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**STATE OF NEW HAMPSHIRE
PUBLIC UTILITIES COMMISSION**

ORIGINAL	
N.H.P.U.C. Case No.	DG 15-104
Exhibit No.	#4
Witness	Randall S. Knepper
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DG 15-104

Liberty Utilities (EnergyNorth Natural Gas) Corp.

d/b/a Liberty Utilities

Cast Iron Bare Steel Replacement Program

Direct Testimony

of

**Randall S. Knepper
Director – Safety Division**

June 02, 2015

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

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

5 **Q. Please summarize your education and professional work experience.**

6 A. I received a Bachelor of Science in Mechanical Engineering from University of Rochester
7 and a Master of Science in Civil Engineering from the University of Massachusetts. I am a
8 licensed Professional Engineer in the State of New Hampshire, License No. 9272. I have
9 been the Director of Safety for the New Hampshire Public Utilities Commission since
10 December 2004. Prior to that I was an Environmental Consultant and Business Development
11 Manager at The Smart Associates, Environmental Consultants, Inc., located in Concord, New
12 Hampshire. My prior work experience includes a number of Business and Operations roles
13 at Keyspan Energy Delivery New England and EnergyNorth Natural Gas Inc. (Keyspan,
14 EnergyNorth), including Key Account Executive, Commercial & Industrial Sales Manager,
15 Sales Engineer, Senior Engineer, Staff Engineer, and CAD Supervisor. For many of those
16 years, I designed natural gas distribution systems, recommended capital improvement
17 projects, recommended system expansions, wrote Operations and Maintenance procedures,
18 and oversaw construction projects. While performing the duties of each of these occupations
19 I was responsible for compliance related to applicable Local, State, and Federal Codes. I
20 worked at Westinghouse Electric designing high voltage transmission lines as a Project
21 Engineer. I have completed 18 Technical Training Sessions and 21 Online Training Sessions
22 provided by the Training and Qualification Center of the Pipeline and Hazardous Materials
23 Safety Administration (PHMSA). See RSK Attachment 1. I serve as Staff Engineer for the
24 New Hampshire Site Evaluation Committee and as subject matter expert for the New

1 Hampshire Advisory Council on Emergency Preparedness and Security. My professional
2 work experience spans approximately 30 years.

3 **Q. Are you affiliated with any professional organizations?**

4 A. Yes. I am a member of the Association of Energy Engineers (AEE). I serve on multiple
5 committees of the National Association of Pipeline Safety Representatives (NAPSR)
6 including positions of Chair and Past Chair. I served as editor of each of the biennial editions
7 of NAPSR's Compendium of State Pipeline Safety Requirements & Initiatives Providing
8 Increased Public Safety Levels Compared to Code of Federal Regulations. I chair the Staff
9 Pipeline Safety subcommittee of the National Association of Regulatory Commissioners
10 (NARUC), serve on the Common Ground Alliance Technology committee, and I am a board
11 member of the New Hampshire Public Works Standards and Training Council. Finally, I
12 have testified before the United States Congress on pipeline safety issues.

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

14 A. The purpose of this testimony is to:

15 I. Update the Commission with brief synopsis of the Cast Iron Bare Steel Replacement
16 (CIBS) replacement program since its inception in 2009;

17 II. Comment on the CIBS program results for Fiscal Year 2015 (April 1, 2014 – March 31,
18 2015), including the associated costs the Company is seeking to recover in this
19 proceeding;

20 III. Provide my assessment of the adequacy of Liberty's CIBS plan for Fiscal Year 2016
21 (April 1, 2015, to March 31, 2016); and

22 IV. Make recommendations regarding the Company's replacement rate associated with its
23 CIBS Main Replacement Program going forward.

24

1 **I. HISTORICAL SYNOPSIS OF THE CAST IRON BARE STEEL PROGRAM**

2 **Q. Would you please summarize the Safety Division's process used to review the cast iron -**
3 **bare steel replacement program since its inception?**

4 A. The interests of the Commission and its Safety Division have always been to ensure that the
5 appropriate levels of safety are either maintained or improved upon, and that associated
6 expenditure considerations result in the least cost impact to customers with minimal
7 disruptions of municipal streets. Through the years the Safety Division has been actively
8 engaged in its review of proposed replacements of leak prone pipes that the Company
9 prioritizes in its annual plans. The review ensures that the Company does not select
10 segments that are outside the limited scope of the CIBS program and includes verifying that
11 municipal projects are not included in the segments selected. Other items that are not always
12 initially excluded from these filings include abandonments, coated steel mains, inside meter
13 relocations, and upsizing mains. A complete detail of the parameters of the CIBS program is
14 included in the Attachment J Section 20 of the Settlement Agreement memorialized in Order
15 No. 25,370 (May 30, 2012). A copy is provided as RSK Attachment 2 and is referred to as
16 Attachment J. We also encourage low pressure mains to be replaced with high pressure
17 mains when appropriate. The Safety Division Staff regularly incorporates field inspections
18 of CIBS segments into its monitoring program. Our Staff will review written reports of
19 actual cutouts of certain segments of pipes that have been replaced through this program.
20 The CIBS Program requires physical cutouts to be hand-delivered to the Staff for
21 examination. This feedback mechanism provides Staff with the tangible evidence that the
22 selected segments are appropriately chosen. Lastly, Staff reviews actual finalized
23 expenditures and compares them to the previously submitted projections for the recently
24 completed fiscal year.

1 **Q. What useful information is the Safety Division able to extract from written condition**
2 **reports that are provided as part of the CIBS main replacement program?**

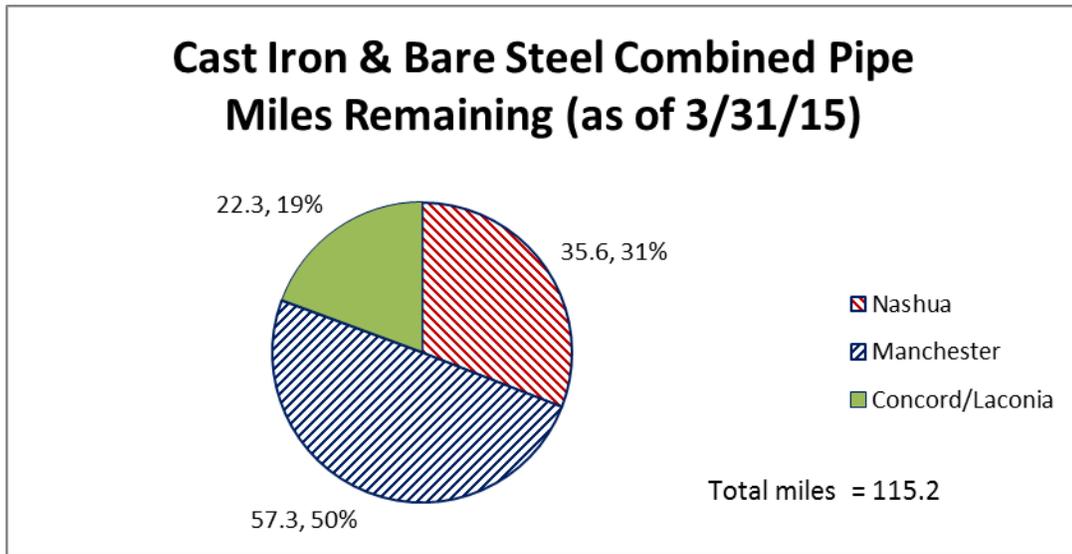
3 A. The condition reports provide the Safety Division with valuable pipeline integrity data
4 including wall thickness, age, soil conditions, system pressure, and location information of
5 pipe segments related to various types and vintages of removed bare steel segments. These
6 characteristics determine integrity and corrosion assumptions that are useful to incorporate
7 into subsequent planning. It is a delicate balance to weigh the need to replace aging piping
8 systems as they near the undesirable condition where leaks increase and mains break against
9 premature replacement of pipes that have many years of useful life and pose little risk to the
10 public. In many cases Staff has seen deep pitting, seam cracks, holes and other undesirable
11 features. For FY 2015, 7 projects involved bare steel that required written condition reports,
12 and 5 of the 7 locations had 100% wall loss (i.e. holes). This indicates that the pipeline has
13 far exceeded acceptable safety requirements and was leaking 24 hours a day, 365 days per
14 year, with ratepayers bearing the costs in the cost of gas. Since 2009, 27 individual reports
15 have been completed regarding bare steel segments, which is an average of 4.5 per year.

16 **Q. Do certain municipalities have higher percentages of the cast iron and bare steel**
17 **distribution pipe that are addressed as part of the CIBS program?**

18 A. Of the 29 communities served by Liberty Utilities gas distribution operation, only seven have
19 cast iron or bare steel segments (leak prone or worn pipe). As expected, the heaviest
20 concentration is in the municipalities of Manchester, Nashua, and Concord. These
21 communities began serving customers back in the 1800s and, as a result, have some of the
22 oldest piping in the state. Liberty reduced the amount of leak prone pipe from 120.8 miles
23 for FY 2014 to 115.2 miles for FY 2015. This 5.6 mile decrease includes 5.0 miles as a result
24 of the CIBS program (4.73 miles replaced and 0.27 miles abandoned because of conversion

1 to high pressure systems). The cities and towns with cast iron or bare steel pipes are listed in
 2 Figure 1 below:

3 **Figure 1**



4
 5 Figure 1 Notes:

- 6 1. The Southern Division CIBS areas include Nashua and some sections of Hudson.
- 7 2. The Central Division CIBS areas include Manchester and small sections of Goffstown and Bedford.
- 8 3. The Northern Division CIBS areas include Concord, Laconia and a small single segment in Bow.

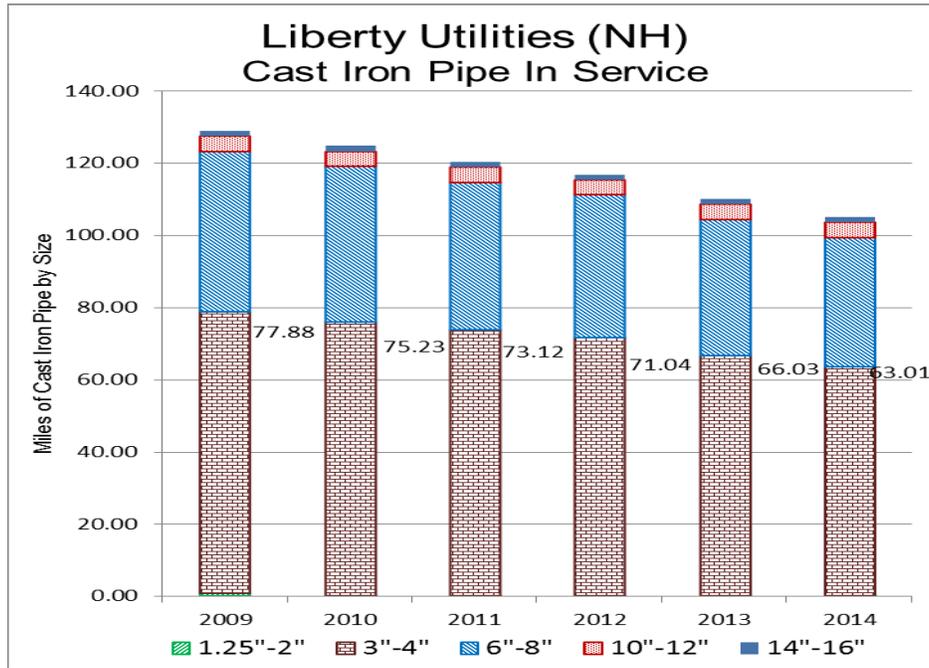
9 There is virtually no difference in each community’s share of leak prone pipe between FY
 10 2014 and FY 2015. This reflects that Liberty is spreading its CIBS program work among all
 11 three of its divisions: Northern, Central, Southern.

12 **Q. Do you have a breakdown of the how much cast iron pipe is in service for each pipe**
 13 **diameter, and if yes, why is this information important to the Safety Division?**

14 A. The Safety division tracks the amount of every type and diameter of pipe in service. This
 15 information helps Staff track the performance of each type and size of pipe as we prioritize
 16 which pipe is more leak prone. The information also gives us a better idea of the cost to
 17 replace the pipe. See Figure 2 below for a breakdown of the Company’s inventory of cast
 18 iron pipe by pipe diameter. Staff believes Liberty should concentrate on the 3”, 4”, and 6”
 19 diameter cast iron mains that make up the majority of the remaining cast iron inventory.

1

Figure 2.



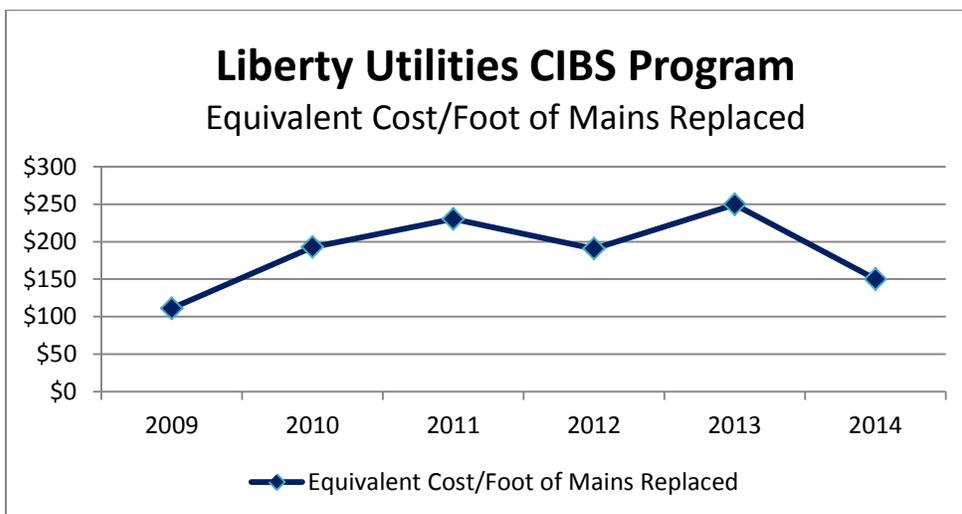
2

3 **Q. Since the inception of the CIBS Program, how does the overall cost per foot of mains**
 4 **replaced compare from year to year?**

5 A. See Figure 3 below that shows the overall CIBS Program expenditures in cost per foot of
 6 mains replaced from year to year.

7

Figure 3



8

9

1 **II. STAFF COMMENTS ON THE FY 2015 RESULTS AND FY 2015 CIBS**
 2 **FORECAST PLAN**

3 **Q. Please describe the FY 2015 Program and what was accomplished versus what was**
 4 **forecasted.**

5 A. Reference Attachment GMC-ITC-2-REVISED 5-20-15. Liberty initially proposed 18 CIBS
 6 projects for FY 2015 (4 in Nashua, 8 in Manchester, and 6 in Concord/Laconia) for a planned
 7 total of 3.7 miles. At Staff’s urging Liberty increased to 28 its planned projects for FY 2015,
 8 which covered 5.45 miles. Liberty completed 23 CIBS projects (6 in Nashua, 10 in
 9 Manchester, and 7 in Concord/Laconia) for a total of 4.73 miles replaced. Liberty thus
 10 replaced approximately 28% more leak prone pipe than originally forecasted. Five of the
 11 28 projects were delayed and never started. Those five have been rescheduled for FY 2016.
 12 The 4.73 miles replaced represents approximately 35% more main replaced than the previous
 13 year, but 13% less than the modified proposal to Staff in June of 2014. Liberty also replaced
 14 the highest number of bare steel services in FY 2015 since the inception of the program, a
 15 94% increase over FY 2014. See Table 1 below:

16 **Table 1:**

Liberty FY	Bare Steel Services Replaced from CIBS Program	Cast Iron Bare Steel Replacement Feet from CIBS Program	CIBS Equivalent Miles
FY 2009	104	15,183	2.88
FY 2010	126	21,050	3.99
FY 2011	105	14,086	2.67
FY 2012	59	8,236	1.56
FY 2013	49	8,738	1.65
FY 2014	82	18,537	3.51
FY 2015	159	24,964	4.73
	684	110,794	20.98
FY 2016 (Projected)	322	39,630	7.51

17
 18 **Q. What is your assessment of the adequacy of the Liberty CIBS results for Fiscal Year**
 19 **2015, beginning with a brief summary of the forecast?**

1 A. For FY 2015, the Company estimated it would replace 5.45 miles of cast iron and bare steel
2 mains and would replace 196 bare steel services that are tied to these mains. Liberty
3 projected it would cost \$6.978 million for these FY 2015 investments. This equates to an
4 estimated cost per mile of replaced main of slightly more than \$1,280,538.

5 The Company actually replaced 4.73 miles of cast iron and bare steel mains and 179 services
6 during FY 2015 at a cost of \$3.346 million (\$3.621 million if the 7 carryover costs from FY
7 2014 are included). The cost per mile of main with services replaced came to approximately
8 \$707,478.

9 Thus, the actual per mile loaded cost was 55.2% of the estimated cost.

10 **Q. What is your assessment of the adequacy of the Company's results for FY 2015?**

11 A. Although the Company's plan meets the requirements of prior settlement agreements
12 approved by the Commission, with the exception of carry over costs which I will go into
13 detail in section IV below, my concern is that we are not gaining sufficient ground on one of
14 the most important objectives of the overall replacement rate (both from CIBS and from
15 municipal projects) to accelerate the timeframe for replacing these problematic pipelines.

16 **Q. Please explain why you believe the Company gained ground FY 2015 in its CIBS mains
17 replacement program but overall did not sufficiently accelerate the total replacement
18 rate forecast iron/bare steel including municipal work?**

19 A. I have created Table 2 below to illustrate my observations. The table summarizes the total
20 cast iron and bare steel mains that have been replaced annually in the CIBS Replacement
21 Plan, the additional cast iron/bare steel pipe that is replaced during local municipal projects,
22 and the cast iron mains replaced as part of the separate Cast Iron Encroachment Program. As
23 noted in Table 2 with data provided by the Company in Attachment DBS-1, page 4 of Mr.
24 Simek's testimony, over the past seven years 39.65 miles of cast iron and bare steel mains
25 have been replaced, but only 21.18 miles (53%) have been replaced as part of the CIBS

1 program. This leaves 115.22 miles of cast iron and bare steel mains yet to be replaced. The
 2 average rate of replacement over the past seven years has been 5.66 miles per year and
 3 Liberty achieved that average in FY 2015. At the current pace, however, it will take an
 4 additional 20 years to replace all remaining cast iron and bare steel pipe in Liberty’s system.

5 **Table 2.**
 6 **Liberty Utilities Cast Iron and Bare Steel Replaced and Remaining Pipe**

CIBS Replacement Program Fiscal Year	Municipal Projects & Encroachment Program Pipe Miles Replaced	CIBS Program Pipe Miles Replaced /1	Total CIBS Plan, CIBS Municipal & CI Encroachment Miles Replaced	CIBS Pipe Miles Remaining in System /2
2009	2.11	2.96	5.07	149.80
2010	3.82	3.98	7.80	142.00
2011	1.81	2.79	4.60	137.40
2012	3.74	1.56	5.30	132.10
2013	4.15	1.65	5.80	126.30
2014	1.91	3.51	5.42	120.88
2015	0.93	4.73	5.66	115.22
Avg/Year	2.64	3.03	5.66	
Total Miles	18.47	21.18	39.65	
1. Source: Attachment DBS-1, p. 4 of 4, line 12				
2. Source: Attachment DBS-1, p. 4 of 4, line 13				

7
 8 The Safety Division (Staff) observes that while Liberty increased the amount of mileage that
 9 was replaced in the CIBS program to the highest since its inception, it was offset by the
 10 smallest amount of municipal work incurred during the last seven years. Thus there was only
 11 a minor change in the accelerated replacement rate time frame of approximately 20 years.

12 **Q. In testimony for the FY 2014 CIBS (DG 14-041) Staff noted three areas of concern.**
 13 **They were:**

- 14 **A) Rising Costs of municipal degradation Fees, Paving Requirements, and**
 - 15 **associated escalation of fees;**
 - 16 **B) Increasing Amounts of Internal Costs applied to the CIBS; and**
 - 17 **C) Increased focus of conversion on non-gas customers along CIBS segments.**
- 18 **What progress has been made regarding these three areas?**

19
 20 **A. Paving and Degradation Fees:**

1 The company was successful in reducing the paving requirements of one project in Nashua to
2 approximately 33% of those required in the previous year by reducing the “cutback”
3 requirement from three feet to one foot. Staff would expect this to be expanded for other
4 projects in Nashua. Liberty stated it is also attempting to reduce cutback requirements in
5 Concord and Manchester and is continuing discussions with those municipalities. It also
6 appears that Liberty’s increased communication efforts with municipal officials are resulting
7 in savings in pavement requirements than in years past. Staff believes continued and
8 frequent communications with public works departments, municipal engineering
9 departments, and other municipal officials is essential to a successful CIBS program.
10 Liberty’s testimony indicates there is a combined \$483,159 of degradation fees hanging in
11 the balance that have not been applied for work completed in FY 2014 and FY 2015. This
12 amount is at risk of being further applied to the already incurred CIBS expenditures. Once
13 again the legal resolution is not expected to be completed prior to FY 2016 (April 1, 2015 to
14 March 31, 2016) work being completed and the exposure for FY 2016 is an additional
15 \$387,195. These two amounts combined leave \$870,354 excluding legal fees at risk for the
16 existing customer base.

17 Liberty has incurred nearly \$400,000 of legal fees so far in challenging municipally applied
18 degradation fees and is anticipating approximately half to be applied to the CIBS program.

19 **Internal Costs:**

20 Controlling internal overhead (loaded) costs has been another significant component of these
21 projects in recent years. I am concerned that the internal overheads have generally been
22 increasing from year to year at a rate that, in my professional opinion, is unsustainable. We
23 have shared this concern with the Company over the past few years and while we have seen

1 some improvement in the unit costs because the overheads are being spread among more
2 miles, there has been steadily rising internal costs. RSK Attachment 3 contains a discovery
3 question on this that exemplifies the concern. Staff continues to look for breakthroughs to
4 see if additional improvement is achievable as the Company transitions away from the larger
5 National Grid model to one managed by the smaller Liberty operation.

6 **Conversions of Non Gas Customers:**

7 Regarding increased focus on converting non-gas customers, Staff feels that FY 2015 CIBS
8 program was the first year where Liberty really targeted customers along the CIBS projects
9 and were successful. Liberty was able to install 17 new services and add 15 new customers
10 from a potential pool of 47. This is a vast improvement over the previous years that yielded
11 one or two customer additions along CIBS routes. Taking advantage of opportunities to add
12 new customers along existing CIBS mains as the pipes are being replaced is something that I
13 feel should be a high priority for the Company. Even though this is a labor intensive
14 proposition that may require multiple visits to some project locations, the benefits to the
15 Company should make these extra efforts a high priority. Often these potential customers
16 need to be educated one-on-one with trained sales specialists that are able to answer
17 questions, provide cost-benefit analysis, discuss energy efficiency incentives that are being
18 offered, explain applicable state and federal tax incentives, and provide a list of reputable gas
19 appliance suppliers and installers. These are the customers who have held out the longest
20 and prove to be the most time consuming. They should not be measured the same as those
21 customers who result from new construction or those for whom main extensions are required
22 because of a new development.

23 Liberty sends gas and non-gas customers the same abutters letter that notifies them of the

1 reconstruction work that will be in the area. This letter only contains a minor solicitation in
2 the last paragraph that provides a phone number to call. It is not signed by a named
3 individual.

4 Staff suggests that separating the non-gas from the gas customers and offering more vibrant
5 and specific solicitations to the non-gas customers may yield increased response rates.

6 Liberty can also create greater customer anticipation by letting them know sooner in the
7 process (more than a year in advance) that gas redevelopment work will be forthcoming with
8 details on how gas can be a solution for those who have not yet converted.

9 For FY 2016 Liberty projects that there are 97 potential customers along CIBS routes. An
10 equivalent success rate would yield 33 conversions or installations of new services.

11

1 **III. STAFF COMMENTS ON THE FY 2016 FORECAST IN RELATION TO FY 2015**
2 **PROGRAM RESULTS**

3 **Q. What is your assessment of the adequacy of the Liberty CIBS plan for Fiscal Year 2016,**
4 **beginning with a brief summary of the forecast?**

5 A. Under the CIBS program forecast for FY 2016, the Company estimates it will replace 7.5
6 miles of cast iron and bare steel mains and will need to replace 322 bare steel services that
7 are tied to these mains. Liberty projects this will cost \$7.302 million which equates to
8 \$973,324 per mile of replaced main.

9 **Q. How does the FY 2016 forecast compare with the Company's CIBS results during FY**
10 **2015.**

11 A. The Company replaced 4.73 miles of cast iron and bare steel mains and 179 services during
12 FY 2015 at a cost of \$3.346 million (\$3.621 million if include the 7 carryover costs from FY
13 2014), or approximately \$707,478 per mile.

14 The FY 2016 forecast of \$973,324 per mile is 38% higher than the actual cost per mile from
15 FY 2015. Staff attributes some of this higher cost to a greater number of services per mile
16 that will be replaced in FY 2016.

1 **IV. STAFF RECOMMENDATIONS OF CIBS ACCELERATED REPLACEMENT**
2 **PROGRAM GOING FORWARD FY 2016 AND OTHER SUGGESTED**
3 **RECOMMENDATIONS**

4 **Q. Liberty has indicated that they intend to remove the remaining cast iron and bare steel**
5 **within 10 years as opposed to the 20 years projected in Table 2. Does Staff agree with**
6 **this accelerated time frame?**

7 A. Staff welcomes the proposed increased rate of replacement projects. Staff is cautious that
8 this requires increased management to oversee that quantity of projects, manage resources
9 efficiently (especially outside crews), and maintain sufficient quality assurance of the
10 replacement projects while balancing increased growth projections and other large capital
11 projects. Staff suggests that Liberty may want to review the replacement criteria for cast iron
12 mains with diameters in the 10 to 16 inch range. This larger diameter pipe accounts for less
13 than 5 percent of the total cast iron pipe in the ground, has greater wall thickness, and has
14 been less prone to leaks. These larger diameters should primarily be considered when there
15 is significant savings to be achieved in conjunction with a municipal project.

16 Staff believes there are operational and maintenance offsets that can be achieved such as
17 having less emergency responses, less leak surveys required, less overtime associated with
18 leak repairs that require repairs after normal business hours.

19 **Q. What are the cost implications of accelerating the pace of the program as you suggest?**

20 A. Although the annual costs would be noticeably higher in total, I believe the per-therm
21 charges would be absorbed with manageable impact on customer bills. The future costs will
22 inevitably be higher and pushing the program out over an extended amount of time only
23 delays the conclusion of the program while not reducing risk. In the long run, I would expect
24 that rate payers would realize savings in costs related to this accelerated program. Other
25 considerations would be the improved safety and reliability from replacing these problem
26 mains over the course of the next ten years as opposed to the next twenty years.

1 **Q. Please explain the “carry over cost provision” of Settlement Attachment J Section 20?**

2 A. According to Liberty, the main costs for FY 2015 were \$2,763,754 for 4.73 miles, plus
3 \$243,102 in paving costs from seven incomplete FY 2014 projects. Liberty added the FY
4 2014 paving costs to the FY 2015 costs, which it recorded as a total main expenditure of
5 \$3,006,856 (reference Attachment GMC-ITC 2-revised column S, row 4)(\$2,763,754 +
6 \$243,102).] Similarly, Liberty listed \$582,619 for 159 bare steel services and added \$32,079
7 from seven incomplete FY 2014 projects. Liberty recorded this as a total service expenditure
8 of \$614,698(\$582,619 + \$32,079). The total amount of paving carryover from FY 2014 to
9 FY 2015 is thus \$275,181. This paving carryover causes two problems. First, including the
10 carryover does not provide a true picture of associated main costs for each project since the
11 costs expended are not allocated to the correct project but become lumped together to form
12 an average for the year.

13 Second, the carryover is not in accordance with the terms of the Settlement Agreement. The
14 carryover provision of the Settlement Agreement excludes from CIBS “carryover costs in
15 aggregate exceeding 5% of the approved estimated total expenditures under the CIBS
16 program for the construction year, unless approved by the Safety Division. Such carryover
17 costs include items such as restoration costs not incurred during the construction year.”

18 Settlement Agreement, Attachment J, Section 20(d)(2.7) (hereinafter Attachment J). Any
19 carryover costs that exceed this 5% cap cannot be recovered through CIBS but may be
20 included in the next rate case.

21 Attachment J reflects Staff’s attempt to limit large carryover costs by capping the recovery of
22 those costs through CIBS. In FY 2015 the estimated costs were \$5,004,572, so 5% of those
23 costs were \$250,229, the maximum allowed to be recovered within the CIBS for FY 2015.

24 Staff believes \$24,952 of extra costs may have been erroneously included [\$275,181-

1 \$250,229]. Staff does not recommend that these costs be deferred to the next rate case at this
2 juncture, because revised filings have been made, but Staff wants the Commission to note
3 that the recoverable costs are not being calculated precisely.

4 **Q. Does Staff believe this occurred previously?**

5 A. Yes. Staff believes that in FY 2014 extra carry over costs from FY 2013 were not properly
6 recorded as well. In FY 2014 the estimated costs were \$ 3,425,250 for 20 projects, so 5% of
7 those costs were \$171,262 that Liberty could recover within the CIBS for FY 2014. Staff
8 believes \$165,531 of extra costs may have been erroneously included (\$336,793 for
9 combined paving costs of mains and services carried over for 7 projects from FY 2013).
10 Staff estimates that in FY 2013 a similar error may have occurred where \$322,836 should
11 have been delayed until the next rate case. Again, at this point in time, Staff does not believe
12 these discrepancies should be readjusted, but writes to make the Commission aware of the
13 issue.

14 **Q. Can the carry over cost problem worsen in FY 2016?**

15 A. The problem gets larger as more replacement projects are undertaken. In FY 2015, 52% of
16 the projects undertaken were not completed by including the final restoration expenditures.
17 Of the 23 projects undertaken in FY 2015, the paving for 12 were not completed accounting
18 for a total of \$912,607 of delayed costs. Under the terms of Attachment J, only \$365,108 of
19 the \$912,607 estimated carryover costs may be recovered in FY 2016 (.05 x \$7,302,160),
20 while the remaining \$547,499 would be recovered during the next rate case.

21 **Q. Does Staff think Attachment J has been effective?**

22 A. No, the results have not been what the Staff originally envisioned. Liberty does not
23 optimally take advantage of the ability to immediately recover through the CIBS program for
24 this large portion of its expenditures. Staff originally envisioned that the projects would be

1 fully completed in the construction season in which they were undertaken. The large
2 carryover costs distort the true variances of actual expenditures compared to estimated
3 expenditures on a project by project basis making it difficult to assess the accuracy of
4 Liberty's estimates. It also hampers Staff's ability to understand why variances differ so
5 much from project to project.

6 **Q. Does Staff suggest any other changes that may get more of these projects completed in a**
7 **timelier deadline?**

8 A. The simple solution is for Liberty to start the projects as early in the season as possible. This
9 will allow time to finish final restoration so all costs of the fiscal year can be included. It
10 should be a manageable problem. Second, Staff believes the disincentives in Attachment J
11 (or incentives, depending on one's perspective) are only going to get larger as Liberty
12 replaces significantly more main per year in the future. One possibility is to modify
13 Attachment J language by enhancing the incentive by limiting cost recovery to those projects
14 that are fully completed. The modification language could consider disallowing costs of the
15 unfinished mains and services as part of the CIBS program and postpone all those costs, not
16 just paving costs, to a future rate case. It should be noted that if Liberty plans to file
17 subsequent rate cases at frequent intervals, then the existing concept contained Attachment J
18 becomes less effective in realizing its intended objective. This remains true for any proposed
19 limitations for the main and service costs.

20 **Q. What other recommendations do you have going forward?**

21 A. I would recommend that in Revised Attachment DBS-2, page 4 of 4, Liberty include a
22 column that restates the total cost impact considering as if Rate Case in FY 2016 was not
23 filed as well as a version that incorporates the results of the Rate Case in DG 14-180
24 including any Final Order considerations given by the Commission. This has been done

1 previously in FY 2010 for National Grid.

2 I would also recommend that the finalized spreadsheets indicate on a project by project basis
3 how many bare steel services were replaced or inserted, how many coated steel services were
4 tied over to the main, how many plastic services were tied over to the main and new services
5 installed to recently acquired customers and the associated costs with these groups of
6 services. Currently the estimates are shown on a project by project basis but the final
7 submitted spreadsheet does not and Liberty provides only a lump sum aggregate in testimony
8 each year.

9 Lastly, I would recommend the provision that the Commission requires as was done in
10 Commission Order No. 25,684 that Liberty would provide a report to Staff by the end of
11 2015 documenting the results of its market research conducted during 2015, and its plans for
12 marketing to new customers on a going forward basis along mains being replaced under the
13 Company's Cast Iron/Bare Steel Replacement Program.

14 **Q. Have the FY2015 costs used to calculate the CIBS revenue requirement and proposed**
15 **rate increase been audited by the commission Audit Staff?**

16 A. No. The annual CIBS filings have not typically been audited. However, at this point in time
17 Staff recommends that the annual CIBS filing should be audited going forward because of
18 the increased number of replacement miles forecasted and resulting increased expenditures
19 associated with the accelerated program.

20 **Q. Does this conclude your testimony?**

21 A. Yes.

22

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FILING INSTRUCTIONS:

- a) Pursuant to N.H. Admin Rule Puc 203.02 (a), with the exception of Discovery, file 7 copies, as well as an electronic copy, of all documents including cover letter with:**

DEBRA A HOWLAND
EXECUTIVE DIRECTOR
NHPUC
21 S. FRUIT ST, SUITE 10
CONCORD NH 03301-2429

- b) Serve an electronic copy with each person identified on the Commission's service list and with the Office of Consumer Advocate.**
- c) Serve a written copy on each person on the service list not able to receive electronic mail.**