Unitil

December 18, 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 19-154
December 2019 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 2019, and NYMEX futures prices as of December 16, 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,

George H. Simmons Jr.

George H. Simmons Jr.

Enclosures

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

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New Hampshire Monthly Cost of Gas Report

Winter Period

December 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, 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 December 2019 analysis, estimated costs and revenues for November 2019 have been replaced with actuals. Estimated commodity costs for December 2019 through April 2020 have been updated to reflect NYMEX prices as of November 16, 2019. As shown on Table 1, Line 23, the estimated end of Winter Period balance is an over-collection of ($2,659,234). This is higher than the target end of Winter Period balance[1] of ($2,379,671), Line 25. The variance between the estimated and target balances is an over-collection of ($279,563), Line 27. This over-collection represents a variance in 1.37% 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] Target end of Winter Period balance has been updated to reflect actual costs and revenues through October 2019, as provided in the November Monthly Cost of Gas Report, filed on November 25, 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
December 2019 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 12/01/19 - 4/30/20				
4	Residential heat & non heat		14,648,202		Table 2, PG. 2, Line 2
5	HLF Classes		3,285,127		Table 2, PG. 2, Line 3
6	LLF Classes		13,551,731		Table 2, PG. 2, Line 4
7					
8	Current recovery rate per therm				
9	Residential heat & non heat		$0.5642		Table 2, PG. 1, Line 7
10	HLF classes		$0.4731		Table 2, PG. 1, Line 8
11	LLF classes		$0.5863		Table 2, PG. 1, Line 9
12					
13	Total	$	(17,764,089)		(LN 4 * Ln 9) + (LN 5 * LN 10) + (LN 6 * LN 11)
14					
15	Forecasted recovered costs at current rates 12/01/19 - 04/30/20			$ (17,764,089)	LN 13
16	Actual recovered costs			$ (2,598,366)	
17	Estimated total recovered costs 11/01/19 - 11/30/19			$ (20,362,455)	LN 15 + LN 16
18					
19	Revised projected direct gas costs [1]			$ 19,528,995	Table 2, PG. 2, Line 62
20	Revised projected indirect gas costs [2]			$ 932,225	Table 2, PG. 4, Line 94
21	Revised total projected gas costs 11/01/2019 - 04/30/2019			$ 20,461,220	LN 19 + LN 20
22					
23	Projected April 30, 2020 Winter Period Balance			$ (2,659,234)	LN 1 + LN 17 + LN 21
24					
25	April 30, 2020 Target Balance [3]			$ (2,379,671)	Table 2, PG. 3, Line 92
26					
27	Variance from Target Balance			$ (279,563)	LN 23 - LN 25
28					
29	Total Projected Gas Costs			$ 20,461,220	LN 21
30					
31	Under/(over) collection as percent of total gas costs			-1.37%	LN 27 / LN 29

NOTES
[1] Reflects futures prices as of December 16, 2019
[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)
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
Residential Heat & Non Heat			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
Sales HLF Classes			707,014	861,268	723,703	637,986	355,155	560,311	387,683	325,806	331,039	351,241	746,303
Sales LLF Classes			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
Total			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
Rates													
Residential Heat & Non Heat CGA			$0.5642	$0.5642	$0.5642	$0.5642	$0.5642	$0.2732	$0.2732	$0.2732	$0.2732	$0.2732	$0.2732
Sales HLF Classes CGA			$0.4731	$0.4731	$0.4731	$0.4731	$0.4731	$0.2407	$0.2407	$0.2407	$0.2407	$0.2407	$0.2407
Sales LLF Classes CGA			$0.5863	$0.5863	$0.5863	$0.5863	$0.5863	$0.3080	$0.3080	$0.3080	$0.3080	$0.3080	$0.3080
Revenues													
Residential Heat & Non Heat			$ (1,778,662)	$ (2,166,724)	$ (1,820,647)	$ (1,605,006)	$ (893,477)	$ (196,767)	$ (136,144)	$ (114,415)	$ (116,253)	$ (123,347)	$ (262,083)
Sales HLF Classes			$ (334,488)	$ (407,466)	$ (342,384)	$ (301,831)	$ (168,024)	$ (134,867)	$ (93,315)	$ (78,422)	$ (79,681)	$ (84,544)	$ (179,635)
Sales LLF Classes			$ (1,709,979)	$ (2,083,055)	$ (1,750,342)	$ (1,543,028)	$ (858,975)	$ (161,742)	$ (111,911)	$ (94,049)	$ (95,559)	$ (101,391)	$ (215,432)
Total Sales		$ (2,598,366)	$ (3,823,129)	$ (4,657,245)	$ (3,913,373)	$ (3,449,866)	$ (1,920,476)	$ (493,376)	$ (341,370)	$ (286,886)	$ (291,493)	$ (309,282)	$ (657,149)

		Winter						Summer					
Gas Costs and Credits			(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)
	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
Demand Costs (net of Capacity Assignment)													
Pipeline			$ 148,071	$ 148,071	$ 148,071	$ 148,071	$ 147,686	$ 147,686	$ 147,686	$ 147,686	$ 147,686	$ 147,686	$ 147,686
Storage			$ 601,905	$ 601,905	$ 601,905	$ 601,905	$ 601,905	$ 601,905	$ 601,905	$ 601,905	$ 601,905	$ 601,905	$ 601,905
On-system Peaking			$ 197,149	$ 197,149	$ 197,149	$ 197,149	$ 91,532	$ 91,532	$ 27,823	$ 27,823	$ 27,823	$ 27,823	$ 27,823
Off-System Peaking			$ 779,362	$ 779,362	$ 779,362	$ 779,362	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Demand Costs			$ 1,726,487	$ 1,726,487	$ 1,726,487	$ 1,726,487	$ 841,123	$ 841,123	$ 777,414	$ 777,414	$ 777,414	$ 777,414	$ 777,414
Asset Management and Capacity Release													
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)
NUI Capacity Release			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
NUI AMA Rev & Cap. Release Subtotal													
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)
NH Capacity Release													
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)
Re-entry Rate & Conversion Rate Revenue			$ (1,666.67)	$ (1,666.67)	$ (1,666.67)	$ (1,666.67)	$ (1,666.67)	$ -	$ -	$ -	$ -	$ -	$ -
Net Demand Costs		$ 759,005	$ 1,220,001	$ 1,220,001	$ 1,220,001	$ 1,220,001	$ 334,637	$ 336,304	$ 272,595	$ 272,595	$ 272,595	$ 272,595	$ 272,595
NUI Commodity Costs													
NUI Total Pipeline Volumes			615,478	557,996	526,109	639,074	969,749	510,915	354,416	307,247	308,564	332,093	656,863
Pipeline Costs Modeled in Sendout™			$ 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
NYMEX Price Used for Forecast			$ 2.4850	$ 2.5880	$ 2.5560	$ 2.4730	$ 2.2770	$ 2.2610	$ 2.2970	$ 2.3360	$ 2.3450	$ 2.3290	$ 2.3540
NYMEX Price Used for Update			$ 2.4700	$ 2.3410	$ 2.3260	$ 2.2650	$ 2.2000	$ 2.2610	$ 2.2970	$ 2.3360	$ 2.3450	$ 2.3290	$ 2.3540
Increase/(Decrease) NYMEX Price			$ (0.01)	$ (0.25)	$ (0.23)	$ (0.21)	$ (0.08)	$ -	$ -	$ -	$ -	$ -	$ -
Increase/(Decrease) in Pipeline Costs			$ (9,232)	$ (137,825)	$ (121,005)	$ (132,927)	$ (74,671)	$ -	$ -	$ -	$ -	$ -	$ -
Updated Pipeline Costs			$ 1,731,947	$ 1,877,592	$ 1,742,357	$ 1,660,065	$ 2,093,524	$ 1,104,254	$ 765,743	$ 669,901	$ 672,296	$ 702,927	$ 1,424,889
New Hampshire Allocated Percentage			38.58%	38.96%	38.53%	38.04%	35.46%	35.71%	35.57%	34.45%	34.85%	34.38%	37.04%
NH Updated Pipeline Costs			$ 668,196	$ 731,489	$ 671,391	$ 631,561	$ 742,267	$ 394,326	$ 272,352	$ 230,753	$ 234,299	$ 241,655	$ 527,737
NH Peaking Volumes			195,770	303,250	184,496	110,637	1,194						
NH Peaking Costs Modeled in Sendout			$ 1,684,145	$ 2,004,526	$ 1,573,556	$ 822,748	$ 4,855						
Change in NYMEX Price			$ (0.01)	$ (0.25)	$ (0.23)	$ (0.21)	$ (0.08)						
Change in Peaking Costs			$ (2,937)	$ (74,903)	$ (42,434)	$ (23,012)	$ (92)						
NH Updated Peaking Costs			$ 1,681,208	$ 1,929,623	$ 1,531,122	$ 799,736	$ 4,764						
NH Commodity Costs													
Pipeline			$ 668,196	$ 731,489	$ 671,391	$ 631,561	$ 742,267	$ 394,326	$ 272,352	$ 230,753	$ 234,299	$ 241,655	$ 527,737
Storage			$ 610,281	$ 754,929	$ 754,783	$ 635,566	$ 333	$ -	$ -	$ -	$ -	$ -	$ -
Peaking			$ 1,681,208	$ 1,929,623	$ 1,531,122	$ 799,736	$ 4,764	$ 2,667	$ 2,559	$ 2,555	$ 2,584	$ 2,458	$ 2,734
Total Commodity Costs		$ 1,405,691	$ 2,959,685	$ 3,416,042	$ 2,957,296	$ 2,066,864	$ 747,363	$ 396,992	$ 274,911	$ 233,309	$ 236,882	$ 244,112	$ 530,470
Inventory Finance Charge			$ 523	$ 659	$ 544	$ 463	$ 219	$ -	$ -	$ -	$ -	$ -	$ -
Total Anticipated Direct Cost of Gas		$ 2,164,696	$ 4,180,210	$ 4,636,702	$ 4,177,842	$ 3,287,328	$ 1,082,219	$ 733,296	$ 547,506	$ 505,903	$ 509,477	$ 516,707	$ 803,065

Northern Utilities
NEW HAMPSHIRE (Over) / Undercollection Anal

Sales Revenues	Winter	Summer	Prior Period	Total
Volumes				
Residential Heat & Non Heat				18,121,880
Sales HLF Classes				5,987,510
Sales LLF Classes				16,084,471
Total				40,193,861
Rates				
Residential Heat & Non Heat CGA				
Sales HLF Classes CGA				
Sales LLF Classes CGA				
Revenues				
Residential Heat & Non Heat				$ (9,213,524)
Sales HLF Classes				$ (2,204,657)
Sales LLF Classes				$ (8,725,464)
Total Sales	$ (20,362,455)	$ (2,379,556)		$ (22,742,011)

Gas Costs and Credits				Total
Demand Costs (net of Capacity Assignment)				
Pipeline	$ 739,968	$ 886,115		$ 1,626,083
Storage	$ 3,009,524	$ 3,611,429		$ 6,620,953
On-system Peaking	$ 880,130	$ 230,649		$ 1,110,778
Off-System Peaking	$ 3,117,447	$ -		$ 3,117,447
Total Demand Costs	$ 7,747,069	$ 4,728,192		$ 12,475,261
Asset Management and Capacity Release				
NUI AMA Revenue				$ (13,255,550)
NUI Capacity Release				$ -
NUI AMA Rev & Cap. Release Subtotal				$ -
NH AMA Revenue				$ (5,553,010)
NH Capacity Release				$ -
NH Total Asset Management and Capacity Release		$ -	$ -	$ (5,553,010)
Re-entry Rate & Conversion Rate Revenue	$ (10,000)	$ -		$ (10,000)
Net Demand Costs	$ 5,973,645	$ 1,699,278		$ 7,672,923
NUI Commodity Costs				
NUI Total Pipeline Volumes				5,778,504
Pipeline Costs Modeled in Sendout™				$ 14,921,155
NYMEX Price Used for Forecast				
NYMEX Price Used for Update				
Increase/(Decrease) NYMEX Price				
Increase/(Decrease) in Pipeline Costs				
Updated Pipeline Costs				
New Hampshire Allocated Percentage				
NH Updated Pipeline Costs				$ 5,346,026
NH Peaking Volumes				
NH Peaking Costs Modeled in Sendout				
Change in NYMEX Price				
Change in Peaking Costs				
NH Updated Peaking Costs				$ 5,946,453
NH Commodity Costs				
Pipeline				$ 5,346,026
Storage				$ 2,755,892
Peaking				$ 5,962,009
Total Commodity Costs	$ 13,552,942	$ 1,916,677		$ 15,469,618
Inventory Finance Charge				$ 2,408
Total Anticipated Direct Cost of Gas	$ 19,528,995	$ 3,615,954		$ 23,144,950

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

		Winter						Summer					
			(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)
	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
Working Capital													
Total Anticipated Direct Cost of Gas		$ 2,321,971	$ 4,337,485	$ 4,793,977	$ 4,335,117	$ 3,444,603	$ 1,239,494	$ 752,114	$ 566,324	$ 524,722	$ 528,295	$ 535,526	$ 821,883
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%
Working Capital Allowance		$ 3,346	$ 6,250	$ 6,908	$ 6,247	$ 4,964	$ 1,786	$ 1,084	$ 816	$ 756	$ 761	$ 772	$ 1,184
Beginning Period Working Capital Balance		$ (47,184)	$ (44,037)	$ (37,966)	$ (31,209)	$ (25,085)	$ (20,220)	$ (18,518)	$ (17,513)	$ (16,772)	$ (16,087)	$ (15,395)	$ (14,689)
End of Period Working Capital Allowance		$ (43,838)	$ (37,787)	$ (31,058)	$ (24,962)	$ (20,121)	$ (18,434)	$ (17,434)	$ (16,697)	$ (16,016)	$ (15,326)	$ (14,623)	$ (13,504)
Interest		$ (199)	$ (179)	$ (151)	$ (123)	$ (99)	$ (85)	$ (79)	$ (75)	$ (72)	$ (69)	$ (66)	$ (62)
End of period with Interest	$ (47,184)	$ (44,037)	$ (37,966)	$ (31,209)	$ (25,085)	$ (20,220)	$ (18,518)	$ (17,513)	$ (16,772)	$ (16,087)	$ (15,395)	$ (14,689)	$ (13,566)
Bad Debt													
Projected Bad Debt	$ -	$ 14,220	$ 8,419	$ -	$ -	$ -	$ -	$ 8,419	$ 25,257	$ 25,257	$ 33,676	$ 25,257	$ 25,257
Beginning Period Bad Debt Balance		$ 32,931	$ 47,326	$ 55,970	$ 56,215	$ 56,461	$ 56,708	$ 56,956	$ 65,643	$ 91,242	$ 116,953	$ 151,214	$ 177,188
End of Period Bad Debt Balance		*$ 47,151*	*$ 55,745*	*$ 55,970*	*$ 56,215*	*$ 56,461*	*$ 56,708*	*$ 65,375*	*$ 90,900*	*$ 116,499*	*$ 150,629*	*$ 176,471*	*$ 202,445*
Interest		$ 175	$ 225	$ 245	$ 246	$ 247	$ 248	$ 268	$ 342	$ 454	$ 585	$ 717	$ 830
End of Period Bad Debt Balance with Interest	$ 32,931	$ 47,326	$ 55,970	$ 56,215	$ 56,461	$ 56,708	$ 56,956	$ 65,643	$ 91,242	$ 116,953	$ 151,214	$ 177,188	$ 203,275
Local Production and Storage Capacity		$ 79,351	$ 79,351	$ 79,351	$ 79,351	$ 79,351	$ 79,351	$ -	$ -	$ -	$ -	$ -	$ -
		$ -	$ -	$ -									
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
Gas Cost Other than Bad Debt and Working Capital Over/Under Collection													
Beginning Balance Over/Under Collection		$ (2,743,747)	$ (3,032,750)	$ (2,530,538)	$ (2,404,578)	$ (1,992,431)	$ (2,006,423)	$ (2,697,672)	$ (2,450,171)	$ (2,235,444)	$ (2,006,868)	$ (1,778,328)	$ (1,559,369)
Net Costs - Revenues		$ (276,395)	$ 514,356	$ 136,732	$ 421,744	$ (5,263)	$ (680,982)	$ 258,738	$ 224,954	$ 237,836	$ 236,802	$ 226,243	$ 164,734
Ending Balance before Interest		$ (3,020,142)	$ (2,518,394)	$ (2,393,806)	$ (1,982,834)	$ (1,997,694)	$ (2,687,405)	$ (2,438,934)	$ (2,225,217)	$ (1,997,608)	$ (1,770,066)	$ (1,552,084)	$ (1,394,635)
Average Balance		$ (2,881,944)	$ (2,775,572)	$ (2,462,172)	$ (2,193,706)	$ (1,995,063)	$ (2,346,914)	$ (2,568,303)	$ (2,337,694)	$ (2,116,526)	$ (1,888,467)	$ (1,665,206)	$ (1,477,002)
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%
Interest Expense		$ (12,609)	$ (12,143)	$ (10,772)	$ (9,597)	$ (8,728)	$ (10,268)	$ (11,236)	$ (10,227)	$ (9,260)	$ (8,262)	$ (7,285)	$ (6,462)
Ending Balance Incl Interest Expense	$ (2,743,747)	$ (3,032,750)	$ (2,530,538)	$ (2,404,578)	$ (1,992,431)	$ (2,006,423)	$ (2,697,672)	$ (2,450,171)	$ (2,235,444)	$ (2,006,868)	$ (1,778,328)	$ (1,559,369)	$ (1,401,097)
Total Over/Under Collection Ending Balance	$ (2,757,999)	$ (3,029,461)	$ (2,512,533)	$ (2,379,571)	$ (1,961,055)	$ (1,969,934)	**$ (2,659,234)**	$ (2,402,041)	$ (2,160,974)	$ (1,906,002)	$ (1,642,508)	$ (1,396,870)	$ (1,211,388)
Total Indirect Cost of Gas		$ 162,208	$ 159,848	$ 153,505	$ 154,048	$ 153,659	$ 148,957	$ 17,274	$ 34,931	$ 35,954	$ 45,510	$ 38,213	$ 39,566
Total Cost of Gas	$ (2,757,999)	$ 2,326,904	$ 4,340,057	$ 4,790,207	$ 4,331,889	$ 3,440,986	$ 1,231,176	$ 750,569	$ 582,437	$ 541,857	$ 554,987	$ 554,920	$ 842,631
Total Interest	$ -	$ (12,632)	$ (12,097)	$ (10,678)	$ (9,474)	$ (8,580)	$ (10,104)	$ (11,047)	$ (9,960)	$ (8,877)	$ (7,745)	$ (6,634)	$ (5,693)

April 30th Target Balance	$ (2,379,671)
April 30th Projected Balance	$ (2,659,234)
Variance	$ (279,563)

Northern Utilities
NEW HAMPSHIRE (Over) / Undercollection Anal

	Winter	Summer	Prior Period	Total
Working Capital				
Total Anticipated Direct Cost of Gas				$ 24,201,511
Working Capital Percentage				
Working Capital Allowance	$ 29,501	$ 5,373	$ (47,184)	$ (12,310)
Beginning Period Working Capital Balance				
End of Period Working Capital Allowance				
Interest	$ (835)	$ (421)		$ (1,257)
End of period with Interest				
Bad Debt				
Projected Bad Debt	$ 22,638	$ 143,122	$ 32,931	$ 198,691
Beginning Period Bad Debt Balance				
End of Period Bad Debt Balance				
Interest	$ 1,387	$ 3,197		$ 4,584
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				$ (27,438,318)
Net Costs - Revenues				$ 1,459,499
Ending Balance before Interest				$ (25,978,819)
Average Balance				$ (26,708,568)
Interest Rate				
Interest Expense				$ (116,850)
Ending Balance Incl Interest Expense				
Total Over/Under Collection Ending Balance				
Total Indirect Cost of Gas	$ 932,225	$ 211,448	$ -	$ 1,143,673
Total Cost of Gas	$ 20,461,220	$ 3,827,402	$ (2,757,999)	$ 21,530,623
Total Interest	$ (63,566)	$ (49,957)		$ (113,523)

Updated End of Period Balance ("Target Balance") per November Monthly Reprot
$2,379,671
Line 92 - April

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

Line			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														
16			Winter						Summer					
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		$ 133,441	$ 197,149	$ 197,149	$ 197,149	$ 197,149	$ 91,532	$ 91,532	$ 27,823	$ 27,823	$ 27,823	$ 27,823	$ 27,823
23	Off-System Peaking		$ 779,362	$ 779,362	$ 779,362	$ 779,362	$ 779,362	$ -	$ -	$ -	$ -	$ -	$ -	$ -
24	Total Demand Costs		$ 1,662,778	$ 1,726,487	$ 1,726,487	$ 1,726,487	$ 1,726,487	$ 841,123	$ 841,123	$ 777,414	$ 777,414	$ 777,414	$ 777,414	$ 777,414
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		$ 1,156,292	$ 1,220,001	$ 1,220,001	$ 1,220,001	$ 1,220,001	$ 334,637	$ 336,304	$ 272,595	$ 272,595	$ 272,595	$ 272,595	$ 272,595
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**		$ 2,856,097	$ 4,221,139	$ 4,764,647	$ 4,251,901	$ 3,324,685	$ 1,120,820	$ 733,296	$ 547,506	$ 505,903	$ 509,477	$ 516,707	$ 803,065

Northern Utilities
NEW HAMPSHIRE (Over) / Undercollectior

Line		Winter	Summer	Prior Period	Total
	Sales Revenues				
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**				
18					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	$ 1,013,571	$ 230,649		$ 1,244,219
23	Off-System Peaking	$ 3,896,809	$ -		$ 3,896,809
24	Total Demand Costs	$ 9,409,847	$ 4,728,192		$ 14,138,039
25					
26	Asset Management and Capacity Release				
27	NUI AMA Revenue				$ (14,460,600)
28	NUI Capacity Release				$ -
29	NUI AMA Rev & Cap. Release Subtotal				$ -
30	NH AMA Revenue				$ (6,057,829)
31	NH Capacity Release				$ -
32	NH Total Asset Management and Capacity Release		$ -	$ -	$ (6,057,829)
33					
34	Re-entry Rate & Conversion Rate Revenue	$ (10,000)	$ -		$ (10,000)
35					
36	Net Demand Costs	$ 6,370,933	$ 1,699,278		$ 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**	$ 20,539,290	$ 3,615,954		$ 24,155,244

Updated End of Period Balance ("Target Balance") per November Monthly Reprot
$2,379,671
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		$ 2,856,097	$ 4,221,139	$ 4,764,647	$ 4,251,901	$ 3,324,685	$ 1,120,820	$ 733,296	$ 547,506	$ 505,903	$ 509,477	$ 516,707	$ 803,065
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		$ 8,224	$ 12,155	$ 13,720	$ 12,244	$ 9,574	$ 3,228	$ 2,112	$ 1,577	$ 1,457	$ 1,467	$ 1,488	$ 2,312
70	Beginning Period Working Capital Balance		$ (47,184)	$ (39,148)	$ (27,137)	$ (13,506)	$ (1,295)	$ 8,294	$ 11,565	$ 13,732	$ 15,372	$ 16,899	$ 18,444	$ 20,016
71	End of Period Working Capital Allowance		$ (38,959)	$ (26,993)	$ (13,417)	$ (1,262)	$ 8,279	$ 11,522	$ 13,677	$ 15,309	$ 16,829	$ 18,367	$ 19,932	$ 22,328
72	Interest		$ (188)	$ (145)	$ (89)	$ (32)	$ 15	$ 43	$ 55	$ 64	$ 70	$ 77	$ 84	$ 93
73	End of period with Interest	$ (47,184)	$ (39,148)	$ (27,137)	$ (13,506)	$ (1,295)	$ 8,294	$ 11,565	$ 13,732	$ 15,372	$ 16,899	$ 18,444	$ 20,016	$ 22,421
74	Bad Debt													
75	Projected Bad Debt	$ -	$ 16,838	$ 8,419	$ -	$ -	$ -	$ -	$ 8,419	$ 25,257	$ 25,257	$ 33,676	$ 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	$ 93,948	$ 119,671	$ 153,943	$ 179,929
77	End of Period Bad Debt Balance		*$ 49,769*	*$ 58,369*	*$ 58,606*	*$ 58,862*	*$ 59,120*	*$ 59,378*	*$ 68,057*	*$ 93,593*	*$ 119,204*	*$ 153,346*	*$ 179,200*	*$ 205,186*
78	Interest		$ 181	$ 237	$ 256	$ 258	$ 259	$ 260	$ 279	$ 354	$ 466	$ 597	$ 729	$ 842
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	$ 93,948	$ 119,671	$ 153,943	$ 179,929	$ 206,028
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)	$ (2,424,237)	$ (2,027,065)	$ (1,951,846)	$ (1,615,729)	$ (1,724,834)	$ (2,450,875)	$ (2,208,808)	$ (1,997,533)	$ (1,771,704)	$ (1,545,984)	$ (1,330,093)
86	Net Costs - Revenues		$ 330,790	$ 406,888	$ 83,904	$ 343,904	$ (101,814)	$ (716,926)	$ 252,238	$ 220,456	$ 234,056	$ 232,962	$ 222,169	$ 156,076
87	Ending Balance before Interest		$ (2,412,957)	$ (2,017,349)	$ (1,943,161)	$ (1,607,942)	$ (1,717,543)	$ (2,441,760)	$ (2,198,637)	$ (1,988,351)	$ (1,763,477)	$ (1,538,742)	$ (1,323,815)	$ (1,174,017)
88	Average Balance		$ (2,578,352)	$ (2,220,793)	$ (1,985,113)	$ (1,779,894)	$ (1,666,636)	$ (2,083,297)	$ (2,324,756)	$ (2,098,579)	$ (1,880,505)	$ (1,655,223)	$ (1,434,899)	$ (1,252,055)
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		$ (11,280)	$ (9,716)	$ (8,685)	$ (7,787)	$ (7,292)	$ (9,114)	$ (10,171)	$ (9,181)	$ (8,227)	$ (7,242)	$ (6,278)	$ (5,478)
91	Ending Balance Incl Interest Expense	$ (2,743,747)	$ (2,424,237)	$ (2,027,065)	$ (1,951,846)	$ (1,615,729)	$ (1,724,834)	$ (2,450,875)	$ (2,208,808)	$ (1,997,533)	$ (1,771,704)	$ (1,545,984)	$ (1,330,093)	$ (1,179,495)
92	**Total Over/Under Collection Ending Balance**	$ (2,757,999)	$ (2,413,435)	$ (1,995,597)	$ (1,906,489)	$ (1,557,903)	$ (1,657,162)	**$ (2,379,671)**	$ (2,126,739)	$ (1,888,213)	$ (1,635,134)	$ (1,373,596)	$ (1,130,148)	$ (951,046)
93														
94	**Total Indirect Cost of Gas**	$ (2,757,999)	$ 171,050	$ 168,226	$ 162,478	$ 161,957	$ 159,831	$ 151,691	$ 19,513	$ 36,888	$ 37,841	$ 47,394	$ 40,098	$ 41,845
95														
96	**Total Cost of Gas**	$ (2,757,999)	$ 3,027,147	$ 4,389,365	$ 4,927,126	$ 4,413,859	$ 3,484,516	$ 1,272,511	$ 752,808	$ 584,394	$ 543,745	$ 556,871	$ 556,805	$ 844,910
97														
98	**Total Interest**	$ -	$ (11,288)	$ (9,624)	$ (8,517)	$ (7,562)	$ (7,018)	$ (8,811)	$ (9,836)	$ (8,764)	$ (7,690)	$ (6,567)	$ (5,465)	$ (4,543)

Northern Utilities
NEW HAMPSHIRE (Over) / Undercollectior

63					
64					
65					Total
66	Working Capital				
67	Total Anticipated Direct Cost of Gas				$ 24,155,244
68	Working Capital Percentage				
69	Working Capital Allowance	$ 59,145	$ 10,412	$ (47,184)	$ 22,373
70	Beginning Period Working Capital Balance				
71	End of Period Working Capital Allowance				
72	Interest	$ (396)	$ 443		$ 47
73	End of period with Interest				
74	Bad Debt				
75	Projected Bad Debt	$ 25,257	$ 143,122	$ 32,931	$ 201,310
76	Beginning Period Bad Debt Balance				
77	End of Period Bad Debt Balance				
78	Interest	$ 1,450	$ 3,268		$ 4,718
79	End of Period Bad Debt Balance with Interest				
80	Local Production and Storage Capacity				$ 476,106
81					$ -
82	Miscellaneous Overhead				$ 580,455
83					
84	Gas Cost Other than Bad Debt and Working Capital (				
85	Beginning Balance Over/Under Collection				$ (23,792,453)
86	Net Costs - Revenues				$ 1,664,702
87	Ending Balance before Interest				$ (22,127,750)
88	Average Balance				$ (22,960,101)
89	Interest Rate				
90	Interest Expense				$ (100,450)
91	Ending Balance Incl Interest Expense				
92	**Total Over/Under Collection Ending Balance**				
93					
94	**Total Indirect Cost of Gas**	$ 975,233	$ 223,579	$ (2,757,999)	$ (1,559,187)
95					
96	**Total Cost of Gas**	$ 21,514,523	$ 3,839,533	$ (2,757,999)	$ 22,596,057
97					
98	**Total Interest**	$ (52,819)	$ (42,865)		$ (95,685)