System

New Rooftop Residential Retrofit PV Systems With Energy Storage Systems
Installed by contractor with all licenses required by jurisdiction
Lithium Ion
Each residence must have a unique utility meter

Electrical

Applicable National Electric Code
600V Max per DC System Size
Single phase 240 V only
Aluminum wires are only allowed for Backup Initiation Device feeders
Must Use 600V rated PV wire (due to outer diameter > 0.24” (6.1mm))
Must use 90 deg C rated insulated wire
Max 2 DC strings in parallel
Max 9 current carrying conductors in a raceway
Inverter output circuit conductors must be THWN-2, or listed NM
Terminals must be rated to 75 deg C, labeled for use with Cu wires, and accept minimum 8 AWG wire
If using microinverter, 1 module per microinverter
Whenever used, microinverters or AC Modules must be rated for a 20A branch circuit overcurrent device
Permitted to install on up to or equal to 400A Service
Permitted to install on up to or equal to 225A Service Disconnect
Permitted to install on up to or equal to 225A busbars
No existing PV or ESS
May install only 1 module type
May install up to 2 Inverters for String Inverters, up to 1 inverter type for Micro-inverters and AC modules Systems
Conduit may not be Schedule 80 PVC
Modules and Inverters must be listed on CEC
Rapid Shutdown cannot be satisfied using the method: No exposed wiring or conductive parts [690.12(B)(2)(3)]
No trenching allowed
All power production inverter outputs have the same point of connection
No new loads, only new monitoring loads are allowed
All equipment is assumed to be non-continuous rated
ESS must be paired with new PV at this time
AC Coupled ESS may not be connected in parallel
May install only 1 racking system type
Height of rooftop conduit >= 7/8”
Flat Plate PV Modules Only

Structural

Detached one- and two-family dwellings and townhomes not more than three stories above grade plane in height with a separate means of egress
Accessory structures to one- and two-family dwellings and townhomes not more than three stories above grade plane in height
Penetrations within 4 ft of the fire-rated property line on the roof of a townhome shall not be permitted
Installations in multi-family structures or R-2 occupancies shall not be permitted
Installations on mobile homes governed by Heath and Safety Code and/or Housing and Urban Development regulations shall not be permitted.
Applicable International Residential Code
PV system + hardware weight is less than or equal to 4psf
No ground mounted systems
No carports or non-permanent structures
No modification alterations or upgrades to the structure
At least 20% of each tilt-up mounted array must be contained under 2 feet above the roof
Installed on a permitted structure
ESS Must be less than 400lbs and its center of mass shall be located less than 4ft from the floor in high seismic areas (Seismic Design Category D,E,F)
No wood shake or wood shingle roofing
Limit of 10” above the roof for pitched (>2/12) roof systems
No metal roof or low-slope roof in areas with > 15psf snow load

Fire