ҚАЗАҚСТАННЫҢ ИННОВАЦИЯЛЫҚ ЖӘНЕ ПОСТИНДУСТРИЯЛЫҚ САЯСАТЫН ЖҮЗЕГЕ АСЫРУ ТИІМДІЛІГІ

ЭФФЕКТИВНОСТЬ РЕАЛИЗАЦИИ ИННОВАЦИОННОЙ И ПОСТИНДУСТРИАЛЬНОЙ ПОЛИТИКИ В КАЗАХСТАНЕ

EFFECTIVENESS OF IMPLEMENTATION THE POST-INDUSTRIAL AND INNOVATION POLICY IN KAZAKHSTAN

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The development of domestic oil and gas industry as one of the priorities state energy policy

It is shown that the presence of large natural resource potential leads to a special place of Kazakhstan among the industrialized countries, and its efficient use becomes a key determinant of energy security of the Republic. The significance of the resumption of oil production at the Kashagan field as an important milestone in the development of the country's oil and gas complex is highlighted. It is proved that an important direction in the solution of questions of increase of efficiency of hydrocarbons usage in the future must be scientific justified its involvement in recycling. t is proved that an important direction in resolving the issues of increasing the efficiency of the use of hydrocarbon raw materials in the future should be the scientific substantiation of its involvement in processing. The idea is stated that, as a result of the current modernization, oil refineries will enter a different qualitative level of fuel supply. The priorities of the transition to low-carbon development of the oil and gas sector enterprises are substantiated, taking into account the commitments undertaken in the field of reducing greenhouse gas emissions in the future. Particular attention is paid to the new vector of development of the oil and gas industry, aimed primarily at technological modernization of its enterprises. It is emphasized that the work on diversification of oil transport routes allowed expanding the technical capabilities of the export of domestic oil. The need for a successful implementation of the project for the creation of an international oil consortium «Eurasia» is disclosed. It is noted that this project is aimed at exploration of deep deposits of the Caspian depression and is already entering the stage of practical implementation.

Keywords: industry, oil, gas, diversification, processing, hydrocarbons, reserves, technology, project, investor, consumption, components, cluster, decarburization, transportation, drilling, wells.

The potential of oil companies in the Republic of Kazakhstan

According to the President's address to people of Kazakhstan «the Third modernization of Kazakhstan: global competitiveness» mining and oil and gas complexes still not lost its strategic importance for the national economy. The main vectors of the development of these industries should be focused on the task of export diversification and geographical expansion. The challenges: «In the face of slowing global demand need to enter new markets and expand the geography of supplies. Great attention should be given to increasing the mineral resource base. You need an active geological exploration.

Further development of these industries should be tightly linked to the deepening of complex processing of raw materials» [1; 2].

Currently, oil and gas complex (OGC) of Kazakhstan continues to thrive in conditions of instability of a conjuncture of the world market, excess supply over demand and commitment of the global economy to a low carbon format. The country explored now more than 200 deposits of hydrocarbons with total recoverable

reserves of about 5.7 billion tons of oil. This determines its place in the top ten among oil-producing countries in the world (Table 1).

Among the CIS countries Kazakhstan is the second after Russia producer of oil and from 90 countries of the world community is in the top thirty [2; 18]. In terms of production, exports and share in country's GDP, the oil and gas complex of the Republic is a leader among other sectors (Table 2).

Table 1

Oil reserves by country

Place	Country in the world	Reserves		Reserves % of world
		billion bbl	billion tons	
1st	Saudi Arabia	264,2	37,7	21,3
2nd	Iran	138,4	19,8	11,2
3-rd	Iraq	115	16,4	9,3
4th	Kuwait	101,5	14,5	8,2
5th	United Arab Emirates	97,8	14	7,9
6th	Venezuela	87	12,4	7
7th	Russia	79,4	11,3	6,4
8th	Libya	41,5	5,9	3,3
9-th	Kazakhstan	39,8	5,7	3,2
10th	Nigeria	36,2	5,2	2,7
The whole world		1237,9	176,8	100

Note. These works [2; 19].

Table 2

The dynamics of oil production, including gas condensate, and natural gas in Kazakhstan

Indicator	2005 y.	2010 y.	2015 y.
Oil and gas condensate, total, million	61,5	79,5	79,5
Oil and gas condensate of «NC «KazMunaiGas», MMT	12	22	22
he share of «NC «KazMunayGas» in total production, %	19,5	27,33	27,7

Note. Data of authors [2; 19].

The forecasts of international experts suggest that the stabilization of the world oil market will be in 2017-2018 when a barrel will cost below $ 60. Of course, depending on oil production in the Republic will also increase.

It is expected that in 2018 the projected level of oil production in the country is 82 million tons in 2019 – 85 MMT in 2025 – 100 million tons, and in 2030 is 102 million tons [3; 5].

Such possibilities for increasing the volume of oil production in Kazakhstan are connected with such primary factors as:

1. 1. Launch of the Kashagan field. The official presentation of one of the largest deposits in the world and the first offshore field in the republic (Kashagan) took place at the end of 2016. Today, this field is at the first stage - an experimental-industrial development characterized by oil production of 370,000 barrels per day, or 13 Million tons per year. Within the first stage, an operational and technical complex, four drilling islands at sea and a Bolashak plant on land were built.

Since the classic drilling and production technologies that exist today are not applicable to Kashagan, then from 2019 it is planned to start the project «Center of Compression-01». It will cost 5 billion dollars and will be commissioned in 2024. Within the framework of the project, an additional sea island will be built, equipped with compressors, from which the reverse injection of raw gas into the reservoir will be carried out. This will increase oil production to 16 million tons per year from 2025 [4; 14].

Here, in the framework of the Production Sharing Agreement (PSA), the extracted oil is divided into bone-oil oil, which is necessary to compensate the investor's expenses and his motivation for the subsequent

development of the deposit, and hence the investments and the profit-oil part of the oil that forms the investor's income go to the budget of the republic.

In the future, in addition to the profit, Kazakhstan will receive all types of taxes stipulated in the PSA, and bonuses. The investor must also allocate funds for social expenses, training of domestic personnel and, of course, invest in the development of related industries.

According to the Ministry of energy of Kazakhstan, in the framework of the pilot commercial development of Kashagan field to 2041 g. planned production of 308 million tons of «black gold» and 211 billion cubic meters of gas, of which 62 bcm of gas to domestic market to meet the needs of citizens and industry.

2. The exploration and development of related oil and gas fields. Thus, in the framework of North-Caspian project will be the development of the Kalamkas-sea, located South-West Kashagan.

The development of this field is planned to combine with the development of the field of the Khazars, i.e. we will build a joint infrastructure – the gas produced at the field of the Khazars, is supposed to pump place of birth Kalamkas. Recoverable volumes for the two fields will be about 66 million tons of oil and about 8 billion cubic meters of gas. This project is important for us from the point of view of the construction of common infrastructure, which in the future will be able to join other deposits within the overall development strategy. This will lead to an improved economy, increased profitability and attractiveness of the projects.

3. Implementation of the largest in recent years, the investment project in the Tengiz field of new energy mining, supply and infrastructure complex. This gives Kazakhstan a chance to overcome the negative trend of falling oil production. However, the Tengiz expansion may have ambiguous consequences for the oil and gas industry in the country.

Discovered in 1979, Tengiz oil field provides a third of the annual oil production of Kazakhstan and has the lowest in the country, the cost of production. In 2015, developing its joint venture Tengizchevroil (TCO) reached a record production figure, having produced 27.16 million tons.

Now, TCO intends to increase annual extraction of raw materials to 39 million tons, which will allow the end of the contract (to 2033) to produce over 250 million tons of oil. With this objective, work began on the further development of the field, namely the implementation of two integrated projects: the future growth project (FGP) and wellhead pressure management (PUAD).

PBR envisages the construction of a new plant for the production of additional oil in the amount of 12 million tons per year and close to inject gas into the reservoir. In turn, PUUD needs to maintain the current processing capacity utilization of the existing Tengiz plants by creating a new system for the collection of well production, infrastructure and auxiliary objects, and system objects increase the pressure at the entrance of the six existing integrated production lines.

This is the third extension of the Tengiz project, members of which are Chevron (50 %), ExxonMobil Kazakhstan Ventures Inc (25 %), Kazakhstan through the NC «KazMunayGas» (20 %) and Russian-American JV LUKArco (5 %).

The need for FGP-PUUD implementation is due to the fact that during the operation of Tengiz, the pressure in its strata from the initial 900 MPa (atmospheres) has almost halved. Today to keep the pressure back into the reservoir is pumped about one third produced at the Tengiz gas, but this is not enough.

In turn, PBR and PWUD will allow injecting into oil reservoirs all together with sulfur compounds, the volume of raw gas received in the process of oil production. Therefore, the technological process does not include the installation of gas treatment and sulfur recovery. Along with the increase in the volume of injection will continue the drilling of new wells: their number will increase to 114 – almost as much as wells are valid today [5; 66].

It should be noted that the expansion of the Tengiz becomes a decisive factor for the efficient work of a priority for Kazakhstan oil transportation by oil pipelines of the Caspian pipeline consortium, as oil of Kashagan is a dubious source to fill the pipeline of the surplus CTC. Additional volumes of Tengiz oil will not only increase the profitability of the pipeline, but also revived the projects for transportation of Kazakh oil to other markets.

The fields operating in the country have already passed the peak of production, and new projects that are able to come to them in the medium term are not visible.

Foreign investors of TCO are confident that the implementation of the above-mentioned world-class projects will be based on long-term partnerships with the Republic of Kazakhstan to ensure stable and reliable production at the Tengiz field, the fruit of which will be used by future generations of Kazakhstanis.

4. Maintaining the current level of oil production in Karachaganak. Now KPO (Karachaganak Petroleum Operating) is one of the largest investors in the economy of Kazakhstan. The economic and social well-being of the West Kazakhstan region directly depends on the successful development of the project [6; 8].

By the way, while carrying out production activities at the world level, KPO remains committed to achieving the highest standards in the field of labor protection, safety and environmental protection. One of the most important obligations of KPO is the application of the best environmental practices that contribute to the sustainable development of the region and the country as a whole. Particular attention is paid to activities aimed at reducing emissions of pollutants, waste management and the introduction of new technologies. The indicator of gas utilization in Karachaganak constitutes 99.81 %, which is a world level achievement. Karachaganak is one of the world's first deposits, successfully implemented the technology of reverse injection of gas into the reservoir, which provides significant environmental benefits.

The gas industry is one of the most dynamically developing and promising areas of the country's economy

Natural gas is an important factor in the formation of the republic's energy market. His proven reserves are 3 trillion. More than 100 deposits have been discovered to date. They are concentrated within the Caspian oil and gas province, Turgai, South Mangyshlak, North Ustyurt oil and gas regions. Kazakhstan in the explored reserves of natural gas takes the 15th place in the world.

According to research data [2; 18], the potential resources of natural gas are estimated at 10 trillion. Cu. M. Of these, 90.2 % are associated with the Caspian Basin. The accounted gas reserves of industrial categories A + B + C1, concentrated in 94 fields, amount to 1,850.7 billion cubic meters.

In 2016 at the expense of the republican budget 35 settlements of West Kazakhstan, Kostanay and Zhambyl oblasts were identified. At the same time, about 43,213 residents of these regions are provided with gas supply services. To date, the level of gasification of settlements in the country is 46.3 %. According to the General Gasification Scheme by 2030, the coverage of the country's gasification system services will reach 56 %.

In recent years, the level of natural gas consumption in the republic has grown from 9 billion cubic meters. With this in mind, for the period until 2020, Kazakhstan envisages providing gas supply to 84 population centers in six regions of the country - West Kazakhstan, Kostanay, Almaty, Zhambyl, Kyzylorda, Aktobe, Mangistau and South Kazakhstan region [3; 5].

It should be born in mind that the gasification of the regions is now proceeding at an accelerated pace. Today, the general scheme of the gasification of the country, approved by the Government, has been fulfilled by almost 70 %. Over the past 10 years, large-scale projects have been implemented, diversified routes have been developed, own fields have been developed, and the entire domestic gas infrastructure has been updated. To address the new challenges facing the industry, we need a well-defined action plan, a road map. At the same time, during the years of independence of Kazakhstan, such a conceptual, strategic development plan was developed only once - the Program for the Development of the Gas Industry of the Republic of Kazakhstan for 2004-2010. After that, there were separate projects, local plans, but there is not yet a specific document that would cover the development of the entire modern sphere of the gas industry.

Substantiation of expediency of construction of oil and gas refining and petrochemical complexes in the republic

Any oil, as is known, reacts to a complex kind of raw materials, from which a wide range of petroleum products can be obtained. Depending on the plant at which it is reprocessed, the technological scheme of output of the product receives a fuel, oil or mixed direction [7; 18].

Substantiating the use of hydrocarbon resources at enterprises of petrochemical profile, one should take into account the actual scheme for obtaining the entire range of petrochemical products, the use of which in various fields of activity will allow developing a wide range of marketable products (Fig. 1).

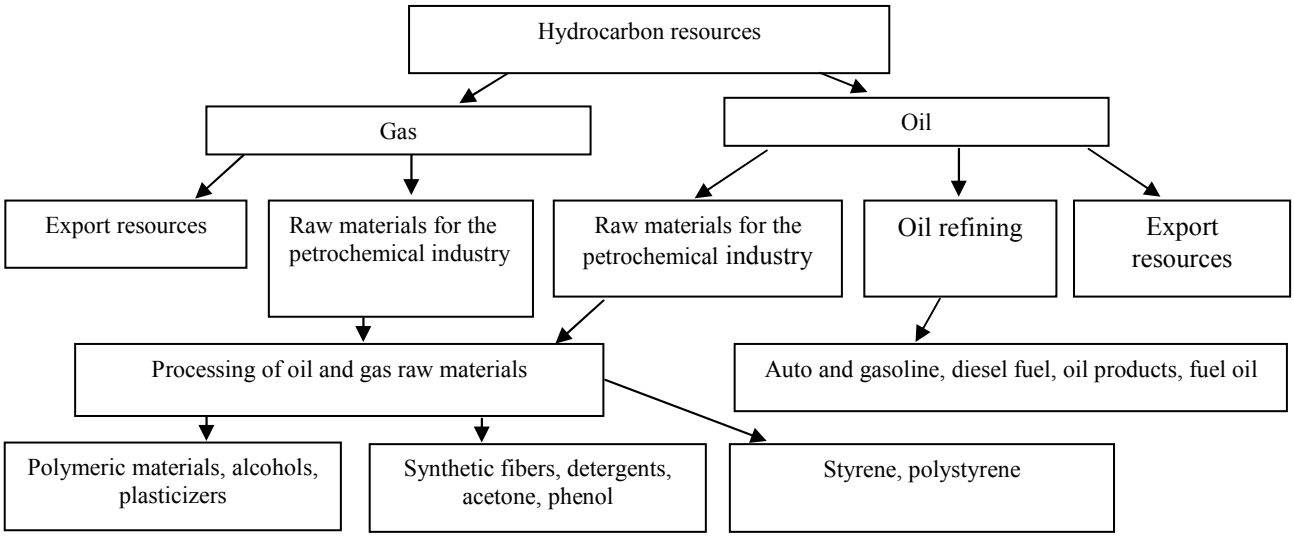

Figure 1. Directions for the integrated use of hydrocarbon feedstock (UBC) [2; 21]

The main idea, laid down in the content of this scheme, is that the processing of oil or associated gas can occur in different technological directions. However, preference should be given only to those that enable the introduction of technology for the deep processing of raw materials. With the scientifically grounded involvement of UVS in processing (pursuing the main objective - economically expedient allocation of all components), the tasks of increasing the efficiency of social production are solved by increasing the yield and maintaining a favorable ecological situation through the utilization of the majority of harmful compounds for the environment and reducing the size of production waste.

In addition, as calculated by specialists [8; 5], the growth of the world population to 9 billion people by 2050 will lead to an increase in consumption of chemical products by 1.5 times. Ten countries with the largest economies are also among the world's top ten producers of chemical products. In addition, the petrochemical industry has a significant multiplier effect on the economy. The creation of one workplace in this sector of the economy creates up to 7 jobs in related industries. The increase in the volume of production in the petrochemical industry by $ 1 gives an increase in other industries to $ 2.3, as 96 % of all consumer goods in the world are produced with the participation of petrochemicals.

As foreign experience shows, the sphere of application of hydrocarbon products - polymer materials, synthetic fibers, plasticizers, etc. is so wide that there is practically no industry and social and economic sector of the economy, wherever they are used as marketable products . Strength, resistance to thermal and chemical effects, the ability to preserve the set parameters (properties) for a long time, comparative cheapness and relative ease, availability and sufficiency of the necessary raw materials for obtaining them are the main advantages that allow successfully compete synthetic fibers with other materials .

Not for nothing recently, the consumption of petrochemical products is rapidly increasing in the world, especially in the neighboring fast-growing markets of China, India and the Asia-Pacific region.

In Kazakhstan, a number of industries have already been launched in the oil and gas chemical industry. Thus, the release of polymer products for the packaging and construction industries allowed the creation of 330 jobs in these enterprises [9; 6].

In the future, in the development of competitive export production, the main focus will be on oil and gas industry projects to produce high conversion products, in particular, polypropylene production with a capacity of about 500 thousand tons and polyethylene - 430 thousand tons [10; 3].

The launch of the polypropylene plant is scheduled for the end of 2020. At the same time, 90 % of the output will be exported, while 10 % will remain in the republic for the development of domestic production. It is determined [9; 6] that the implementation of the project for the production of polypropylene will attract $ 2 billion of investment create 3 thousand jobs during the construction phase and 500 places - during the operation.

By the way, after modernization of all three oil refineries of the country, it is planned to increase the volume of oil refining from 14.5 to 17.5 million tons. At the same time, the volume of production of light oil products will significantly increase: gasoline, diesel and aviation fuel.

Reconstruction and modernization of the refinery will increase the depth of oil refining from 51 to 88 % and bring the quality of oil products to Euro-4, Euro-5 standards.

After 2019, it is expected that the domestic needs of the country will be fully met by domestic oil products and the removal of the problem of import dependence on fuel from the agenda.

In the republic, the implementation of the cluster initiative creates prerequisites for the revival of such large oil refining and petrochemical facilities as the plastic plant (Aktau), JSC Polypropylene and the oil refinery (Atyrau), Novouzensk and Zhanazhol gas processing plants.

In general, summarizing the above, it should be noted that oil and gas resources need to be rationally and comprehensively used, having received a wide range of final products. They must have either a ready-made commodity form, or they must be sent to the subsequent redistributions, which help to turn them into competitive products.

According to scientists from the Institute of Economics of the Committee of Science of the Ministry of Education and Science of the Republic of Kazakhstan [2; 21], in general, the problems arising in the development of the oil and gas industry should be resolved in a phased manner in a timely manner - from the time of the start of geological prospecting and exploration to the commissioning of the field and the construction of hydrocarbon resource processing facilities. Such a strategy can be successfully implemented in the process of substantiating and forming the need to create petrochemical clusters.

The main directions of decarburization of the oil and gas complex and its technological modernization

In the conditions of gradual exhaustion of natural resources and negative conjuncture of prices for hydrocarbons, priorities should be shifted towards introducing low-carbon technologies.

The study of international experience of transition to low-carbon development shows that the main directions of decarburization of the oil and gas complex (NGK) are [11; 339]:

– increase energy efficiency and reduce energy intensity;

– reduction in the carbon intensity of production;

– development of the trading system (Fig. 2).

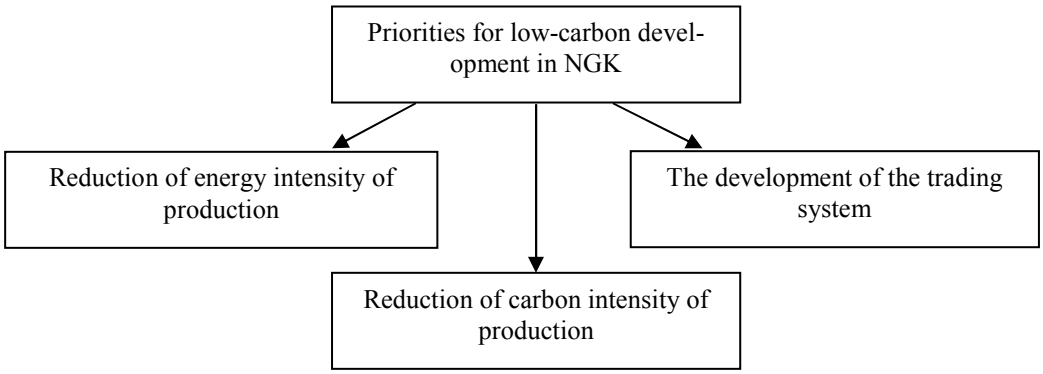

Figure 2. Priorities of low-carbon development in Oil and gas complex (the data of the work [11, 339])

According to experts [11; 339], the most important principles of low-carbon NGC development are:

1) the separation of economic growth from the growth of energy consumption and GHG emissions and other pollutants, thanks to technological innovation, infrastructure change and behavior patterns;

2) achievement of social and economic development goals, including economic growth, job creation, while reducing consumption of resources and accelerating scientific and technological progress;

3) conservation of natural resources and natural capital.

In general, the availability of investment, the development of new technologies and long-term cooperation can become a pledge of successful implementation of decarburization of the economy.

In the Address of the Head of State to the people of Kazakhstan «Third modernization of Kazakhstan: global competitiveness», accelerated technological modernization is not accidentally determined by the first priority. Unlike the previous two stages of the modernization of the country, when we can say, we went to the start; the third stage is an access to the global level of functioning of the RK in the world economy.

Therefore, the following systemic measures are envisaged as the main directions of the work of the oil and gas complex and the implementation of the President's Address: [10; 3]:

1. Introduction of an information system for oil accounting for the automated collection, processing, storage and use of data. This will allow modernizing and automating the ways of accounting for the volumes of oil production and oil turnover, including the technical costs of oil rotation.

2. Realization of the program «Intellectual deposit», based on the digital method. This will allow NC «KazMunaiGas» by means of automation to increase oil production by 2-5 %, to reduce the consumption of materials and equipment to 10 %, and to increase the energy efficiency of production by 20 %. Such a system is being introduced at the Uzen, S. Nurzhanov and Akshabulak deposits.

3. Planning the application of the principles of digital geological hydrodynamic models in the design and development of oil and gas fields. This will increase the efficiency of oil production and increase the final utilization rate of science in these processes.

4. The introduction of the system of electronic trading platforms in order to liberalize and activate the liquefied gas market from the second half of 2018. This will promote transparency in the allocation of resources and a decrease in state participation in this market.

In the republic in 2016 more than 70 % of the total economic profit was provided by only three branches: mining industry 30 %, construction sector 22 % and manufacturing industry 18 % [12; 8].

Undoubtedly, the traditional profitability of the mining industry still delays most of the investment on itself. And these investments have a propensity for growth, taking into account the prospect of discovering and developing new deposits of mineral resources in the country.

Diversification of hydrocarbon deliveries to world markets - strategic directions of activity of national companies

The creation of an efficiently functioning associated infrastructure is one of the factors driving investment in energy. Without its presence there will not be enough favorable climates for the implementation of projects in this area. Currently, the West has a huge oil basin of the Caspian Sea, in which the development of such fields as Chirag-Gunashli and Shah-Deniz in Azerbaijan, the North Caspian project in Kazakhstan, the Korchagin deposit in Russia, As well as Cheleken and the location of Block 1 in Turkmenistan. All of them will be potential sources of supply of hydrocarbons.

Turkmenistan, Azerbaijan, Iran and Russia are major holders of oil and gas. However, at the present moment, the transformation of the posts takes place. Previously, all were aimed at Europe, the Black and Baltic seas. Today, oil and gas flows are increasingly oriented to the East. In particular, Russian hydrocarbons are already sent to the Pacific Ocean and to China. At the same time, Kazakhstan carries out a transit of Russian oil and Turkmen gas to China. For this purpose, the «Kazakhstan-China» system was created - these are oil and gas pipelines, which are designed to distribute volumes of hydrocarbon raw materials supply to such a large market as China is [13; 16].

Kazakhstan has already created a multi-vector, efficient and reliable oil transportation system. At present, CPC (Caspian Pipeline Consortium) pumps two thirds of the entire republic's export oil. The total throughput capacity of CPC from Kazakhstan increased to 52 million tons of oil per year. The consortium has established itself as a successful model of effective international cooperation in the energy field in the CIS space [14; 10].

Today we diversify shipments from the republic to the Black and Baltic Sea basin; we leave the Aktau-Baku-Ceyhan system in the Mediterranean basin and export to China.

Later, the republic can use its infrastructure to transport oil and gas to the growing Asian market and will be an energy bridge between Europe and Asia.

Consequently, in the long term diversification of oil and gas supplies to international markets can become one of the strategic directions of activity of the national companies «KazMunayGas» and «KaztransOil».

Urgency of the «Eurasia» project for the study of the Caspian region

For Kazakhstan, which does not lose hope of using oil rents to create a high-tech industrial economy, the drop in export earnings is a serious challenge. In order to compensate for the negative effect, it is necessary to increase physical volumes of raw materials production, and this is impossible without increasing the efficiency of exploration and production of hydrocarbons.

According to the IEA (International Energy Agency), in the expected future, the dominant role of hydrocarbons in the global energy balance will continue. In other words, the demand for oil will be very long. At the same time, the era of «light oil» goes down in history. World practice shows that the search for large and gigantic hydrocarbon deposits has moved to great depths, more than 5-6 km. A striking confirmation of this fact can be the significant discovery of hydrocarbon deposits in the Mexican Bay at a depth of more than 10 km (Tyber oil field).

In Kazakhstan, the main potential of deep-lying horizons is concentrated in the Caspian Basin, which is part of the main oil and gas belt of the Earth. Within this gap there is 75-80 % of the resource base of our country. It is in this region that five giant hydrocarbon fields are discovered (Tengiz, Karachaganak, Kashagan, Astrakhan, Orenburg). Another of the main factors of the prospect of the Caspian depression lies in its powerful sedimentary cover (according to the order of 25-30 km).

According to foreign geologists, the Caspian depression has significant resources of hydrocarbon raw materials - about 40-50 billion tons of equivalent fuel, 90 % of these resources, in their opinion, lie on the depths of more than 7 km [15; 32].

In 2013, the outlines of the project «Eurasia» aimed at searching for hydrocarbons at great depths were designated in the republic. This project provides for the drilling of a record superdeep support and parametric well up to 15 km.

According to specialists [15; 33], if we talk about the effect and benefits in general, then for Kazakhstan this is, firstly, an increase in the proven recoverable reserves at least twice (at present they are estimated at 3.9 billion tons) , Secondly, the creation of a resource base as a kind of «safety pillow» in the event of possible economic upheavals; thirdly, long-term support of a high level of oil production in the world rating; fourth, the creation of up to 30 thousand new Workplaces, and fifthly, the creation of new science-intensive technologies and products (innovative times Work of a new type of equipment for the construction of deep and super deep wells as the basis for drilling exploration and production wells in the subsequent development of new deep-seated deposits) that allow increasing the local content.

Now this project goes into the stage of practical implementation. A package of investment preferences and tax benefits for project participants is already being developed. Especially for Eurasia, a separate operating company will be established with NC KazMunayGas.

In the near future, seismic exploration will commence preparation for drilling a deep well [16; 60].

It is assumed that the data obtained during the project implementation will allow studying the regional deep structure of possible oil and gas accumulation zones and setting parameters for seismic exploration. In addition, the deep and super deep (reference) storm is called upon to study the main features of the deep structure of little-studied large regions to determine the general patterns of graphic and territorial distribution of sediments favorable for oil and gas accumulation.

The data obtained as a result of drilling will allow answering the questions connected not only with oil geology, but also with the deep structure of the Earth, and also with the history of its formation. This information can be used in planning similar works in other parts of the world.

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Мемлекеттік энергия саясатының басым бағыттарының бірі ретіндегі отандық мұнай-газ саласының дамуы

Ірі табиғи ресурстық әлеуеттің болуы Қазақстанның индустриалды дамыған елдер арасындағы орнын айқындайтындығы, ал оны тиімді пайдалану республиканың энергетикалық қауіпсіздігінің маңызды алғышарты болып табылатындығы көрсетілген. Елдің мұнай-газ кешенінің дамуындағы айшықты мезет ретіндегі Қашаған кен орнында мұнай өндірудің жаңғыруының маңызы айрықшыланған. Болашақта көмірсутекті шикізатты пайдалану тиімділігін арттыру мәселелерін шешудегі маңызды бағыттарының бірі оны ғылыми негізделген өңдеуге жұмылдыру болып табылатындығы дәлелденген. Мұнай өңдеу кәсіпорнын ағымдық жаңғырту жанар-жағар маймен қамтамасыз етудің басқа деңгейге шығаратыны туралы пікір бекітілген. Болашақта парниктік газ тастандыларын азайту саласында қабылданған шешімдерді ескеріп, мұнай-газ секторы кәсіпорындарының төмен көмірсутекті пішінде дамуына көшу басылымдықтары негізделген. Ең алдымен, мұнай-газ саласының технологиялық жағынан мамандануына бағытталған жаңа векторына айрықша көңіл бөлінген. Мұнай тасымалдаушы бағыттарды әртараптандыру бойынша жұмыстар отандық мұнайды экспорттаудың техникалық мүмкіндіктерін кеңейтуге жасайтындығы көрсетілген. Халықаралық «Еуразия» мұнай консорциумының құру жобасын сәтті жүзеге асыру қажеттілігі ашылған. Бұл жобаның Каспий бойы ойпатының терең қойнауын барлауға бағдарланғандығы және бұл күндері оның жүзеге аса бастағаны айтылған.

Кілт сөздер: сала, мұнай, газ, әртараптандыру, өңдеу, көміртегілер, қорлар, технология, жоба, инвестор, тұтыну, құраушы, кластер, декарбонизациялау, тасымалдау, бұрғылау, ұңғымалар.

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Развитие отечественной нефтегазовой отрасли как одно из приоритетных направлений государственной энергополитики

Наличие крупного природно-ресурсного потенциала обусловливает особое место Казахстана среди индустриально развитых стран, а эффективное его использование становится одной из важнейших предпосылок энергетической безопасности республики. Автором выделяется значимость возобновления добычи нефти на месторождении Кашаган как важной вехи в развитии нефтегазового комплекса страны. Важным направлением в решении вопросов повышения эффективности использования углеводородного сырья в дальнейшем должно стать научно обоснованное вовлечение его в переработку. В результате текущей модернизации предприятия нефтепереработки выйдут на иной качественный уровень обеспечения ГСМ. Обосновываются приоритеты перехода к низкоуглеродному развитию предприятий нефтегазового сектора с учетом принятых обязательств в области снижения выбросов парниковых газов в перспективе. Особое внимание уделяется новому вектору развития нефтегазовой отрасли, направленному, прежде всего, на технологическую модернизацию ее предприятий. Подчеркивается, что работы по диверсификации нефтетранспортных маршрутов позволили расширить технические возможности экспорта отечественной нефти. Раскрывается необходимость успешной реализации проекта создания международного нефтяного консорциума «Евразия». Данный проект нацелен на разведку глубинных залежей Прикаспийской впадины и уже переходит в стадию практической реализации.

Ключевые слова: отрасль, нефть, газ, диверсификация, переработка, углеводороды, запасы, технология, проект, инвестор, потребление, компоненты, кластер, декарбонизация, транспортировка, бурение, скважины.

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