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Types and sources of alternative energy. Methods of their Implementation.

Alternative energy sources or renewable energy sources are solar, wind, geothermal, energy, energy of waves and tributaries, hydro energy, biomass energy, organic waste gas, gas from sewage treatment plants, biogas. It also has secondary energy resources, which include blast furnace and coke oven gas, methane gas for coal degassing, transformation of waste energy potential of technological processes. Energy is not only one of the most discussed today concepts. Humanity needs energy, and needs in it increase every year.

Solar energy

Solar energy is one of the alternative sources of energy. It is most often used in the world. The energy of sunlight is used as an energy source, which is converted into thermal or electric by means of special constructions.

There are two types of solar energy - active and passive solar energy. Passive solar energy uses the duration, position and intensity of sunlight in its superiority when heating a particular area. He also uses it to induce airflow from the area. Active solar energy uses electrical technologies and mechanical technologies such as collector panels for capturing, transforming and storing energy for future use.

Today, for the transformation of solar radiation into electrical energy, we have two options: to use solar energy as a source of heat for generating electricity in traditional ways (for example, using turbine generators) or directly convert solar energy into electric current in solar cells. Solar energy is also used after its concentration with the help of mirrors - for melting of substances, water distillation, heating, heating.

According to experts, the most attractive idea about the transformation of solar energy is the use of the photoelectric effect in semiconductors. However, solar photovoltaic cells today are finding their specific application. They were virtually indispensable

sources of electric current in missiles, satellites and automatic interplanetary stations, and on Earth - primarily for powering telephone networks in non-electrified areas or for small consumers of current (radio equipment, electric razors and lighters).

Wind energy

Wind energy is the enormous energy of moving air masses. Stocks of wind energy more than one hundred times exceeds the hydropower reserves of all the rivers of the planet. Winds blow constantly and everywhere on the earth - from a light breeze that carries the desired coolness in the summer heat to powerful hurricanes that bring countless loss and destruction. The theory of a wind turbine was developed, on the basis of which highly productive installations could be created, capable of obtaining energy from the weak wind

The latest research is aimed primarily at receiving electric energy from wind energy.

Geothermal energy

Geothermal energy - industrial energy production, in particular electricity, from hot springs, thermal groundwater. Geothermal energy (natural heat of the Earth), accumulated in the first ten kilometers of Earth's crust, 10 times greater than the geological resources of all types of fuels taken together. Of all types geothermal energy have the best economic parameters hydrogeothermal resources - thermal water, steam and water mixtures and natural steam. Hydrothermal resources, which are used practically today, make up only 1% of the total thermal stock of the subsoil. Perspectives should be considered areas in which the growth of temperature with depth is quite intense.

The earth contains a molten stone called magma. Heat is produced constantly from it. Water penetrates deeply into the Earth, and hot rock boils water. Then boiled water produces a couple that is fond of geothermal heat pumps. The steam converts the turbines, which in turn activates the generators.

It is economically expedient to use thermal water for heating and hot water supply of communal, agricultural and industrial enterprises, for technological purposes, extraction of valuable chemical components and others.

Hydrogen Energy

Hydrogen energy is the direction of human energy production and consumption, which is based on the use of hydrogen as a means for the accumulation, transportation and use of energy by the population, transport and various industrial areas. Hydrogen, the simplest and lightest of all chemical elements, can be considered an ideal fuel. When combustion of hydrogen forms water, which can be re-decomposed into hydrogen and oxygen, and this process does not cause any pollution of the environment.

Hydrogen can be used as fuel for any vehicle (for passenger cars and boats), as well as to meet the energy needs of buildings (for continuous power supply) and as a supply for household appliances. Water can be transported and distributed through pipelines like natural gas . Pipeline fuel transport is the cheapest way of long-range energy transmission. In addition, pipelines are laid underground, which does not violate the landscape. Gas pipelines occupy less land than air electric lines.

In the modern economy, hydrogen remains more chemical than energy.

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