Field Inspection Guide for Rooftop Solar Photovoltaic (PV) Systems

During the field inspection, photographic or video evidence of the items listed below may be required. In addition, photographic or video evidence of 10% (or a minimum of two) of the attachment points of the PV panels to the roof shall be submitted. Images shall be readily identifiable to the installation project. See example photograph Appendix A.

All installations shall be in accordance with the approved plans. At the time of inspection installer shall provide:

a. the means to safely access and inspect construction on the roof
b. knowledgeable personnel on site familiar with the installed system
c. access to the inside of the house to inspect for required carbon monoxide and smoke alarms

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

1. Array mounting system and structural connections according to the approved plan.

   See example photograph Appendix B.

2. Roof-mounted PV systems have the required fire classification (CBC 1505.9 or CRC R902.4).

   See example photograph Appendix C.

3. Grounding/bonding of rack and modules according to the manufacturer’s installation instructions that are approved and listed.

   See example photograph Appendix D.

4. If applicable, the conduit installation in the attic with 18” minimum clearance from the roof assembly (provide attic access for inspection).

   See example photograph Appendix E.
5. All work done in a neat and workmanlike manner (CEC 110.12).

6. PV module model number, quantity and location according to the approved plan.

7. Firefighter access according to approved plan.

8. Roof penetrations flashed/sealed according to the approved plan. Also check for plumbing vents under modules. Provide proper slope in rerouted pipes, if applicable.

   See example photograph Appendix B.

9. Exposed array conductors properly secured, supported and routed to prevent physical damage.

10. Conduit installation according to CRC R331.3 and CEC 690.4(F).

11. Conductors, cables and conduit types, sizes, markings, and temperature ratings according to the approved plan.

12. Equipment installed, listed and labeled according to the approved plan (e.g., PV modules, DC/DC converters (power optimizer), combiners, inverters, disconnects, load centers and electrical service equipment).

13. For ungrounded inverters, installation complies with CEC 690.35 requirements.

14. For grid-connected systems, inverter is labeled as "utility interactive."

15. Disconnects according to the approved plan and properly located as required by the CEC.

16. Overcurrent devices are the type and size according to the approved plan.

17. 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).

18. PV system markings, labels and signs according to the approved plan.

19. Connection of the PV system to the grounding electrode system according to the approved plan.

20. 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)."