
SECTION 110.10 – MANDATORY REQUIREMENTS FOR SOLAR READY BUILDINGS

(a) Buildings listed below shall provide for the future installation of a solar electric or solar thermal system.

- 1. Single Family Residences.** Single family residences located in subdivisions with ten or more single family residences and where the application for a tentative subdivision map has been deemed complete, by the authority having jurisdiction, on or after January 1, 2014, shall comply with the requirements of Section 110.10(b) through 110.10(e).
- 2. Low-rise Multi-Family Buildings.** Low-rise multi-family buildings with eight or more dwelling units or with a water heating system serving multiple dwelling units shall comply with the requirements of Section 110.10(b) through 110.10(d).
- 3. Nonresidential and Hotel/Motel Occupancies.** All nonresidential and hotel/motel occupancies with three stories or fewer shall comply with the requirements of Section 110.10(b) through 110.10(d).

(b) Solar Zone.

- 1. Minimum Area.** The solar zone shall have a minimum area as described below. The required area may be divided into noncontiguous sections, with a minimum section area of 80 square feet. No dimension of the solar zone shall be less than five feet.
 - A. Single Family Residences.** The solar zone shall have a minimum area of 250 square feet.

EXCEPTION to Section 110.10(b)1A: Single family residences with three stories or more and with a total floor area less than or equal to 2000 square feet shall have a solar zone with a minimum area of 150 square feet.
 - B. Multi-Family Buildings.** The solar zone shall have a minimum area equal to 30 percent of the total roof area excluding any skylight area.

EXCEPTION to Section 110.10(b)1B: An alternate reserved space for the future installation of a solar electric or solar thermal system with an area equal to 45 percent of the total roof area may be located elsewhere on the building site in lieu of the solar zone.
 - C. Nonresidential and Hotel/Motel Occupancies.** The solar zone shall have a minimum area equal to 40 percent of the total roof area excluding any skylight area.

EXCEPTION to Section 110.10(b)1C: An alternate reserved space for the future installation of a solar electric or solar thermal system with an area equal to 60 percent of the total roof area may be located elsewhere on the building site in lieu of the solar zone.

EXCEPTION to Section 110.10(b)1: The area of any permanent solar electric or solar thermal system installed on the building site, including non-roof installations, at the time of construction shall be counted as part of the solar zone minimum area requirement. Solar thermal systems that provide water heating exclusively for swimming pools and/or spas shall not be counted as part of the solar zone minimum area requirement.

NOTE: The solar zone shall comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 (California Fire Code) or in any similar requirements adopted by a local jurisdiction.
- 2. Orientation.** All sections of the solar zone shall be either oriented between 110 degrees and 270 degrees or located on a flat roof.
- 3. Shading.**
 - A.** No roof obstructions, including but not limited to, vents, chimneys, architectural features, and roof mounted equipment, shall be located in the solar zone.

B. The solar zone shall be located at a minimum distance, from any on roof obstruction that projects above the point on the solar zone that is closest to the obstruction, that is two times the height difference of the obstruction and the lowest point of the solar zone. Obstructions subject to this requirement include:

i. Any vent, chimney, architectural feature, roof mounted equipment or other obstruction that is on the roof or any other part of the building.

EXCEPTION to Section 110.10(b)3: Any on roof obstruction that is oriented north of all points on the solar zone.

4. Structural Integrity. The as-designed roof dead load and live load for the solar zone shall be clearly indicated on the construction documents.

EXCEPTION to Section 110.10(b)4: If an alternate reserved space located elsewhere on the building site is provided in lieu of the solar zone, the requirements of Section 110.10(b)4 shall not apply.

(c) Interconnection Pathways.

1. The construction documents shall indicate a pathway for routing of conduit from the solar zone or alternate reserved space to the main electrical service panel.

2. The construction documents shall indicate a pathway for routing of plumbing from the solar zone or alternate reserved space to the water-heating system.

(d) Documentation. A copy of the construction documents or a comparable document indicating the information from Section 110.10(b) through Section 110.10(c) shall be provided to the occupant.

(e) Main Electrical Service Panel.

1. The main electrical service panel shall have a minimum busbar rating of 200 amps.

2. The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation.

A. Location. The reserved space shall be positioned at the opposite (load) end from the input feeder location or main circuit location.

B. Marking. The reserved space shall be permanently marked as “For Future Solar Electric”.

EXCEPTION 1 to Section 110.10: If documented that there is no viable solar zone, or alternate reserved space where allowed, due to shading which reduces the annual solar access to 70% or less, the requirements of Section 110 shall not apply. Solar access is the ratio of solar insolation on a given roof section or alternate reserved space including shade to the solar insolation available on that roof section or alternate reserved space without shade. It must be documented that all viable roof sections or alternate reserved spaces have insufficient annual solar access. Shading from on roof obstructions shall not be included in the determination of annual solar access.

EXCEPTION 2 to Section 110.10: If the roof of the building is designed and approved to be used for vehicular traffic or parking, the requirements of Section 110 shall not apply.