ENERGY WORKFORCE & TECHNOLOGY COUNCIL

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January 28, 2022

The Honorable Michael S. Regan
Administrator
U.S. Environmental Protection Agency
Docket ID No. EPA-HQ-OAR-2021-0317
1200 Pennsylvania Avenue, NW
Washington, DC 20460

RE: Environmental Protection Agency (EPA) Notice Titled "Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review," Docket ID No. EPA-HQ-OAR-2021-0317, 86 Fed. Reg. 63110 (November 15, 2021)

Dear Administrator Regan,

On behalf of the 450 companies employing over 650,000 energy workers, manufacturers and innovators represented by the Energy Workforce & Technology Council (Energy Workforce) we respectfully submit comments in response to the Environmental Protection Agency's proposed rulemaking titled "Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review."

Energy Workforce member companies are at the forefront of meeting global energy demand through the development of technologies and processes to make the energy supply chain cleaner and more efficient. At its core, the regulation of methane is a sensible strategy to move the energy industry to lower emissions and it should be done in a way that does not impose disproportionate compliance costs and allows companies of all sizes to participate.

Energy Workforce member companies have developed technologies that can assist operators in meeting many of the methane reduction standards defined in the EPA's proposed rulemaking. Changes in regulation should be accompanied by policies that bolster the ability of our companies to quickly and adequately scale and distribute these technologies to meet the requirements of this regulation. Any major overhaul of methane regulations, such as the one proposed, should be accompanied by Federal partnerships, permitting reform, and funding necessary to meet these standards.

Additionally, while we submit general examples of technologies that can meet the proposed goals, the short initial 60-day comment period, and the two-week extension, have limited the detailed analysis crucial to a regulation of this magnitude. The EPA has announced plans to issue a supplemental proposal containing the regulatory text in 2022. We respectfully request that EPA offer a full and extended public comment period for this supplemental rule to ensure our companies can deliver a comprehensive analysis of the proposed regulations and the potential implications for our industry.

Finding and repairing leaks (fugitive emissions)

Energy Workforce members are making cleaner energy possible by building on our industry's long history of developing and deploying technological solutions on a global scale. Our companies are making the production of oil and gas cleaner, safer and more cost-effective than ever before with technologies that cut energy usage, slash emissions, and streamline operations. These technologies include comprehensive methane monitoring, comprised of leak detection that includes the location and rate quantification in real time so that operators can take immediate action to reduce greenhouse gas (GHG) emissions and save costs. These technologies have been available to operators since the 2010s and include a wide range of options.

For example, since 2018, a team has been utilizing drones equipped with methane detection cameras and sensors in the Permian Basin. It has conducted over 1,000 inspections using drones and drone mounted sensors, combined with an artificial intelligence (AI) enabled software platform. This effort is contributing to meeting an operator's goals of maintaining methane emissions intensity below 0.2% by 2025 and meeting the requirements of the Oil and Gas Methane Partnership (OGMP) 2.0 framework.

Similarly, since 2018, there has been commercially available continuous monitoring using a sensor network strategically placed at an oil or natural gas production site to monitor for emissions. Industry-wide, there are at least 5 million sensor operation hours for continuous monitoring, providing years of reliable and actionable emissions data for operators. The real-time and historical trend data available from continuous monitoring has provided many advantages in data science and process automation for operators including new levels of emissions visibility and how emissions correlate to the operational schedules and processes. Ultimately this not only provides a better source of information to help prioritize repair efforts, but also significantly shortens the time between initial detection and repair.

There is also gas cloud imaging (GCI) system in Europe to provide automated and continuous monitoring for leaks of dangerous and polluting gases such as methane at oil and gas, chemical and power generation facilities across the continent. The Mini GCI systems can be placed throughout an industrial facility to continuously monitor for gas leaks and provide alerts as soon as they occur. The system provides facility operators with an easy-to-interpret, colored visualization of the gas plume type, location, direction, size and concentration. This allows for an earlier and more effective response before leaks have the chance to grow into bigger emissions or safety issues.

Oxygen and gas analyzers improve process efficiency, optimize reactors, and provide greater confidence for petrochemical, power generation, and combustion efficiency applications. These sensors monitor mixtures including hydrogen, carbon dioxide, methane, helium, and more.

Proposed Standards for Well Liquids Unloading Operations

Energy Workforce members believe there are significant opportunities to reduce emissions associated with liquids unloading despite the diversity of circumstances and technologies involved. One means of facilitating reductions in methane emissions generated by liquids unloading is to deploy advanced methods that reduce the frequency of unloading events. For example, there are artificial lift solutions that use advanced analytics and "smart" edge technology to boost production and reduce associated methane emissions from oil and gas wells. During one recent three-month pilot project in the Haynesville Shale using one artificial lift solution across 10 wells, the operator's gas production increased by 5% and well unloading events decreased by 94%. We believe best management practices should include technologies that reduce the frequency of events as a means of reducing overall emissions.

Definition of Hydraulic Fracturing

Energy Workforce and Technology Council represents over 400 energy services and technology companies, many of which conduct hydraulic fracturing activities throughout the United States or produce equipment used for these operations. In response to the proposed update of the definition of hydraulic fracturing, Energy Workforce and Technology Council does not believe that that a numeric threshold is appropriate and applicable to all hydraulic fracturing operations, particularly those that are characterized as "tight formations" or "high rate, extended flowbacks". As different reservoirs will have different operating pressures, defining hydraulic fracturing at a single flow rate that is applied uniformly to all reservoirs is an over-generalization of the differing characteristics between reservoirs and will be difficult if not impossible to achieve. Additionally, flowback will depend on individual characteristics of the particular well and how it was treated along with other factors. These factors are also constantly evolving with industry practices.

In regard to the definition of hydraulic fracturing, Energy Workforce and Technology Council recommends that the New Source Performance Standard definition includes a clause indicating that the purpose of the stimulation activities is for production of the well and not for other well intervention activities for added clarity.

Proposed addition to NSPS definition:

"The process of directing pressurized fluids containing any combination of water, proppant, and any added chemicals to penetrate tight formations, such as shale or coal formations, that subsequently require high rate, extended flowback to expel fracture fluids and solids during completions **for the purpose of production, NOT intervention.**"

Evaluating Additional Sources of Pollution

Any new rule that is adopted to address the growing concern of evaluating solutions for additional sources of pollution could have an enormous effect on many aspects of industry. New technologies will be a crucial part of the energy industry's efforts to decrease emissions and eliminate further sources of pollution. Many technologies needed to decrease Scope 1 and Scope 2 GHG emissions already exist and are currently being used by operators across multiple basins. These technologies include (but are not limited to):

- the use of AI to increase truck loading efficiencies to cut down on loading/unloading truck idle time, smarter scheduling activities to decrease the number of trucks needed for a job (less trucks, less emissions)
- new engine technologies that decrease fuel consumption from idle trucks, well stimulation fleet electrification,
- the use of harvested field gas to power on-site operations (dual-fuel engines)

These technologies, along with other physical methods of decreasing emissions, are constantly evolving and growing within the energy sector to provide a more sophisticated and efficient solution across multiple platforms to meet and exceed emissions standards.

An additional component that will be paramount to the efforts of decreasing overall emissions will be the regulation of flaring. Traditionally, flaring has been a means for producers and operators to combust uneconomic or unusable natural gas that is produced as a part of the extraction process at the well site. While the majority of harmful components in field gas are neutralized through flaring, incomplete combustion by inefficient flares can result in significant quantities of methane emitted to the atmosphere, so called "methane slip".

Flaring alternatives and on-site innovations that have emerged from within the energy sector have already addressed the concerns regarding traditional flaring and companies are developing new ways to reduce and decrease flaring efforts altogether. Chief among these efforts has been the repurposing of collected field gas to power wellsite operations. Gases that would have traditionally been flared or vented are now being used on-site in a closed-loop process with minimal methane emissions. Recent efforts by industry have begun to yield results. For example, in Texas the percentage of natural gas flared in Texas dropped from a previous record low of 0.20% in September 2021 to a new record low of 0.19% in November.

Further, technology is currently available to cost-effectively monitor flare performance, providing automatic monitoring of combustion efficiency and flare combustion control for assisted flares. This technology was launched in 2017 with an emphasis on the North American market and regulatory compliance with the EPA Refinery Sector Rule 63.670. Offerings have since expanded and the technology is now available in all regions and covers oil and gas production facilities. Currently, there are approximately 51 installations worldwide and several pilots are underway in Brazil, Russia, United Arab Emirates and Europe. For example, significant field validation occurred in 2020 and 2021 to help better understand, measure, and ultimately reduce methane emissions at 130 upstream sites. It is critical to verify combustion efficiency in real-time because it can deviate for different flares and different plant operating conditions. This technology has a response time of six seconds for assisted flares and has been proven to achieve real-time control for assisted flares.

Transitioning to Zero-Emitting Pneumatic Controllers

Energy Workforce & Technology Council companies have developed technologies that can support emissions reductions and Energy Workforce supports pneumatic controller updates when technically feasible.

Conclusion

Energy Workforce & Technology Council companies stand ready to meet the shared goal of methane emission reduction in the energy sector. Additionally, the ability for Energy Workforce companies to secure Federal permits, funding and partnerships to scale and distribute these methane reducing technologies is vital to meeting the proposed standard. Finally, urge EPA offer a full and extended public comment period for the supplemental methane rule with regulatory text when it is released later this year.

The companies powering the American economy are the same entities that are actively identifying where the problems exist and deploying innovative solutions to meet their own stringent standards. We urge you to consider these important factors as you continue your analysis and development of methane reducing regulations.

Sincerely,

Tim Tarpley
Senior Vice President Government Affairs
Energy Workforce & Technology Council