Attachment A to Appendix 3

INTERCONNECTION REQUEST

1. The undersigned Interconnection Customer submits this request to interconnect its Generating Facility with the Transmission System pursuant to the 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.

   _____ Replacement of Existing Generating Facility with no increase in capacity

3. The type of interconnection service requested (check one):

   _____ Energy Resource Interconnection Service

   _____ Network Resource Interconnection Service

4. All requests for Network Resource Interconnection Service are also studied for Energy Resource Interconnection Service.

5. The Interconnection Customer provides the following information:

   a. Address or location or the proposed new 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:

   _____

   _____

   Geographic coordinates of the proposed new or Existing Generating Facility site:

   Latitude: ___ degrees, ___ minutes, ___ seconds (North)

   Longitude: ___ degrees, ___ minutes, ___ seconds (West);

   b. Maximum electrical output of the proposed new Generating Facility or the amount of increase in the generating capacity of an Existing Generating Facility;

   Maximum summer electrical output or increase of _____ megawatts at _____ degrees C

Maximum winter electrical output or increase of _____ megawatts at _____ degrees C

c. Preliminary one-line diagram of the Generating Facility;

d. Commercial Operation Date (month/day/year); ____/____/_____;

e. Name, address, telephone number, and e-mail address of Interconnection Customer's contact person in Item 9 below;

f. Geographical map showing the approximate location of the proposed Point of Interconnection and the location of the Generating Facility;

g. Generating Facility Data (set forth in Attachment B to this Appendix 3);

h. Requested capacity (in MW) of Interconnection Service (if lower than the Generating Facility Capacity);

i. Primary frequency response operating range for electric storage resources;

j. For request for Generating Facility Replacement, the planned or actual date of cessation of operation of the Existing Generating Facility: (month/day/year) ___/____/____.

6. Applicable deposit amount (check one).

New or increased Generating Facility or Material Modification:

____ Requested capacity less than or equal to 2 MW – $25,000 deposit.

____ Requested capacity greater than 2 but less than or equal to 20 MW – $35,000 deposit.

____ Requested capacity greater than 20 but less than 75 MW – $50,000 deposit.

____ Requested capacity equal to or greater than 75 MW – $90,000 deposit.

Generating Facility Replacement:

____ $60,000 deposit.

7. Evidence of Site Control as specified in Section 8.2 the GIP:

____ Site Control for the Generating Facility and one of the following:

____ Site Control for at least fifty percent (50%) of the Generating Facility's high voltage tie line to Point of Interconnection; **OR**

_____ Additional financial security in the amount of $80,000 per line right-of-way mile.

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

Manager, GI Studies
Southwest Power Pool, Inc.
201 Worthen Drive
Little Rock, AR 72223-4936

9. Representative of Interconnection Customer to contact (including e-mail address):

Name of Contact Person: _____

Mailing Address: _____

City, State, Zip_____

Telephone: _____

E-mail address: _____

10. This Interconnection Request is submitted by:

Name of Interconnection Customer (Company): _____

By (signature): _____

Name (type or print): _____

Title:_____

Date:_____

Attachment B to Appendix 3

ASSUMPTIONS USED IN CONDUCTING THE DEFINITIVE INTERCONNECTION SYSTEM IMPACT STUDY

The Definitive Interconnection System Impact Study will be based upon the information set forth in the Interconnection Requests and results of applicable prior studies, subject to any modifications in accordance with Section 4.4 of the GIP, and the following assumptions:

Designation of Point of Interconnection and configuration to be studied.

(Name or description of substation or transmission line and voltage):

_____

Geographic coordinates of the proposed Point of Interconnection:

Latitude: ___ degrees, ___ minutes, ___ seconds (North)

Longitude: ___ degrees, ___ minutes, ___ seconds (West)

[Above assumptions to be completed by Interconnection Customer and other assumptions to be provided by Interconnection Customer, Transmission Owner and Transmission Provider]

GENERATING FACILITY DATA FOR THE DEFINITIVE INTERCONNECTION SYSTEM IMPACT STUDY

UNIT RATINGS

(for a single generator in a group of generators)

Nameplate kVA _____ °F _____ Voltage _____
Prime Mover type _____
Power Factor: Lead _____ Lag _____
Speed (RPM) _____ Connection (e.g. Wye) _____
Short Circuit Ratio _____ Frequency, Hertz _____
Stator Amperes at Rated kVA _____ Field Volts _____
Max Turbine Power Output Capability: Summer MW _____ °F _____
Winter MW _____ °F _____

Primary frequency response operating range for electric storage resources:
Minimum State of Charge: _____ (Hz)
Maximum State of Charge: _____ (Hz)

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)

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
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

(for a single generator in a group of generators)

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

Impedance: Zero Z_0 (on self-cooled kVA rating)_____ % _____ X/R

MAIN GENERATOR STEP-UP TRANSFORMER DATA RATINGS

(for a single generator or the step-up from collector system to POI voltage)

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

Impedance: 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.

MULTIPLE-UNIT GENERATING FACILITIES

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.

ENERGY STORAGE RESOURCES

Device manufacturer: _____

Technology (Li-ion, Lead Acid, Flow Battery, Pumped Hydro, Flywheel, etc.)_____

Check one of the following:
_____ Stand-alone
_____ Co-located with another Generating Facility (co-located means at the same POI)

Maximum Energy Output Rating (MWh) _____ at Maximum Power Output (MW) _____

Charging Parameters

Check one of the following:
_____ Yes, the energy storage resource will take energy from the Transmission System when operating in charging mode. The maximum rate of charge capability of the Generating

Facility will be _____ MW. The maximum rate of charge to be utilized (requested maximum) will be_____MW.

Charging Power Factor _____ lag _____ lead at rated output

_____ No, the energy storage resource will never take energy from the Transmission System when operating in charging mode, by either Self-Dispatch or at the direction of SPP. The monitoring and control equipment that will be used to ensure that the Generating Facility never takes energy from the Transmission System when operating in charging mode is described as follows:

_____
_____
_____

Inverter-Based Resource Data

Phase-Locked Loop ("PLL") controller parameters for inverter-based resources:

- PLL Proportional Gain K_p _____
- PLL Integral Gain K_i _____
- PLL Frequency Limits ω_l _____ (rad/sec) and ω_h _____ (rad/sec)

The above data applies to a generic structure of the PLL (also commonly known as a synchronous reference frame PLL) and that the actual PLL structure within an Original Equipment Manufacturer's (OEM) device may differ from this generic structure. Should a difference exist, the parameter values of the PLL shall be provided such that the most recent equivalently parameterized generic industry model shows the same trend as the performance shown by actual OEM equipment.

Electromagnetic Transient (EMT) Models:

See SPP Electromagnetic Transient (EMT) Model Requirements Document

Attachment C to Appendix 3

DATA FORM TO BE PROVIDED BY INTERCONNECTION CUSTOMER FOR THE INTERCONNECTION FACILITIES STUDY

Provide location plan and simplified one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc.

One set of metering is required for each generation connection to the new ring bus or existing Transmission Provider station. Number of generation connections:

On the one line diagram indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)

On the one line diagram indicate the location of auxiliary power. (Minimum load on CT/PT) Amps

Will an alternate source of auxiliary power be available during CT/PT maintenance?

_____ Yes _____ No

Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation? _____Yes _____ No (Please indicate on one line diagram).

What type of control system or PLC will be located at Interconnection Customer's Generating Facility?

_____

What protocol does the control system or PLC use?

_____

Please provide a 7.5-minute quadrangle of the site. Sketch the plant, station, transmission line, and property line.

Physical dimensions of the proposed interconnection station:

_____

Bus length from generation to interconnection station:

_____

Line length from interconnection station to Transmission Provider's transmission line.

_____

Tower number observed in the field. (Painted on tower leg)* _____

Number of third party easements required for transmission lines*:

_____

* To be completed in coordination with Transmission Provider.

Is the Generating Facility in the Transmission Provider's service area?

_____ Yes _____ No Local provider: _____

Please provide proposed schedule dates:

Begin Construction	Date:_____
Generator step-up transformer receives back feed power	Date: _____
Generation Testing	Date: _____
Commercial Operation	Date: _____