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|  |  | |  |  |  | | --- | --- | --- | |  |  |  | |  | fuels burn in a combustion chamber to produce heat.  The heat converts water to steam, and the steam drives turbines to produce electricity.  The burning of fossil fuels, however, produces dark smoke, polluting the air.  The smoke belched out from these plants contains high concentrations of sulfur which smells like rotten eggs and produces acid when combined with water vapor in the air.  The resulting acid rain destroys lakes, forests, and kills animals.  Without exception, fossil fuels create a large amount of pollution, causing drastic changes in many ecosystems.  Worse yet, this pollution creates the possibility of global warming.  The pollution from using these fuels also causes numerous health problems, such as birth defects, endometriosis, infertility, coronary heart disease, respiratory illness, and many types of cancer.  It has become so common as to be categorized as an illness called chronic environmental poisoning, with subdivisions such as sick building syndrome, which is mainly air pollution caused illnesses.  The NRDC (Natural Resources Defense Council) reports that 64,000 people died prematurely from cardiopulmonary causes relating to air pollution.  The five worst cities for this in the U.S. are Los Angeles at 5,873 deaths, New York with 4,024, Chicago at 3,479, Philadelphia coming in 4th with 2,599, and Detroit with 2,123.  Buenos Aires, Mexico City, and Los Angeles, to name a few, are now enveloped in perpetual clouds of smog due to pollution resulting from fossil fuel usage.  In fact, in Mexico City, air is actually sold!  Unfortunately (or maybe luckily, depending on how one looks at it), fossil fuels are running out at a rapid pace.  Scientists are scrambling to find other forms of power.  Can a clean, efficient form of energy be found to replace traditional methods?  One alternative is nuclear power.  It is much cleaner (for the air) than traditional methods, but it still has major fallbacks.  Nuclear waste and spent uranium and plutonium rods have to be disposed of carefully and safely, and remain extremely radioactive for about 600 years, due to the presence of isotopes strontium 90 and cesium 137.  Even after 600 years, when these isotopes have decayed, they are still fairly dangerous because of their plutonium content.  They will remain dangerous for several thousand years, contaminating the groundwater of the area and rendering it unsafe for most forms of life.  In addition to this pollution of the ground, nuclear plants also release radioactive gas into the air.  Also, the water used to cool the reactor is released back into the source it was obtained from after it is used.  Near the reactor, however, the water receives small amounts of radioactive hydrogen. Manatees in Florida, an endangered species, bathe in the warm water released from nuclear power plants, and are constantly exposed to this radiation.  All these problems, however, occur just when the power plant is working correctly.  In 1986, near Kiev, Russia, there was an explosion of fire at a nuclear power plant at Chernobyl.  This explosion released large amounts of radiation into the atmosphere.  At least 26 people were killed by the immediate explosion, and hundreds more were hospitalized.  Even today, the entire area is a barren wasteland; even the soil is radioactive.  No plants or animals can live at or near the site due to this.  As a result of the catastrophe, few nuclear reactors are being built in the United States today.  Some other, safer and more environmentally friendly form of power must be found. |  | |  |  | | | | |  | | | | |
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