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3. Yuldasheva Nilufar Abduvakhidovna Improving the information supply model in the development of innovation strategy in the management of industrial enterprises//sai. 2024. №Special Issue 24. URL: https://cyberleninka.ru/article/n/improving-the-information-supply-model-in-the-development-of-innovation-strategy-in-the-management-of-industrial-enterprises.

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THE ROLE OF RENEWABLE ENERGY SOURCES IN NATIONAL STABILITY

Isroilov Xusanboy Ibrohimjon o‘g‘li
PhD student, Fergana polytechnic institute
x.isroilov@ferpi.uz

Abstract: Green electricity means sustainable electricity generation through renewable energy technologies. This article highlights the environmental, economic, and social importance of green electricity, its role in reducing carbon emissions, and its potential for energy independence. Barriers to the development of green energy, including high initial costs and technological limitations, are also discussed.

Key words: green electricity, renewable energy, solar energy, wind energy, environmental sustainability, carbon emissions, energy efficiency.

The electricity industry plays an important role in the life of the country and the population. The importance of this sector can be seen in several main aspects. First of all, electricity is a supporting factor for industrial development. Many production processes and modern technologies depend on electricity, without which industrial equipment and technological systems would not function. Electricity is also an integral part of the daily life of the population. It is important for lighting, heating and cooling systems, household appliances, and various other services. Without electricity, it would be much more difficult to carry out daily household chores. Electricity also plays a special role in the transport and communications sector. Electrified vehicles, such as railways, metros, and electric buses, as well as modern communication systems such as telephones and the Internet, rely on electricity. In the healthcare sector, electricity is necessary for the operation of modern medical equipment and devices. Electricity also makes a significant contribution to the development of education and science.

Electricity is one of the main factors in ensuring the economic and social development of modern society. It not only supports the continuous operation of production sectors, but also provides services and amenities that facilitate the daily lives of the population. Electricity ensures the uninterrupted operation of the transport, communication, healthcare and education sectors. The transition to sustainable energy sources plays a key role in ensuring the long-term sustainability of the energy system by reducing carbon emissions and ensuring environmental safety.

Figure 1. Electricity consumption by subscribers per capita(W/s)

Per capita consumption has been steadily increasing over the years. The highest consumption was recorded in 2018, followed by a slight decrease in 2019. Since 2019, consumption has been increasing steadily, reaching its peak in 2023.

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This is because Uzbekistan is experiencing economic growth, which is leading to industrial activity, urbanization, and rising living standards. As the economy expands, the demand for electricity to power factories, infrastructure, and households also increases. The country is focusing on industrialization, particularly in sectors such as manufacturing and mining. These industries are energy-intensive, requiring large amounts of electricity to operate. Rapid urbanization continues in Uzbekistan, with more people moving to cities. Cities generally consume more electricity due to factors such as increased use of household appliances, lighting, and transportation systems. As people's income increases, they tend to buy more energy-intensive appliances and equipment such as air conditioners, refrigerators, and computers. This leads to increased electricity consumption.

Figure 2. Global CO2 emissions from energy production and industrial processes and their annual change, (Gt) 1900-2022

The graph shows that global CO2 emissions have increased significantly from 1900 to 2022. At the beginning of the 20th century, emissions reached 36.8 billion tons today. This increase is the result of the widespread use of hydrocarbon-based energy sources and industrial development. The processes of fuel extraction, transportation and electricity generation are the main sources of these emissions, which are the main causes of global climate change.

Conclusion. Greening energy sources is crucial to curbing this growth and preventing climate change. Renewable energy sources such as solar, wind, hydro and biomass not only reduce carbon emissions, but also ensure the sustainability of the energy system. For example, wind and solar energy do not produce atmospheric emissions during their production and allow for the recovery of resources.

Green energy is also economically viable because technological innovations can reduce production costs and create new jobs. The transition to green energy reduces the ecological footprint and increases energy security. Therefore, the transition from hydrocarbon energy to renewable energy is an important strategy for achieving not only global climate goals but also sustainability of the economy.

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