

**SCPSA  
INTERCONNECTION REQUEST APPLICATION FORM**

Utility: Santee Cooper (South Carolina Public Service Authority)

Designated Authority Contact: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Fax: \_\_\_\_\_

An Interconnection Request Application Form is considered complete when it provides all applicable and correct information required below.

**Preamble and Instructions**

An Interconnection Customer who requests an interconnection must submit this Interconnection Request Application Form by hand delivery, mail, e-mail, or fax to Santee Cooper .

Request for: Fast Track Process \_\_\_\_\_ Study Process \_\_\_\_\_  
(All Generating Facilities larger than 2 MW must use the Study Process.)

**Processing Fee or Deposit**

Fast Track Process – Non-Refundable Processing Fees

- If the Generating Facility is 20 kW or smaller, the fee is \$100.
- If the Generating Facility is larger than 20 kW but not larger than 100 kW, the fee is \$250.
- If the Generating Facility is larger than 100 kW but not larger than 2 MW, the fee is \$500.

Study Process – Deposit

If the Interconnection Request is submitted under the Study Process, whether a new submission or an Interconnection Request that did not pass the Fast Track Process, the Interconnection Customer shall submit to the Authority an Interconnection Facilities Deposit Charge of \$10,000 plus \$1 per kW<sub>AC</sub> inclusive of a \$1000 fee to administer the Interconnection Request study process.

Change in Ownership – Non-Refundable Processing Fee

If the Interconnection Request is submitted solely due to a transfer of ownership or change of control of the Generating Facility, the fee is \$50.

**Interconnection Customer Information**

Legal Name of the Interconnection Customer (or, if an individual, individual's name)

Name: \_\_\_\_\_

Contact Name: \_\_\_\_\_

Title: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

County: \_\_\_\_\_

Telephone (Day): \_\_\_\_\_ (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_

Facility Location (if different from above):

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

County: \_\_\_\_\_

Alternative Contact Information/Owner/Lessor (if different from the Interconnection Customer)

Contact Name: \_\_\_\_\_

Title: \_\_\_\_\_

Office of Regulatory Staff Certificate Number (if applicable): \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone (Day): \_\_\_\_\_ (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_

Application is for: \_\_\_\_\_ New Generating Facility

\_\_\_\_\_ Capacity Change to a Proposed or Existing Generating Facility

\_\_\_\_\_ Change of Ownership of a Proposed or Existing  
Generating Facility to a new legal entity

\_\_\_\_\_ Change of Control of a Proposed or Existing  
Generating Facility of the existing legal entity.

If capacity addition to existing Generating Facility, please describe: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Will the Generating Facility be used for any of the following?

Behind-the-meter for a concurrent electric account? Yes \_\_\_\_\_ No \_\_\_\_\_

To Supply Power to the Interconnection Customer? Yes \_\_\_\_\_ No \_\_\_\_\_

To Supply Power to the Authority? Yes \_\_\_\_\_ No \_\_\_\_\_

To Supply Power to Others? Yes \_\_\_\_\_ No \_\_\_\_\_

(If yes, discuss with the Authority whether the interconnection is covered by the SCPSA Interconnection Standard.)

Requested Point of Interconnection: \_\_\_\_\_

Requested In-Service Date: \_\_\_\_\_

For installations at locations with existing electric service to which the proposed Generating Facility will interconnect, provide:

Local Electric Service Provider\*: \_\_\_\_\_

Existing Account Number : \_\_\_\_\_

[\*To be provided by the Interconnection Customer if the local electric service provider is different from the Authority]

Contact Name: \_\_\_\_\_

Title: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone (Day): \_\_\_\_\_ (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_

## Generating Facility Information

Data apply only to the Generating Facility, not the Interconnection Facilities.

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Prime Mover:     Photovoltaic (PV) \_\_\_\_ Fuel Cell \_\_\_\_ Reciprocating Engine \_\_\_\_  
                         Gas Turbine \_\_\_\_ Steam Turbine \_\_\_\_ Micro-turbine \_\_\_\_  
                         Other \_\_\_\_\_

Energy Source:

### Renewable

- Solar – Photovoltaic
- Solar – thermal
- Biomass – landfill gas
- Biomass – manure digester gas
- Biomass – directed biogas
- Biomass – solid waste
- Biomass – sewage digester gas
- Biomass – wood
- Biomass – other (specify below)
- Hydro power – run of river
- Hydro power - storage
- Hydro power – tidal
- Hydro power – wave
- Wind
- Geothermal
- Other (specify below)

### Non-Renewable

- Fossil Fuel - Diesel
- Fossil Fuel - Natural Gas (not waste)
- Fossil Fuel - Oil
- Fossil Fuel – Coal
- Fossil Fuel – Other (specify below)
- Other (specify below)

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Type of Generator: Synchronous \_\_\_\_\_ Induction \_\_\_\_\_ Inverter  
\_\_\_\_\_

Total Generator Nameplate Rating: kW<sub>AC</sub> \_\_\_\_\_ Kw<sub>DC</sub> \_\_\_\_\_ kVAR  
\_\_\_\_\_

Interconnection Customer or Customer-Site Load: \_\_\_\_\_ kWAC (if none, so state)

Interconnection Customer Generator Auxiliary Load: \_\_\_\_\_ kWAC

Typical Reactive Load (if known): \_\_\_\_\_ kVAR

Maximum Physical Export Capability Requested: \_\_\_\_\_ kW<sub>AC</sub>  
(The maximum continuous electrical output of the Generating Facility at any time  
at a power factor of approximately unity as measured at the Point of  
Interconnection and the maximum kW delivered to the Authority during any

metering period.)

List components of the Generating Facility equipment package that are currently certified:

Number	Equipment Type	Certifying Entity
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____

Generator (or solar panel information)

Manufacturer, Model Name, & Quantity: \_\_\_\_\_

Nameplate Output Power Rating in kW<sub>AC</sub>: \_\_\_\_\_ Summer \_\_\_\_\_ Winter

Nameplate Output Power Rating in kVA: \_\_\_\_\_ Summer \_\_\_\_\_ Winter

Individual Generator Rated Power Factor: Leading \_\_\_\_\_ Lagging \_\_\_\_\_

Total Number of Generators in wind farm to be interconnected pursuant to this Interconnection Request (if applicable): \_\_\_\_\_ Elevation: \_\_\_\_\_

Inverter Manufacturer, Model Name, & Quantity (if used): \_\_\_\_\_

Note: The Authority may request a completed Power Systems Load Flow data sheet be supplied as a supplement the Interconnection Request.

For solar projects provide the following information:

Latitude: \_\_\_\_\_ Degrees \_\_\_\_\_ Minutes North

Longitude: \_\_\_\_\_ Degrees \_\_\_\_\_ Minutes West

Orientation: \_\_\_\_\_ Degrees (Due South=180°)

Fixed Tilt Array  Single Axis Tracking Array  Double Axis Tracking Array

Fixed Tilt Angle: \_\_\_\_\_ Degrees

**Impedance Diagram** - If interconnecting to the Authority System at a voltage of

44-kV or greater, provide an Impedance Diagram. An Impedance Diagram may be required by the Authority for proposed interconnections at lower interconnection voltages. The Impedance Diagram shall provide, or be accompanied by a list that shall provide, the collector system impedance of the generation plant. The collector system impedance data shall include equivalent impedances for all components, starting with the inverter transformer(s) up to the utility level Generator Step-Up transformer.

**Load Flow Data Sheet** - If interconnecting to the Authority System at a voltage of 44-kV or greater, provide a completed Power Systems Load Flow data sheet. A Load Flow data sheet may be required by the Authority for proposed interconnections at lower interconnection voltages.

**Excitation and Governor System Data for Synchronous Generators** - If interconnecting to the Authority System at a voltage of 44-kV or greater, provide appropriate IEEE model block diagram of excitation system, governor system and power system stabilizer (PSS) in accordance with the regional reliability council criteria. A PSS may be required at lower interconnection voltages. A copy of the manufacturer's block diagram may not be substituted.

**Generating Facility Characteristic Data (for inverter-based machines)**

Max design fault contribution current: \_\_\_\_\_ Instantaneous \_\_\_\_ or RMS

Harmonics Characteristics: \_\_\_\_\_

Start-up requirements: \_\_\_\_\_

**Inverter Short-Circuit Model Data**

Model and parameter data required for short-circuit analysis is specific to each PV inverter make and model. All data to be provided in per-unit ohms, on the equivalent inverter MVA base.

Values below are valid for initial 2 to 6 cycles:

Inverter Equivalent MVA Base: \_\_\_\_\_ MVA

Short-Circuit Equivalent Pos. Seq. Resistance (R1): \_\_\_\_\_ p.u.

Short-Circuit Equivalent Pos. Seq. Reactance (XL1): \_\_\_\_\_ p.u.

Short-Circuit Equivalent Zero. Seq. Resistance (R2) cycles: \_\_\_\_\_ p.u.

Short-Circuit Equivalent Neg. Seq. Reactance (XL2), valid for initial 2 to 6 cycles:  
\_\_\_\_\_ p.u.

Special notes regarding short-circuit modeling assumptions:

\_\_\_\_\_  
\_\_\_\_\_

**Generating Facility Characteristic Data (for rotating machines)**

RPM Frequency: \_\_\_\_\_

(\*) Neutral Grounding Resistor (if applicable): \_\_\_\_\_

**Synchronous Generators:**

Direct Axis Synchronous Reactance, Xd: \_\_\_\_\_ P.U.

Direct Axis Transient Reactance, X<sub>d</sub>: \_\_\_\_\_ P.U.

Direct Axis Subtransient Reactance, X<sub>d</sub>: \_\_\_\_\_ P.U.

Negative Sequence Reactance, X<sub>2</sub>: \_\_\_\_\_ P.U.

Zero Sequence Reactance, X<sub>0</sub>: \_\_\_\_\_ P.U.

KVA Base: \_\_\_\_\_

Field Volts: \_\_\_\_\_

Field Amperes: \_\_\_\_\_

**Induction Generators:**

Motoring Power (kW): \_\_\_\_\_  
I<sub>2</sub><sup>2</sup>t or K (Heating Time Constant): \_\_\_\_\_  
Rotor Resistance, Rr: \_\_\_\_\_  
Stator Resistance, Rs: \_\_\_\_\_  
Stator Reactance, Xs: \_\_\_\_\_  
Rotor Reactance, Xr: \_\_\_\_\_  
Magnetizing Reactance, Xm: \_\_\_\_\_  
Short Circuit Reactance, Xd: \_\_\_\_\_  
Exciting Current: \_\_\_\_\_  
Temperature Rise: \_\_\_\_\_  
Frame Size: \_\_\_\_\_  
Design Letter: \_\_\_\_\_  
Reactive Power Required In Vars (No Load): \_\_\_\_\_  
Reactive Power Required In Vars (Full Load): \_\_\_\_\_  
Total Rotating Inertia, H: \_\_\_\_\_ Per Unit on kVA Base

Note: Please contact the Authority prior to submitting the Interconnection Request to determine if the specified information above is required.

**Interconnection Facilities Information**

Will more than one transformer be used between the generator and the point of common coupling?

Yes \_\_\_ No \_\_\_ (If yes, copy this section and provide the information for each transformer used. This information must match the single-line drawing and transformer specification sheets.)

Will the transformer be provided by the Interconnection Customer? Yes \_\_\_ No \_\_\_

**Transformer Data (if applicable, for Interconnection Customer-owned transformer):**

Is the transformer: Single phase \_\_\_ Three phase \_\_\_ Size: \_\_\_\_\_ kVA

Transformer Impedance: \_\_\_\_\_ % on \_\_\_\_\_ kVA Base

If Three Phase:

Transformer Primary Winding \_\_\_\_\_ Volts,

Delta  WYE, grounded neutral  WYE, ungrounded neutral

Primary Wiring Connection

3-wire  4-wire, grounded neutral

Transformer Secondary Winding \_\_\_\_\_ Volts,

Delta  WYE, grounded neutral  WYE, ungrounded neutral

Secondary Wiring Connection

3-wire  4-wire, grounded neutral

Transformer Tertiary Winding \_\_\_\_\_ Volts,

Delta  WYE, grounded neutral  WYE, ungrounded neutral

**Transformer Fuse Data (if applicable, for Interconnection Customer-owned fuse):**

(Attach copy of fuse manufacturer's Minimum Melt and Total Clearing Time-Current Curves)

Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Size: \_\_\_\_\_ Speed: \_\_\_

**Interconnecting Circuit Breaker (if applicable):**

Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_

Load Rating (Amps): \_\_\_\_\_ Interrupting Rating (Amps): \_\_\_\_\_ Trip Speed (Cycles): \_\_\_\_\_

**Interconnection Protective Relays (if applicable):**

**If Microprocessor-Controlled:**

List of Functions and Adjustable Setpoints for the protective equipment or software:

	Setpoint Function	Minimum	Maximum
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____

**If Discrete Components:**

(Enclose Copy of any Proposed Time-Overcurrent Coordination Curves)

Manufacturer Type: Style/Catalog No. Proposed Setting

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

**Current Transformer Data (if applicable):**

(Enclose Copy of Manufacturer's Excitation and Ratio Correction Curves)

Manufacturer: \_\_\_\_\_

Type: \_\_\_\_\_ Accuracy Class: \_\_\_\_\_ Proposed Ratio  
Connection: \_\_\_\_\_

Manufacturer: \_\_\_\_\_

Type: \_\_\_\_\_ Accuracy Class: \_\_\_\_\_ Proposed Ratio  
Connection: \_\_\_\_\_

**Potential Transformer Data (if applicable):**

Manufacturer: \_\_\_\_\_

Type: \_\_\_\_\_ Accuracy Class: \_\_\_\_\_ Proposed Ratio  
Connection: \_\_\_\_\_

Manufacturer: \_\_\_\_\_

Type: \_\_\_\_\_ Accuracy Class: \_\_\_\_\_ Proposed Ratio  
Connection: \_\_\_\_\_

### **General Information**

#### 1. One-line diagram

Enclose site electrical one-line diagram showing the configuration of all Generating Facility equipment, current and potential circuits, and protection and control schemes.

- The one-line diagram should include the project owner's name, project name, project address, model numbers and nameplate sizes of equipment, including number and nameplate electrical size information for solar panels, inverters, wind turbines, disconnect switches, latitude and longitude of the project location, and tilt angle and orientation of the photovoltaic array for solar projects.
- The diagram should also depict the metering arrangement required whether installed on the customer side of an existing meter ("behind-the-meter") or directly connected to the grid through a new or separate delivery point requiring a separate meter.
- List of adjustable set points for the protective equipment or software should be included on the electrical one-line drawing.
- This one-line diagram must be signed and stamped by a licensed Professional Engineer if the Generating Facility is larger than 50 kW.
- Is One-Line Diagram Enclosed? Yes \_\_\_ No \_\_\_

#### 2. Site Plan

- Enclose copy of any site documentation that indicates the precise physical location of the proposed Generating Facility (e.g., Latitude and Longitude Coordinates and USGS topographic map, or other diagram or documentation) and the proposed Point of Interconnection.
- Proposed location of protective interface equipment on property (include address if different from the Interconnection Customer's address) \_\_\_\_\_

Is Site Plan Enclosed? Yes \_\_\_ No \_\_\_

Is Site Control Verification Form Enclosed? Yes \_\_\_ No \_\_\_

#### 3. Equipment Specifications

Include equipment specification information (product literature) for the solar panels and inverter(s) that provides technical information and certification information for the equipment to be installed with the application.

Are Equipment Specifications Enclosed? Yes \_\_\_ No \_\_\_

#### 4. Protection and Control Schemes

Enclose copy of any site documentation that describes and details the operation of the protection and control schemes.

Is Available Documentation Enclosed? Yes \_\_\_ No \_\_\_

- Enclose copies of schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits (if applicable).
- Are Schematic Drawings Enclosed? Yes \_\_\_ No \_\_\_

**Applicant Signature**

I hereby certify that, to the best of my knowledge, all the information provided in this Interconnection Request Application Form is true and correct.

For Interconnection Customer:

Signature \_\_\_\_\_ Date: \_\_\_\_\_  
(Authorized Agent of the Legal Entity)

Print Name \_\_\_\_\_