

EPA Doubles Down with Expansive New Methane Regulation

Rule Issuance Presages More to Come for Oil and Gas Industry

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The Obama administration took two major steps in implementing its comprehensive climate change strategy this month, setting first-ever methane emissions standards for new, reconstructed and modified sources and simultaneously beginning a process to regulate existing methane emissions sources.

On June 3, EPA published in the Federal Register a far-reaching, first-ever set of methane regulations capping methane and other emissions from new and modified direct and fugitive emissions sources in the oil and gas industry. EPA also began an information-gathering process to inform the anticipated development of regulations for existing methane sources. EPA has said methane has a global warming potential 25 times greater than carbon dioxide over 100 years¹, while the Intergovernmental Panel on Climate Change (IPCC) has concluded that methane's potency may be 86 times greater than carbon dioxide over 20 years and 34 times greater over 100 years.² EPA's new and emerging methane rules for the oil and gas industry reflect a coordinated and comprehensive federal strategy to implement the President's 2013 Climate Action Plan, which addresses the challenges of climate change across various sectors of the economy.

- The new source rule:
 - Requires "green completions" for hydraulically fractured oil and gas wells;
 - Sets express methane emissions standards;
 - Builds on EPA's 2012 VOCs rule (that had the incidental effect of reducing methane emissions as well) by covering new oil wells and covering a broader range of equipment;

¹ <https://www3.epa.gov/climatechange/ghgemissions/gases/ch4.html>

² Intergovernmental Panel on Climate Change: Fifth Assessment Report, https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_Chapter08_FINAL.pdf

- Sets a fixed schedule for monitoring leaks; and
 - Includes low-production wells.
- Rules for existing sources are not expected until 2017. Like the new source rule, they will probably be comprehensive, with few exemptions. Compliance is expected to be costly, and a significant number of older oil and gas wells could be forced to shut down.

The Heart of EPA's Final Rule—Regulating Methane and VOC Emissions from New Oil and Gas Facilities: Full-Sector Application, Steep Emissions Reductions, Frequent Monitoring Regime, and Green Completion

On May 12, 2016, EPA released a final rule³ amending the New Source Performance Standards (NSPS) under the Clean Air Act to set methane emissions limits for new and modified emissions sources within the oil and gas sector. The new rule, published in the Federal Register on June 3, 2016, also expands on EPA's 2012 rule regulating volatile organic compounds (VOCs) emissions at hydraulically fractured natural gas wells.⁴ While the 2012 VOC rules did not expressly target methane, EPA has acknowledged that it intended for them to incidentally reduce methane emissions from various sources at gas well sites, production gathering and boosting stations, natural gas processing plants, and storage tanks at gas compressor stations. In fact, EPA estimated the 2012 rule would reduce methane emissions by 1 to 1.7 million short tons annually once fully implemented.

In the new rule, EPA asserts the position that “in light of the current and projected future GHG emissions from the oil and natural gas industry, reducing GHG emissions from [methane] should not be treated simply as an incidental benefit to VOC reduction.” EPA has therefore focused on directly reducing methane emissions at gas and oil wells and fugitive emissions (equipment leaks) from well sites, gathering and boosting stations, gas compressor stations, and gas processing plants.

A key feature of the new rule is expanded requirements to use reduced emissions completions (RECs), also known as green completions, to ensure that methane is captured during the hydraulic fracturing of wells. These “green completions” utilize equipment at the wellhead which separates the initial flowback following the hydraulic fracturing of a well into gas, solids and liquids, thus allowing the gas to be captured and put to beneficial use rather than vented into the atmosphere. Natural gas producers are currently required to use “green completion” to capture VOCs at the well under the 2012 rule. The new rule requires both gas and oil wells to use green completions to capture methane, and not just VOCs.⁵ Operators must generally route flowback from hydraulic fracturing to a separator, unless it is shown to be technically infeasible. Once the separator begins to function, a green completion, including routing gas to a collection system, re-injecting the gas into a well, or using the gas onsite as a fuel or for another normal purpose must be used. Once production begins, or the well is disconnected, the use of a green completion is no longer required.



³ <https://federalregister.gov/a/2016-11971> 40 CFR part 60, subpart OOOOa.

⁴ <https://www.gpo.gov/fdsys/pkg/FR-2012-08-16/pdf/2012-16806.pdf>. 40 CFR Parts 60 and 63.

⁵ EPA's final rule on existing sources of methane and other emissions from the oil and gas sector was issued the same day the Agency released its final rule on when it will aggregate multiple emission sources to determine if they should be treated as a single, major source of emissions. An overview of this rule and its likely impact is summarized in the Pillsbury client alert available [at this link](#). Taken together, a new nonadjacent facility may now be considered a major source, and therefore subject to the methane and VOC emission requirements, if it is within a quarter mile from another facility and shares common tankage or facilities.

All regulated sources must now implement fugitive emissions controls for preventing methane and VOC emissions. Only gas processing plants are already required to monitor and repair certain equipment leaks. Under the new requirements, well sites must be monitored bi-annually for leaking and compressor stations must be monitored quarterly. Monitoring can be accomplished via optical gas imaging, Method 21 for VOC emissions from process equipment, or via alternative technologies approved by EPA. Any leaks must be fixed within 30 days of discovery.

EPA was expected to exempt low-production wells from the fugitive emissions control requirements but did not do so in the final rule. EPA cited DrillingInfo data showing that 30 percent of gas wells and 43 percent of oil wells are low-production. Exempting low-production wells, EPA concluded, would omit too many sources. In addition, EPA disagreed with arguments that green completion costs would be higher for small operators, who are often the ones to pursue low-production wells, and therefore applied the green completion requirements across the board as well. As such, for some low-production wells the compliance costs may well exceed income, and they simply will not be drilled.

EPA estimates the new rule will cost industry \$640 million through 2025, offset partially by \$110 million in expected revenues from enhanced product recovery during that period. At the same time, EPA expects the new rule to reduce methane emissions by 510,000 short tons in 2025, a relatively modest reduction compared to the 2012 rule which did not even directly regulate methane emissions.

Existing Sources Targeted Next: Information Collection Requests Planned for Existing Sources, Emission Reduction Technologies and Processes, and Costs

EPA's next step will be a comprehensive rule targeting existing methane sources, a major extension of EPA's reach into an area that has generally been exclusively within the states' regulatory province. And, if EPA's approach to existing sources is as comprehensive as its new source rule, industry can expect that a very large number of wells and other facilities will be affected. While the value of captured methane may offset some of the compliance costs, a rule regulating existing sources will undoubtedly reduce operating margins at a time when the industry is financially distressed. Indeed, a report commissioned by ONE Future, a coalition of natural gas companies, estimates that methane capture from existing sources will cost the natural gas industry \$3.35 for every thousand cubic feet of methane reduced. This figure is substantially in excess of the figure of 66 cents, the estimate from the Environmental Defense Fund. The increased costs associated with this federal regulatory action could force the shutdown of a significant number of wells.

Like the highly debated Clean Power Plan, the existing source rule will be promulgated under Section 111(d) of the Clean Air Act. In contrast to the new source rules, the existing source programs will be state-based. In effect, EPA will establish the standards, and the states will be responsible for designing and implementing programs that meet the standards. As a first step, on May 12, 2016, EPA published a draft two-part Information Collection Request (ICR), setting out a process by which the agency plans to gather a complete library of information about sources and emissions reductions technologies and processes. EPA acknowledges that it has insufficient information at this juncture to develop a viable control regime. The Agency noted that, while it is already collecting information on greenhouse gas emissions from oil and gas facilities under its Greenhouse Gas Reporting Program (GHGRP), that program does not collect information on design, performance and costs of emission controls and does not include all facilities, and so it is insufficient to determine the number of affected facilities or the facility-level impact of various potential emissions control scenarios and technologies.

Part 1 will be aimed at identifying all facility types and the number and types of equipment at each. It will essentially be a census mailed to all 22,500 known operators by October 30, 2016. Owner/operators will have 30 days to respond. EPA will then use the Part 1 information to categorize all potentially affected oil and gas production facilities.

For Part 2, EPA plans to gather facility- and equipment-specific information on emission sources and controls, including devices and processes. EPA acknowledges that it has insufficient information at this juncture to develop a viable control regime. As drafted, Part 2 will not require respondents to conduct studies to test various emissions controls, and it will not be limited to those facilities that already have controls. Rather, Part 2 aims to give EPA a representative picture of the types of existing facilities and equipment in operation, the methane they are emitting, and what, if anything, sources are using to measure and control emissions.

The Part 2 survey will be sent to approximately 3,400 respondents. Part 2 respondents will be selected based on a to-be-determined statistical sampling method intended to capture a representative cross-section of facilities from the various industry segments. Targeted segments specifically include onshore production, gathering and boosting, processing, compression/transmission, pipeline, natural gas storage, and liquefied natural gas storage and import/export facilities. The ICR will expressly exclude the natural gas local distribution industry segment and offshore facilities.

EPA did not specify when it will send the Part 2 survey to the selected respondents, apparently giving EPA time to assimilate the data gathered from the Part 1 survey. It did note, however, that respondents selected for Part 2 of the survey will have 120 days to respond.

EPA estimates that the total industry cost to respond to the ICR is approximately \$40M. This estimate is based on EPA's assumption that most of the information requested under Part 2 will be available from company records and will not require additional measurements to be performed. However, EPA will require respondents to collect the requested information if they do not already have it.

While the requirements of EPA's new source standards for methane emissions will go into effect in the near future, the future regulation of existing sources will not occur until the next Administration. Nevertheless, it is clear that EPA Administrator Gina McCarthy is making good on her promise that the agency will "take action where it can" and "move as quickly as we can."

Emerging Methane Regulation Coincides with EPA's Plans for Continued Greater Scrutiny of the Oil and Gas Sector

These EPA actions, along with additional actions on methane by other federal agencies such as the Department of the Interior, the Pipeline and Hazardous Materials Safety Administration, and potentially the Federal Energy Regulatory Commission, as well as a burgeoning patchwork of state regulations, indicate that methane regulation could catalyze significant, near-term business changes, especially for the natural gas industry and pipeline industries. Such changes could range from investments in new and emerging methane control and reduction technologies to reducing the lifespans of low-production wells.

They also come at a time when EPA has confirmed its intention to maintain a close watch on this sector, which means additional tripwires for companies. In March of this year, EPA renewed its current enforcement initiative focused on energy extraction and production activities. Under this enforcement initiative, EPA has averaged more than 700 inspections and evaluations of energy extraction activities annually from FY 2012 to 2015. The agency has also initiated hundreds of enforcement actions under

various federal environmental statutes, some of which have resulted in millions of dollars in penalties and substantial injunctive relief.

EPA has also signaled that it will use every available tool in its technology toolbox to scrutinize this sector and other sectors. The agency expressly stated in its new round of enforcement initiatives that it intends to utilize next-generation technologies and techniques to identify and address noncompliance. These measures will include advanced monitoring and remote sensing technologies, third-party compliance audits, electronic reporting and the public release of pollution data. Such technologies, coupled with data mining and even the possibility of overflight monitoring, may provide EPA with the ability to evaluate broader swaths of facilities with greater detail than in prior years.

If you have any questions about the content of this Alert, please contact the Pillsbury attorney with whom you regularly work, or the authors below.

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