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# China Carbon Neutrality Tracker Newsletter

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This bi-monthly China Carbon Neutrality Tracker (CCNT) newsletter provides information on the key climate actions being taken by China's state and non-state actors as it pushes forward in its dual-carbon goals, including new research driving carbon neutrality.

## **TOP NEWS**

Highlights of climate progress across China

## **SUBNATIONAL UPDATES**

Official statistics, policies, and actions at the subnational level

## **PERSPECTIVES**

New reports and insights from the field

# Top News

**China issued several policies to support the construction of a new type of power system that is clean, safe, smart, demand-responsive, and flexible.**

[\*Notice on Promoting the Grid Integration and Utilization for Dispatch Purposes of the New Energy Storage\*](#) aims to regulate the grid access management of new energy storage and to optimize the role of new energy storage in supporting the construction of a new type of power system. The *Notice* specifies:

- The functional positioning of new energy storage.
- The scope of new energy storage to be dispatched by the power system.
- And puts forward a series of requirements on strengthening the management of grid access and dispatch operation of new energy storage, technical requirements, and coordination and guarantee.

[\*Guidance on the High-quality Development of Distribution Networks under the New Circumstances\*](#) aims to facilitate the construction of a new type of power system from the perspective of distribution networks. The *Guidance* proposes that:

- By 2025, distribution networks will be capable of supporting approximately 500 million kilowatts of distributed new energy and about 12 million charging piles for electric vehicles.
- By 2025, the proportion of operational transformers that are at or above the level of energy efficiency will increase by more than 10 percentage points compared to 2021.
- By 2030, there will be significant progress in the integration of distributed smart grids and the power grid.

[\*Guiding Opinions on Strengthening the Peak-Shaving Energy Storage and Intelligent Dispatching Capabilities of the Power Grid\*](#) addresses the secure and stable supply of electricity while constructing a new type of power system. The *Opinions* propose that by 2027:

- Pumped-storage hydroelectricity stations with a total capacity of over 80 million kilowatts will be put into operation.
- The demand-side response capability will exceed 5% of the maximum load.
- The policy system to ensure the market-oriented development of new energy storage will be fundamentally established, and the intelligent dispatching system adapted to the new power system will gradually form.
- The national power generation from renewables will exceed 20% while the RE utilization rate will remain at a reasonable level.

**Multiple departments – including the National Financial Regulatory Administration and People's Bank of China – jointly released policies and measures to leverage finance and fiscal instruments in supporting low-carbon development.**

[Notice on Deepening Financial Services for the Manufacturing Industry to Help Promote New Industrialization](#) aims to promote new industrialization by strengthening financial services. The *Notice* contains 17 measures, including a proposal to promote the development of green finance and to support carbon emission reduction, green transformation, resource conservation, recycling, and the construction of a green energy system in the industrial sector. It also requires banks and financial institutions to make good use of their carbon-emission-reduction supporting tools and policies to increase medium- and long-term financial support for industrial green transformation.

[Guidelines on Further Strengthening Financial Support for Green and Low-Carbon Development](#) proposes that over the next five years, a leading international financial support system for green and low-carbon development will be essentially established. This includes:

- To continuously improve environmental information disclosure, financial products and markets, policy support systems, and green finance standards.
- To gradually implement carbon accounting within the financial system and to advance regional reforms in green finance.

[Special Management Measures for Central Budgetary Investment in Energy Saving and Carbon Reduction](#) aims to strengthen and standardize the management of energy conservation and carbon reduction projects funded by the central budget. The *Measures*:

- Set clear provisions regarding support scope and standards, investment plan submissions and allocations, and supervision and management measures.
- Will give special focus to key industries and sectors in energy conservation and carbon reduction. This includes projects such as demonstrations and applications of advanced technologies for carbon peaking and carbon neutrality, energy conservation and carbon reduction projects in key industries and areas, and projects supporting carbon reduction through circular economy initiatives.
- Clarify that the funding support for individual projects will, in principle, not exceed 100 million RMB.

**China published a policy to support distributed wind energy in rural areas and updated its regulatory measures of fully guaranteed purchase of RE generation.**

[Notice on Organizing and Carrying out the Thousands of Townships and Tens of Thousands of Villages Harnessing the Wind Program](#) aims to promote the local development and utilization of wind power in rural areas and making wind power a new carrier for the energy revolution in rural areas. It proposes that during the 14<sup>th</sup> Five-Year Plan period, in rural areas of counties (cities, districts, banners) with enabling conditions, a number of wind power projects that develop and utilize wind energy locally will be established at the village level, with each administrative village not exceeding 20 megawatts in principle.

[Regulatory Measures on the Fully Guaranteed Purchase of Renewable Electricity](#) aims at ensuring the achievement of targets for the proportion of non-fossil energy consumption. It proposes that:

- Hydroelectric power enjoys priority generation and fully guaranteed purchase, with peaking units and large units enjoying a priority sequence.
- Biomass energy, geothermal energy, marine energy generation, and distributed photovoltaic projects will temporarily not participate in market competition, and their generated electricity will be fully purchased by grid companies.
- Renewable energy generation that exceeds the guaranteed purchase amount is encouraged to participate in various forms of electricity market transactions.

### **The building electrification rate will be no less than 55% by 2025 across China.**

The General Office of the State Council published a [Work Plan on Accelerating Energy Conservation and Carbon Reduction in the Buildings Sector](#), emphasizing several key low-carbon targets in the buildings sector in short-term. The *Plan* proposes that:

- By 2025, newly constructed urban buildings will entirely adopt green building standards.
- By 2025, the area of newly built ultra-low and near-zero energy buildings will increase by more than 20 million square meters compared to 2023, and the area of energy-saving retrofits in existing buildings will be 200 million square meters more compared to 2023.
- By 2025, the proportion of electricity consumption in building energy use will exceed 55%, and the substitution rate of renewable energy in urban buildings will reach 8%.

### **China will implement a new round of standard improvement actions to increase the consistency between its national standards and international standards and to accelerate the renewal of energy efficiency standards.**

General Administration of Market Supervision and other departments jointly released an [Action Plan to Promote Equipment Renewal and Trade-in of Consumer Goods by Improving Standards](#). The *Plan* proposes that:

- By 2025, the consistency between national standards and international ones in key consumer goods sectors will reach over 96%.

Additionally, the *Plan* calls for accelerating the upgrading of technical standards for energy consumption and emission, enhancing product quality and safety standards, and increasing the standard supply for recycling and reuse.

### **China will support a total of 70 counties as the first batch of pilots to improve public charging facilities and switching infrastructure in rural areas, with conditional rewards from the Ministry of Finance.**

[Notice of Pilot Work on County Charging and Switching Facilities to Make Up for Shortages](#) aims to accelerate the construction of public charging and switching infrastructure in rural areas and further release the consumption potential of new energy vehicles. It proposes a first batch of pilot county quota of 70, and:

- The car ownership of the prefecture-level city of a pilot county should not be less than 200,000.
- Reward standards are set based on the annual utilization rate of charging and switching facilities in a pilot county, divided into three grades.
- During the demonstration period of 2024-2026, pilot counties that meet the highest target each year will receive up to 45 million RMB reward.
- After the end of the pilot period, counties that have exceeded the target and have shown a significant demonstration and driving effect on neighboring areas will be given an excess reward in accordance with 10% of the reward standard.

## Subnational Updates

**At least 80% of electricity consumed by the green computing industry will come from RE, as Qinghai Province leverages its RE potential.**

The Qinghai Provincial Data Bureau and other departments released [Several Measures to Promote the Development of Green Computing Power in Qinghai Province](#) to further leverage the resource and energy advantages of the Qinghai Plateau and support green computing power development. It proposes that the development of green computing power in Qinghai Province should have six aspects: green electricity, industrial cultivation, financial support, technological innovation, talent development, and improvement of the business environment. The measures also specify that the green computing power industry should achieve more than 80% of its energy consumption from green electricity sources.

**Following the nation, Shaanxi Province will accelerate the construction of a new type of power system with the development of new energy storage.**

[Implementation Plan for New Energy Storage to Participate in the Power Market in Shaanxi Province](#) specifies that the main types of new energy storage projects are those that primarily output electricity and provide services externally, except for pumped hydro storage. New energy storage is categorized into three types according to the electricity market entity type: independent energy storage, generation-side energy storage, and user-side energy storage. The Plan clarifies the market access conditions, registration, and transaction participation details for independent energy storage, generation-side energy storage, and user-side energy storage.

**Provincial governments mobilize green finance and fiscal instruments to support green and low-carbon development.**

**Shandong Province** issued [Several Measures on Further Improving the Green Financial System to Promote Energy and Industrial Transformation](#) to guide and incentivize more financial resources to support high-quality green and low-carbon development. The *Measures* will:

- Primarily support the low-carbon transformation of traditional energy-intensive industries such as steel, petrochemicals, and chemicals.

- Support the development of new energy such as wind and solar energy, and the advancement of green and low-carbon technologies.

It also proposed that by the end of 2026:

- The green loans balance will exceed 2.5 trillion RMB and the number of branches specialized in green finance will exceed 100.
- The preliminary transition finance standard will be established, with over 300 billion RMB of newly added transition finance.

**Beijing Municipality** issued [\*Several Measures to Promote Green and Low-Carbon Development of the Manufacturing and Information Software Industries in Beijing Municipality\*](#). It is proposed that for energy-saving renovation projects that meet certain requirements, a financial reward of no more than 1,200 yuan/ton of standard coal will be given based on the project's energy saving, and neither shall the reward amount exceed 25% of the total investment of the project nor shall the reward add up to over 30 million RMB. For newly built and retrofitted data centers, it strives to reach 50% green power usage by 2025.

**Guizhou Province** published a [\*Notice on Further Promoting Green Finance and Transition Finance to Promote Green and Low-Carbon Development in the Industry Sector\*](#). The Notice primarily focuses on seven main aspects of industry decarbonization, including energy efficiency improvement, low-carbon utilization of energy, efficient use of resources, construction of green manufacturing systems, and innovation in green, low-carbon technologies. It emphasizes mapping and promoting energy-saving technical improvement projects and increasing support for green financing.

**Shandong Province and Guangdong Province actively respond to the national policy of equipment renewal and trade-in of consumer goods by improving energy efficiency standards.**

**Shandong Province** issued an [\*Implementation Plan for Promoting Large-scale Equipment Renewal and Trade-in of Consumer Goods in Shandong Province\*](#), with a focus on improving equipment standards in key industrial sectors to support Shandong Province's role as a leading area for high-quality, green and low-carbon development. The *Plan* proposes that:

- By 2025, the proportion of production capacity in key industrial areas meeting the energy efficiency benchmark standard will reach 35%. The ownership of new energy vehicles will exceed 3 million units.
- By 2027, all production capacity in key industrial areas below the baseline energy efficiency standard (which is lower than the benchmark standard) will be completely upgraded and transformed.

**Guangdong Province** issued an [\*Implementation Plan for Promoting Large-scale Equipment Renewal and Trade-in of Consumer Goods in Guangdong Province\*](#), with an emphasis on improving the proportion of recycled materials in the supply chains. The *Plan* proposes that:

- By 2027, the scale of investment in equipment in the fields of industry, energy, agriculture, construction and transportation will increase by more than 25% compared with 2023; the energy efficiency of major energy-using equipment in key industries will reach the energy-saving level, and the proportion of production capacity with

environmental protection performance at the level of Grade A will be significantly increased; the annual regulated recycling and dismantling volume of end-of-life automobiles will be about 800,000, and the annual trading volume of second-hand automobiles will be more than 4 million, and the annual electrical and electronics waste recycling and dismantling processing volume reached 10 million units (sets).

### **Inner Mongolia will build a low-carbon industry, with policy support from the national NDRC and Guangdong will develop a group of low-carbon industry clusters.**

The National Development and Reform Commission published [\*Notice on Policies and Measures to Support the Green, Low-Carbon and High-Quality Development of Inner Mongolia Autonomous Region\*](#). Key measures include accelerating the green and low-carbon transformation of energy, building a modern industry centered on green and low-carbon principles, promoting green development in key areas, strengthening innovation in green and low-carbon technology, comprehensively improving the quality and stability of the ecological environment, and deepening comprehensive and open cooperation in the region. It also points out the need to develop new energy with greater intensity and to deploy new energy projects in areas such as deserts, wastelands, border areas, coal mining subsidence areas, and open-pit mine dump sites, focusing on the Kubuqi, Ulan Buh, Tengger, and Badain Jaran deserts to build large-scale wind and photovoltaic bases.

**Guangdong Province** released an [\*Action Plan for Cultivating and Developing Future Green and Low-Carbon Industry Clusters\*](#) to accelerate its new industrialization and move towards a manufacturing powerhouse. The *Plan* proposes that:

- By 2030, several future green and low-carbon industry clusters with strong international competitiveness and generating billions in revenue will be formed.
- By 2035, to establish industry clusters driven by low-carbon, zero-carbon, negative-carbon technologies and innovation, laying the foundation for achieving carbon neutrality.

Additionally, the *Plan* outlines eight major projects, including the Deep-sea Offshore Wind Power Leadership Project, Advanced Energy Storage Project, Green Hydrogen Enhancement Project, High-efficiency Photovoltaic Advancement Project, Carbon Capture, Utilization, and Storage (CCUS) Pilot Project, and the Energy-saving and Carbon Reduction Efficiency Project, among others.

### **Two major provincial regions in the Yangze River Delta Region – Jiangsu and Shanghai – are establishing carbon footprint management system to support low-carbon development.**

**Jiangsu Province** published a [\*Notice on Issuing the Implementation Opinions on the Establishment of a Carbon Footprint Management System for Products in Jiangsu Province\*](#), supporting the achievement of dual-carbon goals. The *Notice* proposes that:

- By 2025, complete the carbon footprint accounting for 400 products and publish carbon footprint accounting rules and standards for several categories of key products such as batteries, photovoltaics, and steel.

- By 2030, establish a product carbon footprint accounting rules and standards system that supports the province's key advantageous industrial chains, covering about 1,000 products.

**Shanghai Municipality** [\*Action Plan on Accelerating the Establishment of Carbon Footprint Management System for Products and Creating a Green and Low-Carbon Supply Chain in Shanghai\*](#) to further enhance the management level of key product carbon footprints and build a green, low-carbon supply chain. It proposes that:

- By 2025, about 30 local, corporate, or group standards related to product carbon footprints will be established, and over 50 businesses within the green, low-carbon chain will be built.
- By 2030, approximately 100 local, corporate, or group standards related to product carbon footprints will be formulated, and a comprehensive product carbon footprint service platform system will be fully established.

**Anhui Province published the first provincial Building-Integrated Photovoltaic (BIPV) Plan; Taizhou City promotes prefabricated buildings to decarbonize the building sector.**

**Anhui Province** released the [\*Implementation Plan for Pilot Demonstration and Promotion of Building-Integrated Photovoltaic \(BIPV\) in Anhui Province\*](#) to advance the pilot demonstration and widespread application of BIPV and accelerate the high-quality development of advanced PV and new energy storage industries. The *Plan* proposes that:

- The annual average growth rate of the integrated PV installation capacity should remain above 50%, striving to exceed a cumulative installation capacity of 400MW by 2027 and to cultivate and establish a batch of provincial-level pilot demonstration projects.
- By 2030, BIPV is expected to achieve scaled and commercialized applications in various types of buildings throughout Anhui Province, in both urban and rural areas.

Taizhou City (Jiangsu Province) released an [\*Implementation Plan for Carbon Peaking in Urban and Rural Development in Taizhou City\*](#) to promote green and low-carbon development in the building sector. It proposes that:

- By 2025, the proportion of urban green buildings among new constructions will reach 100%, and the proportion of prefabricated buildings among new constructions will reach 50% (higher than the national target of 30%). The substitution rate of renewable energy in urban buildings will exceed 8%.

**Beijing recently issued carbon trade measures to regulate carbon emission rights transactions and enhance GHG emissions management.**

Beijing Municipality issued [\*Measures for the Management of Carbon Emissions Trading in Beijing\*](#) to enhance greenhouse gas emissions control and management and regulate carbon emission rights transactions and related activities. The *Measures* specifies that:



- The quota certification method includes the issuance of quotas through both free and paid methods, with no more than 5% of the annual total quota amount reserved for adjustments.
- Key carbon-emitting entities are required to surrender quotas equivalent to their annual carbon emissions verified by the municipal Department of Ecology and Environment. They can use carbon reduction credits to offset a portion of their carbon emissions, but the offset ratio cannot exceed 5% of the verified carbon emissions for that year.

## Perspectives

[\*Compendium of Best Practices on Low-carbon Cities in North-East Asia\*](#) (UN Economic and Social Commission for East Asia, ICLEI and Institute for Global Decarbonization Progress)

- The case studies presented in this compendium demonstrate how reducing emissions can positively impact various interconnected SDG goals, such as poverty reduction, improved food and energy security, and enhanced ecosystems for wildlife and humans alike. The compendium aims to facilitate knowledge-sharing among cities and expedite the adoption of effective emissions reduction measures tailored to their specific local contexts. It includes seven cases from Zhejiang, Shaanxi, Beijing, Shanghai, Inner Mongolia and Sichuan in China.

[\*Study on the Potential of Low-Carbon Development of Container Port Collective Transportation System: Insights from Shenzhen Port\*](#) (World Resources Institute)

- This report takes Yantian Port of Shenzhen Port as an example to model the pollution reduction and carbon reduction potential for collection and distribution ports. By scenario analysis, it evaluates the carbon and pollution reduction potential of "road-to-rail", "road-to-water" and new energy trucks. Suggestions were put forward to achieve deep pollution and carbon reduction in the future.

[\*High-Quality Development of Energy Storage: Innovations in Market Mechanisms and Business Models\*](#) (Natural Resources Defense Council)

- NRDC, in collaboration with the China Energy Storage Alliance (CNESA), focuses this research report on two aspects to promote the high-quality development of new energy storage: market mechanisms and business models. The research explores generation-side storage, independent grid-side storage, and user-side storage, and, drawing on the experience of international energy storage market mechanisms, proposes innovative recommendations for market mechanisms and business models for new energy storage.

[Advancing Decarbonization in China's Cement Industry through Alternative Fuels and Raw Materials - Policy Recommendations](#) (Natural Resources Defense Council)

- Jointly published by China Cement Association and NRDC, the study reviews the reserves and application status of alternative fuel and raw materials in China's cement industry, analyzing and highlighting the main reasons for their limited use and the barriers to the widespread adoption of these technologies. The study recommends simplifying regulatory procedures, improving the development of the standards system, and strengthening cross-sector cooperation to promote the large-scale development of alternative fuels and material technologies.

[How will China respond to the imminent Greenhouse gas emission pricing?](#) (Environmental Defense Fund)

- As the International Maritime Organization (IMO) is currently negotiating a medium-term greenhouse gas pricing mechanism, and the EU has formally included the shipping industry in its EU ETS this year, this insight suggests that in order to cope with the international evolvement, in addition to actively participating in and guiding international negotiations, China should also further strengthen the relevant work and capacity building within the industry.

## About the Institute for Global Decarbonization Progress (iGDP)

The Institute for Global Decarbonization Progress (iGDP) is a non-profit think tank focusing on green and low-carbon development with offices in China and Europe. Established in Beijing in 2014, iGDP is dedicated to supporting China's green and low-carbon practices, contributing to the global effort to address climate change, and providing decision-makers, investors and local communities with forward-thinking solutions. Through interdisciplinary, systematic, and empirical policy research, iGDP promotes robust energy and climate solutions with high implementation and investment feasibility. iGDP works with its partners to promote a zero emissions future and tell the story of China's green and low-carbon development.

## About China Carbon Neutrality Tracker (CCNT)

China Carbon Neutrality Tracker (CCNT) is an online database and interactive platform that tracks China's national and sub-national carbon neutrality actions by collecting and sorting publicly available policy documents with an impact on GHG emissions. It offers an overview and structural classification of China's climate actions and serves as a comprehensive compendium of the specific policies and actions of various government departments and key non-state entities. CCNT includes all policies and actions with a climate impact and classifies them by region and sector. It gathers policy information primarily from authoritative government sources at national, regional, provincial and municipal levels. CCNT currently has national and provincial webpages. The database is continuously updated to include new provincial and city-level actions, and CCNT regularly issues short policy briefings.

For the latest national and subnational carbon neutrality actions, please visit the CCNT database at <https://ccnt.igdp.cn>.

If you have any suggestions or feedback, please email us at [ccnt@igdp.cn](mailto:ccnt@igdp.cn).