

## « Understand All Forms of Energy in Two Minutes » (Video transcript)

Over time, humankind has learned to control and make use of various energy forms found in nature.

Examples:

**Kinetic energy** such as in flowing water.

**Thermal energy** like the heat from burning wood.

**Radiant energy** from the Sun and other sources.

This is called “**primary energy**”.

3 types :

- **FOSSIL ENERGY**

- **NUCLEAR ENERGY**

- **RENEWABLE ENERGY**

**FOSSIL ENERGY:**

= generated by burning “fossil” fuels produced by the slow transformation of plants, plankton and algae buried underground for millions of years.

= **COAL / OIL / NATURAL GAS**

**NUCLEAR ENERGY:**

= generated by the fission of uranium nuclei.

**RENEWABLE ENERGY:**

= generated from continuously replenished sources found in nature.

EXAMPLES:

- **HYDRO:** The energy of flowing water in rivers.

- **WIND:** The energy of moving air (wind).

- **SOLAR:** The energy of the Sun’s rays.

- **GEOTHERMAL:** Heat produced inside the Earth.

- **OCEAN:** The energy of tides and waves.

**OTHER RENEWABLES:**

= burned to generate energy.

EXAMPLES:

- **BIOMASS:** Energy generated by burning organic matter such as plants.

- **WASTE:** Energy generated by burning waste from human activity.

The energy from all these sources must then be transmitted to end users in other areas. For that purpose, it is often converted into **electric energy, or electricity.**

Example: a wind turbine.

The kinetic energy of the wind is converted into electric energy. The electricity is transmitted via the power grid. It is then distributed to be transformed into useful energy.

**Mechanical energy** in a washing machine.

**Thermal energy** in a radiator.

**Luminous energy** in a lamp.

For this reason, electricity is referred to as an **ENERGY CARRIER.**