

Analysis on Sustainable Development of Traditional Energy Enterprises and Development Path of Low-carbon Technology--- Taking the Low-carbon Transformation of Enterprises as an Example

Zongrui Xu¹, Xiaowei Liu¹ and Zongyu Xu²

¹School of Finance and Economics, Jiangsu University, Zhenjiang China, 212013

²College of Engineering, Nanjing Agricultural University, Nanjing China, 210031

Keywords: Energy enterprise; Sustainable development; Low-carbon technology; Low-carbon transformation

Abstract: With the continuous development and progress of China's social economy, China's industry has achieved unprecedented development. Under this background, the process of industrial development has brought tremendous impetus to China's economy, and it is also facing enormous development challenges. Among them, energy companies are facing an important transition period in the current social background. Due to the contradiction between natural energy resources and higher social energy demand, traditional energy enterprises are required to carry out sustainable and low-carbon transformation under the background of new era in order to ensure that the problems and contradictions in energy demand can be alleviated through a more environmentally friendly way. In this process, energy companies are required to pay more attention to improving the level of low-carbon technology in the process of transformation and provide more comprehensive energy services through a more environmentally friendly approach. This paper will analyze problems existing in the process of transformation by combining the importance of sustainable energy and low-carbon transformation of traditional energy enterprises in the context of current social, and explore how to improve the sustainable development and low-carbon development of traditional energy enterprises.

In the new era, low-carbon environmental protection has gradually become an important national strategy and social consensus. In this process, China's traditional energy enterprises are facing important development opportunities and challenges. In the new era, due to the change of policy and the limitation of natural energy, the development mode of traditional energy enterprises in China can not meet the current social requirements. Therefore, in today's rapid development of modern technology, China's traditional energy enterprises need to fully seize the opportunity to further optimize their production structure to ensure their own sustainable development and low-carbon development. This will analyze the current situation of low-carbon transformation of energy enterprises in the context of the current era, and explore the strategies to do a good job of related work starting with the necessity of low-carbon transformation of enterprises.

1. Necessity of Sustainable Development and Low-carbon Transition of Traditional Energy Enterprises

1.1 Social Needs and Constraints of Energy Supply

The context of current social focuses on promoting low-carbon environmental protection. Therefore, low-carbon and sustainability have gradually been placed priority in all walks of life in our country. As a high-consumption and high-emission industry, China's traditional energy industry must do a good job of transformation in the era of low-carbon, and improve the production and service mode of enterprises through more scientific and reasonable ways. At the same time, due to the limitation of the supply of natural resources, China has further planned and restricted the exploitation and use of natural resources from the policy aspect. Therefore, traditional energy

enterprises in China must carry out overall low-carbon optimization for enterprises as a whole, maintain the vitality of enterprises, and provide high-quality services for society from the perspective of sustainable development.

1.2 Enterprises need to Strengthen Their Low-carbon Strength and Maintain Their Competitiveness

In the new era, low-carbon industry has gradually developed into the mainstream of the times. In order to maintain their core competitiveness in this social context, traditional energy enterprises must optimize their structure through low-carbon transformation to ensure their competitiveness in the competitive market within the industry. In this process, traditional energy enterprises need to rationally allocate and utilize their own resources, develop external resources, and optimize their own low-carbon technology to launch more low-carbon products and properly promote their market competitiveness.

2. Current Situation and Problems of Low-carbon Transition of Traditional Energy Enterprises in China

2.1. Being lack of Adequate Understanding and Lack of in-depth Implementation of the Transformation

Under the current low carbon requirements, the traditional energy industry has begun to gradually optimize their production structure, and achieved a certain degree of results. However, there are still many shortcomings in the process. Among them, the problem that is highlighted is the lack of execution. The lack of awareness of technology optimization and cleanliness in the low-carbon transformation of enterprises leads to the unclear division of responsibilities and work development in some departments, and the lack of in-depth implementation of work, which seriously affects the effect of transformation.

2.2. Being Lack of Motivation for Low-carbon Technology Innovation

Under the social situation of energy enterprise transformation, most traditional energy companies have begun to use low-carbon technology in production methods. In the process, one of the more important problems is the lack of motivation in technological innovation. At present, most traditional energy companies usually use existing low-carbon technologies to optimize their structure. Some of these technologies are lagging behind the current era, and most enterprises lack sufficient financial support for research and development of low-carbon technologies, resulting in relatively backward technological innovation, which also limits the process of transformation of energy enterprises to a certain extent.

3. Analysis on Sustainable Development and Low-carbon Transition of Traditional Energy Enterprises

3.1. To Raise Awareness of Low-carbon Transformation and Implement Low-carbon Transformation

For the current status of low-carbon transformation of traditional energy enterprises, the first thing they need to do is to enhance the understanding of low-carbon transformation of energy enterprises, and promote the process of low-carbon transformation of enterprises consciously. Firstly, the leaders of enterprises should fully realize the requirements of the current social background for the low-carbon transformation of energy enterprises, the necessity of the transformation, the importance of the mainstream of the development of the times and the sustainable development of enterprises, the competitiveness of enterprises in the market after the transformation, as well as the current situation of energy supply and consumption at home and abroad, and consider the new opportunities and challenges that low-carbon transformation brought to enterprises. At the same time, they should strengthen the training of employees within the

enterprise, establish a scientific and strict management system, strictly require the implementation of low-carbon transformation in the internal work of the enterprise, strengthen the low-carbon awareness of employees, and provide a good guarantee for the low-carbon transformation work of the enterprise.

3.2. To focus on Developing Circular Economy of Enterprises and Optimize Industrial Structure

In the new era, to do a good job of low-carbon transformation of traditional energy companies, energy enterprises need to fully realize the changes brought about by the new economic situation. Doing a good job in the enterprise's circular economy situation has an important role in improving the sustainable development and core competitiveness of enterprises. In the process of building a circular economy, they should be fully aware of the low-carbon and environmental protection of enterprises, and do a good job in the process of low pollution, low emissions, environmental protection, and create new products. In this process, it is necessary to fully optimize the internal structure of the enterprise, set up a special department for the transformation. At the same time, it should precisely divide the responsibilities of various departments within the enterprise, and adopt the responsibility system to ensure the effectiveness of the work.

3.3. To Strengthen the Research and Development of Low-carbon Technologies and Fully be Improved from the Technical Level

Judging from the current low-carbon transformation status of most domestic enterprises, the lack of advanced low-carbon technologies generally limits the low-carbon transformation of traditional energy companies in China. Therefore, in order to improve the transformation effect of enterprises, it is necessary to strengthen the research and development of low-carbon new technologies, and optimize the production of enterprises. In this process, enterprises must increase the cost of technology research and development, and vigorously incorporate new professional talents to provide important guarantees for technology research and development. In addition, the government should also open up policies for enterprises and provide them with a certain degree of support to help them complete the transformation successfully.

3.4. To Strengthen Cooperation between Domestic and Foreign Enterprises and Enhance the Effect of Transformation

There are still many shortcomings and problems in the process of low-carbon transformation of domestic traditional energy enterprises. Therefore, enterprises need to attach importance to cooperation with domestic and foreign enterprises, and fully absorb advanced transformation experience in the same industry. In this process, they should pay attention to the optimum use of traditional energy and the common use of new clean energy to ensure that the low-carbon transformation of enterprises can be implemented to the greatest extent, and achieve the best cost control, to provide protection for the development of enterprises and promote the successful transformation of enterprises.

4. Conclusion

In the era of low-carbon environmental protection, traditional energy enterprises should fully realize the importance of sustainable development and low-carbon transformation of enterprises. In the process of promoting the transformation of enterprises, they should strengthen their awareness of low-carbon environmental protection, vigorously develop low-carbon technology, introduce professionals, optimize the industrial structure, strengthen enterprise cooperation, and jointly promote the transformation of low-carbon enterprises to ensure their core competitiveness.

References

- [1] Yang Xiaolong. *Analysis on Sustainable Development of Traditional Energy Enterprises and the Development Path of Low-carbon Technology -- taking the Low-carbon Transformation of Petroleum Enterprises as an Example* [J]. *Scientific and technological progress and countermeasures*, 2013,30(10):98-102.
- [2] Yu Yuezhou. *Public Policy Research to Promote the Development of Low-carbon Economy -- Taking Biomass Energy Development as an Example* [D]. Anhui: Anhui University, 2011.
- [3] Dai Xinbo. *Research on Low Carbonization Path and Policy Guarantee of Energy Management in Industrial Enterprises* [D]. Beijing: North China Electric Power University; North China Electric Power University (Beijing), 2016.
- [4] Ma Yan. *Research on the Development Model of Coal Industry Based on the New Concept of Green Mining* [D]. Hubei: China University of Geosciences (Wuhan), 2012.
- [5] Yang Hong, Bi Yantao. *Characteristics and Trends of Technology and Innovation Management of Foreign Oil Companies* [J]. *Petroleum Science and Technology Forum*, 2018, 37 (6): 40-47.
- [6] Yu Dan. *Thoughts on Sustainable Development of Traditional Energy and the Development of Low-carbon Economy* [C].// *Proceedings of the 11th Ningxia Young Scientists Forum*. Changqing Oilfield, 2015: 239-240.