STATE OF NEW HAMPSHIRE

PUBLIC UTILITIES COMMISSION

DG 20-152

In the Matter of:
Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty Utilities-Keene
2020-2021 Winter Cost of Gas

Direct Testimony

of

Randall S. Knepper
Safety and Security Director of the Safety Division

October 15, 2020

New Hampshire Public Utilities Commission

Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty Utilities

Liberty-Keene Cost of Gas

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Testimony of
Randall S. Knepper

Q. Please state your name, occupation and business address.

A. My name is Randall S. Knepper. I am employed as the Safety and Security Director of the Safety Division for the New Hampshire Public Utilities Commission. My business address is 21 S. Fruit Street, Suite 10, Concord, New Hampshire 03301.

Q. Please summarize your education and professional work experience.

A. I received a Bachelor of Science in Mechanical Engineering from the University of Rochester and a Master of Science in Civil Engineering from the University of Massachusetts. I am a licensed Professional Engineer in the State of New Hampshire, License No. 9272. For continuing education, I have completed 21 Technical Training Courses and 23 Online Training Sessions provided by the Training and Qualification Center of the Pipeline and Hazardous Materials Safety Administration (PHMSA). See Attachment RSK-3.

I have been the Director of Safety for the New Hampshire Public Utilities Commission since December 2004. I have testified in numerous proceedings before the Commission. See Attachment RSK-4 for a summary of previous dockets. Prior to that I was an Environmental

Consultant and Business Development Manager at The Smart Associates, Environmental Consultants, Inc., located in Concord, New Hampshire. For 16 years I was employed at a local gas distribution company. My previous work experience included a number of Business and Operations roles at Keyspan Energy Delivery New England (Keyspan) and EnergyNorth Natural Gas Inc. (EnergyNorth), including Key Account Executive, Commercial & Industrial Sales Manager, Sales Engineer, Senior Engineer, Staff Engineer, and CAD Supervisor. For many of those years, I designed natural gas distribution systems, recommended capital improvement projects, recommended system expansions, wrote Operations and Maintenance procedures, and oversaw construction projects. While performing the duties of each of these occupations I was responsible for compliance related to applicable local, state, and federal codes. Prior to my utility experience I worked at Westinghouse Electric designing high voltage transmission lines as a Project Engineer.

In addition, I have served as Staff Engineer for the New Hampshire Site Evaluation Committee prior to its most recent reorganization in 2014 and currently serve as subject matter expert for the New Hampshire Advisory Council on Emergency Preparedness and Security. My professional work experience spans more than 30 years.

Q. Are you affiliated with any professional organizations?

A. Yes. I am a member of the Association of Energy Engineers (AEE). I serve on multiple committees of the National Association of Pipeline Safety Representatives (NAPSR), including prior positions as Chair and Past Chair. I have served as editor of all of the past editions of NAPSR's *Compendium of State Pipeline Safety Requirements & Initiatives Providing Increased Public Safety Levels Compared to Code of Federal Regulations*. I currently chair the Staff

Pipeline Safety Subcommittee of the National Association of Regulatory Commissioners (NARUC); I serve on the Common Ground Alliance Technology Committee; I am appointed as a member of the Gas Technology Institute's Public Interest Advisory Committee; and I am a board member of the New Hampshire Public Works Standards and Training Council. Finally, I have testified before the United States Congress on pipeline safety issues.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is to describe the Safety Division's observation regarding Liberty Utilities and Liberty-Keene (Liberty)'s processes used in meeting the safety requirements set forth in Order 26,065.

Q. Did the Safety Division's Adequacy Assessment Report in Docket DG 17-068, regarding safety issues associated with CNG conversion in Keene, recommend to the Commission that any or all costs incurred by Liberty (including the demand costs associated with the XNG CNG supply contract) for the Keene conversion be considered prudent?

A. No. The Safety Division's report containing safety recommendations, issued on October 3, 2018, intentionally does not address prudency. The report did bring to light the significant amount of costs that would be involved in the proposed system conversion.[1] For example, the Safety Division recommended installing a single turbine meter for the propane/air system although Liberty ultimately chose a more expensive ultrasonic meter with flange pressure ratings that were unnecessarily high, which led to excessive costs, in Staff's view. The report mentioned that the customer conversion costs associated with end use gas appliances (either replacement or reconfigured) downstream of the customer meter appeared to be shifted to

[1] *See* **Attachment RSK-1:** Staff Assessment, Section III p. 58, Section IV, pp. 59 and 60, See Section V p. 62, (17-068)available at: https://www.puc.nh.gov/Regulatory/Docketbk/2017/17-068/LETTERS-MEMOS-TARIFFS/17-068_2018-10-05_STAFF_ADEQUACY_REVIEW.PDF

other customers and this is a topic that the Commission should take up later. The significant conversion costs that were being contemplated by Liberty were included in the report to give context to Liberty's conversion proposal, and to show that Liberty's conversion proposal was not merely minor or routine in nature. The entire conversion of a gas distribution system from propane/ air to CNG would be an expensive proposition requiring, in my view, careful project management to achieve a thorough understanding of the CNG implementation impacts, close scrutiny of cost control measures, complete systematic planning and individual customer planning, and examination of the multitude of details required throughout the project without sacrificing necessary safety requirements.

Q. To your knowledge, has Liberty prepared a comprehensive project management plan for conversion of the entire Keene distribution system of that nature and depth?

A. No. The Safety Division is still waiting a detailed comprehensive plan for phases identified as 1 through 5.

Q. Was the Safety Division's October 3, 2018 Adequacy Assessment's primary objective to examine the costs of the Keene conversion from propane/air to CNG?

A. No. The Safety Division's report containing safety recommendations issued on October 3, 2018 was primarily done in order to methodically review and examine the safety ramifications of what Liberty was proposing. The report identified more than 180 areas in Liberty's initial submission that were conflicting, lacking details, or required updating.

Q. Please comment on Liberty's testimony BP 09 "This was the first time that Liberty or the Staff had been involved with connecting CNG to the Company's distribution system and there were unknown obstacles and delays involved with getting the installation finalized to the satisfaction of all parties."

A. Liberty response to Staff data request 1-4 in this docket (attached to Stephen Frink's

testimony as SFP-3) attempts to add clarity to this statement but instead unfortunately depicts safety issues as "obstacles and delays." Webster's dictionary defines an "obstacle" as something that impedes progress or achievement. Liberty response to Staff data request 1-4 suggests that Liberty's impediment was somehow the result of Staff's delays and the Commission's delays. These statements are incorrect and unfounded.

Q. What parts of Liberty Response to Staff data request 1-4 do you consider incorrect and unfounded?

A. Liberty response to Staff 1-4, see SPF-3 states the following:

> The Company submitted its documentation consistent with ASME B31.3, which is the code governing the supplier of the CNG skid and is what that company used in its other installations of CNG unloading facilities, including those that feed into utility transmission and distribution piping, throughout the country. As part of that documentation, the demarcation point between the applicability of ASME B31.3 and 49 CFR Part 192 would be the outlet flange after the decompression was complete. The Safety Division, while acknowledging that "[t]here is no single applicable safety standard used within New Hampshire, nor nationwide, for CNG trailers,"… applied 49 CFR Part 192 to the installation as part of its assessment of the CNG installation, which meant that the demarcation point was the hose that connects the decompression facility to the trailers. **This interpretation was not expected by the Company and resulted in the entire CNG skid having to be modified** to meet the different standards, and also necessitated significant revisions to the Company's documentation, including the documentation of the owner of the CNG skid. [Emphasis added]

The Safety Division from the onset, and repeatedly during discussions with Liberty operations personnel, unequivocally stated that the demarcation point for transfer of product was at the outlet flange of the CNG trailer. The demarcation point is where operational, maintenance and emergency responsibilities must lie totally with the operator of the Keene distribution system, i.e. Liberty. There should have been no surprise to Liberty regarding this

demarcation point and its significance. Liberty could not outsource functions --such as shutting down supply to customers--to a third party. Liberty could not outsource regulator equipment checks to a third party. Because of the demarcation point, Liberty could not downshift responsibilities on material selections, piping wall thickness, remote monitoring of pressures, required maintenance, emergency response duties, public awareness plans, pressure testing and many other standard duties that come with operating a source of supply and providing gas service *as a utility*. Unfortunately, Liberty had prematurely signed a contract for supply with a supplier (XNG) that overlooked the importance of the demarcation point or did not account for it.

Q. Why should Liberty reasonably have expected that the demarcation point was the outlet flange of the CNG trailer i.e. why is the location of the demarcation point not subject to interpretation ?

A. First, the outlet of the flange of the mobile storage tank is similar to the demarcation point Liberty uses with its existing propane deliveries in Manchester, Nashua and Tilton. It is also similar to the demarcation point for Liberty's liquefied natural gas (LNG) deliveries in Manchester, Concord and Tilton. Liberty should have been very familiar and, not surprised with, the similar demarcation point at the outlet of the CNG trailer identified by Staff.

Second, Administrative Rule Puc 506.01 Pipeline Safety Standards clearly delineates in section (a) the following:

> (a) All utilities including those with propane storage facilities shall comply with those pipeline safety regulations established by the United States Department of Transportation which are set forth in 49 C.F.R. Part 192 including future amendments thereto.

This C.F.R., 49 C.F.R. Part 192, does not incorporate by reference an ASME B31.3 Process Piping Standard. Pursuant to the 49 C.F.R. Part 192.7, Liberty is not allowed to use or

substitute any standard that is not incorporated by reference. Moreover, ASME B31.3 contains requirements for piping typically found in petroleum refineries; chemical, pharmaceutical, textile, paper, semiconductor, and cryogenic plants; and related processing plants and terminals. It is for this very reason, the ASME B31.3 standard is not the correct application or standard for gas distribution systems where gas piping *enters residential and business structures and is located in close proximity to the general public and gas consuming appliances.* It is fundamental that standards must be referenced in the C.F.R. (*See* 49 C.R.F. Part 192.7, listing allowed standards).

Lastly, during the Safety Division assessment, the Safety Division informed Liberty of a July 26, 2014, order from the New York Public Service Commission (NYPSC) that essentially says the same thing. The NYPSC order evens go further and instructs the utility how equipment and supply costs will be categorized and treated for rate making purposes. A copy of the NYPSC order is attached as RSK-2. Liberty's own research ought to have led it to the New York Public Service Commission order months and months before Liberty sent out an RFP for CNG supply, let alone signed a CNG supply contract in October of 2016, and subsequently submitted its plans to the Safety Division for assessment.

Q. Why was Liberty's proposed use of the B31.3 process piping standard, and not the requirements contained in 49 CFR Part 192, a problem?

A. Both standards allow similar materials to be used for piping, but B31.3 allows for thinner wall thickness to be used which can lead to higher stresses in the piping. It also allows lower incremental factors for pressure testing. **This results in lower safety margins** for the distribution system and **does not result in an equivalent level of safety for the public and end use customers, who are vulnerable because they have no knowledge of the product unlike an industrial worker employed in a chemical plant who would be more**

knowledgeable of equipment ratings. There are also many other requirements that are in 49CFR Part 192 that are not in B31.3 process piping standard that are relevant and significant to protect the general public, including operational restrictions, maintenance restrictions, personnel qualification restrictions, greater emergency response requirements, and public awareness implications. All of these topics complimented with marketing, financial, and executive oversight become elements of a comprehensive conversion strategy for CNG conversion.

Q. What does the phrase "[t]here is no single applicable safety standard used within New Hampshire, nor nationwide, for CNG *trailers*," (emphasis added) mean and where was it used?

A. This statement is taken directly from page 7 of the October 3, 2018 Staff Adequacy Assessment which identified over 180 areas Liberty needed improvements. The key word that should be emphasized in the above phrase is **"**trailer.**"** The trailer is the mobile storage vessel used to transport CNG over the highways and is also left onsite until the "trailer" gas volume is depleted. Once on site at the utility's property, the trailer no longer functions as a mobile device but functions as more of a traditional storage tank: in this instance the trailer contains highly pressurized fuel. The full context of the statement within the Safety Division's Adequacy Assessment is:

> There is no single applicable safety standard used within New Hampshire, nor nationwide, for CNG trailers [used as storage for CNG]. The National Fire Protection Association (NFPA) has produced Standard 55, Compressed Gases and Cryogenics Code, but that standard focuses on filling station applications used for vehicle refueling systems rather than bulk supply systems.

Because the Safety Division correctly defined the demarcation point as the outlet flange of the CNG trailer, the appropriate standard for demarcation was indisputably the standard contained in 49 C.F.R 192.

The Safety Division also stated on page 7 in the Assessment, to illustrate the lack of an applicable safety standard for *trailers used as storage* and the broad authority the Commission could assert in the future:

> The on-road regulations of a CNG trailer are governed by the Federal Motor Carriers Safety Administration and are not jurisdictional to the Safety Division. Once driven onto and parked on Liberty premises, the trailers become a component of the Liberty supply system and are considered NHPUC-jurisdictional with respect to safety governance, pursuant to the terms of RSA 374:1,374:4, and allied statutes. The Safety Division requires that Liberty ensure that all operational conditions on its property and/or connected to the provision of utility service, be conducted safely, as required by RSA 374:1. Liberty does not [and cannot] cede this independent responsibility by leasing equipment from XNG. For instance, without limitation, Liberty must ensure that physical security, pavement conditions and traffic safety controls, personnel training, equipment maintenance, fire prevention protocols, and all other aspects of its readiness to accept XNG supply trailers at the Keene Installation are safe and adequate, as determined by the Safety Division pursuant to applicable federal and state safety regulations.

This quoted portion merely indicates that the Commission is well within its authority to regulate the onsite trailer once it is stationary on site and used as a storage device. The Safety Division while having the authority, avoided exercising that authority during discussions with Liberty to simplify the review process. The Safety Division's distinction between the trailer when "on road" and when parked, and the demarcation point as defined results in a cleaner, well defined and pragmatic result. It avoids multiple review of the ever-changing characteristics of storage trailers that will be brought to Liberty's Production Avenue site and left there. If potential future events such as a fire involving the trailer, pressure releases, security breaches or other issues arise, the Commission, through its Safety Division, may elect to address the issue, exercise its authority, and impose conditions as warranted.

Liberty in its response to Staff data request 1-4, Attachment to Stephen Frink's Testimony, SPF-3, conflates the statement about the trailers with the Safety Division's identified demarcation point. Had Liberty taken reasonable steps to educate itself, it would have expected and addressed the "unexpected conditions" before the Safety Division had to assess

and recommend changes, and before the Commission had to impose the Safety Division's recommended changes to preserve safety. The Safety Division disagrees with Liberty's representation of the situation.

Q. What measures could have been taken by Liberty or the Staff to reduce the time of review?

A. 1) From October 2016 to November 2017, Liberty could have devoted more resources to the project, designated an overall project manager from the onset that could oversee the immediate project and future phases, and internally performed the review that the Safety Division undertook before they even submitted their documents.

2) Liberty submitted over 1,800 pages of documents and they were originally not Bates Page stamped, which slowed down the Safety Division's review because there were multiple pages taken from manufacturer's specification that had same numbering. It was so cumbersome the Safety Division requested Liberty to resubmit with proper Bates page numbering so that references to pages could be easily made and avoid any future miscommunications.

3) Liberty submitted nearly 470 pages of irrelevant information that was not applicable to the Keene Site. The Safety Division had to review these pages to determine if they contained technical information or instructions that needed review. Filtering out irrelevant material fell upon the Safety Division which lengthened the amount of time to review.

4) A project's documentation is reflective of the quality assurance process used in the design, selection, installation and operation of the project. To ensure a project is completed safely, and to ensure public safety is considered in every step within those processes, reviews should be thorough and comprehensive, and inaccuracies should be eliminated. Liberty employed no quality assurance process which would have helped minimize delays.

5) Staff provided Liberty results of deficiencies as they were identified. This gave Liberty the

opportunity to keep up with required amendments as Staff completed its review. This did not have to occur, but Staff provided this courtesy as a way of enabling Liberty to pre-position itself to be ready to quickly respond to the Adequacy Report.

6) Liberty was allowed to continue to make field changes throughout the process. It was only not allowed to flow gas until all engineering reviews, procedure manuals were updated, training provided, and controls put in place. For example, Liberty was allowed to conduct a pressure test but not flow the gas. While Liberty did not pressure test according to its own procedures and skipped 17 steps in its internal procedure, the Safety Division still allowed the pressure test to occur which needed to be scheduled to accommodate equipment rentals. This is an example of the Safety Division's efforts to reduce delays.

Q. **Has the discovery process been completed?**

A. No. In this expedited COG docket, Liberty has not responded to the October 6, 2020, Technical Session Data Requests (issued October 8, 2020), and I reserve the right to revise my testimony in light of additional information the Company may provide.

Q. Does that conclude your testimony?

A. Yes.