

SOLAR PHOTOVOLTAIC & SOLAR THERMAL ENERGY SYSTEMS PERMIT CHECKLIST



Building Services

219 South First Avenue, Suite 208, Hailey, ID 83333

208-788-5573

OVERVIEW

The pre-submittal checklist below contains the minimum information and project plan details required to be submitted to Blaine County when applying for a permit to install a residential and commercial/non-residential solar photovoltaic (PV) system. The checklist is intended to support solar installers and customers in the solar permit application process, and is not required for submittal.

CODES

The adopted building codes for Blaine County are available online at:

https://codelibrary.amlegal.com/codes/blainecountyid/latest/blaineco_id/0-0-0-1102.

LOCAL DESIGN CRITERIA

BLAINE COUNTY BASIC WIND SPEED

115 mph, 3 Second Gust, Exposure C

ROOF LIVE SNOW LOAD REQUIREMENTS

North Fork to Smiley Creek	150 PSF
North of Ketchum to North Fork	125 PSF
West of Ketchum to western end of platted Board's Lower Ranch	110 PSF
West of western end of platted Lower Board Ranch	125 PSF
East of Triumph	125 PSF
North of Bellevue to south of Ketchum	100 PSF
Picabo to south of Bellevue	65 PSF
Carey including south and east of Carey	50 PSF

REQUIRED PERMITS

A building and electrical permit must be obtained prior to the start of any work. Complete the permit application form(s). Blaine County provides a 12-day streamlined review process for solar PV systems. However, the typical 12-day turnaround time are based on best efforts and not guaranteed.

Incomplete applications, unlicensed contractors, and insufficient information on equipment and systems can also delay permit turnaround.

Check to confirm applications have been completed.

- Blaine County Building Permit Application:

<https://www.co.blaine.id.us/DocumentCenter/View/18378/Building-Permit-Application-and-outdoor-lighting-Checklist>

- State of Idaho Contractor Electrical Permit Application:

<https://dbs.idaho.gov/>

GENERAL PERMIT REQUIREMENTS

1. Site plan showing location of major components on the property, roof access points, and pathways. This drawing need not be exactly to scale, but it should represent relative location of components on site (see supplied example site plan).
2. Electrical diagram showing PV array configuration, wiring system, overcurrent protection, inverter, disconnects, required signs, and AC connection to building. Standard electrical diagrams can be downloaded at <http://www.solarabcs.org/about/publications/reports/expedited-permit/forms/index.html>.
3. Specification sheets and installation manuals (if available) for all manufactured components including, but not limited to, PV modules, inverter(s), combiner box, disconnects, and mounting system.
4. Fire District approval for compliance with the 2018 International Fire Code and Class A materials used for all Solar PV installations on Commercial and Multi unit dwellings.

Carey Fire District	208-720-2076	West Magic Fire District	208-487-2571
North Blaine County Fire District	208-720-0323	Wood River Fire District	208-578-6453
Smiley Creek Fire District	208-833-2603		

5. Small-Scale Solar Energy Systems occupy 1,750 square feet of surface area or less.
6. Solar Thermal Systems require plumbing, electrical, and mechanical permits.

PERMIT FEES

- Blaine County Residential and Commercial Solar Permit Fee: **\$75.00**
The fee covers Structural and Zoning Review and two site inspections.
- Idaho Division of Building Safety Electrical Permit Fees for Renewable Energy calculation:
<https://dbs.idaho.gov/programs/electrical-program/renewable-energy-solar-wind-hydro-power-production-and-energy-storage-systems/>

SOLAR AMERICA BOARD FOR CODES & STANDARDS FORMS

Consider utilizing a standard form for submitting plans to facilitate the permit review process. ***Check to confirm if using a Solar ABCs standard form.***

- Standard String PV System: [Example1-StandardStringSystem.pdf \(solarabcs.org\)](#)
- Micro-Inverter PV System: [Example2-Micro-Inverter.pdf \(solarabcs.org\)](#)
- AC Module PV System: [Example3-ACModule.pdf \(solarabcs.org\)](#)
- Supply-Side PV System: [Example4-Supply-SideConnection.pdf \(solarabcs.org\)](#)

INSPECTION REQUIREMENTS

Schedule required building inspections listed below by calling 208-788-5573, extension #1125.

1. Structural inspection
2. Final inspection

STRUCTURAL REVIEW FOR ROOFTOP MOUNTED SOLAR SYSTEMS

NO	YES	<i>Check YES or NO for the conditions that apply. If NO checked on any questions provide details certified by a design professional.</i>
<input type="checkbox"/>	<input type="checkbox"/>	Is the array to be mounted to a roof structure that was constructed after January 1, 1992 with a building permit issued by Blaine County?
<input type="checkbox"/>	<input type="checkbox"/>	Is the roofing type lightweight (Yes = composition, wood shingle, metal, etc.; No = slate, clay, masonry, etc.)
<input type="checkbox"/>	<input type="checkbox"/>	Does the roof have a single layer of roofing materials?

MOUNTING SYSTEM INFORMATION

NO	YES	<i>Check YES or NO for the conditions that apply. If NO checked on any questions provide details certified by a design professional.</i>
<input type="checkbox"/>	<input type="checkbox"/>	Mounting System meets the requirements for site-specific Roof Snow Load and Wind Load requirements?
<input type="checkbox"/>	<input type="checkbox"/>	If mounted directly to roofing materials (i.e. standing seam), does the roofing material meet mounting system manufacturers thickness and attachment requirements?
<input type="checkbox"/>	<input type="checkbox"/>	Is the Weight per Attachment Point greater than 45 lbs?
<input type="checkbox"/>	<input type="checkbox"/>	Is distributed weight of Solar PV or Thermal system greater than 5 lbs/ft ² ?

- a. Provide method and type of weather proofing roof penetrations (e.g. flashing, caulk):

FOR MANUFACTURED MOUNTING SYSTEMS, COMPLETE INFORMATION BELOW:

- a. Mounting System Manufacturer _____
Product Name and Model Number _____
- b. Total Weight of PV Modules and Rails _____ lbs
- c. Total Number of Attachment Points _____
- d. Weight per Attachment Point (b÷c) _____ lbs
- e. Maximum Spacing Between Attachment Points on a Rail _____ inches
(See product manual for maximum spacing allowed based on maximum design wind speed.)
- f. Total Surface Area of PV Modules (square feet) _____ ft²
- g. Distributed Weight of PV Module on Roof (b÷f) _____ lbs/ft²

STRUCTURAL REVIEW FOR GROUND MOUNTED SOLAR PV & THERMAL SYSTEMS

NO	YES	<i>Check YES or NO to confirm completion of permit application submittal.</i>
<input type="checkbox"/>	<input type="checkbox"/>	Drawings provided that show array supports, framing members, and foundation posts and footings.
<input type="checkbox"/>	<input type="checkbox"/>	Information provided on mounting structure(s) construction with ICC-ES Report verifying compliance with code requirements.
<input type="checkbox"/>	<input type="checkbox"/>	Detail provided that show module attachment method to mounting structure.
<input type="checkbox"/>	<input type="checkbox"/>	Solar thermal systems: the solar storage tank is placed on a slab on grade, or documentation shows that the floor system can support the load.

ACKNOWLEDGEMENT

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 Signature

Homeowner Signature

Print Name: _____

EXAMPLE SOLAR SITE PLAN, PV Only with DC Converters. Source: SolSmart

