

ATTACHMENT A
(DGI and Purchase Policy)

APPLICATION FOR INTERCONNECTION OF A DISTRIBUTED GENERATION FACILITY

This application should be completed as soon as possible and returned to the System Engineer for processing of the request. See *Distributed Generation Interconnection and Purchase Policy* for additional information.

INFORMATION: This application is used by the Cooperative to determine the required equipment configuration for the Facility interface. Every effort should be made to supply as much information as possible. Permission to Operate is granted upon the full execution of the document entitled "Agreement for Interconnection and Parallel Operation".

PART I

OWNER/APPLICANT INFORMATION

Company: _____
Mailing Address: _____
City: _____ County: _____ State: _____ Zip Code: _____
Phone Number: _____ Representative: _____
Email address: _____

PROJECT DESIGN/ENGINEERING INFORMATION (as applicable)

Company: _____
Mailing Address: _____
City: _____ County: _____ State: _____ Zip Code: _____
Phone Number: _____ Representative: _____
Email address: _____

ELECTRICAL CONTRACTOR INFORMATION (as applicable)

Company: _____
Mailing Address: _____
City: _____ County: _____ State: _____ Zip Code: _____
Phone Number: _____ Representative: _____
Email address: _____

ACCOUNT ID & ADDRESS INFORMATION

Is the DG Source proposed to interconnect with an _____ Existing? _____ New Account?

Existing Service Account #: _____
Existing Meter #: _____
Existing Service Address: _____
City: _____ County: _____ State: _____ Zip Code: _____
Phone Number: _____ Representative: _____
Email address: _____

New Service Address: _____
City: _____ County: _____ State: _____ Zip Code: _____
Phone Number: _____ Representative: _____
Email address: _____

PART II

PROPOSED INTERCONNECTION INFORMATION (as applicable)

Generator Type: Inverter, Synchronous, Induction _____
Energy Source Type: Photovoltaic, Wind, Natural Gas, Diesel, Methane _____
Initial DG Facility Capacity - Kilowatt Rating (AC/DC): _____
Planned DG Facility Capacity - Kilowatt Rating (AC/DC): _____
% Power Factor: _____
Output Voltage Rating (VAC/VDC): _____
Number of Phases: _____
Frequency (Hz): _____
Certified & Labelled per UL-1741 or IEEE 1547: Y/N _____
Planned Energization Date: _____

WCEC INTERCONNECTION SERVICE REQUIRED

SINGLE PHASE TRANSFORMER:

_____ 1 PHASE / 3 WIRE – 240/120 V
_____ 1 PHASE / 3 WIRE – 480/240 V

3 PHASE WYE PRIMARY:

_____ 4 WIRE – 240/120 V
_____ 4 WIRE – 208/120 V
_____ 4 WIRE – 480/240 V
_____ 4 WIRE – 480/277 V
_____ 4 WIRE – 4160/2400 V
_____ 4 WIRE – 12470/7200 V

WCEC POINT-OF-INTERCONNECTION INFORMATION

_____ UNDERGROUND SERVICE METER BASE (STUB MOUNTED)
_____ OVERHEAD SERVICE WEATHER-HEAD (MEMBER OWNED POLE)
_____ OVERHEAD SERVICE WEATHER-HEAD (BUILDING STRUCTURE)
_____ OTHER: _____

NOTE: The attachment of foreign equipment to Wood Co. Electric facilities such as poles, meter pedestals, etc. is strictly prohibited.

ESTIMATED ON-SITE LOAD INFORMATION

The following information will be used to help ensure the proper design for an existing or a new Cooperative Member interconnection. The load referenced below is the expected power demand (kW) to be used at this site, not the power generated. This information is not intended as a commitment or contract for billing purposes.

Initial Site Peak Load: _____ (kW)

Planned Site Peak Load: _____ (kW)

NORMAL MODE OF OPERATION FOR INTERCONNECTION (check all that apply)

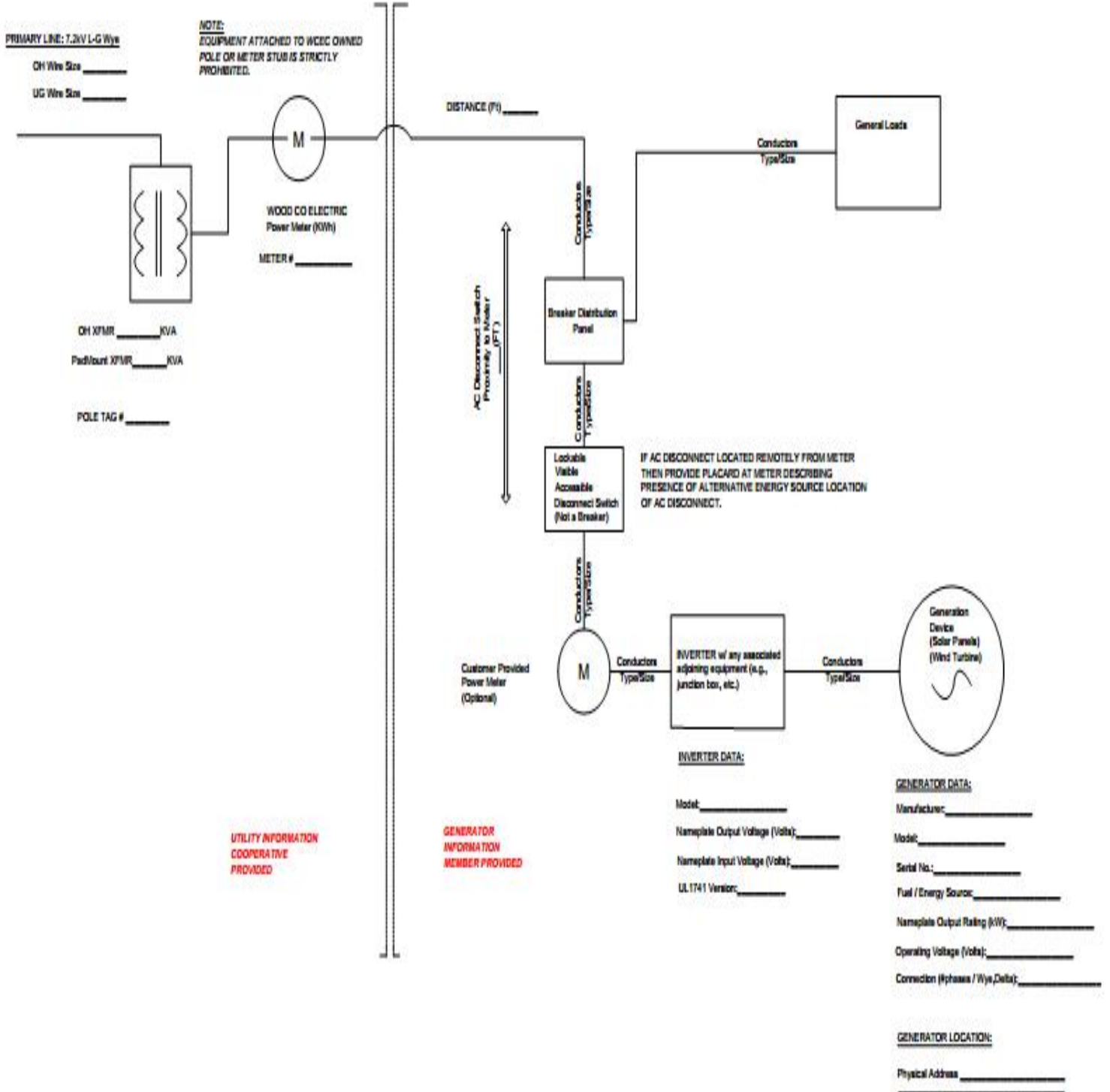
Isolated for Site Load _____ Paralleling _____ Power Export _____

DESCRIPTION OF PROPOSED INSTALLATION AND OPERATION

Give a general description of the proposed installation, including Operational Scheduling.

PLEASE PROVIDE A SINGLE-LINE ELECTRICAL DIAGRAM OF THE PROPOSED DISTRIBUTED GENERATION SYSTEM INCLUDING APPLICABLE BATTERY STORAGE, STAND-BY GENERATION, TRANSFER SWITCHING, ETC.

DISTRIBUTED GENERATION SINGLE-LINE DIAGRAM - Example #1



PART III

SOLAR INVERTER INFORMATION (if applicable)

Quantity: _____
Manufacturer: _____ Model: _____
Phasing: _____ Single Phase _____ Three Phase
Rated Power Factor (%): _____
Efficiency @ Rated Voltage Output (%): _____
Rated Voltage Output (Nominal L-L AC): _____
Maximum Continuous Output Current (Amperes AC): _____
Maximum Continuous Output Power (Volt-Amperes AC): _____
Inverter Type (ferroresonant, step, pulse-width modulation, etc.): _____
Type commutation: ___ forced ___ line
Harmonic Distortion: Maximum Single Harmonic (%) _____
Maximum Total Harmonic (%) _____
UL 1741 Certified (Y/N): _____

Note: Attach available spec sheets, calculations, test reports, and oscillographic prints showing inverter output voltage and current waveforms.

SOLAR PANEL INFORMATION (if applicable)

Quantity: _____
Manufacturer: _____ Model: _____
Rated Maximum Power Output @ STC (Watts DC): _____
Maximum Power Voltage (Vmp) (Volts DC): _____
Maximum Power Current (Imp) (Amperes DC): _____

WIND INVERTER INFORMATION (if applicable)

Quantity: _____
Manufacturer: _____ Model: _____
Phasing: _____ Single Phase _____ Three Phase
Rated Power Factor (%): _____
Efficiency @ Rated Voltage Output (%): _____
Rated Voltage Output (Nominal L-L AC): _____
Maximum Continuous Output Current (Amperes AC): _____
Maximum Continuous Output Power (Volt-Amperes AC): _____
Inverter Type (ferroresonant, step, pulse-width modulation, etc.): _____
Type commutation: ___ forced ___ line
Harmonic Distortion: Maximum Single Harmonic (%) _____
Maximum Total Harmonic (%) _____
UL 1741 Certified (Y/N): _____

Note: Attach available spec sheets, calculations, test reports, and oscillographic prints showing inverter output voltage and current waveforms.

WIND TURBINE INFORMATION (if applicable)

Quantity: _____
Manufacturer: _____ Model: _____
Rated Maximum Power Output (Watts ac/dc): _____
Maximum Power Voltage (Vmp) (Volts ac/dc): _____
Maximum Power Current (Imp) (Amperes ac/dc): _____
UL 1741 Certified (Y/N): _____

SYNCHRONOUS GENERATOR INFORMATION (if applicable)

Unit Number: _____ Total number of units with listed specifications on site: _____
Manufacturer: _____
Type: _____ Date of manufacture: _____
Serial Number (each): _____
Phases: Single: _____ Three: _____ R.P.M.: _____ Frequency (Hz): _____
Rated Output (for one unit): _____ Kilowatt: _____ Kilovolt-Amper: _____
Rated Power Factor (%): _____ Rated Voltage (Volts): _____ Rated Amperes: _____
Field Volts: _____ Field Amps: _____ Motoring power (kW): _____
Synchronous Reactance (X'd): _____ % on _____ KVA base
Transient Reactance (X'd): _____ % on _____ KVA base
Subtransient Reactance (X'd): _____ % on _____ KVA base
Negative Sequence Reactance (Xs): _____ % on _____ KVA base
Zero Sequence Reactance (Xo): _____ % on _____ KVA base
Neutral Grounding Resistor (if applicable): _____

I₂²t of K (heating time constant): _____
Additional Information: _____

INDUCTION GENERATOR INFORMATION (if applicable)

Rotor Resistance (Rr): _____ ohms Stator Resistance (Rs): _____ ohms
Rotor Reactance (Xr): _____ ohms Stator Reactance (Xs): _____ ohms
Magnetizing Reactance (Xm): _____ ohms Short Circuit Reactance (Xd): _____ ohms
Design letter: _____ Frame Size: _____
Exciting Current: _____ Temp Rise (deg C°): _____
Reactive Power Required: _____ Vars _____ (no load), Vars: _____ (full load)
Additional Information: _____

PRIME MOVER INFORMATION (if applicable)

Unit Number: _____ Type: _____
Manufacturer: _____
Serial Number: _____ Date of manufacturer: _____
H.P. Rates: _____ H.P. Max.: _____ Inertia Constant: _____ lb.-ft²
Energy Source (hydro, steam, wind, etc.): _____

GENERATOR TRANSFORMER INFORMATION (if applicable)

(between GENERATOR and WCEC SYSTEM)

Generator unit number: _____ Date of manufacturer: _____

Manufacturer: _____

Serial Number: _____

High-Side Voltage: _____ KV, _____ delta _____ wye, Neutral solidly grounded? _____

Low-Side Voltage: _____ KV, _____ delta _____ wye, Neutral solidly grounded? _____

Transformer Impedance (Z): _____ % on _____ KVA base

Transformer Resistance (R): _____ % on _____ KVA base

Transformer Reactance (X): _____ % on _____ KVA base

Neutral Grounding Resistor (if applicable): _____

POWER CIRCUIT BREAKER INFORMATION (if applicable)

Manufacturer: _____ Model: _____

Rated Voltage (*kilovolts*): _____ Rated ampacity (*Amperes*): _____

Interrupting rating (Amperes): _____ BIL Rating: _____

Interrupting medium / insulating medium (ex. Vacuum, gas, oil): _____/_____

Control Voltage (Closing): _____ (Volts) _____ AC _____ DC

Control Voltage (Tripping): _____ (Volts) _____ AC _____ DC _____ Battery Charged Capacitor

Close Energy: _____ Spring _____ Motor _____ Hydraulic _____ Pneumatic _____ Other

Trip energy: _____ Spring _____ Motor _____ Hydraulic _____ Pneumatic _____ Other

Bushing Current Transformers: _____ (Max. ratio) Relay Accuracy Class: _____

Multi Ratio? _____ No _____ Yes: (available taps) _____

ENERGY STORAGE INFORMATION (if applicable)

Battery Manufacturer: _____

Battery Model: _____

Battery Quantity: _____

Storage Capacity per battery (Ampere-Hours): _____

Battery Technology (Li+, NiCaD, NiMH, etc.): _____

Total Site Storage Capacity (Ampere-Hours): _____

Total Site Maximum Continuous Power Output (Watts DC): _____

Total Site Maximum Power Voltage (Vmp) (Volts DC): _____

Total Site Maximum Power Current (Imp) (Amperes DC): _____

Is the battery bank intended to provide Back-up/Standby power during a WCEC line outage?

(Y/N): _____

If yes, please explain: _____

Does this battery storage system feed a Dedicated Inverter that receives DC power only from the battery system? (Y/N): _____

If yes, please explain: _____

BACK-UP / STANDBY POWER (if applicable)

Note: If battery storage or stand-by generation is integrated with the DG system for the purposes of stand-by power at this site, a properly rated means of electrical disconnect such as a transfer switch is required to entirely disconnect

from the WCEC grid Point-Of-Connection (typically the meter). This requirement is to ensure that no back-feed voltage is being generated onto WCEC lines from the DG / battery system / stand-by generator during a WCEC line outage.

Transfer Switch Operation: _____ Manual _____ Automatic
Power Transfer Switch Rated Voltage (V ac/dc): _____
Power Transfer Switch Rated Amperage (A ac/dc): _____

PRE-EXISTING DG SYSTEM INTERCONNECTED (if applicable)

If modifying or adding to an existing DG system, please provide information requested below:

_____ Solar _____ Wind _____ Other

Inverter: Qty: _____ Manufacturer: _____ Model: _____
Total Output (Watts AC): _____

Solar Panels:
Qty: _____ Manufacturer: _____ Model: _____
Total Output (Watts DC): _____

Turbine:
Qty: _____ Manufacturer: _____ Model: _____
Total Output (Watts DC): _____

SIGN OFF AREA

The Member agrees to provide the Cooperative with any additional information required to complete the interconnection. The Member shall operate his equipment within the guidelines set forth by the Cooperative.

Applicant

Date

WOOD COUNTY ELECTRIC COOPERATIVE, INC. CONTACT FOR APPLICATION SUBMISSION AND FOR MORE INFORMATION:

Cooperative contact:

Name: _____

Title: _____

Physical Address: Wood County Electric Cooperative
501 S. Main St.
Quitman, TX 75783

Mailing Address Wood County Electric Cooperative
Attn: Brian Morgan, P.E.
System Engineer
P.O. Box 1827
Quitman, TX 75783

Phone: (903) 763-6513

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Email: brian.morgan@wcec.org