

Watt's Happening?

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A planet goes solar



What can one little solar panel do to change the world? Quite a bit, it seems. Some one hundred and twenty-five million solar panels like these (on Peace Energy Co-op's roof

in Dawson Creek) were installed around the world last year . . . and we've only just begun.

Yes, it's solar time on planet Earth. Finally.

Things have changed dramatically in the last five years. Back then, respectable organizations like the International Energy Agency were predicting that global solar might reach 20 gigawatts by now. In fact, it exploded to 180 gigawatts, three times the power output of Britain. No one could have imagined that half of all new electricity installed in the US in 2013 and 2014 would be solar, but that's what happened.

If you plot a curve of solar installed around the world vs. time, it's clearly exponential, zipping right up off the page, doubling every two years. You run the numbers. It's incredible.

China invested \$80bn in renewables last year,

as much as the US and EU combined.

While phasing out coal, China plans to install 200 GW of wind and 100 GW of solar by 2030, and talks of a long-term goal of 86 percent renewables by 2050. The amazing reality is that they can actually do it.

India has pledged to put a solar panel on every roof in the country, aiming to raise renewables to 40 percent of power output by 2030. That's a lot of solar.

There are so many examples it's hard to pick, but here's another nice one: Morocco is building the world's largest concentrated solar power plant. When completed in 2020, it will provide half of the country's energy, powering a million homes. Sweet.

STORAGE SOLUTION

The curse of renewables has always been energy storage: what to do when the sun goes down? Just a few years ago, solving this problem was thought a pipe dream requiring technologies belonging to a distant future, or just plain impractical.

Well, I guess the future is now. New storage technologies are springing up everywhere, some small for home use, some huge for the grid. They're all enticed by a totally new multi-trillion dollar rapid-growth market. Within just a few years, energy storage will be everywhere, just part of the woodwork. Problem solved.

CANADA BEHIND

Although the last decade has seen Canada fall far, far behind in the global power shift, our new Federal government has been making all the right noises to help us catch up. We'll see.

Meanwhile, several provinces and territories have taken the lead. Ontario's aggressive feed-in tariffs (guaranteeing a premium price for clean energy) have created a vibrant solar and wind industry there, and the eastern provinces are following Ontario's lead.

Solar power is growing quickly in the NWT with a \$50 million investment in small-scale renewables from the territorial government. This will be a big help for a number of remote indigenous communities who are building their own solar micro-grids while phasing out reliance on expensive diesel.

As of this past summer, the Yukon is also

encouraging renewables, with a nice \$5000 grant for folks wanting grid-tied solar on their roofs, and a healthy payment of over 20 cents per kilowatt-hour for the power they produce (twice that currently paid in BC, and no grant here either. Listening, Christy?)

PARIS LOOKING GOOD

Why is all this happening? The answer in just three words: catastrophic climate change.

The climate is changing, right now, and it ain't lookin' good. Question the science if you want, but the world isn't waiting around for more evidence. Carbon is the cause, and we know what to do.

Some 155 countries have already submitted carbon reduction plans for the upcoming Paris summit, including China, India and the US, covering 88 per cent of global carbon emissions. Wow.

Taken together, they commit the world to a reduction in fossil fuel demand by 30 to 40 percent over the next 20 years. This will require \$90 trillion of investment in new renewable energy infrastructure, mostly solar and wind. Investors are gleeful, and money is moving into renewables at unprecedented rates.

"It is unstoppable," says Christiana Figueres, the UN's top climate official. "No amount of lobbying at this point is going to change the direction."

It's been a long time coming, but when things finally fall into place and "it's time" change can happen all at once. When it comes to solar energy, that all-at-once is right now.

Watt's Happening? Quick Fact:

FEW SOLAR OPPORTUNITIES IN CANADA: *Ontario's Green Energy Act helped birth some large players in the solar arena (like AMP and SkyPower) but they presently find few opportunities at home. Canada has an excellent solar resource, but little federal government leadership. Instead, they are securing big deals in India and the United States.*

