

ALTERNATIVE ENERGY SOLUTIONS

It seems that everywhere, there are news stories telling us about fossil fuels running out, pollution, soaring oil prices, climate change, global warming, stress on our energy grids and so on. The list keeps on growing. Humans and their energy consumption has put untold pressure on our earth's natural resources, and as a result, more people are looking into alternative energy resources to help save the planet.

If we look at the earth's energy resources, they can be divided into two categories: those currently being depleted, and those that are infinite. Most countries burn up fossil fuels, such as coal and oil, for energy. There is only a finite of these resources available. Alternative energy solutions include: water, wind and solar, as well as organic plant matter. These resources are renewable, that is, the use of them doesn't contribute to their depletion.

We already have the ability to benefit from these alternative energy resources. We already have the ability to reduce our dependance on fossil fuels, and many resourceful people are generating their own energy at home, right now. There is already public support and backing, but the way community energy use is currently structured, it is very costly to make a full scale change just yet. This is why people are starting with their own backyard first.

Let's examine some current alternative energy solutions, one at a time:

Wind power

One of the most widely used alternative energy solutions is wind power. Home made windmills are quite energy efficient, one will power the average home, they cost very little to make and can be made at home in a workshop or shed, and so, not surprisingly, they are popular with anyone who likes a weekend project. They operate on a very basic principle. The wind spins the propellor, a shaft is turned by the propellor and the energy is generated into domestic current and the power is stored. There are many detailed instructions out there and the average turbine can be built for under 200 bucks, with parts you source yourself or buy from the hardware store.

Solar power

Another widely used alternative energy solution is solar power. Both wind and solar power produce no air pollution, but unlike wind, solar needs to be in a sunny area, not a windy one. The DIY solar panel kits are very popular, because they are cheap and easy to make, and there are plenty of good kits available. Your goal is to make enough solar panels. A small panel will only generate enough power for household appliances, but the more you make, the more free power you will harness.

Ocean wave energy

Energy generated by harnessing the ocean's power, is understandably, very powerful. It takes a large amount of infrastructure to harness the power of the ocean, but it has a huge amount of potential and many organizations around the world are investigating the long term possibilities. Already, the French have shown a long term commitment and have had much success with ocean wave energy, and so several British countries are now experimenting with the technology.

Hydroelectric power

Hydro is a fairly common alternative energy solution. There are limitations with hydroelectricity, similar to that of wave power, in that infrastructure and Government support is necessary to tap into it. The limitations revolve around the location of the power stations, such as a dam or river. Hydroelectricity is very powerful, and much cleaner than other traditional electricity sources, but the main problem is that a river often needs to be dammed, and this drowns the surrounding areas.

Waste gas energies

When burning methane is mixed with oxygen, it produces water and carbon dioxide and so makes a very attractive and clean fuel. Waste gas creates energy from landfill waste and air pollutants, such as livestock. Electricity is made by burning it in a gas turbine or heating water into steam. Natural gas can be compressed and used to power fuel cells and petrol generators, and NASA are exploring methane as a potential rocket fuel.

Geothermal energy

A few miles below the earth's surface, lies another potential energy source. Geothermal energy uses the earth's super heated molten core to heat water. This superheated water then converts into steam, which is used in a turbine, and electricity is then generated by these turbines. Water

is a renewable resource and the power generated is reliable, cost effective, and environmentally friendly, and makes a terrific alternative to burning fossil fuels. The biggest problem is that it is geographically limited to areas near tectonic plates with access to geothermal wells.

Ethanol

Ethanol is used as fuel for the internal combustion engine, such as motor vehicles. Ethanol is made by burning sugar, and can be generated from sugar cane, strawberries, cellulose and wood chips, grapes, wheat and corn. In the production of their ethanol, Brazil burns huge amounts of sugar cane and it is possible to buy petrol or gasoline with a small percentage of ethanol mixed with it.

Bio diesel fuel

Organic plant matter, especially vegetable oils are used in the production of bio diesel fuel. Brazil is currently the largest producer of biodiesel fuel, and America is not far behind them, but most countries are slow on the uptake. Biodiesel fuel is great for the environment and the economy, especially when you compare it with the petro-diesel most vehicles currently use and lots of people are starting to explore the possibility of making their own biodiesel. It is quite easy to do and compared to other alternative energy solutions, it is one of the cheapest and easiest to utilize, with satisfying results.

Atomic energy

Most people would probably be aware of atomic energy and the fact that it, is a fairly dangerous and potentially toxic process. As far as energies sources go however, atomic energy is very powerful and very efficient. An unfortunate by-product of atomic fission is radioactive waste. So while atomic fission may be a great alternative energy source as far as depletion of fossil fuels go, community concerns about the health and safety aspects often outweigh any benefits. Alternative energy solutions can be categorized two ways. The ones that need large amounts of infrastructure to capitalize on and those that can be harnessed domestically. Solar power, wind power and bio diesel fuel are three of the most popular energies to tap into for domestic uses and many concerned homeowners are exploring these methods at home.

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