



# THE IMPACT OF THE OIL AND GAS SECTORS ON THE ECONOMIC AND SOCIAL DEVELOPMENT OF UZBEKISTAN

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## ABSTRACT

*The gas industry plays an important role in the economic development of Uzbekistan. It also serves as the main raw material for the development of transport, electricity, metallurgy, chemical industry, construction and a number of other industries. The article analyzes the impact of the oil and gas sector on the socio-economic development of the southern regions of Uzbekistan, as well as key indicators of the oil and gas sector in the region.*

**KEY WORDS:** *oil, gas, fuel and energy, economic development.*

## INTRODUCTION

Uzbekistan, as well as two other former Soviet republics located in Central Asia – Kazakhstan and Turkmenistan, has rich hydrocarbon resources. As in the case with its neighbors, this is a determining factor in the development of the country. The presence of oil and gas deposits is a panacea for any country for resolving economic problems and even for achieving its political goals. Uzbekistan is no exception. After gaining independence in 1991, the country began to actively look for ways to increase production of their natural resources and for the markets to sell them. Natural gas, along with cotton, is a brand of the country. Oil plays a lesser role. According to the confirmed data of official Tashkent, potential oil resources in the country amount to more than 5.3 billion tons, gas condensate – 480 million tons, natural gas – about 5 billion cubic meters. Oil and natural gas are produced in the country in five oil and gas fields: “Ustyurt“, “Bukhara-Khivi“, “Southwestern Hissar“, “Surkhandarya” and “Ferghana“. Over the entire period of exploration works in Uzbekistan, there have been discovered 246 oil and gas fields. Consumption of energy resources is also high in Uzbekistan. The Uzbek economy is quite energy-intensive; the country is ranked the 10th in the consumption of gas in the world. In the oil and gas industry of Uzbekistan constitute about 16% of GDP, and its share in the revenue part of the budget is more than 20% [1].

## RESEARCH RESULTS

Nowadays, Uzbekistan is the second largest oil producer in Central Asia, fourth in the CIS, and 21st in the world, and second in the CIS in gas production. Significant changes have been made in the sector as a result of targeted programs and favorable investments implemented in a short period of time. On the basis of implemented structural changes and attraction of foreign investments, gradual implementation of the tasks set by the President of the Republic of Uzbekistan, the oil and gas industry as well as new productive powers have also been created in geological and geophysical research, construction of deep oil and gas wells, extraction, processing and transportation of hydrocarbons, production capacities [2; 3; 4].

Currently, the primary fuel and energy resources of the Republic of Uzbekistan comprise 97% of oil and gas, 2.3% of coal, and 0.7% of hydropower. One of the largest companies in our country is UzTransGas.

Geological oil reserves – 5 bln. tons. Approved reserves – 100 mln. tons. Geological reserves of natural gas are more than 5 trln. cubic meters, and confirmed reserves – 1.1 trln. m<sup>3</sup>. According to the Center for Economic Research of Uzbekistan (CER), natural gas and coal reserves in Uzbekistan will last for the next 20–30 years, while oil and gas consumption is almost used up. However, it should be noted that in our country, as in other advanced oil and gas producing countries, there are undiscovered very large deposits, non-traditional oil and gas fields as yet.



The capacity of manufacturing of Uzbekneftegaz is 60–70 billion cubic meters of natural gas a year and 8 mln. tons of liquid hydrocarbons. Uzbekneftegaz is the 11th largest natural gas producer in the world [5; 6]. As a result of exploration work carried out in accordance with the Decree of President Sh. M. Mirziyoyev dated November 3, 2017, PG-3372, it has been discovered 16 oil and gas fields and produced 171 million tons of fuel of underground hydrocarbon reserves for the period of 2017–2018 and 9 months of 2019.

For reference: 16 deposits, 4 in Ustyurt region (Beshkala, Lower Surgil, Kushkair, Oralik), 2 in Fergana region (Uchtepa, Chakar), 10 in Bukhara-Khiva region (Topichaksoy, Marvarid, Shortak, Chordarbaza, Tumaris, Andakli, South Kulbeshkak, Yarmak, Dultatepa, Shorkum).

By the end of 2019 it is planned to increase its hydrocarbon reserves by 53 million tons of fuel, which is currently under exploration in the central part of the Ustyurt region (Alpomish, Ultan, Arslan, etc.), west of the Bukhara-Khiva region (Tumaris, Andakli, South Kulbeshkak, Eastern Xatar and etc), in the southern part of the Fergana region (Uchtepa, Chakar, Lower Kashkarkir and others).

In particular, the regions of South Uzbekistan (Kashkadarya and Surkhandarya) differ from other regions in the country in terms of volume, structure, specialization and inclusion of industrial products.

Currently, the region supplies about 1/6 of the country's industrial output. The bulk of these products are oil, natural gas, gas condensate, sulfur, polyethylene, and building materials. These same industries, in particular, fuel products, represent the region's share in the national labor distribution. Most of the existing cities function as district centers, with light industry enterprises such as food processing, cotton cleaning and textile processing. In rural areas, industrial production is concentrated mainly in district centers – cities and towns.

Uzbekistan has a great potential for processing natural gas. In this regard, the Mubarek Gas Processing Plant (GRES) is one of the largest enterprises in the world with annual capacity of 30 billion cubic meters of gas, the second is Shurtan Refinery. The plant's annual capacity is 20 billion cubic meters of gas. During the years of independence, large-scale projects on deep processing of gas and production of products meeting international standards have been implemented. Major enterprises such as Shurtan Gas Chemical Complex (GKM) and Kandym Gas Processing Complex have been established.

In April 2018, Kandym Gas Processing Complex was commissioned. The gas processing complex was built under the joint project of Uzbekneftegaz and Russian company, Lukoil. The Kandym group includes six gas condensate

minefields – Kandym, Kuvachi-Alat, Akkum, Parsankul, Khodji and western Khodji.

Kandym JCC capacity is 8.1 billion cubic meters of gas a year, which produce 213.000 tons of stable condensate, 17.500 tons of compressed gas and over 191.000 tons of sulfur per year.

The project “Creation of synthetic liquid fuels (GTL) based on purified methane from the Shurtan Gas Chemical Complex” reflects advanced technological solutions in the gas and chemical industry. This project is one of the largest mega projects in the CIS.

Implementation of the project at Uzbekneftegaz is an evidence of the rapid development of the industry, along with the importance of ensuring the country's fuel and energy security.

The project will produce 1.5 million tons of high quality Euro-5 synthetic fuel by refining

3.6 billion cubic meters of natural gas a year. Of these, 743.000 tons of diesel fuel, 311.000 tons of jet fuel, 431.000 tons of naphtha and 21.000 tons of liquefied gas.

The launch of the new plant will allow saving foreign currency by developing real sectors of the economy, further increasing the transit potential of the country, meeting the major demand for oil products and reducing oil imports [8].

It is planned to complete construction and assembly works in the second half of 2020 and create 682 new jobs at the plant.

Based on the instructions of the head of our state, the Concept of Expansion of Production Capacities of Shurtan Gas Chemical Complex was revised and the issue of the involvement of synthetic naphtha in the production process was studied. When the project is launched, the plant's polymer production capacity will be increased from 125.000 to 450.000 tons, or 3.6 times. As a result, there will be more opportunities for the development of the petrochemical sector. In the first phase it is planned to process high-grade raw materials synthetic naphtha and produce pyrolysis distillate with new types of polyethylene and polypropylene. Access to pyrolysis distillates for the production of new products will create a technological cluster in the region, which will be an important factor in the further development of the chemical, automotive, pharmaceutical, construction and textile industries.

Uzbekneftegaz and Russian Gazprom are implementing a project to build a petrol station within the geological prospecting in Surkhandarya region. The total volume of investments in the framework of the agreements may reach up to 5.8 billion US dollars [4; 7].

The first phase for 2018–2022 there will be built a gas processing plant with a capacity of 5 billion cubic meters a year. In particular, as part of



“the Early Gas” Program, by 2020, up to 1 billion cubic meters of natural gas will be extracted from the 2.800-meter- deep gas layer.

In 2023, another 15 wells will be put into operation, the second turn of the gas processing plant will be launched, which will increase gas production to 5 billion cubic meters per year.

In the second phase, 2023–2025, it will be constructed a gas and chemical complex with the capacity of 500.000 tons of polymer products per year through processing 1.5 billion m<sup>3</sup> of gas. After the project’s implementation, a total of 2.200 high-skilled jobs will be created.

Investments in industry of Uzbekistan make up 2704.8 billion sum, of this amount, Kashkadarya accounts for more than 80.0% and Surkhandarya region – 20.0% (2019 y). The analysis of the territorial structure of capital investments is important because it demonstrates which regions and cities of the zone are going to develop in the near future.

At present, the major part of capital investments in Kashkadarya region is spent on identifying and exploiting new oil and gas fields, the construction of industrial enterprises and reconstruction of transport infrastructure which all considered strategically important for our country. Therefore, investments in the region are dominated by oil and gas-rich districts like Mubarek (28.0%), Mirishkor (17.0%), Guzar (12.3%) and Dehkanabad (7.6%) due to the construction of the potash plant. However, Kasbi, Kitab, Chirakchi, Yakkabog, Kamashi and Koson districts accounted for only 9.0% of total investment. In fact, even in these areas there are large undeveloped hydrocarbon deposits.

The internal structure of the industry by the end of 2018 is as follows: fuel industry (by product value) – 75.9%, light industry – 7.4%, food industry – 4.8%, compound feed industry – 2.8%. For comparison: in 2008 these figures were 56.4; 18.1; 9.2; and 2.6 percent. Thus, it is possible to conclude that for the last 10 years, the industrial sector of the region has either intensified the development of production tools or heavy industries. This is also the result of industrialization of the regional economy [9].

Gas condensate in the region is produced by Mubarek Oil and Gas Production Department, Mubarek Gas Processing Plant, Shurtan Oil and Gas Production Department, Shurtan Gas Chemical Complex and Gissarneftgaz LLC (limited liability company). Among them Mubarek Oil and Gas Production Department and Shurtan Oil and Gas Production Department are leaders in oil and natural gas production. About half of liquefied gas is supplied by Shurtangaz Chemical Complex. Almost 100% of sulfur is supplied by the Mubarek Gas Processing Plant. There are such plants as Mubarek

Oil and Gas Production Department, Mubarek Gas Processing Plant, Shurtan Oil and Gas Production Department and Shurtan Gas Chemical Complex. More than 30 thousand people are working at these enterprises.

More than 2,000 students are currently studying at the Oil and Gas Faculty of the Karshi Engineering- Economic Institute. 16 laboratory services are used for their training. Work is underway to establish new oil and gas labs, and supply qualified specialists for the field [10].

With the launch of a very powerful GTL project, not only diesel and aviation kerosene, but also export-oriented products like naphtha, polyethylene, polypropylene will be produced. In addition to the creation of about 900 jobs at the plant, it was noted that in the related industries, such as processing, transportation and delivery, it would create 10 times more, which is about 10.000 new jobs.

## CONCLUSION

The above data shows that the oil and gas industry is one of the most important sectors in the economy of Uzbekistan. Uzbekistan has significant potential for industrial development and further economic growth in the country. Completion of current projects and further attraction of foreign investments into new projects will serve as a solid basis for the development of Uzbekistan’s fuel and energy complex.

## REFERENCES

1. Rovshan Ibrahimov. *The current situation and future of the oil and gas sector in Uzbekistan*. 2016.
2. Decree of the President of the Republic of Uzbekistan dated 09.03.2017. N PP-2822. “On approval of the Program to increase hydrocarbon production for 2017–2021.” – Tashkent, 2017.
3. Degree the President of the Republic of Uzbekistan dated 09.07.2019. N PP-4388. “On measures for the stable provision of the economy and the population with energy resources, financial recovery and improvement of the oil and gas industry management system”.– Tashkent, 2019.
4. Makhmudov N. N., Yarboboiev T. N. *The role of oil and gas industry in the economy of Uzbekistan*
5. // *Innovative technologies*. No. 1(33).– Karshi, 2019.
6. *Economy of Uzbekistan // Electronic source // URL: <https://ru.wikipedia.org/wiki/> (Date 11/25/2019).*
7. *BP confirms Uzbekistan’s oil and gas reserves*, *Inews.uz*. (date: 12/2/2019).
8. *The project for the development of the investment block “Independence of Uzbekistan” with the participation of Gazprom is estimated at \$5.8*



- billion. // Electronic source //neftegaz.ru (date: 12/05/2019).*
9. *Economic Information of Uzbekistan, No. 2018.*
  10. *Uzbekistan raised \$2.3 billion for the construction of a GTL plant // Electronic source // URL: <https://www.uzdaily.uz> (November 28, 2019).*