




NONRESIDENTIAL AND MULTIFAMILY REACH CODES

 *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 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.

NEW MULTIFAMILY RESIDENTIAL BUILDINGS – LOW-RISE (3 STORIES OR LESS)

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.

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

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

where:

kW_{PV} = kWdc size of the PV system

CFA = Conditioned floor area

ND_{well} = Number of dwelling units

A = 0.586 (per Table 150.1-C, CalEnergy)

B = 1.21 (per Table 150.1-C, CalEnergy)

EV CHARGERS requirements (see page 3)

NEW NON-RESIDENTIAL BUILDINGS & NEW MULTIFAMILY RESIDENTIAL BUILDINGS - HIGH-RISE

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

EXEMPT

1. F, H, and L occupancies.
2. Unavoidable gas applications.

3. Emergency Operation Centers.

Exceptions must prewire for future electric appliances.

SOLAR PANELS are required

Table 110.10-A: Solar panel requirements for all new nonresidential* and high-rise residential** buildings	
Square Footage of Building	Size of Panel
Less than 10,000 sq. ft.	Minimum of 5-kilowatt PV System
Greater than or equal to 10,000 sq. ft.	Minimum of 10-kilowatt PV System
Exception: As an alternative to a solar PV system, the building type may provide a solar hot water system (solar thermal) with a minimum collector area of 40 sq. ft., additional to any other solar thermal equipment otherwise required for compliance with Part 6.	

* Three habitable stories or fewer.

** Ten habitable stories or fewer.

EV CHARGERS requirements (see page 3)

ELECTRIC VEHICLE INFRASTRUCTURE REQUIREMENTS

Development Type		Adopted Ordinance
Single Family, Duplex & Townhomes	Level 1	1RC per unit
	Level 2	1RC per unit
	Unassigned spaces	Same as MF total
Multifamily Dwellings	Level 1	70% RC
	Level 2	30% RC
Hotel and Motels	EV Capable Conduit	50%
	Level 2	20% RC
Office Buildings	EV Capable Conduit	35% C
	Level 1	-
	Level 2	35% EVCS
	Level 3	-
Other Non-residential	EV Capable Conduit	35% C
	Level 1	-
	Level 2	35% EVCS
	Level 3	1 per 100 or fraction thereof

LEGEND	
C	EV Capable : Conduit provided
RC	EV Ready Circuit : Outlet provided
EVCS/EVSE	EV Charging Station : Charger installed
LEVEL 1	120V
LEVEL 2	240V
LEVEL 3	400-800V

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: Would the electric vehicle charging infrastructure requirements be the same for all building uses.

A: The requirements are tailored for different building types to respond to the different charging needs of home, work, and visiting usage patterns. It is also tailored to different densities (e.g., high-rise vs low-rise multifamily) so that the requirement is appropriate for the situation.

Q: How would the Reach Code promote more solar PV installations in Sunnyvale?

A: The Reach Codes require new buildings to have photovoltaic systems (solar panels) installed to benefit each building. The PV installations are tailored for each building based on their size and use.

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 legal square footage remains of the floor and roof area.

Q: Would the Reach Code apply to existing buildings?

A: The Reach Code applies only to new construction. In the future, Reach Codes may apply to additions and alterations.

Q: Do the Reach Codes apply to repairs of existing systems or general maintenance?

A: The repairs or maintenance to existing systems are not be affected by the Reach Codes.

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

A: The replacement of like-for-like gas appliances is permitted for existing buildings.

Q: How would the Reach Code impact affordable housing projects?

A: Affordable housing will benefit from the Reach Codes. Electric buildings are less costly to construct than projects with gas appliances.