

NORTHERN UTILITIES, INC.
NEW HAMPSHIRE DIVISION
Calculation of the Projected Over or Under Collection of the
2020-2021 Summer Period Cost of Gas
DG 20-154
August 2021 Estimated

1	April 30, 2021 Target Balance	\$	(5,447,209)	Table 2, PG. 3, Line 108
2				
3	Forecasted firm therm sales 08/01/21-10/31/21			
4	Residential Heat & Non Heat		1,814,374	Table 2, PG. 2, Line 2
5	HLF Classes		1,006,511	Table 2, PG. 2, Line 3
6	LLF Classes		1,422,216	Table 2, PG. 2, Line 4
7				
8	Current recovery rate per therm			
9	Residential heat & non heat		\$0.4970	Table 2, PG. 1, Line 7
10	HLF classes		\$0.4501	Table 2, PG. 1, Line 8
11	LLF classes		\$0.5291	Table 2, PG. 1, Line 9
12				
13	Total	\$	(2,107,269)	(LN 4 * LN 9) + (LN 5 * LN 10) + (LN 6 * LN 11)
14				
15	Forecasted recovered costs at current rates 08/01/21 - 10/31/21	\$	(2,107,269)	LN 13
16	Actual recovered costs 05/01/2021 - 07/30/2021	\$	(1,892,221)	
17	Estimated total recovered costs 05/01/21 - 10/31/21	\$	(3,999,490)	LN 15 + LN 16
18				
19	Revised projected direct gas costs [1]	\$	9,385,937	Table 2, PG. 2, Line 69
20	Revised projected indirect gas costs [2]	\$	94,685	Table 2, PG. 4, Line 101
21	Revised total projected gas costs 05/01/21 - 10/31/21	\$	9,480,621	LN 19 + LN 20
22				
23	Projected October 31, 2021 Summer Season Balance	\$	33,922	LN 1 + LN 17 + LN 21
24				
25	Projected Winter Season Variance	\$	(53,446)	Table 2, Page 3, LN 111
26				
27	Projected End of Year Balance	\$	(19,524)	Table 2, Page 3, LN 99, October
28				
29				
30				
31	Projected Summer Season Imbalance Type		Under-collection	
32				
33	Projected End of Summer Season Variance		0.36%	LN 27 / LN 21
34				
35	Summer Season Over-collection Threshold (4% of Projected Gas Costs)		NA	(LN 21) * 4%
36				
37	Summer Season Under-collection Threshold (4% of Projected Gas Costs)	\$	379,225	LN 21 * 4%
38				
39	Over-collection Rate Adjustment Required		No	IF (ABS) LN 23 > (ABS) LN 37 Yes, ELSE No
40				
41	Under-collection Rate Adjustment Required		NA	NA

NOTES

[1] Reflects futures prices as of August 17, 2021

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

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

Sales Revenues	Winter							Summer					
	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	(Forecast) Aug-21	(Forecast) Sep-21	(Forecast) Oct-21
Volumes													
Residential Heat & Non Heat											418,643	455,783	939,948
Sales HLF Classes											232,239	252,842	521,430
Sales LLF Classes											328,157	357,270	736,788
Total											979,040	1,065,895	2,198,166
Rates													
Residential Heat & Non Heat CGA											\$0.4970	\$0.4970	\$0.4970
Sales HLF Classes CGA											\$0.4501	\$0.4501	\$0.4501
Sales LLF Classes CGA											\$0.5291	\$0.5291	\$0.5291
Revenues													
Residential Heat & Non Heat											\$ (208,066)	\$ (226,524)	\$ (467,154)
Sales HLF Classes											\$ (104,531)	\$ (113,804)	\$ (234,695)
Sales LLF Classes											\$ (173,628)	\$ (189,032)	\$ (389,835)
Total Sales		\$ (2,882,446)	\$ (4,259,355)	\$ (5,212,885)	\$ (4,765,411)	\$ (4,067,873)	\$ (2,198,500)	\$ (1,042,222)	\$ (283,020)	\$ (566,979)	\$ (486,225)	\$ (529,360)	\$ (1,091,684)
Gas Costs and Credits	Winter							Summer					
	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	(Forecast) Aug-21	(Forecast) Sep-21	(Forecast) Oct-21
Demand Costs (net of Capacity Assignment)													
Pipeline											\$ 457,604	\$ 457,604	\$ 457,604
Storage											\$ 630,827	\$ 630,827	\$ 630,827
On-system Peaking											\$ 16,338	\$ 16,338	\$ 16,338
Off-System Peaking											\$ 317,658	\$ 317,658	\$ 317,658
Total Demand Costs											\$ 1,422,428	\$ 1,422,428	\$ 1,422,428
Asset Management and Capacity Release													
NUI AMA Revenue											\$ (712,459)	\$ (712,459)	\$ (712,459)
NUI Capacity Release											\$ -	\$ -	\$ -
NUI AMA Rev & Cap. Release Subtotal											\$ (288,787)	\$ (288,787)	\$ (288,787)
NH AMA Revenue											\$ (288,787)	\$ (288,787)	\$ (288,787)
NH Capacity Release													
NH Total Asset Management and Capacity Release			\$ -								\$ (288,787)	\$ (288,787)	\$ (288,787)
CNG Expenses											\$ 9,972	\$ 9,972	\$ 9,972
Re-entry Rate & Conversion Rate Revenue								\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Demand Costs		\$ 1,156,589	\$ 1,106,649	\$ 1,207,069	\$ 1,252,487	\$ 1,172,433	\$ 1,285,264	\$ 958,073	\$ 1,137,933	\$ 1,070,137	\$ 1,143,612	\$ 1,143,612	\$ 1,143,612
NUI Commodity Costs													
NUI Total Pipeline Volumes											294,102	320,183	619,360
Pipeline Costs Modeled in Sendout™											\$ 782,079	\$ 832,473	\$ 1,619,126
NYMEX Price Used for Forecast											\$ 2,3450	\$ 2,3290	\$ 2,3540
NYMEX Price Used for Update											\$ 4,0440	\$ 3,8370	\$ 3,8510
Increase/(Decrease) NYMEX Price											\$ 1,70	\$ 1,51	\$ 1,50
Increase/(Decrease) in Pipeline Costs											\$ 499,679	\$ 482,836	\$ 927,182
Updated Pipeline Costs											\$ 1,281,758	\$ 1,315,309	\$ 2,546,307
New Hampshire Allocated Percentage											33.52%	33.54%	35.85%
NH Updated Pipeline Costs											\$ 429,596	\$ 441,164	\$ 912,886
NH Peaking Volumes											623	604	667
NH Peaking Costs Modeled in Sendout											\$ 4,153	\$ 3,992	\$ 4,396
Change in NYMEX Price %											\$ 1.70	\$ 1.51	\$ 1.50
Change in Peaking Costs											\$ 1,059.16	\$ 910.43	\$ 998.25
NH Updated Peaking Costs											\$ 5,212	\$ 4,903	\$ 5,395
NH Commodity Costs													
Pipeline											\$ 429,596	\$ 441,164	\$ 912,886
Storage											\$ -	\$ -	\$ -
Peaking											\$ 5,212	\$ 4,903	\$ 5,395
Off-System Gas Sales Margin													
New Hampshire Allocated Percentage													
NH Off-System Gas Sales Margin													
Total Commodity Costs		\$ 884,990	\$ 1,834,122	\$ 2,088,305	\$ 1,483,717	\$ 1,501,692	\$ 807,025	\$ 403,902	\$ 240,145	\$ 345,756	\$ 434,808	\$ 446,066	\$ 918,281
Inventory Finance Charge								\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Anticipated Direct Cost of Gas		\$ 2,041,578	\$ 2,940,771	\$ 3,295,374	\$ 2,736,205	\$ 2,674,125	\$ 2,092,289	\$ 1,361,975	\$ 1,378,077	\$ 1,415,893	\$ 1,578,420	\$ 1,589,679	\$ 2,061,893

Northern Utilities
NEW HAMPSHIRE (Over) / Undercollection Analysis

Sales Revenues					
Volumes		Winter	Summer	Prior Period	Total
Residential Heat & Non Heat			1,814,374		
Sales HLF Classes			1,006,511		
Sales LLF Classes			1,422,216		
Total		-	4,243,101		
Rates					
Residential Heat & Non Heat CGA					
Sales HLF Classes CGA					
Sales LLF Classes CGA					
Revenues					
Residential Heat & Non Heat			\$ (901,744)		
Sales HLF Classes			\$ (453,031)		
Sales LLF Classes			\$ (752,494)		
Total Sales		\$ (23,386,468)	\$ (3,999,490)		\$ (27,385,958)
Gas Costs and Credits					
		Winter	Summer	Prior Period	Total
Demand Costs (net of Capacity Assignment)					
Pipeline					
Storage					
On-system Peaking					
Off-System Peaking					
Total Demand Costs					
Asset Management and Capacity Release					
NUI AMA Revenue					
NUI Capacity Release					
NUI AMA Rev & Cap. Release Subtotal					
NH AMA Revenue					
NH Capacity Release					
NH Total Asset Management and Capacity Release		\$ -			
CNG Expenses					
Re-entry Rate & Conversion Rate Revenue			\$ -		
Net Demand Costs		\$ 7,180,491	\$ 6,596,979		\$ 13,777,471
NUI Commodity Costs					
NUI Total Pipeline Volumes					
Pipeline Costs Modeled in Sendout™					
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					
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					
Storage					
Peaking					
Off-System Gas Sales Margin					
New Hampshire Allocated Percentage					
NH Off-System Gas Sales Margin		\$ -			\$ -
Total Commodity Costs		\$ 8,599,851	\$ 2,788,957		\$ 11,388,808
Inventory Finance Charge					\$ -
Total Anticipated Direct Cost of Gas		\$ 15,780,342	\$ 9,385,937		\$ 25,166,279

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

	Winter							Summer						
	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	(Forecast) Aug-21	(Forecast) Sep-21	(Forecast) Oct-21	
Working Capital														
Total Anticipated Direct Cost of Gas		\$ 2,199,518	\$ 3,098,711	\$ 3,453,314	\$ 2,894,144	\$ 2,832,065	\$ 2,250,229	\$ 1,380,128	\$ 1,396,231	\$ 1,434,047	\$ 1,596,574	\$ 1,607,832	\$ 2,080,047	
Working Capital Percentage		0.0892%	0.0892%	0.09%	0.09%	0.09%	0.09%	0.09%	0.09%	0.09%	0.09%	0.09%	0.09%	
Working Capital Allowance		\$ 1,962	\$ 2,764	\$ 3,080	\$ 2,582	\$ 2,526	\$ 2,007	\$ 1,231	\$ 1,245	\$ 1,279	\$ 1,424	\$ 1,434	\$ 1,855	
Beginning Period Working Capital Balance		\$ (41,358)	\$ (39,505)	\$ (36,844)	\$ (33,859)	\$ (31,366)	\$ (28,921)	\$ (26,990)	\$ (25,830)	\$ (24,653)	\$ (23,439)	\$ (22,076)	\$ (20,700)	
End of Period Working Capital Allowance		\$ (39,396)	\$ (36,741)	\$ (33,764)	\$ (31,278)	\$ (28,840)	\$ (26,914)	\$ (25,759)	\$ (24,585)	\$ (23,374)	\$ (22,015)	\$ (20,642)	\$ (18,844)	
Interest		\$ (109)	\$ (103)	\$ (96)	\$ (88)	\$ (82)	\$ (76)	\$ (71)	\$ (68)	\$ (65)	\$ (62)	\$ (58)	\$ (54)	
End of period with Interest	\$ (41,358)	\$ (39,505)	\$ (36,844)	\$ (33,859)	\$ (31,366)	\$ (28,921)	\$ (26,990)	\$ (25,830)	\$ (24,653)	\$ (23,439)	\$ (22,076)	\$ (20,700)	\$ (18,898)	
Bad Debt														
Bad Debt Expense	\$ -	\$ 4,903	\$ 10,407	\$ 12,015	\$ 2,685	\$ 5,854	\$ 4,358	\$ 734	\$ 9,403	\$ 9,523	\$ 2,371	\$ 2,371	\$ 2,371	
Beginning Period Bad Debt Balance		\$ (7,408)	\$ (2,518)	\$ 7,896	\$ 19,949	\$ 22,692	\$ 28,615	\$ 33,056	\$ 33,880	\$ 43,388	\$ 53,041	\$ 55,559	\$ 58,084	
End of Period Bad Debt Balance		\$ (2,505)	\$ 7,889	\$ 19,911	\$ 22,634	\$ 28,546	\$ 32,973	\$ 33,790	\$ 43,283	\$ 52,911	\$ 55,412	\$ 57,930	\$ 60,455	
Interest		\$ (13)	\$ 7	\$ 38	\$ 58	\$ 69	\$ 83	\$ 91	\$ 104	\$ 130	\$ 147	\$ 154	\$ 161	
End of Period Bad Debt Balance with Interest	\$ (7,408)	\$ (2,518)	\$ 7,896	\$ 19,949	\$ 22,692	\$ 28,615	\$ 33,056	\$ 33,880	\$ 43,388	\$ 53,041	\$ 55,559	\$ 58,084	\$ 60,616	
Local Production and Storage Capacity		\$ 79,351	\$ 79,351	\$ 79,351	\$ 79,351	\$ 79,351	\$ 79,351	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Miscellaneous Overhead		\$ 78,589	\$ 78,589	\$ 78,589	\$ 78,589	\$ 78,589	\$ 78,589	\$ 18,154	\$ 18,154	\$ 18,154	\$ 18,154	\$ 18,154	\$ 18,154	
Gas Cost Other than Bad Debt and Working Capital Over/Under Collection														
Beginning Balance Over/Under Collection	\$ 1,191,118	\$ 1,191,118	\$ 510,492	\$ (650,342)	\$ (2,414,057)	\$ (4,294,395)	\$ (5,543,507)	\$ (5,506,722)	\$ (5,183,272)	\$ (4,082,591)	\$ (3,225,406)	\$ (2,122,288)	\$ (1,048,104)	
Net Costs - Revenues		\$ (682,928)	\$ (1,160,644)	\$ (1,759,571)	\$ (1,871,266)	\$ (1,235,808)	\$ 51,729	\$ 337,906	\$ 1,113,211	\$ 867,068	\$ 1,110,349	\$ 1,078,472	\$ 988,362	
Ending Balance before Interest		\$ 508,190	\$ (650,153)	\$ (2,409,913)	\$ (4,285,323)	\$ (5,530,203)	\$ (5,491,778)	\$ (5,168,815)	\$ (4,070,061)	\$ (3,215,523)	\$ (2,115,057)	\$ (1,043,816)	\$ (59,741)	
Average Balance		\$ 849,654	\$ (69,831)	\$ (1,530,127)	\$ (3,349,690)	\$ (4,912,299)	\$ (5,517,643)	\$ (5,337,769)	\$ (4,626,666)	\$ (3,649,057)	\$ (2,670,231)	\$ (1,583,052)	\$ (553,922)	
Interest Rate		3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	
Interest Expense		\$ 2,301	\$ (189)	\$ (4,144)	\$ (9,072)	\$ (13,304)	\$ (14,944)	\$ (14,456)	\$ (12,531)	\$ (9,883)	\$ (7,232)	\$ (4,287)	\$ (1,500)	
Ending Balance Incl Interest Expense	\$ 1,191,118	\$ 510,492	\$ (650,342)	\$ (2,414,057)	\$ (4,294,395)	\$ (5,543,507)	\$ (5,506,722)	\$ (5,183,272)	\$ (4,082,591)	\$ (3,225,406)	\$ (2,122,288)	\$ (1,048,104)	\$ (61,241)	
Total Over/Under Collection Ending Balance	\$ 1,142,352	\$ 468,468	\$ (679,290)	\$ (2,427,967)	\$ (4,303,069)	\$ (5,543,813)	\$ (5,500,655)	\$ (5,175,222)	\$ (4,063,856)	\$ (3,195,804)	\$ (2,088,806)	\$ (1,010,720)	\$ (19,524)	
Total Indirect Cost of Gas		\$ 166,983	\$ 170,826	\$ 168,833	\$ 154,104	\$ 153,004	\$ 149,369	\$ 5,681	\$ 16,308	\$ 19,138	\$ 14,803	\$ 17,768	\$ 20,987	
Total Cost of Gas	\$ 1,142,352	\$ 2,208,561	\$ 3,111,597	\$ 3,464,207	\$ 2,890,308	\$ 2,827,129	\$ 2,241,658	\$ 1,367,656	\$ 1,394,385	\$ 1,435,031	\$ 1,593,222	\$ 1,607,446	\$ 2,082,880	
Total Interest	\$ -	\$ 2,178	\$ (285)	\$ (4,202)	\$ (9,103)	\$ (13,316)	\$ (14,936)	\$ (14,437)	\$ (12,494)	\$ (9,817)	\$ (7,147)	\$ (4,192)	\$ (1,393)	

April 30th Target Balance	\$ (5,447,209)
April 30th Ending Balance	\$ (5,500,655)
Variance	\$ (53,446)

Northern Utilities
NEW HAMPSHIRE (Over) / Undercollection Analysis

	Winter	Summer	Prior Period	Total
Working Capital				
Total Anticipated Direct Cost of Gas				\$ 26,222,840
Working Capital Percentage				
Working Capital Allowance	\$ 14,921	\$ 8,469	\$ (41,358)	\$ (17,967)
Beginning Period Working Capital Balance				
End of Period Working Capital Allowance				
Interest	\$ (554)	\$ (378)		\$ (931)
End of period with Interest				
Bad Debt				
Bad Debt Expense	\$ 40,222	\$ 26,773	\$ (7,408)	\$ 59,587
Beginning Period Bad Debt Balance				
End of Period Bad Debt Balance				
Interest	\$ 242	\$ 786		\$ 1,028
End of Period Bad Debt Balance with Interest				
Local Production and Storage Capacity	\$ 476,106	\$ -		\$ 476,106
				\$ -
Miscellaneous Overhead	\$ 471,532	\$ 108,923		\$ 580,455
Gas Cost Other than Bad Debt and Working Capital Over/L				
Beginning Balance Over/Under Collection				
Net Costs - Revenues	\$ (6,658,488)	\$ 5,495,370		\$ (1,163,118)
Ending Balance before Interest				
Average Balance				
Interest Rate				
Interest Expense	\$ (39,352)	\$ (49,889)		\$ (89,241)
Ending Balance Incl Interest Expense				
Total Over/Under Collection Ending Balance				
Total Indirect Cost of Gas	\$ 963,119	\$ 94,685	\$ 1,142,352	\$ 2,200,156
Total Cost of Gas	\$ 16,743,461	\$ 9,480,621	\$ 1,142,352	\$ 27,366,434
Total Interest	\$ (39,664)	\$ (49,481)		\$ (89,144)