

Watt's Happening? #105

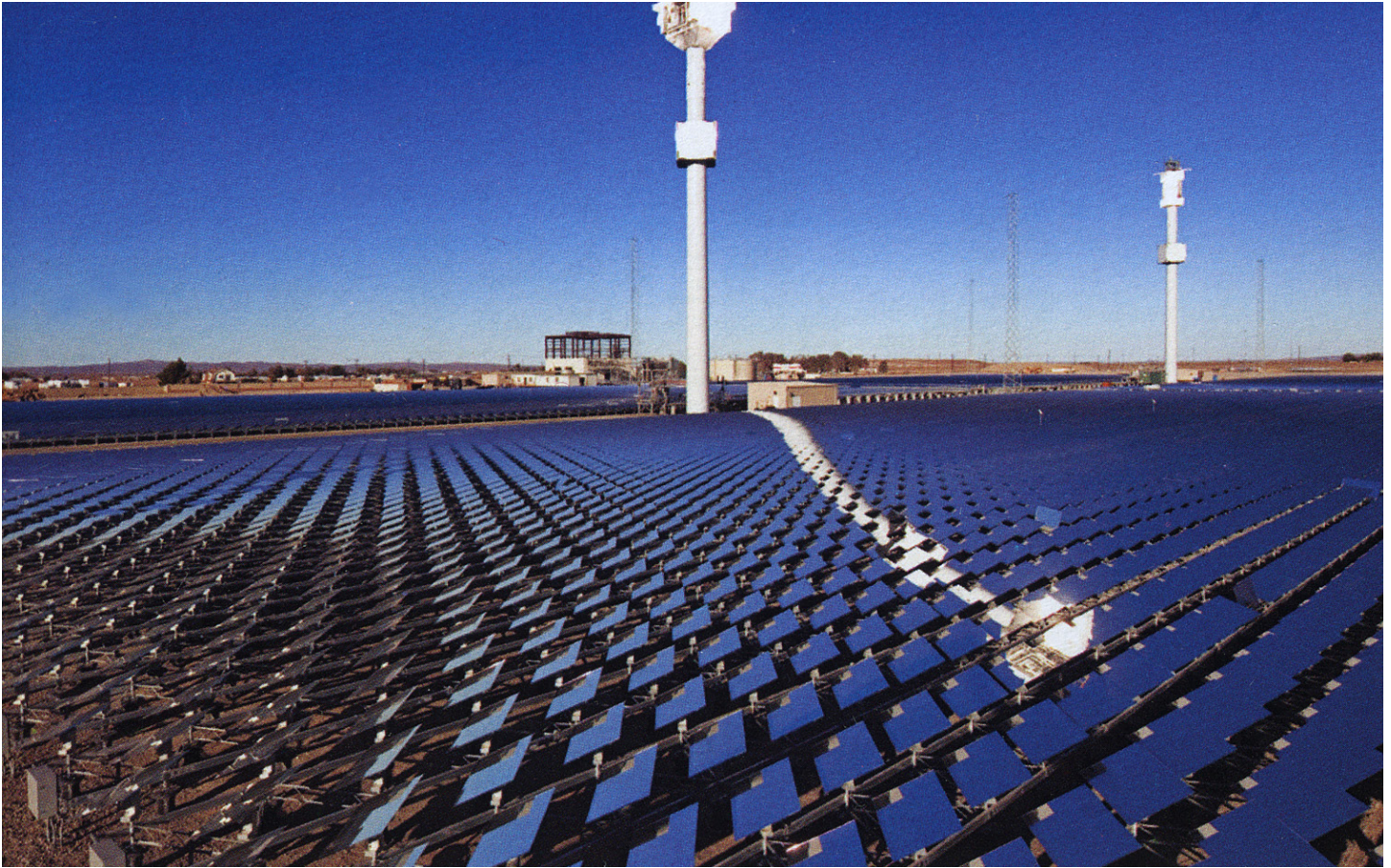
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CHECK OUT THE NUMBERS!



In spite of what you may have heard to the contrary, we don't have to destroy our one and only beautiful planet to make a buck. In the U.S., the solar industry (like the solar thermal/electric plant shown here) now employs more people than coal, oil and gas combined, plus another 100,000 in the growing wind industry.

The fossil fuel era is anything but over, but it's certainly in decline. Concerns about climate change and pollution continue to drive the most rapid energy shift the world has ever seen, and nothing, not even Donald Trump, can stop it.

Coal is being phased out (sort of) while renewables continue to grow by leaps and bounds. The numbers reveal *Watt's* actually *Happening*.

CHINA CANCELS 104 COAL PLANTS

As President Trump promises to cancel everything that makes any sense including the US Clean Power Plan, other countries are eager to take over their role as a climate leader, chief among them China.

China's new five-year plan (2016-2020) has cancelled 104 large-scale coal-fired power plants, about half of which were already under construction. Last year it cancelled thirty.

Altogether, the cancelled plants amount to about 140 GW (one gigawatt equals one thousand megawatts, about the size of BC's Site C dam), capping China's installed coal-fired capacity at 1100 gigawatts by 2020, and mothballing all coal use by 2040.

China is grappling with an oversupply of capacity caused by reduced energy demand, severe pollution-caused health problems and a very rapid increase in wind and solar.

EUROPE MUST PHASE OUT COAL BY 2030

A new report by think tank Climate Analytics finds that all of Europe's 300 coal plants must be closed by 2030 if the EU is to meet its Paris climate pledges.

Coal use in the EU is falling by about 1% per year, says the study, but Europe still generates a quarter of its power and a fifth of its greenhouse gases from coal.

The study also says that coal plants will have to shut down across the entire planet by 2050 to prevent dangerous climate warming.

This will be a big challenge. Although China is now leading the way, Donald Trump has promised a coal renaissance in the USA.

Germany and Poland cause more than half of the EU's coal emissions and also face political hurdles to making the change. The UK, Europe's third highest coal user, has committed to complete coal-phase out by 2025, but again, politics threatens.

BANKS DROP COAL

Several large financial institutions have announced plans to reduce their exposure to coal mining and coal power production, including Deutsche Bank, Morgan Stanley, Bank of America, Citigroup and JP Morgan.

The announcements state that they will no longer grant new financing for thermal coal mining or

new coal-fire power plant construction. They are some of the 400 private and public organizations that signed the Paris Pledge for Action (part of the 2015 Paris agreement on climate change).

Their new policies emphasize their "commitment to protect the climate and to contribute to the overall targets set by the Paris Agreement to limit global warming to two degrees above pre-industrial levels."

US SOLAR AND WIND STILL STRONG

In spite of silly Trump tweets to the contrary, US renewables have never been stronger.

Solar energy in the US ranked as the number one source of new electric generation for the first time last year, doubling the previous record set in 2015. New solar last year in the US topped out at 14,625 MW (megawatts), accounting for 39% of new capacity additions across all fuel types.

The growth is primarily due to solar's cost competitiveness with fossil fuel alternatives, including natural gas.

The US is now home to more than 1.3 million solar PV installations with a total capacity of over 40 GW (40 thousand megawatts).

Meanwhile some 8000 MW of wind were installed in the US last year, employing more than 100,000 people. Wind continues to show strong growth in China (of course), India, Germany, France and the

Netherlands, with Canada showing a modest gain of 702 megawatts. Total global wind capacity reached 487 GW last year.

Since 2011, annual investments in renewable electricity have exceeded those in fossil fuel, and have totaled almost \$2.5 trillion over that time span. Some 6.7 million people have clean power jobs worldwide, and the costs of solar and wind keep falling.

There will always be pockets of insanity and greed trying to slow down the transition to a clean energy world, but the numbers tell the real story. It has begun.

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