

SAN JOSE BUILDING REACH CODE ADMINISTRATIVE UPDATE (ITEM 6.2)

City Council Meeting
September 12, 2023

Presented by
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AGENDA FOR TODAY

- Overview of Building Standards and Reach Codes
- Background on the City's Building Reach Code
- Proposed Building Reach Code Readoption and Administrative Updates
- Next Steps



BUILDING STANDARDS AND REACH CODES OVERVIEW

California Building Energy Efficiency Standards (Efficiency Standards) & California Green Building Standards (CALGreen)

- Set by the California Energy Commission (CEC)
- Increase energy conservation and reduce energy costs in buildings
- Adopted every three years

Building Reach Code

- Increases building code requirements above the current Efficiency Standards.
- Can be adopted at any time
- Must meet CEC's cost effectiveness standards



CITY OF SAN JOSÉ REACH CODE BACKGROUND

Climate Smart San José (2018)

City of San José Building Reach Code

2019: Required solar- and electrification-readiness, incentivized all-electric buildings, and required electric vehicle (EV)-readiness and equipment installation

2022: Readopted 2019 EV-readiness and equipment installation requirements

- **Cost effectiveness studies not available at that time to support re-adoption of other components**

2023: All cost effectiveness studies now available so remaining reach code requirements can be re-adopted



PROPOSED REACH CODE UPDATE OVERVIEW

The 2022 Efficiency Standards included the following updated requirements:

- Photovoltaic solar installation in high-rise multifamily and specified non-residential new construction
- Prewiring for future electrification in single-family and low- and high-rise multifamily
- Increased energy efficiency across all building types



The Proposed Reach Code only includes:

1. **Solar-readiness** requirements for high-rise multifamily and non-residential construction
2. **Electric-readiness** requirements for residential and non-residential construction.
3. **Updated energy efficiency** requirements for all new construction (incentivizing all-electric)
4. Minor additional **administrative updates**

Does not include additional EV-readiness reach code for new multifamily buildings being evaluated under a separate City work stream.

SOLAR-READINESS

Solar-readiness refers to providing reserved roof space (“solar zone”) for the future installation of solar panels.

The Proposed Reach Code extends solar-readiness to all building types, matching 2019 San José Reach Code requirements.



ELECTRIC-READINESS

Electric-readiness refers to the installation of an electrical circuit that is capable of powering an electric appliance when a gas appliance is installed.

The Proposed Reach Code requires:

- **Single-family and Multifamily:** Space designation for a future heat pump water heater in alignment with draft 2025 Efficiency Standards
- **Non-residential:** Revised electric-readiness requirements to allow more design flexibility when working with the highly variable non-residential building market



INCREASED ENERGY EFFICIENCY

- Similar to the 2019 reach code, the Proposed Reach Code requires higher energy performance buildings (i.e. higher “compliance margins”) to reduce emissions
 - **Compliance margins** refer to how a proposed building performs compared to a ‘standard’ building constructed to code minimum requirements
 - Can be expressed as a percentage or integer, with a positive figure indicating better energy performance (lower energy use)
 - **Higher compliance margins are more easily achieved by specifying all-electric appliances**
 - The 2022 Efficiency Standards added metrics for buildings to use to show compliance
 - The Proposed Reach Code uses the **Source Energy metric** to measure compliance margins
 - Represents a more complete picture of a building's energy efficiency.

INCREASED ENERGY EFFICIENCY (CONT'D)

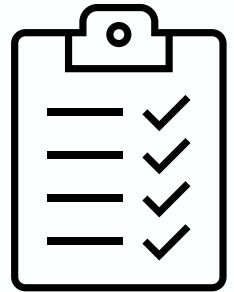
Proposed reach code includes the following compliance margins:

Occupancy Type	Source Energy Compliance Margins
Single-family	8 (Energy Design Rating 1 measurement)
Multifamily	6%
Office/Mercantile	10%
Hotel/Motel	6%
All Other Non-residential Occupancies	6%

- Represents the maximum values found to be cost-effective or the existing thresholds under the 2019 San José Reach Code, whichever was lower
- Small-to-medium Retail/Grocery/Schools/Banks are exempt as the 2022 Efficiency Standards strongly encourage these buildings to have heat pumps.
- Industrial/Manufacturing is excluded due to highly variable process loads.

ADMINISTRATIVE UPDATES

- In addition to readopting 2019 reach code components where not already covered by the 2022 Efficiency Standards, staff is proposing the following administrative updates to clarify and align the proposed reach code with the 2022 Efficiency Standards:
 - **Definitions**
 - Added “Electric Heating Appliance” and “Net Free Area” referenced in electric-readiness requirements.
 - Not including the “Mixed Fuel Buildings” and “All-Electric Building” definitions
 - **Prescriptive Requirements**
 - Not including prescriptive requirements for mixed fuel buildings for simplification and to allow flexibility.



BUILDING REACH CODE BENEFITS

Benefits of the Proposed Reach Code include:

- Reducing community-wide greenhouse gas emissions in line with the City's Climate Smart San José ("Climate Smart") plan and carbon neutrality by 2030 goals;
- Providing financial benefits related to lower-cost electric construction; and
- Supporting public health by decreasing air pollution emissions and exposure.





RECOMMENDATION

- Make findings related to the local geographical, topographical, climatic conditions and cost effectiveness, which are necessary to make modifications to the State of California's Building Energy Efficiency Standards;
- Approve an Ordinance amending various sections of Chapter 24.12 of Title 24 (Technical Codes) to modify provisions of the 2022 California Building Energy Efficiency Standards with certain exceptions, modifications, and additions which serve as a reach code to increase building efficiency, mandate electric- and solar-readiness, and incentivize all-electric development; and
- Authorize the City Manager to submit a reach code submittal package to the California Energy Commission for its approval as required by law.

If approved, the Proposed Reach Code would be effective October 1, 2023.

An aerial night photograph of a city, likely Los Angeles, showing a mix of modern and older architecture. In the background, a range of mountains is visible under a dark sky. The city lights are spread across the valley. A semi-transparent blue rectangular box is overlaid on the left side of the image, containing the word "Questions" in white text.

Questions