

**Liberty Utilities (EnergyNorth Natural Gas) Corp.
d/b/a Liberty Utilities
Docket No. DG 17-XXX
Attachment DBS-1
April 14, 2017**

**Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2017 Cast Iron/Bare Steel Replacement Program
Computation of Revenue Requirement
April 14, 2017**

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Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2017 Cast Iron/Bare Steel Replacement Program
Computation of Revenue Requirement

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	
	July 1, 2009 through March 31, 2010										
	Actual FY09	9 Months FY10	Actual FY11	Actual FY12	Actual FY13	Actual FY14	Actual FY15	Actual FY16	Actual FY17	Estimate FY18	
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	3,006,856	3,304,532	\$5,240,601	-
2	CIBS Program Actual Spend-Service	729,463	798,555	668,631	352,005	161,352	370,655	776,086	705,984	\$1,221,316	-
3	CIBS Program Estimated Spend-Mains					-	-	-	-	-	13,069,252
4	CIBS Program Estimated Spend-Service					-	-	-	-	-	3,045,773
5	Base Spending Amount	500,000	482,110	500,000	500,000	500,000	506,240	514,244	520,965	520,965	520,965
6	Incremental Amount	1,965,616	4,366,440	3,559,700	1,422,213	1,836,165	2,651,795	3,276,702	3,496,272	5,940,951	15,594,061
7	Cumulative CIBS Program Spend Since July 1, 2009		4,366,440	7,926,140	9,348,353	11,184,518	13,836,312	17,113,015	20,609,287	26,550,238	42,144,299
8											
9	Deferred Tax Calculation										
10	Annual Tax Depreciation	1,031,948	4,366,440	3,559,700	1,422,213	1,836,165	2,651,795	3,276,702	3,496,272	5,940,951	15,594,061
11	Cumulative Tax Depreciation Since July 1, 2009		4,366,440	7,926,140	9,348,353	11,184,518	13,836,312	17,113,015	20,609,287	26,550,238	42,144,299
12											
13	Annual Book Depreciation	49,836	98,794	179,335	212,059	249,951	307,352	384,247	464,177	601,598	962,294
14	Cumulative Book Depreciation Since July 1, 2009		98,794	278,129	490,188	740,138	1,047,490	1,431,737	1,895,914	2,497,512	3,459,806
15											
16	Annual Book/Tax Timer	982,112	4,267,646	3,380,365	1,210,154	1,586,214	2,344,443	2,892,456	3,032,095	5,339,353	14,631,767
17	Cumulative Book/Tax Timer	982,112	4,267,646	7,648,011	8,858,165	10,444,379	12,788,822	15,681,278	18,713,373	24,052,726	38,684,493
18	Statutory Tax Rate	40.53%	40.53%	40.53%	40.53%	40.53%	39.61%	39.61%	39.61%	39.61%	39.41%
19											
20	Deferred Tax Reserve	398,001	1,729,677	3,099,739	3,590,214	4,233,107	5,161,741	6,211,354	7,412,367	9,527,285	15,293,664
21											
22	Rate Base Calculation										
23	Plant In Service	1,965,616	4,366,440	7,926,140	9,348,353	11,184,518	13,836,312	17,113,015	20,609,287	26,550,238	42,144,299
24	Accumulated Depreciation	(49,836)	(98,794)	(278,129)	(490,188)	(740,138)	(1,047,490)	(1,431,737)	(1,895,914)	(2,497,512)	(3,459,806)
25	Net Plant in Service	1,915,780	4,267,646	7,648,011	8,858,166	10,444,379	12,788,822	15,681,278	18,713,373	24,052,726	38,684,493
26	Deferred Tax Reserve	(398,001)	(1,729,677)	(3,099,739)	(3,590,214)	(4,233,107)	(5,161,741)	(6,211,354)	(7,412,367)	(9,527,285)	(15,293,664)
27	Year End Rate Base	1,517,779	2,537,969	4,548,272	5,267,951	6,211,273	7,627,082	9,469,924	11,301,006	14,525,441	23,390,829
28											
29	Revenue Requirement Calculation										
30	Year End Rate Base	1,517,779	2,537,969	4,548,272	5,267,951	6,211,273	7,627,082	9,469,924	11,301,006	14,525,441	23,390,829
31	Pre-Tax ROR	11.53%	11.53%	11.63%	11.63%	11.63%	11.50%	10.22%	9.87%	9.87%	9.85%
32	Return and Taxes	175,003	292,628	528,964	612,663	722,371	877,114	967,826	1,115,409	1,433,661	2,303,593
33	Book Depreciation	49,836	98,794	179,335	212,059	249,951	307,352	384,247	464,177	601,598	962,294
34	Property Taxes	37,347	88,340	194,259	231,198	241,265	359,366	503,369	490,290	728,798	1,172,140
35	Annual Revenue Requirement	262,185	479,762	902,558	1,055,920	1,213,587	1,543,832	1,855,442	2,069,876	2,764,057	4,438,027
36											
37	Prior Year Annual Revenue Requirement	-	-	479,762	902,558	1,055,920	1,213,587	1,543,832	1,855,442	2,069,876	2,764,057
38											
39	Incremental Annual Rate Adjustment Since July 1, 2009	262,185	479,762	422,796	153,362	157,667	330,245	311,610	214,434	694,182	1,673,969
40											
41											
42											
43											
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45											
46											
47											
48											
49	Actual Capital Structure/ROR										
50											
51											
52											
53											
54	Long Term Debt	50.00%	4.43%	2.215%	2.215%	2.215%	2.215%	2.215%	2.215%	2.215%	2.215%
55	Short Term Debt	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
56	Common Equity	50.00%	9.25%	4.625%	7.777%	7.777%	7.659%	7.659%	7.659%	7.659%	7.659%
57											
58		100.00%	6.840%	9.992%	9.992%	9.874%	9.874%	9.874%	9.874%	9.874%	9.874%

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2017 Cast Iron/Bare Steel Replacement Program
Vintage Year Book Depreciation Schedule

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
		July 1, 2009 thru March 31, 2010								
Book Depreciation Schedule-Mains	Actual FY09	9 Months FY10	Actual FY11	Actual FY12	Actual FY13	Actual FY14	Actual FY15	Actual FY16	Actual FY17	Estimate FY18
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	3,304,532	5,240,601	13,069,252
2 Base spending	(352,073)	(402,707)	(417,650)	(408,438)	(465,466)	(441,199)	(402,383)	(423,720)	(422,502)	(423,017)
3 Incremental CIBS spending	1,384,080	3,647,288	2,973,419	1,161,770	1,709,346	2,339,940	2,604,473	2,880,812	4,818,099	12,646,235
4										
5 Book Depreciation Rate:										
6 Year 1	2.54%	35,065	0	0	0	0	0	0	0	0
7 Year 1 beginning in FY10	1.92%		70,028	57,090	22,306	32,819	44,927	50,006	55,312	242,808
8 Year 2	1.92%			70,028	57,090	22,306	32,819	44,927	50,006	92,508
9 Year 3	1.92%				70,028	57,090	22,306	32,819	44,927	50,006
10 Year 4	1.92%					70,028	57,090	22,306	32,819	50,006
11 Year 5	1.92%						70,028	57,090	22,306	44,927
12 Year 6	1.92%							70,028	57,090	32,819
13 Year 7	1.92%								70,028	22,306
14 Year 8	1.92%									57,090
15 Year 9	1.92%									70,028
16 Book Depreciation Expense-Mains	35,065	70,028	127,118	149,424	182,243	227,170	277,176	332,487	424,995	667,803
17										
18 Accumulated Depreciation Mains-Beginning of Year	-	-	70,028	197,146	346,570	528,813	755,982	1,033,158	1,365,646	1,365,646
19 Accumulated Depreciation Mains-End of Year	35,065	70,028	197,146	346,570	528,813	755,982	1,033,158	1,365,646	1,790,640	2,033,448
20										
21										
22 Book Depreciation Schedule-Services										
23										
24 Actual CIBS spending	729,463	798,555	668,631	352,005	161,352	370,655	776,086	705,984	1,221,316	3,045,773
25 Base spending	(147,927)	(79,403)	(82,350)	(91,562)	(34,534)	(58,801)	(103,857)	(90,524)	(98,463)	(98,584)
26 Incremental CIBS spending	581,536	719,152	586,281	260,443	126,818	311,854	672,229	615,460	1,122,852	2,947,190
27										
28 Book Depreciation Rate:										
29 Year 1	2.54%	14,771	0	0	0	0	0	0	0	0
30 Year 1 beginning in FY10	4.00%		28,766	23,451	10,418	5,073	12,474	26,889	24,618	117,888
31 Year 2	4.00%			28,766	23,451	10,418	5,073	12,474	26,889	44,914
32 Year 3	4.00%				28,766	23,451	10,418	5,073	12,474	24,618
33 Year 4	4.00%					28,766	23,451	10,418	5,073	26,889
34 Year 5	4.00%						28,766	23,451	10,418	12,474
35 Year 6	4.00%							28,766	23,451	5,073
36 Year 7	4.00%								28,766	10,418
37 Year 8	4.00%									23,451
38 Year 9	4.00%									28,766
39 Book Depreciation Expense-Services	14,771	28,766	52,217	62,635	67,708	80,182	107,071	131,690	176,604	294,491
40										
41 Accumulated Depreciation Services-Beginning of Year	-	-	28,766	80,983	143,618	211,326	291,508	398,579	530,268	706,872
42 Accumulated Depreciation Services-End of Year	14,771	28,766	80,983	143,618	211,326	291,508	398,579	530,268	706,872	1,001,363
43										
44										
45										
46 Total Mains & Services Depreciation Expense	49,836	98,794	179,335	212,059	249,951	307,352	384,247	464,177	601,598	962,294
47										
48 Total Mains & Services Accumulated Depreciation	49,836	98,794	278,129	490,188	740,138	1,047,490	1,431,737	1,895,914	2,497,512	3,034,811

2(g) & 22(g) FY 2018 estimate split 82.6% Mains / 17.4% Services based upon FY 2017 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 2017 Cast Iron/Bare Steel Replacement Program
Municipal Taxes as a Percentage of Net Plant

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
	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	12/31/2015	12/31/2016
1 Plant in Service	258,573	272,678	289,379	305,221	319,737	332,049	344,966	356,165	381,214	419,215	451,950	494,511
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)	(149,943)	(163,209)
3 Net Plant	176,209	184,114	194,817	202,634	211,467	217,756	224,993	235,118	252,006	281,559	302,007	331,302
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	435,582	473,230
7 Depreciation Reserve		(85,463)	(91,563)	(98,575)	(105,429)	(111,282)	(117,133)	(120,510)	(125,128)	(133,432)	(143,799)	(156,576)
8 Net Plant		180,162	189,465	198,726	207,051	214,611	221,375	230,056	243,562	266,782	291,783	316,654
9												
10 Municipal Taxes		3,534	3,641	3,771	4,294	5,459	5,776	5,321	6,835	8,560	7,644	9,596
11												
12 % Municipal Taxes to Net Plant		1.96%	1.92%	1.90%	2.07%	2.54%	2.61%	2.31%	2.81%	3.21%	2.62%	3.03%

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 2017 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)	(i)	(j)
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	Estimate FY2018
1 Annual Increase due to Cast Iron Bare Steel program	262,185	479,762	521,590	(44,226)	157,667	330,245	311,610	214,434	694,182	1,673,969
2										
3 Annual Throughput (see Summer 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	172,103,158	186,909,214	186,909,214
4										
5 Increase Factor	\$0.0017	\$0.0032	\$0.0034	(\$0.0003)	\$0.0010	\$0.0021	\$0.0019	\$0.0012	\$0.0037	\$0.0090
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	\$156,933,825	\$120,053,649	\$120,053,649
8										
9 Annual Percent Increase	0.15%	0.32%	0.39%	-0.03%	0.13%	0.24%	0.26%	0.14%	0.58%	1.39%
10										
11 Miles of Cast Iron/Bare Steel Main Replaced Annually through CIBS	2.96	3.98	2.79	1.56	1.65	3.51	5.00	5.05	10.26	13.10
12 Cumulative Miles of Main Replaced through CIBS	2.96	6.94	9.73	11.29	12.94	16.45	21.45	26.50	36.76	49.86
13 Total Miles of Cast Iron/Bare Steel Main Remaining ¹	149.8	142.0	137.4	132.1	126.30	120.88	113.96	106.46	93.18	77.48
14										
15 Services Replaced Annually ²	101	127	282	81	84	174	316	291	572	689
16 Cumulative Number of Services Replaced	101	228	510	591	675	849	1,165	1,456	2,028	2,717
17										
18 Typical Residential bill	\$1,292	\$1,107	\$1,118	\$1,059	\$1,020	\$1,123	\$1,309	\$1,309	\$1,078	\$1,078
19										
20 Typical Usage	800	800	800	800	800	800	800	800	763	763
21										
22 Annual Increase for Residential Heating customer	\$1.36	\$2.54	\$2.70	(\$0.22)	\$0.80	\$1.65	\$1.50	\$1.00	\$2.83	\$6.83
23										
24 Percent Bill Increase	0.10%	0.23%	0.24%	-0.02%	0.08%	0.15%	0.11%	0.08%	0.26%	0.63%
25										
26										
27 Typical G-41	\$3,375	\$2,939	\$2,842	\$2,696	\$2,654	\$2,926	\$3,499	\$3,499	\$2,651	\$2,651
28										
29 Typical Usage	2,167	2,167	2,167	2,167	2,167	2,167	2,167	2,167	2,029	2,029
30										
31 Annual Increase for G-41 customer	\$3.67	\$6.89	\$7.31	(\$0.59)	\$2.16	\$4.47	\$4.06	\$2.70	\$7.54	\$18.17
32										
33 Percent Bill Increase	0.11%	0.23%	0.26%	-0.02%	0.08%	0.15%	0.12%	0.08%	0.28%	0.69%
34										
35										
36 Typical G-42	\$22,595	\$18,926	\$18,432	\$17,516	\$16,884	\$18,853	\$22,486	\$22,486	\$16,284	\$16,284
37										
38 Typical Usage	15,567	15,567	15,567	15,567	15,567	15,567	15,567	15,567	14,720	14,720
39										
40 Annual Increase for G-42 customer	\$26.38	\$49.52	\$52.50	(\$4.21)	\$15.53	\$32.13	\$29.13	\$19.40	\$54.67	\$131.83
41										
42 Percent Bill Increase	0.12%	0.26%	0.28%	-0.02%	0.09%	0.17%	0.13%	0.09%	0.34%	0.81%
43										
44										
45 Typical G-52	\$21,973	\$16,707	\$16,605	\$16,025	\$14,629	\$16,555	\$18,667	\$18,667	\$14,087	\$14,087
46										
47 Typical Usage	15,687	15,687	15,687	15,687	15,687	15,687	15,687	15,687	14,566	14,566
48										
49 Annual Increase for G-52 customer	\$26.59	\$49.90	\$52.91	(\$4.24)	\$15.65	\$32.37	\$29.35	\$19.55	\$54.10	\$130.45
50										
51 Percent Bill Increase	0.12%	0.30%	0.32%	-0.03%	0.11%	0.20%	0.16%	0.10%	0.38%	0.93%

Line / Column Notes:

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

¹These figures are as of the end of the CIBS fiscal year (i.e. FY 2017 data is as of 3/31/2017). Mileage includes Cast Iron/Bare Steel replaced through the CIBS Program as well as City/State Construction.

²These figures include all service replacements and inserts, including bare steel, coated steel and plastic services

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**Liberty Utilities (EnergyNorth Natural Gas) Corp.
d/b/a Liberty Utilities
Docket No. DG 17-XXX
Attachment DBS-2
April 14, 2017**

**Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2017 Cast Iron/Bare Steel Replacement Program
Computation of Revenue Requirement
April 14, 2017**

Computation of Revenue Requirement	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 2017 Cast Iron/Bare Steel Replacement Program
Computation of Revenue Requirement

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

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
	Actual FY09	12 Months FY10	Actual FY11	Actual FY12	Actual FY13	Actual FY14	Actual FY15	Actual FY16	Actual FY17	Estimate FY18
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	3,006,856	3,304,532	\$5,240,601	-
2 CIBS Program Actual Spend-Service	729,463	822,173	668,631	352,005	161,352	370,655	776,086	705,984	\$1,221,316	-
3 CIBS Program Estimated Spend-Mains					-	-	-	-	-	13,069,252
4 CIBS Program Estimated Spend-Service					-	-	-	-	-	3,045,773
5 Base Spending Amount	500,000	500,000	500,000	500,000	500,000	500,000	506,240	514,244	520,965	520,965
6 Incremental Amount	1,965,616	4,528,468	3,559,700	1,422,213	1,836,165	2,651,795	3,276,702	3,496,272	5,940,951	15,594,061
7 Cumulative CIBS Program Spend Since July 1, 2009		6,494,084	10,053,784	11,475,997	13,312,162	15,963,956	19,240,659	22,736,931	28,677,882	44,271,943
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	3,276,702	3,496,272	5,940,951	15,594,061
11 Cumulative Tax Depreciation Since July 1, 2009		6,494,084	10,053,784	11,475,997	13,312,162	15,963,956	19,240,659	22,736,931	28,677,882	44,271,943
13 Annual Book Depreciation	49,836	152,184	232,725	265,448	303,340	360,741	437,636	517,566	654,988	1,015,683
14 Cumulative Book Depreciation Since July 1, 2009	49,836	202,019	434,744	700,192	1,003,532	1,364,274	1,801,910	2,319,476	2,974,464	3,990,147
16 Annual Book/Tax Timer	982,112	5,309,953	3,326,975	1,156,765	1,532,824	2,291,054	2,839,066	2,978,706	5,285,964	14,578,378
17 Cumulative Book/Tax Timer	982,112	6,292,065	9,619,040	10,775,805	12,308,629	14,599,683	17,438,749	20,417,455	25,703,419	40,281,797
18 Statutory Tax Rate	40.53%	40.53%	40.53%	40.53%	40.53%	39.61%	39.61%	39.61%	39.61%	39.41%
19 Deferred Tax Reserve	398,001	2,550,174	3,898,597	4,367,434	4,988,687	5,896,174	6,907,488	8,087,354	10,181,124	15,926,463
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	19,240,659	22,736,931	28,677,882	44,271,943
24 Accumulated Depreciation	(49,836)	(202,019)	(434,744)	(700,192)	(1,003,532)	(1,364,274)	(1,801,910)	(2,319,476)	(2,974,464)	(3,990,147)
25 Net Plant in Service	1,915,780	6,292,065	9,619,040	10,775,805	12,308,629	14,599,683	17,438,749	20,417,455	25,703,419	40,281,796
26 Deferred Tax Reserve	(398,001)	(2,550,174)	(3,898,597)	(4,367,434)	(4,988,687)	(5,896,174)	(6,907,488)	(8,087,354)	(10,181,124)	(15,926,463)
27 Year End Rate Base	1,517,779	3,741,891	5,720,443	6,408,371	7,319,942	8,703,509	10,531,261	12,330,101	15,522,294	24,355,333
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	10,531,261	12,330,101	15,522,294	24,355,333
31 Pre-Tax ROR	11.53%	11.53%	11.63%	11.63%	11.63%	11.50%	10.22%	9.87%	9.87%	9.85%
32 Return and Taxes	175,003	431,440	665,288	745,294	851,309	1,000,904	1,076,295	1,216,981	1,532,050	2,398,580
33 Book Depreciation	49,836	152,184	232,725	265,448	303,340	360,741	437,636	517,566	654,988	1,015,683
34 Property Taxes	37,347	130,246	244,324	281,249	284,329	410,251	559,784	534,937	778,814	1,220,538
35 Annual Revenue Requirement	262,185	713,870	1,142,337	1,291,991	1,438,978	1,771,896	2,073,715	2,269,484	2,965,852	4,634,801
37 Prior Year Annual Revenue Requirement	-	262,185	713,870	1,142,337	1,291,991	1,438,978	1,771,896	2,073,715	2,269,484	2,965,852
39 Incremental Annual Rate Adjustment Since July 1, 2009	262,185	451,684	428,467	149,654	146,987	332,918	301,819	195,769	696,368	1,668,949
Actual Capital Structure/ROR										
						(prior federal tax rate of 35%)				(current federal tax rate of 34%)
			Weighted	and state rate	and state rate					
			of 8.5%)	of 8.5%)	of 8.5%)					
	Ratio	Rate	after-tax	Pre Tax	Pre Tax					
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%	9.25%	4.625%	7.777%	7.659%					
57										
58	100.00%		6.840%	9.992%	9.874%					

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2017 Cast Iron/Bare Steel Replacement Program
Vintage Year Book Depreciation Schedule

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

		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
		Actual FY09	12 Months FY10	Actual FY11	Actual FY12	Actual FY13	Actual FY14	Actual FY15	Actual FY16	Actual FY17	Estimate FY18
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	3,006,856	3,304,532	5,240,601	13,069,252
2	Base spending	(352,073)	(418,248)	(417,650)	(408,438)	(465,466)	(441,199)	(402,383)	(423,720)	(422,502)	(423,017)
3	Incremental CIBS spending	1,384,080	3,788,047	2,973,419	1,161,770	1,709,346	2,339,940	2,604,473	2,880,812	4,818,099	12,646,235
4											
5	Book Depreciation Rate:										
6	Year 1	2.54%	35,065	35,065	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	50,006	55,312	242,808
8	Year 2	1.92%			72,731	57,090	22,306	32,819	44,927	50,006	55,312
9	Year 3	1.92%				72,731	57,090	22,306	32,819	44,927	50,006
10	Year 4	1.92%					72,731	57,090	22,306	32,819	44,927
11	Year 5	1.92%						72,731	57,090	22,306	32,819
12	Year 6	1.92%							72,731	57,090	22,306
13	Year 7	1.92%								72,731	57,090
14	Year 8	1.92%									72,731
15	Year 9	1.92%									72,731
16	Book Depreciation Expense-Mains	35,065	107,796	164,886	187,191	220,011	264,937	314,943	370,255	462,762	705,570
17											
18	Accumulated Depreciation Mains-Beginning of Year	-	35,065	142,861	307,747	494,938	714,948	979,886	1,294,829	1,665,084	1,665,084
19	Accumulated Depreciation Mains-End of Year	35,065	142,861	307,747	494,938	714,948	979,886	1,294,829	1,665,084	2,127,846	2,370,654
20											
21											
Book Depreciation Schedule-Services											
22											
23											
24	Actual CIBS spending	729,463	822,173	668,631	352,005	161,352	370,655	776,086	705,984	1,221,316	3,045,773
25	Base spending	(147,927)	(81,752)	(82,350)	(91,562)	(34,534)	(58,801)	(103,857)	(90,524)	(98,463)	(98,584)
26	Incremental CIBS spending	581,536	740,421	586,281	260,443	126,818	311,854	672,229	615,460	1,122,852	2,947,190
27											
28	Book Depreciation Rate:										
29	Year 1	2.54%	14,771	14,771	14,771	14,771	14,771	14,771	14,771	14,771	14,771
30	Year 1 beginning in FY10	4.00%		29,617	23,451	10,418	5,073	12,474	26,889	24,618	117,888
31	Year 2	4.00%			29,617	23,451	10,418	5,073	12,474	26,889	44,914
32	Year 3	4.00%				23,451	10,418	5,073	12,474	26,889	24,618
33	Year 4	4.00%					23,451	10,418	5,073	12,474	26,889
34	Year 5	4.00%						23,451	10,418	5,073	12,474
35	Year 6	4.00%							23,451	10,418	5,073
36	Year 7	4.00%								23,451	10,418
37	Year 8	4.00%									23,451
38	Year 9	4.00%									29,617
39	Book Depreciation Expense-Services	14,771	44,388	67,839	78,257	83,330	95,804	122,693	147,311	192,225	310,113
40											
41	Accumulated Depreciation Services-Beginning of Year	-	14,771	59,159	126,998	205,255	288,584	384,388	507,081	654,392	846,618
42	Accumulated Depreciation Services-End of Year	14,771	59,159	126,998	205,255	288,584	384,388	507,081	654,392	846,618	1,156,731
43											
44											
45											
46	Total Mains & Services Depreciation Expense	49,836	152,184	232,725	265,448	303,340	360,741	437,636	517,566	654,988	1,015,683
47											
48	Total Mains & Services Accumulated Depreciation	49,836	202,020	434,745	700,193	1,003,533	1,364,274	1,801,910	2,319,476	2,974,464	3,527,385

2(g) & 22(g) FY 2018 estimate split 82.6% Mains / 17.4% Services based upon FY 2017 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 2017 Cast Iron/Bare Steel Replacement Program
Municipal Taxes as a Percentage of Net Plant**

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

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
	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	12/31/2015	12/31/2016
1 Plant in Service	258,573	272,678	289,379	305,221	319,737	332,049	344,966	356,165	381,214	419,215	451,950	494,511
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)	(149,943)	(163,209)
3 Net Plant	176,209	184,114	194,817	202,634	211,467	217,756	224,993	235,118	252,006	281,559	302,007	331,302
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	435,582	473,230
7 Depreciation Reserve		(85,463)	(91,563)	(98,575)	(105,429)	(111,282)	(117,133)	(120,510)	(125,128)	(133,432)	(143,799)	(156,576)
8 Net Plant		180,162	189,465	198,726	207,051	214,611	221,375	230,056	243,562	266,782	291,783	316,654
9												
10 Municipal Taxes		3,534	3,641	3,771	4,294	5,459	5,776	5,321	6,835	8,560	7,644	9,596
11												
12 % Municipal Taxes to Net Plant		1.96%	1.92%	1.90%	2.07%	2.54%	2.61%	2.31%	2.81%	3.21%	2.62%	3.03%

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 2017 Cast Iron/Bare Steel Replacement Program
Bill Impacts due to Cast Iron and Bare Steel Replacement Program

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

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	Estimate FY2018
1 Annual Increase due to Cast Iron Bare Steel program	262,185	713,870	527,261	(92,036)	146,987	332,918	301,819	195,769	696,368	1,668,949
2										
3 Annual Throughput (see Summer 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	172,103,158	186,909,214	186,909,214
4										
5 Increase Factor	\$0.0017	\$0.0047	\$0.0034	(\$0.0006)	\$0.0009	\$0.0021	\$0.0018	\$0.0011	\$0.0037	\$0.0089
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	\$156,933,825	\$120,053,649	\$120,053,649
8										
9 Annual Percent Increase	0.15%	0.47%	0.40%	-0.06%	0.12%	0.24%	0.25%	0.12%	0.58%	1.39%
10										
11 Miles of Cast Iron/Bare Steel Main Replaced Annually through CIBS	2.96	3.98	2.79	1.56	1.65	3.51	5.00	5.05	10.26	13.10
12 Cumulative Miles of Main Replaced through CIBS	2.96	6.94	9.73	11.29	12.94	16.45	21.45	26.50	36.76	49.86
13 Total Miles of Cast Iron/Bare Steel Main Remaining ¹	149.8	142.0	137.4	132.1	126.30	120.88	113.96	106.46	93.18	77.48
14										
15 Services Replaced Annually ²	101	127	282	81	84	174	316	291	572	689
16 Cumulative Number of Services Replaced	101	228	510	591	675	849	1,165	1,456	2,028	2,717
17										
18 Typical Residential bill	\$1,292	\$1,107	\$1,118	\$1,059	\$1,020	\$1,123	\$1,309	\$1,309	\$1,078	\$1,078
19										
20 Typical Usage	800	800	800	800	800	800	800	800	763	763
21										
22 Annual Increase for Residential Heating customer	\$1.36	\$3.79	\$2.73	(\$0.45)	\$0.74	\$1.66	\$1.45	\$0.91	\$2.84	\$6.81
23										
24 Percent Bill Increase	0.10%	0.34%	0.24%	-0.04%	0.07%	0.15%	0.11%	0.07%	0.26%	0.63%
25										
26										
27 Typical G-41	\$3,375	\$2,939	\$2,842	\$2,696	\$2,654	\$2,926	\$3,499	\$3,499	\$2,651	\$2,651
28										
29 Typical Usage	2,167	2,167	2,167	2,167	2,167	2,167	2,167	2,167	2,029	2,029
30										
31 Annual Increase for G-41 customer	\$3.67	\$10.26	\$7.39	(\$1.22)	\$2.02	\$4.51	\$3.93	\$2.46	\$7.56	\$18.12
32										
33 Percent Bill Increase	0.11%	0.35%	0.26%	-0.05%	0.08%	0.15%	0.11%	0.07%	0.29%	0.68%
34										
35										
36 Typical G-42	\$22,595	\$18,926	\$18,432	\$17,516	\$16,884	\$18,853	\$22,486	\$22,486	\$16,284	\$16,284
37										
38 Typical Usage	15,567	15,567	15,567	15,567	15,567	15,567	15,567	15,567	14,720	14,720
39										
40 Annual Increase for G-42 customer	\$26.38	\$73.68	\$53.07	(\$8.76)	\$14.48	\$32.39	\$28.21	\$17.71	\$54.84	\$131.44
41										
42 Percent Bill Increase	0.12%	0.39%	0.29%	-0.05%	0.09%	0.17%	0.13%	0.08%	0.34%	0.81%
43										
44										
45 Typical G-52	\$21,973	\$16,707	\$16,605	\$16,025	\$14,629	\$16,555	\$18,667	\$18,667	\$14,087	\$14,087
46										
47 Typical Usage	15,687	15,687	15,687	15,687	15,687	15,687	15,687	15,687	14,566	14,566
48										
49 Annual Increase for G-52 customer	\$26.59	\$74.25	\$53.48	(\$8.83)	\$14.59	\$32.64	\$28.43	\$17.84	\$54.27	\$130.06
50										
51 Percent Bill Increase	0.12%	0.44%	0.32%	-0.06%	0.10%	0.20%	0.15%	0.10%	0.39%	0.92%

Line / Column Notes:

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

¹These figures are as of the end of the CIBS fiscal year (i.e. FY 2017 data is as of 3/31/2017). Mileage includes Cast Iron/Bare Steel replaced through the CIBS Program as well as City/State Construction.

²These figures include all service replacements and inserts, including bare steel, coated steel and plastic services

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**Liberty Utilities (EnergyNorth Natural Gas) Corp.
d/b/a Liberty Utilities
Docket No. DG 17-XXX
Attachment DBS-3
April 14, 2017**

**Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2017 Cast Iron/Bare Steel Replacement Program
Computation of Estimated Revenue Requirement Impact of Refund of Degradation Fees - Informational Only
April 14, 2017**

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 2017 Cast Iron/Bare Steel Replacement Program
Computation of Estimated Revenue Requirement Refund on Degradation Fees - Informational Only

(a)	(b) <u>Refund Year</u>
<u>Incremental Investment</u>	
1 CIBS Program Actual - Refund of Degradation Fees	(1,143,789)
2 Base Spending Amount	
3 Incremental Amount	(1,143,789)
4 Cumulative CIBS Program - Refund of Degradation Fees	(1,143,789)
5	
<u>Deferred Tax Calculation</u>	
6 Annual Tax Depreciation	(1,143,789)
7 Cumulative Tax Depreciation on Degradation Fees	(1,143,789)
8	
9 Annual Book Depreciation	(21,961)
10 Cumulative Book Depreciation on Degradation Fees	(21,961)
11	
12 Annual Book/Tax Timer	(1,121,828)
13 Cumulative Book/Tax Timer	(1,121,828)
14	
15 Effective Tax Rate	39.61%
16	
17 Estimated Deferred Tax Reserve	(444,356)
18	
<u>Rate Base Calculation</u>	
19 Plant In Service	(1,143,789)
20 Accumulated Depreciation	21,961
21	
22 Net Plant in Service	(1,121,828)
23 Deferred Tax Reserve	444,356
24	
25 Year End Rate Base	(677,472)
26	
<u>Revenue Requirement Calculation</u>	
27 Year End Rate Base	(677,472)
28 Pre-Tax ROR	9.87%
29 Return and Taxes	(66,867)
30 Book Depreciation	(21,961)
31 Property Taxes	3.03% (33,991)
32 Revenue Requirement Reduction	(122,819)
33	

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%	9.25%	4.625%	7.777%	7.659%
39					
40	<u>100.00%</u>		<u>6.840%</u>	<u>9.992%</u>	<u>9.874%</u>
41					
42					
43					
44					
45					

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2017 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
1	Actual CIBS spending		(1,143,789)
2			
3	Incremental CIBS spending		(1,143,789)
4			
5	Book Depreciation Rate:		
6	Year 1	1.92%	(21,961)
7	Year 2	1.92%	
8	Year 3	1.92%	
9	Year 4	1.92%	
10			
11	Book Depreciation Expense-Mains		(21,961)
12			
13	Accumulated Depreciation-Beginning of Year		-
14	Accumulated Depreciation-End of Year		(21,961)

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>F/Y 2016</u>	<u>F/Y 2017</u>	<u>Totals</u>
Concord	19,856	37,960	9,747	48,350	75,541	129,773	125,308	446,534
Manchester	275,035	39,885	382,335	-	-	-	-	697,255
Totals	294,891	77,845	392,082	48,350	75,541	129,773	125,308	1,143,789

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2017 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)	(k)	(l)
	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	12/31/2015	12/31/2016
1 Plant in Service	258,573	272,678	289,379	305,221	319,737	332,049	344,966	356,165	381,214	419,215	451,950	494,511
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)	(149,943)	(163,209)
3 Net Plant	176,209	184,114	194,817	202,634	211,467	217,756	224,993	235,118	252,006	281,559	302,007	331,302
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	435,582	473,230
7 Depreciation Reserve		(85,463)	(91,563)	(98,575)	(105,429)	(111,282)	(117,133)	(120,510)	(125,128)	(133,432)	(143,799)	(156,576)
8 Net Plant		180,162	189,465	198,726	207,051	214,611	221,375	230,056	243,562	266,782	291,783	316,654
9												
10 Municipal Taxes		3,534	3,641	3,771	4,294	5,459	5,776	5,321	6,835	8,560	7,644	9,596
11												
12 % Municipal Taxes to Net Plant		1.96%	1.92%	1.90%	2.07%	2.54%	2.61%	2.31%	2.81%	3.21%	2.62%	3.03%

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 2017 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	(122,819)
2	
3 Annual Throughput (see Summer COG filing - schedule 10B)	186,909,214
4	
5 Decrease Factor	(\$0.0007)
6	
7 Annual Calendar Year Gross Revenues (Annual Report - Page 11, line 2)	\$156,933,825
8	
9 Annual Percent Decrease	-0.08%
10	
11	
12	
13 Typical Residential bill	\$1,078
14	
15 Typical Usage	763
16	
17 Annual Decrease for Residential Heating customer	(\$0.50)
18	
19 Percent Bill Decrease	-0.05%
20	
21	
22 Typical G-41	\$2,651
23	
24 Typical Usage	2,029
25	
26 Annual Decrease for G-41 customer	(\$1.33)
27	
28 Percent Bill Decrease	-0.05%
29	
30	
31 Typical G-42	\$16,284
32	
33 Typical Usage	14,566
34	
35 Annual Decrease for G-42 customer	(\$9.57)
36	
37 Percent Bill Decrease	-0.06%
38	
39	
40 Typical G-52	\$14,087
41	
42 Typical Usage	14,566
43	
44 Annual Decrease for G-52 customer	(\$9.57)
45	
46 Percent Bill Decrease	-0.07%

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Liberty Utilities (EnergyNorth Natural Gas) Corp.
Fiscal Year 2017 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
April 14, 2017

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(a)	(b) <u>Refund Year</u>
<u>Incremental Investment</u>	
1 CIBS Program Actual - Charge of Degradation Fees	1,198,059
2 Base Spending Amount	
3 Incremental Amount	<u>1,198,059</u>
4 Cumulative CIBS Program - Charge of Degradation Fees	1,198,059
5	
<u>Deferred Tax Calculation</u>	
7 Annual Tax Depreciation	1,198,059
8 Cumulative Tax Depreciation on Degradation Fees	1,198,059
9	
10 Annual Book Depreciation	23,003
11 Cumulative Book Depreciation on Degradation Fees	23,003
12	
13 Annual Book/Tax Timer	1,175,056
14 Cumulative Book/Tax Timer	<u>1,175,056</u>
15 Effective Tax Rate	39.61%
16	
17 Estimated Deferred Tax Reserve	<u>465,440</u>
18	
<u>Rate Base Calculation</u>	
20 Plant In Service	1,198,059
21 Accumulated Depreciation	<u>(23,003)</u>
22 Net Plant in Service	1,175,056
23 Deferred Tax Reserve	<u>(465,440)</u>
24 Year End Rate Base	<u><u>709,617</u></u>
25	
<u>Revenue Requirement Calculation</u>	
27 Year End Rate Base	709,617
28 Pre-Tax ROR	<u>9.87%</u>
29 Return and Taxes	70,039
30 Book Depreciation	23,003
31 Property Taxes	3.03% <u>35,604</u>
32 Revenue Requirement Increase	128,646
33	

Capital Structure/ROR

	<u>Ratio</u>	<u>Rate</u>	<u>Weighted after-tax</u>	(prior federal tax rate of 35% and state rate of 8.5%) <u>Pre Tax</u>	(current federal tax rate of 34% and state rate of 8.5%) <u>Pre Tax</u>
40 Long Term Debt	50.00%	4.43%	2.215%	2.215%	2.215%
42 Short Term Debt	0.00%	0.00%	0.00%	0.00%	0.00%
43 Common Equity	<u>50.00%</u>	<u>9.25%</u>	<u>4.625%</u>	<u>7.777%</u>	<u>7.659%</u>
44					
45	<u>100.00%</u>		<u>6.840%</u>	<u>9.992%</u>	<u>9.874%</u>

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Vintage Year Book Depreciation Schedule

Book Depreciation Schedule-Mains	Refund
	<u>Year</u>
1 Actual CIBS spending	1,198,059
2	
3 Incremental CIBS spending	<u>1,198,059</u>
4	
5 Book Depreciation Rate:	
6 Year 1	1.92% 23,003
7 Year 2	1.92%
8 Year 3	1.92%
9 Year 4	1.92%
10	
11 Book Depreciation Expense-Mains	<u>23,003</u>
12	
13 Accumulated Depreciation-Beginning of Year	<u>-</u>
14 Accumulated Depreciation-End of Year	<u><u>23,003</u></u>

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>F/Y 2016</u>	<u>F/Y 2017</u>	<u>Totals</u>
Concord	-	-	-	-	-	-	-	-
Manchester	-	-	-	246,449	236,710	202,250	512,650	1,198,059
Totals	<u>-</u>	<u>-</u>	<u>-</u>	<u>246,449</u>	<u>236,710</u>	<u>202,250</u>	<u>512,650</u>	<u>1,198,059</u>

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Municipal Taxes as a Percentage of Net Plant

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
	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	12/31/2015	12/31/2015
1 Plant in Service	258,573	272,678	289,379	305,221	319,737	332,049	344,966	356,165	381,214	419,215	451,950	494,511
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)	(149,943)	(163,209)
3 Net Plant	176,209	184,114	194,817	202,634	211,467	217,756	224,993	235,118	252,006	281,559	302,007	331,302
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	435,582	473,230
7 Depreciation Reserve		(85,463)	(91,563)	(98,575)	(105,429)	(111,282)	(117,133)	(120,510)	(125,128)	(133,432)	(143,799)	(156,576)
8 Net Plant		180,162	189,465	198,726	207,051	214,611	221,375	230,056	243,562	266,782	291,783	316,654
9												
10 Municipal Taxes		3,534	3,641	3,771	4,294	5,459	5,776	5,321	6,835	8,560	7,644	9,596
11												
12 % Municipal Taxes to Net Plant		1.96%	1.92%	1.90%	2.07%	2.54%	2.61%	2.31%	2.81%	3.21%	2.62%	3.03%

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

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Bill Impacts due to Cast Iron and Bare Steel Replacement Program

(a)	(b) Charge Year
1 Increase Related to Unpaid Degradation Fees	128,646
2	
3 Annual Throughput (see Summer COG filing - schedule 10B)	186,909,214
4	
5 Increase Factor	\$0.0007
6	
7 Annual Calendar Year Gross Revenues (Annual Report - Page 11, line 2)	\$156,933,825
8	
9 Annual Percent Increase	0.08%
10	
11	
12	
13 Typical Residential bill	\$1,078
14	
15 Typical Usage	763
16	
17 Annual Increase for Residential Heating customer	\$0.53
18	
19 Percent Bill Increase	0.05%
20	
21	
22 Typical G-41	\$2,651
23	
24 Typical Usage	2,029
25	
26 Annual Increase for G-41 customer	\$1.40
27	
28 Percent Bill Increase	0.05%
29	
30	
31 Typical G-42	\$16,284
32	
33 Typical Usage	14,720
34	
35 Annual Increase for G-42 customer	\$10.13
36	
37 Percent Bill Increase	0.06%
38	
39	
40 Typical G-52	\$14,087
41	
42 Typical Usage	14,566
43	
44 Annual Increase for G-52 customer	\$10.03
45	
46 Percent Bill Increase	0.07%