

The Problems and Countermeasures of Suzhou Enterprises' Development under the Background of "Double Carbon"

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Abstract

Enterprises are the most extensive market players to achieve the goal of "double carbon". The green and low carbon transformation of their production and operation activities is an important way to practice the concept of green and low carbon development and achieve the synergy of pollution reduction and carbon reduction. This paper is based on the new development stage, implements the new development concept, follows the requirements of high-quality development, and discusses how to better promote the green and low-carbon transformation of enterprises under the new development pattern, so that enterprises can play their due role in achieving the "dual carbon" strategic goal. Achieving the goal of carbon peaking and carbon neutralization is an inevitable choice to cope with climate change, strive to solve the outstanding problems of resource and environmental constraints, and realize the sustainable development of the Chinese nation. It is a solemn commitment to build a community with a shared future for mankind. In this regard, the Central Economic Work Conference has made it one of the important tasks of economic and social development to do a good job of "double carbon". At the same time, the realization of the "double carbon" goal was included in the overall layout of ecological civilization construction, and was proposed and emphasized in the government work report. Based on the national proposal of "supporting qualified cities to take the lead in reaching the peak carbon emissions", Suzhou, as one of the central cities in the Yangtze River Delta, should show "C responsibility" and more Suzhou actions in promoting regional integration strategy. This study puts forward some suggestions for Suzhou enterprises to achieve the goal of "double carbon" from the perspective of regional synergy.

Keywords

Double Carbon; Low Carbon Transformation; Carbon Reduction.

1. Diagnosis of Green and Low-carbon Transformation of Suzhou Enterprises

Suzhou's traditional enterprises are not willing to make green and low-carbon transformation. Under the continuous impact of the epidemic, this willingness has become increasingly weak. On the one hand, in order to survive and develop in the fierce market competition, most enterprises usually pay more attention to short-term interests, and their awareness of environmental protection is relatively weak. The enterprise management has not fully understood and understood the green values. Extensive development relying on resource consumption and backward production concepts still exist. The green awareness training for staff is insufficient, and a green and low-carbon enterprise development culture has not yet been formed. On the other hand, enterprises' participation in green and low-carbon development requires strict control over raw material procurement, product design, production and manufacturing, packaging and transportation, circulation and consumption,

service guarantee and other aspects, which will greatly increase the cost of enterprises. In order to avoid potential risks, enterprises' business models and investment intentions tend to be more conservative, and they are unwilling to carry out green and low-carbon upgrading and transformation[1-6].

Suzhou's industrial carbon emissions show two 90% characteristics. As a big and strong city in manufacturing industry, Suzhou has long ranked among the top three in China in terms of industrial output value, and its industrial carbon emissions account for more than 90% of Suzhou's total emissions. Among them, the carbon emissions of power and heat production, ferrous metal smelting, chemical raw materials and chemical products manufacturing, paper making, textile and other industries account for more than 90% of Suzhou's industrial carbon emissions. Coal consumption contributes 69% of carbon emissions from energy activities. In Suzhou, fossil energy consumption accounts for more than 80% of primary energy consumption, while coal consumption still accounts for about 60%. About 69% of carbon emissions from energy activities in Suzhou come from coal consumption. Suzhou's economy will continue to grow at a medium high speed, the population will continue to flow in, the people's living standards will improve, and the domestic energy consumption will increase significantly, which will enable the total energy demand to continue to grow rapidly at the same time; Second, the dual requirements for the types and quality of energy demand are also increasing. After the carbon reaches the peak, it is estimated that Suzhou will still need to complete the task of reducing emissions by 7 million tons per year to achieve carbon neutrality. The energy efficiency level of Suzhou's existing high emission industries has reached the leading level in China or even the advanced level in the world. With the support of the current energy management mode and low carbon technology, the remaining carbon emission reduction space is limited. How to break through the bottleneck of decarbonizing high emission enterprises has become the key for Suzhou to achieve the goal of "double carbon". Suzhou, which aims to be a world-class manufacturing center city, will maintain a rapid development of manufacturing industry and bring about a continuous increase in carbon emissions. Facing the pressure of industrial positioning and "double carbon", Suzhou still needs to further improve the proportion of medium and high-end industrial chains to meet the dual requirements of economic growth and emission control[7-8].

Although Suzhou has invested more energy in the development of low carbon economy in recent years, adopted effective means to promote the development of low carbon economy, and also reformed the financial support model, the results achieved are not ideal. The reason is that the service model of low carbon economy is relatively backward, the products of financial institutions supporting low carbon economy are relatively single, and the overall financial support is not strong. With the rapid development of social economy, Suzhou's financial institutions have made obvious progress, but their actual development is not smooth. In the development, there are still problems such as low awareness of low-carbon services, unscientific and incomplete product development, which have a greater adverse impact on the effective promotion of low-carbon economy.

Carbon emission market and carbon tax are two important market-based mechanisms. The accurate measurement of carbon emissions is a key factor to maintain the stable operation of the carbon emissions market. The Suzhou carbon trading market is in the initial construction stage. Due to the limitations of technology and human resources, it is difficult for enterprises to accurately monitor their carbon emissions. At present, the participants in the Suzhou carbon emissions market are limited to large power enterprises. The carbon tax is the cost for enterprises to emit carbon dioxide. The collection of carbon tax is conducive to improving the efficiency of resource utilization, increasing clean energy investment, and guiding the public to practice a green and low-carbon lifestyle. The carbon tax covers a wider area than the carbon emission market. Japan, Singapore, Norway, Sweden and other countries have successively

levied carbon taxes to deal with climate change, and achieved good results. China has not yet carried out the collection of relevant taxes, There is not enough restriction on the carbon dioxide emission of enterprises.

2. Countermeasures and Suggestions for Promoting the Green and Low Carbon Transformation of Suzhou Enterprises

Under the background of "double carbon", the future development space of Suzhou enterprises largely depends on their low-carbon development ability. Therefore, while pursuing economic benefits, enterprises should also take the competitiveness of social responsibility as their core competitiveness, integrate the concept of green and low-carbon development into the company's overall strategy, reduce the concern for immediate interests, and pay high costs in the early stage of green transformation, But looking ahead, it will certainly contribute to the sustainable development of enterprises, and the long-term benefits will be guaranteed. First of all, enterprises need to improve the carbon emission monitoring system, participate in the pilot construction of Suzhou carbon trading, and formulate corresponding low carbon development policies within enterprises according to their own development and carbon emission status; Secondly, we should give full play to the bridge role of various industry associations and actively carry out green standard evaluation; Finally, we will strengthen policy publicity, guide internal employees to change their traditional concepts, actively support the implementation and development of environmental protection measures, encourage internal employees to travel low carbon with "carbon credit" and "carbon footprint", encourage enterprises to establish a "green culture" with floating rewards and punishments, integrate energy conservation and emission reduction into all departments of enterprise operation and all aspects of project management, and create a new situation of low-carbon energy conservation. On this basis, further strengthen publicity and guidance, widely spread the concept of green and low-carbon development, create a good public opinion atmosphere to create a green and low-carbon production and lifestyle, guide enterprises to firmly establish the main responsibility of ecological civilization construction, and actively fulfill the social responsibility of ecological environmental protection. Give full play to the role of the industry association as a bridge and link, support the industry association to formulate industry self-discipline standards and up to standard emission specification guidelines, actively carry out green development evaluation, restrict enterprise behavior and promote technological progress through industry supervision and other means. Organize and carry out green development education and training for key enterprises, publicize laws, regulations, standards, policies and measures related to ecological environment, carry out training on pollution prevention methods for different industries, urge enterprises to fulfill their main responsibility for pollution prevention, improve their awareness of green and low-carbon transformation and development, and standardize their production and operation activities. It is necessary to strengthen policy publicity, so that enterprises can understand relevant preferential policies at the first time and fully enjoy the policy dividend.

In recent years, according to the work deployment of the State Council, the guiding opinions on deepening the integrated development of the manufacturing industry and the Internet, the guiding opinions on deepening the development of the industrial Internet through "Internet + Advanced Manufacturing" and other guiding documents have been issued one after another. Enterprises should use digital technology to form new economic growth points and new driving forces for green development in the green and low-carbon field. Focusing on the development goal of "double carbon", enterprises can focus on scientific and technological innovation, integrate digital economy with traditional manufacturing, transform "manufacturing industry" into "intelligent manufacturing industry", enable green manufacturing and management

through industrial Internet, artificial intelligence, big data and other new generation information technologies, promote the integrated development of the Internet and enterprises, and ultimately improve the green and low-carbon production level of enterprises. Accelerate the construction of new infrastructure, expand 5G, Internet of Things, artificial intelligence, and industrial Internet applications, vigorously develop the digital economy, promote the deep integration of science and technology with the real economy, and build a low-carbon and digital development environment for enterprise transformation and upgrading. Establish and improve the digital platform, accelerate the open sharing, development and utilization of data resources, vigorously cultivate high-quality digital service providers, launch convenient and effective enterprise digital solutions, summarize experience and practices, form typical cases, reduce barriers to enterprise digital transformation, and promote enterprise business to the cloud. We will improve the coordination mechanism between enterprises and research institutes and universities, encourage and support "industrial research" cooperation, promote the creation of innovation alliances, strengthen intellectual property protection, and guide and help enterprises to continuously improve their core competitiveness. The fourth is to expand the digital and information application of enterprise management, realize the transformation of management mode from "extensive" to "refined", provide more sophisticated digital control means for green culture construction and green science and technology innovation, and promote the digital transformation of enterprise activities.

First, improve enterprise financing policies, accelerate the construction of supporting infrastructure for green financial market, improve Suzhou government financing guarantee system, and provide credit enhancement services for enterprise financing; Actively develop carbon trading and carbon financial products, develop green equity funds, guide financial institutions to set up a fast track for green loans, strengthen green financial supervision, and effectively prevent and resolve financial risks. The second is to establish and improve the green financial development system, unify the green bond issuance standards, achieve benchmarking with international standards, reduce the cost of green bond issuance, transaction and management through effective means such as interest discounts and subsidies, improve the information disclosure system, strengthen market supervision, and standardize the development of green bond market. Third, strengthen the exploration of green supply chain finance, promote the construction of green supply chain finance standard system, support financial institutions to provide personalized supply chain financial products and services, and create a new supply chain cooperation model. Fourth, standardize the conclusion of contracts with enterprises, standardize the payment behavior, increase the remediation of arrears of enterprise accounts, establish and improve the relevant credit system and service guarantee, and create a good business environment for safeguarding the legitimate rights and interests of enterprises.

Carbon emission trading is a new financial trading system with CO₂ equivalent as the trading unit, which can accurately connect emission reduction tasks. The international community has established and developed some carbon emission trading markets, covering about 18% of global carbon emissions. A sound legal and regulatory system, a reasonable carbon quota allocation method, a gradual development model and a strict verification system are important guarantees for the operation of the carbon emission trading market. China's carbon emission trading started late, but developed rapidly, covering about 45% of carbon emissions in 2021 × 108t CO₂ equivalent, ranking first in the world. The carbon emission trading market will form a transmission mechanism, and low carbon businesses such as natural gas, new energy and carbon capture in the traditional energy industry will welcome rare development opportunities. It is suggested that Suzhou energy enterprises clearly establish carbon asset management and operation business, improve the enterprise carbon emission basic data management system, rely on technological innovation to achieve emission reduction and carbon reduction, and

strengthen international cooperation in green and low-carbon fields to promote high-quality green and low-carbon transformation and development. Make full use of carbon emission market and carbon tax to promote green and low-carbon transformation of enterprises. First, promote the construction of carbon emission trading market as soon as possible, explore and innovate the technical means for accurate carbon emission detection of enterprises, open up the communication channels between the carbon emission market and micro entities, promote enterprises to participate in carbon emission trading, and improve market participation. Second, actively study and introduce carbon tax policies suitable for Suzhou, take the lead in implementing carbon tax in some enterprises, districts and counties, create a green tax system, increase the carbon emission cost of high energy consumption enterprises, force enterprises to reduce carbon emissions, eliminate backward technical products, and accelerate industrial restructuring; Pay attention to the impact of carbon tax collection on consumer welfare, formulate supporting preferential tax policies, and reduce the pass on effect of carbon tax.

3. Research Value

In the future, it is an inevitable trend to establish an organization similar to the "Yangtze River Delta Low Carbon Ecological City Cluster Alliance". Suzhou should actively participate in and jointly promote the top-level design related to the regional "dual carbon" goal to ensure that the "dual carbon" goal is achieved as scheduled. Actively explore regional carbon trading rules to pave the way for the carbon emission trading market; Establish a unified regional carbon trading market pricing mechanism to ensure the stability and effectiveness of the carbon market; Adhere to the principle of "government led and market operated", carry out pilot projects, implement policies by category, adapt measures to local conditions, and gradually promote various work according to the difficulty of realizing the value of various ecological products.

At present, the carbon emission caliber of the Yangtze River Delta region is not uniform. Suzhou should quickly establish a unified regional carbon emission caliber, and then use the measurement indicators of developed countries to systematically assess urban green development from such dimensions as resource utilization, environmental governance, environmental quality, ecological protection, growth quality, and green life, so as to achieve dynamic monitoring of the status of green development and guide and promote the "dual carbon" work.

Under the background of "dual carbon", if we do not actively adopt low-carbon and zero carbon technologies or solutions for transformation, high carbon industries and enterprises may face a crisis. From this perspective, sustainable development will not only benefit the earth and mankind, but also directly bring benefits to the long-term development of enterprises. Therefore, enterprises should be actively mobilized to investigate their carbon emissions, and find the balance between technology and economy through data analysis. Start from the production mode and business process, measure the level of carbon emissions, and optimize the energy consumption structure and supply structure. Suzhou can formulate policies based on its own conditions to encourage enterprises to apply digital technology to a variety of scenarios and build a new type of enterprise with digital information, digital processes and digital business.

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