



City of Santa Monica

Building and Safety Division

Submittal Requirements Bulletin — Solar Photovoltaic Installations 10 kW or Less in One- and Two-Family Dwellings

Effective: 9-30-2015
Revised: 9-30-2015

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

1. Approval Requirements

The following permit is required to install a solar PV system with a maximum power output of 10 kW or less:

- a) Plan Check/Combination Permit

Planning review is required for solar PV installations of this size.

Fire Department approval is required for solar PV installations of this size.

2. Submittal Requirements

- a) Completed permit application form. This permit application form can be downloaded at <http://www.smgov.net/Departments/PCD/Permits/Plan-Check/>.
- b) Demonstrate compliance with the eligibility checklist for expedited permitting. These criteria can be downloaded at <http://www.smgov.net/Departments/PCD/Permits/Plan-Check/>.
- c) A roof plan showing roof layout, PV panels and the following fire safety items: approximate location of roof access point, location of code-compliant access pathways, PV system fire classification and the locations of all required labels and markings. Examples of clear path access pathways are available in the State Fire Marshal Solar PV Installation Guide. <http://osfm.fire.ca.gov/pdf/reports/solarphotovoltaicguideline.pdf>.

3. Plan Review

Permit applications may be submitted, reviewed, and approved “over the counter” at 1685 Main Street Room 111 Santa Monica, CA 90401. Permit applications may also be submitted electronically for “over the counter” approval at the following email address: eplans@smgov.net.

4. Fees

Consistent with the City of Santa Monica’s approach to renewable energy and sustainable systems, the City encourages the use and installation of such systems and therefore does not charge permit and plan check fees for these systems. However, State of California required fees for the (seismic) Strong Motion Implementation Program and the Green Building Program have required fees that will be collected at the time of permit issuance. For photovoltaic systems less than 10 kilowatts, it is anticipated that these State fees should not exceed \$20.00 per permit.

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 the Building and Safety Inspection Section by telephone at 310-458-2202 or electronically at <http://webpermits.smgov.net/permitting/login.aspx>. Inspection requests received before 3:30 PM are typically scheduled for the next business day.

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.

The inspection checklist provides an overview of common points of inspection that the applicant should be prepared to show compliance. If not available, common checks include the following.

- 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.
- Array is fastened and sealed according to attachment detail.
- Conductors ratings and sizes match plans.
- Appropriate signs are property constructed, installed and displayed, including the following.
 - 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 the following.
 - 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 <http://www.smgov.net/Departments/PCD/Permits/Plan-Check/> or contact a Permit Specialist at 310-458-8355.



BUILDING AND SAFETY DIVISION
1685 MAIN STREET
SANTA MONICA, CA 90401
(310) 458-8355

Solar Photovoltaic One and Two Family Dwellings - 10kW or Less

PERMIT/PLANCHECK APPLICATION

Plan Check Expires One Year from Date of Application.

Property Address:			
Assessor's Parcel No.:		Project Valuation:	
Applicant	Name:	Phone No.:	
	Address:	City:	Zip Code:
	Email Address:		
Property Owner	Name:	Phone No.:	
	Address:	City:	Zip Code:
	Email Address:		
Architect	Name:	Phone No.:	
	Address:	City:	Zip Code:
	Email Address:		
	City Business License No. (if applicable):	State of California License No.:	
Contractor	Name:	Phone No.:	
	Address:	City:	Zip Code:
	Email Address:		
	Contractor's City Business License No.	State of California License No.:	Classification:
Engineer	Name:	Phone No.:	
	Address:	City:	Zip Code:
	Email Address:		
	City Business License No. (if applicable):	State of California License No.:	
Proposed Project Description: _____ (Specify System AC Rating: _____ kW)			
Applicant Name: _____ Signature: _____ Date: _____			
To Be Completed By City Staff Only			
City Planning	Fire Dept	Building and Safety	Permit Specialist



City of Santa Monica
Building and Safety Division

**Eligibility Checklist for Expedited Solar Photovoltaic
Permitting for One and Two Family Dwellings**

Effective: 9-30-2015
Revised: 10-6-2015

PROJECT ADDRESS: _____

GENERAL REQUIREMENTS

- A. System size is 10kW AC rating or less Y N
- B. The solar array is roof-mounted on one- or two-family dwelling or accessory structure Y N
- C. Solar system is utility interactive and without battery storage Y N
- D. Permit application is completed and attached Y N

ELECTRICAL REQUIREMENTS

- A. For central inverter systems: No more than two inverters are utilized Y N
- B. The PV system is interconnected to a single-phase AC service panel of nominal 120/220 Vac with a bus bar rating of 225 A or less Y N
- C. The PV system is connected to the load side of the utility distribution equipment Y N

STRUCTURAL REQUIREMENTS: Structural Criteria for Residential Flush-Mounted Solar Arrays

ROOF CHECKS

- A. Visual Review/Contractor's Site Audit of Existing Conditions:
 - 1) Is the roof a single roof without a reroof overlay? Y N
 - 2) Does the roof structure appear structurally sound, without signs of alterations or significant structural deterioration or sagging? Y N
- B. Roof Structure Data (Where PV Panels are Installed):
 - 1) Measured roof slope (e.g. 6:12) _____ :12
 - 2) Measured rafter spacing (center-to-center): _____ inch
 - 3) Size of roof framing members _____ (rafter or manufactured truss): Rafter Truss

SOLAR ARRAY CHECKS

- A. Flush-mounted Solar Array:
 - 1) Is the plane of the modules (panels) parallel to the plane of the roof? Y N
 - 2) Is there a 2" to 10" gap between underside of module and the roof surface? Y N
 - 3) Modules do not overhang any roof edges (ridges, hips, gable ends, eaves)? Y N
- B. Do the modules plus support components weigh no more than:
4 psf for photovoltaic arrays? Y N

- C. Downward Load Check (Anchor Layout Check):
- 1) Proposed anchor horizontal spacing: _____' - _____"ft-in
 - 2) Is proposed anchor horizontal spacing in-line with rafter spacing? Y N
- D. Wind Uplift Check (Anchor Fastener Check):
- 1) Anchor fastener data:
 - a. Diameter of lag screw, hanger bolt or self-drilling screw: _____ inch
 - b. Embedment depth of rafter: _____ inch
 - c. Number of screws per anchor (typically one): _____
 - d. Are minimum 5/16" diameter lag screws with 2.5" embedment into the rafter used, OR does the anchor fastener meet the manufacturer's guidelines? Y N

FIRE SAFETY REQUIREMENTS

- A. Clear access pathways provided Y N
- B. Fire classification solar system is provided Y N
- C. All required markings and labels are provided Y N
- D. A diagram of the roof layout of all panels, modules, clear access pathways and approximate locations of electrical disconnecting means and roof access points is completed and attached Y N
- E. Fire Department approval is obtained **(required for Building Permit issuance)** Y N

I CERTIFY THAT THE FOREGOING INFORMATION IS TRUE AND CORRECT.

(Check one box) Applicant Contractor Installer Owner

Printed
 Name: _____ Signature: _____ Date: _____

SUMMARY/NOTES

1. *These criteria are intended for expedited solar permitting process.*
2. *If any checkbox is marked NO, project may not qualify for expedited processing.*
3. *The Structural Criteria are intended for better understanding of the minimum structural requirements associated with PV installation.*
4. *Supplementary documents (i.e. Solar PV Standard Plan, Structural Criteria for Residential Rooftop Solar Energy Installations etc.) are intended for better understanding of the minimum code requirements associated with PV installations.*
5. *If a discrepancy and/or unsafe condition is observed during inspection, additional plans and/or calculations may be required.*

OFFICE USE ONLY

 Permit Specialist

Plan Check #: _____