

New Hampshire Monthly Cost of Gas Report

Winter Period

December 2018 Summary

The objective of the Winter Period Monthly Cost of Gas (“COG”) analysis is to determine if COG rates need to be adjusted in order to minimize differences between the April 30, 2018 target balance and the corresponding estimated end of Winter Period balance. An adjustment is made to COG rates if the difference between the estimated and target end of Winter Period balances exceeds 2% of total projected gas costs.

As shown on Table 1, Line 22, the estimated end of Winter Period balance is an over-collection of (\$3,596,761) and, Line 24, the target end of Winter Period balance¹ is an over-collection of (\$2,793,587). Thus, the variance between the estimated and target balances is an over-collection of \$803,174, Line 26. This over-collection represents a variance in 3.01% of total gas costs, Line 31. As a result, Northern will decrease its COG rates by \$0.0334 per therm effective January 1, 2019.

The variance and rate decrease is attributable to lower NYMEX prices combined with higher than forecasted revenues for November 2018, due to colder than normal temperatures.

Support for the estimated end of Winter Period balance is provided in Table 2. Support for the target end of Winter Period balance is provided in Table 3.

¹ The Target end of Winter Period balance has been updated to reflect actual costs and revenues through October 2018.

NORTHERN UTILITIES, INC.
NEW HAMPSHIRE DIVISION
Calculation of the Projected Over or Under Collection of the
Winter 2018-2019 Period Cost of Gas
DG 18-143
December 2018 Estimated

1	Under/(Over) collection as of 11/01/18	\$ 1,296,222	Table 2, PG. 3, Line 94, October
2			
3	Forecasted firm therm sales 12/01/2018 - 04/30/2019		
4	Residential Heat & Non Heat	11,151,329	Table 2, PG. 2, Line 2
5	HLF Classes	1,708,188	Table 2, PG. 2, Line 3
6	LLF Classes	11,165,195	Table 2, PG. 2, Line 4
7			
8	Current recovery rate per therm		
9	Residential heat & non heat	\$ 0.8953	Table 2, PG. 1, Line 7
10	HLF classes	\$ 0.7936	Table 2, PG. 1, Line 8
11	LLF classes	\$ 0.9106	Table 2, PG. 1, Line 9
12			
13	Total	\$ (21,506,429)	(LN 4 * Ln 9) + (LN 5 * LN 10) + (LN 6 * LN 11)
14			
15	Forecasted recovered costs at current rates 12/01/2018 - 04/30/2019	\$ (21,506,429)	LN 13
16	Actual Recovered Costs 11/01/2018 - 11/30/2018	\$ (10,088,624)	
17	Estimated total recovered costs 11/01/18 - 04/30/19	\$ (31,595,053)	LN 15 + LN 16
18			
19	Revised projected direct gas costs 11/01/18 - 04/30/19[1]	\$ 25,717,361	Table 2, PG. 2, Line 71
20	Revised projected indirect gas costs 11/01/18 - 04/30/19 [2]	\$ 984,709	Table 2, PG. 4, Line 101
21			
22	Projected April 30, 2019 End of Winter Period Balance	\$ (3,596,761)	LN 1 + Ln 17 + LN 19 + LN 20
23			
24	April 30, 2019 Target Balance[3]	\$ (2,793,587)	Table 2, PG. 3, Line 107
25			
26	Variance from Projected Target Balance	\$ (803,174)	LN 24 - LN 22
27			
28	Total Projected Gas Costs	\$ 26,702,070	LN 19 + LN 20
29			
30			
31	Under/(over) collection as percent of total gas costs	-3.01%	LN 26 / LN 28

NOTES

[1] Reflects futures prices as of December 19, 2018

[2] Includes: Working Capital Allowance, Bad Debt Allowance, Production and Storage Capacity,

(3) Adjusted to reflect actual account balance as of November 1, 2018

**Northern Utilities
 NEW HAMPSHIRE (Over) / Undercollection Ana**

Sales Revenues					
	Winter	Summer	Prior Period	Total	
1	Volumes				
2	Residential Heat & Non Heat	14,227,004	3,551,405	17,778,409	
3	Sales HLF Classes	2,179,327	1,904,106	4,083,434	
4	Sales LLF Classes	14,244,696	2,646,145	16,890,841	
5	Total	30,651,027	8,101,656	77,505,368	
6	Rates				
7	Residential Heat & Non Heat CGA				
8	Sales HLF Classes CGA				
9	Sales LLF Classes CGA				
10	Revenues				
11	Residential Heat & Non Heat	\$ (12,737,437)	\$ (1,303,366)	\$ (14,040,803)	
12	Sales HLF Classes	\$ (1,729,514)	\$ (622,452)	\$ (2,351,966)	
13	Sales LLF Classes	\$ (12,971,220)	\$ (1,047,344)	\$ (14,018,564)	
14	Total Sales	\$ (31,595,053)	\$ (2,973,162)	\$ (34,568,216)	
15					
16					
17	Gas Costs and Credits				
18		Winter	Summer	Prior Period	Total
19	Demand Costs (net of Capacity Assignment)				
20	Pipeline	\$ 862,412	\$ 1,034,894		\$ 1,897,306
21	Storage	\$ 3,657,424	\$ 4,388,908		\$ 8,046,332
22	On-system Peaking	\$ 725,995	\$ 293,155		\$ 1,019,150
23	Off-System Peaking	\$ 2,920,195	\$ -		\$ 2,920,195
24	Total Demand Costs	\$ 8,166,025	\$ 5,716,958		\$ 13,882,982
25	Asset Management and Capacity Release				
26	NUI AMA Revenue				\$ (6,436,467)
27	NUI Capacity Release				\$ -
28	NUI AMA Rev & Cap. Release Subtotal				\$ -
29	NH AMA Revenue				\$ (2,865,576)
30	NH Capacity Release				\$ -
31	NH Total Asset Management and Capacity Release	\$ (1,302,535)	\$ 1,563,042	\$ -	\$ (2,865,576)
32					
33					
34	Re-entry Rate & Conversion Rate Revenue	\$ (10,000)	\$ -		\$ (10,000)
35					
36	Net Demand Costs	\$ 8,395,690	\$ 4,153,916		\$ 12,549,606
37	NUI Commodity Costs				
38	NUI Total Pipeline Volumes				5,067,182
39	Pipeline Costs Modeled in Sendout™				\$ 15,182,284
40	NYMEX Price Used for Forecast				
41	NYMEX Price Used for Update				
42	Increase/(Decrease) NYMEX Price				
43	Increase/(Decrease) in Pipeline Costs	\$ 1,941,120			
44	Updated Pipeline Costs				
45	New Hampshire Allocated Percentage				
46	NH Updated Pipeline Costs	\$ 4,529,571			\$ 6,502,788
47					
48	Peaking Volumes				
49	Peaking Costs Modeled in Sendout				
50	Increase/(Decrease) NYMEX Price				
51	Increase in Peaking Costs	\$ 1,839,888			
52	Updated Peaking Costs				
53	New Hampshire Allocated Percentage				
54	NH Updated Peaking Costs	\$ 7,175,121			
55					
56	NH Commodity Costs				
57	Pipeline				\$ 6,502,788
58	Storage				\$ 3,454,942
59	Peaking				\$ 7,206,673
60	Total Commodity Costs	\$ 17,318,992	\$ 2,004,769		\$ 19,323,761
61	Inventory Finance Charge				\$ 2,678
62					
63					
64	Total Anticipated Direct Cost of Gas	\$ 25,717,361	\$ 6,158,685		\$ 31,876,046

**Northern Utilities
 NEW HAMPSHIRE (Over) / Undercollection Analysis, Balances and Interest Calculation**

	Winter												Summer			
	Oct-18	Nov-18	(Forecast) Dec-18	(Forecast) Jan-19	(Forecast) Feb-19	(Forecast) Mar-19	(Forecast) Apr-19	(Forecast) May-19	(Forecast) Jun-19	(Forecast) Jul-19	(Forecast) Aug-19	(Forecast) Sep-19	(Forecast) Oct-19			
Working Capital																
Total Anticipated Direct Cost of Gas		\$ 3,857,751	\$ 5,532,368	\$ 5,763,280	\$ 5,058,610	\$ 4,041,486	\$ 1,621,725	\$ 1,168,567	\$ 985,844	\$ 939,282	\$ 940,266	\$ 932,952	\$ 1,191,773			
Working Capital Percentage		0.1373%	0.14%	0.14%	0.14%	0.14%	0.14%	0.14%	0.14%	0.14%	0.14%	0.14%	0.14%			
Working Capital Allowance		\$ 5,297	\$ 7,596	\$ 7,913	\$ 6,945	\$ 5,549	\$ 2,227	\$ 1,604	\$ 1,354	\$ 1,290	\$ 1,291	\$ 1,281	\$ 1,636			
Beginning Period Working Capital Balance		\$ 9,505	\$ 14,853	\$ 22,526	\$ 30,550	\$ 37,637	\$ 43,354	\$ 45,766	\$ 47,565	\$ 49,119	\$ 50,616	\$ 52,121	\$ 53,622			
End of Period Working Capital Allowance		\$ 14,802	\$ 22,449	\$ 30,439	\$ 37,495	\$ 43,186	\$ 45,581	\$ 47,371	\$ 48,918	\$ 50,409	\$ 51,907	\$ 53,402	\$ 55,258			
Interest		\$ 51	\$ 78	\$ 110	\$ 142	\$ 168	\$ 185	\$ 194	\$ 201	\$ 207	\$ 214	\$ 220	\$ 227			
End of period with Interest	\$ 9,505	\$ 14,853	\$ 22,526	\$ 30,550	\$ 37,637	\$ 43,354	\$ 45,766	\$ 47,565	\$ 49,119	\$ 50,616	\$ 52,121	\$ 53,622	\$ 55,485			
Bad Debt																
Projected Bad Debt	\$ -	\$ 7,281	\$ 9,432	\$ -	\$ -	\$ -	\$ -	\$ 9,432	\$ 28,297	\$ 28,297	\$ 37,729	\$ 28,297	\$ 28,297			
Beginning Period Bad Debt Balance	\$ (5,841)	\$ 1,430	\$ 10,888	\$ 10,888	\$ 10,934	\$ 10,979	\$ 11,025	\$ 11,071	\$ 20,569	\$ 49,011	\$ 77,571	\$ 115,702	\$ 144,540			
End of Period Bad Debt Balance	\$ 1,439	\$ 10,863	\$ 10,888	\$ 10,934	\$ 10,934	\$ 10,979	\$ 11,025	\$ 20,503	\$ 48,866	\$ 77,307	\$ 115,300	\$ 143,999	\$ 172,837			
Interest	\$ (9)	\$ 26	\$ 45	\$ 46	\$ 46	\$ 46	\$ 46	\$ 66	\$ 145	\$ 263	\$ 402	\$ 541	\$ 661			
End of Period Bad Debt Balance with Interest	\$ (5,841)	\$ 1,430	\$ 10,888	\$ 10,934	\$ 10,979	\$ 11,025	\$ 11,071	\$ 20,569	\$ 49,011	\$ 77,571	\$ 115,702	\$ 144,540	\$ 173,498			
Local Production and Storage Capacity		\$ 79,351	\$ 79,351	\$ 79,351	\$ 79,351	\$ 79,351	\$ 79,351	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
Miscellaneous Overhead		\$ 78,509	\$ 78,509	\$ 78,509	\$ 78,509	\$ 78,509	\$ 78,509	\$ 18,234	\$ 18,234	\$ 18,234	\$ 18,234	\$ 18,234	\$ 18,234			
Gas Cost Other than Bad Debt and Working Capital Over/Under Collection																
Beginning Balance Over/Under Collection		\$ 1,292,558	\$ 998,189	\$ 760,331	\$ (496,902)	\$ (1,339,533)	\$ (2,498,590)	\$ (3,653,598)	\$ (3,122,955)	\$ (2,567,642)	\$ (1,985,313)	\$ (1,403,812)	\$ (844,047)			
Net Costs - Revenues		\$ (299,132)	\$ (241,514)	\$ (1,257,781)	\$ (838,813)	\$ (1,151,077)	\$ (1,142,218)	\$ 544,732	\$ 567,144	\$ 591,795	\$ 588,547	\$ 564,438	\$ 438,270			
Ending Balance before Interest		\$ 993,427	\$ 756,675	\$ (497,450)	\$ (1,335,715)	\$ (2,490,610)	\$ (3,640,808)	\$ (3,108,866)	\$ (2,555,811)	\$ (1,975,847)	\$ (1,396,766)	\$ (839,374)	\$ (405,777)			
Average Balance		\$ 1,142,992	\$ 877,432	\$ 131,441	\$ (916,308)	\$ (1,915,072)	\$ (3,069,699)	\$ (3,381,232)	\$ (2,839,383)	\$ (2,271,744)	\$ (1,691,039)	\$ (1,121,593)	\$ (624,912)			
Interest Rate		5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%			
Interest Expense		\$ 4,762	\$ 3,656	\$ 548	\$ (3,818)	\$ (7,979)	\$ (12,790)	\$ (14,088)	\$ (11,831)	\$ (9,466)	\$ (7,046)	\$ (4,673)	\$ (2,604)			
Ending Balance Incl Interest Expense	\$ 1,292,558	\$ 998,189	\$ 760,331	\$ (496,902)	\$ (1,339,533)	\$ (2,498,590)	\$ (3,653,598)	\$ (3,122,955)	\$ (2,567,642)	\$ (1,985,313)	\$ (1,403,812)	\$ (844,047)	\$ (408,380)			
Total Over/Under Collection Ending Balance	\$ 1,296,222	\$ 1,014,472	\$ 793,745	\$ (455,419)	\$ (1,290,917)	\$ (2,444,210)	\$ (3,596,761)	\$ (3,054,821)	\$ (2,469,512)	\$ (1,857,126)	\$ (1,235,990)	\$ (645,886)	\$ (179,398)			
Total Indirect Cost of Gas	\$ 1,296,222	\$ 175,241	\$ 178,647	\$ 166,476	\$ 161,174	\$ 155,643	\$ 147,527	\$ 15,442	\$ 36,399	\$ 38,825	\$ 50,824	\$ 43,899	\$ 46,451			
Total Cost of Gas	\$ 1,296,222	\$ 3,875,132	\$ 5,711,015	\$ 5,929,756	\$ 5,219,785	\$ 4,197,130	\$ 1,769,252	\$ 1,184,009	\$ 1,022,243	\$ 978,107	\$ 991,090	\$ 976,852	\$ 1,238,225			
Total Interest	\$ -	\$ 4,804	\$ 3,759	\$ 703	\$ (3,631)	\$ (7,765)	\$ (12,559)	\$ (13,829)	\$ (11,485)	\$ (8,995)	\$ (6,431)	\$ (3,912)	\$ (1,716)			

Variance due to changes in NYMEX	
April 30, 2019 Target Balance	\$ (2,793,587)
April 30, 2018 Projected Balance	\$ (3,596,761)
Variance	\$ (803,174)

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Northern Utilities
NEW HAMPSHIRE (Over) / Undercollection Ana

	Winter	Summer	Prior Period	Total
Working Capital				
Total Anticipated Direct Cost of Gas				\$ 32,033,905
Working Capital Percentage				
Working Capital Allowance	\$ 35,527	\$ 8,456	\$ 9,505	\$ 53,488
Beginning Period Working Capital Balance				
End of Period Working Capital Allowance				
Interest	\$ 734	\$ 1,263		\$ 1,997
End of period with Interest				
Bad Debt				
Projected Bad Debt	\$ 16,713	\$ 160,349	\$ (5,841)	\$ 171,221
Beginning Period Bad Debt Balance				
End of Period Bad Debt Balance				
Interest	\$ 199	\$ 2,078		\$ 2,277
End of Period Bad Debt Balance with Interest				
Local Production and Storage Capacity				\$ 476,106
				\$ -
Miscellaneous Overhead	\$ 471,052	\$ 109,403		\$ 580,455
Gas Cost Other than Bad Debt and Working Capital Over/				
Beginning Balance Over/Under Collection				\$ (14,861,313)
Net Costs - Revenues				\$ (1,635,609)
Ending Balance before Interest				\$ (16,496,922)
Average Balance				\$ (15,679,117)
Interest Rate				
Interest Expense				\$ (65,330)
Ending Balance Incl Interest Expense				
Total Over/Under Collection Ending Balance				
Total Indirect Cost of Gas	\$ 984,709	\$ 231,841	\$ 1,296,222	\$ 2,512,772
Total Cost of Gas	\$ 26,702,070	\$ 6,390,526	\$ 1,296,222	\$ 34,388,818
Total Interest	\$ (14,689)	\$ (46,368)		\$ (61,056)

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Initial Projected End of Period Balance ("Target Balance")

Northern Utilities
 NEW HAMPSHIRE (Over) / Undercollection Analysis, Balances and Interest Calculation

		Winter						Summer			
Sales Revenues		(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)
1	Volumes	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19
2	Residential Heat & Non Heat	1,964,278	3,075,676	3,722,352	3,139,733	2,774,255	1,514,988	766,943	521,912	436,849	441,905
3	Sales HLF Classes	300,893	471,139	570,199	480,952	424,967	232,070	411,201	279,826	234,219	236,930
4	Sales LLF Classes	1,966,721	3,079,500	3,726,981	3,143,637	2,777,705	1,516,872	571,448	388,876	325,496	329,262
5	Total	4,231,892	6,626,315	8,019,532	6,764,323	5,976,928	3,263,930	1,749,592	1,190,614	996,564	1,008,097
6	Rates										
7	Residential Heat & Non Heat CGA	\$0.8271	\$0.8271	\$0.8271	\$0.8271	\$0.8271	\$0.8271	\$0.3670	\$0.3670	\$0.3670	\$0.3670
8	Sales HLF Classes CGA	\$0.7254	\$0.7254	\$0.7254	\$0.7254	\$0.7254	\$0.7254	\$0.3269	\$0.3269	\$0.3269	\$0.3269
9	Sales LLF Classes CGA	\$0.8424	\$0.8424	\$0.8424	\$0.8424	\$0.8424	\$0.8424	\$0.3958	\$0.3958	\$0.3958	\$0.3958
10	Revenues										
11	Residential Heat & Non Heat	\$ (1,624,654)	\$ (2,543,891)	\$ (3,078,757)	\$ (2,596,873)	\$ (2,294,587)	\$ (1,253,047)	\$ (281,468)	\$ (191,542)	\$ (160,324)	\$ (162,179)
12	Sales HLF Classes	\$ (218,268)	\$ (341,765)	\$ (413,622)	\$ (348,883)	\$ (308,271)	\$ (168,343)	\$ (134,422)	\$ (91,475)	\$ (76,566)	\$ (77,452)
13	Sales LLF Classes	\$ (1,656,765)	\$ (2,594,171)	\$ (3,139,609)	\$ (2,648,200)	\$ (2,339,939)	\$ (1,277,813)	\$ (226,179)	\$ (153,917)	\$ (128,831)	\$ (130,322)
14	Total Sales	\$ (3,499,688)	\$ (5,479,827)	\$ (6,631,988)	\$ (5,593,956)	\$ (4,942,797)	\$ (2,699,203)	\$ (642,069)	\$ (436,934)	\$ (365,721)	\$ (369,953)
15											
16											
17	Gas Costs and Credits										
18		(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)
19	Demand Costs (net of Capacity Assignment)	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19
20	Pipeline	\$ 172,482	\$ 172,482	\$ 172,482	\$ 172,482	\$ 172,482	\$ 172,482	\$ 172,482	\$ 172,482	\$ 172,482	\$ 172,482
21	Storage	\$ 731,485	\$ 731,485	\$ 731,485	\$ 731,485	\$ 731,485	\$ 731,485	\$ 731,485	\$ 731,485	\$ 731,485	\$ 731,485
22	On-system Peaking	\$ 112,545	\$ 159,501	\$ 159,501	\$ 159,501	\$ 159,501	\$ 87,989	\$ 87,989	\$ 41,033	\$ 41,033	\$ 41,033
23	Off-System Peaking	\$ 730,049	\$ 730,049	\$ 730,049	\$ 730,049	\$ 730,049	\$ -	\$ -	\$ -	\$ -	\$ -
24	Total Demand Costs	\$ 1,746,561	\$ 1,793,517	\$ 1,793,517	\$ 1,793,517	\$ 1,793,517	\$ 991,956	\$ 991,956	\$ 945,000	\$ 945,000	\$ 945,000
25	Asset Management and Capacity Release										
26	NUI AMA Revenue	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)
27	NUI Capacity Release	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
28	NUI AMA Rev & Cap. Release Subtotal	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)
29	NH AMA Revenue	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)
30	NH Capacity Release	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
31	NH Total Asset Management and Capacity Release	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)
32	Re-entry Rate & Conversion Rate Revenue	\$ (1,666.67)	\$ (1,666.67)	\$ (1,666.67)	\$ (1,666.67)	\$ (1,666.67)	\$ (1,666.67)	\$ -	\$ -	\$ -	\$ -
33	Net Demand Costs	\$ 1,484,388	\$ 1,531,344	\$ 1,531,344	\$ 1,531,344	\$ 1,531,344	\$ 729,783	\$ 731,449	\$ 684,493	\$ 684,493	\$ 684,493
34	NUI Commodity Costs										
35	NUI Total Pipeline Volumes	570,060	556,881	406,460	367,544	541,084	912,309	494,604	334,214	288,763	290,326
36	Pipeline Costs Modeled in Sendout™	\$ 1,713,896	\$ 1,952,159	\$ 1,910,102	\$ 1,710,242	\$ 1,814,531	\$ 2,281,006	\$ 1,202,907	\$ 821,440	\$ 713,823	\$ 712,207
37	NYMEX Price Used for Forecast	\$ 2,890	\$ 2,979	\$ 3,066	\$ 3,030	\$ 2,926	\$ 2,635	\$ 2,603	\$ 2,634	\$ 2,667	\$ 2,671
38	NYMEX Price Used for Update	\$ 2,890	\$ 2,979	\$ 3,066	\$ 3,030	\$ 2,926	\$ 2,635	\$ 2,603	\$ 2,634	\$ 2,667	\$ 2,671
39	Increase/(Decrease) NYMEX Price	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
40	Increase/(Decrease) in Pipeline Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
41	Updated Pipeline Costs	\$ 1,713,896	\$ 1,952,159	\$ 1,910,102	\$ 1,710,242	\$ 1,814,531	\$ 2,281,006	\$ 1,202,907	\$ 821,440	\$ 713,823	\$ 712,207
42	New Hampshire Allocated Percentage	39.44%	39.81%	40.15%	39.77%	39.26%	36.25%	35.89%	36.05%	34.96%	35.18%
43	NH Updated Pipeline Costs	\$ 675,924	\$ 777,176	\$ 766,900	\$ 680,159	\$ 712,421	\$ 826,859	\$ 431,688	\$ 296,109	\$ 249,562	\$ 250,525
44	Peaking Volumes	227,145	510,384	743,233	477,763	284,994	2,145	2,170	2,100	2,170	2,170
45	Peaking Costs Modeled in Sendout	\$ 1,835,577	\$ 4,526,660	\$ 5,420,325	\$ 4,161,751	\$ 2,045,340	\$ 15,195	\$ 15,129	\$ 14,540	\$ 14,949	\$ 14,918
46	Increase Due to NYMEX	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
47	Increase in Peaking Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
48	Updated Peaking Costs	\$ 1,835,577	\$ 4,526,660	\$ 5,420,325	\$ 4,161,751	\$ 2,045,340	\$ 15,195	\$ 15,129	\$ 14,540	\$ 14,949	\$ 14,918
49	New Hampshire Allocated Percentage	39.44%	39.81%	40.15%	39.77%	39.26%	36.25%	35.89%	36.05%	34.96%	35.18%
50	NH Updated Peaking Costs	\$ 723,913	\$ 1,802,113	\$ 2,176,245	\$ 1,655,118	\$ 803,041	\$ 5,508	\$ 5,429	\$ 5,241	\$ 5,226	\$ 5,248
51	NH Commodity Costs										
52	Pipeline	\$ 675,924	\$ 777,176	\$ 766,900	\$ 680,159	\$ 712,421	\$ 826,859	\$ 431,688	\$ 296,109	\$ 249,562	\$ 250,525
53	Storage	\$ 321,985	\$ 683,543	\$ 983,407	\$ 981,943	\$ 806,050	\$ -	\$ -	\$ -	\$ -	\$ -
54	Peaking	\$ 723,913	\$ 1,802,113	\$ 2,176,245	\$ 1,655,118	\$ 803,041	\$ 5,508	\$ 5,429	\$ 5,241	\$ 5,226	\$ 5,248
55	Total Commodity Costs	\$ 1,721,822	\$ 3,262,831	\$ 3,926,553	\$ 3,317,220	\$ 2,321,512	\$ 832,367	\$ 437,117	\$ 301,351	\$ 254,789	\$ 255,773

Northern Utilities
NEW HAMPSHIRE (Over) / Undercollection

Sales Revenues		(Forecast)	(Forecast)			Prior	
Volumes		Sep-19	Oct-19	Winter	Summer	Period	Total
1	Residential Heat & Non Heat	461,965	921,830	16,191,282	3,551,405		19,742,687
2	Sales HLF Classes	247,685	494,245	2,480,220	2,590,528		4,384,327
3	Sales LLF Classes	344,210	686,854	16,211,416	14,816,144		18,857,561
4	Total	1,053,861	2,102,929	34,882,919	20,958,077		77,867,494
5	Rates						
6	Residential Heat & Non Heat CGA	\$0.3670	\$0.3670				
7	Sales HLF Classes CGA	\$0.3269	\$0.3269				
8	Sales LLF Classes CGA	\$0.3958	\$0.3958				
9	Revenues						
10	Residential Heat & Non Heat	\$ (169,541)	\$ (338,312)				\$ (14,695,175)
11	Sales HLF Classes	\$ (80,968)	\$ (161,569)				\$ (2,421,604)
12	Sales LLF Classes	\$ (136,238)	\$ (271,857)				\$ (14,703,841)
13	Total Sales	\$ (386,748)	\$ (771,737)	\$ (28,847,459)	\$ (2,973,162)		\$ (31,820,621)
14							
15	Gas Costs and Credits						
16		(Forecast)	(Forecast)				Total
17		Sep-19	Oct-19				
18	Demand Costs (net of Capacity Assignment)						
19	Pipeline	\$ 172,482	\$ 172,482	\$ 1,034,894	\$ 1,034,894		\$ 2,069,788
20	Storage	\$ 731,485	\$ 731,485	\$ 4,388,908	\$ 4,388,908		\$ 8,777,817
21	On-system Peaking	\$ 41,033	\$ 41,033	\$ 838,540	\$ 293,155		\$ 1,131,695
22	Off-System Peaking	\$ -	\$ -	\$ 3,650,243	\$ -		\$ 3,650,243
23	Total Demand Costs	\$ 945,000	\$ 945,000	\$ 9,912,586	\$ 5,716,958		\$ 15,629,544
24	Asset Management and Capacity Release						
25	NUI AMA Revenue	\$ (585,133)	\$ (585,133)				\$ (7,021,600)
26	NUI Capacity Release	\$ -	\$ -				\$ -
27	NUI AMA Rev & Cap. Release Subtotal						\$ -
28	NH AMA Revenue	\$ (260,507)	\$ (260,507)				\$ (3,126,083)
29	NH Capacity Release						\$ -
30	NH Total Asset Management and Capacity Release	\$ (260,507)	\$ (260,507)	\$ (1,563,042)	\$ -	\$ (1,563,042)	\$ (3,126,083)
31	Re-entry Rate & Conversion Rate Revenue						
32		\$ -	\$ -	\$ (10,000)	\$ -		\$ (10,000)
33	Net Demand Costs	\$ 684,493	\$ 684,493	\$ 8,339,544	\$ 4,153,916		\$ 12,493,460
34	NUI Commodity Costs						
35	NUI Total Pipeline Volumes	302,280	572,717				5,637,242
36	Pipeline Costs Modeled in Sendout™	\$ 706,238	\$ 1,357,630				\$ 16,896,179
37	NYMEX Price Used for Forecast	\$ 2.6530	\$ 2.6690				
38	NYMEX Price Used for Update	\$ 2.6530	\$ 2.6690				
39	Increase/(Decrease) NYMEX Price						
40	Increase/(Decrease) in Pipeline Costs	\$ -	\$ -				
41	Updated Pipeline Costs	\$ 706,238	\$ 1,357,630				
42	New Hampshire Allocated Percentage	34.48%	36.96%				
43	NH Updated Pipeline Costs	\$ 243,514	\$ 501,818				\$ 6,412,656
44	Peaking Volumes						
45	Peaking Costs Modeled in Sendout	\$ 14,342	\$ 14,778				
46	Increase Due to NYMEX	\$ -	\$ -				
47	Increase in Peaking Costs	\$ -	\$ -				
48	Updated Peaking Costs	\$ 14,342	\$ 14,778				
49	New Hampshire Allocated Percentage	34.48%	36.96%				
50	NH Updated Peaking Costs	\$ 4,945	\$ 5,462				
51	NH Commodity Costs						
52	Pipeline	\$ 243,514	\$ 501,818				\$ 6,412,656
53	Storage	\$ -	\$ -				\$ 3,776,928
54	Peaking	\$ 4,945	\$ 5,462				\$ 7,197,490
55	Total Commodity Costs	\$ 248,459	\$ 507,280	\$ 15,382,305	\$ 2,004,769		\$ 17,387,074

Initial Projected End of Period Balance ("Target Balance")

Northern Utilities

NEW HAMPSHIRE (Over) / Undercollection Analysis, Balances and Interest Calculation

62	Inventory Finance Charge		\$ 339	\$ 584	\$ 729	\$ 609	\$ 517	\$ 239	\$ -	\$ -	\$ -	\$ -
63												
64	Total Anticipated Direct Cost of Gas		\$ 3,206,548	\$ 4,794,759	\$ 5,458,625	\$ 4,849,172	\$ 3,853,372	\$ 1,562,389	\$ 1,168,567	\$ 985,844	\$ 939,282	\$ 940,266
65												
66			Winter						Summer			
67		Oct-18	(Forecast) Nov-18	(Forecast) Dec-18	(Forecast) Jan-19	(Forecast) Feb-19	(Forecast) Mar-19	(Forecast) Apr-19	(Forecast) May-19	(Forecast) Jun-19	(Forecast) Jul-19	(Forecast) Aug-19
68	Working Capital											
69	Total Anticipated Direct Cost of Gas		\$ 3,206,548	\$ 4,794,759	\$ 5,458,625	\$ 4,849,172	\$ 3,853,372	\$ 1,562,389	\$ 1,168,567	\$ 985,844	\$ 939,282	\$ 940,266
70	Working Capital Percentage		0.2742%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%
71	Working Capital Allowance		\$ 8,794	\$ 13,149	\$ 14,970	\$ 13,299	\$ 10,568	\$ 4,285	\$ 3,205	\$ 2,704	\$ 2,576	\$ 2,579
72	Beginning Period Working Capital Balance		\$ 9,505	\$ 18,357	\$ 31,610	\$ 46,743	\$ 60,265	\$ 71,105	\$ 75,695	\$ 79,222	\$ 82,262	\$ 85,186
73	End of Period Working Capital Allowance		\$ 18,299	\$ 31,507	\$ 46,581	\$ 60,042	\$ 70,832	\$ 75,390	\$ 78,900	\$ 81,926	\$ 84,838	\$ 87,764
74	Interest		\$ 58	\$ 104	\$ 163	\$ 222	\$ 273	\$ 305	\$ 322	\$ 336	\$ 348	\$ 360
75	End of period with Interest	\$ 9,505	\$ 18,357	\$ 31,610	\$ 46,743	\$ 60,265	\$ 71,105	\$ 75,695	\$ 79,222	\$ 82,262	\$ 85,186	\$ 88,125
76	Bad Debt											
77	Projected Bad Debt	\$ -	\$ 18,865	\$ 9,432	\$ -	\$ -	\$ -	\$ -	\$ 9,432	\$ 28,297	\$ 28,297	\$ 37,729
78	Beginning Period Bad Debt Balance		\$ (5,841)	\$ 13,038	\$ 22,544	\$ 22,638	\$ 22,733	\$ 22,827	\$ 22,923	\$ 32,470	\$ 60,961	\$ 89,571
79	End of Period Bad Debt Balance		\$ 13,023	\$ 22,471	\$ 22,544	\$ 22,638	\$ 22,733	\$ 22,827	\$ 32,355	\$ 60,767	\$ 89,258	\$ 127,300
80	Interest		\$ 15	\$ 74	\$ 94	\$ 94	\$ 95	\$ 95	\$ 115	\$ 194	\$ 313	\$ 452
81	End of Period Bad Debt Balance with Interest	\$ (5,841)	\$ 13,038	\$ 22,544	\$ 22,638	\$ 22,733	\$ 22,827	\$ 22,923	\$ 32,470	\$ 60,961	\$ 89,571	\$ 127,752
82	Local Production and Storage Capacity		\$ 79,351	\$ 79,351	\$ 79,351	\$ 79,351	\$ 79,351	\$ 79,351	\$ -	\$ -	\$ -	\$ -
84	Miscellaneous Overhead		\$ 78,509	\$ 78,509	\$ 78,509	\$ 78,509	\$ 78,509	\$ 78,509	\$ 18,234	\$ 18,234	\$ 18,234	\$ 18,234
86	Gas Cost Other than Bad Debt and Working Capital Over/Under Collection											
87	Beginning Balance Over/Under Collection		\$ 1,292,558	\$ 1,162,382	\$ 638,919	\$ (376,038)	\$ (965,751)	\$ (1,903,281)	\$ (2,892,205)	\$ (2,358,389)	\$ (1,799,890)	\$ (1,214,362)
88	Net Costs - Revenues		\$ (135,280)	\$ (527,208)	\$ (1,015,503)	\$ (586,924)	\$ (931,565)	\$ (978,955)	\$ 544,732	\$ 567,144	\$ 591,795	\$ 588,547
89	Ending Balance before Interest		\$ 1,157,279	\$ 635,174	\$ (376,584)	\$ (962,962)	\$ (1,897,316)	\$ (2,882,235)	\$ (2,347,473)	\$ (1,791,245)	\$ (1,208,096)	\$ (625,816)
90	Average Balance		\$ 1,224,918	\$ 898,778	\$ 131,168	\$ (669,500)	\$ (1,431,534)	\$ (2,392,758)	\$ (2,619,839)	\$ (2,074,817)	\$ (1,503,993)	\$ (920,089)
91	Interest Rate		5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
92	Interest Expense		\$ 5,104	\$ 3,745	\$ 547	\$ (2,790)	\$ (5,965)	\$ (9,970)	\$ (10,916)	\$ (8,645)	\$ (6,267)	\$ (3,834)
93	Ending Balance Incl Interest Expense	\$ 1,292,558	\$ 1,162,382	\$ 638,919	\$ (376,038)	\$ (965,751)	\$ (1,903,281)	\$ (2,892,205)	\$ (2,358,389)	\$ (1,799,890)	\$ (1,214,362)	\$ (629,649)
94	Total Over/Under Collection Ending Balance	\$ 1,296,222	\$ 1,193,778	\$ 693,074	\$ (306,656)	\$ (882,754)	\$ (1,809,348)	\$ (2,793,587)	\$ (2,246,697)	\$ (1,656,667)	\$ (1,039,606)	\$ (413,772)
95												
96	Total Indirect Cost of Gas	\$ 1,296,222	\$ 190,695	\$ 184,364	\$ 173,633	\$ 168,686	\$ 162,831	\$ 152,575	\$ 20,392	\$ 41,119	\$ 43,501	\$ 55,520
97												
98	Total Cost of Gas	\$ 1,296,222	\$ 3,397,243	\$ 4,979,124	\$ 5,632,258	\$ 5,017,858	\$ 4,016,203	\$ 1,714,964	\$ 1,188,959	\$ 1,026,963	\$ 982,783	\$ 995,787
99												
100	Total Interest	\$ -	\$ 5,177	\$ 3,923	\$ 803	\$ (2,473)	\$ (5,597)	\$ (9,570)	\$ (10,479)	\$ (8,115)	\$ (5,606)	\$ (3,022)

Northern Utilities
NEW HAMPSHIRE (Over) / Undercollection

62	Inventory Finance Charge	\$ -	\$ -				\$ 3,017
63							
64	Total Anticipated Direct Cost of Gas	\$ 932,952	\$ 1,191,773	\$ 23,724,866	\$ 6,158,685		\$ 29,883,551
65							
66		(Forecast)	(Forecast)				Total
67		Sep-19	Oct-19				
68	Working Capital						
69	Total Anticipated Direct Cost of Gas	\$ 932,952	\$ 1,191,773				\$ 29,883,551
70	Working Capital Percentage	0.27%	0.27%				
71	Working Capital Allowance	\$ 2,559	\$ 3,268	\$ 65,065	\$ 16,890	\$ 9,505	\$ 91,460
72	Beginning Period Working Capital Balance	\$ 88,125	\$ 91,056				
73	End of Period Working Capital Allowance	\$ 90,683	\$ 94,324				
74	Interest	\$ 373	\$ 386	\$ 1,125	\$ 2,125		\$ 3,250
75	End of period with Interest	\$ 91,056	\$ 94,710				
76	Bad Debt						
77	Projected Bad Debt	\$ 28,297	\$ 28,297	\$ 28,297	\$ 160,349	\$ (5,841)	\$ 182,805
78	Beginning Period Bad Debt Balance	\$ 127,752	\$ 156,640				
79	End of Period Bad Debt Balance	\$ 156,049	\$ 184,937				
80	Interest	\$ 591	\$ 712	\$ 467	\$ 2,377		\$ 2,844
81	End of Period Bad Debt Balance with Interest	\$ 156,640	\$ 185,649				
82	Local Production and Storage Capacity	\$ -	\$ -				\$ 476,106
84	Miscellaneous Overhead	\$ 18,234	\$ 18,234				\$ 580,455
86	Gas Cost Other than Bad Debt and Working Capital						
87	Beginning Balance Over/Under Collection	\$ (629,649)	\$ (66,659)				\$ (9,112,365)
88	Net Costs - Revenues	\$ 564,438	\$ 438,270				\$ (880,509)
89	Ending Balance before Interest	\$ (65,211)	\$ 371,612				\$ (9,992,874)
90	Average Balance	\$ (347,430)	\$ 152,476				\$ (9,552,619)
91	Interest Rate	5.00%	5.00%				
92	Interest Expense	\$ (1,448)	\$ 635				\$ (39,803)
93	Ending Balance Incl Interest Expense	\$ (66,659)	\$ 372,247				
94	Total Over/Under Collection Ending Balance	\$ 181,038	\$ 652,606				
95							
96	Total Indirect Cost of Gas	\$ 48,606	\$ 51,532	\$ 1,032,783	\$ 260,671	\$ 1,296,222	\$ 2,589,676
97							
98	Total Cost of Gas	\$ 981,558	\$ 1,243,306	\$ 24,757,649	\$ 6,419,356	\$ 1,296,222	\$ 32,473,227
99							
100	Total Interest	\$ (484)	\$ 1,733	\$ (7,736)	\$ (25,972)		\$ (33,708)