

Watt's Happening? #93

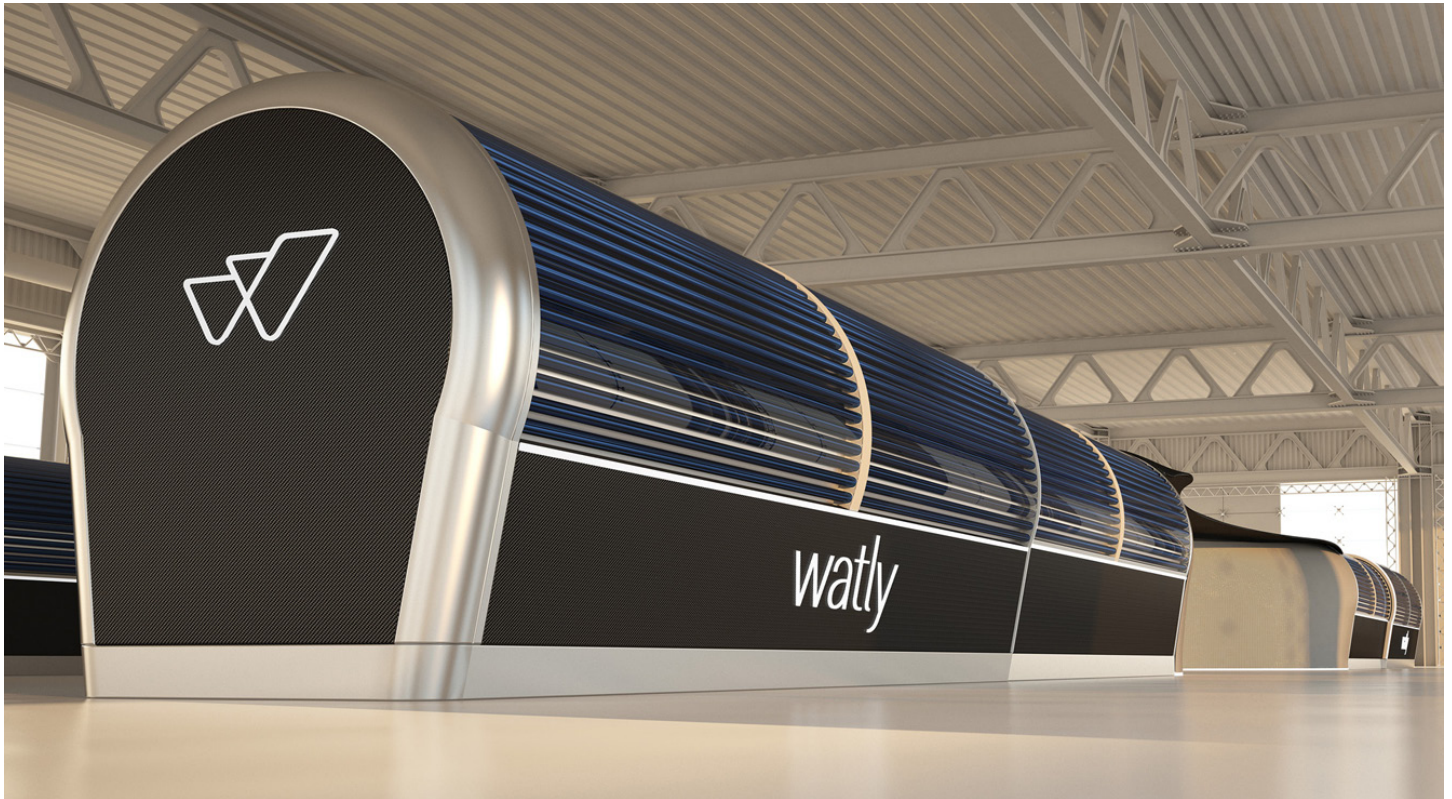
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Creative Solutions



The global transition to renewable energy provides unlimited opportunities for creative minds eager to build a better world. Watly, the solar-powered computer that makes clean drinking water and solar electricity is one such promising innovation.

We are quickly developing the tools to harvest the vast and limitless energies of sun and wind. The world has begun its fourth great energy transition.

But we have a long, long way to go. A recent report from NASA and the National Oceanic and Atmospheric Association states that climate change shows signs of accelerating. We have reached 400 ppm carbon dioxide, a level beyond which increasing weather instability is predicted. This past June was the hottest since records began in 1880, and was preceded

by 14 consecutive months that each broke the previous records, all set in 2015.

“While the El Nino event in the tropical Pacific this winter gave a boost to global temperatures from October onward, it is the underlying trend which is producing these record numbers,” said NASA’s Gavin Schmidt.

We need to reduce carbon emissions to the atmosphere dramatically, and also get very energy smart very quickly. Right now, we are very, very energy stupid.

CHINA CONTINUES TO LEAD

The good news is that we know what to do, and we have begun to do it. We need to waste so very much less energy through efficiency and energy recovery, which we have begun.

We need to ramp up production of solar panels and wind turbines to quickly reduce costs, which we are doing.

We need to sequester carbon in soils by increasing their fertility, and in plants by growing sustainably harvested forests, which is beginning.

We need rapid advancement in energy storage technologies, so we can set up a transportation system that doesn't pollute, and this is beginning to happen.

And we need a global price on carbon to provide incentives to do all of this, and we are getting there too.

This remarkable and critical power shift to renewables provides vast opportunity for those creative minds willing to embrace it. And that's happening too. Here are few examples:

LANDFILL GAS TO DIESEL

UK-based Renovare Fuels has invented technology that converts climate-changing landfill gas to liquid diesel and gasoline fuels suitable for all motor vehicles, ships and planes with no engine retrofitting required.

The process takes the potent climate-changing gas methane, turns it into a liquid fuel which when burned essentially converts it to carbon dioxide, a much less potent greenhouse gas.

SOLAR ENHANCES BIODIVERSITY

New research has found that when land-based solar farms include appropriate land management plans, they can enhance biodiversity and provide ecosystem services for both people and agriculture.

Planting solar sites with diverse seed mixes, employing conservation grazing or mowing, providing a mosaic of meadow habitat and foraging grounds for wildlife and habit for pollinating insects, all bring benefits along with the cash crop of solar electricity.

If you still think of China as the world's worst polluter, you need to give your head a shake. China is tripling its installed wind capacity, shooting for 500 GW (500 billion watts) by 2030. China already has the highest wind power globally by far, accounting for a third of all wind power worldwide, followed by the US with 17% of the global share.

A recent GlobalData report states: "China's quick adoption of wind power can be attributed to a wider global trend driven by depleting fossil fuel reserves, the declining cost of wind power generation and a growing sensitivity towards environmental issues."

China is also the world leader in solar power. Their up-scaling of solar panel production has created a global boom in solar installation and plummeting prices.

WATLY DOES IT ALL

Google "Watly" and check this out. The Watly is a solar-powered computer that cleans water to drinking standards while providing energy and Internet connectivity in simple stand-alone no-maintenance units.

The latest Watly 3.0 is described as a solar-powered thermodynamic computer. It is 40 meters long and 2.4 meters high, capable of sanitizing 5000 litres of water per day while serving as a powerful communications device that can download and upload data to and from the Internet while providing clean solar electricity to resource-poor communities. It is currently deployed on a trial basis around the world, and receiving wide acceptance.

We are only limited by our ability to imagine a better world, and our willingness to create one. Take heart. We know what to do. We have begun.