How to Connect Your Generation Facility

(>12 kW & ≤ 10 MW) To Enova's Distribution System

Last Revised: April 7, 2026

Revision #0

General

The following guideline applies to the generation facilities under two categories:

Small:	≤ 500 kW connected on distribution system voltage < 15 kV
	≤ 1 MW connected on distribution system voltage ≥ 15kV
Mid-Sized:	≤10 MW but > 500 kW connected on distribution system voltage < 15 kV
	> 1 MW but ≤ 10 MW connected on distribution system voltage ≥ 15 kV

Generation facilities larger than 10 MW may exceed Enova's system limit and will be subject to a System Impact Assessment (SIA) conducted by the IESO, in addition to a special engineering review and connection process. The Customer shall contact Enova for further information.

Contact Information

For customer inquiry and application submission, please contact Enova Power Corp. at:

Enova Power Corporation
301 Victoria Street South
Kitchener, Ontario, N2G 4L2

Email: eclerk@enovapower.com
Phone: 519-888-5552

Responsibility of Enova

- The safety, reliability, and efficiency of its distribution system,
- Ensuring that the new generation connection does not adversely affect the distribution system or risk the hydro employees and the existing customers;
- Ensuring that the Distribution System Code and applicable standards are followed;
- Keep connection cost effective to promote renewable energy.

Responsibility of the Customer

- The safety, design, construction, operation, metering, protection and control, and maintenance of the generating facility.
- Contacting Enova early in the process.
- Contacting the various agencies involved before finalizing plans.
- Ensuring all necessary submissions and agreements are completed and required payments clear.

In addition to satisfy the requirements listed in this guideline, the customer is solely responsible to obtain regulatory approvals for installing and operating the generation facility, which may include but not be limited to the following:

- Compliance with all municipal zoning and land use by-laws, Ontario Building Code, please contact City/Township's Planning Department.
- Renewable Energy Approval for renewable energy project or Certificate of Approval for non-renewable energy project (please consult Ministry of Environment and Ministry of Natural Resources)
- Electricity Generator License required by Ontario Energy Board for generation facility above 500kW
- Connection Authorization by Electrical Safety Authority (ESA)

ESA approval will be required before the generation facility is allowed to connect. The ESA can be contacted at 1-877-ESA-SAFE (1-877-372-7233). The ESA website is http://www.esasafe.com/ .

Connection Process

In compliance with the Distribution System Code, the connection process and timing for Small and Mid-Sized generation facility to be connected in parallel with Enova distribution system is as follows:

1. Initial Contact

The Customer proposing the installation of a generation facility should contact Enova and the Electrical Safety Authority for information regarding the connection process and applicable requirements.

The Customer may also contact other relevant agencies before finalizing the project plan, such as:

- The local municipality or City Planning Department
- Ontario Energy Board
- Provincial ministries such as the Ministry of the Environment or Ministry of Natural Resources

2. Provision of Information

Enova will provide the Customer with a copy of guideline explaining the generation connection process, technical requirements, and applicable application forms.

Additional information regarding Enova's distribution system may be found in Appendix A2.

The Electrical Safety Authority provides information related to electrical safety requirements and the electrical inspection and authorization-to-connect process.

3. Develop Plan and Register Project

The Customer reviews the information provided by Enova and ESA and develops a plan for the proposed generation project. This plan typically includes:

- Size and type of generation facility
- Potential project location(s)
- Intended operation (e.g., load displacement, net metering, isolated operation, or grid-connected generation)
- Project development plan and schedule

4. Initial Consultation (No charge)

A Customer or developer interested in connecting a Generation Project should review the Centralized Capacity Information Map (CCIM) and Restricted Feeders list on Enova website to determine whether the proposed connection point is located on a restricted feeder.

The CCIM and Restricted Feeders document is updated by Enova at least every three (3) months.

It should be noted that a restricted feeder does not necessarily mean that connection is not possible. Rather, it indicates that the feeder has limited capacity to accommodate additional generation. In such cases, distribution system upgrades may be required prior to connection, and the associated costs would be the responsibility of the Customer.

To initiate the preliminary consultation process, the Customer or developer must download the Preliminary Consultation Information Request (PCIR) form from the Enova

website (also see See Appendix B2) and submit the completed form to: eclerk@enovapower.com

Upon receipt of the completed PCIR form, Enova will review the request and provide a Preliminary Consultation Report (PCR) using the same PCIR form. The response will include preliminary connection information and technical details related to the proposed project.

5. Simplified CIA

Requests which meet the criteria in the table below may be eligible for a simplified CIA. Enova will indicate if the proposed project is eligible for a simplified CIA when providing the Preliminary Consultation Report (PCR).

Size Limits:

- Single-phase DER:
  Greater than 12kW and up to 30kW
- Three-phase DER:
  Greater than 12kW and up to 50kW when connected to a distribution line operating below 15kV

  Greater than 12kW and up to 100kW when connected to a distribution line operating at 15kV or higher

6. Application for Connection Impact Assessment (CIA)

The Customer submits a completed Connection Impact Assessment (CIA) Application (See Appendix C2) to Enova, including all required technical information, via email to: eclerk@enovapower.com

Note: All technical submissions at minimum should have following for all applicable projects:

- Filled and signed Preliminary Study Agreement (see Enova website)
- CIA application form (P.Eng. certified)
- single-line diagrams (P.Eng. certified)
- Protection philosophy (See Appendix E2)
- Inverter specs with CSA compliance certificate

Upon receipt of a complete CIA application, Enova will review the submission and provide comments. If the application is satisfactory, Enova will request payment from the customer. The fee schedule for CIA payments can be found on the Enova website.

7. Connection Impact Assessment

Enova performs an impact assessment of the proposed generation facility to determine connection feasibility and required system upgrades, following the technical requirements outlined in Appendix A1.

The CIA will commence once the Connection Impact Study Agreement has been executed and payment has been received. The CIA is valid for six (6) months only.

For generators that may impact an upstream transmission station or another system owner, the upstream owner may also be required to perform its own CIA, with the associated costs borne by the Customer.

Following completion of the study, Enova provides the Customer with a CIA report that includes:

- Connection feasibility
- System fault level information at the proposed Point of Connection
- Required system modifications or upgrades
- SCADA points (for greater than 50kW systems)

If the Customer chooses to revise the project based on the CIA results, the revised plans must be resubmitted for a new CIA review, beginning again at Step 6.

As part of the CIA process, Enova will also provide a Connection Cost Agreement (CCA) estimate outlining:

- Distribution system upgrade requirements
- Metering requirements (See Appendix G2)
- Transfer trip and telemetry requirements (if applicable)
- Estimated connection costs and schedule

8. Connection Cost Estimate

If the customer is satisfied with the results of the CIA and wishes to proceed with the project, Enova requires the customer to complete a CCA application to issue a Connection Cost Agreement (CCA). See Appendix D2 for the CCA application.

The CCA specifies:

- Scope of work to be performed by Enova and/or the Customer
- System modifications required for the connection
- Metering and protection requirements
- Total connection costs
- Target connection timeline
- Any additional requirements that must be met before connection

For generators connecting to a shared feeder or an upstream station owner, the upstream owner may also issue its own CCA. Any associated costs will be incorporated into the CCA provided by Enova.

If the Customer decides to proceed with the project, the Customer must sign the CCA and provide the required payments.

Note: Capacity allocation for a proposed embedded generation facility may be removed if a CCA is not executed within six (6) months of the date on which the capacity allocation was granted.

9. Implementation and Design Review

At the Design Review stage of a DER project, the distributor (Enova) verifies that the detailed engineering design submitted by the customer matches the requirements identified in the CIA and CCA and will operate safely on the distribution system. It is essentially a technical compliance check before construction or energization. Design review stage includes but not limited to:

- Verification that the detailed design complies with the conditions and requirements identified in the Connection Impact Assessment (CIA).
- Review of the detailed Single Line Diagram, including the point of connection, transformer configuration, switching devices, and grounding arrangement.
- Review of the protection philosophy and protection system, including relay functions, protection coordination, and anti-islanding protection.
- Verification of metering configuration and revenue metering requirements, including CT/PT ratios and meter location.
- Review of telemetry, communication, and SCADA requirements, where applicable.
- Verification that the ratings of equipment (transformers, switchgear, breakers, cables, etc.) are adequate for system fault levels and operating conditions.
- Review of grounding and safety requirements, including isolation devices and safe operation practices.
- Confirmation of the distribution system upgrades and interconnection facilities required as identified in the CIA and Connection Cost Agreement (CCA).
- Review of the commissioning plan and testing procedures, including protection testing and verification requirements prior to operation in parallel with the distribution system.

The Customer works closely with Enova, the Electrical Safety Authority, and any other relevant organizations from which approvals, inspections, or licenses are required.

The Customer must submit detailed engineering drawings and a commissioning plan to Enova as required under the CCA. At the same time, the Customer must submit detailed electrical plans to ESA as part of the ESA Plan Approval process.

Enova will perform a design review to ensure that the detailed engineering of the generation facility does not adversely impact Enova's distribution system or associated transformer stations.

Note: *Detailed engineering drawings must be submitted to Enova at least six (6) months before the proposed Commercial Operation Date. All technical submissions must be signed and sealed by a licensed Ontario Professional Engineer (P.Eng.). It is recommended that the design review be completed before major equipment is purchased.*

The Customer is responsible for constructing the generation facility and arranging ESA inspections. All requirements from the design review and the ESA Plan Approval process must be satisfied. Enova will implement the required system upgrades, metering installation, and service connection as outlined in the CCA.

10. Commissioning and Verification

The Customer performs commissioning and testing of the generation facility, including off-line testing and on-line testing. During commissioning, the Customer must complete the Enova Confirmation of Verification Evidence Report (COVER) form provided in Appendix F2 and submit it to Enova. The COVER report demonstrates that the generation facility has been tested and is operating correctly.

Note: The COVER form must be signed and sealed by a licensed Ontario Professional Engineer (P.Eng.).

After the off-line testing is completed and prior to on-line testing, the Customer must arrange a site inspection with the Electrical Safety Authority and obtain a Temporary Authorization to Connect.

The Customer must submit the following to Enova before on-line testing begins:

- Temporary Authorization to Connect from ESA
- Partially completed COVER form (signed and sealed)

Once reviewed by Enova, the generator may be temporarily allowed to operate in parallel with Enova's distribution system for testing purposes. Enova may also request site witnessing and verification during commissioning, if required.

11. Connection Agreement

The Connection Agreement outlines the operating conditions and responsibilities associated with the generation facility. Enova will issue the Connection Agreement for

execution with the Customer. The Customer must complete and return the signed agreement prior to final energization.

The following documentation is required to complete the Connection Agreement:

- As-built Single Line Diagram
- Contact Information (Owner, Contractual, and Operational contacts)
- Certificate of Insurance
- Signed and sealed COVER

12. Final Connection

Enova will approve the final connection once the following conditions are met:

- Signed and approved COVER form received
- Executed Connection Agreement in place
- Formal Authorization to Connect received from the Electrical Safety Authority
- All outstanding payments cleared

Once the final connection is completed, Enova will begin recording generation output and will work with the Customer to establish the appropriate settlement arrangement based on the project type.