



The role of renewable energy sources in the energy system

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ABSTRACT

This article focuses on the role and possibilities of renewable energy sources in the energy system. Opinions are expressed about the fact that the energy system is also an important system.

Keywords:

global problem, science, technology, energy shortage, solar energy

Energy is a national economy that includes the creation of various types of energy, their transformation from one type to another, their transmission and delivery over a certain distance, their use in all areas, and the solution of theoretical and practical problems related to them. , the field of science and technology. Energy is divided into types such as renewable and non-renewable energy. Renewable energy is energy collected from renewable sources that replenish naturally over time. It is energy collected from solar sources.

The problem of energy as a global problem in the world should serve to improve the system of using energy sources and to use alternative, ecologically clean energy sources in the energy system, to raise the continuity and quality of energy supply to a higher level. In order to prevent energy shortages on Earth and to maintain environmental cleanliness, other sources of energy are used: geothermal energy, wind and solar energy. At the moment, scientific research and practical work are being carried out on the basis of programs for the use of alternative energy sources in about 80 countries

of the world. Renewable energy often generates energy to generate electricity for the electric grid, air and water heating and cooling, and self-contained energy systems. Most of the new renewable energy is solar energy. Solar technologies are characterized as passive solar energy systems or active solar energy systems depending on the method of capturing solar energy, converting it into energy, and distributing it. A passive solar energy system involves orienting the building to the movement of the sun, selecting materials with favorable thermal mass or light dispersive properties, and designing ventilation areas. Active solar technologies use solar collectors for heating and convert sunlight directly into electricity using photovoltaics (PV) or indirectly using concentrated solar power (CSP).

Today, in our country, some experiments have been conducted on the use of renewable alternative energy sources, and practical results have been achieved. Using solar energy, which is an alternative source of energy, the production of devices that generate electricity - photoelectric devices - has been launched.

However, in this regard, it is undoubtedly important to improve the legal framework that will be the basis for the development of the industry with the creation of favorable economic conditions, and the development and adoption of a single draft law that will regulate it. The share of renewable alternative energy sources in the territory of our republic is 50984.6 million tons. n.e. water energy 9.2, solar energy 50973, wind energy 2.2 million tons. equal to n.e. Renewable energy is replacing four sectors that often use conventional fuels: electricity generation, hot water, transportation, and agricultural (off-grid) energy services. By 2021, more than a quarter of electricity will be generated from renewable sources. Solar water heating is an important contribution to renewable heat sources in many countries, especially in China. In China, most of these systems are installed in multi-family residential buildings. In China, this energy source meets part of the hot water needs of approximately 50-60 million households. Total solar water heating systems installed worldwide meet part of the water heating needs of more than 70 million households. In Sweden, the use of biomass energy has surpassed oil-based energy sources. Heat pumps provide water heating and cooling. Currently, renewable heat energy is also growing rapidly. Approximately 10% of the energy used for heating and cooling water is obtained from renewable sources. Also in Uzbekistan, on March 24, 2022, the Cabinet of Ministers approved "Measures for the establishment of the National Research Institute of Renewable Energy Sources under the Ministry of Energy" Resolution No. 127 is also a clear proof of the importance of renewable energy in the energy system. In short, renewable energy expands life opportunities for the well-being of human life.

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