

SMEs in the Circular Economy Development Strategy

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Abstract

Developing circular economy is of economic development model of human reflection the inevitable choice after solving environmental problems, is the way of sustainable development of the essential requirements. Small and medium-sized enterprises as modern society are an important part of economic development, the circular economy in China, is the realization of energy saving and emission reduction targets decision key realization. China's circulation economy is more weak in economic foundation, weak ecological environment, established on the basis of late start, was in the process of the development level of economic development, technology development level, and production and consumption subject consciousness insufficiency, the system wasn't strong enough and some other factor.

In the current situation, we are in dire need of further research on developing circular economy, analyzes the basic characteristics of circulation economy, mainly reflect and developing circulating economy, small and medium-sized enterprises in China through understanding the development situation and developing circular economy the main problem facing at home and abroad, and comprehensive study of circular economy development, in combination with the actual situation of small and medium-sized enterprise development of small and medium-sized enterprises, and explore the development of recycling economy under way.

Key words: Circular economy; Small and medium-sized enterprises; Problem faced; Development countermeasures

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INTRODUCTION

Vigorously develop the circular economy, the country implement the scientific development concept and building a resource-saving and environment-friendly society, a necessary requirement to achieve sustainable development and effective carrier, reflects the people-centered development philosophy, is the only way for China's economic and social sustainable development. Since the reform and opening up, China's rapid economic development, economic growth rate highest in the world. However, as has been the traditional extensive economic growth mode, we create \$1 per energy consumed profit is 4.3 times the United States, 7.7 times that of Germany and France, Japan, 11.5 times. And suffered a bottleneck of economic growth, high consumption in exchange for growth, resulting in more waste emissions, environmental pollution, economic growth and conflict environment continues to deepen.

Reform and opening up, especially since the eighteen large, rapid development of China's SMEs in the party's position and role in the national economy and social development in the growing. However, most SMEs are facing the dual constraints of resources and the environment, vigorously develop the circular economy is imperative, if not take the recycling economy road as soon as possible, the issue of resources, ecological environment will inevitably lead to rising production costs, a direct impact on China's economy sustainable development.

At present, China in efforts to build a socialist harmonious society, to achieve a comprehensive well-off, and proposed to "implement the scientific concept

of development, the development of recycling economy and building a resource-saving and environment-friendly society to achieve sustainable development will effectively change the high input, high pollution and low efficiency of growth, increase recycling economy pilot, efforts to improve the production cycle, ecological level. "Therefore, in today's situation, in-depth study of the current situation and development strategies of SMEs development in Circular Economy, identify the problems and countermeasures in the development process faced by the rapid growth of China's economy and sustainable development has a very important significance.

1. CIRCULATION ECONOMY CONNOTATION

"Recycling economy" by the American economist Paulding made in the 1960s. It abandoned the traditional economic development model of "resources-products-waste" one-way linear process, but the use of "resources-products-waste-of renewable resources" feedback cycle required to maximize economic activity into the material and energy systems. Since the advent of the concept of circular economy, it has developed as a means of improving the international competitiveness and rapid development.

Currently, the society is generally adopted NDRC definition of recycling economy: "The circular economy is an efficient use and recycling of resources as the core, with" reduction, reuse, resource-based in principle, low consumption, low emission, high efficiency basic features of the concept of sustainable development economic growth model is the "mass production, mass consumption and mass disposal" of a fundamental change in the traditional growth model.

This definition not only he pointed out that the core of the circular economy, principles, characteristics, and also pointed out the circular economy concept of sustainable development is in line with the economic growth mode, to solve the bottleneck of China's economic development resources constraints have immediate practical significance.

I think that the circular economy is based on the fundamental principle of environmental ecology, economics, summarize experiences from the development of the international community out of an economic development model. This mode requires a change in economic system movement material, to achieve the reduction, harmless and recycling in all aspects of social production, and promote sustainable development. Circular economy to efficient use and recycling of resources as the core, is a kind of environmental protection era of development model, advocated a harmonious economic development pattern and economic and social environment, it can optimize the human economic systems of the various components provide holistic relationship between the idea of the traditional economy to sustainable development since the industrialization of the economy

to provide scientific theoretical paradigm, so digestion conflict between environment and development has long been fundamentally.

2. THE BASIC CHARACTERISTICS OF CIRCULAR ECONOMY

In the resource extraction sectors, we should vigorously improve the comprehensive development of resources and recycling rates. Resource Development to co-ordinate planning, comprehensive and efficient use; strengthen the development and management of resources, and improve access for resource development, improvement of development and utilization, to eliminate "private dug Luancai, too poor mining rich" and other predatory exploitation, to achieve protection of resources development; actively introduce and promote the use of new technology, new equipment, improve resource utilization, promoting the sustainable use of resources.

Link in resource consumption, to greatly improve the efficiency of resource use. Strengthen the sugar, glue, smelting, cement manufacturing and other key industries of energy, raw materials, water and other resource consumption management, implementation of total amount of emissions control to achieve efficient use and recycling of energy cascade utilization and resources and efforts to improve resource output efficiency.

In the waste generated link to vigorously carry out comprehensive utilization of resources. Strengthen the metallurgical, nonferrous metals, electric power, glue, building materials, paper, sugar and other waste produced large, heavy pollution in key industries management, improve the comprehensive utilization of waste, waste water, waste gas. Pushing through the extension and the coupling of different industries industrial chain, to achieve recycling waste.

In the renewable resource generation, we should vigorously use of waste recovery and recycling of resources. Actively promote the scrap iron and steel, non-ferrous metal scrap, waste paper, waste batteries, waste plastics, waste tires, waste electrical and electronic products, waste textiles, machinery and electronic products and waste such as packaging waste recovery and recycling; waste collection and urban and rural construction sorting system, and constantly improve the renewable resource recycling, processing and utilization system; give full play to regional advantages, the use of two markets and two resources, the development of renewable resources industry in the international trade.

Social spending is, we should vigorously promote green consumption. Establish sustainable consumption concept, to promote a healthy and civilized, help save lifestyles and consumption of resources and protecting the environment; and to encourage the use of green products; boycott wasteful behavior excessive packaging; play a

leading role in government agencies, the energy, water, materials, grain-saving, waste separation and recovery, reducing disposable supplies gradually become the conscious action of every citizen.

3. DEVELOPMENT STATUS OF SMES IN CHINA

SMEs are the main force of social employment. Small and medium business and management low-cost, high resilience of the market, the employment elasticity is high, with large enterprises unparalleled advantage. Especially in recent years, economic restructuring and reorganization of state-owned enterprises intensified, the state-owned, collective enterprises increased laid-off workers, new employment high, surplus rural labor to urban migration continues, as well as government agencies to streamline staff great pressure on employment under the circumstances, SMEs in particular, small and medium enterprises to absorb non-public employment and reemployment “reservoir” more obvious.

SMEs are the main force of technological innovation. In recent years, the rise of SME quietly and quickly developed to become the technological advances in the most active and innovative subject.

Between regions, imbalances in the distribution of small and medium enterprises in various regions. From the number of enterprises, the total number of employees in operating income, and assets, the ratio of SMEs eastern Midwest and Northeast regions to be developed more. Judging from the size of its workforce in SMEs, Midwest business higher average staff size, staff size of the eastern and northeastern regions closer. SMEs in the eastern part of the higher per capita revenue creation. Per capita assets accounted for only about half of the central region of the eastern region, less than one-third of the average level of the western region in the east. In the eastern region, domestic private enterprises in Zhejiang and Jiangsu higher proportion of Guangdong and Hong Kong, Macao, and Taiwan-invested enterprises in Fujian more developed, higher proportion of foreign-invested enterprises in Shanghai and Tianjin, in the less developed western regions, the state-owned small and medium enterprises play a relatively a more important role.

4. MAIN PROBLEMS FACING SMES IN THE DEVELOPMENT OF CIRCULAR ECONOMY

SMEs lack awareness of technological innovation cycle. SMEs lack a sense of the ecological environment and natural resources crisis, insufficient understanding of circular economy. Its model of circular economy poorly understood, to adapt to the requirements of circular

economy less eco-technology innovation. Interest trend has led some leaders of SMEs to consider only the short-term economic benefits, without considering the economic and social and ecological benefits of new technologies on business cycle economy brought new economic and business from a long-term perspective relationship. The cycle of technological innovation to enable enterprises to obstacles, the long run but also weakened the competitiveness and sustainable development capacity.

SME is difficult to form scale advantages of circular economy, the cycle of technological innovation capability is weak. Economies of scale are the basis for the development of circular economy. Compared with large enterprises, SMEs rely most developed of primitive accumulation of capital, small capital and scale, can not establish the enterprise independent R&D centers, more dependent on external technology, it is difficult as compared with large enterprises in the economic and technological innovation . Due to technical monopoly, but also makes it difficult for SMEs to obtain ready-cycle technology, resulting in long-term consumption of resources per unit of output, high energy consumption, it can not make full use of state resources.

SMEs lack of talent cycle of technological innovation bottleneck. Most small and medium enterprises, especially private enterprises, long-standing family management, cronyism, and a considerable part of SME managers their quality is not high. Technological innovation talent, unreasonable distribution of scientific and technological personnel, about two-thirds of technology development efforts outside the enterprise, and the rest are mainly in the small number of large enterprise groups. Coupled with poor conditions on SMEs, enabling SMEs technological innovation staff shortages. It has the expertise, research ability and a high level of scientific research and technological leaders and high-quality, highly educated workers harder rooted in SMEs.

SMEs lack of technical innovation funding cycle. SMEs lack the necessary funds circulating transformation, not timely introduction of advanced recycling technologies and processes to transform backward technology. Cycle technology innovation funds required are not met, leading to technical innovation stagnation or failure, or a non-predictable supply of funds occurred during the record breaking is not timely, difficult cycle technology upgrades and equipment renewal project caused the failure and the loss of opportunities. Cause more stress factors of finance for SMEs, such as: Lack of credit due to the small size of their own banks for funding security for SMEs credit crunch. In addition, the government financial support for SMEs lack of SME is difficult to obtain from the government research and development funds, it is difficult through the issuance of equity or debt financing directly, making the fund the development of SMEs lack the technological transformation of circular economy.

5. AFFECT THE DEVELOPMENT OF SMES CIRCULAR ECONOMY ANALYSIS

Facilitate the implementation of strategic resources, safeguard national economic security. Our resources, on the one hand the amount of per capita relative shortage of resources, on the other hand extensive resource extraction and use patterns, low utilization level of waste. SMEs to accelerate the development of recycling economy is very promising in terms of conservation of resources.

Beneficial to improve the prevention and control of pollution, environmental protection awareness. First, the development of recycling economy requires the implementation of cleaner production, which can reduce the generation of pollutants from the source, it is a fundamental measure to protect the environment. In addition, the recycling of various wastes also greatly reduces the emission of solid pollutants. According to estimates, solid waste comprehensive utilization rate increased by 1 percentage point per year could be reduced by about 10 million tons of waste emissions.

Contribute to the transformation of economic growth mode, enhancing the competitiveness of enterprises. After joining the WTO, SMEs face more fierce market competition, enterprises to survive and develop, we must change the growth mode, take the connotation of development. The development of recycling economy, to enable SMEs to actively respond to the WTO challenge, can reduce product costs, improve economic efficiency, so that their competitiveness is enhanced. At present, China's energy consumption per unit output value of 2.3 times the world average, the main product unit energy consumption 40% higher than the international advanced level; our industrial products, energy, raw material consumption accounted for about 75% of the production costs, if the lower one points will be able to get more than 100 billion of benefits.

6. OUR COUNTERMEASURES OF SME DEVELOPMENT OF CIRCULAR ECONOMY

To enhance awareness of innovation-oriented small and medium enterprises of circular economy technology. Vigorously develop the circular economy and build a resource-saving society, we must break through the relevant technical bottlenecks. SMEs can obtain technological innovation alliance cycle technology, thus turning the circular economy. Within the Alliance achieve circular economy will bring some economic, ecological and social benefits, create a good corporate image and corporate brand image. This will encourage enterprises to strengthen alliances within cycle technology innovation, and thus on investment cycle technology has more people. At the same time, it will have an impact in the region

where the Innovation Alliance, forcing more enterprises around the importance of recycling technologies attention.

Establishment of a centralized economy to take advantage of the project cycle. For SMEs on the one hand due to the higher marginal cost of pollution control towers, and partly because the government is difficult to carry out effective supervision "polluter pays" This economic policy is not feasible for SMEs. In practice, it touches more feasible "polluter pays." In the middle of our government may have to act as a very important role, one boot emissions relative concentration of pollutants same building; the second is to guide the centralized management of environmental protection facilities operation qualification having professional company responsible for the pollution of the solutions to SME pollution control facilities technological backwardness, reach economies of scale of the problem requires. Practice has proved that this kind of operation not only reduces the cost of enterprise pollution can also make polluters to concentrate on the development of primary care industry market. Given the characteristics of SMEs and their dependence on the market, as long as the government to correct guidance, it is entirely possible to make relevant SMEs is relatively concentrated in certain specialized areas or industrial parks allowing centralized management of small businesses towel pollution as possible. Centralized management should be an effective way to solve SME pollution.

Select the new cycle path suitable technology. In the development cycle technology is not yet perfect situation, SMEs rely on flexible operations, maintain close contact with consumers to gain advantage. In an increasingly competitive market and large companies squeeze, making the market due to lack of funding innovative SMEs unstable position. Therefore, choosing the right technology innovation break through the bad policy to integrate innovative edge is the key to cycle technology SMEs access to market competitive advantage in transition. When carrying out the cycle of technological innovation of SMEs, we can not care to establish technology leadership, technological innovation, the main consideration in the product meet the concept of green consumption, resource recycling to reduce costs, can be taken to follow the strategy of innovation and technology imitation innovation strategy.

Cultivation technology markets, accelerate the development and promotion of energy saving technologies. SMEs in the implementation of circular economy, and actively cultivate technology market, we must first solve the problem of talent. SMEs through technology sharing alliance allows talent, is an effective external learning. Establish a network through alliances and recycling technical expert team of experts to promote research and development and promotion of energy saving technologies, technical support to be provided

for the development of recycling economy and security. In addition, small and medium enterprises to actively introduce strategically circular economy development of recycling economy and culture of professional technical and management personnel, protection and respect for the talent to make it in occupational safety, stability and social security, to have the full confidence of business enterprises to create conditions establish good incentives, people will gain full play.

To organize the development and demonstration of universal significance to promote resource conservation and alternative technologies, energy ladder use technology to extend the industrial chain link technology and related industries, “zero emission” technology, toxic and hazardous raw materials, alternative technologies, recycling technology, remanufacturing technology, and strive to make breakthroughs in the development of recycling economy technological bottlenecks. In key industries and key areas, industrial parks and circular economy pilot cities.

CONCLUSION

The development of recycling economy is the implementation of sustainable development strategies and take the new road to industrialization inevitable choice. Enterprise development of circular economy as a vector for technology innovation to achieve circular economy is important. SMEs account for most companies in the amount of ingredients, so SMEs to achieve circular economy is the foundation of China’s circular

economy to achieve, SMEs must carry out technical innovation alliance to achieve circular economy. Achieve economic, ecological and social benefits of unity. Cycle technology innovation is the key to a cycle of economic transformation of SMEs, but SMEs Innovation Alliance recycling economy-oriented technology can and stable development, the ability to coordinate the interests of the members of the good alliance, as well as different types of enterprises for technical innovation alliance choice The alliance model and other issues still need further discussion and research. SMEs in the process of development of circular economy are to play to their strengths to overcome obstacles, to choose the right loop innovative strategies to achieve the transition to a circular economy.

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