

Big oil firms knew of dire effects of fossil fuels as early as 1950s, memos show

Newly unearthed documents contain warning from head of Air Pollution Foundation, founded in 1953 by oil interests

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Oil refinery in Baton Rouge, Louisiana, owned by ExxonMobil, is the second largest in the country. Photograph: Barry Lewis/In Pictures/Getty Images

Major oil companies, including Shell and precursors to energy giants Chevron, ExxonMobil and BP, were alerted about the planet-warming effects of fossil fuels as early as 1954, newly unearthed documents show.

The warning, from the head of an industry-created group known as the Air Pollution Foundation, was revealed by [Climate Investigations Center](#) and [published Tuesday](#) by the climate website DeSmog. It represents what may be the earliest instance of big oil being informed of the potentially dire consequences of its products.

“Every time there’s a push for climate action, [we see] fossil fuel companies downplay and deny the harms of burning fossil fuels,” said Rebecca John, a researcher at the Climate Investigations Center who uncovered the historic memos. “Now we have evidence they were doing this way back in the 50s during these really early attempts to crack down on sources of pollution.”

The Air Pollution Foundation was founded in 1953 by [oil interests](#) in response to public outcry over smog that was blanketing Los Angeles county.



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Researchers had identified hydrocarbon pollution from fossil fuel sources such as cars and refineries as a primary culprit and Los Angeles officials had begun to proposal pollution controls.

The Air Pollution Foundation, which was primarily funded by the lobbying organization Western States Petroleum Association, publicly claimed to want to help solve the smog crisis, but was set up in large part to counter efforts at regulation, the new memos indicate.

It's a commonly used tactic today, said Geoffrey Supran, an expert in climate disinformation at the University of Miami.



A gas flare from the Shell Chemical LP petroleum refinery burns against the sky in Louisiana. Photograph: Drew Angerer/Getty Images

“The Air Pollution Foundation appears to be one of the earliest and most brazen efforts by the oil industry to prop up a ... front group to exaggerate scientific uncertainty to defend business as usual,” Supran said. “It helped lay the strategic and organizational groundwork for big oil’s decades of climate denial and delay.”

Then called the Western Oil and Gas Association, the lobbying group provided \$1.3m to the group in the 1950s – the equivalent of \$14m today – to the Air Pollution Foundation. That funding came from member companies including Shell and firms later bought by or merged with ExxonMobil, BP, Chevron, Sunoco and ConocoPhillips, as well as southern California utility SoCalGas.

The Air Pollution Foundation recruited the respected chemical engineer Lauren B Hitchcock to serve as its president. And in 1954, the organization – which until then was arguing that households incinerating waste in backyards was to blame – asked Caltech to submit a proposal to determine the main source of smog.

In November 1954, Caltech submitted its proposal, which included crucial warnings about the coal, oil, and gas and said that “a changing concentration of CO₂ in the atmosphere with reference to climate” may “ultimately prove of considerable significance to civilization”, a memo previously uncovered by John shows. The newly uncovered documents show the Air Pollution Foundation shared the warning with the Western Oil and Gas Association’s members in March 1955.

In the mid-1950s, climate researchers were beginning to understand the planet-heating impact of fossil fuels, and to discuss their emergent research in the media. But the newly uncovered Air Pollution Foundation memo represents the earliest known cautionary message to the oil industry about the greenhouse effect.

The Air Pollution Foundation’s board of trustees, including representatives from SoCalGas and Union Oil, which was later acquired by Chevron, approved funding for the Caltech project. In the following months, foundation president Hitchcock advocated for pollution controls on oil refineries and then testified in favor of state-funded pollution research in the California Senate.

Hitchcock was reprimanded by industry leaders for these efforts. In an April 1955 meeting, the Western Oil and Gas Association told him he was drawing too much “attention” to refinery pollution and conducting “too broad a program” of research. The Air Pollution Foundation was meant to be “protective” of the industry and should publish “findings which would be accepted as unbiased”, meeting minutes uncovered by John show.

After this meeting, the foundation made no further reference to the potential climate impact of fossil fuels, publications reviewed by DeSmog suggest.

“The fossil fuel industry is often seen as having followed in the footsteps of the tobacco industry’s playbook for denying science and blocking regulation,” said Supran. “But these documents suggest that big oil has been running public affairs campaigns to downplay the dangers of its products just as long as big tobacco, starting with air pollution in the early-to-mid-1950s.”

In the following months, many of the foundation’s research projects were scaled back or designed to be conducted in direct partnerships with lobbying groups. Hitchcock resigned as president in 1956.

Last year, the largest county in Oregon sued the Western States Petroleum Association for allegedly sowing doubt about the climate crisis despite longstanding knowledge of it.

DeSmog and the Climate Investigations Center previously found that the Air Pollution Foundation underwrote the earliest studies on CO₂ conducted in 1955 and 1956 by renowned climate scientist Charles David Keeling, paving the way for his groundbreaking “Keeling Curve,” which charts how fossil fuels cause an increase in atmospheric carbon dioxide.

Other earlier investigations have found that major fossil companies spent decades conducting their own research into the consequences of burning coal, oil and gas. One 2023 study found that Exxon scientists made “breathtakingly” accurate predictions of global heating in the 1970s and 1980s, only to then spend decades sowing doubt about climate science.

The newly unearthed documents come from the Caltech archives, the US National Archives, the University of California at San Diego, the State University of New York Buffalo archives and Los Angeles newspapers from the 1950s.

The Western States Petroleum Association and the American Petroleum Institute, the top US fossil fuels lobby group, did not respond to requests for comment.