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| **FOR INTERNAL USE ONLY** |
| **Project Number:** |
| **Queue Date:** |

**Generation Interconnection Study Datasheet - Photovoltaic Power ONLY**

Customers must provide the following information in its entirety. (Add Company Name) will not proceed with an interconnection study until all data is received and confirmed to be practical. (Add Company Name) uses power technology incorporated 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 to the cooperative, 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.

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| Application Date: |  |
| Datasheet Revision #: | |
| Revision Date: | |

**REQUESTOR OF INTERCONNECTION STUDY**

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| --- | --- |
| Company Name: | Company Phone Number: |
| Company Address: | |
| Company City/State/Zip Code: | |
| Project Name: | |
| Project Address: | |
| Project City/State/Zip Code: |  |
| Contact Name: |  |
| Contact Title: |  |
| Contact Phone Number: | Email: |

**DESCRIPTION OF REQUEST**

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| 1. **i. Type of Request (i.e. ERIS, NRIS, IPP):** Choose an item.   **ii. Requested MW:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **2) Is this request an alternate to another request?**  *NOTE: This information is needed to alleviate duplication of analysis of generation requests.*  YES \_\_\_\_\_\_\_\_ NO \_\_\_\_\_\_\_\_  *If yes, please indicate location and M/MVA of other request.*  Location: MW/MVA:  *When making multiple requests for interconnection, the customer is required to provide a separate datasheet for each request.* |
| 1. **Maximum Gross Capacity:**    1. MVA at 95°F (Gross plant/facility aggregate nameplate rating)    2. Will generation be installed incrementally? YES \_\_\_\_\_\_\_\_\_ NO \_\_\_\_\_\_\_\_\_    3. Portion of request which is designated a network resource: %    4. Portion of request for interconnection service only: % |
| 1. **Location of Interconnection:**    1. County: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_    2. Substation or Transmission Line: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_    3. If Interconnecting to Transmission Line, indicate distance of Point of Interconnection to either end (substation) of the Transmission line: miles to substation    4. Voltage level requested for interconnection: kV |
| 1. **Key Dates:**    1. Expected In Service Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_    2. Expected Synchronization Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_    3. Expected Commercial Operation Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**TECHNICAL DATA**

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| **1) Provide a Single Line Diagram, similar to the diagram below. Space provided on next page.** |
| **Single Line Diagram of Requestor’s Project: Please draw diagram here or attach file.** |
| 1. **Interconnection Transmission Line:**    1. Line voltage = kV    2. Line rating at 95°F = MVA    3. Line length = miles    4. Conductor wire type, size and temperature (ex 4/0 ACSR at 100°C): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_    5. R = Ohm or p.u on 100 MVA and line kV base (positive sequence)    6. X = Ohm or p.u on 100 MVA and line kV base (positive sequence)    7. B = µF or p.u on 100 MVA and line kV base (positive sequence)    8. R = Ohm or p.u on 100 MVA and line kV base (zero sequence)    9. X = Ohm or p.u on 100 MVA and line kV base (zero sequence)    10. B = µF or p.u on 100 MVA and line kV base (zero sequence) |
| 1. **Main Transformer:** *Note: If there are multiple transformers, data for each transformer should be provided.*    1. Rating (ONAN/ONAF/ONAF): \_\_\_\_\_\_ /\_\_\_\_\_\_/\_\_\_\_\_\_MVA    2. Nominal Voltage for each winding (Low /High): \_\_\_\_\_\_ /\_\_\_\_\_\_\_kV    3. Available high side taps: +/- , Low side fixed or with LTC?    4. Positive sequence ZHL: %, Zero Sequence Z0HL: %, X/R ratio: on MVA base    5. Winding Connections (Low/High): 2. Does the transformer include a tertiary winding? YES \_\_\_\_\_\_ NO \_\_\_\_\_\_\_ 3. If the answer is yes to the question above, provide the following:    1. Nominal Voltage for tertiary winding: \_\_\_\_\_\_\_\_\_kV    2. Positive Sequence ZHT (high side-tertiary): %, X/R ratio: on MVA base    3. Positive sequence ZLT (low side-tertiary): %, X/R ratio: on MVA base    4. Zero Sequence Z0HT: %, X/R ratio: on MVA base    5. Zero Sequence Z0LT: %, X/R ratio: on MVA base |
| 1. **High Side Breaker/Protection Switch:**    1. Rated Maximum Voltage in kV (R.M.S., Line-to-line, 60 Hz Operating Voltage): kV    2. Rated Nominal Voltage in kV (R.M.S., Line-to-line, 60 Hz Operating Voltage): kV    3. Rated Ampere (Maximum, R.M.S., continuous, 60 Hz rated current): A    4. Interrupting Rating: kA |
| 1. **Collector System Equivalent Model:**    1. Collector system voltage = kV and equivalent rating at 95°F = MVA    2. R = Ohm or p.u on 100 MVA and collector kV base (positive sequence)    3. X = Ohm or p.u on 100 MVA and collector kV base (positive sequence)    4. B = µF or p.u on 100 MVA and collector kV base (positive sequence)    5. R = Ohm or p.u on 100 MVA and collector kV base (zero sequence)    6. X = Ohm or p.u on 100 MVA and collector kV base (zero sequence)    7. B = µF or p.u on 100 MVA and collector kV base (zero sequence) |
| 1. **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.*    1. Number of transformers: \_\_\_\_\_\_\_\_\_\_\_\_    2. Rating: kVA    3. Nominal voltage for each winding (Low /High): \_\_\_\_\_\_\_\_ / \_\_\_\_\_\_\_ kV    4. Available high side taps: +/- %, Low side fixed or with LTC? High side operating tap:    5. Positive sequence impedance (ZHL): %, Zero Sequence (Z0HL): %, X/R ratio: on MVA base    6. Winding Connections (Low/High): |
| 1. **Inverter and PV Module Data:**    1. Number of Inverters: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_    2. Gross Individual Nameplate Rating (each Inverter) at 95°F: kVA    3. Describe Nameplate Rating as a function of temperature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_    4. Describe reactive capability: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_    5. Inverter Manufacturer and Model #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_    6. Please attach documentation with PSS/E dynamic data either using PSS/E model(s) or user written dynamic models.    7. Please attach documentation with the manufacturer specification sheet for the inverters. |
| 1. **Plant Parasitic/Auxiliary load:**    1. Auxiliary load for total plant: kW, kVAr    2. How is the auxiliary load served: through GSU, dedicated distribution feed etc.? Please specify: \_\_\_\_\_\_\_\_\_   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 1. **Plant Controller:**    1. Plant Controller Manufacturer and Model #:    2. Please attach documentation with PSS/E (or other) dynamic data either using PSS/E model(s) or user written dynamic models. |
| 1. **Low Side Breaker/Protection Switch:**    1. Rated Maximum Voltage in kV (R.M.S., Line-to-line, 60 Hz Operating Voltage): \_\_\_\_\_\_\_\_\_ kV    2. Rated Nominal Voltage in kV (R.M.S., Line-to-line, 60 Hz Operating Voltage): \_\_\_\_\_\_\_\_\_\_ kV    3. Rated Ampere (Maximum, R.M.S., continuous, 60 Hz rated current): \_\_\_\_\_\_\_\_\_\_\_ A    4. Interrupting Rating: \_\_\_\_\_\_\_\_\_\_\_\_\_ kA    5. Rated interrupting time: \_\_\_\_\_\_\_\_\_\_\_\_\_\_cycles |
| 1. **Plant Reactive Power Compensation:** Provide the following information for plant-level reactive compensation, if applicable:    1. Individual shunt capacitor and size of each: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_MVAr\*    2. Dynamic reactive control device, (SVC, STATCOM): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_    3. Please attach a file with completed PSS/E dynamic and static data for the dynamic reactive control devices.   *(\*) If the generator is not capable of meeting the reactive requirements, static reactive power compensation will be considered on a case by case basis, as an addition to the full range of generator reactive power.* |
| **12) 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:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |