

LEVELS 2-4
INTERCONNECTION REQUEST APPLICATION FORM
(For Distributed Generation Facilities 10 MVA or Less)

INSTRUCTIONS:

1. *Indicates required information.
2. Mail completed form with application fee (see page 2) to your utility

| INTERCONNECTION CUSTOMER CONTACT INFORMATION | | | | | | | |
|--|--|---|---------------------------------|-------------------------|---|-------------|--|
| *Owner/Company (Legal Entity Name) | | | | *Contact Name | | | |
| *Mailing Address | | | *City | | *State | *Zip | |
| *Phone No. (Daytime) | Phone No. (Evening) | Facsimile No. | | *Email Address | | | |
| ALTERNATE CONTACT INFORMATION (if different from Customer Contact Information) | | | | | | | |
| Owner / Company (Legal Entity Name) | | | | Contact Name | | | |
| Mailing Address | | | City | | State | Zip | |
| Phone No. (Daytime) | Phone No. (Evening) | Facsimile No. | | Email Address | | | |
| FACILITY LOCATION (if different from Customer Contact Information) | | | | | | | |
| *Facility Address or Latitude and Longitude | | | *City | | *State | *Zip | |
| *Utility Serving Facility Site | | Account No. of Facility Site (existing utility customers) | | | *Meter No. (existing utility customers) | | |
| EQUIPMENT CONTRACTOR | | | | | | | |
| *Name | | | | *Contact Name | | | |
| *Mailing Address | | | *City | | *State | *Zip | |
| *Phone No. (Daytime) | Phone No. (Evening) | Facsimile No. | | *Email Address | | | |
| ELECTRICAL CONTRACTOR (if different from Equipment Contractor) | | | | | | | |
| Name | | | | Contact Name | | | |
| Mailing Address | | | City | | State | Zip | |
| Phone No. (Daytime) | Phone No. (Evening) | Facsimile No. | | *Email Address | | | |
| License No. (if applicable) | | | Active License? (if applicable) | | | | |
| | | | YES | | NO | | |
| ELECTRIC SERVICE INFORMATION FOR CUSTOMER FACILITY WHERE GENERATOR WILL BE INTERCONNECTED | | | | | | | |
| *Existing Capacity (Service Entrance) (Amps) | *Proposed Capacity (Service Entrance) (Amps) | Voltage (Volts) | *Type of Service | | Single Phase | Three Phase | |
| | | | Breaker - Existing Panel | Line Side Tap with Fuse | Inside Sealed Enclosure | | |
| If 3 Phase Transformer, indicate type: | | | | | Transformer Size | Impedance | |
| Primary Winding | Wye | Delta | Secondary Winding | Wye | Delta | | |
| *Does this application require a group interconnection study? | | | | YES | | NO | |
| *Is this project an expansion of a current distributed generation facility? | | | | YES | | NO | |

APPLICANT OWNERSHIP INTEREST (check one)

Owner Lease 3rd Party PPA Tenant Other (Please explain)

***INTENT OF GENERATION (check one)**

Offset Load (Unit will operate in parallel and may export without net metering or without selling excess power and energy pursuant to Iowa Utilities Commission rule 199 IAC 15.5 and the utility's tariff).

Net Metering (Unit will operate in parallel and will export power to utility pursuant to Iowa Utilities Commission rule 199 IAC 15.11(5) and the utility's net metering, net billing, or inflow/outflow tariff).

Self-Use and Sales to the Utility (Unit will operate in parallel and may export and sell excess power to utility pursuant to Iowa Utilities Commission rule 199 IAC 15.5 and the utility's tariff).

Wholesale Market Transaction (Unit will operate in parallel and participate in MISO (Midwest Independent System Operators) or other wholesale power markets pursuant to separate requirements and agreements with MISO or other transmission providers, and applicable rules of the Federal Energy Regulatory Commission).

Back-Up Generation (Units that temporarily operate in parallel with the electric distribution system for more than 100 milliseconds. Units that temporarily operate in parallel with the electric distribution system for 100 milliseconds or less are outside the scope of Chapter 45 Interconnection. Contact the utility for applicable interconnection procedures).

NOTE: Back-up units that do not operate in parallel for more than 100 milliseconds do not need an interconnection agreement.

***REQUESTED PROCEDURE UNDER WHICH TO EVALUATE INTERCONNECTION REQUEST (check one)**

Please indicate below which review procedure applies to the interconnection request. The review procedure used is subject to confirmation by the utility.

Level 2 - Lab-certified interconnection equipment with an aggregate electric nameplate capacity less than or equal to 2 MVA for non-inverter-based systems or inverter-based systems as defined in 199 IAC 45.8(2)(b). Lab-certified is defined in Iowa Utilities Commission chapter 45 rules on Electric Interconnection of Distributed Generation Facilities (199 IAC 45.1). (Application fee is \$250 plus \$1.00 per kVA. If the utility performs a Witness Test as specified in 199 IAC 45.5(10), the utility may charge the interconnected customer an additional cost-based fee of no more than \$125.)

Level 3 - Distributed generation facility does not export power. Nameplate capacity rating is less than or equal to 50 kVA if connecting to area network or less than or equal to 10 MVA if connecting to a radial distribution feeder. (Application fee amount is \$500 plus \$2.00 per kVA)

Level 4 - Nameplate capacity rating is less than or equal to 10 MVA and the distributed generation facility does not qualify for a Level 1, Level 2, or Level 3 review, or the distributed generation facility has been reviewed but not approved under a Level 1, Level 2, or Level 3 review. (Application fee amount is \$1,000 plus \$2.00 per kVA, to be applied toward any subsequent studies related to this application.)

NOTE: Descriptions for interconnection review categories do not list all criteria that must be satisfied. For a complete list of criteria, please refer to Iowa Utilities Commission chapter 45 rules on Electric Interconnection of Distributed Generation Facilities (199 IAC 45).

***DISTRIBUTED GENERATION FACILITY INFORMATION**

Commissioning Test Date (If the Commissioning Test Date changes/unknown, the interconnection customer must inform the utility as soon as aware of the changed/known date, but no later than 15 business days.)

*List interconnection components/systems to be used in the distributed generation facility that are lab-certified.

| *Component/System | NRTL Providing Label and Listing |
|-------------------|----------------------------------|
|-------------------|----------------------------------|

| | |
|--|--|
| | |
| | |
| | |

Copies of manufacturer brochures and/or technical specifications included. YES

| *DISTRIBUTED GENERATION FACILITY INFORMATION | | | | | | |
|--|-------------------------|---------|-------|---------------|-------------|----------|
| *Energy Source/Converter | | | | | | |
| Wind Turbine | Solar Photovoltaic Cell | Biomass | Hydro | Diesel Engine | Natural Gas | Fuel Oil |
| Storage - Specify type | | Other | | | | |

| *INFORMATION FOR INVERTER-BASED FACILITIES | | | | | | |
|---|----------|----------------------------------|---|------------------------|-------------------|-----------------|
| Inverter Information (Attach manufacturer's technical specifications and label information from a nationally recognized testing laboratory, e.g. UL.) | | | | | | |
| Manufacturer Model | Quantity | Inverter UL1741 Listed Yes No | Continuous Rated Output kW _{AC} Volts _{AC} | Number of Phase 1 3 | Power Factor % | Efficiency % |
| Manufacturer Model | Quantity | Inverter UL1741 Listed Yes No | Continuous Rated Output kW _{AC} Volts _{AC} | Number of Phase 1 3 | Power Factor % | Efficiency % |

| *DC Source/Prime Mover | | |
|------------------------------------|----------|------------------------------------|
| Solar Module #1 Manufacturer Model | Quantity | Power Rating Watt _{DC} |
| Solar Module #2 Manufacturer Model | Quantity | Power Rating Watt _{DC} |

| *Solar Module Orientation | | | | | | |
|---------------------------|---------------------|-----------|----------------|------------------------|-----------------------------|-----------------------------|
| Fixed | Type Single Axis | Dual Axis | Tilt (degrees) | Azimuth (180° = south) | Solar Module #1 Quantity | Solar Module #2 Quantity |
| Fixed | Type Single Axis | Dual Axis | Tilt (degrees) | Azimuth (180° = south) | Solar Module #1 Quantity | Solar Module #2 Quantity |
| Fixed | Type Single Axis | Dual Axis | Tilt (degrees) | Azimuth (180° = south) | Solar Module #1 Quantity | Solar Module #2 Quantity |
| Fixed | Type Single Axis | Dual Axis | Tilt (degrees) | Azimuth (180° = south) | Solar Module #1 Quantity | Solar Module #2 Quantity |

| *Inverter/Solar Module Combinations (Use a separate row for each unique combination of Inverter and Solar Modules) | | | | | | |
|---|-------------------------|-----------------------------|-----------------------------|--|---|--|
| Inverter Information (Attach manufacturer's technical specifications and label information from a nationally recognized testing laboratory, e.g. UL.) | | | | | | |
| Inverter Type: String | Quantity: Microinverter | Solar Module #1 Quantity | Solar Module #2 Quantity | kW _{DC} Connected to each inverter: kW _{DC} | Continuous Rated Output of each inverter: kW _{AC} | Inverter is DC Limited (kW _{DC} < kW _{AC}) Yes No |
| Inverter Type: String | Quantity: Microinverter | Solar Module #1 Quantity | Solar Module #2 Quantity | kW _{DC} Connected to each inverter: kW _{DC} | Continuous Rated Output of each inverter: kW _{AC} | Inverter is DC Limited (kW _{DC} < kW _{AC}) Yes No |
| Inverter Type: String | Quantity: Microinverter | Solar Module #1 Quantity | Solar Module #2 Quantity | kW _{DC} Connected to each inverter: kW _{DC} | Continuous Rated Output of each inverter: kW _{AC} | Inverter is DC Limited (kW _{DC} < kW _{AC}) Yes No |
| Inverter Type: String | Quantity: Microinverter | Solar Module #1 Quantity | Solar Module #2 Quantity | kW _{DC} Connected to each inverter: kW _{DC} | Continuous Rated Output of each inverter: kW _{AC} | Inverter is DC Limited (kW _{DC} < kW _{AC}) Yes <input type="checkbox"/> No |

| *Aggregate kWAC Power Output of all Inverters Constituting Distributed Generation Facility | |
|---|------------------|
| Aggregate kWAC power output of first inverter/solar module combination listed above (Quantity of inverters multiplied by either the Continuous Rated Output of each inverter (no DC limited) OR kW _{DC} Connected to each inverter (DC Limited)) | kW _{AC} |
| Aggregate kWAC power output of second inverter/solar module combination listed above (Quantity of inverters multiplied by either the Continuous Rated Output of each inverter (no DC limited) OR kW _{DC} Connected to each inverter (DC Limited)) | kW _{AC} |
| Aggregate kWAC power output of third inverter/solar module combination listed above (Quantity of inverters multiplied by either the Continuous Rated Output of each inverter (no DC limited) OR kW _{DC} Connected to each inverter (DC Limited)) | kW _{AC} |
| Aggregate kWAC power output of fourth inverter/solar module combination listed above (Quantity of inverters multiplied by either the Continuous Rated Output of each inverter (no DC limited) OR kW _{DC} Connected to each inverter (DC Limited)) | kW _{AC} |
| Aggregate kWAC Power Output of ALL Inverters Constituting Distributed Generation Facility | kW _{AC} |

***INFORMATION FOR NON-INVERTER BASED ENERGY PRODUCTION EQUIPMENT**

| | | | | |
|---|-----------------|-------------------------|---|--|
| Synchronous | Induction | Other | | |
| Rating (kW) | Rating (kVA) | *Rated Voltage Volts | *Rated Current Amps | |
| System Type Tested? (<i>Total System</i>) | | YES | NO (<i>attach product literature</i>) | |

***FOR SYNCHRONOUS MACHINES**

NOTE: Contact utility to determine if all the information requested in this section is required for the proposed distributed generation facility.

| | | | | |
|--|-----------------------------------|---|--|--|
| Manufacturer | | | | |
| Model No. | | Version No. | Submit Copies of the Saturation Curve and the Vee Curve Salient Non-Salient | |
| Torque (lb-ft) | Rated RPM | Field Amperes at rated generator voltage and current and % PF over-excited | | |
| Type of Exciter | | Output Power of Exciter | Type of Voltage Regulator | |
| Locked Rotor Current (Amps) | Synchronous Speed (RPM) | Winding Connection | Minimum Operating Frequency/Time | |
| Generator Connection Delta Wye Wye Grounded | | | | |
| Direct-axis Synchronous Reactance (Xd) (ohms) | | Direct-axis Transient Reactance (X'd) (ohms) | Direct-axis Sub-transient Reactance (X''d) (ohms) | |
| Negative Sequence Reactance (ohms) | Zero Sequence Reactance (ohms) | Natural Impedance or Grounding Resister (if any) (ohms) | | |

***FOR INDUCTION MACHINES**

NOTE: Contact utility to determine if all the information requested in this section is required for the proposed distributed generation facility.

| | | | | |
|--------------------------------------|--|------------------------------------|---------------------------|--|
| Manufacturer | | | Model No. | |
| Version No. | | Locked Rotor Current (Amps) | | |
| Rotor Resistance (Rr) (ohms) | Exciting Current (Amps) | Rotor Resistance (Xr) (ohms) | Reactive Power Required | |
| Magnetizing Reactance (Xm) (ohms) | VARs (<i>No load</i>) | Stator Resistance (Rs) (ohms) | VARs (<i>Full load</i>) | |
| Stator Reactance (Xs) (ohms) | Short Circuit Reactance (Xd) (ohms) | Phases Single Phase Three Phase | | |
| Frame Size | Design Letter | Temp. Rise (°C) | | |

REVERSE POWER RELAY INFORMATION (LEVEL 3 REVIEW ONLY)

| | | |
|--------------|-----------------------|--|
| Manufacturer | | Model No. |
| Relay Type | Reverse Power Setting | Reverse Power Time Delay (<i>if any</i>) |

***INSURANCE DISCLOSURE**

The attached terms and conditions contain provisions related to liability and indemnification and should be carefully considered by the interconnection customer. The interconnection customer shall carry general liability insurance coverage, such as, but not limited to, homeowner's insurance. The interconnection customer shall provide the utility with proof that it has a current homeowner's insurance policy or other general liability policy.

Proof of insurance must include:

- 1. Facility Address
- 2. Interconnection Customer as insured
- 3. General Liability Coverage

Proof of Homeowner's or General Liability Insurance attached

YES

***OTHER FACILITY INFORMATION**

One Line Diagram - A basic drawing of an electric circuit in which one or more conductors are represented by a single line and each electrical device and major component of the installation, from the generator to the point of interconnection, are noted by symbols.

One Line Diagram attached YES

Plot Plan - A map or sketch showing the distributed generation facility's location in relation to streets, alleys, or other geographic markers (i.e. section pin, corner pin, buildings, permanent structures, etc.). The map or sketch should also denote the location of the electric meter and disconnect used to isolate the distributed generation facility.

Plot Plan attached YES

***CUSTOMER SIGNATURE**

I hereby certify that all of the information provided in this Interconnection Request Application Form is true.

Applicant Signature (*signature must reflect Contact Name under section Interconnection Applicant Contact Information*)

Date

Printed Name

Title

An application fee is required before the application can be processed. Please verify that the appropriate fee is included with the application (see page 2).

Amount
\$

FOR UTILITY ENERGY USE ONLY

Date Received

Project ID

UTILITY ACKNOWLEDGEMENT

Receipt of application fee is acknowledged and this interconnection request is complete.

Utility Representative's Signature

Date

Printed Name

Title