

# Watt's Happening?

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## CLEAN ENERGY BOOM



*The roof top solar revolution is here, but real government incentives and immediate corporate action are required to avoid the worst consequences of climate change. This 10 kw solar array was recently*

*installed at Mile 108 in BC, purchased from Peace Energy Cooperative by long-time member Laurie Embree and installed by Dawson Creek's Moch Electric Ltd.*

**T**he clean energy revolution is here. Trillions will be invested in solar and wind power over the next 25 years, completely changing the way we create and use electricity.

If you doubt it, check this out: China has just committed a staggering USD \$6.6 trillion to cap its carbon emissions by 2030 and meet 20 percent of its energy needs from zero-carbon sources. That's just fifteen years from now!

So that final excuse for inaction – that it's pointless to act on carbon emissions until China does – has just disappeared.

Renewables are now the leading new energy source

on the planet, with first wind and soon solar achieving cost competitiveness with coal, traditionally the cheapest (and dirtiest) source of electricity.

We're talking clean energy boom folks. But what will this new world of solar and wind power look like? Lets have a look at the trends:

### **DEMAND WILL DECREASE**

It seems counter-intuitive, with everybody staring at their smart phones and electric cars rising into the mainstream, but contrary to popular opinion (and government pronouncement) global electricity demand

is expected to slow, and in some cases, already is.

Why? Efficiency is number one. Think of the huge leaps in efficiency we have already seen (the LED light bulb comes to mind) and multiply that by many, many times. We are still living in “the age of waste.” As we emerge from it, driven largely by cost competitiveness and the desire for profit, efficient use of energy will finally take its rightful place as a major driver of the economy.

Even in developing countries during the rise of their immense new middle class, demand is expected to grow by just half of the normal 3 percent a year that was seen from 1990 to 2012. And in developed countries, where renewables are coming in strong, per capita demand is already dropping.

Then add in the fact that homes, businesses and even huge corporations will be generating their very own renewable energy right on their roofs. They won't “demand” electricity, they will instead be creating it and feeding excess into the rapidly greening grid.

## THE FUTURE WILL BE DECENTRALIZED

The mega-mind set of the past saw power generation in only one way: huge centralized facilities distributing power to the scattered masses. This was touted as efficient, but today we can look back and see that it was efficient mostly at making a few people a lot of money, but a very inefficient way of making and distributing electricity.

The big power revolution of today is happening not with more mega-project announcements, but on the rooftops of ordinary people like you and me. Solar power for the average homeowner is affordable and totally doable now, even in British Columbia where there is little or no support for individuals or

businesses wanting to go solar. But where there IS government encouragement, watch out!

Germany, the world's fourth-largest industrial economy with a population of 80 million, is leading the energy revolution, with over one million solar roofs and 25,000 wind turbines producing about 25 percent of their electrical needs. Their goal? 100% in 50 years.

Australia has some 2 million solar roofs, and Japan installed one million just last year. India has just increased its already ambitious target of 20,000 megawatts of solar (“a solar panel for every roof”) to an astounding 100,000 megawatts by 2022, about half of it from roof top solar, and the other half from larger solar arrays.

By 2040, roof top solar is expected to be the cheapest energy source in every major economy, and will be supplying almost 15 percent of the world's electricity.

## CLIMATE STILL SCREWED

It's still not enough though. With “business more or less as usual” global carbon emissions from the power sector are expected to continue to rise until about 2030, pushing us past the 2 degrees of heating of Earth's atmosphere which is expected to be the point-of-no-return for the worst consequences of climate disruption.

There's still time, we know what to do, and no new technologies are required. But new government and corporate policy changes ARE required, now. Not token gestures and long-term promises, but real action, real incentives, right now. There is literally no time to waste.



*The completed 10 kilowatt grid-tied system of Peace Energy Coop member Laurie Embree at Mile 108. This state-of-the-art system features microinverters and sophisticated power monitoring. It went on-line earlier this year.*

*To catch up with the solar age and benefit from the on-going solar boom, BC needs tens of thousands of solar roofs like this one, not just the few hundred that it has today.*