HILL COUNTY ELECTRIC COOPERATIVE

Application for Operation of Customer-Owned Generation

This application should be completed as soon as possible and returned to Hill County Electric Cooperative (HCE) in order to begin processing the request. See HCE Policy Manual Section 10: Interconnection of Small Customer Generation Facilities for additional information.

INFORMATION: This application is used by the Cooperative to determine the required equipment configuration for the Customer interface. Every effort should be made to supply as much information as possible.

Company:					
Mailing Address:					
	County:				
Phone Number:	Representative:				
PROJECT DESIGN	/ENGINEERING (AR	CHITECT) (as annli	cable)		
	`	, , , , , , , , , , , , , , , , , , ,	,		
	County:				
	NTRACTOR (as applic				
ELECTRICAL CO	NTRACTOR (as applic	eable)			
ELECTRICAL CO	NTRACTOR (as applic	eable)			
ELECTRICAL COMPONENTS Company: Mailing Address:	NTRACTOR (as applic	eable)			
ELECTRICAL COMPANY: Company: Mailing Address: City:	NTRACTOR (as applic	State:	Zip Code:		
ELECTRICAL COMMON Company: Mailing Address: City: Phone Number:	NTRACTOR (as applic	sable) State: Representative:	Zip Code:		
ELECTRICAL COMMON Company: Mailing Address: City: Phone Number:	NTRACTOR (as applic	sable) State: Representative:	Zip Code:		
ELECTRICAL COMPANY: Company: Mailing Address: City: Phone Number: TYPE OF GENERA Photographics	County: County:TOR (as applicable)	State:	Zip Code:		
ELECTRICAL COMPANY: Company: Mailing Address: City: Phone Number: TYPE OF GENERA Photovoltaic	County: TOR (as applicable) Wind	State:	Zip Code:_		

ESTIMATED LOAD, GENERATOR RATING AND MODE OF OPERATION INFORMATION

The following information will be used to help properly design the Cooperative customer interconnection. This information is not intended as a commitment or contract for billing purposes. Total Site Load _____(kW) Commercial _____ Residential Industrial Generator Rating _____(kW) Annual Estimated Generation (kWh) **Mode of Operation** Isolated _____ Paralleling _____ Power Export _____ DESCRIPTION OF PROPOSED INSTALLATION AND OPERATION Give a general description of the proposed installation, including a detailed description of its planned location and when you plan to operate the generator. PART 2 (Complete all applicable items. Copy this page as required for additional generators) SYNCHRONOUS GENERATOR DATA Unit Number: ______Total number of units with listed specifications on site: _____ Manufacturer: Date of manufacture: Type: Serial Number (each):

Phases: Single Three R.P.M.: Frequency (Hz): ___ Rated Output (for one unit): _____Kilowatt ____Kilovolt-Ampere
Rated Power Factor (%): ____Rated Voltage (Volts): ____Rated Amperes: ____ Field Amps: _____ Motoring power (kW): ____ Field Volts: <u>%</u> on _____ KVA base Synchronous Reactance (Xd): % on Transient Reactance (X'd): 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): I_2^2 t or K (heating time constant):

Additional information:					
INDUCTION GENERATOR	R DATA				
Rotor Resistance (Rr):		ohms	Stator Resistance (Rs):	ohms	
Rotor Reactance (Xr):	(hms	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	Temp Rise (deg C°):load),	Vars (full load)	
Additional information:					
PRIME MOVER (Complete					
Unit Number:	_ 1 ype:				
Manufacturer:		Data of	agnufacturar:		
LLD Detad.	IID Mov.	_ Date of fi	nanufacturer: Inertia Constant:	11 ₆ G 2	
Energy Source (hydro steem	H.P. Max.:		Inerua Constant:	IDIL	
Energy Source (hydro, steam,	wind, etc.)				
GENERATOR TRANSFOR TRANSFORMER (between g Generator unit number: Manufacturer:	enerator and utility s	ystem) Date of	manufacturer:		
Serial Number:					
High Voltage:	KV, Connection:	delta	wye, Neutral solidly grounded?		
Low Voltage:	_ KV, Connection:	delta	wye, Neutral solidly g rounded?		
Transformer Impedance(Z): _			% on	KVA base.	
Transformer Resistance (R): _			% on	KVA base.	
Transformer Reactance (X): _Neutral Grounding Resistor (i			% on	KVA base.	
INVERTER DATA (if app	plicable)	•••••			
Manufacturer:			Model:		
Rated Power Factor (%):	Rated V	oltage (Vo	Model:Rated Amper	es.	
Inverter Type (ferroresonar	nt, step, pulse-width	modulatio	on, etc):		
Type commutation: for Harmonic Distortion: Maximaxim Maxim Note: Attach all available	mum Single Harmo	onic (%) ic (%) eports, and	l oscillographic prints showing	inverter output	
voltage and current wavefo					
POWER CIRCUIT BREA	AKER (if applicable	e)			
Manufacturer:			Model:		
Rated Voltage (kilovolts):		Model:			

Interrupting rating (A		BIL Rating:/					
						/	
Control Voltage (Clos	sing):	(Volts) AC	DC	_		
Control Voltage (Trip	ping):	(Volts) AC	DC	Battery	Charged Capacitor	
Close energy: Sprin	g Motor	Hydraulic I	neumat	tic	Other: _	Charged Capacitor	
Trip energy: Sprin	g Motor	Hydraulic	'neumat	11C	Other:		
Bushing Current Tran Multi ratio?	stormers:	(Max. r	itio) Re	iay Ac	curacy Cla	iss:	
		: (Available taps)					
			•••••			•••••	
ADDITIONAL INFO	ORMATION						
all applicable eleme breakers, protective r documents necessary	ntary diagran elays, etc.) spe for the proper	ns, major equipment ecifications, test repo r design of the interc	, (gene rts, etc. onnecti	rators, , and on. Al	transform any other so describe	of the proposed facility ners, inverters, circui applicable drawings o e the project's planned ss or grid coordinates.	
END OF PART	2						
SIGN OFF AREA							
interconnection. The cooperative.						equired to complete the t forth by the	
Applicant			j	Date			
ELECTRIC COOPE INFORMATION:	ERATIVE CO	NTACT FOR APPI	JCATI	ON SI	UBMISSIO	ON AND FOR MORE	
Cooperative contact:	Jim Sands				Warren S	Schmitt	
Title:	Engineering	& Operations Manag	ger		Operation	ns Coordinator	
Address:	Hill County	Electric Cooperative	Inc.				
	PO Box 233	80					
	Havre, MT	59501					
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e-mail:	jsands@its	Triangle.net			wschmit	t@itsTriangle.net	