Attachment C

BEHIND-THE-METER GENERATION INTERCONNECTION REQUEST FORM

Contact Information

1. Primary
Company/Customer Name: _____
Phone No: (___) ___ - _____
Email: _____

2. Secondary
Company/Customer Name: _____
Phone No: (___) ___ - _____
Email: _____

General Project Information

Project Address: _____

Location of POI: _____

Commercial Operation Date: _____

Requested Capacity (MW): _____

Synchronous Generator

Unit Ratings

kVA: _____ Rated ˚F: _____ Voltage (kV): _____
Power Factor: _____ Speed (RPM): _____
Frequency (Hz): _____
Field Volts: _____
Max Unit Rating (MW): _____ @ _____ ˚F
Number of Units: _____
Stator Amperes at Rated kVA: _____

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–Line Short Circuit Transient	T'_{d2}	_____		
Line–Neutral Short Circuit Transient	T'_{d1}	_____		
Short Circuit Subtransient	T''_{d}	_____	T''_{q}	_____
Open Circuit Subtransient	T''_{do}	_____	T''_{qo}	_____

Time Constant Data (Sec)

Three Phase Short Circuit	T_{a3}	_____
Line to Line Short Circuit	T_{a2}	_____
Line to Neutral Short Circuit	T_{a1}	_____

MW Capability and Plant Configuration
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

Inverter Based Resource

Unit Ratings

Individual Inverter Nameplate Capability: _____ MVA @ _____˚F
Number of Inverters: _____
Gross Facility Capability: _____ MVA @ _____˚F
Power Factor: _____Leading / _____ Lagging
Station Service Load: _____ MW _____ MVAR

Battery Energy Storage System Specific

Individual Storage Unit Rating: _____ MW _____ Hours
Gross Energy Storage Rating: _____ MW-Hr
Maximum State of Charge: _____ PU
Minimum State of Charge: _____ PU

Collector System Equivalent

Collector System Voltage: _____ kV
Collector System Equivalent Rating: _____ MVA @ _____ ˚F
Collector System Equivalent Impedance (values can NOT be provided in Ohms):

1. R_1 = _____ PU on 100 MVA base (positive sequence)
2. X_1 = _____ PU on 100 MVA base (positive sequence)
3. B_1 = _____ PU on 100 MVA base (positive sequence)
4. R_0 = _____ PU on 100 MVA base (zero sequence)
5. X_0 = _____ PU on 100 MVA base (zero sequence)
6. B_0 = _____ PU on 100 MVA base (zero sequence)

Inverter Step-Up Transformer

Number of Transformers: _____

Two-Winding Step-Up Transformer Data (as applicable):

Rating (ONAN/ONAF/ONAF): _____ / _____ / _____ MVA
Nominal Voltage for each winding (High / Low): _____ / _____ kV
Winding Connections (High / Low): [Delta/Wye/Wye-Ground] / [Delta/Wye/Wye-Ground]
Available Tap Positions: _____ /_____ /_____ /_____ /_____ kV or _____ % _____ # of taps

Positive Sequence Impedance Z_1: _____ %, _____ X/R on self-cooled (ONAN) transformer MVA base
Zero Sequence Impedance Z_0: _____ %, _____ X/R on self-cooled (ONAN) transformer MVA base

Three-Winding Step-Up Transformer Data (as applicable):

	H Winding	X Winding	Y Winding
Rated Voltage (kV)			
Winding Connection (Delta/Wye/Wye-Ground)			
Ratings (MVA) ONAN/ONAF/ONAF	____/____/____	____/____/____	____/____/____
Tap Positions Available	____/____/____ ____/____ kV	____/____/____ ____/____ kV	____/____/____ ____/____ kV

	H-X Winding Data	H-Y Winding Data	X-Y Winding Data
Base for Impedances (MVA)			
Positive Sequence Impedance (Z_1)	_____%_____X/R	_____%_____X/R	_____%_____X/R
Zero Sequence Impedance (Z_0)	_____%_____X/R	_____%_____X/R	_____%_____X/R

Facility Equipment Data

Proposed Interconnection Tie Line

Line Voltage: _____ kV
Line Rating: _____ MVA @ _____ ˚F
Line Length: _____ Miles
Line Impedance (values can NOT be provided in Ohms):

1. R_1 = _____ PU on 100 MVA base (positive sequence)
2. X_1 = _____ PU on 100 MVA base (positive sequence)
3. B_1 = _____ PU on 100 MVA base (positive sequence)
4. R_0 = _____ PU on 100 MVA base (zero sequence)
5. X_0 = _____ PU on 100 MVA base (zero sequence)
6. B_0 = _____ PU on 100 MVA base (zero sequence)

Site Main Transformer

Number of Transformers: _____

Two-Winding Main Transformer Data (as applicable):

Rating (ONAN/ONAF/ONAF): _____ / _____ / _____ MVA
Nominal Voltage for each winding (High / Low): _____ / _____ kV
Winding Connections (High / Low): [Delta/Wye/Wye-Ground] / [Delta/Wye/Wye-Ground]
Available Tap Positions: _____ /_____ /_____ /_____ /_____ kV or _____ % _____ # of taps

Positive Sequence Impedance Z_1: _____ %, _____ X/R on self-cooled (ONAN) transformer MVA base
Zero Sequence Impedance Z_0: _____ %, _____ X/R on self-cooled (ONAN) transformer MVA base

Three-Winding Main Transformer Data (as applicable):

	H Winding	X Winding	Y Winding
Rated Voltage (kV)			
Winding Connection (Delta/Wye/Wye-Ground)			
Ratings (MVA) ONAN/ONAF/ONAF	____/____/____	____/____/____	____/____/____
Tap Positions Available	____/____/____ ____/____ kV	____/____/____ ____/____ kV	____/____/____ ____/____ kV

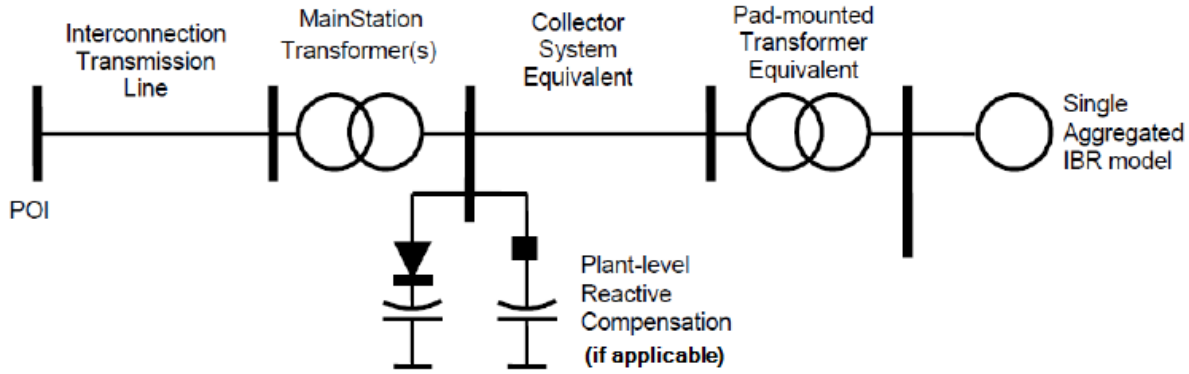
	H-X Winding Data	H-Y Winding Data	X-Y Winding Data
Base for Impedances (MVA)			
Positive Sequence Impedance (Z_1)	_____%_____X/R	_____%_____X/R	_____%_____X/R
Zero Sequence Impedance (Z_0)	_____%_____X/R	_____%_____X/R	_____%_____X/R

Plant Reactive Power Compensation
(if applicable)

Type of Reactive Compensation Device(s): _____
Individual Fixed Shunt Reactive Device Type: _____
Number and Size: _____ x _____ MVA
Dynamic Reactive Control Device (e.g. SVC, STATCOM): _____
Control Range: _____ MVAR (lead) to _____ MVAR (lag)
Control Mode (e.g. voltage, power factor, reactive power): _____
Regulation Point: _____

Short Circuit Contribution at POI
Maximum Three Phase Fault Current: _____ Amps & _____ MVA
Duration: _____
Maximum Single Line–Ground Fault Current: _____ Amps & _____ MVA
Duration: _____
Fault X/R Ratio: _____
Inverter Equivalent Base: _____ MVA
Short-Circuit Equivalent Positive Sequence Resistance: _____ PU
Short-Circuit Equivalent Positive Sequence Reactance: _____ PU
Short-Circuit Equivalent Negative Sequence Resistance: _____ PU
Short-Circuit Equivalent Negative Sequence Reactance: _____ PU
Short-Circuit Equivalent Zero Sequence Resistance: _____ PU
Short-Circuit Equivalent Zero Sequence Reactance: _____ PU

Modeling Requirements



Facility modeling data must be provided for use in PSSE v35, however it is the Interconnecting Party's responsibility to verify the latest software version being utilized. All equipment ratings and impedance data must be provided within the model file. An example of an IBR SMIB model is displayed above for reference.

Documentation Requirements

Provide as much documentation as possible as is applicable to the generation technology utilized.

1. Facility One-Line Diagrams
2. Generation Equipment Datasheets
3. Reactive Capability Curve
4. Temperature Correction Curves
5. Saturation Curve