Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Annual revenue requirement	622,788	604,998	587,941	571,038	554,685	538,775	523,013	507,085	490,992	474,705	458,246	441,577	424,728	407,640	377,748
Minimum Take-or-Pay Assumption Level															
Annual estimated revenue at minimum take-or-pay level	192,600	192,600	314,600	314,600	802,600	802,600	802,600	802,600	802,600	802,600	802,600	802,600	802,600	802,600	802,600
Annual revenue requirement (line 6)	622,788	604,998	587,941	571,038	554,685	538,775	523,013	507,085	490,992	474,705	458,246	441,577	424,728	407,640	377,748
Excess revenue (deficiency)	(430,188)	(412,398)	(273,341)	(256,438)	247,915	263,825	279,587	295,515	311,608	327,895	344,354	361,023	377,872	394,960	424,852
NPV $213,526															
Baseline Assumption Level															
Annual estimated revenue at baseline level	314,600	467,100	619,600	924,600	1,077,100	1,229,600	1,229,600	1,412,600	1,412,600	1,412,600	1,412,600	1,412,600	1,412,600	1,412,600	1,412,600
Annual revenue requirement (line 6)	622,788	604,998	587,941	571,038	554,685	538,775	523,013	507,085	490,992	474,705	458,246	441,577	424,728	407,640	377,748
Excess revenue (deficiency)	(308,188)	(137,898)	31,659	353,562	522,415	690,825	706,587	905,515	921,608	937,895	954,354	971,023	987,872	1,004,960	1,034,852
NPV $3,340,916															
Accelerated Sales Assumption Level															
Annual estimated revenue at accelerated level	467,100	558,600	802,600	1,229,600	1,229,600	1,412,600	1,412,600	1,412,600	1,412,600	1,412,600	1,412,600	1,412,600	1,412,600	1,412,600	1,412,600
Annual revenue requirement (line 6)	622,788	604,998	587,941	571,038	554,685	538,775	523,013	507,085	490,992	474,705	458,246	441,577	424,728	407,640	377,748
Excess revenue (deficiency)	(155,688)	(46,398)	214,659	658,562	674,915	873,825	889,587	905,515	921,608	937,895	954,354	971,023	987,872	1,004,960	1,034,852
NPV $4,172,057															

2100000

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Request for Approval of Special Contract and Lease Agreement with Innovative Natural Gas, LLC d/b/a iNATGAS
Computation of Revenue Requirement

1			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
2	Year		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
3			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
4			Year 1 began on 12/1/2016														
5	**Investment**																
6	Compressors		1,100,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Piping, meter set, survey, etc		3,080,084	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Land (pro-rated)		200,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Contingency		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	AFUDC - Actual		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Total Amount		4,380,084	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Cumulative Program Spend		4,380,084	4,380,084	4,380,084	4,380,084	4,380,084	4,380,084	4,380,084	4,380,084	4,380,084	4,380,084	4,380,084	4,380,084	4,380,084	4,380,084	4,380,084
13			Does not include Burdens														
14	**Deferred Tax Calculation**																
15	Annual Tax Depreciation (bonus in 2016)	MACRS 15 year	2,194,544	198,554	178,699	160,933	144,840	130,210	123,312	123,312	123,521	123,312	123,312	123,521	123,312	123,312	123,521
16	Cumulative Tax Depreciation		2,194,544	2,393,098	2,571,797	2,732,730	2,877,570	3,007,779	3,131,092	3,254,404	3,377,926	3,501,238	3,624,551	3,748,072	3,871,385	3,994,697	4,118,219
17																	
18	Annual Book Depreciation (30-yr prop)	3.33%	139,336	139,336	139,336	139,336	139,336	139,336	139,336	139,336	139,336	139,336	139,336	139,336	139,336	139,336	139,336
19	Cumulative Book Depreciation		139,336	278,672	418,008	557,345	696,681	836,017	975,353	1,114,689	1,254,025	1,393,361	1,532,697	1,672,034	1,811,370	1,950,706	2,090,042
20																	
21	Annual Book/Tax Timer		2,055,208	59,218	39,362	21,597	5,504	(9,127)	(16,024)	(16,024)	(15,815)	(16,024)	(16,024)	(15,815)	(16,024)	(16,024)	(15,815)
22	Cumulative Book/Tax Timer		2,055,208	2,114,426	2,153,788	2,175,385	2,180,889	2,171,763	2,155,739	2,139,715	2,123,901	2,107,877	2,091,853	2,076,039	2,060,015	2,043,991	2,028,177
23	Effective Tax Rate		39.61%	39.41%	39.21%	39.21%	39.21%	39.21%	39.21%	39.21%	39.21%	39.21%	39.21%	39.21%	39.21%	39.21%	39.21%
24																	
25	Deferred Tax Reserve		814,019	833,295	844,500	852,969	855,127	851,548	845,265	838,982	832,781	826,499	820,216	814,015	807,732	801,449	795,248
26																	
27	**Rate Base Calculation**																
28	Plant In Service		4,380,084	4,380,084	4,380,084	4,380,084	4,380,084	4,380,084	4,380,084	4,380,084	4,380,084	4,380,084	4,380,084	4,380,084	4,380,084	4,380,084	4,380,084
29	Accumulated Depreciation		(139,336)	(278,672)	(418,008)	(557,345)	(696,681)	(836,017)	(975,353)	(1,114,689)	(1,254,025)	(1,393,361)	(1,532,697)	(1,672,034)	(1,811,370)	(1,950,706)	(2,090,042)
30	Net Plant in Service		4,240,748	4,101,412	3,962,076	3,822,739	3,683,403	3,544,067	3,404,731	3,265,395	3,126,059	2,986,723	2,847,387	2,708,050	2,568,714	2,429,378	2,290,042
31	Deferred Tax Reserve		(814,019)	(833,295)	(844,500)	(852,969)	(855,127)	(851,548)	(845,265)	(838,982)	(832,781)	(826,499)	(820,216)	(814,015)	(807,732)	(801,449)	(795,248)
32	Year End Rate Base		3,426,729	3,268,117	3,117,575	2,969,771	2,828,277	2,692,519	2,559,466	2,426,413	2,293,277	2,160,224	2,027,171	1,894,036	1,760,982	1,627,929	1,494,794
33																	
34	**Revenue Requirement Calculation**																
35	Year End Rate Base		3,426,729	3,268,117	3,117,575	2,969,771	2,828,277	2,692,519	2,559,466	2,426,413	2,293,277	2,160,224	2,027,171	1,894,036	1,760,982	1,627,929	1,494,794
36	Pre-Tax ROR		10.71%	10.71%	10.71%	10.71%	10.71%	10.71%	10.71%	10.71%	10.71%	10.71%	10.71%	10.71%	10.71%	10.71%	10.71%
37	Return and Income Taxes		367,003	350,015	333,892	318,062	302,908	288,369	274,119	259,869	245,610	231,360	217,110	202,851	188,601	174,351	160,092
38	Book Depreciation - annual		139,336	139,336	139,336	139,336	139,336	139,336	139,336	139,336	139,336	139,336	139,336	139,336	139,336	139,336	139,336
39	Property Taxes - annual (2.7% inflation adj)		116,449	115,647	114,713	113,640	112,441	111,070	109,558	107,880	106,046	104,009	101,800	99,390	96,791	93,953	78,319
40	**Annual Revenue Requirement**		622,788	604,998	587,941	571,038	554,685	538,775	523,013	507,085	490,992	474,705	458,246	441,577	424,728	407,640	377,748
41																	
42	Prior Year Cumulative Revenue Requirement		-	622,788	1,227,786	1,815,727	2,386,765	2,941,450	3,480,224	4,003,238	4,510,323	5,001,315	5,476,020	5,934,265	6,375,843	6,800,571	7,208,211
43																	
44	Cumulative Revenue Requirement		622,788	1,227,786	1,815,727	2,386,765	2,941,450	3,480,224	4,003,238	4,510,323	5,001,315	5,476,020	5,934,265	6,375,843	6,800,571	7,208,211	7,585,959
45																	
46	**Minimum Take-or-Pay Assumption Level**																
47	Cumulative estimated revenue at minimum take-or-pay level		192,600	385,200	699,800	1,014,400	1,817,000	2,619,600	3,422,200	4,224,800	5,027,400	5,830,000	6,632,600	7,435,200	8,237,800	9,040,400	9,843,000
48	Cumulative revenue requirement (line 39)		622,788	1,227,786	1,815,727	2,386,765	2,941,450	3,480,224	4,003,238	4,510,323	5,001,315	5,476,020	5,934,265	6,375,843	6,800,571	7,208,211	7,585,959
49	Excess revenue (deficiency)		(430,188)	(842,586)	(1,115,927)	(1,372,365)	(1,124,450)	(860,624)	(581,038)	(285,523)	26,085	353,980	698,335	1,059,357	1,437,229	1,832,189	2,257,041
50	NPV	$213,526															
51	**Baseline Assumption Level**																
52	Cumulative estimated revenue at baseline level		314,600	781,700	1,401,300	2,325,900	3,403,000	4,632,600	5,862,200	7,274,800	8,687,400	10,100,000	11,512,600	12,925,200	14,337,800	15,750,400	17,163,000
53	Cumulative revenue requirement (line 39)		622,788	1,227,786	1,815,727	2,386,765	2,941,450	3,480,224	4,003,238	4,510,323	5,001,315	5,476,020	5,934,265	6,375,843	6,800,571	7,208,211	7,585,959
54	Excess revenue (deficiency)		(308,188)	(446,086)	(414,427)	(60,865)	461,550	1,152,376	1,858,962	2,764,477	3,686,085	4,623,980	5,578,335	6,549,357	7,537,229	8,542,189	9,577,041
55	NPV	$3,340,916															
56	**Accelerated Sales Assumption Level**																
57	Cumulative estimated revenue at accelerated sales level		467,100	1,025,700	1,828,300	3,057,900	4,287,500	5,700,100	7,112,700	8,525,300	9,937,900	11,350,500	12,763,100	14,175,700	15,588,300	17,000,900	18,413,500
58	Cumulative revenue requirement (line 39)		622,788	1,227,786	1,815,727	2,386,765	2,941,450	3,480,224	4,003,238	4,510,323	5,001,315	5,476,020	5,934,265	6,375,843	6,800,571	7,208,211	7,585,959
59	Excess revenue (deficiency)		(155,688)	(202,086)	12,573	671,135	1,346,050	2,219,876	3,109,462	4,014,977	4,936,585	5,874,480	6,828,835	7,799,857	8,787,729	9,792,689	10,827,541
60	NPV	$4,172,057															
61																	
67			**Imputed Capital Structure/ROR**														

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Request for Approval of Special Contract and Lease Agreement with Innovative Natural Gas, LLC d/b/a iNATGAS
Computation of Revenue Requirement

1			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
2	Year		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
3			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
4			Year 1 began on 12/1/2016														
68						(current federal tax											
69						rate of 34% plus											
70				Weighted		NH rate of 8.2%)											
71		Ratio	Rate	Rate		Pre Tax											
72	Long Term Debt	50.00%	4.43%	4.43%		2.215%											
73	Short Term Debt	0.00%	0.00%	0.00%		0.00%											
74	Common Equity	50.00%	10.30%	10.30%		8.500%											
75																	
76		100.00%		14.73%		10.71%											
					this rate is for informational purposes only												