

Micro-Embedded Generation Facility Connection Agreement

In consideration of Hydro One Networks Inc. (Hydro One) agreeing to allow you to connect your 10 kW name-plate rated capacity or smaller generation facility to the Hydro One's distribution system, you hereby agree to the following terms and conditions.

1.0 Eligibility

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

2.0 Technical Requirements

- 2.1 You represent and warrant that you have installed or will install prior to the connection of your generation facility to Hydro One's distribution system, an isolation device satisfying Section 84 of the Ontario Electrical Safety Code and agree to allow Hydro One'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 the Hydro One 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 Hydro One's distribution system, as per the generator protective relay settings set out in this Agreement, in the event of a power outage on Hydro One's distribution system or any abnormal operation of Hydro One'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 Hydro One's distribution system.
- 2.5 Due to Hydro One's obligation to maintain the safety and reliability of its distribution system, you acknowledge and agree that in the event Hydro One determines that your generation facility (i) causes damage to; and/or (ii) is producing adverse effects affecting other distribution system customers or Hydro One's assets, you will disconnect your generation facility immediately from the distribution system upon direction from Hydro One and correct the problem at your own expense prior to reconnection.

3.0 Liabilities

- 3.1 You and Hydro One 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 Hydro One's distribution system.
- 3.2 Hydro One 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.

4.0 Compensation and Billing

- 4.1 If you are not an embedded retail generator, you agree that, subject to any applicable law:
 - a. Hydro One will not pay you for any excess generation that results in a net delivery to Hydro One 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 Hydro One 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 Hydro One, you agree that Hydro One will pay you for generation in accordance with the Retail Settlement Code.

5.0 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 Hydro One of such action.

6.0 Assignment

6.1 You may assign your rights and obligations under this Agreement with the consent of Hydro One which shall not withhold its consent unreasonably. Hydro One 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 Hydro One's distribution system.

Customer Signature: _____ Date: _____

Print name and Hydro One account number: _____

I confirm that the following information is true and accurate:

Nameplate rating of Generator: _____KW Total installed generation _____KW

Type: ☐ Wind Turbine ☐ Photovoltaic (Solar) ☐ Hydraulic Turbine ☐ Fuel Cell
☐ Other _____

Inverter Utilized: ☐ Yes ☐ No

Inverter Certification: ☐ C22.2 #107.1 ☐ UL 1741 ☐ 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 number of cycles to disconnect	
		Seconds	Cycle
$V < 0.5 V_n$	60	0.1	6
$0.5 V_n \leq V < 0.88 V_n$	60	2	120
$1.10 V_n \leq V < 1.37 V_n$	60	2	120
$V > 1.37 V_n$	60	0.033	2
Vn	$F < 59.5^*$	0.1	6
Vn	$F > 60.5$	0.1	6

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

Table 2 – Non – Inverter Generation

Hydro One's minimum requirements, for other generation are as follows:

System Voltage Vn ' V nominal V (Volts)	Frequency F (Hertz)	Maximum clearing time*	
		Seconds	Cycles
$V < 0.5 V_n$	60	0.16	9.6
$0.5 V_n \leq V < 0.88 V_n$	60	2	120
$1.10 V_n \leq V < 1.20 V_n$	60	1	60
$V \geq 1.20 V_n$	60	0.16	9.6

Vn	F < 59.3	0.16	9.6
Vn	F > 60.5	0.16	9.6

*Clearing time is the time between the start of the abnormal condition and the generation ceasing to energize Hydro One'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 Hydro One's distribution system.