

Pipeline and Hazardous Materials Safety Administration
Office of Pipeline Safety

Reducing Methane Emissions/Section 114 Overview

PHMSA Public Meeting - December 15, 2022

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U.S. Department of Transportation
Pipeline and Hazardous Materials
Safety Administration

PHMSA: Your Safety is Our Mission



Section 114: Timeline of Significant Milestones

- Publication of The PIPES Act, December 2020
- Advisory Bulletin, June 2021
- PHMSA builds Inspection Program in 2021
- Operators to be compliant by late December 2021
- Program & Procedures Inspections started in early 2022
- Implementation Inspections may begin in 2023



Vented Emissions Sources

Most gas transmission pipeline emissions are vented emissions. Vented emissions sources include:

- Blowdowns associated with repairs / maintenance, and replacement / construction,
- Vents from equipment such as pressure relief devices, regulators (gas use), emergency shut down devices (ESD),
- Venting from ruptures, upset conditions and third-party damage, and
- Current facility/equipment designs
- Section 114(d) study to help identify options for reduction of emissions from planned activities and facility designs.

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Fugitive Emissions Sources

Most gas distribution emissions are ‘fugitive emissions.’ Fugitive emissions sources include:

- Leak-prone pipe, especially cast iron and bare-steel systems, or plastic systems with known problems.
- Commercial/industrial meter sets.
- Compressor stations.
- Residential meter sets.
- Excavation damage and other incidents.

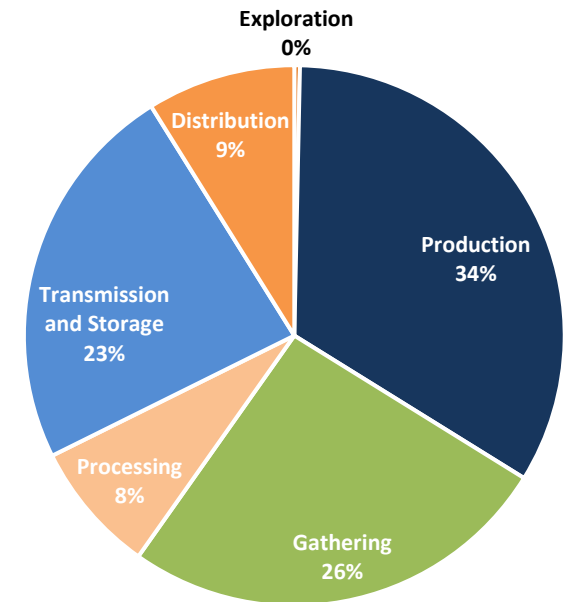


Natural Gas Industry Methane Emissions Estimates

U.S. Environmental Protection Agency (EPA). Draft Inventory of U.S. Greenhouse Gas Emissions and Sinks (GHG Inventory): 1990-2019. February 12, 2021.

Source	Kt CH4*	MMcf**
Exploration	21	1,090
Production*	2,112	109,655
Gathering	1,636	84,941
Processing	497	25,804
Transmission and Storage	1,478	76,738
Distribution	560	29,075
Total	6,305	327,304

Data for 2019
 *Excluding Gathering
 ** 1kt CH4 = 51.92 MMCF



Bold highlights Sources in PHMSA Domain



Applicability to Section 114

- Natural Gas Emissions Reduction
 - Gas Transmission
 - Underground Natural Gas Storage
 - Liquefied Natural Gas
 - Natural Gas Distribution Companies & Master Meters
 - Gas Gathering
 - Part 192/195 Pipeline Facilities for Commodities other than Natural Gas, but using natural gas as fuel, power, appurtenance or instrument gas
- Leak-Prone Pipe
 - All Regulated Operators



2022 Inspection Process

EPA Programs & Regulations

- Adoption or compliance with EPA voluntary programs and regulations may address some Section 114 requirements
- Inspections not addressing compliance with EPA regulations



Inspection Program for 2022

Timing & Format

- Early emphasis on Transmission & Distribution
- Gathering – Later in Program
- Programs & Procedures
- Well-suited for Virtual Format
- Mostly Stand-alone
- Could be bundled with other Inspections



Inspection Program: Scope of Initial Inspections

Inspections focused on:

- Procedures for Natural Gas Emission Reduction
- Procedures for the Replacement/Remediation of Leak-Prone Pipe
- Technically supportable criteria



Bipartisan Infrastructure Law

Infrastructure Investment and Jobs Act of 2021

Natural Gas Distribution Infrastructure Safety
and Modernization Grant Program



Gas Distribution Safety & Modernization Grant

Available To
A municipality or
community-owned
utility
(not including for-
profit entities)



For

Repair, rehabilitation,
or replacement of gas
distribution pipelines



Or to acquire equipment to reduce incidents
and fatalities and/or avoid economic losses



Gas Distribution Safety & Modernization Grant

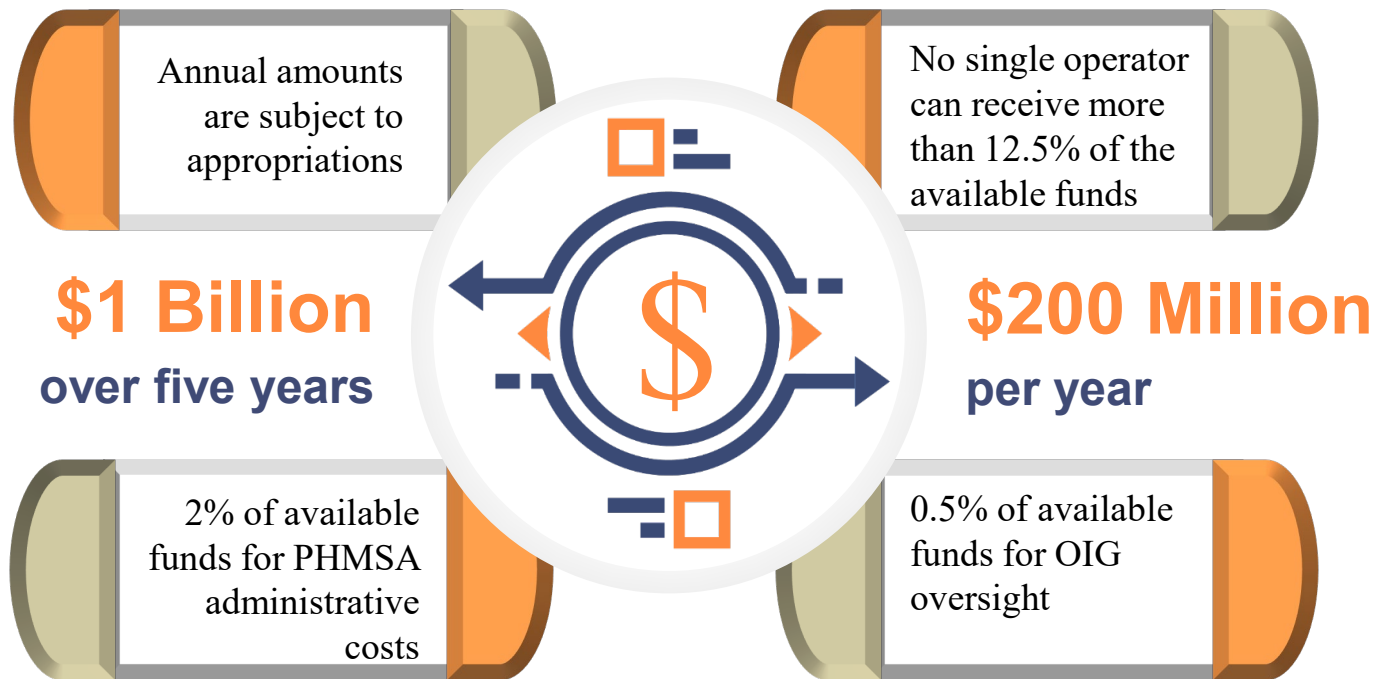
Grant Reviews Consider the Following Criteria



- Risk profile of existing pipeline system including presence of leakage prone pipe
- Job creation potential
- Potential to benefit disadvantaged rural and urban communities
- Economic impact or growth



Funding



Session Overview

- Lessons Learned from federal and state inspections
- Gas Emission Reduction Technologies
- Renewable Natural Gas/Biogas
- Opportunities and Challenges Panel

