

Watt's Happening? #111

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New Energy Update



Jobs, jobs, jobs.

Renewable energy is a great job creator. In the US, this year for the first time, more people held jobs in clean energy than in conventional energy: 769,000 in solar and wind, 2.2 million in energy efficiency while 174,000 are building electric cars.

OK, let's get right at it this week. I am anxious to share with you a few of the cool things that are happening with "new" energy here and around the world.

THE SUN RISES IN ALBERTA

June 21 (the summer solstice) marked the official launch of Energy Efficiency Alberta's \$36-million Residential and Commercial Solar Program.

Homeowners can receive up to 30% off their solar electric system costs, to a maximum of \$10,000. Businesses and non-profits are eligible for up to 25 per cent of system costs, to a maximum rebate of \$500,000. This is in addition to Alberta's existing farm and ranch solar subsidy program.

Alberta clearly wants solar. They want the

clean, low-carbon power. They want the jobs and a thriving provincial solar industry. They want to diversify their energy mix and phase out their coal power to meet carbon reduction objectives. They want to give farmers, ranchers, businesses and homeowners a break on their electrical bills by encouraging them to make their own electricity.

Although just a start, this program will get things rolling. Check out Energy Efficiency Alberta's website to get the details.

Congratulations Alberta!

COMING SOON: SOLAR WINDOWS

If a window can let 80% of the light hitting it pass through while converting 20% to electricity, the "solar window" will have reached the same conversion

efficiency of modern rooftop solar panels. At that point, electric-generating windows will become commonplace.

Solar Window Technologies Inc., a US company, says this major solar breakthrough is just a few years away. They have developed an electricity-generating liquid coating that can be sandwiched between two layers of glass (the same way safety glass is made) to create a true solar window. This is big, very big.

Solar Window explains that skyscrapers and tall office towers alone consume some 40% of all electricity generated in the US. Coated in solar windows, a 50-story building would reduce its electrical costs by at least 50% per year, avoid more than two million miles of equivalent carbon dioxide emitted by vehicles on the road, and achieve a one-year financial payback.

Of course it will take a few years to ramp up production and distribution to bring the cost per watt down, but hey, that's the beauty of all things solar. If you can build one, you can build a modern factory to churn out a million a month, just like we did with regular flat plate solar panels, bringing the price way, way down in just a few years.

GLOBAL ENERGY DEMAND WILL FALL

In stark contrast to historic trends, the World Energy Council predicts that global per capita energy demand will peak before 2030, then decline.

Global demand for energy has risen steadily and more than doubled since 1970, but that trend is about to change. Huge strides in energy efficiency, lower overall economic growth expectations and massive adoption of "self-generated" energy with renewables will dramatically shift traditional trends, says the Energy Council.

"It is clear that we are undergoing a Grand Transition, which will create a fundamentally new world

for the energy industry," says Ged Davis of the World Energy Council. "Historically people have talked about Peak Oil but now disruptive trends are leading energy experts to consider the implications of Peak Demand . . . We are entering a world where the concern is no longer just about stranded assets but also the impact of stranded resources on nations."

JOBS, JOBS, JOBS

This year was a tipping point in the US: for the first time, more people held jobs in clean energy than in fossil fuels. Coal, for instance, has steadily declined to about 50,000 jobs from a peak of 178,000 in 1985, while jobs in wind and solar now account for 769,000 in the US and is increasing 12 times faster than the US economy.

Energy efficiency jobs (mostly small businesses involved in the construction and installation of energy efficient systems), now total roughly 2.2 million in the US. Another 174,000 are busy

building electric cars.

Solar and wind are now thoroughly mature technologies, cost competitive with all other forms of energy, and for this reason are being implemented on a truly massive scale. The Grand Transition has begun.

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