

310 CMR 7.73 Program Review Proposal

Introduction	1
Current Regulation.....	1
Program Review	2
Proposal	3
Questions for Stakeholder Comment	4
Information Request for GSEP LDCs	7

Introduction

MassDEP is publishing this *310 CMR 7.73 Program Review Proposal* to update stakeholders on MassDEP’s 310 CMR 7.73: *Reducing Methane (CH₄) Emissions from Natural Gas Distribution Mains & Services* program review and assist stakeholders wishing to comment on program design before MassDEP officially proposes updated regulations. Questions for stakeholders and information requests for certain Local Distribution Companies (LDCs) are noted below. MassDEP requests written comments on this program review no later than January 9, 2026 to climate.strategies@mass.gov. The attached appendix is a spreadsheet containing calculations of the estimated emissions limits in this proposal. This proposal and the attachment are posted on the 310 CMR 7.73 web page: [Reducing Methane \(CH₄\) Emissions from Natural Gas Distribution Mains & Services \(310 CMR 7.73\) | Mass.gov](#).

Current Regulation

The 310 CMR 7.73 regulation was promulgated on August 11, 2017, and revised on December 21, 2020. The regulation applies to six LDCs (Berkshire, Eversource EGMA (formerly Columbia), Eversource NSTAR, Liberty, National Grid, Unitil) that have a Massachusetts Department of Public Utilities (DPU)-approved Gas System Enhancement Plan (GSEP) intended to eliminate leak-prone pipe as required by MGL c.164 s.145. The original regulation established company-specific annual methane emissions limits (in carbon dioxide equivalents or CO₂e) that declined from 2018 to 2020; the revised regulation set declining emissions limits from 2021 to 2024. To address unexpected events affecting the natural gas distribution system, the regulation allows GSEP LDCs to petition for a portion of an annual emissions set-aside based on actual pipeline replacements achieved, as reflected in Annual Reports submitted to the Pipeline and Hazardous Materials Safety Administration (PHMSA). The regulation

requires GSEP LDCs to report pipeline miles and number of services by material type and age. Table 1 and 2 show compliance and set-aside use under the current regulation over the last four years.

Table 1. Compliance with 310 CMR 7.73 from 2021 through 2024 (Metric Tons CO₂e)

Emissions	2021	2022	2023	2024
310 CMR 7.73 Table 7 sum of limits	165,988	157,183	148,462	139,814
Amount petitioned from emissions set-aside	2,641	5,679	7,108	7,813
Sum of above rows	168,629	162,862	155,570	147,627
Actual emissions	168,318	162,389	155,219	147,220

Table 2. Set-aside from 2021 through 2024 (Metric Tons CO₂e)

Set-Aside	2021	2022	2023	2024
Amount Available	37,990	37,550	37,114	36,682
Amount petitioned from emissions set-aside	2,641	5,679	7,108	7,813
Amount Remaining Unused	35,349	31,871	30,006	28,869
% of available set-aside used	7.0%	15.1%	19.2%	21.3%

Program Review

310 CMR 7.73(9) requires a program review as follows: *(9) Program Review. Not later than December 31, 2024, the Department shall complete a review, including an opportunity for public comment on the program review, of the requirements of 310 CMR 7.73 to determine whether the program should be amended or extended. This review shall evaluate whether to require the use of feasible technologies to detect and quantify gas leaks and any other information relevant to review of the program.*

The program review timeline has been affected by multiple ongoing policy discussions, including:

- The August 11, 2022 *An Act Driving Clean Energy and Offshore Wind* amended Chapter 164, section 145 (the GSEP law) to allow GSEP cost recovery for actions other than replacement, i.e., ‘advanced leak repair’ and ‘non-emitting renewable thermal’;
- MassDEP participated in the GSEP Working Group that issued recommendations January 31, 2024;

- The November 20, 2024 *An Act Promoting a Clean Energy Grid, Advancing Equity, and Protecting Ratepayers* amended the GSEP law to also allow GSEP cost recovery for ‘retirement’; and
- Final DPU 24-GSEP Orders were published on April 30, 2025.

Proposal

MassDEP will propose regulatory amendments to update the current, now outdated, 7.73 emissions factors (EFs) (i.e., emissions per mile of pipeline and emissions per service, by material type) to match the EFs used for calendar years after 2015 in the MassDEP GHG Inventory, EPA National GHG Inventory (GHGI), and the MA 2050 Clean Energy and Climate Plan (CECP).

MassDEP also will propose regulatory amendments to present emissions in metric tons of methane (mt CH₄) rather than CO₂e. Tons of methane are converted to tons of carbon dioxide equivalents by applying a global warming potential (GWP). GWPs are updated over time based on scientific studies. However, in assessing compliance with limits and sublimits the GWP that the limit or sublimit was based on must be used to have a valid comparison. Presenting the 7.73 emissions in tons of methane will allow users to apply the applicable GWP to determine compliance with CO₂e limits. For example, the 2025, 2030 and 2050 CECP sublimits were all based on GWPs from the Intergovernmental Panel on Climate Change Fourth Assessment Report (AR), while future CECP sublimits may be based on later ARs.

To illustrate the effects of the change in EFs and from CO₂e to CH₄:

- Table 3 compares the 2024 7.73 GSEP LDC sublimits in CO₂e, reported emissions in CO₂e, and reported emissions in CH₄.
- Table 4 shows the last two columns of Table 3, but with the updated EFs.

Table 3. 2024 emissions using current 7.73 EFs

GSEP LDC	2024 limit (mt CO₂e)	2024 reported (mt CO₂e)	2024 reported (mt CH₄)
National Grid	94,532	96,437	3,857.27
Eversource EGMA	18,567	23,111	924.27
Berkshire	2,605	2,699	108.94
Unitil (Fitchburg Gas)	1,477	1,223	49.95
Liberty	3,877	3,724	147.93
Eversource NSTAR	18,756	20,026	801.93
Total	139,814	147,220	5,888.29

Table 4. 2024 reported emissions calculated using updated EFs

GSEP LDC	N/A	2024 reported (mt CO₂e)	2024 reported (mt CH₄)
National Grid		142,333	5,693.34
Eversource EGMA		31,513	1,260.54
Berkshire		3,380	135.19
Unitil (Fitchburg Gas)		1,509	60.38
Liberty		5,416	216.64
Eversource NSTAR		25,369	1,014.74
Total		209,520	8,380.82

Table 5 lists draft emission limits for 2025 through 2029. Calculations are provided in the Appendix spreadsheet. These limits were calculated using the reported miles of pipeline and number of services as of December 31, 2024, modified by the planned work in the GSEP dockets finalized in April 2025. Note that no projected growth in miles or services is yet included for 2025-2029.

Table 5. Draft Limits calculated using updated EFs (metric tons of CH₄)

GSEP LDC	2025	2026	2027	2028	2029
National Grid	5,501.63	5,330.96	5,160.29	4,990.75	4,821.21
Eversource EGMA	1,183.34	1,106.13	1,025.78	945.43	865.08
Berkshire	116.67	105.73	94.79		
Unitil (Fitchburg Gas)	53.03	46.49	38.69	30.52	25.56
Liberty	201.10	186.43	166.42	148.63	126.86
Eversource NSTAR	930.90	847.06	763.22	679.37	595.53
Total	7,986.67	7,622.80	7,249.19	6,794.70*	6,434.23*

*Does not include Berkshire

Questions for Stakeholder Comment

1. Should the declining annual emissions limits be extended beyond 2024? If so, should limits be extended through 2027 or 2029? On April 30, 2025, DPU issued orders for GSEPs covering 2025 through 2029, except for Berkshire which went through 2027.
 - A. MassDEP could propose limits through 2027 for Berkshire and 2029 for all other GSEP LDCs. Once a DPU order for GSEPs covering Berkshire's 2028 and 2029 proposed work is available (presumably in the April 30, 2027 Order), MassDEP could propose limits for Berkshire.
 - B. MassDEP could propose limits through 2027 for all GSEP LDCs. Once a DPU order for GSEPs covering 2028 and 2029 proposed work is available (presumably in the

April 30, 2027 Order), MassDEP could propose limits for all GSEP LDCs. This option also would allow MassDEP to incorporate any upcoming DPU decisions that affect future GSEP work.¹

2. What is the appropriate size of the emissions set-aside?

To address unexpected events affecting the natural gas distribution system, the regulation allows GSEP LDCs to petition for a portion of an annual emissions set-aside based on actual pipeline replacements achieved, as reflected in Annual Reports submitted to PHMSA. For each year from 2021-2024, the set-aside equals 5% of the sum of the GSEP LDCs' limits plus the emissions from 1,600 miles of National Grid pipeline and 6.86 miles of Unitil pipeline that might have needed to be reclassified from cathodically- to noncathodically-protected steel.

Considerations in setting the size of the set-aside:

- The classification of National Grid's 1,600 miles and Unitil's 6.86 miles has been resolved and therefore the set-aside starting in 2025 does not need to consider these miles.
- Based on the past implementation of 7.73 (shown in Table 2 above), a 5% set-aside likely will be sufficient to address unexpected events if MassDEP issues limits for only 3 years (i.e., 2025-2027). If MassDEP issues limits for 5 years (i.e., 2025-2029), a 5% set-aside may not be large enough in the later years because a shortfall in pipeline replacement accumulates over the years (falling behind in pipeline replacement in one year is rarely able to be made up in a subsequent year for which 7.73 has established limits). Therefore, the shortfall must be made up for by the use of the set-aside in the initial shortfall year and every year thereafter for which 7.73 has established a limit.
- In coming years, if GSEP LDCs focus more on repair of cast iron joints in pipeline they originally proposed to replace with plastic, they could exceed emissions limits because the cast iron has a higher per mile emission factor than plastic and could need to use the set-aside.

¹ For example, as stated in DPU's [Order](#) on *Petition of Boston Gas Company d/b/a National Grid for Approval of its 2025 Gas System Enhancement Plan, pursuant to G.L. c. 164, § 145, for rates effective May 1, 2025*: "We are therefore taking five significant actions in these proceedings to substantially reform the GSEP process: (1) Reducing the revenue cap from 3.0 percent to 2.5 percent; (2) Allowing spending in excess of the newly established 2.5-percent revenue cap up to 3.0 percent for NPAs; (3) Eliminating carrying charges on deferred GSEP expenditures; (4) Requiring a more rigorous risk prioritization process for GSEP projects; and (5) Imposing the express requirement that as a matter of burden of proof, LDCs will be required to demonstrate evaluation of advanced leak repair technology as an alternative to pipe replacement." April 30, 2025, p. 37.

- In coming years, GSEP LDCs may focus more on retirement without replacement: Once retirement miles are projected in GSEP filings, MassDEP will be able to adjust 7.73 limits to account for retirements; until retirements without replacement are included in the limits, if GSEP LDCs retire pipeline without replacement, they will have less need to use the set-aside.

MassDEP requests comments on the appropriate size of the set-aside.

3. Are there practical, economically feasible technologies to detect and quantify gas leaks?

MassDEP has been staying abreast of the science, regularly attending webinars and reviewing the literature and EPA research.

At least one Massachusetts GSEP LDC has investigated an alternative quantification approach, see

https://northeastgas.org/files/galleries/Day_1_Session_2_Unitil_EmissionAssessment_Demo_V2.pdf.

EPA issued a Request for Information (RFI) seeking comment on uses of Methane Measurement Technologies for greenhouse gas reporting purposes.² The RFI comment period closed in November 2024. Four of the 63 responses related directly to distribution systems. One³ letter addressed the challenges and complications of pipeline leak quantification, one⁴ discussed their method of mobile leak detection and quantification, and two^{5, 6} stated that standards based on emission factors and activity factors would provide no way for a system without cast iron or unprotected steel pipeline to reduce emissions.⁷

MassDEP requests comments on the availability of practical, economically feasible technologies to detect and quantify gas leaks.

MassDEP requests Stakeholders to submit responses to these questions by January 9, 2026 via email to climate.strategies@mass.gov.

² <https://www.regulations.gov/docket/EPA-HQ-OAR-2024-0350>

³ <https://www.regulations.gov/comment/EPA-HQ-OAR-2024-0350-0017>

⁴ <https://www.regulations.gov/comment/EPA-HQ-OAR-2024-0350-0056>

⁵ <https://www.regulations.gov/comment/EPA-HQ-OAR-2024-0350-0039>

⁶ <https://www.regulations.gov/comment/EPA-HQ-OAR-2024-0350-0062>

⁷ All Massachusetts GSEP LDCs have cast iron and unprotected steel pipeline.

Information Request for GSEP LDCs

1. The draft emission limits in the Appendix were created using estimates of LDC-proposed work in the 2024 GSEPs, except where the GSEPs lacked data (i.e., National Grid, Eversource NSTAR and Eversource EGMA services). In the absence of data on future service replacements, MassDEP used the following approaches:
 - National Grid service reductions for each year from 2025 to 2029 were set equal to the average annual leak-prone pipe (unprotected steel plus cast iron plus copper) number of services reductions over 2020 to 2024.
 - Eversource NSTAR and Eversource EGMA service reductions for each year from 2025 to 2029 were set equal to the proposed number of service reductions in 2024.

If National Grid, Eversource NSTAR and Eversource EGMA propose a different approach to determining the number of services replaced for 2025 through 2029, please provide information and supporting documentation on such approach.

2. The draft emission limits in the Appendix do not include projected pipeline and services growth (in miles/year and services/year) for 2025 through 2029 (i.e., going forward from 12/31/24 reported miles and services). MassDEP requests information and supporting documentation on what annual level of growth to assume for each year.

MassDEP requests GSEP LDCs to submit responses to these questions by January 9, 2026 via email to climate.strategies@mass.gov.