

# Carbon Levels Could Hit Pre-Human, 'Palms in the Arctic' State by Mid-Century

Published on Tuesday, April 04, 2017 by [Common Dreams](#)  
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Current carbon dioxide levels are unprecedented in human history and could reach a level unseen in millennia if their rates continue at this pace, a [new report](#) out Tuesday warns.

Research published in *Nature Communications* finds that if fossil fuel use continues unabated, the atmosphere could revert “to values of CO<sub>2</sub> not seen since the early Eocene (50 million years ago),” a time when humans did not exist, by the middle of the 21st century.

Dana L. Royer, a paleoclimate researcher at Wesleyan University and co-author of the study, [told](#) *Climate Central*, “The early Eocene was much warmer than today: global mean surface temperature was at least 10°C (18°F) warmer than today. There was little-to-no permanent ice. Palms and crocodiles inhabited the Canadian Arctic.”

Because carbon dioxide stays in the atmosphere for centuries, climate change would continue to impact the planet even if humans miraculously dropped emissions to zero after hitting that mid-century peak, Royer said.

Indeed, global warming may have already locked in the Antarctic ice sheet for [unstoppable melting](#)—driving sea level rise and threatening coastal communities worldwide.

The authors continue, “If CO<sub>2</sub> continues to rise further into the twenty-third century, then the associated large increase in radiative forcing, and how the Earth system would respond, would likely be without geological precedent in the last half

a billion years.”

The report comes as the Trump administration [turns its back](#) on climate regulations, issuing an executive order last week that aims to undo Obama-era policies keeping a lid on greenhouse gas emissions.

“Aside from provoking a large-scale nuclear war, it is hard to imagine an American president taking an action more harmful to the U.S. than [President Donald] Trump’s effort to accelerate greenhouse gas emissions,” David J. Arkush, managing director of Public Citizen’s Climate Program, said at the time.

“This day may be remembered as a low point in human history—a time when the world’s preeminent power could have led the world to a better future but instead moved decisively toward catastrophe,” Arkush added.

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