Advantages of Nuclear Power

* Large Fuel Supply
* Low Environmental Impact
* Emits 1/6th of the Co2 that Coal Does
* Moderate land Destruction
* Moderate Water pollution
* Moderate Land use
* Low accident risk when protected
* Low air Pollution
* Low land destruction from the surface mining

Disadvantages of Nuclear Power

* Can’t economically compete with Government subsidies
* Low net energy yield
* High environmental impact if Accident
* Environmental cost not included in market price
* Risk of bad accidents
* No accepted way to store the waste
* Subject to terrorism
* Spreads nuclear technology
* High cost

Statistics

* Light water reactors make up 85% of the worlds nuclear-generated energy (US only uses this kind)
* 83% of the available energy is lost in their nuclear fuel as waste heat to the environment (highly inefficient)
* 75% of this loss occurs in the plant it’s self and another 9% when the fuel is mined, upgraded, and transported to the plant.
* - Nuclear power plants provide about 6% of the world's energy and 13–14% of the world's electricity

How does it Work?

Nuclear power plants have a generator that boils water to produce steam that spins a turbine and generates electricity. To provide the heat for the steam, power plants use a controlled nuclear fission reaction. The fuel for the reactor is made from uranium ore mined from the earths crust which then goes through the process of being enriched. Enriched uranium is processed into small pellets, and packed into pipes called fuel rods, which are grouped into fuel assemblies, then placed in the core of a reactor. Special control rods are dipped in and out of the core to absorb neutrons and regulate the fission. A coolant (usually water) circulates through the core to remove heat. This keeps the pipes from melting and releasing radioactivity into the environment.

Nuclear Energy provides 19.6% of the Us' electricity and is its #1 source of emission free electricity.

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Statistics

* US, France, and Japan produce about 50% of the generated nuclear energy.
* Annual generation of nuclear power has been on a slight downward trend since 2007, decreasing 1.8%.
* Nuclear Energy provides 30% of the energy used in the European Union
* - Nuclear power plants provide about 6% of the world's energy and 13–14% of the world's electricity