City of Truth or Consequences

Solar Photovoltaic Systems Checklist

City Business Offices
City of Truth or Consequences
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&
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Solar Photovoltaic Systems Checklist

Per NEC (National Electrical Code and NMPRC Rule 568)

Solar Photovoltaic applications are reviewed by the City and State electrical inspectors. The following checklist shall be submitted with your plans. Each item on the list shall be marked to verify it is part of the submittal. Incomplete information may result in plan rejection or delay in the approval of your project.

Plan Submittal Requirements

Provide the following information:

1. A completed application form. Include the proposed PV System capacity in Watts, and whether system is a stand-alone, grid-tied, or hybrid system.
2. Application fee of $50 for small, ≤10 kW systems.
3. Two complete sets of plans (electronic or hard-copy) to be submitted to the Electric Department.

Site Plan - Equipment Outside a Building

- O Show the location of all disconnects.
- O Show the location of all modules.
- O Show the location of all batteries.
- O Show the location of inverters.
- O Show the location and connection of all grounding electrode conductors.
- O Show the clearances around all equipment.
- O Show dimensions between equipment and structures.
- O Show dimensions between equipment and property lines.
- O Show location of weather proof plan tube.

Note: See the Pole or Ground Mounted Panels section for additional site plan requirements.

Floor Plan - Equipment Within a Building

- O Show the location of all disconnects.
- O Show the location of all batteries.
- O Show the location of inverters.
- O Show the location and connection of all grounding electrode conductors.
- O Show location of all equipment within structures.
- O Label the use of the room in which the equipment is placed.
- O Show clearances of the equipment.

Wiring Requirements

Provide a one-line diagram that includes the following information:

- O Label whether the system is stand-alone, grid-tied, or hybrid.
- O Conductor sizes.
- O Conductor insulation types (i.e., THHN, THWN, direct burial cable, etc.).
- O Conductor material (i.e., copper/aluminum).
- O Conduit sizes.
- O Conduit material (i.e., non-metallic, EMT, etc.).
- O Over current device ratings.
- O Existing and new panel amperage ratings (buss ratings).

- O Series and parallel configuration of the module connections.

Equipment Requirements

Provide product listing sheets for all equipment with the following information:

- O Module short circuit current ratings.
- O Module open circuit voltage ratings.
- O Module series fuse ratings.
- O Inverter output circuit current rating.
- O Inverter UL listings.
- O All associated documentation (i.e., batteries, inverters, disconnects, modules, charge controllers, over-current devices etc.).
- O Method of grounding for modules and array.

Note: Voltage correction factor is based on 125% (NEC Table 690.7).

Panels

Roof Mounted Panels

Provide the Following Information:

- O An Engineer's evaluation regarding the dead-load capability of the existing roof structure and its ability to support the added weight of the solar photovoltaic system. The Engineer must reference the required wind and snow load for the site. If the panels project above the ridge line of the roof, this most also be part of engineers evaluation.
- O For flat roof installations provide method of repair for roof penetrations.

Pole or Ground Mounted Panels

Provide The Following Information:

- O Site Plan to include the following:
  - O Location of panel(s) on property.
  - O Dimensions from panel(s) to property lines.
  - O Dimensions from panel(s) to other structures on the property and property easements.
- O Engineered footing design.

References

Interconnection and Net Metering Rules:

Rule 17.9.568 covers interconnections for qualifying and non-qualifying facilities as large as 10MW

Rule 17.9.570 provides guidelines for metering and billing for qualifying facilities.

The New Mexico Interconnection Manual

Comply With:

NFPA 70: National Electric Code, NEC

New Mexico Administrative Code Title 14, Chapter 10: New Mexico Electrical Code

City of Truth or Consequences Building Code

Available documents from the City:

Solar PV Systems (sample site plan)

Standard Interconnection Application for Net Metering (form) may be obtained on the City of Truth or Consequences website: www.torcnm.org

