

Biden Signs Sweeping Orders to Tackle Climate Change and Rollback Trump's Anti-Environment Legacy

The new president moved immediately to review more than 100 Trump administration actions and restore the protection of federal lands and the regulation of greenhouse gases.

By [Sabrina Shankman](#), [Dan Gearino](#), [David Hasemyer](#), [James Bruggers](#), [Judy Fahys](#), [Marianne Lavelle](#), [Phil McKenna](#)

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In the early hours on Wednesday, as the sun was setting on one presidency and rising on another—but long before it would actually peek over the horizon—two men did two very different things.

Departing President Donald J. Trump, who four years ago promised to drain the swamp, rescinded an ethics order, clearing the way for members of his administration to immediately become lobbyists. It would be the last formal act of his presidency: to make it easier for those loyal to him to cash in on their Washington roles.

Just a few hours later, incoming President Joseph Biden announced a plan of his own “offering relief for families across America amid converging crises.

Biden, who ran on the most progressive and comprehensive climate plan of any presidential candidate in history, took the oath of office just before noon outside a Capitol building ransacked two weeks ago by a Trump-supporting mob, and Wednesday evening signed executive orders aimed at aggressively fighting both the pandemic and climate change—something Trump glaringly failed to do.

From [revoking the Keystone XL](#) pipeline permit to reviewing actions that rolled back clean air and water protections, the sweeping directives laid a road map for the work ahead on the climate crisis. It's an urgent plan, predicated upon Biden's belief that there is no time to waste.

After four years of steady erosion of the nation's climate policy, Biden offered big plans on day one. The president moved to [rejoin the Paris agreement](#) and signaled a review of vehicle emissions standards. His order also directed federal agencies to review more than 100 rules that the Trump administration made on the environment, with an eye to potentially overturning many of them.

"The last four years have been an unrelenting assault on our public health and environmental protections on an unprecedented scale," said Jill Tauber, the vice president of litigation for climate and energy at Earthjustice.

"But while we've lost a lot of time, and while certainly there is much damage to undo," she said, Biden's order to review the agency rules "is a commitment to do just that—to as swiftly as possible reverse the destructive policies of the Trump administration and also recognizing that that's not enough."

At Columbia University's Sabin Center for Climate Change Law, professor Michael Gerrard's Climate Deregulation Tracker logged more than 175 rollbacks during the Trump administration, like its rule limiting what kinds of science could be used by the EPA or changes to the National Environmental Policy Act.

On Wednesday, it was rebranded the [Climate Reregulation Tracker](#) to keep track of the work to be done by the Biden administration to restore what was lost, starting with what was included in Biden's day one order.

"It will be an enormous and impressive list for the new administration to get through," said Gerrard, "but each agency has a staff that has been waiting to be unleashed, and that will be thrilled to get back to their primary mission."

For the United States, rejoining the Paris agreement means finding a way to decarbonize the atmosphere by 2050 and do its part to limit global warming

to between 1.5 and 2 degrees Celsius. It also represents an opportunity for the United States to be part of a global green economic boom linked with recovery from the coronavirus pandemic.

The commitments that Biden makes toward the Paris agreement will likely serve as a crystallizing force for climate policy in the United States, said Pat Parenteau, a professor of environmental law at the Vermont Law School. “The question is, what are we going to commit to, and how much can Biden do via executive orders and how much will rely on Congress?” said Parenteau. “My guess is he can’t get where he’d like to be in 2030 without Congress.”

On that front, the Biden administration’s work on climate will face some roadblocks, thanks to the narrow margins Democrats hold in both houses of Congress. “There will have to be Republicans on board,” he said.

But passing climate legislation—quickly—will be key to assuring allies across the world that the United States is recommitting to fighting the climate crisis in a real way.

As Biden pursues the vision of unity that he laid out in his inaugural speech on Wednesday, he will face pressures from within his own party, as members of the progressive wing try to pull him toward more significant climate action.

To emphasize their focus on climate change, Biden and Harris have stacked their political appointments with climate hawks—even their cabinet appointees Pete Buttigieg as transportation secretary and Janet Yellen as treasury secretary are strong on the issue, noted Parenteau.

Still, Biden faces a Herculean task in rebuilding the lower ranks of agencies like the Environmental Protection Agency and the Interior Department, which saw high rates of attrition during the Trump years.

Despite all the work to be done, climate and environmental advocates seemed to collectively exhale following Biden’s inauguration, after a bruising four years under Trump.

“For the next four years, at least, we have a president who understands the intersection of climate change, equity and social and economic justice,” said Rob Jackson, an earth system science professor at Stanford University.

Biden’s day one executive order cannot undo all of the environmental damage done during the Trump era. It cannot unpack the courts, from the lower courts to the Supreme Court. And it cannot rollback four years of accumulated greenhouse gas emissions, a period in which the administration seemingly prioritized economic growth above everything else.

But environmental activists and climate scientists said there’s a lot it can do.

Reducing Greenhouse Gas Emissions Will Be a Primary Focus

Many of the regulations Biden is looking to reverse focus squarely on emissions, with none more consequential than the Trump administration’s one-two punch on auto emissions.

In September 2019, the Trump administration stripped California of its authority to enact auto pollution standards that are more stringent than the federal standard, a standard that the administration weakened just six months later.



Motor vehicles drive on the 101 freeway in Los Angeles, California on Sept. 17, 2019. Credit: Robyn Beck/AFP via Getty Images

The revised federal standard, released in March, set a fuel economy increase of **1.5 percent per year**, down from the 5 percent annual increase that had been required by the Obama administration.

Reinstating the Obama era regulations would go a long way to reducing emissions from transportation, but after four years of government led efforts to weaken, rather than strengthen, emissions reductions, environmental advocates say more needs to be done.

Pollution from automobiles increased in 2019 for the first time in five years, according to a [January report by the EPA](#).

Emissions now need to be reduced by 7 percent per year to achieve a zero-emissions fleet by mid-century, as part of the Biden administration's larger goal of net-zero emissions economy-wide by 2050, said Dan Becker, director of the Safe Climate Transport Campaign with the Center for Biological Diversity.

"Seven percent a year is an aggressive level of improvement, but all the technologies for these vehicles already exist," he said.

The Biden administration is also calling on the EPA to review a highly consequential roll back of methane emission regulations for the oil and gas industry, instituted by the Trump administration [in August](#). The regulations weakened Obama-era rules requiring oil and gas companies to monitor and fix methane leaks from new wells and other infrastructure.

Methane is the second largest driver of human-made climate change after carbon dioxide and the rollbacks, if they remain in place, will allow additional emissions equal to the annual greenhouse gas emissions of roughly 100 coal fired power plants.

Methane emissions also contribute to the formation of ground level ozone, or smog, which causes adverse health impacts, particularly in low-income communities and communities of color where ozone levels are disproportionately high.

Reinstating the Obama era regulations would be a good first step, but more needs to be done, climate experts say.

"We really need to deal with all of the sources of methane and that is not just the new construction in the fossil fuel industry," Drew Shindell, an earth science professor at Duke University, said. "We need to really aggressively push to reduce methane emissions from all sectors."

Another key regulation flagged by the Biden administration was [a 2020 rule by the Trump administration](#) that relaxed requirements for leak detection and

repairs of refrigeration equipment that uses hydrofluorocarbons (HFCs), potent greenhouse gases known as “climate super-pollutants.”

A phase-down in the production of new HFC chemicals is required under an international agreement known as the Kigali Amendment to the Montreal Protocol. The United States has not yet ratified the amendment. However, legislation that will bring the United States in line with the agreement **passed with bipartisan support in December**.

Reducing emissions of existing HFCs by restoring the Obama era controls on refrigeration equipment will also play a key role in reducing greenhouse gas emissions.

“This is just the first step in Biden’s focus on tightening refrigerant management and energy efficiency of cooling equipment and we’ll see many more leading up to [U.S] ratification of the Kigali Amendment,” said Durwood Zaelke, president of the Institute for Governance and Sustainable Development.

At the EPA a Focus on Fuel Standards, Emissions and Safeguards

In ordering agencies to review Trump administration rules, Biden made it clear that the new president wanted to waste no time at the Environmental Protection Agency. The order laid out 48 actions for the EPA to review—more than in any other agency, perhaps not surprising considering the laser-like focus of the Trump administration on weakening the EPA’s bedrock regulations.

Biden included on the list a so-called “transparency” rule that the Trump EPA finalized in early January, limiting the kind of science the agency could use in decision-making. Public health experts had said that the rule could keep the EPA from considering some of the most well-documented health research in the world, and decried it as an “Orwellian” attempt to hamper future environmental protection, particularly on clean air and climate change.

Biden’s team also pledged to review the EPA’s decision that it would not tighten the national ambient air quality standards for ozone or particulate

matter, even though recent science suggests that tens of thousands of American lives are lost each year from exposure to pollution caused by the burning of fossil fuels.

And the new administration will scrutinize a rule that the Trump EPA finalized this month on greenhouse gas emissions from aviation. The Trump rule did little more than accept the voluntary standards created by the airline industry and was not expected to curb the industry's emissions in any significant way.

Former EPA officials, climate scientists and environmental activists said the Biden order was part of an ambitious environment and climate agenda that they expected to be guided by science, to prioritize environmental justice, rebuild trust and help the country recover from the current economic crisis through a green economy.

And some said bluntly that they expected the new administration to put the interests of people over polluters and corporations.

Brett Hartl, government affairs director for the Center for Biological Diversity, said that with Biden's day one executive order, corporate polluters that have benefited from Trump's environmental rollbacks may begin to reassess their business models. "They will do it for their bottom line," he said. "They see the writing on the wall that the Trump rollbacks will not survive, so they will need to reassess their practices to do what is less costly while getting in line."

While Trump called climate change a "hoax," and appointed fossil fuel industry lobbyists to key positions in his administration, Biden has laid out an ambitious climate plan, with a goal of reaching net-zero greenhouse gas emissions by 2050, in part through a \$1.7 trillion investment in clean energy and green jobs.

Biden's order also calls for the advancement of environmental justice, an issue that had come to the forefront during the Obama administration and then largely disappeared under Trump.

“It’s going to take a lot of work and commitment,” said Mustafa Ali, who served as an associate administrator in the EPA’s environmental justice office under the Obama administration, “but it can be done.”

Restoring the Bears Ears and Grand Staircase-Escalante National Monuments

At the Interior Department, the Biden order calls for the review of more than three dozen actions taken by the previous administration. That process will be led by [Interior Secretary designee](#) Deb Haaland, a Democratic congresswoman and 35th-generation New Mexican from the Pueblos of Laguna and Jemez. She would be the first Indigenous person to become a U.S. cabinet secretary.

Eleven [Interior Department agencies](#) oversee everything from Native American tribal trust lands to preserving endangered species habitat, managing national parks and supervising western water projects. The agencies also set the agenda for developing energy in the federal mineral portfolio of more than 245 million acres of public land and 700 million acres of subsurface rights which, according to the U.S Geological Survey, another Interior agency, are responsible for about 24 percent of the nation’s greenhouse gas emissions.

The new administration said it will revisit boundary reductions at three national monuments: Bears Ears and Grand Staircase-Escalante in southern Utah, and an area nearly the size of Connecticut off the New England Coast, the [Northeast Canyons and Seamounts Marine National Monument](#). Trump shrank the boundaries at the behest of state and local political conservatives who saw the monuments as an overreach, and energy companies that had been barred from mining within the original monuments.

“We’re hopeful that this really is the first indication that it won’t be long until these monuments are fully restored,” said Stephen Bloch, an attorney for the [Southern Utah Wilderness Alliance](#), one of the organizations behind efforts to overturn Trump’s reductions of the Utah monuments in federal court.



Bears Ears buttes in southern Utah. Credit: Judy Fahys/Inside Climate News

Biden “has been clear that he views the attack on Bears Ears and Grand Staircase as unlawful and one of this slew of decisions by the Trump administration that needs to be reversed,” Bloch said.

Another early promise from the new administration is to impose a temporary moratorium on oil and natural gas leasing activities in the Arctic National Wildlife Refuge. The move is enthusiastically supported by those fighting to stop fossil fuel development and to protect the natural habitat of the Porcupine caribou herd and the people who consider the caribou and the land integral to Alaskan Native culture.

“It is so important that our young people see that we are heard, and that the President acknowledges our voices, our human rights and our identity,” said Bernadette Demientieff, executive director of the Gwich’in Steering Committee, in a news release. “We know there’s so much work ahead, and are thankful that the President will take early action to help protect these lands forever.”

It’s unclear how Biden’s order might affect leases in the Arctic refuge that were issued on Tuesday by the Trump administration. Those leases, the first ever issued in the refuge, are expected to result in a legal battle as environmental and Indigenous groups, along with the Biden administration, seek to keep them from being developed, but the state of Alaska works to bring drilling there.

In addition to moves like these, there are dozens of Trump Interior Department actions and initiatives that the Biden administration is expected to reconsider and potentially deconstruct. The new administration is also expected to review—and likely reverse—recent moves by the department to allow logging in Northwest forestland once protected as critical habitat for the northern spotted owl, and to allow incidental killing of migratory birds. Also on the Biden administration redo list are scaled-back protections for threatened and endangered species like the monarch butterfly, gray wolf and greater sage-grouse. Tightening of oil and gas leasing and development rules is also anticipated.

Jennifer Rokala, executive director of the Center for Western Priorities, said the announcement shows the incoming president is honoring his promise to protect America’s land and water, address climate change, and erase a long list of the Trump administration’s “horrific” environmental actions. She called the list “a strong downpayment on the future of our public lands.”

“Incoming Interior Secretary Deb Haaland and her team will need to work quickly but carefully to ensure these destructive policies are reversed or unwound in a way that stands up to the inevitable legal challenges from polluters, oil companies, and others who seek to exploit America’s public land,” Rokala said.

Toward a Cleaner Electricity Grid

One of the big items on Biden’s list is undoing the Trump administration’s rollback of the Clean Power Plan, a key pillar of the Obama administration’s climate policy that targeted greenhouse gas emissions from the nation’s power plants.

The rollback was overturned on Tuesday when the U.S. Court of Appeals for the District of Columbia Circuit **struck down** the Trump administration’s replacement regulation.

The court’s decision sends Trump’s rule back to the EPA, giving the incoming Biden administration a chance to write new and potentially more ambitious regulations.

“This decision frees up the new Biden administration to begin working immediately on the science-based greenhouse pollution rules we desperately need to make up for lost time,” said Clare Lakewood, legal director of the Center for Biological Diversity’s Climate Law Institute.

A more ambitious rule for power plants would help to push inefficient fossil-fuel plants to close, accelerating a shift in the market that is already well underway as utilities invest heavily in wind and solar power and energy storage.

The Biden administration is looking to make the electricity grid cleaner while also reducing electricity use through energy efficiency. This is an abrupt change from Trump, who was hostile to clean energy technologies that save water and electricity, with complaints about low-flow showerheads and the phaseout of incandescent light bulbs.

Biden's team plans to review at least 10 Trump administration rules dealing with efficiency in lighting, air conditioning and appliances.

"In the 2020s it's time to take advantage of the incredible innovations that are happening, whether they are in lighting or in air conditioning or in appliances, and raise the minimum efficiency standards so all consumers save money and we reduce emissions," said Andrew deLaski, executive director of the nonprofit Appliance Standards Awareness Project.

The fact that the Biden administration is organized enough to have this list of energy efficiency rules ready to go on the first day was a good sign about things to come, he said. And, he added, it was a welcome change from the Trump administration's "misplaced nostalgia for old technology" like incandescent light bulbs.

deLaski's reaction was in line with that of others across renewable energy advocacy and business groups.

Bill Parsons, the chief operating officer of the American Council on Renewable Energy, a business group, said the actions on federal rules send a signal that the Biden administration is committed to leading on clean energy and understands how to do it.

His group is pleased to see that the new administration is reviewing a rule within the Department of Labor that seeks to undermine socially-responsible investing by pension funds.

The Trump administration adopted a rule last year that managers of pension plans needed to base investment decisions on financial factors and not on social ones. It was a rebuke of the growing popularity of funds that consider environmental, social and governance, or ESG, factors when deciding whether to invest in a company.

Parsons said the pension rule was "misguided" and the process of reviewing it and the other Trump administration rules will help to "deliver the clean energy future Americans want and deserve."

Recalculating the Social Cost of Carbon

Part of the climate solution sought by Biden comes down to math and a concept known as the social cost of carbon: the dollar amount that the government associates with the impact of each ton of greenhouse gas emitted.

Trump abandoned the government's interagency working group that had been working to refine the calculation of social cost. And the Trump administration used numbers to calculate this cost that were seven times lower than those used by the Obama administration, the General Accounting Office **found** last year. That allowed President Trump and his team to adopt federal rules that gave fossil fuels an advantage.

On Wednesday, the Biden administration announced that it was reforming the Interagency Working Group on the Social Cost of Greenhouse Gases, directing it to issue new factors that "ensure that agencies account for the full costs" of heat-trapping emissions, "including climate risk, environmental justice and intergenerational equity."

In the past, calculations like these have been **used** to justify energy efficiency standards for everything from ice cream freezers to dishwashers. They have affected fuel efficiency standards for cars and trucks, and emission limits for power plants and oil and gas production on federal lands. As the Biden administration reviews what to do about dozens of environmental rollbacks from the Trump years, accurately accounting for climate impacts will give a more realistic understanding of regulatory tradeoffs, experts said on Wednesday.

Re-establishing the working group will be an important part of U.S. climate policy, said Maureen Cropper, a University of Maryland economics professor who was co-chair of a National Academies of Sciences' panel that **reviewed** the working group's efforts in 2016 and 2017. The working group had, during the Obama administration, provided estimates of the social cost of carbon that were used by federal agencies, states and other countries, she said.

She said that accurate calculations are "essential to be able to balance the benefits of reducing carbon emissions against the costs of the regulation." The factors can also be used to evaluate "the full social cost of fossil fuels versus renewable energy sources."

Indiana University professor David Konisky, whose research focuses on U.S. environmental and energy policy, agreed.

Agencies “will have to account for the implications for their actions on climate change,” he said. “One of the most significant implications is that the benefits of regulations that result in reductions of greenhouse gas emissions will be fully valued in cost-benefit analyses.”