



Village of Carol Stream

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Rooftop Solar Photovoltaic (PV) System Field Inspection Checklist

This checklist provides basic guidelines for inspecting most residential rooftop solar PV systems (15 kW and under). Ground-mounted systems, systems with energy storage, building-integrated systems, and commercial systems, for example, would not be fully covered by this checklist. The intent of using the checklist is to provide transparent and well-defined information to minimize the number of re-inspections and accelerate project completion for most PV systems. These guidelines are not exhaustive.

Make sure all PV disconnects and circuit breakers are in the open position and verify the following:

- 1.** All work done in a neat and workmanlike manner [NEC 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 and manufacturers' instructions.
- 4.** Roof penetrations flashed/sealed according to the approved plan and manufacturers' instructions.
- 5.** Exposed cables are properly secured, supported, and routed to prevent physical damage.
- 6.** Conduit installation according to NEC 690.31(D) and the approved plan.
- 7.** Firefighter access according to IRC R324 and the approved plan.
- 8.** Roof-mounted PV mounting system and modules have sufficient fire classification [IRC R324.4.2].
- 9.** Grounding/bonding of rack, modules, inverter(s), and other electrical equipment according to the manufacturer's instructions.
- 10.** Equipment installed, listed, and labeled according to the approved plan and manufacturers' instructions (e.g., PV modules, inverters, dc-to-dc converters, rapid shutdown equipment).
- 11.** For grid-connected systems, inverter is marked "interactive," or documentation is provided to show that inverter meets utility interconnection requirements.

- 12.** Conductors, cables, and conduit types, sizes, and markings according to the approved plan.
- 13.** Overcurrent devices are the type and size according to the approved plan.
- 14.** Disconnects according to the approved plan and properly located as required by the NEC.
- 15.** Inverter output circuit breaker is located at opposite end of bus from utility supply at load center and/or service panelboard. If panel is center-fed, inverter output circuit breaker can be at either end of busbar [NEC 705.12(B)] (not required if the sum of the inverter and utility supply circuit breakers is less than or equal to the panelboard bus rating).
- 16.** PV system markings, labels, and signs according to the approved plan.
- 17.** Connection of the PV system equipment grounding conductors according to the approved plan.
- 18.** Access and working space for operation and maintenance of PV equipment such as inverters, disconnecting means and panelboards (not required for PV modules) [NEC 110.26].
- 19.** The rapid shutdown system is installed and operational according to the approved plan and manufacturers' instructions [NEC 690.12].
- 20.** Building mounted solar energy collection systems on residential structures shall not extend beyond 12 inches parallel to the roof surface. Systems on nonresidential structures shall not extend beyond 36 inches parallel to the roof surface. Systems on all structures shall not extend above the highest peak of a pitched roof.

Contact Information

If you have any questions, please contact us at:

- Community Development
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