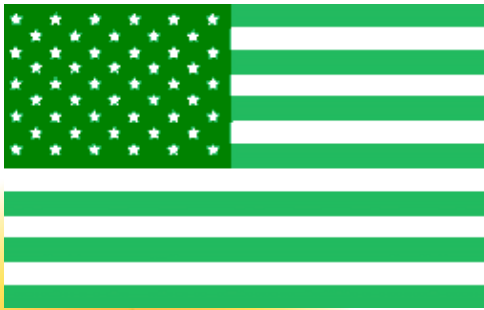
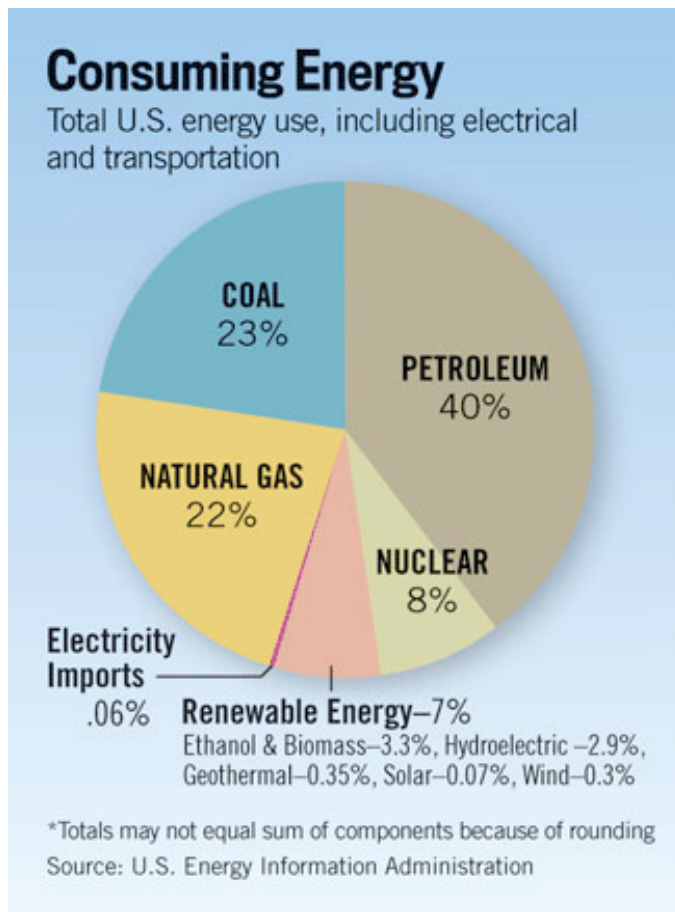


The Future of Alternative Energy in the United States



The United States is currently too dependent on fossil fuels. President Obama promised to reduce the reliance on fossil fuels and move to alternative energy sources.



The U.S. has a goal of renewable resources' energy use being 25%. It is currently at 7%. The U.S. needs to start relying on alternative energy sources such as hydrogen power, which is the most abundant element in the universe and it doesn't pollute. Another energy source is solar power, which gets its energy from the sun. Lastly, there is wind power that uses wind and converts it into energy with wind turbines.

The following provides some detail on these three examples of alternative energy sources including what they are, how they are currently used, and where they are projected to grow.

Hydrogen power is the lightest and most abundant element in the universe. Of all the alternative energy options, hydrogen is the only one that could allow us to get rid of fossil fuels. It doesn't pollute the air at all. When it's burned,



hydrogen gives off water. Hydrogen could allow the U.S. to be self-sufficient with its energy sources. Hydrogen can be used in fuel cells to generate power or it can burn in an internal combustion engine. Fuel cells are twice as efficient as internal combustion engines. Some cars are being tested with the use of hydrogen fuel cells and could possibly be on the market by 2010. Arnold Schwarzenegger the governor of California hopes to open 200 hydrogen filling stations along the west coast of North America, from Baja, California to Vancouver. Californians buy 1/5th of the cars purchased in the U.S., so the number of hydrogen cars could quickly grow if they take off in California.



Solar power gets its energy from the sun. Solar power was first created in the 1950's and was put into use in the 1970's. Its use has been increasing every year. Solar power is usually captured by solar cells and then turned into electricity. There is enough solar energy received every 15 minutes to supply the earth's energy for a year. However, it is costly to capture the solar energy and has a long payback period, so it hasn't grown very quickly. Now with interest in reducing the use of fossil fuels, it is possible that solar energy may be of interest, but still may not grow as quickly as the other alternative energy sources. Many houses have added solar panels to take advantage of tax breaks and companies, such as Whole Foods, have added solar panels to their roofs. The Glen Rock School system also has plans to add solar panels on the roofs of some of its elementary schools. Hopefully solar energy use continues to grow, since this is a clean energy source and is available freely, after installation of solar cells.

Wind power uses wind and converts it into energy with wind turbines. It is a clean form of energy that can help the U.S. become energy independent. However, wind doesn't blow continuously, so the amount of energy generated can fluctuate a lot. Also it is



relatively expensive to convert the wind into electricity. Regardless it is growing in its use, particularly in the U.S., Germany, and Spain. In the U.S., wind energy can power more than 6.5 million homes. A Department of Energy report said that, by 2030, wind power could supply 20% of the U.S.'s electricity. They hope to reduce the costs and increase usage from the 0.3% usage today.

In order to reduce its dependency on fossil fuels, it is important for the U.S. to pursue alternative energy sources such as hydrogen, solar, and wind power. Hydrogen power, doesn't pollute, is readily available, and has the ability to meet all our energy needs if it is properly utilized. It is currently being tested in car fuel cells, which are expected to reach the market by 2010. Solar power is also a clean energy source that comes from the sun. It is somewhat costly and has a long payback period, but is still growing because of the need to reduce reliance on fossil fuels. Wind power is another clean source of energy that is costly to convert into electricity. The Department of Energy hopes to reduce the cost of producing wind energy so that it can supply 20% of the U.S.'s electricity by 2030. These are only some of the alternative energy sources available that can help the U.S. become less dependent on fossil fuel. If time and money are invested into these energy sources, we can have a cleaner America now and in the future.