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PROPOSED METHANE RULES SHOW EPA COMING AROUND ON FRACKING

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On August 18, 2015, the U.S. Environmental Protection Agency (EPA) released its proposal to regulate methane emissions from new and modified sources in the oil and gas sector. *Oil and Gas Sector: Emission Standards for New and Modified Sources*, EPA (Aug. 18, 2015) (to be codified at 40 C.F.R. pt. 60) (hereafter, Proposed Rule). The Proposed Rule aims to support the ambitious goal announced by the Obama administration to cut methane emissions from the oil and gas sector by 40 to 45 percent of 2012 levels by 2025. To do so, the Proposed Rule employs a variety of regulatory programs to address methane emissions emanating from oil and natural gas production, processing, transmission and storage operations. However, despite all EPA has to say about methane emissions, the Proposed Rule is just as significant for what it does not say—in contrast to the recent public outcry over hydraulic fracturing, the Proposed Rule is expected to have minimal effect on this area of the American energy industry. In these authors’ opinion, EPA is wise to support the continued self-regulation of hydraulic fracturing.

Background

With nearly 30,000 new injection wells being drilled each year, hydraulic fracturing, or “fracking,” is a rapidly expanding method of oil and gas extraction that underlies the recent growth of the American energy sector. Fracking is the high-pressure injection of a mix of fluids and substances called “proppants” (usually sand) into an oil and gas reservoir, thereby fracturing the reservoir rock, and allowing otherwise inaccessible oil or gas to flow back to the well as proppants hold the fractures open. Conventional fracking techniques have been common in the United States for over 60 years. However, recent technological advances have drastically increased the amount of oil and gas accessible by fracking wells. The benefits to the American economy and environment have been remarkable.

Natural gas from underground shale deposits, for example, now constitutes roughly one-third of the country’s natural gas production, with the United States leading the world in shale gas production. Such deposits simply are not accessible without fracking. By opening new supply possibilities, fracking has been primarily responsible for the dramatic decrease in natural gas prices in the United States. Lower gas prices have helped the energy sector transition from the production and use of polluting coal technologies to relatively environmentally benign natural gas. According to Secretary of Energy Ernest Moniz, “About half of that progress we have made on [greenhouse gas emissions] is from the natural gas boom.” Moreover, fracking has driven the strong growth in domestic oil production over the past several years. Since 2012, the United States has been the world’s leading oil producer, producing more oil than it imports for the first time in nearly two decades.

Despite its essential contributions to the American energy industry, fracking has faced nearly constant criticism for its supposed negative effects on the surrounding environment. Local, state, and federal regulators, in turn, have been quick to consider draconian regulations and, in extreme cases, outright prohibitions on fracking. While much of the criticism has centered on alleged threats to groundwater, fracking has recently come under fire for contributions to American methane pollution.

Like conventional oil and gas production techniques, fracking results in the release of

methane. As EPA noted in the preamble to the Proposed Rule, EPA "is including requirements for methane emissions in this proposal because methane is a greenhouse gas (GHG), and the oil and natural gas category is currently one of the country's largest emitters of methane." Proposed Rule, at 1. EPA's concern with greenhouse gases, including methane, stems from a 2009 endangerment finding by EPA "that by causing or contributing to climate change, GHGs endanger both the public health and the public welfare of current and future generations." *Id.* Based on data from 2013, EPA estimates that nearly 29 percent of the total methane emissions in the United States come from the oil and natural gas industries. *Id.* at 350–51. This is not surprising, as such emissions are prevalent in both industries. On the one hand, when oil is produced from a reservoir, associated natural gas is produced and, if not captured or combusted, vents into the open air. The natural gas industry, on the other hand, contributes to methane emissions that "primarily result from normal operations, routine maintenance, fugitive leaks and system upsets." *Id.* at 80. Natural gas is, after all, principally composed of methane.

Development of the Proposed Methane Rule

The process that led to the development of the Proposed Rule is not entirely indicative of the final product. In the early stages, EPA appeared to single out the fracking industry. For example, it solicited peer review of its technical white paper titled *Oil and Natural Gas Sector Hydraulically Fractured Oil Well Completions and Associated Gas During Ongoing Production*, and in a published fact sheet, touted regulation of methane emissions from fracking operations as a primary benefit of the Proposed Rule. Given the public furor regularly generated by fracking, this focus was not surprising.

However, the finished product is more restrained with respect to fracking—a positive result, as even EPA's own data suggest the focus was misplaced. The most recent data from EPA's Greenhouse Gas Reporting Program indicate that the largest reduction in methane emissions since 2011 has come from hydraulically fractured natural gas wells, which experienced a 73 percent decrease in emissions reductions during the study period. Notably, the reduction in methane emissions has occurred while fracking production has been on the rise.

Balanced Final Product

Perhaps recognizing the extremely limited utility of new methane emission regulations on the fracking industry, EPA's Proposed Rule achieves emission reductions largely in non-fracking sectors. Indeed, to achieve the goals of the Obama administration, EPA is predominantly proposing controls and work practice standards for methane emissions that already are employed in the oil and gas industry pursuant to the 2012 new source performance standards for volatile organic compounds (VOCs). In fact, because the new methane regulations build on the existing regulatory program for VOCs, the methane standards will often be satisfied by the same equipment and best practices already required under the VOC program. Even for situations not already covered by the existing VOC regulatory regime, the requirements are familiar to the oil and gas industry.

While the cornerstone of the Proposed Rule is the revised performance standards addressing VOCs for new and modified oil and gas sources, EPA's regulatory plan also provides additional guidance to states on reducing VOC emissions in ozone nonattainment areas and the ozone transport region. Further, the EPA proposal includes a Source Determination rule defining "adjacent" for purposes of determining what activities or emission sources must be considered as a "group" when evaluating permitting requirements for new sources. However, neither the additional VOC guidance for nonattainment areas nor the Source Determination rule is specifically intended to regulate fracking.

Instead, the new methane regulations proposed by EPA should have a relatively limited effect on the fracking industry. As noted above, EPA has proposed an expansion of existing new source performance standards for VOCs to cover methane emissions. This expansion will affect the fracking industry in two primary ways, depending on the type of fracked well. For "hydraulically fractured gas well completions," EPA has proposed simply extending the new source performance standards for VOCs to include methane emissions. Fracked natural gas wells already are subject to the new source performance standards for VOCs and, consequently, such wells will not be substantively affected by the new methane regulations. Alternatively, for "hydraulically fractured oil well completions," EPA has proposed standards that "are the same as the requirements finalized for hydraulically fractured gas well completions" under the VOC rules. Proposed Rule, at 17.

Although the methane regulations for fracked oil wells are new, the requirements mirror the VOC regulations already in place for fracked natural gas wells. EPA's proposed requirements for new and modified fracked oil wells are twofold, depending on the subcategory of well at issue. For "non-exploratory and non-delineation wells," EPA has proposed requiring owners and/or operators to use "reduced emissions completions" (RECs). RECs are utilized by "separating flowback water, sand, hydrocarbon condensate, and natural gas to reduce the portion of natural gas and VOC vented to the atmosphere, while maximizing recovery of salable natural gas and condensate." *Id.* at 202. In essence, by requiring RECs, EPA has acknowledged the incredible value of natural gas to achieve emissions reductions by urging oil and gas producers to capture more of it. EPA has also proposed requiring "completion combustion devices," which are defined as "any ignition device, installed horizontally or vertically, used in exploration and production operations to combust otherwise vented emissions from completions." *Id.* at 571. According to EPA, use of RECs in combination with a completion combustion device should result in 95 percent reduction of both methane and VOC emissions, which EPA believes is the "option [that] maximizes gas recovery and minimizes venting to the atmosphere." *Id.* at 204.

In contrast, EPA has proposed a more limited set of requirements for "exploratory and delineation wells." In doing so, EPA recognized that RECs are not an option for such wells due to the lack of infrastructure to bring natural gas recovered from the wells to market. Thus, EPA has proposed restricting the requirements for exploratory and delineation wells to completion combustion devices, which EPA estimates should still result in a 95 percent emission reduction in the category.

Conclusion

Ultimately, EPA has proposed a narrow suite of regulations for fracking, all of which should be familiar to the oil and gas industry following implementation of the 2012 new source performance standards for VOCs. Most significantly, EPA has demonstrated a lack of concern with methane emissions from existing fracked oil and natural gas wells, as the new requirements only apply to new and modified sources. EPA's decision to limit the methane regulations to existing sources is an important victory for the oil and gas industry, as compliance costs for updating existing sources tend to be significantly higher than incorporating changes into plans for new or modified sources. By crafting such minimal regulations for methane emissions from fracked wells, EPA has once again acknowledged the environmental sustainability of the nation's most important well stimulation technique.

This is not the first time this year EPA has shown signs of accepting the value of fracking to the American economy and environment. In June, EPA aligned itself with fracking industry advocates by releasing its long-awaited assessment of the impacts of fracking on drinking water, *Assessment of the Potential Impacts of Hydraulic Fracturing for Oil and Gas on Drinking Water Sources*, EPA (June 2015). After evaluating the conceivable mechanisms by which fracking could affect

drinking water supplies, EPA found no evidence that fracking has led to widespread, systemic change in the quality or quantity of drinking water in the United States. The only evidence EPA cited of drinking water contamination came from isolated incidents, almost all of which were traceable to a small subset of fracking wells that fail to meet current industry safety standards.

However, while EPA's decision to spare the oil and gas industry from more onerous regulations is heartening, the new methane regulations do not come without a cost. Implementing REC protocols for new fracked oil well completions and installing completion combustion devices will cost the industry millions of dollars. The compliance costs associated with the Proposed Rule could not come at a worse time for the oil and gas industry, which has recently suffered through the consequences of its own success, as the falling prices of oil and natural gas have forced some contraction. EPA would be well served to heed its instincts by allowing this industry to continue its positive experience with voluntary regulation. Unnecessary regulation of the fracking industry threatens to derail the substantial economic and environmental progress that has accompanied the industry's growth.

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