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Article



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ANALYSIS OF THE EXPORT POTENTIAL OF UZBEKISTAN'S OIL AND GAS PRODUCTS

Abstract: The article presents an analysis of the current state of the export potential of Uzbekistan's oil and gas products. The volume of production and exported hydrocarbon resources, such as natural gas and oil, has been studied. The assessment of internal and external factors influencing the change and export opportunities has been carried out. Possible ways of diversifying export flows are considered.

Key words: oil and gas industry, export potential, natural gas production, export diversification, investments, energy security.

Language: English

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Introduction

The oil and gas complex are traditionally seen as a cornerstone of energy security and an important source of export earnings for Uzbekistan. However, the last decade has been a period of fundamental testing of this model. With increasing domestic consumption, the country is facing a steady decline in production in major, depleted fields. The decline in production thus exacerbates the conflict between two strategic objectives: ensuring domestic energy independence and maintaining revenues from hydrocarbon exports. [10]

Public policy expressed in a number of strategic documents, such as the Presidential Decree PP-3107 of 30 June 2017 «On measures to further improve the management system of the oil and gas industry», recognizes these challenges and sets the direction for modernization and investment [3]. Despite efforts, key industry indicators show trends that require deep analytical rethinking.

The relevance of this study is determined by the need not simply to observe the decline in exports, but to identify the systemic causes of this phenomenon, assess the competitive position of the country in the region and develop ways of transforming export potential in new conditions. The objective of the work is to propose, on the basis of a comprehensive analysis of statistics, comparative assessment and structural approach, strategic guidelines for the transition from the commodity export model to the value-added economy in the oil and gas sector.

Research methodology

The work was based on a comparative analysis of official statistics of the National Committee of Statistics of the Republic of Uzbekistan, which made it possible to trace the dynamics of oil and gas production between 2017 and 2024.

To understand the place of Uzbekistan in the regional context, a comparative analysis was used - the current situation of the export potential of

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neighboring countries - Kazakhstan and Turkmenistan.

The depth of the study was provided by structural and causal analysis, which helped to identify and rank key factors constraining export potential. In addition, a scenario approach was applied to form a weighted forecast, taking into account both current trends and the development directions declared in government programs.

Analysis of modern dynamics: from production to export

The current state of the oil and gas complex in Uzbekistan is characterized by a number of interrelated negative trends, which are most clearly reflected in official statistics. As can be seen from the data, natural gas production after a short-term peak in 2018 (61.6 billion m³) entered a phase of steady decline, dropping to 44.6 billion m³ in 2024 [1, 2].

Table 1. Volume of production of natural gas and oil in Uzbekistan

Year	Natural gas production, billion m ³	Oil production, thousand tons
2017	56,642	813
2018	61,585	745
2019	60,711	698
2020	49,678	739
2021	53,802	774
2022	51,678	787
2023	46,71	778
2024	44,6	713

A key indicator of structural shifts is the significant decline in export potential of the sector. Between 2018 and 2023, the volume of natural gas exports decreased from 14.4 to 1.3 billion m³ [1, 2].

This trend indicates that the shrinking resource base is largely covering growing domestic demand, significantly constraining supply in external markets.

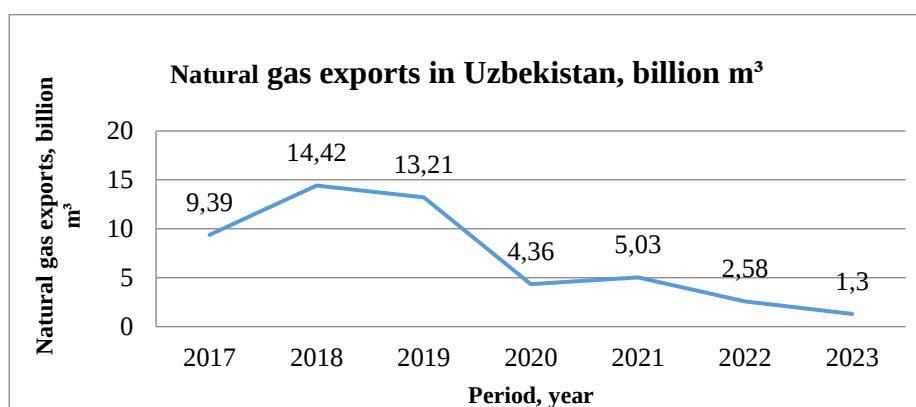


Figure 1. Export of natural gas in Uzbekistan for 2017-2023, bn. m.3 [2]

The decline in export potential has had an impact on the country's macroeconomic performance. According to the data of the State Committee, the share of fuel and energy products in the structure of exports of Uzbekistan for the period 2018-2023, significantly decreased from 24.94% to 4.46% (Figure 2). This reflects the segment's loss of its former role

as a stable source of foreign exchange earnings and its transition to a volatile, market-driven component of external trade. The temporary increase in share in 2021, coinciding with a period of high global energy prices, only underlined the overall volatility and dependence of the indicator on external conditions.

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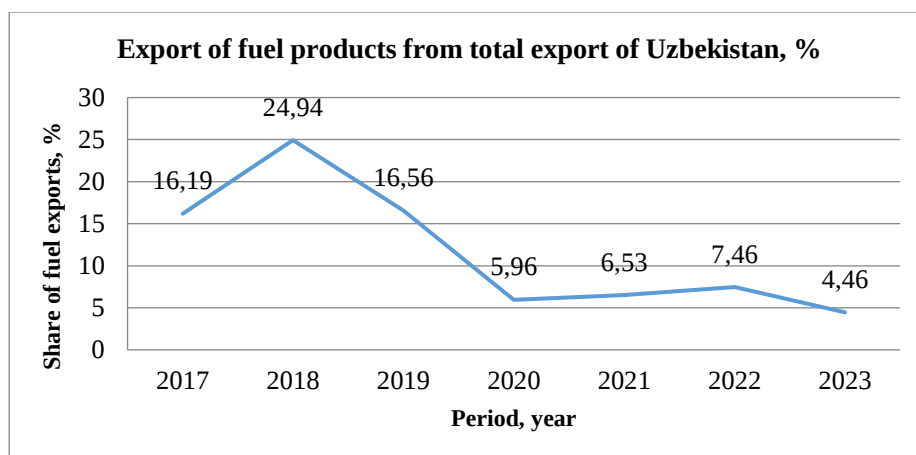


Figure 2. Export of fuel products from total exports of Uzbekistan for 2017-2023, % [1]

The main causes of the observed decline are systemic. First, it is a progressive depletion of existing deposits, especially gas ones, without adequate compensation by new discoveries. Secondly, there is a chronic lack of investment in exploration and modernization of production machinery, leading to the physical and moral obsolescence of equipment. Third, a key constraint is the lack of implementation of advanced technologies for enhanced oil recovery and production intensification [4].

Comparative context: Uzbekistan in the system of regional export models

The peculiarities of Uzbekistan's position become more evident when it is compared with the strategies of its key regional neighbors - Turkmenistan and Kazakhstan. A comparative analysis conducted on the basis of data from international organizations makes it possible to identify the distinctive features and structural characteristics of the development model of Uzbekistan's oil and gas sector.

Turkmenistan, which has one of the largest reserves of natural gas in the world, continues to implement a strategy of net exporter, mainly focused on China. According to the International Energy Agency (IEA), it remains a key supplier of pipeline gas in the region under long-term contracts [6].

Kazakhstan, by contrast, builds its export policy primarily on large-scale crude oil exports. According to the report of the Organization of Petroleum Exporting Countries (OPEC), in 2023 Kazakhstan became one of the top ten world oil exporters, actively using transit routes through Russia and the Caspian Sea [7][8].

Thus, Uzbekistan occupies an intermediate position: on the one hand, it does not possess as huge reserves as Turkmenistan, and on the other - its internal energy consumption, due to population size and economic structure, is much higher than in both neighbors. This dual situation constitutes a unique challenge for building the country's sustainable export potential. *Access mode*

Analysis and conclusions

The analysis indicates that the oil and gas sector of Uzbekistan is entering a new phase of its development, characterized by a change in the balance between domestic consumption and export possibilities. The current situation requires not so much a response to the current challenges, but rather the formation of a new, more sustainable and diversified model for the development of the industry. In this context, the strategic course should be a comprehensive modernization aimed at the qualitative transformation of the structure of export potential and the creation of new sources of added value.

In this context, several interrelated directions of strategic development can be identified:

First, urgent measures to increase production should be a priority. Widespread introduction of modern technologies to increase oil recovery and promotion of exploration with the involvement of foreign investors will slow down the rate of decline of production and create a basis for its future stabilization. Without addressing this fundamental problem, any plans to increase exports will remain unachievable. [5]

Second, deep processing of hydrocarbons should be the key. Emphasis on the development of gas chemistry and projects on gas liquefaction (LNG) is aimed at a qualitative change in export structure. Instead of vulnerable exports of pipeline raw materials, the country will be able to sell more expensive and liquid products on the world market: polymers, methanol or liquefied gas. This will not only increase foreign exchange earnings from each cubic meter of gas produced, but also reduce dependence on transit routes. [5]

Third, there is a need for systematic work to improve the efficiency of domestic energy consumption. The large-scale energy conservation programme in industry and utilities will free up significant quantities of gas, which can be used either for export or for new processing. This internal

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resource release will be the most important reserve for the implementation of the first two recommendations.

Conclusion

The export potential of the oil and gas sector of Uzbekistan is undergoing a transitional phase, which requires a strategic review of approaches to its development. Maintaining the current model, based on the exploitation of traditional fields with a predominant export of raw materials, objectively reduces the contribution of the sector to the economy and complicates the tasks of providing energy balance.

The growing imbalance between domestic demand and production capacity requires structural adaptation of the industry. This is consistent with the global practice of States transitioning from a commodity export model to an economy based on

deep resource processing and technologically sophisticated services.

Therefore, the strategic goal in the medium term is the consistent transformation of the oil and gas complex into a high-tech segment of the national economy focused on production of products with high added value. Implementation of this task depends on effective interaction between the state, creating a stable regulatory environment, and international investors with the necessary capital and technology.

Achievement of the target will allow Uzbekistan not only to maintain but also to strengthen its position in the international division of labor in the energy sphere, ensuring sustainable export earnings and transition to a qualitatively new model of energy security, based on technological development and diversification.

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