

Development of Alternative Energy

B.X.Mamatkulov, A.A.Mustafakulov
Jizzakh Polytechnic Institute

Abstract

In recent years, large-scale and consistent reforms have been implemented in our country to increase energy efficiency in economic sectors and the social sphere, to develop the use of renewable energy sources, and legal frameworks related to energy development have been created.

Keywords- economic, sectors, social sphere, increase energy efficiency, implemented.

INTRODUCTION

The main part: Since the last decade of the last century, special attention has been paid to the use of environmentally friendly renewable sources of energy, primarily solar and wind sources [1-6,16]. For example, in the world, the rate of development of wind energy is slightly behind that of information technology. Strategies for the development of renewable energy sources are now being developed in sunny Uzbekistan. Although the cost of renewable energy technologies is much higher than the costs of traditional energy production technologies, today it is possible to clearly identify the facilities where they are implemented. For Uzbekistan, these are primarily devices intended for electricity and heat production for low-power facilities of the local industry and construction sector, facilities of agriculture and social and household sectors, farms and greenhouses, and other facilities.

Today, the widespread use of renewable energy sources in remote mountainous and semi-desert areas, as well as in grasslands, can easily compete with conventional energy sources. This publication, prepared by the United Nations Development Program in Uzbekistan, provides complete information about the current state of energy use in our country and the possibilities of using renewable energy sources not only from a technical, but most importantly, from an economic and social point of view. Presentation of various aspects of this problem in an understandable form arouses great interest not only among specialists working in the field of energy and economics, but also among the general public. This, in turn, serves as a basis for accelerating the process of increasing energy efficiency and security in our country [7-9].

A number of laws, international agreements, decrees and decisions aimed at further development of the field have been adopted [13-15]. In these documents, further development of renewable energy sources by starting new capacities and increasing their share to more than 25% of the total volume of electricity production, introducing a special purchase tariff ("green tariff") for supplying electricity from renewable energy sources and from them to the network was determined.

At this point, it is worth noting that the widespread use of renewable energy sources in practice allows saving natural resources and reducing the amount of harmful waste to the atmosphere.

In 2020-2030, based on the concept of supplying the Republic of Uzbekistan with electricity, it is aimed to increase the number of industrial-scale renewable energy sources - power plants by completing the construction of 5 GW of solar photovoltaic and 3 GW of wind power plants. The law "On the use of renewable energy sources", which came into force on May 22, 2019, is of great importance in this regard. Based on the decision of the President of August 22, 2019, it was decided to double the share of alternative energy sources in the total capacity of our country by 2030. Currently, this indicator is 12-14 percent [10-12]. Within 10 years, solar power plants with a total capacity of 5,000 megawatts and wind power plants with a capacity of 3,000 MW will be built. As the beginning of these works, on the basis of the decision of the President of April 14, 2020, "Construction of a 100 MW photoelectric power plant in Navoi region" [15], construction works are being carried out by Nur Navoi Solar company on 268 hectares of land in Karmana district. . This company is considered a subsidiary of the UAE company "Masdar". In this company, the cost of 1 KWh of electricity is 2,679 US cents and the construction period is 12 months. The Chinese company "SEKO" is the main contractor for the construction works started in the area 35 km from the center of Navoi region. According to the decision of March 27, 2019 "On the strategy of further development and reform of the electric energy network of the Republic of Uzbekistan", the company "Masdar" will implement the second project, i.e. the construction of a wind power station, near the city of Zarafshan. An agreement has now been signed to increase the capacity of this project from 500 MW to 1.5 GW. The project, originally valued at US\$600 million, has now been increased to US\$1.8 billion. It is planned to put this wind power plant into operation by the end of 2024. After this work, the amount of wind electricity produced in Uzbekistan will be equal to 3 GW, which will allow the share of alternative energy sources in the country's total energy volume to reach 26%. In this case, alternative electric energy provides 1.5 million households, reduces 3.3 million tons of carbonic anhydride gas, and ensures environmental purity [7,14-15].

In order to ensure the rapid development of renewable energy sources, to diversify the sources of electricity production, to expand the scale of renewable energy sources by attracting direct foreign investments in the electricity industry, as well as to reduce the use of natural gas in the production of electricity, the President of the Republic of Uzbekistan decisions on the construction of photoelectric power stations were signed.

In these documents, by the end of 2023, 4 solar photoelectric power plants with a total capacity of 1,096.6 MW will be put into operation.

In particular, by the end of 2023, the UAE company "Masdar" will build 456.6 MW of power in Sherabad district of Surkhandarya region, 220 MW in Gallaorol district of Jizzakh region by October 2023, 220 MW in Kattakorgan district of Samarkand region, and 220 MW in Navoi region by November 2023. "Phanes Energy Holding III B.V." of the Netherlands in Nurota district. 200 MW solar photoelectric power stations will be commissioned by the company.

Uzbekistan is facing certain difficulties in terms of electricity supply. This is especially noticeable in rural areas, where 60 percent of the population lives. Modernization and reconstruction of power stations, energy supply and distribution networks are among the priority tasks of industrial development in the country. As we focus on economic development, we should think about conserving our natural resources and preventing environmental degradation [9-13]. Only increasing the amount of energy produced by using renewable energy sources can make energy production more efficient. Currently, the population does not have enough information about renewable energy sources, there is a lack of scientific and practical experience in the use of solar

and wind energy. This situation is typical for many developing countries. They should move forward according to the technological development of renewable energy, create an economic environment that will allow the private sector to be involved in the process of using solar and wind energy, and thus increase the share of renewable energy in the energy balance of the country.

Setting prices that reflect the real value of traditional energy fuel and energy, using efficient energy equipment, and inculcating ideas about energy saving into the minds of the population are among such important measures [7,13]. The purpose of preparing this information is to familiarize leaders, scientists and scientific circles, as well as the entire society with renewable energy opportunities in Uzbekistan[15]. Efforts should be made to change the misconception that renewable energy sources can be used only in rich countries or that renewable energy is economically unprofitable and development is being accelerated only to solve environmental problems.

Conclusion: In our country, which is experiencing a transitional economy, where the process of upgrading the energy infrastructure is underway, there are all opportunities for the introduction of renewable energy technologies. "Green energy" - the transition to renewable energy is the main demand of the economy and the era.

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