

**Northern Utilities, Inc.**  
**New Hampshire Division**  
**Annual Cost of Gas**  
**Winter Period Rate Adjustment**

**Tariff Sheets**

Fifteenth Revised Page No. 43  
Calculation of proposed Cost of Gas Adjustment

Sixteenth Revised Page No. 96  
Rate Summary

Sixteenth Revised Page No. 97  
Rate Summary

# CALCULATION OF FIRM SALES COST OF GAS RATE

Period Covered: November 1, 2016 - April 30, 2017

(Col 1)	(Col 2)	(Col 3)
Total Anticipated Direct Cost of Gas	\$21,855,615	
Projected Prorated Sales (11/01/16 - 04/30/17)	31,549,237	
<b>Direct Cost of Gas Rate</b>		\$0.6927 per therm
<b>Demand Cost of Gas Rate</b>	\$8,327,997	\$0.2640 per therm
<b>Commodity Cost of Gas Rate</b>	<u>\$13,527,619</u>	<u>\$0.4287</u> per therm
<b>Total Direct Cost of Gas Rate</b>	\$21,855,615	<b>\$0.6927</b> per therm
Total Anticipated Indirect Cost of Gas	\$1,989,516	
Projected Prorated Sales (11/01/16 - 04/30/17)	31,549,237	
<b>Indirect Cost of Gas</b>		\$0.0631 per therm
<b>TOTAL PERIOD AVERAGE COST OF GAS</b>		<b>\$0.7558 per therm</b>

Period Ending over-collection as determined on 11/21/16

(\$672,842)

Projected Sales (11/01/16 - 04/30/17)

27,653,599

Per unit change in Cost of Gas (11/01/16 - 04/30/17)

(\$0.0243)

\*1 Over-collection w/o rate adjustment as contained in NUI's COG Report dated November 21, 2016

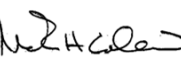
<b>RESIDENTIAL COST OF GAS RATE -12/01/16</b>	<b>COGwr</b>	<b>\$0.7315 per therm</b>
	<b>Maximum (COG+25%)</b>	<b>\$0.9448</b>
RESIDENTIAL COST OF GAS RATE - 11/01/16		\$0.7558
CHANGE IN PER UNIT COST		(\$0.0243)
RESIDENTIAL COST OF GAS RATE - 12/01/16		\$0.7315

<b>COM/IND LOW WINTER USE COST OF GAS RATE - 12/01/16</b>	<b>COGwl</b>	<b>\$0.6558 per therm</b>
	<b>Maximum (COG+25%)</b>	<b>\$0.8501</b>
COMM/IND LOW WINTER USE COST OF GAS RATE - 11/01/16		\$0.6801
CHANGE IN PER UNIT COST		(\$0.0243)
COMM/IND LOW WINTER USE COST OF GAS RATE - 12/01/16		\$0.6558

<b>COM/IND HIGH WINTER USE COST OF GAS RATE - 12/01/16</b>	<b>COGwh</b>	<b>\$0.7453 per therm</b>
	<b>Maximum (COG+25%)</b>	<b>\$0.9620</b>
COMM/IND HIGH WINTER USE COST OF GAS RATE - 11/01/16		\$0.7696
CHANGE IN PER UNIT COST		(\$0.0243)
COMM/IND HIGH WINTER USE COST OF GAS RATE - 12/01/16		\$0.7453

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Issued By:



Senior Vice President

**NORTHERN UTILITIES - NEW HAMPSHIRE DIVISION**  
**WINTER SEASON RESIDENTIAL RATES**

<b>Winter Season November 2016 - April 2017</b>		<b>Tariff Rates</b>	<b>Total Delivery Rates (Includes LDAC)</b>	<b>Total Billed Rates Tariff Rates, LDAC Plus Cost of Gas</b>
Residential Heating	<b><u>Tariff Rate R 5:</u></b>			
	Monthly Customer Charge	\$21.36	\$21.36	\$21.36
	First 50 therms	\$0.6239	\$0.6722	\$1.4037
	All usage over 50 therms	\$0.5103	\$0.5586	\$1.2901
	<b>LDAC</b>	<b>\$0.0483</b>		
	<b><u>Gas Cost Adjustment:</u></b>			
	Cost of Gas	<b>\$0.7315</b>		
Residential Heating Low Income	<b><u>Tariff Rate R 10:</u></b>			
	Monthly Customer Charge	\$8.54	\$8.54	\$8.54
	First 50 therms	\$0.2496	\$0.2979	\$1.0294
	All usage over 50 therms	\$0.2041	\$0.2524	\$0.9839
	<b>LDAC</b>	<b>\$0.0483</b>		
	<b><u>Gas Cost Adjustment:</u></b>			
	Cost of Gas	<b>\$0.7315</b>		
Residential Non-Heating	<b><u>Tariff Rate R 6:</u></b>			
	Monthly Customer Charge	\$21.36	\$21.36	\$21.36
	First 10 therms	\$0.4214	\$0.4697	\$1.2012
	All usage over 10 therms	\$0.4214	\$0.4697	\$1.2012
	<b>LDAC</b>	<b>\$0.0483</b>		
	<b><u>Gas Cost Adjustment:</u></b>			
	Cost of Gas	<b>\$0.7315</b>		
Residential Non-Heating Low Income	<b><u>Tariff Rate R 11:</u></b>			
	Monthly Customer Charge	\$15.52	\$15.52	\$15.52
	First 10 therms	\$0.3196	\$0.3679	\$1.0994
	All usage over 10 therms	\$0.3196	\$0.3679	\$1.0994
	<b>LDAC</b>	<b>\$0.0483</b>		
	<b><u>Gas Cost Adjustment:</u></b>			
	Cost of Gas	<b>\$0.7315</b>		

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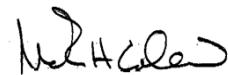
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**NORTHERN UTILITIES - NEW HAMPSHIRE DIVISION**  
**WINTER SEASON C&I RATES**

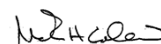
<b>Winter Season November 2016 - April 2017</b>		<b>Tariff Rates</b>	<b>Total Delivery Rates (Includes LDAC)</b>	<b>Total Billed Rates Tariff Rates, LDAC Plus Cost of Gas</b>
C&I Low Annual/High Winter	<b><u>Tariff Rate G 40:</u></b> Monthly Customer Charge First 75 therms All usage over 75 therms <b>LDAC</b> <b><u>Gas Cost Adjustment:</u></b> Cost of Gas	\$67.45 \$0.1615 \$0.1615 <b>\$0.0294</b>  <b>\$0.7453</b>	 \$67.45 <b>\$0.1909</b> <b>\$0.1909</b>   	 \$67.45 <b>\$0.9362</b> <b>\$0.9362</b>   
C&I Low Annual/Low Winter	<b><u>Tariff Rate G 50:</u></b> Monthly Customer Charge First 75 therms All usage over 75 therms <b>LDAC</b> <b><u>Gas Cost Adjustment:</u></b> Cost of Gas	\$67.45 \$0.1615 \$0.1615 <b>\$0.0294</b>  <b>\$0.6558</b>	 \$67.45 <b>\$0.1909</b> <b>\$0.1909</b>   	 \$67.45 <b>\$0.8467</b> <b>\$0.8467</b>   
C&I Medium Annual/High Winter	<b><u>Tariff Rate G 41:</u></b> Monthly Customer Charge All usage <b>LDAC</b> <b><u>Gas Cost Adjustment:</u></b> Cost of Gas	\$196.73 \$0.2098 <b>\$0.0294</b>  <b>\$0.7453</b>	 <b>\$196.73</b> <b>\$0.2392</b>   	 <b>\$196.73</b> <b>\$0.9845</b>   
C&I Medium Annual/Low Winter	<b><u>Tariff Rate G 51:</u></b> Monthly Customer Charge First 1,300 therms All usage over 1,300 therms <b>LDAC</b> <b><u>Gas Cost Adjustment:</u></b> Cost of Gas	\$196.73 \$0.1520 \$0.1238 <b>\$0.0294</b>  <b>\$0.6558</b>	 <b>\$196.73</b> <b>\$0.1814</b> <b>\$0.1532</b>   	 <b>\$196.73</b> <b>\$0.8372</b> <b>\$0.8090</b>   
C&I High Annual/High Winter	<b><u>Tariff Rate G 42:</u></b> Monthly Customer Charge All usage <b>LDAC</b> <b><u>Gas Cost Adjustment:</u></b> Cost of Gas	\$1,124.19 \$0.1764 <b>\$0.0294</b>  <b>\$0.7453</b>	 <b>\$1,124.19</b> <b>\$0.2058</b>   	 <b>\$1,124.19</b> <b>\$0.9511</b>   
C&I High Annual/Low Winter	<b><u>Tariff Rate G 52:</u></b> Monthly Customer Charge All usage <b>LDAC</b> <b><u>Gas Cost Adjustment:</u></b> Cost of Gas	\$1,124.19 \$0.1541 <b>\$0.0294</b>  <b>\$0.6558</b>	 <b>\$1,124.19</b> <b>\$0.1835</b>   	 <b>\$1,124.19</b> <b>\$0.8393</b>   

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**CALCULATION OF FIRM SALES COST OF GAS RATE**

Period Covered: November 1, 2016 - April 30, 2017

(Col 1)	(Col 2)	(Col 3)
Total Anticipated Direct Cost of Gas	\$21,855,615	
Projected Prorated Sales (11/01/16 - 04/30/17)	31,549,237	
<b>Direct Cost of Gas Rate</b>		\$0.6927 per therm
<b>Demand Cost of Gas Rate</b>	\$8,327,997	\$0.2640 per therm
<b>Commodity Cost of Gas Rate</b>	\$13,527,619	\$0.4287 per therm
<b>Total Direct Cost of Gas Rate</b>	\$21,855,615	<b>\$0.6927</b> per therm
Total Anticipated Indirect Cost of Gas	\$1,989,516	
Projected Prorated Sales (11/01/16 - 04/30/17)	31,549,237	
<b>Indirect Cost of Gas</b>		\$0.0631 per therm
<b>TOTAL PERIOD AVERAGE COST OF GAS</b>		<b>\$0.7558</b> per therm

<u>Period ending over-collection as determined on 11/21/16</u>	<u>(\$672,842)</u>
<u>Projected sales (12/01/16 - 04/30/17)</u>	<u>27,653,599</u>
<u>Per unit change in Cost of Gas (12/01/16 - 04/30/17)</u>	<u>(\$0.0243)</u>
<u>Over-collection w/o rate adjustment as contained in NUI's COG Report dated November 21, 2016</u>	

<b>RESIDENTIAL COST OF GAS RATE - 11/01/16 - 12/01/2016</b>	<b>COGwr</b>	<b>\$0.7558</b>	<b>\$0.7315</b>	<b>per therm</b>
	Maximum (COG+25%)		\$0.9448	
<u>RESIDENTIAL COST OF GAS RATE - 11/01/16</u>			<u>\$0.7558</u>	
<u>CHANGE IN PER UNIT COST</u>			<u>(\$0.0243)</u>	
<u>RESIDENTIAL COST OF GAS RATE - 12/01/16</u>			<u>\$0.7315</u>	

<b>COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/16 - 12/01/2016</b>	<b>COGwl</b>	<b>\$0.6801</b>	<b>\$0.6558</b>	<b>per therm</b>
	Maximum (COG+25%)		\$0.8501	
C&I HLF DEMAND COSTS ALLOCATED PER SMBA	\$382,224			
PLUS: RESIDENTIAL DEMAND REALLOCATION TO C&I HLF	\$66,032			
C&I HLF TOTAL ADJUSTED DEMAND COSTS	\$448,256			
C&I HLF PROJECTED PRORATED SALES (11/01/16 - 04/30/17)	2,670,611			
<b>DEMAND COST OF GAS RATE</b>	<b>\$0.1744</b>			
C&I HLF COMMODITY COSTS ALLOCATED PER SMBA	\$1,139,040			
PLUS: RESIDENTIAL COMMODITY COSTS	(\$1,261)			
C&I HLF TOTAL ADJUSTED COMMODITY COSTS	\$1,137,779			
C&I HLF PROJECTED PRORATED SALES (11/01/16 - 04/30/17)	2,670,611			
<b>COMMODITY COST OF GAS RATE</b>	<b>\$0.4426</b>			
<b>INDIRECT COST OF GAS</b>	<b>\$0.0631</b>			
<b>TOTAL C&amp;I HLF COST OF GAS RATE</b>	<b>\$0.6801</b>			
<u>COM/IND LOW WINTER USE COST OF GAS RATE - 11/01/16</u>			<u>\$0.6801</u>	
<u>CHANGE IN PER UNIT COST</u>			<u>(\$0.0243)</u>	
<u>COM/IND LOW WINTER USE COST OF GAS RATE - 12/01/16</u>			<u>\$0.6558</u>	

<b>COM/IND HIGH WINTER USE COST OF GAS RATE - 11/01/16 - 12/01/2016</b>	<b>COGwh</b>	<b>\$0.7696</b>	<b>\$0.7453</b>	<b>per therm</b>
	Maximum (COG+25%)		\$0.9620	
C&I LLF COMMODITY COSTS ALLOCATED PER SMBA	\$3,393,314			
PLUS: RESIDENTIAL DEMAND REALLOCATION TO C&I LLF	\$586,225			
C&I LLF TOTAL ADJUSTED DEMAND COSTS	\$3,979,536			
C&I LLF PROJECTED PRORATED SALES (11/01/16 - 04/30/17)	14,203,338			
<b>DEMAND COST OF GAS RATE</b>	<b>\$0.2802</b>			
C&I LLF COMMODITY COSTS ALLOCATED PER SMBA	\$6,061,232			
PLUS: RESIDENTIAL COMMODITY REALLOCATION TO C&I LLF	(\$6,710)			
C&I LLF TOTAL ADJUSTED COMMODITY COSTS	\$6,054,521			
C&I LLF PROJECTED PRORATED SALES (11/01/16 - 04/30/17)	14,203,338			
<b>COMMODITY COST OF GAS RATE</b>	<b>\$0.4263</b>			
<b>INDIRECT COST OF GAS</b>	<b>\$0.0631</b>			
<b>TOTAL C&amp;I LLF COST OF GAS RATE</b>	<b>\$0.7696</b>			
<u>COM/IND HIGH WINTER USE COST OF GAS RATE - 11/01/16</u>			<u>\$0.7696</u>	
<u>CHANGE IN PER UNIT COST</u>			<u>(\$0.0243)</u>	
<u>COM/IND HIGH WINTER USE COST OF GAS RATE - 12/01/16</u>			<u>\$0.7453</u>	

NORTHERN UTILITIES - NEW HAMPSHIRE DIVISION  
WINTER SEASON RESIDENTIAL RATES

Winter Season November 2016 - April 2017		Tariff Rates	Total Delivery Rates (Includes LDAC)	Total Billed Rates Tariff Rates, LDAC Plus Cost of Gas
Residential Heating	<b><u>Tariff Rate R 5:</u></b>			
	Monthly Customer Charge	\$21.36	\$21.36	\$21.36
	First 50 therms	\$0.6239	\$0.6722	<del>\$1.4289</del> <u>\$1.4037</u>
	All usage over 50 therms	\$0.5103	\$0.5586	<del>\$1.3144</del> <u>\$1.2901</u>
	<b><u>LDAC</u></b>	\$0.0483		
	<b><u>Gas Cost Adjustment:</u></b>			
	Cost of Gas	<del>\$0.7558</del> <u>\$0.7315</u>		
Residential Heating Low income	<b><u>Tariff Rate R 10:</u></b>			
	Monthly Customer Charge	\$8.54	\$8.54	\$8.54
	First 50 therms	\$0.2496	\$0.2979	<del>\$1.0537</del> <u>\$1.0294</u>
	All usage over 50 therms	\$0.2041	\$0.2524	<del>\$1.0082</del> <u>\$0.9839</u>
	<b><u>LDAC</u></b>	\$0.0483		
	<b><u>Gas Cost Adjustment:</u></b>			
	Cost of Gas	<del>\$0.7558</del> <u>\$0.7315</u>		
Residential Non-Heating	<b><u>Tariff Rate R 6:</u></b>			
	Monthly Customer Charge	\$21.36	\$21.36	\$21.36
	First 10 therms	\$0.4214	\$0.4697	<del>\$1.2255</del> <u>\$1.2012</u>
	All usage over 10 therms	\$0.4214	\$0.4697	<del>\$1.2255</del> <u>\$1.2012</u>
	<b><u>LDAC</u></b>	\$0.0483		
	<b><u>Gas Cost Adjustment:</u></b>			
	Cost of Gas	<del>\$0.7558</del> <u>\$0.7315</u>		
Residential Non-Heating Low income	<b><u>Tariff Rate R 11:</u></b>			
	Monthly Customer Charge	\$15.52	\$15.52	\$15.52
	First 10 therms	\$0.3196	\$0.3679	<del>\$1.1237</del> <u>\$1.0994</u>
	All usage over 10 therms	\$0.3196	\$0.3679	<del>\$1.1237</del> <u>\$1.0994</u>
	<b><u>LDAC</u></b>	\$0.0483		
	<b><u>Gas Cost Adjustment:</u></b>			
	Cost of Gas	<del>\$0.7558</del> <u>\$0.7315</u>		

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WINTER SEASON C&I RATES

Winter Season November 2016 - April 2017		Tariff Rates	Total Delivery Rates (Includes LDAC)	Total Billed Rates Tariff Rates, LDAC Plus Cost of Gas
C&I Low Annual/High Winter	<b><u>Tariff Rate G 40:</u></b> Monthly Customer Charge First 75 therms All usage over 75 therms <b>LDAC</b> <b><u>Gas Cost Adjustment:</u></b> Cost of Gas	\$67.45 \$0.1615 \$0.1615 \$0.0294 <del>\$0.7696</del> <u>\$0.7453</u>	\$67.45 \$0.1909 \$0.1909	\$67.45 <del>\$0.9605</del> <u>\$0.9362</u> <del>\$0.9605</del> <u>\$0.9362</u>
C&I Low Annual/Low Winter	<b><u>Tariff Rate G 50:</u></b> Monthly Customer Charge First 75 therms All usage over 75 therms <b>LDAC</b> <b><u>Gas Cost Adjustment:</u></b> Cost of Gas	\$67.45 \$0.1615 \$0.1615 \$0.0294 <del>\$0.6801</del> <u>\$0.6558</u>	\$67.45 \$0.1909 \$0.1909	\$67.45 <del>\$0.8710</del> <u>\$0.8467</u> <del>\$0.8710</del> <u>\$0.8467</u>
C&I Medium Annual/High Winter	<b><u>Tariff Rate G 41:</u></b> Monthly Customer Charge  All usage <b>LDAC</b> <b><u>Gas Cost Adjustment:</u></b> Cost of Gas	\$196.73  \$0.2098 \$0.0294 <del>\$0.7696</del> <u>\$0.7453</u>	\$196.73  \$0.2392	\$196.73  <del>\$1.0088</del> <u>\$0.9845</u>
C&I Medium Annual/Low Winter	<b><u>Tariff Rate G 51:</u></b> Monthly Customer Charge First 1,300 therms All usage over 1,300 therms <b>LDAC</b> <b><u>Gas Cost Adjustment:</u></b> Cost of Gas	\$196.73 \$0.1520 \$0.1238 \$0.0294 <del>\$0.6801</del> <u>\$0.6558</u>	\$196.73 \$0.1814 \$0.1532	\$196.73 <del>\$0.8615</del> <u>\$0.8372</u> <del>\$0.8333</del> <u>\$0.8090</u>
C&I High Annual/High Winter	<b><u>Tariff Rate G 42:</u></b> Monthly Customer Charge  All usage <b>LDAC</b> <b><u>Gas Cost Adjustment:</u></b> Cost of Gas	\$1,124.19  \$0.1764 \$0.0294 <del>\$0.7696</del> <u>\$0.7453</u>	\$1,124.19  \$0.2058	\$1,124.19  <del>\$0.9754</del> <u>\$0.9511</u>
C&I High Annual/Low Winter	<b><u>Tariff Rate G 52:</u></b> Monthly Customer Charge  All usage <b>LDAC</b> <b><u>Gas Cost Adjustment:</u></b> Cost of Gas	\$1,124.19  \$0.1541 \$0.0294 <del>\$0.6801</del> <u>\$0.6558</u>	\$1,124.19  \$0.1835	\$1,124.19  <del>\$0.8636</del> <u>\$0.8393</u>

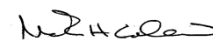
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