System Studies & Distributed Energy
Resource Connections, Investment Planning
Toronto Hydro
500 Commissioners Street, 3rd Floor
Toronto, ON M4M 3N7

Micro-Embedded Generation Facility Application

This application is for micro-embedded generation facilities, including net metering, that are ≤ 10 kW.

Section A - Administrative Information

Program *(choose one)*	☐ FIT ☐ Net Metering ☐ Load Displacement ☐ Energy Storage ☐ Large Renewable Procurement (LRP) ☐ Closed Transition ☒ Other, please specify:
Existing Distributed Energy Resource (DER) on the property	☒ Yes ☐ No IESO Contract # for existing generator(s) if applicable:

If existing DER(s) on property, select resource technology below

☐ Solar Photovoltaic (PV) ☐ Renewable Biomass ☐ Wind ☐ Bio-Gas ☐ Co-Generation/Combined Heat and Power (CHP)
☐ Energy Storage Type (please specify):
☐ Other (please specify):

Section B - Contact Information

	Toronto Hydro Service Location (site of project)	**Distributed Energy Resource Owner** (owner of project)	**Engineering Consultant** (electrical/developer)
Company/ Person			
Street Address			
City			
Postal Code			
Contact Name			
Telephone			
Cell			
Email			

System Studies & Distributed Energy
Resource Connections, Investment Planning
Toronto Hydro
500 Commissioners Street, 3rd Floor
Toronto, ON M4M 3N7

Section C - Billing Contact

◉ Toronto Hydro Customer ○ DER Owner ○ Engineering Consultant
○ Other (please specify): _____

_____

_____

Section D - Project Description

Dates	Proposed Start of Construction (dd/mm/yyyy)				
	Proposed In-Service (dd/mm/yyyy)				
Account	If you are an HST registrant, provide your HST number	- RT			
	Toronto Hydro Account Number				
Generator/ Storage *(if applicable)*	DER	☐ Synchronous ☐ Induction ☐ Inverter ☐ Other, please specify:			
	Resource Technology *(select all that apply)*	☐ Solar PV ☐ Renewable Biomass ☐ Wind ☐ Bio-Gas ☐ Co-Generation/CHP ☐ Other, please specify:			
		Generator		**Storage**	
	Manufacturer				
	Model Number				
	Power Factor (p.u)				
	[A]: Number of Units				
	[B]: Rating of Each Unit	kW	kVA	kWh	kVA
	Proposed Total Capacity: = **[A] × [B]**	kW	kVA	kWh	kVA
	Number of Phases:	○ one	◉ three		
	Output Voltage (V)				
	Connection Configuration	○ delta	◉ star		

System Studies & Distributed Energy
Resource Connections, Investment Planning
Toronto Hydro
500 Commissioners Street, 3rd Floor
Toronto, ON M4M 3N7

Mode of Operation	Load Displacement?	☐ Yes, existing load new load ☐ No	kW kW
	Power Export?	☐ Yes ☐ No	kW
	Peak Period Only?	☐ Yes ☐ No	kW

Please be advised that the nameplate capacity for Solar PV systems is determined by taking the lesser of:

i. The sum of the manufacturer's capacity ratings (in kW) for normal operation (e.g., continuous output ratings) of the installed solar modules (i.e. panels) of the Facility; or,

ii. The sum of the manufacturer's capacity ratings (in kW) for normal operation (e.g., continuous output ratings) of the installed inverters of the Facility.

Section E - Single Line Diagram (SLD)

Provide an updated SLD of the Generating Facility, signed by a Professional Engineer, which includes the Interface Point/Point of Common Coupling (PCC) to Toronto Hydro's distribution system.

The SLD shall contain details on the following:

- Electrical equipment at the embedded generation facility, principal ratings, impedances, winding configurations, neutral grounding methods, etc.
- Protective relaying, synchronizing and revenue metering arrangements. The device numbers should be in accordance with IEEE Standard Electrical Power System Device Function Numbers (ANSI/IEEE C37.2)
- Only dual winding transformers are acceptable for connection to the Toronto Hydro system.
- Provide the details at the connection point. Toronto Hydro Transformer Station, Toronto Hydro Feeder ID, Transformer Location number and ratings

Note: If the project includes upgrades to existing Embedded Generation facilities, show the existing and new electrical equipment.

SLD Drawing Number: _____ Revision: _____

Single Line Diagram Checklist

Item description	Check as applicable
Toronto Hydro transformer station, feeder ID, transformer location number and ratings (obtained from Pre-Assessment)	☐
Disconnecting device at the interface (PCC) point with Toronto Hydro system	☐
Load break switches	☐
Fuses / circuit breakers	☐

System Studies & Distributed Energy
Resource Connections, Investment Planning
Toronto Hydro
500 Commissioners Street, 3rd Floor
Toronto, ON M4M 3N7

Interface step-up transformer (intermediate transformer)	☐
Current transformers / voltage transformers (quantity, location, connection, ratio)	☐
Power cables (length, type, impedance)	☐
Power factor correction capacitors and their switching arrangements (particularly for induction units)	☐
Generators (rotating/static) / Motors / PV inverter system	☐
Surge arresters	☐
Other information	☐
Drawing attached / mailed separately	☐

Section F - Location and Site Plan

Provide a site plan outlining existing facilities and proposed embedded generator location. The site plan should include approximate line route for connection to Toronto Hydro, as well as roads, lot numbers and nearby power lines.

Provide meter room layout showing locations of all equipment and approximate clearances.

Drawing Number: _____ Revision: __

Section G - Protection Philosophy

Provide a document describing the protection philosophy for detecting and clearing:

- Internal faults within the Embedded Generation facility
- External phase and ground faults (in Toronto Hydro's distribution system)
- Certain abnormal system conditions such as; over- / under-voltage, over- / under-frequency, open phase(s)
- Islanding
- Tripping matrix

Drawing Number: _____ Revision: __

System Studies & Distributed Energy
Resource Connections, Investment Planning
Toronto Hydro
500 Commissioners Street, 3rd Floor
Toronto, ON M4M 3N7

The information and, where applicable, personal information being collected via this form is being collected by Toronto Hydro for the purposes of facilitating Distributed Energy Resources connections. By signing this form, you are agreeing to Toronto Hydro collecting the information and, where applicable, personal information on this form, and are consenting to its usage by Toronto Hydro for the aforementioned purposes. By opting to submit this form, you are acknowledging that you accept the risk of communications to and from Toronto Hydro not being encrypted or secure, and that the personal information contained in this form, where applicable, including but not limited to name, service address, phone number, email address and Toronto Hydro account number, could be intercepted and/or read by unintended parties. Toronto Hydro accepts no liability for any loss and/or damages caused by unintended parties intercepting and/or reading email communications contained in this form. For more information on how Toronto Hydro collects, uses and discloses personal information, please refer to Toronto Hydro's Privacy Policy at **torontohydro.com/privacypolicy**.

Customer Name (Print): _____

Customer Signature: _____ **Date:** _____