



# Building Electrification Update

City Council Meeting

July 30, 2024.

# Rational for Reach Code



Cost effective approach to decarbonize the built environment



Help developers and building owners reduce emissions



Improve air quality

# What is a reach code?

- Amendment to California Energy Code (Title 24 Part 6)
- Reach code requirements
  - Must be at least as restrictive as the Energy Code.
  - Must be cost-effective, demonstrate that the proposed code pays for itself over life of building.
  - Local governments must make finding that the reach code is needed for local climatic, geological, topographical, or environmental reasons.
  - Must be approved by CEC and filed with BSC.

# History

- November 2022 – City adopted a Building Electrification Reach Rode
  - All new construction to be all electric
  - Non-residential and multi-family install PV, offset 100% of electricity use or cover at least 50% of roof space
  - EV charging required
  - Limited exemptions
  - Infeasibility waivers

# CRA vs. City of Berkeley

- 2019 CRA sued Berkeley on their fuel gas piping ban in new buildings
- 3 judge panel of the 9<sup>th</sup> Circuit Federal Court stuck down Berkeley ordinance
- City of Berkeley requested an en-banc rehearing
- 2024 the 9<sup>th</sup> Circuit declined to reconsider
- Many jurisdictions with all electric or similar ordinances suspended enforcement

# City of Glendale Action

- Considering the Berkeley decision Glendale asked Rincon to outline alternate options.
- In May 2024 Rincon provided a memorandum outlining options for the City to consider.



# Reach Code Replacement Options

Option	What is it	Pro	Con
1. Gas ban through a local amendment to the building code	Complete gas ban – All electric ordinance	Easy to understand Easy to implement	Legally tenuous (Glendale City Council suspended parts of the all electric ordinance)
2. Air Quality Ordinance	Regulates sources of air emissions (NO <sub>x</sub> , GHG)	Complete gas ban (minus exemptions) EPCA Compliant Supported by SCAQMD and CARB efforts	Untested legally (some risk) (Sustainability Commission recommended staff research an emissions standard)
3. Single margin source energy code amendment	Establish an energy performance metric more stringent than state code	EPCA Compliant Well established reach code	Gas can still be installed in new construction More difficult modeling to show compliance

# Option 3: Single Source Energy Margin Code Amendment

- Cities in California can adopt local amendments to the energy code (Title 24).
- Cities can adopt more stringent requirements under the source energy rating
  - EDR1 for single family
  - Source Energy Score for low & high multifamily and nonresidential
- The single source energy margin establishes a performance standard that would apply to all electric and mixed fuel buildings. This approach may encourage all electric construction due to the superior energy performance of electric heating and water heating systems.
- This approach may also not work for all building types depending on climate zone and cost effectiveness results.

As an example, an all-electric home may achieve relatively high-performance levels with the following measures



Heat pump water heater



Heat pump space heater

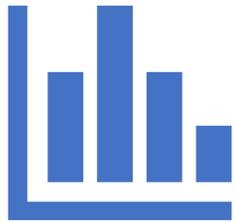


Prescriptive efficiency measures (baseline efficiency measures otherwise required by the state code)



Additional solar PV, additional efficiency measures or high-efficiency appliances

To achieve a similar performance level, a mixed-fuel home may need to install a combination of measures that may include:



### **Prescriptive efficiency measures**



### **Advanced efficiency measures, such as**

Increased ceiling insulation

Attic ducts to be buried in insulation

Slab insulation

Low-pressure drop ducts

Compact hot water distribution design

Battery storage

# Recommendations



Single source energy margin code amendments are a well-established approach to encouraging the construction of all electric buildings.

Staff can develop the amended reach code for City Council consideration in a timely manner.



# Thank you

Questions?

