ALTERNATIVE ENERGY TECHNOLOGIES - AN OVERVIEW

Adding up the alternatives

Energy is not running out, nor will run out ever. The problem lies with the environmental and political consequences of the current energy consumption, not that there are less energy resources are available. That's why there is a push for alternatives. The following is meant to give a basic introduction of some of the alternative energy candidates.

Solar energy

Solar power uses the sun to create electricity and heat, it also provides passive cooling and heating effects in buildings. There are many ways to take advantage of solar energy (similar to photosynthesis, for example), but the one that is primarily focused on is the direct conversion of radiation. This includes solar liquid heating set ups and photovoltaic panels. Larger scale solar farms can provide enough electrical and heating energy to make an entire community self-sufficient.

Nuclear energy

Nuclear power utilizes the incredible energy created from both the fusing and splitting of atoms. Some people don't consider nuclear energy an alternative energy resource. My personal interpretation is that any energy source that does not emit the fossil fuel pollutants that causes so much environmental harm is considered alternative energy. Therefore. I include nuclear power in the alternative energy collection.

Hydro and wind power

Wind energy comes from windmills that are placed in locations with an abundance of wind. Luckily, there are plenty of suitable sites in the United States.

Dams are used for hydro-power because they provide high pressure water flows that can spin turbines and create electricity. This can be done on a macro level (huge dams can be built to create state wide electrical power on some of the biggest rivers) and on a micro level (people put hydro-power generators in backyard streams and rivers).

Geothermal power

Geothermal power redistributes heat from the earth into a building or uses that heat to generate electricity. It's a very abundant resource, but it requires a lot of capital equipment and is difficult to extract. Heat pumps, like the ones found in many homes, are a source of geothermal power. This shows that geothermal power can be both effective and practical on a micro level.

Wood and biomass

Biomass is corn, mulch, saw grass, and so on. These materials are either processed into liquid or solid fuels, or burned in their raw form. Wood is perhaps the most common biomass and is used to heat homes throughout the country.

Fuel cells

Basically, hydrogen fuel cells produce electricity from nothing more than hydrogen, which is completely carbon free. Water is the exhaust, now what could be more natural than that?

The hydrogen fuel cells combine hydrogen with oxygen to create electrical power and water. This sounds simple, and if hydrogen fuel cells pan out like some think they will, this could solve a lot of the worlds environmental issues. The technologies, however, are years away. There are also some major difficulties that may never be overcome. But a lot of development money is being invested in fuel cells and the promise remains bright.

Bio fuels

Bio-fuels, such as corn, are made of biomass products. In the United States, corn ethanol is added to most gasoline supplies. Bio-fuels allow the United States to import less foreign oil, despite the very high energy consumption in the refining process, so the political effects are desirable. Bio-fuels may be mixed with fossil fuels or be used in their pure form.

Source : http://www.hicow.com/alternative-energy/geothermal-power/bio-fuels-1.html