

**HEART of TEXAS**



**ELECTRIC CO-OP**

**DISTRIBUTED GENERATION GUIDELINES MANUAL**

**AGREEMENT**

**DISTRIBUTED GENERATION AGREEMENT  
FOR THE INTERCONNECTION AND PARALLEL OPERATION OF  
DISTRIBUTED GENERATION SYSTEMS**

THIS AGREEMENT made this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between \_\_\_\_\_, hereinafter referred to as the "Member-Producer," and Heart of Texas Electric Cooperative., hereinafter referred to as the "Cooperative" is as follows:

**Purpose**

This agreement defines the relationship between the Cooperative and Member-Producer including pricing and other terms affecting the purchase and sale of electricity as well as reasonable conditions for interconnection and parallel operation.

Cooperative owns and operates an electric utility engaged in the distribution of electricity serving portions of McLennan, Bell, Bosque, Falls, Milam, Coryell, and Hamilton Counties; and Member-Producer owns or intends to own, operate and maintain a Distributed Generation System (DG System) of 50 KW or less and desires to interconnect and operate such installation in parallel with Cooperative's electric distribution system at address:

\_\_\_\_\_ ; and  
the parties hereto wish to contract for the purchase and sale of the electrical output from the DG System, and the terms of its interconnection with the Cooperative electric distribution system. THEREFORE, in consideration of the mutual covenants and agreements herein contained, the parties hereby contract and agree with each other as follows:

**Article 1 | Effective Date**

This Agreement shall be effective as of the date of execution by the latter of the two parties (the Effective Date) and, subject to the other terms of this Agreement, shall continue in effect for a period of one year, and month to month thereafter.

**Article 2 | General Terms**

The DG System will be installed at Member-Producer's premises at the address specified above. The DG System shall not have a generation capacity greater than 50 KW and be connected on the Cooperative's distribution at a voltage of 60KV or lower. Member-Producer shall install, operate and maintain the DG System in full and faithful compliance with all applicable federal, state and local laws, ordinances, rules and regulations, and generally accepted industry codes and standards, including, but not limited to the National Electrical Safety Code and the National Electrical Code. Member-Producer shall promptly notify Cooperative upon receipt of any citation or other official notice of alleged violation of laws, ordinances, rules and regulations concerning the DG System.

The Cooperative agrees to use reasonable diligence to provide simultaneous electric service. Interconnection, parallel operation, sales and purchases of electricity will be governed by the Cooperative's Distributed Generation Interconnection Manual that includes the technical, interconnection, parallel operations and other procedural requirements and the Cooperative's Distributed Generation Tariff including any and all amendments that may hereafter be approved or ordered by any regulatory authority having

jurisdiction, SAID TARIFF including all service rules, regulations, and rates IS A PART OF THIS AGREEMENT TO THE SAME EXTENT AS IF FULLY SET OUT HEREIN AND IS ON FILE AND AVAILABLE AT THE COOPERATIVE'S OFFICE.

### **Article 3 | Interconnection Process and Requirements**

Prior to interconnection Member-Producer shall have:

- (1) fulfilled all requisites for the provision of electric utility service contained in the Agreement;
- (2) provide required information (see DG Application) regarding the DG system;
- (3) comply with conditions for line extension (if required);
- (4) provide satisfactory liability insurance (if required);
- (5) sign and deliver this Agreement;
- (6) complete construction / comply with applicable laws, codes and industry practices; and
- (8) give notice of intent to energize and notify Cooperative to schedule inspection;

Member-Producer shall be solely responsible for the design, installation, operation, maintenance, and repair of the DG System and Member-Producer's interconnection facilities. The interconnection of the DG System to the Cooperative electrical system shall comply with the Public Utility Commission of Texas Substantive Rules §25.212 relating to Technical Requirements for Interconnection and Parallel Operation of On-Site Distributed Generation, (16 Texas administrative Code §25.212) or any successor rule addressing distributed generation. Cooperative shall inspect the DG System and the interconnection equipment.

All costs to interconnect with the Cooperative electric system shall be the responsibility of Member-Producer. Cooperative shall not be required to take or pay for any energy generated by the DG System until the DG System successfully passes Cooperative's Field Inspection and Member-Producer shall have reimbursed Cooperative for all its interconnection costs. Maintenance of the DG System shall be performed in accordance with the applicable manufacturer's recommended maintenance schedule.

### **Article 4 | Insurance Requirements**

For Facilities Less than 50 KW AC: The Member-Producer is required to provide a certificate of insurance coverage to Cooperative. The Member-Producer must carry liability insurance coverage which insures the Member-Producer against all claims for property damage and for personal injury or death arising out of, resulting from or in any manner connected with the installation, operation and maintenance of the Member-Producer's generating equipment.

For Facilities 50 KW AC and Larger: Prior to installation / interconnection, the Member-Producer must provide a certificate of insurance showing satisfactory liability insurance including contractual liability insurance covering indemnity obligations which insures the Member-Producer against all claims for property damage and for personal injury or death arising out of, resulting from or in any manner connected with the installation, operation and maintenance of the Member-Producer's DG Facility.

- (1) The amount of such insurance coverage shall be not less than \$2,000,000 per occurrence and name Cooperative as an additional insured. This amount may be increased at the sole discretion of Cooperative if the nature of the project so requires.

- (2) The certificate of insurance shall provide that the insurance policy will not be changed or canceled during its term without thirty days written notice to the Cooperative. The term of the insurance shall be coincident with the term of the installation / interconnection contract or shall be specified to renew throughout the length of the Installation / Interconnection Contract.
- (3) The Cooperative reserves the right to request a Member-Producer provide proof of such insurance at any time.

#### **Article 5 | Indemnification**

**THE COOPERATIVE'S LIABILITY IS LIMITED IN ACCORDANCE WITH THIS AGREEMENT AND MEMBER-PRODUCER SHALL INDEMNIFY, DEFEND AND SAVE HARMLESS COOPERATIVE, ITS ELECTED AND NON-ELECTED OFFICIALS, OFFICERS, AGENTS AND EMPLOYEES FROM AND AGAINST ANY AND ALL LIABILITIES, LOSSES, CLAIMS, DAMAGES, ACTIONS, SUITS OR DEMANDS FOR DAMAGES (INCLUDING COSTS AND ATTORNEY'S FEES, BOTH AT TRIAL AND ON APPEAL) ARISING OUT OF, RESULTING FROM, OR IN ANY MANNER CONNECTED WITH THE BREACH OF ANY WARRANTY OR REPRESENTATION MADE BY MEMBER-PRODUCER IN THIS AGREEMENT, OR IN ANY MANNER CONNECTED WITH THE DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE OR REPAIR OF ANY PART OF MEMBER-PRODUCER'S DG SYSTEM OR INTERCONNECTION FACILITIES, INCLUDING, WITHOUT LIMITATION LIABILITIES, LOSSES, CLAIMS, DAMAGES, ACTIONS, SUITS OR DEMANDS FOR DAMAGES FOR OR ON ACCOUNT OF PERSONAL INJURY TO, OR DEATH OF, ANY PERSON, OR DAMAGE TO, OR DESTRUCTION OR LOSS OF, PROPERTY BELONGING TO MEMBER-PRODUCER, COOPERATIVE OR ANY THIRD PERSON.**

#### **Article 6 | Installation and Information Warranty**

Member-Producer warrants to Cooperative that Member-Producer's power generating installation (DG System) is constructed and will be maintained in a safe and reliable condition and will comply with the latest applicable codes.

Member-Producer warrants and represents that:

- The information regarding the characteristics of the DG System are as specified in the Application for Interconnection and Parallel Operation of Distributed Generation with the Cooperative's Electric System filed by the Member-Producer with Cooperative;
- The DG System and associated other electrical components and devices meet National Electrical Code standards;
- All permits, inspections, approvals, and/or licenses necessary for the installation or operation of the DG System have been obtained. The DG System has been successfully tested to UL 1741 and IEEE 1547 standards or has been satisfactorily tested by an independent laboratory with published results.

Member-Producer shall provide manufacturer's data or other written proof acceptable to Cooperative to verify the accuracy of the foregoing warranties and representations. If any of foregoing warranties and representations are inaccurate, Cooperative may, without waiver of or prejudice to any other remedy, immediately disconnect the DG system from the Cooperative's electric system and terminate this agreement.

#### **Article 7 | Interconnection Studies**

Cooperative may perform interconnection studies, which shall include service study, coordination study, and utility system impact study, as needed and determined in the sole discretion of the Cooperative. In instances

where such studies are deemed necessary, the scope of such studies shall be based on the characteristics of the particular distributed generation facility to be interconnected and the Cooperative's distribution system at the specific proposed location. Cooperative may charge Member fees for Pre-Interconnection Studies that recover the costs of performing such studies. Any modifications or additions to the Cooperative's Electric system identified through the interconnection study as required for the safe and reliable interconnection of Member's facility shall be solely at the Member's expense. Member shall not acquire any ownership in such modifications or additions to Cooperative's electric distribution system.

### **Article 8 | Metering Equipment**

The actual metering equipment required, its voltage rating, number of phases and wires, size, current transformers, number of input and associated memory is dependent upon the type, size and location of the electric service provided. For all approved DG installations, HOTEK will provide a meter that can measure the "Delivered KWh" (energy delivered by the Cooperative); the "Received KWh" (energy delivered to the Cooperative by the Member-Producer). HOTEK will also require a secondary meter that measures the PV systems production.

### **Article 9 | Manual Safety Disconnect**

The Member-Producer shall provide and install a manual load break switch that provides clear indication of the switch position at the Point of Interconnection to provide separation between the Cooperative electrical system and the Member-Producer's electrical generation system. The location of the disconnect switch must be approved by the Cooperative.

The disconnect switch shall be easily visible, mounted separately from metering equipment, readily accessible to Cooperative personnel at all times, and capable of being locked in the open position with a Cooperative padlock. The Cooperative reserves the right to open the disconnect switch isolating the Member-Producer's electrical generating system (which may or may not include the Member-Producer's load) from cooperative electrical system for any of the following reasons:

- 1) To facilitate maintenance or repair of the Cooperative electrical system, or
- 2) When emergency conditions exist on the Cooperative electrical system, or
- 3) When the Member-Producer's electrical generating system is determined to be operating in a hazardous or unsafe manner or is or potentially can unduly affect the Cooperative electrical system waveform, or
- 4) When the Member-Producer's electrical generating system is determined to be adversely affecting other electric consumers on the Cooperative electrical system, or
- 5) Failure of the Member-Producer to comply with applicable codes, regulations and standards in effect at the time, or
- 6) Failure of the Member-Producer to abide by any contractual arrangement or operating agreement with the Cooperative.
- 7) The Cooperative reserves the right to operate the disconnect for the protection of the Cooperative's system even if it affects Member-Producer's distributed generation system. In the event the Cooperative opens and closes the disconnect switch it shall not be responsible for energization or restoration of parallel operation of the generating installation. The Cooperative will make reasonable efforts to notify the Member-Producer in the event the disconnect switch has been operated. The Member-Producer will not bypass the disconnect switch at any time for any reason.

### **Article 10 | Cooperative Right to Disconnect**

Cooperative shall not be obligated to accept and shall have the right to require Member-Producer to temporarily curtail, interrupt, or reduce, deliveries of energy in order to construct, install, maintain, repair, replace, remove, investigate, inspect, or test any part of the interconnection facilities, equipment, or any part of the Cooperative's electric system. Cooperative may disconnect, without notice, the DG System from the electric distribution system, if, in the Cooperative's opinion, a hazardous condition exists and such immediate action is necessary to protect persons, or Cooperative's facilities or other member's facilities from damage or interference caused by Member-Producer's DG System or lack of properly operating protective devices.

### **Article 11 | Parallel Operation**

Member-Producer is responsible for installation, safe operation, protection, and maintenance of all equipment and wiring at and beyond the point where Member-Producer's conductors contact the Cooperative's conductors. The electrical power generated shall be compatible with Cooperative's standard distribution system at the point of delivery and of such quality that Cooperative's system is not adversely affected.

### **Article 12 | Purchases of Electricity from Member-Producer**

As provided for in the Cooperative's Distributed Generation Tariff,

- 1) Member-Producer and the Cooperative agree that the Member-Producer will sell exclusively to the Cooperative the electrical output from the DG system
- 2) the Cooperative shall pay Member for the "KWh Received" (energy received by the Cooperative's Distribution System) at the Avoided Cost of Energy Rate (ACER).
- 3) The ACER is calculated based on the Cooperative's wholesale electric energy provider's monthly invoices. The Cooperative reserves the right to amend the ACER at any time.
- 4) Member-Producer shall exclusively purchase from the Cooperative its requirements of electric energy above the amounts generated by the DG system at the applicable tariff rate. If any tariff or rate is changed by the Cooperative, or by order or consent of any regulatory authority having a jurisdiction thereof whether or not at the request of the Cooperative, such changed tariff, rate/or redefined class of service shall be applicable to service provided hereunder from and after the effective date of such change.

### **Article 13 | Payment / Reimbursement for Energy**

The Member's compensation for the excess energy supplied to the Cooperative during the monthly billing period shall accumulate as a monetary credit to be applied to future energy purchases by Member. If at the end of the calendar year an accumulated monetary credit for the excess energy supplied to the Cooperative during the monthly billing period still exists, Cooperative will issue payment to Member equal to the amount of the remaining accumulated monetary credit. Accumulated credits, if any, will not carry forward to the next calendar year.

**Article 14 | Access to Premise and DG System Interconnection**

Member-Producer hereby grants Cooperative access on and across its property at any reasonable time to inspect the DG System and the interconnection equipment, to read or test meters and metering equipment, and to operate, maintain and repair Cooperative’s facilities. No inspection by Cooperative of the DG System or the interconnection facilities shall impose on Cooperative any liability or responsibility for the operation, safety or maintenance of the DG system or Member-Producer's interconnection facilities.

**Article 15 | Breach**

A material failure of either party to fully, faithfully and timely perform its obligations under this Agreement shall be a breach of this Agreement. In the event of a breach which is not cured within thirty (30) days after receipt of written notice to the party in default, the party not in default may terminate this Agreement. Notwithstanding any other provision of this agreement, Cooperative may discontinue service or may disconnect the DG System or otherwise suspend taking energy from Member-Producer. All rights granted under this section are in addition to all other rights or remedies available at law or under this Agreement or the applicable Rules and Regulations of the Cooperative.

**Article 16 | Entire Agreement**

This agreement constitutes the entire agreement between the parties and supersedes all prior agreements between Member-Producer and Cooperative for the service herein described, and the Cooperative, its agents and employees have made no representations, promises, or made any inducements, written or verbal, which are not contained herein. Member-Producer agrees that it is not relying on any statements not herein contained.

**Article 17 | Notice**

After the initial term, this agreement shall continue in force thereafter unless terminated by either party giving at least thirty (30) days written notice to the other. Notices given under this Agreement are deemed to have been duly delivered if hand delivered or sent by United States certified mail, return receipt requested, postage prepaid, to:

**If to Company:**

Heart of Texas Electric Cooperative  
1111 Johnson Dr. PO Box 357, McGregor TX, 76657

**If to Member-Producer:**

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**Article 19 | Termination**

Termination of this agreement will result in the disconnection of the distributed generation facility from the Cooperative's distribution system in accordance with good utility practice.

**Article 20 | Assignments**

This Agreement shall inure to the benefit of and be binding upon the heirs, successors, or assigns of each of the parties hereto. Member-Producer may not assign this Agreement without the prior written consent of the Cooperative. Any assignment without such consent shall be null and void.

**Article 21 | Waiver**

The failure of either party to insist in any one or more instances upon strict performance of any provisions of this Agreement, or to take advantage of any of its rights hereunder, shall not be construed as a waiver of any such provision or the relinquishment of any such right or any other right hereunder.

**Article 22 | Interconnection Costs**

Member-Producer agrees to pay for extension of Cooperative's facilities and other interconnection costs as follows:

\$\_\_\_\_\_ in advance of any work by the Cooperative.

**Article 23 | Other Costs**

Member-Producer agrees to reimburse Cooperative for all future costs, including:

- a. Costs required to correct the quality of service provided by Member-Producer,
- b. Costs of modification to Cooperative's system in order to purchase or continue to purchase Member-Producer's output, costs associated with meter reading, billing or other activities engaged in by Cooperative as a result of the purchase of the Member-Producer's output, or other costs that may be assessed to the Cooperative by ERCOT, the Public Utility Commission, or other agencies and their successors that are attributable to distributed generation systems.

These costs may include, but are not limited to, the costs of special interconnection equipment, protective devices, control devices, upgrading of distribution system components; associated engineering and general and administrative expenses, maintenance and repair costs of the modifications and equipment, and other just and reasonable costs which are allocable to the Member-Producer's small power generating installation.

**Article 24 | Review of Distributed Generation Tariff**

Member-Producer acknowledges it has reviewed the Cooperative's Distributed Generation Tariff.

**Article 25 | Disputes** This Agreement and all disputes arising hereunder shall be governed by the laws of the State of Texas. Venue for all such disputes shall be proper and lie exclusively in McLennan County, Texas.



**Article 26 | Approvals**

IN WITNESS WHEREOF, the parties hereto have caused their names to appear below, signed by authorized representatives.

<b>Heart of Texas Electric Cooperative Association</b>	
By (Signature):	_____
Name (Print):	_____
Title:	_____
Date:	_____

<b>Member-Producer</b>	
By (Signature):	_____
Name (Print):	_____
Date:	_____

**HEART of TEXAS**

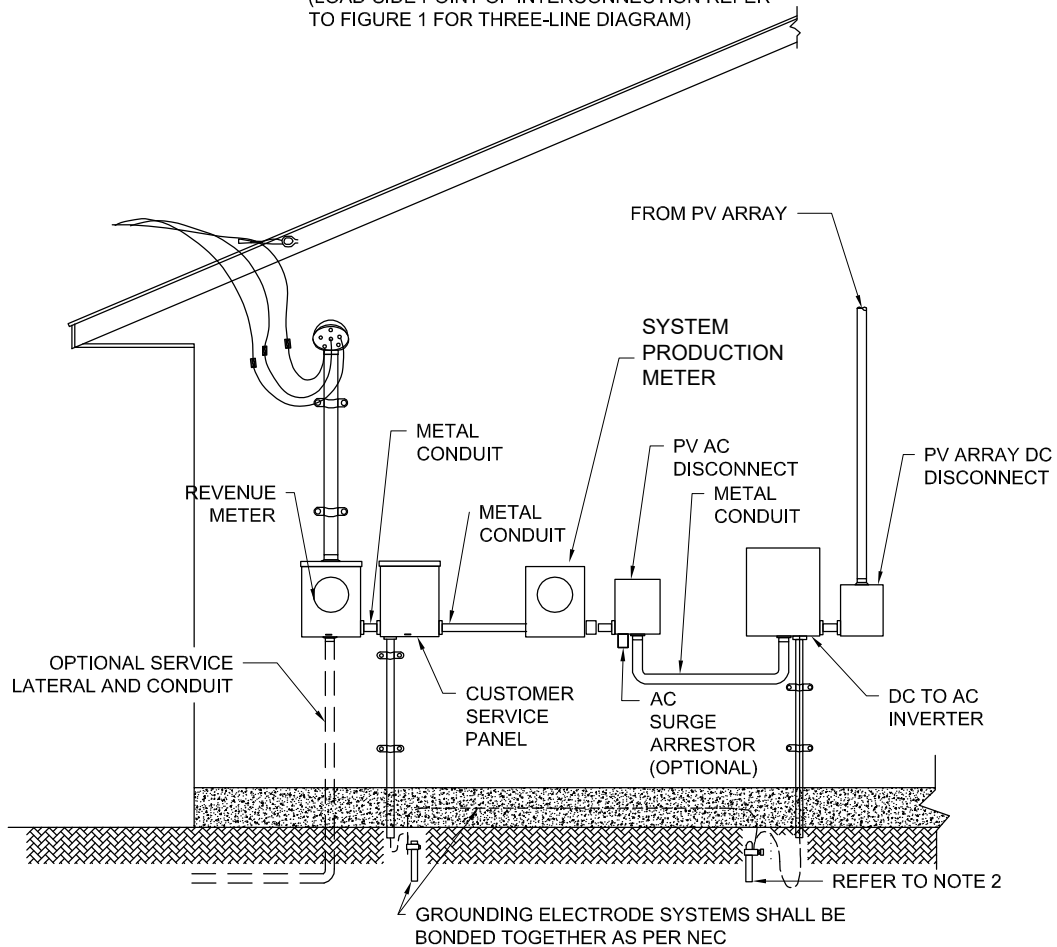


**ELECTRIC CO-OP**

**DISTRIBUTED GENERATION GUIDELINES MANUAL**

**DIAGRAM**

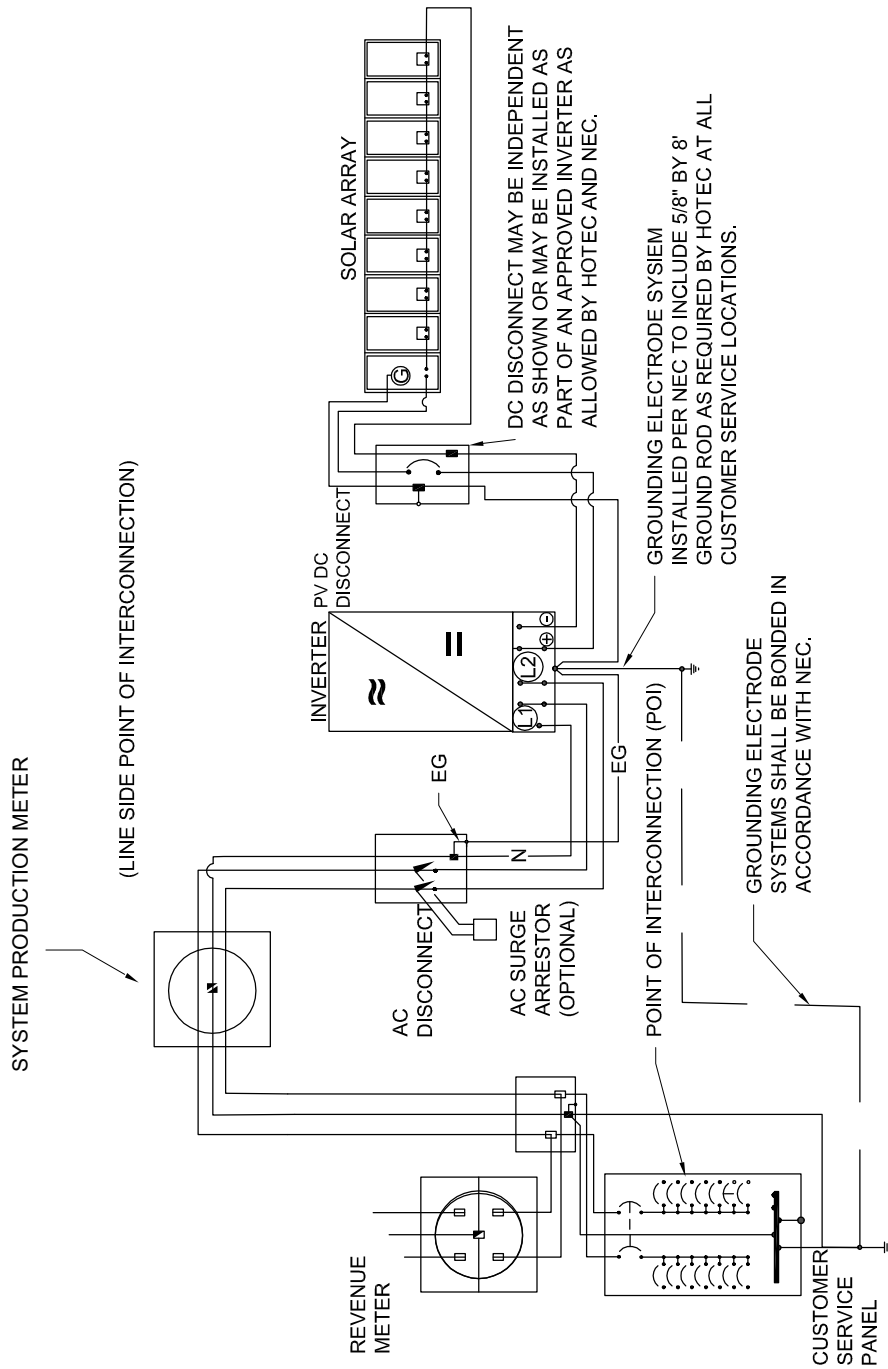
FIGURE 2  
 TYPICAL 120/240-VOLT, SINGLE-PHASE PHOTOVOLTAIC (PV) SYSTEM  
 (LOAD-SIDE POINT OF INTERCONNECTION REFER  
 TO FIGURE 1 FOR THREE-LINE DIAGRAM)



**NOTES:**

1. INVERTER OUTPUT CIRCUIT CONDUCTOR SHALL BE INSTALLED IN METAL RACEWAYS FROM INVERTER TO POINT OF INTERCONNECTION.
2. GROUNDING ELECTRODE SYSTEM INSTALLED AS PER NEC TO INCLUDE 5/8-INCH X 8-FOOT GROUND ROD AS REQUIRED BY HOTEC AT ALL CUSTOMER SERVICE LOCATIONS.
3. THE PV DC GROUNDING SYSTEM SHALL NOT BE BONDED TO THE AC GROUNDING SYSTEM BY USING A COMBINED DC GROUNDING ELECTRODE CONDUCTOR AND AC EQUIPMENT GROUNDING CONDUCTOR. CONTRACTOR MAY CHOOSE TO USE THE OPTION SHOWN ABOVE OR MAY INSTALL A GROUNDING ELECTRODE CONDUCTOR DIRECTLY FROM THE INVERTER GROUNDING ELECTRODE TERMINAL TO THE MAIN SERVICE GROUNDING ELECTRODE SYSTEM.
4. THE PV AC DISCONNECT SHALL BE LOCATED IMMEDIATELY ADJACENT TO THE REVENUE METER.
5. LABELING AND IDENTIFICATION OF ALL PV RELATED EQUIPMENT SHALL BE DONE IN ACCORDANCE WITH THE NEC.
6. WHERE THE POINT OF INTERCONNECTION IS TO BE MADE AHEAD OF THE SERVICE EQUIPMENT, IT SHALL BE MADE AFTER THE HOTEC REVENUE METER. SUCH INSTALLATIONS MUST BE PRE-APPROVED.

FIGURE 3  
 TYPICAL PHOTOVOLTAIC (PV) SYSTEM  
 120/240-VOLT SINGLE-PHASE THREE-WIRE DIAGRAM



**NOTES:**

1. TYPICAL INTERACTIVE PV SYSTEM WIRING DIAGRAM. FOR ILLUSTRATION PURPOSES ONLY. REFER TO EQUIPMENT MANUFACTURER LITERATURE FOR ACTUAL EQUIPMENT WIRING RECOMMENDATIONS. INSTALLATION SHALL COMPLY WITH SERVICE STANDARDS AND NATIONAL (NEC, UL AND IEEE) CODES.
2. INVERTER OUTPUT CIRCUIT CONDUCTORS SHALL BE INSTALLED IN CONTINUOUS METAL RACEWAYS.
3. THE PV DC GROUNDING SYSTEM SHALL NOT BE BONDED TO THE AC GROUNDING SYSTEM BY USING A COMBINED DC GROUNDING ELECTRODE CONDUCTOR AND AC EQUIPMENT GROUNDING CONDUCTOR. CONTRACTOR MAY CHOOSE TO USE THE OPTION SHOWN ABOVE OR MAY INSTALL A GROUNDING ELECTRODE CONDUCTOR FROM THE INVERTER DIRECTLY TO THE SERVICE GROUNDING ELECTRODE(S).
4. THE POINT OF INTERCONNECTION SHALL BE MADE AFTER THE HOTEC REVENUE METER IN A JUNCTION BOX SUITABLE FOR THE CONDITIONS AND PROVIDED WITH LOCKING PROVISIONS. SUCH INSTALLATION MUST BE PRE-APPROVED BY HOTEC.



ELECTRICAL DISTRIBUTION  
 CONSTRUCTION SPECIFICATIONS



[WWW.SE-TEXAS.COM](http://WWW.SE-TEXAS.COM)  
 TEXAS REGISTRATION  
 NUMBER F-1594

TYPICAL  
 PHOTOVOLTAIC SYSTEM

APPROVED BY

UNIT NUMBER  
 FIGURE 3