# A New Explanation for the Nature of Energy and Force in the Universe Part A: Energy

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If we were standing beside an ocean and a child were to ask what it is, we would simply explain that it is an ocean, composed of water or, in more scientific terms, H<sub>2</sub>O molecules. This means that the entire, vast ocean is formed from just two elements, hydrogen and oxygen, which can readily be separated via experimentation to yield these simple elements.

Similarly, on a cloudy day, if the same child were to ask what the great cloud masses in the sky are, we would easily explain that they are clouds whose fundamental nature is also that of the simple H<sub>2</sub>O molecule, which, upon cooling, yields rain, snow, or hail. The nature of all these is also the H<sub>2</sub>O molecule. To put it another way, an ocean is composed of "N" number of H<sub>2</sub>O molecules, all of which possess a near-identical structure and are considered to be one of the simplest molecules in nature.

Considering the Sun on a bright day, the emissions from the Sun that reach the Earth consist of abundant light radiation, illuminating the Earth and the Sun's surroundings. Interestingly, of the total number of photons released by the Sun, only approximately one-billionth reaches the Earth; we call this solar radiant energy. Therefore, radiant energy is the energy of photons arriving at Earth with a linear velocity, "C".

Now, let us consider an atom, which is constructed from electrons, protons, and neutrons. In previous papers, we have posited that electrons, protons, and neutrons are themselves also composed of photons. It is therefore photons, arranged in various configurations, that form electrons, protons, and neutrons, which in turn are situated within the collective structure known as an atom. Thus, during the process of nuclear decay, for example, the constituent photons of the atomic nucleus are liberated and propagate at the speed of light, thereby releasing nuclear energy.

Furthermore, if we examine a mass of molecules, we see that it is composed of a collection of atoms, which are themselves made of electrons, protons, and neutrons. This molecular mass—much like the Earth, which possesses kinetic energy as it orbits the Sun at approximately 110,000 km/h—is composed of "N" photons, each with a mass " $m_p$ ". Since it is in motion, it must possess kinetic energy. It can therefore be stated that kinetic energy is a consequence of the motion of these constituent photons.

If we now consider electrons moving within a wire at speeds close to the speed of light, electrical energy can be explained similarly, since electrons are made up of photons. That is, electrical energy is the motion of the photons that form the structure of the electron as it travels through the wire. Furthermore, within a lamp filament, some electrons are annihilated and converted into photons, which itself indicates that electrons are composed of photons. Therefore, the radiant



energy produced by the lamp also depends on photons.

In previous papers, we have referred to the structure of magnetic and gravitational fields, noting that these fields are constructed from 'chain-like' photons. The energy of these fields is therefore derived from the kinetic energy of these interconnected photons.

In essence, it can be asserted that all forms of energy are a product of these photons in motion. Thus, a new definition for energy can be proposed:

The various forms of energy are different manifestations of photon motion, occurring at various velocities, because all matter is fundamentally composed of photons.

### Note:

As we have stated in previous papers, the velocity of photons can range from zero to 3.3 C. Moving photons with a velocity up to 3.3 C are descriptive of kinetic energy, whereas those with zero velocity are descriptive of potential energy.

## Conclusion:

All forms of energy—such as radiant energy, thermal energy, nuclear energy, magnetic field energy, and gravitational energy, among others—are derived from the kinetic energy of moving photons.

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