

# RESIDENTIAL SOLAR ELECTRICITY

## QUICK OVERVIEW

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We make it easy for you to add solar to your home, and reap the rewards.

***Grid-Tie Solar***

***Off-Grid Solar***

***Portable Systems***

We custom design your system & deliver the equipment right to your home. Use the trades people you know & trust to do the installation, or do it yourself. We provide the technical support.

Call or email for more information or to arrange a site visit.

Solar electric systems may sound exotic, but over the past decade, they have evolved from off-grid conveniences into mainstream home renovation options. It's never been easier to add a source of clean, renewable energy to your home, and reap the benefits both environmentally and financially.

Here's a quick look at the basics of a solar electric system for your home...

## GRID-TIE SOLAR

Grid-Tie is the name given to solar electric systems designed to interact with your electrical utility service. The power you produce from panels mounted on your roof is synchronized and added to the service coming into your home.

### Net Metering...

Your utility meter is able to track both inflows & outflows from your home. All it takes is the green light from your provincial utility, and any power you produce will get deducted from your next bill, and at the most expensive tier pricing too! All provinces offer Net Metering programs.

### What's Involved...

There are 2 main components to a Grid-Tied solar system:

1. Solar Panels
2. Grid-Tie inverter(s)

Grid tie inverters convert the DC power coming from your panels into AC power that synchronizes with your utility power.

The wiring of the system is direct to your main service panel, with 120V AC service wiring that you & your electrician will be familiar working with. No high-voltage DC in this scenario.

## OFF-GRID SOLAR

This is the solar system designed for places with no utility service at all. As a result, strict power budgeting is required to ensure that the system will provide the power required.

### What's Involved...

There are several key components in an Off-Grid system:

1. Solar panels
2. Charge controller - manages solar into battery bank
3. Battery bank - your power reservoir
4. AC power inverter - converts battery DC to household AC
5. Options: wind, micro-hydro, generator back-up

Off-Grid solar systems are DC format, which requires different calculations, wiring, and safety equipment than standard AC.

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## BY THE NUMBERS

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There's no wonder Solar electric (PV) power is becoming increasingly popular with homeowners. The cost of PV systems is approaching grid parity, while Net Metering programs make the green investment extremely attractive.

Here's a quick look at 5 reasons for looking at solar for your next home renovation...



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## THE HOME IMPROVEMENT THAT PAYS

### 1. Purchase Less Power

The obvious benefit to having solar on your roof is to reduce the amount of power you purchase each month from your utility. Putting 4 panels on the roof can offset 10-15% of a typical home's annual electricity use.

### 2. Pay The Same Rate For Years To Come

The power produced by your solar panels will never increase in cost, only value. Rest assured, your utility rates will likely double in the next 10 years, making your solar investment more valuable each year.

### 3. Sell Back To Your Utility

All Provinces currently offer Net Metering programs. The power you generate gets fed into the utility grid, & your meter tracks it all. The great part is that the power you produce is taken off the top of your monthly utility bill. This means you save on your most expensive tier pricing each billing period. Generate more than you consume each year, & many utilities, like BC Hydro, cut you a cheque.

### 4. ROI & Resale Value

Savings on your utility bill typically equate to a return of 3-7% on your solar investment, with an ROI in the 15 year range. Also, many real estate studies show that homes with average solar systems installed can fetch up to \$10,000-\$15,000 more when sold, thereby recouping most of your initial investment. Kitchen cabinets, bathroom renos, & other home improvement projects can't match these positive numbers.

### 5. Tax Deductions & Incentives

Solar Electric systems enjoy an accelerated CCA of 50%. So businesses will be able to deduct a significant portion of their solar investment each year. Additional federal & provincial incentive programs may be available to you.

### 6. Choice Of Investing Gradually

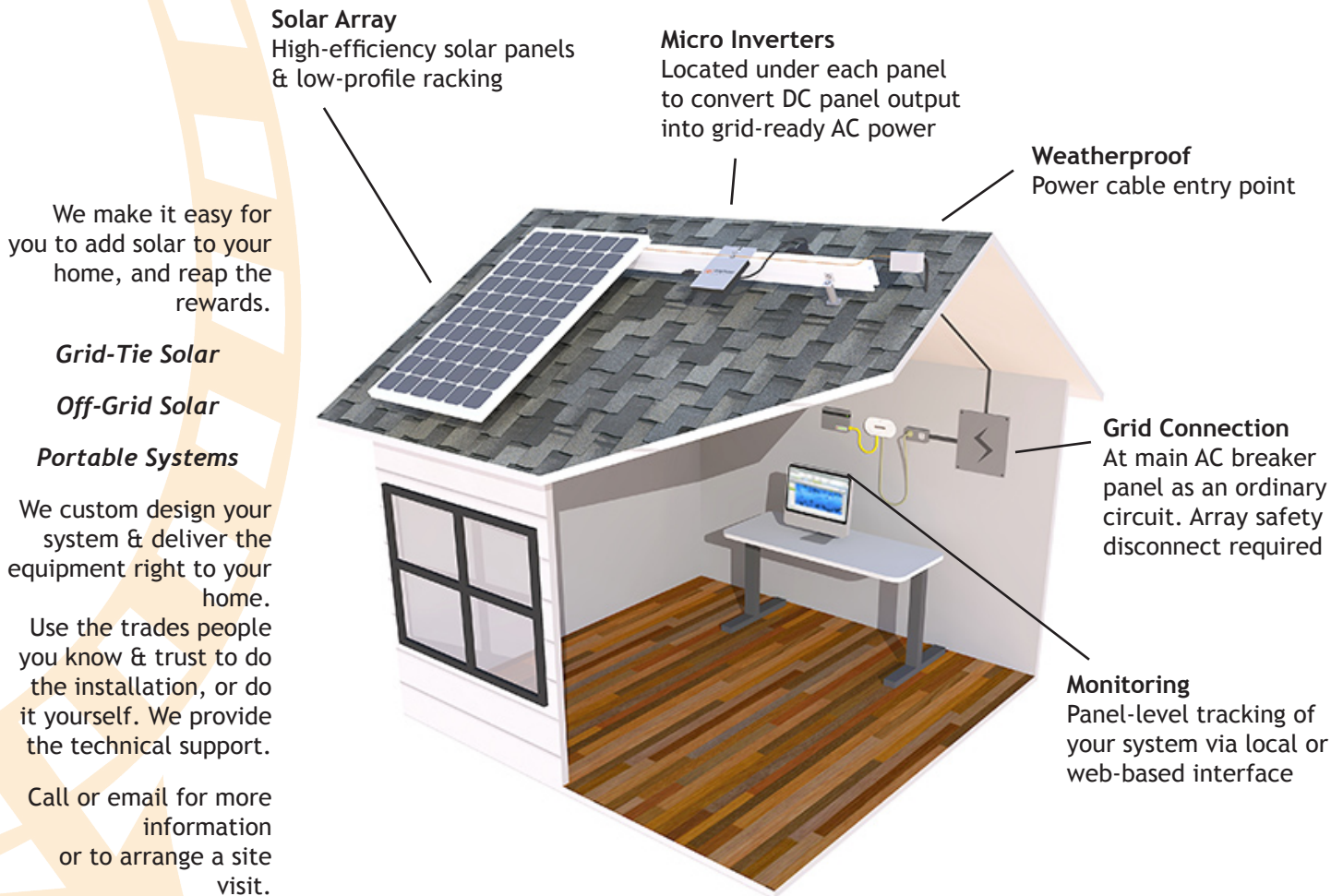
Going solar doesn't mean you have to take out another mortgage. Today's grid-tie solar electric systems are flexible & modular. Start with a small system today & easily add to it in the future. Like all investments, the best time to start is now.

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## GRID-TIE & NET METERING

Grid-Tie solar is the easy, low-maintenance way to reduce your electricity bills. Modern solar systems connect easily to your existing electrical service, and provide real-time monitoring. Net Metering programs, like the one offered by BC Hydro, use your existing meter to track the power you produce vs the power you consume. If you produce more than you use, credit is carried forward to offset your future electricity usage.

Here's a quick look at how popular Canadian Grid-Tie systems are put together...



We encourage the completion of a Net Metering application with your electrical utility early in the design process. This will ensure that you have the green light to start selling power back to the utility as soon as your system is operational.