Short Essay: Electricity Generation Concepts

Directions: Type your answers in the space below each question. Then compare your answer to the sample answer.

Questions

1. What makes the turbine in a power plant spin?

2. What makes the magnets in a generator spin and how does this result in the production of electric current?

3. In terms of energy conversions, what is the difference between a turbine and a generator?

4. In your own words, explain how burning fossil fuels in a power plant leads to electricity generation.

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Templated Game	

Sample Answers

1. The turbine spins when steam exerts a force on it, just like blowing on a pinwheel makes it spin.

2. The magnets are attached to the turbine and they spin in response to the spinning of the turbine. They are enclosed in copper wires. When magnets spin within a coil of copper wire, electric current is generated.

3. When a turbine is acted on by the force of steam, the turbine begins to spin. This converts the heat energy of the steam to the mechanical energy of the moving turbine. A generator then converts mechanical energy to electrical energy.

4. The fuel is first burned to heat water and produce steam. The steam then turns a turbine. The turbine turns magnets enclosed in copper wires within the generator. This creates electrical current, which can then flow out of the power plant and be transmitted to your home.