

- cut carbon dioxide emissions by 45% from 2010 levels by 2030 (which approximates to halving them over the decade from now)
- bring global CO₂ emissions to net zero by 2050
- reduce steeply emissions of other greenhouse gases.

Enacted globally, these actions would give a 50% chance of keeping global warming below 1.5°C.¹⁷

Gear change? China

In September 2020, President Xi Jinping told the UN General Assembly that his country would peak emissions by 2030 and achieve carbon neutrality 'before 2060'. China accounts for almost 30% of the world's CO₂ emissions and more than half of its coal use. If it were to achieve the 2060 goal, the world's biggest greenhouse gas emitter could on its own lower global warming projections by around 0.2 to 0.3°C, the biggest reduction ever estimated from a single policy measure.¹

Chinese officials have been quick to set their sights on implementation. Within a week of President Xi's announcement, Tsinghua University's Institute of Energy, Environment and Economy – which works closely with the Chinese Ministry of Ecology and Environment (MEE) – presented a roadmap for reaching net zero by 2060.² And within three weeks, 18 Chinese research institutes, including MEE, produced a decarbonisation scenario titled 'China Low-Carbon Development Strategy and Transformation Pathways'.³ The IEA revealed it was working with China 'to design a roadmap and energy policies that simultaneously put it on a path towards its carbon neutrality goal while also supporting the country's continued economic development'.⁴

At the UN Climate Action Summit on 12 December 2020, President Xi announced updated climate targets for 2030, including more ambitious goals for emissions intensity, the share of non-fossil fuels in China's energy mix and wind and solar power generating capacity of at least 1,200GW by 2030.

But while these few details have emerged, there is still a lot to be clarified; and so far, short-term commitments and policies do not look commensurate with the 2060 net zero pledge. China's draft summary of its 14th Five-Year Plan (FYP14), for example, offers no planned reduction in the deployment of coal, no clarification on when peak emissions may occur nor even an economy-wide 'carbon cap'. In the absence of more details in its FYP14, China's new long-term climate targets risk being undermined by a conspicuous lack of short-term urgency. According to one recent analysis, China needs to get 25% of its energy from non-fossil sources by 2025 to be on a linear track to meeting its 2060 carbon neutrality goal.⁵ Much attention now focuses on the NDC that China is due to release before COP26.

1 China reaching carbon neutrality before 2060 would lower warming projections by around 0.2 to 0.3° C. <https://climateactiontracker.org/press/china-carbon-neutral-before-2060-would-lower-warming-projections-by-around-2-to-3-tenths-of-a-degree/>
2 https://mp.weixin.qq.com/s?__biz=MzU5MzY5ODIwNQ%3D%3D&mid=2247489602&idx=1&sn=c6c6ee7b640539cb6f805817173a7990&chksm=fe0dd4b0c97a5da6b00836019650a2adee0075e1b53290703b5c8fdecfbef7081324a47d9a21#rd
3 https://mp.weixin.qq.com/s/S_8ajdqg63YL7X3sRJSWGg
4 IEA holds talks with China on a roadmap for reaching its 2060 carbon neutrality goal. <https://www.iea.org/news/iea-holds-talks-with-china-on-a-roadmap-for-reaching-its-2060-carbon-neutrality-goal>
5 <https://energyandcleanair.org/how-to-tell-a-strong-chinese-five-year-plan-from-a-weak-one/>



Image credit: Macau Photo Agency, Unsplash

The 'net zero' part of the formula rapidly caught attention. Sweden already had a target (for 2045) in national law, and in 2019 the UK and France followed suit. Many other nations pledged on similar timelines, with companies, cities and regions also issuing commitments. Between June 2019 and February 2020, the proportion of global GDP covered by net zero targets from nations, states and

17 <https://eciu.net/analysis/briefings/net-zero/net-zero-why>

regions and cities soared from 16% to 49%.^{18,19} Now, 'net zero' has very clearly evolved from a technical formulation into a central organising principle for climate action. More than 120 nations have pledged to reach net zero around mid-century, complemented by more than 100 regional governments, 800 cities and 1,500 companies.²⁰ Many of these so-called 'non-state actors' are members of the 'Race to Zero', a UN initiative established to encourage more entities of all sorts (other than nations) to set net zero targets.²¹

In September 2020 came the most dramatic announcement of all, when President Xi Jinping pledged China to carbon neutrality by 2060.²² Japan and South Korea swiftly followed suit, with 2050 target dates. Then came the December 2020 election of Joe Biden to the US Presidency on a manifesto pledging net zero by 2050 — within a week of Biden's inauguration, an Executive Order reiterated that pledge.²³ With the EU also setting a 2050 climate neutrality target, the world's three biggest emitters (accounting for about half of both global GDP and emissions) are all now signed up to hitting net zero emissions (either for CO₂ alone or for all greenhouse gases) around mid-century.

Entities other than national governments have continued to sign on too, in part stimulated by the launch of Race to Zero in June 2020. Cities, regional governments, universities, businesses, even wineries... the list continues to grow, with Race to Zero aiming to add still more signatories before COP26 in November.

The importance of these recent moves was demonstrated by analysis published in November. Climate Action Tracker calculated that prior to the spate of announcements, the world was heading for global warming by the end of the century of approximately 2.7°C; however, if China, the US and other nations deliver their net zero promises, that could put the world on a path to 2.1°C, approximately halving the gap to the Paris Agreement target of 1.5°C.²⁴

While this paints an optimistic picture, the growth in net zero target-setting has been matched by a growth in the volume of criticism, from civil society, academia and some businesses. A particular concern is offsetting – the practice of purchasing credits based on efforts elsewhere (often, by implication, in developing nations) to meet one's own target. Offsetting projects can either be emission reduction activities (eg funding renewable energy installation or clean cookstoves), emission avoidance (eg forest preservation) or removal of CO₂ from the atmosphere (eg planting more trees). Offset credits may play an important role in addressing emissions that cannot be cut by any other means; and doing so by restoring natural habitats, such as forests or peatlands, can play a crucial role in achieving this,

18 <https://eciu.net/news-and-events/press-releases/2019/one-sixth-of-global-economy-under-net-zero-targets>

19 <https://eciu.net/news-and-events/press-releases/2020/almost-half-of-global-gdp-under-actual-or-intended-net-zero-emissions-targets>

20 <https://climateaction.unfccc.int/views/cooperative-initiative-details.html?id=94>

21 <https://unfccc.int/climate-action/race-to-zero-campaign>

22 https://www.fmprc.gov.cn/mfa_eng/zxxx_662805/t1817098.shtml

23 <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/>

24 <https://climateactiontracker.org/publications/global-update-paris-agreement-turning-point/>