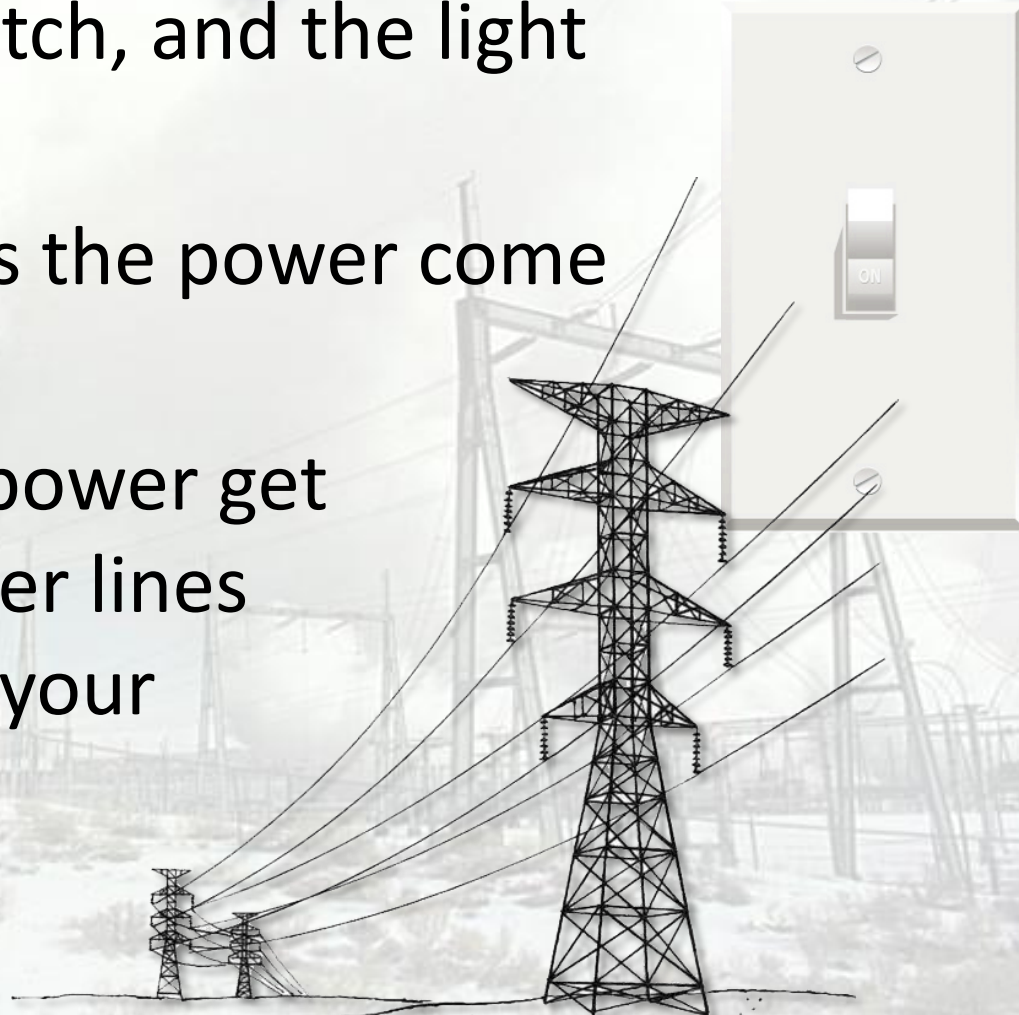


Power Plants



Bring on the Power!

- You flip the switch, and the light comes on, . . .
- But where does the power come from?
- How does the power get into those power lines that bring it to your home?



Power Plants (The Turbine)

Power plants generate electricity by energy transformations.

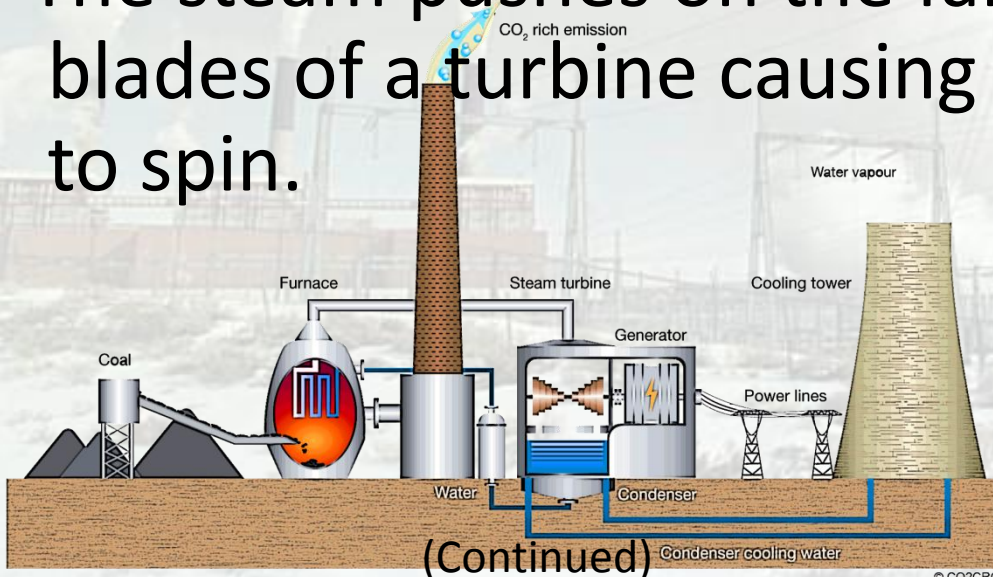
WRITE
DOWN

How?



Energy is used to turn a generator.

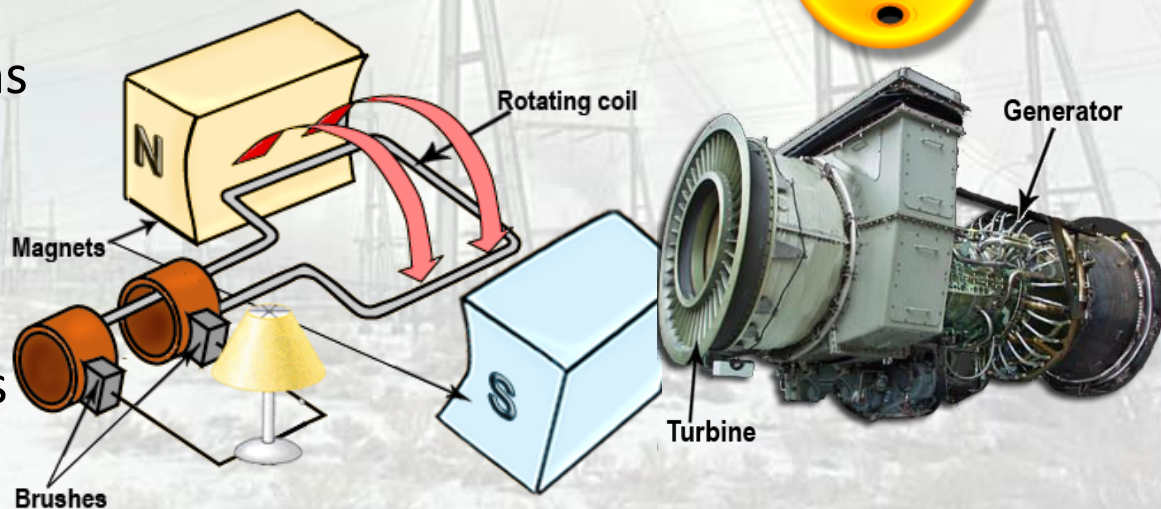
- Fuels are burned to heat water and produce steam.
- The steam pushes on the fan blades of a turbine causing it to spin.



A turbine

Power Plants (The Generator)

- The spinning turbine spins a generator.
- A generator is a device that transforms kinetic energy into electrical energy.
- Alternating voltage is generated by rotating a coil between magnets or by rotating magnets within a stationary coil.
- The value of the voltage generated depends upon:
 - The number of turns in the coil.
 - The strength of the magnets.
 - The speed at which the coil or magnets rotate.



And That's How Electricity is Produced



Why did the physics teacher explain to his students how electricity is produced?

He thought they'd get a charge out of it!

