

Reach Codes 101

Advancing safer, healthier and more affordable
buildings and vehicles

BayAreaReachCodes.org

V2.2



Building Codes Background

- Reach Codes Definitions
- Electrification Benefits
- Reach Code Adoption Process
- Emissions

Reach Codes in the Local Context

- 2025 Updates to State Code
- Reach Code Options

Policy Impacts

- Future Zero Emission Appliance Rules
- Reach Code Litigation

Additional Resources



Reach Codes Definitions and Benefits

- What are reach codes?
- What are the benefits?
- What are the requirements and process for adoption?

What are Reach Codes?

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

Types of Reach Codes:



Building Decarbonization in New & Existing Buildings



Electric Vehicle Infrastructure (EVI)

What are the Main Benefits?



Minimize construction costs all-electric new construction is the cheapest option.

Promote community safety by electrifying to reduce GHG emissions and warming.

Promote healthful homes by eliminating indoor emissions and fuel for wildfire from gas lines.

Rebates are available now to limit up-front costs and enjoy efficient appliances with low energy bills in the future

Why Establish Reach Codes?



Continuous Signal to the Market

- Send clear, continuous message to market
- Avoid stranded asset cost of continued gas investment

Local Control

- Enables innovative approaches for cost-effective decarbonization policy
- Ability to design customized exemptions
- Jurisdictions with more progressive climate targets can pass more progressive reach codes

State and Regional Air District Codes are Limited

- Lacks specific existing building measures
- No regulation or triggers for cost-effective building electrification
- Ignores methane appliances

Local Reach Codes Influence the State

- Statewide electrification codes incorporate elements from local reach codes
- Smoother implementation of BAAD ruling if similar requirements are adopted before 2027

Allows More Action, Sooner

- Greenhouse gas emissions are cumulative, early action has exponential savings
- Existing building policy is needed immediately to meet 2030, 2035, and 2040 climate goals



Firefighters excavate and shut off a natural gas service line in Altadena, January 2025

All-electric construction is reliable

Electric homes depend on only one infrastructure system, mixed homes depend on two, which increases outage susceptibility, according to the Sierra Club. Nearly all gas appliances also need electricity to operate.

Many energy-efficient upgrades are fire hardening upgrades

- Air sealing/vent sealing
- Cool roofs
- Double-paned tempered windows
- Insulation

Minimizing emissions reduces catastrophic warming and wildfire

- Warmer conditions doubled the area burned in forest fires from 1984-2015. Burning fossil fuels increases the concentration of greenhouse gases, creating warmer conditions. Researchers have been able to model the influence of these warmer conditions on wildfire burn area.
- High fire risk days in California autumns have doubled since the early 1980's. Warmer conditions increase the chances of wildfire by drying out more vegetation to fuel extreme fire.

Gas exacerbates wildfire

Natural gas will burn along with a home, adding fuel, and meters may require manual shut off by firefighters after a fire, adding another obstacle to clearing, recovery, and rebuild.

Reach Codes Requirements and Process

- What are the requirements?
- What is the process for adoption?

Reach Code Requirements

1

Must use no more energy than the Energy Code

2

Energy efficiency/conservation measures **must be cost-effective**

3

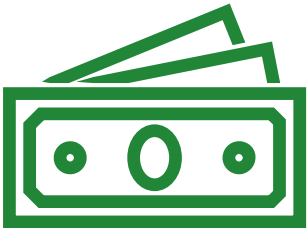
Local governments must make findings that the reach code is needed for local climatic, geological, or topographical reasons and must file with the California Building Standards Commission (CBSC)

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](#)



Reach Code Adoption Process (Part 1)



Kick-Off Meeting with Program Team and Essential Jurisdiction Staff

In-depth discussions of specific member agency goals, policies, support needed, and next steps

Research, Education, and Support for Council Approval (1-3 months)

The team researches relevant policies, local policies and stakeholders, and provides technical assistance to the city/county and education at stakeholder events

Council Study/Information Session

City/county staff presents the reach code topic to council for information only. TRC requests presenting duties at the study session. Council may direct staff to conduct further research and stakeholder engagement before presenting a reach code ordinance to council.

Develop Draft Code for Review (1-3 months)

TRC will deliver a first draft of the model code

Stakeholder Engagement (1-3+ months)

Solicit feedback from the community. TRC answers technical questions. Option for multiple meetings targeted at specific groups.

Customize Code (1-3 months)

TRC continues code edits based on feedback from city/county departments and local stakeholders

1st Council Reading (1+ month after study session)

City/county staff present the reach code ordinance to council. There is a public comment period and council vote to advance the reach code to a 2nd reading. TRC is available to answer technical questions.

2nd Council Reading (2 weeks after 1st reading)

Council votes to pass the reach code. Usually, this is on consent but may go through public comment if the item is pulled from the consent calendar. TRC is available to answer technical questions.

Submittal to the CBSC and/or CEC (2-3 months)

Once the ordinance is approved, staff file it with the state so the code can take effect

Reach Code Goes Into Effect! (Total of ~ 4-8 months)

Reach Codes in the Local Context

- What is the State's Energy Code?

- Title 24 California Code of Regulations (California Building Standards Code) standardizes the construction of residential and non-residential buildings in California
- It is updated every 3 years, with an Intervening Code Adoption 18 months into each update
- Part 6 and 11 of Title 24 of the govern energy efficiency in California's buildings

Part 6

The California Building Energy Code

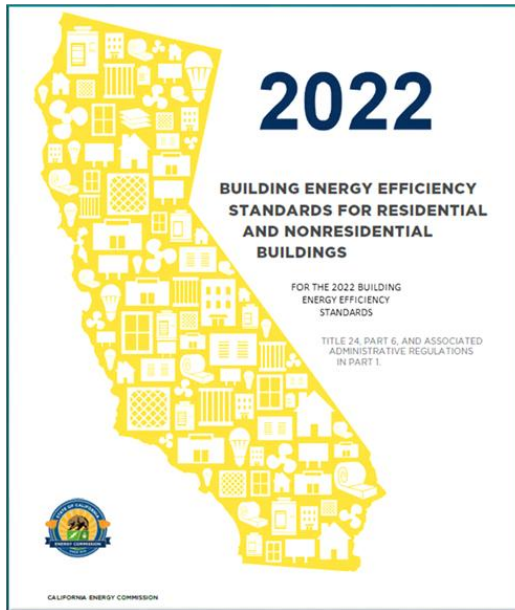
- Regulates the energy efficiency for new residential and nonresidential buildings
- Regulated by the California Energy Commission (CEC)

Part 11

The CA Green Building Standards Code

- Regulates the use of electric vehicle charging, energy, water, and materials during and after construction
- Regulated by several state agencies including California Building Standards Commission (CBSC) and Housing and Community Development (HCD)

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

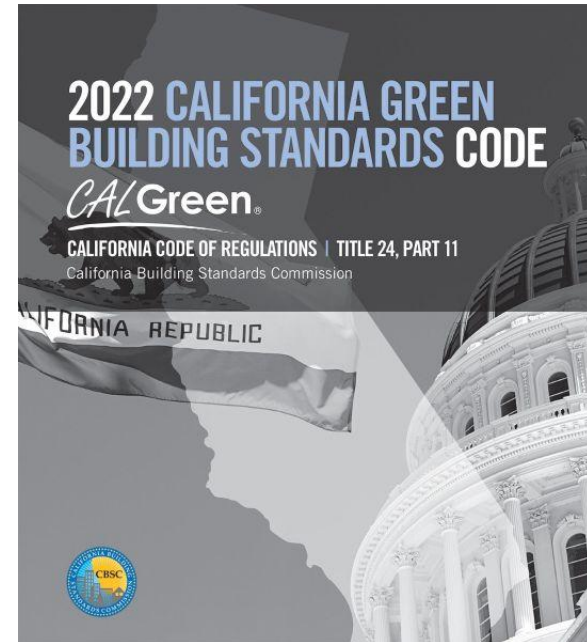
Pathways to amend:

- Mandatory
- Prescriptive
- Performance



Proposed 2025 Energy Code

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

Proposed 2025 CALGreen Code

Prescriptive: Checklist of specific energy efficiency and renewable energy measures.

Performance: Allows builders to tradeoff specific measures as part of a custom design while meeting the overall energy budget set by the Prescriptive pathway, allowing applicants flexibility.

- Part 6 -The Energy Code- is a set of mandatory building requirements
- Regulates the efficiency of window and doors, insulation, lighting, solar, HVAC, hot water heaters, electrical panels, faucets, and more.
- **There are 2 pathways to compliance:**
 - **Prescriptive path:** allowing specific methods known to be efficient
 - **Performance path:** allowing builders flexibility in design, provided the building achieves the same overall energy 'budget' of the prescriptive option

Energy Code Benefits

- Accelerates heat pump adoption for space and water heating
- Increases on-site renewable energy generation from solar
- Increases electric load flexibility to support grid reliability
- Reduces emissions from newly constructed buildings
- Reduces air pollution for improved public health
- Encourages adoption of environmentally beneficial efficient electric technologies.

Find the CA Energy Codes here:

[California Building Energy Efficiency Standards](#)

- Part 11- CALGreen - is a set of mandatory minimum green building standards driven by California's goal to:
 - **Reduce greenhouse gas emissions from buildings**
 - **Promote healthier environments**
 - **Prevent wastage of energy and water resources.**
- Standards include cost-effective reductions to greenhouse gases
- Includes Electric Vehicle Infrastructure and charging

Voluntary Tiers

- ⚡ Local governments may opt for more restrictive regulations to achieve higher degree of compliance with Green Building principles.
- ⚡ This approach reduces energy usage even further than State requirements



*CAL*Green

California Green Building
Standards Code

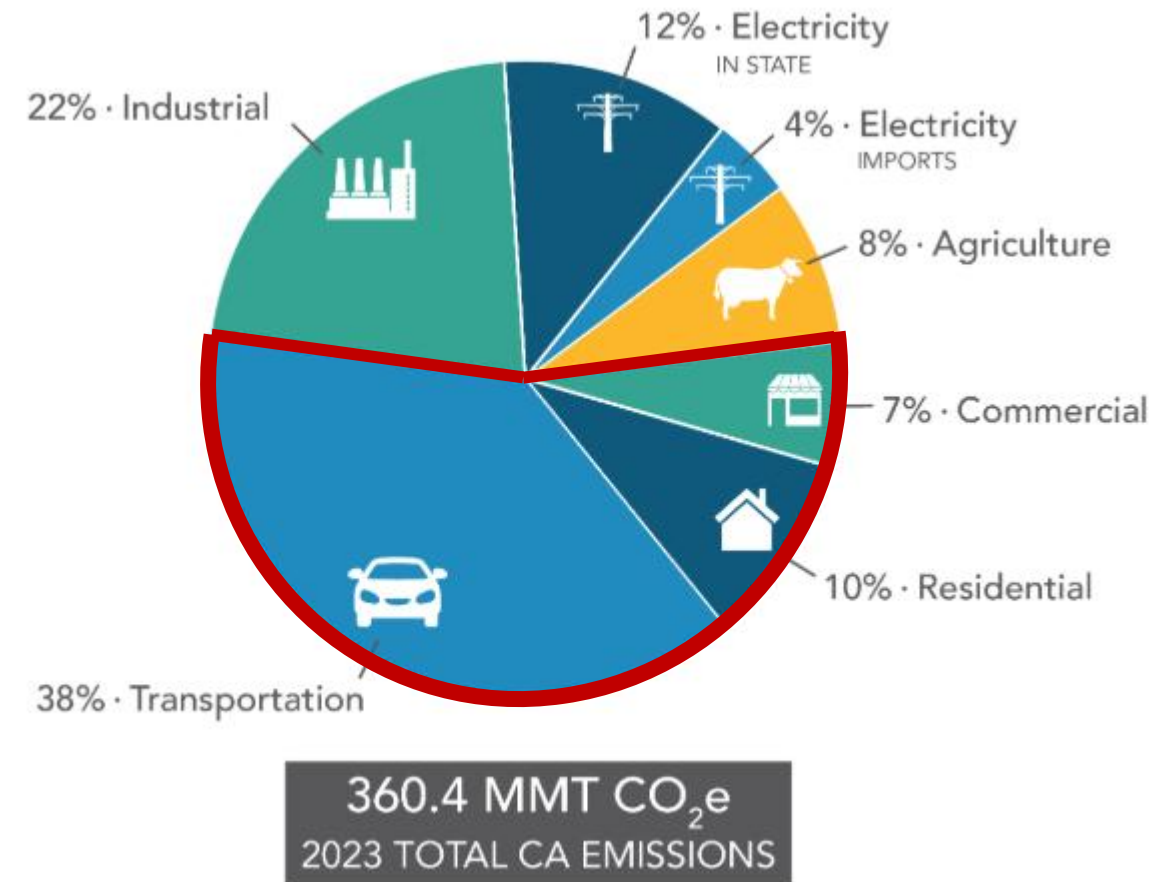
Emissions in California

- How large of a problem are building emissions?
- What appliances contribute to the most gas usage?
- What about gas stoves?

Emissions from Transportation and Commercial and Residential buildings accounted for 55% of the CA inventory in 2023

- Mostly fossil fuel combustion
- Nearly all gas appliances can be electrified, except some high-temperature industrial applications.

2023 California GHG Emission Inventory

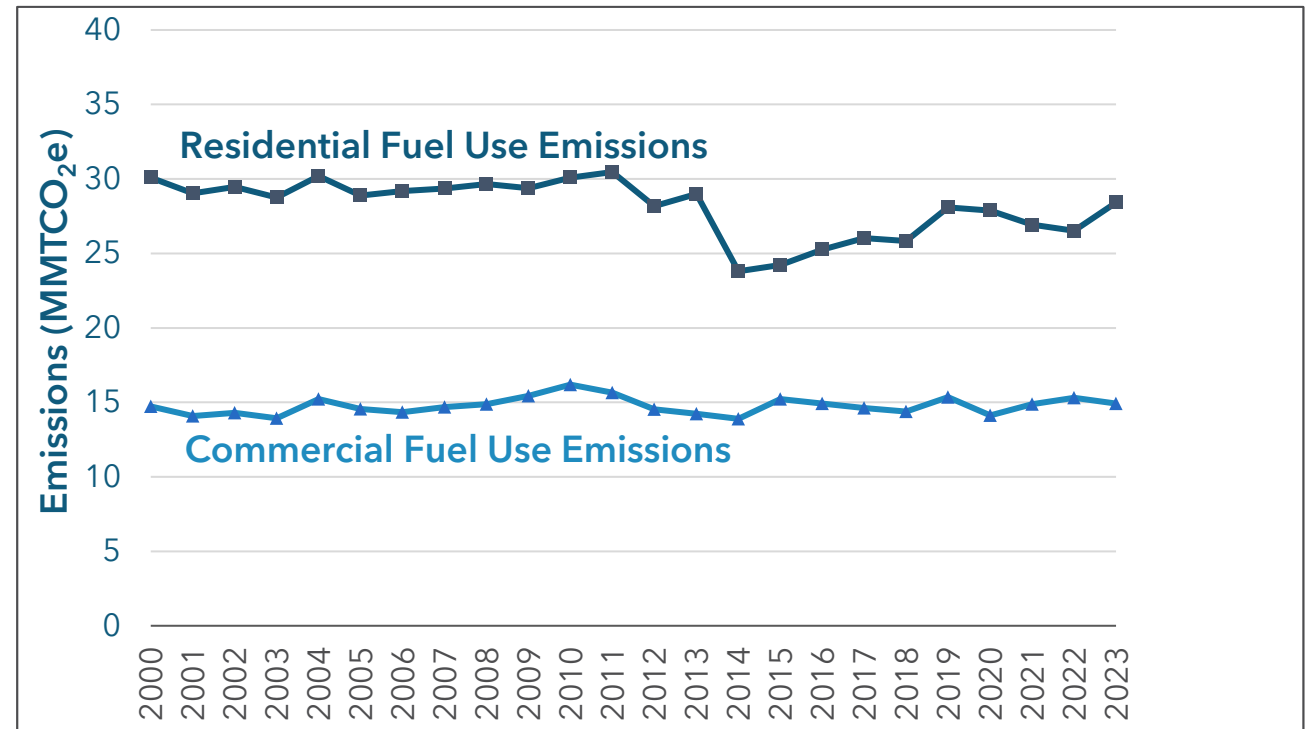


Source: [California Air Resources Board GHG inventory](#)

17% of the CA GHG inventory in 2023 came from Commercial and Residential Buildings

- **Residential** has fallen modestly since 2000
- **Commercial** fuel emissions are steady
- Nearly all residential and commercial gas appliances can be electrified

2000-2023 California Building Emissions



Source: [California Air Resources Board, 2023](#)

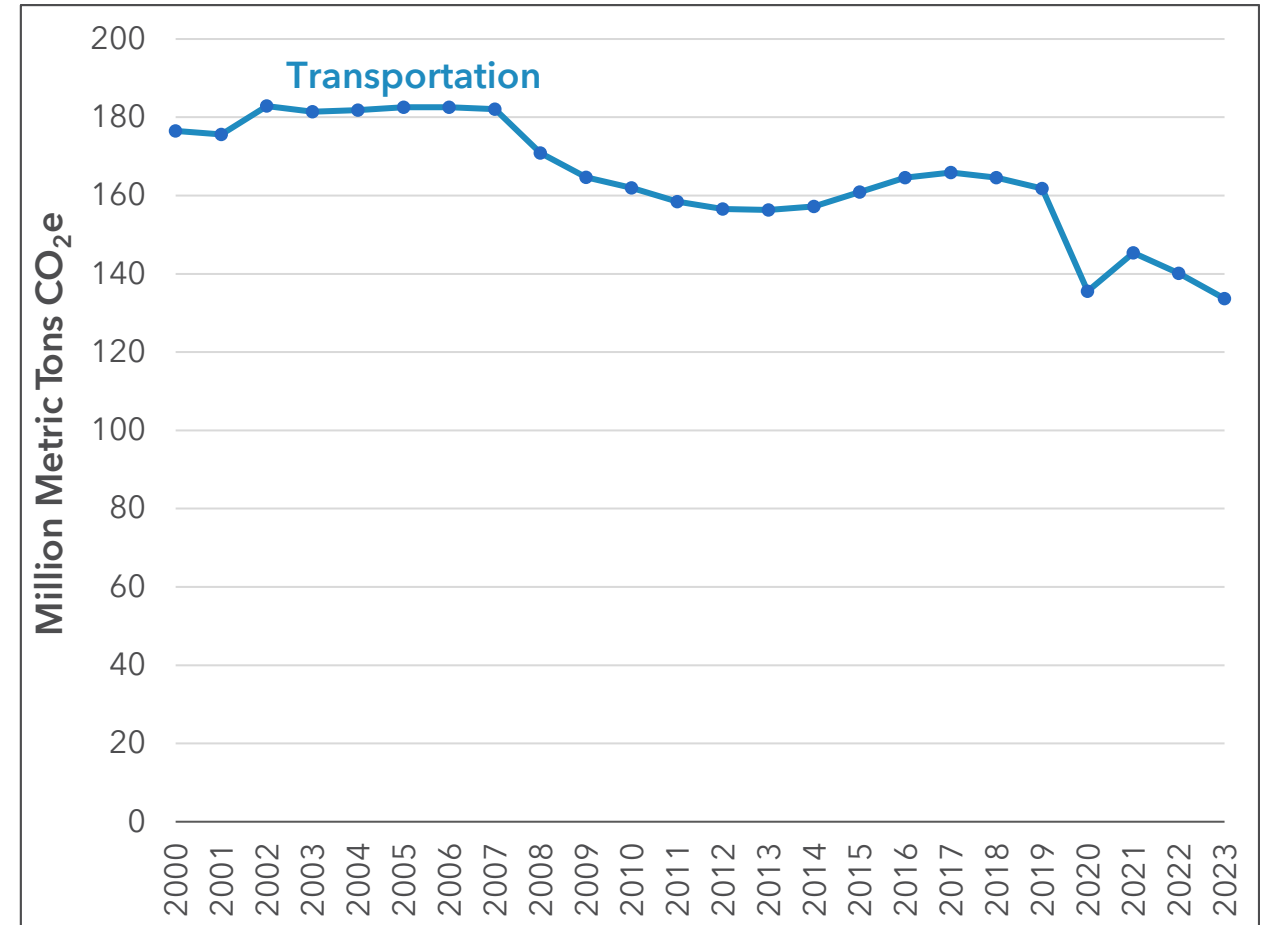
Transportation Emissions



38% of the CA GHG inventory in 2023 came from Transportation

- Electrifying **transportation** while greening the grid is a unique and impactful opportunity to cut emissions in California

2000-2023 California Transportation Emissions

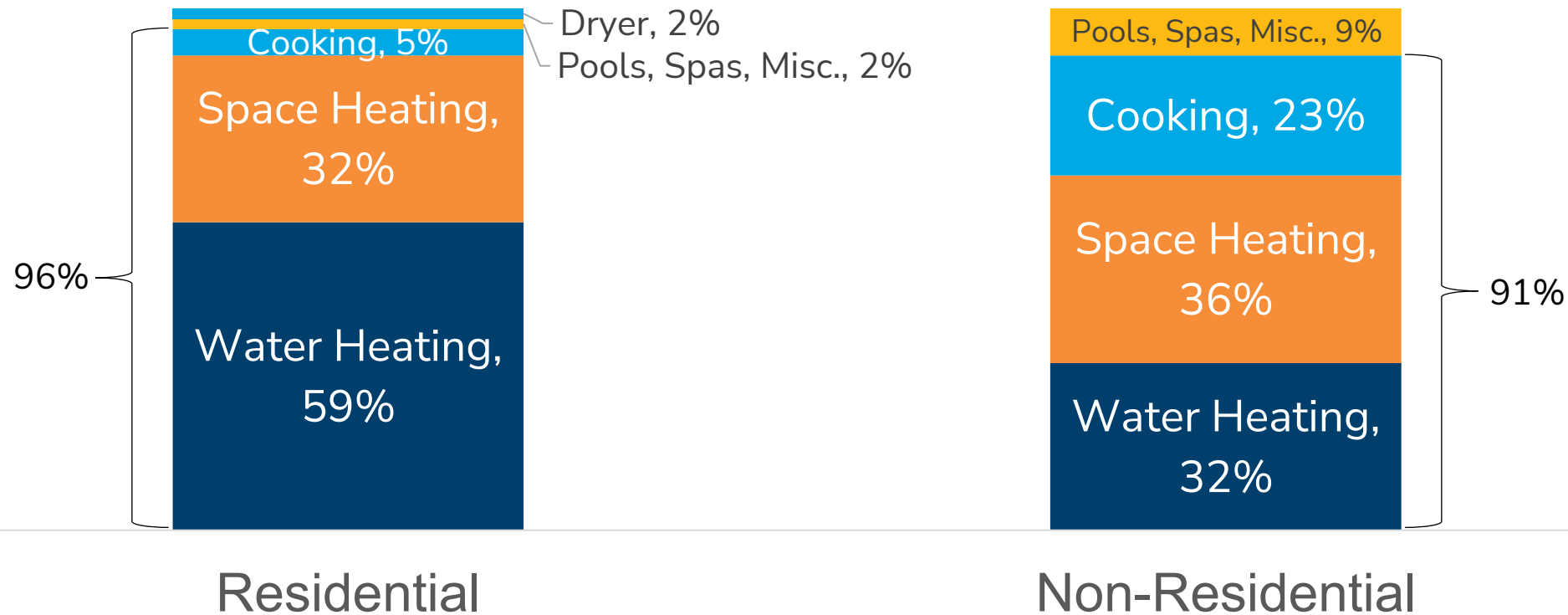


Source: [California Air Resources Board, 2023](#)

Gas Usage in California Buildings



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](#)

Health Harms of Gas Stoves



- Electrifying cooking limits indoor air quality health risks
- Nationwide, electrifying cooking alone would eliminate the equivalent emissions of half a million cars within 20 years
- Stoves don't burn all the fuel delivered to a home: 0.8-1.3% is released un-combusted indoors

Children Are at Risk

Children are at **greater risk of harm from gas stoves** because they have:

- Higher breathing rates and higher levels of physical activity,
- Higher lung surface to body weight ratios and smaller bodies,
- Immature immune systems,

... leading to **increased toxic exposure.**

Compounded with health disparities, these risks contribute to overall **higher rates of asthma** in African-American and Hispanic children.

AIR POLLUTION IN YOUR HOME

NO_x NITROUS OXIDES

BZ BENZENES

CO CARBON MONOXIDE

PM PARTICULATE MATTER

Gas stoves produce more air pollutants indoors than electric cooking appliances, often to levels exceeding indoor and outdoor guidelines.

GAS STOVES HARM HEALTH

How Gas Stoves Harm Health

POOR AIR QUALITY = POORER HEALTH

Gas stoves produce pollutants that increase risk of:

- asthma
- respiratory illnesses
- cardiovascular disease

Research shows that children living in a home with a gas stove have a **42% increased risk of having asthma symptoms.**

Learn more: www.sfbaypsr.org/BE

Reach Codes in 2025

- Reach Codes 2016-2025: How we got here
- 2025 Statewide Code: Where we're headed



Statewide Progress... ...Thanks to Our Local Agencies!



2016

Buildings

Almost impossible to build all-electric

Multifamily EV Charging

3% L2 EV Capable

2019

Buildings

Becomes easier to build all-electric

Multifamily EV Charging

10% L2 EV Capable

2022

Buildings

Heat pumps are promoted statewide

Multifamily EV Charging

10% L2 EV Capable + 30% EV Ready or EVCS

2025

Buildings

More heat pumps and existing buildings

Multifamily EV Charging

100% of units get access

What's new in the 2025 Energy Code?



Heat Pump Adoption Emphasis



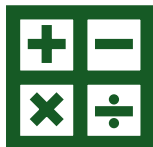
- Single-family: Use heat pumps for both space and water heating
- Multifamily: Wider use of heat pump for space heating, plus heat pump water heaters for individual units.
- Nonresidential: Expanded baseline from 2022

Electric-ready Emphasis



- Allows owners flexibility to upgrade to electric cooking and water heating when the investment works for them

Cost Effectiveness Change



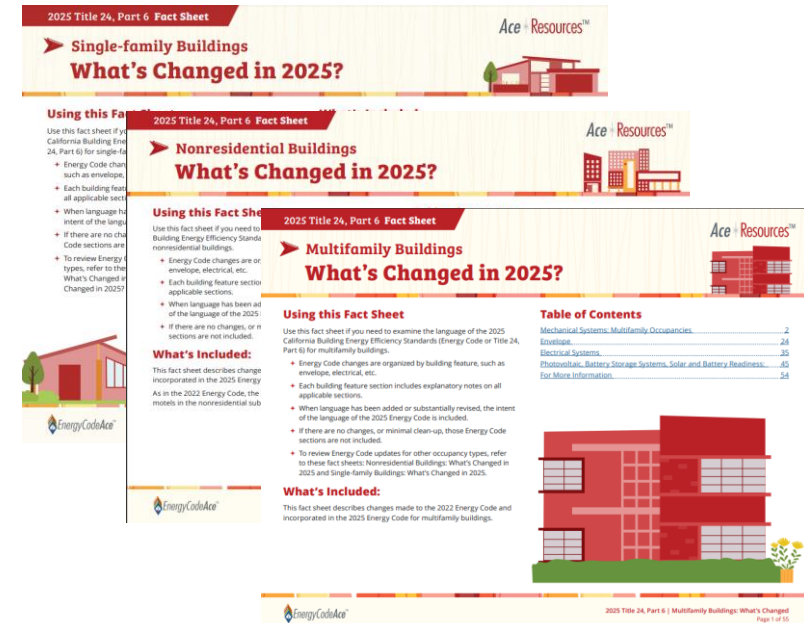
- 2025 Calculations will switch from EDR and TDV to Longterm Systemwide Cost (LSC)

Summary Fact Sheets from Energy Code Ace:

[Single-family Buildings: What's Changed in 2025](#)

[Multi-family Buildings: What's Changed in 2025](#)

[Non-residential Buildings: What's Changed in 2025](#)



The 2025 Energy Code is effective Jan 1, 2026.

2025 New Construction Code Requirements: Electric Appliances and Equipment

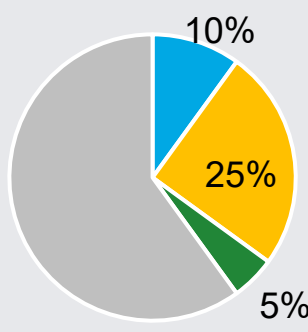
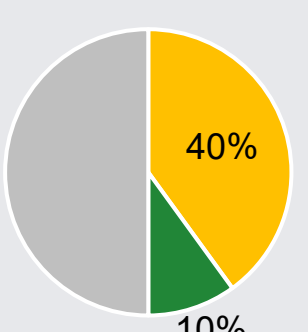
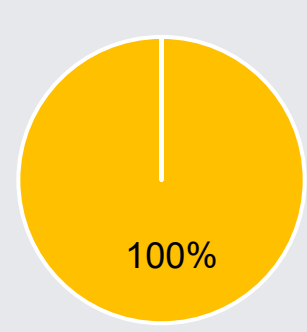


Key:	Electrification	Gas Allowed	Electric Ready
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Prescriptive Requirements	Space Heating		Water Heating		Appliances/ Other
Cycle	2022	2025	2022	2025	2025
Single Family	Heat Pump	Heat Pump	Gas/propane or HPWH	HPWH	N/A
Multifamily	Heat Pump	Heat Pump	All systems: Gas/propane or HPWH	Individual: HPWH required	Building electrical system sizing for future electrification
				Central: Gas/propane or HPWH	
Nonresidential	Single zone HPs required in most building types (retail, grocery, school, office, bank, library)	Same single zone requirement Multizone HPs required for offices and schools	HPWH in schools <25k ft2	HPWH in schools <25k ft2	Electric readiness requirements for commercial kitchens
All Buildings	N/A				Pools and spas heated by HP pool heaters or partially by renewable energy

2025 New Construction Code Requirements: Multifamily EVI



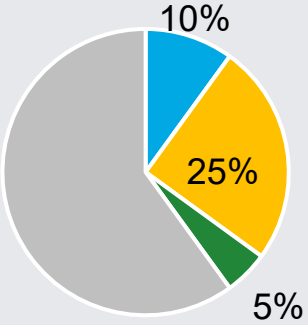
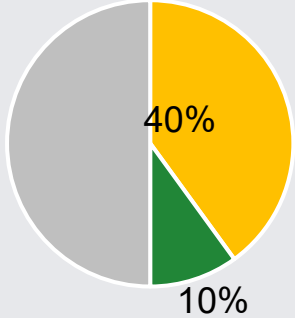
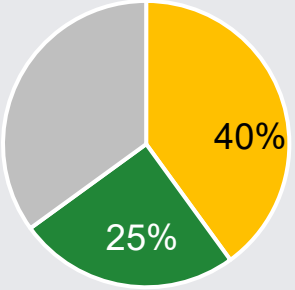
2022 CALGreen	2022 CALGreen Intervening	2025 CALGreen (Jan 1 st 2026)
Mandatory	Mandatory	Mandatory
 10% Level 2 EV Capable 25% Low Power Level 2 EV Ready 5% Level 2 EVCS	 40% Low-Power Level 2 EV Ready + <i>Direct Wiring (MF)</i> 10% Level 2 EVCS	 100% Low-Power Level 2 EV Ready + <i>Direct Wiring (MF)</i>
% of Parking Spaces		

2025 Cycle: New Requirements

- LPL2 EV receptacles up to the number of dwelling units
- Level 2 EVCS in 25% of unassigned or common use parking spaces

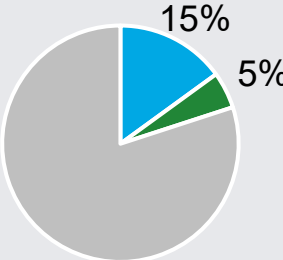
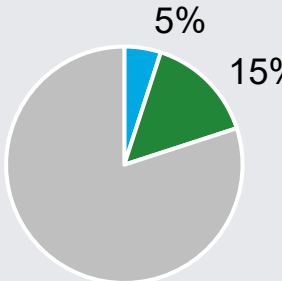
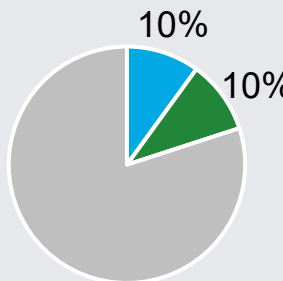
2025 New Construction Code Requirements: Hotel/Motel EVI



2022 CALGreen	2022 CALGreen Intervening	2025 CALGreen (Jan 1 st 2026)
Mandatory	Mandatory	Mandatory
 10% Level 2 EV Capable 25% Low Power Level 2 EV Ready 5% Level 2 EVCS	 40% Low-Power Level 2 EV Ready 10% Level 2 EVCS	 40% Low-Power Level 2 EV Ready 25% Level 2 EVCS
% of Parking Spaces		

2025 Cycle: New Requirements

- Increase to 25% Level 2 EVCS (from 10%)

2022 CALGreen	2022 CALGreen Intervening	2025 CALGreen (Jan 1 st 2026)	
Mandatory	Mandatory	Mandatory <i>Office/Retail</i>	Mandatory <i>All Other</i>
 15% Level 2 EV Capable 5% Level 2 EVCS		 5% Level 2 EV Capable 15% Level 2 EVCS	 10% Level 2 EV Capable 10% Level 2 EVCS
% of Parking Spaces			

2025 Cycle: New Requirements

- No changes to overall %
- Increase in EVCS % for office/retail buildings

Reach Code Options

New Construction and Existing Buildings



Reach Code Options



Existing Building Approaches	Description
AC to HP Single Family	A “Time of Replacement” reach code that requires property owners at the time of equipment replacement (upgrades or burnouts) to install either a heat pump or a set of efficiency measures.
FlexPath Single Family Multifamily	A “Time of Renovation” or “Time of Sale” reach code that requires applicants that are already pulling a permit to abide by a flexible menu of energy efficiency measures, electrification measures and/or electric readiness requirements.
Electric Readiness All Buildings	A “Time of Renovation” reach code that requires applicants that are already pulling a permit to abide by electric readiness requirements.
Gas WH to HPWH	For SF, replaces a gas water heater with a heat pump or like-for-like gas + solar thermal

New Construction Approaches	Description
Energy Performance	Requires a higher Source Energy compliance margin than what the state requires through the performance path of the Energy Code, Part 6.
Air Quality All Buildings	Regulates building or appliance emissions through CALGreen, Part 11.
Electric Vehicle Infrastructure All Buildings	Enhances electric vehicle infrastructure requirements through CALGreen, Part 11.

Visit our [website](#) for more details about each reach code option.

New Construction Reach Code Approaches

Reach codes with available information today

- Energy Performance Approach
- Air Quality



New Construction Approaches



Energy Performance Approach



- Requires a higher *Source Energy* compliance margin than what the state requires through the performance path of the Energy Code, Part 6
- Fuel-neutral; allows for some flexibility
- Meets the Federal Energy Policy and Conservation Act 7-Factor Test Criteria
- Compliance process is similar to current state code process

Air Quality



- Regulates building or appliance nitrogen oxide (NOx) emissions
- Fuel-neutral; focus is on emissions
- Can capture new construction and/or existing buildings
- Cost effectiveness not needed
- Amends CALGreen, Part 11
- Does not require CEC approval



Description:

- For new construction
- All building types (single- or multi-family and nonresidential)
- Requires a higher compliance margin than what state allows through the performance path of the Energy Code, Part 6.



Pros:

- New construction is easiest time to incorporate high performance measures
- Flexible compliance methods
- Compliance process is similar to current state code process

Cons:

- State code is already highly efficient, minimal reach gains



Legal Considerations:

- Meets Federal EPCA 7-Factor Test Criteria
- Requires CEC approval



Description:

- Can capture new construction and/or existing buildings
- Regulates building or appliance nitrogen oxide (NOx) emissions
- Fuel-neutral; focus is on emissions
- Cost effectiveness not needed
- Amends CALGreen, Part 11
- Does not require CEC approval



Pros:

- Direct benefit to air quality / health
- High impact on emissions reduction
- Likely to result in all-electric construction (construction cost savings)
- Regulates all emitting equipment (including cooking, fireplaces, dryers, etc.)

Cons:

- Limited precedence on implementation and enforcement



Legal Considerations:

- Legally untested
- Relies on Clean Air Act authority rather than Energy Policy and Conservation Act
- [NYC Local Law No. 154 - GHGs](#)
- [Litigation Against SCAQMD](#)

Existing Building Reach Code Approaches

- Air Conditioning to Heat Pump
- Electric Readiness
- FlexPath
- Gas Water Heater to Heat Pump Water Heater

Existing Building Approaches



Single Family AC to Heat Pump



- A “Time of Replacement” reach code that requires property owners at the time of AC equipment replacement (upgrades or burnouts) to install either:
 1. A heat pump
 2. Efficiency measures
- Originates from the 2025 CALGreen Tier 1 Voluntary Pathway.

Single Family FlexPath



- A “Time of Renovation” reach code that requires applicants that are already pulling a permit to abide by a flexible menu of:
 1. Energy efficiency measures
 2. Electrification measures
 3. Electric readiness requirements

Electric Readiness



- A “Time of Renovation” reach code that requires applicants that are completing a relevant addition or alteration to abide by electric readiness requirements.

Gas WH to HPWH



- For existing single family buildings
- Replace a gas water heater with
 - Heat pump water heater; OR
 - Like-for-like gas + solar thermal
- Cost effectiveness results [available](#)
- Amends the 2025 Energy Code
- Requires CEC approval

Single Family AC to HP



Description:

- For existing single family buildings
- Requires AC equipment replacement (upgrades or burnouts) to install either:
 - A heat pump
 - AC/Furnace + Efficiency measures
- Cost effectiveness results available
- Originates from the 2025 CALGreen Tier 1 Voluntary Pathway



Pros:

- Developed with CEC
- Addresses major energy load
- Aligns with regional and state Air Quality regulations

Cons:

- More rigorous enforcement and inspection resources
- Permit rates for space-conditioning are low
- For ducted systems only



Legal Considerations:

- Meets EPCA 7-Factor Test Criteria
- Requires CEC approval

Single Family FlexPath



Description:

- For existing single-family buildings
- A “Time of Renovation” reach code that requires applicants that are already pulling a permit to abide by a flexible menu of:
 - Energy efficiency measures
 - Electrification measures
 - Solar PV



Pros:

- Flexible menu of options
- Leverages financing of major projects to add incremental requirements

Cons:

- Limited number of major alterations annually



Legal Considerations:

- Meets EPCA 7-Factor Test Criteria. Identifies cost-effective pathway based on efficiency measures
- Requires CEC approval

Gas WH to HPWH

Gas Water Heater to Heat Pump Water Heater



Description:

- For existing single family buildings
- Replace a gas water heater with
 - Heat pump water heater; OR
 - Like-for-like gas + solar thermal
- Cost effectiveness results [available](#)
- Amends the 2025 Energy Code
- Requires CEC approval



Pros:

- Widely LSC cost-effective under variety of existing conditions and equipment types (e.g. 120V)

Cons:

- While it's close, On-Bill cost-effective is challenging without some of these:
 - Incentives
 - Demand Response program participation
 - Solar PV installation
 - Rate increases for gas surpassing electricity
 - POU rates



Legal Considerations:

- Similar to AC to HP for DHW, which is promoted by the CEC
- Includes an energy-equivalent pathway for gas water heating when combine with a 50% solar fraction solar thermal system
- Work on-going for alternate gas pathways to mitigate risks

Rebates & Incentives

- What resources are available locally?
- Regional & Statewide resources to lower electric equipment costs

PCE Jurisdictions

[PCE Residential Programs and Rebates](#)

[PCE Commercial Programs and Rebates](#)

SVCE Jurisdictions

[Residential Incentives Programs, Rebates & Resources](#)

[Business and Contractor Incentive Programs, Rebates & Resources](#)

More Financial Options



Incentive lookup by zipcode from [Switch is ON](#)

TECH Clean California

[Heat pump water heaters – Up to \\$5,700](#)

[Heat pump space heaters – Up to \\$4,000](#)

Golden State Rebate

[\\$900 off heat pump water heater](#)

National Energy Improvement Fund

[100% financing up to \\$35,000](#)

Go Green Financing

[Up to 100% of project cost- and can pair with rebates/incentives](#)

Energy Smart Homes

[Up to \\$6500 for whole-home electrification, available to layer with TECH incentives. Must include:](#)

- Heat pump space & water heater and
- Electric/induction stove and
- Electric clothes dryer

Federal Tax Credits*

[Heat pump space heaters – Up to \\$2,000](#)

[Air sealing, insulation, ductwork – Up to \\$1,200](#)

[Heat pump water heaters – Up to \\$2,000](#)

[Solar Panels – Up to 30% of Project Cost](#)

*expiring 12/31/2025

Future Zero Emission Appliance Rules

- What is the direct of state regulations on air quality?
- What are the specific details of the Air Districts
- What is the harm associated with gas stoves?

California's Upcoming Electrification Changes



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

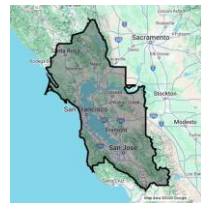
2026

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 District (BAAD)

Regional

2030

CARB Zero-Emission Appliance Standards

Gas water heaters and space heaters no longer sold, statewide

2035

All new car sales are Zero Emission Vehicles (ZEV)

Gas vehicles no longer sold, statewide



California

2045

California Achieves Carbon Neutrality

Statewide gas piping projected decommissioning date

Anticipated State & Regional Zero Emission Appliance Regulations

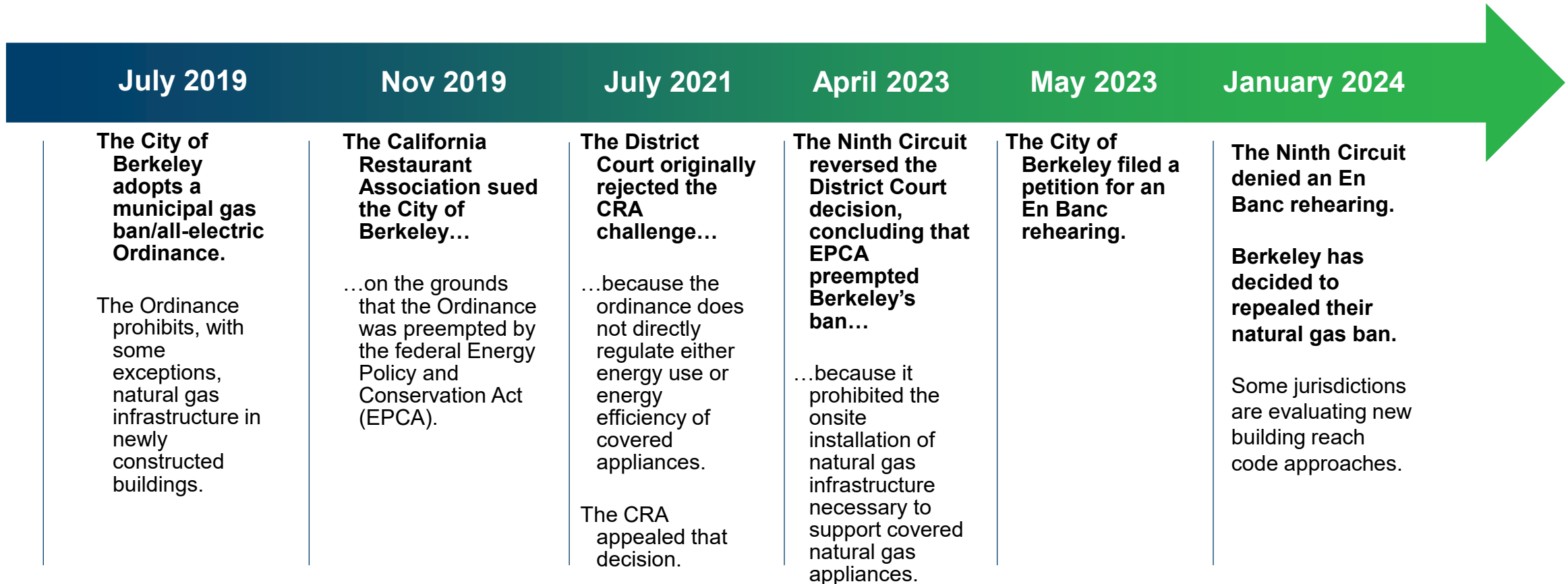
Agency & Rule	Status	Appliance	2026	2027	2028	2029	2031	2033	2036
 CARB	In-Process	Space Heating					Emissive equipment sales limit: 39%	Emissive equipment sales limit: 36%	Emissive equipment sales limit: 31%
	In-Process	Water Heating					Emissive equipment sales limit: 59%	Emissive equipment sales limit: 57%	Emissive equipment sales limit: 54%
	In-Process	Pool Heating					Emissive equipment sales limit: 40%	Emissive equipment sales limit: 40%	Emissive equipment sales limit: 40%
 Air District Rule 9-4	Adopted	Furnaces				All furnaces			
 Air District Rule 9-6	Adopted	Boilers and Water Heaters			< 75 kbtu/hr			Large commercial	
 SCAQMD Rule 1111	Under Revision	Furnaces		Limited-NOx furnaces installed in new residential buildings OR: 30% zero-emission sales target		Limited-NOx furnaces installed in existing residential buildings OR: 50% zero-emission sales target		75% zero-emission sales target	90% zero-emission sales target
 SCAQMD Rule 1121	Under Revision	Residential Water Heaters		Limited-NOx water heater installations in new residential buildings OR: 30% zero-emission sales target		Limited-NOx water heater installations in existing residential buildings OR: 50% zero-emission sales target		75% zero-emission sales target	90% zero-emission sales target
 SCAQMD Rule 1146.2	Adopted	Large Water Heaters, Small Boilers and Process Heaters	New construction: Boilers, storage water heaters, and process heaters ≤ 400 kbtu/hr; tankless ≤ 200 kbtu/hr		New construction: boilers, storage water heaters, and process heaters ≤ 2000 kbtu/hr; tankless >200 kbtu/hr; pool heaters ≤ 400 kbtu/hr	New buildings: high temperature units Existing buildings: apply 2026 new construction rule	Existing buildings: apply 2028 new construction rules	Existing buildings: high temperature units	

CRA v. City of Berkeley

- Summary of the litigation

Reach Code Litigation

California Restaurant Association v. City of Berkeley

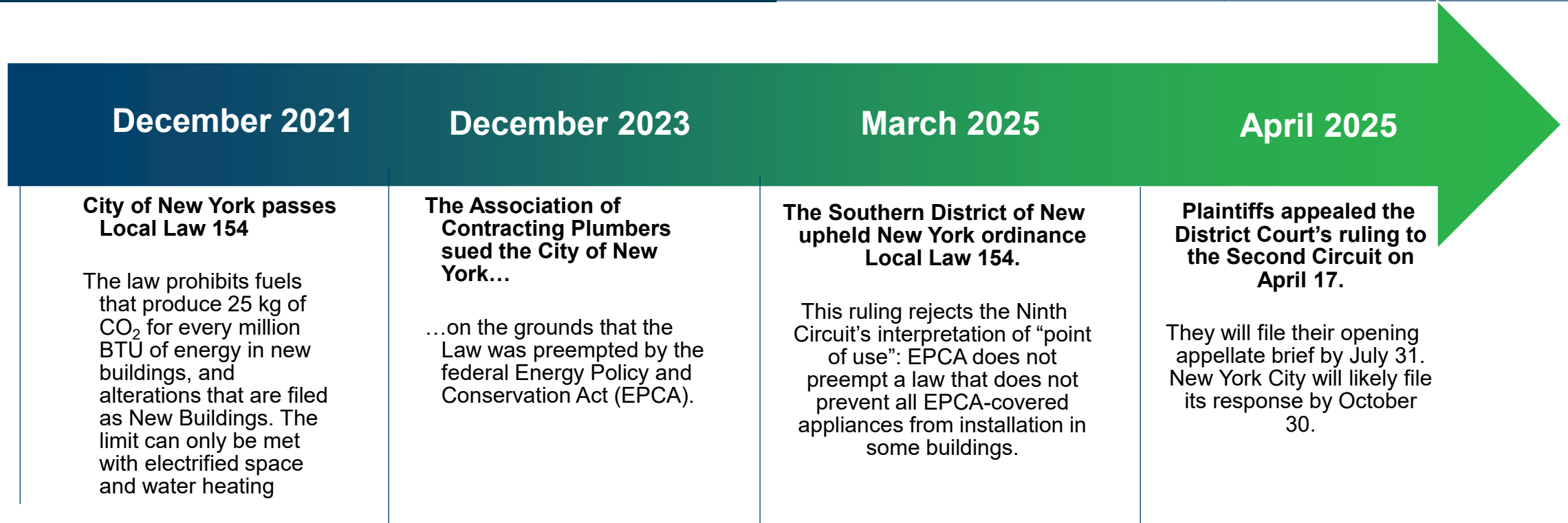


Ruling Takeaway: Natural gas appliances can't be directly prohibited from use based on EPCA. The City of Berkely was forced to repeal their natural gas ban.

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

Reach Code Litigation

Association of Contracting Plumbers v. City of New York



Ruling Takeaway: EPCA does not preempt a law just because the law would prevent some EPCA-covered appliances from being used in some buildings. City of New York is still allowed to enforce Local Law 154

Source: [Public Health Law Center blog](#): 3/19/25

Alternative Solutions

1. **Energy Performance Approach:** Requiring higher building performance scores that limit source GHG emissions (via the California Energy Commission's hourly source energy metric).
2. **Air Quality Code:** Limit on-site NOX emissions or GHG emissions, in alignment with New York City and air quality control agencies
3. **Continue to educate** jurisdictions and stakeholders on the benefits of electrification

Adopt codes that explicitly meet the Energy Policy and Conservation Act (EPCA) requirements

EPCA requirements (excerpts) that building codes must

1. Permit a builder to... select items whose combined energy efficiency meet an overall building energy target;
2. Do not specifically require any EPCA-covered appliance to exceed federal standards
3. Offer options for compliance, on a 1-for-1 equivalent energy use or equivalent cost basis

- [Building and Home Energy Resource Hub](#) - provided by the California Energy Commission. Includes a comprehensive list of information, guidance, and rebates
- [LocalEnergyCodes.com](#) - provides comprehensive list of adopted model codes and cost effectiveness studies
 - [Cost Effectiveness Explorer Tool](#) – provides estimates of building stock, potential emissions savings, and policy options
- [Building Electrification Technology Roadmap](#) - covers the technical capabilities of a variety of end-uses
- [Ecosizer](#) - guides engineers and energy consultants for proper design of central heat pump water heating systems
- [Building Standards Commission Resources](#) - Title 24 guidebooks for local jurisdictions
- [California Air Resources Board 2022 Scoping Plan Appendix F Building Decarbonization](#) - overview of efficient building decarbonization research, important benefits, cost and cost savings, and strategies
- [Redwood Energy Electrification Guides and Research](#) - a series of comprehensive guides ranging in electrification topics including construction, retrofits, electric transportation, appliances, and strategies
- [The Switch Is On](#) – developed by the Building Decarbonization Coalition (BDC), this website provides a wealth of educational resources for communities, contractors, and residents to understand the benefits, incentives, and contractor support available for electric appliances

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