

COUNTY OF TEHAMA DEPARTMENT OF BUILDING & SAFETY

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Photovoltaic Submittal Checklist

For all systems provide two sets of:

- Electrical schematic diagram of system (module wiring series/parallel), disconnects, grounding/bonding, wire, conduit type, size, and number of conductors in each section of conduit). When batteries are to be installed include them in the diagram, and their locations/rooms and venting.
- Site Diagram (show arrangement of panels on the roof, location of combiner box, inverter, utility disconnect, main service, show approx. distance from panel to all components).
- Equipment cut sheets including inverters, modules, wind generators, etc.
- Cost breakdown of solar equipment, labor, structural for ground mount
- Completed page two, the System Summary sheet.

For Roof Mounted Systems Provide:

- Engineered or listed system for mounting and attachment of system.
- Weight of array: _____ psf
- Roof type: _____ Truss _____ Cut and stack
- If the roof is cut and stack, provide the following:
 - a. _____ Size of rafters
 - b. _____ Span of rafters
 - c. _____ Spacing of Rafters

For Ground Mount and Wind Generator Systems Provide:

- Engineering (When the total height from ground to top of the array (not post height) exceeds 6 feet) for mounting, attachments, and foundation to meet the minimum wind and snow loads. Provide details of attachments, anchors brackets, photovoltaic panels, and all hardware.
- Provide plot plans (dimension all setbacks to all structures and property lines).

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System Summary:

- Roof Mount
 Off-Grid

- Ground Mount
 Grid Tie

Inverter(s):

Number of Inverter(s) _____
DC Input Voltage Range _____

Model Number _____
Listed for Utility Interconnection (Y, N)

Modules:

Total # of modules per inverter _____

Model Number _____

From the module listing:

*Maximum system voltage _____

Open Circuit Voltage (Voc) _____

Short-circuit current (Isc) _____

Voltage at Pmax _____

Maximum series fuse rating _____

Current a Pmax _____

Calculated system voltage _____ = (Voc x # of modules in series x 1.13) NEC 690.7

Calculated system voltage must be less than or equal to the module *Maximum system voltage.

Array information:

Total number of modules _____ Number of modules in each series _____

Number of parallel source circuits _____

Operating voltage _____ volts (Voltage at Pmax x number of modules in series)

Operating current _____ amps (Current at Pmax x number of strings in parallel)

Minimum PV source circuit ampacity for conductor sizing _____

(Isc x number of parallel circuits x 1.25 x 1.25) NEC 690.8A-1, 690.8B-1 and NOTE 2.

Explanation: To determine wire sizing and over current protection you must determine the minimum source circuit conductor ampacity which is 125% of the maximum PV source circuit current ampacity (NEC 690.8.A-1). The maximum PV source circuit current ampacity is 125% of the source circuit ampacity or Isc (NEC 690.8B-1).

NOTE 1: All wiring rated at 90 degrees and equipment on array side of the inverter must be DC rated.

NOTE 2: Further ampacity adjustments are necessary when more than 3 current carrying conductors are installed in the conduit. See NEC Table 310.15(B)(2)(a)

