

 <p>Building Division 285 Hamilton Avenue Palo Alto, CA 94301 650.329.2496</p>	<p><b>PHOTOVOLTAIC (PV) Summary Inspection Checklist</b></p>	Revision Date 08/25/2015
		Requirements for: Residential PV Systems under 10kW
		Codes Enforced: <ul style="list-style-type: none"> <li>• 2013 California Codes of Regulations Title 24</li> <li>• Palo Alto Municipal Code (PAMC)</li> </ul>

## Field Inspection Guide for Rooftop Photovoltaic (PV) Systems Standard Plan

Make sure all PV system AC/DC disconnects and circuit breakers are in the open position and verify the following.

1. All work done in a neat and workmanlike manner (CEC 110.12).
2. PV module model number, quantity and location according to the approved plan.
3. Array mounting system and structural connections according to the approved plan.
4. Roof penetrations flashed/sealed according to the approved plan.
5. Array exposed conductors are properly secured, supported and routed to prevent physical damage.
6. Conduit installation according to CRC R331.3 and CEC 690.4(F).
7. Firefighter access according to approved plan.
8. Roof-mounted PV systems have the required fire classification (CBC 1505.9 or CRC R902.4).
9. Grounding/bonding of rack and modules according to the manufacturer's installation instructions that are approved and listed.
10. Equipment installed, listed and labeled according to the approved plan (e.g., PV modules, DC/DC converters, combiners, inverters, disconnects, load centers and electrical service equipment).
11. For grid-connected systems, inverter is marked "utility interactive."
12. For ungrounded inverters, installation complies with CEC 690.35 requirements.
13. Conductors, cables and conduit types, sizes and markings according to the approved plan.
14. Overcurrent devices are the type and size according to the approved plan.
15. Disconnects according to the approved plan and properly located as required by the CEC and City of Palo Alto Utilities
16. Inverter output circuit breaker is located at opposite end of bus from utility supply at load center and/or service panelboard (not required if the sum of the inverter and utility supply circuit breakers is less than or equal to the panelboard bus rating).
17. Labels shall be phenolic where exposed to sunlight. Labels required on conduit shall be permanent, weather resistant and suitable for the environment. Labels shall be red background w/white lettering.
18. Connection of the PV system to the grounding electrode system according to the approved plan.

19. Access and working space for operation and maintenance of PV equipment such as inverters, disconnecting means and panelboards (not required for PV modules) (CEC 110.26).

### Palo Alto Utility Requirements

- A. Prior to Building Department Final approval, an inspection by the City of Palo Alto meter shop is required. Call 650-496-6987 to request an inspection with the meter shop. A green sticker will be applied once the meter shop inspection has passed.
- B. If electrical equipment is located near a gas meter, verify required clearances are met. See gas meter standard drawing #std-gd-02 for clearance requirements.
- C. Per City of Palo Alto Utilities, the AC disconnect shall be located within sight and within 10' of the main electrical service. The AC disconnect shall be readily accessible with visible-blades and lockable.

**Table: Signage Requirements for PV systems**

Code Section	Location of Label	Text
CEC 690.5(C)	Utility-interactive inverter & battery enclosure	WARNING ELECTRIC SHOCK HAZARD IF A GROUND FAULT IS INDICATED, NORMALLY GROUNDED CONDUCTORS MAY BE UNGROUNDED AND ENERGIZED.
CEC 690.35(F)	All enclosures with ungrounded circuits or devices which are energized and may be exposed during service	WARNING ELECTRIC SHOCK HAZARD. THE DC CONDUCTORS OF THIS PHOTOVOLTAIC SYSTEM ARE UNGROUNDED AND MAY BE ENERGIZED.
CEC 690.14(C)(1)	On the main service when dc wiring is run through the building and the dc disconnect is located other than at the main service	DC DISCONNECT IS LOCATED....
CEC 690.14(C)(2)	On the ac and dc disconnects	PHOTOVOLTAIC SYSTEM DISCONNECT
CEC 690.53	On the dc disconnects	OPERATING CURRENT ____ OPERATING VOLTAGE ____ MAXIMUM SYSTEM VOLTAGE____ SHORT CIRCUIT CURRENT ____
CEC 690.54	At interactive points of interconnection, usually the main service	RATED AC OUTPUT CURRENT ____ AMPS NORMAL OPERATING AC VOLTAGE ____ VOLTS
CEC 690.56(B)/ 690.14(D)(4), 705.10 2011 CEC 690.4(H)	At the electrical service and at the PV inverter if not at the same location	A directory providing the location of the service disconnecting means and the photovoltaic system disconnecting means
CEC 690.17	On the dc disconnect and on any equipment that stays energized in the off position from the PV supply	WARNING ELECTRIC SHOCK HAZARD. DO NOT TOUCH TERMINALS. TERMINALS ON BOTH THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION.
CEC 705.12 (D)(7)	Inverter output OCPD	WARNING INVERTER OUTPUT CONNECTION.

		DO NOT RELOCATE THIS OVERCURRENT DEVICE.
CFC 605.11.1.4, CEC 690.31(E)(3), 690.31(E)(4), CRC R331.2.4	On conduit, raceways, and enclosures, mark every 10 feet, at turns, above/below penetrations	WARNING: PHOTOVOLTAIC POWER SOURCE

\*Labels have a red background with white lettering \*