Interconnection Application

Persons interested in applying for the interconnection of a distributed energy resource (DER) 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.

The Interconnection Application is to be filled out clearly and completely by the applicant or as noted in each section of the application. Sections that are noted with an asterisk (*) are required to be filled out along with **bolded items**.

Checklist for Submission to Area EPS Operator

The items below shall be included with submittal of the Interconnection Application to the Area EPS Operator. Applications that fail to include all items will be deemed incomplete.

	Included
Non-refundable processing fee Fast Track Process • $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 • Please see Area EPS Operator's Technical Specification Manual (TSM) for more details.	☐ Yes
Documentation showing site control.	☐ Yes
Site diagram showing DER system layout (See TSM for more details)	☐ Yes
<u>Possible Additional Documentation (See TSM for more details)</u> • If requesting the DER export capacity to be limited, include information material explaining the limiting capabilities. • Schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits (if applicable). • Documentation that describes and details the operation of protection and control schemes (if applicable). • Inverter Specification Sheet(s) (if applicable).	

Applicant *

First and last name:	
Name on electric service account, if different:	
Account number:	**Meter number:**
Mailing address:	
Email:	**Phone:**

Application Agent *

Is the applicant using an Application Agent for this application? ☐ Yes ☐ No	
If Interconnection Customer is not using an Applicant Agent, please continue to next section.	
Application agent:	
Agent's company name:	
Email:	Phone:

DER Location *

Is the proposed DER system to be located at the applicant's mailing address: ☐ Yes ☐ No	
If yes, please continue to the next section.	
If no, will the proposed DER system be interconnected to an existing electric service? ☐ Yes ☐ No	
Please provide the address or GPS coordinates:	
If not an existing service, please state the proposed service entrance size (amps):	

General *

Select Review Process:	☐ Fast Track Process	☐ Study Process
Choose one of the following and provide applicable data:		
☐ Application is for a new DER		
Aggregate DER nameplate rating of all generation and storage types (kW_{ac}):		
☐ Application is for a Capacity Addition to an existing DER		
Capacity of existing DER (kW_{ac}):	Capacity proposed to be added (kW_{ac}):	
☐ Application is for a Material Modification to an existing DER (See M-MIP Process Overview, p. 21)		
If Material Modification to existing facility, please describe:		
Distributed Energy Resource will be used for what reason? (Check all that apply):		
☐ Net metering ☐ Only to supply power to applicant ☐ Only to supply power to Area EPS		
Type of generator (check all that apply):	☐ Inverter	☐ Induction or synchronous
Installed DER system cost (before incentives): $		

Distributed Energy Resource Information *

Phase configuration of Distributed Energy Resource(s): ☐ Single-phase ☐ Three-phase

DER type (Check all that apply and list aggregate capacity of each type):

☐ Solar photovoltaics	Size (kW_{ac}):	☐ Wind	Size (kW_{ac}):
☐ Storage	Size (kW_{ac}):	☐ Diesel	Size (kW_{ac}):
☐ Natural gas	Size (kW_{ac}):	☐ Fuel oil	Size (kW_{ac}):
☐ Hydro type	Size (kW_{ac}):	☐ Other	Size (kW_{ac}):

Please specify Other:

Export Capacity Limitation *

Is the maximum physical export capacity request the same as the nameplate capacity: ☐ Yes ☐ No

If yes, please continue to the next section.

If no, what is the maximum physical export capacity requested? kW_{ac}

Is the export capacity limited? (E.g., though the use of a control system, power relay(s), or other similar devices setting of adjustment) ☐ Yes ☐ No

If yes, please attach detailed information describing the method of limiting export capacity.

Interconnection Facilities Information *

What type of DER interconnection/transfer method is proposed?

☐ None (DER is never operating parallel with the distribution system)

☐ Extended parallel/continuous (The normal state of the DER is to operate parallel with the distribution system.)

☐ Limited (DER operated parallel with the distribution system for a short time). Please specify what type of Limited.

☐ Quick closed (100msec parallel or less) ☐ Limited parallel (2 minutes or less)

Will a transfer switch be used with the DER? ☐ Yes ☐ No

Manufacturer:	Model:	Load rating (in Amps):

Will a transformer, owned by the Interconnection Customer, be used between the DER and the Point of Common Coupling?	☐ Yes ☐ No

Please show proposed location of protective interface equipment on property on the submitted site diagram.

Transformer Data, if applicable (For Interconnection Customer-Owned Transformer) ***(E.g., Transformers used for secondary voltage conversion or primary metered interconnections)***			
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, if applicable (For Interconnection Customer-Owned Circuit Breaker)			
Manufacturer:		Type:	
Load rating (in amps):	Interrupting rating (in amps):		Trip speed (cycles):
Interconnection Protective Relays: Please show protective relay manufacturer, model and type on the one-line diagram.			
Current and Potential Transformer Data: Please show CT ratios and CT/PT locations on one-line.			

Fill out all following sections which pertain to the proposed DER installation

Inverter Interconnected System Information – non ESS (if applicable)	
Aggregate inverter rating (kW_{ac}):	**Total number of inverters:**
Phase configuration of inverter(s): ☐ Single-phase ☐ Three-phase	
Voltage of inverter(s):	
Inverter manufacturer:	
1. Model No.	**Certification** ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	**Number of units of this model:**
2. Model No.	Certification ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	Number of units of this model:
3. Model No.	Certification ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	Number of units of this model:
4. Model No.	Certification ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	Number of units of this model:

Energy Storage System Information (if applicable)

ESS inverter energy rating (kWh_{ac}):	**ESS inverter capacity rating (kW_{ac}):**
How will the ESS be used? Select all use cases that apply. ☐ Outage protection/backup power ☐ Demand reduction ☐ No export ☐ Time-of-use energy management ☐ Increased self-consumption ☐ Other	
Please specify other:	
What operating modes will be used? Select only one operating mode. ☐ Import only ☐ Export only ☐ No exchange ☐ Unrestricted exchange	
If Export Only is Checked, select all that apply. ☐ ESS export is allowed ☐ Solar export is allowed ☐ Limited export is allowed (please specify export limit amount in kW):	
Is the ESS recharging limited to certain times of the day and/or after a power outage? ☐ Yes ☐ No If yes, please explain:	
If the ESS shares an inverter that is listed in the previous section, please skip the rest of this section.	
Aggregate ESS inverter rating (kW_{ac}):	**Total number of ESS inverters:**
Phase configuration of ESS inverter(s): ☐ Single-phase ☐ Three-phase	
Voltage of ESS inverter(s):	
ESS inverter manufacturer:	
1. Model No.	**Certification** ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	**Number of units of this model:**
2. Model No.	Certification ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	Number of units of this model:
3. Model No.	Certification ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	Number of units of this model:
4. Model No.	Certification ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	Number of units of this model:

Rotating Generation System Information (if applicable) **Prime Mover Information**		
Please indicate the prime mover: ☐ Microturbine ☐ Reciprocating engine ☐ Hydro ☐ Wind ☐ Other (please specify)		
Generator type ☐ Induction ☐ Synchronous		
Manufacturer:	Model name & number:	Version:

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:	

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:
For synchronous generators 1 MW or larger, 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'':	

Additional Documentation

On the one-line diagram please show the interconnection transformer and provide the transformer winding configuration, primary and secondary transformer voltage, transformer protection information and expected impedance. Please also show how the transformer will be protected to meet the NEC requirements.

Please see the Area EPS Operator's Technical Specification Manual (TSM) for requirements that need to be on the one-line and site diagrams and for application documentation examples.

Please see the Municipal Minnesota Interconnection Process for additional requirements related to site control and insurance documentation.

*Interconnection Agreement **

An approved interconnection applicant is referred to throughout the Municipal Minnesota Interconnection Process as an Interconnection Customer and will be provided one of two interconnection agreement forms from the Process to encapsulate the rights and obligations of the Interconnection Customer and the utility. For facilities that qualify to proceed through the Simplified Process, the Interconnection Customer may elect to utilize the simpler Uniform Contract form. Included in this contract are payment terms for purchase by the utility of excess power generated by the interconnected DER system. The Interconnection Customer has the option, however, to utilize the longer Municipal Minnesota Interconnection Agreement form in lieu of the Uniform Contract.

Would the applicant prefer to utilize the Municipal Minnesota Interconnection Agreement form in lieu of the Uniform Contract form?	☐ Yes ☐ No

*Acknowledgements – Must be completed by Interconnection Customer **

	Initials
An 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.	
Proposed DER interconnections 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. Interconnection Customers would be contacted to approve being moved into the Study Process.	

*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 Operator on my behalf throughout the interconnection process.

_____
Initials

I hereby certify that, to the best of my knowledge, the information provided in this Interconnection 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.

_____ _____

Applicant Signature **Date**

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