15-4: Coal

How does it work?

Coal is a fossil fuel created from the remnants of decaying organisms that are compressed and heated for 300-400 million years. Then it is burned to create energy.

-Coal that is crushed and burning in a furnace produce heat to boil water which eventually creates steam

-This steam then spins a turbine to create electricity.

- The steam then cooled and condensed to be returned for reuse in boiler

- Waste heat sent to atmosphere or water source

- Water pumped though condenser and back to water source to rid of waste heat

Statistics=

* Provides 40% of the world’s energy
* Provides 49% of the US’s energy
* Provides 80% of China’s energy
* In China, by 2025, will burn twice as much as the US
* In India, if you look at the gap between 2006 and 2031, their use of coal is projected to quadruple
* US has 25% of the Worlds proven coal reserves, Russia 15%, India and China 13%, Australia 8%, South Africa 8%
* 25% of CO2 comes from power plants
* In power plants 75% of the energy that is produced is lost through the processes

Pros and Cons:

PROS:

Ample supply

Lots of energy

Not very costly

Advanced technology

It’s possible to reduce air pollution

CONS:

Land damage

Threat to human health

Environment costs not included in market prices

Large gov’t subsides

High CO2 emissions

Radioactive particles