

How Biden Might Reverse Trump's Attacks on Climate Research

His options include revaluing the costs of climate change and removing political appointees who have downplayed climate science

November 11, 2020

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Activists are hoping the next four years will represent a new era for U.S. climate action.

President-elect Joe Biden has outlined an ambitious climate plan aimed at achieving net-zero carbon emissions by 2050. And he's pledged to immediately reenter the U.S. in the Paris climate agreement.

The election won't only affect climate mitigation. Basic climate and environmental research also stands to benefit.

Over the last four years, the Trump administration has undermined climate science at federal agencies, including by suppressing research and filling top leadership positions with officials who question or reject the tenets of global warming. These practices have inhibited government scientists' ability to conduct and communicate their own research and promoted misinformation about climate change, according to scientists and advocates.

These attacks on climate research are in keeping with the Trump administration's broad pattern of science denial. Climate research is just one field of government science that has suffered under Trump.

Still, many of the practices and policies implemented by the Trump administration could be quickly reversed by Biden. Here are a few areas to watch:

THE VALUE OF CLIMATE COSTS

In 2017, the Trump administration overhauled a wonky, but highly significant, economic metric used to estimate the monetary costs of climate change.

Known as the social cost of carbon, the metric evaluates the dollar amount that greenhouse gas emissions are likely to cost society in climate change impacts, including future damages to infrastructure, agriculture and human health. It's frequently employed in cost-benefit analyses used to help develop and evaluate environmental policies.

The Obama administration valued the social cost of carbon at about \$42 for every ton of carbon dioxide emitted into the atmosphere.

The Trump administration significantly reduced its estimate of the metric, bringing it down to about \$6 per ton of carbon dioxide. The administration then used the lower estimate to help justify rollbacks of several Obama-era environmental rules, including the Clean Power Plan.

Climate experts have argued that the Trump administration's estimate is far too low. Even the Obama-era estimate may have failed to fully account for the costs of some future climate impacts, researchers suggest. Some recent studies indicate that the metric should be well above \$100 per ton of CO₂.

The Biden administration will have the opportunity to revise the social cost of carbon again, accounting for the most up-to-date research and expert opinions.

SCIENCE-INFORMED POLICY

Trump's EPA is in the process of implementing a controversial rule to bar the agency from considering studies that aren't able to make all their underlying data public.

Critics have argued that the so-called transparency rule would disqualify some crucial studies from consideration, including research containing trade secrets or health studies involving confidential information about patients.

Earlier this year, dozens of scientific organizations and institutions penned an open letter to EPA Administrator Andrew Wheeler expressing concern about the rule.

"Scientists welcome transparency and encourage scrutiny of their work," the letter stated. "However, this rule and supplemental are not about strengthening science, but about undermining the ability of the EPA to use the best available science in setting policies and regulations."

The rule is likely to affect regulations that rely on medical and epidemiological studies, including the human health impacts of various toxins and pollutants. These may include regulations targeting sources of both air pollution and greenhouse gas emissions, which often coincide.

The Biden administration could potentially overturn the rule via a federal law known as the Congressional Review Act. This would require the support of Congress. Otherwise, a formal rulemaking process could be required to undo it.

DENIERS IN LEADERSHIP

Trump has staffed his federal science agencies with numerous top officials known to undermine or deny the science of climate change.

His first EPA administrator, Scott Pruitt, was a known climate skeptic. Pruitt's successor, Andrew Wheeler, has repeatedly downplayed the seriousness of climate change and stated that he doesn't consider the issue a pressing priority.

The Trump administration has also been criticized for reducing or dissolving various science advisory panels charged with advising government agencies. The administration has also been

criticized for padding the EPA's advisory board with appointees who have connections to industries the agency regulates.

Most recently, the White House has appointed several skeptics of mainstream climate science to top positions at NOAA.

Last month, NOAA's acting chief of staff, Erik Noble, removed the agency's acting chief scientist, Craig McLean, and replaced him with meteorologist Ryan Maue. Maue previously worked for the libertarian think tank Cato Institute and has a history of downplaying the seriousness of climate change.

Maue was joined at NOAA by University of Delaware geography professor David Legates, who's now serving in a newly created position as a deputy secretary. Legates also has a history of criticizing mainstream climate science and questioning the influence of human carbon dioxide emissions on global warming.

These latest appointments may be short-lived. The Biden administration will have the power to appoint its own top agency officials, with the opportunity to return these positions to individuals who embrace accepted science.

SCIENCE SUPPRESSION

More generally, numerous reports have suggested the Trump administration has suppressed climate research, quietly removed climate information from agency websites and pressured scientists not to communicate about climate change.

The [Silencing Science Tracker](#), a joint initiative from Columbia University's Sabin Center for Climate Change Law and the Climate Science Legal Defense Fund, tracks government attempts to restrict scientific research or communication. It cites numerous instances in which scientific studies or reports related to climate change or clean energy were blocked, sidelined or delayed by federal agencies.

One [report](#) from *Politico* found that the Trump administration refused to promote or publicize dozens of government-funded studies conducted by scientists at the Department of Agriculture.

Over the last four years, numerous reports have documented how climate information has quietly disappeared from government websites and documents.

Meanwhile, a 2018 [survey](#) of scientists across 16 federal agencies found that 18% of all respondents, including 47% of respondents from the National Park Service and 35% from EPA, reported being asked to omit the phrase "climate change" from their work.