

# Proposed Energy Code Amendment to Reduce Greenhouse Gas Emissions from New Buildings

Board of Supervisors  
September 10, 2024



**Demian Hardman-Saldana**

Department of Conservation and Development

Contra Costa County

925-655-2816 · [Demian.Hardman@dcd.cccounty.us](mailto:Demian.Hardman@dcd.cccounty.us)



# Today's Presentation



**Ordinance  
Adoption Process**



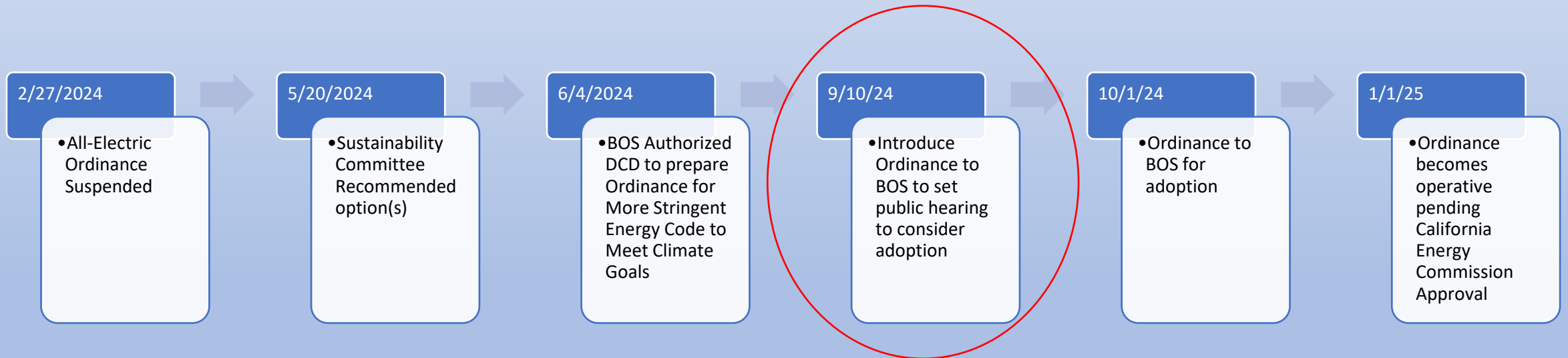
**Ordinance Overview**



**Energy Resources & Cost-  
Effectiveness**

# Ordinance Process

- ❑ On February 27, 2024, the Board of Supervisors suspended the all-electric ordinance in response to the to the Berkeley decision
- ❑ The proposed ordinance is planned for an operative date of January 1, 2025



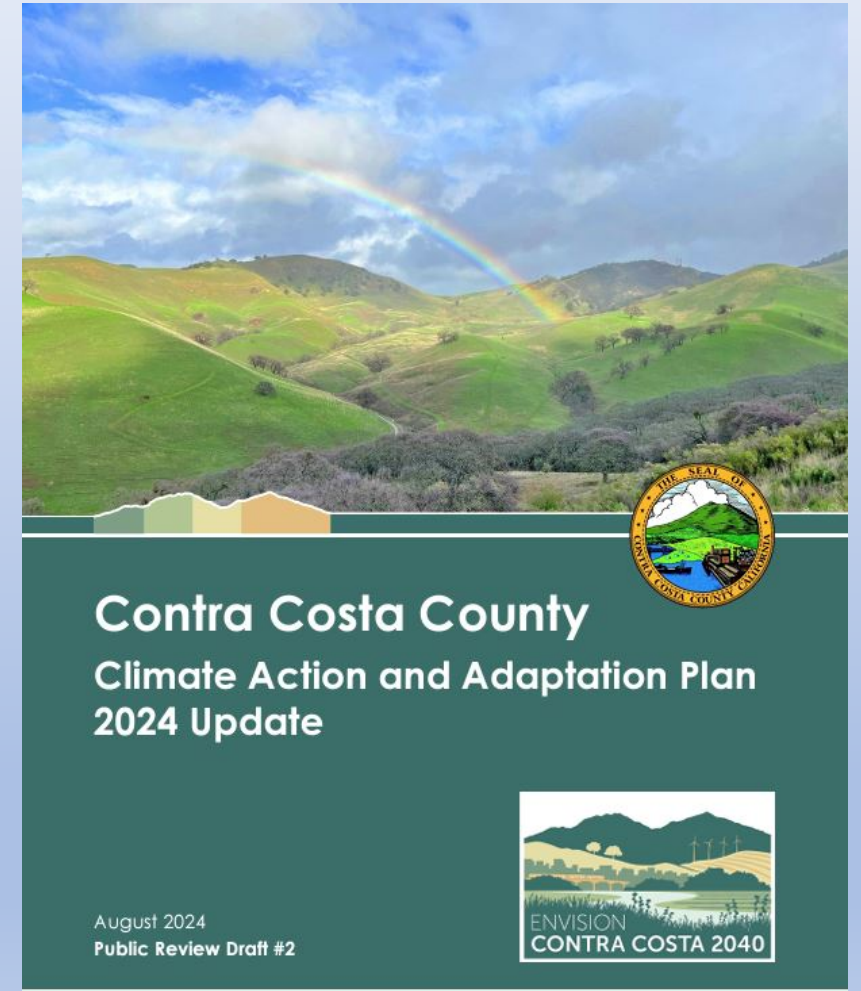
# Proposed Ordinance

## Purpose:

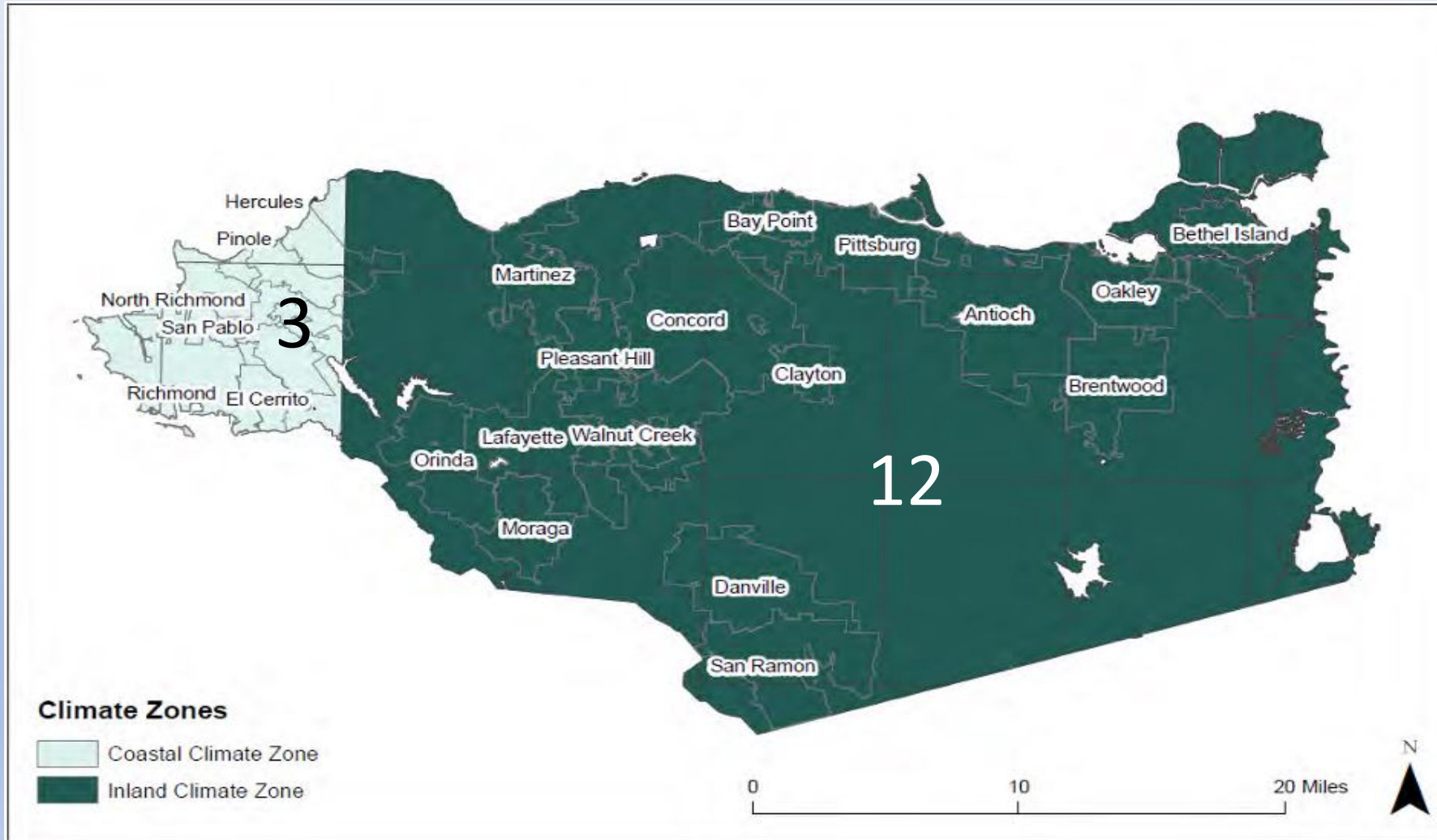
To replace emissions reductions lost from the suspended all-electric ordinance so the County can meet its 2024 Climate Action and Adaptation Plan goals.

## Proposed Action:

Amend the 2022 California Building Code to increase energy efficiency standards for the design and construction of newly constructed residential buildings, hotels, offices, and retail buildings with an operative date of January 1, 2025



# Energy Code Climate Zones



# Proposed Ordinance

Building Type	Climate Zone 3 West County Energy Improvement Margin	Climate Zone 12 Central/East County Energy Improvement Margin	Cost-effective Design Options
Single-Family Homes, Duplexes and Townhomes <sup>1</sup>	9 EDR1 Points	11 EDR1 Points	Install second heat pump system or install battery storage and additional solar.
Detached Accessory Dwelling Units (ADUs) <sup>1</sup>	Not yet proven cost-effective. No change recommended.	6.6 EDR1 Points	Only for Climate Zone 12, install second heat pump system, or install battery storage and additional solar.
Low-rise Multifamily (up to 3 habitable stories) <sup>2</sup>	10%	11%	More heat pump system(s), or install battery storage and/or additional solar.
High-rise Multifamily Residential (4 or more habitable stories) <sup>2</sup>	4%	4%	Would need additional solar above current code requirement(s).
Non-residential (Office, Retail, and Hotel) <sup>2</sup>	5%	4%	Would need additional efficiency above current code requirement(s).

<sup>1</sup> **Energy Design Rating (EDR1)** - Rates the building energy efficiency based on hourly source energy use for the home measured in kBtu/ft<sup>2</sup>-yr. It includes energy use for the building envelope, indoor air quality (IAQ), HVAC, water heating and unregulated loads. The metric approximates the building's greenhouse gas (GHG) emissions to support California's GHG reduction goals.

<sup>2</sup> **Source Energy (SE)** - The log run marginal source energy of fossil fuels that are combusted as a result of building energy consumption considering the long-term effects of Commission-projected energy resource procurement. For a given hour, the value in that hour for each forecasted year is averaged to establish a lifetime average source energy.

# Other Provisions & Exceptions

## Other Provisions

- Electric readiness in nonresidential new construction where gas is installed for hotel, office and retail buildings

## Exceptions

- Small homes exempt from installing solar under current code
- Nonresidential new construction with single-zone conditioning systems
- Projects with community solar and/or battery storage may use these systems to meet compliance
- Additions and alterations

# Impact on Energy Resources

This ordinance is not expected to significantly increase the electrical service requirement for new buildings compared to existing requirements

- Proposed ordinance allows for flexible design options, including mixed fuel options. Gas appliances are allowable if the overall building design complies with energy requirements.
- Newly constructed single-family homes are typically equipped with a 200-amp electrical service. This is the standard service from PG&E and will not be changed by the proposed ordinance.
- PG&E interconnection delays currently being experienced by many new construction projects will not be affected by this ordinance.



# Cost-Effectiveness and Impacts on Construction

This ordinance has cost-effective compliance pathways and is not expected to slow new development and construction in the County

- Cost-effectiveness studies show that the requirements proposed in this ordinance allow for multiple cost-effective pathways.
- Higher energy efficiency standards may increase up-front costs for constructing covered buildings – perhaps by 1-2% based on building design and materials selected. This increase will be offset by lifecycle energy bill savings.
- The proposed energy code amendments are expected to be included in the 2025 California Energy Code (effective January 2026) and the construction industry is aware and currently adjusting its practices.

# Questions?



Contact:

**Demian Hardman-Saldana**

Principal Planner

[demian.hardman@dcd.cccounty.us](mailto:demian.hardman@dcd.cccounty.us)

P: 925-655-2816