

# Watt's Happening? #88

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## Your solar questions answered



*Rooftop solar power makes good sense, and dollars and cents, right now.*

**S**olar has now passed wind power as the fastest growing energy source on the planet, and is quickly becoming the cheapest. But, as a homeowner, does it make sense to generate your own solar power, like you might grow your own vegetables?

At Peace Energy Coop's solar powered headquarters in Dawson Creek, we get a steady stream of interested folks dropping in, calling and emailing, all with lots of questions. Here are few of the most common, answered:

### HOW DOES "GRID-TIE" WORK?

Most rooftop solar arrays around the world (and now there are millions, and some 750 in BC) are tied into their local electrical grid. That means they feed excess

solar power into the grid then withdraw it later when it's needed, say at night or in the winter. You might think of the grid as a huge battery.

If your grid-tied system puts more power into the grid than it takes out over a one-year period, BC Hydro pays you for that excess at 10 cents/kwh.

From my own experience in northern Canada, I can tell you this works very well: we have excellent solar power in the spring, summer and fall, but not so well in the winter. Being grid-tied means I can withdraw my electrical credit in the winter from the excess I generated in the summer.

My modest grid-tied system in Dawson Creek has now produced more power each year than my building has consumed, resulting in essentially zero electrical bills for two years PLUS a small cheque from BC Hydro each year. Sweet.

**The price of solar has dropped dramatically over the last few years. Should I wait to invest until the price comes down even more, or wait for some super new technology?**

A solar power system for your cottage or cabin could cost as little as a few thousand dollars, but a large whole-house grid-tied system, installed, wired, inspected and working could cost \$20,000 to \$40,000. Asking if this is a good investment only makes sense, but should I wait?

Probably not. The price for solar has dropped over the last few years from \$5 or \$6 per watt to close to \$1 per watt, making it, for the first time, quite affordable. But that price seems to be bottoming-out. Demand continues to outstrip production, so eventually we may even see a slight price INCREASE.

However, most experts think the overall price for solar will continue to slowly decrease over the next decade, heading for the magic number of 50 cents per watt, at which point solar electricity will be the cheapest source of power on the planet (even beating out the cheapest power now: coal). That will be the point when all other sources of electricity (with the possible exception of wind) become obsolete.

The super amazing new solar tech we keep hearing about is wonderful, but keep in mind it usually takes twenty years for new tech to scale up and replace the old tech with better quality and prices. Not something to wait around for.

So don't expect any more rapid price drops or magical new technology, but rather a slow, steady price decrease with existing technology over the next decade or so. Overall, NOW is an excellent time to go solar.

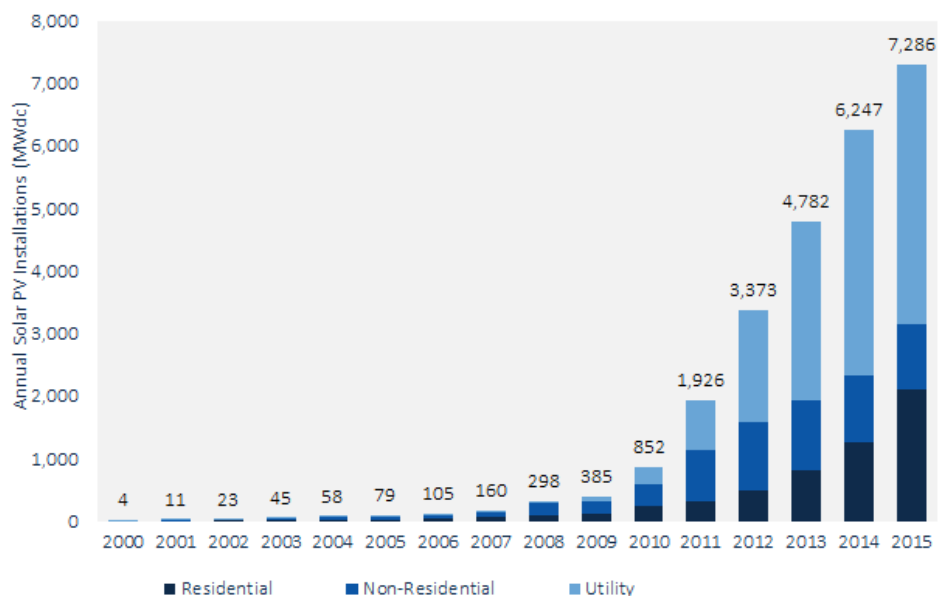
**How long do solar modules last? Are they a good long-term investment?**

All reputable manufacturers now give a 25-year warranty on their solar panels. Real lifetime is expected to be in excess of 50 years. Nothing is "used up" and nothing "wears out" on a solar module. (Actually, there is a very tiny internal deterioration causing a small power output loss, usually rated at about percent per year.)

Through the magical quantum properties of light and silicon crystals, photons are converted directly into electrons in the solar module — no moving parts, no chemical reactions, no emissions, no pollution, no noise, no maintenance. PV panels are truly solid-state electrical generators.

Yes, solar electric panels are a very good long-term investment.

Solar power can reduce or eliminate your electricity bills, provide a good long-term asset as an investment in your home or business, and greatly reduces your carbon footprint. That sounds like pretty good value to me.



*Installed solar power is rapidly increasing around the world and across BC, outstripping all predictions. This graph shows actual solar installed in the US. (Bloomberg New Energy)*