ISSN:2790-5179 DOI: 10.56028/iajhss.1.3.27

Obstacles to China's low-carbon economy

Gaohan Zhang[1,*]

[1] University of Chinese Academy of Social Sciences, Beijing, China

[*]793560804@qq.com

Abstract

Since the beginning of China's industrialization process, the economy has achieved sustained and stable rapid development. But at the same time, there are also a series of problems such as waste of resources and environmental pollution in the process of industrialization. As China gradually enters the middle and late stage of industrialization, environmental protection and carbon emission reduction have become important issues for sustainable economic and social development. This paper mainly analyzes the problems existing in the development of low-carbon economy in China, such as the excessive consumption of resources, the backward industrial structure leading to the aggravation of ecological pollution, the need for further application of science and technology in the treatment of ecological pollution, and the inadequate management of local administrative departments. On this basis, in view of the problems facing the development of low-carbon economy, a series of relevant policy Suggestions are put forward, such as changing the economic growth model, unswervingly promoting the adjustment of industrial structure of Chinese enterprises, vigorously developing science and technology of low-carbon energy conservation in China, strengthening the government's environmental control, and strengthening the public and enterprises' awareness of environmental protection.

Key words

Low-carbon economy; economic growth; industrial structure.

1. Introduction

After the reform and opening up, China's economic development has made remarkable achievements, but at the same time of economic development, there are also some areas of "pollution first, treatment later. First cut the forest, then plant the trees. In recent years, China's economy has been growing rapidly. However, while China's economic aggregate has been rising, environmental problems have become increasingly prominent. In recent years, with the growth of people's living level, the living comfort of living environment has gradually gained people's attention. People use electric heating, electric heating air, air conditioning and other heating or cooling systems on a large scale, which improves the indoor living experience on a certain level, but also brings large-scale resource consumption. With the deterioration of the environment and huge consumption of resources, the whole society began to advocate the concept of low-carbon economic development out of the concept of environmental protection[1].

The concept of a "low-carbon economy" originated in the UK's energy white paper. Low-carbon economy is based on the economic development concept of reducing energy

ISSN:2790-5179 DOI: 10.56028/iajhss.1.3.27
consumption, emission and pollution. Its essence is to develop innovative and clean energy and improve the utilization rate of resources, especially to solve the problem of China's current large amount of coal consumption. The core is to strengthen innovative technology, change the development structure of enterprises, and improve people's consciousness of low-carbon life[2].

2. The necessity of developing low carbon economy

2.1. The intrinsic requirement of sustainable development

Harmonious coexistence between man and nature is the basic requirement of implementing sustainable development strategy in China. With the continuous development of economy, the environmental problems caused by the economic growth mode of high energy consumption in the past become increasingly prominent. With the continuous improvement of people's living standards, the society began to pay more and more attention to environmental and resource protection. It also means that China must change the mode of economic development and change the economic growth pursued at the cost of high energy consumption and environmental pollution. Therefore, under the new situation, it is necessary to realize the transformation of economic development mode through the development of low-carbon economy, through the development of new energy, the development of innovative science and technology, to change people's concept of life and consumption, so as to leave a sustainable ecological environment for future generations.

2.2. The way of adjusting industrial structure

As China's industrialization enters the middle and late stage, the inevitable law of social and economic development objectively requires and promotes the development of the tertiary industry. With the continuous development of China's economy, especially the country vigorously promotes the transformation of industrial structure, especially the rise of computer software, finance, marketing, design, culture and other industries in recent years, which will objectively reduce the consumption of energy and resources. Therefore, the development of low-carbon economy is objectively an important way to eliminate backward production capacity of high-tech low-carbon industries, as well as an important way to improve the utilization of resources and gradually change the mode of economic growth[3].

2.3. Feasible measures to optimize China's energy structure

Coal accounts for a large share of China's energy mix, while natural gas accounts for only 13.30%, and nuclear, hydropower and other energy sources account for less than 4%. At present, our country has developed a lot of new energy. In the future, China's energy structure will continue to increase the proportion of clean energy and reduce the carbon emissions of disposable energy consumption. Therefore, it is of great importance to develop diversified and innovative energy to gradually replace coal, oil and other conventional resources. This is also an important measure for China to develop low-carbon economy and adjust and optimize its energy structure.

ISSN:2790-5179 DOI: 10.56028/iajhss.1.3.27

2.4. The development of low-carbon economy is a possible path for China to achieve leapfrog development

China's technical level is uneven, research and development and innovation capacity is limited. Facing this reality is the biggest challenge of China's transition from "high carbon" economy to "low carbon" economy. In recent years, China has made a lot of achievements in the development of new energy, especially in nuclear energy, wind energy and other aspects. Renewable energy is on the rise.

3. China's difficulties in developing a low-carbon economy

3.1. Resource consumption leads to serious ecological pollution

With the rapid promotion of enterprises, the demand for resources increases gradually, which makes the ecological pollution problem worse. In 2017, the country produced 320 million tons of industrial solid waste, an increase of 5.3 percent over 2016. The comprehensive utilization of industrial solid waste is 320 million tons. Of this total, 4.1632 million tons of hazardous waste was produced and 1.5042 million was used. Carbon dioxide emissions in 2017 reached 103.57 million tons, or 19.12 percent of the global total, or 5.5 metric tons per capita. Among China's major industries, electricity, gas and water supply account for the highest proportion of carbon emissions, reaching 53.5%. Coal accounts for 62.1 percent of China's total energy consumption of various types, with total energy consumption of 4.360 billion tons of standard coal[4].

3.2. The backward industrial structure leads to the aggravation of ecological pollution

China is in the stage of transforming manufacturing into new drivers of growth. The proportion of manufacturing has already exceeded 55%, and the trend is increasing. The correlation with the production of solid waste in manufacturing industry was shown in the right half of the positive u-shaped curve, and the influence coefficient also showed a trend of slow growth. This indicates that China's economic growth is still in the anxious period of manufacturing-oriented development, and the process of manufacturing-oriented development has entered a period of rapid improvement, which still brings certain ecological pollution. Therefore, we should pay attention to scientific and technological investment and financial support for ecological pollution control and actively guide the improvement of service industry while promoting manufacturing-oriented development.

3.3. Science and technology in ecological pollution control need to be further applied

Without scientific and technological assistants, it is very difficult to improve the economic level. Therefore, in order to achieve better development, enterprises in various industries in the market must combine their own characteristics to introduce new and high science and technology to improve production level and capacity, which can reduce cost consumption and pollution treatment costs. Especially in the aspect of pollutant treatment, it can save cost for enterprises to reduce the pollutants eliminated in production through science and technology,

ISSN:2790-5179 DOI: 10.56028/iajhss.1.3.27
and to adopt advanced treatment technology for efficient and harmless treatment of pollutants[5].

3.4. The local administrative departments lack effective management

Local management plays a key role in the ascension of the economic and social, and environmental policies and regulations, regulatory and tax breaks or control policy such as method influence corporate investment, manufacturing practices, and changes of environmental quality, China's fiscal revenue and manufacturing scale and solid waste emissions form a linear positive correlation between the amount. National overall atmospheric pollutants emission for successive years increases, the reason is that China's large more energy-intensive companies, sources of revenue inevitably affected by the administrative department of environmental policy and the lack of strict environment protection standards. Due to its own problems, the system of government departments makes cadres unable to give full play to their advantages and break through the traditional mode. In most cases, when encountering new problems, they conduct analysis and research based on experience. However, in the face of short time limit, heavy task load and high demand for work, most of the results can not achieve the unity of quality and efficiency.

4. Proposals to promote China's low-carbon economy

4.1. National strategic reform

Change the way the economy grows. At present, China is facing severe environmental problems. It has become the only way for China's economic development to promote the adjustment of industrial structure and change the traditional economic growth model. Therefore, China must seek a path of low consumption and sustainable development, develop a new low-carbon economy, guide enterprises to carry out structural reform, and adjust enterprises with high energy consumption and low efficiency.

We will vigorously develop low-carbon technologies. Low-carbon technology is an important means to optimize the energy structure. Only with high and new technology can the country provide technological means for the traditional economic reform. To solve the existing problems, the state should strengthen the cooperation between scientific research institutions and enterprises. Practice and theory should be combined to develop clean energy such as bio-energy, solar energy and wind energy. These measures can fundamentally solve the current problem[6].

4.2. The government has strengthened institutional and legal systems

We will strengthen the legal system. Environmental management departments should not only rely on administrative management system to control environmental pollution of enterprises, but must be combined with criminal legal punishment at the same time. Only by cracking down on enterprises whose serious environmental pollution may bring permanent secondary disasters to the society can they be effective from the perspective of criminal law. The administrative department of environmental protection should publicize and study the legal system of environmental protection for key enterprises in daily work. Regularly organize the inspection team to inspect the production conditions of key enterprises to check the emission of pollutants. If there are violations of timely governance. In the management

ISSN:2790-5179 DOI: 10.56028/iajhss.1.3.27
process, the environmental management department formulates unified management standards to provide a level playing field for the company. The improvement of environmental standards is conducive to the company's technological transformation, technology introduction and clean manufacturing. It can also guide foreign investment into environmental protection, effectively preventing China from becoming a "pollution paradise". Management departments should not only pay attention to the tax paid by companies with high profits, taxes and high pollution, but also reduce the cost of pollution discharge or give other preferential policies. The correct orientation of management departments is a key factor for environmental protection. The information disclosure system in government administration system is introduced into environmental protection management. Make full disclosure of the company's pollution discharge and environmental treatment, and use the power of social supervision to urge enterprises to carry out environmental protection work. If an enterprise fails to do a good job in environmental protection, it will have a negative impact on the society, directly leading to the deterioration of the brand effect of the enterprise in the market and the reduction of market share[7].

Chinese authorities have strict policies and supervision on the discharge of manufacturing wastewater. Compared with manufacturing waste gas and solid waste, various control plans and monitoring measures are more perfect and suitable than before. It can be seen that the government administration is crucial in environmental protection. For now, market economies are becoming more complex and diverse, and the risks are becoming harder to identify. Therefore, in this case, the relevant government departments must fundamentally enhance their discernment in order to achieve long-term development.

4.3. Promote enterprise reform

Increase scientific research and development. At present, many countries have invested heavily in low-carbon technology research and development. More than 50 financial institutions around the world have invested 1.3 billion us dollars in low-carbon technology development. Seek to capture the technological high ground when the age of low carbon economy really arrives. As a modern enterprise, we should invest more in high-tech new technology in production. Although the investment in the development of new equipment and technology will occupy part of the production capital of the enterprise, the production efficiency of the enterprise will be greatly improved after the new technology and equipment are put into use, and the pollution emission in production will be continuously reduced. Higher production efficiency means that enterprises can produce more products in a shorter time, and less pollutant emission means that enterprises will spend less money on environmental protection. That is to say, enterprises will gain more benefits after increasing the efforts of scientific and technological development.

Enterprises optimize the composition of the industry. On the premise of sufficient sewage energy, enterprises should promote the promotion of manufacturing industry and environmental protection. Economic composition is the adjustable factor and the key carrier of other factors that affect ecological pollution. We should comprehensively upgrade and transform the manufacturing industry, and improve the proportional correlation between light and heavy manufacturing within the manufacturing industry. Efforts will be made to improve the scientific and technological content and added value of energy-based products, and to transform traditional manufacturing of raw materials into deep processing and

ISSN:2790-5179 DOI: 10.56028/iajhss.1.3.27
manufacturing. Enterprises can form a comprehensive plan for the management quality of low-carbon economy, and the relevant assessment system is not perfect. If the Marketing Department and the corresponding low-carbon economic management department exist in an independent form and lack effective communication, the control of the management department will be more inconvenient. In addition, the approval system adopted by the company requires a long period of time, which also makes the decisions made by the management lag behind to some extent. In this new era, we are required to be nimble, and if the approval time is too long, we may miss the development opportunity[8].

We will strengthen corporate censorship. On the corresponding review work. To ensure that the enterprise is on the right strategic path and the right execution and decision-making at all levels of the organization. Improvements can be made in the following aspects: ensuring that enterprises themselves have appropriate low-carbon economy management systems. In the corresponding management post, the work shall be implemented to specific individuals to realize the responsibility system. Must not ignore the supervision work, needs to formulate the reasonable supervision plan. The corresponding low-carbon economy management system of the enterprise should adapt to the future development of the enterprise, so as to promote the steady development of the enterprise toward a better situation.

4.4. Strengthen people's and enterprises' awareness of environmental protection

In order to control the deteriorating environment, it is impossible to rely on the efforts of only one enterprise and one department. The real environmental protection is the environmental protection with the participation of the whole people. The environmental protection management department should make great efforts to publicize the environmental protection and make every citizen aware of their environmental responsibilities and obligations. The more civilized a country is, the stronger its citizens' awareness of environmental protection will be[9]. If the national quality wants to take the leading position in the world, it must pay attention to the shaping of environmental protection awareness and become a civilized and environmentally friendly Chinese. Promote a well-researched quality culture of low-carbon economy management. In the new era, with the increasing level of information technology. It is required that all personnel of the enterprise should keep the overall development goal of the enterprise in mind. A successful enterprise can develop steadily in a complex and diverse environment, and must have the corresponding coordination force. Be able to reprogram your development pace and pace based on specific risks. It can be used as a basis to require decision-makers to pay enough attention to the implementation of the corresponding management system from top to bottom, so as to ensure that the management of low-carbon economy can act on all departments and personnel[10].

5. Conclusion

To sum up, under the new normal of China's current economy, changing the traditional economic growth model requires all-round changes. On the government side, we need to promote industrial restructuring, change the traditional pattern of economic growth, vigorously develop low-carbon technologies, optimize the energy mix, and strengthen institutional and legal systems. On the enterprise side, we should increase scientific and

ISSN:2790-5179 DOI: 10.56028/iajhss.1.3.27
technological research and development, optimize the industrial structure, establish a new enterprise management model, and strengthen the enterprise review system. Look for low consumption growth points. In terms of the public, we should strengthen low-carbon publicity, establish the concept of low-carbon economy for all, guide enterprises to produce low-carbon products, and make low-carbon life a fashion.

References

[1] Liping Wang. Analysis of the Realization Mechanism of the Regional Low-carbon Innovation System Based on the Technological Forecasting[C]. Singapore Management University、Xi'an Jiaotong University.Proceedings of 2019 3rd International Conference on Education,Management Science and Economics(ICEMSE 2019).Singapore Management University、Xi'an Jiaotong University,2019:430-433.

[2] Yanping Liu. Research on Low-carbon Economy and Its Consumption Guidance[C]. Institute of Management Science and Industrial Engineering.Proceedings of 2018 7th International Conference on Social Science,Education and Humanities Research(SSEHR 2018).Institute of Management Science and Industrial Engineering,2018:580-583.

[3] Zhang LiuCheng. Research on Chinese Corporate Social Responsibility Accounting under the Background of Low Carbon Economy[C]. Institute of Management Science and Industrial Engineering.Proceedings of 2018 5th International Conference on Education,Management,Arts,Economics and Social Science(ICEMAESS 2018).Institute of Management Science and Industrial Engineering,2018:453-456.

[4] Yin Long. Regional Differences and Countermeasures of Low Carbon Economy Development in China[C]. Institute of Management Science and Industrial Engineering.Proceedings of 2018 5th International Conference on Education,Management,Arts,Economics and Social Science(ICEMAESS 2018).Institute of Management Science and Industrial Engineerin, 2018:406-410.

[5] Wenhua Li. Current Fiscal and Taxation Policy Research on Haze Control under the Background of Low-carbon Economy in China[C]. Institute of Management Science and Industrial Engineering.Proceedings of 2018 International Conference on Economics,Finance,Business,and Development(ICEFBD 2018).Institute of Management Science and Industrial Engineering, 2018:227-231.

[6] Yu Rui. Low Carbon Economic Development in Canada[C],2015:171-175.

[7] LU Xian-xiang. On the Market Failures during the Development of Low-Carbon Economy[C]. .Journal of Contemporary Finance and Economics(English Version 2014), 2014:4-16.

[8] Rui Guo. A Strategy Research on Building Low-carbon Consumption Patterns of the Doctrine of the Trinity[C]. Hong Kong Education Society.Proceedings of 2013 International Conference on Economic,Business Management and Education Innovation(EBMEI 2013 V17).Hong Kong Education Society,2013:26-30.

[9] YANG Jianxin. Study on Application of Value Engineering in Low-Carbon Economy[C],2011:33-37.

[10] Tianwei WANG 1,Zemin WANG (Energy Research institute of Tianjin,Fujian Road 17,Hexi District,Tianjin 300202,China). Path Analysis on the Target of Low-Carbon Development in China[C],2011:4-10.Ling-Yang He,Ling-Ling Pei,Yu-He Yang. An optimised grey buffer operator for

ISSN:2790-5179 DOI: 10.56028/iajhss.1.3.27
forecasting the production and sales of new energy vehicles in China[J]. Science of the Total Environment,2019.