



Residential Photovoltaic Systems Permit Requirements & Checklist

Purpose

This standardized permit submittal has been developed for residential (one and two family dwellings) roof mounted PV systems of up to 10 KW. If the project is located in a historical district, or is a ground mount system, additional requirements for review may be required. **This checklist must be completed and submitted with all PV permit applications.**

Design and Review

All residential PV applications shall be reviewed at the by the building department, with a quicker turn around time than standard building plan checks. The following documents must be included in all PV Permit applications.

1. A PV System Plan Set specifying:
 - a. Site plan clearly showing location of all components of the PV system.
 - b. Single line diagram of electrical equipment clearly showing size of main panel, sub panels, PV system equipment, including make, model, size of units, and disconnects.
 - c. Conductor wiring methods and insulation rating, system and solar panel grounding methods as per inverter and solar panel manufacturer's listings, and PV system DC and AC disconnects.
 - d. Signage (on panel(s), disconnects and transmission line conductors).
 - e. Placement of equipment and modules with associated access pathways.
 - f. Equipment type, listing, testing agency approvals, etc.
 - g. Panel attachment details.
2. This completed PV Checklist.
3. Manufacturer Spec sheets of all proposed equipment
 - a. Listing information including mounting, conductor type, method of grounding of PV modules and mounting racks.

Photovoltaic Disconnect Requirements

PV disconnect shall be installed in a readily accessible location and located together when possible. The disconnecting means for all electrical panels shall be designed to shut off all power (solar and domestic).

Photovoltaic Worksheet

Roof Design

Approx. Age of House _____ Approx. Age of Roof _____

Roofing Type: Comp. Shingle Tile Shake Metal

Rafter Size: _____x_____ inches

Rafter Spacing: 16" o.c. 24" o.c. Other: _____

Rafter Span: _____ Array Weight: _____ lbs.

If Truss/Rafters are over-spanned, or if the array is over 5 lbs. psf, design by a licensed professional may be required.

PV System Components

Per Module

Manufacturer & Model

Photovoltaic Panel	_____	
Rated Power (PMax)	_____	Watts
Open Circuit Voltage (Voc)	_____	VDC
Short Circuit (Isc)	_____	Amps DC
Max. Voltage (Vpmax)	_____	VDC
Max. Current (Ipmax)	_____	Amps DC
Inverter Model	_____	

Module Configuration

No. of Modules in Series _____

No. of Strings in Parallel _____

Total Rated Power of System _____

DC Grounding Electrode Conductor _____ AWG CEC Sec 690.47 (c) (2)

AC Grounding Electrode Conductor _____ AWG CEC Sec 690.47 (c) (2)

* Attach PV module, inverter and mounting system cut sheets

Customer Name _____

Project Address _____

Drawn By _____ Date _____

Installer's Name _____

Company Name _____

Address _____

Telephone _____

Cell Phone _____

E-Mail _____

License No. & Class _____

Checklist for PV System Plan Check

- Is a basic site diagram provided showing location of structure and equipment? Yes No
- Is the array configuration shown? Yes No
- Is the array wiring identified? Yes No
- Is the combiner/junction box identified? Yes No
- Is the AC/DC disconnect box identified? Yes No
- Is the equipment grounding specified? Yes No
- Is the conduit size, from the array to the power source, identified? Yes No
- Are cut sheets provided for the PV modules? Yes No
- Are cut sheets provided for the mounting hardware? Yes No
- Are cut sheets provided for the inverter? Yes No
- Is the system user's manual available to the property owner? Yes No
- Does the roof appear to be in good condition? Yes No
- Has every plan sheet been wet signed by the designer (min. 3 sets)? Yes No

Note: Three forms of signage are required for solar PV systems. Permanently affixed labels shall have a red background with white lettering. Printed material shall be resistant to fading per UL 969, and CEC Article 690.