Tier III Interconnection Application

This form is for Distributed Energy Resources (DERs) that meets the eligibility of a Tier III track.

The Interconnection Application is to be filled out completely by the applicant or as noted in each section of the application. Section that are noted with * 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. Failure to include all items will deem the Interconnection Application incomplete.	
	Included
Non-Refundable Processing Fee	☐ Yes
One-line diagram • Please see Area EPS Operator's Technical Requirement for more details.	☐ Yes
Site Diagram showing DER system layout (See Technical Requirements for more details)	☐ Yes
<u>Possible Additional Documentation (See Technical Requirements 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).	

If you have any questsions, please call Lucas Schaaf at 701-463-6715

Interconnection Customer/Owner *

Full Name (match name of electric service account, if applicable)**:**	
Account Number:	**Meter Number:**
Mailing Address:	
Email:	**Phone:**

Application Agent *

Is the Customer 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:	
Company Name:	
Email:	Phone:

DER Location *

Is the proposed DER system to be located at the Interconnection Customer'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 *

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	
If Material Modification to existing facility, please describe:	
Distributed Energy Resource will be used for what reason? (Check all that apply): ☐ To only supply power to Interconnection Customer ☐ To only supply power to the Area EPS ☐ To supply power to the Interconnection Customer and the Area EPS	
Type of Generator (check all that apply): ☐ Inverter ☐ Induction or Synchronous	

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 (100 msec 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 (For Interconnection Customer-Owned Transformer) (if applicable) ***(Ex. 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 (For Interconnection Customer-Owned Circuit Breaker) (if applicable)			
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):	**Number of Total 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 Exchanged	
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):	**Number of Total 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, show the interconnection transformer and provide the transformer winding configuration, primary and secondary transformer voltage, transformer protection information and expected impedance. Show how the transformer will be protected to meet the NEC requirements.

See the Area EPS Operator's Technical Requirement for required information that needs to be on the one-line and site diagram and for example application documentation.

See the Interconnection Process for additional requirements related to Site Control and insurance documentation.

*Acknowledgements – 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.	

*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 correct and I have appropriate Site Control in conformance with the Interconnection Process. I agree to abide by the Area EPS Operator's Interconnection Process and Technical Requirements.

_____ _____

Applicant Signature: Date:

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