

A photograph of several high-voltage power transmission towers and their associated power lines, set against a clear blue sky. Green trees are visible in the foreground, partially obscuring the lower part of the towers.

# Distributed energy resource (DER) generation connection information package

This package provides customers (applicants) with information, process, applications, documents and supporting links to connect their distributed energy resource (DER) to Hydro One's distribution system.

Processes or requirements may change without notice. It's imperative that applicants do not incur any expenses for their proposed projects until they have received and accepted an offer to connect from the Hydro One team.

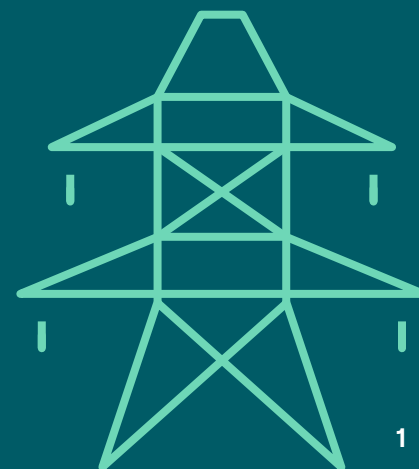
## We're here to help

For more information, please visit our generators page at **[HydroOne.com/business-services/generators](https://hydroone.com/business-services/generators)**.

If you have any questions, or would like to request a hard copy of this information package, call our distributed generation connections team at **1-877-447-4412** from Monday to Friday 8:30 a.m. to 5 p.m. or send us an email at **[DxGenerationConnections@HydroOne.com](mailto:DxGenerationConnections@HydroOne.com)**.

Payments by cheque or where hardcopy document submissions are required, please send to the following mailing address:

**Hydro One Networks Inc.**  
**Attention: DxGeneration Connections**  
**185 Clegg Road,**  
**Markham, Ontario L6G 1B7**



## Station capacity

Before submitting your DER connection application request (outlined in this document), we encourage applicants to visit our interactive **station capacity calculator** to check for station and feeder capacity, including feeder capacity for a restricted feeder. You may also access our **generation capacity map**.

While we hope you find the capacity calculator and capacity map helpful, please note that any information it provides are for informational purposes only.

Please review the [Terms of Use](#) on our website.

Hydro One does not allocate capacity for proposed projects based on the use of this tool. Capacity can only be allocated after Hydro One issues an official offer to connect.

## Technical requirements

We're committed to delivering safe and reliable electricity service. To help ensure a quick and easy process, applicants are asked to follow the terms and conditions outlined in the following documents:

[Conditions of service](#)

[Technical interconnection requirements](#)

### Additional technical requirements:

- Planning Act (Ontario) (latest version)
- Ontario Electrical Safety Code (latest version)
- Canadian Standards Association (applicable codes)
- Institute of Electrical and Electronics Engineers (IEEE)
- All other applicable rules, codes and regulations



## Micro-embedded generation facility ≤ 10kW

### Connection process

Step	Instruction	Details
<b>Step 1</b>	Review Hydro One's DER webpage	Visit <a href="#">Micro-embedded generation</a> for information on processes, forms, technical requirements and other helpful information. If you're applying as a subdivision, contact our Dx generation connections team at <b>DxGenerationConnections@HydroOne.com</b> or <b>1-877-447-4412</b> . Visit the <a href="#">Electrical Safety Authority (ESA)</a> for more information on connection process and requirements.
<b>Step 2</b>	Request to connect your Micro-DER project	Complete <a href="#">Form C - Micro-generation connection application</a> .  There is no charge to submit a Form C application. Within the prescribed timeline, which varies based on the facility location, Hydro One will either provide you with an offer to connect or a refusal to connect as per the distribution system code (DSC) and the distribution energy resources connection procedures (DERCP).
<b>Step 3</b>	Sign and return your offer to connect package with payment	Your project will be allocated capacity when the offer to connect (OTC) has been provided.  Should you wish to proceed with connection, you must review and accept the OTC within 90 days of the OTC sent date to maintain the capacity for the project.  Submit and sign (where applicable) the following: <ul style="list-style-type: none"> <li>• Customer service contract for connection of micro-embedded generation facility</li> <li>• Micro-embedded generation facility connection agreement</li> <li>• Net metering program agreement (if applicable)</li> <li>• Inverter manufacturer derating letter (if applicable)</li> <li>• Connection payment (or proof of payment if paid by credit card)</li> </ul>
<b>Step 4</b>	Construction and ESA inspection	You must make a request to the ESA for an electrical inspection upon completing construction.  Once ESA has been received by Hydro One's field business centre, we will schedule a connection date.
<b>Step 5</b>	Meter installation and connection complete	Once your meter has been installed, your account will be prepared for billing.  You are now connected to Hydro One's distribution system.

### Applications, documents and helpful links:

[Load displacement program and connection information](#)

[Net metering program and connection information](#)

[Available capacity on Hydro One's distribution system](#)

[Station capacity calculator](#)

[Generation capacity map](#)

[Form C - micro-generation connection application form](#)

[Emergency back-up generation notification/application form](#) [Sample single-line diagram](#)

[Micro-embedded generation facility connection agreement](#)

[Sample inverter manufacturer derating letter](#)

[Disclosure of information to a third-party consent or termination of consent form](#)

[Technical interconnection requirements \(TIR\) microFIT](#)

[CSA-approved meter-mounting devices](#)

[Retail metering guide](#)

[Next steps for microfit assignment & assumption](#)



## Small, mid-sized and large generation facility > 10kW

### Connection process

Step	Instruction	Details
<b>Step 1</b>	Review Hydro One's DER webpage	<p>Review our <a href="#">connection process</a> webpage for more information on processes, forms, technical requirements and other helpful information.</p> <p>You may also contact us at <b>DxGenerationConnections@HydroOne.com</b> or <b>1-877-447-4412</b> and the <a href="#">ESA</a> to obtain more information on connection process and requirements.</p>
<b>Step 2</b>	Submit a preliminary consultation information request (PCIR)	<p>Complete the optional <a href="#">Form A – preliminary consultation information request</a>.</p> <p>As per the DSC and the DERCP, Hydro One will provide you with a PCR within the prescribed timeline.</p> <p>The PCR includes a Hydro One GIS map and identifies feasibility and the complexity level of a connection based on the information provided in the PCIR</p> <p>Capacity is only reserved upon completion of a successful connection impact assessment (CIA).</p>
<b>Step 3</b>	Submit a connection impact assessment (CIA) request	<p>Complete <a href="#">Form B – connection impact assessment (CIA) application</a> and submit to DxGeneration Connections (refer to page one of this package).</p> <p>Please ensure the following items are submitted with your application:</p> <p>Payment and fees</p> <ul style="list-style-type: none"> <li>• CIA payment in full including applicable taxes (refer to page three of this package) (CIA fees represent the costs for performing the connection impact assessment study only.)</li> <li>• An additional \$10,000 will be required for projects that involve another LDC.</li> </ul> <p>For more information on <a href="#">CIA fees</a></p> <ul style="list-style-type: none"> <li>• Other documents IESO system impact assessment (SIA) and Hydro One's transmission customer impact assessment (TxCIA) are required for Large projects (&gt;10MW).</li> <li>• Signed study agreement (contact DxGeneration for the template).</li> <li>• Single-line diagram (SLD).</li> <li>• Geographic information system (GIS) map (not required for existing load customers).</li> <li>• Protection philosophy.</li> <li>• PCR (if one was requested).</li> </ul>
<b>Step 4</b>	CIA screening process	<p>CIA applications are subject to a review and screening process for completeness.</p> <p>As per the DSC and the DERCP, Hydro One will confirm if the application is substantially complete within the prescribed timeline.</p>
<b>Step 5</b>	Completion of the CIA and detailed cost estimate	<p>Within the prescribed timeline, which varies based on size and complexity, Hydro One will either provide you with a completed CIA and detailed cost estimate outlining the cost to connect the project (+/-50%) or a refusal to connect as per the DSC and DERCP.</p> <p>A Hydro One account executive will be assigned to your project.</p>

Step	Instruction	Details
<b>Step 6</b>	Sign a connection cost application (CCA) with payment	<p>Your project will be allocated capacity as of the CIA sent date.</p> <p>Should you wish to proceed with connection, submit a <u>connection cost agreement and connection and cost recovery agreement application form</u>.</p> <p>Sign a CCA and remit 100% of deposits payable by you within six-months of this date to maintain the capacity for the project.</p>
<b>Step 7</b>	Kick-off meeting	<p>A Hydro One project manager will be assigned and will contact you to schedule a project kick-off meeting after your CCA has been executed.</p> <p>During the meeting, you and the Hydro One project manager will negotiate an in-service date (ISD) and review the steps to get connected.</p> <p>It's important not to underestimate the amount of time and work involved relative to construction, testing and completing required documents.</p> <p>Establishing an ISD that is acceptable to you and Hydro One will be one of the objectives of the kick-off meeting.</p>
<b>Step 8</b>	Design, construct & obtain ESA Inspection	<p>Work with your Hydro One project manager to ensure you are following our <u>technical requirements</u> (including SLD requirements).</p> <p>Hydro One performs the work required to make the connection. The customer will then complete the construction of the facility and obtain ESA inspection approval.</p>
<b>Step 9</b>	Confirmation of verification evidence report (COVER)	<p>The COVER is a comprehensive document that will be provided by the Project Manager at the kick-off meeting.</p> <p>The purpose of the COVER is to ensure your generation facility is designed with the required protections as identified in the CIA, TIR and where applicable, the transmission customer impact assessment (TxCIA) and system impact assessment (SIA) requirements, and they are verified to function as designed.</p> <p>Your consulting engineer will need to complete and sign different sections of the COVER as your generation facility is built and tested and must provide the completed sections back to Hydro One's project manager at various stages of completion.</p>
<b>Step 10</b>	Distribution connection agreement (DCA)	<p>The DCA is a legal agreement that outlines the project characteristics and operating procedures that are to be maintained and adhered to while your project is connected to Hydro One's distribution system.</p> <p>The DCA will be provided to you for review approximately 60 days before the current ISD for your facility. It is your sole responsibility to obtain all the corresponding feedback and documentation (including the as-built SLD) and supply it to Hydro One 30 days before the ISD to complete and execute the DCA.</p>
<b>Step 11</b>	Final commissioning, approvals & connection complete	<p>There will be three milestones in the final commissioning and connection process.</p> <p>Milestone 1 – Connecting as a load</p> <p>Milestone 2 – Connecting the generator for testing purposes only</p> <p>Milestone 3 – Generator allowed to start generating commercially</p> <p>*Note: Milestone 1 &amp; 2 may occur at the same time</p> <p>Once your meter has been installed, your account will be prepared for billing.</p> <p>You are now connected to Hydro One's distribution system.</p>

## Small, mid-sized and large generation facility > 10kW

### Generation facility applications, documents and helpful links:

[Load displacement program and connection information](#)

[Net metering program and connection information](#)

[Available capacity on Hydro One's distribution system](#)

[Station capacity calculator](#)

[Generation capacity map](#)

[Form A - preliminary consultation information request](#)

[Connection impact assessment \(CIA\) Form B application](#)

[CIA fee schedule](#)

[CIA Form B instructions](#)

[CIA Form B study agreement](#)

[CIA Form B study agreement checklist](#)

[System impact assessment \(SIA\)](#)

[Emergency back-up generation notification/application form](#)

[Emergency back-up generation open transition declaration template](#)

[Gross load billing FAQ](#)

[Connection cost agreement \(CCA\) and connection & cost recovery agreement \(CCRA\) application form](#)

[Disclosure of information to a third-party consent or termination of consent form](#)

[Distribution generation technical interconnection requirements](#)

[Retail metering guide](#)

[DER protection philosophy checklist](#)

[Sample single-line diagram \(SLD\)](#)

[Settlements and revenue metering SLD requirements](#)

[Declaration of commissioning compliance form](#)

[DER disconnect switch witness confirmation](#)

[Sample inverter manufacturer derating](#)

[Distribution connection agreement \(DCA\) application form](#)

[Intertie protection settings](#)

[Schedule F form information](#)

[Schedule F form](#)

[Expansion deposit refunds](#)

[DER project connection cost guidance](#)

