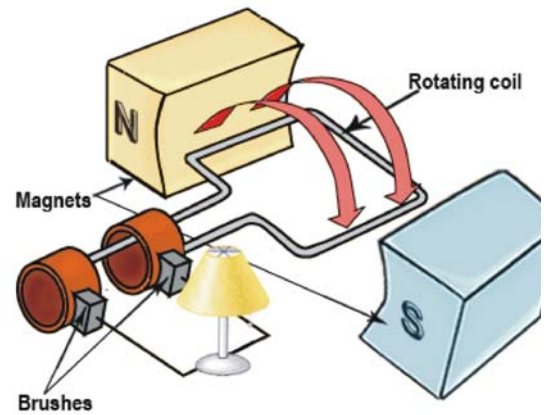


How do Power Plants Work?

You flip the switch, and the light comes on, but where does the power come from? Electricity is the energy of moving electrons. It is generated in a power plant. Power plants generate electricity by energy transformations. Energy is used to turn a generator. This is usually accomplished by burning fuels. Burning fuels heat water to produce steam. The steam pushes on the fan blades of a turbine causing it to spin. The spinning turbine spins a **generator**, a device that transforms kinetic energy into electrical energy. A generator transforms kinetic energy into alternating voltage by rotating a coil between magnets or by rotating magnets within a stationary coil. The magnets pull on the electrons in the wire causing them to move. That's electricity!



A generator

Answer the questions below based on the reading above and on your knowledge of physics.

1. What is electricity? _____
2. What is a generator? _____
3. How does a generator work? _____

4. How does a power plant transform the potential energy in fuels into electricity? _____

5. The paragraph above says that the energy transformations done by power plants are “usually accomplished by burning fuels.” In hydroelectric plants, instead of burning fuels, the energy of water flowing over a dam is harnessed. How might that work? _____

