



# B211

## SOLAR ENERGY SYSTEMS

### CHECKLIST

#### **Section 1 - Submittal Requirements**

Use the column to the left to check off items included with your application.

✓	<b>Form #</b>	<b>Required Applications</b>
	B101	1. Building Permit Application - 1 original
✓		<b>Required Submittal Items</b>
		2. Roof Layout ( only for roof mounted panels) – 2 copies

#### **Section 2 – Expedited Permitting Checklist**

If you can answer “yes” to all of the below items, then your project can be issued over the counter with a completed building permit application form. If the answer to any one item is “no” then engineering may be required and you must submit 2 copies of the manufacturer’s specifications, with the roof layout, for review.

	Yes	No
1. PV System is designed and proposed for a detached one- or two-family dwelling or townhouse not more than three stories above grade or a detached accessory structure and is code compliant to setbacks and height(IRC 101.2)		
2. The PV system is installed on a rooftop.		
3. Modules on pitched roofs do not exceed the highest point of the roof.		
4. Rooftop is made from lightweight material such as a single layer of composition singles metal roofing, lightweight masonry, or cedar shingles.		
5. The PV system is designed for the wind speed of the local area and will be installed per the manufacturer’s installation specifications. (IRC M2302.2.1(1))		
6. Total dead load of the entire system weighs no more than four pounds per square foot. (IRC M2302.2.1(3))		
7. Modules are mounted no higher than 18” above the surface of the roofing to which they are affixed. (IRC M2302.2.1(4))		
8. Supports for solar modules are installed to spread the dead load across as many roof-framing members as needed to ensure that no point load exceeds fifty (50) pounds. (IRC M2302.2.1(5))		
9. The photovoltaic modules and supporting structure shall be constructed of noncombustible materials or fire-retardant treated wood equivalent to that required for the roof construction (IRC M2302.2.1)		
10. Roof and wall penetrations shall be flashed and sealed to prevent entry of water, rodents, and insects. (IRC M2302.2.2)		
11. PV modules are listed and labeled with a fire classification in accordance with UL 1703.		
12. The solar array is less than 33% of the roof area and is limited to 1,000 square feet or less.		
13. An unobstructed pathway is maintained along each side of any horizontal ridge.		

Fees are due at the time of submittal and are based on the valuation of installation. Accepted forms of payment:

- Cash
- Check/Cashier's Check - Make checks payable to City of Bainbridge Island (COBI)
- Credit Cards: Discover, Visa, or MasterCard. A convenience fee will be assessed to each credit/debit card transaction.

## General Information

Installation of Solar Energy Systems may require review by the City of Bainbridge Planning, Building and Fire Department for compliance with zoning, building and fire codes. Additionally, if the solar panels and modules are proposed to be installed on the ground, the Kitsap Public Health District must review the location to ensure it will not interfere with well or septic components. There are two basic types of solar energy systems: thermal and photovoltaic.



### ***Thermal Solar Energy Systems (IRC M2301)***

- If roof mounted, the roof shall be constructed to support the loads imposed by the solar collectors. Typically an engineer is required to evaluate the existing roof system and provide recommendations for upgrade or a letter stating the existing roof is adequate to support the proposed system.
- Roof mounted panels, modules and supporting structures shall be noncombustible or fire-retardant-treated wood.
- The Fire Department recommends a 3' clear area around roof mounted panels for access.
- System components containing fluids shall be protected with pressure, temperature and vacuum relief valves.
- System components shall be protected from freezing.
- Expansion tanks are required in closed fluid loops that contain heat transfer fluid.
- Roof and wall penetrations shall be flashed and sealed.
- Valves shall be installed to allow the solar collectors to be isolated from the remainder of the system.
- System temperature shall be equipped with a means to limit the maximum water temperature to 180 degrees Fahrenheit.
- Collectors shall be listed and labeled to show manufacturer's name, model number, serial number, collector weight, collector maximum allowable temperatures and pressures and the type of heat transfer fluids compatible with the collector.
- Connections from the potable water supply to solar systems shall be provided with backflow protection.

### ***Photovoltaic Solar Energy Systems (IRC M2302)***

- If roof mounted, the roof shall be constructed to support the loads imposed by the solar collectors. Typically an engineer is required to evaluate the existing roof system and provide recommendations for upgrade or a letter stating the existing roof is adequate to support the proposed system.
- Roof mounted panels, modules and supporting structures shall be noncombustible or fire-retardant-treated wood.
- Roof and wall penetrations shall be flashed and sealed.
- The Fire Department recommends a 3' clear area around roof mounted panels for access.