

Catherine A. McNamara Rates Analyst II, Rates & Regulatory Affairs O: 603-216-3537 E: <u>Catherine.McNamara@libertyutilities.com</u>

December 31, 2018

Via ERF and US Mail

Debra A. Howland Executive Director New Hampshire Public Utilities Commission 21 S. Fruit Street, Suite 10 Concord, NH 03301-2429

RE: DG 18-137 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a/ Liberty Utilities 2018/2019 Winter Period Cost of Gas – January 2019 Monthly COG Adjustment

Dear Ms. Howland:

On behalf of Liberty Utilities (EnergyNorth Natural Gas) Corp. (the "Company") and in accordance with New Hampshire Public Utilities Commission (the "Commission") Order No. 26,188 (November 01, 2018) in Docket DG 18-137, I enclose for filing the Company's (January) calculation of its projected under collection of gas costs for the 2018/2019 winter season ending April 30, 2019. We apologize for making this filing past the due date. Although we had this adjustment calculated on-time we had some internal communication issues which caused this filing to not be filed by the due date.

The calculation reflects the estimated November 2018 through April 2019 NYMEX settled forward prices as of December 14, 2018. The resulting projected under collection of approximately \$619,534 is 0.88% of the total revised anticipated gas costs for the 2018/2019 winter season. Liberty elects to implement the increase of \$0.0093 per therm for the January 1st billing cycle.

The current and revised cost of gas rates are summarized in the following table.

	Cost of Gas Rates					
	Current Rate	Revised Rate	Change			
Residential	\$0.7411	\$0.7504	\$0.0093			
Commercial/Industrial Low Winter Use	\$0.7456	\$0.7549	\$0.0093			
Commercial/Industrial High Winter Use	\$0.7403	\$0.7496	\$0.0093			

Please note this report has been filed via the Commission's Electronic Report Filing System.

Debra A. Howland DG 18-137 Page 2

We have also included a revised page 41B, which includes a minor change to the account number for the Revenue Decoupling Adjustment Factor.

Thank you for your attention to these matters. Please do not hesitate to call if you have any questions. Again, we apologize for the late submission.

Sincerely,

Catherine A. McNamara

Enclosures

ENERGYNORTH NATURAL GAS, INC.

Calculation of the Projected Over or Under Collection of the 2018 - 2019 Winter Cost of Gas Filing DG 18-137

January 1, 2019

Under/(Over) Collection as of 12/1/18			\$	(2,034,785)
Under/(Over) Collection as of 12/1/18			Ф	(2,034,765)
Forecasted firm Residential therm sales 1/1/19 - 4/30/19		40,793,035		
Residential Cost of Gas Rate per therm	\$	(0.7411)		
Forecasted firm C&I High Winter Use therm sales 1/1/19 - 4/30/19		21,765,431		
C&I- High Winter Use Cost of Gas Rate per therm	\$	(0.7456)		
Forecasted firm C&I Low Winter therm sales 1/1/19 - 4/30/19		3,791,210		
C&I- Low Winter Use Cost of Gas Rate per therm	\$	(0.7403)		
Forecasted firm Residential therm sales 12/18		7,903,914		
Residential Cost of Gas Rate per therm	\$	(0.7411)		
Forecasted firm C&I High Winter Use therm sales 12/18		4,375,729		
C&I- High Winter Use Cost of Gas Rate per therm	\$	(0.7456)		
Forecasted firm C&I Low Winter Use therm sales 12/18		635,054		
C&I- Low Winter Use Cost of Gas Rate per therm	\$	(0.7403)		
Forecast recovered costs at current rate 12/1/18 - 4/30/19	Ψ	(0.1 100)		(58,856,922)
				(,,- ,
Estimated FPO Premium 12/1/18 - 4/30/19				(103,942)
Revised projected gas costs 12/1/18 - 4/30/19				61,592,498
Estimated interest charged (credited) to customers 12/1/18 - 4/30/19				22,685
Projected under / (over) collection as of 4/30/19 (A)			<u>\$</u>	619,534
Actual Gas Costs through 12/1/18	\$	8,399,222		
	Ψ	0,000,222		
Revised projected gas costs 12/1/18 - 4/30/19	\$	61,592,498		
	Ψ	01,002,400		
Estimated total adjusted gas costs 12/1/18 - 4/30/19 (B)			\$	70,014,404
			<u> </u>	
Under/ (over) collection as percent of total gas costs (A/B)				0.88%
				0.0070
Projected under / (over) collections as of 1/30/19 (A)			\$	619,534
Forecasted firm therm sales 12/1/18 - 4/30/19				66,349,677
Change in rate used to reduce forecast under/(over) collection			\$	0.0093
			Ψ	0.0000
Current Cost of Cos Poto			¢	0 7444
Current Cost of Gas Rate			\$	0.7411
Revised Cost of Gas Rate			\$	0.7504
Cap - Residential Cost of Gas Rate			\$	0.9264

Revised as follows:

The revised projected gas costs include the January 2019 - April 2019 NYMEX settled strip prices as of December 14, 2018.

Compliance rates per New Hampshire Public Utilities Commission Order Number 26,188 dated November 01, 2018 in Docket DG 18-137. The Company may adjust the approved residential cost of gas rate of \$0.7411 per therm upwards by no more than 25% or \$0.1853 per therm. The adjusted residential cost of gas rate shall not be more than \$0.9264 per therm.

ENERGYNORTH NATURAL GAS, INC.

Projected Over or Under Collection

Without Rate Adjustment	Beginning		Nov-18		Dec-18		Jan-19		Feb-19		Mar-19		Apr-19		
	Under/(Over)		(Actuals)		(Estimate)		(Estimate)		(Estimate)		(Estimate)		(Estimate)		Total Peak
Total Gas Costs		\$	8,002,139	\$	16,396,715	\$	16,101,008	\$	14,314,930	\$	9,186,884	\$	3,349,527	\$	67,351,203
Adjustments and Indirect Costs															
Refunds & Adjustments		\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
COG Bad Debt			-		-		-		-		-		-		-
Inventory Financing			-		-		-		-		-		-		-
Transportation Revenue			(46,059)		(5,030)		(6,229)		(6,429)		(5,746)		(4,841)		(74,333)
Broker Revenue			-		(368,407)		(17,997)		703,749		(369,992)		(217,609)		(270,255)
Off System and Capacity Release Fixed Price Option Admin.			-		(334,366) 45,000		(284,042)		(314,967)		(307,820)		(307,198)		(1,548,394) 45,000
Bad Debt Costs			- 100,012		380,984		- 540,528		- 580,291		- 493,576		- 342,920		2,438,311
Working Capital			11,278		7,749		10,994		11,803		10.039		6,975		58,837
Misc Overhead			-		1,490		2,113		2,269		1,930		1,341		9,142
Production & Storage			331,852		330,071		330,071		330,071		330,071		330,071		1,982,208
Total Indirect Costs		\$	397,083	\$	57,490	\$	575,439	\$,	\$	152,058	\$	151,659	\$	2,640,516
Interest			(728)		(1,562)		1,980		7,748		10,147		4,371	\$	21,957
Total Gas Costs plus Indirect Costs	\$ 1,488,075		8,398,494		16,437,567		16,653,090		15,603,485		9,328,517		3,488,581	\$	71,397,810
Total Forecasted Sales Volumes			13,343,607		12,914,697		18,322,981		19,670,884		16,731,404		11,624,407		92,607,981
Total Forecasted Collections			11,921,354		9,590,265		13,605,212		14,606,591		12,423,520		8,631,334	\$	70,778,276
With Rate Adjustment															
	Beginning		Nov-18		Dec-18		Jan-19		Feb-19		Mar-19		Apr-19		
	Under/(Over)		(Actuals)		(Estimate)		(Estimate)		(Estimate)		(Estimate)		(Estimate)		Total Peak
Total Gas Costs		\$	8,002,139	\$	16,396,715	\$	16,101,008	\$	14,314,930	\$	9,186,884	\$	3,349,527	\$	67,351,203
Adjustments and Indirect Costs															
Refunds & Adjustments		\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
COG Bad Debt			-		-		-		-		-		-		-
Inventory Financing			-		-		-		-		-		-		-
Transportation Revenue			(46,059)		(5,030)		(6,229)		(6,429)		(5,746)		(4,841)		(74,333)
Broker Revenue			-		(368,407)		(17,997)		703,749		(369,992)		(217,609)		(270,255)
Off System and Capacity Release			-		(334,366)		(284,042)		(314,967)		(307,820)		(307,198)		(1,548,394)
Fixed Price Option Admin.			-		45,000		-		-		-		-		45,000
Bad Debt Costs			100,012		380,984		540,528		580,291		493,576		342,920		2,438,311
Working Capital			11,278		7,749		10,994		11,803		10,039		6,975		58,837
Misc Overhead			-		1,490		2,113		2,269		1,930		1,341		9,142
Production & Storage		¢	331,852	•	330,071	•	330,071		330,071		330,071	¢	330,071		1,982,208
Total Indirect Costs		\$	397,083	\$	57,490	\$	575,439	\$	1,306,787	\$	152,058	\$	151,659	\$	2,640,516
Interest			(728)		(1,562)		1,980		7,748		10,147		1,889	\$	19,475
Total Gas Costs plus Indirect Costs	\$ 1,488,075		8,398,494		16,437,567		16,653,090		15,603,485		9,328,517		3,486,099	\$	71,395,328
Total Forecasted Sales Volumes			13,343,607		12,914,697		18,322,981		19,670,884		16,731,404		11,624,407		92,607,981
Total Forecasted Collections		1	11,921,354		9,590,265		13,775,616		14,789,530		12,579,122		8,739,441	\$	71,395,328

Liberty Utilities (EnergyNorth Natural Gas) Corp. Peak 2018 - 2019 Winter Cost of Gas Filing

Filed Tariff Sheets

Proposed Eleventh Revised Page 1 Check Sheet

Proposed Third Revised Page 2 Check Sheet (Cont'd)

Proposed Tenth Revised Page 3 Check Sheet (Cont'd)

> Proposed Ninth Revised Page 4 Check Sheet (Cont'd)

Proposed First Revised Page 41 B General Terms and Conditions

Proposed Seventh Revised Page 84 Firm Rate Schedules

> Proposed Seventh Revised Page 86 Firm Rate Schedules

Proposed Second Revised Page 92 Calculation of Firm Sales Winter Period Cost of Gas Rate

Page	Revision
Title	Original
TOC i	First Revised
TOC ii	First Revised
TOC iii	Original
TOC iv	Original
1	Eleventh Revised
2	Third Revised
3	Tenth Revised
4	Ninth Revised
5	Original
6	Original
7	Original
8	Original
9	Original
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14	Original
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18	Original
19	Original
20	Original
21	Original
22	Original
23	Original
24	Original

ISSUED BY: <u>/s/Susan L. Fleck</u> Susan L. Fleck TITLE: President

EFFECTIVE: January 01, 2019

Page	Revision
25	Original
26	Original
27	Original
28	Original
29	Original
30	Original
31	Original
32	First Revised
33	First Revised
34	First Revised
35	First Revised
36	First Revised
37	First Revised
38	First Revised
39	First Revised
40	First Revised
41	First Revised
41A	Original
41B	First Revised
42	Original
43	Original
44	Second Revised
45	Original
46	Second Revised
47	Original
48	Second Revised
49	Original
50	Second Revised
51	Original
52	Second Revised
53	Original
54	Second revised
55	Original

ISSUED BY: <u>/s/Susan L. Fleck</u> Susan L. Fleck TITLE: President

EFFECTIVE: January 01, 2019

Page	Revision
56	Second Revised
57	Original
58	Second Revised
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72	Second Revised
73	Original
74	Second Revised
75	Original
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77	Original
78	Second Revised
79	Original
80	Second Revised
81	Original
82	Second Revised
83	First Revised
84	Seventh Revised
85	Ninth Revised
86	Seventh Revised

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EFFECTIVE: January 01, 2019

Page	Revision
87	First Revised
88	First Revised
89	Fifth Revised
90	Fifth Revised
91	First Revised
92	Second Revised
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94	First Revised
95	First Revised
96	First Revised
97	First Revised
98	Original
99	Original
100	Original
101	Original
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EFFECTIVE: January 01, 2019

- 1930-1745 **Rate Case Expense/Temporary Rates Reconciliation Adjustment:** This account shall be used to record the cumulative difference between the recovery and actual amounts of third-party incremental expenses associated with the Company's Rate Case initiatives and the difference between the final and temporary distribution rates. Entries to this account shall be determined as outlined in the Local Distribution Adjustment Clause, 17(F).
- 1169-1756 **Residential Low Income Assistance Program Reconciliation Adjustment:** This account shall be used to record the cumulative difference between the actual revenue derived from the actual sales and transportation service throughput multiplied by the RLIAP rate and the actual costs of the program, which consists of the revenue shortfall and all administrative and marketing costs, as outlined in the Local Distribution Adjustment Clause, 17(G).
- 1168-1823 **Revenue Decoupling Adjustment Factor:** This account shall be used to record the cumulative difference between the lost revenue of the Company and the revenue collected from customers pursuant to this clause with respect to a given Rate Category. Entries to this account shall be determined as outlined in the Local Distribution Adjustment Clause, 17(D).

18 SUPPLY & CAPACITY SHORTAGE ALLOCATION POLICY

A. DEFINITIONS

The following are definitions of terms used in this subsection and applicable only to this subsection:

- 1. <u>Residential</u>: Service to customers which consists of direct natural gas usage in a residential dwelling for space heating, air conditioning, cooking, water heating and other residential uses
- B. <u>Commercial</u>: Service to customers engaged primarily in the sale of goods or services including institutions and local, state and federal government agencies for uses other than those involving manufacturing or electric power generation
- C. <u>Industrial</u>: Service to customers engaged primarily in a process which creates or changes raw or unfinished materials into another form or product including the generation of electric power
- D. <u>Large Volume</u>: Service to large commercial and industrial customers with an annual gas load greater than 200,000 therms
- E. <u>Seasonal</u>: Service available from April 1 to October 31 to all customers using gas to replace some other fuel or gas for air conditioning purposes
- F. <u>Firm Sales Service</u>: Service from schedules or contracts under which seller is expressly obligated to supply and deliver specific volumes within a given time period and which anticipates no interruptions, but which may permit unexpected interruption in case the supply to higher priority customers is threatened
- G. <u>Firm Transportation Service</u>: Service from schedules or contracts under which seller is expressly obligated to deliver specific third-party volumes within a given time period and which anticipates no interruptions, but which may permit unexpected interruption in case the supply to higher priority customers is threatened.
- H. <u>Plant Protection Gas:</u> Is defined as minimum volumes required to prevent physical harm to the plant facilities or danger to plant personnel, when such protection cannot be afforded through the use of alternate fuel. This includes the protection of such material in process as would otherwise be destroyed, but shall not

ISSUED:	December 31, 2018	ISSUED BY:	/s/Susan L. Fleck
EFFECTIVE:	January 01, 2019	TITLE:	Susan L. Fleck President

22 FIRM RATE SCHEDULES EXCLUDING KEENE CUSTOMERS

	Rates effe		ry 1, 2019 - A r Period	pril 30, 2019	Rates Effective September 1, 2018- October 31, 2018 Summer Period						
	Delivery <u>Charge</u>	Cost of Gas Rate <u>Page 92</u>	LDAC Page 97	Total <u>Rate</u>	Cost of Delivery Gas Rate <u>Charge Page 89</u>	LDAC Page 97	Total <u>Rate</u>				
<u>Residential Non Heating - R-1</u> Customer Charge per Month per Meter All therms	\$15.02 \$ 0.3741	\$ 0.7504	\$ 0.0660	\$ 15.02 \$ 1.1905	\$ 15.02 \$ 0.3741 \$ 0.4445	\$ \$ 0.0660 \$	15.02 0.8846				
Residential Heating - R-3 Customer Charge per Month per Meter Size of the first block Therms in the first block per month at	\$15.02 all therms \$ 0.5502		\$ 0.0660	\$ 15.02 \$ 1.3666	\$ 15.02 all therms \$ 0.5502 \$ 0.4445	\$ \$ 0.0660 \$	15.02 1.0607				
Residential Heating - R-4 Customer Charge per Month per Meter Size of the first block	\$6.01 all therms		φ 0.0000	\$ 6.01	\$ 6.01 all therms	\$	6.00				
Therms in the first block per month at Commercial/Industrial - G-41	\$ 0.2201		\$ 0.0660	\$ 1.0365	\$ 0.2201 \$ 0.4445	\$ 0.0660 \$	0.7306				
Customer Charge per Month per Meter Size of the first block Therms in the first block per month at All therms over the first block per month at	\$55.68 100 therms \$ 0.4566 \$ 0.3067	\$ 0.7496			\$55.68 20 therms \$0.4566 \$0.4417 \$0.3067 \$0.4417		56.58 0.9740 0.8241				
Commercial/Industrial - G-42 Customer Charge per Month per Meter	\$167.06	\$ 0.7490	\$ 0.0757	\$ 167.06	\$ 167.06	\$ 0.0757 \$	169.75				
Size of the first block Therms in the first block per month at All therms over the first block per month at	1000 therms \$ 0.4152 \$ 0.2766			• • • •	400 therms \$ 0.4152 \$ 0.4417 \$ 0.2766 \$ 0.4417		0.9326 0.7940				
<u>Commercial/Industrial - G-43</u> Customer Charge per Month per Meter All therms over the first block per month at	\$716.95 \$ 0.2552	\$ 0.7496	\$ 0.0757	\$ 716.95 \$ 1.0805	\$ 716.95 \$ 0.1167 \$ 0.4417	\$ \$ 0.0757 \$	728.47 0.6341				
Commercial/Industrial - G-51 Customer Charge per Month per Meter Size of the first block	\$55.68 100 therms			\$ 55.68	\$ 55.68 100 therms	\$	56.58				
Therms in the first block per month at All therms over the first block per month at Commercial/Industrial - G-52	\$ 0.2752 \$ 0.1789	\$ 0.7549 \$ 0.7549			\$ 0.2752 \$ 0.4506 \$ 0.1789 \$ 0.4506	\$ 0.0757 \$ \$ 0.0757 \$	0.8015 0.7052				
Customer Charge per Month per Meter Size of the first block Therms in the first block per month at	\$167.06 1000 therms \$ 0.2363	\$ 0.7549	\$ 0.0757	\$ 167.06 \$ 1.0669	\$ 167.06 1000 therms \$ 0.1712 \$ 0.4506	\$ \$ 0.0757 \$	169.75 0.6975				
All therms over the first block per month at Commercial/Industrial - G-53	• • • • •				\$ 0.0973 \$ 0.4506		0.6236				
Customer Charge per Month per Meter All therms over the first block per month at	\$737.84 \$ 0.1652	\$ 0.7549	\$ 0.0757	\$ 737.84 \$ 0.9958	\$ 737.84 \$ 0.0792 \$ 0.4506	\$ \$ 0.0757 \$	749.68 0.6055				
<u>Commercial/Industrial - G-54</u> Customer Charge per Month per Meter All therms over the first block per month at	\$737.84 \$ 0.0630	\$ 0.7549	\$ 0.0757	\$ 737.84 \$ 0.8936	\$ 737.84 \$ 0.0342 \$ 0.4506	\$ \$ 0.0757 \$	749.68 0.5605				

ISSUED:	December	31.	20

ember 31, 2018

ISSUED BY: <u>/s/Susan L. Fleck</u> Susan L. Fleck TITLE: President

EFFECTIVE: January 01, 2019

24 FIRM RATE SCHEDULES EXCLUDING KEENE CUSTOMERS – MANAGED EXPANSION PROGRAM

	Rates effectiv	-	, 2019 - Apri r Period	l 30, 2019	Rates Effective May 1, 2019 - October 31, 2019 Summer Period					
	Delivery <u>Charge</u>	Cost of Gas Rate <u>Page 92</u>	LDAC Page 97	Total <u>Rate</u>	Delivery Gas	ost of s Rate LDAC <u>je 89 Page 97</u>	Total <u>Rate</u>			
<u>Residential Non Heating - R-5</u> Customer Charge per Month per Meter All therms	\$		\$0.0660	\$19.53 \$1.3027	\$ 19.53 \$ 0.4863 \$0	0.4445 \$0.0660	\$ 19.53 \$ 0.9968			
<u>Residential Heating - R-6</u> Customer Charge per Month per Meter All therms	\$		\$0.0660	\$19.53 \$ 1.5317	\$ 19.53 \$ 0.7153 \$(0.4445 \$0.0660	\$ 19.53 \$ 1.2258			
Residential Heating - R-7 Customer Charge per Month per Meter All therms	\$7.81 \$0.2861	\$0.7504	\$0.0660	\$7.81 \$ 1.1025	\$	0.4445 \$0.0660	\$7.81 \$0.7966			
Commercial/Industrial - G-44 Customer Charge per Month per Meter Size of the first block Therms in the first block per month at All therms over the first block per month at	\$ 72.38 100 therms \$0.5936 \$0.3987	\$ 0.7496 \$ 0.7496	•	\$72.38 \$ 1.4189 \$ 1.2240		0.4417 \$ 0.0757 0.4417 \$ 0.0757	\$72.38 \$1.1110 \$0.9161			
Commercial/Industrial - G-45 Customer Charge per Month per Meter Size of the first block Therms in the first block per month at All therms over the first block per month at	\$ 217.18 1000 therms \$0.5398 \$0.3596	\$ 0.7496	•	\$217.18 \$ 1.3651 \$ 1.1849		0.4417 \$ 0.0757 0.4417 \$ 0.0757	\$ 217.18 \$ 1.0572 \$ 0.8770			
<u>Commercial/Industrial - G-46</u> Customer Charge per Month per Meter All therms over the first block per month at	\$ 932.04 \$0.3318	\$ 0.7496	\$ 0.0757	\$932.04 \$1.1571	\$ 932.04 \$ 0.1517 \$ (0.4417 \$ 0.0757	\$ 932.04 \$ 0.6691			
Commercial/Industrial - G-55 Customer Charge per Month per Meter Size of the first block Therms in the first block per month at All therms over the first block per month at	\$ 72.38 100 therms \$0.3578 \$0.2326		•	\$72.38 \$ 1.1884 \$ 1.0632		0.4506 \$ 0.0757 0.4506 \$ 0.0757	\$72.38 \$0.8841 \$0.7589			
Commercial/Industrial - G-56 Customer Charge per Month per Meter Size of the first block Therms in the first block per month at All therms over the first block per month at	\$ 217.18 1000 therms \$0.3072 \$0.2046	\$ 0.7549		\$217.18 \$ 1.1378 \$ 1.0352		0.4506 \$ 0.0757 0.4506 \$ 0.0757	\$ 217.18 \$ 0.7489 \$ 0.6528			
Commercial/Industrial - G-57 Customer Charge per Month per Meter All therms over the first block per month at	\$ 959.19 \$0.2148	\$ 0.7549	\$ 0.0757	\$959.19 \$1.0454	\$ 959.19 \$ 0.1030 \$ (0.4506 \$ 0.0757	\$ 959.19 \$ 0.6293			
Commercial/Industrial - G-58 Customer Charge per Month per Meter All therms over the first block per month at	\$ 959.19 \$0.0819	\$ 0.7549	\$ 0.0757	\$959.19 \$0.9125	\$ 959.19 \$ 0.0445 \$ (0.4506 \$ 0.0757	\$ 959.19 \$ 0.5708			

ISSUED:	December 31, 2018	ISSUED BY:	/s/Susan L. Fleck
EFFECTIVE:	January 01, 2019	TITLE:	Susan L. Fleck President

NHPUC NO. 10 GAS LIBERTY UTILITIES

\$ 0.9264

CALCULATION OF FIRM SALES COST OF GAS RATE PERIOD COVERED: WINTER PERIOD, NOVEMBER 1, 2018 THROUGH APRIL 30, 2019 (Refer to Text in Section 16 Cost of Gas Clause)

Maximum (COG + 25%)

(Col 1)		(Col 2)	(Col 3)	
Total Anticipated Direct Cost of Gas	\$	61,003,856		
Projected Prorated Sales (11/01/18 - 04/30/19)		86,451,254		
Direct Cost of Gas Rate			\$ 0.7056	per therm
Demand Cost of Gas Rate	\$	11,230,946	\$ 0.1299	per therm
Commodity Cost of Gas Rate		49,116,221	\$ 0.5681	per therm
Adjustment Cost of Gas Rate		656,690	\$ 0.0076	per therm
Total Direct Cost of Gas Rate	\$	61,003,857	\$ 0.7056	per therm
Total Anticipated Indirect Cost of Gas	\$	3,070,244		
Projected Prorated Sales (11/01/18 - 04/30/19)		86,451,254		
Indirect Cost of Gas			\$ 0.0355	per therm
TOTAL PERIOD AVERAGE COST OF GAS EFFECTIVE 11/01/17			\$ 0.7411	per therm
RESIDENTIAL COST OF GAS RATE - 11/01/18	COG	Bwr	\$ 0.7411	/therm
Change in Rate due to change in under/over recovery			\$ 0.0093	
RESIDENTIAL COST OF GAS RATE - 01/01/2019	COG	Swr	\$ 0.7504	/therm

C&I LOW WINTER USE COST OF GAS RATE - 11/01/18	COGwl	\$ 0.7456 /therm
Change in Rate due to change in under/over recovery		\$ 0.0093
C&I LOW WINTER USE COST OF GAS RATE - 01/01/2019	COGsl	\$ 0.7549 /therm

Average Demand Cost of Gas Rate Effective 11/01/18 Times: Low Winter Use Ratio (Winter) Times: Correction Factor	\$ 0.1299 1.0335 1.0011	Maximum (COG + 25%)	\$ 0.9320
Adjusted Demand Cost of Gas Rate	\$ 0.1344		
Commodity Cost of Gas Rate	\$ 0.5681		
Adjustment Cost of Gas Rate	\$ 0.0076		
Indirect Cost of Gas Rate	\$ 0.0355		
Adjusted C&I Low Winter Use Cost of Gas Rate	\$ 0.7456		

C&I HIGH WINTER USE COST OF GAS RATE - 11/01/18	COGwh	\$ 0.7403 /therm
Change in Rate due to change in under/over recovery		\$ 0.0093
C&I HIGH WINTER USE COST OF GAS RATE - 01/01/19	COGwh	\$ 0.7496 /therm

Average Demand Cost of Gas Rate Effective 11/01/18	\$ 0.1299	M : (000 05%)	• • • • • • • • •
Times: High Winter Use Ratio (Winter)	0.9930	Maximum (COG + 25%)	\$ 0.9254
Times: Correction Factor	1.0011		
Adjusted Demand Cost of Gas Rate	\$ 0.1291		
Commodity Cost of Gas Rate	\$ 0.5681		
Adjustment Cost of Gas Rate	\$ 0.0076		
Indirect Cost of Gas Rate	\$ 0.0355		
Adjusted C&I High Winter Use Cost of Gas Rate	\$ 0.7403		

 ISSUED:
 December 31, 2018
 ISSUED BY:
 /s/Susan L. Fleck

 EFFECTIVE:
 January 01, 2019
 TITLE:
 President