



RESIDENTIAL SOLAR PHOTOVOLTAIC SYSTEMS

Submittal/Permitting Requirements

The provisions of the of the 2022 CRC, 2022 CEC & latest edition of the CSP Guidebook shall apply to Solar Photovoltaic electrical energy systems, including the array circuits, inverters, and controllers for such systems.

Plan Check Plan check to take 3 business days for rooftop arrays under 10kW

Submit a .pdf version of the plan set with structural & load calculations electronically by through the City's Online Permit Portal

Plan set must include:

Site Plan: Provide full dimensioned site plan showing location, size and use of all structures on the lot, property lines, and distance to property lines. Show size and location of the service meter, location of all solar photovoltaic system.

Line Diagrams: Provide a minimum of a single line diagram showing

- | | |
|---|---|
| a. Array configuration | g. Inverter specified |
| b. Array wiring identified | h. Conduit/wiring from inverter to Utility point of connection identified |
| c. Combiner/junction box identified | i. AC grounding and system grounding specified |
| d. Conduit/wiring from array to inverter identified | j. Point of connection attachment method identified |
| e. DC grounding system specified | |
| f. Disconnecting means specified | |

Inverter Information: Provide inverter manufacturer specification sheet

PV Module Information: Provide module manufacturer specification sheet

Array Information: Show the following on the plan

- | | |
|---------------------------------------|---------------------------|
| a. Number of module on the plan | e. Operating current |
| b. Number of parallel source circuits | f. Maximum system voltage |
| c. Total number of modules | g. Short-circuit current |
| d. Operating voltage | |

Wiring and Overcurrent Protection: Show the following on the plan

- Wire type shall be 90°C wet and continuous rated
- Overcurrent protection on inverter output circuit is sufficient

Required Photovoltaic Signs:

- DC Combiner/Junction Box:
 - "Warning. Electrical shock hazard. The direct current circuit conductors of this photovoltaic power system are ungrounded but may be energized with respect to ground due to leakage paths and/or ground faults."
- DC Disconnect:
 - "Warning. Electrical shock hazard. The direct current circuit conductors of this photovoltaic power system are ungrounded but may be energized with respect to ground due to leakage paths and/or ground faults."
 - "PV system – DC disconnect"
 - *At accessible location*
 - Operating current
 - Operating voltage
 - Maximum system voltage
 - Short-circuit current
- Inverter:
 - "If a ground fault is indicated, the normally grounded conductors may be energized and ungrounded."

- b. "Warning. Electrical shock hazard. Do not touch terminals. Terminals on both the line and load sides may be energized in the open position."
- c. "The maximum AC output operating current _____"
- 4. AC Disconnect:
 - a. "PV system – AC disconnect" PV Signage
- 5. Meter:
 - a. "The maximum AC output operating current _____"
 - b. "The operating AC voltage _____"
 - c. "Dual sources: Second source is Photovoltaic"
 - d. "PV connection" When applicable
- 6. Permanent directory or plaque providing location of service disconnecting means and photovoltaic system disconnecting means, if not located at the same location

Rooftop Systems only

Roof Information: Show the following information on the plan

- a. Weight of the arrays
- b. Describe and show the roof structural elements & percentage of roof coverage
- c. Identify roof type
- d. Provide detail of photovoltaic panel mounting hardware attachment to the roof framing members
- e. Provide mounting hardware manufacturer specification
- f. Provide engineering calculations and details demonstrating adequacy of supporting members, including wind uplift effects

Groundmount Systems only

Footings Detail: Provide a detail drawing of the footings for the structure

Screening Methods: Include plans/elevations showing the method(s) that will be used to properly screen the solar panel array

Permit

- 1. Contractor (C-10 or C46)
 - a. Copy of State Contractor's License on file with License Board
 - b. Certificate of Worker's Compensation
 - c. Letter of Authorization to act as Agent for Contractor

Inspections – (one day notice prior to 4pm required)

Rooftop Systems

- Final Inspection

The inspector will not be getting on the roof of the residence. In order to pass your inspection you will need to provide pictures of:

 - 1.) The tag on the panel showing the brand and fire rating of the panel and
 - 2.) The junction box showing it is properly grounded.
 - 3.) Placement of panels showing 3' OCFA required setback

Groundmount Systems

- Footings & Steel Inspection
- Electrical Underground Inspection
- Final Inspection

Prior to a final sign-off you will need to obtain Planning Division approval. In order to pass your inspection, you will need to provide pictures of the installed screening underneath the solar panel array or coordinate a site visit with the planner prior to the date the final inspection is scheduled.

Electrical Meter Panel (if part of project)

- Electrical Power Meter Release
- Final Electrical (after meter panel has been installed)
- Lath inspection if stucco broken open