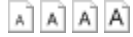


How the Renewable Energy Standard Offer Program Works



The Standard Offer Program makes it easier for operators of small renewable energy generating facilities to participate in Ontario's electricity supply system by supplying power through their local electricity distributors and being paid a fair and stable price for the power they provide.

From a planning perspective, you should investigate all of the implications of running your operation, including determining a business structure, paying business income taxes, and tracking costs and revenues.



Projects can range from residential photovoltaic rooftop generation of 1 kilowatt (costing about \$12,000) up to small wind farms of 10 megawatts (costing about \$25 million).

There are a number of other steps you should take before fully committing to your project. The following information will give you an idea of the scope of a renewable energy project.

Stage 1. Pre-Feasibility

Connecting the project to the electricity distribution system: Contact your local distribution company (LDC) to determine that a connection can be made from your site to the distribution system – and identify any additional costs associated with making the connection.

Additionally, there may be constraints that limit connections in designated areas where the transmission system cannot accommodate additional power.

Consulting neighbours: The Ontario Sustainable Energy Association (OSEA) recommends that a comprehensive and inclusive public consultation process be an integral part of the development of all renewable energy projects.

Some developers have reported that proximity concerns can result in significant roadblocks. Listening and responding to community concerns as early as possible can help avoid conflict, delays and increased costs at a later stage.

Community open-houses, door-to-door visits with neighbours and group visits to existing similar facilities can build goodwill and contribute to greater community acceptance of a proposed project.

The issues of concern will vary with your type of renewable project. For example, aesthetics, bird

mortality and noise levels are the three most common concerns associated with wind-power projects.

Zoning by-laws: Each municipality has an official plan with allowable land-use designations. You should ensure your project meets these local requirements before proceeding. The Association of Municipalities of Ontario (AMO) maintains a [database](#) of municipal contacts in Ontario that can help in establishing contact with the municipality.



Stage 2. Consulting and Project Planning

Resource assessment and siting: Resource assessment (fuel source availability) is critical for renewable energy project planning and will vary according to type:

- Wind power projects are the most likely to require the assistance of an experienced professional consultant to help determine energy potential.
- Waterpower, typically 'run of river' projects, are dependent on the characteristics of the water flow during all four seasons.
- Biomass projects rely on the ongoing availability of the source material which itself will be subject to regulations.
- Solar photovoltaic (PV) projects will require continuous solar access from the particular building or structure, avoiding shade interruptions and maintaining optimum orientation.

Note: Assessment of wind power potential can be extremely complex. One developer, with the participation of a consultant, studied wind patterns for almost two years and correlated the results with long-term wind data from Environment Canada, prior to leasing the land and making technology choices.

Securing financial resources: There are a variety of ways to finance a small renewable energy project. In addition to conventional debt (borrowing from a bank) or equity (issuing shares), you may have additional financing avenues available, depending on the specific project.

- Some developers have utilized flow-through shares that provide a tax deduction for investors, while others have entered into partnership arrangements with municipalities or other parties.
- Project may qualify for a variety of federal and provincial incentive programs, grants, etc. (see [REDO](#), Renewable Energy Development in Ontario)

Prospective developers may choose to engage a professional consultant with experience in the financing of renewable energy projects to investigate all available options.

The developers contacted for the case studies presented here generally agree that the introduction of Ontario's Standard Offer Program, which provides a stable pricing regime under a 20-year contract, will likely make lending or investing in small renewable energy projects more attractive to financial

institutions and investors.

Connection Impact Assessment: This required document details the technical specification for the connection and determines its impact on the regional (LDC) and provincial power systems (IESO).

Details regarding the project's generator and transformer characteristics and expected peak and base production are required. As the developer, you will have to pay for any required assessments.

Environmental assessments and screenings: Some electricity generation projects will be subject to Environmental Assessments or Environmental Screening processes required by the Ontario Ministry of the Environment and the federal Ministry of the Environment.

For example, the following technologies are all subject to the provincial Environmental Screening process:

- Wind turbines of 2 MW or greater
- Waterpower facilities of less than 200 MW
- Biomass technologies of 5 MW or greater

The following technologies are exempted from both Environmental Assessments and Screening:

- Solar photovoltaic projects
- wind turbines of less than 2 MW
- biomass technologies of less than 5 MW
- landfill and biogas technologies of less than 25 MW

For more information on the provincial Environmental Assessment and Environmental Screening processes, developers are advised to read the [Guide to Environmental Assessment Requirements for Electricity Projects](#) available on the Ministry's Web site, and to contact the [Ministry of the Environment](#). Additional, federal approvals may be required.

Municipal approvals: Some renewable energy electricity generation projects require municipal approvals and permits. Each municipality has its own approach to approvals and permits and you should check with the municipality in which your project will be located.

To access the Association of Municipalities on Ontario database of municipal contacts, click [here](#).

Standard Offer Program requirements: The Standard Offer Program Rules establish three requirements that must be met by applicants **at the time of filing an application** with the OPA. In each case, evidence that the requirement has been met must be provided.

1. A completed Connection Impact Assessment, as required, provided by the relevant local distribution company.
2. The applicant must state the category applicable to the project under the Environmental Assessment requirements of the Ontario Ministry of the Environment, and provide evidence that any required Environmental Assessment is underway.
3. The applicant must provide evidence either of ownership of the property in question or of leasehold or other access rights necessary to complete the proposed project, such as a copy of a deed or a lease agreement with the property owner.



Stage 3. Project Management and Commercial Operation

Detailed project design: To ensure the successful completion of your project, you should prepare a detailed construction plan. You may also find that experienced, qualified contractors are required to meet the unique connection and construction challenges of your project.

Choosing equipment suppliers and manufacturers: Generally, developers advise choosing suppliers with established facilities and service/maintenance/parts capability – close to your project site. Configuring and maintaining renewable energy technologies is a highly specialized field. Maintaining an inventory of parts and technical staff can significantly increase expenses.

Licences: The Ontario Energy Board (OEB) issues licences to electricity generators in the province and defines the terms and conditions of these generators licences. All potential generators are required to contact the Ontario Energy Board [directly](#), prior to generating electricity from their project.

Standard Offer Program payments: Under the terms of the Standard Offer Program contract, payments will be based on the electricity delivered from the generating facility to the connection point and successfully incorporated into the distribution system or the load customer's electrical system. Note that this may include adjustments to metered electricity output to account for site-specific losses.

The OPA will pay any amounts owing to the generator through the existing settlement mechanisms managed by the local distribution company. In all cases, settlement will be based on metered data, and payments based on the Contract Price will be made directly to the generator.

Electricity consumed by the generator and the LDC's fixed monthly customer charges will both be dealt with in the normal course by the LDC, in compliance with the requirements of the Ontario Energy Board.

The OPA will pay all applicable sales taxes on amounts payable to a generator under a contract. The generator will be responsible for all taxes other than sales taxes in respect of the electricity delivered from the contract facility.

Related Content

[Standard Offer Program for Wind Energy](#)

The following information covers issues that are specific to Wind Energy Projects operating under the Standard Offer Program

[Standard Offer Program for Waterpower](#)

The following information covers issues that are specific to Waterpower Projects operating under the Standard Offer Program.

[Standard Offer Program for Solar PV Energy](#)

The following information covers issues that are specific to Solar PV Projects operating under the Standard Offer Program.

[Standard Offer Program for Biomass Energy](#)

The following information covers issues that are specific to Biomass Energy Projects operating under the Standard Offer Program.