

Introduction of advanced technologies – based oil and gas industry development strategy of Uzbekistan

Introducción de la tecnología avanzada basada en la estrategia de desarrollo de la industria del petróleo y el gas de Uzbekistán

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ABSTRACT

The article starts with perspective indicators of five years of the Republic of Uzbekistan. It also describes the development of the oil and gas industry in Uzbekistan, which is inextricably linked with the implementation of tasks to ensure the effective functioning of the fuel and energy complex of the country, as one of the key areas of economic development. Further, there is mention of strategic direction of activity of the companies, which should become not the growth of export of such strategic raw materials as natural gas, but the development of own production on its processing and production of highly liquid oil and gas and chemical products with high added value, meeting the world standards on quality and environmental requirements.

Keywords: advanced technology, integration, environmental development, strategic direction, alternative fuels.

RESUMEN

El artículo comienza con indicadores de perspectiva de cinco años de la República de Uzbekistán. También describe el desarrollo de la industria del petróleo y el gas en Uzbekistán, que está indisolublemente ligada a la implementación de tareas para garantizar el funcionamiento efectivo del complejo de combustible y energía del país, como una de las áreas clave del desarrollo económico. Además, se menciona la dirección estratégica de la actividad de las empresas, que no debería convertirse en el crecimiento de la exportación de materias primas estratégicas como el gas natural, sino en el desarrollo de la producción propia en su procesamiento y producción de petróleo y gas altamente líquido y químico productos con alto valor agregado, que cumplen con los estándares mundiales de calidad y requisitos ambientales.

Palabras clave: tecnología avanzada, integración, desarrollo ambiental, dirección estratégica, combustibles alternativos.

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Introduction

The role of investment in the country's economy is to create conditions for further expansion of production. Investments are what is "saved" for tomorrow so that they can consume more in the future. In addition, part of the investment is directed to the growth of non-commercial fixed assets in education, health care, etc.

President of Uzbekistan Sh. Mirziyoyev approved the Strategy of Action on five priority areas of the country's development in 2017-2021 by his Decree of February 7. One of the directions, "Development and liberalization of the economy", directs sectors and the economy as a whole to strengthening macroeconomic stability and maintaining high rates of economic growth, increasing its competitiveness, modernization and intensive development of agriculture, the continuation of institutional and structural reforms to reduce the presence of the state in the economy, strengthening the protection of rights and priority development of private property, stimulating the development of small business and private entrepreneurship, comprehensive and balanced.

Therefore, in modern conditions, the study of problems of increasing the investment attractiveness of companies of the oil and gas industry of the Republic of Uzbekistan for foreign investors is an important and relevant task.

The solution. In order to achieve the goal of the research, the following tasks were set and solved in the current work:

- The approaches of leading local and foreign theoretical schools to the interpretation of the concept of investment attractiveness and its impact on the processes of international capital mobility are summarized;
- The basic tendencies and world experience in the sphere of attraction and implementation of direct foreign investments are defined;
- The scale and structure of investments in the oil and gas industry are analyzed;
- The main directions of increase of investment attractiveness and perfection of investment financing mechanisms of the oil and gas companies are defined, including measures on perfection of the taxation of oil-extracting industry of Uzbekistan for increase of own investment resources are offered.

The methodological basis of the study was the fundamental works of the First President of the Republic of Uzbekistan I.A. Karimov and "Strategy of actions in five priority directions of the country's development in 2017-2021", approved by the Decree of the President of Uzbekistan Sh.M. Mirziyoev on February 7, 2017, the works of foreign and local specialists in the field of theory and practice of investment, financial management, capital management, investment analysis, as well as science-applied researchs on the problems of investment attractiveness of companies. The development is based on the legislative acts of the Republic of Uzbekistan on the issues of reforming the economy as a whole and investment activity, regulatory documents of state administration and JSC "Uzbekneftegaz".

Methods. Research methods are based on the study of the dynamics of investment processes taking place in the industry. The analysis and calculations are made on the basis of economic and mathematical methods, program-targeted and system analysis, as well as used graph-analytical techniques and methods of matrix modeling. At different stages of dissertation research, depending on the nature of theoretical and practical tasks being developed, the methods of financial and statistical analysis, the method of expert evaluation, situational analysis and the method of abstract and logical evaluation were used as tools.

The result consists that on the basis of studying of foreign experience and the analysis of a modern condition of attraction of foreign investments on the companies of Uzbekistan, practical recommendations on increase of investment appeal of securities of the enterprises of an oil and gas complex of Republic Uzbekistan for expansion of scales and increase of quality of financial support of processes of their restructuring and modernization have been developed and offered.

Realization of results. The results of the study were introduced in Subsidiary Enterprise Ustyurtgaz to the Republic of Uzbekistan (Act of 21.07.2012), the main results of the dissertation research were included in the scientific reports of «O'ZLITINEFTGAZ» JSC of «Uzbekneftegaz» JSC system: Complex analysis of the financial state of joint stock companies in the oil and gas industry and forecasting of investment sources for 2004-2010; Assessment of the efficiency of investments in the oil and gas industry in 1996-2004 and ways to improve it in the future. 2005; Study of the efficiency of fixed assets use in 2000-2004 and development of recommendations on its increase in the future (for gas transportation enterprises of Uzbekneftegaz NHC). 2006; Problems of using fixed assets of «Uzneftegazdobycha» JSC enterprises and ways of their solution. 2007; Assessment of the efficiency of investments made in the development of oil and gas production and refining enterprises of «Uzneftegazdobycha» JSC and measures to increase it. 2008

The impressive economic growth of Uzbekistan's economy and large-scale structural reforms carried out in the years of independence, have attracted the attention of international organizations, major companies, banks, investment funds and agencies. Launched this year, the successful program of privatization of state property and the implementation of major investment projects caused great interest of the international business community and only accelerated the process of joining the major players in the domestic market.

In the future, within the next five years the average annual GDP growth of Uzbekistan will be at least 8%, industrial

production 0%, with an increase in the share of industry from 24% to 30% - such a forecast was made public at the International Investment Forum. These figures are confirmed by specific calculations, projects and initiatives. For example, only in the next few years it is planned to master production of about 100 new product categories, including more than 1 thousand. Kind of different products. The growth of the export potential will increase by more than half to \$ 25 billion.

The development of the oil and gas industry of Uzbekistan is inseparably linked with the task of ensuring the effective functioning of the fuel and energy complex of the country, as one of the key areas of economic development.

The main strategic focus of enterprises should be no increase in exports of such strategic raw materials like natural gas, and the development of their own production for their processing and production of highly liquid petroleum and chemical products with high added value, corresponding to world standards in quality and environmental In requirements. Development of international cooperation contributes to the economic growth of the republic through the introduction of advanced technologies, and development, the gradual connection to the system of international labor and full integration into the world market.

It is obvious that in the modern world it is high technologies are the determining factor in economic development, the main source of replenishment of the budget revenues of the leading world states, the fundamental basis of their national security. In addition, the production of high-tech products is now becoming one of the main conditions for successful integration of any country in the emerging system of international relations¹. The introduction of advanced technology and organization of production, in turn, significantly increases productivity, reduces costs and improves the quality of (Fig.1).

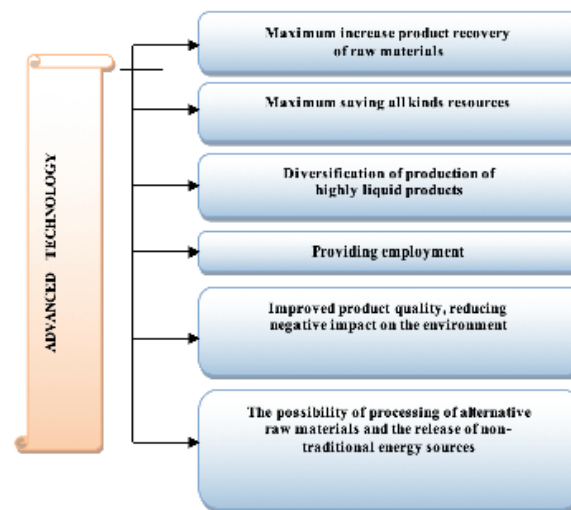


Fig. 1 Possible results of the introduction of advanced technologies in production (compiled by the author)

In order to introduce advanced technology, advanced innovative ideas in the enterprise need to develop an innovative strategy, the main objectives of which are shown in Figure 2.

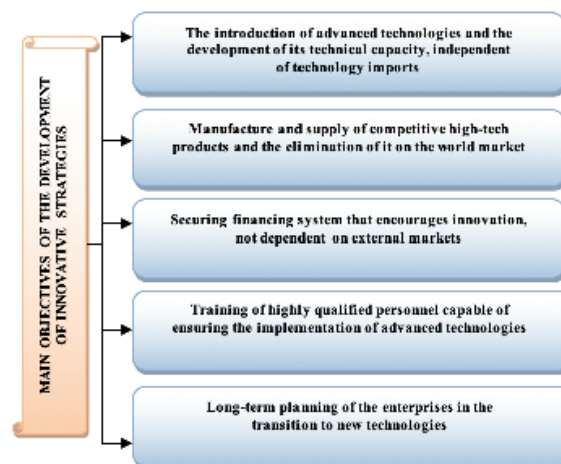


Fig. 2 The main objectives of the development of innovative strategies (compiled by the author)

¹ Resolut on of the President of the Republic of Uzbekistan No. PP-4388 dated 9 July 2019 on "About measures for stable providing economy and the populat on with energy resources, f nancial improvement in enhancement of management system oil and gas industry"

In modern conditions of growing worldwide shortage of energy resources, focusing on technology, providing energy efficiency and increased use of alternative energy sources.

Prospects for the development of gas processing Uzbekistan connected both with the expansion of liquefied gas, condensate, sulfur, and with intensive use of the resources of natural gas for the chemical synthesis to obtain highly liquid products.

Currently, the system of «Uzbekneftegaz» for the processing of natural gas operated: Bukhara Oil Refinery, Fergana refinery, Mubarek Gas Processing Plant, Shurtan Gas Chemical Complex and USE «Shurtan- neftegaz»².

In the Bukhara oil refinery in the period 2007-2009, much has been done to introduce new products into production - aviation fuel for gas turbine engines of the brand Jet A-1. To this end, upgraded technological infrastructure of the factory floor and storage tanks produced a new type of aviation fuel. The factory laboratory is equipped with modern laboratory equipment and instrumentation for testing for compliance with international standards, conducted the study for the development of the production of aviation fuel Jet A-1 and started his industry. With the purpose of modernization and reconstruction of existing process units to improve the quality of oil products and bring the quality of gasoline and diesel fuel to Euro-5 conducted the project «Modernization and reconstruction of the Bukhara Oil Refinery»³.

Power five queues install propane-butane mixture to the USE «Shurtaneftegaz» allow to produce annually about 250.0 thousand tons of liquefied gas, condensate - 70-80 tons, and get up to 5.0 thousand tons of sulfur.

“In 2012 - 2013 years in the USE «Mubarek Gas Processing Plant» commissioned 3 threads for the production of liquefied petroleum gas unit with capacity of 4.0 billion m³ of gas per year. Total company production of LPG is about 258 thousand tons and 125 thousand tons of stable gas condensate.

Deeper recovery of valuable components from natural gas is due to the introduction in 2001 commissioned Shurtan gas chemical complex, where for the first time applied technology cryogenic processing of natural gas, ensuring the separation of ethane, propane, butane and condensate. The complex includes production of ethylene based on allocated ethane and polyethylene production. In order to ensure a stable raw material gas «the GTL Project» is currently performed work

«Modernization headworks systems (IIS) Shurtan gas pipeline construction IIS Shurtan-SI IGCC». Developed organizational and technical measures for the reconstruction and modernization of existing plants GS Shurtan, calculation is done on the development of production companies and the approximate cost estimate. Implementation of measures on modernization of farm Shurtan by supplying high ethane- containing gas at the Shurtan Gas Chemical Complex will increase ethylene and polyethylene production.

In order to increase production of environmentally friendly oil products in the Republic of Uzbekistan, a project to create a production of synthetic liquid fuels based on purified methane produced at Shurtan Gas Chemical Complex. This technology will increase the capacity to ensure the country's growing fuel needs, and significantly reduce the environmental impact of emissions, as products produced using GTL technology meets the Euro 4 and 5 standards.

Since 2016 it is led operation in Ustyurt Gas Chemical Complex at Surgil deposit with the arrangement of the field, where it will be processed in a year 4.5 billion m³ of gas and produce up to 400 thousand tons of polyethylene and 100 thousand tons of polypropylene. This project was included in the top ten global investment projects by the end of the world 2012.

Together with the company «Lukoil» is working on the development of Kandym field with the construction of a gas processing plant. The design capacity of the object on the processed gas 8.1 billion, m³ per year. At I LI provides process sour gas at two Threads nominal capacity of 4.05 billion m³ per year to obtain a purified dry 7.8 billion m³ of gas per year; 134.3 thousand tons of stable gas condensate; Lump sulfur 212.9 thousand tons.

Today, advances in science and the introduction of advanced technologies offer unprecedented opportunities for sustainable economy development in any industry, including oil and gas.

BIBLIOGRAPHIC REFERENCES

- Decree of the President of the Republic of Uzbekistan No UP-4707 dated 4 March 2015 on “the Program of Measures to Promote Structural Reforms, Modernization and Diversification of Production in 2015–2019”.
- Resolution of the President of the Republic of Uzbekistan No. PP-4388 dated 9 July 2019 on “About measures for stable providing economy and the population with energy resources, financial improvement in enhancement of management system oil and gas industry”.
- Report on the research work of O’ZLITINEFTGAZ JSC “Monitoring and analysis of the development efficiency parameters of the oil and gas industry of Uzbekistan” Tashkent, 2019.

² Report on the research work of O’ZLITINEFTGAZ JSC “Monitoring and analysis of the development efficiency parameters of the oil and gas industry of Uzbekistan” Tashkent, 2019

³ Decree of the President of Uzbekistan. Number UP-4707 of 04.03.2015, “On the Program of measures for structural reforms, modernization and diversification of production in 2015-2019”