



Natural Gas STAR Methane Challenge Program



Continuous Improvement Proposal

Update Mains and Services Emission Factors

Proposed by: Natural Gas STAR Methane Challenge Program

Date submitted: August 13, 2018

Category of change proposed: Reporting Methodology Update

Summary of proposed change: Update emission factors used for emission and reduction calculations for Distribution Mains and Services from Part 98, Subpart W factors to U.S. Greenhouse Gas Inventory factors

Introduction

Through the Natural Gas STAR Methane Challenge Program (“the Program”), EPA encourages Partners to make ambitious commitments to reduce natural gas (methane) emissions through broad scale implementation of cost-effective technologies and practices. EPA recognizes ongoing advances in technologies and approaches for identifying, measuring, and mitigating methane emissions and will consider revising approaches to track, implement, and report on current commitments through the Continuous Improvement Process.¹

Proposed Change

Under the Program, partners in both commitment options (i.e., the Best Management Practice and ONE Future options) commit to voluntarily submit data detailing their annual methane emissions and reductions as relates to their program commitments. The calculation methodologies to use, and data elements to report, are detailed in “Technical Documents” published by the Program.² The Program is proposing to change the emission factors used to calculate emissions and reductions for Distribution Mains and Distribution Services in both commitment options from the relevant factors used in Part 98, Subpart W³ of the Greenhouse Gas Reporting Program (GHGRP) to those used in the most recent version of the U.S. Greenhouse Gas Inventory (GHGI). The Program has prepared this Continuous Improvement proposal to allow stakeholders to provide any feedback they may have on this change.

¹ Details available on the Program website at <https://www.epa.gov/natural-gas-star-program/methane-challenge-program-continuous-improvement-fact-sheet>

² Note that EPA reserves the right to update the contents of the Technical Documents at any time to maintain alignment with definitions and methodologies from Part 98, Subpart W of the Greenhouse Gas Reporting Program (GHGRP) and the U.S. Greenhouse Gas Inventory (GHGI).

³ 40 CFR 98.233(r)

Details

The GHGI emission factors were updated in 2016 for the 1990-2014 Inventory and use data from a 2015 study by Lamb et al, in combination with data from GRI/EPA 1996.^{4,5} For more detailed information on the emission factors, please see EPA's memo on the update made to the 2016 GHGI.⁶

The Program proposes to update the methodology for Distribution Mains and Services to use the GHGI emission factors for 2016, from the 2018 GHGI, for all pipeline materials. These factors are presented in Table 1 below.

Table 1. 2016 Emission Factors in the 2018 GHG Inventory⁷

	Distribution Mains (kg/mile/year)	Distribution Services (kg/service/year)
Cast Iron	1,157.3	*
Unprotected steel	861.3	14.5
Protected steel	96.7	1.3
Plastic	28.8	0.3
Copper	NA	4.9

**As detailed in the Program Technical Documents, the Unprotected Steel Services emission factor will be used as a proxy for Cast Iron Services.*

This Methane Challenge reporting methodology change would be reflected in newly revised technical documents which would be published for the first year of reporting for the program.

If you have feedback on this proposal

Send feedback to: Methane Challenge Program Managers at GasSTAR@epa.gov

Feedback due: August 31, 2018

⁴ Lamb, et al. (2015) Direct Measurements Show Decreasing Methane Emissions from Natural Gas Local Distribution Systems in the United States. Environmental Science & Technology, Vol. 49 5161-5169.

⁵ GRI/EPA (1996) Methane Emissions from the Natural Gas Industry. Volume 9: Underground Pipelines. https://www.epa.gov/sites/production/files/2016-08/documents/9_underground.pdf

⁶ EPA (2016) Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2014: Revisions to Natural Gas Distribution Emissions. https://www.epa.gov/sites/production/files/2016-08/documents/final_revision_ng_distribution_emissions_2016-04-14.pdf

⁷ Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016, Annex 3.6 (Table 3.6-2), 2016 data, https://www.epa.gov/sites/production/files/2018-04/2018_ghgi_natural_gas_systems_annex_tables.xlsx.