



The siting restrictions in O. Reg. 274/18 which were administered by electricity distributors such as ~~ES&~~ **OPH@** have been replaced by amendments to the Planning Act (Ontario) that puts siting and planning requirements for renewable DER facilities under municipal oversight. It is recommended that you discuss municipal permitting and approvals requirements with the planning department in the municipality where your DER project is located before you proceed.

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▶ SECTION C: CONTACT INFORMATION

CIA will be issued in the name of the host customer (load facility owner). All agreements (including CCA and DCA) are only made between **[LDC name]** and the host customer. This section is strictly to gather contact information of some of the key contacts that are involved with the project.

Who is the single point of contact for this project?

Host Customer DER Owner (if different from host customer) Consultant

Please enter the following information about the **host customer** (load facility owner)

Contact Person

Company's Legal Name

Mailing Address *including postal code, P.O. Boxes and Rural Routes will not be accepted*

Work Telephone

Cell Phone

Fax Number

Email Address

Please enter the following information about the **DER owner** (if different from host customer)

Contact Person

Company's Legal Name

Mailing Address *including postal code, P.O. Boxes and Rural Routes will not be accepted*

Work Telephone

Cell Phone

Fax Number

Email Address

Please enter the following information about the **consultant**

Contact Person

Company's Legal Name

Mailing Address *including postal code, P.O. Boxes and Rural Routes will not be accepted*

Work Telephone

Cell Phone

Fax Number

Email Address





▶ SECTION D: CUSTOMER STATUS

Is there an existing [LDC name] account at the project location?

Yes No

Is the account holder aware of this application?

Yes No

Does your account fall within a residential-rate classification?

Yes No Do not Know

Existing Account Number

Account Holder Name

Does the account holder have an HST registration number?

Yes No

HST Number

▶ SECTION E: EXISTING DER

Are there existing DER at the point of common coupling (PCC)?

Yes No

Existing Project Number

Existing Project Size (kW)

Program Type For Existing DER *choose one*

DER type: Synchronous Induction Inverter based Other

For synchronous units	For induction units	For inverter based units
Min. power limit for stable operation <i>kW</i> <input type="text"/>	Direct axis sub-transient reactance, X''_d <i>pu</i> <input type="text"/>	Inverter rating <i>kVA</i> <input type="text"/>
Direct axis sub-transient reactance, X''_d <i>pu</i> <input type="text"/>	Direct axis transient reactance, X'_d <i>pu</i> <input type="text"/>	Maximum continuous power output <i>kW</i> <input type="text"/>
Direct axis transient reactance, X'_d <i>pu</i> <input type="text"/>	Total PF correction installed <i>kVAR</i> <input type="text"/>	
Direct axis synchronous reactance, X_d <i>pu</i> <input type="text"/>		
Zero sequence reactance, X_0 <i>pu</i> <input type="text"/>		





▶ SECTION F: PROJECT INFORMATION

Station Name *(optional to leave blank for behind the meter projects)*

Fuel/Energy Type *select all that apply*

Feeder *(optional to leave blank for behind the meter projects)*

Feeder Voltage (kV) *(optional to leave blank for behind the meter projects)*

Project Size (kW) *total maximum output capacity*

Equipment Capacity (kVA) *total equipment nameplate rating*

Type of Connection

Single Phase

Three Phase

If this is a solar project, please answer the following questions:

Mounting Type *select one*

If this is a water project, please answer the following questions:

Is your generation facility located on provincial Crown or federally-regulated lands?

Yes

No

Is water your primary energy source?

Yes

No

▶ SECTION G: STATION SERVICE LOAD INFORMATION

The host customer's station service load details

If there is an existing account at the project location, populating the fields in Section G is [optional or required] for [LDC name]. Ensure selection below matches with this note.

Required

Optional

Maximum Demand of Station Service Load of DER *kW*

Average Monthly Consumption *kWh*





▶ SECTION H: CONNECTION INFORMATION

On a cut-out from the [LDC name] DOM (Distribution Operating Map) provide the location of the generation facility with proposed line routings for connection to [LDC name]'s distribution system. It should identify the Point of Expansion (POE), the Point of Common Coupling (PCC), the location of the generation facility, and (if applicable) the route of the new line between the generation facility and the POE (ie. on private property or public road/right-of-way). This is not required for existing load customers that are connecting a load displacement generation, net metering generation or energy storage system behind their existing metered connection point. Please see "Appendix A" for a visual representation of POE and PCC.

DOM Drawing/Sketch Number

DOM Revision Number

Please provide an SLD of the Generator's facilities, including the PCC, transformer and connecting station, feeder, and supply voltage.

SLD Drawing/Sketch Number

SLD Revision Number

POE Latitude *degree decimal format*

POE Longitude *degree decimal format*

PCC Latitude *degree decimal format*

PCC Longitude *degree decimal format*

Generation Facility Latitude *degree decimal format*

Generation Facility Longitude *degree decimal format*

Length of Line from POE to PCC *km*

Length of Line from PCC to Generation Facility *km*

Important: The line between the PCC and the Generation Facility must NOT be shared with any other DER owner (refer to Appendix A).

Conductor Type/Size *for the line between the PCC and the Generation Facility*

Generator Fault Contribution *with fault location at the PCC*

IMPORTANT NOTES:

If this project requires line expansion work between the POE and PCC, [LDC name] 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 [LDC name], as well as contestable work (i.e. new construction/green-field) that may be performed by the Generator, their contractor or [LDC name]. The design of uncontestable and contestable work shall conform to [LDC name] specifications).

For Generator-owned line, the Generator may apply to construct the line on existing [LDC name]-owned poles. This is known as an application for Joint Use (JU) of poles. If the application is accepted, [LDC name] will provide the Generator with information on initial connection costs, annual pole-space rental and emergency service (ES) fees, and required JU & ES Agreements.





▶ SECTION I: ENERGY STORAGE OR UPS

Please complete the following section if your project includes energy storage.

Number of Units

Inverter Unit Size *enter zero if inverter is shared with generation unit(s)*

Energy Storage Unit Size *kWh*

Total Energy Storage Size *kWh*

Energy Storage Facility Control Strategy

Peak Shaving

Dynamic VAR Support

Frequency Support

Other

Please submit a detailed description of the control strategy according to the templates in Appendix B. **[LDC name]** reserves the right to modify the control strategy as part of its Detailed Technical Connection Assessment.

▶ SECTION J: LOAD DISPLACEMENT/PEAK SHAVING

Please complete the following section if this is a load displacement or peak shaving project

Operating Mode

Parallel

Non-Parallel

Transition Type

Closed *"make before break"*

Open *"break before make"*

Time that generator remains parallel to grid *closed transition only, ms*

For non-parallel load displacement, SCADA monitoring and Gross Load Billing (GLB) may apply. For load displacement generation facilities, please attach a schedule of the forecasted maximum generation output (as a function of loading of the facility). At a minimum, include the forecasted generation output information (i.e. Watts and VARs) during the minimum and maximum of the load facility to which the load displacement generator is connecting (see Appendix C for template)





SECTION K: DER CHARACTERISTICS

For facilities with multiple generators: If your generators have different characteristics, please use the "Add Page" button and provide the characteristics for each generator on the additional pages.

DER type: Synchronous Induction Inverter based Other

Number of Generating Units Rated Capacity of Each Unit kW kVA DER Output Voltage in kV

Manufacturer Type or Model Number

If Power Conversion Type is "Other", please provide values equivalent to a Synchronous or Induction type generator.

Maximum Starting In-rush Current multiple of full load current, pu Generator Winding Connection Delta Star

Neutral Grounding Method for star winding connection only Solid Ungrounded Impedance Impedance R in ohms Impedance X in ohms

Limits of range of reactive power at the machine output:

Lagging over-excited, kVAR Lagging Power Factor Leading under-excited, kVAR Leading Power Factor

Limits of range of reactive power at the PCC:

Lagging over-excited, kVAR Lagging Power Factor Leading under-excited, kVAR Leading Power Factor

For synchronous units	For induction units
Nominal Machine Voltage <input type="text"/> kV(LL)	Nominal Machine Voltage <input type="text"/> kV(LL)
Unsaturated Reactance <input type="text"/> kVA Base	Unsaturated Reactance <input type="text"/> kVA Base
Unsaturated Reactance <input type="text"/> kV Base	Unsaturated Reactance <input type="text"/> kV Base
Direct Axis Subtransient Reactance, Xd'' <input type="text"/> pu	Direct Axis Subtransient Reactance, Xd'' <input type="text"/> pu
Direct Axis Transient Reactance, Xd' <input type="text"/> pu	
Direct Axis Synchronous Reactance, Xd <input type="text"/> pu	
Subtransient Time, Td'' <input type="text"/> ms	
Zero Sequence Reactance, X0 <input type="text"/> pu	





SECTION L: INTERFACE TRANSFORMER

The transformer connecting to the [LDC name] distribution system

Transformer Ownership

Customer [LDC name]

Transformer Rating *kVA*

Transformer Type

Single Phase

Three Phase

Nominal Voltage of High Voltage Winding *kV*

Nominal Voltage of Low Voltage Winding *kV*

Impedance Base (if different than ratings above)

kVA Base

kV Base

Impedance (R) *pu*

Impedance (X) *pu*

OR

Impedance (Z%) %

High Voltage Winding Connection

Delta

Star

High Voltage Grounding Method *for star winding connection only*

Solid

Ungrounded

Impedance

Star Impedance R *in ohms*

Star Impedance X *in ohms*

Low Voltage Winding Connection

Delta

Star

Low Voltage Grounding Method *for star winding connection only*

Solid

Ungrounded

Impedance

Star Impedance R *in ohms*

Star Impedance X *in ohms*

Notes

The term "High Voltage" refers to the connection voltage to [LDC name]'s distribution system and "Low Voltage" refers to the generation or any other intermediate voltage.

Providing a photo of transformer equipment along with this application may help expedite your application.





SECTION M: INTERMEDIATE TRANSFORMER

Transformer between the interface transformer and DER

Please complete the following section if your project includes an intermediate transformer.

Do you intend to install an intermediate transformer?

Yes No

Transformer Rating *kVA*

Transformer Type

Single Phase Three Phase

Nominal Voltage of High Voltage Winding *kV*

Nominal Voltage of Low Voltage Winding *kV*

Impedance

kVA Base

kV Base

Impedance R *pu*

Impedance X *pu*

High Voltage Winding Connection

Delta Star

High Voltage Grounding Method *for star winding connection only*

Solid Ungrounded Impedance

Star Impedance R *in ohms*

Star Impedance X *in ohms*

Low Voltage Winding Connection

Delta Star

Low Voltage Grounding Method *for star winding connection only*

Solid Ungrounded Impedance

Star Impedance R *in ohms*

Star Impedance X *in ohms*

Notes:

The term "High Voltage" refers to the connection voltage to [LDC name]'s distribution system and "Low Voltage" refers to the generation or any other intermediate voltage.

SECTION N: HIGH-VOLTAGE GROUNDING TRANSFORMER

Please complete the following section if your project includes a high-voltage grounding transformer.

Do you have a high-voltage grounding transformer?

Yes No

Transformer Type *select one*

Zig-Zag Star-Delta

Zero Sequence Impedance (Z0) R *ohms*

Zero Sequence Impedance (Z0) X *ohms*





▶ APPENDIX C - LOAD DISPLACEMENT FIGURES

Figure C1: Example Schedule With Minimum Information Required for Load Displacement Projects

	Load of Facility (kW)	Load of Facility (kVAR, lead or lag)	Generation Output (kW)	Generation Output (kVAR, lead or lag)
Minimum Load				
Maximum Load				

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