Interconnection Application

Persons interested in applying for the interconnection of a distributed energy resource to the Utility's distribution system through the Fast Track or Study Processes are to fill out this Interconnection Application. The Interconnection Application is to be filled out completely by the applicant or as noted in each section of the application. The Utility will contact the applicant within 10 business days once the Interconnection Application and the corresponding processing fee is submitted to the Utility. The Utility will then notify the applicant of the completeness of their application. If the application is deemed incomplete by the Utility, the Utility will provide the applicant with a list of missing material. The applicant will then have 10 business days to provide the Utility with this information or request an extension, otherwise the application will be deemed incomplete and the applicant will lose their place in the queue. Section that are noted with * are required to be filled out.

Checklist for Submission to Utility	
The items below shall be included with submittal of the Interconnection Application to the Utility. Failure to include all items will deem the Interconnection Application incomplete.	
	Included
Non-Refundable Processing Fee Fast Track • $100 + $1/kW for Certified Systems • $100 + $2/kW for Non-Certified Systems Study Process • $1,000 + $2/kW down payment. Additional study fees may apply.	☐ Yes
One-line diagram • This one-line diagram must be signed and stamped by a Professional Engineer licensed in Minnesota if the DER is uncertified greater than 20 kW AC or if certified system is over 250 kW. • Details required on one-line diagram specified at the end of the interconnection application.	☐ Yes
Schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits	☐ Yes
Inverter Specification Sheet(s) (if applicable)	☐ Yes
Documentation that describes and details the operation of protection and control schemes	☐ Yes
Documentation showing site control	☐ Yes
Aerial map showing DER system layout including major roadways and true north	☐ Yes
<u>Possible Additional Documentation</u> • If the DER export capacity is limited, include information material explaining the limiting capabilities.	

- If Energy Storage is included with the proposed DER system include the Energy Storage Application.

General *

Select Review Process:	☐ Fast Track Process	☐ Study Process
Application is for:	☐ New Distribution Energy Resource	☐ Capacity Addition or Material Modification to Existing Distributed Energy Resource

If Capacity Addition or Material Modification to existing facility, please describe:

Distributed Energy Resource will be used for what reason? (Check all that apply):

☐ Net Metering ☐ Supply Power to Interconnection Customer

☐ Supply Power to Area EPS

Installed DER System Cost (before incentives):	$

Interconnection Customer *

Full Name (must match the name of the existing service account):

Account Number:	Meter Number:

Mailing Address:

City:	State:	Zip Code:
Email:	Phone:	

** Indicates section must be completed.*

Application Agent *

Is the Customer using an Application Agent for this application?	☐ Yes ☐ No
If Interconnection Customer is not using an Application Agent, please skip to the next section.	
Application Agent:	
Company Name:	
Email:	Phone:

Distributed Energy Resource Information *

Estimated Installation Date:			
Location (if different from mailing address of Interconnection Customer):			
Will the Proposed DER system be interconnected to an existing electric service?		☐ Yes ☐ No	
Is the Distributed Energy Resource a single generating unit or multiple?		☐ Single ☐ Multiple	
DER Type *(Check all that apply)*:			
☐ Solar Photovoltaic	☐ Wind	☐ Energy Storage	
☐ Combined Heat and Power	☐ Solar Thermal	☐ Other (please specify)	
DER systems with Energy Storage must also submit the Energy Storage Application to the Utility.			
Total Number of Distributed Energy Resources to be interconnected pursuant to this Interconnection Application:			
Phase configuration of Distributed Energy Resource(s):		☐ Single Phase ☐ Three Phase	
Type of Generator:	☐ Inverter	☐ Synchronous	☐ Induction
Aggregate DER Capacity (the sum of nameplate capacity of all generation and storage devices at the PCC):			

kW_{ac}	kVA_{ac}

** Indicates section must be completed.*

Export Capacity Limitation *

Is the export capability of the DER limited?	☐ Yes ☐ No
If the DER export capacity is limited, complete the following sections and include information material explaining the limiting capabilities.	
Maximum Physical Export Capacity Requested:	kW_{ac}
If Yes, please provide additional details describing method of export limitation:	

Load Information *

Interconnection Customer's or Customer-sited Load:	kW_{ac}
Typical Reactive Load (if known):	

Equipment Certification *

Is the DER equipment certified?		☐ Yes ☐ No
Please list all IEEE 1547 certified equipment below. Include all certified equipment manufacturer specification sheets with the Interconnection Application submission.		
	Equipment Type	Certifying Entity
1		
2		
3		
4		

** Indicates section must be completed.*

Prime Mover *		
Please indicate the prime mover:		
☐ Solar Photovoltaic	☐ Microturbine	☐ Fuel Cell
☐ Reciprocating Engine	☐ Gas Turbine	☐ Other (please specify)

Is the prime mover compatible with certified protection equipment package?	☐ Yes ☐ No

DER Manufacturer:	Model Name & Number:	Version:
List of Adjustable Set Points for Protection Equipment or Software:		

Summer Name Plate Rating: kW_{ac}	Summer Name Plate Rating: kW_{ac}
Winter Name Plate Rating: kVA_{ac}	Winter Name Plate Rating: kVA_{ac}

Rated Power Factor:	Leading:	Lagging:

A completed Power System Load Flow data sheet must be supplied with the Interconnection Application.

Only appropriate sections beyond this point until the signature page are to be completed.

Distributed Energy Resource Characteristic Data (for Inverter-based machines)	
Max design fault contribution current:	
Is your response to the previous field an Instantaneous or RMS measurement?	☐ Instantaneous ☐ RMS
Harmonic Characteristics:	

Start-up Requirements:

** Indicates section must be completed.*

Distributed Energy Resource Characteristic Data (for Synchronous machines)	
RPM Frequency:	Neutral Grounding Resistor:
Direct Axis Synchronous Reactance, X_d:	Zero Sequence Reactance, X_0:
Direct Axis Transient Reactance, X'_d:	KVA Base:
Direct Axis Subtransient Reactance, X''_d:	Field Volts:
Negative Sequence Reactance, X_2:	Field Amperes:
Please provide the appropriate IEEE model block diagram of excitation system, governing 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 submitted.	

Distributed Energy Resource Characteristic Data (for Induction machines)	
RPM Frequency:	Neutral Grounding Resistor:
Motoring Power (kW):	Exciting Current:
Heating Time Constant:	Temperature Rise:
Rotor Resistance, R_r:	Frame Size:
Stator Resistance, R_s:	Design Letter:
Stator Reactance, X_s:	Reactive Power Required In Vars (No Load):
Rotor Reactance, X_r:	Reactive Power Required In Vars (Full Load):
Magnetizing Reactance, X_m:	Total Rotating Inertia, H:
Short Circuit Reactance, X''_d:	

Interconnection Facilities Information

Will a transformer be used between the DER and the Point of Common Coupling?	☐ Yes ☐ No
Will the transformer be provided by the Interconnection Customer? If yes, please fill in the fields below.	☐ Yes ☐ No
Proposed location of protective interface equipment on property:	

Transformer Data (For Interconnection Customer-Owned Transformer)

What is the phase configuration of the transformer?			☐ Single Phase ☐ Three Phase
Size (kVA):	Transformer Impedance (%):		On kVA Base:
Transformer Volts: (Primary)	Delta:	Wye:	Wye Grounded:
Transformer Volts: (Secondary)	Delta:	Wye:	Wye Grounded:
Transformer Volts: (Tertiary)	Delta:	Wye:	Wye Grounded:

Transformer Fuse Data (For Interconnection Customer-Owned Fuse)

Manufacturer:	Type:	Size:	Speed:

Interconnecting Circuit Breaker (For Interconnection Customer-Owned Circuit Breaker)

Manufacturer:	Type:	
Load Rating (in Amps):	Interrupting Rating (In Amps):	Trip Speed (Cycles):

Interconnection Protective Relays (For Microprocessor Controlled Relays)

Setpoint Function	Minimum	Maximum

Interconnection Protective Relays (For Relays with Discrete Components)			
Manufacturer:	Type:	Style/Catalog No.:	Proposed Setting:
Manufacturer:	Type:	Style/Catalog No.:	Proposed Setting:
Manufacturer:	Type:	Style/Catalog No.:	Proposed Setting:
Manufacturer:	Type:	Style/Catalog No.:	Proposed Setting:
Manufacturer:	Type:	Style/Catalog No.:	Proposed Setting:

Current Transformer Data:			
Manufacturer:	Type:	Accuracy Class:	Proposed Ratio Connection:
Manufacturer:	Type:	Accuracy Class:	Proposed Ratio Connection:

Potential Transformer Data:			
Manufacturer:	Type:	Accuracy Class:	Proposed Ratio Connection:
Manufacturer:	Type:	Accuracy Class:	Proposed Ratio Connection:

For Office Use Only		
Application ID:		
Date Received:	Application Fee Received:	☐ Yes ☐ No
Date Completed:		

*Interconnection Agreement **

Proposed DER interconnections that are also deemed Qualifying Facilities less than 40 kW AC under Minnesota Statutes §216B.164 are eligible to sign the Utility's Uniform Contract for Cogeneration and Small Power Production Facilities. Included in this agreement are payment terms for excess power generated by the proposed DER system the Utility may purchase. In lieu of the Utility's Uniform Contract for Cogeneration and Small Power Production Facilities, the Interconnection Customer may choose to instead sign the Municipal Minnesota Interconnection Agreement (MMIA).

The Interconnection Customer requests an MMIA to be executed in lieu of the Utility's Uniform Contract for Cogeneration and Small Power Production Facilities.	☐ Yes ☐ No

*Disclaimers – Must be completed by Interconnection Customer **

	Initials
The Interconnection Customer has opportunities to request a timeline extension during the interconnection process. Failure by the Interconnection Customer to meet or request an extension for a timeline outlined in the Interconnection Process could result in a withdrawn queue position and the need to re-apply.	
Propose DER interconnection to the Utility's distribution submitted under the Fast Track Process may be moved into the Study Process if engineering screens are failed during the Interconnection Application review.	

*Application Signature – Must be completed by Interconnection Customer **

I designate the individual or company listed as my Application Agent to serve as my agent for the purpose of coordinating with the Area EPS Operators on my behalf throughout the interconnection process.

_____
Initials

I hereby certify that, to the best of my knowledge, the information provided in this Application is true, and that I have appropriate Site Control in conformance with the Interconnection Process. I agree to abide by the Municipal Minnesota Distributed Energy Resource Interconnection Process (M-MIP) and will inform the Utility if the proposed DER system changes from the details listed in this Interconnection Application.

_____ _____

Applicant Signature: Date:

*****Please print clearly or type and return completed along with any additional documentation*****

Information Required on One-Line Diagram

An Interconnection Application must include a site electrical one-line diagram showing the configuration of all Distributed Energy Resource equipment, current and potential circuits, and protection and control schemes. The one-line diagram shall include:

- Applicant name.
- Application ID.
- Installer name and contact information.
- Address where DER system will be installed - must match application address.
    - Be sure to list the address for the protective interface equipment if the protective interface equipment is located at a different address than the DER system.
- Correct positions of all equipment, including but not limited to panels, inverter, and DC/AC disconnect. Include distances between equipment, and any labeling found on equipment.

This one-line diagram must be signed and stamped by a Minnesota licensed Professional Engineer if the Distributed Energy Resource is larger than 20 kW (if uncertified) and 250 kW (if certified.)