

A GUIDE TO MICROFIT-ING IN ONTARIO (SOLAR POWER STYLE)

Canada has the potential to produce immense quantities of solar power. In fact, our nation receives more sun radiation than most leading countries in solar energy production. Nevertheless, over 90 percent of residential homes in Ontario use electricity that is currently derived from natural gas and other fossil fuels (Enersource, 2010). Despite our abundant supply of sunlight, one reason solar power has not caught much attention in Canada is that it is publicly perceived to be an economically unfeasible source of energy. Solar PV and other renewable energies have significant capital costs that make it difficult for homeowners to invest in such technologies. Thus, the Government of Ontario decided to provide attractive financial incentives for its citizens to participate in small-scaled solar, wind, water, biomass, and biogas energy projects (MEI, 2009).



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The provincial government introduced the *Green Energy Act* on February 23, 2009, with the aim to increase the supply of clean and renewable energy sources, help households become more energy efficient, and create at least 50,000 jobs within the green industry (MEI, 2009).

In order to promote household production of renewable energy, the *Micro Feed-In Tariff*(microFIT) program was instigated to encourage homeowners and small commercial landowners to install and run small-scaled renewable power projects that generate 10 kW or less (OPA 1, 2010). This article will guide homeowners through the process and benefits of participating in the microFIT program with a solar photovoltaic (PV) system.

The OPA administers all aspects of program and allows individuals to sell excess solar energy to grid for 80.2 cents per kWh, which is a fixed price guaranteed by a 20-year, transferable contract (OPA 2, 2010). With the additional incentives that OPA will provide, a homeowner can expect recover the capital investment of their solar project within 10 to 15 years, and earn a reasonable return on investment. Furthermore, the off-grid generation of electricity will allow homeowners to hedge against increasing energy prices throughout their contract term.

A solar PV system is large and long-term financial investment that is not accessible to many homeowners.

But with the microFIT program's financial incentives, the technology is now less financially risk adverse for the average citizen. Furthermore, as more people invest in solar PV systems in the remote future, the Canadian solar industry will draw more suppliers and consumers (Go Solar 2009). This industry growth will encourage advancements in solar power, and consequently make it increasingly efficient and affordable to the general populace.

During installation, it is important to determine the location of a PV system for optimal power generation. A PV system in Ontario generates energy under maximum efficiency when it is installed on a south-facing surface at a 45-degree horizontal incline (OPA, 2009). The location should also not be blocked by shade-inducing objects, such as trees and other houses (Go Solar, 2009). Once connected to a grid, PV panels are automated by a circuit panel to transfer solar energy to the grid, while acquiring electricity from the grid when the panels generate less energy than a household's demand (*ibid*).

The microFIT program makes solar and other renewable energy technologies more economically viable for the average homeowner. It also will help reduce greenhouse gas emissions, eliminate smog during high peak usage seasons, and combat climate change.

After all, one of the primary objectives of this project is to help discontinue the use of coal as an energy source by 2014 (Enersource, 2010). Overall, coupled with its environmental benefits, the financial incentives from the microFIT program should persuade more Ontario homeowners to consider installing their own solar PV systems.

Source: <http://www.sassweb.ca/3bb3/volume1-0/solar-volume1-0/microfit-program-solar>