

FLARING Oil Dynamics to Dictate Permian Flaring Despite Rising Gas Prices

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As oil and gas companies demonstrate progress in lowering the emissions intensity of their operations, experts argue public pressure and high natural gas prices may not be enough to solve the methane waste problem plaguing the Permian Basin. Instead, oil market dynamics will continue to govern industry-wide gas flaring volumes until regulators step in.

As West Texas Intermediate oil prices have climbed over \$72 per barrel, natural gas prices at Waha Hub, a key pricing point for Permian gas production, have climbed to over \$5 per million Btu even after an Aug. 15 explosion on El Paso Pipeline's South Mainline in Arizona, which carries gas from West Texas production areas to markets in Southern California, limiting transmission capacity **COOKIE SETTINGS** t even \$5 gas has no value to an operator that cannot get it to market. Most flaring in recent years happens at leases that sell at least 25% of their gas, according to *The Economics of Natural Gas Venting, Flaring and Leaking in U.S. Shale: An Agenda for Research and Policy*, a paper updated in July by a trio of economists at the Colorado School of Mines, Louisiana State University and the University of California at Davis. That suggests producers are likely flaring to cope with gathering and processing constraints upstream of the interstate transmission system, one of the paper's authors, UC Davis' Mark Agerton, told Energy Intelligence last week.

To resolve that problem, Agerton said, "You can build infrastructure, which will take time. Or you can slow production and keep the gas in the ground until you can sell it tomorrow. In my mind, if [a producer] can make money from high oil prices, [it] would rather accelerate those oil revenues because they're going to be worthless tomorrow. I don't see a lot of rationale for producers to slow down drilling so that they can sell gas tomorrow."

According to Texas Railroad Commission data, as gas production averaged 11.8 billion cubic feet per day and oil production averaged 3.4 million barrels per day in the Texas Permian in 2019, flaring averaged 469 million cubic feet per day with averages above 556 MMcf/d in both January and August of that year. Since then, oil production declines and increased takeaway capacity have lowered flaring. In 2020, with gas production volumes climbing to an average of 12.9 Bcf/d and oil production volumes remaining at 3.4 million b/d, flaring volumes declined to 260 MMcf/d. Year-to-date through May, flaring volumes have averaged 177 MMcf/d as gas production volumes have averaged 12.5 Bcf/d and oil production volumes have declined to 3.2 million b/d.

The declines might reflect the industry's response to public pressure that had some oil majors calling for federal <u>methane regulations</u> even as the Trump administration worked to roll them back. But it might be that they do not reflect all of the gas operators are flaring.

"I don't want to call it a chasm, but there's a gap between what companies and governments are reporting ... and what's being picked up by sensors and monitoring," Jim Krane, an energy researcher at Rice University's Baker Institute for Public Policy, said last week.

Meanwhile, the industry is trumpeting a recent study showing that some operators are doing a better job at capturing associated gas production. A report from The Environmental Partnership, a group of US oil and gas companies formed to drive improvement in the industry's environmental performance, shows that among their members, flaring volumes fell more than 50% from 2019 to 2020 while production volumes remained "consistent," and flaring intensity, or the proportion of gas flared to gas-equivalent production, fell from 3.04% to 1.49%.

An analysis of flaring intensity at first-year wells by BTU Analytics also showed broad improvement, but found that the practice of flaring was becoming concentrated among smaller, privately held operators that don't face as much public pressure to improve their emissions profile. According to the analysis, oil majors reduced flaring intensity by 82% to less than 1% intensity, while other public companies reduced intensity by 68% to just over 1%.

Private equity-backed operators reduced flaring intensity by 39% to around 2.75%, while other private operators reduced flaring intensity by 40% to just over 4%.

The progress larger companies are showing might reflect a shuffling of assets rather than a change in **COOKIE SETTINGS** 'ease level, Krane.

"Some of the majors and the larger producers are cognizant of the public pressure on flaring and on methane, and so they are selling off their more polluting assets to clean up their portfolios and reduce their carbon footprints," Krane said. "That doesn't mean that methane is not being emitted. ... It's just that the smaller companies are doing it."

Krane said slowing oil production growth, driven by uncertainty about the trajectory of the pandemic and about Opec's own production plans has driven the recent decline in flaring. "I don't think the folks on Wall Street want to push Opec into a price war footing again because it's so disastrous for the Permian. And that's having an effect on flaring," he said, adding that producers being hedged at a lower oil price might also have an impact.

"That said, we're still dealing with a really permissive regulatory environment in Texas. Market forces are really the main tool that we have to deal with flaring in Texas. Until the regulators here take it seriously and come to grips to Texas' contribution to climate change, we're just going to have to hope for high gas prices to prevent operators from wasting or getting no value from a resource."