



Micro-Embedded ($\leq 10\text{kW}$) Generation Facility Connection Agreement

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All Other Locations: (800) 619-6722 Website: www.northernontariowires.com

In consideration of Northern Ontario Wires Inc. agreeing to allow you to connect your $\leq 10\text{kW}$ name-plate rated capacity or smaller generation facility to Northern Ontario Wires Inc.'s distribution system, you hereby agree to the following terms and conditions.

1. Eligibility

1.1. You agree that your generation connection shall be subject to all applicable laws and bound by the terms and conditions of Northern Ontario Wires Inc.'s Conditions of Service as amended from time-to-time, which have been filed with the OEB and are available on request.

2. Technical Requirements

2.1. You represent and warrant that you have installed or will install prior to the connection of your generation facility to Northern Ontario Wires Inc.'s distribution system, an isolation device satisfying Section 84 of the Ontario Electrical Safety Code and agree to allow Northern Ontario Wires Inc.'s staff access to and operation of this as required for the maintenance and repair of the distribution system.

2.2. You agree to perform regular scheduled maintenance to your generation facility as outlined by the manufacturer in order to assure that connection devices, protection systems, and control systems are maintained in good working order and in compliance with all applicable laws.

2.3. You agree that during a power outage on Northern Ontario Wires Inc.'s system, your generation facility will shut down unless you have installed special transfer and isolating capabilities on your generation facility. You agree to the automatic disconnection of your generation facility from Northern Ontario Wires Inc.'s distribution system, as per the generator protective relay settings set out in this Agreement, in the event of a power outage on Northern Ontario Wires Inc.'s distribution system or any abnormal operation of Northern Ontario Wires Inc.'s distribution system.

2.4. You covenant and agree that the design, installation, maintenance, and operation of your generation facility are conducted in a manner that ensures the safety and security of both the generation facility and Northern Ontario Wires Inc.'s distribution system.

2.5. Due to Northern Ontario Wires Inc.'s obligation to maintain the safety and reliability of its distribution system, you acknowledge and agree that in the event Northern Ontario Wires Inc. determines that your generation facility (i) causes damage to; and/or (ii) is producing adverse effects affecting other distribution system customers or Northern Ontario Wires Inc.'s assets, you will disconnect your generation facility immediately from the distribution system upon direction from Northern Ontario Wires Inc. and correct the problem at your own expense prior to reconnection.

3. Liabilities

- 3.1. You and Northern Ontario Wires Inc. will indemnify and save each other harmless for all damages and/or adverse effects resulting from either party's negligence or willful misconduct in the connection and operation of your generation facility or Northern Ontario Wires Inc.'s distribution system.
- 3.2. Northern Ontario Wires Inc. and you shall not be liable to each other under any circumstances whatsoever for any loss of profits or revenues, business interruptions losses, loss of contract or loss of goodwill, or for any indirect, consequential, incidental or special damages, including but not limited to punitive or exemplary damages, whether any of the said liability, loss or damages arise in contract, tort or otherwise.

4. Compensation and Billing

- 4.1. If you are not an embedded retail generator, you agree that, subject to any applicable law:
- (a) Northern Ontario Wires Inc. will not pay you for any excess generation that results in a net delivery to Northern Ontario Wires Inc. between meter reads; and
 - (b) there will be no carryover of excess generation from one billing period to the next unless you are, at the relevant time, a net metered generator (as defined in section 6.7.1 of the Distribution System Code).
- 4.2. If you are an embedded retail generator selling output from the embedded generation facility to the Ontario Power Authority under contract, you agree that Northern Ontario Wires Inc. will pay you for generation in accordance with the Retail Settlement Code.
- 4.3. If you are an embedded retail generator delivering and selling output to Northern Ontario Wires Inc., you agree that Northern Ontario Wires Inc. will pay you for generation in accordance with the Retail Settlement Code.

5. Termination

- 5.1. You understand that you have the right to terminate this agreement at any time, and that by doing so you are required to disconnect your generation facility and notify Northern Ontario Wires Inc. of such action.

6. Assignment

- 6.1. You may assign your rights and obligations under this Agreement with the consent of Northern Ontario Wires Inc., which shall not withhold its consent unreasonably. Northern Ontario Wires Inc. shall have the right to assign its rights and obligations under this Agreement without your consent.

I understand, accept, and agree to comply with and be bound by the above terms and conditions governing the connection of my generation facility to Northern Ontario Wires Inc.'s distribution system.

Customer Signature: _____ Date (mm/dd/yyyy): _____

Customer Name: _____ Account #: _____

I confirm that the following information is true and accurate:

Nameplate Rating of Generator:	kW	Total Installed Generation:	kW	
Generation Type:	<input type="checkbox"/> Wind Turbine	<input type="checkbox"/> Photovoltaic (Solar)	<input type="checkbox"/> Hydraulic Turbine	<input type="checkbox"/> Fuel Cell
	<input type="checkbox"/> Other (please specify)			
Inverter Used:	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
Inverter Certification:	<input type="checkbox"/> C22.2#107.1-01	<input type="checkbox"/> UL 1741	<input type="checkbox"/> Site Certified by the ESA	

For office use:		
Station _____	Feeder _____	Date Connected _____

Generator Protective Relay Settings

Table 1 – Inverter Based Generation

The following relay settings shall be used for inverters built to the CSA standard:

Source: CSA C22.2 No. 107.1-01 Table 16

System Voltage Vn = V nominal V (Volts)	Frequency F (Hertz)	Maximum clearing time*	
		Seconds	Cycle
V < 0.5 Vn	60	0.1	6
0.5 Vn < V < 0.88 Vn	60	2	120
1.10 Vn < V < 1.37 Vn	60	2	120
V > 1.37 Vn	60	0.033	2
Vn	F < 59.5*	0.1	6
Vn	F > 60.5	0.1	6

*The UL1741 & IEEE P1547 Standards use F < rated -0.7 (i.e. 59.3 Hz). To update if CSA C22.2 No. 107.1-01 is changed.

Table 2 – Generation Other Than That Covered by Table 1

Northern Ontario Wires Inc.'s minimum requirements for other generation are as follows:

System Voltage Vn = V nominal V (Volts)	Frequency F (Hertz)	Maximum clearing time*	
		Seconds	Cycle
V < 0.5 Vn	60	0.16	9.6
0.5 Vn < V < 0.88 Vn	60	2	120
1.10 Vn < V < 1.20 Vn	60	1	60
V > 1.20 Vn	60	0.16	9.6
Vn	F < 59.3	0.16	9.96
Vn	F > 60.5	.016	9.6

*Clearing time is the time between the start of the abnormal condition and the Generation ceasing to energize Northern Ontario Wires Inc.'s distribution system

- If you are uncertain about your generation equipment's protective relay settings, please check with your generating equipment supplier.
- Automatic reconnect setting time for your generator is after 5 minutes of normal voltage and frequency on Northern Ontario Wires Inc.'s distribution system.