Unitil

January 22, 2020

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 19-154
January 2020 Monthly Cost of Gas Report

Dear Director Howland:

Pursuant to the Commission's Order No. 26,303 in Docket DG 19-154, enclosed is Northern Utilities - New Hampshire Division's ("Northern") current calculation of its projected over or under collection of gas costs for the 2019 / 2020 Winter Period.

Northern's current calculation of costs has been updated to reflect the actual November 1, 2019 balance, actual costs and revenues for November through December 2019, and NYMEX futures prices as of January 22, 2020. 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,

George H Simmons Jr CAK

George H. Simmons Jr.

Enclosures

cc: Lynn Fabrizio, Esq.
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New Hampshire Monthly Cost of Gas Report

Winter Period

January 2020 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, 2020 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.

For the January 2020 analysis, a revision was made to the April 30, 2020 target balance in order to align the peaking demand costs in the COG model to those in the Company's accounting models. Typically, peaking contracts are billed over the five month period November through March. For the 2019 -2020 COG year, Northern has two peaking contracts, both of which were included in the COG model as being billed during the five month winter period. However, one of these contracts has demand charges billed over the 12 month period November 2019 through October 2020. This contract[1] has now been revised in the COG model to reflect the 12 month payment period. As a result, the allocation of demand costs in the winter months is now lower which increases the target balance over-collection from ($2,379,671) to ($4,302,677).

In addition to the revision in the COG model, estimated costs and revenues for November and December 2019 have been replaced with actual values. Also, estimated commodity costs for January through April 2020 have been updated to reflect NYMEX prices as of January 22, 2020. As shown on Table 1, Line 23, the estimated end of Winter Period balance is an over-collection of (4,220,629). This is lower than the target end of Winter Period balance of ($4,302,677), Line 25. The variance between the estimated and target balances is an under-collection of $82,049, Line 27. This under-collection represents a variance in 0.43% of total gas costs, Line 31 and is below the 2% threshold. Therefore, 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] This peaking contract is listed as Peaking Contract 1 in Confidential Schedule 20-FXW in the Company's annual cost of gas filing submitted on September 17, 2019.

NORTHERN UTILITIES, INC.
NEW HAMPSHIRE DIVISION
Calculation of the Projected Over or Under Collection of the
Winter 2019-2020 Period Cost of Gas
DG 19-154
Janauary 2020 Estimated

1	Under/(Over) collection as of 11/01/19		$ (2,757,999)	Table 2, PG. 3, Line 92
2				
3	Forecasted firm therm sales 01/01/20 - 4/30/20			
4	Residential heat & non heat	11,495,664		Table 2, PG. 2, Line 2
5	HLF Classes	2,578,113		Table 2, PG. 2, Line 3
6	LLF Classes	10,635,172		Table 2, PG. 2, Line 4
7				
8	Current recovery rate per therm			
9	Residential heat & non heat	$0.5626		Table 2, PG. 1, Line 7
10	HLF classes	$0.4715		Table 2, PG. 1, Line 8
11	LLF classes	$0.5847		Table 2, PG. 1, Line 9
12				
13	Total	$ (13,901,426)		(LN 4 * Ln 9) + (LN 5 * LN 10) + (LN 6 * LN 11)
14				
15	Forecasted recovered costs at current rates 01/01/20 - 04/30/20		$ (13,901,426)	LN 13
16	Actual recovered costs 11/01/19 - 12/31/19		$ (6,608,752)	
17	Estimated total recovered costs 11/01/19 - 04/30/20		$ (20,510,177)	LN 15 + LN 16
18				
19	Revised projected direct gas costs [1]		$ 18,137,793	Table 2, PG. 2, Line 62
20	Revised projected indirect gas costs [2]		$ 909,754	Table 2, PG. 4, Line 94
21	Revised total projected gas costs 11/01/2019 - 04/30/2019		$ 19,047,548	LN 19 + LN 20
22				
23	Projected April 30, 2020 Winter Period Balance		$ (4,220,629)	LN 1 + LN 17 + LN 21
24				
25	April 30, 2020 Target Balance [3]		$ (4,302,677)	Table 2, PG. 3, Line 92
26				
27	Variance from Target Balance		$ 82,049	LN 23 - LN 25
28				
29	Total Projected Gas Costs		$ 19,047,548	LN 21
30				
31	Under/(over) collection as percent of total gas costs		0.43%	LN 27 / LN 29

NOTES
[1] Reflects futures prices as of January 22, 2020
[2] Includes: Working Capital Allowance, Bad Debt Allowance, Production and Storage Capacity, Miscellaneous Overhead and Interest
[3] Adjusted to reflect actual account balance as of October 31, 2019

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)	(Forecast)
1	Volumes	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20
2	Residential Heat & Non Heat				3,840,347	3,226,953	2,844,747	1,583,618	720,231	498,332	418,796	425,522	451,490	959,307
3	Sales HLF Classes				861,268	723,703	637,986	355,155	560,311	387,683	325,806	331,039	351,241	746,303
4	Sales LLF Classes				3,552,883	2,985,404	2,631,807	1,465,078	525,137	363,346	305,354	310,258	329,192	699,453
5	Total				8,254,498	6,936,059	6,114,540	3,403,851	1,805,678	1,249,361	1,049,956	1,066,818	1,131,924	2,405,063
6	Rates													
7	Residential Heat & Non Heat CGA				$0.5626	$0.5626	$0.5626	$0.5626	$0.2712	$0.2712	$0.2712	$0.2712	$0.2712	$0.2712
8	Sales HLF Classes CGA				$0.4715	$0.4715	$0.4715	$0.4715	$0.2387	$0.2387	$0.2387	$0.2387	$0.2387	$0.2387
9	Sales LLF Classes CGA				$0.5847	$0.5847	$0.5847	$0.5847	$0.3060	$0.3060	$0.3060	$0.3060	$0.3060	$0.3060
10	Revenues													
11	Residential Heat & Non Heat				$ (2,160,579)	$ (1,815,484)	$ (1,600,454)	$ (890,943)	$ (195,327)	$ (135,148)	$ (113,577)	$ (115,401)	$ (122,444)	$ (260,164)
12	Sales HLF Classes				$ (406,088)	$ (341,226)	$ (300,811)	$ (167,456)	$ (133,746)	$ (92,540)	$ (77,770)	$ (79,019)	$ (83,841)	$ (178,142)
13	Sales LLF Classes				$ (2,077,371)	$ (1,745,566)	$ (1,538,818)	$ (856,631)	$ (160,692)	$ (111,184)	$ (93,438)	$ (94,939)	$ (100,733)	$ (214,033)
14	Total Sales		$ (2,598,366)	$ (4,010,385)	$ (4,644,038)	$ (3,902,275)	$ (3,440,083)	$ (1,915,030)	$ (489,765)	$ (338,871)	$ (284,786)	$ (289,359)	$ (307,018)	$ (652,339)
15														

			Winter						Summer					
16														
17	**Gas Costs and Credits**				(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)
18		Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20
19	Demand Costs (net of Capacity Assignment)													
20	Pipeline				$ 148,071	$ 148,071	$ 148,071	$ 147,686	$ 147,686	$ 147,686	$ 147,686	$ 147,686	$ 147,686	$ 147,686
21	Storage				$ 601,905	$ 601,905	$ 601,905	$ 601,905	$ 601,905	$ 601,905	$ 601,905	$ 601,905	$ 601,905	$ 601,905
22	On-system Peaking				$ 197,149	$ 197,149	$ 197,149	$ 91,532	$ 27,823	$ 27,823	$ 27,823	$ 27,823	$ 27,823	$ 27,823
23	Off-System Peaking				$ 324,734	$ 324,734	$ 324,734	$ 324,734	$ 324,734	$ 324,734	$ 324,734	$ 324,734	$ 324,734	$ 324,734
24	Total Demand Costs				$ 1,271,859	$ 1,271,859	$ 1,271,859	$ 1,165,857	$ 1,102,148	$ 1,102,148	$ 1,102,148	$ 1,102,148	$ 1,102,148	$ 1,102,148
25														
26	Asset Management and Capacity Release													
27	NUI AMA Revenue				$ (1,205,050)	$ (1,205,050)	$ (1,205,050)	$ (1,205,050)	$ (1,205,050)	$ (1,205,050)	$ (1,205,050)	$ (1,205,050)	$ (1,205,050)	$ (1,205,050)
28	NUI Capacity Release				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
29	NUI AMA Rev & Cap. Release Subtotal													
30	NH AMA Revenue				$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)
31	NH Capacity Release													
32	NH Total Asset Management and Capacity Release				$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)
33														
34	Re-entry Rate & Conversion Rate Revenue				$ (1,666.67)	$ (1,666.67)	$ (1,666.67)	$ (1,666.67)	$ -	$ -	$ -	$ -	$ -	$ -
35														
36	Net Demand Costs		$ 759,005	$ 797,653	$ 765,373	$ 765,373	$ 765,373	$ 659,371	$ 597,329	$ 597,329	$ 597,329	$ 597,329	$ 597,329	$ 597,329
37														
38	NUI Commodity Costs													
39	NUI Total Pipeline Volumes				557,996	526,109	639,074	969,749	510,915	354,416	307,247	308,564	332,093	656,863
40	Pipeline Costs Modeled in Sendout™				$ 2,015,417	$ 1,863,362	$ 1,792,992	$ 2,168,195	$ 1,104,254	$ 765,743	$ 669,901	$ 672,296	$ 702,927	$ 1,424,889
41	NYMEX Price Used for Forecast				$ 2.5880	$ 2.5560	$ 2.4730	$ 2.2770	$ 2.2610	$ 2.2970	$ 2.3360	$ 2.3450	$ 2.3290	$ 2.3540
42	NYMEX Price Used for Update				$ 2.1580	$ 1.9050	$ 1.9000	$ 1.9500	$ 2.2610	$ 2.2970	$ 2.3360	$ 2.3450	$ 2.3290	$ 2.3540
43	Increase/(Decrease) NYMEX Price				$ (0.43)	$ (0.65)	$ (0.57)	$ (0.33)	$ -	$ -	$ -	$ -	$ -	$ -
44	Increase/(Decrease) in Pipeline Costs				$ (239,938)	$ (342,497)	$ (366,189)	$ (317,108)	$ -	$ -	$ -	$ -	$ -	$ -
45	Updated Pipeline Costs				$ 1,775,479	$ 1,520,865	$ 1,426,803	$ 1,851,087	$ 1,104,254	$ 765,743	$ 669,901	$ 672,296	$ 702,927	$ 1,424,889
46	New Hampshire Allocated Percentage				38.96%	38.53%	38.04%	35.46%	35.71%	35.57%	34.45%	34.85%	34.38%	37.04%
47	NH Updated Pipeline Costs				$ 691,707	$ 586,043	$ 542,818	$ 656,310	$ 394,326	$ 272,352	$ 230,753	$ 234,299	$ 241,655	$ 527,737
48														
49	NH Peaking Volumes				303,250	184,496	110,637	1,194						
50	NH Peaking Costs Modeled in Sendout				$ 2,004,526	$ 1,573,556	$ 822,748	$ 4,855						
51	Change in NYMEX Price				$ (0.43)	$ (0.65)	$ (0.57)	$ (0.33)						
52	Change in Peaking Costs				$ (130,398)	$ (120,107)	$ (63,395)	$ (391)						
53	NH Updated Peaking Costs				$ 1,874,128	$ 1,453,449	$ 759,353	$ 4,465						
54														
55	NH Commodity Costs													
56	Pipeline				$ 691,707	$ 586,043	$ 542,818	$ 656,310	$ 394,326	$ 272,352	$ 230,753	$ 234,299	$ 241,655	$ 527,737
57	Storage				$ 754,929	$ 754,783	$ 635,566	$ 333	$ -	$ -	$ -	$ -	$ -	$ -
58	Peaking				$ 1,874,128	$ 1,453,449	$ 759,353	$ 4,465	$ 2,667	$ 2,559	$ 2,555	$ 2,584	$ 2,458	$ 2,734
59	Total Commodity Costs		$ 1,405,691	$ 3,504,183	$ 3,320,765	$ 2,794,275	$ 1,937,738	$ 661,108	$ 396,992	$ 274,911	$ 233,309	$ 236,882	$ 244,112	$ 530,470
60	Inventory Finance Charge				$ 659	$ 544	$ 463	$ 219	$ -	$ -	$ -	$ -	$ -	$ -
61														
62	**Total Anticipated Direct Cost of Gas**		$ 2,164,696	$ 4,301,837	$ 4,086,797	$ 3,560,192	$ 2,703,574	$ 1,320,697	$ 994,321	$ 872,240	$ 830,637	$ 834,211	$ 841,441	$ 1,127,799

Northern Utilities
NEW HAMPSHIRE (Over) / Undercollection Anal

Line		Winter	Summer	Prior Period	Total
	Sales Revenues				
1	Volumes				
2	Residential Heat & Non Heat				14,969,342
3	Sales HLF Classes				5,280,495
4	Sales LLF Classes				13,167,912
5	Total				33,417,749
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				$ (7,409,522)
12	Sales HLF Classes				$ (1,860,639)
13	Sales LLF Classes				$ (6,993,403)
14	Total Sales	$ (20,510,177)	$ (2,362,139)		$ (22,872,316)
15					
16					
17	**Gas Costs and Credits**				
18					Total
19	Demand Costs (net of Capacity Assignment)				
20	Pipeline	$ 591,898	$ 886,115		$ 1,478,012
21	Storage	$ 2,407,619	$ 3,611,429		$ 6,019,048
22	On-system Peaking	$ 682,980	$ 166,940		$ 849,920
23	Off-System Peaking	$ 1,298,936	$ 1,948,405		$ 3,247,341
24	Total Demand Costs	$ 4,981,434	$ 6,612,888		$ 11,594,322
25					
26	Asset Management and Capacity Release				
27	NUI AMA Revenue				$ (12,050,500)
28	NUI Capacity Release				$ -
29	NUI AMA Rev & Cap. Release Subtotal				$ -
30	NH AMA Revenue				$ (5,048,191)
31	NH Capacity Release				$ -
32	NH Total Asset Management and Capacity Release		$ -	$ -	$ (5,048,191)
33					
34	Re-entry Rate & Conversion Rate Revenue	$ (10,000)	$ -		$ (10,000)
35					
36	Net Demand Costs	$ 4,512,148	$ 3,583,973		$ 8,096,122
37					
38	NUI Commodity Costs				
39	NUI Total Pipeline Volumes				5,163,026
40	Pipeline Costs Modeled in Sendout™				$ 13,179,976
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				$ 4,377,999
48					
49	NH Peaking Volumes				
50	NH Peaking Costs Modeled in Sendout				
51	Change in NYMEX Price				
52	Change in Peaking Costs				
53	NH Updated Peaking Costs				$ 4,091,396
54					
55	NH Commodity Costs				
56	Pipeline				$ 4,377,999
57	Storage				$ 2,145,612
58	Peaking				$ 4,106,952
59	Total Commodity Costs	$ 13,623,760	$ 1,916,677		$ 15,540,437
60	Inventory Finance Charge				$ 1,885
61					
62	**Total Anticipated Direct Cost of Gas**	$ 18,137,793	$ 5,500,650		$ 23,638,444

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

Line			Winter						Summer					
64					(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)
65		Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20
66	Working Capital													
67	Total Anticipated Direct Cost of Gas		$ 2,321,971	$ 4,459,112	$ 4,244,072	$ 3,717,467	$ 2,860,850	$ 1,477,973	$ 1,013,140	$ 891,058	$ 849,456	$ 853,029	$ 860,260	$ 1,146,617
68	Working Capital Percentage		0.1441%	0.14%	0.14%	0.14%	0.14%	0.14%	0.14%	0.14%	0.14%	0.14%	0.14%	0.14%
69	Working Capital Allowance		$ 3,346	$ 6,426	$ 6,116	$ 5,357	$ 4,122	$ 2,130	$ 1,460	$ 1,284	$ 1,224	$ 1,229	$ 1,240	$ 1,652
70	Beginning Period Working Capital Balance		$ (47,184)	$ (44,037)	$ (37,790)	$ (31,826)	$ (26,597)	$ (22,582)	$ (20,546)	$ (19,173)	$ (17,970)	$ (16,822)	$ (15,664)	$ (14,490)
71	End of Period Working Capital Allowance		$ (43,838)	$ (37,611)	$ (31,674)	$ (26,469)	$ (22,474)	$ (20,452)	$ (19,086)	$ (17,889)	$ (16,746)	$ (15,593)	$ (14,424)	$ (12,837)
72	Interest		$ (199)	$ (179)	$ (152)	$ (128)	$ (107)	$ (94)	$ (87)	$ (81)	$ (76)	$ (71)	$ (66)	$ (60)
73	End of period with Interest	$ (47,184)	$ (44,037)	$ (37,790)	$ (31,826)	$ (26,597)	$ (22,582)	$ (20,546)	$ (19,173)	$ (17,970)	$ (16,822)	$ (15,664)	$ (14,490)	$ (12,897)
74	Bad Debt													
75	Projected Bad Debt	$ -	$ 14,220	$ 7,458	$ -	$ -	$ -	$ -	$ 8,419	$ 25,257	$ 25,257	$ 33,676	$ 25,257	$ 25,257
76	Beginning Period Bad Debt Balance		$ 32,931	$ 47,326	$ 55,008	$ 55,248	$ 55,490	$ 55,733	$ 55,977	$ 64,659	$ 90,254	$ 115,961	$ 150,217	$ 176,187
77	End of Period Bad Debt Balance		*$ 47,151*	*$ 54,784*	*$ 55,008*	*$ 55,248*	*$ 55,490*	*$ 55,733*	*$ 64,396*	*$ 89,916*	*$ 115,511*	*$ 149,636*	*$ 175,474*	*$ 201,443*
78	Interest		$ 175	$ 223	$ 241	$ 242	$ 243	$ 244	$ 263	$ 338	$ 450	$ 581	$ 712	$ 826
79	End of Period Bad Debt Balance with Interest	$ 32,931	$ 47,326	$ 55,008	$ 55,248	$ 55,490	$ 55,733	$ 55,977	$ 64,659	$ 90,254	$ 115,961	$ 150,217	$ 176,187	$ 202,269
80	Local Production and Storage Capacity		$ 79,351	$ 79,351	$ 79,351	$ 79,351	$ 79,351	$ 79,351	$ -	$ -	$ -	$ -	$ -	$ -
81			$ -	$ -	$ -									
82	Miscellaneous Overhead		$ 77,924	$ 77,924	$ 77,924	$ 77,924	$ 77,924	$ 77,924	$ 18,818	$ 18,818	$ 18,818	$ 18,818	$ 18,818	$ 18,818
83														
84	Gas Cost Other than Bad Debt and Working Capital Over/Under Collection													
85	Beginning Balance Over/Under Collection		$ (2,743,747)	$ (3,032,750)	$ (2,596,311)	$ (3,008,510)	$ (3,206,884)	$ (3,801,414)	$ (4,256,059)	$ (3,750,160)	$ (3,213,172)	$ (2,661,324)	$ (2,108,065)	$ (1,562,836)
86	Net Costs - Revenues		$ (276,395)	$ 448,726	$ (399,966)	$ (184,808)	$ (579,233)	$ (437,057)	$ 523,375	$ 552,187	$ 564,670	$ 563,670	$ 553,241	$ 494,278
87	Ending Balance before Interest		$ (3,020,142)	$ (2,584,024)	$ (2,996,276)	$ (3,193,318)	$ (3,786,117)	$ (4,238,472)	$ (3,732,684)	$ (3,197,973)	$ (2,648,502)	$ (2,097,654)	$ (1,554,823)	$ (1,068,557)
88	Average Balance		$ (2,881,944)	$ (2,808,387)	$ (2,796,293)	$ (3,100,914)	$ (3,496,501)	$ (4,019,943)	$ (3,994,372)	$ (3,474,066)	$ (2,930,837)	$ (2,379,489)	$ (1,831,444)	$ (1,315,697)
89	Interest Rate		5.25%	5.25%	5.25%	5.25%	5.25%	5.25%	5.25%	5.25%	5.25%	5.25%	5.25%	5.25%
90	Interest Expense		$ (12,609)	$ (12,287)	$ (12,234)	$ (13,566)	$ (15,297)	$ (17,587)	$ (17,475)	$ (15,199)	$ (12,822)	$ (10,410)	$ (8,013)	$ (5,756)
91	Ending Balance Incl Interest Expense	$ (2,743,747)	$ (3,032,750)	$ (2,596,311)	$ (3,008,510)	$ (3,206,884)	$ (3,801,414)	$ (4,256,059)	$ (3,750,160)	$ (3,213,172)	$ (2,661,324)	$ (2,108,065)	$ (1,562,836)	$ (1,074,314)
92	**Total Over/Under Collection Ending Balance**	$ (2,757,999)	$ (3,029,461)	$ (2,579,093)	$ (2,985,088)	$ (3,177,991)	$ (3,768,263)	**$ (4,220,629)**	$ (3,704,674)	$ (3,140,888)	$ (2,562,185)	$ (1,973,511)	$ (1,401,139)	$ (884,941)
93														
94	**Total Indirect Cost of Gas**	$ (2,757,999)	$ 162,208	$ 158,917	$ 151,246	$ 149,180	$ 146,236	$ 141,967	$ 11,398	$ 30,417	$ 32,851	$ 43,823	$ 37,949	$ 40,737
95														
96	**Total Cost of Gas**	$ (2,757,999)	$ 2,326,904	$ 4,460,754	$ 4,238,043	$ 3,709,372	$ 2,849,810	$ 1,462,665	$ 1,005,720	$ 902,657	$ 863,488	$ 878,034	$ 879,390	$ 1,168,537
97														
98	**Total Interest**	$ -	$ (12,632)	$ (12,242)	$ (12,145)	$ (13,452)	$ (15,162)	$ (17,438)	$ (17,299)	$ (14,942)	$ (12,448)	$ (9,900)	$ (7,366)	$ (4,990)

Line		
101	April 30th Target Balance	$ (4,302,677)
102	April 30th Projected Balance	$ (4,220,629)
103		
104	Variance	$ 82,049

Northern Utilities
NEW HAMPSHIRE (Over) / Undercollection Anal

	Winter	Summer	Prior Period	Total
Working Capital				
Total Anticipated Direct Cost of Gas				$ 24,695,005
Working Capital Percentage				
Working Capital Allowance	$ 27,496	$ 8,089	$ (47,184)	$ (11,598)
Beginning Period Working Capital Balance				
End of Period Working Capital Allowance				
Interest	$ (859)	$ (440)		$ (1,299)
End of period with Interest				
Bad Debt				
Projected Bad Debt	$ 21,678	$ 143,122	$ 32,931	$ 197,731
Beginning Period Bad Debt Balance				
End of Period Bad Debt Balance				
Interest	$ 1,368	$ 3,171		$ 4,539
End of Period Bad Debt Balance with Interest				
Local Production and Storage Capacity				$ 476,106
				$ -
Miscellaneous Overhead				$ 580,455
Gas Cost Other than Bad Debt and Working Capital Over/U				
Beginning Balance Over/Under Collection				$ (35,941,231)
Net Costs - Revenues				$ 1,822,689
Ending Balance before Interest				$ (34,118,542)
Average Balance				$ (35,029,887)
Interest Rate				
Interest Expense				$ (153,256)
Ending Balance Incl Interest Expense			$ (2,743,747)	
Total Over/Under Collection Ending Balance				
Total Indirect Cost of Gas	$ 909,754	$ 197,176	$ (2,757,999)	$ (1,651,069)
Total Cost of Gas	$ 19,047,548	$ 5,697,826	$ (2,757,999)	$ 21,987,374
Total Interest	$ (83,071)	$ (66,945)		$ (150,016)

Updated End of Period Balance ("Target Balance") per November Monthly Reprot
$4,302,677
Line 92 - 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)	(Forecast)	(Forecast)
1	Volumes	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20
2	Residential Heat & Non Heat		2,129,394	3,152,538	3,840,347	3,226,953	2,844,747	1,583,618	720,231	498,332	418,796	425,522	451,490	959,307
3	Sales HLF Classes		477,556	707,014	861,268	723,703	637,986	355,155	560,311	387,683	325,806	331,039	351,241	746,303
4	Sales LLF Classes		1,970,002	2,916,559	3,552,883	2,985,404	2,631,807	1,465,078	525,137	363,346	305,354	310,258	329,192	699,453
5	Total		4,576,952	6,776,112	8,254,498	6,936,059	6,114,540	3,403,851	1,805,678	1,249,361	1,049,956	1,066,818	1,131,924	2,405,063
6	Rates													
7	Residential Heat & Non Heat CGA		$0.5861	$0.5861	$0.5861	$0.5861	$0.5861	$0.5861	$0.2768	$0.2768	$0.2768	$0.2768	$0.2768	$0.2768
8	Sales HLF Classes CGA		$0.4950	$0.4950	$0.4950	$0.4950	$0.4950	$0.4950	$0.2443	$0.2443	$0.2443	$0.2443	$0.2443	$0.2443
9	Sales LLF Classes CGA		$0.6082	$0.6082	$0.6082	$0.6082	$0.6082	$0.6082	$0.3116	$0.3116	$0.3116	$0.3116	$0.3116	$0.3116
10	Revenues													
11	Residential Heat & Non Heat		$ (1,248,038)	$ (1,847,703)	$ (2,250,827)	$ (1,891,317)	$ (1,667,306)	$ (928,158)	$ (199,360)	$ (137,938)	$ (115,923)	$ (117,784)	$ (124,973)	$ (265,536)
12	Sales HLF Classes		$ (236,390)	$ (349,972)	$ (426,328)	$ (358,233)	$ (315,803)	$ (175,802)	$ (136,884)	$ (94,711)	$ (79,595)	$ (80,873)	$ (85,808)	$ (182,322)
13	Sales LLF Classes		$ (1,198,155)	$ (1,773,851)	$ (2,160,864)	$ (1,815,723)	$ (1,600,665)	$ (891,060)	$ (163,633)	$ (113,219)	$ (95,148)	$ (96,676)	$ (102,576)	$ (217,950)
14	Total Sales		$ (2,682,583)	$ (3,971,526)	$ (4,838,019)	$ (4,065,273)	$ (3,583,774)	$ (1,995,021)	$ (499,876)	$ (345,868)	$ (290,665)	$ (295,333)	$ (313,357)	$ (665,808)
15														

			Winter						Summer					
16														
17	**Gas Costs and Credits**		(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)
18		Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20
19	Demand Costs (net of Capacity Assignment)													
20	Pipeline		$ 148,071	$ 148,071	$ 148,071	$ 148,071	$ 148,071	$ 147,686	$ 147,686	$ 147,686	$ 147,686	$ 147,686	$ 147,686	$ 147,686
21	Storage		$ 601,905	$ 601,905	$ 601,905	$ 601,905	$ 601,905	$ 601,905	$ 601,905	$ 601,905	$ 601,905	$ 601,905	$ 601,905	$ 601,905
22	On-system Peaking		$ 197,149	$ 197,149	$ 197,149	$ 197,149	$ 197,149	$ 91,532	$ 27,823	$ 27,823	$ 27,823	$ 27,823	$ 27,823	$ 27,823
23	Off-System Peaking		$ 324,734	$ 324,734	$ 324,734	$ 324,734	$ 324,734	$ 324,734	$ 324,734	$ 324,734	$ 324,734	$ 324,734	$ 324,734	$ 324,734
24	Total Demand Costs		$ 1,271,859	$ 1,271,859	$ 1,271,859	$ 1,271,859	$ 1,271,859	$ 1,165,857	$ 1,102,148	$ 1,102,148	$ 1,102,148	$ 1,102,148	$ 1,102,148	$ 1,102,148
25														
26	Asset Management and Capacity Release													
27	NUI AMA Revenue		$ (1,205,050)	$ (1,205,050)	$ (1,205,050)	$ (1,205,050)	$ (1,205,050)	$ (1,205,050)	$ (1,205,050)	$ (1,205,050)	$ (1,205,050)	$ (1,205,050)	$ (1,205,050)	$ (1,205,050)
28	NUI Capacity Release		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
29	NUI AMA Rev & Cap. Release Subtotal													
30	NH AMA Revenue		$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)
31	NH Capacity Release													
32	NH Total Asset Management and Capacity Release		$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)	$ (504,819)
33														
34	Re-entry Rate & Conversion Rate Revenue		$ (1,666.67)	$ (1,666.67)	$ (1,666.67)	$ (1,666.67)	$ (1,666.67)	$ (1,666.67)	$ -	$ -	$ -	$ -	$ -	$ -
35														
36	Net Demand Costs		$ 765,373	$ 765,373	$ 765,373	$ 765,373	$ 765,373	$ 659,371	$ 597,329	$ 597,329	$ 597,329	$ 597,329	$ 597,329	$ 597,329
37														
38	NUI Commodity Costs													
39	NUI Total Pipeline Volumes		720,067	615,478	557,996	526,109	639,074	969,749	510,915	354,416	307,247	308,564	332,093	656,863
40	Pipeline Costs Modeled in Sendout™		$ 1,797,848	$ 1,741,179	$ 2,015,417	$ 1,863,362	$ 1,792,992	$ 2,168,195	$ 1,104,254	$ 765,743	$ 669,901	$ 672,296	$ 702,927	$ 1,424,889
41	NYMEX Price Used for Forecast		$ 2.3240	$ 2.4850	$ 2.5880	$ 2.5560	$ 2.4730	$ 2.2770	$ 2.2610	$ 2.2970	$ 2.3360	$ 2.3450	$ 2.3290	$ 2.3540
42	NYMEX Price Used for Update		$ 2.5660	$ 2.6300	$ 2.5850	$ 2.4820	$ 2.3240	$ 2.3120	$ 2.2610	$ 2.2970	$ 2.3360	$ 2.3450	$ 2.3290	$ 2.3540
43	Increase/(Decrease) NYMEX Price		$ 0.24	$ 0.15	$ (0.00)	$ (0.07)	$ (0.15)	$ 0.03	$ -	$ -	$ -	$ -	$ -	$ -
44	Increase/(Decrease) in Pipeline Costs		$ 174,256	$ 89,244	$ (1,674)	$ (38,932)	$ (95,222)	$ 33,941	$ -	$ -	$ -	$ -	$ -	$ -
45	Updated Pipeline Costs		$ 1,972,104	$ 1,830,423	$ 2,013,743	$ 1,824,430	$ 1,697,770	$ 2,202,136	$ 1,104,254	$ 765,743	$ 669,901	$ 672,296	$ 702,927	$ 1,424,889
46	New Hampshire Allocated Percentage		36.93%	38.58%	38.96%	38.53%	38.04%	35.46%	35.71%	35.57%	34.45%	34.85%	34.38%	37.04%
47	NH Updated Pipeline Costs		$ 728,228	$ 706,189	$ 784,532	$ 703,017	$ 645,906	$ 780,776	$ 394,326	$ 272,352	$ 230,753	$ 234,299	$ 241,655	$ 527,737
48														
49	NH Peaking Volumes		83,733	195,770	303,250	184,496	110,637	1,194						
50	NH Peaking Costs Modeled in Sendout		$ 695,468	$ 1,684,145	$ 2,004,526	$ 1,573,556	$ 822,748	$ 4,855						
51	Change in NYMEX Price		$ -	$ -	$ -	$ -	$ -	$ -						
52	Change in Peaking Costs		$ -	$ -	$ -	$ -	$ -	$ -						
53	NH Updated Peaking Costs		$ 695,468	$ 1,684,145	$ 2,004,526	$ 1,573,556	$ 822,748	$ 4,855						
54														
55	NH Commodity Costs													
56	Pipeline		$ 728,228	$ 706,189	$ 784,532	$ 703,017	$ 645,906	$ 780,776	$ 394,326	$ 272,352	$ 230,753	$ 234,299	$ 241,655	$ 527,737
57	Storage		$ 275,783	$ 610,281	$ 754,929	$ 754,783	$ 635,566	$ 333	$ -	$ -	$ -	$ -	$ -	$ -
58	Peaking		$ 695,468	$ 1,684,145	$ 2,004,526	$ 1,573,556	$ 822,748	$ 4,855	$ 2,667	$ 2,559	$ 2,555	$ 2,584	$ 2,458	$ 2,734
59	Total Commodity Costs		$ 1,699,480	$ 3,000,615	$ 3,543,988	$ 3,031,356	$ 2,104,221	$ 785,964	$ 396,992	$ 274,911	$ 233,309	$ 236,882	$ 244,112	$ 530,470
60	Inventory Finance Charge		$ 325	$ 523	$ 659	$ 544	$ 463	$ 219	$ -	$ -	$ -	$ -	$ -	$ -
61														
62	**Total Anticipated Direct Cost of Gas**		$ 2,465,178	$ 3,766,511	$ 4,310,020	$ 3,797,274	$ 2,870,057	$ 1,445,554	$ 994,321	$ 872,240	$ 830,637	$ 834,211	$ 841,441	$ 1,127,799

Northern Utilities
NEW HAMPSHIRE (Over) / Undercollectior

Line	Sales Revenues	Winter	Summer	Prior Period	Total
1	Volumes				
2	Residential Heat & Non Heat				20,251,274
3	Sales HLF Classes				6,465,065
4	Sales LLF Classes				18,054,473
5	Total				44,770,812
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				$ (10,794,863)
12	Sales HLF Classes				$ (2,522,720)
13	Sales LLF Classes				$ (10,229,520)
14	Total Sales	$ (21,136,195)	$ (2,410,908)		$ (23,547,103)
15					
16					
17	**Gas Costs and Credits**			Prior	
18		Winter	Summer	Period	Total
19	Demand Costs (net of Capacity Assignment)				
20	Pipeline	$ 888,039	$ 886,115		$ 1,774,154
21	Storage	$ 3,611,429	$ 3,611,429		$ 7,222,857
22	On-system Peaking	$ 1,077,279	$ 166,940		$ 1,244,219
23	Off-System Peaking	$ 1,948,405	$ 1,948,405		$ 3,896,809
24	Total Demand Costs	$ 7,525,152	$ 6,612,888		$ 14,138,039
25					
26	Asset Management and Capacity Release				
27	NUI AMA Revenue	$ (7,230,300)	$ (7,230,300)		$ (14,460,600)
28	NUI Capacity Release				$ -
29	NUI AMA Rev & Cap. Release Subtotal				$ -
30	NH AMA Revenue	$ (3,028,914)	$ (3,028,914)		$ (6,057,829)
31	NH Capacity Release				$ -
32	NH Total Asset Management and Capacity Release	$ (3,028,914)	$ (3,028,914)		$ (6,057,829)
33					
34	Re-entry Rate & Conversion Rate Revenue	$ (10,000)	$ -		$ (10,000)
35					
36	Net Demand Costs	$ 4,486,237	$ 3,583,973		$ 8,070,211
37					
38	NUI Commodity Costs				
39	NUI Total Pipeline Volumes				6,498,570
40	Pipeline Costs Modeled in Sendout™				$ 16,719,003
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				$ 6,249,769
48					
49	NH Peaking Volumes				
50	NH Peaking Costs Modeled in Sendout				
51	Change in NYMEX Price				
52	Change in Peaking Costs				
53	NH Updated Peaking Costs				
54					
55	NH Commodity Costs				
56	Pipeline				$ 6,249,769
57	Storage				$ 3,031,676
58	Peaking				$ 6,800,855
59	Total Commodity Costs	$ 14,165,623	$ 1,916,677		$ 16,082,300
60	Inventory Finance Charge				$ 2,734
61					
62	**Total Anticipated Direct Cost of Gas**	$ 18,654,594	$ 5,500,650		$ 24,155,244

Updated End of Period Balance ("Target Balance") per November Monthly Reprot
$4,302,677
Line 92 - April

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

Line			Winter						Summer						
64			(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)
65		Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20
66	Working Capital													
67	Total Anticipated Direct Cost of Gas		$ 2,465,178	$ 3,766,511	$ 4,310,020	$ 3,797,274	$ 2,870,057	$ 1,445,554	$ 994,321	$ 872,240	$ 830,637	$ 834,211	$ 841,441	$ 1,127,799
68	Working Capital Percentage		0.2880%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%
69	Working Capital Allowance		$ 7,099	$ 10,846	$ 12,411	$ 10,935	$ 8,265	$ 4,163	$ 2,863	$ 2,512	$ 2,392	$ 2,402	$ 2,423	$ 3,248
70	Beginning Period Working Capital Balance		$ (47,184)	$ (40,276)	$ (29,583)	$ (17,274)	$ (6,391)	$ 1,864	$ 6,044	$ 8,940	$ 11,496	$ 13,943	$ 16,412	$ 18,912
71	End of Period Working Capital Allowance		$ (40,085)	$ (29,430)	$ (17,171)	$ (6,339)	$ 1,874	$ 6,026	$ 8,907	$ 11,451	$ 13,888	$ 16,346	$ 18,835	$ 22,160
72	Interest		$ (191)	$ (152)	$ (102)	$ (52)	$ (10)	$ 17	$ 33	$ 45	$ 56	$ 66	$ 77	$ 90
73	End of period with Interest	$ (47,184)	$ (40,276)	$ (29,583)	$ (17,274)	$ (6,391)	$ 1,864	$ 6,044	$ 8,940	$ 11,496	$ 13,943	$ 16,412	$ 18,912	$ 22,249
74	Bad Debt													
75	Projected Bad Debt	$ -	$ 16,838	$ 8,419	$ -	$ -	$ -	$ -	$ 8,419	$ 20,000	$ 25,257	$ 25,000	$ 25,257	$ 25,257
76	Beginning Period Bad Debt Balance		$ 32,931	$ 49,950	$ 58,606	$ 58,862	$ 59,120	$ 59,378	$ 59,638	$ 68,337	$ 88,679	$ 114,379	$ 139,934	$ 165,859
77	End of Period Bad Debt Balance		*$ 49,769*	*$ 58,369*	*$ 58,606*	*$ 58,862*	*$ 59,120*	*$ 59,378*	*$ 68,057*	*$ 88,337*	*$ 113,936*	*$ 139,379*	*$ 165,191*	*$ 191,115*
78	Interest		$ 181	$ 237	$ 256	$ 258	$ 259	$ 260	$ 279	$ 343	$ 443	$ 555	$ 667	$ 781
79	End of Period Bad Debt Balance with Interest	$ 32,931	$ 49,950	$ 58,606	$ 58,862	$ 59,120	$ 59,378	$ 59,638	$ 68,337	$ 88,679	$ 114,379	$ 139,934	$ 165,859	$ 191,896
80	Local Production and Storage Capacity		$ 79,351	$ 79,351	$ 79,351	$ 79,351	$ 79,351	$ 79,351	$ -	$ -	$ -	$ -	$ -	$ -
81			$ -	$ -	$ -									
82	Miscellaneous Overhead		$ 77,924	$ 77,924	$ 77,924	$ 77,924	$ 77,924	$ 77,924	$ 18,818	$ 18,818	$ 18,818	$ 18,818	$ 18,818	$ 18,818
83														
84	Gas Cost Other than Bad Debt and Working Capital Over/Under Collection													
85	Beginning Balance Over/Under Collection		$ (2,743,747)	$ (2,816,011)	$ (2,876,175)	$ (3,260,293)	$ (3,385,523)	$ (3,957,994)	$ (4,368,359)	$ (3,873,085)	$ (3,343,647)	$ (2,798,263)	$ (2,251,589)	$ (1,713,341)
86	Net Costs - Revenues		$ (60,129)	$ (47,739)	$ (370,724)	$ (110,724)	$ (556,442)	$ (392,192)	$ 513,263	$ 545,190	$ 558,790	$ 557,696	$ 546,903	$ 480,810
87	Ending Balance before Interest		$ (2,803,876)	$ (2,863,751)	$ (3,246,899)	$ (3,371,017)	$ (3,941,965)	$ (4,350,185)	$ (3,855,096)	$ (3,327,895)	$ (2,784,857)	$ (2,240,567)	$ (1,704,687)	$ (1,232,531)
88	Average Balance		$ (2,773,811)	$ (2,839,881)	$ (3,061,537)	$ (3,315,655)	$ (3,663,744)	$ (4,154,089)	$ (4,111,728)	$ (3,600,490)	$ (3,064,252)	$ (2,519,415)	$ (1,978,138)	$ (1,472,936)
89	Interest Rate		5.25%	5.25%	5.25%	5.25%	5.25%	5.25%	5.25%	5.25%	5.25%	5.25%	5.25%	5.25%
90	Interest Expense		$ (12,135)	$ (12,424)	$ (13,394)	$ (14,506)	$ (16,029)	$ (18,174)	$ (17,989)	$ (15,752)	$ (13,406)	$ (11,022)	$ (8,654)	$ (6,444)
91	Ending Balance Incl Interest Expense	$ (2,743,747)	$ (2,816,011)	$ (2,876,175)	$ (3,260,293)	$ (3,385,523)	$ (3,957,994)	$ (4,368,359)	$ (3,873,085)	$ (3,343,647)	$ (2,798,263)	$ (2,251,589)	$ (1,713,341)	$ (1,238,975)
92	**Total Over/Under Collection Ending Balance**	$ (2,757,999)	$ (2,806,337)	$ (2,847,152)	$ (3,218,705)	$ (3,332,794)	$ (3,896,751)	**$ (4,302,677)**	$ (3,795,809)	$ (3,243,472)	$ (2,669,940)	$ (2,095,243)	$ (1,528,571)	$ (1,024,830)
93														
94	**Total Indirect Cost of Gas**	$ (2,757,999)	$ 169,066	$ 164,200	$ 156,446	$ 153,910	$ 149,760	$ 143,541	$ 12,424	$ 25,965	$ 33,560	$ 35,819	$ 38,588	$ 41,749
95														
96	**Total Cost of Gas**	$ (2,757,999)	$ 2,634,245	$ 3,930,711	$ 4,466,466	$ 3,951,183	$ 3,019,817	$ 1,589,094	$ 1,006,745	$ 898,205	$ 864,197	$ 870,030	$ 880,030	$ 1,169,548
97														
98	**Total Interest**	$ -	$ (12,145)	$ (12,340)	$ (13,240)	$ (14,300)	$ (15,780)	$ (17,897)	$ (17,677)	$ (15,365)	$ (12,907)	$ (10,401)	$ (7,910)	$ (5,573)

Northern Utilities
NEW HAMPSHIRE (Over) / Undercollectior

	Winter	Summer	Prior Period	Total
Working Capital				
Total Anticipated Direct Cost of Gas				$ 24,155,244
Working Capital Percentage				
Working Capital Allowance	$ 53,718	$ 15,840	$ (47,184)	$ 22,373
Beginning Period Working Capital Balance				
End of Period Working Capital Allowance				
Interest	$ (490)	$ 366		$ (124)
End of period with Interest				
Bad Debt				
Projected Bad Debt	$ 25,257	$ 129,189	$ 32,931	$ 187,377
Beginning Period Bad Debt Balance				
End of Period Bad Debt Balance				
Interest	$ 1,450	$ 3,069		$ 4,519
End of Period Bad Debt Balance with Interest				
Local Production and Storage Capacity				$ 476,106
				$ -
Miscellaneous Overhead				$ 580,455
Gas Cost Other than Bad Debt and Working Capital (				
Beginning Balance Over/Under Collection				$ (37,388,028)
Net Costs - Revenues				$ 1,664,702
Ending Balance before Interest				$ (35,723,325)
Average Balance				$ (36,555,677)
Interest Rate				
Interest Expense				$ (159,931)
Ending Balance Incl Interest Expense			$ (2,743,747)	
Total Over/Under Collection Ending Balance				
Total Indirect Cost of Gas	$ 936,923	$ 188,106	$ (2,757,999)	$ (1,632,971)
Total Cost of Gas	$ 19,591,517	$ 5,688,756	$ (2,757,999)	$ 22,522,273
Total Interest	$ (85,703)	$ (69,833)		$ (155,536)