

June 4, 2019
Waltham, MA

Update on Massachusetts Natural Gas System

Provided to:

ACEC / MA Utilities & Energy Markets Conference



Stephen Leahy
Northeast Gas Association

About NGA

- Non-profit trade association
- Local gas utilities (LDCs) serving New England, New York, New Jersey, Pennsylvania
- Several interstate pipeline companies
- LNG & CNG suppliers & transporters
- Over 350 “associate member” companies, from industry suppliers and contractors to electric grid operators
- www.northeastgas.org



NGA'S ANTITRUST COMPLIANCE PROCEDURES

Adopted by the NGA Board of Directors on June 20, 2018

Objective

The Northeast Gas Association (NGA) and its member companies are committed to full compliance with all laws and regulations, and to maintaining the highest ethical standards in the way we conduct our operations and activities. Our commitment includes strict compliance with federal and state antitrust laws, which are designed to protect this country's free competitive economy.

Responsibility for Antitrust Compliance

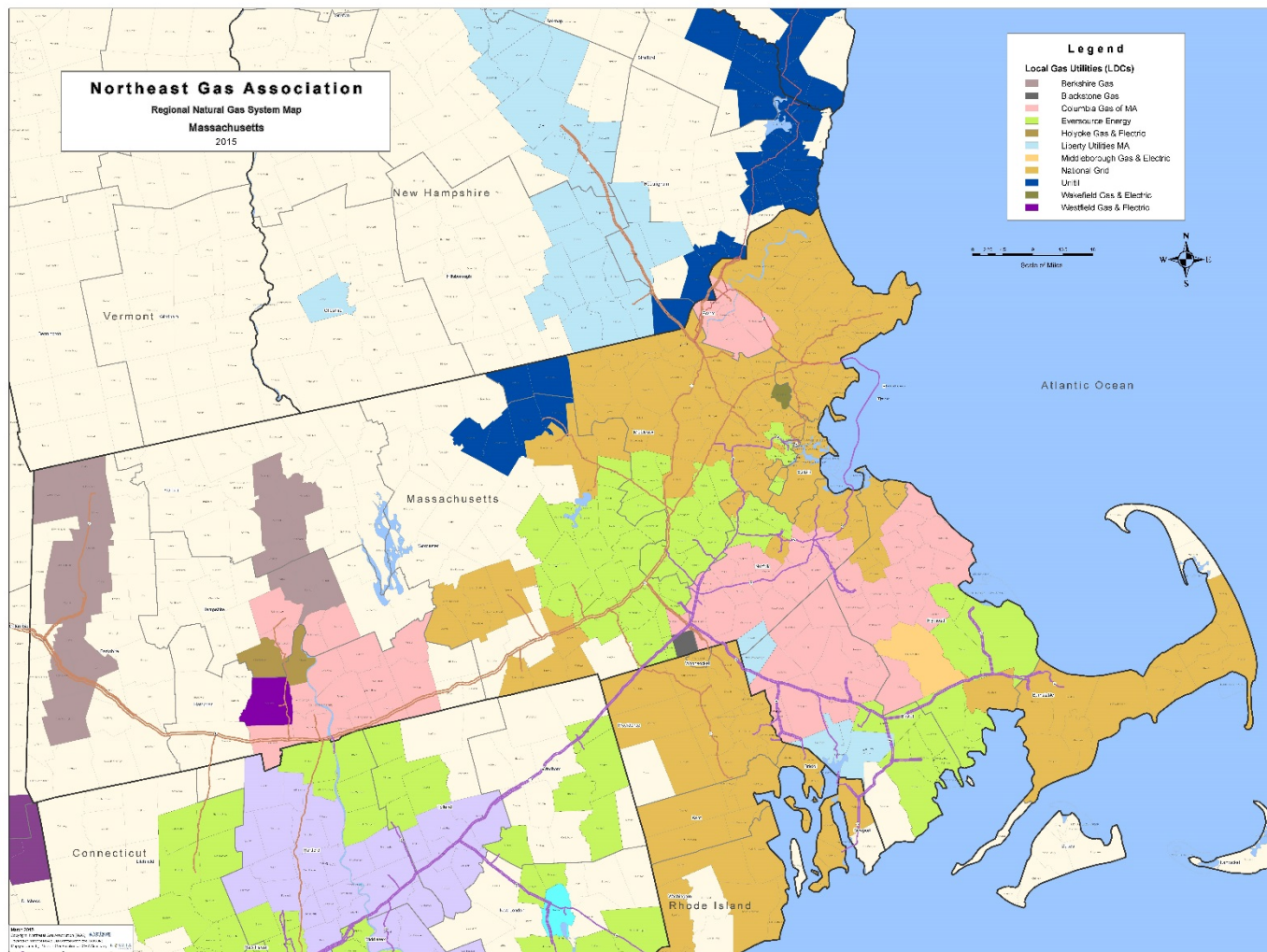
Compliance with the antitrust laws is a serious business. Antitrust violations may result in heavy fines for corporations, and in fines and even imprisonment for individuals. While NGA's attorneys provide guidance on antitrust matters, you bear the ultimate responsibility for assuring that your actions and the actions of any of those under your direction comply with the antitrust laws.

Antitrust Guidelines

In all NGA operations and activities, you must avoid any discussions or conduct that might violate the antitrust laws or even raise an appearance of impropriety. The following guidelines will help you do that:

- **Do** consult counsel about any documents that touch on sensitive antitrust subjects such as pricing, market allocations, anti-employee poaching practices, refusals to deal with any company, and the like.

Massachusetts Natural Gas System



MA

Gas = 52% of home heating

Gas = 43% of power gen

1.6 million natural gas customers

Massachusetts Natural Gas Utilities - # of Customers



40,148



1,883



323,120



302,229



7,949



56,024



5,700



930,626



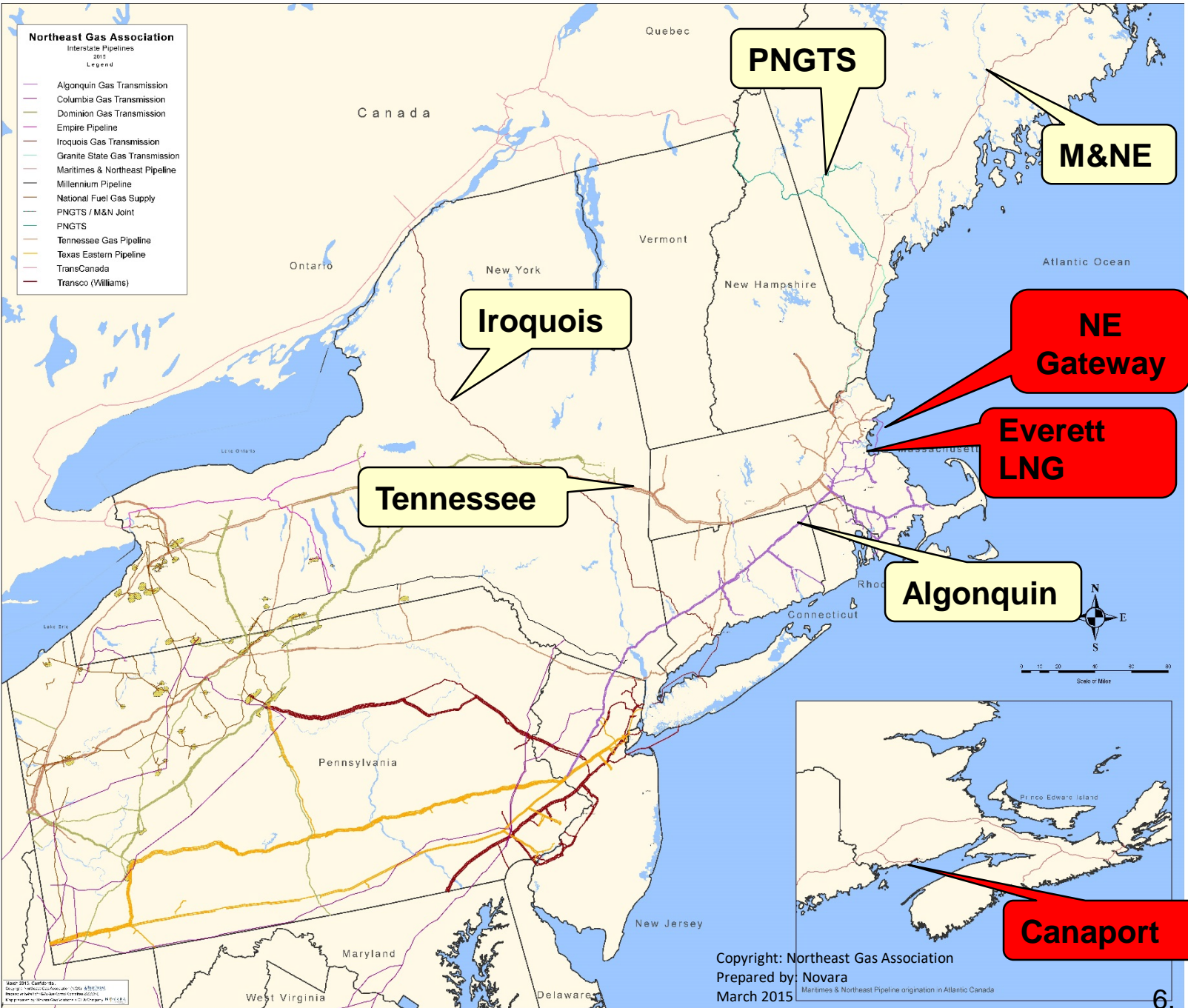
15,853



6,400



10,416



- Northeast Gas Association**
Interstate Pipelines
2015
Legend
- Algonquin Gas Transmission
 - Columbia Gas Transmission
 - Dominion Gas Transmission
 - Empire Pipeline
 - Iroquois Gas Transmission
 - Granite State Gas Transmission
 - Maritimes & Northeast Pipeline
 - Millennium Pipeline
 - National Fuel Gas Supply
 - PNGTS / M&N Joint
 - PNGTS
 - Tennessee Gas Pipeline
 - Texas Eastern Pipeline
 - TransCanada
 - Transco (Williams)

PNGTS

M&NE

Iroquois

NE Gateway

Tennessee

Everett LNG

Algonquin

Canaport

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Prepared by: Novara
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Maritimes & Northeast Pipeline origination in Atlantic Canada

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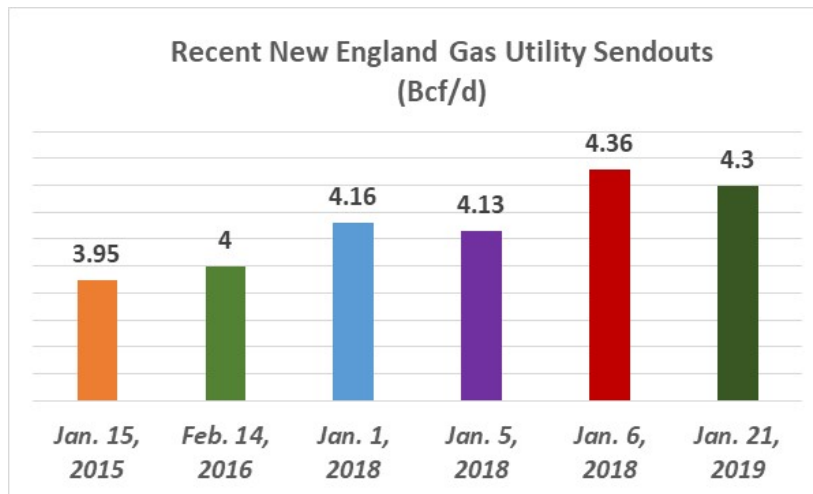
Massachusetts Has Added 120,000 Residential Natural Gas Customers Since 2009

- **Natural gas** heats the majority of households in the Commonwealth – at 52%.
- **Heating oil** = 26%.
- **Electricity** = 16%.

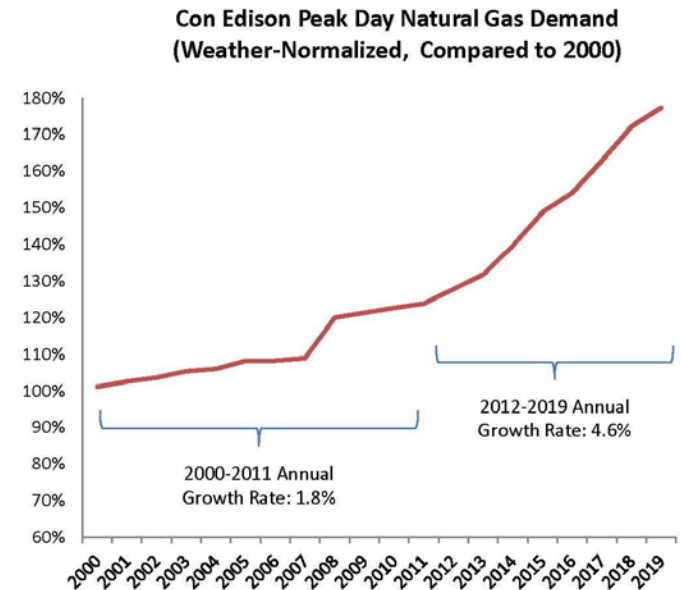
In the 9-state Northeast region, there are **over 1 million new gas residential customers** since 2010.



Increasing Peak Day Demand & Records



- Most LDCs in Northeast set multiple sendout records in first week of Jan. 2018.
- New England natural gas utilities collectively set 3 new sendout records that week – with new all-time peak set on 1-6-18, at close to 4.4 Bcf.
- 2nd highest sendout recorded Jan. 21, 2019.



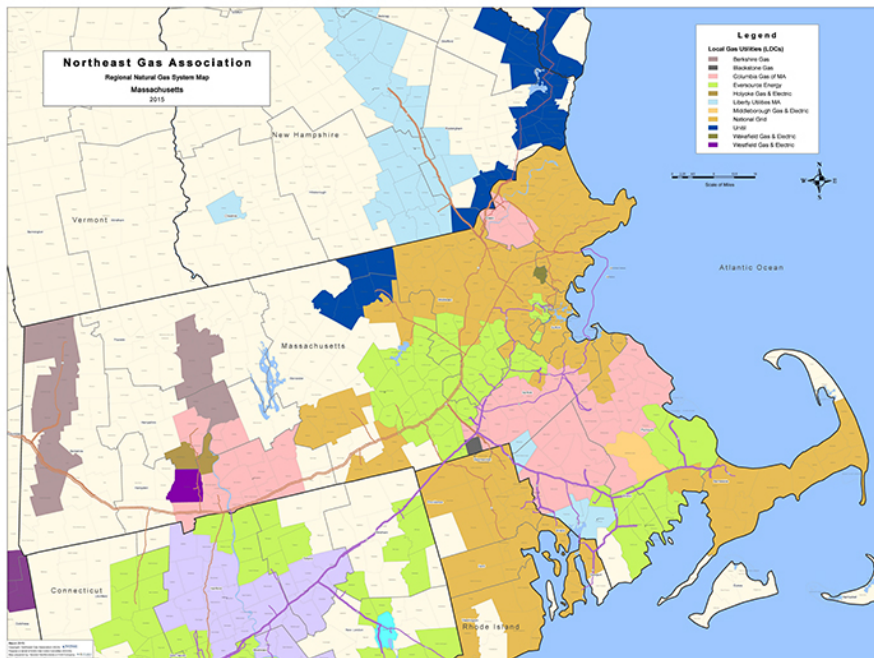
“Supply and demand increasingly out of balance
– ~50% peak growth in last 10 years
– Last new supply added in 2013
– Use of delivered services rising”

Source: Con Edison, 4-25-19, at NGA Forum

Moratoria Enacted by Several Gas Utilities in MA

There are currently 4 natural gas utilities in MA that have implemented restrictions on new gas service interconnections, due to limitations on pipeline supply availability in-state. They are: ***Berkshire Gas; Columbia Gas of MA; Holyoke Gas & Electric; Middleborough Gas & Electric.***

Communities impacted:



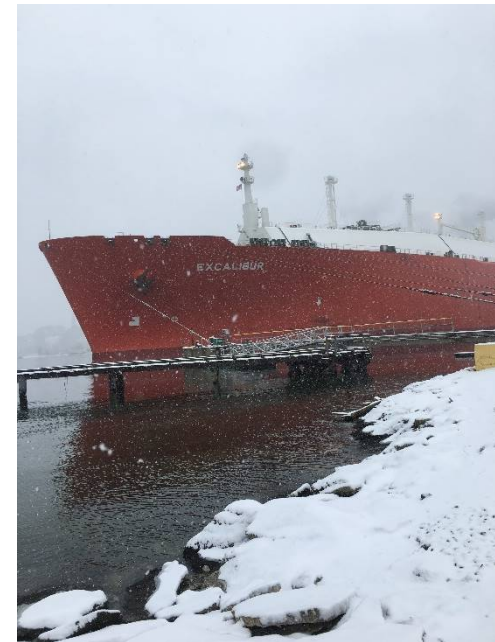
Amherst
Deerfield
Easthampton
Greenfield
Hadley
Hatfield
Holyoke
Middleborough
Montague
Northampton
Sunderland
Whately

LNG Provided Key Supply Input This Past Winter

Strong volumes this winter on key delivery days from the **Exelon Generation, Everett LNG** facility; and **Canaport LNG** in New Brunswick.

Offshore facility owned by Excelerate Energy – **Northeast Gateway** - made its first deliveries in 2 years into New England system. Achieved record sendout on Feb. 1.

Northeast Energy Center (NEC) is a proposed L LNG liquefaction, storage and truck loading facility in Charlton, MA. The facility will consist of about 25,000 dth per day of liquefaction, 200,000 dth of LNG storage, and four truck loading bays. NEC is currently being reviewed by the MA Energy Facilities Siting Board (Docket EFSB18-04).



LNG ship Excalibur at dock in Everett, MA this winter during a snowstorm.

New Gas Generation Capacity in MA



**Footprint Power
Salem Harbor
Salem, MA
674 MWs
Online June 2018**



**Exelon Generation
Medway Peaker Project
Medway, MA
200 MWs
Expected online, June 2019**



**NRG Energy
Canal 3
Sandwich, MA
333 MWs
Single-cycle peaker
Expected online, June 2019**

"The region's reliance on natural gas will only intensify... While some argue that the region is too dependent on natural-gas-fired power plants, the future hybrid power system will require reliable, flexible back-up power - exactly what efficient natural-gas-fired generators provide."

- Gordon van Welie, ISO-NE, 2017

Merrimack Valley Incident: *Review of State System*

- Post-incident, MA DPU hired consultant, Dynamic Risk Assessment Systems, to conduct safety & operational assessment of entire state gas distribution system.
- Phase 1 report released May 13, 2019.
- The report is posted on the MA DPU web site:
<https://www.mass.gov/files/documents/2019/05/15/Dynamic%20Risk%20Phase%20I%20Report.pdf>
- Phase 2 report will include field visits with all of state's gas utilities "to better understand their programs and practices."
- Phase 1 report has 11 preliminary recommendations.

Phase 1 System Report:

Some of the Preliminary Recommendations

- Take steps to improve gas company emergency response plans
- Conduct tabletop and field emergency response preparedness drills
- Establish programs and training for process safety hazard identification in the field, specifically for live gas work
 - Change the mindset of personnel in the field regarding potential impacts of work
 - Promote a continued focus on personal and public safety rather than compliance
- Review the Professional Engineer (PE) requirement and in the short term, enhance or supplement current guidance to add value and to reduce disruption in upcoming construction seasons
- Specifically consider gas pipelines and gas pipeline safety in the transition plan to achieve 80% reduction of greenhouse gases by 2050.

Merrimack Valley Incident:

NTSB Recommendations,

11-18



To the Commonwealth of Massachusetts:

Eliminate the professional engineer licensure exemption for public utility work and require a professional engineer's seal on public utility engineering drawings. (P-18-005)

To NiSource, Inc.:

Revise the engineering plan and constructability review process across all of your subsidiaries to ensure that all applicable departments review construction documents for accuracy, completeness, and correctness, and that the documents or plans be sealed by a professional engineer prior to commencing work. (P-18-006) (Urgent)

Review and ensure that all records and documentation of your natural gas systems are traceable, reliable, and complete. (P-18-007) (Urgent)

Apply management of change process to all changes to adequately identify system threats that could result in a common mode failure. (P-18-008) (Urgent)

Develop and implement control procedures during modifications to gas mains to mitigate the risks identified during management of change operations. Gas main pressures should be continually monitored during these modifications and assets should be placed at critical locations to immediately shut down the system if abnormal operations are detected. (P-18-009) (Urgent)

Merrimack Valley Incident: *Baker-Polito Admin Urges PSMS Adoption, 11-18*

- On November 21, 2018, the Baker-Polito Administration “announced that the Northeast Gas Association (NGA) has committed to adopting a Pipeline Safety Management System, the [American Petroleum Institute’s \(API\) Recommended Practice 1173](#). This marks the first time an entire state has committed to Recommend Practices 1173, which was developed in the aftermath of high-profile natural gas incidents like the San Bruno gas disaster in 2010. After the gas explosions in the Merrimack Valley on September 13th, the Department of Public Utilities (DPU) requested that all natural gas companies adopt these comprehensive standards and review their safety protocols, including an examination of the feasibility of implementing a safety management system.”
- NGA issued RFP in late November for consulting assistance re: development of PSMS.
- In March 2019, The Blacksmith Group (P-PIC) was selected.
- A new NGA Standing Committee - the NGA PSMS Committee - will manage this work, beginning in Massachusetts and expanding to other interested members throughout the NGA footprint.

Merrimack Valley Incident: *PE Regulation & Guidance*

- On December 31, 2018, Governor Baker signed into law, “An Act Ensuring the Safety and Soundness of the Commonwealth’s Natural Gas Infrastructure.” This regulation requires a **professional engineer stamp on engineering plans that could pose a material risk to public safety**. The regulation also authorized the Department of Public Utilities (“Department”) to promulgate regulations, as necessary, to implement the new regulation.
- On March 18, 2019, the Department issued an Inquiry seeking initial written comments on the issues that the professional engineer regulations should address.
- On May 2, 2019, NGA and the MA gas LDCs submitted reply comments to the DPU.

Merrimack Valley Incident:

PE: NGA Reply Comments

- NGA urges technical session with Department and stakeholders to discuss further.
- “Not all work, services and documents require a PE stamp. NGA also believes that some common and repetitive jobs can be completed safely using PE stamped standard designs/drawings.”
- “NGA believes that the availability of experienced pipeline and gas operations PEs to perform work in the natural gas industry depends on the scope of work, services and documents requiring a PE stamp.”
- “This needs to be accomplished, in our view, without significantly impacting the important replacement work of our existing infrastructure that is already underway.”

GSEP Progress in Replacing Older Pipe

- In 2014, the MA Legislature enacted legislation to accelerate the replacement of “leak-prone” pipe by the MA gas utilities. Gas Safety Enhancement Program (GSEP) sets annual targets for replacement.
- Independent consultant, in May 2019 report for DPU, described the GSEP to be “an example of legislative and regulatory success.”
- Percentage of leak-prone pipe (cast iron/bare steel) in MA distribution mains in 2018 was **19.3%**; in 2012, MA share was **26%**.

