

The Function of Energy Metering Management in National Economy

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Abstract: at present, the rising energy demand and limited energy reserves have become the “bottleneck” restricting the sustainable development of China's social economy. Starting from China's energy utilization structure, this paper makes an in-depth analysis on the necessity and implementation methods of the implementation of energy-saving strategy, in order to further optimize China's energy utilization structure, achieve the purpose of energy conservation and consumption reduction, and promote the sustainable development of social economy.

1. Introduction

Energy is not only the material guarantee to maintain the sustainable development of human society, but also the material basis of China's national economy. China has a vast territory, vast territory and abundant resources, and its total geological storage ranks third in the world. . China's coal reserves rank first in the world, and its total coal energy consumption ranks first in the world, but its oil reserves can only reach 2% ~ 4% of the world level, and its oil resources are very poor. In addition, China's total oil and power consumption is second only to the United States. At present, energy shortage has seriously restricted the sustainable development of China's national economy and posed a certain threat to national energy security.

Based on the above analysis of energy reserves and total consumption, we realize that energy conservation and consumption reduction has become an inevitable choice to ensure China's energy security and promote sustainable economic and social development[1]. However, in terms of China's energy utilization at this stage, China's energy supply and demand is tight, and the phenomenon of energy waste is very serious, resulting in the unreasonable energy utilization structure. From the growth rate of China's power generation, the growth rate of China's power generation is not low, but the growth rate of power consumption is much higher than that of GDP. The reason for the shortage of power supply is not due to insufficient supply to a great extent, but due to the extensive and waste of power utilization.

In order to alleviate the tense situation of energy supply and demand, further optimize the energy utilization structure, reduce energy waste and promote sustainable economic and social development, China must unswervingly implement the energy-saving strategy. Specifically, the energy-saving strategy mainly includes legal mandatory provisions, policy guidance, the application of low loss materials, enterprise technological progress and the promotion of new energy-saving equipment. Accurate and reliable energy measurement and monitoring is the basic guarantee for the

smooth implementation of energy-saving strategy and an effective way to strengthen energy-saving management.

2. Strengthening Energy Measurement and Monitoring Being an Important Means of Energy Conservation

2.1 Strengthening Energy Measurement is an Important Content of China's Energy Conservation Laws and Regulations

Energy conservation is China's basic national policy. The Interim Regulations on the administration of energy conservation issued by the State Council in January 1986 requires enterprises to earnestly implement the measurement Law of the people's Republic of China and other measurement laws and regulations; We should further improve relevant supporting facilities such as measuring instruments and strengthen energy measurement management. The energy conservation law of the people's Republic of China promulgated by the Standing Committee of the National People's Congress in November 1997 has further improved a series of basic legal systems for energy conservation, such as energy conservation standards and quota management system, elimination system of high energy consuming products and equipment, management system of key energy users, energy consumption statistics and energy utilization analysis system. According to the relevant provisions of the energy conservation law, energy users should adhere to strengthening energy measurement and management, and improve the whole energy consumption statistics and energy efficiency analysis system[2]. It can be seen that strengthening the close relationship between energy measurement and energy conservation, as well as the position and role of energy measurement in energy conservation.

2.2 Energy Measurement Being an Indispensable and Important Means of Energy Conservation Management

Energy saving standards only generally describe the indicators and general requirements of energy saving, and are the basic indicators to evaluate the effectiveness of energy saving management. However, only with effective energy measurement can it be truly implemented. This requires that we must take measurement and monitoring measures in line with energy-saving standards in advance and spare no effort to promote the effective development of energy-saving work. We should realize that the lack of an effective measurement and testing system and the absence of an energy-saving standard can not fundamentally eliminate the phenomenon of energy waste. Measurement is not only an important means for the state and enterprises to monitor and evaluate the energy-saving effect, but also the main way to carry out energy consumption statistics and comprehensively evaluate energy utilization efficiency and energy-saving benefits. The energy measurement and monitoring results can be used as the basic data of energy conservation management and provide an important basis for accurate decision-making of national energy management departments and enterprises.

2.3 Energy Measurement Being the Driving Force for Enterprises to Strengthen Cost Management and Technological Progress

Energy monitoring and measurement is the inevitable choice for enterprises to respond to the national call and fully implement energy-saving standards. Accurate and reliable energy measurement and monitoring will help to reduce the production and operation cost of enterprises. At this stage, people's consumption demand for green products continues to rise. In order to meet

the consumption demand of consumers, improve the market share of products and strictly control production costs, enterprises should make efforts in energy conservation and environmental protection, strengthen energy measurement and monitoring, adopt production equipment and operation technology with low energy consumption and seek technological innovation.

2.4 Energy Measurement Being the Driving Force to Guide and Promote the Development of Energy-Saving Industry

An energy expert said: “between the huge contrast between energy shortage and energy waste, we are left with energy conservation, one of the most important national strategies in the 21st century, and the huge business opportunity of energy-saving industry.” energy saving equipment is the driving force for the steady development of energy-saving industry. Excellent energy-saving equipment must use low-energy materials to reduce energy waste, and the development of energy measurement and monitoring technology is directly related to the application effect of energy-saving technology. Properly improving the accuracy of energy measurement and monitoring and energy-saving evaluation indicators can effectively improve the grade and application effect of energy-saving equipment and energy-saving products. Therefore, in order to promote the popularization and application of energy-saving products and improve the effectiveness of energy-saving strategy, we must adhere to strengthening energy measurement and monitoring.

3. Countermeasures and Means to Strengthen Energy Measurement

3.1 Strengthening Energy Conservation Publicity, Improve Energy Conservation Awareness, and Advocate the Scientific Outlook on Development and Realistic and Pragmatic Work Style

The promotion and implementation of energy-saving strategy is a systematic project, which not only depends on the national macro-control, but also needs a broad public base[3]. However, at this stage, China is in the primary stage of socialist development. Affected by the level of social and economic development and the lack of people's awareness of energy conservation, the phenomenon of energy waste is very serious, and the problem of energy conservation is still shelved. Therefore, first of all, government agencies are required to strengthen the publicity of energy-saving knowledge, improve people's ideological awareness, make the whole society have a clear understanding of the necessity of the implementation of energy-saving strategy, make scientific decisions, and spare no effort to promote the implementation of energy-saving strategy.

3.2 Action According to Law and Implement the Relevant Requirements of the Energy Conservation Law

After the Standing Committee of the Eighth National People's Congress was convened, the energy conservation law was officially promulgated and implemented. Local governments at all levels have successively established energy conservation management institutions, which provides a legal guarantee for the implementation of China's energy conservation strategy and plays a good guiding role in the whole society's participation in energy conservation and consumption reduction. At the same time, we should realize that there are still some small and medium-sized enterprises that do not realize the necessity of promoting energy-saving strategy. The internal energy measurement and monitoring department of the enterprise is in vain, and the corresponding measurement tools need to be improved. In view of this, we should strengthen the publicity of energy-saving strategy, use laws and regulations to restrict the measurement and monitoring behavior of enterprises, and strengthen the supervision of energy utilization and energy

measurement for enterprises with high energy consumption, so as to reduce energy consumption and promote the sustainable development of social economy.

3.3 Government Departments Strengthening Guidance and Services and Constantly Improve the Energy Measurement and Testing System

In order to make small and medium-sized enterprises fully realize the important role of energy measurement and monitoring in promoting the effective implementation of energy conservation strategy, the opinions on strengthening measurement of small and medium-sized enterprises jointly issued by the State Administration of quality and technical supervision and the State Economic and Trade Commission in 1999 clearly put forward that key energy consuming enterprises should strengthen energy measurement, monitoring and management, improve energy measurement Monitoring and management system, and improve the supporting facilities such as measuring instruments and meters based on the guidelines for the allocation and management of enterprise energy measuring instruments, so as to ensure that the measurement results can objectively reflect the energy utilization, so as to strictly control the energy cost and improve the energy efficiency[4]. Quality and technical supervision departments at all levels shall, in conjunction with the economic and Trade Commission, strengthen guidance and services for key energy consuming enterprises, especially small and medium-sized enterprises, help them establish and improve energy measurement and testing means, meet the requirements of energy conservation standards, and promote the development of energy conservation and efficiency.

3.4 Actively Promote the Promotion and Application of New Energy Measurement Products

Energy saving management is to innovate the traditional machinery and equipment and enterprise production mode that do not meet the requirements of modern energy saving; By strengthening energy-saving publicity, improve people's ideological awareness, and use technological innovation to promote enterprise modernization. Of course, it is an inevitable choice to implement the energy conservation strategy, further optimize the energy utilization structure and constantly innovate the energy measurement and monitoring means. Enterprises should actively respond to the national call for energy conservation, develop or introduce new technologies and processes based on energy-saving indicators, and actively promote the application of energy-saving products, so that the whole industry and even the whole society can widely participate in energy conservation and consumption reduction activities, so as to achieve the purpose of reducing energy consumption, controlling production costs and protecting the ecological environment[5].

4. Conclusion

The report of the 18th CPC National Congress pointed out: “Realizing industrialization is still an arduous historical task in the process of China's modernization. Informatization is the inevitable choice for China to accelerate the realization of industrialization and modernization. We should adhere to using informatization to drive industrialization and industrialization to promote informatization, and walk out of a new industry with high scientific and technological content, good economic benefits, low resource consumption, less environmental pollution and giving full play to the advantages of human resources In the face of limited energy and resources, we must save energy and cherish energy. By strengthening energy measurement and effectively carrying out energy-saving activities, we will promote the development of China's new road to industrialization and realize our dream of pollution-free, rational use of energy and green life.

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