UNUSUAL ENERGY SOURCES

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Most people would agree that fossil fuels simply need to go.

They're the cause of pollution, wars and climate change.

global warming

coal

gas

oil

Thankfully, scientists have been researching alternative energy solutions like wind and solar power for years.

However

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Wind and solar are still more expensive than oil and coal, and may not be the best solution for all places or uses.

When they saw the prices:

BODY HEAT

SUGAR

ALGAE

JELLYFISH

DANCEFLOORS

EXPLODING LAKES

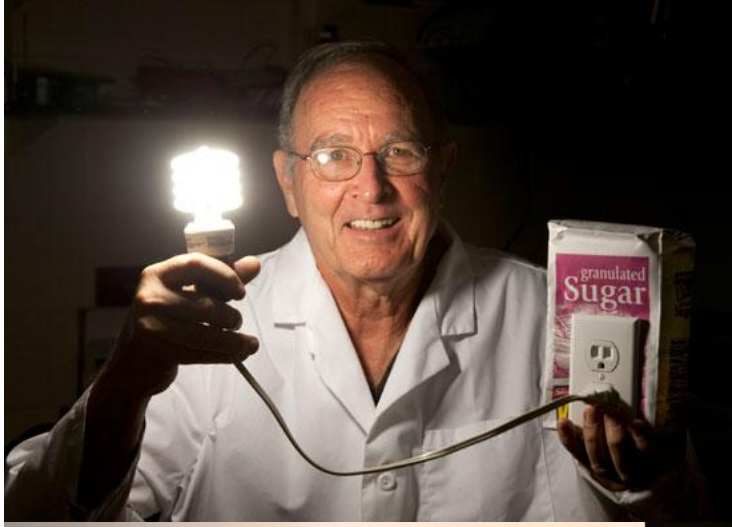
SUGAR

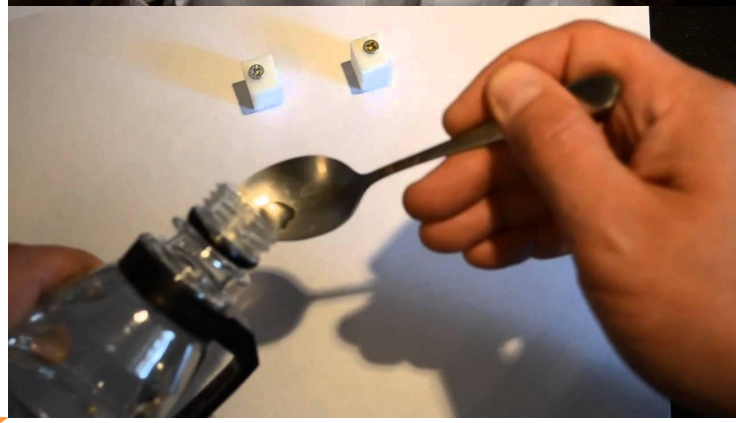
Percival Zhang and his team at Virginia Tech have created a biobattery, which can create a lot of electricity just from glucose.

Rather than charging the battery at a plug socket, you simply need to pour in a sugar solution.

Zhang believes it could be commercially available very soon!

https://www.youtube.com/watch?v=wX9bGEgB4hQ
https://www.youtube.com/watch?v=1rLp0P4JQ-M&feature=emb_logo





BODY HEAT

The body heat given off by rushing commuters in Stockholm Central Station is gathered and used to heat up an office building close by.

Body heat does not only provide warmth, but can also generate electricity through thermoelectric technology, which could revolutionise the way we currently use mobile devices.

With the popularity of smart watches in recent years, this energy source could prove very successful.

ALGAE

Algae is formed of multiple tiny organisms that live in water and thrive on carbon dioxide. These organisms produce algal oil which is then converted into biofuel.

Scientists are currently testing the best environment for algae to produce as much algal oil. Once the best option has been determined, more steps can be taken to make this source more commercially viable.

Take a look at how an algae farm works here: https://www.youtube.com/watch?time_continue=203&v=yCNkmi7VE0I&feature=emb_logo

JELLYFISH

A bioluminescent jellyfish, contain Green Fluorescent Protein which allows scientists to create miniature fuel cells.

However, as thousands of jellyfish need to be blended up to extract GFP. the sustainability and ethical issues behind this energy source would make it hard to produce on a large scale right now.

Although, future advancements may improve the efficiency of the energy source from jellyfish and GFP.

DANCEFLOORS

Piezoelectricity generates energy when a material is put under strain or pressure, and has proven to work successfully when the technology has been placed underneath nightclub dancefloors.

With every movement that partygoers make on the dancefloor, the strain generates electricity through piezoelectricity, and systems have been installed in some dancefloors to make them entirely self sufficient!

EXPLODING LAKES

Some lakes (in fact, there are only three known in the world) are known as ‘exploding lakes’ due to their deadly reservoirs of methane and carbon dioxide. These gases are trapped, but should the water temperature of the lakes change, a limnic eruption would occur.

CO2 erupts from the surface, with potentially fatal consequences for any nearby animals or humans. However one such exploding lake in Rwanda, Lake Kivu, has been turned into a renewable energy generator. Three large generators suck up the poisonous gases and in turn generate electricity that is sold back to the local grid.

We’ve seen some alternative energy sources, a couple of which are pretty unusual, that may end up powering your home, car or business in the future!

Thank you for attention.