PV System Checklist – System Summary Sheet 1

Submittal Checklist:

PROPERTY ADDRESS/APN# _____

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 there locations/rooms and venting.

[ ] Site diagram (show arrangement of panels on the roof or ground, location of combiner box, inverter, utility disconnect, main service, show approx. distance from panel to all components, dimension all setbacks to all structures and property lines).

[ ] Equipment cut sheets including inverters, modules, wind generators, etc.

[ ] Label equipment for electrical hazard per CEC sec. 690.17

[ ] System KW _____

[ ] Completed page two, the System Summary sheet.

For Roof Mounted Systems Provide:

[ ] Solar panels that cover more than 50% of the total roof area, require fire deapatment approval.

[ ] Engineered or listed system for mounting and attachment of system.

[ ] Integrated systems that replace roofing material require detailed information showing class "A" roof assembly.

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.

PV System Checklist – System Summary Sheet 2

System Summary:

[ ] Roof Mount [ ] Ground Mount [ ] Batteries

[ ] Off-Grid [ ] Grid Tie [ ] Generator

Inverter(s):
Number of Inverter(s) Manufacture/Model Number _____

DC Input Voltage Range_____ Listed for Utility Interconnection (Y, N)

Modules:
Total # of modules per inverter manufacture/Model Number_____

From the module listing:
*****Maximum system voltage _____ Open-circuit voltage (**VOC**) _____
Short-circuit current (**ICS**) _____ Voltage at Pmax _____
Maximum series fuse rating _____ Current a Pmax _____

***Calculated system voltage** = (**VOC x** #of modules in series **x** 1.13) CEC 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 _____
(**ICS x** number of parallel circuits **x** 1.25 **x** 1.25) CEC 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 (CEC 690.8.A-1). The maximum PV source circuit current ampacity is 125% of the source circuit ampacity or **ICS** (CEC 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 CEC Table 310.15(B)(2)(a)
NOTE 3: PER CEC 690.63 Exception: For dwelling unit, the sum of the ampere ratings of the over current devices shall not exceed 120 percent of the bus bar or conductor.