

Distributed Generation Interconnection

Construction Guidelines

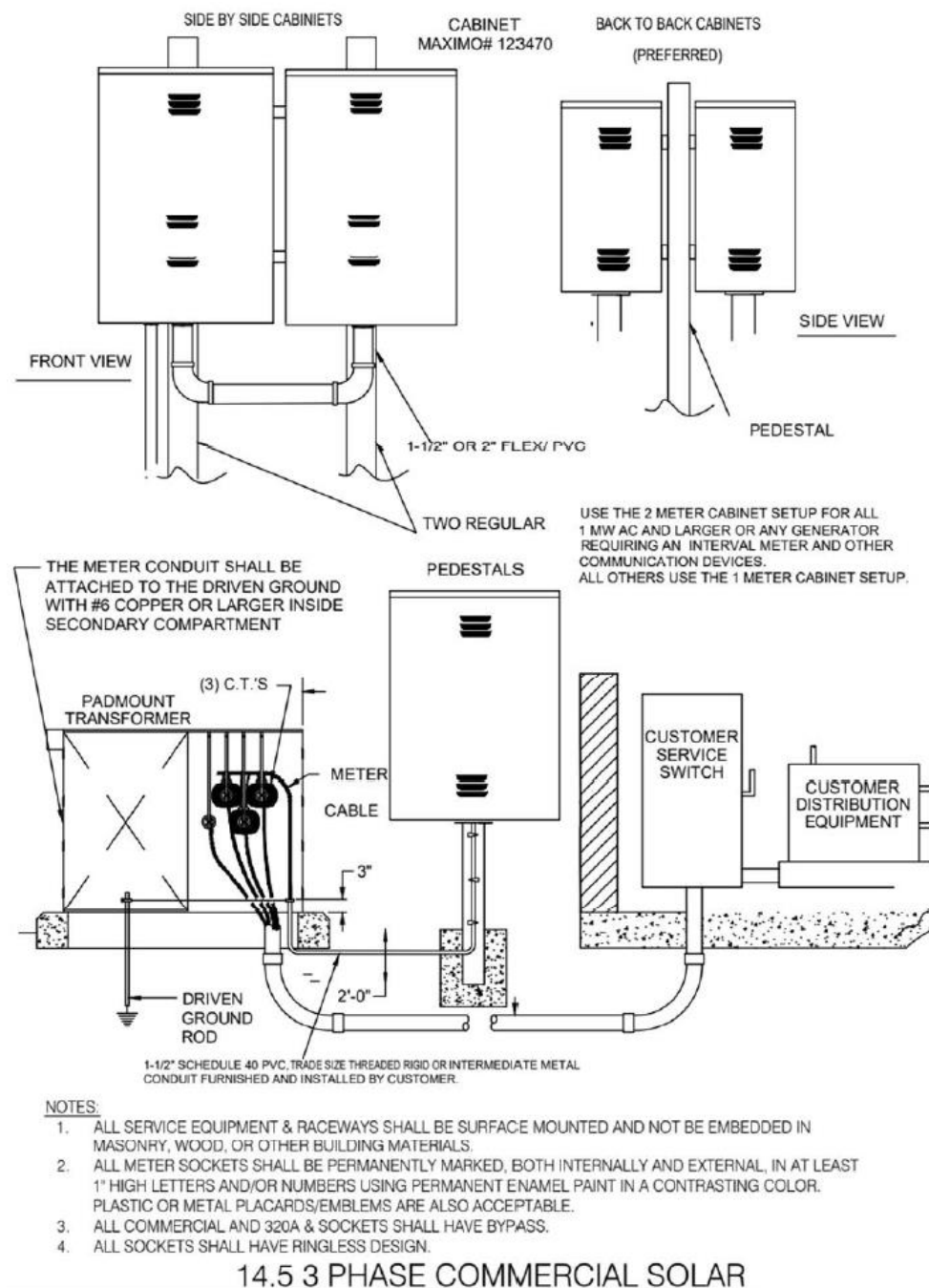
When the owner or lessee of a distributed generation resource (“**Facility**”) seeks to interconnect its Facility with the Georgia Power Company (“**GPC**”) Distribution System, the owner/lessee (“**Generator**”), in addition to entering into a Power Purchase Agreement (“**PPA**”) with GPC, must arrange for interconnection pursuant to an Interconnection Agreement (“**IA**”) between GPC and Generator. In accordance with the IA, GPC, at Generator’s cost, will own and install “**Interconnection Facilities**” for the project, so long as Generator complies with IA terms and conditions, including the requirements outlined in these Guidelines. All obligations of Generator as described in these Guidelines may be performed by Generator’s contractor or other representative, but GPC will look only to Generator, as GPC’s contractual counterparty, for compliance; Generator will be fully responsible for the acts or omissions of any contractor or other representative.

For Generator’s planning purposes, these Guidelines address topics related to physical site and construction requirements, as well as several interconnection and compliance requirements, all of which are spelled out in more detail in the IA or the PPA. This is a **guideline document only**; IA and PPA requirements govern over any conflicting term in these Guidelines.

PART 1. FACILITY DESIGN REQUIREMENTS

- 1.1. **Generator Design Responsibility.** Generator is solely responsible for designing its Facility in accordance with all applicable law and technical requirements, including commercial/industry technical standards (e.g., IEEE, NEMA, NEC, NESC, ANSI, FCC, NFPA, and UL) and GPC technical requirements described in the PPA and IA (including the ***Southern Company Operation of Distributed Energy Resources (DER) in Parallel with the Distribution System Policy*** (publicly available on the GPC Distributed Generation [website](#))). For Generator’s convenience only, GPC highlights below some of the technical requirements that must be considered when planning a Facility for interconnection with GPC’s Distribution System.
- 1.2. **Interconnection Schemes.** Generator’s Facility design must meet one of the interconnection schemes illustrated in **Exhibit A** to these Guidelines.
- 1.3. **Metering Requirements- GPC BlueBook.** Generator must adhere to the latest version of GPC’s ***BlueBook for Electrical Service*** (“**BlueBook**”) (publicly available on the GPC Distributed Generation [website](#)) with respect to metering requirements. It is Generator’s responsibility to work with local (where the Facility is located) GPC metering personnel to pick up Interconnection Facilities metering equipment. For Facilities with a Generator-owned transformer, GPC will install and own the primary meter for the Facility. At Facilities with only one GPC- owned transformer, Generator will be responsible for installing secondary metering equipment. Facilities with multiple GPC-owned transformers will be primary metered, in which case GPC will install and own the metering equipment.

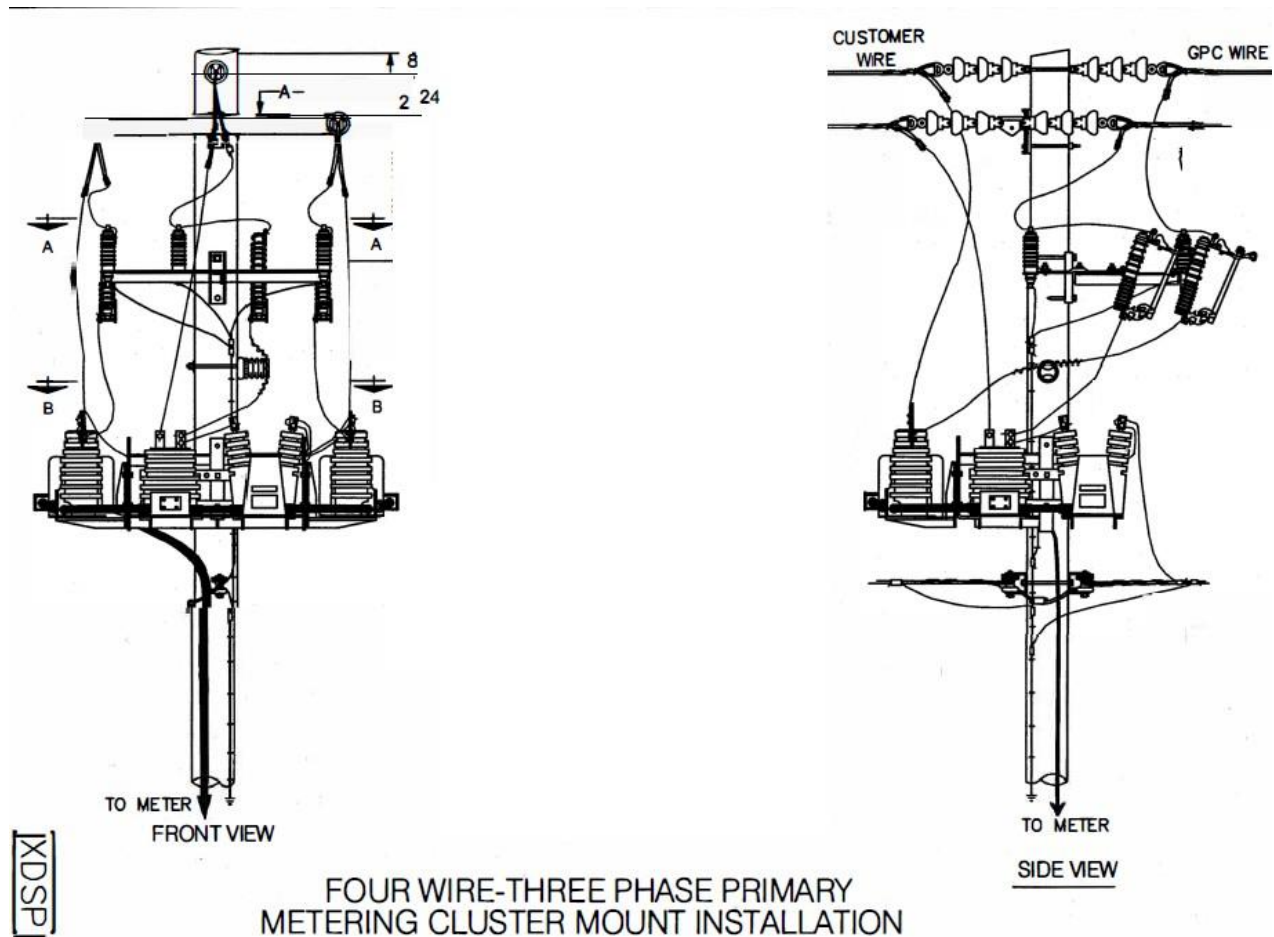
The drawing below highlights the Interconnection Facilities metering requirements, per the BlueBook.



1.4. Secondary Confirmation and Coordination. For a Facility with a GPC-owned transformer, Generator must notify GPC of the number of conductors (per phase) and conductor sizes planned for the secondary side of the transformer. This information will be required at the time of Final Facility Document submission. Generator must limit the number of conductors per phase to twelve (12). Generator must have secondary conduits run and stubbed out at the final transformer location prior to GPC's setting the transformer and pad. Final transformer location will be identified and staked at the project pre-construction site visit. For all projects where GPC owns the transformer, GPC will make the terminations for Generator-owned secondary conductors.

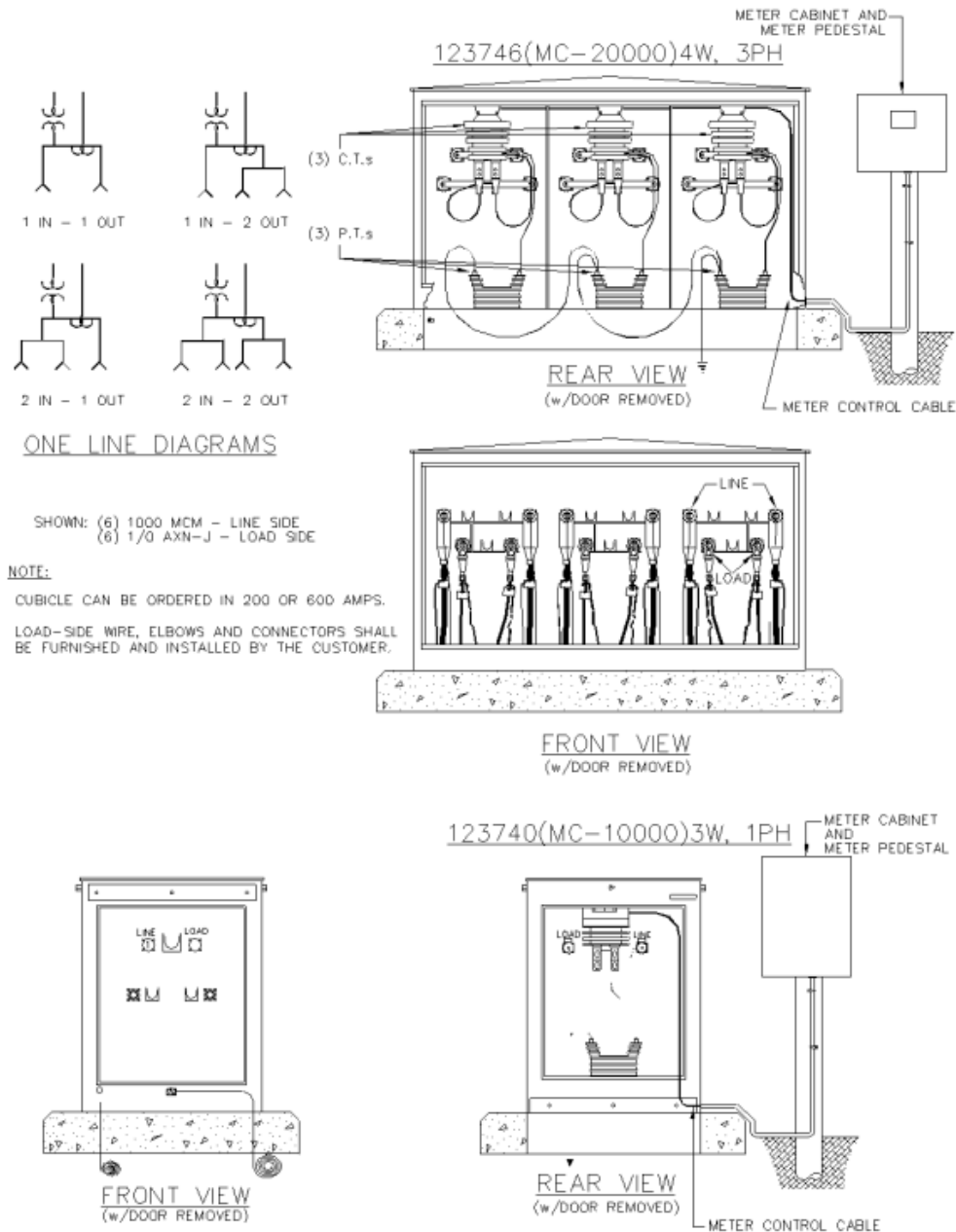
1.5. Overhead Interconnection Requirements for Primary Metered Facilities. Generator must interconnect to GPC primary metered facilities with overhead-to-overhead construction. Generator must install an overhead pole and interconnect via overhead construction to GPC's framing hardware. GPC will not allow Generator-owned underground cable to terminate on a GPC-owned pole.

The drawing below highlights the overhead-to-overhead configuration and change in ownership.



- 1.6. Underground Interconnection Requirements for Primary Metered Facilities.** Generator must interconnect to GPC primary metered facilities with underground-to-underground construction. Generator must install the load side wire, elbows, and connectors in order to interconnect via underground construction to GPC's primary metering cubicle. It is the Generator's responsibility to work with local (where the Facility is located) GPC metering personnel to pick up Interconnection Facilities metering equipment and to install the meter cabinet and pedestal.

The drawing below highlights the Interconnection Facilities metering requirements, per the BlueBook.



PRIMARY METERING CUBICLE

- 1.7. **Pre-Engineering Site Visit.** In coordination with Generator, GPC will schedule a Facility site visit during which GPC and Generator will determine the location of the Interconnection Facilities and the “**Access Route**” between the Change of Ownership location and the Point of Interconnection on the GPC Distribution System that will be available to GPC throughout the term of the IA (collectively, the “**Interconnection Facilities Site**” or “**ICF Site**”). GPC will provide to Generator the pre-engineering site visit notes, indicating the proposed ICF Site design. GPC will then create and provide to Generator the Interconnection Facilities Site Plan (“**ICF Site Plan**”), reflecting the mutually discussed and agreed layout.

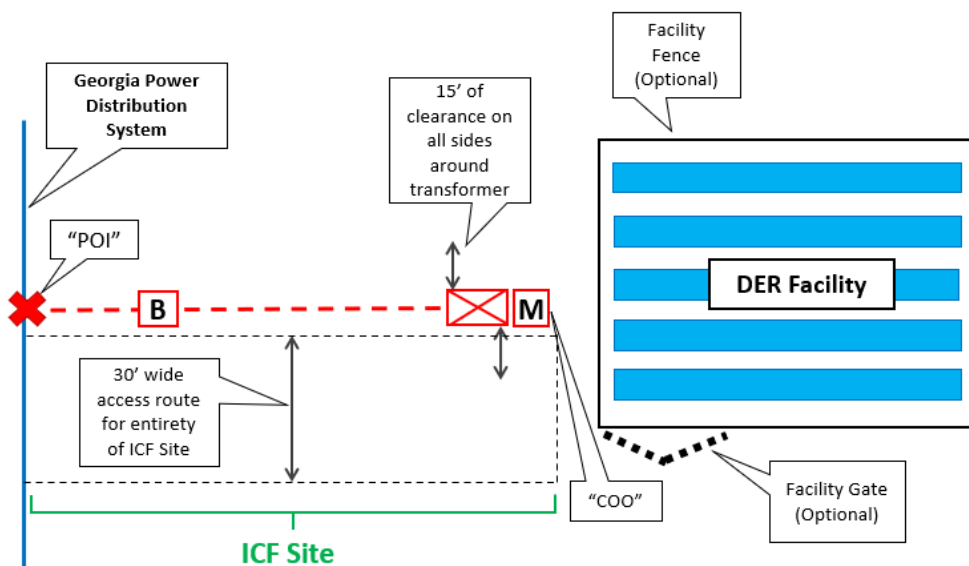
PART 2. INTERCONNECTION FACILITIES

- 2.1. Interconnection Facilities Location.** All of GPC's Interconnection Facilities must be located outside of Generator's, or, if applicable, other property-owner's, fence or outside the edge of the Facility site/parcel. This applies for all Facilities, regardless of whether GPC or Generator owns the transformer. All Interconnection Facilities require a 30-foot clearance (15 feet on each side) for operation and maintenance throughout the IA term. For a Generator owned transformer Facility, the Generator must provide a minimum separation of 50 feet between the Change of Ownership and the Generator disconnecting means.

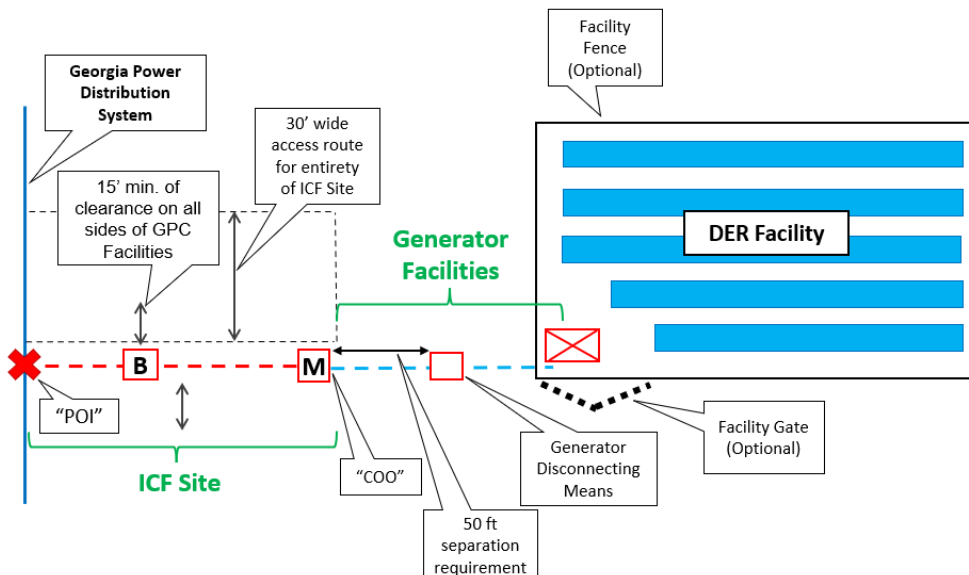
The drawings below highlight Georgia Power's typical interconnection scenarios.

Note: This is provided for illustration purposes only. GPC's Distributed Generation Interconnection Construction Guidelines highlight the requirements all sites must meet for construction and long-term access of the interconnection facilities. The location of GPC's interconnection facilities must be located outside of the Generator's or property owner's facility fence and parcel. GPC reserves the right to refuse to allow its interconnection facilities to be located in any location that is not approved and acceptable in GPC's sole discretion.

Georgia Power Owned Transformer



Generator Owned Transformer



- 2.2. Easements for Interconnection Facilities.** GPC will require an easement for the ICF Site (or easements, if the ICF Site is on more than one parcel), at Generator's cost, before GPC's construction can begin. If GPC cannot secure an easement from a parcel owner, Generator will be responsible for securing the necessary easement. Further details about the easement process can be requested from the assigned GPC Distributed Generation project coordinator.
- 2.3. Interconnection Facilities Site Accessibility and Generator-Prepared Site.** Initial preparation of the ICF Site is the responsibility of Generator. The section below outlines GPC's standard requirements for a suitable site and describes Generator's basic roles and responsibilities in ICF Site preparation. This is a **guideline document only**, addressing the major topics applicable to the typical ICF Site. Because each ICF Site is unique, and there are many technical, site-specific factors, these Guidelines are for general planning purposes only and do not address every situation and every obligation. For further clarification on any particular ICF Site, please contact the assigned GPC Distributed Generation project coordinator.

PART 3. ICF SITE

- 3.1. General Site Preparation Requirements. A suitable graded ICF Site must conform to GPC's requirements, as generally outlined below:**
- A. A suitable all-weather Access Route to the ICF Site is necessary for GPC's construction, operation, and maintenance activities throughout the IA term. The maximum slope (grade) for Access Route roads/driveways is 17%. Access Routes are subject to Georgia Department of Transportation (GDOT) specifications (capable of supporting an HS-20-wheel load and with minimum 6-inch GDOT road base surface). Access Routes (including bridges, if applicable) must accommodate large- capacity hauling trailers, cranes, bucket trucks, and other heavy equipment. Access Route driveways and equipment access corridors into and within the ICF Site require sufficient width (30 ft. minimum) and turning radii (50 ft. minimum) for maneuvering construction vehicles and equipment. A minimum clearance of 16'-5" is needed for any overhead obstruction crossing the Access Route/driveway.
 - B. The Access Route must provide GPC with 24-hour/7-day access to the ICF Site throughout the IA term. The Access Route is integral to the safe operation of the GPC Distribution System.
 - C. The ICF Site, including the entire Access Route, must be located outside of the 100-year floodplain.
 - D. Trees, brush, stumps, roots, topsoil, organic materials, asphalt, foundations, and other debris must be removed within the limits of disturbance ("**LOD**").
 - E. Fill for the entire ICF Site, including Access Route, must be placed to establish a finished grade, which must be within +/- three (3) inches of the final grade, and must be spread in 6-inch layers or less and mechanically compacted to no less than 95% Standard Proctor (American Society for Testing and Materials (ASTM) D698-91 – Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lb/ft)). GPC may request compaction reports.
 - F. Any tree work (including basic tree trimming or complete tree removal) necessary for the ICF Site will be Generator's responsibility.
 - G. The ICF Site, including Access Route, must be prepared for inspection by GPC at least 30 days before GPC schedules Interconnection Facilities construction. If GPC determines ICF Site preparation is deficient, Generator must cure the deficiency promptly and to GPC's satisfaction.
 - H. Any approved deviation or variance from Guidelines requirements will be documented in the Facility's ICF Site Plan.
 - I. All ICF Site preparation work must be in accordance with all applicable laws, including all applicable environmental and erosion control regulations.
 - J. If an Access Route is located within a transmission right-of-way, Generator will need to obtain an encroachment agreement approved by the utility that owns the right-of-way.

- 3.2. Trench Location.** Generator is responsible for providing a clear path, at least 10' wide, (as specified on the ICF Site Plan) for GPC trenching and/or backhoe use. GPC will assess the final trench location with Generator in order to minimize rock blasting, rock removal, and the furnishing of acceptable back-fill dirt free from rock debris. The final trench location will be determined by GPC at the pre-construction site visit. Generator will be solely responsible for performing any necessary ICF Site rock removal. Further, Generator is responsible for all costs of landscaping, back-fill dirt, or any other site enhancement work necessary to provide a suitable ICF Site. Generator must reimburse any GPC costs incurred to remedy Generator's inadequate ICF Site preparation.
- 3.3. Privately-Owned Underground Facilities.** Generator must mark any and all privately-owned underground facilities not covered by the Georgia Utility Facility Protection Act (O.C.G.A. § 25-9-1 et seq.); Generator releases GPC, its employees, and its contractors from any claim due to damage to such underground facilities that have not been marked. Installation of any new Generator-owned underground facilities must be coordinated with GPC to avoid interference with GPC's existing Distribution System or planned Interconnection Facilities.
- 3.4. Utilities Protection Center (UPC).** Generator, in accordance with the Georgia Utility Facility Protection Act (O.C.G.A. § 25-9-1 et seq.), must notify the UPC at GA 811 at least 72 hours before excavating or working within 10 feet of energized power lines. Compliance with the High Voltage Safety Act (O.C.G.A. § 46-3-30 et seq.) is also mandatory. The cost of repair to damaged underground utilities will be borne by the party responsible for the damage. Should there be any damage, potential for damage, or conflict with another installation, Generator must notify GPC.
- 3.5. Erosion, Sedimentation, and Pollution Control Plan.** Generator must notify GPC if the project is subject to EPD Stormwater regulations. Projects with a common plan of development requiring land disturbance activities of more than one acre require Generator (or its contractor) to be the primary permittee. Generator must provide to GPC a copy of the project Erosion, Sedimentation, and Pollution Control Plan, or that portion of the plan related to GPC's work. GPC requires a minimum of three weeks to file a Notice of Intent with EPD to be a Secondary Permittee for the development. GPC will be responsible only for meeting Erosion, Sedimentation and Pollution Control Plan requirements as agreed to by Generator and the authorized GPC employee.
- 3.6. Final Facility Site Plan.** Generator, in accordance with the time frame required by the PPA or IA, must submit a final Facility site plan, to be acknowledged by GPC, as part of the project's Final Facility Documents. The final Facility site plan will include a generic representation of GPC's Interconnection Facilities, in relation to Generator's final Facility Site layout. The final Facility site plan must be submitted in an acceptable format (PDF or DWG) to GPC. GPC requires (at a minimum) three to five business days to review the final Facility site plan, in conjunction with the Final Facility Documents, for GPC comments. The final Facility site plan from Generator should not include detailed information for GPC-owned assets, as GPC will design and install its Interconnection Facilities in adherence to the National Electrical Safety Code (NESC) and all technical requirements.
- 3.7. Pre-Construction Site Visit.** Before GPC schedules its construction, Generator must attend a pre-construction site visit with GPC to discuss the ICF Site, Interconnection Facilities location, Access Route and site accessibility, and the GPC construction schedule. After the pre-construction site visit, Generator will receive pre-construction site visit notes summarizing the meeting and the next steps in the construction process.
- 3.8. ICF Site Plan Changes.** If Generator requests any change to the Interconnection Facilities design as shown in the ICF Site Plan, or if Generator fails to construct its Facility in accordance with the design agreed upon in the ICF Site Plan, such that a change in the Interconnection Facilities design or ICF Site Plan is necessary, GPC planning or construction will stop and a scope change will be initiated pursuant to terms and conditions of the IA. Only after resolution of the scope change, including payment for additional costs, will GPC re-commence project activity.
- 3.9. Final ICF Site Readiness Notification.** If the ICF Site/Access Route preparation was not final at the time of the pre-construction site visit, Generator must notify GPC, in writing, when the ICF Site, including Access

Route, is ready for GPC's construction. For resource scheduling purposes, this notice must be at least 10 business days in advance of GPC's scheduled start of construction.

PART 4. **AUXILIARY SERVICE**

4.1. Auxiliary Service Requirements. Generator must arrange and purchase auxiliary service for the Facility under standard retail rates. This electric service must be purchased from the electric service provider and will be a separate, metered service. Generator is not allowed to "self-serve" its auxiliary equipment, which includes:

- Lighting
- Security systems and equipment
- Electric gates
- Etc.

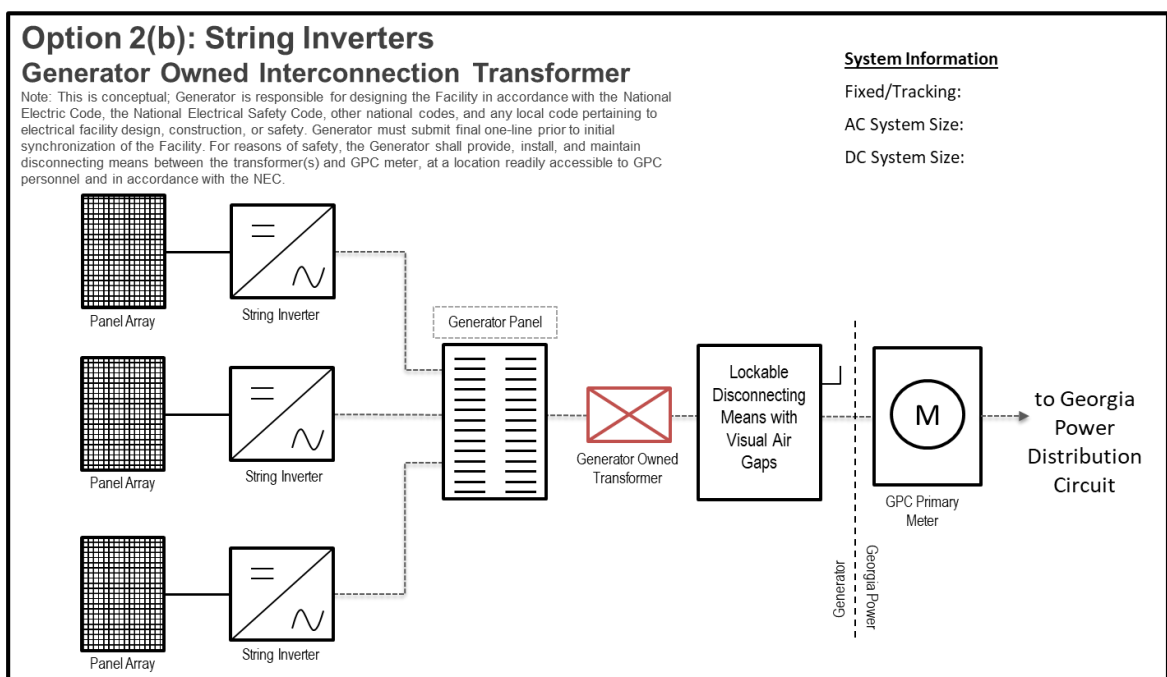
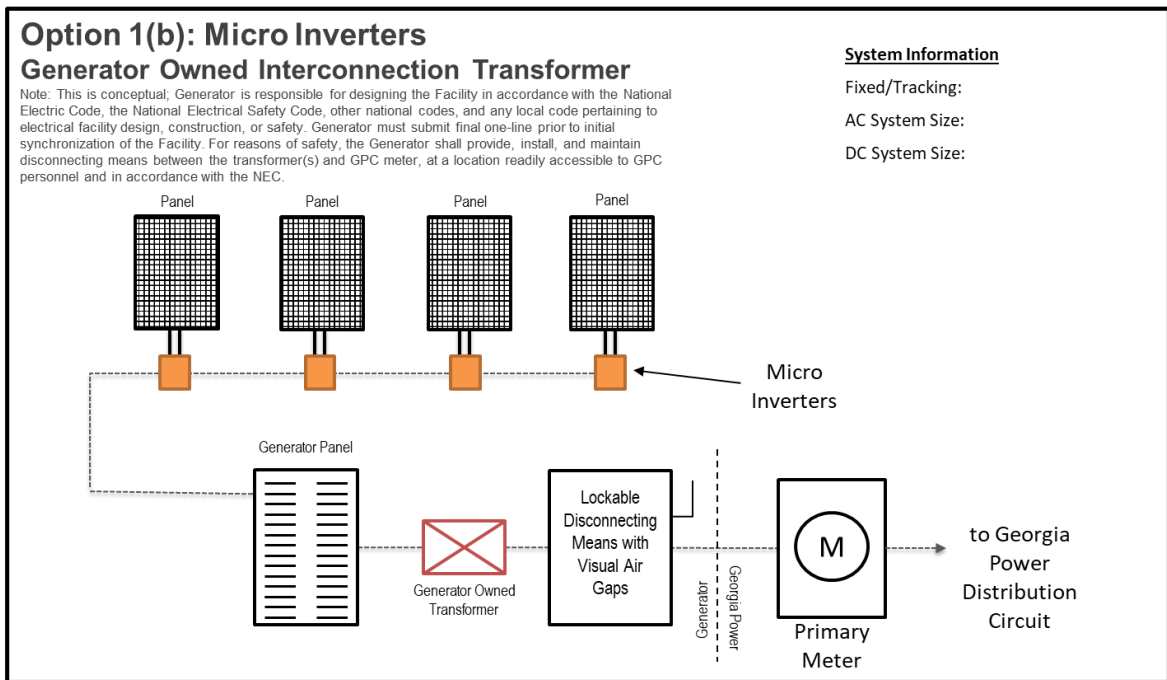
If GPC is the electric service provider for the territory (in accordance with the Georgia Territorial Electric Service Act (O.C.G.A. §§ 46-3-1 – 46-3-15)), a separate estimate and design will be created to serve auxiliary equipment while the Interconnection Facilities costs are being estimated. Generator will be required to install applicable metering service equipment for auxiliary service, per the BlueBook.

Exhibit A

Distributed Generation Interconnection Construction Guidelines

Generator's Facility design must meet one of the following interconnection schemes:

1. Generator-Owned Interconnection Transformer:



Option 3(b): Central Inverter(s) Generator Owned Interconnection Transformer

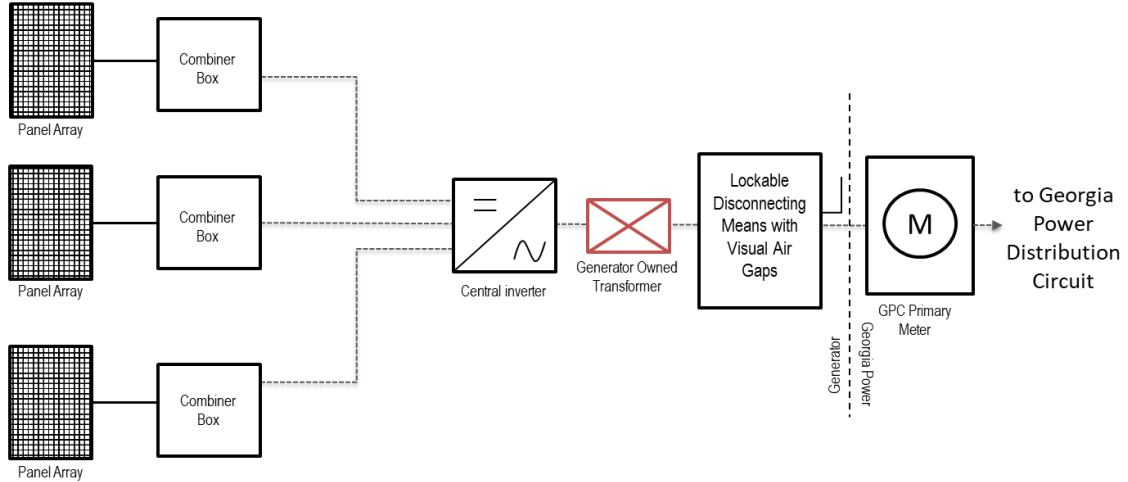
Note: This is conceptual; Generator is responsible for designing the Facility in accordance with the National Electric Code, the National Electrical Safety Code, other national codes, and any local code pertaining to electrical facility design, construction, or safety. Generator must submit final one-line prior to initial synchronization of the Facility. For reasons of safety, the Generator shall provide, install, and maintain disconnecting means between the transformer(s) and GPC meter, at a location readily accessible to GPC personnel and in accordance with the NEC.

System Information

Fixed/Tracking:

AC System Size:

DC System Size:



2. GPC-Owned Interconnection Transformer:

Option 1(a): Micro Inverters

GPC Owned Interconnection Transformer

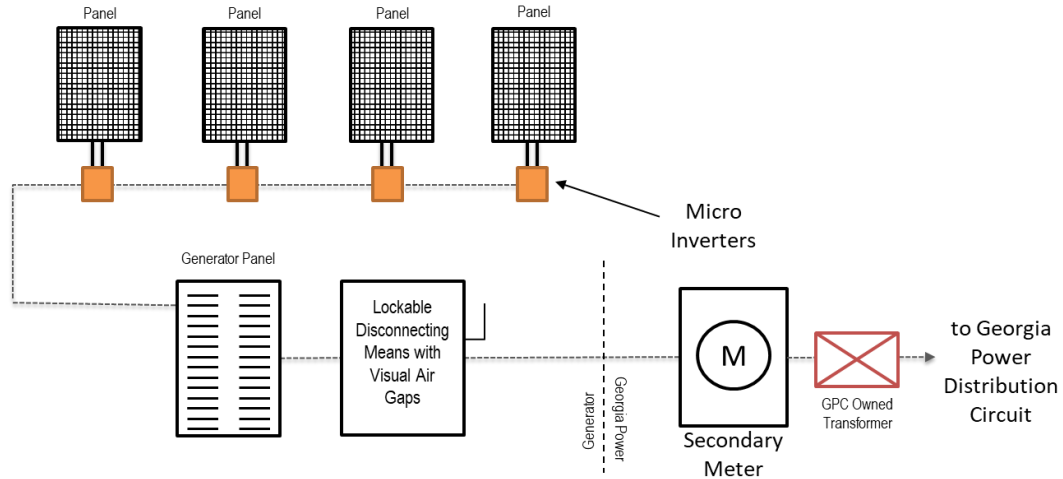
Note: This is conceptual; Generator is responsible for designing the Facility in accordance with the National Electric Code, the National Electrical Safety Code, other national codes, and any local code pertaining to electrical facility design, construction, or safety. Generator must submit final one-line prior to initial synchronization of the Facility. For reasons of safety, the Generator shall provide, install, and maintain disconnecting means between the inverter(s) and GPC meter, at a location readily accessible to GPC personnel and in accordance with the NEC.

System Information

Fixed/Tracking:

AC System Size:

DC System Size:



Option 2(a): String Inverters

GPC Owned Interconnection Transformer

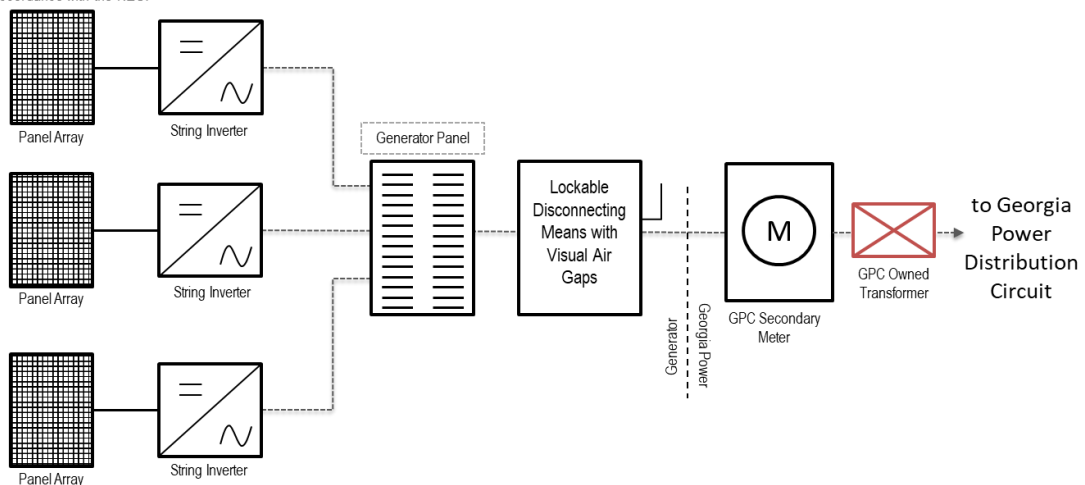
Note: This is conceptual; Generator is responsible for designing the Facility in accordance with the National Electric Code, the National Electrical Safety Code, other national codes, and any local code pertaining to electrical facility design, construction, or safety. Generator must submit final one-line prior to initial synchronization of the Facility. For reasons of safety, the Generator shall provide, install, and maintain disconnecting means between the inverter(s) and GPC meter, at a location readily accessible to GPC personnel and in accordance with the NEC.

System Information

Fixed/Tracking:

AC System Size:

DC System Size:



Option 3(a): Central Inverter(s) GPC Owned Interconnection Transformer

Note: This is conceptual. Generator is responsible for designing the Facility in accordance with the National Electric Code, the National Electrical Safety Code, other national codes, and any local code pertaining to electrical facility design, construction, or safety. Generator must submit final one-line prior to initial synchronization of the Facility. For reasons of safety, the Generator shall provide, install, and maintain disconnecting means between the inverter(s) and GPC meter, at a location readily accessible to GPC personnel and in accordance with the NEC.

System Information

Fixed/Tracking:

AC System Size:

DC System Size:

