

# US Rolls Back Regulation but the Oil Industry Moves Forward

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## Instant Insight

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On August 28, 2019, the United States (U.S.) Environmental Protection Agency (EPA) proposed a series of amendments to Obama-era environmental regulations covering greenhouse gas (GHG) emissions that it claims will save the oil and gas industry millions of dollars in compliance costs. However, the measures, part of the Trump administration's attempt to roll back existing environmental standards, are largely cosmetic and the oil industry has responded with a notable lack of enthusiasm. If anything, they highlight the efforts made in recent years to improve the industry's GHG emissions.

The proposed amendments to the 2012 and 2016 New Source Performance Standards (NSPS) for the oil and natural gas industry effectively relieve the industry from having to monitor and control emissions from the transmission and storage segment of the business. Companies no longer have to worry about ozone-forming gases known as volatile organic compounds (VOCs) and GHGs, particularly methane, the principal component of natural gas. More importantly, the EPA proposes rescinding the methane requirements in the 2016 NSPS relating to the upstream production and processing segments of the industry while retaining limits on other VOCs. In short, the EPA appears to be telling the industry that it no longer has to worry about methane emissions.

As the key component of natural gas, methane is produced onshore or offshore and distributed to consumers by pipelines, trucks and ships. It is also present when oil is produced, sometimes in large amounts that can be marketed or used, and sometimes in smaller amounts as a by-product. Methane emissions from the oil and gas industry largely come from three sources:

- Venting – the planned release of gas, used in situations where neither re-injection nor utilization are seen as feasible, or for unplanned emergency safety purposes.
- Incomplete combustion, including flaring where the gas is burnt off in the absence of infrastructure to collect and use it.
- Fugitives – unplanned releases in the form of leakages from equipment such as valves and pumps.

While carbon dioxide (CO<sub>2</sub>) is the main greenhouse gas and the focus of most discussions at the United Nations Framework Convention on Climate Change's (UNFCCC's) Conference of the Parties, manmade methane emissions – from agriculture, energy and waste – also play a significant role in climate change. According to the Intergovernmental Panel on Climate Change, methane in the atmosphere causes around a quarter of the current level of global warming, even though it has a much shorter atmospheric lifetime than CO<sub>2</sub>. Typically, methane degrades after around a decade. As a result, reducing methane emissions represents a quick win that can have an almost immediate positive impact on limiting global warming. According to the International Energy Agency, the energy and agricultural sectors are the largest emitters of manmade methane emissions.

Most oil and gas companies recognize that they need to minimize, if not eliminate, methane emissions that occur during the course of their operations. In 2018, the thirteen oil and gas companies that are part of the Oil and Gas Climate Initiative (OGCI) announced their intention to move toward near-zero methane emissions. These companies, which together account for 30% of global oil and gas production, agreed to a target to reduce methane intensity in the group's aggregate upstream gas and oil operations by more than

one-fifth, from 0.32% to 0.25% in 2025, with the ambition of achieving 0.20%. By reducing their collective methane emissions, the group will account for approximately 600,000 tonnes of methane reductions annually by the end of 2025.

OGCI companies are not only focusing on their own upstream production facilities. They are also working toward near-zero methane emissions from the full gas value chain, including transport and distribution to final customers (downstream). The EPA is proposing loosening the regulations on methane emissions in these segments, which the OGCI companies neither own nor control.

In recent years, oil and gas companies – including but not limited to the OGCI consortium – have spent many hundreds of millions of dollars in reducing methane emissions. In many cases, such measures have commercial benefits. After all, methane is a valuable commodity that is easily monetized. For example, Saudi Aramco stopped almost all flaring of gas produced alongside its oil extraction as early as 1980 and began recovering it for other higher value applications, significantly reducing emissions at its operations. Now, after years of infrastructure investment, the gas is captured and used to diversify the domestic energy mix and support the petrochemical industry. Incomplete flaring is now a relatively small source of methane emissions, and Aramco's focus has shifted to controlling fugitive emissions. It is implementing a leak detection and repair (LDAR) program designed to identify leaks from components such as valves, flanges, pump seals, sampling connections, compressors, pressure relief valves, and so on. This program aims to reduce emissions by conducting repairs at specified locations at regular intervals, and within specified time frames. LDAR involves detailed process analysis, tagging millions of components, performing field surveys, repairing leaking equipment and verifying the outcome of repair results. Aramco is now assessing and introducing new methane monitoring technologies, including thermal cameras and laser detection and quantification sensors.

Aramco's vapor recovery program extends beyond methane to other VOCs, an area where the EPA is loosening regulations. VOCs can be carcinogenic and are powerful GHG ozone-forming emissions. Ozone is formed when VOCs and nitrogen oxides react in the atmosphere in the presence of sunlight. Aramco is installing vapor control and recovery systems at all its bulk loading sites.

The EPA's regulatory impact analysis estimates that the proposed amendments would save the oil and natural gas industry between \$17 million and \$19 million a year, or between \$97 million and \$123 million from 2019 through 2025. For an industry that spends many billions of dollars, this is negligible, but it sends a signal that the oil and gas industry can let up on its ongoing voluntary efforts. This is not an offer that reputable industry players will want to take up. Indeed, some of the U.S. majors who have publicly committed to reducing their emissions have voiced opposition to the proposal. They will be irked that it gives a competitive advantage to smaller and more unscrupulous operators, particularly in the shale business, willing to operate with lower environmental standards.

The EPA says it will accept comments on all aspects of the proposed amendments for 60 days after they are published in the U.S. Federal Register and will hold a public hearing on the proposed amendments in Texas. Support for the measure from established industry players is likely to be muted.



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