

## You Can Get Involved!

*How can I earn money AND do something good for the environment?*

*Should I lease my roof space for solar equipment?*

*What is required to set up a solar energy generation project in Pickering?*

*What is the FIT Program?*

These are just some of the questions that many people have been asking since the new Green Energy Act was adopted by the Province of Ontario. As part of the Sustainable Pickering program, the City of Pickering is committed to providing up-to-date information on renewable energy generation opportunities to residents and business owners in Pickering. Read on for answers about the new Feed-in Tariff (FIT) Program and to find out what is involved in implementing a renewable energy generation project.

As renewable energy generation technology and the FIT Program are relatively new, this document will be a “living document” and will be updated as new information becomes available. This document is intended to be a resource for residents and business owners in the City of Pickering interested in generating renewable energy.

### General Questions

### FAQ: Residents (microFIT – 10 kW or less)



## General Questions



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## 1. What is the Green Energy Act?

Ontario's [Green Energy Act](#) was passed in May 2009 and is intended to attract new investment, create new green economy jobs and better protect the environment by:

- Sparking growth in clean and renewable sources of energy (e.g., solar, wind, waterpower and bioenergy)
- Introducing new conservation measures
- Creating 50,000 jobs for Ontarians in its first three years through measures such as domestic content requirements for renewable energy projects

The Green Energy Act contains several opportunities for homeowners, businesses and communities to get involved in renewable energy initiatives – most notably, the [Feed-In Tariff \(FIT\) Program](#).

## 2. What is the FIT (Feed-In Tariff) Program?

The [Feed-In Tariff \(FIT\) Program](#) establishes a [tariff rate](#) which generates a payment based on the number of kilowatt hours of renewable energy generated. Projects eligible for the FIT Program receive a 20 year contract for the payment of renewable energy produced.

The FIT Program streamlines the approval process and allows all types of renewable energy producers to participate. The Ontario Power Authority (OPA) is responsible for implementing

the FIT Program. The FIT Program is open to the following renewable energy technologies:

- [Solar PV](#) (roof and ground mounted)
- [Wind](#) (on-shore and off-shore)
- [Waterpower](#)
- [Bioenergy](#) (biogas, biomass and landfill gas)

To date, the most common installations in the FIT Program are solar PV systems.

Click here to access a detailed [Overview of the FIT Program](#).

Click here for a detailed [list of FIT FAQs](#).

## 3. What is the microFIT Program?

The Ontario Power Authority's [microFIT Program](#) is a component of the FIT Program for projects with generating capacity of **10 kW or less** (i.e. micro-scale renewable energy projects, such as residential solar photovoltaic (PV) installations and small wind power facilities). Projects eligible for the microFIT Program have a simplified application and contracting process.

Click here to access a detailed [Overview of the microFIT Program](#).

Click here for a detailed [list of microFIT FAQs](#).

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#### 4. What kinds of renewable energy generation projects qualify under the FIT and microFIT Programs?

- [Solar PV](#) (roof and ground mounted)
- [Wind](#) (on-shore and off-shore)
- [Waterpower](#)
- [Bioenergy](#) (biogas, biomass and landfill gas)

Note: Geothermal and solar domestic hot water projects are not eligible under these programs.

#### 5. How can I learn money for producing renewable energy?

Ontario’s new Feed-In Tariff (FIT) Program and microFIT Program provide payment for qualifying renewable energy generation systems connected to the electricity system or “grid”. Here’s how it works:

You produce energy via a qualifying renewable energy generation project. It goes into the grid. You are [paid a set rate](#) for this power. You do not power your house or building with power generated with your system. Nor do you store energy produced with your system for your own use. You still pay for the electricity used on your property at your current rate but you also receive money (under a separate account) for the renewable power you feed into the grid.

In other words, these programs do not save you money on your energy bill. They generate a revenue stream which you may use to offset your energy use.

Here is a summary of the payments you could receive for the renewable energy you feed into the grid from a solar PV system:

Rooftop or ground mounted: 10 kW or less	80.2 cents/kWh
Rooftop: 11 to 250 kW	71.3 cents/kWh
Rooftop: 251 to 500 kW	63.5 cents/kWh
Rooftop: greater than 500 kW	53.9 cents/kWh
Ground mounted: 10 kW to 10 MW	44.3 cents/kWh

Click here for a detailed [list of tariff rates](#).

#### 6. How does renewable energy generation benefit my community?

Producing renewable energy:

- Supports our local economy by creating jobs for local renewable energy equipment manufacturers and installers
- Provides an additional source of revenue for community residents
- Improves energy security by reducing the demand for oil and natural gas
- Increases electricity system reliability by reducing the burden on existing energy generation infrastructure
- Improves our environment by decreasing smog
- Improves the quality of the air we breathe
- Sets a powerful example for your friends and neighbours

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## FAQ: Residents *(microFIT – 10 kW or less)*

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# Residents

*(microFIT – 10 kW or less)*

## A. Can residents participate in the FIT Program?

Yes. Residents can apply to participate in larger scale renewable energy projects governed by the FIT Program. For details, see information provided for businesses.

## B. How do I participate in the microFIT Program?

There are three ways for residents to participate in the microFIT program. Residents may purchase and install their own microFIT project, lease the equipment and install their own microFIT project, or join a community of people to build and install a microFIT project that is collectively owned.

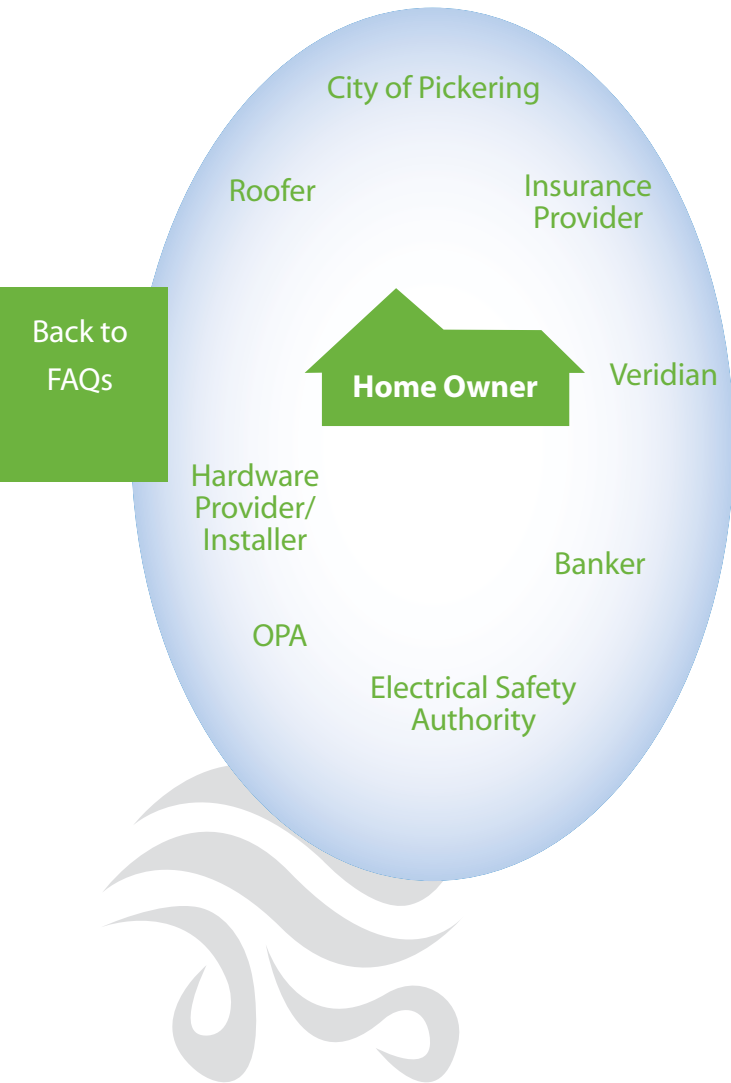
For more information on leasing equipment for your microFIT project or building and installing a collectively-owned project, visit the OPA's section on [How to Get Involved](#)

The first step is to educate yourself about renewable energy and the microFIT Program. Next, select your renewable energy technology and develop a project plan by discussing your project with the appropriate people (e.g. installer, local electricity provider, City of Pickering's Building Services Department, conservation authority, insurance provider, etc.).

Once you've selected your renewable energy technology and developed a project plan, there are three key steps:

- a) [Submit an application and receive conditional offer](#)
- b) [Build and connect your project](#)
- c) [Accept your contract and receive payments](#)

There is no application fee for the microFIT Program.



**C. Who should I consult before considering the installation of a renewable energy project?**

It is important to communicate with all of the potential players in your renewable energy project early in process. On page 6 is a diagram of the people that may need to be contacted to discuss your system.

**D. Will the energy I produce power my house?**

No. If you participate in the microFIT Program, the power you produce goes into the electricity system or “grid”. You do not power your house with energy generated by your system, nor do you store energy produced by your system for your own use. You are [paid a set rate](#) for this power. You still pay for the electricity used on your property at your current rate but you also receive money (under a separate account) for the renewable power you feed into the grid.



**E. What is the average cost, payback and generation capacity of a typical residential renewable energy project?**

The cost, payback, generation capacity and maintenance of a residential renewable energy system varies depending on the size, type and location of the system. An example for a residential rooftop solar PV installation (one of the most common installations) on an average house is provided below.

An Ontario homeowner might install a residential-scale solar PV project of about three kilowatts (which would typically equal about one-third of the home’s electricity consumption). The cost would be around \$30,000 (the general “rule of thumb” cost for PV panels is \$10 per watt or \$10,000 per kilowatt). This system would occupy approximately 250 square feet of roof space. If the homeowner is participating in the microFIT Program, this investment could result in payments of about \$7 per day, or about \$2,500 per year for the homeowner.

A three kilowatt solar PV installation could pay for itself in about 12 years. For a more accurate estimate of the payback period, access [Natural Resources Canada’s RETScreen tool](#).

The output will vary based on location and exposure to the sun. A typical 3 kW solar PV system could produce approximately 3400 kWh per year. For a more accurate estimate of your project’s expected output, use [Natural Resources Canada’s RETScreen tool](#). *Source: Ontario Power Authority*

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### F. How do I find a reputable renewable energy generation equipment supplier, dealer or installer?

We suggest visiting the member directories of the appropriate industry associations. The [Canadian Solar Industries Association](#), [Canadian Wind Energy Association](#) and [Ontario Water Power Association](#) all have member directories. Note that the companies on these lists do not necessarily hold particular certifications and are not vetted in any way; it is simply a list of members.

Additionally, within our community, we have companies that are ready to work with you to install a system. For a listing of local companies, consult the [City of Pickering Business Directory](#).

Both renewable energy generation technology and the microFIT Program are relatively new. Finding a reputable renewable energy generation equipment supplier is a key step in your project. Ask your potential supplier, dealer and/or installer the right questions, including:

- Does the company have the proper credentials/training?
- How much experience do they have selling and/or installing the product?
- Do they carry a range of products and brands?
- Can they provide references?
- Are they willing to discuss your system without asking for any money up front?
- Are they willing to answer all of your questions and walk you through the process?

- Are they willing to show you a system that they have installed?
- Do they offer guarantees on their services/products?

### G. What permissions do I need from the City of Pickering to install a renewable energy generation system?

Our Building Services Department would be happy to meet with you at no cost in the planning stages of your project to discuss the required permissions. Contact the City of Pickering's Building Services Department at 905.420.4631.

The Building Services Department approves and inspects all construction projects and installations that are governed by the Ontario Building Code Act. In other words, if your renewable energy generation system includes structural or plumbing elements, you may need a building permit from the City of Pickering. You must obtain a building permit before your project can be inspected. In order to obtain a building permit, an application form must be completed, accompanied by drawings and specifications of the structural components and any proposed plumbing associated with the installation. The building permit fee is \$100.

Below is a breakdown of the permissions required by the City of Pickering for various renewable energy generation systems. Note that other permissions may be required from other groups (e.g. the Ministry of Natural Resources).

### **Structures Built for a Renewable Energy Generation System:**

A building permit is required for any solar panel having a surface area equal to or greater than 5m<sup>2</sup>.

#### **Solar**

##### **Solar Photovoltaic (PV) Systems**

A solar PV system can involve both electrical and structural components. Some solar PV systems use a mounting system to install PV panels. Others are installed flat, directly against the roofing and do not require a structural apparatus to be installed. If any significant structural apparatus is necessary to support the PV system above or beyond the roof or on a wall, you must obtain a building permit, and the project must be approved and inspected by the City of Pickering. Significant structural apparatus includes:

- Systems on a roof and projecting more than 12" above the roof at any point
- Systems projecting more than 12" beyond the edge of the roof
- Systems supported on an exterior wall

A building permit is typically not required if the PV array, having a surface area less than 5m<sup>2</sup>, is installed directly against the roofing at all locations. If you are unsure whether or not your system requires a permit, contact the City of Pickering's Building Services Department.

Your solar PV project's electrical system is not required to be reviewed or inspected by the City of Pickering. Note that all solar PV installations also require inspection by the Electrical Safety Authority.

#### **Wind**

A building permit is required for a wind turbine installation with a generation capacity greater than 3 kW. Note that other permissions may be required from various other groups (e.g. the Ministry of Natural Resources).

#### **Water**

Water generation is not governed by the Ontario Building Code Act and therefore a building permit is not required. It should be noted, however, that any changes to water courses, damming, and installation of generating stations require Conservation Authority, Ministry of Natural Resources and Ministry of the Environment approval.

#### **Bioenergy**

All bioenergy projects require Ministry of the Environment approval. If a structure greater than 10m<sup>2</sup> is constructed in conjunction with a bioenergy project, the City of Pickering Building Services Department will only issue a building permit for the structure, upon receipt of Ministry of the Environment approval.

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## H. What other permissions do I need to install a renewable energy generation system?

Depending on its size, type and location, your renewable energy generation system may require other approvals from your local Conservation Authority and other Ontario Ministries. If you're unsure what other permissions your system requires, contact the groups below to discuss your project.

### a) Conservation Authority

Pickering lies within the jurisdiction of two Conservation Authorities, the Toronto and Region Conservation Authority and the Central Lake Ontario Conservation Authority.

A rooftop solar PV system *likely* does not require permissions from your local Conservation Authority. If you are unsure if your system requires approvals, contact your local Conservation Authority to discuss your project. Your system will likely only require Conservation Authority approval if it is located within a regulated/screening area (e.g. flood plain, tributary area, etc.).

In order to contact the appropriate Conservation Authority and find out if your property is located in a regulated/screening area, use the map links provided below to determine within which jurisdiction your property is located.

Toronto and Region Conservation Authority ([Map](#)):

Chris Jones, Planning and Development Department,  
416.661.6600, ext. 5718

Central Lake Ontario Conservation Authority ([Map](#)):  
Chris Darling, Director, Development Review & Regulation,  
905.579.0411, ext. 119

### b) Other Ministries

Contact Ontario's [Renewable Energy Facilitation Office](#) to discuss your project and determine if your project requires approvals from the Ministry of Environment or the Ministry of Natural Resources.

## I. Does my renewable energy generation equipment need to be inspected by the Electrical Safety Authority (ESA)?

Yes. Electrical components must be inspected and approved by the Electrical Safety Authority (ESA). There is a fee for the inspection. Visit the [Electrical Safety Authority's Renewable Generation Safety webpage](#) for more information.

## J. What is the role of my electricity provider in a renewable energy generation project?

If you plan to connect to the electricity grid, you must discuss your project with your local electricity provider, [Veridian](#). They are responsible for connection. If you are participating in the microFIT Program, your local electricity provider is also

responsible for payments for your energy generation. [Contact Veridian](#) in the initial planning stages to discuss your project.

### **K. Is there a limit to how much energy can be fed back into the grid?**

In general, small renewable energy generation projects (e.g. projects eligible under the [microFIT Program](#): 10kW or less) do not have grid connection capacity issues.

### **L. Will installing renewable energy generation equipment impact my property taxes?**

Renewable energy generation is relatively new. There is little experience with respect to its effects on property taxes.

The Municipal Property Assessment Corporation (MPAC) is responsible for the valuation and classification of properties across the Province of Ontario. It administers a uniform, province-wide property assessment system based on current value assessment in accordance with the provisions of the [Assessment Act](#).

MPAC is bound by the provisions of the [Assessment Act](#), and related assessment legislation, when valuing your property. Section 3(1)18 of the Assessment Act exempts “All machinery and equipment used for producing electric power but not including any buildings, structures, structural facilities or fixtures used in connection therewith.”

To determine information specific to the valuation and classification treatment of your property, and the provisions of Section 3(1)18 of the Assessment Act, in relation to the microFIT Program, please contact MPAC at: 1.866.296.MPAC (6722), and [visit them on-line](#) to obtain extensive property assessment related information.

### **M. Will my insurance be affected if I install renewable energy generation equipment?**

Check with your property insurance provider to determine whether insurance is required to cover your renewable energy generation equipment or structures. Generally, there is a small rate increase associated with a renewable energy generation equipment installation. It is advisable to have your equipment installation company discuss your project with your insurance provider to ensure that they are properly educated about the technology.

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## Links

[Ontario's Green Energy Act](#)

[MicroFIT/FIT Program website](#)

[Natural Resources Canada – Renewable Energy Information](#)

[Veridian](#)

[Ontario's Renewable Energy Facilitation Office](#)

[Ontario's Renewable Energy Information Centre](#)

[Canadian Renewable Energy Association](#)

[Canadian Solar Industries Association](#)

[Canadian Wind Energy Association](#)

[Canadian Bioenergy Association](#)

[Ontario Sustainable Energy Association](#)

[Ontario Water Power Association](#)

Sustainable Pickering is a Journey, not a destination. We know that moving towards sustainability is the right direction to go and that every step in that direction is worth taking. We invite Pickering residents and businesses to join us on this journey.

For more information on sustainability in Pickering, see our Measuring Sustainability Report on the Sustainable Pickering website: [www.sustainablepickering.com](http://www.sustainablepickering.com)

This guide is a publication of the City of Pickering, Office of Sustainability.

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