IMPROVEMENT OF INDUSTRIAL ENTERPRISES IN THE CONDITIONS OF DIGITAL ECONOMY

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Abstract: *The article examines the issues of improvement of industrial enterprises in the conditions of digital economy. Proposals and recommendations have been developed to diversify the fuel and energy balance of the country through the widespread use of modern energy, in particular, renewable energy sources.*

Keywords: *global energy sector, technological transformation, virtual power plants, renewable energy sources, cost-effectiveness, energy resources, energy efficiency, energy capacity, alternative energy sources.*

INTRODUCTION:

According to the results of the conducted research, the first place was taken by Japan. The country of Kunchikar received the highest marks in terms of the main indicators of the research - the number of Nobel laureates, the average IQ (intelligence) level of the population, and the mastery rate in schools. Switzerland, China, the USA and the Netherlands took the next place. China ranked third because of its high population intelligence, while the United States ranked fourth thanks to the number of Nobel laureates. South Korea, Taiwan and Singapore are in the leading positions in terms of the number of educated (intelligent) young people, but they did not rank high only because of the small number of Nobel laureates. According to McKinsey experts, digital assets currently account for about 10% of global GDP, while their development rate is equal to 30% of global economic growth. The development of digital assets is like an accelerator. \As a result of the reforms implemented in the new Uzbekistan, openness, the development of international economic and political relations have created opportunities for the modernization of industrial sectors in our country, as well as technical and technological re-equipment. An example of this is the increase in the volume of foreign trade of our country. Hundreds of expressions such as "electronic government", "electronic management", "telecommunications", "internet", "website" have become an integral part of our life. IT covers every aspect of our daily life.

As a result of the ongoing reforms, 178 services have been launched through the Electronic Government and the unified interactive services portal, and these services save time and costs of citizens. We know very well that building a digital economy requires the right infrastructure, a lot of money and labor resources. Therefore, active transition to the digital economy will be one of our top priorities in the next 5 years. Digital technologies not only improve the quality of products and services, but also dramatically reduce excess costs, especially corruption.

Here, let's talk about the concept of digital economy. It is an activity aimed at optimizing the interrelated production, distribution, sharing, consumption and management processes (inter-human, inter-machine, cloud and BIG DATA) by optimizing the exchange of information with the help of digital technologies and the Internet.

It should be noted here that the foundations of a new renaissance period - the third Renaissance - are being laid, which shows the greatness of our perspective. It is difficult to imagine the development of society and country without knowledge and enlightenment.

Yusuf Khos Hajib wrote in his work "A person without knowledge is a tree without fruit, what should a hungry person do with a tree without fruit?" showed how relevant and important the place of knowledge is. The special emphasis of the head of our state on science and education and putting the issues of development of the digital economy on the agenda is a clear indication that the path chosen by Uzbekistan leads to only one destination, that is, we have entered a new stage of building a society that is economically and socially strong, and the laws of the market economy are fully applicable. is enough.

Specific quantitative indicators for the development of the digital economy in Uzbekistan have also been established, covering the period from 2020 to 2023. In particular, in 2020-2021, connecting all health institutions, schools and preschool educational organizations, as well as villages and neighborhoods to a high-speed Internet network, and improving the quality of communication services, fully modernizing the digital infrastructure, and ensuring access to modern telecommunications services in all regions, by 2022 plans to increase the share of electronic government services to 60 percent by 2023 and to double the share of the digital economy in the country's gross domestic product by 2023.

The results of practical efforts did not wait long. According to the results of June 2020, "Speedtest Global Index" published new data, and in the rating of Internet speed, Uzbekistan currently occupies the 94th place, an increase of 36 places was observed in one year. In general, the speed of wired Internet in Uzbekistan has increased by 2.5 times in the last year.

In order for us to join the ranks of developed countries, first of all, it is necessary to take the shortest path to progress through the in-depth acquisition of knowledge in the field of advanced modern information and communication, Internet and digital technologies.

After all, due to our geographical location, we have to cross at least two national borders in order to reach ports on large water bodies by land. This will have a negative impact on our position in the world market, both in terms of time and economically. The solution is directly related to intelligence, new innovations and the potential of skilled personnel.

Another important aspect is digitization of the sectors that the population is facing the most in our country, priority is being given to lightening people's burden. In particular, practical processes for digitization of health care, cadastre, social protection, agriculture, and education have started and will soon bring positive results.

The digital economy will bring about certain changes in society, in particular, its impact on working conditions will be significant. In the conditions of digital transformation,

the increase in the automation of processes, artificial intelligence, analytical systems working with huge data, and the increase in the use of robots serve as substitutes for labor resources. As a result, business conditions improve and efficiency increases significantly.

Today, the global energy sector is entering the next significant phase of technological transformation that began with the invention of the light bulb by the Edison Electric Light Company in 1880. Business models are built around innovative technologies, including decentralized energy generation technologies, virtual power plants and energy storage devices. In the near future, widespread traditional energy supply and energy exchange will give way to modern energy infrastructures. Soon, the regulation of the sector with new technologies, especially subsidies for renewable energy sources, will increase the demand for smart energy metering and transmission systems. Modernization of the economy based on the large-scale implementation of modern energy, in particular, renewable energy sources and smart systems of energy metering and transmission, will reduce the dependence of countries on external energy resources. It allows to save a part of the stock of fuel resources, such as oil, gas and coal. This means that in the near future, the increase in the use of renewable energy sources will become one of the main factors in the sustainable development of countries, the basis of energy strategy in the long term, and it will have a great economic effect.

The fact that the indicator of the energy capacity of the GDP of Uzbekistan is 1.7-2.0 times higher than that of developed countries indicates that there are sufficient opportunities for effective use of energy resources in the near future in our country, and the optimal use of energy resources, improvement of energy efficiency, which should be resolved in the light of our policy in the energy sector. shows that there are priority issues such as reduction of energy capacity, extensive use of alternative sources of energy. Therefore, providing the economy with energy resources in our country can be done by solving the following two tasks:

First, diversification of the fuel and energy balance of our country through the wide use of modern energy, in particular, renewable energy sources in all sectors of the economy. It is achieved by replacing traditional fuels with renewable energy sources in the production of electricity and thermal energy.

Secondly, implementation of long-term programs to reduce the energy capacity of production in economic sectors and measures to improve the environmental condition in industrial sectors based on digitization of energy sectors.

Digitization of energy sectors in our country and the use of renewable energy sources in all sectors of the economy is an important factor in increasing the competitiveness of sectors in the long term. The development of digital energy and the widespread introduction of renewable energy sources will have a positive effect on the provision of energy resources services in the networks, the reduction of costs, the increase of production efficiency, as well as the availability of sustainable energy, the saving of financial resources, and the mitigation of the complications of climate change.

The large potential of renewable energy sources in our country will further encourage the development of an ecologically clean and green economy. The total potential of

Uzbekistan for renewable energy sources is 117,984 mln. establishing t.n.e., its technical potential is 179.3 mln. equal to t.n.e. The main share of this potential is solar energy, and its total potential is 50,973 mln. t.n.e. and technical potential of 177 mln. equal to t.n.e. The technical potential of solar energy is 3-3.5 times more than the primary energy consumption of our country. The favorable climatic and geographical location of our country allows the use of solar energy potential for industrial purposes on a large scale (Table 1).

Table 1

Potential of renewable energy sources in Uzbekistan [1]

Renewable energy sources	General potential	Technical potential
Hydropower	9,2 million t.n.e.	2 million t.n.e.
Wind energy	2,2 million t.n.e	0,4 million t.n.e.
Solar energy	50 973 million t.n.e	177 million t.n.e
Total renewable energy sources (excluding geothermal energy)	50 984 million t.n.e	179 million t.n.e
Geothermal energy	67 000 million t.n.e	0,3 million t.n.e
Common renewable energy sources	117 984 million t.n.e	179,3 million t.n.e

As in other developing countries, there remain a number of problems, challenges and negative factors related to the development of digital energy and the relatively innovative renewable energy sector:

First, the production cost of renewable energy sources is high and they have less capacity compared to conventional energy sources, the unit cost of conventional energy sources compared to other countries. Today, in developing countries, the cost of electricity production based on renewable energy sources remains high compared to traditional energy sources. Our country ranks among the leaders in the world in terms of the low cost of supplying electricity to the population, which is produced in a traditional way. In our country, the average price of electricity for residents per kWh in 2018 was 2.4 cents [2], while in Kazakhstan it was 3.5 cents [3], in Turkmenistan 0.7 cents [4], in Russia 4.8 cents, 13.0 cents in China [5], 33.8 cents in developed countries Germany, 18.6 cents in Great Britain, 33.3 cents in Denmark, 31.8 cents in Belgium [6]. Currently, due to the cheapness of using natural gas in the production of electricity for our country, the production of electricity based on renewable energy sources is gaining importance mainly in providing electricity supply and continuity in remote areas.

Secondly, there are no specific financial mechanisms for the use of digital energy and renewable energy sources (tariffs and taxes) and government support. Inadequate formation of the legal framework for the economic mechanisms of encouraging the use of renewable energy sources.

Thirdly, insufficient development of progressive techniques and technologies based on modern management systems. One of the main reasons for the slow development of digital energy and renewable energy sources is the technical imperfection of these types of energy

production technologies and the low efficiency of capital return of financial resources involved in this energy system in the short term from an economic point of view.

Fourthly, as in many developing countries, the population does not have enough information about digitalization in the energy sector and the possibilities of modern types of energy, especially renewable electric energy, and is adapted to old views.

Fifth, the fact that digital energy and renewable energy sources have the character of innovative rapid development of techniques and technologies. For example, solar electric panels were originally manufactured on the basis of semiconductor silicon, but later the production of photovoltaic panels switched to amorphous silicon. Initially, only glass solar panels were produced, but now modern flexible plastic solar panels are also being produced. Due to the insufficient localization of the production of renewable energy sources and technologies, their cost, installation and maintenance costs remain high. Rapid development in the field requires transition from previously implemented technologies to new technologies until the return on capital is fully realized over time.

Based on the above, the following conclusions were drawn:

- it is necessary to eliminate a number of problems and negative factors related to the digitization of the energy sector in the country and the development of the renewable energy sector;

- it is necessary to effectively use the factors that have a positive effect on the development of the energy sector and to increase the level of digitalization in the energy sector and the share of renewable energy sources in the primary energy consumption;

- to ensure that renewable energy sources are practically not exhausted, that they are available in some form in all regions, and that interest in using this type of energy will increase in the near future, etc.

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