

# Research on Green E-commerce Integration under the Background of "Online Shopping Normalization" and "Green Transformation"

## -- Take the E-commerce Capital of Hangzhou as an Example

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### Abstract

With the rapid development of e-commerce, the number of consumers shopping online has surged, and the market scale of e-commerce industry continues to expand. As an important part of sustainable development, green consumption has become a key concern of the international community. Under the background of "the normalization of online shopping" and "green transformation," this paper focuses on the current situation, problems and future green development direction of e-commerce integration. It aims to provide guidance for enterprises to establish and improve the integrated system of green operation. This paper uses text mining, descriptive analysis, literature analysis, word cloud mapping and other research methods. The research finds that: as the e-commerce capital of Hangzhou, its e-commerce enterprises follow the footsteps of the state, respond to the call of policies, and accelerate their own green transformation under the background of the normalization of online shopping: firmly establish green concepts and standardize green standards; Do accurate market analysis and strive to break down information barriers; Innovate and develop low-carbon transportation and vigorously promote green packaging; Invest heavily in green renewal of enterprise equipment; We will strengthen information disclosure, strengthen legislation on corporate carbon information disclosure, improve relevant standards and certification systems, give full play to the role of various public service platforms, corporate websites and media, and guide zero-carbon enterprises to actively disclose their key information on green procurement, green supplier management, energy conservation and carbon reduction.

### Keywords

E-commerce; Green Consumption; E-commerce Platforms; The Green Transition.

## 1. Introduction

### 1.1. Research Background

In the past few decades, e-commerce has gradually entered a new era of rapid development, with a surge in the number of online shopping by consumers and continuous expansion of the market scale of e-commerce industry. According to relevant data, according to the data of international market research company Statista, the scale of global e-commerce market has continued to show a significant growth trend since its birth. It will reach \$6.5 trillion by 2023. With the acceleration of global trade, the cross-border e-commerce market has also grown rapidly, and the size of the global cross-border e-commerce market will reach 1.3 trillion US dollars in 2022. Among them, China's e-commerce market occupies more than 30% of the

global e-commerce market, becoming the world's largest e-commerce market, and the competition in the domestic e-commerce industry is very fierce. Research data show that the volume of online shopping and express delivery in China reached 110.58 billion in 2022, ranking first in the world. In 2022 and 2023, the country's e-commerce transaction volume will reach 43.21 trillion yuan and 49.76 trillion yuan, respectively, up 16.1 percent and 15.1 percent year-on-year. With the rapid rise of global e-commerce and the growth of commodity and service consumption reaching an unprecedented level, environmental problems such as climate change, environmental pollution and biodiversity destruction caused by this have attracted extensive attention from governments, enterprises and the public [1]. At the beginning of 2022, the National Development and Reform Commission and other relevant departments formulated the Implementation Plan for Promoting Green Consumption, which clearly proposed to promote online trading and circulation enterprises to actively promote the sales of green products in the consumption field, so as to boost the "green" life and consumption concept of Chinese residents. In accordance with the Proposal of the CPC Central Committee on Formulating the 14th Five-Year Plan for National Economic and Social Development and the Long-term Goals for 2035 and the Outline of the 14th Five-Year Plan for National Economic and Social Development and the Long-term Goals for 2035 of the People's Republic of China, In 2022, the Ministry of Commerce, the Cyberspace Administration of the CPC Central Committee and the National Development and Reform Commission studied and prepared the "14th Five-Year Plan for E-commerce Development", which proposed to comprehensively accelerate green and low-carbon development, guide e-commerce enterprises to actively adapt to the requirements of green and low-carbon development, establish the concept of green development, actively fulfill the social responsibility of ecological and environmental protection, and improve the level of green innovation.

## 1.2. Research Objectives and Contents

This paper mainly studies the green integration of e-commerce enterprises in the context of the normalization of online shopping and the green transformation of low-carbon trend, and provides the direction for the development of green e-commerce integration. It analyzes the development status of e-commerce, e-commerce development platform management, plastic packaging and express packaging supply chain management from the perspective of e-commerce enterprises. We will investigate the promotion and application of energy-saving and environmental protection technology and equipment in enterprises, as well as the green transformation and upgrading of data centers, warehousing and logistics facilities and industrial parks, continuously promote energy conservation and emission reduction, and establish and improve an integrated green operation system for enterprises. Collect relevant data to explore the specific measures of enterprises' green e-commerce transformation, how to optimize consumers' consumption choices, and study the optimization strategies to promote social green consumption. Through the research of this paper, we can promote the recycling of resources and practice green and low-carbon policies. Explore and investigate the development of green e-commerce integration under the environment of "normalization of online shopping" and "green transformation". To obtain the support of relevant platform data and research data, which is conducive to the establishment of the performance evaluation system of consumers' expectations for the green integration of e-commerce platforms; Then it analyzes the problems existing in the development of green e-commerce, and finally puts forward suggestions to establish and improve the integrated green operation system for enterprises, and put forward reasonable solutions to the problems found in the previous research, so as to promote the e-commerce industry to form a green integrated transformation and development mode.

### 1.3. Research Significance

Under the background of "online shopping normalization" and "green transformation," it has important theoretical and practical significance to study the development status, problems and future development direction of the green integration level of e-commerce, so as to establish and improve the integrated system of green operation for enterprises.

#### 1.3.1. Its Theoretical Significance is Shown as Follows:

The combination of e-commerce and green development enriches the connotation of the future development trend of e-commerce. E-commerce, as a driving force for national economic development, has increased the progress of the establishment and improvement of the integrated system of enterprise green operation, and promoted the formation of the theoretical system of green e-commerce integration.

#### 1.3.2. Its Practical Significance is Reflected in:

Many scholars have conducted relevant research on the development status of e-commerce, but there are many shortcomings in the research on its green relative. The development of e-commerce is conducive to paying attention to green environmental protection issues in the development process of e-commerce, aiming to improve the green operation concept of enterprises and the green consumption concept of consumers, and provide corresponding basis for the development of enterprises and the formulation of corresponding strategies. It makes the public pay more attention to green development and national policies.

## 2. Literature Review

Many scholars have carried out a lot of research on the green integration of e-commerce from the aspects of macro national policies, micro enterprises and huge consumer groups.

### 2.1. Current Situation of Foreign Research

Fang,Z.Y.(2021).[2] Starting from the concept and application principles of green supply chain, this paper analyzed how to integrate green supply chain into each link of logistics industry chain and the problems existing in the operation of green logistics. From the perspective of green supply chain, this paper discusses the innovative development path of e-commerce enterprises, and puts forward the method of introducing the concept of green environmental protection into the management decision-making of logistics industry. The paper explores the green development path of e-commerce from the perspective of green logistics. Liang,C.Y.,etal.(2022).[3] simulated and analyzed the connection between e-commerce industry and solid waste in eastern, central and western China through different mathematical models, with a view to providing a perspective and basis for China to formulate regional green laws and regulations to reduce solid waste discharge from e-commerce and open up a green development path for e-commerce. Explore the green development path of e-commerce from the perspective of solid waste.

### 2.2. Domestic Research Status Quo

For the study of green development, China's famous scholars Li Sinan, Sheng and Chen Kai (2022) [4] started to interpret the green consumption policy and explained the urgency and desire of national policies for green consumption development from three perspectives: the composition structure of green consumption policy, the process of policy change and the logic of policy evolution. The premise of national macro policy provides a theoretical basis for the new retail model of "live streaming + e-commerce" to practice the concept of green development. Qian Huimin and Feng Kaiying (2023) [5] explained from the perspective of various giant companies, such as Apple, Cainiao Post and Alibaba, to practice green packaging, green logistics and other specific measures, as well as why they actively practice the concept of

green and sustainable e-commerce. The lead of giant companies in the industry is bound to promote the imitation and transformation of the whole industry and even the whole society. Sun Jin, Miao Pan and Yang Jingshu (2023) [6] discussed the type of advertising information (ability information vs. Enthusiasm information) is the impact of personal interest appeals based on egoism or social interest appeals based on altruism on the effectiveness of green consumption interest appeals and its internal mechanism. It is found that when enterprises use green advertising to convey their personal interests, the use of ability information can better trigger consumers' more positive green purchase intention, among which the mediating role of product quality perception and collective efficacy is particularly important. From the green research of e-commerce development, from the perspective of micro-enterprises, it is discussed that enterprises' green advertising should express consumers' personal interest demands more, and at the same time use ability information, which can trigger consumers' more positive green purchase intention. Promoting green consumption is an inevitable requirement for practicing the concept of green development and realizing the goal of "dual carbon". Consumption is the primary productive force, and only by stimulating green consumption from the demand side can we force the green transformation of supply chain, thus forming benign green and sustainable development. "We need to accelerate the green transformation of our development model, implement a comprehensive conservation strategy, develop green and low-carbon industries, advocate green consumption, and promote the formation of green and low-carbon production and life styles." The report of the 20th National Congress of the Communist Party of China proposed to accelerate the green transformation of development mode, which provides guidance and follow for the green integration transformation of the e-commerce industry.

### 3. Research Methods

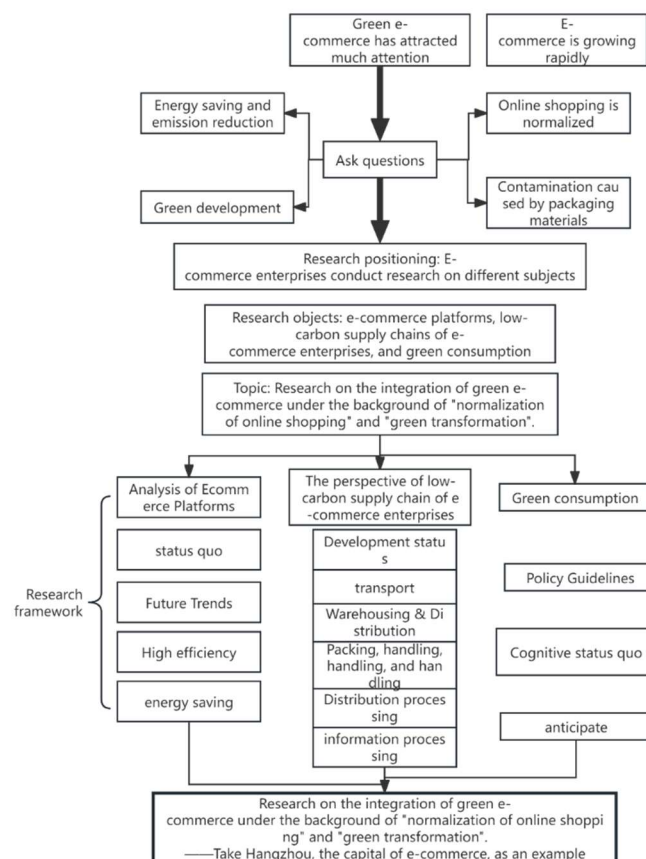


Figure 1. Dissertation process

Firstly, this paper conducts literature analysis, collects relevant research results, and explores what kind of transformation e-commerce companies make in green development, energy conservation and emission reduction under the background of "online shopping normalization" and "green transformation". The methods of text mining and descriptive analysis are mainly adopted, and the content of the research is presented by word cloud map. The main process and research methods are as follows.

#### **4. Divided into Main Body Research on the Current Situation of Green Development of E-commerce Enterprises**

The basic characteristics of green economy are low emission, low pollution and low energy consumption. Vigorously developing green economy can reduce the damage to the environment and realize the dynamic balance of "gold and silver mountains are clear waters and green mountains". E-commerce is the product of the deep integration of real economy and digital economy. E-commerce is the product of the deep integration of real economy and digital economy through information technology, network technology and modern business operation. Participating in market transactions through information technology, network technology and modern business operation can greatly reduce the cost of social and economic activities. Avoid overcapacity caused by blindness in raw material procurement and generation. Through network governance, subjects participating in economic activities can further reduce the consumption of material and energy resources, improve work efficiency, reduce social and economic costs, and achieve the purpose of optimizing resource allocation.

This paper takes e-commerce enterprises in Hangzhou as the research object, which is divided into three main bodies: enterprise e-commerce platform, e-commerce low-carbon supply chain and green consumption, and studies the green development status of e-commerce enterprises.

##### **4.1. Relevant E-commerce Platforms Promote Green Development Models**

###### **4.1.1. The Normalization of Online Shopping and its Green Transformation Promote the Platform to Reach Green Agreements with its Partners**

The green agreement of e-commerce platforms mainly focuses on environmental protection, sustainable development and resource conservation. Green Supply chain management: Suppliers must comply with environmental regulations and commit to reduce waste and improve recycling in their supply chains. The platform encourages the use of renewable or degradable packaging materials to reduce plastic pollution;

Energy saving and emission reduction: Platforms should optimize their data centers and servers to reduce energy consumption and carbon emissions. Encourage users to adopt electronic invoicing and online payment methods to reduce the use and transportation of paper documents; Green logistics and distribution: promote the use of electric vehicles, hybrid vehicles and other low-emission or zero-emission transportation. Optimize distribution routes to reduce vehicle mileage and empty driving time.

Encourage the use of recyclable packaging materials and reduce the use of single-use packaging; Green product certification: To conduct green certification for products sold on the platform to ensure that the products meet environmental protection standards. Encourage suppliers to develop eco-friendly products to provide consumers with more green choices; Environmental protection publicity and education: Carry out environmental protection publicity and education activities on the platform to improve users' awareness of environmental protection. Cooperate with environmental organizations to jointly promote environmental protection concepts and actions; Green policy formulation: Formulate and implement green procurement policies and give priority to environmentally friendly products and suppliers. Set up a green fund or incentive mechanism to encourage suppliers and users to participate in environmental



protection actions; Data sharing and transparency: The environmental protection data and information of the platform shall be made public and subject to public supervision. Share environmental protection data and information with other e-commerce platforms and industry associations to jointly promote the green development of the industry; Green cooperation and partnership: Establish green partnership with other e-commerce platforms, government departments, ngos, etc., to jointly promote the green development of e-commerce. Suppliers and users are encouraged to participate in green cooperation projects to jointly promote the green transformation of supply chains. These green agreement contents can be adjusted and improved according to specific e-commerce platforms and industry needs. By implementing these green agreements, e-commerce platforms can contribute to sustainable development by achieving the goals of environmental protection and resource conservation while promoting economic development.

#### **4.1.2. Establishment of B2C E-commerce Platform**

Business-to-consumer (B2C) is a model of e-commerce, that is, a Business retail model in which enterprises sell products or services directly to consumers. In this model, enterprises provide consumers with a series of services such as online shopping, payment and delivery through the Internet and other electronic means to achieve electronic sales of goods. A B2C e-commerce site usually consists of three basic parts: a mall site that provides a place for online shopping, a distribution system that handles the delivery of goods, and a banking and authentication system that handles customer identification and payment settlement. This model focuses on online retail, which carries out online sales activities through the Internet and aims to provide consumers with convenient and efficient shopping experience. With the deepening of the national "dual carbon" strategy and the enhancement of consumers' awareness of environmental protection, the rise of e-commerce platforms provides a new business idea for manufacturing enterprises to practice green. Manufacturers add online channels to their offline channels and compete with offline retailers in the end market. In business practice, manufacturers can build their own online direct sales channels, such as Xiaomi, Gree, Huawei and other self-built brand official websites and directly sell products to consumers. In addition, manufacturers can also establish online channels with the help of e-commerce platforms. There are generally two types:

- **Resale:**

the manufacturer resells the products to the platform in the wholesale mode, and then the platform sells them in the terminal market.

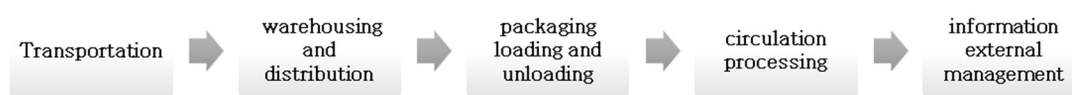
- **Commission sales:**

manufacturers set up flagship stores on e-commerce platforms to sell products directly to consumers, such as Geely's official flagship store on JD.com by paying sales commission to JD.com. In order to satisfy consumers' green preference, manufacturers produce green products through green R&D investment.

In addition, manufacturers can not only sell green products through offline channels, but also establish platforms for resale or sell green products through commission channels. With the increase of consumers' green preference, manufacturers will increase green R&D investment to improve the green level of products, which will benefit manufacturers, offline retailers and e-commerce platforms. It can be seen that building a B2C e-commerce platform helps enterprises to practice green.

#### **4.2. Analysis of Low-carbon Supply Chain of E-commerce in Hangzhou**

At present, e-commerce low-carbon logistics is mainly composed of five parts: transportation, storage and distribution, packaging and loading, unloading and handling, circulation processing and information processing, and its process is as follows:



**Figure 2.** Low-carbon supply chain analysis process by module

The structure of the supply chain is as follows:

#### 4.2.1. Transportation

Transportation is an important **part** of logistics, but it is also the main cause of carbon emissions. In order to complete the spatial location transfer of people and things, it needs to be realized by various means of transportation. Transport consumes a lot of energy, and the highest carbon emissions come from road transport. The unreasonable choice of transportation route will not only aggravate the fuel consumption of vehicles, but also increase the exhaust emissions of vehicles. Because there are many inconvenient factors such as waterways and railways, people mainly adopt road transport and air transport with high energy consumption and high emissions. Highway and air transportation cannot be separated from the construction of transportation infrastructure, which will affect the water, soil and vegetation, the living environment of animals, people's living environment and human landscape in the region. Since the main mode of transportation is road transportation, the number of transportation vehicles will be greatly increased, which will cause traffic congestion, reduce the operation efficiency of road transportation, and greatly aggravates environmental pollution.

Taking Alibaba as an example, its transportation mainly adopts the clean mode, and the storage near the shopping end makes its transportation links relatively reduced, which is more clean and efficient.

#### 4.2.2. Warehousing and Logistics

The problem of carbon emission in storage and distribution is mainly reflected in three aspects: first, site selection and layout. The structure of too dense storage center will greatly reduce the transportation efficiency, and the transportation cost will increase unreasonably. The second is the energy consumption control of storage and distribution center facilities and equipment. Such as forklifts, conveyors, cold storage, automatic control equipment, etc. Third, wrong distribution center location and unreasonable sorting, stoving and distribution channels will also increase carbon emissions.

The solution to the energy consumption problem of transportation mentioned above is closely related to warehousing. Appropriate warehousing can maximize the development benefits of enterprise e-commerce. Alibaba mainly provides one-stop digital supply chain and warehouse automation solutions, and integrates the industrial Internet resources accumulated by Alibaba in logistics automation for a long time. It can provide more economical, high-quality and efficient intelligent warehousing, and has terminal logistics distribution system.

For the express packaging pollution problem at the end of logistics, the deposit return system should be introduced to build an efficient and coordinated express packaging recycling system. Express packaging has the characteristics of easy category identification, high generation frequency and high socialized collection cost in the recycling process. E-commerce enterprise platforms make use of the new "Internet +" recycling platform to build a deposit system recycling system, realize efficient and safe recycling of cartons, and open a breakthrough point for low-value recyclables recycling. We will explore the path of "Internet plus recycling". To build a low-value recyclable recycling system from "source classification" to "end resource utilization".

### 4.2.3. Packaging, Loading, Unloading, Handling and Circulation Processing

In addition, additional carbon emissions to society also include the unrationalization of packaging and handling of logistics. It is mainly manifested in the following aspects: first, selecting materials with high emissions but low efficiency as logistics packaging or excessive packaging; Secondly, violent handling by relevant staff will increase the damage of products and the consumption of outer packaging materials, thus wasting many resources; Third, containers and pallets are used less often and the degree of social leasing is low in the return trip, which leads to the problems of low transportation efficiency and low utilization rate of related resources in the transportation process.

Carbon emissions are also caused by unreasonable distribution and processing, which is mainly reflected in the low utilization rate of resources. For example, the distribution and processing of this point, because consumers are scattered, so the distribution and processing involved in the utilization of resources is very low; Moreover, the scattered waste generated by the distribution and processing process is difficult to be centralized and effectively reused, which will lead to garbage pollution; Finally, the three wastes generated by processing will cause considerable harm to the environment and human body [7].

### 4.2.4. Information Processing

For the environment, the impact and harm brought by logistics is small or non-existent, but poor information will cause many negative impacts on the environment. The error of ordering information will make the work invalid and the work efficiency will be greatly reduced. Hangzhou logistics information technology means and management level is still in the traditional form, after consulting the relevant data, Hangzhou logistics information processing lack of necessary public logistics information platform. In-depth research has found that different logistics departments have different standards of information, equipment and technology, as well as a few non-compliance operations in logistics operation, which will directly cause the increase of operation and transaction costs.

## 4.3. Green Consumption -- a New Engine of Economic Growth

### 4.3.1. Analysis of China's Green Consumption Policy

As an important part of sustainable development, green consumption has become a key concern of the international community. Due to the significant positive externality of green consumption, the actors will face a difficult dilemma between the interests of environmental protection and their own interests, leading to market failure in the process of constructing the green consumption pattern. In recent years, China has issued a series of policies related to green consumption. Special policies such as "Guiding Opinions on Promoting Green Consumption" and "Opinions on Accelerating the Establishment of Green Production and Consumption laws and Policies System" jointly issued by several ministries and commissions put forward specific requirements from the aspects of goals and tasks, practice paths, service guarantee and other aspects, and clarified the task priorities and responsibility subjects, initially building China Green consumption system. With the introduction of a series of green consumption policies, it has important academic value and practical significance to excavate the development context and change logic of policies [8].

This paper summarizes the policy words of green consumption under the background of "normalization of online shopping" and "green transformation" according to the following principles:

- "Green consumption" was used as the key word, and the websites of central ministries and committees were mainly searched, and the search scope was expanded by means of backtracking and association, and the databases of Peking University Fabao and Wanfang were further checked to fill in the gaps.



- Selected policy texts include laws, administrative regulations, departmental rules and normative documents issued by the national legislature, the central government and its directly affiliated agencies.
- The policy was issued from 2000 to 2024. After selecting the texts, 127 policy texts were finally determined through careful reading and repeated comparison of the policy texts and consultation with experts in the field of green consumption research.

This paper uses the word frequency analysis method to mine the theme of the collected policy texts and analyze the word cloud map (Figure 3), thus intuitively obtaining the keywords that appear more frequently in the texts. As can be seen from the following figure, the selected policy texts mainly focus on green, development, energy conservation, environment, ecology, products and other contents, which shows that the state attaches great importance to and strongly supports green consumption and low-carbon economy.



### Figure 3. Policy word clouds

#### 4.3.2. Green Consumption Promotion Strategy Analysis

After information collection and investigation, enterprises take the following ways to strengthen consumers' choice intention of green consumption:

Strengthen the digital construction of green product production, logistics, brand and other information, so that consumers can easily view the comprehensive information and chain information of green products, mobilize the enthusiasm of green consumption, and stimulate the demand for green consumption. We will explore the implementation of a national green consumption points system, encourage all kinds of sales platforms to formulate incentives for the consumption of green and low-carbon products, and encourage green consumption by issuing green consumption vouchers and green points. Industry associations, platform enterprises, manufacturing enterprises and distribution enterprises are encouraged to jointly launch green consumption action plans and introduce more green and low-carbon products and green consumption scenarios. We will strengthen financial services and promote the transformation of green consumption. To achieve the goal of carbon peak and carbon neutrality is a broad and profound change, which cannot be achieved easily. It is necessary to improve the ability of strategic thinking, mobilize the strength of the whole society, and put the system concept through the whole process of "dual carbon" work.

## 5. Analysis and Suggestions

As the e-commerce capital of Hangzhou, its e-commerce enterprises follow the footsteps of the state and respond to the call of policies to accelerate their own green transformation under the

background of the normalization of online shopping, so as to better develop the green integration of e-commerce enterprises and form the core creativity of sustainable development. First, enterprises should firmly establish green concepts and standardize green standards. Starting from the need of green supply chain integration, establish and improve the green logistics standardization system, and do a good job in supply chain strategy design according to unified standards. Relying on industry associations and other third-party institutions, green logistics enterprises will carry out activities to meet the standards and improve the efficiency of green development of the industry. We will vigorously develop green digital integration technologies, foster a new ecosystem of green digital industries, establish a coordination mechanism for all stakeholders, promote collaborative innovation in the upstream and downstream of the industrial and supply chains, and maintain the resilience and security of supply chains.

Second, do a good job in accurate market analysis and strive to break down information barriers. We will use big data, cloud computing and other information technologies to promote digital and green transformation. Conduct in-depth research and demand prediction on logistics demand place, production place and transshipment place, market capacity, material flow, direction, timeliness and characteristics. According to market demand, layout of logistics outlets, optimization of paths and selection of time periods, to achieve accurate matching of supply and demand, logistics on time, and minimize the impact of logistics activities on the environment. Establish a green supply chain information platform to collect data on the whole process of green design, green procurement, green production and green recycling, establish an information exchange mechanism between upstream and downstream enterprises of the supply chain, and realize information sharing among manufacturers, suppliers, recyclers, government departments and consumers. We will promote the orderly opening of basic public information and data in the field of logistics, and eliminate barriers and "islands" of logistics information.

Third, innovate and develop low-carbon transportation and vigorously promote green packaging. Give full play to the positive role of digital freight in matching vehicles and goods, connecting supply and demand, and reducing empty driving and roundabout transportation. On the basis of the existing network freight platform, the service chain is extended, the service function is increased, and the supply chain integration service is gradually expanded. We will continue to adjust the transport structure, increase the proportion of railway and waterway transport, and popularize and deepen transport modes such as "revolution to rail", "revolution to water", "mass to mass", and "sling to sling transport". Implement green packaging standards, optimize green packaging design, and select multi-functional, lightweight, environmentally friendly and degradable packaging materials. Promote the use of circular packaging, circular turnover boxes, reduce excessive packaging and secondary packaging, to achieve intelligent packaging, reduction, reuse, recycling and sharing. From raw material selection, product manufacturing to use and disposal of the whole life cycle, packaging products should meet the requirements of environmental protection. Vigorously promote the ecological environment and human health harmless, can be reused and recycled, in line with sustainable development of packaging.

Fourth, vigorously invest in the green renewal of enterprise equipment. We will promote energy-saving and low-carbon technologies and equipment, and strengthen research and development and application of new green logistics technologies and equipment. We will step up efforts to control pollution from diesel trucks and accelerate the promotion of new energy freight vehicles in urban distribution. Promote the application of new energy forklifts in the storage field. We will formulate and implement policies and measures to support the innovative development of green supply chains, support enterprises in their digital, smart and green

upgrading and transformation, and encourage the innovative development of new forms of business, new models and new technologies.

Finally, it is suggested that enterprises strengthen information disclosure, strengthen legislation on corporate carbon information disclosure, improve relevant standards and certification systems, give full play to the role of various public service platforms, corporate websites and media, and guide enterprises building zero-carbon supply chains to actively disclose their green procurement and green supplier management. As well as energy saving, carbon reduction and other key information reflecting the low-carbon development level of the supply chain, widely accept social supervision.

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