

# Oil companies in West Texas dumping methane without permits, study finds

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An oil pumpjack works at dawn in the Permian Basin oil field on January 20, 2016 in the oil town of Andrews, Texas. | Spencer Platt/Getty Images

The vast majority of the oil wells in western Texas belching the greenhouse gas, methane, into the atmosphere are doing so without a permit and in many cases, without the company operating the well even tracking the amount released, according to a new study published Thursday.

[The study from the environmental group Earthworks](#) paints a picture of intentional, nearly unrestrained methane emissions from drillers working the biggest oil producing region in the United States — charges that some companies named in the report denied. The problem, in a state the federal government has said [contributes half of the country's methane emissions](#), poses a major challenge to President Joe Biden's pledge to cut the country's methane emissions by half by 2030, experts say.

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Earthworks collected data taken from three helicopter flights environmental group Environmental Defense Fund took with methane-detecting sensors over parts of the Permian Basin, a massive geological formation that is the heart of U.S. oil production, over January, March and June 2020. The flyovers detected 227 flare stacks — the towers to burn methane from nearby wells — were operating during at least one of the flights. Cross-checking the stacks' location with state records, the group found that 84 percent of them were operating without the required permit from the Texas Railroad Commission, the agency charged with regulating the state's oil industry.

The findings show that regulators are vastly undercounting how much methane is being burned into the atmosphere, Earthworks Senior Field Advocate Sharon Wilson said. Many of the stacks are spouting methane without volume measurements taken, meaning neither the commission nor anyone else can be sure how much of the gas is actually entering the atmosphere.

"The commission] just depends on the industry's good faith and good behavior and they don't keep up with anything," Wilson said in an interview. "Their objective is to permit as many holes as fast as they can, and after that they don't know what's happening."

The violations come even as the commission has exponentially increased the permits it has approved, from barely more than a hundred in 2008 to nearly 7,000 in 2019.

Methane is a particularly potent greenhouse gas that traps more heat than carbon dioxide, though it doesn't last as long in the atmosphere. Biden has little chance to meet his climate pledge without tackling Texas, a state from which even [satellites in space can see the gas billowing](#) from its oil fields, Wilson added.

"There is no way," Wilson said. "Even the satellites are just showing how much gas is just blasting out everywhere."

The commission, which had seen a draft of the study, says it has "flaws."

The commission's spokesperson Andrew Keese said it had found 36 permits for stacks cited in the report, but did not answer follow-up questions on how many of those were for the 35 sites already mentioned in the report as being permitted.

Other flaring and venting might not need a permit, Keese added, including for "fugitive emissions" and "blowdown gas during construction, maintenance, or repair." Earthworks said none of those circumstances were likely to apply to the flaring captured in the helicopter data.

The commission and Texas oil production in general have become a flashpoint for not only environmental groups who warn that the state's methane emissions are a major factor in causing more extreme weather. The decisions from the RRC's three commissioners — two of whom on the record as denying the human role in causing climate change — have come under the international spotlight as [European countries turn increasingly skeptical](#) that the U.S. gas industry is as clean as its proponents say.

The flyovers found methane coming from stacks operated by a range of companies, from small independents to name-brand international companies that have pledged to cut their methane emissions.

Diamondback Energy was the company found to have the most unpermitted activity in the study, with none of its 21 stacks identified in the sample found to have the proper permits. Mewbourne, a Texas company whose founder's name adorns the energy school at the University of Oklahoma, was running 14 flares without a permit. Neither company responded to inquiries.

Devon Energy, an independent driller found to have 17 of its 19 identified flares active during the period operating without a permit, said some of its flaring in the Permian doesn't meet the permit requirements.

"Devon requests exceptions to flare in circumstances that require it, but in some cases the volume flared does not meet the threshold or operational circumstances that specifically require an exception," Devon spokesperson Lisa Adams said in an email.

But larger companies that have pledged to reduce their emissions were also found in the mix. Six of the eight stacks run by Exxon Mobil, which has [pledged to reduce its flaring](#) in the next several years, were operating without a permit, according to the study. Shell, the European company that has promoted the idea of its reaching net-zero carbon emissions by 2050, had no permits for its eight active flare stacks found in fly-bys, the study found.

Occidental Petroleum, which the study found to have permits for six of the 20 flare stacks found to be active at the time of the fly-bys, said one stack was flaring because of a storm-related power outage and the others were not subject to the commission's permit rule.

Shell spokesperson Natalie Gunnell said the company was not operating its flares without a permit. By company measurements, Shell since 2017 has reduced flaring by more than 80 percent even as it has more than doubled increasing production of its operated assets, Gunnell said.

"Shell takes methane emissions reduction very seriously and is dedicated to conducting operations in a safe and environmentally responsible manner," Gunnell said. "We cannot make the case for natural gas playing a pivotal role in the energy transition if methane emissions go

unchecked."

Exxon spokesperson Julie King called the study results "inaccurate and deliberately misleading," adding that "some flaring is exempt or pre-authorized" per Texas flaring rules.

It's not just the flaring stacks causing emissions. Some companies in the Permian [may emit methane without a permit](#), experts say, as natural gas has become so cheap that storing and transporting might cost more than the gas is worth on the market.

[In video footage submitted to Texas regulators](#) and shared by Earthworks, Texas oil producer MDC Texas was found to have holes drilled in the tops of more than a dozen storage tanks, allowing the natural gas to escape into the air without having sought a permit.

[In an investigative report](#), the Texas Commission on Environmental Quality, the state agency charged with regulating air emissions, noted that MDC Texas had never sought a permit to drill the holes in the storage tanks. After hearing from regulators, the company "plugged all drilled holes in the 18 tanks after finding 16 tank hatches leaking on June 17," the TCEQ report states.

MDC did not respond to questions.

The commission last year promised to crack down on flaring. But it's main response was to ask companies to be more specific when offering reasons why it couldn't store the gas.

That solution means little if the commission or other state regulators don't send more people in the field to check if flares are burning gas only when they're supposed to be, said Gunnar Schade, an associate professor at Texas A&M University focusing on air pollution not involved with the study.

"They haven't cracked down on flaring," Schade said in an interview. "What they're doing is making extra lawyer hours. What's now required isn't anything in the field, it's [companies] doing more paperwork."

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*CORRECTION: An earlier version of this report misattributed data used in the Earthworks study.*

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