

FORMS OF ENERGY

MECHANICAL ENERGY

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

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 combusting gasoline to propel an automobile or using electricity to turn a ceiling fan motor.

Further considerations: 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: The energy specifically associated with an object's motion. A bicycle or skateboard in motion possesses this form of mechanical energy.

Potential energy: The 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 all have potential energy.