

Watt's Happening? #97

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2016: an historic year



As the Solar Impulse 2 completes its historic around-the-world flight powered night and day by sunlight alone, we are reminded that we too can fly above the clouds into a clean energy future powered by hope and opportunity.

The past year has seen great change. Inspired by the dire need to halt climate disruption and the obvious opportunities for employment and profit, the growth of renewable energy has continued to break all records and exceed all expectations.

In a moment we will have a look at some of these historic milestones, but first let me apologize – apologize for yet another year of unremitting optimism.

Of course I know all about the doom and gloom. I've spent 40 years studying the mess we've gotten ourselves into on this fragile little planet.

But I have also studied the immense progress we have made, the exciting changes and opportunities I see rapidly evolving around me, and the stunning

cosmic perspective that modern astronomy, physics and biology have brought us over the last century.

The very real progress I see inspires me to work every day for the positive change I want to see in the world. The worst thing that can possibly happen is to collapse into despair under the weight of hopelessness.

In this column I have taken the clear editorial stance of trying to balance the ocean of negativity we swim in with a drop of optimism. I do it because that is what I see so clearly happening all around me, tragically unreported by the annoyingly negative media.

Here are a few amazing 2016 milestones that we can all take pride in:

SOLAR CONTINUES TO RAMP UP

There seems to be an unlimited appetite for solar panels. When China first began to ramp up production a few years ago, prices fell by some 80% almost overnight. Now practically every country is manufacturing panels (even Canada!) and every panel that is made is quickly sold.

Around the world, a million solar panels were installed every two days in 2015. Even more this past year. This figure closely matches global production – build a panel, and its sold. Why? Because solar is the cleanest, most reliable, lowest maintenance energy source ever invented. Major growth, opportunity and jobs here, with no end in sight.

WIND NO SLOUCH

This past year saw solar exceed wind as the fastest growing energy source on planet Earth, but wind isn't exactly sitting still. Like solar, China has moved aggressively into the wind market, installing roughly two multi-megawatt towers every hour of last year, more this year, and steady growth predicted for next.

Wind is a bit ahead of solar when it comes to “grid parity,” meaning that it is now the least expensive energy source in many parts of the world – cheaper than coal without even considering the environmental mess that coal creates.

Accordingly, massive new wind projects (not just hundreds but thousands of turbines) are in the works for offshore Europe, mainland China (of course), and across the U.S. Even Alberta is waking up to its massive wind resource.

INVESTMENT MILESTONE

This past year saw global investment in new renewable energy infrastructure exceed investment in new fossil infrastructure for the first time in history. This is not a one-time event, but a clear and obvious trend. Investment in fossils is falling. Investment in renewables is climbing.

Even oil and gas companies are seeing the light. One small example of many: French oil major Total is equipping 5,000 of its service stations with solar panels. The \$300-million investment in solar will save the company \$40 million a year for electricity every year for the next 50 years. Go ahead. Work the math.

TESLA GOES SOLAR

Tesla is no longer just an award-winning electric carmaker. It's now a clean energy company. Elon Musk officially acquired SolarCity Corp. this year for an estimated \$2 billion.

Cover your roof with Musk's new electricity-generating roof shingles (in four lovely styles and colours), store power

in your new smart battery system (reducing, and eventually eliminating your dependence on the grid) and charge your zero-emission EV with your own free solar electricity. That's where we're headed, and Elon Musk plans to take us there.

To my loyal readers, I say remain positive, and work for a better world. As Gandhi said: “You must be the change you want to see. . .”

May you have a wonderful and loving Christmas, and a New Year filled with hope and opportunity.

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