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Interconnection Request for a Generating Facility

1. The undersigned Interconnection Customer submits this request to interconnect its Generating Facility with Transmission Provider's Transmission System pursuant to a Tariff.

2. This Interconnection Request is for (check one):
   - ☐ A proposed new Generating Facility.
   - ☐ An increase in the generating capacity or a Material Modification of an existing generating facility.

3. The type of interconnection service requested (check one):
   - ☐ Energy Resource Interconnection Service
   - ☐ Network Resource Interconnection Service

4. If you are an Interconnection Customer requesting Network Resource Interconnection Service, do you also seek to have your Generating Facility studied for Energy Resource Interconnection Service?

   ☐ Yes ☐ No

5. The Interconnection Customer should provide the following information:

   a. Address or location or the proposed new Generating Facility site including a United States Geological Survey map of the proposed plant site (to the extent known) or, in the case of an existing Generating Facility, the name and specific location of the existing Generating Facility.

   b. Maximum summer at 95° Fahrenheit and winter at 50-70° Fahrenheit gross and net megawatt electrical output of the proposed new Generating Facility or the amount of megawatt increase in the generating capacity of an existing Generating Facility.

   c. General description of the equipment configuration.

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d. Estimated In-Service Date, Initial Synchronization Date and Commercial Operation Date (Day, Month, and Year).

e. Name, address, telephone number, and e-mail address of Interconnection Customer's contact person.

f. Approximate location of the proposed Point of Interconnection (optional).

g. Interconnection Customer Data (set forth in Attachment A); and Running Station Service Load MW: Mvar, and connection location (i.e. attach single-line diagram).

6. Applicable deposit amount as specified in the GIP.

7. Evidence of Site Control as specified in the GIP (check one):
☐ Is attached to this Interconnection Request
☐ Will be provided at a later date in accordance with this GIP

8. This Interconnection Request shall be submitted to the representative indicated below:

Inter-connect Transmission Contracts Administrator
Imperial Irrigation District
333 E. Barioni Blvd.
Imperial, CA 92243

9. Representative of Interconnection Customer to contact:

[To be completed by Transmission Provider]

This Interconnection Request is submitted by:

Name of Interconnection Customer: _____

Signature: _____

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Print Name: _____

Title: _____

Date: _____

ATTACHMENT A TO APPENDIX 1
INTERCONNECTION REQUEST

GENERATING FACILITY DATA

Unit Ratings

MVA °F Voltage

Power Factor

Speed (RPM) Connection (e.g. Wye)

Short Circuit Ratio Frequency, Hertz

Stator Amperes at Rated MVA Field Volts

Maximum Gross Turbine MW at 50-70°F

Maximum Gross Turbine MW at 95°F

Maximum Gross Reactive production at Maximum MW output (95°F) and rated voltage Mvar, Maximum Gross Reactive absorption at Maximum MW output (95°F) and rated voltage Mvar.

COMBINED TURBINE-GENERATOR-EXCITER INERTIA DATA

Inertia Constant, H = kW sec/kVA

Moment-of-Inertia, WR2 = lb. ft.2

REACTANCE DATA (PER UNIT-RATED KVA)

	DIRECT AXIS	*QUADRATURE AXIS*
Synchronous – saturated	Xdv	Xqv
Synchronous – unsaturated	Xdi	Xqi

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Transient – saturated	X'dv	X'qv
Transient – unsaturated	X'di	X'qi
Subtransient – saturated	X"dv	X"qv
Subtransient – unsaturated	X"di	X"qi
Negative Sequence – saturated	X2v	
Negative Sequence – unsaturated	X2i	
Zero Sequence – saturated	X0v	
Zero Sequence – unsaturated	X0i	
Leakage Reactance	Xlm	

FIELD TIME CONSTANT DATA (SEC)

Open Circuit	T'do	T'qo
Three-Phase Short Circuit Transient	T'd3	T'q
Line to Line Short Circuit Transient	T'd2	
Line to Neutral Short Circuit Transient	T'd1	
Short Circuit Subtransient	T"d	T"q
Open Circuit Subtransient	T"do	T"qo

ARMATURE TIME CONSTANT DATA (SEC)

Three Phase Short Circuit	Ta3
Line to Line Short Circuit	Ta2
Line to Neutral Short Circuit	Ta1

NOTE: If requested information is not applicable, indicate by marking "N/A."

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MW CAPABILITY AND PLANT CONFIGURATION
GENERATING FACILITY DATA

ARMATURE WINDING RESISTANCE DATA (PER UNIT)

Positive R1

Negative R2

Zero R0

Rotor Short-Time Thermal Capacity I22t =

Field Current at Rated MVA, Armature Voltage and PF = amps

Field Current at Rated MVA and Armature Voltage, 0 PF = amps

Three Phase Armature Winding Capacitance = microfarad

Field Winding Resistance = ohms °C

Armature Winding Resistance (Per Phase) = ohms °C

CURVES

Provide Generator Vendor Data Sheets, including reactances, time constants, Saturation, Vee, Reactive Capability, Capacity Temperature Correction curves. Designate normal and emergency Hydrogen Pressure operating range for multiple curves.

If available, provide Power Quality curves specifying percent total harmonic distortion vertically and percent power output horizontally from 25-100% power output for both current and voltages.

GENERATOR STEP-UP TRANSFORMER DATA RATINGS

Capacity Self-cooled/(i.e. OA/FA/FA)

/ / MVA

Voltage Ratio (Generator Side/System side)

/ / kV

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Winding Connections (Low V/High V/ (Delta or Wye)
/ /

Fixed
Available / / / / / kV

Taps
Present Tap Setting (if applicable)
kV

IMPEDANCE

Positive Z1 (on OA MVA rating) % X/R

Zero Z0 (on OA MVA rating) % X/R

THREE-WINDING GENERATOR STEP-UP TRANSFORMER DATA (if applicable)

GSU connection and winding
Please attach diagram and mark to reference this form.

H Winding Data
Full load ratings (i.e. OA/FA/FA)

/ / MVA

Rated high side voltage base kV Delta/Wye connected (circle one)

Tap positions available: / / / / kV
Present Tap Setting (if applicable): kV
Neutral solidly grounded? ☐ or Neutral Grounding Resistor ☐ (if applicable)

Ohms

BIL rating: kV

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X Winding Data

Full Load Ratings (i.e. OA/FA/FA)

/ / MVA

Rated low side voltage base kV Delta/Wye connected (circle one)

Tap positions available: / / / / kV

Present Tap Setting (if applicable): kV
Neutral solidly grounded? or) Neutral Grounding Resistor (if applicable)
Ohms
BIL rating: kV

Y Winding Data

Full Load Ratings (i.e. OA/FA/FA)

/ / MVA

Rated low side voltage base kV Delta/Wye connected (circle one)

Tap positions available: / / / / kV

Present Tap Setting (if applicable): kV
Neutral solidly grounded? or) Neutral Grounding Resistor (if applicable)
Ohms
BIL rating: kV

Impedance

H-X Winding data

Transformer base for impedances provided below: MVA

Positive sequence impedance Z1 (H-X) % X/R

Zero sequence impedance Z0 (HX) % X/R

H-Y Winding data

Transformer base for impedances provided below: MVA

Positive sequence impedance Z1 (H-X) % X/R

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Zero sequence impedance Z0 (HX) % X/R

X-Y Winding data
Transformer base for impedances provided below: MVA

Positive sequence impedance Z1 (H-X) % X/R

Zero sequence impedance Z0 (HX) % X/R

EXCITATION SYSTEM DATA

Identify appropriate IEEE model or PTI block diagram of excitation system and power system stabilizer (PSS) for computer representation in power system stability simulations and the corresponding excitation system and PSS constants for use in the model.

GOVERNOR SYSTEM DATA

Identify appropriate IEEE or PTI model block diagram of governor system for computer representation in power system stability simulations and the corresponding governor system constants for use in the model.

OTHER SPECIAL EQUIPMENT

Identify any appropriate special equipment and/or diagrams required for this installation including, any Flexible AC Transmission (FACTs) devices such as static VAR compensators and/or Special Protection Systems (SPS).

WIND GENERATORS

Number of generators to be interconnected pursuant to this Interconnection Request:

Elevation: Single Phase Three Phase

Inverter manufacturer, model name, number, and version:

List of adjustable set points for the protective equipment or software:

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Note: A completed General Electric Power Systems Load Flow (PSLF) data sheet or other compatible formats, such as IEEE and PTI power flow models must be supplied with the Interconnection Request. If other data sheets provide additional information for consideration in the Interconnection Request then they shall be provided and discussed at the Scoping Meeting.

INDUCTION GENERATORS

(*) Field Volts:

(*) Field Amperes:

(*) Motoring Power (kW):

(*) Neutral Grounding Resistor (If Applicable):

(*) I22t or K (Heating Time Constant):

(*) Rotor Resistance:

(*) Stator Resistance:

(*) Stator Reactance:

(*) Rotor Reactance:

(*) Magnetizing Reactance:

(*) Short Circuit Reactance:

(*) Exciting Current:

(*) Temperature Rise:

(*) Frame Size:

(*) Design Letter:

(*) Reactive Power Required In Vars (No Load):

(*) Reactive Power Required In Vars (Full Load):

(*) Total Rotating Inertia, H: Per Unit on KVA Base

Please consult Transmission Provider prior to submitting the Interconnection Request to determine if the information designated by (*) is required.

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