

Research on Sustainable Development of China's Overseas Trade in the Low-carbon Economic Circumstances

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Abstract. Nowadays, the major developed countries stipulate the development policies and measures for low-carbon economy and one after another in order to promote the domestic low-carbon related industries. Low-carbon economy has officially stepped into a phase in which government is the main lead. This paper will analyze the reality of the sustainable development of China's overseas trade and the effects to it brought by the policies of other countries from the government management point and offer advises to promote the sustainable development of overseas trade with low-carbon economy.

Keywords: China's overseas trade; sustainable development; low-carbon economy

1. Introduction

Since the signing of UN Framework Convention on Climate Change in 1992, now 194 members have joined it as the climate change and the responsive measures have been one of the global focuses [1]. The Tokyo Protocol in 1997 set stricter lines about the carbon-dioxide emission. Though, so far the developed countries failed to meet the demands on the reduction of greenhouse gas emission, the development of low-carbon economy which aims to cope with climate change and reduce the emission has been the main trend in the world. The Copenhagen Conference at the end of 2009 will further promote the low-carbon economy in the world even it failed to come to any binding agreements on emission. A more green industry will be the key of the competition among countries. Anyone coupled with the advantages to develop a green economy will be invincible in this generation of industry reforms. The policies of low-carbon industry will influence the international trade rules and order significantly. How to achieve the sustainable development of China's overseas trade in the low-carbon economic circumstances is a problem worthy of attention.

2. The Status Quo of Low-Carbon Economy and Countries' Policies

2.1. Low-carbon economic policies of EU

As a leading role in environment protection, EU is also a staunch force against climate change. Back before the signing of UN Framework Convention on Climate Change, EU has taken correspondent strategies. After the Tokyo Protocol, EU made detailed policies and measures to implement the emission reduction and develop low-carbon economy.

Firstly, European climate change program.

In June, 2000, EU started its ECCP (European Climate Change Program) which integrated all the measures and actions taken to reduce or response to the climate change. Led by EU Committee, all industries, departments, non-government organizations and experts participated. Meanwhile, it was in accordance with development strategies of EU with a shared aim to promote the war against climate change in EU. The

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program is divided into two phases and involves lot of policies and many departments including the cap-and-trade system, joint implementation and green development mechanism, energy supply, energy demand, end use energy efficiency, industrial energy efficiency, transport, industry, research, agriculture, soil carbon sequestration, forest carbon sequestration, airlines, carbon dioxide and vehicle, carbon catch and storage, adaptive activity and the European carbon emission trading system.

Secondly, laws and regulations.

The laws and regulations about environment protection namely low-carbon in EU enjoyed an early start and are being perfected continuously. Since 2000, EU stipulated a number of orders, resolutions and regulations which involves the power generation of renewable energies, energy efficiency in buildings, biological fuel and other renewable fuel, emission trading system and the energy tax come up with demands for energy conservation and efficiency from various aspects such as the development and use of renewable energy, the production and use of energy products like air conditioner and vehicles as well as the life cycle of products since their design.

Thirdly, strategies of climate change and energy.

In March, 2007, the statesmen and government leaders of EU members approved a complete project came up by EU Committee around the climate change and energy. This project aimed to enhance competitiveness and fight against climate change meanwhile improving the energy safety for EU and realizing the transformation to a high-efficient and low-carbon economy. It set the goals in 2020 which include: the green gas emission shall be 20% less over 1990, the renewable energy shall take up a 20% in the energy consumption, the energy use shall be 20% less compared to the project level after the improvement of energy efficiency. Corresponding to this project, EU Committee put forward a climate/energy package plan covering the aspects such as emission trading system, renewable energy, carbon catch and storage and quality of transport fuel. In January, 2009, the orders involved have been passed and become laws.

2.2. Low-carbon economic policies of Japan

Japan is another pioneer in the tide of low-carbon economy. Early in 1975, the Ministry of Economy, Trade and Industry (METI) has already issued preferential policies for the industrial revenue and tax to encourage energy conservation and enhance energy efficiency. Since 2000, Japan issued more policies for the development of low-carbon economy.

Firstly, new international energy strategy.

In May, 2005, Japanese government stipulated New International Energy Strategy based on three principles (stable supply, environment fit, market operation) with a long-term goal that the energy efficiency will be 30% higher in 2030. It also covers regulations on the energy efficiency, conservation policies and detailed measures involving the energy conservation, new generation of traffic energy and nuclear.

Secondly, outlook and strategic plan of energy demand and supply.

In May of 2008, the Ministry of Economy, Trade and Industry issued it, comprehensively coming up with the structure of Japanese energy demand and supply and making a medium or long term strategy for technology development as well as analyzing the technologies and measures needed for an ideal balance between the supply and demand in 2030. The plan includes the following measures such as improving the energy efficiency, promoting new technologies and equipments, introducing new generation of cars, achieving the diversity of fuel and enhancing the utility ratio of power generated by nuclear.

2.3. Low-carbon economic policies of America

Even though America holds negative thoughts on the international cooperation against climate change, it doesn't mean that it has no interest in promoting the domestic low carbon economy. It's mainly trying to reduce the dependence on oil from the point of energy safety through the improvement of energy efficiency.

Firstly, bills of renewable energy.

Since 2000, America has passed many bills to develop biological energy and encouraged federal government to support the development of the biological energy enterprises through procurement, investment or loans for the renewable energy projects. America works to rid of the dependence on oil by

developing biological fuel and fuel cell and raise the improvement of energy efficiency to the level of energy safety.

Secondly, recovery and reinvestment act.

On February 15, 2009, US passed the American Recovery and Reinvestment Act with a total investment volume of 787 billion dollars. This act put the key on the development of new energy which including the development of high-efficient battery, smart grid, carbon storage and catch and the renewable energy (such as solar or wind energy). The energy conservation mainly refers to the green vehicles.

Thirdly, clean energy and security act.

On June 26, 2009, the U.S. House of Representatives passed the American Clean Energy and Security Act which made detailed regulations on the use of renewable energy, the improvement of energy efficiency, the reduction of greenhouse gas, and the transformation to an economy based on clean energy. Besides, this act set the international reserve allowance which requires that the concerned products introduced to American market shall purchase a permit under such system in order to offset the carbon cost of the production of such products by American enterprises.

3. Effects to Overseas Trade in China from the Low-Carbon Economy

So far, the development mode of the overseas trade in China is till of the extensive growth. The resource-intensive and labor-intensive products featuring low-technology, high energy-consuming and energy pollution still take a major position in the overseas trade. In the trade structure of China, the export products have relatively more pollution per energy-consuming, more pollution and higher total energy consumption.

3.1. Energy consumption of the main export and import industries in China

Generally speaking, the energy efficiency in China is relatively low the carbon dioxide emission is over the world average. The energy consumption of industry sector accounts for 72% of the total and the energy consumption of manufacturing sector is a major part, taking up 59% of the total.

As for the overseas trade, the export volume of it accounts for over 90% of the total export volume. In 2009, the total export volume reached \$1201.67 billion and the export volume of manufacturing industry was \$1161.31 billion, accounting for 96.6% of the total volume. The mechanical and electrical products, textile, clothing, toys, shoes, chemical products as well as the metal and metal products such as the steel or iron have taken a major number of the export volume and they share a high energy-consuming, ranking top in manufacturing sector. The ferrous metal smelting and the smelting and processing of nonferrous metal have consumed 477.74 million tons of coal, far more than other industries; the close follower was the industry of chemical material and products, a coal consumption of 272.45 million tons; the textile industry came at 6, a coal consumption of 62.08 million tons.

3.2. Effects to export market in China from other countries' low-carbon policies

The effects from other countries' policies are not certain yet as they are more dependent on the contrast between the results of the low carbon policies adopted in China and other countries such as the situation of the development and use of the renewable energy and the state quo of the application of the low carbon technologies in various sectors [2]. From the goal and implementation of the low carbon strategies of countries, a conclusion is drawn that the development and use of the renewable energy and the low carbon technologies will possibly evolve into the low carbon technique regulations or standards or will be used to limit China's export combined with other trade limitations such as the technique barriers and border tax adjustment. Though faced with many problems when it comes to feasibility of the carbon tariff, with the development of the low carbon technologies, the carbon tariff may evolve into technique tariff, which will be exert big influence to China's overseas trade.

4. Suggestions to Promote Sustainable Development of China's Overseas Trade

The major targets for China's overseas trade include the transformation of the growth mode, the adjustment and optimization of the industry structure and the achievement of sustainable development of

overseas trade. With the low carbon economy as the mainstream, the realization of the above targets needs coordination of all forces with government playing a leading role.

First, the stipulation of low carbon economic development strategy should be in accordance with domestic situation. As for the advanced economies, society has stepped into the phase of post-industrial society with few high energy-consuming industries and relatively mature energy consumption. The goals for these countries are mainly to achieve energy safety and to find new competitiveness and a new economic driver as well as reducing the emission of carbon dioxide. But China is a developing country of which the economic development and urbanizations still need efforts and the manufacturing sector of which is irreplaceable, so the starting point and goal of us shall differ from those of the developed countries. China need to come up with a development strategy that is in lines with domestic situation: for one thing, we shall embrace the coming of the era of low carbon economy and give due consideration to the transformation of a more green economy; for another thing, we shall develop low carbon economy with reason and avoid the redundant construction or pursuing low carbon economy under the scarification of other resources such as water or grain.

Second, China should participate the international cooperation, make use of the rights entitled by international conventions and agreements and stick to the principle of common and differential liability in the development of low carbon economy. UN Framework Convention on Climate Change and Tokyo Protocol have entitled developing countries to control green gas emission with the principle of common and differential liability on the basis of the financial and technique support from developed countries [3]. China shall make full use of the right. On one hand, we should play the two cards: both the principle and the support card so as to gain financial and technique support from developed countries to foster the development of low carbon economy in China; on the other hand, we shall also acknowledge the hesitation of them in supporting us so it is not practical for us to lay the hope on them, instead, we should vigorously develop relevant technologies and carry out cooperation with them to reduce the cost and to achieve the updating technology, laying a sound foundation for the development of low carbon economy.

Third, China should combine the development of low carbon economy and the overseas trade, and use the driver from low carbon economy to foster the sustainable development of the overseas trade. The development of low carbon economy in China shall be combined with overseas trade. The development and use of the low carbon technologies should help the export industries, especially for the industries which may bring great job opportunities. Therefore, on one hand, we should invest more in the research and development of the low carbon technologies and encourage technical innovation, especially those for the export products; on the other hand, we shall give greater support to the promotion of new technologies and advocate the export of the new technologies and new products.

Fourth, China should make full use of the economic means such as the budget, financing and tax to nurture the development of low carbon industries. With proper opportunities, energy tax may be issued as a way to limit the export of the high energy-consuming and high-pollution enterprises. As for the high-technology-adopted enterprises, preferential tax policy or financial support shall be granted as a way to encourage energy conservation, emission reduction and the technical innovation. By the allowance for the research and promotion of new technologies, the high-technology-adopted enterprises shall be more competitive and the export of the products will enjoy more advantages. It is of significance to the structure adjustment of the export products, to the realization of the growth pattern transformation of the overseas trade and to the sustainable development of overseas trade.

5. References

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