Standard Interconnection Application

A Customer-Generator applicant ("Applicant") hereby makes an application to Lea County Electric Cooperative, Inc. to install and operate a generating facility interconnected with the _____ utility system.

Written applications should be submitted by mail, e-mail or fax to [*insert utility name*], as follows:

Lea County Electric Cooperative, Inc.
1300 West Avenue D, Lovington, NM 88260
Fax: 575-396-3634
E-mail: bkimbro@lcecnet.com
Contact: Bobby Kimbro
Contact Title: Manager of Engineering and Operations

An application is a Complete Application when it provides all applicable information required below. (Additional information to evaluate a request for interconnection may be required and will be so requested from the Interconnection Applicant by Utility after the application is deemed complete).

SECTION 1. APPLICANT INFORMATION

Legal Name of Interconnecting Applicant (or, if an Individual, Individual's Name)
Name:_____
Mailing Address: _____
City:_____; State:_____; Zip Code: _____
Facility Location (if different from above):
_____
Telephone (Daytime): _____
Telephone (Evening): _____
Fax Number:_____
E-Mail Address: _____

Utility_____
_____
(Existing Account Number, if generator to be interconnected
on the Customer side of a utility revenue meter)_____

Type of Interconnect Service Applied for (choose one):_____Network Resource, _____Energy Only,_____Load Response (no export)_____Net metering

SECTION 2. GENERATOR QUALIFICATIONS

Data apply only to the Generating Facility, not the Interconnection Facilities.

Energy Source:

- ☐ Solar
- ☐ Wind
- ☐ Hydro
- ☐ Hydro type (e.g. Run-of-River)
- ☐ Diesel
- ☐ Natural Gas
- ☐ Fuel Oil
- ☐ Other (state type);_____

Prime Mover:

- ☐ Fuel Cell
- ☐ Recip Engine
- ☐ Gas Turbine
- ☐ Steam Turbine
- ☐ MicroTurbine
- ☐ PV
- ☐ Storage Batteries
- ☐ Other (state type);_____

Type of Generator:_____Synchronous_____Induction_____Inverter

Generator Nameplate Rating:_____kW (Typical);

Generator Nameplate kVA: _____

Number of Units:_____

Total Export Capacity: _____kW ___ kVA ____

Interconnection Customer or Customer-Site Load:_____kW (if none, so state)

Typical Reactive Load (if known): _____

List components of the Generating Facility Equipment Package that are currently certified:

	Equipment Type	Certifying Entity
1.		
2.		
3.		
4.		
5.		

Is the prime mover compatible with the certified protective relay package?
____Yes_____No

Generator (or energy storage or solar collector) Manufacturer, Model Name & Number: Version Number:
Nameplate Output Power Rating in kW:
(Summer)_____; (Winter) _____
Nameplate Output Power Rating in kVA:
(Summer)_____; (Winter) _____

Individual Generator Power Factor
Rated Power Factor: Leading:_____Lagging: _____

Total Number of Generators to be interconnected pursuant to this Interconnection Application:_____; Elevation:_____;___Single phase;___Three phase

Inverter Manufacturer, Model Name & Number (if used): _____

List of adjustable set points for the protective equipment or software: _____

Note: A completed Power Systems Load Flow data sheet must be supplied with the Interconnection Application.

Generating Facility Characteristic Data (for inverter-based machines):
Max design fault contribution current: Instantaneous or RMS?
Harmonics Characteristics:
Start-up requirements:

Generating Facility Characteristic Data (for rotating machines):
RPM Frequency: _____
(*) Neutral Grounding Resistor (If Applicable): _____

Synchronous Generators:
Direct Axis Synchronous Reactance, Xd:_____P.U.
Direct Axis Transient Reactance, X' d:_____P.U.
Direct Axis Subtransient Reactance, X" d:_____P.U.
Negative Sequence Reactance, X2:_____P.U.

Zero Sequence Reactance, X0:_____P.U.
KVA Base: _____
Field Volts: _____
Field Amperes: _____

Induction Generators:

Motoring Power (kW): _____
I2t or K (Heating Time Constant): _____
Rotor Resistance, Rr: _____
Stator Resistance, Rs: _____
Stator Reactance, Xs: _____
Rotor Reactance, Xr: _____
Magnetizing Reactance, Xm: _____
Short Circuit Reactance, Xd": _____
Exciting Current: _____
Temperature Rise: _____
Frame Size: _____
Design Letter: _____
Reactive Power Required In Vars (No Load): _____
Reactive Power Required In Vars (Full Load): _____
Total Rotating Inertia, H:_____Per Unit on kVA Base

Note: Please contact the Utility prior to submitting the Interconnection Application to determine if the specified information above is required.

Excitation and Governor System Data for Synchronous Generators Only:

Provide appropriate IEEE model block diagram of excitation system, governor 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 substituted.

SECTION 3. INTERCONNECTION FACILITIES INFORMATION

Will a transformer be used between the generator and the Point of Common Coupling? ___Yes___No

Transformer Data (If Applicable, for Interconnection Customer-Owned Transformer):

Is the transformer:_____single phase_____three phase? Size:_____kVA
Transformer Impedance:_____percent on_____kVA Base
If Three Phase:
Transformer Primary:_____Volts_____Delta_____Wye_____Wye Grounded
Transformer Secondary:_____Volts_____Delta_____Wye_____Wye Grounded
Transformer Tertiary:_____Volts_____Delta_____Wye_____Wye Grounded

Transformer Fuse Data (If Applicable, for Interconnection Customer-Owned Fuse):

(Attach copy of fuse manufacturer's Minimum Melt and Total Clearing Time-Current Curves)
Manufacturer: _____ Type: _____ Size: _____Speed: _____

Interconnecting Circuit Breaker (if applicable):

Manufacturer:_____Type: _____
Load Rating (Amps): _____ Interrupting Rating (Amps): _____ Trip Speed (Cycles): _____

Interconnection Protective Relays (If Applicable):

If Microprocessor-Controlled:
List of Functions and Adjustable Setpoints for the protective equipment or software:

Setpoint Function	Minimum	Maximum
1.		
2.		
3.		
4.		
5.		
6.		

If Discrete Components:
(Enclose Copy of any Proposed Time-Overcurrent Coordination Curves)

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 (If Applicable):
(Enclose Copy of Manufacturer's Excitation and Ratio Correction Curves)
Manufacturer:
Type: Accuracy Class: Proposed Ratio Connection: _____
Manufacturer:
Type: Accuracy Class: Proposed Ratio Connection: _____

Potential Transformer Data (If Applicable):
Manufacturer:
Type: Accuracy Class: Proposed Ratio Connection: _____
Manufacturer:
Type: Accuracy Class: Proposed Ratio Connection: _____

Limited Export and Non-Export Controls Information

Manufacturer: _____

Model Number: _____

Limited Export or Non-Export? ☐ Limited Export ☐ Non-Export

Control Type:

_____ Reverse Power Protection

_____ Relative Distributed Energy Resource Rating

_____ Power Control System

_____ Directional Power Protection

_____ Minimum Power Protection

_____ Configured Power Rating

_____ Export Control using mutually agreed-upon means

Control Power Setting: _____

Control Power Time Delay (if any): _____

Power Control System Open-Loop Response Time: Maximum _____ Average _____

When grid-connected, will the PCS employ any of the following? [Select all that apply]

- ☐ Unrestricted mode
- ☐ Export only mode
- ☐ Import only mode
- ☐ No exchange mode
- ☐ Export-limiting from all sources
- ☐ Export limiting from ESS
- ☐ Import limiting to ESS

Battery Storage Facility Information (If Applicable)

Do the batteries share an inverter with a renewable energy system? ☐ Yes ☐ No

Does the applicant intend to have the batteries charged by the distribution grid? ☐ Yes ☐ No

System Manufacturer: _____

Model: _____

Battery System Charge/Discharge Rating (kW AC): _____

Maximum Battery System Charge/Discharge Rate (kW AC per second): _____

Battery Energy Capacity (kWh): _____

Battery Operational Information

Backup – allows for partial or whole home transition to off-grid during a grid outage ☐ Yes ☐ No

Solar Self-Powered – the battery will charge from the renewable energy source during normal operation and discharge to serve loads behind your meter ☐ Yes ☐ No

Solar Non-Export – limits the export of energy to the grid to zero for both the battery and solar inverter, even if the battery system is fully charged and there is excess renewable source energy ☐ Yes ☐ No

Time-Based Control (sometimes called time-of-use or TOU mode) – the battery charges during off-peak hours and discharges to serve onsite loads during on-peak hours. ☐ Yes ☐ No

Describe any other intended operation of the battery: _____

_____

Reference Point of Applicability (RPA) Designation

Where is the desired RPA location? [Check one]

- ☐ Point of DER connection (PoC)
- ☐ Point of interconnection / point of common coupling (PCC)
- ☐ Another point between PoC and PCC
- ☐ Different RPAs for different DER units

Is the RPA location the same as above for detection of abnormal voltage, faults and open-phase conditions?

- ☐ Yes
- ☐ No (detection location must be denoted in the one-line diagram)

Why does this DER fit the chosen RPA? [Check all that apply]

- ☐ Zero-sequence continuity between PCC and PoC is maintained
- ☐ The DER aggregate Nameplate Rating is less than 500 kVA
- ☐ Annual average load demand is greater than 10% of the aggregate DER Nameplate Rating, and it is not capable of, or is prevented from, exporting more than 500 kVA for longer than 30 seconds.

SECTION 4. GENERAL INFORMATION

Enclose copy of site electrical one-line diagram showing the configuration of all Generating Facility equipment, Reference Point of Applicability, current and potential circuits, and protection and control schemes.

This one-line diagram must be signed and stamped by a licensed Professional Engineer if the Generating Facility is larger than 50 kW. Is One-Line Diagram Enclosed?
_____Yes _____ No

Enclose copy of any site documentation that indicates the precise physical location of the proposed Generating Facility (e.g., USGS topographic map or other diagram or documentation).

Proposed location of protective interface equipment on property (include address if different from the Interconnection Customer's address) _____

Enclose copy of any site documentation that describes and details the operation of the protection and control schemes. Is Available Documentation Enclosed?
_____Yes _____ No

Enclose copies of schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits (if applicable). Are Schematic Drawings Enclosed?
_____Yes _____ No

Enclose a copy of specification sheets for all applicable interface and control equipment, e.g., inverters, energy storage system, gateway, plant controller, automatic transfer switch and power control system.

Are specification sheets enclosed?
_____Yes _____ No

SECTION 5. APPLICANT SIGNATURE

I hereby certify that, to the best of my knowledge, all the information provided in the Interconnection Application is true and correct. I also agree to install a Warning Label provided by (utility) on or near my service meter location. Generating systems must be compliant with IEEE, NEC, ANSI, and UL standards, where applicable. By signing below, the Applicant also certifies that the installed generating equipment meets the appropriate preceding requirement(s) and can supply documentation that confirms compliance.

Signature of Applicant: _____
Date: _____

SECTION 6. INFORMATION REQUIRED PRIOR TO PHYSICAL INTERCONNECTION

(Not required as part of the application, unless available at time of application.)

Installing Electrician:_____Firm:_____

License No.: _____

Mailing Address: _____

City:_____State:_____Zip Code: _____

Telephone:_____

Installation Date: _____

Interconnection Date: _____

Signed (Inspector – if required): _____

Date: _____

(In lieu of signature of Inspector, a copy of the final inspection certificate may be attached)