

Nova Scotia Power Inc.
Distribution Generator Interconnection Request



The undersigned Interconnection Customer submits this request to interconnect its Generating Facility to the Distribution System. A valid Interconnection Request must include the below application form and a \$1000 fee.

Applicant Information

Applicant	Company Name:	Street Address:
	Contact Name:	Unit/Suite:
	Phone:	City:
	Fax:	Province:
	E-Mail:	Country:
		Postal / Zip Code:

Project Information

Project	Name:	Project Location:
	Owner/Developer:	
	Engineering Consultant:	Proposed In-Service Date: yy/mm/dd

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.

Summary of configuration

Prime Mover (ie: wind, hydro, etc):
Number and type of generators:
Total project Capacity (kW):

Maximum kilowatt electrical output of the proposed new Generating Facility:

KW summer at degrees C KW winter at degrees C

OR

KW increase in the generating capacity of an existing Generating Facility

This Interconnection Request is Submitted by:

I hereby certify that, to the best of my knowledge, all the information provided in this Interconnection Request And Equipment Information Form is true and correct.

_____ Name of Interconnection Customer (Type or Print)	_____ Title:
_____ Signature	_____ Date:

Contact Information- Send completed form in hardcopy to:

Nova Scotia Power Inc.,
 5 Long Lake Drive, Halifax, NS
 B3S 1N8
 Attention: Interconnection Engineer

NS Power - Internal Use

_____ Received By:	_____ Date and Time Received:
_____ Signature	

Nova Scotia Power Inc.
Distribution Generator Interconnection Request
 Attachment A to Distribution Interconnection Request



GENERATING FACILITY DATA

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)	

COMBINED TURBINE-GENERATOR-EXCITER INERTIA DATA

Inertia Constant	H	kW-sec/kVA	Moment-of-Inertia	WR ²	lb.-ft. ²
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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}			

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	

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."

MW CAPABILITY AND PLANT CONFIGURATION - GENERATING FACILITY DATA

ARMATURE WINDING RESISTANCE DATA (PER UNIT)

Positive	R1			
Negative	R2			
Zero	R0			
Rotor Short Time Thermal Capacity		I ₂ ² t		
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 kVA Self-cooled kVA Max. nameplate kVA

Voltage ratio Generator Side kV System Side kV

Winding Connections Low Voltage WYE or DELTA
High Voltage WYE or DELTA

Fixed Taps Available

IMPEDANCE

Positive	Z1	(on self-cooled rating)	<input type="text"/>	%	<input type="text"/>	X/R
Zero	Z0	(on self-cooled rating)	<input type="text"/>	%	<input type="text"/>	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:

Flicker co-efficient: Single Phase Three Phase

Inverter: Manufacturer: Model Number
Model name: Version:
Power Factor range:

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

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"/>

DOCUMENTATION REQUIRED - Two copies of each required.

Information below to be submitted for all projects. All diagrams are to be on appropriate paper size as required for ease of reading. NSPI reserves the right to refuse drawings if they are not legible.

1. Electrical One-Line Diagram

A Single-line drawing showing the electrical relationship and descriptions of the significant electrical components such as the primary switchgear, secondary switchboard, protective relays, transformers, generators, circuit breakers, with operating voltages, capacities, and protective functions of the Generating Facility, the Customer's loads, metering and the interconnection with NSPI's system.

2. Project Location:

Provide area maps. Maps should show major cross streets and proposed plant location, and include the street address.

3. Site Plan:

Provide site plan, showing the physical arrangement of the major equipment, including generators, transformers, primary switchgear/secondary switchboard, and control panels, the Customer's loads and the interconnection with NSPI's System. Include the civic address, references, etc.

4. Point of Contact:

If the interconnection and start-up process is to be coordinated through a party or individual other than the Customer, provide the name, company, address and phone number of that individual or party with whom the utility is to coordinate the interconnection.