



CREATING GOOD JOBS, A CLEAN ENVIRONMENT, AND A FAIR AND THRIVING ECONOMY

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The BlueGreen Alliance (BGA) unites labor unions and environmental organizations to solve today’s environmental challenges in ways that create and maintain quality jobs and build a clean, thriving, and equitable economy. Our partnership is firm in its belief that Americans don’t have to choose between a good job and a clean environment—we can and must have both. We appreciate the opportunity to comment on the Pipeline and Hazardous Materials Safety Administration’s (PHMSA) proposed rule on Gas Pipeline Leak Detection and Repair.

Reducing methane emissions in the United States is an example of how America’s environmental challenges can also be economic opportunities. Investing in methane mitigation will reduce greenhouse gas emissions, smog- and soot-forming compounds, and toxic pollution, make workers and communities around the pipelines safer and healthier, and generate and support good-paying jobs.

Reducing Methane Leaks is a Win-Win-Win for Workers, Communities, and the Climate

The threat of catastrophic climate change has reached a crisis point. According to the Intergovernmental Panel on Climate Change’s (IPCC) Sixth Assessment Report, the window to prevent the worst effects of warming is rapidly closing.¹ Keeping the world on its target of 1.5°C of warming will require immediate action to reduce the emission of greenhouse gases. Of the greenhouse gases (GHGs) being emitted, methane is one of the most potent,

¹ IPCC, *Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, 2022. Available online: https://report.ipcc.ch/ar6/wg2/IPCC_AR6_WGII_FullReport.pdf

with one ton of methane in the atmosphere having over 80 times the warming impact of a ton of carbon dioxide (CO₂) in the twenty years after it is emitted.² While methane emissions occur in many sectors, the oil and gas sector is the largest source of this pollution in the United States. This sector is also responsible for other dangerous and wasteful emissions like smog- and soot-forming volatile organic compounds and air toxics like benzene—a known carcinogen—which endanger workers and communities surrounding these facilities. Across the country, nearly 14 million people in 21 states face a cancer risk greater than the EPA’s one-in-a-million threshold for concern due to oil and gas alone.³ The communities facing the greatest public health risk from these harmful air pollutants are in states with the greatest amount of oil and gas development, including New Mexico, Texas, Colorado, Pennsylvania, Oklahoma, Louisiana, West Virginia, North Dakota, Wyoming, Utah, and Ohio. Oil and gas sector emissions are particularly harmful to workers that serve in that industry, who face serious long term health challenges as a result of their labor.

Not only do leaks from pipelines pose a threat to the climate through methane pollution, but they increase the risk of deadly explosions from the ignition of volatile gasses from gathering, transmission, and distribution lines. These explosions present an immediate threat to worker safety and could lead to disastrous outcomes for frontline communities. For example, in 2012 an assessment of distribution pipes in Boston identified 3,300 gas leaks in the city of Boston, six of which had levels higher than the threshold at which explosions could occur. More recently, a survey of gas lines in Washington D.C. identified more than 5,900 leaks—with a dozen of these potentially reaching explosion threshold.⁴ Taking action to detect and repair pipeline leaks early is essential in preventing them from evolving into catastrophic risks to public safety.

²U.S. EPA, Understanding Global Warming Potentials. Available online: <https://www.epa.gov/ghgemissions/understanding-global-warming-potentials>.

³Ibid.

⁴ BlueGreen Alliance, *Interconnected The Economic and Climate Change Benefits of Accelerating Repair and Replacement of America’s Natural Gas Distribution Pipelines*, July 23, 2014. Available online: <https://www.bluegreenalliance.org/resources/interconnected-the-economic-and-climate-change-benefits-of-accelerating-repair-and-replacement-of-americas-natural-gas-distribution-pipelines/>

Moreover, recent research suggests emissions from oil and gas activities are significantly underestimated in the EPA's latest greenhouse gas inventory.⁵ In fact, the International Energy Agency's (IEA) 2022 Global Methane Tracker analysis found that national governments underestimated methane emissions from the energy industry globally by 70%.⁶ Methane leaks are particularly underestimated from gathering lines—which move gas from the point of production to processing facilities for refinement and transmission—and are believed to be responsible for a disproportionate share of fugitive emissions. One study from the Environmental Defense Fund found that gathering lines in the Permian Basin were responsible for 14 times more methane pollution than the EPA had estimated.⁷

Our nation's energy sector has made significant strides to increase the efficiency of gas and oil systems in recent years. However, emissions of methane and other pollutants continue to harm the economy and the environment by jeopardizing the health of workers and communities, wasting resources, and worsening climate change. Reducing emissions from this sector can significantly improve air quality for workers and communities, preventing 255,000 premature deaths and more than half a million asthma-related emergency room visits globally each year.⁸

Effectively reducing emissions from the energy industry starts with stopping wasted methane from outdated practices and technology. Controlling methane leaks in the oil and natural gas sector would not only promote healthy communities and a livable planet, but would create family-sustaining jobs. By advancing standards for enhanced methane monitoring and leak

⁵ Harvard SEAS, "Oil and natural gas production emit more methane than previously thought". March 22, 2021. Available online: <https://www.seas.harvard.edu/news/2021/03/oil-and-natural-gas-production-emit-more-methane-previously-thought>

⁶ IEA, "Methane emissions from the energy sector are 70% higher than official figures", February 23, 2022. Available online: <https://www.iea.org/news/methane-emissions-from-the-energy-sector-are-70-higher-than-official-figures>

⁷ EDF, "Research shows gathering pipelines in the Permian Basin leaking 14 times more methane than officials estimate," October 4, 2022. Available online: <https://blogs.edf.org/energyexchange/2022/10/04/research-shows-gathering-pipelines-in-the-permian-basin-leaking-14-times-more-methane-than-officials-estimate/#:~:text=The%20scale%20of%20methane%20being,213%2C000%20metric%20ton%20per%20year>

⁸ UN Environment Programme, *Global Methane Assessment: Benefits and Costs of Mitigating Methane Emissions*, May 2021. Available online: <https://www.unep.org/resources/report/global-methane-assessment-benefits-and-costs-mitigating-methane-emissions>

repair, PHMSA is unlocking a win-win-win for workers, communities, and the climate.

A Standard Will Expedite Technology Deployment, Emissions Reductions, and Job Creation

Low-cost, proven measures and technologies are already commercially available to cut methane emissions from the oil and gas sector by 65% in the next five years.⁹ A report from ICF International, *Economic Analysis of Methane Emission Reduction Opportunities in the U.S. Onshore Oil and Natural Gas Industries*, explores what sources are responsible for a large portion of the emissions at existing facilities and what existing technologies can be used to reduce them.¹⁰ One key finding was that energy sector methane emissions could be cut dramatically—by 40%—at an average annual cost of less than one cent per thousand cubic feet of produced natural gas by adopting available emissions-control technologies and operating practices. Even in times when the market price of gas fluctuates downwards, methane emissions mitigation remains a cost-effective approach to combating climate change. ICF found that even at a low gas price of \$2 per thousand cubic feet, the cost of methane emissions mitigation is still just over one cent per thousand cubic feet of natural gas produced.¹¹

ICF International found that more than half of methane reductions identified can be achieved at a negative net cost, accounting for the value of captured methane sold at \$4 per thousand cubic feet (Mcf). In many cases, more than 95% of emissions could be reduced at zero net cost.

Much of the technology that can modernize America's pipeline infrastructure has existed for decades and is supported by an active supply chain. A Datu report identifies 584 employment locations (referred to in the report as "employee locations") for manufacturing, assembling, and providing installation

⁹ Clean Air Task Force, *Reducing Methane from Oil and Gas*, December 2020. Available online: https://cdn.catf.us/wp-content/uploads/2020/04/21092556/Path_to_65pc_OG_reduction-Dec2020_update.pdf

¹⁰ ICF International, *Economic Analysis of Methane Emission Reduction Opportunities in the U.S. Onshore Oil and Natural Gas Industries*, March 2014. Available online: https://www.edf.org/sites/default/files/methane_cost_curve_report.pdf

¹¹ EDF, "Do Lower Gas Prices Alter Conclusion of the ICF Study on Methane Reduction Costs?" March 2016, Available online: <https://blogs.edf.org/energyexchange/2016/03/21/do-lower-gas-prices-alter-conclusion-of-the-icf-study-on-methane-reduction-costs/>

and other services for methane mitigation technologies that could help reduce leaks and achieve the emissions reduction goals of the PHMSA leak detection and repair rule.¹² For example, fixed sensors are allowing for continuous monitoring of leaks when deployed to high-risk areas. When a leak is detected, monitors can use optical gas imaging (OGI) or infrared lasers to detect specific malfunction equipment or pinpoint the location of a pipeline leak.

While unionized workers at some companies already do this work, the prospect of capturing additional gas with available and cost-effective mitigation technology could improve with a larger market and level regulatory playing field among energy companies.¹³ The gas pipeline leak detection and repair standards proposed by PHMSA would support adoption of these technologies by operators controlling pipeline leaks. Given the accessibility of cost-effective technologies to detect and repair fugitive emissions, a wide-reaching standard in place also provides an opportunity for companies to innovate in methane mitigation technology and strategies and provides greater regulatory certainty for the industry over the long run.

Mitigating Leaks with U.S.-made Equipment

Wider adoption of leak detection and repair standards would also lead to the creation of high-quality, good-paying jobs in the manufacturing sector. The equipment necessary for finding and fixing leaks in natural gas infrastructure is American-made and driving the rapid growth of the methane mitigation industry. Today there are 33% more firms manufacturing methane mitigation technologies than in 2014, and 90% more firms providing installation and other services than in 2017:

- At least 215 firms manufacture methane mitigation equipment in the United States and/or offer services;
- 70% of methane mitigation firms qualify as small businesses;
- Methane mitigation companies provide U.S. jobs in at least 748 locations across 47 states; and

¹² Datu Research, *Find, Measure, Fix: Jobs in the U.S. Methane Emissions Mitigation Industry*, 2021. Available online: <https://www.daturesearch.com/wp-content/uploads/Datu-2021-Methane-Emissions-Mitigation-Industry.pdf>

¹³ McKinsey, *Curbing Methane Emissions*, September 2021. Available online: <https://www.mckinsey.com/~media/mckinsey/business%20functions/sustainability/our%20insights/curbing%20methane%20emissions%20how%20five%20industries%20can%20counter%20a%20major%20climate%20threat/curbing-methane-emissions-how-five-industries-can-counter-a-major-climate-threat-v4.pdf>

- The methane mitigation industry employs at least 35 key job types.¹⁴

Strong standards for pipelines have the potential to build on this growth by accelerating the deployment of methane mitigation technology. The BlueGreen Alliance's report *Plugging the Leaks 2.0* studies the economic effects of the EPA's proposed supplemental methane standards, which includes similar leak detection and repair requirements for oil and gas well sites and gas compressor stations.¹⁵ The report found that the adoption of leak reducing technologies and practices at new, modified, and existing facilities would create over 136,000 job-years through 2035, including over 10,000 net direct and indirect jobs created annually in a variety of sectors—including manufacturing, construction, and operations and maintenance. These findings clarify the economic benefit of methane regulations and highlight PHMSA's opportunity to support the creation of new jobs in the methane mitigation industry.

Jobs in the mitigation industry have the potential to provide pathways into the middle class for millions of workers and families, and to support millions of high-skill, high-wage jobs—particularly in manufacturing. As this sector grows, we need to ensure that the employment opportunities created are good-paying, safe, accessible union jobs. This means supporting and growing pathways into good union jobs in these and other sectors for workers of color and other segments of the population historically underrepresented in these jobs.

Replacing Pipes Known to Leak with Reliable Materials

When replacing aging and leak-prone pipelines, PHMSA should encourage operators to utilize protected steel for its efficiency and environmental benefits. According to a report from Global Efficiency Intelligence (GEI), the United States has among the cleanest steel in the world and has the lowest

¹⁴ Datu Research, *Find, Measure, Fix: Jobs in the U.S. Methane Emissions Mitigation Industry*, 2021. Available online: <https://www.daturesearch.com/wp-content/uploads/Datu-2021-Methane-Emissions-Mitigation-Industry.pdf>

¹⁵ BlueGreen Alliance, *Plugging the Leaks 2.0: Protect Workers, Reduce Pollution, and Create Quality Jobs by Reducing Methane Waste in the Oil and Gas Industry*, July 2023. Available online: <https://www.bluegreenalliance.org/resources/plugging-the-leaks-2-0-protect-workers-reduce-pollution-and-create-quality-jobs-by-reducing-methane-waste-in-the-u-s-oil-and-gas-industry/>

carbon intensity among the top steel-producing nations.¹⁶ Materials like domestically manufactured steel that emit less carbon in production would further the goals of PHMSA's proposed rule to mitigate the catastrophic outcomes of climate change.

Pipes made of domestically sourced steel not only offer a low-carbon alternative for replacing pipes, but also offer better performance and durability. Steel pipes with composite liners were shown to have more protection and offer less permeation than pipes with polymer-based liners, which degrade over time.¹⁷ In its final rule, PHMSA should consider elevating the efficiency of using protected steel in pipeline replacements over other, less resilient materials to ensure that operators utilize the best resources for avoiding fugitive emissions. By encouraging operators with aging pipelines to source steel from American manufacturers, PHMSA would be securing a win-win-win situation, creating good-paying jobs for American workers, utilizing cleaner materials for pipeline infrastructure, and mitigating future fugitive emissions.

Conclusion

PHMSA's proposed rule has the potential to achieve cost-effective reductions of methane and other harmful emissions, spur quality job creation, protect workers and communities, and help to combat climate change. At the same time, we need to ensure that the jobs created are good-paying, safe, accessible union jobs. Updating industry practices and equipment to meet these proposed standards will not just make workers and communities around the facilities safer and healthier, but will also generate and support quality, family-sustaining jobs.

Implementing these standards is a win-win-win situation. With these standards, workers and communities will be protected, jobs will be created, and our nation will take another concrete step toward reducing harmful air pollution and the emissions driving climate change.

¹⁶ Global Efficiency Intelligence, *Steel Climate Impact: An International Benchmarking of Energy and CO2 Intensities*, April 2022. Available online: <https://static1.squarespace.com/static/5877e86f9de4bb8bce72105c/t/624ebc5e1f5e2f3078c53a07/1649327229553/Steel+climate+impact-benchmarking+report+7April2022.pdf>

¹⁷ National Energy Technology Laboratory, *Corrosion protection of steel pipelines with metal-polymer composite barrier liners*, June 2020. Available online: <https://www.sciencedirect.com/science/article/abs/pii/S1875510020302614>