Photovoltaic System Permit Submittal Requirements

Completed application for a building permit and two (2) copies of the following documents:

1. Location, floor, and site plans. Site plan must show septic system location and all buried utilities.
2. Detailed System Diagram of all the system components, highlighting system grounding and bonding.
3. Basic Line Drawing that shows all the devices on the system including the solar module, DC disconnect, inverter, sub-panels, AC disconnect, main service meter, and wire sizes and connections. Specify manufacturer, model numbers, and ratings.
4. Show specific locations and labels used for compliance with NEC 690 and UL 969.
5. PV Module Label and Listing Specs.
6. Inverter Label and Listing Specs.
7. Rack Label and Listing Specs.
8. Rack Mounting Details and Calcs (Ground Mounted Systems).
9. Battery Storage Location and Venting (if applicable).

Worksheet Information

Any proposed supply-side connection will not be approved if it is considered a violation of the UL listing of the equipment. Provide complete information of method of supply-side connection, if proposed.

Point of Connection EXAMPLE

1. Service Panel Rating in Amperes _____ (125A)
2. Service Busbar Rating in Amperes _____ (125A)
3. 120% of Busbar Rating _____ (125A x 1.2 = 150A)
4. Main Panel Breaker Rating _____ (100A)
5. Maximum Allowed PV Breaker _____ (150A – 100A = 50A)
6. Backfed PV Breaker in Amperes _____ (25A, 25A< 50A)

Roof Design

1. Approximate Age of Roof _____
2. Roofing Type: ☐ Comp ☐ Shingle ☐ Tile ☐ Shake ☐ Metal
3. Rafter Size: _____ X _____ Inches
4. Rafter Spacing: ☐ 16" o.c. ☐ 24" o.c. ☐ Other _____
5. Rafter Span: _____ Array Weight: _____ lbs.

Truss/Rafters that are over-spanned or if the array is over 5 lbs psf, design by a licensed professional may be required.

PV System Components

Per Module Manufacturer & Model

1. Photovoltaic Panel _____
2. Rated Power (PMax) _____Watts
3. Open Circuit Voltage (Voc) _____ VDC
4. Short Circuit (Isc) _____Amps DC
5. Maximum Voltage (Vpmax) _____ VDC
6. Maximum Current (Ipmax) _____ Amps DC
7. Inverter Model _____

Module Configuration

1. No. of Modules in Series _____
2. No. of Strings in Parallel _____
3. Total Rated Power of System (@STC) _____
4. DC Grounding Electrode Conductor _____ AWG _____ NEC Sec 690.47 (c) (2)
5. AC Grounding Electrode Conductor _____ AWG _____ NEC Sec 690.47 (c) (2)
6. Attach PV module, inverter and mounting system cut sheets.

Checklist for PV System Plan Check

☐ Yes ☐ No - Is a basic site diagram provided showing location of structure and equipment?

☐ Yes ☐ No - Is the array configuration shown?

☐ Yes ☐ No - Is the array wiring identified?

☐ Yes ☐ No - Is the combiner/junction box identified?

☐ Yes ☐ No - Is the AC / DC disconnect box identified?

☐ Yes ☐ No - Is the equipment grounding specified?

☐ Yes ☐ No - Is the conduit size from the array to the power source identified?

☐ Yes ☐ No - Are cut sheets provided for the PV modules?

☐ Yes ☐ No - Are cut sheets provided for the mounting hardware?

☐ Yes ☐ No - Are cut sheets provided for the Inverter?

☐ Yes ☐ No - Is the system user's manual available to property owner?

☐ Yes ☐ No - Does the roof appear to be in good condition?

Special Signage is required for Solar PV Systems. Permanently affixed labels shall have a red background with white lettering. Printed material shall be resistant to fading per UL 969, and NEC Article 690

Required Documents for Solar Photovoltaic Systems Permitting

Completed application for a building permit and three (3) copies of the following documents:

1. Location, floor, and site plans. Site plan must show septic system location and all buried utilities.
2. Detailed System Diagram of all the system components, highlighting system grounding and bonding.
3. Basic Line Drawing that shows all the devices on the system including the solar module, DC disconnect, inverter, sub-panels, AC disconnect, main service meter, and wire sizes and connections. Specify manufacturer, model numbers, and ratings.
4. Show specific locations and labels used for compliance with NEC 690 and UL 969.
5. PV Module Label and Listing Specs.
6. Inverter Label and Listing Specs.
7. Rack Label and Listing Specs.
8. Rack Mounting Details and Calcs (Ground Mounted Systems).
9. Battery Storage Location and Venting (if applicable).

Worksheet Information

Any proposed supply-side connection will not be approved if it is considered a violation of the UL listing of the equipment. Provide complete information of method of supply-side connection, if proposed.

Point of Connection EXAMPLE

10. Service Panel Rating in Amperes _____ (125A)
11. Service Busbar Rating in Amperes _____ (125A)
12. 120% of Busbar Rating _____ (125A x 1.2 = 150A)
13. Main Panel Breaker Rating _____ _____ (100A)
14. Maximum Allowed PV Breaker _____ (150A – 100A = 50A)
15. Backfed PV Breaker in Amperes _____ __ (25A, 25A< 50A)
16.

Roof Design

1. Approximate Age of Roof _____
2. Roofing Type: □ Comp □ Shingle □ Tile □ Shake □ Metal
3. Rafter Size: ____ **X** ____ Inches
4. Rafter Spacing: □ 16" o.c. □ 24" o.c. □ Other _____
5. Rafter Span: _____ Array Weight: _____ lbs.

Truss/Rafters that are over-spanned or if the array is over 5 lbs psf, design by a licensed professional may be required.

PV System Components

	Per Module	**Manufacturer & Model**
6.	Photovoltaic Panel	_____
7.	Rated Power (P_{Max})	_____ Watts
8.	Open Circuit Voltage (Voc)	_____ VDC
9.	Short Circuit (I_{sc})	_____ Amps DC
10.	Maximum Voltage (V_{pmax})	_____ VDC
11.	Maximum Current (I_{pmax})	_____ Amps DC
12.	Inverter Model	_____

Module Configuration

13. No. of Modules in Series _____

14. No. of Strings in Parallel _____
15. Total Rated Power of System (@STC) _____
16. DC Grounding Electrode Conductor _____ AWG _____ NEC Sec 690.47 (c) (2)
17. AC Grounding Electrode Conductor _____ AWG _____ NEC Sec 690.47 (c) (2)
18. □ Attach PV module, inverter and mounting system cut sheets.
19. .
20. ,

Checklist for PV System Plan Check

□ Yes □No Is a basic site diagram provided showing location of structure and equipment?
□ Yes □ No Is the array configuration shown?
□ Yes □ No Is the array wiring identified?
□ Yes □ No Is the combiner/junction box identified?
□ Yes □ No Is the AC / DC disconnect box identified?
□ Yes □ No Is the equipment grounding specified?
□ Yes □ No Is the conduit size from the array to the power source identified?
□ Yes □ No Are cut sheets provided for the PV modules?
□ Yes □ No Are cut sheets provided for the mounting hardware?
□ Yes □ No Are cut sheets provided for the Inverter?
□ Yes □ No Is the system user's manual available to property owner?
□ Yes □ No Does the roof appear to be in good condition?

Special Signage is required for Solar PV Systems. Permanently affixed labels shall have a red background with white lettering. Printed material shall be resistant to fading per UL 969, and NEC Article 690.