



# SINGLE-FAMILY, DUPLEX, AND TOWNHOME REACH CODES

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- ✚ ***These requirements do not apply to planning applications deemed complete before January 26, 2021.***
  - ✚ ***Reach codes do not apply to building permits submitted before January 26, 2021.***

**REACH CODES** are new building codes that exceed the state's standard construction codes. The California Energy Commission sets standards (California Energy Code) for energy efficiency to reduce greenhouse gas emissions. The Reach Codes exceed the California Energy Code requirements to accelerate the reduction of greenhouse gas emissions. They only apply to new buildings, and any alterations changing more than 50% of the existing building.

The Reach Codes apply to:

- *NEW SINGLE-FAMILY AND TOWNHOMES*
- *NEW DUPLEX HOMES*
- *NEW DETACHED ACCESSORY DWELLING UNIT*

**Electric appliances are required.** This includes, but is not limited to the fireplace, range, oven, heater, water heater, clothes dryer, etc. Gas lines are prohibited.

**New structures shall have solar panels** greater than or equal to the anticipated dwelling's annual electrical usage per California Energy Code 150.1(c)(14). See below.

**EV Chargers are required.**

1. New Level 1 outlet (standard outlet)
2. New Level 2 Ready Circuit (outlet for the charger)

EV Charger requirements do not apply to Detached Accessory Dwelling Units.

*Solar Panel Sizing:*

Calculation per California Energy Code 150.1(c)(14)

$$kW_{PV} = (CFA \times A) / 1000 + (ND_{well} \times B)$$

where:

$$kW_{PV} = \text{kWdc size of the PV system}$$

$$CFA = \text{Conditioned floor area}$$

$$ND_{well} = \text{Number of dwelling units}$$

$$A = 0.586 \text{ (per Table 150.1-C, CalEnergy)}$$

$$B = 1.21 \text{ (per Table 150.1-C, CalEnergy)}$$

## *REACH CODES FREQUENTLY ASKED QUESTIONS*

### **Q. What are Reach Codes?**

**A.** Reach Codes are new building codes that exceed the state's standard energy construction codes. The California Energy Commission sets standards (California Energy Code) for energy efficiency to reduce greenhouse gas emissions. The Reach Codes exceed the California Energy Code requirements to accelerate the reduction of greenhouse gas emissions. Reach Codes apply to new buildings.

### **Q. Why has the City Council adopting Reach Codes?**

- Improves new building health and safety for occupants
- Reduces new building construction costs
- Realizes cost effectiveness over the building life
- Helps transition City's building stock to State's planned phase-out of Natural Gas infrastructure
- Reduces greenhouse gas emissions within the City
- Supports the Sunnyvale Climate Action Playbook
- Supports Silicon Valley Clean Energy Authority's Building Electrification and Electric Vehicle Infrastructure Goals
- Supports State of California Greenhouse Gas Reduction Goal

### **Q: Do all-electric buildings cost more?**

**A:** In most cases, all-electric buildings are less costly to build. The service and piping for natural gas is an expense that is often ignored when comparing the cost of gas and electric equipment. An all-electric building starts without that expense, so even when electric equipment might be more expensive in some cases than its natural gas counterparts, that cost is offset by the gas infrastructure savings.

### **Q: Do the reach codes apply to remodels or renovations?**

**A:** The Reach Codes apply to new construction only, which includes a remodel/addition where less than 50% of existing exterior walls remain. Please refer to our Major Residential Remodels and Additions handout on our website.

### **Q. Will a garage conversion to an Accessory Dwelling Unit (ADU) trigger an all-electric requirement?**

**A.** Reach Codes apply to new buildings. Garage conversions are considered an alteration of a building and would not be required to comply.

### **Q. Will a detached garage conversion to an ADU trigger an all-electric requirement?**

**A.** The State California Energy Commission considers a detached garage conversion as an alteration, not a new residential building. Compliance would not be required for additions or alterations to buildings.

**Q. Do you need solar panels on the roof of a detached garage converted to an ADU?**

**A.** Since this project is considered an alteration, solar panels would not be required for this project.

**Q. Are solar panels required on an ADU addition to an existing house?**

**A.** No, solar panels are not required on additions to existing buildings. Solar panels are required to be installed on new detached buildings.

**Q. Do new detached ADU requires solar panels? Does the main house?**

**A.** A newly constructed detached ADU requires solar panels. If the ADU is on the same property as another building, the original building does not need solar panels.

**Q: I'm a current Sunnyvale resident that has natural gas appliances in my home – how will these reach codes affect me?**

**A:** The Reach Codes will not affect your existing gas appliances; the Reach Codes are applicable to new buildings.

**Q: Would the reach code apply to existing buildings?**

**A:** The reach code is meant for new buildings.

**Q: Do the reach codes apply to repairs of existing appliances or general maintenance?**

**A:** The repairs or maintenance to existing appliances will not be affected by the Reach Codes.

**Q: What if I need to replace a natural gas appliance in my home, such as a water heater, furnace, or stove? Does this mean I need to replace it with an electric version?**

**A:** The replacement of an existing gas appliances with a new gas appliance is permitted for existing buildings.