

ALTERNATIVE METHODS OF OBTAINING ELECTRICITY

Today, mankind has developed many ways to obtain electric current due to natural phenomena. Alternative energy is a set of promising ways of obtaining, storing, transmitting and using energy from sources that are not used as widely as traditional ones, but are of interest because of the profitability of their use with, as a rule, a low risk of causing harm to the environment. There are 5 ways of generating electricity, which are considered unusual for the reason that they have not gained enough popularity. Sometimes it is said that they are economically costly and ineffective, but this does not mean that humanity will abandon them. These innovative methods will soon be able to be used by humans as new sources of electric current. Even with the advent of oil, mankind considered this natural resource ineffective and unknown, but today it is used in many areas of our activities.

So the first one is seawater -salt water reserves on the planet are simply huge, so scientists decided to develop a power plant that will work on this resource. The only power plant was built in Europe by Starkraft. Electrical energy is obtained using the technology of osmosis. In simple terms, the mixing of salt and fresh water takes place, which leads to the generation of energy due to the increase in the entropy of the liquids. This energy is necessary to activate hydro turbines of electric generators. This method is not as efficient as nuclear power plants, but it does not cause much damage to the environment.

The second one - fuel cells - today, a power plant that operates on fuel-type cells with a capacity of up to 0.5 GW has also been developed. It works by burning fuel in an element that converts heat energy into electric current. In essence, this is a diesel generator that does not use diesel fuel. The power plant does not pollute the environment, as it does not emit combustion products into the atmosphere. Also, this source of electrical energy has a high efficiency.

The third, thermal generators - in order to obtain an electric current, you can use heat energy. This theory is more than 100 years old, but today it has become popular due to the wide application of energy saving technologies. Today, this method is also used on an industrial scale. For example, in communal heating systems, they receive heat and electricity for their needs.

The next is piezoelectric generator - the law of conservation of kinetic energy became the basis of works to obtain electricity in experimental instal-

lations - piezoelectric generators. They are used as an experiment in high traffic areas, dance floors, railway stations and subways. There is even an idea to create "green" fitness centers and gyms, in which visitors will be able to produce up to 3.6 megawatts of electricity per year through their actions.

And finally, nanogenerators - did you know that there are micro-oscillations in the human body that can be converted into electrical energy? A nanogenerator is used to convert small fluctuations in the human body into electric current. Such technologies can be used to charge mobile devices. Any human movement can be used to generate electrical energy. Today, there are many developments that combine the use of nanogenerators and solar batteries.

Further development of energy in the world will shift towards the development of alternative energy sources and the so-called small-scale energy. And this is caused, first of all, by a shortage of energy and limited fuel resources. Alternative energy sources are environmentally friendly, renewable, and distributed relatively evenly, so regions with a skilled workforce, susceptibility to innovation and strategic foresight will win the leadership in their use.