Orillia Power Distribution Corporation

Generator Connection Assessment, >10kW

Form B

1. Applicant (the legal owner of the generating facility) **Date:**_____

Company Name: _____

Representative: _____

Address: _____

Business HST#: _____

Phone#: _____ Cell#: _____

Email: _____ Fax#: _____

2. Engineering or Installation Contractor Single Point of Contact: ☐ Applicant ☐ Contractor

Company Name: _____

Representative: _____

Address: _____

Business HST#: _____

Phone#: _____ Cell#: _____

Email: _____ Fax#: _____

3. Project Name: _____

Generator Service Address: _____

Lot Number(s): _____ Concession Number(s): _____ GPS Coordinates: _____

Applicant is: ☐ Property Owner ☐ Leaser

Generation Capacity: _____ kW DC, Output Capacity: _____ kW AC

☐ Rooftop Solar ☐ Ground Mount Solar ☐ Other: _____

OPA Contract #:_____ Generator License #:_____

Construction Start Date: _____ Target In-Service Date: _____

4. Primary Intent of the Generation System

☐ IESO Project ☐ Net Metering Project ☐ Load Displacement Project

5. Type of Interconnection

☐ Parallel to Load Customer ☐ Direct Connection

6. Design Requirements

(a) Has the proposed distribution generation equipment been certified?
☐ CSA ☐ UL ☐ Other: _____
Please attach associated documentation and specifications from the manufacturer.

(b) On three phase systems Orillia Power accepts only three phase power generation (i.e. three phase inverters) to be connected to prevent phase imbalance in the distribution system.

(c) It is the responsibility of the generator to produce reliable power generation, prevent system disturbances and not affect other customers on our distribution system. If there is evidence of system disturbances detected the generator shall rectify the problem before allowing reconnection to Orillia Power distribution system. Refer to IEEE 1547.2 for proper protective features of a generating system and connection to the distribution grid.

7. Generator Characteristics

Please attach the Manufacturer's technical brochure and specifications sheets of the generator units.

Manufacturer: _____ Model #: _____

Unit Nameplate Capacity (AC): _____ kW # of Units: _____

☐ Battery Banks - capacity _____ Ah

Type: ☐ Inverter (go to A) ☐ Synchronous (go to B) ☐ Induction (go to B)

A. Inverter Information

☐ Line Commutated ☐ Self-Commutated ☐ Anti-Islanding ☐ < 5% Harmonics

☐ DC Ground Fault Protection Power Factor: _____

Fault Interrupter Rating or Breaker Capacity: _____ kA

B. Motor Information

Nominal Voltage: _____ kV Rated Frequency: _____ Hz Power Factor Range: ____ - ____

Direct Axis Transient Reactance X'd: _____ Sub-transient Reactance X"d: _____

8. Single Line Drawing & Protection Philosophy

Provide a Single Line Drawing (SLD) of the generating facility including the Interface Point / Point of Common Coupling (PCC) to Orillia Power's distribution system.

SLD Drawing #: _____ Rev. _____

Provide a document describing the protection philosophy for detecting and clearing:
- internal faults within the embedded generation facility
- external phase and ground faults (in Orillia Power's distribution system)
- certain abnormal system conditions such as over/under voltage , over/under frequency, open phase(s)
- islanding

9. Interface (or Step-Up) Transformer Information

Rating: _____ kVA Primary Voltage: _____ kV Secondary Voltage: _____ V

Transformer Type: ☐ Single Phase ☐ Three (3) Phase

Impedance: _____ % ☐ kVA Base ☐ kV Base; R: _____ pu, X: _____ pu

High Voltage Winding: ☐ Delta ☐ Star (Y)
Ground for Star (Y): ☐ Solid ☐ Ungrounded ☐ Impedance; R: _____pu, X: _____pu

Low Voltage Winding: ☐ Delta ☐ Star (Y)
Ground for Star (Y): ☐ Solid ☐ Ungrounded ☐ Impedance; R: _____pu, X: _____pu

10. Intermediate (or Service) Transformer Information

Rating: _____ kVA Primary Voltage: _____ kV Secondary Voltage: _____ V

Transformer Type: ☐ Single Phase ☐ Three (3) Phase

Impedance: _____ % ☐ kVA Base ☐ kV Base; R: _____ pu, X: _____ pu

High Voltage Winding: ☐ Delta ☐ Star (Y)
Ground for Star (Y): ☐ Solid ☐ Ungrounded ☐ Impedance; R: _____pu, X: _____pu

Low Voltage Winding: ☐ Delta ☐ Star (Y)
Ground for Star (Y): ☐ Solid ☐ Ungrounded ☐ Impedance; R: _____pu, X: _____pu

11. Existing Facility Main Service Voltage

☐120/240V ☐ 120/208V ☐ 208V ☐ 347/600V ☐ 600V

12. Generator Output Voltage

☐ 120V ☐120/240V ☐ 120/208V ☐ 208V ☐ 347/600V ☐ 347V ☐ 600V

13. Meter Disconnecting Device, Current & Short Circuit Interrupting Rating

_____ A & _____ kA (Symmetrical)

14. Short Circuit Current Contribution of the Proposed Generating Facility

Three-Phase Symmetrical: _____ kA & Asymmetrical: _____ kA

15. Does the Proposed Generating Facility start with the Aid of Power from the Grid?

☐ Yes ☐ No In-Rush Current: _____ A

Maximum Load of the Facility: _____ kVA _____ kW

16. Certification of Construction Design

The construction of generation equipment, structural engineering (if applicable), electrical circuit design and generator conformance to operating parameters shall be certified by a professional engineer. The certificate shall be submitted for connection approval before the final connection is permitted.

17. Liability Insurance

As long as the generator is in operation, you agree to keep in force a comprehensive general liability insurance of a minimum $2,000,000 (dependent on the size of the project), acceptable to and designate Orillia Power Distribution Corporation as an additional named insured. The generator shall send updated insurance policy at times of policy renewal to Orillia Power's Engineering Department.

18. Applicant and Engineering/Installation Contractor Signature

We agree to the terms and conditions set by Orillia Power Distribution Corporation as referred to in the connection process. We submit the required deposit amount in full with this application to start the connection process. We understand that the deposit includes the metering, connection labor and connection impact assessment study cost. To the best of my knowledge, all the information provided in this Application Form is complete and correct.

Engineering/Installation Contractor Signature	Print Name	Date

Applicant Signature	Print Name	Date

Please fill in all required information to reduce correspondence time and to expedite the process.
Please return this form to

Orillia Power Distribution Corporation
Engineering Department
360 West St S, PO Box 398
Orillia, ON L3V 6J9
T. 705-326-2495
F. 705-326-0800
info@orilliapower.ca

NOTE: All technical submissions (Form B, Single Line Diagrams, etc.) must be signed and sealed by a licensed Ontario Professional Engineer (P.Eng.).