

Dear ****,

What I intend to purchase is called a "grid-connected solar PV system" or a "grid-tie solar PV system". "PV" stands for "photovoltaic", panels that generate electricity directly from sunlight. I will install roughly 10 PV panels on my roof that will generate electricity in the form of direct current (DC). Such panels have been in use all over the world for decades, and most have an extremely long life (15-40 years or more). The manufacturer's warranty in my case will guarantee my panel's performance (output) for 20 years; you can't find a more trouble-free type of generating system.

The panels will be mounted on rails, which are securely fastened to my roof so that the panels run over the roof, but are raised up only about 6" from it. The electricity will be fed from the panels on the roof down to a device called an inverter, which transforms the electricity into alternating current so that it exactly matches the grid power that we all receive and use. The electricity will then be fed into a second electrical meter, installed so that Toronto Hydro can measure how much electricity my system generates, and then the power is fed to the grid. My home would use none, some, or all of it depending on what we are powering in the house and how much electricity my system is producing at the time. Any power left over goes to help supply my neighbours and everyone else on the grid.

As the government of Ontario is trying to encourage the generation of electricity from renewable energy sources, a mechanism has been in place for almost four years in Ontario which pays a premium rate to "micro generators" as we are called. It is administered by the OPA, was originally called the "Renewable Energy Standard Offer Program" (RESOP) and is now known as the "micro Feed-In Tariff program" (microFIT). Under the microFIT, such producers of electricity, once approved for a microFIT contract, are paid 80.2 cents per kilowatt-hour, with a contract length of 20 years. The rate was calculated by the OPA and various stakeholders to ensure that these projects covered their costs and earned a 'reasonable' rate of return for the project investor(s). I have received confirmation of this from Our Power, the service provider that is helping me with this investment decision. Their parent organization, Toronto Renewable Energy Co-Operative (TREC), authored one of the definitive Canadian studies on the subject for a project called "SolarShare" in 2006.

Trained PV system installers will install my system, licensed electricians will do all electrical work, and an inspector from the Electrical Safety Authority (ESA) will inspect the system before going live. All electrical components are CSA and NEC approved and the inverters (most people have one, I have 2) must also carry two specific approvals; UL 1741 and CSA 22.2, which require that they disconnect from the grid within fractions of a second if any aspect of the grid electricity becomes irregular. This is required to ensure the safety of utility workers who might be making repairs somewhere on the grid after a power disruption. There are no moving parts and no batteries involved in my system, although such could be added as an option to provide standby power for use in a power failure. A system installed by my service provider, Our Power, has its own website which includes anyone can visit and includes pictures of the system.

It's URL:

<http://www.cachelan.com/green/solarVu.php?ac=brigham>

Some related links: (add in links to the vendor from whom you intend to buy the system and the components it will use)

MicroFIT program: <http://microfit.powerauthority.on.ca/>

Day Four solar panels: <http://www.day4energy.com/products.htm>

Sanyo solar panels: <http://en.ca.sanyo.com/Solar>

My inverters: <http://www.xantrex.com/web/id/172/p/1/pt/25/product.asp>

The company who sold and installed my system:

<http://www.soleraenergies.com/>

The report on the economics of PV in Ontario done for the Toronto Renewable Energy Co-Operative (TREC) in 2007:

<http://www.trec.on.ca/projects/solarshare.html>

There are still apparently some underwriters who are not comfortable with these systems, likely because they are simply not familiar with them. Since they are fully approved in all aspects by the electrical authorities, and are a desired form of generation being encouraged by both our provincial and municipal governments, I suggest the underwriters may want to get themselves sorted out on this sooner rather than later. Our Service provider, Our Power (<http://www.ourpower.ca/>) is working on clearing the hurdles still remaining for the adoption of solar PV and thermal systems in and around Toronto. They are in contact with 11 community associations encompassing over 2,000 homeowners at the moment, who are developing initiatives within their communities to get solar systems on their roofs. In the support tools that we offer through Our Power, if any real problems with insurance does exist and persist, we plan to begin offering a list of insurance companies who have seen the light (pun intended), by getting familiar and comfortable with modern grid-tie solar systems, so that adding them to a home policy is nothing more than for example, adding a small addition or new kitchen to their home; it is just considered to be an addition to their existing coverage.

Hope this helps and I am happy to answer any of the questions that will inevitably arise.

Sincerely,
