



RESIDENTIAL PV SUBMITTAL REQUIREMENTS

SITE PLAN:

- SHOW ALL PROPERTY LINES & PROVIDE LOCATIONS & DIMENSIONS OF ALL STRUCTURES ON PROPERTY.
- SHOW THE LOCATION OF ELECTRICAL SERVICE, PV EQUIPMENT, INVERTERS, AC/DC DISCONNECTS, ETC.
- INCLUDE BOTH THE DESIGNER & THE PROPERTY OWNERS NAME, ADDRESS & PHONE NUMBER.

ONE LINE DIAGRAM:

- SHOW ARRAY CONFIGURATION. IDENTIFY ARRAY WIRING, COMBINER/JUNCTION BOX & CONDUIT FROM THE ARRAY TO PV POWER SOURCE DISCONNECT.
- IDENTIFY THE EQUIPMENT & SYSTEM GROUNDING.
- SPECIFY THE DISCONNECT. IDENTIFY THE CONDUIT FROM DISCONNECT TO INVERTER.
- SPECIFY THE INVERTER. IDENTIFY THE CONDUIT FROM INVERTER TO DISCONNECT TO PANEL.
- SPECIFY AC/DC GROUNDING ELECTRODE CONDUCTOR SIZE.
- IDENTIFY THE POINT OF CONNECTION ATTACHMENT METHOD.

INVERTER INFORMATION:

- PROVIDE THE INVERTER CUT SHEETS & MODEL NUMBER. INVERTER SHALL BE LISTED FOR UTILITY INTERACTIVITY.
- INDICATE THE MAX CONTINUOUS OUTPUT POWER AT 40° C & PROVIDE THE INPUT VOLTAGE RANGE OF INVERTER.

PV MODULE INFORMATION:

- PROVIDE CUTSHEETS FOR PV MODULES. MODULES SHALL BE LISTED.
- INDICATE THE V_{oc} (OPEN-CIRCUIT VOLTAGE. SEE THE LISTING LABEL).
- INDICATE THE MAXIMUM PERMISSIBLE SYSTEM VOLTAGE (SEE LISTING LABEL).
- INDICATE THE I_{sc} (SHORT-CIRCUIT CURRENT) & SPECIFY MAX SERIES FUSE RATING FROM THE LISTING LABEL.
- INDICATE THE P_{max} , VOLTAGE & CURRENT (MAX POWER AT STANDARD TEST CONDITIONS) FROM LISTING LABEL.

ARRAY INFORMATION:

- NUMBER OF MODULES & NUMBER OF PARALLEL SOURCE CIRCUITS.
- INDICATE OPERATING VOLTAGE & CURRENT (SEE CALCULATION SHEET), MAXIMUM SYSTEM VOLTAGE (CEC 690.7) & SHORT-CIRCUIT CURRENT (CEC 690.8).

WIRING & OVERCURRENT PROTECTION:

- ARRAY WIRING (DC): INDICATE WIRE TYPE & SIZE. SPECIFY EQUIPMENT GROUNDING CONDUCTOR SIZE (2022 CEC TABLE 250.122).
- SOURCE CIRCUIT TO INVERTER WIRING & OVERCURRENT PROTECTION (DC): PROVIDE NUMBER OF WIRES, TYPE & SIZE, FUSE SIZE (IF APPLICABLE) & EQUIPMENT GROUNDING CONDUCTOR SIZE (2022 CEC TABLE 250.122).
- INVERTER TO GRID-TIE WIRING & OVERCURRENT PROTECTION (AC): PROVIDE WIRE TYPE & SIZE, WORKING VOLTAGE, BREAKER SIZE & EQUIPMENT GROUNDING CONDUCTOR SIZE (2022 CEC TABLE 250.122).

CENTER FEED SERVICE PANELS CONNECTED ON THE LOAD SIDE CANNOT USE THE 20% INCREASE EXCEPTION SINCE THE SOLAR BREAKER CANNOT BE LOCATED ON THE OPPOSITE END OF THE BUSS BAR FROM THE MAIN BREAKER (CEC 705.12(D)(7)).

ROOF INFORMATION (ROOFTOP SYSTEMS):

- IDENTIFY ROOFING TYPE. PROVIDE SIZE, SPAN & SPACING OF RAFTERS.
- IF THE CONDUCTORS FROM THE PV ARRAY ARE RUN THROUGH THE HOUSE, SPECIFY WHAT METHOD WILL BE USED TO ADDRESS THE PROTECTION ISSUES.
- SPECIFY THE WEIGHT OF THE ARRAY (POUNDS PER SQUARE FOOT-INCLUDE MOUNTING HARDWARE). IF MORE THAN 4 LBS PER SQ FT, STRUCTURAL CALCULATIONS & A FRAMING PLAN THAT DETAILS HOW THE RAFTERS WILL BE STRENGTHENED ARE REQUIRED.
- STRUCTURAL CALCULATIONS ARE REQUIRED FOR TILE ROOFS, SYSTEMS INVOLVING PANELS WHICH ARE INTEGRATED INTO ROOF TILES, PANELS MORE THAN 12" OFF THE ROOF & ROOFS WITH AN OVERLAY OF ROOFING MATERIAL.
- ATTACHMENT DETAILS OF PV PANELS TO THE RAILS & RAIL INSTALLATION INSTRUCTIONS.
- IDENTIFY METHOD OF SEALING ROOF PENETRATIONS.

ACCESS AND PATHWAYS

- PATHWAYS SHALL BE CONSTRUCTED OVER AREA CAPABLE OF SUPPORTING FIREFIGHTERS ACCESSING THE ROOF.
- PATHWAY SHALL BE LOCATED IN AREAS WITH MINIMAL OBSTRUCTIONS, SUCH AS VENT PIPES, CONDUIT OR MECHANICAL EQUIPMENT.
- ROOF ACCESS, PATHWAYS AND SETBACK REQUIREMENTS SHALL BE PROVIDED IN ACCORDANCE WITH SECTIONS R324.6.1 THROUGH R324.6.2.1.

SETBACK AT RIDGE	
PV ARRAYS PERCENT OF THE PLAN VIEW TOTAL ROOF AREA	HORIZONTAL RIDGE SETBACK
≤33%	18" BOTH SIDES OF RIDGE
>33%	36" BOTH SIDES OF RIDGE
≤66% +NFPA 13d SPRINKLER	18" BOTH SIDES OF RIDGE
>66% +NFPA 13d SPRINKLER	36" BOTH SIDES OF RIDGE

GROUND MOUNTED STRUCTURE:

- WEIGHT OF ARRAY IN POUNDS PER SQUARE FOOT, INCLUDING MOUNTING HARDWARE.
- PROVIDE DETAILS OF ARRAY SUPPORTS, FRAMING MEMBERS, POSTS & FOOTINGS. IF THE MOUNTING STRUCTURE IS UNFAMILIAR TO THE AHJ &/OR IS MORE THAN SIX FEET ABOVE GRADE, IT MAY REQUIRE ENGINEERING CALCULATIONS. PROVIDE DETAILS ON THE METHOD OF MODULE ATTACHMENT TO THE MOUNTING STRUCTURE.

REFER TO THE 2022 CALIFORNIA ELECTRICAL CODE (CEC) TABLE 310.16 OR 310.17, 2022 CEC 690.31(A), 2022 CEC TABLE 310.15(B)(2)(a), 2022 CEC 310.10 FPN.

NOTE: PRIOR TO SCHEDULING THE FINAL BUILDING INSPECTION, THE PV INSTALLATION SHALL BE INSPECTED AND APPROVED BY THE TURLOCK FIRE DEPARTMENT.

Note: The information provided in this form is intended as general guidance to assist the public with their solar permitting application. Omission of any portion of the California Code in this guideline does not exempt applicants from complying with the most recent applicable codes.