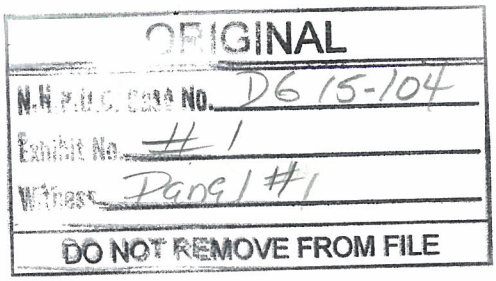


STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION

Docket No. DG 15-104

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities
Fiscal Year 2015 Cast Iron/Bare Steel Replacement Program Filing

JOINT DIRECT TESTIMONY

OF

GWYN M. CASSETTY AND IAN T. CRABTREE

April 15, 2015

I. INTRODUCTION

Ms. Cassetty

Q. Would you please state your full names and business address?

A. My name is Gwyn M. Cassetty. My business address is 130 Elm Street, Manchester, New Hampshire 03101.

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

A. I am the Manager, Gas Construction for Liberty Energy Utilities (New Hampshire) Corp. ("Liberty Energy NH"), which provides services to Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities ("Liberty" or the "Company").

Q. Would you please provide a brief overview of your experience and education?

A. Yes. In 1994, I received a Bachelor's of Arts in Finance from Saint Anselm College in Manchester, NH. In 2001, I received a Masters of Business Administration from the University of West Florida in Pensacola, FL. In September 2012, I became employed by Liberty Energy NH. My current position is Manager, Gas Construction. From 2001 to August 2012, I was employed by National Grid and its legacy companies where I held various positions including Senior Analyst Gas Financial Operations, Lead Analyst Resource Management and Program Manager, Gas Distribution Field Operations. One of my

responsibilities as Manager, Gas Construction is the execution and tracking of Liberty's Cast Iron/Bare Steel ("CIBS") program.

Q. Have you previously testified in regulatory proceedings before the New Hampshire Public Utilities Commission (the "Commission")?

A. Yes, I testified in DG 13-149, Liberty's Fiscal Year 2013 Cast Iron/Bare Steel Replacement Program Filing and DG 14-041 Liberty's Fiscal Year 2014 Cast Iron/Bare Steel Replacement Program Filing.

Mr. Crabtree

Q. Please state your full name, business address and position.

A. My name is Ian T. Crabtree. My business address is 15 Buttrick Road, Londonderry, NH 03053. I am a Senior Engineer for Liberty Energy NH and provide engineering services to the Company.

Q. Please describe your educational background and training.

A. In 2008, I received a Bachelor of Science degree in Mechanical Engineering from the University of Massachusetts Lowell. I have attended several training seminars and courses conducted by various reputable organizations such as the National Association of Corrosion Engineers (NACE), the Northeast Gas Association (NGA) and the Gas Technology Institute (GTI).

Q. Please describe your professional background.

A. In July of 2012, I assumed a position in Project Engineering for Liberty Energy Utilities where some of my responsibilities include analyzing, prioritizing and selecting the gas main replacement projects under the CIBS Program. From 2007 to 2008, I was employed by KeySpan Energy Delivery where I was an intern for the Corrosion Department. From 2008 to 2012, I worked as a Gas System Operator in the Gas Control room and as an engineer in the Asset Replacement department at National Grid.

Q. Have you previously testified before the Commission?

A. No, I have not.

II. PURPOSE OF TESTIMONY

Q. What is the purpose of your testimony?

A. The purpose of our testimony is to explain the Company's CIBS main replacement program for fiscal year ("FY") 2014-2015, or the twelve months ended March 31, 2015 ("FY 2015"), as well as the Company's initiatives for future CIBS programs.

III. IMPLEMENTATION OF THE CIBS PROGRAM

Q. Please describe the purpose of the CIBS Program.

A. The CIBS program was established as part of the National Grid/KeySpan merger

settlement agreement approved by the Commission in Order No. 24,777 dated July 12, 2007, in Docket No. DG 06-107 and the settlement agreement in Docket No. DG 11-040 approved in Order No. 25,370. The program is aimed at accelerating the replacement of cast iron and bare steel pipes used in the Company's distribution system, which tend to deteriorate over time. These are pipes that have been in-ground and exposed to a corrosive environment and earth movement for many years, in some cases more than one hundred years.

Q. How is the CIBS program implemented?

A. Under the CIBS program, the Company annually submits its plan for the replacement of cast iron and bare steel pipes for the coming fiscal year which begins in April[1] to the Commission Staff for review and comment. The proposed plan sets forth a prioritized list of pipes to be replaced based upon the year of installation and condition of the pipe as well as other relevant factors. Subject to certain limited exceptions, pipes replaced as part of public works projects or as part of the Company's gas main encroachment policy are excluded from the CIBS program because these pipes would likely have been replaced even in the absence of the program. Following review by Staff, including technical sessions between Staff and the Company, Liberty implements the CIBS plan over the course of the

[1] The CIBS' fiscal year begins in April and concludes in March of the following year.

construction season, subject to reasonable deviations based on circumstances that may arise or additional information that may become available.

The base amount of capital expenditures required under the FY 2015 CIBS program is $506,240 ("CIBS Base Amount"), and the Company is permitted a permanent increase in its base distribution delivery rates ("Capital Investment Allowance"), effective as of July 1 of each year, to recover the annual revenue requirement for investments made in excess of the CIBS Base Amount during the preceding fiscal year. A copy of the CIBS report is included as Attachment GMC/ITC-1 to our testimony and includes, among other things, an overview of the actual capital expenditures incurred in implementing the FY 2015 CIBS Plan, variances between the initial project estimated costs and final estimated project costs, with comments on variances. Also included with the Report is a FY 2015 Condition Bare Steel Main Replacement Program – Sample Analysis, describing steel pipe and soil samples collected from the CIBS projects completed over the course of the 2014-2015 construction season.

IV. FY 2015 CIBS PROGRAM

Q. Please describe the FY 2015 CIBS program.

A. The FY 2015 CIBS program was based on a preliminary project plan developed by the Company in January 2014 and agreed to by Staff during a subsequent technical session in April 2014. Based upon comments received from Staff

during the technical session, the Company revised its FY 2015 CIBS Plan and subsequently submitted a final version to Staff in June of 2014. The final FY 2015 CIBS program consisted of eighteen original and ten incremental projects. Five of the incremental projects were completed, with the remaining five left for completion under the FY 2016 CIBS program. The 23 completed projects eliminated 5 miles of leak prone pipe at a total cost of $4,921,902 (including estimated carryover costs). The program also included the replacement, insert or abandonment of 317 associated services (159 Bare Steel, and 68 Coated Steel and 90 Plastic) and transfer of 59 services.

Due to permit restrictions imposed by the Cities of Nashua and Concord late in the season, the Company was unable to complete all planned projects. The Cities allow the Company to go into the winter season with a certain number of patches, which are monitored all winter long. These are the first jobs to be final paved in the spring. Permits are granted in the spring, only after most of the restoration is completed. In 2014, the Company had a large amount of restoration work to be completed from the prior year. This delayed the start of the construction season. For this reason, and the amount of City/State Work that took priority, the CIBS projects started later than planned.

Q. Is all of the replacement main installed as part of the FY 2015 CIBS Program used and useful?

A. Yes. All of the main installed and related capital improvements are used and useful and providing service to customers.

Q. Does the Company coordinate with the cities and towns in which it conducts work related to CIBS? If so, please explain.

A. Yes. Prior to each program year, a paving letter is sent to each city and town requesting a list of the municipality's planned work for the upcoming construction season. Included in the letter are lists of the Company's proposed work by street, length and type of work being executed. Typically, there will be several exchanges of information between the Company and the municipalities where CIBS work is planned. Discussions will include the scope of work within the proposed projects and coordinating efforts.

Q. Has the Company made any changes in the past year in the way it which it coordinates with the cities and towns in which it conducts CIBS work?

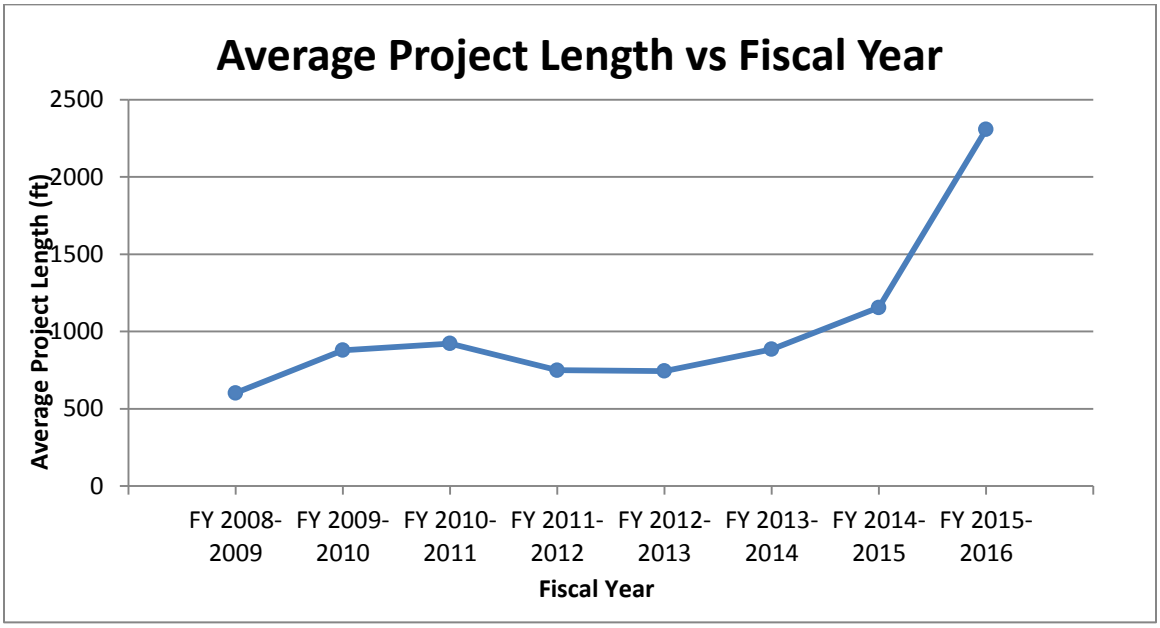
A. Yes. We scheduled face to face meetings with representatives of each of the major cities in the fall to discuss a list of the proposed projects for the FY 2016 program. This is earlier than our standard notification through the winter paving letters. Understanding that the CIBS program will increase significantly in the upcoming years, it is essential that the Company communicates effectively with

the municipalities and coordinates appropriately with each. During the meeting with each municipality, the Company presented one to two years of potential CIBS projects using an overview map of the city and a detailed list of streets that would be impacted. Also discussed were upcoming paving projects and any benefits with renewing our infrastructure in conjunction with those projects. There are several benefits with coupling CIBS projects and municipal paving projects. These benefits can include cost savings with restoration, eliminating the risk of pursuing projects with street excavation moratoriums, timely identification of potential obstacles, and building stronger relationships with the municipalities. A final list of projects was sent to each city showing any variances from what was discussed at the original meeting.

Q. Has the Company adopted a geographic zone approach to its CIBS replacement program?

A. Yes. Over the past couple of years, the average length of a project under the CIBS program has been on a steady increase. This trend can be seen in Figure 1 below. Comparing the FY 2015 program to the proposed FY 2016 program, the average length per project will approximately double. The Company's initiatives to accelerate the CIBS program to a 10-year replacement plan allow for a significant increase in project sizes to capture "geographical zones" thereby improving the cost efficiency of the work as well as eliminating our problem areas.

Figure 1.



V. COSTS OF FY2015 CIBS PROGRAM

Q. Were there any carry-over costs from FY 2015 CIBS projects that the Company expects to incur in FY 2016?

A. Yes. As shown on Attachment GMC/ITC-2 column W, there is $912,607 of carry-over costs from FY 2015 to FY 2016. All of the carry-over costs are related to final trench restoration work that could not be completed in the planned fiscal year due to city rules regarding minimum temperature requirements for final restoration.

Q. What are the unit costs for FY 2015?

A. The actual total per foot cost for the FY 2015 program was $197 (including carry over costs) compared to the estimated loaded cost of $211. On a direct basis, the

actual unit cost was $185 per foot, compared to a direct estimated cost per foot of $162. Overall, the average variances between estimated and actual costs were minimal. Of the twenty three jobs, ten had a variance of less than 20%. The average of the variance was -2%. The per-foot cost and the overall variance between actual and estimated costs have decreased from last year. The Company reviewed the variances on a per job basis from the prior year to identify shortfalls in estimating. Additional costs were built in to the FY 2015 estimates to allow for better cost projections.

Q. What steps has the Company taken to control and/or reduce direct costs since last year?

A. The Company controls direct costs by monitoring crew productivity and working closely with cities and towns to ensure that permits are obtained in a timely manner and crew down time is reduced to the greatest extent possible.

The Company's ability to manage final restoration costs is less flexible. Final restoration requirements imposed by New Hampshire municipalities, including Manchester, Nashua, and Concord are considerably higher than those imposed by other municipalities in New Hampshire as well as municipalities in nearby states. However, the Company was successful in working with one particular city to develop a pilot program, reducing the required 3' cut-back to 1'. The Company plans to expand this practice and introduce additional pilot programs in an effort

to reduce the restoration costs, and increase productivity in various locations.

The Company also completed an RFP process for a five-year mains and services contract. We received competitive bids from eight contractors; three contractors were chosen and will be working for the Company beginning April 1, 2015.

Other significant drivers of costs associated with the FY 2015 CIBS projects were unforeseen excavation needs. Ledge removal was included in many of the estimates, where the locations were "known ledge' areas. However, it is not always possible to predict these conditions.

Q. Have there been any significant variances in the cost of work in the past year? If so, please explain the reasons for the variances.

A. The average variance between estimated and actual costs of all jobs was insignificant. However on an individual basis there were some instances where the actual cost was much higher, and conversely much lower than originally estimated. The significant overage variances for jobs completed early in the season were due to a change in the philosophy of allocating the oversight and supervision to construction jobs. These allocations are now done on a contractor spend basis. The use of time and material (T&M) charges was also a driver in the overages. Due to State requirements for compaction testing, additional resources were needed and charged at T&M rates. Ledge removal, hand excavation,

shoring, police and flagger charges and welding inspection continues to be a challenge in estimating the jobs. As noted above, predicting ledge can be difficult. Variances where costs were lower than expected are due in part to cooperation and coordination with the cities and towns, where they decided to pave the street, so estimated restoration costs were lower. Also, the Company's supervisors work with engineering and the contractors to identify locations where the installation can be on edge of pavement, thereby reducing the size of the required cutback.

Q. What steps has the Company undertaken to limit the amount of variances?

A. In an effort to limit the amount of variances, the Company has revised the bid unit structure; there are now fewer bid units. In some cases typical "everyday" costs were combined into one unit. For example, under the new five-year contract, the cost of a shoring box is included in the unit pricing for all main replacement and new main installation. This will reduce the Company's exposure to the high cost of shoring in the prior contract. The Company has also separated out the restoration cost which will reduce the risk to the contractor, and allow the Company to better manage restoration. Also, the team has taken steps to analyze specific costs for ledge removal and hand excavation on a per foot basis. The goal will be to build this into the estimating tool.

Q. Will the Company have sufficient crews to complete the planned work?

A. Yes. The Company is confident there will be enough crews to complete all the work planned for the FY 2016 CIBS Program. We plan to have between 22 and 25 crews working in the system for the construction season doing CIBS, City/State and growth work. There will be approximately fifteen main crews and eight service crews. Of those crews, there will be approximately six crews focused on Cast Iron/Bare Steel replacement. These calculations are based on historical performance.

VI. CUSTOMER GROWTH ALONG CIBS ROUTES

Q. Commission Order 25,684 required the Company to provide the Staff with a report documenting the results of its market research conducted during this construction season and its plans for marketing to new customers going forward. Did the Company submit this report?

A. Yes, the Company provided this report on December 31, 2014, a copy of which is included as Attachment GMC/ITC-3.

Q. Please explain the efforts the Company undertook in FY 2015 to market to potential customers along the CIBS routes.

A. In FY 2015, the Company directed special attention towards potential gas customers along the CIBS routes. The gas sales staff developed a list of potential customers and subsequently checked every property along the CIBS routes one-

by-one, and also visited 44 of 47 non-customer locations and placed door hangers on those potential customers' doors. Each potential customer address was verified prior to mailing Abutter's Letters to ensure the letter was mailed to a valid address. The Company manually tracked the "before" and "after" saturation rates and placed a unique marketing code on each CIBS route Abutter Letter to enable tracking of sales down to the actual street. Conservatively, the gas sales staff logged approximately 200 hours on the sales and marketing of CIBS routes in 2014.

Q. How many new customers did the Company obtain as a result of these efforts?

A. In FY 2015, the Company added 1,235 meters, of which 15 resulted from sales and marketing efforts along CIBS routes. Overall, customers obtained as a result of CIBS projects represented 1.2% of the Company's sales in 2014. The saturation rate along CIBS routes was 87% in FY 2015.

Q. Is the Company marketing to potential customers along the CIBS routes being worked in FY 2016? If so, please explain how.

A. Yes. The Company documented each of the 754 addresses along the 20 CIBS routes. The gas sales staff will be mailing Abutter Letters to all 754 addresses prior to the commencement of work along the routes, encouraging potential customers along those routes to convert to natural gas, and providing information

on how to contact the Company to pursue natural gas service if the potential customer is interested. A copy of the Abutter Letter is included as Attachment GMC/ITC-4. The Company's sales intake team will track the response to these letters, which will allow the Company to document "before and after" saturation rates.

Q. How many customers does the Company anticipate adding along the CIBS routes in FY 2016?

A. The Company anticipates that it will add approximately 14 new customers (out of a potential 90 non-customers) along CIBS routes in FY 2016.

Q. Why is the projected number of new customers so low?

A. In FY 2015, there were only 47 non-customers along the CIBS routes. Even if the Company sold 100% of them, that would still only account for 4% of the Company's overall incremental sales. The return on investment is low with respect to marketing to non-customers along CIBS routes because the saturation rate is so high, the non-customers have had the opportunity to be served for decades, and the marketing effort is very manual. The Company is able to achieve a much higher return on investment when adding customers via non-CIBS projects. Further, in FY 2016, the price of oil is at a 7-year low, adding to the challenge of attracting new customers in high-saturation areas. Given the foregoing comments, the Company intends to discuss with Staff the future levels

of marketing effort along CIBS routes.

Q. Does the Company walk door-to-door along the CIBS routes to attempt to recruit potential customers?

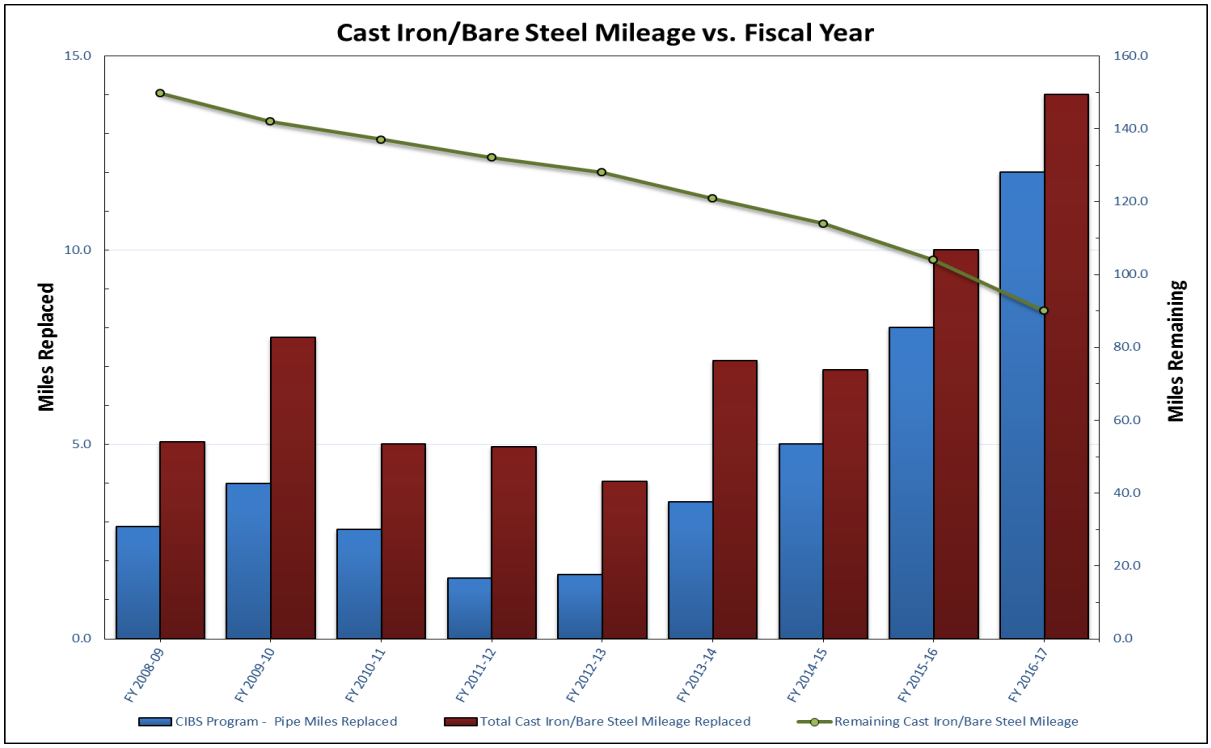
A. Yes. The gas sales staff placed forty-four door hangers in 2014. Three non-customers were engaged for discussion during the door hanger placement process. The forty-four door hangers resulted in zero leads. As a result, we do not plan to go door-to-door in 2015 due to a lack of return on time invested.

VII. THE ACCELERATED CIBS SCHEDULE

Q. Please describe the Company's ten-year plan for accelerated CIBS replacement.

A. Currently, there are 110.1 miles of <12 inch leak-prone pipe ("LPP") in the Company's system. The Company's ten-year CIBS replacement plan eliminates all LPP by year 2024. LPP includes vintage cast iron, bare steel and wrought iron main pipes that have high risk of main breaks and corrosion, and replacement of the bare steel services along the route. In essence, this accelerated replacement plan will not only reduce leak rates and increase public safety but will also reduce internal operating and maintenance costs to the Company. The Company has steadily increased the amount of LPP replacement since taking over management of the CIBS program in 2012. This trend can be seen in Figure 2 below.

Figure 2.



In the chart, the blue bar represents miles of cast iron and bare steel replaced under the CIBS program and the red bar represents total cast iron & bare steel replaced (including public works and encroachments). The Company has planned approximately 8 miles of LPP replacement through CIBS and 2 miles of LPP replacement through municipal projects for FY 2016. Assuming a steady rate of 2 miles of LPP replacement in conjunction with municipal work going forward, the Company plans to replace up to 12 miles of LPP replacement a year under the CIBS program. See Figure 3 below for a year to year projection of LPP replacement.

Figure 3.

Fiscal Year	Miles of LPP Replaced Under CIBS	Miles of LPP Replaced Under Municipal Work	Total Miles of LPP Replaced	Miles of LPP Remaining (<12 inch)	Miles of LPP Remaining (All)	Percent of LPP Remaining (<12 inch)
FY 2014-2015	5.0	2.0	7.0	110.1	114.0	100%
FY 2015-2016	8.0	2.0	10.0	100.1	103.9	90.9%
FY 2016-2017	10.0	2.0	12.0	88.1	91.9	80.0%
FY 2017-2018	12.0	2.0	14.0	74.1	77.9	67.3%
FY 2018-2019	12.0	2.0	14.0	60.1	63.9	54.6%
FY 2019-2020	12.0	2.0	14.0	46.1	49.9	41.9%
FY 2020-2021	12.0	2.0	14.0	32.1	35.9	29.2%
FY 2021-2022	12.0	2.0	14.0	18.1	21.9	16.4%
FY 2022-2023	10.0	1.0	11.0	7.1	10.9	6.5%
FY 2023-2024	7.1	0.0	7.1	0.0	3.8	0.0%

Figure 3 Notes:

1. There is approximately 3.8 miles of 12, 14 and 16 inch cast iron in the system.

Q. Will all of the <12 inch LPP be removed from the Company's system by 2024?

A. Yes. The Company is projecting that as of December 31, 2024, all of the <12 inch LPP will be removed.

Q. Does this conclude your testimony?

A. Yes.

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