



## **PHOTOVOLTAIC SOLAR SYSTEM REQUIREMENTS**

Permits are required for all photovoltaic (PV) systems. Submittals shall include the following:

- 1.) General requirements:
  - The photovoltaic installation company should be licensed as an electrician with the City of Northglenn.
  - A permit will not be issued without a licensed electrician indicated on the permit.
  - All plans need to be legible and on a minimum of 11" X 17" paper
  - Include two sets of all plans
- 2.) General permit application form completely filled out, including:
  - Project address
  - Owner's name, address and phone number
  - Specify a contact person: name, phone number and email
  - Project valuation (should include materials and labor) of the photovoltaic system before any rebates. The valuation should be divided into general (racking, mounting and any modifications being made to the existing structure to accommodate the additional load) and electrical (panels, equipment and wiring). *All fees are based on the total valuation provided.*
  - Project description should include the mount type (ie: roof-mount, flush mount, grid-tied, etc.), the kilowatts of the system, how many PV Arrays there are and specify if any modifications will need to be made to the existing structure to accommodate the additional dead load (per engineer letter)
- 3.) Site plan that shows the location of all equipment:
  - Location of PV array(s), 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 arrays, B-vents, attic vents and plumbing vents.
- 4.) Manufacturer's specification sheets for the PV panels and the PV inverter
- 5.) 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 (with 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 (equipment grounding conductor) indicate size and type
  - Over-current protection/ disconnects with voltage rating, current rating and indicate if "integrated" in inverter

- Note the inverter manufacturer, model number, rated AC output (Wattage), AC voltage and maximum AC current
  - Grid interconnection location shall show AC load panel with back feed breaker rating (voltage and amperage), panel rating (bus bar rating and main breaker rating) and line/load side tap.
- 6.) Mounting/ Racking system details including the following:
- Indicate the mount type (ie: roof-mount, flush mount, grid-tied, etc.)
  - Manufacturer specifications with uplift capacity that meet the **wind loads (110 mph, 3 second gusts), snow loads (30 psf)**, attachment details (type, size and spacing of fasteners)
  - Colorado stamped engineer's verification letter for any custom racking.
- 7.) Structural information:
- Size, type and spacing of roof framing members
  - Type and thickness of roof sheathing
  - Type and number of layers or roofing materials
  - Include plans for changes (if any) being made to the existing structure to accommodate the additional dead load

**THE CONTRACTOR IS RESPONSIBLE TO CALL FOR FINAL INSPECTION WHEN THE SYSTEM INSTALLATION IS COMPLETE.**