



# Buying a Solar PV System?

CanSIA

CANADIAN SOLAR INDUSTRIES ASSOCIATION

**Congratulations!** It's great that you're taking charge of your energy production. A solar photovoltaic (PV) installation can generate significant benefits for you or your business. As with any major investment, it is important that you thoroughly research and evaluate your options before choosing your supplier and system.

If you are planning to buy a solar system that will produce 10 kW or less of electricity and qualify under Ontario's microFIT program, you can look forward to receiving fixed payments over a 20-year period. Of course, you will want to ensure your system delivers the performance and investment return you expect over the life of the contract. Here are the key steps to take when selecting your solar provider, followed by a brief explanation for each:

- Verify vendor qualifications
- Understand what the total cost includes
- Examine revenue projections
- Use appropriate site selection tools
- Reduce installation risk
- Before you sign

## Verify Vendor Qualifications

Installing solar panels is about much more than buying a set of PV modules at the lowest cost. It is about analyzing your unique needs, coming up with the best overall solution, choosing the right components that are certified and labeled for use in your jurisdiction and that comply with Domestic Content requirements, installing them correctly and keeping the system running as expected. You want to choose a vendor you look forward to working with over the period of design, installation and ongoing delivery of power.

Start by determining if the prospective vendor has a record of quality work in the solar installation business by asking questions and checking references. Obtain independent feedback from past customers wherever possible. You need to be able to count on the company to competently manage your PV installation from permits to safe solar power delivery. If the vendor's main experience is unrelated to solar, you may want to ask more questions about how their prior skills and experience are valuable in the solar business.

After your consultation, ask yourself if your vendor representative leaves you with the confidence that the company will be around for the long term to deliver on warranty coverage and services that will assure optimum performance of your system. If there is any doubt, ask more questions. Consult multiple vendors and compare your findings.

## Understand What the Total Cost Includes

Ask for a written accounting of the costs and responsibilities covered in the total estimate. Look for the costs of stamped engineering drawings, building permits, connection costs, Electrical Safety Authority (ESA) fees, warranty support and maintenance support going forward. Will the vendor help you with your microFIT application? Will the company order all the required equipment and see that domestic content requirements are met? In other words, does the total cost estimate include a complete turnkey installation including all permits, costs and related tasks?

## Examine Revenue Projections

A number of factors are used to calculate the projected revenue returns for your PV panels. Ensure each quote you obtain documents the following:

- estimates the total costs of the solar equipment, including regular system maintenance and service
- sets out the approximate life of the panels, aligning with the manufacturer's warranty period
- provides kWh estimates reflecting the small reduction in panel performance that occurs each year, ranging from 0.5% to 1% (e.g., a 20- or 25-year warranty that reflects a minimum expected power rating for the solar modules throughout the warranty period – typically 90% at the end of year 10 and 80% at the end of year 20 or 25)

- indicates the potentially significant costs for replacement parts such as inverters or tracker motors and control systems
- accurately assesses the solar irradiation and energy production, considering statistical highs and lows caused by fluctuations in weather.

Consider including monitoring equipment with your system to track its performance and ensure its optimal performance.

## Use Appropriate Site Selection Tools

When determining the best location for your installation, a competent solar company will provide detailed performance modelling. With the use of appropriate devices and/or analytical skills, the representative can identify obstructions such as structural or natural features that could affect system performance because of shading, both now and in the future. Ensure the system will be unshaded for the life of the contract. At this point, it is well worth speaking to neighbours to discuss plans that could affect one another's use of the land (e.g., removal or addition of trees).

## Reduce installation Risk

Determine the installation services that your solar provider offers in-house. Some providers subcontract these services to reduce labour costs.

For microFIT programs, a licensed electrician is required to take out a permit and be responsible for all electrical connections on site. If your provider contracts out electrical or other work, find out who they use and whether that company or person is experienced with, or certified in, the installation of solar power systems. To reduce risk and protect all parties, you may decide to give preference to certain providers based on the degree to which their installers are trained in solar technologies. Anyone working on site must also be insured by the Workplace Safety and Insurance Board.

If you are connecting to the electrical grid, understand your obligations with the local utility. Ensure your solar provider is also aware of its obligations, and capable of following through with them.

## Before You Sign

- Obtain your feed-in tariff contract and ensure your building permit (if applicable) is in place. Be sure to get the Offer to Connect (from your power utility) and the Conditional Offer (from the OPA) BEFORE proceeding with the system purchase. Your chosen

vendor can assist with this. Be advised that the process can take several months and that an 'out-clause' in the agreement with your installer would be prudent for significant delays.

- Ensure your chosen vendor is on a solid financial footing, has business insurance and meets the standards set by the Better Business Bureau. The deposit amount they are asking should be reasonable relative to work they will perform.
- Check both the product and installer's warranty policies to determine what services are covered, at what cost and for how long. Understand the level of system service and response commitment that your vendor is ready to make.
- Ensure that your bank supports the installation and recognizes the value a solar system can provide to a property.
- Check with your insurance company to confirm it will cover potential loss or damage to the solar installation or building as well as third-party liability.

A solar system is a big investment offering long-term rewards. Be empowered by doing your homework before you select your solar system and supplier. With good choices, you can fully capitalize on the benefits of solar energy and enjoy peace of mind over many years.

For more details on the microFIT program, including a list of questions to ask a potential installer, visit the Ontario Power Authority microFIT program site.

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