

# Study: Exxon Mobil accurately predicted warming since 1970s

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Exxon Mobil Billings Refinery sits in Billings, Mont. Exxon Mobil's scientists were remarkably accurate in their predictions about global warming, even as the company made public statements that contradicted its own scientists' conclusions, a new study says. Credit: AP Photo/Matthew Brown, File

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about global warming, even as the company made public statements that contradicted its own scientists' conclusions, a new study says.

The study in the journal *Science* Thursday looked at research that Exxon funded that didn't just confirm what climate scientists were saying, but used more than a dozen different computer models that forecast the coming warming with precision equal to or better than government and academic scientists.

This was during the same time that the oil giant publicly doubted that warming was real and dismissed climate models' accuracy. Exxon said its understanding of climate change evolved over the years and that critics are misunderstanding its earlier research.

Scientists, governments, activists and news sites, including [Inside Climate News](#) and [the Los Angeles Times](#), several years ago reported that "Exxon knew" about the science of climate change since about 1977 all while publicly casting doubt. What the new study does is detail how accurate Exxon funded research was. From 63% to 83% of those projections fit strict standards for accuracy and generally predicted correctly that the globe would warm about .36 degrees (.2 degrees Celsius) a decade.

The Exxon-funded science was "actually astonishing" in its precision and accuracy, said study co-author Naomi Oreskes, a Harvard science history professor. But she added so was the "hypocrisy because so much of the Exxon Mobil disinformation for so many years ... was the claim that climate models weren't reliable."

Study lead author Geoffrey Supran, who started the work at Harvard and now is an environmental science professor at the University of Miami, said this is different than what was previously found in documents about the oil company.

"We've dug into not just the language, the rhetoric in these documents, but also the data. And I'd say in that sense, our analysis really seals the deal on 'Exxon knew'," Supran said. It "gives us airtight evidence that Exxon Mobil accurately predicted global warming years before, then turned around and attacked the science underlying it."

The paper quoted then-Exxon CEO Lee Raymond in 1999 as saying future climate "projections are based on completely unproven climate models, or more often, sheer speculation," while his successor in 2013 called models "not competent."

Exxon's understanding of climate science developed along with the broader scientific community, and its four decades of research in climate science resulted in more than 150 papers, including 50 peer-reviewed publications, said company spokesman Todd Spittler.

"This issue has come up several times in recent years and, in each case, our answer is the same: those who talk about how 'Exxon Knew' are wrong in their conclusions," Spittler said in an emailed statement. "Some have sought to misrepresent facts and Exxon Mobil's position on climate science, and its support for effective policy solutions, by recasting well intended, internal policy debates as an attempted company disinformation campaign."

Exxon, one of the world's largest oil and gas companies, has been the target of numerous lawsuits that claim the company knew about the damage its oil and gas would cause to the climate, but misled the public by sowing doubt about climate change. In the latest such lawsuit, New Jersey accused five oil and gas companies including Exxon of deceiving the public for decades while knowing about the harmful toll fossil fuels take on the climate.

Similar lawsuits from New York to California have claimed that Exxon

and other oil and gas companies launched public relations campaigns to stir doubts about climate change. In one, then-Massachusetts Attorney General Maura Healey said Exxon's public relations efforts were "reminiscent of the tobacco industry's long denial campaign about the dangerous effects of cigarettes."

Oreskes acknowledged in the study that she has been a paid consultant in the past for a law firm suing Exxon, while Supran has gotten a grant from the Rockefeller Family Foundation, which has also helped fund groups that were suing Exxon. The Associated Press receives some foundation support from Rockefeller and maintains full control of editorial content.

Oil giants including Exxon and Shell were accused in congressional hearings in 2021 of spreading misinformation about climate, but executives from the companies denied the accusations.

University of Illinois atmospheric scientist professor emeritus Donald Wuebbles told The Associated Press that in the 1980s he worked with Exxon-funded scientists and wasn't surprised by what the company knew or the models. It's what science and people who examined the issue knew.

"It was clear that Exxon Mobil knew what was going on," Wuebbles said. "The problem is at the same time they were paying people to put out misinformation. That's the big issue."

There's a difference between the "hype and spin" that companies do to get you to buy a product or politicians do to get your vote and an "outright lie ... misrepresenting factual information and that's what Exxon did," Oreskes said.

Several outside scientists and activists said what the study showed about

Exxon actions is serious.

"The harm caused by Exxon has been huge," said University of Michigan environment dean Jonathan Overpeck. "They knew that fossil fuels, including oil and natural gas, would greatly alter the planet's climate in ways that would be costly in terms of lives, human suffering and economic impacts. And yet, despite this understanding they choose to publicly downplay the problem of climate change and the dangers it poses to people and the planet."

Cornell University climate scientist Natalie Mahowald asked: "How many thousands (or more) of lives have been lost or adversely impacted by Exxon Mobil's deliberate campaign to obscure the science?"

Critics say Exxon's past actions on climate change undermine its claims that it's committed to reducing emissions.

After tracking Exxon's and hundreds of other companies' corporate lobbying on climate change policies, InfluenceMap, a firm that analyzes data on how companies are impacting the climate crisis, concluded that Exxon is lobbying overall in opposition to the goals of the Paris Agreement and that it's currently among the most negative and influential corporations holding back climate policy.

"All the research we have suggests that effort to thwart climate action continues to this day, prioritizing the oil and gas industry value chain from the "potentially existential" threat of climate change, rather than the other way around," said Faye Holder, program manager for InfluenceMap.

"The messages of denial and delay may look different, but the intention is the same."

**More information:** G. Supran, Assessing ExxonMobil's global warming projections, *Science* (2023). [DOI: 10.1126/science.abk0063](https://doi.org/10.1126/science.abk0063).  
[www.science.org/doi/10.1126/science.abk0063](https://www.science.org/doi/10.1126/science.abk0063)

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