Watt's Happening? #275

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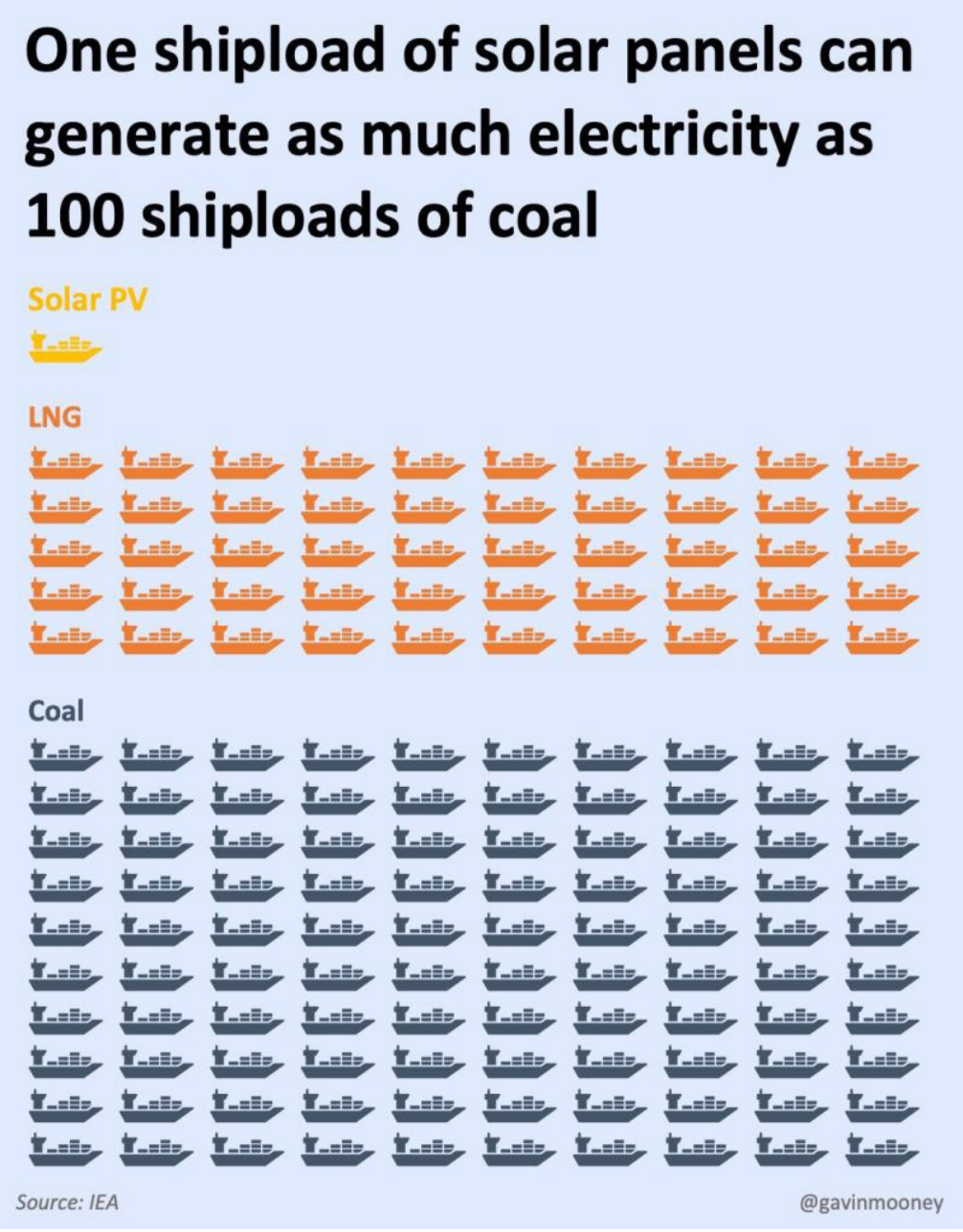
MORE Good News for 2026



The International Energy Agency is an autonomous intergovernmental organization established in 1974 to address oil supply disruptions. It now provides data and policy recommendations to ensure global energy security and sustainability.

Renewable energy overtook coal as the leading source of electricity in the first half of last year – an historic first!

Electricity demand continues to climb around the world, but the growth in solar and wind was strong enough to meet 100% of this extra electricity demand, even driving the use of coal and gas slightly down.

The graph at left illustrates why this is happening. According to the International Energy Agency (IEA) a single container ship loaded with solar PV panels can generate as much electricity over its lifetime as 100 to 120 ships full of coal, or about 50 large LNG tankers.

HIGH EFFICIENCY REDUCES COST

This immense efficiency advantage is the result of the cumulative, long-term power output of solar PV. Coal and gas are used once: burn them and they're gone. Solar, in contrast, generates power over its very long lifetime of 30 to 40 years. No fossil fuel can compete with that kind of efficiency.

There have also been

very significant technological advancements in solar in the last few years, improving efficiency and reducing costs per watt.

At Peace Energy Co-op, for instance, we sell and install a lot of solar panels, and we have seen the overall cost per watt drop steadily over the last decade.

As one example, the new bi-facial panels have more or less taken over the market. They have a transparent backing, so they generate energy from sunlight on both the front and back sides, producing more power from the same panel, at the same cost per panel!

In other words, the efficiency of each panel continues to increase (more power per square meter of panel) while the overall cost per watt continues to fall.

(some of) THE WORLD IS LISTENING

And much of the world is listening, because that's a lot less material to mine and transport per kilowatt-hour of electricity generated. It's also a lot less carbon and other pollutants emitted, and therefore less cost to the consumer, to the environment and to human health.

The cost of solar has seen a 99.9% cost reduction since 1975, making it in many areas of the world the cheapest energy ever created. But not everybody is rushing into renewables.

President Donald Trump's administration is rushing headlong into the past instead, boosting the use of coal and poo-pooing the climate crisis. The IEA has halved its forecast for the growth of renewables in the US this decade, reducing its estimated growth from 500 GW (one GW = one billion watts) by 2030 to 250 GW.

SOLAR: we're talking big, very big business!

CHINA BENEFITTING BIG TIME

China, of course, is leading the clean energy charge, adding more solar and wind capacity per day than the rest of the world combined. This allowed the growth in renewables there to outpace rising electricity demand while reducing its use of fossil fuels by 2% last year.

China is not only reaping the benefits of plentiful, cheap and clean renewable energy, but also capitalizing on an immense export market as by far the leading manufacturer and distributor of solar technology worldwide. We're talking big, very big business!

India too added enough solar and wind to cut back on coal and gas last year.

Solar has been the largest source of new electricity globally for three years now. Much of this growth (58%) is in lower-income countries, many of which have seen explosive growth in renewables.

Pakistan, for example, imported enough solar panels last year to generate 17 GW of solar power, double the previous year and equivalent to about one third of the country's current electricity generation capacity.

AFRICA'S SOLAR BOOM

Africa is also in the middle of a solar boom with panel imports up 60% year on year. Coal-heavy South Africa led the way, and Nigeria overtook Egypt with enough solar to meet the demand of 1.8 million European homes. Extremely rapid growth in solar is also being seen in Algeria (33-fold), Zambia (8-fold), in Botswana sevenfold.

So yes, there is some good news for the new year: most of the world is moving rapidly to electrification powered by renewables; the use of fossil fuels worldwide is declining; global carbon emissions are stabilizing, and will soon, we hope, be headed down . . . one container ship of solar panels at a time.