



TO: Development Services Customers

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

DATE: August 9, 2011/*Revised December 06, 2021*

CREATED BY: Field Services Division/Plan Review Division

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 (PV) installed in San Antonio. This bulletin has been updated to reflect the BuildSA submittal 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 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 will 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.

CPS 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:

The Customer/Contractor is to obtain a separate electrical permit from DSD to install the photovoltaic system (*See DSD Process outlined below*).

Step 4:

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 by DSD (See Inspection Requirements below for additional information on inspections).*

After a successful inspection, DSD 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 5:

Following successful completion of a Commissioning Test, Customer can complete and send in a rebate application (if applicable) to 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 or contact them at (210) 353-2641.

Historical Review

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.

DSD Process:

The following information is provided to assist the permit applicant with the DSD plan review and permitting process. Your cooperation in providing this information will ensure that your project application will be reviewed for completeness within three working days and forwarded to technical review promptly. Technical review has a goal of three working days for initial review. The time for issuance of the permit depends on the quality of submittal and promptness to re-submit documents that correct plan review issues.

DSD Photovoltaic permit application:

An electronic application and pdf document submittal for PV is available online at the BuildSA Customer Portal: <https://aca.sanantonio.gov/CitizenAccess/Default.aspx> The PV application is a sub-type of the Electrical Permit, applied for by state licensed master electricians who are registered with the City of San Antonio. The master electrician must be the applicant. Others may be added as contacts to the application record. The application is located under the building module tab in the customer portal.

1. Apply on-line by filling out the electronic application, which includes the address, contact information, and questions related to the solar – PV work. Payment of the fee is part of the application process. You will receive a payment receipt by e-mail.
2. After completion of the permit application, you will receive an application number and may then upload PDF files of the complete drawings and all documents as outlined below, through the online BuildSA Customer Portal. If uploading later, you may open the application record and upload to the Plan Room once logged into the portal.
3. Once files are uploaded, the City of San Antonio receives notice of the application and checks for completeness of the application and documents prior to the start of technical plan review. The city receives no notice of the application without documents being uploaded.
4. Upon completion of the initial technical plan review, notification of the result is sent back to the customer by e-mail and status available through the BuildSA Customer Portal. The customer may receive an e-mail that there are issues to address. If revisions are required, the applicant will make any necessary corrections and re-upload PDF files to COSA via the BuildSA Customer Portal for further review. Customers are required to record a response to each issue and may be required to upload revised pdf documents or sheets. Any revised file or sheet should contain all the information supplied in the original plus indications of corrections made.
5. Upon further technical plan review and approval, a Permit record will be created with a different number than the application. The permit record contains all inspections. If addition fees are assessed during technical review, the applicant will review an e-mail with invoice. After payment (if there any unpaid fees), the applicant may download the approved stamped PDF file drawings in the Plan Room from the application record, to be printed out and made available on the site for inspections.
6. Inspections are located on the Permit record and can be scheduled on-line through the BuildSA portal by opening the permit record, clicking on the Record Info tab and then Inspections. All electrical work shall be performed the licensed electrical contractor that submitted the application and must meet the requirements of all applicable current adopted codes. Contractor registration requirements along with the current codes and their amendments may be found by visiting our website at [San Antonio adopted codes and amendments](#).

DSD Electronic Document Requirements:

1) Site Plan – showing the location of:

- a) Existing structures on the property
 - i) Location of any newly proposed structures
 - ii) Provide set back locations and dimensions to property lines and other buildings
- b) Main Electrical Service
 - i) Wall layout showing location of existing equipment (electrical, foreign, etc.) and proposed equipment
- c) Photovoltaic (PV) equipment:
 - i) Rapid Shutdown Equipment (optimizers, micro inverters, “birdhouse”, etc.)
 - ii) Conduits and combiner boxes - Inverters and Disconnect(s)
 - iii) Batteries (if applicable)
 - iv) Modules/Panels
 - v) Listed Mounting System
 - vi) Other types of equipment or systems not listed above

2) Building components

- a) Provide a Roof Plan – showing:
 - i) Array layout
 - ii) Roof covering, type and number of overlays, type of roof deck
 - iii) Rafter or beam sizes, spacing and roof slope
 - iv) Plumbing, mechanical, attic vent terminals located on roof
 - v) Show measurements for clearance for fire fighter access as required by the International Fire Code Section 605.11.1. There are two types of roof mounted possibilities for design: In both cases, solar arrays shall not be greater than 150-feet on any one side. (Larger dimensions create multiple arrays with further access pathways between the arrays. see the International Fire Code for details)
 - (1) Residential (single family, duplex, and townhomes) and all Commercial occupancies with sloped roofs greater than 2 units vertical and 12 units horizontal (2:12). See Section 605.11.1.2
 - (2) All Commercial with flat roofs or with slope equal to, or less than, 2 units vertical and 12 units horizontal (2:12). See Section 605.11.1.3
 - vi) 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
 - i) Provide fastening specification sheets from the manufacturer or an engineered design for anchorage and support of the array panels to the roof structure
 - ii) Method of sealing roof penetrations

- c) Single Family, R-3, duplex, and townhome buildings shall require Engineering calculations from an engineer licensed in the State of Texas for roof-mounted array systems where any of the following occur:
 - i) Weighing more than six (6) lbs. per sq. ft, when installed on roofs with slopes of less than 4:12,
 - ii) Where two or more existing applications of any type of roof covering are encountered,
 - iii) 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) All commercial buildings shall require engineering calculations from an engineer licensed and registered in the State of Texas.

3) Electrical and System Information

- a) Provide a single or three-line diagram showing:
 - i) Size and type of conductors
 - ii) Voltage and amperage of all circuits
 - iii) Ampacity and type of all over-current protection
 - iv) Equipment grounding
 - v) 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 per any one of the following:
 - i) rated over six hundred (600) amps at two hundred fifty (250) volts or less,
 - ii) rated at over four hundred (400) amps at two hundred fifty (250) volts or greater,
 - iii) any system above six hundred (600) volts
 - iv) 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.

DSD Inspection Requirements:

After the installation is completed, the contractor must request inspections with DSD. Typically, the rough-in and final are called at the same time. For commercial there may be a separate Work with CPS inspection. Inspections can be requested by scheduling on-line using the [BuildSA Customer Portal](#) or for a fee 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.

Specific questions pertaining to the application, process, or installation and inspections of these systems can be directed to Plan Review Staff at: DSDPlansManagement@sanantonio.gov.

Summary:

This Information Bulletin is for informational purposes only.

Prepared by: Richard Chamberlin, PE, Development Services Engineer

Reviewed by: Plan Review Division

Authorized by: Crystal Gonzales, PE CBO, Assistant Director