



PROBLEMS AND PROSPECTS FOR DEVELOPMENT OF THE OIL AND GAS INDUSTRY IN THE REPUBLIC OF UZBEKISTAN

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ABSTRACT

The article identifies and discusses the problems and prospects for the development of the oil and gas industry in the Republic of Uzbekistan. The analysis of the problems that have the greatest negative impact on the development of the industry, developed proposals for overcoming them and assessed the prospects for the development of the industry as a whole.

KEY WORDS: *problems; prospects; oil; gas; industry; The Republic of Uzbekistan.*

DISCUSSION

The oil and gas industry of Uzbekistan is one of the most important industries in the country. The oil and gas industry includes a full production cycle: from production to delivery to consumers of finished products. The oil and gas industry is managed by Uzbekneftegaz, which is responsible for a number of large companies that produce, process, transport and sell oil and gas products.

Under the chairmanship of the President of the Republic of Uzbekistan Shavkat Mirziyoyev, on January 25, 2018, a meeting was held on the efficiency of exploration and production in the oil and gas industry, the state of ensuring domestic demand for fuel and lubricants, and the industry's challenges for the future. It was noted at the meeting that more than half of the investments attracted to the economy of our country are in the oil and gas industry, and every dollar spent should have an economic effect. These words show how important the role of the oil and gas industry in the economy of the republic. [1]

Despite the fact that Uzbekistan is a leading producer and gas exports (ranked 16th among countries in gas production with production of 56.3 billion m³ in 2019 according to British Petroleum), within the country there is a constant increase in prices for natural gas and petroleum products. [2]

In 2018, there was another jump in prices, and the increase in energy prices was discussed at a government meeting with the participation of

Uzbekneftegaz, Uzbekenergo and Uzneftmahsulot companies. Energy suppliers explained the need to increase tariffs due to growing losses in production and sales.

The decline in oil production in Uzbekistan continues for several years. According to Uzbekneftegaz, over the past 10 years, natural gas production at the company's enterprises has decreased by 1.4 times, or from 59 billion cubic meters in 2007 to 42.3 billion cubic meters in 2017; oil — by 3.8 times, or from 3 to 0.8 million tons; gas condensate — from 1.8 to 1.4 million tons, or by 28%. [3]

Depletion of reserves of the main fields, such as Kokdumalak, Gazli, Shurtan group, and Dengizkul, is one of the main reasons for the decline in production volumes. According to calculations of Uzbekneftegaz JSC, the cost of gas production has increased from the estimated \$ 3.16 since 2000 by 1,000 cubic meters to \$ 20 in 2018, due to increased investment in exploration, measures to maintain production at old fields and the commissioning of new reserves.

Depletion of reserves was observed not only in the gas industry, but also in the oil industry of Uzbekistan. The decline in oil production continues. So, if in 2017 it amounted to 806 thousand tons (a drop of 6.3%), in 2018 – 746.4 thousand tons (a decrease of 8.2%). In January-February 2019, compared to the same period in 2018, the Republic of Uzbekistan reduced oil and gas condensate



production by 5.3% (to 115.5 thousand tons) and 2.5% (more than 344.8 thousand tons), respectively. [4]

In the Republic of Uzbekistan, there are three major refineries aimed at refining oil – Ferghana, Alty – Aryk and Bukhara refineries. The annual capacity of these plants is about 11 million tons of oil. Over the past ten years, due to the lack of raw materials, these plants have not been loaded enough, in some years the load did not even reach 50 % of the total capacity.

Despite the decline in oil production, Uzbekistan is increasing its production of petroleum products, mainly due to imports of oil and gas condensate from countries such as Russia, Kazakhstan and Turkmenistan. Import of petroleum products is one of the problems of the oil industry of Uzbekistan, which is the reason for the increase in prices for petroleum products, including transportation, logistics and other costs. On the other hand, the Ministry of Finance of the Republic of Uzbekistan explains the increase in prices for petroleum products as a step to attract private investors to these industries, which confirms the need to increase tariffs to the break-even point, which allows investing in the modernization of production facilities.

So, the main characteristic problems of the oil and gas industry are:

- Slowing of the growth rate and subsequent decline in oil and gas production;
- Low rates of implementation of innovative technological developments;
- The physical deterioration of the gas distribution system and the allowable losses in the delivery of gas to consumers;
- A high degree of deterioration of the key assets of the oil and gas processing industry, which leads to a decrease in the quality of oil products and products obtained from gas.

Due to the fact that imperfect outdated technologies are used at oil refineries, the share of deepening processes (catalytic cracking, coking, hydrocracking) in the technological scheme of oil refining is small, and the level of conversion of oil raw materials into more valuable products of processing is also low.[5]

Taking into account these problems, the oil industry can currently produce petroleum products of acceptable quality, but, nevertheless, still lag behind the best world samples. The problem of rapid renewal and modernization of outdated equipment, technological machines and separate processes is one of the most important at oil refineries in Uzbekistan. In order to solve the problems, new technologies and equipment are needed, as well as the replacement of backward technological processes with more

advanced and environmentally friendly and waste-free oil refining processes. In order to attract foreign direct investment to modernize and load the production capacity of Ferghana oil refinery LLC, ensure sustainable development and increase the production and export potential of the oil and gas industry through the introduction of advanced technologies, the decree of the President of the Republic of Uzbekistan PD-4275 of April 10, 2019 was adopted. Work has started in this area, and the joint venture Jizzakh Petroleum has started upgrading the Ferghana oil refinery for \$ 300 million. And \$ 1.3 billion has been allocated for the modernization of the Bukhara oil refinery.

It should be noted that, in the past 2017-2018 the volume of gas production increased by 10 percent, the supply of natural gas to the population - by 15 percent, liquefied gas - 1.6 times. During the same period, oil refineries produced an additional 204 thousand tons of oil products, fully satisfied the domestic market's demand for gasoline. Given the growth in hydrocarbon consumption, it is planned to invest almost \$ 9.8 billion in the industry during 2019-2030, including \$ 3.5 billion for exploration and \$ 6.3 billion for increasing natural gas production. For the further development of the oil and gas industry, expansion of geological exploration and production of hydrocarbons is envisaged. To this end, at the expense of internal resources, work has been intensified on the most promising areas in the Bukhara-Khiva, Ustyurt, Surkhandarya and Fergana regions. Together with the world's leading oil and gas companies, geological exploration is being carried out on little-studied investment blocks. Ministry of Energy Taking into account the growth in consumption of hydrocarbons, during 2019-2030 plans to invest almost \$ 9.8 billion in the industry, including \$ 3.5 billion for exploration and \$ 6.3 billion to increase natural gas production. It is planned to modernize the main gas transmission system with the introduction of a monitoring and control system for natural gas flows (SCADA). The petrochemical direction is actively developing, aimed at the production of products with high added value. A project to expand the Shurtan gas-chemical complex is at the implementation stage, as a result of which it is planned to additionally produce 280 thousand tons of new grades of polyethylene and 100 thousand tons of polypropylene. The implementation of these and other tasks will make it possible to increase the deep processing of natural gas by six times by 2030. [6]

The prospects for the development of the oil and gas industry in Uzbekistan can be considered sufficient for rapid and high-quality growth. This is due to the presence of a large volume of natural gas. That is why in the future it is expected to open new



fields that will increase the amount of oil produced in the country, which will lead to its effective development. At the same time, the oil and gas industry in Uzbekistan is constantly controlled by the state. As a result, it consistently implements the latest and modernized technologies and innovations, which leads to easier extraction of energy resources and a reduction in the time spent on production.

The Ministry of energy of Uzbekistan is constantly passing a lot of bills aimed at stimulating the introduction of modern methods in the processes of oil production that can cope with almost all the problems associated with the domestic oil industry.

In order to achieve the goals and solve key problems, it is necessary to do the following:

– Diversification of logistics routes of the sphere, determination of transport corridors and tariffs that guarantee a reduction in the cost of importing raw materials and exporting products, saving energy consumption and expanding alternative energy sources;

– To intensify scientific and technological developments to further improve the quality characteristics of petroleum products;

– Take all measures to maximize the processing of raw oil and natural gas by introducing technological production processes with minimizing the amount of waste received;

– Pay special attention to the advanced development of production of raw materials for the oil and gas chemical industry;

– Maximize the efficiency of the applied technological processes by modernizing existing production facilities and using more advanced technological schemes, as well as by developing and then implementing intensive energy - and resource-saving technologies using various types of catalysts;

– Actively implement technologies that allow increasing the volume of processing of natural gases, gas condensates and other alternative sources from which it is possible to obtain hydrocarbons and motor fuels;

– To develop high and medium pressure gas distribution systems in cooperation with foreign companies, transfer of vehicles to gas fuel;

– Increasing the culture of rational use of energy resources among consumers;

– Meeting the growing needs of consumers in the fuel and energy industry at affordable competitive prices that ensure a return on investment, providing for the modernization and reconstruction of existing enterprises in the fuel and energy industry, the construction of new facilities based on highly efficient technologies for the production and processing of energy resources, improving and automating the system of accounting and control of electricity and natural gas at all stages of gas supply,

diversification of fuel and energy resources with the development of the use of renewable energy sources, implementation of appropriate geological and technical measures (aimed at increasing the reserves of hydrocarbons in the subsurface and increasing their production). [7] [8]

In conclusion, it should be noted that further economic growth, improving the quality of life of the population and strengthening the country's energy security depend on the dynamic development of the fuel and energy industry of the Republic of Uzbekistan.

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