

**Liberty Utilities (EnergyNorth Natural Gas) Corp.
d/b/a Liberty Utilities
Docket No. DG 14-041
Attachment MGS-1
May 15, 2014**

**Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2014 Cast Iron/Bare Steel Replacement Program
Computation of Revenue Requirement
May 15, 2014**

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Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2014 Cast Iron/Bare Steel Replacement Program
Computation of Revenue Requirement

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	Actual FY09	July 1, 2009 through March 31, 2010 9 Months FY10	Actual FY11	Actual FY12	Actual FY13	Actual FY14	Estimate FY15
Incremental Investment							
1 CIBS Program Actual Spend-Mains	1,736,153	4,049,995	3,391,069	1,570,208	2,174,813	2,781,140	-
2 CIBS Program Actual Spend-Service	729,463	798,555	668,631	352,005	161,352	370,655	-
3 CIBS Program Estimated Spend-Mains					-	-	3,235,778
4 CIBS Program Estimated Spend-Service					-	-	597,383
5 Base Spending Amount	500,000	482,110	500,000	500,000	500,000	500,000	500,000
6 Incremental Amount	1,965,616	4,366,440	3,559,700	1,422,213	1,836,165	2,651,795	3,333,161
7 Cumulative CIBS Program Spend Since July 1, 2009		4,366,440	7,926,140	9,348,353	11,184,518	13,836,312	17,169,473
8							
Deferred Tax Calculation							
9 Annual Tax Depreciation	1,031,948	4,366,440	3,559,700	1,422,213	1,836,165	2,651,795	3,333,161
10 Cumulative Tax Depreciation Since July 1, 2009		4,366,440	7,926,140	9,348,353	11,184,518	13,836,312	17,169,473
11							
12 Annual Book Depreciation	49,836	98,794	179,335	212,059	249,951	307,352	382,153
13 Cumulative Book Depreciation Since July 1, 2009		98,794	278,129	490,188	740,138	1,047,490	1,429,643
14							
15 Annual Book/Tax Timer	982,112	4,267,646	3,380,365	1,210,154	1,586,214	2,344,443	2,951,008
16 Cumulative Book/Tax Timer	982,112	4,267,646	7,648,011	8,858,165	10,444,379	12,788,822	15,739,830
17 Statutory Tax Rate	40.53%	40.53%	40.53%	40.53%	40.53%	39.61%	39.61%
18							
19 Deferred Tax Reserve	398,001	1,729,677	3,099,739	3,590,214	4,233,107	5,161,741	6,330,635
20							
Rate Base Calculation							
21 Plant In Service	1,965,616	4,366,440	7,926,140	9,348,353	11,184,518	13,836,312	17,169,473
22 Accumulated Depreciation	(49,836)	(98,794)	(278,129)	(490,188)	(740,138)	(1,047,490)	(1,429,643)
23 Net Plant in Service	1,915,780	4,267,646	7,648,011	8,858,166	10,444,379	12,788,822	15,739,830
24 Deferred Tax Reserve	(398,001)	(1,729,677)	(3,099,739)	(3,590,214)	(4,233,107)	(5,161,741)	(6,330,635)
25 Year End Rate Base	1,517,779	2,537,969	4,548,272	5,267,951	6,211,273	7,627,082	9,409,195
26							
Revenue Requirement Calculation							
27 Year End Rate Base	1,517,779	2,537,969	4,548,272	5,267,951	6,211,273	7,627,082	9,409,195
28 Pre-Tax ROR	11.53%	11.53%	11.63%	11.63%	11.63%	11.50%	11.50%
29 Return and Taxes	175,003	292,628	528,964	612,663	722,371	877,114	1,082,057
30 Book Depreciation	49,836	98,794	179,335	212,059	249,951	307,352	382,153
31 Property Taxes	37,347	88,340	194,259	231,198	241,265	359,366	442,289
32 Annual Revenue Requirement	262,185	479,762	902,558	1,055,920	1,213,587	1,543,832	1,906,499
33							
34 Prior Year Annual Revenue Requirement	-	-	479,762	902,558	1,055,920	1,213,587	1,543,832
35							
36 Incremental Annual Rate Adjustment Since July 1, 2009	262,185	479,762	422,796	153,362	157,667	330,245	362,667
37							
Imputed Capital Structure/ROR (see DG 10-017)							
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Line / Column Notes:

- 20 Using an effective tax rate of 39.61% starting in FY 2014 and an effective tax rate of 40.53% additions prior to fiscal 2014
- 34 Property tax rate reflects actual calendar year 2013 ratio of municipal tax expense to average net plant in service per page 3 of 4.
- Col (b) In accordance with Exhibit EN-3 of the National Grid/KeySpan Merger Settlement Agreement (Docket No. DG 06-107), EnergyNorth is allowed to implement on July 1 of each year, a permanent increase in its base distribution delivery rates to recover the annual revenue requirement for those investments made in the preceding fiscal year ended March 31st in excess of the CIBS base amount. As shown on Attachment A of Exhibit EN-3, the revenue requirement in any year reflects deferred income tax reserves based on the cumulative book/tax timing difference of all prior year CIBS investments. However, on July 1, 2010, EnergyNorth implemented new temporary base distribution delivery rates as part of its rate case in Docket No. DG 10-017. These new rates were based on the historic test year ended June 30, 2009 which included the first three months of CIBS investment for the fiscal year ended March 31, 2010. As a consequence, the revenue requirement for the fiscal year ended March 31, 2010 reflected CIBS investment for only the last nine months of the fiscal year ended March 31, 2010. In addition, this revenue requirement did not reflect deferred income tax reserves based on cumulative book/tax timing differences on CIBS spending prior to June 30, 2009.

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2014 Cast Iron/Bare Steel Replacement Program
Vintage Year Book Depreciation Schedule

		(a)	(b)	(c)	(d)	(e)	(f)	(g)	
		Actual	July 1, 2009 thru March 31, 2010 9 Months	Actual	Actual	Actual	Actual	Estimate	
		FY09	FY10	FY11	FY12	FY13	FY14	FY15	
Book Depreciation Schedule-Mains									
1	Actual CIBS spending	1,736,153	4,049,995	3,391,069	1,570,208	2,174,813	2,781,140	3,235,778	
2	Base spending	(352,073)	(402,707)	(417,650)	(408,438)	(465,466)	(441,199)	(422,077)	
3	Incremental CIBS spending	1,384,080	3,647,288	2,973,419	1,161,770	1,709,346	2,339,940	2,813,701	
4									
5	Book Depreciation Rate:								
6	Year 1	2.54%	35,065	0	0	0	0	0	
7	Year 1 beginning in FY10	1.92%		70,028	57,090	32,819	44,927	54,023	
8	Year 2	1.92%		70,028	57,090	22,306	32,819	44,927	
9	Year 3	1.92%			70,028	57,090	22,306	32,819	
10	Year 4	1.92%				70,028	57,090	22,306	
11	Year 5	1.92%					70,028	57,090	
12	Year 6	1.92%						70,028	
13	Book Depreciation Expense-Mains	35,065	70,028	127,118	149,424	182,243	227,170	281,193	
14									
15	Accumulated Depreciation Mains-Beginning of Year	-	-	70,028	197,146	346,570	528,813	755,982	
16	Accumulated Depreciation Mains-End of Year	35,065	70,028	197,146	346,570	528,813	755,982	1,037,175	
17									
18									
19	Book Depreciation Schedule-Services								
20									
21	Actual CIBS spending	729,463	798,555	668,631	352,005	161,352	370,655	597,383	
22	Base spending	(147,927)	(79,403)	(82,350)	(91,562)	(34,534)	(58,801)	(77,923)	
23	Incremental CIBS spending	581,536	719,152	586,281	260,443	126,818	311,854	519,460	
24									
25	Book Depreciation Rate:								
26	Year 1	2.54%	14,771	0	0	0	0	0	
27	Year 1 beginning in FY10	4.00%		28,766	23,451	10,418	5,073	12,474	
28	Year 2	4.00%		28,766	23,451	10,418	5,073	12,474	
29	Year 3	4.00%			28,766	23,451	10,418	5,073	
30	Year 4	4.00%				28,766	23,451	10,418	
31	Year 5	4.00%					28,766	23,451	
32	Year 6	4.00%						28,766	
33	Book Depreciation Expense-Services	14,771	28,766	52,217	62,635	67,708	80,182	100,960	
34									
35	Accumulated Depreciation Services-Beginning of Year	-	-	28,766	80,983	143,618	211,326	291,508	
36	Accumulated Depreciation Services-End of Year	14,771	28,766	80,983	143,618	211,326	291,508	392,468	
37									
38									
39									
40	Total Mains & Services Depreciation Expense	49,836	98,794	179,335	212,059	249,951	307,352	382,153	
41									
42	Total Mains & Services Accumulated Depreciation	49,836	98,794	278,129	490,188	740,138	1,047,490	1,429,643	

2(f) & 22(f) FY 2015 estimate split 84.4% Mains / 15.6% Services based upon FY 2015 estimated spend.

6(a) & 26(a) FY 2009 filing used the composite depreciation rate for both mains and services.

col. (b) See footnote regarding column (b) on page 1 of 5.

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2014 Cast Iron/Bare Steel Replacement Program
Municipal Taxes as a Percentage of Net Plant

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
	12/31/2005	12/31/2006	12/31/2007	12/31/2008	12/31/2009	12/31/2010	12/31/2011	12/31/2012	12/31/2013
1 Plant in Service (page 100, table 10)	258,573	272,678	289,379	305,221	319,737	332,049	344,966	356,165	381,214
2 Depreciation and Amortization Reserve (a)	(82,363)	(88,564)	(94,562)	(102,587)	(108,270)	(114,294)	(119,973)	(121,047)	(129,209)
3 Net Plant	<u>176,209</u>	<u>184,114</u>	<u>194,817</u>	<u>202,634</u>	<u>211,467</u>	<u>217,756</u>	<u>224,993</u>	<u>235,118</u>	<u>252,006</u>
4									
5 Average Net Plant									
6 Plant in Service		265,625	281,028	297,300	312,479	325,893	338,508	350,565	368,690
7 Depreciation Reserve		(85,463)	(91,563)	(98,575)	(105,429)	(111,282)	(117,133)	(120,510)	(125,128)
8 Net Plant		<u>180,162</u>	<u>189,465</u>	<u>198,726</u>	<u>207,051</u>	<u>214,611</u>	<u>221,375</u>	<u>230,056</u>	<u>243,562</u>
9									
10 Municipal Taxes (page 112, table 33)		<u>3,534</u>	<u>3,641</u>	<u>3,771</u>	<u>4,294</u>	<u>5,459</u>	<u>5,776</u>	<u>5,321</u>	<u>6,835</u>
11									
12 % Municipal Taxes to Net Plant		<u>1.96%</u>	<u>1.92%</u>	<u>1.90%</u>	<u>2.07%</u>	<u>2.54%</u>	<u>2.61%</u>	<u>2.31%</u>	<u>2.81%</u>

Note: Source of above data is the December 31 PUC Annual Report to be consistent with data previously provided to the Commission.

(a) From page 101 table 10 of the Annual Report to the New Hampshire Public Utilities, as adjusted by a reclassification of \$28,809,328 related to a reserve for cost of removal that has been reclassified as a liability (see Annual Report page 111, table 29)

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2014 Cast Iron/Bare Steel Replacement Program
Bill Impacts due to Cast Iron and Bare Steel Replacement Program

	(a) FY2009	(b) FY2010	(c) FY2011	(d) FY2012	(e) FY2013	(f) FY2014	(g) Estimate FY2015
1 Annual Increase due to Cast Iron Bare Steel program	262,185	479,762	521,590	(44,226)	157,667	330,245	362,667
2							
3 Annual Throughput (see Winter COG filing - schedule 10B)	154,702,063	150,828,182	154,648,622	163,588,592	158,062,349	160,018,819	160,018,819
4							
5 Increase Factor	\$0.0017	\$0.0032	\$0.0034	(\$0.0003)	\$0.0010	\$0.0021	\$0.0023
6							
7 Annual Calendar Year Gross Revenues (Annual Report - Page 28)	\$176,520,000	\$151,224,178	\$132,475,941	\$146,365,316	\$119,363,340	\$137,617,008	\$137,617,008
8							
9 Annual Percent Increase	0.15%	0.32%	0.39%	-0.03%	0.13%	0.24%	0.26%
10							
11 Miles of Main Replaced Annually	2.96	3.98	2.79	1.56	1.65	3.51	4.40
12 Cumulative Miles of Main Replaced	2.96	3.98	6.77	8.33	9.98	13.49	17.89
13 Miles of Cast Iron/Bare Steel Main Remaining ¹	149.8	142.0	137.4	132.1	126.30	120.88	116.48
14							
15 Services Replaced Annually	101	127	282	81	84	174	266
16 Cumulative Number of Services Replaced	101	127	409	490	574	748	1,014
17							
18 Typical Residential bill	\$1,289	\$1,090	\$1,075	\$1,057	\$1,020	\$1,122	\$1,122
19							
20 Typical Usage	797	797	797	797	797	797	797
21							
22 Annual Increase for Residential Heating customer	\$1.35	\$2.54	\$2.69	(\$0.22)	\$0.80	\$1.64	\$1.81
23							
24 Percent Bill Increase	0.10%	0.23%	0.25%	-0.02%	0.08%	0.15%	0.16%
25							
26							
27 Typical G-41	\$3,272	\$2,802	\$2,732	\$2,623	\$2,589	\$2,842	\$2,842
28							
29 Typical Usage	2,073	2,073	2,073	2,073	2,073	2,073	2,073
30							
31 Annual Increase for G-41 customer	\$3.51	\$6.59	\$6.99	(\$0.56)	\$2.07	\$4.28	\$4.70
32							
33 Percent Bill Increase	0.11%	0.24%	0.26%	-0.02%	0.08%	0.15%	0.17%
34							
35							
36 Typical G-42	\$22,210	\$18,400	\$17,791	\$17,274	\$16,764	\$18,663	\$18,663
37							
38 Typical Usage	15,270	15,270	15,270	15,270	15,270	15,270	15,270
39							
40 Annual Increase for G-42 customer	\$25.88	\$48.57	\$51.50	(\$4.13)	\$15.23	\$31.51	\$34.61
41							
42 Percent Bill Increase	0.12%	0.26%	0.29%	-0.02%	0.09%	0.17%	0.19%
43							
44							
45 Typical G-52	\$22,883	\$16,983	\$16,819	\$16,554	\$15,035	\$17,154	\$17,154
46							
47 Typical Usage	16,365	16,365	16,365	16,365	16,365	16,365	16,365
48							
49 Annual Increase for G-52 customer	\$27.74	\$52.05	\$55.19	(\$4.42)	\$16.32	\$33.77	\$37.09
50							
51 Percent Bill Increase	0.12%	0.31%	0.33%	-0.03%	0.11%	0.20%	0.22%

Line / Column Notes:

1(b)-16(b) Amounts are cumulative from July 1, 2009

¹These figures are as of the end of the prior calendar year (i.e. FY 2014 data is as of 12/31/2013)

**Liberty Utilities (EnergyNorth Natural Gas) Corp.
d/b/a Liberty Utilities
Docket No. DG 14-041
Attachment MGS-2
May 15, 2014**

**Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2014 Cast Iron/Bare Steel Replacement Program
Computation of Revenue Requirement Since Program Inception - Informational Only
May 15, 2014**

Computation of Revenue Requirement From Inception	1
Vintage Year Book Depreciation Schedule From Inception	2
Municipal Taxes as a Percentage of Net Plant From Inception	3
Bill Impacts due to Cast Iron and Bare Steel Replacement Program From Inception	4

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2014 Cast Iron/Bare Steel Replacement Program
Computation of Revenue Requirement From Inception

RESTATED AS IF RATE CASE WAS NOT FILED. FOR INFORMATIONAL PURPOSES ONLY.

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	Actual FY09	12 Months FY10	Actual FY11	Actual FY12	Actual FY13	Actual FY14	Estimate FY15
Incremental Investment							
1 CIBS Program Actual Spend-Mains	1,736,153	4,206,295	3,391,069	1,570,208	2,174,813	2,781,140	-
2 CIBS Program Actual Spend-Service	729,463	822,173	668,631	352,005	161,352	370,655	-
3 CIBS Program Estimated Spend-Mains					-	-	3,235,778
4 CIBS Program Estimated Spend-Service					-	-	597,383
5 Base Spending Amount	500,000	500,000	500,000	500,000	500,000	500,000	500,000
6 Incremental Amount	1,965,616	4,528,468	3,559,700	1,422,213	1,836,165	2,651,795	3,333,161
7 Cumulative CIBS Program Spend	1,965,616	6,494,084	10,053,784	11,475,997	13,312,162	15,963,956	19,297,118
8							
9 Deferred Tax Calculation							
10 Annual Tax Depreciation	1,031,948	5,462,136	3,559,700	1,422,213	1,836,165	2,651,795	3,333,161
11 Cumulative Tax Depreciation	1,031,948	6,494,084	10,053,784	11,475,997	13,312,162	15,963,956	19,297,118
12							
13 Annual Book Depreciation	49,836	152,184	232,725	265,448	303,340	360,741	435,542
14 Cumulative Book Depreciation	49,836	202,019	434,744	700,192	1,003,532	1,364,273	1,799,815
15							
16 Annual Book/Tax Timer	982,112	5,309,953	3,326,975	1,156,765	1,532,825	2,291,054	2,897,619
17 Cumulative Book/Tax Timer	982,112	6,292,065	9,619,040	10,775,805	12,308,630	14,599,684	17,497,303
18 Effective Tax Rate	40.53%	40.53%	40.53%	40.53%	40.53%	39.61%	39.61%
19							
20 Deferred Tax Reserve	398,001	2,550,174	3,898,597	4,367,434	4,988,688	5,896,174	7,043,921
21							
22 Rate Base Calculation							
23 Plant In Service	1,965,616	6,494,084	10,053,784	11,475,997	13,312,162	15,963,956	19,297,118
24 Accumulated Depreciation	(49,836)	(202,019)	(434,744)	(700,192)	(1,003,532)	(1,364,273)	(1,799,815)
25 Net Plant in Service	1,915,780	6,292,065	9,619,040	10,775,805	12,308,630	14,599,683	17,497,303
26 Deferred Tax Reserve	(398,001)	(2,550,174)	(3,898,597)	(4,367,434)	(4,988,688)	(5,896,174)	(7,043,921)
27 Year End Rate Base	1,517,779	3,741,891	5,720,443	6,408,371	7,319,942	8,703,509	10,453,381
28							
29 Revenue Requirement Calculation							
30 Year End Rate Base	1,517,779	3,741,891	5,720,443	6,408,371	7,319,942	8,703,509	10,453,381
31 Pre-Tax ROR	11.53%	11.53%	11.63%	11.63%	11.63%	11.50%	11.50%
32 Return and Taxes	175,003	431,440	665,288	745,294	851,309	1,000,904	1,202,139
33 Book Depreciation	49,836	152,184	232,725	265,448	303,340	360,741	435,542
34 Property Taxes	37,347	130,246	244,324	281,249	284,329	410,251	491,674
35 Annual Revenue Requirement	262,185	713,870	1,142,337	1,291,991	1,438,978	1,771,896	2,129,355
36							
37 Prior Year Annual Revenue Requirement	-	262,185	713,870	1,142,337	1,291,991	1,438,978	1,771,896
38							
39 Incremental Annual Rate Adjustment	262,185	451,684	428,467	149,654	146,987	332,918	357,459
40							
41							
42							
43 Imputed Capital Structure/ROR (see DG 10-017)							
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53							
	<u>Ratio</u>	<u>Rate</u>	<u>after-tax</u>	<u>Pre Tax</u>	<u>Pre Tax</u>	<u>Pre Tax</u>	
	50.00%	6.99%	3.495%	3.495%	3.495%	3.495%	
	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
	50.00%	9.67%	4.835%	8.130%	8.006%	8.006%	
	<u>100.00%</u>		<u>8.330%</u>	<u>11.625%</u>	<u>11.501%</u>		

Line / Column Notes:

- 20 Using an effective tax rate of 39.61% starting in FY 2014 and an effective tax rate of 40.53% additions prior to fiscal 2014
34 Property tax rate reflects actual calendar year 2013 ratio of municipal tax expense to average net plant in service per page 3 of 4.
Col (b) Amounts are as if rate case was never filed in 2009; informational only.
11 (b) Includes repairs tax catch up for FY 2009.

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2014 Cast Iron/Bare Steel Replacement Program
Computation of Revenue Requirement Since Program Inception - Informational Only

Vintage Year Book Depreciation Schedule From Inception

RESTATE AS IF RATE CASE WAS NOT FILED. FOR INFORMATIONAL PURPOSES ONLY.

		(a) Actual FY09	(b) 12 Months FY10	(c) Actual FY11	(d) Actual FY12	(e) Actual FY13	(f) Actual FY14	(g) Estimate FY15	
Book Depreciation Schedule-Mains									
1	Actual CIBS spending	1,736,153	4,206,295	3,391,069	1,570,208	2,174,813	2,781,140	3,235,778	
2	Base spending	(352,073)	(418,248)	(417,650)	(408,438)	(465,466)	(441,199)	(422,077)	
3	Incremental CIBS spending	1,384,080	3,788,047	2,973,419	1,161,770	1,709,347	2,339,940	2,813,701	
4									
5	Book Depreciation Rate:								
6	Year 1	2.54%	35,065	35,065	35,065	35,065	35,065	35,065	
7	Year 1 beginning in FY10	1.92%		72,731	57,090	22,306	32,819	44,927	
8	Year 2	1.92%		72,731	57,090	22,306	32,819	44,927	
9	Year 3	1.92%			72,731	57,090	22,306	32,819	
10	Year 4	1.92%				57,090	22,306	32,819	
11	Year 5	1.92%				57,090	22,306	32,819	
12	Year 6	1.92%					22,306	32,819	
13	Book Depreciation Expense-Mains	35,065	107,796	164,886	187,191	220,010	264,937	318,960	
14									
15	Accumulated Depreciation Mains-Beginning of Year	-	35,065	142,860	307,746	494,937	714,947	979,884	
16	Accumulated Depreciation Mains-End of Year	35,065	142,860	307,746	494,937	714,947	979,884	1,298,844	
17									
18									
19	Book Depreciation Schedule-Services								
20									
21	Actual CIBS spending	729,463	822,173	668,631	352,005	161,352	370,655	597,383	
22	Base spending	(147,927)	(81,752)	(82,350)	(91,562)	(34,534)	(58,801)	(77,923)	
23	Incremental CIBS spending	581,536	740,421	586,281	260,443	126,818	311,854	519,460	
24									
25	Book Depreciation Rate:								
26	Year 1	2.54%	14,771	14,771	14,771	14,771	14,771	14,771	
27	Year 1 beginning in FY10	4.00%		29,617	23,451	10,418	5,073	12,474	
28	Year 2	4.00%		29,617	23,451	10,418	5,073	12,474	
29	Year 3	4.00%			29,617	23,451	10,418	5,073	
30	Year 4	4.00%				29,617	23,451	10,418	
31	Year 5	4.00%					29,617	10,418	
32	Year 6	4.00%						10,418	
33	Book Depreciation Expense-Services	14,771	44,388	67,839	78,257	83,330	95,804	116,582	
34									
35	Accumulated Depreciation-Beginning of Year	-	14,771	59,159	126,998	205,255	288,584	384,388	
36	Accumulated Depreciation-End of Year	14,771	59,159	126,998	205,255	288,584	384,388	500,970	
37									
38									
39									
40	Total Mains & Services Depreciation Expense	49,836	152,184	232,725	265,448	303,340	360,741	435,542	
41									
42	Total Mains & Services Accumulated Depreciation	49,836	202,019	434,744	700,192	1,003,531	1,364,272	1,799,814	

Line / Column Notes:

2(d) & 22(d) FY 2015 estimate split 84.4% Mains / 15.6% Services based upon FY 2015 estimated spend.

6(a) & 26(a) FY 2009 filing used the composite depreciation rate for both mains and services.

Col (b) See footnote regarding column (b) on page 1 of 4.

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2014 Cast Iron/Bare Steel Replacement Program
Computation of Revenue Requirement Since Program Inception - Informational Only

Municipal Taxes as a Percentage of Net Plant From Inception

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
	12/31/2005	12/31/2006	12/31/2007	12/31/2008	12/31/2009	12/31/2010	12/31/2011	12/31/2012	12/31/2013
1 Plant in Service (page 100, table 10)	258,573	272,678	289,379	305,221	319,737	332,049	344,966	356,165	381,214
2 Depreciation and Amortization Reserve (a)	(82,363)	(88,564)	(94,562)	(102,587)	(108,270)	(114,294)	(119,973)	(121,047)	(129,209)
3 Net Plant	176,209	184,114	194,817	202,634	211,467	217,756	224,993	235,118	252,006
4									
5 Average Net Plant									
6 Plant in Service		265,625	281,028	297,300	312,479	325,893	338,508	350,565	368,690
7 Depreciation Reserve		(85,463)	(91,563)	(98,575)	(105,429)	(111,282)	(117,133)	(120,510)	(125,128)
8 Net Plant		180,162	189,465	198,726	207,051	214,611	221,375	230,056	243,562
9									
10 Municipal Taxes (page 112, table 33)		3,534	3,641	3,771	4,294	5,459	5,776	5,321	6,835
11									
12 % Municipal Taxes to Net Plant		1.96%	1.92%	1.90%	2.07%	2.54%	2.61%	2.31%	2.81%

Note: Source of above data is the December 31 PUC Annual Report to be consistent with data previously provided to the Commission.

(a) From page 101 table 10 of the Annual Report to the New Hampshire Public Utilities, as adjusted by a reclassification of \$28,809,328 related to a reserve for cost of removal that has been reclassified as a liability (see Annual Report page 111, table 29)

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2014 Cast Iron/Bare Steel Replacement Program
Computation of Revenue Requirement Since Program Inception - Informational Only

Bill Impacts due to Cast Iron and Bare Steel Replacement Program From Inception

RESTATED AS IF RATE CASE WAS NOT FILED. FOR INFORMATIONAL PURPOSES ONLY.

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	Estimate FY2015
1 Cumulative Increase due to Cast Iron Bare Steel program	262,185	713,870	1,142,337	1,291,991	1,438,978	1,771,896	2,129,355
2							
3 Annual Throughput (see Winter COG filing - schedule 10B)	154,702,063	150,828,182	154,828,182	163,588,592	158,062,349	160,018,819	160,018,819
4							
5 Cumulative Increase Factor	\$0.0017	\$0.0047	\$0.0074	\$0.0079	\$0.0091	\$0.0111	\$0.0133
6							
7 Annual Calendar Year Gross Revenues (Annual Report - Page 28)	\$176,520,000	\$151,224,178	\$132,475,941	\$146,365,316	\$119,363,340	\$137,617,008	\$137,617,008
8							
9 Cumulative Percent Increase	0.15%	0.47%	0.86%	0.88%	1.21%	1.29%	1.55%
10							
11 Miles of Main Replaced Annually	2.96	3.98	2.79	1.56	1.65	3.51	4.40
12 Cumulative Miles of Main Replaced	2.96	6.94	9.73	11.29	12.94	16.45	20.85
13 Miles of Cast Iron/Bare Steel Main Remaining ¹	149.8	142.0	137.4	132.1	126.3	120.9	116.5
14							
15 Services Replaced Annually	101	127	282	81	84	174	266
16 Cumulative Number of Services Replaced	101	228	510	591	675	849	1,115
17							
18 Typical Residential bill (Based on Pk 11-12 and OffPeak 12 COG)	\$1,289	\$1,090	\$1,075	\$1,057	\$1,020	\$1,122	\$1,122
19							
20 Typical Usage	797	797	797	797	797	797	797
21							
22 Cumulative Increase for Residential Heating customer	\$1.35	\$3.77	\$5.88	\$6.29	\$7.26	\$8.83	\$10.61
23							
24 Percent Bill Increase	0.10%	0.35%	0.55%	0.60%	0.71%	0.79%	0.95%
25							
26							
27 Typical G-41 (Based on Pk 11-12 and OffPeak 12 COG)	\$3,272	\$2,802	\$2,732	\$2,623	\$2,589	\$2,842	\$2,842
28							
29 Typical Usage	2,073	2,073	2,073	2,073	2,073	2,073	2,073
30							
31 Cumulative Increase for G-41 customer	\$3.51	\$9.81	\$15.29	\$16.37	\$18.87	\$22.95	\$27.59
32							
33 Percent Bill Increase	0.11%	0.35%	0.56%	0.62%	0.73%	0.81%	0.97%
34							
35							
36 Typical G-42 (Based on Pk 11-12 and OffPeak 12 COG)	\$22,210	\$18,400	\$17,791	\$17,274	\$16,764	\$18,663	\$18,663
37							
38 Typical Usage	15,270	15,270	15,270	15,270	15,270	15,270	15,270
39							
40 Cumulative Increase for G-42 customer	\$25.88	\$72.27	\$112.66	\$120.60	\$139.02	\$169.09	\$203.20
41							
42 Percent Bill Increase	0.12%	0.39%	0.63%	0.70%	0.83%	0.91%	1.09%
43							
44							
45 Typical G-52 (Based on Pk 11-12 and OffPeak 12 COG)	\$22,883	\$16,983	\$16,819	\$16,554	\$15,035	\$17,154	\$17,154
46							
47 Typical Usage	16,365	16,365	16,365	16,365	16,365	16,365	16,365
48							
49 Cumulative Increase for G-52 customer	\$27.74	\$77.46	\$120.74	\$129.25	\$148.98	\$181.21	\$217.77
50							
51 Percent Bill Increase	0.12%	0.46%	0.72%	0.78%	0.99%	1.06%	1.27%

¹These figures are as of the end of the prior calendar year (i.e. FY 2014 data is as of 12/31/2013)

**Liberty Utilities (EnergyNorth Natural Gas) Corp.
d/b/a Liberty Utilities
Docket No. DG 14-041
Attachment MGS-3
May 15, 2014**

**Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2014 Cast Iron/Bare Steel Replacement Program
Computation of Estimated Revenue Requirement Impact of Refund of Degradation Fees - Informational Only
May 15, 2014**

Computation of Estimated Revenue Requirement Refund on Degradation Fees - Information	1
Vintage Year Book Depreciation Schedule	2
Municipal Taxes as a Percentage of Net Plant	3
Bill Impacts due to Cast Iron and Bare Steel Replacement Program	4

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2014 Cast Iron/Bare Steel Replacement Program
Computation of Estimated Revenue Requirement Refund on Degradation Fees - Informational Only

(a)	(b) Refund Year
<u>Incremental Investment</u>	
1 CIBS Progam Actual - Refund of Degradation Fees	(813,168)
2 Base Spending Amount	
3 Incremental Amount	(813,168)
4 Cumulative CIBS Program - Refund of Degradation Fees	(813,168)
5	
<u>Deferred Tax Calculation</u>	
6 Annual Tax Depreciation	(813,168)
7 Cumulative Tax Depreciation on Degradation Fees	(813,168)
8	
9 Annual Book Depreciation	(15,613)
10 Cumulative Book Depreciation on Degradation Fees	(15,613)
11	
12 Annual Book/Tax Timer	(797,555)
13 Cumulative Book/Tax Timer	(797,555)
14 Effective Tax Rate	39.61%
15	
16 Estimated Deferred Tax Reserve	(315,912)
17	
18	
19 <u>Rate Base Calculation</u>	
20 Plant In Service	(813,168)
21 Accumulated Depreciation	15,613
22 Net Plant in Service	(797,555)
23 Deferred Tax Reserve	315,912
24 Year End Rate Base	(481,644)
25	
26 <u>Revenue Requirement Calculation</u>	
27 Year End Rate Base	(481,644)
28 Pre-Tax ROR	11.50%
29 Return and Taxes	(55,389)
30 Book Depreciation	(15,613)
31 Property Taxes	2.81% (18,424)
32 Revenue Requirement Reduction	(89,426)
33	
34	

Imputed Capital Structure/ROR (see DG 10-017)

	Ratio	Rate	Weighted after-tax	(prior federal tax rate of 35% and state rate of 8.5%) Pre Tax	(current federal tax rate of 34% and state rate of 8.5%) Pre Tax
36					
37					
38					
39					
40					
41	Long Term Debt	50.00%	6.99%	3.495%	3.495%
42	Short Term Debt	0.00%	0.00%	0.00%	0.00%
43	Common Equity	50.00%	9.67%	4.835%	8.130%
44					
45		<u>100.00%</u>		<u>8.330%</u>	<u>11.625%</u>
				<u>11.501%</u>	

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2014 Cast Iron/Bare Steel Replacement Program
Computation of Estimated Revenue Requirement Impact of Refund of Degradation Fees - Informational Only

Vintage Year Book Depreciation Schedule

Book Depreciation Schedule-Mains		Refund Year	Degradation Fees by Year by City:					
		<u> </u>	<u>F/Y 2011</u>	<u>F/Y 2012</u>	<u>F/Y 2013</u>	<u>F/Y 2014</u>	<u>Totals</u>	
1	Actual CIBS spending	(813,168)						
2								
3	Incremental CIBS spending	<u>(813,168)</u>						
4								
5	Book Depreciation Rate:							
6	Year 1	1 92% (15,613)	Concord	19,856	37,960	9,747	48,350	115,913
7	Year 2	1 92%	Manchester	275,035	39,885	382,335	-	697,255
8	Year 3	1 92%	Totals	<u>294,891</u>	<u>77,845</u>	<u>392,082</u>	<u>48,350</u>	<u>813,168</u>
9	Year 4	1 92%						
10								
11	Book Depreciation Expense-Mains	<u>(15,613)</u>						
12								
13	Accumulated Depreciation-Beginning of Year	<u>-</u>						
14	Accumulated Depreciation-End of Year	<u><u>(15,613)</u></u>						

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2014 Cast Iron/Bare Steel Replacement Program
Computation of Estimated Revenue Requirement Impact of Refund of Degradation Fees - Informational Only

Municipal Taxes as a Percentage of Net Plant

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
	12/31/2005	12/31/2006	12/31/2007	12/31/2008	12/31/2009	12/31/2010	12/31/2011	12/31/2012	12/31/2013
1 Plant in Service (page 100, table 10)	258,573	272,678	289,379	305,221	319,737	332,049	344,966	356,165	381,214
2 Depreciation and Amortization Reserve (a)	(82,363)	(88,564)	(94,562)	(102,587)	(108,270)	(114,294)	(119,973)	(121,047)	(129,209)
3 Net Plant	176,209	184,114	194,817	202,634	211,467	217,756	224,993	235,118	252,006
4									
5 Average Net Plant									
6 Plant in Service		265,625	281,028	297,300	312,479	325,893	338,508	350,565	368,690
7 Depreciation Reserve		(85,463)	(91,563)	(98,575)	(105,429)	(111,282)	(117,133)	(120,510)	(125,128)
8 Net Plant		180,162	189,465	198,726	207,051	214,611	221,375	230,056	243,562
9									
10 Municipal Taxes (page 112, table 33)		3,534	3,641	3,771	4,294	5,459	5,776	5,321	6,835
11									
12 % Municipal Taxes to Net Plant		1.96%	1.92%	1.90%	2.07%	2.54%	2.61%	2.31%	2.81%

Note: Source of above data is the December 31 PUC Annual Report to be consistent with data previously provided to the Commission

(a) From page 101 table 10 of the Annual Report to the New Hampshire Public Utilities, as adjusted by a reclassification of \$28,809,328 related to a reserve for cost of removal that has been reclassified as a liability (see Annual Report page 111, table 29)

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2014 Cast Iron/Bare Steel Replacement Program
Computation of Estimated Revenue Requirement Impact of Refund of Degradation Fees - Informational On

Bill Impacts due to Cast Iron and Bare Steel Replacement Program

(a)	(b) Refund Year
1 Decrease Related to Refund of Degradation Fees	(89,426)
2	
3 Annual Throughput (see Winter COG filing - schedule 10B)	160,018,819
4	
5 Decrease Factor	(\$0.0006)
6	
7 Annual Calendar Year Gross Revenues (Annual Report - Page 28)	\$137,617,008
8	
9 Annual Percent Decrease	-0.06%
10	
11	
12	
13 Typical Residential bill (Based on Pk 11-12 and OffPeak 12 COG)	\$1,477
14	
15 Typical Usage	797
16	
17 Annual Increase for Residential Heating customer	(\$0.45)
18	
19 Percent Bill Decrease	-0.03%
20	
21	
22 Typical G-41 (Based on Pk 11-12 and OffPeak 12 COG)	\$2,489
23	
24 Typical Usage	2,073
25	
26 Annual Increase for G-41 customer	(\$1.16)
27	
28 Percent Bill Decrease	-0.05%
29	
30	
31 Typical G-42 (Based on Pk 11-12 and OffPeak 12 COG)	\$22,742
32	
33 Typical Usage	15,270
34	
35 Annual Increase for G-42 customer	(\$8.53)
36	
37 Percent Bill Decrease	-0.04%
38	
39	
40 Typical G-52 (Based on Pk 11-12 and OffPeak 12 COG)	\$19,215
41	
42 Typical Usage	16,365
43	
44 Annual Increase for G-52 customer	(\$9.15)
45	
46 Percent Bill Decrease	-0.05%