



Behind-the-Meter Distribution Interconnection Summary

Table of Contents

Interconnecting to Georgia Power's Distribution System	2
Selling Electric Generation to Georgia Power	2
Residential Interconnection Overview	3
STEP 1: Interconnection Summary Review and Analysis	3
Solar Analysis	3
STEP 2: Interconnection Application	3
STEP 3: Interconnection Application Review	4
STEP 4: Interconnection Agreement	4
Interconnection Agreement Types	4
Interconnection Agreement Process	4
STEP 5: DER Facility Installation	4
STEP 6: Inspection, Witness Testing, and Permission to Generate	4
Commercial and Industrial Interconnection Overview	6
STEP 1: Interconnection Summary Review and Analysis	6
Solar Analysis	6
STEP 2: Interconnection Application	6
STEP 3: DER Facility Design Review	7
STEP 4: Interconnection Study (if applicable)	7
Interconnection Study Process	7
Interconnection Study Results and Costs	7
STEP 5: Interconnection Agreement	8
Interconnection Agreement Types	8
Interconnection Agreement Process	8
STEP 6: DER Facility Installation	9
STEP 7: Inspection, Witness Testing, and Permission to Generate	9
Battery Installations	10
QUESTIONS?	10





Interconnecting to Georgia Power's Distribution System

Retail customers and generators interested in installing a distributed energy resource (DER) facility for self-consumption or sale of electrical output to Georgia Power must apply for interconnection. The interconnection process varies based upon the unique nature of each DER facility. Georgia Power provides this guide to help its customers navigate the interconnection process.

This summary outlines the requirements, timelines, and process for interconnecting a DER facility sized 10 MW AC or less in capacity and provides general information about Georgia Power's distribution system. Customers served directly off the Transmission system (including distribution substation) or Network Underground Distribution system must contact Georgia Power for additional guidance if they are interested in installing a DER facility on site either for self-consumption or sale of electrical output. This summary will be updated periodically, and Georgia Power reserves the right to make changes without prior notice.

Selling Electric Generation to Georgia Power

Successfully initiating and completing the interconnection process does not constitute an agreement to sell the DER facility's electrical output to Georgia Power. Customers must follow the steps outlined in this document to interconnect a DER facility. A customer desiring to install generation for sale of electrical output or who has already installed generation behind-the-meter with capability of net export of electrical output to the Company's electric system may sell excess energy to Georgia Power through one of the following programs:

- 1. Renewable and Non-Renewable Resources Tariff ("RNR"): An eligible customer may apply to participate in the RNR program. Renewable energy resources are residential DER facilities with peak generating capacity of less than or equal to 10 kW and commercial DER facilities with a peak generating capacity of less than or equal to 250 kW (not to exceed one hundred and twenty-five percent (125%) of the metered peak demand of the premises the technology serves). Eligibility is determined by the nameplate capacity of the installed equipment. Participating customers are paid Georgia Power's Renewable Cost Benefit ("RCB") adjusted solar avoided cost as filed with the Georgia Public Service Commission ("Commission") in Docket No. 16573.
- Qualifying Facility ("QF"): An eligible customer may apply to participate as a QF and be paid Georgia Power's
 actual day-ahead avoided cost as required by Commission Order in Docket No. 4822. While the maximum
 facility size is 80 MW for small power production, and there is not a facility size limit for cogeneration, this
 document provides guidance for a QF that would be sized to interconnect on Georgia Power's distribution
 system.

For more information on how to sell electric generation to Georgia Power, please visit our website.





Residential Interconnection Overview

Interconnection is the process of obtaining permission from the jurisdictional utility to physically connect a DER facility to the electric grid, whether on the customer side of the meter or on the utility side of the meter. There are several important steps that must be followed to ensure the proposed DER facility is safely and properly connected to the Georgia Power distribution system. These steps include:

- STEP 1: Interconnection Summary Review and Analysis
- STEP 2: Interconnection Application
- STEP 3: Interconnection Application Review
- STEP 4: Interconnection Agreement¹
- STEP 5: DER Facility Installation
- STEP 6: Inspection, Witness Testing, and Permission to Generate

STEP 1: Interconnection Summary Review and Analysis

Prior to applying for interconnection to Georgia Power's distribution system, a customer must familiarize itself with this document (Behind-the-Meter Distribution Interconnection Summary) and the following technical requirements:

- Southern Company Distribution Interconnection Policy:
 - Operation of Distributed Energy Resources (DER) in Parallel with the Distribution System up to 10,000 kW AC

Solar Analysis

In addition, Georgia Power recommends that customers request a free solar analysis to help in making the best renewable energy decision.

Please visit www.GeorgiaPower.com/Solar to review all of Georgia Power's solar program options. On this
site, residential customers can use the solar calculator and request a telephone consultation with a
Georgia Power solar specialist to discuss solar program options and receive a customized design,
installation cost estimate, and projection of energy savings. In addition, Georgia Power can provide a
turnkey solution and build a system specifically to meet each customer's needs.

STEP 2: Interconnection Application

A customer interested in interconnecting a DER facility to the Georgia Power distribution system must apply for interconnection service.

For a behind-the-meter facility served by the Georgia Power distribution system, there is no fee to apply for interconnection; however, charges may apply during the interconnection testing processes.

The customer must notify Georgia Power of its intent to install a DER facility on the customer's premises by applying for interconnection using Georgia Power's PowerClerk website. To apply for interconnection, the first step is to visit PowerClerk in order to enter the interconnection queue. The basic DER facility information, including a system one-line diagram and equipment specifications must be provided in PowerClerk in order to proceed

If the customer fails to notify Georgia Power in advance, Georgia Power may still learn of the existence of the DER facility on-site from reverse energy flow alerts from the customer's electric service meter. After receiving a reverse energy flow alert, Georgia Power will contact the customer for information regarding the on-site DER facility and arrange for a site visit (if necessary) and testing, the costs of which will be charged to the customer. Georgia Power

¹ Interconnection Agreements and the level of detail provided to customer are DER facility-specific.





reserves the right to disconnect electric service to the customer until such time that Georgia Power can be assured that the DER facility can safely operate in parallel with the Georgia Power distribution system.

STEP 3: Interconnection Application Review

Prior to customer purchasing equipment for the addition of the DER facility, Georgia Power requests to review how the DER facility will be integrated with existing equipment. See the "Battery Installations" section below for additional requirements if a battery is installed. Georgia Power will review and provide feedback on the DER facility Interconnection Application to address potential interconnection issues before the installation occurs.

STEP 4: Interconnection Agreement

A customer proposing to interconnect a DER facility to the Georgia Power distribution system will enter into an Interconnection Agreement outlining the process, expectations, costs, and obligations of Georgia Power and the customer in interconnecting the DER facility to the electric system. The Interconnection Agreement type offered for execution varies by DER facility type and size.

Interconnection Agreement Types

Georgia Power has three Interconnection Agreements for behind-the-meter generation residential customers, depending on the size of the DER facility and the participating program requirements:

- 1. RNR Distributed Generation Service Agreement: for customers participating in the Renewable and Non-renewable Resources ("RNR") tariff, which allows compensation for some of all DER facility energy produced. See more specifics in the above "Selling Electric Generation to Georgia Power" section.
- 2. **Distributed Generation Service Agreement**: for customers with DER facilities sized <250 kW not participating the Renewable and Non-renewable Resources ("RNR") tariff (Energy Offset Only).
- 3. **QF Interconnection Agreement**: for Qualifying Facilities ("QFs") interconnecting to Georgia Power's distribution system for purposes of this summary, but applicable to any QF facility with a maximum facility size of 80 MW for small power production, which allows compensation for some or all DER energy produced. See more specifics in the above "Selling Electric Generation to Georgia Power" section.

Interconnection Agreement Process

The process to generate and review the draft Interconnection Agreement typically takes two weeks but may take longer depending on the circumstances. After an Interconnection Agreement is generated, Georgia Power sends it to the customer for review. The customer will receive and execute the Interconnection Agreement through PowerClerk DocuSign. Once the customer has signed the Interconnection Agreement, Georgia Power signs and returns a copy of the fully executed Interconnection Agreement to the customer.

STEP 5: DER Facility Installation

Once an Interconnection Agreement has been fully executed, the customer may install the DER facility and notify Georgia Power once it is complete and ready to be tested. If Georgia Power must construct additional interconnection facilities or system upgrades, or if the customer is served by network underground, additional time may be needed.

STEP 6: Inspection, Witness Testing, and Permission to Generate

All DER facilities will be initially tested for safe, parallel operation prior to approval. Georgia Power's Distribution Reliability staff outlines typical required test parameters, which are communicated to the customer. The DER facility must pass the applicable witness test before the customer's DER facility is approved to operate in parallel with Georgia Power's distribution system. Witness testing fees are DER facility -specific and program-specific.





All witness tests are subject to the customer's completion of program and interconnection process requirements (as applicable), Georgia Power resource availability, holiday schedules, inclement weather, and other unforeseen system emergencies. Georgia Power requires a minimum of two weeks to coordinate and schedule a witness test.

As shown in the table below, RNR participants are charged for interconnection testing based on the current tariff. All other energy offset only customers or QFs are charged based on the man-hours required for the test, not to exceed \$2,500 for tests conducted during normal business hours Monday through Friday (non-holidays).

Upon successful witness testing, Georgia Power will program the customer's meter for bi-directional service (if applicable), indicating the DER facility has been approved to operate in parallel.

Program	Monthly Fee	Testing Fees
Renewable and Non-Renewable Resources ("RNR") Tariff	Monthly metering fee (varies depending on meter setup) • Bidirectional (one-meter setup): \$2.82/month • Single Directional (two-meter setup): ○ Single Phase: \$4.50/month ○ Polyphase: \$11.20/month	\$5/kW AC (nameplate)
Energy Offset Only ≤250 kW	• N/A	N/A
Qualifying Facilities ("QF")	 Administration Fee: \$100/month Phone communication to meter: \$50/month Translation fee for interval metering: \$60/month If applicable, one-time conversion to interval metering fee: \$580 	\$2,500 M-F \$3,000 on Weekends





Commercial and Industrial Interconnection Overview

Interconnection is the process of obtaining permission from the jurisdictional utility to physically connect a DER facility to the electric grid, whether on the customer side of the meter or on the utility side of the meter. There are several important steps that must be followed to ensure the proposed DER facility is safely and properly connected to the Georgia Power distribution system. The steps include:

- STEP 1: Interconnection Summary Review and Analysis
- STEP 2: Interconnection Application
- STEP 3: DER Facility Design Review
- STEP 4: Interconnection Study (if applicable²)
- STEP 5: Interconnection Agreement³
- STEP 6: DER Facility Installation
- STEP 7: Inspection, Witness Testing, and Permission to Generate

STEP 1: Interconnection Summary Review and Analysis

Prior to applying for interconnection to Georgia Power's distribution system, a customer must familiarize itself with this document (Behind-the-Meter Distribution Interconnection Summary) and the following technical requirements:

- Southern Company Distribution Interconnection Policy:
 - Operation of Distributed Energy Resources (DER) in Parallel with the Distribution System up to 10,000 kW AC

Solar Analysis

In addition, Georgia Power recommends that customers request a free solar analysis to help in making the best renewable energy decision.

Please visit <u>www.GeorgiaPower.com/Solar</u> to review all of Georgia Power's solar program options.
 Business customers may inquire directly at <u>G2GPCSEE@southernco.com</u> to discuss solar program options and receive a customized estimate of energy savings following an installation. In addition, Georgia Power can provide a turnkey solution and build a system specifically to meet each customer's needs.

STEP 2: Interconnection Application

A customer interested in interconnecting a DER facility to the Georgia Power distribution system must apply for interconnection service.

For a behind-the-meter facility served by the Georgia Power distribution system, there is no fee to apply for interconnection; however, charges may apply during the interconnection testing processes.

The customer must notify Georgia Power of its intent to install a DER facility on the customer's premises by applying for interconnection using Georgia Power's PowerClerk website. To apply for interconnection, the first step is to visit PowerClerk in order to enter the interconnection queue. The basic DER facility information, including a system one-line diagram and equipment specifications must be provided in PowerClerk in order to proceed

If the customer fails to notify Georgia Power in advance, Georgia Power may still learn of the existence of the DER facility on-site from reverse energy flow alerts from the customer's electric service meter. After receiving a reverse energy flow alert, Georgia Power will contact the customer for information regarding the on-site DER facility and arrange for a site visit (if necessary) and testing, the costs of which will be charged to the customer. Georgia Power

² Interconnection Studies are site- and DER facility-specific.

³ Interconnection Agreements and the level of detail provided to the customer are DER facility-specific.





reserves the right to disconnect electric service to the customer until such time that Georgia Power can be assured that the DER facility can safely operate in parallel with the Georgia Power distribution system.

STEP 3: DER Facility Design Review

Prior to customer purchasing equipment for the addition of the DER facility, Georgia Power requests to review how the DER will be integrated with existing equipment. For a DER facility sized >250 kW, Georgia Power may request detailed design drawings not already provided through PowerClerk, such as the AC three-line diagrams and DC control diagrams. These design drawings should illustrate any existing installations (standby generators, other energy resources, etc.), new installations, how the new and existing equipment will operate in unity, and all protection schemes and devices (relays, potential transformer, current transformers, etc.). This information will be reviewed by Georgia Power's Distribution Reliability staff. Georgia Power's review of and feedback on how the DER facility will interconnect and operate will alleviate and address potential interconnection or witness testing issues before the installation occurs.

STEP 4: Interconnection Study (if applicable)

The proposed DER facility may affect the reliability and safety of electric service to Georgia Power's customers. Georgia Power studies a proposed DER facility to determine how its installation will interact with the existing distribution system and identify what (if any) equipment, upgrades, services or costs are required to interconnect the DER facility.

Interconnection Study Process

Georgia Power's Transmission, Distribution Planning, and Reliability staff review the feasibility and system impacts of the proposed DER facility. The level of study required may depend on the proposed DER facility size. Generally, proposed DER facility installations sized >250 kW require an in-depth interconnection study as described below⁴. Depending on the complexity of the proposed DER facility interconnection, this review generally takes two to four weeks; however, this timeline may be extended if Georgia Power must construct additional facilities.

Georgia Power considers the following for each interconnection:

- DER facility size and type of generation already connected (or planned to be connected) to the circuit
- Locations of existing interconnecting circuit protective devices and voltage regulating equipment between the point of interconnection of the DER facility and the interconnecting circuit source substation
- Maximum and minimum amount of power consumed by the existing customers on the circuit
- Stiffness of the circuit at the point of common coupling or interconnection of the DER facility
- Compatibility of the proposed DER facility design with the interconnecting circuit design
- Type of protection system used for the power transformer at the power system source substation

The Georgia Power distribution system is dynamic. Georgia Power conducts the interconnection study with a snapshot look at the conditions and requirements of the system at the location where the DER facility is proposed to interconnect at the time the study is conducted.

Interconnection Study Results and Costs⁵

Once complete, the results of Georgia Power's interconnection study are communicated to the customer. Customers may be asked to purchase and install equipment to meet protection requirements that are outside the design scope of the proposed DER facility to eliminate the risks associated with the interconnection factors evaluated. Equipment purchased by the customer must be used behind-the-meter. If Georgia Power system upgrades are required to

⁴ Interconnection studies for DER facility sized <250 kW may be needed

⁵ Interconnection study results and the level of detail provided to the customer are DER facility-specific.





interconnect the customer's DER facility, Georgia Power will purchase, install, own, and maintain such equipment on the utility's side of the meter at the customer's expense.

The cost to interconnect the proposed DER facility is dependent on the results of the interconnection study and are DER facility -and location-specific. The interconnection study itself does not provide cost information; however, it does indicate any required upgrades, which can be used to approximate interconnection costs. If any interconnection costs are identified, they will be included in the applicable Interconnection Agreement provided in Step 5.

For battery energy storage systems designed to operate in parallel with the Georgia Power distribution system, Georgia Power will evaluate such battery energy storage system as incremental load that is additional to the peak demand for the customer premises. This additional load could also trigger upgrades to the Georgia Power distribution system, including upgrades to existing equipment used to provide electric service to the premises. Any required upgrades to the Georgia Power distribution system caused by the addition of the battery energy storage system will be installed at the customer's expense.

STEP 5: Interconnection Agreement

A customer proposing to interconnect a DER facility to the Georgia Power distribution system will enter into an Interconnection Agreement outlining the process, expectations, costs, and obligations of Georgia Power and the customer in interconnecting the DER facility to the electric system. The Interconnection Agreement type offered to the customer for execution varies by DER facility type and size. For example, Georgia Power may require a more detailed Interconnection Agreement if Georgia Power performed an interconnection study to describe specific operating requirements.

Interconnection Agreement Types

Georgia Power has six Interconnection Agreements for behind-the-meter generation customers, depending on the size of the DER facility and the participating program requirements:

- 1. **RNR Distributed Generation Service Agreement**: for a customer participating in the Renewable and Non-renewable Resources ("RNR") tariff, which allows compensation for some of all DER facility energy produced. See more specifics in the above "Selling Electric Generation to Georgia Power" section.
- 2. **Distributed Generation Service Agreement**: for a customer with a DER facility sized <250 kW not participating the Renewable and Non-renewable Resources ("RNR") tariff.
- 3. Large Facility Interconnection Agreement: for a customer with a DER facility sized >250 kW not participating as a QF or whose interconnections required a System Impact Study.
- 4. **Large Facility SEPA Interconnection Agreement**: for a customer with a DER facility sized >250 kW that are leased through a Solar Energy Procurement Agreement ("SEPA").
- 5. **SEPA Interconnection Agreement**: for a customer with a DER facility sized <250 kW leased through a SEPA arrangement.
- 6. **QF Interconnection Agreement**: for Qualifying Facilities ("QFs") interconnecting to Georgia Power's distribution system for purposes of this summary, but applicable to any QF facility with a maximum facility size of 80 MW for small power production, which allows compensation for some or all DER energy produced. See more specifics in the above "Selling Electric Generation to Georgia Power" section.

Interconnection Agreement Process

The process to generate and review the draft Interconnection Agreement typically takes two weeks but may take longer depending on the circumstances. After an Interconnection Agreement is generated, Georgia Power sends it to the customer for review. For DER facilities sized <250 kW AC, the customer executes the Interconnection Agreement through PowerClerk DocuSign. For DER facilities sized <250 kW AC, the customer signs the Interconnection Agreement and returns it to Georgia Power for execution. Once the customer has signed the





Interconnection Agreement, Georgia Power signs and returns a copy of the fully executed Interconnection Agreement to the customer.

STEP 6: DER Facility Installation

Once an Interconnection Agreement has been fully executed, the customer may install the DER facility and notify Georgia Power once it is complete and ready to be tested. If Georgia Power must construct additional interconnection facilities or system upgrades, or if the customer is served by network underground, additional time may be needed.

STEP 7: Inspection, Witness Testing, and Permission to Generate

All DER facilities will be initially tested for safe, parallel operation prior to approval. Georgia Power's Distribution Reliability staff outlines typical required test parameters, which are communicated to the customer. The DER facility must pass the applicable witness test before the customer's DER facility is approved to operate in parallel with Georgia Power's distribution system. Witness testing fees are DER facility-specific and program-specific.

All witness tests are subject to the customer's completion of program and interconnection process requirements (as applicable), Georgia Power resource availability, holiday schedules, inclement weather, and other unforeseen system emergencies. Georgia Power requires a minimum of two weeks to coordinate and schedule a witness test.

As shown in the table below, RNR participants are charged for interconnection testing based on the current tariff. All other energy offset customers or QFs are charged based on the man-hours required for the test, not to exceed \$2,500 for tests conducted during normal business hours Monday through Friday (non-holidays).

Upon successful witness testing, Georgia Power will program the customer's meter for bi-directional service (if applicable), indicating the system has been approved to operate in parallel.

Program	Monthly Fee	Testing Fees
Renewable and Non-Renewable Resources ("RNR") Tariff	Monthly metering fee (varies depending on meter setup) • Bidirectional (one-meter setup): \$2.82/month • Single Directional (two-meter setup): ○ Single Phase: \$4.50/month ○ Polyphase: \$11.20/month	\$5/kW AC (nameplate)
Energy Offset ≤250 kW	• N/A	Site specific - not to exceed \$2,500 (M-F)
Energy Offset >250 kW	• N/A	\$2,500 M-F \$3,000 on Weekends
Qualifying Facilities ("QF")	 Administration Fee: \$100/month Phone communication to meter: \$50/month Translation fee for interval metering: \$60/month If applicable, one-time conversion to interval metering fee: \$580 	\$2,500 M-F \$3,000 on Weekends





Battery Installations

For a battery system to operate in parallel with Georgia Power's distribution system, the following conditions must be met:

- If the Battery Energy Storage System (BESS) will be used for self-consumption only (peak shaving, on-peak hours, nighttime energy needs, etc.), the inverter used in the system (whether the system is AC or DC-coupled) must comply with UL1741 and IEEE 1547. When grid power is lost, the inverter must cease-to-energize so that it is incapable of delivering power to Georgia Power's distribution system. Georgia Power verifies this functionality by testing the cease-to-energize functionality of the facility.
- If the battery system will be used for standby purposes (supply power to all or some of the customer's loads when the distribution system is unavailable) then the following requirements/conditions must be met:
 - All inverters must be UL1741 compliant. Georgia Power verifies this functionality with the same procedure currently used for solar PV installations installed without a battery system.
 - The Automatic Transfer Switches <u>must</u> be <u>an Open Transition Transfer (OTT) Switch that operates</u> in a Break-Before-Make manner, which must be employed to switch over from utility power to the <u>BESS device to serve local loads</u>. Spec sheets that confirm this information must be provided to Georgia Power.
 - The Automatic Transfer Switches <u>must</u> be <u>mechanically interlocked</u>. Spec sheets that confirm this
 information must be provided to Georgia Power, along with <u>a picture of the switches</u> for
 verification purposes.
 - o Georgia Power's <u>DB 18-23</u> Form for Standby Generators must be completed and submitted with the application. Customer must complete all the applicable fields, sign and submit this form.
 - If the Energy Management System/BESS/inverters have special functionalities (such as single-directional power flow on certain circuits, communication lines, etc.), these functions, and all other details concerning the battery system's operation must be clearly indicated on the single-line diagram.

QUESTIONS?

Please send all questions and correspondence to:

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