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ANALYSIS OF DEVELOPMENT OF THE COAL INDUSTRY OF KAZAKHSTAN

Abstract. First of all, a fundamental improvement in the quality of coal products is one of the most important factors in the development of the coal industry and increasing the competitiveness of coal. It is necessary to create an effective concept of coal quality management, which should ensure protection of the domestic market from low-quality coal products. In the article the authors noted that the Republic of Kazakhstan has a great opportunity to meet the needs for energy coals both on the domestic and foreign markets, this is due to the fact that the proven coal resources and the potential of the created capacities of coal enterprises have significant dimensions. In addition, the work on exploration and production of coalbed methane will solve by 2020 the energy problems of the whole of Central Kazakhstan and have a fundamental impact on the further development of the social sphere and the solution of environmental problems, the reduction in the amount of gas emitted into the atmosphere.

Keywords: coal industry, perspective, raw materials, forecast, resources, extraction.

Introduction

Mining and metallurgy in Kazakhstan in recent years are among the most dynamically developing sectors of domestic industry. The coal industry is one of the most important industries. The importance of coal as a fuel is great, coal also serves as a raw material for the chemical industry (production of artificial fibers, plastics).

The world coal market consists of two elements - the market of energy coals and the coking coal market.

Among the CIS countries, Kazakhstan ranks third in reserves and in excess of coal and the first place in terms of coal production per capita. The wide development of the coal industry of Kazakhstan began in the 30s due to the intensive development of the Karaganda basin and the industrialization of the national economy. The favorable geographic position of this basin, the availability of huge coal reserves, and their coking ability led to the creation of a powerful coal base on its base. The coal reserves of the Republic of Kazakhstan are accounted for by the state balance of 47 coal-bearing deposits and areas, including 197 sites, with a total diluted reserves of about 35 billion tons.

In the market conditions, the development of the coal industry is mainly determined by the need to acquire Kazakhstan's energy independence, taking into account the integration into the Euro-Asian top-energy and energy complex.

When solving issues related to the development of the coal industry in Kazakhstan, it is necessary to take into account the complex interaction of the two main factors of a technological and economic nature. The first is the qualitative characterization of different brands of coal and explains the specifics of their national economic use; the second is reflected in the level of economic efficiency of the coal industry.

MAIN PART

An analysis of the fuel and energy balance shows that there is a shortage of cheap graded coals for domestic needs and for enterprises that have boiler plants with layer combustion. In this regard, the expansion of coal production in the Maikuben basin of the Pavlodar region is of great importance. The coals of this basin are distinguished by high grades, easy enrichment and cheapness.

The Republic of Kazakhstan has a real opportunity to meet the need for energy coals both on the domestic and foreign markets, as the proven coal resources and the potential of the created capacities of

coal enterprises are huge. The total geological reserves and estimated reserves of coal in Kazakhstan are estimated at 150 billion tons..

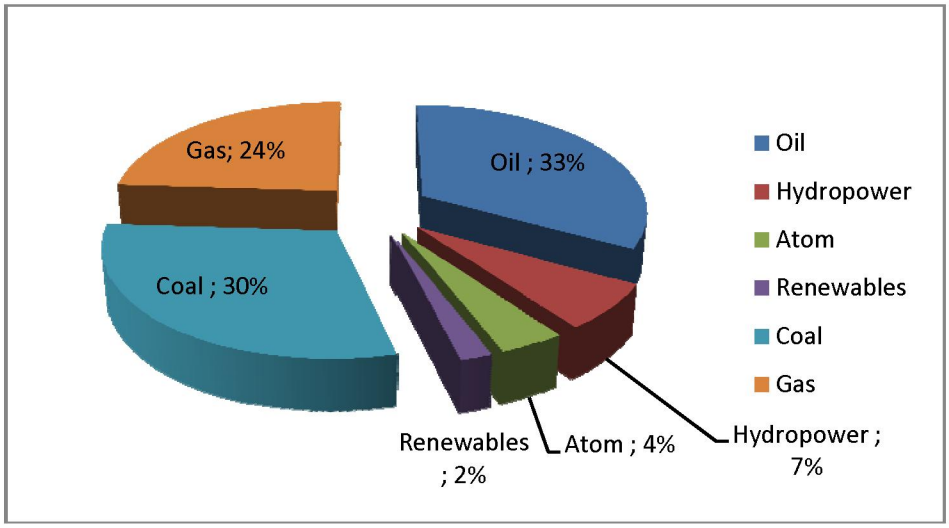

Figure 1 - The structure of global energy consumption

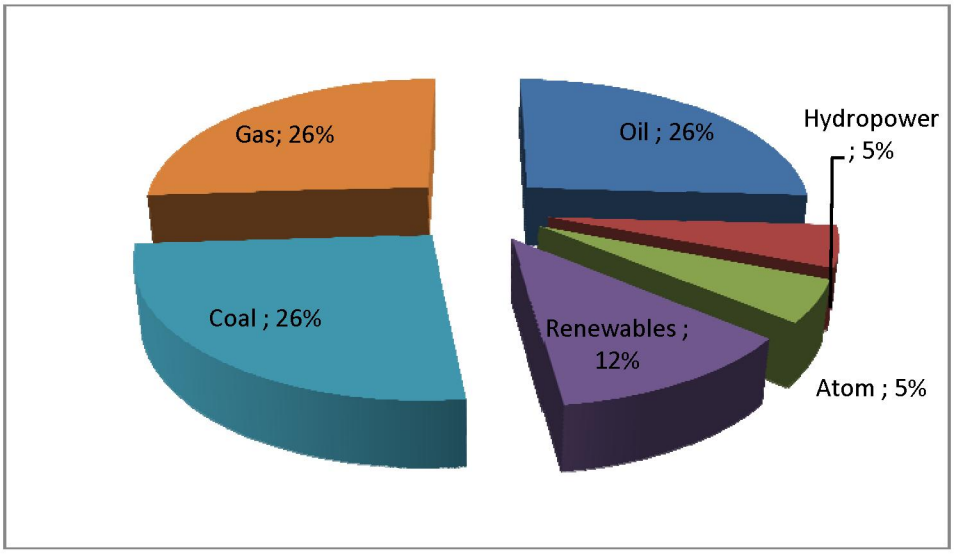

Figure 2 - The structure of global energy consumption in 2035

According to figures 1 and 2, oil production is 33% in 2017, but experts predict that in 2035 its production will decrease by 7% to 26%, hydropower from 7% to 5%, 4% to 5% renewable sources of 2% will increase to 12%, gas 24% will increase production to 26% and coal from 30% will decrease in production to 26%.

Kazakhstan has huge fuel-energy resources and is among the ten largest coal producers in the world market. The coal industry (along with the oil and gas industry) is the backbone of the energy complex of the Republic of Kazakhstan and one of the basic sectors of the country's economy. It provides 80% of the generation of electricity and heat, as well as 100% of the needs of the iron and steel industry for the production of coke. Today, coal production capacities in the Republic of Kazakhstan are significantly ahead of the demand for the traditional coal market, that is, the domestic market for thermal coal. In recent years, there has been a decline in coal production.

As you know, the reduction in demand for coal is currently observed not only in Russia, but throughout the world. But it is worth noting that, according to analysts, the real problem is not this, but in

the abundance of supply. Analysts on the basis of these factors predict the imminent decline of the era of coal as an energy resource. However, this will not happen very soon. "Most of the serious predictions in the electricity sector agree that coal will remain an essential component of the global energy balance for many years to come." The US Energy Information Administration (EIA) is also reassuring - according to him, fossil fuels will continue to account for nearly 80 % of global energy consumption up to 2040. "In fact, world demand for coal should increase by 2019 to 9 billion tons, which means an average increase of 2.1% per year. Electricity shortage in the African, Asian and South American countries, combined with the expected explosive growth of world energy consumption by 40% by 2040, can also spur the demand for fossil fuels. "Thus, despite the fact that the share of coal in the market will decline in favor of natural gas and renewable energy, it will still remain relevant. Prices for energy coals depend on demand, which is significantly influenced by the prices of oil and gas.

Most likely, coal prices will be set at a level that will allow producers to maintain a minimum profitability while at the same time restraining them from a sharp increase in production capacity and from developing new coal seams is connected with the problem of advance degassing of mine fields for the construction of new mines that has always stood and stands in a row priority, requiring prompt solution. The priority of these sites is evident in connection with the prospect of development and maintenance of the Karaganda Basin Mine Fund and the planned construction of new mines for the production of highly deficient coking coal grades KZh and K in these areas with a design capacity of more than 11 million tons per year. Without carrying out these works, further construction of new mines is unthinkable.

One of the significant factors for increasing the competitiveness of coal is a fundamental improvement in the quality of coal products. It is necessary to create an effective concept of coal quality management, which should ensure protection of the domestic market from low-quality coal products. Coal must accurately meet the requirements of various groups of consumers, forming a segment of the market for homogeneous products. The development and introduction of measures to improve the quality of coal products should be aimed at reducing the supply of unprocessed coal.

Today, the development of methane production in coal seams in Kazakhstan can create a new industry that has great prospects in the future. Karaganda as an industrial, coal-mining region of Kazakhstan can largely meet its needs in gas fuel due to development of resources of coalbed methane.

Timely work begun on the exploration and production of coalbed methane could really solve the energy problems not only in the Karaganda region by 2020 but become an alternative option for gasification of the whole of Central Kazakhstan and have a fundamental impact on the further development of the social sphere and the solution of environmental problems.

CONCLUSION

In addition, the proposed project is attractive from an environmental point of view. New unconventional hydrocarbon raw materials in the center of Kazakhstan have a huge trade and political significance.

The development of resources of methane of coal seams in the Karaganda basin will allow:

- radically improve the safety of mining operations and in the future increase coking coal production;
- to create a new branch of industry that has great prospects in the future;
- use coalbed methane in industries to generate electricity by burning in mobile gas power plants, CHP boiler houses (experience of methane use in boiler houses is available in Karaganda);
- for household purposes for centralized and retail supply of the population with fuel - gas to apartments and as fuel for motor transport;
- in the metallurgical industry and chemical industry for use as fuel, as well as in the production of synthetic materials;
- reduce the environmental component by reducing the amount of gas emitted into the atmosphere.

In addition to the above, it should be noted that in order for coal-mining enterprises to develop, owners should pay attention to the problems of training miners in order to avoid shortages of workers, as well as safety and protection of miners, providing them with modern personal protective equipment

The results obtained in the course of the research show that the coal industry is potentially a significant industry in terms of its development in the world market.

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АНАЛИЗ РАЗВИТИЯ УГОЛЬНОЙ ПРОМЫШЛЕННОСТИ КАЗАХСТАНА

Аннотация. Прежде всего одним из значимых факторов развития угольной промышленности и повышения конкурентоспособности угля является фундаментальное усовершенствование качества угольной продукции. Необходимо создать эффективную концепцию управления качеством углей, которая должна обеспечить защиту отечественного рынка от некачественной угольной продукции. В статье авторами отмечано, что Республика Казахстан располагает огромной возможностью для удовлетворения потребностей в энергетических углях как на отечественном, так и на внешнем рынке, это связано с тем, что разведанные угольные ресурсы и потенциал созданных мощностей угольных предприятий имеет весомые размеры. К тому же начатые работы по разведке и добыче метана угольных пластов решит к 2020 году энергетические проблемы всего Центрального Казахстана и оказать принципиальное влияние на дальнейшее развитие социальной сферы и решение экологических проблем, уменьшением количества выбрасываемого газа в атмосферу.

Ключевые слова: угольная промышленность, перспектива, сырье, прогноз, ресурсы, добыча

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ҚАЗАҚСТАН КӨЛІК ӨНЕРКӘСІПТІҢ ДАМУЫН ТАЛДАУ

Аннотация. Бірінші кезекте көмір өнеркәсібі дамуының маңызды факторларының бірі және көмір бәсекеге қабілеттілігін арттыру көмір өнімдерінің сапасын түбегейлі жақсарту болып табылады. төмен сапалы көмір өнімдерінің ішкі нарығын қорғау қажет тиімді сапа менеджменті тұжырымдамасы көмірде. Мақалада, автор Қазақстан Республикасы салдарынан көмір кәсіпорындары құрылған әлеуетті айтарлықтай сыйымдылығы өлшемдері бар дәлелденген көмір ресурстары және фактісі үшін де отандық және шетелдік нарықта энергетикалық көмір үшін қажеттіліктерін қанағаттандыру үшін үлкен мүмкіндік бар екенін атап өтті. Сонымен қатар, жұмыс 2020 жылға барлық Орталық Қазақстан энергетикалық мәселелерді шешеді және әлеуметтік және экологиялық проблемаларды одан әрі дамыту туралы іргелі әсер етуі, атмосферада шығаратын газ көлемін азайту болады көмір қабаттарынан метан сіңіру барлау және өндіру басталды.

Түйін сөздер: көмір өнеркәсібі, болашағы, шикізат, болжам, ресурстар, өндіру

Примечание: Статья выполнена в рамках реализации проекта, согласно договора №209 на программно-целевое финансирование от 19 марта 2018 года по подпрограмме 1, на тему «Оценка технико-экономической эффективности и технологической возможности использования слабо-коксующихся углей Казахстана в ферросплавном производстве и в качестве бездымного топлива для бытовых нужд». Регистрационная карта №01.01-22/161 от 13.04.2018г., Номер госрегистрации №0118РК00698.

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