
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

The Central Committee of CPC and the State Council have issued guidelines to comprehensively promote the development of a "Beautiful China"

[Opinions of the Central Committee of the CPC and the State Council on Comprehensively Promoting the Building of a Beautiful China](#) aims to accelerate the modernization of harmonious coexistence between people and nature. The *Opinions* suggest to:

- Promote the dual control of energy consumption and gradually shift to dual control of the total amount and intensity of carbon emissions.
- Develop an annual national greenhouse gas inventory.
- Implement the methane emission control action plan and formulate other non-carbon dioxide greenhouse gas emission control action plans.
- Further develop the national carbon market and steadily expand industry coverage.

China submitted its *Fourth National Information Communication on Climate Change and the Third Biennial Update Report on Climate Change*

- The [Communication](#) includes the 2017 National Greenhouse Gas Inventory. In 2017, China's total GHG emissions (including LULUCF) amounted to about 11.55 billion tons of CO₂e, of which the shares of CO₂, CH₄, N₂O, and F-gases accounted for 80.9%, 11.8 %, 5.1%, and 2.2%.
- The [Report](#) includes the 2018 National Greenhouse Gas Inventory. China's total GHG emissions (including LULUCF) in 2018 were approximately 11.78 billion tons of CO₂e (about 2% increase from 2017).
- In 2020, China's carbon intensity – CO₂ emissions per unit of GDP – was 48.4% less than that in 2005, outperforming its goal of a 40-45% reduction.

China pushes forward the ultra-low emissions reform for cement and coking industries

The Ministry of Environment and Ecology (MEE) and four other departments jointly announced [Opinions on Promoting the Implementation of Ultra-low Emissions Upgrade in Cement Industry](#) and [Opinions on Promoting the Implementation of Ultra-low Emissions Upgrade in Coking Industry](#), aiming to reduce air pollutant and carbon emissions.

- By the end of 2025, 50% of cement clinker production capacity and large state-owned enterprise groups will complete the ultra-low emissions reform, rising to 80% by the end of 2028.

- By the end of 2025, 60% of coking capacity will complete the ultra-low emissions reform, rising to 80% by the end of 2028. Steel and coke combined enterprises need to ensure that their coking process meets the requirements of the *Opinions* on schedule.

The MEE issued the first batch of pilot cities and industrial zones to promote synergistic reduction of pollution and carbon emission

[*The First Batch of Pilot Cities and Industrial Zones for Collaborative Innovation in Pollution and Carbon Reduction*](#) includes 21 cities and 43 industrial zones. These cities vary in resource endowment, industrial structure and environment. The selected industrial zones involve multiple industries such as steel, non-ferrous metals, petrochemicals, automobiles, equipment manufacturing and new energy.

Subnational Updates

The shift from dual control of energy consumption to dual control of carbon emissions is underway. Inner Mongolia Autonomous Region released the first provincial-level transition plan:

After gaining momentum during President Xi’s major speech on China’s first National Ecology Day, Inner Mongolia Autonomous Region released the first provincial-level [*Work Plan for the Pilot Transformation from Dual Control of Energy Consumption to Dual Control of Carbon Emissions*](#). The *Plan* proposes that:

- During the 14th FYP period, a preliminary management mechanism, mainly based on the constraint of carbon emission intensity, supplemented by the elastic management of carbon emission cap and coordinated advancement of energy consumption control and carbon emission control will be formed.
- During the 15th FYP period, a dual-control system for carbon emissions and intensity will be fully implemented in accordance with national arrangements, providing institutional guarantees for achieving the carbon peak by 2030.

Local governments developed strategies for synergistic control of air pollution and carbon emissions:

Shenzhen City issued [*Implementation Plan for the Synergistic Reduction of Pollution and Carbon Emissions in Shenzhen*](#). According to the *Plan*:

- By 2025, there will be 50 projects for synergistic control of pollution and carbon reduction and 10 projects for synergistic control of air pollutants and GHG emissions. The city's ownership of NEVs will reach 1.3 million.
- By 2030, 200 projects for synergistic control of pollution and carbon reduction will be built to help realize the goal of carbon peaking with advanced demonstration standards. NEV ownership will reach 2 million and the total area of ultra-low-energy, near-zero-energy and zero-carbon buildings to be constructed will be no less than 10 million m².
- The city will study and formulate a control plan on non-CO₂ GHGs and explore the inclusion of non-CO₂ GHGs in the carbon market.

Guizhou Province issued [*Implementation Plan for the Synergistic Reduction of Pollution and Carbon Emissions in Guizhou*](#). According to the *Plan*:

- By 2025, CO₂ emissions per unit of GDP will drop by 18% compared with 2020. Nitrogen oxides, volatile organic compounds, chemical oxygen demand, and ammonia nitrogen will reduce by 12,000 tons, 4,600 tons, 31,400 tons, and 3,300 tons, respectively.
- By 2030, significant achievements will be made in synergistic reduction of pollution and carbon emissions in key areas and industries, and the carbon peaking target will be achieved.

Liaoning Province issued [*Implementation Plan for the Synergistic Reduction of Pollution and Carbon Emissions in Liaoning*](#). According to the *Plan*:

- By 2025, the province's energy consumption per unit of GDP and CO₂ emissions per unit of GDP will decrease by 14.5% and 18%, respectively, compared with 2020. In the power sector, the proportion of clean energy installed capacity will reach 55%, with electricity generation accounting for over 48% of the total.
- By 2030, the total emissions of major pollutants and the CO₂ emissions per unit of GDP will continue to decrease, significantly improving the ecological environment and helping achieve the carbon peaking target.

1+N - City-level plans continue to be released, tailored to local conditions:

Tianjin Municipality issued [*Carbon Peaking Pilot Construction Plan in Tianjin*](#). According to the *Plan*:

- By 2025, within the pilot scope, a basic policy framework conducive to green and low-carbon development will be established, and the carbon peaking pathways for districts/industrial zones with different resource endowments, development foundations, and industrial structures will be essentially clear.
- By 2030, favorable policies and mechanisms for green and low-carbon development will be comprehensively established within the pilot districts/ industrial zones.

Two cities released implementation plans and action plans for carbon peaking:

- **Mianyang City** (Sichuan Province): By 2025, the proportion of non-fossil energy consumption in the city will reach around 45% and the forest coverage rate will reach 56.5%. The city's energy consumption per unit of GDP and CO₂ emissions per unit of GDP will decrease by 14% and 19%, respectively, compared with 2020. By 2030, CO₂ emissions per unit of GDP will decrease by over 70% compared to 2005.
- **Shuozhou City** (Shanxi Province): By 2025, the proportion of clean energy installed capacity will reach 50%. By 2030, the proportion of new energy and clean energy installed capacity exceeding 60%, aiming to achieve the carbon peaking target while ensuring national energy security.

Zhuzhou City (Hunan Province) issued implementation plans for carbon peaking in the energy sector:

- By 2025, the energy consumption per unit of GDP will decrease by 15% compared with 2020. The proportion of non-fossil energy consumption will increase to around 20%, with electricity accounting for approximately 22% of terminal energy consumption.
- By 2030, the proportion of non-fossil energy consumption will reach about 25% and carbon emissions in the energy sector will peak as planned.

Financial support for carbon peaking and green, low-carbon transformation takes place at the subnational level:

Shanghai Municipality issued *Implementation Opinions on Financial Support for Carbon Peaking and Carbon Neutrality in Shanghai Municipality*. The *Opinions* propose that:

- By 2025, a preliminary financial support policy system conducive to green and low-carbon development will be formed, and an economic system of green, low-carbon and recycling development will be established.
- By 2030, a financial support policy system conducive to green and low-carbon development will be established, and carbon peaking will be completed on schedule.
- By 2060, a mature and sound fiscal support policy system for green and low-carbon development will facilitate the smooth realization of carbon neutrality goals.

Hebei Province issued *Guidelines on Financial Transition of Iron and Steel Industry in Hebei Province (2023-2024 Edition)*. The *Guidelines* propose that:

- From 2023 to 2024, the transition finance for the iron and steel industry in Hebei Province will support activities that are conducive to the industry's pollution reduction, energy saving and carbon reduction.
- The targets of support include iron and steel enterprises and downstream enterprises purchasing low-carbon-emissions iron and steel products.

- Enterprises seeking transition finance support are required to have a comprehensive transition plan, investment plans focused on carbon reduction and related initiatives, as well as commitments to environmental disclosure.

Multiple provinces issued long-term climate change adaptation plans:

Fujian Province, Anhui Province and Shandong Province issued their respective *Climate Change Adaptation Plan*. All three provinces mentioned that:

- By 2025, the policy framework and institutional mechanisms for climate change adaptation will be basically established. By 2030, the policy framework and institutional mechanisms for climate change adaptation will be basically perfected. And by 2035, a climate-adaptive society will be basically constructed.

In addition to that, all three provinces proposed distinct targets, for example:

- **Fujian Province**: By 2025, the soil and water conservation rate will exceed 93%.
- **Anhui Province**: By 2025, the forest coverage rate will be no less than 31%, and wetland protection will reach 55%.
- **Shandong Province**: By 2025, the natural coastline retention rate will be no less than 35%. The soil and water conservation rate will reach 86.77% by 2025 and will rise to 90.67% by 2030.

Renewable energy development - Inner Mongolia stimulates the development and application of RE by promoting consumption:

Inner Mongolia Autonomous Region issued [*Notice on Several Measures to Promote New Energy Consumption Inner Mongolia*](#). The *Notice* proposes:

- Five major measures, including: improve the level of self-consumption of RE, expand the scale of RE exports, enhance the regulation capacity of the power system, improve policies on RE pricing, and market transactions.
- By the end of 2025, Inner Mongolia will achieve an annual increase of approximately 10 billion kWh of RE electricity export. During the 15th FYP period, additional RE electricity exports are expected to reach 100 billion kWh.

Hydrogen - Hainan aims toward large-scale application of green hydrogen by 2035 and Dongguan strives to become an advanced regional manufacturing base for hydrogen energy equipment and a core area for demonstration:

Hainan Province released [*Medium- and Long-Term Plan for the Development of Hydrogen Energy Industry in Hainan \(2023-2035\)*](#). According to the *Plan*:

- By 2025, around 200 fuel cell vehicles will be promoted and about six hydrogen refueling stations will be deployed. The annual hydrogen supply from RE will reach 100,000 tons, reducing 1 million tons of CO₂ per year.
- By 2030, around 1000 fuel cell vehicles will be promoted and hydrogen refueling stations will increase to about 15. The scale of hydrogen production from RE will reach 400,000 tons per year.

Dongguan City (Guangdong Province) released [*Action Plan for the Development of Hydrogen Energy Industry in Dongguan \(2023-2025\)*](#). The *Plan* proposes that:

- By 2025, the city will build more than five hydrogen energy-related key laboratories, engineering research centers, enterprise technology centers and other innovation carriers. Meanwhile, 900 fuel cell vehicles will be promoted and 20 hydrogen refueling stations will be built.

Perspectives

[*The Agri-Food System and Carbon Neutrality: An Analysis of China's Agriculture- and Food-Related Greenhouse Gas Emissions and Emission Reduction Pathways*](#). (Institute for Global Decarbonization Progress)

- This report takes a systematic approach to mapping out GHG emissions from China's agri-food system, examines existing mitigation actions in terms of emissions sources, assesses the mitigation potential of these actions, and performs a scenario analysis to identify decarbonization pathways for the system.

[*Building Sustainability into China's Agri-food System – Fourteen Case Studies*](#). (Institute for Global Decarbonization Progress)

- This report presents fourteen case studies on actions being taken to drive China's sustainable agri-food transition. They explore local practices under specific abatement actions and briefly analyze the key elements needed for scale-up and replication. The cases show how different stakeholders in the agri-food system can help achieve emissions reduction and lead to multiple benefits.

CCNT Insights: [*Green and Low-Carbon Policies as Key Principles in a Stable Industrial Growth Strategy for China*](#). (Institute for Global Decarbonization Progress)

- Following the Ministry of Industry and Information Technology's recent release of a series of plans to achieve steady growth in ten key industries, this policy brief reviews these plans and suggests that the ten key industries with steady growth action plans should organize industry-specific long-term carbon-neutrality strategic studies.

CCNT Insights: [*Observations and Prospects on Fertilizer Reduction and Efficiency and Nitrous Oxide Emission Reduction*](#). (Institute for Global Decarbonization Progress)

- This policy brief focuses on nitrous oxide (N₂O), the third largest greenhouse gas after carbon dioxide and methane, analyzes the status of N₂O emissions and the progress of emission mitigation in China, and makes emission reduction recommendations.

CCNT Insights: [*Observations on Green and Low-Carbon Actions in the Building Sector in the 14th Five-Year Plan in Each Province*](#). (Institute for Global Decarbonization Progress)

- This policy brief compares the key indicators for green and low-carbon development in the building sector proposed in policy documents, showing the green and low-carbon actions of the sector during the 14th FYP period in each provincial region.

[*A Tool for Corporate Renewable Energy Procurement Decision Making: Technical Note*](#). (World Resources Institute)

- WRI has developed the "Corporate Renewable Energy Procurement Decision Making Tool" to help companies or organizations located in mainland China that have RE consumption needs to generate feasible green power consumption pathways under the existing electricity market policy framework. This technical note introduces a methodology for tool development and describes how to use the tool.

[*Jiangsu Province Power Sector Low-carbon Transformation*](#). (Natural Resources Defense Council)

- Compiled by State Grid Suzhou City & Energy Research Institute and Jiangsu Provincial Society of Macroeconomics with support from NRDC, this report examines the foundation, opportunities, and challenges of the low-carbon transition in Jiangsu's power sector. It also analyzes the power demand, carbon emission trend and cost of low-carbon transition under different scenarios, explores the pathways for the low-carbon transition, and provides policy recommendations.

[*Research on China's Methane Emission Control Pathways and Policies*](#). (Natural Resources Defense Council)

- Supported by NRDC and prepared by Chinese Academy of Environmental Planning, this study refers to the current situation and to the *Action Plan for the Control of Methane Emissions* released on November 7, 2023, and proposes the recommendations regarding methane control pathways and policies in major sectors – energy, agriculture and waste – in China.

[*China GHG Voluntary Emission Reduction Program \(CCER program\) Fact Sheet*](#). (Environmental Defense Fund)

- On January 22, 2024, the new CCER program was officially launched. This Fact Sheet provides an overview of the CCER program development timeline since 2012, comparing the key elements including climate goal, covered GHGs, methodologies,

registry, trading platform, etc. between the new CCER program and the previous one. It also summarizes the regulations and rules that provide an institutional foundation for the CCER program.

About the Institute for Global Decarbonization Progress (iGDP)

The Institute for Global Decarbonization Progress (iGDP) is an international 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.