

Building Reach Code Updates

Council Sustainability Committee

May 29, 2024

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- **Reach Codes** are local building code amendments that exceed the State Building Code to achieve City environmental and sustainability goals.
- Updated as part of the **State Triennial Building Code update**, next in 2025.
- City has **partnered with Silicon Valley Clean Energy**
- **Proposing a new electric-readiness alternative** in response to the Berkeley Lawsuit
 - We can encourage going electric; we can't prohibit natural gas appliances

Impact of Our Reach Code



BUILDING PERMITS FINALED UNDER ALL-ELECTRIC CODE REQUIREMENTS (RESIDENTIAL UNITS IN RED)								
DEVELOPMENT TYPE								
YEAR	Single-Family and Duplexes		Townhomes/Rowhomes and Condominiums		Commercial and Mixed-Use Buildings		Total Per Year	
2020	49	49	67	67	1	108	117	224
2021	98	98	148	148	4	30	250	276
2022	71	71	89	89	12	13	172	173
2023	72	72	29	29	8	990	109	1,091
2024 (Q1 only)	8	8	1	1	2	0	11	9
Grand Total							659	1,773



OPTION 1



Electric Prewiring
Requirements

OPTION 2



Air Quality
(Zero NOx)

OPTION 3



Energy Performance
(Single Margin)

Option 1: Expand Prewiring Requirements



- Requires the installation from service panel to natural gas appliance of the following:
 - Electrical line (prewiring) and an outlet (or outlet cover);
 - Labeling the voltage for future use;
 - Providing dedicated space on the service panel for appliance circuit; and
 - Ensuring adequate space to accommodate the future electric appliance, as needed
- Includes all development types
- Amends Part 11 (CalGreen Code)



Option 1: Expanded Prewiring Requirements



Current 2022 State Building Code	Potential Expanded Requirements
<p><u>For New Construction:</u></p> <p>Single-Family Residential:</p> <ul style="list-style-type: none">• Heat pump water heater• Solar• Energy storage• Stove• Clothes dryer <p>Multi-Family Residential:</p> <ul style="list-style-type: none">• Heat pump water heater• Stove• Clothes dryer	<p><u>For New Construction (incl. Major Renovations)</u></p> <p>Single-Family Residential:</p> <ul style="list-style-type: none">• Heat pump space heating (furnace)• Outdoor cooking facilities• Pool/spa heating equipment• Indoor/outdoor fireplaces or fire pits <p>Multi-Family Residential:</p> <ul style="list-style-type: none">• Building electrical system sizing• Central (shared) and individual heat pump water heaters• Outdoor cooking facilities• Pool/spa heating equipment• Indoor/outdoor fireplaces or firepits <p>Nonresidential, Hotel/Motel, and Mixed-Use:</p> <ul style="list-style-type: none">• Commercial kitchens• Hot water supply temperature• All nonresidential gas or propane appliance <p>AND</p> <p><u>Evaluate lower threshold</u> for electric prewiring requirements in existing buildings (e.g., kitchen renovation or you touch it, prewire it)</p>

Option 2: Air Quality Approach



- Regulate air quality emissions from equipment/appliances
- Example: “Zero Nitrogen Oxide (NOx)” equipment requirement
- Only example applies to single-family residential; no example of application to other development types
- Amends Part 11 (CalGreen Code)



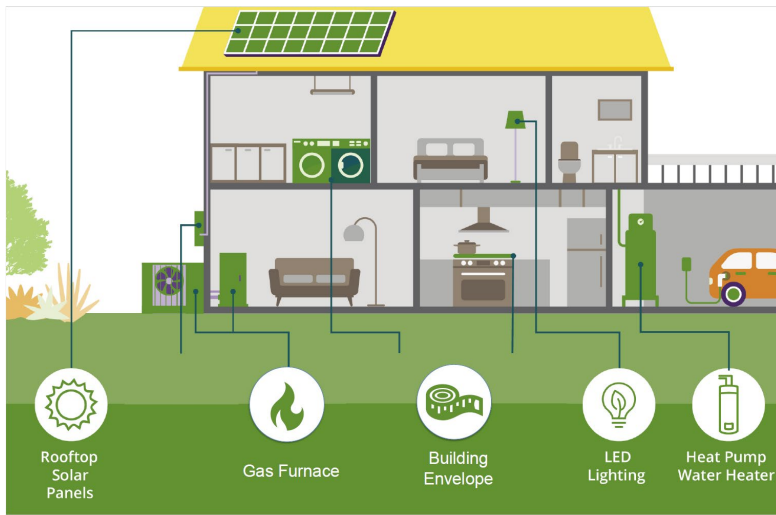
Option 3: Energy Performance Approach



- Regulate energy performance from equipment at a set percentage above the State Code
- Referred to as “Single Margin”
- Can apply to all development types
- Amends Part 6 (Energy Code)
- Requires a Cost Effectiveness Study
- Requires California Energy Commission (CEC) approval

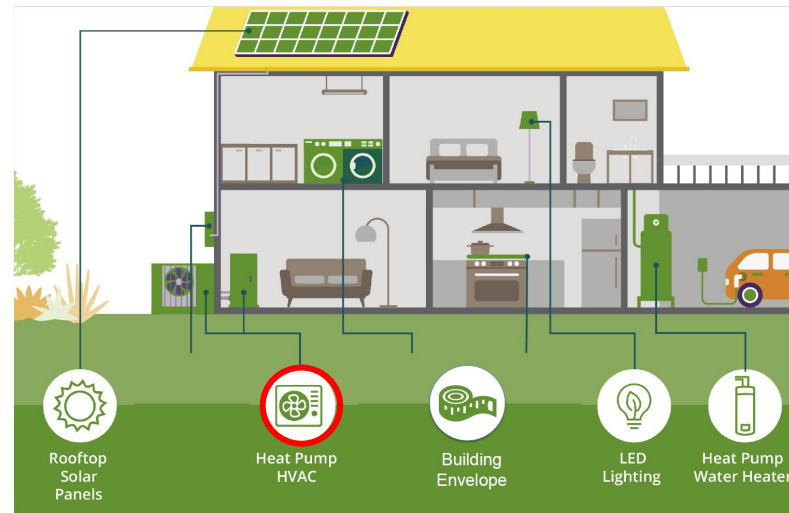


Option 3 EXAMPLE Energy Performance Approach



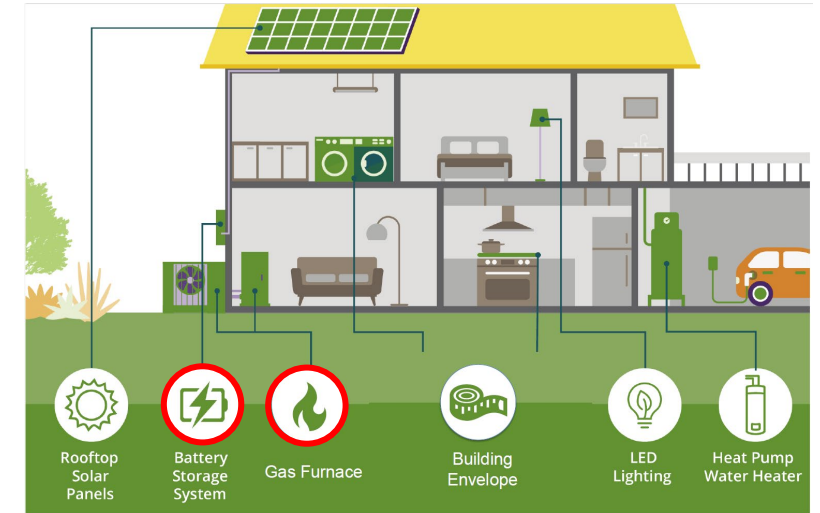
House Illustration source: Southern California Edison

Meets Base State Code



House Illustration source: Southern California Edison

Meet Energy Performance
w/ Electric Appliance



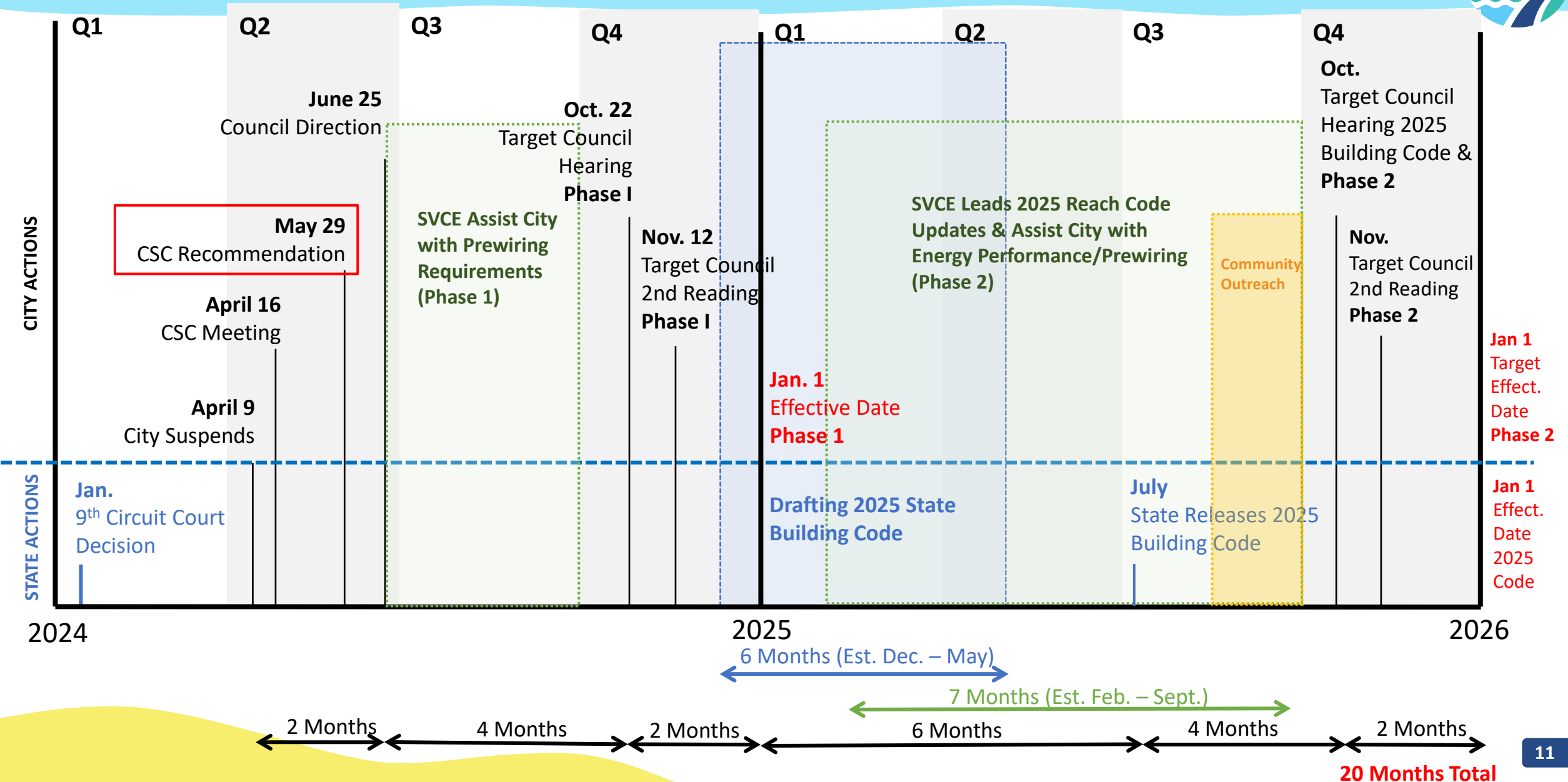
House Illustration source: Southern California Edison

Meet Energy Performance
w/ Gas Appliance



PHASE 1 ORDINANCE (2024):	PHASE 2 ORDINANCE (2025):
<ul style="list-style-type: none">• Add electrical rewiring requirements beyond 2022 State Building Code minimums for all development types.• Retain existing City thresholds for new construction and major renovations of existing buildings.• <u>TARGET:</u> Council in Q4 2024 for adoption; effective date January 1, 2025.	<ul style="list-style-type: none">• Establish an energy performance approach using 2025 State Energy Code factors.• Remove any duplicate rewiring requirements and evaluate new rewiring requirements for existing buildings below City's current threshold.• <u>TARGET:</u> Council in Q4 2025 for adoption, as part of 2025 Triennial Update; effective date January 1, 2026.

Implementation Timeline



Community Education and Engagement



- **Phase 1 (Expand Prewiring) – City website**
- **Phase 2 (Energy Performance & Additional Prewiring) & 2025 Reach Code Updates**
 - City website
 - City newsletters
 - Community Meeting
- **Ongoing – Create additional educational content**
 - Print materials
 - Web content

The screenshot shows the City of Mountain View website with the 'Development Permits' section active. The 'Residential' tab is selected, displaying a list of permit categories on the left sidebar, including 'GO ELECTRIC'. The main content area is titled 'Go Electric in Your Home' and features a list of benefits for electrification, such as avoiding costly upgrades in 2027, reducing fire and safety risks, and maximizing utility savings. Callout boxes highlight that induction cooktops are 20-40% faster and safer than gas, and that heat pumps are 3 times more efficient than gas heating. A contact box at the bottom provides information for a 'Go Electric Advisor'.

City of Mountain View
Development Permits

What are you looking for today?

Residential Non-Residential About Permits

Go Electric in Your Home

Font Size:

Have you heard about the benefits of electric appliances and equipment? There is no better time than now to consider the benefits:

- Avoid costly upgrades in the future by preparing now for new rules coming into effect in 2027 that will prohibit the sale of gas water heaters and furnaces.
- Reduce fire and life safety risks from earthquakes.
- Reduce the risk of asthma and chronic respiratory illnesses from harmful nitrogen oxides (NOx) that are emitted from gas-fire appliances.
- Take advantage of limited tax credits and Silicon Valley Clean Energy incentives.

INDUCTION COOKTOPS keep a constant desired temperature and heat water 20-40% faster than a traditional gas or electric stove! And, no more burns! Once cookware is removed from the induction top, the burner is safe to touch within a minute. Some induction cooktops even come with battery storage, so you can cook during a power outage.

HEAT PUMPS are 3 times more efficient than gas heating!

- Maximize utility savings with electric appliances, especially when paired with solar and battery storage, and become more energy independent!
- Make everyday earth day with electric appliances, which are greenhouse gas free!

Need help with how to electrify or what incentives you qualify for? Contact a Go Electric Advisor at svcegoelectric@smud.org or call 833-843-2435, or visit the [Go Electric Advisor website](#).

Next Steps



- Obtain input and recommended direction from CSC tonight
- Seek approval of direction from Council on June 25, 2024
- Begin working with Silicon Valley Clean Energy on drafting Phase 1 Ordinance with target to return to Council in Q4 2024
- In Q2 2025, begin working with SVCE on 2025 Reach Code Updates and Phase 2, target to return to Council in Q4 2025



Thank you