

BEFORE THE MASSACHUSETTS DEPARTMENT OF PUBLIC UTILITIES (DPU)

COMMENTS FOR THE COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF PUBLIC UTILITIES ON THE

INTERLOCUTORY ORDER AND STRAW PROPOSAL ON

PROFESSIONAL ENGINEER REGULATIONS

DOCKET (D.P.U. 19-34).

SUBMITTED BY THE AMERICAN GAS ASSOCIATION

November 4, 2019

I. Background

The American Gas Association, founded in 1918, represents more than 200 local energy companies that deliver clean natural gas throughout the United States. There are more than 73 million residential, commercial and industrial natural gas customers in the U.S., of which 95 percent — over 69 million customers — receive their gas from AGA members. Today, natural gas meets more than one-fourth of the United States' energy needs.

II. General Comments

AGA appreciates the time and effort expended by the Massachusetts Department of Public Utilities (DPU) to develop its Straw Proposal on Professional Engineer Regulations and respectfully offers suggestions that we believe would improve its feasibility and effectiveness for natural gas distribution utilities in the Commonwealth of Massachusetts. AGA member companies are embedded in the communities that they serve and interact daily with customers and with the state regulators who oversee pipeline safety locally. The natural gas distribution industry remains committed to delivering natural gas to our families, neighbors, and business partners in a safe, reliable, and responsible manner. We strongly support efforts which enhance public safety, and AGA and our members have adopted a *Commitment to Enhancing Public Safety*¹ that identifies actions, beyond regulation, to improve safety and underscores the actions our member companies are taking every day to help ensure that America's 2.2 million miles of natural gas distribution pipeline operate safely and reliably.

AGA is providing comments on this Straw Proposal due to the fact that the topic of Professional Engineer certification requirements is being discussed nationally, were included in

¹ https://www.aga.org/globalassets/safety--standards/commitment_to_enhancing_safety_february2016.pdf

National Transportation Safety Board recommendations on the incident in Merrimack Valley, and are being considered by Congress in pipeline safety reauthorization. How Massachusetts implements its requirement may shape how other states address this issue. Therefore, AGA offers several recommendations for consideration that support the DPU's stated intent to have competent personnel review complex work utilizing a robust engineering design review process. Furthermore, AGA requests that the DPU consider expanding the authority for conducting reviews of complex projects to other personnel² who have demonstrated key competencies in certain circumstances that would not pose a material risk to public safety.

Certain projects within the proposed definition of "Complex Projects" appear outside of what the industry would consider a complex project. These projects do not pose a material risk to public safety, and could be safely, efficiently, and effectively reviewed by competent personnel other than a professional engineer. As currently proposed, the professional engineer's regulations could stop or significantly delay the construction or completion of work meant to enhance the safety and reliability of the pipeline system. AGA's proposal leverages a process approach to design review underpinned by Pipeline Safety Management System (PSMS) elements. AGA's proposal utilizes skilled personnel to effectively approve complex work without compromising safety.

Below, the AGA provides recommendations for what activities should be considered complex work and encourages the DPU use risk reduction as a key metric for identifying additional complex work. Since all gas systems are unique, AGA urges the DPU to allow operators to submit alternate proposals to the DPU for complex work, based on the risks to their respective system.

This would allow the DPU to evaluate the uniqueness and complexity of the work, the portions of

² The use of the term "personnel" in this document includes both employees of a natural gas utility company and contractors and consultants hired by a natural gas utility company.

the work that would be produced by or under the direct charge and supervision of a Professional Engineer, and the portions of the work that would utilize personnel with the knowledge and skills necessary to do the work but who may not have a Professional Engineer's license.

III. Specific Comments

1. Personnel who demonstrate key competencies needed to effectively design natural gas systems should be allowed to approve complex designs

AGA appreciates the proposal put forth by the DPU and supports efforts that enhance the safety of the natural gas distribution system and the safety of the public. However, the proposal incorrectly correlates public safety with limiting the approval of complex work to licensed engineers.

The DPU's proposal highlights the importance of possessing key competencies, noting that professional engineers must also possess "significant knowledge of a gas company's natural gas system". AGA strongly believes that possessing key competencies is critical when designing or reviewing engineering work involving natural gas systems. As AGA notes within its white paper "Skills and Experience for Effectively Designing Natural Gas Systems"³, key competencies include not only technical expertise but also "industry-specific experience and first-hand knowledge needed to understand natural gas systems and make decisions related to public safety in this field."

Therefore, AGA recommends that DPU also allow other personnel who demonstrate the necessary key competencies to review and approve certain design work when this work does not pose a material risk to public safety. This may include standard work such as connecting a single

³ https://www.aga.org/contentassets/2ebcf84d71484f89a1b30dd26f1721ef/skills-and-experience-for-effectively-designing-ng-systems_final.pdf

residential service, bypasses on a distribution system to make a minor repair, and other routine work performed on the distribution system.

2. Limiting the review of complex work to professional engineers impedes construction activities and inadvertently increases risk to the natural gas system.

By omitting as part of a design review process other key professionals who possess not just a technical understanding of natural gas systems but familiarity with an operator's specific natural gas system, the DPU may inadvertently create a backlog of projects awaiting review and approval by a professional engineer. Such a backlog has the potential to impact public safety and may compromise the reliability of a natural gas system by impeding how quickly operators can begin projects which would modernize and strengthen the existing natural gas system. This backlog could impact work such as routine maintenance work, integrity management-based mitigative actions, and the timely completion of compliance work in accordance with Federal and/or State regulations.

Given the limited number of Professional Engineers with specific experience and expertise of an individual operators' natural gas systems, the current proposal would place an undue burden on natural gas operators to determine whether higher risk repair or replacement work or lower-risk compliance activities, many of which are time sensitive, are reviewed first.

While a Professional Engineer's stamp is not required for emergency work, a stamp is required after the emergency has been resolved if the remaining work or services are on a complex project. Operators must already work expeditiously to obtain permits, schedule crews and look at system constraints to perform repairs and mitigate safety related conditions. Waiting for a professional engineer to review this design would further delay the repairs. Allowing this work to be reviewed by other competent individuals when the work does not pose a material risk to public safety would

allow natural gas system operators to promptly finalize repairs post emergencies and would not compromise safety.

Without expanding the scope of the proposal to allow for other appropriately skilled personnel to review certain work the DPU has labeled as “complex”, most gas companies would require time to allow their personnel to gain a state license or train third-party consultants on the specific nuances of their gas system. This again has the potential to create a backlog of plans to be reviewed and may delay or halt important repair, replacement, and maintenance work.

3. The proposal increases costs to rate payers without clarifying the enhancements to safety.

The DPU has not adequately demonstrated in its proposal that requiring natural gas system operators to expend additional resources to hire or train personnel to have both a Professional Engineering license and adequate knowledge of the operators’ natural gas system would enhance safety. This unnecessarily places the financial burden of complying with the proposed requirement on rate payers without providing meaningful enhancements to public safety. AGA supports additional review and oversight for complex work; however, we also believe that alternate proposals that minimize the financial burden to rate payers while enhancing public safety should also be considered. Allowing personnel who have demonstrated the key competencies necessary to review certain complex work would minimize the impact to rate payers without compromising safety.

4. Approvals should be driven by complexity of work and risk

While AGA is supportive of additional review and approvals being applied to complex work, the proposal does not clearly differentiate routine work from complex designs. Additional considerations of the impact construction projects have on public safety, risk, and the complexity of the work should be considered. For example, as proposed, a bypass on a distribution main to repair

a single service is an equivalent risk and complexity as a bypass for a transmission line. In this example, the risk to public safety and system reliability are not equivalent and are mischaracterized within the proposal. Work performed on a transmission pipeline can impact a significant number of customers, or even electric generation. Additional coordination and review of system impacts are needed when performing this work. Work of this type on a distribution main or single service, by comparison, does not.

The proposal also identifies tie-ins as complex work. As currently written, this would include all construction projects that connect one or more pipe segments or appurtenances. Without further clarification that limits the scope to higher-risk tie-ins, operators would be required to have a Professional Engineer approve all construction work. Even modifying the scope to only include “more than 2 tie-ins” would still extend to routine work performed by operators within intersections which, on average, require a minimum of 4 tie-ins. This would significantly delay construction and inadvertently increase system risk. Tie-ins on high pressure projects may warrant additional review. AGA recommends that the DPU leverage gas operator system specific knowledge to identify complex tie-in work, which would be reviewed for compliance with the law by the DPU.

Additionally, the proposal broadly classifies all changes to operating pressure as being complex and requiring the review of a licensed engineer. Operators are already required to test or qualify pipelines and components to a designated pressure, and use factors such as material properties, test pressure, and test duration to set the maximum pressure that these facilities can safely operate at. It is unclear why work performed on a gas system within the existing maximum allowable pressure is considered complex work. Gas systems may also fluctuate within a range of pressures. As written, the proposal may include all construction performed on pipeline systems where pressures may change due to customer use. The proposal, as currently drafted, does not differentiate between the risk and complexity of routine work performed on a system which operates within a safe

pressure range, and work being performed on pipelines to increase the maximum allowable pressure of a system.

As an alternative, AGA proposes that DPU consider limiting the definition of complex work initially to several key critical types of project designs such as the following:

- A. Installations that create or reconfigures district pressure regulator stations or gate/take stations.
- B. Installation of new compressor stations.
- C. Installation, uprating, or abandonment of intrastate transmission lines.
- D. Upratings on distribution mains.

Following successful implementation of the criteria noted above, the DPU can coordinate stakeholder workshops to determine if additional project design considerations are warranted.

5. The DPU should consider allowing operators to submit risk-based proposals which addresses the design review process for complex work.

Each natural gas system is unique and natural gas operators are best equipped to define projects on their systems that are complex. In addition to the core complex project criteria offered above by AGA, the DPU should consider allowing operators to submit alternate proposals, which, based on the operators' system-specific risks, identify work activities and functions which meet the intent of complex work and could be done by an individual with the necessary knowledge and experience but does not have a Professional Engineers license. This would include a summary of the risk-based analysis used to identify these work activities, a summary of an operators change management process to manage design review and changes. The DPU should also allow operators to submit any changes to their scope of complex work based on additional system knowledge, changes to the environment, or other information which would require an operator to require additional reviews of design work.

By implementing this proposal, the DPU mirrors the continuous improvement cycle outlined by the American Petroleum Institutes' PSMS model. PSMS is a holistic process that enhances pipeline safety and promotes safety awareness, vigilance, and cooperation company-wide. Within its plan-do-act-cycle, the PSMS framework integrates current data, gaps, and findings to manage risks. Rather than setting static requirements for complex work and applying a one-size-fits-all approach, PSMS allows operators to use system-specific information to determine what constitutes complex work.

Enhancements to an operator's design review process is one of many ways in which operators address gaps and manage risks. Adopting a robust company specific design review process incorporating use of competent individual(s) meets the intent of our parallel goals of achieving zero incidents, maximizing public safety value, system reliability and underpinned by our industry-wide commitment to adopting PSMS.

PSMS also recognizes management of change (MOC) as a core safety element. MOC addresses *all changes*, permanent and temporary, of a technical, physical, procedural and organizational manner. Integrating a change management process as part of design review can provide the necessary checks and balances needed for routine work as well as other non- complex designs. These ensure relevant changes are communicated to the appropriate teams and allows other personnel with key competencies as identified in a company specific design review process to approve any changes.

IV. Conclusion

AGA appreciates the opportunity to comment on the DPU's proposal and supports measures which continue to improve public safety by using competent personnel to oversee design projects, using risk-based measures to define complex work, and implementing PSMS, a program which encourages

continuous improvement. AGA's proposal above leverages skilled personnel to effectively approve complex work without delaying construction activities, without significantly increasing costs to customers, and most importantly, without compromising safety. AGA also recommends further refining the DPU's list of proposed complex project criteria to those types of work that truly represent a higher risk to public safety. In addition, that complex work should be prioritized for additional approvals based on the risk to public safety and the specific pipeline system or complexity of the work being performed. Since all gas systems are unique, the AGA urges the DPU to allow operators to submit alternate proposals to the DPU for complex work, based on the risks to their respective system. Mirroring a culture of safety and continuous improvements to further reduce system risks meets the intent of the proposal set forth by the DPU.

Respectfully submitted,

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