

**PROBLEMS IN THE FIELD OF ENERGY IN WORLD DEVELOPMENT AND  
THEIR ANALYSIS****Boribay Dawletmuratov***Teacher of Nukus State Pedagogical Institute named after Ajiniyaz***Saltanat Tlepbergenova***Student of Nukus State Pedagogical Institute named after Ajiniyaz*

The future increase in energy consumption will directly confront the deficit of many conventional fuels, whose reserves are expected to run out by the end of the 21st century. At this time, it will be necessary to use nuclear fission and thermonuclear fusion, solar and wind energy for large-scale energy production. About 85-90% of the electricity produced in our country comes from coal, natural gas and other oil products. The share of "Green Energy" is 10-14%.

The decision of the President of the Republic of Uzbekistan dated August 22, 2019 "On rapid measures to increase the energy efficiency of economic sectors and the social sphere, introduce energy-saving technologies and develop renewable energy sources" is the development of this direction in our country. serves as an important legal basis.<sup>5</sup> Based on these requirements, the Ministry of Energy of the Republic of Uzbekistan developed a strategic plan to increase the share of renewable energy sources to 25-30% by 2030. According to the decision of the President of August 22, 2019, producers of renewable energy sources devices are exempted from paying all types of taxes for five years from the date of state registration, for installing renewable energy sources devices, from the moment they are put into use. it is envisaged to be exempted from payment of property tax and land tax on plots occupied by these devices for a period of 10 years. At the same time, a number of compensations and benefits were given in this regard. According to Internet sources, the world population will reach 9.8 billion in 2050. Such demographic growth raises the issue of finding solutions for all systems, including the energy sector. In countries with limited fossil energy sources, the use of renewable energy serves as a solution to such problems. In 2020, 66.4 billion kWh of electricity was produced in the power plants of our country, which is 5% more than the figure in 2019, and 12.6% more than in 2016.

The world is changing as a result of human influence. The environment is changing as a result of mankind's thoughtless use of organic energy resources in energy, transport, large factories and plants, nuclear power, and waste disposal of large cities into the world ocean. Climate change is observed on Earth, glaciers are melting, cities are under water, forests are burning. In many countries of the world, people are suffering from lack of drinking water, drought and famine, and new diseases are appearing. What can be done to stop the disasters that are happening? First of all, it is necessary to change the inner

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<sup>5</sup> O'zbekiston Respublikasi Prezidentining qarori, 22.08.2019 yildagi PQ-4422-son

world of a person in a positive way in relation to nature, and then to completely stop the use of organic energy resources.

Energy that serves humanity without harming the environment is environmentally friendly natural energy that is abundant in nature. These types of energy include water, sun, wind, geothermal waters, geysers, torrents, rising and falling water levels, volcanoes, lightning, various currents in oceans and seas, biomass, hydrogen fuel, urban waste, photosynthesis; photoelectric converters, chemical (galvanic) elements and others can be included. These types of energy are called non-conventional and renewable energy sources. It is possible to produce clean ecological energy only from the above-mentioned energy sources.

Organic fuels burned in thermal power plants cause serious damage to the environment. In the process of burning, carbon, nitrogen, sulfur and other elements contained in them are oxidized and released into the air at a high temperature. Pollutants in emissions from coal and gas-fired power plants; Includes  $\text{SO}_2$ ,  $\text{NO}_x$ , nitrogen oxides,  $\text{CO}$ ,  $\text{CO}_2$ , certain hydrocarbons. Due to the use of coal fuel, it leads to an increase in emissions of greenhouse gases in the atmosphere. This greenhouse gas is causing global warming. This cannot be avoided because when coal is burned it converts carbon into  $\text{CO}_2$ . Other fossil fuels, such as oil and natural gas, contain additional elements that are oxidized to other compounds during combustion, meaning that, for purely stoichiometric reasons, the total greenhouse gas emissions produced when coal is burned will be lower than that. Coal-fired thermal power plants and boilers create large mounds, and thermal power plants with a capacity of 1 GW create mounds with an area of  $0.5 \text{ km}^2$  and a height of 2 meters per year. One of the most important issues in the present time is the use of ash from kultepas as building materials.

Environmental problems of atomic energy. There are 440 nuclear reactors in the world, which produce 17% of the world's electricity. Currently, the construction of reactors is being carried out at a rapid pace. More than 40 percent of energy production in ten countries is accounted for by nuclear energy. In addition, the impact of nuclear power plants on the environment, especially on flora and fauna, should not be ignored. A large area near a natural water body is needed to build a nuclear power plant. As a result, it is possible to destroy the natural habitat of many creatures and gradually change the ecological balance of the region. In addition, studies have shown that several species of fish have experienced significant declines in the populations of several species of water in some regions of the United States due to the warming of water bodies. Another important effect is the increase in the amount of  $\text{CO}_2$  sulfur dioxide in the air, which leads to the formation of acid rain, which subsequently leads to the pollution of the surface water bodies of the region, the decrease in soil fertility, and a number of negative effects on the vegetation of the region. shows.

Impact of hydropower plants on the environment. Currently, 23% of the electricity generated on Earth is contributed by hydropower plants. In Uzbekistan, this indicator is

8.5-13% (4.0-6.5 billion KW/h. The influence of this sector on the environmental situation is significant. requires water storage. What is the impact of reservoirs on the natural environment? First, reservoirs built on plains occupy hundreds and thousands of hectares of fertile land. Second, reservoirs cause the rise of groundwater levels in the surrounding areas, secondary sho 1960 15,000 people died when a dam collapsed in India in 2010. The construction of reservoirs also affects the atmospheric air of the regions where they are located. does. In such places, the evaporation of water creates a unique microclimate - the temperature of the air is usually lower than in other places, there are more foggy days, the solar radiation is reduced, the reservoir and the surrounding land are cooler. windy days will increase due to the change in heat balance. The consequences of this will also affect agriculture. The creation of a reservoir will fundamentally change the local ecosystems, and the harmful substances accumulated in the dams can worsen the ecological situation for many aquatic organisms. For these reasons, it is planned not to increase the share of hydropower plants in the world energy balance from 5 percent in the future.

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