

Why the US looks back 17 years to set its climate goals

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Consider the Biden administration's central climate goal: cut domestic greenhouse gas emissions 50%-52% below 2005 levels by 2030, then zero out emissions by 2050.

The first part of that goal comes due in just eight years. But the starting

point was 17 years ago. In fact, 2005 was also the baseline for the Obama administration's goal of cutting those climate-changing emissions 26%-28% below 2005 levels by 2025.

Why not use 2020? The simplified answer is, well, simple. The U.S. government can place its climate goals within closer reach if it bases its target on what happened in 2005 rather than subsequent years.

Although [climate models](#) often report data in five-year increments and the U.S. baseline of 2005 has roots in climate legislation that Congress considered in 2009, the year is a useful tool in climate messaging, empowering politicians to highlight America's recent emissions drop. It's also useful to politicians who would delay climate steps and criticize China's carbon output.

This is all possible because U.S. emissions peaked in 2005, the year before China's emissions exceeded America's.

By picking 2005 as the baseline for its climate goal, the Biden administration made its climate target more reachable than if it started with a different year when emissions were lower. A year with lower emissions would require deeper cuts to meet the same percentage goal.

"The math works in favor of the U.S. target," Rachel Cleetus, policy director of the climate and energy program at the Union of Concerned Scientists, said by phone.

"2005 is typically the reference for not only the U.S. but other countries because it was a high emissions year across the board," said Columbia University researcher Harrison Fell. "That was the period where you started to have pretty high [natural gas prices](#), and that means more coal generation."

After hydraulic fracturing expanded domestically in the 2000s, utilities turned to gas. "Big coal to gas switching in our electricity sector. That's the major driver of those post-2005 emissions reductions," Fell said.

Republicans and industry representatives often point to 2005 and the downward emissions slide as evidence that federal climate steps are unnecessary, despite contrary scientific findings.

On the House floor in June, Rep. Bob Latta, R-Ohio, said he opposed methane rules because emissions were trending lower. "If the argument is about addressing climate change, then we really need to acknowledge the fact that the United States has been a global leader in emissions reduction since 2005."

'Shale revolution'

After U.N. climate talks in November, Rep. August Pfluger, R-Texas, made similar comments. "We are told that we must dismantle the American oil and gas production to save the planet, but in 2019, U.S. harmful emissions were 13% less than they were in 2005," Pfluger said. "No other country has cut their footprint more in that short amount of time. And what is responsible for this?" Pfluger asked. "It's the American shale revolution."

Democrats use the line too. Rep. Conor Lamb, D-Pa., touted gas during a 2020 floor debate.

"Some have opposed the continuation of natural gas drilling simply because it is a fossil fuel, and I ask them: Who gets credit for the reduced carbon emissions over the last 15 years?" he asked. "Natural gas has made a bigger difference than anything."

It's true that phasing out coal for gas lowered emissions and bought time

to tackle the climate crisis. It's also true that natural gas includes methane, which is more than 80 times more potent than carbon dioxide, and the gas-supplants-coal argument point of view distorts the broader picture.

Although America's annual emissions overall have gently declined since 2005, its emissions increased more than 6% last year after a pandemic-driven dip in 2020, Congress does not appear close to passing significant climate legislation and the U.S. is responsible for about 25% of all the carbon dioxide emitted since the 1700s, according to figures from Our World in Data, a project of Global Change Data Lab, a British charity.

Depending on the type, greenhouse gasses can take months, years, decades, centuries or millennia to leave the atmosphere, making the accumulation of heat-trapping gasses around Earth, not year-to-year swings, the key metric to follow.

"CO₂ is a stock pollutant. So when that stuff goes up, it stays up," Fell said.

The greater the emissions—atmospheric concentrations of [carbon dioxide](#) linger at 416 parts per million, the highest concentration in at least 800,000 years—the closer to irretrievable climate damage the world lurches. Meeting climate targets set out in a 2018 report by the Intergovernmental Panel on Climate Change means deep cuts soon.

"We have to be on a trajectory to net-zero emissions by 2050 at the latest. When you get to zero, the base year you compare it to doesn't matter anymore," Dan Lashof, director of the World Resources Institute, United States, said by phone.

Cleetus said the world will miss its global goal unless big emitters such as Australia, China, Japan and the United States hit their targets.

'Vast gulf'

"It's pretty clear from things like the U.N. Emissions Gap Report," Cleetus said, citing a study on climate pledges, "that there's still a vast gulf between what countries are offering and what is going to be needed."

American politicians are not alone in setting baselines that place their nation's [climate goals](#) more easily within reach.

The EU's climate target names its baseline as 1990, when emissions from the bloc peaked. Japan (2013), Russia (1990) and South Korea (2018) also use their base years as the same years domestic emissions peaked.

Some countries don't use baselines. China's goal aims for carbon neutrality "before 2060." South Africa's plan describes a target range to reach by 2030. Thailand operates under a "business as usual" baseline, with a vague goal of lowering emissions from historical levels.

"Having good benchmarks against which you're looking at what shift you're making is really important," Surabi Menon, a climate scientist at ClimateWorks Foundation, said in an interview. Menon, who worked on the IPCC report that won its authors the Nobel Peace Prize in 2007, said firm dates provide clarity.

"At least we know we can compare. You can normalize everything," she said. "You can look at that shift of which countries are ambitious, which are not."

Experts wrestle over how to measure climate legacy and ambition.

National emissions. Global emissions. Per capita emissions. Carbon

prices. Baselines. They're all useful yet flawed metrics.

"At some level, what you really want to do is sit there and ask, 'Well, how hard is the country trying?'" said Billy Pizer, a researcher at the nonpartisan Resources for the Future. "I think of effort as cost, and that's really what you would like to see."

Kate Larsen, a U.S. negotiator during the 2009 climate talks in Copenhagen, said baselines are important to mark when a nation gets serious on [climate](#).

Still, they're flimsy unless governments make deep cuts, Larsen said. "We know that so much of this needs to happen within national governments, and however they can make that happen is what's important," she said. "I care a lot less about these base years."

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