Press release

China's clean power boom keeps emissions flat in 2025, but vague targets risk emissions rebound

Unchecked coal growth until 2023 has put China on track to miss multiple 2025 targets

BEIJING, 4 December 2025 - In 2025, China's total CO_2 emissions are on track to stay flat despite rapidly rising energy demand for the first time, whilst power sector emissions should experience their first full year drop since 2016, both trends largely due to China's clean energy boom. However, the country will miss several key climate targets. Notably, China will not achieve the target of reducing carbon emissions per unit of GDP nor pledges to "strictly control" new coal projects and coal consumption growth, with vague target-setting raising the risk of an emissions rebound after two years of plateauing emissions. That's according to the Centre for Research on Energy and Clean Air (CREA)'s newly released China Climate Transition: Outlook 2025.

The report finds that China's 2025 emissions are plateauing even as energy demand is expected to grow rapidly. The clean power capacity added in the country in 2025 will generate more electricity in a year than Germany consumes. This rapid growth now exceeds the increase in electricity demand. It's also likely going to be China's first drop in coal-fired power generation on record that wasn't caused by a slowdown in electricity consumption below average levels, unless solar and wind curtailment increases dramatically in the last two months of the year.

However, a new pricing policy for new solar and wind projects pitting clean power generation against coal, as well as modest targets for renewable capacity growth, have created uncertainty about whether the clean power boom will continue. Meanwhile, 2025 will see the largest amount of coal-fired capacity added to China's grid since 2015 whilst progress on retiring older coal plants remains remarkably slow.

In the industrial sector, energy consumption and emissions rose in 2025, a clear contrast with the emission reductions needed in the sector to align with the goals of the Paris Agreement. This growth is predominantly driven by the chemical industry and the highly emission-intensive coal-based chemical sector, as well as stalled progress in replacing coal-based steelmaking with greener electric-arc furnace technology.

The building sector's energy consumption and emission growth has also continued above the energy pathways aligned with the Paris Agreement goals. And whilst a major reduction in small-scale coal use in buildings has significantly improved air quality in the wintertime and helped reduce CO_2 emissions, many of the programmes to replace coal use have relied on fossil gas rather than electricity.

The decarbonisation of the transportation sector, meanwhile, progressed in leaps and bounds in 2025, with the pace of electrification aligned for the first time with transition pathways. China's share of electric vehicles (EV) sales in passenger cars has reached more than 50% for the first time, meaning that 12% of all vehicles on the road will be electric by the end of 2025, up from less than 2% just five years ago. As a result, oil consumption in the transport sector continues to decline.

'China will miss key climate targets in 2025, despite its claim to 'always honour its words with deeds'. This puts a lot of expectations on China's upcoming 15th Five-Year Plan to ensure the credibility of its 2030 targets and how it plans to achieve those. While China's recently released 2035 climate commitments include the country's first absolute emission reduction target, covering all greenhouse gases (GHG) and sectors, the level of ambition still falls far short of what is needed for China to align with the Paris Agreement. A plan to reduce GHG emissions from an undefined 'peak level' instead of a specific past year allows emissions to still grow in the near term. The upcoming five years will be crucial to prove that China remains committed to its domestic and international climate commitments,' said Belinda Schäpe, China Policy Analyst at CREA.

'China's clean energy boom has exceeded government targets, stabilised emissions ahead of schedule, and provided a major tailwind to economic growth. Now, ambiguity about meeting climate commitments, a glut of new coal and gas-fired power capacity, and unaddressed obstacles to renewable energy in the power system threaten this progress, risking an emission rebound in the next few years. It is up to China's policymakers to shore up the growth of clean energy investments and curb the expansion of fossil fuel-based industries to enable the country to meet its 2030 climate commitments and progress towards its carbon neutrality goal,' said Lauri Myllyvirta, Lead Analyst and Co-Founder at CREA.

CREA's report assessed China's energy and emissions trends sector-by-sector, comparing them to pathways compiled from the literature that meet the Paris Agreement's goals to limit global temperature rise to 1.5°C and well below 2°C. The analysis found that the following indicators are on track:

- Clean energy investments and non-fossil energy production.
- Electrification (increase in the share of electricity in final energy use).
- Power sector CO_2 emissions and CO_2 intensity.
- Oil and gas consumption.
- Steel and cement output.
- CO_2 emissions from the production of construction materials.
- Building sector coal use and electricity consumption.
- Transport sector energy consumption, electrification, and CO_2 emissions.
- EV sales.

The below Indicators were found to be off track:

- Total CO_2 emissions.
- Total energy consumption.
- Coal consumption.
- Commissioning, construction, and permitting of coal and gas-fired power capacity.
- Industrial energy consumption and coal consumption.
- Steel sector electrification.
- Coal and oil consumption growth in the chemicals sector.
- Building energy consumption.

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Note(s) to editors

The report and its accompanying press release can be found here.

All CREA publications can be found here:
energyandcleanair.org/publications

About CREA

The Centre for Research on Energy and Clean Air (CREA) is an independent research organisation focused on revealing the trends, causes, and health impacts, as well as the solutions, to air pollution. CREA was founded in December 2019 in Helsinki and has staff in several Asian and European countries. The organisation's work is funded through philanthropic grants and revenue from commissioned research.

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