Standardized Permit Submittal

Residential Photovoltaic Systems

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.

Design and Review

1) All PV applications shall be reviewed at the front counter for completeness. Every attempt will be made to review and approve projects that are residential PV systems of 10 KW or less "over the counter."
2) Larger PV systems (>10 KW) or systems using new technology (i.e., micro inverters, thin film panels, etc.) may be required to submit detailed plans and specifications for plan review.
3) All PV system plans shall specify:
   a) 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.
   b) Signage (on panel(s), disconnects and transmission line conductors).
   c) Placement of equipment and modules with associated access pathways.
   d) Equipment type, listing, testing agency approvals, etc.
   e) Panel attachment details.

Submittal requirements

1) Provide site plan clearly showing location of all components of the PV system.
2) Provide single line diagram of electrical equipment clearly showing size of main panel, subpanels, PV system equipment, including make, model, size of units, and disconnects.
3) 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.