

# What if US quits climate deal? Doesn't look good for Earth

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In this Jan. 20, 2015 file photo, a plume of steam billows from the coal-fired Merrimack Station in Bow, N.H. Earth is likely to hit more dangerous levels of warming even sooner if the U.S. pulls back from its pledge to cut carbon dioxide pollution because America contributes so much to rising temperatures, scientists said. (AP Photo/Jim Cole, File)

Earth is likely to reach more dangerous levels of warming even sooner if the U.S. retreats from its pledge to cut carbon dioxide pollution,

scientists said. That's because America contributes so much to rising temperatures.

President Donald Trump, who once proclaimed global warming a Chinese hoax, said in a tweet Saturday that he would make his "final decision" this coming week on whether the United States stays in or leaves the 2015 Paris climate change accord in which nearly every nation agreed to curb its greenhouse gas emissions.

Leaders of seven wealthy democracies, at a summit in Sicily, urged Trump to commit his administration to the agreement, but said in their closing statement that the U.S., for now, "is not in a position to join the consensus."

"I hope they decide in the right way," said Italy's prime minister, Paolo Gentiloni. More downbeat was German Chancellor Angela Merkel, who said the leaders' talks were "very difficult, if not to say, very unsatisfactory."

In an attempt to understand what could happen to the planet if the U.S. pulls out of Paris, The Associated Press consulted with more than two dozen climate scientists and analyzed a special computer model scenario designed to calculate potential effects.

Scientists said it would worsen an already bad problem and make it far more difficult to prevent crossing a dangerous global temperature threshold.

Calculations suggest it could result in emissions of up to 3 billion tons of additional carbon dioxide in the air a year. When it adds up year after year, scientists said that is enough to melt ice sheets faster, raise seas higher and trigger more extreme weather.

"If we lag, the noose tightens," said Princeton University climate scientist Michael Oppenheimer, co-editor of the peer-reviewed journal *Climatic Change*.

One expert group ran a worst-case computer simulation of what would happen if the U.S. does not curb emissions, but other nations do meet their targets. It found that America would add as much as half a degree of warming (0.3 degrees Celsius) to the globe by the end of century.



In this photo taken May 23, 2017, President Donald Trump meets Pope Francis at the Vatican. Earth is likely to hit more dangerous levels of warming even sooner if the U.S. pulls back from its pledge to cut carbon dioxide pollution because America contributes so much to rising temperatures, scientists said. (AP Photo/Evan Vucci, Pool)

Scientists are split on how reasonable and likely that scenario is.

Many said because of cheap natural gas that displaces coal and growing adoption of renewable energy sources, it is unlikely that the U.S. would stop reducing its carbon pollution even if it abandoned the accord, so the effect would likely be smaller.

Others say it could be worse because other countries might follow a U.S. exit, leading to more emissions from both the U.S. and the rest.

Another computer simulation team put the effect of the U.S. pulling out somewhere between 0.1 to 0.2 degrees Celsius (0.18 to 0.36 degrees Fahrenheit).

While scientists may disagree on the computer simulations they overwhelmingly agreed that the warming the planet is undergoing now would be faster and more intense.

The world without U.S. efforts would have a far more difficult time avoiding a dangerous threshold: keeping the planet from warming more than 2 degrees Celsius (3.6 degrees Fahrenheit) above pre-industrial levels.

The world has already warmed by just over half that amount—with about one-fifth of the past heat-trapping carbon dioxide emissions coming from the United States, usually from the burning of coal, oil and gas.

So the efforts are really about preventing another 1.6 degrees Fahrenheit (0.9 degrees Celsius) from now.

"Developed nations—particularly the U.S. and Europe—are responsible for the lion's share of past emissions, with China now playing a major role," said Rutgers University climate scientist Jennifer Francis. "This means Americans have caused a large fraction of the warming."



In this Dec. 12, 2015, file photo, French President Francois Hollande, right, French Foreign Minister and president of the COP21 Laurent Fabius, second right, United Nations climate chief Christiana Figueres, left, and United Nations Secretary General Ban Ki-moon hold their hands up in celebration after the final conference at the COP21, the United Nations conference on climate change, in Le Bourget, north of Paris. (AP Photo/Francois Mori, File)

Even with the U.S. doing what it promised under the Paris agreement, the world is likely to pass that 2 degree mark, many scientists said.

But the fractions of additional degrees that the U.S. would contribute could mean passing the threshold faster, which could in turn mean "ecosystems being out of whack with the climate, trouble farming current crops and increasing shortages of food and water," said the National Center for Atmospheric Research's Kevin Trenberth.

Climate Interactive, a team of scientists and computer modelers who track global emissions and pledges, simulated global emissions if every country but the U.S. reaches their individualized goals to curb carbon pollution. Then they calculated what that would mean in global temperature, sea level rise and ocean acidification using scientifically-accepted computer models.

By 2030, it would mean an extra 3 billion tons of carbon dioxide in the air a year, according to the Climate Interactive models, and by the end of the century 0.3 degrees Celsius of warming.

"The U.S. matters a great deal," said Climate Interactive co-director Andrew Jones. "That amount could make the difference between meeting the Paris limit of two degrees and missing it."

Climate Action Tracker, a competing computer simulation team, put the effect of the U.S. pulling out somewhere between 0.1 to 0.2 degrees Celsius (0.18 to 0.36 Fahrenheit) by 2100. It uses a scenario where U.S. emissions flatten through the century, while Climate Interactive has them rising.

One of the few scientists who plays down the harm of the U.S. possibly leaving the agreement is John Schellnhuber, the director of the Potsdam Institute for Climate Impact Research and the scientist credited with coming up with the 2 degree goal.

"Ten years ago (a U.S. exit) would have shocked the planet," Schellnhuber said. "Today if the U.S. really chooses to leave the Paris agreement, the world will move on with building a clean and secure future."

Not so, said Texas Tech climate scientist Katharine Hayhoe: "There will be ripple effects from the United States' choices across the world."



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