

Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty
Index to Revenue Requirement Schedules
Test Year Ended December 31, 2022

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Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty
Revenue Deficiency and Revenue Requirement
Test Year With Known and Measurable Changes

Line	Description	Reference	EnergyNorth
1	Rate Base	RR-EN-5	\$ 527,941,042
2			
3	Target Rate of Return on Rate Base	RR-EN-4	7.68%
4			
5	Operating Income Requirement	Line 1 X Line 3	\$ 40,545,872
6			
7	Operating Income at Present Rates	RR-EN-2	\$ 20,415,206
8			
9	Operating Income Deficiency	Line 5 - Line 7	\$ 20,130,666
10			
11	Gross-up Factor for Additional Income Taxes	Line 19	1.3686
12			
13	Revenue Deficiency	Line 9 X Line 11	\$ 27,549,837
14	Total Deficiency	Line 13	\$ 27,549,837
15	<u>Gross-up Factor for Income Taxes</u>		
16	Federal Income Tax Rate		21.00%
17	New Hampshire State Income Tax Rate		7.50%
18	Combined Income Tax Rate	Line 16 + Line 17 - (Line 16 X Line 17)	26.93%
19	Gross-up Factor	1 / (1 - Line 18)	1.3686
20			
21	Additional Income Tax Required	Line 13 - Line 9	\$ 7,419,171
22			
23	Distribution Revenue at Present Rates	RR-EN-2	\$ 103,126,298
24			
25	% Increase Needed	Line 13 / Line 23	26.71%
26			
27	Revenue with Increase	RR-EN-2	\$ 130,676,134
28			
29	% Increase Needed - Total Revenue		12.31%

Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty
Operating Income Statement - EnergyNorth
Test Year With Known and Measurable Changes

Line Account	<i>Source</i>		<i>RR-EN-3</i>		<i>RR-1</i>		Distribution Operating Income with Proposed Increase
	Test Year Ended December 31, 2022	Cost of Gas & LDAC	Distribution Operating Income	Known and Measurable Adjustments	Test Year at Current Rates	Proposed Increase	
1 Revenue							
2 Operating Revenue	\$ 209,490,317	\$ (110,661,385)	\$ 98,828,931	\$ (2,275,787)	\$ 96,553,144	\$ 24,699,266	\$ 121,252,410
3 Decoupling	8,479,807	(8,479,807)	-	-	-	-	-
4 Indirect COG Revenue	3,893,588	-	3,893,588	-	3,893,588	2,850,571	6,744,159
5 Other Revenue	1,880,466	-	1,880,466	799,100	2,679,566	-	2,679,566
6	\$ 223,744,178	\$ (119,141,193)	\$ 104,602,985	\$ (1,476,687)	\$ 103,126,298	\$ 27,549,837	\$ 130,676,134
7							
8 Operating Expenses							
9 Operations and Maintenance - Gas	\$ 114,454,194	\$ (112,232,037)	\$ 2,222,157	\$ 40,402	\$ 2,262,559		\$ 2,262,559
10 Operations and Maintenance - Distribution	13,059,212	-	13,059,212	239,253	13,298,465		13,298,465
11 Customer Accounting	3,925,424	782,693	4,708,117	1,412,740	6,120,857		6,120,857
12 Sales and New Business	487,256	-	487,256	14,694	501,950		501,950
13 Administrative & General	12,266,440	-	12,266,440	3,385,305	15,651,745		15,651,745
14 Depreciation and Amortization	24,926,507	-	24,926,507	(384,754)	24,541,752		24,541,752
15 Taxes other than Income Taxes	15,457,322	-	15,457,322	1,219,835	16,677,157		16,677,157
16 Income Taxes	12,188,963	-	12,188,963	(8,532,355)	3,656,608	7,419,171	11,075,779
17	\$ 196,765,317	\$ (111,449,344)	\$ 85,315,973	\$ (2,604,881)	\$ 82,711,091	\$ 7,419,171	\$ 90,130,262
18							
19 Utility Net Income	\$ 26,978,861	\$ (7,691,849)	\$ 19,287,012	\$ 1,128,194	\$ 20,415,206	\$ 20,130,666	\$ 40,545,872
20							
21 Rate Base			<u>\$ 527,941,042</u>		<u>\$ 527,941,042</u>		<u>\$ 527,941,042</u>
22							
23 Rate of Return on Rate Base			3.65%		3.87%		7.68%

Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty
Operating Income Statement - Detail - EnergyNorth
Test Year With Known and Measurable Changes

Source

RR-EN-3

RR-EN-3

Line	Account	Account Number	Test Year Ended December 31, 2022	Cost of Gas & LDAC	Distribution Operating Income	Known and Measurable Adjustments	Test Year At Current Rates	Labor	Labor Pro Forma
1	OPERATION AND MAINTENANCE EXPENSES								
2	O&M - Gas Production								
3	Operation Supervision and Engineering	710	\$ 1,461,346	\$ -	\$ 1,461,346	\$ 33,533	\$ 1,494,880	\$ 1,234,127	\$ 1,267,661
4	Liquefied Petroleum Gas Expenses	717	34,408	-	34,408	419	34,827	15,430	15,849
5	Miscellaneous Production Expenses	735	434,858	-	434,858	3,543	438,401	130,386	133,929
6	Maintenance of Production Equipment	742	257,313	-	257,313	2,859	260,172	105,202	108,060
7	Natural Gas City Gate Purchases	804	10,467,995	(10,467,995)	-	-	-	-	-
8	Other Gas Purchases	805	105,879,815	(105,879,815)	-	-	-	-	-
9	Gas Withdrawn from Storage	808	(4,115,772)	4,115,772	-	-	-	-	-
10	LNG Processing Terminal Labor and Expenses	844.2	27,195	-	27,195	-	27,195	-	-
11	Other Expenses	846	7,036	-	7,036	48	7,084	1,772	1,820
12	<i>Total O&M - Gas Production</i>		\$ 114,454,194	\$ (112,232,037)	\$ 2,222,157	\$ 40,402	\$ 2,262,559	\$ 1,486,917	\$ 1,527,319
13									
14	O&M - Distribution Expenses								
15	Operation Supervision and Engineering	850	\$ 306	\$ -	\$ 306	\$ 8	\$ 315	\$ 306	\$ 315
16	Maintenance of Mains (Transmission)	863	8,386	-	8,386	228	8,614	8,386	8,614
17	Operation Supervision and Engineering	870	526,329	-	526,329	9,172	535,501	337,561	346,733
18	Distribution Load Dispatching	871	301,395	-	301,395	14,492	315,887	533,356	547,848
19	Mains Services Expenses	874	4,922,998	-	4,922,998	96,200	5,019,198	3,540,424	3,636,624
20	Measuring and Regulating Station Expenses - General	875	52,551	-	52,551	1,230	53,780	45,254	46,484
21	Meter and House Regulator Expenses	878	1,268,364	-	1,268,364	28,226	1,296,590	1,038,814	1,067,040
22	Customer Installations Expenses	879	614,499	-	614,499	18,343	632,842	675,078	693,421
23	Other Expenses	880	1,378,633	-	1,378,633	26,727	1,405,360	983,624	1,010,351
24	Rents	881	36,016	-	36,016	2	36,018	71	73
25	Maintenance Supervision and Engineering	885	110,719	-	110,719	3,008	113,727	110,719	113,727
26	Maintenance of Structures and Improvements	886	262,296	-	262,296	2,717	265,013	99,994	102,711
27	Maintenance of Mains	887	2,306,529	-	2,306,529	18,893	2,325,423	695,330	714,223
28	Maintenance of Measuring and Regulating Station Expenses	889	2,487	-	2,487	68	2,555	2,487	2,555
29	Maintenance of Services	892	559,259	-	559,259	7,869	567,129	289,616	297,485
30	Maintenance of Meters and House Regulators	893	339,700	-	339,700	7,376	347,077	271,470	278,846
31	Maintenance of Other Equipment	894	368,744	-	368,744	4,693	373,437	172,715	177,408
32	<i>Total O&M - Distribution</i>		\$ 13,059,212	\$ -	\$ 13,059,212	\$ 239,253	\$ 13,298,465	\$ 8,805,204	\$ 9,044,457
33	<i>Total O&M - Gas Production and Distribution</i>		\$ 127,513,406	\$ (112,232,037)	\$ 15,281,369	\$ 279,655	\$ 15,561,024	\$ 10,292,121	\$ 10,571,776
34									
35	Customer Accounts Expenses								
36	Supervision	901	\$ 149,424	\$ -	\$ 149,424	\$ 4,060	\$ 153,484	\$ 149,424	\$ 153,484
37	Meter Reading Expenses	902	453,911	-	453,911	13,463	467,374	495,479	508,942
38	Customer Records and Collection Expenses	903	2,107,953	-	2,107,953	1,393,567	3,501,520	1,366,675	1,403,810
39	Uncollectible Accounts	904.0	1,936,129	-	1,936,129	-	1,936,129	-	-
40	Bad Debt Expense - Commodity	904.1	(782,693)	782,693	-	-	-	-	-
41	Miscellaneous Customer Accounts Expenses	905	60,701	-	60,701	1,649	62,350	60,701	62,350
42	<i>Total Customer Accounting</i>		\$ 3,925,424	\$ 782,693	\$ 4,708,117	\$ 1,412,740	\$ 6,120,857	\$ 2,072,278	\$ 2,128,585
43									
44	Customer Service and Informational & Sales Expenses								
45	Informational and Instructional Advertising Expenses	909	\$ 92,247	\$ -	\$ 92,247	\$ 1,405	\$ 93,652	\$ 51,714	\$ 53,120
46	Sales & Advertising	912	253,928	-	253,928	11,533	265,462	424,453	435,986
47	Advertising Expenses	913	82,021	-	82,021	161	82,182	5,919	6,080
48	Miscellaneous Sales Expenses	916	59,059	-	59,059	1,595	60,654	58,696	60,291
49	<i>Total Customer Service and Informational & Sales Expenses</i>		\$ 487,256	\$ -	\$ 487,256	\$ 14,694	\$ 501,950	\$ 540,783	\$ 555,477
50	<i>Total Customer Accounts, Customer Service and Informational</i>		\$ 4,412,680	\$ 782,693	\$ 5,195,373	\$ 1,427,434	\$ 6,622,807	\$ 2,613,061	\$ 2,684,063
51									
52	Administrative and General Expenses								
53	A&G Salaries	920	\$ 1,706,504	\$ -	\$ 1,706,504	\$ 88,218	\$ 1,794,722	\$ 3,246,668	\$ 3,334,886
54	Office Supplies and Expenses	921	6,406,776	-	6,406,776	1,183	6,407,959	43,554	44,738
55	Administrative Expenses Transferred	922	(8,941,610)	-	(8,941,610)	(605,519)	(9,547,129)	(897,465)	(921,850)
56	Outside Services Employed	923	5,855,336	-	5,855,336	1,737,945	7,593,282	-	-
57	Property Insurance	924	130,114	-	130,114	-	130,114	-	-
58	Injuries and Damages	925	1,423,852	-	1,423,852	-	1,423,852	-	-
59	Employee Pensions and Benefits	926	7,240,313	-	7,240,313	2,082,065	9,322,377	-	-
60	Regulatory Commission Expenses	928	1,090,204	-	1,090,204	87,083	1,177,287	-	-
61	Miscellaneous General Expenses	930.2	(3,121,419)	-	(3,121,419)	1,235	(3,120,185)	45,439	46,673
62	Rents	931	125,425	-	125,425	(7,751)	117,674	-	-
63	Maintenance of General Plant	932	350,946	-	350,946	845	351,791	31,110	31,955
64	<i>Total Administrative & General</i>		\$ 12,266,440	\$ -	\$ 12,266,440	\$ 3,385,305	\$ 15,651,745	\$ 2,469,306	\$ 2,536,402
65	Total Operation and Maintenance Expenses		\$ 144,192,526	\$ (111,449,344)	\$ 32,743,181	\$ 5,092,394	\$ 37,835,575	\$ 15,374,489	\$ 15,792,241
66									

Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty
Operating Income Statement - Detail - EnergyNorth
Test Year With Known and Measurable Changes

Source

RR-EN-3

RR-EN-3

Line	Account	Account Number	Test Year Ended December 31, 2022	Cost of Gas & LDAC	Distribution Operating Income	Known and Measurable Adjustments	Test Year At Current Rates	Labor	Labor Pro Forma
67									
68	DEPRECIATION AND AMORTIZATION EXPENSE								
69	Depreciation Expense	403	\$ 21,708,700	\$ -	\$ 21,708,700	\$ 1,121,189	\$ 22,829,889		
70	Amortization - Intangibles	405	1,175,454	-	1,175,454	1,468,747	2,644,202		
71	Regulatory Debits - Amortization of Regulatory Assets	407.3	736,549	-	736,549	(582,258)	154,291		
72	Regulatory Credits - Amortization of Regulatory Liabilities	407.4	1,305,803	-	1,305,803	(2,392,432)	(1,086,629)		
73	Total Depreciation and Amortization Expense		\$ 24,926,507	\$ -	\$ 24,926,507	\$ (384,754)	\$ 24,541,752		
74									
75	TAXES OTHER THAN INCOME TAXES								
76	Taxes other than Income Taxes - Payroll Taxes	408	\$ 1,203,396	\$ -	\$ 1,203,396	\$ 32,628	\$ 1,236,024		
77	Taxes other than Income Taxes - Property Taxes	408	14,253,925	-	14,253,925	1,187,207	15,441,132		
78	Total Taxes other than Income Taxes		\$ 15,457,322	\$ -	\$ 15,457,322	\$ 1,219,835	\$ 16,677,157		
79									
80	FEDERAL / STATE INCOME TAXES								
81	Income Tax Expense	409-410	\$ 12,188,963	\$ -	\$ 12,188,963	\$ (8,532,355)	\$ 3,656,608		
82	Subtotal - Income Tax		\$ 12,188,963	\$ -	\$ 12,188,963	\$ (8,532,355)	\$ 3,656,608		
83									
84									
85									
86	TOTAL EXPENSES		\$ 196,765,317	\$ (111,449,344)	\$ 85,315,973	\$ (2,604,881)	\$ 82,711,091	\$ 15,374,489	\$ 15,792,241
87									
88	REVENUES								
89	Operating Revenue		\$ 209,490,317	\$ (110,661,385)	\$ 98,828,931	\$ (2,275,787)	\$ 96,553,144		
90	Decoupling		8,479,807	(8,479,807)	-	-	-		
91	Indirect COG Revenue		3,893,588	-	3,893,588	-	3,893,588		
91	Other Revenue		1,880,466	-	1,880,466	799,100	2,679,566		
92	Total Revenue		\$ 223,744,178	\$ (119,141,193)	\$ 104,602,985	\$ (1,476,687)	\$ 103,126,298		
93									
94	UTILITY NET INCOME		\$ 26,978,861	\$ (7,691,849)	\$ 19,287,012	\$ 1,128,194	\$ 20,415,206		
95									
96	TOTAL RATE BASE	RR-EN-5	\$ 527,941,042		\$ 527,941,042		\$ 527,941,042		
97									
98	Income Tax Rate		31.12%		38.72%		15.19%		
99									
100	Rate of Return		5.11%		3.65%		3.87%		

Liberty Utilities (Energy/North Natural Gas) Corp., d/b/a Liberty
Summary of Adjustments
Test Year Ended December 31, 2022

Adjustment 1 Adjustment 2 Adjustment 3 Adjustment 4 Adjustment 5 Adjustment 6 Adjustment 7 Adjustment 8 Adjustment 9 Adjustment 10

Line	Account	Account Number	Total	Revenue Adjustments	Salary and Wage Expense	Payroll Tax Expense	Pension and Benefits Expense	Depreciation Expense	Amortization Expense	Property Tax	Income Tax Expense - Historical Test Year	Income Tax Expense - Pro Forma Test Year at Current Rates	Other Adjustments	Historical Test Year Labor Expense	% Total Labor	
1	OPERATION AND MAINTENANCE EXPENSES															
2	O&M - Gas Production															
3	Operation Supervision and Engineering	710	\$ 33,533		\$ 33,533									\$ 1,234,127	8.03%	
4	Liquefied Petroleum Gas Expenses	717	419		419									15,430	0.10%	
5	Miscellaneous Production Expenses	735	3,543		3,543									130,386	0.85%	
6	Maintenance of Production Equipment	742	2,859		2,859									105,202	0.68%	
7	Natural Gas City Gate Purchases	804	-		-									-	0.00%	
8	Other Gas Purchases	805	-		-									-	0.00%	
9	Gas Withdrawn from Storage	808	-		-									-	0.00%	
10	LNG Processing Terminal Labor and Expenses	844.2	-		-									-	0.00%	
11	Other Expenses	846	48		48									1,772	0.01%	
12	Total O&M - Gas Production		\$ 40,402	\$ -	\$ 40,402	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,486,917	9.67%	
13																
14	O&M - Distribution Expenses															
15	Operation Supervision and Engineering	850	\$ 8		\$ 8									\$ 306	0.00%	
16	Maintenance of Mains (Transmission)	863	228		228									8,386	0.05%	
17	Operation Supervision and Engineering (Transmission)	870	9,172		9,172									337,561	2.20%	
18	Distribution Load Dispatching	871	14,492		14,492									533,356	3.47%	
19	Mains Services Expenses	874	96,200		96,200									3,540,424	23.03%	
20	Measuring and Regulating Station Expenses - General	875	1,230		1,230									45,254	0.29%	
21	Meter and House Regulator Expenses	878	28,226		28,226									1,038,814	6.76%	
22	Customer Installations Expenses	879	18,343		18,343									675,078	4.39%	
23	Other Expenses	880	26,727		26,727									983,624	6.40%	
24	Rents	881	2		2									71	0.00%	
25	Maintenance Supervision and Engineering	885	3,008		3,008									110,719	0.72%	
26	Maintenance of Structures and Improvements	886	2,717		2,717									99,994	0.65%	
27	Maintenance of Mains	887	18,893		18,893									695,330	4.52%	
28	Maintenance of Measuring and Regulating Station Expenses	889	68		68									2,487	0.02%	
29	Maintenance of Services	892	7,869		7,869									289,616	1.88%	
30	Maintenance of Meters and House Regulators	893	7,376		7,376									271,470	1.77%	
31	Maintenance of Other Equipment	894	4,693		4,693									172,715	1.12%	
32	Total O&M - Distribution		239,253	-	239,253	-	-	-	-	-	-	-	-	8,805,204	57.27%	
33	Total O&M - Gas Production and Distribution		\$ 279,655	\$ -	\$ 279,655	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,292,121	66.94%	
34																
35	Customer Accounts Expenses															
36	Supervision	901	\$ 4,060		4,060									\$ 149,424	0.97%	
37	Meter Reading Expenses	902	13,463		13,463									495,479	3.22%	
38	Customer Records and Collection Expenses	903	1,393,567		37,135							1,356,432		1,366,675	8.89%	
39	Uncollectible Accounts	904.0	-		-									-	0.00%	
40	Bad Debt Expense - Commodity	904.1	-		-									-	0.00%	
41	Miscellaneous Customer Accounts Expenses	905	1,649		1,649									60,701	0.39%	
42	Total Customer Accounting		\$ 1,412,740	\$ -	\$ 56,307	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,072,278	13.48%	
43																
44	Customer Service and Informational & Sales Expenses															
45	Informational and Instructional Advertising Expenses	909	1,405		1,405									51,714	0.34%	
46	Sales & Advertising	912	11,533		11,533									424,453	2.76%	
47	Advertising Expenses	913	161		161									5,919	0.04%	
48	Miscellaneous Sales Expenses	916	1,595		1,595									58,696	0.38%	
49	Total Customer Service and Informational & Sales Expenses		14,694	-	14,694	-	-	-	-	-	-	-	-	540,783	3.52%	
50	Total Customer Accounts, Customer Service and Informational		\$ 1,427,434	\$ -	\$ 71,001	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,613,061	17.00%	
51																
52	Administrative and General Expenses															
53	A&G Salaries	920	\$ 88,218		\$ 88,218									\$ 3,246,668	21.12%	
54	Office Supplies and Expenses	921	1,183		1,183									43,554	0.28%	
55	Administrative Expenses Transferred	922	(605,519)		(24,386)		(581,133)							(897,465)	-5.84%	
56	Outside Services Employed	923	1,737,945		-								1,737,945	-	0.00%	
57	Property Insurance	924	-		-									-	0.00%	
58	Injuries and Damages	925	-		-									-	0.00%	
59	Employee Pensions and Benefits	926	2,082,065		-		2,082,065							-	0.00%	
60	Regulatory Commission Expenses	928	87,083		-								87,083	-	0.00%	
61	Miscellaneous General Expenses	930	1,235		1,235									45,439	0.30%	
62	Rents	931	(7,751)		-								(7,751)	-	0.00%	
63	Maintenance of General Plant	932	845		845									31,110	0.20%	
64	Total Administrative & General		3,385,305	-	67,095	-	1,500,932	-	-	-	-	-	-	1,817,278	2,469,306	16.06%
65	Total Operation and Maintenance Expenses		\$ 5,092,394	\$ -	\$ 417,752	\$ -	\$ 1,500,932	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,173,710	\$ 15,374,489	100.00%
66																
67	DEPRECIATION AND AMORTIZATION EXPENSE															
68	Depreciation Expense	403.0	\$ 1,121,189					\$ 1,121,189					\$ -			
69	Amortization - Intangibles	405.0	1,468,747						1,468,747							
70	Regulatory Debits	407.3	(582,258)						(582,258)							
71	Regulatory Credits - Amortization of Regulatory Assets	407.4	(2,392,432)						(2,392,432)							
72	Total Depreciation and Amortization Expense		\$ (384,754)	\$ -	\$ -	\$ -	\$ -	\$ 1,121,189	\$ (1,505,943)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
73																
74	TAXES OTHER THAN INCOME TAXES															
75	Taxes other than Income Taxes - Payroll Taxes	408	\$ 32,628		\$ 32,628											
76	Taxes other than Income Taxes - Property Taxes	408	1,187,207							1,187,207						
77	Total Taxes other than Income Taxes		\$ 1,219,835	\$ -	\$ -	\$ 32,628	\$ -	\$ -	\$ -	\$ 1,187,207	\$ -	\$ -	\$ -	\$ -	\$ -	
78																
79	FEDERAL / STATE INCOME TAXES															
80	Income Tax Expense		\$ (8,532,355)								\$ (6,538,415)	\$ (1,993,941)				
81			\$ (8,532,355)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (6,538,415)	\$ (1,993,941)	\$ -			
82																
83																
84	TOTAL EXPENSES		\$ (2,604,881)	\$ -	\$ 417,752	\$ 32,628	\$ 1,500,932	\$ 1,121,189	\$ (1,505,943)	\$ 1,187,207	\$ (6,538,415)	\$ (1,993,941)	\$ 3,173,710			
85																
86	REVENUES															
87	Operating Revenue		\$ (2,275,787)	\$ (2,275,787)												
88	Other Revenue		799,100		799,100											
89	Total Revenue		\$ (1,476,687)	\$ (1,476,687)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
90																
91	UTILITY NET INCOME		\$ 1,128,194	\$ (1,476,687)	\$ (417,752)	\$ (32,628)	\$ (1,500,932)	\$ (1,121,189)	\$ 1,505,943	\$ (1,187,207)	\$ 6,538,415	\$ 1,993,941	\$ (3,173,710)			

Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty
Adjustments to Test Year
Adjustment 1
Revenue Adjustments

Line	Description	Current Amounts (12/31/2022 Test Year)	Source/Notes
1	Operating Revenue	\$ 98,828,931	Trial Balance
2			
3	<u>Adjustments to Operating Revenue</u>		
4	Weather Normalization/Calendarization	\$ 939,769	
5	Granite Ridge Special Contract	(904,985)	
6	iNATGAS Special Contract	(792,672)	
7	Step-Increase Prior Period Amortization	(1,517,900)	
8	Pro Forma Operating Revenue	\$ 96,553,144	
9	Total Adjustment to Operating Revenues	\$ (2,275,787)	
10	Miscellaneous Revenues	\$ 1,880,466	Trial Balance
11	Connection Fee Adjustment	\$ 799,100	
12	Pro Forma Miscellaneous Revenue	\$ 2,679,566	
13	Total Adjustment to Miscellaneous Revenues	\$ 799,100	

Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty
Adjustments to Test Year
Adjustment 2
Salary and Wage Expense

Line	Department	Total
1	Test Year LU NH Labor Charged to EnergyNorth	\$ 15,374,489
2	Adjust Labor to Full Compliment	324,769
3	Net Test Year Labor Charged to EnergyNorth	<u>\$ 15,049,720</u>
4	2022 Salary & Wage Increase Annualization - O&M	<u>3.50%</u>
5	2022 Payroll Increase Annualization (not in test year, effective March 2022)	<u>89,685</u>
6	2022 Labor, as Annualized	<u>15,139,404</u>
7		
8	2023 Salary & Wage Increase Annualization - O&M	<u>4.00%</u>
9	2023 Salary & Wage Increase - O&M	<u>605,576</u>
10	2023 Payroll, as Annualized for 2023 Increase	<u>\$ 15,744,981</u>
11		
12	New Customer Advocacy Manager	
13	Base Salary	125,000
14	Benefits/Overhead Load (@ 60%)	200,000
15	ENNG Customer Count as a Percentage of the East Region	<u>23.18%</u>
16	ENNG Share	<u>\$ 46,360</u>
17		
18	Pro Forma LU NH Labor for 2023 Payroll Increase and New Position	\$ 15,791,341
19	2019 Ratification Bonus Original Amount (DG 20-105)	18,000
20	Months Remaining in Original Amortization (Ends December 31, 2023)	12
21	Amount remaining to be amortized	<u>3,600</u>
22	Proposed Amortization Period	<u>4</u>
23	Proposed Amortization - 4 Years	<u>\$ 900</u>
24		
25	Net Pro Forma LU NH Labor for 2023 Payroll Increase	<u>\$ 15,792,241</u>
26		
27	Test Year Labor Charged to EnergyNorth	\$ 15,374,489
28		
29	Increase Due to Known and Measurable - Payroll	<u>\$ 417,752</u>

Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty
Adjustments to Test Year
Adjustment 3
Payroll Tax Expense

Line	Particulars	Reference	Expense (\$)
1	Unadjusted Test Year Labor Expense	<i>RR-EN-2-1</i>	\$ 15,374,489
2	Unadjusted Test Year Payroll Tax Expense	<i>RR-EN-2-1</i>	1,203,396
3	Payroll Tax Rate (%)		7.83%
4			
5	Adjusted Test Year Labor Expense		\$ 15,791,341
6	Payroll Tax Rate (%)		7.83%
7	Adjusted Payroll Tax Expense		1,236,024
8	Increase Due to Known and Measurable Payroll Tax Expense		\$ 32,628

Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty
Adjustments to Test Year
Adjustment 4
Pension and Benefits Expense

Line	Particulars	Source	Amount
1	Test Year ended 12/31/2022 Benefits Expense	RR-EN-3-04-WP	\$ 7,240,313
2	Adjustment to Other Benefits Expense		\$ 185,726
3			
4	Historical Test Year Pension & OPEB Expense	RR-EN-3-04-WP	\$ 1,662,175
5	Adjustment to Pension & OPEB Expense	RR-EN-3-04-WP	\$ 1,896,339
6			
7	Adjusted Test Year	RR-EN-3-04-WP	\$ 9,322,377
8			
9	Adjustment - Including Capitalized Portion of Pensions and OPEBs - To Account 926		\$ 2,082,065
10			
11	Total	Ln 5	1,896,339
12	Capitalization Rate		30.65%
13			
14	Adjustment - Capitalized Portion - To Account 922		\$ (581,133)
15			
16			
17	Adjustment to Rate Year Expense		\$ 1,500,932

Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty
Adjustments to Test Year
Adjustment 5
Depreciation Expense

Line	Account	Account Number	Depreciation Rates	Plant in Service				Pro Forma	Accumulated Reserve		
				Balance 1/1/2022	Net Additions	Account 106	Balance 12/31/2022	Depreciation Expense	Accumulated Reserve as of 12/31/2022	Accounts 1084 and 2420 by FERC Account	Adjusted Accumulated Reserve
1	Franchises and Consents	302	0.00%	\$ 250,950	\$ -	\$ -	\$ 250,950	\$ -	-	\$ -	\$ -
2	Capital Software	303.0	16.13%	18,792,415	32,543,132	4,229,432	-	-	19,431,611	-	19,431,611
3	Capital Software - 3 Years	303.1	33.33%	-	-	-	1,814,463	168,876	-	-	-
4	Capital Software - 5 Years	303.2	20.00%	-	-	-	18,264,307	674,513	-	-	-
5	Capital Software - 7 Years	303.3	14.29%	-	-	-	1,503,103	214,729	-	-	-
6	Capital Software - 10 Years	303.4	10.00%	-	-	-	3,607,066	36,729	-	-	-
7	Capital Software - 20 Years	303.5	5.00%	-	-	-	30,376,040	1,518,802	-	-	-
8	Subtotal - INTANGIBLE PLANT			\$ 19,043,366	\$ 32,543,132	\$ 4,229,432	\$ 55,815,930	\$ 2,613,650	\$ 19,431,611	\$ -	\$ 19,431,611
9											
10	Land & Land Rights	304		\$ 97,504	\$ -	\$ -	\$ 97,504	\$ -	\$ -	\$ -	\$ -
11	Structures and Improvements	305	2.86%	852,167	-	-	852,167	24,372	90,488	-	90,488
12	Liquefied Petroleum Gas Equipment	311	2.86%	(26,231)	26,231	139,857	139,857	4,000	(33,499)	-	(33,499)
13	Gas Mixing Equipment	319	5.00%	527,292	-	50,631	577,923	28,896	326,036	-	326,036
14	Other Equipment - LNG	320	2.86%	3,885,253	2,517	3,435,791	7,323,561	209,454	(35,819)	-	(35,819)
15	Structures and Improvements	361	2.86%	96,980	-	-	96,980	2,774	27,642	-	27,642
16	Other Equipment	363.5	2.86%	7,646	-	-	7,646	219	2,808	-	2,808
17	Subtotal - PRODUCTION PLANT			\$ 5,440,610	\$ 28,748	\$ 3,626,279	\$ 9,095,636	\$ 269,714	\$ 377,655	\$ -	\$ 377,655
18											
19	Land & Land Rights	364.1	0.00%	\$ 57,315	\$ -	\$ -	\$ 57,315	\$ -	\$ -	\$ -	\$ -
20	Structures and Improvements	364.2	2.86%	556,650	52,428	390,098	999,175	28,576	536,412	-	536,412
21	LNG Processing Terminal Equipment	364.3	2.86%	-	-	31,293	31,293	895	397	-	397
22	Other Equipment	364.8	5.26%	3,896,019	-	-	3,896,019	204,931	2,734,433	-	2,734,433
23	Subtotal LNG Terminating and Processing			\$ 4,509,984	\$ 52,428	\$ 421,391	\$ 4,983,803	\$ 234,402	\$ 3,271,243	\$ -	\$ 3,271,243
24											
25	Structures and Improvements	366	2.86%	\$ -	\$ -	\$ -	\$ -	\$ -	(154,862)	\$ -	(154,862)
26	Mains	367	1.92%	11,683,757	26,785	26,785	11,737,328	225,357	(3,950,973)	6,071,129	(10,022,102)
27	Measuring and Regulating Station Equipment	369	2.86%	23,974	114,208	114,208	252,390	7,218	(51,521)	-	(51,521)
28	Land & Land Rights	374	0.00%	376,710	(18,807)	-	357,903	-	-	-	-
29	Structures and Improvements	375	2.86%	1,678,911	10,385	10,385	1,699,681	48,611	365,804	-	365,804
30	T&D Mains - STL-PLST-CI-Mixed	376	1.92%	331,011,767	11,379,241	49,515,161	391,906,168	7,524,598	88,068,956	(1,806,286)	89,875,242
31	Dist-Compressor station equipment	377	1.92%	2,859,214	-	-	2,859,214	54,897	442,426	-	442,426
32	Measuring and Regulating Station Equipment - General	378	2.86%	7,820,389	291,739	1,478,255	9,590,382	274,285	5,087,329	-	5,087,329
33	Dist-Measuring and regulating station equipment-Ci	379	2.86%	5,253,764	51,523	177,319	5,482,605	156,803	1,782,734	-	1,782,734
34	T&D Gas Services - STL	380	3.20%	187,754,415	1,430,519	28,165,754	217,350,688	6,955,222	63,063,196	26,738,352	36,324,844
35	Meters	381.0	3.33%	13,298,575	665,292	4,756,036	18,719,903	623,373	5,295,180	-	5,295,180
36	Meters - ERTS	381.2	6.67%	6,347,958	-	-	6,347,958	423,409	5,314,698	-	5,314,698
37	Meter Installations	382	3.33%	15,016,139	6,751,384	6,779,781	28,547,303	950,625	6,852,869	(8,701)	6,861,570
38	Indust meas and reg station equip	385	2.86%	(79,651)	133,026	133,026	186,401	5,331	15,665	-	15,665
39	Other Equipment	387	5.26%	2,234,714	85,364	276,617	2,596,695	136,586	1,497,167	-	1,497,167
40	Subtotal - DISTRIBUTION PLANT			\$ 585,280,634	\$ 20,920,659	\$ 91,433,325	\$ 697,634,619	\$ 17,386,315	\$ 173,628,669	\$ 30,994,494	\$ 142,634,174
41											
42	Land & Land Rights	389	0.00%	\$ 121,489	\$ -	\$ -	\$ 121,489	\$ -	\$ -	\$ -	\$ -
43	Structures and Improvements	390	2.86%	22,624,338	(393,918)	3,122,087	25,352,506	725,082	6,898,722	-	6,898,722
44	Office Furniture and Equipment	391.0	5.28%	590,450	2,985	519,008	1,112,443	58,737	285,283	-	285,283
45	Office Furniture and Equipment - Computers	391.1	10.00%	923,137	-	20,888	944,025	94,403	354,418	-	354,418
46	Office Furniture and Equipment - Laptop Computers	391.2	20.00%	838,779	-	20,888	859,667	171,933	997,852	-	997,852
47	Transportation Equipment - Auto	392	20.00%	10,161,823	1,169,429	2,084,450	13,415,702	2,683,140	10,410,231	6,750	10,403,481
48	Stores Equipment	393	3.33%	107,831	-	-	107,831	3,591	40,190	-	40,190
49	Tools, Shop, and Garage Equipment	394	5.26%	3,443,445	297,502	1,385,785	5,126,732	269,666	1,361,470	-	1,361,470
50	Power Operated Equipment <=12,000 lbs	396	20.00%	724,559	52,622	138,330	915,511	183,102	786,652	1,950	784,702
51	Communications Equipment	397	10.00%	814,350	-	127,466	941,816	94,182	754,991	-	754,991
52	Miscellaneous Equipment	398	6.67%	(721,156)	1,285,940	1,590,533	2,155,317	143,760	423,913	-	423,913
53	Subtotal - GENERAL PLANT			\$ 39,629,044	\$ 2,414,560	\$ 9,009,435	\$ 51,053,039	\$ 4,427,595	\$ 22,313,721	\$ 8,700	\$ 22,305,021
54											
55	TOTAL			\$ 653,903,638	\$ 55,959,527	\$ 108,719,862	\$ 818,583,027	\$ 24,931,676	\$ 219,022,898	\$ 31,003,194	\$ 188,019,704
56											
57	OPI-LAND RETAINED	121					13,665	Non-Rate Base			
58	OPI-STRUCTURES-RETAINED	121.1					133,284	Non-Rate Base	133,284		Not In Rate Base
59	PLANT HELD FOR FUTURE USE	105					852,305	Non-Rate Base			
60											
61	GRAND TOTAL			\$ 653,903,638	\$ 55,959,527	\$ 108,719,862	\$ 819,582,281	\$ 24,931,676	\$ 219,156,182	\$ 31,003,194	\$ 188,019,704
62											
63	Less: Amortization expense included above						To RR-EN-3-6	\$ (2,613,650)			
64	Depreciation Expense, as Calculated							22,318,026			
65	Depreciation Reserve Imbalance (Account 405) Annual Amortization							\$ 1,535,588			
66	Monthly Amortization							127,966			
67	Months Remaining In Original Amortization (ends April 30, 2024)							16			
68	Total Depreciation Reserve Imbalance Left to be Recovered							2,047,451			
69	Proposed Recovery Period							4			
70	Depreciation Reserve Imbalance Adjustment Amortization (Account 403)							\$ 511,863			
71	Pro Forma Depreciation Expense							22,829,889			
72	Test Year Actual Depreciation Expense							21,708,700			
73	Adjustment to Depreciation Expense							\$ 1,121,189			

Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty
Adjustments to Test Year
Adjustment 6
Amortization Expense

Line	Description	Reference	Amortization Expense
1	Adjustment 1: Amortization of Costs to Achieve		
2			
3	Cost of Achieve DG 20-105		48,197
4	Months Remaining in Amortization		19
5	Amount Remaining to be Amortized		25,438
6	Proposed Amortization (Years)		3
7	Add New Cost to Achieve Amortization		16,066
8			
9	Adjustment 2: NHDAS Special Contract Amortization DG 20-105 (original amortization ends July 2024)		
10			
11	NHDAS Special Contract Amount DG 20-105 (original amortization ends July 2024)	\$	1,047,599
12	Months Remaining in Amortization		19
13	Amount Remaining to be Amortized		552,899
14	Proposed Amortization Period (Years)		4
15	Adjustment	\$	138,225
16			
17	Test Year Regulatory Asset Amortization		736,549
18	Going Forward Regulatory Asset Amortization		154,291
19			
20	Adjustment to Test Year Account 407.3	\$	(582,258)
21			
22	Adjustment 3: Amortization of Excess Accumulated Deferred Income Taxes (EADIT)		
23			
24	Protected TCJA EADIT DG20-105 (excludes gross-up) /1	\$	(24,254,572)
25	Weighted Average Remaining Life (years)		28.93
26	Protected EADIT Amortization DG20-105	\$	(838,388)
27			
28	Unprotected TCJA EADIT DG20-105 (excludes gross-up) /1	\$	(3,206,592)
29	Unprotected TCJA EADIT Amortization Period (years)		20.00
30	Unprotected TCJA EADIT Amortization DG20-105	\$	(160,330)
31			
32	Unprotected NH EADIT (excludes gross-up) /1	RR-EN-5WP1 \$	(1,758,215)
33	Unprotected NH EADIT Amortization Period (years)		20.00
34	Unprotected NH EADIT Amortization	\$	(87,911)
35			
36	Test Year Regulatory Liability Amortization	\$	1,305,803
37	Going Forward Regulatory Liability Amortization	\$	(1,086,629)
38			
39	Adjustment to Test Year Account 407.4	\$	(2,392,432)
40			
41	Adjustment 4: Account 8640-4050 - Amortization of Intangibles		
42	Annual Amortization Expense, as Calculated	RR-EN-3-5 \$	2,613,650
43	Depreciation Reserve Imbalance (Account 405) Annual Amortization	\$	122,208
44	Monthly Amortization		10,184
45	Months remaining in original amortization (ends April 30, 2024)		16
46	Total amortization to be recovered	\$	162,944
47	Proposed amortization (years)		4
48	Depreciation Reserve Imbalance Amortization	\$	30,552
49	Pro Forma Annual Amortization Expense		2,644,202
50	Historical Test Year Expense	RR-EN-2-1	1,175,454
51	Adjustment	\$	1,468,747
52			
53	Adjustment to Test Year Account 405.0	\$	1,468,747
54			
55	Total Adjustment	\$	(1,505,943)

Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty
Adjustments to Test Year
Adjustment 7
Property Tax

Line	Municipality	Parcel	Tax Year 2022		
			Installment #1	Installment #2	Total Due
1	Allenstown	000400-000001-000000	\$ 28,173	\$ 15,891	\$ 44,064
2	Amherst	002-033-008	55,921	53,326	109,247
3	Amherst	002-033-007	2,711	2,660	5,371
4	Auburn	000001/000001/000UTL	803	738	1,541
5	Bedford	1-1-A	78,192	89,187	167,379
6	Belmont	999-000-000-001	21,032	16,015	37,046
7	Berlin	000404-000051.0000L1	9,619	6,563	16,182
8	Boscawen	000099-000002-000000	14,078	14,619	28,697
9	Bow	0-9-99	70,188	60,426	130,614
10	Canterbury	000000-000002-000000	2,683	2,939	5,622
11	Derry	35-102	54,263	41,956	96,219
12	Franklin	000000-000001-000000	50,242	50,867	101,109
13	Gilford	210-002.000	51	50	101
14	Gilford	210-003.000	48	47	95
15	Gilford	210-004.000	46	46	92
16	Gilford	210-005.000	48	48	96
17	Gilford	200-003.000	3,158	2,595	5,753
18	Goffstown	99-4-2	46,619	41,589	88,208
19	Goffstown	99-4-1	1,379	1,232	2,610
20	Hollis	056-027-001	2,069	1,354	3,423
21	Hooksett	0GAS-0001	148,889	187,820	336,709
22	Hooksett	0036-0041-0001	3,024	3,815	6,839
23	Hudson	100-006-000	192,634	133,065	325,699
24	Hudson	167-030-000	861	908	1,769
25	Hudson	167-029-000	1,057	794	1,851
26	Laconia	425/44/83/1	159,000	116,063	275,063
27	Litchfield	000UTL-000UTL-000001	14,788	15,876	30,664
28	Londonderry	81-7-0	46,634	24,320	70,954
29	Londonderry	81-7-1	241,469	239,644	481,113
30	Londonderry	81-14-0	16,638	12,048	28,685
31	Londonderry	81-14-1	11,549	10,454	22,002
32	Londonderry	14-21-2	12,918	12,517	25,435
33	Loudon	000070-000004-000000	81,479	124,701	206,180
34	Manchester	0999A-0075	1,174,871	1,493,525	2,668,395
35	Manchester	0752-0001	20,310	23,615	43,925
36	Manchester	0508-0002A	63	70	133
37	Manchester	0394-0004	266	299	566
38	Manchester	0471-0008	461	519	980
39	Merrimack	006D-3-000000-000000	135,089	215,420	350,509
40	Milford	036-183-000-000	868	973	1,841
41	Milford	055-007-000-000	63,457	64,796	128,252
42	Nashua	0039-00026	1,618	1,580	3,198
43	Nashua	0038-00063	97	137	234
44	Nashua	0038-00020	153	217	370
45	Nashua	0041-00011	40,712	15,428	56,140
46	Nashua	0000PC-00005	1,313,323	1,413,359	2,726,682
47	Northfield	000999-000001-000001	25,815	16,172	41,987
48	Pembroke	999-11	77,306	57,172	134,478
49	Sanborton	00.003.000.000	2,168	2,003	4,171
50	Tilton	000R23-000013-000000	125,307	135,767	261,074
51	Tilton	000R23-000014-000000	10,315	11,153	21,468

Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty
Adjustments to Test Year
Adjustment 7
Property Tax

Line	Municipality	Parcel	Tax Year 2022		
			Installment #1	Installment #2	Total Due
52	Concord	77Z/12	\$ 7,640	\$ 8,435	\$ 16,075
53	Concord	77Z/12	7,640	8,435	16,075
54	Concord	77Z/11	503	553	1,056
55	Concord	77Z/11	503	553	1,056
56	Concord	77Z/10	6,263	6,914	13,177
57	Concord	77Z/10	6,263	6,914	13,177
58	Concord	77Z/9	304	336	640
59	Concord	77Z/9	304	336	640
60	Concord	77Z7	558	616	1,174
61	Concord	77Z7	558	616	1,174
62	Concord	77Z/6	881	973	1,853
63	Concord	77Z/6	881	973	1,853
64	Concord	77Z/6/A	5	5	10
65	Concord	77Z/6/A	5	5	10
66	Concord	NO00/1/13	12,687	14,817	27,503
67	Concord	NO00/1/13	12,687	14,817	27,503
68	Concord	P000/1/6	860	682	1,541
69	Concord	P000/1/6	860	682	1,541
70	Concord	792Z/2/1	344	379	723
71	Concord	792Z/2/1	344	379	723
72	Concord	P000/1/3	28,652	22,737	51,389
73	Concord	P000/1/3	28,652	22,737	51,389
74	Concord	NO00/1/2	422,896	493,879	916,774
75	Concord	NO00/1/2	422,896	493,879	916,774
76	Concord	202Z/21	249	275	523
77	Concord	202Z/21	249	275	523
78	Concord	743Z/19	1,729	1,909	3,638
79	Concord	743Z/19	1,729	1,909	3,638
80	Concord	494Z/3	283	313	596
81	Concord	494Z/3	283	313	596
82	State of NH	TRUE UP		238,744	238,744
83	State of NH	NH DRA 1-3	800,579	800,579	1,601,159
84	State of NH	NH DRA 2-4	800,579	800,579	1,601,159
85	Keene	116039000000000	9,407	9,541	18,948
86	R&M REALTY	582014000000000	5,102	5,020	10,122
87	Keene Propane	583038000001000	119,006	138,132	257,138
88	Keene Propane	583038000000000	3,791	3,731	7,522
89	Total		\$ 7,070,632	\$ 7,838,342	\$ 14,908,973
90	Pro Forma Property Tax		\$ 15,437,939		
91	Property Tax expense, Test Year		14,253,925		
92	Less: Education Tax Removal (adjustment to book)		3,193		
93	Increase (Decrease) in Property tax expense		\$ 1,187,207		

Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty
Adjustments to Test Year
Adjustment 8
Income Tax Expense - Historical Test Year

Line	Description	Reference	Amount
1	Test Year Actual to Statutory Rates		
2			
3	Normalized Revenue	RR-EN-2, Line 6	\$ 104,602,985
4	Normalized Expenses, Excluding Income Tax	RR-EN-2, Lines 9-15	73,127,010
5	Income (Loss) Before Taxes		\$ 31,475,975
6			
7	Rate Base	RR-EN-1	\$ 527,941,042
8	Debt Portion	RR-EN-2	45.00%
9	Debt Component		237,573,469
10	Debt Cost	RR-EN-3	4.417%
11	Synchronized Interest Expense		10,493,620
12	Pre-Tax Income		\$ 20,982,355
13			
14	Combined Income Tax Rate	Line 21	26.93%
15	Income Tax Expense (Credit) at Statutory Rates		\$ 5,650,548
16	Income Tax Expense (Credit) Recorded		12,188,963
17	Adjustment to Normalize Historical Test Year		\$ (6,538,415)
18			
19	Federal Statutory Rate		21.00%
20	New Hampshire Business Tax Rate		7.50%
21	Combined Income Tax Rate		26.93%
22			
23	This adjustment normalizes income tax expense in the Test Year before adjustments to reflect statutory rates.		

Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty
Adjustments to Test Year
Adjustment 9
Income Tax Expense - Pro Forma Test Year at Current Rates

Line	Description	Reference	Adjustment Amount	Items with Tax Effects
1	Adjustments to increase (decrease) taxable income:			() = Lower income
2	Revenue Adjustments	RR-EN-3-1	\$ (1,476,687)	\$ (1,476,687)
3	Salary and Wage Expense	RR-EN-3-2	(417,752)	(417,752)
4	Payroll Tax Expense	RR-EN-3-3	(32,628)	(32,628)
5	Pension and Benefits Expense	RR-EN-3-4	(1,500,932)	(1,500,932)
6	Depreciation Expense	RR-EN-3-5	(1,121,189)	(1,121,189)
7	Amortization Expense	RR-EN-3-6	1,505,943	1,505,943
8	Property Tax	RR-EN-3-7	(1,187,207)	(1,187,207)
9	Income Tax Expense - Historical Test Year	RR-EN-3-8	6,538,415	
10	Income Tax Expense - Pro Forma Test Year at Current Rates	RR-EN-3-9	1,993,941	
11	Other Adjustments	RR-EN-3-10	(3,173,710)	(3,173,710)
12			<u>\$ 1,128,194</u>	<u>\$ (7,404,161)</u>
13	Tax Rate			26.93%
14	Adjustment to Test Year at Current Rates			\$ (1,993,941)
15				
16	This adjustment reflects income tax expense related to the Company's adjustments, computed at statutory rates.			

Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty
Adjustments to Test Year
Adjustment 10
Other Adjustments

Line	Description	Account	Amount
1	Adjustment for PUC Annual Assessment		
2	Liberty Utilities (ENNG) - Gas	\$	840,634
3	Liberty Utilities (ENNG) - IESR		172,989
4			
5	Liberty Utilities (ENNG) - GPSP	\$	132,249
6	Liberty Utilities (ENNG) - PIESR		27,215
7	Regulatory Expenses- Test Year		(1,086,004)
8			
9	Total PUC Annual Assessment Adjustment	Account 928	\$ 87,083
10			
11	Adjustment for Concord Rental Expense Credit		
12	Test Year Concord Training Center Lease Credit	\$	298,486
13	Going forward Concord Training Center Lease Credit		290,736
14			
15	Total Concord Rental Expense Credit Adjustment	Account 931	\$ (7,751)
16			
17	Adjustment to Include Fee Free Credit/Debit Cards (RR-EN 3-10 WP1)		
18	Fee Free Credit/Debit Cards	\$	136,364
19			
20	Total Fee Free Credit/Debit Card Program Adjustment	Account 903	\$ 136,364
21			
22	Adjustment to Include Low Income Customer Arrears Relief (RR-EN 3-10 WP1)		
23			
24	Residential - monthly customer fee waived	\$	1,202,880
25	Communication/Outreach (one/year bill insert)		17,188
26			
27	Total Low Income Customer Arrears Relief Adjustment	Account 903	\$ 1,220,068
28			
29	Adjustment to Include Customer 1st Program Costs (RR-EN 3-10 WP2)		
30	Foundations	\$	1,384,455
31	Ecustomer		27,478
32	Employee Central		47,676
33	Procure-to-Pay		23,739
34	Network Design		254,597
35			
36	Total Adjustment to Include Customer 1st Program Costs	Account 923	\$ 1,737,945

Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty
Weighted Average Cost of Capital
Test Year Ended December 31, 2022

Line	Description	Capital Structure	Cost of Capital	Weighted Cost of Capital	Tax Rate	Pre-Tax
1	Common Stock	55.00%	10.35%	5.69%	26.93%	7.79%
2	Long-Term Debt	<u>45.00%</u>	4.417%	<u>1.99%</u>		<u>1.99%</u>
3	Total	<u><u>100.00%</u></u>		<u><u>7.68%</u></u>		<u><u>9.78%</u></u>

Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty
Rate Base - EnergyNorth
Balances at December 31, 2022

Line	Description	Reference	Rate Base
1	Utility Plant (Balance at 12/31/2022)	RR-EN-3-5	\$ 818,583,027
2	Depreciation Allowance (Balance at 12/31/2022)	RR-EN-3-5	(188,019,704)
3	Net Utility Plant		<u>\$ 630,563,323</u>
4			
5	Materials and Supplies (Average of 5 Quarterly Balances)	RR-EN-5-1	\$ 6,463,310
6	Customer Deposits (Average of 5 Quarterly Balances)	RR-EN-5-1	(3,027,697)
7			
8	Cash Working Capital	RR-EN-5-2	\$ 3,148,063
9			
10	Deferred Tax Liability, Net (Balance at 12/31/2022)	RR-EN-5-WP1	\$ (84,710,759)
11			
12	Regulatory Assets	RR-EN-3-6	\$ 12,610,917
13			
14	Excess Accumulated Deferred Income Taxes	RR-EN-5-WP1	<u>\$ (37,106,114)</u>
15			
16	Rate Base		<u>\$ 527,941,042</u>

Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty
Rate Base Quarterly Balances - EnergyNorth
Test Year Ended December 31, 2022

Line	Description	2018 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4	5-Quarter Average
1							
2	Materials and Supplies	\$ 5,910,648	\$ 5,822,066	\$ 6,493,157	6,858,447	7,232,230	\$ 6,463,310
3							
4							
5	Customer Deposits	\$(3,033,268)	\$(3,077,394)	\$(3,054,163)	(2,946,060)	(3,027,602)	\$(3,027,697)

Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty
Cash Working Capital - EnergyNorth
Test Year Ended December 31, 2022

Line	Description	Reference	Test Year Pro Forma
1	O&M Expenses		
2	Distribution, before Adjustments	RR-EN-2-1	\$ 85,315,973
3	Less: Depreciation and Amortization	RR-EN-2-1	(24,926,507)
4	Less: Deferred Income Taxes	RR-EN-2-1-WP	(11,942,273)
5	Known and Measurable Adjustments (excluding depreciation and amortization)	RR-EN-2-1	(2,220,127)
6			<u>\$ 46,227,066</u>
7			
8	Cash Working Capital Required - Days	24.86	<u>6.81%</u>
9			
10	Cash Working Capital Required		<u><u>\$ 3,148,063</u></u>

MANAGEMENT APPLICATIONS CONSULTING, INC.



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MEMO

DATE: June 2, 2023
TO: Erica Menard, Director of Rates and Regulatory Affairs
FROM: Paul Normand
SUBJECT: EnergyNorth 2023 Rate Case

Liberty Utilities (EnergyNorth) Corp. (the Company) has experienced changes in the depreciation reserve imbalance since the depreciation study performed at year end 2016. In the last rate case (Docket No. DG-20-105) Order No. 26,122 stipulated the Company to adjust the reserve imbalance of \$9,946,778 by amortizing \$1,657,796 annually over six years. This amortization began on May 1, 2018 and will be fully amortized by April 30, 2024. In the first quarter of 2022, the Company contracted Management Applications Consulting, Inc. (MAC) to conduct a full depreciation rate study of the Company's utility assets to assess the current average service lives, accrual rates, net salvage and the reserve variance based on plant in service @12/31/2021.

MAC completed the depreciation rate study and updated the depreciation reserve variance by plant account. The following comparison details the change in the reserve imbalance since the depreciation study @12/31/2016.

HISTORICAL PLANT BALANCES AND RESERVE VARIANCE

TOTAL DEPREC. GAS PLANT @12/31/2016	\$477,852,305
TOTAL DEPREC. GAS PLANT @12/31/2021	\$698,179,397
THEO. RSV. WITH NET SALVAGE @12/31/2016	\$165,193,965
THEO. RSV. WITH NET SALVAGE @12/31/2021	\$213,646,147
BOOK RSV @12/31/2016	\$155,247,187
BOOK RSV @12/31/2021	\$202,727,844
RESERVE VARIANCE @12/31/2016	\$9,946,778
RESERVE VARIANCE @12/31/2021	\$10,918,303

Page 2 of 3

DATE: June 2, 2023
TO: Erica Menard, Director of Rates and Regulatory Affairs
Liberty Utilities
FROM: Paul Normand
SUBJECT: EnergyNorth 2023 Rate Case

The change in the reserve variance from the prior study can be associated with two key elements. The first key element relates to average service life (ASL) which has to do with the potential increase to the life once new additions are factored into the life analyses. The Company has seen growth with respect to the replacement/retirement of large quantities of mains and services. This growth creates a potential for change in average service life (ASL) of the depreciable assets. This historical growth of mains and services plant accounts would influence longer average service lives which would ultimately impact the resulting reserve variance for these two accounts.

The second key element recognized annually is the cost of removal portion of the Company's plant replacement activities. It is this portion of costs that the Company has historically been estimating at a blanket 10% of investments in major plant accounts instead of the laborious task of quantifying these amounts which are primarily labor related. In understanding this process, large growth in plant investments which has been occurring for many years, especially for key plant accounts related to mains and services, results in large amounts of unrecovered dollars being identified but not recovered in the short term.

In the last ten years, the rapid increase in plant replacement/retirement requirements had, in many cases, resulted in a more detailed review of these costs (COR) by utilities which has resulted in being modified to reflect a much lower 3% to 5% range of costs to new plant investments. The areas of cost which are mostly typically considered are with respect to digging a trench, cutting and purging pipe, capping, resurfacing and flaggers/police.

MAC recommended in the most recent depreciation study the company continue to evaluate the actual removal costs to determine a new 3-year COR threshold. The Company performed a cost of removal study on calendar year 2021 based on a sampling of different sized mains and services capital projects. The Company calculated 4.74% based on this analysis of one year of capital projects. MAC recommended the Company continue to evaluate the actual removal cost for a least two additional years to establish a reasonable three-year average for all applicable accounts. A one year COR result does not determine a definitive level to establish a firm COR percentage going forward.

As part of the step adjustment filing, MAC was requested to recalculate the reserve imbalance on plant in service @12/31/2021, assuming a cost of removal (COR) of 7.5% instead of the Company's current level of 10% (a reduction of 25% of COR compared to the current level). Note that the cost of removal recalculation only affected Mains and Services. The reserve imbalance for total depreciable gas plant as filed was \$10,918,303. The revised COR to 7.5% reduced the reserve imbalance to \$8,083,813.

DATE: June 2, 2023
TO: Erica Menard, Director of Rates and Regulatory Affairs
Liberty Utilities
FROM: Paul Normand
SUBJECT: EnergyNorth 2023 Rate Case

In addition, MAC was requested to recalculate the reserve imbalance assuming a cost of removal (COR) of 4.74% instead of the Company's current level of 10% (a reduction of 52.6% of COR compared to the current level). Note that the cost of removal recalculation only affected Mains and Services. The reserve imbalance for total depreciable gas plant as filed was \$10,918,303. The revised COR to 4.74% reduced the reserve imbalance to \$4,956,639.

MAC also recommended to implement a stepwise reduction in the COR rate going forward from the current 10% level to a 7.5% level to the recent one-year level of 4.74%. The Company should continue to implement the 7.5% step reduction until the next review and analysis of COR which would present a three-year average level.

The Company is currently midway through the study of cost of removal for the calendar year ending 2022 for mains and services. The 2022 COR percent will be compared to the 2021 percent and an average can now be calculated on two years of cost of removal based on capital projects for mains and services.

Since the depreciation study performed on plant in service @12/31/2021, the Company has implemented a new software platform, Customer First. Customer first is an enterprise software solution from SAP. This software is a sizeable investment (\$32.7M) for EnergyNorth. The software is comprised of five components. These components and the amortization period MAC is recommending for future depreciation accruals are as follows:

Program/Asset Class	Amortization Period
CI Foundation	20 Years
Employee Central	7 Years
P2P (Ariba)	7 Years
e-Customer (Kubra)	7 Years
Network Design	7 Years

In addition, MAC recommends the Company perform a full depreciation accrual rate study in approximately five years. The cost of removal should be updated from the 3-year study the Company has undertaken to a new three-year level. The depreciation parameters and reserve imbalance would be updated where necessary and adjusted for the new cost of removal percentages. The Company should continue to amortize the \$1,657,796 annually until completion (April 30, 2024) to mitigate the remaining depreciation reserve imbalance. This will further assist with reducing the amount of depreciation reserve variance.

Liberty Utilities (EnergyNorth Natd Gas) Corp., d/b/a Liberty
2023 Step Increase - EnergyNorth

Line	Description	Misc. Intangible Plant - 10 yr	Misc. Intangible Plant - 20 yr	Other Equipment	Mains	Meas. And Reg. Station Equip.	Meas. And Reg. Station Equip. - City Gate	Services	Meters	Meter Installations	Structures and Improvements	Office Furniture and Equipment	Office Furniture and Equipment - Computers	Vehicles	Tools	Communications Equipment	Miscellaneous Equipment	Total
1	Capital Spending	303.4	303.5	364.8	376	378	379	380	381.0	382	390	391	391.1	392	394	397	398	
2		\$ 4,392,304	\$ -	\$ 106,090	\$ 30,697,319	\$ -	\$ 4,500,000	\$ 1,467,550	\$ 732,327	\$ 1,482,700	\$ 877,611	\$ 75,000	\$ 84,100	\$ 1,600,000	\$ 305,000	\$ 92,700	\$ 26,523	\$ 46,439,223
3	Deferred Tax Calculation																	
4	Tax Method	MACRS15	MACRS15	MACRS20	MACRS20	MACRS20	MACRS20	MACRS20	MACRS20	MACRS39	MACRS7	MACRS7	MACRS7	MACRS5	MACRS7	MACRS7	MACRS7	
5	Tax Depreciation Rate	5.00%	5.00%	3.75%	3.75%	3.75%	3.75%	3.75%	3.75%	1.28%	14.29%	14.29%	14.29%	20.00%	14.29%	14.29%	14.29%	
7	Bonus Depreciation @ 0.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9	Tax Basis	\$ 4,392,304	\$ -	\$ 106,090	\$ 30,697,319	\$ -	\$ 4,500,000	\$ 1,467,550	\$ 732,327	\$ 1,482,700	\$ 877,611	\$ 75,000	\$ 84,100	\$ 1,600,000	\$ 305,000	\$ 92,700	\$ 26,523	\$ 46,439,223
10	MACRS Depreciation	\$ 219,615	\$ -	\$ 3,978	\$ 1,151,149	\$ -	\$ 168,750	\$ 55,033	\$ 27,462	\$ 19,009	\$ 125,373	\$ 10,714	\$ 12,014	\$ 320,000	\$ 43,571	\$ 13,243	\$ 3,789	\$ 2,173,702
12	Tax Depreciation - Federal	\$ 219,615	\$ -	\$ 3,978	\$ 1,151,149	\$ -	\$ 168,750	\$ 55,033	\$ 27,462	\$ 19,009	\$ 125,373	\$ 10,714	\$ 12,014	\$ 320,000	\$ 43,571	\$ 13,243	\$ 3,789	\$ 2,173,702
13	Tax Depreciation - State	\$ 219,615	\$ -	\$ 3,978	\$ 1,151,149	\$ -	\$ 168,750	\$ 55,033	\$ 27,462	\$ 19,009	\$ 125,373	\$ 10,714	\$ 12,014	\$ 320,000	\$ 43,571	\$ 13,243	\$ 3,789	\$ 2,173,702
15	Book Depreciation Rate	10.00%	20.00%	5.26%	1.92%	2.86%	2.86%	3.20%	3.33%	3.33%	2.86%	5.28%	10.00%	20.00%	5.26%	10.00%	6.67%	
16	Book Depreciation	\$ 439,230	\$ -	\$ 5,580	\$ 589,389	\$ -	\$ 128,700	\$ 46,962	\$ 24,386	\$ 49,374	\$ 25,100	\$ 3,960	\$ 8,410	\$ 320,000	\$ 16,043	\$ 9,270	\$ 1,769	\$ 1,668,173
18	Tax over (under) Book - Federal	\$ (219,615)	\$ -	\$ (1,602)	\$ 561,761	\$ -	\$ 40,050	\$ 8,072	\$ 3,076	\$ (30,365)	\$ 100,273	\$ 6,754	\$ 3,604	\$ -	\$ 27,528	\$ 3,973	\$ 2,020	\$ 505,529
19	Tax over (under) Book - State	\$ (219,615)	\$ -	\$ (1,602)	\$ 561,761	\$ -	\$ 40,050	\$ 8,072	\$ 3,076	\$ (30,365)	\$ 100,273	\$ 6,754	\$ 3,604	\$ -	\$ 27,528	\$ 3,973	\$ 2,020	\$ 505,529
20	Deferred Taxes - Federal @ 19.43%	\$ (42,660)	\$ -	\$ (311)	\$ 109,122	\$ -	\$ 7,780	\$ 1,568	\$ 597	\$ (5,898)	\$ 19,478	\$ 1,312	\$ 700	\$ -	\$ 5,347	\$ 772	\$ 392	\$ 98,199
21	Deferred Taxes - State @ 7.50%	\$ (16,471)	\$ -	\$ (120)	\$ 42,132	\$ -	\$ 3,004	\$ 605	\$ 231	\$ (2,277)	\$ 7,520	\$ 507	\$ 270	\$ -	\$ 2,065	\$ 298	\$ 151	\$ 37,915
22	Deferred Tax Balance	\$ (59,131)	\$ -	\$ (431)	\$ 151,254	\$ -	\$ 10,783	\$ 2,173	\$ 828	\$ (8,176)	\$ 26,999	\$ 1,819	\$ 970	\$ -	\$ 7,412	\$ 1,070	\$ 544	\$ 134,500
24	Rate Base Calculation																	
25	Plant in Service	\$ 4,392,304	\$ -	\$ 106,090	\$ 30,697,319	\$ -	\$ 4,500,000	\$ 1,467,550	\$ 732,327	\$ 1,482,700	\$ 877,611	\$ 75,000	\$ 84,100	\$ 1,600,000	\$ 305,000	\$ 92,700	\$ 26,523	\$ 46,439,223
26	Accumulated Depreciation	\$ (439,230.40)	\$ -	\$ (5,580.33)	\$ (589,389)	\$ -	\$ (128,700)	\$ (46,962)	\$ (24,386)	\$ (49,374)	\$ (25,100)	\$ (3,960)	\$ (8,410)	\$ (320,000)	\$ (16,043)	\$ (9,270)	\$ (1,769)	\$ (1,668,173)
27	Deferred Tax Balance	\$ 59,131	\$ -	\$ 431	\$ (151,254)	\$ -	\$ (10,783)	\$ (2,173)	\$ (828)	\$ 8,176	\$ (26,999)	\$ (1,819)	\$ (970)	\$ -	\$ (7,412)	\$ (1,070)	\$ (544)	\$ (136,114)
28	Rate Base	\$ 4,012,205	\$ -	\$ 100,941	\$ 29,956,676	\$ -	\$ 4,360,517	\$ 1,418,415	\$ 707,112	\$ 1,441,502	\$ 825,512	\$ 69,221	\$ 74,720	\$ 1,280,000	\$ 281,545	\$ 82,360	\$ 24,210	\$ 44,634,936
30	Revenue Requirement Calculation																	
31	Return on Rate Base @ 9.78%	\$ 392,394	\$ -	\$ 9,872	\$ 2,929,763	\$ -	\$ 426,459	\$ 138,721	\$ 69,156	\$ 140,979	\$ 80,735	\$ 6,770	\$ 7,308	\$ 125,184	\$ 27,535	\$ 8,055	\$ 2,368	\$ 4,365,297
32	Depreciation Expense	\$ 439,230	\$ -	\$ 5,580	\$ 589,389	\$ -	\$ 128,700	\$ 46,962	\$ 24,386	\$ 49,374	\$ 25,100	\$ 3,960	\$ 8,410	\$ 320,000	\$ 16,043	\$ 9,270	\$ 1,769	\$ 1,668,173
33	Property Tax @ 0.66%	n/a	n/a	700	202,602	-	29,700	9,686	4,833	9,786	5,792	n/a	n/a	n/a	n/a	n/a	n/a	263,100
34	Insurance @ 0.20%	n/a	n/a	216	62,539	-	9,168	2,990	1,492	3,021	1,788	153	171	3,260	621	189	54	85,661
35	Annual Revenue Requirement	\$ 831,624	\$ -	\$ 16,369	\$ 3,784,293	\$ -	\$ 594,026	\$ 198,358	\$ 99,867	\$ 203,159	\$ 113,415	\$ 10,883	\$ 15,889	\$ 448,444	\$ 44,199	\$ 17,514	\$ 4,191	\$ 6,382,231
37	Rate of Return Calculation																	
38	Equity								Portion	After-Tax Cost	Pre-Tax WACC	Tax						
39	Debt								55.0%	10.35%	7.79%	26.93%						
40									45.0%	4.417%	1.99%							
41									100.0%		9.78%							
42	Description								Amount		Reference							
43	State Property Tax Rate (\$6.60 per \$1,000)								0.66%									
44	Property insurance (Account 924)										RR-EN-2-1	\$ 130,114						
45	Injuries and Damage (Casualty Insurance) (Account 925)										RR-EN-2-1	\$ 1,423,852						
46												\$ 1,553,965						
47	Plant at Cost										RR-Step-EN-WP2	\$ 762,767,097						
48	As % of Plant Cost											0.20%						

Liberty Utilities (EnergyNorth Natul Gas) Corp., d/b/a Liberty
2024 Step Increase - Energy North

Line	Description	Misc. Intangible Plant - 10 yr	Misc. Intangible Plant - 20 yr	Other Equipment	Mains	Meas. And Reg. Station Equip.	Meas. And Reg. Station Equip. - City Gate	Services	Meters	Meter Installations	Structures and Improvements	Office Furniture and Equipment	Office Furniture and Equipment - Computers	Vehicles	Tools	Communications Equipment	Miscellaneous Equipment	Total
1	Capital Spending	303.4	303.5	364.8	376	378	379	380	381.0	382	390	391	391.1	392	394	397	398	
2		\$ 4,048,804	\$ 7,269,728	\$ 2,610,000	\$ 40,469,093	\$ 500,000	\$ -	\$ 1,425,300	\$ 732,000	\$ 888,654	\$ 2,605,305	\$ 75,000	\$ 69,600	\$ 1,700,000	\$ 305,000	\$ 93,936	\$ 100,000	\$ 62,892,420
3	Deferred Tax Calculation																	
4	Tax Method	MACRS15	MACRS15	MACRS20	MACRS20	MACRS20	MACRS20	MACRS20	MACRS20	MACRS39	MACRS7	MACRS7	MACRS7	MACRS5	MACRS7	MACRS7	MACRS7	
5	Tax Depreciation Rate	5.00%	5.00%	3.75%	3.75%	3.75%	3.75%	3.75%	3.75%	1.28%	14.29%	14.29%	14.29%	20.00%	14.29%	14.29%	14.29%	
6																		
7	Bonus Depreciation @ 0.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8																		
9	Tax Basis	\$ 4,048,804	\$ 7,269,728	\$ 2,610,000	\$ 40,469,093	\$ 500,000	\$ -	\$ 1,425,300	\$ 732,000	\$ 888,654	\$ 2,605,305	\$ 75,000	\$ 69,600	\$ 1,700,000	\$ 305,000	\$ 93,936	\$ 100,000	\$ 62,892,420
10	MACRS Depreciation	\$ 202,440	\$ 363,486	\$ 97,875	\$ 1,517,591	\$ 18,750	\$ -	\$ 53,449	\$ 27,450	\$ 11,393	\$ 372,186	\$ 10,714	\$ 9,943	\$ 340,000	\$ 43,571	\$ 13,419	\$ 14,286	\$ 3,096,554
11																		
12	Tax Depreciation - Federal	\$ 202,440	\$ 363,486	\$ 97,875	\$ 1,517,591	\$ 18,750	\$ -	\$ 53,449	\$ 27,450	\$ 11,393	\$ 372,186	\$ 10,714	\$ 9,943	\$ 340,000	\$ 43,571	\$ 13,419	\$ 14,286	\$ 3,096,554
13	Tax Depreciation - State	\$ 202,440	\$ 363,486	\$ 97,875	\$ 1,517,591	\$ 18,750	\$ -	\$ 53,449	\$ 27,450	\$ 11,393	\$ 372,186	\$ 10,714	\$ 9,943	\$ 340,000	\$ 43,571	\$ 13,419	\$ 14,286	\$ 3,096,554
14																		
15	Book Depreciation Rate	10.00%	20.00%	5.26%	1.92%	2.86%	2.86%	3.20%	3.33%	3.33%	2.86%	5.28%	10.00%	20.00%	5.26%	10.00%	6.67%	
16	Book Depreciation	\$ 404,880	\$ 1,453,946	\$ 137,286	\$ 777,007	\$ 14,300	\$ -	\$ 45,610	\$ 24,376	\$ 29,592	\$ 74,512	\$ 3,960	\$ 6,960	\$ 340,000	\$ 16,043	\$ 9,394	\$ 6,670	\$ 3,344,534
17																		
18	Tax over (under) Book - Federal	\$ (202,440)	\$ (1,090,459)	\$ (39,411)	\$ 740,584	\$ 4,450	\$ -	\$ 7,839	\$ 3,074	\$ (18,199)	\$ 297,675	\$ 6,754	\$ 2,983	\$ -	\$ 27,528	\$ 4,026	\$ 7,616	\$ (247,980)
19	Tax over (under) Book - State	(202,440)	(1,090,459)	(39,411)	740,584	4,450	-	7,839	3,074	(18,199)	297,675	6,754	2,983	-	27,528	4,026	7,616	(247,980)
20	Deferred Taxes - Federal @ 19.43%	(39,324)	(211,822)	(7,656)	143,859	864	-	1,523	597	(3,535)	57,823	1,312	579	-	5,347	782	1,479	(48,170)
21	Deferred Taxes - State @ 7.50%	(15,183)	(81,784)	(2,956)	55,544	334	-	588	231	(1,365)	22,326	507	224	-	2,065	302	571	(18,598)
22	Deferred Tax Balance	\$ (54,507)	\$ (293,606)	\$ (10,611)	\$ 199,402	\$ 1,198	\$ -	\$ 2,111	\$ 828	\$ (4,900)	\$ 80,149	\$ 1,819	\$ 803	\$ -	\$ 7,412	\$ 1,084	\$ 2,051	\$ (69,903)
23																		
24	Rate Base Calculation																	
25	Plant in Service	\$ 4,048,804	\$ 7,269,728	\$ 2,610,000	\$ 40,469,093	\$ 500,000	\$ -	\$ 1,425,300	\$ 732,000	\$ 888,654	\$ 2,605,305	\$ 75,000	\$ 69,600	\$ 1,700,000	\$ 305,000	\$ 93,936	\$ 100,000	\$ 62,892,420
26	Accumulated Depreciation	(404,880.40)	(1,453,945.60)	(137,286.00)	(777,007)	(14,300)	-	(45,610)	(24,376)	(29,592)	(74,512)	(3,960)	(6,960)	(340,000)	(16,043)	(9,394)	(6,670)	(3,344,534)
27	Deferred Tax Balance	54,507	293,606	10,611	(199,402)	(1,198)	-	(2,111)	(828)	4,900	(80,149)	(1,819)	(803)	-	(7,412)	(1,084)	(2,051)	66,769
28	Rate Base	\$ 3,698,431	\$ 6,109,389	\$ 2,483,325	\$ 39,492,684	\$ 484,502	\$ -	\$ 1,377,580	\$ 706,797	\$ 863,962	\$ 2,450,644	\$ 69,221	\$ 61,837	\$ 1,360,000	\$ 281,545	\$ 83,458	\$ 91,279	\$ 59,614,654
29																		
30	Revenue Requirement Calculation																	
31	Return on Rate Base @ 9.78%	\$ 361,707	\$ 597,498	\$ 242,869	\$ 3,862,385	\$ 47,384	\$ -	\$ 134,727	\$ 69,125	\$ 84,495	\$ 239,673	\$ 6,770	\$ 6,048	\$ 133,008	\$ 27,535	\$ 8,162	\$ 8,927	\$ 5,830,313
32	Depreciation Expense	404,880	1,453,946	137,286	777,007	14,300	-	45,610	24,376	29,592	74,512	3,960	6,960	340,000	16,043	9,394	6,670	3,344,534
33	Property Tax @ 0.66%	n/a	n/a	17,226	267,096	3,300	-	9,407	4,831	5,865	17,195	n/a	n/a	n/a	n/a	n/a	n/a	324,920
34	Insurance @ 0.20%	n/a	n/a	5,317	82,447	1,019	-	2,904	1,491	1,810	5,308	153	142	3,463	621	191	204	105,070
35	Annual Revenue Requirement	\$ 766,587	\$ 2,051,444	\$ 402,699	\$ 4,988,934	\$ 66,003	\$ -	\$ 192,648	\$ 99,823	\$ 121,763	\$ 336,687	\$ 10,883	\$ 13,149	\$ 476,471	\$ 44,199	\$ 17,747	\$ 15,801	\$ 9,604,838
36																		
37	Rate of Return Calculation																	
38	Equity								Portion	After-Tax Cost	Pre-Tax WACC	Tax						
39	Debt								55.0%	10.35%	7.79%	26.93%						
40									45.0%	4.417%	1.99%							
41									100.0%		9.78%							
42																		
43	Description								Amount		Reference							
44	State Property Tax Rate (\$6.60 per \$1,000)								0.66%									
45	Property insurance (Account 924)										RR-EN-2-1	\$ 130,114						
46	Injuries and Damage (Casualty Insurance) (Account 925)										RR-EN-2-1	1,423,852						
47												\$ 1,553,965						
48	Plant at Cost										RR-Step-EN-WP2	\$ 762,767,097						
	As % of Plant Cost											0.20%						

Liberty Utilities (EnergyNorth Natul Gas) Corp., d/b/a Liberty
2025 Step Increase - EnergyNorth

Line	Description	Misc. Intangible Plant - 10 yr	Misc. Intangible Plant - 20 yr	Other Equipment	Mains	Meas. And Reg. Station Equip.	Meas. And Reg. Station Equip. - City Gate	Services	Meters	Meter Installations	Structures and Improvements	Office Furniture and Equipment	Office Furniture and Equipment - Computers	Vehicles	Tools	Communications Equipment	Miscellaneous Equipment	Total
1	Capital Spending	303.4	303.5	364.8	376	378	379	380	381.0	382	390	391	391.1	392	394	397	398	
2		\$ 4,981,204	\$ -	\$ 15,010,000	\$ 25,110,005	\$ 500,000	\$ -	\$ 1,925,300	\$ 732,000	\$ 1,153,180	\$ 377,611	\$ 75,000	\$ 91,900	\$ 1,350,000	\$ 305,000	\$ 95,551	\$ 700,000	\$ 52,406,751
3	Deferred Tax Calculation																	
4	Tax Method	MACRS15	MACRS15	MACRS20	MACRS20	MACRS20	MACRS20	MACRS20	MACRS20	MACRS39	MACRS7	MACRS7	MACRS7	MACRS5	MACRS7	MACRS7	MACRS7	
5	Tax Depreciation Rate	5.00%	5.00%	3.75%	3.75%	3.75%	3.75%	3.75%	3.75%	1.28%	14.29%	14.29%	14.29%	20.00%	14.29%	14.29%	14.29%	
7	Bonus Depreciation @ 0.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	Tax Basis	\$ 4,981,204	\$ -	\$ 15,010,000	\$ 25,110,005	\$ 500,000	\$ -	\$ 1,925,300	\$ 732,000	\$ 1,153,180	\$ 377,611	\$ 75,000	\$ 91,900	\$ 1,350,000	\$ 305,000	\$ 95,551	\$ 700,000	\$ 52,406,751
10	MACRS Depreciation	\$ 249,060	\$ -	\$ 562,875	\$ 941,625	\$ 18,750	\$ -	\$ 72,199	\$ 27,450	\$ 14,784	\$ 53,944	\$ 10,714	\$ 13,129	\$ 270,000	\$ 43,571	\$ 13,650	\$ 100,000	\$ 2,391,752
12	Tax Depreciation - Federal	\$ 249,060	\$ -	\$ 562,875	\$ 941,625	\$ 18,750	\$ -	\$ 72,199	\$ 27,450	\$ 14,784	\$ 53,944	\$ 10,714	\$ 13,129	\$ 270,000	\$ 43,571	\$ 13,650	\$ 100,000	\$ 2,391,752
13	Tax Depreciation - State	\$ 249,060	\$ -	\$ 562,875	\$ 941,625	\$ 18,750	\$ -	\$ 72,199	\$ 27,450	\$ 14,784	\$ 53,944	\$ 10,714	\$ 13,129	\$ 270,000	\$ 43,571	\$ 13,650	\$ 100,000	\$ 2,391,752
14	Book Depreciation Rate	10.00%	20.00%	5.26%	1.92%	2.86%	2.86%	3.20%	3.33%	3.33%	2.86%	5.28%	10.00%	20.00%	5.26%	10.00%	6.67%	
16	Book Depreciation	\$ 498,120	\$ -	\$ 789,526	\$ 482,112	\$ 14,300	\$ -	\$ 61,610	\$ 24,376	\$ 38,401	\$ 10,800	\$ 3,960	\$ 9,190	\$ 270,000	\$ 16,043	\$ 9,555	\$ 46,690	\$ 2,274,682
17	Tax over (under) Book - Federal	\$ (249,060)	\$ -	\$ (226,651)	\$ 459,513	\$ 4,450	\$ -	\$ 10,589	\$ 3,074	\$ (23,617)	\$ 43,145	\$ 6,754	\$ 3,939	\$ -	\$ 27,528	\$ 4,095	\$ 53,310	\$ 117,070
19	Tax over (under) Book - State	\$ (249,060)	\$ -	\$ (226,651)	\$ 459,513	\$ 4,450	\$ -	\$ 10,589	\$ 3,074	\$ (23,617)	\$ 43,145	\$ 6,754	\$ 3,939	\$ -	\$ 27,528	\$ 4,095	\$ 53,310	\$ 117,070
20	Deferred Taxes - Federal @ 19.43%	\$ (48,380)	\$ -	\$ (44,027)	\$ 89,260	\$ 864	\$ -	\$ 2,057	\$ 597	\$ (4,588)	\$ 8,381	\$ 1,312	\$ 765	\$ -	\$ 5,347	\$ 795	\$ 10,355	\$ 22,741
21	Deferred Taxes - State @ 7.50%	\$ (18,680)	\$ -	\$ (16,999)	\$ 34,463	\$ 334	\$ -	\$ 794	\$ 231	\$ (1,771)	\$ 3,236	\$ 507	\$ 295	\$ -	\$ 2,065	\$ 307	\$ 3,998	\$ 8,780
22	Deferred Tax Balance	\$ (67,059)	\$ -	\$ (61,026)	\$ 123,724	\$ 1,198	\$ -	\$ 2,851	\$ 828	\$ (6,359)	\$ 11,617	\$ 1,819	\$ 1,060	\$ -	\$ 7,412	\$ 1,103	\$ 14,354	\$ 16,065
23	Rate Base Calculation																	
25	Plant in Service	\$ 4,981,204	\$ -	\$ 15,010,000	\$ 25,110,005	\$ 500,000	\$ -	\$ 1,925,300	\$ 732,000	\$ 1,153,180	\$ 377,611	\$ 75,000	\$ 91,900	\$ 1,350,000	\$ 305,000	\$ 95,551	\$ 700,000	\$ 52,406,751
26	Accumulated Depreciation	\$ (498,120.40)	\$ -	\$ (789,526.00)	\$ (482,112)	\$ (14,300)	\$ -	\$ (61,610)	\$ (24,376)	\$ (38,401)	\$ (10,800)	\$ (3,960)	\$ (9,190)	\$ (270,000)	\$ (16,043)	\$ (9,555)	\$ (46,690)	\$ (2,274,682)
27	Deferred Tax Balance	\$ 67,059	\$ -	\$ 61,026	\$ (123,724)	\$ (1,198)	\$ -	\$ (2,851)	\$ (828)	\$ 6,359	\$ (11,617)	\$ (1,819)	\$ (1,060)	\$ -	\$ (7,412)	\$ (1,103)	\$ (14,354)	\$ (31,521)
28	Rate Base	\$ 4,550,143	\$ -	\$ 14,281,500	\$ 24,504,169	\$ 484,502	\$ -	\$ 1,860,839	\$ 706,797	\$ 1,121,138	\$ 355,194	\$ 69,221	\$ 81,650	\$ 1,080,000	\$ 281,545	\$ 84,893	\$ 638,956	\$ 50,100,547
30	Revenue Requirement Calculation																	
31	Return on Rate Base @ 9.78%	\$ 445,004	\$ -	\$ 1,396,731	\$ 2,396,508	\$ 47,384	\$ -	\$ 181,990	\$ 69,125	\$ 109,647	\$ 34,738	\$ 6,770	\$ 7,985	\$ 105,624	\$ 27,535	\$ 8,303	\$ 62,490	\$ 4,899,834
32	Depreciation Expense	\$ 498,120	\$ -	\$ 789,526	\$ 482,112	\$ 14,300	\$ -	\$ 61,610	\$ 24,376	\$ 38,401	\$ 10,800	\$ 3,960	\$ 9,190	\$ 270,000	\$ 16,043	\$ 9,555	\$ 46,690	\$ 2,274,682
33	Property Tax @ 0.66%	n/a	n/a	\$ 99,066	\$ 165,726	\$ 3,300	\$ -	\$ 12,707	\$ 4,831	\$ 7,611	\$ 2,492	n/a	n/a	n/a	n/a	n/a	n/a	\$ 295,733
34	Insurance @ 0.20%	n/a	n/a	\$ 30,579	\$ 51,156	\$ 1,019	\$ -	\$ 3,922	\$ 1,491	\$ 2,349	\$ 769	\$ 153	\$ 187	\$ 2,750	\$ 621	\$ 195	\$ 1,426	\$ 96,619
35	Annual Revenue Requirement	\$ 943,124	\$ -	\$ 2,315,902	\$ 3,095,502	\$ 66,003	\$ -	\$ 260,229	\$ 99,823	\$ 158,009	\$ 48,799	\$ 10,883	\$ 17,363	\$ 378,374	\$ 44,199	\$ 18,052	\$ 110,606	\$ 7,566,868
36	Rate of Return Calculation																	
37	Equity								Portion	After-Tax Cost	Pre-Tax WACC	Tax						
38	Debt								55.0%	10.35%	7.79%	26.93%						
39									45.0%	4.417%	1.99%							
40									100.0%		9.78%							
41																		
42	Description								Amount		Reference							
43	State Property Tax Rate (\$6.60 per \$1,000)								0.66%									
44	Property insurance (Account 924)										RR-EN-2-1	\$ 130,114						
45	Injuries and Damage (Casualty Insurance) (Account 925)										RR-EN-2-1	\$ 1,423,852						
46												\$ 1,553,965						
47	Plant at Cost										RR-Step-EN-WP2	\$ 762,767,097						
48	As % of Plant Cost											0.20%						

Liberty Utilities (EnergyNorth Natural Gas) Corp., d/b/a Liberty
Rate Case Expense
Test Year Ended December 31, 2022

Line	Vendor	Description of Work	Procurement Process	Projected Amount
1	<u>Liberty Consultants</u>			
2	Black & Veatch	Revenue Requirements/Lead-Lag Study	Competitive Bid	\$ 115,238
3	Black & Veatch	Functional Cost of Service Study	Competitive Bid	60,863
4	Black & Veatch	Marginal Cost of Service	Competitive Bid	75,638
5	Black & Veatch	Rate Design and Rate Calculations	Competitive Bid	77,843
6	Management Applications Consulting, Inc.	Depreciation Study Update	Existing Contract	63,470
7	Keegan Werlin LLP	Legal Services	Competitive Bid	400,000
8	The Brattle Group	ROE Testimony	Competitive Bid	125,000
9	Eagle Tribune	Legal Notices	Existing Contract	1,800
10	Court Reporter	Court Reporter	Existing Contract	2,500
11	Customer Notice	Customer Notice	Existing Contract	75,000
12	Total Estimated Rate Case Expense			\$ 997,352
13				
14	<u>DOE/OCA Consultants</u>			
15	TBD	NHDOE Consultant - Revenue Requirement		\$ 75,000
16	TBD	NHDOE Consultant - Cost of Capital		40,000
17	TBD	NHOC Consultant - Cost of Service/Rate Design		25,000
18	Total Estimated Rate Case Expense Incurred by DOE/OCA			\$ 140,000
19				
20	Grand Total			\$ 1,137,352