



# COUNTY OF MODOC

Building & Safety Department

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DOMINIC BUDMARK  
Building Official

## Alternative Energy Submittal Checklist

### For All Systems Provide (two sets of):

- Site diagram / Plot Plan; dimension all setbacks to all structures and property lines, show arrangement of panels on the roof or location on the property if ground mount, location of the the combiner box, inverter, utility disconnect, main service, show approximate distance from the panel to all components.
- Equipment cut sheets including inverters, modules, wind generators, etc.
- Electrical schematic diagram of the 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.
- Completed the information below and page two, the System Summary sheet.

### For Roof Mounted Systems Provide:

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

### For Ground Mount and Wind Generator Systems Provide:

- Provide 2 sets of wet stamped **Engineered Plans** that include details of attachments, anchors brackets, photovoltaic panels, and all hardware. (When the total height from the ground to the top of the post exceeds 6 feet).
- Provide a cost breakdown of the system, including labor.

# System Summary Information/Worksheet

## Type of System:

- |   |  |
|---|--|
| <input type="checkbox"/> Off-Grid                     | <input type="checkbox"/> Grid Tie (Net metering) |
| <input type="checkbox"/> Photovoltaic                 | <input type="checkbox"/> Wind Generation         |
| <input type="checkbox"/> Other (Specify type?): _____ |  |

## Type of Mounting System:

- |                                     |                                       |
|-------------------------------------|---------------------------------------|
| <input type="checkbox"/> Roof Mount | <input type="checkbox"/> Ground Mount |
|-------------------------------------|---------------------------------------|

## Inverter(s):

Number of Inverter(s): \_\_\_\_\_ Model Number: \_\_\_\_\_  
DC Input Voltage Range: \_\_\_\_\_ 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 at Pmax: \_\_\_\_\_

**Calculated System Voltage:** (NEC 690.7) \_\_\_\_\_ = (Voc x the number of modules in series x 1.25)

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:** \_\_\_\_\_

(NEC, 690.8(A)(1), 690.8(B)(1) and Note 2) / (Isc x number of parallel circuits x 1.25)

Explanatory note(s): 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, 690.8(B)(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. (NEC, Table 310.15 (B)(2)(a))