



September 26, 2018

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 17-144
September 2018 Monthly Cost of Gas Report

Dear Director Howland:

Pursuant to Commission Order No. 26,068 in Docket DG 17-144, enclosed is Northern Utilities - New Hampshire Division's ("Northern" or the "Company") current calculation of its Cost of Gas (COG) Clause projected over or under-collection of gas costs for the 2018 summer season.

The calculation, which reflects the Company's actual May 1, 2018 balance, actual costs and revenues for May through August 2018, and updated NYMEX prices produces an anticipated under-recovery of gas costs for the 2018 summer period. As a result, Northern is increasing its projected cost of gas by \$190,000 or 3.1% for the 2018 summer season.

Support for this decision is provided in the attached summary and tables. Accordingly, pursuant to its tariff, the Company has enclosed for filing the following Tariff Pages reflecting an increase in its COG Rates:

First Revised Page 43,
First Revised Page 86,
First Revised Page 88.

These Tariff Pages are issued September 26, 2018 to be effective on October 1, 2018. Red-line versions of these Tariff Pages are also enclosed.

The impact of the September 1 change in the COG Rate on the typical residential heating customer for the 2018 summer season will be \$2.04 or 0.8 percent more than the summer period bill at the Company's current COG rate.

George H. Simmons
Manager Regulatory Services

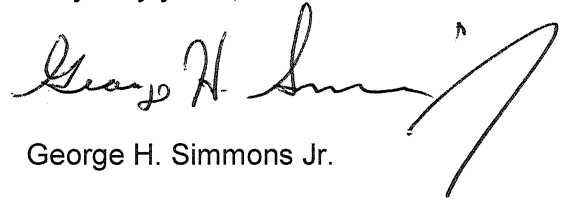
6 Liberty Lane West
Hampton, NH 03842

Phone: 603-773-6534
Fax: 603-773-6734

simmons@unitil.com

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

Very truly yours,

A handwritten signature in black ink, appearing to read "George H. Simmons Jr.", with a large, stylized flourish extending from the end of the signature.

George H. Simmons Jr.

Enclosures

cc: D. Maurice Kreis, Consumer Advocate

CALCULATION OF FIRM SALES COST OF GAS RATE

Period Covered: May 1, 2018 - October 31, 2018

(Col 1)	(Col 2)	(Col 3)
Total Anticipated Direct Cost of Gas	\$3,112,112	
Projected Prorated Sales (05/01/18 - 10/31/18)	7,869,571	
Direct Cost of Gas Rate		\$0.3955 per therm
Demand Cost of Gas Rate	\$963,258	\$0.1224 per therm
Commodity Cost of Gas Rate	<u>\$2,148,854</u>	<u>\$0.2731</u> per therm
Total Direct Cost of Gas Rate	\$3,112,112	\$0.3955 per therm
Total Anticipated Indirect Cost of Gas	\$15,364	
Projected Prorated Sales (05/01/18 - 10/31/18)	7,869,571	
Indirect Cost of Gas		\$0.0020 per therm
TOTAL PERIOD AVERAGE COST OF GAS		\$0.3975 per therm
Period ending under-collection to be recovered	\$190,000	
Projected sales (10/01/18 - 10/31/18)	2,148,096	
Per unit change in Cost of Gas (10/01/18 - 10/31/18)	\$0.0885	

Under-collection w/o rate adjustment as contained in NUI's COG Report dated September 26, 2018

RESIDENTIAL COST OF GAS RATE -10/01/18	COGwr	\$0.4860 per therm
	Maximum (COG+25%)	\$0.4969

RESIDENTIAL COST OF GAS RATE - 5/01/18	\$0.3975
CHANGE IN PER UNIT COST	\$0.0885
RESIDENTIAL COST OF GAS RATE - 10/01/18	\$0.4860

COM/IND LOW WINTER USE COST OF GAS RATE - 10/01/18	COGwl	\$0.4428 per therm
	Maximum (COG+25%)	\$0.4429

COM/IND LOW WINTER USE COST OF GAS RATE - 5/01/18	\$0.3543
CHANGE IN PER UNIT COST	\$0.0885
COM/IND LOW WINTER USE COST OF GAS RATE - 10/01/18	\$0.4428

COM/IND HIGH WINTER USE COST OF GAS RATE - 10/01/18	COGwh	\$0.5139 per therm
	Maximum (COG+25%)	\$0.5318

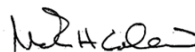
COM/IND LOW WINTER USE COST OF GAS RATE - 05/01/18	\$0.4254
CHANGE IN PER UNIT COST	\$0.0885
COM/IND LOW WINTER USE COST OF GAS RATE - 10/01/18	\$0.5139

Issued: September 26, 2018

Effective Date: October 1, 2018

*:Authorized by NHPUC Order No. 26,129 in Docket No. DG 17-070, dated May 2, 2018

Authorized by NHPUC Order No. 26,068 in Docket No. DG 17-144, dated October 31, 2017

Issued By: 
Senior Vice President

NORTHERN UTILITIES - NEW HAMPSHIRE DIVISION
SUMMER SEASON RESIDENTIAL RATES

Summer Season May 2018 - October 2018		Tariff Rates	Total Delivery Rates (Includes LDAC)	Total Billed Rates Tariff Rates, LDAC Plus Cost of Gas
Residential Heating	<u>Tariff Rate R 5:</u>			
	Monthly Customer Charge	\$21.36	\$21.36	\$21.36
	First 50 therms	\$0.5870	\$0.6446	\$1.1306
	All usage over 50 therms	\$0.5870	\$0.6446	\$1.1306
	LDAC	\$0.0576		
	<u>Gas Cost Adjustment:</u>			
	Cost of Gas*	\$0.4860		
Residential Heating Low Income	<u>Tariff Rate R 10:</u>			
	Monthly Customer Charge	\$8.54	\$8.54	\$8.54
	First 50 therms	\$0.2348	\$0.2924	\$0.7784
	All usage over 50 therms	\$0.2348	\$0.2924	\$0.7784
	LDAC	\$0.0576		
	<u>Gas Cost Adjustment:</u>			
	Cost of Gas*	\$0.4860		
Residential Non-Heating	<u>Tariff Rate R 6:</u>			
	Monthly Customer Charge	\$21.36	\$21.36	\$21.36
	First 10 therms	\$0.6227	\$0.6803	\$1.1663
	All usage over 10 therms	\$0.6227	\$0.6803	\$1.1663
	LDAC	\$0.0576		
	<u>Gas Cost Adjustment:</u>			
	Cost of Gas*	\$0.4860		

Issued: September 26, 2018

Effective: With Service Rendered On and After October 1, 2018

Authorized by NHPUC Order No. 26,129 in Docket No. DG 17-070, dated May 2, 2018

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Issued by:



Senior Vice President

NORTHERN UTILITIES - NEW HAMPSHIRE DIVISION
SUMMER SEASON C&I RATES

Summer Season May 2018 - October 2018		Tariff Rates	Total Delivery Rates (Includes LDAC)	Total Billed Rates Tariff Rates, LDAC Plus Cost of Gas
C&I Low Annual/High Winter	<u>Tariff Rate G 40:</u>			
	Monthly Customer Charge	\$72.26	\$72.26	\$72.26
	First 75 therms	\$0.1795	\$0.2104	\$0.7243
	All usage over 75 therms	\$0.1795	\$0.2104	\$0.7243
	LDAC	\$0.0309		
Gas Cost Adjustment:				
Cost of Gas*		\$0.5139		
C&I Low Annual/Low Winter	<u>Tariff Rate G 50:</u>			
	Monthly Customer Charge	\$72.26	\$72.26	\$72.26
	First 75 therms	\$0.1795	\$0.2104	\$0.6532
	All usage over 75 therms	\$0.1795	\$0.2104	\$0.6532
	LDAC	\$0.0309		
Gas Cost Adjustment:				
Cost of Gas*		\$0.4428		
C&I Medium Annual/High Winter	<u>Tariff Rate G 41:</u>			
	Monthly Customer Charge	\$214.26	\$214.26	\$214.26
	All usage	\$0.1824	\$0.2133	\$0.7272
	LDAC	\$0.0309		
	Gas Cost Adjustment:			
Cost of Gas*		\$0.5139		
C&I Medium Annual/Low Winter	<u>Tariff Rate G 51:</u>			
	Monthly Customer Charge	\$214.26	\$214.26	\$214.26
	First 1,000 therms	\$0.1287	\$0.1596	\$0.6024
	All usage over 1,000 therms	\$0.1046	\$0.1355	\$0.5783
	LDAC	\$0.0309		
Gas Cost Adjustment:				
Cost of Gas*		\$0.4428		
C&I High Annual/High Winter	<u>Tariff Rate G 42:</u>			
	Monthly Customer Charge	\$1,285.55	\$1,285.55	\$1,285.55
	All usage	\$0.1161	\$0.1470	\$0.6609
	LDAC	\$0.0309		
	Gas Cost Adjustment:			
Cost of Gas*		\$0.5139		
C&I High Annual/Low Winter	<u>Tariff Rate G 52:</u>			
	Monthly Customer Charge	\$1,285.55	\$1,285.55	\$1,285.55
	All usage	\$0.0762	\$0.1071	\$0.5499
	LDAC	\$0.0309		
	Gas Cost Adjustment:			
Cost of Gas*		\$0.4428		

Issued: September 26, 2018

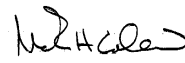
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Commodity Cost of Gas Rate	\$2,148,854	\$0.2731 per therm
Total Direct Cost of Gas Rate	\$3,112,112	\$0.3955 per therm
Total Anticipated Indirect Cost of Gas	\$15,364	
Projected Prorated Sales (05/01/18 - 10/31/18)	7,869,571	
Indirect Cost of Gas		\$0.0020 per therm
TOTAL PERIOD AVERAGE COST OF GAS		\$0.3975 per therm

<u>Period ending under-collection to be recovered</u>	<u>\$190,000</u>
<u>Projected sales (10/01/18 - 10/31/18)</u>	<u>2,148,096</u>
<u>Per unit change in Cost of Gas (10/01/18 - 10/31/18)</u>	<u>\$0.0885</u>
<u>Under-collection w/o rate adjustment as contained in NUI's COG Report dated September 26, 2018</u>	

RESIDENTIAL COST OF GAS RATE -05/01/18 10/01/2018	COGwr	\$0.3975	\$0.4860 per therm
	Maximum (COG+25%)		\$0.4969
<u>RESIDENTIAL COST OF GAS RATE - 05/01/18</u>			<u>\$0.3975</u>
<u>CHANGE IN PER UNIT COST</u>			<u>\$0.0885</u>
<u>RESIDENTIAL COST OF GAS RATE - 10/01/18</u>			<u>\$0.4860</u>

COM/IND LOW WINTER USE COST OF GAS RATE - 05/01/18 10/01/2018	COGwl	\$0.3543	\$0.4428 per therm
	Maximum (COG+25%)		\$0.4429
<u>COM/IND LOW WINTER USE COST OF GAS RATE - 5/01/18</u>			<u>\$0.3543</u>
<u>CHANGE IN PER UNIT COST</u>			<u>\$0.0885</u>
<u>COM/IND LOW WINTER USE COST OF GAS RATE - 10/01/18</u>			<u>\$0.4428</u>

C&I HLF DEMAND COSTS ALLOCATED PER SMBA	\$125,955
PLUS: RESIDENTIAL DEMAND REALLOCATION TO C&I HLF	\$13,376
C&I HLF TOTAL ADJUSTED DEMAND COSTS	\$139,331
C&I HLF PROJECTED PRORATED SALES (05/01/18 - 10/31/18)	1,757,926
DEMAND COST OF GAS RATE	\$0.0793
C&I HLF COMMODITY COSTS ALLOCATED PER SMBA	\$480,017
PLUS: RESIDENTIAL COMMODITY REALLOCATION TO C&I HLF	(\$56)
C&I HLF TOTAL ADJUSTED COMMODITY COSTS	\$479,961
C&I HLF PROJECTED PRORATED SALES (05/01/18 - 10/31/18)	1,757,926
COMMODITY COST OF GAS RATE	\$0.2730
INDIRECT COST OF GAS	\$0.0020
TOTAL C&I HLF COST OF GAS RATE	\$0.3543

COM/IND HIGH WINTER USE COST OF GAS RATE -05/01/18 10/01/2018	COGwh	\$0.4254	\$0.5139 per therm
	Maximum (COG+25%)		\$0.5318
<u>COM/IND HIGH WINTER USE COST OF GAS RATE - 05/01/18</u>			<u>\$0.4254</u>
<u>CHANGE IN PER UNIT COST</u>			<u>\$0.0885</u>
<u>COM/IND HIGH WINTER USE COST OF GAS RATE - 10/01/18</u>			<u>\$0.5139</u>

C&I LLF COMMODITY COSTS ALLOCATED PER SMBA	\$368,794
PLUS RESIDENTIAL DEMAND REALLOCATION TO C&I LLF	\$39,165
C&I LLF TOTAL ADJUSTED DEMAND COSTS	\$407,959
C&I LLF PROJECTED PRORATED SALES (05/01/18 - 10/31/18)	2,713,210
DEMAND COST OF GAS RATE	\$0.1504
C&I LLF COMMODITY COSTS ALLOCATED PER SMBA	\$740,865
PLUS: RESIDENTIAL COMMODITY REALLOCATION TO C&I LLF	(\$85)
C&I LLF TOTAL ADJUSTED COMMODITY COSTS	\$740,780
C&I LLF PROJECTED PRORATED SALES (05/01/18 - 10/31/18)	2,713,210
COMMODITY COST OF GAS RATE	\$0.2730
INDIRECT COST OF GAS	\$0.0020
TOTAL C&I LLF COST OF GAS RATE	\$0.4254

Issued: May 9, September 26, 2018

Effective Date: May 1, October 1, 2018

*: Authorized by NHPUC Order No. 26,129 in Docket No. DG 17-070, dated May 2, 2018

Authorized by NHPUC Order No. 26,068 in Docket No. DG 17-144, dated October 31, 2017

Issued By:

Senior Vice President

NORTHERN UTILITIES - NEW HAMPSHIRE DIVISION
SUMMER SEASON RESIDENTIAL RATES

Summer Season May 2018 - October 2018		Tariff Rates	Total Delivery Rates (Includes LDAC)	Total Billed Rates Tariff Rates, LDAC Plus Cost of Gas	
Residential Heating	<u>Tariff Rate R 5:</u>				
	Monthly Customer Charge	\$21.36	\$21.36		\$21.36
	First 50 therms	\$0.5870	\$0.6446	\$1.0421	<u>\$1.1306</u>
	All usage over 50 therms	\$0.5870	\$0.6446	\$1.0421	<u>\$1.1306</u>
	<u>LDAC</u>	\$0.0576			
<u>Gas Cost Adjustment:</u>					
Cost of Gas*		\$0.3975 <u>\$0.4860</u>			
Residential Heating Low income	<u>Tariff Rate R 10:</u>				
	Monthly Customer Charge	\$8.54	\$8.54		\$8.54
	First 50 therms	\$0.2348	\$0.2924	\$0.6899	<u>\$0.7784</u>
	All usage over 50 therms	\$0.2348	\$0.2924	\$0.6899	<u>\$0.7784</u>
	<u>LDAC</u>	\$0.0576			
<u>Gas Cost Adjustment:</u>					
Cost of Gas*		\$0.3975 <u>\$0.4860</u>			
Residential Non-Heating	<u>Tariff Rate R 6:</u>				
	Monthly Customer Charge	\$21.36	\$21.36		\$21.36
	First 10 therms	\$0.6227	\$0.6803	\$1.0778	<u>\$1.1663</u>
	All usage over 10 therms	\$0.6227	\$0.6803	\$1.0778	<u>\$1.1663</u>
	<u>LDAC</u>	\$0.0576			
<u>Gas Cost Adjustment:</u>					
Cost of Gas*		\$0.3975 <u>\$0.4860</u>			

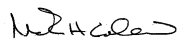
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NORTHERN UTILITIES - NEW HAMPSHIRE DIVISION
SUMMER SEASON C&I RATES

Summer Season May 2018 - October 2018	Tariff Rates	Total Delivery Rates (Includes LDAC)	Total Billed Rates Tariff Rates, LDAC Plus Cost of Gas
C&I Low Annual/High Winter <u>Tariff Rate G 40:</u> Monthly Customer Charge First 75 therms All usage over 75 therms LDAC <u>Gas Cost Adjustment:</u> Cost of Gas*	\$72.26 \$0.1795 \$0.1795 \$0.0309 \$0.4254 \$0.5139	\$72.26 \$0.2104 \$0.2104	\$72.26 \$0.6358 \$0.7243 \$0.6358 \$0.7243
C&I Low Annual/Low Winter <u>Tariff Rate G 50:</u> Monthly Customer Charge First 75 therms All usage over 75 therms LDAC <u>Gas Cost Adjustment:</u> Cost of Gas*	\$72.26 \$0.1795 \$0.1795 \$0.0309 \$0.3543 \$0.4428	\$72.26 \$0.2104 \$0.2104	\$72.26 \$0.5647 \$0.6532 \$0.5647 \$0.6532
C&I Medium Annual/High Winter <u>Tariff Rate G 41:</u> Monthly Customer Charge All usage LDAC <u>Gas Cost Adjustment:</u> Cost of Gas*	\$214.26 \$0.1824 \$0.0309 \$0.4254 \$0.5139	\$214.26 \$0.2133	\$214.26 \$0.6387 \$0.7272
C&I Medium Annual/Low Winter <u>Tariff Rate G 51:</u> Monthly Customer Charge First 1,000 therms All usage over 1,000 therms LDAC <u>Gas Cost Adjustment:</u> Cost of Gas*	\$214.26 \$0.1287 \$0.1046 \$0.0309 \$0.3543 \$0.4428	\$214.26 \$0.1596 \$0.1355	\$214.26 \$0.5139 \$0.6024 \$0.4898 \$0.5783
C&I High Annual/High Winter <u>Tariff Rate G 42:</u> Monthly Customer Charge All usage LDAC <u>Gas Cost Adjustment:</u> Cost of Gas*	\$1,285.55 \$0.1161 \$0.0309 \$0.4254 \$0.5139	\$1,285.55 \$0.1470	\$1,285.55 \$0.5724 \$0.6609
C&I High Annual/Low Winter <u>Tariff Rate G 52:</u> Monthly Customer Charge All usage LDAC <u>Gas Cost Adjustment:</u> Cost of Gas*	\$1,285.55 \$0.0762 \$0.0309 \$0.3543 \$0.4428	\$1,285.55 \$0.1071	\$1,285.55 \$0.4614 \$0.5499

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Senior Vice President

New Hampshire Monthly Cost of Gas Report

Summer Period

September 2018 Summary

The objective of the Summer Period Monthly Cost of Gas (“COG”) analysis is to determine if COG rates need to be adjusted in order to minimize the October 31, 2018 expected end of year balance. This is done by determining if the October 31, 2018 Summer Season balance exceeds the threshold for a rate change and, if exceeded, the rate change would lower the expected end of year balance.

As shown on Table 1, Line 24, the projected end of Summer Period balance is an under-collection of \$420,682. This balance is above the 4% Summer Period under-collection threshold of \$245,817 (Line 36) for requiring a change in COG rates. In addition, the winter season variance (Line 26) is also an under-collection. Therefore, a COG rate change is required in order to reduce the end of year balance.

Of the \$420,682 projected under-collection, Northern will increase rates to recover \$190,000 due to the 25% limit for a rate increase above the initially approved COG rates.

Support for the projected end of Summer Period and end of year balances is provided in Table 2.

NORTHERN UTILITIES, INC.
NEW HAMPSHIRE DIVISION
Calculation of the Projected Over or Under Collection of the
2017-2018 Summer Period Cost of Gas
DG 17-144
September 2018 Estimated

1	Target under/(over) collection as of 05/01/18	(\$2,708,745)	Table 2, PG. 3, Line 107
2			
3	Forecasted firm therm sales 09/01/2018 - 10/31/2018		
4	Residential Heat & Non Heat	1,370,844	Table 2, PG. 2, Line 2
5	HLF Classes	709,103	Table 2, PG. 2, Line 3
6	LLF Classes	1,094,441	Table 2, PG. 2, Line 4
7			
8	Current recovery rate per therm		
9	Residential heat & non heat	\$0.3975	Table 2, PG. 1, Line 7
10	HLF classes	\$0.3543	Table 2, PG. 1, Line 8
11	LLF classes	\$0.4254	Table 2, PG. 1, Line 9
12			
13	Total	\$ (1,261,721)	(LN 4 * Ln 9) + (LN 5 * LN 10) + (LN 6 * LN 11)
14			
15	Forecasted recovered costs at current rates 09/01/2018 - 10/31/2018	\$ (1,261,721)	LN 13
16	Actual recovered costs at current rates 05/01/2018 - 08/31/2018	\$ (1,754,270)	Table 2, PG. 1, Line 14
17	Estimated total recovered costs 05/01/18 - 10/31/18	\$ (3,015,991)	LN 15 + LN 16
18			
19	Revised projected direct gas costs 05/01/18 - 10/31/18 [1]	\$ 5,907,943	Table 2, PG. 2, Line 71
20	Revised projected indirect gas costs 05/01/18 - 10/31/18 [2]	\$ 237,474	Table 2, PG. 4, Line 101
21			
22	Total Projected Summer Period Gas Costs	\$ 6,145,417	LN 19 + LN 20
23			
24	Projected October 31, 2018 Summer Season Balance	\$420,682	LN 1 + Ln 17 + LN 19 + LN 20
25			
26	Winter Season Variance	\$ 550,810	Table 2, PG 3, LN 111
27			
28	Projected October 31, 2018 End of Year Balance	\$ 971,492	LN 24 +LN 26; Table 2, PG. 3, LN 99
29			
30	Projected October 31, 2018 Summer Season Balance	\$ 420,682	LN 24
31			
32	Projected Summer Period Imbalance Type	Under-collection	
33			
34	Projected Summer Period Imbalance %	6.85%	LN 24 / LN 22
35			
36	Summer Season Under-collection Threshold (4% of Projected Costs)	\$ 245,817	LN 22 * 4%
37			
38	Summer Season Over-collection Threshold (4% plus Winter Balance)	\$ (796,627)	((ABS) LN 26 + (ABS) LN 36)*-1
39			
40	Under-collection Rate Adjustment Required	Yes	IF (ABS) LN 30< (ABS) LN 36, No ELSE Yes
41			
42	Over-collection Rate Adjustment Required	No	IF (ABS) LN 30< (ABS) LN 38, No ELSE Yes

NOTES

[1] Reflects futures prices as of September 24, 2018

[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

		Winter						Summer					
Sales Revenues												(Forecast)	(Forecast)
Volumes	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18
Residential Heat & Non Heat												443,199	927,645
Sales HLF Classes												229,256	479,847
Sales LLF Classes												353,837	740,604
Total												1,026,291	2,148,096
Rates													
Residential Heat & Non Heat CGA												\$0.3975	\$0.3975
Sales HLF Classes CGA												\$0.3543	\$0.3543
Sales LLF Classes CGA												\$0.4254	\$0.4254
Revenues													
Residential Heat & Non Heat												\$ (176,172)	\$ (368,739)
Sales HLF Classes												\$ (81,225)	\$ (170,010)
Sales LLF Classes							\$ -					\$ (150,522)	\$ (315,053)
Total Sales		\$ (1,965,771)	\$ (5,152,151)	\$ (6,668,252)	\$ (4,898,752)	\$ (5,053,884)	\$ (2,990,600)	\$ (774,739)	\$ (327,003)	\$ (300,722)	\$ (351,805)	\$ (407,919)	\$ (853,802)
		Winter						Summer					
Gas Costs and Credits												(Forecast)	(Forecast)
	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18
Net Demand Costs (Net of Injection Fees & Cap. Assign.)													
Pipeline										\$ 278,965	\$ 278,965	\$ 278,020	\$ 278,020
Storage										\$ 410,369	\$ 410,369	\$ 410,369	\$ 410,369
Peaking										\$ 42,108	\$ 42,108	\$ 42,108	\$ 42,108
Total Demand Costs							\$ 667,322	\$ 730,457		\$ 731,442	\$ 731,442	\$ 730,497	\$ 730,497
Asset Management and Capacity Release													
NUI AMA Revenue										\$ (394,079)	\$ (394,079)	\$ (394,079)	\$ (394,079)
NUI Capacity Release										\$ -	\$ -	\$ -	\$ -
NUI AMA Rev & Cap. Release Subtotal										\$ (394,079)	\$ (394,079)	\$ (394,079)	\$ (394,079)
NH AMA Revenue										\$ (175,799)	\$ (175,799)	\$ (175,799)	\$ (175,799)
NH Capacity Release										\$ -	\$ -	\$ -	\$ -
NH Total Asset Management and Capacity Release										\$ (175,799)	\$ (175,799)	\$ (175,799)	\$ (175,799)
PNGTS Refund									\$ -	\$ -	\$ -	\$ -	\$ -
Net Demand Costs		\$ 749,069	\$ 854,867	\$ 927,541	\$ 1,087,774	\$ 969,649	\$ 667,322	\$ 730,457	\$ 705,866	\$ 728,162	\$ 723,391	\$ 554,698	\$ 554,698
NUI Commodity Costs													
NUI Total Pipeline Volumes												306,404	614,624
Pipeline Costs Modeled in Sendout™												\$ 800,369	\$ 1,648,370
NYMEX Price Used for Forecast												\$ 2.9200	\$ 2.9400
NYMEX Price Used for Update												\$ 2.8950	\$ 3.0380
Increase/(Decrease) NYMEX Price												\$ (0.02)	\$ 0.10
Increase/(Decrease) in Pipeline Costs												\$ (7,660)	\$ 60,233
Updated Pipeline Costs												\$ 792,709	\$ 1,708,603
Interruptible Volumes - NH												0	0
Average Supply Cost (\$/MMBtu)												\$ 2.59	\$ 2.78
Interruptible Cost - NH												\$ -	\$ -
Total Updated Pipeline Costs												\$ 792,709	\$ 1,708,603
New Hampshire Allocated Percentage												33.68%	35.26%
NH Updated Pipeline Costs												\$ 266,992	\$ 602,505
Hedging (Gain)/Loss Estimate													
NYMEX Options Contracts													
Hedging Expenses													
NYMEX Option Strike Price													
NYMEX Price Used for Forecast													
Strike Price Hit													
Option Hedging Gain (Credit)													
Tota Northern Hedging Net Cost													
New Hampshire Allocated Percentage													
NH Futures Hedging Net Cost										\$ -		\$ -	\$ -
NH Commodity Costs													
Pipeline Excl Hedging										\$ -		\$ 266,992	\$ 602,505
Hedging (Gain)/Loss Estimate										\$ -		\$ -	\$ -
Storage										\$ -		\$ -	\$ -
Peaking										\$ -		\$ -	\$ -
Total Commodity Costs		\$ 1,136,399	\$ 3,718,933	\$ 5,675,647	\$ 3,529,056	\$ 2,624,112	\$ 1,268,509	\$ 399,763	\$ 196,852	\$ 200,283	\$ 234,450	\$ 271,712	\$ 607,610
Inventory Finance Charge								\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Anticipated Direct Cost of Gas		\$ 1,885,467	\$ 4,573,800	\$ 6,603,187	\$ 4,616,830	\$ 3,593,760	\$ 1,935,832	\$ 1,130,221	\$ 902,718	\$ 928,445	\$ 957,841	\$ 826,410	\$ 1,162,308

Northern Utilities

NEW HAMPSHIRE (Over) / Undercollection / Analysis, Balances & Interest Calculation

	Sales Revenues			
1	Volumes	Winter	Summer	Prior Period
2	Residential Heat & Non Heat	-	1,370,844	
3	Sales HLF Classes	-	709,103	
4	Sales LLF Classes	-	1,094,441	
5	Total	-	3,174,388	
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	-	(544,910)	
12	Sales HLF Classes	-	(251,235)	
13	Sales LLF Classes	-	(465,575)	
14	Total Sales	(26,729,410)	(3,015,991)	
15				
16				
17	Gas Costs and Credits			
18		Winter	Summer	Total
19	Net Demand Costs (Net of Injection Fees & Cap. Assn)			
20	Pipeline	-	1,113,969	
21	Storage	-	1,641,476	
22	Peaking	-	168,433	
23	Total Demand Costs	667,322	3,654,336	
24				
25	Asset Management and Capacity Release			
26	NUI AMA Revenue	-	(1,576,316)	\$ (1,576,316)
27	NUI Capacity Release	-	-	\$ -
28	NUI AMA Rev & Cap. Release Subtotal	-	(1,576,316)	\$ (1,576,316)
29	NH AMA Revenue	-	(703,195)	\$ (703,195)
30	NH Capacity Release	-	-	\$ -
31	NH Total Asset Management and Capacity Release	\$ -	\$ (703,195)	\$ (703,195)
32				
33	PNGTS Refund	\$ (1,387,970)	\$ -	\$ -
34				
35	Net Demand Costs	\$ (720,648)	\$ 2,951,141	\$ 3,618,464
36				
37	NUI Commodity Costs			
38	NUI Total Pipeline Volumes			921,028
39	Pipeline Costs Modeled in Sendout™			\$ 2,448,739
40	NYMEX Price Used for Forecast			
41	NYMEX Price Used for Update			
42	Increase/(Decrease) NYMEX Price			
43	Increase/(Decrease) in Pipeline Costs			
44	Updated Pipeline Costs			
45	Interruptible Volumes - NH			
46	Average Supply Cost (\$/MMBtu)			
47	Interruptible Cost - NH			
48	Total Updated Pipeline Costs			
49	New Hampshire Allocated Percentage			
50	NH Updated Pipeline Costs			\$ 869,497
51	Hedging (Gain)/Loss Estimate			
52	NYMEX Options Contracts			
55	Hedging Expenses			
56	NYMEX Option Strike Price			
57	NYMEX Price Used for Forecast			
58	Strike Price Hit			
59	Option Hedging Gain (Credit)			
60	Total Northern Hedging Net Cost			\$ -
61	<u>New Hampshire Allocated Percentage</u>			
62	NH Futures Hedging Net Cost	\$ -	\$ -	\$ -
63	NH Commodity Costs			
64	Pipeline Excl Hedging	\$ -	\$ 869,497	\$ 869,497
65	Hedging (Gain)/Loss Estimate	\$ -	\$ -	\$ -
66	Storage	\$ -	\$ -	\$ -
67	Peaking	\$ -	\$ 9,824	\$ 9,824
68	Total Commodity Costs	\$ 17,952,655	\$ 1,910,671	\$ 19,863,326
69	Inventory Finance Charge	\$ -	\$ -	\$ -
70				
71	Total Anticipated Direct Cost of Gas	\$ 23,208,876	\$ 5,907,943	\$ 29,116,820

		Winter													
	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	(Forecast) Sep-18	(Forecast) Oct-18		
Working Capital															
Total Anticipated Direct Cost of Gas		\$ 2,043,746	\$ 4,732,078	\$ 6,761,466	\$ 4,775,109	\$ 3,752,039	\$ 2,094,110	\$ 1,148,035	\$ 920,533	\$ 946,260	\$ 975,656	\$ 826,410	\$ 1,162,308		
Working Capital Percentage		0.1167%	0.1167%	0.1167%	0.1167%	0.1167%	0.1235%	0.1235%	0.12%	0.13%	0.13%	0.13%	0.13%		
Working Capital Allowance		\$ 2,384	\$ 5,521	\$ 7,889	\$ 5,571	\$ 4,378	\$ 2,587	\$ 1,418	\$ 1,137	\$ 1,234	\$ 1,272	\$ 1,078	\$ 1,516		
Beginning Period Working Capital Balance		\$ 3,690	\$ 6,092	\$ 11,644	\$ 19,588	\$ 25,239	\$ 29,713	\$ 32,417	\$ 33,959	\$ 35,226	\$ 36,602	\$ 38,021	\$ 39,251		
End of Period Working Capital Allowance		\$ 6,075	\$ 11,613	\$ 19,533	\$ 25,160	\$ 29,616	\$ 32,300	\$ 33,835	\$ 35,096	\$ 36,460	\$ 37,874	\$ 39,099	\$ 40,767		
Interest		\$ 17	\$ 31	\$ 55	\$ 79	\$ 97	\$ 116	\$ 124	\$ 129	\$ 142	\$ 147	\$ 153	\$ 158		
End of period with Interest	\$ 3,690	\$ 6,092	\$ 11,644	\$ 19,588	\$ 25,239	\$ 29,713	\$ 32,417	\$ 33,959	\$ 35,226	\$ 36,602	\$ 38,021	\$ 39,251	\$ 40,925		
Bad Debt															
Projected Bad Debt	\$ -	\$ (12,901.55)	\$ (3,279.80)	\$ (2,812.78)	\$ 48,970.46	\$ (467.28)	\$ 33,605.75	\$ 7,351.05	\$ 14,538.20	\$ 19,415.40	\$ 32,568.24	\$ 30,733.90	\$ 30,733.90		
Beginning Period Bad Debt Balance		\$ 13,172	\$ 294	\$ (2,991)	\$ (5,819)	\$ 43,218	\$ 42,903	\$ 76,732	\$ 84,385	\$ 99,267	\$ 119,113	\$ 152,218	\$ 183,615		
End of Period Bad Debt Balance		\$ 270	\$ (2,986)	\$ (5,803)	\$ 43,152	\$ 42,750	\$ 76,508	\$ 84,083	\$ 98,923	\$ 118,682	\$ 151,682	\$ 182,952	\$ 214,349		
Interest		\$ 24	\$ (5)	\$ (16)	\$ 66	\$ 152	\$ 224	\$ 302	\$ 344	\$ 431	\$ 536	\$ 663	\$ 788		
End of Period Bad Debt Balance with Interest	\$ 13,172	\$ 294	\$ (2,991)	\$ (5,819)	\$ 43,218	\$ 42,903	\$ 76,732	\$ 84,385	\$ 99,267	\$ 119,113	\$ 152,218	\$ 183,615	\$ 215,136		
Local Production and Storage Capacity		\$ 79,351	\$ 79,351	\$ 79,351	\$ 79,351	\$ 79,351	\$ 79,351	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Miscellaneous Overhead		\$ 78,928	\$ 78,928	\$ 78,928	\$ 78,928	\$ 78,928	\$ 78,928	\$ 17,815	\$ 17,815	\$ 17,815	\$ 17,815	\$ 17,815	\$ 17,815		
Gas Cost Other than Bad Debt and Working Capital Over/Under Collection															
Beginning Balance Over/Under Collection		\$ 361,181	\$ 440,573	\$ 21,317	\$ 114,772	\$ (8,684)	\$ (1,312,866)	\$ (2,267,084)	\$ (1,901,589)	\$ (1,314,078)	\$ (672,464)	\$ (50,040)	\$ 386,931		
Net Costs - Revenues		\$ 77,975	\$ (420,072)	\$ 93,214	\$ (123,643)	\$ (1,301,845)	\$ (896,489)	\$ 373,296	\$ 593,530	\$ 645,538	\$ 623,851	\$ 436,306	\$ 326,321		
Ending Balance before Interest		\$ 439,156	\$ 20,501	\$ 114,531	\$ (8,872)	\$ (1,310,529)	\$ (2,209,355)	\$ (1,893,788)	\$ (1,308,060)	\$ (668,540)	\$ (48,613)	\$ 386,266	\$ 713,252		
Average Balance		\$ 400,168	\$ 230,537	\$ 67,924	\$ 52,950	\$ (659,607)	\$ (1,761,110)	\$ (2,080,436)	\$ (1,604,824)	\$ (991,309)	\$ (360,538)	\$ 168,113	\$ 550,092		
Interest Rate		4.25%	4.25%	4.25%	4.25%	4.50%	4.50%	4.50%	4.50%	4.50%	4.75%	4.75%	4.75%		
Interest Expense		\$ 1,417	\$ 816	\$ 241	\$ 188	\$ (2,336)	\$ (6,604)	\$ (7,802)	\$ (6,018)	\$ (3,924)	\$ (1,427)	\$ 665	\$ 2,177		
Ending Balance Incl Interest Expense	\$ 361,181	\$ 440,573	\$ 21,317	\$ 114,772	\$ (8,684)	\$ (1,312,866)	\$ (2,267,084)	\$ (1,901,589)	\$ (1,314,078)	\$ (672,464)	\$ (50,040)	\$ 386,931	\$ 715,430		
Total Over/Under Collection Ending Balance	\$ 378,043	\$ 446,959	\$ 29,971	\$ 128,541	\$ 59,772	\$ (1,240,249)	\$ (2,157,935)	\$ (1,783,245)	\$ (1,179,585)	\$ (516,749)	\$ 140,199	\$ 609,798	\$ 971,492		
Total Indirect Cost of Gas	\$ 378,043	\$ 149,220	\$ 161,363	\$ 163,635	\$ 213,153	\$ 160,102	\$ 188,207	\$ 19,208	\$ 27,945	\$ 35,113	\$ 50,911	\$ 51,108	\$ 53,188		
Total Cost of Gas	\$ 378,043	\$ 2,034,687	\$ 4,735,162	\$ 6,766,822	\$ 4,829,983	\$ 3,753,863	\$ 2,124,039	\$ 1,149,429	\$ 930,663	\$ 963,559	\$ 1,008,752	\$ 877,518	\$ 1,215,496		
Total Interest	\$ -	\$ 1,458	\$ 843	\$ 280	\$ 333	\$ (2,087)	\$ (6,264)	\$ (7,376)	\$ (5,545)	\$ (3,351)	\$ (744)	\$ 1,481	\$ 3,123		
				April 30, 2018 Target Balance				(\$2,708,745)							
				April 30, 2018 Actual Balance				\$ (2,157,935)							
				Variance				\$ 550,810							

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

	Winter	Summer	Prior Period	Total
Working Capital				
Total Anticipated Direct Cost of Gas				\$ 30,137,751
Working Capital Percentage				
Working Capital Allowance	\$ 28,330	\$ 7,655	\$ 3,690	\$ 39,675
Beginning Period Working Capital Balance				
End of Period Working Capital Allowance				
Interest				\$ 1,250
End of period with Interest				
Bad Debt				
Projected Bad Debt	\$ 184,403	\$ 11,146	\$ 13,172	\$ 208,721
Beginning Period Bad Debt Balance				
End of Period Bad Debt Balance				
Interest				\$ 3,509
End of Period Bad Debt Balance with Interest				
Local Production and Storage Capacity	\$ 476,106	\$ -		\$ 476,106
Miscellaneous Overhead	\$ 473,566	\$ 106,889	\$ -	\$ 580,455
Gas Cost Other than Bad Debt and Working Capital C				
Beginning Balance Over/Under Collection				\$ (6,202,030)
Net Costs - Revenues				\$ 427,980
Ending Balance before Interest				\$ (5,774,049)
Average Balance				\$ (5,988,040)
Interest Rate				
Interest Expense				\$ (22,606)
Ending Balance Incl Interest Expense				
Total Over/Under Collection Ending Balance				
Total Indirect Cost of Gas	\$ 1,035,681	\$ 237,474	\$ 378,043	\$ 1,651,198
Total Cost of Gas	\$ 24,244,557	\$ 6,145,417	\$ 378,043	\$ 30,768,017
Total Interest	\$ (5,436)	\$ (12,410)		\$ (17,847)