

## PHOTOVOLTAIC SOLAR SYSTEMS

Permits are required for all photovoltaic (PV) systems. Permit submittals shall include:

- **General permit application form completed;**
- **Site plan that locates all equipment on the drawing:**
  - 8½" x 11" plan is acceptable, show PV array, combiner/junction boxes, disconnects, inverters, meter and service panel/tie-in locations, show general footprint of structure and relation to property lines, show a roof plan with location and physical size of all PV panels, b-vents, attic vents, and plumbing vents.
- **Manufacturer's specification sheets for the PV panels and the PV inverter;**
- **Complete 3 line electrical diagram:**
  - Electrical specifications shall indicate
    - System size (DC - STC "nameplate" rating);
    - Module manufacturer and model number;
    - Module specs (@ STC) including VOC, VMP, ISC, and IMP;
    - Array specs (@ STC) show max VOC (w/ temp corrections), VMP, ISC, and IMP;
    - Number of strings;
    - String fuse rating (if appropriate);
    - Current carrying conductors show size and type (ie. USE-2);
    - Grounding (equip grounding conductor) indicate size and type;
    - Over current protection/disconnects with voltage rating, current rating, and indicate if "integrated" in inverter;
    - Inverter, note manufacturer, model number, rated AC output (wattage), AC voltage, and max AC current;
    - Grid interconnection location shall show AC load panel with backfeed breaker rating (voltage and amperage), panel rating (busbar rating and main breaker rating), and line / load side tap.
- **Mounting / racking system details:**
  - Shall include manufacturer's spec sheets with uplift capacity for wind loads (110 mph, 3 second gust), snow loads (30 psf), attachment details (type, size, and spacing of fasteners), and Colorado stamped engineer's verification letter; if custom racking, a site specific engineered design is required.
- **Structural information:**
  - Size, type and spacing of roof framing members, type and thickness of roof sheathing, type and number of layers of roofing materials, and indicate whether array is flush or tilt mounted. Specify method of locating framing members. Additional information or engineering may be required for unique situations.

Installation of the electrical wiring shall be performed by a State of Colorado licensed electrician. The permit will not be issued without a licensed electrician listed on the permit. Permit fees of \$300 are waived. The total cost of materials (before rebates) must be listed on the permit for calculation of the use tax.

The contractor shall call for a final inspection when the project is complete. The contractor shall provide an affidavit that the rooftop mounting & grounding were completed per design requirements.