

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

Required Documentation

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

PV Inverter

- Is the PV system utility-interactive, stand alone or multimode?
- Is all the equipment listed for PV application or be evaluated for the application and have a field label applied? 690.4
- Is the system solidly 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 and is the maximum 600 volts or less for a dwelling or 1000 volts or less for non-dwelling or 1500 volts or less when not located on a building? 690.7
- Is all listed equipment and conductors 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

- Is 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 and are all connections properly torqued? 690.43 and 110.14
- Are the EGC properly sized and protected, if exposed not smaller than #6? 690.45, 250.122, and 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

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)
- Are 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 sunlight resistant Type USE-2, Type RHW-2, or listed & labeled PV wire, and properly support and secured? 690.31(C)
- Are PV source or output circuits inside a building in a metal raceway and marked? 690.31(D)

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 705.11 or 705.12?
- 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 label list.)