



Land Use Services Department Building & Safety Division

SMALL RESIDENTIAL (< 10 kW) SOLAR PERMIT-STANDARD CONDITIONS

All of the following conditions contained herein are applicable and must be incorporated into the construction of the project. Additional comments or corrective action(s) may be required by the Building Inspector if any applicable codes or regulations are violated.

1. The project must fully comply with the most current version of the **2019 California Building Standards Codes** as adopted by the County of San Bernardino.
2. Working clearances around all electrical equipment shall be maintained in accordance with **CEC 110.26**.
3. PV equipment and all associated wiring and interconnections shall only be installed by qualified persons. Solar permits shall be pulled by a licensed contractor. **CEC 690.4 (C)**
4. Rooftop mounted PV system panels and modules shall meet a minimum fire classification as required by **R902.4** and **CBC 1505.9**.
5. Photovoltaic panels and modules shall be listed and labeled in accordance with **UL 1703**. Inverters shall be listed and labeled in accordance with **UL 1741**. Systems connected to the utility grid shall use inverters listed for utility interaction. **R324.3.1**
6. Arc Fault (AFCI) DC circuit protection is required for all PV systems on or penetrating a building with a maximum system voltage of 80 volts or greater. The AFCI protection shall be listed and labeled in accordance with **UL 1699 (B)**. **CEC 690.11**
7. PV systems shall be provided with DC ground-fault protection. **CEC 690.41 (B)**
8. All associated electrical equipment required for the PV system shall be listed and labeled.
9. Approved smoke and carbon monoxide alarms are required within the dwelling unit and shall be field verified either through final building inspection or a County of San Bernardino Self-Certification Form. Smoke alarms are required to be installed in all bedrooms, outside each bedroom, and at least one on each floor of the house. Carbon Monoxide alarms are required outside each bedroom and at least one on each floor of the house. **R314.1, R315.1**
10. Installation of PV System shall not obstruct or interfere with the function of plumbing vents or mechanical equipment; minimum of 6 inch separation is required. **CMC 304.1, CPC 906, SPG Part 5 Sect. 8**
11. All new rooftop penetrations shall be sealed and made weather tight with approved materials. **R324.4.3**
12. Appropriate working clearances shall be provided around existing rooftop equipment. **CMC 304.1**
13. DC conductors run inside a building (or attic) shall be contained in a metal raceway or enclosure from point of penetration to first readily accessible disconnecting means and appropriately marked and identified. **CEC 690.31 (G)**
14. All exterior conduit, fittings, and boxes shall be rain-tight and approved for use in wet locations, properly supported, and marked accordingly. **CEC 110.28, CEC 314.15**
15. Any conductors exposed to sunlight shall be listed as sunlight resistant. **CEC 300.6 (C) (1)**
16. All metallic raceways and equipment shall be bonded and electrically continuous. **CEC 250.90**
17. Grounding electrode conductors shall be continuous, except for splices or joints at bus bars within listed equipment. **CEC 250.64 (C)**
18. PV system Point of Connection shall be on the Supply Side or Load Side of the service disconnecting means and comply accordingly with requirements set forth by **CEC 705.12**.
19. PV System disconnecting means shall be provided at a readily accessible location, be externally operable and labeled. **CEC 690.13**.
20. Isolating devices shall be provided to isolate PV modules, ac PV modules, fuses, dc-to-dc converters, inverters, and charge controllers from all conductors that are not solidly grounded. **CEC 690.15**
21. Isolating devices and/or disconnecting means shall be installed at a location within the respective equipment, or within line of sight and within 10-feet of the respective equipment. **CEC 690.15(A)**

22. Revised plans shall be required to be resubmitted if the installed array and associated equipment does not match the approved building plans. Additional fees shall also apply.
23. New electrical shall be located at least three (3) feet (0.9 m) from Gas meter or Gas shutoff/valves. [NFPA 54:5.7.2.3] **CPC 1208.7.1**
24. Notify serving utility before activation of PV system.
25. Existing main breaker and Solar back-feed breaker does not exceed
1)120% of top fed busbar rating or 2) 100% of center fed busbar rating (**CEC 705.12 D(2)**)
26. Licensed C-10 or C-46 Contractor can prepare & sign PV plans only if they are performing the work, otherwise plans shall be prepared by a licensed design professional. (**B & P Code 5536, 5537.2, 5537.4 and 6737.3**)
27. Proposed racking system California Engineering Certification has been provided and is suitable for its intended installation with consideration to environmental loads and proposed span lengths.
28. Roof covering shall be Class A, in a non-deteriorated state and no more than 2 roof layers. Pursuant to **CRC Chapter 9**
29. The weight of the new solar array(including all mounting equipment) is less than 4 lbs.ft²
30. The roof anchors are an industry standard 5/16 inch bolt with a minimum 2 1/2" penetration into the existing roof framing members or equivalent
31. The existing roof framing members supporting the solar array are in good service, materially sound, and are not considered substandard.
32. Racking System Standoff Spacing
1) Location is not in a snow load area: The racking system standoffs are spaced no more than 4 ft. on center; 6-feet on center; or as allowed by manufacturers' specifications and staggered
2) Location is in a snow load area: The standoffs are attached at every rafter.
Alternative: Analysis performed and provided by licensed design professional justifying alternate standoff spacing considering load cases presented in **R324.4.1.1**
33. Ground Mount Solar System (<1000 Volts) Guarding of Live Parts **CEC 110.26, CEC 110.27**
1) Installation shall be guarded against accidental contact by approved enclosure or as listed in **CEC 110.27 (A)**.
2) An approved enclosure shall consist of a permanent fence 3-feet away from array and minimum 4-feet tall.
3) All enclosure doors or hunged panels shall be capable of opening a minimum of 90 degrees. **CEC 110.26(4)(c)**
34. **Attic access shall be provided at time of final inspection to confirm rafter size and that fasteners have not missed framing members.***
*** Or Engineer of Record shall provide a structural observation report that identifies any deficiencies. This report shall be to the best of the structural observer's knowledge and address all items pursuant to CBC 1704.5.2, item 4 (include stamp and signature)**