

MICRO-EMBEDDED GENERATION FACILITY CONNECTION APPLICATION

The application is for the connection of a micro-embedded generation facility ($\leq 10\text{kW}$) to the Welland Hydro Electrical System Corporation's (WHESC) distribution system in accordance with the Distribution System Code Section 6.2.6 and the Distributed Energy Resources Connection Procedure Section 5.3.1.

Note:

Applications are cautioned NOT to incur significant expenses until WHESC has issued an Offer to Connect for the proposed generation facility.

General terms and conditions are included at the end of this application document.

There will be a connection capacity assessment performed for all proposed generation connections. There may be a limitation on the number of generation facilities that can be connected to the same distribution transformer, feeder, or substation. Insufficient generation capacity will be sufficient grounds to deny this application.

IMPORTANT: All fields below are mandatory, except where noted. Incomplete applications will not be processed and returned by WHESC.

Please submit the completed form with the required documents by email or mail to:

Welland Hydro Electrical System Corporation
Attn: Engineering Department
950 East Main Street
Welland, ON L3B 0L9

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1. Process

Following steps are to be completed & submitted to Welland Hydro.

- Preliminary Consultation Information Request
- Preliminary Consultation Report (15 days)
- Application and supporting documents
 - Micro-Embedded Generation Facility Connection Application
 - Single Line Diagram
 - Generator information
- Application reviewed and available capacity checks
- Site Assessment
- Offer to Connect, include connection costs
 - 15 Days for existing customer and no Site Assessment required
 - 30 Days for existing customer and Site Assessment required
 - 60 Days for new project and Site Assessment required
- Execute Offer to Connect and provide payment (30 days)
- Micro-Embedded Generation Facility Connection Agreement
- Electrical Safety Authority – Inspection and Authorization to Connect
- Metering Review & Upgrades
- Authorization to Generate or connection for new project (5 days)

2. Requirements

Applicants preparing to connect a Micro-Embedded Generation Facility to Welland Hydro's distribution system must comply with the following rules, codes and regulations:

- Welland Hydro Distributed Generation Resources Technical Interconnection Requirements
- Hydro One Technical Interconnection Requirements for Distributed Generation - Micro Generation & Small Generation, 3-phase, less than 30 kW
- Ontario Electrical Safety Code – Administered by the Electrical Safety Authority
- Canadian Standards Association – product compliance
- Contact local municipal offices for municipal applications, permits, bylaws and Building Codes

3. Application Submission Checklist

- ☐ Micro-Embedded Generation Facility Connection Application
- ☐ Single Line Diagram
- ☐ Generator Information



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4.5 Contact Information

Single point of Contact: _____

4.6 Owner (Mandatory)

Company/Person: _____

Contact Person: _____

Mailing Address: _____

City, Prov., Postal: _____

Telephone: _____ Cell: _____

Email: _____

4.7 Consultant (Optional)

Company/Person: _____

Contact Person: _____

Mailing Address: _____

City, Prov., Postal: _____

Telephone: _____ Cell: _____

Email: _____

4.8 Generation Information

Number of Generating Units: _____

AC Power Output of Each Unit: _____ kW AC Voltage Output of Each Unit: _____ V

Total Proposed Nameplate Capacity: _____ kW Generator Type: _____
(Inverter, Asynchronous, Synchronous, other)

Manufacturer: _____ Model Number: _____

Number of Phases: Single Phase Three Phase

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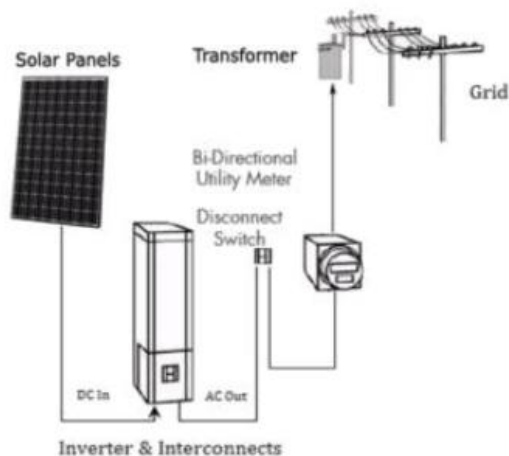
Inverter Certification: C22.2 #107.1-01 UL 1741

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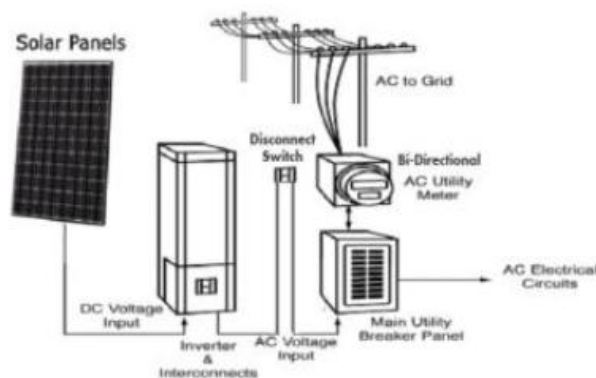
4.9 Type of Connection

Select the Single Line Diagram below that is appropriate for your connection to the WHESC distribution system.

1. Stand Alone Connection



2. Net Metering Connection



Note:

1. WHESC requires the disconnect switch must have a viewing window and must be adjacent to the meter.

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General Terms and Conditions:

1. By submitting a Micro-Embedded Generation Facility Connection Application Form, the Applicant authorizes the collection by Welland Hydro, of the information set out in the Form and otherwise collected in accordance with the terms hereof, the terms of Welland Hydro Conditions of Service, Welland Hydro Privacy Policy and the requirements of the Distribution System Code and the use of such information for the purposes of the connection of the generation facility to Welland Hydro distribution system.
2. Applicants are reminded that all provisions of the Distribution System Code (DSC) and WHESC's Conditions of Service are applicable for this connection. In particular, applicants are cautioned that WHESC cannot guarantee continuous and uninterrupted electrical supply to any part of its distribution system. Although WHESC will use reasonable diligence to ensure consistent electrical reliability and power quality, occasional outages and abnormal voltages may still occur. WHESC is not responsible for any financial loss, damage or injury incurred by the Applicant as a result of such events.
3. As required by the DSC, all applications will be subjected to a Capacity Screening Test (CST) by WHESC, to ensure that there is sufficient remaining generation capacity available. This test reviews the capacity at the Transmission Substation and Transmission Network that supplies electricity to the relevant portion of WHESC's distribution system to be used by the applicant. If this application fails the CST, it will be denied with no further review.
4. Inverter-based generating units must not inject DC greater than 0.5% of the full rated output current at the point of connection of the generating units. The generated harmonic levels must not exceed those given in the CAN/CSA-C61000-3-6 Standards.
5. In connection with WHESC's obligation to maintain the safety and reliability of its distribution system, you acknowledge, warrant, and agree:
 - a. That in the event WHESC determines that your generation facility (i) causes damage to; and/or(ii)adversely affects other distribution system customers or WHESC's assets, you will disconnect your generation facility immediately from the distribution system upon direction from WHESC and correct the problem at your own expense prior to reconnection.
 - b. That you have installed or will install prior to the connection of your generation facility to WHESC's distribution system, an isolation device satisfying Section 84 of the Ontario Electrical Safety Code and agree to allow WHESC's staff access to and operation of this as required for the maintenance and repair of the distribution system.
 - c. That during a power outage on WHESC'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 WHESC's distribution system, as per the generator protective relay settings set out in this Application, in the event of a power outage on WHESC's distribution system or any abnormal operation of WHESC's distribution system. Also, 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.

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- d. 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 WHESC's distribution system.

Applicants are cautioned that they are **NOT permitted** to interconnect any new generation to WHESC's distribution system without WHESC's express permission **under any circumstances**. In addition, provincial regulations and WHESC policies require that WHESC (or an agent of WHESC) perform a verification of new generation connection facilities and must be in attendance to install the appropriate revenue metering prior to interconnection. Failure to abide by these requirements will result in refusal by WHESC to connect the new generation installation.

Liabilities: The Applicant will indemnify and save harmless for all damages and/or adverse effects resulting from any reasonable WHESC'S operation of its distribution system or events that may occur from time to time that affect this distribution system. WHESC shall not be liable to the Applicant 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.

Customer Name (Please Print)

Signature

Date (mm/dd/yyyy)

5. Capacity Check – Completed by Welland Hydro

Transformer Station: _____ Welland Hydro MS: _____

TS Feeder ID: _____ Welland Hydro MS Feeder: _____

TS Bus ID: _____ Welland Hydro Phase: _____

Welland Hydro Connection Voltage: _____

Welland Hydro PCC: _____

Switch #: _____ Transformer #: _____

Capacity Available: ☐ Yes, ☐ No, as of _____ (mm/dd/yyyy)

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Comments
