

**STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION**

Docket No. DG 17-048

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities
Distribution Service Rate Case

**DIRECT TESTIMONY
OF
CHRISTIAN P. BROUILLARD**

April 28, 2017

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1 **I. INTRODUCTION**

2 **Q. Mr. Brouillard, please state your name and business address.**

3 A. My name is Christian P. Brouillard. My business address is 15 Buttrick Road,
4 Londonderry, New Hampshire.

5 **Q. By whom are you employed and in what capacity?**

6 A. I am employed as the Director of Engineering by Liberty Utilities Service Corp. In my
7 capacity as Director of Engineering, I am responsible for delivery system planning and
8 capital investments, engineering and design, and maps and records integrity for Liberty
9 Utilities (Granite State Electric) Corp. (“Granite State”) and Liberty Utilities
10 (EnergyNorth Natural Gas) Corp. (“EnergyNorth” or the “Company”).

11 **Q. Please describe your educational background and professional experience.**

12 A. I graduated from the University of New Hampshire in 1982, earning a bachelor’s degree
13 in electrical engineering. I also completed the Public Utility Executive Course sponsored
14 by the University of Idaho. I am a registered professional engineer in the states of New
15 Hampshire and Massachusetts and a certified Project Management Professional. In 1982,
16 I began my engineering career as an associate engineer with Massachusetts Electric
17 Company, a subsidiary of National Grid USA (“National Grid”), in North Andover,
18 Massachusetts. From 1982 to 1992, I held positions of progressive responsibility in
19 distribution engineering, planning, protection, and executive support functions. In 1993,
20 I was promoted to Manager of District Engineering and held various engineering and
21 management positions since that time, including Manager of Asset Strategy. In 2005, I

1 became Manager of Work Planning and was responsible for developing Granite State's
2 capital construction plans. In 2008, I was promoted to Director, Investment Planning for
3 the electric distribution system in both New England and New York for National Grid. In
4 2011, I assumed my current role as Director of Engineering for Liberty Utilities. In
5 January 2015, I assumed transitional responsibility for Electric Operations, Gas
6 Production, Control and Dispatch Center, and Compliance Quality and Emergency
7 Management. I am currently responsible for Electric and Gas Engineering, Compliance
8 Quality, and Emergency Management.

9 **Q. Have you previously testified before the New Hampshire Public Utilities**
10 **Commission (“Commission”)?**

11 A. Yes, I have testified numerous times before the Commission on engineering and planning
12 matters involving both EnergyNorth and Granite State.

13 **Q. What is the purpose of your testimony?**

14 A. My testimony discusses EnergyNorth's gas distribution system and its capital
15 investments since the Company's last general distribution rate case. I also provide a
16 description of the next phase of the Concord-Tilton Hi-Line reinforcement, currently
17 scheduled to commence in 2018. Although that project is not a part of this rate
18 proceeding, the Company endeavors to keep the Commission apprised of this continuing
19 effort to reinforce the supply to the Tilton area and reduce dependence on vaporization of
20 liquefied natural gas (“LNG”) and liquefied petroleum gas (“LPG”) at the Tilton plant.

1 **II. ENERGYNORTH'S OPERATIONS AND SYSTEM INVESTMENT**

2 **Q. Please provide an overview of EnergyNorth's operations.**

3 A. EnergyNorth distributes natural gas to approximately 90,700 residential, commercial, and
4 industrial customers across 30 communities in southern and central New Hampshire as
5 well as in the City of Berlin. The Company will shortly begin providing gas service to
6 the communities of Pelham and Windham. To serve its customers, the Company uses
7 seven pipeline take stations serving approximately 1,400 miles of distribution main
8 operating from 0.5 psig to 200 psig. There are approximately 69,000 gas services on the
9 delivery system. The Company also operates approximately 2.8 miles of transmission-
10 pressure main.

11 **Q. How much capital has the Company invested in its distribution system since its last**
12 **distribution rate case, Docket No. DG 14-180?**

13 A. The Company has invested approximately \$116.4 million of capital in its distribution
14 system from April 1, 2014 (the end of its test year in Docket No. DG 14-180), through
15 December 31, 2016 (the end of the test year in this case). A breakdown of the major cost
16 categories follows:

Sum of Total		
Rate Case Priority	Rate Case Category	Total
<input type="checkbox"/> Mandated	Replacement of Mains	\$9,523,801
	Replacement of Services	\$1,663,760
	Finance Transactions	-\$8,232
Mandated Total		\$11,179,329
<input type="checkbox"/> Growth	New Mains	\$14,108,170
	Reinforcement Mains	\$590,654
	New Residential Services	\$12,731,253
	New Commercial Services	\$3,837,381
	Meters and Regulators	\$2,254,131
	CIAC Payments	-\$85,010
Growth Total		\$33,436,579
<input type="checkbox"/> Regulatory Programs	Cast Iron/Bare Steel (CIBS) Replacements	\$19,478,285
	Concord-Tilton HiLine Reinforcement	\$9,166,760
	Replacement of Mains	\$1,634,091
	Replacement of Services	\$3,119,760
	Meters and Regulators	\$2,660,454
	Corrosion Prevention Installations	\$3,244,757
	Equipment Upgrades/Replacements	\$152,193
	Gas Production Facilities Upgrades	\$640,990
	Facilities	\$547,803
	Tools and Equipment	\$206,322
Regulatory Programs Total		\$40,851,415
<input type="checkbox"/> Discretionary	IT Applications, Computers, and Hardware	\$14,796,107
	Vehicles	\$2,021,445
	Replacement of Mains	\$341,488
	Meters and Regulators	\$870,833
	Corrosion Prevention Installations	\$25,070
	Facilities	\$11,413,245
	Tools and Equipment	\$665,554
	Dispatch & Control, Instrumentation, and Regulation	\$814,944
Discretionary Total		\$30,948,686
Grand Total		\$116,416,009

1 **Q. Please list the types of capital projects that have been undertaken since Docket No.**
2 **DG 14-180.**

3 A. From April 1, 2014, through December 31, 2016, the major categories of capital
4 investments included the following:

5 **Mandatory:**

- 6 • Gas mains and services replaced as part of city/state construction, repaving
7 projects, and encroachments.

8 **Growth:**

- 9 • Installation of new main in support of service to new customers;
10 • Installation of new residential and commercial services; and
11 • Installation of new meters required to serve new customers.

12 **Regulatory Programs:**

- 13 • Leak prone pipe replacements undertaken as part of the Cast Iron/Bare Steel
14 replacement (“CIBS”) program;¹
15 • Bare steel services replaced under the CIBS program;²
16 • 5.5 miles of supply line (Concord-Tilton Hi-Line) necessary to improve the
17 reliability and performance of the supply to the Tilton area, reduce dependence on

¹ CIBS Program investments are recovered annually as part of the CIBS filing and reconciliation process. CIBS investments are therefore excluded from the incremental rate base calculation, but are presented here for completeness.

² See footnote 3.

1 the Tilton LNG/LPG plant, and allow for continued customer growth in the Tilton
2 area³;

- 3 • Main replacements necessary to maintain system operating pressures and
4 reliability and to support continued growth; and
- 5 • Replacement of meters as required under Commission Rules.

6 **Discretionary:**

- 7 • IT applications investments including development and enhancements to
8 Cogsdale, Billing/Web Development, OASYS-SCADA, GIS, and Leak Survey;
- 9 • Vehicle purchases;
- 10 • Replacement of obsolete, inside K-Meters;
- 11 • Regulator pit replacement with modern pre-fabricated vaults; and
- 12 • Construction of the Training Center, interior construction and equipment at the
13 Londonderry office building, and renovations and enhancements at Manchester,
14 Nashua, and Tilton.

15 **Q. Is all the capital investment included in rate base used and useful in providing**
16 **service to the Company's customers?**

17 **A.** Yes. The entire rate base is used and useful in the provision of service to the Company's
18 customers.

³ Photographs and slides of various aspects of this project are included in Attachment CPB-1.

1 **Q. Were the costs for all the projects prudently incurred?**

2 A. Yes. Under Liberty Utilities ownership, the following criteria are used to evaluate
3 proposed capital expenditures:

4 Each year, EnergyNorth develops a Five-Year Capital Investment Plan (the “Plan”) that
5 is designed to achieve the overriding performance objectives of safety, compliance,
6 reliability, efficiency, and customer satisfaction. The Plan represents a compilation of
7 proposed spending for Delivery System Mandatory Programs, Growth, Regulatory
8 Programs, and Discretionary/Non-Infrastructure requirements. The Plan also reflects a
9 mix of continuing blanket projects, multi-year programs, and individual capital projects.

10 Projects may be aimed at addressing a one-time objective or may be developed to address
11 multi-year programs. In either case, management reviews the scope of work and the
12 estimated costs to ensure they will satisfy business objectives.

13 **Q. Is the Company seeking rate recovery for any capital investments planned for the**
14 **period January 1, 2017, through December 31, 2017, that will be used and useful**
15 **and placed in service prior to the effective date of permanent rates in this**
16 **proceeding?**

17 A. Yes. Please refer to section 1604.01(a)(23) of the Rate Case Filing Requirements for the
18 Company’s planned capital investments during 2017 for which the Company will be
19 seeking rate recovery upon implementation of permanent rates in 2018. As described in
20 the testimony of David Simek and Daniel Dane, the Company is seeking recovery of
21 2017 capital investments through a proposed step adjustment. The 2017 capital

1 investments for which the Company is seeking recovery exclude capital additions
2 planned as part of the Company's CIBS program as those are subject to separate
3 recovery. Also excluded from the request are planned capital investments in the newly
4 expanded franchise communities of Windham and Pelham as those investments are now
5 planned to be placed in service during 2018.

6 **Q. Does the Company have any other significant capital projects or programs planned**
7 **for the near future?**

8 A. Yes. Beginning in 2018, the Company expects to start the next phase of the Concord-
9 Tilton Hi-Line project, a continuing and significant multi-year capital project. The next
10 phase, beginning with engineering and procurement activities in 2018, will include the
11 installation of approximately five miles of 12-inch coated steel gas main, rated at 300
12 psig. This phase will extend the Hi-Line reinforcement from Shaker Road in Loudon
13 through the Town of Canterbury. The objective of this phase is to continue to improve
14 system performance and reliability to the area by further reducing the need for pressure
15 support during cold days from December through March, thereby increasing pipeline
16 reliability to approximately 4,500 customers in the Tilton area. In 2018, the Company
17 plans to undertake the necessary engineering and procurement of long lead time
18 materials. Actual construction is anticipated to commence in 2019. The Company
19 anticipates investing approximately \$800,000 in 2018, \$11,000,000 in 2019, and
20 \$500,000 in 2020.

21 The drivers behind the need for the Concord-Tilton Hi-Line Reinforcement projects are

1 briefly described below. The Company will be developing additional cost and
2 justification information as we complete the preliminary engineering phase of this
3 project.

4 Liberty's primary goals for the gas supply to the Tilton area are to:

- 5 1. Achieve 100% design day LNG redundancy for vaporization capability at the
6 Tilton LNG Plant;
- 7 2. Eliminate LNG pressure peaking requirements and utilize the LNG/LPG plant for
8 supply capacity only;
- 9 3. Mitigate risks and enhance reliability associated with the remaining 10 miles of
10 single feed vintage 1963 pipeline supply assets, installed in accordance with
11 practices and standards in force in 1963; and
- 12 4. Support future growth opportunities in the Tilton area by moving away from
13 reliance on the Tilton LPG plant.

14 While the costs of this project are not included in the Company's request for a rate
15 increase in this case, this project demonstrates that the Company has an ongoing and
16 continued need to invest capital in its system.

17 **Q. Does this conclude your direct testimony?**

18 **A.** Yes, it does.

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