



PHOTOVOLTAIC POWER SYSTEM WORKSHEET

NEC Article 690

PV Type:

Stand Alone PV System with Batteries: (DC system) separate electric permit not required.

Stand Alone PV System without Batteries: (DC to AC without utility connection)

Utility Interactive PV System: (DC to AC with utility connection)

Installation:

Roof Mounted (Manufacture specifications required onsite)

Ground Mounted (Manufacture specifications required onsite)

Grounding:

N.E.C. 690.41

Conductor Type:

DC:

Exposed

In Conduit

Automotive, Marine and Telecom devices are not acceptable

AC:

Exposed

USE-2

UF

In Conduit

RHW-2

THWN-2

XHHW-2

NOTE:

1. AC disconnects must be listed for AC operation. DC disconnects must be listed for DC operation.
2. Photovoltaic Power Systems must meet all local, state, and federal code related requirements.
3. Machinery and Equipment must meet minimum elevation requirements and zoning setback requirements.
4. All Conductors should have insulation rated for 90°C and wet conditions; exposed conductors must also be sunlight resistant.
5. PV systems must have ground-fault protection device as per 690.41 (b) (1).
6. **SEPARATE ELECTRIC PERMIT** required for conductors and equipment on load side of inverter.

Permitting requirements in addition to worksheet:

- **Two (2) copies of Photovoltaic System Specifications**
- **One-line diagram including AC/DC grounding electrode requirements**
- **Completed Building Permit Application**