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Chugach Electric Association, Inc.

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OF ALASKA

## APPENDIX D

Application for Interconnection of Electric Power Sources Greater than 5 MVA to the Power Transmission Grid

Chronology: Original filed in 2008 under Tariff Advice No. 297-8	÷	····	· · · · · · · · · · · · · · · · · · ·	
Pursuant to: U-08-138(1)		Effective:	December 5, 2008	
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Issued by:

Chugach Electric Association, Inc.

P.O. Box 196300, Anchorage, Alaska 99519-6300

By:

Title: Chief Executive Officer

## RECEIVED

AUG 1 5 2008

## Application for Interconnection of Electric Power Sources greater than 5 MVA to the Power Transmission Grid

STATE OF ALASKA
REGULATORY COMMISSION OF ALASKA

Who Should File This Application: Association members proposing to construct and/or operate electrical generation facilities of capacity greater than 5 MegaVolt-Amperes (MVA) interconnected and in-parallel with Chugach Electric Association, Inc's (Chugach's) subtransmission or transmission systems.

**Application Use:** This application is used by Chugach to perform an interconnection Study to determine required interconnection equipment and configuration for the Chugach/Applicant interface. Accordingly, every effort should be made by the Applicant to supply as much information as possible.

**Design Information Submittal**: In addition to the items listed in this form, the Applicant shall include the following design information submittal items as outlined.

- A. One-Line diagram This is a schematic electrical drawing with sufficient detail to show the major elements of the facility electrical connections, interconnection and protective equipment, and point of interconnection to the Chugach electrical system.
- B. Control, Relay, Metering, and Telemetering Functional Drawing This diagram shall indicate the functions of the individual control components, relays, metering, and telemetering equipment.
- C. Paralleling Device Control Drawings These drawings shall show the conditions, relays, and instrument transformers that cause all switchgear and/or circuit breakers applied to the interconnecting facility to open or close. The source of power for each control should be clearly indicated in the drawings.

OWNER/APPLICANT INFORMATION		
Company:		
Representative:	Phone Number:	Fax Number:
Title:		
Mailing Address:		
PROPOSED LOCATION OF GENERATING PLANT AN	D INTERCONNECTION	
Address:		
PROJECT DESIGN / ENGINEERING		·
Company:		
Representative:	Phone Number:	Fax Number:
Title:		
Mailing Address:		
ELECTRICAL CONTRACTOR		
Company:		
Representative:	Phone Number:	Fax Number:
Title:		
Mailing Address:		
ESTIMATED LOAD INFORMATION		
The following information will be used to help properly de is not intended as a commitment or contract for billing pu	esign the Chugach-Customer in rposes.	nterconnection. This information
Minimum anticipated load (generation not operating)	kVA Duratio	on (indicate hours, minutes, etc)
Maximum anticipated load (generation operating)	kVA Duratio	on (indicate hours, minutes, etc)

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	s page as	required for addition	al generate	ors.)	You I 9
SYNCHRONOUS GENERATION DATA	1			REGL	STATE OF A LATORY COMMIS
Unit Number:	Total n	umber of units with li	sted specif	fications on site:	
Manufacturer:					
Type:	Manufa	acture Date:		Windings (Delta, Wye):	
Serial Number (each):	- 1				
Phases: 1 or 3	Speed	(RPM):		Frequency (Hz):	
Rated Output (each unit) Kilowatt:	Datad	\\alta== \( \)		Kilovolt-Ampere:	
Rated Power Factor (%):		Voltage (Volts): current (Amperes):		Rated Current (Amperes)  Motoring Power (kW):	
Field Voltage (Volts): Synchronous Reactance:	r leiα c X <sub>d</sub> :	X <sub>q</sub> :	% on	prototting Power (Kvv).	kVA base
Transient Reactance:	X <sub>d</sub> ':	X <sub>q</sub> ':	% on		kVA base
Subtransient Reactance:	∧d. Xd":	<b>∕</b> q · X <sub>a</sub> ":	% on		kVA base
		<b>~</b> q ⋅	% on		kVA base
Negative Sequence Reactance: Zero Sequence Reactance:	X <sub>2</sub> :		% on % on		kVA base
•	X₀:	<b>v</b> ·	% on % on		kVA base
Neutral Grounding Impedance:	R <sub>n</sub> :	X <sub>n</sub> :	76 ON		KVA Dase
Inertia constant, H (joules/VA):					
I <sup>2</sup> t or K (heating time constant):	<del> </del>				
Exciter data:					
Governer data:					
INDUCTION GENERATOR DATA Unit Number:	Total r	umber of units with	isted speci	ifications on site:	
Manufacturer:	1.0		полош орос		· · · · · · · · · · · · · · · · · · ·
Туре:	Manuf	acture Date:		Windings (Delta, Wye):	
Serial Number (each):				Speed (RPM):	
Rotor Resistance, R <sub>r</sub> , (Ohms):		Stator Resistance	R <sub>s</sub> (Ohm	<del> </del>	
Rotor Reactance, X <sub>r</sub> , (Ohms):		Stator Reactance			
Magnetizing Reactance, X <sub>m</sub> , (Ohms):			, ,,	•	
iriagnisticing i veactalice, Am. (Cillis).		Size:			
	⊩rame				
Design Letter:				H constant, (joules/VA):	
Design Letter: Exciting Current:		Rise (deg C):		H constant, (joules/VA):	
Design Letter: Exciting Current: Rated Output (kW):	Temp			H constant, (joules/VA):  kVAR (full load):	
Design Letter:	kVAR any exter	Rise (deg C):  (no load):  nal equipment to be		kVAR (full load):	
Design Letter: Exciting Current: Rated Output (kW): Reactive Power Required If this a wound-rotor machine, describe etc.) to rotor circuit, and circuit configur	kVAR any exter	Rise (deg C):  (no load):  nal equipment to be		kVAR (full load):	
Design Letter:  Exciting Current:  Rated Output (kW):  Reactive Power Required  If this a wound-rotor machine, describe etc.) to rotor circuit, and circuit configur	kVAR any exter	Rise (deg C):  (no load):  nal equipment to be		kVAR (full load):	

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Pursuant to: U-08-138(1)

AUG 1 5 2008

		le items)						STATE OF AL
Unit Number:		Туре:					REGULA	TURY COMMISS
Manufacturer:								
Serial Number:		Manufactu	ure Dat	te:				
Rated Horsepower (H.P.):		Max. Hors	epowe	er (H.P.):		Ine	ertia constant, (lbft²):	
Energy Source (fuel; hydro, s	steam, nat	ural gas, etc.)	:					
TRANSFORMER (If applicat	ble)							
Manufacturer:		kVA						
Date of Manufacture:		Serial No.			·			
High Voltage:	kV	Connectio	n:	delta	wye	Ne	eutral solidly grounded?	
_ow Voltage:	kV	Connectio	on:	delta	wye	Ne	eutral solidly grounded?	
Transformer Impedance, Z:					(	% on		kVA base
Transformer Resistance, R:						% on		kVA base
Transformer Reactance, X:	**************************************				(	% on		kVA base
Neutral Grounding Impedance	ce:	R <sub>n</sub> :	X <sub>n</sub> :		% c	n		kVA base
POWER CONVERTER DAT	TA (If applie	cable)			and definition from the control of the Polymer's	,		
Manufacturer:		Model:						
Date of Manufacture:		Serial No.						
Rated Power Factor (%):		Rated Vol	ltage (	Volts):		Re	ated Current (Amperes):	
Converter Type (ferroresona	ant, step, p	ulse-width mo	dulatio	on, etc.):				
Type of commutation: force	ed line	Minimum	Short	Circuit Re	tio requir	ed:		
Viinimum voltage for success		utation:			···			
		Maximum	Indivi	dual Harr	oonio (%)			,
				uuai naiii		•		
Current Hamonic Distortion:		Maximum (%):						
Current Hamonic Distortion:		Maximum	Total	Harmonio	Distortio	n		
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	o adjust rea	Maximum (%): Maximum Maximum (%): active output t	Total Individual	Harmonio dual Harr Harmonio ride voltaç	c Distortic nonic (%) c Distortic ge regular	n : on tion:		ue and
Voltage Harmonic Distortion  Describe capability, if any, to  NOTE: Attach all available ocurrent waveforms.	o adjust rea	Maximum (%):  Maximum (%):  active output to	Total Individual	Harmonio dual Harr Harmonio ride voltaç	c Distortic nonic (%) c Distortic ge regular	n : on tion:		e and
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STATE OF ALASKA

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