



September 9, 2020

EPA's Final Methane Emissions Rule Rolls Back Standards and Statutory Authority

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On August 13, 2020, EPA released its final rules rolling back standards to control methane and VOC emissions from new oil and gas facilities. The rule lifts emissions standards for broad segments of the industry, some of which have been in place since 2012, and will result in a significant increase in expected methane, VOC, and HAP emissions in the coming years. The rule also re-interprets the Clean Air Act to attenuate EPA's authority to set pollution control standards generally, setting back and complicating future efforts by EPA to regulate methane emissions from the oil and gas sector.

The new interpretation defies both the plain meaning of the statutory language and decades of EPA precedent. EPA trades emissions reductions for a thinly supported legal theory restricting the agency's regulatory authority. This exchange suggests the new rule is designed to further an agenda of statutory re-interpretation rather than an environmental purpose – a common thread through many EPA rulemakings, especially those under the Clean Air Act. (For more discussion of how EPA has used Clean Air Act regulation to attempt to limit the scope of the statute, [see Joe Goffman and Laura Bloomer's related article](#)).

This memorandum provides background on the development of these rules, summarizes the specifics of the new final rules, and discusses some of their implications for future regulation. EELP is also developing additional legal analysis pieces on specific aspects of EPA's new rules. Visit our [website](#) to see these pieces when released or subscribe to [EELP Updates](#) to get them in your email.

BACKGROUND

In [2012](#), EPA set standards for volatile organic compounds for new hydraulically fractured and re-fractured natural gas wells and well-pad equipment that, when implemented, also resulted in reductions in methane pollution from those sources. In [2016](#), EPA issued the first rule expressly targeting methane emissions from oil and gas well-head, well pad, and transport equipment and



operations. These New Source Performance Standards were issued pursuant to Sec. 111(b) of the Clean Air Act.

EPA also issued [Control Technique Guidelines](#) in 2016 to states with moderate nonattainment areas for ozone, in effect directing them to amend their SIPs to address VOCs from existing sources via a set of controls that would also reduce methane emissions at those sources. Less than two weeks later EPA issued an [Information Collection Request \(ICR\)](#) to operators, asking them to identify ways to control methane from existing oil and gas sources. As a first step towards regulating existing oil and gas infrastructure for methane leaks, venting, and flaring under Clean Air Act Sec. 111(d), the ICR covered facilities and processes including “onshore production, gathering and boosting, gas processing, transmission, storage, and liquefied natural gas (LNG) import/export.”

With the change in administration in 2017 came a change in priorities. EPA [canceled its Information Collection Request](#) for existing oil and gas operations on March 2, 2017. On March 28, 2017, President Trump issued his “[Executive Order on Promoting Energy Independence and Economic Growth](#)” that included a directive to EPA to reconsider the 2016 methane standards for the oil and gas industry. This order also disbanded the Interagency Working Group on Social Cost of Greenhouse Gases (IWG) and withdrew the various technical documents that resulted from the IWG’s multi-year evaluations. EPA [initiated its review](#) of the 2016 NSPS in light of President Trump’s EO on April 4, 2017.

EPA Administrator Pruitt indicated in a [letter to industry](#) on April 18, 2017, that EPA would reconsider the fugitive emissions requirements at well sites and compressor stations and [granted reconsideration](#) of the well site pneumatic pump standards and the requirements for certification of closed vent systems (CVS) by a professional engineer in a June 5, 2017 notice. EPA attempted to delay implementation of its 2016 NSPS while it reviewed and reconsidered the rule that ultimately led to the [D.C. Circuit ordering EPA to enforce the 2016 methane rule](#). EPA [proposed withdrawing its Control Techniques Guidelines](#) and finalized an initial [amendment](#) to the 2016 NSPS rule to allow leaks to go unrepaired during unscheduled or emergency shutdowns in March 2018.

Many of the agency’s actions and inactions have already garnered legal challenges. A more detailed chronology of these events and the associated litigation can be found on [EELP’s Regulatory Rollback Tracker page](#) for the EPA VOC/Methane regulation.



THE NEW RULES

On August 13, 2020 EPA released [two final rules](#) revising and rolling back aspects of the VOC/methane NSPS:

- 1) One final rule, referred to as the “[Review Rule](#)” or “Policy Amendments,” eliminated standards for methane emissions entirely, revised the 2012 and 2016 New Source Performance Standards to remove transmission and storage segments from the category of sources regulated, and incorporated new interpretations of the Clean Air Act that will have lasting impacts on the agency’s authority to regulate pollution.
- 2) The other rule, referred to as the “[Reconsideration Rule](#)” or “Technical Amendments,” responded to reconsideration petitions. It revises what is left of the 2012 and 2016 New Source Performance Standards, adjusting requirements for well completions, pneumatic pumps, storage vessels, fugitive emissions, and inspections, among other things.

EPA acknowledges the revised rules will lead to increased emissions of methane, VOC, and HAP, estimating 850,000 short tons of methane more will be emitted by these sources between 2021 and 2030 than would have been if the agency had left the methane standards intact. Methane is a very powerful greenhouse gas, and [studies](#) indicate that methane emissions from the oil and gas industry are likely [significantly higher](#) than previously reported, indicating these estimates may undercount the impacts of the rule.

Forgone Emissions Reductions	2021-2030 Total
Methane (short tons)	850,000
VOC	140,000
HAP	5,000
Methane (million metric tons CO ₂ Eq.)	19

(Table 1-3 from the [Regulatory Impact Analysis](#), representing the combined estimated foregone emissions reductions as a result of the two rules)

The Review Rule will go into effect as soon as it is published in the Federal Register, immediately removing regulatory requirements for the transmission and storage segments of the oil and gas



industry. The Reconsideration Rule will go into effect 60 days after it is published in the Federal Register.

THE REVIEW RULE

The Review Rule is the most significant of the two rules. It removes a segment of oil and gas operations from regulation, discontinues regulation of methane (with the effect of also eliminating the legal predicate for regulating existing sources), and establishes new interpretations of the Clean Air Act that seem designed to hamper future EPA efforts to promulgate emissions standards for other pollutants from a variety of industrial sectors. It finalizes what was described as the “primary proposal” in the proposed rule published on September 24, 2019. (84 Fed. Reg. 50247)

EPA’s Review Rule removes all transmission and storage sources from regulation, arguing that it should not have been considered part of the Crude Oil and Natural Gas Production source category. This determination removes all emissions limits for both VOCs and GHGs (methane) from transmission and storage sources. EPA also rescinds the methane emissions standards for sources in the remaining production and processing segments of the industry.

EPA presents a new legal interpretation of the Clean Air Act in this rule. Breaking with decades of prior agency interpretation, EPA now asserts that the Clean Air Act requires that for each pollutant the agency seeks to regulate from a source category, EPA must make a separate finding that the pollutant significantly contributes to pollution that can endanger public health or welfare. Until now, following the plain text of the Clean Air Act, once EPA determined a source category as a whole causes or contributes significantly to air pollution that could reasonably endanger public health or welfare it could then establish emissions standards for pollutants emitted by that source category without additional determinations for each particular pollutant.

EPA also invalidates a significant contribution finding made in the 2016 rule for the source category—explicitly defined to include production, processing, storage, and transmission. Now that it has determined to separate transmission and storage from the source category, the agency says it would have to conduct a separate evaluation for the transmission and storage category if it were to develop standards for that segment. In the 2016 rule, EPA asserted it did not *need* to make this finding because the source category as originally defined and evaluated included transmission and storage



and thus the original finding of significant contribution considered that segment in its finding. However, EPA put forth an alternative position that it was officially expanding the source category to include transmission and storage and provided a new significant contribution finding of the revised source category in case a court determined the scope of the initial source category was ambiguous. The 2016 rule specifically stated that the source category defined to include transmission and storage contributed significantly to air pollution reasonably anticipated to endanger public health and welfare based on its SO₂, VOC, and methane emissions.

In addition to invalidating the source category significant contribution finding in the 2016 rule because it included transmission and storage, EPA also says a second, independent reason for invalidating it is that the finding was inadequate. EPA argues the evaluation itself was inadequate because EPA had not established criteria by which to make such determinations, something it expects to do in a future rulemaking before proposing any new NSPS. EPA has never before taken the position that it needed explicit, uniform criteria to make significant contribution findings and has made many such findings in the process of establishing source categories and issuing emissions standards absent such criteria.

Redefining the Source Category and Requiring Additional Significant Contribution Findings Increases Emissions and Creates Barriers to Regulating GHGs

By breaking with its prior understanding of the scope of the Crude Oil and Natural Gas source category, EPA's final action both increases emissions and makes it harder to regulate that source segment in the future. The result of this legal interpretation is that there will no longer be VOC or methane emissions standards in place for the transmission and storage segment of the industry. In order to regulate methane and VOC emissions from transmission and storage in the future EPA will now have to establish a new source category and make a new significant contribution finding evaluating the significance of its emissions. By requiring the agency to evaluate a smaller segment of the industry, EPA makes it more challenging to demonstrate the significance of the emissions, providing another barrier to regulation.

In addition to its reinterpretation of the source category, EPA articulated a new interpretation of the CAA that requires it to prepare a second significant contribution finding specific to the pollutant it



proposes to regulate before establishing any new NSPS. As with its source category definition, this interpretation breaks with EPA's prior position. It likewise makes it harder to impose standards for new pollutants. It could potentially lead to the perverse outcome of the agency determining a source category contributes significantly to air pollution reasonably anticipated to endanger public health and welfare but that the agency cannot regulate the pollutants that the source category emits because it cannot show that the source category's contribution of a particular pollutant on its own is likely to endanger public health and welfare.

By breaking the evaluations down into smaller segments of the industry and particular pollutants, the agency is able to say the sum of the parts does not equal the whole, providing a rationale not to regulate. By requiring the agency to narrow its scope to a smaller slice of the sectoral and emissions pie it allows it to consider less than the full impact of the emissions. This approach makes it more challenging to regulate emissions from new and modified sources.

De-Regulating Methane Means Not Regulating Existing Sources

In addition to eliminating emissions standards for the transmission and storage segments entirely, EPA also eliminated the standards for methane emissions from all segments of the oil and gas industry. The remaining regulations in place for production and processing segments cover only VOC emissions, not methane. EPA argues this is appropriate because the methods for regulating methane in these segments are largely redundant of VOC control methods under current technology.

However, the removal of methane standards under section 111(b) removes the legal predicate for regulating methane emissions from existing sources under 111(d). Because VOCs are precursors to ozone, a criteria pollutant, they fall under an exception to the existing sources regulations in 111(d). Thus, EPA's choice to eliminate methane regulation for new and modified sources means eliminating its ability to impose similar emissions standards on existing oil and gas facilities.

EPA indicated early in this administration that it did not intend to follow through with 111(d) regulation of methane emissions from existing sources. In March 2017 EPA [canceled](#) a [2016 Information Collection Request](#) (ICR) asking operators to identify ways to control methane from existing oil and gas sources. The ICR was a preliminary step towards regulating existing oil and gas infrastructure for



methane leaks, venting, and flaring as it would have provided needed information to help develop possible regulatory approaches.

Eliminating the standards for methane also ignores the technology-forcing purpose of the CAA. Even if currently there is not a significant difference between the methods of controlling VOCs and methane, an independent regulatory requirement for methane incentivizes the development of new control technologies.

THE RECONSIDERATION RULE

EPA finalized a separate rule (initially proposed Oct. 2018 at 83 Fed. Reg. 52056) revising specific requirements in the VOC/methane NSPS in response to several petitions for reconsideration of aspects of the 2016 NSPS. This rule responds to requests for reconsideration of fugitive emissions requirements at well sites and compressor stations, well site pneumatic pump standards, and the requirements for certification of closed vent systems (CVS) by a professional engineer. EPA also made additional changes not specifically responsive to these requests. In light of the changes made by the Review Rule, the changes to the technical aspects of the NSPS apply to oil and gas production and processing segments only and address VOCs only. Below are short descriptions of the primary changes made by this rule.

Separators

- Changes the rules around well completions so that a separator is no longer required to be on site during the entire flowback period.

Exemptions for control equipment

- Expands technical infeasibility exemptions from emissions control requirements to pneumatic pumps at all well sites, the prior rule only allowed for the technical infeasibility exemption at greenfield sites.
- The rule also no longer requires a qualified professional engineer (PE) to certify technical infeasibility, allowing an in-house engineer with expertise on the design and operation of the pneumatic pump to do so instead.



Storage Vessels

- Amends the applicability criteria for storage vessels to allow the operator to average the emissions across the number of storage vessels in a controlled battery rather than calculating VOC emissions from individual vessels as long as certain design and operational criteria are met. Storage vessels with the potential for VOC emissions of 6 tpy or greater are subject to control requirements.
- The rule also amends various other applicability criteria for storage vessels' potential to emit VOCs.

Monitoring and certification for closed vent systems

- Changes emissions monitoring and certification requirements for pneumatic pump closed vent systems to allow for monthly audio/visual/olfactory (AVO) monitoring and optical gas imaging (OGI) as alternatives to annual Method 21 monitoring to demonstrate no detectable emissions at affected facilities.
- It also changed the requirements on CVS for storage vessels to allow for OGI in addition to annual AVO monitoring. The new rule also allows for the certification to be conducted by an in-house engineer rather than a professional engineer.

Fugitive Emissions Monitoring

- Lowers the frequency of fugitive emissions monitoring required, excludes low production facilities from monitoring requirements, and allows operators to stop monitoring when major production and processing equipment is removed from the well site.
- Instead of requiring semiannual monitoring for fugitive emissions at well sites and quarterly monitoring at compressor stations as the 2016 NSPS required, the new rule requires only semiannual monitoring for both well sites and compressor stations, no monitoring for sites with 15 boe per day (low production sites), and only annual monitoring for well sites and compressor stations on Alaska's North Slope.



- Extends the period within which operators must conduct initial fugitive emissions monitoring from within 60 days to within 90 days of startup.
- Excludes third-party equipment and disposal wells (Underground Injection Control (UIC) Class I non-hazardous and UIC Class II disposal wells) from fugitive emissions requirements by changing the definition of well sites.
- Exempts equipment at onshore oil and gas processing plants used for emergencies from monitoring if they are in service for less than 300 hours per year.

Repair Requirements

- Changes the repair requirements so that only a first attempt at a repair must be made within 30 days of identifying fugitive emissions rather than requiring repair within 30 days. The 2016 rule required repair within 30 days and verification by resurvey within 30 days of the repair.
- The final repair must be made within 30 days of the first attempt (and must include a resurvey to verify), 60 days from the identification of the emissions.
- For any repairs that must be delayed because they require a blowdown, shutdown, or shut-in, etc., the new rule requires operators to make them at the next scheduled shutdown where maintenance is scheduled or within 2 years. The previous version of the rule required such repairs at the next shutdown.

Alternative Means of Emission Limitation

- Amends the Alternative Means of Emission Limitation (AMEL) provisions for emerging technologies and includes alternative fugitive emissions standards for specific existing state fugitive emissions programs. Alternative fugitive emissions standards are provided for well sites and compressor stations in California, Colorado, Ohio, Pennsylvania, and Texas, and well sites in Utah.



Additional Changes

- Revises equipment leak standards for onshore natural gas processing plans to require compliance as soon as practicable but no later than 180 days after initial startup.
- Revises the applicability criteria for the sulfur dioxide (SO₂) standards to define sweetening units as any onshore sweetening unit that processes natural gas produced from either onshore or offshore wells, correcting the prior definition that only referred to those that processed gas produced at onshore wells.
- Streamlines recordkeeping requirements, including changes such as no longer requiring digital photos of each monitoring survey and numerous other details about fugitive emissions surveys, the conditions in which they are carried out, and who performs them.

EPA estimates that the changes made in its Reconsideration Rule alone will result in 450,000 short tons of additional methane emissions 120,000 short tons of additional VOC emissions, and 4,700 short tons of additional HAP emissions between 2021 and 2030.

FOR MORE INFORMATION

For more information about the chronology of these two rules rolling back methane emissions standards for new, modified, and reconstructed oil and gas sources visit our [EPA VOC/Methane Standards Regulatory Rollback Tracker page](#).

EELP is also developing additional legal analysis on certain aspects of the EPA's positions in this rulemaking. Look for future pieces on our website at eelp.law.harvard.edu or sign up to receive periodic [EELP Updates](#) to get them in your email.