Ten Years After Paris: Transition Outlook
CHINA

Emissions trajectory since Paris Agreement

Emissions have continued to rise, with growth slowing after 2020, while renewables exceeded 1.2 TW of capacity by 2024, supporting an expected pre-2030 emissions peak.

Progress

Rapid structural change in the power system

China has shifted **from pilot projects and policy experimentation to a system-wide low-carbon transition aligned with its dual-carbon goals** — peak emissions before 2030 and carbon neutrality before 2060. Renewable energy deployment has expanded sharply, reaching **2.09 TW by May 2025**, now accounting for over half of installed power capacity.

Nationwide electrification momentum in transport

The new energy vehicle ecosystem has scaled rapidly, with **9.6 million new energy vehicles produced in 2023 and 31.4 million vehicles in stock by 2024**, supported by dense charging and battery-swap networks.

Methane emission control & institutionalization of governance

China has built a **policy and technical pathway for the measurement, reporting and verification (MRV) of methane**, positioning it as a near-term, high-impact lever to structurally reduce these emissions.

Enablers

A coherent governance architecture

China's **"1 + N" framework** connects national targets with sectoral and provincial plans, reinforced through Five-Year Plans that provide implementation cycles and interim targets and improved cross-ministerial coordination. Moreover, tracking indicators aligned with the NDC have been established.

Industrial capability as climate driver

Strategic **investment in solar, wind, battery and electrification technologies** has reduced costs and enabled scale, making renewables and NEVs economic engines as well as climate enablers. "New quality productivity"

Institutional mechanisms that sustain delivery

The **national ETS,** informed by provincial pilots, now operates as a **multi-sector market mechanism**, that apportions reduction responsibility, internalizes carbon costs and reduces system-wide abatement costs.

Main Transformations Needed in Key Sectors

Electricity

A **managed coal phase-out** alongside grid modernization, storage development and cross-regional transmission reforms to support rising renewable penetration.

Transport

Continued **new energy vehicles (NEVs)** uptake supported by charging networks and supply-chain maturity, while addressing rising mobility demand across regions.

Buildings

Stronger pricing signals, flexibility measures and consumer participation to complement supply-side progress.

Industry

Deeper emission cuts in steel, cement and chemicals through technology innovation, electrification, low-carbon fuels and emerging carbon capture solutions.

Barriers

Coal dependence remains systemic

Coal still accounted for **53.2% of energy consumption** in 2024, and **~47.5 GW of coal power capacity was added** that year — reinforcing structural lock-in even as renewables scale.

Demand-side mitigation lags

Limited price signals, uneven consumer uptake and weak flexibility tools **mean behavioral and efficiency gains remain underused.**

Hard-to-abate sectors require deeper solutions

Decarbonizing **steel, cement and chemicals** is constrained by long-lived assets, high capital costs and technology readiness gaps. While **methane governance** is emerging, implementation remains uneven, highlighting the need for institutional follow-through.

Check the full China chapter from the DDP 2025 Report