



# Micro-Embedded Generation Facility Connection Agreement

In consideration of Orillia Power Distribution Corporation agreeing to allow you to connect your 10 kW name-plate rated capacity or smaller generation facility to Orillia Power'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 Orillia Power's Conditions of Service as amended from time-to-time, which have been filed with the Ontario Energy Board and 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 Orillia Power's distribution system, an isolation device satisfying Section 84 of the Ontario Electrical Safety Code and you agree to allow Orillia Power's staff access to and operation of this as required for the maintenance and repair of Orillia Power's distribution system.
- 2.2 You agree to perform regular scheduled maintenance on 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 Orillia Power's distribution 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 Orillia Power's distribution system, as per the generator protective relay settings set out in this Agreement, in the event of a power outage on Orillia Power's distribution system or any abnormal operation of Orillia Power'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 your generation facility and Orillia Power's distribution system.
- 2.5 Due to Orillia Power's obligation to maintain the safety and reliability of its distribution system, you acknowledge and agree that in the event Orillia Power determines that your generation facility (i) causes damage to; and/or (ii) is producing adverse effects affecting other distribution system customers or Orillia Power's assets, you will disconnect your generation facility immediately from the distribution system upon direction from Orillia Power and correct the problem at your own expense prior to reconnection.

## 3.0 Liabilities

- 3.1 You and Orillia Power 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 Orillia Power's distribution system.
- 3.2 Orillia Power 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) Orillia Power will not pay you for any excess generation that results in a net delivery of energy to Orillia Power 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 your embedded generation facility to the Independent Electricity System Operator under contract, you agree that Orillia Power 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 Orillia Power, you agree that Orillia Power will pay you for your 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 Orillia Power of such action.

**6.0 Assignment**

6.1 You may assign your rights and obligations under this Agreement with the consent of Orillia Power, which shall not withhold its consent unreasonably. Orillia Power 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 your generation facility to Orillia Power's distribution system.

Customer Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Print First & Last Name: \_\_\_\_\_

Orillia Power 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

*Note: Orillia Power deems necessary that the generator owner contacts Orillia Power in the event they sell the property on which the micro-generation facility exists, and inform the new owner of their responsibility to contact Orillia Power and sign a new Connection Agreement should they continue to be connected to the distribution system. Failure to meet these requirements may result in the disconnection of the facility.*

*For office use: Station \_\_\_\_\_ Feeder \_\_\_\_\_  
Address \_\_\_\_\_ Date Connected \_\_\_\_\_*

*(To be filled in by Orillia Power)*

## 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 $V_n = V$ nominal <b>V (volts)</b>	Frequency <b>F (Hertz)</b>	Maximum number of cycles to disconnect	
		Seconds	Cycles
$V < 0.5 V_n$	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
$V_n$	<b>F &lt; 59.5*</b>	0.1	6
$V_n$	<b>F &gt; 60.5</b>	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**

**Orillia Power's minimum requirements for other generation are as follows:**

System Voltage $V_n = V$ nominal <b>V (volts)</b>	Frequency <b>F (Hertz)</b>	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
$V > 1.37 V_n$	60	0.16	9.6
$V_n$	<b>F &lt; 59.3</b>	0.16	9.6
$V_n$	<b>F &gt; 60.5</b>	0.16	9.6

\*Clearing time is the time between the start of the abnormal condition and the generator ceasing to energize Orillia Power'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 Orillia Power's distribution system.