ATTORNEYS GENERAL OF MARYLAND, NEW YORK, CONNECTICUT, DELAWARE, THE DISTRICT OF COLUMBIA, ILLINOIS, MASSACHUSSETS, MICHIGAN, NEW JERSEY, OREGON, PENNSYLVANIA, VERMONT, AND WISCONSIN

Via submission on www.regulations.gov

August 16, 2023

Alan K. Mayberry
Associate Administrator for Pipeline Safety
Pipeline and Hazardous Material Safety Administration
U.S. Department of Transportation, East Building PHH-30
1200 New Jersey Avenue, SE
Washington, DC 20590

Re: Comments of Attorneys General on PHMSA Notice of Proposed Rulemaking – Pipeline Safety: Gas Pipeline Leak Detection and Repair. Docket No. PHMSA-2021-0039.

Dear Associate Administrator Mayberry:

The Attorneys General of Maryland, New York, Connecticut, Delaware, the District of Columbia, Illinois, Massachusetts, Michigan, New Jersey, Oregon, Pennsylvania, Vermont, and Wisconsin ("Attorneys General"), submit these comments on the Pipeline and Hazardous Materials Safety Administration's ("PHMSA" or "the agency") proposed rule to adopt regulations that implement congressional mandates in the Protecting our Infrastructure of Pipelines and Enhancing Safety (PIPES) Act of 2020 to reduce methane emissions from new and existing gas transmission pipelines, distribution pipelines, regulated (Types A, B, C and offshore) gas gathering pipelines, underground natural gas storage facilities, and liquefied natural gas facilities.[1]

The Attorneys General support the Proposed Rule as it would substantially improve the safety of existing gas pipelines and related gas infrastructure, while significantly reducing the contribution that such pipelines and gas infrastructure make to climate change through leaks of methane and other gases. The Attorneys General offer these comments to explain their support for the Proposed Rule and to highlight several additional directions for related PHMSA rulemaking to strengthen pipeline safety and mitigate contributions to climate change.

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[1] Pipeline and Hazardous Materials Safety Administration, *Pipeline Safety: Gas Pipeline Leak Detection and Repair*, 88 Fed. Reg. 31,890 (May 18, 2023) (Notice of Proposed Rulemaking) [hereinafter Proposed Rule].

I. BACKGROUND AND INTERESTS OF THE ATTORNEYS GENERAL

a. Enhancing Pipeline Safety is Critically Important.

PHMSA acknowledges, and the Attorneys General agree, that its regulations governing pipeline safety are outdated and need to be dramatically improved. The regulations establishing requirements for detecting and repairing leaks from pipelines were last updated in the 1970s and in many instances lag behind state-level pipeline safety programs, and technological advancements for detecting and repairing leaks. Updating these standards is of the utmost importance to our states, each of which has agencies that actively partner with PHMSA to regulate gas pipelines pursuant to the federal Pipeline Safety Act.[2] According to the National Association of Pipeline Safety Representatives, "most [s]tates can and do adopt pipeline safety regulations (1,477 documented occurrences) that are stricter than the corresponding federal regulations, and the overwhelming majority of [s]tates require more stringent requirements to satisfy specific local needs for public safety."[3]

The Attorneys General therefore welcome PHMSA's proposed updates to its regulations governing pipeline leak detection and repair, which are critical for improving gas pipeline safety and protecting the environment.

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[2] The Pipeline Safety Act establishes a system of cooperative federalism to ensure the safety of both intrastate and interstate pipelines. 49 U.S.C. §§ 60105, 60106. Section 60105 establishes a backfilling role for PHMSA oversight of intrastate pipelines where a state lacks a certified state program. Section 60106 provides alternatives to certification under § 60105 and establishes that states may, by agreement, "participate in the oversight of interstate pipeline transportation."

[3] National Association of Pipeline Safety Representatives, *2022 Summary Report of State Pipeline Safety Initiatives and Requirements Providing Increased Public Safety compared to Code of Federal Regulations* 9 (3d. ed. 2022) [hereinafter NAPSR 2022] available at http://nebula.wsimg.com/77f8f2a14d467fbe1e56cbafaf9e8a8b?AccessKeyId=8C483A6DA79FB79FC7FA&disposition=0&alloworigin=1. For example, and as PHMSA acknowledges in the Proposed Rule, the Commonwealth of Massachusetts requires leakage surveys outside of "principal business districts" at least once every 24-months, which goes beyond any PHMSA requirement. *See* 88 Fed. Reg. 31927. The State of Washington requires a 15-minute response time for certain leak detection thresholds, whereas PHMSA currently has no such requirements. NAPSR 2022, at 10. The State of New Jersey's regulations require "depth of cover" surveys for pipelines that go 50% deeper than is currently required by federal regulations. *See id.* The State of Wisconsin requires special precautions if overhead electric transmission lines are located near pipeline facilities, while the State of Oregon has a landslide protection program to safeguard pipelines; in contrast, PHMSA has thus far issued only non-binding advisory bulletins to warn operators about these unique, site-specific hazards. *See id.*

The risk to public safety and the environment from maintaining the status quo is showcased by the sheer scope of accidents that have occurred under the existing regulations. Since 1986 pipeline accidents have caused more than 500 deaths, injured over 4,000 people, and caused an estimated $7 billion in property damage.[4] A number of high profile incidents investigated by both PHMSA and the National Transportation Safety Board (NTSB) reveal specific shortcomings in the existing regulatory system.

For example, in September 9, 2010, a natural gas transmission pipeline owned by Pacific Gas & Electric (PG&E) exploded in a residential section of San Bruno, California. Eight people (including a 13-year old) died, and 58 people were injured by the massive explosion and resulting fires. The NTSB's investigation, completed in August 2011, concluded that the explosion, brought on by an undetected ruptured pipe, was likely caused by (1) PG&E's inadequate quality assurance and quality control when installing the pipeline decades earlier that allowed the use of a poorly welded pipe section with a visible defect that grew over time to a critical size, causing the pipeline to rupture during a pressure increase; and (2) the utility's "inadequate pipeline integrity management program, which failed to detect and repair or remove the defective pipe section."[5] NTSB also found that an exemption of existing pipelines from pressure testing requirements, and the lack of automatic shutoff valves or remote control valves on the line to stop the flow of gas contributed to the accident.[6] The NTSB's many recommendations to stakeholders included recommendations to PHMSA to amend and strengthen various pipeline safety regulations under 49 C.F.R. Part 192.[7]

Another tragic example occurred on August 10, 2016, when an undetected gas leak in the basement of an apartment complex in Silver Spring, Maryland caused an explosion and fire that killed seven people and injured sixty-five others.[8] The NTSB's investigation identified the likely causes of the explosion as the accumulation of natural gas in the building's meter room due to a failed indoor mercury service regulator with an unconnected vent line, and the location of mercury service regulators, where leak detection by odor was not readily available.[9]

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[4] Lena V. Groeger, *Pipelines Explained: How Safe are America's 2.5 Million Miles of Pipelines?*, ProPublica (Nov. 15, 2022), https://www.propublica.org/article/pipelines-explained-how-safe-are-americas-2.5-million-miles-of-pipelines.
[5] NTSB Accident Report NTSB/PAR-11/01 (adopted Aug. 30, 2011), Probable Cause, page xii, https://www.ntsb.gov/investigations/accidentreports/reports/par1101.pdf.
[6] *Id.*
[7] *Id.*
[8] NTSB Accident Report NTSB/PAR-19-01 (adopted Apr. 24, 2019), https://www.ntsb.gov/investigations/AccidentReports/Reports/PAR1901.pdf.
[9] *Id.* at 41 (Probable Cause)

Based on the threat to public safety, the NTSB has included "improved pipeline leak detection and mitigation" among its recent "most wanted list" of transportation safety improvements, urging PHMSA to pursue a "fast-track" regulatory approach.[10] The NTSB pointed to PHMSA data showing that there had been 167 estimated accidents on gas distribution and transmission systems in the five years preceding 2021, and an estimated 827 leaks in gas transmission systems in "high-consequence areas" during that time period.[11]

b. Limiting Methane Leaks from Gas Pipelines and Other Gas Infrastructure Helps Combat the Climate Crisis.

As a result of the heat trapping effect of greenhouse gas (GHG) emissions, higher surface temperatures are already affecting the environment in observable ways through more frequent and increasingly severe heatwaves,[12] extended droughts, wildfires, rising sea levels, flooding, and extreme weather events.[13] These environmental occurrences have dangerous consequences for humans in both the long and short-term. Extreme heat is itself an acute risk to human health and long term changes in weather patterns will likely displace populations, and destroy infrastructure.[14] In 2022 alone, climate-change-related disasters cost the country one-hundred and sixty-five billion dollars.[15] The most severe of these consequences

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[10] NTSB, *Improve Pipeline Leak Detection and Mitigation,* https://www.ntsb.gov/Advocacy/mwl/Pages/mwl-21-22/mwl-rph-01.aspx.
[11] *Id.*
[12] For much of summer 2023, a series of heatwaves devastated almost every corner of the globe. *See* Alan Yuhas, *Heat Waves Grip 3 Continents as Climate Change Warms Earth*, New York Times (July 18, 2023), https://www.nytimes.com/2023/07/18/world/extreme-heat-wave-us-europe-asia.html.
[13] *See* Intergovernmental Panel on Climate Change, *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, *Summary for Policy Makers* 40 (2023) [hereinafter 2023 IPCC Report, SPM] https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf (detailing changes in global extreme weather events and confidence of human contribution on a regional basis); *id.* at 5 (explaining increases in global mean sea level and atmosphere warming as "very likely" caused by human influence).
[14] *See* U.S. Global Change Research Program, *Climate Science Special Report: Fourth National Climate Assessment, Volume I* (2017), https://science2017.globalchange.gov/.
[15] Smith, Adam B., *2022 U.S. Billion-dollar weather and climate disasters in historical context*, NOAA (Jan.10, 2023), https://www.climate.gov/news-features/blogs/2022-us-billion-dollar-weather-and-climate-disasters-historical-context#:~:text=Damages%20from%20the%202022%20disasters,Heat%20Wave%20(%2422.1%20billion).

have been, and likely will continue to be, borne disproportionately by underserved communities.[16]

To avoid the most destructive effects of climate change, meaningful steps must be taken to reduce greenhouse gas emissions, including from the release of methane gas. Atmospheric methane concentrations are higher now than at any time in the past 800,000 years.[17] As PHMSA observes in the Proposed Rule, while carbon dioxide comprises the majority of global GHG emissions today, methane has twenty-five times the warming impact of carbon dioxide over a period of one hundred years.[18] Indeed, human emissions of methane account for about one third of current global warming.[19] According to the 2023 IPCC Report, methane emissions must be cut in approximately half of 2015 levels before 2050 in order to limit global surface temperature increases to 2°C above 1850 levels by the end of this century.[20]

As discussed in Section II of the Proposed Rule, gas pipelines are also among the infrastructure at risk of damage and destruction due to the environmental effects of climate change.[21] Flooding, earth movement (such as landslides), and hurricanes can lead to pipeline failures and large releases of methane gas that threaten public safety and contribute to further climate change.[22] Additionally, any leaks of methane during transportation to end users reduces the climate-related benefits from substituting gas for coal.[23] Similarly, leaks within a future hydrogen

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[16] *See e.g.* Marcus C. Sarofim et al., U.S. Global Change Research Program, *The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment—Executive Summary* at 6 (2016); EPA, Climate Change and Social Vulnerability in the United States: A Focus on Six Impacts at 6–7 (Sept. 2021), https://www.epa.gov/system/files/documents/2021-09/climate-vulnerability_september 2021_508.pdf; IPCC, Summary for Policymakers, in Climate Change 2022: Impacts, Adaptation and Vulnerability at 12 (2022), http://bit.ly/3EEzBCy.

[17] 2023 IPCC Report, SPM *supra* note 14 at 4.

[18] 88 Fed. Reg. at 31,894.

[19] *See* Nat'l Aeronautics and Space Admin., *Global Climate Change: Vital Signs of the Planet, Facts: Methane*, NASA, https://climate.nasa.gov/vital-signs/methane/ (last updated July 20, 2023) (estimating that increased methane concentrations are responsible for "20 to 30% of climate warming since the Industrial Revolution").

[20] 2023 IPCC Report, SPM *supra* note 14 at 22.

[21] 88 Fed. Reg. at 31,897 (discussing how pipeline infrastructure is "vulnerable to the impacts of climate change").

[22] *Id.*

[23] *See* Deborah Gordon et al, *Evaluating Net Life-Cycle Greenhouse Gas Emissions Intensities from Gas and Coal at Varying Methane Leakage Rates*, 2023 Environ. Res. Lett. 18 (2023) 084008, *available at* https://iopscience.iop.org/article/10.1088/1748-9326/ace3db/pdf (finding that a leakage rate of 0.2% is sufficient to greenhouse gas benefits from substituting gas for coal); Hiroko Tabuchi, *Leaks Can Make Natural Gas as Bad for the Climate as Coal, a Study Says*, N.Y. Times (July 13, 2023) (discussing the Gordon et al. study).

pipeline system may undermine the benefits of transitioning to that fuel by prolonging the atmospheric residency of methane.[24]

Many states are confronting the climate crisis head-on by enacting laws and policies to reduce greenhouse gas emissions, including methane. Thirty-three states across the United States have released a climate action plan or are currently developing one.[25] These plans broadly include GHG emissions reduction goals and discuss state initiatives to meet them. For example, New York, pursuant to the Climate Leadership and Community Protection Act of 2019, intends to reduce GHG emissions by 40% in 2030 and 85% in 2050 from 1990 levels[26] and has finalized regulations that will reduce methane emissions by 14,000 metric tons per year in furtherance of these requirements.[27] Washington has committed to achieving net zero greenhouse gas emissions by 2050.[28] This commitment includes reducing statewide greenhouse gas emissions to 45% below 1990 levels by 2030; 70% below 1990 levels by 2040; and 95% below 1990 levels by 2050.[29] And Maryland has targeted a 60% reduction in greenhouse gases below 2006 emission levels by 2031 and net-zero carbon emissions by 2045. [30] Many states have prioritized mitigating methane emissions as key components of their climate action plans.[31] States are

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[24] *See* Matteo B. Bertagni et al., *Risk of the Hydrogen Economy for Atmospheric Methane*, 13 Nature Communications 7706 (2022) available at https://www.nature.com/articles/s41467-022-35419-7 (explaining how increased hydrogen emissions reduce atmospheric effects to break down methane, leading to longer-term build-up of atmospheric methane).
[25] Center for Climate and Energy Solutions, *U.S. State Climate Action Plans*, https://www.c2es.org/document/climate-action-plans/ (last updated Dec. 2022).
[26] N.Y. Env't. Conserv. Law § 75-0107.
[27] N.Y. Comp. Codes R. & Regs. Tit. 6, § § 200, 203 (2023).
[28] Laws of 2020, Ch. 79 (E2SHB 2311) (codified at RCW 70A.45.020(1)(c)).
[29] RCW 70A.45.020(1)(a).
[30] Climate Solutions Now Act of 2022, S.B. 528, 2022 Gen Assemb., Reg. Sess. (MD 2022). Md. Code. Ann. Env't §§ 2-1204.1, 2-1204.2.
[31] *See, e.g.*, Pennsylvania Dep't of Env. Protection, *Pennsylvania Climate Action Plan* at 79 (2021), https://www.dep.pa.gov/Citizens/climate/Pages/PA-Climate-Action-Plan.aspx (outlining the strategy to reduce methane emissions across oil and natural gas systems by 8.8 million metric tons in 2050); New Mexico Interagency Climate Change Task Force, *Progress & Recommendations* at 5 (2021), https://www.climateaction.nm.gov/wp-content/uploads/2022/05/NMClimateChange_2021_final.pdf (setting targets requiring 98% gas capture from oil and gas production and reducing methane emissions by 426,000 tons annually); Massachusetts Executive Office of Energy and the Environment, *Massachusetts Clean Energy and Climate Plan for 2025 and 2030* at 62 (June, 30, 2022), https://www.mass.gov/doc/clean-energy-and-climate-plan-for-2025-and-2030/download (requiring that by 2050, Massachusetts limit emission to achieve at least net zero greenhouse gas emissions statewide and economywide, and in no event higher than a level 85% below 1990 emissions baseline).

also taking indirect action to limit methane emissions through initiatives like building electrification[32] and advanced composting and waste disposal practices.[33]

As shown through these actions, our states maintain an interest in avoiding the worst effects of climate change to protect the well-being of their residents and natural resources. Limiting methane leaks from pipelines is a crucial measure for achieving the emissions targets that many of our states have enacted to combat the climate crisis.

II. GENERAL COMMENTS IN SUPPORT OF THE PROPOSED RULE

a. The Proposed Rule is Well Within PHMSA's Authority.

i. The Proposed Rule Implements Several Changes Specifically Instructed by Congress in the PIPES Act of 2020.

1. Section 113 of the PIPES Act

Section 113 of the PIPES Act mandated that PHMSA establish performance standards for leak detection and repair programs for certain regulated gas gathering, transmission, and distribution operators reflecting commercially available advanced technology and practices for the identification, location, categorization, and repair of all leaks that are hazardous to public safety or the environment.[34] Specifically, Section 113, codified at 49 U.S.C. § 60102(q)(1), requires PHMSA to promulgate regulations that require operators of gathering, transmission, and distribution lines to conduct leak detection and repair programs "(A) to meet the need for gas pipeline safety, as determined by the Secretary; and (B) to protect the environment." This leak detection and repair program must "be able to identify, locate, and categorize all leaks that—(i) are hazardous to human safety or the environment; or (ii) have the potential to become explosive or otherwise hazardous to human safety."[35]

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[32] In May 2023, the New York legislature approved a budget including the All Electric Buildings Act that will ban fossil fuels, including natural gas, in most new buildings. *All-Electric Building Act*, N.Y. Senate Bill S6843C (May 3, 2023).
[33] In September 2016, California enacted a statue establishing long-term organic waste limits for landfills to curb methane emissions from short-lived climate pollutants. Cal. Senate Bill 1383 (Sept. 19, 2016).
[34] PIPES Act of 2020, Pub. L. 116–260, 134 STAT. 1182, 2228-30 (Dec. 27, 2020).
[35] 49 U.S.C. § 60102(q)(2)(B).

Under the statutory authority provided to PHMSA by Section 113 of the PIPES Act, the Proposed Rule would implement several key enhancements to its pipeline leak detection and repair regulations.

A. Increased frequency of leakage surveys and patrolling (49 C.F.R. §§ 192.705, 192.706, 192.723)

PHMSA proposes increased leakage survey frequencies for distribution pipelines,[36] and for gas transmission,[37] offshore gathering, and Types A, B, and C onshore gathering pipelines[38] in high consequence areas (HCAs).[39]

The Proposed Rule increases the frequency of leakage surveys for distribution pipelines located outside "business districts" to once every 3 years (not to exceed 39 months).[40] However, higher-risk pipelines known to leak would be subject to a minimum of once-a-year survey requirement (not to exceed 15 months), which matches the existing regulatory requirement for leakage survey frequency for distribution pipelines located within "business districts."[41] The Proposed Rule would also add a requirement for operators of distribution pipelines to conduct leakage surveys when freezing or other environmental conditions may allow gas migration into nearby buildings, or after extreme weather events or land movement.[42]

Under PHMSA's proposal, certain kinds of transmission and gathering pipelines would need to be surveyed more frequently than is currently required. For gas transmission, offshore gathering, and Types A, B, and C gathering pipelines

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[36] Distribution line "means a pipeline other than a gathering or transmission line." 49 C.F.R. §192.3.

[37] Transmission pipelines are lines, other than gathering lines, that: "(1) transports gas from a gathering pipeline or storage facility to a distribution center, storage facility, or large volume customer that is not down-stream from a distribution center; (2) has an MAOP of 20 percent or more of SMYS; (3) transports gas within a storage field; or (4) is voluntarily designated by the operator as a transmission pipeline." *Id.*

[38] A gathering pipeline "means a pipeline that transports gas from a current production facility to a transmission line or main." 49 C.F.R. § 192.3. Regulations further classify gathering pipelines based on their design and location. Type A gathering lines are high pressure pipelines located in class 2, 3, or 4 locations. 49 C.F.R. § 192.8. Type B gathering lines are low pressure pipelines located in class 2, 3, or 4 locations. *Id.* Type C gathering lines have an outside diameter greater than or equal to 8.625 inches, operate at high pressure, and are located in Class 1 locations. *Id.* Class locations are based on the number of buildings within 200 meters of either side of a one mile length of pipeline, with Class 1 locations being the least densely populated and Class 4 being the most dense. 49 C.F.R. § 192.5.

[39] The term "high consequence area" is defined at 49 C.F.R. § 192.903.

[40] *See* Proposed Rule, 88 Fed. Reg. at 31,928.

[41] *See id.*

[42] *See id.* Surveys in response to specific weather or environmental conditions would not qualify as "periodic" surveys that would reset the one- or three-year clock. *Id.*

located in HCAs in Class 1, 2, or 3 locations, leakage surveys would need to take place twice a year (at intervals not exceeding 7 ½ months).[43] If located in Class 4 locations in HCAs (the most densely populated zones), these kinds of pipelines would need to be surveyed for leakage four times a year (at intervals not exceeding 4 ½ months).[44] Additionally, the proposal requires surveys for all valves, flanges, tie-ins with valves and flanges, in-line inspection (ILI) launcher and receiver facilities, and pipe with a known leak or incident history to occur with the frequencies applicable to the various HCA classifications (Classes 1 through 4) discussed above.[45]

These proposed changes fill a major regulatory gap in the existing scheme because the existing survey requirements (in some cases requiring surveys only every 5 years) allow for leaks to go undetected for longer periods of time, which can present serious safety and environmental concerns.

B. Advanced leak protection program performance standards (49 C.F.R. § 192.763)

PHMSA proposes to introduce an advanced leak protection program performance standard that would require operators of Part 192-regulated gas pipelines to demonstrate, by conducting engineering tests and analyses, that their suite of leak detection equipment, procedures, and analytics are capable of detecting all leaks above a minimum concentration threshold when measured in close proximity to the pipeline.[46] PHMSA proposes to require that leakage surveys be performed using commercially available advanced technology and practices consistent with the proposed performance standard.[47] PHMSA also proposes to require a minimum sensitivity of 5 parts per million (ppm) for leak detection equipment used in leakage surveys and leak investigations.[48] PHMSA proposes to limit the use of human or animal senses—*i.e.*, sight and smell—for leakage surveys to offshore, submerged gas transmission and gathering pipelines.[49] Human senses may also be used for gas transmission and regulated gas gathering lines in Class 1 and Class 2 locations outside of high consequence areas, but only with prior notification to and no objection from PHMSA in accordance with 49 C.F.R. § 192.18.[50]

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[43] Proposed Rule, 88 Fed. Reg. at 31,929.
[44] *Id.*
[45] *Id.* at 31,930.
[46] Proposed Rule, 88 Fed. Reg. at 31,933-35.
[47] *Id.*
[48] *Id.*
[49] *Id.*
[50] *Id.*

This proposed provision is central to PHMSA's implementation of the PIPES Act's goals of addressing the significant safety and environmental harms associated with leaks and modernizing PHMSA's regulatory approach by requiring the use of commercially available *technology*.

PHMSA's proposals to vastly limit the use of human or animal senses in favor of using leak detection equipment and to set a minimum sensitivity for such equipment are consistent with its mandate to implement the statutory requirement that the leak detection and repair program be able "to identify, locate, and categorize all leaks that—(i) are hazardous to human safety or the environment; or (ii) have the potential to become explosive or otherwise hazardous to human safety."[51]

C. Requirements to identify, locate, classify and repair *all* leaks in a timely manner (49 C.F.R. §§ 192.553, 192.703, 192.760)

PHMSA proposes to require operators of gas transmission, distribution, and Part 192-regulated gathering pipelines to identify, locate, classify, and repair all leaks in a timely manner. Presently, Part 192's provisions governing leak repair are narrowly focused on the risks to public safety from ignition of large-volume, instantaneous releases and accumulated gas; they are unclear regarding when, if at all, most leaks must be repaired. Although some—not all—Part 192-regulated pipelines are subject to a general maintenance requirement in § 192.703(c) to "promptly repair hazardous leaks," Part 192 maintenance requirements neither define "hazardous leak" in terms of risks to public safety or the environment nor establish meaningful timelines for repair of hazardous or any other leaks. These proposed amendments would address the Section 113 mandate of the PIPES Act of 2020 requiring identification, location, classification, and repair of leaks hazardous to either public safety or the environment.

PHMSA proposes that operators of gas transmission, distribution, and Part 192-regulated gathering pipelines must classify and repair all identified leaks on a schedule that depends on the severity of public safety and environmental risks. PHMSA's proposed requirements build on the tiered framework of the Gas Piping Technology Committee (GPTC) "Guide for Gas Transmission and Distribution Piping Systems" leak grading and repair criteria (an industry standard). PHMSA's proposed framework would require the classification of every leak (as either grade 1, grade 2, or grade 3) and to prioritize remediation of leaks posing the most significant risks to public safety or the environment.

[51] 49 U.S.C. § 60102(q)(2)(B).

These changes are important because the existing regulatory scheme contains significant gaps regarding repair obligations and leaves significant discretion to operators regarding how quickly to repair leaks.

In addition to the safety and environmental concerns from unrepaired leaks, there is evidence that the insufficiency of the current requirements may contribute to environmental justice concerns.[52] For instance, a 2022 study found consistently higher densities of unrepaired leaks in the homes of people of color, lower income persons, renters, adults with lower levels of education, and limited English-speaking households.[53] These same groups were more likely to experience slower repair times and significantly older unrepaired leaks.[54]

D. New requirements for gathering pipelines (49 C.F.R. § 192.9)

PHMSA proposes to introduce new patrolling and surveying requirements for Type B and Type C gathering pipelines and for offshore gas gathering pipelines.[55] PHMSA also proposes to revise § 192.9 to add to the list of Part 192 requirements applicable to Types B and C pipelines each of its proposed requirements for pressure relief device design and maintenance (§§ 192.199 and 192.773), certain recordkeeping (§ 192.709) and procedural manual requirements for operations, maintenance, and emergency response (§ 192.605), and—for Type B gathering pipelines—the emergency planning requirements at § 192.615.

These proposed changes would fill a major regulatory gap. Types B and C gathering pipelines are not currently subject to all of the Part 192 safety requirements broadly applicable to other Part 192-regulated gas pipelines. This gap creates serious public safety and environmental risks, because when leaks occur on these lines, they effectively go unregulated. For Type B lines, the public safety risks are especially significant because those pipelines are located in densely-populated Class 2, 3 and 4 locations. Likewise, the high operating pressures and large diameters of Type C pipelines entail significant risks to public safety. Moreover, fugitive and vented emissions from all natural gas gathering pipelines contribute to climate change, which underscores the importance of minimizing those greenhouse emissions from Types B and C regulated gathering pipelines.

These proposals are consistent with Section 113 of the PIPES Act which requires PHMSA to establish a leak detection and repair program that is able "to identify, locate, and categorize all leaks that—(i) are hazardous to human safety or

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[52] *See, e.g.*, Luna et al., *An Environmental Justice Analysis of Distribution-Level Natural Gas Leaks in Massachusetts, USA.*, 162 Energy Policy 112778 (2022).
[53] *Id.*
[54] *Id.*
[55] Types B and C gathering pipelines are explained above in note 40.

the environment; or (ii) have the potential to become explosive or otherwise hazardous to human safety."[56]

2. Section 114 of the PIPES Act

In addition to the mandates of Section 113 of the PIPES Act, Section 114 requires operators of *all* pipeline facilities with maintenance and inspection procedures to update pertinent manuals to address the elimination of hazardous leaks and minimize releases of natural gas—whether fugitive emissions from leaks or intentional releases due to venting from maintenance and other activities—and repair or remediate pipelines known to leak.[57]

The Proposed Rule would codify the statutory directive of Section 114 in § 192.605 of PHMSA's regulations. The new regulatory provision would require operators of gas pipeline facilities to have written procedures that address the elimination of hazardous leaks, minimize releases of natural gas, and provide for repair or replacement of pipelines known to leak based on material, design, or past operating and maintenance histories. These changes would support PHMSA's cooperation with states undertaking inspection and enforcement activity in connection with those requirements.

ii. Other Changes that PHMSA Proposes Also Implement the PIPES Act.

As discussed above, Section 113 of the PIPES Act directs PHMSA to promulgate regulations that require operators of gathering, transmission, and distribution lines to conduct leak detection and repair programs "(A) to meet the need for gas pipeline safety, as determined by the Secretary; and (B) to protect the environment."[58]

Additionally, Section 118 of the PIPES Act clarified that PHMSA must consider environmental benefits equally with public safety benefits. Specifically, Section 118 of the PIPES Act requires PHMSA to consider "safety and environmental benefits" when conducting cost benefit analysis of any standard promulgated.[59] These provisions of the PIPES Act of 2020 align with the importance of enhancing pipeline safety *and* addressing climate change by reducing methane emissions, and provide PHMSA with authority to adopt the following additional proposals:

- **Training and qualification requirements** (49 C.F.R. § 192.769)
    - PHMSA proposes to clarify training and qualification requirements for personnel that conduct leakage surveys, investigation, and leak

[56] 49 U.S.C. § 60102(q)(2)(B).
[57] PIPES Act of 2020, 134 STAT. at 2230-32 (codified at 49 U.S.C. § 60108(a)).
[58] *Id.* 134 STAT. at 2228-30 (codified at 49 U.S.C. § 60102(q)(2)(B)).
[59] *Id.* 134 STAT. at 2234(codified at 49 U.S.C. § 60102(b)(5)).

grading on gas transmission, distribution, offshore gathering, and Types A gathering pipelines. Specifically, § 192.769 clarifies that surveying, investigating, and grading leaks are covered tasks under subpart N and therefore personnel conducting these activities must be qualified and have documented work history or training.

- **Mitigation of intentional emissions such as blowdowns** (49 C.F.R § 192.770)
    - PHMSA proposes requirements for the mitigation of intentional emissions such as blowdowns on gas transmission, offshore gas gathering, and Type A gas gathering pipelines and LNG facilities. This proposal requires an operator to choose from among prescribed, proven, cost-effective mitigation measures when performing blowdowns related to operations, maintenance, or construction.

- **Configuration of modified pressure relief and limiting devices to minimize unnecessary releases** (49 C.F.R. § 192.199)
    - PHMSA proposes requirements for operators of gas transmission, distribution, offshore gathering, and Types A, B, and C gathering pipelines to design and configure all new and modified pressure relief and limiting devices to minimize unnecessary releases and to assess and remediate any relief devices that operate outside of the tolerances established in the operator's procedures.
    - PHMSA notes that this change was proposed in response to reports of incidents resulting from malfunctioning pressure relief devices. These proposed requirements would minimize unintended and unnecessary releases of gas to the atmosphere, better protecting against environmental and public safety hazards posed by malfunctioning or poorly designed and configured pressure relief devices.

- **New definition of "hazardous leak" to include environmental harm** (49 C.F.R. § 192.3)
    - PHMSA proposes incorporation of explicit reference to environmental harm among the "hazards" addressed in certain Part 191 and 192 requirements, consistent with Section 118 of the PIPES Act of 2020. PHMSA's proposed expansion of the concept of "hazards" to expressly encompass environmental harms would not extend to integrity management (IM) regulations in Part 192, subparts O (gas distribution pipelines) and P (gas transmission pipelines), which would remain focused on safety, and certain other existing requirements directed at hazards to public safety in particular.
    - This proposed change clearly tracks the language of the PIPES Act, which requires PHMSA to establish a program to "identify, locate, and categorize all leaks that—(i) are hazardous to human safety or the

environment; or (ii) have the potential to become explosive or otherwise hazardous to human safety."[60]

- **New requirements for LNG facilities** (49 C.F.R. §§ 193.2605, 193.2624)
    - PHMSA proposes a new § 193.2624 that would oblige operators of Part 193-regulated LNG facilities to perform quarterly methane leakage surveys of non-tank equipment and components within an LNG facility using leak detection equipment satisfying the minimum 5 ppm sensitivity proposed elsewhere within the Proposed Rule. Operators would also need to repair any leaks identified in a manner and on a schedule consistent with their maintenance or abnormal operations procedures. PHMSA also proposes conforming changes to annual report forms for LNG facilities to ensure meaningful reporting of methane leaks discovered and repaired pursuant to the proposed § 193.2624.
    - This is an important change because it fills a regulatory gap by requiring surveys of methane leaks for LNG facilities for the first time.

- **New requirements for Underground Natural Gas Storage Facilities (UNGSF)** (49 C.F.R. § 192.12)
    - PHMSA proposes to require UNGSFs to update their procedures to provide for the elimination of leaks and minimize release of natural gas from pipeline facilities.

iii. PHMSA has Broad Authority to Expand Reporting Requirements.

Congress has provided PHMSA with broad authority to require reporting that will "enable the Secretary to decide whether a person owning or operating a pipeline facility is complying with this chapter and standards prescribed or orders issued under this chapter."[61] All of the changes now proposed to reporting requirements for gas-related infrastructure under PHMSA's jurisdiction fit within that general authority.[62]

The proposal would modify the annual reporting forms completed by pipeline operators to include information concerning the number and class of all leaks from the preceding year, repairs made, and the aggregate emissions attributable to each class of leaks.[63] The Proposed Rule would also require reporting of other emissions by source category, such as venting.[64] Additionally, the Proposed Rule would require a new large volume release report for releases over 1 million cubic feet (MMCF) to

[60] 49 U.S.C. § 60102(q)(2)(B).
[61] 49 U.S.C. § 60117(c).
[62] 49 C.F.R. §§ 191.11 (distribution); 191.17 (gathering and transmission).
[63] 88 Fed. Reg. at 31,946.
[64] *Id.*

apply to all Section 191 facilities as well as storage and LNG facilities within PHMSA's jurisdiction.[65]

Information collected through the proposed changes is necessary to comply with Congress' directive that the agency "identify, locate, and categorize all leaks that – (i) are hazardous to human safety or the environment; or (ii) have the potential to become explosive or otherwise hazardous to human safety."[66] And these changes will provide important information, at a more accurate level, that will allow policy makers to better understand the impact of gas usage across the commodity's entire lifecycle. That understanding will enhance the efficacy of our response to public safety and environmental concerns, including the climate crisis, an issue that many of our states are spending significant resources to confront.[67]

b. The Proposed Rule is Grounded in the Application of Proven Technologies and Regulatory Practices.

The current federal standards for monitoring, grading, and repairing leaks on gas pipelines and associated infrastructure are simply out of line with modern technology and sound regulatory practice. Many of these standards were last updated in the 1970s and still allow compliance through measures like human sense monitoring. Although the changes PHMSA is proposing to those regulations are significant, and will be a marked improvement over the status quo, none are by any means groundbreaking. Rather, the regulatory changes in the Proposed Rule is grounded in the application of proven technology and sound administrative practice or are otherwise measures that correspond to good management. Moreover, while most states have simply adopted the regulatory floor established by existing federal standards, several have enacted measures that demonstrate the feasibility of PHMSA's current proposals.

i. Survey Requirements

As PHMSA now acknowledges, many of its existing requirements for detecting leaks may be inadequate. Gas transmission pipelines, for example, must be inspected annually outside of Class 3 and 4 areas but require the use of leak detection equipment only if the pipeline is not odorized.[68] Human sense surveys, which rely on smelling the release of odorized gas or otherwise observing changes to the physical area adjacent to a pipeline, like dead vegetation or bubbling water, will reveal only those leaks that are large enough to have observable effect.[69] Moreover, they may be ineffective based on external environmental factors, *i.e.*, a vegetation

[65] *Id.* at 31,945.
[66] 49 U.S.C. § 60102(q)(2)(B).
[67] *See supra,* Section I.b.
[68] 88 Fed. Reg. at 31,907.
[69] *Id.* at 31,909 (describing human sense surveys as "imprecise and substantially limited in their effectiveness.").

survey may be inconclusive during winter when vegetation naturally dies back or in areas with limited vegetative cover. PHMSA is therefore proposing that all such surveys should be conducted using leak detection technologies capable of registering methane at specified concentrations.

Several states already require that leak surveys are conducted using these types of technology. In Maryland, for example, leakage surveys must be conducted using flame ionization, combustible gas indicator and bar hole, optical methane detectors, or other methods approved by the Maryland Public Service Commission.[70] Similarly, New Jersey requires that surveys conducted on bare or coated cathodically unprotected pipelines "out of doors shall be performed using leak detection equipment that is at least as reliable and sensitive as flame ionization."[71] The experiences of these states confirm that it is practical to require pipeline operators to use commercially available leak detection equipment when surveying their lines.

ii. Leak Grading and Repair

Current regulations for grading and repairing leaks are also lacking. Those provisions require only the prompt repair of leaks posing an imminent hazard to persons or property and require no further action in other cases.[72] As PHMSA notes throughout the proposal, the lack of detailed grading and repair requirements means leaks may go unaddressed indefinitely, or at least until they develop into acute threats to persons or property. As such, the existing regulations fail to meet Section 113 of the PIPES Act of 2020's requirement that PHMSA promulgate regulations concerning leak detection and repair that are sufficient to "protect the environment" as well as public safety and property.[73]

Those regulations are also inconsistent with industry best practices. The Gas Pipeline Technology Committee (GPTC), for example, suggests grading leaks into three tiers. Grade 1 leaks are those that pose "an existing or probable hazard to persons or property," largely mirroring the current regulatory definition of "hazardous leak" at 49 C.F.R. § 192.1001, and should be repaired promptly, using immediate and continuous action to protect persons and property.[74] Grade 2 leaks

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[70] Md. Code Regs. 20.55.09.05(A).
[71] N.J. Admin. Code § 14:7-1.20.
[72] *See* 49 C.F.R. § 192.703(c) ("hazardous leaks must be repaired promptly"); 49 C.F.R. § 192.1001 ("Hazardous Leak means a leak that represents an existing or probable hazard to persons or property and requires immediate repair or continuous action until the conditions are no longer hazardous.").
[73] 49 U.S.C. § 60102(q)(1).
[74] The GPTC provides a non-exhaustive list of examples of Grade 1 leaks which PHMSA summarizes in the proposal as: "(1) any leak that, in the judgment of operating personnel at the scene, constitute an immediate hazard; (2) escaping gas that is ignited; (3) any indication of gas which has migrated into or under a building, or into a tunnel; (4) any indication of gas which has migrated to an outside wall of a building where gas would likely

are "non-hazardous at the time of detection but that require[] or justif[y] a scheduled repair based on probable future hazard," and they should be reevaluated every six months to ensure conditions have not worsened, and repaired within one year from the date reported.[75] Grade 3 encompasses leaks that are "non-hazardous at the time of detection and can reasonably be expected to remain non-hazardous," *i.e.*, all other leaks, and the GPTC suggests that the leak be reevaluated within 15 months. There is no repair recommendation for Grade 3 leaks.[76]

While most states only apply PHMSA's current regulatory standards, some states have adopted requirements based on the GPTC's recommendations, and a few others have adopted even more stringent standards. The State of Washington, for example, defines leak grades almost identical to the GPTC's suggestions, requires all Grade 1 leaks to be promptly repaired, and lacks any repair requirement for Grade 3 leaks. Washington differs from the GPTC's suggestion for Grade 2 leaks, however, by requiring that all Grade 2 leaks are repaired within 15 months of their discovery while also explicitly acknowledging the wide range of leaks that may fit into this category and the variety of appropriate response times depending on the particular characteristics of each leak.[77] This includes an explicit six-month repair criteria for Grade 2 leaks exhibiting specific qualities.[78]

In Massachusetts, Grade 1 leaks must be repaired promptly and Grade 2 leaks within 12 months.[79] Grade 3 leaks are to be repaired within eight years of their discovery unless they are determined to be "environmentally significant."[80] A

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migrate or into a tunnel; (5) any reading of 80% LEL, or greater in a confined space; (6) any reading of 80% LEL, or greater, in small substructures (other than gas-associated substructures) from which gas would likely migrate to the outside wall of a building; and (7) any leak that can be seen, heard, or felt, and which is in a location that may endanger public or property." 88 Fed. Reg. at 31,917

[75] 88 Fed. Reg. at 31,918.

[76] *Id.* at 31,919.

[77] Wash. Admin. Code § 480-93-18601(2)(a) ("Each gas company must repair or clear Grade 2 leaks within fifteen months from the date the leak is reported."); *id.* at 480-93-18601(2)(c) ("Grade 2 leaks vary greatly in degree of potential hazard. Some Grade 2 leaks, when evaluated by the criteria, will require prompt scheduled repair within the next five working days. Other Grade 2 leaks may require repair within thirty days… Many Grade 2 leaks, because of their location and magnitude, can be scheduled for repair on a normal routine basis with periodic reevaluation as necessary.").

[78] Wash. Admin. Code § 480-93-18601(2)(e) (Providing non-exhaustive list of examples of "Grade 2 leaks requiring action within six months.").

[79] 220 Mass. Code Regs. § 114.04(3)(a), (b).

[80] *Id.* § 114.04(3)(c) ("Each Gas Company shall repair or eliminate Grade 3 leaks located on non-GSEP facilities that are initially classified on January 1, 2018 or later, other than those that were designated as environmentally significant in accordance with 220 CMR 114.07(1), within eight years.").

Grade 3 leak is "environmentally significant" if "the highest barhole reading shows a gas-in-air reading of 50% or higher or the Leak Extent is 2,000 square feet or greater."[81] Such leaks must be repaired within either 12 or 24 months depending on whether the leak was designated "environmentally significant" based on barhole readings, or leak extent, and the severity of that leak extent designation.[82]

New Jersey offers an example of a state with more stringent grading and repair requirements than those recommended by the GPTC. There, leaks that "represent an existing or probable hazard to persons, property, or the environment" are considered Grade 1 and must be repaired immediately, while Grade 2 leaks "shall be repaired within six months," and Grade 3 leaks must be reevaluated every six months and repaired within two years of their discovery.[83] Moreover, in New Jersey, a Grade 1 classification is triggered by "any leak with a 20 percent or greater [Lower Explosive Limit] LEL reading in any enclosed space," a threshold that is much lower than the 80 percent LEL trigger now proposed by PHMSA.[84] New Jersey also exempts any operators "who repair all leaks when found, meaning they treat all leaks as Grade 1 leaks," from its regulatory grading requirements.[85]

The Proposed Rule would strike a middle ground between these approaches by largely adopting the GPTC's criteria for grading leaks, with tighter deadlines for repairing Grade 2 and Grade 3 leaks than those suggested by the GPTC. Under the proposal, all Grade 2 leaks must be repaired within six months of detection and reevaluated every 30 days until they are repaired.[86] All Grade 3 leaks must be repaired within two years unless the pipeline or fitting is made of cast iron, unprotected steel, wrought iron, and plastics that are known to leak and is slated for replacement or abandonment within five years.[87] These more ambitious repair requirements are necessary to prevent harm to the environment from allowing Grade 2 and Grade 3 leaks to go unrepaired for extended periods of time.

The Attorneys General strongly support the adoption of these repair timelines. While they may be more ambitious than the GPTC's recommendations, they are in some ways less stringent than the requirements implemented by several states. Moreover, as PHMSA notes, these deviations from the GPTC framework are necessary to "address gaps in safety and environmental protection."[88] The proposed

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[81] *Id.* § 114.07(1)(a).
[82] *Id.* § 114.07(2)(a).
[83] N.J. Admin. Code § 14:7-1.19.
[84] *Compare* N.J. Admin. Code § 14:7-1.19 *with* 88 Fed. Reg. 31,940 ("PHMSA's proposed grade 1 leak criteria elaborate that, at a minimum, a grade 1 leak includes . . . any reading of 80% or greater of the LEL in a confined space").
[85] N.J. Admin. Code § 14:7-1.19(a).
[86] 88 Fed. Reg. at 31,942.
[87] *Id.* at 31,943.
[88] *Id.* at 31,937.

standards will serve as a necessary regulatory floor, meaning that states like New Jersey can continue to require more stringent leak grading and timely response but that states cannot do less than the federal requirement. This is especially important considering that under the current regulations, and GPTC recommendations, operators are under no requirement to repair Grade 3 leaks. Additionally, PHMSA's proposed § 192.760(h) will provide sufficient flexibility to pipeline operators if complying with the regulatory repair deadlines may be impractical or otherwise cause unnecessary environmental harm.[89]

iii. Minimizing Intentional Releases

PHMSA is also proposing a handful of measures to minimize intentional releases from gas transmission, offshore gathering, and Type A gathering pipelines, as well as LNG facilities.[90] Intentional emissions from blowdowns, venting, and suboptimization of pressure relief devices are a significant source of pipeline emissions. Intentional boiloffs and other venting measures are a large source of emissions from LNG facilities. Although some such emissions may be an unavoidable component of facility operations, there are proven measures that can be implemented to mitigate the scope and extent of these releases. Given methane's outsized contribution to climate change, particularly in the short term, it is extremely important that such intentional emissions are minimized. In fact, the significance of these intentional releases, and operators' ability to minimize them, was so apparent that Congress expressly instructed PHMSA to propose measures to do just that in Section 114 of the PIPES Act of 2020.

Before maintenance can proceed on a pipeline, the operator must remove gas from the section of the pipeline being worked on. There is currently no regulatory requirement specifying how an operator does that and operators have historically vented gas from the section of pipeline undergoing repair via blowdown.[91] However, there are technological and operational actions that can be implemented before blowdown to minimize the volume of gas released. Such actions include using valves or control fittings to shorten the segment of pipeline – and corresponding amount of gas that must be removed – prior to maintenance; rerouting gas that would otherwise be vented to flares, short term storage, or other consumptive uses; and lowering pressure in the section of pipeline that will be undergoing maintenance prior to venting.[92] As PHMSA notes, such actions are already being implemented by pipeline operators that have made voluntary commitments under EPA's voluntary Methane Challenge program.[93]

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[89] *Id.* at 31,944.
[90] *Id.* at 31,948.
[91] *Id.*
[92] 88 Fed. Reg. at 31,948-49 (describing blowdown mitigation techniques in greater detail).
[93] *Id.*

Although the proposed menu of options for preventing or minimizing intentional releases is a significant improvement over the status quo, the Attorneys General urge PHMSA to strengthen the proposal in order to align with Congress' direction that operators "minimize" intentional releases of natural gas.[94] The Oxford English Dictionary defines "minimize" as "reduce (something, especially something unwanted or unpleasant) to the smallest possible amount or degree,"[95] while the Merriam-Webster Dictionary defines "minimize" as a transitive verb meaning "to reduce or keep to a minimum,"[96] with "minimum" correspondingly defined as "the least quantity assignable, admissible, or possible."[97] As such, the Attorneys General believe that the regulatory focus should be on reducing intentional emissions to the maximum extent possible.[98]

The Attorneys General believe that a tiered regulatory approach that distinguishes between practices that have the potential to prevent releases and those that may be used to minimize any unavoidable emissions would accomplish the goal of minimizing emissions. We therefore suggest that PHMSA first specify those operational steps that can be used, alone or in tandem, to reduce the amount of gas in a pipeline segment requiring maintenance. These steps would include the measures currently proposed at sections 192.770(a)(1), (3), and (4). The regulations should then specify that once those measures have been taken the pipeline operator must attempt to route the remaining gas to storage. If it is not feasible to do so, the operator must then attempt to route the gas to another useful purpose. If it is not feasible to do that, then the operator must attempt to route the gas for flaring. Only if none of those options are feasible should an operator be allowed to vent the remaining gases.[99] Alternative methods should only be allowed if none of the three options to prevent methane emissions are available or if the pipeline operator can show that the alternative will result in less emissions than the prescribed procedures. Such a step-by-step approach will more closely adhere to the goal of minimizing, and not just mitigating, the amount of gas released via blowdown and other intentional venting.

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[94] PIPES Act of 2020, 134 STAT. at 2230-32 (codified at 49 U.S.C. § 60108(a)).
[95] *Minimize*, Oxford English Dictionary, https://www.oed.com/search/dictionary/?scope=Entries&q=minimize.
[96] *Minimize*, Merriam-Webster Dictionary, https://www.merriam-webster.com/dictionary/minimize.
[97] *Minimum,* Merriam-Webster Dictionary, https://www.merriam-webster.com/dictionary/minimum.
[98] Such an interpretation is also consistent with the significance of these regulations for addressing climate change. *See supra,* Section I.b.
[99] The Attorneys General suggest that PHMSA retain the emergency exception at proposed section 192.770(b).

iv. Minimizing Releases from Pressure Relief Devices

The Attorneys General strongly support PHMSA's proposals to optimize the design and function of pressure relief devices on new pipelines and to require the timely repair of malfunctioning devices on all pipelines. Pressure relief devices play an integral role in pipeline safety by preventing dangerous overpressure events. However, if pressure relief devices are configured in an overly conservative manner or malfunction from their intended operations they can become a significant source of emissions, particularly from transmission pipelines. PHMSA notes that it received 112 incident reports of malfunctioning pressure relief devices from 2010-2022, with an average release of 12.5 million cubic feet (MMCF) per incident.[100]

PHMSA now proposes addressing these emissions through a two-pronged approach. First, operators of new, replaced, relocated or otherwise changed gas transmission, distribution, and Part 192 regulated gathering pipelines would have to design and configure their pressure relief devices to be based on a set of requirements that would minimize unnecessary releases.[101] These requirements focus on the design, material, configuration, and other characteristics of the pressure relief devices and pipeline itself.[102] This will ensure that pipelines are only releasing as much gas as is necessary, with an adequate margin of safety, to avoid dangerous overpressure events. Second, operators of existing gas transmission, distribution, and Part 192 regulated gathering pipelines would have to develop procedures to assess the proper function of pressure relief devices and replace any malfunctioning device within a maximum of 30 days.[103]

Again, these proposals break no new ground. Rather, they would simply require pressure relief devices to be designed for the specific climate and location of the pipelines they serve and ensure that devices are maintained in a manner that protects both public safety and the environment.[104] Thus, these proposed standards represent a significant step towards limiting emissions from unnecessary pressure relief device operations in a manner that is efficient and technologically proven.

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[100] 88 Fed. Reg. at 31,950.
[101] *Id.* (proposed section 192.199).
[102] *Id.*
[103] *Id.* at 31,950-51 (proposed section 192.773).
[104] Weather conditions can have a significant effect on venting, as noted by the release of significant amounts of methane from pipelines during a recent heatwave in Texas. *See* Dylan Baddour, *West Texas gas operators released tons of excess emissions during June heat wave*, The Texas Tribune (June 19, 2023), https://www.texastribune.org/2023/07/19/texas-pipeline-heat-natural-gas-emissions-pollution-permian-basin/. *See also* Dylan Baddour, *Texas Pipeline Operators Released or Flared Tons of Gas to Avert Explosions During Heatwave*, Inside Climate News (June 30, 2023), https://insideclimatenews.org/news/30062023/texas-pipeline-flare-release-gasheat/.

c. The Proposed Rule Would Significantly Reduce Greenhouse Gas Emissions from Existing and Future Gas Pipelines.

The Attorneys General largely support the Proposed Rule as it would significantly reduce methane emissions from natural gas pipelines and raise the regulatory floor for the safety and operation of future hydrogen and gaseous carbon dioxide pipelines that may be required as we attempt to address carbon pollution from the power and home heating sectors.

i. Methane Reductions

Climate change, largely driven by the anthropogenic addition of greenhouse gases to the Earth's atmosphere, is already wreaking havoc in our states.[105] Some of our states are already dealing with the effects of climate change driven sea level rise and all of our states are experiencing more frequent extreme weather events linked to climate change.[106] And many of our states are making significant investments to attempt to stop the decline into climate catastrophe.[107] Still, the reality is that methane will continue to play a significant role in the power and home heating sectors for some time, meaning it is essential to reduce the emissions associated with transporting that fuel. Doing so will require strong federal regulations like those included in the Proposed Rule.

As PHMSA details in section II of the Proposed Rule, and its Draft Environmental Assessment, the proposal would avoid approximately 72% of unintentional emissions from regulated gathering pipelines, 17% of unintentional emissions from transmission pipelines, and 44-62% of unintentional emissions from distribution pipelines versus the status quo.[108] Additionally, PHMSA expects that the rule would eliminate 43% of intentional emissions associated with pipeline blowdown, primarily from transmission pipelines.[109] Those reductions correspond to a massive reduction in annual methane emissions. PHMSA estimates that by 2038, unintentional releases will decrease by well over 1 million metric tons per year and blowdown emissions by over 100,000 metric tons per year.[110] Avoiding these emissions will yield significant climate benefits in the short term as methane has a higher global warming potential—but much shorter atmospheric residence time—than carbon dioxide.[111]

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[105] *See supra* Section I.b.
[106] 2023 IPCC Report, SPM, *supra* note 14 at 5.
[107] *See supra* Section I.b.
[108] 88 Fed. Reg. at 31,892.
[109] *Id*.
[110] Draft Environmental Assessment at 24, t.6 (unintentional releases); *id*. at 25-26, t.8 (blowdowns), available at https://www.regulations.gov/document/PHMSA-2021-0039-0017
[111] *See supra* section I.b.

ii. Novel Commodities

The Proposed Rule may also play an important role in ensuring that the infrastructure built to respond to the climate crisis is safe and effective. A number of federal initiatives have signaled that hydrogen and carbon capture and sequestration (CCS) will be a part of the transition to a low-carbon economy.[112] Both will require either new pipeline infrastructure or the repurposing of existing pipelines to move different gases like hydrogen, hydrogen-methane blends, or carbon captured for sequestration.[113] Without strong federal regulations, pipelines carrying these new commodities may pose significant risks to public safety and the environment and we urge PHMSA to continue its ongoing efforts to publish regulations specific to these two commodities.[114]

1. Hydrogen

Burning hydrogen produces no greenhouse gases so if the hydrogen gas itself is produced from water using electricity derived from renewable sources it can be a climate-friendly fuel source.[115] Because of the relative ease of substituting hydrogen for methane in the power generation sector, hydrogen is receiving newfound attention as a dispatchable fuel in a carbon-free or low-carbon future and

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[112] *See* EPA, *New Source Performance Standards for Greenhouse Gas Emissions from New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Generating Units; and Repeal of the Affordable Clean Energy Rule*, 88 Fed. Reg. 33,240 (May 23, 2023) (proposed rule); Inflation Reduction Act, Pub. L. 117–169, 136 STAT. 1818 (Aug. 16, 2022); Infrastructure Improvement and Jobs Act, Pub. L. 117-58, 135 STAT. 429 (Nov. 15, 2021).

[113] PHMSA has issued guidance to operators for changing the composition of products shipped via pipeline and that such guidance should apply before a pipeline operator begins blending hydrogen into an existing natural gas line or repurposing existing lines to move pure hydrogen or gaseous carbon dioxide. *See* U.S. DOT PHMSA, *Guidance for Pipeline Flow Reversals, Product Changes and Conversion to Service*, Sept. 2014, https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/technical-resources/pipeline/control-room-management/70031/gorrpccs.pdf.

[114] Spring 2023 Unified Regulatory Agenda, DOT/PHMSA, RIN: 2137-AF60, *Pipeline Safety—Safety of Carbon Dioxide Pipelines*, https://www.reginfo.gov/public/do/eAgenda ViewRule?pubId=202304&RIN=2137-AF60; PHMSA, *Pipeline Transportation Hydrogen and Emergin Fuels R&D Public Meeting and Forum*, Nov. 30, 2021 – Dec. 2, 2021, https://primis.phmsa.dot.gov/meetings/MtgHome.mtg?mtg=153. *See generally,* PHMSA, *Hydrogen* Page, https://primis.phmsa.dot.gov/comm/hydrogen.htm

[115] Most hydrogen commercially available today is, however, derived from fossil fuel feedstocks through a process known as steam-methane-reformation and therefore is associated with significant upstream climate pollution.

investments in hydrogen production, transportation, and end use technologies are booming.[116]

Hydrogen gas, however, has several specific properties that differ from methane, raising unique challenges for transporting it to end users. One such difference is that hydrogen molecules are significantly smaller than methane molecules. This means that there is a significantly higher rate of leakage associated with transporting hydrogen by pipeline.[117] Additionally, it may mean that several materials historically used in gas pipelines are unsuitable for transporting hydrogen, either alone or blended with methane.[118]

Leakage is a significant issue for several reasons. First, hydrogen itself is flammable. It has a lower point of ignition[119] and lower explosive limit (LEL)[120] than methane and burns with a light blue flame that is hard to detect with the naked eye.[121] Therefore, the risk of ignition from a small hydrogen leak may be greater than from a corresponding leak of methane. Second, hydrogen in the atmosphere serves as something of an indirect greenhouse gas by reacting with the same hydroxyl radical (OH) ions that help break down atmospheric methane.[122] Put another way, hydrogen essentially prolongs the atmospheric residence time of methane.[123] It is therefore essential that PHMSA's regulations are sufficient to prevent hydrogen emissions.[124] Failure to do so may risk public safety and undermine the benefits of reducing methane emissions.

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[116] Will Horner, *North American Clean Hydrogen Projects are Booming* (April 28, 2023), https://www.wsj.com/articles/north-american-clean-hydrogen-projects-are-booming-75a3d4ed.

[117] 88 Fed. Reg. at 31,899 n.75.

[118] *See* Arun SK Raju & Alfredo Martinez-Morales, University of California, Riverside, *The California Public Utiliteis Commission Final Report: Hydrogen Blending Impacts Study* at 11-14 (July 18, 2022), https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M493/K760/493760600.PDF. The issue of leakage is different, but related, to the matter of hydrogen embrittlement, a phenomenon in which hydrogen compromises the structural integrity of a metal pipeline, fitting, or valve based on the metal's crystallographic microstructure. *Id*. at 10.

[119] *Id*. at 7.

[120] 88 Fed. Reg. at 31,955 ("The LEL of natural gas is 5% methane in air by volume… the LEL for hydrogen gas is 4% hydrogen by volume.").

[121] Pipeline Safety Trust, *Report: Safety of Hydrogen Transportation by Gas Pipelines* at 4 (Nov. 28, 2022), https://pstrust.org/wp-content/uploads/2022/11/11-28-22-Final-Accufacts-Hydrogen-Pipeline-Report.pdf.

[122] Bertagni, *supra* note 25.

[123] *Id*.

[124] Bertagni, et al, conducted modeling showing that green hydrogen leakage must be kept below 6-12%, and blue hydrogen – a term used to refer to hydrogen derived from natural

2. Carbon Dioxide

Increased emphasis on reducing carbon emissions from large point sources like power plants is also likely to lead to a major buildout of carbon dioxide pipelines.[125] PHMSA's current regulatory definitions present a significant problem though, as they define carbon dioxide only as a supercritical fluid for regulation at Part 195.[126] It is unclear yet whether the majority of carbon dioxide captured for sequestration will be transported as a liquid, gas, or supercritical fluid, but the potential exists for significant amounts to be moved in non-supercritical phases leaving a major regulatory gap.[127]

While PHMSA is in the process of proposing rules specific to non-supercritical carbon dioxide pipelines,[128] the present proposal may still influence those regulations because it will serve as the regulatory backdrop for operating gas pipelines generally. In fact, in 2016 PHMSA assessed the need for carbon dioxide specific regulations and concluded that the best way of regulating gaseous carbon dioxide pipelines would be to include them within Part 192 with reference to the regulations governing supercritical carbon dioxide in Part 195 where appropriate.[129]

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gas with carbon capture and sequestration – below 1% in order for hydrogen to actual reduce atmospheric methane levels. *Id.*

[125] *See e.g.*, Eric Larson, et al., Princeton University, *Net-Zero America: Potential Pathways, Infrastructure, and Impacts*, at 205-220 (Oct. 29, 2021) available at https://netzeroamerica.princeton.edu/img/Princeton%20NZA%20FINAL%20REPORT%20SUMMARY%20(29Oct2021).pdf (projecting future CO2 pipeline requirements to meet net zero goals).

[126] *See* 49 C.F.R. § 195.2 ("Carbon dioxide means a fluid consisting of more than 90 percent carbon dioxide molecules compressed to a supercritical state."); 49 C.F.R. § 192.3 ("Gas means natural gas, flammable gas, or gas which is toxic or corrosive").

[127] The timing and substance of tax credits included in the Inflation Reduction Act, 25 U.S.C. 45Q, raise the prospect that retired or underused pipelines may be repurposed for CO2 transportation. *See* Pipeline Safety Trust, *Accufacts' Perspectives on the State of Federal Carbon Dioxide Transmission Pipeline Safety Regulations as It Relates to Carbon Capture, Utilization, and Sequestration Within the U.S.*, at 7, March 23, 2022. And even if all CO2 slated for CCS were moved as a supercritical fluid, it is unclear if those regulations are sufficient to protect public safety and the environment in the case of a massive CCS pipeline buildout. *Id.*

[128] *See* OIRA, Unified Agenda of Regulatory and Deregulatory Actions, RIN: 2137-AF60, https://www.reginfo.gov/public/do/eAgendaViewRule?pubId=202304&RIN=2137-AF60. PHMSA held a public meeting on this topic in late May 2023. *See* Pipeline and Hazardous Materials Safety Administration, CO2 Public Meeting 2023, Docket ID: PHMSA-2023-0013, https://www.regulations.gov/docket/PHMSA-2023-0013.

[129] PHMSA Office of Pipeline Safety, *Background for Regulating the Transportation of Carbon Dioxide in a Gaseous State*, at 22 (Feb. 2015) available at https://www.regulations.gov/document/PHMSA-2016-0049-0001.

As such, many of the changes that PHMSA proposes in the present rulemaking may also ultimately apply to carbon dioxide pipelines.

Even if PHMSA adopts a different regulatory approach, and Part 192 does not apply directly to CO2 pipelines, it will still serve as a regulatory model for establishing CO2 specific regulations as many of the environmental concerns that motivate the proposed regulations apply to CO2 with equal force as they do to methane. Even small leaks, for example, could cause significant environmental harm if allowed to go unrepaired indefinitely because carbon dioxide is a greenhouse gas. And requiring timely repair of such leaks is also important to protect public safety as large carbon dioxide releases are a significant public safety concern.[130] Requiring pipeline operators to have advanced leak detection programs and a structured grading and repair program that promptly addresses such leaks will be essential to ensuring that carbon capture and sequestration plays the role it is intended to fill in our low-carbon future.

III. SPECIFIC COMMENTS

a. Defining "Business District"

PHMSA does not propose to define the term "business district," which is a key element of determining survey frequencies under 49 C.F.R. § 192.723, but instead "invites comment on potential criteria for defining the boundaries of a business district."[131] The Attorneys General believe that PHMSA's current approach—which leaves it to states to define the term—is appropriate and should be continued given the variety of state definitions currently in use.

However, if PHMSA does decide to define "business district" as part of this proceeding it should adopt a definition of that term that is as broad as possible to minimize conflicts with existing state law and practice. We note that PHMSA's current guidance concerning the term is inclusive in nature and merely states that a business district is an area "used in the conducting of buying and selling commodities and services, and related transactions," and "would normally be associated with the assembly of people in shops, offices and the like and in the

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[130] *See e.g.*, Julia Simon, NPR, *The U.S. is expanding CO2 pipelines. One poisoned town wants you to know its story*, May 21, 2023, https://www.npr.org/2023/05/21/1172679786/carbon-capture-carbon-dioxide-pipeline (Describing CO2 pipeline release and the impact on nearby town of Satartia, MS). *See also* PHMSA Office of Pipeline Safety, *Failure Investigation Report – Denbury Gulf Coast Pipelines, LLC – Pipeline Rupture/Natural Force Damage*, May 26, 2022, https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2022-05/Failure%20Investigation%20Report%20-%20Denbury%20Gulf%20Coast%20Pipeline.pdf (Report detailing the rupture and leakage of the Satartia CO2 pipeline).

[131] 88 Fed. Reg. at 31,926.

conduct of such business."[132] In many states, the term "business district" is used not just for purposes of leakage surveys but for other programs, like development grants and traffic requirements, as well. It is not uncommon for state codes to contain multiple different definitions of "business district," each specific to the section of code where it appears. Defining the term in a manner that conflicts with state laws may therefore raise serious administrative issues.

b. PHMSA's Proposed Definition of "Leak or Hazardous Leak"

PHMSA is proposing a new regulatory definition of "leak or hazardous leak" at 49 C.F.R. § 192.3 to mean "any release of gas from a pipeline that is uncontrolled at the time of discovery and is an existing, probable, or future hazard to persons, property, or the environment, or any uncontrolled release of gas from a pipeline that is or can be discovered using equipment, sight, sound, smell, or touch."[133] The Attorneys General agree that all leaks, no matter the size, present hazards to the environment and that even the smallest leak poses a risk of degrading to the point where it presents a danger to persons or property.[134] We therefore support PHMSA's proposal to delete references to "*potentially* hazardous" releases in Part 192.

However, we suggest that PHMSA define these terms separately to avoid unnecessary confusion and any argument that the proposed definition renders the term "hazardous" surplusage.

c. Large-Volume Gas Release Reporting Threshold (49 C.F.R. § 191.19)

PHMSA proposes to require pipeline operators to report all releases, whether intentional or unintentional, that exceed 1 MMCF.[135] Specifically, "[o]perators would be required to submit a report within 30 days from the date that a release known at detection to be 1 MMCF or more was detected, or 30 days from the date that a previously detected release became reportable."[136] Further, under PHMSA's proposal, "[i]f the time the leak started is unknown, operators should base the calculation based on estimated release volume from the date of the most recent leakage survey."[137]

The Attorneys General support the establishment of this large-volume gas release report and urge PHMSA to consider whether a lower threshold would be

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[132] 88 Fed. Reg. at 31,982 n.4 (citing PHMSA, Interpretation Response Letter No PI-72-038 (Aug. 26, 1972)).
[133] 88 Fed. Reg. at 31,955.
[134] *Id.*
[135] 88 Fed. Reg. at 31,945.
[136] *Id.*
[137] *Id.*

feasible. Currently, the only volume-based trigger for reporting releases comes from the definition of "incident," which includes a threshold of 3 MMCF for unintentional releases.[138] The Attorneys General support establishing a reporting requirement for both intentional and unintentional large volume releases that is separate from the definition of "incident" and encourage PHMSA to consider the safety and environmental benefits that could be achieved nationwide with a lower reporting threshold.

We note that some of our states have codified a lower reporting threshold under state regulations and have found this to be workable. For example, New York applies a far more stringent standard of 10,000 standard cubic feet to trigger reporting requirements about planned and unplanned blowdowns to state regulators.[139] PHMSA should consider state experiences with such lowered reporting requirements when determining whether to lower the threshold for reporting large releases.

d. Comments on Whether PHMSA Should Include Specific Provisions on Hydrogen Gas Pipelines in a Final Rule

PHMSA invites comment on whether, within a final rule in this proceeding, there would be value in adopting hydrogen gas pipeline-specific provisions (in lieu of or in addition to the provisions in the Proposed Rule).[140]

The Attorneys General acknowledge that the proposed regulations, which would as a general matter apply to pipelines carrying hydrogen gas, offer a significant improvement for public safety and the environment over existing regulations.[141] However, as PHMSA has acknowledged, hydrogen has distinct qualities from methane that mean operating hydrogen pipelines under the default provisions being proposed may be insufficient to protect those important interests.[142]

PHMSA should prioritize publishing hydrogen-specific pipeline regulations because the buildout of hydrogen infrastructure is one likely effect of national policies aimed at staving off the worst effects of climate change. EPA, for example, has proposed that co-firing with hydrogen is one of two potential pathways for implementing the best system of emission reductions, as that term is used in

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[138] 49 C.F.R. § 191.3.
[139] *See* 6 N.Y. Comp. Codes R. & Regs. Tit. 6, § 203-4.5.
[140] 88 Fed. Reg. at 31,926.
[141] 88 Fed. Reg. at 31,926, n.222
[142] 88 Fed. Reg. at 31,899, n.75 (noting that smaller size of hydrogen molecules may lead to more leaks); 31,906, n.123 (same); 31,940, n.248 (hydrogen has smaller lower explosive limit than methane); 31,941 (risks from lower explosive limit and autoignition temperature of hydrogen).

Section 111 of the Clean Air Act, for new and existing intermediate and baseload methane fueled power plants.[143] EPA envisions that compliance with that rule will require power plants to adopt a graduated approach to co-firing with facilities having to reduce their greenhouse gas emissions by the equivalent of co-firing 30% low-GHG hydrogen by 2032 and 96% low-GHG hydrogen by 2038.[144] Additionally, both the Inflation Reduction Act and the Infrastructure Investment and Jobs Act contained significant provisions to incentivize the development of hydrogen infrastructure.[145] These initiatives signal that a significant buildout of hydrogen related infrastructure is imminent and it is essential that PHMSA rise to the challenge of ensuring that hydrogen pipelines are safely operated.

The Attorneys General therefore urge PHMSA to continue its efforts to develop regulations specific to hydrogen pipelines, either in this proceeding if a sufficient record is produced to justify strong standards or in a subsequent rulemaking allowing for more complete development of the science and studies around transporting hydrogen by pipeline. If the latter approach is taken, then the Attorneys General urge PHMSA to consider publishing interim guidance that will ensure a higher level of care regarding hydrogen-specific pipelines, and pipelines carrying hydrogen-methane blends.

IV. ADDITIONAL REQUESTS TO PHMSA

a. PHMSA Should Specify that Where Pipelines Carry a Blend of Hydrogen and Methane, the Lower Explosive Limit of Hydrogen Should be Used for Grading Leaks.

PHMSA acknowledges the high risk posed by any leak of hydrogen when proposing that "Grade 2 is the minimum priority grade for leaks of gaseous hydrogen."[146] The Attorneys General support such a grading floor but urge PHMSA to clarify that this floor also applies to leaks from pipelines carrying hydrogen-methane blends. Additionally, PHMSA should clarify that when grading leaks from pipelines carrying hydrogen-methane blends, operators should use the lower explosive limit (LEL) of hydrogen for all relevant calculations. In the alternative, we

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[143] *See* EPA, *New Source Performance Standards for Greenhouse Gas Emissions from New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Generating Units; and Repeal of the Affordable Clean Energy Rule*, 88 Fed. Reg. 33,240 (May 23, 2023) (proposed rule).

[144] *Id.* at 33,277.

[145] Inflation Reduction Act, Pub. L. 117–169, 136 STAT. 1818 (Aug. 16, 2022) § 13204; Infrastructure Improvement and Jobs Act, Pub. L. 117-58, 135 STAT. 429 (Nov. 15, 2021), Title III §§ 40311 – 40315.

[146] 88 Fed. Reg. at 31,941.

urge PHMSA to develop a method for calculating the LEL of hydrogen-methane blends that is specific to the risks posed by mixtures of those two molecules at specified concentrations.

b. In a Separate Rulemaking, PHMSA Should Adopt Measures Suggested by the National Transportation Safety Board Including Improved Supervisory Control and Data Acquisition Systems and Potential In-Home Leak Detector Requirements.

The Attorneys General echo the points raised by the National Transportation Safety Board (NTSB) in its comments on the Proposed Rule, particularly as they concern the improvement of supervisory control and data acquisition systems (SCADA).[147] The NTSB recommends that federal regulations require SCADA systems to include "tools to assist in recognizing and pinpointing the location of leaks, including line breaks."[148] Available tools include real-time leak detection systems and flow and pressure monitors.[149] The Attorneys General support including these requirements as they could greatly decrease incident response times by alerting pipeline operators to the specific location of a leak as soon as it occurs.

Additionally, we urge PHMSA to more fully explore ways of improving in-home leak detection. The NTSB "urges PHMSA to consider in its final rule how in-home methane detector technology may be incorporated into pipeline operators' leak management programs,"[150] a recommendation that the Attorneys General largely agree with. As the NTSB notes, odorization alone has proven insufficient to notify residents of pipeline leaks with disastrous consequences. As discussed above, in August 2016, for example, a gas leak in the basement of an apartment complex in Silver Spring, Maryland went undetected and the ensuing explosion killed seven residents and injured sixty-five others.[151] Automated leak detectors could have alerted building residents and pipeline operators to the leak before gas concentrations reached hazardous levels, allowing residents more time to evacuate the premises. The incident also demonstrates the inadequacy of odorization, particularly for multi-family residences where gas line connections may be far away from living spaces and common areas.[152]

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[147] Letter from NTSB to PHMSA, *Docket No. PHMSA-2021-0039*, July 6, 2023, available at https://www.regulations.gov/comment/PHMSA-2021-0039-2766.
[148] *Id.* at 6.
[149] *Id.*
[150] *Id.* at 4.
[151] NTSB Investigation Report, https://www.ntsb.gov/investigations/AccidentReports/Reports/PAR1901.pdf
[152] These concerns may be even more acute for gas lines carrying hydrogen or hydrogen-methane blends because of hydrogen's lower explosive limit and greater propensity to leak. We therefore urge PHMSA to consider requirements that can detect hydrogen as well as

We also suggest that PHMSA consider whether to require in-home leak detection for hydrogen and hydrogen-methane blends. As noted previously, hydrogen has a much higher propensity to leak and may react poorly with materials used to make existing pipelines, fittings, and valves.[153] Additionally, PHMSA itself has acknowledged that hydrogen's lower LEL and ignition range warrant heightened scrutiny by proposing a Grade 2 floor for all hydrogen leaks.[154] These risks may be particularly significant when leaks occur within a residential building, which by their very nature occur in a confined space.

CONCLUSION

The Attorneys General generally support the Proposed Rule because it would substantially improve the safety of existing gas pipelines and related gas infrastructure, while significantly reducing the contribution that such pipelines and gas infrastructure make to climate change through leaks of methane and other gases. The Attorneys General urge PHMSA to consider and incorporate these comments when finalizing this rulemaking and in undertaking other rulemakings related to gas pipeline safety.

Respectfully Submitted,

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methane and to also consider whether odorization could help alert the public to dangerous hydrogen leaks.

[153] *See supra* Section II.c.ii.1.

[154] 88 Fed. Reg. at 31,941.

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