

LEVEL 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 Farmers Electric Cooperative, Inc.

INTERCONNECTION MEMBER-CONSUMER CONTACT INFORMATION <i>(Applicant must be owner or lessee of the facility)</i>				
*Owner / Company <i>(Legal Entity Name)</i>			* Contact Name	
* Mailing Address		* City		*State
* Phone No. <i>(Daytime)</i>	Phone No. <i>(Evening)</i>	Facsimile No.	* Email Address	
ALTERNATE CONTACT INFORMATION <i>(If different from Member-Consumer Contact Information)</i>				
Owner / Company <i>(Legal Entity Name)</i>			Contact Name	
Mailing Address		City		*State
Phone No. <i>(Daytime)</i>	Phone No. <i>(Evening)</i>	Facsimile No.	Email Address	
FACILITY LOCATION <i>(If different from information above)</i>				
* Facility Address or Latitude and Longitude			* City	
* Cooperative serving Facility Site		Account Number of Facility Site <i>(existing member-consumers)</i>		Meter No. <i>(existing member-consumers)</i>
EQUIPMENT CONTRACTOR				
* Company Name			* Contact Name	
* Mailing Address		* City		*State
* Phone No. <i>(Daytime)</i>	Phone No. <i>(Evening)</i>	Facsimile No.	* Email Address	
ELECTRICAL CONTRACTOR <i>(If different from Equipment Contractor)</i>				
*Owner / Company Name			* Contact Name	
* Mailing Address		* City		*State
* Phone No. <i>(Daytime)</i>	Phone No. <i>(Evening)</i>	Facsimile No.	* Email Address	
License No. <i>(If applicable)</i>			Active License? <i>(If applicable)</i>	
			<input type="checkbox"/> Yes <input type="checkbox"/> No	
APPLICANT OWNERSHIP INTEREST <i>(check one)</i>				
<input type="checkbox"/> Owner <input type="checkbox"/> Lease <input type="checkbox"/> 3 ^d Party PPA <input type="checkbox"/> Other <i>(Please Explain)</i> _____				
THIRD PARTY INFORMATION <i>(Only complete this section if the facility is to be located on the premise of someone other than the applicant)</i>				
Location of Proposed Facility			Name of Customer at said location	

* Mailing Address		* City	
* Phone No. (Daytime)	Phone No. (Evening)	*State	*Zip

ELECTRIC SERVICE INFORMATION FOR MEMBER-CONSUMER FACILITY WHERE GENERATOR WILL BE INTERCONNECTED			
*Capacity (Service Entrance): _____ (Amps)	Voltage: _____ (Volts)	* Type of Service <input type="checkbox"/> Single Phase <input type="checkbox"/> Three-Phase	
* If three-phase transformer, indicate type: Primary Winding: <input type="checkbox"/> Wye <input type="checkbox"/> Delta Secondary Winding: <input type="checkbox"/> Wye <input type="checkbox"/> Delta		* Transformer Size	*Impedance

* INTENT OF GENERATION (check one)	
<input type="checkbox"/>	Offset Load (Unit will operate in parallel, but will not export power to Cooperative) (If this option is selected, the Cooperative will not purchase any portion of the generation facility output and Attachment 2 is not applicable)
<input type="checkbox"/>	Self-Use and Sales to the Cooperative (Unit will operate in parallel and may export and sell excess power to Cooperative pursuant to the Cooperative's tariff and a separate power purchase agreement to be executed by the parties)
<input type="checkbox"/>	Wholesale Market Transaction (Unit will operate in parallel and participate in MISO, SPP, or other wholesale power markets pursuant to separate requirements and agreements with MISO, SPP, or other transmission providers, and applicable rules of the Federal Energy Regulatory Commission)
<input type="checkbox"/>	Back-up Generation (Units that temporarily operate in parallel with the electric distribution system for more than 100 milliseconds) (Note: Back-up units that do not operate in parallel for more than 100 milliseconds do not need an interconnection agreement.)
<input type="checkbox"/>	Sale of generation output to Member-Consumer upon whose premise the facility is located and export and sell any excess power to the Cooperative, which sales may require a separate point of interconnection, metering, and power purchase agreement.
<input type="checkbox"/>	Other: (Please Explain):

*GENERATOR AND PRIME MOVER INFORMATION	
Energy Source <input type="checkbox"/> Wind <input type="checkbox"/> Solar <input type="checkbox"/> Process Byproduct <input type="checkbox"/> Biomass <input type="checkbox"/> Hydro <input type="checkbox"/> Oil <input type="checkbox"/> Natural Gas <input type="checkbox"/> Coal <input type="checkbox"/> Other _____	
If Solar: Number of Inverters _____ Number of Panels _____ Tilt (degrees) _____ Azimuth (180° is South facing) _____ Array Type: <input type="checkbox"/> Fixed <input type="checkbox"/> Single Axis <input type="checkbox"/> Dual Axis	
Energy Converter Type <input type="checkbox"/> Wind Turbine <input type="checkbox"/> Photovoltaic Cell <input type="checkbox"/> Fuel Cell <input type="checkbox"/> Reciprocating Engine <input type="checkbox"/> Other _____	
Generator #1 Size: _____ (kW) _____ (kVA)	Generator #1 Nameplate Rating (AC): _____ (kW)
Generator #2 Size: _____ (kW) _____ (kVA)	Generator #2 Nameplate Rating (AC): _____ (kW)
Generator #3 Size: _____ (kW) _____ (kVA)	Generator #3 Nameplate Rating (AC): _____ (kW)
Total Number of Units: _____	Total Capacity of All Generators: _____ (kW) _____ (kVA)
Disconnection Device: Identify type and location of disconnection device:	
Is the generation facility a qualifying facility as defined under Public Utilities Regulatory Policy Act (18 CFR Part 292, Subpart B)? <input type="checkbox"/> Yes <input type="checkbox"/> No	

* 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 Cooperative.	
<input type="checkbox"/>	Level 2 - Lab-certified interconnection equipment with an aggregate electric nameplate capacity less than or equal to 150 kVA. Lab-certified is defined in Iowa Utilities Board Chapter 45 rules on Electric Interconnection of Distributed Generation Facilities (199 IAC 45.1). (Application fee is \$250 plus \$1.00 per kVA and an additional \$125 if Cooperative performs a witness test.)
<input type="checkbox"/>	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 150 kVA if connecting to a radial distribution feeder. (Application fee amount is \$500 plus \$2.00 per kVA.)

<input type="checkbox"/>	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 Section 25.5 of the Cooperative's tariff.	

DISTRIBUTED GENERATION FACILITY INFORMATION

Commissioning Test Date: _____ (If the Commissioning Test Date changes, the interconnection member-consumer must inform the Cooperative as soon as it is aware of the changed date. Notice must be at least 15 business days prior to the test date.)

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

*Component/System	NRTL Providing Label and Listing

Please provide copies of the manufacturer brochures or technical specifications.

***ENERGY PRODUCTION EQUIPMENT/INVERTER INFORMATION**

Induction Inverter Synchronous Other _____

Rating _____ (kW)	Rating _____ (kVA)	*Rated Voltage _____ Volts	* Rated Current _____ Amps
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* System Type Tested? (Total System): Yes No (attach product literature)

***FOR SYNCHRONOUS MACHINES**

Note: Contact Cooperative 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 Vee Curve <input type="checkbox"/> Salient <input type="checkbox"/> 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 Cooperative 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)
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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 <input type="checkbox"/> Single Phase <input type="checkbox"/> 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>)

*FOR INVERTER-BASED MACHINES

Inverter Information

Manufacturer:	Model No.
Type <input type="checkbox"/> Forced Commutated <input type="checkbox"/> Line Commutated	Rated Output _____ Watts _____ Volts
Efficiency (%)	Power Factor (%)
	Inverter UL 1741 Listed <input type="checkbox"/> Yes <input type="checkbox"/> No

DC Source/Prime Mover

Rating _____ (kW)	Rating _____ (kVA)	Rated Voltage _____ Volts	Open Circuit Voltage (<i>if applicable</i>) _____ Volts
Rated Current (Amps)		Short Circuit Current (<i>if applicable</i>) (Amps)	

*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.).

Plot Plan attached: Yes

*MEMBER-CONSUMER SIGNATURE

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

Applicant Signature (<i>signature must reflect Contact Name under section Interconnection Applicant Contact Information</i>)	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 COOPERATIVE USE ONLY

Date Received:	Project ID:
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***COOPERATIVE ACKNOWLEDGEMENT**

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

Cooperative Representative's Signature

Date

Printed Name:

Title: