

# Power Profile

## WHAT ARE THE ADVANTAGES AND DISADVANTAGES OF EACH POWER SOURCE?

Energy	Availability	Cost To Produce Electricity	By Products
 <b>COAL</b>	Plentiful now, but nonrenewable. It is estimated that the U.S. has several hundred more years worth of coal supply.	Low at existing plants, but new plants are difficult to build. Fuel costs are low.	Air emissions such as sulfur dioxide, nitrogen oxide, carbon dioxide and particulate, or ash.
 <b>OIL</b>	Plentiful now, but nonrenewable. Experts disagree on how long our supply will last.	Expensive and difficult to get out of the ground or buy from other countries.	Air emissions such as sulfur dioxide, nitrogen dioxide, carbon dioxide, carbon monoxide and particulate, or ash.
 <b>NATURAL GAS</b>	Plentiful now, and we may discover more, but it is nonrenewable.	New plants are moderately expensive to build, but fuel costs can be high. Fuel prices vary, but have consistently gone up.	Cleaner than other fossil fuels, but still produces air emissions, such as nitrogen oxide, carbon monoxide and carbon dioxide.
 <b>NUCLEAR FISSION</b>	The uranium used as fuel is plentiful and significantly cheaper than coal, but nonrenewable.	Very low at existing plants, but new plants are expensive and complex to build.	No air emissions, but spent fuel rods must be stored carefully for many years, because their radiation can be dangerous.
 <b>HYDRO POWER</b>	Renewable, but limited by the number of suitable river locations, and the water flow at those locations.	Very low at existing plants, but new plants are moderately expensive to build.	No air emissions, but a dam changes the river environment for fish and other animals, and changes the natural look and flow of rivers.
 <b>WIND POWER</b>	Renewable, but only works when the wind blows. Wind farms must be built in windy locations.	Wind is free. Wind turbines are moderately expensive to build and maintain, and new transmission lines may need to be built.	No air emissions, but wind turbines make noise and some people don't like how they look. They also may injure birds, but can be designed to minimize this.
 <b>SOLAR ENERGY</b>	Renewable, but only works when the sun is shining, and is also affected by the brightness of the sunlight.	Sunlight is free, but solar cells are expensive, and produce only small amounts of electricity.	No air emissions, but many solar cells in an array may require large areas of space.
 <b>BIOMASS</b>	Plentiful and renewable, but requires lots of trash for fuel.	Trash is expensive to transport and sort, and new plants are expensive to build.	Small amount of air emissions, which vary by different biomass fuel sources.