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E-commerce Promote the Development of Low-carbon Economy in Jilin Province

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Abstract: As an important part of the Northeast old industrial base, Jilin province has relatively complete industrial categories, So, studying its low-carbon economy development has typical significance. The study analyzes the favorable conditions of low-carbon economy development based on the perspective of energy, describes the economic benefits from low-carbon development which uses e-commerce by the pillar industry of Changchun FAW, Jilin petrochemical, agricultural production, etc. and the major initiatives of low-carbon development in advocated by province government, These all escort for Jilin's development of low-carbon economy.

Key words: e-commerce, low-carbon economy, economic mode, petrochemical, agricultural production

INTRODUCTION

Low-carbon economy is an economic development model based on low energy consumption, low pollution and low-emission. The substance of the low-carbon economy is the efficient use of energy, clean energy development and GDP green growth; the core is the innovation of energy technologies and emission reduction technology, the innovation of industrial structure and institution, as well as the fundamental change of human concept of survival and development (Tijun and Gang, 2007). As a new business model, e-commerce has potential for development of low-carbon economy, would not be constrained by the energy, time and space (Zhongmin and Yanhong, 2009). As the old industrial base, Jilin province should actively explore the development model characterized by the low-carbon economy in optimizing energy structure, improving energy usage, adjusting Economic management Institute, Jilin Institute of Chemical Technology industrial structure, developing the low-carbon technology and advocating society members' behavior changes, in order to achieve its strategic goal of sustainable development (Zhangping and Yintai, 2008).

As an important part of the Northeast old industrial base, Jilin province has relatively complete industrial categories, covering petrochemical, automobile manufacturing, agroprocessing, metallurgy, electric power, building materials, bio-pharmaceutical industry, etc. As the country's first low carbon city standard applies to case, Jilin City has the typical sense.

Jilin province is the first pilot province that the country promotes the use of renewable energy, which has

abundant renewable energy that favorably solves the blocking effect to the low-carbon economy development from the coal-dominated energy structure. By the end of 2008, in the full aperture 13 million kilowatts of generating capacity, hydropower installed capacity of 3.894 million kilowatts, accounting for 29.95% of the total electricity generation, wind power and other installed capacity of 804,000 kilowatts, accounting for 6.18% of total electricity generation. Straw, manure and agricultural and forestry wastes and other biomass resources have provided favorable conditions for the development of biogas, biomass and biomass fuels in Jilin province. In the aspects of solar and nuclear energy, the west plains area has abundant solar energy and Chisong will start the construction of nuclear power in 2012. With such a wealth of renewable resources, Jilin province's actual utilization ratio is less than the national average level and the main reasons are that technology is comparatively backward, capital investment is not enough, the incentive policy is not perfect. Actively using the renewable energy to increase the non-fossil energy consumption proportion is one of the important ways to develop the low-carbon economy.

THE e-COMMERCE ADVOCATE LOW-CARBON ECONOMIC MODE

As a basic application of the Internet, the development of e-commerce enable enterprise to reduce energy consumption in the aspects of procurement, production, sales, etc. and reduce carbon emission. Jilin province takes the appropriate strategies to develop e-commerce and implement low-carbon economic model,

starting from the pillar industries, such as Jilin Petrochemical, Changchun FAW, agricultural production and so on.

Products online display: With the increasingly widespread application of e-commerce, the technology people have access to product information more mature, from the original static information of text description, pictures, etc. to the more attempt in displaying products, such as the video experience, flash animation, virtual space and so on. Strengthening the product packaging and user experience will finally promote the turnover rate and create more effective. For example, the 3D automatic imaging system widely respected by enterprises, control the digital camera and product showcase with the computer and the chip and automatically photograph the product from 360°, eventually generate 360° panoramic animation which can automatically play and also be controlled by the mouse.

The construction of agricultural information platform: Jilin province is a large province of agricultural production. Agricultural e-commerce is an important part of the modern market system and inevitable choice of the agricultural information development to a certain stage.

On February 25, 2011, agricultural e-commerce transaction stroked a bargain for the first time in our province, which marks the pilot project has taken a solid step forward. On this basis, following the principle of “safe start, solid progress, the easier issues first, pragmatic”, 10 counties are selected to carry out experimental work in our province's nine cities and prefectures: Shuangyang district, Changchun city, Jiutai city, Jiaohe city, Lishu county, East county, Tonghua county, Fusong county, Zhenlai and Dunhua city.

There are three main tasks of experimental works: Firstly, to build a safe, smooth and convenient e-commerce trading platform for agriculture, secondly, to grope a new marketing model that peasants can purchase means of agricultural production without apprehensions and sell agricultural commodities whose quality can be traced, thirdly, to create a high level of demonstration base of e-commerce industry for agriculture of Jilin province. Improve the efficiency of agricultural production, reduce the use of agricultural inputs and promote agricultural energy-saving and environmental protection and the development of carbon sink of agricultural.

Electronic procurement: At present, e-procurement is mainly adopted by small and medium-sized

enterprise, which is B to B mode. In 2010, the size of B to B e-commerce market reached \$26 trillion all over the world and the Volume of transaction amounted to 2.25 trillion Yuan in China and 2.05 trillion Yuan came from B to B.

According to the survey, e-procurement is marked as a stable channel in almost 45% of enterprises, through which 37% of enterprises meet the immediate procurement.

The rapid development of e-procurement benefits from several unique advantage of its own: Firstly, to improve procurement efficiency and shorten the procurement cycle. The enterprises require only one to two weeks by e-procurement, which saves 30 to 60% of the time than the traditional bidding process, secondly, to save the cost of procurement. In 2010, Jilin petrochemical's total procurement budget was 16.574 million Yuan in high and low voltage switchgears, but the actual price was 11.782 million Yuan and saved 4.792 million Yuan, thirdly, to reduce inventory. Changchun FAW reduced the cost of procurement and the storage area, lowered stock funds about 840 million Yuan and Speeded up the turnover rate of it by e-procurement, Fourthly, with information transparency, the parties all can share them, which is huge and valuable resource for the field of commercial and circulation, Fifthly, the electronic procurement is a way of low-carbon economy, low-carbon circulation. The e-procurement can save the cost of transportation, negotiation, delivery, the value is inestimable and it promotes the development of low-carbon economy.

Online sales: Online sales greatly meets the demand of people's daily consumption, As long as to click the mouse, people will be able to complete a series of processes from purchase to payment, Which greatly reduced the consumption of paper and energy, so that lower carbon emissions. According to the data of Taobao data cube, the recharge card directly reduced carbon emissions 1065 tons only which is almost equivalent to 8 million kilometers of travel by air.

Online sales makes the material world change to digital information and all transportation-related information are recorded by electronic mode, including customer name, product name, type, weight, quantity, delivery date, address, all vehicle models, number, age and so on. Logistics company guarantee in providing the quality service to customers, at the same time realize the commitment to environmental protection, the optimization involves from supplier to supplier, from customer to customer, related all aspects of the entire value chain, so that greatly reduces transportation cost and effectively controlled carbon dioxide emissions.

At present, the supply chain management system no longer emphasizes the data, but to focuses on knowledge processing and get the summary, then to guide the logistic practice in Jilin Petrochemical and Changchun FAW Trade Corporation. The data processing result must be the only, but management issues relates with the experience and knowledge more often, so that is difficult to completely resolve only by it. The knowledge processing is fuzzy which can get different results from different conditions by mathematical model.

Electronic payment: The electronic payment system includes bank cards, internet, mobile phones, mobile payment, etc. but the bank cards and online payment are the main content. By the end of 2009, the personal online banking customers reached to 92, 954, 500 in major commercial banking institutions throughout the country, increasing 45.72% over 2008, personal transaction amounted to 49.87 trillion Yuan increasing 84.29%, e-banking customers reached to 533,174,600, increasing 45.87%, e-banking transaction amounted to 48.97 trillion Yuan, increasing 16.14%. The annual consumption transaction volume was 3.491 billion by bank card, amounted to 6.86 trillion Yuan, which accounted for 32.0% of annual retail sales of social consumer goods.

At the same time, third-party payment market remains a major concern, which has become an important part of the electronic payment system. In 2009, the size of China's third-party payment market amounted to 576.6 billion Yuan, increasing 110.2% and the growth of the online payment transaction volume is over 100% for five consecutive years.

THE JILIN PROVINCIAL GOVERNMENT TOOK MAJOR INITIATIVES IN DEVELOPING THE LOW-CARBON ECONOMY

Promote the reform of property rights and accelerate the development of the industries of emerging and strategic:

We should vigorously promote the reform of property rights in respect of the strategic resources of the national economic lifeline and rare minerals unified nationalized; in the competitive field, open up green channels for some private and foreign-funded enterprises which have rich resource, leading technology and strong strength of talent and scientific research, in order to promote the healthy development of the market economy; establish and improve the property rights trading system, promote the further development and improvement of the Jilin property rights trading system, to provide an institutional guarantee for the development of low-carbon economy and market infrastructure; establish a new type of

resource revenue distribution system to provide incentive and restraint mechanisms for enterprise energy saving. We must vigorously develop photonics, biopharmaceuticals, new energy and other emerging strategic industries.

Actively explore the market trading mechanism of low-carbon economy in Jilin province:

Development of low-carbon economy of Jilin province should actively play the role of market mechanisms of resource allocation, reduce carbon dioxide and greenhouse gas emissions and use market mechanisms to lead the development of low-carbon economy. Establish carbon trading market in Jilin province, including: In the aspect of environmental policy, carbon trading, management, regulation and supervision system construction, the training of professionals in doing the preparatory work of building a carbon trading market in Jilin province and establish a monitoring mechanism.

Build the macroeconomic policy and regulating and control system of low-carbon economy:

Encourage or require the government to try to procure the energy-saving and environment-friendly products and to build a green purchasing network; try to use indirect tax incentive policies for energy-saving and ejection-decreasing and provide preferential policies in the income tax and value-added tax; support the development of hybrid electric or new energy vehicle vigorously, when the time is ripe, develop the pure electric vehicle; actively develop energy-efficient building; guide low-carbon consumer behavior, such as the popularity of green lighting, enhanced the knowledge of energy-saving and ejection-decreasing of residents and the environmental awareness of purchasing clerks, etc. carry out the green accounting and auditing work and establish monitoring mechanism and green evaluating system.

Construct the technology innovation mechanism of energy-saving and ejection-decreasing:

Jilin province actively promote the development and application of new energy vehicles, nuclear power technology, bio-energy technology and photoelectron information industry, which promote the development of emerging strategic industries, Sound the incentive and guarantee mechanism of green technology innovation and gradually perfect the talent incentive mechanism, the financing mechanism and the risk investment system, actively guide the wide-ranging deep level cooperation of industry, academia and research, promote a combination of innovation-driven and industrial development, provide the power for green technology innovation with the

patent law and policy, increase penalty for patent infringement and adjust the patent term, through the effective design of the patent system to promote the protection and diffusion of scientific and technological achievements, promote the flow of knowledge and spill.

CONCLUSION

Now, Jilin province vigorously advocates the model of low-carbon economy. Based on the characteristics of the old industrial base, according to the actual situation of the pillar industry, enterprises develop low-carbon with the network tool of e-commerce and analysis measures of reducing pollution and consumption of natural resource

from all aspects of business management, in order that enterprises reduce cost, speed up the financing, broaden the business field, improve economic efficiency.

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