

FOR INTERNAL USE ONLY

GI Number:

Queue Date:

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Generation Interconnection Study Datasheet - Photovoltaic Power ONLY

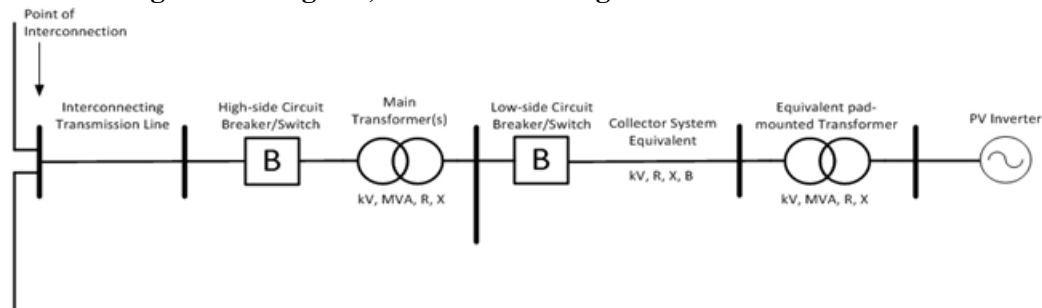
Customers must provide the following information in its entirety. GTC will not proceed with an interconnection study until all data is received and confirmed to be practical. GTC uses PTI standard models to perform power flow and stability analysis. If the information provided conforms to a PTI model, please specify. Study results are dependent on study data provided by the customer. Notification of changes to data should be provided, in writing, as promptly as possible. Any change in the study data will have an impact on the performance of the study and the study results provided.

A) REQUESTOR OF INTERCONNECTION STUDY

Company Name:	Company Phone Number:
Project Name:	
Project Address:	
Contact Name:	Application Date:
Contact Phone Number:	Email:
Datasheet Revision#:	Revision date:

B) DESCRIPTION OF REQUEST

1) i. Type of Request (i.e. ERIS, NRIS, IPP):	, ii. Requested MW:
2) Is this request an alternate to another request made by an ITS Participant?	
<p><i>NOTE: The ITS Participants are Georgia Transmission Corporation, Georgia Power/Southern Company, MEAG Power, and Dalton Utilities. This information is needed to alleviate duplication of analysis of generation requests within the ITS.</i></p> <p>YES <input type="checkbox"/> NO <input type="checkbox"/></p> <p><i>If yes, please indicate location and size in MW/MVA of other request</i></p> <p>Location: _____, Size: _____ MW/_____ MVA</p> <p>When making multiple requests for interconnection, the customer is required to provide a separate datasheet for each request.</p>	
3) Maximum Gross Capacity:	
<p>i. _____ MVA at 104 °F and _____ MVA at 95°F (Gross plant/facility aggregate nameplate rating)</p> <p>ii. Will generation be installed incrementally? YES <input type="checkbox"/> NO <input type="checkbox"/></p> <p>iii. Portion of request which is designated a network resource: _____%</p> <p>iv. Portion of request for interconnection service only: _____%</p>	
4) Location of Interconnection	
<p>i. County: _____</p> <p>ii. Distance of customer plant from ITS point of interconnection: _____ miles</p> <p>iii. Substation or Transmission Line: _____</p> <p>iv. Voltage level requested for interconnection: kV</p>	
5) Key Dates:	
<p>i. Expected In Service Date: _____ ii. Expected Back Feed Date: _____</p> <p>iii. Expected Commercial Operation Date: _____</p>	

C) TECHNICAL DATA
1) Provide a Single Line Diagram, similar to the diagram below

2) Interconnection Transmission Line:

- i. Line voltage = _____ kV
- ii. Line rating at 95⁰F = _____ MVA
- iii. Line rating at 104⁰F = _____ MVA
- iv. Line length = _____ miles
- v. Conductor type:
- vi. R = _____ ohm or _____ p.u on 100 MVA and line kV base (positive sequence)
- vii. X = _____ ohm or _____ p.u on 100 MVA and line kV base (positive sequence)
- viii. B = _____ μ F or _____ p.u on 100 MVA and line kV base (positive sequence)

3) Main Transformer: Note: If there are multiple transformers, data for each transformer should be provided)

- i. Rating (ONAN/ONAF/ONAF): ___/___/___ MVA
- ii. Nominal Voltage for each winding (Low /High /Tertiary): ___/___/___ kV
- iii. Available high side taps: _____ +/- _____, Low side fixed or with LTC? _____
- iv. Positive sequence ZHL: _____%, Zero Sequence Z₀HL: _____%, X/R ratio: _____ on the transformer self-cooled (ONAN) MVA base
- v. Winding Connections (Low/High): _____
- vi. If transformer includes tertiary winding provide the following impedances on the transformer self-cooled (ONAN) MVA base :
 - a. Positive Sequence ZHT (high side-tertiary) : _____%
 - b. Positive sequence ZLT (low side-tertiary) : _____%
 - c. Zero Sequence Z₀HT : _____%
 - d. Zero Sequence Z₀LT : _____%

4) High Side Breaker/Protection Switch:

- i. Rated Maximum Voltage in kV (R.M.S., Line-to-line, 60 Hz Operating Voltage): _____ kV
- ii. Rated Nominal Voltage in kV (R.M.S., Line-to-line, 60 Hz Operating Voltage): _____ kV
- iii. Rated Ampere (Maximum, R.M.S., continuous, 60 Hz rated current): _____ A
- iv. Interrupting Rating: _____ kA
- v. Rated interrupting time: _____cycles
- vi. BIL Rating: _____
- vii. Interrupting and insulating media: _____
- viii. Tripping and closing control voltages: _____
- ix. Breaker Current Transformer accuracy class: _____
- x. Rated Frequency: _____ Hz

5) Collector System Equivalent Model:

- i. Collector system voltage = _____kV and equivalent rating at 95°F = _____MVA and at 104°F = _____MVA
- ii. R = _____ohm or _____ p.u on 100 MVA and collector kV base (positive sequence)
- iii. X = _____ohm or _____ p.u on 100 MVA and collector kV base (positive sequence)
- iv. B = _____ μF or _____p.u on 100 MVA and collector kV base (positive sequence)

6) Inverter Step-Up Transformer: *Note: These are typically two-winding air-cooled transformers. If the proposed project contains different types or sizes of step-up transformers, please provide data for each type.*

- i. Number of transformers:
- ii. Rating: _____ kVA
- iii. Nominal voltage for each winding (Low /High): ___ / ___ kV
- iv. Available high side taps: ___ +/- ___ , Low side fixed or with LTC? _____ High side operating tap: _____
- v. Positive sequence impedance (ZHL): _____%, Zero Sequence (Z₀HL): _____%, X/R ratio: _____ on the transformer self-cooled MVA base
- vi. Winding Connections (Low/High): ___ / ___

7) Inverter and PV Module Data:

- i. Number of Inverters: _____
- ii. Gross Individual Nameplate Rating (each Inverter) at 104 °F: ___ / ___ kW/kVA and 95°F: ___ / ___ kW/kVA
- iii. Describe Nameplate Rating as a function of temperature: _____
- iv. Describe reactive capability: _____
- v. Inverter Manufacturer and Model #: _____
- vi. Please submit PSS/E dynamic data either using PSS/E model(s) or user written dynamic models.
- vii. Please submit the manufacturer specification sheet for the inverters

8) Plant Parasitic/Auxiliary load:

- i. Auxiliary load for total plant: _____ kW, _____kVAr
- ii. How is the auxiliary load served: through GSU, dedicated distribution feed etc. please specify:

9) Plant Controller:

- i. Plant Controller Manufacturer and Model #:
- ii. Please submit PSS/E dynamic data either using PSS/E model(s) or user written dynamic models.

10) Low Side Breaker/Protection Switch:

- i. Rated Maximum Voltage in kV (R.M.S., Line-to-line, 60 Hz Operating Voltage): _____ kV
- ii. Rated Nominal Voltage in kV (R.M.S., Line-to-line, 60 Hz Operating Voltage): _____ kV
- iii. Rated Ampere (Maximum, R.M.S., continuous, 60 Hz rated current): _____ A
- iv. Interrupting Rating: _____ kA
- v. Rated interrupting time: _____ cycles

11) Standards for PV Interconnection to Transmission Power Grid:

Please explicitly list all applicable electric power standards and electric power industry codes that the PV units conform to: _____
