

# 2021 Green Development Report

of National Economic and  
Technological Development Zone

INNOVATE TODAY FOR A  
GREEN FUTURE



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Tel: (86)02266371885 Fax: (86)02266371919 Email: [info@ecoteda.org](mailto:info@ecoteda.org)

<https://english.greendev.org.cn/>



GPIPC NEWS (CN)



# Preface

Since 2012, the People's Republic of China has accurately defined the new development stage, comprehensively implemented new development philosophy, accelerated the construction of a new development landscape, and firmly and unshakably followed the high-quality development path that features priority in ecological conservation, greenness and low carbon. Remarkable results have been achieved by vigorously promoting comprehensive green transformation in economic and social development. China is accelerating the establishment and improvement of a green and low-carbon circular development economic system, as well as promoting the adjustment of industrial structure and energy structure. China has started national carbon exchange market, announced that it will not build new overseas coal-fired power projects, geared up the building of a “carbon peaking and carbon neutrality” policy system, and actively participated in international cooperation in response to climate change. All these have demonstrated China’s commitment to act as a responsible major country.

In the new development stage, advancing efforts related to “carbon peaking and carbon neutrality” is indispensable to solving the prominent problems of resource and environment constraints, achieving sustainable development, following the trend of technological progress, and promoting the transformation and upgrading of economic structure. It is also an urgent need for meeting the public’s demand for a beautiful ecological environment and the harmony between humanity and nature, fulfilling the commitment to act as a responsible major country, and building a community of a shared future for humanity. President Xi Jinping emphasized that “we must fully understand the importance of achieving the ‘carbon peaking and carbon neutrality’ goals, and enhance our confidence in advancing efforts in this regard”. With the continuous improvement of the “1+N” policy system, an increasingly strong foundation has been built for achieving China’s “carbon peaking and carbon neutrality” goals.

To achieve the “carbon peaking and carbon neutrality” goals, we need to take a realistic, efficient and sustainable path suited to China’s realities. A National Economic and Technological Development Zone (NETDZ) is the experimental field and pilot for exploring this path. Starting with “modern affairs in bungalows”, we are always at the forefront of the times. By “blazing pathways through mountains and building bridges over rivers”, we have such encourage to become a trendsetter and practical reformer in the modern era. Since the NETDZ was first utilized as the experimental base for green investment in 1992, “greenness” and “innovation” have been implanted in our genes. In October 2021, The Ministry of Commerce printed and distributed special policies, specifically proposed “encouraging NETDZs to take the lead in achieving carbon peaking and carbon neutrality”. The “Measures for Assessment and Evaluation of the Comprehensive Development Levels of National Economic and Technological Development Zones (2021 Edition)” (Shang Zi Fa [2021] No. 188) also includes carbon reduction-related indicators to guide the green and low-carbon sustainable development of NETDZs. China’s NETDZs have been well-prepared to set out on the imperative road towards “carbon peaking and carbon neutrality” goals!

Jiangning Development Zone is the 6th chair member of the GPIPC. Guided by the Department of Foreign Investment Administration under the Ministry of Commerce, we worked with the GPIPC Secretariat to compile the “Green Development Report of National Economic and Technological Development Zones (2021)”. This Report makes an in-depth summary of the green development of NETDZs in recent years, expounds the green business competitiveness and typical green development cases, as well as summarizes China’s newly issued policies on this regard. It will serve as a good reference for the green transformation, innovation and development of NETDZs across China.

**Chair Member of the 6th Green Partnership of Industrial Parks**

**The Administrative Committee of Jiangning Development Zone**

With support from Ministry of Commerce (MOFCOM), Green Partnership of Industrial Parks in China (GPIPC) was jointly initiated on August 20th, 2016 by 36 leading National Economic & Technological Development Zones (NETDZs) in China.

Since its establishment, GPIPC has been working towards economic growth and ecological protection to facilitate green transition, high-quality development and international cooperation for industrial parks.

GPIPC have five key functions, including green information exchange, green development mechanism research, international cooperation promotion, green investment and financing, and green technology innovation and application.

GPIPC is also one of the eight founding members of the Global Alliance for Special Economic Zones (GASEZ) initiated by UNCTAD.



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# Green Development Status

## 1.1 Distribution of NETDZs in China

The first-batch NETDZs were established in 1984. As of December 2021, the State Council approved a total of 230 NETDZs in 31 provinces (autonomous regions and municipalities directly under the Central Government) across China. China's NETDZs have seen their industrial structures and governance capacities optimize continuously over the past 30-plus years. With significantly improved economic contributions to their respective regions and even the whole country, NETDZs are now frontier platforms for China's efforts in becoming an open economy with innovation, achieving scientific, technological and institutional innovation, as well as becoming an important carrier to promote the green and low-carbon transformation and development of the economy and society.







### 1.2 Powerhouses for China’s Economic Development

The official statistics of the Ministry of Commerce show that in 2020, the regional GDP of 217 NETDZs in China totaled CNY11.6 trillion, accounting for 11.5% of China’s GDP in the same period, up by 6.4% YoY, and 4.1 percentage points higher than the national average (2.3%) in the same period. The added value of the secondary industry was CNY7 trillion, accounting for 18.3% of China’s total in this respect in the same period. The added value of the tertiary industry was CNY4.5 trillion, accounting for 8% of China’s total in this respect in the same period.

The regional GDP of 107 NETDZs in the Eastern China Region totaled CNY7.4 trillion, up by 6.3% YoY, accounting for 7.3% of China’s GDP in the same period. The GDP of 63 NETDZs in the Central China Region totaled CNY2.7 trillion, accounting for 2.6% of China’s GDP in the same period. The regional GDP of 47 NETDZs in the Western China Region totaled CNY1.6 trillion, accounting for 1.6% of China’s GDP in the same period.

Category	Industry’s Added Value	Growth rate (YoY)	Proportion in China’s GDP in the same period
Regional GDP of 217 NETDZs	CNY11.6 trillion	6.4%	11.5%
Secondary Industry’s Added Value	CNY7 trillion	3.9%	18.3%
Tertiary Industry’s Added Value	CNY4.5 trillion	10.9%	8%

Table 1: Economic Development of NETDZs

The fiscal revenue of 217 NETDZs tallied at CNY2.1 trillion, accounting for 11.7% of China’s total in this regard. Their tax revenue tallied at CNY1.9 trillion, accounting for 12.4% of China’s total in this regard. The Eastern China Region saw their fiscal revenue/tax revenue come in at CNY1.5 trillion/CNY1.3 trillion; the Central China Region, CNY376.2 billion/CNY337.1 billion; and the Western China Region, CNY245.9 billion/CNY231.8 billion.

### 1.3 Key Platforms for China’s Opening up to the World

In 2020, these 217 NETDZs actually utilized US\$61.1 billion of foreign investment and reinvestment by foreign-invested enterprises, accounting for 23.1% of China’s total in this regard; their import and export amounts tallied at CNY6.7 trillion (incl. CNY3.9 trillion of exports and CNY2.8 trillion of imports), accounting for 20.8% of China’s total in this regard.

The Eastern China Region actually utilized US\$35.9 billion of foreign investment and reinvestment by foreign-invested enterprises, up by 14.8% YoY; its import and export amounts tallied at CNY5.7 trillion (incl. CNY3.3 trillion of exports and CNY2.4 trillion of imports), up by 3.2% YoY.

The Central China Region actually utilized US\$19.1 billion of foreign investment and reinvestment by foreign-invested enterprises, up by 25.1% YoY; its import and export amounts tallied at CNY720 billion (incl. CNY420.6 billion of exports and CNY299.4 billion of imports), up by 12.3% YoY.

The Western China Region actually utilized US\$6.1 billion of foreign investment and reinvestment by foreign-invested enterprises, up by 11.9% YoY; its import and export amounts tallied at 261.6 billion (incl. CNY154 billion of exports and CNY107.6 billion of imports), up by 22.8% YoY.



## 1.4 Pilots for China's Green and Low-carbon Efforts

NETDZs have been adhering to the strategy of green and sustainable development, actively exploring new paths of green and low-carbon development, constantly innovating new modes of green and low-carbon circular development, and continuously improving the governance level in the fields of energy, resources, ecological environment, climate change, etc. In this way, they strive to become new models pioneering the green and low-carbon transformation and development of industrial parks.

As advanced manufacturing cluster areas, NETDZs have thoroughly studied and implemented Xi Jinping thought on eco-civilization, and extensively participated in the establishment and evaluation organized by China's relevant ministries and commissions for the green development demonstration pilots of industrial parks. After years of development and cultivation, NETDZs have made outstanding achievements in constructing a series of green demonstration zones, such as "National Eco-industry Demonstration Parks". Apart from enabling China's industrial parks to attract investment and achieve high-quality development, they also providing a Chinese solution for the sustainable development of global industrial parks.

By the end of 2021, 53 NETDZs (39/9/5 in the Eastern/Central/Western China Regions) were included in the list of 95 National Eco-industry Demonstration Parks across China, accounting for 55.79% of the national total. Among them, 38 have been approved as National Eco-industry Demonstration Parks. Of the 225 National Green Industrial Parks across China, 81 were NETDZs (29/25/27 in the Eastern/Central/Western China Regions), accounting for 36% of the national total. Of the 55 National Low-carbon Industrial Parks across China, 17 were NETDZs (12/2/3 in the Eastern/Central/Western China Regions), accounting for 30.91% of the national total.

Of the 129 National Circular Economy Demonstration and Pilot Parks across China, 59 were NETDZs, accounting for 45.73% of

the national total. Of the 31 National Green Industry Demonstration Bases in China, 7 were NETDZs, accounting for 22.6% of the national total. Of the 76 National Pilot for Third-party Treatment of Environmental Pollution in Industrial Parks across China, 8 were NETDZs, accounting for 10.53% of the national total. Moreover, 10 NETDZs across China were approved as "National Pilot for Roof Distributed PV Across County (City, District)", 5 were approved to implement the "National Demonstration Project of Internet Plus Smart Energy (Energy Internet)", and 1 was awarded the title of "New Energy Comprehensive Utilization Demonstration Zone".

In 2020, the energy consumption, water consumption and emissions of major pollutants per unit of industrial added value of 217 industrial enterprises above designated size in the NETDZs decreased conspicuously YoY, significantly lower than the national average. The "energy consumption of enterprises above designated size per unit of industrial added value" of 92 (43/32/17 in the Eastern/Central/Western China Regions) among 217 NETDZs was lower than the advocated level in the green park evaluation indicators proposed by the Ministry of Industry and Information Technology. 79 NETDZs (40/25/14 in the Eastern/Central/Western China Regions) had lower "water consumption of enterprises above designated size per unit of industrial added value" than the advocated level.

115 (59/35/21 in the Eastern/Central/Western China Regions) of the 217 NETDZs had lower "energy consumption of enterprises above designated size per unit of industrial added value" than the advocated level in the evaluation indicators for National Eco-industry Demonstration Parks. 100 (51/33/16 in the Eastern/Central/Western China Regions) of the 217 NETDZs had lower "water consumption of enterprises above designated size per unit of industrial added value" than the advocated level in the evaluation indicators for National Eco-industry Demonstration Parks.

## Green Governance Policies

Amid China's on-going ecological environment protection and ecological civilization construction efforts, the green governance policy system keeps pace with the times. Constantly revised and improved in the fields of pollutant control, new energy utilization and energy conservation, resource recycling and ecological protection, the green governance policy system plays a key guiding and instructive role in improving the green governance level of industrial parks.

In September 2020, President Xi Jinping announced China's "carbon peaking and carbon neutrality" goals at the General Debate of the 75th Session of the UN General Assembly. This means that China will actively respond to climate change and achieve sustainable development. China's ministries and commissions also issued a series of green policies and measures to fully achieve the "carbon peaking and carbon neutrality" goals and improve the green environment and circular economy management capability. This Report summarizes 56 major policy documents issued by relevant ministries and commissions in 2020-2021, including 20 in strategic planning, 15 in policies and systems, 13 in industrial promotion and eight in energy development. Please see the following table for the list of policy documents:

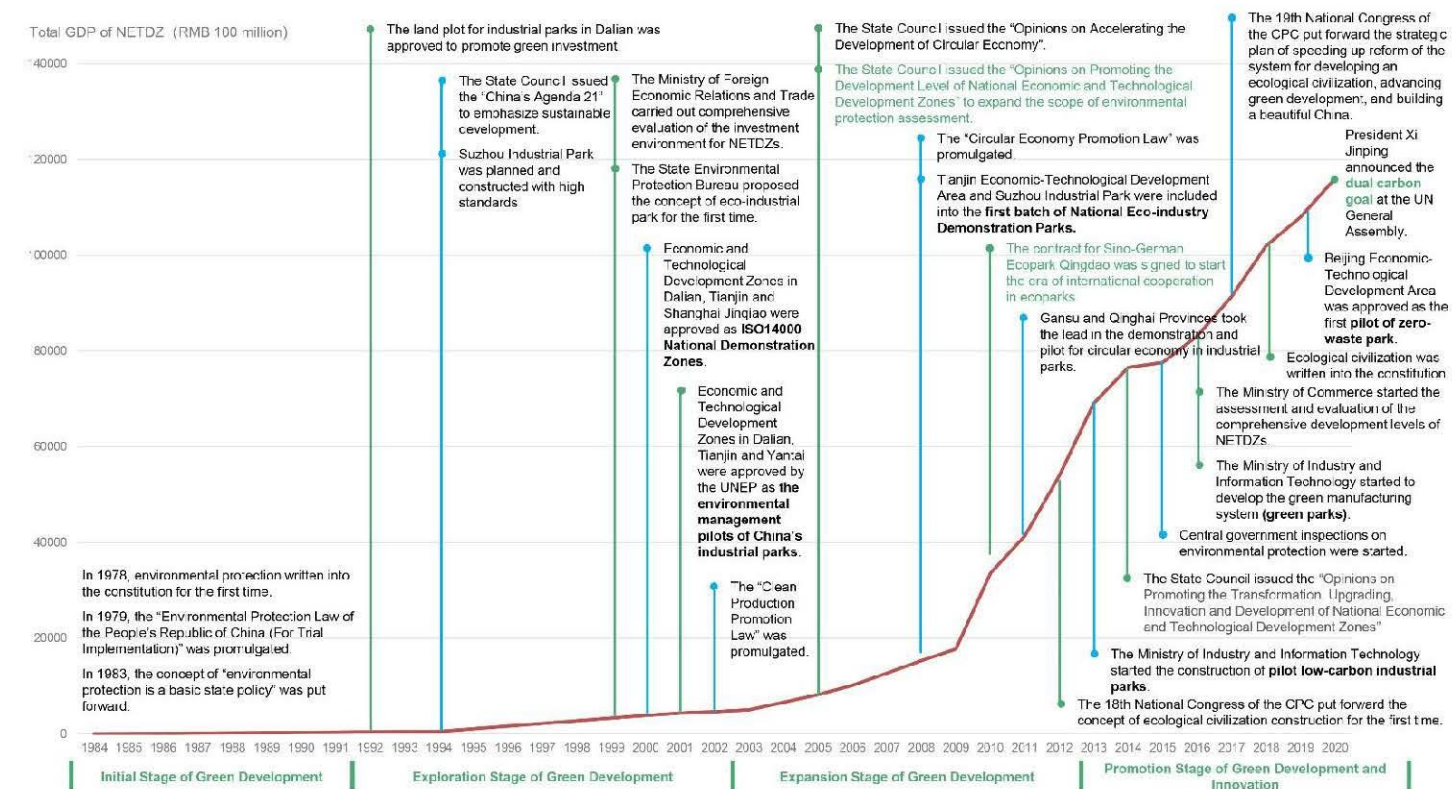


Fig. 2: Milestones in the Green



Table 2: Policies Related to China’s Green Development in 2020-2021 (Incomplete Statistics)

Date	Policy Name	Purport and Green Development-related Contents	Issuer Department
March 2020	“Guiding Opinions on Establishing a Modern System of Environmental Treatment”	Establish a modern environmental governance system in which Party committee and government take the lead, enterprises assume main responsibility, and social organizations and the public also participate.	The General Office of CPC Central Committee, the General Office of State Council
March 2020	“Opinions on Accelerating the Establishment of a System of Laws and Policies for Green Production and Consumption”	Accelerate the establishment of a system of laws and policies for green production and consumption, and solve the problem of incomplete laws and policies for green production and consumption, such as insufficient incentives and constraints, and weak operability.	National Development and Reform Commission, Ministry of Justice
April 2020	“Implementation Opinions on Accelerating the Construction of Natural Gas Reserve Capacities”	Accelerate the construction of gas storage infrastructure and increase natural gas reserve capacities. Relevant measures: First, optimize the planning and construction layout of gas storage facilities. Second, establish and improve the operational modes of gas storage facilities. Third, deepen the reform of system and mechanism. Fourth, provide stronger policy support in the aspects of land supply, finance and taxation, finance and investment.	Five ministries and commissions, including the National Development and Reform Commission
May 2020	“Implementation Opinions on Creating a Better Environment to Support the Healthy Development of Energy-saving and Environmentally Friendly Private Enterprises”	Provide support for energy-saving and environmentally friendly private enterprises, thus winning the battle against pollution, protecting the ecological environment and building a beautiful China.	Six ministries and commissions, including the National Development and Reform Commission
May 2020	“Notice on the Weights of Renewable Energy Accommodation Provincial Administrative Regions in 2020”	It clarified the weights of the total accommodation of renewable energy-generated power by provinces (autonomous regions and municipalities), and accordingly estimated that the accommodation of renewable energy-generated power would reach 28.2% in 2020.	National Development and Reform Commission, National Energy Administration
May 2020	“Implementing Opinions on Further Reducing Logistics Costs”	Actively develop green logistics, including giving more traffic convenience to NEVs for intra-city delivery service, further promoting the greening and reduction of goods packaging and logistics equipment, and encouraging enterprises to develop and use green packaging materials that are recyclable and degradable.	National Development and Reform Commission, Ministry of Transport
June 2020	“Notice on Organizing and Recommending of Use of Green Technologies”	Speed up the popularization and application of advanced green technologies. All units are required to recommend related technologies in the fields of energy conservation and environmental protection, clean production, clean energy, ecological environment and green upgrading of infrastructure.	Four ministries and commissions, including the National Development and Reform Commission
June 2020	“Guiding Opinions on Energy Work in 2020”	Deepen the supply-side structural reform, continuously improve the quality of energy development, expand the clean energy industry, and promote the transformation of energy structure. Recommended measures include sustainable development of non-fossil energy and improvement of clean energy utilization level.	National Energy Administration
June 2020	“Interim Measures for Administration of the Special Funds for Development of Clean Energy”	Standardize and strengthen the management of special funds for clean energy, promote the development and utilization of clean energy, optimize the energy structure and ensure energy security. In addition to supporting the development and utilization of renewable energy, this special fund also supports clean fossil energy and clean utilization of fossil energy at this stage.	Ministry of Finance
July 2020	“Several Opinions on Promoting High-Quality Development of National High-tech Industrial Development Zones”	<b>Support National High-tech Zones to establish National Eco-industry Demonstration Parks, as well as to strictly prevent enterprises with high pollution, high energy consumption and high emissions to settle in. It has increased the weight of green development indicator for National High-tech Zones.</b> Accelerate the integrated development of industry and city, encourage all kinds of private entities to invest in infrastructure (e.g., IT facilities) in National High-tech Zones, strengthen the integration with municipal construction, improve public service facilities (scientific research, education, medical care and culture), and promote the construction of safe, green and intelligent science and technology parks.	State Council
July 2020	“Notice on Organizing the Construction of Green Industry Demonstration Bases”	<b>By 2025, staged progress shall be made in the construction of green industry demonstration bases, a number of leading green industry enterprises shall be cultivated, the green industry agglomeration and comprehensive competitiveness of the bases shall be obviously improved, and the green industrial chain shall be effectively constructed.</b> In this way, the green technology innovation system will be basically established, the infrastructure and service platforms will become intelligent and efficient, and the system and mechanism of green industry development will be more comprehensive. All these will initially show leading role in the development of green industry in China.	National Development and Reform Commission
July 2020	“Action Plan for Green Mobility Program”	Further improve the level of green mobility. Targets: Over 70% of green mobility ratios for more than 60% of cities involved; the satisfaction rate of green mobility service is at least 80%. Participants: Cities with a population of more than one million in urban areas, as well as small and medium-sized towns (encouraged to participate in the program) around them.	Ministry of Transport, National Development and Reform Commission
September 2020	“Implementation Plan for Improving the Construction and Operation of Biomass Power Generation Projects”	Give full play to the role of market mechanism, guide rational investment in photovoltaic power generation industry and promote the healthy and orderly development of photovoltaic power generation industry. Relevant measures: First, continue to set the guidance price for centralized photovoltaic power generation. Second, lower the subsidy standard for industrial and commercial distributed photovoltaic power generation. Third, lower the subsidy standard for household distributed photovoltaic power generation.	National Development and Reform Commission, Ministry of Finance National Energy Administration
October 2020	“Guiding Opinions on Promoting Investment and Financing in Response to Climate Change”	Vigorously promote the development of investment and financing in response to climate change, guide and encourage more private funds to enter the field of response to climate change, further tap potential in this regard, open up markets, and promote the formation of energy structure, industrial structure, production mode and lifestyle to slow down and adapt to climate change.	Five ministries and commissions, including the Ministry of Ecology and Environment
December 2020	“2019-2020 Implementation Plan for Nationwide Setting and Distributing Total Quota of Carbon Emissions Trading (Power Generation Industry)”	Accelerate the construction of the national carbon emissions trading market, and stipulate the setting, distribution method, quota issuance and payment of the total carbon emission quota in the power generation industry.	Ministry of Ecology and Environment
January 2021	“Guiding Opinions on Coordinating and Strengthening the Work Related to Climate Change and Ecological Environment Protection”	Accelerate the coordination of functions, work units and mechanisms related to climate change response and eco-environmental protection, strengthen source management, system management and overall management, make greater efforts to promote climate change response, realize the synergistic effect of pollution reduction and carbon reduction, provide support for achieving the carbon peaking and carbon neutrality targets, thus helping build a beautiful China.	Ministry of Ecology and Environment
February 2021	“Guiding Opinions on Accelerating the Establishment and Improvement of a Green and Low-carbon Circular Development Economic System”	Accelerate the establishment and improvement of a green and low-carbon circular development economic system, promote a comprehensive green transformation of economic and social development, and ensure the realization of carbon peaking and carbon neutrality targets. Define the specific targets for 2025 and 2035; deploy key tasks, such as improving the production system, circulation system and consumption system of green and low-carbon circular development, and accelerating the green upgrading of infrastructure.	State Council
February 2021	“Implementation Scheme of the Special Action for the Green Development in National High-tech Zones”	Encourage and cultivate leading enterprises with influence in green development demonstration parks. <b>Take the lead in achieving the goals of the United Nations 2030 Agenda for Sustainable Development, near-zero discharge of industrial wastewater, carbon peaking and modernization of the green development and governance capacities of industrial parks in National High-tech Zones; and take the lead in achieving carbon neutrality in some high-tech zones.</b>	Ministry of Science and Technology
February 2021	“Notice on Guiding and Increasing Financial Support to Promote the Healthy and Orderly Development of Wind Power and Photovoltaic Power Generation Industries”	Mitigate the difficulties faced by renewable energy enterprises, and promote the healthy and orderly development of renewable energy. Clarify that financial institutions shall negotiate with renewable energy enterprises to extend or renew loans according to the principle of commercialization, independently issue subsidies and loans according to the principle of marketization and rule of law, and appropriately make up for the interest costs shared by enterprises by issuing green power certificates.	Five ministries and commissions, including the National Development and Reform Commission
March 2021	“Outline of the 14th Five-Year Plan of the People’s Republic of China for National Economic and Social Development and the Long-Range Objectives Through the Year 2035”	Narrate the strategic intention of the state, clarify the focus of government work, guide and standardize the behavior of market players, and put forward the long-range objective of basically realizing socialist modernization in China by 2035. The “Outline” puts forward that it is necessary to improve the quality and stability of the ecosystem, continuously improve the environmental quality, and accelerate the green transformation of the development mode, so as to promote the green development and promote the harmony between humanity and nature.	National People’s Congress
March 2021	“Guidelines for Verification of Greenhouse Gas Emission Reports of Enterprises (For Trial Implementation)”	Further standardize the verification activities of greenhouse gas emission reports of enterprises in the national carbon emissions trading market. Clarify the verification principles and basis, verification procedures and key points, verification review and information disclosure for greenhouse gas emission reports of key emission units.	The General Office of the Ministry of Ecology and Environment



Date	Policy Name	Purport and Green Development-related Contents	Issuer Department
March 2021	“Notice on Strengthening the Management of Greenhouse Gas Emission Reports of Enterprises”	Consolidate the data base of the national carbon emissions trading market to expand the coverage of industries and improve the quota allocation method. Make arrangements for the reporting and verification of greenhouse gas emission data in 2020; clarify the quota verification and payment schedule for the first performance cycle of the national carbon emissions trading market.	Ministry of Ecology and Environment
March 2021	“Opinions on Accelerating the High-quality Development of Manufacturing and Service Industries”	Promote the transformation, upgrading and high-quality development of the manufacturing industry. Focus on six fronts, including optimizing the supply quality of manufacturing industry and supporting the green development of manufacturing industry. Take special actions and key projects as the starting point to carry out actions such as intelligent transformation and green transformation of the manufacturing industry, thus contributing to the long-range objective of socialist modernization.	Thirteen ministries and commissions, including the National Development and Reform Commission and the Ministry of Education
April 2021	“Catalogue of Projects Supported by Green Bonds (2021 Edition)”	Further standardize the domestic green bond market, give full play to the positive role of green finance in adjusting the structure and model, promoting the ecological civilization construction, and driving sustainable economic development, thus contributing to carbon peaking and carbon neutrality targets. Clarify green bonds-supported projects in such industries as energy conservation and environmental protection, clean production, clean energy, and green upgrading of infrastructure.	People's Bank of China National Development and Reform Commission, China Securities Regulatory Commission
April 2021	“Opinions on Establishing and Improving Ecological Product Value-realization Mechanism”	Promote ecological industrialization and industrial ecologicalization, and advance the formation of a new model for establishing ecological civilization with Chinese characteristics. By 2025, the institutional framework for realizing the value of ecological products shall be initially formed. The main objective is to establish a comprehensive ecological product value realization mechanism by 2035.	The General Office of CPC Central Committee The General Office of the State Council
May 2021	“Guiding Opinions on Strengthening Ecological Environmental Protection in Pilot Free Trade Zones and Promoting High-quality Development”	Promote the harmonious development of trade, investment and the ecological environment, and build the Pilot Free Trade Zones into demonstration models for jointly promoting high-quality economic development and high-level protection of the ecological environment. <b>By 2025, the framework for realizing ecological environmental protection and promoting high-quality development in the Pilot Free Trade Zones shall basically take shape, and the energy consumption intensity and carbon dioxide emission intensity shall be significantly reduced. A number of replicable and scalable management and system innovation achievements shall be formed to advance green and low-carbon development, ecological environment management and international cooperation.</b>	Eight ministries and commissions, including the Ministry of Ecology and Environment
May 2021	“Rules for Registration and Administration of Carbon Emission Rights (For Trial Implementation)” “Rules for Administration of Carbon Emissions Trading (For Trial Implementation)” “Rules for Administration of Settlement of Carbon Emission Rights (For Trial Implementation)”	Standardize the registration, trading and settlement of carbon emission rights in China, and protect the legitimate rights and interests of all participants in the national carbon emissions trading market. Stipulate that China Hubei Emission Exchange Co., Ltd. shall undertake the specific work of opening, operation and maintenance of the national carbon emissions registration system accounts before the establishment of the national carbon emissions registration institution; that Shanghai Environment and Energy Exchange Co., Ltd. shall be responsible for the account opening, operation and maintenance of the national carbon emissions trading system the establishment of the national carbon emissions registration institution; and that the registration institution shall be responsible for the unified settlement of carbon emission trading across China, managing transaction settlement funds and preventing settlement risks.	Ministry of Ecology and Environment
May 2021	“Measures for Administration of Special Investment Projects within the Central Budget for Pollution Control, Energy Conservation and Carbon Reduction”	Improve the efficiency in using central funds and mobilize the enthusiasm of nongovernmental capital to participate in pollution control, energy conservation and carbon reduction. Clarify the scope of and criteria for special investment support, the rules of investment plan declaration and review, the process of issuing investment plans, project management, supervision and inspection.	National Development and Reform Commission
May 2021	“Plan for Reforming the Legal Disclosure System of Environmental Information”	Implement the reform and deployment of the ecological civilization system, and make a top-level design for reforming the legal disclosure system of environmental information. By 2025, the compulsory disclosure system of environmental information shall basically take shape, enterprises shall disclose environmental information on time and truthfully according to law, the multi-party cooperation and condominium mechanism shall operate effectively, the supervision and punishment measures shall be strictly implemented, the rule of law shall be constantly improved, the technical specification system shall be strongly supported, and the public participation shall obviously improve.	Office of Central Environmental Protection Inspections
May 2021	“Guiding Opinions on Strengthening Prevention and Control of Ecological and Environmental Pollution Sources for Construction Projects with High Energy Consumption and High Emission”	Accelerate green and low-carbon development, resolutely curb the blind development of high-energy-consumption and high-emission projects, and promote green transformation and high-quality development. Clarify the key points of the work, such as strengthening the management and control of ecological environment zoning and planning constraints, strictly examining and approving the environmental impact assessment of high-energy-consumption and high-emission projects, promoting the coordinated control of pollution reduction and carbon reduction in high-energy-consumption and high-emission industries, strengthening supervision and law enforcement according to the sewage discharge permit, and ensuring the effectiveness of the policies. Measures include the in-depth implementation of “ecological red line, environmental quality bottom line, online declaration of resource utilization, and ecological environment access list”, and the incorporation of carbon emission impact assessment into the environmental impact assessment system.	Ministry of Ecology and Environment
May 2021	“Opinions on Strengthening Green and Low-carbon Construction in Counties”	Promote green and low-carbon development in counties. Put forward ten low-carbon development requirements, such as limiting the density of county construction, controlling the height of civil buildings, vigorously developing green buildings and energy-saving measures for buildings. In view of the development of green buildings and energy-saving measures for buildings, it is proposed to continuously increase the proportion of green buildings in newly-built buildings, popularize and apply green building materials and green construction, and promote regional clean heating and clean heating in counties in Northern China.	Fifteen ministries and commissions, including the Ministry of Housing and Urban-Rural Development
June 2021	“Work Plan for Synergistic Promotion of Carbon Emission Reduction in Environmental Impact Assessment and Emission Permits”	By 2022, coordinated environmental impact assessment of pollution and carbon emissions in key areas and industries, and pilot projects of pollutant discharge permits shall be carried out. By 2025, an environmental impact assessment system that is compatible with the carbon peaking and carbon neutrality targets shall be basically formed, and a pollutant discharge permit system for coordinated management of pollutants and greenhouse gases shall be established.	Ministry of Ecology and Environment
July 2021	“Circular Economic Development Plan during the 14th Five-Year Plan Period”	By 2025, a resource recycling industrial system and a resource recycling system covering the whole society shall be basically established; energy consumption per unit of GDP shall be reduced by about 13.5% over 2020, and the comprehensive utilization rate of bulk solid waste shall reach 60%.	National Development and Reform Commission
July 2021	“Opinions on Promoting High-quality Development of the Central Region in the New Era”	Puts forward the specific objectives of high-quality development in the Central and Eastern China Regions by 2025 and 2035; proffer specific opinions in the aspects of building a modern industrial system, enhancing the coordination of urban and rural regional development, and adhering to green development. For green development, it defines the specific contents of building ecological security barrier, strengthening the joint protection and governance of ecological environment, and accelerating the formation of green production modes and living patterns.	CPC Central Committee, State Council
July 2021	“Notice on Launching the Pilot Environmental Impact Assessment of Carbon Emissions in Key Industry Construction Projects”	Clarify the pilot areas, pilot industries, pilot projects and evaluation factors of carbon emission environmental impact assessment; define related tasks and safeguard measures.	Ministry of Ecology and Environment
September 2021	“Opinions on Deepening the Reform of Ecological Protection Compensation System”	Clarify the objectives and key tasks of deepening the reform of eco-environmental conservation compensation system by 2025 and 2035; propose to speed up the construction of the national carbon emissions trading market, improve the carbon emission offsetting mechanism based on the national voluntary greenhouse gas emission reduction trading mechanism, and incorporate voluntary greenhouse gas emission reduction projects in forestry, renewable energy, methane utilization and other fields into the national carbon emissions trading market.	The General Office of CPC Central Committee The General Office of the State Council
September 2021	“Opinions on Carbon Dioxide Peaking and Carbon Neutrality in Full and Faithful Implementation of the New Development Philosophy”	By 2025, the carbon dioxide emissions per unit of GDP shall decrease by 18% over 2020. The forest coverage shall reach about 25% by 2030, and the proportion of non-fossil energy consumption shall exceed 80% by 2060. Put forward 35 specific work tasks in 11 aspects, such as promoting the overall green transformation of economic and social development, comprehensively adjusting industrial institutions, and accelerating the construction of a clean, low-carbon and safe and efficient energy system.	The Central Committee of the CPC State Council
September 2021	“Technical Guidelines on Environmental Impact Assessment for Planning of Industrial Parks”	The “Technical Guidelines” adds requirements for prevention and control technologies in the of environmental impact assessment, refines the requirements for environmental pollution prevention and control technologies and centralized pollution control. <b>It includes new requirements such as environmental feasibility demonstration and optimization adjustment of infrastructure in the industrial park, focuses on synergistic effect of pollution reduction and carbon reduction, and adds requirements for resource conservation and carbon reduction.</b>	Ministry of Ecology and Environment
September 2021	“Plan for Improving Dual-controls over Energy Intensity and Gross Energy Consumption”	Clarify the overall objective of improving the dual-controls of energy intensity and gross energy consumption by 2025, 2030 and 2035; put forward 13 specific measures, such as resolutely controlling high-energy-consumption and high-emission projects and encouraging local governments to increase renewable energy consumption, in the aspects of enhancing the flexibility of gross energy consumption management and improving the dual-controls system for energy consumption.	National Development and Reform Commission



Date	Policy Name	Purport and Green Development-related Contents	Issuer Department
October 2021	“Outlines for the Development of National Standardization”	Clarify the development targets of 2025 and 2035, as well as such contents as improving the standardization guarantee of green development, speeding up the standardization process of urban and rural development and social advancement. In terms of improving the standardization of and guarantee for green development, put forward specific requirements, such as establishing and improving carbon peaking and carbon neutrality standards, building the foundation of green production standards and strengthening the guidance of green consumption standards.	CPC Central Committee, State Council
October 2021	“Opinions on Promoting Green Development in Rural and Urban Areas”	Clarify the objectives for promoting green development in urban and rural areas by 2025 and 2035; put forward 17 specific tasks in four aspects, such as promoting the integrated development of urban and rural areas and changing the development models of urban and rural areas. In the aspect of changing the development models of urban and rural areas, propose to build high-quality green buildings, implement carbon peaking and carbon neutrality actions in the construction field, and realize green construction in the whole process of engineering.	CPC Central Committee, State Council
October 2021	“Action Plan for Carbon Dioxide Peaking Before 2030”	Clarify main objectives; emphasize the implementation of “Top 10 Actions for Carbon Dioxide Peaking”, such as green and low-carbon transformation of energy, energy saving and carbon reduction and efficiency improvement, carbon peaking in industrial field, carbon peaking in urban and rural development, green and low-carbon transportation, and circular economy to help carbon reduction. Select 100 typical cities and industrial parks as pilots for carbon peaking; provide support for the pilot cities and industrial parks in terms of policies, funds, technology, etc., so as to accelerate the green and low-carbon transformation.	State Council
October 2021	“Notice on the Pilot of Carbon Emission Assessment in Environmental Impact Assessment for Industrial Park Planning”	Explore the <b>technical methods and working paths of carbon emission assessment in the environmental impact assessment for industrial park planning</b> ; promote the formation of a mechanism to incorporate climate change factors into environmental management. Clarify that the pilot targets are national and provincial industrial parks with the basis of carbon emission assessment; put forward three tasks, such as exploring the technical methods of carbon emission assessment in environmental impact assessment for planning and improving the environmental management mechanism of incorporating carbon emission assessment into environmental impact assessment for planning.	Ministry of Ecology and Environment
October 2021	“Program for Promoting the Nationwide Clean Production during the 14th Five-Year Plan Period”	Accelerate the implementation of cleaner production; promote comprehensive green transformation of economic and social development. Put forward the main objectives of reducing the total emission of NOx and VOCs by 10% and more than 10% respectively by 2025 over 2020; clarify 19 work tasks in six aspects, such as strengthening the clean production evaluation of high-energy-consumption and high-emission projects and vigorously promoting the clean and low-carbon transformation of key industries.	Ten ministries and commissions, including the National Development and Reform Commission
October 2021	“Guiding Opinions on Strengthening the Integration of Industry and Finance to Promote the Green Development of Industry”	Establish a sustainable commercial integration of industry and finance as a path to promote the green development of industry; promote the construction of an industrial system in which industrial green and low-carbon transformation and industrial empowerment and green development are mutually promoted and comprehensively integrated. Put forward the overall objective of promoting the green development of industry by 2025, such as the basic maturity of the industrial integration mechanism; clarify eight key directions of industrial green development, such as strengthening the innovation and application of green low-carbon technologies, and nine major tasks, such as establishing and improving the carbon accounting and green finance standard system.	Four ministries and commissions, including the Ministry of Industry and Information Technology
October 2021	“Opinions on Encouraging and Supporting the Participation of Social Capital in Ecological Conservation and Restoration”	Further encourage nongovernmental capital to participate in ecological conservation; accelerate the integrated conservation and restoration of landscape, forest, farmland, lake, grass and sand. Clarify the contents of and procedures for nongovernmental capital's participation in eco-environmental conservation and restoration, as well as six key areas (e.g., conservation and restoration of natural ecosystems), and support policies (e.g., incentive for property rights). In the key areas of natural ecosystem conservation and restoration, clarify tasks such as comprehensively improving the carbon sink capacity of the ecosystem, increasing the carbon sink increment, and encouraging the development of carbon sink projects.	The General Office of the State Council
November 2021	“Opinions on Further Fighting the Tough Battle of Pollution Prevention and Control”	Put forward the main objectives of reducing the carbon dioxide emissions per unit of GDP by 18% by 2025 over 2020, and widely forming green production modes and living patterns by 2035; clarify more than 40 work tasks such as advancing carbon peaking actions in seven aspects (e.g., accelerating green and low-carbon development).	CPC Central Committee, State Council
November 2021	“Implementation Plan for Promoting High-quality Development of Resource-based Areas during the 14th Five-year Plan Period”	Put forward the objectives of promoting the high-quality development of resource-based areas by 2025 and 2035; clarify seven work tasks, such as promoting the green development of resource-based areas and guiding the innovative development of resource-based areas. In terms of promoting the green development of resource-based areas, clarify the need for comprehensive management of ecological environment and accelerating the formation of green ways of production.	National Development and Reform Commission
November 2021	“Plan for Green Development of Industry during the 14th Five-Year Plan Period”	Propose that by 2025, the carbon dioxide emission per unit of industrial added value shall be reduced by 18%, and the emission intensity of major pollutants in key industries shall be reduced by 10%; <b>clarify main tasks, such as focusing on carbon peaking action in the industrial field, constructing green low-carbon technology system and green manufacturing support system, and promoting low-carbon transformation of energy consumption.</b>	Ministry of Industry and Information Technology
December 2021	“Plan for Building ‘Zero-waste Cities’ during the 14th Five-Year Plan Period”	Propose to encourage about 100 cities at and above prefecture level to carry out the pilot of “zero-waste cities”; put forward main tasks, such as accelerating the green and low-carbon development of industry, reducing the pressure of industrial solid waste disposal, promoting the green and low-carbon development of agriculture and rural areas, and improving the comprehensive utilization level of major agricultural solid waste in seven aspects, including industry, agriculture and green life.	Eighteen ministries and commissions, including the Ministry of Ecology and Environment and the National Development and Reform Commission
December 2021	“Plan for Pilot of Climate Investment and Financing”	Clarify the definition and support scope of climate investment and financing; propose that through 3-5 years' efforts, pilot localities shall basically form a favorable policy environment for the development of climate investment and financing; deploy eight key tasks (e.g., orderly development of carbon finance, strengthening carbon accounting and information disclosure); clarify the application criteria for pilot in terms of organization and implementation.	Nine ministries and commissions, including the Ministry of Ecology and Environment
December 2021	“Measures for the Administration of Corporate Environmental Information Disclosure in Accordance with the Law”	Clarify basic contents, such as the subject, content, form, time limit, supervision and management of enterprise environmental information disclosure according to law. In terms of disclosure contents, clarify that the annual environmental information disclosure reports of enterprises shall include information on pollutants generation, treatment and carbon emission.	Ministry of Ecology and Environment
December 2021	“Notice of the General Office of the National Development and Reform Commission and the General Office of the Ministry of Industry and Information Technology on Developing Circular Economy in Industrial Parks during the 14th Five-Year Plan Period”	<b>Clarify that by the end of 2025, all qualified industrial parks at or above the provincial level shall implement circular economy</b> ; clarify work targets for greatly reducing the emissions of carbon dioxide and major air pollutants; deploy five main tasks, including promoting industrial recycling & linkage and promoting energy conservation and carbon reduction.	The General Office of the National Development and Reform Commission The General Office of the Ministry of Industry and Information Technology
December 2021	“Plan for the Development of Raw Materials Industry during the 14th Five-Year Plan Period”	Put forward specific targets, such as reducing the comprehensive energy consumption per ton of steel production by 2% and carbon emissions from electrolytic aluminum production by 5% in 2025; propose five key tasks (e.g., accelerating the greening of industrial development in five aspects (e.g., industrial structure and green and low-carbon); deploy five major projects (e.g., pilots for low-carbon manufacturing).	Three ministries and commissions, including the Ministry of Industry and Information Technology
December 2021	“Action Plan for Innovation and Development of the Smart Photovoltaic Industry (2021-2025)”	Put forward the development targets by 2025; propose 24 measures, including realizing the green development of the whole industrial chain, building an intelligent photovoltaic system, and improving the technical standard system in six aspects, such as optimizing the industrial development environment and contributing to carbon peaking and carbon neutrality in various fields.	Five ministries and commissions, including the Ministry of Industry and Information Technology
December 2021	“Comprehensive Work Program for Energy Conservation and Emissions Reduction during the 14th Five-Year Plan Period”	Put forward development targets by 2025: the national energy consumption per unit of GDP shall decrease by 13.5% over 2020, and the gross energy consumption shall be reasonably controlled; the chemical oxygen demand and the total discharge of ammonia nitrogen, nitrogen oxides and volatile organic compounds shall decrease by 8%/8%/more than 10%/more than 10% over 2020. Deploy ten key projects, such as green upgrading projects in key industries, energy conservation and environmental protection upgrading projects in industrial parks, green and energy-saving renovation projects in cities and towns, and energy-saving and emission reduction projects in transportation and logistics.	State Council



As a mentor for NETDZs, the Ministry of Commerce actively promotes NETDZs to work toward “carbon peaking and carbon neutrality” goals. In October 2021, the newly revised “Measures for Assessment and Evaluation of the Comprehensive Development Levels of National Economic and Technological Development Zones (2021 Edition)” included carbon dioxide emissions in the evaluation system for the first time (incl. two indicators: “energy consumption and carbon dioxide emissions of enterprises above designated size per unit of industrial added value” and “carbon dioxide emissions growth rate of an industrial park”). This has played a vital role in encouraging NETDZs to work toward “carbon peaking and carbon neutrality” goals and become models in this regard



Level-I Indicators	Code	Level-II Indicators	Unit	Source	Indicator Weight
Green Development (Weight: 15%)	14	Energy consumption and carbon dioxide emissions of enterprises above designated size per unit of industrial added value	Tons of standard coal/CNY10,000, tons of carbon dioxide/CNY10,000	Statistics departments	4%
	15	Water consumption of enterprises above designated size per unit of industrial added value	CBM/CNY10,000	Statistics departments	3%
	16	Carbon dioxide emissions growth rate of an industrial park	%	Statistics departments	3%
	17	Chemical oxygen demand (COD) emissions per unit of industrial added value	KG/CNY10,000	Ecology and environment departments and statistics departments	3%
	18	Comprehensive utilization rate of industrial solid waste	%	Ecology and environment departments	2%

Table 3: Excerpts from the “Green Development” Section of the “Measures for Assessment and Evaluation of the Comprehensive Development Level of National Economic and Technological Development Zones (2021 Edition)”





# Green Business Environment

In October 2021, the State Council issued the “Action Plan for Carbon Dioxide Peaking Before 2030”, clearly stating that “industry is one of the main areas that produce carbon emissions, and the industrial sector should speed up the green and low-carbon transformation and high-quality development, and strive to peak carbon dioxide emissions ahead of other industries”. As the economic zones with the most concentrated industries and the densest distribution of industrial enterprises, NETDZs not only shoulder the responsibility of guiding and promoting the energy saving, carbon reduction, transformation and upgrading of industrial enterprises in the NETDZs, but also undertake the important mission of promoting the green and high-quality development of industrial parks.

Through survey and interview, we analyzed and classified the demand of investment enterprises for the green development of industrial parks. Based on the results from discussion with relevant experts, we believe that the green business environment of industrial parks can be characterized from four aspects: green energy supply capacity, green policy incentive capability, green IT management capability and green planning & strategic layout capability.

To assist the investment enterprises to acknowledge the green development achievements and the green business environments of NETDZs, this Report collects and summarizes the green development achievements of some NETDZs in the above-mentioned four aspects, so as to provide decision-making reference for investment enterprises in considering strategic layout, as well as for industrial park managers to work toward “carbon peaking and carbon neutrality” goals.

## 3.1 Green Energy Supply

China’s NETDZs have started the work of energy structure optimization continually , and taken the use of clean energy as a priority development strategy. As China marches towards the “carbon peaking and carbon neutrality” goals, industrial enterprises in industrial parks pay more and more attention to their capability in energy supply and management of carbon emissions. The green energy supply capacity of the industrial park’s host area has also become one of the important bases for enterprises to make investment decisions. The proportions of clean energy in 230 NETDZs and the minimum proportions of green electricity (excl. Hydro-power) to be consumed in their provinces (autonomous regions and municipalities directly under the Central Government) are shown in the following Figure:



Fig. 3: Distribution of NETDZs Using More Than 50% of Clean Energy

(Blue Labels) The proportions of clean energy utilized by 48 NETDZs are between 75% (excluding) and 100%;  
(Green Labels) The proportions of clean energy utilized by 35 NETDZs are between 50% (excluding) and 75%;



Fig. 4: Weight of Responsibility for Accommodation of Electricity Generated from Renewable Energy (Non-hydropower)

≤5% 5%-10% 10%-15% 15%-20% 20%-25%



3.2 Green Incentive Policies

Green incentive policies are the important breakthrough to promote the green transformation of industrial structure and economic growth models. In recent years, NETDZs have utilized policy levers to promote green and high-quality economic development. For example, Beijing Economic-Technological Development Area, Tianjin Economic-Technological Development Area, and Jiangning Development Zone followed special green development fund support policies to subsidize eco-friendly and low-carbon projects; Suzhou Industrial Park and Hefei Economic and Technological Development Zone adopted high-quality development measures; Guangzhou Development District (Huangpu District) and Chongqing Economic and Technological Development Zone promoted green innovation and green finance policies. All these initiatives played a huge role in stimulating the green and low-carbon development and industrial transformation of industrial parks.

Table 4: Green Incentive Policies Issued by Some NETDZs

NETDZ	Policy Release Date	Policy Name	Policy Incentive Target
Suzhou Industrial Park	2019-03-15	Measures of Suzhou Industrial Park for the Administration of Special Funds for Green Development	Green, eco-friendly and low-carbon projects
	2021-03-09	Measures of Suzhou Industrial Park for Promoting the High-quality Development of Manufacturing Industry	High-quality development of the manufacturing industry
Beijing Economic-Technological Development Area	2021-09-26	Policy of Beijing Economic-Technological Development Area for Supporting Green Development Funds in 2021	Green, eco-friendly and low-carbon projects
Ningbo Economic and Technological Development Zone	2019-07-08	Special Fund Support Policy of Beilun District (Development Zone) for Promoting Industrial Structure Adjustment	High-quality economic development
Quanzhou Economic and Technological Development Zone	2021-09-16	Special Action Plan of Quanzhou Economic and Technological Development Zone for Green and Digital Technical Transformation	Green, eco-friendly, low-carbon and digital transformation projects
Chongqing Economic and Technological Development Zone	2021-07-30	Fiscal and Financial Policies for Supporting Green Innovation	Green, eco-friendly and low-carbon projects, as well as high-quality economic development
Guangzhou Development District	2021-05-12	Measures of Guangzhou Huangpu District, Guangzhou Development District and Guangzhou High-tech Industrial Development Zone for Promoting Green and Low-carbon Development	Green, eco-friendly and low-carbon projects
	2020-04-28	Policies and Measures of Guangzhou Huangpu District and Guangzhou Development District for Promoting the Development of Green Finance	Green finance
Tianjin Economic-Technological Development Area	2020-06-09	Interim Measures of Tianjin Economic-Technological Development Area for Promoting Green Development	Green, eco-friendly and low-carbon projects
Chuzhou Economic and Technological Development Zone	2020-09-02	Policies of Chuzhou Economic and Technological Development Zone for Supporting the Accelerated Development of Advanced Manufacturing Industry	High-quality development of the manufacturing industry
Jiangning Development Zone	2021-10-01	Interim Measures of Jiangning Development Zone for Promoting Green Development	Green, eco-friendly and low-carbon projects
Hefei Economic and Technological Development Zone	2021-07-29	Policies of Hefei Economic and Technological Development Zone for Promoting High-quality Development of Economy	High-quality economic development
Nanchang Economic and Technological Development Zone	2021-05-01	Some Policies and Measures of Nanchang Economic and Technological Development Zone for Promoting Green Development (For Trial Implementation)	Green, eco-friendly and low-carbon projects

3.3 Green & Intelligent Management

Environmental protection, safety and emergency management are the cornerstones for the green development of industrial parks. With the development of Internet of Things, big data, artificial intelligence and other information technologies, NETDZs actively explore methods for combining smart and intelligent technologies and green development management of industrial parks. They have successively developed and applied IT-based management platforms for intelligent environmental protection, circular economy and online monitoring of energy consumption to provide timely and effective data information and decision-making support for ecological environment management by industrial parks. The green and intelligent management platforms established by some industrial parks are as follows:

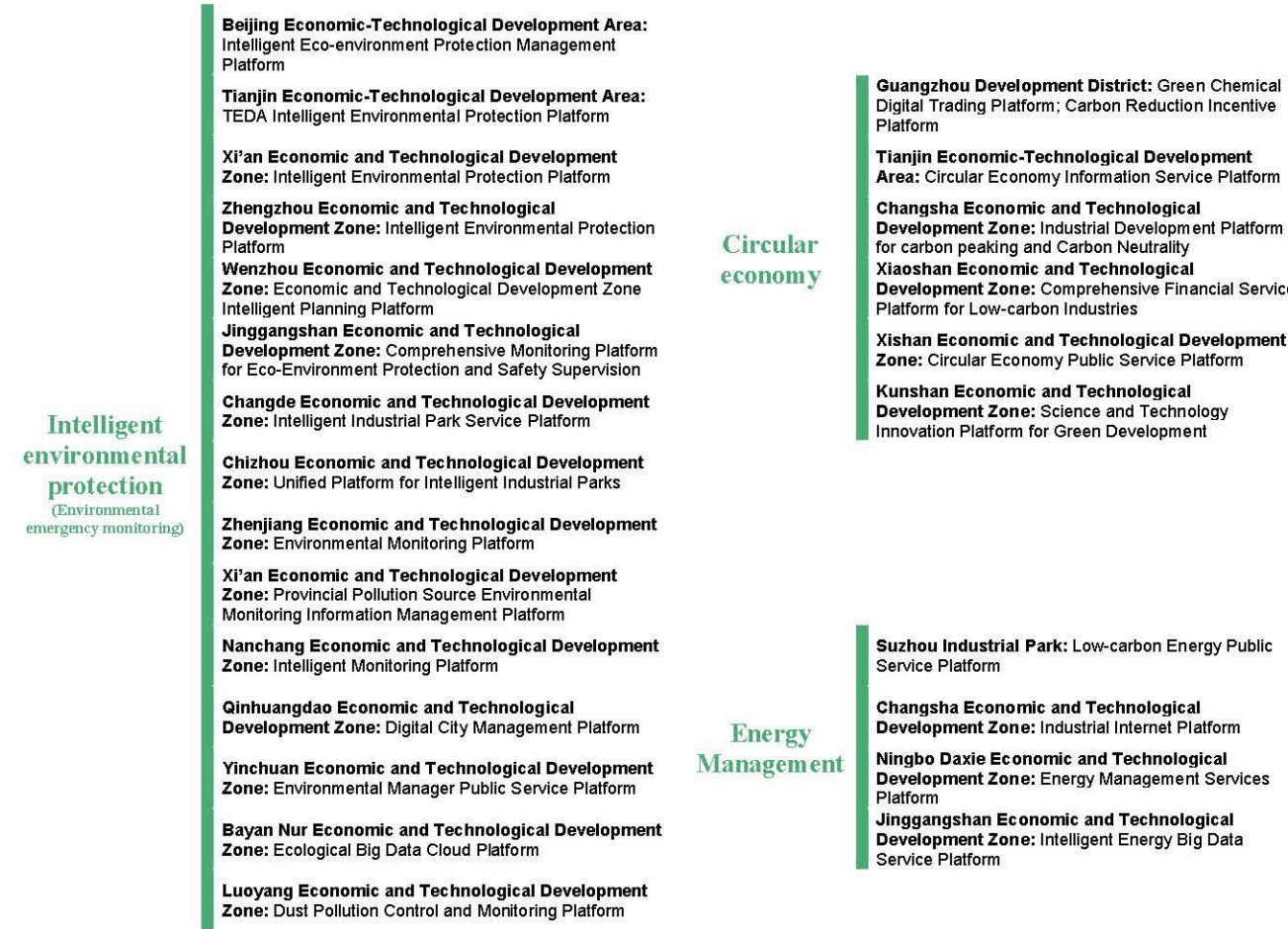


Table 5: Application of Green and Intelligent Management Platforms by Some NETDZs



### 3.4 Green Development Strategies

Strategic planning is the policy carrier and bridge from idea to action and from theory to practice. NETDZs attach great importance to the formulation and implementation of strategic plans for green development. This effectively promotes the systematic implementation of green and high-quality development policies, promotes the green and energy-efficient development of enterprises in these zones, and accelerates industrial structure adjustment and industrial transformation and upgrading. The capability of NETDZs to make strategic planning for green development reflects their overall and long-term planning for green development goals, and plays an important role in the production and development of enterprises in these zones.

This Report summarizes 34 green development strategic plans and related information published on the official websites of 21 NETDZs, including Suzhou Industrial Park, Guangzhou Development District, Tianjin Economic-Technological Development Area, Zhangjiakou Economic and Technological Development Zone and Jinzhou Economic and Technological Development Zone (Binhai New Area). The content mainly includes special plans for energy, low-carbon development, environmental protection and water, and clauses in comprehensive plans. From these plans (or action plans), it can be seen that the NETDZs are systematically planning energy structure adjustment, especially the development and utilization of new energy and the efficient utilization of resources and energy; the adjustment of industrial structure and the development of green industry; and the establishment of supporting policy system for green business environment in their industrial parks. All these have a very important impact on investment enterprises.

Table 6: Strategic Plans of Some NETDZs for Green Development

S.N.	NETDZ	Name	Type
1	Suzhou Industrial Park	Energy Plan of Jinguang Science and Technology Industrial Park	Energy planning scheme
2		Plan of Suzhou Industrial Park for Energy Conservation and Low-carbon Development during the 13th Five-Year Period	Low-carbon development planning scheme
3		Plan of Suzhou Industrial Park for Development of Low-carbon Economy	Low-carbon development planning scheme
4		Implementation Plan of Suzhou Industrial Park for Construction of Pilot Low-carbon Communities	Low-carbon development planning scheme
5	Guangzhou Development District	Special Plan of Guangzhou Huangpu District and Guangzhou Development District for Ecological Environment Protection during the 14th Five-Year Plan Period	Environmental protection planning scheme
6	Tianjin Economic-Technological Development Area	Top Design of Tianjin Economic-Technological Development Area for Intelligent Environment Protection	Environmental protection planning scheme
7		Plan of Nangang Industrial Park for Achieving carbon peaking and Carbon Neutrality Targets	Low-carbon development planning scheme
8	Zhangjiakou Economic and Technological Development Zone	Proposals for Formulating the 14th Five-Year Plan (2021-2025) for National Economic and Social Development and the Long-Range Objectives Through the Year 2035	Comprehensive planning clause
9		Plan of Zhangjiakou Economic and Technological Development Zone for Construction of Beijing Water Source Conservation Areas and Ecological Buffer Zones (2019-2035)	Environmental protection planning scheme
10		Special Plan of Zhangjiakou Economic and Technological Development Zone for Treatment of Rural Domestic Sewage	Special water planning
11		Special Plan of Zhangjiakou Economic and Technological Development Zone for Green Buildings (2020-2025)	Special green building planning
12	Jinzhou Economic and Technological Development Zone	Special Plan of Jinzhou Binhai New Area for Treatment of Rural Domestic Sewage (2021-2035)	Special water planning
13	Taizhou Bay Economic and Technological Development Zone	Signed a strategic cooperation agreement with China Resources Gas Group to jointly promote the construction of distributed green and low-carbon new energy system in the new area.	Strategic cooperation on low-carbon development
14	Qingdao Economic and Technological Development Zone	Plan of Qingdao Economic and Technological Development Zone for Industrial Development during the 14th Five-Year Plan Period	Comprehensive planning clause
15	Yueyang Economic and Technological Development Zone	Plan of Yueyang Economic and Technological Development Zone for Treatment of Rural Domestic Sewage (2020-2030)	Special water planning
16	Guangyuan Economic and Technological Development Zone	Outline of the 14th Five-Year Development Plan of Guangyuan Economic and Technological Development Zone for National Economic and Social Development (2021-2025)	Comprehensive planning clause
17	Deyang Economic and Technological Development Zone	Decisions of Deyang Municipal Committee of the Communist Party of China on Accelerating the Construction of World-class Clean Energy Equipment Manufacturing Bases Under the Guidance of carbon peaking and Carbon Neutrality Targets	Energy industry planning

S.N.	NETDZ	Name	Type
18	Kunming Economic and Technological Development Zone	Plan of Kunming Economic and Technological Development Zone for Ecological Environment Protection during the 14th Five-Year Plan Period	Environmental protection planning scheme
19	Qujing Economic and Technological Development Zone	Outline of the 14th Five-Year Plan (2021-2025) of Qujing Economic and Technological Development Zone for National Economic and Social Development and the Long-Range Objectives Through the Year 2035	Comprehensive planning clause
20		Special Plan of Qujing Economic and Technological Development Zone for Treatment of Rural Domestic Sewage (2019-2030)	Special water planning
21	Lanzhou Economic and Technological Development Zone	Implementation Plan of Lanzhou Economic and Technological Development Zone for Promoting Transformation, Upgrading, Innovation and Development	Comprehensive planning clause
22		Development Plan of Lanzhou Economic and Technological Development Zone during the 14th Five-Year Plan Period	Comprehensive planning clause
23	Jinchang Economic and Technological Development Zone	Plan of Jinchang Economic and Technological Development Zone for Industrial Development (2021-2025)	Comprehensive planning clause
24		Development Plan of Jinchang Economic and Technological Development Zone during the 14th Five-Year Plan Period	Comprehensive planning clause
25	Tianshui Economic and Technological Development Zone	13th Five-Year Plan of Tianshui Economic and Technological Development Zone	Comprehensive planning clause
26	Ningbo Economic and Technological Development Zone	Implementation Plan of Beilun District for Ecological Improvement Projects	Environmental protection planning scheme
27		2018 Green Development Report of Beilun District, Ningbo City	Green development report
28	Wuhan Economic and Technological Development Zone	Work Plan of Wuhan Economic and Technological Development Zone (Hannan District) for Reducing Total Coal Consumption in 2021	Energy planning scheme
29		Action Plan of Wuhan Economic and Technological Development Zone (Hannan District) for Fighting Air Pollution in 2019	Environmental protection planning scheme
30	Xi'an Economic and Technological Development Zone	Notice on Printing and Issuing the Implementation Plan of Economic and Technological Development Zone for Dual-controls over Energy Intensity and Gross Energy Consumption in 2019	Energy scheme
31	Xuzhou Economic and Technological Development Zone	Implementation Plan of Xuzhou Economic and Technological Development Zone for Gridded Environmental Supervision	Environmental protection planning scheme
32		Circular Economy Development Strategy and Short-term Action Plan	Circular economy planning
33	Suzhou Hushu Economic and Technological Development Zone	Plan of Xushuguan Economic and Technological Development Zone for Construction of Eco-Industrial Parks	Eco-industrial park planning
34	Qinhuangdao Economic and Technological Development Zone	Three-year Action Plan of Qinhuangdao Economic and Technological Development Zone for Building Green Communities	Environmental protection planning scheme



# Green Practice Models

As the “experimental field” for reform and opening up, NETDZs have fully implemented the new development philosophy, vigorously practiced the green and low-carbon development strategy, voluntarily made bold reform attempts, and played a leading and active role as the pioneer and model. Based on survey results and expert discussions, this Report summarizes the typical practices of NETDZs in green and low-carbon development, which have distinctive features, generate remarkable results and is replicable and promotable. They can be divided into four aspects: low-carbon and green industrial system construction, clean energy utilization system construction, wastes and resources recycling system construction, and intelligent park management & innovation system construction. This Report gives an explanation by summarizing typical cases, as enlightenment.

## 4.1 Green and Low-carbon Industrial System

NETDZs focus on building a green and low-carbon industrial system. They drive green and low-carbon economic development and create drivers of green development, by vigorously developing strategic emerging industries, and industries featuring low energy and resource consumption, low environmental pollution, high added value and strong market demand, such as low-carbon-oriented corporate transformation, innovative low-carbon technology provision, carbon finance and green investment.

### Case 1: Industrial Chain for Green Energy Transformation in Jiangning Development Zone >>>> ●●●●



In the link of green energy production, Jiangning Development Zone has attracted NGC Group and other high-quality wind power and photovoltaic enterprises, and gathered suppliers of key components such as transmission systems, generators, control systems and blades. In the link of green energy transmission, more than 130 smart grid enterprises such as NARI Group, NR Electric and Guodian Nanjing Automation have gathered, forming a complete industrial chain covering six links: power generation, transmission, transformation, distribution, consumption and dispatching. They have evident advantages in UHV, large-scale intermittent new energy grid connection technology, large-scale energy storage system and intelligent power distribution technology. In the link of green energy utilization, Jiangning Development Zone vigorously develops the NEV industry and launches high-quality projects of complete vehicles and core components. It has introduced green ICV enterprises such as China Automotive Innovation, Ford New Energy Automobile Headquarters, T3 Travel, FAW Research Institute and Tafel, and formed a layout in such core areas as ICV(Intelligent Connected Vehicle), complete vehicles, charging facilities and aftermarket services. At the end of the 13th Five-Year Plan period, the comprehensive energy consumption of the industrial park was 694,800 tons of standard coal. The energy consumption of enterprises above designated size per unit of industrial added value decreased from 0.091 tons of standard coal/CNY10,000 in 2016 to 0.0779 tons of standard coal/CNY10,000, which was lower than the average level of NETDZs.

### Case 2: Green Industry Demonstration Base Model in Guangzhou Development District >>>> ●●●●

Guangzhou Development District vigorously develops green and low-carbon industries (mainly hydrogen energy industrial clusters). It has fostered 211 enterprises above designated size with an output value of CNY236.45 billion, accounting for 29.8% of the total output value of the development zone. Among them, 25 are leading green enterprises with an annual output value exceeding CNY1 billion. Meanwhile, by formulating special policies for green and low-carbon industries, the development zone speeds up the development of key technologies for hydrogen fuel cell stack, membrane electrode, catalyst, bipolar plate, carbon paper, air compressor, advanced technology of hydrogen production process and energy storage, accelerates the layout of the whole hydrogen energy industry chain, and strengthens the demonstration of hydrogen energy application. In this way, it strives to construct a hydrogen energy industry innovation center in Guangdong-Hong Kong-Macao Greater Bay Area, and a world-class hydrogen energy industrial park.



### Cases 3: Zero-carbon Demonstration Zone Model in Shanghai Minhang Economic and Technological Development Zone >>>> ●●●●



During the 13th Five-Year Plan period, Shanghai Minhang Economic and Technological Development Zone implemented 436 projects in 10 areas, including energy-saving technology transformation, clean production and green supply chain, to make the manufacturing industry more eco-friendly. As a result, the comprehensive energy consumption of industrial enterprises above designated size and their energy consumption per unit of industrial added value showed a downward trend in general, from 321,000 tons and 0.088 tons of standard coal/CNY10,000 in 2009 to 197,000 tons and 0.034 tons of standard coal/CNY10,000 in 2020, down by 38.6% and 62.0% respectively. They were far lower than the average level of Shanghai, only 1/5 of the energy consumption of industrial enterprises above designated size in Shanghai per unit of industrial added value. According to preliminary evaluation, Shanghai Minhang Economic and Technological Development Zone has achieved historical peak carbon dioxide emissions, and is constructing a zero-carbon demonstration industrial park.



## 4.2 Clean Energy Utilization System

To achieve green industrial development, NETDZs plan the comprehensive energy systems such as electricity, gas and heat as a whole, actively implement the alternative energy consumption structure, and increase the utilization ratio of clean energy to continuously optimize the energy structure. They plan energy transmission networks such as power grid and heating network in a coordinated way, and take multiple measures to promote the efficient and coordinated development of various energy forms and reduce the comprehensive energy consumption level.



## 4.3 Waste Recycling System

NETDZs have innovated the comprehensive waste recycling mode to break the material information barriers between enterprises, industrial chains and between enterprises and industrial parks. They popularize the “internet plus” waste recycling mode, improve the level of IT-based waste management, and promote the exchange of corporate wastes for utilization, industrial waste recycling, and centralized disposal of pollutants. This helps realize the efficient utilization of waste resources and the green and low-carbon circular development of industrial parks.



## 4.4 Intelligent Management & Innovation System

NETDZs have innovated green management methods. On one hand, they introduce policies to encourage green development, and guide enterprises to assume the primary responsibility in achieving energy conservation and emission reduction to make the industrial parks greener. On the other hand, they develop and build intelligent information management platforms, realizing the dynamic management of energy consumption, pollutants, carbon emissions and other information in the industrial parks. In this way, they form an innovation system for the refined management of green industrial parks, and then realize a governance mode featuring both policy incentives and strict supervision, thus promoting the sustainable, healthy and green operation of the industrial parks.



### Case 4: Low-carbon Energy System Model in Suzhou Industrial Park >>>> ●●●●

In 2017, Suzhou Industrial Park (SIP) started to build a regional energy interconnection network of “PV-energy storage-charging pile-natural gas”. Now, it has 116 distributed PV projects completed, 71 charging pile projects, 141 charging stations in operation, and seven energy storage projects on record. It has invested in the construction of natural gas distributed energy station projects, biogas production from kitchen waste project and LNG storage and gasification stations. With the utilization rate of clean energy reaching 100%, the consumption of fossil energy consumption has been effectively reduced. During the 13th Five-Year Plan period, the energy consumption of the industrial park per unit output value decreased by 16.8%, while its total energy consumption increased by only 0.74% annually. Compared with the 12th Five-Year Plan period, the average annual growth rate of total carbon dioxide emissions in the whole society decreased by only 3.5 percentage points. This showed that the carbon emission intensity of the industrial park was much lower than the national average.

### Case 5: Zero-waste Industrial Park Model in Beijing Economic-Technological Development Area >>>> ●●●●

Beijing Economic-Technological Development Area, the only representative of NETDZs among the “11+5” zero-waste pilot cities in China, pioneered the “Classification of General Industrial Solid Wastes”, and launched the intelligent zero-waste information management system platform. This allows the digital management of the whole life cycle of industrial solid wastes that features improved classification, thorough data collection, lifelong tracing, prompt resource matching and grading evaluation. Six experiential models have been formed: green upgrading of core industries to drive waste reduction and quality improvement in the entire industrial chain, all-round hazardous waste management services, digital management of industrial solid wastes in their entire life cycle, setting a model of urban green recycling with no-waste industrial parks, industry-city integrated classification of domestic wastes, and building market systems to help cultivate energy-saving and eco-friendly industries.

### Case 6: Autonomous Information Disclosure Platform for Third-party Environmental Service Organizations in Tianjin Economic-Technological Development Area >>>> ●●●●

Tianjin Economic-Technological Development Area (TEDA) is among the second batch of pilot industrial parks for the third-party treatment of environmental pollution selected by the National Development and Reform Commission and the Ministry of Ecology and Environment. Following the principle of deepening enterprise services, strengthening supervision by third-party agencies and improving the service quality of the industrial park, it strives to solve the problem of information asymmetry between enterprises and third-party environmental service organizations. In 2021, it developed an autonomous information disclosure platform for third-party environmental service organizations. The platform allows third-party agencies to apply for registration on a voluntary basis, and involves 10 service types such as pollution control, online equipment operation and maintenance, environmental assessment and environmental consultation, low-carbon services, energy conservation and new energy system construction. By disclosing basic information, business categories and performance in a thorough manner, third-party agencies can better facilitate enterprises to make choices according to their own business needs. Industrial enterprises may make comments on project service and quality, and view the comprehensive evaluation results and reports of violations of laws and regulations concerning all third-party agencies on the platform. In the future, the platform will strive to become a marketing platform for third-party agencies, a service platform for enterprises in the industrial park, and an intelligent management platform of the park.



### Case 7: Intelligent Environmental Protection Information Management System Model in Nanchang Economic and Technological Development Zone >>>> ●●●●

Nanchang Economic and Technological Development Zone actively responded to the state's requirements for building an internet plus green ecosystem and an industrial internet platform. In 2019, by using technologies such as big data analysis, cloud services and Internet of Things, it developed an intelligent environmental protection information management system, which focuses on online monitoring and environmental compliance of key enterprises, and combines online and offline channels. The system has four characteristic functional modules – A Map, A Database, A File and An Intelligent Cloud, and eight core functions – an overview of the industrial park, ecological environment, one file for one enterprise, one policy for one enterprise, online monitoring, statistical analysis, environmental management, policies and regulations. It effectively enables the industrial park to conduct environmental management in a more intelligent and IT-based way, and helps achieve digital management in environmental statistics, environmental law enforcement and environmental monitoring.



## Vision and Outlook Related to Dual Carbon Goal

Looking to the future, China will continuously promote green manufacturing and green industrial development to achieve carbon peaking and carbon neutrality targets. In this context, NETDZs have been entrusted with a new historical mission of supporting green, low-carbon and high-quality development.

### Strive to construct a reform pilot zone that supports China's green, low-carbon and high-quality development.

Create a globally-oriented green and low-carbon industrial park infrastructure system. Promote the green and low-carbon transformation of the energy system. Vigorously develop renewable energy, and popularize energy storage technology and new hydrogen energy utilization technology. Promote the demonstration of integrated carbon capture, utilization and storage technologies in an orderly manner. Create a policy environment favorable to the deep integration of low-carbon economy, industry, technology, finance and trade. Guide social capital to invest in enterprises and projects in the fields of energy conservation, environmental protection, clean energy and green upgrading of infrastructure, and establish a green financial services system to support the development of green industries. Develop and improve a digital management and operation model that adapts to the high-quality development of industrial parks. Explore the establishment of a monitoring and management system for energy conservation and carbon reduction to cover key industrial platforms and energy-using units, and realize real-time monitoring, analysis and early warning of energy consumption and carbon emissions. Deepen the cooperation between the government, enterprises and scientific research institutions, and leverage the technical strength of third-party agencies to improve the environmental management and green development level of industrial parks.

### Strive to build the world's leading zero-carbon and low-carbon manufacturing industrial cluster network.

Vigorously develop green industries such as integrated circuit, geospatial information, new-generation information technology, intelligent manufacturing, automobile, digital, biology, new energy and new materials, and aerospace industries, and launch the program of building, reinforcing, extending and upgrading links in the industrial chains. Build a green manufacturing system and cultivate a new batch of green industrial parks, green factories, green products designers and green supply chain enterprises. Continue to optimize and upgrade traditional industries, implement a new round of technological transformation and upgrading, and promote the green development of steel, chemicals, building materials and textile industries. Strengthen the access management of energy-intensive and high-emission projects, and strictly control the implementation of these projects. Improve the recycling level of industrial parks, continue to make their operations more circular, and promote the construction of green industry demonstration bases, and bases for the comprehensive utilization of bulk solid wastes and industrial resources.

### Strive to establish globally-oriented national green and low-carbon technology innovation centers.

Cultivate a number of national green and low-carbon technology innovation centers, and green and low-carbon technology innovation demonstration bases. Encourage leading enterprises to build all kinds of green and low-carbon technology innovation platforms, and resource sharing service platforms. Implement green and low-carbon manufacturing pilot and demonstration projects. Encourage industrial parks to switch to green products, green technology and green buildings. Support enterprises to adopt digital and intelligent systems for the management of resources, energy and environment, strengthen refined and intelligent management of manufacturing, optimize process control, and reduce resource consumption and environmental impact in the production process.



## Strive to build a green and low-carbon international cooperation demonstration zone suitable for deep development and opening up.

Promote the establishment of international partnerships for green manufacturing, further expand the construction of multilateral and bilateral cooperation mechanisms, and strengthen cooperation and exchanges with relevant international organizations in the field of green manufacturing. Encourage qualified regions to build Sino-foreign cooperative green industrial parks, and promote the transformation of green technological innovations in China. Vigorously promote the development of green Belt and Road, expand green trade, build a number of green factories and green supply chains, and speed up the internationalization of green product standards, certification and labeling. Rely on key scientific research institutes, institutions of higher education and enterprises to explore the establishment of international green and low-carbon technology innovation cooperation platforms and training bases. Encourage overseas project contracting and labor export based on green and low-carbon technology and equipment.



## Annexes

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Annex 1: List of NETDZs with the title of “National Eco-industry Demonstration Park”

National Eco-industry Demonstration Park is a demonstration project jointly promoted by the former Ministry of Environmental Protection, the Ministry of Commerce and the Ministry of Science and Technology since 2007. So far, there have been 95 such parks across China. They are a new type of industrial parks based on the concept of circular economy, the principle of industrial ecology and the requirement of cleaner production. Through concept innovation, system renewal and mechanism innovation, they link different factories, enterprises and industries, provide a sustainable service system, and form industrial symbiosis that allows resources sharing and by-products exchanging. By establishing a circulation mode of “producer-consumer-decomposer”, they aim at closed-loop circulation of materials, multi-level utilization of energy and information feedback, thus realizing the coordinated and healthy development of industrial park economy.

NETDZs Approved as National Eco-industry Demonstration Parks			
1	Suzhou Industrial Park	20	Hangzhou Economic and Technological Development Zone
2	Tianjin Economic-Technological Development Area	21	Fuzhou Economic and Technological Development Zone
3	Yantai Economic and Technological Development Zone	22	Jiangning Development Zone
4	Shandong Weifang Binhai Economic and Technological Development Zone	23	Changsha Economic and Technological Development Zone
5	Rizhao Economic and Technological Development Zone	24	Wenzhou Economic and Technological Development Zone
6	Kunshan Economic and Technological Development Zone	25	Yancheng Economic and Technological Development Zone
7	Yangzhou Economic and Technological Development Zone	26	Lianyungang Economic and Technological Development Zone
8	Beijing Economic-Technological Development Area	27	Shanghai Jinqiao Export Processing Zone (Jinqiao Economic and Technological Development Zone)
9	Guangzhou Development District	28	Huai'an Economic and Technological Development Zone
10	Nanjing Economic and Technological Development Zone	29	Zhengzhou Economic and Technological Development Zone
11	Caohejing Hi-Tech Park	30	Changchun Automobile Economic and Technological Development Zone
12	Shanghai Chemical Industry Economic and Technological Development Zone	31	Urumqi Economic and Technological Development Zone
13	Linyi Economic and Technological Development Zone	32	Langfang Economic and Technological Development Zone
14	Shenyang Economic and Technological Development Zone	33	Chengdu Economic and Technological Development Zone
15	Ningbo Economic and Technological Development Zone	34	Wuhu Economic and Technological Development Zone
16	Shanghai Minhang Economic and Technological Development Zone	35	Qingdao Economic and Technological Development Zone
17	Xuzhou Economic and Technological Development Zone	36	Kunming Economic and Technological Development Zone
18	Changshu Economic and Technological Development Zone	37	Tianjin Ziya Economic and Technological Development Zone
19	Nantong Economic and Technological Development Zone	38	Guiyang Economic and Technological Development Zone
NETDZs Approved to Construct National Eco-industry Demonstration Parks			
1	Hefei Economic and Technological Development Zone	9	Ma'anshan Economic and Technological Development Zone
2	Dongying Economic and Technological Development Zone	10	Zhangjiagang Economic and Technological Development Zone
3	Taiyuan Economic and Technological Development Zone	11	Xishan Economic and Technological Development Zone
4	Wuhan Economic and Technological Development Zone	12	Wuzhong Economic and Technological Development Zone
5	Guangzhou Nansha Economic and Technological Development Zone	13	Hangzhou Bay Shangyu Economic and Technological Development Zone
6	Wujiang Economic and Technological Development Zone	14	Jiaxing Economic and Technological Development Zone
7	Changchun Economic and Technological Development Zone	15	Jinggangshan Economic and Technological Development Zone
8	Ganzhou Economic and Technological Development Zone		

Annex 2: List of NETDZs with the title of “National Green Industrial Park”

In May 2015, the “Made in China 2025” issued by the State Council put forward the green manufacturing system for the first time, emphasizing “developing green parks, promoting industrial coupling in industrial parks, and achieving near-zero emissions”. And it planned the building of 100 green demonstration parks by 2020. In July 2016, the “Plan for Green Development of Industry (2016-2020)” issued by the Ministry of Industry and Information Technology proposed to focus on concentrated development of enterprises, industrial ecological link and service platform construction, and promote the construction of green industrial parks. So far, there have been 225 such parks in China, including 81 NETDZs.

Batch	S.N.	NETDZ	S.N.	NETDZ
First Batch (2017)	1	Tianjin Economic-Technological Development Area	6	Kunming Economic and Technological Development Zone
	2	Suzhou Industrial Park	7	Urumqi Economic and Technological Development Zone
	3	Ningbo Petrochemical Economic and Technological Development Zone	8	Changchun Automobile Economic and Technological Development Zone
	4	Ningguo Economic and Technological Development Zone	9	Huizhou Daya Bay Petrochemical Industrial Park (Huizhou Daya Bay Economic and Technological Development Zone)
	5	Hainan Yangpu Economic Development Zone		
Second Batch (2018)	10	Shanghai Chemical Industry Economic and Technological Development Zone	15	Guangyuan Economic and Technological Development Zone
	11	Zhangjiagang Economic and Technological Development Zone	16	Yulin Economic and Technological Development Zone (Yushen Industrial Zone)
	12	Zhenjiang Economic and Technological Development Zone	17	Xining Economic and Technological Development Zone Biotechnology Industrial Park
	13	Hongqiqu Economic and Technological Development Zone	18	Yinchuan Economic and Technological Development Zone
	14	Ningxiang Economic and Technological Development Zone		
Third Batch (2018)	19	Beijing Economic-Technological Development Area	27	Jinggangshan Economic and Technological Development Zone
	20	Xiqing Economic and Technological Development Zone	28	Yantai Economic and Technological Development Zone
	21	Qinhuangdao Economic and Technological Development Zone	29	Xuchang Economic and Technological Development Zone
	22	Nanjing Economic and Technological Development Zone	30	Xinxiang Economic and Technological Development Zone
	23	Huzhou Economic and Technological Development Zone	31	Zhuhai Economic and Technological Development Zone
	24	Ma'anshan Economic and Technological Development Zone	32	Changshou Economic and Technological Development Zone
	25	Tongcheng Economic and Technological Development Zone	33	Shaanxi Aerospace Economic and Technological Development Zone
	26	Shangrao Economic and Technological Development Zone	34	Dongchuan Industrial Park, Xining Economic and Technological Development Zone
Fourth Batch (2019)	35	Cangzhou Lingang Economic and Technological Development Zone	44	Wangcheng Economic and Technological Development Zone
	36	Xuzhou Economic and Technological Development Zone	45	Nanning Economic and Technological Development Zone
	37	Jiangning Development Zone	46	Chengdu Economic and Technological Development Zone
	38	Hangzhou Yuhang Economic and Technological Development Zone	47	Neijiang Economic and Technological Development Zone
	39	Hefei Economic and Technological Development Zone	48	Dali Economic and Technological Development Zone
	40	Chuzhou Economic and Technological Development Zone	49	Nanchuan Industrial Park of Xining Economic and Technological Development Zone
	41	Pingxiang Economic and Technological Development Zone	50	Golmud Kunlun Economic and Technological Development Zone
	42	Ganzhou Economic and Technological Development Zone	51	Korla Economic and Technological Development Zone
	43	Changde Economic and Technological Development Zone	52	Ningbo Daxie Economic and Technological Development Zone



Annex 3: List of NETDZs with the title of “National Circular Economy Demonstration and Pilot Park”

The construction of National Circular Economy Demonstration and Pilot Park is promoted by the National Development and Reform Commission and the Ministry of Finance. They aim to support industrial parks to implement circular economy within 3-5 years with the 7 goals including rationalization of spatial layout, optimization of industrial structure, recycling of industrial links, efficient utilization of resources, centralization of pollution control, greening of infrastructure, and standardization of operation and management. Today, there are 129 National Circular Economy Demonstration and Pilot Parks in China, including 59 NETDZs.

Batch	S.N.	NETDZ	S.N.	NETDZ
Fifth Batch (2020)	53	Shijiazhuang Economic and Technological Development Zone	62	Guangzhou Development District
	54	Taiyuan Economic and Technological Development Zone	63	Zhanjiang Economic and Technological Development Zone
	55	Shanxi Transformation and Comprehensive Reform Demonstration Jinzhong Zone	64	Guangxi-ASEAN Economic and Technological Development Zone
	56	Bayan Nur Economic and Technological Development Zone	65	Guiyang Economic and Technological Development Zone
	57	Suzhou Wuzhong Economic and Technological Development Zone	66	Shaanxi Aviation Economic and Technological Development Zone
	58	Jiashan Economic and Technological Development Zone	67	Jinchang Economic and Technological Development Zone
	59	Hangzhou Bay Shangyu Economic and Technological Development Zone	68	Lanzhou Economic and Technological Development Zone
	60	Longnan Economic and Technological Development Zone	69	Dalian Economic and Technological Development Zone
Sixth Batch (2021)	61	Liuyang Economic and Technological Development Zone	70	Sino-German (Shenyang) High-end Equipment Manufacturing Industrial Park (Shenyang Economic and Technological Development Zone)
	71	Tianjin Ziya Economic and Technological Development Zone	77	Changsha Economic and Technological Development Zone
	72	Jincheng Economic and Technological Development Zone	78	Xiangtan Economic and Technological Development Zone
	73	Songjiang Economic and Technological Development Zone	79	Suining Economic and Technological Development Zone
	74	Jiujiang Economic and Technological Development Zone	80	Kuitun-Dushanzi Economic and Technological Development Zone
	75	Ruijin Economic and Technological Development Zone	81	Qingbaijiang Economic Development Zone (Chengdu International Railway Port Economic and Technological Development Zone)
	76	Yancheng Economic and Technological Development Zone	82	

Batch	S.N.	NETDZ	S.N.	NETDZ
First Batch (2011)	1	Jinchang Economic and Technological Development Zone		
Second Batch (2013)	2	Beijing Economic-Technological Development Area	9	Dongying Economic and Technological Development Zone
	3	Tianjin Economic-Technological Development Area	10	Qingdao Economic and Technological Development Zone
	4	Cangzhou Lingang Economic and Technological Development Zone	11	Guangxi Qinzhou Port Economic and Technological Development Zone
	5	Binxi Economic and Technological Development Zone	12	Guang'an Economic and Technological Development Zone
	6	Zhenjiang Economic and Technological Development Zone	13	Guiyang Economic and Technological Development Zone
	7	Ningbo Economic and Technological Development Zone	14	Urumqi Economic and Technological Development Zone
	8	Tongling Economic and Technological Development Zone		
Third Batch (2013)	15	Caofeidian Industrial Zone (Tangshan Caofeidian Economic and Technological Development Zone)	19	Linyi Economic and Technological Development Zone
	16	Dalian Economic and Technological Development Zone	20	Changshou Economic and Technological Development Zone
	17	Huai'an Economic and Technological Development Zone	21	Zunyi Economic and Technological Development Zone
	18	Ganzhou Economic and Technological Development Zone	22	Puyang Economic and Technological Development Zone
Fourth Batch (2014)	23	Nantong Economic and Technological Development Zone	29	Zhangye Economic and Technological Development Zone
	24	Guangzhou Development District	30	Hongqiqu Economic and Technological Development Zone
	25	Ningbo Petrochemical Economic and Technological Development Zone	31	Wanzhou Economic and Technological Development Zone
	26	Shixenze Economic and Technological Development Zone	32	Ganhe Industrial Park, Xining Economic and Technological Development Zone
	27	Hailin Economic and Technological Development Zone	33	Yangpu Economic and Technological Development Zone
	28	Rizhao Economic and Technological Development Zone	34	Shaoxing Binhai Industrial Park (Shaoxing Keqiao Economic and Technological Development Zone)
				Zhundong Economic and Technological Development Zone
Fifth Batch (2015)	35	Wujiaqu Economic and Technological Development Zone:	41	
	36	Jinggangshan Economic and Technological Development Zone	42	Dongchuan Industrial Park, Xining Economic and Technological Development Zone
	37	Zhanjiang Economic and Technological Development Zone	43	Mudanjiang Economic and Technological Development Zone:
	38	Weifang Binhai Economic and Technological Development Zone	44	Bayan Nur Economic and Technological Development Zone
	39	Ningbo Daxie Economic and Technological Development Zone	45	Lishui Economic and Technological Development Zone
	40	Guangxi-ASEAN Economic and Technological Development Zone	46	Xinxiang Economic Development Zone (Xinxiang Economic and Technological Development Zone)
Sixth Batch (2016)	47	Changshu Economic and Technological Development Zone	51	Nanning Economic and Technological Development Zone
	48	Nanchang Economic and Technological Development Zone	52	Deyang Economic and Technological Development Zone
	49	Shiyan Economic and Technological Development Zone	53	Aral Economic and Technological Development Zone
	50	Zhuhai Economic and Technological Development Zone		
Seventh Batch (2017)	54	Hangzhou Bay Shangyu Economic and Technological Development Zone	57	Guangyuan Economic and Technological Development Zone
	55	Hangzhou Yuhang Economic and Technological Development Zone	58	Kuche Economic and Technological Development Zone
	56	Pingxiang Economic and Technological Development Zone	59	Huizhou Daya Bay Petrochemical Industrial Park (Huizhou Daya Bay Economic and Technological Development Zone)



Annex 4: List of NETDZs with the title of “National Low-carbon Industrial Park”

The construction of pilot National Low-carbon Industrial Parks was started in 2013, which was jointly promoted by the Ministry of Industry and Information Technology and the National Development and Reform Commission. So far, there have been 55 national low-carbon industrial parks, including 17 NETDZs. Under the pilot program, a number of lawfully established industrial parks with solid foundation, distinctive features and strong representativeness are selected to use renewable energy on a large-scale basis, and accelerate the low-carbon transformation of key energy-using industries such as steel, building materials, nonferrous metals, petrochemicals and chemicals; to cultivate a number of low-carbon enterprises; to promote a number of low-carbon industrial park management modes suited to China’s realities; and to make their own carbon emission intensity reach the advanced level of domestic industries to guide and drive the low-carbon development of industry.

S.N.	First Batch (2014)
1	Tianjin Economic-Technological Development Area
2	Shenyang Economic and Technological Development Zone
3	Changchun Economic and Technological Development Zone
4	Shanghai Chemical Industry Zone
5	Shanghai Jinqiao Economic and Technological Development Zone
6	Suzhou Industrial Park
7	Hangzhou Economic and Technological Development Zone
8	Wenzhou Economic and Technological Development Zone
9	Hefei Economic and Technological Development Zone
10	Chizhou Economic and Technological Development Zone
11	Linyi Economic and Technological Development Zone
12	Rizhao Economic and Technological Development Zone
13	Zunyi Economic and Technological Development Zone
14	Qinghai Golmud Kunlun Economic Development Zone (Golmud Industrial Park) (Golmud Kunlun Economic and Technological Development Zone)
15	Ganhe Industrial Park, Xining Economic and Technological Development Zone
16	Dalian Economic and Technological Development Zone
17	Ningbo Economic and Technological Development Zone

Annex 5: List of NETDZs with the title of “National Green Industry Demonstration Bases”

In 2020, the National Development and Reform Commission and the Ministry of Science and Technology jointly issued the list of the first batch of green industry demonstration bases, which totaled 31 and included 7 NETDZs. In the construction of demonstration bases, relevant policies require that it is necessary to further clarify the leading green industries and increase the concentration of green industries; to actively cultivate leading enterprises in green industries and enhance the competitiveness of these industries; and to speed up the construction of a market-oriented green technology innovation system, promote greater synergy between industry, academia, research, financing institutions and intermediaries, strengthen the research, development, demonstration and promotion of green technologies, and promote the high-quality development of green industries. Also, the demonstration bases are required to strengthen the co-construction and sharing of infrastructure based on local conditions, promote the intensive use of land, resource recycling, energy cascading utilization and centralized treatment pollutants in the industrial parks, and strive to be the leader of green development; and to strengthen the management of the industrial parks and strictly forbid projects with high energy consumption and high pollution.

S.N.	First Batch (2020)
1	Tianjin Economic-Technological Development Area
2	Datong Economic and Technological Development Zone
3	Guangzhou Development District
4	Chongqing Economic and Technological Development Zone
5	Xi'an Economic and Technological Development Zone
6	Caohejing Hi-Tech Park Yancheng Branch
7	Golmud Kunlun Economic and Technological Development Zone

Annex 6: List of NETDZs with the title of “National Pilot for Third-party Treatment of Environmental Pollution in Industrial Park”

The National Pilot for Third-party Treatment of Environmental Pollution in Industrial Park is promoted by the General Office of the National Development and Reform Commission and the General Office of the Ministry of Ecology and Environment. It is aimed at improving the pollution treatment level of the industrial park, and cultivating and expanding energy-saving and eco-friendly industries, thus winning the battle against pollution and promoting the establishment of ecological civilization. So far, there have been 76 National Pilot for Third-party Treatment of Environmental Pollution in Industrial Parks, including 8 NETDZs.

Batch	S.N.	NETDZ	S.N.	NETDZ
First Batch (2019)	1	Qianfeng Industrial Park of Guang'an Economic and Technological Development Zone	2	Mianyang Economic and Technological Development Zone
Second Batch (2020)	3	Tianjin Economic-Technological Development Area	6	Changshou Economic and Technological Development Zone
	4	Pingxiang Economic and Technological Development Zone	7	Zhenjiang New Zone New Materials Industrial Park (Zhenjiang Economic and Technological Development Zone)
	5	Huangshi Economic and Technological Development Zone	8	Kuitun-Dushanzi Economic and Technological Development Zone



Annex 7: List of NETDZs with the title of “National Pilot for Roof Distributed PV Across County (City, District)”

Promoted by China’s National Energy Administration, the national pilot for roof distributed PV across county (city, district) was started in 2021. Among The first batch of 676 projects approved, 10 are located in NETDZs. For these pilot areas, it is required that photovoltaic power generation equipment shall be installed on no less than 50%/40%/30%/20% of the total roof areas of buildings of party and government organs/public buildings such as schools, hospitals and village committees/industrial and commercial premises/buildings of rural residents.

S.N.	First Batch (2021)
1	Beijing Economic-Technological Development Area
2	Yancheng Economic and Technological Development Zone
3	Yangzhou Economic and Technological Development Zone
4	Chuzhou Economic and Technological Development Zone
5	Liaocheng Economic and Technological Development Zone
6	Xuchang Economic and Technological Development Zone
7	Luohe Economic and Technological Development Zone
8	Guangzhou Development District
9	Qujing Economic and Technological Development Zone
10	Xi'an Economic and Technological Development Zone