Behind-the-Meter Solar and Storage Interconnection Summary for Commercial and Industrial Customers

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This Summary is subject to periodic revision. The current version is available on GPC's Business Solar Solutions Website. GPC provides this Summary for guidance and informational purposes only; it does not amend any rule, regulation, tariff, policy, or agreement.

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TERMINOLOGY AND RESOURCES

Terminology Schedule

This Summary uses the terminology described in this *Terminology Schedule* or in the body of this Summary, and the rules of construction identified in this *Terminology and Resources* section.

AC: Alternating current.

AHJ: See *Authority Having Jurisdiction*.

Authority Having Jurisdiction (AHJ): The entity or person responsible for: (i) enforcing codes and regulations; or (ii) approving equipment and materials. If no AHJ exists for the Facility location, a qualified licensed electrician (for Facility less than or equal to 100 kW) or Professional Engineer (for a Facility greater than 100 kW) must perform required inspections and provide required authorizations.

Battery Energy Storage System (BESS): A system that captures energy produced at one time, stores that energy for a period of time, and delivers that energy as electricity at a future time.

BlueBook: The ***GPC BlueBook for Electrical Service*** or any successor policy, publicly available on the GPC Distributed Generation Website (see *Resources* section for additional information).

Business Solar Solutions Website: GPC's Business Solar Solutions website (see *Resources* section for additional information).

BTM: Behind-the-meter.

Campus-Style Premises: Defined in Section 1.5 (*Campus-Style Solar Facility Installations*).

Commission: The Georgia Public Service Commission, or any governmental authority succeeding to the powers and functions of the Commission.

Construction Guidelines: GPC's ***Distributed Generation Interconnection Construction Guidelines***, publicly available on the Business Solar Solutions Website (see *Resources* section for additional information).

Customer: The GPC Commercial and Industrial (C&I) customer (a GPC retail electric service customer, as defined in the Rules and Regulations).

Customer-Owned Generation: A system in which Customer's Facility is located and that: (i) interconnects to the Distribution System at a GPC-owned, dedicated substation or via a dedicated circuit; and (ii) is or will be part of Customer's electric system.

DB 18-23: See *Distribution Bulletin 18-23*.

DC: Direct current.

DCI: Distributed Commercial and Industrial

Distributed Generation Website: GPC's Distributed Generation website (see *Resources* section for additional information).

Distribution Bulletin 18-23 (DB 18-23): GPC's ***Distribution Bulletin: 18-23***, which addresses interconnection requirements for non-exporting generators (see *Resources* section for additional information).

Distribution System: Electric System facilities owned by GPC that operate at a voltage below 40 kV (AC).

Distribution Test Policy: The ***GPC Distribution Test Policy*** or any successor policy, publicly available on the GPC Distributed Generation Website (see *Resources* section for additional information).

Electric System: The network of electric generation, transmission, or distribution facilities owned or operated by GPC or other electric utilities.

Energy Offset Only (EOO): A system: (i) that is: (a) designed to offset Customer's load usage; and (ii) may be authorized to push energy back onto the Electric System, but for which Customer will not be compensated for any excess energy generated by the Facility.

EOO: See *Energy Offset Only*.

Facility: The complete facility comprised of: (i) the solar electric energy generating equipment and BESS (if applicable); or (ii) standalone BESS, that is or will be connected to the GPC Electric System. "Facility" in this Summary is equivalent to "Distributed Energy Resource" or "DER" in the Southern Company DER Policy.

Feasibility Analysis: GPC's initial screening of the proposed Facility interconnection to identify potential costs and Electric System limitations that could impact the Facility's ability to interconnect to the Distribution System.

GPC: Georgia Power Company.

Impact Study: GPC's study of a proposed Facility to determine how its installation will interact with the existing Electric System and whether equipment, upgrades, services, or costs are required to interconnect the Facility.

kW: Kilowatt (AC).

MW: Megawatt (AC).

Network Underground Distribution System: An underground Distribution System that utilizes network protectors to improve reliability. Network underground is commonly found in metropolitan areas (downtown) but may apply to an isolated large Facility served underground.

Permission to Operate (PTO): Permission to operate the Facility after: (i) the Facility has passed the Witness Test; (ii) all documents are complete; and (iii) GPC issues a PTO letter.

Point of Connection (POC): The point where a Facility is electrically connected the Premise and meets the requirements of IEEE 1547-2018 or its successor, exclusive of any load present in the respective part of the Premise.

Point of Interconnection (POI): The point where the Facility interconnects to the Electric System, as further defined in the applicable interconnection agreement or service and interconnection agreement.

PowerClerk: GPC's PowerClerk website (see *Resources* section for additional information).

PowerClerk BTM User Guide: GPC's PowerClerk user guide for BTM Customers (see *Resources* section for additional information).

Primary Meter: A device used to measure electrical consumption at the primary voltage level before it is stepped down through transformers to the lower voltages used by Customer's equipment (enabling more accurate billing and monitoring of large-scale energy consumption).

Premises: The building, structure, or facility to which GPC furnishes or will furnish electricity to Customer as a retail electric customer. Two or more buildings, structures, or facilities that are located on one tract or contiguous tracts of land and are utilized by one retail electric customer will together constitute one Premises, except that: (i) any such building, structure, or facility will not, together with any other building, structure, or facility, constitute one Premises if the permanent service to it is separately metered and the charges for the service are calculated independently of charges for service to any other building, structure, or facility; and (ii) an outdoor security light, or an outdoor sign requiring less than 2200 watts will not constitute a Premises.

Professional Engineer: A registered professional engineer in good standing through the applicable state board with licensing authority over professional engineers.

Protection and Controls Test Policy (P&C Test Policy): The ***Protection & Controls Test Policy for Non-Exporting, Behind-the-Meter Customer owned generation (Excluding Large Load)*** or any successor policy, publicly available on the GPC Distributed Generation Website (see *Resource*s section for additional information).

PTO: See *Permission to Operate*.

QF Website: GPC's Qualifying Facility website (see *Resources* section for additional information).

RNR Tariff: GPC's Renewable and Nonrenewable Resources Tariff (RNR-11, or its successor) as approved by the Commission.

Rules and Regulations (Rules and Regs): GPC's ***Rules, Regulations, and Rate Schedules for Electric Service*** (see *Resources* section for additional information).

SEPA: See *Solar Energy Procurement Agreement*.

Solar Energy Procurement Agreement (SEPA): The agreement between Customer and a Solar Financing Agent that conforms to the requirements of the Solar Power Free-Market Financing Act of 2015 (O.C.G.A. § 46-3-61 et. seq.), which is an agreement, lease, or other arrangement under which Solar Financial Agent finances the installation, operation, or both, of solar technology and under which payments are based on performance and output of the solar technology installed.

Solar Financing Agent: Any person, including an electric service provider or an affiliate, whose business includes leasing, financing, or installation of solar technology under the Solar Power Free-Market Financing Act of 2015 (O.C.G.A. § 46-3-61 et. seq.).

Southern Company DER Policy: Southern Company *Operation of Distributed Energy Resources (DER) in Parallel with the Distribution System Policy*, applicable to facilities interconnecting to the Distribution System and publicly available on the GPC Distributed Generation Website (see *Resources* section for additional information).

Summary: This ***Behind-the-Meter Solar Interconnection Summary for Commercial and Industrial Customers***.

Test Policy: Either: (i) for standard Distribution System interconnection, the Distribution Test Policy; or (ii) for Customer-Owned Generation interconnection, the P&C Test Policy.

Transmission System: Electric System facilities owned by GPC that operate at a voltage greater than 40 kV (AC).

Witness Test or Witness Testing: Live testing of the Facility while operating in parallel with the Electric System in accordance with the Test Policy.

Resources

Bluebook: https://www.georgiapower.com/content/dam/georgia-power/pdfs/business-pdfs/bluebook_2023.pdf

Business Solar Solutions Website: https://www.georgiapower.com/business/products-programs/business-solutions/commercial-solar-solutions.html

Distributed Generation Website: https://www.georgiapower.com/business/products-programs/business-solutions/commercial-solar-solutions/distributed-generation.html#dgi

Distribution Bulletin 18-23 (DB 18-23): https://www.georgiapower.com/content/dam/georgia-power/pdfs/business-pdfs/DB-18-23-Rev-1-6-21_external-only.pdf

PowerClerk: https://georgiapowerdistributedci.powerclerk.com/MvcAccount/Login

PowerClerk BTM User Guide: https://www.georgiapower.com/content/dam/georgia-power/pdfs/company-pdfs/PowerClerk-BTM-User-Guide.pdf

QF Website: https://www.georgiapower.com/business/products-programs/business-solutions/qualifying-facilities.html

Residential Solar Solutions Website: https://www.georgiapower.com/residential/save-money-and-energy/products-programs/residential-solar-solutions/residential-rooftop-installations.html

RNR Tariff: https://www.georgiapower.com/residential/save-money-and-energy/products-programs/residential-solar-solutions/residential-rooftop-installations/how-it-works.html

Rules and Regs: https://www.georgiapower.com/content/dam/georgia-power/pdfs/business-pdfs/tariffs/2023/Rules-Regs.pdf

Southern Company DER Policy: SOCO_Interconnection_Policy_Binder.pdf

Test Policy: https://www.georgiapower.com/content/dam/georgia-power/pdfs/residential-pdfs/solar/distribution-test-policy.pdf

Protection & Controls Test Policy for Non-Exporting, Behind-the-Meter Customer owned generation (Excluding Large Load): https://www.georgiapower.com/content/dam/georgia-power/pdfs/residential-pdfs/solar/p-and-c-apps-test-policy.pdf

Rules of Construction:

In this Summary: (i) whenever the term "**include**," "**including**," or "**e.g.**" is used, concerning a listing of items included within, or as an example of, the prior reference, the listing will be interpreted as illustrative only and not as a limitation on, or as an exclusive listing of, the items included in the prior reference (e.g., "**include**" means "include, but is not limited to"; "**including**" means "including, without limitation"); and (ii) "**or**" means either or both (i.e., "A or B" means "A or B or both A and B").

Unless otherwise specified, reference to: (a) an agreement or document includes any exhibit, attachment, appendix, or schedule; and (b) an applicable law, agreement, document, policy, procedure, standard, or provision is to the law, agreement, document, policy, procedure, standard, or provision as modified, amended, supplemented, or restated, and then-effective or current.

A defined term may be singular or plural, as the context requires. Captions are for convenience only and do not affect interpretation.

INTRODUCTION

This Summary provides information for GPC commercial and industrial (C&I) Customers[1] interested in installing an on-site BTM Facility (solar, solar paired with BESS, or standalone BESS). Customers and installers must follow the steps outlined in this Summary to interconnect their Facility, and Customers who are exploring BTM options are encouraged to use this Summary as a guide to assist in understanding GPC's application and interconnection process. As further discussed in this Summary, the interconnection process will vary based upon the unique nature of a Customer's Facility.

PART 1. OVERVIEW OF GPC COMMERCIAL AND INDUSTRIAL PROGRAMS AND FACILITY SIZE LIMITATIONS

1.1. Solar Analysis Assistance. GPC offers several programs and alternatives to help Customers meet their renewable energy goals. Upon request, GPC offers Customers a solar analysis to help in making the best renewable energy decision. Please visit GPC's Business Solar Solutions Website to review GPC's solar program options. Customers may use the Solar Intake Request Form (see *Resources* section for additional information) to learn about solar program options and receive a customized estimate of potential energy savings following an installation or request a turnkey solution to fit Customer's needs.

1.2. Program Options. The three primary programs for a Customer who wants to install an on-site BTM solar Facility are: (i) Energy Offset Only (EOO); (ii) Renewable and Nonrenewable Resources (RNR); and (iii) Qualifying Facility (QF). A Customer desiring to install a Facility and to receive compensation for excess electrical energy delivered to GPC or who has already installed a BTM Facility with capability of net export of electrical output to the Electric System may sell excess energy to GPC through the RNR program or as a QF. The three primary BTM programs are discussed in the following sections.

1.2.1. Energy Offset Only (EOO). EOO is designed for Customers who would like to maximize the size of their Facility to offset their energy usage. An EOO Customer will use all electric energy generated by the Facility at the Premises and any excess energy that might flow back to the Electric System will be *de minimis* and not a sale of energy, but merely an inherent byproduct of the interconnection of the Facility to the Electric System. EOO Customers are not compensated for any excess energy that is generated and delivered to the Electric System. GPC may require Customer to install reverse power relays or an equivalent system at their EOO Facility to prevent excess energy export. If a BTM Customer has installed a BTM Facility but has not yet elected to participate in a specific BTM program, GPC will require Customer to apply for EOO. For more information regarding EOO, please visit the "*How it Works*" section on the Business Solar Solutions Website.

A. Energy Offset Only (EOO) for Storage Device. In addition to requiring Customers to install reverse power relays or an equivalent system at their EOO Facility to prevent excess energy export, an EOO Facility with a Standalone BESS may be subject to charging limits as further outlined in the applicable service and interconnection agreement.

1.2.2. Renewable and Nonrenewable Resources (RNR) Tariff. Customers who participate in the RNR program receive compensation for excess electrical energy delivered to GPC. GPC's RNR Tariff outlines parameters of the RNR program. The RNR Tariff limits eligible C&I renewable energy resources to Facilities with a peak generating capacity of less than or equal to 250 kW.

[1] This Summary is for C&I Customers. If you are a residential customer, please reference the *GPC Behind-the-Meter Residential Solar Interconnection Summary* available at https://www.georgiapower.com/residential/save-money-and-energy/products-programs/residential-solar-solutions/residential-rooftop-installations.html.

Resources between 100 kW and 250 kW may not exceed 125% of the preceding year's metered peak electrical demand of the Premises the Facility serves. Eligibility is determined by the nameplate capacity of the installed equipment. Participating Customers receive compensation based on GPC's Renewable Cost Benefit (RCB) Framework-adjusted solar avoided energy cost as filed with the Commission in Docket No. 16573. For more information about the RNR Tariff, please visit the "*How it Works*" section under the "*Rooftop Installation*" page on the Business Solar Solutions Website.

1.2.3. Qualifying Facility (QF). Customer may apply to participate as a BTM QF and receive compensation based on GPC's actual day-ahead avoided cost as required by Commission Orders in Docket No. 4822. If Customer plans to submit a BTM application for a QF, please contact GPC's QF Manager (g2qulfac@southernco.com). For more information regarding the QF program, please visit the QF Website.

1.3. Additional Requirements for Customer-Owned Generation. As a condition for Customer-Owned Generation interconnection, the substation serving a Customer-Owned Generation Facility must include an electronically controlled protective device that prevents energy exports to the Transmission System. Customer-Owned Generation Facilities may not deliver any energy to the Transmission System and Customer must, at Customer's sole cost and expense, install additional equipment necessary to prevent the Facility from exporting energy to the Electric System. Additionally, as further described in the Southern Company DER Policy and P&C Test Policy, the Distribution System may require system upgrades.

1.4. Transmission Interconnection; Network Underground Customers. This Summary provides guidance regarding GPC's interconnection process and operating requirements for a BTM Facility that will interconnect to the Distribution System. Customers considering facilities that would interconnect to the Transmission System must satisfy testing requirements under the P&C Test Policy, and Electric System upgrades may be necessary before the facility can operate in parallel with the Electric System. Customer must contact GPC for additional guidance (G2GPCDISTCI@southernco.com). If Customer is served directly off the Network Underground Distribution System, Customer will not be allowed to export excess energy to the Electric System or participate in a program to receive compensation for excess energy. Network Underground Distribution System Customers must install additional equipment (at the Customer's sole expense) to prevent the Facility from exporting any energy to the Electric System.

1.5. Campus Style Solar Facility Installations. A Customer interested in installing multiple Facilities to interconnect to the Distribution System behind a Primary Meter to supply energy to multiple Customer Premises behind that same Primary Meter ("**Campus-Style Premises**") should contact GPC for additional guidance (G2GPCDISTCI@southernco.com).

1.6. Delta Transformer Interconnections. A Customer interested in installing a system with delta transformers integrated in the Distribution System or Facility should contact GPC for additional guidance (G2GPCDISTCI@southernco.com). Delta configurations present unique safety and reliability challenges that may require additional protection measures.

PART 2. FACILITY OWNERSHIP OPTIONS

In addition to Customer's installing, owning, and maintaining its Facility on its own, Customer also may enter into a SEPA with a Solar Financing Agent. Under a SEPA, Solar Financing Agent finances Facility installation or operation, or both, and Customer makes payments (as agreed with the Solar Financing Agent) based on the Facility's performance and output. A Facility financed under a SEPA is limited to solar electric energy generating equipment and BESS (if applicable) that will interconnect to the Distribution System. If the Facility includes a BESS, the BESS: (i) may only be charged by the solar electric generating equipment; and (ii)

Customer, at Customer or Solar Financing Agent's sole cost and expense, must include additional equipment to prevent charging the BESS from the Distribution System.

Please note, Customer remains responsible to GPC for all obligations under the interconnection agreement or service and interconnection agreement even when a Solar Financing Agent is involved. If Customer chooses to engage a Solar Financing Agent, GPC recommends that Customer finalize and execute the SEPA before applying to GPC for interconnection. Customer is responsible for completing the application (and obligations regarding the Facility), but Solar Financing Agent may provide necessary information or assist Customer in completing the application.

PART 3. COMMERCIAL AND INDUSTRIAL INTERCONNECTION OVERVIEW

To ensure the proposed BTM Facility safely and properly connects to the Distribution System, Customers, their installers, and GPC must cooperate throughout the following multi-step process:

- **Step 1:** Review Summary and relevant documents
- **Step 2:** Customer submits interconnection application
- **Step 3:** GPC reviews Customer's interconnection application
- **Step 4:** Facility Impact Study (if applicable[2])
- **Step 5:** Parties execute applicable agreement(s)
- **Step 6:** Facility installation and inspection
- **Step 7:** Witness Testing and PTO

The multi-step process is discussed in the following sections.

3.1. Step 1: Review Summary and Relevant Documents. Before applying for interconnection, Customer and Customer's installer should review this Summary (and the RNR Tariff if Customer desires to participate in the RNR program), and the installer should also understand the following documents:

- Southern Company DER Policy
- BlueBook
- PowerClerk User Guide
- DB 18-23
- Rules and Regs Section G (*Customer Generation*)
- Applicable Test Policy

3.2. Step 2: Customer Submits Interconnection Application. Customers interested in interconnecting a Facility to the Electric System must apply for interconnection service. The application process uses PowerClerk. Depending on Customer's preference, Customer or Customer's chosen installer (including a Solar Financing Agent) may complete the PowerClerk information.

3.2.1. Feasibility Analysis. Before submitting an application, Customer may request a Feasibility Analysis to assist in evaluating whether to move forward with an a proposed project. The Feasibility Analysis, includes a preliminary assessment of potential transformer replacements or upgrades, Distribution System impacts, anticipated schedule implications, and the potential

[2] Impact Studies are site- and Facility-specific.

need for an Impact Study. The Feasibility Analysis is a complementary and intended as a high-level, non-comprehensive overview to support Customer's initial evaluation of the project.

3.2.2. Application Requirements. Customer must notify GPC of Customer's intent to install a Facility on its property by applying for interconnection through PowerClerk. To proceed, Customer (or Customer's installer) must provide in PowerClerk basic Facility information, including a Facility one-line diagram and proposed equipment specifications. All documentation must be in digital format. GPC will review the application after Customer has submitted all application forms and related documentation.

3.2.3. Fees. For a Facility that will interconnect to the Distribution System, there is a one-time interconnection fee. Reference Rules and Regs Section G (*Customer Generation*) for current amounts.

3.2.4. Application Supporting Documents. Customer must submit the following information as part of the application process: **One-Line Diagram.** Facility one-line electrical diagram showing how the Facility is or will be electrically wired from the generation/solar panels or BESS to GPC's electric meter. The one-line diagram must be an accurate digital representation of the equipment and wiring methods. Reference Exhibit A (*One-Line Diagram Example*) for a one-line diagram example. GPC will not accept hand-drawn one-line diagrams. GPC requires the following information as part of the one-line diagram:

- Customer name and address matching the GPC account.
- Facility total capacity rating (DC and AC in accordance with the Southern Company DER Policy).
- Renewables or energy storage equipment, including quantity, manufacturer, and model.
- Location of generation AC disconnect (identifying whether fusible or non-fusible, visible load break, and mounting location, and stating labeling language as installed). For full AC disconnect requirements, reference the Construction Guidelines for additional information.
- POI (showing GPC meter number and, if applicable, transformer number serving the POI). Reference Exhibit A (*One-Line Diagram Examples*), Attachment 2 (*Generic Example Diagram*) for additional information.
- POC (connection method (e.g., line-side tap inside customer's equipment) stated and accurate location). Reference Exhibit A (*One-Line Diagram Examples*), Attachment 3 (*POC and POI Example Diagram*) for additional information.
- Facility-owned transformer (kVA Rating, primary and secondary voltage, and winding configuration).
- Identify whether equipment is existing or new (all existing and new equipment and wiring must be shown).
- Professional Engineer's stamp on all drawings (if the Facility's capacity is above 100 kW).

B. Equipment Specification Sheets. Equipment specification sheets for all Facility renewable and energy storage equipment, including the solar modules, inverter equipment, energy storage equipment (e.g., BESS), and an open transition transfer switch/battery gateway, if installed. All Facility, inverter equipment, and AC-coupled batteries specification sheets must state UL1741SB and IEEE1547-2018 listing.

C. Transformer Specification Sheets (Customer Facility-Owned). Specification sheet for Facility-owned transformer including the test sheet and an image of the equipment nameplate mounted to the transformer.

D. Non-Export Application Form (Energy Storage Installations). DB 18-23 non-export application form (available in DB 18-23) for all energy storage installations that can operate in a backup operation mode.

E. Site Plan. Facility site plan showing physical location of the equipment at the site. This is particularly important if there are multiple AC disconnects installed or the AC disconnects are not located adjacent to the GPC meter.

F. W-9 Form. Customer must submit a W-9 as required by the Internal Revenue Service to verify that any expected monetary payments to Customer are not directed to a foreign entity.

3.3. Step 3: GPC Reviews Customer's Interconnection Application. GPC's review and feedback on how the Facility will interconnect and operate will alleviate and address potential interconnection or Witness Testing issues before the installation occurs. Customer is advised not to purchase any Facility equipment until after GPC reviews the application and determines how the Facility can be integrated with existing GPC equipment and service. GPC's review will include a Feasibility Analysis. GPC may request detailed design drawings not already provided through PowerClerk (e.g., AC three-line diagrams and DC control diagrams). The design drawings should illustrate any existing installations (e.g., standby generators and other energy resources), new installations, how the new and existing equipment will operate in unity, and all protection schemes and devices (e.g., relays, potential transformer, and current transformers). For full Facility design requirements, reference the Construction Guidelines.

3.4. Step 4: Facility Impact Study (if Applicable). An Impact Study may be required because the proposed Facility may affect the safety or reliability of electric service to other GPC customers. All Facilities greater than or equal to 250 kW must undergo an Impact Study, and Facilities under 250 kW may undergo an Impact Study if GPC determines the Facility may pose a safety or reliability risk or the interconnection aggregate of facilities on the Distribution System circuit is over 250 kW. Reference Exhibit B (*Facility Impact Studies*) for additional information regarding the Impact Study.

A. Impact Study Process. The level of Impact Study required may depend on the proposed Facility size or characteristics of the proposed interconnection circuit. Generally, proposed Facility installations greater than or equal 250 kW require an in-depth Impact Study as further described in Exhibit B (*Facility Impact Studies*). Depending on the complexity of the proposed Facility interconnection, this review could take several weeks or may be extended. GPC considers the following for each interconnection:

(i). Facility size and type of generation already connected (or planned to be connected) to the circuit;

(ii). Locations of existing interconnecting circuit protective devices and voltage regulating equipment between the POI and the interconnecting circuit source substation;

(iii). Maximum and minimum amount of power consumed by existing customers on the circuit;

(iv). Stiffness of the circuit at the point of common coupling or interconnection of the Facility;

(v). Compatibility of the proposed Facility design with the interconnecting circuit design; and

(vi). Type of protection system used for the power transformer at the interconnection circuit source substation.

B. Impact Study Results and Costs. Once complete, GPC will provide Customer with the Impact Study results.[3] Customer may be required to purchase and install equipment to meet protection requirements and to eliminate risks identified in the Impact Study. The equipment purchased by Customer must be used behind Customer's meter. If GPC Electric System upgrades are required to interconnect Customer's Facility, GPC, at Customer's expense, will purchase, install, own, and maintain the equipment on GPC's side of the meter.

The costs to interconnect a Facility are dependent on the Impact Study results and are Facility- and location-specific. The Impact Study itself does not provide cost information, but it does indicate any required upgrade, which can be used to estimate interconnection costs. If interconnection costs are identified, GPC will include the costs in the applicable interconnection agreement or service and interconnection agreement.

For BESS designed to operate in parallel with the Distribution System, GPC will evaluate the BESS as incremental load that is additional to the peak demand for Customer's Premises. This additional load could also require upgrades to the Distribution System, including upgrades to existing equipment used to provide electric service to the Premises. Any required upgrades to the Distribution System caused by addition of the BESS will be installed at Customer's expense.

3.5. Step 5: Parties Execute Applicable Agreement(s). Customer must enter into an interconnection agreement or a service and interconnection agreement with GPC. The interconnection agreement or service and interconnection agreement outlines the terms and conditions of interconnection and the particular BTM program Customer selected. Customers who participate in the QF program must also enter into a power purchase agreement to sell excess energy to GPC. The appropriate agreement(s) will depend on the BTM program Customer selects and whether Customer has entered into a SEPA with a Solar Financing Agent. The following table summarizes the appropriate BTM agreement(s).

BTM COMMERCIAL AND INDUSTRIAL AGREEMENTS SUMMARY	
Agreement Name	**Key Program Requirements**
Renewable and Nonrenewable Service and Interconnection Agreement for BTM Solar ("RNR")	For a commercial/industrial Facility ≤ 250 kW that meets the requirements of the current RNR Tariff. Customer receives compensation for excess energy delivered to GPC.
Renewable and Nonrenewable Service and Interconnection Agreement for BTM Solar with SEPA ("RNR with SEPA")	Same as above, except for Customers who have entered into a SEPA with a Solar Financing Agent.
Energy Offset Only Service and Interconnection Agreement for BTM Solar ("EOO Short Form")	For a commercial/industrial Facility ≤ 250 kW that is EOO. No compensation for any excess energy delivered to GPC.
Energy Offset Only Service and Interconnection Agreement for BTM Solar with SEPA ("EOO Short Form with SEPA")	Same as above, except for Customers who have entered into a SEPA with a Solar Financing Agent.
Energy Offset Only Service and Interconnection Agreement for BTM Storage Device ("EOO Storage Short Form")	For a commercial/industrial BESS-only Facility ≤ 250 kW that is EOO. No compensation for any excess energy delivered to GPC.

[3] Impact Study results and the level of detail provided to Customer are Facility-specific.

BTM COMMERCIAL AND INDUSTRIAL AGREEMENTS SUMMARY	
Agreement Name	**Key Program Requirements**
Energy Offset Only Service and Interconnection Agreement for BTM Solar ("EOO Long Form")	For a commercial/industrial Facility > 250 kW that is EOO. No compensation for any excess energy delivered to GPC.
Energy Offset Only Service and Interconnection Agreement for BTM Solar with SEPA ("EOO Long Form with SEPA")	Same as above, except for Customers who have entered into a SEPA with a Solar Financing Agent.
Energy Offset Only Service and Interconnection Agreement for Behind-the-Meter Solar with Customer-Owned Generation (EOO Long Form (COG)))	For a commercial/industrial Facility with Customer-Owned Generation interconnection.
Energy Offset Only Service and Interconnection Agreement for Behind-the-Meter Solar with Customer-Owned Generation with SEPA (EOO Long Form (COG) with SEPA)	Same as above, except for Customers who have entered into a SEPA with a Solar Financing Agent.
Energy Offset Only Service and Interconnection Agreement for BTM Storage Device ("EOO Storage Long Form")	For a commercial/industrial BESS-only Facility ≥ 250 kW that is EOO. No compensation for any excess energy delivered to GPC.
Qualifying Facility Power Purchase Agreement ("QF PPA") *and* Qualifying Facility Interconnection Agreement ("QFIA")	For a qualifying Facility. Customer receives compensation (in accordance with QF PPA) for excess energy delivered to GPC.
Qualifying Facility Power Purchase Agreement ("QF PPA with SEPA") *and* Qualifying Facility Interconnection Agreement ("QFIA with SEPA")	Same as above, except for Customers who have entered into a SEPA with a Solar Financing Agent.

3.5.1. Interconnection Agreement Process. The process to generate and review the draft agreement(s) typically takes two weeks but may take longer depending on circumstances (e.g., additional information needed from Customer or additional time needed to review Customer's supporting documents). GPC will send the agreement to Customer for review and execution via electronic signature:

- **Short Forms.** For short form agreements (i.e., RNR, RNR with SEPA, EOO Short Form, EOO Short Form with SEPA, or EOO Storage Short Form), Customer will execute the applicable service and interconnection agreement via PowerClerk Docusign. GPC will sign after Customer and will send a copy of the fully executed agreement to Customer via PowerClerk.
- **Long Forms.** For long form agreements (i.e., EOO Long Form, EOO Long Form with SEPA, EOO Long Form (COG), EOO Long Form (COG) with SEPA, EOO Storage Long Form, QF PPA and QFIA, QF PPA with SEPA, or QFIA with SEPA), Customer will sign the agreement(s) via Nitro Sign. GPC will sign after Customer and will send the fully executed agreement(s) to Customer once GPC grants PTO.

3.6. Step 6: Facility Installation and Inspection. After GPC reviews and approves the application and Customer and GPC have signed the agreement(s), Customer may install the Facility and notify GPC once it is complete and ready for Witness Testing. GPC will program Customer's meter for bi-directional service (if applicable) before Witness Testing. If GPC must construct additional interconnection facilities or system upgrades, or if Customer is served by Network Underground Distribution System, additional time may be needed. Customer's installer should reference the Construction Guidelines for additional information regarding BTM Facility construction.

A. Inspection by the Local Authority Having Jurisdiction. All renewable energy and BESS must be inspected by the local AHJ after installation, but before interconnection to the Distribution System. Inspection ensures that all National Electric Code (NEC) requirements have been met.

B. Electrical Inspection Report. Customer must provide a Facility final electrical inspection report showing passing inspection of the Facility at the account address. The inspection report must also show the name of the local AHJ and the permit number for the installation, if applicable. For additional details reference Southern Company DER Policy Section 8.6.6 (*DER Initial Synchronization*).

3.7. Step 7: Witness Testing and PTO.

3.7.1. Witness Testing. GPC will test all Facilities for safe parallel operation before granting PTO. As described in Rules and Regs Section G (*Customer Generation*), GPC may conduct Witness Testing to ensure the Facility's safe parallel operation. If Witness Testing is required for Customer's Facility, the Facility must pass the applicable Witness Test before GPC provides PTO. All Witness Tests are subject to Customer's completion of program and interconnection process requirements (as applicable), GPC resource availability, holiday schedules, inclement weather, and unforeseen Electric System emergencies. For additional Witness Testing information, refer to the Test Policy.

3.7.2. Permission to Operate. Once all documents are final, GPC will mark the project as "Project Complete" and will email a PTO letter to Customer and the installer, indicating the Facility has received PTO.

PART 4. BATTERY INSTALLATIONS

This Part 4 (*Battery Installations*) provides an overview of general requirements for BESS used to operate in parallel with the Distribution System or for standby purposes.

4.1. Parallel Operation. For a BESS to operate in parallel with the Distribution System, the following conditions must be met:

4.1.1. If the BESS will be used for self-consumption only (e.g., peak shaving, on-peak hours, nighttime energy needs), the inverter used in the system (whether the system is AC- or DC-coupled) must comply with UL1741SB and IEEE 1547-2018. When Electric System power is lost, the inverter must cease-to-energize so that it is incapable of delivering power to the Distribution System. GPC verifies this functionality by testing the cease-to-energize functionality of the Facility.

4.2. Standby Operation. If the BESS will be used for standby purposes (i.e., to supply power to all or some of Customer's loads when the Distribution System is unavailable) then the following requirements and conditions must be met:

4.2.1. All inverters must be UL1741 compliant. GPC verifies this functionality with the same procedure currently used for solar PV installations installed without a BESS.

4.2.2. The automatic transfer switches must be open transition transfer (OTT) switches that operate in a break-before-make manner, which must be employed to switch over from utility power to the BESS to serve local loads. Customer must provide GPC with specification sheets that confirm this information.

4.2.3. The automatic transfer switches must be mechanically interlocked. Customer must provide GPC with specification sheets that confirm this information, along with a picture of the switches for verification purposes.

4.2.4. If the energy management system/BESS/inverters have special functionalities (e.g., single directional power flow on certain circuits, communication lines), these functions, and all other details concerning the BESS's operation must be clearly indicated on the single-line diagram.

For additional BESS requirements, reference the Construction Guidelines.

PART 5. ADDITIONAL INFORMATION

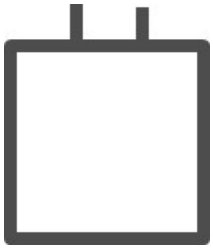
5.1. Failure to Apply for Interconnection. If Customer fails to notify GPC in advance, GPC will learn of the existence of Customer's Facility from reverse energy flow alerts from Customer's electric service meter. After receiving a reverse energy flow alert, GPC will contact Customer for information regarding the Facility and, if necessary, arrange for a site visit and Witness Testing. GPC reserves the right to disconnect electric service to Customer until GPC determines the Facility can safely operate in parallel with the Distribution System, Customer executes the applicable service and interconnection agreement (see Section 3.5 (*Step 5: Parties Execute Applicable Agreement(s)*), and pays all applicable fees and expenses associated with the Facility.

5.2. Contacting GPC. Please use the Solar Intake Request Form (see *Resources* section for additional information) to send questions and correspondence to GPC.

5.3. Periodic Revision. This Summary is subject to periodic revision and GPC may make changes without notice. The current version of this Summary is always available on the Business Solar Solutions Website.

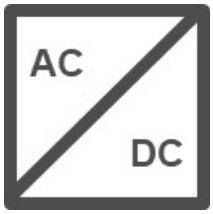
EXHIBIT A – ONE-LINE DIAGRAM EXAMPLES

ATTACHMENT 1 – ONE-LINE DIAGRAM LEGEND

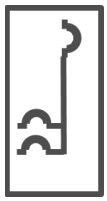


SOLAR MODULE

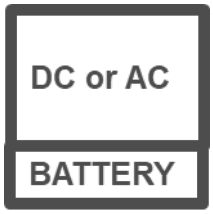
METER



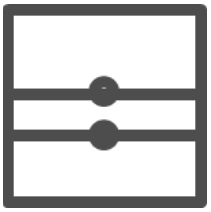
INVERTER



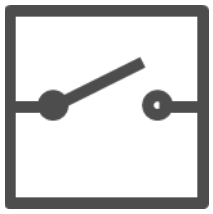
BREAKER PANEL



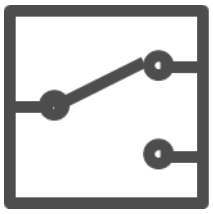
BATTERY



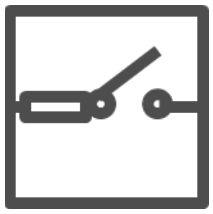
JUNCTION BOX



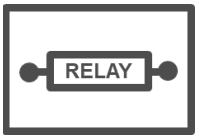
AC DISCONNECT (NOT FUSED)



TRANSFER SWITCH



AC DISCONNECT (FUSED)

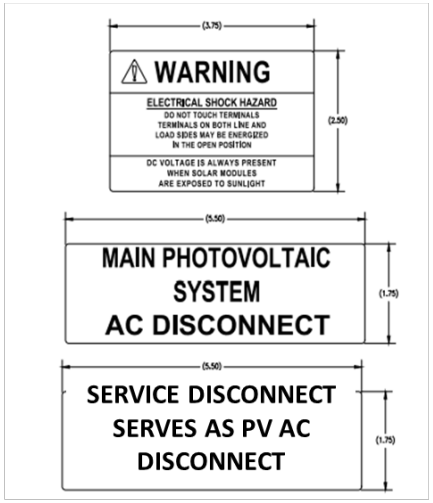


RELAY SWITCH

EXHIBIT A – ONE-LINE DIAGRAM EXAMPLES

ATTACHMENT 2 – GENERIC EXAMPLE DIAGRAM

One-Line Standard Electrical Diagram	
GPC Customer Name:	Fname Lname
Address:	123 Street, City, GA 12345
Renewables Total DC Size (kW):	6kW
Renewables Total AC Size (kW):	5kW
Energy Storage Total Size (kW):	5kW
Energy Storage Total Capacity (kWh):	14kWh
Date Prepared:	2/1/21
Drawn By:	GPC



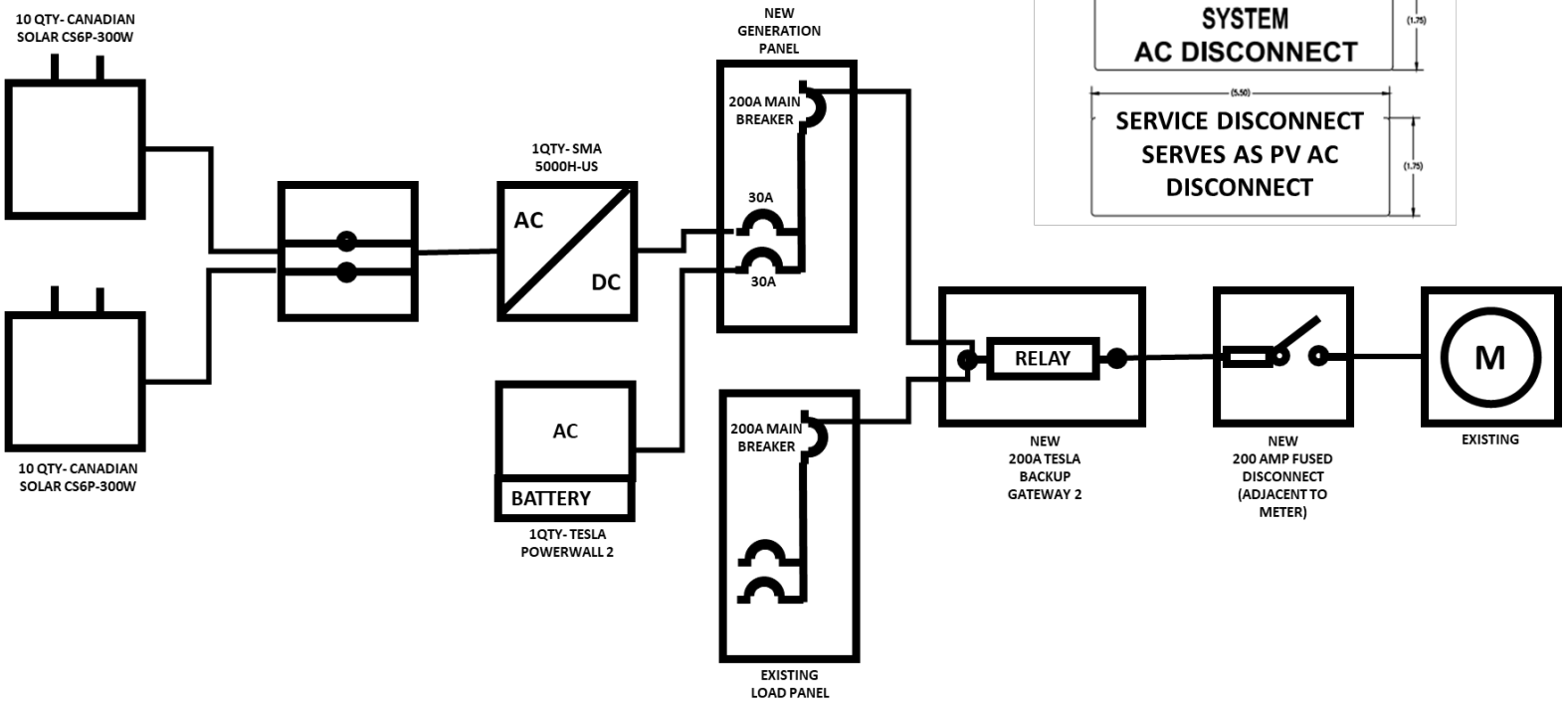
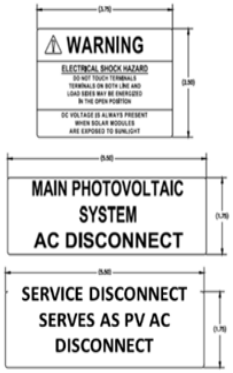


EXHIBIT A – ONE-LINE DIAGRAM EXAMPLES

ATTACHMENT 3 – POC AND POI EXAMPLE DIAGRAM

POC versus POI Delineation: One-Line Standard Electrical Diagram	
GPC Customer Name:	Fname Lname
Renewable Total DC Size (kW):	6kW
Renewable Total AC Size (kW):	5kW
Date Prepared:	2/1/21
Drawn By:	GPC
POC:	Solar connects to Premises
POI:	Premises connects to Electric System



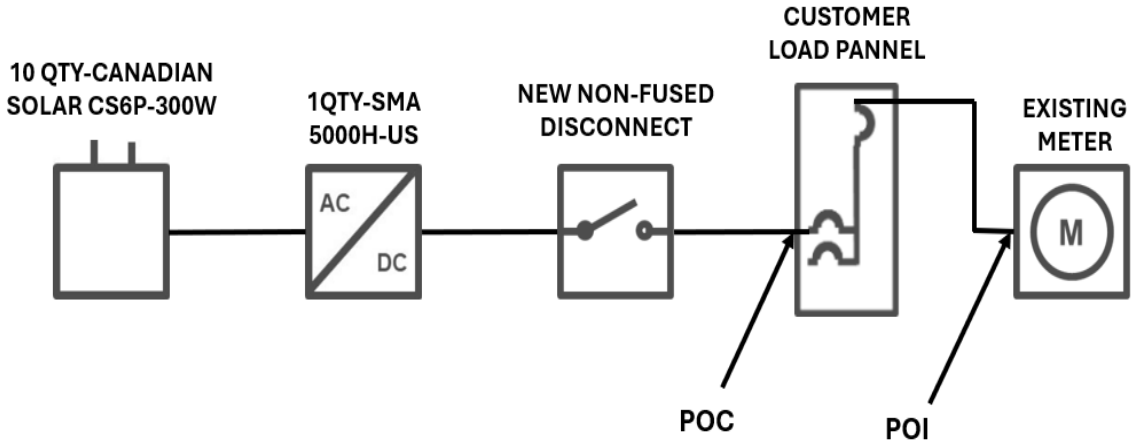


EXHIBIT B – FACILITY IMPACT STUDIES

GPC may perform one or more Impact Studies to identify reliability issues, safety issues, or GPC upgrades required to accommodate the proposed Facility installation. The following is a summary of the standard Impact Studies and their typical applicability. GPC reserves the right to perform additional studies if required and at its discretion.

Impact Study Types and Typical Applicability		
Impact Study Type	**Description**	**When Required**
Distribution	Identifies and prevents any future issues negatively affecting the reliable and safe operation of the Electric System.	Facilities connecting to standard distribution feeder resulting in ≥ 250 kW in aggregate on the feeder. May be required for Facilities ≤ 250 kW.
Distribution + Transmission Adder	Detailed Impact Study to identify and prevent any future issues negatively affecting reliable and safe operation of the Electric System. Includes detailed load flow study.	As applicable. Determined during Impact Study (typically for Facilities > 1 MW)
Network Underground	Impact Study to identify and prevent future issues negatively affecting reliable and safe operation of the Electric System. Operational limitations to prevent export to the Electric System will be determined.	All Facilities at Premises connected to Network Underground Distribution System.
Reliability	Impact Study to identify and prevent future issues negatively affecting reliable and safe operation of the Electric System. May also include renewables equipment, energy storage, and Customer equipment operation review.	As applicable.
P&C Applications	Detailed Impact Study to identify and prevent any future issues negatively affecting reliable and safe operation of the Electric System and ensure design prevents exporting to the Transmission System. Additional documentation may be required to prove non-exporting relaying scheme.	As applicable.

1.1 Need for New Impact Study. GPC may require a new Impact Study if any of the following modifications occur after GPC has completed a previous Impact Study: (i) modification to inverter manufacturer or model selection; (ii) change to inverter quantities that increases kW capacity rating; or (iii) modification to the Facility.

1.2 Costs. Customer is responsible for the Impact Study costs regardless of the Impact Study results or whether the Facility ultimately is installed. Customer must pay the Impact Study costs before GPC will begin the Impact Study. Impact Study costs are non-refundable. If during the Witness Test, GPC discovers a discrepancy between the installed system and the applied for system, additional Impact Studies may be required.

1.3 Limitations. The Impact Study is based solely on the connected load and generation on the Electric System at the time the study is performed. The amount of generation capacity that can be accommodated may be impacted by subsequent changes to the Electric System, such as the interconnection of other facilities or additional circuit loads. GPC will not allocate capacity to Customer until Customer executes an interconnection agreement or a service and interconnection agreement. The completed Impact Study does not guarantee or reserve hosting capacity.