

## **Micro-Embedded Generation Facility Connection Agreement**

In consideration of Centre Wellington Hydro Ltd. agreeing to allow you to connect your 10 kW name-plate rated capacity or smaller generation facility to Centre Wellington Hydro'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 Centre Wellington Hydro's Conditions of Service as amended from time-to-time, which have been filed with the Ontario Energy Board and available onrequest.

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

### **3.0 Liabilities**

- 3.1 You and Centre Wellington Hydro 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 Centre Wellington Hydro's distribution system.
- 3.2 Centre Wellington Hydro 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) Centre Wellington Hydro will not pay you for any excess generation that results in a net delivery of energy to Centre Wellington Hydro 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 Ontario Power Authority under contract, you agree that Centre Wellington Hydro 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 Centre Wellington Hydro, you

agree that Centre Wellington Hydro 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 Centre Wellington Hydro of such action.

**6.0 Assignment**

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

Print Generation Account Name: \_\_\_\_\_

LDC account number: \_\_\_\_\_

OPA Reference Number: \_\_\_\_\_

Location of Generation System

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ Postal Code: \_\_\_\_\_

HST Registrant? Y/N      Registration #: \_\_\_\_\_

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: Centre Wellington Hydro deems necessary that the generator owner contacts Centre Wellington Hydro in the event they sell the property on which the micro-generation facility exists, and inform the new owner of their responsibility to contact Centre Wellington Hydro 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.*

<p><i>For office use: Station</i> _____ <i>Feeder</i> _____</p> <p><i>Address</i> _____ <i>Date Connected</i> _____</p> <p><i>(To be filled in by Centre Wellington Hydro)</i></p>
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## 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
$V_n$	$F < 59.5^*$	0.1	6
$V_n$	$F > 60.5$	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**

Centre Wellington Hydro'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
$V_n$	$F < 59.3$	0.16	9.6
$V_n$	$F > 60.5$	0.16	9.6

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