Form B
Connection Impact Assessment (CIA) Application

This Application Form is for Generators applying for Connection Impact Assessment ("CIA") and for Generators with a project size >10 kW, including:

- **New Generators applying for Connection Impact Assessment ("CIA")**
- **New Generators applying for revision to their original Connection Impact Assessment ("CIA")**
- **Generators applying for Connection Impact Assessment ("CIA") after rescinding a previous CIA. Note: Please include your previous CIA Project ID # below.**
- **Existing Generators to verify information related to current connection to the Hydro One system. It is part of the overall Distribution Connection Agreement.**

Please return the completed form, fees and other required documents by mail to:

Westario Power Inc.
Attn:Operations Department
Generation Connection Application
24 Eastridge Road RR2
Walkerton On.
NOG 2VO

If you have any questions please e-mail Westario Power Inc. at microfit@westario.com or call 1-519-507-6666 ext 252 or 236 (8:30 am to 4:00 pm Mon to Fri).

NOTES:

1) Applicants are cautioned NOT to incur major expenses until Westario Power Inc. approves to connect the proposed generation facility.
2) All technical submissions (Form B, single line diagrams, etc.) must be signed and sealed by a licensed Ontario Professional Engineer (P.Eng.).
3) All fields below are mandatory, except where noted. Incomplete applications shall be returned by Westario Power Inc.

Date: _____ (dd / mm / yyyy)

Application Type: ☐ New CIA Application ☐ CIA Revision/Rework

1. **Original CIA Project ID# (if applicable):** _____ **Project Name:** _____
2. **Ontario Power Authority (OPA) Feed-In Tariff (FIT) Contract Number:** _____
3. **Proposed In- Service Date**: _____(dd / mm / yyyy)
4. **Project Size:** Nameplate Capacity _____ kW

5. **Project Location:** Address _____
City / Town / Township _____
Lot Number(s) _____
Concession Number(s) _____

6. **Project Information:**
Choose a Single Point of Contact: ☐ Owner ☐ Consultant

	Generator *(Mandatory)*	**Owner** *(Mandatory)*	**Consultant** *(Optional)*
Company/Person			
Contact Person			
Mailing Address Line 1			
Mailing Address Line 2			
Telephone			
Cell			
Fax			
E-mail			

Preferred method of communication with Hydro One: ☐ E-mail ☐ Telephone ☐ Mail ☐ Fax

7. **Customer Status:**

Existing Westario Power Inc. Customer? ☐ Yes ☐ No

If yes, Westario Power Inc. Account Number: _____

Customer name registered in this Account: _____

Are you a GST registrant? ☐ Yes ☐ No

If yes, provide your GST registration number: _____ - _____ RT _____

8. **Fuel / Renewable Energy Type:**

☐ Biomass ☐ Solar ☐ Water ☐ Wind

☐ Diesel Engine ☐ Gas Turbine

☐ Other (Please Specify) _____

9. **Generator's Facilities and New Line Map:**

- *In the following items, "**Point of Connection**" means the point where the new Generator's connection assets or new line expansion assets will be connected to the existing Hydro One distribution system.*
- *"**Point of Common Coupling**" or "**PCC**" or "**Point of Supply**" means the point where the Generator's facilities are to connect to Hydro One's distribution system.*
- *The **Point of Connection** and the **PCC** may be the same, especially if the Generator's facilities lie along the existing Westario Power Inc. distribution system; or the **PCC** may be located somewhere between*

*the **Point of Connection** and the Generator's facilities if new line will be owned by Westario Power inc. For illustration of the **Point of Connection** and the **PCC**, refer to Appendix A attached.*

On a cut-out from the Westario Power Inc. DOM (distribution operating map) provide location of Generator's facilities with proposed line routings for connection to Westario Power Inc.distribution system. It should identify the Point of Connection, the PCC, and the location (i.e. on private property or public road right-of-ways) of new lines between the Generator's facilities and the Point of Connection.

Drawing / Sketch No. _____, Rev. _____

10. Connection to Westario Power Inc. Distribution System:

a. Proposed or existing Connection voltage to WPI distribution system: _____ kV
b. Station: _____
c. Feeder: _____

d. GPS coordinates of the following:
(Please give GPS co-ordinates in following format: Longitude, Latitude - Degree Decimal Format: * e.g. 49.392, -75.570)

Point of Connection: _____
PCC: _____
Generator facilities: _____

e. Distance from the Point of Connection to the PCC _____ km

f. Generator's Collector Lines or Tap Line Facilities
If the Generator's facilities include collector lines or a tap line on the Generator's side of the PCC, provide the following:

Distance and conductor size of tap line on the Generator's side of the PCC, or equivalent distance for Generator's collector lines on the high-side of interface transformer(s):

_____ km;
Conductor size: _____

g. Fault contribution from Generator's facilities, with the fault location at the PCC:
☐ Three-phase generators: 3-phase short circuit _____ MVA;
☐ Single-phase generators: 1-phase short circuit _____

NOTES:

- If this project requires line expansion work between the **Point of Connection** and **PCC**, Westario Power Inc. will provide a cost estimate to construct any line located on public road right-of-way. The cost estimate will include a breakdown of **Uncontestable** work (i.e., overbuild to existing line) that can only be performed by Westario Power Inc., as well as **Contestable** work (i.e., new construction/green-field) that can be performed by the Generator/their contractor **or WPI**. (Both **Uncontestable** work and **Contestable** work require that Westario Power Inc.design & engineer. Westario Power Inc. will become the owner.)

- For Generator-owned line, the Generator may choose to apply for installation of the line on existing Westario Power Inc.owned poles. This is known as an application for **Joint Use (JU**) of poles. If the application is accepted,Westario Power Inc. will provide the Generator with information on initial

connection costs, annual pole-space rental and emergency service (ES) fees, and required JU & ES Agreements.

11. Single Line Diagram ("SLD"):

Provide a SLD of the Generator's facilities including the PCC.

SLD Drawing Number: _____, Rev. _____

12. Generator Characteristics

a. Characteristics of Existing Generators

If Generator's facilities include existing generators, provide details as an attached document.

b. Characteristics of New Generators:

NOTE:
Please provide the manufacturer's technical data (electrical) for the generator or inverter.

Number of generating unit(s): _____
Manufacturer / Type or Model No: _____ / _____
Rated capacity of each unit: _____ kW _____ kVA
If unit outputs are different, please fill in additional sheets to provide the information.
Rated frequency: _____ Hz
Rotating Machine Type:
☐ Synchronous ☐ Induction ☐ Inverter ☐ Other (Please Specify) _____
(If the machine type is "Other", please provide values equivalent to a Synchronous or Induction type Generator)
Generator connecting on: ☐ single phase ☐ three phase
Limits of range of reactive power at the machine output:
i. Lagging (over-excited): _____ kVAR power factor _____
ii. Leading (under-excited) _____ kVAR power factor _____
Limits of range of reactive power at the PCC:
iii. Lagging (over-excited): _____ kVAR power factor _____
iv. Leading (under-excited) _____ kVAR power factor _____
Starting inrush current: _____ pu (multiple of full load current)
Generator terminal connection: ☐ delta ☐ star
Neutral grounding method of star connected generator:
☐ Solid ☐ Ungrounded ☐ Impedance: R _____ ohms X _____ ohms

For Synchronous Units:

i. Nominal machine voltage: _____ kV
ii. Minimum power limit for stable operation: _____ kW
iii. Unsaturated reactances on: _____ kVA base _____ kV base
Direct axis subtransient reactance, Xd'' _____ pu
Direct axis transient reactance, Xd' _____ pu
Direct axis synchronous reactance, Xd _____ pu
Zero sequence reactance, X0 _____ pu
iv. Provide a plot of generator capability curve (MW output vs MVAR)
Document Number: _____, Rev._____

For Induction Units:

i. Nominal machine voltage: _____ kV

ii. Unsaturated reactances on: _____ kVA base _____ kV base
Direct axis subtransient reactance, Xd'' _____ pu
Direct axis transient reactance, Xd' _____ pu

iii. Total power factor correction installed: _____ kVAR
- Number of regulating steps _____
- Power factor correction switched per step _____ kVAR
- Power factor correction capacitors are automatically switched off when generator breaker opens

☐ Yes ☐ No

13. Interface Step-Up Transformer Characteristics:

a. Transformer ownership: ☐ Customer / ☐ Hydro One
b. Transformer rating: _____ kVA
c. Nominal voltage of high voltage winding: _____ kV
d. Nominal voltage of low voltage winding: _____ kV
e. Transformer type: ☐ single phase ☐ three phase
f. Impedances on: _____ kVA base _____ kV base
R: _____ pu, X: _____ pu

g. High voltage winding connection: ☐ delta ☐ star
Grounding method of star connected high voltage winding neutral:
☐ Solid ☐ Ungrounded ☐ Impedance: R: _____ ohms X: _____ ohms
Nameplate rating and impedance values of High Voltage Grounding Transformer (If applicable):
Voltage:_____ V Rating: _____KVA R:_____ pu X:_____pu

h. Low voltage winding connection: ☐ delta ☐ star
Grounding method of star connected low voltage winding neutral:
☐ Solid ☐ Ungrounded ☐ Impedance: R: _____ ohms X: _____ ohms

14. Intermediate Transformer Characteristics (if applicable):

a. Transformer rating: _____ kVA
b. Nominal voltage of high voltage winding: _____ kV
c. Nominal voltage of low voltage winding: _____ kV
d. Transformer type: ☐ single phase ☐ three phase
e. Impedances on: _____ kVA base _____ kV base
R _____ pu X _____ pu

f. High voltage winding connection: ☐ delta ☐ star
Grounding method of star connected high voltage winding neutral:
☐ Solid ☐ Ungrounded ☐ Impedance: R _____ ohms X _____ ohms

g. Low voltage winding connection: ☐ delta ☐ star
Grounding method of star connected low voltage winding neutral:
☐ Solid ☐ Ungrounded ☐ Impedance: R _____ ohms X _____ ohms

NOTE: The term 'High Voltage' refers to the intermediate voltage that is input to the interface step-up transformer and the 'Low Voltage' refers to the generation voltage.

15. Load information:

a. Maximum load of the facility: _____ kVA _____ kW
b. Maximum load current (referred to the nominal voltage at the connection point to Hydro One system): _____ A
c. Maximum inrush current to loads (referred to the nominal voltage at the connection point to Hydro One system): _____ A

Attached Documents:

	Item No.	Description	Document No.	No. of Pages
1				
2				
3				

Attached Drawings:

Item No.	Description	Document No.	No. of Pages
1			
2			
3			

CHECKLIST
Please ensure the following items are completed prior to submission. The application shall be returned if incomplete:

- ☐ Completed form stamped by a Professional Engineer
- ☐ Payment in full including applicable taxes (by cheque or money order payable to "Westario Power Inc.").
- ☐ Signed Study Agreement
- ☐ Single Line Diagram (SLD) of the Generator's facilities, must be stamped by a Professional Engineer

NOTE:

By submitting a Form B, the Proponent authorizes the collection by Westario Power Inc., of any agreements and any information pertaining to agreements made between the Proponent and the Ontario Power Authority from the Ontario Power Authority, the information set out in the Form B and otherwise collected in accordance with the terms hereof, the terms of Westario power Inc. Conditions of Service, WPI 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 Westario Power Inc distribution system.