

# Southern Illinois Power Cooperative Generation Interconnection Application

For generation  $\geq 40$  kW and  $\leq 5$  MW connecting to  $\leq 12.5$  kV

Transmission Owner: Southern Illinois Power Cooperative (SIPC)  
Designated Contact Person: Attn: Vice President Power Delivery  
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 as well as the application fee discussed below.

## Preamble and Instructions

An Interconnection Customer who requests an interconnection must submit this Interconnection Request by hand delivery, mail, or e-mail to the Transmission Owner.

## Processing Fee or Deposit

The Interconnection Customer shall submit to the Transmission Owner a non-refundable deposit of Five Thousand Dollars (\$5,000) for sites  $\leq 5$  MW. The entire application fee will be applied towards the engineering studies and interconnection equipment if a Small Generator Interconnection Agreement is fully executed.

## Interconnection Customer Information

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

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

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

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

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

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

Telephone (Primary): \_\_\_\_\_ Telephone (Alternate): \_\_\_\_\_

email: \_\_\_\_\_

Alternative Contact Information (if different from the Interconnection Customer)

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

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

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

Telephone (Primary): \_\_\_\_\_ Telephone (Alternate): \_\_\_\_\_

email: \_\_\_\_\_

Application is for:     \_\_\_\_\_ New Generating Facility (40 – 5,000 kW)  
                                  \_\_\_\_\_ Capacity addition to Existing Generating Facility

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

\_\_\_\_\_

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

MISO Market Participant? Yes \_\_\_ No \_\_\_

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

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

Point of Interconnection (GPS Coordinates): \_\_\_\_\_

\_\_\_\_\_

Interconnection Customer's 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 Transmission Owner*

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

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

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

Telephone (Primary): \_\_\_\_\_ Telephone (Alternate): \_\_\_\_\_

email: \_\_\_\_\_

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**Generating Facility Information**

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

Generator Nameplate AC Rating: \_\_\_\_\_ kW

Generator Nameplate kVAR: \_\_\_\_\_ (leading/lagging)

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

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

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

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

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

Type: (Solar, Wind, Storage, Hydro, Biomass, etc.):

Inverter manufacturer and model: \_\_\_\_\_

AC and DC Nameplate Rating kW: \_\_\_\_\_

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

Harmonics Contribution: \_\_\_\_\_

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

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

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 the engineering studies. A copy of the manufacturer's block diagram may not be substituted.

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### **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):

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. _____	_____	_____

If Discrete Components:

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

Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Style/Catalog No.: \_\_\_\_\_

Proposed Setting: \_\_\_\_\_

Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Style/Catalog No.: \_\_\_\_\_

Proposed Setting: \_\_\_\_\_

Current Transformer Data (If Applicable):

Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Accuracy Class: \_\_\_\_\_

Proposed Ratio Connection: \_\_\_\_\_

Potential Transformer Data (If Applicable):

Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Accuracy Class: \_\_\_\_\_

Proposed Ratio Connection: \_\_\_\_\_

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**General Information to include with application:**

One-Line Diagram  Yes  No

Site Plan with .KMZ if available  Yes  No

System Protection and Control Scheme Documentation  Yes  No

Relay, Alarm, Control Schematics  Yes  No

Completed Power Systems Load Flow data sheet  Yes  No

List of adjustable set points for protective equipment or software  Yes  No

Transformer Fuse Manufacturer's TCC Curves  Yes  No

CT Manufacturer's Excitation and Ratio Correction Curves  Yes  No

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