

Blaine County Solar Permit Checklist for Small-Scale Residential PV and Thermal Systems

General requirements

- › Site Plan- Locations of all major components on property, roof access points and pathways
- › Plumbing, Electrical and Mechanical Permit #'s _____ , _____ , _____ and Contractor information
- › Zoning approval – pre-review by Blaine County Land Use and Building Services is recommended
- › Fire District approval – compliance with 2012 International Fire Code Section 605.11 and Class A materials used for all roof top arrays.
- › Small-Scale Systems are 13Kw or less

Structural review for roof mounted PV and thermal array systems

If "NO" is answered to any of the questions listed below Professional Design is required

- Is the array to be mounted to a roof structure that was constructed after January 1st 1992 with a building permit issued by Blaine County? Yes/ No
- Is the roofing type lightweight (Yes = Asphalt or wood shingle, metal, etc.)(No= Slate, clay or concrete tile etc.) Yes/No
- Does the roof have a single layer of roofing materials? Yes/No

Mounting system information

- Is the mounting system an engineered product with an ICC-ES Report, designed to mount PV modules with no more than an 18" gap beneath the module frame? Yes/No
- Mounting System meets the requirements for site-specific Roof Snow Load and Wind Load requirements? Yes/No
- If mounted directly to roofing materials (i.e. standing seam), does the roofing material meet mounting system manufacturers thickness and attachment requirements? Yes/No
- Provide method and type of weather proofing roof penetrations (e.g. flashing, Caulk) _____
- Snow sliding forces? Required engineering at the discretion of the Building Official

For manufactured mounting systems, fill out information on the mounting system below:

- Mounting System Manufacturer _____ Product Name and Model # _____
- Total Weight of PV Modules and Rails _____ lbs.
- Total number of attachment points _____
- Weight per Attachment point (b/c) _____ lbs. *(if greater than 45 lbs. professional design is require)*
- Maximum Spacing Between Attachment Points on a Rail _____ inches (see product manual for maximum spacing allowed based on maximum design wind speed)
- Total Surface Area of PV Modules (sq./ft.) _____
- Distributed Weight of PV Modules on Roof (b/f) _____ lbs. per sq./ft.

If distributed weight of the PV system is greater than 5 lbs. per sq. /ft. then professional design is required

Structural review for ground mounted PV and thermal array systems

- Show array supports, framing members, and foundation posts and footings
- Provide information on mounting structure(s) construction. ICC-ES Report
- Show detail on module attachment method to mounting structure.

Solar thermal systems, the solar storage tank shall be placed on a slab on grade, or documentation shall be provided that the floor system can support the load imposed by the tank

This checklist takes into account the unused dead load that a second layer of roofing materials would impose upon the roof structure and allows the solar array's gravity load to be used in place of the dead load allowance for the second roofing materials layer.

When the roofing materials meet the end of the intended service life at which they were designed and need to be replaced, the solar array will need to be removed along with all existing roofing materials. Then a new roof can be installed and the solar array re-installed, so as to not exceed the designed allowable dead load of the roof structure.

Although this checklist takes into consideration the allowable dead loads for a Code compliant roof structure, Blaine County Building Services recommends consulting with a structural engineer for all increases in gravity loads imposed on existing structures.

I hereby acknowledge that I have received and reviewed the above-stated policy

Contractor

Homeowner

Blaine County basic wind speed: 90 mph, 3 second gust, exposure C

Roof Live Snow Load Requirements for Blaine County

North Fork to Smiley Creek:	150 pounds roof live load per square foot
North of Ketchum to North Fork:	125 pounds roof live load per square foot
West of Ketchum to western end of platted Board's Lower Ranch:	110 pounds roof live load per square foot
West of western end of platted Lower Board Ranch	125 pounds roof live load per square foot
East of Triumph	125 pounds roof live load per square foot
North of Bellevue to south of Ketchum	100 pounds roof live load per square foot
Picabo to south of Bellevue	65 pounds roof live load per square foot
Carey Valley including south and east of Carey	50 pounds roof live load per square foot