

Massachusetts is deciding how much gas system to keep. Your capital plan is where that gets answered.

The DPU's Future of Gas order and a net-zero-by-2050 mandate put a ceiling on long-term throughput, even as the GSEP program obligates roughly half a billion dollars a year replacing leak-prone pipe. Every one of those forces moves the projects on your list. Invizion helps gas utilities re-sequence a capital portfolio in a click — and defend every decision.

1.6M¹	~17%²	>\$40B²	2050³
Residential natural gas customers in Massachusetts — roughly 1.75 million counting commercial and industrial.	Share of Massachusetts gas mains still considered leak-prone as of 2024.	Projected lifetime cost of the GSEP leak-prone-pipe replacement program — about \$0.5 billion a year.	Net-zero mandate behind the DPU's Future of Gas order — the ceiling on long-term gas throughput.

THE MASSACHUSETTS LANDSCAPE

Four forces are moving your project list at once

None of these is theoretical, and none of them waits for your next budget cycle. Together they mean the capital plan you approved last year may already be the wrong plan.

SYSTEM INTEGRITY & AGING PIPE

Half a billion a year, chasing a shrinking window

Roughly 17% of the state's gas mains were still leak-prone as of 2024, and the 2014 Gas System Enhancement Plan (GSEP) law obligates utilities to replace them — at about \$0.5 billion a year, on a path toward a lifetime cost projected to exceed \$40 billion, targeting completion by 2039²

The safety stakes are not abstract here: HEET mapped more than 20,000 gas leaks across Massachusetts in 2015⁴ and the 2018 Merrimack Valley disaster — one death, dozens of fires, and over \$1 billion in damage — reset the state's tolerance for deferred integrity work.⁵

DECARBONIZATION & ELECTRIFICATION

A regulator asking how much gas system to keep

In its December 2023 Future of Gas order (D.P.U. 20-80), the DPU found that continuing to grow the gas system is inconsistent with the Commonwealth's net-zero-by-2050 mandates³ It directed utilities to weigh non-pipeline alternatives — including networked geothermal — before major gas investments, moved to end the subsidy that lets new hookups be cross-subsidized by existing customers, and declined to endorse widespread hydrogen blending for building heat.³

With the 2021 climate law locking in a 50% cut by 2030 and net zero by 2050,⁶ every long-lived dollar spent replacing pipe now carries stranded-asset risk on a 2050 horizon.

SUPPLY, PEAKING & RELIABILITY

At the end of a constrained pipeline network

Massachusetts sits at the end of constrained interstate pipelines into New England and leans on LNG and peaking supply to meet design-day demand on the coldest days — a structural exposure that turns winter commodity spikes into higher customer bills¹

With roughly 1.75 million gas customers depending on the system through the heating season,¹ capacity and design-day planning stay non-negotiable even as long-term throughput is expected to decline.

CAPITAL RECOVERY & REGULATORY

Rising bills meet a shrinking customer base

The GSEP surcharge recovers pipe-replacement spending between rate cases, but at roughly \$0.5 billion a year it has drawn sustained criticism as costly infrastructure being built for a system the state intends to shrink²

Consolidation has already reshaped the sector: Eversource acquired the former Columbia Gas of Massachusetts for about \$1.1 billion in 2020 after the Merrimack Valley failures⁷ and now serves over 600,000 gas customers.⁸ Every dollar recovered from a declining base sharpens the affordability question.

WHO DELIVERS MASSACHUSETTS'S GAS

A few large investor-owned LDCs and a handful of municipal systems

Massachusetts gas distribution is dominated by investor-owned LDCs regulated by the Department of Public Utilities, alongside a small number of municipal gas departments. The pressures are shared; the accountability path differs.

Investor-owned gas LDCs

Rates & capital recovery regulated by the DPU

National Grid (Boston Gas & Colonial Gas)	The state's largest gas LDCs
Eversource Energy (NSTAR Gas)	Over 600,000 gas customers in 125 communities
Eversource Gas of Massachusetts	Former Columbia Gas; 300,000+ customers, acquired 2020
Liberty Utilities (New England Natural Gas)	Fall River & southeastern Massachusetts
Berkshire Gas	40,000+ customers, 20 western MA towns (Avangrid)
Unitil (Fitchburg Gas & Electric)	North-central Massachusetts

GSEP replacement spending across these LDCs runs roughly \$0.5 billion a year statewide.

Municipal gas systems

Governed by their communities, not DPU rate cases

Holyoke Gas & Electric	Municipal gas & electric department
Westfield Gas & Electric (Whip City)	Municipal gas & electric department
Middleborough Gas & Electric	Municipal gas & electric department
Wakefield Municipal Gas & Light	Municipal gas & electric department

Massachusetts has only a handful of municipal gas departments; the vast majority of gas customers are served by the investor-owned LDCs on the left.

Every capital dollar has to be defensible

The DPU sets rates and capital recovery for the investor-owned LDCs, and it is now the same body steering the sector's long-term contraction — so the question on every project is: why this, why now, why at this cost?

Department of Public Utilities (DPU) regulates rates, capital recovery, and safety for the investor-owned gas LDCs, and issued the Future of Gas order in D.P.U. 20-80³

Gas System Enhancement Plan (GSEP) is the state's infrastructure-replacement surcharge, created by 2014 law to accelerate leak-prone-pipe replacement with cost recovery between rate cases — now running about \$0.5 billion a year²

The Future of Gas order (Dec. 2023) directs LDCs to evaluate non-pipeline alternatives, ends the new-hookup subsidy, and requires long-term plans consistent with net-zero-by-2050 — a structural shift in what capital the DPU will approve³⁶

The Columbia Gas / Eversource transition — a \$1.1 billion acquisition after the 2018 Merrimack Valley failures — is a reminder that safety and integrity outcomes can reshape ownership itself⁷⁵

The money is mostly ratepayer money — and it is being scrutinized

Massachusetts gas capital is recovered largely through rate base and the GSEP surcharge, not federal grants. That makes the affordability and stranded-asset case for each project the thing that has to hold up.

GSEP surcharge: ~\$0.5B/year recovers leak-prone-pipe replacement between rate cases, with a lifetime cost projected to exceed \$40 billion — the single largest capital driver in the sector²

Rate base & DPU rate cases remain the primary recovery path for non-GSEP capital, with the Future of Gas order narrowing what qualifies as prudent long-term gas investment³

Merrimack Valley settlements: \$143M + \$53M — the class-action settlement and federal criminal penalty that followed the 2018 disaster show how integrity failures convert into direct financial exposure.⁵

Non-pipeline alternatives — networked geothermal pilots and targeted electrification — are now an expected line of analysis before major gas spend, redirecting some capital away from traditional pipe.³

MASSACHUSETTS GAS, IN BRIEF

Questions Massachusetts gas leaders are asking

Short, sourced answers — the same facts we dig into with utilities looking at their capital programs.

What did the DPU's Future of Gas order actually change?

In D.P.U. 20–80 (December 2023) the DPU found that expanding the gas system conflicts with net-zero-by-2050, directed utilities to weigh non-pipeline alternatives such as networked geothermal, moved to end the subsidy for new gas hookups, and was skeptical of hydrogen for building heat³⁶

How big and how expensive is the GSEP pipe-replacement program?

About 17% of Massachusetts gas mains were still leak-prone as of 2024. GSEP obligates utilities to replace them at roughly \$0.5 billion a year, with a projected lifetime cost above \$40 billion and a target completion around 2039²

Who are the main gas utilities in Massachusetts?

National Grid (Boston Gas and Colonial Gas) is the largest, followed by Eversource, which serves over 600,000 customers including the former Columbia Gas of Massachusetts it acquired in 2020. Liberty Utilities, Berkshire Gas, and Unitil's Fitchburg operation round out the investor-owned LDCs³⁷

Why is the Merrimack Valley disaster still relevant to capital planning?

The 2018 over-pressurization killed one person, caused dozens of fires and over \$1 billion in damage, led to \$143 million in class settlements and a \$53 million federal penalty, and forced Columbia Gas to sell its Massachusetts system to Eversource — the clearest illustration of how integrity risk becomes financial and structural risk.⁵⁷

How is this capital recovered, and is there federal money?

Massachusetts gas capital is recovered mostly through rate base and the GSEP surcharge — ratepayer money, not federal grants — which is exactly why the affordability and stranded-asset case for each project matters so much²³

How does Invizion help Massachusetts gas utilities plan capital?

Invizion is scenario-based capital portfolio optimization for utilities. It lets you model how a Future of Gas requirement, a GSEP acceleration, a non-pipeline alternative, or a declining-throughput forecast reshuffles your whole project list, re-sequence the portfolio automatically, and keep a defensible record of every trade-off for the DPU.

REFERENCES

Sources

Every figure in this briefing is tied to a primary or authoritative source.

1. U.S. Energy Information Administration — Massachusetts number of natural gas consumers (2024): 1,604,279 residential, 138,545 commercial, 10,916 industrial. www.eia.gov
2. HEET (Home Energy Efficiency Team) — GSEP overview: ~17% of pipes leak-prone as of 2024, ~\$0.5B/year, projected lifetime cost above \$40B, 2039 target, tension with net-zero 2050. heet.org/gsep
3. Massachusetts Department of Public Utilities — Order in D.P.U. 20–80, Investigation into the Future of the Natural Gas Distribution Industry, issued December 2023. eeaonline.eea.state.ma.us
4. HEET — statewide gas-leak mapping: more than 20,000 gas leaks mapped across Massachusetts in 2015. heet.org
5. Merrimack Valley gas explosions (Sept. 13, 2018) — one death, dozens of fires, over \$1B in damage, \$143M class settlement (2019), \$53M federal fine; Columbia Gas ordered to sell MA operations. en.wikipedia.org
6. Massachusetts Executive Office of Energy and Environmental Affairs — Clean Energy and Climate Plan / Global Warming Solutions Act: 50% cut by 2030, net zero by 2050. www.mass.gov
7. Columbia Gas of Massachusetts — 300,000+ customers; Eversource acquisition completed October 2020 for ~\$1.1 billion; \$53M fine. en.wikipedia.org
8. Eversource Energy — serves over 600,000 natural gas customers in 125 Massachusetts communities. en.wikipedia.org
9. National Grid US — Massachusetts gas delivery via Boston Gas Company and Colonial Gas Company (largest gas LDC in the state). www.nationalgridus.com
10. Liberty Utilities (New England Natural Gas Company) — natural gas service in the Fall River and southeastern Massachusetts area. new.libertyutilities.com
11. Berkshire Gas Company — more than 40,000 customers across 20 western Massachusetts communities; a subsidiary of AVANGRID. www.berkshiregas.com
12. Unitil Corporation — Fitchburg Gas and Electric Light Company serves north-central Massachusetts; Unitil serves 75,900+ gas customers across NH, MA and ME. unitil.com

ABOUT INVIZION

Capital program optimization for utilities

Invizion is a purpose-built capital lifecycle management platform for utilities. It integrates budgeting, CIP, scenario analysis, and funding-source tracking in one system — so utilities can re-sequence a capital portfolio in a click and demonstrate audit-ready, defensible decisions to regulators, boards, and rating agencies.

See how utilities keep capital plans current and defensible with Invizion.

Explore Invizion →