



Photovoltaic support basic inspection content

Are all items outlined in this section relevant to a PV system?

Not all items outlined in this section are relevant to each PV system. This inspection reference details most of the issues that relate to the PV system during the inspection process. All California Electrical Code (CEC), California Residential Code (CRC), California Building Code (CBC) and California Fire Code (CFC) references are noted.

Do Photovoltaic (PV) systems need to be certified?

Photovoltaic (PV) systems must adhere to required codes and use certified products and equipment by a Nationally Recognized Testing Laboratory (NRTL). Codes, product standards, and regulations governing the installation of PV systems provide assurance that they can be safely installed and operated.

What types of PV systems are covered by this document?

This document is targeted at fleets of third-party-owned, grid-connected PV systems of the following size classes: residential rooftop (typically less than 10 kW); commercial and industrial rooftops and shade structures (10 kW to 1,000 kW); and ground-mounted systems (often greater than 1,000 kW).

Do I need to meter a photovoltaic system?

It is assumed that aluminum framed photovoltaic (PV) panels mounted on a "post" and rail mounting system, the most common in the industry today, will be installed by the homeowner. While metering the system is encouraged, the specification does not address system wiring elements for associated system sensors or monitoring equipment.

What are the requirements for a roof-mounted PV system?

Firefighter access according to approved plan. Roof-mounted PV systems have the required fire classification (CBC 1505.9 or CRC R902.4). Grounding/bonding of rack and modules according to the manufacturer's installation instructions that are approved and listed.

What is operation & maintenance (O&M) of photovoltaic (PV) systems?

This guide considers Operation and Maintenance (O&M) of photovoltaic (PV) systems with the goal of reducing the cost of O&M and increasing its effectiveness. Reported O&M costs vary widely, and a more standardized approach to planning and delivering O&M can make costs more predictable.

The popular and frequently referenced Model Inspection Checklist for Rooftop PV is now updated and expanded to include the latest national and international codes and safety insight for the rapidly expanding ...

The photovoltaic (PV) industry has experienced incredibly fast transformation after year 2000 as a result of extraordinary technology breakthroughs, from the material level up to large-scale module ...

Rooftop Solar Photovoltaic (PV) System Field Inspection Checklist. This checklist provides basic guidelines for inspecting most residential rooftop solar PV systems. Ground-mounted systems, ...

not fall under the specification's basic assumption of a single family home with a pitched roof that offers adequate attic access, EPA recommends that the builder consult with a certified solar ...

Delays in the inspection can lead to increased solar panel maintenance costs or failure of the panels. For that reason, the assessment is vital in ensuring the corrosion and accumulation of moisture, dust, and other particles are ...

Manual inspection methods in artificial physical identification are adopted to check for defects on the surface of PV panels on an individual basis. The manual inspection of large-scale PV ...

Fieldwork involves balance of systems design for PV systems, inspections and acceptance testing of PV systems, test and evaluation of PV components, and the design and installation of data acquisition systems.

Module Assembly - At a module assembly facility, copper ribbons plated with solder connect the silver busbars on the front surface of one cell to the rear surface of an adjacent cell in a process known as tabbing and stringing. The ...

