



SOLAR AND WIND ENERGY CONVERSION SYSTEMS

Please include this completed form with your application

APPLICATION CHECKLIST

1. Completed permit application / subcontractor sheet.
2. Type of System: Solar Panel OR Solar Hot Water OR Wind Power Equipment
3. Type of Application: Residential OR Commercial
4. Type of System Mounting: Roof Top OR Ground Mount OR Other: _____
5. Number of Solar Panels to be installed: _____
6. Number of Turbines to be installed: _____
7. All installations must comply with all City of McKinney Ordinances:

CONSTRUCTION CODES

- <http://www.mckinneytexas.org/index.aspx?NID=1153>

WIND ENERGY CONVERSION SYSTEM

- https://www.municode.com/library/tx/mckinney/codes/code_of_ordinances?nodeId=SPBDERE_CH146ZORE_ARTIVSPRE_S146-140WIENCOSYWERE

8. Construction documents shall include, but are not limited to, the following items:

- Assembly Installation Plans, Manufacturer's Installation Instructions, and/or Equipment Manufacturer's Data Sheets.
- Roof Plan showing locations of roof top mounted equipment and any required fire setbacks & roof access points per Section 605.11 of the 2018 International Fire Code (IFC). For additional information contact the McKinney Fire Department.
- Site Plan showing locations of ground mounted equipment that includes the system layout in compliance with existing site easements, property lines, building setback lines, and zoning setbacks.
- Structural Engineer's Plans, Calculations and/or Letter (sealed & signed) indicating any additional framing / foundations designed to support the system or indicating the existing structure has adequate capacity.
- Connection Details to building or ground mounted frame.

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- Make, Model, and Quantity of module(s), inverter, and racking system.
- Data Sheets for battery storage. *(if applicable - including type of battery)*
- Plumbing Plans for solar hot water systems.
- Electrical line diagram that includes:
 - All calculations per Article 690 of the adopted NEC
 - AC and/or DC circuit arc fault / ground fault protection as required by the NEC
 - 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 overcurrent 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

9. Additional commercial information about the building the system will be associated with:

- Occupancy Group: _____
- Number of Stories: _____
- Year Built: _____
- Construction Type: _____
- Area (Square Feet): _____
- Roof Type: _____
- Fire Sprinklered (Yes or No): _____

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SYSTEM INSTALLATION INSPECTION NOTES per the **2017 NATIONAL ELECTRICAL CODE**

1. An electrical rough inspection shall be performed prior to installing panels on roofs. (You are allowed to start the installation of mounting system, invertors, disconnect, etc.)
2. Equipment must be listed and labeled.
3. Equipment grounding conductors used for grounding arrays smaller than #6 AWG copper shall be installed in a suitable raceway. All exposed equipment grounding and bonding conductors shall be solid copper or UV rated.
4. Devices (lugs) used for grounding arrays shall be suitable for use in wet locations (tin plated copper) and attachment hardware shall be stainless steel with star washers.
5. Provide all appropriate warning labels at disconnects and equipment.
6. Plumbing and mechanical vent terminations are not allowed to remain under solar installations.
7. Conductors and conduits run on rooftops may require additional ambient temperature adjustments per table 310.15(B)(3)(c).
8. Residential interior PV direct current system conductors shall be identified by system to comply with 690.4(B). DC ungrounded conductors shall be Orange or Yellow. The grounded conductor shall be identified by the color Gray.
9. PV source and output circuits run inside the building shall not be installed within 10" of the roof decking unless installed directly below the roof surface covered by PV modules and associated equipment per 690.31(E)(1)
10. Metal junction boxes, raceways, or other wiring methods supplying DC circuit wiring shall be labeled designating "Photovoltaic Power Source" per 690.31(E)(3)&(4).
11. All inspections must be scheduled through CSS or the automated request line at 972-547-7460
12. Electrical and frame inspections (if applicable) shall be called in while field installation is in progress.
13. Utility interactive systems must also be approved by the serving utility company.
14. All final inspections must be approved prior to connection to the premises electrical system. Panel covers, disconnect covers and access panels must be open and accessible for inspection. Provide attic and roof access if required.

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