

New Climate Plan Accelerates Green Transition

Policy Express

By CHEN Chunyou

China has released the national climate change response plan for the 15th Five-Year Plan period (2026-2030), setting clear targets to cut carbon intensity and expand its carbon trading system, as it pushes for a faster and broader green transformation.

The plan, issued by the Ministry of Ecology and Environment (MEE) and 18 other departments, is the first of its kind to lay out a full set of climate goals across all major sectors at the five-year planning level.

According to the MEE's Department of Climate Change, the plan is designed to reduce climate-related risks and adverse impacts, and ensure both high-quality development and high-level security.

By 2030, the plan aims to:

- Cut carbon dioxide emissions per unit of GDP by 17 percent from 2025 levels;
- Reduce emissions per unit of output in industries covered by the national carbon market by roughly three percent;
- Complete the construction of a



The Fuxing 220-kilovolt substation, Xiong'an New Area's first full-lifecycle near-zero carbon facility in Hebei province. (PHOTO: XINHUA)

national voluntary greenhouse gas reduction trading market;

- Basically put in place a product-level carbon footprint management system.

The plan also calls for tougher controls on non- CO2 greenhouse gases, with a target to reduce them by 30 million tonnes of CO2 equivalent. It envisions a more climate- resilient society,

with better systems in place to adapt to changing weather patterns and rising climate threats.

If these efforts continue over the following five years, China expects to meet its 2035 nationally determined contributions under the Paris Agreement, paving the way for its long-term goal of carbon neutrality.

Key action areas include cutting

CO2 emissions in energy- intensive sectors, building a carbon footprint tracking system, improving climate risk response, stepping up adaptation measures, and playing a more active role in global climate governance.

For the first time, the plan dedicates a full chapter to managing non-CO2 gases — specifically methane, nitrous oxide, and fluorinated gases. Concrete steps include: expanding coal-mine methane capture and use, promoting water-saving irrigation in rice fields to cut methane, and promoting smarter fertilizer use to limit nitrous oxide emissions from farming.

On the market side, the plan envisions a major digital upgrade of China's national carbon market. It will use Internet of Things technology to build a more accurate carbon data collection network, install over 10,000 monitoring gateways for voluntary emission reduction projects, and unify data management — all to make regulation smarter and more efficient.

In addition, the government will keep updating its national catalogue of low-carbon technologies for promotion, while stepping up support for research and pilot projects on carbon capture, utilization, and storage.



Driving High-quality Development of Internet Fundamental Resources

By TANG Zhexiao

Four departments, including the Ministry of Industry and Information Technology and the Cyberspace Administration of China, have issued a guideline for high-quality development of Internet fundamental resources.

Centering on core resources such as IP addresses, domain names, autonomous system numbers and network identifiers, the document lays out 16 key tasks covering six major areas. It aims to bolster high- quality development of China's Internet fundamental resources and support building a cyber power and "Digital China."

Boosting fundamental innovation capacity

The document sets four targeted measures:

First, basic theoretical research will be strengthened. Leveraging emerging technologies including AI, quantum communication and blockchain, systematic

research will be conducted on core operational mechanisms and underlying architectures.

Second, breakthroughs will be achieved in core and key technologies. Supported by national key R&D programs, technical bottlenecks in high-performance IPv6 transmission, mega- constellation networking for satellite Internet, and resource public key infrastructure will be tackled.

Third, innovation platforms will be improved. Fundamental and forward-looking research and experimental trials will be scaled up to produce more original innovative achievements.

Finally, the standard system will be refined and national standards better aligned with international ones.

Upgrading digital infrastructure

Both the optimization of existing infrastructure and the layout of new facilities will be advanced.

On one hand, traditional infrastructure will be upgraded. Resolution nodes

for the ".CN" country-code top-level domain will be expanded and the transition to full IPv6 single-stack operation promoted.

On the other hand, new-type infrastructure will be explored and developed. Efforts will be intensified to improve supporting planning for satellite Internet and accelerate the integration of industrial Internet identifiers and the domain name system.

Protecting the security bottom line

A fundamental resource security guarantee initiative will be implemented to shore up defenses in four key dimensions:

- Ensuring supply security through coordinated planning and rational allocation of IPv6 address resources;
- Securing operational stability by formulating full- process classified and tiered security specifications and strengthening operational assurance for the ".CN" domain name;
- Enhancing risk monitoring by

establishing an AI- and big data- powered cross- departmental collaborative monitoring mechanism to identify and defuse potential risks;

- Improving emergency response capabilities by optimizing tiered emergency plans and conducting regular practical drills.

By strengthening support for network, Internet of Things connectivity, data connectivity and intelligent connectivity, nationwide addressing and switching capabilities will be optimized and large-scale industrial application of AI facilitated.

The guideline also clarifies arrangements for enhanced international communication, coordination and global governance participation. China will engage in affairs of international bodies, advance the formulation of international standards, and promote the development of international organizations for emerging digital sectors.



Blueprint for Industrial Decarbonization

By TANG Zhexiao

To facilitate all-round green transformation of the economy and society, the Ministry of Industry and Information Technology (MIIT) has released the 15th Five-Year Plan (2026-2030) for accelerating green and low-carbon development of the industry sector.



Workers operate intelligent manufacturing equipment in a coil digital workshop. (PHOTO: XINHUA)

The plan lays out phased development goals. By 2030, China will optimize its industrial and energy consumption structure, peak carbon dioxide emissions in the industrial sector, and significantly increase the proportion of green energy applications.

Seven priority initiatives, including an industrial carbon peaking campaign, have been arranged to build a comprehensive new framework for eco-friendly, low-carbon industrial growth.

Efforts will be accelerated for the green transformation of key industries such as steel, non-ferrous metals, petrochemicals and chemicals, building materials, and textiles. At the same time, green equipment will be developed, electric and hydrogen- powered aircraft will be promoted, and sustainable aviation fuel will be used in domestic civilian aircraft.

In terms of international cooperation, the plan proposes promoting green cooperation under the Belt and Road Initiative, expanding global green manufacturing partnerships, and strengthening multilateral and bilateral cooperation on green and low-carbon issues.

Domestically, the plan emphasizes that green and low-carbon technological innovation should fuel the development of green productivity. Efforts will focus on technological R&D and industrialization applications, promoting key green and low-carbon technologies and the implementation and transformation of scientific and technological achievements.

Furthermore, the plan envisions

jointly promoting intelligent manufacturing and green manufacturing, leveraging digital and intelligent technologies and artificial intelligence to empower green production, restructuring industrial production organization models, and enhancing the quality and efficiency of green transformation.

Two supporting frameworks are scheduled for constant improvement: the industrial resource-recycling system plus the green manufacturing and service system.

Industries such as recycled resources from waste steel, waste non-ferrous metals, waste plastics, waste paper, and used tires will be cultivated and strengthened. By 2030, the annual recycling and utilization volume of waste steel and waste plastics will reach 300 million tonnes and 22 million tonnes respectively.

Green factories and green industrial parks will be built, green supply chains formed, and a group of leading green manufacturing forces with international competitiveness will be created.



Case Study

Shenzhen Strengthens Basic Research Investment

By CHEN Chunyou & LUO Yunpeng

China's southern tech hub Shenzhen is doubling down on basic research as it pushes to strengthen its innovation foundation and secure a leading position in frontier science.

Recently, the Shenzhen Institutes of Advanced Technology (SIAT) of the Chinese Academy of Sciences, together with more than 100 laboratories from six Asian countries, unveiled Asia's first 10-year roadmap for synthetic cells. The roadmap focuses on creating an artificial single- celled biological system, one of the world's most advanced scientific frontiers.

"This marks a key leap for China in basic research on synthetic life and synthetic cells, and demonstrates the country's determination to make greater contributions to this field through open cooperation," said SIAT president Liu Chenli.

Breakthroughs in basic research rest on a foundation of long-term, patient capital. Since 2020, Shenzhen has mandated by law that at least 30 percent of its municipal science and technology R&D funds will go to basic research and applied basic research. The city has also improved its funding mechanism by combining competitive grants with stable fund support.

"Quantum technology demands high investment and long cycles. Basic research funding is vital for building world-class infrastructure, attracting top talent and nurturing future industries," said Liu Song, vice dean of the Shenzhen International Quantum Academy.

Shenzhen is strengthening its R&D system through high spending and diversified policies. Its 15th Five- Year Plan (2026-2030) calls for accelerating AI applications across all industries, leveraging both hardware and software strengths to become a pioneering AI-powered city.

T&S Communications, a local company, is developing new optical

communication equipment to meet the surging demand from the AI market. "With policy and financial support, we have succeeded in packing hundreds of optical fibers onto flexible boards, achieving an ultra-fineness thinner than a strand of hair, as well as their mass production and sales," said Hou Dan, the firm's technical director.

In recent years, Shenzhen's annual public budget spending on science and technology has averaged more than 40 billion RMB, accounting for over nine percent. The funds are used to support national and provincial laboratories and other innovation platforms to pursue original and leading-edge research.

In promoting innovation, Shenzhen puts enterprises in the driver's seat, channeling over 60 percent of its municipal R&D funds directly to support corporate R&D.

During the 15th Five-Year Plan period, the city will steer more innovation resources toward enterprises, roll out incentives to boost corporate R&D, expand its enterprise innovation credit system that channels precise funding to high-potential innovators, and mobilize venture, patient, international and industrial capital into key technological fields.

Official data shows Shenzhen's basic research investment has grown at an average annual rate of 19.7 percent over the past three years. The city's 15th Five-Year Plan targets to raise its R&D intensity to seven percent of GDP by 2030, boosting basic research and original innovation while integrating education, science and technology, and talent to improve overall innovation efficiency.

"Shenzhen has gone through a phase of catch-up innovation and is now entering the uncharted territory of original innovation," said Zhang Lin, director-general of the Shenzhen Municipal Science, Technology and Innovation Bureau. "By setting clear quantitative targets, we demonstrate our determination to invest in basic research and deliver more original results."



A view of the Guangming Life Science Park in Shenzhen, Guangdong province, home to advanced life science research facilities. (PHOTO: XINHUA)

China-Europe Freight Trains Facilitate Eurasia Cooperation

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In the first half of 2026, the freight volume of China-Europe freight trains along the southern corridor increased by more than 90 percent year on year.

The China-Europe freight train service provides new opportunities for inland regions to pursue opening-up and development. It has fostered the growth of border port and hub economies, and helped countries and regions along the routes better integrate into the open world economy, Liang added.

Thanks to it, Malaszewicze, a small border town in Poland, has become a key logistics distribution center of the European Union. German city Duisburg has transformed itself from a traditional industrial city to a crucial European logistics hub.

Looking ahead to the 15th Five-Year Plan period (2026-2030), China will improve transport organization services.

Liang said coordination across the China-Europe freight train network will be strengthened, transport organization models optimized, and customs clearance facilitation enhanced. The stability and reliability of end-to-end transit times will be improved.

The corridor network will be improved by coordinating different modes of transport, including rail, road, maritime and air transport, and developing new multi-modal transport routes. Furthermore, intergovernmental cooperation mechanisms will be strengthened to enhance coordination with countries along the routes and ensure secure and smooth operation.

In addition, China will further advance the digital, intelligent and green development of the freight train service, enhance collaborative innovation capabilities, accelerate the application of new technologies and equipment, and foster new drivers of growth.