



March 24, 2020

Via Electronic Filing

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
March 2020 Monthly Cost of Gas Report

Dear Director Howland:

Pursuant to Commission 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 season.

Northern's current calculation of costs has been updated to reflect the actual November 1, 2019 balance, actual costs and revenues for November through February 2020, and updated NYMEX futures prices as of March 20, 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.

Sincerely,

A handwritten signature in black ink, appearing to read "Patrick H. Taylor".

Patrick H. Taylor
Senior Counsel

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

New Hampshire Monthly Cost of Gas Report

Winter Period

March 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 March 2020 analysis, estimated costs and revenues for November 2019 through February 2020 have been replaced with actuals. Estimated commodity costs for March and April 2020 have been updated to reflect NYMEX prices as of March 23, 2020. As shown on Table 1, Line 23, the estimated end of Winter Period balance is an over-collection of (\$3,891,850). This over-collection is higher than the target end of Winter Period balance¹ of (\$3,553,724), Line 25. The variance between the estimated and target balances is an over-collection of (\$338,127), Line 27. This variance represents 1.89% 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 was updated in February 2020 to reflect a revision in projected revenues from December 2019 through April 2020. Prior adjustments to the target end of Winter Period balance include updating for actual costs and revenues through October 2019 (per the November 2019 Monthly Cost of Gas Report) plus the revision of the monthly peaking demand charges during the winter months (per the January 2020 Monthly Cost of Gas Report).

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
March 2020 Estimated

1	Under/(Over) collection as of 11/01/19	\$ (2,757,999)	Table 2, PG. 3, Line 92, October
2			
3	Forecasted firm therm sales 03/01/20 - 4/30/20		
4	Residential heat & non heat	4,428,364	Table 2, PG. 2, Line 2
5	HLF Classes	993,142	Table 2, PG. 2, Line 3
6	LLF Classes	4,096,885	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	\$ (5,355,113)	(LN 4 * Ln 9) + (LN 5 * LN 10) + (LN 6 * LN 11)
14			
15	Forecasted recovered costs at current rates 03/01/20 - 04/30/20	\$ (5,355,113)	LN 13
16	Actual recovered costs 11/01/19 - 02/29/20	\$ (13,630,034)	Table 2, PG. 1, Line 14, Nov through Feb
17	Estimated total recovered costs 11/01/19 - 04/30/20	\$ (18,985,146)	LN 15 + LN 16
18			
19	Revised projected direct gas costs [1]	\$ 16,907,284	Table 2, PG. 2, Line 62, Winter
20	Revised projected indirect gas costs [2]	\$ 944,011	Table 2, PG. 4, Line 94, Winter
21	Revised total projected gas costs 11/01/2019 - 04/30/2019	\$ 17,851,295	LN 19 + LN 20
22			
23	Projected April 30, 2020 Winter Period Balance	\$ (3,891,850)	LN 1 + LN 17 + LN 21
24			
25	April 30, 2020 Target Balance [3]	\$ (3,553,724)	Table 3, PG. 3, Line 92, April
26			
27	Variance from Target Balance	\$ (338,127)	LN 23 - LN 25
28			
29	Total Projected Gas Costs	\$ 17,851,295	LN 21
30			
31	Under/(over) collection as percent of total gas costs	-1.89%	LN 27 / LN 29

NOTES

- [1] Reflects futures prices as of March 23, 2020
- [2] Includes: Working Capital Allowance, Bad Debt Allowance, Production and Storage Capacity, Miscellaneous Overhead and Interest
- [3] Updated in November 2019 to reflect actual account balance as of October 31, 2019

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

Sales Revenues	Winter						Summer										
	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	(Forecast) Mar-20	(Forecast) Apr-20	(Forecast) May-20	(Forecast) Jun-20	(Forecast) Jul-20	(Forecast) Aug-20	(Forecast) Sep-20	(Forecast) Oct-20				
Volumes																	
Residential Heat & Non Heat						2,844,747	1,583,618	720,231	498,332	418,796	425,522	451,490	959,307				
Sales HLF Classes						637,986	355,155	560,311	387,683	325,806	331,039	351,241	746,303				
Sales LLF Classes						2,631,807	1,465,078	525,137	363,346	305,354	310,258	329,192	699,453				
Total						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						\$ 0.5626	\$ 0.5626	\$ 0.2728	\$ 0.2728	\$ 0.2728	\$ 0.2728	\$ 0.2728	\$ 0.2728				
Sales HLF Classes CGA						\$ 0.4715	\$ 0.4715	\$ 0.2403	\$ 0.2403	\$ 0.2403	\$ 0.2403	\$ 0.2403	\$ 0.2403				
Sales LLF Classes CGA						\$ 0.5847	\$ 0.5847	\$ 0.3076	\$ 0.3076	\$ 0.3076	\$ 0.3076	\$ 0.3076	\$ 0.3076				
Revenues																	
Residential Heat & Non Heat						\$ (1,600,454)	\$ (890,943)	\$ (196,479)	\$ (135,945)	\$ (114,248)	\$ (116,082)	\$ (123,167)	\$ (261,699)				
Sales HLF Classes						\$ (300,811)	\$ (167,456)	\$ (134,643)	\$ (93,160)	\$ (78,291)	\$ (79,549)	\$ (84,403)	\$ (179,337)				
Sales LLF Classes						\$ (1,538,818)	\$ (856,631)	\$ (161,532)	\$ (111,765)	\$ (93,927)	\$ (95,435)	\$ (101,259)	\$ (215,152)				
Total Sales						\$ (2,598,366)	\$ (4,010,385)	\$ (3,837,605)	\$ (3,183,677)	\$ (3,440,083)	\$ (1,915,030)	\$ (492,654)	\$ (286,466)	\$ (295,106)	\$ (308,829)	\$ (656,187)	
Gas Costs and Credits																	
Demand Costs (net of Capacity Assignment)																	
Pipeline						\$ 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				
On-system Peaking						\$ 197,149	\$ 91,532	\$ 27,823	\$ 27,823	\$ 27,823	\$ 27,823	\$ 27,823	\$ 27,823				
Off-System Peaking						\$ 324,734	\$ 324,734	\$ 324,734	\$ 324,734	\$ 324,734	\$ 324,734	\$ 324,734	\$ 324,734				
Total Demand Costs						\$ 1,271,859	\$ 1,165,857	\$ 1,102,148	\$ 1,102,148	\$ 1,102,148	\$ 1,102,148	\$ 1,102,148	\$ 1,102,148				
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)				
NUI Capacity Release						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
NUI AMA Rev & Cap. Release Subtotal						\$ (504,819)	\$ (504,819)	\$ (504,819)	\$ (504,819)	\$ (504,819)	\$ (504,819)	\$ (504,819)	\$ (504,819)				
NH AMA Revenue						\$ (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)				
Re-entry Rate & Conversion Rate Revenue						\$ (1,666.67)	\$ (1,666.67)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
Net Demand Costs						\$ 759,005	\$ 797,653	\$ 798,937	\$ 694,815	\$ 765,373	\$ 659,371	\$ 597,329	\$ 597,329				
NUI Commodity Costs																	
NUI Total Pipeline Volumes						639,074	969,749	510,915	354,416	307,247	308,564	332,093	656,863				
Pipeline Costs Modeled in Sendout™						\$ 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						\$ 2,4730	\$ 2,2770	\$ 2,2610	\$ 2,2970	\$ 2,3360	\$ 2,3450	\$ 2,3290	\$ 2,3540				
NYMEX Price Used for Update						\$ 1,8210	\$ 1,6020	\$ 2,2610	\$ 2,2970	\$ 2,3360	\$ 2,3450	\$ 2,3290	\$ 2,3540				
Increase/(Decrease) NYMEX Price						\$ (0.65)	\$ (0.68)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
Increase/(Decrease) in Pipeline Costs						\$ (416,676)	\$ (654,580)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
Updated Pipeline Costs						\$ 1,376,316	\$ 1,513,615	\$ 1,104,254	\$ 765,743	\$ 669,901	\$ 672,296	\$ 702,927	\$ 1,424,889				
New Hampshire Allocated Percentage						38.04%	35.46%	35.71%	35.57%	34.45%	34.85%	34.38%	37.04%				
NH Updated Pipeline Costs						\$ 523,611	\$ 536,658	\$ 394,326	\$ 272,352	\$ 230,753	\$ 234,299	\$ 241,655	\$ 527,737				
NH Peaking Volumes																	
NH Peaking Costs Modeled in Sendout						\$ 110,637	\$ 1,194										
Change in NYMEX Price						\$ 822,748	\$ 4,855										
Change in Peaking Costs						\$ (0.65)	\$ (0.68)										
NH Updated Peaking Costs						\$ (72,135)	\$ (806)										
NH Commodity Costs																	
Pipeline						\$ 523,611	\$ 536,658	\$ 394,326	\$ 272,352	\$ 230,753	\$ 234,299	\$ 241,655	\$ 527,737				
Storage						\$ 635,566	\$ 333	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
Peaking						\$ 750,613	\$ 4,049	\$ 2,667	\$ 2,559	\$ 2,555	\$ 2,584	\$ 2,458	\$ 2,734				
Total Commodity Costs						\$ 1,909,790	\$ 541,040	\$ 396,992	\$ 274,911	\$ 233,309	\$ 236,882	\$ 244,112	\$ 530,470				
Inventory Finance Charge						\$ 463	\$ 219	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
Total Anticipated Direct Cost of Gas						\$ 2,164,696	\$ 4,301,837	\$ 3,705,513	\$ 2,858,983	\$ 2,675,627	\$ 1,200,630	\$ 994,321	\$ 872,240	\$ 830,637	\$ 834,211	\$ 841,441	\$ 1,127,799

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

Sales Revenues				
Volumes	Winter	Summer	Prior Period	Total
Residential Heat & Non Heat				7,902,042
Sales HLF Classes				3,695,524
Sales LLF Classes				6,629,625
Total				18,227,191
Rates				
Residential Heat & Non Heat CGA				
Sales HLF Classes CGA				
Sales LLF Classes CGA				
Revenues				
Residential Heat & Non Heat				\$ (3,439,017)
Sales HLF Classes				\$ (1,117,649)
Sales LLF Classes				\$ (3,174,520)
Total Sales	\$ (18,985,146)	\$ (2,376,073)		\$ (21,361,219)
Gas Costs and Credits				
Demand Costs (net of Capacity Assignment)				Total
Pipeline	\$ 295,756	\$ 886,115		\$ 1,181,871
Storage	\$ 1,203,810	\$ 3,611,429		\$ 4,815,238
On-system Peaking	\$ 288,681	\$ 186,940		\$ 455,621
Off-System Peaking	\$ 649,468	\$ 1,948,405		\$ 2,597,873
Total Demand Costs	\$ 2,437,716	\$ 6,612,888		\$ 9,050,604
Asset Management and Capacity Release				
NUI AMA Revenue				\$ (9,640,400)
NUI Capacity Release				\$ -
NUI AMA Rev & Cap. Release Subtotal				\$ -
NH AMA Revenue				\$ (4,038,553)
NH Capacity Release				\$ -
NH Total Asset Management and Capacity Release		\$ -	\$ -	\$ (4,038,553)
Re-entry Rate & Conversion Rate Revenue	\$ (10,000)	\$ -		\$ (10,000)
Net Demand Costs	\$ 4,475,154	\$ 3,583,973		\$ 8,059,128
NUI Commodity Costs				
NUI Total Pipeline Volumes				4,078,920
Pipeline Costs Modeled in Sendout™				\$ 9,301,197
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				\$ 2,961,389
NH Peaking Volumes				
NH Peaking Costs Modeled in Sendout				
Change in NYMEX Price				
Change in Peaking Costs				
NH Updated Peaking Costs				\$ 754,662
NH Commodity Costs				
Pipeline				\$ 2,961,389
Storage				\$ 635,899
Peaking				\$ 770,218
Total Commodity Costs	\$ 12,431,448	\$ 1,916,677		\$ 14,348,125
Inventory Finance Charge				\$ 682
Total Anticipated Direct Cost of Gas	\$ 16,907,284	\$ 5,500,650		\$ 22,407,934

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

	Winter						Summer						
	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	(Forecast) Mar-20	(Forecast) Apr-20	(Forecast) May-20	(Forecast) Jun-20	(Forecast) Jul-20	(Forecast) Aug-20	(Forecast) Sep-20	(Forecast) Oct-20
Working Capital													
Total Anticipated Direct Cost of Gas		\$ 2,321,971	\$ 4,459,112	\$ 3,862,788	\$ 3,016,258	\$ 2,832,902	\$ 1,357,905	\$ 1,013,140	\$ 891,058	\$ 849,456	\$ 853,029	\$ 860,260	\$ 1,146,617
Working Capital Percentage		0.1441%	0.14%	0.13%	0.13%	0.13%	0.13%	0.13%	0.13%	0.13%	0.13%	0.13%	0.13%
Working Capital Allowance		\$ 3,346	\$ 6,426	\$ 5,037	\$ 3,933	\$ 3,694	\$ 1,771	\$ 1,321	\$ 1,162	\$ 1,108	\$ 1,112	\$ 1,122	\$ 1,495
Beginning Period Working Capital Balance		\$ (47,184)	\$ (44,037)	\$ (37,790)	\$ (32,893)	\$ (29,082)	\$ (25,496)	\$ (23,822)	\$ (22,593)	\$ (21,518)	\$ (20,493)	\$ (19,460)	\$ (18,413)
End of Period Working Capital Allowance		\$ (43,838)	\$ (37,611)	\$ (32,753)	\$ (28,959)	\$ (25,388)	\$ (23,725)	\$ (22,501)	\$ (21,431)	\$ (20,410)	\$ (19,381)	\$ (18,338)	\$ (16,918)
Interest		\$ (199)	\$ (179)	\$ (140)	\$ (122)	\$ (108)	\$ (97)	\$ (92)	\$ (87)	\$ (83)	\$ (79)	\$ (75)	\$ (70)
End of period with Interest		\$ (47,184)	\$ (44,037)	\$ (37,790)	\$ (32,893)	\$ (29,082)	\$ (25,496)	\$ (23,822)	\$ (22,593)	\$ (21,518)	\$ (20,493)	\$ (19,460)	\$ (18,413)
Bad Debt													
Projected Bad Debt	\$ -	\$ 14,220	\$ 7,458	\$ 24,377	\$ 1,585	\$ -	\$ -	\$ 8,419	\$ 25,257	\$ 25,257	\$ 33,676	\$ 25,257	\$ 25,257
Beginning Period Bad Debt Balance		\$ 32,931	\$ 47,326	\$ 55,008	\$ 79,651	\$ 81,554	\$ 81,877	\$ 82,201	\$ 90,962	\$ 116,629	\$ 142,398	\$ 176,704	\$ 202,710
End of Period Bad Debt Balance		\$ 47,151	\$ 54,784	\$ 79,385	\$ 81,236	\$ 81,554	\$ 81,877	\$ 90,620	\$ 116,219	\$ 141,886	\$ 176,073	\$ 201,960	\$ 227,967
Interest		\$ 175	\$ 223	\$ 266	\$ 318	\$ 323	\$ 324	\$ 342	\$ 410	\$ 512	\$ 630	\$ 749	\$ 852
End of Period Bad Debt Balance with Interest	\$ 32,931	\$ 47,326	\$ 55,008	\$ 79,651	\$ 81,554	\$ 81,877	\$ 82,201	\$ 90,962	\$ 116,629	\$ 142,398	\$ 176,704	\$ 202,710	\$ 228,819
Local Production and Storage Capacity		\$ 79,351	\$ 79,351	\$ 79,351	\$ 79,351	\$ 79,351	\$ 79,351	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Miscellaneous Overhead		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 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)	\$ (2,596,311)	\$ (2,581,355)	\$ (2,759,323)	\$ (3,378,628)	\$ (3,950,229)	\$ (3,444,350)	\$ (2,906,707)	\$ (2,354,108)	\$ (1,800,351)	\$ (1,254,956)
Net Costs - Revenues		\$ (276,395)	\$ 448,726	\$ 25,183	\$ (167,419)	\$ (607,181)	\$ (557,125)	\$ 520,486	\$ 550,188	\$ 562,990	\$ 561,963	\$ 551,430	\$ 490,430
Ending Balance before Interest		\$ (3,020,142)	\$ (2,584,024)	\$ (2,571,128)	\$ (2,748,774)	\$ (3,366,504)	\$ (3,935,753)	\$ (3,429,743)	\$ (2,894,162)	\$ (2,343,717)	\$ (1,792,145)	\$ (1,248,921)	\$ (764,526)
Average Balance		\$ (2,881,944)	\$ (2,808,387)	\$ (2,583,719)	\$ (2,665,064)	\$ (3,062,913)	\$ (3,657,190)	\$ (3,689,986)	\$ (3,169,256)	\$ (2,625,212)	\$ (2,073,127)	\$ (1,524,636)	\$ (1,009,741)
Interest Rate		5.25%	5.25%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%
Interest Expense		\$ (12,609)	\$ (12,287)	\$ (10,227)	\$ (10,549)	\$ (12,124)	\$ (14,476)	\$ (14,606)	\$ (12,545)	\$ (10,391)	\$ (8,206)	\$ (6,035)	\$ (3,997)
Ending Balance Incl Interest Expense	\$ (2,743,747)	\$ (3,032,750)	\$ (2,596,311)	\$ (2,581,355)	\$ (2,759,323)	\$ (3,378,628)	\$ (3,950,229)	\$ (3,444,350)	\$ (2,906,707)	\$ (2,354,108)	\$ (1,800,351)	\$ (1,254,956)	\$ (768,523)
Total Over/Under Collection Ending Balance	\$ (2,757,999)	\$ (3,029,461)	\$ (2,579,093)	\$ (2,534,597)	\$ (2,706,850)	\$ (3,322,246)	\$ (3,891,850)	\$ (3,375,980)	\$ (2,811,596)	\$ (2,232,204)	\$ (1,643,108)	\$ (1,070,659)	\$ (556,691)
Total Indirect Cost of Gas	\$ (2,757,999)	\$ 162,208	\$ 158,917	\$ 176,589	\$ 152,440	\$ 149,060	\$ 144,796	\$ 14,203	\$ 33,015	\$ 35,220	\$ 45,952	\$ 39,836	\$ 42,356
Total Cost of Gas	\$ (2,757,999)	\$ 2,326,904	\$ 4,460,754	\$ 3,882,102	\$ 3,011,423	\$ 2,824,687	\$ 1,345,426	\$ 1,008,524	\$ 905,255	\$ 865,857	\$ 880,163	\$ 881,278	\$ 1,170,155
Total Interest	\$ -	\$ (12,632)	\$ (12,242)	\$ (10,101)	\$ (10,353)	\$ (11,909)	\$ (14,250)	\$ (14,356)	\$ (12,222)	\$ (9,963)	\$ (7,655)	\$ (5,360)	\$ (3,214)

April 30th Target Balance	\$ (3,553,724)
April 30th Projected Balance	\$ (3,891,850)
Variance	\$ (338,127)

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Northern Utilities
NEW HAMPSHIRE (Over) / Undercollection Anal

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	Winter	Summer	Prior Period	Total
Working Capital				
Total Anticipated Direct Cost of Gas				\$ 23,464,495
Working Capital Percentage				
Working Capital Allowance	\$ 24,207	\$ 7,320	\$ (47,184)	\$ (15,657)
Beginning Period Working Capital Balance				
End of Period Working Capital Allowance				
Interest	\$ (845)	\$ (485)		\$ (1,330)
End of period with Interest				
Bad Debt				
Projected Bad Debt	\$ 47,640	\$ 143,122	\$ 32,931	\$ 223,693
Beginning Period Bad Debt Balance				
End of Period Bad Debt Balance				
Interest	\$ 1,630	\$ 3,496		\$ 5,126
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/L				
Beginning Balance Over/Under Collection				\$ (32,802,815)
Net Costs - Revenues				\$ 2,103,276
Ending Balance before Interest				\$ (30,699,539)
Average Balance				\$ (31,751,177)
Interest Rate				
Interest Expense				\$ (128,053)
Ending Balance Incl Interest Expense			\$ (2,743,747)	
Total Over/Under Collection Ending Balance				
Total Indirect Cost of Gas	\$ 944,011	\$ 210,581	\$ (2,757,999)	\$ (1,603,407)
Total Cost of Gas	\$ 17,851,295	\$ 5,711,231	\$ (2,757,999)	\$ 20,804,528
Total Interest	\$ (71,487)	\$ (52,770)		\$ (124,257)

Updated End of Period Balance ("Target Balance")
 (\$3,553,724)
 Line 92 - April

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

	Oct-19	Winter						Summer					
		(Forecast) Nov-19	(Forecast) Dec-19	(Forecast) Jan-20	(Forecast) Feb-20	(Forecast) Mar-20	(Forecast) Apr-20	(Forecast) May-20	(Forecast) Jun-20	(Forecast) Jul-20	(Forecast) Aug-20	(Forecast) Sep-20	(Forecast) Oct-20
Sales Revenues													
Volumes													
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
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
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
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
Rates													
Residential Heat & Non Heat CGA		\$0.5861	\$0.5626	\$0.5626	\$0.5626	\$0.5626	\$0.5626	\$0.2768	\$0.2768	\$0.2768	\$0.2768	\$0.2768	\$0.2768
Sales HLF Classes CGA		\$0.4950	\$0.4715	\$0.4715	\$0.4715	\$0.4715	\$0.4715	\$0.2443	\$0.2443	\$0.2443	\$0.2443	\$0.2443	\$0.2443
Sales LLF Classes CGA		\$0.6082	\$0.5847	\$0.5847	\$0.5847	\$0.5847	\$0.5847	\$0.3116	\$0.3116	\$0.3116	\$0.3116	\$0.3116	\$0.3116
Revenues													
Residential Heat & Non Heat		\$ (1,248,038)	\$ (1,773,618)	\$ (2,160,579)	\$ (1,815,484)	\$ (1,600,454)	\$ (890,943)	\$ (199,360)	\$ (137,938)	\$ (115,923)	\$ (117,784)	\$ (124,973)	\$ (265,536)
Sales HLF Classes		\$ (236,390)	\$ (333,357)	\$ (406,088)	\$ (341,226)	\$ (300,811)	\$ (167,456)	\$ (136,884)	\$ (94,711)	\$ (79,595)	\$ (80,873)	\$ (85,808)	\$ (182,322)
Sales LLF Classes		\$ (1,198,155)	\$ (1,705,312)	\$ (2,077,371)	\$ (1,745,566)	\$ (1,538,818)	\$ (856,631)	\$ (163,633)	\$ (113,219)	\$ (95,148)	\$ (96,676)	\$ (102,576)	\$ (217,950)
Total Sales		\$ (2,682,583)	\$ (3,812,287)	\$ (4,644,038)	\$ (3,902,275)	\$ (3,440,083)	\$ (1,915,030)	\$ (499,876)	\$ (345,868)	\$ (290,665)	\$ (295,333)	\$ (313,357)	\$ (665,808)
Gas Costs and Credits													
Demand Costs (net of Capacity Assignment)													
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
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
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
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
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
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)	\$ (1,205,050)
NUI Capacity Release		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
NUI AMA Rev & Cap. Release Subtotal		\$ (504,819)	\$ (504,819)	\$ (504,819)	\$ (504,819)	\$ (504,819)	\$ (504,819)	\$ (504,819)	\$ (504,819)	\$ (504,819)	\$ (504,819)	\$ (504,819)	\$ (504,819)
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)
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		\$ 765,373	\$ 765,373	\$ 765,373	\$ 765,373	\$ 765,373	\$ 659,371	\$ 597,329	\$ 597,329	\$ 597,329	\$ 597,329	\$ 597,329	\$ 597,329
NUI Commodity Costs													
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
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
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
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
Increase/(Decrease) NYMEX Price		\$ 0.24	\$ 0.15	\$ (0.00)	\$ (0.07)	\$ (0.15)	\$ 0.03	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Increase/(Decrease) in Pipeline Costs		\$ 174,256	\$ 89,244	\$ (1,674)	\$ (38,932)	\$ (95,222)	\$ 33,941	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
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
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%
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
NH Peaking Volumes		83,733	195,770	303,250	184,496	110,637	1,194						
NH Peaking Costs Modeled in Sendout		\$ 695,468	\$ 1,684,145	\$ 2,004,526	\$ 1,573,556	\$ 822,748	\$ 4,855						
Change in NYMEX Price		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -						
Change in Peaking Costs		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -						
NH Updated Peaking Costs		\$ 695,468	\$ 1,684,145	\$ 2,004,526	\$ 1,573,556	\$ 822,748	\$ 4,855						
NH Commodity Costs													
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
Storage		\$ 275,783	\$ 610,281	\$ 754,929	\$ 754,783	\$ 635,566	\$ 333	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
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
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
Inventory Finance Charge		\$ 325	\$ 523	\$ 659	\$ 544	\$ 463	\$ 219	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
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) / Undercollection

Sales Revenues				
Volumes	Winter	Summer	Prior Period	Total
Residential Heat & Non Heat				20,251,274
Sales HLF Classes				6,465,065
Sales LLF Classes				18,054,473
Total				44,770,812
Rates				
Residential Heat & Non Heat CGA				
Sales HLF Classes CGA				
Sales LLF Classes CGA				
Revenues				
Residential Heat & Non Heat				\$ (10,450,630)
Sales HLF Classes				\$ (2,445,519)
Sales LLF Classes				\$ (9,911,054)
Total Sales	\$ (20,396,296)	\$ (2,410,908)		\$ (22,807,204)
Gas Costs and Credits				
	Winter	Summer	Prior Period	Total
Demand Costs (net of Capacity Assignment)				
Pipeline	\$ 888,039	\$ 886,115		\$ 1,774,154
Storage	\$ 3,611,429	\$ 3,611,429		\$ 7,222,857
On-system Peaking	\$ 1,077,279	\$ 166,940		\$ 1,244,219
Off-System Peaking	\$ 1,948,405	\$ 1,948,405		\$ 3,896,809
Total Demand Costs	\$ 7,525,152	\$ 6,612,888		\$ 14,138,039
Asset Management and Capacity Release				
NUI AMA Revenue	\$ (7,230,300)	\$ (7,230,300)		\$ (14,460,600)
NUI Capacity Release				\$ -
NUI AMA Rev. & Cap. Release Subtotal				\$ -
NH AMA Revenue	\$ (3,028,914)	\$ (3,028,914)		\$ (6,057,829)
NH Capacity Release				\$ -
NH Total Asset Management and Capacity Release	\$ (3,028,914)	\$ (3,028,914)		\$ (6,057,829)
Re-entry Rate & Conversion Rate Revenue	\$ (10,000)	\$ -		\$ (10,000)
Net Demand Costs	\$ 4,486,237	\$ 3,583,973		\$ 8,070,211
NUI Commodity Costs				
NUI Total Pipeline Volumes				6,498,570
Pipeline Costs Modeled in Sendout™				\$ 16,719,003
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				\$ 6,249,769
NH Peaking Volumes				
NH Peaking Costs Modeled in Sendout				
Change in NYMEX Price				
Change in Peaking Costs				
NH Updated Peaking Costs				
NH Commodity Costs				
Pipeline				\$ 6,249,769
Storage				\$ 3,031,676
Peaking				\$ 6,800,855
Total Commodity Costs	\$ 14,165,623	\$ 1,916,677		\$ 16,082,300
Inventory Finance Charge				\$ 2,734
Total Anticipated Direct Cost of Gas	\$ 18,654,594	\$ 5,500,650		\$ 24,155,244

Updated End of Period Balance ("Target Balance")
 (\$3,553,724)
 Line 92 - April

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

	Oct-19	Winter						Summer					
		(Forecast) Nov-19	(Forecast) Dec-19	(Forecast) Jan-20	(Forecast) Feb-20	(Forecast) Mar-20	(Forecast) Apr-20	(Forecast) May-20	(Forecast) Jun-20	(Forecast) Jul-20	(Forecast) Aug-20	(Forecast) Sep-20	(Forecast) Oct-20
Working Capital													
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
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%
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
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
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
Interest		\$ (191)	\$ (152)	\$ (102)	\$ (52)	\$ (10)	\$ 17	\$ 33	\$ 45	\$ 56	\$ 66	\$ 77	\$ 90
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
Bad Debt													
Projected Bad Debt	\$ -	\$ 16,838	\$ 8,419	\$ -	\$ -	\$ -	\$ -	\$ 8,419	\$ 20,000	\$ 25,257	\$ 25,000	\$ 25,257	\$ 25,257
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
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
Interest		\$ 181	\$ 237	\$ 256	\$ 258	\$ 259	\$ 260	\$ 279	\$ 343	\$ 443	\$ 555	\$ 667	\$ 781
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
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)	\$ (2,816,011)	\$ (2,716,588)	\$ (2,905,603)	\$ (2,865,927)	\$ (3,292,119)	\$ (3,619,406)	\$ (3,120,855)	\$ (2,588,125)	\$ (2,039,436)	\$ (1,489,443)	\$ (947,860)
Net Costs - Revenues		\$ (60,129)	\$ 111,499	\$ (176,743)	\$ 52,274	\$ (412,750)	\$ (312,201)	\$ 513,263	\$ 545,190	\$ 558,790	\$ 557,696	\$ 546,903	\$ 480,810
Ending Balance before Interest		\$ (2,803,876)	\$ (2,704,512)	\$ (2,893,331)	\$ (2,853,329)	\$ (3,278,677)	\$ (3,604,320)	\$ (3,106,142)	\$ (2,575,664)	\$ (2,029,335)	\$ (1,481,740)	\$ (942,540)	\$ (467,050)
Average Balance		\$ (2,773,811)	\$ (2,760,262)	\$ (2,804,960)	\$ (2,879,466)	\$ (3,072,302)	\$ (3,448,219)	\$ (3,362,774)	\$ (2,848,259)	\$ (2,308,730)	\$ (1,760,588)	\$ (1,215,991)	\$ (707,455)
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		\$ (12,135)	\$ (12,076)	\$ (12,272)	\$ (12,598)	\$ (13,441)	\$ (15,086)	\$ (14,712)	\$ (12,461)	\$ (10,101)	\$ (7,703)	\$ (5,320)	\$ (3,095)
Ending Balance Incl Interest Expense	\$ (2,743,747)	\$ (2,816,011)	\$ (2,716,588)	\$ (2,905,603)	\$ (2,865,927)	\$ (3,292,119)	\$ (3,619,406)	\$ (3,120,855)	\$ (2,588,125)	\$ (2,039,436)	\$ (1,489,443)	\$ (947,860)	\$ (470,145)
Total Over/Under Collection Ending Balance	\$ (2,757,999)	\$ (2,806,337)	\$ (2,687,565)	\$ (2,864,014)	\$ (2,813,198)	\$ (3,230,876)	\$ (3,553,724)	\$ (3,043,578)	\$ (2,487,950)	\$ (1,911,113)	\$ (1,333,096)	\$ (763,089)	\$ (256,000)
Total Indirect Cost of Gas	\$ (2,757,999)	\$ 169,066	\$ 164,548	\$ 157,569	\$ 155,818	\$ 152,347	\$ 146,629	\$ 15,700	\$ 29,256	\$ 36,865	\$ 39,139	\$ 41,923	\$ 45,098
Total Cost of Gas	\$ (2,757,999)	\$ 2,634,245	\$ 3,931,060	\$ 4,467,588	\$ 3,953,092	\$ 3,022,404	\$ 1,592,183	\$ 1,010,022	\$ 901,496	\$ 867,502	\$ 873,350	\$ 883,364	\$ 1,172,897
Total Interest	\$ -	\$ (12,145)	\$ (11,992)	\$ (12,118)	\$ (12,392)	\$ (13,193)	\$ (14,809)	\$ (14,400)	\$ (12,074)	\$ (9,602)	\$ (7,081)	\$ (4,575)	\$ (2,224)

Northern Utilities
NEW HAMPSHIRE (Over) / Undercollection

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	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				\$ (31,145,119)
Net Costs - Revenues				\$ 2,404,601
Ending Balance before Interest				\$ (28,740,518)
Average Balance				\$ (29,942,818)
Interest Rate				\$ (131,000)
Interest Expense				\$ (131,000)
Ending Balance Incl Interest Expense			\$ (2,743,747)	
Total Over/Under Collection Ending Balance				
Total Indirect Cost of Gas	\$ 945,978	\$ 207,982	\$ (2,757,999)	\$ (1,604,040)
Total Cost of Gas	\$ 19,600,572	\$ 5,708,632	\$ (2,757,999)	\$ 22,551,204
Total Interest	\$ (76,648)	\$ (49,957)		\$ (126,605)