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CIRCULAR ECONOMY IN CHINA: CURRENT DEVELOPMENT SITUATION AND INVESTMENT PROSPECTS

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The article analyzes the main indicators of the circular economy in China for the period from 2019 to 2024. Based on the results of the analysis, the authors predicted the main trends in the development of the circular economy in China and its investment prospects.

Keywords: circular economy; investment; circular economy indicators; China; waste; prospects for the development of a circular economy.

ЭКОНОМИКА КУЛЬТУРЫ В КИТАЕ: ТЕКУЩАЯ СИТУАЦИЯ В ОБЛАСТИ РАЗВИТИЯ И ИНВЕСТИЦИОННЫЕ ПЕРСПЕКТИВЫ

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В статье проанализированы основные индикаторы экономики замкнутого цикла в Китае за период с 2019 по 2024 годы. По результатам анализа авторами спрогнозированы основные тенденции развития циркулярной экономики в Китае и ее инвестиционные перспективы.

Ключевые слова: циркулярная экономика; инвестиции; индикаторы циркулярной экономики; Китай; отходы; перспективы развития циркулярной экономики.

The circular economy is an economic growth model that takes the efficient use and recycling of resources as its core and follows the principles of Reduce, Reuse and Recycle. Its basic characteristics are low consumption, low emissions and high efficiency, aiming to achieve coordinated development of the economy and the environment by optimizing resource allocation and reducing waste emissions. This model is a fundamental change from the traditional linear economic model of ‘mass production, mass consumption, mass waste’ and is in line with the core concept of sustainable development.

The circular economy occupies an important position in China's economic and social development and has received great attention from the Government in recent years. During the period from the 11th Five-Year Plan to the 14th Five-Year Plan, a series of policy documents have been issued, such as the Opinions of the State Council on Accelerating the Development of the Circular Economy, the Circular Economy Development Strategy and the Immediate Plan of Action, the Leadership in Circular Development and the 14th Five-Year Plan, which provide strong policy guarantee for the development of circular economy. The 14th Five-Year Plan for the Development of Circular Economy provides a strong policy guarantee for the development of circular economy.

With the global emphasis on resource conservation and environmental protection, the size of China's circular economy market continues to expand. By 2024, the market size of China's circular economy has reached RMB 407.74 billion, a year-on-year growth of 13.10 %. The market shows strong vitality, as shown in the following:

Recycling the value of renewable resources continues to climb technological advancement and policy support have promoted the improvement of the recycling system, and the recycling efficiency has been significantly improved (table).

Comprehensive utilization of bulk solid waste has increased significantly: through technological innovation and industrial upgrading, the comprehensive utilization rate of bulk solid waste has increased significantly, reducing resource waste and environmental pollution.

Significant increase in power generation from biomass waste: The development and utilization of biomass energy sources has become an important part of the circular economy, which not only reduces waste emissions, but also provides a new growth point for energy structure adjustment.

It is expected that China's circular economy industry will maintain a strong growth momentum in the next few years, especially in the areas of resource recovery and recycling, with huge market demand, providing a broad space for the development of related enterprises.

Circular Economy Indicators, 2019 – first half of 2024, yuan billions

Indicator	2019	2020	2021	2022	2023	first half of 2024
Scope of Circular Economy, yuan billions	2837.015	3002.5	3201.744	3605.164	4077.44	2318.273
Product Reuse, yuan billions	357.464	379.216	406.621	460.74	530.067	325.486
Recycling market share, yuan billions	407.679	450.375	493.709	575.264	671.962	394.106
Bulk Solid Waste Comprehensive Utilization	518.323	549.458	583.998	654.337	753.103	426.099
Waste Resourcing, yuan billions	222.138	234.195	251.657	285.529	323.545	184.72
Recycling volume, yuan billions	900.38	1013.67	1369.5	1314.05	1298.88	765.27
Amount of non-hazardous municipal waste disposed of, megaton	354.474	371.841	380.635	370.677	376.36	194.59
Comprehensive utilization of bulk solid waste in China, billion tonnes	3.47	3.65	3.8	3.92	4.09	2.15
Recycling of renewable resources in China, billion tonnes	0.323	0.35	0.38	0.35	0.36	0.175
Used mobile phone transactions in China, million	129	152	180.5	213.5	254.9	142.03
Amount of non-hazardous municipal waste disposed of, megaton	240.13	234.52	248.39	225.77	266.36	138.03

The circular economy chain covers several links, including resource recovery, processing and reuse, forming a closed-loop ecosystem. To enhance supply efficiency and quality, enterprises need to strengthen supply chain integration and optimize resource allocation.

The 2023 Government Work Report proposes to improve policies supporting green development, develop a circular economy, promote economical and intensive use of resources, and promote energy conservation and carbon reduction in key areas. The importance of resource recycling has gradually increased in various regions, and the renewable resources recycling industry has shown a good trend of specialization, industrialization, intensification and cluster development. The scale of the industry continues to expand, the recycling system is becoming increasingly sound, the phenomenon of industrial aggregation has gradually emerged, and leading enterprises continue to emerge.

In 2023, the total recycling amount of ten varieties of renewable resources in China, including scrap iron and steel, waste non-ferrous metals, waste plastics, waste paper, waste tires, waste electrical and electronic products, end-of-life motor vehicles, waste textiles, waste glass, and waste batteries (except for lead-acid batteries), was about 376.36 million tonnes, representing a year-on-year growth of 1.5 percent. However, in terms of the amount of recycling, the total amount of recycled resources recycled in 2023 will be approximately 129.88 billion yuan, a decrease of 1.2 % year-on-year. The global economic slowdown has weakened overseas demand and affected the recycling prices of some renewable resources, especially the steel industry, which is facing an imbalance between supply and demand, high costs and shrinking profits.

The circular economy industry covers a wide range of eight key areas, including the comprehensive utilization of bulk solid waste, resource regeneration and recycling, product reuse, rubbish resourcing, waste heat and energy recycling, recyclable express packaging, waste recycling in emerging industries and shared cycling.

Bulk solid waste (bulk solid waste) refers to a single type of solid waste with an annual generation of more than 100 million tonnes, including seven categories such as coal gangue, fly ash, tailings, industrial by-product gypsum, smelting slag, construction waste and crop residues, etc. The comprehensive utilization of bulk solid waste was about 3.92 billion tonnes in 2022 and increased to 4.09 billion tonnes in 2023.

Resource regeneration and recycling involves scrap iron and steel, non-ferrous metals, waste plastics, wastepaper, waste rubber and waste textiles, etc. In 2022, the recycling volume of major waste materials will be about 325 million tons, increasing to 336 million tonnes in 2023.

Product reuse is an important connotation of the circular economy, including second-hand trading of idle goods and product remanufacturing. Taking second-hand mobile phones as an example, the volume of second-hand mobile phone transactions in China grew from 129 million to 254.9 million in 2019–2023.

Resourceful utilization of waste converts domestic waste into resources or energy through sorting and recycling, composting and incineration, etc. In 2022, China's harmless treatment of municipal domestic waste reached 258 million tons, increasing to 266 million tonnes in 2023, with the harmless treatment rate reaching 99.9 %.

Waste Resourcing converts waste into reusable resources or energy through physical, chemical, biological, and other technological means. The market size of the waste resourcing segment grows from $222.138 billion to $323.545 billion from 2019–2023.

Comprehensive utilization of bulk solid waste is the core area of comprehensive utilisation of resources. Its market size grows from 518.323 billion yuan to 753.103 billion yuan from 2019–2023.

Recycling of renewable resources regains the use value of waste through recycling and processing. In 2023, China's total recycling of renewable resources reached 376.36 million tonnes, with a market size of 671.962 billion yuan.

Product reuse is developing rapidly, driven by policy support and market demand. As of 2023, the market size of product reuse reached 530.67 billion yuan, and in the first half of 2024 it was about 325.486 billion yuan.

As an important path for China to achieve green transformation and sustainable development, the circular economy has been expanding its market scale and industrial chain. Despite challenges

such as insufficient technological innovation and imperfect recycling systems, the circular economy industry has a bright future as policy support increases and market demand grows. In the future, China is expected to take the lead in the global green economy competition through the deepening development of the circular economy, contributing Chinese wisdom and Chinese solutions to global resource conservation and environmental protection.

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