

Gas System Enhancement Program (GSEP)

Overview

11.06.2023

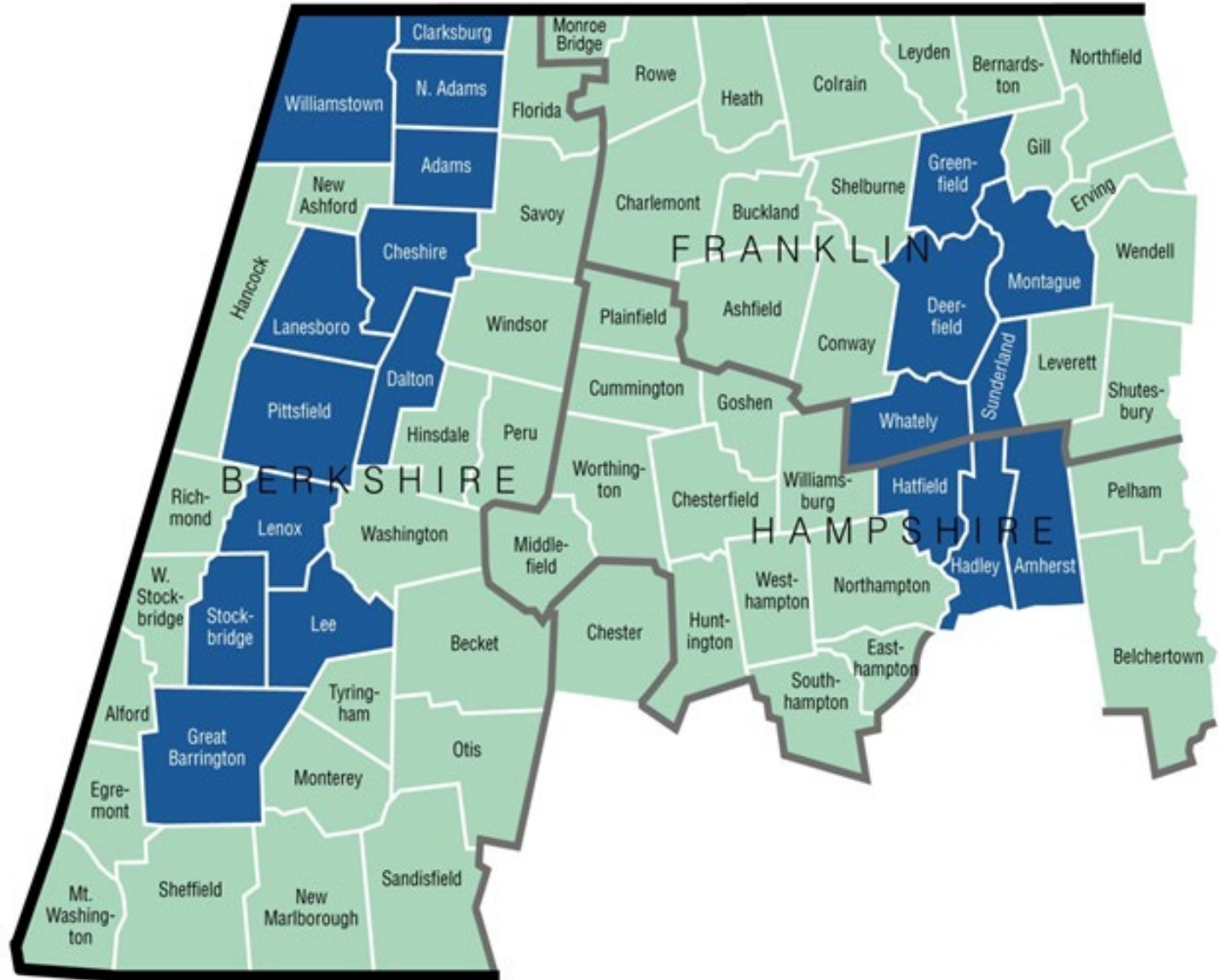


**Berkshire
Gas**

An Avangrid company

BERKSHIRE GAS

Delivering natural gas services to over 40,000 customers in 20 Western Massachusetts cities and towns



GSEP OVERVIEW

Gas System Enhancement Program

Pursuant to G.L. c. 164, § 145, each gas company must annually submit to the Department of Public Utilities a plan to replace leak-prone natural gas pipeline infrastructure. These plans are known as the Gas System Enhancement Plans or GSEPs.

Agenda:

GSEP Program Projections	Main Miles
	Service Quantity
	Planned Rates of Replacement
	Spend Rate per Replacement Category
	Emissions Reduction Target

	2024	2025	2026	2027	2028	2029
Bare Steel Mains (mi)	1.57	2.87	0.88	2.00	2.00	1.37
Cast Iron Mains (mi)	9.19	7.3	4.50	2.50	3.50	0.96
Non-Protected Coated Steel Mains (mi)	0.97	0.54	0.44	5.50	5.50	4.04
Main Replacement Subtotal	11.73	10.71	5.82	10.00	11.00	6.37
Bare Steel Services (ea.)	430	314	218	23	0	0
Non-Protected Coated Steel Services (ea.)	144	100	100	100	100	75
Copper Service (ea.)	52	30	0	36	0	0
Service Replacement Subtotal	626	444	318	159	100	75

PLANNED REPLACEMENT 2024-2029

2023	MAINS 2"-6" PE	\$1,146,678	SERVICES Avg \$/EA	\$6,090		
Project Risk	1.20	1.20	1.30	1.30	1.35	1.35
Year	2024	2025	2026	2027	2028	2029
Main \$/mi *	\$1,318,614	\$1,453,845	\$1,659,280	\$1,742,244	\$1,902,530	\$1,997,657
Service \$/ea. *	\$7,354	\$7,722	\$8,814	\$9,255	\$10,106	\$10,612
<ul style="list-style-type: none"> ▪ Risk Factors <ul style="list-style-type: none"> ▪ 15 – 30 % - New & existing contracts, overheads, materials, environmental & staffing ▪ 5 % - Contingency maintained for construction rate inflation 						

GSEP RATE PROJECTIONS

2024-2029

EMISSIONS

Total Emission Reduction Targets

GSEP Timeline	Total Main Reduction in CO²e	Total Service Reduction in CO²e	Total Yearly Reduction in CO²e
Years	Metric Tones	Metric Tones	Metric Tones
2024	315	81	396
2025	278	58	336
2026	156	50	206
2027	225	20	245
2028	253	13	266
2029	138	10	148

TOTAL PLANNED GSEP EMISSION REDUCTION TARGET = 1,597

THANK YOU



An Avangrid company

APPENDIX



EMISSIONS

GSEP Emission Matrix

<u>Mains</u>	2024 Target (m)	2024 Target Emissions (mt CO2e)	2025 Target (m)	2025 Target Emissions (mt CO2e)	2026 Target (m)	2026 Target Emissions (mt CO2e)	2027 Actual (m)	2027 Actual Emissions (mt CO2e)	2028 Target (m)	2028 Target Emissions (mt CO2e)	2029 Actual (m)	2029 Actual Emissions (mt CO2e)
Steel, Cathodically Unprotected and Uncoated	1.57	32	2.87	58	0.88	18	2.00	41	2.00	41	1.37	28
Steel, Cathodically Unprotected and Coated	0.97	20	0.54	11	0.44	9	5.50	112	5.50	112	4.04	82
Steel, Cathodically Protected and Uncoated	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Steel, Cathodically Protected and Coated	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Plastic	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Cast or Wrought Iron	9.19	263	7.30	209	4.50	129	2.50	72	3.50	100	0.96	28
Ductile Iron	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Copper	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Other	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Target Miles Total	11.73		10.71		5.82		10.00		11.00		6.37	
Target Emissions Total for Mains		315		278		156		225		253		138
<u>Services</u>												
Steel, Cathodically Unprotected and Uncoated	430	56	314	41	285	37	23	3	0	0	0	0
Steel, Cathodically Unprotected and Coated	144	19	100	13	100	13	100	13	100	13	75	10
Steel, Cathodically Protected and Uncoated	0	0	0	0	0	0	0	0	0	0	0	0
Steel, Cathodically Protected and Coated	0	0	0	0	0	0	0	0	0	0	0	0
Plastic	0	0	0	0	0	0	0	0	0	0	0	0
Cast or Wrought Iron	0	0	0	0	0	0	0	0	0	0	0	0
Ductile Iron	0	0	0	0	0	0	0	0	0	0	0	0
Copper	52	6	30	4	0	0	36	4	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0
Target Services Total	626.00		444		385.00		159.00		100		75.00	
Target Emissions Total for Services		81		58		50		20		13		10
Target Yearly Emissions Total for Program		396		336		206		245		266		148
Total	mt CH4	15.84		13.44	mt CH4	8.24		9.8	mt CH4	10.64		5.92