



SOLAR PHOTOVOLTAIC (PV) SYSTEM PERMIT APPLICATION CHECKLIST

This Permit Application Checklist is intended to be used as a best management practice when establishing local government requirements for residential and commercial solar photovoltaic (PV) system permits. Local governments may modify this checklist to accommodate their local ordinances, code requirements, and permit procedures. The following application items may, at the community's discretion, be replaced by an expedited process such as those published by the Solar America Board for Codes and Standards or referenced as examples in the Solar Ready II materials posted at www.nctcog.org/solar.

1. REQUIRED INFORMATION

Type of Application

- Residential
- Commercial (Also see Part 2: Commercial Building Requirements)

Type of Solar PV System

- Roof Top
- Ground Mount
- Other: Click here to enter text.
- Size of System (kW): Click here to enter text.
- Completed permit application(s) and supplement information sheet, if required. Select all that apply: *(Please contact Building Department for standards)*
 - Roof Top: An electrical permit is required
 - Ground Mount: Building and electrical permits are required
 - Other: Building and/or electrical permits may be required
- Installed in accordance with the National Fire Protection Association National Electrical Code (NFPA 70) as adopted by the State of Texas, applicable ordinances, districts, and/or special use categories (e.g.: zoning or special use, etc.); subject to plan approval.

NOTE: The National Electrical Code (NEC) is the Texas state electrical code. The state adopts the NEC as the State Code on September 1 of any year in which the new NEC Code book is published (every three years).

NOTE: Potential impacts of solar PV projects to other development such as airports should be considered and evaluated by the local government as appropriate.

- Construction Documents:** Two copies of construction documents shall include, but are not limited to, the following items:
 - Site specific, stamped engineering drawings *(reviewed or designed, and sealed by a licensed professional engineer, if determined to be necessary by the building official or their appointed designee)*, assembly installation plans, manufacturer's installation instructions, and/or equipment manufacturer's data sheets.
 - Make, model, and quantity of module, inverter, and racking system certified to the UL 2703, UL 62109, or UL 1741 standard by a Nationally Recognized Testing Laboratory as appropriate.

- Framing plans
- Method of sealing/flashing for roof penetrations
- Connection details to building or ground mount
- Structural calculations or load diagram (required only when the PV array weight exceeds 5 lbs./sq. ft) (*may require engineer design if deemed applicable by Building Official*)
- Data cut sheets for battery storage if applicable (including type of battery)
- Site Plan:** Include the PV array layout in compliance with the local government design criteria including:
 - Roof plan showing location of equipment and, if required, fire setbacks
 - Existing site easements, property lines, building setback lines, zoning setbacks
 - Typical side view detail of the solar PV system mount on the roof
 - Location of all existing structures and proposed PV system equipment (*including modules, disconnects, inverters, panel boards, combiner boxes, storage batteries, utility meters, etc.*)
 - Plumbing vent termination: Vent termination is not allowed under solar installations and must be relocated or modified, or an air admittance valve may be utilized in accordance with the International Plumbing Code (IPC) and/or the International Residential Code (IRC).
- Fire Code Requirements:** Installation complies with Section 605.11 of the 2012 International Fire Code (IFC), or a more recent IFC version.
- Electrical Plans:** In addition to the construction documents, include a three line diagram, or a line diagram that meets the requirements of the local government, and complies with the state NEC. The local government should determine appropriate level of professional design requirements (*e.g. preparation by a master electrician licensed by TDLR; designed and sealed by an engineer, if required by the Texas Engineering Practice Act; or PV equipment manufacturer's engineered line diagram*). A proper line diagram should include:
 - AC and/or DC circuit arc fault protection as required by the NEC or ordinance (if any)
 - Inverter listed to the UL 62109 or UL 1741 Safety Standard; photovoltaic module(s) listed to the UL 1703 safety standard. Listings conducted by a Nationally Recognized Testing Laboratory.
 - Inverter AC output disconnect location, utility disconnect location, and AC output over-current protection device rating.
 - Location of combiner box(es), disconnect switch, size of source circuit overcurrent protection, if required
 - Service panel bus rating and main circuit breaker/fuse ampere rating
 - Circuit diagram with conduit, wire type and sizes, and/or cable type and wire sizes
 - Equipment grounding and bonding conductors and grounding electrode conductor, if applicable
 - Battery disconnect and overcurrent protection, if applicable
 - List of all appropriate labels and marking per NEC and IFC requirements

2. ADDITIONAL COMMERCIAL BUILDING INFORMATION

- Building Information: Information about the building the PV system will be attached to:
- Occupancy Group: Click here to enter text.
- Number of Stories: Click here to enter text.
- Year Built: Click here to enter text.
- Construction Type: Click here to enter text.
- Area (Square Feet): Click here to enter text.
- Roof Type: Click here to enter text.
- Fire Sprinkler System (for fully sprinkled building only)