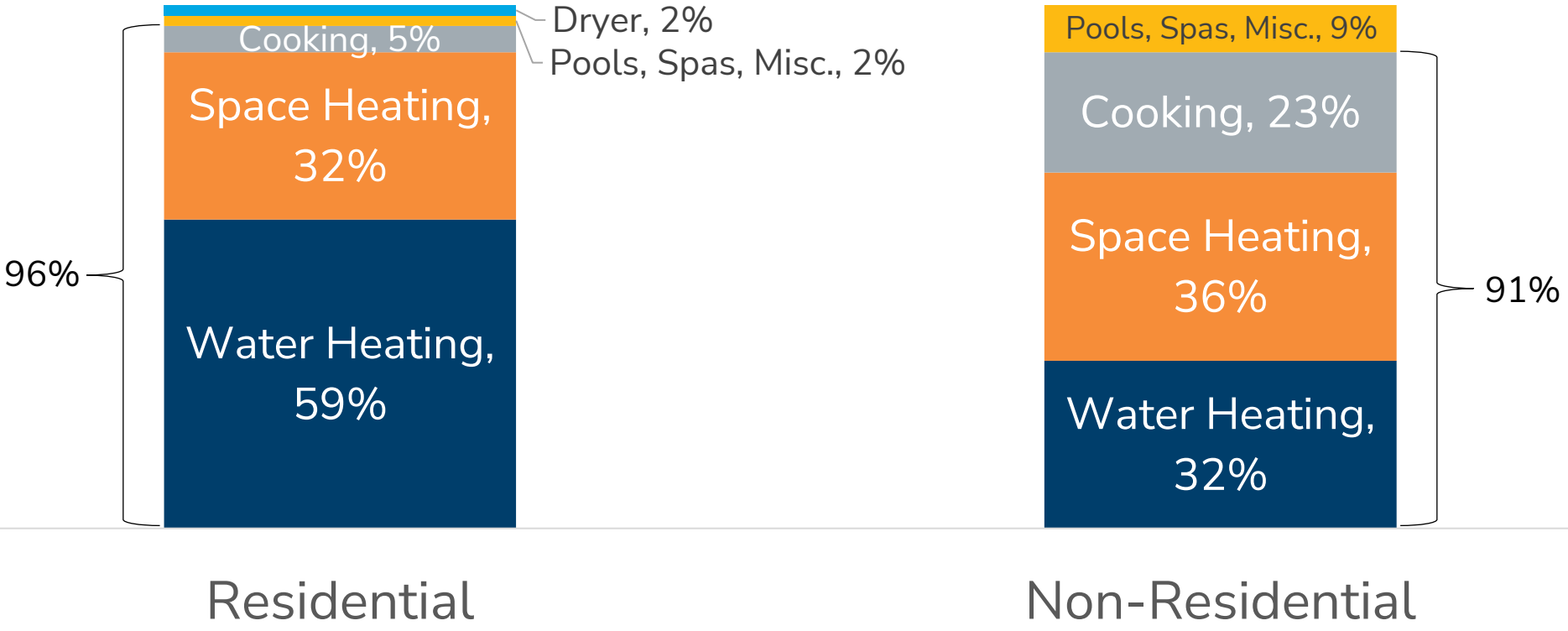
2022 California GHG Emission Inventory



Source: California Air Resources Board, 2022

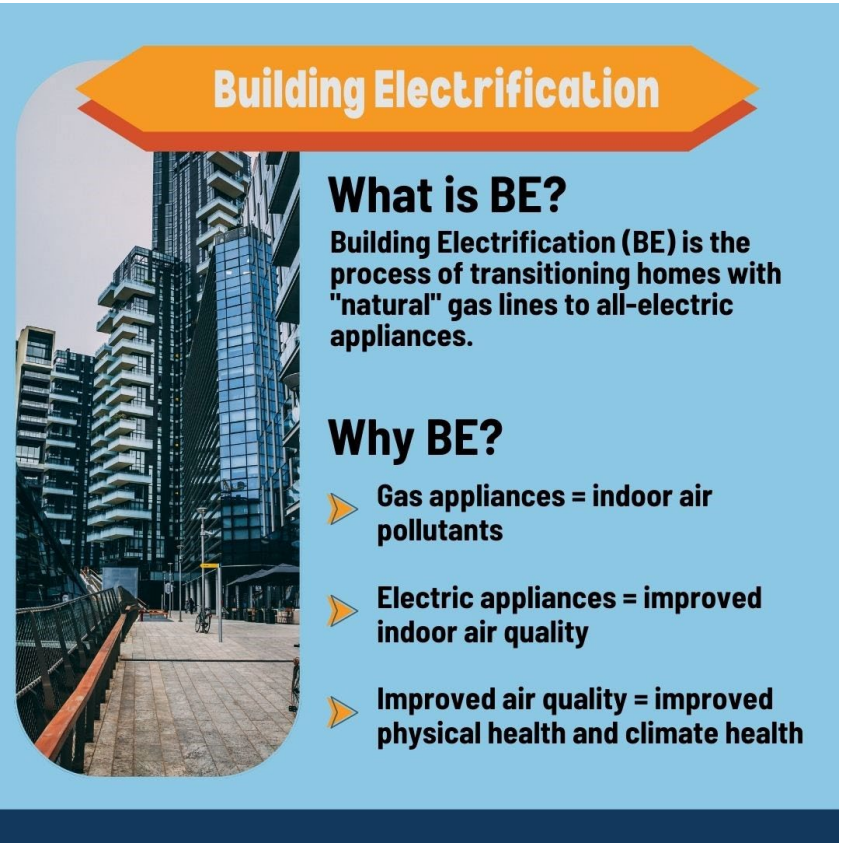
California Buildings Gas Usage

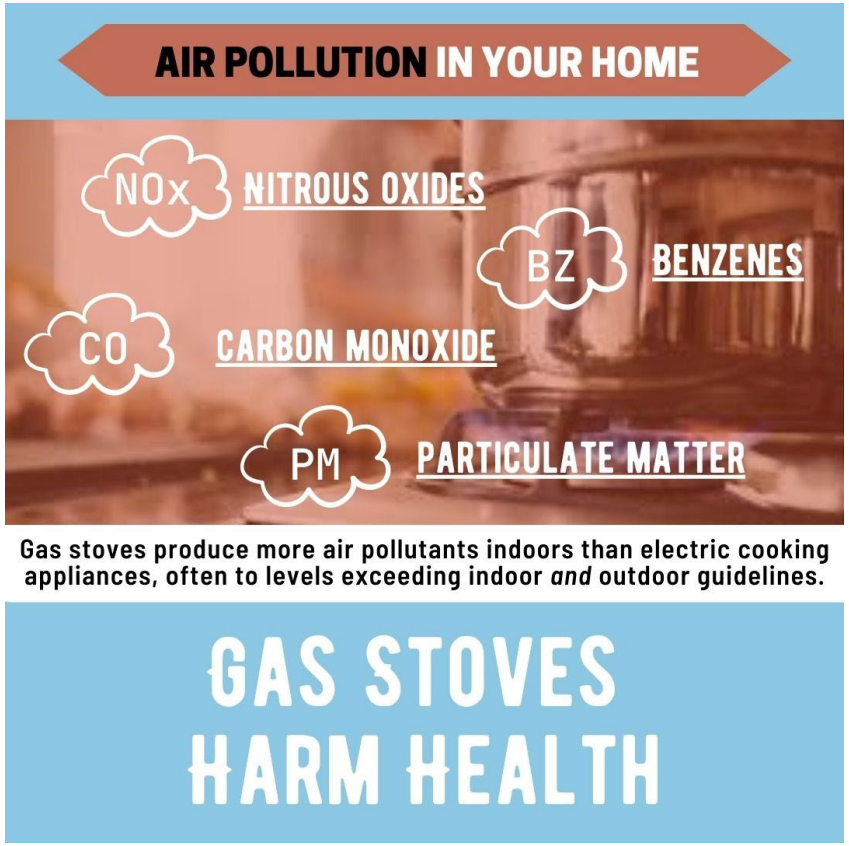
The combined gas usage for **cooking, water heating,** and **space heating** accounts for 96% in residential and 91% in non-residential sectors.



Sources: 2019 Residential Appliance Saturation Survey and California Building Decarbonization Assessment

The Health Harms of Gas Stoves





Learn more: www.sfbaypsr.org/BE

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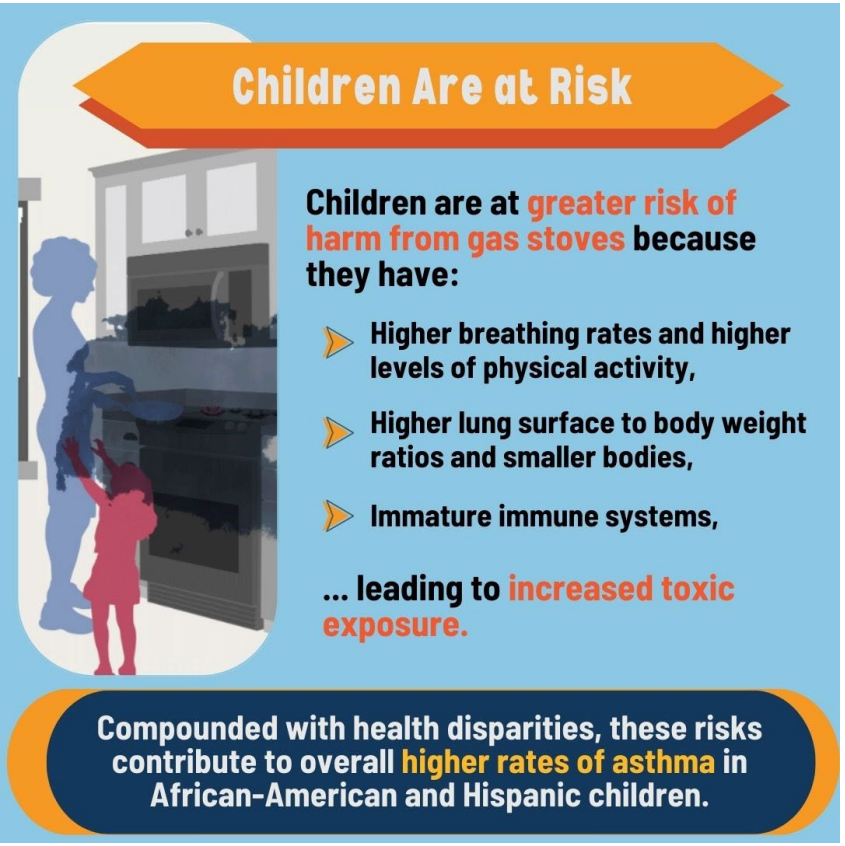
The Health Harms of Gas Stoves



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Why Establish Reach Codes?

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Air Quality Regulations Aren't Certain	• California Air Resource Board (CARB) is considering proposals for zero NOx emissions limits for water heating and space heating, starting as early as 2027, but they aren't adopted yet
Local Reach Codes Influence the State	• Statewide electrification codes incorporate elements from local reach codes • Smoother implementation of state-wide requirements
Allows More Action, Sooner	• Earlier actions have exponential greenhouse gas emissions savings • Existing building policy is needed immediately to meet 2030, 2035, and 2040 climate goals
Continuous Signal to the Market	• Avoid a progress gap for new construction from 2024-2027 • Send clear, continuous message to market • Avoid stranded asset cost of continued gas investment
Local Control	• Ability to design customized exception and language • Jurisdictions with more progressive climate targets can pass more progressive reach codes

Reach Code Context in 2024

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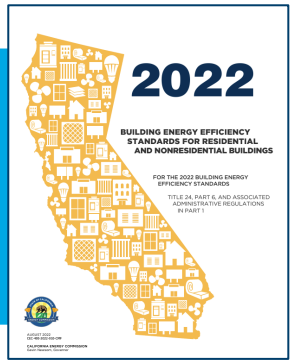
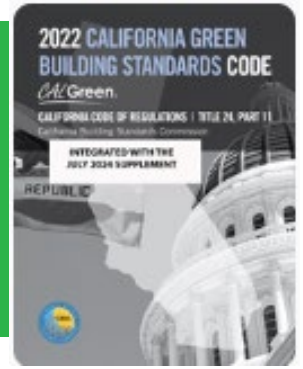
Buildings

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.



California's Upcoming Electrification Changes

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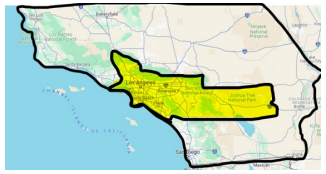
2026 | 2029 | 2030 | 2035 | 2045

Proposed Air Quality Management District Zero-NOx Requirements Begin

Tank-type gas water heaters and gas furnaces no longer sold in certain areas



South Coast Air Quality Management District (SCAQMD)

Bay Area Air Quality Management District (BAAQMD)

CARB Zero-Emission Appliance Standards

Gas water heaters and space heaters no longer sold, statewide

All new car sales are Zero Emission Vehicles (ZEV)

Gas vehicles no longer sold, statewide

California Achieves Carbon Neutrality

Statewide gas piping projected decommissioning date

Regional

California

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

Reach Code Litigation

California Restaurant Association v. City of Berkeley

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

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

Source: Climate Case Charts, Columbia Law blog and Earthjustice blog; "Gloom Not Doom: The Latest in the Berkeley Decarbonization Case."

Contact Us

Mayra Vega
mvega@trccompanies.com
(916) 247-2165

Taylor Taylor
ttaylor@trccompanies.com
(510) 431-8547