

**Liberty Utilities (EnergyNorth Natural Gas) Corp.  
d/b/a Liberty Utilities  
Docket No. DG 15-104  
Revised Attachment DBS-1  
May 20, 2015**

**Liberty Utilities (EnergyNorth Natural Gas) Corp.  
Fiscal Year 2015 Cast Iron/Bare Steel Replacement Program  
Computation of Revenue Requirement  
May 20, 2015**

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

Liberty Utilities (EnergyNorth Natural Gas) Corp.  
Fiscal Year 2015 Cast Iron/Bare Steel Replacement Program  
Computation of Revenue Requirement

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	
	July 1, 2009 through March 31, 2010								
	Actual FY09	9 Months FY10	Actual FY11	Actual FY12	Actual FY13	Actual FY14	Actual FY15	Estimate FY16	
<b>Incremental Investment</b>									
1	CIBS Program Actual Spend-Mains	1,736,153	4,049,995	3,391,069	1,570,208	2,174,813	2,781,140	3,006,856	-
2	CIBS Program Actual Spend-Service	729,463	798,555	668,631	352,005	161,352	370,655	614,698	-
3	CIBS Program Estimated Spend-Mains					-	-	-	6,352,460
4	CIBS Program Estimated Spend-Service					-	-	-	1,298,647
5	Base Spending Amount	500,000	482,110	500,000	500,000	500,000	500,000	506,240	506,240
6	Incremental Amount	1,965,616	4,366,440	3,559,700	1,422,213	1,836,165	2,651,795	3,115,314	7,144,867
7	Cumulative CIBS Program Spend Since July 1, 2009		4,366,440	7,926,140	9,348,353	11,184,518	13,836,312	16,951,627	24,096,494
8									
9									
<b>Deferred Tax Calculation</b>									
10	Annual Tax Depreciation	1,031,948	4,366,440	3,559,700	1,422,213	1,836,165	2,651,795	3,115,314	7,144,867
11	Cumulative Tax Depreciation Since July 1, 2009		4,366,440	7,926,140	9,348,353	11,184,518	13,836,312	16,951,627	24,096,494
12									
13	Annual Book Depreciation	49,836	98,794	179,335	212,059	249,951	307,352	378,164	540,712
14	Cumulative Book Depreciation Since July 1, 2009		98,794	278,129	490,188	740,138	1,047,490	1,425,655	1,966,367
15									
16	Annual Book/Tax Timer	982,112	4,267,646	3,380,365	1,210,154	1,586,214	2,344,443	2,737,150	6,604,155
17	Cumulative Book/Tax Timer	982,112	4,267,646	7,648,011	8,858,165	10,444,379	12,788,822	15,525,972	22,130,127
18	Statutory Tax Rate	40.53%	40.53%	40.53%	40.53%	40.53%	39.61%	39.61%	39.61%
19									
20	Deferred Tax Reserve	398,001	1,729,677	3,099,739	3,590,214	4,233,107	5,161,741	6,149,838	7,777,646
21									
<b>Rate Base Calculation</b>									
23	Plant In Service	1,965,616	4,366,440	7,926,140	9,348,353	11,184,518	13,836,312	16,951,627	24,096,494
24	Accumulated Depreciation	(49,836)	(98,794)	(278,129)	(490,188)	(740,138)	(1,047,490)	(1,425,655)	(1,966,367)
25	Net Plant in Service	1,915,780	4,267,646	7,648,011	8,858,166	10,444,379	12,788,822	15,525,972	22,130,127
26	Deferred Tax Reserve	(398,001)	(1,729,677)	(3,099,739)	(3,590,214)	(4,233,107)	(5,161,741)	(6,149,838)	(7,777,646)
27	Year End Rate Base	1,517,779	2,537,969	4,548,272	5,267,951	6,211,273	7,627,082	9,376,135	14,352,480
28									
29									
<b>Revenue Requirement Calculation</b>									
30	Year End Rate Base	1,517,779	2,537,969	4,548,272	5,267,951	6,211,273	7,627,082	9,376,135	14,352,480
31	Pre-Tax ROR	11.53%	11.53%	11.63%	11.63%	11.63%	11.50%	10.22%	10.22%
32	Return and Taxes	175,003	292,628	528,964	612,663	722,371	877,114	958,241	1,466,823
33	Book Depreciation	49,836	98,794	179,335	212,059	249,951	307,352	378,164	540,712
34	Property Taxes	37,347	88,340	194,259	231,198	241,265	359,366	461,121	657,265
35	Annual Revenue Requirement	262,185	479,762	902,558	1,055,920	1,213,587	1,543,832	1,797,526	2,664,800
36									
37	Prior Year Annual Revenue Requirement	-	-	479,762	902,558	1,055,920	1,213,587	1,543,832	1,797,526
38									
39	Incremental Annual Rate Adjustment Since July 1, 2009	262,185	479,762	422,796	153,362	157,667	330,245	253,694	867,274
40									
46									
47									
48									
<b>Actual Capital Structure/ROR</b>									
49					(prior federal	(current federal			
50					tax rate of 35%	tax rate of 34%			
51					and state rate	and state rate			
52					of 8.5%)	of 8.5%)			
53		<u>Ratio</u>	<u>Rate</u>	<u>after-tax</u>	<u>Pre Tax</u>	<u>Pre Tax</u>			
54	Long Term Debt	50.00%	4.43%	2.215%	2.215%	2.215%			
55	Short Term Debt	0.00%	0.00%	0.00%	0.00%	0.00%			
56	Common Equity	50.00%	9.67%	4.835%	8.130%	8.006%			
57									
58		<u>100.00%</u>		<u>7.050%</u>	<u>10.345%</u>	<u>10.221%</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 2014 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 2015 Cast Iron/Bare Steel Replacement Program  
Vintage Year Book Depreciation Schedule

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	
		July 1, 2009 thru March 31, 2010							
	Actual FY09	9 Months FY10	Actual FY11	Actual FY12	Actual FY13	Actual FY14	Actual FY15	Estimate FY16	
<b>Book Depreciation Schedule-Mains</b>									
1	Actual CIBS spending	1,736,153	4,049,995	3,391,069	1,570,208	2,174,813	2,781,140	3,006,856	6,352,460
2	Base spending	(352,073)	(402,707)	(417,650)	(408,438)	(465,466)	(441,199)	(420,314)	(415,133)
3	Incremental CIBS spending	1,384,080	3,647,288	2,973,419	1,161,770	1,709,346	2,339,940	2,586,542	5,937,327
4									
5	Book Depreciation Rate:								
6	Year 1	2.54%	35,065	0	0	0	0	0	0
7	Year 1 beginning in FY10	1.92%		70,028	57,090	22,306	32,819	44,927	113,997
8	Year 2	1.92%		70,028	57,090	22,306	32,819	44,927	49,662
9	Year 3	1.92%			70,028	57,090	22,306	32,819	44,927
10	Year 4	1.92%				70,028	57,090	22,306	32,819
11	Year 5	1.92%					70,028	57,090	22,306
12	Year 6	1.92%						70,028	57,090
13	Year 7	1.92%							70,028
14	Book Depreciation Expense-Mains	35,065	70,028	127,118	149,424	182,243	227,170	276,831	390,828
15									
16	Accumulated Depreciation Mains-Beginning of Year	-	-	70,028	197,146	346,570	528,813	755,982	755,982
17	Accumulated Depreciation Mains-End of Year	35,065	70,028	197,146	346,570	528,813	755,982	1,032,814	1,146,811
18									
19									
20	<b>Book Depreciation Schedule-Services</b>								
21									
22	Actual CIBS spending	729,463	798,555	668,631	352,005	161,352	370,655	614,698	1,298,647
23	Base spending	(147,927)	(79,403)	(82,350)	(91,562)	(34,534)	(58,801)	(85,926)	(84,867)
24	Incremental CIBS spending	581,536	719,152	586,281	260,443	126,818	311,854	528,772	1,213,780
25									
26	Book Depreciation Rate:								
27	Year 1	2.54%	14,771	0	0	0	0	0	0
28	Year 1 beginning in FY10	4.00%		28,766	23,451	10,418	5,073	12,474	48,551
29	Year 2	4.00%		28,766	23,451	10,418	5,073	12,474	21,151
30	Year 3	4.00%			28,766	23,451	10,418	5,073	12,474
31	Year 4	4.00%				28,766	23,451	10,418	5,073
32	Year 5	4.00%					28,766	23,451	10,418
33	Year 6	4.00%						28,766	23,451
34	Year 7	4.00%							28,766
35	Book Depreciation Expense-Services	14,771	28,766	52,217	62,635	67,708	80,182	101,333	149,884
36									
37	Accumulated Depreciation Services-Beginning of Year	-	-	28,766	80,983	143,618	211,326	291,508	291,508
38	Accumulated Depreciation Services-End of Year	14,771	28,766	80,983	143,618	211,326	291,508	392,841	441,392
39									
40									
41									
42	Total Mains & Services Depreciation Expense	49,836	98,794	179,335	212,059	249,951	307,352	378,164	540,712
43									
44	Total Mains & Services Accumulated Depreciation	49,836	98,794	278,129	490,188	740,138	1,047,490	1,425,655	1,588,202

2(g) & 22(g) FY 2016 estimate split 79.5% Mains / 20.5% Services based upon FY 2015 actual 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 2015 Cast Iron/Bare Steel Replacement Program  
Municipal Taxes as a Percentage of Net Plant**

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
	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	12/31/2014
1 Plant in Service	258,573	272,678	289,379	305,221	319,737	332,049	344,966	356,165	381,214	419,215
2 Depreciation and Amortization Reserve	(82,363)	(88,564)	(94,562)	(102,587)	(108,270)	(114,294)	(119,973)	(121,047)	(129,209)	(137,656)
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>	<u>281,559</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	400,214
7 Depreciation Reserve		(85,463)	(91,563)	(98,575)	(105,429)	(111,282)	(117,133)	(120,510)	(125,128)	(133,432)
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>	<u>266,782</u>
9										
10 Municipal Taxes		<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>5,962</u>	<u>6,835</u>	<u>7,919</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>2.59%</u>	<u>2.81%</u>	<u>2.97%</u>

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

Liberty Utilities (EnergyNorth Natural Gas) Corp.  
Fiscal Year 2015 Cast Iron/Bare Steel Replacement Program  
Bill Impacts due to Cast Iron and Bare Steel Replacement Program

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	Estimate FY2016
1 Annual Increase due to Cast Iron Bare Steel program	262,185	479,762	521,590	(44,226)	157,667	330,245	253,694	867,274
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	166,523,068	166,523,068
4								
5 Increase Factor	\$0.0017	\$0.0032	\$0.0034	(\$0.0003)	\$0.0010	\$0.0021	\$0.0015	\$0.0052
6								
7 Annual Calendar Year Gross Revenues (Annual Report - Page 11)	\$176,520,000	\$151,224,178	\$132,475,941	\$146,365,316	\$119,363,340	\$137,617,008	\$119,363,341	\$119,363,341
8								
9 Annual Percent Increase	0.15%	0.32%	0.39%	-0.03%	0.13%	0.24%	0.21%	0.73%
10								
11 Miles of Main Replaced Annually	2.96	3.98	2.79	1.56	1.65	3.51	5.00	8.00
12 Cumulative Miles of Main Replaced	2.96	6.94	9.73	11.29	12.94	16.45	21.45	29.45
13 Miles of Cast Iron/Bare Steel Main Remaining <sup>1</sup>	149.8	142.0	137.4	132.1	126.30	120.88	113.96	103.96
14								
15 Services Replaced Annually	101	127	282	81	84	174	316	500
16 Cumulative Number of Services Replaced	101	228	510	591	675	849	1,165	1,665
17								
18 <b>Typical Residential bill</b>	\$1,292	\$1,107	\$1,118	\$1,059	\$1,020	\$1,123	\$1,309	\$1,309
19								
20 Typical Usage	800	800	800	800	800	800	800	800
21								
22 Annual Increase for Residential Heating customer	\$1.36	\$2.54	\$2.70	(\$0.22)	\$0.80	\$1.65	\$1.22	\$4.17
23								
24 Percent Bill Increase	0.10%	0.23%	0.24%	-0.02%	0.08%	0.15%	0.09%	0.32%
25								
26								
27 <b>Typical G-41</b>	\$3,375	\$2,939	\$2,842	\$2,696	\$2,654	\$2,926	\$3,499	\$3,499
28								
29 Typical Usage	2,167	2,167	2,167	2,167	2,167	2,167	2,167	2,167
30								
31 Annual Increase for G-41 customer	\$3.67	\$6.89	\$7.31	(\$0.59)	\$2.16	\$4.47	\$3.30	\$11.29
32								
33 Percent Bill Increase	0.11%	0.23%	0.26%	-0.02%	0.08%	0.15%	0.09%	0.32%
34								
35								
36 <b>Typical G-42</b>	\$22,595	\$18,926	\$18,432	\$17,516	\$16,884	\$18,853	\$22,486	\$22,486
37								
38 Typical Usage	15,567	15,567	15,567	15,567	15,567	15,567	15,567	15,567
39								
40 Annual Increase for G-42 customer	\$26.38	\$49.52	\$52.50	(\$4.21)	\$15.53	\$32.13	\$23.72	\$81.07
41								
42 Percent Bill Increase	0.12%	0.26%	0.28%	-0.02%	0.09%	0.17%	0.11%	0.36%
43								
44								
45 <b>Typical G-52</b>	\$21,973	\$16,707	\$16,605	\$16,025	\$14,629	\$16,555	\$18,667	\$18,667
46								
47 Typical Usage	15,687	15,687	15,687	15,687	15,687	15,687	15,687	15,687
48								
49 Annual Increase for G-52 customer	\$26.59	\$49.90	\$52.91	(\$4.24)	\$15.65	\$32.37	\$23.90	\$81.70
50								
51 Percent Bill Increase	0.12%	0.30%	0.32%	-0.03%	0.11%	0.20%	0.13%	0.44%

Line / Column Notes:

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

<sup>1</sup>These figures are as of the end of the prior calendar year (i.e. FY 2015 data is as of 12/31/2014)

**Liberty Utilities (EnergyNorth Natural Gas) Corp.  
d/b/a Liberty Utilities  
Docket No. DG 15-104  
Revised Attachment DBS-2  
May 20, 2015**

**Liberty Utilities (EnergyNorth Natural Gas) Corp.  
Fiscal Year 2015 Cast Iron/Bare Steel Replacement Program  
Computation of Revenue Requirement Since Program Inception - Informational Only  
May 20, 2015**

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



Liberty Utilities (EnergyNorth Natural Gas) Corp.  
Fiscal Year 2015 Cast Iron/Bare Steel Replacement Program  
Vintage Year Book Depreciation Schedule From Inception

RESTATED 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) Actual FY15	(h) Estimate FY16	
<b>Book Depreciation Schedule-Mains</b>									
1	Actual CIBS spending	1,736,153	4,206,295	3,391,069	1,570,208	2,174,813	2,781,140	3,006,856	6,352,460
2	Base spending	(352,073)	(418,248)	(417,650)	(408,438)	(465,466)	(441,199)	(420,314)	(415,133)
3	Incremental CIBS spending	1,384,080	3,788,047	2,973,419	1,161,770	1,709,346	2,339,940	2,586,542	5,937,327
4									
5	Book Depreciation Rate:								
6	Year 1	2.54%	35,065	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	49,662
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%					72,731	57,090	22,306
11	Year 5	1.92%						72,731	57,090
12	Year 6	1.92%							72,731
13	Year 7	1.92%							72,731
14	Book Depreciation Expense-Mains	35,065	107,796	164,886	187,191	220,010	264,937	314,599	428,595
15									
16	Accumulated Depreciation Mains-Beginning of Year	-	35,065	142,860	307,746	494,937	714,947	979,884	979,884
17	Accumulated Depreciation Mains-End of Year	35,065	142,860	307,746	494,937	714,947	979,884	1,294,483	1,408,479
18									
19									
20	<b>Book Depreciation Schedule-Services</b>								
21									
22	Actual CIBS spending	729,463	822,173	668,631	352,005	161,352	370,655	614,698	1,298,647
23	Base spending	(147,927)	(81,752)	(82,350)	(91,562)	(34,534)	(58,801)	(85,926)	(84,867)
24	Incremental CIBS spending	581,536	740,421	586,281	260,443	126,818	311,854	528,772	1,213,780
25									
26	Book Depreciation Rate:								
27	Year 1	2.54%	14,771	14,771	14,771	14,771	14,771	14,771	14,771
28	Year 1 beginning in FY10	4.00%		29,617	23,451	10,418	5,073	12,474	21,151
29	Year 2	4.00%			29,617	23,451	10,418	5,073	12,474
30	Year 3	4.00%				29,617	23,451	10,418	5,073
31	Year 4	4.00%					29,617	23,451	10,418
32	Year 5	4.00%						29,617	23,451
33	Year 6	4.00%							29,617
34	Year 7	4.00%							29,617
35	Book Depreciation Expense-Services	14,771	44,388	67,839	78,257	83,330	95,804	116,955	165,506
36									
37	Accumulated Depreciation Services-Beginning of Year	-	14,771	59,159	126,998	205,255	288,584	384,388	384,388
38	Accumulated Depreciation Services-End of Year	14,771	59,159	126,998	205,255	288,584	384,388	501,343	549,894
39									
40									
41									
42	Total Mains & Services Depreciation Expense	49,836	152,184	232,725	265,448	303,340	360,741	431,553	594,101
43									
44	Total Mains & Services Accumulated Depreciation	49,836	202,019	434,744	700,192	1,003,531	1,364,272	1,795,825	1,958,373

2(g) & 22(g) FY 2016 estimate split 79.5% Mains / 20.5% Services based upon FY 2015 actual 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 2015 Cast Iron/Bare Steel Replacement Program**  
**Municipal Taxes as a Percentage of Net Plant From Inception**

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
	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	12/31/2014
1 Plant in Service	258,573	272,678	289,379	305,221	319,737	332,049	344,966	356,165	381,214	419,215
2 Depreciation and Amortization Reserve	(82,363)	(88,564)	(94,562)	(102,587)	(108,270)	(114,294)	(119,973)	(121,047)	(129,209)	(137,656)
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>	<u>281,559</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	400,214
7 Depreciation Reserve		(85,463)	(91,563)	(98,575)	(105,429)	(111,282)	(117,133)	(120,510)	(125,128)	(133,432)
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>	<u>266,782</u>
9										
10 Municipal Taxes		<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>5,962</u>	<u>6,835</u>	<u>7,919</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>2.59%</u>	<u>2.81%</u>	<u>2.97%</u>

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

Liberty Utilities (EnergyNorth Natural Gas) Corp.  
Fiscal Year 2015 Cast Iron/Bare Steel Replacement Program  
Bill Impacts due to Cast Iron and Bare Steel Replacement Program From Inception

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

	(a) FY2009	(b) FY2010	(c) FY2011	(d) FY2012	(e) FY2013	(f) FY2014	(g) FY2015	(h) Estimate FY2016
1 Annual Increase due to Cast Iron Bare Steel program	262,185	713,870	527,261	(92,035)	146,987	332,918	239,685	858,479
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	166,523,068	166,523,068
4								
5 Increase Factor	\$0.0017	\$0.0047	\$0.0034	(\$0.0006)	\$0.0009	\$0.0021	\$0.0014	\$0.0052
6								
7 Annual Calendar Year Gross Revenues (Annual Report - Page 11)	\$176,520,000	\$151,224,178	\$132,475,941	\$146,365,316	\$119,363,340	\$137,617,008	\$119,363,341	\$119,363,341
8								
9 Annual Percent Increase	0.15%	0.47%	0.40%	-0.06%	0.12%	0.24%	0.20%	0.72%
10								
11 Miles of Main Replaced Annually	2.96	3.98	2.79	1.56	1.65	3.51	5.00	8.00
12 Cumulative Miles of Main Replaced	2.96	6.94	9.73	11.29	12.94	16.45	21.45	29.45
13 Miles of Cast Iron/Bare Steel Main Remaining <sup>1</sup>	149.8	142.0	137.4	132.1	126.30	120.88	113.96	103.96
14								
15 Services Replaced Annually	101	127	282	81	84	174	316	500
16 Cumulative Number of Services Replaced	101	228	510	591	675	849	1,165	1,665
17								
18 <b>Typical Residential bill</b>	\$1,292	\$1,107	\$1,118	\$1,059	\$1,020	\$1,123	\$1,309	\$1,309
19								
20 Typical Usage	800	800	800	800	800	800	800	800
21								
22 Annual Increase for Residential Heating customer	\$1.36	\$3.79	\$2.73	(\$0.45)	\$0.74	\$1.66	\$1.15	\$4.12
23								
24 Percent Bill Increase	0.10%	0.34%	0.24%	-0.04%	0.07%	0.15%	0.09%	0.31%
25								
26								
27 <b>Typical G-41</b>	\$3,375	\$2,939	\$2,842	\$2,696	\$2,654	\$2,926	\$3,499	\$3,499
28								
29 Typical Usage	2,167	2,167	2,167	2,167	2,167	2,167	2,167	2,167
30								
31 Annual Increase for G-41 customer	\$3.67	\$10.26	\$7.39	(\$1.22)	\$2.02	\$4.51	\$3.12	\$11.17
32								
33 Percent Bill Increase	0.11%	0.35%	0.26%	-0.05%	0.08%	0.15%	0.09%	0.32%
34								
35								
36 <b>Typical G-42</b>	\$22,595	\$18,926	\$18,432	\$17,516	\$16,884	\$18,853	\$22,486	\$22,486
37								
38 Typical Usage	15,567	15,567	15,567	15,567	15,567	15,567	15,567	15,567
39								
40 Annual Increase for G-42 customer	\$26.38	\$73.68	\$53.07	(\$8.76)	\$14.48	\$32.39	\$22.41	\$80.25
41								
42 Percent Bill Increase	0.12%	0.39%	0.29%	-0.05%	0.09%	0.17%	0.10%	0.36%
43								
44								
45 <b>Typical G-52</b>	\$21,973	\$16,707	\$16,605	\$16,025	\$14,629	\$16,555	\$18,667	\$18,667
46								
47 Typical Usage	15,687	15,687	15,687	15,687	15,687	15,687	15,687	15,687
48								
49 Annual Increase for G-52 customer	\$26.59	\$74.25	\$53.48	(\$8.83)	\$14.59	\$32.64	\$22.58	\$80.87
50								
51 Percent Bill Increase	0.12%	0.44%	0.32%	-0.06%	0.10%	0.20%	0.12%	0.43%

Line / Column Notes:

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

<sup>1</sup>These figures are as of the end of the prior calendar year (i.e. FY 2015 data is as of 12/31/2014)

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**  
**d/b/a Liberty Utilities**  
**Docket No. DG 15-104**  
**Revised Attachment DBS-3**  
**May 20, 2015**

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**  
**Fiscal Year 2015 Cast Iron/Bare Steel Replacement Program**  
**Computation of Estimated Revenue Requirement Impact of Refund of Degradation Fees - Informational Only**  
**May 20, 2015**

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

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**  
**Fiscal Year 2015 Cast Iron/Bare Steel Replacement Program**  
**Computation of Estimated Revenue Requirement Refund on Degradation Fees - Informational Only**

	(a)		(b)		
			<b>Refund</b>		
			<b>Year</b>		
1	<b><u>Incremental Investment</u></b>				
2	CIBS Progam Actual - Refund of Degradation Fees		(888,709)		
3	Base Spending Amount				
4	Incremental Amount		(888,709)		
5	Cumulative CIBS Program - Refund of Degradation Fees		(888,709)		
6	<b><u>Deferred Tax Calculation</u></b>				
7	Annual Tax Depreciation		(888,709)		
8	Cumulative Tax Depreciation on Degradation Fees		(888,709)		
9					
10	Annual Book Depreciation		(17,063)		
11	Cumulative Book Depreciation on Degradation Fees		(17,063)		
12					
13	Annual Book/Tax Timer		(871,645)		
14	Cummulative Book/Tax Timer		(871,645)		
15	Effective Tax Rate		39.61%		
16					
17	Estimated Deferred Tax Reserve		(345,259)		
18					
19	<b><u>Rate Base Calculation</u></b>				
20	Plant In Service		(888,709)		
21	Accumulated Depreciation		17,063		
22	Net Plant in Service		(871,645)		
23	Deferred Tax Reserve		345,259		
24	Year End Rate Base		(526,387)		
25					
26	<b><u>Revenue Requirement Calculation</u></b>				
27	Year End Rate Base		(526,387)		
28	Pre-Tax ROR		10.22%		
29	Return and Taxes		(53,797)		
30	Book Depreciation		(17,063)		
31	Property Taxes	2.97%	(22,576)		
32	Revenue Requirement Reduction		(93,436)		
33					
34					
35	<b><u>Capital Structure/ROR</u></b>				
36					
37				(prior federal	(current federal
38				tax rate of 35%	tax rate of 34%
39				and state rate	and state rate
40				of 8.5%)	of 8.5%)
41	Long Term Debt	<u>Ratio</u>	<u>Rate</u>	<u>Weighted</u>	<u>after-tax</u>
42	Short Term Debt	50.00%	4.43%	2.215%	2.215%
43	Common Equity	50.00%	9.67%	4.835%	8.130%
44				8.130%	8.006%
45		<u>100.00%</u>		<u>7.050%</u>	<u>10.221%</u>

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**  
**Fiscal Year 2015 Cast Iron/Bare Steel Replacement Program**  
**Computation of Estimated Revenue Requirement Impact of Refund of Degradation Fees - Informational Only**

**Vintage Year Book Depreciation Schedule**

<b>Book Depreciation Schedule-Mains</b>	<b>Refund Year</b>
1 Actual CIBS spending	(888,709)
2	
3 Incremental CIBS spending	(888,709)
4	
5 Book Depreciation Rate:	
6 Year 1                    1.92%	(17,063)
7 Year 2                    1.92%	
8 Year 3                    1.92%	
9 Year 4                    1.92%	
10	
11 Book Depreciation Expense-Mains	(17,063)
12	
13 Accumulated Depreciation-Beginning of Year	-
14 Accumulated Depreciation-End of Year	(17,063)

**Degradation Fees by Year by City:**

	<u>F/Y 2011</u>	<u>F/Y 2012</u>	<u>F/Y 2013</u>	<u>F/Y 2014</u>	<u>F/Y 2015</u>	<u>Totals</u>
Concord	19,856	37,960	9,747	48,350	75,541	191,454
Manchester	275,035	39,885	382,335	-	-	697,255
<b>Totals</b>	<b>294,891</b>	<b>77,845</b>	<b>392,082</b>	<b>48,350</b>	<b>75,541</b>	<b>888,709</b>

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**  
**Fiscal Year 2015 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)	(j)
	<u>12/31/2005</u>	<u>12/31/2006</u>	<u>12/31/2007</u>	<u>12/31/2008</u>	<u>12/31/2009</u>	<u>12/31/2010</u>	<u>12/31/2011</u>	<u>12/31/2012</u>	<u>12/31/2013</u>	<u>12/31/2014</u>
1 Plant in Service	258,573	272,678	289,379	305,221	319,737	332,049	344,966	356,165	381,214	419,215
2 Depreciation and Amortization Reserve	(82,363)	(88,564)	(94,562)	(102,587)	(108,270)	(114,294)	(119,973)	(121,047)	(129,209)	(137,656)
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>	<u>281,559</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	400,214
7 Depreciation Reserve		(85,463)	(91,563)	(98,575)	(105,429)	(111,282)	(117,133)	(120,510)	(125,128)	(133,432)
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>	<u>266,782</u>
9										
10 Municipal Taxes		3,534	3,641	3,771	4,294	5,459	5,776	5,962	6,835	7,919
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>2.59%</u>	<u>2.81%</u>	<u>2.97%</u>

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

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**  
**Fiscal Year 2015 Cast Iron/Bare Steel Replacement Program**  
**Computation of Estimated Revenue Requirement Impact of Refund of Degradation Fees - Informational Only**

**Bill Impacts due to Cast Iron and Bare Steel Replacement Program**

(a)	(b) Refund Year
1 Decrease Related to Refund of Degradation Fees	(93,436)
2	
3 Annual Throughput (see Winter COG filing - schedule 10B)	166,523,068
4	
5 Decrease Factor	(\$0.0006)
6	
7 Annual Calendar Year Gross Revenues (Annual Report - Page 11, line 2)	\$119,363,341
8	
9 Annual Percent Decrease	-0.08%
10	
11	
12	
13 <b>Typical Residential bill</b>	\$1,309
14	
15 Typical Usage	800
16	
17 Annual Decrease for Residential Heating customer	(\$0.45)
18	
19 Percent Bill Decrease	-0.03%
20	
21	
22 <b>Typical G-41</b>	\$3,499
23	
24 Typical Usage	2,167
25	
26 Annual Decrease for G-41 customer	(\$1.22)
27	
28 Percent Bill Decrease	-0.03%
29	
30	
31 <b>Typical G-42</b>	\$22,486
32	
33 Typical Usage	15,567
34	
35 Annual Decrease for G-42 customer	(\$8.73)
36	
37 Percent Bill Decrease	-0.04%
38	
39	
40 <b>Typical G-52</b>	\$18,667
41	
42 Typical Usage	15,687
43	
44 Annual Decrease for G-52 customer	(\$8.80)
45	
46 Percent Bill Decrease	-0.05%

Liberty Utilities (EnergyNorth Natural Gas) Corp.  
Fiscal Year 2015 Cast Iron/Bare Steel Replacement Program  
Computation of Estimated Revenue Requirement Impact if the Company Does Not Prevail in the Degradation Fee Litigation - Informational Only  
May 20, 2015

Computation of Estimated Revenue Requirement Refund on Degradation Fees - Informational Only	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 2015 Cast Iron/Bare Steel Replacement Program**  
**Computation of Estimated Revenue Requirement Refund on Degradation Fees - Informational Only**

(a)	(b) Refund Year
<b><u>Incremental Investment</u></b>	
1 CIBS Progam Actual - Charge of Degradation Fees	483,159
2 Base Spending Amount	
3 Incremental Amount	483,159
4 Cumulative CIBS Program - Charge of Degradation Fees	483,159
5	
<b><u>Deferred Tax Calculation</u></b>	
6 Annual Tax Depreciation	483,159
7 Cumulative Tax Depreciation on Degradation Fees	483,159
8	
9 Annual Book Depreciation	9,277
10 Cumulative Book Depreciation on Degradation Fees	9,277
11	
12 Annual Book/Tax Timer	473,882
13 Cummulative Book/Tax Timer	473,882
14 Effective Tax Rate	39.61%
15	
16 Estimated Deferred Tax Reserve	187,705
17	
18	
19 <b><u>Rate Base Calculation</u></b>	
20 Plant In Service	483,159
21 Accumulated Depreciation	(9,277)
22 Net Plant in Service	473,882
23 Deferred Tax Reserve	(187,705)
24 Year End Rate Base	286,178
25	
26 <b><u>Revenue Requirement Calculation</u></b>	
27 Year End Rate Base	286,178
28 Pre-Tax ROR	10.22%
29 Return and Taxes	29,247
30 Book Depreciation	9,277
31 Property Taxes	12,274
32 Revenue Requirement Increase	50,798
33	
34	

**Capital Structure/ROR**

	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 Long Term Debt	50.00%	4.43%	2.215%	2.215%	2.215%
37 Short Term Debt	0.00%	0.00%	0.00%	0.00%	0.00%
38 Common Equity	50.00%	9.67%	4.835%	8.130%	8.006%
39					
40	<u>100.00%</u>		<u>7.050%</u>	<u>10.345%</u>	<u>10.221%</u>
41					
42					
43					
44					
45					

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**  
**Fiscal Year 2015 Cast Iron/Bare Steel Replacement Program**  
**Computation of Estimated Revenue Requirement Impact if the Company Does Not Prevail in the Degradation Fee Litigation - Informational Only**

**Vintage Year Book Depreciation Schedule**

<b>Book Depreciation Schedule-Mains</b>	<b>Refund Year</b>
1 Actual CIBS spending	483,159
2	
3 Incremental CIBS spending	483,159
4	
5 Book Depreciation Rate:	
6 Year 1	1.92% 9,277
7 Year 2	1.92%
8 Year 3	1.92%
9 Year 4	1.92%
10	
11 Book Depreciation Expense-Mains	9,277
12	
13 Accumulated Depreciation-Beginning of Year	-
14 Accumulated Depreciation-End of Year	9,277

**Uncharged Degradation Fees by Year by City:**

	<u>F/Y 2011</u>	<u>F/Y 2012</u>	<u>F/Y 2013</u>	<u>F/Y 2014</u>	<u>F/Y 2015</u>	<u>Totals</u>
Concord	-	-	-	-	-	-
Manchester	-	-	-	246,449	236,710	483,159
Totals	-	-	-	246,449	236,710	483,159

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**  
**Fiscal Year 2015 Cast Iron/Bare Steel Replacement Program**  
**Computation of Estimated Revenue Requirement Impact if the Company Does Not Prevail in the Degradation Fee Litigation - Informational Only**

**Municipal Taxes as a Percentage of Net Plant**

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
	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	12/31/2014
1 Plant in Service	258,573	272,678	289,379	305,221	319,737	332,049	344,966	356,165	381,214	419,215
2 Depreciation and Amortization Reserve	(82,363)	(88,564)	(94,562)	(102,587)	(108,270)	(114,294)	(119,973)	(121,047)	(129,209)	(137,656)
3 Net Plant	176,209	184,114	194,817	202,634	211,467	217,756	224,993	235,118	252,006	281,559
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	400,214	
7 Depreciation Reserve	(85,463)	(91,563)	(98,575)	(105,429)	(111,282)	(117,133)	(120,510)	(125,128)	(133,432)	
8 Net Plant	180,162	189,465	198,726	207,051	214,611	221,375	230,056	243,562	266,782	
9										
10 Municipal Taxes		3,534	3,641	3,771	4,294	5,459	5,776	5,962	6,835	7,919
11										
12 % Municipal Taxes to Net Plant		1.96%	1.92%	1.90%	2.07%	2.54%	2.61%	2.59%	2.81%	2.97%

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

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**  
**Fiscal Year 2015 Cast Iron/Bare Steel Replacement Program**  
**Computation of Estimated Revenue Requirement Impact if the Company Does Not Prevail in the Degradation Fee Litigation - Informational Only**

**Bill Impacts due to Cast Iron and Bare Steel Replacement Program**

(a)	(b) Charge Year
1 Increase Related to Unpaid Degradation Fees	50,798
2	
3 Annual Throughput (see Winter COG filing - schedule 10B)	166,523,068
4	
5 Increase Factor	\$0.0003
6	
7 Annual Calendar Year Gross Revenues (Annual Report - Page 11, line 2)	\$119,363,341
8	
9 Annual Percent Increase	0.04%
10	
11	
12	
13 <b>Typical Residential bill</b>	\$1,309
14	
15 Typical Usage	800
16	
17 Annual Increase for Residential Heating customer	\$0.24
18	
19 Percent Bill Increase	0.02%
20	
21	
22 <b>Typical G-41</b>	\$3,499
23	
24 Typical Usage	2,167
25	
26 Annual Increase for G-41 customer	\$0.66
27	
28 Percent Bill Increase	0.02%
29	
30	
31 <b>Typical G-42</b>	\$22,486
32	
33 Typical Usage	15,567
34	
35 Annual Increase for G-42 customer	\$4.75
36	
37 Percent Bill Increase	0.02%
38	
39	
40 <b>Typical G-52</b>	\$18,667
41	
42 Typical Usage	15,687
43	
44 Annual Increase for G-52 customer	\$4.79
45	
46 Percent Bill Increase	0.03%