

Appendix C



**Engineering Data Submittal
For the Interconnection/Wheeling of a
Generation System**

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

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

OWNER / INTERCONNECTION MEMBER		
Company / Interconnection Member:		
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 _____

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 (if applicable)	
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):	

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°):	
Nameplate 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)			

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)	

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	<u>Maximum Individual Harmonic (%):</u> <u>Maximum Total Harmonic Distortion (%):</u>	
Voltage Harmonic Distortion	<u>Maximum Individual Harmonic (%):</u> <u>Maximum Total Harmonic Distortion (%):</u>	
Describe capability, if any, to adjust reactive output to provide voltage regulation:		
<p>NOTE: Attach all available calculations, test reports, and oscillographic prints showing inverter output voltage and current waveforms.</p>		

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 #:	