Gas 101

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Agenda

1. Overview of Energy Consumption
2. Gas System Operations
3. Reliability, Safety & Compliance
4. LDC Service Territories
5. Questions

Energy Consumption in MA

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Energy Consumption

Massachusetts

End-use energy consumption 2022, estimates

0.0 trillion British thermal units

Source

Coal	Natural gas	Petroleum	Renewable energy	Electricity
0.0 (0.0%)	313.6 (29.5%)	543.3 (51.0%)	33.7 (3.2%)	174.0 (16.3%)

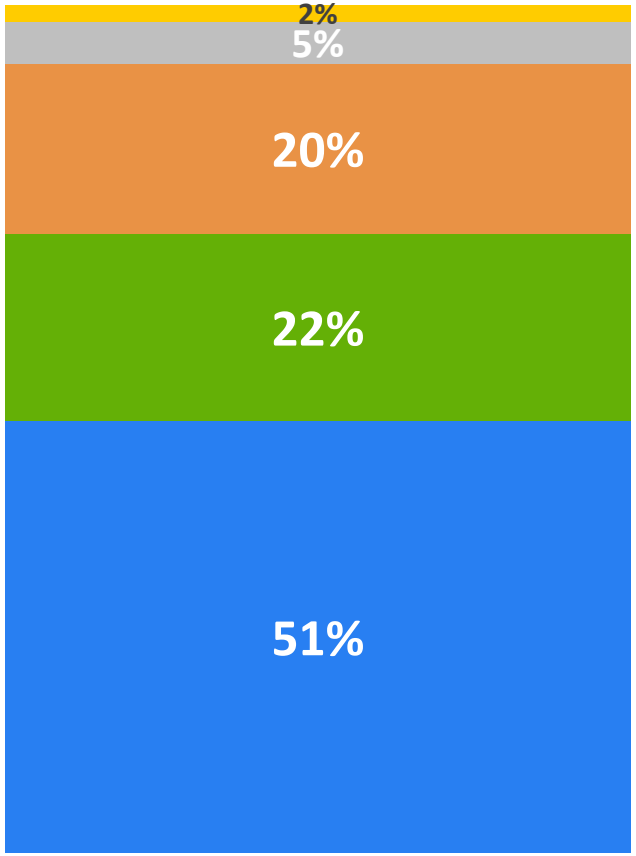
Sector

Commercial	Industrial	Residential	Transportation
246.1 (23.1%)	104.1 (9.8%)	295.3 (27.7%)	419.0 (39.4%)

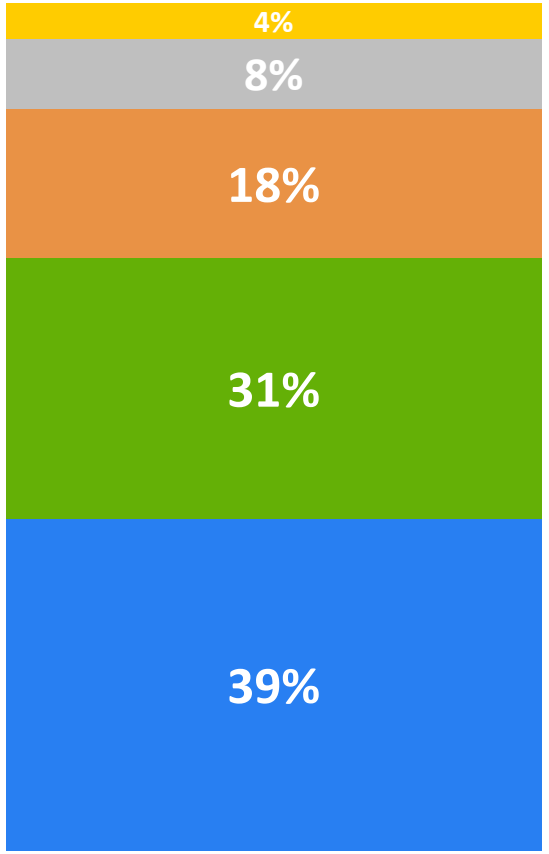
Energy Consumption

MA Home Heating

2.8 Million MA Residential Homes



New England Home Heating



6 Million NE Residential Homes

Natural gas | Oil | Electricity | Petroleum | Wood or Other

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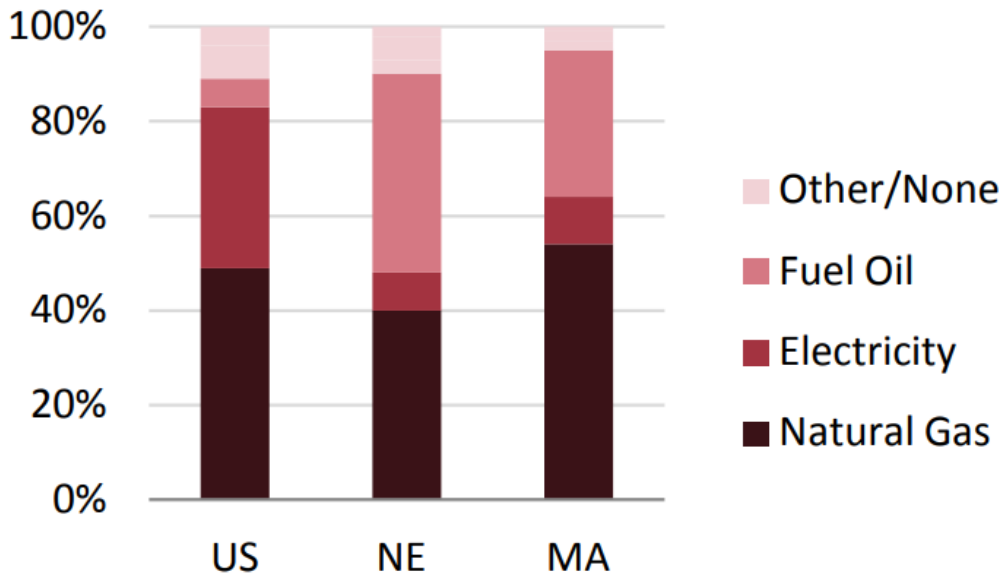
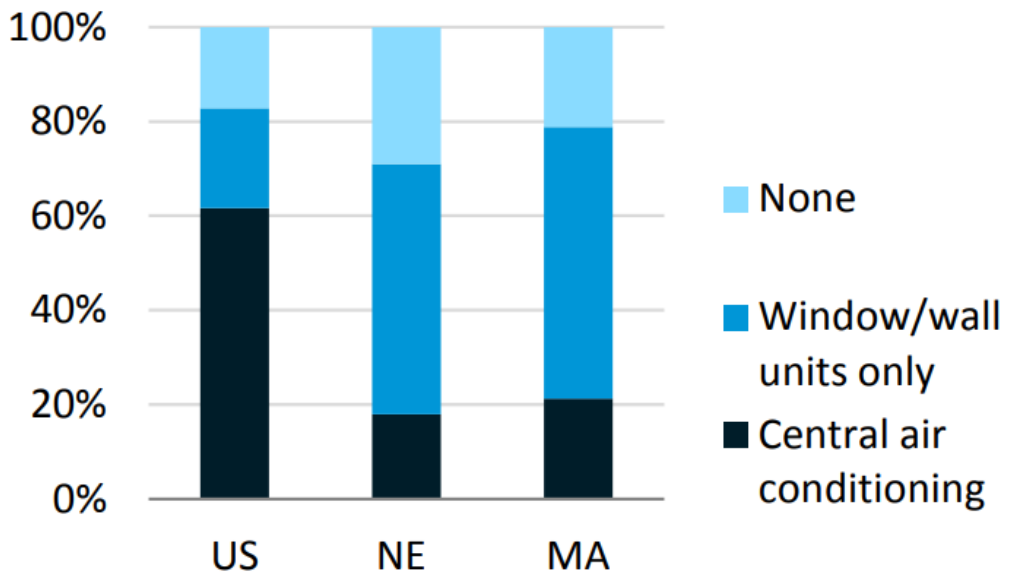
Heating and Cooling

MAIN HEATING FUEL USED



Compared to the U.S. average, a greater proportion of Massachusetts residents use fuel oil (31%) and a much smaller proportion of residents use electricity (10%).

COOLING EQUIPMENT USED



More than 20% of Massachusetts households do not use air conditioning, and those that do still predominantly rely on individual window/wall units for cooling.

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Overview of Gas System

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Key Terminology

Interstate Pipelines

Pipelines similar to the interstate highway system, carrying natural gas across state boundaries, and in some cases, across the country

Intrastate Pipelines

Pipelines located within the borders of one state. This distinction determines which agency will oversee the regulation of a particular pipeline

Compressor Stations

To ensure natural gas remains pressurized, it must be compressed periodically along the pipeline. Compressor stations are where gas is compressed either by a turbine, a motor or an engine

Gate Stations

Facilities where natural gas is measured and transferred from the pipeline transmission system to the LDC under controlled pressure

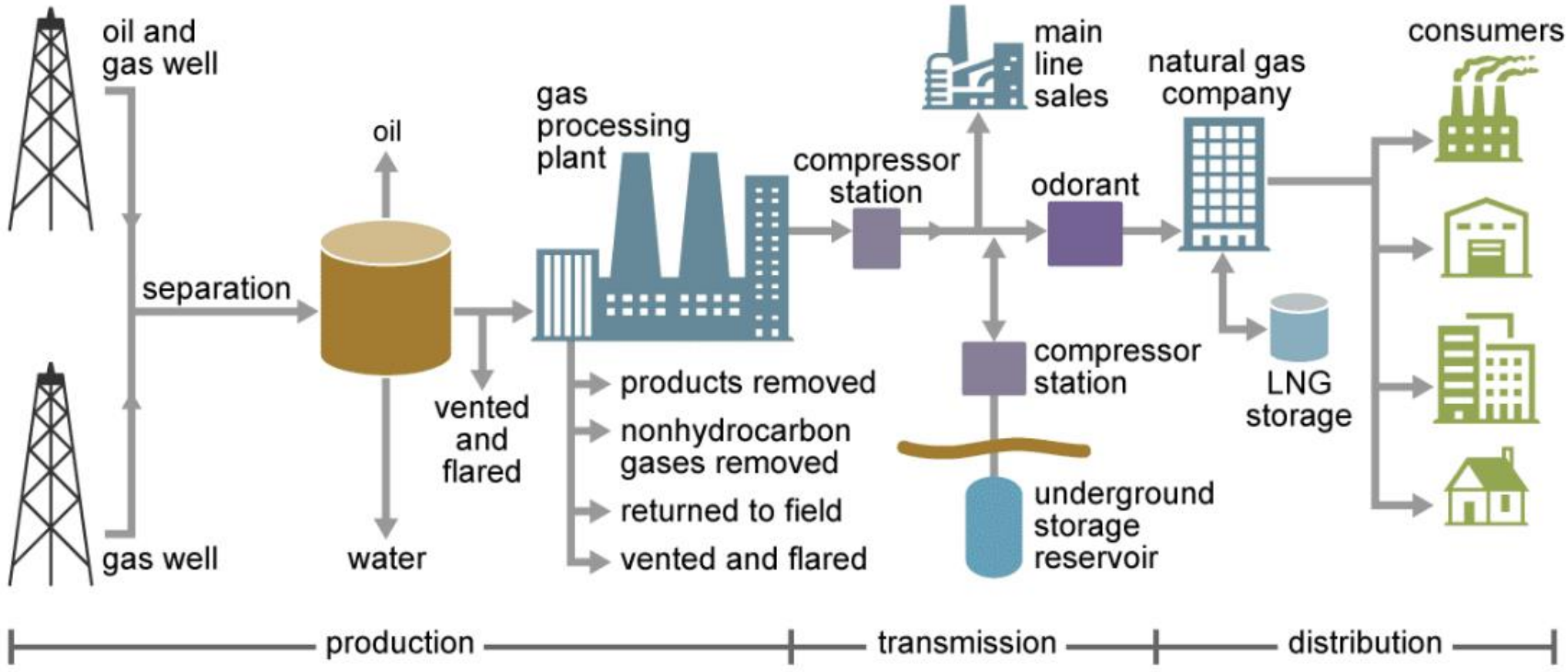
Regulator Stations

Facilities that use multiple regulators to reduce pressure for use by customers in the residential and C&I sectors.

SCADA Systems

Sophisticated control systems that monitor the gas as it travels through all sections of a pipeline network. Also, collect and manage data received from monitoring and compressor stations

Natural Gas Delivery Chain

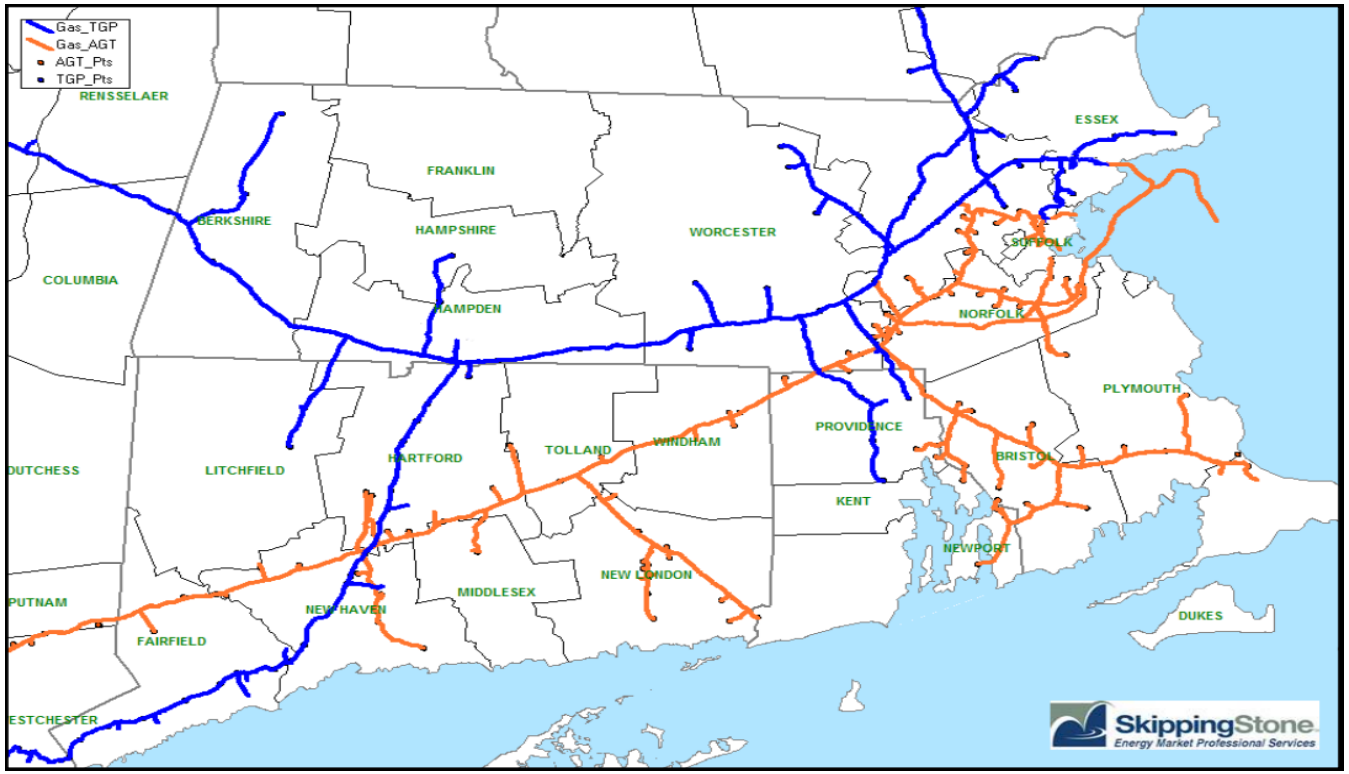


Source: U.S. Energy Information Administration

Where does Massachusetts get its natural gas?

Natural Gas Supply into the Region

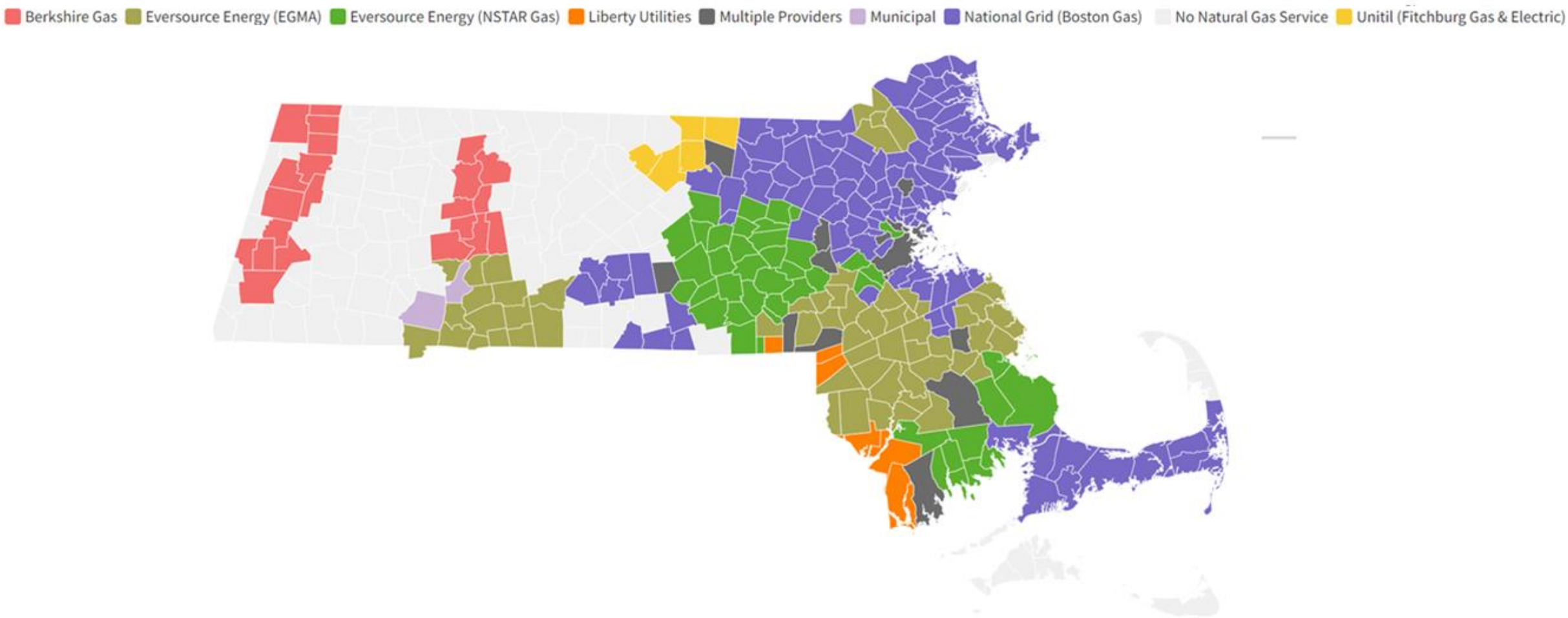
- New England has no in-region fossil fuel reserves or production.
- Supplies are delivered via interstate pipelines, tanker ships and trucks from both domestic and foreign sources.
- New England is at the “end of the pipeline” system, with pipelines terminating in Massachusetts.



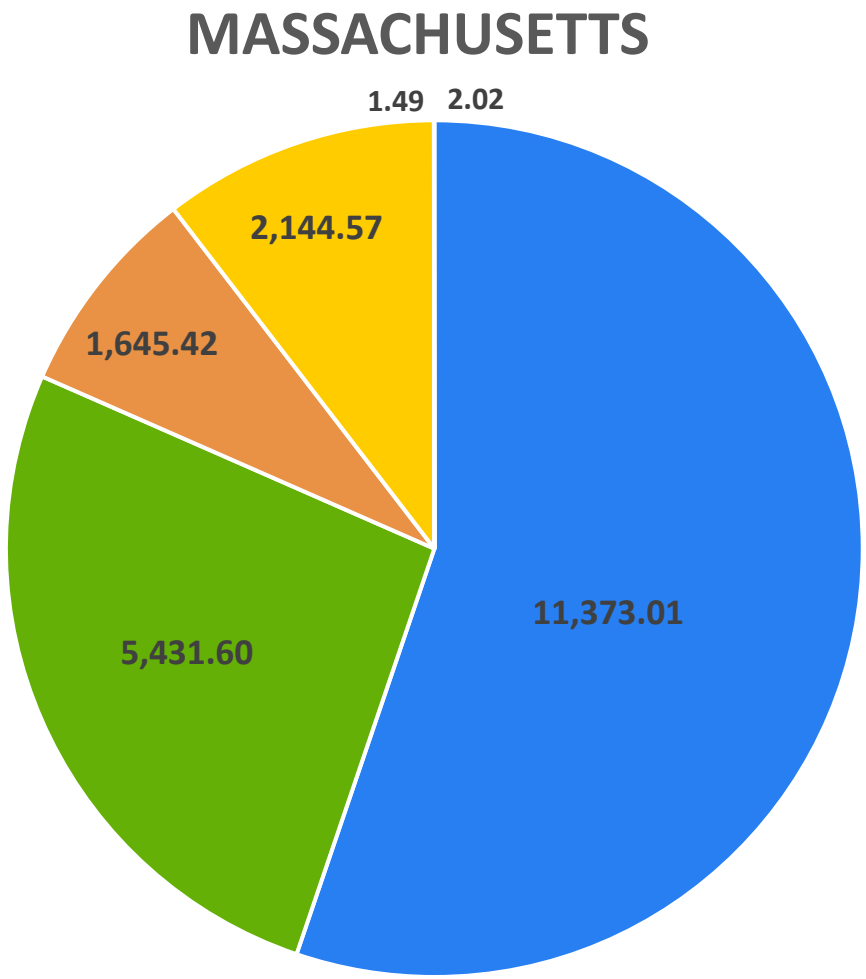
Natural Gas Deliveries to Massachusetts Customers

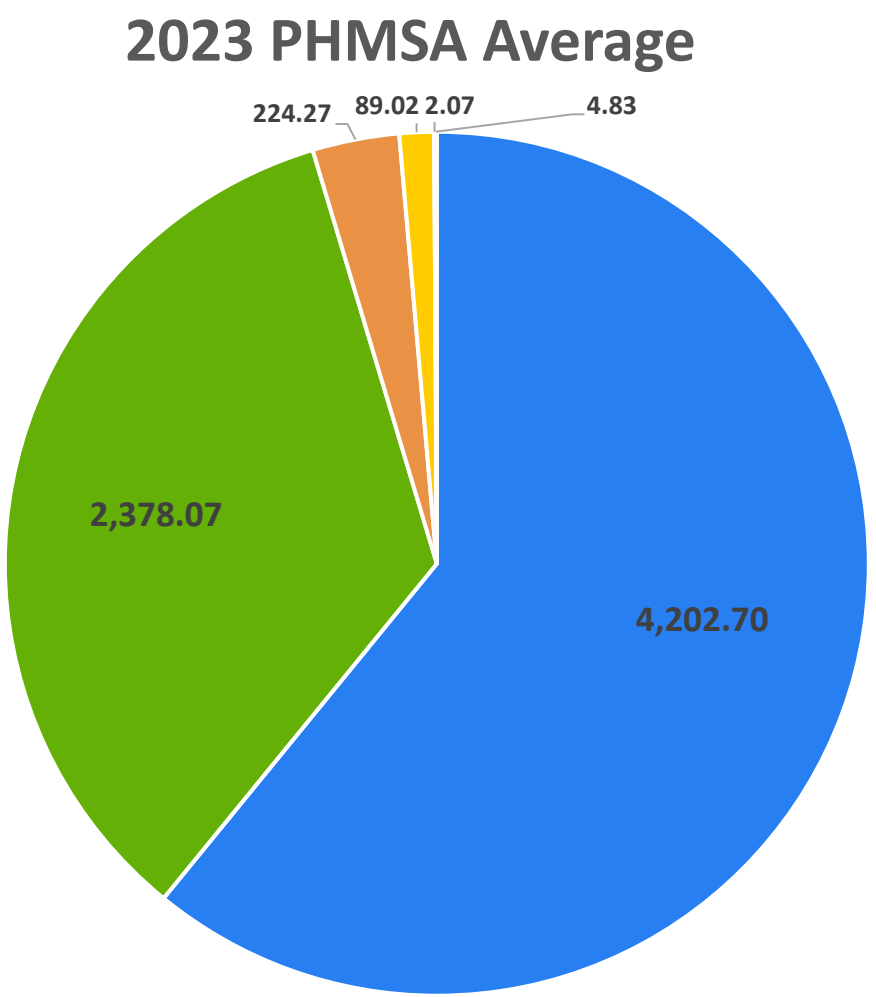
- Massachusetts has approximately 2.8 million gas customers.
- Most customers receive service from one of five investor-owned **local distribution companies** (LDCs), with some customers receiving service from four municipally-owned gas companies.

MA LDC Statewide Territory Map



MA Gas Inventory by Miles of Main





Plastic (%) Steel - Protected (%) Steel - Unprotected (%) Cast/Wrought Iron (%) Ductile Iron (%) Other (%)

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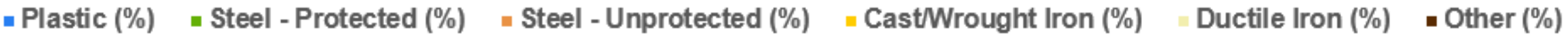
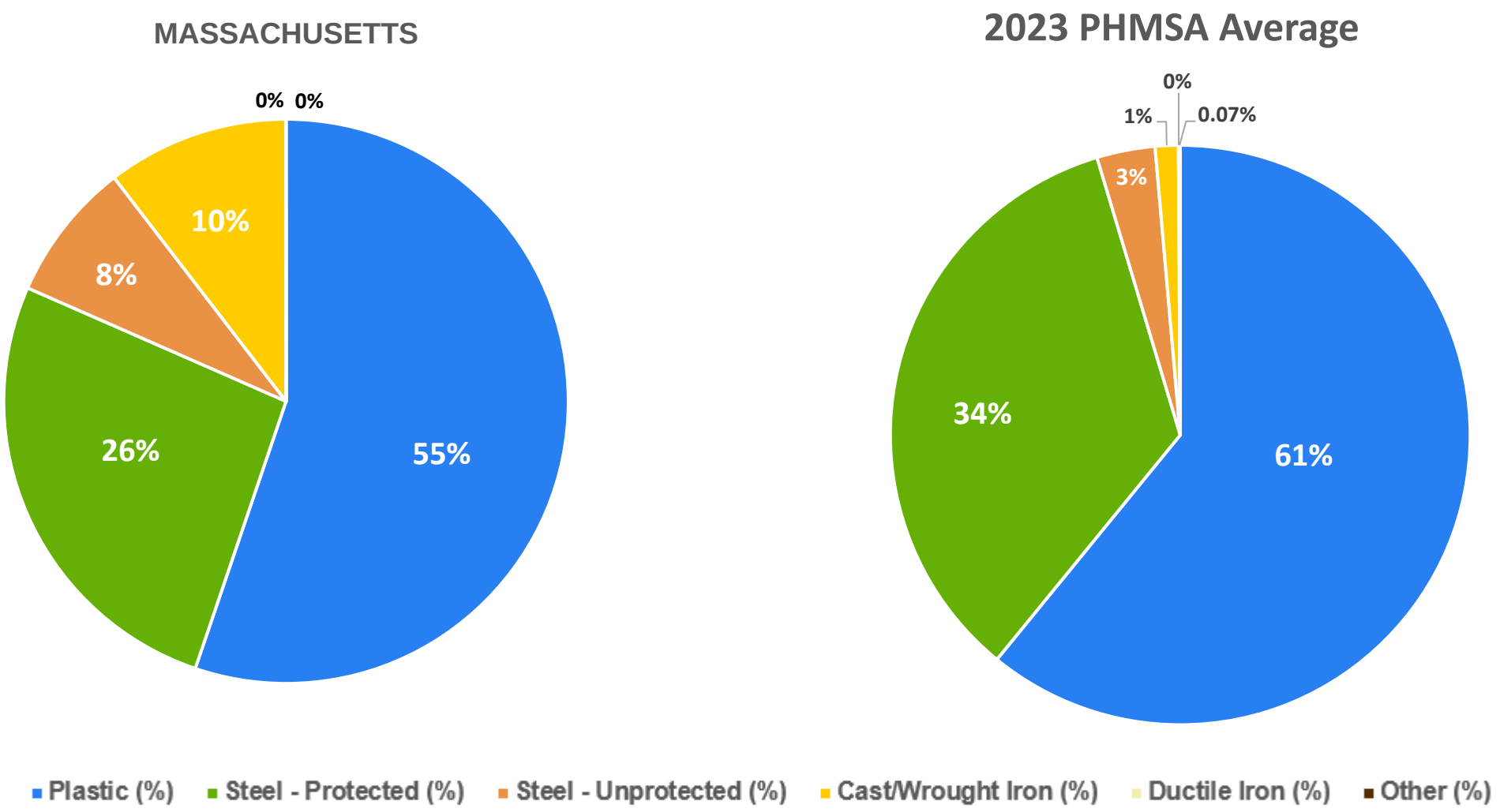
MA Gas Inventory by Miles of Main

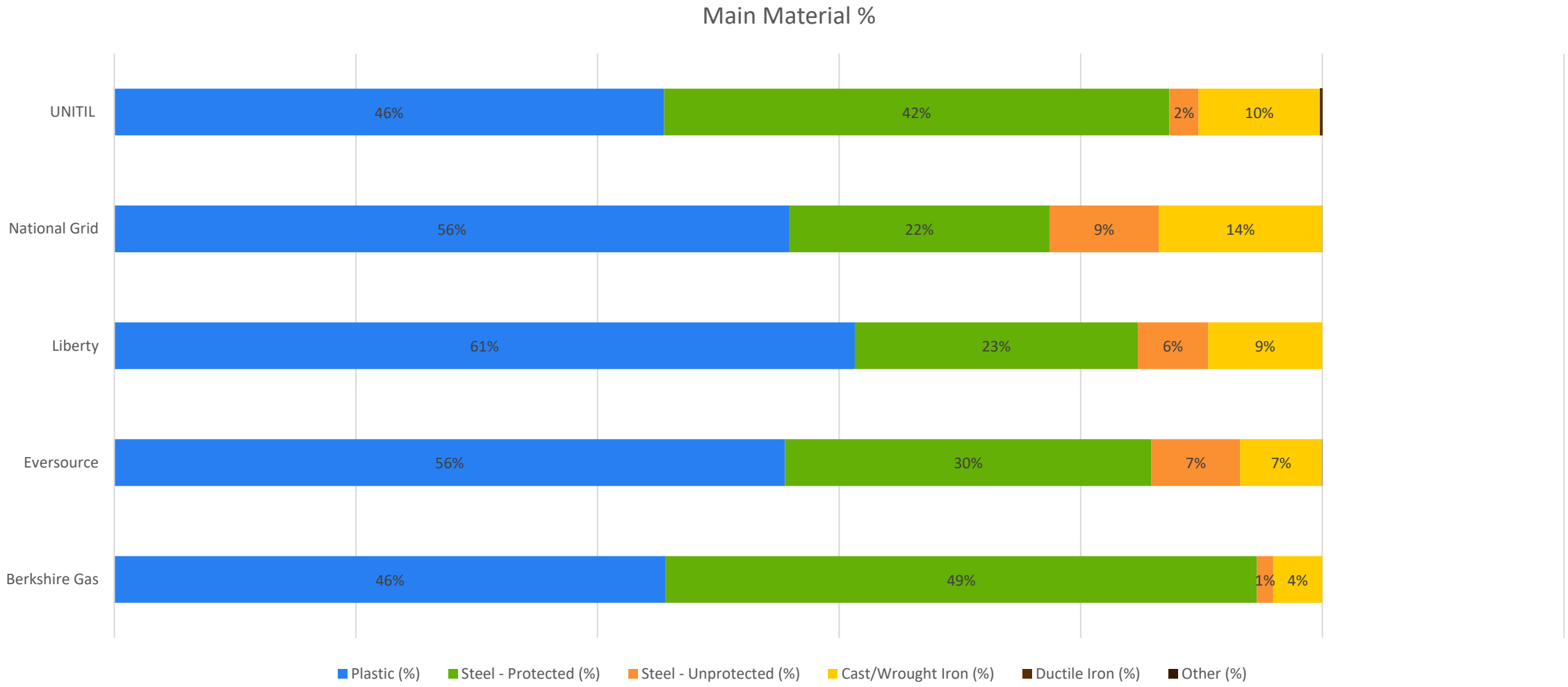
Berkshire Gas	Eversource	Liberty	National Grid	UNITIL
349.77	4,626.80	418.7	6,272.10	123.34
374.93	2,527.31	159.92	2,415.04	113.32
10.41	612	39.79	1,015.43	6.58
31.12	566	64.55	1,519.19	27.26
-	-	-	-	0.49
-	1	0	0.02	-
766.23	**8,333.11**	**682.95**	**11,221.78**	**270.99**



MA Gas Inventory by Types of Main



Gas Main Inventory



Safety, Reliability, Compliance

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Operating Pressure

Operating Pressure(s)

- LDCs intricate distribution systems operate by utilizing varying minimum operating pressures to ensure safe and reliable delivery to end users

Monitoring Operating Pressure(s)

- Highly qualified LDC personnel use complex SCADA platforms and telemetry to monitor system pressures 24 hours/day 365 days/year ensuring safe and reliable operation of critical systems

Maintaining Operating Pressure(s)

- Operating pressure is maintained through a network of compressor and regulation equipment located in strategic locations of each LDCs system
- Inability to sustain required operating pressures can result in an unplanned outage

Unplanned Outages

- An unplanned outage impacting gas customers may occur at any time. Gas outages are almost always unanticipated and infrequent
- Outages may last hours, days or weeks depending on the number of customers impacted and the reasons for the outage.
- Gas systems must be designed and maintained to ensure reliability and prevent outages, especially during peak winter periods where an outage may leave customers without heat for an extended period.
- Reasons for unplanned outages include:
    - System Damage
    - Insufficient gas supply
    - Loss of pressure on the distribution or transmission system
        - Blockage in main – such as water
        - Equipment failure
        - Demand exceeding capacity to serve
- To restore service following an outage an LDC will need to perform the following steps. Most steps are sequential.
    - Determine extent of the outage and number of customers impacted
    - Visit all impacted locations to shut off gas meters. Requires access inside the premise if meters are located inside.
    - Assess damage to gas assets
    - Develop a repair plan if damage has occurred
    - Make repairs
    - Re-introduce gas into the system
    - Survey system to ensure repairs were successful
    - Visit all locations for the second time to turn on gas meters and check that appliances are operating properly.
    - Actual time to restore service following a gas system outage varies, but in all cases requires at least two visits to every impacted customer, and for one or both visits requires access inside the customer premise.

NATURAL GAS vs. ELECTRIC OUTAGE RESPONSE

Natural Gas (Local Distribution Companies)

- Gas emergencies are almost always unanticipated.
- Gas infrastructure is generally buried underground, so damage is not always visible to the public or easily accessible to field crews.
- Most gas emergencies are due to construction equipment damaging buried lines. Repair of damaged or leaking pipes usually involves excavation in streets or property.
- During outages, LDC crews will have to physically turn off affected customer meters.
- For gas outages, the restoration process involves:
    - Repairing the damaged line.
    - Removing, or purging air from damaged pipelines to restore 100% gas to the system.
    - Visiting each customer home or business twice; first to shut off gas flow, and then, after repairs are complete, to conduct a safety check and relight gas appliances.

Electric (Electric Distribution Companies)

- Most major emergencies are storm related outages and typically have a few days' warning.
- Damage to facilities is usually highly visible and accessible and repairable by trained crews.
- EDCs are usually able to prepare well in advance by positioning:
    - Line crews at potential high-risk areas
    - Replacement equipment and parts in advance
- Many substations have switching mechanisms that automatically restore or reroute electricity flow.
- Many parts of the electric grid are highly interconnected, with multiple energy pathways.
- In most cases, restoration to individual customer meters is done automatically once energy flow through power lines and transformers is restored.
- For outage restoration, our crews will go to the scene to remove obstructions, and repair damaged wires/ equipment as necessary.

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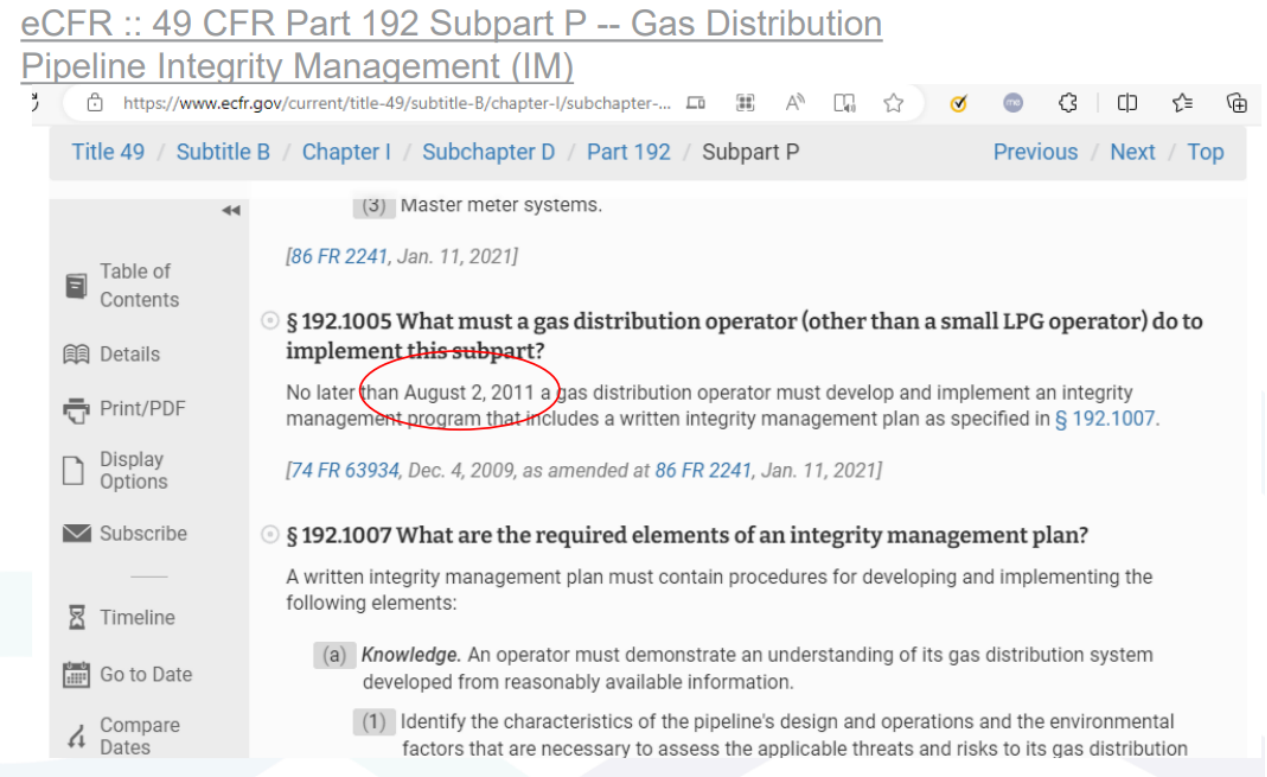
Gas System Compliance

- Local Distribution Companies are subject to both Federal and State Pipeline Safety Regulations
- Pipeline safety code currently is promulgated and enforced by the Department of Transportation – **Pipeline and Hazardous Materials Safety Administration (USDOT – PHMSA)**, and by state public utility commissions such as the **MA Department of Public Utilities**.
- Together the Federal code – 192 CFR and 193 CFR, and Commonwealth of MA code 220 CMR Sections 100 and 101, establish hundreds of pipeline safety compliance obligations, including obligations which specify:
  - How work on gas assets must be performed
  - How frequently gas assets must be inspected
  - How frequently gas assets maintenance must be performed
  - How quickly repairs or replacements of assets must occur following a failure
- In addition to Federal and State Pipeline Safety Regulations, in consideration of serious or significant pipeline incidents, oversight organizations, such as the **National Transportation Safety Board**, may issue recommendations for code change based on their findings from an incident investigation. The US Congress periodically re-establishes funding and mandates for the PHMSA administration
- Standards organizations such as **ASME** and **ASTM**, may update their standards based on engineering or material reviews, and the federal government may mandate the adoption of the most recently published standards.
- All LDCs have Operating and Maintenance Procedures, which are filed with the MA DPU. LDCs are required per Federal and State code to perform all work in accordance with their O&M procedures.

Compliance Code Example - Distribution Integrity Management Program (DIMP) Requirements

- All LDCs are required to have a DIMP
- DIMP identifies risks on a gas system, and includes plans to eliminate those risks
- The GSEP Statute requires utilities replace leak prone pipe in accordance with their DIMPs



Massachusetts Local Distribution Companies

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Berkshire Gas

An Avangrid company

Evolution of Berkshire Gas

- **1851** – **Pittsfield Coal Gas Company** is founded to produce gas for western Massachusetts communities' streetlights and homes
- **1954** – **The Berkshire Gas Company** name was adopted after the acquisition of **Berkshire Gas Company**, previously known as **Northern Berkshire Gas**
- **1958** – **Berkshire Gas** acquired **Greenfield Gas Light Company**
- **2010** – **Berkshire Gas** was acquired by **UIL Holdings**
- **2015** – **UIL Holdings** merged with **Iberdrola S.A.** to form **Avangrid, Inc.**
- **2024** – **Berkshire Gas** continues to operate under its legacy name, growing holistically due to customer demand

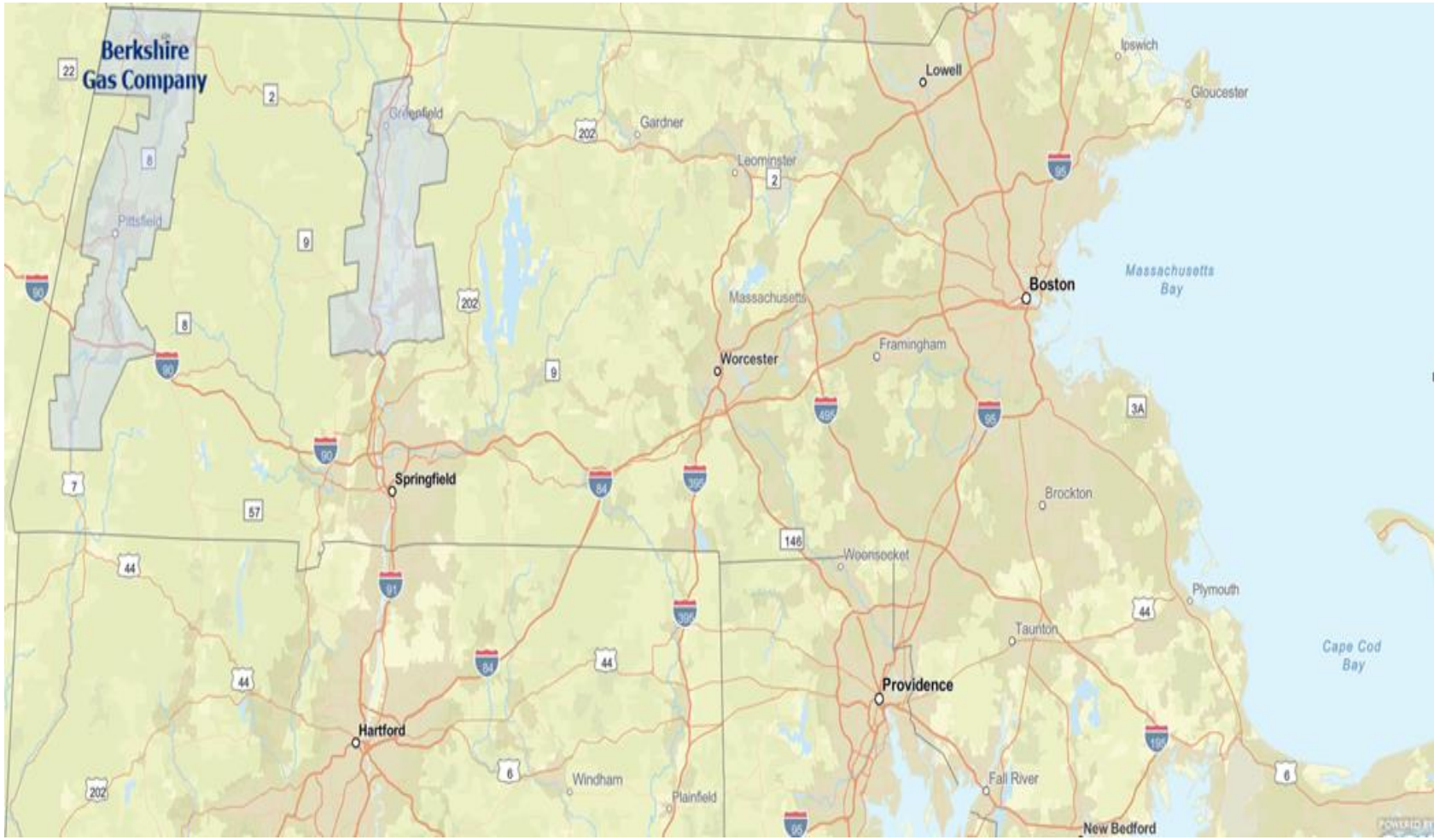
Berkshire Gas

An Avangrid company

System at a Glance

System Overview	
Customers	40,717
Communities Served	23
Miles of Main	766
Number of Services	32,784
Gate Stations	6
District Regulator Stations	79
LNG Storage Facilities	1

Company Structure	
Total Employees	134
Field Employees	64
Field Supervisors	11



Berkshire Gas

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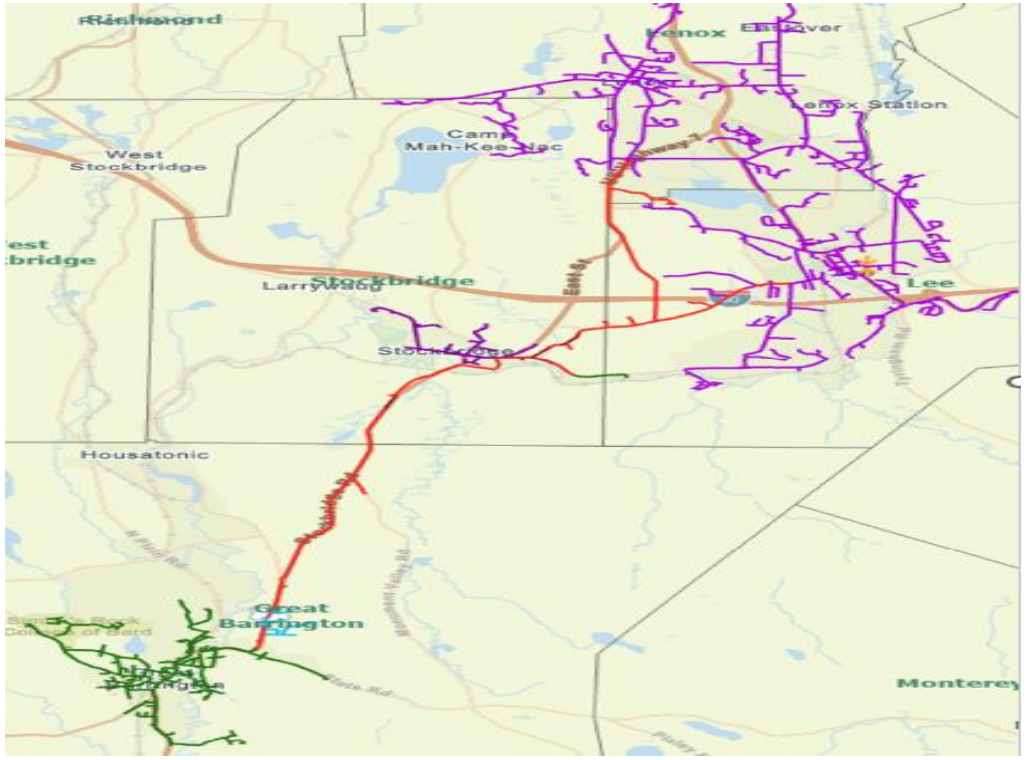
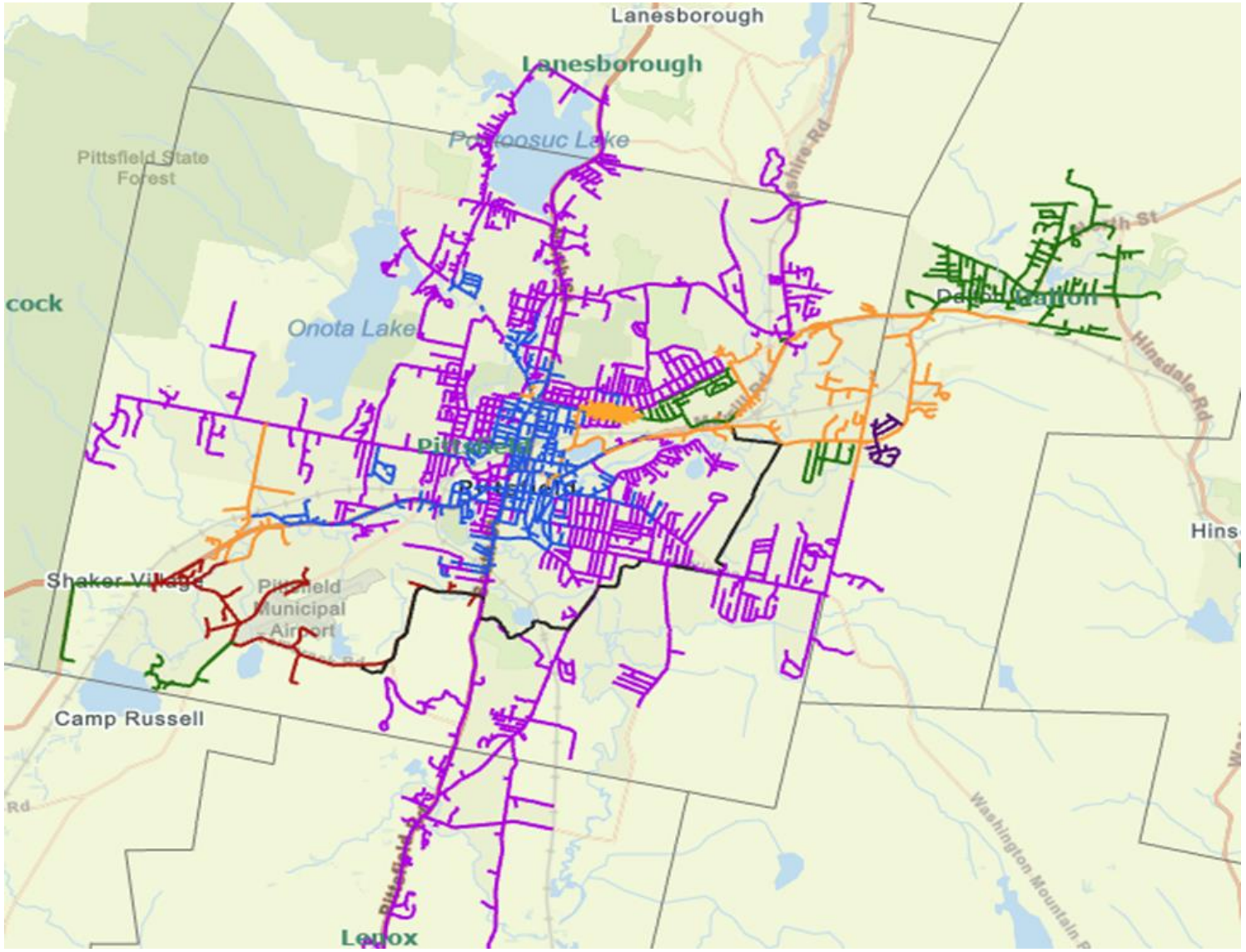


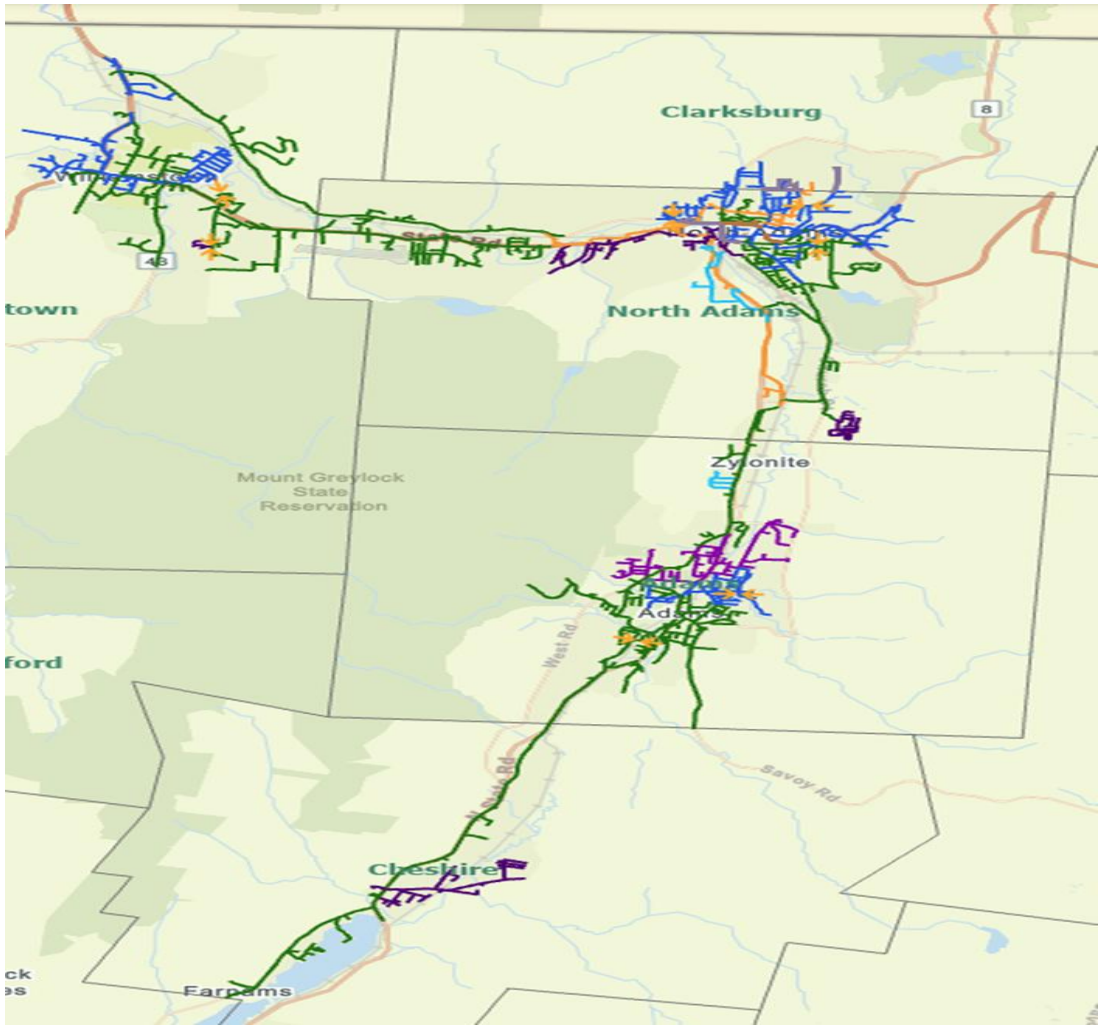
Southern Berkshire County



Central Berkshire County

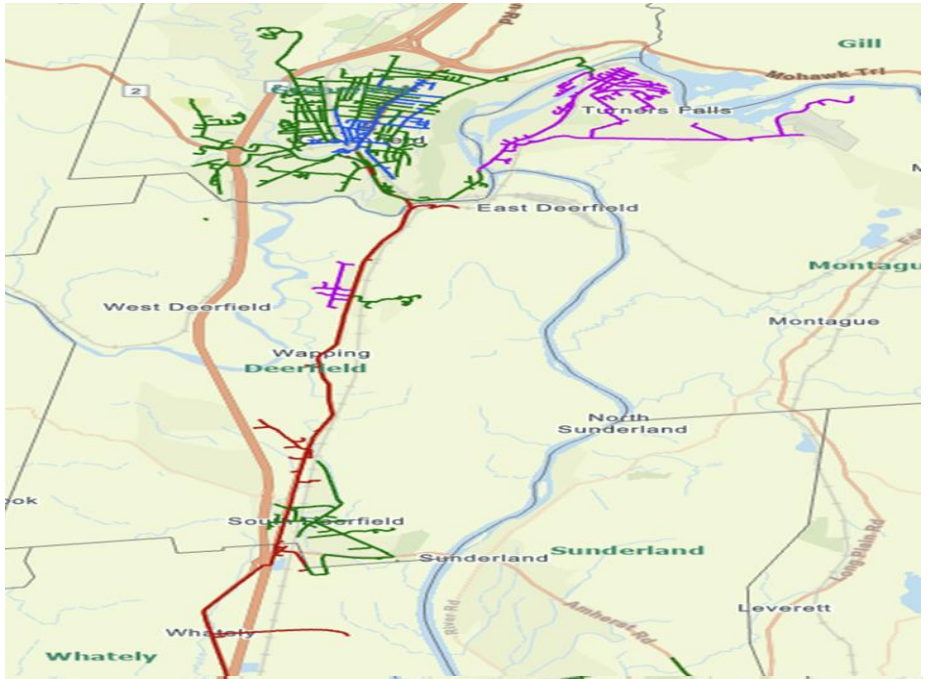
Berkshire Gas

An Avangrid company



Northern Berkshire County

Franklin County



Hampshire County

Commonwealth Gas

Eversource Gas of Massachusetts (EGMA)

- **1847 – Springfield Gas Light Company** is founded
- **1974 – Bay State Gas Company** is formed through the merger of Brockton-Taunton Gas, Springfield Gas Light, Northampton Gas Light and Lawrence Gas.
- **1979 – Bay State** acquires **Northern Utilities** and **Granite State Gas Transmission, Inc.**
- **1999 – NIPSCO Industries**, **Inc** acquires **Bay State Gas**
- **2000 –NiSource** (NIPSCO parent) acquires **Columbia Energy Group**
- **2010 – Bay State Gas Co.** rebrands to match other **NiSource** distribution company names (d/b/a) **Columbia Gas of Massachusetts**
- **2020 – Eversource Energy** acquires **Columbia Gas of Massachusetts** assets, forms distribution company **Eversource Gas of Massachusetts**

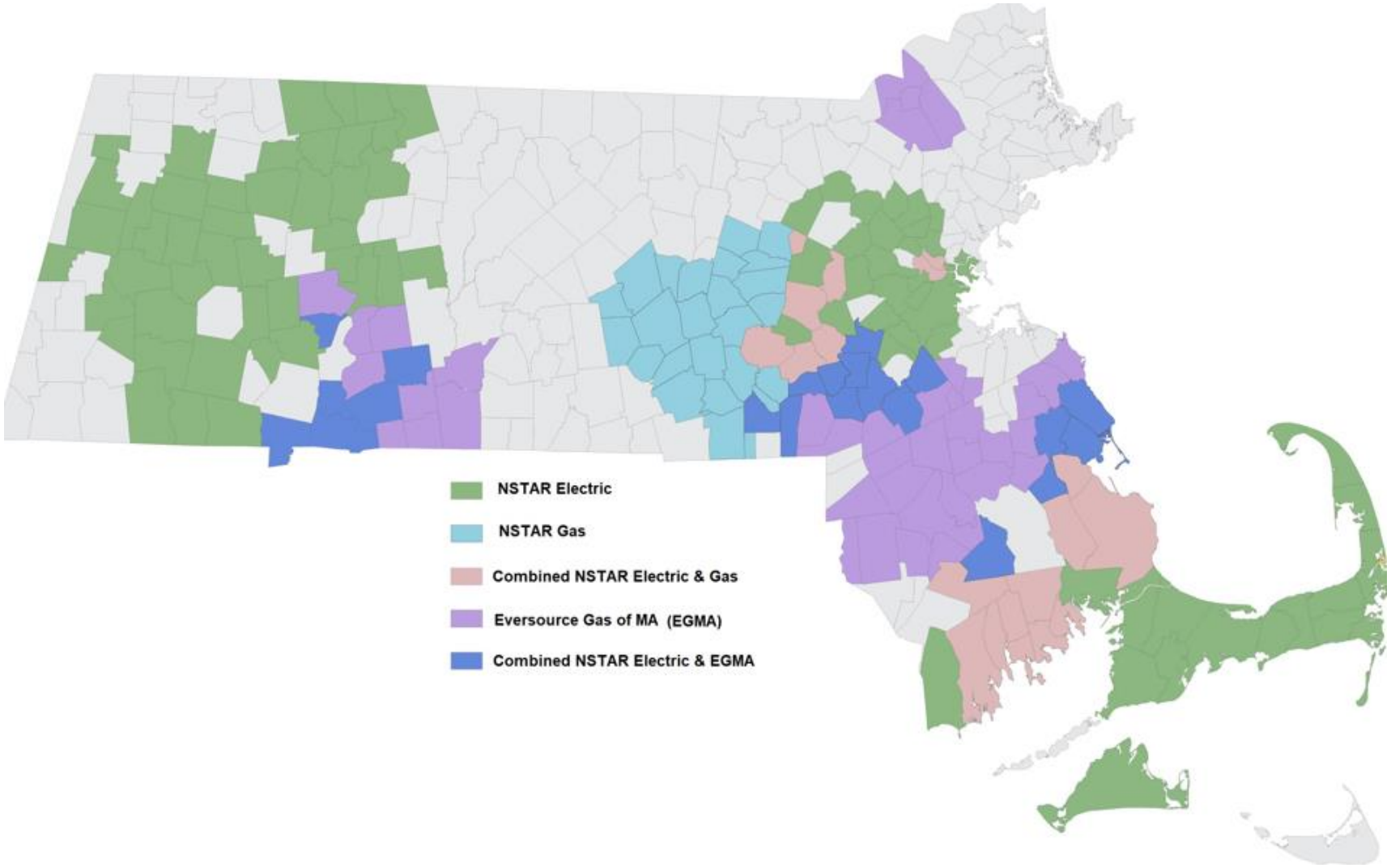
Eversource (NSTAR Gas)

- **1851 - Worcester Gas Light** is founded
- **1971 - Commonwealth Gas** formed after acquisition of a dozen other small gas light companies in cities and towns that would eventually become part of NSTAR
- **1999 - NSTAR Gas and Electric** created with merger of Boston Edison Company, Commonwealth Gas, Commonwealth Electric, and Cambridge Electric Light Co.
- **2012 - Northeast Utilities** acquires NSTAR Gas and Electric
- **2015 - Eversource Energy** rebrand

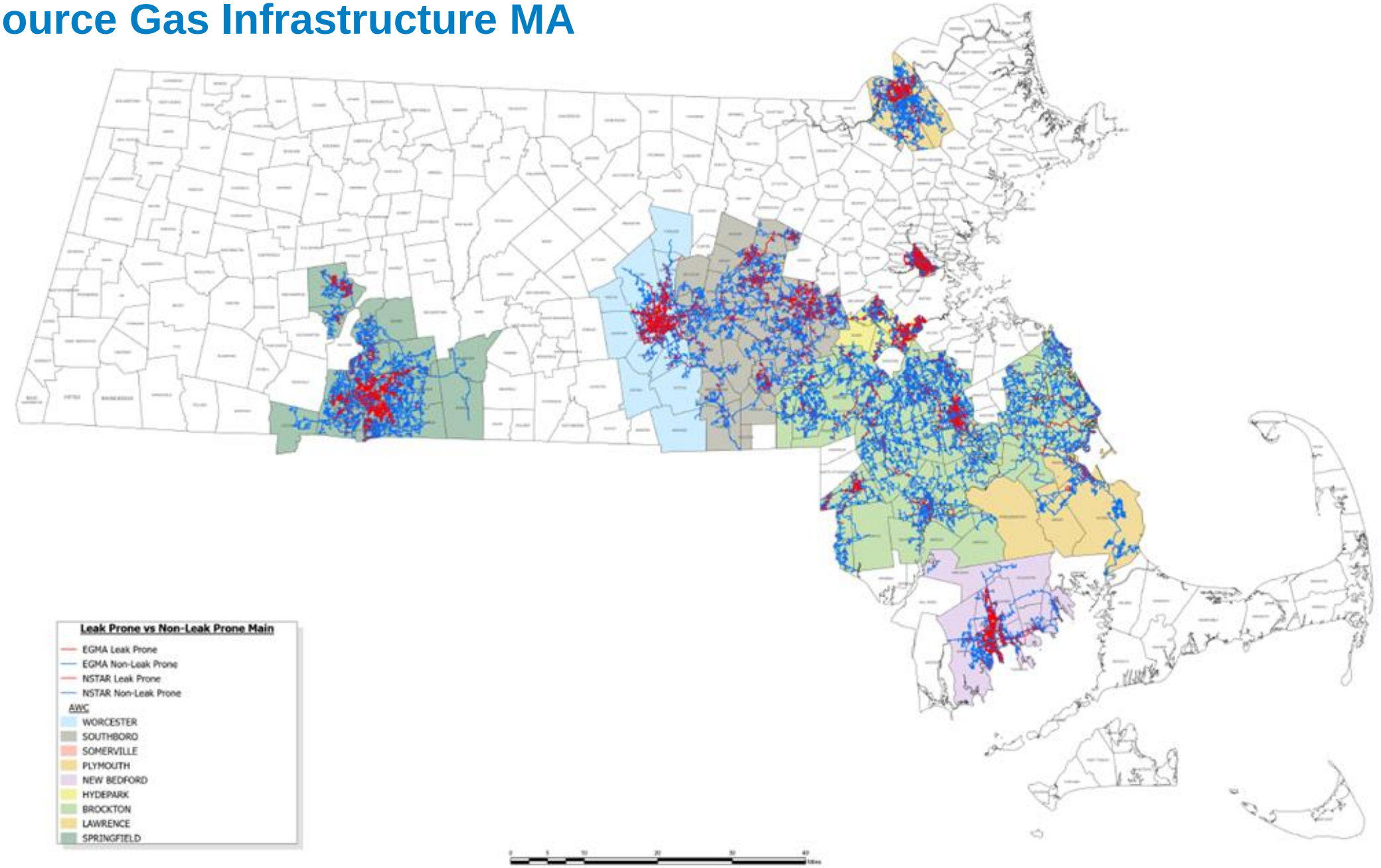
Eversource Service Territory MA

Gas	
Miles of Gas Mains	8,363
Gas Services	494,072
Gas Customers	643,000
Active Gate Stations	36
District Regulator Stations	338
Communities Served	122

Employees	
Total MA Employees	4,728
MA Represented Employees	2,864



Eversource Gas Infrastructure MA

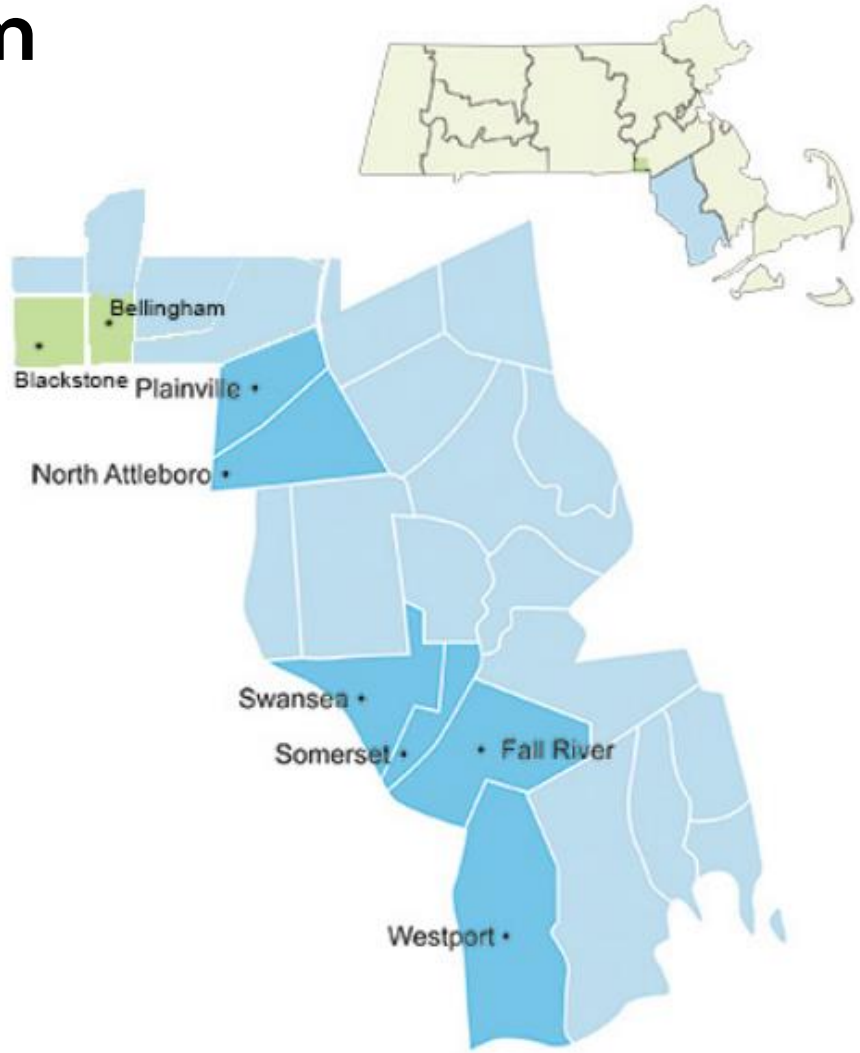


Liberty

1847	• Started as Fall River Gas Works • Produced Gas by Heating Coal
1855	• North Attleboro Gas Formed
1989	• Providence Gas Company Purchased North Attleboro Gas
2000	• Two Companies were Consolidated under Southern Union and did Business as New England Gas Company
2006	• National Grid Purchased the Rhode Island Gas Operations • Southern Union retained Massachusetts Assets
2013	• Liberty Purchased Massachusetts Assets
2020	• Liberty Purchased Blackstone Gas Company

Characteristics of Distribution System

1. **Serve approximately 61,057 customers in the nine southeastern Massachusetts communities within two service areas.**
   - 5 of those are designated as EJ Communities
2. **Fall River and North Attleboro Service Area**
   - Company has firm pipeline capacity entitlements of 45,861 MMBtu/day on Algonquin
   - Fall River is 60% of the overall customer base
3. **Blackstone Service Area**
   - Company has firm pipeline capacity entitlements of 519 Dth/day on Tennessee

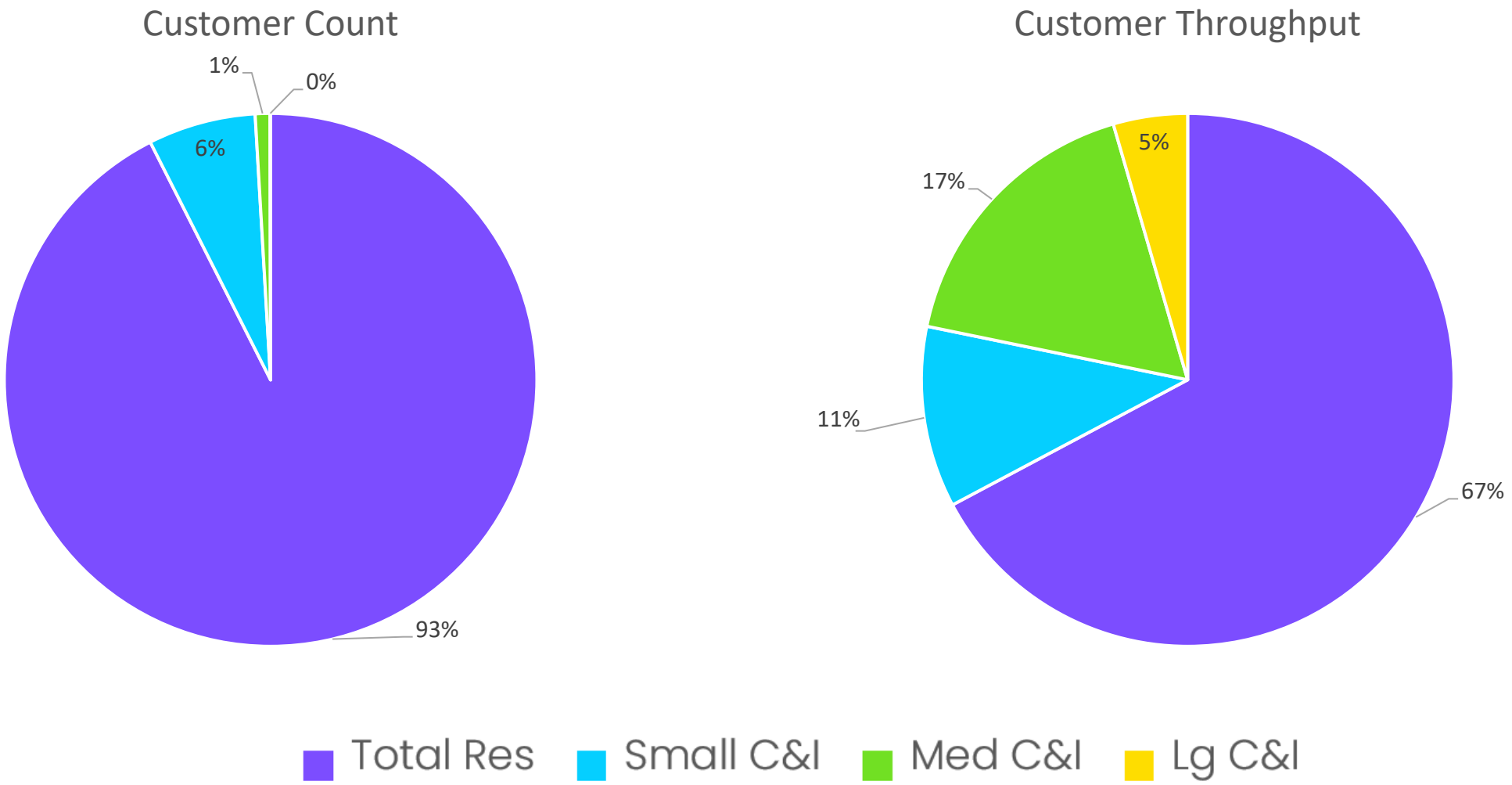


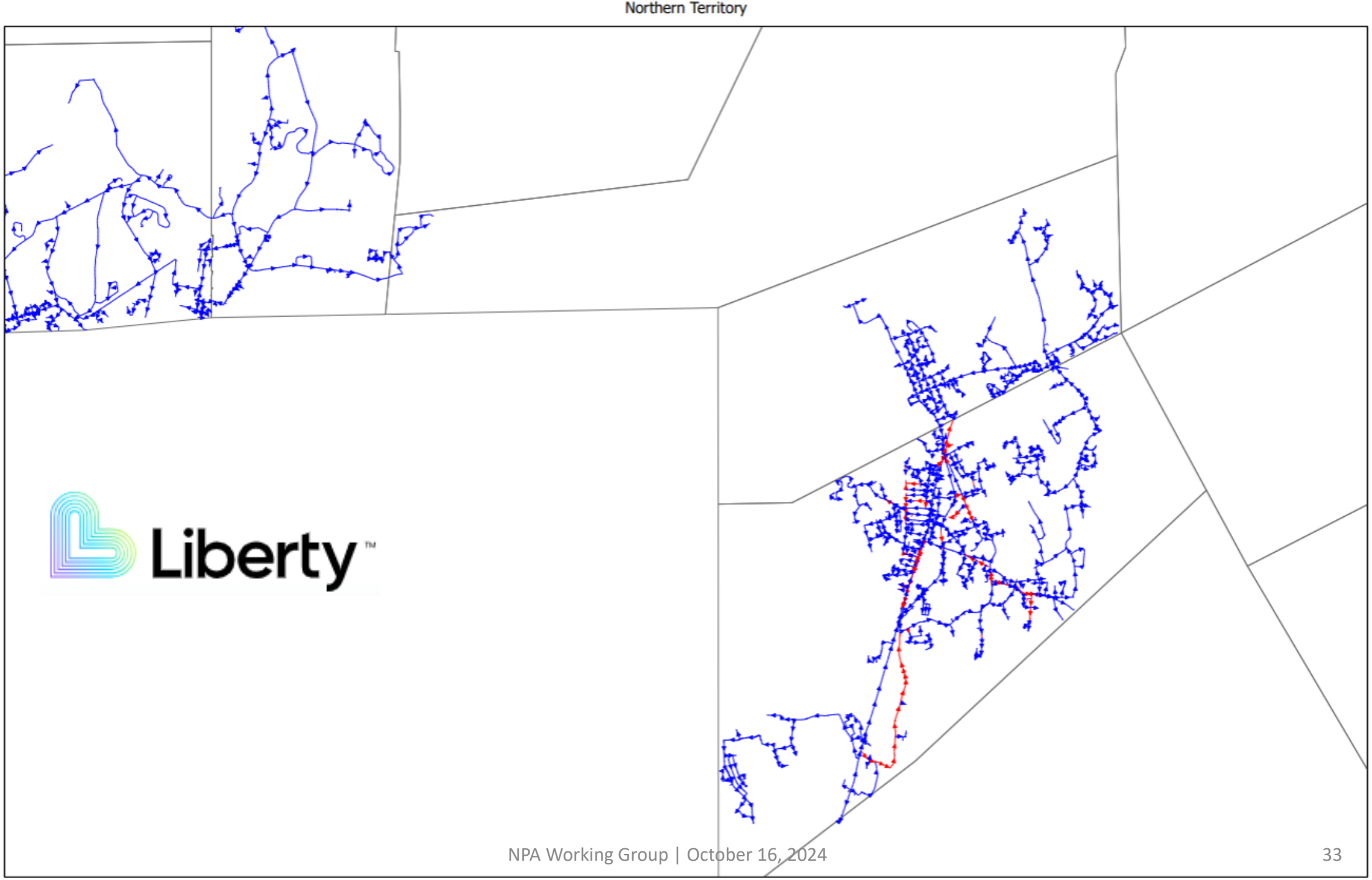
Customer Demographics

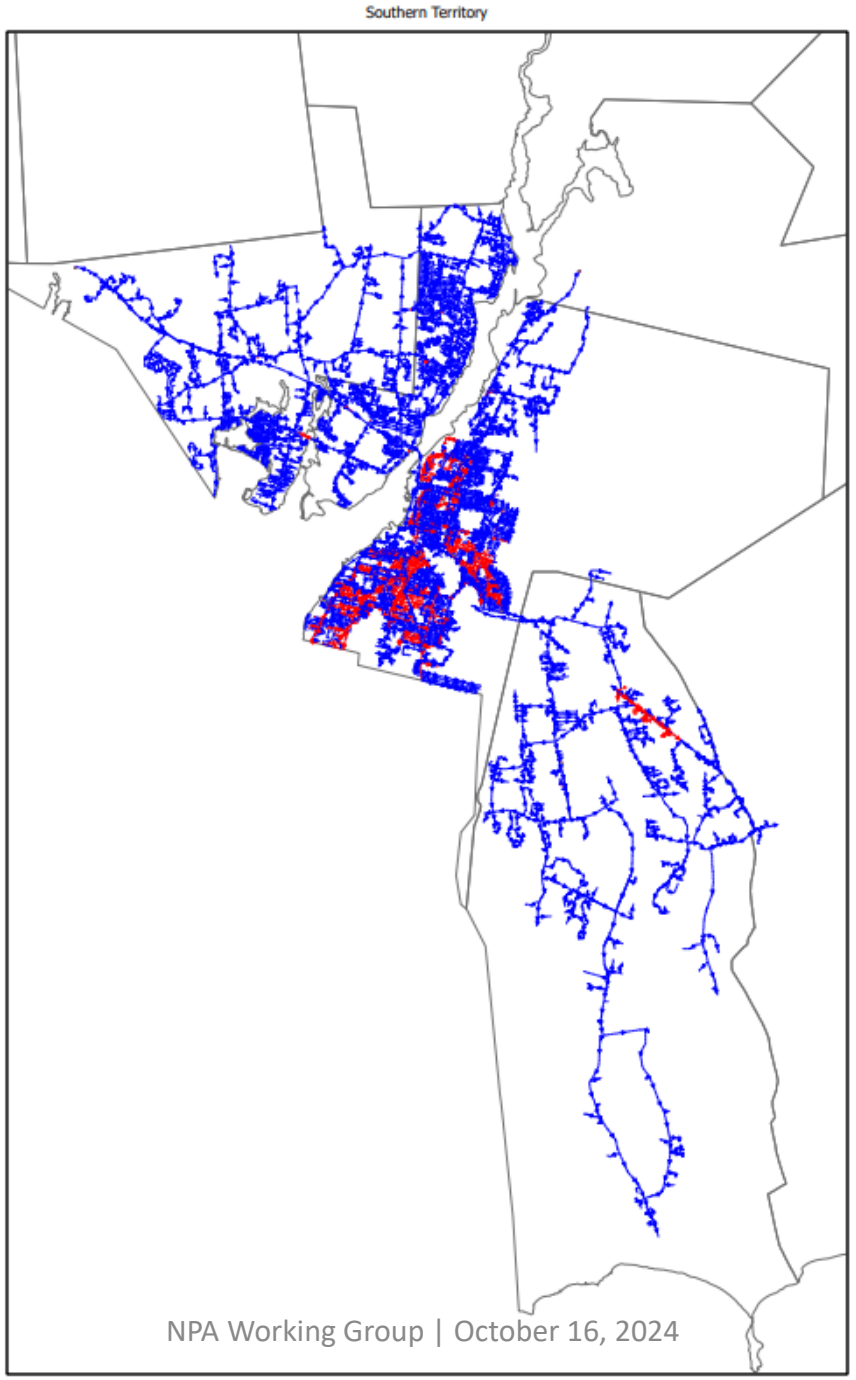
1. The Company's Fall River and North Attleboro customer base includes a large low-income population with 75.2% multifamily housing stock, 66% constructed prior to 1940
2. While 17.25% of Liberty's customers are currently enrolled on a low-income rate, that figure likely understates the economic vulnerability of its service areas
3. Approximately 35.3% of residential customers have an income less than $15,000 and 48.6% have an income less than $50,000
4. Approximately 44% of residential customer base are renters and approximately 64.2% in Fall River

Income Distribution	
Less than 14,999	35.3%
15,000 – 24,999	0.1%
25,000 – 34,999	6.4%
35,000 – 49,999	6.8%
50,000 – 74,999	34.1%
75,000 – 99,999	10.5%
100,000 – 124,999	1.0%
125,000 – 149,999	4.2%
175,000 – 199,999	1.3%
More than 250,000	0.3%
TOTAL	100.0%

Customer Base

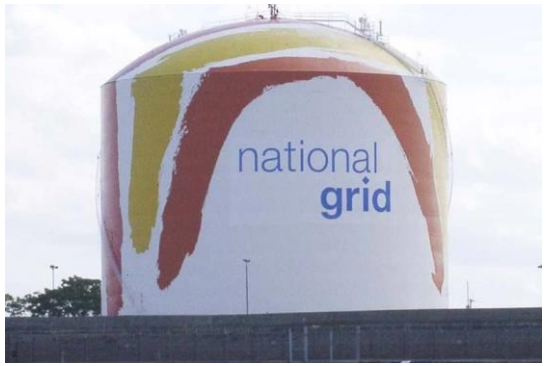



Northern Territory
Liberty™


Southern Territory

History of Boston Gas Company (D/B/A National Grid)

- 1822 – A group of men, referred to as “The City Gas Company” received permission to lay pipes for the purpose of supplying gas to customers in Boston
- 1823 – Boston Light Company Chartered
- 1846 – Charlestown Gas Light Company
- 1852 – Roxbury Gas Light Company
- 1853 – Brookline Gas Light Company, East Boston Gas light Company, Chelsea Gas Light Company, Citizens Gas Light Company (Quincy)
- 1854 – Dorchester Gas Light Company, Newton and Watertown Gas Light Company
- 1857 – Waltham Gas Light Company
- 1884 – Bay State Gas Company
- 1896 – Massachusetts Pipeline Company
- 1903 – Massachusetts Gas Companies
- 1905 – Boston Consolidated Gas Co given permission to consolidate eight gas companies operating in Greater Boston
- 1905 to 1921 – Assumed control of East Boston, Chelsea, Newton and Watertown, Waltham, and Citizen’s Gas companies
- 1929 – Joined Eastern Gas and Fuel Associates
- 1930 – Boston Consolidated Gas Co extended into the municipalities of Wayland, Concord, Lincoln, Sudbury, Bedford, Littleton, Ayer, Acton, and Groton
- 1931 – Eastern Gas and Fuel transferred Charlestown Gas and Electric to Boston Consolidated Gas Company
- 1949 – Algonquin Gas Transmission Company formed to bring Natural Gas to New England
- 1953 – Merged with Old Colony Gas Company
- 1955 – Name officially changed to Boston Gas Company
- 1961 – Expanded to Harvard, Carlisle, Shirley, and Boxborough
- 1972 – Merged with Norwood, Wachusett, and Central Massachusetts Gas Companies
- 1973 – Purchased Mystic Valley, Lynn, and North Shore Gas Companies
- 1998 – Purchased Essex Gas Company
- 1999 – Purchased Colonial Gas Company
- 2000 – Purchased by KeySpan Energy Delivery
- 2008 – Purchased by National Grid



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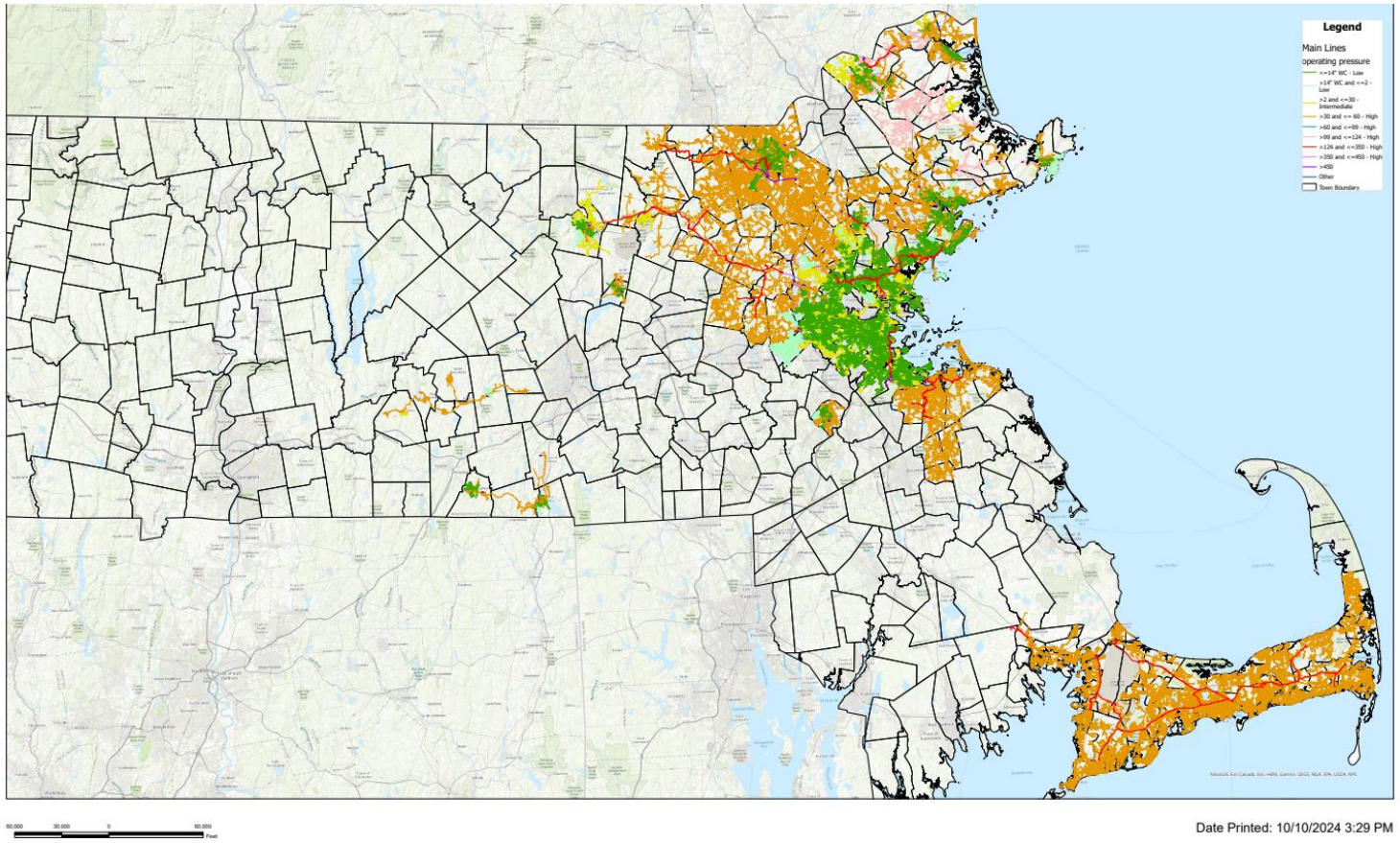
	National Grid
Gas Customers	968,800
Annual Gas Deliveries (Dkth)	133,475,490
DOT Transmission Main (>20%Specified Minimum Yield Strength (SMYS)) (miles)	10
Distribution Main (miles)	11,400
Services (count)	770,500
Gate Stations	41
Gas Regulation Facilities	520
LNG Storage	7
LNG Storage Capacity (Bcf)	5
LNG Portable Storage (count)	2
LNG Portable Storage Capacity (gallons)	60,000



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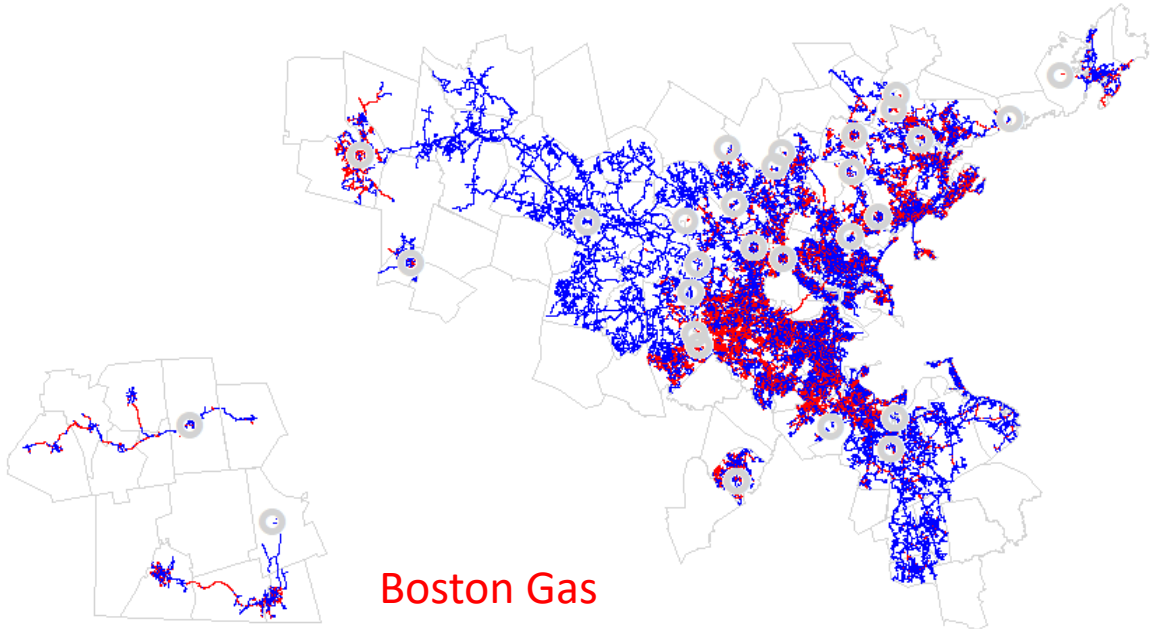
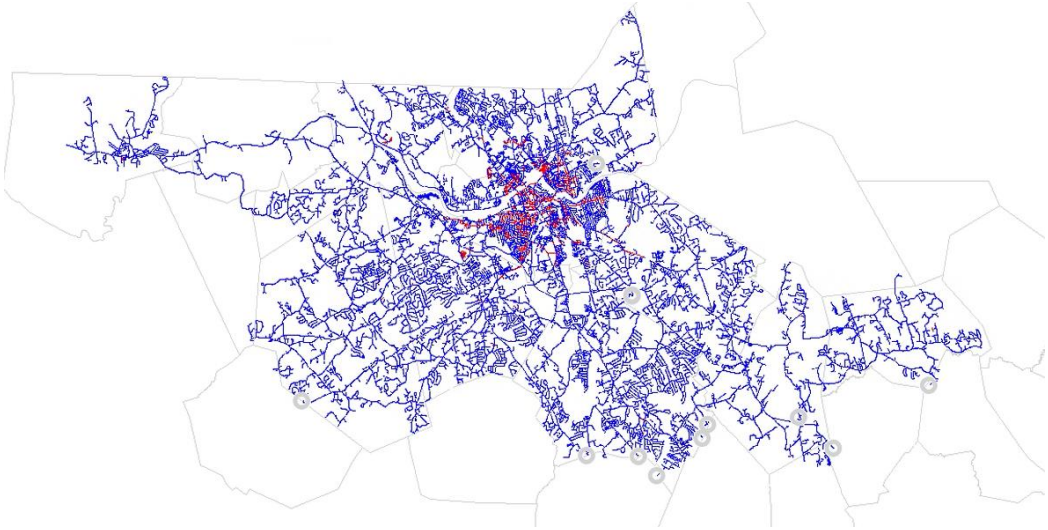
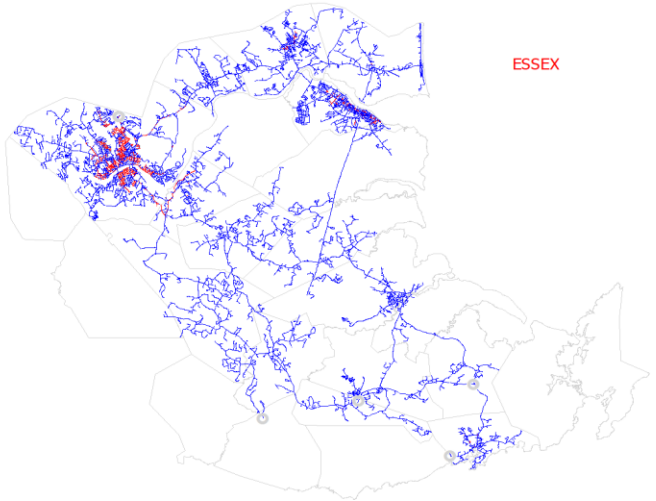
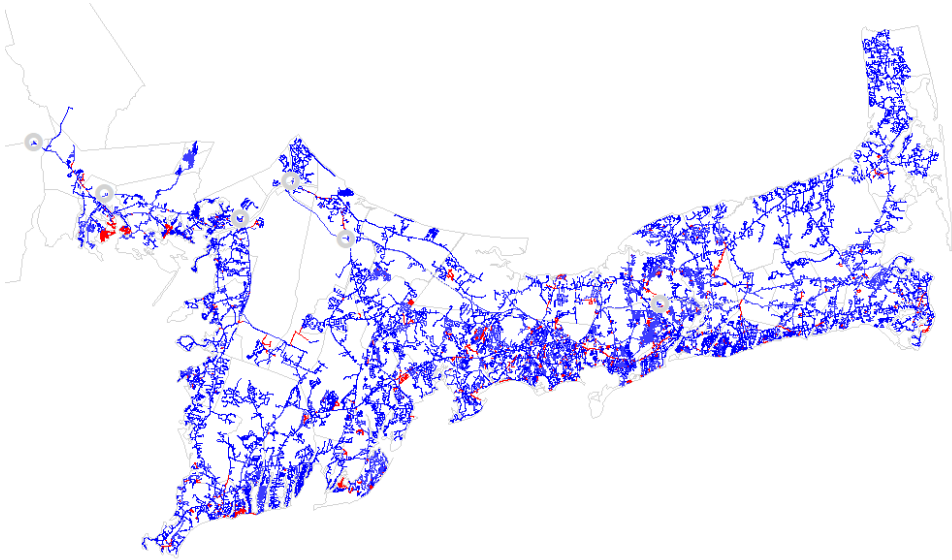


Boston Gas



Lowell





Cape Cod

Unitil Legacy Companies

1852:

Fitchburg Gas and Electric Light Company was chartered as **Fitchburg Gas Company** to manufacture and supply gas to the town of Fitchburg, MA.

1895:

Fitchburg Gas Company acquired **Wachusett Electric Company** and the name of the Company was changed to Fitchburg Gas and Electric Light Company (FGE).

1969:

FGE acquired **Massachusetts Natural Gas Company** as an operating subsidiary.

1973:

Massachusetts Natural Gas Company was merged into FGE. FGE was the surviving company.

1992:

FGE merged with **Unitil Corporation**. Unitil Corporation is the holding company and FGE remained as a wholly owned operating subsidiary.

2004:

FGE adopted the operating name of "**d/b/a Unitil**".

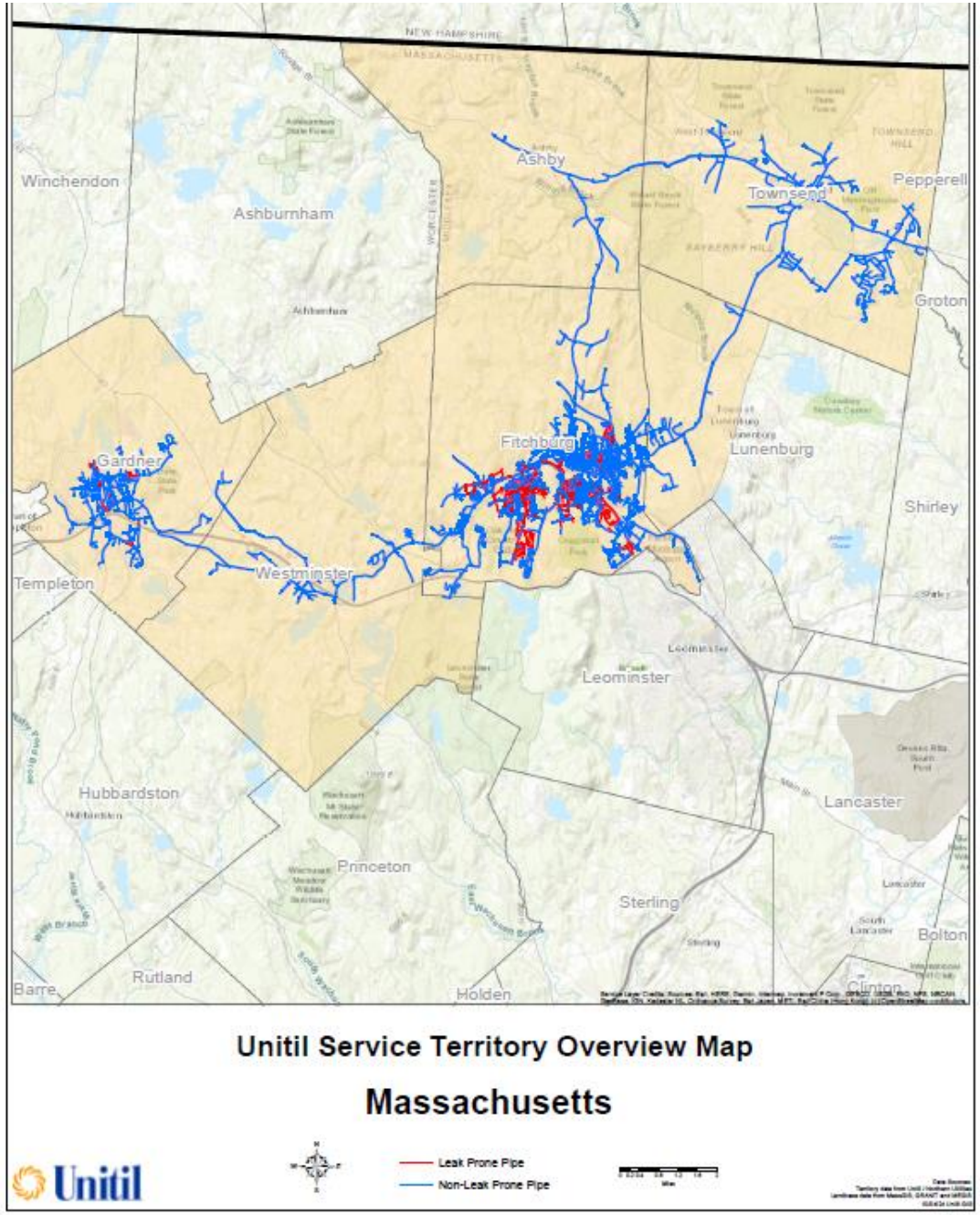
FGE 24-inch cast iron pipe installation - 1924

Unitil Snapshot

- Customers served by Unitil:
  - 16,346 gas customers (0.9% of MA)
  - 30,607 electric customers (1.0% of MA)
  - 87% of gas customers are Unitil electric customers
    - National Grid serves the other 13%

- Residential Customer Equity Concerns
  - High portion of Fitchburg (86%) and Gardner (73%) residents live in a designated environmental justice community block groups
  - 33% of gas customers on low income rate
  - 26% of electric customers on low income rate

- Local employment
  - Unitil has 29 gas employees
  - Unitil has 26 electric employees
  - and 8 who support both gas and electric



Leak Prone Pipe

Non- Leak Prone Pipe

Summary

- MA Gas Companies have provided service to customers for over 200 years
- Today's LDC systems were built through many mergers, acquisitions and sales of smaller, local gas companies, resulting in unique system designs, ages, and key characteristics for each LDC.
- LDC gas systems consist of different assets – mains, services, meters, pressure regulation stations, and LNG tanks
- LDCs are subject to extensive federal and state pipeline safety and compliance regulations. In addition, work is also governed by engineering standards. Regardless of gas system size, LDCs are responsible for compliance with these rules and for maintaining the safety and reliability of gas systems.
- Unplanned outages and incidents on gas systems are infrequent, but when they occur can impact customers for extended periods of time.
- Areas with Leak Prone Pipe requiring replacement are an opportunity to consider an NPA. Other types of asset investments will also be considered for an NPA.
- The MA DPU, in its DPU 20-80-B Order recognizes the importance of ensuring gas systems remain safe and reliable during the clean energy transition
- In some circumstances, LDCs must replace existing gas assets with new gas assets due to an emergency, no adequate NPA, or if insufficient time exists to consider an NPA while ensuring system safety and reliability
- In some areas, LDC gas systems are highly interconnected or looped with multiple main providing gas to customers. In other areas, a single gas main may feed customers. The degree to which a system is looped may impact the ease with which a segment of main may be electrified and should be considered when discussing NPA opportunities

QUESTIONS?

APPENDIX

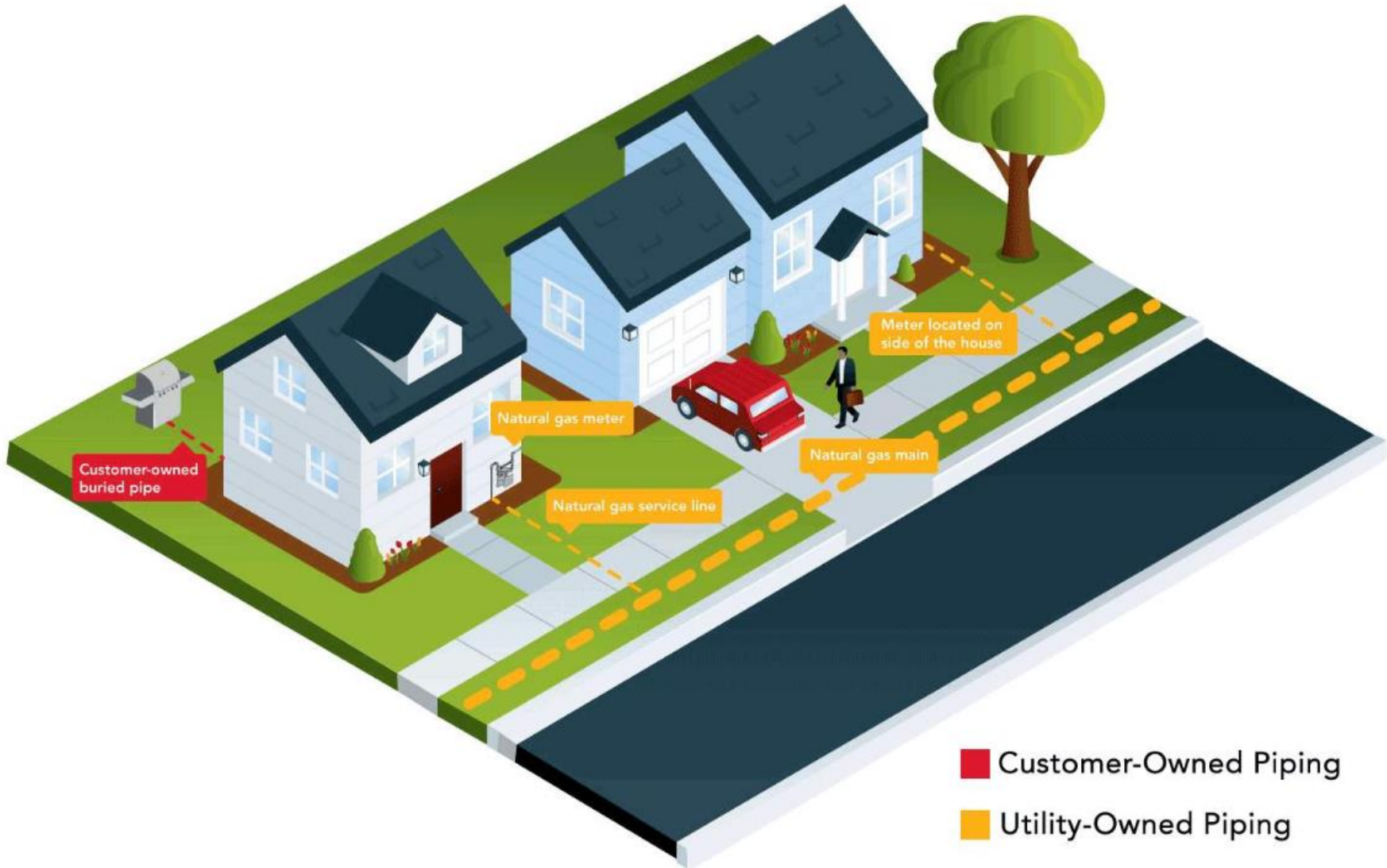
BERKSHIRE GAS
An AVANGRID Company

EVERSOURCE

Liberty

nationalgrid

Unitil



If a home or business uses natural gas, there is a natural gas service line located somewhere on the property.

Demographics: Detailed Summary of Observations

Berkshire	ES-EGMA	ES-NSTAR	Liberty	NG-Boston Gas	NG-Colonial Gas	Unitil
+ **Only LDC with decline in population** from 2010-2019 with low forecasted growth in population + **High proportion of older homes** (almost 40% built before 1940) with the lowest concentration of newer homes (only 22% built after 1980) + **Highest concentration of households with low income** (45% below $50,000) and low proportion of households with income above $150,000 (12%) + **Second highest proportion of population in EJ blocks** relative to overall service area population	+ **Second highest population** with moderate growth forecast consistent with state average + Second lowest proportion of older homes (25% built before 1940) + **Highest rate of owner-occupied homes** (65%) + **Second highest proportion of 1-unit structures** (66%) with the second lowest proportion of multi-unit buildings (17% are 2-4 unit and 17% are 5+ units) + Approximately 43% of population in the overall service area is within designated EJ block groups	+ **Second highest population growth forecast** + Roughly one-third of homes were built before 1940 + **Second highest proportion of buildings with 5+ units** (24%), and second highest proportion of homes with only 1-3 rooms (16%) + Second lowest concentration of households with low income (31% below $50,000) with the **second highest proportion of households with income over $150,000** (25%) + Approximately 46% of population in the overall service area is within designated EJ block groups	+ Low historical growth with a **projected decline in population** + **High proportion of older homes** (almost 40% built before 1940) + **Highest percentage of 2-4 unit housing structures** (29%) + Highest rate of homes with 4-7 rooms (72%) + Second highest concentration of households with low income (42% below $50,000) and **only 13% of households with median income above $150,000** + Approximately 45% of service area population is in EJ block groups	+ **Highest projected population growth** + **Highest proportion of older homes** (40% were built before 1940) + **Highest level of tenant-occupied units** (41%) + **Largest number of multi-unit buildings** (30% are 5+ unit) + Low proportion of households with low income (30% below $50,000) with **highest percentage of households with income above $150,000** (26%) + High proportion of population in EJ block groups relative to overall service area population (52%)	+ **Projected decline in population** + **Largest concentration of newer homes** (37% built in 1980 or later) and lowest proportion of homes built before 1940 + Lowest proportion of tenant-occupied + **Highest percentage of 1-unit housing structures** (78%) + Lowest proportion of households with income below $50,000 (30%); 21% of population with income above $150,000 + **Lowest proportion of population in EJ block groups** relative to overall service area population (31%)	+ Low historical growth with a **projected decline in population** + **High proportion of older homes** (almost 40% built before 1940) + High concentration of households with low income (40% below $50,000) with **only 12% of households with income above $150,000** + **Highest proportion of population in EJ block groups** relative to overall service area population (56%)

LDC Statistics: Detailed Summary of Observations

Berkshire	ES-EGMA	ES-NSTAR	Liberty	NG-Boston Gas	NG-Colonial Gas	Unitil
+ **Second lowest projected gas demand growth** (Design Year and Design Day of 0.6%) + **Highest concentration of transport volumes**, with the largest share of industrial transport volume + **Lowest concentration of on-system peaking resources** with three propane facilities (all in EJ communities) and one small LNG facility	+ Gas demand projected to grow at less than 1.0% per year + Sales customers represent over 60% of volumes + **High C&I contribution**, with the industrial segment accounting for a larger share of volume + **On-system resources represent nearly 30% of Design Day portfolio** • Propane facilities (which account for over 60% of the total propane storage capacity in the state) located in four EJ communities • Three out of four LNG facilities are located in EJ communities	+ **Second highest projected gas demand growth** (Design Year of 2.0% and Design Day of 1.6%) + Volumes evenly split between sales and transportation customers + **High C&I contribution**, with the commercial segment accounting for a larger share of volume + **High share of on-system peaking resources** with two LNG facilities (which account for 35% of the total LNG storage capacity in the state)	+ Gas demand projected to grow at approximately 1.0% per year + Highest proportion of sales volumes, with the **largest share of residential volume** + Low C&I contribution with low volume per C&I customer and third lowest revenue contribution per C&I customer + **On-system LNG facility accounts for over 25% of Design Day resources** and is located in an EJ community	+ **Highest projected demand growth** (Design Year of 2.0% and Design Day of 1.6%) + **Highest proportion of commercial transport volume** + High revenue and volume contributions per C&I customer + Combined with Colonial Gas, **high concentration of on-system peaking resources** with six out of seven LNG facilities located in EJ communities (combined National Grid represents nearly 50% of the total LNG storage capacity in the state)	+ Second highest proportion of sales volumes (76%), with the **residential sector accounting for largest share** of overall volume + **Lowest revenue and volume contribution per C&I customer** + Combined with Boston Gas, **high concentration of on-system peaking resources** with six out of seven LNG facilities located in EJ communities (combined National Grid represents nearly 50% of the total LNG storage capacity in the state)	+ **Lowest projected gas demand growth** (Design Year of 0.5% and Design Day of 0.2%) + **Second highest concentration of industrial transport volumes** and highest revenue contribution per C&I customer + **High share of on-system peaking resources** with one propane facility and one small LNG facility

LDC System: Detailed Summary of Observations

Berkshire	ES-EGMA	ES-NSTAR	Liberty	NG-Boston Gas	NG-Colonial Gas	Unitil
+ **Lowest share of T&D plant** relative to total gas plant (66%) + Lowest population density and **low LDC distribution system density** (42 services per mile of main) + **Lowest share of "Leak-Prone" pipe** with a 20-year GSEP timeline	+ **Second lowest share of T&D plant** relative to total gas plant (72%) + Population density of 2,300 people per square mile and **moderate distribution system density** of 55 services per mile of main, + 20-year GSEP timeline with a **high share of pre-1970 mains and services**	+ **Second highest share of T&D plant** relative to total gas plant (91%) + **Second highest population density** (4,700 people per square mile), with a system density of 63 services per mile of main + 25-year GSEP timeline with a **high share of "Leak-Prone" mains and high share of pre-1970 mains and services**	+ 77% of gas plant is classified as T&D + **Moderate density** (at 59 services per mile of main in NAG/FR) + 20-year GSEP timeline with a **high share of pre-1970 mains and services**	+ 81% of gas plant is classified as T&D + Highest population density and **highest number of services per mile of main** (at 80 in Boston area) + 25-year timeline for GSEP with a **high share of "Leak-Prone" pipe**, as well as a high share of pre-1970 mains and services	+ 82% of gas plant is classified as T&D + Population density of approximately 2,300 people per square mile and **moderate LDC distribution system density** of approximately 50 services per mile of main + 20-year timeline for GSEP with low share of "Leak-Prone" pipe and the **lowest proportion of pre-1970 main and services**	+ **Highest share of T&D plant** relative to total gas plant (95%) + Low population density and **lowest LDC distribution system density** (41 services per mile of main) + 20-year timeline for GSEP with a **high share of pre-1970 mains and services**