

Research on the Market Access System of Renewable Resource Management in China

SHANG Ke^{[a],*}; HU Yaowei^[b]

^[a]Professor, Ph.D. President, College of Labor Science and Law, Beijing Wuzi University, Beijing, China.

^[b]Graduate Student, College of Economics, Beijing Wuzi University, Beijing, China.

*Corresponding author.

Received 5 February 2016; accepted 9 April 2016
Published online 26 June 2016

Abstract

As an independent module of the countries' economic development, the renewable resource industry is a part of circular economic development. It is the key element for national economic development and environmental protection. Anyone who wants to regulate the whole renewable resources industry development orderly cannot be separated from the strong supervision and management measures. However, the planning of the management measures is based on a series of standardized system design. This thesis focuses on the market access system of renewable resources management as a starting point, first of all, understand and learn the world most advanced countries' (Japan, Germany, Singapore) renewable resources market access system design, then according to the objective conditions of China, we draw a lesson from the experience of developed countries and construct a new series of market access system for China' renewable resource industry, which include renewable resources list announcement system, enterprise technical standard system, extended producer responsibility system and so on, all of these are designed to provide reference management standards for the regeneration resources industry development in China.

Key words: Renewable resources; Management system; Market access system

Shang, K., & Hu, Y. W. (2016). Research on the Market Access System of Renewable Resource Management in China. *Management Science and Engineering*, 10(2), 57-61. Available from: URL: <http://www.cscanada.net/index.php/mse/article/view/8424>
DOI: <http://dx.doi.org/10.3968/8424>

INTRODUCTION

For a long time, the renewable resources industry development of China in the world is in a backward position, which is mainly due to the renewable resources industry in China lack of a series of perfect standards to ensure the healthy and orderly development of the whole industry. By learning from the experiences of the advanced countries' development of renewable resources industry, no matter at the legislative level, or in the actual management, the systemic and standardized management systems is a powerful weapon to ensure the development of renewable resources. There will be a great feasibility in actual operation if we can make the specific policy guidance and management measures standardization and show it through the form of legal provisions (Zhang, 2013). Therefore, for the development of China's renewable resources, we lack of such a set of mutual coordination and interaction management system, and in this system, the market access system is the most critical. It is not only a prerequisite for the orderly conduct of the whole renewable resources industry, but also the first step to ensure the enterprise to enter the renewable resources market orderly.

1. THE DESIGN EXPERIENCE OF THE ADVANCED COUNTRIES' RENEWABLE RESOURCES MARKET ACCESS SYSTEM, BASED ON JAPAN, GERMANY AND SINGAPORE

1.1 Renewable Resources Market Access System Design of Japan

In Japan, the concept of circular economy is the core of its market access system design of renewable resources industry development.

1.1.1 All Participants Are Responsible for the Recycling Process

Japan views the development of renewable resources as a closed circular space, so it emphasizes the overall concept of resource recovery. From the renewable resource products birth, to the process of consumption, and to the terminal recovery, everyone who takes part in the recovery process should bear the corresponding responsibility. For example, the promotion law of resources efficient use of Japan clearly defines the responsibilities of each person in the process of renewable resources recycling, which include the products producers, consumers, recyclers and other participants, so there is a responsible person for every part of the renewable resources product life cycle. The producer should achieve the production technology of renewable resource products, consumer has the responsibility to collect all kinds of renewable resources and sent them to the enterprise with processing qualification, recycling enterprises have responsibility to properly and safely handle the renewable resources with the national standards (Guo, 2015). Any link appears illegal operations, the behavior is illegal. So, Japan's strict legal provisions fully detailed and divided all participants' responsibilities in the recycling process.

1.1.2 Extend Producer's Responsibility to the Maximum

As per renewable resources product is produced by the manufacturer, and according to the source control of circular economy concept, the producer has an unshirkable responsibility for renewable resources production, circulation and recycling. Therefore, Japanese government establishes the most stringent criterion for the source producers of renewable resource products, which are mainly reflected in the process of production and recovery. From each product design to manufacturing, distribution, recycling, reprocessing and the whole life cycle, the producer should think ahead to the characteristics of their products and the controllability of the recycling process. For instance, in Japan's "circulation law", this question is reflected as "reduce production-continue to use—recycling". And in this process, the producer's responsibility is extended to the entire life cycle of the products.

1.2 Renewable Resources Market Access System Design of Germany

Germany is a country with advanced industrial technology, therefore, the development of its renewable resources market access system is mainly reflected in its specific processing technology standards.

1.2.1 Compile a Renewable Resources Directory

Which products can be recycled and which products cannot be recycled is the key for the government to rightly guide a country's renewable resource recycling enterprises

to carry out the resource recovery. Especially, in Germany, the government classify the recyclable products in the market first, then detect the products in specific enterprise by a series of technical standards, finally, the government compiles a renewable resources product directory timely for social promotion. For one aspect, it can bitterly guide the recycling enterprises to collect various types of renewable resources, for another aspect, it can regulate the recycling enterprises to design the product by the national standards. At the same time, the directory can guide the people have a better division for the products in the market, so as to actively participate in the process of recycling of renewable resources.

1.2.2 Reach Renewable Resources Recycling Technology Standard

Whether a product can be recycled and used for a second time, to a large extent, it depends on the design criteria and the recycling process of the product. Design standards affect the service life of the product and whether it can be recovered, the recovery process criteria determine the quality of recycling and the secondary use. So, in Germany, it is mainly through a series of rigid technical standards to regulate the production and processing economic behavior of renewable resources in enterprises. For example, German Packaging Ordinance expressly provides that packaging manufacturer must use recyclable raw materials, which can be recycled raw materials ratio shall not be less than 50% (Guan, 2012); when the renewable resources is processed by the recycling enterprises, the service life of the product is not less than the prescribed time. These specific production and processing technology standards for renewable resources enterprise become the core of German market access system for the development of renewable resources industry.

1.2.3 Design a Green Product Identification

No matter how reasonable the product is designed by the manufacturer, the secondary use of the renewable resources products need timely recovery after circulation. Therefore, in order to ensure the effective recycling of products, German government has tried every means to allow people to participate in recycling of renewable resources. Among them, green labeling system is one of the products labeling systems that German government strongly promotes. German government requires renewable resource enterprises to mark the green circular logo and product material properties that can be recycled in a conspicuous place of products, which is beneficial for people to discover and identify renewable resource products to the greatest extent and deliver or transfer them to the renewable resources department timely. Green product marking system take people in society to participate in the process of collection and recycling, which can extensively guarantee the rapid development of its national renewable resources industry.

1.3 Renewable Resources Market Access System Design of Singapore

Due to the limited land resources, Singapore has paid special attention to the protection of its environment. And in other words, the government can only take special measures to ensure the efficient use of its resources and comprehensively improve the energy conservation and environmental protection awareness of the nation. Therefore, Singapore's market access system for the development of renewable resources industry is mainly reflected in the severity of punishment and the comprehensive of its legal norms.

1.3.1 The Comprehensiveness of Legal Norms

In fact, there is no or few professional legal document to regulate the development of renewable resources in Singapore's environmental protection laws, but Singapore environmental protection law have special legal provisions to guide the market access of renewable resources for enterprises. For example, the Singapore environment protection law clearly defined the A/B/C classification of national renewable resources product according to the nature of the production, different categories of products must be properly handled by the enterprise with processing qualification, any personal or organizational violation recovery behavior is illegal. Thus, we can know that the comprehensiveness of the Singapore legal norms has been involved to specific production behavior of regeneration resources industry, which demonstrate that the law maker has made ahead planning for the specific behavior that has occurred or is coming out in the renewable resources market. The comprehensive nature of the environmental protection law of Singapore is the place that our country's legislative department can refer.

1.3.2 Extremely Strict Punishment

A good law is not only the government can use it to guide and regulate the market operators rightly, but also it has a deterrent. Anyone who breaks the law must be punished, thus, it can produce a warning to the behavior who fails to observe the market access system. This is obviously reflected in Singapore's environmental protection law. For instance, the provisions of Singapore Public Health Management Ordinance defined that any citizen or organization not delivers or transfers the recyclable resources to recycle locations, but discarded or other unauthorized disposal behavior is illegal. For the first time, you will be punished by 50-200 Singapore dollars; and the second time, you will be punished by 500-2,000 Singapore dollars, and the third time, your behavior has constituted a crime, you will be detained or imprisoned (Wen, 2011). Singapore's legal provisions are not only formulated by this way, but also really implemented by this way. Just these extremely strict punishment provisions and harsh law formulation standards, Singapore's environmental protection is in the forefront of the world, and also by this reason, Singapore can manage

the development of renewable resources industry in an orderly way.

2. EXPERIENCE REFERENCE OF THE ADVANCED COUNTRIES' RENEWABLE RESOURCES MARKET ACCESS SYSTEM DESIGN

Undeniably, for China's development of renewable resources industry, the first step that we need to do is change our long-term misunderstanding of renewable resources that they are just or simply waste materials recycling, we should use a circular economy concept to guide the development of renewable resources industry in our country, from the source of the product to the end of the recovery. Then, according to the objective conditions of our country, we can draw lessons from developed countries on the market access system design of renewable resources management and formulate a set of suitable market access system for the development of China's renewable resources industry. And from what we have talked above, the experiences are as follows.

2.1 To Establish a Renewable Resources List Announcement System as Soon as Possible

On the one hand, although the concept of renewable resources has its own precise definition, the scope of the renewable resources recycling is expanding with the development of the times. Therefore, it is too narrow or outdated for the definition of renewable resources in the relevant laws in China; on the other hand, regeneration resource directory is directly related to the recycle utilization type and market supervision range of the government. For this, the state should publish the recovery list of the renewable resources with the development of renewable resources timely and properly, and attach them to the relevant legal documents by legal annexes. Also, in terms of renewable resources recycling types, the government should further extend China's major recycling categories of iron and steel scrap, scrap metals, waste plastics, waste paper, waste tires, waste electronic products, scrap cars, scrap vessels, glass and other waste to industrial waste, Such as waste building materials (gravel, slag, dust, sludge and other new garbage); to agricultural production waste, such as straw, animal hair, bone, feces and other miscellaneous; to community garbage, such as daily leftovers (swill) and vegetable leaf, sewage, and so on. We need to use the advanced technology at present stage to recover and utilize all kinds of new renewable resources and classify them into the renewable resources directory as soon as possible; also, under the specific resource recycling directory, we need to formulate the provisions of the recycled way, such as removal and storage methods, recording, reporting and other management matters. Enterprises and

institutions shall not recover and reuse the resources that are not included in the catalogue of renewable resources, otherwise you will be punished.

2.2 Speed Up the Construction of Relevant Enterprise Technical Standard System

2.2.1 Operation License System

The enterprise or institution that engaged in renewable resource recycling production shall adopt the qualification cognizance in relevant laws such as scrap metal, waste household appliances, electronic waste, scrap cars and other related industries. For instance, the enterprises or individual industrial and commercial households that engaged in renewable resource recycling should respectively meet the different standards of production technology, such as processing equipment, the size of the venue, the output value scale, personnel skills (the practitioners in the recycling process should have certain conditions, for example, they should have vocational training and vocational skills identification), and these standards must be implemented by business license system, anyone who does not meet the conditions of those license system is strictly prohibited to engaged in business waste materials recycling.

2.2.2 Standard of Technical Application System

In this part, we need to do two things. First, using environmental and friendly product materials. The nature of the product is directly related to the amount of waste generated and if can be degraded in the natural environment, how to recycle and how to use determine the impact extent of the waste to the environment, so, if the manufacturer can use environmental and friendly materials to produce a product, we can reduce the waste generation from the source. The State shall stipulate in the legislation that enterprises of renewable resources are prohibited and restricted to use materials which are harmful to the environment and difficult to recycle. They need to use materials which are biodegradable and easy to recycle. Second, achieving the required resource recovery rate and technical requirements. As mentioned above, the characteristics of the product determine whether the product can be recycled and the quality of secondary product. So, the State shall formulate the applicable standards of the advanced technology for the comprehensive utilization of renewable resources. These standards are mainly for industrial products that contain the recoverable proportion of renewable resources and the number of regeneration. In other words, the standard is mainly set out specifications that institution should reach the resources utilization rate in the renewable resource recycling process, such as the recoverable renewable resources proportion shall not less than 50 percent or the secondary product must be used not less than 3 years and so on. Also, it provides any other matters of technical requirements and managements, such as selling, producing or recovering renewable resources products.

2.3 Extensively Implement the Extended Producer Responsibility System

Waste production and its pollution to the environment are not only caused in the field of production, but also the circulation and consumption fields. Therefore, the producer should take full responsibility for the product through the entire product life cycle. From the birth to the end, in other words, they should fully consider the problem of the design, manufacturing production, processing, sale, transportation, storage, recycling and other aspects that we have to face in the process of environmental pollution and resource recycling. System design should be used to extend the producer responsibility and regulate the producers' business behavior, which requires producers to develop a concept of recycling economy. Specific practices are as follows: from the source control, for example, in the part of the design, using recyclable or green materials to produce product; regulatory processes, for example, in the part of circulation, taking special recycling packaging to ensure the product has a minimal harm to the environment; at the end of the recovery, for example, in the part of reprocessing, renewable resources recovery and utilization rate to reach a fixed proportion, thus, we can guarantee the systematic and all-round development of renewable resources industry in our country.

2.4 Promote Green Product Identification System

The green product logo of environment and resources protection is also known as eco logo, it refers to the specific graphics that printed in the goods or packaging, which is used to indicate the product from production to use and recycling of the entire process are in line with the requirements of environmental protection, and it does not harm the environment or has a minimum harm to the environment, also, it is advantageous to the reuse of renewable resources and recycling.

Compared with other body in the product circulation process, producers are in a strong position, they clearly know the processing technology and the selected material and they have the right to choose the mode of production in line with their own interests. So, we set this system is to require manufacturers to provide the products' knowledge, information and the environmental performance to the public when they are selling their products (for example, the producer has the obligation to inform consumer what substances of the product contains that are harmful to human health and the environment, what harm to the environment after the product is abandoned, and how to reuse it by an environmental and acceptable way, etc.). Thus, they can guide consumers to buy environmental and friendly products as well as properly handle their waste products.

At the same time, the implementation of ecological signs can make the public clearly see the products differences in environmental protection and provide

consumers with a comprehensive green information of the product; also, it can improve the public awareness of environmental protection and enhance the competitiveness of enterprises in the market; otherwise, it can play a positive role in promoting the maturity of green market in our country. Therefore, legislation of renewable resources in our country should stipulate that renewable resources products must be marked on the product composition materials, so as to facilitate the identification of product materials. For the complex composition of product material, the producer must indicate how to classify and recycle. The government should take measures to encourage manufacturers to mark a green logo in conspicuous place.

In short, according to the objective situation of our country, if the government want to formulate a good market access system in the management of renewable resources in our country, the first step we need to do is we should start from the primary stage to regulate the development of China's renewable resources industry (Cai, 2010). And for China, on the one hand, in order to facilitate the timely guidance for recycling enterprises, the government need to publish the renewable resources directory according to the market and the national standards as soon as possible; on the other hand, the government need to introduce new laws and regulations on the development of renewable resources, but for specific legal provisions, we do not need to design the provisions

with strictness as well as Singapore, after all, there is a great differences in the objective conditions between China and Singapore, the rigorous laws will produce opposite effect; also, for enterprises engaged in renewable resources, they need to meet the standards that we have talked about above, a set of specific systems, first, in line with the regulation about recycling scope of renewable resources directory; second, to reach appropriate technical standards of the state; third, to assume the responsibilities and obligations of standardized production and safe recovery. Enterprises that meet all the conditions above can enter the renewable resources market.

REFERENCES

- Cai, C. L. (2010, March 6). Market access of renewable resources and government management. *Economic Daily Newspaper*.
- Guan, A. G. (2012). The government's legislative plan for renewable resources. *Renewable Resources and Recycling Economy*, 12, 43-46.
- Guo, X. Y. (2015). The development of renewable resources industry in Japan and its reference to China. *Comprehensive Utilization of Resources in China*, 8, 56-58.
- Wen, Z. G. (2011). Foreign experience for the development of renewable resources. *The World Economy*, 32, 44-47.
- Zhang, X. P. (2013). *Study on the legal system of renewable resources recycling* (Master thesis). Chongqing University.