READY TO INSPECT — FIELD CHECKLIST

Rooftop solar PV final inspection checklist

Rooftop solar PV final inspection is where the punch list is either short or expensive. This checklist walks the finished work the way an owner or AHJ will see it: devices on, systems running, everything labeled. Each item gets the photo that closes it instead of reopening it. Work is commonly verified against NEC (NFPA 70), the applicable building code, manufacturer's published instructions. Confirm the edition your authority having jurisdiction has adopted.

Who runs it: The install crew lead with the electrician, and the GC's superintendent for the walk before commissioning. When: After all modules are set and the electrical is terminated, at the commissioning and energization visit before the array is turned over.

Modules and mechanical

- [ ] Modules seated and clamps torqued to spec
  Every module fully seated in the clamp, clamps torqued with a calibrated tool to the module and rail maker's value, marked after torque.
  2 photos required
- [ ] No module damage on the finished array
  Glass free of cracks, chips or pressure marks; backsheet and frames undamaged; no footprints or point loads across the field.
  2 photos required
- [ ] Module model on the label matches the approved submittal
  Module label on an accessible edge row read for maker, model and rating and compared with the approved submittal; module count per the plan.
  1 photo required
- [ ] Clamps inside the module's clamping zone with even gaps
  Mid and end clamps within the clamping zone the module maker allows, gaps between modules even, end clamps set back from rail ends as the racking maker says.
  1 photo required

Grounding and wiring

- [ ] Grounding and bonding continuous across the array
  Bonding jumpers, lugs or listed clips at every rail and module per the system, equipment grounding conductor landed, continuity confirmed end to end.
  2 photos required
- [ ] Wire management holds conductors off the roof
  Home runs and module leads clipped to the rack with listed clips or trays, drip loops formed, no conductors resting on or dragging the roof.
  2 photos required
- [ ] Array connectors fully mated and from matching makers
  Module and home-run connectors looked at without unplugging: clicked fully home, mated pairs from the same maker or listed together, none lying in a water path.
  1 photo required
- [ ] Conduit, combiner and inverter connections complete
  Conduit fully supported and sealed at transitions, combiner and inverter terminations torqued, covers on, no open knockouts.
  2 photos required

Rapid shutdown and energization

- [ ] Rapid-shutdown function and labeling in place
  Initiation device installed and reachable, module-level shutdown devices present, placard and directory labels legible at the disconnect and inverter.
  2 photos required
- [ ] Commissioning and energization observed and documented
  System brought online with the crew present, inverter status and string readings recorded, the commissioning record photographed.
  3 photos required

- [ ] Installer's pre-energization string test report on file
  The licensed installer's report lists polarity, open-circuit voltage and insulation resistance per string, with the meter used, dated before startup.
  No photo required

- [ ] Rapid-shutdown test observed as the licensed installer runs it
  Installer operates the initiation device while the crew watches from a safe spot; the installer's readings at the array written on the commissioning record.
  No photo required

- [ ] AHJ final and utility permission to operate recorded
  Final electrical inspection result and the utility's permission to operate noted with dates before the system is left running unattended.
  No photo required

Labels at raceways and the service

- [ ] Raceways and boxes labeled as PV circuits along their run
  Field labels on exposed conduit, covers and enclosures identifying the PV circuit at the spacing the plan's labeling sheet shows, legible from the floor or roof.
  1 photo required

- [ ] Point of connection labeled at the service equipment
  At the panel or switchgear where the PV ties in, the backfed breaker or connection and the warning signs from the labeling sheet seen from outside the dead front.
  1 photo required