Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class: \_\_\_\_\_\_\_\_ Date \_\_\_/\_\_\_/\_\_\_

**Sources of Electrical Energy**

**Quiz KEY**

1. What does electricity come from?

**A** Air

**B** Charge

**C** Government

**D** Wires

1. How much of our total energy use comes from electricity?

**A** 10 percent

**B** 25 percent

**C** 40 percent

**D** 88 percent

1. Where does most of the electrical energy we use in the United States come from?

**A** Nuclear power

**B** Wind power

**C** Solar power

**D** Fossil fuels

1. A utility pole is an example of what type of infrastructure?

**A** Electrical generation

**B** Electrical distribution

**C** Roads and bridges

**D** Homes and businesses

1. Which of the following is the largest fuel source for electricity?

**A** Coal

**B** Petroleum

**C** Nuclear

**D** Hydro

1. How much of our total electricity generation do we get from renewable energy sources?

**A** 2 percent

**B** 13 percent

**C** 25 percent

**D** 50 percent

1. Which of the following is a chemical process?

**A** Fission

**B** Converting heat into steam

**C** Condensation

**D** Combustion

1. Which of the following process is used in a turbine?

**A** Converting fuel into heat

**B** Converting thermal energy in steam to mechanical energy

**C** Electromagnetic induction

**D** Converting electrical energy into mechanical energy

1. Which of the following process is used in a generator?

**A** Converting fuel into heat

**B** Converting thermal energy in steam to mechanical energy

**C** Electromagnetic induction

**D** Converting electrical energy into mechanical energy

1. What does it take to get more electrical energy out of a generator?

**A** More mechanical energy in

**B** More heat in

**C** More fuel in

**D** All of the above

1. Oil production in the United States is \_\_\_\_\_\_\_\_\_\_\_\_ since the late 2000s.

**A** Increasing

**B** Decreasing

**C** Steady

**D** Non-existent

1. List 3 ways electricity is useful.
   * There are a lot of ways to create electricity.
   * Electricity is very efficient to transmit over short or long distances.
   * Electricity can be converted into a lot of other forms of energy.
2. Describe the complete electricity generation process from fuel to electricity.
3. Fuel creates heat
4. Heat boils water
5. Water becomes steam
6. Steam drives a turbine
7. The turbine spins a generator
8. The generator produces electricity