

## 4 Summary

5				OP 19
6		Reference		May - Oct
7	(a)	(b)		(c)
8				
9	<b>Anticipated Direct Cost of Gas</b>			
10	Purchased Gas:			
11	Demand Costs:	Sch. 5A, col (j), ln 45	\$	4,372,669
12	Supply Costs	Sch. 6, col (i), ln 45		3,602,943
13				
14	Storage Gas:			
15	Demand, Capacity:	Sch. 5A, col (j), ln 60	\$	-
16	Commodity Costs:	Sch. 6, col (i), ln 48		-
17				
18	Produced Gas:	Sch. 6, col (i), ln 54	\$	27,091
19				
20	Hedge Contract (Savings)/Loss	Sch. 7, col (i), ln 32	\$	-
21				
22				
23	<b>Total Unadjusted Cost of Gas</b>		<b>\$</b>	<b>8,002,703</b>
24				
25	<b>Adjustments</b>			
26				
27	Prior Period (Over)/Under Recovery	Sch. 3, col (c) ln 26	\$	617,043
28	Interest 11/01/17 - 10/31/18	Sch. 3, col (q) ln 191		41,437
29	Prior Period Adjustments	Sch. 4, ln 26 col (b)		-
30	Refunds from Suppliers	Sch. 4, ln 26 col (c)		-
31	Broker Revenue	Sch. 4, ln 26 col (d)		-
32	Fuel Financing	Sch. 4, ln 26 col (e)		-
33	Transportation CGA Revenues	Sch. 4, ln 26 col (f)		-
34	Interruptible Sales Margin	Sch. 4, ln 26 col (g)		-
35	Capacity Release and Off System Sales Margins	Sch. 4, ln 26 col (h) + col (i)		-
36	Hedging Costs	Sch. 4, ln 26 col (j)		-
37	FPO Premium - Collection			-
38	Fixed Price Option Administrative Costs	Sch. 4, ln 26 col (k)		-
39				
40	<b>Total Adjustments</b>		<b>\$</b>	<b>658,480</b>
41				
42	<b>Total Anticipated Direct Costs</b>	Ins 23 + 40	<b>\$</b>	<b>8,661,183</b>
43				
44	<b>Anticipated Indirect Cost of Gas</b>			
45	<b>Working Capital</b>			
46	Total Unadjusted Anticipated Cost of Gas	Ln 23	\$	8,002,703
47	Lead Lag Days / 365	DG 10-017, 14.27 / 365		0.0391
48	Prime Rate			5.00%
49	Working Capital Percentage	ln 47 * ln 48		0.196%
50	Working Capital	ln 46 * ln 49		15,647
51	Plus: Working Capital Reconciliation	Sch. 3, col (c), ln 98		(4,953)
52				
53	<b>Total Working Capital Allowance</b>	Ins 50 + 51	<b>\$</b>	<b>10,694</b>
54				
55	<b>Bad Debt</b>			
56	Total Unadjusted Anticipated Cost of Gas	ln 23	\$	8,002,703
57	Less Refunds	ln 30		-
58	Plus Working Capital	ln 53		10,694
59	Plus Prior Period (Over) Under Recovery	ln 27		617,043
60	Subtotal		\$	8,630,440
61	Bad Debt Percentage	per GTC 16(f), docket 14-220 Sch 6 Pg 3		1.75%
62				
63	Bad Debt Allowance	ln 60 * ln 61	\$	150,685
64	Prior Period Bad Debt Allowance	Sch. 3, col (c), ln 161		18,034
65				
66	<b>Total Bad Debt Allowance</b>	Ins 63 + 64	<b>\$</b>	<b>168,720</b>
67				
68	<b>Production and Storage Capacity</b>	per GTC 16(f)	<b>\$</b>	<b>-</b>
69				
70	<b>Miscellaneous Overhead</b>	per GTC 16(f)	\$	13,170
71	Sales Volume	Sch. 10B, ln 23/1000		20,186
72	Divided by Total Sales	Sch. 10B, ln 23/1000		106,815
73	Ratio			18.90%
74				
75	<b>Miscellaneous Overhead</b>	Ins 70 * 73	<b>\$</b>	<b>2,489</b>
76				
77	<b>Total Anticipated Indirect Cost of Gas</b>	Ins 53 + 66 + 68 + 75	<b>\$</b>	<b>181,903</b>
78				
79	<b>Total Cost of Gas</b>	Ins 42 + 77	<b>\$</b>	<b>8,843,085</b>
80				
81	<b>Projected Forecast Sales (Therms)</b>	Sch. 3, col (q), ln 52		<b>19,890,267</b>

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2019 Summer Cost of Gas Filing

4 Summary of Supply and Demand Forecast

7 For Month of:		May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Off Peak Period May - Oct
8 (a)	(b)	(c)	(d)	(e)	(d)	(e)	(f)	(g)	(h)
9 I. Gas Volumes (Therms)									
10									
11 A. Firm Demand Volumes									
12 Firm Gas Sales	Sch. 10B, In 23	1,016,035	3,311,456	1,934,793	1,696,683	2,258,446	4,080,217	5,592,637	19,890,267
13 Lost Gas (Unaccounted for)		70,762	39,318	27,991	26,657	35,587	74,952		275,267
14 Company Use		2,724	1,513	1,077	1,026	1,370	2,885		10,595
15 Unbilled Therms		3,327,556	(898,032)	(216,657)	(60,380)	(73,986)	520,526	(5,592,637)	(2,993,609)
16									
17 Total Firm Volumes	Sch. 6, In 94	4,417,077	2,454,255	1,747,204	1,663,987	2,221,418	4,678,580		17,182,520
18									
19 B. Supply Volumes (Therms)									
20 Pipeline Gas:									
21 Dawn Supply	Sch. 6, In 64	142,098	-	-	-	-	135,379		277,476
22 Niagara Supply	Sch. 6, In 65	614,064	547,533	530,186	515,272	533,984	621,073		3,362,112
23 TGP Supply (Gulf)	Sch. 6, In 66	-	-	-	-	-	-		-
24 Dracut Supply 1 - Baseload	Sch. 6, In 67	-	-	-	-	-	-		-
25 Dracut Supply 2 - Swing	Sch. 6, In 68	77,392	-	-	-	-	77,634		155,027
26 City Gate Delivered Supply	Sch. 6, In 69	-	-	-	-	-	-		-
27 LNG Truck	Sch. 6, In 70	45,040	16,946	-	-	49,580	14,757		126,323
28 Propane Truck	Sch. 6, In 71	72,952	67,200	62,987	61,215	65,537	73,785		403,675
29 PNGTS	Sch. 6, In 72	194,750	173,551	168,148	163,418	169,256	196,973		1,066,095
30 Portland Natural Gas	Sch. 6, In 73	76,758	-	-	-	-	127,679		204,437
31 TGP Supply (Zone 4)	Sch. 6, In 74	4,947,405	4,368,574	3,844,396	3,770,320	4,184,677	5,005,157		26,120,528
32 Subtotal Pipeline Volumes		6,170,459	5,173,803	4,605,716	4,510,225	5,003,034	6,252,436		31,715,673
33									
34 Storage Gas:									
35 TGP Storage	Sch. 6, In 79	-	-	-	-	-	-		-
36									
37 Produced Gas:									
38 LNG Vapor	Sch. 6, In 82	18,397	16,946	15,884	15,437	15,957	18,607		101,226
39 Propane	Sch. 6, In 83	-	-	-	-	-	-		-
40 Subtotal Produced Gas		18,397	16,946	15,884	15,437	15,957	18,607		101,226
41									
42 Less - Gas Refill:									
43 LNG Truck	Sch. 6, In 88	(45,040)	(16,946)	-	-	(49,580)	(14,757)		(126,323)
44 Propane	Sch. 6, In 89	(72,952)	(67,200)	(62,987)	(61,215)	(65,537)	(73,785)		(403,675)
45 TGP Storage Refill	Sch. 6, In 90	(1,653,787)	(2,652,348)	(2,811,409)	(2,800,459)	(2,682,456)	(1,503,921)		(14,104,381)
46 Subtotal Refills		(1,771,779)	(2,736,494)	(2,874,396)	(2,861,674)	(2,797,573)	(1,592,462)		(14,634,379)
47									
48 Total Firm Sendout Volumes	Ins 32 + 35 + 40 + 46	4,417,077	2,454,255	1,747,204	1,663,987	2,221,418	4,678,580		17,182,520
49									

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2019 Summer Cost of Gas Filing

4 Summary of Supply and Demand Forecast

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6

7 For Month of:

May-19 Jun-19 Jul-19 Aug-19 Sep-19 Oct-19 Nov-19 Off Peak Period  
May - Oct

50 II. Gas Costs

51 REDACTED

52 A. Demand Costs

53 Supply

54	Niagara Supply	Sch.5A, In 12	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
55	Subtotal Supply Demand		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
56	Less Capacity Credit		-	-	-	-	-	-	-	-	-
57	Net Pipeline Demand Costs		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

59 Pipeline:

60	Iroquois Gas Trans Service RTS 470-0	Sch.5A, In 16	REDACTED								
61	Tenn Gas Pipeline 95346 Z5-Z6	Sch.5A, In 17									
62	Tenn Gas Pipeline 2302 Z5-Z6	Sch.5A, In 18									
63	Tenn Gas Pipeline 8587 Z0-Z6	Sch.5A, In 19									
64	Tenn Gas Pipeline 8587 Z1-Z6	Sch.5A, In 20									
65	Tenn Gas Pipeline 8587 Z4-Z6	Sch.5A, In 21									
66	Tenn Gas Pipeline (Dracut) 42076 Z6-Z6	Sch.5A, In 22									
67	Tenn Gas Pipeline (Concord Lateral) Z6-Z6	Sch.5A, In 23									
68	Portland Natural Gas Trans Service	Sch.5A, In 24									
69	ANE (TransCanada via Union to Iroquois)	Sch.5A, In 26									
70	Portland Natural Gas	Sch.5A, In 25									
71	TransCanada via Union to Portland	Sch.5A, In 27									
72	Tenn Gas Pipeline Z4-Z6 stg 632	Sch.5A, In 28									
73	Tenn Gas Pipeline Z4-Z6 stg 11234	Sch.5A, In 29									
74	Tenn Gas Pipeline Z5-Z6 stg 11234	Sch.5A, In 30									
75	National Fuel FST 2358	Sch.5A, In 31									
76	Subtotal Pipeline Demand		\$ 1,210,374	\$ 1,216,211	\$ 1,216,211	\$ 1,216,211	\$ 1,216,211	\$ 1,216,211	\$ 1,216,211	\$ 7,291,427	
77	Less Capacity Credit		(484,513)	(486,849)	(486,849)	(486,849)	(486,849)	(486,849)	(486,849)	(2,918,758)	
78	Net Pipeline Demand Costs		\$ 725,861	\$ 729,362	\$ 729,362	\$ 729,362	\$ 729,362	\$ 729,362	\$ 729,362	\$ 4,372,669	

80 Peaking Supply:

81	Tenn Gas Pipeline (Concord Lateral) Z6-Z6	Sch.5A, In 36	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
82	Granite Ridge Demand	Sch.5A, In 37	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
83	DOMAC Demand NSB041	Sch.5A, In 38	-	-	-	-	-	-	-	-
84	Subtotal Peaking Demand		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
85	Less Capacity Credit		-	-	-	-	-	-	-	-
86	Net Peaking Supply Demand Costs		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

88 Storage:

89	Dominion - Demand	Sch.5A, In 48	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
90	Dominion - Storage	Sch.5A, In 49	-	-	-	-	-	-	-	-
91	Honeoye - Demand	Sch.5A, In 50	-	-	-	-	-	-	-	-
92	National Fuel - Demand	Sch.5A, In 51	-	-	-	-	-	-	-	-
93	National Fuel - Capacity	Sch.5A, In 52	-	-	-	-	-	-	-	-
94	Tenn Gas Pipeline - Demand	Sch.5A, In 53	-	-	-	-	-	-	-	-
95	Tenn Gas Pipeline - Capacity	Sch.5A, In 54	-	-	-	-	-	-	-	-
96	Subtotal Storage Demand		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
97	Less Capacity Credit		-	-	-	-	-	-	-	-
98	Net Storage Demand Costs		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

100	Total Demand Charges	Ins 55 + 76 + 84 + 96	\$ 1,210,374	\$ 1,216,211	\$ 1,216,211	\$ 1,216,211	\$ 1,216,211	\$ 1,216,211	\$ 1,216,211	\$ 7,291,427
101	Total Capacity Credit	Ins 56 + 77 + 85 + 97	(484,513)	(486,849)	(486,849)	(486,849)	(486,849)	(486,849)	(486,849)	(2,918,758)
102	Net Demand Charges		\$ 725,861	\$ 729,362	\$ 729,362	\$ 729,362	\$ 729,362	\$ 729,362	\$ 729,362	\$ 4,372,669

103  
104

REDACTED

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2019 Summer Cost of Gas Filing

4 Summary of Supply and Demand Forecast

5  
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7 For Month of:

105 B. Commodity Costs

106 Pipeline:

107 Dawn Supply	Sch. 6, In 12
108 Niagara Supply	Sch. 6, In 13
109 TGP Supply (Gulf)	Sch. 6, In 14
110 Dracut Supply 1 - Baseload	Sch. 6, In 15
111 Dracut Supply 2 - Swing	Sch. 6, In 16
112 City Gate Delivered Supply	Sch. 6, In 17
113 LNG Truck	Sch. 6, In 18
114 Portland Natural Gas	Sch. 6, In 21
115 PNGTS	Sch. 6, In 20
116 TGP Supply (Zone 4)	Sch. 6, In 22

May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Off Peak Period May - Oct
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REDACTED

117 Subtotal Pipeline Commodity Costs	\$ 1,472,882	\$ 1,252,866	\$ 1,110,111	\$ 1,082,619	\$ 1,147,187	\$ 1,474,756	\$ 7,540,420
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119 Storage:

120 TGP Storage - Withdrawals	Sch. 6, In 48
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\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
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122 Produced Gas Costs:

123 LNG Vapor	Sch. 6, In 51
124 Propane	Sch. 6, In 52

\$ 8,289	\$ 4,769	\$ 3,831	\$ 3,723	\$ 3,848	\$ 2,631	\$ 27,091
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127 Less Storage Refills:

128 LNG Truck	Sch. 6, In 38
129 Propane	Sch. 6, In 39
130 TGP Storage Refill	Sch. 6, In 40
131 Storage Refill (Trans.)	Sch. 6, In 41

\$ (500,096)	\$ (809,512)	\$ (867,078)	\$ (865,037)	\$ (824,108)	\$ (464,977)	\$ (4,330,808)
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134 Total Supply Commodity Costs

\$ 981,075	\$ 448,122	\$ 246,864	\$ 221,305	\$ 326,927	\$ 1,012,410	\$ 3,236,702
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136 C. Supply Volumetric Transportation Costs

137 Dawn Supply	Sch. 6, In 27
138 Niagara Supply	Sch. 6, In 28
139 TGP Supply (Zone 4)	Sch. 6, In 29
140 Dracut Supply 1 - Baseload	Sch. 6, In 30
141 Dracut Supply 2 - Swing	Sch. 6, In 31

\$ 75,533	\$ 65,453	\$ 57,985	\$ 56,763	\$ 62,128	\$ 75,470	\$ 393,331
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142 Subtotal Pipeline Volumetric Trans. Costs	
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\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
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146 Total Supply Volumetric Trans. Costs Ins 142 + 144

\$ 75,533	\$ 65,453	\$ 57,985	\$ 56,763	\$ 62,128	\$ 75,470	\$ 393,331
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148 Total Commodity Gas & Trans. Costs Ins 134 + 146

\$ 1,056,607	\$ 513,575	\$ 304,849	\$ 278,068	\$ 389,055	\$ 1,087,880	\$ 3,630,034
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REDACTED

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2019 Summer Cost of Gas Filing

4 Summary of Supply and Demand Forecast

5  
6

7 For Month of:

		May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Off Peak Period May - Oct
151	<b>D. Supply and Demand Costs by Source</b>								<b>REDACTED</b>
152									
153	<u>Purchased Gas Demand Costs</u>								
154	Pipeline Gas Demand Costs	In 55 + 76	\$ 1,210,374	\$ 1,216,211	\$ 1,216,211	\$ 1,216,211	\$ 1,216,211	\$ 1,216,211	\$ 7,291,427
155	Peaking Gas Demand Costs	In 84	-	-	-	-	-	-	-
156	Subtotal Purchased Gas Demand Costs		\$ 1,210,374	\$ 1,216,211	\$ 1,216,211	\$ 1,216,211	\$ 1,216,211	\$ 1,216,211	\$ 7,291,427
157	Less Capacity Credit	In 56 + 77 + 85	(484,513)	(486,849)	(486,849)	(486,849)	(486,849)	(486,849)	(2,918,758)
158	Net Purchased Gas Demand Costs		\$ 725,861	\$ 729,362	\$ 729,362	\$ 729,362	\$ 729,362	\$ 729,362	\$ 4,372,669
159									
160	<u>Storage Gas Demand Costs</u>								
161	Storage Demand	In 96	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
162	Less Capacity Credit	In 97	-	-	-	-	-	-	-
163	Net Storage Demand Costs		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
164									
165	<b>Total Demand Costs</b>	In 158 + 163	\$ 725,861	\$ 729,362	\$ 729,362	\$ 729,362	\$ 729,362	\$ 729,362	\$ 4,372,669
166									
167	<u>Purchased Gas Supply</u>								
168	Commodity Costs	In 117	\$ 1,472,882	\$ 1,252,866	\$ 1,110,111	\$ 1,082,619	\$ 1,147,187	\$ 1,474,756	\$ 7,540,420
169	Less Storage Inj.(TGP Storage)	In 130							
170	Less Storage Transportation	In 131							
171	Less LNG Truck	In 128							
172	Less Propane Truck	In 129							
173	Plus Transportation Costs	In 142							
174	Subtotal Purchased Gas Supply		\$ 1,048,318	\$ 508,806	\$ 301,018	\$ 274,345	\$ 385,207	\$ 1,085,249	\$ 3,602,943
175									
176	<u>Storage Commodity Costs</u>								
177	Commodity Costs	In 120	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
178	Transportation Costs	In 144	-	-	-	-	-	-	-
179	Subtotal Storage Commodity Costs		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
180									
181	<u>Produced Gas Commodity Costs</u>	In 125	\$ 8,289	\$ 4,769	\$ 3,831	\$ 3,723	\$ 3,848	\$ 2,631	\$ 27,091
182									
183	<b>Subtotal Commodity Costs</b>	In 174 + 179 + 181	\$ 1,056,607	\$ 513,575	\$ 304,849	\$ 278,068	\$ 389,055	\$ 1,087,880	\$ 3,630,034
184									
185	Hedge Contract (Savings)/Loss		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
186									
187	<b>Total Commodity Costs</b>	In 183 + 185	\$ 1,056,607	\$ 513,575	\$ 304,849	\$ 278,068	\$ 389,055	\$ 1,087,880	\$ 3,630,034
188									
189	<b>Total Demand Costs</b>	In 102	\$ 725,861	\$ 729,362	\$ 729,362	\$ 729,362	\$ 729,362	\$ 729,362	\$ 4,372,669
190	<b>Total Supply Costs</b>	In 187	1,056,607	513,575	304,849	278,068	389,055	1,087,880	3,630,034
191									
192	<b>Total Direct Gas Costs</b>	In 189 + 190	\$ 1,782,468	\$ 1,242,936	\$ 1,034,210	\$ 1,007,430	\$ 1,118,417	\$ 1,817,241	\$ 8,002,703
193									
194									

REDACTED

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2019 Summer Cost of Gas Filing

4 Contracts Ranked on a per Unit Cost Basis

5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
	Supplier	Contract	Contract Type	Contract Unit	Unit Dth	Off Peak																																													
	(a)	(b)	(c)	(d)	(e)	Cost per																																													
						Unit Dth																																													
						(f)																																													
<b>9 Demand Costs</b>																																																			
10	Granite Ridge Demand		Peaking	MDQ	-																																														
11	Niagara Supply		Supply	MDQ	-																																														
12	Dominion - Capacity Reservation	GSS 300076	Storage	ACQ	102,700																																														
13	Tenn Gas Pipeline - Cap. Reservations	FS-MA 523	Storage	ACQ	1,560,391																																														
14	National Fuel - Capacity Reservation	FSS-1 2357	Storage	ACQ	670,800																																														
15	Tenn Gas Pipeline - Demand	FS-MA 523	Storage	MDQ	21,844																																														
16	Dominion - Demand	GSS 300076	Storage	MDQ	934																																														
17	National Fuel - Demand	FSS-1 2357	Storage	MDQ	6,098																																														
18	National Fuel	FST N02358	Transportation	MDQ	6,098																																														
19	Tenn Gas Pipeline	42076 FTA Z6-Z6	Transportation	MDQ	20,000																																														
20	Iroquois Gas Trans Service	RTS 470-01	Transportation	MDQ	4,047																																														
21	Honeoye - Demand	SS-NY	Storage	MDQ	1,362																																														
22	Tenn Gas Pipeline	2302 Z5-Z6	Transportation	MDQ	3,122																																														
23	Tenn Gas Pipeline (short haul)	11234 Z5-Z6(stg)	Transportation	MDQ	1,957																																														
24	Tenn Gas Pipeline (short haul)	8587 Z4-Z6	Transportation	MDQ	3,811																																														
25	Tenn Gas Pipeline (short haul)	632 Z4-Z6 (stg)	Transportation	MDQ	15,265																																														
26	Tenn Gas Pipeline (short haul)	11234 Z4-Z6(stg)	Transportation	MDQ	7,082																																														
27	Tenn Gas Pipeline (Concord Lateral) Z6-Z6	Firm Transportation	Transportation	MDQ	30,000																																														
28	Tenn Gas Pipeline	95346 Z5-Z6	Transportation	MDQ	4,000																																														
29	ANE (TransCanada via Union to Iroquois)	Union Parkway to Iroquois	Transportation	MDQ	4,047																																														
30	TransCanada via Union to Portland	Union Parkway to Portland	Transportation	MDQ	1,784																																														
31	Tenn Gas Pipeline (long haul)	8587 Z1-Z6	Transportation	MDQ	14,561																																														
32	Tenn Gas Pipeline (long haul)	8587 Z0-Z6	Transportation	MDQ	7,035																																														
33	Portland Natural Gas Trans Service	FT-1999-001	Transportation	MDQ	1,000																																														
34	Portland Natural Gas	FTN	Transportation	MDQ	1,784																																														
<b>36 Supply Costs - Commodity</b>																																																			
37	LNG Truck		Pipeline	Dkt	12,632																																														
38	TGP Supply (Zone 4)		Pipeline	Dkt	2,612,053																																														
39	Niagara Supply		Pipeline	Dkt	336,211																																														
40	Dracut Supply 2 - Swing		Pipeline	Dkt	15,503																																														
41	TGP Citygate Supply		Pipeline	Dkt	-																																														
42	Dracut Supply 1 - Baseload		Pipeline	Dkt	-																																														
43	TGP Supply (Gulf)		Pipeline	Dkt	-																																														
44	Dawn Supply		Pipeline	Dkt	27,748																																														
45	PNGTS		Pipeline	Dkt	106,610																																														
46	Propane		Pipeline	Dkt	-																																														
47	LNG Vapor (Storage)		Produced	Dkt	10,123																																														
<b>49 Supply Costs - Volumetric Transportation</b>																																																			
50	Dracut Supply 1 - Baseload		Pipeline	Dkt	-																																														
51	Dracut Supply 2 - Swing		Pipeline	Dkt	15,503																																														
52	Dawn Supply		Storage	Dkt	27,748																																														
53	Niagara Supply		Pipeline	Dkt	336,211																																														
54	TGP Supply (Zone 4)		Pipeline	Dkt	-																																														

REDACTED

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2019 Summer Cost of Gas Filing

4 COG (Over)/Under Cumulative Recovery Balances and Interest Calculation

		Prior Period Balance Plus Nov Collections October 31, 2018	Nov-18 30	Dec-18 31	Jan-19 31	Feb-19 28	Mar-19 31	Apr-19 30	May-19 31	Jun-19 30	Jul-19 31	Aug-19 31	Sep-19 30	Oct-19 31	Nov-19 30	Off Peak Period Total	
(a)	Days in Month (b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	
<b>Account 8840-2-0000-10-1920-1741 (formerly, 175.40) COG (Over)/Under Balance - Interest Calculation</b>																	
11	Beginning Balance	Account 1920-1741 1/	\$ 617,043	\$ 617,043	\$ 619,579	\$ 622,210	\$ 624,852	\$ 627,249	\$ 629,913	\$ 632,501	\$ 569,585	\$ 778,217	\$ 1,071,369	\$ 1,373,378	\$ 1,556,923	\$ 1,424,520	\$ 617,043
12	Forecast Direct Gas Costs		-	-	-	-	-	-	-	1,758,865	1,219,333	1,010,606	983,826	1,094,813	1,793,638	-	7,861,080
13	Production & Storage & Misc Overhead		-	-	-	-	-	-	-	415	415	415	415	415	415	-	2,489
14	Projected Revenues w/o Int.	In 52 * In 62	-	-	-	-	-	-	-	(426,836)	(1,391,143)	(812,806)	(712,777)	(948,773)	(1,714,099)	(2,349,467)	(8,355,901)
15	Projected Unbilled Revenue	In 56 * In 62	-	-	-	-	-	-	-	(1,397,906)	(1,020,643)	(929,626)	(904,260)	(873,178)	(1,091,852)	-	(6,217,465)
16	Reverse Prior Month Unbilled		-	-	-	-	-	-	-	-	1,397,906	1,020,643	929,626	904,260	873,178	1,091,852	6,217,465
17	Add Net Adjustments (with TGP Refund)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	Gas Cost Billed	Account 1920-1741 2/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	Monthly (Over)/Under Recovery		\$ 617,043	\$ 617,043	\$ 619,579	\$ 622,210	\$ 624,852	\$ 627,249	\$ 629,913	\$ 567,038	\$ 775,453	\$ 1,067,450	\$ 1,368,198	\$ 1,550,914	\$ 1,418,203	\$ 166,905	\$ 124,711
20	Average Monthly Balance	(In 11 + 19)/ 2	\$ -	\$ 617,043	\$ 619,579	\$ 622,210	\$ 624,852	\$ 627,249	\$ 629,913	\$ 599,770	\$ 672,519	\$ 922,833	\$ 1,219,783	\$ 1,462,146	\$ 1,487,563	\$ 795,712	
22	Interest Rate	Prime Rate		5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%		
24	Interest Applied	In 20 * In 22 /365 *Days/Mo.	\$ -	\$ 2,536	\$ 2,631	\$ 2,642	\$ 2,397	\$ 2,664	\$ 2,589	\$ 2,547	\$ 2,764	\$ 3,919	\$ 5,180	\$ 6,009	\$ 6,317	\$ -	\$ 42,194
26	(Over)/Under Balance	In 19 + In 24	\$ 617,043	\$ 619,579	\$ 622,210	\$ 624,852	\$ 627,249	\$ 629,913	\$ 632,501	\$ 569,585	\$ 778,217	\$ 1,071,369	\$ 1,373,378	\$ 1,556,923	\$ 1,424,520	\$ 166,905	166,905
<b>Calculation of COG with Interest</b>																	
31	Beginning Balance	In 11	\$ 617,043	\$ 617,043	\$ 619,579	\$ 622,210	\$ 624,852	\$ 627,249	\$ 629,913	\$ 632,501	\$ 570,896	\$ 780,265	\$ 1,073,950	\$ 1,376,473	\$ 1,560,700	\$ 1,429,710	\$ 617,043
32	Forecast Direct Gas Costs	In 12	-	-	-	-	-	-	-	1,758,865	1,219,333	1,010,606	983,826	1,094,813	1,793,638	-	7,861,080
33	Prod Storage & Misc Overhead	In 13	-	-	-	-	-	-	-	415	415	415	415	415	415	-	2,489
34	Projected Revenues with int.	In 52 * 64	-	-	-	-	-	-	-	(426,531)	(1,390,149)	(812,226)	(712,268)	(948,096)	(1,712,875)	(2,347,789)	(8,349,934)
35	Projected Unbilled Revenue	In 56 * 64	-	-	-	-	-	-	-	(1,396,908)	(1,019,914)	(928,962)	(903,614)	(872,555)	(1,091,072)	-	(6,213,025)
36	Reverse Prior Month Unbilled		-	-	-	-	-	-	-	-	1,396,908	1,019,914	928,962	903,614	872,555	1,091,072	6,213,025
37	Add Net Adjustments	In 17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	Gas Cost Billed	In 18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	Gas Cost Unbilled		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	Reverse Prior Month Unbilled		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	Add Interest	In 24	-	-	-	-	-	-	-	2,547	2,764	3,919	5,180	6,009	6,317	-	26,735
42	(Over)/Under Balance		\$ 617,043	\$ 617,043	\$ 619,579	\$ 622,210	\$ 624,852	\$ 627,249	\$ 629,913	\$ 570,888	\$ 780,252	\$ 1,073,932	\$ 1,376,450	\$ 1,560,674	\$ 1,429,677	\$ 172,993	\$ 157,414
44	Average Monthly Balance		\$ 617,043	\$ 619,579	\$ 622,210	\$ 624,852	\$ 627,249	\$ 629,913		\$ 601,695	\$ 675,574	\$ 927,098	\$ 1,225,200	\$ 1,468,573	\$ 1,495,189		
46	Interest Applied	In 22 * In 44 /365 *Days/Mo.		2,536	2,631	2,642	2,397	2,664	2,589	2,555	2,776	3,937	5,203	6,035	6,349	-	\$ 42,314
48	(Over)/Under Balance	In 41 + In 42 + In 46	\$ 617,043	\$ 619,579	\$ 622,210	\$ 624,852	\$ 627,249	\$ 629,913	\$ 632,501	\$ 570,896	\$ 780,265	\$ 1,073,950	\$ 1,376,473	\$ 1,560,700	\$ 1,429,710	\$ 172,993	172,992
51	Forecast Sendout Therms	Sch 1								4,417,077	2,454,255	1,747,204	1,663,987	2,221,418	4,678,580		17,182,520
52	Less Forecast Billing Therm Sales	Sch. 10B, In 23 May - Oct								1,016,035	3,311,456	1,934,793	1,696,683	2,258,446	4,080,217	5,592,637	19,890,267
53	Less Forecast Unaccounted For	Sch 1								70,762	39,318	27,991	26,657	35,587	74,952		275,267
54	Less Forecast Company Use	Sch 1								2,724	1,513	1,077	1,026	1,370	2,885		10,595
55	Unbilled Volumes									3,327,556	(898,032)	(216,657)	(60,380)	(73,986)	520,526	(5,592,637)	(2,993,609)
56	Gross Unbilled									3,327,556	2,429,524	2,212,867	2,152,488	2,078,502	2,599,028	(2,993,609)	
58	Beg Balance									-	3,327,556	2,429,524	2,212,867	2,152,488	2,078,502	2,599,028	
59	Incremental									3,327,556	(898,032)	(216,657)	(60,380)	(73,986)	520,526	(5,592,637)	
60	Ending Balance									3,327,556	2,429,524	2,212,867	2,152,488	2,078,502	2,599,028	(2,993,609)	
62	COG w/o Interest	Sch. 3, pg. 4, In 209 col. (c)								\$0.4201	\$0.4201	\$0.4201	\$0.4201	\$0.4201	\$0.4201	\$0.4201	
64	COG With Interest	Sch. 3, pg. 4, In 209 col. (d)								\$0.4198	\$0.4198	\$0.4198	\$0.4198	\$0.4198	\$0.4198	\$0.4198	

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2019 Summer Cost of Gas Filing

4 COG (Over)/Under Cumulative Recovery Balances and Interest Calculation

69		Prior Period Balance	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Off Peak Period	
70	Days in Month	Plus Nov Collections	30	31	31	28	31	30	31	30	31	31	30	31	30	Total	
71	(a)	October 31, 2018	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
72	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
73																	
74	<b>Account 8840-2-0000-10-1163-1424 (formerly, 142.40) Working Capital (Over)/Under Balance - Interest Calculation</b>																
75																	
76	<b>Beginning Balance</b>	Account 1163-1424 1/	\$ (4,953)	\$ (4,953)	\$ (4,973)	\$ (4,994)	\$ (5,016)	\$ (5,035)	\$ (5,056)	\$ (5,077)	\$ (6,005)	\$ (6,059)	\$ (5,826)	\$ (5,563)	\$ (5,630)	\$ (6,750)	\$ (4,953)
77																	
78	Days Lag									0.0391	0.0391	0.0391	0.0391	0.0391	0.0391	0.0391	
79	Prime Rate									5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	
80	Forecast Working Capital	In 32 * In 78 / 365 * In 79								3,439	2,384	1,976	1,924	2,141	3,507		15,370
81																	
82	Projected Revenues w/o Int.	In 121 * In 124								(1,016)	(3,311)	(1,935)	(1,697)	(2,258)	(4,080)	(5,593)	(19,890)
83	Projected Unbilled Revenue	In 122 * In 124								(3,328)	(2,430)	(2,213)	(2,152)	(2,079)	(2,599)		(14,800)
84	Reverse Prior Month Unbilled										3,328	2,430	2,213	2,152	2,079	2,599	14,800
85																	
86	Add Net Adjustments																
87																	
88	Working Capital Billed	Account 1163-1424 2/															
89																	
90	Monthly (Over)/Under Recovery		\$ (4,953)	\$ (4,953)	\$ (4,973)	\$ (4,994)	\$ (5,016)	\$ (5,035)	\$ (5,056)	\$ (5,982)	\$ (6,034)	\$ (5,801)	\$ (5,539)	\$ (5,607)	\$ (6,724)	\$ (9,743)	\$ (9,473)
91																	
92	Average Monthly Balance	(In 76 + 90) / 2	\$ (4,953)	\$ (4,973)	\$ (4,994)	\$ (5,016)	\$ (5,035)	\$ (5,056)	\$ (5,056)	\$ (5,529)	\$ (6,020)	\$ (5,930)	\$ (5,683)	\$ (5,585)	\$ (6,177)		
93																	
94	Interest Rate	Prime Rate		5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%		
95																	
96	Interest Applied	In 92 * In 94 / 365 * Days of Month	\$ (20)	\$ (21)	\$ (21)	\$ (19)	\$ (21)	\$ (21)	\$ (21)	\$ (23)	\$ (25)	\$ (25)	\$ (24)	\$ (23)	\$ (26)		\$ (271)
97																	
98	<b>(Over)/Under Balance</b>	In 90 + In 96	\$ (4,953)	\$ (4,973)	\$ (4,994)	\$ (5,016)	\$ (5,035)	\$ (5,056)	\$ (5,077)	\$ (6,005)	\$ (6,059)	\$ (5,826)	\$ (5,563)	\$ (5,630)	\$ (6,750)	\$ (9,743)	\$ (9,744)
99																	
100																	
101	<b>Calculation of Working Capital with Interest</b>																
102																	
103	<b>Beginning Balance</b>		\$ (4,953)	\$ (4,953)	\$ (4,973)	\$ (4,994)	\$ (5,016)	\$ (5,035)	\$ (5,056)	\$ (5,077)	\$ (6,005)	\$ (6,059)	\$ (5,827)	\$ (5,564)	\$ (5,631)	\$ (6,751)	\$ (4,953)
104	Forecast Working Capital	In 80								3,439	2,384	1,976	1,924	2,141	3,507		15,370
105	Projected Rev. with interest	In 121 * In 126								(1,016)	(3,311)	(1,935)	(1,697)	(2,258)	(4,080)	(5,593)	(19,890)
106	Projected Unbilled Revenue	In 122 * In 126								(3,328)	(2,430)	(2,213)	(2,152)	(2,079)	(2,599)		(14,800)
107	Reverse Prior Month Unbilled										3,328	2,430	2,213	2,152	2,079	2,599	14,800
108	Add Net Adjustments	In 86															
109	Working Capital Billed	In 88															
110	WC Unbilled																
111	Reverse WC Unbilled																
112	Add Interest	In 96								(23)	(25)	(25)	(24)	(23)	(26)		(147)
113	Monthly (Over)/Under Recovery		\$ (4,953)	\$ (4,953)	\$ (4,973)	\$ (4,994)	\$ (5,016)	\$ (5,035)	\$ (5,056)	\$ (6,005)	\$ (6,059)	\$ (5,827)	\$ (5,564)	\$ (5,630)	\$ (6,751)	\$ (9,744)	\$ (9,620)
114																	
115	Average Monthly Balance		\$ (4,953)	\$ (4,973)	\$ (4,994)	\$ (5,016)	\$ (5,035)	\$ (5,056)	\$ (5,056)	\$ (5,541)	\$ (6,032)	\$ (5,943)	\$ (5,695)	\$ (5,597)	\$ (6,191)		
116																	
117	Interest Applied	In 94 * In 115 / 365 * Days of Month	(20)	(21)	(21)	(19)	(21)	(21)	(21)	(24)	(25)	(25)	(24)	(23)	(26)		(271)
118																	
119	<b>(Over)/Under Balance</b>	-In 112 +In 113 + In 117	\$ (4,953)	\$ (4,973)	\$ (4,994)	\$ (5,016)	\$ (5,035)	\$ (5,056)	\$ (5,077)	\$ (6,005)	\$ (6,059)	\$ (5,827)	\$ (5,564)	\$ (5,631)	\$ (6,751)	\$ (9,744)	\$ (9,744)
120																	
121	Forecast Therm Sales	In 51								1,016,035	3,311,456	1,934,793	1,696,683	2,258,446	4,080,217	5,592,637	19,890,267
122	Unbilled Therm	In 53								3,327,556	2,429,524	2,212,867	2,152,488	2,078,502	2,599,028	(2,993,609)	
123																	
124	Working Cap. Rate w/out Int.	Sch. 3, pg. 4, In 226 col. (c)								\$0.0010	\$0.0010	\$0.0010	\$0.0010	\$0.0010	\$0.0010	\$0.0010	
125																	
126	Working Capital Rate w/ Int.	Sch. 3, pg. 4, In 226 col. (d)								\$0.0010	\$0.0010	\$0.0010	\$0.0010	\$0.0010	\$0.0010	\$0.0010	
127																	
128																	
129																	



1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2019 Summer Cost of Gas Filing

4 COG (Over)/Under Cumulative Recovery Balances and Interest Calculation

130		Prior Period Balance	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Off Peak Period	
131		Plus Nov Collections	30	31	31	28	31	30	31	30	31	31	30	31	30	Total	
132	Days in Month	October 31, 2018	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	
133	(a)	(c)															
135	<b>Account 8840-2-0000-10-1163-1754 (formerly, 175.54) Bad Debt (Over)/Under Balance - Interest Calculation</b>																
136																	
137	Forecast Direct Gas Costs	In 32	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,758,865	\$ 1,219,333	\$ 1,010,606	\$ 983,826	\$ 1,094,813	\$ 1,793,638	\$ -	7,861,080	
		In 104 + (May includes prior period )															
138	Forecast Working Capital		-	-	-	-	-	-	(1,514)	2,384	1,976	1,924	2,141	3,507	-	10,417	
139	Prior Period Balance (with Refund)	In 19 / 6	-	-	-	-	-	-	102,841	102,841	102,841	102,841	102,841	102,841	-	617,043	
140	Total Forecast Direct Gas Costs & Working Capital		-	-	-	-	-	-	1,860,191	1,324,557	1,115,423	1,088,590	1,199,794	1,899,985	-	7,871,498	
141																	
142	<b>Beginning Balance</b>	Account 1163-1754 1/ Oct Collections & Unbilled	\$ 18,034	\$ 18,108	\$ 18,185	\$ 18,263	\$ 18,333	\$ 18,410	\$ 18,486	\$ (18,533)	\$ (34,021)	\$ (42,198)	\$ (49,567)	\$ (63,802)	\$ (104,598)	\$ 18,034	
143																	
144	Forecast Bad Debt	In 140 * 0.0174597638738471	-	-	-	-	-	-	32,479	23,126	19,475	19,007	20,948	33,173	-	148,208	
145																	
146	Projected Revenues w/o int	In 182 * In 185	-	-	-	-	-	-	(16,257)	(52,983)	(30,957)	(27,147)	(36,135)	(65,283)	(89,482)	(318,244)	
147	Projected Unbilled Revenue	In 183 * In 185	-	-	-	-	-	-	(53,241)	(38,872)	(35,406)	(34,440)	(33,256)	(41,584)	(41,584)	(236,799)	
148	Reverse Prior Month Unbilled		-	-	-	-	-	-	53,241	38,872	35,406	34,440	33,256	41,584	-	236,799	
149																	
150	Bad Debt Billed	Account 1163-1754 2/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
151	Add Net Adjustments		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
152																	
153	Monthly (Over)/Under Recovery		\$ 18,034	\$ 18,108	\$ 18,185	\$ 18,263	\$ 18,333	\$ 18,410	\$ (18,533)	\$ (34,021)	\$ (42,036)	\$ (49,372)	\$ (63,570)	\$ (104,241)	\$ (152,495)	\$ (152,002)	
154																	
155	Average Monthly Balance	(In 142 + 153)/ 2	\$ 18,034	\$ 18,108	\$ 18,185	\$ 18,263	\$ 18,333	\$ 18,410	\$ (23)	\$ (26,277)	\$ (38,029)	\$ (45,785)	\$ (56,568)	\$ (84,022)	\$ (128,547)		
156																	
157	Interest Rate	Prime Rate	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%			
158																	
159	Interest Applied	In 155 * In 157 / 365 * Days of Mo.	\$ 74	\$ 77	\$ 77	\$ 70	\$ 78	\$ 76	\$ (0)	\$ (108)	\$ (161)	\$ (194)	\$ (232)	\$ (357)		\$ (601)	
160																	
161	<b>(Over)/Under Balance</b>	In 153 + In 159	\$ 18,034	\$ 18,108	\$ 18,185	\$ 18,263	\$ 18,333	\$ 18,410	\$ (18,533)	\$ (34,129)	\$ (42,198)	\$ (49,567)	\$ (63,802)	\$ (104,598)	\$ (128,547)	\$ (152,603)	
162																	
163																	
164	<b>Calculation of Bad Debt with Interest</b>																
165																	
166	<b>Beginning Balance</b>		\$ 18,034	\$ 18,108	\$ 18,185	\$ 18,263	\$ 18,333	\$ 18,410	\$ 18,486	\$ (18,533)	\$ (34,129)	\$ (42,307)	\$ (49,677)	\$ (63,913)	\$ (104,710)	\$ 18,034	
167	Forecast Bad Debt	In 144	-	-	-	-	-	-	32,479	23,126	19,475	19,007	20,948	33,173	-	148,208	
168	Projected Revenues with int.	In 182 * 187	-	-	-	-	-	-	(16,257)	(52,983)	(30,957)	(27,147)	(36,135)	(65,283)	(89,482)	(318,244)	
169	Projected Unbilled Revenue	In 183 * 187	-	-	-	-	-	-	(53,241)	(38,872)	(35,406)	(34,440)	(33,256)	(41,584)	(41,584)	(236,799)	
170	Reverse Prior Month Unbilled		-	-	-	-	-	-	53,241	38,872	35,406	34,440	33,256	41,584	-	236,799	
171	Bad Debt Billed	In 150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
172	Add Interest	In 159	-	-	-	-	-	-	(0)	(108)	(161)	(194)	(232)	(357)	-	(1,053)	
173	Add Net Adjustments	In 151	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
174	Monthly (Over)/Under Recovery		\$ 18,034	\$ 18,108	\$ 18,185	\$ 18,263	\$ 18,333	\$ 18,410	\$ (18,533)	\$ (34,129)	\$ (42,306)	\$ (49,676)	\$ (63,912)	\$ (104,709)	\$ (152,608)	\$ (153,055)	
175																	
176	Average Monthly Balance	(In 166 + 174)/ 2	\$ 18,034	\$ 18,108	\$ 18,185	\$ 18,263	\$ 18,333	\$ 18,410	\$ (23)	\$ (26,331)	\$ (38,218)	\$ (45,991)	\$ (56,794)	\$ (84,311)	\$ (128,659)		
177																	
178	Interest Applied	In 157 * In 176 / 365 * Days of Month	74	77	77	70	78	76	(0)	(108)	(162)	(195)	(233)	(358)	-	(606)	
179																	
180	<b>(Over)/Under Balance</b>	-In 172 +In 174 + In 178	\$ 18,034	\$ 18,108	\$ 18,185	\$ 18,263	\$ 18,333	\$ 18,410	\$ (18,533)	\$ (34,129)	\$ (42,307)	\$ (49,677)	\$ (63,913)	\$ (104,710)	\$ (152,608)	\$ (152,608)	
181																	
182	Forecast Therm Sales	In 51							1,016,035	3,311,456	1,934,793	1,696,683	2,258,446	4,080,217	5,592,637	19,890,267	
183	Unbilled Therm	In 53							3,327,556	2,429,524	2,212,867	2,152,488	2,078,502	2,599,028			
184																	
185	COG Rate Without Interest	Sch. 3, pg. 4, In 243 col. (c)							\$0.0160	\$0.0160	\$0.0160	\$0.0160	\$0.0160	\$0.0160	\$0.0160		
186																	
187	COG With Interest	Sch. 3, pg. 4, In 243 col. (d)							\$0.0160	\$0.0160	\$0.0160	\$0.0160	\$0.0160	\$0.0160	\$0.0160		
188																	
189																	
190																	
191	<b>Total Interest</b>	In 46 + 117 + 178	\$ 2,590	\$ 2,687	\$ 2,698	\$ 2,448	\$ 2,720	\$ 2,644	\$ 2,532	\$ 2,643	\$ 3,749	\$ 4,983	\$ 5,779	\$ 5,965	\$ -	\$ 41,437	

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 [Off Peak 2019 Summer Cost of Gas Filing](#)

4 COG (Over)/Under Cumulative Recovery Balances and Interest Calculation

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2019 Summer Cost of Gas Filing

4 Adjustments to Gas Costs

5

6	<u>Adjustments</u>	Prior Period	Refunds from	Broker	Fuel Financing	Transportation	Interruptible	Off System	Capacity	Net Option	Fixed Price	Administrative	Total
7	(a)	Adjustments	Suppliers /	Revenue	(e)	CGA Revenues	Sales Margin	Sales Margin	Release Margin	Premiums	Option	Costs	Adjustments
8		(b)	Pipelines	(d)		(f)	(g)	(h)	(i)	(j)	(k)		(m)
9	Nov-17	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	Dec-17	-	-	-	-	-	-	-	-	-	-	-	-
11	Jan-18	-	-	-	-	-	-	-	-	-	-	-	-
12	Feb-18	-	-	-	-	-	-	-	-	-	-	-	-
13	Mar-18	-	-	-	-	-	-	-	-	-	-	-	-
14	Apr-18	-	-	-	-	-	-	-	-	-	-	-	-
15	May-18	-	-	-	-	-	-	-	-	-	-	-	-
16	Jun-18	-	-	-	-	-	-	-	-	-	-	-	-
17	Jul-18	-	-	-	-	-	-	-	-	-	-	-	-
18	Aug-18	-	-	-	-	-	-	-	-	-	-	-	-
19	Sep-18	-	-	-	-	-	-	-	-	-	-	-	-
20	Oct-18	-	-	-	-	-	-	-	-	-	-	-	-
21													
22	Total Off Peak Period	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

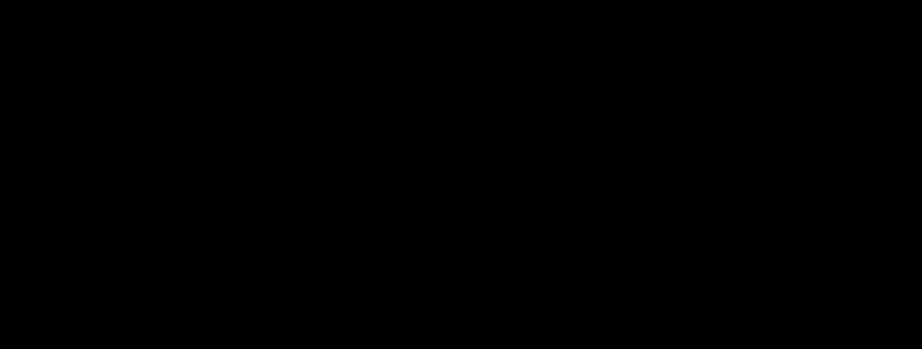
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1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2019 Summer Cost of Gas Filing

4 Demand Costs

	(a)	Peak (b)	Reference (c)	May-19 (d)	Jun-19 (e)	Jul-19 (f)	Aug-19 (g)	Sep-19 (h)	Oct-19 (i)	Off Peak May - Oct Total (j)	Peak May - Oct Total (k)
11 Supply											
12	Niagara Supply		Sch 5B, In 9 * Sch 5C In 9 x days	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13	Subtotal Supply Demand & Reservation Charges			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14											
15 Pipeline											
16	Iroquois Gas Trans Service RTS 470-0		Sch 5B, In 12 * Sch 5C In 12 x days								
17	Tenn Gas Pipeline 95346 Z5-Z6		Sch 5B, In 13 * Sch 5C In 14 x days								
18	Tenn Gas Pipeline 2302 Z5-Z6		Sch 5B, In 14 * Sch 5C In 16 x days								
19	Tenn Gas Pipeline 8587 Z0-Z6		Sch 5B, In 15 * Sch 5C In 18 x days								
20	Tenn Gas Pipeline 8587 Z1-Z6		Sch 5B, In 16 * Sch 5C In 20 x days								
21	Tenn Gas Pipeline 8587 Z4-Z6		Sch 5B, In 17 * Sch 5C In 22 x days								
22	Tenn Gas Pipeline (Dracut) 42076 Z6-Z6		Sch 5B, In 18 * Sch 5C In 24 x days								
23	Tenn Gas Pipeline (Concord Lateral) Z6-Z6		Sch 5B, In 19 * Sch 5C In 26 x days								
24	Portland Natural Gas Trans Service		Sch 5B, In 20 * Sch 5C In 28 x days								
25	Portland Natural Gas		Sch 5B, In 21 * Sch 5C In 29 x days								
26	ANE (TransCanada via Union to Iroquois)		Sch 5B, In 22 * Sch 5C In 46 x days								
27	TransCanada via Union to Portland		Sch 5B, In 23 * Sch 5C In 47 x days								
28	Tenn Gas Pipeline Z4-Z6 stg 632	peak	Sch 5B, In 24 * Sch 5C In 32 x days								
29	Tenn Gas Pipeline Z4-Z6 stg 11234	peak	Sch 5B, In 25 * Sch 5C In 34 x days								
30	Tenn Gas Pipeline Z5-Z6 stg 11234	peak	Sch 5B, In 26 * Sch 5C In 36 x days								
31	National Fuel FST 2358	peak	Sch 5B, In 27 * Sch 5C In 38 x days								
32											
33	Subtotal Pipeline Demand Charges			\$ 1,428,951	\$ 1,434,788	\$ 1,434,788	\$ 1,434,788	\$ 1,434,788	\$ 1,434,788	\$ 7,291,427	\$ 1,311,464
34											
35 Peaking Supply											
36	Tenn Gas Pipeline (Concord Lateral) Z6-Z6	peak	Sch 5B, In 30 * Sch 5C In 26 x days	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
37	Granite Ridge Demand	peak	Sch 5B, In 31 * Sch 5C In 57 x days	-	-	-	-	-	-	-	-
38	DOMAC Demand NSB041	peak	Per Contract	-	-	-	-	-	-	-	-
39	Subtotal Peaking Demand Charges			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
40											
41	Subtotal Supply, Pipeline & Peaking		In 13 + In 33 + In 39	\$ 1,428,951	\$ 1,434,788	\$ 1,434,788	\$ 1,434,788	\$ 1,434,788	\$ 1,434,788	\$ 7,291,427	\$ 1,311,464
42											
43	Less Transportation Capacity Credit			\$ (572,009)	\$ (574,346)	\$ (574,346)	\$ (574,346)	\$ (574,346)	\$ (574,346)	\$ (2,918,758)	\$ (524,979)
44											
45	Total Supply, Pipeline & Peaking Demand			\$ 856,942	\$ 860,442	\$ 860,442	\$ 860,442	\$ 860,442	\$ 860,442	\$ 4,372,669	\$ 786,485
46											



1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2019 Summer Cost of Gas Filing

4 Demand Costs

				May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Off Peak May - Oct Total	Peak May - Oct Total
	(a)	Peak (b)	Reference (c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
47	<b>Storage</b>										
48	Dominion - Demand	peak	Sch 5B, In 35 * Sch 5C In 61 x days	\$ 1,744	\$ 1,744	\$ 1,744	\$ 1,744	\$ 1,744	\$ 1,744	\$ -	\$ 10,464
49	Dominion - Storage	peak	Sch 5B, In 36 * Sch 5C In 62 x days	1,489	1,489	1,489	1,489	1,489	1,489	-	8,935
50	Honeoye - Demand	peak	Sch 5B, In 37 * Sch 5C In 65 x days	8,744	8,744	8,744	8,744	8,744	8,744	-	52,466
51	National Fuel - Demand	peak	Sch 5B, In 39 * Sch 5C In 67 x days	15,163	15,163	15,163	15,163	15,163	15,163	-	90,980
52	National Fuel - Capacity	peak	Sch 5B, In 40 * Sch 5C In 68 x days	25,557	25,557	25,557	25,557	25,557	25,557	-	153,345
53	Tenn Gas Pipeline - Demand	peak	Sch 5B, In 41 * Sch 5C In 71 x days	32,631	32,631	32,631	32,631	32,631	32,631	-	195,783
54	Tenn Gas Pipeline - Capacity	peak	Sch 5B, In 42 * Sch 5C In 72 x days	31,988	31,988	31,988	31,988	31,988	31,988	-	191,928
55											
56	<b>Subtotal Storage Demand Costs</b>			\$ 117,317	\$ 117,317	\$ 117,317	\$ 117,317	\$ 117,317	\$ 117,317	\$ -	\$ 703,901
57											
58	Less Transportation Capacity Credit			\$ (46,962)	\$ (46,962)	\$ (46,962)	\$ (46,962)	\$ (46,962)	\$ (46,962)	\$ -	\$ (281,772)
59											
60	<b>Total Storage Demand Costs</b>		In 56 + In 58	\$ 70,355	\$ 70,355	\$ 70,355	\$ 70,355	\$ 70,355	\$ 70,355	\$ -	\$ 422,129
61											
62	<b>Total Demand Charges</b>		In 41 + In 56	\$ 1,546,268	\$ 1,552,105	\$ 1,552,105	\$ 1,552,105	\$ 1,552,105	\$ 1,552,105	\$ 7,291,427	\$ 2,015,366
63											
64	Total Transportation Capacity Credit		In 43 + In 58	\$ (618,971)	\$ (621,308)	\$ (621,308)	\$ (621,308)	\$ (621,308)	\$ (621,308)	\$ (2,918,758)	\$ (806,751)
65											
66	<b>Total Demand Charges less Cap. Cr.</b>		In 62 + In 64	\$ 927,297	\$ 930,797	\$ 930,797	\$ 930,797	\$ 930,797	\$ 930,797	\$ 4,372,669	\$ 1,208,615
67											
68											
69	Monthly Off Peak Demand			\$ 1,171,015	\$ 1,176,852	\$ 1,176,852	\$ 1,176,852	\$ 1,176,852	\$ 1,176,852	\$ 7,055,272	\$ -
70	Monthly Off Peak Transportation Cap Credit			(468,757)	(471,094)	(471,094)	(471,094)	(471,094)	(471,094)	(2,824,225)	-
71	<b>Total Off Peak Demand</b>			\$ 702,257	\$ 705,758	\$ 705,758	\$ 705,758	\$ 705,758	\$ 705,758	\$ 4,231,047	\$ -
72											
73	Monthly Peak Demand			\$ 335,894	\$ 335,894	\$ 335,894	\$ 335,894	\$ 335,894	\$ 335,894	\$ -	\$ 2,015,366
74	Monthly Peak Transportation Cap Credit			(134,458)	(134,458)	(134,458)	(134,458)	(134,458)	(134,458)	-	(806,751)
75	<b>Total Peak Demand</b>			\$ 201,436	\$ 201,436	\$ 201,436	\$ 201,436	\$ 201,436	\$ 201,436	\$ -	\$ 1,208,615

1 **Liberty Utilities (EnergyNorth Natural Gas) Corp.**

3 **Off Peak 2019 Summer Cost of Gas Filing**

4 **Demand Volumes**

6		Peak	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
7	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
8	<b>Supply</b>								
9	Niagara Supply			0	0	0	0	0	0
11	<b>Pipeline</b>								
12	Iroquois Gas Trans Service		RTS 470-01	4,047	4,047	4,047	4,047	4,047	4,047
13	Tenn Gas Pipeline		95346 Z5-Z6	4,000	4,000	4,000	4,000	4,000	4,000
14	Tenn Gas Pipeline		2302 Z5-Z6	3,122	3,122	3,122	3,122	3,122	3,122
15	Tenn Gas Pipeline (long haul)		8587 Z0-Z6	7,035	7,035	7,035	7,035	7,035	7,035
16	Tenn Gas Pipeline (long haul)		8587 Z1-Z6	14,561	14,561	14,561	14,561	14,561	14,561
17	Tenn Gas Pipeline (short haul)		8587 Z4-Z6	3,811	3,811	3,811	3,811	3,811	3,811
18	Tenn Gas Pipeline		42076 FTA Z6-Z6	20,000	20,000	20,000	20,000	20,000	20,000
19	Tenn Gas Pipeline (Concord Lateral)		Firm Transportation	30,000	30,000	30,000	30,000	30,000	30,000
20	Portland Natural Gas Trans Service		FT-1999-001	1,000	1,000	1,000	1,000	1,000	1,000
21	Portland Natural Gas		FTN	1,784	1,784	1,784	1,784	1,784	1,784
22	ANE (TransCanada via Union to Iroquois)		Union Parkway to Iroquois	4,047	4,047	4,047	4,047	4,047	4,047
23	TransCanada via Union to Portland		Union Parkway to Portland	1,784	1,784	1,784	1,784	1,784	1,784
24	Tenn Gas Pipeline (short haul)	peak	632 Z4-Z6 (stg)	15,265	15,265	15,265	15,265	15,265	15,265
25	Tenn Gas Pipeline (short haul)	peak	11234 Z4-Z6(stg)	7,082	7,082	7,082	7,082	7,082	7,082
26	Tenn Gas Pipeline (short haul)	peak	11234 Z5-Z6(stg)	1,957	1,957	1,957	1,957	1,957	1,957
27	National Fuel	peak	FST N02358	6,098	6,098	6,098	6,098	6,098	6,098
29	<b>Peaking</b>								
30	Tenn Gas Pipeline (Concord Lateral)	peak		0	0	0	0	0	0
31	Granite Ridge Demand	peak		0	0	0	0	0	0
32	DOMAC Liquid Demand Charge	peak	NSB041						
34	<b>Storage</b>								
35	Dominion - Demand	peak	GSS 300076	934	934	934	934	934	934
36	Dominion - Capacity Reservation	peak	GSS 300076	102,700	102,700	102,700	102,700	102,700	102,700
37	Honeoye - Demand	peak	SS-NY	1,362	1,362	1,362	1,362	1,362	1,362
38	Honeoye - Capacity	peak	SS-NY	245,380	245,380	245,380	245,380	245,380	245,380
39	National Fuel - Demand	peak	FSS-1 2357	6,098	6,098	6,098	6,098	6,098	6,098
40	National Fuel - Capacity Reservation	peak	FSS-1 2357	670,800	670,800	670,800	670,800	670,800	670,800
41	Tenn Gas Pipeline - Demand	peak	FS-MA 523	21,844	21,844	21,844	21,844	21,844	21,844
42	Tenn Gas Pipeline - Cap. Reservations	peak	FS-MA 523	1,560,391	1,560,391	1,560,391	1,560,391	1,560,391	1,560,391

1 Liberty Utilities (EnergyNorth Natural Gas) Corp  
2 d/b/a Liberty Utilities  
3 Off Peak 2019 Summer Cost of Gas Filing  
4 Demand Rates

					May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20
					31	30	31	31	30	31	184	30	31	31	28	31	30
					Unit Rate	Unit Rate	Unit Rate	Unit Rate	Unit Rate	Unit Rate	Avg Rate						
8	<b>Supply</b>																
9	Niagara Supply		\$0.0000	Per Contract	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
11	<b>Pipeline</b>																
12	Iroquois Gas	RTS 470-01	\$5.5997	First Revised Sheet No. 4	\$0.1806	\$0.1867	\$0.1806	\$0.1806	\$0.1867	\$0.1806	\$0.1826	\$0.1867	\$0.1806	\$0.1806	\$0.2000	\$0.1806	\$0.1867
14	Tenn Gas Pipeline	95346 Z5-Z6	\$7.1569	11th Rev Sheet No. 14	\$0.4746	\$0.4904	\$0.4746	\$0.4746	\$0.4904	\$0.4746	\$0.4799	\$0.4904	\$0.4746	\$0.4746	\$0.5254	\$0.4746	\$0.4904
16	Tenn Gas Pipeline	2302 Z5-Z6	\$7.1569	11th Rev Sheet No. 14	\$0.2309	\$0.2386	\$0.2309	\$0.2309	\$0.2386	\$0.2309	\$0.2334	\$0.2386	\$0.2309	\$0.2309	\$0.2556	\$0.2309	\$0.2386
18	Tenn Gas Pipeline	8587 Z0-Z6	\$23.2175	FT-A (Z0 - Z6)	\$0.7490	\$0.7739	\$0.7490	\$0.7490	\$0.7739	\$0.7490	\$0.7573	\$0.7739	\$0.7490	\$0.7490	\$0.8292	\$0.7490	\$0.7739
20	Tenn Gas Pipeline	8587 Z1-Z6	\$20.6094	FT-A (Z1 - Z6)	\$0.6648	\$0.6870	\$0.6648	\$0.6648	\$0.6870	\$0.6648	\$0.6722	\$0.6870	\$0.6648	\$0.6648	\$0.7361	\$0.6648	\$0.6870
22	Tenn Gas Pipeline	8587 Z4-Z6	\$8.1481	FT-A (Z4 - Z6)	\$0.2628	\$0.2716	\$0.2628	\$0.2628	\$0.2716	\$0.2628	\$0.2658	\$0.2716	\$0.2628	\$0.2628	\$0.2910	\$0.2628	\$0.2716
24	TGP Dracut	42076 FTA Z6-	\$4.7453	11th Rev Sheet No. 14	\$0.1531	\$0.1582	\$0.1531	\$0.1531	\$0.1582	\$0.1531	\$0.1548	\$0.1582	\$0.1531	\$0.1531	\$0.1695	\$0.1531	\$0.1582
26	TGP Concord Latera Firm Transport		\$12.1916	Per contract	\$0.3933	\$0.4064	\$0.3933	\$0.3933	\$0.4064	\$0.3933	\$0.3976	\$0.4064	\$0.3933	\$0.3933	\$0.4354	\$0.3933	\$0.4064
28	Portland Natural Gas FT-1999-001		\$18.2633	Dmd is Negot/CMDY=Part 4.1 \	\$0.5891	\$0.6088	\$0.5891	\$0.5891	\$0.6088	\$0.5891	\$0.5957	\$0.6088	\$0.5891	\$0.5891	\$0.6523	\$0.5891	\$0.6088
30	Portland Natural Gas FTN		\$22.8125	Dmd is Negot/CMDY=Part 4.1 \	\$0.7359	\$0.7604	\$0.7359	\$0.7359	\$0.7604	\$0.7359	\$0.7441	\$0.7604	\$0.7359	\$0.7359	\$0.8147	\$0.7359	\$0.7604
32	Tenn Gas Pipeline	632 Z4-Z6 (stg)	\$8.1481	11th Rev Sheet No. 14	\$0.2628	\$0.2716	\$0.2628	\$0.2628	\$0.2716	\$0.2628	\$0.2658	\$0.2716	\$0.2628	\$0.2628	\$0.2910	\$0.2628	\$0.2716
34	Tenn Gas Pipeline	11234 Z4-Z6(st	\$8.1481	11th Rev Sheet No. 14	\$0.2628	\$0.2716	\$0.2628	\$0.2628	\$0.2716	\$0.2628	\$0.2658	\$0.2716	\$0.2628	\$0.2628	\$0.2910	\$0.2628	\$0.2716
36	Tenn Gas Pipeline	11234 Z5-Z6(st	\$7.1569	11th Rev Sheet No. 14	\$0.2309	\$0.2386	\$0.2309	\$0.2309	\$0.2386	\$0.2309	\$0.2334	\$0.2386	\$0.2309	\$0.2309	\$0.2556	\$0.2309	\$0.2386
38	National Fuel	FST N02358	\$3.6874	4.010 Version 21.0.1 Pg 1	\$0.1189	\$0.1229	\$0.1189	\$0.1189	\$0.1229	\$0.1189	\$0.1203	\$0.1229	\$0.1189	\$0.1189	\$0.1317	\$0.1189	\$0.1229
40	ANE Union Gas		\$3.7160														
41	TransCanada Pipelines Limite		\$13.34166	Union Parkway to Iroquois													
42	Delivery Pressure Demand Ct		0.6704	Union Parkway to Iroquois													
43	Sub Total Demand Charges		17.7280														
44	Conversion rate GJ to MMBTL		1.0551														
45	Conversion rate to US\$		1.2851	updated 7/6/18													
46	Demand Rate/US\$		\$14.5544		\$0.4695	\$0.4851	\$0.4695	\$0.4695	\$0.4851	\$0.4695	\$0.4747	\$0.4851	\$0.4695	\$0.4695	\$0.5198	\$0.4695	\$0.4851
48	ANE Union Gas		\$3.7160														
49	TransCanada Pipelines Limite		\$22.4898														
50	Delivery Pressure Demand Ct		0.6704														
51	Sub Total Demand Charges		26.8762														
52	Conversion rate GJ to MMBTL		1.0551														
53	Conversion rate to US\$		1.2851	updated 7/6/18													
54	Demand Rate/US\$		\$22.0649		\$0.7118	\$0.7355	\$0.7118	\$0.7118	\$0.7355	\$0.7118	\$0.7197	\$0.7355	\$0.7118	\$0.7118	\$0.7880	\$0.7118	\$0.7355
56	<b>Peaking</b>																
57	Granite Ridge Demand		\$0.0000	Per Contract	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
58	DOMAC Demand NSB041		\$0.0000	Per Contract	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
60	<b>Storage</b>																
61	Dominion - Demand	GSS 300076	\$1.8672	GSS Settled, Tariff Rec #10.30 \	\$0.0602	\$0.0622	\$0.0602	\$0.0602	\$0.0622	\$0.0602	\$0.0610	\$0.0622	\$0.0602	\$0.0602	\$0.0667	\$0.0602	\$0.0622
62	Dominion - Capacity	GSS 300076	\$0.0145	GSS Settled, Tariff Rec #10.30 \	\$0.0005	\$0.0005	\$0.0005	\$0.0005	\$0.0005	\$0.0005	\$0.0005	\$0.0005	\$0.0005	\$0.0005	\$0.0005	\$0.0005	\$0.0005
63			\$1.8817		\$0.0607	\$0.0627	\$0.0607	\$0.0607	\$0.0627	\$0.0607	\$0.0615	\$0.0627	\$0.0607	\$0.0607	\$0.0672	\$0.0607	\$0.0627
65	Honeoye - Demand	SS-NY	\$6.4187	Sub 1st Rev Sheet No. 5	\$0.2071	\$0.2140	\$0.2071	\$0.2071	\$0.2140	\$0.2071	\$0.2098	\$0.2140	\$0.2071	\$0.2071	\$0.2292	\$0.2071	\$0.2140
67	National Fuel - Dem	FSS-1 2357	\$2.4866	4.020 Version 16.0.0 Pg 1	\$0.0802	\$0.0829	\$0.0802	\$0.0802	\$0.0829	\$0.0802	\$0.0813	\$0.0829	\$0.0802	\$0.0802	\$0.0888	\$0.0802	\$0.0829
68	National Fuel - Capa	FSS-1 2357	\$0.0381	4.020 Version 16.0.0 Pg 1	\$0.0012	\$0.0013	\$0.0012	\$0.0012	\$0.0013	\$0.0012	\$0.0012	\$0.0013	\$0.0012	\$0.0012	\$0.0014	\$0.0012	\$0.0013
69			\$2.5247		\$0.0814	\$0.0842	\$0.0814	\$0.0814	\$0.0842	\$0.0814	\$0.0825	\$0.0842	\$0.0814	\$0.0814	\$0.0902	\$0.0814	\$0.0842
71	Tenn Gas Pipeline	FS-MA 523	\$1.4938	14th Rev Sheet No.61	\$0.0482	\$0.0498	\$0.0482	\$0.0482	\$0.0498	\$0.0482	\$0.0488	\$0.0498	\$0.0482	\$0.0482	\$0.0534	\$0.0482	\$0.0498

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

REDACTED

2 Off Peak 2019 Summer Cost of Gas Filing

3 Supply and Commodity Costs, Volumes and Rates

6 For Month of:	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Off-Peak May - Oct
7 (a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
<b>9 Supply and Commodity Costs</b>								
<b>11 Pipeline Gas</b>								
12 Dawn Supply	In 64 * In 104							
13 Niagara Supply	In 65 * In 109							
14 TGP Supply (Gulf)	In 66 * In 125							
15 Dracut Supply 1 - Baseload	In 67 * In 114							
16 Dracut Supply 2 - Swing	In 68 * In 119							
17 City Gate Delivered Supply	In 69 * In 131							
18 LNG Truck	In 70 * In 133							
19 Propane Truck	In 71 * In 135							
20 PNGTS	In 72 * In 140							
21 Portland Natural Gas								
22 TGP Supply (Zone 4)	In 74 * In 150							
23								
24 Subtotal Pipeline Gas Costs		\$ 1,472,882	\$ 1,252,866	\$ 1,110,111	\$ 1,082,619	\$ 1,147,187	\$ 1,474,756	\$ 7,542,180
25								
<b>26 Volumetric Transportation Costs</b>								
27 Dawn Supply	In 64 * In 197							
28 Niagara Supply	In 65 * In 208							
29 TGP Supply (Zone 4)	In 74 * In 245							
30 Dracut Supply 1 - Baseload	In 67 * In 256							
31 Dracut Supply 2 - Swing	In 68 * In 256							
32 City Gate Delivered Supply	In 69 * In 256							
33 TGP Storage - Withdrawals	In 79 * In 172							
34								
35 Total Volumetric Transportation Costs		\$ 75,533	\$ 65,453	\$ 57,985	\$ 56,763	\$ 62,128	\$ 75,470	\$ 393,331
36								
<b>37 Less - Gas Refill</b>								
38 LNG Truck	In 88 * In 157							
39 Propane	In 89 * In 158							
40 TGP Storage Refill	In 90 * In 123							
41 Storage Refill (Trans.)	In 90 * In 235							
42								
43 Subtotal Refills		\$ (500,096)	\$ (809,512)	\$ (867,078)	\$ (865,037)	\$ (824,108)	\$ (464,977)	\$ (4,330,808)
44								
45 Total Supply & Pipeline Commodity Costs	In 24 + In 35 + In 43	\$ 1,048,318	\$ 508,806	\$ 301,018	\$ 274,345	\$ 385,207	\$ 1,085,249	\$ 3,602,943
46								
<b>47 Storage Gas</b>								
48 TGP Storage - Withdrawals	In 79 * In 164	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
49								
<b>50 Produced Gas</b>								
51 LNG Vapor	In 82 * In 152							
52 Propane	In 83 * In 154							
53								
54 Total Produced Gas	In 51 + In 52	\$ 8,289	\$ 4,769	\$ 3,831	\$ 3,723	\$ 3,848	\$ 2,631	\$ 27,091
55								
56								
57 Total Commodity Gas & Trans. Costs	In 45 + In 48 + In 54	\$ 1,056,607	\$ 513,575	\$ 304,849	\$ 278,068	\$ 389,055	\$ 1,087,880	\$ 3,630,034
58								
59								

REDACTED



1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2019 Summer Cost of Gas Filing

4 Supply and Commodity Costs, Volumes and Rates

6 For Month of:	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Off-Peak
7 (a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	May - Oct
								(i)
60								
61								
62								
63	See Schedule 11A							
64	Dawn Supply	142,098	-	-	-	-	135,379	277,476
65	Niagara Supply	614,064	547,533	530,186	515,272	533,984	621,073	3,362,112
66	TGP Supply (Gulf)	-	-	-	-	-	-	-
67	Dracut Supply 1 - Baseload	-	-	-	-	-	-	-
68	Dracut Supply 2 - Swing	77,392	-	-	-	-	77,634	155,027
69	City Gate Delivered Supply	-	-	-	-	-	-	-
70	LNG Truck	45,040	16,946	-	-	49,580	14,757	126,323
71	Propane Truck	72,952	67,200	62,987	61,215	65,537	73,785	403,675
72	PNGTS	194,750	173,551	168,148	163,418	169,256	196,973	1,066,095
73	Portland Natural Gas	76,758	-	-	-	-	127,679	204,437
74	TGP Supply (Zone 4)	4,947,405	4,368,574	3,844,396	3,770,320	4,184,677	5,005,157	26,120,528
75								
76	Subtotal Pipeline Volumes	6,170,459	5,173,803	4,605,716	4,510,225	5,003,034	6,252,436	31,715,673
77								
78	Storage Gas							
79	TGP Storage	-	-	-	-	-	-	-
80								
81	Produced Gas							
82	LNG Vapor	18,397	16,946	15,884	15,437	15,957	18,607	101,226
83	Propane	-	-	-	-	-	-	-
84								
85	Subtotal Produced Gas	18,397	16,946	15,884	15,437	15,957	18,607	101,226
86								
87	Less - Gas Refill							
88	LNG Truck	(45,040)	(16,946)	-	-	(49,580)	(14,757)	(126,323)
89	Propane	(72,952)	(67,200)	(62,987)	(61,215)	(65,537)	(73,785)	(403,675)
90	TGP Storage Refill	(1,653,787)	(2,652,348)	(2,811,409)	(2,800,459)	(2,682,456)	(1,503,921)	(14,104,381)
91								
92	Subtotal Refills	(1,771,779)	(2,736,494)	(2,874,396)	(2,861,674)	(2,797,573)	(1,592,462)	(14,634,379)
93								
94	Total Sendout Volumes	4,417,077	2,454,255	1,747,204	1,663,987	2,221,418	4,678,580	17,182,520
95								
96								
97								

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

REDACTED

3 Off Peak 2019 Summer Cost of Gas Filing

4 Supply and Commodity Costs, Volumes and Rates

6 For Month of:	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Off-Peak May - Oct
7 (a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
98	<b>Gas Costs and Volumetric Transportation Rates</b>							
99								
100	<b>Pipeline Gas</b>							
101	<b>Dawn Supply</b>							Average Rate
102	NYMEX Price							
103	Basis Differential							
104	<b>Net Commodity Costs</b>							
105								
106	<b>Niagara Supply</b>							
107	NYMEX Price							
108	Basis Differential							
109	<b>Net Commodity Costs</b>							
110								
111	<b>Dracut Supply 1 - Baseload</b>							
112	Commodity Costs - NYMEX Price							
113	Basis Differential							
114	<b>Net Commodity Costs</b>							
115								
116	<b>Dracut Supply 2 - Swing</b>							
117	Commodity Costs - NYMEX Price							
118	Basis Differential							
119	<b>Net Commodity Costs</b>							
120								
121								
122	<b>TGP Supply (Gulf)</b>							
123	NYMEX Price							
124	Basis Differential							
125	<b>Net Commodity Costs</b>							
126								
127								
128	<b>TGP Citygate Supply</b>							
129	NYMEX Price							
130	Basis Differential							
131	<b>Net Commodity Costs</b>							
132								
133	LNG Truck	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
134								
135	Propane Truck	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
136								
137	<b>PNGTS</b>							
138	NYMEX Price							
139	Additional Cost							
140	<b>Net Commodity Cost</b>							
141								
142	<b>PNGTS EXP</b>							
143	NYMEX Price							
144	Basis Differential							
145	<b>Net Commodity Cost</b>							
146								
147	<b>TGP Supply (Zone 4)</b>							
148	NYMEX Price							
149	Basis Differential							
150	<b>Net Commodity Cost</b>							
151								
152	LNG Vapor (Storage)	\$0.4506	\$0.2814	\$0.2412	\$0.2412	\$0.2412	\$0.1414	\$0.2661
153								
154	Propane	\$1.3801	\$1.1823	\$1.0444	\$0.9415	\$0.8592	\$0.7857	\$1.0322
155								
156	<b>Storage Refill</b>							
157	LNG Truck	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
158	Propane	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
159								
160								

REDACTED

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

REDACTED

3 Off Peak 2019 Summer Cost of Gas Filing

4 Supply and Commodity Costs, Volumes and Rates

6 For Month of:	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Off-Peak
7 (a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	May - Oct
								(i)
161								Average Rate
162								
177	<b>Per Unit Volumetric Transportation Rates</b>							
178	<b>Dawn Supply Volumetric Transportation Charge</b>							
179	<b>Commodity Costs</b> In 104	<b>\$0.2400</b>	<b>\$0.2437</b>	<b>\$0.2418</b>	<b>\$0.2398</b>	<b>\$0.2389</b>	<b>\$0.2391</b>	<b>\$0.2406</b>
180								
181	TransCanada - Commodity Rate/GJ	\$0.00060	\$0.00060	\$0.00060	\$0.00060	\$0.00060	\$0.00060	\$0.00060
182	Conversion Rate GL to MMBTU	1.0551	1.0551	1.0551	1.0551	1.0551	1.0551	1.0551
183	Conversion Rate to US\$	1.2851	1.2851	1.2851	1.2851	1.2851	1.2851	1.2851
184	Commodity Rate/US\$	\$0.00081	\$0.00081	\$0.00081	\$0.00081	\$0.00081	\$0.00081	\$0.00081
185	TransCanada Fuel %	1.44%	2.20%	0.00%	0.00%	0.00%	0.00%	0.61%
186	TransCanada Fuel * Percentage	\$0.00345	\$0.00535	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00147
187	Subtotal TransCanada	<b>\$0.00426</b>	<b>\$0.00617</b>	<b>\$0.00081</b>	<b>\$0.00081</b>	<b>\$0.00081</b>	<b>\$0.00081</b>	<b>\$0.00228</b>
188	IGTS - Z1 RTS Commodity	\$0.00034	\$0.00034	\$0.00034	\$0.00034	\$0.00034	\$0.00034	\$0.00034
189	IGTS - Z1 RTS ACA Rate Commodity	\$0.00013	\$0.00013	\$0.00013	\$0.00013	\$0.00013	\$0.00013	\$0.00013
190	IGTS - Z1 RTS Deferred Asset Surcharge	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000
191	Subtotal IGTS - Trans Charge - Z1 RTS Commodity	<b>\$0.00047</b>	<b>\$0.00047</b>	<b>\$0.00047</b>	<b>\$0.00047</b>	<b>\$0.00047</b>	<b>\$0.00047</b>	<b>\$0.00047</b>
192	TGP NET-NE - Comm. Segments 3 & 4	\$0.00013	\$0.00013	\$0.00013	\$0.00013	\$0.00013	\$0.00013	\$0.00013
193	IGTS -Fuel Use Factor - Percentage	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
194	IGTS -Fuel Use Factor - Fuel * Percentage	<b>\$0.00240</b>	<b>\$0.00244</b>	<b>\$0.00242</b>	<b>\$0.00240</b>	<b>\$0.00239</b>	<b>\$0.00239</b>	<b>\$0.00241</b>
195	TGP FTA Fuel Charge % Z 5-6	0.91%	0.91%	0.91%	0.91%	0.91%	0.91%	0.91%
196	TGP FTA Fuel * Percentage	<b>\$0.00218</b>	<b>\$0.00222</b>	<b>\$0.00220</b>	<b>\$0.00218</b>	<b>\$0.00217</b>	<b>\$0.00218</b>	<b>\$0.00219</b>
197	<b>Total Volumetric Transportation Charge - Dawn Supply</b>	<b>\$0.00944</b>	<b>\$0.01142</b>	<b>\$0.00603</b>	<b>\$0.00599</b>	<b>\$0.00598</b>	<b>\$0.00598</b>	<b>\$0.00747</b>

198

199

200 Niagara Supply Volumetric Transportation Charge

201 Commodity Costs Ln 109

202

203 TGP FTA - FTA Z 5-6 Comm. Rate 13th Rev Sheet No. 15

204 TGP FTA - FTA Z 5-6 - ACA Rate 13th Rev Sheet No. 15

205 Subtotal TGP FTA - FTA Z 5-6 Commodity Rate

206 TGP FTA Fuel Charge % Z 5-6 13th Rev Sheet No. 32

207 TGP FTA Fuel \* Percentage In 201 x In 206

208 Total Volumetric Transportation Rate - Niagara Supply

209

210

211

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1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

REDACTED

3 Off Peak 2019 Summer Cost of Gas Filing

4 Supply and Commodity Costs, Volumes and Rates

6 For Month of:	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Off-Peak
7 (a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	May - Oct
								(i)
212								
213								
214	<b>TGP Direct Volumetric Transportation Charge</b>							Average Rate
215	<b>Commodity Costs</b>							
216	Ln 123							
217	TGP - Max Comm. Base Rate - Z 0-6	\$0.03039	\$0.03039	\$0.03039	\$0.03039	\$0.03039	\$0.03039	\$0.03039
218	TGP - Max Commodity ACA Rate - Z 0-6	\$0.00013	\$0.00013	\$0.00013	\$0.00013	\$0.00013	\$0.00013	\$0.00013
219	Subtotal TGP - Max Comm. Rate Z 0-6	\$0.03052	\$0.03052	\$0.03052	\$0.03052	\$0.03052	\$0.03052	\$0.03052
220	Prorated Percentage	32.60%	32.60%	32.60%	32.60%	32.60%	32.60%	32.60%
221	Prorated TGP - Max Commodity Rate - Z 0-6	\$0.00995	\$0.00995	\$0.00995	\$0.00995	\$0.00995	\$0.00995	\$0.00995
222	TGP - Max Comm. Base Rate - Z 1-6	\$0.02650	\$0.02650	\$0.02650	\$0.02650	\$0.02650	\$0.02650	\$0.02650
223	TGP - Max Commodity ACA Rate - Z 1-6	\$0.00013	\$0.00013	\$0.00013	\$0.00013	\$0.00013	\$0.00013	\$0.00013
224	Subtotal TGP - Max Commodity Rate - Z 1-6	\$0.02663	\$0.02663	\$0.02663	\$0.02663	\$0.02663	\$0.02663	\$0.02663
225	Prorated Percentage	67.40%	67.40%	67.40%	67.40%	67.40%	67.40%	67.40%
226	Prorated TGP - Trans Charge - Max Commodity Rate - Z 1-6	\$0.01795	\$0.01795	\$0.01795	\$0.01795	\$0.01795	\$0.01795	\$0.01795
227	TGP - Fuel Charge % - Z 0-6	4.44%	4.44%	4.44%	4.44%	4.44%	4.44%	4.44%
228	Prorated Percentage	32.6%	32.6%	32.6%	32.6%	32.6%	32.6%	32.6%
229	Prorated TGP Fuel Charge % - Z 0-6	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%
230	TGP - Fuel Charge % - Z 1-6	3.88%	3.88%	3.88%	3.88%	3.88%	3.88%	3.88%
231	Prorated Percentage	67.40%	67.40%	67.40%	67.40%	67.40%	67.40%	67.40%
232	Prorated TGP Fuel Charge - Fuel Charge % - Z 1-6	2.62%	2.62%	2.62%	2.62%	2.62%	2.62%	2.62%
233	TGP - Fuel Charge % - Z 0-6	\$0.00370	\$0.00373	\$0.00377	\$0.00378	\$0.00375	\$0.00378	\$0.00375
234	TGP - Fuel Charge % - Z 1-6	\$0.00669	\$0.00675	\$0.00681	\$0.00682	\$0.00678	\$0.00683	\$0.00678
235	<b>Total Volumetric Transportation Rate - TGP (Direct)</b>	<b>\$0.03829</b>	<b>\$0.03838</b>	<b>\$0.03848</b>	<b>\$0.03850</b>	<b>\$0.03843</b>	<b>\$0.03852</b>	<b>\$0.03843</b>
236								
237	<b>TGP (Zone 4 Purchase) Volumetric Transportation Charge</b>							
238	<b>Commodity Costs</b>							
239	Ln 123							
240	TGP - Max Comm. Base Rate - Z 4-6	\$0.01050	\$0.01050	\$0.01050	\$0.01050	\$0.01050	\$0.01050	\$0.01050
241	TGP - Max Commodity ACA Rate - Z 4-6	\$0.00013	\$0.00013	\$0.00013	\$0.00013	\$0.00013	\$0.00013	\$0.00013
242	Subtotal TGP - Max Commodity Rate - Z 4-6	\$0.01063	\$0.01063	\$0.01063	\$0.01063	\$0.01063	\$0.01063	\$0.01063
243	TGP - Fuel Charge % - Z 4-6	1.24%	1.24%	1.24%	1.24%	1.24%	1.24%	1.24%
244	TGP - Fuel Charge	\$0.00306	\$0.00309	\$0.00307	\$0.00305	\$0.00294	\$0.00299	\$0.00303
245	<b>Total Vol. Trans. Rate - TGP (Zone 6)</b>	<b>\$0.01369</b>	<b>\$0.01372</b>	<b>\$0.01370</b>	<b>\$0.01368</b>	<b>\$0.01357</b>	<b>\$0.01362</b>	<b>\$0.01366</b>
246								
247								
248	<b>TGP Dracut</b>							
249	<b>Commodity Costs - NYMEX Price</b>							
250	Ln 114							
251	TGP - Trans Charge - Comm. - Z 6-6							
252	TGP - Trans Charge - ACA Rate - Z6-6							
253	Subtotal TGP - Trans Charge - Max Commodity Rate - Z 6-6							
254	TGP - Fuel Charge % - Z 6-6							
255	TGP - Fuel Charge							
256	<b>Total Volumetric Transportation Rate - TGP Dracut</b>							
257								

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2019 Summer Cost of Gas Filing

4 NYMEX Futures @ Henry Hub

6 For Month of:	Reference	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	May - Oct	
7 (a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	Off Peak	
8 I. NYMEX Opening Prices as of								Strip Average	
9	Opening Prices (15 day average)	Line 206	\$2.6410	\$2.6683	\$2.6993	\$2.7039	\$2.6879	\$2.7066	\$ 2.6845
10			\$2.6410	\$2.6683	\$2.6993	\$2.7039	\$2.6879	\$2.7066	\$ 2.6845
11									
12									
13									
14	<u>NYMEX Settlement - 15 Day Average</u>								
15	Days	Date							
16		8/21/2018	2.673	2.699	2.729	2.732	2.716	2.732	
17		8/20/2018	2.665	2.692	2.723	2.727	2.71	2.726	
18		8/17/2018	2.671	2.697	2.728	2.731	2.714	2.731	
19		8/16/2018	2.659	2.686	2.719	2.723	2.706	2.723	
20		8/15/2018	2.672	2.698	2.727	2.732	2.716	2.733	
21		8/14/2018	2.678	2.704	2.733	2.738	2.722	2.739	
22		8/13/2018	2.665	2.692	2.722	2.727	2.711	2.728	
23		8/10/2018	2.656	2.683	2.713	2.717	2.701	2.717	
24		8/9/2018	2.663	2.689	2.719	2.724	2.708	2.725	
25		8/8/2018	2.655	2.681	2.712	2.716	2.698	2.714	
26		8/7/2018	2.625	2.653	2.683	2.687	2.668	2.684	
27		8/6/2018	2.604	2.632	2.664	2.669	2.651	2.667	
28		8/3/2018	2.595	2.624	2.657	2.662	2.644	2.659	
29		8/2/2018	2.578	2.608	2.642	2.648	2.645	2.696	
30		8/1/2018	2.556	2.586	2.619	2.626	2.608	2.625	
31									
32									
33		15 Day Average	2.6410	2.6683	2.6993	2.7039	2.6879	2.7066	

Liberty Utilities (EnergyNorth Natural Gas) Corp.

2 Off Peak 2019 Summer Cost of Gas Filing  
3 Annual Bill Comparisons, May 18 - Oct 18 vs May 19 - Oct 19 - Residential Heating Rate R-3

6 November 1, 2018 - April 30, 2019  
7 Residential Heating (R3)

May 1, 2019 - October 31, 2019

	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	Winter Nov-Apr
Typical Usage (Therms)	38	95	157	139	107	100	636
<i>7/1/2018</i>							
<b>Winter:</b>							
Cust. Chg	\$15.02	\$15.02	\$15.02	\$15.02	\$15.02	\$15.02	\$90.12
Headblock	\$0.5631	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Tailblock	\$0.5631	\$21.33	\$53.70	\$88.19	\$78.12	\$60.12	\$357.86
HB Threshold	-						
<b>Summer:</b>							
Cust. Chg	\$15.02						0.4445
Headblock	\$0.5631						0.3133
Tailblock	\$0.5631						0.1312
HB Threshold	-						0.418768
Total Base Rate Amount	\$36.35	\$68.72	\$103.21	\$93.14	\$75.14	\$71.42	\$447.98
COG Rate - (Seasonal)	\$0.7411	\$0.7411	\$0.7411	\$0.7411	\$0.7411	\$0.7411	\$0.7411
COG amount	\$28.07	\$70.68	\$116.07	\$102.82	\$79.12	\$74.23	\$470.98
LDAC	\$0.0836	\$0.0836	\$0.0836	\$0.0836	\$0.0836	\$0.0836	0.0836
LDAC amount	\$3.17	\$7.98	\$13.10	\$11.60	\$8.93	\$8.38	\$53.15
<b>Total Bill</b>	<b>\$67.58</b>	<b>\$147.37</b>	<b>\$232.37</b>	<b>\$207.57</b>	<b>\$163.19</b>	<b>\$154.03</b>	<b>\$972.12</b>

May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Summer May-Oct	Total Nov-Oct
56	21	17	15	16	18	142	778
\$15.02	\$15.02	\$15.02	\$15.02	\$15.02	\$15.02	\$90.12	\$180.24
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$31.27	\$11.95	\$9.43	\$8.47	\$8.80	\$10.15	\$80.06	\$437.92
\$46.29	\$26.97	\$24.45	\$23.49	\$23.82	\$25.17	\$170.18	\$618.16
\$0.4445	\$0.4445	\$0.4445	\$0.4445	\$0.4445	\$0.4445	\$0.4445	\$0.6869
\$24.68	\$9.43	\$7.44	\$6.68	\$6.95	\$8.01	\$63.20	\$534.18
\$0.0836	\$0.0836	\$0.0836	\$0.0836	\$0.0836	\$0.0836	\$0.0836	\$0.0836
\$4.64	\$1.77	\$1.40	\$1.26	\$1.31	\$1.51	\$11.89	\$65.05
<b>\$75.62</b>	<b>\$38.17</b>	<b>\$33.29</b>	<b>\$31.43</b>	<b>\$32.08</b>	<b>\$34.69</b>	<b>\$245.28</b>	<b>\$1,217.39</b>

34 November 1, 2017 - April 30, 2018  
35 Residential Heating (R3)

May 1, 2018 - October 31, 2018

	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	Winter Nov-Apr
Typical Usage (Therms)	38	95	157	139	107	100	636
<b>Winter:</b>							
Cust. Chg	\$24.43	\$24.43	\$24.43	\$24.43	\$24.43	\$24.43	\$146.58
Headblock	\$14.63	\$36.84	\$38.63	\$38.63	\$38.63	\$38.63	\$205.99
Tailblock	\$0.00	\$0.00	\$18.10	\$12.39	\$2.16	\$0.05	\$32.70
HB Threshold							
<b>Summer:</b>							
Cust. Chg							
Headblock							
Tailblock							
HB Threshold							
Total Base Rate Amount	\$39.06	\$61.27	\$81.16	\$75.45	\$65.22	\$63.11	\$385.27
COG Rate - (Seasonal)	\$0.6445	\$0.6445	\$0.6445	\$0.8056	\$0.8056	\$0.8056	\$0.7321
COG amount	\$24.41	\$61.46	\$100.94	\$111.77	\$86.01	\$80.69	\$465.28
LDAC	\$0.0856	\$0.0856	\$0.0856	\$0.0856	\$0.0856	\$0.0856	0.0856
LDAC amount	\$3.24	\$8.16	\$13.41	\$11.88	\$9.14	\$8.57	\$54.40
<b>Total Bill</b>	<b>\$66.71</b>	<b>\$130.90</b>	<b>\$195.50</b>	<b>\$199.09</b>	<b>\$160.37</b>	<b>\$152.38</b>	<b>\$904.95</b>

May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Summer May-Oct	Total Nov-Oct
56	21	17	15	16	18	142	778
\$24.43	\$24.43	\$24.43	\$24.43	\$24.43	\$24.43	\$146.58	\$293.16
\$7.73	\$7.73	\$6.26	\$5.45	\$5.43	\$7.73	\$40.33	\$246.32
\$8.99	\$2.23	\$0.00	\$0.00	\$0.00	\$0.52	\$11.74	\$44.44
\$41.15	\$34.39	\$30.69	\$29.88	\$29.86	\$32.68	\$198.65	\$583.92
\$0.3133	\$0.3916	\$0.3127	\$0.3665	\$0.3916	\$0.3916	\$0.3491	\$0.6621
\$17.40	\$8.31	\$5.24	\$5.51	\$6.12	\$7.06	\$49.63	\$514.91
\$0.0945	\$0.0945	\$0.0945	\$0.0945	\$0.0945	\$0.0945	\$0.0945	\$0.0872
\$5.25	\$2.00	\$1.58	\$1.42	\$1.48	\$1.70	\$13.44	\$67.84
<b>\$63.79</b>	<b>\$44.70</b>	<b>\$37.51</b>	<b>\$36.81</b>	<b>\$37.46</b>	<b>\$41.44</b>	<b>\$261.72</b>	<b>\$1,166.67</b>

62 DIFFERENCE:

	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	Winter Nov-Apr
Total Bill	\$0.87	\$16.48	\$36.87	\$8.48	\$2.82	\$1.65	\$67.17
% Change	1.30%	12.59%	18.86%	4.26%	1.76%	1.08%	7.42%
Base Rate	(\$2.71)	\$7.45	\$22.05	\$17.70	\$9.92	\$8.31	\$62.71
% Change	-6.95%	12.16%	27.17%	23.46%	15.20%	13.17%	16.28%
COG & LDAC	\$3.58	\$9.03	\$14.82	(\$9.22)	(\$7.10)	(\$6.66)	\$4.46
% Change	12.96%	12.96%	12.96%	-7.46%	-7.46%	-7.46%	0.86%
check	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Summer May-Oct	Total Nov-Oct
\$11.82	(\$6.53)	(\$4.22)	(\$5.38)	(\$5.38)	(\$6.75)	(\$16.44)	\$50.73
18.53%	-14.61%	-11.24%	-14.62%	-14.37%	-16.29%	-6.28%	4.35%
\$5.14	(\$7.42)	(\$6.24)	(\$6.39)	(\$6.04)	(\$7.51)	(\$28.47)	\$34.25
12.49%	-21.59%	-20.33%	-21.39%	-20.22%	-22.98%	-14.33%	5.86%
\$6.68	\$0.89	\$2.03	\$1.01	\$0.66	\$0.76	\$12.02	\$16.48
29.51%	8.65%	29.70%	14.56%	8.65%	8.65%	19.06%	2.83%
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Liberty Utilities (EnergyNorth Natural Gas) Corp.

2 Off Peak 2019 Summer Cost of Gas Filing  
3 Annual Bill Comparisons, May 18 - Oct 18 vs May 19 - Oct 19 - Commercial Rate G-41

6 November 1, 2018 - April 30, 2019  
7 Commercial Rate (G-41)

	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	Winter Nov-Apr
Typical Usage (Therms)	89	277	504	457	331	297	1,954
Winter: <u>7/1/2018</u>							
Cust. Chg	\$56.58	\$56.58	\$56.58	\$56.58	\$56.58	\$56.58	\$339.48
Headblock	\$0.4639	\$41.15	\$46.39	\$46.39	\$46.39	\$46.39	\$273.10
Tailblock	\$0.3116	\$0.00	\$55.19	\$125.84	\$111.12	\$71.93	\$61.33
HB Threshold	100						
Summer:							
Cust. Chg	\$56.58						
Headblock	\$0.4639						
Tailblock	\$0.3116						
HB Threshold	20						
Total Base Rate Amount	\$97.73	\$158.16	\$228.81	\$214.09	\$174.90	\$164.30	\$1,037.99
COG Rate - (Seasonal)	\$0.7403	\$0.7403	\$0.7403	\$0.7403	\$0.7403	\$0.7403	\$0.7403
COG amount	\$65.67	\$205.16	\$373.01	\$338.04	\$244.91	\$219.74	\$1,446.51
LDAC	\$0.0772	\$0.0772	\$0.0772	\$0.0772	\$0.0772	\$0.0772	0.0772
LDAC amount	\$6.84	\$21.38	\$38.88	\$35.23	\$25.53	\$22.90	\$150.76
<b>Total Bill</b>	<b>\$170.24</b>	<b>\$384.70</b>	<b>\$640.69</b>	<b>\$587.36</b>	<b>\$445.33</b>	<b>\$406.94</b>	<b>\$2,635.27</b>

May 1, 2019 - October 31, 2019

May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Summer May-Oct	Total Nov-Oct
153	39	26	34	25	29	306	2,260
\$56.58	\$56.58	\$56.58	\$56.58	\$56.58	\$56.58	\$339.50	\$678.98
\$9.28	\$9.28	\$9.28	\$9.28	\$9.28	\$9.28	\$55.67	\$328.77
\$41.37	\$5.84	\$1.96	\$4.23	\$1.58	\$2.87	\$57.84	\$483.25
\$107.23	\$71.70	\$67.82	\$70.09	\$67.44	\$68.73	\$453.01	\$1,491.00
\$0.4417	\$0.4417	\$0.4417	\$0.4417	\$0.4417	\$0.4417	\$0.4417	\$0.6999
\$67.47	\$17.11	\$11.61	\$14.83	\$11.07	\$12.90	\$134.98	\$1,581.49
\$0.0772	\$0.0772	\$0.0772	\$0.0772	\$0.0772	\$0.0772	\$0.0772	\$0.0772
\$11.79	\$2.99	\$2.03	\$2.59	\$1.93	\$2.25	\$23.58	\$174.34
<b>\$186.48</b>	<b>\$91.79</b>	<b>\$81.45</b>	<b>\$87.50</b>	<b>\$80.45</b>	<b>\$83.89</b>	<b>\$611.56</b>	<b>\$3,246.83</b>

34 November 1, 2017 - April 30, 2018  
35 Commercial Rate (G-41)

	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	Winter Nov-Apr
Typical Usage (Therms)	89	277	504	457	331	297	1,954
Winter:							
Cust. Chg	\$53.45	\$53.45	\$53.45	\$53.45	\$53.45	\$53.45	\$320.70
Headblock	\$38.88	\$43.83	\$43.83	\$43.83	\$43.83	\$43.83	\$258.03
Tailblock	\$5.45	\$52.15	\$118.90	\$104.99	\$67.96	\$57.94	\$407.38
HB Threshold							
Summer:							
Cust. Chg							
Headblock							
Tailblock							
HB Threshold							
Total Base Rate Amount	\$97.78	\$149.43	\$216.18	\$202.27	\$165.24	\$155.22	\$986.11
COG Rate - (Seasonal)	\$0.6433	\$0.6433	\$0.6433	\$0.8041	\$0.8041	\$0.8041	\$0.7325
COG amount	\$57.06	\$178.28	\$324.13	\$367.17	\$266.02	\$238.67	\$1,431.33
LDAC	\$0.0674	\$0.0674	\$0.0674	\$0.0674	\$0.0674	\$0.0674	0.0674
LDAC amount	\$5.98	\$18.68	\$33.96	\$30.78	\$22.30	\$20.01	\$131.70
<b>Total Bill</b>	<b>\$160.82</b>	<b>\$346.38</b>	<b>\$574.27</b>	<b>\$600.21</b>	<b>\$453.55</b>	<b>\$413.90</b>	<b>\$2,549.14</b>

May 1, 2018 - October 31, 2018

May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Summer May-Oct	Total Nov-Oct
153	39	26	34	25	29	306	2,260
\$56.07	\$56.07	\$56.58	\$56.58	\$56.58	\$56.58	\$338.47	\$659.17
\$9.19	\$9.19	\$9.28	\$9.28	\$9.28	\$9.28	\$55.50	\$313.53
\$40.99	\$5.78	\$1.96	\$4.23	\$1.58	\$2.87	\$57.41	\$464.79
\$106.25	\$71.05	\$67.82	\$70.09	\$67.44	\$68.73	\$451.38	\$1,437.49
\$0.3084	\$0.3855	\$0.3066	\$0.3604	\$0.3855	\$0.3855	\$0.3374	\$0.6791
\$47.11	\$14.93	\$8.06	\$12.10	\$9.66	\$11.26	\$103.11	\$1,534.44
\$0.0763	\$0.0763	\$0.0763	\$0.0763	\$0.0763	\$0.0763	\$0.0763	\$0.0686
\$11.65	\$2.95	\$2.00	\$2.56	\$1.91	\$2.23	\$23.32	\$155.01
<b>\$165.01</b>	<b>\$88.93</b>	<b>\$77.88</b>	<b>\$84.75</b>	<b>\$79.02</b>	<b>\$82.22</b>	<b>\$577.81</b>	<b>\$3,126.95</b>

62 DIFFERENCE:

	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	Winter Nov-Apr
Total Bill	\$9.42	\$38.32	\$66.43	(\$12.85)	(\$8.22)	(\$6.97)	\$86.13
% Change	5.86%	11.06%	11.57%	-2.14%	-1.81%	-1.68%	3.38%
Base Rate	(\$0.05)	\$8.74	\$12.64	\$11.82	\$9.66	\$9.08	\$51.88
% Change	-0.05%	5.85%	5.85%	5.85%	5.85%	5.85%	5.26%
COG & LDAC	\$9.47	\$29.59	\$53.79	(\$24.68)	(\$17.88)	(\$16.04)	\$34.25
% Change	15.02%	15.02%	15.02%	-6.20%	-6.20%	-6.20%	2.19%
check	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Summer May-Oct	Total Nov-Oct
\$21.46	\$2.86	\$3.57	\$2.76	\$1.43	\$1.67	\$33.75	\$119.88
13.01%	3.22%	4.59%	3.25%	1.81%	2.03%	5.84%	3.83%
\$0.97	\$0.65	\$0.00	\$0.00	\$0.00	\$0.00	\$1.62	\$53.51
0.92%	0.92%	0.00%	0.00%	0.00%	0.00%	0.36%	3.72%
\$20.49	\$2.21	\$3.57	\$2.76	\$1.43	\$1.67	\$32.13	\$66.38
34.87%	12.36%	35.51%	18.81%	12.36%	12.36%	25.41%	3.93%
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Liberty Utilities (EnergyNorth Natural Gas) Corp.

2 Off Peak 2019 Summer Cost of Gas Filing

4 Annual Bill Comparisons, May 18 - Oct 18 vs May 19 - Oct 19 - Commercial Rate G-42

5  
6

7 November 1, 2018 - April 30, 2019

8 C&I High Winter Use Medium G-42

	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	Winter Nov-Apr
9 Typical Usage (Therms)	830	2,189	3,708	3,406	2,603	2,395	15,130
10 <u>7/1/2018</u>							
11 <b>Winter:</b>							
12 Cust. Chg	\$169.75	\$169.75	\$169.75	\$169.75	\$169.75	\$169.75	\$1,018.50
13 Headblock	\$0.4219	\$350.20	\$421.90	\$421.90	\$421.90	\$421.90	\$2,459.70
14 Tailblock	\$0.2811	\$0.00	\$334.13	\$761.08	\$676.27	\$450.55	\$392.11
15 HB Threshold	1,000						
16 <b>Summer:</b>							
17 Cust. Chg	\$169.75						
18 Headblock	\$0.4219						
19 Tailblock	\$0.2811						
20 HB Threshold	400						
21 Total Base Rate Amount	\$519.95	\$925.78	\$1,352.73	\$1,267.92	\$1,042.20	\$983.76	\$6,092.33
22 COG Rate - (Seasonal)	\$0.7403	\$0.7403	\$0.7403	\$0.7403	\$0.7403	\$0.7403	\$0.7403
23 COG amount	\$614.49	\$1,620.25	\$2,744.67	\$2,521.30	\$1,926.86	\$1,772.94	\$11,200.51
24 LDAC	\$0.0772	\$0.0772	\$0.0772	\$0.0772	\$0.0772	\$0.0772	0.0772
25 LDAC amount	\$64.04	\$168.87	\$286.06	\$262.78	\$200.82	\$184.78	\$1,167.36
26 <b>Total Bill</b>	<b>\$1,198.49</b>	<b>\$2,714.89</b>	<b>\$4,383.46</b>	<b>\$4,052.00</b>	<b>\$3,169.88</b>	<b>\$2,941.48</b>	<b>\$18,460.21</b>

35 November 1, 2017 - April 30, 2018

36 C&I High Winter Use Medium G-42

	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	Winter Nov-Apr
37 Typical Usage (Therms)	830	2,189	3,708	3,406	2,603	2,395	15,130
38 <b>Winter:</b>							
39 Cust. Chg	\$160.36	\$160.36	\$160.36	\$160.36	\$160.36	\$160.36	\$962.16
40 Headblock	\$330.86	\$398.60	\$398.60	\$398.60	\$398.60	\$398.60	\$2,323.86
41 Tailblock	\$0.00	\$315.58	\$718.84	\$638.74	\$425.54	\$370.34	\$2,469.05
42 HB Threshold							
43 <b>Summer:</b>							
44 Cust. Chg							
45 Headblock							
46 Tailblock							
47 HB Threshold							
48 Total Base Rate Amount	\$491.22	\$874.54	\$1,277.80	\$1,197.70	\$984.50	\$929.30	\$5,755.08
49 COG Rate - (Seasonal)	\$0.6433	\$0.6433	\$0.6433	\$0.8041	\$0.8041	\$0.8041	\$0.7326
50 COG amount	\$533.98	\$1,407.95	\$2,385.04	\$2,738.59	\$2,092.92	\$1,925.74	\$11,084.22
51 LDAC	\$0.0674	\$0.0674	\$0.0674	\$0.0674	\$0.0674	\$0.0674	0.0674
52 LDAC amount	\$55.95	\$147.51	\$249.89	\$229.55	\$175.43	\$161.42	\$1,019.74
53 <b>Total Bill</b>	<b>\$1,081.15</b>	<b>\$2,430.01</b>	<b>\$3,912.73</b>	<b>\$4,165.84</b>	<b>\$3,252.85</b>	<b>\$3,016.46</b>	<b>\$17,859.03</b>

63 DIFFERENCE:

64 <b>Total Bill</b>	<b>\$117.35</b>	<b>\$284.88</b>	<b>\$470.73</b>	<b>(\$113.84)</b>	<b>(\$82.97)</b>	<b>(\$74.98)</b>	<b>\$601.17</b>
65 % Change	<b>10.85%</b>	<b>11.72%</b>	<b>12.03%</b>	<b>-2.73%</b>	<b>-2.55%</b>	<b>-2.49%</b>	<b>3.37%</b>
66 <b>Base Rate</b>	<b>\$28.73</b>	<b>\$51.23</b>	<b>\$74.93</b>	<b>\$70.22</b>	<b>\$57.69</b>	<b>\$54.45</b>	<b>\$337.25</b>
67 % Change	<b>5.85%</b>	<b>5.86%</b>	<b>5.86%</b>	<b>5.86%</b>	<b>5.86%</b>	<b>5.86%</b>	<b>5.86%</b>
68 <b>COG &amp; LDAC</b>	<b>\$88.61</b>	<b>\$233.65</b>	<b>\$395.80</b>	<b>(\$184.06)</b>	<b>(\$140.66)</b>	<b>(\$129.43)</b>	<b>\$263.92</b>
69 % Change	<b>15.02%</b>	<b>15.02%</b>	<b>15.02%</b>	<b>-6.20%</b>	<b>-6.20%</b>	<b>-6.20%</b>	<b>2.18%</b>
70 check	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

May 1, 2019 - October 31, 2019

May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Summer May-Oct	Total Nov-Oct
1,319	484	285	247	269	340	2,943	18,073
\$169.75	\$169.75	\$169.75	\$169.75	\$169.75	\$169.75	\$1,018.50	\$2,037.00
\$168.76	\$168.76	\$120.07	\$104.03	\$113.31	\$143.61	\$818.54	\$3,278.25
\$258.33	\$23.64	\$0.00	\$0.00	\$0.00	\$0.00	\$281.97	\$2,896.10
\$596.84	\$362.15	\$289.82	\$273.78	\$283.06	\$313.36	\$2,119.01	\$8,211.34
\$0.4417	\$0.4417	\$0.4417	\$0.4417	\$0.4417	\$0.4417	\$0.4417	\$0.6917
\$582.61	\$213.82	\$125.70	\$108.91	\$118.63	\$150.35	\$1,300.03	\$12,500.54
\$0.0772	\$0.0772	\$0.0772	\$0.0772	\$0.0772	\$0.0772	\$0.0772	\$0.0772
\$101.77	\$37.35	\$21.96	\$19.03	\$20.72	\$26.26	\$227.09	\$1,394.45
<b>\$1,281.22</b>	<b>\$613.32</b>	<b>\$437.48</b>	<b>\$401.72</b>	<b>\$422.42</b>	<b>\$489.97</b>	<b>\$3,646.13</b>	<b>\$22,106.34</b>

May 1, 2018 - October 31, 2018

May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Summer May-Oct	Total Nov-Oct
1,319	484	285	247	269	340	2,943	18,073
\$160.36	\$160.36	\$169.75	\$169.75	\$169.75	\$169.75	\$999.72	\$1,961.88
\$167.24	\$167.24	\$120.07	\$104.03	\$113.31	\$143.61	\$815.50	\$3,139.37
\$255.94	\$23.42	\$0.00	\$0.00	\$0.00	\$0.00	\$279.36	\$2,748.42
\$583.54	\$351.02	\$289.82	\$273.78	\$283.06	\$313.36	\$2,094.59	\$7,849.66
\$0.3084	\$0.3855	\$0.3066	\$0.3604	\$0.3855	\$0.3855	\$0.3412	\$0.6689
\$406.78	\$186.62	\$87.26	\$88.87	\$103.54	\$131.22	\$1,004.28	\$12,088.49
\$0.0763	\$0.0763	\$0.0763	\$0.0763	\$0.0763	\$0.0763	\$0.0763	\$0.0688
\$100.64	\$36.94	\$21.71	\$18.81	\$20.49	\$25.97	\$224.57	\$1,244.31
<b>\$1,090.97</b>	<b>\$574.57</b>	<b>\$398.79</b>	<b>\$381.46</b>	<b>\$407.09</b>	<b>\$470.55</b>	<b>\$3,323.43</b>	<b>\$21,182.47</b>

<b>\$190.25</b>	<b>\$38.75</b>	<b>\$38.69</b>	<b>\$20.26</b>	<b>\$15.32</b>	<b>\$19.42</b>	<b>\$322.70</b>	<b>\$923.87</b>
<b>17.44%</b>	<b>6.74%</b>	<b>9.70%</b>	<b>5.31%</b>	<b>3.76%</b>	<b>4.13%</b>	<b>9.71%</b>	<b>4.36%</b>
\$13.30	\$11.13	\$0.00	\$0.00	\$0.00	\$0.00	\$24.43	\$361.68
2.28%	3.17%	0.00%	0.00%	0.00%	0.00%	1.17%	4.61%
\$176.95	\$27.62	\$38.69	\$20.26	\$15.32	\$19.42	\$298.27	\$562.19
34.87%	12.36%	35.51%	18.81%	12.36%	12.36%	24.27%	4.22%
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00



Liberty Utilities (EnergyNorth Natural Gas) Corp.

2 Off Peak 2019 Summer Cost of Gas Filing

4 Annual Bill Comparisons, May 18 - Oct 18 vs May 19 - Oct 19 - Commercial Rate G-52

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7 November 1, 2018 - April 30, 2019

8 Commercial Rate (G-52)

	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	Winter Nov-Apr
9 Typical Usage (Therms)	1,352	1,866	2,284	2,160	1,886	1,760	11,306
10							
11 <b>Winter:</b> <u>7/1/2018</u>							
12 Cust. Chg	\$169.75	\$169.75	\$169.75	\$169.75	\$169.75	\$169.75	\$1,018.50
13 Headblock	\$0.2401	\$240.10	\$240.10	\$240.10	\$240.10	\$240.10	\$1,440.60
14 Tailblock	\$0.1600	\$56.28	\$138.55	\$205.37	\$185.54	\$121.61	\$849.04
15 HB Threshold	1,000						
16							
17 <b>Summer:</b>							
18 Cust. Chg	\$169.75						
19 Headblock	\$0.1740						
20 Tailblock	\$0.0989						
21 HB Threshold	1,000						
22							
23 Total Base Rate Amount	\$466.13	\$548.40	\$615.22	\$595.39	\$551.54	\$531.46	\$3,308.14
24							
25 COG Rate - (Seasonal)	\$0.7456	\$0.7456	\$0.7456	\$0.7456	\$0.7456	\$0.7456	\$0.7456
26 COG amount	\$1,007.86	\$1,391.23	\$1,702.65	\$1,610.22	\$1,405.86	\$1,312.30	\$8,430.11
27							
28 LDAC	\$0.0772	\$0.0772	\$0.0772	\$0.0772	\$0.0772	\$0.0772	0.0772
29 LDAC amount	\$104.30	\$143.97	\$176.19	\$166.63	\$145.48	\$135.80	\$872.37
30							
31 <b>Total Bill</b>	<b>\$1,578.29</b>	<b>\$2,083.59</b>	<b>\$2,494.07</b>	<b>\$2,372.23</b>	<b>\$2,102.88</b>	<b>\$1,979.56</b>	<b>\$12,610.61</b>

35 November 1, 2017 - April 30, 2018

36 Commercial Rate (G-52)

	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	Winter Nov-Apr
37 Typical Usage (Therms)	1,352	1,866	2,284	2,160	1,886	1,760	11,306
38							
39 <b>Winter:</b>							
40 Cust. Chg	\$160.36	\$160.36	\$160.36	\$160.36	\$160.36	\$160.36	\$962.16
41 Headblock	\$226.80	\$226.80	\$226.80	\$226.80	\$226.80	\$226.80	\$1,360.80
42 Tailblock	\$53.15	\$130.84	\$193.95	\$175.22	\$133.81	\$114.84	\$801.81
43 HB Threshold							
44							
45 <b>Summer:</b>							
46 Cust. Chg							
47 Headblock							
48 Tailblock							
49 HB Threshold							
50							
51 Total Base Rate Amount	\$440.31	\$518.00	\$581.11	\$562.38	\$520.97	\$502.00	\$3,124.77
52							
53 COG Rate - (Seasonal)	\$0.6560	\$0.6560	\$0.6560	\$0.8171	\$0.8200	\$0.8200	\$0.7397
54 COG amount	\$886.74	\$1,224.04	\$1,498.04	\$1,764.63	\$1,546.14	\$1,443.25	\$8,362.84
55							
56 LDAC	\$0.0674	\$0.0674	\$0.0674	\$0.0674	\$0.0674	\$0.0674	0.0674
57 LDAC amount	\$91.11	\$125.76	\$153.91	\$145.56	\$127.09	\$118.63	\$762.06
58							
59 <b>Total Bill</b>	<b>\$1,418.16</b>	<b>\$1,867.80</b>	<b>\$2,233.06</b>	<b>\$2,472.57</b>	<b>\$2,194.19</b>	<b>\$2,063.88</b>	<b>\$12,249.67</b>

63 DIFFERENCE:

64 <b>Total Bill</b>	<b>\$160.13</b>	<b>\$215.79</b>	<b>\$261.00</b>	<b>(\$100.33)</b>	<b>(\$91.32)</b>	<b>(\$84.32)</b>	<b>\$360.95</b>
65 % Change	11.29%	11.55%	11.69%	-4.06%	-4.16%	-4.09%	2.95%
66							
67 <b>Base Rate</b>	<b>\$25.82</b>	<b>\$30.40</b>	<b>\$34.11</b>	<b>\$33.01</b>	<b>\$30.57</b>	<b>\$29.45</b>	<b>\$183.37</b>
68 % Change	5.86%	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%
69							
70 <b>COG &amp; LDAC</b>	<b>\$134.31</b>	<b>\$185.39</b>	<b>\$226.89</b>	<b>(\$133.34)</b>	<b>(\$121.89)</b>	<b>(\$113.78)</b>	<b>\$177.58</b>
71 % Change	13.73%	13.73%	13.73%	-6.98%	-7.28%	-7.28%	1.95%
check	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

May 1, 2019 - October 31, 2019

	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Summer May-Oct	Total Nov-Oct
1,497	1,128	1,032	1,025	1,050	897	6,628	17,935	
\$169.75	\$169.75	\$169.75	\$169.75	\$169.75	\$169.75	\$1,018.50	\$2,037.00	
\$174.00	\$174.00	\$174.00	\$174.00	\$174.00	\$174.00	\$1,026.04	\$2,466.64	
\$49.15	\$12.63	\$3.16	\$2.48	\$4.92	\$0.00	\$72.35	\$921.38	
\$392.90	\$356.38	\$346.91	\$346.23	\$348.67	\$325.79	\$2,116.89	\$5,425.02	
\$0.4506	\$0.4506	\$0.4506	\$0.4506	\$0.4506	\$0.4506	\$0.4506	\$0.6366	
\$674.55	\$508.16	\$465.00	\$461.89	\$473.04	\$404.09	\$2,986.72	\$11,416.83	
\$0.0772	\$0.0772	\$0.0772	\$0.0772	\$0.0772	\$0.0772	\$0.0772	\$0.0772	
\$115.50	\$87.01	\$79.62	\$79.09	\$81.00	\$69.19	\$511.42	\$1,383.79	
<b>\$1,182.96</b>	<b>\$951.55</b>	<b>\$891.53</b>	<b>\$887.20</b>	<b>\$902.71</b>	<b>\$799.08</b>	<b>\$5,615.03</b>	<b>\$18,225.65</b>	

May 1, 2018 - October 31, 2018

	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Summer May-Oct	Total Nov-Oct
1,497	1,128	1,032	1,025	1,050	897	6,628	17,935	
\$168.21	\$168.21	\$169.75	\$169.75	\$169.75	\$169.75	\$1,015.42	\$1,977.58	
\$172.40	\$172.40	\$174.00	\$174.00	\$174.00	\$156.04	\$1,022.84	\$2,383.64	
\$49.15	\$12.63	\$3.16	\$2.48	\$4.92	\$0.00	\$72.35	\$874.16	
\$389.76	\$353.24	\$346.91	\$346.23	\$348.67	\$325.79	\$2,110.61	\$5,235.38	
\$0.3299	\$0.4124	\$0.3335	\$0.3873	\$0.4124	\$0.4124	\$0.3776	\$0.6058	
\$493.86	\$465.08	\$344.16	\$397.00	\$432.94	\$369.83	\$2,502.87	\$10,865.71	
\$0.0763	\$0.0763	\$0.0763	\$0.0763	\$0.0763	\$0.0763	\$0.0763	\$0.0707	
\$114.22	\$86.05	\$78.74	\$78.21	\$80.10	\$68.42	\$505.74	\$1,267.80	
<b>\$997.85</b>	<b>\$904.37</b>	<b>\$769.80</b>	<b>\$821.44</b>	<b>\$861.71</b>	<b>\$764.05</b>	<b>\$5,119.22</b>	<b>\$17,368.88</b>	

<b>\$185.11</b>	<b>\$47.19</b>	<b>\$121.73</b>	<b>\$65.76</b>	<b>\$41.00</b>	<b>\$35.03</b>	<b>\$495.81</b>	<b>\$856.76</b>
18.55%	5.22%	15.81%	8.01%	4.76%	4.58%	9.69%	4.93%
\$3.14	\$3.14	\$0.00	\$0.00	\$0.00	\$0.00	\$6.28	\$189.65
0.81%	0.89%	0.00%	0.00%	0.00%	0.00%	0.30%	3.62%
\$181.97	\$44.05	\$121.73	\$65.76	\$41.00	\$35.03	\$489.53	\$667.12
29.93%	7.99%	28.78%	13.84%	7.99%	7.99%	16.27%	5.50%
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Liberty Utilities (EnergyNorth Natural Gas) Corp.

2 Off Peak 2019 Summer Cost of Gas Filing

3 Residential Heating

	Summer 2018	Summer 2019
4 Customer Charge	\$15.02	\$15.02
6 First 20 Therms	\$0.5631	\$0.5631
7 Excess 20 Therms	\$0.5631	\$0.5631
8 LDAC	\$0.0945	\$0.0836
9 COG	\$0.3491	\$0.4445
10 Total Adjust	\$0.4436	\$0.5281

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	Summer 2018 COG @	Summer 2019 Cog @
	\$0.4436	\$0.5281
18 Cooking alone	5 \$2.22	\$20.48
20	10 \$4.44	\$25.93
22	20 \$8.87	\$36.84
24 Water Heating alone	30 \$13.31	\$47.76
26	45 \$19.96	\$64.13
28	50 \$22.18	\$69.58
30 Heating Alone	80 \$33.27	\$96.86
32	125 \$59.00	\$160.15
34	150 \$66.54	\$178.71
36	200 \$88.71	\$233.27

Total		Base Rate		COG		LDAC	
\$ Impact	% Impact	\$ Impact	% Impact	\$ Impact	% Impact	\$ Impact	% Impact
\$0.08	19%						
\$18.26	823%	\$17.84	804%	\$0.48	2%	-\$0.05	-2%
\$21.50	485%	\$20.65	466%	\$0.95	4%	-\$0.11	-2%
\$27.97	315%	\$26.28	296%	\$1.91	5%	-\$0.22	-2%
\$34.45	259%	\$31.91	240%	\$2.86	6%	-\$0.33	-2%
\$44.16	221%	\$40.36	202%	\$4.29	7%	-\$0.49	-2%
\$47.40	214%	\$43.18	195%	\$4.77	7%	-\$0.54	-2%
\$63.59	191%	\$57.25	172%	\$7.16	7%	-\$0.81	-2%
\$101.16	171%	\$89.91	152%	\$12.69	8%	-\$1.44	-2%
\$112.17	169%	\$99.49	150%	\$14.31	8%	-\$1.63	-2%
\$144.55	163%	\$127.64	144%	\$19.09	8%	-\$2.17	-2%

Liberty Utilities (EnergyNorth Natural Gas) Corp.

2019 Summer Cost of Gas Filing

Capacity Assignment Calculations 2017-2018

Derivation of Class Assignments and Weightings

Basic assumptions:

- 1 Residential class pays average seasonal gas cost rate (using MBA method to allocate costs to seasons)
- 2 Residual gas costs are allocated to C&I HLF and LLF classes based on MBA method
- 3 The MBA method allocates capacity costs based on design day demands in two pieces:
  - a The base use portion of the class design day demand based on base use
  - b The remaining portion of design day demand based on remaining design day demand
- 4 Base demand is composed solely of pipeline supplies
- 5 Remaining demand consists of a portion of pipeline and all storage and peaking supplies

	Column A	Column B	Column C	Column D	Column E	Column F
	Design Day Demand, Dekatherm	Adjusted Design Day Demand, Dt	Percent of Total		Avg Daily Base Use Load, Dt	Remaining Design Day Demand
1	RATE R-1-Resi Non-Htg	575	578	0.4%	109	469
2	RATE R-3-Resi Htg	71,486	71,889	43.7%	4,189	67,700
3	RATE G-41 (T)	30,310	30,485	18.5%	1,045	29,440
4	RATE G-51 (S)	2,545	2,556	1.6%	670	1,886
5	RATE G-42 (V)	37,598	37,813	23.0%	1,566	36,248
6	RATE G-52	5,360	5,381	3.3%	1,846	3,535
7	RATE G-43	7,427	7,468	4.5%	587	6,881
8	RATE G-53	3,878	3,893	2.4%	1,412	2,480
9	RATE G-54	4,483	4,507	2.7%	382	4,126
10						
11	Total	163,661	164,571	100.0%	11,806	152,765
12						
13	Residential Total	72,061	72,467	<b>44.034%</b>	4,298	68,169
14	LLF Total	75,334	75,766	<b>46.038%</b>	3,198	72,568
15	HLF Total	<u>16,266</u>	<u>16,338</u>	<b>9.927%</b>	<u>4,310</u>	<u>12,027</u>
16	Total	163,661	164,571	100.0%	11,806	152,765
17						
18	C&I Breakdown					
19	LLF Total				3,198	72,568
20	HLF Total				4,310	12,027
21	Total				7,508	84,595
22						
23	C&I Breakdown Percentage					
24	LLF Total				42.590%	85.783%
25	HLF Total				57.410%	14.217%
26	Total				<b>100.0%</b>	<b>100.0%</b>
27						
28		Capacity Cost	MDQ, Dt	\$/Dt-Mo.		
29	Pipeline	\$12,671,205	79,718	\$13.2459		
30	Storage	\$4,394,284	28,115	\$13.0247		
31						
32	Peaking	\$4,969,000				
33	Peaking Additional Costs (Concord Lateral Peaking x Differential)	\$0				
34	Subtotal Peaking Costs	<u>\$4,969,000</u>	<u>56,738</u>	<u>\$7.2982</u>		
35	Total	\$22,034,489	164,571	\$11.1575		
36						
37		Capacity Cost	MDQ, Dt	\$/Dt-Mo.		
38	Pipeline - Baseload	1,876,633	11,806	\$13.2459		
39	Pipeline - Remaining	10,794,572	67,912	\$13.2459		
40	Storage	4,394,284	28,115	\$13.0247		
41	Peaking	<u>4,969,000</u>	<u>56,738</u>	<u>\$7.2982</u>		
42	Total	22,034,489	164,571	\$11.1575		
43						
44						
45	Residential Allocation	Capacity Cost	MDQ, Dt	\$/Dt-Mo.		
46	Pipeline - Base	Line 38 * Line 13 Col C	<b>44.034%</b>	826,357	5,199	\$13.2459
47	Pipeline - Remaining	Line 39 * Line 13 Col C	<b>44.034%</b>	4,753,297	29,904	\$13.2459
48	Storage	Line 40 * Line 13 Col C	<b>44.034%</b>	1,934,974	12,380	\$13.0247
49	Peaking	Line 41 * Line 13 Col C	<b>44.034%</b>	<u>2,188,059</u>	<u>24,984</u>	<u>\$7.2982</u>
50	Total		<b>44.034%</b>	9,702,631	72,467	\$11.1575

Liberty Utilities (EnergyNorth Natural Gas) Corp.

2019 Summer Cost of Gas Filing

Capacity Assignment Calculations 2017-2018

Derivation of Class Assignments and Weightings

						<b>Ratios for COG</b>	
51							
52							
53	C&I Allocation		Capacity Cost	MDQ, Dt	\$/Dt-Mo.		
54	Pipeline - Base	Line 38 - Line 46	1,050,276	6,608	\$13.2459		
55	Pipeline - Remaining	Line 39 - Line 47	6,041,275	38,007	\$13.2458		
56	Storage	Line 40 - Line 48	2,459,310	15,735	\$13.0248		
57	Peaking	Line 41 - Line 49	2,780,941	31,754	\$7.2981		
58	Total		<b>55.966%</b> 12,331,802	92,104	\$11.1575	<b>1.0000</b>	
59							
60							
61	LLF - C&I Allocation		Capacity Cost	MDQ, Dt	\$/Dt-Mo.		
62	Pipeline - Base	Line 54 * Line 24 Col E	447,308	2,814	\$13.2465		
63	Pipeline - Remaining	Line 55 * Line 24 Col F	5,182,374	32,604	\$13.2458		
64	Storage	Line 56 * Line 24 Col F	2,109,664	13,498	\$13.0245		
65	Peaking	Line 57 * Line 24 Col F	2,385,568	27,239	\$7.2983		
66	Total		<b>45.9503%</b> 10,124,914	76,155	\$11.0793	<b>0.9930</b>	
67			42.590%	82%		(Line 66 / Line 58)	
68							
69	HLF - C&I Allocation		Capacity Cost	MDQ, Dt	\$/Dt-Mo.		
70	Pipeline - Base	Line 54 - Line 62	602,968	3,794	\$13.2439		
71	Pipeline - Remaining	Line 55 - Line 63	858,901	5,403	\$13.2473		
72	Storage	Line 56 - Line 64	349,646	2,237	\$13.0251		
73	Peaking	Line 57 - Line 65	395,373	4,515	\$7.2974		
74	Total		<b>10.0156%</b> 2,206,888	15,949	\$11.5310	<b>1.0335</b>	
75						(Line 74 / Line 58)	
76							
77	Unit Cost		Residential	LLF C&I	HLF C&I		
78							
79	Pipeline		\$ 13 2459	\$ 13.2459	\$ 13 2459		
80	Storage		\$ 13 0247	\$ 13.0247	\$ 13 0247		
81	Peaking		\$ -	\$ -	\$ -		
82	Total		\$ 11.1575	\$ 11.0793	\$ 11 5310		
83							
84							
85	Load Makeup		Residential	LLF C&I	HLF C&I		
86							
87	Pipeline		48.44%	<b>46.51%</b>	<b>57.67%</b>		
88	Storage		17.08%	<b>17.72%</b>	<b>14.03%</b>		
89	Peaking		34.48%	<b>35.77%</b>	<b>28.31%</b>		
90	Total		100.00%	<b>100.00%</b>	<b>100.00%</b>		
91							
92							
93	Supply Makeup		Residential	LLF C&I	HLF C&I	Total	
94							
95	Pipeline		44.03%	44.43%	11.54%	100.00%	
96	Storage		44.03%	48.01%	7.96%	100.00%	
97	Peaking		44.03%	48.01%	7.96%	100.00%	

1 **Liberty Utilities (EnergyNorth Natural Gas) Corp.**

3 **2019 Summer Cost of Gas Filing**

4 **Correction Factor Calculation**

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8 Data Source: Schedule 10B

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11 G-41

12 G-42

13 G-43

14 High Winter Use

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16 G-51

17 G-52

18 G-53

19 G-54

21 Low Winter Use

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23 **Gross Total**

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26 Total Sales

27 Low Winter Use

28 Summer Ratio for Low Winter Use

29 High Winter Use

30 Summer Ratio for High Winter Use

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32 Correction Factor =

33 Correction Factor =

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36 **Allocation Calculation for Miscellaneous Overhead**

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38 Projected Winter Sales Volume

39 Projected Annual Sales Volume

40 Percentage of Winter Sales to Annual Sales

	d	e	f	g	h	i	Total Sales
	May	June	July	Aug	Sep	Oct	
G-41	800,746	362,796	221,001	168,493	181,679	460,013	2,194,729
G-42	748,675	460,256	231,012	116,114	74,965	227,916	1,858,939
G-43	304,113	197,948	134,668	105,947	121,390	192,087	1,056,153
High Winter Use	1,853,534	1,021,001	586,681	390,554	378,035	880,017	5,109,821
G-51	115,160	74,244	56,098	56,385	71,155	94,990	468,032
G-52	131,291	88,424	68,817	68,840	84,354	107,862	549,588
G-53	291,255	205,865	165,249	156,854	172,243	202,036	1,193,502
G-54	23,468	19,194	16,830	17,609	20,668	21,777	119,546
Low Winter Use	561,175	387,726	306,994	299,688	348,420	426,664	2,330,668
<b>Gross Total</b>	<b>2,414,708</b>	<b>1,408,727</b>	<b>893,675</b>	<b>690,242</b>	<b>726,454</b>	<b>1,306,681</b>	<b>7,440,489</b>

7,440,489

2,330,668

**1.0335 Schedule 10A p 2, In 74**

5,109,821

**0.9930 Schedule 10A p 2, In 66**

Total Sales/((Low Winter Use x Winter Ratio for Low Winter Use)+(High Winter Use x Winter Ratio for High Winter Use)

**99.4346%**

11/1/18 - 4/30/19

86,628,921 Sch.10B, In 23

11/1/18 - 10/31/19

106,815,146 Sch.10B, In 23

81.10%

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.  
 2 d/b/a Liberty Utilities  
 3 Off Peak 2019 Summer Cost of Gas Filing  
 4 2019 Summer Cost of Gas Filing

5  
6  
7 Firm Sales

Dry Therms

8

9 R-1

10 R-3

11 R-4

12 Total Residential.

13

14 G-41

15 G-42

16 G-43

17 G-51

18 G-52

19 G-53

20 G-54

21 Total C/I

22

23 Sales Volume

24

25 Transportation Sales

26

27 G-41

28 G-42

29 G-43

30 G-51

31 G-52

32 G-53

33 G-54

34

35 Total Trans. Sales

36

37 Total All Sales

	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	Subtotal PK 18-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Subtotal OP 19	Total
9 R-1	58,148	73,323	85,127	87,489	80,107	60,928	445,123	44,082	30,039	23,238	24,503	31,923	43,218	197,003	642,126
10 R-3	4,041,030	7,405,866	10,502,345	11,246,925	9,528,683	6,407,575	49,132,423	3,690,099	1,773,275	1,006,300	981,527	1,481,613	2,659,147	11,591,962	60,724,385
11 R-4	225,090	424,725	668,812	822,921	728,538	573,586	3,443,671	361,052	178,352	90,516	79,349	97,393	150,109	956,771	4,400,443
12 Total Residential.	4,324,268	7,903,914	11,256,284	12,157,335	10,337,327	7,042,089	53,021,218	4,095,234	1,981,666	1,120,055	1,085,379	1,610,929	2,852,473	12,745,736	65,766,954
13															
14 G-41	1,321,101	2,319,276	3,165,299	3,498,870	2,926,465	1,918,416	15,149,429	800,746	362,796	221,001	168,493	181,679	460,013	2,194,729	17,344,157
15 G-42	895,704	1,551,977	2,083,542	2,176,169	1,812,337	1,285,485	9,805,213	748,675	460,256	231,012	116,114	74,965	227,916	1,858,939	11,664,152
16 G-43	360,692	504,475	733,059	836,182	731,266	598,340	3,764,015	304,113	197,948	134,668	105,947	121,390	192,087	1,056,153	4,820,168
17 G-51	135,964	177,998	217,956	227,659	210,007	162,636	1,132,220	115,160	74,244	56,098	56,385	71,155	94,990	468,032	1,600,252
18 G-52	146,420	183,177	224,756	238,484	224,688	178,727	1,196,252	131,291	88,424	68,817	68,840	84,354	107,862	549,588	1,745,840
19 G-53	156,779	249,279	616,066	508,733	461,553	413,241	2,405,652	291,255	205,865	165,249	156,854	172,243	202,036	1,193,502	3,599,154
20 G-54	23,619	24,600	26,018	27,451	27,760	25,474	154,923	23,468	19,194	16,830	17,609	20,668	21,777	119,546	274,468
21 Total C/I	3,040,279	5,010,783	7,066,697	7,513,549	6,394,077	4,582,318	33,607,703	2,414,708	1,408,727	893,675	690,242	726,454	1,306,681	7,440,489	41,048,192
22															
23 Sales Volume	7,364,547	12,914,697	18,322,981	19,670,884	16,731,404	11,624,407	86,628,921	6,509,942	3,390,393	2,013,730	1,775,621	2,337,384	4,159,155	20,186,225	106,815,146
24															
25 Transportation Sales															
26															
27 G-41	575,879	819,379	1,110,280	1,198,083	994,081	780,156	5,477,859	419,152	223,968	126,739	130,012	177,081	307,285	1,384,236	6,862,094
28 G-42	1,709,642	2,476,139	3,396,451	3,680,772	3,051,299	2,391,810	16,706,114	1,277,699	653,670	331,128	308,102	424,112	829,661	3,824,373	20,530,487
29 G-43	916,199	1,344,906	1,729,807	1,910,992	1,765,170	1,398,691	9,065,765	1,166,024	718,428	474,845	407,575	463,279	699,961	3,930,112	12,995,877
30 G-51	42,394	46,822	55,046	63,877	60,806	58,506	327,451	77,824	67,235	64,233	77,040	88,667	80,334	455,334	782,784
31 G-52	222,033	234,604	257,794	277,352	269,034	248,554	1,509,370	283,695	260,424	264,769	323,847	380,983	356,910	1,870,628	3,379,999
32 G-53	465,205	609,368	785,673	886,023	881,490	807,226	4,434,985	739,996	529,662	363,450	297,063	282,627	351,494	2,564,292	6,999,276
33 G-54	2,364,482	2,375,492	2,456,766	2,089,499	2,011,618	1,925,018	13,222,874	1,781,763	1,808,656	1,788,616	1,955,455	2,061,440	2,219,044	11,614,976	24,837,850
34															
35 Total Trans. Sales	6,295,834	7,906,710	9,791,817	10,106,599	9,033,498	7,609,960	50,744,418	5,746,154	4,262,044	3,413,780	3,499,094	3,878,188	4,844,690	25,643,949	76,388,368
36															
37 Total All Sales	13,660,381	20,821,407	28,114,798	29,777,484	25,764,902	19,234,367	137,373,339	12,256,096	7,652,437	5,427,510	5,274,715	6,215,572	9,003,844	45,830,174	183,203,513

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2019 Summer Cost of Gas Filing

4 Normal and Design Year Volumes

5  
6

7 Volumes (Therms)

Normal Year

8

9 For the Months of May 18 -October 18

10  
11

12 **Off Peak**

13 **May - Oct**

	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Off Peak May - Oct
14 Pipeline Gas:							
14 Dawn Supply	142,098	-	-	-	-	135,379	277,476
15 Niagara Supply	614,064	547,533	530,186	515,272	533,984	621,073	3,362,112
16 TGP Supply (Gulf)	-	-	-	-	-	-	0
17 Dracut Supply 1 - Baseload	-	-	-	-	-	-	0
18 Dracut Supply 2 - Swing	77,392	-	-	-	-	77,634	155,027
19 ENGIE Combo	-	-	-	-	-	-	0
20 LNG Truck	45,040	16,946	-	-	49,580	14,757	126,323
21 Propane Truck	72,952	67,200	62,987	61,215	65,537	73,785	403,675
22 PNGTS	194,750	173,551	168,148	163,418	169,256	196,973	1,066,095
23 Portland Natural Gas	76,758	-	-	-	-	127,679	204,437
24 TGP Supply (Z4)	4,947,405	4,368,574	3,844,396	3,770,320	4,184,677	5,005,157	26,120,528
25	6,170,459	5,173,803	4,605,716	4,510,225	5,003,034	6,252,436	31,715,673
26							
27 Storage Gas:							
28	-	-	-	-	-	-	0
29							
30 Produced Gas:							
31 LNG Vapor	18,397	16,946	15,884	15,437	15,957	18,607	101,226
32 Propane	-	-	-	-	-	-	0
33	18,397	16,946	15,884	15,437	15,957	18,607	101,226
34							
35 Less - Gas Refills:							
36 LNG Truck	(45,040)	(16,946)	-	-	(49,580)	(14,757)	(126,323)
37 Propane	(72,952)	(67,200)	(62,987)	(61,215)	(65,537)	(73,785)	(403,675)
38 TGP Storage Refill	(1,653,787)	(2,652,348)	(2,811,409)	(2,800,459)	(2,682,456)	(1,503,921)	(14,104,381)
39	(1,771,779)	(2,736,494)	(2,874,396)	(2,861,674)	(2,797,573)	(1,592,462)	(14,634,379)
40							
41 Total Sendout Volumes	4,417,077	2,454,255	1,747,204	1,663,987	2,221,418	4,678,580	17,182,520
42							

Schedule 11A

Page 1 of 1

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2019 Summer Cost of Gas Filing

43 Normal and Design Year Volumes

Schedule 11B

Page 1 of 1

44

46 Volumes (Therms)

Design Year

47

48 For the Months of May 18 -October 18

49

50

51

52 Pipeline Gas:

	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Off Peak May - Oct
53 Dawn Supply	142,098	-	-	-	-	278,456	420,554
54 Niagara Supply	614,064	547,533	530,186	515,272	533,984	621,073	3,362,112
55 TGP Supply (Gulf)	-	-	-	-	-	-	0
56 Dracut Supply 1 - Baseload	-	-	-	-	-	-	0
57 Dracut Supply 2 - Swing	77,392	-	-	-	-	162,968	240,360
58 ENGIE Combo	-	-	-	-	-	-	0
59 LNG Truck	45,040	16,946	-	-	49,580	14,757	126,323
60 Propane Truck	72,952	67,200	62,987	61,215	65,537	73,785	403,675
61 PNGTS	194,750	173,551	168,148	163,418	169,256	196,973	1,066,095
62 Portland Natural Gas	-	-	-	143,719	-	2,162,684	2,306,404
63 TGP Supply (Z4)	4,948,040	4,368,574	3,773,193	3,770,320	4,185,247	4,999,382	26,044,755
64 Subtotal Pipeline Volumes	6,094,336	5,173,803	4,534,514	4,653,944	5,003,604	8,510,078	33,970,278
65							
66 Storage Gas:							
67 TGP Storage	-	-	-	-	-	-	0
68							
69 Produced Gas:							
70 LNG Vapor	18,397	16,946	15,884	15,437	15,957	18,607	101,226
71 Propane	-	-	-	-	-	-	-
72 Subtotal Produced Gas	18,397	16,946	15,884	15,437	15,957	18,607	101,226
73							
74 Less - Gas Refills:							
75 LNG Truck	(45,040)	(16,946)	-	-	(49,580)	(14,757)	(126,323)
76 Propane	(72,952)	(67,200)	(62,987)	(61,215)	(65,537)	(73,785)	(403,675)
77 TGP Storage Refill	(1,648,712)	(2,652,348)	(2,740,207)	(2,800,459)	(2,683,026)	(1,648,282)	(14,173,034)
78 Subtotal Refills	(1,766,704)	(2,736,494)	(2,803,194)	(2,861,674)	(2,798,143)	(1,736,823)	(14,703,033)
79							
80 Total Sendout Volumes	4,346,028	2,454,255	1,747,204	1,807,706	2,221,418	6,791,861	19,368,472



1 **Liberty Utilities (EnergyNorth Natural Gas) Corp.**

Schedule 11C

2  
3 **Off Peak 2019 Summer Cost of Gas Filing**

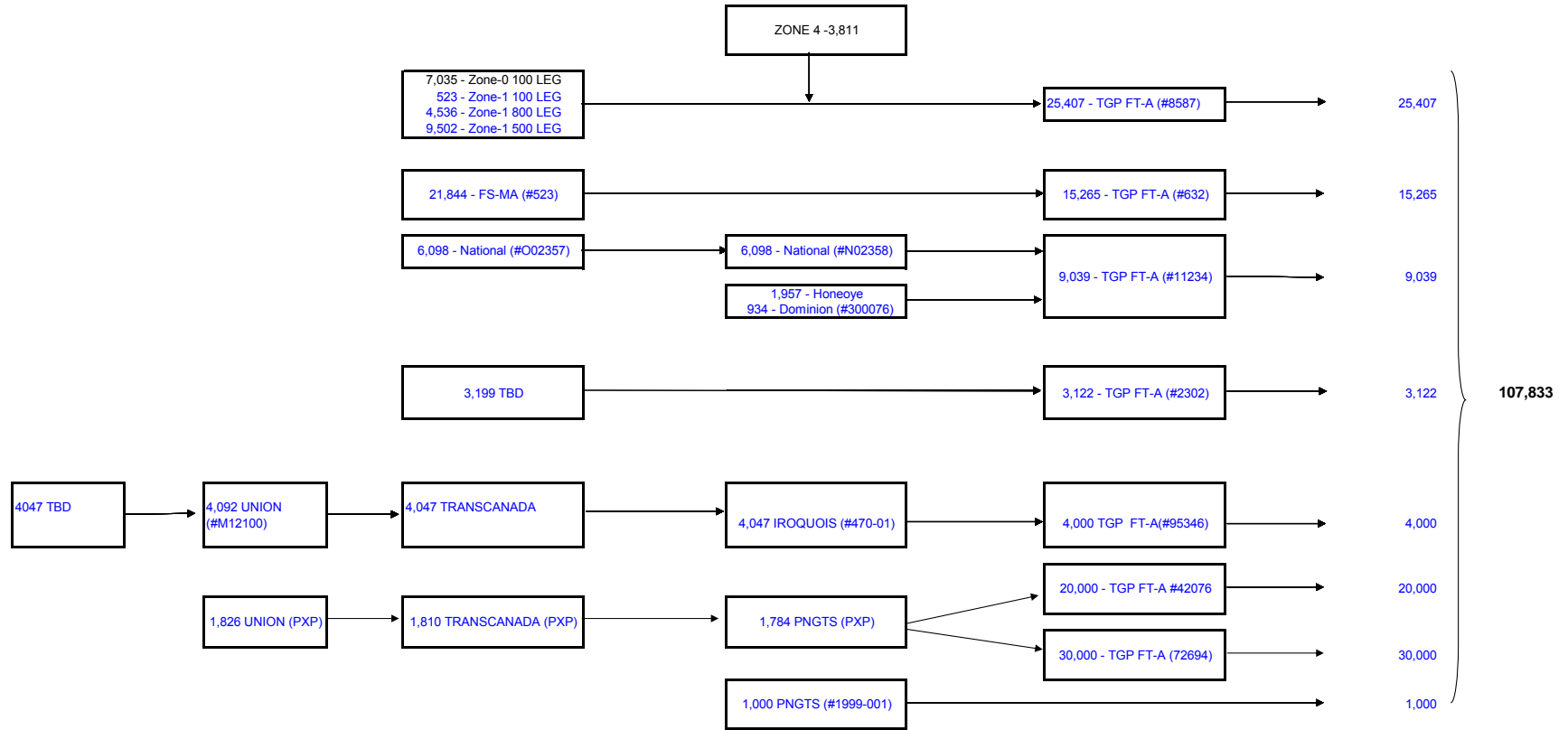
Page 1 of 1

4 **Capacity Utilization**

5 **Volumes (Therms)**

	Off-Peak Period				Off-Peak Period			
	Normal Year		Seasonal	Utilization	Design Year		Seasonal	Utilization
	Use	MDQ	Quantity	Rate	Use	MDQ	Quantity	Rate
	(Therms)	(MMBtu/day)	(Therms)		(Therms)	(MMBtu/day)	(Therms)	
11 <b>Pipeline Gas:</b>								
12 Dawn Supply	277,476	4,000	7,360,000	4%	420,554	4,000	7,360,000	6%
13 Niagara Supply	3,362,112	3,122	5,744,480	59%	3,362,112	3,122	5,744,480	59%
14 TGP Supply (Gulf)	-	21,596	39,736,640	0%	-	21,596	39,736,640	0%
15 Dracut Supply 1 & 2	155,027	50,000	92,000,000	0%	240,360	50,000	92,000,000	0%
16 LNG Truck	126,323	-	-	-	126,323	-	-	-
17 Propane Truck	403,675	-	-	-	403,675	-	-	-
18 PNGTS	1,066,095	1,000	1,840,000	58%	1,066,095	1,000	1,840,000	58%
Portland Natural Gas	204,437	1,784	3,282,560	6%	2,306,404	1,784	3,282,560	70%
19 TGP Supply (Z4)	26,120,528	21,596	39,736,640	66%	26,044,755	21,596	39,736,640	66%
20 Other Purchased Resources	-	-	-	-	-	-	-	-
21								
22 Subtotal Pipeline Volumes	31,715,673				33,970,278			
23								
24 <b>Storage Gas:</b>								
25 0	0		25,792,710	0%	-		25,792,710	0%
26								
27 <b>Produced Gas:</b>								
28 LNG Vapor	101,226				101,226			
29 Propane	-				-			
30								
31 Subtotal Produced Gas	101,226				101,226			
32								
33 <b>Less - Gas Refills:</b>								
34 LNG Truck	(126,323)				(126,323)			
35 Propane	(403,675)				(403,675)			
36 TGP Storage Refill	(14,104,381)				(14,173,034)			
37								
38 Subtotal Refills	(14,634,379)				(14,703,033)			
39								
40 Total Sendout Volumes	17,182,520				19,368,472			

Liberty Utilities (EnergyNorth Natural Gas) Corp.  
Off Peak 2019 Summer Cost of Gas Filing  
Transportation Available for Pipeline Supply and Storage  
(MMBtu)



Liberty Utilities (EnergyNorth Natural Gas) Corp.  
Off Peak 2019 Summer Cost of Gas Filing  
Agreements for Gas Supply and Transportation

SOURCE	RATE SCHEDULE	CONTRACT NUMBER	TYPE	MDQ MMBTU	MAQ * MMBTU	EXPIRATION DATE	NOTIFICATION DATE	RENEWAL OPTIONS
Niagara	NA	NA	Supply	3147	1148655	43555	N/A	Terminates
ANE	NA	NA	Supply	4047	611097	Peak Only	N/A	Terminates
ENGIE	FCS / FLS		Firm Combination	Up to 10	730000	43555	N/A	Terminates
			Liquid and Vapor Svc	trucks		Peak Only		
Dracut or Z6	NA	NA	Supply	Up to 20,000 / day	1412000	43524	N/A	Terminates
TGP Long-Haul	NA	NA	Supply	21596	3908876	43585	N/A	Terminates
Northern Transport	NA	NA	Trucking	28,500 Gallons	900,000 Gallons		N/A	
Dominion Transmission		300076	Storage	934	102700	44286	43555	Mutually agreed upon
Honeoye Storage Corporation	SS-NY	11234	Storage	1957	245380	43921	12 months notice	Evergreen Provision
National Fuel Gas Supply Corporation	FSS	002358	Storage	6098	670800	43921	43555	Evergreen Provision
National Fuel Gas Supply Corporation	FSST	N02358	Transportation	6098	670800	43921	43555	Evergreen Provision
Iroquois Gas Transmission System	RTS	47001	Transportation	4047	1477155	44866	44501	Evergreen Provision
Portland Natural Gas Transmission System	FT	208544	Transportation	1000	365000	43769	43404	Evergreen Provision
Portland Natural Gas Transmission System	FT	PXP	Transportation	1784	651160	43770	0	Precedent Agreement
Tennessee Gas Pipeline Company	FS-MA	523	Storage	21844	1560391	44135	43769	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	8587	Transportation	25407	9273555	44135	43769	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	2302	Transportation	3122	1139530	44135	43769	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	632	Transportation	15265	5571725	44135	43769	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	11234	Transportation	9039	3299235	44135	43769	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	72694	Transportation	30000	10950000	47422	47422	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	95346	Transportation	4000	1460000	44530	44165	Evergreen Provision
Tennessee Gas	FTA	42076	Transportation	20000	7300000	44135	43769	Evergreen Provision
TransCanada Pipeline	FT	41232	Transportation	4047	1477155	44865	44500	Evergreen Provision
TransCanada Pipeline	FT	PXP	Transportation	1810	660650	43770	0	Precedent Agreement
Union Gas Limited	M12	M12200	Transportation	4092	1493580	44865	44135	Evergreen Provision
Union Gas Limited	M12	PXP	Transportation		666490	43770	0	Precedent

\* MAQ is calculated on a 365 day calendar year.

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

2  
3 Off Peak 2019 Summer Cost of Gas Filing

4 Storage Inventory

5  
6 Underground Storage Gas

		May-19 (Estimate)	Jun-19 (Estimate)	Jul-19 (Estimate)	Aug-19 (Estimate)	Sep-19 (Estimate)	Oct-19 (Estimate)	Total
7								
8								
9	Beginning Balance (MMBtu)	221,109	371,273	536,652	801,887	1,083,028	1,363,074	1,951,935
10								
11	Injections (MMBtu) Sch 11A In 38 /10	150,164	165,379	265,235	281,141	280,046	268,246	1,864,099
12								
13	Subtotal	371,273	536,652	801,887	1,083,028	1,363,074	1,631,319	
14								
15	Storage Sale							
16								
17	Withdrawals (MMBtu) Sch 11A In 28 /10	-	-	-	-	-	-	(1,368,064)
18								
19	Ending Balance (MMBtu)	371 273	536 652	801 887	1 083 028	1 363 074	1 631 319	2 447 971
20								
21								
22	Beginning Balance	\$ 571,197	\$ 999,788	\$ 1,475,245	\$ 2,232,925	\$ 3,033,224	\$ 3,803,859	3,609,668
23								
24	Injections In 11 * In 36	428,591	475,457	757,680	800,299	770,635	749,468	5,007,546
25								
26	Subtotal	\$ 999,788	\$ 1,475,245	\$ 2,232,925	\$ 3,033,224	\$ 3,803,859	\$ 4,553,327	
27								
28	Storage Sale							
29								
30	Withdrawals In 17 * In 34	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	(2,634,626)
31								
32	Ending Balance	\$ 999,788	\$ 1,475,245	\$ 2,232,925	\$ 3,033,224	\$ 3,803,859	\$ 4,553,327	\$ 5,982,588
33								
34	Average Rate For Withdrawals In 22 /In 9	\$2.5833	\$2.6929	\$2.7490	\$2.7846	\$2.8007	\$2.7906	
35								
36	TGP Storage Rate for Actual or NYMEX plus TGP Injections Transportation	\$2.8541	\$2.8750	\$2.8566	\$2.8466	\$2.7518	\$2.7940	
37								

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

2  
3 Off Peak 2019 Summer Cost of Gas Filing

4 Storage Inventory

5

39

40 Liquid Propane Gas (LPG)

		May-19 (Estimate)	Jun-19 (Estimate)	Jul-19 (Estimate)	Aug-19 (Estimate)	Sep-19 (Estimate)	Oct-19 (Estimate)	Total
41								
42								
43	Beginning Balance	43,608	43,608	50,903	57,623	63,922	70,043	96,655
44								
45	Injections							
46	Sch 11A In 37 /10	-	7,295	6,720	6,299	6,122	6,554	46,069
47	Subtotal	43,608	50,903	57,623	63,922	70,043	76,597	
48								
49	Withdrawals							
50	Sch 11A In 32 /10	-	-	-	-	-	-	(61,632)
51	Adjustment for change in temperature	-	-	-	-	-	-	-
52	Adjustment for Transfer	-	-	-	-	-	-	-
53	Ending Balance	43,608	50,903	57,623	63,922	70,043	76,597	81,092
54								
55								
56	Beginning Balance	\$ 601,814	\$ 601,814	\$ 601,814	\$ 601,814	\$ 601,814	\$ 601,814	\$ 1,193,497
57								
58	Injections							
59	In 45 * In 68	-	-	-	-	-	-	168,840
60	Subtotal	\$ 601,814	\$ 601,814	\$ 601,814	\$ 601,814	\$ 601,814	\$ 601,814	
61								
62	Withdrawals							
63	In 51 * In 66	-	-	-	-	-	-	(763,126)
64	Ending Balance	\$ 601,814	\$ 601,814	\$ 601,814	\$ 601,814	\$ 601,814	\$ 601,814	\$ 599,211
65								
66	Average Rate For Withdrawals	\$13.8005	\$11.8227	\$10.4439	\$9.4148	\$8.5920	\$7.8569	
67								
68	Propane Rate for Injections							
69	Actual or Sch. 6, In 158 * 10	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	
70								

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

2  
3 Off Peak 2019 Summer Cost of Gas Filing

4 Storage Inventory

5

71  
72 Liquid Natural Gas (LNG)

		May-19 (Estimate)	Jun-19 (Estimate)	Jul-19 (Estimate)	Aug-19 (Estimate)	Sep-19 (Estimate)	Oct-19 (Estimate)	Total
73	Beginning Balance	9,590	7,493	10,157	10,157	8,569	7,025	12,057
74								
75	Injections							
76	Sch 11A In 36 /10	-	4,504	1,695	-	-	4,958	136,105
77								
78	Subtotal	9,590	11,997	11,851	10,157	8,569	11,983	
79								
80	Withdrawals							
81	Sch 11A In 31 /10	(2,097)	(1,840)	(1,695)	(1,588)	(1,544)	(1,596)	(131,743)
82								
83	Ending Balance	7,493	10,157	10,157	8,569	7,025	10,387	16,419
84								
85	Beginning Balance	43,209	33,760	28,583	24,496	20,665	16,942	\$ 135,659
86								
87	Injections							
88	In 76 * In 97	-	-	-	-	-	-	653,097
89								
90	Subtotal	\$ 43,209	\$ 33,760	\$ 28,583	\$ 24,496	\$ 20,665	\$ 16,942	
91								
92	Withdrawals							
93	In 80 * In 95	(9,449)	(5,177)	(4,087)	(3,831)	(3,723)	(2,256)	(771,085)
94								
95	Ending Balance	\$ 33,760	\$ 28,583	\$ 24,496	\$ 20,665	\$ 16,942	\$ 14,686	\$ 17,672
96								
97	Average Rate For Withdrawals	\$4.5058	\$2.8141	\$2.4117	\$2.4117	\$2.4117	\$1.4139	
	LNG Rate for Injections	Actual or Sch. 6, In 157 * 10	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	