CALCULATION OF FIRM SALES COST OF GAS RATE

Period Covered: November 1, 2018 - April 30, 2019

r enou Govereu. Novembe	11, 2010 - April 30, 2013		
(Col 1)	(Col 2)	(Col 3)	
Total Anticipated Direct Cost of Gas Projected Prorated Sales (11/01/18 - 04/30/19) Direct Cost of Gas Rate	\$27,122,704 34,882,919	\$0.7775	nor thorm
Demand Cost of Gas Rate Commodity Cost of Gas Rate Total Direct Cost of Gas Rate	\$11,747,382 \$15,382,305 \$27,128,686	\$0.7778 \$0.3368 \$ <u>0.4410</u> \$0.7778	per therm per therm per therm per therm
Total Anticipated Indirect Cost of Gas Projected Prorated Sales (11/01/18 - 04/30/19) Indirect Cost of Gas	\$1,719,515 34,882,919	\$0.0493	per therm
TOTAL PERIOD AVERAGE COST OF GAS	\$2,000,504	\$0.8271	per therm
Period endig under-collection to be recovered as determined on 11/20/2018 Projected Sales (12/01/18 - 04/30/2019) Per unit change in Cost of Gas (12/01/18 - 04/30/18)	\$2,089,524 30,651,027 \$0.0682		
RESIDENTIAL COST OF GAS RATE -12/01/18	COGwr	\$0.8953	per therm
	Maximum (COG+25%)	\$1.0339	
RESIDENTIAL COST OF GAS RATES - 11/01/2018 CHANGE IN PER UNIT COST RESIDENTIAL COST OF GAS RATES - 12/01/2018		\$0.8271 \$0.0682 \$0.8953	
COM/IND LOW WINTER USE COST OF GAS RATE - 12/01/18	COGwl	\$0.7936	per therm
	Maximum (COG+25%)	\$0.9068	
COM/IND LOW WINTER USE COST OF GAS RATES - 11/01/2018 CHANGE IN PER UNIT COST COM/IND LOW WINTER USE COST OF GAS RATES - 12/01/2018		\$0.7254 \$0.0682 \$0.7936	
COM/IND HIGH WINTER USE COST OF GAS RATE - 12/01/18	COGwh	\$0.9106	per therm
	Maximum (COG+25%)	\$1.0530	
COM/IND HIGH WINTER USE COST OF GAS RATES - 11/01/2018 CHANGE IN PER UNIT COST COM/IND HIGH WINTER USE COST OF GAS RATES - 12/01/2018		\$0.8424 \$0.0682 \$0.9106	
Issued: November 20, 2018 Effective Date: December 1, 2018	Issued By:	Senior Vice	President

NORTHERN UTILITIES - NEW HAMPSHIRE DIVISION WINTER SEASON RESIDENTIAL RATES

	Winter Season		Total	Total Billed	l Rates
	November 2018 - April 2019	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	\$0.6660	\$0.7351	\$1.6304	
	All usage over 50 therms	\$0.6660	\$0.7351	\$1.6304	
	LDAC	\$0.0691			
	Gas Cost Adjustment:				
	Cost of Gas	\$0.8953			
Residential Heating	Tariff Rate R 10:				
Low Income	Monthly Customer Charge	\$8.54	\$8.54		\$8.54
	First 50 therms	\$0.2664	\$0.3355	\$1.2308	
	All usage over 50 therms	\$0.2664	\$0.3355	\$1.2308	
	LDAC	\$0.0691			
	Gas Cost Adjustment:				
	Cost of Gas	\$0.8953			
Residential Non-Heating	Tariff Rate R 6:				
	Monthly Customer Charge	\$21.36	\$21.36		\$21.36
	First 10 therms	\$0.6227	\$0.6918	\$1.5871	
	All usage over 10 therms	\$0.6227	\$0.6918	\$1.5871	
	LDAC	\$0.0691			
	Gas Cost Adjustment:				
	Cost of Gas	\$0.8953			

Issued: November 20, 2018	Issued by:	McHales
Effective: With Service Rendered On and After December 1, 2018	Title	Senior Vice President

NORTHERN UTILITIES - NEW HAMPSHIRE DIVISION

WINTER SEASON C&I RATES

	Winter Season		Total	Total Billed Rates
	November 2018 - April 2019	Tariff	Delivery Rates	Tariff Rates, LDAC
	November 2010 April 2010	Rates	(Includes LDAC)	Plus Cost of Gas
C&I Low Annual/High Winter	Tariff Rate G 40:	ivates	(Illiciades EDAG)	Tius Cost of Gas
Cor Low Aimany right Winter	Monthly Customer Charge	\$72.26	\$72.26	\$72.26
	First 75 therms	\$0.1795	\$0.2191	\$1.1297
		\$0.1795	\$0.2191 \$0.2191	
	All usage over 75 therms	*	\$U.Z191	\$1.1297
	LDAC	\$0.0396		
	Gas Cost Adjustment:			
	Cost of Gas	\$0.9106		
C&I Low Annual/Low Winter	Tariff Rate G 50:			
	Monthly Customer Charge	\$72.26	\$72.26	\$72.26
	First 75 therms	\$0.1795	\$0.2191	\$1.0127
	All usage over 75 therms	\$0.1795	\$0.2191	\$1.0127
	LDAC	\$0.0396	ψ0.2101	ψ1.0121
	Gas Cost Adjustment:	Ψ0.0000		
		¢0.7026		
	Cost of Gas	\$0.7936		
C&I Medium Annual/High Winter	Tariff Rate G 41:			
_	Monthly Customer Charge	\$214.26	\$214.26	\$214.26
	All usage	\$0.2334	\$0.2730	\$1.1836
	LDAC	\$0.0396	40.2700	V
		40.000		
	Gas Cost Adjustment:	*** 0400		
	Cost of Gas	\$0.9106		
C&I Medium Annual/Low Winter	Tariff Rate G 51:			
	Monthly Customer Charge	\$214.26	\$214.26	\$214.26
	First 1,300 therms	\$0.1648	\$0.2044	\$0.9980
	All usage over 1,300 therms	\$0.1346	\$0.1742	\$0.9678
	LDAC	\$0.0396	4 0	40.00.0
	Gas Cost Adjustment:	\$0.0390		
		£0.7000		
	Cost of Gas	\$0.7936		
C&I High Annual/High Winter	Tariff Rate G 42:			
	Monthly Customer Charge	\$1,285.55	\$1,285.55	\$1,285.55
	All usage	\$0.1909	\$0.2305	\$1.1411
	LDAC	\$0.0396		
	Gas Cost Adjustment:			
	Cost of Gas	\$0.9106		
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C&I High Annual/Low Winter	Tariff Rate G 52:	04 005 55	A4 005	A4 00=
	Monthly Customer Charge	\$1,285.55	\$1,285.55	\$1,285.55
	All usage	\$0.1655	\$0.2051	\$0.9987
	LDAC	\$0.0396		
	Gas Cost Adjustment:			
	Cost of Gas	\$0.7936		
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Issued: November 20, 2018 Issued by:

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

(Col 1)

(Col 3)

CALCULATION OF FIRM SALES COST OF GAS RATE

Period Covered: November 1, 2018 - April 30, 2019

(Col 1)	(0012)	(,	JUI 3)	
Total Anticipated Direct Cost of Gas Projected Prorated Sales (11/01/18 - 04/30/19) Direct Cost of Gas Rate	\$27,122,704 34,882,919		\$0.7775	per therm
Demand Cost of Gas Rate Commodity Cost of Gas Rate Total Direct Cost of Gas Rate	\$11,747,382 \$15,382,305 \$27,128,686		\$0.3368 \$0.4410 \$0.7778	per therm per therm per therm
Total Anticipated Indirect Cost of Gas Projected Prorated Sales (11/01/18 - 04/30/19) Indirect Cost of Gas	\$1,719,515 34,882,919		\$0.0493	•
TOTAL PERIOD AVERAGE COST OF GAS			\$0.0493 \$0.8271	per therm
Period endig under-collection to be recovered as determined on 11/20/2018 Projected Sales (12/01/18 - 04/30/2019) Per unit change in Cost of Gas (12/01/18 - 04/30/18)	\$2,089,524 30,651,027 \$0.0682			
RESIDENTIAL COST OF GAS RATE -11/01/18-12/01/18	COGwr	\$0.8271	\$0.8953	per therm
	Maximum (COG+25%)		\$1.0339	
RESIDENTIAL COST OF GAS RATES - 11/01/2018 CHANGE IN PER UNIT COST RESIDENTIAL COST OF GAS RATES - 12/01/2018			\$0.8271 \$0.0682 \$0.8953	
COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/18-12/01/18	COGwl	\$0.725 4	\$0.7936	per therm
	Maximum (COG+25%)		\$0.9068	
COM/IND LOW WINTER USE COST OF GAS RATES - 11/01/2018			<u>\$0.7254</u>	

	Maximum (COG+25%)	\$0.9068
COM/IND LOW WINTER USE COST OF GAS RATES - 11/01/2018 CHANGE IN PER UNIT COST COM/IND LOW WINTER USE COST OF GAS RATES - 12/01/2018		\$0.7254 \$0.0682 \$0.7936
C&I HLF-DEMAND COSTS ALLOCATED PER SMBA PLUS: RESIDENTIAL DEMAND RELOCATION TO C&I HLF C&I HLF-TOTAL ADJUSTED DEMAND COSTS C&I HLF-PROJECTED PRORATED SALES (11/01/18 - 04/30/19) DEMAND COST OF GAS RATE	\$660,916 (\$16,297) \$644,620 2,480,220 \$0.2599	
C&I HLF COMMODITY COSTS ALLOCATED PER SMBA PLUS: RESIDENTIAL COMMODITY REALLOCATION TO C&I HLF C&I HLF TOTAL ADJUSTED COMMODITY COSTS C&I HLF PROJECTED PRORATED SALES (11/01/18 - 04/30/19) COMMODITY COST OF GAS RATE	\$1,031,082 \$1,238 \$1,032,320 2,480,220 \$0,4162	
INDIRECT COST OF GAS	\$ 0.0493	
TOTAL C&I HLF COST OF GAS RATE	\$ 0.7254	

M/IND HIGH WINTER USE COST OF GAS RATE - 11/01/18 12/01/18	COGwh	\$0.8424 <u>\$0.9106</u>	per therm
	Maximum (COG+25%)	\$1.0530	
COM/IND HIGH WINTER USE COST OF GAS RATES - 11/01/2018		\$0.842 <u>4</u>	
CHANGE IN PER UNIT COST		\$0.0682	
COM/IND HIGH WINTER USE COST OF GAS RATES - 12/01/2018		<u>\$0.9106</u>	
C&I LLF COMMODITY COSTS ALLOCATED PER SMBA	\$5,787,436		
PLUS RESIDENTIAL DEMAND REALLOCATION TO C&I LLF	(\$142,706)		
C&I LLF TOTAL ADJUSTED DEMAND COSTS	\$ 5,644,730		
C&I LLF PROJECTED PRORATED SALES (11/01/18 - 04/30/19)	16,211,416		
DEMAND COST OF GAS RATE	\$ 0.3482		
C&I LLF COMMODITY COSTS ALLOCATED PER SMBA	\$7,203,090		
PLUS: RESIDENTIAL COMMODITY REALLOCATION TO C&I LLF	\$8,649		
C&I LLF TOTAL ADJUSTED COMMODITY COSTS	\$7,211,739		
C&I LLF PROJECTED PRORATED SALES (11/01/18 - 04/30/19)			
COMMODITY COST OF GAS RATE	\$0.4449		
INDIRECT COST OF GAS	\$ 0.0493		
TOTAL C&I LLF COST OF GAS RATE	\$0.8424		

NORTHERN UTILITIES - NEW HAMPSHIRE DIVISION WINTER SEASON RESIDENTIAL RATES

	Winter Season November 2018 - April 2019	Tariff Rates	Total Delivery Rates (Includes LDAC)	<u>Total Billed Rates</u> Tariff Rates, LDAC Plus Cost of Gas
Residential Heating	Tariff Rate R 5: Monthly Customer Charge First 50 therms All usage over 50 therms LDAC Gas Cost Adjustment: Cost of Gas	\$21.36 \$0.6660 \$0.6660 \$0.0691 \$0.8271 \$0.8953	\$21.36 \$0.7351 \$0.7351	\$21.36 \$1.5622 \$1.6304 \$1.5622 \$1.6304
Residential Heating Low income	Tariff Rate R 10: Monthly Customer Charge First 50 therms All usage over 50 therms LDAC Gas Cost Adjustment: Cost of Gas	\$8.54 \$0.2664 \$0.2664 \$0.0691 \$0.8271 \$0.8953	\$8.54 \$0.3355 \$0.3355	\$8.54 \$1.1626 <u>\$1.2308</u> \$1.1626 <u>\$1.2308</u>
Residential Non-Heating	Tariff Rate R 6: Monthly Customer Charge First 10 therms All usage over 10 therms LDAC Gas Cost Adjustment: Cost of Gas	\$21.36 \$0.6227 \$0.6227 \$0.0691 \$0.8274 \$0.8953	\$21.36 \$0.6918 \$0.6918	\$21.36 \$1.5189 \$1.5871 \$1.5189 \$1.5871

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Effective: With Service Rendered On and After November December 1, 2018 Title:

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

	Winter Season November 2018 - April 2019	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	\$72.26 \$0.1795 \$0.1795 \$0.0396 \$0.8424 \$0.9106	\$72.26 \$0.2191 \$0.2191	\$72.26 \$1.0615 \$1.0615 \$1.1297
C&I Low Annual/Low Winter	Tariff Rate G 50: Monthly Customer Charge First 75 therms All usage over 75 therms LDAC Gas Cost Adjustment: Cost of Gas	\$72.26 \$0.1795 \$0.1795 \$0.0396 \$0.7254 \$0.7936	\$72.26 \$0.2191 \$0.2191	\$72.26 \$0.9445 \$0.9445 \$1.0127
C&I Medium Annual/High Winter	Tariff Rate G 41: Monthly Customer Charge All usage LDAC Gas Cost Adjustment: Cost of Gas	\$214.26 \$0.2334 \$0.0396 \$0.8424 \$0.9106	\$214.26 \$0.2730	\$214.26 \$1.1154 \$1.1836
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	\$214.26 \$0.1648 \$0.1346 \$0.0396 \$0.7254 \$0.7936	\$214.26 \$0.2044 \$0.1742	\$214.26 \$0.9298 \$0.8996 \$0.9678
C&I High Annual/High Winter	Tariff Rate G 42: Monthly Customer Charge All usage LDAC Gas Cost Adjustment: Cost of Gas	\$1,285.55 \$0.1909 \$0.0396 \$0.8424 \$0.9106	\$1,285.55 \$0.2305	\$1,285.55 \$1.0729 \$1.1411
C&I High Annual/Low Winter	Tariff Rate G 52: Monthly Customer Charge All usage LDAC Gas Cost Adjustment: Cost of Gas	\$1,285.55 \$0.1655 \$0.0396 \$0.7254 \$0.7936	\$1,285.55 \$0.2051	\$1,285.55 \$0.9305 \$0.9987

Issued: November 5 November 20, 2018

Issued by:

Senior Vice President

Effective: With Service Rendered On and After November December 1, 2018 Title Authorized by NHPUC Order No. 26,186 in Docket No. DG 18-143, dated October 31, 2018.