

Solar PV Inspection Checklist

Solar PV Inspection Checklist for REI #ELE- _____ Installer _____
Job Address _____ City/Township _____

Required Documentation

- Manufacturer's specifications for the inverter
- Manufacturer's specifications for the module
- Manufacturer's specifications for the optimizer (if used)
- Verification that the racking system grounding and bonding is listed

PV Inverter

- Is the PV system utility-interactive, stand alone or multimode? 690.2
- Is all the equipment listed for PV application? 690.4
- Is the system grounded, ungrounded or (functionally grounded)? 690.2 and 690.41
- Has DC Ground-Fault Protection been provided and properly labeled? 690.41(B)?
- What is the maximum PV system voltage? 690.7
- Is all listed equipment rated for the maximum voltage? 690.7
- Determine the maximum circuit current for the PV Source and Output Circuit; Inverter Output Circuit; Inverter Input Circuit; and DC to DC Converter Output (refer to inverter documentation). 690.8

System Grounding

- Are all exposed non-current carrying metal parts of the PV system grounded? 690.43 and 690.47
- Are the mounting structures or systems used for equipment grounding? 690.43
- Are the interconnecting devices used for equipment grounding listed and identified? 690.43
- Are the EGC properly sized and protected if exposed and not smaller than #6? 690.45, 690.46, 690.50, 250.122, 250.120(C)
- Has the grounding electrode system been installed? 690.47
- If both are present, has the DC grounding electrode system been bonded to the AC GES? 690.47(A)

Wiring Methods and Disconnecting Means

- Are the conductor and cable ampacities determined at 125% before adjustment factors? 690.8 (B)
- How are the PV Source and Output Circuit protected from overcurrent? 690.9
- Do AC or DC OCPD's have the appropriate voltage, current and interrupt ratings? 690.9
- Has arc-fault circuit protection been provided for DC source and/or output circuits? 690.11
- Is a rapid shutdown required and if so, how is it accomplished and identified? 690.12 & 690.56(C)
- Is the PV disconnect permanently marked and installed in a readily accessible location? 690.13
- Are the Isolating devices or equipment disconnecting means installed in circuits connected to equipment at a location within the equipment, or within sight and 10 feet of the equipment? (Where the maximum circuit current is greater than 30 amperes an equipment disconnecting means shall be provided for isolation.) 690.15
- Has the fuse disconnecting means, if required, been installed? 690.15 and 240.40
- Are PV source or output circuits > 30 volts in a raceway or guarded if readily accessible? 690.31
- Is single conductor cable used outdoors Type USE-2 or listed & labeled PV wire? 690.31
- Are PV source or output circuits on or inside a building in a metal raceway and marked? 690.31

Interconnection

- Has a plaque or directory been installed at each disconnecting means (capable of interconnection) denoting all electric power sources & power production sources? 705.10
- Has the point of connection to other sources been installed per 705.12?
- Is the supply side disconnect readily accessible and within 10' of the connection point? 705.11
- Are the utility interactive inverters connected to the system through a dedicated circuit breaker or fusible disconnecting means? 705.12
- Does the bus or conductor ampacity comply with 705.12?
- Have all the required labels been applied? (See separate label list.)