



solartricity™ producers

Operational Requirements for Interconnection on the CPS Energy Distribution System

CPS Energy and the Solar Power Producer (SPP) recognize the importance of having operational and maintenance procedures for the purpose of coordinating the operation of the SPP's system with CPS Energy's Gas, Electric, and Generation Operation systems. Failure to install, operate and maintain all wiring and apparatus in such condition and/or manner as not to endanger persons or property, or to cause impairment of CPS Energy's interconnection and service to the SPP, or any of CPS Energy's distribution customers, may result in CPS Energy disconnecting the SPP from the CPS Energy distribution system. The SPP's contractors, agents, and operating/maintenance personnel shall be informed of and follow these procedures. Copies of this document and its attachments shall be posted in all of the SPP's applicable operating centers and facility.

Accordingly, to help ensure the protection and safety of the SPP's and CPS Energy's personnel and property, the continued provision of electric service to the SPP, the continued maintenance of an interconnection between the SPP and CPS Energy, and the reliable functioning of CPS Energy's overall system operations, the following operational and maintenance procedures shall be observed:

A. CPS Energy System Responsibility

CPS Energy maintains a Generation Control and Transmission and Distribution Control Center on a 24-hour basis for the purpose of coordinating the operation of all Transmission, Distribution, and Generation facilities at CPS Energy. Although coordination will occur through the Solar Producer Program Manager (SPPM), CPS Energy's System Operator will have the ultimate responsibility for carrying out the procedures described herein with the SPP. The SPPM can be contacted at (210) 353-3388. The SPP will provide telephone numbers for normal and emergency situations and a one-line diagram of the SPP's facility to CPS Energy System Operations. The SPP may be required to have on call person that can take orders from the CPS Energy System Operators any time the Photovoltaic (PV) system is on line and generating energy into the CPS Energy Grid

CPS Energy is a member of the Electric Reliability Council of Texas (ERCOT) and operates its system in accordance with the operating criteria and guidelines of ERCOT. As a result, CPS Energy may interrupt service to the SPP in the event of an ERCOT declared emergency or as directed by ERCOT Operations. Emergencies may arise anywhere on the interconnected system of which CPS Energy is a part. If in CPS Energy's sole judgment consistent with CPS Energy's operating procedures, such emergency poses a threat to the area power supply and service interruption may prevent



solartricity™ producers

or alleviate the emergency condition, the SPP may be called upon by CPS Energy's System Operator to operate necessary switches, breakers, reduce generation, etc. in order to prevent or alleviate such an emergency condition.

CPS Energy shall install, operate and maintain any SCADA (Supervisory Control and Data Acquisition) equipment which may be installed at the SPP's facility to communicate with CPS Energy's Transmission and Distribution Center.

CPS Energy shall have the right and authority to disconnect the SPP at CPS Energy's reasonable discretion if CPS Energy believes (in each case, as determined in a non-discriminatory manner) that: (a) continued interconnection of the PV Facility with CPS Energy's electric system creates or contributes (or will create or contribute) to a system emergency on CPS Energy's electric system; or (b) the PV Facility is not in compliance with the requirements of this Agreement, or the non-compliance adversely affects the safety, reliability or power quality of CPS Energy's electric system. In non-emergency situations, CPS Energy shall give the SPP notice of noncompliance including a description of the specific noncompliance condition and allow the SPP a reasonable time to correct the noncompliance prior to disconnecting the PV Facility.

B. The SPP's System Responsibility

Only authorized employees of CPS Energy are permitted to make and energize the connections between CPS Energy's service wires and the SPP's service entrance conductors. The SPP assumes all responsibility for the electrical system on the SPP's side of the Point of Interconnection. If the Point of Interconnection is defined in the interconnection agreement between CPS Energy and the SPP, that definition overrides the following definition:

The Point of Interconnection is defined as the point of termination on the line side of metering equipment.

The SPP shall make a reasonable attempt to notify CPS Energy at least 48 hours in advance of any scheduled switching the SPP wishes CPS Energy to execute.

The SPP will install, operate and maintain all wiring and apparatus in such condition and/or manner as not to endanger persons or property, or to cause impairment of CPS Energy's interconnection and service to the SPP, or any of CPS Energy's distribution customers.

The SPP shall coordinate operation of its system with CPS Energy to ensure that the overall CPS Energy system operation will be consistent with ERCOT operating criteria and guidelines to the extent applicable to this transaction.



solartricity™ producers

The SPP shall follow all switching instructions provided by CPS Energy's System Operator.

The SPP shall promptly notify the SPPM of all internal system conditions that could affect CPS Energy's distribution system. All communications with the SPPM shall reference the SPP's facility alphanumeric name as designated by CPS Energy.

The SPP shall provide CPS Energy's authorized representatives access to the SPP's premises at all reasonable hours for the purpose of inspecting CPS Energy's wiring and apparatus, erecting, removing or replacing CPS Energy's facilities at the Point of Interconnection, reading CPS Energy's meters and for all other purposes connected herewith. For ERCOT meter equipment failure, CPS Energy authorized representatives shall have access 24 hrs a day, 365 days a year.

The SPP shall, after reasonable notice by CPS Energy, repair, replace or disconnect equipment which violates the CPS Energy Technical Requirements for limiting harmonics, voltage fluctuations or other problems that interfere with CPS Energy's supply of electric service to other customers.

The SPP is responsible for providing all facility equipment in accordance with CPS Energy's applicable specifications, both initially and from time to time thereafter, whenever changes in the CPS Energy's distribution system (including the distribution system's monitoring and protection devices) requires such changes in the facility in order to maintain its compatibility with the CPS Energy's distribution system. *Prior to the replacement or modification of any equipment, the SPP shall first notify **CPS Energy's Distributed Generation Group by email at distgen@cpsenergy.com**, submit specifications to CPS Energy and obtain CPS Energy's approval of compatibility with CPS Energy's distribution system.*

C. CPS Energy Maintenance Responsibility

CPS Energy performs periodic maintenance on its equipment. Such maintenance on CPS Energy equipment at the Point of Interconnection may require scheduling approximately an eight hour outage annually during normal working hours. Any changes to such schedule shall be reviewed and approved by CPS Energy.

CPS Energy shall inspect the following devices, instruments, and systems (if installed):

1. Revenue metering equipment owned by CPS Energy. This equipment shall be inspected on a reasonable basis not more often than every two months. CPS Energy will maintain and replace this equipment as necessary.



solartricity™ producers

2. CPS Energy owned high voltage instrument transformers. A power outage to the SPP's equipment is required for the maintenance of the revenue metering or control instrument transformers at the Point of Interconnection.
3. All SCADA equipment at the Point of Interconnection. CPS Energy will maintain this equipment as necessary and must have access to this equipment 24 hours a day 7 days a week in case the need of reactive maintenance occurs.
4. All communication equipment used with distribution line protective relaying including periodic performance testing. The SPP will be notified of any problems or irregularities found.

D. The SPP Maintenance Responsibility

The SPP agrees to install, operate and maintain all wiring and apparatus in such condition and/or manner as not to endanger persons or property, or to cause impairment of CPS Energy's interconnection and service to the SPP, or any of CPS Energy's distribution customers.

The SPP shall inspect and maintain all facility structures and equipment provided by the SPP on an industry or manufacturer's recommended basis.

The SPP will visually inspect and conduct periodic maintenance on any facility batteries as recommended by manufacturer. The SPP will provide CPS Energy copies of test reports and any corrective action taken.

E. Switching Scope and Guidelines

Switching of CPS Energy equipment is required for equipment outages to allow CPS Energy to perform maintenance and construction and for the SPP to perform maintenance and construction. CPS Energy and SPP activities should be coordinated whenever possible to reduce switching requirements. To facilitate this process, the following requirements have been included for guidance:

1. When switching CPS Energy equipment is desired for maintenance or operation of the SPP's system, the SPP shall contact CPS Energy's System Operator during CPS Energy's regular business hours at least 48 hours in advance, but not later than 2:00 P.M. on the day preceding such planned switching and explain the nature of the request. If CPS Energy's System Operator approves the switching, the SPP must notify CPS Energy's System Operator one hour prior to start of work and one hour prior to



solartricity™ producers

completion of job if the job requires the assistance of CPS Energy personnel.

2. In addition to outages for scheduled maintenance by the SPP or CPS Energy, switching may be required at the Point of Interconnection as a result of defective equipment being found, failed equipment and emergency situations. In these situations, both CPS Energy and the SPP agree to provide any required switching as promptly as reasonably possible.
 - (a) To remove a transformer from service, all loads and PV system should be removed first. All SPP equipment should be removed and/or disconnected via a main disconnect or by some other device to ensure that the equipment has been disconnected electrically from CPS Energy for safety purposes.
 - (b) To remove line equipment from service, switching at remote CPS Energy or other SPP facilities is required. The SPP must request an outage as previously described. CPS Energy will provide all switching on the CPS Energy side of the Point of Interconnection.
 - (c) CPS Energy will not perform any switching and/or maintenance on SPP equipment or facilities. The SPP must obtain qualified personnel to perform these tasks.

The SPP and CPS Energy shall abide by each other's isolation procedures, including but not limited to abiding by the intent of isolation tags, locks or written notices of both parties.

F. Equipment Identification

The SPP is required to label equipment per current NEC standards. The SPP must label the revenue meter with the facility's alphanumeric name provided by CPS Energy.

CPS Energy may display and mount signs, stickers, drawings, telephone numbers, and instructions pertaining to the scheduled maintenance or emergency operation of the SPP's system on outside equipment and inside.

G. Clearance Procedures

It is CPS Energy's practice that the SPP must obtain clearance from CPS Energy System Operator for any maintenance activities requiring the outage of CPS Energy's distribution lines at the Point of Interconnection. CPS Energy's personnel will remove CPS Energy's



solartricity™ producers

equipment from service and create any open points necessary between CPS Energy and the SPP. CPS Energy is not responsible for the SPP's side of equipment. When an outage of distribution line apparatus is desired, the following procedure for securing a clearance will apply:

1. For a clearance request, please contact the SPPM at (210) 353-3388. The SPPM will coordinate with the System Operator and the System Operator shall give switching instructions to CPS Energy personnel to accomplish switching at the SPP's facility and contact any other CPS Energy operators or crews necessary to accomplish switching at remote terminals.
2. The SPP and/or CPS Energy personnel shall place safety or "hold" tag on switches when they are opened. Tagging of equipment remote from the SPP's system shall be done by CPS Energy personnel.
3. CPS Energy's System Operator shall give the clearance in the name of the party requesting it. CPS Energy will use designated CPS Energy personnel to check that the procedures of the clearance are completed by the SPP before the prior to final approval. In the event more than one crew is working on a line, each crew shall secure clearance. CPS Energy is responsible for placing grounds on CPS Energy tie point.
4. When a switch in the SPP's system is tagged mutually by the SPP and CPS Energy personnel, the first operator desiring to remove his tag shall notify CPS Energy's System Operator that he is removing his tag and that there is still a tag on the switch. Neither CPS Energy nor the SPP shall operate the switch until the operator whose tag is still on the switch has notified CPS Energy's System Operator that he is removing his tag.
5. Release of all clearances and removal of all grounds are required before "hold" tags are removed and any switches closed. "Hold" tags are removed only after the clearance is released by the individual who secured the clearance and switching instructions are received from CPS Energy's System Operator.

H. Grounding Procedures

CPS Energy shall place safety grounds on CPS Energy equipment when required for maintenance procedures. All grounding on the SPP side will be performed by the SPP personnel. The operator providing maintenance is responsible for placing safety grounds around the equipment to be maintained. No safety grounds should be placed where a switching device could be opened, removing the protection of a safety ground(s). The



solartricity™ producers

number and locations of all grounds should be provided to CPS Energy's System Operator.

All grounds must be removed before "hold" tags are removed from switches.

I. Fault Initiated Outages

After automatic tripping of the SPP due to an interruption of CPS Energy service at the Point of Interconnection (due to a fault or other system disturbance), the SPP shall notify the SPPM. Items 1, 2, and 3 below are most important and should be reported as soon as possible.

1. Present position of circuit breakers or switches (open or closed).
2. Time of outage.
3. Any information which might be helpful in determining the cause of the outage.

J. Amendment Procedure

These procedures may be amended from time to time by CPS Energy to reflect subsequent changes in CPS Energy's Rate Structure for Electric Service approved by the San Antonio City Council or to account for significant modifications in the manner in which the SPP is connected to and must operate on CPS Energy's system.