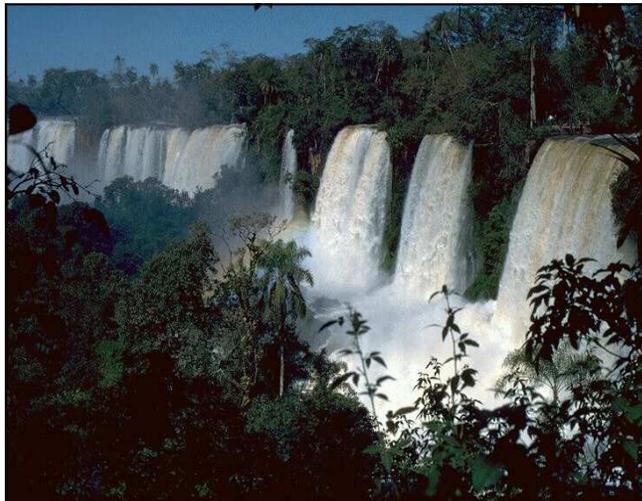


Forms of Energy: Mechanical Energy

Mechanical energy is the energy produced by physical movement. Many natural systems have forms of mechanical energy that can be harnessed for power. Examples include the flow of rivers to the sea, the formation of wind from the movement of air masses, and tidal currents that result from the Moon's gravitational force. Often we use other forms of energy to create useful mechanical energy such as the **combustion** of gasoline to propel an automobile or using **electrical power** to turn a ceiling fan motor.

An object's velocity (speed), elevation and mass can have an effect on the magnitude of its mechanical energy. In general, the faster an object moves or the greater its mass or height, then the greater the amount of energy it can possess. An object's **kinetic** or **potential energy** can increase with increasing mass. A large river system has great mass, elevation and motion and therefore can be a tremendous source of mechanical energy.

There are two basic types of mechanical energy. Kinetic energy is specifically associated with an object's motion such as a moving bicycle or a skateboard. Potential energy is energy an object has as a result of its position or ability to perform work. A stretched rubber band, compressed air, or a rock sitting on the top of a cliff are examples of objects with potential energy.



A waterfall exhibits the kinetic energy of the water flowing from its elevated position.

Glossary

Combustion: A high-temperature chemical reaction resulting from the combination of a fuel with oxygen which releases carbon dioxide and water mixed with other substances (smoke) as well as thermal and light energy.

Electrical power: Electrical energy used to conduct work; the measure of the rate of electrical energy used by a circuit. This is usually measured using a unit called a Watt (W).

Kinetic energy: Energy that is specifically associated with an object's motion.

Mechanical energy: The energy an object has from its motion or its potential for motion.

Potential energy: The energy an object has as a result of its position or ability to perform work.

For more information:

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