# Puzzled About Power?
# Electricity Generation

Where does electricity, used to light our homes, schools, and businesses, come from?

1. Use the descriptions to put the different power generation puzzles together. (coal, natural gas, hydro, solar, wind)

2. Trace the pathway electricity takes from the point of generation through delivery to its end source.

3. What parts or "pieces" do the puzzles have in common? Which are different?

4. What are the benefits and drawbacks of various generation methods?

Much large scale generation of electricity is accomplished through an old but very successful method using a turbine, generator, and energy source. When coal or natural gas is the energy source in the electricity generation process, the coal or natural gas is burned to heat water to produce steam which spins a turbine. The spinning turbine is an integral component in nearly all methods of wide scale electricity production. The turbine either spins coils of wire around stationary magnets or magnets are spun around coils of wire. The “spinning” sets into motion the flow of electricity. Electricity is delivered to homes, schools, and businesses through a series of power lines. When wind or water is the energy source used to generate electricity, the water is not heated to produce steam to turn a turbine. The force of wind turns a wind turbine and likewise, the force of water turns a water turbine.

In many parts of the United States, coal continues to be a dominant energy source used for electricity production. In the late 1800’s Maine began utilizing its beautiful and pristine rivers to produce hydroelectric power. Alternative energy sources being explored in Maine include wind, biomass (plant or once living material), solar, geothermal, tidal and wave.

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