

The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC UTILITIES

D.P.U. 21-04

February 18, 2021

Investigation of the Department of Public Utilities, on its own motion, instituting a rulemaking pursuant to G.L. c. 164, § 148; G.L. c. 30A, § 2; and 220 CMR 2.00, to establish requirements for Use of Professional Engineers for Gas Utility Work, 220 CMR 105.00.

ORDER INSTITUTING RULEMAKING

I. INTRODUCTION

On December 31, 2018, Governor Baker signed as an emergency law Chapter 339 of the Acts of 2018, An Act Further Providing for the Safety of the Commonwealth's Natural Gas Infrastructure ("Act"). Section 2 of the Act amended G.L. c. 164 by adding Section 148, which provides:

Any engineering plans or specifications for engineering work or services that could pose a material risk to public safety, as determined by the [Department of Public Utilities ("Department")] pursuant to clause (l) of section 81R of chapter 112, developed by or on behalf of a gas company shall bear the stamp of a professional engineer certified under section 81E of said chapter 112; provided, however, that any such plan or specification shall be housed within the applicable gas company, subject to review and audit by the [D]epartment, and shall be deemed to be filed with a public authority within the meaning of section 81M of said chapter 112. The [D]epartment may promulgate regulations as necessary to implement this section and applicable provisions of subsection (l) of section 81R of said chapter 112.¹

On March 18, 2019, in anticipation of promulgating regulations, the Department commenced a proceeding, D.P.U. 19-34, to explore issues related to the use of professional

¹ G.L. c. 112, §§ 81D through 81T pertain to the registration of professional engineers, and § 81R of that chapter provides:

Nothing in said sections shall be construed to prevent or to affect:—

(l) the performance of engineering work and services by a person, firm or corporation subject to the jurisdiction of the department of public utilities or the department of telecommunications and cable which work and services are performed as part of their employment and for the benefit of such person, firm, or corporation; provided, however, that this subsection shall not apply to engineering work or services that could pose a material risk to public safety, as determined by the department of public utilities, performed by or on behalf of a gas company, as defined in section 1 of chapter 164, that distributes and sells gas within the commonwealth.

engineers in relation to natural gas engineering plans, work, or services that could pose a material risk to public safety. In the Order opening that inquiry, the Department solicited comments from interested stakeholders on the issues that the professional engineer regulations should address. D.P.U. 19-34, Vote and Order to Open Inquiry (March 18, 2019). The Department accepted initial written comments through April 18, 2019,² and reply comments through May 2, 2019.³ On October 11, 2019, based on the comments received, the Department issued a Straw Proposal delineating possible regulations for the use of professional engineers in relation to natural gas engineering plans, work, or services, and requested further comment.⁴

² The following entities filed initial comments: the Office of the Attorney General of Massachusetts; Massachusetts Board of Registration of Professional Engineers and Land Surveyors; Bay State Gas Company d/b/a Columbia Gas of Massachusetts; NSTAR Gas Company d/b/a Eversource Energy; Boston Gas Company and Colonial Gas Company each d/b/a National Grid; Liberty Utilities (New England Natural Gas Company) Corp. d/b/a Liberty Utilities; Fitchburg Gas & Electric Light Company d/b/a Unitil; The Berkshire Gas Company; New England Gas Workers Alliance; Massachusetts Society of Professional Engineers, Inc.; American Council of Engineering Companies of Massachusetts; and National Association of Pipeline Safety Representatives.

³ The following entities filed reply comments: Bay State Gas Company d/b/a Columbia Gas of Massachusetts; NSTAR Gas Company d/b/a Eversource Energy; Boston Gas Company and Colonial Gas Company each d/b/a National Grid; Liberty Utilities (New England Natural Gas Company) Corp. d/b/a Liberty Utilities; Fitchburg Gas & Electric Light Company d/b/a Unitil; and Northeast Gas Association.

⁴ The following entities filed comments on the Straw Proposal: the local distribution companies filing jointly (Bay State Gas Company d/b/a Columbia Gas of Massachusetts; NSTAR Gas Company d/b/a Eversource Energy; Boston Gas Company and Colonial Gas Company each d/b/a National Grid; Liberty Utilities (New England Natural Gas Company) Corp. d/b/a Liberty Utilities; and Fitchburg Gas & Electric Light Company d/b/a Unitil); Fitchburg Gas & Electric Light

The Department takes this opportunity to thank the participants in the D.P.U. 19-34 docket for their participation and thoughtful comments. We now close that docket as we open this rulemaking.

Based on the comments received in response to the Straw Proposal, the Department institutes this rulemaking pursuant to G.L. c. 30A, § 2 and 220 CMR 2.00, establishing 220 CMR 105.00, Use of Professional Engineers for Gas Utility Work, for the purpose of adopting uniform requirements regarding the use of professional engineers by local gas distribution companies.⁵ Further, the Department is proposing detailed Guidelines for Use of Professional Engineers for Gas Utility Work (“Guidelines”) to specify when and how a gas company is required to use a professional engineer.⁶ Specifying these details in the Guidelines, rather than in the regulations, will enable the Department (with stakeholder input) to make amendments consistent with the regulations and ensure that the professional engineer requirements adequately address the safety concerns and industry realities without the need for a new rulemaking. The Department used this same approach in D.P.U. 19-44 regarding the promulgation of 220 CMR 115.00, Uniform Reporting of Lost and Unaccounted-for Gas,

Company d/b/a Unitil, filing separately; Northeast Gas Association; the Office of the Attorney General of Massachusetts; American Gas Association; Division of Professional Licensure, Board of Registration of Professional Engineers and Land Surveyors; American Council of Engineering Companies; and American Public Gas Association.

⁵ Attached hereto as Appendix A is a copy of the Proposed Regulations.

⁶ Attached hereto as Appendix B is a copy of the Guidelines for Use of Professional Engineers for Gas Utility Work.

providing guidelines to specify the methods by which the gas companies would report their lost and unaccounted-for gas.

II. PROPOSED REGULATIONS AND GUIDELINES

Pursuant to the proposed regulations, each gas company shall require the review and stamp of a professional engineer with “sufficient knowledge” on any engineering plans or specifications that could pose a material risk to public safety, as determined by the Department pursuant to G.L. c. 112, § 81R clause (l). Proposed Regulations, 220 CMR 105.04(1). The Proposed Regulations, 220 CMR 105.02, define “sufficient knowledge” as “An understanding of natural gas facilities in general and of the pipeline design, construction, operations, maintenance, standards, and procedures of a particular Gas Company.” In addition, the regulations provide that the professional engineer’s review and use of their professional engineer’s stamp must comply with the professional and ethical obligations set forth in 250 CMR 5.00, which governs the professional practice of all professional engineers practicing in the Commonwealth. Proposed Regulations, 220 CMR 105.04(2). The regulations further provide that each gas company shall maintain the plans and specifications that bear a professional engineer’s stamp and shall keep these documents readily accessible upon request by the Department and in accordance with the document retention timelines set forth in 49 C.F.R. Part 192, the federal regulation regarding pipeline safety. Proposed Regulations, 220 CMR 105.04(3). Finally, the regulations require each gas company to incorporate procedures for all requirements of 220 CMR 105.00 into its written procedures

under 49 C.F.R. Part 192 as applicable, to ensure compliance with G.L. c. 164, §§ 105A, 148 and 220 CMR 105.00. Proposed Regulations, 220 CMR 105.05.

The Guidelines delineate the specific types of engineering work or services that the Department finds could pose a material risk to public safety and, thus, require a professional engineer stamp. In particular, the Guidelines provide a detailed definition of “complex projects” and specify that any gas pipeline engineering plans or specifications for complex projects must be produced by or under the direct charge and supervision of a professional engineer with sufficient knowledge, as defined in 220 CMR 105.00. Guidelines §§ I.B, II.A. Further, the Guidelines provide that a professional engineer must ensure, in coordination with gas company personnel, that the plans or specifications conform to all applicable pipeline safety laws, regulations, and standards and procedures of the gas company, and that they present a proper sequencing of steps to be performed. Guidelines § II.A. The Guidelines also provide the following: (1) that a professional engineer’s stamp may not be used on standardized or generic plans or specifications; (2) that all plans and specifications with a professional engineer’s stamp must be part of a site-specific project package and applicable to the specific project requirements; (3) that prior to commencing work on a complex project, the gas company must ensure that all plans or specifications bearing the professional engineer’s stamp are accurate, complete, follow proper sequencing of steps to be performed, and accord with all applicable standards and procedures; and (4) that a professional engineer’s stamp is not required during an emergency, as defined in 220 CMR 105.00, but is

required after the emergency has been brought to conclusion and gas service restored.

Guidelines § II.B, C, D.

III. SOLICITATION OF COMMENTS

The Department seeks initial written comments on the Proposed Regulations no later than 5:00 p.m. on **Thursday, April 1, 2021**. The Department seeks reply written comments on the Proposed Regulations no later than 5:00 p.m. on **Thursday, April 15, 2021**. Written comments shall be limited in length to a maximum of ten one-sided, double-spaced, typewritten pages.

At this time, because of the COVID-19 state of emergency issued by Governor Baker on March 10, 2020 and ongoing limitations, all filings will be submitted only in electronic format in recognition of the difficulty that parties and the Department may have filing and receiving original copies. Parties must retain the original paper version, and the Department will later determine when the paper version must be filed with the Department Secretary.

All documents must be submitted to the Department in **.pdf format** by e-mail attachment to dpu.efiling@mass.gov and Laurie.E.Weisman@mass.gov. The text of the e-mail must specify: (1) the docket number of the proceeding (D.P.U. 21-04); (2) the name of the person or company submitting the filing; and (3) a brief descriptive title of the document. The electronic filing should also include the name, title, and telephone number of a person to contact in the event of questions about the filing. The electronic file name should identify the document but should not exceed 50 characters in length. Importantly, all large files submitted must be broken down into electronic files that do not exceed 20 MB. All

documents submitted in electronic format will be posted on the Department's website through our online File Room as soon as practicable (enter "21-04") at:

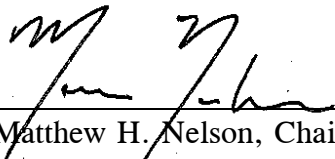
<https://eeaonline.eea.state.ma.us/DPU/Fileroom/dockets/bynumber>.

Documents filed in this proceeding will not be available for public viewing at the Department because of the COVID-19 pandemic. All documents, pleadings, or filings submitted to or issued by the Department will be available on the Department's website as referenced above as soon as practicable. To the extent a person or entity wishes to submit comments in accordance with this Notice, electronic submission, as detailed above, is sufficient. To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), contact the Department's ADA coordinator at DPUADACoordinator@mass.gov.


Because of the COVID-19 state of emergency and certain ongoing restrictions and safety measures relating to in-person events, the Department will conduct a virtual public hearing to receive comments on the rulemaking. The Department will conduct the hearing using Zoom videoconferencing on **April 8, 2021**, beginning at 10:00 a.m. Attendees can join by entering the link, <https://zoom.us/j/93992307643>, from a computer, smartphone, or tablet. For audio-only access to the hearings, attendees can dial in at **1 (312) 626-6799** (not toll free) and then enter ID# 939 9230 7643. If you anticipate providing comments during the public hearing, please send an email by **Thursday, April 1, 2021**, to Laurie.E.Weisman@mass.gov with your name, email address, and mailing address, or leave a voicemail message by **Thursday, April 1, 2021**, at (617) 305-3721 with your name,

telephone number, and mailing address. Interested persons may present facts, opinions, or arguments relating to the Proposed Regulations at the public hearing.

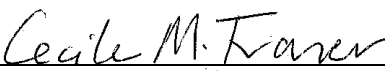
By Order of the Department,



Matthew H. Nelson, Chair



Robert E. Hayden, Commissioner



Cecile M. Fraser, Commissioner

220 CMR: DEPARTMENT OF PUBLIC UTILITIES

220 CMR 105.00: USE OF PROFESSIONAL ENGINEERS FOR GAS UTILITY WORK

Section

105.01: Purpose and Scope

105.02: Definitions

105.03: Applications for Exceptions from Provisions of 220 CMR 105.00

105.04: Use of Professional Engineers

105.05: Gas Company Procedures Manual

105.01: Purpose and Scope

- (1) Purpose. 220 CMR 105.00 establishes regulations to promote the safety of natural gas engineering work or services through the use of Professional Engineers with sufficient knowledge of natural gas facilities, to provide direction to gas companies for certain engineering work or services. 220 CMR 105.00 does not waive or otherwise modify any provisions of M.G.L. c. 112, §§ 81D through 81T or 250 CMR, which establish requirements for Professional Engineers. Further, 220 CMR 105.00 may be supplemented by guidelines from the Department of Public Utilities, Commonwealth of Massachusetts.
- (2) Scope. 220 CMR 105.00 applies to every Gas Company as defined in 220 CMR 105.02.

105.02: Definitions

For the purposes of 220 CMR 105.00, the following definitions apply:

Department. Department of Public Utilities, Commonwealth of Massachusetts.

Division. Pipeline Safety Division of the Department.

Emergency. A sudden or unexpected occurrence involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services, but not including a loss of business or profits.

Gas Company. As defined in M.G.L. c. 164, § 1, a corporation organized for the purpose of making and selling or distributing and selling, gas within the commonwealth, even though subsequently authorized to make or sell electricity; provided, however, that gas company shall not mean an alternative energy producer.

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Professional Engineer. A person who is registered as a professional engineer in the Commonwealth of Massachusetts and certified under M.G.L. c. 112, § 81E; provided, however, that the Professional Engineer has Sufficient Knowledge.

Sufficient Knowledge. An understanding of natural gas facilities in general and of the pipeline design, construction, operations, maintenance, standards, and procedures of a particular Gas Company that would permit effective review of that Gas Company's engineering plans or specifications.

105.03: Applications for Exceptions from Provisions of 220 CMR 105.00

Any Gas Company may make a written request to the Department for an exception to the provisions of 220 CMR 105.00, in whole or in part. The request shall justify why the exception should be granted and shall demonstrate why the exception sought does not detract from the safety objectives of 220 CMR 105.00. The request shall include details on the need for the exception, specific information on the circumstances surrounding the requested exception, the provisions of 220 CMR 105.00 from which the exception is sought, the time period for which the exception is sought, and a description of any safety consequences that might result from the exception. Documentation in support of the request shall also be submitted.

The Department may deny the exception or grant the exception as requested, or as modified by the Department and subject to conditions. Any exception shall be issued in writing and may be made by the Director of the Division. Any person aggrieved by a decision of the Director regarding a request for an exception may appeal the Director's decision to the Department. Any appeal shall be in writing and shall be made not later than ten business days following issuance of the written decision of the Director.

105.04: Use of Professional Engineers

- (1) Pursuant to M.G.L. c. 164, § 148, each Gas Company shall require the review and stamp of a Professional Engineer with Sufficient Knowledge on any engineering plans or specifications for engineering work or services that could pose a material risk to public safety, as determined by the Department pursuant to G.L. c. 112, § 81R clause (1).
- (2) The Professional Engineer's review and use of their Professional Engineer's stamp must comply with the professional and ethical obligations set forth in 250 CMR 5.00.
- (3) Each Gas Company shall maintain at its office within the Commonwealth of Massachusetts the plans and specifications that bear a Professional Engineer's stamp pursuant to 220 CMR 105.00. These plans and specifications shall be

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readily accessible upon request by the Department and shall be maintained for the useful life of the pipe, as that term is used in 49 CFR Part 192.

105.05: Gas Company Procedures Manual

Each Gas Company shall incorporate procedures for all requirements of 220 CMR 105.00 into its written procedures under 49 CFR Part 192 as applicable, to ensure compliance with M.G.L. c. 164, §§ 105A, 148 and 220 CMR 105.00.

REGULATORY AUTHORITY

220 CMR 105.00: M.G.L. c. 164, §§ 66, 76, 76C, 105A and 148.

GUIDELINES FOR USE OF PROFESSIONAL ENGINEERS FOR GAS UTILITY WORK

D.P.U. 21-04, Appendix B (proposed February 18, 2021)

I. GENERAL

A. Purpose and Scope

The purpose of these Guidelines is to ensure that every gas company, as defined in 220 CMR 105.00, requires the stamp of an appropriate Professional Engineer on any engineering plans or specifications for engineering work or services that could pose a material risk to public safety, pursuant to G.L. c. 164, § 148 and 220 CMR 105.00. More specifically, these Guidelines delineate the types of engineering work or services that could pose a material risk to public safety and, thus, require a Professional Engineer stamp. In the event of a conflict between these Guidelines and any Orders or regulations of the Department of Public Utilities (“Department”), said Orders and regulations shall govern.

These Guidelines apply to every gas company as defined in M.G.L. c. 164, § 1: a corporation organized for the purpose of making and selling or distributing and selling, gas within the commonwealth, even though subsequently authorized to make or sell electricity; provided, however, that gas company shall not mean an alternative energy producer.

B. Definitions

In addition to the definitions set forth in 220 CMR 105.00, the following definitions apply to these Guidelines:

“Abandonment.” The process of disconnecting a pipeline from all sources and supplies of gas, purging the pipeline of gas, and sealing the ends.

“Bypass.” An auxiliary piping arrangement, generally used to carry gas around specific equipment or an integral section of a piping system.

“Complex Project.” Any engineering work or services that could pose a material risk to public safety and requires a job-specific design plan, such as the following:

1. Installation that creates or reconfigures district pressure regulator stations or gate/take stations.

2. System analysis and subsequent adjustment of system operating pressures at district regulator stations or gate/take stations.
3. Installation of new, intrastate compressor stations.
4. Installation, uprating, or abandonment of intrastate transmission lines.
5. Installation, replacement, or abandonment of distribution mains or services that:
 - a. Involves a single tie-in 12" or greater;
 - b. Involves two or more tie-ins of any size;
 - c. Requires more than one bypass;
 - d. Involves distribution pipelines operating at a pressure greater than 200 psig.
 - e. Crosses any road of two or more lanes;
 - f. Crosses any bridge, railway, or waterway; or
 - g. Uses trenchless technology for pipe 4" or greater.
6. Uprating of distribution mains and services.
7. Installation or abandonment of service lines that require an interruption of flow in the distribution main.
8. Installation or abandonment of mains or service lines connecting to a high-pressure distribution main with an MAOP of 200 psig or greater, including farm taps.
9. Nonstandard installation of service lines 12" or greater in nominal diameter.
10. Installation or reconfiguration of liquefied natural gas ("LNG") peak shaving facilities or portable LNG facilities connected to a distribution system.
11. Nonstandard installation of large volume meter sets if the inlet line to the meter is 4" or greater in nominal diameter, with consideration given to site-specific complexity.

12. Installation, reconfiguration, or annual review of relief valve capacity calculations per 49 C.F.R § 192.739 for district regulator and relief valve stations.
13. System design and procedures for installation of cathodic protection.
14. System design to supply large-volume users, such as co-generation facilities, factories, power plants, or institutional facilities.
15. Installation or reconfiguration of liquefied propane gas facilities connected to a distribution system.

“Farm tap.” A regulated service line directly connected to a production, gathering, or transmission pipeline that is not operated as part of a distribution system.

“Installation.” The design or construction of new facilities or changes to existing facilities.

“MAOP.” Maximum allowable operating pressure.

“Nonstandard.” That which is not identified as standard in a gas company’s drawings or procedures.

“Peak shaving facilities.” An LNG facility used for storing surplus natural gas for use during peak demand periods such as winter and summer.

“Reconfigure.” Rebuild or relocate components, including the replacement of any individual component that would alter the MAOP or volumetric capacity, but excluding individual component replacement that has no effect on operation or function.

“Tie-in.” The connection of a new pipeline or branch to an existing pipeline.

“Trenchless Technology.” A method used to minimize excavation activity, such as horizontal directional drilling, tunneling, and auger boring, but excluding short installations with pneumatic tools such as moling.

“Uprating.” Increasing the MAOP of a pipeline.

II. USE OF PROFESSIONAL ENGINEERS

- A. Any gas pipeline engineering plans or specifications for Complex Projects must be produced by or under the direct charge and supervision of a Professional Engineer with Sufficient Knowledge, as defined in 220 CMR 105.00. The Professional Engineer must ensure, in coordination with Gas Company personnel, that the plans or specifications conform to all applicable pipeline safety laws, regulations, and standards and procedures of the Gas Company, and that they present a proper sequencing of steps to be performed.
- B. A Professional Engineer's stamp may not be used on standardized or generic plans or specifications unless they meet the definition of Complex Project. All plans and specifications with a Professional Engineer's stamp must be part of a site-specific project package and applicable to the specific project requirements.
- C. Prior to commencing work on a Complex Project, the Gas Company must ensure that all plans or specifications bear the Professional Engineer's stamp and are accurate, complete, follow proper sequencing of steps to be performed, and accord with all applicable standards and procedures.
- D. A Professional Engineer's stamp is not required during an Emergency, as defined in 220 CMR 105.00, but is required after the Emergency has been brought to conclusion and gas service restored to the customer if there is further work or services constituting a Complex Project.