

# CLIMATE SMART SAN JOSÉ: BUILDING REACH CODE ADMINISTRATIVE UPDATE

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Presented by: Environmental Services Department

Presentation Dates: July 25 and July 27, 2023

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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
- Comments and Questions



# BUILDING STANDARDS AND REACH CODES OVERVIEW

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

- Standards are 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

# CITY OF SAN JOSÉ REACH CODE BACKGROUND

## 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 EV-readiness and equipment requirements
  - Cost effectiveness studies not available to support re-adoption of other components





# 2023 Proposed Reach Code Administrative Updates

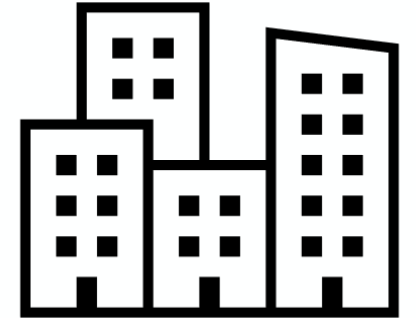




# PROPOSED REACH CODE UPDATE OVERVIEW

**The 2022 Efficiency Standards included the following updated requirements:**

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



**The proposed Reach Code only includes readoption of the following:**

1. **Solar-readiness** requirements for high-rise multifamily and non-residential construction where limited by number of stories.
2. **Electric-readiness** requirements for non-residential construction.
3. **Updated energy efficiency** requirements for all new construction to incentivize all-electric buildings

***Several minor additional administrative updates were also included.***

# SOLAR-READINESS

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

The proposed reach code requires:

- Solar-readiness for new nonresidential and hotel/motel <4 stories or greater and high rise multifamily/hotel/motel 10 stories or greater for buildings not installing solar.
  - The 2019 San José reach code extended solar ready requirements to all buildings irrespective of the number of habitable stories, and the 2022 proposal remains the same



# 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.**

**Additional requirements for systems using gas or propane:**

- **Single-family:**
  - 2022 Efficiency Standards already requires electric-readiness for single-family buildings and Accessory Dwelling Units.
  - The proposed reach code will require a designated exterior location for a future heat pump compressor unit to ensure heat pump readiness, in alignment with the draft 2025 Efficiency Standards.





# ELECTRIC-READINESS (CONT'D)



- **Multifamily:**
  - The proposed reach code will require water heating systems using gas or propane and serving multiple units to meet requirements that allow for future central heat pump water heater installation.
    - Reserving space for a heat pump water system that meets the total building hot water demand.
  - This requirement is in alignment with the draft 2025 Efficiency Standards.

# ELECTRIC-READINESS (CONT'D 2)

- **Non-residential:**

- There are no electric-readiness requirements in 2022 Efficiency Standards for non-residential and hotel/motel buildings.
- Similar to 2019, the proposed reach code will add electric-readiness requirements for fossil fuel systems, but allow designer discretion regarding the specific power requirements considering the wide variety of nonresidential systems that must be accommodated.





# COMPLIANCE APPROACHES

- The proposed reach code requires higher performance buildings to reduce emissions, achieved through higher source energy compliance margins compared to the 2022 Efficiency Standards.
  - These higher compliance margins are more easily achieved by specifying all-electric appliances
- The proposed reach code compliance margin requirements represent the maximum values found to be cost-effective or the existing thresholds under the 2019 San Jose reach code, whichever is lower.

# COMPLIANCE APPROACHES (CONT'D)

## Performance and prescriptive compliance approaches for residential buildings

- **Single-family:** A new building complies with the performance approach if the total energy budget calculated for the proposed design is no greater than the total energy budget calculated for the Standard Design Building and Source Energy Design Rating (EDR1) **compliance margin of at least 8.**
- **Multi-family:** A new building complies with the performance approach if it has a source energy **compliance margin of at least 6%.**



# COMPLIANCE APPROACHES (CONT'D 2)

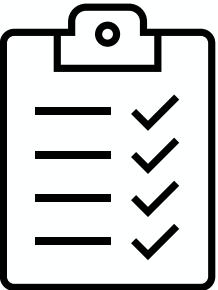
- **Non-residential:** A building complies with the performance approach if the energy budget calculated for the proposed design building has a source energy compliance margin per the table below:

Occupancy Type	Source Energy Compliance Margins
Office/Mercantile	10%
Hotel/Motel	6%
Industrial/Manufacturing	0%
All Other Non-residential Occupancies	6%

- Retail is exempted because these buildings are required to have heat pumps.
- Industrial/Manufacturing is excluded due to highly variable process loads.

# ADMINISTRATIVE UPDATES

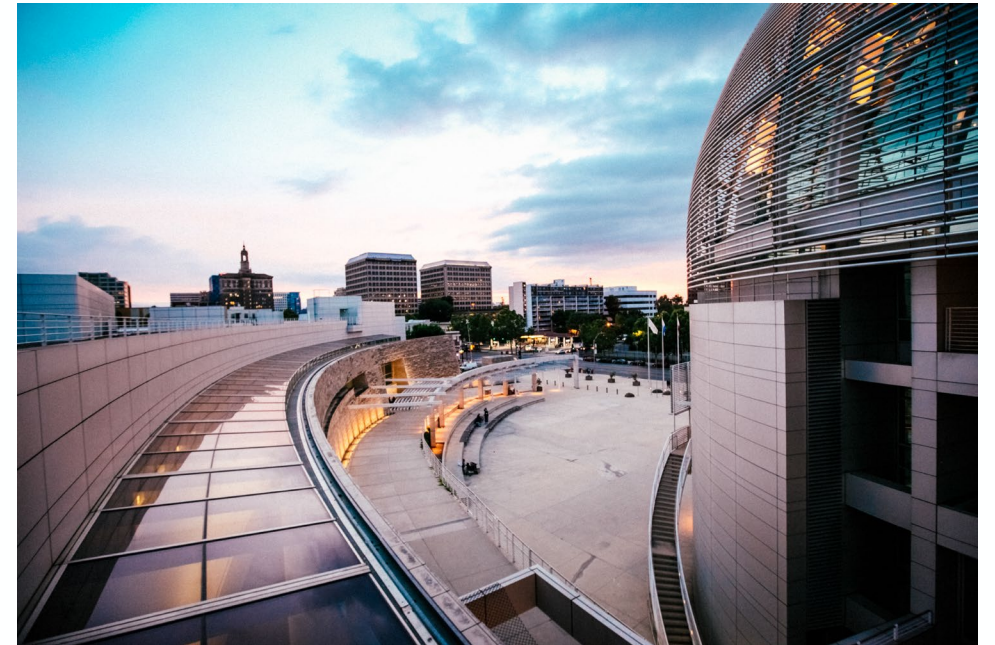
- In addition to readopting 2019 reach code components where not already covered by the 2022 Efficiency Standards, staff is proposing the following administrative updates to clarify and align the proposed reach code with the 2022 Efficiency Standards:
  - **Definitions**
    - Added “Electric Heating 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.
  - **Electric-readiness**
    - Included revised electric-readiness requirements to allow more design flexibility when working with the highly variable non-residential building market.





# NEXT STEPS

- Complete stakeholder engagement
- Update City reach code website with webinar presentation
- Present to City Council on August 29, 2023
- If approved, reach code effective October 2023



# QUESTIONS AND COMMENTS

**Do you have any questions or comments on the proposed reach code administrative updates?**

*Please raise your hand to speak  
or submit your comments and questions via the Q&A feature.*

You may also email us your comments by Wednesday, August 2 by 5:00 p.m. to: [climatesmart@sanjoseca.gov](mailto:climatesmart@sanjoseca.gov)