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## EPA Finalizes Emissions Standards for the Oil and Gas Industry, Including First-Ever Federal Air Standards for Hydraulic Fracturing

Natural gas production in the United States has increased significantly in recent years, in large part due to advances in drilling and extraction methods. The result has been a significant drop in natural gas prices and new interest in switching to natural gas in an effort to capitalize on the low prices.<sup>1</sup> Increased production activity has also attracted greater regulatory oversight by state and federal agencies. President Obama recently issued an executive order establishing an inter-agency working group to coordinate policies impacting shale gas development. The following issue brief examines a suite of regulations developed by EPA to address air emissions from natural gas production operations.

### Background

On April 17, 2012, Lisa Jackson, Administrator of the U.S. Environmental Protection Agency (EPA), signed regulations to control air emissions from the oil and gas industry, including the first federal air standards for hydraulically fractured wells. The new source performance standards (NSPS) for the natural gas sector were previously updated 13 years ago and only covered emissions from natural gas processing plants. The newly finalized rules update those standards and include new standards for emissions of volatile organic compounds (VOCs) from a range of sources including well completions, compressors, pneumatic controllers, and crude oil and condensate storage vessels. At the same time the Administrator signed the O&G NSPS, she also signed limits on emissions of air toxics (HAPs) from the oil and gas industry. Those standards update previous standards for glycol dehydrators and equipment leaks from natural gas processing facilities and propose new standards for glycol dehydrators at major sources.



<sup>1</sup> M.J. Bradley & Associates recently completed an assessment of the opportunities for natural gas to power U.S. marine vessels, including tugs, barges, ferries, and Great Lakes bulk carriers.

## Key Takeaways

The following discussion highlights key topics associated with the final oil and gas regulation. The rule impacts much of the natural gas value chain, including drilling, processing, transmission, and storage.

- **Delayed Operational Impacts.** The O&G NSPS requires, with certain exceptions, that fractured and refractured gas wells rely on reduced emissions completions (RECs) or green completions to reduce VOC emissions during production operations. In short, the practice captures gas produced during well completions and well workovers following hydraulic fracturing, significantly reducing the need to flare. Traditionally, affected sources would need to comply with an NSPS standard within 60 days of its publication in the Federal Register. However, during the course of the rulemaking, industry stakeholders had raised concerns about the availability of the portable equipment used to separate the gas from the solids and liquids produced during flowback. In response, the final rule phases in implementation of the REC requirement. By delaying the requirement to perform RECs until 2015, but requiring the use of combustion devices to reduce emissions in the interim, EPA has responded to industry concerns about the availability of REC equipment while at the same time ensuring an immediate reduction in emissions. In addition, EPA extended the compliance date for storage vessels (one year after publication in the Federal Register) and pneumatic controllers (one year after publication in the Federal Register).
- **No Concession on GHG Emissions Factor.** Despite repeated industry criticism, EPA did not change a key emissions factor associated with methane released from uncontrolled well completions and recompletions. However, with the requirement to control well completions using flares or RECs, EPA's future estimates of uncontrolled emissions from the natural gas sector will be significantly lower. Previously, EPA assumed only 15 percent of well completions and recompletions were controlled with RECs and 50 percent of the remainder was flared, based on state requirements.
- **Implications for Future Regulation.** EPA is moving to regulate greenhouse gas emissions under the Clean Air Act by establishing tailpipe emissions standards for cars and light trucks, permitting requirements for large industrial facilities, and NSPS standards for new power plants. Currently, EPA has no plans to establish greenhouse gas emissions standards for natural gas production activities. However, the Agency acknowledges that the O&G rule, while aimed at controlling VOC and HAP emissions, will reduce methane emissions as a co-benefit. According to EPA, the combined rule is expected to reduce methane emissions by about 1.0 million tons per year.

The new standards may impact the potential for generating greenhouse gas offset credits under emerging state and regional CO<sub>2</sub> cap and trade programs in North America.

- **VOC Threshold.** Industry stakeholders had strongly advocated for the inclusion of a "VOC threshold" to avoid regulating natural gas streams with limited or no potential for producing VOC emissions. Although EPA acknowledges that the VOC concentration in natural gas can vary across wells and reservoir types, EPA elected to regulate all natural gas streams. This could leave the Agency open to criticism and result in additional operational challenges for operators.

EPA did include some provisions aimed at improving the cost-effectiveness of the rule. For example, EPA does not require RECs for low pressure wells. EPA established an emissions threshold for storage vessels, and deferred taking final action on reciprocating and centrifugal compressors in the transmission and storage segment because of the low level of VOC emissions.

## Contacts

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