Section 1: Distributed Generation Overview - Q&A

What is the purpose of the City of Llano Distributed Generation (DG) Interconnection Guidelines?

The City of Llano (CoL) Distribution Generation Interconnection Guidelines Manual was developed to establish the requirements and procedures for the safe installation, interconnection, and parallel operation of distributed generation facilities within the City's electric service area.

CoL's DG Interconnection Guidelines are aligned 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 provides for the interconnection and parallel operation of Distributed Renewable Generation with electric utilities in Texas.

The information contained in this Manual has been developed for CoL's customers that are interested and/or considering the installation of interconnected distributed generation. CoL wants to ensure that our customers have all the technical and procedural information needed to have a full understanding of the requirements involved with this process in advance of any decision to install a DG system.

This Manual also provides information for CoL customers regarding the rate that CoL has put in place regarding the purchase of any energy that is generated by a DG system and delivered to the CoL distribution system.

The bottom line: CoL is committed to the safe interconnection and operation of all DG installations on the CoL distribution system.

I am a City of Llano electric customer and considering installing a DG system. Where should I start?

City of Llano (CoL) customers should contact the City very early in the "DG decision-making" process. Our representatives will be glad to take time to answer questions and provide both technical and procedural information regarding your potential DG installation. **The CoL DG Policy is clear: DG systems <u>will not</u> be allowed to interconnect and/or operate until the following steps have occurred:**

1. <u>Customer must submit information and application to CoL</u> for the proposed DG system(s). The CoL DG Application Form is included in the CoL DG Interconnection Guidelines Manual and is also available on the City's website (cityofllano.com) and at the City office.
2. The <u>DG application must be reviewed and approved by CoL, prior to installation</u> of the DG system. CoL must confirm that the proposed system meets the technical requirements and specifications and determine if the proposed DG installation requires an engineering study. In some cases, engineering studies are essential to ensure the safe and proper operation of the DG system. Engineering studies may also result in the denial of a DG application.
3. Once the DG system is installed CoL will confirm the installation is consistent with the DG Application and meets all CoL requirements. This <u>inspection must take place prior to interconnecting the DG system</u> with the CoL distribution system.
4. The <u>customer must execute a DG Agreement with CoL</u>. This agreement is required prior to interconnecting the DG system with the CoL distribution system. The DG Agreement confirms that the system meets all technical requirements and sets forth the rate at which CoL will purchase any energy that is delivered to CoL (energy in excess of the DG output that is used by the customer).

What are the technical specifications 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:

- ✓ CoL has adopted the technical requirements and specifications that are aligned and consistent with the Texas Public Utility Commission (PUC) DG Rule. 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 addressed / covered by having "pre-certified" equipment with appropriate IEEE, UL and other "stamps of approval" from the DG system manufacturer. For most systems, these certifications signal to CoL that the system being installed meets and/or exceeds technical engineering 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. CoL has provided the requirements (technical and procedural) in this Manual. Several of these requirements are included in the DG Application Form and the DG Agreement. These documents are included in this Manual.

Are there any DG system size restrictions or size thresholds to consider?

- ✓ Yes. The Public Utility Commission of Texas (PUCT) defines DG as "10 MW or less". While this definition is utilized by the CoL, the City has developed a policy that sets a threshold of 50 kW AC for several policies that are provided in this DG Guidelines Manual.
- ✓ For customers considering the interconnection of DG systems larger than 50 kW AC, the City will utilize the technical requirements and certain other requirements in this manual but will likely require an engineering study to determine if a large DG system will be allowed to interconnect to the City's distribution system. Furthermore, the City will consider purchases and reimbursements for energy delivered to the system on a case-by-case basis for DG systems larger than 50 kW.
- ✓ The City encourages customers considering the installation and interconnection of DG system to "right-size" these systems. A good rule to consider is to size DG systems at not larger than 30% of the premise (residence or business) peak demand. For most houses, this means a "right-sized DG system would be in the 2-5 kW AC range.

Does CoL sell and/or install DG systems? Does CoL have listed DG vendors or contractors?

CoL does not sell and/or install DG systems. The City is committed to the safe and reliable operation and maintenance of the CoL distribution system.

CoL understands that our customers look to the City for sound and unbiased information related to electric energy topics and issues. And with that in mind, CoL can provide general industry information to our customers regarding distributed generation. However, ***CoL will not endorse or recommend systems, vendors, or contractors for DG system installations***.

How will CoL account for (and reimburse) for energy that my DG system sends to the electric grid?

CoL will reimburse customers for energy "delivered to" the CoL distribution system at the "avoided cost of generation" rate (ACGR). The ACGR is determined by the average per kWh cost of wholesale generation costs for electric energy purchased by CoL from its wholesale electric energy provider(s). CoL reserves the right to amend the ACGR at any time. Reimbursements will likely take the form of a credit on the customer's monthly bill; however, CoL may make other arrangements for reimbursement based on the amount of energy that is delivered to the City from the DG system.

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

CoL has the following charges associated with the application, interconnection, and parallel operation of a DG system on the CoL distribution system:

Fee / Charge	Amount
1. Permit and DG Application Fee	**$100.00**
2. Bi-Directional DG Meter Fee	**Current Meter Cost**
3. Monthly DG Capacity Charge	**Annual Fee Schedule**