

**APPENDIX 1 to LGIP  
INTERCONNECTION REQUEST FOR A  
LARGE GENERATING FACILITY**

1. The undersigned Interconnection Customer submits this request to interconnect its Large Generating Facility with Transmission Provider's Transmission System pursuant to a Tariff.
2. This Interconnection Request is for (check one):  
 A proposed new Large 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.  Check here only if Interconnection Customer requesting Network Resource Interconnection Service also seeks to have its Generating Facility studied for Energy Resource Interconnection Service
5. Interconnection Customer provides the following information:
  - a. Address or location of the proposed new Large Generating Facility 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 \_\_\_\_ degrees C and winter at \_\_\_\_ degrees C megawatt electrical output of the proposed new Large Generating Facility or the amount of megawatt increase in the generating capacity of an existing Generating Facility;
  - c. General description of the equipment configuration;
  - d. Commercial Operation Date (Day, Month, and Year);
  - e. Name, address, telephone number, and e-mail address of Interconnection Customer's contact person;
  - f. Interconnection Customer's tax identification number;
  - g. Approximate location of the proposed Point of Interconnection (optional);
  - h. Interconnection Customer Data (set forth in Attachment A); and
  - i. Primary frequency response operating range for electric storage resources.

6. Applicable deposit amount as specified in the LGIP.
7. Evidence of Site Control as specified in the LGIP (check one)  
 Is attached to this Interconnection Request  
 Will be provided at a later date in accordance with this LGIP
8. This Interconnection Request shall be submitted to the representative indicated below:  

[To be completed by Transmission Provider]
9. Representative of Interconnection Customer to contact:  

[To be completed by Interconnection Customer]
10. This Interconnection Request is submitted by:  
Name of Interconnection Customer: \_\_\_\_\_  
By (signature): \_\_\_\_\_  
Name (type or print): \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

**Attachment A to Appendix 1  
Interconnection Request**

**LARGE GENERATING FACILITY DATA**

**UNIT RATINGS**

kVA \_\_\_\_\_ °F \_\_\_\_\_ Voltage \_\_\_\_\_  
Power Factor \_\_\_\_\_  
Speed (RPM) \_\_\_\_\_ Connection (e.g. Wye) \_\_\_\_\_  
Short Circuit Ratio \_\_\_\_\_ Frequency, Hertz \_\_\_\_\_  
Stator Amperes at Rated kVA \_\_\_\_\_ Field Volts \_\_\_\_\_  
Max Turbine MW \_\_\_\_\_ °F \_\_\_\_\_

Primary frequency response operating range for electric storage resources:

Minimum State of Charge: \_\_\_\_\_

Maximum State of Charge: \_\_\_\_\_

**COMBINED TURBINE-GENERATOR-EXCITER INERTIA DATA**

Inertia Constant, H = \_\_\_\_\_ kW sec/kVA

Moment-of-Inertia,  $WR^2 =$  \_\_\_\_\_ lb. ft.<sup>2</sup>

**REACTANCE DATA (PER UNIT-RATED KVA)**

	<b>DIRECT AXIS</b>	<b>QUADRATURE AXIS</b>
Synchronous – saturated	$X_{dv}$ _____	$X_{qv}$ _____
Synchronous – unsaturated	$X_{di}$ _____	$X_{qi}$ _____
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	$X_{2v}$ _____	
Negative Sequence – unsaturated	$X_{2i}$ _____	
Zero Sequence – saturated	$X_{0v}$ _____	
Zero Sequence – unsaturated	$X_{0i}$ _____	
Leakage Reactance	$X_{lm}$ _____	

**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	$T_{a3}$	_____
Line to Line Short Circuit	$T_{a2}$	_____
Line to Neutral Short Circuit	$T_{a1}$	_____

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

**MW CAPABILITY AND PLANT CONFIGURATION  
LARGE GENERATING FACILITY DATA**

**ARMATURE WINDING RESISTANCE DATA (PER UNIT)**

Positive	$R_1$	_____
Negative	$R_2$	_____
Zero	$R_0$	_____

Rotor Short Time Thermal Capacity  $I_2^2t =$  \_\_\_\_\_  
Field Current at Rated kVA, Armature Voltage and PF = \_\_\_\_\_ amps  
Field Current at Rated kVA 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 Saturation, Vee, Reactive Capability, Capacity Temperature Correction curves.  
Designate normal and emergency Hydrogen Pressure operating range for multiple curves.

### GENERATOR STEP-UP TRANSFORMER DATA RATINGS

Capacity \_\_\_\_\_ Self-cooled/  
Maximum Nameplate  
\_\_\_\_\_ / \_\_\_\_\_ kVA

Voltage Ratio(Generator Side/System side/Tertiary)  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ kV

Winding Connections (Low V/High V/Tertiary V (Delta or Wye))  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Fixed Taps Available \_\_\_\_\_

Present Tap Setting \_\_\_\_\_

### IMPEDANCE

Positive  $Z_1$  (on self-cooled kVA rating) \_\_\_\_\_ % \_\_\_\_\_ X/R

Zero  $Z_0$  (on self-cooled kVA rating) \_\_\_\_\_ % \_\_\_\_\_ X/R

### **EXCITATION SYSTEM DATA**

Identify appropriate IEEE model 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 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.

### **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 setpoints for the protective equipment or software:

\_\_\_\_\_

Note: A completed General Electric Company 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 are more appropriate to the proposed device, then they shall be provided and discussed at Scoping Meeting.

### INDUCTION GENERATORS

- (\*) Field Volts: \_\_\_\_\_
- (\*) Field Amperes: \_\_\_\_\_
- (\*) Motoring Power (kW): \_\_\_\_\_
- (\*) Neutral Grounding Resistor (If Applicable): \_\_\_\_\_
- (\*)  $I_2^2t$  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

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

### SOLAR GENERATORS

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

\_\_\_\_\_

Inverter manufacturer, model name, number, and version:

\_\_\_\_\_

List of adjustable setpoints for the protective equipment or software:

\_\_\_\_\_

Note: A completed General Electric Company Power Systems Load Flow (PSLF) data sheet must be supplied with the Interconnection Request. If other data sheets are more appropriate to the proposed device then they shall be provided and discussed at Scoping Meeting.