

These experts say we have three years to get climate change under control. And they're the optimists.

By [Chris Mooney](#) June 29 at 7:15 AM



Smokestacks from the coal-fired Plant Scherer are silhouetted against the sky in Juliette, Ga., on June 3. (Branden Camp/AP)

A group of prominent scientists, policymakers, and corporate leaders released a [statement](#) Wednesday warning that if the world doesn't set greenhouse gas emissions on a downward path by 2020, it could become impossible to contain climate change within safe limits.

The group, led by Christiana Figueres, who oversaw the United Nations negotiations that produced the Paris climate agreement, base their case on simple math. The world, they calculate, probably has a maximum of 600 billion remaining tons of carbon dioxide that can be emitted if we want a good chance of holding the rise in planetary temperatures within the Paris

limit of 1.5 to 2 degrees Celsius (2.7 to 3.6 degrees Fahrenheit).

With 41 billion tons emitted every year from energy consumption and other sources, such as deforestation, there are only about 15 years before that budget is exhausted.

Emissions can't suddenly go to zero after 15 years — the world economy would grind to a halt if they did. Therefore, they must be put on a downward path almost immediately.

“When it comes to climate, timing is everything,” write Figueres and her co-authors, including scientists Hans Joachim Schellnhuber and Stefan

The Washington Post

Rahmstorf of the Potsdam Institute for Climate Impact Research, in a commentary in the journal *Nature*. The commentary has six authors and was endorsed by [dozens of co-signers](#) from the climate science and policy world as well as from industry.

The paper by Figueres, who now leads an initiative called Mission 2020, was directly aimed at influencing the upcoming G-20 meetings in Germany. It also notes President Trump's decision to withdraw the United States from the Paris accord.

"The whole purpose of this comment ... is to wake up the intentionality and the ingenuity that we must bring to this effort, because of the urgency," Figueres said during a call with reporters.

Fortunately, global emissions have been flattening lately. Not going down — but not rising, either. The past three years have instead shown a leveling-off thanks to a decline of coal burning by the United States and China.

Yet to achieve their objectives, extremely rapid carbon cuts would be required on a tremendous scale.

By 2020, among other objectives, all of the world's coal plants would have to be on the path to retirement (and no new ones can be built), and electric vehicles would have to explode in popularity, moving from 1 percent of global sales to 15 percent in just three years, an extraordinarily rapid rate of growth.

Deforestation would have to decline sharply and then end entirely. By 2030, global forests would actually have to start pulling carbon dioxide out of the air. That is an enormous lift, given the entrenched nature of deforestation and the

economic pressures in the developing world to convert forested land to agriculture and ranching.

But if emissions are not on a significant downward path by 2020, the logic is inevitable — it gets increasingly difficult to control global warming. The reason is simple. The later emissions reach their peak, the more rapidly they would have to decline following that peak. At some point it becomes impossible to cut emissions as fast as would be necessary to avoid busting the limited carbon "budget."

These kinds of considerations are why a number of researchers have expressed skepticism about global temperatures increasing less than two degrees Celsius. Keeping the temperature change below 1.5 Celsius is even harder and, increasingly, being considered unachievable by scientists. (It has already increased about one degree Celsius.)

"I have said for quite a while now that I don't think 2C is possible," said Glen Peters, an expert on carbon budgets and climate change at the Center for International Climate Research in Oslo, in response to the new missive by Figueres and her colleagues. "I would like to be wrong, and I am happy to aim for 2C or lower. But, I can't look people in the eye and give them false hope."

Peters did acknowledge that there was a purpose to maintaining optimism, though he said that "personally, I don't see that as my role."

Such is where we are. There's a narrowing window of time to fix the climate problem before crossing new thresholds — but since we're still not actually at them yet, there's still room for both optimists and pessimists.