



CITY OF SEGUIN

DISTRIBUTED GENERATION TECHNICAL MANUAL AND INTERCONNECTION GUIDE

Updated July- 2018



What is the purpose of the City of Seguin Distributed Generation (DG) Technical Manual and Interconnection Guide?

The City of Seguin Distributed Generation Technical Manual and Interconnection Guide was developed to communicate the requirements for interconnection and parallel operation of distributed generation facilities within the City of Seguin's electric utility's service area.

The City of Seguin DG Guidelines are consistent with the Texas Public Utility Commission's (PUC) DG rules and regulations (P.U.C. SUBST. R. 25.211, 25.212 and 25.217) as well as other statutory guidelines, including the Texas Public Utilities Regulatory Act (PURA), which entitles all Texas electric customers to access to on-site distributed generation, and authorizes the interconnection and parallel operation of Distributed Renewable Generation with electric utilities.

*The **Technical Manual and Interconnection Guide** provides information to City customers desiring to install and interconnect a DG system on the City of Seguin electric distribution system and describes the technical and procedural information needed to have a full understanding of the requirements involved with this process.*

The Manual / Guide also provides information for City customers regarding the rate that City of Seguin has put in place to purchase any energy that is delivered to the City of Seguin's distribution system.

The bottom line: The City of Seguin is committed to the safe interconnection and operation of all DG installations connected to the City of Seguin's distribution system.



I am a City of Seguin electric customer and considering installing a DG system -- where do I need to start?

City of Seguin customers should contact City of Seguin very early in the decision / installation process. City personnel will be glad to take time to answer questions and provide both technical and procedural information regarding your potential DG installation. The City of Seguin's DG Policy is clear – **DG systems will not be allowed to interconnect and/or operate until the following steps have occurred:**

Step-1: Customer **must submit an application** to City of Seguin for the DG system(s). The City of Seguin DG Application Form is attached to the City of Seguin DG Technical Manual and Interconnection Guide – and is also available on the City of Seguin website (Seguintexas.gov) and at the City of Seguin office.

Step-2: The DG **application must be reviewed and approved** by City of Seguin, prior to installation of the DG system. City of Seguin must confirm that the proposed system meets the technical requirements and determine if the installation requires an engineering study. In some cases, engineering studies are required to ensure the safe operation of the DG system.

Step-3: Once the DG system is installed **City of Seguin will confirm the installation is consistent with the DG Application and meets all City of Seguin requirements.** This inspection must take place prior to interconnecting the DG system with the City's distribution system.

Step-4: The **customer must execute a DG Agreement with City of Seguin.** This agreement is required prior to interconnecting the DG system with the City of Seguin distribution system. The DG agreement confirms that the system meets all technical requirements and also sets forth the rate at which City of Seguin will purchase any energy that is delivered to City of Seguin (in excess of the DG output that is used by the customer).



What are the technical specification and requirements for the interconnection of a DG system?

The term “technical requirements” can be a little confusing in terms of the DG application, installation and agreement process. Here are some key things to know and consider regarding technical requirements:

- ✓ ***City of Seguin has adopted the technical requirements and specifications from the Texas Public Utility Commission’s (PUC) DG rules and regulations. These specifications set forth the requirements for the safe interconnection and operation of DG systems. These requirements also establish the criteria used to determine if an engineering study is needed.***
- ✓ ***Many technical requirements are covered by having equipment with appropriate IEEE, UL and other “stamps of approval” from the DG system manufacturer. For most systems, these certifications signal to City of Seguin that the system being installed meets and/or exceeds technical requirements for the major components of the system (e.g., the solar panels and inverter(s)).***
- ✓ ***There are also technical requirements related to the installation. City of Seguin has provided a summary of all the requirements (technical and procedural) in this Technical Manual and Interconnect Guide, taken from the City of Seguin DG Ordinance. We have also attached the City’s DG Application and DG Agreement to the DG Technical Manual and Interconnection Guide.***



Does the City of Seguin sell and / or install DG systems?

Does the City have listed DG vendors or contractors?

*City of Seguin realizes that some electric utilities have decided to be in the business of selling and installing some types of DG systems. However, **City of Seguin has determined that selling and/or installing DG systems is not a business that the City of Seguin can (or should) consider.***

*City of Seguin understands that our customers look to us for sound and unbiased information, and with that in mind – we can provide general information to our customers regarding distributed generation, but **City of Seguin will not endorse or recommend systems, vendors or contractors for DG system installations.** The City urges customers that are interested in distributed generation systems, to look for well-established and reputable vendors and contractors with solid company experience and references.*



How will the City of Seguin account for and reimburse for energy that my DG system sends to the City's electric grid?

City of Seguin will reimburse customers for energy “delivered to” the City of Seguin system at the “Avoided Cost of Generation Rate” (ACGR). The ACGR is determined by a formula that derives inputs from the City’s wholesale energy provider(s). The formula and inputs can be obtained from the City’s electric department. The City will maintain and updated this rate on a regular basis. The City of Seguin reserves the right to amend the ACGR at any time.

The City of Seguin DG Rate Rider (attached to this Interconnection Guide) contains all relevant information regarding the rate for accounts with interconnected DG systems.



What initial and ongoing costs are associated with a DG interconnection?

The City of Seguin has the following upfront charges associate with DG interconnection:

Fee Type	City Department	Amount
Permit	Planning / Codes	\$24.00
Electric Meter and meter socket (2 nd meter for DG)	Electric Utility	(100-amp meter) \$280.00
		(200-amp meter) \$320.00
DG Application Fee	Electric Utility	\$25.00

The City of Seguin does not charge any monthly or ongoing fees for interconnected DG systems.



DISTRIBUTED GENERATION

**GENERAL AND TECHNICAL
REQUIREMENTS**

PART 1. General Information and Definitions

Section 1.1. Authority

Chapter 102, Division III of the City of Seguin Code of Ordinances serves as the authority for this Technical Manual. Compliance with this Technical Manual is required for all Distributed Generation Systems operating with the City of Seguin.

Section 1.2. Definitions

As applied in this Technical Manual the following words and terms shall have the meaning and definition herein subscribed:

- **City Manager** means the current City Manager, or a person appointed by the City Manager to act for the City with respect to the installation and operation of a distributed generation system.
- **Commission** means the Public Utility Commission of Texas.
- **Customer** means an entity interconnected to the Seguin electric system for the purpose of receiving or exporting electric power from or to the Seguin electric system.
- **Director of Utilities** means the person hired by the City Manager to oversee utilities owned or managed by the City or a person delegated to oversee the electric department.
- **Distributed Generation** means an electrical generating facility located at a customer's point of delivery (point of common coupling) of ten megawatts (MW) or less and connected at a voltage less than 60 kilovolts (kV) which may be connected in parallel operation to the Seguin electric system.
- **ERCOT:** The Electric Reliability Council of Texas, Inc. or successor independent organization under PURA §39.151 for the power region to which the City's system is connected.
- **Interconnection** means the physical connection of distributed generation to the utility system in accordance with the requirements of this ordinance so that parallel operation can occur.
- **Networked secondary** means two or more utility primary distribution feeder sources electrically tied together on the secondary (low voltage) side to form one power source for one or more customers. The service is designed to maintain service to the customers even after the loss of one of these primary distribution feeder sources.
- **Parallel operation** means the operation of distributed generation by a customer while the customer is connected to the Seguin electric system.
- **Point of Interconnection** (Point of Service, Point of Common Coupling) means the point where the electrical conductors of the City of Seguin utility system are connected to the customer's conductors and where any transfer of electric power between the customer and the City of Seguin utility system takes place, such as switchgear near the meter.
- **Pre-certified equipment** means a specific generating and protective equipment system or systems that have been certified as meeting the applicable parts of this ordinance relating to safety and reliability by an entity approved by the Commission.
- **Stabilized** means that the Seguin electric system shall be considered stabilized when, following a disturbance, the system returns to the normal range of voltage and frequency for a duration of two minutes.

Section 1.3. Applicability

The information in this technical manual applies to all persons or entities that desire to interconnect or operate in parallel a distributed generation system within the City of Seguin electric system.

Section 1.4. Application and Agreement Required

- 1) Before a person or entity may interconnect or operate in parallel a distributed generation system within the City of Seguin electric system, that person or entity must apply with the City on the form provided by the City. The applicable (a DG Application is included/attached to this Manual); and the person or entity shall execute the agreement with the City that establishes the terms and conditions for the interconnection and parallel operation of the distributed generation system (the Agreement is attached to this Manual as Exhibit B).; and pay the application fee set forth in Appendix C to the Seguin Code of Ordinances.
- 2) The City Council hereby delegates to the City Manager the authority to execute Agreements with Customers for the interconnection and parallel operation of distributed generation within the City of Seguin electric system in accordance with this ordinance, the Public Utility Commission of Texas rules and regulations, and in accordance with all state and federal laws applicable. The Agreement shall not *vary* substantially in form and intent from Exhibit B of this ordinance.
- 3) Substantial changes to the form and/or intent of the Agreement (a DG Agreement is included/attached to this Manual) must be approved by the City Council before the execution of the Agreement.
- 4) The interconnection shall not be energized prior to the execution of the Agreement as required herein.
- 5) The application, Exhibit A, may be modified from time to time by the City Manager as is required for smooth processing of applications.

Section 1.5. Utility Contact Person

- 1) Per the P.U.C. SUBST. R. 25.11 (I), the City Manager shall designate the appropriate City staff member or members as contact person or persons for all matters related to distributed generation interconnection.
- 2) The City Manager shall identify to the Public Utility Commission of Texas the contact person or persons for all matters related to distributed generation interconnection.
- 3) The City Manager shall cause the City of Seguin internet web site to provide convenient access through the internet web site to the names, telephone numbers, mailing addresses and electronic mail addresses for the distributed generation contact person or persons.
- 4) The designated contact person or persons shall review applications for distributed generation with attached technical documentation and determine compliance with the City of Seguin technical requirements for interconnection and parallel operation of distributed generation.
- 5) When satisfied that a customer has complied with the application requirements and that the Customer's system complies with the technical requirements for interconnection and parallel operation of distributed generation, the Director of Utilities shall recommend to the City Manager that an Agreement be executed with the Customer for the interconnection and parallel operation

of distributed generation. The Director of Utilities shall review the application and technical information submitted, and if the Utility Director finds that the Customer has complied with the application requirements and that the Customer's system complies with the technical requirements for interconnection and parallel operation of distributed generation, the City Manager shall execute an Agreement with the Customer substantially in the form attached to this ordinance as Exhibit B.

PART 2. TECHNICAL REQUIREMENTS

Section 2.1. General Requirements

- 1) All interconnections shall comply with P.U.C. SUBST. R. 25.212 and successors. In addition, all interconnections shall comply with applicable state and federal laws and regulations and the Seguin City Code, including this Technical Manual.
- 2) All interconnections shall comply with local building and electric codes as adopted by the City of Seguin. Installation of all interconnections shall be inspected by the City of Seguin. Inspection and approval of the installation by the City of Seguin is a condition of interconnection and parallel operation of distributed generation. A Distributed Generation system shall not be energized prior to obtaining approval upon inspection by the City of Seguin.
- 3) Distributed Generation systems with installed capacity greater than 1 MW, which exports energy into the City of Seguin's Electric Distribution System, is required to be registered with ERCOT.
- 4) Variations from the Technical Requirements herein must be reviewed and approved by the Director of Utilities prior to implementation. Variations in the point of interconnection must be approved by the Director of Utilities and included in the Agreement approved by the City Council and signed by the City Manager.

Section 2.2 Manual Disconnect

The customer 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 City of Seguin electrical system and the customer's electrical generation system. The location of the disconnect switch must be approved by the City of Seguin. The disconnect switch shall be easily visible, mounted separately from metering equipment, readily accessible to City of Seguin personnel at all times, and capable of being locked in the open position with a City of Seguin padlock. The City of Seguin reserves the right to open the disconnect switch isolating the customer's electrical generating system (which may or may not include the customer's load) from City of Seguin electrical system for the following reasons:

- 1) To facilitate maintenance or repair of the City of Seguin electrical system.
- 2) When emergency conditions exist on the City of Seguin electrical system.
- 3) When the customer's electrical generating system is determined to be operating in a hazardous or unsafe manner or unduly affecting the City of Seguin electrical system waveform.
- 4) When the customer's electrical generating system is determined to be adversely affecting other electric consumers on the City of Seguin electrical system.
- 5) Failure of the customer to comply with applicable codes, regulations and standards in effect at the time.

- 6) Failure of the customer to abide by any contractual arrangement or operating agreement with the City of Seguin.

Section 2.3. Power Quality

- 1) **Voltage** - The City of Seguin shall endeavor to maintain the distribution voltages on the electrical system but shall not be responsible for factors or circumstances beyond its control. The customer shall provide an automatic method of disconnecting generation equipment from the City of Seguin electrical system within 10 cycles should a voltage deviation greater than +5% or -10% from normal be sustained for more than 30 seconds (1800 cycles) or a voltage deviation greater than +10% or -30% from normal be sustained for more than 10 cycles. If high or low voltage complaints or flicker complaints result from the operation of the customer's electrical generation, the customer's generating system shall be disconnected until the problem is resolved.
- 2) **Frequency** - The City of Seguin shall endeavor to maintain a 60-hertz nominal frequency on the electrical system. The customer shall provide an automatic method of disconnecting generation equipment from the City of Seguin electrical system within 15 cycles should a deviation in frequency of +0.5Hz or -0.7Hz from normal occur.
- 3) **Harmonics** -In accordance with IEEE 519, the total harmonic distortion (THD) of voltage shall not exceed 5% of a pure sine wave of 60-hertz frequency or 3% of the 60-hertz frequency for any individual harmonic when measured at the point of interconnection with the City of Seguin electrical system. Also, the total current distortion shall not exceed 5% of the fundamental frequency sine wave. If harmonics beyond the allowable range result from the operation of the customer's electrical generation, the customer's generating system shall be disconnected until the problem is resolved.
- 4) **Flicker** - The distributed generation facility shall not cause excessive voltage flicker on the City of Seguin electrical system. This flicker shall not exceed 3% voltage dip, in accordance with IEEE 519 (Section 10.5), as measured at the point of interconnection.
- 5) **Power factor** - The customer's electrical generation system shall be designed, operated and controlled at all times to provide reactive power requirements at the point of interconnection from 0.95 lagging to 0.95 leading power factor. Induction generators shall have static capacitors that provide at least 95% of the magnetizing current requirements of the induction generator field. The City of Seguin may, in the interest of safety, authorize the omission of capacitors. However, where capacitors are used for power factor correction, additional protective devices may be required to guard against self-excitation of the customer's generator field.

Section 2.4 Loss of Source

The customer shall provide approved protective equipment necessary to immediately, completely and automatically disconnect the customer's electrical generation equipment from the City of Seguin electrical system in the event of a fault on the customer's system, a fault on the City of Seguin system or loss of source on the City of Seguin system. Such protective equipment shall conform to the criteria specified in UL 1741 and IEEE 1547. The customer's generating system shall automatically disconnect from the grid within 10 cycles if the voltage on one or more phases falls and stays below 70% of nominal voltage for at least 10 cycles. The automatic disconnecting device may be of the manual or automatic reclose type and shall not be capable of reclosing until after the City of Seguin service voltage and frequency are restored to within the normal operating range and the system is stabilized.

Section 2.5 Coordination and Synchronization

The customer shall be solely responsible for coordination and synchronization of the customer's electrical generating system with all aspects of the City of Seguin electrical system, and the customer assumes all responsibility for damage or loss that may occur from improper coordination and synchronization of its generating system with the City of Seguin electrical system.

Section 2.6 Metering

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. The Customer shall pay for the installation of the data recorder (meter) that is capable of measuring the "Delivered KWh" (energy delivered by the City of Seguin); the "Received KWh" (energy delivered to the City of Seguin by the Customer) using a single meter or two-meter configuration. The City will provide, at the Customers expense, the appropriate meter can as all meter cans must meet City of Seguin specifications. Additionally, for all Customers, The City of Seguin reserves the right to install, at its own expense, a meter to measure the output of the DG system.

Section 2.7 Interconnection Study

The City of Seguin will determine whether an interconnection study is necessary, based on relevant engineering factors including the output of the system, the location of the system and other City of Seguin distribution system factors. If the interconnection study is deemed necessary, the City of Seguin shall perform the study under reasonable terms and conditions agreed upon by both the customer and City of Seguin and at the customer's sole expense. No study fee will be charged if the proposed generation site is not on a networked secondary and if all of the following apply:

- 1) Proposed generation equipment is pre-certified.
 - a. Generation equipment that are less than 20 kW AC shall be considered pre-certified if a UL 1741 listed inverter that also meets IEEE 1547 specifications is used. For solar PV installations, to be pre-certified system must have UL 1703 listed PV modules.
- 2) Proposed generation system does not expect to export more than 15% of total load on the feeder.
- 3) Proposed generation system does not contribute more than 25% of the maximum possible short circuit current of the feeder.

Section 2.8 Protection

The distributed generation facility must have interrupting devices capable of interrupting the maximum available fault current, an interconnection disconnect device, a generator disconnect device, an over-voltage trip, an under-voltage trip, an over/under frequency trip and a manual or automatic synchronizing check (for facilities with standalone capability). Facilities rated over 10kW, three phase, must also have reverse power sensing and either a ground over-voltage or a ground over-current trip depending on the grounding system. Grounding shall be done in accordance with UL 1741, IEEE 1547 and NEC Article 250.

Section 2.9 Three-Phase generators

- 1) Synchronous machines:

- a. The distributed generation facility's circuit breakers shall be three-phase devices with electronic or electromechanical control.
 - b. The Customer is solely responsible for proper synchronization of its generator with the City of Seguin system.
 - c. The excitation system response ratio shall not be less than 0.5.
 - d. The generator's excitation system shall conform to the field voltage versus time criteria specified in ANSI Standard C50. 13-1989.
- 2) Induction machines: The induction machines used for generation may be brought up to synchronous speed if it can be demonstrated that the initial voltage drop at the point of interconnection is within the flicker limits specified in this Technical Manual.
- 3) Inverters:
- a. Line-commutated inverters do not require synchronizing equipment.
 - b. Self-commutated inverters require synchronizing equipment.

Section 2.10. Standards

The distributed generation equipment shall be designed, installed, operated and maintained in accordance with, but not limited to, ANSI standards, UL standards, IEEE standards, the National Electrical Code, ERCOT Operating Guides and any other applicable local, state or federal codes and statutes. In the case of a conflict between the requirements in this document and any of those standards or codes, this document shall prevail.



DISTRIBUTED GENERATION

**INTERCONNECTION AND
METER APPLICATION**

APPLICATION AND CUSTOMER INFORMATION

This application is for the coordination of interconnection of a distributed generation (DG system) and associated / required metering equipment between “Customer”, the City of Seguin and the electrician / contractor doing the proposed work. The following needs to be filled out completely and clearly.

Date	
First Name (Customer)	
Last Name (Customer)	
Account Number	
Premise Type	<input type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Other
Phone	
Email	
Installation Address (physical address)	

DG SYSTEM INFORMATION

Total Nameplate Rating (kW)		Over 20kW?	Yes	No
(If Solar DG) Panel Manufacturer				
Inverter Manufacturer				
Do you plan to export power?	Yes	No	(please circle one)	
Does system have a battery backup?				
IEE and/or UL Certification(s) (list all or attach documentation)				
Please provide the system engineering and/or manufacturers drawings and specifications	<input type="checkbox"/> System one-line diagram <input type="checkbox"/> Additional system documentation			

INFORMATION PREPARED AND SUBMITTED BY

License Number (Master Electrician, Electrical Engineer, or Homestead Owner)	
Company Name	
Phone	
Email	
Project Contact Person	
Signature	
Date	

NOTES TO APPLICANT

1. It is understood that electric services (new meter) charges must be paid in accordance with Chapter 102, "utilities". Division 2. "Deposit and Services", Article II, "Electricity", Section 102-52, "Electric Service Charge to Customers" of the City of Seguin Code of Ordinances.
2. Charges will be available after application has been reviewed. Charges are required to be paid and application for service be made prior to issuance of permit.
3. If work has not been completed within a 180-day period – the application will be voided.
4. If additional work is required by the City of Seguin – there will be additional charges that will need to be paid.
5. **ALLOW A MINIMUM OF FIVE WORKING DAYS FOR PROCESSING**
6. Return to City of Seguin Building Code Department; City of Seguin, Texas 205 N River Street, Seguin TX, 78155; 830-379-3212

INTERNAL / OFFICE USE ONLY:

WO# _____



DISTRIBUTED GENERATION

AGREEMENT

**FOR THE INTERCONNECTION AND PARALLEL
OPERATION OF DISTRIBUTED GENERATION IN THE
CITY ELECTRIC SYSTEM**

AGREEMENT FOR THE INTERCONNECTION AND PARALLEL OPERATION OF
DISTRIBUTED GENERATION IN THE SEGUIN ELECTRIC SYSTEM

THIS AGREEMENT is entered into by and between the City of Seguin (CITY) and _____ Customer (Customer).

City owns and operates a municipal electric utility engaged in the distribution of electricity serving the City and portions of Guadalupe County, Texas; and Customer intends to construct, own, operate, maintain and connect to the City electric distribution system, a Distributed Generation system less than 10MW in size (the DG 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 City 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 1.0 | 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 2.0 | The DG System will be installed at Customer's premises at the address specified above. The DG System shall not have a generation capacity greater than 10 MW. Customer 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. Customer shall promptly notify CITY upon receipt of any citation or other official notice of alleged violation of laws, ordinances, rules and regulations concerning the DG System.

Article 3.0 | Customer warrants and represents that:

3.01 | 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 CITY Electric system filed by the Customer with CITY;

3.02 | The DG System and associated other electrical components and devices meet National Electrical Code standards;

3.03 | 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.

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

Article 4.0 | CITY will purchase from Customer and Customer will sell exclusively to CITY the electrical output from the DG system that is "received" by the CITY Distribution System. During the term of this

AGREEMENT FOR THE INTERCONNECTION AND PARALLEL OPERATION OF
DISTRIBUTED GENERATION IN THE SEGUIN ELECTRIC SYSTEM

Agreement, Customer shall exclusively purchase from CITY its requirements of electric energy above the amounts generated by the DG system.

Article 5.0 | The CITY shall pay Customer for the “KWh Received” (energy received by the CITY’S Distribution System) at the “Avoided Cost of Generation Rate” (ACGR). The ACGR is calculated based on the Avoided Cost of Generation Formula (ACGF), which can be obtained from the CITY. The inputs to the calculation are derived from the CITY’S wholesale electric energy provider(s) monthly invoices. The CITY reserves the right to amend the ACGR and the ACGF at any time.

Article 6.0 | Customer shall pay for the installation of the data recorder (meter) that is capable of measuring the “KWh Delivered” (energy delivered to the Customer) and the “KWh Received” (energy received by the CITY’S Distribution System) in intervals established by the CITY, using a single meter or two-meter configuration. The City may waive this fee if a standard electric meter can be programmed or configured to support the required measurements and functionality.

Article 7.0 | CITY 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 CITY. In instances where such studies are deemed necessary, the scope of such studies shall be based on the characteristics of the distributed generation facility to be interconnected and the CITY’S distribution system at the specific proposed location. CITY may charge Customer fees for Pre-Interconnection Studies that recover the costs of performing such studies. Any modifications or additions to the CITY’S Electric system identified through the interconnection study as required for the safe and reliable interconnection of Customer’s facility shall be solely at the Customer’s expense. Customer shall not acquire any ownership in such modifications or additions to CITY’S Electric system.

Article 8.0 | Customer shall be solely responsible for the design, installation, operation, maintenance, and repair of the DG System and Customer's interconnection facilities. The interconnection of the DG System to the CITY 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. CITY shall inspect the DG System and the interconnection equipment. All costs to interconnect with the CITY electric system shall be the responsibility of Customer. CITY shall not be required to take or pay for any energy generated by the DG System until the DG System successfully passes CITY’S Field Inspection and Customer shall have reimbursed CITY for all its interconnection costs. Maintenance of the DG System shall be performed in accordance with the applicable manufacturer's recommended maintenance schedule.

Article 9.0 | CITY shall not be obligated to accept and shall have the right to require Customer 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 CITY electric system. CITY may disconnect, without notice, the DG System from the electric distribution system, if, in CITY’S opinion, a hazardous condition exists, and such immediate action is necessary to protect persons, or CITY’S facilities or other customers' facilities from damage or interference caused by Customer's DG System or lack of properly operating protective devices.

AGREEMENT FOR THE INTERCONNECTION AND PARALLEL OPERATION OF
DISTRIBUTED GENERATION IN THE SEGUIN ELECTRIC SYSTEM

Article 10.0 | Customer hereby grants CITY 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 CITY'S facilities. No inspection by CITY of the DG System or the interconnection facilities shall impose on CITY any liability or responsibility for the operation, safety or maintenance of the DG system or Customer's interconnection facilities.

Article 11.0 | **CUSTOMER SHALL INDEMNIFY, DEFEND AND SAVE HARMLESS CITY, 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 CUSTOMER IN THIS AGREEMENT, OR IN ANY MANNER CONNECTED WITH THE DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE OR REPAIR OF ANY PART OF CUSTOMER'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 CUSTOMER, CITY OR ANY THIRD PERSON.**

Article 12.0 | For Facilities 50 kW and Smaller (based on system nameplate information): The Customer is not required to provide a certificate of insurance coverage to CITY. It is recommended, however, that the Customer carry liability insurance coverage which insures the Customer 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 Customer's generating equipment.

For Facilities Larger than 50 kW (based on system nameplate information): Prior to installation / interconnection, the Customer must provide a certificate of insurance showing satisfactory liability insurance including contractual liability insurance covering indemnity obligations which insures the Customer 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 Customer's DG Facility.

- (1) The amount of such insurance coverage shall be not less than \$2,000,000 per occurrence and name CITY as an additional insured. This amount may be increased at the sole discretion of CITY 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 CITY. 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 Customer shall provide proof of such insurance to CITY at least annually and on request by CITY.

AGREEMENT FOR THE INTERCONNECTION AND PARALLEL OPERATION OF
DISTRIBUTED GENERATION IN THE SEGUIN ELECTRIC SYSTEM

Article 13.0 | 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:

City

Attn: City Manager

205 N River Street, Seguin TX, 78155

If to Customer:

The above-listed names, titles, and addresses of either party may be changed by written notification to the other.

Article 14.0 | 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. If Customer is in breach of this Agreement, and such breach continues for thirty (30) days after written notice from CITY, CITY may disconnect the DG System or otherwise suspend taking energy from Customer. 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 CITY Utilities Rules and Regulations.

Article 15.0 | This Agreement shall inure to the benefit of and be binding upon the heirs, successors, or assigns of each of the parties hereto. Customer may not assign this Agreement without the prior written consent of CITY. Any assignment without such consent shall be null and void.

Article 16.0 | This Agreement constitutes the entire agreement and understanding between the parties hereto and can be amended only by agreement between the parties in writing. In the event any provision of this Agreement, or any part or portion thereof, shall be held to be invalid, void or otherwise unenforceable, the obligations of the parties shall be deemed to be reduced only as much as may be required to remove the impediment.

Article 17.0 | The failure of either party to insist in anyone 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 18.0 | 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 Guadalupe County, Texas.

AGREEMENT FOR THE INTERCONNECTION AND PARALLEL OPERATION OF
DISTRIBUTED GENERATION IN THE SEGUIN ELECTRIC SYSTEM

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

City	
By (Signature):	_____
Name (Print):	_____
Title:	_____
Date:	_____
Customer	
By (Signature):	_____
Name (Print):	_____
Date:	_____

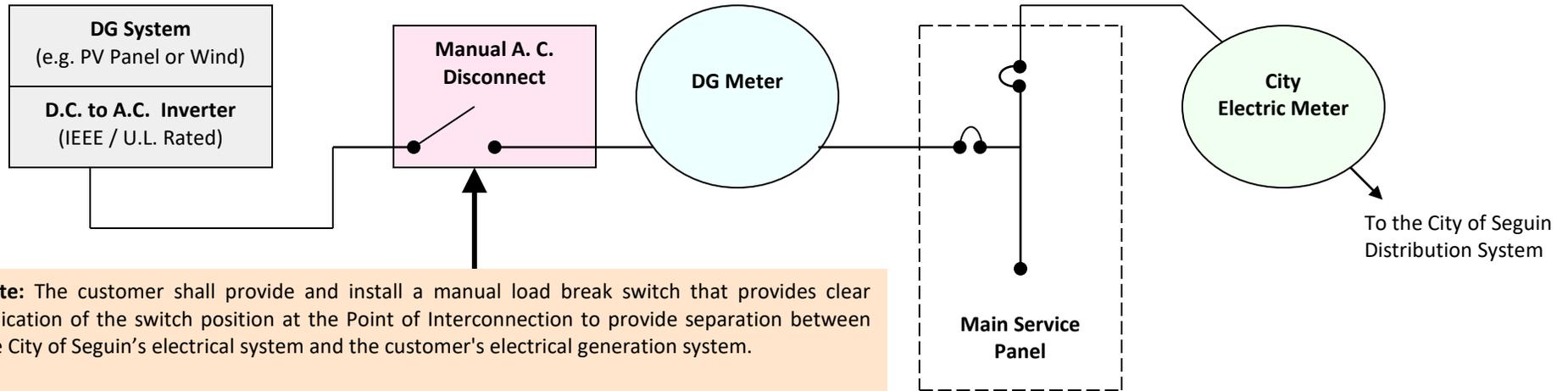


DISTRIBUTED GENERATION

DIAGRAM



City of Seguin Distributed Generation (DG) Interconnection Diagram



Note: The customer 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 City of Seguin's electrical system and the customer's electrical generation system.

The location of the disconnect switch must be approved by the City of Seguin. The disconnect switch shall be easily visible, mounted separately from metering equipment, readily accessible to City personnel at all times, and capable of being locked in the open position with a City padlock.

Distributed Generation (DG) Interconnection Process

Step 1: Make application for your planned "grid-connected" project. Pick up application at the City Office (Building Code Department) or download from the City of Seguin website (Seguintexas.gov)

Recommendation: Contact the City early in the process. Much of the information on the application is specific to the respective DG system.

Step 2: City of Seguin Building official will review the application within a reasonable timeframe and will determine if a study is required.

Recommendation: The City may need to ask follow up questions. Pre-certified equipment is a big plus in this phase.

Step 3: City of Seguin will prepare DG Agreement. Both parties must sign agreement before system can be connected to the City's distribution system.

Note: The DG agreement documents the requirements and obligations of both parties and addresses the rate and billing aspects of the DG interconnection.

City of Seguin DG Contact: Clarence Smith, Director of Electric Utilities

Email: csmith@seguintexas.gov **Phone:** 830.401.2404