Date Submitted:

Date Received:

**APPENDIX 1 to Revised 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.
   _____A Generating Facility proposed for inclusion in a resource solicitation process.

3. The type of interconnection service requested (check one):
   _____Energy Resource Interconnection Service
   _____Network Resource Interconnection Service

4. Interconnection Customer provides the following information:

   a. Address or location or 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. Approximate location of the proposed Point of Interconnection (optional);
   g. Interconnection Customer Data (set forth in Attachment A)
   h. Primary frequency response operating range for electric storage resources.
   i. Requested capacity (in MW) of Interconnection Service (if lower than the Generating Facility Capacity).

5. Interconnection Customer provides applicable study deposit amount as specified in the Revised LGIP.

   $75,000 for requests of less than 50 MW; or
   $150,000 for requests of 50 MW and Greater, but less than 200 MW; or
   $250,000 for requests of 200 MW and greater

6. Interconnection Customer provides Readiness Milestone 1 (M1) as specified in the Revised LGIP.

   M1 is satisfied by any one of the three options below (also described in 3.4.1.f of the Revised LGIP) at Interconnection Customer’s option. M1 may also be satisfied by

providing additional security described in Section 7.7.5 *in lieu* of providing one of the three options to demonstrate readiness.

i. Executed term sheet (or comparable evidence) related to a contract, binding upon the parties to the contract, for sale of (i) the constructed Generating Facility, (ii) the Generating Facility's energy, or (iii) the Generating Facility's ancillary services if the Generating Facility is an electric storage resource; where the term of sale is not less than five (5) years;

ii. Reasonable evidence the project has been selected in a Resource Plan or Resource Solicitation Process; or

iii. Provisional Large Generator Interconnection Agreement accepted for filing with FERC. Such an agreement shall not be suspended and shall include a commitment to construct the Generating Facility.

7. Interconnection Customer provides security equal to one times the study deposit described in Section 3.1 of the Revised LGIP in the form of an irrevocable letter of credit or cash.

8. If requesting NRIS: Interconnection Customer provides the expected point of delivery to deliver within the Transmission Provider's Control Area or to an adjoining Control Area if the Generating Facility is not designated a Network Resource pursuant to Section 30.2 of the Tariff.

9. Interconnection Customer provides Evidence of Site Control as specified in the Revised LGIP and Transmission Provider's business practices posted on OASIS.

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

[To be completed by Transmission Provider]

11. Representative of Interconnection Customer to contact:

[To be completed by Interconnection Customer]

12. This Interconnection Request is submitted by:

Name of Interconnection Customer: _____

By (signature): _____

Name (type or print): _____

Title: _____

Date: _____

Date Submitted:

Date Received:

**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. $ft.^2$

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

### DIRECT AXIS QUADRATURE AXIS

| | | |
|---|---|---|
| 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 | $X2_v$_____ | |
| Negative Sequence – unsaturated | $X2_i$_____ | |
| Zero Sequence – saturated | $X0_v$_____ | |
| Zero Sequence – unsaturated | $X0_i$_____ | |
| Leakage Reactance | $Xl_m$_____ | |

### FIELD TIME CONSTANT DATA (SEC)

Date Submitted: Date Received:

| | | |
|---|---|---|
| Open Circuit | $T'_{do}$_____ | $T'_{qo}$_____ |
| Three-Phase Short Circuit Transient | $T'_{d3}$_____ | $T'_{q}$_____ |
| Line to Line Short Circuit Transient | $T'_{d1}$_____ | |
| Short Circuit Subtransient | $T''_{d}$_____ | $T''_{q}$_____ |
| Open Circuit Subtransient | $T'_{d2}$_____ | |
| Line to Neutral Short Circuit Transient | $T''_{do}$_____ | $T''_{qo}$_____ |

**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.

Date Submitted:

Date Received:

## 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 _____

If more than one transformer stage is used to deliver the output from the proposed Generating Facility to the Transmission System, please provide the information above for each transformer or transformer type.

## 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 AND OTHER NON-SYNCHRONOUS GENERATORS

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

Elevation: _____ Single Phase _____Three Phase _____

Date Submitted:

Date Received:

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.

**Project Information: Site Control and Adequacy**

Total acres required to construct the Generating Facility: _____

Total acres under site control for the Generating Facility at the time of application:

_____

Is Site Control required for Interconnection Facilities, i.e. transmission gen-tie or substation, to interconnect the Generating Facility? ___ Y ___ N

> If yes, how many miles of gen-tie right-of-way are required? _____
> What is the total number of acres required to build the gen-tie? _____
> How many miles of gen-tie right-of-way are under Site Control at the time of this application?
>
> _____

List any local, state, or federal government permits required to construct the Generating Facility and any applicable Interconnection Facilities, i.e. transmission gen-tie:

_____

_____

Date Submitted:

Date Received:

## 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.