

TOOLKIT DOCUMENT

City/County of [NAME OF CITY]
Department of [NAME OF DEPARTMENT]

Submittal Requirements for Permit Application Solar Photovoltaic Installations under 10KW in Single-Family Dwellings

Departmental Information Bulletin [IDENTIFYING NUMBER]
Effective: [DATE]

This information bulletin is published to guide applicants through a streamlined permitting process for solar photovoltaic (PV) projects under 10 KW in size. This bulletin provides information about submittal requirements for plan review, required fees, and inspections.

*Note: Language in **BOLD FONT** below indicates where local jurisdiction needs to provide information specific to the jurisdiction.*

1. Approval Requirements

The following permits are required to install a solar PV system under 10KW:

- a) [LIST TYPE OF PERMIT(S) REQUIRED BY THE LOCAL JURISDICTION, i.e. ELECTRICAL OR BUILDING PERMIT].

Planning review [IS/IS NOT] required for solar PV installations of this size.

Fire Department approval [IS/IS NOT] required for solar PV installations of this size.

2. Submittal Requirements

- a) Completed permit application form. This permit application form can be downloaded at [WEBSITE ADDRESS]
- b) A completed Standard Electrical Plan [THIS GUIDEBOOK RECOMMENDS DEVELOPMENT OF A STANDARD PLAN THAT ALLOWS PERMIT APPLICANTS TO SIMPLY FILL IN INFORMATION REGARDING A SOLAR SYSTEM'S ELECTRICAL CONFIGURATION. A TEMPLATE STANDARD PLAN IS PROVIDED IN THIS GUIDEBOOK]. The standard plan may be used for proposed solar installations under 10KW in size and can be downloaded at [WEBSITE ADDRESS].

If a standard electrical plan is not available for use, an electrical plan shall be submitted that includes the following:

- Locations of main service or utility disconnect
- Total number of modules, number of modules per string, and the total number of strings
- Make and model of inverter(s) and/or combiner box if used
- One-line diagram of system
- Specify grounding/bonding, conductor type and size, conduit type and size, and number of conductors in each section of conduit
- If batteries are to be installed, include them in the diagram and show their locations and venting

- Equipment cut sheets including inverters, modules, AC and DC disconnects, combiners, and wind generators
 - Labeling of equipment as required by CEC, Sections 690 and 705
 - Site diagram showing the arrangement of panels on the roof or ground, north arrow, lot dimensions, and EXISTED SHADING ELEMENTS the distance from property lines to adjacent buildings/structures (existing and proposed)
- c) Demonstrate compliance with structural requirements. [THIS GUIDEBOOK RECOMMENDS THAT LOCAL JURSDICTION ADOPT PRESCRIPTIVE APPROACH TO ESTABLISHING MINIMAL STRUCTURAL REQUIREMENTS THAT AVOIDS THE NEED FOR STRUCTURAL CALCULATIONS.]

If a prescriptive approach has not been developed to ensure structural requirements, structural support information for roof-mounted systems including the following SHOULD INCLUDE:

- The type of roof covering and the number of roof coverings installed
- Type of roof framing, size of members, and spacing
- Weight of panels, support locations, and method of attachment
- Framing plan and details for any work necessary to strengthen the existing roof structure
- Any relevant calculations (if required)
- Where an approved racking system is used, provide documentation showing manufacturer of the rack system, maximum allowable weight the system can support, attachment method to the roof or ground, and product evaluation information or structural design for the rack system

3. Plan Review

Permit applications can be submitted to [DEPARTMENT NAME] in person at [ADDRESS] and [IF APPLICABLE] online through the following website: [WEBSITE].

Permit applications utilizing standard plan may be approved over the counter at [ADDRESS]. Permit applications can also be submitted electronically [IF APPLICABLE] at the following website: [WEBSITE]. Permits not approved over the counter are typically reviewed in [NUMBER OF] days.

4. Fees

[PROVIDE CLEAR FEE SCHEDULE]

5. Inspections

Once all permits to construct the solar installation have been issued and the system has been installed, it must be inspected before final approval is granted for the solar system. On-site inspections can be scheduled by contacting [DEPARTMENT] by telephone at [PHONE NUMBER] or electronically at [WEBSITE OR E-MAIL ADDRESS]

Permit holders must be prepared to show conformance with all technical requirements in the field at the time of inspection. The inspector will verify that the installation is in conformance with applicable code requirements and with the approved plans.

Below are common points of inspection with which the applicant should be prepared to show compliance:

- Number of PV modules and model number matches plans, and specification sheets number matches plans and specification sheets
- Array conductors and components are installed in a neat and workman-like manner.
- PV array is properly grounded
- Electrical boxes are accessible and connections are suitable for environment

- Array is fastened and sealed according to attachment detail
- Conductors ratings and sizes match plans
- Appropriate signs are properly constructed, installed, and displayed, including:
 - Sign identifying PV power source system attributes at DC disconnect
 - Sign identifying AC point of connection
 - Sign identifying switch for alternative power system
- Equipment ratings are consistent with application and installed signs on the installation, including:
 - Inverter has a rating as high as max voltage on PV power source sign
 - DC-side overcurrent circuit protection devices (OCPDs) are DC rated at least as high as max voltage on sign
 - Switches and OCPDs are installed according to the manufacturer’s specifications (i.e. many 600VDC switches require passing through the switch poles twice in a specific way)
 - Inverter is rated for the site AC voltage supplied and shown on the AC point of connection sign
 - OCPD connected to the AC output of the inverter is rated at least 125% of maximum current on sign, and is no larger than the maximum OCPD on the inverter listing label
 - Sum of the main OCPD and the inverter OCPD is rated for not more than 120% of the bus bar rating

6. Departmental Contact information

For additional information regarding this permit process, please consult our departmental website at [WEBSITE] or contact [DIVISION NAME] at [PHONE NUMBER].