



March 22, 2019

Debra Howland
Executive Director and Secretary
New Hampshire Public Utilities Commission
21 S. Fruit St., Suite 10
Concord, NH 03301-2429

Re: Northern Utilities, Inc., New Hampshire Division - Docket DG 18-143
March 2019 Monthly Cost of Gas Report

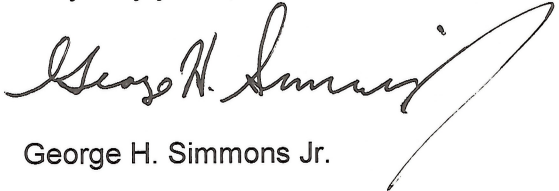
Dear Director Howland:

Pursuant to the Commission's Order No. 26,186 in Docket DG 18-143, enclosed is Northern Utilities - New Hampshire Division's ("Northern") current calculation of its projected over or under collection of gas costs for the 2018 / 2019 Winter Period.

Northern's current calculation of costs has been updated to reflect the actual November 1, 2018 balance, actual costs and revenues for November 2018 through February 2019, and NYMEX futures prices as of March 19, 2019. The updated calculations indicate that a rate change is not required at this time. Support for this decision is provided in the attached summary and tables.

If you have any questions regarding this filing, please do not hesitate to contact me or Chris Kahl at (603)773-6425.

Very truly yours,

A handwritten signature in black ink, appearing to read "George H. Simmons Jr.", with a long, sweeping flourish extending to the right.

George H. Simmons Jr.

Enclosures

cc: Lynn Fabrizio, Esq.
D. Maurice Kreis, Consumer Advocate

George H. Simmons
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New Hampshire Monthly Cost of Gas Report

Winter Period

March 2019 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, 2019 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 (\$3,277,349) 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 (\$483,762), Line 26. This over-collection represents a variance of 1.89% of total gas costs, Line 31. Since this variance is below the 2% threshold, no rate change is proposed at this time.

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
March 2019 Estimated

1	Under/(Over) collection as of 10/31/18	\$ 1,314,231	Table 2, PG. 3, Line 94, October
2			
3	Forecasted firm therm sales 03/01/2019 - 04/30/2019		
4	Residential Heat & Non Heat	4,289,244	Table 2, PG. 2, Line 2
5	HLF Classes	657,037	Table 2, PG. 2, Line 3
6	LLF Classes	4,294,577	Table 2, PG. 2, Line 4
7			
8	Current recovery rate per therm		
9	Residential heat & non heat	\$ 0.7650	Table 2, PG. 1, Line 7
10	HLF classes	\$ 0.6633	Table 2, PG. 1, Line 8
11	LLF classes	\$ 0.7803	Table 2, PG. 1, Line 9
12			
13	Total	\$ (7,068,142)	(LN 4 * Ln 9) + (LN 5 * LN 10) + (LN 6 * LN 11)
14			
15	Forecasted recovered costs at current rates 03/01/2019 - 04/30/2019	\$ (7,068,142)	LN 13
16	Actual recovered costs at rates for 11/01/2018 - 02/28/2019	\$ (23,173,529)	
17	Estimated total recovered costs at above rates 11/01/18 - 04/30/19	\$ (30,241,672)	LN 15 + LN 16
18			
19	Revised projected direct gas costs 11/01/18 - 04/30/19[1]	\$ 24,619,066	Table 2, PG. 2, Line 64
20	Revised projected indirect gas costs 11/01/18 - 04/30/19 [2]	\$ 1,031,026	Table 2, PG. 4, Line 96
21			
22	Revised projected April 30, 2019 End of Winter Period Balance	\$ (3,277,349)	LN 1 + Ln 17 + LN 19 + LN 20
23			
24	April 30, 2019 Target Balance[3]	\$ (2,793,587)	Table 2, PG. 3, Line 103
25			
26	Variance from Projected Target Balance	\$ (483,762)	LN 24 - LN 22
27			
28	Total Projected Gas Costs	\$ 25,650,092	LN 19 + LN 20
29			
30			
31	Under/(over) collection as percent of total gas costs	-1.89%	LN 26 / LN 28

NOTES

[1] Reflects futures prices as of March 19, 2019

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

(3) Adjusted to reflect actual account balance as of October 31, 2018

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

		Winter						Summer					
Sales Revenues						(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)
Volumes	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
Residential Heat & Non Heat						2,774,255	1,514,988	766,943	521,912	436,849	441,905	461,965	921,830
Sales HLF Classes						424,967	232,070	411,201	279,826	234,219	236,930	247,685	494,245
Sales LLF Classes						2,777,705	1,516,872	571,448	388,876	325,496	329,262	344,210	686,854
Total						5,976,928	3,263,930	1,749,592	1,190,614	996,564	1,008,097	1,053,861	2,102,929
Rates													
Residential Heat & Non Heat CGA						\$ 0.7650	\$ 0.7650	\$ 0.3670	\$ 0.3670	\$ 0.3670	\$ 0.3670	\$ 0.3670	\$ 0.3670
Sales HLF Classes CGA						\$ 0.6633	\$ 0.6633	\$ 0.3269	\$ 0.3269	\$ 0.3269	\$ 0.3269	\$ 0.3269	\$ 0.3269
Sales LLF Classes CGA						\$ 0.7803	\$ 0.7803	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958	\$ 0.3958
Revenues													
Residential Heat & Non Heat						\$ (2,122,305)	\$ (1,158,966)	\$ (281,468)	\$ (191,542)	\$ (160,324)	\$ (162,179)	\$ (169,541)	\$ (338,312)
Sales HLF Classes						\$ (281,881)	\$ (153,932)	\$ (134,422)	\$ (91,475)	\$ (76,566)	\$ (77,452)	\$ (80,968)	\$ (161,569)
Sales LLF Classes						\$ (2,167,443)	\$ (1,183,615)	\$ (226,179)	\$ (153,917)	\$ (128,831)	\$ (130,322)	\$ (136,238)	\$ (271,857)
Total Sales		\$ (4,156,882)	\$ (5,933,170)	\$ (7,078,578)	\$ (6,004,899)	\$ (4,571,629)	\$ (2,496,513)	\$ (642,069)	\$ (436,934)	\$ (365,721)	\$ (369,953)	\$ (386,748)	\$ (771,737)
		Winter						Summer					
Gas Costs and Credits				(Forecast)		(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)
	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
Demand Costs (net of Capacity Assignment)													
Pipeline						\$ 172,482	\$ 172,482	\$ 172,482	\$ 172,482	\$ 172,482	\$ 172,482	\$ 172,482	\$ 172,482
Storage						\$ 731,485	\$ 731,485	\$ 731,485	\$ 731,485	\$ 731,485	\$ 731,485	\$ 731,485	\$ 731,485
On-system Peaking						\$ 159,501	\$ 87,989	\$ 87,989	\$ 41,033	\$ 41,033	\$ 41,033	\$ 41,033	\$ 41,033
Off-System Peaking						\$ 730,049	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Demand Costs						\$ 1,793,517	\$ 991,956	\$ 991,956	\$ 945,000	\$ 945,000	\$ 945,000	\$ 945,000	\$ 945,000
Asset Management and Capacity Release													
NUI AMA Revenue						\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)
NUI Capacity Release						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
NUI AMA Rev & Cap. Release Subtotal						\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)
NH AMA Revenue						\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)
NH Capacity Release													
NH Total Asset Management and Capacity Release					\$ -	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)
Re-entry Rate & Conversion Rate Revenue					\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Demand Costs		\$ 1,540,534	\$ 1,528,964	\$ 1,595,630	\$ 1,404,587	\$ 1,533,010	\$ 731,449	\$ 731,449	\$ 684,493	\$ 684,493	\$ 684,493	\$ 684,493	\$ 684,493
NUI Commodity Costs													
NUI Total Pipeline Volumes						541,084	912,309	494,604	334,214	288,763	290,326	302,280	572,717
Pipeline Costs Modeled in Sendout™						\$ 1,814,531	\$ 2,281,006	\$ 1,202,907	\$ 821,440	\$ 713,823	\$ 712,207	\$ 706,238	\$ 1,357,630
NYMEX Price Used for Forecast						\$ 2,9260	\$ 2,6350	\$ 2,6030	\$ 2,6340	\$ 2,6670	\$ 2,6710	\$ 2,6530	\$ 2,6690
NYMEX Price Used for Update						\$ 2,8550	\$ 2,8740	\$ 2,6030	\$ 2,6340	\$ 2,6670	\$ 2,6710	\$ 2,6530	\$ 2,6690
Increase/(Decrease) NYMEX Price						\$ (0.07)	\$ 0.24						
Increase/(Decrease) in Pipeline Costs						\$ (38,417)	\$ 218,042	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Updated Pipeline Costs						\$ 1,776,114	\$ 2,499,048	\$ 1,202,907	\$ 821,440	\$ 713,823	\$ 712,207	\$ 706,238	\$ 1,357,630
New Hampshire Allocated Percentage						39.26%	36.25%	35.89%	36.05%	34.96%	35.18%	34.48%	36.96%
NH Updated Pipeline Costs						\$ 697,338	\$ 905,899	\$ 431,688	\$ 296,109	\$ 249,562	\$ 250,525	\$ 243,514	\$ 501,818
Peaking Volumes						284,994	2,145	2,170	2,100	2,170	2,170	2,100	2,170
Peaking Costs Modeled in Sendout						\$ 2,045,340	\$ 15,195	\$ 15,129	\$ 14,540	\$ 14,949	\$ 14,918	\$ 14,342	\$ 14,778
Increase/(Decrease) NYMEX Price						\$ (0.07)	\$ 0.24	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Increase in Peaking Costs						\$ (20,235)	\$ 513	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Updated Peaking Costs						\$ 2,025,105	\$ 15,707	\$ 15,129	\$ 14,540	\$ 14,949	\$ 14,918	\$ 14,342	\$ 14,778
New Hampshire Allocated Percentage						39.26%	36.25%	35.89%	36.05%	34.96%	35.18%	34.48%	36.96%
NH Updated Peaking Costs						\$ 795,097	\$ 5,694	\$ 5,429	\$ 5,241	\$ 5,226	\$ 5,248	\$ 4,945	\$ 5,462
NH Commodity Costs													
Pipeline						\$ 697,338	\$ 905,899	\$ 431,688	\$ 296,109	\$ 249,562	\$ 250,525	\$ 243,514	\$ 501,818
Storage						\$ 806,050	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Peaking						\$ 795,097	\$ 5,694	\$ 5,429	\$ 5,241	\$ 5,226	\$ 5,248	\$ 4,945	\$ 5,462
Total Commodity Costs		\$ 2,159,358	\$ 4,084,471	\$ 3,865,370	\$ 2,964,860	\$ 2,298,484	\$ 911,593	\$ 437,117	\$ 301,351	\$ 254,789	\$ 255,773	\$ 248,459	\$ 507,280
Inventory Finance Charge						\$ 517	\$ 239	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Anticipated Direct Cost of Gas		\$ 3,699,891	\$ 5,613,436	\$ 5,461,000	\$ 4,369,447	\$ 3,832,011	\$ 1,643,281	\$ 1,168,567	\$ 985,844	\$ 939,282	\$ 940,266	\$ 932,952	\$ 1,191,773

Northern Utilities
NEW HAMPSHIRE (Over) / Undercollection Ana

	Sales Revenues				
1	Volumes	Winter	Summer	Prior Period	Total
2	Residential Heat & Non Heat				
3	Sales HLF Classes				
4	Sales LLF Classes				
5	Total				
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	Sales HLF Classes				
13	Sales LLF Classes				
14	Total Sales	\$ (30,241,672)	\$ (2,973,162)		\$ (33,214,834)
15					
16					
17	Gas Costs and Credits				
18		Winter	Summer	Prior Period	Total
19	Demand Costs (net of Capacity Assignment)				
20	Pipeline				
21	Storage				
22	On-system Peaking				
23	Off-System Peaking				
24	Total Demand Costs				
25					
26	Asset Management and Capacity Release				
27	NUI AMA Revenue				
28	NUI Capacity Release				
29	NUI AMA Rev & Cap. Release Subtotal				
30	NH AMA Revenue				
31	NH Capacity Release				
32	NH Total Asset Management and Capacity Release				
33					
34	Re-entry Rate & Conversion Rate Revenue				
35					
36	Net Demand Costs	\$ 8,334,175	\$ 4,153,916		\$ 12,488,091
37					
38	NUI Commodity Costs				
39	NUI Total Pipeline Volumes				
40	Pipeline Costs Modeled in Sendout™				
41	NYMEX Price Used for Forecast				
42	NYMEX Price Used for Update				
43	Increase/(Decrease) NYMEX Price				
44	Increase/(Decrease) in Pipeline Costs				
45	Updated Pipeline Costs				
46	New Hampshire Allocated Percentage				
47	NH Updated Pipeline Costs				
48					
49	Peaking Volumes				
50	Peaking Costs Modeled in Sendout				
51	Increase/(Decrease) NYMEX Price				
52	Increase in Peaking Costs				
53	Updated Peaking Costs				
54	New Hampshire Allocated Percentage				
55	NH Updated Peaking Costs				
56					
57	NH Commodity Costs				
58	Pipeline				
59	Storage				
60	Peaking				
61	Total Commodity Costs	\$ 16,284,135	\$ 2,004,769		\$ 18,288,904
62	Inventory Finance Charge				
63					
64	Total Anticipated Direct Cost of Gas	\$ 24,619,066	\$ 6,158,685		\$ 30,777,751

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

				Winter						Summer			
	Oct-18	Nov-18	Dec-18	Jan-19	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	\$ 5,771,295	\$ 5,618,860	\$ 4,527,307	\$ 3,832,011	\$ 1,643,281	\$ 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	\$ 7,924	\$ 8,097	\$ 6,524	\$ 5,522	\$ 2,368	\$ 1,684	\$ 1,421	\$ 1,354	\$ 1,355	\$ 1,344	\$ 1,717
Beginning Period Working Capital Balance		\$ 9,529	\$ 14,876	\$ 22,879	\$ 31,093	\$ 37,768	\$ 43,467	\$ 46,030	\$ 47,919	\$ 49,552	\$ 51,126	\$ 52,707	\$ 54,285
End of Period Working Capital Allowance		\$ 14,826	\$ 22,800	\$ 30,976	\$ 37,617	\$ 43,290	\$ 45,835	\$ 47,714	\$ 49,340	\$ 50,906	\$ 52,481	\$ 54,052	\$ 56,003
Interest		\$ 51	\$ 78	\$ 118	\$ 150	\$ 177	\$ 195	\$ 205	\$ 213	\$ 220	\$ 227	\$ 234	\$ 241
End of period with Interest	\$ 9,529	\$ 14,876	\$ 22,879	\$ 31,093	\$ 37,768	\$ 43,467	\$ 46,030	\$ 47,919	\$ 49,552	\$ 51,126	\$ 52,707	\$ 54,285	\$ 56,244
Bad Debt													
Projected Bad Debt	\$ -	\$ 7,281	\$ 40,557	\$ 14,378	\$ 4,248	\$ -	\$ -	\$ 9,432	\$ 28,297	\$ 28,297	\$ 37,729	\$ 28,297	\$ 28,297
Beginning Period Bad Debt Balance		\$ (5,841)	\$ 1,430	\$ 42,078	\$ 56,672	\$ 61,177	\$ 61,444	\$ 61,713	\$ 71,436	\$ 100,107	\$ 128,904	\$ 167,280	\$ 196,371
End of Period Bad Debt Balance		\$ 1,439	\$ 41,987	\$ 56,456	\$ 60,919	\$ 61,177	\$ 61,444	\$ 71,145	\$ 99,733	\$ 128,404	\$ 166,633	\$ 195,577	\$ 224,668
Interest		\$ (9)	\$ 90	\$ 216	\$ 257	\$ 268	\$ 269	\$ 291	\$ 374	\$ 500	\$ 646	\$ 794	\$ 921
End of Period Bad Debt Balance with Interest	\$ (5,841)	\$ 1,430	\$ 42,078	\$ 56,672	\$ 61,177	\$ 61,444	\$ 61,713	\$ 71,436	\$ 100,107	\$ 128,904	\$ 167,280	\$ 196,371	\$ 225,589
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		\$ 1,310,543	\$ 1,016,249	\$ 858,271	\$ (600,885)	\$ (2,084,339)	\$ (2,676,489)	\$ (3,385,092)	\$ (2,853,978)	\$ (2,298,080)	\$ (1,715,045)	\$ (1,132,714)	\$ (571,997)
Net Costs - Revenues		\$ (299,132)	\$ (161,875)	\$ (1,459,718)	\$ (1,477,592)	\$ (581,759)	\$ (695,372)	\$ 544,732	\$ 567,144	\$ 591,795	\$ 588,547	\$ 564,438	\$ 438,270
Ending Balance before Interest		\$ 1,011,412	\$ 854,374	\$ (601,447)	\$ (2,078,478)	\$ (2,666,097)	\$ (3,371,861)	\$ (2,840,360)	\$ (2,286,834)	\$ (1,706,285)	\$ (1,126,498)	\$ (568,276)	\$ (133,726)
Average Balance		\$ 1,160,977	\$ 935,311	\$ 128,412	\$ (1,339,682)	\$ (2,375,218)	\$ (3,024,175)	\$ (3,112,726)	\$ (2,570,406)	\$ (2,002,183)	\$ (1,420,771)	\$ (850,495)	\$ (352,861)
Interest Rate		5.00%	5.00%	5.25%	5.25%	5.25%	5.25%	5.25%	5.25%	5.25%	5.25%	5.25%	5.25%
Interest Expense		\$ 4,837	\$ 3,897	\$ 562	\$ (5,861)	\$ (10,392)	\$ (13,231)	\$ (13,618)	\$ (11,246)	\$ (8,760)	\$ (6,216)	\$ (3,721)	\$ (1,544)
Ending Balance Incl Interest Expense	\$ 1,310,543	\$ 1,016,249	\$ 858,271	\$ (600,885)	\$ (2,084,339)	\$ (2,676,489)	\$ (3,385,092)	\$ (2,853,978)	\$ (2,298,080)	\$ (1,715,045)	\$ (1,132,714)	\$ (571,997)	\$ (135,270)
Total Over/Under Collection Ending Balance	\$ 1,314,231	\$ 1,032,556	\$ 923,228	\$ (513,120)	\$ (1,985,395)	\$ (2,571,578)	\$ (3,277,349)	\$ (2,734,623)	\$ (2,148,420)	\$ (1,535,015)	\$ (912,727)	\$ (321,341)	\$ 146,562
Total Indirect Cost of Gas	\$ 1,314,231	\$ 175,316	\$ 210,407	\$ 181,230	\$ 163,178	\$ 153,435	\$ 147,461	\$ 16,228	\$ 37,293	\$ 39,844	\$ 51,975	\$ 45,182	\$ 47,867
Total Cost of Gas	\$ 1,314,231	\$ 3,875,207	\$ 5,823,842	\$ 5,642,230	\$ 4,532,625	\$ 3,985,446	\$ 1,790,742	\$ 1,184,794	\$ 1,023,137	\$ 979,126	\$ 992,242	\$ 978,134	\$ 1,239,640
Total Interest	\$ -	\$ 4,879	\$ 4,066	\$ 895	\$ (5,454)	\$ (9,947)	\$ (12,767)	\$ (13,122)	\$ (10,658)	\$ (8,040)	\$ (5,343)	\$ (2,694)	\$ (381)

Variance due to changes in NYMEX

April 30, 2019 Target Balance	\$ (2,793,587)
April 30, 2918 Projected Balance	\$ (3,277,349)
Variance	\$ (483,762)

Northern Utilities
NEW HAMPSHIRE (Over) / Undercollection Ana

	Winter	Summer	Prior Period	Total
Working Capital				
Total Anticipated Direct Cost of Gas				
Working Capital Percentage				
Working Capital Allowance	\$ 35,731	\$ 8,875	\$ 9,529	\$ 54,135
Beginning Period Working Capital Balance				
End of Period Working Capital Allowance				
Interest	\$ 770	\$ 1,339		\$ 2,109
End of period with Interest				
Bad Debt				
Projected Bad Debt	\$ 66,464	\$ 160,349	\$ (5,841)	\$ 220,972
Beginning Period Bad Debt Balance				
End of Period Bad Debt Balance				
Interest	\$ 1,091	\$ 3,526		\$ 4,617
End of Period Bad Debt Balance with Interest				
Local Production and Storage Capacity	\$ 476,106			\$ 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				
Net Costs - Revenues				
Ending Balance before Interest				
Average Balance				
Interest Rate				
Interest Expense				
Ending Balance Incl Interest Expense				
Total Over/Under Collection Ending Balance				
Total Indirect Cost of Gas	\$ 1,031,026	\$ 238,389	\$ 1,314,231	\$ 2,583,646
Total Cost of Gas	\$ 25,650,092	\$ 6,397,073	\$ 1,314,231	\$ 33,361,396
Total Interest	\$ (18,327)	\$ (40,239)		\$ (58,565)

Projected End of Period Balance ("Target Balance") per January Summary
(\$2,793,587)
Line 94 - April

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)
Volumes	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19
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
Sales HLF Classes		300,893	471,139	570,199	480,952	424,967	232,070	411,201	279,826	234,219	236,930
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
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
Rates											
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
Sales HLF Classes CGA		\$0.7254	\$0.7254	\$0.7254	\$0.7254	\$0.7254	\$0.7254	\$0.3269	\$0.3269	\$0.3269	\$0.3269
Sales LLF Classes CGA		\$0.8424	\$0.8424	\$0.8424	\$0.8424	\$0.8424	\$0.8424	\$0.3958	\$0.3958	\$0.3958	\$0.3958
Revenues											
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)
Sales HLF Classes		\$ (218,268)	\$ (341,765)	\$ (413,622)	\$ (348,883)	\$ (308,271)	\$ (168,343)	\$ (134,422)	\$ (91,475)	\$ (76,566)	\$ (77,452)
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)
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)
		Winter						Summer			
Gas Costs and Credits		(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)
Demand Costs (net of Capacity Assignment)	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19
Pipeline		\$ 172,482	\$ 172,482	\$ 172,482	\$ 172,482	\$ 172,482	\$ 172,482	\$ 172,482	\$ 172,482	\$ 172,482	\$ 172,482
Storage		\$ 731,485	\$ 731,485	\$ 731,485	\$ 731,485	\$ 731,485	\$ 731,485	\$ 731,485	\$ 731,485	\$ 731,485	\$ 731,485
On-system Peaking		\$ 112,545	\$ 159,501	\$ 159,501	\$ 159,501	\$ 159,501	\$ 87,989	\$ 87,989	\$ 41,033	\$ 41,033	\$ 41,033
Off-System Peaking		\$ 730,049	\$ 730,049	\$ 730,049	\$ 730,049	\$ 730,049	\$ -	\$ -	\$ -	\$ -	\$ -
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
Asset Management and Capacity Release											
NUI AMA Revenue		\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)	\$ (585,133)
NUI Capacity Release		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
NUI AMA Rev & Cap. Release Subtotal											
NH AMA Revenue		\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)	\$ (260,507)
NH Capacity Release											
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)
Re-entry Rate & Conversion Rate Revenue		\$ (1,666.67)	\$ (1,666.67)	\$ (1,666.67)	\$ (1,666.67)	\$ (1,666.67)	\$ (1,666.67)	\$ -	\$ -	\$ -	\$ -
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
NUI Commodity Costs											
NUI Total Pipeline Volumes		570,060	556,881	406,460	367,544	541,084	912,309	494,604	334,214	288,763	290,326
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
NYMEX Price Used for Forecast		\$ 2.8900	\$ 2.9790	\$ 3.0660	\$ 3.0300	\$ 2.9260	\$ 2.6350	\$ 2.6030	\$ 2.6340	\$ 2.6670	\$ 2.6710
NYMEX Price Used for Update		\$ 2.8900	\$ 2.9790	\$ 3.0660	\$ 3.0300	\$ 2.9260	\$ 2.6350	\$ 2.6030	\$ 2.6340	\$ 2.6670	\$ 2.6710
Increase/(Decrease) NYMEX Price		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Increase/(Decrease) in Pipeline Costs		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
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
New Hampshire Allocated Percentage		39.44%	39.81%	40.15%	39.77%	39.26%	36.25%	35.89%	36.05%	34.96%	35.18%
NH Updated Pipeline Costs		\$ 675,924	\$ 777,176	\$ 766,900	\$ 680,159	\$ 712,421	\$ 826,859	\$ 431,688	\$ 296,109	\$ 249,562	\$ 250,525
Peaking Volumes		227,145	510,384	743,233	477,763	284,994	2,145	2,170	2,100	2,170	2,170
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
Increase Due to NYMEX		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Increase in Peaking Costs		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
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
New Hampshire Allocated Percentage		39.44%	39.81%	40.15%	39.77%	39.26%	36.25%	35.89%	36.05%	34.96%	35.18%
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
NH Commodity Costs											
Pipeline		\$ 675,924	\$ 777,176	\$ 766,900	\$ 680,159	\$ 712,421	\$ 826,859	\$ 431,688	\$ 296,109	\$ 249,562	\$ 250,525
Storage		\$ 321,985	\$ 683,543	\$ 983,407	\$ 981,943	\$ 806,050	\$ -	\$ -	\$ -	\$ -	\$ -
Peaking		\$ 723,913	\$ 1,802,113	\$ 2,176,245	\$ 1,655,118	\$ 803,041	\$ 5,508	\$ 5,429	\$ 5,241	\$ 5,226	\$ 5,248
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						
Volumes	(Forecast) Sep-19	(Forecast) Oct-19	Winter	Summer	Prior Period	Total
Residential Heat & Non Heat	461,965	921,830	16,191,282	3,551,405		19,742,687
Sales HLF Classes	247,685	494,245	2,480,220	2,590,528		4,384,327
Sales LLF Classes	344,210	686,854	16,211,416	14,816,144		18,857,561
Total	1,053,861	2,102,929	34,882,919	20,958,077		77,867,494
Rates						
Residential Heat & Non Heat CGA	\$0.3670	\$0.3670				
Sales HLF Classes CGA	\$0.3269	\$0.3269				
Sales LLF Classes CGA	\$0.3958	\$0.3958				
Revenues						
Residential Heat & Non Heat	\$ (169,541)	\$ (338,312)				\$ (14,695,175)
Sales HLF Classes	\$ (80,968)	\$ (161,569)				\$ (2,421,604)
Sales LLF Classes	\$ (136,238)	\$ (271,857)				\$ (14,703,841)
Total Sales	\$ (386,748)	\$ (771,737)	\$ (28,847,459)	\$ (2,973,162)		\$ (31,820,621)
Gas Costs and Credits						
	(Forecast) Sep-19	(Forecast) Oct-19				Total
Demand Costs (net of Capacity Assignment)						
Pipeline	\$ 172,482	\$ 172,482	\$ 1,034,894	\$ 1,034,894		\$ 2,069,788
Storage	\$ 731,485	\$ 731,485	\$ 4,388,908	\$ 4,388,908		\$ 8,777,817
On-system Peaking	\$ 41,033	\$ 41,033	\$ 838,540	\$ 293,155		\$ 1,131,695
Off-System Peaking	\$ -	\$ -	\$ 3,650,243	\$ -		\$ 3,650,243
Total Demand Costs	\$ 945,000	\$ 945,000	\$ 9,912,586	\$ 5,716,958		\$ 15,629,544
Asset Management and Capacity Release						
NUI AMA Revenue	\$ (585,133)	\$ (585,133)				\$ (7,021,600)
NUI Capacity Release	\$ -	\$ -				\$ -
NUI AMA Rev & Cap. Release Subtotal						\$ -
NH AMA Revenue	\$ (260,507)	\$ (260,507)				\$ (3,126,083)
NH Capacity Release						\$ -
NH Total Asset Management and Capacity Release	\$ (260,507)	\$ (260,507)	\$ (1,563,042)	\$ -	\$ (1,563,042)	\$ (3,126,083)
Re-entry Rate & Conversion Rate Revenue						
	\$ -	\$ -	\$ (10,000)	\$ -		\$ (10,000)
Net Demand Costs	\$ 684,493	\$ 684,493	\$ 8,339,544	\$ 4,153,916		\$ 12,493,460
NUI Commodity Costs						
NUI Total Pipeline Volumes	302,280	572,717				5,637,242
Pipeline Costs Modeled in Sendout™	\$ 706,238	\$ 1,357,630				\$ 16,896,179
NYMEX Price Used for Forecast	\$ 2.6530	\$ 2.6690				
NYMEX Price Used for Update	\$ 2.6530	\$ 2.6690				
Increase/(Decrease) NYMEX Price	\$ -	\$ -				
Increase/(Decrease) in Pipeline Costs	\$ -	\$ -				
Updated Pipeline Costs	\$ 706,238	\$ 1,357,630				
New Hampshire Allocated Percentage	34.48%	36.96%				
NH Updated Pipeline Costs	\$ 243,514	\$ 501,818				\$ 6,412,656
Peaking Volumes						
Peaking Costs Modeled in Sendout	\$ 14,342	\$ 14,778				
Increase Due to NYMEX	\$ -	\$ -				
Increase in Peaking Costs	\$ -	\$ -				
Updated Peaking Costs	\$ 14,342	\$ 14,778				
New Hampshire Allocated Percentage	34.48%	36.96%				
NH Updated Peaking Costs	\$ 4,945	\$ 5,462				
NH Commodity Costs						
Pipeline	\$ 243,514	\$ 501,818				\$ 6,412,656
Storage	\$ -	\$ -				\$ 3,776,928
Peaking	\$ 4,945	\$ 5,462				\$ 7,197,490
Total Commodity Costs	\$ 248,459	\$ 507,280	\$ 15,382,305	\$ 2,004,769		\$ 17,387,074

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

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 C						
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)