

SMALL GENERATOR INTERCONNECTION REQUEST
(Application Form for Units Rated from 501 kW – 20,000 kW)

Transmission Provider:

Designated Contact Person: _____

Address: _____

Telephone Number: _____

Fax: _____

E-Mail Address: _____

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

Preamble and Instructions

An Interconnection Customer who requests a MidAmerican interconnection must submit this Interconnection Request by hand delivery, mail, e-mail, or fax to the Transmission Provider.

Processing Fee or Deposit:

If the Interconnection Request is submitted under the Fast Track Process, meaning an aggregated combined nameplate capacity of 501 – 20,000 kW, whether a new submission or an existing Interconnection Request, the Interconnection Customer shall submit to the Transmission Provider a deposit not to exceed \$500 towards the cost of the feasibility study. If the Interconnection Request is submitted under the Normal 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 Transmission Provider a deposit not to exceed \$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: _____

SMALL GENERATOR INTERCONNECTION REQUEST
(Application Form for Units Rated from 501 kW – 20,000 kW) - continued

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 apply 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. _____	_____

SMALL GENERATOR INTERCONNECTION REQUEST
(Application Form for Units Rated from 501 kW – 20,000 kW) - continued

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)

Individual Generator Power Factor

Rated Power Factor: Leading: _____ Lagging: _____

Total Number of Generators in wind farm 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): _____

SMALL GENERATOR INTERCONNECTION REQUEST
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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_2^2t 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 Provider 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

SMALL GENERATOR INTERCONNECTION REQUEST
(Application Form for Units Rated from 501 kW – 20,000 kW) - continued

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 Set points for the protective equipment or software:

Set point Function	Minimum	
Maximum		
1. _____	_____	_____
2. _____	_____	_____

SMALL GENERATOR INTERCONNECTION REQUEST
(Application Form for Units Rated from 501 kW – 20,000 kW) - continued

- 3. _____
- 4. _____
- 5. _____
- 6. _____

If Discrete Components:

(Enclose Copy of any Proposed Time-Over-current 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: _____

SMALL GENERATOR INTERCONNECTION REQUEST
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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 501 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

Applicant Signature

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

For Interconnection Customer: _____

Date: _____

Please mail completed application to:

Jeff Hart
106 E. 2nd Street
Davenport, IA 52801