



TO: Development Services Customers

SUBJECT: **INFORMATION BULLETIN 153**  
Requirements for Solar Photovoltaic Systems (PV)  
(Commercial/Residential)

DATE: August 9, 2011/*Revised April 2013/August 2014/August 2015*

CREATED BY: Field Services Division/Plan Review Division

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**Purpose:**

As a customer service initiative, the Development Services Department (DSD) and CPS Energy created this Information Bulletin to assist with the minimum requirements for submitting applications, plan submittals, permitting, inspection, testing and commissioning of photovoltaic systems installed in San Antonio. This bulletin has been updated to embed CPS Energy's process.

**Scope:**

Successful installation of solar equipment is a joint coordinated effort between DSD and CPS Energy. The following information will help guide customers through both processes. *Note: It is highly recommended that you submit your application and required documentation, as applicable, to both entities simultaneously.*

**CPS Energy Process:**

**Step 1:**

Customer/Contractor is urged to review all program information including the application process overview and the program terms & conditions before starting the application process. Customer's/Contractor's failure to comply with all requirements may result in Solar PV installation being ineligible for interconnection to the CPS Energy system and/or the rebate application (if applicable) being denied.

As you plan the installation of your solar equipment it is also important that you ensure the contractor is licensed to install solar equipment (if seeking a rebate) and that the proposed equipment meets all necessary requirements to ensure timely commissioning.

**Step 2:**

Submit online registration form & preconstruction documentation: One-Line Diagram, Site Layout/Plan and Photos, Equipment Specifications, and the Distributed Energy Resource (DER) Application to [cpesolar@cpsenergy.com](mailto:cpesolar@cpsenergy.com).

CSP Energy will conduct a review of the completed application and preconstruction documentation (Note: =>25kW AC systems will be forwarded to DER Engineering Team for

review). This initial review typically takes 10 business days. If approved, a Construction Letter authorizing the commencement of work will be emailed to the Contractor. If seeking a rebate, equipment installation must be completed within 120 days.

#### Step 3

Once Contractor completes the equipment installation, they can schedule an inspection with DSD. *CPS Energy will only schedule a Commissioning Test if the permit is released (See Inspection Requirements below for additional information on inspections).*

After a successful inspection, DSD will issue the permit and will notify CPS Energy that the equipment is ready for a Commissioning Test and the installation of a meter. The Customer must have a CPS Energy electric service account number and the equipment is to be installed at the specified address.

#### Step 4:

Following successful completion of a Commissioning Test, Customer can complete and send in a rebate application (if applicable) to [cpesolar@cpsenergy.com](mailto:cpesolar@cpsenergy.com). For more information regarding CPS Energy's rebate program visit <http://www.cpsenergysavers.com/start-saving/rebates/solar/solar-photovoltaic-rebates>.

For additional information on the process, please visit CPS Energy's website at [www.cpsenergy.com](http://www.cpsenergy.com) or contact them at (210) 353-2641.

#### **DSD Process:**

The following information is provided to assist the permit applicant with DSD plan review and permitting process. Your cooperation in providing this information will ensure that your project will be reviewed within ten (10) working days and help to ensure that your permit process and inspections proceed with minimal difficulties.

An electronic plan review submittal and permit application for Solar PV systems installed on one and two family dwellings is an option available [online](#) at <http://www.sanantonio.gov/dsd> by utilizing the following directions.

1. The permit applicant will apply for an electrical permit via our online permitting system, entering the relevant information regarding address, electrical equipment, quantity of PV panels and a brief description of the work. In applying over the internet a password validation will be required to connect the applicant to their valid electrical license registered with the City of San Antonio. Upon completion of the data entry the system will generate the AP# (permit number) and plan review fees. The applicant will then be required to pay for the plan review fees through an escrow account or major credit card.
2. The applicant will be required to secure a commercial building permit ([COSA Portal](#)) for the installation of a PV system on commercial or multi-family buildings and structures.
3. The applicant will be required to secure a combination/electrical residential ([COSA Portal](#)) permit for the installation of a PV system on new structures such as additions, trellises, patio covers, canopies, carports and similar new structures intended to support PV systems that would otherwise be exempt from a building permit per Chapter 10 City Amendments and the Uniform Development Code.

4. After completion of the permit application a PDF file of the complete drawings as outlined below can be emailed to [dsdplansmanagement@sanantonio.gov](mailto:dsdplansmanagement@sanantonio.gov) for the plan review. The AP# shall be used as the file name for the PDF of the drawings.
5. Upon completion of the initial plan review notification of the results will be emailed to the applicant via email. If revisions are required the applicant will be emailed a narrative explaining the corrections which need to be made. The applicant will make any necessary corrections and email the corrected drawings to [dsdplansmanagement@sanantonio.gov](mailto:dsdplansmanagement@sanantonio.gov) for further review. Upon approval by the plan review team the applicant will be notified by email of any outstanding fees. The next step is to pay the applicable permit fees. Upon payment of all outstanding fees please notify, by email, both the reviewer and the [dsdplansmanagement@sanantonio.gov](mailto:dsdplansmanagement@sanantonio.gov) email address. Once this notification has been received the applicant will be emailed the approved stamped PDF file drawings with any approval comments to be printed out and made available on the site for inspections. All electrical work shall be performed by a licensed electrical contractor registered with DSD and must meet the requirements of all applicable current adopted codes. Contractor registration requirements along with the current codes and their amendments can be found by visiting our website at [www.sanantonio.gov/dsd](http://www.sanantonio.gov/dsd).

#### **DSD PLAN SUBMITTAL REQUIREMENTS:**

If submitting paper plans, two complete sets of plans and specifications must be provided. All of the plans submitted must be signed by the applicant, contractor or engineer as applicable. All plans, whether paper copy or electronic, must include the following information:

##### **1. A Site Plan – showing the location of:**

- a. Existing structures on the property
  - Location of any newly proposed structures
  - Provide set back locations
- b. Main Electrical Service
  - Wall layout showing location of existing equipment (electrical, foreign, etc.) and proposed equipment
- c. Photovoltaic (PV) equipment:
  - Rapid Shutdown Equipment (optimizers, micro inverters, “birdhouse”, etc.)
  - Conduits and combiner boxes - Inverters and Disconnect(s)
  - Batteries (if applicable)
  - Modules/Panels
  - Listed Mounting System
  - Etc.

##### **2. Building components**

- a. Provide a Roof Plan – showing:
  - Array layout
  - Roof covering, type and number of overlays, type of roof deck
  - Rafter or beam sizes, spacing and roof slope
  - Plumbing, mechanical, attic vent terminals located on roof
  - Show measurements for clearance for fire fighter access as required by the International Fire Code Section 605.11.1.2 for Residential and 605.11.1.3 for all other.

- Generally, for R-3 occupancies at least three (3) feet of clearance along the edge (rake) of the roof to a panel and at least three (3) feet from the ridge of the roof to a panel. Panels shall be at least one and one-half (1-1/2) feet from a valley or hip. No clearance is required at the eave.
- Generally for other than R-3 buildings, clearance shall be a minimum of 6-feet around all edges of the roof. Ground mounted PV arrays are not subject to setback requirements and shall maintain a clear brush free area of 10 feet.

**b. Listed and labeled, Array/Panel fastening method**

- Provide fastening specification sheets from the manufacturer or an engineered design for anchorage and support of the array panels to the roof structure
- Method of sealing roof penetrations

**c. R-3 buildings shall require Engineering calculations from an engineer licensed and registered in the State of Texas for roof-mounted array systems weighing more than six (6) lbs per sq. ft, when installed on roofs with slopes of less than 4:12, where two or more existing applications of any type of roof covering are encountered, or where a new structure such as trellises, patio covers, canopies, carports and similar new structures intended to support PV systems that would otherwise be exempt from a building permit per Chapter 10 City Amendments and the Uniform Development Code.**

**d. Other than R-3 buildings shall require engineering calculations from an engineer licensed and registered in the State of Texas.**

**Historical Review**

1. Applicants proposing to install or modify a photovoltaic system on a premise containing a designated historical resource or within a historic district are required to meet with Historic Design and Review Commission prior to submittal of the project to the Development Services Department for review.

**3. Electrical and System Information**

**a. Provide a single or three-line diagram showing:**

- Size and type of conductors.
- Voltage and amperage of all circuits
- Ampacity and type of all over current protection
- Equipment grounding
- Disconnection devices – AC & DC

**b. Voltage and ampacity of main service and main service disconnect.**

**c. Provide manufacturers specification sheets and listing information for all components. Roof mounted PV panels or modules shall have the same fire classification as the roof assembly per the International Residential and International Building Code.**

**d. Batteries must be installed in a listed racking system and located in areas provided with ventilation in accordance with manufacturer’s installation instructions.**

**e. Electrical plans and specifications prepared by engineer. Installation or alteration of any equipment on the customer side of the CPS Energy point of delivery (service point) rated over six hundred (600) amps at two hundred fifty (250) volts or less and rated at over four hundred (400) amps at greater than two hundred fifty (250) volts, any system**

above six hundred (600) volts or when required by the Texas Engineering Practice Act shall have the electrical plans sealed by a professional engineer, licensed and registered to practice in the state of Texas.

**INSPECTION REQUIREMENTS:**

After the installation is completed, the contractor must request inspection with DSD. Inspections can be requested by using the [online](#) services found on our website at <http://www.sanantonio.gov/dsd> or by contacting customer service at (210) 207-1111.

Once the required inspections have been performed by DSD, and your permit is released to CPS Energy, the applicant must still coordinate with CPS Energy so that the interactive systems are successfully interconnected to the utility grid. For more information regarding this process, please see CPS Energy process above, or contact CPS Energy at (210) 353-2641. For general process guidance, see diagram below.

Specific questions pertaining to the installation and inspections of these systems can be directed to the Electrical Inspections Supervisor at (210) 207-8286. Specific question pertaining to permitting and reviews of these systems can be directed to the Plan Review Supervisor at (210) 207-0152.

**Summary:**

This Information Bulletin is for information purposes only.

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# SOLAR PV SYSTEM APPLICATION/COMMISSIONING PROCESS

