

# Watt's Happening? #133

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## Going Solar: *making cents of it all*



*Investing in a solar power system for your home, farm or business is now a sound financial decision that will only make more sense, and cents, as the cost of regular grid electricity continues to rise.*

**G**enerating your own power with solar panels on the roof of your home, shop, business or farm is one of the “greenest” things that you can do to help the environment.

It's green because rooftop solar electricity is generated right where it is used, reducing transmission losses.

It's green because sunlight is the fuel, delivered free to your solar array every day by that great nuclear reactor in the sky, the Sun.

It's green because solar panels run for decades with no maintenance, because there are no

moving parts to wear out (and no pollution or noise either!). Most experts agree that solar panels will work perfectly well for 50 years or more.

But perhaps the more important question is: does generating your own solar electricity make financial sense? Is investing in your own solar power system a good investment, and what is the return on that investment?

### **RUNNING THE NUMBERS**

Figuring this out will be different

for every province, since every province charges different amounts for their grid electricity. Let's have a look at British Columbia.

In B.C. we have a two-tier billing system for electricity. Tier-1 rates are presently at about 9 cents per kilowatt-hour, which covers roughly the first 8000-kilowatt hours of usage.

Above that amount the rate jumps to the Tier-2 rate that's close to 15 cents per kilowatt hour (ouch!).

When you hire a company to design a solar power system for your home or business, they will

look very carefully at your normal power usage and design a system to replace the most expensive power with solar to provide the most financial benefit to you. That means making sure you replace any Tier-2 power you may have with solar first.

Let's say, as an example, that we calculate that a 5 kW system will replace all your Tier-2 consumption.

A 5 kW system, installed and working, should cost about \$15,000. In B.C. 1 kW of solar generates about 1150 kW hrs. per year, (a bit better up in the sunny Peace Country) so 5 kW will generate 5750 kW hrs. per year for a yearly savings of \$862.50. That's a year one return on investment (ROI) of 5.75%.

This is a healthy ROI, better than the guaranteed return on many financial products available on the market today. GIC's from banks in Canada, for instance, are at about 3.25% at the high end.

### **MONEY SAVED IS BEST**

The money you are not paying Hydro for the power you are generating yourself is, of course, money saved, not money earned. Money saved is better than money earned because it is not taxable. All the money you save with solar is money you keep in your pocket, right where it belongs. Sweet.

Plus the solar array itself is a capital asset. It

retains value while it is saving you money, so when you sell your home much of your initial investment in your solar array will also go right back into your pocket.

As well, let's not forget that the amount of money you save each year will only go up, as Hydro rates inevitably go up. Your ROI just keeps getting better.

And yes, Hydro rates will indeed continue to go up. B.C. Hydro is investing more than \$2 billion a year over the next 10 years in B.C.'s aging electrical system, for instance. (most of B.C.'s electrical infrastructure was built in the 1960s, 70s and 80s). And then there's Site C . . .

### **BUSINESS IS BETTER**

For a business, going solar makes even more cents.

Commercial installations are usually larger, reducing the cost per installed watt, creating an even higher ROI. Plus the CRA allows an accelerated capital cost allowance on renewable energy

installations, providing a nice write off for the business owner. Under this system, eligible businesses can write off the cost of even a very large solar array in as little as four years!

Installing solar on your home or business makes sound financial sense in B.C., and will only make more sense as the cost of grid electricity continues to rise. From a practical, financial standpoint solar energy is definitely worth considering.

**This is a healthy  
ROI, better than  
the guaranteed  
return on many  
financial products  
available on the  
market today.**



*The "Solar Wave" in Hudson's Hope not only helps to power their outdoor swimming pool, it provides shade and shelter . . . and is proving to be a popular tourist attraction too. The unique Solar Wave was designed, supplied and installed by Peace Energy Co-op/Moch Electric Ltd. Joint Venture.*