THE STUDY OF VARIOUS FORMS OF ENERGY (FUEL)

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The production and consumption of different types of energy is a necessary tool for human existence and development. Energy is an important component of the state economic potential and people welfare, and also has a strong impact on the environment, ecosystem and biosphere. On the one hand, having penetrated into the production activity, electrical power and heat power have become so common, that the man can not imagine his existence without them and uses infinite resources. On the other another hand, the man focuses more attention on the economic aspect of energy and needs eco-friendly energy production. The second half of the twentieth century faced another global problem – environmental pollution with combustion products of organic fuel. This problem has the following feature: all currently used sources of energy are exhaustible. That is, in one or two centuries such intensive rates of using coal, oil and gas will lead the population of the Earth to energy crises.[1] Therefore, now the scientists from all over the world face the problem of finding and developing new alternative sources of energy. The paper studies different types of the fuel and the problems of their further development; as well as the possibility of solving these problems by finding new types of fuel, which can be called wasteless and inexhaustible.

Nuclear power is based on the reaction of nuclear fission to generate heat and electricity including a lot of industrial processes, which together form a fuel cycle. Electric engineering includes mining and processing of various types of fuel, leading branches of which are petroleum engineering, gas and coal industries. The development of industrial society is due to the ever-growing level of production and consumption of different types of energy. The scale of production and consumption of energy resources for the production of the required amount of energy is enormous and the amount of national resource is declining rapidly. Alternative energy is based on the use of renewable energy sources, such as solar and wind power.

At present time, with an enormous size of population, the production and use of energy has become rather dangerous. Along with different ecological consequences accompanied with air and water pollution, soil erosion, there is a danger of changing the world climate as a result of the greenhouse effect. Nowadays, about half of the world's energy balance accounts for share of oil, about one third accounts for share of gas and atom, and about of one third accounts for share of coal [2]. And only small percentage accounts for other sources of energy. Obviously, the mankind can't do without heat and nuclear power plants, but alternative sources of energy should be implemented to soften the inevitable transition from traditional power engineering to alternative one.

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