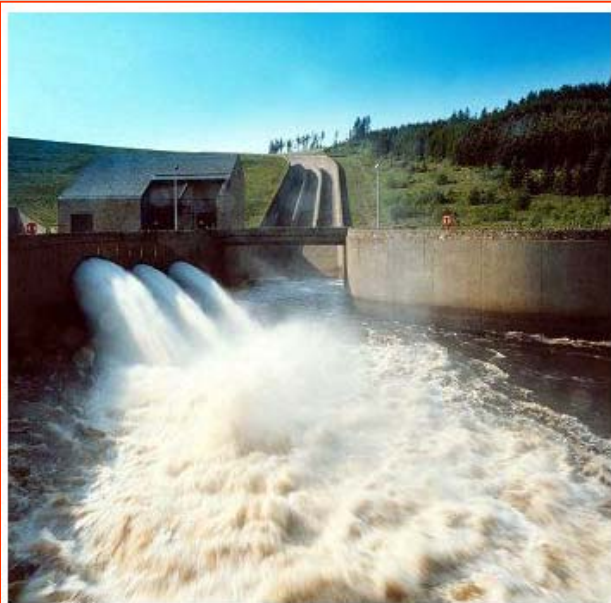


# Mechanical Energy



<http://www.concerto-sesac.eu/IMG/jpg/Hydro.jpg>

## Mechanical Energy (E)

Mechanical energy (E) is the energy due to the **position** (potential energy, PE) of something or the **movement** (kinetic energy, KE) of something.

$$E = KE + PE$$

## Kinetic Energy (KE)

A body that is in motion has kinetic energy (KE).

$$KE = \frac{1}{2} * m * v^2$$



<http://nexus404.com/Blog/wp-content/uploads/2007/03/lockheed-ckem-kinetic-energy-missile-3.jpg>

# Mechanical Energy



<http://www.creationscience.com/onlinebook/webpictures/prestoninswing.jpg>

## Gravitational Potential Energy (PE)

The energy of a body due to its position (height) is called gravitational potential energy.

$$PE = m * g * h$$

## Elastic Potential Energy (PE)

The energy of a body due to its displacement ( $x$ =displacement) from the equilibrium position (by stretching or compressing) is called elastic potential energy.

$$PE = \frac{1}{2} * k * x^2$$

( $k$  = spring constant)

