

ENGINEERING DATA SUBMITTAL

For the Interconnection of Generation System



WHO SHOULD FILE THIS SUBMITTAL: Anyone in the final stages of interconnecting a Generation System with Central Electric Cooperative, Inc. This submittal shall be completed and provided to Central Electric's Engineering Department during the design of the Generation System, as established in the "Central Electric's Interconnection Process for Distributed Generation Systems".

INFORMATION: This submittal is used to document the interconnected Generation System. The Applicant's Engineer (if applicable) should complete as much of the form as applicable and the Applicant shall sign and return the form to Central Electric. The Applicant will be contacted if additional information is required.

OWNER / APPLICANT		
Company / Applicant:		
Representative:	Phone Number:	FAX Number:
Title:		
Mailing Address:		
Email Address:		

PROPOSED LOCATION OF GENERATION SYSTEM INTERCONNECTION
Street Address, Legal Description or GPS coordinates:

PROJECT DESIGN / ENGINEERING (if applicable)		
Company:		
Representative:	Phone:	FAX Number:
Mailing Address:		
Email Address:		

ELECTRICAL CONTRACTOR (if applicable)		
Company:		
Representative:	Phone:	FAX Number:
Mailing Address:		
Email Address:		

TYPE OF INTERCONNECTED OPERATION	
Interconnection / Transfer method: <input type="checkbox"/> Open <input type="checkbox"/> Closed <input type="checkbox"/> Soft Loading <input type="checkbox"/> Extended Parallel <input type="checkbox"/> Inverter	
Proposed use of generation: (Check all that may apply) <input type="checkbox"/> Peak Reduction <input type="checkbox"/> Standby <input type="checkbox"/> Energy Export Sales <input type="checkbox"/> Cover Load	Duration Parallel: <input type="checkbox"/> None <input type="checkbox"/> Limited <input type="checkbox"/> Continuous
Transfer Switch Mfg. _____ Model _____	Amps: Switchgear _____ Transfer Switch _____

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ESTIMATED LOAD		
The following information will be used to help properly design the interconnection. This Information is not intended as a commitment or contract for billing purposes.		
Minimum anticipated load (generation not operating):	kW:	kVA:
Maximum anticipated load (generation not operating):	kW:	kVA:

GENERATION SYSTEM OPERATING INFORMATION	
Fuel Capacity (gals):	Full Fuel Run-time (hrs):
Engine Cool Down Duration (Minutes):	Start time Delay on Load Shed signal:
Start Time Delay on Outage (Seconds):	

GENERATION SYSTEM OPERATION / MAINTENANCE CONTACT INFORMATION		
Maintenance Provider:	Phone #:	Pager #:
Operator Name:	Phone #:	Pager #:
Person to Contact before remote starting of units		
Contact Name:	Phone #:	Pager #:
	24hr Phone #:	

REQUESTED CONSTRUCTION START/COMPLETION DATES	
Design Completion:	
Construction Start Date:	
Footings in place:	
Primary Wiring Completion:	
Control Wiring Completion:	
Start Acceptance Testing:	
Generation operational (In-service):	

TRANSFER SWITCH (If applicable)		
Number of Transfer Switches planned _____	Amperage of Switchgear & Transfer Switches	
1. Transfer Switch Mfg. _____ Model _____	Switchgear _____	Transfer Switch _____
2. Transfer Switch Mfg. _____ Model _____	Switchgear _____	Transfer Switch _____
3. Transfer Switch Mfg. _____ Model _____	Switchgear _____	Transfer Switch _____
4. Transfer Switch Mfg. _____ Model _____	Switchgear _____	Transfer Switch _____
5. Transfer Switch Mfg. _____ Model _____	Switchgear _____	Transfer Switch _____

Relay Information : Please Include pickup setting and time delay for each protective element			
Relay Type		Relay Model No.	
CT Ratio		VT Ratio	
Under-voltage (27)		Reverse Power (32R)	
Over-current (50/51)		Lockout Relay (86) trips...	
Over-voltage (59)		Synch Check Relay (25)	
Under-frequency (81U)		Parallel Limit Timer (62PL)	
Over-frequency (81O)			

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PRIME MOVER (Complete all applicable items)			
Unit Number:		Type:	
Manufacturer:			
Serial Number:		Date of Manufacture:	
H.P. Rated:	H.P. Max:	Inertia Constant:	lb.-ft. ²
Energy Source (hydro, steam, wind, wind etc.):			

SYNCHRONOUS GENERATOR (if applicable)			
Unit Number:		Total number of units with listed specifications on site:	
Manufacturer:		Type:	Phases: 1 or 3
Serial Number (each)		Date of manufacture:	Speed (RPM): Freq. (Hz);
Rated Output (each unit) kW Standby:		kW Prime:	kVA:
Rated Power Factor (%):		Rated Voltage(Volts):	Rated Current (Amperes):
Field Voltage (Volts):		Field Current (Amperes):	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 (X ₂):		% on	kVA base
Zero Sequence Reactance (X ₀):		% on	kVA base
Neutral Grounding Resistor (if applicable):			
I ² t or K (heating time constant):			
Exciter data:			
Governor data:			
Additional Information:			

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INDUCTION GENERATOR (if applicable)			
Rotor Resistance (R_r):	Ohms	Stator Resistance (R_s):	Ohms
Rotor Reactance (X_r):	Ohms	Stator Reactance (X_s):	Ohms
Magnetizing Reactance (X_m):	Ohms	Short Circuit Reactance (X_d''):	Ohms
Design Letter:		Frame Size:	
Exciting Current:		Temp Rise (deg C°):	
Rated Output (kW):			
Reactive Power Required:		k Vars (no Load)	kVars (full load)
If this is a wound-rotor machine, describe any external equipment to be connected (resistor, rheostat, power converter, etc.) to rotor circuit, and circuit configuration. Describe ability, if any, to adjust generator reactive output to provide power system voltage regulation.			
Additional Information:			

INTERCONNECTION (STEP-UP) TRANSFORMER (If applicable)			
Manufacturer:		kVA:	
Date of Manufacture:	Serial Number:		
High Voltage: kV	Connection: delta	wye	Neutral solidly grounded?
Low Voltage: kV	Connection: 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)			

INVERTER (If applicable)		
Manufacturer:		Model:
Rated Power Factor (%):	Rated Voltage (Volts):	Rated Current (Amperes):
Inverter Type (ferroresonant, step, pulse-width modulation, etc.):		
Type of Commutation: forced line	Minimum Short Circuit Ratio required:	
Minimum voltage for successful commutation:		
Current Harmonic Distortion	Maximum Individual Harmonic (%): _____	
	Maximum Total Harmonic Distortion (%): _____	
Voltage Harmonic Distortion	Maximum Individual Harmonic (%): _____	
	Maximum Total Harmonic Distortion (%): _____	
Describe capability, if any, to adjust reactive output to provide voltage regulation:		
NOTE: Attach all available calculations, test reports, and oscillographic prints showing inverter output voltage and current waveforms.		

