Brighton
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Solar System Installation
Permit Submittal Requirements

Standardized System Submittals

- Applicants for COSEIA standardized solar system installations are encouraged to utilize the standardized submittal forms provided on our website for standard string, micro-inverter, AC module, and supply side systems mounted to roofs with only one layer of asphalt shingles. All solar system applications must include the requirements listed in this document.
- Applicants are encouraged to apply via email to 1stop@brightonco.gov. Please submit .pdf files for each document being submitted.
- Please visit our Solar Friendly Community webpage for a complete list of all forms and applications, and for link to additional reports and other resources.

General Requirements

- ☐ solar installation permit application for residential installations (including standardized form for standardized residential installation if applicable)
- ☐ permit fee
- ☐ two copies of all construction documents (11" X 17" - or digital if filing via email)
- ☐ site plan showing the location of all equipment – interior and exterior
  - show any plumbing, mechanical, or building vents that will have to be relocated NOTE: Attic vents, plumbing vents, dryer vents, bathroom exhaust vents, and similar terminations on the rooftop cannot be covered by solar equipment.
  - Indicate setbacks for ground-mounted equipment
- ☐ Floor plan
  - Locate all equipment within the structure (if applicable) and indicate clearances
- ☐ Pipe plan
  - Provide schematics of all system components of piping – include sizes and materials (solar thermal system installation)
- ☐ Product literature and equipment listing – include mounting systems, racking, standoffs, and flashing
- ☐ Foundation design (if roof mounted)
- ☐ Engineer's letters and designs, as applicable
- ☐ structural analysis from a P.E. for additional loads

NOTE: Installations on roofs with two or more layers of asphalt shingles or with any stone, slate, or clay tile shingles require an engineer's analysis of the roof structure's ability to support the new system.

Wiring Requirements (for PV systems)

- ☐ one-line diagram that includes the following information:
  - conductor size and insulation types

- conductor material, (i.e., copper, aluminum)
- series and parallel configuration of the module connections
- main over current device ratings
- existing and new panel busbar amperage ratings

☐ schematic drawing that includes the following:
- location of all modules, inverters, disconnects, and service equipment
- location of all batteries
- location and connection of all grounding electrode conductors
- clearances around all equipment noted above

☐ conduit or cable type & size, (i.e., nonmetallic, EMT, direct burial cable etc)

☐ all calculations from modules to inverter and inverter to point of connection

☐ all applicable warning and marking labels for AC and DC disconnects as required per the current adopted code

Equipment Requirements

☐ Provide the following equipment information:
- module short circuit current ratings
- module open circuit voltage ratings
- module series fuse ratings
- inverter maximum output current rating
- inverter maximum over current protection – output/input per manufacturer
- inverter U.L. File number, listings and remaining specifications
- all associated documentation/cut sheets and installation instructions on equipment, (i.e., inverters, disconnects, modules, charge controllers, over current devices, etc.), as required per the current adopted code

Fire Department Requirements

☐ Per the 2012 International Fire Code, PV solar systems must meet the following requirements:
- roof clearances for installations

☐ direct current (DC) wiring
- direct current (DC) conduit, wiring, and raceways shall be located below the solar array or a minimum of 24" below the roof sheathing

☐ labeling
- for residential applications, a label stating "CAUTION, SOLAR PHOTO VOLTAIC SYSTEM ON PREMISES" shall be placed at or within the main electrical service disconnect

Any questions related to the submittal requirements for residential solar installations should be directed to Matt Rowland – 303-655-2014, or via email at mrowland@brightonco.gov.