



January 19, 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

January 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 target over-/under-collection of gas costs for the 2017/2018 winter season. The Company is also providing a summary of its hedging transactions and monthly inventory interest calculation, both updated through December 2017.

Northern's projected target over-/under-collection has been updated to reflect the actual November 1, 2017 balance, actual costs and revenues for November and December 2017, and January 2018 through April 2018 NYMEX futures prices on January 11, 2018. The updated calculations indicate an increase in COG Rates up to the maximum allowable, 25%, is required at this time. 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:

Supplement No. 2, First Revised Page 1, Supplement No. 2, First Revised Page 3, Twentieth Revised Page 43.

These Tariff Pages are issued January 19, 2018 to be effective on February 1, 2017. Red-line versions of these Tariff Pages are also enclosed.

The impact of the February 1 change in the COG Rate on the typical residential heating customer for the 2017/2018 winter season will be \$51.39 or 5.4 percent more than the winter period bill at the Company's current COG rate.

George H. Simmons Manager Regulatory Services

6 Liberty Lane West Hampton, NH 03842

one: 603-773-6534 x: 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,

George H. Simmons Jr. (

Enclosures

cc: Alex Speidel, Staff Counsel Donald Kreis, Consumer Advocate

New Hampshire Monthly Cost of Gas Report

Winter Period

January 2018 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, 2018 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.

As shown on Table 1, Line 22, the estimated end of Winter Period balance is an under-collection of \$1,089,880 and, Line 25, the target end of Winter Period balance is an over-collection of (\$2,708,745). Thus, the variance between the estimated and target balances is an under-collection of \$3,798,625, Line 27. This under-collection represents a variance of 15.2% of total gas costs, Line 32. Therefore, Northern will increase its COG rates by the maximum allowance of 25%. This rate increase will allow Northern to recover approximately \$2,500,000 of the estimated under-recovery by the end of the Winter Period. If Northern continues to estimate a substantial end of Winter Period under-collection in subsequent months, the Company may submit a supplemental COG rate filing for approval by the Commission.

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.

NORTHERN UTILITIES - NEW HAMPSHIRE DIVISION WINTER SEASON RESIDENTIAL RATES

	Winter Season		Total	Total Billed Rates						
	November 2017 - April 2018	Tariff	Delivery Rates	Tariff Rate	s, LDAC					
		Rates	(Includes LDAC)	Plus Cost	of Gas					
Residential Heating	Tariff Rate R 5:									
	Monthly Customer Charge	\$21.36	\$21.36		\$21.36					
	First 50 therms	\$0.6468	\$0.7028	\$1.5674						
	All usage over 50 therms	\$0.5332	\$0.5892	\$1.4538						
	LDAC	\$0.0560								
	Gas Cost Adjustment:									
	Cost of Gas	\$0.8646								
Residential Heating	Tariff Rate R 10:									
Low Income	Monthly Customer Charge	\$8.54	\$8.54		\$8.54					
Low meaning	First 50 therms	\$0.2725	\$0.3285	\$1.1931	ψοιο .					
	All usage over 50 therms	\$0.2270	\$0.2830	\$1.1476						
	LDAC	\$0.0560	40.2000	4						
	Gas Cost Adjustment:	V 0.0000								
	Cost of Gas	\$0.8646								
Residential Non-Heating	Tariff Rate R 6:									
incoloring incoloring	Monthly Customer Charge	\$21.36	\$21.36		\$21.36					
	First 10 therms	\$0.4443	\$0.5003	\$1.3649	ΨΞσσ					
	All usage over 10 therms	\$0.4443	\$0.5003	\$1.3649						
	LDAC	\$0.0560	40.000	\$1.0010						
	Gas Cost Adjustment:	V								
	Cost of Gas	\$0.8646								
<u> </u>										
Residential Non-Heating	Tariff Rate R 11:		_							
Low Income	Monthly Customer Charge	\$15.52	\$15.52		\$15.52					
	First 10 therms	\$0.3425	\$0.3985	\$1.2631						
	All usage over 10 therms	\$0.3425	\$0.3985	\$1.2631						
	LDAC	\$0.0560								
	Gas Cost Adjustment:	1								
	Cost of Gas	\$0.8646								

Issued: January 19, 2018

Issued by:

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

Title: Senior Vice President

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

NORTHERN UTILITIES - NEW HAMPSHIRE DIVISION

WINTER SEASON C&I RATES

	Winter Season		Total	Total Billed Rates
	November 2017 - April 2018	Tariff	Delivery Rates	Tariff Rates, LDAC
	-	Rates	(Includes LDAC)	Plus Cost of Gas
C&I Low Annual/High Winter	Tariff Rate G 40:			
	Monthly Customer Charge	\$67.45	\$67.45	\$67.45
	First 75 therms	\$0.1844	\$0.2137	\$1.0916
	All usage over 75 therms	\$0.1844	\$0.2137	\$1.0916
	LDAC	\$0.0293		
	Gas Cost Adjustment:			
	Cost of Gas	\$0.8779		
C&I Low Annual/Low Winter	Tariff Rate G 50:			
Cor Low Amidaly Low Willten	Monthly Customer Charge	\$67.45	\$67.45	\$67.45
	First 75 therms	\$0.1844	\$0.2137	\$0.9904
	All usage over 75 therms	\$0.1844	\$0.2137	\$0.9904
	LDAC	\$0.0293	40.2.0.	ψοισσο :
	Gas Cost Adjustment:	V 0.0200		
	Cost of Gas	\$0.7767		

C&I Medium Annual/High Winter	Tariff Rate G 41:	\$196.73	\$196.73	\$196.73
	Monthly Customer Charge	· ·		•
	All usage	\$0.2327	\$0.2620	\$1.1399
	LDAC	\$0.0293		
	Gas Cost Adjustment:			
	Cost of Gas	\$0.8779		
C&I Medium Annual/Low Winter	Tariff Rate G 51:			
	Monthly Customer Charge	\$196.73	\$196.73	\$196.73
	First 1,300 therms	\$0.1749	\$0.2042	\$0.9809
	All usage over 1,300 therms	\$0.1467	\$0.1760	\$0.9527
	LDAC	\$0.0293		
	Gas Cost Adjustment:	***************************************		
	Cost of Gas	\$0.7767		
C0111:-b A	Toriff Data C 42:		<u> </u>	
C&I High Annual/High Winter	Tariff Rate G 42: Monthly Customer Charge	\$1,124.19	\$1,124.19	\$1,124.19
	All usage	\$0.1993	\$0.2286	\$1,124.19
	LDAC	\$0.0293	φυ.2200	φ1.1005
	Gas Cost Adjustment:	φ0.0293		
	Cost of Gas	\$0.8779		
		ψυ.υπσ	I	
C&I High Annual/Low Winter	Tariff Rate G 52:	M4 404 10	04.404.40	M4 404 40
	Monthly Customer Charge	\$1,124.19	\$1,124.19	\$1,124.19
	All usage	\$0.1770	\$0.2063	\$0.9830
	LDAC	\$0.0293		
	Gas Cost Adjustment:			
	Cost of Gas	\$0.7767		

Issued: January 19, 2018 Issued by:

Effective: With Service Rendered On and After February 1, 2018 Title: Senior Vice President

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

CALCULATION OF FIRM SALES COST OF GAS RATE

Period Covered: November 1, 2017 - April 30, 2018

(Col 1)	(Col 2)	(Col 3)	
Total Anticipated Direct Cost of Gas Projected Prorated Sales (11/01/17 - 04/30/18) Direct Cost of Gas Rate	\$24,032,363 34,865,979	\$0.6893	per therm
Demand Cost of Gas Rate Commodity Cost of Gas Rate Total Direct Cost of Gas Rate	\$9,128,178 \$ <u>14,904,185</u> \$24,032,363	\$0.2618 \$ <u>0.4275</u> \$0.6893	per therm per therm per therm
Total Anticipated Indirect Cost of Gas Projected Prorated Sales (11/01/17 - 04/30/18) Indirect Cost of Gas	\$731,226 34,865,979	\$0.0210	per therm
TOTAL PERIOD AVERAGE COST OF GAS		\$0.7103	per therm
Period Ending over-collection as determined on 01/19/17 Projected Sales (02/01/18 - 04/30/18) Per unit change in Cost of Gas (02/01/18 - 04/30/18) 1 Over-collection w/o rate adjustment as contained in NUI's COG Report dated January 19, 2018		\$2,500,000 16,202,626 \$0.1543	

RESIDENTIAL COST OF GAS RATE - 02/01/18	COGwr	\$0.8646	per therm
	Maximum (COG+25%)	\$0.8879	
RESIDENTIAL COST OF GAS RATE - 11/01/17		\$0.7103	
CHANGE IN PER UNIT COST		\$0.1543	
RESIDENTIAL COST OF GAS RATE - 2/01/18		\$0.8646	
OM/IND LOW WINTER USE COST OF GAS RATE - 02/01/18	COGwl	\$0.7767	per therm
	Maximum (COG+25%)	\$0.7780	
COMM/IND LOW WINTER USE COST OF GAS RATE - 11/01/17		\$0.6224	
CHANGE IN PER UNIT COST		\$0.1543	
COMM/IND LOW WINTER USE COST OF GAS RATE - 2/01/18		\$0.7767	
OM/IND HIGH WINTER USE COST OF GAS RATE - 02/01/18	COGwh	\$0.8779	per therm
	Maximum (COG+25%)	\$0.9045	
COMM/IND HIGH WINTER USE COST OF GAS RATE - 11/01/17		\$0.7236	
CHANGE IN PER UNIT COST		\$0.1543	
COMM/IND HIGH WINTER USE COST OF GAS RATE - 2/01/18		\$0.8779	

Issued: January 19, 2018

Effective Date: February 1, 2018
Authorized by NHPUC Order No. 26,068 in Docket No. DG 17-144, dated October 31, 2017

NORTHERN UTILITIES - NEW HAMPSHIRE DIVISION WINTER SEASON RESIDENTIAL RATES

	Winter Season		Total	Total Billed Rates
	November 2017 - April 2018	Tariff	Delivery Rates	Tariff Rates, LDAC
		Rates	(Includes LDAC)	Plus Cost of Gas
Residential Heating	Tariff Rate R 5:			
	Monthly Customer Charge	\$21.36	\$21.36	\$21.36
	First 50 therms	\$0.6468	\$0.7028	\$1.4131 <u>\$1.5674</u>
	All usage over 50 therms	\$0.5332	\$0.5892	\$ 1.2995 \$1.4538
	LDAC	\$0.0560		
	Gas Cost Adjustment:			
	Cost of Gas	\$0.7103 \$0.8646		
Residential Heating	Tariff Rate R 10:			
Low income	Monthly Customer Charge	\$8.54	\$8.54	\$8.54
	First 50 therms	\$0.2725	\$0.3285	\$1.0388 <u>\$1.1931</u>
	All usage over 50 therms	\$0.2270	\$0.2830	\$0.9933 <u>\$1.1476</u>
	LDAC	\$0.0560		
	Gas Cost Adjustment:			
	Cost of Gas	\$0.7103 <u>\$0.8646</u>		
		T		
Residential Non-Heating	Tariff Rate R 6:			*
	Monthly Customer Charge	\$21.36	\$21.36	\$21.36
	First 10 therms	\$0.4443	\$0.5003	\$1.2106 \$1.3649
	All usage over 10 therms	\$0.4443	\$0.5003	\$1.2106 \$1.3649
	LDAC	\$0.0560		
	Gas Cost Adjustment:			
	Cost of Gas	\$0.7103 <u>\$0.8646</u>		
			1	
Residential Non-Heating	Tariff Rate R 11:			
Low income	Monthly Customer Charge	\$15.52	\$15.52	\$15.52
	First 10 therms	\$0.3425	\$0.3985	\$1.1088 <u>\$1.2631</u>
	All usage over 10 therms	\$0.3425	\$0.3985	\$1.1088 \$1.2631
	LDAC	\$0.0560		
	Gas Cost Adjustment:			
	Cost of Gas	\$0.7103 \$0.8646		

Issued: November 6, 2017 January 19, 2018

Effective Date: November 1, 2017 February 1, 2018

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

Issued by:

Senior Vice Presider

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

	Winter Season November 2017 - April 2018	Tariff Rates	Total Delivery Rates (Includes LDAC)	Total Billed Rates Tariff Rates, LDAC Plus Cost of Gas				
C&I Low Annual/High Winter	Tariff Rate G 40: Monthly Customer Charge First 75 therms All usage over 75 therms LDAC Gas Cost Adjustment: Cost of Gas	\$67.45 \$0.1844 \$0.1844 \$0.0293 \$0.7236 \$0.8779	\$67.45 \$0.2137 \$0.2137		\$67.45 0 <u>916</u> 0 <u>916</u>			
C&I Low Annual/Low Winter	Tariff Rate G 50: Monthly Customer Charge First 75 therms All usage over 75 therms	\$67.45 \$0.1844 \$0.1844	\$67.45 \$0.2137 \$0.2137		\$67.45 9904 9904			
	LDAC Gas Cost Adjustment: Cost of Gas	\$0.0293 \$0.6224 \$0.7767						
C&I Medium Annual/High Winter	Tariff Rate G 41: Monthly Customer Charge	\$196.73	\$196.73		\$196.73			
	All usage LDAC Gas Cost Adjustment:	\$0.2327 \$0.0293	\$0.2620	\$0.9856 <u>\$1.</u>	<u>1399</u>			
	Cost of Gas	\$0.7236 <u>\$0.8779</u>						
C&I Medium Annual/Low Winter	Tariff Rate G 51: Monthly Customer Charge First 1,300 therms All usage over 1,300 therms LDAC Gas Cost Adjustment: Cost of Gas	\$196.73 \$0.1749 \$0.1467 \$0.0293 \$0.6224 \$0.7767	\$196.73 \$0.2042 \$0.1760		\$196.73 9809 9527			
C&I High Annual/High Winter	Tariff Rate G 42:	ψ0.0224 <u>ψ0.7101</u>						
con night Annualy night white	Monthly Customer Charge	\$1,124.19	\$1,124.19		1,124.19			
	All usage LDAC Gas Cost Adjustment: Cost of Gas	\$0.1993 \$0.0293 \$0.7236 \$0.8779	\$0.2286	\$0.9522 <u>\$1.</u>	<u>1065</u>			
C&I High Annual/Low Winter	Tariff Rate G 52:							
	Monthly Customer Charge	\$1,124.19	\$1,124.19	\$	1,124.19			
	All usage LDAC Gas Cost Adjustment:	\$0.1770 \$0.0293	\$0.2063	\$0.8287 <u>\$0.</u>	<u>9830</u>			
	Cost of Gas	\$0.6224 \$0.7767						

 Issued: November 6, 2017 January 19, 2018
 Issued by:

 Effective Date: November 1, 2017 February 1, 2018
 Title:

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

Senior Vice President

CALCULATION OF FIRM SALES COST OF GAS RATE

Period Covered: November 1, 2017 - April 30, 2018

Feriod Covered. November	1, 2017 - April 30, 2016		
(Col 1)	(Col 2)	(Col 3)	
·	• •	,,	
Total Anticipated Direct Cost of Gas Projected Prorated Sales (11/01/17 - 04/30/18)	\$24,032,363 34,865,979		
Direct Cost of Gas Rate	37,003,979	\$0.6893	per therm
			•
Demand Cost of Gas Rate	\$9,128,178	\$0.2618	per therm
Commodity Cost of Gas Rate	\$ <u>14,904,185</u>	\$ <u>0.4275</u>	per therm
Total Direct Cost of Gas Rate	\$24,032,363	\$0.6893	per therm
Total Anticipated Indirect Cost of Gas	\$731,226		
Projected Prorated Sales (11/01/17 - 04/30/18)	34,865,979		
Indirect Cost of Gas		\$0.0210	per therm
TOTAL PERIOD AVERAGE COST OF GAS		\$0.7103	per therm
Period ending over-collection as determined on 1/19/18	\$2,500,000		
Projected sales (02/01/18 - 04/30/18)	16,202,626		
Per unit change in Cost of Gas (02/01/18 - 04/30/18)			
	\$0.1543		
Over-collection w/o rate adjustment as contained in NUI's COG Report dated January	19, 2018		
DESIDENTIAL COST OF CAS DATE 44/04/47 02/04/2049	COCHI	\$0.7402 \$0.9646	nor thorm
RESIDENTIAL COST OF GAS RATE -11/01/17-02/01/2018	COGwr (COC OFFIC)	\$0.7103 \$0.8646	per therm
	Maximum (COG+25%)	\$0.8879	
RESIDENTIAL COST OF GAS RATE - 11/01/17		\$0.7103	
CHANGE IN PER UNIT COST		\$0.1543	
RESIDENTIAL COST OF GAS RATE - 02/01/18		\$0.8646	
		+	
COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/17 02/01/2018	COGwl	\$0.6224 <u>\$0.7767</u>	per therm
<u> </u>	Maximum (COG+25%)	\$0.7780	
		V 000	
C&I HLF DEMAND COSTS ALLOCATED PER SMBA	\$349,557		
PLUS: RESIDENTIAL DEMAND RELOCATION TO C71 HLF	\$ 57,241		
C&I HLF TOTAL ADJUSTED DEMAND COSTS	\$406,798		
C&I HLF PROJECTED PRORATED SALES (11/01/17 - 04/30/18)	2,448,624		
DEMAND COST OF GAS RATE	\$0.1661		
CRI HI E COMMODITY COSTS ALLOCATED DED SMBA	\$1,066,497		
C&I HLF COMMODITY COSTS ALLOCATED PER SMBA PLUS: RESIDENTIAL COMMODITY COSTS	\$1,066,497 (\$584)		
PLUS: RESIDENTIAL COMMODITY COSTS	\$1,066,497 (\$584) \$1,065,913		
	(\$584)		
PLUS: RESIDENTIAL COMMODITY COSTS C&I HLF TOTAL ADJUSTED COMMODITY COSTS	(\$584) \$1,065,913		
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE	(\$584) \$1,065,913 2,448,624 \$0.4353		
PLUS: RESIDENTIAL COMMODITY COSTS C&I HLF TOTAL ADJUSTED COMMODITY COSTS C&I HLF PROJECTED PRORATED SALES (11/01/17 - 04/30/18)	(\$584) \$1,065,913 2,448,624		
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE	(\$584) \$1,065,913 2,448,624 \$0.4353		
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS	\$1,065,913 \$1,065,913 2,448,624 \$0,4353 \$0,0210		
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS	\$1,065,913 \$1,065,913 2,448,624 \$0,4353 \$0,0210	\$ 0.6224	
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS TOTAL C&I HILF COST OF GAS RATE	\$1,065,913 \$1,065,913 2,448,624 \$0,4353 \$0,0210	<u>\$0.6224</u> \$0.1543	
PLUS: RESIDENTIAL COMMODITY COSTS C&I HLF TOTAL ADJUSTED COMMODITY COSTS C&I HLF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS TOTAL C&I HLF COST OF GAS RATE COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/17	\$1,065,913 \$1,065,913 2,448,624 \$0,4353 \$0,0210		
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS TOTAL C&I HILF COST OF GAS RATE COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST	\$1,065,913 \$1,065,913 2,448,624 \$0,4353 \$0,0210	\$0.1543	
PLUS: RESIDENTIAL COMMODITY COSTS C&I HLF TOTAL ADJUSTED COMMODITY COSTS C&I HLF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS TOTAL C&I HLF COST OF GAS RATE COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND LOW WINTER USE COST OF GAS RATE - 02/01/18	\$1,065,913 2,448,624 \$0.4353 \$0.0210 \$0.6224	\$0.1543 \$0.7767	
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS TOTAL C&I HILF COST OF GAS RATE COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST	\$1,065,913 2,448,624 \$0,4353 \$0.0210 \$0.6224	\$0.1543 \$0.7767 \$0.77236 \$0.8779	per therm
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS TOTAL C&I HILF COST OF GAS RATE COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND LOW WINTER USE COST OF GAS RATE - 02/01/18	\$1,065,913 2,448,624 \$0.4353 \$0.0210 \$0.6224	\$0.1543 \$0.7767	per therm
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS TOTAL C&I HILF COST OF GAS RATE COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND LOW WINTER USE COST OF GAS RATE - 02/01/18 COM/IND HIGH WINTER USE COST OF GAS RATE - 14/01/17 02/01/2018	\$1,065,913 2,448,624 \$0.4353 \$0.0210 \$0.6224 COGwh	\$0.1543 \$0.7767 \$0.77236 \$0.8779	per therm
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/48) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS TOTAL C&I HILF COST OF GAS RATE COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND LOW WINTER USE COST OF GAS RATE - 02/01/18 COM/IND HIGH WINTER USE COST OF GAS RATE - 11/01/17 02/01/2018	\$1,065,913 2,448,624 \$0,4353 \$0.0210 \$0.6224 COGwh Maximum (COG+25%)	\$0.1543 \$0.7767 \$0.77236 \$0.8779	per therm
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS TOTAL C&I HILF COST OF GAS RATE COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND LOW WINTER USE COST OF GAS RATE - 02/01/18 COM/IND HIGH WINTER USE COST OF GAS RATE - 14/01/17 02/01/2018	\$1,065,913 2,448,624 \$0.4353 \$0.0210 \$0.6224 COGwh	\$0.1543 \$0.7767 \$0.77236 \$0.8779	per therm
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/48) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS TOTAL C&I HILF COST OF GAS RATE COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND LOW WINTER USE COST OF GAS RATE - 02/01/18 COM/IND HIGH WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND HIGH WINTER USE COST OF GAS RATE - 11/01/17 CAST COM/IND HIGH WINTER USE COST OF GAS RATE - 11/01/17 C&I LIF COMMODITY COSTS ALLOCATED PER SMBA PLUS RESIDENTIAL DEMAND REALLOCATION TO C&I LIF	\$1,065,913 2,448,624 \$0,4353 \$0,0210 \$0,6224 COGwh Maximum (COG+25%)	\$0.1543 \$0.7767 \$0.77236 \$0.8779	per therm
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS RATE COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND LOW WINTER USE COST OF GAS RATE - 02/01/18 COM/IND HIGH WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND HIGH WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND HIGH WINTER USE COST OF GAS RATE - 11/01/17 02/01/2018 C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS RESIDENTIAL DEMAND REALLOCATION TO C&I LLF C&I LLF TOTAL ADJUSTED DEMAND COSTS	(\$584) \$1,065,913 2,448,624 \$0.4353 \$0.0210 \$0.6224 COGwh Maximum (COG+25%) \$3,841,918 \$629,123 \$4,471,041	\$0.1543 \$0.7767 \$0.77236 \$0.8779	per therm
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS TOTAL C&I HILF COST OF GAS RATE COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND LOW WINTER USE COST OF GAS RATE - 02/01/18 COM/IND HIGH WINTER USE COST OF GAS RATE - 11/01/17 OM/IND HIGH WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND HIGH WINTER USE COST OF GAS RATE - 11/01/17 OM/IND HIGH WINTER USE COST OF GAS RATE - 11/01/17 C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS RESIDENTIAL DEMAND REALLOCATION TO C&I LLF C&I LLF TOTAL ADJUSTED DEMAND COSTS C&I LLF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) DEMAND COST OF GAS RATE	(\$584) \$1,065,913 2,448,624 \$0.4353 \$0.0210 \$0.6224 COGwh Maximum (COG+25%) \$3,841,918 \$629,123 \$4,471,041 16,182,767 \$0.2763	\$0.1543 \$0.7767 \$0.77236 \$0.8779	per therm
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS RATE COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND LOW WINTER USE COST OF GAS RATE - 02/01/18 COM/IND HIGH WINTER USE COST OF GAS RATE - 02/01/18 COM/IND HIGH WINTER USE COST OF GAS RATE - 14/01/17 02/01/2018 C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS RESIDENTIAL DEMAND REALLOCATION TO C&I LLF C&I LLF TOTAL ADJUSTED DEMAND COSTS C&I LLF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) DEMAND COST OF GAS RATE C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS RESIDENTIAL DEMAND REALLOCATION TO C&I LLF C&I LLF TOTAL ADJUSTED DEMAND COSTS C&I LLF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) DEMAND COST OF GAS RATE C&I LLF COMMODITY COSTS ALLOCATED PER SMBA	(\$584) \$1,065,913 2,448,64353 \$0.0210 \$0.6224 COGwh Maximum (COG+25%) \$3,841,918 \$629,123 \$4,471,041 16,182,767 \$0.2763	\$0.1543 \$0.7767 \$0.77236 \$0.8779	per therm
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS RATE COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND LOW WINTER USE COST OF GAS RATE - 02/01/18 COM/IND HIGH WINTER USE COST OF GAS RATE - 02/01/18 C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS RESIDENTIAL DEMAND REALLOCATION TO C&I LLF C&I LLF TOTAL ADJUSTED DEMAND COSTS C&I LLF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) DEMAND COST OF GAS RATE C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS: RESIDENTIAL COMMODITY REALLOCATION TO C&I LLF	(\$584) \$1,065,913 -2,448,624 \$0.4353 \$0.0210 \$0.6224 COGwh Maximum (COG+25%) \$3,841,918 \$629,123 \$4,471,041 -16,182,767 \$0.2763 \$6,902,243 (\$3,782)	\$0.1543 \$0.7767 \$0.77236 \$0.8779	per therm
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS RATE COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND LOW WINTER USE COST OF GAS RATE - 02/01/18 COM/IND HIGH WINTER USE COST OF GAS RATE - 02/01/18 C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS RESIDENTIAL DEMAND REALLOCATION TO C&I LLF C&I LLF TOTAL ADJUSTED DEMAND COSTS C&I LLF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) DEMAND COST OF GAS RATE C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS: RESIDENTIAL COMMODITY REALLOCATION TO C&I LLF C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS: RESIDENTIAL COMMODITY REALLOCATION TO C&I LLF C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS: RESIDENTIAL COMMODITY REALLOCATION TO C&I LLF C&I LLF TOTAL ADJUSTED COMMODITY COSTS	(\$584) \$1,065,913 2,448,613 2,448,624 \$0.4353 \$0.0210 \$0.6224 COGwh Maximum (COG+25%) \$3,841,918 \$629,123 \$4,471,041 16,182,767 \$0.2763 \$6,902,243 (\$3,782) \$6,898,461	\$0.1543 \$0.7767 \$0.77236 \$0.8779	per therm
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS RATE COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND LOW WINTER USE COST OF GAS RATE - 02/01/18 COM/IND HIGH WINTER USE COST OF GAS RATE - 02/01/18 COM/IND HIGH WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND HIGH WINTER USE COST OF GAS RATE - 02/01/18 C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS RESIDENTIAL DEMAND REALLOCATION TO C&I LLF C&I LLF TOTAL ADJUSTED DEMAND COSTS C&I LLF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) DEMAND COST OF GAS RATE C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS: RESIDENTIAL COMMODITY REALLOCATION TO C&I LLF C&I LLF TOTAL ADJUSTED COMMODITY COSTS C&I LLF PROJECTED PRORATED SALES (11/01/17 - 04/30/18)	(\$584) \$1,065,913 2,448,624 \$0.4353 \$0.0210 \$0.6224 COGwh Maximum (COG+25%) \$3,841,918 \$629,123 \$4,471,041 16,182,767 \$0.2763 \$6,902,243 (\$3,782) \$6,898,461 16,182,767	\$0.1543 \$0.7767 \$0.77236 \$0.8779	per therm
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS RATE COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND LOW WINTER USE COST OF GAS RATE - 02/01/18 COM/IND HIGH WINTER USE COST OF GAS RATE - 02/01/18 C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS RESIDENTIAL DEMAND REALLOCATION TO C&I LLF C&I LLF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) DEMAND COST OF GAS RATE C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS: RESIDENTIAL COMMODITY REALLOCATION TO C&I LLF C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS: RESIDENTIAL COMMODITY REALLOCATION TO C&I LLF C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS: RESIDENTIAL COMMODITY REALLOCATION TO C&I LLF C&I LLF TOTAL ADJUSTED COMMODITY COSTS	(\$584) \$1,065,913 2,448,613 2,448,624 \$0.4353 \$0.0210 \$0.6224 COGwh Maximum (COG+25%) \$3,841,918 \$629,123 \$4,471,041 16,182,767 \$0.2763 \$6,902,243 (\$3,782) \$6,898,461	\$0.1543 \$0.7767 \$0.77236 \$0.8779	per therm
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS TOTAL C&I HILF COST OF GAS RATE COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND LOW WINTER USE COST OF GAS RATE - 02/01/18 COM/IND HIGH WINTER USE COST OF GAS RATE - 02/01/18 COM/IND HIGH WINTER USE COST OF GAS RATE - 11/01/17 02/01/2018 C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS RESIDENTIAL DEMAND REALLOCATION TO C&I-LLF C&I LLF TOTAL ADJUSTED DEMAND COSTS C&I LLF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) DEMAND COST OF GAS RATE C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS: RESIDENTIAL COMMODITY REALLOCATION TO C&I-LLF C&I LLF TOTAL ADJUSTED COMMODITY COSTS C&I-LLF TOTAL ADJUSTED COMMODITY COSTS C&I-LLF PROJECTED PRORATED SALES (11/01/17 - 04/30/18)	(\$584) \$1,065,913 2,448,624 \$0.4353 \$0.0210 \$0.6224 COGwh Maximum (COG+25%) \$3,841,918 \$629,123 \$4,471,041 16,182,767 \$0.2763 \$6,902,243 (\$3,782) \$6,898,461 16,182,767	\$0.1543 \$0.7767 \$0.77236 \$0.8779	per therm
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS RATE COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND LOW WINTER USE COST OF GAS RATE - 02/01/18 COM/IND HIGH WINTER USE COST OF GAS RATE - 02/01/18 COM/IND HIGH WINTER USE COST OF GAS RATE - 14/01/17 02/01/2018 C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS RESIDENTIAL DEMAND REALLOCATION TO C&I LLF C&I LLF TOTAL ADJUSTED DEMAND COSTS C&I LLF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) DEMAND COST OF GAS RATE C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS: RESIDENTIAL COMMODITY COSTS C&I LLF TOTAL ADJUSTED COMMODITY COSTS C&I LLF TOTAL ADJUSTED COMMODITY COSTS C&I LLF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS RATE	(\$584) \$1,065,913 2,448,624 \$0,4353 \$0,0210 \$0,6224 COGwh Maximum (COG+25%) \$3,841,918 \$629,123 \$4,471,041 16,182,767 \$0,2763 \$6,902,243 (\$3,782) \$6,898,461 16,182,767 \$0,4263	\$0.1543 \$0.7767 \$0.77236 \$0.8779	per therm
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS TOTAL C&I HILF COST OF GAS RATE COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND LOW WINTER USE COST OF GAS RATE - 02/01/18 COM/IND HIGH WINTER USE COST OF GAS RATE - 02/01/18 C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS RESIDENTIAL DEMAND REALLOCATION TO C&I LLF C&I LLF TOTAL ADJUSTED DEMAND COSTS C&I LLF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) DEMAND COST OF GAS RATE C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS: RESIDENTIAL COMMODITY REALLOCATION TO C&I LLF C&I LLF COTAL ADJUSTED COMMODITY COSTS C&I LLF TOTAL ADJUSTED COMMODITY COSTS C&I LLF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE	(\$584) \$1,065,913 -2,448,624 \$0.4353 \$0.0210 \$0.6224 COGwh Maximum (COG+25%) \$3,841,918 \$629,123 \$4,471,041 -16,182,767 \$0,2763 \$6,902,243 (\$3,782) \$6,898,461 -16,182,767 \$0,4263	\$0.1543 \$0.7767 \$0.77236 \$0.8779	per therm
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS RATE COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND LOW WINTER USE COST OF GAS RATE - 02/01/18 COM/IND HIGH WINTER USE COST OF GAS RATE - 02/01/18 COM/IND HIGH WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND HIGH WINTER USE COST OF GAS RATE - 02/01/18 C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS RESIDENTIAL DEMAND REALLOCATION TO C&I-LLF C&I-LLF TOTAL ADJUSTED DEMAND COSTS C&I-LLF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) DEMAND COST OF GAS RATE C&I-LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS: RESIDENTIAL COMMODITY REALLOCATION TO C&I-LLF C&I-LLF TOTAL ADJUSTED COMMODITY COSTS C&I-LLF TOTAL ADJUSTED COMMODITY COSTS C&I-LLF TOTAL ADJUSTED COMMODITY COSTS C&I-LLF COST OF GAS RATE INDIRECT COST OF GAS RATE INDIRECT COST OF GAS RATE COM/IND HIGH WINTER USE COST OF GAS RATE - 11/01/17	(\$584) \$1,065,913 2,448,624 \$0,4353 \$0,0210 \$0,6224 COGwh Maximum (COG+25%) \$3,841,918 \$629,123 \$4,471,041 16,182,767 \$0,2763 \$6,902,243 (\$3,782) \$6,898,461 16,182,767 \$0,4263	\$0.1543 \$0.7767 \$0.77236 \$0.8779 \$0.9045	per therm
PLUS: RESIDENTIAL COMMODITY COSTS C&I HILF TOTAL ADJUSTED COMMODITY COSTS C&I HILF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS TOTAL C&I HILF COST OF GAS RATE COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND LOW WINTER USE COST OF GAS RATE - 02/01/18 COM/IND HIGH WINTER USE COST OF GAS RATE - 02/01/18 COM/IND HIGH WINTER USE COST OF GAS RATE - 11/01/17 CHANGE IN PER UNIT COST COM/IND HIGH WINTER USE COST OF GAS RATE - 02/01/18 C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS RESIDENTIAL DEMAND REALLOCATION TO C&I LLF C&I LLF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) DEMAND COST OF GAS RATE C&I LLF COMMODITY COSTS ALLOCATED PER SMBA PLUS: RESIDENTIAL COMMODITY REALLOCATION TO C&I LLF C&I LLF TOTAL ADJUSTED COMMODITY COSTS C&I LLF PROJECTED PRORATED SALES (11/01/17 - 04/30/18) COMMODITY COST OF GAS RATE INDIRECT COST OF GAS- TOTAL C&I LLF COST OF GAS RATE	(\$584) \$1,065,913 2,448,624 \$0,4353 \$0,0210 \$0,6224 COGwh Maximum (COG+25%) \$3,841,918 \$629,123 \$4,471,041 16,182,767 \$0,2763 \$6,902,243 (\$3,782) \$6,898,461 16,182,767 \$0,4263	\$0.1543 \$0.7767 \$0.7236_\$0.8779 \$0.9045	per therm

Issued By: WHALES

NORTHERN UTILITIES, INC. NEW HAMPSHIRE DIVISION

Calculation of the Projected Over or Under Collection of the Winter 2017-2018 Period Cost of Gas DG 17-144

January 2018 Estimated

Under/(Over) collection as of 11/01/17 Sable 2, PG. 3, Line 99 Forecasted firm therm sales 11/01/17 - 4/30/18 Table 2, PG. 2, Line 2 Table 2, PG. 2, Line 2 Table 2, PG. 2, Line 3 Table 2, PG. 2, Line 4 Table 2, PG. 2, Line 4 Table 2, PG. 2, Line 3 Table 2, PG. 2, Line 4 Table 2, PG. 2, Line 5 Table 2, PG. 1, Line 7 Table 2, PG. 1, Line 8 Table 2, PG. 1, Line 9 Table 2, PG. 1, Line 8 Table 2, PG. 1, Line 9 Table 2, PG. 1, Line 8 Table 2, PG. 1, Line 9 Table 2, PG. 1, Line 8 Table 2, PG. 1, Line 9 Table 2, PG. 2, Line 101 Table 2, PG. 3, Line 101 Table 2, PG. 4, Line 101 Table 2, PG. 4, Line 101 Table 2, PG. 4, Line 101 Table 2, PG. 3, Line 107 Table 2, PG. 4, Line 101 Table 2, PG. 3, Line 107 Table 2, PG. 4, Line 101 Table 2, PG. 3, Line 107 Table 2, PG. 4, Line 101 Table 2, PG. 5, Line 101 Table					
Forecasted firm therm sales 11/01/17 - 4/30/18 Residential Heat & Non Heat 11,259,737 HLF Classes LLF Classes So.7103 Residential heat & non heat So.7103 Residential heat & non heat So.7236 Table 2, PG. 2, Line 2 Table 2, PG. 2, Line 4 Table 2, PG. 2, Line 3 Table 2, PG. 2, Line 4 Table 2, PG. 1, Line 7 Table 2, PG. 1, Line 7 Table 2, PG. 1, Line 7 Table 2, PG. 1, Line 8 Table 2, PG. 1, Line 9 Table 2, PG. 1, Line 8 Table 2, PG. 1, Line 9 LLF classes So.7236 Table 2, PG. 1, Line 9 LLF classes So.7236 Table 2, PG. 1, Line 9 LLF classes So.7236 Table 2, PG. 1, Line 9 LLF classes So.7236 Table 2, PG. 1, Line 9 LLF classes Table 2, PG. 1, Line 9 LLF classes Table 2, PG. 1, Line 9 Table 2, PG. 1, Line 9 LLF classes Table 2, PG. 1, Line 9 LLF classes Table 2, PG. 1, Line 9 Table 2, PG. 1, Line 9 LLF classes Table 2, PG. 1, Line 10 LLF classes Table	1	Under/(Over) collection as of 11/01/17		\$ 352,624	Table 2, PG. 3, Line 99
Residential Heat & Non Heat					
HLF Classes 1,698,279 Table 2, PG. 2, Line 3 Table 2, PG. 2, Line 3 Table 2, PG. 2, Line 4 Table 2, PG. 1, Line 7 Table 2, PG. 1, Line 7 Table 2, PG. 1, Line 8 Table 2, PG. 1, Line 8 Table 2, PG. 1, Line 8 Table 2, PG. 1, Line 9 Table 2, PG. 1, Line 10 Table 2, PG. 2, Line 10 Table 2, PG. 2, Line 71 Table 2, PG. 3, Line 101 Table 2, PG. 3, Line 101 Table 2, PG. 3, Line 107 Table 2, PG. 3,					
LLF Classes 11,223,794 Table 2, PG. 2, Line 4 Current recovery rate per therm Residential heat & non heat \$0.7103 Table 2, PG. 1, Line 7 Table 2, PG. 1, Line 8 Table 2, PG. 1, Line 9 Total \$(17,176,337) (LN 4 * Ln 9) + (LN 5 * LN 10) + (LN 6 * LN 11) Forecasted recovered costs at current rates 01/01/2018 - 04/30/2018 (7.074,448) Estimated total recovered costs 11/01/17 - 04/30/18 (18) Revised projected direct gas costs 11/01/17 - 04/30/18 [1] Revised projected indirect gas costs 11/01/17 - 04/30/18 [2] Projected April 30, 2018 End of Winter Period Balance \$1,089,880 Variance from Projected Target Balance \$3,798,625 Total Projected Gas Costs \$24,988,041 Table 2, PG. 2, Line 4 Table 2, PG. 1, Line 9 Table 2, PG. 1, Line 9 (LN 4 * Ln 9) + (LN 5 * LN 10) + (LN 6 * LN 11) LN 15 + LN 16 Extraction 4 Table 2, PG. 1, Line 7 Table 2, PG. 1, Line 8 Table 2, PG. 1, Line 9 (LN 4 * Ln 9) + (LN 5 * LN 10) + (LN 6 * LN 11) LN 15 + LN 16 Extraction 4 Table 2, PG. 2, Line 71 Table 2, PG. 2, Line 71 Table 2, PG. 2, Line 71 Table 2, PG. 4, Line 101 LN 15 + LN 16 Extraction 4 Table 2, PG. 2, Line 71 Table 2, PG. 3, Line 107 LN 1 + Ln 17 + LN 19 + LN 20 Table 2, PG. 3, Line 107 LN 12 + Ln 17 + LN 19 + LN 20 Table 2, PG. 3, Line 107 LN 15 + LN 16 Table 2, PG. 3, Line 107 Table 2, PG. 3, Line 107 Table 2, PG. 3, Line 107 LN 15 + LN 19 + LN 20 Table 2, PG. 3, Line 107 Table 2, PG. 4, Line 101 LN 15 + LN 15					
Current recovery rate per therm Residential heat & non heat HLF classes LLF classes LLF classes Total Total Forecasted recovered costs at current rates 01/01/2018 - 04/30/2018 Actual Recovered Costss 11/01/2017 - 12/31/2017 Revised projected direct gas costs 11/01/17 - 04/30/18 [1] Revised projected indirect gas costs 11/01/17 - 04/30/18 [2] Projected April 30, 2018 End of Winter Period Balance April 30, 2018 Target Balance Variance from Projected Target Balance Table 2, PG. 1, Line 7 Table 2, PG. 1, Line 9 (LN 4 * Ln 9) + (LN 5 * LN 10) + (LN 6 * LN 11) LN 13 LN 13 LN 15 + LN 16 Etimated total recovered costs 11/01/17 - 04/30/18 [1] Revised projected indirect gas costs 11/01/17 - 04/30/18 [2] Projected April 30, 2018 End of Winter Period Balance Variance from Projected Target Balance Table 2, PG. 1, Line 7 Table 2, PG. 1, Line 8 Table 2, PG. 1, Line 8 Table 2, PG. 1, Line 9 LLN 14 * Ln 9) + (LN 5 * LN 10) + (LN 6 * LN 11) LN 15 * LN 16 Table 2, PG. 2, Line 71 Table 2, PG. 4, Line 101 LN 1 + Ln 17 + LN 19 + LN 20 Table 2, PG. 3, Line 107 LN 1 + Ln 17 + LN 19 + LN 20 LN 1 + Ln 17 + LN 19 + LN 20 Table 2, PG. 3, Line 107 LN 1 + Ln 17 + LN 19 + LN 20 LN 15 *					
Current recovery rate per therm Residential heat & non heat #LF classes 10 LLF classes 11 Table 2, PG. 1, Line 7 Table 2, PG. 1, Line 8 Table 2, PG. 1, Line 8 Table 2, PG. 1, Line 9 (LN 4 * Ln 9) + (LN 5 * LN 10) + (LN 6 * LN 11) Forecasted recovered costs at current rates 01/01/2018 - 04/30/2018 #Actual Recovered Costss 11/01/2017 - 12/31/2017 Revised projected direct gas costs 11/01/17 - 04/30/18 Revised projected direct gas costs 11/01/17 - 04/30/18 [1] Revised projected indirect gas costs 11/01/17 - 04/30/18 [2] Projected April 30, 2018 End of Winter Period Balance April 30, 2018 Target Balance Variance from Projected Target Balance Table 2, PG. 1, Line 7 Table 2, PG. 1, Line 9 LN 15 + LN 10 LN 15 + LN 16 Table 2, PG. 4, Line 101 LN 15 + LN 16 Table 2, PG. 3, Line 101 LN 1 + Ln 17 + LN 19 + LN 20 Table 2, PG. 3, Line 107 Table 2, PG. 4, Line 101 LN 1 + Ln 17 + LN 19 + LN 20		LLF Classes	11,223,794		Table 2, PG. 2, Line 4
Residential heaf & non heat HLF classes HLF classes LLF classes LLF classes Total Total Forecasted recovered costs at current rates 01/01/2018 - 04/30/2018 Actual Recovered Costss 11/01/2017 - 12/31/2017 Estimated total recovered costs 11/01/17 - 04/30/18 Revised projected direct gas costs 11/01/17 - 04/30/18 [1] Revised projected indirect gas costs 11/01/17 - 04/30/18 [2] Projected April 30, 2018 End of Winter Period Balance April 30, 2018 Target Balance Total Projected Gas Costs Table 2, PG. 1, Line 7 Table 2, PG. 1, Line 8 Table 2, PG. 1, Line 9 (LN 4 * Ln 9) + (LN 5 * LN 10) + (LN 6 * LN 11) LN 13 LN 13 LN 13 LN 15 + LN 16 Table 2, PG. 2, Line 71 Table 2, PG. 2, Line 71 Table 2, PG. 4, Line 101 LN 1 + Ln 17 + LN 19 + LN 20 Table 2, PG. 3, Line 107 LN 1 + Ln 17 + LN 19 + LN 20 Table 2, PG. 3, Line 107 LN 1 + Ln 17 + LN 19 + LN 20 Table 2, PG. 3, Line 107 LN 1 + Ln 17 + LN 19 + LN 20 Table 2, PG. 3, Line 107 LN 1 + Ln 17 + LN 19 + LN 20 Table 2, PG. 3, Line 107 LN 1 + Ln 17 + LN 19 + LN 20 Table 2, PG. 3, Line 107 LN 1 + Ln 17 + LN 19 + LN 20 Table 2, PG. 3, Line 107 LN 1 + Ln 17 + LN 19 + LN 20 Table 2, PG. 3, Line 107 LN 1 + Ln 17 + LN 19 + LN 20 Table 2, PG. 3, Line 107 LN 1 + Ln 17 + LN 19 + LN 20	-				
HLF classes \$0.6224 \$0.7236 Table 2, PG. 1, Line 8 Table 2, PG. 1, Line 8 Table 2, PG. 1, Line 9					
LLF classes \$0.7236 Table 2, PG. 1, Line 9			•		
Total \$ (17,176,337)	10		•		
Total \$ (17,176,337) (LN 4 * Ln 9) + (LN 5 * LN 10) + (LN 6 * LN 11) Forecasted recovered costs at current rates 01/01/2018 - 04/30/2018		LLF classes	\$0.7236		Table 2, PG. 1, Line 9
Forecasted recovered costs at current rates 01/01/2018 - 04/30/2018 \$ (17,176,337)					
Forecasted recovered costs at current rates 01/01/2018 - 04/30/2018 \$ (17,176,337) Actual Recovered Costss 11/01/2017 - 12/31/2017 \$ (7,074,448) \$ (24,250,786) LN 15 + LN 16 LN 15 + LN 15 + LN 16 LN 15 + LN 16 LN 15 + LN 15 + LN 16 LN 15 + LN		Total \$	(17,176,337)		(LN 4 * Ln 9) + (LN 5 * LN 10) + (LN 6 * LN 11)
Actual Recovered Costss 11/01/2017 - 12/31/2017 Estimated total recovered costs 11/01/17 - 04/30/18 Revised projected direct gas costs 11/01/17 - 04/30/18 [1] Revised projected indirect gas costs 11/01/17 - 04/30/18 [2] Projected April 30, 2018 End of Winter Period Balance April 30, 2018 Target Balance Variance from Projected Target Balance Total Projected Gas Costs \$ (7,074,448) \$ (7,074,448) \$ (24,250,786) LN 15 + LN 16 Table 2, PG. 2, Line 71 Table 2, PG. 4, Line 101 LN 1 + Ln 17 + LN 19 + LN 20 (\$2,708,745) Table 2, PG. 3, Line 107 LN 1 + Ln 17 + LN 19 + LN 20 Table 2, PG. 3, Line 107 LN 15 + LN 16 Table 2, PG. 3, Line 107 Table 2, PG. 3, Line 107 LN 15 + LN 16 Table 2, PG. 3, Line 107 Table 2, PG. 3, Line 107 LN 15 + LN 16 Table 2, PG. 3, Line 107 Table 2, PG. 3, Line 107 LN 15 + LN 16 Table 2, PG. 3, Line 107 LN 15 + LN 19 + LN 20 Table 2, PG. 3, Line 107 LN 15 + LN 19 + LN 20 Table 2, PG. 3, Line 107 LN 15 + LN 16 Table 2, PG. 3, Line 107 LN 15 + LN 19 + LN 20 Table 2, PG. 3, Line 107 LN 15 + LN 19 + LN 20 Table 2, PG. 3, Line 107 LN 15 + LN 19 + LN 20					
Estimated total recovered costs 11/01/17 - 04/30/18	15	Forecasted recovered costs at current rates 01/01/2018 - 04/30/2018		\$ (17,176,337)	LN 13
Revised projected direct gas costs 11/01/17 - 04/30/18 [1] \$ 24,102,816 Revised projected indirect gas costs 11/01/17 - 04/30/18 [2] \$ 885,225 Revised projected indirect gas costs 11/01/17 - 04/30/18 [2] \$ 885,225 Revised projected indirect gas costs 11/01/17 - 04/30/18 [2] \$ 885,225 Revised projected April 30, 2018 End of Winter Period Balance \$ 1,089,880 LN 1 + Ln 17 + LN 19 + LN 20 April 30, 2018 Target Balance \$ 3,798,625 Revised projected Target Balance \$ 3,798,625 Revised projected Target Balance \$ 3,798,625 Revised projected Target Balance \$ 24,988,041 Revised projected Target Balance Revised projected Target Balance \$ 24,988,041 Revised projected Target Balance Revi	16	Actual Recovered Costss 11/01/2017 - 12/31/2017		\$ (7,074,448)	
Revised projected direct gas costs 11/01/17 - 04/30/18 [1] \$ 24,102,816 Revised projected indirect gas costs 11/01/17 - 04/30/18 [2] \$ 885,225 Table 2, PG. 2, Line 71 Table 2, PG. 4, Line 101 Projected April 30, 2018 End of Winter Period Balance \$ 1,089,880 LN 1 + Ln 17 + LN 19 + LN 20 April 30, 2018 Target Balance \$ 3,798,625 LN 25 - LN 22 Variance from Projected Target Balance \$ 3,798,625 LN 19 + LN 20 Total Projected Gas Costs \$ 24,988,041 LN 19 + LN 20		Estimated total recovered costs 11/01/17 - 04/30/18		\$ (24,250,786)	LN 15 + LN 16
Revised projected indirect gas costs 11/01/17 - 04/30/18 [2] \$ 885,225	18				
21	19	Revised projected direct gas costs 11/01/17 - 04/30/18 [1]		\$ 24,102,816	Table 2, PG. 2, Line 71
Projected April 30, 2018 End of Winter Period Balance \$ 1,089,880 LN 1 + Ln 17 + LN 19 + LN 20	20	Revised projected indirect gas costs 11/01/17 - 04/30/18 [2]		\$ 885,225	Table 2, PG. 4, Line 101
23	21				
24	22	Projected April 30, 2018 End of Winter Period Balance		\$ 1,089,880	LN 1 + Ln 17 + LN 19 + LN 20
25 April 30, 2018 Target Balance (\$2,708,745) Table 2, PG. 3, Line 107 26 Variance from Projected Target Balance \$ 3,798,625 LN 25 - LN 22 28 Total Projected Gas Costs \$ 24,988,041 LN 19 + LN 20 30 31	23				
26	24				
26	25	April 30, 2018 Target Balance		(\$2,708,745)	Table 2, PG. 3, Line 107
28				,	·
28		Variance from Projected Target Balance		\$ 3,798,625	LN 25 - LN 22
29 Total Projected Gas Costs \$ 24,988,041 LN 19 + LN 20 30 31		, , ,			
31	29	Total Projected Gas Costs		\$ 24,988,041	LN 19 + LN 20
32 Under/(over) collection as percent of total gas costs 15.20% LN 27 / LN 29					
	32	Under/(over) collection as percent of total gas costs		15.20%	LN 27 / LN 29

NOTES

^[1] Reflects futures prices as of January 11, 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

alos Povonuos		+		(Forecast)	(Forecast)	(Enroppet)	(Egregoet)	(Forecast)	(Foresest)	(Forecast)	nmer (Forecast)	(Forecost)	(Fore
ales Revenues folumes	0 % 4 7	Nov. 47	Dec 47	, ,	, ,	(Forecast)	(Forecast)	, ,	(Forecast)	. ,	(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	Oc
Residential Heat & Non Heat Sales HLF Classes				3,715,334 560,375	3,261,260 491,888	2,797,567 421,950	1,485,575 224,066	702,997 363,643	482,427 249,548	419,957 217,233	422,211 218,399	443,199 229,256	9
Sales LLF Classes													4
Sales LLF Classes otal				3,703,475 7,979,184	3,250,850 7,003,998	2,788,637 6,008,154	1,480,833 3,190,474	561,252 1,627,891	385,156 1,117,130	335,281 972,471	337,080 977,690	353,837 1,026,291	2,1
ates				7,979,104	7,003,996	0,000,134	3,190,474	1,027,091	1,117,130	972,471	977,090	1,020,291	۷,۱
Residential Heat & Non Heat CGA				\$0.7103	\$0.7103	\$0.7103	\$0.7103	\$0.3975	\$0.3975	\$0.3975	\$0.3975	\$0.3975	
Sales HLF Classes CGA				\$0.6224	\$0.6224	\$0.6224		\$0.3543	\$0.3543	\$0.3543	\$0.3543	\$0.3543	
Sales LLF Classes CGA				\$0.7236	\$0.7236	\$0.7236	\$0.7236	\$0.4254	\$0.4254	\$0.4254	\$0.4254	\$0.4254	
devenues				ψ0.7200	Ψ0.7200	ψ0.7200	ψ0.7200	Ψ0.1201	ψ0.1201	Ψ0.1201	Ψ0.1201	ψ0.4204	
Residential Heat & Non Heat				\$ (2,639,002)	\$ (2,316,473)	\$ (1,987,112)	\$ (1,055,204)	\$ (279,441)	\$ (191,765)	\$ (166,933)	\$ (167,829)	\$ (176,172)	\$ (3
Sales HLF Classes				\$ (348,777)							\$ (77,379)		
Sales LLF Classes				\$ (2,679,834)					\$ (163,845)		\$ (143,394)		
otal Sales		\$ (1.965,771)	\$ (5,108,678)						\$ (444,025)		\$ (388,601)		
otal Galeo		ψ (1,000,111)	Ψ (0,100,010)	ψ (0,001,010)	ψ (1,01 1,000)	ψ (1,201,001)	(Σ,Σσο, 1σο)	ψ (0.1.1000)	ψ (,σ2σ)	φ (000,02.7	ψ (000,00.7)	ψ (101,010)	Ψ (
				Wi	nter					Sur	nmer		
as Costs and Credits				(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Forecast)	(Fore
	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oc
let Demand Costs (Net of Injection Fees & Cap. As		1407 17	D00 17	ouii io	1 00 10	mai 10	740110	way 10	oun to	001 10	7 tag 10	G0P 10	- 00
` ,	ssign.)												
Pipeline		\$ 278,965	\$ 278,965	\$ 278,965	\$ 278,965	\$ 278,965	\$ 278,965	\$ 278,965	\$ 278,965	\$ 278,965	\$ 278,965	\$ 278,020	\$ 2
Storage			\$ 1,118,336	\$ 1,118,336	\$ 1,118,336	\$ 1,118,336			\$ 410,369	\$ 410,369	\$ 410,369	\$ 410,369	\$ 4
Peaking		\$ 242,893	\$ 327,662	\$ 327,662	\$ 327,662	, , , , , ,	\$ 90,295	\$ 42,108	\$ 42,108	\$ 42,108	\$ 42,108	\$ 42,108	\$
otal Demand Costs		\$ 1,640,194	\$ 1,724,963	\$ 1,724,963	\$ 1,724,963	\$ 1,640,194	\$ 812,524	\$ 764,337	\$ 731,442	\$ 731,442	\$ 731,442	\$ 730,497	\$
sset Management and Capacity Release													
NUI AMA Revenue				\$ (494.079)	\$ (494,079)	\$ (494,079)	\$ (293,679)	\$ (394,079)	\$ (394,079)	\$ (394,079)	\$ (394,079)	\$ (394,079)	\$ (3
NUI Capacity Release				\$ -	\$ -	\$ -	¢ (===,===,	\$ -	\$ -	\$	\$ (55.,51.5)	\$ -	\$ (-
				\$ (494,079)	\$ (494,079)	*	\$ (293,679)	+	\$ (394,079)	\$ (394,079)	\$ (394,079)	\$ (394,079)	\$ (3
IUI AMA Rev & Cap. Release Subtotal				, , ,	, , ,	, , ,	, , ,	. , ,	, , ,				. ,
NH AMA Revenue				\$ (220,409)	\$ (220,409)	\$ (220,409)	\$ (131,010)	\$ (175,799)	\$ (175,799)	\$ (175,799)	\$ (175,799)	\$ (175,799)	\$ (1
NH Capacity Release				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$
IH Total Asset Management and Capacity Release	1			\$ (220,409)	\$ (220,409)	\$ (220,409)	\$ (131,010)	\$ (175,799)	\$ (175,799)	\$ (175,799)	\$ (175,799)	\$ (175,799)	\$ (1
NGTS Refund				\$ (293,328.41)	\$ (293,328.41)	\$ (293,328.41)	\$ (293,328.41)	\$ -	\$ -	\$ -	\$ -	\$ -	\$
let Demand Costs		\$ 812,941	\$ 854,867	\$ 1,211,226	\$ 1,211,226	\$ 1,126,457	\$ 388,185	\$ 588,539	\$ 555,644	\$ 555,644	\$ 555,644	\$ 554,698	\$ 5
or Domana Coolo		ψ 0.2,0	ψ σσ ι,σσι	Ψ 1,211,220	Ψ 1,211,220	ψ 1,120,101	ψ σσσ,τσσ	ψ 000,000	φ σσσ,στι	ψ 000,011	ψ σσο,στι	ψ 001,000	<u> </u>
IUI Commodity Costs													
				000.057	0.40.005	4 070 055	000.050	474 700	004 007	000 000	004.400	000 404	,
NUI Total Pipeline Volumes				898,057	943,605	1,070,055	883,856	474,732	321,807	282,899	284,126	306,404	6
Pipeline Costs Modeled in Sendout™				\$ 11,474,093	\$ 7,280,330 \$ 3.2000				\$ 862,289 \$ 2.9200	\$ 761,921 \$ 2.9400	\$ 763,018		\$ 1,6
NYMEX Price Used for Forecast				\$ 2.7380			\$ 2.7890					\$ 2.9200	
NYMEX Price Used for Update				\$ 2.7380 \$ -	\$ 3.2000 \$ -	\$ 2.9930 \$ -	\$ 2.7890	\$ 2.8900	\$ 2.9200	\$ 2.9400	\$ 2.9500	\$ 2.9200	\$
Increase/(Decrease) NYMEX Price				Ŧ	φ -	\$ -	φ -	œ.	œ.	•	e	œ.	¢
Increase/(Decrease) in Pipeline Costs Ipdated Pipeline Costs				\$ - \$ 11.474.093	φ - \$ 7300320		\$ 2,395,366	\$ - \$ 1,273,432	\$ 862,289	\$ 761,921	\$ 763,018	\$ 800,369	\$ 1,6
Interruptible Volumes - NH				\$ 11,474,093	\$ 7,280,330	\$ 3,338,452	\$ 2,395,366 0	φ 1,2/3,432	\$ 862,289	φ /01,921	φ /03,018	\$ 800,369	φ 1,6
Average Supply Cost (\$/MMBtu)				\$ 12.78	\$ 7.72	\$ 3.12	\$ 2.71	\$ 2.68	\$ 2.68	\$ 2.69	\$ 2.69	\$ 2.61	\$
Interruptible Cost - NH				ψ 12.78 ¢	\$ 7.72	\$ 3.12	φ 2./1 ¢	\$ 2.00	\$ 2.00	\$ 2.09	φ ∠.09 ¢	ψ ∠.01 ¢	\$
otal Updated Pipeline Costs				\$ 11,474,093	\$ 7,280,330	T	\$ 2,395,366	*	\$ 862,289	\$ 761,921	\$ 763,018	\$ 800,369	\$ 1,6
New Hampshire Allocated Percentage				40.28%	39.88%	39.23%	\$ 2,395,366 36.46%	34.56%	34.92%	34.54%	34.57%	33.68%	ψ 1,0
IH Updated Pipeline Costs		1		\$ 4,621,623	\$ 2,903,260	\$ 1,309,682	\$ 873,435	\$ 440,118	\$ 301,101		\$ 263,809	\$ 269,572	\$ 5
ledging (Gain)/Loss Estimate				Ψ 4,021,023	ψ 2,503,200	ψ 1,303,002	ψ 013,433	ψ 440,110	ψ 301,101	ψ 203,130	ψ 200,009	ψ 205,372	Ψ
NYMEX Options Contracts													1
Hedging Expenses				\$ 71,775	\$ 74,100	\$ 60,000							
NYMEX Option Strike Price				\$ 6.00	\$ 74,100	\$ 6.30							1
NYMEX Option Strike Frice NYMEX Price Used for Forecast				\$ 2.74	\$ 3.20	\$ 2.99							1
Strike Price Hit				No 2.74	No 3.20	No 2.99							
Option Hedging Gain (Credit)													
Tota Northern Hedginf Net Cost				\$ 71,775	\$ 74,100	\$ 60,000							
New Hampshire Allocated Percentage				40.28%	39.88%	39.23%							
NH Futures Hedging Net Cost				\$ 28,910		\$ 23,538		\$ -	\$ -	\$ -	s -	\$ -	\$
IH Commodity Costs		+		Ψ 20,010	ψ 20,000	ψ 20,000		_	<u> </u>		<u> </u>	· -	Ψ
Pipeline Excl Hedging				\$ 4,621,623	\$ 2,903,260	\$ 1,309,682	\$ 873,435	\$ 440,118	\$ 301,101	\$ 263,150	\$ 263,809	\$ 269,572	\$ 5
Hedging (Gain)/Loss Estimate				\$ 4,021,023		\$ 23,538		\$ 440,118	\$ 301,101	\$ 203,130	\$ 200,009	\$ 200,012	\$
Storage				\$ 889,823				\$ -	\$ -	\$ -	\$ -	\$ -	\$
Peaking				\$ 679,714	\$ 638,648	\$ 231,645		\$ 5,039	\$ 4,917	\$ 5,026	\$ 5,031	\$ 4,719	\$
otal Commodity Costs		\$ 1,131,186	\$ 3,765,770	\$ 6,220,071		\$ 2,057,219		\$ 5,039			\$ 268,840	\$ 274,292	\$ 5
otal Commodity Costs eventory Finance Charge		ψ 1,131,100	ψ 3,103,110	\$ 6,220,071	\$ 4,442,800	\$ 2,057,219		ψ 44 0,107	\$ 306,019	\$ 200,170	\$ 200,040	ψ ∠14,∠9Z	ψ D
										- 11			- 43

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

	(0.10.), 0.1110.	,a., c.c, _a.				
	Sales Revenues			Prior	 	
1	Volumes	Winter	Summer	Period		Total
2	Residential Heat & Non Heat	11,259,737	3,398,435	Pellou		Total 14,658,172
3	Sales HLF Classes	1,698,279	1,757,926			3,456,204
4	Sales LLF Classes	11,223,794	2,713,210			13,937,004
5	Total	24,181,810	7,869,571			32,051,380
6	Rates	-	-			-
7	Residential Heat & Non Heat CGA					
8	Sales HLF Classes CGA					
9	Sales LLF Classes CGA				<u> </u>	
10	Revenues					
11	Residential Heat & Non Heat	(7,997,791)				(9,348,669)
12	Sales HLF Classes	(1,057,009)				(1,679,842)
13	Sales LLF Classes	(8,121,538)				(9,275,737)
14 15	Total Sales	(24,250,786)	(3,127,910)			(27,378,696)
16			1			
17	Can Coate and Cradita	,				
18	Gas Costs and Credits	Winter	Summer			Total
	Net Description (Net of Initiation From 8 Oct.)		Summer		 	Total
19	Net Demand Costs (Net of Injection Fees & Cap. As		4 074 000			0.045.000
20	Pipeline	1,673,790	1,671,899			3,345,689
21	Storage	6,034,946	2,495,109			8,530,055
22	Peaking	1,559,066	252,650		<u> </u>	1,811,716
23	Total Demand Costs	9,267,802	4,419,659		<u> </u>	13,687,460
24		_				
25	Asset Management and Capacity Release					
26	NUI AMA Revenue	(1,775,916)	(2,364,475)		\$	(4,140,391)
27	NUI Capacity Release	-	-		\$	-
28	NUI AMA Rev & Cap. Release Subtotal	(1,775,916)	(2,364,475)		\$	(4,140,391)
29	NH AMA Revenue	(792,236)	(1,054,792)		\$	(1,847,028)
30	NH Capacity Release	(: ==,===)	(1,001,102)		\$	(1,011,020)
31	NH Total Asset Management and Capacity Release	\$ (792,236)	\$ (1,054,792)		\$	(1,847,028)
32	This rotal record management and capacity research	ψ (102,200)	ψ (1,001,102)		Ψ	(1,011,020)
33	PNGTS Refund	\$ (1,387,970)	\$ -		\$	(1,173,314)
34	1 NOTO Retaild	ψ (1,307,370)	Ψ -		Ψ	(1,173,314)
35	Net Demand Costs	\$ 7,087,595	\$ 3,364,866		\$	10,667,118
	Net Demand Costs	ψ 1,001,3 3 3	ψ 3,304,000		Ψ	10,007,110
36	NII II O	l				
37	NUI Commodity Costs					
38	NUI Total Pipeline Volumes				•	6,080,165
39 40	Pipeline Costs Modeled in Sendout™ NYMEX Price Used for Forecast				\$	30,597,640
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				\$	11,827,016
51	Hedging (Gain)/Loss Estimate					
52	NYMEX Options Contracts					
55	Hedging Expenses					
56 57	NYMEX Option Strike Price NYMEX Price Used for Forecast					
57 58	Strike Price Hit					
59	Option Hedging Gain (Credit)					
60	Tota Northern Hedginf Net Cost				\$	205,875
61	New Hampshire Allocated Percentage				*	200,070
62	NH Futures Hedging Net Cost	\$ 81,998	\$ -		\$	81,998
63	NH Commodity Costs	, , , , ,				
64	Pipeline Excl Hedging	\$ 9,708,000	\$ 2,119,016		\$	11,827,016
65	Hedging (Gain)/Loss Estimate	\$ 81,998	\$ -		\$	81,998
66	Storage	\$ 2,253,519	\$ -		\$	2,253,519
67	Peaking	\$ 1,555,025	\$ 29,837		\$	1,584,863
68	Total Commodity Costs	\$ 18,495,498	\$ 2,148,854		\$	20,644,351
69	Inventory Finance Charge	\$ 2,416	\$ 2,416		\$	2,416
70 71	Total Anticipated Direct Cost of Cos	\$ 24,102,816	¢ 5,510,700		©	20 646 526
71	Total Anticipated Direct Cost of Gas	\$ 24,102,816	\$ 5,513,720		\$	29,616,536

Northern Utilities

108 109

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

72									Wir	nter					Summer										
73								((Forecast)		(Forecast)	(Forecast)	(Forecast)	(Forecast)		(Forecast)	(Forecast)		(Forecast)		(Forecast)	(F	orecast)
74		(Oct-17		Nov-17		Dec-17		Jan-18		Feb-18		Mar-18	Apr-18	May-18		Jun-18	J	lul-18		Aug-18		Sep-18	(Oct-18
75	Working Capital																								
76	Total Anticipated Direct Cost of Gas			\$	2,083,946	\$	4,760,457	\$	7,432,126	\$	5,654,751	\$	3,184,272	\$ 1,266,904	\$ 1,033,696	\$	861,662	\$	823,819	\$	824,484	\$	828,990	\$ 1	1,141,068
77	Working Capital Percentage				0.1077%		0.1077%		0.11%		0.11%		0.11%	0.11%	0.11%		0.11%		0.11%		0.11%		0.11%		0.11%
78	Working Capital Allowance			\$	2,245	\$	5,127	\$	8,005	\$	6,090	\$	3,430	\$ 1,365	\$ 1,113			\$	887	\$	888	\$	893	\$	1,229
79	Beginning Period Working Capital Balance			\$		\$	5,671	\$	10,828	\$	18,885	\$	25,053	28,578	\$ 30,046			\$	32,308	\$	33,311	\$	34,319	\$	35,335
80	End of Period Working Capital Allowance			\$	5,655	\$	10,799	\$	18,833	\$	24,976	\$	28,483	\$ 29,942	\$ 31,159	\$	32,196	\$	33,195	\$	34,199	\$	35,212	\$	36,564
81	Interest			\$	16	\$	29	\$	53	\$	78	\$	95	\$ 104	\$ 108	\$	112	\$	116	\$	120	\$	123	\$	127
82	End of period with Interest	\$	3,411	\$	5,671	\$	10,828	\$	18,885	\$	25,053	\$	28,578	\$ 30,046	\$ 31,268	\$	32,308	\$	33,311	\$	34,319	\$	35,335	\$	36,691
83	Bad Debt																								
84	Projected Bad Debt	\$	-	\$	(12,901.55)		(3,279.80)	\$	1,857.72	\$	1,857.72	\$	1,857.72	\$ 1,857.72	\$ 30,733.90	\$		\$ 3		\$	30,733.90	\$	30,733.90	\$ 3	30,733.90
85	Beginning Period Bad Debt Balance			\$	13,172	\$	294	\$	(2,991)	\$	(1,140)	\$	717	\$ 2,580	\$ 4,451	\$	35,255	\$	66,168	\$	97,190	\$	128,323	\$	159,566
86	End of Period Bad Debt Balance			\$	270	\$	(2,986)	\$	(1,133)	\$	718	\$	2,575	\$ 4,438	\$ 35,184	\$	65,989	\$	96,902	\$	127,924	\$	159,057	\$	190,300
87	Interest			\$	24	\$	(5)	\$	(7)	\$	(1)	\$	6	\$ 12	\$ 70	\$	179	\$	289	\$	399	\$	509	\$	620
88	End of Period Bad Debt Balance with Interest	\$	13,172	\$		\$	(2,991)	\$	(1,140)	\$		\$	2,580	4,451	\$ 35,255	\$	66,168	\$	97,190	\$	128,323	\$	159,566	\$	190,919
89	Local Production and Storage Capacity			\$	70,110		70,110	\$	70,110	\$	70,110	\$	70,110	70,110		\$	-	\$	-	\$	-	\$	- :	\$	-
90	Miscellaneous Overhead			\$	69,710	\$	69,710	\$	69,710	\$	69,710	\$	69,710	\$ 69,710	\$ 15,734	\$	15,734	\$	15,734	\$	15,734	\$	15,734	\$	15,734
91	Gas Cost Other than Bad Debt and Working Capita	I Ove	r/Under Co	llect																					
92	Beginning Balance Over/Under Collection			\$	336,042		455,616	\$	108,393	\$	2,016,481	\$	2,844,706	\$ 1,909,611	\$ 1,055,383	\$				\$:	2,362,109	\$		\$ 3	3,270,468
93	Net Costs - Revenues			\$	118,176		(348,221)	\$	1,904,333	\$	819,632	\$	(943,500)	(859,469)	\$ 402,394	\$			453,026	\$		\$	436,805	\$	303,001
94	Ending Balance before Interest			\$	454,217		107,396	\$	2,012,725	\$	2,836,113	\$	1,901,206			\$				\$	2,813,726			\$ 3	3,573,469
95	Average Balance			\$	395,129	\$	281,506	\$	1,060,559	\$	2,426,297	\$	2,372,956	\$ 1,479,876	\$ 1,256,580	\$		\$ 2		\$:	2,587,918	\$	3,041,294	\$ 3	3,421,968
96	Interest Rate				4.25%		4.25%		4.25%		4.25%		4.25%	4.25%	4.25%		4.25%		4.25%		4.25%		4.25%		4.25%
97	Interest Expense			\$	1,399		997	\$	3,756	\$	8,593	\$	8,404	5,241	\$ 4,450		5,946	\$	7,537	\$	9,166	\$	10,771	\$	12,119
98	Ending Balance Incl Interest Expense	\$	336,042	\$	455,616		108,393	\$	2,016,481	\$	2,844,706	\$	1,909,611	\$ 1,055,383	\$ 1,462,228		1,901,546	\$ 2	,362,109	\$	2,822,891	\$	3,270,468	\$ (3,585,588
99	Total Over/Under Collection Ending Balance	\$	352,624	\$	461,582	\$	116,230	\$	2,034,226	\$	2,870,476	\$	1,940,769	\$ 1,089,880	\$ 1,528,750	\$	2,000,022	\$ 2	,492,611	\$	2,985,533	\$	3,465,369	\$ (3,813,199
100																									
101	Total Indirect Cost of Gas	\$	352,624	\$	130,602	\$	142,689	\$	153,484	\$	156,438	\$	153,612	\$ 148,400	\$ 52,210	\$	53,634	\$	55,297	\$	57,040	\$	58,764	\$	60,564
102																									
103	Total Cost of Gas	\$	352,624	\$	2,074,729	\$	4,763,326	\$	7,585,610	\$	5,811,189	\$	3,337,884	\$ 1,415,304	\$ 1,085,907	\$	915,296	\$	879,117	\$	881,524	\$	887,754	\$ '	1,201,632
104													•												
105	Total Interest	\$	-	\$	1,439	\$	1,021	\$	3,801	\$	8,670	\$	8,505	\$ 5,357	\$ 4,629	\$	6,238	\$	7,942	\$	9,684	\$	11,403	\$	12,866
106																	•				•				
107								Apri	il 30, 2018 Ta	rge	t Balance			(\$2,708,745)											
100								-		-															

April 30, 2018 Target Balance (\$2,708,745) April 30, 2018 Projected Balance \$ 1,089,880 \$ 3,798,625 Variance

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

} [Winter		Summer		Prior Period		Total	
5	Working Capital									
	Total Anticipated Direct Cost of Gas							\$	29,896,17	
	Working Capital Percentage									
	Working Capital Allowance	\$	26,261	\$	5,939	\$	3,411	\$	35,61	
	Beginning Period Working Capital Balance									
	End of Period Working Capital Allowance									
	Interest							\$	1,08	
	End of period with Interest									
Ī	Bad Debt									
	Projected Bad Debt	\$	184,403	\$	11,146	\$	13,172	\$	208,72	
	Beginning Period Bad Debt Balance									
	End of Period Bad Debt Balance									
	Interest							\$	2,09	
	End of Period Bad Debt Balance with Interest								,	
	Local Production and Storage Capacity	\$	420,658	\$	-			\$	420,65	
	Miscellaneous Overhead	\$	418,262	\$	94,406	\$	-	\$	512,66	
ı	Gas Cost Other than Bad Debt and Working Capita									
	Beginning Balance Over/Under Collection							\$	20,545,47	
	Net Costs - Revenues							\$	3,171,16	
	Ending Balance before Interest							\$	23,716,64	
	Average Balance							\$	22,131,05	
	Interest Rate								, - ,-	
	Interest Expense							\$	78,38	
ı	Ending Balance Incl Interest Expense									
ı	Total Over/Under Collection Ending Balance									
	· ·									
	Total Indirect Cost of Gas	\$	885,225	\$	337,509	\$	352,624	\$	1,575,35	
ŀ	Total Cost of Gas	\$	24,988,041	\$	5,851,229	\$	352,624	\$	31,191,89	
-										
	T-1-1 l-1	\$	28,794	\$	52,762			\$	81,55	
	Total Interest									

Table 2 Page 4 of 4

Northern Utilities, Inc. Price Risk Management Profit and Loss Statement December 2017

Account # 53325

Current

ACB \$0.00 TE \$8,445.00 LV \$8,445.00

ACTIVITY -	Purchase Cost and Profit and Loss						Expense	Profit and Loss
Date	Description	State		Contracts	Option Premuim	Strike Price	Option Purchase Cost	
	Net P&L							\$0.00
TRANSACT	TION COSTS						Subtotal	Total
	Transaction Cost-Enter Options Transaction Cost-Exit Options	Both		0 0	\$7.36		\$0.00 \$0.00	
	Total New Transaction Costs							\$0.00
OPEN CALI	OPTION POSITIONS-Expense and Open Trade	e Equity			Total			Total
07/27/16 08/29/16	Feb18 Options Mar18 Options	State Both Both	QTY 30 25	Actual Option Premium 0.2470 0.2400	Option Purchase Cost \$74,100.00 \$60,000.00	Strike Price \$4.500 \$4.650	12/29/17 Futures Price \$2.953 \$2.906	Current Open Trade Equity \$0.00 \$0.00
	Total Expense, Open Trade Equity				\$134,100.00			\$0.00
OPEN CALI	OPTION POSITIONS- Long Option Value				Total			
07/27/16 08/29/16	Feb18 Options Mar18 Options	State Both Both	QTY 30 25	Current Option Premium 0.0094 0.0225	Current Option Value \$2,820.00 \$5,625.00	Strike Price \$4.500 \$4.650		
12/29/17	Total Long Option Value				\$8,445.00	,		
MARGIN CA	ASH BALANCE						Subtotal	Total
12/01/17	Beginning Balance-carried forward from las	t month						\$0.00
	Interest Credit Net Deposit to Margin Account Option Premiums of new activity Monthly Transaction Costs						\$0.00 \$0.00 \$0.00 \$0.00	
	Total Monthly Cash Adjustment							\$0.00
12/29/17	Ending Balance (ACB)							\$0.00

NORTHERN UTILITIES, INC.

DETERMINATION OF INVENTORY FINANCING FROM MONEY POOL December 2017

				Money Pool	_		
	Total Inventory	Average bal beg + end / 2	Internally Financed	Interest Rate	Interest to Defer	NH	ME
	1 otal inventory	beg i cha / 2	1 muneeu	Tute	Deter	1111	1412
January 2016	\$8,349,188.69	\$9,797,354.69	\$9,797,354.69	1.70%	\$13,879.59	\$5,887.72	\$7,991.87
February	\$6,881,382.39	\$7,615,285.54	\$7,615,285.54	1.71%	\$10,851.78	\$4,603.33	\$6,248.46
March	\$6,466,038.05	\$6,673,710.22	\$6,673,710.22	1.71%	\$9,510.04	\$4,034.16	\$5,475.88
April	\$6,932,113.54	\$6,699,075.80	\$6,699,075.80	1.71%	\$9,546.18	\$4,049.49	\$5,496.69
May	\$7,347,477.88	\$7,139,795.71	\$7,139,795.71	1.72%	\$10,233.71	\$4,341.14	\$5,892.57
June	\$7,775,720.99	\$7,561,599.44	\$7,561,599.44	1.73%	\$10,901.31	\$4,624.33	\$6,276.97
July	\$8,390,100.35	\$8,082,910.67	\$8,082,910.67	1.76%	\$11,852.12	\$5,027.67	\$6,824.45
August	\$9,003,112.57	\$8,696,606.46	\$8,696,606.46	1.79%	\$12,953.71	\$5,494.96	\$7,458.74
September	\$9,643,843.60	\$9,323,478.09	\$9,323,478.09	1.81%	\$14,040.27	\$5,955.88	\$8,084.39
October	\$10,336,838.18	\$9,990,340.89	\$9,990,340.89	1.81%	\$15,044.50	\$6,381.88	\$8,662.62
November	\$10,177,266.05	\$10,257,052.11	\$10,257,052.11	1.84%	\$15,692.96	\$6,656.95	\$9,036.01
December	\$8,176,192.96	\$9,176,729.50	\$9,176,729.50	1.98%	\$15,151.98	\$6,427.47	\$8,724.51
January 2017	\$5,829,428.98	\$7,002,810.97	\$7,002,810.97	2.05%	\$11,957.06	\$5,072.18	\$6,884.87
February	\$3,991,804.55	\$4,910,616.77	\$4,910,616.77	2.05%	\$8,384.71	\$3,556.79	\$4,827.92
March	\$1,988,672.70	\$2,990,238.62	\$2,990,238.62	2.19%	\$5,445.13	\$2,309.82	\$3,135.31
April	\$3,252,033.76	\$2,620,353.23	\$2,620,353.23	2.27%	\$4,956.51	\$2,102.55	\$2,853.96
May	\$4,492,308.93	\$3,872,171.35	\$3,872,171.35	2.29%	\$7,389.39	\$3,134.58	\$4,254.81
June	\$5,803,856.23	\$5,148,082.58	\$5,148,082.58	2.44%	\$10,467.77	\$4,440.43	\$6,027.34
July	\$7,018,391.76	\$6,411,123.99	\$6,411,123.99	2.51%	\$13,409.93	\$5,688.49	\$7,721.44
August	\$8,211,399.49	\$7,614,895.62	\$7,614,895.62	2.52%	\$15,991.28	\$6,783.50	\$9,207.78
September	\$9,381,190.83	\$8,796,295.16	\$8,796,295.16	2.52%	\$18,472.22	\$7,835.92	\$10,636.30
October	\$10,586,052.58	\$9,983,621.71	\$9,983,621.71	2.52%	\$20,965.61	\$8,893.61	\$12,072.00
November	\$8,906,849.26	\$9,746,450.92	\$9,746,450.92	2.56%	\$20,805.30	\$9,281.24	\$11,524.05
December	\$5,829,428.98	\$7,368,139.12	\$7,368,139.12	2.69%	\$16,516.91	\$7,368.19	\$9,148.72
Inventory							
ACCT#	LNC		<u>MMBTU</u>	<u>AMOUNT</u>			
515152	NATURAL GAS						
			7,514	\$44,251.50			
515114&115							
515116	ē		174,845	\$387,803.62			
515113	E		1,824,670	\$5,397,373.86			
516525	Washington 10 prepaid		-				

Total Inventory

\$5,829,428.98