



Handout No. 1-10
Published: 1/08/02
Revised: 10/30/07

Solar Hot Water Heaters & Photovoltaic Systems

Permits & Plan Review Required

Building, Plumbing and Electrical permits are required for all solar installations. Building permits are not required for roof installations that do not exceed any of the following criteria.

1. Total panel weight (including frame) is greater than 5 lbs. per square foot.
2. Maximum concentrated load at each point of support exceeds 40 lbs.
3. Maximum height above roof surface exceeds 18 inches.

If a Building permit is required, a plan must be submitted showing existing roof framing and any proposed elements or alterations needed along panel support and bracing systems with attendant structural design verifying the capacity of framing elements and connections to support additional loads. For installations that do not require a Building permit, connection of the panels must be made to structural members of the roof in conformance with applicable codes and manufacturer’s recommendation. Structural members consist of roof rafters, roof trusses, purlins or blocking. Plywood sheathing and spaced sheathing are not considered as structural members. All roof penetrations must be water tight.

Plumbing Plan Review is required for hot water solar systems for multi-family, commercial and industrial installations.

Electrical Plan Review for photovoltaic systems is required for all multi-family, commercial and industrial installations. Electrical Plan Review for single family and duplex installations will be offered, if requested, by the applicant or may be required by the Building Official based on complexity of installation.

Required Permits and Fee Criteria

Solar Unit Type	Trade	Building Use	Permit Fee Criteria	Plan Check
Hot Water Solar Systems	Plumbing	All Uses	One inspection	Based on Hourly Rate
	Building	All Uses	Contract Valuation	Based on Hourly Rate
Photovoltaic	Electrical	Single Family & Duplexs	One inspection	Based on Hourly Rate
	Electrical	Multi Fam/Com /Ind	More than One inspection	Based on Hourly Rate
	Building	All Uses	Contract Valuation	Based on Hourly Rate

Design Guidelines

Planning Site Adjustment Permits are not required for commercial or industrial buildings and residential buildings. Installation of Solar/Photovoltaic panels should **strive to** incorporate the following design guidelines:

- Solar devices should not block views or be placed where they are visible from the public right-of-way.
- If attached to the building, solar devices should lay flush with the roof line. This will not cause a significant decrease in the device’s solar gain capabilities.
- If not attached to the building, collectors should be located in side or rear yards. Exposed hardware, frames and piping should have a matte finish, and be consistent with the color scheme of the primary structure.
- Collectors not attached to the building should be screened by whatever landscaping may be necessary to reduce their visibility. However, screening may diminish the effectiveness of the collectors to receive sunlight.

For general information please call (408) 535-3555.