

THE FLOW OF ENERGY

D. Glushenko, *student*

Today we make use of various sources of energy found on earth to produce electricity. Using machines we convert the energies of wind, biomass, fossil fuels, water, heat trapped in the earth (geothermal), nuclear and solar energy into usable electricity. The flow of energy has always been important to advanced civilization. The flow of energy and the integrity of the system can be maintained. Having automatic back-ups means we can do just that. Weather and climate on the Earth are determined by the amount and distribution of incoming radiation from the sun. Energy may be stored for some time, transported in various forms, and converted among the different types, giving rise to a rich variety of weather or turbulent phenomena in the atmosphere and ocean.

[Flow of energy](#) is an essential feature of every ecosystem since all living systems are open systems. They depend on a steady supply of energy in order to keep up the structural organization and all life-preserving functions. According to the second law of [thermodynamics](#), each system strives for the state of highest entropy. Natural ecosystems are optimized for a high turnover, while ecosystems influenced by humans, especially agricultural areas, are optimized for an as high as possible rate of net production. Only about 5 percent of all available sun energy is conserved as chemical energy in the biomass of plants. A theoretically optimal 80 percent of this energy can be used by the organisms of the next higher trophic level. The need for alternative energy sources is getting urgent, hence the development of renewable energy is moving fast. Nationally and internationally various individuals and research companies are creating new and exciting energy systems. Some of these apparatus are great works and need improving for massive use. The solution for the above problems can be resolved by renewable energy. Our beautiful planet gives us the opportunity to make proper use of sunlight, flowing water, strong winds, and hot springs and convert these into energy. These energy sources are abundant and free to use. We must be sure that we convert the energy the right way, without causing other problems that can again hurt our environment.

ELA – T.A. Aleksakhina