

**DISTRIBUTION SYSTEM GENERATOR INTERCONNECTION REQUEST  
(Application Form)**

**Transmission Owner**

**Southern Illinois Power Cooperative**

Designated Contact Person: Attn: Systems Department Manager  
Address: 11543 Lake of Egypt Rd.  
Marion, IL 62959  
Telephone Number: (618) 964-1448

An Interconnection Request 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 by hand delivery, mail, e-mail, or fax to the Transmission Owner.

**Processing Fee or Deposit**

The Interconnection Customer shall submit to the Transmission Owner a deposit of One Thousand Dollars (\$1,000) towards the cost of the feasibility study.

**Interconnection Customer Information**

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

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

Contact Person: \_\_\_\_\_

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

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

Facility Location (if different from above): \_\_\_\_\_

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

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

Alternative Contact Information (if different from the Interconnection Customer)

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

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

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

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

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

Application is for:    \_\_\_\_\_ New Small Generating Facility  
                          \_\_\_\_\_ Capacity addition to Existing Small Generating Facility

If capacity addition to existing facility, please describe (including a description of the existing net capability):

\_\_\_\_\_

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

Net Metering? Yes \_\_\_ No \_\_\_

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

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

For installations at locations with existing electric service to which the proposed Small 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 Transmission Owner]

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

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

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

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

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

Requested Point of Interconnection:

\_\_\_\_\_

Interconnection Customer's Requested In-Service Date: \_\_\_\_\_

**Small Generating Facility Information**

Data applies only to the Small Generating Facility, not the Interconnection Facilities.

Energy Source:  Solar  Wind  Hydro  Hydro Type (e.g. Run-of-River): \_\_\_\_\_  
Diesel  Natural Gas  Fuel Oil  Other (state type) \_\_\_\_\_

Prime Mover:  Fuel Cell  Recip Engine  Gas Turb  Steam Turb  
 Microturbine  PV  Other

Type of Generator:  Synchronous  Induction  Inverter

Generator Nameplate Rating: \_\_\_\_\_ kW (Typical) Generator Nameplate kVAR: \_\_\_\_\_

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

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

Maximum Physical Export Capability Requested: \_\_\_\_\_ kW

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

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

Is the prime mover compatible with the certified protective relay package?  Yes  No

Generator (or solar collector)

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

Version Number: \_\_\_\_\_

Nameplate Output Power Rating in kW: (Summer) \_\_\_\_\_ (Winter) \_\_\_\_\_

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

Net Output Power Rating in kW: (Summer) \_\_\_\_\_ (Winter) \_\_\_\_\_

Net Output Power Rating in kVA: (Summer) \_\_\_\_\_ (Winter) \_\_\_\_\_

Individual Generator Power Factor

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

Total Number of Generators to be interconnected pursuant to this Interconnection Request: \_\_\_\_\_ Elevation: \_\_\_\_\_ Single phase \_\_\_\_\_ Three phase

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

List of adjustable set points for the protective equipment or software: \_\_\_\_\_

Note: A completed Power Systems Load Flow data sheet must be supplied with the Interconnection Request.

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

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

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

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

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

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

(\*) Neutral Grounding Resistor (If Applicable): \_\_\_\_\_

Synchronous Generators:

Direct Axis Synchronous Reactance,  $X_d$ : \_\_\_\_\_ P.U.

Direct Axis Transient Reactance,  $X'_d$ : \_\_\_\_\_ P.U.

Direct Axis Subtransient Reactance,  $X''_d$ : \_\_\_\_\_ P.U.

Negative Sequence Reactance,  $X_2$ : \_\_\_\_\_ P.U.

Zero Sequence Reactance,  $X_0$ : \_\_\_\_\_ P.U.

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

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

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

Induction Generators:

Motoring Power (kW): \_\_\_\_\_

$I_2^2$  t or K (Heating Time Constant): \_\_\_\_\_

Rotor Resistance,  $R_r$ : \_\_\_\_\_

Stator Resistance,  $R_s$ : \_\_\_\_\_

Stator Reactance,  $X_s$ : \_\_\_\_\_

Rotor Reactance,  $X_r$ : \_\_\_\_\_

Magnetizing Reactance,  $X_m$ : \_\_\_\_\_

Short Circuit Reactance,  $X_d''$ : \_\_\_\_\_

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 Transmission Owner prior to submitting the Interconnection Request to determine if the specified information above is required.

**Excitation and Governor System Data for Synchronous Generators Only**

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 determined to be required by applicable studies. A copy of the manufacturer's block diagram may not be substituted.

**Interconnection Facilities Information**

Will a transformer be used between the generator and the point of common coupling?  
\_\_\_ Yes \_\_\_ No

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: \_\_\_\_\_ Volts \_\_\_ Delta \_\_\_ Wye \_\_\_ Wye Grounded  
Transformer Secondary: \_\_\_\_\_ Volts \_\_\_ Delta \_\_\_ Wye \_\_\_ Wye Grounded  
Transformer Tertiary: \_\_\_\_\_ Volts \_\_\_ Delta \_\_\_ Wye \_\_\_ Wye Grounded

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: \_\_\_\_\_  
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 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**

Enclose copy of site electrical one-line diagram showing the configuration of all Small Generating Facility equipment, current and potential circuits, and protection and control schemes. This one-line diagram must be signed and stamped by a licensed Professional Engineer if the Small Generating Facility is larger than 50 kW.

Is One-Line Diagram Enclosed? \_\_\_ Yes \_\_\_ No

Enclose copy of any site documentation that indicates the precise physical location of the proposed Small Generating Facility (e.g., USGS topographic map or other diagram or documentation).

Proposed location of protective interface equipment on property (include address if different from the Interconnection Customer's address)

\_\_\_\_\_

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

Interconnection Customer has attached site control documents that meet the requirements of Section 1.5 of the Small Generator Interconnection Procedures?  Yes  No

**Applicant Signature**

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

Interconnection Customer: \_\_\_\_\_ Date: \_\_\_\_\_