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Country Analysis Paper

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< People’s Republic of China >

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The Rapid Development of Circular Economy

— China 3R National Analysis Report

To develop circular economy and improve the resource output ratio is the necessary way to build a resource efficient and environmental friendly society, and raise the level of ecological civilization, as well as realize transformation towards green economy and sustainable development. The Chinese government attaches great importance to the development of circular economy. The national Twelfth Five-Year Plan Outline put forward to vigorously develop circular economy. In 2005, China issued “*Several Opinions on Accelerating the Development of Circular Economy*”, which was a programmatic document for the development of circular economy in China. In 2009, “*Circular Economy Promotion Law*” was implemented formally, bringing the circular economy development of China into the legal track. In 2013, the State Council published “*Notice on the Issuance of the Development Strategy and Recent Action Plans for Circular Economy*”, to make strategic planning for the development of circular economy and overall arrangement for the work in the next period. Circular economy developed rapidly from concept into action across the country in just a few years, and made important breakthrough in theory, practice and policy support and institutional innovation.

1. The guidance of regulations, policies and plans continues to strengthen.

“*Circular Economy Promotion Law*” has been implemented since 1 January, 2009, which is the third specific law for circular economy in the world, followed Germany and Japan. This law takes “reduce, reuse, recycle” and “priority to reduce” as the important principles for China’s economic and social development, and puts forward to establish circular economy planning, extended producer responsibility, inhibition of resource wasting, total pollution load control, and other important institutions, laying a legal foundation for the development of circular economy from all aspects of management, policy, technology and so on.

In 2013, the State Council published “*Notice on the Issuance of the Development Strategy and Recent Action Plans for Circular Economy*”, to make strategic planning for the development of circular economy and overall arrangement for the work in the next period. The medium and long term objectives of circular economy development are determined as follows: extensive implementation of circular production patterns; popularization of green consumption mode; initial establishment of nationwide resource recycling system; substantial increase in resource output ratio; and significantly enhanced capacity for sustainable development.

In aspect of policy, the relevant state departments issued “*Notice on Investment and Financing Policies, Measures and Opinions for the Circular Economy Development*”, putting forward specific measures on planning, investment, industry, prices, credit,

debt financing products, equity investment funds, venture capital, public financing, the use of foreign capital and so on, to support the development of circular economy. *“Regulations on recycling and Recovery of Waste Electrical and Electronic Equipment”* has been effective since January 2011, and the related qualification, directory, fund and other supporting system has been actively carried out. At present, according to the requirements of *“Circular Economy Promotion Law”*, we are pressing ahead with studying and formulating *“The Catalogue of Products and Packages for Compulsory Recycling”*, exploring the implementation of extended producer responsibility system, and promoting the reduce, reuse and recycle of waste packages.

China determined the circular economy statistical assessment system with resource output ratio as the core with pilot work and has made some progress so far. In 2010, pilot projects were launched in some regions of four provinces (cities). In 2012, China proposed to continue the resource output ratio statistics pilot work at the provincial level, and strive to establish a comprehensive resource output ratio statistics system by 2014.

2. The comprehensive utilization of resources has achieved positive progress

The state authorities issued *“Notice on Further Advancing Wall Materials Innovation and Promoting Energy Saving Building”*, *“Suggestion on Accelerating the Comprehensive Utilization of Crop Straw”*, *“Twelfth Five-Year Plan on Construction of National Municipal Effluent Treatment and Recycling Facilities”* and a series of institutional documents and plans. And related departments issued *“Management Practices of Comprehensive Utilization of Resources Encouraged by the State”*, *“Technical Policy of Resources Comprehensive Utilization in China”*, *“Technical Policy of Municipal Effluent Recycling”*, *“Technical Guidelines of Municipal Effluent Recycling”*, *“Technical Policy of Sludge Treatment, Disposal and Pollution Control in Municipal Effluent Treatment Plant”*, *“Technology Guide of Sludge Treatment and Disposal in Municipal Effluent Treatment Plant”*, *“Special Plan for Utilization of Metal Tailings”* and a number of normative documents and technical policies. Comprehensive utilization of resources has been developing rapidly, and oil shale associated with coal, kaolin and other minerals has been utilized in large-scale; the quantity of comprehensive utilization of industrial solid waste significantly increased. During 2006 to 2010, comprehensive utilization of fly ash was about 10 million tons, coal waste about 11 million tons and smelting slag about 500 million tons. And the use of straw and wood residues and wood products manufacturing industry has formed industrial scale. In recent years, the central finance allocated funds to support the construction of a multitude of circular economy key projects, and agricultural projects with long industrial chain, good economic benefits and significant effect of environmental protection.

3. The remanufacturing industry is developing smoothly

In 2005, remanufacturing industry was determined as the first batch of key areas in circular economy. In 2008, 14 enterprises implemented the auto parts remanufacturing pilot project. In 2012, China continued to carry out the second batch of remanufacturing pilot projects. State authorities issued *"Opinion on Promoting the Development of the Remanufacturing Industry"* defined the guiding ideology, priorities and main tasks of remanufacturing industry in China, put forward a complete development policy guarantee measures of re-manufacturing industry.

4. Demonstration construction has achieved positive progress

China carried out the construction of "urban mining" demonstration parks, and proposed to build a number of "urban mining" demonstration parks with standard recycling system, reasonable industrial chain, large scale utilization, various recyclable resources, advanced technology, enforcing environmental standards, high level management and demonstration effect all over the country through five-year effort. And it can also promote the large scale, recycling and high-value utilization of key "urban mining" resources, such as waste electrical and mechanical equipment, waste home appliances, end of life vehicles, scrapped wire and cables, used lead-acid batteries, scrapped mobile phones, waste plastics, waste rubber and so on. The state authorities have identified three batches of 29 demonstration parks since 2010, and will continue to select the fourth batch of demonstration parks in 2013. At the same time, relevant departments try to develop ecological industry with various types of industrial parks as the carrier, to promote the construction of national eco-industrial demonstration parks actively. Till February 2013, 20 parks had been officially named the National Eco-Industrial Demonstration Parks, and 53 parks approved to carry out the construction work of National Eco-Industrial Demonstration Parks, which effectively promote the industrial structure optimization, pollution emission control and enhancement of the development quality, and motivate the development of industry towards green, circulation and low-carbon.

5. The recycling and safe disposal of kitchen waste is advancing steadily

China issued *"Opinion on Strengthening the Management of Illegal Cooking Oil and Kitchen Food Waste"*. National authorities carried out the pilot work of urban kitchen waste recycling and environmental sound disposal, China has organized three batches of kitchen waste recycling pilot projects since 2010, to explore the establishment of conditions for the registration of kitchen waste generating, authorized recovery, centralized treatment and resource-based product evaluation and supervision management system, building kitchen waste recycling and safe disposal of demonstration projects, and guide scientific consumption and reduce the generation.

6. The technical support is strengthening

The Chinese government listed key technologies of circular economy into *"State*

Long-term Science and Technology Development Plan Guidelines”, *“Demonstration of Clean Production and Key Technologies of Circular Economy”* and *“Key Technology Research and Demonstration for Constructing Decision Support System of Circular Economy”* and other major projects of national science and technology has been launched. Support technology of circular economy in 10 key industries such as power, steel and building material have been summarized and issued. In 2012, China issued *“The Catalogue of Encouraged Circular Economy Technologies, Crafts and Equipment (First Batch)”*, involving four aspects of reducing, reusing& remanufacturing, recycling, and industrial symbiosis with links, including a total of 42 key technologies, crafts and equipment for circular economy.

7. The international cooperation is deepening

In recent years, the cooperation between China and countries with successful experiences of circular economy has been strengthening continuously. Based on the technical assistance project of Asian Development Bank, China has carried out the research on municipal effluent recycling, sludge recycling of effluent treatment plant and so on. Since 2005, under the mechanism of Tripartite Environment Ministers Meeting Among China, Japan, and Korea, six circular economy seminars has been held, with themes on establishment of circular economic laws and regulations, eco-industrial parks construction, information sharing, e-waste treatment and end of life vehicles dismantling and recycling system and so on, providing a platform for the circular economy exchanges and cooperation among Japan, Korea and China. Since 2009, Japan, Korea and China have discussed to establish circular economy demonstration parks among China, Japan and Korea jointly.

During the Twelfth Five-Year, circular economy will be promoted vigorously by the Chinese government, with increasing resource output ratio as its core, with systematic and technical innovation as driving force, with the construction of modern industrial system of circular industries, agriculture, services and green consumption modes as the key aspects , to carry out the concept of circular economy through the production, circulation and consumption to build a low consumption, low emission, high efficiency, and circular industrial system in order to promote the resource circular utilization, industrial circular combination and social circular consumption. At the same time, China will continue to strengthen international communication and cooperation and insist on mutual benefit and co-win, prevent and fight against illegal transboundary movement of solid waste, and promote global sustainable development together with the international community.