U.S. EPA Natural Gas STAR

Methane Challenge Program

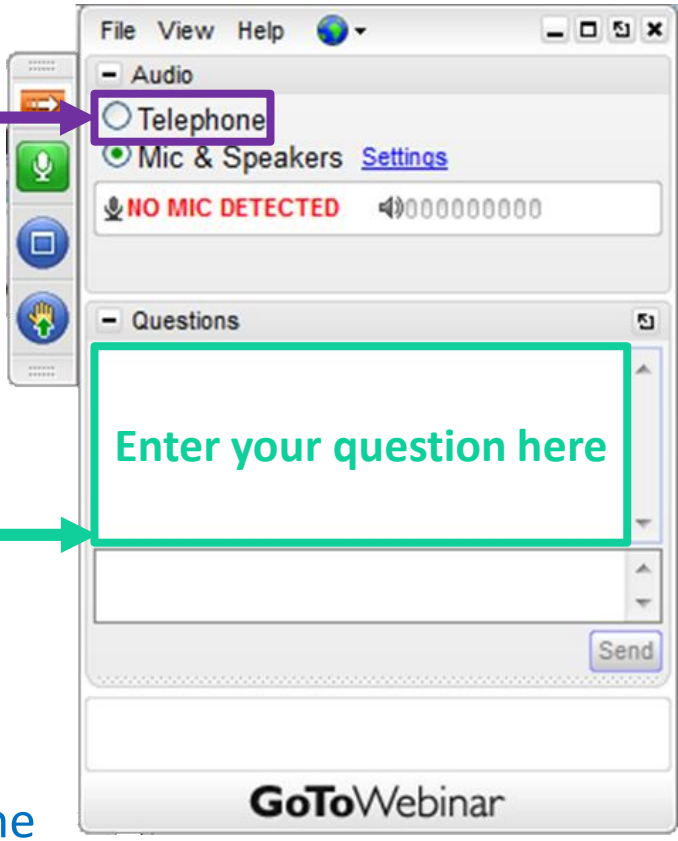
Best Management Practice (BMP) Commitment: Distribution Segment Webinar

February 18, 2016

NaturalGas
EPA POLLUTION PREVENTER

Tips

- All participants will be muted at the beginning of the webinar
- When you join, audio will be through your computer
  - Use headphones, or
  - Choose telephone and follow the prompts to dial in
- Please do not put this call on hold
- Questions submitted during the webinar will be reviewed at the end of the webinar
  - Type a question here
- If you are experiencing technical difficulties, please contact Chris Bachman at 703-795-4473



Members of the press--please identify yourself by name and organization by sending a note now via the Question Pane

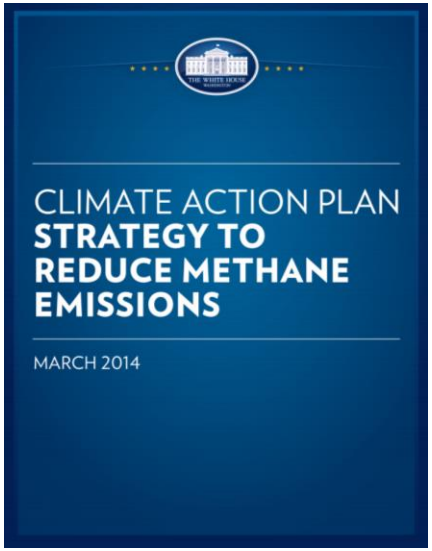
Welcome

- Agenda for Today's Webinar
  - Background
  - Key Elements of the Best Management Practice (BMP) Commitment Framework
  - Overview of *Distribution Segment Supplementary Technical Information*
  - Next Steps
  - Questions and Wrap Up

Background

Background

- In 2015 EPA released Methane Challenge Framework and technical proposals for comment
- EPA incorporated feedback to finalize
  - BMP Commitment Framework
  - BMP Commitment: Distribution Segment Supplementary Technical Information
- Methane Challenge is a key part of Administration efforts to reduce methane emissions
  - March 2014 – White House releases the Strategy to Reduce Methane Emissions
  - January 2015 – Administration announces a new goal to cut methane emissions from the oil and gas sector by 40-45 percent from 2012 levels by 2025



Key Elements of the BMP Commitment Framework

BMP Commitment Framework

- Partner companies join the Program through a commitment to address one or more emission sources by implementing designated BMPs across their operations by a future date
- Intended to spur near-term, widespread implementation of methane mitigation activities across the oil and natural gas value chain
- Commitments for the distribution sector include the following sources:
  - Metering and Regulating (M&R) Stations/City Gates*
  - Distribution Pipeline Blowdowns
  - Mains – Cast Iron and Unprotected Steel
  - Services – Cast Iron and Unprotected Steel
  - Excavation Damages

**At this time, EPA is not finalizing BMP commitment details for this source*

Commit to Action

Join the Program

Sign Partnership Agreement with EPA covering source commitments, timing and agreement to submit data to Program

Announce Commitments

Company and commitments listed on Methane Challenge program website

Submit Implementation Plan

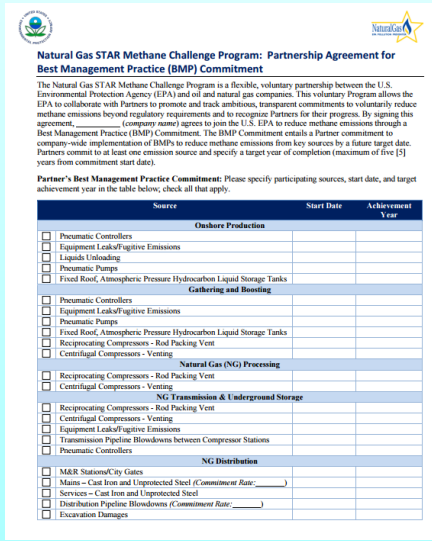
Within 6 months of joining the program, submit implementation plan to EPA with key milestones

Annual Reporting

Submit voluntary supplementary data via Methane Challenge reporting mechanism (covered sources only)

Annual Progress Tracking

Source-specific data (activity and emissions) rolled up at company level and provided on Program website



Natural Gas STAR Methane Challenge Program: Partnership Agreement for Best Management Practice (BMP) Commitment

The Natural Gas STAR Methane Challenge Program is a flexible, voluntary partnership between the U.S. Environmental Protection Agency (EPA) and oil and natural gas companies. This voluntary Program allows the EPA to collaborate with Partners to promote and track ambitious, transparent commitments to voluntarily reduce methane emissions beyond regulatory requirements and to recognize Partners for their progress. By signing this agreement, _____ (*company name*) agrees to join the U.S. EPA to reduce methane emissions through a Best Management Practice (BMP) Commitment. The BMP Commitment entails a Partner commitment to company-wide implementation of BMPs to reduce methane emissions from key sources by a future target date. Partners commit to at least one emission source and specify a target year of completion (maximum of five [5] years from commitment start date).

Partner's Best Management Practice Commitment: Please specify participating sources, start date, and target achievement year in the table below, check all that apply.

	Source	Start Date	Achievement Year
	Onshore Production		
☐	Pneumatic Controllers		
☐	Equipment Leaks/Fugitive Emissions		
☐	Liquids Unloading		
☐	Pneumatic Pumps		
☐	Fixed Roof, Atmospheric Pressure Hydrocarbon Liquid Storage Tanks		
	Gathering and Boosting		
☐	Pneumatic Controllers		
☐	Equipment Leaks/Fugitive Emissions		
☐	Pneumatic Pumps		
☐	Fixed Roof, Atmospheric Pressure Hydrocarbon Liquid Storage Tanks		
☐	Reciprocating Compressors - Rod Packing Vent		
☐	Centrifugal Compressors - Venting		
	Natural Gas (NG) Processing		
☐	Reciprocating Compressors - Rod Packing Vent		
☐	Centrifugal Compressors - Venting		
	NG Transmission & Underground Storage		
☐	Reciprocating Compressors - Rod Packing Vent		
☐	Centrifugal Compressors - Venting		
☐	Equipment Leaks/Fugitive Emissions		
☐	Transmission Pipeline Blowdowns between Compressor Stations		
☐	Pneumatic Controllers		
	NG Distribution		
☐	M&R Stations/City Gates		
☐	Mains – Cast Iron and Unprotected Steel *(Commitment Rate:_____)*		
☐	Services – Cast Iron and Unprotected Steel		
☐	Distribution Pipeline Blowdowns *(Commitment Rate:_____)*		
☐	Excavation Damages		

Download the BMP Commitment Option Partnership Agreement from the Program website.

Annual Reporting

- EPA will use GHGRP Subpart W data, plus non-confidential supplemental data provided by partners, to track progress in meeting source-specific commitments under the Methane Challenge Program
  - Data will be reported at the facility level, in line with Subpart W facility definitions
- EPA aims to minimize the reporting burden so Partner companies can focus resources on the implementation of methane-reducing activities
  - Plan to use streamlined data collection process in eGGRT for reporting
- Partner companies will start collecting data on designated Start Date (within six months of joining program)
  - Full calendar year data will be most valuable to tracking Program process
  - EPA will evaluate Partners reporting partial year data the first year in Program

Continuous Improvement is a Principal Goal

- Partners are encouraged to expand their Program commitments at any time
  - In particular, Partners that join for a single emission source will be strongly encouraged to commit to additional source(s) over time
- To encourage innovation, the EPA will consider adopting new sources and additional BMPs
  - Partner companies can propose additional sources of interest and/or new BMPs for inclusion in the Program
  - The EPA will review information presented by Partners, as well as relevant publicly available information, and make decisions on a case-by-case basis
- For innovative mitigation actions that Partners would like to pilot before they are widely commercially available or adopted, the EPA will work with Partners to assess including them as Program BMPs

Overview: Distribution Segment Supplementary Technical Information

Emissions Sources for the Distribution Segment

Emission Source	Description
Distribution Pipeline Blowdowns	Release of gas from a pipeline or section of pipeline that causes a reduction in system pressure or a complete depressurization
Mains – Cast Iron and Unprotected Steel	Natural gas pipelines that serve as a common source of gas supply for more than one service line
Services – Cast Iron and Unprotected Steel	A service line is a distribution line that transports gas from a common source of supply to (1) a customer meter or the connection to a customer's piping, whichever is farther downstream, or (2) the connection to a customer's piping if there is no customer meter
Excavation Damages	May include damage to the external coating of the pipe, or dents, scrapes, cuts, or punctures directly into the pipeline itself; covers both distribution mains and services

Distribution Pipeline Blowdowns
Mitigation Options

- Route gas to a compressor or capture system for beneficial use
- Route gas to a flare
- Route gas to a low-pressure system
  - Use existing piping connections between high- and low-pressure systems
  - Temporarily reset or bypass pressure regulators to reduce system pressure prior to maintenance
  - Install temporary connections between high- and low-pressure systems
- Utilize hot tapping
  - Makes a new pipeline connection while the pipeline remains in service, flowing natural gas under pressure, to avoid the need to blow down gas

Partners commit to maximize blowdown gas recovery and/or emission reductions through utilization of one or more of these options to reduce methane emissions from non-emergency blowdowns of pipelines operating greater than 60 psi by at least 50% from total potential emissions each year.

Mains – Cast Iron and Unprotected Steel
Mitigation Options

- Replace cast iron mains with plastic or cathodically protected steel and replace or cathodically protect unprotected steel mains
- Rehabilitate cast iron and unprotected steel pipes with plastic pipe inserts, also referred to as sliplining or u-liners, or cured-in-place liners

Partners commit to replace or rehabilitate cast iron and unprotected steel mains at the following minimum annual rates.

Tier	Inventory of Cast Iron and Unprotected Steel Mains	% Minimum Annual Replacement/Repair
Tier 1	<500 miles	6.5%
Tier 2	500-1,000 miles	5%
Tier 3	1,001 – 1,500 miles	3%
Tier 4	1,501 miles – 3,000 miles	2%
Tier 5	> 3,000 miles	1.5%

Services – Cast Iron and Unprotected Steel
Mitigation Options

- Replace unprotected steel and cast iron services with copper, plastic, or protected steel
- Rehabilitate cast iron and unprotected steel services with plastic pipe inserts or liners

At a minimum, partners commit to replace or rehabilitate cast iron and unprotected steel services when the main is replaced or rehabilitated.

Due to the linkage with mains, this source is not eligible for a stand-alone commitment, but can be selected as an optional addition for Partners that select the "Mains – Cast Iron and Unprotected Steel" source category.

Excavation Damages
Mitigation Options

- Conduct incident analyses to inform process improvements and reduce excavation damages
  - For example, by identifying whether excavation, locating, or One-Call practices were not sufficient
- Undertake targeted programs to reduce excavation damages and/or shorten time to shut-in when damages do occur
  - Patrolling systems when construction activity is higher
  - Excavator education programs (811, call before you dig)
  - Identifying and implementing steps to minimize repeat offenders
  - Stand-by efforts

Partner companies' collection and reporting of data on all excavation damages is a significant part of this commitment. Partners will use the collected data to set a company-specific goal for reducing excavation damages and/or methane emissions from excavation damages.

Reporting

- For each emission source, the Supplementary Technical Information document includes
  - Specific emission sources
  - Quantification methods
  - Data elements to be collected at facility level
  - Indication of whether the data are collected through GHGHP

Emission Source	Quantification Method [24]	Data Elements to be Collected at Facility-Level	Collected through GHGRP
Distribution services - cast iron - gas service	Subpart W unprotected steel services EF[25]	Total numb… iron services	
		…(mt CH_4)	
Distribution services - copper - gas service	Subpart W c… services EF	…copper services	X
		…CH_4 emissions (mt CH_4)	X
Distribution services - plastic - gas service	Subpart W plas… services EF	Total number of plastic services	X
		Annual CH_4 emissions (mt CH_4)	X
Distribution services - protected steel - gas service	Subpart W protected steel services EF	Total number of protected steel services	X
		Annual CH_4 emissions (mt CH_4)	X
Distribution services - unprotected steel - gas service	Subpart W unprotected steel services EF	Total number of unprotected steel services	X
		Annual CH_4 emissions (mt CH_4)	X

EXAMPLE

Next Steps

Next Steps – Sign up today!

- EPA will officially launch the Methane Challenge Program with founding Partners at the Global Methane Forum (GMF) on March 30, 2016 at 10:00AM EDT in Washington, DC
- The Program will accept new Partners at any time
- Interested companies are encouraged to contact Carey Bylin at (202) 343-9669 or by email at bylin.carey@epa.gov

Join Us at the GMF

globalmethane.org/forum

Partner Recognition and Benefits

- Program provides companies with the opportunity to showcase systematic and comprehensive actions to reduce methane emissions
- Implementing BMPs and mitigation activities reduces operational risk, increases efficiency and demonstrates company concern for the environment
- Partners will be recognized as leaders in demonstrating commitments to action and transparency to minimize methane emissions in the United States

Questions

Wrap Up

- Information about the Methane Challenge Program is available on the EPA website at www.epa.gov/gasstar/methanechallenge
- This webinar presentation will be posted to the website