



# Local Distribution Company (LDC) Form B

LDC Individual Generation Assessment Application



Hydro One Distributed Generation Group | DxGenerationConnections@HydroOne.com | 1-877-447-4412

## ▶ ABOUT THIS FORM

This Application form is to be used only by a Distributor ("LDC") to apply to Hydro One for a Connection Impact Assessment ("CIA") or Detailed Technical Connection Assessment ("DTCA") on behalf of a generation proponent connecting to the LDC's Distribution System. This application is to be accompanied with the LDC's generation connection application as completed by the generation proponent, which must provide the minimum information requirements listed in Appendix A and, if applicable, Sections G, H and I of this application form.

## ▶ TECHNICAL REQUIREMENTS

For technical requirements of Hydro One's Distributed Generation projects, refer to the "Distributed Generation Technical Interconnection Requirements Interconnections at Voltages 50kV and Below" available at:

[https://www.hydroone.com/businessservices/\\_generators/Pages/technicalrequirements.aspx](https://www.hydroone.com/businessservices/_generators/Pages/technicalrequirements.aspx)

## ▶ SUBMISSION INSTRUCTIONS

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

Hydro One Networks Inc.  
Attn: Dx Generation Connections  
Generation Connection Application  
185 Clegg Road  
Markham, Ontario L6G 1B7

## ▶ IMPORTANT NOTES

- Applicants are cautioned NOT to incur major expenses until Hydro One approves to connect the proposed generation facility.
- All technical submissions (Form B, Single Line Diagrams, etc.) must be signed and sealed by a licensed Ontario Professional Engineer (P.Eng.).
- If you are applying for connection of a Load Displacement or Energy Storage facility, the assessment performed by Hydro One is a Detailed Technical Connection Assessment ("DTCA"). For such facilities, the term Connection Impact Assessment ("CIA") as it appears throughout this Form B shall be interpreted to mean Detailed Technical Connection Assessment ("DTCA").
- If you have any questions please e-mail Hydro One's Dx Generation Connections Group at [dxgenerationconnections@hydroone.com](mailto:dxgenerationconnections@hydroone.com) or call 1-877-447-4412 (8:30 am to 5:00 pm Mon to Fri).
- All fields below are mandatory, except where noted. Incomplete applications may be returned by Hydro One Networks Inc. ("Hydro One"). Failure to provide the minimum information requirements will result in delays in processing your application.
- For Emergency Backup Generation, the LDC is responsible for ensuring that their customer's facility has an Automatic Transfer Switch ("ATS") that isolates it from the Distribution System; does not remain parallel with the grid for more than 100ms or any other prescribed time (Closed Transition Only) and be operated in isolation from the Distribution System. Please ensure that you submit a Letter of Equivalency form with your application located on our website at: <https://www.hydroone.com/business-services/commercial-industrial-generators-and-lDCs/local-distribution-companies>



**▶ SECTION A: APPLICATION INFORMATION**

Date *mm/dd/yyyy*

Application Type *choose one*

Project Modifications *Please provide additional details (if applicable)*

Program Type/Purpose *choose one*

Program Type (additional details)

**▶ SECTION B: CONTACT INFORMATION**

Legal Name of LDC

Mailing Address Line 1

Mailing Address Line 2

City

Province

Postal Code

Contact Person Name

Telephone Number

Email Address

Cell Number

Fax Number

Preferred Contact Method

- Email    Telephone    Mail    Fax

**▶ SECTION C: GENERATOR INFORMATION**

Proponent Name

Project Name

Project Size (kW) *total maximum output capacity*

Equipment Capacity (kVA)

Energy Type

Fuel Type/Technology *Please provide additional details*

IESO Contract Number *F-XXXXXX-XXX-XXX-XX (if applicable)*

Proposed In Service Date *mm/dd/yyyy*

Does this project include energy storage?

- Yes    No



**▶ SECTION D: CONNECTION INFORMATION**

Please complete the following fields regarding the connection to the Hydro One transformer station.

Transformer Station <input type="text"/>	LV Bus Designation <input type="text"/>
Feeder Designation <input type="text"/>	Feeder Voltage <input type="text"/>

Is the feeder owned entirely by the LDC?

Yes  No

Is SCADA monitoring through ICCP available?

Yes  No

The following fields refer the conductor between the generator and the Hydro One transformer station, or between the generator and the LDC/Hydro One boundary.

LDC Feeder Length <i>km</i> <input type="text"/>	LDC Feeder Conductor Type <input type="text"/>
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**▶ SECTION E: CONNECTION REQUIREMENTS FROM LDC**

Transfer Trip

Yes  No

Feeder Relay Directioning

Yes  No

DGEO Signal

Yes  No

Low Set Block Signal (LSBS)

Yes  No

Feeder Protection Change Required

Yes  No

**▶ SECTION F: PROPONENT FORM B**

Please attach one copy of your company’s completed Form B as submitted by the generation proponent including an Engineer’s stamp. The Form B must include all the minimum information requirements noted in Appendix “A”.

**▶ SECTION G: LOAD DISPLACEMENT FACILITIES**

The following fields only apply to Load Displacement facilities.

Operation Mode <input type="text"/>	Transition Type <input type="text"/>
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Transition Time (ms) *length of time generator remains parallel to grid*

Minimum Generation Output Information

	Load of Facility (kW)	Load of Facility (kVAR, lead or lag)	Generation Output (kW)	Generation Output (kVAR, lead or lag)
Min. Load				
Max. Load				

**▶ SECTION H: EMERGENCY BACKUP GENERATORS**

The following fields only apply to Emergency Backup generators.

Transition Type

Transition Time (ms) *length of time generator remains parallel to grid*

**▶ SECTION I: ENERGY STORAGE FACILITIES**

The following fields only apply to Energy Storage facilities.

Energy Storage Control Strategy

Description of Control Strategy

If you selected "Peak Shaving", fill in the following fields:

**When operating as a load:**

Switch In Time

Switch Out Time

Peak Load (kW)

Peak Load (kVAR, lead or lag)

**When operating as a generator:**

Switch In Time

Switch Out Time

Peak Generation (kW)

Peak Generation (kVAR, lead or lag)

If you selected "Dynamic VAR Support" or "Frequency Support", fill in the following fields:

Switch In Condition

Switch Out Condition

Peak Generation (kW)

Peak Generation (kVAR, lead or lag)

If you selected "Other", please attach a detailed description of the proposed control mode.

*Hydro One reserves the right to modify the control strategy as part of its Detailed Technical Connection Assessment.*

## ▶ SECTION J: SUBMISSION CHECKLIST

Please ensure the following items are completed prior to submission. Your application will not be processed if any part is omitted or incomplete:

- Payment in full including applicable taxes (by cheque payable to "Hydro One Networks Inc.")  
*If the payment cheque for the CIA fee is from the proponent instead of the LDC, the cheque must be certified.  
Please reference the [LDC Connection Impact Assessment Fee Schedule](#) on our website for costs.*
- Proponent's Form B Application and Single Line Diagram (SLD) stamped by a P. Eng.
- Minimum information for Load Displacement or Energy Storage facilities (Section G or I), if applicable
- Letter of Equivalency, if applicable for Emergency Backup Generation submissions

*A CIA or DTCA Study Agreement must be included with this application. It must be an original, signed hard-copy document. Electronic signatures will not be accepted.*

**▶ OFFICE USE ONLY - PLEASE INCLUDE WITH APPLICATION**



## ▶ **APPENDIX A - LDC GENERATION APPLICATION MINIMUM REQUIREMENTS**

*The following sections/items in the LDC Generation Application are mandatory:*

- Project Name
- FIT Contract Number
- Project Size
- Project Location
- Single Line Diagram with P. Eng Stamp

*Generation Characteristics - The following items are required:*

- Number of generating units
- Manufacturer/type or model number
- Rated capacity for each unit
- Rated frequency
- Generator terminal connection
- Nominal machine voltage
- Direct axis sub-transient reactance,  $X_d''$
- Direct axis transient reactance,  $X_d'$

*Interface Step-Up Transformer Characteristics - The following items are required:*

- Transformer Rating (kVA)
- Nominal voltage of high voltage winding (kV)
- Nominal voltage of low voltage winding (kV)
- Transformer Type (single or three phase)
- Impedances on kVA & kV Base (R pu, X pu)
- High voltage (HV) winding connection (delta/star)
- Grounding method of star connected HV winding neutral (solid/ungrounded & impedance, R & X ohms)
- Low voltage (LV) winding connection (delta/star)
- Grounding method of star connected LV winding neutral (solid/ungrounded & impedance, R & X ohms)

*Intermediate Transformer Characteristics - The following items are required if there is an intermediate transformer*

- Transformer Rating (kVA)
- Nominal voltage of high voltage winding (kV)
- Nominal voltage of low voltage winding (kV)
- Transformer Type (single or three phase)
- Impedances on kVA & kV Base (R pu, X pu)
- High voltage (HV) winding connection (delta/star)
- Grounding method of star connected HV winding neutral (solid/ungrounded & impedance, R & X ohms)
- Low voltage (LV) winding connection (delta/star)
- Grounding method of star connected LV winding neutral (solid/ungrounded & impedance, R & X ohms)

*NOTE: The term 'High Voltage' refers to the connection voltage at Hydro One's distribution system and 'Low Voltage' refers to the generation or any other intermediate voltage.*

