Clean Coal: Reality or Myth?
by Maria Gant

We're often unaware of it, but coal is a big part of our lives. Clean coal is being touted as the solution to our future energy needs and improving air quality. The U.S. Department of Energy reports that since 1990, in excess of 83% of carbon dioxide pollution has come from coal-fired power plants. The EPA reports that coal-fired power plants are the single largest source of mercury pollution in our country, and that coal is the fossil fuel with the highest ratio of CO2 output per unit of electricity.

Efforts to produce "clean coal" include chemically washing minerals and impurities from the coal, converting coal to gas by mixing it with water and oxygen, treating flue gases with steam to take out sulfur dioxide, and carbon capture and storage technologies. When you gasify coal it isn't burned, but rather it is heated to about 2,000 degrees Fahrenheit in a sealed chamber. When steam and oxygen are added, the coal breaks down into its chemical components. The resulting gas is primarily made up of carbon monoxide, hydrogen, sulfur, and nitrogen compounds, plus smaller amounts of elements including mercury. Hydrogen and other coal gases can also be used to fuel power-generating turbines or as the chemical "building blocks" for a wide range of commercial products.

Greenpeace is a vocal opponent to the concept of clean coal because emissions and wastes are not avoided but merely moved to a different waste stream. Greenpeace refutes carbon capture and storage as risky, wasteful of energy and expensive. The Sierra Club has launched a site to rebut clean coal contentions, Coal Is Not the Answer. On December 4, 2008 the Natural Resources Defense Council joined the National Wildlife

Federation, the Sierra Club and other groups to launch the "Reality" Coalition, a national grassroots and advertising effort to spread the word that there is no such thing as "clean coal." That sentiment has also been attributed to James Hansen, NASA's expert on global warming, who says all coal plants emit millions of tons of carbon dioxide, the most dangerous greenhouse gas.

Currently more than 90% of the coal used in the U.S. is for generation of electricity. Although the concept of "clean coal" sounds attractive, it is important to look at the underlying facts. Consider the environmental impact of coal mining, which includes erosion, groundwater contamination, habitat destruction, and toxic waste. Consider that coal is not a renewable energy source. Then consider other clean forms of energy, such as geothermal, solar, wind and hydroelectric. Consider that "clean coal" sounds like a marketing term invented by the coal industry.