

# **Standard 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	
<ul> <li>\$100 + \$1/kW for Certified Systems</li> </ul>	□ Yes
<ul> <li>\$100 + \$2/kW for Non-Certified Systems</li> </ul>	
Study Process	
<ul> <li>\$1,000 + \$2/kW down payment. Additional study fees may apply.</li> </ul>	
One-line diagram	
<ul> <li>This one-line diagram must be signed and stamped by a Professional</li> </ul>	
Engineer licensed in Minnesota if the DER is uncertified greater than 20 kW	□ Yes
AC or if certified system is over 250 kW.	
<ul> <li>Details required on one-line diagram specified at the end of the</li> </ul>	
interconnection application.	
Schematic drawings for all protection and control circuits, relay current circuits,	□ Yes
relay potential circuits, and alarm/monitoring circuits	
Inverter Specification Sheet(s) (if applicable)	□ Yes
Documentation that describes and details the operation of protection and control	□ Yes
schemes	
Documentation showing site control	🗆 Yes



Aerial map showing DER system layout including major roadways and true north I Yes				🗆 Yes
<ul> <li>Possible Additional Documentation         <ul> <li>If the DER export capacity is limited, include information material explaining the limiting capabilities.</li> <li>If Energy Storage is included with the proposed DER system include the Energy Storage Application.</li> </ul> </li> </ul>				_
General *				
Select Review Proc	ess: 🛛 Fast Track Pro	cess	□ Study Process	
Application is for: Application is for: 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			r	
□ 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:		



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 n	ext section.
Application Agent:		
Company Name:		
Email:	Phone:	

Distributed Energy Resource Information *						
Estimated Installation Date:						
Location (if different	from mailir	ng address of Interc	onnection Custom	ner):		
Will the Proposed DE	R system b	e interconnected to	an existing electr	ic service?	□ Yes	🗆 No
Is the Distributed Ene	ergy Resour	ce a single generati	ng unit or multiple	e? 🗆 S	ingle [	☐ Multiple
DER Type (Check all t	hat apply):			I		
□ Solar Photovoltaic	□ Solar Photovoltaic □ Wind □ Energy Storage				orage	
Combined Heat an	Combined Heat and Power Solar Thermal Other (please specify				ase specify)	
DER systems with	Energy Stor	rage must also subr	nit the Energy Sto	rage Applica	ntion to tl	he Utility.
Total Number of Distributed Energy Resources to be						
interconnected pursu	iant to this	Interconnection Ap	plication:			
Phase configuration of Distributed Energy Resource(s):				Three Phase		
Type of Generator:        Inverter        Synchronous        Induction			on			
Aggregate DER Capacity (the sum of nameplate capacity of all generation and storage devices at the PCC):						
		kW <sub>ac</sub> kVA <sub>ac</sub>				kVA <sub>ac</sub>



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					
If Yes, please provide additional details describing method of export limitation:					

Load Information *	
Interconnection Customer's or Customer-sited Load:	kWac
Typical Reactive Load (if known):	

Eq	Equipment Certification *					
Is the DER equipment certified?						
	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	1					
2	2					
3						
4						



Prime Mover *							
Please indicate the prin	me mover:						
□ Solar Photovoltaic		□ Microturb	ine	🗆 Fi	iel Cel	I	
□ Reciprocating Engine □ Gas Turbine □		□ Ot	her (p	lease specif	y)		
Is the prime mover cor	npatible with	certified prote	ection equip	ment packag	;e?	□ Yes	□ No
DER Manufacturer: Model Name & Number: Version:							
List of Adjustable Set P	oints for Pro	tection Equipm	ent or Softw	/are:	I		
Summer Name Plate Rating: $kW_{ac}$ Summer Name Plate Rating: $k$		kW <sub>ac</sub>					
Winter Name Plate Rating:kVAacWinter Name Plate Rating:		kVA <sub>ac</sub>					
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:				



#### 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			

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 <sub>s</sub> :	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 Fa	cilities I	Information					
Will a transformer be used between the DER and the Poir Common Coupling?				nt of		□ Yes	□ No
Will the transformer be provided by the Interconnection Customer? If yes, please fill in the fields below.					□ Yes	□ No	
Proposed location of pro			nt on p	property:	1		
Transformer Data (For Ir	nterconne	ection Customer-C	)wned	l Transforme	er)		
What is the phase configuration of the transformer?					□ Single Phase □ Three Phase		
Size (kVA):	VA): Transformer Imp		bedan	edance (%): On kVA		A Base:	
Transformer Volts: (Primary)	Delta:	I	Wye	:	I	Wye Grounded:	
Transformer Volts: (Secondary)	Delta:		Wye	e:		Wye Grounded:	
Transformer Volts: (Tertiary)	Delta:		Wye	ye:		Wye Grounded:	
Transformer Fuse Data (	For Interd	connection Custor	ner-O	wned Fuse)			
Manufacturer:	Type:	e: Size: Speed		Speed:			
Interconnecting Circuit E	Breaker (F	or Interconnectio	n Cust	tomer-Owne	ed Circui	t Breaker	)
Manufacturer:			Туре:				
Load Rating (in Amps):		Interrupting Rat	ing (In Amps): Trip Speed (Cycles):		es):		
Interconnection Protecti	ve Relays	(For Microproce	ssor Co	ontrolled Re	lays)		
Setpoint Function			Minimum		mum		Maximum



Interconnection Pro	otective Relays (For	Relays with	Discrete Compo	nents)		
Manufacturer:	Туре:		Style/Catalog No.:		Proposed Setting:	
Manufacturer:	Туре:	Туре:		lo.:	Proposed Setting:	
Manufacturer:	Туре:	Туре:		lo.:	Proposed Setting:	
Manufacturer:	Туре:	Туре:		lo.:	Proposed Setting:	
Manufacturer:	Туре:		Style/Catalog N	lo.:	Proposed Setting:	
Current Transforme	er Data:					
Manufacturer:	Туре:	Туре: Асси		Propos	sed Ratio Connection:	
Manufacturer:	Туре:	Accu	racy Class:	Propos	Proposed Ratio Connection:	
Potential Transform	ner Data:					
Manufacturer:	Туре:	Accu	Accuracy Class:		Proposed Ratio Connection:	
Manufacturer:	Туре:	Accu	Accuracy Class:		Proposed Ratio Connection:	

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



#### Interconnection Agreement \*

Propose DER interconnections that are also deemed Qualifying Facilities less than 40 kW AC under Minnesota Statute 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 Utility's Distribution Interconnection Agreement.

The Interconnection Customer requests an Interconnection Agreement to be executed in lieu of the Utility's Uniform Contract for Cogeneration and Small Power Production Facilities.

□ Yes □ No

	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 Terms and Conditions of the Interconnection Process and will inform the Utility if the proposed DER system changes from the details listed in this Interconnection Application.

App	licant	Signature	:
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Date:

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

\* Indicates section must be completed.

#### 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.)