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PROBLEMS AND PROSPECTS FOR INVESTMENTS IN THE COAL INDUSTRY OF THE KYRGYZ REPUBLIC

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ПРОБЛЕМЫ И ПЕРСПЕКТИВЫ ИНВЕСТИЦИЙ В УГОЛЬНУЮ ПРОМЫШЛЕННОСТЬ КИРГИЗСКОЙ РЕСПУБЛИКИ

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Abstract. This study is devoted to the development of investments in the coal industry in the Kyrgyz Republic as an economic environment for the growth of the potential of the country's coal industry. The purpose of this study is to examine the coal market in Kyrgyzstan, as well as consideration of the main trends in the coal industry and the qualitative characteristics of the industry. In accordance with the purpose of the paper, it attempts to give an analysis of the current state of the coal industry in Kyrgyzstan, to analyze the change in the qualitative characteristics of the industry in recent years. It also considers the main priorities of the state policy with regard to the coal industry at the present stage, such as: increasing the role of coal in the power industry; building up the export potential of the coal industry; increasing the efficiency of rail transport of coal; and ensuring a favorable investment climate. The coal mining industry in the Kyrgyz Republic is a big economic sector as coal is the primary fuel for electricity generation and the cheapest and most sufficient source of energy. This paper provides an overview of coal reserves in the Kyrgyz Republic and an analysis of the coal industry's systematic data with respect to the number of companies, their total production and productivity. It discusses the issues of investment in the coal industry regarding its future, including creation of an investment-favorable climate, financial support for the coal industry of the republic.

Аннотация. Данное исследование посвящено развитию инвестиций в угольную промышленность Киргизской Республики как экономической среде роста потенциала страны. Целью данного исследования является изучение рынка угля Кыргызстана, а также рассмотрение основных тенденций развития угольной отрасли, и их характеристики. Предпринята попытка дать анализ современного состояния угольной отрасли Кыргызстана, проанализировать изменение качественных характеристик отрасли за последние годы, рассмотреть основные приоритеты государственной политики. Применительно к угольной отрасли на современном этапе это: повышение роли угля в электроэнергетике; наращивание экспортного потенциала угольной отрасли; повышение эффективности железнодорожных перевозок угля; и обеспечение благоприятного инвестиционного климата. Угольная промышленность в Киргизской Республике является крупным сектором экономики, поскольку уголь является основным топливом для производства электроэнергии и самым дешевым и наиболее достаточным источником энергии. В данной статье представлен обзор запасов угля в стране и систематический анализ данных угольной отрасли в отношении количества компаний, их общего производства и производительности. В нем обсуждаются

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вопросы инвестирования в угольную отрасль относительно ее будущего, в том числе создание инвестиционно-благоприятного климата, финансовая поддержка угольной отрасли республики.

Keywords: investment, coal, energy, production.

Ключевые слова: инвестиции, уголь, энергия, производство.

Introduction

In the modern fuel and energy balance of Kyrgyzstan, fossil coal plays a leading role, accounting for more than half of the energy resources used by the population for heating. From the point of view of industrial and energy consumption, coal is called "black gold" for some reason. Taking into account the existing economic, geopolitical conditions of the republic, market prices for energy carriers, taking into account the possibility of obtaining a number of commodity products from coal, coal for Kyrgyzstan is an invaluable gift of nature and strategic raw materials.

During the selection of materials for this paper, we faced some difficulties due to the fact that there is a deficit of information on the prices and volumes of coal sales on the market, as well as the financial results of the coal companies' activity, has significantly worsened. This information is largely transferred to the rank of commercial secret of firms, as a result of which coal companies and potential buyers of their products wander in the "darkness", repeatedly increasing their operational risks. Of course, there is no big tragedy here. All countries, during the transition to the market, passed the stage of the deficit of information resources.

Over time, coal producers in Kyrgyzstan will realize that the benefits of the open business are greater than those of the excessively tough press of the tax system. But it also cannot be considered rational when each coal company creates its own mini-institutions for forecasting the coal market situation: they lack information about the situation on the coal market, or the qualifications for building large information and analytical systems.

However, despite the fact the coal industry is in crisis, the explored coal reserves are 1.3 billion tons, previously estimated — about 2.0 billion tons. Geological reserves and forecasted resources of coking coal reach 260 million tons, which allows us to start work on their exploration and plan the construction of coke-chemical production (http://cbd.minjust.gov.kg/act/view/ru-ru/5764).

One of the main problems of the industry is the unsatisfactory state of the coal and oil and gas industries, which, in terms of their potential, can fully meet the country's coal needs and, in part, in petroleum products. This situation is caused by high costs for transportation of coal, backward production technology, large depreciation of fixed assets, reaching 95%, inefficiency of most coal companies in conditions of reduced demand for coal and reduced solvency of consumers (http://cbd.minjust.gov.kg/act/view/ru-ru/61542). Many coal mines and sections laid 40-50 years ago, work out coal reserves, which are non-technological. The mine fund is worn out, the equipment is used, basically, does not meet the technological requirements of current rules. The sharp increase in railway tariffs and a drop-in demand for coal have led to a reduction in coal production and, as a result, an increase in unit costs for its production. In addition, at many enterprises, work is conducted with gross violations of the regulatory legal acts of the Kyrgyz Republic in the field of industrial safety and labor legislation (http://cbd.minjust.gov.kg/act/view/ru-ru/5764). The main causes of the crisis state of the coal industry are the absence of an effective owner, a low level of management, these factors lead to apply the creation of an investment-favorable climate, financial support for the coal industry of the republic. With the help of the

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government and foreign and national investors the number of coal mining organizations will be increased. At the same time, it gives possibility to update material and technical base of these organizations.

Fossil coal plays a leading role, accounting for more than half of the energy resources used by the population for heating in the modern fuel and energy balance of Kyrgyzstan. From the point of view of industrial and energy consumption, coal is called "black gold" for some reason. Taking into account the existing economic, geopolitical conditions of the republic, market prices for energy carriers, and taking into account the possibility of obtaining a number of commodity products from coal, coal for the Kyrgyz Republic is an invaluable gift of nature and one of the main strategic raw materials.

About 70 major coal deposits are located on the territory of the republic, the reserves of which are estimated at more than 5.7 billion tons. Coal resources are unevenly distributed across the territory of the republic: 65% of coal is in Southern Kyrgyzstan, 33% in Naryn, 2% in Issyk-Kul region, more than 70% of coal deposits are concentrated in mountainous regions of the republic. Most of the coal produced is spent in power engineering, 32% in communal services, and 13% — for the production of building materials (http://cbd.minjust.gov.kg/act/view/ru-ru/5764).

Despite the presence of many coal deposits in the country, most of the coal consumed is imported from Kazakhstan (Karaganda). The future of the coal industry is related to the degree of development of a sufficient number of promising but not yet developed coal deposits, among which the Kavak brown coal basin occupies an economically important place.

Coal reserves of the Kavak basin are 2.3 billion tons, which constitutes 23.3% of the country's total reserves (http://cbd.minjust.gov.kg/act/view/ru-ru/5764). However, in the conditions of a market economy without complex development of the deposit, without the development of humic and oxidized coals, coal fines, useful overburden rocks, associated minerals, even coal ash, such commodities as fertilizer, energy and household gas, diesel fuel, gasoline, clay (raw materials for aluminum) and a number of other chemical products, i.e. when coal is used only as a solid fuel, coal producers will not be able to provide profitability of production.

Data source and methodology

In order to make a comprehensive analysis of the research, a systematic search was used to collect historical data, bibliographic data. Analyzing the data on coal production provided by proceedings and reports noted that the largest producing mine is in Kabak Basin. This article provides a brief description of the characteristics of the coal industry in the Kyrgyz Republic, presents an overview of coal production and processing methods, and discusses the major issues associated with coal mining investment and processing. A summary of current research activities supported by state reports and findings provides the context for recommendations and discussions for future research of the coal mining in the Kyrgyz Republic.

Findings and Discussion

The coal industry is a branch of the fuel and energy complex that deals with enriching and briquetting the fossil fuels. The coal industry is the oldest branch for the extraction of mineral fuels. It continues to provide a significant part of the world's energy needs in fuel, especially in the generation of electricity [1].

The role of coal as one of the main fuel and energy resources is determined by several factors:

1) large resource base (one of the highest indicators of the level of reserves among minerals extracted);

2) convenience of storing large volumes of coal reserves;

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3) provision of long-distance sea transportation of coal with small transport costs;

4) cheapness of coal (in comparison with the cost of direct substitutes);

5) relatively low degree of monopolization of supply; 6) the possibility of selling coal in various sales markets.

Coal is a combustible sedimentary rock of vegetable origin, which consists mainly of carbon and a number of other chemical elements. Coal continues to play a crucial role in the global economy. Coal is classified according to several parameters: the place of extraction, the method of extraction, the chemical composition.

Establishment and development of coal mining in the Kyrgyz Republic

The coal industry of the Kyrgyz Republic is the oldest branch of the national economy. Primitive mining in some coal deposits began in the XIX century. Coal mining by entrepreneurs and local people in these four deposits amounted to 166 thousand tons in 1917, which constituted about 70% of all coal production in Central Asia. Until 1940, the coal industry was based mainly on the above mentioned deposits, the capacity of the mines was very different — from 50 thousand to 100 thousand tons of coal per year. For instance, Kyzyl-Kiya gave 60.2% of the entire Kyrgyz coal production, Suluktu — 23.3%, Kok-Zhangak — 10.4%, Tash-Komur — 3.0%. In 1940, coal production increased by 17 times in comparison with 1913 [2].

In the postwar years, other deposits such as Jyrgalan, Kadzhisay, Minkush and Almalyk began to be developed. In the 70's the coal industry had 10 mines and 2 sections with a total production capacity of more than 4.5 million tons of coal per year. The share of open-pit coal mining accounted for 55% of total production. At the same time, the state-owned coal mining enterprises developed the largest fields - Suluktu, Tash-Komur, Kyzyl-Kiya and Kok-Zhangak [2].

Despite the presence of many coal deposits in the country, most of the coal consumed is imported from Kazakhstan (Karaganda). The future of the coal industry is related to the degree of development of a sufficient number of promising but still unexploited coal deposits, among which the Kabak brown coal basin occupies an economically important place (geological reserves of coal are 800 million tons) [3]. At present, in connection with the need for a uniform distribution of productive forces across the regions and fuel supply to the northern part of the republic, strengthening the fuel and energy independence of Kyrgyzstan, the development of the Kara-Keche field is of strategic importance. Its coal reserves are 312.6 million tons, or 23.3% of the country's reserves. However, in the conditions of a market economy without complex development of the deposit, without the development of humic and oxidized coals, coal fines, useful overburden rocks, associated minerals, even coal ash, such commodities as fertilizer, energy and household gas, diesel fuel, gasoline, clay (raw materials for aluminum) and a number of other chemical products, i.e. when coal is used only as a solid fuel, coal producers will not provide profitability of production. Currently, attention is being given to the development of the coal industry, and to one of the main directions for ensuring energy security in the National Energy Program for 2008-2019. The strategy for the development of the fuel and energy complex for the future up to 2025 together with the creation of conditions for the diversification of energy sources with replacement of imported coal from Kazakhstan is currently under consideration (http://cbd.minjust.gov.kg/act/view/ru-ru/5764).

Priority development of the coal industry is also indicated in the National Strategy for Sustainable Development of the enterprises and organizations with 4,080 people, including 3,400 Kyrgyz Republic for 2013-2020, but all coal-mining enterprises develop at their own expense and are in search of investment (http://cbd.minjust.gov.kg/act/view/ru-ru/5764). However, investors have no interest in assets in the coal sector, since the mines require constant development to increase production and enrich coal. The importance of mineral resources for the economy of the

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Kyrgyz Republic is enormous. Possessing significant reserves of various minerals, the country is in a position to ensure the development of mining and metallurgical, fuel and energy complexes, the industries dependent on them and solve many complex social problems, making a definite contribution to the economy of the country. At the same time, Kyrgyzstan, having a significant potential for the development of the mining industry, launching new enterprises and creating jobs, cannot fully realize the existing opportunities [3].

After the acquisition of independence in Kyrgyzstan as of January 1, 1998, the coal mining industry of the Kyrgyz Republic comprised 12 operating mines and sections, 5 auxiliary coal-mining enterprises with 3400 people (http://cbd.minjust.gov.kg/act/view/ru-ru/5764).

In addition, there were five coal-mining enterprises in the sector: mine management Kyzyl-Kiya, Suluktu, Tash-Komur, Central and Almalyk sections, which are in accordance with the PESAC program at the stage of liquidation.

Recommendations on improvement of Kavak basin coal sales

The role of coal used as fuel and technological raw materials, predetermines the high requirements for pricing in the coal industry. On how well the wholesale prices for coal are set, costs depend, and, ultimately, prices for many types of products. When developing coal prices, they proceed from the fact that they must first of all reflect the socially necessary labor costs in the extraction of minerals. The main indicators of the establishment of wholesale prices for coal are: the volume of coal production and supply by brands, classes and grades, the caloric content of all types of commercial coal, ash, sulfur and moisture content and total cost price.

The coal industry, as well as other mining industries, is characterized by differentiation of costs for production by individual deposits and enterprises. Operating wholesale prices for coal are introduced from January 1, 1982. They were installed in basins and coal deposits based on coal processing and a minimum level of profitability. Currently, the highest wholesale prices are the prices for Donetsk coal. In comparison with Kuznetsk it is more expensive to 60% [3].

Establishing a general level of wholesale prices for coal, based on the need to provide industry recovery of costs and obtaining regulatory profits, is only the first stage of planning wholesale prices.

By designation, coal can be of technological brands: F (fat), K (coconut), OC (reclaimed caking), B (brown); G (gas); and energy brands: A (anthracite), PA (semi-anthracite), T (lean), and D (long-flame). In accordance with this classification, wholesale prices for coal are set for individual brands, and within brands, they are differentiated by the size of classes. [4].

Wholesale prices for coal should also reflect such quality indicators as ash content, humidity and sulfur content. For this purpose, surcharges (discounts) are applied to wholesale prices for coal.

The coal industry is a specific industry, the features of which are the dependent on the technical and economic performance of each enterprise on the mining and geological conditions of occurrence and methods of coal mining; the limited availability of mineral resources in each field. As a result, the limited service life of the enterprise and the volume of production; deterioration of the operating conditions of the deposit as it is developed [5].

Taking into account the marketing research and shortcomings mentioned above in the development of the deposit to eliminate negatives in mining operations and their development at the Kara-Keche deposit, we suppose the following measures are necessary to implement:

To adopt new organizational solutions:

1. Transfer of license rights to conduct mining operations for coal mining and exploration at a field to one enterprise (legal entity), to form an association (consortium) operating from the field of

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firms and companies with all the rights for technical management of production processes, solving all production problems;

2. Carrying out of clearing works in no more than two quarries (sections), separated by a disturbed zone, according to a single project, in which cleaning and preparatory work would be interlinked;

3. Considering that it is impossible to transport large amounts of coal to consumers (with production volumes of 1 million tons or more) by conventional vehicles, a transport consortium should be established (for example, by concluding a consortium agreement between the coal produced at the deposit by the enterprise and the Bishkek thermal power plant), which could ensure the delivery of solid fuel to consumers not only in the Naryn region, but also in Bishkek (including the Bishkek TPP), Chui and Issyk-Kul valleys. The optimal solution to this issue would be the construction of the Balykchy-Chayek railway with a branch directly up to the field, possibly with a narrow gauge (900mm), which is much cheaper than a railroad track with a wide track. For many years, such a railway has existed between Suluktu town and the railway station Proletarsk in Tajikistan.

4. The newly created production association (consortium) will provide a one-time sufficiently large financial support (state, sponsorship by individuals and legal entities in the form of long-term loans, preferably interest-free). These funds are necessary for the acquisition of modern mining and mining equipment, without which it is impossible to increase coal production to these volumes. When mining coal at the field is about 1 million tons or more, these funds can be returned to the state within 10 to 15 years.

5. For all these deposits, should be made strict control by the State Ecological Inspectorate and the State Agency of Geology and Mineral Raw Materials on compliance with the rules for mining, conservation of the earth's interior and environment.

Conclusion

In the conditions of formation and development of market relations, the fuel and energy complex as the main base for the development of all branches of the national economy, acquires special significance.

The coal industry is one of the basic branches of heavy industry. This causes a close interconnection of scientific and technological progress in the coal industry and other industries.

Given the high labor intensity, the complexity of the natural and technological conditions of coal mining, scientific and technological progress in the industry is of paramount importance as the main factor in increasing production efficiency.

In the development of the national economy, an exceptionally important role belongs to coal as mineral fuel and technological raw material.

The value of coal as an energy fuel and technological raw material will increase steadily. Coal was and remains the main fuel for power plant.

In the modern fuel and energy balance of Kyrgyzstan, fossil coal plays a leading role, accounting for more than half of the energy resources used by the population for heating. From the point of view of industrial and energy consumption, coal is called "black gold" for some reason. Taking into account the existing economic, geopolitical conditions of the republic, market prices for energy carriers, and taking into account the possibility of obtaining a number of commodity products from coal, coal for the Kyrgyz Republic is an invaluable gift of nature and strategic raw material.

Despite the presence of many coal deposits in the country, most of the consumed coal is imported from Kazakhstan (Karaganda). The future of the coal industry is related to the degree of

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development of a sufficient number of promising but not yet developed coal deposits; among them is the Kavak brown coal basin which occupies an economically important place.

Moreover, for the profitability and completeness of the project, it is necessary to implement an accompanying project — the construction of a railway in the Balykchy-Kochkor-Kara-Keche sections.

The construction of a new railway in the area of Balykchy-Kochkor-Kara-Keche will fundamentally solve the transport problem of the Kara-Keche deposit and the adjacent territories. Being a reliable vehicle, the railway in the coming years will provide a significant increase in the volume of coal mining at the field. Thus, the Balykchy-Kochkor-Kara-Keche railway is a critical moment for solving import-substituting tasks in the country's economy.

Along with economic and environmental benefits, the construction of this road is also have strategic importance, it will become an important component of the transport sector with its further development in the North-South Transnational Highway (along the Balykchy-Jalal-Abad (Karasu) route with access to China).

The third aspect in the implementation of the complex project on Kara-Keche is the construction of the Kara-Keche TPP (600 MW). Year after year, in the period of low water availability, the country's population is in short supply of electricity. As the economy of the republic develops, the lack of electricity in the winter period becomes more tangible, limiting the development of industrial production and improving the living standards of the population.

Given the shortage of power generation, in order to ensure the availability of affordable, high-quality and reliable electricity and meet the increasing demand for electricity, it is necessary to build thermal generators with a focus on the resources of the local coal field. Thus, satisfying the increasing demand for electricity and providing its own energy resources base of the republic.

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