The Washington Post

Democracy Dies in Darkness

China's emissions are peaking. Bringing them down will be the hard part.

Will Beijing be able to dramatically slash carbon emissions, or will it just let them plateau? The answer has huge implications for the climate.

December 13, 2024

By Christian Shepherd

China's annual greenhouse gas emissions, by far the largest in the world today, are at an inflection point.

Thanks to huge investments in renewable energy, combined with a sharp decline in construction, China's carbon dioxide output is likely to hit its peak this year, a growing number of analysts say — five years ahead of Beijing's 2030 goal.

What China does next could be decisive in the next phase of the global fight against climate change.

"It's now clear the peak will come before 2030, but when exactly China peaks is not that important," said Hu Min, director of the Institute for Global Decarbonization Progress, a Chinese think tank. "The question is whether China will plateau or decline sharply."

Will China, which still burns more coal than the rest of the world combined, attempt what no major economy has done before: slash emissions sharply after hitting the peak?

Or will Beijing let releases plateau before working to meet its target of net-zero emissions by 2060? That option might look more attractive as China tries to stimulate a slowing economy with energy-intensive manufacturing and readies for another trade showdown with <u>Donald Trump</u>.

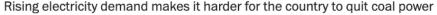
The course China chooses could have enormous ramifications for the world: If Beijing allows a plateau, it could continue to add 13 gigatons of carbon dioxide per year to the atmosphere — an outcome that would all but ensure that nations won't meet the <u>Paris agreement</u> to limit warming to 1.5 degrees Celsius (2.7 degrees Fahrenheit) above preindustrial levels, environmentalists warn.

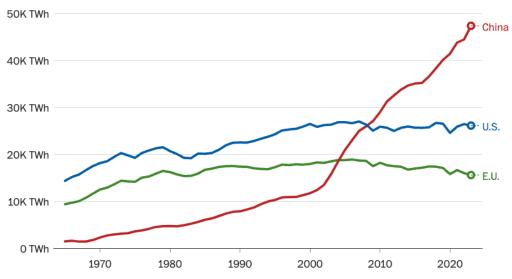
Average global temperatures are <u>almost certain</u> to cross the 1.5C threshold this year, which scientists say makes it all the more urgent for all countries to rapidly cut use of fossil fuels if there is any hope of cooling the planet to <u>below that level by the end of the century</u>.

"Reaching peak emissions is taking your foot off the accelerator," said Neil Grant, an analyst at Climate Analytics, a Berlin-based think tank. "But if you are driving a car over a cliff, you need to also apply the brakes really fast."

That is especially true for China, which has been responsible for about half of all greenhouse gases added to the atmosphere since the start of this century.

China's energy consumption is huge and growing fast





Primary energy consumption is measured in terawatt-hours. Data includes coal, oil, gas, nuclear and renewables

Source: U.S. EIA, Energy Institute, Our World In Data

CHRISTIAN SHEPHERD / THE WASHINGTON POST

As of last year, China had emitted more than the European Union since industrialization started, <u>according</u> to Carbon Brief, a climate-focused publication, although it remains far behind the total output of the United States over the same period.

The Paris agreement requires that countries update their targets every five years, and several governments — including the European Union, Mexico and Canada — pledged last month at the U.N. climate talks in Baku, Azerbaijan, to make "deep, rapid and sustained" emissions cuts by 2035, the next target date.

Britain and Brazil went even further and quantified their reduction targets, vowing to cut their emissions by 81 percent from 1990 levels and 67 percent from 2005 levels, respectively.

The coordinated statements were widely seen as an effort to pressure the biggest emitters — China, the United States and India — to make comparable commitments.

Wopke Hoekstra, the E.U.'s commissioner for climate action, urged "the largest economies and those emitting the most to do something similar to what we are doing." China has not yet responded to the call.

Experts who model China's energy transition say the country needs to start slashing emissions immediately to be certain of hitting a goal of being "carbon-neutral" by 2060, and that means setting an ambitious target for 2035.

Beijing should commit to cut greenhouse gases by <u>at least 30 percent below today's levels by 2035</u> to ensure it is on track for that goal, according to the Asia Society Policy Institute, a New York-based think tank.

Committing to a drop of that scale would make China the first major economy to attempt an abrupt about-turn in emissions, and it would aid Beijing's bid to be seen as a global climate leader, especially if Trump makes good on his promise to withdraw the United States from the Paris agreement — again.

But some Western climate negotiators have <u>voiced concern</u> that China will set a weak reductions target — perhaps about 10 percent — that it can easily hit, as it has done in previous rounds of negotiations.

"We see strong evidence that they have already peaked, so then the question becomes, how do they credibly deliver on their target to achieve net zero before 2060?" a senior U.S. administration official said on the sidelines of the talks in Baku.

A steep decline, rather than a plateau, would cut more than 3 gigatons from China's annual emissions by 2035, the official said, speaking on the condition of anonymity because he was not authorized to comment publicly. That's more than the E.U. currently emits each year. China has given little indication it is considering a 2035 target of that size.

Liu Zhenmin, China's special climate envoy, said in Baku that China's updated targets would cover all greenhouse gases across the entire economy and focus on total control, not just cutting the emission intensity of industries. "In the next 10 years, there will be a big leap in our actions on emission reduction and energy transformation," Liu told Chinese state media. Analysts tracking Chinese climate policy expect an announcement by the February deadline laid out in the Paris agreement.

The problem for China — and the world — is that no major economy has so far been able to engineer a sharp fall in emissions immediately after hitting the peak. It took the United States 15 years to curb emissions by 15 percent from its 2007 peak, and that decline was bumpy.

What's more, China's economy is structured differently from those of developed countries whose emissions have fallen in recent decades, and that may make it harder to make cuts quickly.

Many advanced countries' climate goals benefited from a shift away from polluting manufacturing — much of which was outsourced to China — and toward consumer spending and professional services.

Chinese leader Xi Jinping has a different vision for China.

Xi has described the country's manufacturing ability — in everything from emissions-heavy raw materials such as steel and cement to power-hungry advanced semiconductors — as essential for global competitiveness and national security. These industries are a key focus of recent measures to try to stimulate the economy, which will struggle to hit its 5 percent growth target this year.

While China is manufacturing far more wind turbines, solar panels and electric cars than any other country — which is good for the planet — it also requires a huge, and rising, amount of energy to power factories, data centers and air-conditioned homes.

That increase in demand has hampered China's efforts to guit coal, the world's largest single source of carbon dioxide emissions. China is still building coal-fired power plants, which account for nearly 60 percent of the country's electricity generation.

China's demand for electricity is "virtually unfathomable," said Tim Buckley, director of Climate Energy Finance, a Sydney-based think tank: It is more than double that of the United States and still rising rapidly.

CHRISTIAN SHEPHERD / THE WASHINGTON POST

Annual carbon dioxide emissions per country

Carbon dioxide (CO₂) emissions from fossil fuels and industry

14 gigatons China 12 gigatons 10 gigatons 8 gigatons 6 gigatons 4 gigatons 2 gigatons 0 gigatons 1985 1990 1995 2000 2005 2010 2015 2020 Source: Global Carbon Budget, Our World In Data

Over the past three years, the growth in China's electricity consumption has equaled approximately the total amount that Germany uses each year, <u>according to the International Energy Agency</u>.

Surging electricity demand, driven in part by rising use of air conditioning during <u>intense</u> <u>summer heat waves</u>, has contributed to uncertainty over Chinese emissions.

That means China is likely to continue to rely on coal — making it hard to cut carbon dioxide emissions.

"For all that China is doing in renewables, we are still seeing coal go up year after year," Buckley said. "To think they are going to wean themselves off any time soon is optimistic."

https://www.washingtonpost.com/world/2024/12/12/china-emissions-peak-renewable-energy/