



# Residential Photovoltaic Requirements

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.

## 1. Approval Requirements

An electrical permit is required to install a solar PV system under 10KW.

Planning review is not required for solar PV installations of this size.

Fire Department approval is not required for solar PV installations of this size if the plan provides 3' clearance.

## 2. Submittal Requirements

- a. The permit is completed at the Development Services counter by the technician at the time of plan review.
- b. A completed Standard Electrical Plan similar to the plan included in this handout shall be submitted.

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
  - One-line diagram of system
  - Specify grounding/bonding, conductor type and size, conduit type and size, and number of conductor 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 and combiners.
  - Labeling of equipment as required by CEC, Sections 690 and 705.
  - Site diagram showing the arrangements of panels on the roof or ground, north arrow, lot dimensions, existing shading elements and the distance from property lines to adjacent building/structures (existing and proposed).
- c. Provide roof framing information to include:
    - The type of roof covering and the number of layers of the roofing material.
    - The type of roof framing, size of members, and spacing.
    - Weight of panels, support locations, and method of attachment.
    - 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 the Development Services counter in person at 200 Civic Center Drive, Vista, CA 92084.

Permit applications utilizing standard plan may be approved over the counter. It is recommended to call and verify staffing availability before going to City Hall. Permits not approved over the counter are typically reviewed within five (5) days.

### 4. 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 calling the building division inspection request line at (760) 639-6106 or electronically at [buildinginspection@cityofvista.com](mailto:buildinginspection@cityofvista.com).

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 match plans, and specification sheets number match 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.
- Existing electrical meter shall be shown to have an adequate ground or a new grounding rod shall be provided.
- 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.

### 5. Departmental Contact information

For additional information regarding this permit process, please consult our departmental website [www.cityofvista.com](http://www.cityofvista.com) or contact Fred Huddleston at (760) 643-5392.