

LIBERTY UTILITIES - KEENE DIVISION

CONVERSION OF GAS COSTS - GALLONS TO THERMS
SUMMER PERIOD 2018

	(1)	(2)	(3)	(4)	(5)	(6)
			<u>VOLUMES</u>		<u>UNIT COST</u>	
	<u>UNIT</u>	<u>CONVERSION FACTOR</u>	<u>GALLONS</u>	<u>THERMS</u>	<u>PER GALLON</u>	<u>PER THERM</u>
PROPANE FROM INVENTORY	GALLONS	0.91502	388,102	355,121	\$1.0697	\$1.1691

LIBERTY UTILITIES - KEENE DIVISION

CALCULATION OF COST OF GAS RATE
SUPPLY / DEMAND BALANCE
SUMMER PERIOD 2018

	PRIOR	MAY-18	JUN-18	JUL-18	AUG-18	SEP-19	OCT-18	TOTAL
<u>SENDOUT (THERMS)</u>								
1 FIRM SENDOUT *		66,615	48,138	44,108	45,930	47,824	88,604	341,219
2 COMPANY USE		2,703	2,202	2,002	2,126	2,170	2,699	13,902
3 TOTAL SENDOUT		69,318	50,340	46,110	48,056	49,994	91,303	355,121
4 * UNACCTED FOR VOLS INCLUDED		2,141	1,547	1,417	1,476	1,537	2,847	10,964
<u>COSTS</u>								
5 PROPANE SENDOUT FROM ABOVE		69,318	50,340	46,110	48,056	49,994	91,303	355,121
6 COST/THERM FROM SCHEDULE D		\$1.2238	\$1.2399	\$1.1753	\$1.1532	\$1.1424	\$1.1084	\$1.1691
7 TOTAL PROPANE COSTS		\$84,828	\$62,416	\$54,193	\$55,420	\$57,114	\$101,198	\$415,169
<u>REVENUES</u>								
8 FIRM SALES (THERMS)		86,888	61,769	44,129	38,460	44,670	48,574	324,490
9 RATE/THERM PER TARIFF		\$0.9995	\$0.9995	\$0.9995	\$0.9995	\$0.9995	\$0.9995	\$0.9995
10 TOTAL REVENUES		\$86,846	\$61,739	\$44,108	\$38,441	\$44,648	\$48,551	\$324,333
11 (OVER)/UNDER COLLECTION		(\$2,018)	\$677	\$10,085	\$16,979	\$12,466	\$52,647	\$90,836
12 INTEREST FROM SCHEDULE F		(\$283)	(\$286)	(\$270)	(\$228)	(\$183)	(\$82)	(\$1,332)
13 <u>FINAL (OVER)/UNDER COLLECTION</u>	(\$89,504)	(\$2,301)	\$391	\$9,815	\$16,751	\$12,283	\$52,565	(\$0)

LIBERTY UTILITIES - KEENE DIVISION
 PROPANE SPOT MARKET PURCHASE COST ANALYSIS
 SUMMER PERIOD 2018

		(1) Mt. Belvieu	(2) Broker Fee	(3) Pipeline Rate	(4) PERC Fee	(5) Supplier Charge	(6) Cost @ Selkirk	(7) Trucking to Keene	(8) \$ per Gal.	(9) \$ per Therm
1	MAY	0.7388	+ 0.1150	+ 0.0000	+ 0.0045	+ 0.1400	= 0.9983	+ 0.0864	= 1.0847	= 1.1854
2	JUN	0.7306	+ 0.1150	+ 0.0000	+ 0.0045	+ 0.1400	= 0.9901	+ 0.0864	= 1.0765	= 1.1765
3	JUL	0.7294	+ 0.1150	+ 0.0000	+ 0.0045	+ 0.1400	= 0.9889	+ 0.0864	= 1.0753	= 1.1751
4	AUG	0.7319	+ 0.1150	+ 0.0000	+ 0.0045	+ 0.1400	= 0.9914	+ 0.0864	= 1.0778	= 1.1779
5	SEP	0.7350	+ 0.1150	+ 0.0000	+ 0.0045	+ 0.1400	= 0.9945	+ 0.0864	= 1.0809	= 1.1813
6	OCT	0.7400	+ 0.1150	+ 0.0000	+ 0.0045	+ 0.1400	= 0.9995	+ 0.0864	= 1.0859	= 1.1868

NOTE: Summer spot purchases are based on market quotes from local suppliers. The above schedule provides a breakdown of the quote taken at the time (March 15th)

1. Propane futures market quotations (cmegroup.com) on 03/14/18 close. See Appendix 1.
2. A generally accepted standard broker fee
3. Summer prices are quoted on a delivered basis with pipeline charges embedded in delivered price
4. Propane Education Research Council (propanecouncil.org)
5. A generally accepted standard supplier charge
6. Selkirk Cost - all fees plus propane cost
7. Northern Gas Transport trucking rate including diesel fuel surcharge. See Appendix 3A & 3B.
8. Delivered Price per Gallon
9. Delivered Price per therm as converted using per gallon price / .91502

LIBERTY UTILITIES - KEENE DIVISION
PRIOR PERIOD (OVER)/UNDER COLLECTION
SUMMER PERIOD 2017

	<u>PRIOR</u>	<u>MAY-17</u>	<u>JUN-17</u>	<u>JUL-17</u>	<u>AUG-17</u>	<u>SEP-17</u>	<u>OCT-17</u>	[1] <u>TOTAL</u>
<u>COSTS</u>								
1 FIRM SENDOUT (therms)		66,038	46,368	42,691	44,455	44,794	64,102	308,448
2 COMPANY USE (therms)		2,703	2,202	2,002	2,126	2,170	2,699	13,902
3 TOTAL SENDOUT (therms)		68,741	48,570	44,693	46,581	46,964	66,801	322,350
4 COST PER THERM		\$0.9454	\$0.9163	\$0.9194	\$0.9764	\$0.9119	\$0.9981	\$0.9479
5 DIRECT PROPANE PURCHASED COSTS		\$64,989	\$44,507	\$41,089	\$45,479	\$42,827	\$66,672	\$305,563
6 PROPANE COST ADJUSTMENTS		\$0	\$107	(\$54)	(\$54)	\$0	\$32	\$32
7 UNBILLED PROPANE COSTS (NET)		(\$34,717)	\$12,148	(\$991)	\$23,560	\$0	(\$42,254)	(\$42,253)
8 TOTAL PROPANE COSTS		\$30,272	\$56,762	\$40,045	\$68,986	\$42,827	\$24,450	\$263,341
<u>REVENUES</u>								
9 FIRM SALES (therms)		78,722	64,784	44,215	38,458	44,671	45,174	316,024
10 RATE PER THERM		\$0.6281	\$0.6281	\$0.6866	\$0.7766	\$0.7851	\$0.7851	\$0.6984
11 TOTAL REVENUES		\$49,266	\$40,691	\$30,358	\$29,865	\$35,071	\$35,466	\$220,717
12 (OVER)/UNDER COLLECTION		(\$18,995)	\$16,071	\$9,687	\$39,121	\$7,756	(\$11,016)	\$42,624
13 INTEREST AMOUNT		\$53	\$56	\$104	\$199	\$313	\$356	\$1,082
14 TOTAL (OVER)/UNDER COLLECTION -	(\$131,588)	(\$18,941)	\$16,127	\$9,791	\$39,320	\$8,069	(\$10,660)	(\$87,881)

[1] Slightly off due to rounding

LIBERTY UTILITIES - KEENE DIVISION

INTEREST CALCULATION
SUMMER PERIOD 2018

LINE NO.	MONTH	(1) BEG. OF MONTH BALANCE	(2) (OVER) UNDER COLLECT	(3) REFUNDS	(4) END OF MONTH BALANCE (COL.1+2+3)	(5) AVERAGE BALANCE COL. (COL. [1+4]/2)	(6) ANNUAL INTEREST RATE	(7) INTEREST AMOUNT	(8) MONTH END BAL. WITH INTEREST (COL. 4+7)
1	NOV 2017	(\$87,881)	\$0	\$0	(\$87,881)	(\$87,881)	3.50%	(\$256)	(\$88,137)
2	DEC	(88,137)	0	0	(88,137)	(88,137)	3.50%	(257)	(88,394)
3	JAN 2018	(88,394)	0	0	(88,394)	(88,394)	3.75%	(276)	(88,670)
4	FEB	(88,670)	0	0	(88,670)	(88,670)	3.75%	(277)	(88,947)
5	MAR	(88,947)	0	0	(88,947)	(88,947)	3.75%	(278)	(89,225)
6	APR	(89,225)	0	0	(89,225)	(89,225)	3.75%	(279)	(89,504)
7	MAY	(89,504)	(2,018)	0	(91,522)	(90,513)	3.75%	(283)	(91,805)
8	JUN	(91,805)	677	0	(91,128)	(91,467)	3.75%	(286)	(91,414)
9	JUL	(91,414)	10,085	0	(81,329)	(86,372)	3.75%	(270)	(81,599)
10	AUG	(81,599)	16,979	0	(64,620)	(73,110)	3.75%	(228)	(64,848)
11	SEP	(64,848)	12,466	0	(52,382)	(58,615)	3.75%	(183)	(52,565)
12	OCT	(52,565)	52,647	0	82	(26,242)	3.75%	(82)	(0)
13									
14								<u>(\$2,955)</u>	

15 = COL. 1, LINE 1 + COL. 7, LINES 1 TO 6

16 = (87,881) + (1,623) = (89,504) @ MAY 1, 2018
(TRANSFER TO SCHEDULE B, LINE 13)
(UNLESS ADJUSTMENTS UNDER COLUMN 2 LINES 1-6)

LIBERTY UTILITIES - KEENE DIVISION Weather Normalization - Firm Sendout													
Period	Actual Firm Sendout	Base Use	Heat Use	Actual Calendar Month Degree Days	Normal Calendar Month Degree Days	Colder (Warmer) Than Normal	Actual Unit Heat Load Therm/DD	Weather Adjustment	Normal Heat Load	Normalized Firm Sendout	Actual Company Use	Unaccounted For 3.32%	Total Firm Sendout
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
			(1) - (2)			(4) - (5)	(3) / (4)	(6) X (7)	(3) + (8)	(1) - (3) + (9)		(10 - 11) * 3.32%	(10) - (11) + (12)
May-17	68,741	45,637	23,104	325	303	22	71.09	(1,564)	21,540	67,177	2,703	2,141	66,615
Jun-17	48,570	45,637	2,934	79	85	(6)	37.14	223	3,157	48,793	2,202	1,547	48,138
Jul-17	44,693	45,637	0	15	17	(2)	0.00	0	0	44,693	2,002	1,417	44,108
Aug-17	46,581	45,637	0	38	31	7	0.00	0	0	46,581	2,126	1,476	45,930
Sep-17	46,964	45,637	1,327	88	187	(99)	15.08	1,493	2,820	48,457	2,170	1,537	47,824
Oct-17	66,801	45,637	21,164	259	524	(265)	81.72	21,655	42,819	88,456	2,699	2,847	88,604
Total	322,350	273,821	48,529	804	1,147	(343)		21,807	70,336	344,156	13,902	10,964	341,219

LIBERTY UTILITIES - KEENE DIVISION											
Weather Normalization - Sales Rate Residential											
Period	Billing Cycle Customers	Billing Cycle Sales	Base Load	Heating Load	Billing Cycle Monthly Actual Degree Days	Billing Cycle Monthly Normal Degree Days	Colder (Warmer) Than Normal	Actual Unit Heat Load Therm/DD	Weather Adjustment	Normal Heat Load	Normal Firm Billing Cycle Therms
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
				(1) - (2)			(4) - (5)	(3) / (4)	(6) X (7)	(3) + (8)	(1) - (3) + (9)
May-17	759	15,460	6,540	8,920	445	537	(92)	20.04	1,844	10,764	17,304
Jun-17	733	12,950	6,540	6,410	288	251	37	22.26	(824)	5,586	12,126
Jul-17	735	6,960	6,540	420	69	67	2	6.09	(12)	408	6,948
Aug-17	727	6,120	6,540	0	19	15	4	0.00	0	0	6,120
Sep-17	733	7,140	6,540	0	47	50	(3)	0.00	0	0	7,140
Oct-17	730	7,350	6,540	810	114	215	(101)	7.11	718	1,528	8,068
Total		55,980	39,240	16,560	982	1,135	(153)	11.28	1,726	18,286	57,706

LIBERTY UTILITIES - KEENE DIVISION											
Weather Normalization - Sales Rate Commercial											
Period	Billing Cycle Customers	Billing Cycle Sales	Base Load	Heating Load	Billing Cycle Monthly Actual Degree Days	Billing Cycle Monthly Normal Degree Days	Colder (Warmer) Than Normal	Actual Unit Heat Load Therm/DD	Weather Adjustment	Normal Heat Load	Normal Firm Billing Cycle Therms
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
				(1) - (2)			(4) - (5)	(3) / (4)	(6) X (7)	(3) + (8)	(1) - (3) + (9)
May-17	450	63,270	34,795	28,475	451	551	(100)	63.14	6,314	34,789	69,584
Jun-17	455	51,830	34,795	17,035	296	258	38	57.55	(2,187)	14,848	49,643
Jul-17	449	37,250	34,795	2,455	71	69	2	34.58	(69)	2,386	37,181
Aug-17	446	32,340	34,795	0	18	14	4	0.00	0	0	32,340
Sep-17	444	37,530	34,795	0	45	44	1	0.00	0	0	37,530
Oct-17	449	37,820	34,795	3,025	107	202	(95)	28.27	2,686	5,711	40,506
Total		260,040	208,770	50,990	988	1,138	(150)	44.96	6,743	57,733	266,784

Summary - Total Summer Season Billed Sales

	<u>Actual 2017</u>	<u>Normalized</u>
May	78,730	86,888
June	64,780	61,769
July	44,210	44,129
August	38,460	38,460
September	44,670	44,670
October	45,170	48,574
Total	316,020	324,490

LIBERTY UTILITIES - KEENE DIVISION
Typical Residential Heating Bill - Fixed Price Option Program
Forecasted 2018 Summer Period vs. Actual 2017 Summer Period

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
12 MONTHS ENDED 10/2017	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	Winter Nov-Apr	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Summer May-Oct	Total Nov-Oct
Typical Usage - therms (1)	40	76	104	110	117	87	534	57	29	17	17	22	17	159	693
Residential Heating															
Customer Charge	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$54.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$54.00	\$108.00
Delivery Charge:															
Winter															
Summer															
First 80 therms @ \$1.1522	\$46.09	\$87.57	\$92.18	\$92.18	\$92.18	\$92.18	\$502.38	\$65.68	\$33.41	\$19.59	\$19.59	\$25.35	\$19.59	\$183.21	\$685.59
Next 120 therms @ \$0.9442	\$0.00	\$0.00	\$22.66	\$28.33	\$34.94	\$6.61	\$92.54	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$92.54
Over 200 therms @ \$0.7946	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Base Delivery Revenue Total	\$55.09	\$96.57	\$123.84	\$129.51	\$136.12	\$107.79	\$648.92	\$74.68	\$42.41	\$28.59	\$28.59	\$34.35	\$28.59	\$237.21	\$886.13
Deferred Revenue Surcharge Rate	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000		\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000		
Deferred Revenue Surcharge Total	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
COG Rates	\$1.5352	\$1.5352	\$1.5352	\$1.5352	\$1.5352	\$1.5352	\$1.5352	\$0.6281	\$0.6281	\$0.6866	\$0.7766	\$0.7851	\$0.7851	\$0.6887	
Cost of Gas Total	\$61.41	\$116.68	\$159.66	\$168.87	\$179.62	\$133.56	\$819.80	\$35.80	\$18.21	\$11.67	\$13.20	\$17.27	\$13.35	\$109.50	\$929.30
Total Bill	\$117	\$213	\$284	\$298	\$316	\$241	\$1,469	\$110	\$61	\$40	\$42	\$52	\$42	\$347	\$1,815
12 MONTHS ENDED 10/2018	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	Winter Nov-Apr	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Summer May-Oct	Total Nov-Oct
Typical Usage - therms (1)	40	76	104	110	117	87	534	57	29	17	17	22	17	159	693
Residential Heating															
Customer Charge	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$54.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$54.00	\$108.00
Delivery Charge:															
Winter															
Summer															
First 80 therms @ \$1.1522	\$46.09	\$87.57	\$92.18	\$92.18	\$92.18	\$92.18	\$502.38	\$65.68	\$33.41	\$19.59	\$19.59	\$25.35	\$19.59	\$183.21	\$685.59
Next 120 therms @ \$0.9442	\$0.00	\$0.00	\$22.66	\$28.33	\$34.94	\$6.61	\$92.54	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$92.54
Over 200 therms @ \$0.7946	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Base Delivery Revenue Total	\$55.09	\$96.57	\$123.84	\$129.51	\$136.12	\$107.79	\$648.92	\$74.68	\$42.41	\$28.59	\$28.59	\$34.35	\$28.59	\$237.21	\$886.13
Seasonal Base Delivery Difference from previous year							\$0.00							\$0.00	\$0.00
Seasonal Percent Change from previous year							0.0%							0.0%	0.0%
Deferred Revenue Surcharge Rate	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000		\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000		
Deferred Revenue Surcharge Total	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
COG Rates	\$1.2408	\$1.2408	\$1.2408	\$1.2408	\$1.2408	\$1.2408	\$1.2408	\$0.9995	\$0.9995	\$0.9995	\$0.9995	\$0.9995	\$0.9995	\$0.9995	
Cost of Gas Total	\$49.63	\$94.30	\$129.04	\$136.49	\$145.17	\$107.95	\$662.58	\$56.97	\$28.99	\$16.99	\$16.99	\$21.99	\$16.99	\$158.92	\$821.50
Seasonal COG Difference from previous year							-\$157.22							\$49.42	-\$107.80
Seasonal Percent Change from previous year							-19.2%							45.1%	-11.6%
Total Bill	\$105	\$191	\$253	\$266	\$281	\$216	\$1,312	\$132	\$71	\$46	\$46	\$56	\$46	\$396	\$1,708
Seasonal Total Bill Difference from previous year							-\$157.22							\$49.42	-\$107.80
Seasonal Percent Change from previous year							-10.7%							14.3%	-5.9%
Seasonal Percent Change resulting from Base Rates (inc. Def. Revenue Surch.)							0.0%							0.0%	0.0%
Seasonal Percent Change resulting from COG							-10.7%							14.3%	-5.9%

(1) Residential Heating Typical Usage: Single family detached home using gas for heat, hot water and cooking.

LIBERTY UTILITIES - KEENE DIVISION
Typical Residential Heating Bill - Non-Fixed Price Option Program
Forecasted 2018 Summer Period vs. Actual 2017 Summer Period

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
12 MONTHS ENDED 10/2017	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	Winter Nov-Apr	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Summer May-Oct	Total Nov-Oct
Typical Usage - therms (1)	40	76	104	110	117	87	534	57	29	17	17	22	17	159	693
Residential Heating															
Customer Charge	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$54.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$54.00	\$108.00
Delivery Charge:															
Winter															
Summer															
First 80 therms @ \$1.1522	\$46.09	\$87.57	\$92.18	\$92.18	\$92.18	\$92.18	\$502.38	\$65.68	\$33.41	\$19.59	\$19.59	\$25.35	\$19.59	\$183.21	\$685.59
Next 120 therms @ \$0.9442	\$0.00	\$0.00	\$22.66	\$28.33	\$34.94	\$6.61	\$92.54	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$92.54
Over 200 therms @ \$0.7946	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Base Delivery Revenue Total	\$55.09	\$96.57	\$123.84	\$129.51	\$136.12	\$107.79	\$648.92	\$74.68	\$42.41	\$28.59	\$28.59	\$34.35	\$28.59	\$237.21	\$886.13
Deferred Revenue Surcharge Rate	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000		\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000		
Deferred Revenue Surcharge Total	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
COG Rates	\$1.5152	\$1.6165	\$1.7694	\$1.7694	\$1.2750	\$1.1678	\$1.5223	\$0.6281	\$0.6281	\$0.6866	\$0.7766	\$0.7851	\$0.7851	\$0.6887	
Cost of Gas Total	\$60.61	\$122.85	\$184.02	\$194.63	\$149.18	\$101.60	\$812.89	\$35.80	\$18.21	\$11.67	\$13.20	\$17.27	\$13.35	\$109.50	\$922.39
Total Bill	\$116	\$219	\$308	\$324	\$285	\$209	\$1,462	\$110	\$61	\$40	\$42	\$52	\$42	\$347	\$1,809
12 MONTHS ENDED 10/2018	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	Winter Nov-Apr	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Summer May-Oct	Total Nov-Oct
Typical Usage - therms (1)	40	76	104	110	117	87	534	57	29	17	17	22	17	159	693
Residential Heating															
Customer Charge	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$54.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$54.00	\$108.00
Delivery Charge:															
Winter															
Summer															
First 80 therms @ \$1.1522	\$46.09	\$87.57	\$92.18	\$92.18	\$92.18	\$92.18	\$502.38	\$65.68	\$33.41	\$19.59	\$19.59	\$25.35	\$19.59	\$183.21	\$685.59
Next 120 therms @ \$0.9442	\$0.00	\$0.00	\$22.66	\$28.33	\$34.94	\$6.61	\$92.54	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$92.54
Over 200 therms @ \$0.7946	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Base Delivery Revenue Total	\$55.09	\$96.57	\$123.84	\$129.51	\$136.12	\$107.79	\$648.92	\$74.68	\$42.41	\$28.59	\$28.59	\$34.35	\$28.59	\$237.21	\$886.13
Seasonal Base Delivery Difference from previous year							\$0.00							\$0.00	\$0.00
Seasonal Percent Change from previous year							0.0%							0.0%	0.0%
Deferred Revenue Surcharge Rate	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000		\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000		
Deferred Revenue Surcharge Total	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
COG Rates	\$1.2533	\$1.2533	\$1.3008	\$1.5666	\$1.5188	\$1.5188	\$1.4285	\$0.9995	\$0.9995	\$0.9995	\$0.9995	\$0.9995	\$0.9995	\$0.9995	
Cost of Gas Total	\$50.13	\$95.25	\$135.28	\$172.33	\$177.70	\$132.14	\$762.83	\$56.97	\$28.99	\$16.99	\$16.99	\$21.99	\$16.99	\$158.92	\$921.75
Seasonal COG Difference from previous year							-\$50.06							\$49.42	-\$0.64
Seasonal Percent Change from previous year							-6.2%							45.1%	-0.1%
Total Bill	\$105	\$192	\$259	\$302	\$314	\$240	\$1,412	\$132	\$71	\$46	\$46	\$56	\$46	\$396	\$1,808
Seasonal Total Bill Difference from previous year							-\$50.06							\$49.42	-\$0.64
Seasonal Percent Change from previous year							-3.4%							14.3%	0.0%
Seasonal Percent Change resulting from Base Rates (inc. Def. Revenue Surch.)							0.0%							0.0%	0.0%
Seasonal Percent Change resulting from COG							-3.4%							14.3%	0.0%

(1) Residential Heating Typical Usage: Single family detached home using gas for heat, hot water and cooking.

L BERTY UTILIT ES - KEENE DIVISION

BID PREMIUM FOR PRE-PURCHASED GALLONS - PRIOR YEAR

	Mt. Belvieu Price	Pipeline Rate	Broker + Supplier Fee	PERC	Trucking	Keene Div. Price	Contract Volumes	Keene Div. Cost	Fixed Basis Bid	Plan Price	Contract Volumes	Plan Cost	Cost Premium	Per Gallon Premium					
Apr-17	\$0.7001	+	\$0.2169	+	\$0.1000	+	\$0.0045	+	\$0.0810	=	\$1.1025	115,000	\$126,783	\$0 315	\$1.0151	115,000	\$116,732	(\$10,051)	-\$0.0874
May-17	\$0.6657	+	\$0.2169	+	\$0.1000	+	\$0.0045	+	\$0.0810	=	\$1.0681	86,250	\$92,123	\$0 315	\$0.9807	86,250	\$84,584	(\$7,538)	-\$0.0874
Jun-17	\$0.6257	+	\$0.2169	+	\$0.1000	+	\$0.0045	+	\$0.0810	=	\$1.0281	86,250	\$88,673	\$0 315	\$0.9407	86,250	\$81,134	(\$7,538)	-\$0.0874
Jul-17	\$0.6675	+	\$0.2169	+	\$0.1000	+	\$0.0045	+	\$0.0810	=	\$1.0699	115,000	\$123,036	\$0 315	\$0.9825	115,000	\$112,985	(\$10,051)	-\$0.0874
Aug-17	\$0.7535	+	\$0.2169	+	\$0.1000	+	\$0.0045	+	\$0.0810	=	\$1.1559	86,250	\$99,699	\$0 315	\$1.0685	86,250	\$92,160	(\$7,538)	-\$0.0874
Sep-17	\$0.8272	+	\$0.2169	+	\$0.1000	+	\$0.0045	+	\$0.0810	=	\$1 2296	86,250	\$106,050	\$0 315	\$1.1422	86,250	\$98,512	(\$7,538)	-\$0.0874
Total											575,000	\$636,362			575,000	\$586,107	(\$50,255)	-\$0.0874	

LIBERTY UTILITIES - KEENE DIVISION

COMPARISON OF CONTRACT COST TO HYPOTHETICAL SPOT COST
WINTER SEASON 2017-2018 TO DATE

Delivery Month	Contract Price (1)	Contract Volumes (2)	Contract Cost (3)	Average Spot Price (4)	Contract Volumes (5)	Hypothetical Spot Cost (6)	Incremental Cost / (Savings) of Plan (7)
			(1) x (2)			(4) x (5)	(3) - (6)
Nov-17	\$1.0285	75,346	\$77,493	\$1.3388	75,346	\$100,873	(\$23,380)
Dec-17	\$1.0341	115,000	\$118,924	\$1.3289	115,000	\$152,824	(\$33,899)
Jan-18	\$1.0398	134,828	\$140,187	\$1.5853	134,828	\$213,743	(\$73,555)
Feb-18	\$1.0321	111,034	\$114,601	\$1.3169	111,034	\$146,221	(\$31,620)
Total			\$451,206			\$613,660	(\$162,454)

-26.5%

LIBERTY UTILITIES - KEENE DIVISION
 PROPANE PURCHASING STABILIZATION PLAN
 PRE-PURCHASES AND DELIVERY SCHEDULE

Delivery Month	Pre-Purchases (Gallons)						
	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Total
Nov-18	15,069	11,302	11,302	15,069	11,302	11,302	75,346
Dec-18	23,000	17,250	17,250	23,000	17,250	17,250	115,000
Jan-19	26,966	20,224	20,224	26,966	20,224	20,224	134,828
Feb-19	22,207	16,655	16,655	22,207	16,655	16,655	111,034
Mar-19	17,448	13,086	13,086	17,448	13,086	13,086	87,240
Apr-19	10,310	7,733	7,733	10,310	7,733	7,733	51,552
Total	115,000	86,250	86,250	115,000	86,250	86,250	575,000
Monthly %	20.0%	15.0%	15.0%	20.0%	15.0%	15.0%	

The monthly allocation percentage for the pre-purchases is unchanged.

LIBERTY UTILITIES - KEENE DIVISION
CALCULATION OF PURCHASED GAS COSTS
SUMMER PERIOD 2018

LINE NO.		MAY-18	JUN-18	JUL-18	AUG-18	SEP-19	OCT-18	TOTAL
1	TOTAL SENDOUT (GALLONS)	75,756	55,016	50,392	52,519	54,637	99,783	388,102
2	CHANGE TO END NG INVENTORY BALANCE (GALLONS)	-	-	-	-	-	-	-
3	TOTAL REQUIRED PURCHASES (GALLONS)	75,756	55,016	50,392	52,519	54,637	99,783	388,102
4	<u>PROPANE PURCHASE STABILIZATION PLAN DELIVERIES</u>							
5	GALLONS	-	-	-	-	-	-	-
6	<u>RATES</u> - from Schedule D							
7	Contract Price	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	
8	Broker Fee	incl.	incl.	incl.	incl.	incl.	incl.	
9	Pipeline Fee	incl.	incl.	incl.	incl.	incl.	incl.	
10	PERC Fee	incl.	incl.	incl.	incl.	incl.	incl.	
11	Trucking Fee	incl.	incl.	incl.	incl.	incl.	incl.	
12	COST PER GALLON	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	
13	TOTAL COST - Propane Purchase Stabilization Plan Deliveries	\$0	\$0	\$0	\$0	\$0	\$0	\$0
14	<u>AMHERST STORAGE PROPANE DELIVERIES</u>							
15	GALLONS	-	-	-	-	-	-	-
16	<u>RATES</u> - from Schedule F							
17	WACOG Price	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	
18	Trucking Fee	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	
19	COST PER GALLON	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	
20	TOTAL COST - Amherst Storage Propane Deliveries	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21	<u>CNG DELIVERIES</u>							
22	GALLONS	-	-	16,393	16,393	16,393	32,786	81,965
23	RATE							
24	PRICE							
25	COST PER GALLON							
26	COST - CNG							
27	DEMAND FIXED							
28	COST PER GALLON							
29	TOTAL CNG							
30	<u>SPOT PURCHASES</u>							
31	GALLONS	75,756	55,016	33,999	36,126	38,244	66,997	306,137
32	<u>RATES</u> - from Schedule E							
33	Market Quotes 3/14/18							
34	Broker Fee	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	
35	Pipeline Fee	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	
36	PERC Fee	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	
37	Supplier Charge	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	
38	Trucking Fee	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	
39	COST PER GALLON							
40	TOTAL COST - Spot Purchases							
41	<u>OTHER ITEMS</u>							
42	Storage - Winter Period 2015-2016	\$0	\$0	\$0	\$0	\$0	\$0	\$0
43	Refund of Deferred Revenue Surcharge overcollection	\$0	\$0	\$0	\$0	\$0	\$0	\$0
44	TOTAL OTHER ITEMS	\$0	\$0	\$0	\$0	\$0	\$0	\$0
45	TOTAL							
46	GALLONS	75,756	55,016	50,392	52,519	54,637	99,783	388,102
47	THERMS	69,318	50,340	46,110	48,056	49,994	91,303	355,121
48	COST	\$86,339	\$63,391	\$52,153	\$54,522	\$56,587	\$99,284	\$412,275
49	COST PER GALLON	\$1.1397	\$1.1522	\$1.0349	\$1.0381	\$1.0357	\$0.9950	\$1.0623
50	COST PER THERM	\$1.2455	\$1.2593	\$1.1311	\$1.1345	\$1.1319	\$1.0874	\$1.1609