

Policy Roadmap to Support a Market for Differentiated Gas

March 2024

Acknowledgments

This roadmap was developed by CO2EFFICIENT LLC (COEFFICIENT) for the Differentiated Gas Coordinating Council. COEFFICIENT is a mission-based strategic consultancy focused on advancing public policy and market solutions in the energy and environmental sectors. Located in Washington, D.C., COEFFICIENT is a leader in developing transformational 21st century climate policies that integrate environmental sustainability and corporate governance with digital technology solutions.

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Table of Contents

| | |
|---|----|
| Acknowledgments..... | 2 |
| Table of Contents..... | 2 |
| I. Executive Summary..... | 2 |
| II. About the Differentiated Gas Coordinating Council | 4 |
| III. Market Developments Towards Differentiated Gas and Enabling Differentiation..... | 7 |
| IV. Role of the Federal Government in Advancing Differentiated Natural Gas..... | 11 |
| V. Key Policy Drivers..... | 13 |

I. Executive Summary

Over the past decade, an increasing number of companies have voluntarily set clean energy targets and taken steps to reduce emissions as part of their business strategy. Similar to corporate buyers pursuing clean energy commitments, buyers of natural gas (both domestic and international) are increasingly seeking trusted, transparent, and verifiable emissions data across the full natural gas value chain.

Natural gas operators in the U.S. are increasingly utilizing measurement-based practices, often using advanced monitoring technologies, to provide empirical data about their operations at both the basin and site level. These measurement-based practices play a critical role in domestic and international initiatives to improve site-level monitoring and measurement of methane emissions.

Differentiated gas is geologic natural gas characterized by the assessment and verification of its superior environmental performance criteria, particularly methane measurement, across the natural gas value chain. The market for differentiated gas is made possible by new measurement practices, emissions verification and validation, and established transparency. Differentiated gas' rapid evolution is underscored by the industry's commitment to producing

reliable, high-quality data that translates into significant on-the-ground environmental benefits. This shift is instrumental in transitioning the energy sector towards a more sustainable and transparent future, aligning closely with global environmental objectives.

The reliable verification of a cleaner product using robust Measurement, Monitoring, Reporting, and Verification (MMRV) protocols means that such a product can be valued at a premium by stakeholders who seek a trusted and transparent method of verifying emissions reductions. To participate in this market, natural gas producers, midstream companies, and buyers must track, measure, and communicate their methane and carbon dioxide emissions to investors, customers, and regulators.

In November 2021, 155 nations launched the [Global Methane Pledge](#), an initiative that seeks to reduce methane emissions by 30% from 2020 levels by 2030. This ambitious goal is only achievable if governments and stakeholders acknowledge the need to balance emissions reductions with energy security. Voluntary measures, such as the advancement of the differentiated gas market, are important tools for policymakers, regulators, and gas consumers to achieve their climate goals.

Federal and state governments play an instrumental role in shaping the future of the differentiated gas market to be trustworthy and transparent. The Differentiated Gas Coordinating Council's policy recommendations aim to align government actions with industry advancements, fostering a policy environment that enables the adoption of differentiated gas and supports the overarching goal of a sustainable energy transition.

Key policy recommendations:

- Harmonize methane regulations and policies to avoid overlapping, duplicative, or contradictory programs;
- Support the Department of Energy's "Greenhouse Gas Supply Chain Emissions Measurement, Monitoring, Reporting, Verification Framework" to promote best practices, common criteria, and definitional consistency;
- Establish differentiated gas procurement programs at a federal and state level;
- Bolster technical support from national laboratories;
- Improve workforce development to deploy advanced emissions measurement technologies and develop differentiated markets;
- Promote global U.S. leadership on methane measurement and reporting;
- Allow regulated utilities to recover the cost of differentiated gas adoption; and,
- Allow utilities to integrate differentiated gas into their decarbonization plans.

II. About the Differentiated Gas Coordinating Council

The Differentiated Gas Coordinating Council (DGCC) is a coalition of stakeholders across the natural gas supply chain dedicated to facilitating a pathway for policymakers, regulators, utilities, and other gas consumers to utilize differentiated gas as an important option to meet their climate goals.

The DGCC's members represent the entire spectrum of the natural gas value chain and are dedicated to advancing a comprehensive set of policies that foster the development of a robust market for differentiated gas. **Differentiated gas, also referred to as certified gas, producer-certified gas, and responsibly sourced gas, can be described as geologic natural gas characterized by the assessment and verification of its superior environmental performance criteria, particularly methane, across the natural gas value chain.** The differentiated gas market is underpinned by new measurement practices, including the use of advanced software and hardware technologies, that provide a more detailed view of emissions across the entire value chain versus the industry averages typically used. A growing number of industry stakeholders are utilizing these technologies and practices for site-level detection and measurement, including stationary point sensors, cameras, and satellites in support of emerging measurement, monitoring, reporting, and verification (MMRV) best practices.

DGCC member commitments to improve environmental performance, transparency, and accountability are charting a new course in the market, building needed trust and confidence among consumers, investors, and policymakers. As federal and state governments are developing and implementing new methane regulations, DGCC members encourage collaboration across stakeholders and policymakers to increase the awareness and adoption of differentiated gas.

Natural gas will play a key role in the world's rapidly evolving energy mix for [decades to come](#), contributing significantly to the reliability and security of U.S. and global energy infrastructure. As the world's largest producer of natural gas, U.S. leadership in establishing a transparent market for differentiation serves as a strategic avenue for reducing the emissions associated with natural gas. Given that the market for differentiated gas is rapidly evolving, policies should be aligned to foster technological innovation, facilitate the deployment of emissions-cutting technologies and methodologies, and stimulate market growth.

The differentiated natural gas market [exemplifies](#) how private sector innovation and collaboration can help the U.S. and its trading partners meet their energy needs and climate

goals. Encouraging differentiated practices is important as the DGCC endeavors to mitigate and minimize methane emissions in the short, medium, and long term.

What are the benefits of differentiated gas?

Responsible Utilization of Fossil Resources

At its core, differentiated gas facilitates transparent accounting of and demand for emissions reductions, both for the direct and indirect use of natural gas. According to the International Energy Agency, energy sector operations are responsible for [approximately 40%](#) of global methane emissions. As the U.S. pursues the next generation of energy and environmental policy, emissions transparency is critical to enable the viability of natural gas as a future energy source.

Industrial Decarbonization

Differentiated gas can contribute to the decarbonization of a variety of sectors, including heavy industry, and can be paired with other carbon management technologies.

Environmental Benefits

Differentiated gas typically has a lower measured leak rate along the full energy supply chain, [generally 0.2%](#). By contrast, the typical measured leak rate is approximately 2.4% (~1.4% for production). With a lower measured leak rate, communities can also experience co-benefits of reducing non-GHG emissions such as volatile organic compounds and hazardous air pollutants.

Domestic and International Energy Security

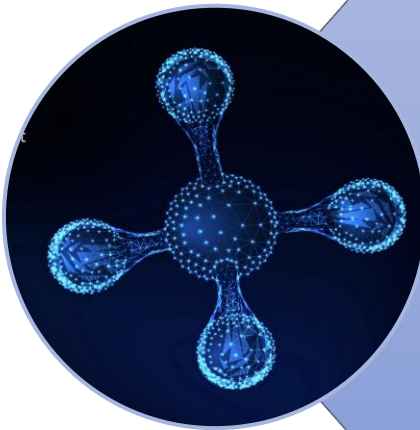
U.S.-based companies produce some of the lowest-methane intensity gas in the world. The adoption of differentiated gas promotes robust and transparent measurement practices that will help ensure U.S. natural gas retains its strategic advantage in the market as Europe's emissions standards become more stringent.

What enables differentiated gas?



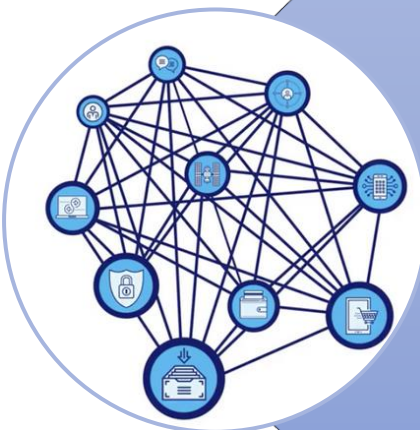
New Measurement Technologies

New measurement-based practices are improving transparency and enabling direct measurement, remote sensing, and continuous monitoring of methane emissions from oil and gas operations. Numerous studies have shown that current methods of emissions reporting—using estimate-based emissions factors—are [highly inaccurate](#). With the proliferation of new technologies and protocols for MMRV, the ability to differentiate gas products has, and will continue to, become more accurate and trustworthy.



Verification and Validation

To ensure transparency and credibility, the differentiated gas market relies on rigorous third-party validation and verification processes, often through certificates, to meet the expectations of energy buyers. This approach involves regular measurement, monitoring, and reconciliation of emissions, along with swift responses to any discrepancies. Ultimately, these attestations are designed to promote more transparent emissions data and enhance the credibility of the differentiated gas market as a whole.



Established Transactability

Registries and standards bodies legitimize the market and digital ledger technology builds trust across transactions. Transactability refers to the ability of actors in the differentiated gas or voluntary carbon market to trade emissions credits. Stakeholders, rating agencies, registries, and standards bodies are increasingly establishing criteria or best practices for differentiated gas markets—enabling contracting standards. To promote the transactability of products based on emissions data, regulations should support the development of data that is interoperable across multiple systems and the development of uniform, secure certification processes for differentiated gas and related products.

III. Market Developments Towards Differentiated Gas and Enabling Differentiation

The U.S. is experiencing a resurgence of domestic manufacturing, largely driven by the growing needs of America's digital economy. This resurgence is boosting economic development, increasing high-quality jobs, and improving existing supply chains. For companies to continue to invest and expand, they need reliable and affordable supplies of energy that have reduced environmental impacts.

Over the past decade, an increasing number of companies have [voluntarily set](#) clean energy targets and taken steps to reduce emissions as part of their business strategy. These commitments have led to increased federal and state policies that support voluntary actions by enabling more harmonized emissions data for purchasing decisions. For example, in the Infrastructure Investment and Jobs Act (IIJA), Congress [directed](#) the U.S. Energy Information Administration (EIA) to develop a publicly available dashboard, including greenhouse gas (GHG) emissions data, of every megawatt hour of electricity generated, which will improve the carbon transparency of the grid. IIJA also [directed](#) the EIA to harmonize the data it collects with data from the Environmental Protection Agency (EPA) and other federal agencies.

Similar to corporate buyers pursuing clean energy commitments, buyers of natural gas (both domestic and international) are increasingly seeking trusted, transparent, and verifiable emissions data across the full natural gas value chain. In response to this demand, over the last decade, [numerous efficient and effective methods](#) have been developed to detect and measure methane emissions. These include direct source-level measurement, continuous emission monitors, and sensors deployed on vehicles, drones, helicopters, aircraft, and satellites. The capabilities of these systems help reveal where, how, and why natural gas systems lose methane to the atmosphere and how to mitigate and eliminate those emissions with confidence.

Natural gas operators in the U.S. are increasingly utilizing measurement-based practices, often using advanced monitoring technologies, to provide empirical data about their operations at both the basin and site level. These measurement-based practices are playing a critical role in domestic and international initiatives to improve site-level monitoring and measurement of methane emissions. The deployment of these technologies will also substantially expand the capabilities of oil and gas producers to quickly detect and mitigate large release events, often referred to as super-emitters. With each passing year, measurement-based practices, including the use of advanced monitoring and measurement technologies, are improving the accuracy and precision of emissions quantification, which is the ability to determine an emissions rate based on accurate and direct measurement. This trustworthy, granular data enables the assessment or certification of natural gas as differentiated, allowing utilities, industrial buyers, and international consumers to make educated purchasing decisions that result in real environmental benefits and incentivize ongoing reductions.

The ability to quickly scale measurement-based practices that provide reliable data on real-time methane emissions will be crucial to achieving voluntary reductions within the differentiated gas sector. These practices offer a more frequent and accurate way to identify

methane leaks throughout the oil and gas industry, allowing for timely remediation and accelerated progress toward achieving the ambitious climate goals of the U.S. They also provide a competitive advantage that will promote economic growth in the technology and energy sectors and can assist regulators in creating more effective policies that improve the accuracy of emissions reporting and facilitate regulatory compliance.

Coupled with new domestic and international [electric load growth](#), the continued global pursuit of U.S. liquefied natural gas (LNG), and the rapid advancement of clean hydrogen pathways, transparent protocols and best practices governing differentiated gas markets are poised to play an increasingly pivotal role to ensure robust and accurate emissions accounting.

Numerous academic and private sector initiatives have emerged to address this growing demand for accurate and transparent emissions data, particularly regarding the measurement of methane.

Notable efforts include:



EEMDL
Energy Emissions Modeling and Data Lab

The [Energy Emissions Modeling and Data Lab](#) (EEMDL), an initiative of the University of Texas at Austin, Colorado State University, and the Colorado School of Mines, works to

develop transparent models and datasets for accurate GHG emissions accounting across global oil and gas supply chains. EEMDL manages and maintains the Fugitive Emissions Abatement Simulation Toolkit, often referred to as "FEAST," which helps operators and regulators compare a variety of methane leak detection and repair program configurations, such as continuous monitoring systems and hybrid aerial and ground surveys, to develop cost-effective mitigation protocols.



The [GTI Veritas](#) initiative [provides](#) uniform, technology-neutral measurement protocols, founded on a robust library of scientific evidence, to build verified methane emissions inventories through direct field observations. These protocols assess methane emissions across the entirety of the natural gas supply chain, from production to distribution, including LNG, providing a consistent method to credibly show reductions in emissions. These protocols

aim to encourage responsible behavior and ensure the reporting of emissions is both accurate and transparent.



Oil And Gas Methane Partnership 2.0

At the international level, the [Oil & Gas Methane Partnership 2.0](#) (OGMP 2.0) is a comprehensive, measurement-based reporting framework for the oil and gas industry that improves the accuracy and

transparency of methane emissions reporting in the sector. This effort demonstrates global momentum to collaborate on methane emissions reduction across the natural gas value chain. OGMP 2.0 is a multi-stakeholder initiative launched by the United Nations Environment Programme (UNEP) and UNEP's Climate and Clean Air Coalition. Over 120 companies with operations in more than 70 countries are members.



OIL AND GAS CLIMATE INITIATIVE

The [Oil and Gas Climate Initiative](#) (OGCI) is a CEO-led initiative that aims to accelerate action to align global oil and gas practices with a “net zero future consistent with the Paris Agreement.” OGCI is comprised of twelve of the world’s largest energy companies, which represents approximately [30%](#) of global oil and gas production. OGCI’s top priorities include carbon management (i.e., carbon capture, utilization, and storage), methane management, and net zero solutions.

Differentiated Gas Blueprint 2030

The DGCC envisions a future where differentiated gas catalyzes significant shifts throughout the oil and gas industry, leading to deep, cost-effective reductions in methane emissions.

Following comprehensive methane regulations, the natural gas market has bifurcated into a cost-focused “regulatory baseline” segment, and a premium “differentiated” segment with lower emissions.

Regulatory Shift & Market Split



Economies of scale driven by the widespread adoption of aerial, satellite, and continuous monitoring have revolutionized leak detection across the natural gas value chain, enhancing emissions controls and transparency.

Advanced Monitoring Deployed at Scale



A significant share of U.S. natural gas now surpasses federal standards, assessed as differentiated gas, driving substantial emissions reductions and potentially creating market premiums.

Differentiated Gas Emergence



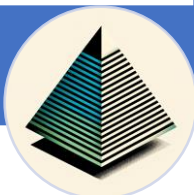
A robust MMRV system ensures the integrity of differentiated gas, with comprehensive assessments eliminating selective reporting and addressing uncertainty.

Validation & Trust



The market features varied tiers of differentiated gas, reflecting methane intensity. Harmonized regulations at all levels support transparent trading and global standard adoption.

Market & Regulatory Evolution



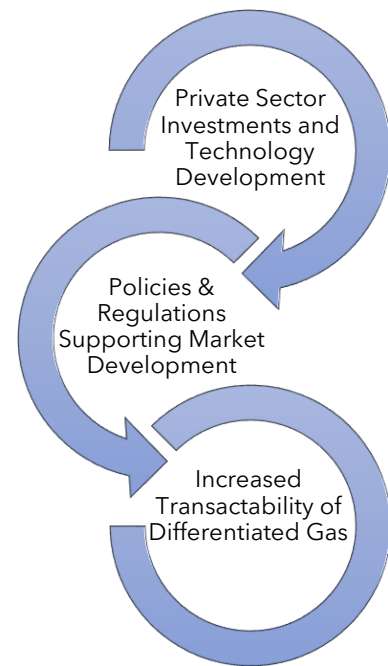
U.S. innovation in methane monitoring has spurred the growth of specialized startups and set global benchmarks, significantly cutting GHG emissions and shaping practices in adjacent sectors.

Innovation & Leadership



IV. Role of the Federal Government in Advancing Differentiated Natural Gas

The federal government played a significant role in the commercialization of other decarbonization tools, from renewable energy solutions to carbon management, and can similarly facilitate the research, demonstration, and tools for market development needed to advance emissions reduction across the natural gas supply chain. **However, any policies or initiatives pursued by the federal government should support a competitive marketplace by facilitating continued innovation in the industry and development of best practices that allow for necessary and continued technological advancements.** This flexibility can be seen in other federal policies and grant programs where agencies have allowed for advancement by recognizing the capabilities of a suite of technologies through technology readiness levels.



Establishing a federal role in facilitating the marketplace for differentiated gas is essential to instilling confidence with purchasers regarding verifiable environmental benefits. The federal government can support defining policies for tracking, accounting, and verifying environmental attributes associated with methane intensity and GHG emissions accounting more broadly. The Department of Energy (DOE) recently announced a non-regulatory best practices initiative called the [“Greenhouse Gas Supply Chain Emissions Measurement, Monitoring, Reporting, Verification Framework”](#) (MMRV framework). DOE began this effort after recognizing the “considerable activity underway related to MMRV of methane, carbon dioxide, and other GHG emissions associated with delivered natural gas,” alongside the “current lack of consensus regarding what the purchaser, regulator, or other stakeholder expectations should be for a company making a claim about the GHG intensity of delivered or contracted gas.” DOE is currently developing a “shared and broadly credible global framework” for MMRV across the international supply chain for natural gas.

Creating such a framework will facilitate emissions transparency across a variety of federal incentives, including clean energy tax credits and grant programs. Many of these programs require a life cycle assessment (LCA) that necessitates accurate accounting of methane emissions. By ensuring that clean energy infrastructure projects can utilize their specific emissions data in their LCA, the federal government can foster the growth of transparent, accurate, and verifiable data.

Differentiated gas also has the potential to maximize the investments made by the federal government in other areas. For instance, the 45V clean hydrogen tax credit can integrate with project-specific data to not only enhance emissions reductions, but also optimize the cost benefits of hydrogen derived from natural gas feedstocks.

Similarly, in the realm of carbon capture projects, differentiated gas is poised to play a crucial role in augmenting emissions reductions. By addressing GHG emissions upstream from the capture facility, it can ensure a comprehensive mitigation strategy. Integrating accurate upstream accounting with carbon capture initiatives holds the promise of unlocking a new era of low-emission, reliable power generation at natural gas combined cycle power plants across the nation.

This association between differentiated gas and federal initiatives showcases the potential for a multifaceted approach that maximizes the benefits of natural gas while addressing necessary emissions reductions. The strategic integration of measurement-informed differentiated gas practices into these frameworks creates a seamless flow of benefits, laying the foundation for a more sustainable and economically viable energy landscape.

V. Key Policy Drivers

The development of a differentiated gas market provides an opportunity for natural gas producers to demonstrate how and where they are exceeding existing and proposed regulatory standards. This fast-evolving market will benefit from establishing policy parameters to build trust, transparency, and credibility regarding emissions reduction claims, including how such reductions can help exceed federal targets.

The Biden Administration has proposed a suite of policies that address methane emissions from natural gas operations. It is critical these policies are harmonized upon implementation to maximize the potential for achieving additional voluntary emissions reductions and enabling a transparent market for differentiation.

- EPA's final New Source Performance Standards OOOOb/Emissions Guidelines OOOOc (NSPS OOOOb/EG OOOOc) [rule](#), promotes innovation by allowing operators to choose advanced technologies to comply with the regulations. EPA has also released a [proposed rule](#), referred to as Subpart W, that would amend reporting requirements for oil and natural gas systems under the agency's Greenhouse Gas Reporting Program to implement the Inflation Reduction Act (IRA) requirement that the program is to be based on empirical data. EPA has also proposed a rule to implement the IRA [Methane Emissions Reduction Program](#) (MERP) which will be based on Subpart W reported emissions. Financial assistance for these and other initiatives is provided through the IRA-funded MERP program, which provides \$1.55 billion in funding for financial and technical assistance to reduce methane emissions from the oil and natural gas sector.
- As noted previously, DOE is partnering with the European Union (EU) and several other countries to establish an international best practices [framework](#) for MMRV in the natural gas trading system. This is intended to address gaps and promote consistency across emissions reporting platforms in order to provide market participants with comparable and reliable information about GHG emissions and intensity.
- In addition, DOE [announced](#) nearly \$47 million in funding for 22 research projects to advance the development of new and innovative measurement, monitoring, and mitigation technologies to help detect, quantify, and reduce methane emissions across oil and natural gas producing regions of the U.S.
- The Bureau of Land Management (BLM) [released](#) a [proposed rule](#) that would modernize requirements for oil and gas operations on federal and Tribal lands, also pursuant to the IRA, to take reasonable steps to avoid the waste of natural gas in the production process.
- The Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) [announced](#) a [proposed rule](#) to improve the detection and repair of methane leaks from gas pipelines by establishing advanced leak detection programs.
- The Department of the Treasury (Treasury) released a [Notice of Proposed Rulemaking](#) on the 45V credit for clean hydrogen production, which includes provisions for the use of natural gas as a feedstock.

The DGCC outlines below the steps policymakers can take to facilitate enabling policies to support market development for differentiated gas. The DGCC's shared interest is to promote the adoption of the MMRV framework currently being developed by DOE, and a transactional structure that ensures any premiums are reliably correlated to ongoing emission reductions. DGCC members encourage collaboration across multiple stakeholders—including the federal government, states, academia, industry, and environmental non-governmental organizations—to ensure that a process is developed for independent verification of emission estimates and adherence to transparent criteria.

Harmonizing Federal Regulatory Policies

As an overarching goal, the Executive Branch should seek to harmonize methane regulations and policies to avoid overlapping, duplicative, or contradictory programs. By ensuring consistent rules, standards, and practices, policymakers can significantly accelerate the development, adoption and deployment of advanced technologies that can assist with the identification and elimination of fugitive and intermittent emissions. Harmonized programs will also promote greater transparency and public confidence in U.S. methane policies.

Federal agencies should rely on EPA's survey matrix for alternative screening approaches, continuous monitoring provisions, and the alternative test method approval process in the final NSPS OOOOb/EG OOOOc rulemaking. EPA's robust model for integrating advanced methods on an ongoing basis should serve as a framework for continuous review and approval of advanced technologies and rigorous performance criteria. This EPA rulemaking covers a large part of the natural gas supply chain from production, gathering and boosting, transmission, and storage segments, potentially providing advanced technology and methodology approaches that can address emissions across other federal agency rulemakings.

DGCC supports the creation of a joint clearinghouse to promote the consistent development and application of advanced monitoring and measurement practices across the federal government. Agencies should rely on the information in EPA's NSPS OOOOb/EG OOOOc rule, eliminating the need for an applicant to replicate information already provided to EPA. Agencies with requirements that vary from EPA's requirements should rely on EPA-approved methodologies coupled with additional performance criteria tailored to the compliance purpose of other agencies' distinct programs or statutes.

Key Recommendations:

- EPA should establish a framework in the **Final Subpart W Rule** for approval of qualifying advanced methane measurement technologies, including continuous monitoring systems, that owners and operators of applicable facilities may use for compliance with their reporting obligations and for determining their liability for a Methane Waste Emissions Charge (Methane Fee). The framework should use EPA's NSPS OOOOb/EG OOOOc advanced technology approval process and have performance criteria tailored to the advanced methane measurement quantification technology needed for the Methane Fee.

- DOE should align the **MMRV framework** with EPA’s NSPS OOOOb/EG OOOOc rule by relying on EPA-approved methodologies as standard benchmarks for monitoring and measurement. For example, the final NSPS OOOOb/EG OOOOc rule includes methods for approving continuous monitoring solutions that other agencies could adopt, thereby becoming a standard that consumers and governments point to. This removes the potential for debate as to what is sufficient and reliable.
- BLM should also rely on EPA’s NSPS OOOOb/EG OOOOc rule’s approved technologies and methodologies for its final [Waste Prevention Rule](#). The final rule should explicitly state that operator use of direct measurement constitutes a “reasonable precaution [...] to prevent waste” and a “prudent and reasonable step [...] to avoid waste.” BLM should provide automatic or expedited approval in these plans for the use of advanced technologies and methodologies that have been approved under EPA’s NSPS OOOOb/EG OOOOc rule.
- PHMSA should also rely on EPA’s NSPS OOOOb/EG OOOOc rule’s approved technologies and methodologies in its final [Gas Pipeline Leak Detection and Repair Rule](#). PHMSA proposed a similar approach, the Advanced Leak Detection Program, which would be a performance-based standard, and requested comments on a proposed exception for compressor stations already covered under EPA’s NSPS OOOOb/EG OOOOc rule. As with BLM, PHMSA should provide automatic approval for the use of those technologies approved under EPA’s NSPS OOOOb/EG OOOOc test method. Where use under the PHMSA rule requires specific outcomes or performance, PHMSA could add specific performance-based criteria tailored for the application but rely on the information provided in EPA’s approval process, thereby eliminating the need for an applicant to replicate the information already provided to EPA. For example, drone flyovers could be approved in EPA’s NSPS OOOOb/EG OOOOc and also require specific use case criteria for application on a pipeline.
- Treasury should also look to EPA’s NSPS OOOOb/EG OOOOc rule’s approved technologies to create a pathway for projects to demonstrate lower natural gas feedstock emissions in their final [45V Clean Hydrogen Production Tax Credit Rule](#). Treasury can rely on EPA-approved technologies and methodologies to provide reliable project-specific, verifiable data instead of the industry average default values in the Greenhouse gases, Regulated Emissions, and Energy use in Technologies (GREET) model.
- The **final Securities and Exchange Commission (SEC) climate disclosure rule** and the **final Department of Defense (DOD) Federal Acquisition Regulation (FAR) rule** disclosure requirements should similarly rely on measured data from approved technologies and methodologies for companies disclosing methane emission reductions, as opposed to emission estimates. SEC and DOD should point to EPA’s NSPS OOOOb/EG OOOOc methodologies as an approved methodology for MMRV, removing the potential for debate as to what is sufficient and reliable.

Federal Policy

The voluntary market for differentiated gas is gaining momentum, and federal involvement could expedite this positive trend. For example, a provision within the National Defense Authorization Act for Fiscal Year 2024 instructs DOD to assess procurement of “certified low-methane intensity natural gas.” Such government-supported endeavors can act as catalysts for broader industry adoption and provide a blueprint for sourcing. DOE and federal policymakers can also support the market’s momentum by providing additional funding and programmatic support for differentiated gas research, workforce development, and pilot programs.

High-quality project-specific emissions data, versus estimates or industry averages, will provide important transparency for several programs. It plays a vital role in comparing emissions estimates over time, verifying emissions reductions, identifying emission leakage events, and informing mitigation strategies. Efforts to support reconciliation of various emissions measurement, quantification of site-level emissions, and independent third-party verification are critical to ensuring a project’s unique data is transparent and high-quality.

National laboratories can support private sector work in this area and DOE’s MMRV best practices initiative by participating in the development of data attestation for differentiated gas, similar to their contributions in other industries. While academic groups are presently involved in establishing protocols and guidance, federal government participation could be advantageous in facilitating emissions measurement best practices, and the adoption of state-of-the-art technologies.

Key Recommendations:

In addition to supporting harmonization of federal rulemakings, as noted above, Congress can also take the below actions.

- **Support DOE’s MMRV Framework:** Congress should support DOE’s efforts to complete its MMRV framework by providing adequate resources to establish a measurement framework that promotes transparency, best practices, and good governance that will enhance the credibility in the voluntary differentiated gas market. Similarly, as federal and state policymakers consider actions that implicate measurement-based practices or differentiated gas markets, they should align such initiatives with DOE’s MMRV framework.
- **Establish Procurement Programs:** Congress should direct federal agencies to implement programs to procure differentiated gas. The federal government is the largest buyer of natural gas in the U.S., [consuming](#) approximately 124.3 billion cubic feet in 2022. Developing such programs could actively encourage the adoption of advanced, American-made monitoring technologies and reduce the emissions intensity of the federal government’s energy procurements.
- **Advance Energy Security and Emissions Reductions:** DOE’s MMRV effort can bolster the position of U.S. natural gas on the global market as allies across the world, whether in Europe or East Asia, announce standards for methane emissions.
- **Bolster Technical Support:** National laboratories, specifically the National Energy Technology Laboratory (NETL), should support the adoption of differentiated gas

through providing technical assistance to improve data quality practices and innovation related to emissions reporting activities. NETL can look to other federal programs for examples of data policies and protocols.

- **Workforce Development:** DOE and NETL should pursue avenues for developing a workforce that can support measurement-based practices in the energy sector. Increased training and knowledge sharing amongst these professionals can help ensure voluntary markets are transparent, and the data and transactions contained within these markets are accurately accounted for.

State Policy

State policies hold a pivotal role in driving the adoption of differentiated gas. State policymakers should advance measures that provide avenues for utilities to explore the procurement and utilization of differentiated gas as a way to reduce emissions while ensuring affordability. States throughout the country, including [Colorado](#), [New York](#), [Oregon](#), [Pennsylvania](#), [Tennessee](#), [Virginia](#), and [Washington](#) have adopted policies that encourage the utilization of lower-emissions fuels.

By incentivizing advanced technologies and methodologies for natural gas production and transparent assessment criteria, states can help create competitive markets for differentiated products and encourage stakeholders to embrace cleaner energy sources. Initiatives like this not only complement federal efforts but also serve as a model for other regions seeking more sustainable energy solutions. By actively engaging utilities, consumers, and industry stakeholders, states can establish clear guidelines for differentiated gas, fostering integration into the energy infrastructure and inspiring similar programs nationwide.

Key Recommendations:

- **Procurement Programs:** States should support utilities' efforts to make purchases of differentiated gas to support continued and state-level development of the MMRV process.
- **Cost Recovery:** States should encourage the purchase of differentiated natural gas by creating cost recovery pathways for regulated utilities.
- **Decarbonization Integration:** States should improve energy affordability and reliability by allowing utilities to integrate differentiated gas into their decarbonization plans.

International Policy

Standards for differentiated gas will be required for companies exporting natural gas to the EU due to the EU's new methane regulations for oil and natural gas. By 2027, these [new regulations](#) will require U.S. importers to include MMRV data in all new contracts. By 2030, these regulations will expand to include all contracts, new and existing. The DOE partnership with the EU on a MMRV framework is intended to provide the appropriate approach for the required MMRV information.

Similarly, differentiated gas has significant implications for carbon border programs. The natural gas industry, specifically differentiated gas, stands as a prime example of a commodity that incorporates emissions data directly into the product, aligning well with legislative efforts like Senator Chris Coons' (D-DE) [PROVE IT Act](#) or Senator Bill Cassidy's (R-LA) [Foreign Pollution Fee Act of 2023](#).

The best practices established by differentiated gas can serve as a model for other industries and commodities and position the U.S. as a reliable exporter in the global market. For example, as interest in the use of clean hydrogen as a decarbonization tool continues to grow, there is significant potential for differentiated gas to be exported to Europe as a feedstock in the production of clean hydrogen.

Key Recommendation:

- **U.S. Leadership on Methane Measurement and Reporting:** Federal agencies, including State Department's Bureau of Energy Resources, should utilize DOE's MMRV framework to encourage international development of a comprehensive set of U.S. best practices and accounting systems of differentiated gas.