Permian gas-flaring is much worse than previously thought

The burning and releasing of vast amounts of natural gas into the atmosphere in America’s top shale basin is much bigger than previously thought when processing plants are included, Rystad Energy found.

Research on the controversial practices of flaring and venting — described by shale pioneer Scott Sheffield as a “black eye” for the Permian Basin — has typically focused on emissions by oil producers at the wellhead.

But gas-processing facilities in the region are receiving more gas than they can handle, so they burned off or released about 190 million cubic feet per day of the fuel last year, raising the total by 30% to roughly 810 million, data from Oslo-based Rystad shows. That’s almost enough gas to supply 5 million

U.S. homes.

“With the inclusion of estimates for gas plant-related flaring, we observe a significant increase in total Permian flaring and venting compared to our previous update,” the consultancy said in a report.

The silhouette of an electric oil pump jack is seen near a flare at night in the oil fields surrounding Midland, Texas.

Flaring has become a major source of negative attention for Permian oil producers in Texas and New Mexico as concerns about greenhouse-gas emissions and climate change grow among consumers and investors. Permian drillers burn or release the gas that comes out of wells as an unwanted byproduct because they lack pipelines to send it where it’s needed.

Rystad, a leading provider of flaring and venting data, uses information from the U.S. Environmental Protection Agency, the Texas Railroad Commission, which regulates oil and gas in the state, and its own estimates.

Ryan Sitton, one of the regulator’s three commissioners, plans to release a first-of-its-kind report on flaring next week to give the public better information. The commission’s reporting has been criticized as “outdated” and “difficult-to-manipulate” by the Environmental Defense Fund.

The dearth of good-quality data means that total flaring volumes are likely underreported, according to Rystad. Of the Permian’s 50 smallest operators, only seven posted any flaring at all, meaning there are “obvious gaps” in the data, the consultancy said.

“This implies energy regulators might need to enforce better waste gas reporting standards to ensure that the market has sufficient fact-based visibility on the total volume of flared gas in the Permian,” Rystad said.

Texas regulators have come under pressure from environmentalists and some larger oil producers for allowing the industry to burn off gas at record levels in the Permian. While safer and cleaner than letting methane vent unchecked into the air, flaring produces carbon dioxide and wastes a useful resource. Opponents say producers should not be allowed to flare at will, and should not be allowed to drill wells unless they have a plan for their gas.

Click here for more on the commission's planned report

The Texas Railroad Commission says the increased flaring is primarily a result of surging crude production in the basin. The amount of gas flared as a portion of total production in Texas is much lower than other major oil producers such as Russia or states like North Dakota, Sitton said last week.

Still, if the Permian were a country, it would have ranked ninth for total volume of flared gas in 2018, ahead of Mexico and Angola and just behind Libya.

Including processing plants, the Permian flares about 5.5% of its gas, down slightly from a year ago, Rystad said.
– With assistance by Rachel Adams-Heard