

Watt's Happening? #90

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More solar myths

When a new technology enters the mainstream, skepticism and myths often follow, especially when that new technology competes directly with a very old and influential one.

Solar power has definitely entered the mainstream. Global solar capacity has increased from 3.7 gigawatts (billion watts) in 2004 to 177 gigawatts in 2014. That's nearly an increase of 48 times in just ten years. That trend has not only continued, but has accelerated.

Each year around the world, hundreds of thousands of homes are outfitted with their own rooftop solar arrays, not only powering those homes but also flooding their local grids with clean solar electrons. Solar power has pulled ahead of wind power as the fastest growing energy source on the planet.

This is happening for a host of very good and practical reasons, but solar myths persist, especially in western Canada where industry-backed governments have been reluctant to encourage solar. In some cases solar has even been actively discouraged, sometimes by intentionally spreading miss-information.

Lets have a look at a few of these myths and put them to bed for good.

Myth #1: solar energy is too expensive

The average cost of solar panels fell some 75 percent between 2009 and 2014, and as global solar panel production continues to ramp up, the cost of solar continues to fall. In some parts of the world, it is already competitive with many other forms of energy.

Solar power has all the advantages of an ideal energy source: constantly renewed by natural forces



Solar power has all the advantages of an ideal energy source: the fuel is free!; very low maintenance; easy to mass-produce, ship and install on any scale, anywhere; pretty well everybody has some sunlight to harvest; and solar is pollution-free during operation. Here a 6000 watt solar array is being installed on the Demmitt Hall in northern Alberta.

(the fuel is free!); very low maintenance; easy to mass-produce, ship and install on any scale, anywhere; and pretty well everybody all around the world has some sunlight to harvest.

Even for the average homeowner, solar power makes sense right now. Many provinces have grants and subsidies to help make solar competitive with existing (already heavily subsidized) energy sources, but even without government help, solar makes sense.

Solar can quickly and easily reduce or eliminate your electrical bills, and provide a valuable home asset that increases the resale value of your property. For Canadian businesses, there are valuable federal tax incentives.

Over the next decade, solar will win out over most other sources of electricity for practical, economic reasons, not to mention the environmental ones.



We are quickly heading for a world powered in large part by sunlight, and it will be the cheapest (and least polluting) power ever made.

Myth #2: solar technology is new and experimental

Anything for a little doubt hey? No, solar electricity is actually rather old and certainly well established as solid and reliable.

The “photoelectric effect” was discovered in the late 1800’s when it was noted that light striking certain metals caused electricity to flow. Einstein finally explained the phenomenon early in the 20th century, and got a Nobel Prize in physics for his effort.

Although it’s a little more complicated than this (it took an Einstein to figure it out, after all) its OK to think of a solar panel as a solid-state device that turns solar photons directly into electrical electrons.

The metal usually used in modern solar panels is crystalline silicon, which sounds pretty exotic but is actually very abundant. Next to oxygen, silicon is the most abundant and widely distributed element in earth’s crust – think sand and clay. Glass is made from compounds of silicon. Just like sunlight, silicon is everywhere and everybody has some.

Photovoltaic (PV) power is so reliable and maintenance free that essentially all of the thousands of satellites launched to date are solar powered, along with the international space station.

All of the electricity my business uses in Dawson Creek is supplied by sunlight, and about half of my power at home. One of the solar panels in my home array is 36 years old, and still working just fine. This is not new technology.

As far as maintenance goes, there just hasn’t been any. I hooked up my home solar panels decades ago, and other than admiring their quiet crystalline beauty, I have forgotten all about them.

Except when I pay my electrical bill, when I admire its quiet, beautiful smallness.

Joanne and Greg Dueck of Peace Energy Cooperative helped install the Demmitt Hall solar array this summer. Peace Energy has designed and installed about 60,000 watts of solar power in the BC and Alberta Peace regions over the last two years, with much, much more in the works.