



2019 CALIFORNIA BUILDING STANDARDS CODE OF REGULATIONS TITLE 24

PV Submittal Checklist – System Summary Sheet

The following items are required for a complete submittal.

To avoid delay, please use the attached Document Naming Conventions for all digital submittals

PROPERTY ADDRESS / APN #: _____

- (Please mark all that apply) [] Main Residence [] Second Residence [] Garage/Storage [] Barn
[] Manufactured Home (if roof mounted, permit will be through HCD) [] Other: _____

[] Required: Signed contract with the property owner for the solar installation

For All Systems, Provide 2-Sets for Roof Mount or 3-Sets for Ground Mount (minimum size 11" x 17"):

- [] 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], rapid shutdown, D/C color coding. When batteries are to be installed include them in the diagram and their locations/rooms and venting.
[] For ALL Battery Connections: An Electrical Engineer is required.
[] Site diagram (show arrangement of panels on the roof or ground, location of combiner box, inverter, utility disconnect, main service, show approximate distance from panel to all components, dimension all setbacks to all structures and property lines, generator and transfer locations if applicable).
[] Equipment cut sheets including inverters, modules, generators, transfer switch if applicable, etc.
[] Labeling schedule for equipment and electrical hazard per CEC Sec. 110.21(B), 690.13, 690.31, 690.56, 705.10 and 705.12
[] System KW _____ capacity
[] Completed page 2 of the System Summary sheet
[] Labeling schedule for equipment and electrical hazard per CEC Sec. 110.21(B), 690.13, 690.31, 690.56, 705.10 and 705.12

For Roof Mounted Systems Provide:

- [] Photovoltaic systems shall be Class A listed and labeled for fire classification per UL 1703. Provide documentation demonstrating compliance.
[] Identify location and method of rapid shutdown per CEC sec. 690.12
[] Solar panels that cover more than 50% of the total roof area, require fire department approval.
[] Engineered or listed racking 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 7 feet] for mounting, attachments, and foundation to meet the minimum wind and snow loads. Engineering required for all structures if ground snow load (Pg) exceeds 50 psf. Provide details of attachments, anchors, brackets, photovoltaic panels, and all hardware.



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System Summary: [] Roof Mount [] Ground Mount [] Batteries
[] Off-Grid [] Grid Tie [] Generator

Interver(s): # of Inverter(s): ___ Manufacturer / Model Number: ___
DC Input Voltage Range: ___ Listed for Utility Interconnection [] Yes [] No

From the Module Listing: *Maximum System Voltage: ___ Open-Circuit Voltage (VOC): ___
Short-Circuit Current (ICS): ___ Voltage at Pmax: ___
Maximum Series Fuse Rating: ___ Current at 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 # of Modules: ___ # of Modules in Each Series: ___
of Optimizer / Micro-Inverters: ___ # of Parallel Source Circuits: ___

[] Provide and identify Arc Fault protection per CEC sec. 690.11

Operating Voltage: ___ volts (Voltage at Pmax x # of modules in series)

Operating Current: ___ amps (Current at Pmax x # of strings in parallel)

Minimum PV Source Circuit Ampacity or 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 705.12 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.

[] If derating main breaker less than 175 amps, Load Calculation Worksheet is required.

I understand applications for building permits will be reviewed for plan completeness.
An incomplete submittal package may be returned, and additional fees assessed, for subsequent reviews.

ADDRESS: _____ APN #: _____

SIGNATURE: _____ DATE: _____



Document Naming Conventions

Specific naming conventions are required to facilitate the electronic document submittal process. Failure to adhere to the naming format may result in requests for corrections to the application packets and delays in processing.

Do not apply any security setting which will interfere with approval markups and file combining.

If a permit number has not been assigned, please use "BLD22" instead of the permit number (BLD22-01234)

Plan sheets	File Naming Conventions
Plans (shall include all sheets indicated on the submittal requirement checklist in one file)	BLD22-01234_JONES_PLANS

Associated Documents	File Naming Conventions
Construction Waste Management Plan	BLD22-01234_JONES_CWM
Fire Sprinkler Plans	BLD22-01234_JONES_FS PLANS
Fire Sprinkler supporting documents	BLD22-01234_JONES_FS INFO
Solar PV System	BLD22-01234_JONES_PV
Solar PV supporting documents	BLD22-01234_JONES_PV INFO
Special Inspection Agreement	BLD22-01234_JONES_SPECIAL INSPECTION
Structural Calculations	BLD22-01234_JONES_STRUCTURAL CALCS
Title 24 documents	BLD22-01234_JONES_ENERGY CALCS
Truss Calculations	BLD22-01234_JONES_TRUSS CALCS

Correction and Revision documents shall follow the naming conventions above followed by Corrections "COR" or Revision "REV" numbering each submittal accordingly. See examples below:

- **Corrections** are required by the County
 - BLD22-01234_JONES_COR1_ENERGY CALCS
 - BLD22-01234_JONES_COR2_ENERGY CALCS

- **Revisions** are requested by the applicant
 - BLD22-01234_JONES_REV1_ENERGY CALCS
 - BLD22-01234_JONES_REV2_ENERGY CALCS

A new plan set is required for each re-submittal, if a slip sheet is necessary, it is the applicant's responsibility to insert the sheet into the plan set accordingly at the time of submittal.

At permit issuance, the applicant will be provided with the approved PDF documents with "_APPROVED" added to each file name.