Examples of energy

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energy, in physics, the capacity for doing work. It may exist in potential, kinetic, thermal, electrical, chemical, nuclear, or other various forms. There are, moreover, heat and work--i.e., energy in the process of transfer from one body to another. After it has been transferred, energy is always designated according to its nature.

Energy is the ability to do work. Examples of energy include electrical, nuclear, and chemical energy. The concept of energy is key to science and engineering. Here is the definition, examples of energy, and a look at the way it is classified.

Forms of energy include the kinetic energy of a moving object, the potential energy stored by an object (for instance due to its position in a field), the elastic energy stored in a solid object, chemical energy associated with chemical reactions, the radiant energy carried by electromagnetic radiation, the internal energy contained within a ...

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In science, energy is the ability to do work or heat objects. It is a scalar physical quantity, which means it has magnitude, but no direction. Energy is conserved, which means it can change from one form to another, but isn’t created or destroyed. There are many different types of energy, such askinetic energy,potential energy, light, sound, andnuclear energy.

The term “energy” comes from the Greek wordenergeiaor from the French wordsenmeaning in andergonwhich means work. The SI unit of energy is the joule (J), where 1 J = 1?kg?m2?s-2. Other units include the kilowatt-hour (kW-h), British thermal unit (BTU), calorie (c), kilocalorie (C), electron-volt (EV), erg, and foot-pound (ft-lb).

One form of energy may be converted into another without violating a law of thermodynamics. Not all of these forms of energy are equally useful for practical applications. When energy is “lost”, it means the energy can’t be recaptured for use. This usually occurs when heat is produced. Losing energy doesn’t mean there is less of it, only that it has changed forms.

Energy may be either renewable or nonrenewable. Photosynthesis is an example of a process the produces renewable energy. Burning coal is an example of nonrenewable energy. The plant continues to produce

chemical energy in the form of sugar, by converting solar energy. Once coal is burned, the ash can’t be used to continue the reaction.

The various forms of energy are classified as kinetic energy, potential energy, or a mixture of them. Kinetic energy is energy of motion, while potential energy is stored energy or energy of position. The total of the sum of the kinetic and potential energy of a system is constant, but energy changes from one form to another.

For example, when you hold an apple motionless above the ground, it has potential energy, but no kinetic energy. When you drop the apple, it has both kinetic and potential energy as it falls. Just before it strikes the ground, it has maximum kinetic energy, but no potential energy.