

## Study on Problems and Countermeasures of China's Supervision on Coal Resources Recovery Rate

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**Abstract.** Coal is the most important energy resources in China's economy. In recent years, China's coal industry has made great progress. However, many problems including weak sense of resource protection among people, confusion of departments in charge of supervision, lacking in mechanism of motivation, etc, arose on China's coal resources recovery rate, which caused a serious waste of coal resources. Therefore, it is necessary to establish a monitoring mechanism to solve these problems, including paying more attention to the regulation on coal resources recovery rate, defining the functions of government regulation, establishment of information disclosure and the system of compensation for their use, etc.

### Introduction

Coal is the largest and most widely distributed non-renewable resources in China. By the end of 2013, the country proved coal reserves 1472.87Gt [1]. Although China's coal reserves ranks third in the world, the amount of coal per person only ranks 15 of the world. In recent years, with the rapid economic and social development and the expansion of coal application, China has become the largest coal producer and consumer in the world. According to statistics, in 2013, China's coal production accounted for 47.4% of total world, and coal consumption accounted for 50.3% of total world [2]. China has consumed more than half of the world's total coal production. Coal is the most important energy resources in China's energy structure. In 2013, China's total primary energy production is 3400Mtce, of which coal production accounted for 75.3%, oil accounted for 8.9%, natural gas accounted for 4.6%, non-fossil energy accounted for 11.2% [3]. It is quite clear that China's energy structure cannot be changed in a short time. Therefore, it is essential to take effective measures to save and protect China's coal resources.

It's true that China's government regulation of coal resources is in a mess and the supervision functions of coal resources recovery rate are getting more and more weakening. There are some coal mines who usually go beyond the approved limits of their mining area, which not only destroys and wastes resources, but threatens work safety of coal mine. The article ties to understand the present state of China's supervision on coal resources recovery rate and analyzes the existing problems and their influence so as to provide base for putting forward the corresponding measures of improvement, which would play a positive role in supporting the national economy and sustainable social development.

### **The Main Problems of China's supervision on coal resources recovery rate**

It is a well-known fact that the healthy development of coal mine industry is greatly influenced by policies and measures. In the development of China's coal industry, the authorities give more attention to the prevalence of coal production and development, work safety, and technological advances etc. and devote less attention to coal resources recovery rate management aspects. For example, the 12th Five-Year Plan for coal industry excluded the quality objectives and requirements for improving coal resources recovery rate, which bears out the fact that authorities did not attach importance to supervision on coal resources recovery rate.

The supervision system for coal resources recovery rate cannot meet the present requirements, which is mainly reflected in the following:

First, the factors of distortion results from incompleteness and faultiness of coal laws and stipulations. Over the past twenty years, remarkable achievements have been made in China's coal production and coal mine recovery. Law of the People's Republic of China on the Coal Industry, Mineral Resources Law of the People's Republic of China, and Provisional Measures for Administration of Coal Mine Recovery (Order of the Ministry of Coal Industry of China No.5) have been issued, which has played an important role in maintaining the development of China's coal industry. However, China's supervision system of coal industry changed in the late of 1990s and authorities did not, at appropriate times, respond with changes in auxiliary laws and regulations in order to support the new system. On December 9, 2012, the State Development and Reform Commission promulgated the Provisional Regulation on Administration of Coal Mine Recovery (Order of the State Development and Reform Commission No.17). The Provisional Regulation went into effect as of January 9, 2013. As a new supervision rule, the Provisional Regulation has many shortcomings, which is mainly manifested in the following aspects: First, as a low legal hierarchy, the Provisional Regulation could not regulate and adjust supervision system of coal mine recovery. The second is the penalty of 30,000 Yuan for any coal mine who fails to perform the obligations for recovery prescribed in this regulation has been too low to keep down illegal activities. For example, the Article 28 in this regulation is that the coal production license will be revoked by agency for issue and administration if coal mine below recovery rate set for exploiting coal resources achieved. Law of the People's Republic of China on the Coal Industry amended on June 29, 2013, abolished the system of coal production license. The consequence of this law revision is the article 28 mentioned above is not law-based. In addition, the technical standards of coal recovery rate based on supervision still follow the policies formulated by the Ministry of Coal Industry. These policies developed in the last 1980s and 1990s, including Code of Reserves Management for Operating Mine, Technical Policies in Coal Industry, etc, couldn't meet the demands of increasing development.

Second, in 1998, China implemented the reform of government institutions and the Ministry of Coal Industry was revoked. Since then, Coal regulatory functions are divided into several government departments. In China's central government, there are the State Development and Reform Commission, The Ministry of Land and Resources of the People's Republic of China (MOLR), State Administration of Coal Mine Safety, the State-owned Assets Supervision and Administration Commission, The Ministry of Finance of the People's Republic of China (MOF) and State Tax Administration, etc. In the governments at all levels in the Region, there are Development and Reform Commission, Coal Industry Bureau, Economic and Information

Commission, Coal Mine Safety Supervision Bureau, The Bureau of State Taxation and The Bureau of Land and Resources, etc. There are two drawbacks in the current system:

On one hand, the functions of resource supervision is seriously divided, especially after the Ministry of Coal revoked, the power of centralized management has been seriously weakened. The departments in charge of coal recovery rate belong to different management systems and their functions are very different. This supervision system lacking of systematic and unitary supervision can easily lead to regulatory conflicts and management gaps, which will hamper overall development of coal industry [4]. On the other hand, inadequate staffing cannot perform the whole process and dynamic supervision. China's coal mines have many qualities such as a great quantity, extensive dispersion. In practice, the shortage of specialist staff rarely suffices supervision [5]. In addition, the data of supervision primarily collected from coal mining and occasional spot checks had a pernicious influence such as data fabrication.

Third, coal mining enterprises lack the ability to self-regulation. The annual register records system is designed by the state to strengthen the administration of the coal mining recovery. On one hand, coal mine enterprise compliance with making real data is not expected to improve in the absence of perfect and effective regulatory system. In practice, coal reserves assessment is not accurate. For example, some of the thick coal seams, ash or higher sulfur coals were incorrectly assessed as non-economically recoverable coal seams [6]. On the other hand, still battered by the effects of a weak coal economy, some coal mine enterprises failed to do in accordance with the provisions of the Provisional Regulation, especially the small coal mines whose processing technique is backward and lack of the professional management staff.

Furthermore, the departments for supervision coal recovery should establish public display system in spot-check management. Unfortunately, very few departments take the initiative to publish their information. China has not established the government information disclosure system and public participation system, which would not encourage coal mining enterprises supervision by the public to fulfill their legal obligations.

The defect of finance compensation for coal resources recovery is one of the reasons why China's coal enterprises lack motivation. Like many countries in the world, the state implements a system of resource paid acquisition for their use and the owners' equity is mainly reflected by collecting resource tax, resource compensation fee, mining right cost, and so on. However, China's resource tax and the recovery rate are not linked and the resource tax according to the amount of coal is not reasonable. In addition, the mineral resources compensation rate is so low that many coal mining enterprises do not cherish resources. For example, since 1994, the rate of coal resources has remained at 1 percent. Because of the low tax rate and the poorly supervising, many coal mining enterprises made a false report on the recovery rate, which resulted in the amount of mineral resources compensation cannot fully reflect the current economic value of coal resources [7]. In addition, the functions of resource tax and resource compensation fee are almost the same [8].

Under the condition of market economy, if coal mining enterprises carry out exploitation thin coal seams, they will suffer losses. Thus, the preferential measures in mining of low coal seams will greatly encourage enterprises to enhance the recovery rate of coal mining. Unfortunately, the Provisional Regulation only provides the incentive system in principle, but the local governments did not formulate measures of implementation in accordance with the Provisional Regulation.

## Conclusions

It is highly necessary for the Chinese government to take steps to enhance supervision on coal resources recovery rate.

First, people should realize the importance of the supervision of coal resources recovery rate. In the development of coal industry, the author recommends the state should establish the concept of harmonious ecological civilization, handle the relationship between resource protection and economic development and the resource protection should be given priority. Only in this way can we achieve the sustainable development of resources and environment. It includes the following aspects: establishment of coal rational development planning, improvement of the threshold for the coal mining, promoting merger and reorganization of coal enterprises, strengthening supervision of coal enterprises, strict implementation of the legislation and standards of coal resources and so on.

Second, Chinese government should improve supervision mechanism and elevate supervision efficiency from three aspects:

(1) The state should exercise a uniform supervision system. The author believes that the experience of the United States, Australia, South Africa and other countries is worth learning. The state should continue to promote the reform of current coal supervision system and establish a unified department in charge of the coal mine recovery. And the various functions of the coal resource recovery rate should be relative concentration of supervision.

(2) The local government should improve regulatory bodies, set up a special inspection body of coal resource recovery and be provided with necessary personnel according to the number of coal mine and the production capacity. In the process of coal production, all sectors may have resulted in a waste of resources. Therefore, it is necessary to strengthen the whole process supervision, occasional spot checks and on-site management.

(3) The publicity of government information should also be strengthened. The State should take the reference of American best practice for information statistics of coal resource supervision and establish an annual reporting system. It involves coal production, coal reserves, the number of coal mines and their employment, coal-mining method, coal mining recovery rate and so on, which should be issued by the government communiqué.

The third is to establish an incentive mechanism for coal resource recovery. On one hand, the state should actively promote the reform of resources tax. The resources tax will be levied ad valorem instead of on weight; its tax rate is designed by recovery rate levels. The tax is equal to the ratio of the actual recovery rate and the approved recovery. Meanwhile, learning from foreign experience, China can build resource compensation tax standards based on differences according to coal-mining methods, changes in market prices, coal varieties and other factors [9].

On the other hand, China's current standard of coal resources recovery rate is unreasonable. The natural endowments, management and technology of US are superior to our country, but in 2012 the average recovery rate of US is only reached 77.99 percent, especially underground mining, only 56.09%. The author suggests that China should set the scientific standard of coal mining recovery rate by considering the current technical conditions, coal quality, quantity, market, operating costs and other factors. In addition, China should strengthen supervision on coal mining and utilization planning and strict the requirements of coal mining enterprises in accordance with the approved mining method to ensure the requirements of the recovery rate are fulfilled [10].

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