

The Positive Impact of China's Carbon Emissions Trading Market Legal System Construction on Solving the Climate Crisis

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ABSTRACT

The outbreak of the new crown pneumonia epidemic on a global scale has prompted the whole human society to pay more attention to the issue of climate change, and how to reduce global carbon emissions has once again become one of the hot spots. Although China's environmental protection situation is still very severe and the task of energy conservation and emission reduction is facing enormous challenges, China, as a responsible major country, still abides by its climate commitments and proposes to achieve carbon peaking by 2030 and carbon neutrality by 2060. The ambitious new goal of carbon neutrality, and the carbon trading market, as a low-cost, high-efficiency, market-based means of energy conservation and emission reduction, will surely become a key driver for China's carbon neutrality goal. China launched a pilot carbon emissions trading project in seven provinces and cities in 2013 and announced the establishment of a national carbon emissions market in December 2017. The pilot project has accumulated useful experience, but it has also exposed many defects, such as the lack of national-level legislative basis and national unified rules for the carbon market, loopholes in the management mechanism, the transition rules from the pilot to the national carbon trading are not refined enough, and the carbon trading supporting system It is not perfect, and the carbon financial market system has not yet been formed.

Keywords: Carbon emission rights; Price mechanism; Legal system; Emissions trading

1. Introduction

Climate crises are real, urgent, and at the same time, long-term. At present, the issue of climate change has penetrated various fields and formed a climate risk situation, which has seriously affected the process of global green recovery. What form of legal mechanism to seek to deal with climate change is an urgent issue for all countries.

As one of the symbols of green civilization, carbon neutrality is a broad and profound economic and social systemic revolution. China's emissions trading system (ETS) will be officially put into operation in mid-2021. The system aims to reduce carbon emission intensity through a tradable performance standard and will be first implemented in the power generation industry. It is expected to expand to other industries in the future and will transition from an intensity-based carbon trading system to a cap-based system. This paper sorts out the history, design, and implementation rules of the carbon trading

system, and analyzes its development trend in the next ten years. The carbon emission trading law will support the realization of the two goals of "Peak carbon emissions by 2030" And "Carbon neutrality by 2060".

1. Research Background And Purpose

In recent years, the issue of global warming has attracted more and more attention from the international community, and it has become a global issue faced by all mankind. Since the industrial revolution, rapid economic development has stimulated the demand for fossil energy, leading to massive emissions of greenhouse gases represented by carbon dioxide, the increasing global average atmospheric temperature near the ground, increasing the greenhouse effect, and the frequency and intensity of extreme weather. With the increase, various realities force human society to face the contradiction between economic development and the ecological environment. It has become a wise

move to accelerate carbon emission reduction to alleviate global warming.

The sixth report of the United Nations Intergovernmental Panel on Climate Change pointed out that compared with 1850 to 1900, the global average temperature has risen by as much as 1.1°C, with more pronounced warming in terrestrial ecosystems and high latitudes in the northern hemisphere (IPCC, 2021). The greenhouse gas emissions caused by human activities such as fossil fuel combustion and land-use change are important causes of global warming. However, the continuous increase in the world population and the sustained economic development of various countries have led to an unabated increase in the total global greenhouse gas emissions. The latest United Nations climate report pointed out that global carbon dioxide (CO₂) emissions reached 38 billion tons in 2019. As the world's largest fossil energy consumer and greenhouse gas emitter, China is facing enormous international pressure to reduce emissions. As early as in the negotiation process of the Paris Agreement in 2015, China submitted to the United Nations the NDC target for greenhouse gas emission reduction, promising to "Peak the total carbon emissions by 2030 and strive to reach the peak as soon as possible."

In the long run, it is the trend to formulate special laws in the field of climate change. Through special legislation, formulate China's law on addressing climate change, establish China's carbon neutrality goal, clarify the scope of rights and responsibilities of carbon emission management and control entities, the rights, and obligations of various entities, and build a combination of national unified management and local and departmental division of responsibilities carbon emission management system and working mechanism. At the same time, promote the adjustment and improvement of laws, regulations, and policies for low-carbon transformation in various fields, and provide a legal basis for carrying out relevant supervision and management, publicity and education, international cooperation, dispute resolution, and other activities.

2. Scope and Method

Countries have formulated and implemented relevant national policies and national legislation for carbon neutrality, especially the United States and the European Union. National policy and legislative documents guide progress towards carbon neutrality. Based on the carbon neutrality laws of various countries, comparative analysis methods and

empirical analysis methods are used, and relevant empirical data are added to the international legal system and the Chinese legal system to accurately analyze the problems and propose corresponding solutions.

2. Related Discussions on Carbon Neutrality

1. What is Carbon Neutrality?

Carbon neutrality refers to the total amount of carbon dioxide or greenhouse gas emissions directly or indirectly generated by a country, enterprise, product, activity, or individual within a certain period. Emissions and other forms to offset the carbon dioxide or greenhouse gas emissions generated by itself, to achieve positive and negative offsets, and achieve relatively "Zero emissions". In 1997, the London Future Forest Company first proposed the concept of carbon neutrality. The company's operating model is as follows: With carbon neutrality as a product brand, by calculating the total annual carbon emissions of customers, providing customers with tree planting and other methods to offset the total carbon emissions to obtain economic benefits. Although carbon neutrality was initially created by economic interests and was criticized by environmental groups at the time, its initiatives to promote public participation in global climate governance were still well-received. "In 1999, the earliest carbon-neutral non-profit organization 'Climate Neutral Network' was established in Oregon, USA, the organization aims to persuade commercial companies to remain carbon neutral, believing that this will save money and achieve environmental sustainability. ...and then many companies and organizations around the world developed their own 'carbon and climate neutral' certifications and labels." In 2006, carbon-neutral was selected as one of the new Oxford Dictionaries' words of the year, which was widely discussed.

2. How to Achieve Carbon Neutrality?

Approaches to achieving carbon neutrality there are generally two approaches to achieving carbon neutrality: 1. Through the carbon offset mechanism, the carbon emissions produced by it are reduced in other places. For example: Planting trees, and purchasing renewable energy certificates. 2. Use low-carbon or zero-carbon technologies (low-carbon economy). For example, the use of renewable energy sources (such as wind and solar energy) to avoid carbon dioxide emissions into the atmosphere from burning

fossil fuels; the ultimate goal is to use only low-carbon energy sources, not fossil fuels, to balance the amount of carbon released and absorbed back to the earth does not increase.

3. Net-Zero Emissions

Net-zero emissions, which refer to net-zero emissions of greenhouse gases, have been used more often in recent years. Unlike carbon neutrality, net zero emissions include all greenhouse gases and offsetting emissions only considers ways of actually removing greenhouse gases from the atmosphere (e.g. afforestation, carbon capture, and storage).

4. What is Carbon Emission Right?

The concept of emission rights (i.e. pollutant emission rights) was first proposed by American economist dales in 1968 in the book "Pollution, wealth and prices", which means that after the emission subject obtains the permission of the environmental management department, it is under the premise of ensuring that the exercise of this right will not damage other public environmental rights and interests, the right to discharge pollutants into the environment according to the pollutant discharge index, that is, the right of the discharge subject to discharge pollutants under the conditions specified by law.

As a kind of emission right, the concept of carbon emission right comes from the emission right, but it is different from the general emission right. Carbon emission rights, also known as carbon rights, refer to the right of companies to emit carbon dioxide as the main greenhouse gas into the atmosphere.

As a non-physical right product, carbon emission rights naturally have the attributes of financial derivatives. They are mainly traded in futures and options in mature futures exchanges and are also guided by price theory in the financial market. In the futures market, the carbon emission rights trading futures market also has the functions of price discovery, hedging, and risk investment in the general futures market. In a mature and perfect futures market, the futures price should have a strong guiding effect on the spot price. Due to the important influence of the price in the futures market, there are many types of research on the formation of futures and options prices. The pricing methods of futures contracts are mainly divided into two categories: The first is the holding cost hypothesis, which holds that the futures price should be equal to the holding cost; the second is the risk premium hypothesis, which holds that the futures price should be equal to the

future expected value of the spot price plus risk premium. According to the price discovery function of the futures contract and the pricing method of the futures contract, the price of carbon futures can be calculated in two ways: The holding cost or the sum of the expected value of the future spot price and the risk premium. The relevant research results of carbon futures prices at home and abroad show that there is an interrelationship between carbon futures prices and carbon spot prices. The fluctuation path of carbon futures prices may affect the expectations of spot prices, which in turn affects the current spot prices. In addition, the pricing method of options is mainly based on the classic model bs model of warrant pricing theory and the binomial option pricing model. The amount of compensation is therefore reached by buyers and sellers through bidding in the exchange, and the price of carbon options can be predicted with the help of a pricing model, which provides an important basis for the development of the carbon futures market.

5. Carbon Emissions Trading Market

The carbon emission rights trading market is different from the traditional market composed of labor, capital, and other factors. It is a special market that conducts market activities for emission rights. It makes full use of market mechanisms to address issues such as environmental issues, carbon emission reduction issues, and low-carbon economic development. It can be solved in a unified and coordinated manner and achieve a win-win situation between the optimal allocation of ecological elements and the acquisition of economic benefits. The carbon emission trading market can also be called a carbon trading market or a carbon market.

Fundamentally, the carbon emission rights of trading products in the carbon market have a strong policy nature because they are allocated by the government, and thus a special purchase contract relationship between supply and demand for carbon emission allowances is established. Under the premise of minimizing both the cost of emissions and the cost of operation, and following the policy orientation or incentive mechanism, it seeks a special market for the availability of benefits.

According to different trading products, the market structure of carbon trading can be divided into the quota-based market and the project-based market. The trading objects of the two markets are different. Among them, the allowance market is based on the "Kyoto protocol" Allowances that are allowed amount units (Assigned Amount Units, AAU) and the

EU emissions trading system allowance (European Union Allowance, EUA) as the trading objects. The basic principle of total cap trading is that it can be refined into mandatory trading represented by the EU Emissions Trading System (EU ETS) and the Regional Greenhouse Gas Initiative (RGGI). The market and the resource trading market are represented by the Chicago Climate Exchange (CCX); while the project market trades carbon credits, including the joint performance mechanism and the clean development mechanism, and the allocation of emission reductions under the two mechanisms Emission Reduction Units (ERU) and Certification Emission Reduction (CER).

6. Carbon Finance and Carbon Finance Market

Carbon finance originated from the "United Nations Framework Convention on Climate Change" and the "Kyoto Protocol" and is a general term for various financial institutional arrangements and financial transaction activities for the development of a low-carbon economy. In 2007, Sonia Labatt and Rodney r. White mentioned in their book "Carbon finance: Financial implications for climate change": "Carbon finance is developed by financial institutions after adding carbon emission elements in financial theory and practice. Financial products traded in the carbon finance market to transfer climate risks." It can be said that carbon finance is a new emission reduction mechanism that integrates marketization and financialization. But there are broad and narrow senses. Carbon finance in a broad sense refers to various financial trading activities carried out to reduce greenhouse gas emissions and the relevant financial institutional arrangements for such activities, including Carbon spot trading based on carbon allowances and carbon emission projects, and carbon financial derivatives. Transactions, investment, and financing activities for the smooth progress of these transactions, financial products and services related to carbon emission reduction provided by commercial banks, carbon fund projects established by governments or public welfare organizations, and guarantees related to the above activities provided by intermediaries, consulting, and other intermediary services. Carbon finance in a narrow sense refers to financial products and derivatives such as carbon spot, carbon futures, carbon options, and carbon forwards based on allowances and project transactions.

The carbon financial market is a market composed of various carbon financial derivatives generated in the process of carbon

emission trading. The carbon financial market based on the combination of financial theory and the carbon emission trading market is an important carbon trading market. It is mainly manifested in a series of various financial activities of investment, financing, and carbon emission market transactions. Under the background that the international community is actively promoting the process of carbon emission reduction, the development of the carbon financial market has entered a new era. As far as the definition of the carbon financial market is concerned, if only GHG emission rights indicators are traded by relevant agreements or regulations, then such a market is a carbon financial trading market in a narrow sense. Decide on whether or not to trade after making comparisons" the broad carbon financial trading market refers to "In addition to the content involved in the narrow carbon financial trading market, it should also include the investment and financing market related to energy conservation, emission reduction, and clean energy projects, these markets are closely related to the development of the carbon financial trading market." like other traditional markets, the development of the carbon financial market is closely related to the types of trading products, the degree of perfection of the market mechanism, and the activity of trading activities. The market is centered on carbon emissions trading. Therefore, the carbon financial market, like the carbon emissions trading market, can be divided into a project-based carbon financial market and a carbon allowance-based carbon financial market according to the trading objects. The difference can be the spot carbon financial market and the futures carbon financial market. However, no matter which classification method is used, generally speaking, the trading products and participants in the carbon financial market have the same components, with carbon allowances and certified emission reductions as the main basic trading products and derivatives mainly composed of carbon futures, carbon options, and carbon funds constitute the trading products of the carbon financial market; market traders, intermediaries represented by commercial banks and exchanges, and carbon financial market regulators from the main participants of the market. As an emerging field in the capital market, the establishment and improvement of the carbon financial market have an important reality. From the perspective of environmental protection and emission reduction, it can promote the improvement of emission reduction technologies and accelerate the development and utilization of new energy.

From an economic perspective, it can play the value discovery function in the financial market and help participating entities avoid risks and obtain benefits, virtually expanding the financial services, intermediary services, and asset management businesses of financial institutions.

3. Previous Research

1. Research on the Global Carbon Emissions Market

The establishment of the initial carbon emission right price mostly uses the marginal abatement cost curve (MAC) to measure the shadow price method for analysis, which is a typical representative method of using the mac model to estimate the opportunity cost between environmental costs and benefits, Montgomery (1972) in his article, he pointed out that there is also a marginal emission reduction cost in the carbon emission trading market, and this cost can be calculated by a general equilibrium model.

Denny Ellerman J and Annenene Decaux (1998) divided the world into six major sectors, used the model to obtain the aggregation of the MAC curve and the possible equilibrium price under non-trading and trading conditions, and calculated the ratio of the benefits and costs of carbon emissions trading. Scientific presentation.

Ross Mc Kitrick (1999) deduces the MAC function by using a rigorous mathematical method and makes a detailed model introduction on this basis, which provides a valuable reference for future research. Kuik Patrick Criqui (1999) used an economic model to conduct an effective correlation study between the global emission reduction level and the national marginal emission reduction cost and achieved a quantitative comparison of the two.

Hintermann (2010), under the premise of an efficient market, deeply analyzed the operation of the EU ETS and explored the interaction and correlation between marginal abatement costs and price changes. however, with the development of the carbon emission rights trading market, although many scholars have used the MAC analysis method to calculate the shadow price of carbon emission reduction costs, and based on determining the optimal emission reduction function, they use the opportunity cost of environmental costs and benefits to set prices. However, this research method cannot cover factors including technological spillover, carbon leakage, scarcity of public resources, and fair distribution of resources, which affects the

scientific performance of the pricing mechanism.

Andresen et al pointed out that the Paris agreement is a new step towards addressing the climate challenge, its positive significance is unquestionable, but there are many uncertainties. The article analyzes the potential impact of the Paris agreement on the EU carbon market and concludes that the EU carbon market will continue to accelerate policy and institutional reforms after 2030, to drive other developing countries to contribute their strength and actively respond to the agreement called for. In conclusion.

Rahel Mandaroux emphasized that the EU carbon emission trading system is an important pillar of the European energy policy to reduce energy conservation and emission reduction. In response to the data fraud chaos in actual operation, the article proposes a technology that can digitize ETC, which can help regulators verify the authenticity and accuracy of data, extend the traceability and traceability of transaction data, and improve regulatory efficiency. But its drawbacks are that it may involve corporate privacy, and it is expensive and cannot be universally applied for the time being.

Eichhammer et al. Focused on the differences between the three methods of EU ETS quota allocation and pointed out that the EU designers mainly use the free allocation method, which is flawed, which leads to a huge allocation gap among member states, and even distorts competition. Based on the principle of polluter-pays, the EU's third phase focused on policy reforms in quota allocation and revised relevant legislation to make auctions the default method for quota allocation.

Yun-Jung adopted the data analysis method to select the transaction price data of the EU carbon market from august 4, 2005 to December 31, 2019, and obtained the information efficiency of the first development stage of the EU through the trend fluctuation model analysis. The lowest is the lowest, and the third is the highest. Although the overall trend is on the rise, it has not yet achieved the desired effect. Therefore, it is proposed that EU ETS policymakers should strengthen regulatory measures as soon as possible to reduce market manipulation and promote the flow of market information. Perfect suggestions.

Sam Hartmann takes Australia's carbon emission rights market as the research object, the relevant issues of the carbon emission rights market are studied through blockchain technology. The research found that blockchain technology can improve the

efficiency, fairness, and effectiveness of the Australian carbon emission rights market, which provides suggestions for the improvement of the carbon emission rights market.

Marco Schultz evaluates the applicability of blockchain technology in the carbon emission rights market mechanism and creates and applies an eight-step decision-making framework, the research shows that blockchain application can improve transparency and increase automation, thereby eliminating information asymmetry in the carbon emission rights market.

Nicolas Kreibich's research on the outlook for the post-2020 voluntary carbon emissions market found that carbon credits used to offset remaining emissions from neutral targets need to be accounted for against the host country's nationally determined contribution to ensuring environmental integrity.

Vijay P. Ojha takes India as a research object to analyze the effect of the carbon tax mechanism on reducing carbon emissions. The results show that while carbon taxes are extremely effective in reducing carbon emissions, they also lead to a reduction in GDP. As a result, there is an unfavorable trade-off between economic growth and climate change mitigation.

Mojtaba Khastar takes Finland as the research object and analyzes the impact of a carbon tax on social welfare and emission reduction rate through a general equilibrium model. Research has shown that although Finland's carbon tax policy has been successful in reducing CO₂ emissions, it has hurt the social welfare of Finnish citizens and, therefore, carbon prices should be adjusted in the future to achieve optimal levels.

In addition, buying takes South Africa as the research object, and within the framework of the general equilibrium model, establishes a new price mechanism with full coverage of carbon emissions. The results suggest that South Africa is likely to move towards a low-carbon and sustainable economy through a carbon tax policy.

2. Research on Carbon Reduction Technologies

Udayan Singh conducted an assessment of CO₂ capture, utilization and storage technologies through life cycle assessments and found that a broad, uniform application of standardized ratio metrics and carbon ROI would improve the utility of life cycle assessments to elucidate candidate CO₂ capture, utilization, and storage and storage technology platform for true CO₂ storage.

Analyzing the EU's strategic energy technology program, prove Lakeland found that different research and innovation priorities exist between state, non-state (industry and research), and institutional players within the EU, making the program competitive and there is a divergence between plans to lead the mobilization of actors whose priorities are not included in the plan and that constitute the EU's low-carbon technology push policy and EU market-pull policies such as carbon pricing.

Grazia Leonzio's further exploration of carbon capture utilization and storage supply chains in Italy and Germany shows that carbon taxes only affect the total value of the objective function value, while economic incentives and income also have a significant impact on the topology of the supply chain.

4. Development Status of Carbon Trading in China

1. Legislative Development Process

China's carbon market adopts the design idea of the bottom-up, first pilot and then gradually popularized. Accordingly, the adjustment scope of China's carbon market legal system also follows the transition process from pilot to national, which effectively endows the carbon market construction with laws and regulations. Based on this, it can effectively point out the direction for the improvement of the carbon market, which is highly dependent on institutional construction. Specifically:

As early as 2011, the National Development and Reform Commission issued the "Notice on Carrying out the Pilot Work of Carbon Emissions Trading", mainly to explore the establishment of emission reduction tools to alleviate the pressure of climate change through the market mechanism, and to provide guidance to seven provinces including Beijing and Tianjin. The city has put forward new work requirements, that is, to approve these provinces and cities to start the pilot construction of the carbon market based on the actual situation of their respective regions, and at the same time, they should formulate a convenient and feasible carbon pilot implementation plan to clarify the overall thinking and basic rules of the pilot construction. Although the notice is only a normative document of the State Council, it is the first time that China's climate change authority has made working arrangements for the construction of the carbon market, and it is the starting point for the construction of China's pilot carbon market.

Next, in 2014, the National Development and Reform Commission issued the Interim Measures for the Administration of Carbon Emissions Trading (hereinafter referred to as the Interim Measures). The measures firstly divided the responsibilities of the National Development and Reform Commission and the provincial carbon trading authorities, established a two-level management model, and also made allowance allocation methods, trading types, and content, performance verification, supervision scope and responsibilities, etc. system regulations. However, in general, most of the measures are principled and framework content, lack specific technical standards and are not very maneuverable in practice. For example, the Measures did not announce the scope of enterprises and types of greenhouse gases to be included in the carbon market adjustment, resulting in an empty system but no statutory implementation body; another example, the chapter on legal responsibility, only stipulates that non-performance or breach of contract should be Administrative penalties have been imposed, but the specific penalty methods and penalties have not been stipulated. Therefore, from an overall analysis, the "Interim Measures" are departmental regulations in nature. They are the first formal legislative document to make arrangements for China's carbon market, which has effectively promoted the preparation of the national carbon market. It is not perfect enough, and it has also attracted criticism from many experts and scholars.

In 2017, the National Development and Reform Commission issued a notice on the "National Carbon Emissions Trading Market Construction Plan (Power Generation Industry)", which clarified that the power generation industry has become the first industry category to be included in the coverage of the national carbon market. Therefore, it has officially entered the initial start-up stage. The plan makes new regulations on carbon market trading rules from eight aspects. First, it emphasizes the work goal of taking the power generation industry as a breakthrough point and roughly divides the development path of carbon market construction into three stages. The tasks to be completed are also different; secondly, the plan sets clear inclusion criteria for the scope of key emission units, that is, the annual emissions need to reach more than 26,000 tons of carbon dioxide equivalent to meet the coverage standard of the national carbon market. Thirdly, the plan also elaborated in detail the necessary supporting systems and supporting systems for the carbon market, and for the first time

mentioned the connection plan between the pilot market and the national carbon market, that is, those that meet the national carbon market inclusion criteria will be directly included in the national carbon market. Emissions entities that do not meet national standards will continue to be regulated by the pilot carbon market. Finally, the cooperation and division of responsibilities of government departments at all levels were further clarified. The plan does not involve much in terms of quota allocation, supervision mechanism, and punishment mechanism, so there is still a lot of room for refinement.

In 2018, China's national institutions changed, and the Ministry of Ecology and Environment was changed to lead the response to climate change and be responsible for formulating various energy-saving and emission-reduction policies. To further use the market mechanism to control greenhouse gas emissions and promote green and low-carbon development, the Ministry of Ecology and Environment drafted the "Interim Regulations on the Management of Carbon Emissions Trading (Draft for Comment)" at the end of March 2019 for public comment. For the first time, the document proposed to raise the legislative level of the carbon market to the level of administrative regulations, but one of the major flaws was that it did not provide for the connection between the pilot provinces and cities and the national carbon market after the national carbon market was launched. End the solicitation for comments.

2020 is a harvest year for the legal construction of China's carbon market. The first is the "Guiding Opinions on Promoting Investment and Financing to Address Climate Change" jointly issued by the Ministry of Ecology and Environment and other five ministries and commissions, advocating active model innovation and making major work arrangements for the development of climate investment and financing. The performance of the investment and financing fields is further linked, highlighting the important position and bright prospects of carbon finance development. Then, from November to December, the Ministry of Ecology and Environment released a series of drafts for legal documents on the carbon market, showing that the top-level design of China's carbon market is being improved at an unprecedented speed. At present, it has been formally reviewed and approved, including the "2019-2020 National Carbon Emissions Trading Allowance Total Setting and Distribution Implementation Plan (Power Generation Industry)" (hereinafter referred to

as the "Implementation Plan"), "Included in the 2019-2020 National Carbon Emissions Rights Implementation Plan" List of Key Emissions Units under Trading Allowance Management (hereinafter referred to as "Key Units List"), "Guidelines for Verification of Corporate Greenhouse Gas Emissions Reports (Trial)" (hereinafter referred to as "Verification Guidelines") and "Administrative Measures", etc. The objects and priorities regulated by these legal documents are different. Among them, the "Administrative Measures", based on the "Interim Measures" in 2014, have made a new revision to the overall operating framework of China's national carbon market, which is the current existing carbon market in China. The legal documents with the most complete provisions and the highest level of effectiveness in the legislation deserve our attention. The analysis of its main contents will be carried out in the next section.

2. Analysis of the current situation of legislation

The "Administrative Measures" officially entered into force on February 1, 2021. It is the legal document with the most comprehensive and highest level of effectiveness for the overall operating mechanism of the national carbon market in China's current legislation, and its important guiding status is evident; in addition, 2021 On March 30, 2009, the Ministry of Ecology and Environment also drafted the "Interim Regulations on the Administration of Carbon Emissions Trading (Draft Revised)" (hereinafter referred to as the "Administrative Regulations" <Draft Revised Draft>), which is issued to all social groups, enterprises, institutions, and individuals. Public comments are solicited. Although the regulations are still at the stage of soliciting opinions on drafts, it is believed that in the near future, the real "Administrative Regulations" will also be reviewed and completed soon, and will become legislation with real legal effect. Since both the "Administrative Measures (Trial)" and the "Administrative Regulations (Revised Draft)" have made overall and systematic specific regulations on the operation mechanism of China's national carbon market, this section adopts the research method of comparative analysis, focusing on the A comparative analysis is made in the three aspects of the formulation institutions, legal status and specific content of the two, in order to discover differences and deficiencies as soon as possible, and put forward better suggestions for improvement.

First, the institutions and legal status of the two are not the same. The "Administrative

Measures" were formulated by the Ministry of Ecology and Environment of China, and are departmental regulations of legal nature. According to its provisions, it can be seen that the Ministry of Ecology and Environment has the scope to plan the carbon market, set up registration or trading institutions, and formulate technical specifications. The "Administrative Regulations (Revised Draft)" were finally formulated and promulgated by the State Council. It is second only to the Constitution and laws in legal nature and belongs to administrative regulations. The departmental rules formulated by the Ministry of Ecology and Environment shall not violate administrative regulations. According to the principles and provisions of the regulations, and according to the relevant provisions of the revised draft, it can be seen that the aforementioned responsibilities of the Ministry of Ecology and Environment need to be reported to the State Council for approval before they can be implemented. Therefore, the "Administrative Regulations (Revised Draft)" upgrades the legislative level of the carbon market from departmental regulations to administrative regulations, which enhances the authority of legislation and further demonstrates the importance China attaches to the carbon market mechanism.

Secondly, the two are also different in specific content. The "Administrative Measures" that has officially entered into force has a total of 8 chapters and 43 articles. The general thinking process is as follows: Chapter 1 defines the scope of application of the carbon market, the three-level management system, and the two core service agencies of registration and trading through framework principles. The second chapter realizes the closed-loop management of key emission units by setting the threshold for inclusion, responsibility and obligation, directory management, and exit mechanism; Relevant rules for change registration, settlement registration, and registration; Chapter 4 specifies the object, subject, and method of carbon emissions trading, as well as the requirements for the two institutions that serve trading and quota management; Chapter 5 specifies emission data respectively The monitoring, reporting, accounting, verification, voluntary emission reduction offset and related management process technical requirements; Chapter VI specifies the subject of supervision, the content of supervision and specific supervision measures in more detail, emphasizes information disclosure, and also establishes Supervision and inspection system; Chapter 7 sets out provisions on the handling

of violations and non-compliance by competent authorities and key emission units, but the penalties are not very severe; Chapter 8 is the supplementary provisions, and some explanations and requirements for related terms are made.

In contrast, the "Administrative Regulations (Draft Revised Draft)", which is still in the stage of soliciting opinions on the draft, has supplemented some of the contents in a more detailed manner, including: first, the procedures for the Ministry of Ecology and Environment to submit to the State Council for approval have been added; It cannot be implemented without the approval of the State Council, which enhances the authority of the law; second, a number of supervision and management departments or institutions have been added, including market supervision and management departments, securities supervision and management agencies, etc.; third, it is clarified that provincial-level ecological environment departments carry out verification The trial limit is 30 working days to prevent the inaction of the administrative organ; fourth, the rules for the use of allowances that can be carried over after the emission units have been paid off have been added; The staff of competent departments and service agencies are not allowed to hold or trade carbon allowances, strengthen the supervision of internal personnel, and prevent opportunistic behavior in operating the market. Limits on holdings, risk reserves, temporary restrictions on major transactions, etc.; Seventh, the carbon emission trading fund system has been added, and the source and specific purposes of the funds have been clarified; eighth, the supervision and management measures that can be taken by the competent authorities are clarified, including review and copy. At the same time, it also stipulates the accountability mechanism for different subjects and different violations and establishes a credit punishment platform.

Through the above comparison, it can be found that the most prominent feature of the "Administrative Regulations (Revised Draft)" is that it strengthens the supervision mechanism of the carbon market in an all-round way, clarifies the supervision responsibilities of all parties, and formulates a more scientific supervision system. Moreover, the "Administrative Regulations (Revised Draft)" has more detailed provisions in all aspects and is more operable. However, it has not yet officially entered into force and has no real legal effect. At present, it cannot be used as a basis for regulating the carbon market. Moreover, the regulations of the regulations

are not perfect, and they still tend to be framed as a whole. Not mentioned. Of course, the carbon market involves multiple links and is complex and changeable. We cannot require a formal rule to be all-encompassing. Therefore, in the future, a series of supporting systems and institutions will be needed to ensure the details of the carbon market. The legal form is solidified to help the construction of the national carbon market to move forward.

5. Problems existing in China's carbon trading legislation

1. China's carbon trading legislation level is relatively low

The Ministry of Ecology and Environment is currently soliciting opinions on the "Administrative Regulations (Revised Draft)". Although the regulations are at the level of administrative regulations, their progress has been slow, and they have not been formally adopted, and there is still the possibility of changes in the provisions, but they cannot be used as a carbon market. Reference for construction. In addition, the "Administrative Measures" issued by the Ministry of Ecology and Environment is the highest legal document to regulate the national carbon market so far, and it is a departmental regulation in nature, although the Measures have been revised to the "Interim Measures" issued by the National Development and Reform Commission in 2014. The imperfections of the law have been supplemented accordingly, but there are still problems that the legal level is too low and the content is too principled. In addition, other legal systems related to carbon market construction are mostly government regulations or normative documents issued by the pilot areas. Therefore, the overall analysis shows that the legislative level of China's carbon market at this stage is still low, lacking sufficient coercive effect and deterrent effect, which is not conducive to the formation of stable and powerful market expectations. Following this, it is necessary to raise the legislative level and speed up the construction of the top-level system of the carbon market.

2. There are loopholes in China's carbon trading regulatory mechanism

From the above judicial practice and analysis of the current situation of legislation, it can be concluded that the regulations on China's carbon market supervision mechanism in the "Administrative Measures" that have been issued so far are slightly rough, and there are still many areas for improvement. For example,

the "Administrative Measures" mainly clarify the three-level government departments in the national carbon market and their corresponding responsibilities, but in practice, there are many links that require the direct participation of various professional departments, such as the trading of carbon financial products. The process will inevitably involve financial departments such as securities and banks. At this time, government regulatory agencies may appear "powerless" in these links; For example, in Article 32, there is no clear and specific disclosure period for the disclosure of the payment status of emission units. of prevarication. Thirdly, the supervision of certification agencies, registration, trading, settlement, and other third-party agencies and the internal staff of the aforementioned agencies is not adequate, and there is still a lack of detailed and specific operating specifications to clarify the rights, responsibilities, and obligations of all parties, which cannot satisfy emission reduction companies and the public. expected. The carbon market is a trading mechanism, and it is very prone to opportunistic behaviors such as insider operations. It must be strictly controlled from the source to better maintain the healthy development of the carbon market.

3. The transition rules from the pilot to the national carbon trading are not refined enough

The path of China's carbon market construction has certain particularities. The special thing is that it is not directly carried out from the national field, but adopts a stable method of pilot first, the first pilot, and then transitions to nationwide unified promotion after the pilot gradually mature and obtains relevant experience. . At present, the official launch of the national carbon market is imminent, and it is in a critical period for the pilot carbon market to become a national carbon market. However, the problem is that the carbon market mechanisms between various domestic pilots are quite different, and the "Administrative Measures" are only in Article 13. It mentioned that the key units included in the national carbon market are no longer under the control of the local market, but there is no detailed regulation or guidance on how to connect with the national carbon market. This will undoubtedly bring many practical problems. For example, the incorporation of industry changes is likely to bring many uncertain risks to the operation of the regional carbon market, such as unbalanced allocation of allowances, price fluctuations, and increased difficulty in compliance. They all have their independent systems and

mechanisms, and there may be management differences or even conflicts with the national carbon market in terms of quota allocation standards, data reporting, law enforcement, and regulatory boundaries. Focus on key issues.

4. The carbon trading supporting system is not perfect

As a multi-link and multi-subject participation emission reduction mechanism, the carbon market has remarkable characteristics such as systematicness, integrity, complexity, institutional management, contract performance management, MRV, electronic registration, transaction settlement, etc. at the practical level. Both the level of participation and ability put forward higher requirements. The imperfection of any link will have a chain effect, resulting in a series of problems and risks. Therefore, the smooth development of the carbon market cannot be separated from the support and protection of the supporting institutional system. At present, the institutional guarantee work after the launch of China's national carbon market is not sufficient. Only the "Administrative Measures" have made some framework regulations for the carbon trading process, and there is still a lack of rules and guidelines for operation. In addition, the "Administrative Measures" are departmental regulations issued by the State Council's ecological environment department. Although they have certain legal effects, they are still insufficient to play a sufficient deterrent role. In addition, the national carbon market is about to be launched. Although corresponding guidelines or rules have been issued in terms of greenhouse gas verification, registration, transaction settlement, etc., these documents can only provide a basic framework for the initial carbon market, and generally tend to be process oriented. However, there are not many substantive regulations concerning the rights and obligations of working institutions such as registration and transactions, which may cause unnecessary disputes.

5. The carbon financial market system has not yet been formed

At present, with the continuous rise of global carbon prices, spot trading has been completely unable to meet the rapid development requirements of the EU carbon market. Active, forming a virtuous cycle of green investment by various financial institutions, various carbon financial derivatives around carbon securities and carbon funds are emerging one after another, injecting fresh energy into the EU carbon market. Compared with the

European Union, China's carbon financial market is still in the early stage of exploration. Although some financial institutions in China have begun to pay attention to the unlimited potential of carbon financial products in the future, there is no special legal regulation for the trading of such products in China. There is also no uniform standard for the application of financial rules, resulting in the lack of clear legal guidelines, and unforeseen market risks may arise. Therefore, the lack of a legal system for carbon finance has led to the fact that most financial institutions in China can only take a wait-and-see attitude, which directly increases the opening gap with the advanced carbon market. For China, how to provide legal protection for the carbon financial market and attract more investment from carbon financial institutions to ease the pressure of emission reduction is an important issue to solve the development dilemma of China's carbon finance.

6. Conclusions

The setting of a double carbon target is not only a concrete measure for China to practice its sustainable development strategy, but also an urgent need to build a community of human destiny. Nineteen European countries, including Germany, Norway, Russia, etc., have already reached the peak by 1990, and the United States also reached the peak in 2007, and these countries will gradually achieve carbon neutrality according to the plan. From an objective point of view, it takes much longer for developed countries such as Europe and the United States to reach the carbon peak and become carbon neutral than China, but joining international treaties means that China needs to be bound by the treaties and fulfill its obligations under international law, which means that China needs to make more efforts than developed countries to reach the carbon peak and become carbon neutral. Therefore, the need to use legal force to promote and guarantee the timely achievement of the dual carbon goal is self-evident.

With the launch of the national carbon emission trading market on July 16, 2021, the supporting policies and measures for carbon finance will be increasingly improved, especially after the nature of carbon emission rights and trading methods are clarified at the legal level, the problem that the carbon financial market cannot be based on will be gradually solved. China's carbon trading market is bound to be further improved, and the double carbon target will be achieved as scheduled.

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