New Rooftop Residential Building Integrated PV Systems With Energy Storage Systems

Installed by contractor with all licenses required by jurisdiction

Lithium Ion

### Electrical

Applicable National Electric Code

- 600V Max per DC System Size
- Single phase 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
- Single Family Dwelling Only
- 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
- 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

### Structural

Applicable International Residential Code

- PV system + hardware weight is less than or equal to 4psf
- No carports or non-permanent structures
- 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)

### Fire

Applicable International Residential Code