

Interconnection Request



Appendix 1 to GIP

1. The undersigned Interconnection Customer submits this request to interconnect its Generating Facility with the Transmission Provider's Transmission System pursuant to a Tariff.	
2. This Interconnection Request is for (check one):	
<input type="checkbox"/> A proposed new Generating Facility. <input type="checkbox"/> An increase in the generating capacity or a Material Modification of an existing Generating Facility.	
3. The type of interconnection service requested (check one):	
<input type="checkbox"/> Energy Resource Interconnection Service <input type="checkbox"/> Network Resource Interconnection Service	
4. The Interconnection Customer Provides the following Information:	
a. Address or location of the proposed new Generating Facility (to the extent known) or, in the case of an existing Generating Facility, the name and specific location of the existing facility:	
b. Maximum megawatt electrical output of the proposed new Generating Facility:	
<input type="text" value=""/> MW summer at <input type="text" value=""/> degrees C <input type="text" value=""/> MW winter at <input type="text" value=""/> degrees C OR <input type="text" value=""/> MW increase in the generating capacity of an existing Generating Facility	
c. General description of the equipment configuration:	
d. Commercial Operation Date <input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/>	
<small>Day Month Year</small>	
e. Interconnection Customer's Contact Person:	
Contact Name:	Street:
Phone:	Unit/Suite:
Fax:	City:
E-Mail:	Province:
	Postal Code:
f. Approximate location of the point of Interconnection (optional):	
5. Applicable deposit amount as specified in the GIP (\$15,000) (Certified Cheque or Bank Draft)	
6. Evidence of Site Control as specified in the GIP (check one)	
<input type="checkbox"/> Is attached to this Interconnection Request <input type="checkbox"/> Will be provided at a later date in accordance with this GIP	
7. This Interconnection Request shall be submitted to the representative indicated below. Hardcopy only (no fax or electronic submissions will be accepted)	
Nova Scotia Power Inc., 5 Long Lake Drive, Halifax, NS B3S 1N8 Attention: John Charlton, Sr. Interconnection Engineer	
8. Representative of the Interconnection Customer to contact:	
Name:	Phone:
	Email:
9. This Interconnection Request is Submitted by:	
_____ Name of Interconnection Customer (Type or Print)	
_____ Submitted By: (Type or print)	_____ Title:
_____ Signature	_____ Date:
NS Power - Generator Interconnection Coordinator Use	
_____ Received By:	_____ Date and Time Received:
_____ Signature	

1. GENERATING FACILITY DATA									
a. UNIT RATINGS									
kVA		Degrees C		Voltage					
Power Factor					Connection (e.g. wye)				
Short Circuit Ratio					Frequency (hz)				
Stator Amps at Rated kVA					Field Volts				
Max MW		Degrees C		Speed (RPM)					
b. COMBINED TURBINE-GENERATOR-EXCITER INERTIA DATA									
Inertia Constant H		kW-sec/kVA			Moment-of-Inertia WR^2		lb.-ft. ²		
c. 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		X_{2v}							
Negative Sequence – unsaturated		X_{2i}							
Zero Sequence – saturated		X_{0v}							
Zero Sequence – unsaturated		X_{0i}							
Leakage Reactance		X_{lm}							
d. 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''_q				
e. ARMATURE TIME CONSTANT (SEC)									
Three Phase Short Circuit		T_{a3}							
Line to Line Short Circuit		T_{a2}							
Line to Neutral Short Circuit		T_{a1}							
NOTE: If information requested above is not applicable, indicate by marking "N/A" for each constant.									
2. MW CAPABILITY AND PLANT CONFIGURATION - GENERATING FACILITY DATA									
a. ARMATURE WINDING RESISTANCE DATA (PER UNIT)									
Positive		R1							
Negative		R2							
Zero		R0							
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

b. CURVES

Provide Saturation, Vee, Reactive Capability, Capacity Temperature Correction curves.
Designate normal and emergency Hydrogen Pressure operating range for multiple curves

3. SUBSTATION STEP-UP TRANSFORMER DATA

a. RATINGS

Capacity kVA Self-cooled kVA Max. nameplate kVA

Voltage ratio Low Voltage kV High Voltage kV Tertiary Voltage kV

Winding Connections Low Voltage WYE or DELTA or other

High Voltage WYE or DELTA or other

Tertiary Voltage WYE or DELTA or other

Fixed Taps Available % Present/Proposed Tap Setting %

b. IMPEDANCE

Positive **Z1** (on self-cooled rating) % X/R

Zero **Z0** (on self-cooled rating) % X/R

4. 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.

5. 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.

6. WIND GENERATORS

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

Elevation: Single Phase Three Phase

Inverter: Manufacturer: Model Number

Model name: Version:

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

Note: A completed PTI - PSS/E load flow data sheet for the WEC 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.

7. INDUCTION GENERATORS

Field Volts:	<input type="text"/>
Field Amperes:	<input type="text"/>
Motoring Power (kW):	<input type="text"/>
Neutral Grounding Resistor (If Applicable) :	<input type="text"/>
I ₂ ² t or K (Heating Time Constant):	<input type="text"/>
Rotor Resistance:	<input type="text"/>
Stator Resistance:	<input type="text"/>
Stator Reactance:	<input type="text"/>
Rotor Reactance:	<input type="text"/>
Magnetizing Reactance:	<input type="text"/>
Short Circuit Reactance:	<input type="text"/>
Exciting Current:	<input type="text"/>
Temperature Rise:	<input type="text"/>
Frame Size:	<input type="text"/>
Design Letter:	<input type="text"/>
Reactive Power Required In Vars (No Load) :	<input type="text"/>
Reactive Power Required In Vars (Full Load) :	<input type="text"/>
Total Rotating Inertia, H:	<input type="text"/>