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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 forward 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

## Transition from controlling energy consumption to controlling carbon emissions gained momentum

On August 15, President Xi made a major speech on China's first National Ecology Day. Xi [noted](#) that "with a focus on carbon peaking and carbon neutrality, the country should facilitate the gradual transition from dual control over the amount and intensity of energy consumption to dual control over the amount and intensity of carbon emissions." This reinforces carbon reduction as a key strategic direction in China's ongoing development drive and is intended to help China [better juggle](#) its economic development, energy security, and carbon reduction priorities.

## MEE released its Assessment Report on Low-carbon Pilot Cities

On July 12, China's Low Carbon Day, the Ministry of Ecology and Environment (MEE) released the [National Low-carbon City Pilot Progress Assessment Report](#). It evaluated 81 pilot cities in terms of their overall low-carbon progress, institutional setting, policy implementation, capacity building and innovative actions.

- The pilot cities support an average annual GDP growth rate of 5.8% with an average annual carbon emission growth rate of 1.3% between 2017 and 2022.
- 95% of the pilot cities have a significant decrease in carbon emission intensity
- 38% of the pilot cities have a steady decrease in total carbon emissions.
- 25% of the pilot cities have a decrease in total carbon emission growth rate.
- Challenges remain in ambitious science-based low-carbon targets setting and GHG inventory development.

## China is setting up a recycling system for old wind and solar equipment

The remarkable growth of renewable energy in China has meant that a lot of equipment has been produced. Because aging and obsolete equipment will someday have to be disposed of, multiple departments jointly released the [Guidance on Promoting the Recycling of Decommissioned Wind Power and Photovoltaic Equipment](#).

- It proposes to establish a responsibility mechanism for the treatment of retired wind turbines and solar panels, and to improve the standards of recycling the equipment.
- It supports photovoltaic equipment manufacturers to establish a distributed photovoltaic recycling system.

## China will expand its climate-adaptive pilot cities to 100 by 2030

A summer replete with heatwaves, torrential rains and flooding in China has brought the importance of climate resilience into sharp focus. Multiple departments jointly released the [Notice on Deepening the Construction of Climate-adaptive Pilot Cities](#).

- By 2025, pilot cities for early pilot implementation will be selected.
- By 2030, the number of pilot cities will be expanded to about 100.
- By 2035, all cities at the prefecture level and above will be climate-adaptive.

## Low-Carbon Lifestyles

While China's climate action has largely been driven by policy, the government is also keen to mobilize public participation in energy conservation and carbon reduction. On July 12th, China's Low-Carbon Day, the Ministry of Ecology and Environment (MEE), together with several government departments, carried out public activities to raise awareness about how to cope with climate change and the importance of a low-carbon lifestyle. This was part of China's National Energy Conservation Awareness week (July 11<sup>th</sup>-16<sup>th</sup>), during which China schedules daily activities to promote sustainable lifestyles.

# Subnational Updates

## 1 +N: The subnational rollout of the "1+ N" climate policy system is forging ahead

Two provinces issued implementation plans for carbon peaking in the urban and rural construction sector:

- **Yunnan Province:** The proportion of electricity used in buildings to the energy consumption of buildings will have exceeded 55%.
- **Hubei Province:** 1.2 million square meters (about half the area of Central Park in New York City) of ultra-low energy building area will be developed by 2025.

Three provinces released implementation plans for carbon peaking in industry sector:

- **Yunnan Province:** Energy consumption per unit of added value of industries above a designated size will drop by 13.5% compared to 2020 by 2025.
- **Xinjiang Uygur Autonomous Region:** Energy consumption per unit of added value of industries above a designated size will drop by 17% compared to 2020 by 2025.
- **Fujian Province:** By 2025, energy consumption per unit of added value in industries above a designated scale will have dropped by more than 14% compared to 2020.

Three provinces released implementation plans for carbon peaking in the energy sector:

- **Qinghai Province:** Installed capacity of clean energy will reach more than 84 million kilowatts by 2025 and will reach more than 140 million kilowatts by 2030.
- **Jilin Province:** The total installed capacity of wind power and photovoltaic power generation will reach 30 million kilowatts by 2025 and 60 million kilowatts by 2030.

**Hydrogen: Local governments have started to set up ambitious plans for hydrogen development since China released its first national hydrogen strategy March 2022.**

**Xinjiang Uygur Autonomous region** issued the [\*Three-Year Action Plan for Hydrogen Industry in Xinjiang Uygur Autonomous Region \(2023-2025\)\*](#)

- Calls for establishing a hydrogen energy supply system focusing on industrial by-product hydrogen and renewable energy hydrogen production by 2025.

**Zhejiang Province** released [\*Provincial Hydrogen Refueling Stations Development Plan\*](#)

- Calls for developing a hydrogen fueling network with a radius of 100 kilometers (about 62.14 mi) in cities and urban areas by 2025.
- Calls for building more than 50 hydrogen fueling stations with a daily hydrogen fueling capacity of more than 35.5 tons by 2025.

**Shanghai** released the [\*Application Plan for Promoting Hydrogen in the Transportation Sector in Shanghai \(2023-2025\)\*](#)

- Focuses on the development and the application scenarios of hydrogen in heavy trucks, public transport, cold chain, non-road mobile machinery.
- The total number of fuel cell vehicles for demonstration application will aim to exceed 10,000 vehicles by 2025.

**Time-of-Use Pricing: To reduce stress on the power system during peak hours, local governments have been implementing time-of-use electricity pricing plans for customers.**

**Shandong Province** released the [\*Notice Regarding Further Improvement of Time-Sharing Electricity Tariff Policy for Residential Electric Vehicle Charging Stations\*](#)

- Sets up the time-of-use electricity pricing for electricity use in charging piles for the electric vehicles.
- Sets five price periods: 0.222 RMB per kWh (deep valley), 0.385 RMB per kWh (low valley), 0.555 RMB per kWh (off-peak), 0.585 RMB per kWh (peak), and RMB 0.888 RMB per kWh (extreme peak).

**Beijing** issued the [\*Notice Regarding Further Improvement of Time-Sharing Electricity Tariff Policy for Residential Electric Vehicle Charging Stations\*](#)

- All industrial and commercial electricity use except subways, trolleybuses, and electrified railway traction are subject to time-of-use electricity prices.

**Electric Vehicles: Though there is still much room for growth, China already has large quantities of EVs in its urban areas. Policymakers are now aiming to increase EV use in China's vast rural areas.**

Several provinces released plans to promote rural NEV sales and infrastructure after China's May 2023 policy to support rural NEV consumption.

**Gansu Province** released [\*Several Measures for Accelerating the Construction of Charging Infrastructure to Promote the Development of New Energy Vehicles in the Rural Areas and to Support Rural Revitalization\*](#)

- Charging stations will be available in every county of Gansu by 2025.
- A charging facilities service network covering all rural areas of the province will be established by 2030.

**Zhejiang Province** released the [\*Action Plan for Improving High-quality Charging Infrastructure Network System and Promoting New Energy Vehicles in the Rural Areas in Zhejiang Province \(2023-2025\)\*](#)

- It will construct more than 2.3 million charging piles and no less than 900,000 in rural areas, meeting the charging needs of more than 4 million new energy vehicles by 2025.
- The annual sales volume of new energy vehicles will reach more than 1 million by 2025.

**Methane Reduction: With reduction of non-CO2 GHGs getting more attention in China, Shanxi Province started aiming to deal with the low-concentration coalbed methane recovery.**

**Shanxi Province** released the [\*Guidance on Promoting the Integrated Development of the Coal Industry and Carbon Reduction Technologies\*](#)

- Aims for the recovery efficiency of coalbed methane (CBM) to reach 50% by 2025.
- Focuses on breakthrough technologies of low-concentration CBM (including Ventilation Air Methane, VAM), and develops pilot demonstrations of low-concentration CBM recovery.

**Carbon Markets: Guangdong Province plans to expand its emissions coverage in its pilot Emissions Trading Scheme (ETS) and has started to prepare a response to the EU's Carbon Border Adjustment Mechanism (CBAM).**

**Guangdong Province** issued the [\*Implementation Plan for Carbon Trading to Support Carbon Peaking and Carbon Neutrality in Guangdong Province \(2023-2030\)\*](#)

- The proportion of carbon emissions from enterprises included in carbon trading will reach 70% of the province's energy-related carbon emissions by 2025.
- Proposes to study the response to the EU's CBAM, including the industries covered in Guangdong's carbon market.

# Perspectives

- China Carbon Neutrality Tracker (CCNT) 2022 Annual Report: [\*Closing the Emissions Gap Through Subnational Climate Actions in China\*](#) (Institute for Global Decarbonization Progress)

The report analyzes carbon emission trends and mitigation progress in each provincial region, determines whether the policies currently in place will be sufficient to achieve subnational dual-carbon goals, and identify gaps and opportunities to enhance subnational climate actions.

- China Carbon Neutrality Tracker Factsheets: [\*An Overview of Provincial Climate Action and Progress in China\*](#) (Institute for Global Decarbonization Progress)

The publication includes 1) each provincial region's basic information, such as GDP per capita, energy-related CO<sub>2</sub> emissions, and GDP ranking; 2) historical emissions trends and decoupling status; 3) 14th Five-Year Plan climate targets and ambition in each provincial region; 4) the implementation of climate actions in the 13th Five-Year Plan period; and 5) a list of the local policies driving climate action.

- [\*Solutions for Optimizing the Construction and Operation of Electric Vehicle Charging Facilities – Insights from Shanghai\*](#) (Natural Resources Defense Council)

Focusing on Shanghai, the report investigates the status of EV charging facilities in China, how to optimize them, and how to support EV to play a greater role in the development of a new energy system.

- [\*Deciphering China's Provincial Transport Carbon Emissions: Status Quo and Growth Trends\*](#) (World Resources Institute)

Based on estimates of direct transport CO<sub>2</sub> emissions for 30 provinces from 2012 to 2019, the study finds that the eastern region had the highest transport CO<sub>2</sub> emissions, while western and central regions witnessed the most rapid emissions growth.

- [\*Pathways to Decarbonize the Road Transport Sector in Guangdong, China\*](#) (World Resources Institute)

Decarbonizing Guangdong's road transport sector will require accelerated deployment of zero-emission vehicles by providing provincial matching funds, establishing clear policy targets, and developing charging infrastructure.

- [\*Analysis of High-Quality and Low-Carbon Development Pathways of Small and Medium-Sized Coal-Fired Power Plants in Shandong Province\*](#) (Natural Resources Defense Council)

As the province with the highest installed capacity of coal power plants in China, Shandong needs to figure out pathways for them under the national dual-carbon goal.

- [\*The Positioning and Transition of Shanxi's Coal Power Industry in the Context of Carbon Neutrality\*](#) (*Natural Resources Defense Council and Shanxi Coshare Innovation Institute of Energy & Environment*)

A scenario analysis shows that Shanxi should strictly control capacity, implement the “Three-Renovations” (renovation in energy-saving, flexibility, and heating), and improve market mechanisms.

- [\*The Positioning and Transition of Shanxi's Coking Industry in the Context of Carbon Neutrality\*](#) (*Natural Resources Defense Council and Shanxi Coshare Innovation Institute of Energy & Environment*)

The report concludes that the carbon emissions of the coking industry in Shanxi Province will plateau during the 14th FYP period in both BAU and intensive carbon reduction scenarios. It recommends a flexible control mechanism for coke production and exploration of a mechanism to transit away from coal.

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

iGDP is a non-profit consultancy focusing on green and low-carbon development. It works to strengthen China's low carbon environmental policy design and implementation through interdisciplinary, systematic, and empirical research. We work with all stakeholders 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).