

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

3 **Off Peak 2016 Summer Cost of Gas Filing**

4 **Summary of Supply and Demand Forecast**

5	6	7 For Month of:	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Off Peak Period
8	(a)	(b)	(c)	(d)	(e)	(d)	(e)	(f)	(g)	May - Oct
9	<b>I. Gas Volumes (Therms)</b>									(h)
10	<b>A. Firm Demand Volumes</b>									
11	Firm Gas Sales	Sch. 10B, In 23	755,453	3,813,065	2,325,862	1,933,495	2,070,649	3,728,595	5,365,100	19,992,221
12	Lost Gas (Unaccounted for)		71,368	42,217	28,736	27,118	39,385	108,879		317,702
13	Company Use		3,368	1,992	1,356	1,280	1,858	5,138		14,992
14	Unbilled Therms		3,744,672	(1,151,069)	(513,907)	(223,569)	412,760	3,136,811	(5,365,100)	40,597
15	<b>Total Firm Volumes</b>	Sch. 6, In 92	<b>4,574,861</b>	<b>2,706,205</b>	<b>1,842,047</b>	<b>1,738,324</b>	<b>2,524,652</b>	<b>6,979,423</b>		<b>20,365,512</b>
16										
17	<b>B. Supply Volumes (Therms)</b>									
18	<u>Pipeline Gas:</u>									
19	Dawn Supply	Sch. 6, In 63	-	-	-	-	-	814,589		814,589
20	Niagara Supply	Sch. 6, In 64	-	-	-	-	-	221,968		221,968
21	TGP Supply (Gulf)	Sch. 6, In 65	-	-	-	-	-	-		-
22	Dracut Supply 1 - Baseload	Sch. 6, In 66	-	-	-	-	-	-		-
23	Dracut Supply 2 - Swing	Sch. 6, In 67	-	-	-	-	-	-		-
24	City Gate Delivered Supply	Sch. 6, In 68	-	-	-	-	-	-		-
25	LNG Truck	Sch. 6, In 69	23,896	-	-	-	90,396	19,631		133,924
26	Propane Truck	Sch. 6, In 70	78,516	72,510	69,277	70,031	71,202	37,908		399,444
27	PNGTS	Sch. 6, In 71	33,455	22,068	19,879	20,096	24,766	41,970		162,234
28	TGP Supply (Zone 4)	Sch. 6, In 72	6,007,477	4,273,200	3,411,416	3,307,286	4,089,268	6,301,990		27,390,637
29	Subtotal Pipeline Volumes		6,143,345	4,367,778	3,500,572	3,397,412	4,275,632	7,438,057		29,122,796
30										
31	<u>Storage Gas:</u>									
32	TGP Storage	Sch. 6, In 77	120,847	-	-	-	-	1,185,992		1,306,839
33										
34	<u>Produced Gas:</u>									
35	LNG Vapor	Sch. 6, In 80	19,800	17,654	17,470	17,660	17,336	19,631		109,551
36	Propane	Sch. 6, In 81	-	-	-	-	-	-		-
37	Subtotal Produced Gas		19,800	17,654	17,470	17,660	17,336	19,631		109,551
38										
39	<u>Less - Gas Refill:</u>									
40	LNG Truck	Sch. 6, In 86	(23,896)	-	-	-	(90,396)	(19,631)		(133,924)
41	Propane	Sch. 6, In 87	(78,516)	(72,510)	(69,277)	(70,031)	(71,202)	(37,908)		(399,444)
42	TGP Storage Refill	Sch. 6, In 88	(1,606,718)	(1,606,718)	(1,606,718)	(1,606,718)	(1,606,718)	(1,606,718)		(9,640,307)
43	Subtotal Refills		(1,709,131)	(1,679,227)	(1,675,994)	(1,676,749)	(1,768,316)	(1,664,257)		(10,173,675)
44										
45	<b>Total Firm Sendout Volumes</b>	Ins 31 + 34 + 39 + 45	<b>4,574,861</b>	<b>2,706,205</b>	<b>1,842,047</b>	<b>1,738,324</b>	<b>2,524,652</b>	<b>6,979,423</b>		<b>20,365,512</b>
46										
47										
48										

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2016 Summer Cost of Gas Filing  
4 Summary of Supply and Demand Forecast

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7 For Month of: May-16 Jun-16 Jul-16 Aug-16 Sep-16 Oct-16 Nov-16 Off Peak Period  
May - Oct

49 II. Gas Costs

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51 A. Demand Costs

52 Supply

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

58 Pipeline:

59 Iroquois Gas Trans Service RTS 470-0 Sch.5A, In 16  
60 Tenn Gas Pipeline 95346 Z5-Z6 Sch.5A, In 17  
61 Tenn Gas Pipeline 2302 Z5-Z6 Sch.5A, In 18  
62 Tenn Gas Pipeline 8587 Z0-Z6 Sch.5A, In 19  
63 Tenn Gas Pipeline 8587 Z1-Z6 Sch.5A, In 20  
64 Tenn Gas Pipeline 8587 Z4-Z6 Sch.5A, In 21  
65 Tenn Gas Pipeline (Dracut) 42076 Z6-Z6 Sch.5A, In 22  
66 Tenn Gas Pipeline (Concord Lateral) Z6-Z6 Sch.5A, In 23  
67 Portland Natural Gas Trans Service Sch.5A, In 24  
68 ANE (TransCanada via Union to Iroquois) Sch.5A, In 25  
69 Tenn Gas Pipeline Z4-Z6 stg 632 Sch.5A, In 26  
70 Tenn Gas Pipeline Z4-Z6 stg 11234 Sch.5A, In 27  
71 Tenn Gas Pipeline Z5-Z6 stg 11234 Sch.5A, In 28  
72 National Fuel FST 2358 Sch.5A, In 29

73 Subtotal Pipeline Demand	\$ 1,169,108	\$ 1,175,693	\$ 1,175,693	\$ 1,175,693	\$ 1,175,693	\$ 1,175,693	\$ 1,175,693	\$ 7,047,571
74 Less Capacity Credit	(405,542)	(407,826)	(407,826)	(407,826)	(407,826)	(407,826)	(407,826)	(2,444,669)
75 Net Pipeline Demand Costs	\$ 763,567	\$ 767,867	\$ 767,867	\$ 767,867	\$ 767,867	\$ 767,867	\$ 767,867	\$ 4,602,902

77 Peaking Supply:

78 Tenn Gas Pipeline (Concord Lateral) Z6-Z6 Sch.5A, In 34  
79 Granite Ridge Demand Sch.5A, In 35  
80 DOMAC Demand NSB041 Sch.5A, In 36  
81 Subtotal Peaking Demand  
82 Less Capacity Credit  
83 Net Peaking Supply Demand Costs

85 Storage:

86 Dominion - Demand Sch.5A, In 46  
87 Dominion - Storage Sch.5A, In 47  
88 Honeoye - Demand Sch.5A, In 48  
89 National Fuel - Demand Sch.5A, In 49  
90 National Fuel - Capacity Sch.5A, In 50  
91 Tenn Gas Pipeline - Demand Sch.5A, In 51  
92 Tenn Gas Pipeline - Capacity Sch.5A, In 52

93 Subtotal Storage Demand	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
94 Less Capacity Credit	-	-	-	-	-	-	-	-
95 Net Storage Demand Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

97 Total Demand Charges	Ins 54 + 73 + 81 + 93	\$ 1,169,108	\$ 1,175,693	\$ 1,175,693	\$ 1,175,693	\$ 1,175,693	\$ 1,175,693	\$ 7,047,571
98 Total Capacity Credit	Ins 55 + 74 + 82 + 94	(405,542)	(407,826)	(407,826)	(407,826)	(407,826)	(407,826)	(2,444,669)
99 Net Demand Charges		\$ 763,567	\$ 767,867	\$ 767,867	\$ 767,867	\$ 767,867	\$ 767,867	\$ 4,602,902

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1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2016 Summer Cost of Gas Filing  
4 Summary of Supply and Demand Forecast

		May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Off Peak Period May - Oct
7	For Month of:								REDACTED
102	<b>B. Commodity Costs</b>								
103	<u>Pipeline:</u>								
104	Dawn Supply	Sch. 6, In 12							
105	Niagara Supply	Sch. 6, In 13							
106	TGP Supply (Gulf)	Sch. 6, In 14							
107	Dracut Supply 1 - Baseload	Sch. 6, In 15							
108	Dracut Supply 2 - Swing	Sch. 6, In 16							
109	City Gate Delivered Supply	Sch. 6, In 17							
110	LNG Truck	Sch. 6, In 18							
111	Propane Truck	Sch. 6, In 19							
112	PNGTS	Sch. 6, In 20							
113	TGP Supply (Zone 4)	Sch. 6, In 21							
114	Subtotal Pipeline Commodity Costs								
115		\$ 751,994	\$ 570,119	\$ 483,441	\$ 483,213	\$ 602,812	\$ 1,162,834		\$ 4,054,414
116	<u>Storage:</u>								
117	TGP Storage - Withdrawals	Sch. 6, In 47							
118		\$ 23,295	\$ -	\$ -	\$ -	\$ -	\$ 217,366		\$ 240,661
119	<u>Produced Gas Costs:</u>								
120	LNG Vapor	Sch. 6, In 50							
121	Propane	Sch. 6, In 51							
122	Subtotal Produced Gas Costs								
123		\$ 5,855	\$ 4,437	\$ 4,390	\$ 4,438	\$ 4,357	\$ 2,413		\$ 25,890
124	<u>Less Storage Refills:</u>								
125	LNG Truck	Sch. 6, In 37							
126	Propane	Sch. 6, In 38							
127	TGP Storage Refill	Sch. 6, In 39							
128	Storage Refill (Trans.)	Sch. 6, In 40							
129	Subtotal Storage Refill								
130		\$ (359,995)	\$ (373,611)	\$ (386,666)	\$ (393,925)	\$ (396,589)	\$ (402,339)		\$ (2,313,123)
131	Total Supply Commodity Costs								
132		\$ 421,150	\$ 200,945	\$ 101,165	\$ 93,726	\$ 210,580	\$ 980,274		\$ 2,007,841
133	<b>C. Supply Volumetric Transportation Costs</b>								
134	Dawn Supply	Sch. 6, In 26							
135	Niagara Supply	Sch. 6, In 27							
136	TGP Supply (Zone 4)	Sch. 6, In 28							
137	Dracut Supply 1 - Baseload	Sch. 6, In 29							
138	Dracut Supply 2 - Swing	Sch. 6, In 30							
139	Subtotal Pipeline Volumetric Trans. Costs								
140		\$ 70,127	\$ 50,180	\$ 40,289	\$ 39,183	\$ 48,504	\$ 80,242		\$ 328,525
141	TGP Storage - Withdrawals	Sch. 6, In 32							
142		\$ 1,587	\$ -	\$ -	\$ -	\$ -	\$ 15,475		\$ 17,061
143	Total Supply Volumetric Trans. Costs	Ins 139 + 141							
144		\$ 71,713	\$ 50,180	\$ 40,289	\$ 39,183	\$ 48,504	\$ 95,717		\$ 345,587
145	Total Commodity Gas & Trans. Costs	Ins 131 + 143							
146		\$ 492,863	\$ 251,125	\$ 141,455	\$ 132,910	\$ 259,085	\$ 1,075,991		\$ 2,353,428

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1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

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4 Summary of Supply and Demand Forecast

7 For Month of:		May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Off Peak Period May - Oct
148	<b>D. Supply and Demand Costs by Source</b>								<b>REDACTED</b>
150	<u>Purchased Gas Demand Costs</u>								
151	Pipeline Gas Demand Costs	In 54 + 73	\$ 1,169,108	\$ 1,175,693	\$ 1,175,693	\$ 1,175,693	\$ 1,175,693	\$ 1,175,693	\$ 7,047,571
152	Peaking Gas Demand Costs	In 81	-	-	-	-	-	-	-
153	Subtotal Purchased Gas Demand Costs		\$ 1,169,108	\$ 1,175,693	\$ 1,175,693	\$ 1,175,693	\$ 1,175,693	\$ 1,175,693	\$ 7,047,571
154	Less Capacity Credit	In 55 + 74 + 82	(405,542)	(407,826)	(407,826)	(407,826)	(407,826)	(407,826)	(2,444,669)
155	Net Purchased Gas Demand Costs		\$ 763,567	\$ 767,867	\$ 767,867	\$ 767,867	\$ 767,867	\$ 767,867	\$ 4,602,902
157	<u>Storage Gas Demand Costs</u>								
158	Storage Demand	In 93	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
159	Less Capacity Credit	In 94	-	-	-	-	-	-	-
160	Net Storage Demand Costs		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
162	<b>Total Demand Costs</b>	In 155 + 160	\$ 763,567	\$ 767,867	\$ 767,867	\$ 767,867	\$ 767,867	\$ 767,867	\$ 4,602,902
164	<u>Purchased Gas Supply</u>								
165	Commodity Costs	In 114	\$ 751,994	\$ 570,119	\$ 483,441	\$ 483,213	\$ 602,812	\$ 1,162,834	\$ 4,054,414
166	Less Storage Inj.(TGP Storage)	In 127							
167	Less Storage Transportation	In 128							
168	Less LNG Truck	In 125							
169	Less Propane Truck	In 126							
170	Plus Transportation Costs	In 139							
171	Subtotal Purchased Gas Supply		\$ 462,126	\$ 246,688	\$ 137,064	\$ 128,472	\$ 254,728	\$ 840,737	\$ 2,069,816
173	<u>Storage Commodity Costs</u>								
174	Commodity Costs	In 117	\$ 23,295	\$ -	\$ -	\$ -	\$ -	\$ 217,366	\$ 240,661
175	Transportation Costs	In 141	1,587	-	-	-	-	15,475	17,061
176	Subtotal Storage Commodity Costs		\$ 24,882	\$ -	\$ -	\$ -	\$ -	\$ 232,840	\$ 257,722
178	<u>Produced Gas Commodity Costs</u>	In 122	\$ 5,855	\$ 4,437	\$ 4,390	\$ 4,438	\$ 4,357	\$ 2,413	\$ 25,890
180	<b>Subtotal Commodity Costs</b>	In 171 + 176 + 178	\$ 492,863	\$ 251,125	\$ 141,455	\$ 132,910	\$ 259,085	\$ 1,075,991	\$ 2,353,428
182	Hedge Contract (Savings)/Loss	Sch 7, In 32	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
184	<b>Total Commodity Costs</b>	In 180 + 182	\$ 492,863	\$ 251,125	\$ 141,455	\$ 132,910	\$ 259,085	\$ 1,075,991	\$ 2,353,428
186	<b>Total Demand Costs</b>	In 99	\$ 763,567	\$ 767,867	\$ 767,867	\$ 767,867	\$ 767,867	\$ 767,867	\$ 4,602,902
187	<b>Total Supply Costs</b>	In 184	492,863	251,125	141,455	132,910	259,085	1,075,991	2,353,428
189	<b>Total Direct Gas Costs</b>	In 186 + 187	\$ 1,256,430	\$ 1,018,992	\$ 909,322	\$ 900,777	\$ 1,026,952	\$ 1,843,858	\$ 6,956,330

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1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

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3 Off Peak 2016 Summer Cost of Gas Filing

4 Contracts Ranked on a per Unit Cost Basis

5	6	7	8	9	10	11
	Supplier	Contract	Contract Type	Contract Unit	Unit Dth (MDQ/ACQ)	Off Peak Cost per Unit Dth
	(a)	(b)	(c)	(d)	(e)	(f)

9 Demand Costs

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	Honeoye - Demand	SS-NY	Storage	MDQ	1,362	
21	Iroquois Gas Trans Service	RTS 470-01	Transportation	MDQ	4,047	
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	Tenn Gas Pipeline (long haul)	8587 Z1-Z6	Transportation	MDQ	14,561	
31	Tenn Gas Pipeline (long haul)	8587 Z0-Z6	Transportation	MDQ	7,035	
32	Portland Natural Gas Trans Service	FT-1999-001	Transportation	MDQ	1,000	

34 Supply Costs - Commodity

35	LNG Truck		Pipeline	Dkt	13,392	
36	TGP Supply (Zone 4)		Pipeline	Dkt	2,739,064	
37	Niagara Supply		Pipeline	Dkt	22,197	
38	TGP Supply (Gulf)		Pipeline	Dkt	-	
39	Dawn Supply		Pipeline	Dkt	81,459	
40	LNG Vapor (Storage)		Produced	Dkt	10,955	
41	TGP Citygate Supply		Pipeline	Dkt	-	
42	Dracut Supply 2 - Swing		Pipeline	Dkt	-	
43	PNGTS		Pipeline	Dkt	16,223	
44	Dracut Supply 1 - Baseload		Pipeline	Dkt	-	
45	Propane		Pipeline	Dkt	-	

47 Supply Costs - Volumetric Transportation

48	Dracut Supply 1 - Baseload		Pipeline	Dkt	-	
49	TGP Supply (Zone 4)		Pipeline	Dkt	-	
50	Dracut Supply 2 - Swing		Pipeline	Dkt	-	
51	Dawn Supply		Storage	Dkt	81,459	
52	Niagara Supply		Pipeline	Dkt	22,197	

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1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2016 Summer Cost of Gas Filing

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

		Prior Period Balance	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Off Peak Period	
		Plus Nov Collections	30	31	31	28	31	30	31	30	31	31	30	31	30	Total	
(a)	Days in Month	October 31, 2015	(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/	\$ 1,995,269	\$ 963,754	\$ 966,329	\$ 968,996	\$ 1,298,904	\$ 1,302,142	\$ 1,305,737	\$ 1,309,493	\$ 782,922	\$ 747,744	\$ 940,669	\$ 1,166,176	\$ 1,211,073	\$ 332,099	\$ 1,995,269
12	Forecast Direct Gas Costs		-	-	-	-	-	-	-	1,256,430	1,018,992	909,322	900,777	1,026,952	1,843,858	-	6,956,330
13	Production & Storage & Misc Overhead		-	-	-	-	-	-	-	444	444	444	444	444	444	-	2,663
14	Projected Revenues w/o Int.	In 52 * In 62	-	-	-	-	-	-	-	(299,915)	(1,513,787)	(923,367)	(767,598)	(822,048)	(1,480,252)	(2,129,945)	(7,936,912)
15	Projected Unbilled Revenue	In 56 * In 62	-	-	-	-	-	-	-	(1,486,635)	(1,029,660)	(825,639)	(736,882)	(900,748)	(2,146,062)	-	(7,125,627)
16	Reverse Prior Month Unbilled		-	-	-	-	-	-	-	-	1,486,635	1,029,660	825,639	736,882	900,748	2,146,062	7,125,627
17	Add Net Adjustments (with TGP Refund)		1,514,946	-	-	326,782	-	-	-	-	-	-	-	-	-	-	326,782
18	Gas Cost Billed	Account 1920-1741 2/	(2,546,460)	-	-	-	-	-	-	-	-	-	-	-	-	-	(2,546,460)
19	Monthly (Over)/Under Recovery		\$ 963,754	\$ 963,754	\$ 966,329	\$ 1,295,778	\$ 1,298,904	\$ 1,302,142	\$ 1,305,737	\$ 779,817	\$ 745,546	\$ 938,164	\$ 1,163,049	\$ 1,207,658	\$ 329,808	\$ 348,216	\$ (1,202,328)
20	Average Monthly Balance	(In 11 + 19) / 2	\$ -	\$ 963,754	\$ 966,329	\$ 1,132,387	\$ 1,298,904	\$ 1,302,142	\$ 1,305,737	\$ 1,044,655	\$ 764,234	\$ 842,954	\$ 1,051,859	\$ 1,186,917	\$ 770,441	\$ 340,157	
22	Interest Rate	Prime Rate		3.25%	3.25%	3.25%	3.25%	3.25%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%		
24	Interest Applied	In 20 * In 22 /365 *Days/Mo.		\$ 2,574	\$ 2,667	\$ 3,126	\$ 3,238	\$ 3,594	\$ 3,756	\$ 3,105	\$ 2,198	\$ 2,506	\$ 3,127	\$ 3,414	\$ 2,290	\$ -	\$ 35,597
26	<b>(Over)/Under Balance</b>	In 19 + In 24	\$ 963,754	\$ 966,329	\$ 968,996	\$ 1,298,904	\$ 1,302,142	\$ 1,305,737	\$ 1,309,493	\$ 782,922	\$ 747,744	\$ 940,669	\$ 1,166,176	\$ 1,211,073	\$ 332,099	\$ 348,216	(1,166,730)
<b>Calculation of COG with Interest</b>																	
31	Beginning Balance	In 11	\$ 1,995,269	\$ 963,754	\$ 966,329	\$ 968,996	\$ 1,298,904	\$ 1,302,142	\$ 1,305,737	\$ 1,309,493	\$ 779,321	\$ 742,004	\$ 933,464	\$ 1,157,584	\$ 1,200,471	\$ 315,968	\$ 1,995,269
32	Forecast Direct Gas Costs	In 12	-	-	-	-	-	-	-	1,256,430	1,018,992	909,322	900,777	1,026,952	1,843,858	-	6,956,330
33	Prod Storage & Misc Overhead	In 13	-	-	-	-	-	-	-	444	444	444	444	444	444	-	2,663
34	Projected Revenues with int.	In 52 * 64	-	-	-	-	-	-	-	(300,519)	(1,516,837)	(925,228)	(769,144)	(823,704)	(1,483,235)	(2,134,237)	(7,952,906)
35	Projected Unbilled Revenue	In 56 * 64	-	-	-	-	-	-	-	(1,489,631)	(1,031,735)	(827,303)	(738,367)	(902,563)	(2,150,386)	-	(7,139,986)
36	Reverse Prior Month Unbilled		-	-	-	-	-	-	-	-	1,489,631	1,031,735	827,303	738,367	902,563	2,150,386	7,139,986
37	Add Net Adjustments	In 17	1,514,946	-	-	326,782	-	-	-	-	-	-	-	-	-	-	1,841,728
38	Gas Cost Billed	In 18	(2,546,460)	-	-	-	-	-	-	-	-	-	-	-	-	-	(2,546,460)
39	Gas Cost Unbilled		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	Reverse Prior Month Unbilled		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	Add Interest	In 24	-	-	-	-	-	-	-	3,105	2,198	2,506	3,127	3,414	2,290	-	16,641
42	<b>(Over)/Under Balance</b>		\$ 963,754	\$ 963,754	\$ 966,329	\$ 1,295,778	\$ 1,298,904	\$ 1,302,142	\$ 1,305,737	\$ 779,322	\$ 742,014	\$ 933,479	\$ 1,157,602	\$ 1,200,494	\$ 316,004	\$ 332,118	\$ 313,266
44	Average Monthly Balance		\$ 963,754	\$ 966,329	\$ 1,132,387	\$ 1,298,904	\$ 1,302,142	\$ 1,305,737	\$ 1,044,407	\$ 760,668	\$ 837,741	\$ 1,045,533	\$ 1,179,039	\$ 758,238			
46	Interest Applied	In 22 * In 44 /365 *Days/Mo.		2,574	2,667	3,126	3,238	3,594	3,756	3,105	2,188	2,490	3,108	3,392	2,254	-	\$ 35,493
48	<b>(Over)/Under Balance</b>	In 41 +In 42 + In 46	\$ 963,754	\$ 966,329	\$ 968,996	\$ 1,298,904	\$ 1,302,142	\$ 1,305,737	\$ 1,309,493	\$ 779,321	\$ 742,004	\$ 933,464	\$ 1,157,584	\$ 1,200,471	\$ 315,968	\$ 332,118	332,118
51	Forecast Sendout Therms	Sch 1							4,574,861	2,706,205	1,842,047	1,738,324	2,524,652	6,979,423			20,365,512
52	Less Forecast Billing Therm Sales	Sch. 10B, In 23 May - Oct							755,453	3,813,065	2,325,862	1,933,495	2,070,649	3,728,595	5,365,100		19,992,221
53	Less Forecast Unaccounted For	Sch 1							71,368	42,217	28,736	27,118	39,385	108,879			317,702
54	Less Forecast Company Use	Sch 1							3,368	1,992	1,356	1,280	1,858	5,138			14,992
55	Unbilled Volumes								3,744,672	(1,151,069)	(513,907)	(223,569)	412,760	3,136,811	(5,365,100)		40,597
56	Gross Unbilled								3,744,672	2,593,603	2,079,696	1,856,127	2,268,887	5,405,698			40,597
58	Beg Balance								-	3,744,672	2,593,603	2,079,696	1,856,127	2,268,887	5,405,698		5,405,698
59	Incremental								3,744,672	(1,151,069)	(513,907)	(223,569)	412,760	3,136,811	(5,365,100)		40,597
60	Ending Balance								3,744,672	2,593,603	2,079,696	1,856,127	2,268,887	5,405,698			40,597
62	COG w/o Interest	Sch. 3, pg. 4, In 20 col. (c)							\$0.3970	\$0.3970	\$0.3970	\$0.3970	\$0.3970	\$0.3970	\$0.3970		\$0.3970
63	COG With Interest	Sch. 3, pg. 4, In 20 col. (d)							\$0.3978	\$0.3978	\$0.3978	\$0.3978	\$0.3978	\$0.3978	\$0.3978		\$0.3978

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2016 Summer Cost of Gas Filing

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

	Days in Month	Prior Period Balance Plus Nov Collections October 31, 2015	Nov-15 30	Dec-15 31	Jan-16 31	Feb-16 28	Mar-16 31	Apr-16 30	May-16 31	Jun-16 30	Jul-16 31	Aug-16 31	Sep-16 30	Oct-16 31	Nov-16 30	Off Peak Period Total	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	
<b>Account 8840-2-0000-10-1163-1424 (formerly, 142.40) Working Capital (Over)/Under Balance - Interest Calculation</b>																	
76	Beginning Balance	Account 1163-1424 1/	\$ 14,081	\$ 14,110	\$ 14,147	\$ 14,187	\$ 10,796	\$ 10,823	\$ 10,853	\$ 10,884	\$ 7,230	\$ 5,449	\$ 4,534	\$ 3,727	\$ 2,161	\$ (3,556)	\$ 14,081
78	Days Lag									0.0391	0.0391	0.0391	0.0391	0.0391	0.0391	0.0391	
79	Prime Rate									3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	
80	Forecast Working Capital	In 32 * In 78 / 365 * In 79								1,720	1,395	1,245	1,233	1,406	2,524		9,521
82	Projected Revenues w/o Int.	In 121 * In 124								(907)	(4,576)	(2,791)	(2,320)	(2,485)	(4,474)	(6,438)	(23,991)
83	Projected Unbilled Revenue	In 122 * In 124								(4,494)	(3,112)	(2,496)	(2,227)	(2,723)	(6,487)		(21,538)
84	Reverse Prior Month Unbilled										4,494	3,112	2,496	2,227	2,723	6,487	21,538
86	Add Net Adjustments		1,896			(3,425)											(1,529)
88	Working Capital Billed	Account 1163-1424 2/	(1,867)														(1,867)
90	Monthly (Over)/Under Recovery		\$ 14,110	\$ 14,110	\$ 14,147	\$ 10,762	\$ 10,796	\$ 10,823	\$ 10,853	\$ 7,203	\$ 5,431	\$ 4,519	\$ 3,715	\$ 2,153	\$ (3,554)	\$ (3,507)	\$ (3,785)
92	Average Monthly Balance	(In 76 + 90) / 2	\$ 14,095	\$ 14,147	\$ 12,474	\$ 10,796	\$ 10,823	\$ 10,853	\$ 9,044	\$ 6,331	\$ 4,984	\$ 4,124	\$ 2,940	\$ (696)			
94	Interest Rate	Prime Rate	3.25%	3.25%	3.25%	3.25%	3.25%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%			
96	Interest Applied	In 92 * In 94 / 365 * Days of Month	\$ 38	\$ 39	\$ 34	\$ 27	\$ 30	\$ 31	\$ 27	\$ 18	\$ 15	\$ 12	\$ 8	\$ (2)			\$ 278
98	(Over)/Under Balance	In 90 + In 96	\$ 14,110	\$ 14,147	\$ 14,187	\$ 10,796	\$ 10,823	\$ 10,853	\$ 10,884	\$ 7,230	\$ 5,449	\$ 4,534	\$ 3,727	\$ 2,161	\$ (3,556)	\$ (3,507)	\$ (3,507)
<b>Calculation of Working Capital with Interest</b>																	
103	Beginning Balance		\$ 14,081	\$ 14,110	\$ 14,147	\$ 14,187	\$ 10,796	\$ 10,823	\$ 10,853	\$ 10,884	\$ 7,230	\$ 5,449	\$ 4,534	\$ 3,727	\$ 2,161	\$ (3,556)	\$ 14,081
104	Forecast Working Capital	In 80								1,720	1,395	1,245	1,233	1,406	2,524		9,521
105	Projected Rev. with interest	In 121 * In 126								(907)	(4,576)	(2,791)	(2,320)	(2,485)	(4,474)	(6,438)	(23,991)
106	Projected Unbilled Revenue	In 122 * In 126								(4,494)	(3,112)	(2,496)	(2,227)	(2,723)	(6,487)		(21,538)
107	Reverse Prior Month Unbilled										4,494	3,112	2,496	2,227	2,723	6,487	21,538
108	Add Net Adjustments	In 86	1,896														1,896
109	Working Capital Billed	In 88	(1,867)			(3,425)											(5,292)
110	WC Unbilled																
111	Reverse WC Unbilled																
112	Add Interest	In 96								27	18	15	12	8	(2)		79
113	Monthly (Over)/Under Recovery		\$ 14,110	\$ 14,110	\$ 14,147	\$ 10,762	\$ 10,796	\$ 10,823	\$ 10,853	\$ 7,230	\$ 5,449	\$ 4,534	\$ 3,727	\$ 2,161	\$ (3,556)	\$ (3,507)	\$ (3,707)
115	Average Monthly Balance		\$ 14,095	\$ 14,147	\$ 12,474	\$ 10,796	\$ 10,823	\$ 10,853	\$ 9,057	\$ 6,340	\$ 4,991	\$ 4,130	\$ 2,944	\$ (698)			
117	Interest Applied	In 94 * In 115 / 365 * Days of Month	\$ 38	\$ 39	\$ 34	\$ 27	\$ 30	\$ 31	\$ 27	\$ 18	\$ 15	\$ 12	\$ 8	\$ (2)			\$ 278
119	(Over)/Under Balance	-In 112 +In 113 + In 117	\$ 14,110	\$ 14,147	\$ 14,187	\$ 10,796	\$ 10,823	\$ 10,853	\$ 10,884	\$ 7,230	\$ 5,449	\$ 4,534	\$ 3,727	\$ 2,161	\$ (3,556)	\$ (3,507)	\$ (3,507)
121	Forecast Therm Sales	In 51								755,453	3,813,065	2,325,862	1,933,495	2,070,649	3,728,595	5,365,100	19,992,221
122	Unbilled Therm	In 53								3,744,672	2,593,603	2,079,696	1,856,127	2,268,887	5,405,698	40,597	
124	Working Cap. Rate w/out Int.	Sch. 3, pg. 4, In 37 col. (c)							\$0.0012	\$0.0012	\$0.0012	\$0.0012	\$0.0012	\$0.0012	\$0.0012	\$0.0012	
126	Working Capital Rate w/ Int.	Sch. 3, pg. 4, In 37 col. (d)							\$0.0012	\$0.0012	\$0.0012	\$0.0012	\$0.0012	\$0.0012	\$0.0012	\$0.0012	

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2016 Summer Cost of Gas Filing

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

		Prior Period Balance Plus Nov Collections October 31, 2015	Nov-15 30	Dec-15 31	Jan-16 31	Feb-16 28	Mar-16 31	Apr-16 30	May-16 31	Jun-16 30	Jul-16 31	Aug-16 31	Sep-16 30	Oct-16 31	Nov-16 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 8840-2-0000-10-1163-1754 (formerly, 175.54) Bad Debt (Over)/Under Balance - Interest Calculation</b>																	
137	Forecast Direct Gas Costs	In 32	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,256,430	\$ 1,018,992	\$ 909,322	\$ 900,777	\$ 1,026,952	\$ 1,843,858	\$ -	6,956,330	
	In 104 + (May includes prior period )																
138	Forecast Working Capital		-	-	-	-	-	-	15,829	1,395	1,245	1,233	1,406	2,524	-	23,631	
139	Prior Period Balance (with Refund)	In 19 / 6							160,626	160,626	160,626	160,626	160,626	160,626		963,754	
140	Total Forecast Direct Gas Costs & Working Capital		-	-	-	-	-	-	1,432,885	1,181,012	1,071,192	1,062,635	1,188,983	2,007,007	-	6,979,961	
141																	
142	<b>Beginning Balance</b>	Account 1163-1754 1/ <b>Oct Collections &amp; Unbilled</b>	\$ (86,856)	\$ (86,972)	\$ (87,212)	\$ (102,775)	\$ (103,031)	\$ (103,316)	\$ (103,613)	\$ (99,432)	\$ (82,544)	\$ (59,846)	\$ (36,159)	\$ (16,756)	\$ (17,612)	\$ -	
143		In 140 * 0.0427							61,184	50,429	45,740	45,375	50,770	85,699		339,197	
144	Forecast Bad Debt		-	-	-	-	-	-									
145	Projected Revenues w/o int	In 182 * In 185							(9,519)	(48,045)	(29,306)	(24,362)	(26,090)	(46,980)	(67,600)	(251,902)	
146	Projected Unbilled Revenue	In 183 * In 185							(47,183)	(32,679)	(26,204)	(23,387)	(28,588)	(68,112)		(226,153)	
147	Reverse Prior Month Unbilled									47,183	32,679	26,204	23,387	28,588	68,112	226,153	
148																	
149	Bad Debt Billed	Account 1163-1754 2/ Add Net Adjustments	(9,064) (77,792)	-	(15,301)	-	-	-								(24,365) (77,792)	
150																	
151	Monthly (Over)/Under Recovery		\$ (86,856)	\$ (86,972)	\$ (87,212)	\$ (102,775)	\$ (103,031)	\$ (103,316)	\$ (99,130)	\$ (82,544)	\$ (59,634)	\$ (36,016)	\$ (16,680)	\$ (17,561)	\$ (17,100)	\$ (14,862)	
152																	
153	Average Monthly Balance	(In 142 + 153) / 2	\$ (43,428)	\$ (86,972)	\$ (94,863)	\$ (102,775)	\$ (103,031)	\$ (103,316)	\$ (101,372)	\$ (90,988)	\$ (71,089)	\$ (47,931)	\$ (26,419)	\$ (17,158)	\$ (17,356)		
154																	
155	Interest Rate	Prime Rate	3.25%	3.25%	3.25%	3.25%	3.25%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%			
156																	
157	Interest Applied	In 155 * In 157 / 365 * Days of Mo.	\$ (116)	\$ (240)	\$ (262)	\$ (256)	\$ (284)	\$ (297)	\$ (301)	\$ (262)	\$ (211)	\$ (142)	\$ (76)	\$ (51)		\$ (2,500)	
158																	
159	<b>(Over)/Under Balance</b>	In 153 + In 159	\$ (86,856)	\$ (86,972)	\$ (87,212)	\$ (102,775)	\$ (103,031)	\$ (103,316)	\$ (99,432)	\$ (82,805)	\$ (59,846)	\$ (36,159)	\$ (16,756)	\$ (17,612)	\$ (17,356)	\$ (17,362)	
160																	
161																	
162	<b>Calculation of Bad Debt with Interest</b>																
163																	
164	<b>Beginning Balance</b>		\$ -	\$ (86,856)	\$ (86,972)	\$ (87,212)	\$ (102,775)	\$ (103,031)	\$ (103,613)	\$ (99,432)	\$ (82,806)	\$ (60,109)	\$ (36,423)	\$ (17,022)	\$ (17,878)	\$ -	
165	Forecast Bad Debt	In 144							61,184	50,429	45,740	45,375	50,770	85,699		339,197	
166	Projected Revenues with int.	In 182 * 187							(9,519)	(48,045)	(29,306)	(24,362)	(26,090)	(46,980)	(67,600)	(251,902)	
167	Projected Unbilled Revenue	In 183 * 187							(47,183)	(32,679)	(26,204)	(23,387)	(28,588)	(68,112)		(226,153)	
168	Reverse Prior Month Unbilled									47,183	32,679	26,204	23,387	28,588	68,112	226,153	
169	Bad Debt Billed	In 150	(9,064)	-	(15,301)	-	-	-								(24,365)	
170	Add Interest	In 159	-	-	-	-	-	-	(301)	(262)	(211)	(142)	(76)	(51)	-	(1,044)	
171	Add Net Adjustments	In 151	(77,792)	-	-	-	-	-								(77,792)	
172	Monthly (Over)/Under Recovery		\$ (86,856)	\$ (86,972)	\$ (87,212)	\$ (102,775)	\$ (103,031)	\$ (103,316)	\$ (99,432)	\$ (82,806)	\$ (60,108)	\$ (36,422)	\$ (17,021)	\$ (17,877)	\$ (17,367)	\$ (15,906)	
173																	
174	Average Monthly Balance	(In 166 + 174) / 2	\$ (43,428)	\$ (86,972)	\$ (94,863)	\$ (102,775)	\$ (103,031)	\$ (103,316)	\$ (101,522)	\$ (91,119)	\$ (71,457)	\$ (48,266)	\$ (26,722)	\$ (17,449)	\$ (17,623)		
175																	
176	Interest Applied	In 157 * In 176 / 365 * Days of Month	(116)	(240)	(262)	(256)	(284)	(297)	(302)	(262)	(212)	(143)	(77)	(52)	-	\$ (2,504)	
177																	
178	<b>(Over)/Under Balance</b>	-In 172 +In 174 + In 178	\$ (86,856)	\$ (86,972)	\$ (87,212)	\$ (102,775)	\$ (103,031)	\$ (103,316)	\$ (99,432)	\$ (82,806)	\$ (60,109)	\$ (36,423)	\$ (17,022)	\$ (17,878)	\$ (17,367)	\$ (17,366)	
179																	
180	Forecast Therm Sales	In 51							755,453	3,813,065	2,325,862	1,933,495	2,070,649	3,728,595	5,365,100	19,992,221	
181	Unbilled Therm	In 53							3,744,672	2,593,603	2,079,696	1,856,127	2,268,887	5,405,698			
182																	
183	COG Rate Without Interest	Sch. 3, pg. 4, In 54 col. (c)							\$0.0126	\$0.0126	\$0.0126	\$0.0126	\$0.0126	\$0.0126	\$0.0126	\$0.0126	
184																	
185	COG With Interest	Sch. 3, pg. 4, In 54 col. (d)							\$0.0126	\$0.0126	\$0.0126	\$0.0126	\$0.0126	\$0.0126	\$0.0126	\$0.0126	
186																	
187																	
1																	
2	<b>Total Interest</b>	In 46 + 117 + 178	\$ 2,496	\$ 2,466	\$ 2,898	\$ 3,009	\$ 3,340	\$ 3,490	\$ 2,830	\$ 1,944	\$ 2,293	\$ 2,977	\$ 3,323	\$ 2,200	\$ -	\$ 33,267	
3																	



1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2016 Summer Cost of Gas Filing

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

		<u>COG Rate</u>	<u>COG Rate With</u>
		<u>Without Interest</u>	<u>Interest</u>
		(c)	(d)
4	<b>Calculation of COG</b>		
5	(a) (b)		
6	(Over)Under Recovery Balance In 11, col. (d)	\$ 944,579	\$ 944,450
7			
8	Unadjusted Forecast of Gas Costs In 12, col. (q)	6,956,330	6,956,330
9			
10	Production & Storage and Misc Ove In 13, col. (q)	2,663	2,663
11			
12	Adjustments In 17, col. (q)	33,751	33,751
13			
14	Interest May - Oct In 46, col. (q)	-	\$ 16,641
15			
16	Total Gas To Be Recovered	\$ 7,937,324	\$ 7,953,835
17			
18	Forecast Gas Sales (May - Oct) In 52, col. (q)	19,992,221	19,992,221
19			
20	Preliminary COG Rate In 16 / 18	<u>\$0.3970</u>	<u>\$0.3978</u>
21			
22			
		<u>Working Capital</u>	<u>Working</u>
		<u>Rate without</u>	<u>Capital Rate</u>
		<u>interest</u>	<u>with Interest</u>
		(c)	(d)
23	<b>Calculation of Working Capital Rate</b>		
24	(a) (b)		
25	(Over)Under Recovery Balance In 76, col. (q)	\$ 15,650	\$ 15,650
26			
27	Unadjusted Working Capital Forecast In 80, col. (q)	9,521	9,521
28			
29	Adjustments without interest In 86, col. (q)	(1,529)	(1,529)
30			
31	Interest May - Oct In 117, col. (q)	-	\$ (11)
32			
33	Total Gas To Be Recovered	\$ 23,642	\$ 23,631
34			
35	Forecast Gas Sales In 51, col. (q)	19,992,221	19,992,221
36			
37	Preliminary Working Capital COG F In 33 / 35	<u>\$0.0012</u>	<u>\$0.0012</u>
38			
39			
		<u>Bad Debt Rate</u>	<u>Bad Debt Rate</u>
		<u>without Interest</u>	<u>with interest</u>
		(c)	(d)
40	<b>Calculation of Bad Debt Rate</b>		
41	(a) (b)		
42	(Over)Under Recovery Balance In 142, col. (q)	\$ (86,833)	\$ (86,833)
43			
44	Unadjusted Bad Debt Forecast In 144, col. (q)	339,197	339,197
45			
46	Adjustments without interest In 151, col. (q)	-	-
47			
48	Interest May - Oct In 178, col. (q)	-	\$ (23)
49			
50	Total Gas To Be Recovered	\$ 252,363	\$ 252,340
51			
52	Forecast Gas Sales (May - Oct) In 51, col. (q)	19,992,221	19,992,221
53			
54	Preliminary Bad Debt COG Rate In 50 / 52	<u>\$0.0126</u>	<u>\$0.0126</u>

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.  
 2  
 3 Off Peak 2016 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	Total
7	(a)	Adjustments	Suppliers /	Revenue		CGA Revenues	Sales Margin	Sales Margin	Release Margin	Premiums	Option	Adjustments
8		(b)	Pipelines	(d)	(e)	(f)	(g)	(h)	(i)	(j)	Administrative	(m)
9			(c)								Costs	
9	May-14	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	Jun-14	-	-	-	-	-	-	-	-	-	-	-
11	Jul-13	-	-	-	-	-	-	-	-	-	-	-
12	Aug-13	-	-	-	-	-	-	-	-	-	-	-
13	Sep-13	-	-	-	-	-	-	-	-	-	-	-
14	Oct-13	-	-	-	-	-	-	-	-	-	-	-
15	Nov-13	-	-	-	-	-	-	-	-	-	-	-
16	Dec-13	-	-	-	-	-	-	-	-	-	-	-
17	Jan-14	-	-	-	-	-	-	-	-	-	-	-
18	Feb-14	-	-	-	-	-	-	-	-	-	-	-
19	Mar-14	-	-	-	-	-	-	-	-	-	-	-
20	Apr-14	-	-	-	-	-	-	-	-	-	-	-
21												
22	Total Off Peak Period	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2016 Summer Cost of Gas Filing

4 Demand Costs

				May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Off Peak May - Oct Total	Peak May - Oct Total
	(a)	Peak (b)	Reference (c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
45	<b>Storage</b>										
46	Dominion - Demand	peak	Sch 5B, In 33 * Sch 5C In 51 x days	\$ 1,740	\$ 1,740	\$ 1,740	\$ 1,740	\$ 1,740	\$ 1,740	\$ -	\$ 10,437
47	Dominion - Storage	peak	Sch 5B, In 34 * Sch 5C In 52 x days	1,489	1,489	1,489	1,489	1,489	1,489	-	8,935
48	Honeoye - Demand	peak	Sch 5B, In 35 * Sch 5C In 55 x days	8,744	8,744	8,744	8,744	8,744	8,744	-	52,466
49	National Fuel - Demand	peak	Sch 5B, In 37 * Sch 5C In 57 x days	15,139	15,139	15,139	15,139	15,139	15,139	-	90,833
50	National Fuel - Capacity	peak	Sch 5B, In 38 * Sch 5C In 58 x days	25,557	25,557	25,557	25,557	25,557	25,557	-	153,345
51	Tenn Gas Pipeline - Demand	peak	Sch 5B, In 39 * Sch 5C In 61 x days	33,640	33,640	33,640	33,640	33,640	33,640	-	201,839
52	Tenn Gas Pipeline - Capacity	peak	Sch 5B, In 40 * Sch 5C In 62 x days	32,924	32,924	32,924	32,924	32,924	32,924	-	197,546
53											
54	<b>Subtotal Storage Demand Costs</b>			\$ 119,233	\$ 119,233	\$ 119,233	\$ 119,233	\$ 119,233	\$ 119,233	\$ -	\$ 715,401
55											
56	Less Transportation Capacity Credit			\$ (41,360)	\$ (41,360)	\$ (41,360)	\$ (41,360)	\$ (41,360)	\$ (41,360)	\$ -	\$ (248,159)
57											
58	<b>Total Storage Demand Costs</b>		In 54 + In 56	\$ 77,874	\$ 77,874	\$ 77,874	\$ 77,874	\$ 77,874	\$ 77,874	\$ -	\$ 467,242
59											
60	<b>Total Demand Charges</b>		In 39 + In 54	\$ 1,513,989	\$ 1,520,573	\$ 1,520,573	\$ 1,520,573	\$ 1,520,573	\$ 1,520,573	\$ 7,047,571	\$ 2,069,285
61											
62	Total Transportation Capacity Credit		In 41 + In 56	\$ (525,174)	\$ (527,458)	\$ (527,458)	\$ (527,458)	\$ (527,458)	\$ (527,458)	\$ (2,444,669)	\$ (717,796)
63											
64	<b>Total Demand Charges less Cap. Cr.</b>		In 60 + In 62	\$ 988,815	\$ 993,115	\$ 993,115	\$ 993,115	\$ 993,115	\$ 993,115	\$ 4,602,902	\$ 1,351,489
65											
66											
67	Monthly Off Peak Demand			\$ 1,169,108	\$ 1,175,693	\$ 1,175,693	\$ 1,175,693	\$ 1,175,693	\$ 1,175,693	\$ 7,047,571	\$ -
68	Monthly Off Peak Transportation Cap Credit			(405,542)	(407,826)	(407,826)	(407,826)	(407,826)	(407,826)	(2,444,669)	-
69	<b>Total Off Peak Demand</b>			\$ 763,567	\$ 767,867	\$ 767,867	\$ 767,867	\$ 767,867	\$ 767,867	\$ 4,602,902	\$ -
70											
71	Monthly Peak Demand			\$ 344,881	\$ 344,881	\$ 344,881	\$ 344,881	\$ 344,881	\$ 344,881	\$ -	\$ 2,069,285
72	Monthly Peak Transportation Cap Credit			(119,633)	(119,633)	(119,633)	(119,633)	(119,633)	(119,633)	-	(717,796)
73	<b>Total Peak Demand</b>			\$ 225,248	\$ 225,248	\$ 225,248	\$ 225,248	\$ 225,248	\$ 225,248	\$ -	\$ 1,351,489

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

2 **Off Peak 2016 Summer Cost of Gas Filing**

3 **Demand Volumes**

4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
	(a)	Peak (b)	Reference (c)		May-16 (d)	Jun-16 (e)	Jul-16 (f)	Aug-16 (g)	Sep-16 (h)	Oct-16 (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	ANE (TransCanada via Union to Iroquois)		Union Parkway to Iroquois		4,047	4,047	4,047	4,047	4,047	4,047													
22	Tenn Gas Pipeline (short haul)	peak	632 Z4-Z6 (stg)		15,265	15,265	15,265	15,265	15,265	15,265													
23	Tenn Gas Pipeline (short haul)	peak	11234 Z4-Z6(stg)		7,082	7,082	7,082	7,082	7,082	7,082													
24	Tenn Gas Pipeline (short haul)	peak	11234 Z5-Z6(stg)		1,957	1,957	1,957	1,957	1,957	1,957													
25	National Fuel	peak	FST N02358		6,098	6,098	6,098	6,098	6,098	6,098													
27	<b>Peaking</b>																						
28	Tenn Gas Pipeline (Concord Lateral)	peak			0	0	0	0	0	0													
29	Granite Ridge Demand	peak			0	0	0	0	0	0													
30	DOMAC Liquid Demand Charge	peak	NSB041																				
32	<b>Storage</b>																						
33	Dominion - Demand	peak	GSS 300076		934	934	934	934	934	934													
34	Dominion - Capacity Reservation	peak	GSS 300076		102,700	102,700	102,700	102,700	102,700	102,700													
35	Honeoye - Demand	peak	SS-NY		1,362	1,362	1,362	1,362	1,362	1,362													
36	Honeoye - Capacity	peak	SS-NY		245,380	245,380	245,380	245,380	245,380	245,380													
37	National Fuel - Demand	peak	FSS-1 2357		6,098	6,098	6,098	6,098	6,098	6,098													
38	National Fuel - Capacity Reservation	peak	FSS-1 2357		670,800	670,800	670,800	670,800	670,800	670,800													
39	Tenn Gas Pipeline - Demand	peak	FS-MA 523		21,844	21,844	21,844	21,844	21,844	21,844													
40	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 2016 Summer Cost of Gas Filing

4 Demand Rates

				May-16 <sup>31</sup>	Jun-16 <sup>30</sup>	Jul-16 <sup>31</sup>	Aug-16 <sup>31</sup>	Sep-16 <sup>30</sup>	Oct-16 <sup>31</sup>	May - Oct <sup>184</sup>	
				Unit Rate	Unit Rate	Unit Rate	Unit Rate	Unit Rate	Unit Rate	Avg Rate	
6	<b>Tariff Rates</b>										
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	
11	<b>Pipeline</b>										
12	Iroquois Gas Trans Service	RTS 470-01	\$6.5971	First Revised Sheet No. 4	\$0.2128	\$0.2199	\$0.2128	\$0.2128	\$0.2199	\$0.2128	\$0.2152
14	Tenn Gas Pipeline	95346 Z5-Z6	\$7.3963	Seventh Rev Sheet No. 14	\$0.4746	\$0.4904	\$0.4746	\$0.4746	\$0.4904	\$0.4746	\$0.4799
16	Tenn Gas Pipeline	2302 Z5-Z6	\$7.3963	Seventh Rev Sheet No. 14	\$0.2386	\$0.2465	\$0.2386	\$0.2386	\$0.2465	\$0.2386	\$0.2412
18	Tenn Gas Pipeline	8587 Z0-Z6	\$23.9536	FT-A (Z0 - Z6)	\$0.7727	\$0.7985	\$0.7727	\$0.7727	\$0.7985	\$0.7727	\$0.7813
20	Tenn Gas Pipeline	8587 Z1-Z6	\$21.2648	FT-A (Z1 - Z6)	\$0.6860	\$0.7088	\$0.6860	\$0.6860	\$0.7088	\$0.6860	\$0.6936
22	Tenn Gas Pipeline	8587 Z4-Z6	\$8.4181	FT-A (Z4 - Z6)	\$0.2716	\$0.2806	\$0.2716	\$0.2716	\$0.2806	\$0.2716	\$0.2746
24	TGP Dracut	42076 FTA Z6-Z6	\$4.9101	Seventh Rev Sheet No. 14	\$0.1584	\$0.1637	\$0.1584	\$0.1584	\$0.1637	\$0.1584	\$0.1602
26	TGP Concord Lateral	Firm Transportatio	\$12.2103	Per contract	\$0.3939	\$0.4070	\$0.3939	\$0.3939	\$0.4070	\$0.3939	\$0.3983
28	Portland Natural Gas	FT-1999-001	\$25.9843	Part 4.1 v.5.0.0	\$0.8382	\$0.8661	\$0.8382	\$0.8382	\$0.8661	\$0.8382	\$0.8475
30	Tenn Gas Pipeline	632 Z4-Z6 (stg)	\$8.4181	Seventh Rev Sheet No. 14	\$0.2716	\$0.2806	\$0.2716	\$0.2716	\$0.2806	\$0.2716	\$0.2746
32	Tenn Gas Pipeline	11234 Z4-Z6(stg)	\$8.4181	Seventh Rev Sheet No. 14	\$0.2716	\$0.2806	\$0.2716	\$0.2716	\$0.2806	\$0.2716	\$0.2746
34	Tenn Gas Pipeline	11234 Z5-Z6(stg)	\$7.3963	Seventh Rev Sheet No. 14	\$0.2386	\$0.2465	\$0.2386	\$0.2386	\$0.2465	\$0.2386	\$0.2412
36	National Fuel	FST N02358	\$3.7805	4.010 Version 12.0.0 Pg 1	\$0.1220	\$0.1260	\$0.1220	\$0.1220	\$0.1260	\$0.1220	\$0.1233
38	ANE Union Gas		\$2.6040								
39	TransCanada Pipelines Limited		\$15.05290	Union Parkway to Iroquois							
40	Delivery Pressure Demand Charge		<u>1.0123</u>	Union Parkway to Iroquois							
41	Sub Total Demand Charges		<u>18.6692</u>								
42	Conversion rate GJ to MMBTU		1.0551								
43	Conversion rate to US\$		1.2019	updated 7/28/15							
44	Demand Rate/US\$		\$16.3894		\$0.5287	\$0.5463	\$0.5287	\$0.5287	\$0.5463	\$0.5287	\$0.5346
46	<b>Peaking</b>										
47	Granite Ridge Demand		\$0.0000	Per Contract	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
48	GDF Suez Demand NSB041		\$66.6667	Per Contract	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
50	<b>Storage</b>										
51	Dominion - Demand	GSS 300076	\$1.8625	Rec No 10.30 Ver 14.0.0	\$0.0601	\$0.0621	\$0.0601	\$0.0601	\$0.0621	\$0.0601	\$0.0609
52	Dominion - Capacity	GSS 300076	\$0.0145	Rec No 10.30 Ver 14.0.0	\$0.0005	\$0.0005	\$0.0005	\$0.0005	\$0.0005	\$0.0005	\$0.0005
53			\$1.8770		\$0.0605	\$0.0626	\$0.0605	\$0.0605	\$0.0626	\$0.0605	\$0.0614
55	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
57	National Fuel - Demand	FSS-1 2357	\$2.4826	4.020 Version 8.0.0 Pg 1	\$0.0801	\$0.0828	\$0.0801	\$0.0801	\$0.0828	\$0.0801	\$0.0812
58	National Fuel - Capacity	FSS-1 2357	\$0.0381	4.020 Version 8.0.0 Pg 1	\$0.0012	\$0.0013	\$0.0012	\$0.0012	\$0.0013	\$0.0012	\$0.0012
59			\$2.5207		\$0.0813	\$0.0840	\$0.0813	\$0.0813	\$0.0840	\$0.0813	\$0.0824
61	Tenn Gas Pipeline	FS-MA 523	\$1.5400	Tenth Rev Sheet No.61	\$0.0497	\$0.0513	\$0.0497	\$0.0497	\$0.0513	\$0.0497	\$0.0503
62	Tenn Gas Pipeline - Space	FS-MA 523	\$0.0211	Tenth Rev Sheet No.61	\$0.0007	\$0.0007	\$0.0007	\$0.0007	\$0.0007	\$0.0007	\$0.0007
63			\$1.5611		\$0.0504	\$0.0520	\$0.0504	\$0.0504	\$0.0520	\$0.0504	\$0.0510

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

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3 Off Peak 2016 Summer Cost of Gas Filing

4 Supply and Commodity Costs, Volumes and Rates

6 For Month of:	Reference	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Off-Peak
7 (a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	May - Oct
8								(i)

9 Supply and Commodity Costs

11 Pipeline Gas

12 Dawn Supply	In 63 * In 102							
13 Niagara Supply	In 64 * In 107							
14 TGP Supply (Gulf)	In 65 * In 123							
15 Dracut Supply 1 - Baseload	In 66 * In 112							
16 Dracut Supply 2 - Swing	In 67 * In 117							
17 City Gate Delivered Supply	In 68 * In 129							
18 LNG Truck	In 69 * In 131							
19 Propane Truck	In 70 * In 133							
20 PNGTS	In 71 * In 138							
21 TGP Supply (Zone 4)	In 72 * In 143							
22								
23 Subtotal Pipeline Gas Costs		\$ 751,994	\$ 570,119	\$ 483,441	\$ 483,213	\$ 602,812	\$ 1,162,834	\$ 4,067,189

25 Volumetric Transportation Costs

26 Dawn Supply	In 63 * In 176							
27 Niagara Supply	In 64 * In 187							
28 TGP Supply (Zone 4)	In 72 * In 224							
29 Dracut Supply 1 - Baseload	In 66 * In 235							
30 Dracut Supply 2 - Swing	In 67 * In 235							
31 City Gate Delivered Supply	In 68 * In 235							
32 TGP Storage - Withdrawals	In 77 * In 165							
33								
34 Total Volumetric Transportation Costs		\$ 71,713	\$ 50,180	\$ 40,289	\$ 39,183	\$ 48,504	\$ 95,717	\$ 345,587

36 Less - Gas Refill

37 LNG Truck	In 86 * In 150							
38 Propane	In 87 * In 151							
39 TGP Storage Refill	In 88 * In 121							
40 Storage Refill (Trans.)	In 88 * In 214							
41								
42 Subtotal Refills		\$ (359,995)	\$ (373,611)	\$ (386,666)	\$ (393,925)	\$ (396,589)	\$ (402,339)	\$ (2,313,123)

44 Total Supply & Pipeline Commodity Costs In 23 + In 34 + In 42

43		\$ 463,713	\$ 246,688	\$ 137,064	\$ 128,472	\$ 254,728	\$ 856,212	\$ 2,086,877
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46 Storage Gas

47 TGP Storage - Withdrawals	In 77 * In 157	\$ 23,295	\$ -	\$ -	\$ -	\$ -	\$ 217,366	\$ 240,661
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49 Produced Gas

50 LNG Vapor	In 80 * In 145							
51 Propane	In 81 * In 147							
52								
53 Total Produced Gas	In 50 + In 51	\$ 5,855	\$ 4,437	\$ 4,390	\$ 4,438	\$ 4,357	\$ 2,413	\$ 25,890

56 Total Commodity Gas & Trans. Costs In 44 + In 47 + In 53

57		\$ 492,863	\$ 251,125	\$ 141,455	\$ 132,910	\$ 259,085	\$ 1,075,991	\$ 2,353,428
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1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2016 Summer Cost of Gas Filing

4 Supply and Commodity Costs, Volumes and Rates

5									
6	For Month of:	Reference	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Off-Peak
7	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	May - Oct
59									(i)
60	<u>Volumes (Therms)</u>								Off-Peak
61									
62	<b>Pipeline Gas</b>	See Schedule 11A							
63	Dawn Supply		-	-	-	-	-	814,589	814,589
64	Niagara Supply		-	-	-	-	-	221,968	221,968
65	TGP Supply (Gulf)		-	-	-	-	-	-	-
66	Dracut Supply 1 - Baseload		-	-	-	-	-	-	-
67	Dracut Supply 2 - Swing		-	-	-	-	-	-	-
68	City Gate Delivered Supply		-	-	-	-	-	-	-
69	LNG Truck		23,896	-	-	-	90,396	19,631	133,924
70	Propane Truck		78,516	72,510	69,277	70,031	71,202	37,908	399,444
71	PNGTS		33,455	22,068	19,879	20,096	24,766	41,970	162,234
72	TGP Supply (Zone 4)		6,007,477	4,273,200	3,411,416	3,307,286	4,089,268	6,301,990	27,390,637
73									
74	Subtotal Pipeline Volumes		6,143,345	4,367,778	3,500,572	3,397,412	4,275,632	7,438,057	29,122,796
75									
76	<b>Storage Gas</b>								
77	TGP Storage		120,847	-	-	-	-	1,185,992	1,306,839
78									
79	<b>Produced Gas</b>								
80	LNG Vapor		19,800	17,654	17,470	17,660	17,336	19,631	109,551
81	Propane		-	-	-	-	-	-	-
82									
83	Subtotal Produced Gas		19,800	17,654	17,470	17,660	17,336	19,631	109,551
84									
85	<b>Less - Gas Refill</b>								
86	LNG Truck		(23,896)	-	-	-	(90,396)	(19,631)	(133,924)
87	Propane		(78,516)	(72,510)	(69,277)	(70,031)	(71,202)	(37,908)	(399,444)
88	TGP Storage Refill		(1,606,718)	(1,606,718)	(1,606,718)	(1,606,718)	(1,606,718)	(1,606,718)	(9,640,307)
89									
90	Subtotal Refills		(1,709,131)	(1,679,227)	(1,675,994)	(1,676,749)	(1,768,316)	(1,664,257)	(10,173,675)
91									
92	<b>Total Sendout Volumes</b>		<u>4,574,861</u>	<u>2,706,205</u>	<u>1,842,047</u>	<u>1,738,324</u>	<u>2,524,652</u>	<u>6,979,423</u>	<u>20,365,512</u>
93									
94									
95									



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1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2016 Summer Cost of Gas Filing  
4 Supply and Commodity Costs, Volumes and Rates

6 For Month of:	Reference	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Off-Peak May - Oct
7 (a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
96	<b>Gas Costs and Volumetric Transportation Rates</b>							
97								
98	<b>Pipeline Gas</b>							
99	<b>Dawn Supply</b>							Average Rate
100	NYMEX Price							
101	Basis Differential							
102	<b>Net Commodity Costs</b>							
103								
104	<b>Niagara Supply</b>							
105	NYMEX Price							
106	Basis Differential							
107	<b>Net Commodity Costs</b>							
108								
109	<b>Dracut Supply 1 - Baseload</b>							
110	Commodity Costs - NYMEX Price							
111	Basis Differential							
112	<b>Net Commodity Costs</b>							
113								
114	<b>Dracut Supply 2 - Swing</b>							
115	Commodity Costs - NYMEX Price							
116	Basis Differential							
117	<b>Net Commodity Costs</b>							
118								
119								
120	<b>TGP Supply (Gulf)</b>							
121	NYMEX Price							
122	Basis Differential							
123	<b>Net Commodity Costs</b>							
124								
125								
126	<b>TGP Citygate Supply</b>							
127	NYMEX Price							
128	Basis Differential							
129	<b>Net Commodity Costs</b>							
130								
131	<b>LNG Truck</b>	Sch 7, In 10/10	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
132								
133	<b>Propane Truck</b>	NYMEX - Propane	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
134								
135	<b>PNGTS</b>							
136	NYMEX Price	Sch 7, In 10/10						
137	Additional Cost							
138	<b>Net Commodity Cost</b>							
139								
140	<b>TGP Supply (Zone 4)</b>							
141	NYMEX Price	Sch 7, In 10/10						
142	Basis Differential							
143	<b>Net Commodity Cost</b>							
144								
145	<b>LNG Vapor (Storage)</b>	Sch 13, In 95 /10	\$0.2957	\$0.2513	\$0.2513	\$0.2513	\$0.2513	\$0.1229
146								
147	<b>Propane</b>	Sch 13, In 66 /10	\$1.2457	\$1.0709	\$0.9480	\$0.8544	\$0.7768	\$0.7112
148								
149	<b>Storage Refill</b>							
150	<b>LNG Truck</b>	In 131	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
151	<b>Propane</b>	In 133	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
152								
153								

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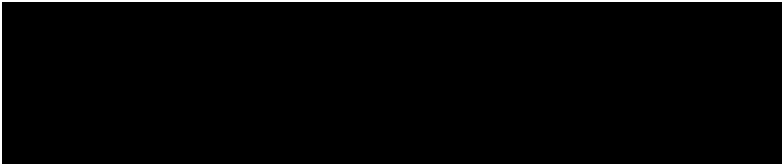
1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

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3 Off Peak 2016 Summer Cost of Gas Filing  
4 Supply and Commodity Costs, Volumes and Rates

6 For Month of:	Reference	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Off-Peak May - Oct
7 (a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
154								
155								Average Rate
156	<b>Per Unit Volumetric Transportation Rates</b>							
157	<b>Dawn Supply Volumetric Transportation Charge</b>							
158	<b>Commodity Costs</b> In 102							
159								
160	TransCanada - Commodity Rate/GJ	Union Parkway to Iroquois	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000
161	Conversion Rate GL to MMBTU		1.0551	1.0551	1.0551	1.0551	1.0551	1.0551
162	Conversion Rate to US\$	updated 7/28/15	1.3751	1.3751	1.3751	1.3751	1.3751	1.3751
163	Commodity Rate/US\$	In 160 x In 161 x In 162	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000
164	TransCanada Fuel %	Union Parkway to Iroquois	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
165	TransCanada Fuel * Percentage	In 158 x In 164	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000
166	Subtotal TransCanada		\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000
167	IGTS - Z1 RTS Commodity	First Revised Sheet No. 4	\$0.00030	\$0.00030	\$0.00030	\$0.00030	\$0.00030	\$0.00030
168	IGTS - Z1 RTS ACA Rate Commodity	Fifth Revised Sheet 4A	\$0.00014	\$0.00014	\$0.00014	\$0.00014	\$0.00014	\$0.00014
169	IGTS - Z1 RTS Deferred Asset Surcharge	Fifth Revised Sheet 4A	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000
170	Subtotal IGTS - Trans Charge - Z1 RTS	Commodity	\$0.00044	\$0.00044	\$0.00044	\$0.00044	\$0.00044	\$0.00044
171	TGP NET-NE - Comm. Segments 3 & 4	Twelveth Rev Sheet No. 15	\$0.00014	\$0.00014	\$0.00014	\$0.00014	\$0.00014	\$0.00014
172	IGTS -Fuel Use Factor - Percentage	Fifth Revised Sheet 4A	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
173	IGTS -Fuel Use Factor - Fuel * Percentage	In 158 x In 172	\$0.00195	\$0.00199	\$0.00204	\$0.00209	\$0.00207	\$0.00214
174	TGP FTA Fuel Charge % Z 5-6	Eleventh Rev Sheet No. 32	0.62%	0.62%	0.62%	0.62%	0.62%	0.62%
175	TGP FTA Fuel * Percentage	In 158 x In 174	\$0.00121	\$0.00124	\$0.00127	\$0.00129	\$0.00128	\$0.00132
176	<b>Total Volumetric Transportation Charge - Dawn Supply</b>		<b>\$0.00374</b>	<b>\$0.00381</b>	<b>\$0.00389</b>	<b>\$0.00396</b>	<b>\$0.00394</b>	<b>\$0.00404</b>

177								
178								
179	<b>Niagara Supply Volumetric Transportation Charge</b>							
180	<b>Commodity Costs</b> Ln 107							
181								
182	TGP FTA - FTA Z 5-6 Comm. Rate	Twelveth Rev Sheet No. 15						
183	TGP FTA - FTA Z 5-6 - ACA Rate	Twelveth Rev Sheet No. 15						
184	Subtotal TGP FTA - FTA Z 5-6 Commodity Rate							
185	TGP FTA Fuel Charge % Z 5-6	Eleventh Rev Sheet No. 32						
186	TGP FTA Fuel * Percentage	In 180 x In 185						
187	<b>Total Volumetric Transportation Rate - Niagara Supply</b>							



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1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2016 Summer Cost of Gas Filing

4 Supply and Commodity Costs, Volumes and Rates

6 For Month of:	Reference	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Off-Peak
7 (a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	May - Oct
								(i)

191  
192

193 TGP Direct Volumetric Transportation Charge

Average Rate

194 Commodity Costs	Ln 121							
195								
196 TGP - Max Comm. Base Rate - Z 0-6	Twelveth Rev Sheet No. 15	\$0.03037	\$0.03037	\$0.03037	\$0.03037	\$0.03037	\$0.03037	\$0.03037
197 TGP - Max Commodity ACA Rate - Z 0-6	Twelveth Rev Sheet No. 15	\$0.00014	\$0.00014	\$0.00014	\$0.00014	\$0.00014	\$0.00014	\$0.00014
198 Subtotal TGP - Max Comm. Rate Z 0-6		\$0.03051	\$0.03051	\$0.03051	\$0.03051	\$0.03051	\$0.03051	\$0.03051
199 Prorated Percentage		32.60%	32.60%	32.60%	32.60%	32.60%	32.60%	32.60%
200 Prorated TGP - Max Commodity Rate - Z 0-6		\$0.00995	\$0.00995	\$0.00995	\$0.00995	\$0.00995	\$0.00995	\$0.00995
201 TGP - Max Comm. Base Rate - Z 1-6	Twelveth Rev Sheet No. 15	\$0.02648	\$0.02648	\$0.02648	\$0.02648	\$0.02648	\$0.02648	\$0.02648
202 TGP - Max Commodity ACA Rate - Z 1-6	Twelveth Rev Sheet No. 15	\$0.00014	\$0.00014	\$0.00014	\$0.00014	\$0.00014	\$0.00014	\$0.00014
203 Subtotal TGP - Max Commodity Rate - Z 1-6		\$0.02662	\$0.02662	\$0.02662	\$0.02662	\$0.02662	\$0.02662	\$0.02662
204 Prorated Percentage		67.40%	67.40%	67.40%	67.40%	67.40%	67.40%	67.40%
205 Prorated TGP - Trans Charge - Max Commodity Rate - Z 1-6		\$0.01794	\$0.01794	\$0.01794	\$0.01794	\$0.01794	\$0.01794	\$0.01794
206 TGP - Fuel Charge % - Z 0-6	Eleventh Rev Sheet No. 32	3.05%	3.05%	3.05%	3.05%	3.05%	3.05%	3.05%
207 Prorated Percentage		32.6%	32.6%	32.6%	32.6%	32.6%	32.6%	32.6%
208 Prorated TGP Fuel Charge % - Z 0-6		0.99%	0.99%	0.99%	0.99%	0.99%	0.99%	0.99%
209 TGP - Fuel Charge % - Z 1-6	Eleventh Rev Sheet No. 32	2.66%	2.66%	2.66%	2.66%	2.66%	2.66%	2.66%
210 Prorated Percentage		67.40%	67.40%	67.40%	67.40%	67.40%	67.40%	67.40%
211 Prorated TGP Fuel Charge - Fuel Charge % - Z 1-6		1.79%	1.79%	1.79%	1.79%	1.79%	1.79%	1.79%
212 TGP - Fuel Charge % - Z 0-6	In 194 x In 208	\$0.00184	\$0.00193	\$0.00202	\$0.00206	\$0.00207	\$0.00210	\$0.00200
213 TGP - Fuel Charge % - Z 1-6	In 194 x In 211	\$0.00332	\$0.00349	\$0.00364	\$0.00371	\$0.00373	\$0.00378	\$0.00361
214 Total Volumetric Transportation Rate - TGP (Direct)		\$0.03305	\$0.03331	\$0.03354	\$0.03366	\$0.03368	\$0.03376	\$0.03350

215

216 TGP (Zone 4 Purchase) Volumetric Transportation Charge

217 Commodity Costs	Ln 121							
218								
219 TGP - Max Comm. Base Rate - Z 4-6	Twelveth Rev Sheet No. 15	\$0.01048	\$0.01048	\$0.01048	\$0.01048	\$0.01048	\$0.01048	\$0.01048
220 TGP - Max Commodity ACA Rate - Z 4-6	Twelveth Rev Sheet No. 15	\$0.00014	\$0.00014	\$0.00014	\$0.00014	\$0.00014	\$0.00014	\$0.00014
221 Subtotal TGP - Max Commodity Rate - Z 4-6		\$0.01062	\$0.01062	\$0.01062	\$0.01062	\$0.01062	\$0.01062	\$0.01062
222 TGP - Fuel Charge % - Z 4-6	Eleventh Rev Sheet No. 32	0.85%	0.85%	0.85%	0.85%	0.85%	0.85%	0.85%
223 TGP - Fuel Charge	In 217 x In 222	\$0.00105	\$0.00112	\$0.00119	\$0.00123	\$0.00124	\$0.00127	\$0.00118
224 Total Vol. Trans. Rate - TGP (Zone 6)		\$0.01167	\$0.01174	\$0.01181	\$0.01185	\$0.01186	\$0.01189	\$0.01180

225  
226

227 TGP Dracut

228 Commodity Costs - NYMEX Price	Ln 112							
229								
230 TGP - Trans Charge - Comm. - Z 6-6	Twelveth Rev Sheet No. 15							
231 TGP - Trans Charge - ACA Rate - Z6-6	Twelveth Rev Sheet No. 15							
232 Subtotal TGP - Trans Charge - Max Commodity Rate - Z 6-6								
233 TGP - Fuel Charge % - Z 6-6	Eleventh Rev Sheet No. 32							
234 TGP - Fuel Charge	In 228 x In 233							
235 Total Volumetric Transportation Rate - TGP Dracut								

236

APPLICABLE TO SETTLING PARTIES PURSUANT TO THE DECEMBER 6, 2013 STIPULATION  
 IN DOCKET NO. RP14-262

(FOR RATES APPLICABLE TO SEVERED PARTIES IN THE ABOVE REFERENCED DOCKETS SEE TARIFF RECORD 10.31)

RATES APPLICABLE TO RATE SCHEDULES IN  
 FERC GAS TARIFF, VOLUME NO. 1  
 (\$ per DT)

Rate Schedule (1)	Rate Component (2)	Base Tariff Rate [1] (3)	Current Acct 858 Base (4)	Current EPCA Base (5)	TCRA [5] Surcharge (6)	EPCA [6] Surcharge (7)	Current Rate [7] (8)	FERC ACA (9)
GSS [2], [4]	Storage Demand	\$1.7984	\$0.0671	\$0.0014	(\$0.0049)	(\$0.0002)	\$1.8618	-
	Storage Capacity	\$0.0145	-	-	-	-	\$0.0145	-
	Injection Charge	\$0.0154	-	\$0.0127	\$0.0000	(\$0.0019)	\$0.0262	-
	Withdrawal Charge	\$0.0154	-	-	\$0.0000	(\$0.0019)	\$0.0135	[8]
	GSS-TE Surcharge [3]	-	\$0.0046	-	(\$0.0015)	-	\$0.0031	-
	From Customers Balance	\$0.6163	\$0.0144	\$0.0003	(\$0.0011)	(\$0.0019)	\$0.6280	[8]
GSS-E [2], [4]	Storage Demand	\$2.2113	\$0.0671	\$0.0014	(\$0.0049)	(\$0.0002)	\$2.2747	-
	Storage Capacity	\$0.0369	-	-	-	-	\$0.0369	-
	Injection Charge	\$0.0154	-	\$0.0127	\$0.0000	(\$0.0019)	\$0.0262	-
	Withdrawal Charge	\$0.0154	-	-	\$0.0000	(\$0.0019)	\$0.0135	[8]
	Authorized Overruns	\$1.0657	\$0.0144	\$0.0003	(\$0.0011)	(\$0.0019)	\$1.0774	[8]
ISS [2]	ISS Capacity	\$0.0736	\$0.0022	\$0.0000	(\$0.0002)	\$0.0000	\$0.0756	-
	Injection Charge	\$0.0154	-	\$0.0127	\$0.0000	(\$0.0019)	\$0.0262	-
	Withdrawal Charge	\$0.0154	-	-	\$0.0000	(\$0.0019)	\$0.0135	[8]
	Authorized Overrun/from Cust. Bal	\$0.6163	\$0.0144	\$0.0003	(\$0.0011)	(\$0.0019)	\$0.6280	[8]
	Excess Injection Charge	\$0.2245	-	\$0.0127	\$0.0000	(\$0.0019)	\$0.2353	-

[1] The base tariff rate is the effective rate on file with the FERC, excluding adjustments approved by the Commission.  
 [2] Storage Service Fuel Retention Percentage is 1.67% plus Adders of 0.28% (RP00-632 S&A approved 9/13/01) totaling 1.95%.  
 [3] Applies to withdrawals made under Rate Schedule GSS, Section 5.1.G.  
 [4] Daily Capacity Release Rate for GSS per Dt is \$0.6145. Daily Capacity Release Rate for GSS-E per Dt is \$1.0639.  
 [5] 858 over/under from previous TCRA period.  
 [6] Electric over/under from previous EPCA period.  
 [7] The Current Rate shall be increased for the Annual Charge Adjustment (ACA) as applicable.  
 [8] The applicable ACA rate is set forth on the FERC website (<http://www.ferc.gov/industries/gas/annual-charges.asp>).

*ACA is charged on also only*

Superseding SUBSTITUTE ORIGINAL SHEET NO. 5

subject to an allowable variation of not more than one percent above or below the aggregate of said scheduled daily deliveries of said month.

The amount of gas in storage for Buyer's account at any time (exclusive of Buyer's share of cushion gas) shall be Buyer's Gas Storage Balance at that time and shall not exceed Buyer's Maximum Quantity Stored (MQS).

Seller shall be ready at all times to deliver to Buyer, and Buyer shall have the right at all times to receive from Seller, natural gas up to the MDWQ Seller is obligated to deliver to Buyer on that day.

Buyer's MQS, Buyer's MDWQ and Buyer's ADWQ shall be specified in the Gas Storage Agreement providing for service under this Rate Schedule.

3. RATE

WQ = Avg Daily  
Wd Quantity

Buyer shall pay Seller for each month of the year during the term of the Gas Storage Agreement a Demand Charge which shall be six dollars and forty one point eight seven cents per MMBTU (\$6.4187/MMBTU)\*\* multiplied by the ADWQ as provided for in the Gas Storage Agreement.

\* 6.4187  
x 13621.33

\$ 874439

4. MINIMUM BILL

The Minimum Bill for each month shall consist of the Demand Charge for the ADWQ as defined in Article 3.

5. COMPRESSOR FUEL ALLOWANCE

Buyer will make available without charge to Seller such additional quantities of gas as needed by Seller for

\*\* The Demand Charge Rate set forth in individual service agreements shall be deemed to have been converted to a thermal billing basis utilizing a factor of 1022/MMBTU per 1 MCF as adjusted pursuant to Section III of the General Terms & Conditions, provided however, the total Maximum Quantity Stored in the field shall not exceed 4.8 BCF and provided that each Buyer shall receive its allowable share of same.

*Amor*

## Contract Summary

**General Information**

Contract Number EN-11234	Customer Energy North Natural Gas Inc.	Contract Type Firm
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**Contract Dates**

Effective Date (mm/dd/yy) 05/01/10	Termination Date (mm/dd/yy) 01/01/20
--	--

**Transaction Types and Rates**

Transaction Type	Volumetric Charge	Other Rate	Fuel %	Invoice Qty Type
Storage Injection	\$ 0.0000	\$ 0.0000	0	Sch Qty
Storage Withdrawal	\$ 0.0000	\$ 0.0000	0	Sch Qty
Authorized Injection Overrun	\$ 0.0000	\$ 0.0000	0	Sch Qty
Authorized Withdrawal Overrun	\$ 0.0000	\$ 0.0000	0	Sch Qty

**Storage and Other Rates**

Use Monthly Storage Rate (\$/Dth/Month)

**Monthly Storage Rate Table**

From	To
05/01/10	01/01/20

Use Monthly Flat Fee (\$/Month)

**Monthly Flat Storage Fee Table**

From	To	Rate
05/01/10	01/01/20	8,744.36

Use Daily Storage Rate (\$/Dth/Day)

Rate	Amount
0	

Use Injection Deliverability Rate

Rate	Amount
0	0

Use Withdrawal Deliverability Rate

Rate	Amount
0	0



----- RATES (All in \$ Per Dth) -----

	Minimum	Non-Settlement	Settlement Recourse Rates				
		Recourse & Eastchester Initial Rates 3/	Effective 1/1/2003	Effective 7/1/2004	Effective 1/1/2005	Effective 1/1/2006	Effective 1/1/2007
----- Applicable to Non-Eastchester/Non-Contesting Shippers 2/ -----							
RTS DEMAND:							
Zone 1	\$0.0000	\$7.5637	\$7.5637	\$6.9586	\$6.8514	\$6.7788	\$6.5971
Zone 2	\$0.0000	\$6.4976	\$6.4976	\$5.9778	\$5.8857	\$5.8233	\$5.6673
Inter-Zone	\$0.0000	\$12.7150	\$12.7150	\$11.6978	\$11.5177	\$11.3956	\$11.0902
Zone 1 (MFV) 1/	\$0.0000	\$5.3607	\$5.3607	\$4.9318	\$4.8559	\$4.8044	\$4.6757
RTS COMMODITY:							
Zone 1	\$0.0030	\$0.0030	\$0.0030	\$0.0030	\$0.0030	\$0.0030	\$0.0030
Zone 2	\$0.0024	\$0.0024	\$0.0024	\$0.0024	\$0.0024	\$0.0024	\$0.0024
Inter-Zone	\$0.0054	\$0.0054	\$0.0054	\$0.0054	\$0.0054	\$0.0054	\$0.0054
Zone 1 (MFV) 1/	\$0.0300	\$0.1506	\$0.1506	\$0.1386	\$0.1364	\$0.1350	\$0.1314
ITS COMMODITY:							
Zone 1	\$0.0030	\$0.2517	\$0.2517	\$0.2318	\$0.2283	\$0.2259	\$0.2199
Zone 2	\$0.0024	\$0.2160	\$0.2160	\$0.1989	\$0.1959	\$0.1938	\$0.1887
Inter-Zone	\$0.0054	\$0.4234	\$0.4234	\$0.3900	\$0.3840	\$0.3800	\$0.3700
Zone 1 (MFV) 1/	\$0.0300	\$0.3268	\$0.3268	\$0.3007	\$0.2960	\$0.2929	\$0.2850
MAXIMUM VOLUMETRIC CAPACITY RELEASE RATE 4/:							
Zone 1	\$0.0000	\$0.2487	\$0.2487	\$0.2288	\$0.2253	\$0.2229	\$0.2169
Zone 2	\$0.0000	\$0.2136	\$0.2136	\$0.1965	\$0.1935	\$0.1915	\$0.1863
Inter-Zone	\$0.0000	\$0.4180	\$0.4180	\$0.3846	\$0.3787	\$0.3746	\$0.3646
Zone 1 (MFV) 1/	\$0.0000	\$0.1762	\$0.1762	\$0.1621	\$0.1596	\$0.1580	\$0.1537

\*\*SEE SHEET NO. 4A FOR ADJUSTMENTS TO RATES WHICH MAY BE APPLICABLE

(Footnotes continued on Sheet 4.01)

To the extent applicable, the following adjustments apply:

ACA ADJUSTMENT:

Commodity 1/

MEASUREMENT VARIANCE/FUEL USE FACTOR:

Minimum	0.00%
Maximum (Non-Eastchester Shipper)	1.00%
Maximum (Eastchester Shipper)	4.50%
Maximum (Brookfield Shipper)	1.20%

1/ The ACA ADJUSTMENT Commodity rate shall be the applicable FERC ACA unit charge incorporated by reference pursuant to Section 12.2 in the General Terms and Conditions of Transporter's FERC Gas Tariff.



**RATES FOR TRANSPORTATION SERVICES**

Rate Sch. (1)	Rate Component <sup>1/</sup> (2)		Base Rate (3)	TSCA (4)	TSCA Surch. (5)	Current Rate <sup>2/</sup> (6)
<b>FT/FT-S</b>						
	Reservation	(Max)	\$3.7049	-	-	\$3.7049
		(Min)	0.0000	-	-	\$0.0000
	Commodity	(Max)	0.0135	-	-	\$0.0135 plus ACA <sup>3/</sup>
		(Min)	0.0135	-	-	\$0.0135 plus ACA <sup>3/</sup>
	Overrun	(Max)	0.1378	-	-	\$0.1378 plus ACA <sup>3/</sup>
		(Min)	0.0135	-	-	\$0.0135 plus ACA <sup>3/</sup>
	Maximum Volumetric Rate		0.1378	-	-	\$0.1378 plus ACA <sup>3/</sup>
<b>EFT</b>						
	Reservation	(Max)	3.8860	0.0000	0.0000	\$3.8860
		(Min)	0.0000	0.0000	0.0000	\$0.0000
	Commodity	(Max)	0.0148	0.0000	0.0000	\$0.0148 plus ACA <sup>3/</sup>
		(Min)	0.0148	0.0000	0.0000	\$0.0148 plus ACA <sup>3/</sup>
	Overrun	(Max)	0.1452	-	-	\$0.1452 plus ACA <sup>3/</sup>
		(Min)	0.0148	-	-	\$0.0148 plus ACA <sup>3/</sup>
	Maximum Volumetric Rate		0.1452	0.0000	0.0000	\$0.1452 plus ACA <sup>3/</sup>
<b>FST</b>						
	Reservation	(Max)	3.7049	-	-	\$3.7049
		(Min)	0.0000	-	-	\$0.0000
	Commodity	(Max)	0.0135	-	-	\$0.0135 plus ACA <sup>3/</sup>
		(Min)	0.0135	-	-	\$0.0135 plus ACA <sup>3/</sup>
	Overrun	(Max)	0.1378	-	-	\$0.1378 plus ACA <sup>3/</sup>
		(Min)	0.0135	-	-	\$0.0135 plus ACA <sup>3/</sup>
	Maximum Volumetric Rate		0.1378	-	-	\$0.1378 plus ACA <sup>3/</sup>
<b>IT</b>						
	Commodity	(Max)	\$0.1378	-	-	\$0.1378 plus ACA <sup>3/</sup>
		(Min)	0.0000	-	-	\$0.0000 plus ACA <sup>3/</sup>
	Overrun	(Max)	0.1378	-	-	\$0.1378 plus ACA <sup>3/</sup>
		(Min)	0.0000	-	-	\$0.0000 plus ACA <sup>3/</sup>

*Commodity is charged on both tax & w/o  
 .0135  
 .0014  
 .0149*

*Inst fuel .54%  
 .42%  
 .96%*

*\* NO fuel when withdrawing gas*

1/ The unit of measure for each rate component is the Dth unless otherwise indicated.  
 2/ All rates exclusive of Transportation Fuel and Company Use Retention and Transportation LAUF Retention. The Transportation Fuel and Company Use Retention for all applicable rate schedules is 0.54% and the Transportation LAUF Retention for all applicable rate schedules is 0.42%. Transporter may from time to time identify point pair transactions where the Transportation Fuel and Company Use Retention shall be zero ("Zero Fuel Point Pair Transactions"). Zero Fuel Point Pair Transactions will be assessed the applicable Transportation LAUF Retention.  
 3/ Pursuant to Section 19 of the General Terms and Conditions, the ACA unit charge, as revised annually and posted on the Commission's website, will be charged in addition to the specified rate.

**RATES FOR PART 284 STORAGE SERVICES**

Rate Sch. (1)	Rate Component <sup>1</sup> (2)		Rate <sup>2</sup> (3)
ESS	Demand	(Max)	\$2.5440
		(Min)	0.0000
	Capacity	(Max)	0.0396
		(Min)	0.0000
	Injection/Withdrawal	(Max)	0.0411 plus ACA <sup>3</sup>
		(Min)	0.0000
	Max. Volumetric Dem. Rate <sup>2</sup>		0.0853 plus ACA <sup>3</sup>
	Max. Volumetric Cap. Rate <sup>2</sup>		0.0013
Storage Balance Transfer	(Max) <sup>6</sup>	3.8600	
	(Min) <sup>6</sup>	0.0000	
ISS	Injection	(Max)	0.9923 plus ACA <sup>3</sup>
		(Min)	0.0000
	Storage Balance Transfer	(Max) <sup>6</sup>	3.8600
		(Min) <sup>6/</sup>	0.0000
FSS	Demand	(Max)	2.4329
		(Min)	0.0000
	Capacity	(Max)	0.0373
		(Min)	0.0000
	Injection/Withdrawal	(Max)	0.0391 plus ACA <sup>3</sup>
		(Min)	0.0000
	Max. Volumetric Dem. Rate <sup>4/</sup>		0.0816 plus ACA <sup>3</sup>
	Max. Volumetric Cap. Rate <sup>5/</sup>		0.0013
Storage Balance Transfer	(Max) <sup>6</sup>	3.8600	
	(Min) <sup>6</sup>	0.0000	

*0.0391  
 .0014  
 .0405*

- 1/ The unit of measure for each rate component is the Dth unless otherwise indicated.
- 2/ All rates exclusive of Storage Operating and LAUF Retention, where applicable. The Storage Operating and LAUF Retention for all applicable rate schedules is 0.46%.
- 3/ Pursuant to Section 19 of the General Terms and Conditions, the ACA unit charge, as revised annually and posted on the Commission's website, will be charged in addition to the specified rate.
- 4/ Assessed per dekatherm injected/withdrawn. Exclusive of Injection/Withdrawal charge.
- 5/ Assessed per dekatherm per day on storage balance.
- 6/ Rate per nomination.

*\* .46% fuel charged on both inj and wto*

Statement of Transportation Rates  
 (Rates per DTH)

Rate Schedule	Rate Component	Base Rate	ACA Unit Charge 1/
FT	Recourse Reservation Rate		
	-- Maximum	\$25.9843	-----
	-- Minimum	\$00.0000	-----
	Seasonal Recourse Reservation Rate		
	-- Maximum	\$49.3701	-----
	-- Minimum	\$00.0000	-----
FT-FLEX	Recourse Usage Rate		
	-- Maximum	\$00.0000	2/
	-- Minimum	\$00.0000	2/
	Recourse Reservation Rate		
	--Maximum	\$17.4406	-----
	--Minimum	\$00.0000	-----
FT-FLEX	Recourse Usage Rate		
	--Maximum	\$00.2809	2/
	--Minimum	\$00.0000	2/

The following adjustment applies to all Rate Schedules above:

MEASUREMENT VARIANCE:

Minimum down to -1.00%  
 Maximum up to +1.00%

1/ ACA assessed where applicable under Section 154.402 of the Commission's regulations and will be charged pursuant to Section 6.18 of the General Terms and Conditions at such time that initial and successive ACA assessments are made.

2/ The currently effective ACA unit charge as published on the Commission's website ([www.ferc.gov](http://www.ferc.gov)) is incorporated herein by reference.

RATES PER DEKATHERM

FIRM TRANSPORTATION RATES  
 RATE SCHEDULE FOR FT-A

Base Reservation Rates	RECEIPT ZONE	DELIVERY ZONE							
		0	L	1	2	3	4	5	6
	0	\$5.5411		\$11.5794	\$15.5758	\$15.8514	\$17.4175	\$18.4879	\$23.1959
	L		\$4.9193						
	1	\$8.3417		\$7.9962	\$10.6413	\$15.0745	\$14.8460	\$16.7429	\$20.5878
	2	\$15.5759		\$10.5774	\$5.5014	\$5.1427	\$6.5803	\$9.0504	\$11.6830
	3	\$15.8514		\$8.3784	\$5.5458	\$4.0009	\$6.1457	\$11.1149	\$12.8437
	4	\$20.1259		\$18.5544	\$7.0708	\$10.7456	\$5.2598	\$5.6884	\$8.1265
	5	\$23.9973		\$16.8625	\$7.4172	\$8.9748	\$5.8432	\$5.4810	\$7.1353
	6	\$27.7603		\$19.3678	\$13.3296	\$14.6845	\$10.3726	\$5.4568	\$4.7237

Daily Base Reservation Rate 1/	RECEIPT ZONE	DELIVERY ZONE							
		0	L	1	2	3	4	5	6
	0	\$0.1822		\$0.3807	\$0.5121	\$0.5211	\$0.5726	\$0.6078	\$0.7626
	L		\$0.1617						
	1	\$0.2742		\$0.2629	\$0.3499	\$0.4956	\$0.4881	\$0.5505	\$0.6769
	2	\$0.5121		\$0.3478	\$0.1809	\$0.1691	\$0.2163	\$0.2975	\$0.3841
	3	\$0.5211		\$0.2755	\$0.1823	\$0.1315	\$0.2021	\$0.3654	\$0.4223
	4	\$0.6617		\$0.6100	\$0.2325	\$0.3533	\$0.1729	\$0.1870	\$0.2672
	5	\$0.7890		\$0.5544	\$0.2439	\$0.2951	\$0.1921	\$0.1802	\$0.2346
	6	\$0.9127		\$0.6367	\$0.4382	\$0.4828	\$0.3410	\$0.1794	\$0.1553

Maximum Reservation Rates 2 /, 3 /	RECEIPT ZONE	DELIVERY ZONE							
		0	L	1	2	3	4	5	6
	0	\$5.5609		\$11.5992	\$15.5956	\$15.8712	\$17.4373	\$18.5077	\$23.2157
	L		\$4.9391						
	1	\$8.3615		\$8.0160	\$10.6611	\$15.0943	\$14.8658	\$16.7627	\$20.6076
	2	\$15.5957		\$10.5972	\$5.5212	\$5.1625	\$6.6001	\$9.0702	\$11.7028
	3	\$15.8712		\$8.3982	\$5.5656	\$4.0207	\$6.1655	\$11.1347	\$12.8635
	4	\$20.1457		\$18.5742	\$7.0906	\$10.7654	\$5.2796	\$5.7082	\$8.1463
	5	\$24.0171		\$16.8823	\$7.4370	\$8.9946	\$5.8630	\$5.5008	\$7.1551
	6	\$27.7801		\$19.3876	\$13.3494	\$14.7043	\$10.3924	\$5.4766	\$4.7435

Notes:

- 1/ Applicable to demand charge credits and secondary points under discounted rate agreements.
- 2/ Includes a per Dth charge for the PCB Surcharge Adjustment per Article XXXII of the General Terms and Conditions of \$0.0000.
- 3/ Includes a per Dth charge for the PS/GHG Surcharge Adjustment per Article XXXVIII of the General Terms and Conditions of \$0.0198.

→ Not rates for zones

Notes: See Schedule of Rates

RATES PER DEKATHERM

COMMODITY RATES  
 RATE SCHEDULE FOR FT-A

Base  
 Commodity Rates

RECEIPT ZONE	DELIVERY ZONE							
	0	L	1	2	3	4	5	6
0	\$0.0032		\$0.0115	\$0.0177	\$0.0219	\$0.2668	\$0.2546	\$0.3030
L		\$0.0012						
1	\$0.0042		\$0.0081	\$0.0147	\$0.0179	\$0.2269	\$0.2313	\$0.2641
2	\$0.0167		\$0.0087	\$0.0012	\$0.0028	\$0.0734	\$0.1178	\$0.1305
3	\$0.0207		\$0.0169	\$0.0026	\$0.0002	\$0.0982	\$0.1358	\$0.1482
4	\$0.0250		\$0.0205	\$0.0087	\$0.0105	\$0.0454	\$0.0642	\$0.1041
5	\$0.0284		\$0.0256	\$0.0100	\$0.0118	\$0.0639	\$0.0633	\$0.0787
6	\$0.0346		\$0.0300	\$0.0143	\$0.0163	\$0.0984	\$0.0533	\$0.0324

Minimum  
 Commodity Rates 1/, 2/

RECEIPT ZONE	DELIVERY ZONE							
	0	L	1	2	3	4	5	6
0	\$0.0032		\$0.0115	\$0.0177	\$0.0219	\$0.0250	\$0.0284	\$0.0346
L		\$0.0012						
1	\$0.0042		\$0.0081	\$0.0147	\$0.0179	\$0.0210	\$0.0256	\$0.0300
2	\$0.0167		\$0.0087	\$0.0012	\$0.0028	\$0.0056	\$0.0100	\$0.0143
3	\$0.0207		\$0.0169	\$0.0026	\$0.0002	\$0.0081	\$0.0118	\$0.0163
4	\$0.0250		\$0.0205	\$0.0087	\$0.0105	\$0.0028	\$0.0046	\$0.0092
5	\$0.0284		\$0.0256	\$0.0100	\$0.0118	\$0.0046	\$0.0046	\$0.0066
6	\$0.0346		\$0.0300	\$0.0143	\$0.0163	\$0.0086	\$0.0041	\$0.0020

Maximum  
 Commodity Rates 1/, 2/, 3/

RECEIPT ZONE	DELIVERY ZONE							
	0	L	1	2	3	4	5	6
0	\$0.0039		\$0.0122	\$0.0184	\$0.0226	\$0.2675	\$0.2553	\$0.3037
L		\$0.0019						
1	\$0.0049		\$0.0088	\$0.0154	\$0.0186	\$0.2276	\$0.2320	\$0.2648
2	\$0.0174		\$0.0094	\$0.0019	\$0.0035	\$0.0741	\$0.1185	\$0.1312
3	\$0.0214		\$0.0176	\$0.0033	\$0.0009	\$0.0989	\$0.1365	\$0.1489
4	\$0.0257		\$0.0212	\$0.0094	\$0.0112	\$0.0461	\$0.0649	\$0.1048
5	\$0.0291		\$0.0263	\$0.0107	\$0.0125	\$0.0646	\$0.0640	\$0.0794
6	\$0.0353		\$0.0307	\$0.0150	\$0.0170	\$0.0991	\$0.0540	\$0.0331

Notes:

- 1/ Rates stated above exclude the ACA Surcharge as revised annually and posted on the FERC website at <http://www.ferc.gov> on the Annual Charges page of the Natural Gas section. The ACA Surcharge is incorporated by reference into Transporter's Tariff and shall apply to all transportation under this Rate Schedule as provided in Article XXIV of the General Terms and Conditions.
- 2/ The applicable F&LR's and EPCR's, determined pursuant to Article XXXVII of the General Terms and Conditions, are listed on Sheet No. 32.
- 3/ Includes a per Dth charge for the PS/GHG Surcharge Adjustment per Article XXXVIII of the General Terms and Conditions of \$0.0007.



RATES PER DEKATHERM

FIRM STORAGE SERVICE  
 RATE SCHEDULE FS

Rate Schedule and Rate	Base Tariff Rate	Max Tariff Rate	F&LR 2/, 3/	EPCR 2/
<b>FIRM STORAGE SERVICE (FS) - PRODUCTION AREA</b>				
Deliverability Rate	\$2.0334	\$2.0334 1/		
Space Rate	\$0.0207	\$0.0207 1/		
Injection Rate	\$0.0073	\$0.0073	1.37%	\$0.0000
Withdrawal Rate	\$0.0073	\$0.0073		
Overrun Rate	\$0.2441	\$0.2441 1/		
<b>FIRM STORAGE SERVICE (FS) - MARKET AREA</b>				
Deliverability Rate	\$1.4938	\$1.4938 1/		
Space Rate	\$0.0205	\$0.0205 1/		
Injection Rate	\$0.0087	\$0.0087	1.37%	\$0.0000
Withdrawal Rate	\$0.0087	\$0.0087		
Overrun Rate	\$0.1793	\$0.1793 1/		

Notes:

- 1/ Includes a per Dth charge for the PCB Surcharge Adjustment per Article XXXII of the General Terms and Conditions of \$0.000.
- 2/ The F&LR's and EPCR's determined pursuant to Article XXXVII of the General Terms and Conditions.
- 3/ The applicable F&LR pursuant to Article XXXVII of the General Terms and Conditions, associated with Losses is equal to 0.03%.

*No fuel on who  
 fuel is charged on gas*

*No fee on gas or who  
 No EPCR. NO F&LR*

FUEL AND EPCR

F&LR 1/, 2/, 3/, 4/

RECEIPT ZONE	DELIVERY ZONE								
	0	L	1	2	3	4	5	6	
0	0.35%		1.05%	1.56%	1.91%	2.28%	2.57%	3.05%	
L		0.18%							
1	0.44%		0.77%	1.32%	1.58%	1.93%	2.34%	2.66%	
2	1.56%		0.82%	0.18%	0.32%	0.58%	0.97%	1.30%	
3	1.91%		1.58%	0.32%	0.10%	0.80%	1.14%	1.50%	
4	2.28%		1.80%	0.81%	0.97%	0.33%	0.50%	0.85%	
5	2.64%		2.39%	0.97%	1.15%	0.49%	0.49%	0.62%	
6	3.14%		2.66%	1.31%	1.50%	0.80%	0.39%	0.21%	

EPCR 3/, 4/

RECEIPT ZONE	DELIVERY ZONE								
	0	L	1	2	3	4	5	6	
0	\$0.0025		\$0.0095	\$0.0147	\$0.0183	\$0.0221	\$0.0251	\$0.0301	
L		\$0.0008							
1	\$0.0033		\$0.0067	\$0.0122	\$0.0149	\$0.0185	\$0.0227	\$0.0260	
2	\$0.0147		\$0.0072	\$0.0008	\$0.0022	\$0.0048	\$0.0087	\$0.0120	
3	\$0.0183		\$0.0149	\$0.0022	\$0.0000	\$0.0070	\$0.0104	\$0.0138	
4	\$0.0221		\$0.0171	\$0.0071	\$0.0086	\$0.0023	\$0.0040	\$0.0075	
5	\$0.0251		\$0.0227	\$0.0087	\$0.0104	\$0.0039	\$0.0039	\$0.0052	
6	\$0.0301		\$0.0260	\$0.0120	\$0.0138	\$0.0070	\$0.0029	\$0.0011	

- 1/ Included in the above F&LR is the Losses component of the F&LR equal to 0.05%.
- 2/ For service that is rendered entirely by displacement and for gas scheduled and allocated for receipt at the Dracut, Massachusetts receipt point, Shipper shall render only the quantity of gas associated with Losses of 0.05%.
- 3/ The F&LR's and EPCR's listed above are applicable to FT-A, FT-BH, FT-G, FT-GS, and IT.
- 4/ The F&LR's and EPCR's determined pursuant to Article XXXVII of the General Terms and Conditions.

TransCanada PipeLines Limited  
 Final Mainline Transportation Tolls Effective July 1, 2015 (Amended November 1, 2015) and  
 Final Abandonment Surcharges Effective January 1, 2016 (Amended January 29, 2016)

**Storage Transportation Service**

Line No	Particulars	Monthly Toll (\$/GJ/Month)	Daily Equivalent (\$/GJ)	Abandonment Surcharge (\$/GJ/Month)	Daily Equivalent Abandonment Surcharge (\$/GJ)
	(a)	(b)	(c)	(d)	(e)
1	Centram MDA	5.23197	0.17201	0.26971	0.0088
2	Union WDA	39.71839	1.30581	2.45373	0.0805
3	Union NDA	16.92748	0.55652	0.90892	0.0298
4	Union EDA	11.84212	0.38933	0.56423	0.0185
5	KPUC EDA	11.39043	0.37448	0.53360	0.0175
6	GMIT EDA	19.47488	0.64027	1.08161	0.0355
7	Enbridge CDA	6.05839	0.19918	0.17218	0.0057
8	Enbridge EDA	15.16514	0.49858	0.78946	0.0259
9	Cornwall	15.38840	0.50592	0.80461	0.0264
10	Philipsburg	19.52568	0.64194	1.08502	0.0356

**Firm Transportation - Short Notice**

Line No	Particulars	Monthly Toll (\$/GJ/Month)	Daily Equivalent (\$/GJ)	Abandonment Surcharge (\$/GJ/Month)	Daily Equivalent Abandonment Surcharge (\$/GJ)
	(a)	(b)	(c)	(d)	(e)
11	Kirkwall to Thorold CDA	6.98093	0.22951	0.19172	0.0063
12	Union Parkway Belt to Goreway CDA	5.19730	0.17087	0.08183	0.0027
13	Union Parkway Belt to Victoria Square #2 CDA	6.13839	0.20181	0.13980	0.0046
14	Union Parkway Belt to Schomberg #2 CDA	6.07695	0.19979	0.13601	0.0045

**Enhanced Market Balancing Service**

Line No	Particulars	Monthly Toll (\$/GJ/Month)	Daily Equivalent (\$/GJ)	Abandonment Surcharge (\$/GJ/Month)	Daily Equivalent Abandonment Surcharge (\$/GJ)
	(a)	(b)	(c)	(d)	(e)
15	Union Parkway Belt to Union EDA	13.02633	0.42826	0.56423	0.0185

**Delivery Pressure**

Line No	Particulars	Monthly Toll (\$/GJ/Month)	Daily Equivalent (\$/GJ)
	(a)	(b)	(c)
16	Average Delivery Pressure Toll	1.01227	0.03328

Note: Delivery Pressure toll applies to the following locations: Emerson 1, Emerson 2, Union SWDA, Enbridge SWDA, Dawn Export, Niagara Falls, Iroquois, Chippawa and East Hereford.  
 The Daily Equivalent Toll is only applicable to STS Injections, IT, Diversions, STFT and SSS.

**Union Dawn Receipt Point Surcharge**

Line No	Particulars	Monthly Toll (\$/GJ/Month)	Daily Equivalent (\$/GJ)
	(a)	(b)	(c)
17	Union Dawn Receipt Point Surcharge	0.10724	0.00353

**Short Notice Balancing (SNB) Service**

Line No.	Particulars	Monthly Toll (\$/GJ/Month)	Daily Equivalent (\$/GJ)
	(a)	(b)	(c)
18	SNB Toll		

Note: This SNB Toll is a representative toll for the Eastern Region. 3.42005 0.1124

**Energy Deficient Gas Allowance (EDGA) Service**

Line No	Particulars	Capacity Charge (\$/GJ/D)
	(a)	(b)
19	Western Section	1.52481
20	Eastern Section	0.41865

Note: The EDGA Service capacity charge for the Western Section is the effective Empress to North Bay Junction FT Toll and the capacity charge for the Eastern Section is the effective Parkway to North Bay Junction FT Toll.  
 The EDGA Service fuel charge for the Western Section includes the effective Empress to North Bay Junction monthly fuel ratio and the fuel charge for the Eastern Section includes the effective Parkway to North Bay Junction monthly fuel ratio.



Line No	Receipt Point	Delivery Point	FT Toll (\$/GJ/Month)	Daily Equivalent FT for IT / STFT (\$/GJ)	Abandonment Surcharge (\$/GJ/Month)	Daily Equivalent Abandonment Surcharge (\$/GJ)
1	Union NCDA	Emerson 2	-	1.6405	-	0.1031
2	Union NCDA	Iroquois	-	0.5366	-	0.0285
3	Union NCDA	Kirkwall	-	0.3096	-	0.0131
4	Union NCDA	Napierville	-	0.6905	-	0.0389
5	Union NCDA	Niagara Falls	-	0.3847	-	0.0182
6	Union NCDA	North Bay Junction	-	0.2724	-	0.0106
7	Union NCDA	Philipsburg	-	0.7044	-	0.0398
8	Union NCDA	Spruce	-	1.5278	-	0.0955
9	Union NCDA	St. Clair	-	0.4785	-	0.0245
10	Union NCDA	Welwyn	-	1.8384	-	0.1165
11	Union NCDA	Dawn Export	-	0.4596	-	0.0233
12	Union NCDA	Union Parkway Belt	-	0.2792	-	0.0111
13	Union NCDA	Union CDA (Amended)	-	0.3277	-	0.0143
14	Union NCDA	Union ECDA	-	0.2883	-	0.0117
15	Union NDA	Empress	-	1.4286	-	0.1306
16	Union NDA	TransGas SSDA	-	1.1879	-	0.1073
17	Union NDA	Centram SSDA	-	1.0893	-	0.0977
18	Union NDA	Centram MDA	-	0.9409	-	0.0833
19	Union NDA	Centrat MDA	-	0.8727	-	0.0767
20	Union NDA	Union WDA	-	0.6155	-	0.0518
21	Union NDA	Nipigon WDA	-	0.5101	-	0.0416
22	Union NDA	Union NDA	-	0.0927	-	0.0012
23	Union NDA	Calstock NDA	-	0.3266	-	0.0238
24	Union NDA	Tunis NDA	-	0.1989	-	0.0115
25	Union NDA	GMIT NDA	-	0.1848	-	0.0101
26	Union NDA	Union SSMDA	-	0.8518	-	0.0747
27	Union NDA	Union NCDA	-	0.3072	-	0.0199
28	Union NDA	Union CDA	-	0.4349	-	0.0314
29	Union NDA	Union EDA	-	0.4902	-	0.0364
30	Union NDA	Enbridge CDA	-	0.4128	-	0.0294
31	Union NDA	Enbridge Parkway CDA	-	0.4170	-	0.0298
32	Union NDA	Enbridge EDA	-	0.4480	-	0.0326
33	Union NDA	KPUC EDA	-	0.5277	-	0.0398
34	Union NDA	GMIT EDA	-	0.5801	-	0.0445
35	Union NDA	Enbridge SWDA	-	0.5522	-	0.0420
36	Union NDA	Union SWDA	-	0.5543	-	0.0422
37	Union NDA	Chippawa	-	0.4975	-	0.0371
38	Union NDA	Cornwall	-	0.4798	-	0.0355
39	Union NDA	East Hereford	-	0.6919	-	0.0546
40	Union NDA	Emerson 1	-	0.9514	-	0.0843
41	Union NDA	Emerson 2	-	0.9514	-	0.0843
42	Union NDA	Iroquois	-	0.4600	-	0.0337
43	Union NDA	Kirkwall	-	0.4398	-	0.0319
44	Union NDA	Napierville	-	0.5713	-	0.0437
45	Union NDA	Niagara Falls	-	0.4961	-	0.0369
46	Union NDA	North Bay Junction	-	0.1893	-	0.0105
47	Union NDA	Philipsburg	-	0.5817	-	0.0447
48	Union NDA	Spruce	-	0.8727	-	0.0767
49	Union NDA	St. Clair	-	0.5274	-	0.0433
50	Union NDA	Welwyn	-	1.0893	-	0.0977
51	Union NDA	Dawn Export	-	0.5522	-	0.0420
52	Union NDA	Union Parkway Belt	-	0.4170	-	0.0298
53	Union NDA	Union CDA (Amended)	-	0.4534	-	0.0331
54	Union NDA	Union ECDA	-	0.4238	-	0.0304
55	Union Parkway Belt	Empress	72.71500	2.3906	4.69033	0.1538
56	Union Parkway Belt	TransGas SSDA	62.22550	2.0458	3.97933	0.1305
57	Union Parkway Belt	Centram SSDA	57.92793	1.9045	3.68804	0.1209
58	Union Parkway Belt	Centram MDA	51.42698	1.6908	3.24739	0.1065
59	Union Parkway Belt	Centrat MDA	50.92176	1.6741	3.21314	0.1054
60	Union Parkway Belt	Union WDA	39.71839	1.3058	2.45373	0.0805
61	Union Parkway Belt	Nipigon WDA	35.11878	1.1546	2.14195	0.0702
62	Union Parkway Belt	Union NDA	16.92748	0.5565	0.90892	0.0298
63	Union Parkway Belt	Calstock NDA	27.12102	0.8917	1.59989	0.0525
64	Union Parkway Belt	Tunis NDA	20.82538	0.6847	1.17313	0.0385
65	Union Parkway Belt	GMIT NDA	16.14638	0.5308	0.85599	0.0281
66	Union Parkway Belt	Union SSMDA	24.24117	0.7970	1.40465	0.0461
67	Union Parkway Belt	Union NCDA	8.49264	0.2792	0.33718	0.0111
68	Union Parkway Belt	Union CDA	4.76720	0.1567	0.08466	0.0028
69	Union Parkway Belt	Union EDA	11.84212	0.3893	0.56423	0.0185
70	Union Parkway Belt	Enbridge CDA	6.05839	0.1992	0.17218	0.0057
71	Union Parkway Belt	Enbridge Parkway CDA	4.04238	0.1329	0.03553	0.0012
72	Union Parkway Belt	Enbridge EDA	15.16514	0.4986	0.78946	0.0259
73	Union Parkway Belt	KPUC EDA	11.39043	0.3745	0.53360	0.0175
74	Union Parkway Belt	GMIT EDA	19.47488	0.6403	1.08161	0.0355
75	Union Parkway Belt	Enbridge SWDA	9.52802	0.3133	0.40736	0.0134
76	Union Parkway Belt	Union SWDA	9.61501	0.3161	0.41326	0.0136
77	Union Parkway Belt	Chippawa	7.30852	0.2403	0.25694	0.0084
78	Union Parkway Belt	Cornwall	15.38840	0.5059	0.80461	0.0264
79	Union Parkway Belt	East Hereford	24.00088	0.7891	1.38839	0.0455
80	Union Parkway Belt	Emerson 1	47.97256	1.5772	3.01323	0.0988
81	Union Parkway Belt	Emerson 2	47.97256	1.5772	3.01323	0.0988
82	Union Parkway Belt	Iroquois	14.36427	0.4723	0.73518	0.0241



TRANSPORTATION RATES

**(A) Applicability**

The charges under this schedule shall be applicable to a Shipper who enters into a Transportation Service Contract with Union.

Applicable Points

Dawn as a receipt point: Dawn (TCPL), Dawn (Facilities), Dawn (Tecumseh), Dawn (Vector) and Dawn (TSLE).

Dawn as a delivery point: Dawn (Facilities).

**(B) Services**

Transportation Service under this rate schedule shall be for transportation on Union's Dawn - Trafalgar facilities.

**(C) Rates**

The identified rates represent maximum prices for service. These rates may change periodically. Multi-year prices may also be negotiated, which may be higher than the identified rates.

	Monthly Demand Charge (applied to daily contract demand) <u>Rate/GJ</u>	Commodity and Fuel Charges  Fuel Ratio %	Commodity Charge  <u>AND</u> <u>Rate/GJ</u>
<b><u>Firm Transportation (1)</u></b>			
Dawn to Parkway	\$2.883	Monthly fuel rates and ratios shall be in accordance with schedule "C".	
Dawn to Kirkwall	\$2.421		
Kirkwall to Parkway	\$0.462		
Parkway to Dawn	n/a		
<b><u>M12-X Firm Transportation</u></b>			
Between Dawn, Kirkwall and Parkway	\$3.602	Monthly fuel rates and ratios shall be in accordance with schedule "C".	
<b><u>Limited Firm/Interruptible Transportation (1)</u></b>			
Dawn to Parkway – Maximum	\$6.919	Monthly fuel rates and ratios shall be in accordance with schedule "C".	
Dawn to Kirkwall – Maximum	\$6.919		
Parkway (TCPL) to Parkway (Cons) (2)		0.156%	

**Authorized Overrun (3)**

Authorized overrun rates will be payable on all quantities in excess of Union's obligation on any day. The overrun charges payable will be calculated at the following rates. Overrun will be authorized at Union's sole discretion.

	If Union supplies fuel Commodity Charge <u>Rate/GJ</u>	Commodity and Fuel Charges  Fuel Ratio %	Commodity Charge  <u>AND</u> <u>Rate/GJ</u>
Transportation Overrun			
Dawn to Parkway		Monthly fuel rates and ratios shall be in accordance with schedule "C".	\$0.095
Dawn to Kirkwall			\$0.080
Kirkwall to Parkway			\$0.015
Parkway to Dawn			\$0.095
Parkway (TCPL) Overrun (4)	n/a	0.699%	n/a
<b><u>M12-X Firm Transportation</u></b>			
Between Dawn, Kirkwall and Parkway		Monthly fuel rates and ratios shall be in accordance with schedule "C".	\$0.118

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

3 **Off Peak 2016 Summer Cost of Gas Filing**

4 **NYMEX Futures @ Henry Hub and Hedged Contracts**

5										May - Oct
6	For Month of:	Reference	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16		Off Peak
7	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)		Strip Average
8	I. NYMEX Opening Prices as of									
9	Opening Prices (15 day average)	Line 206	\$1.9101	\$1.9922	\$2.0711	\$2.1151	\$2.1315	\$2.1665	\$	2.0644
10			\$1.9101	\$1.9922	\$2.0711	\$2.1151	\$2.1315	\$2.1665	\$	2.0644

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19 **II. Development of Hedging Costs and Savings**

20										May - Oct
21	TGP (Direct) Volumes									
22	Hedged Volumes (Dth)	In 76	-	-	-	-	-	-	-	Total
23	Market Priced Volumes (Dth)	In 24 - In 22	443,421	268,855	182,458	172,066	250,732	577,380	1,894,912	-
24	Total Volumes (Dth)	Sch 6, Ins 74 + 90 / 10	443,421	268,855	182,458	172,066	250,732	577,380	1,894,912	-
25	Percentage of Volumes Hedged	In 22 / In 24	0.00%					0.00%	0.00%	
26										
27	Hedge Price	In 162	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
28	NYMEX Price	In 10	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
29										
30	Hedged Volumes at Hedged Price	In 22 * In 27	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
31	Less Hedged Volumes at NYMEX	In 22 * In 28	-	-	-	-	-	-	-	-
32	Hedge (Savings)/Loss	In 30 - In 31	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

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34

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2016 Summer Cost of Gas Filing

4 NYMEX Futures @ Henry Hub and Hedged Contracts

5									May - Oct
6	For Month of:	Reference	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Off Peak
35									Strip Average
36									
37									May - Oct
38	Hedged Volumes (Dth)								Total
39	Hedge	Trade Date	Swaps	-	-	-	-	-	-
40	Hedge	Trade Date	Swaps	-	-	-	-	-	-
41	Hedge	Trade Date	Swaps	-	-	-	-	-	-
42	Hedge	Trade Date	Swaps	-	-	-	-	-	-
43	Hedge	Trade Date	Swaps	-	-	-	-	-	-
44	Hedge	Trade Date	Swaps	-	-	-	-	-	-
45	Hedge	Trade Date	Swaps	-	-	-	-	-	-
46	Hedge	Trade Date	Swaps	-	-	-	-	-	-
47	Hedge	Trade Date	Swaps	-	-	-	-	-	-
48	Hedge	Trade Date	Swaps	-	-	-	-	-	-
49	Hedge	Trade Date	Swaps	-	-	-	-	-	-
50	Hedge	Trade Date	Swaps	-	-	-	-	-	-
51	Hedge	Trade Date	Swaps	-	-	-	-	-	-
52	Hedge	Trade Date	Swaps	-	-	-	-	-	-
53	Hedge	Trade Date	Swaps	-	-	-	-	-	-
54	Hedge	Trade Date	Swaps	-	-	-	-	-	-
55	Hedge	Trade Date	Swaps	-	-	-	-	-	-
56	Hedge	Trade Date	Swaps	-	-	-	-	-	-
57	Hedge	Trade Date	Swaps	-	-	-	-	-	-
58	Hedge	Trade Date	Swaps	-	-	-	-	-	-
59	Hedge	Trade Date	Swaps	-	-	-	-	-	-
60	Hedge	Trade Date	Swaps	-	-	-	-	-	-
61	Hedge	Trade Date	Swaps	-	-	-	-	-	-
62	Hedge	Trade Date	Swaps	-	-	-	-	-	-
63	Hedge	Trade Date	Swaps	-	-	-	-	-	-
64	Hedge	Trade Date	Swaps	-	-	-	-	-	-
65	Hedge	Trade Date	Swaps	-	-	-	-	-	-
66	Hedge	Trade Date	Swaps	-	-	-	-	-	-
67	Hedge	Trade Date	Swaps	-	-	-	-	-	-
68	Hedge	Trade Date	Swaps	-	-	-	-	-	-
69	Hedge	Trade Date	Swaps	-	-	-	-	-	-
70	Hedge	Trade Date	Swaps	-	-	-	-	-	-
71	Hedge	Trade Date	Swaps	-	-	-	-	-	-
72	Hedge	Trade Date	Swaps	-	-	-	-	-	-
73	Hedge	Trade Date	Swaps	-	-	-	-	-	-
74	Hedge	Trade Date	Swaps	-	-	-	-	-	-
75	Hedge								
76									
77									
78									

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2016 Summer Cost of Gas Filing

4 NYMEX Futures @ Henry Hub and Hedged Contracts

5

May - Oct  
Off Peak

Strip Average

May - Oct

6 For Month of:	Reference	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Strip Average
79 Strike Price								
80								
81 Hedge	Trade Date 1/0/00 Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
82 Hedge	Trade Date 1/0/00 Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
83 Hedge	Trade Date 1/0/00 Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
84 Hedge	Trade Date 1/0/00 Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
85 Hedge	Trade Date 1/0/00 Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
86 Hedge	Trade Date 1/0/00 Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
87 Hedge	Trade Date 1/0/00 Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
88 Hedge	Trade Date 1/0/00 Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
89 Hedge	Trade Date 1/0/00 Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
90 Hedge	Trade Date 1/0/00 Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
91 Hedge	Trade Date 1/0/00 Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
92 Hedge	Trade Date 1/0/00 Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
93 Hedge	Trade Date 1/0/00 Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
94 Hedge	Trade Date 1/0/00 Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
95 Hedge	Trade Date 1/0/00 Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
96 Hedge	Trade Date Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
97 Hedge	Trade Date Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
98 Hedge	Trade Date Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
99 Hedge	Trade Date Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
100 Hedge	Trade Date Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
101 Hedge	Trade Date Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
102 Hedge	Trade Date Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
103 Hedge	Trade Date Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
104 Hedge	Trade Date Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
105 Hedge	Trade Date Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
106 Hedge	Trade Date Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
107 Hedge	Trade Date Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
108 Hedge	Trade Date Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
109 Hedge	Trade Date Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
110 Hedge	Trade Date Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
111 Hedge	Trade Date Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
112 Hedge	Trade Date Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
113 Hedge	Trade Date Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
114 Hedge	Trade Date Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
115 Hedge	Trade Date Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
116 Hedge	Trade Date Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
117 Hedge	Trade Date Swaps	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000

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1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2016 Summer Cost of Gas Filing

4 NYMEX Futures @ Henry Hub and Hedged Contracts

5

6 For Month of:	Reference	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	May - Oct Off Peak Strip Average
120								
121 Hedge Dollars								May- Oct
122 Hedge	Trade Date 1/0/00 Swaps	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
123 Hedge	Trade Date 1/0/00 Swaps	-	-	-	-	-	-	-
124 Hedge	Trade Date 1/0/00 Swaps	-	-	-	-	-	-	-
125 Hedge	Trade Date 1/0/00 Swaps	-	-	-	-	-	-	-
126 Hedge	Trade Date 1/0/00 Swaps	-	-	-	-	-	-	-
127 Hedge	Trade Date 1/0/00 Swaps	-	-	-	-	-	-	-
128 Hedge	Trade Date 1/0/00 Swaps	-	-	-	-	-	-	-
129 Hedge	Trade Date 1/0/00 Swaps	-	-	-	-	-	-	-
130 Hedge	Trade Date 1/0/00 Swaps	-	-	-	-	-	-	-
131 Hedge	Trade Date 1/0/00 Swaps	-	-	-	-	-	-	-
132 Hedge	Trade Date 1/0/00 Swaps	-	-	-	-	-	-	-
133 Hedge	Trade Date 1/0/00 Swaps	-	-	-	-	-	-	-
134 Hedge	Trade Date 1/0/00 Swaps	-	-	-	-	-	-	-
135 Hedge	Trade Date 01/00/00 Swaps	-	-	-	-	-	-	-
136 Hedge	Trade Date 01/00/00 Swaps	-	-	-	-	-	-	-
137 Hedge ##	Trade Date Swaps	-	-	-	-	-	-	-
138 Hedge ##	Trade Date Swaps	-	-	-	-	-	-	-
139 Hedge ##	Trade Date Swaps	-	-	-	-	-	-	-
140 Hedge ##	Trade Date Swaps	-	-	-	-	-	-	-
141 Hedge ##	Trade Date Swaps	-	-	-	-	-	-	-
142 Hedge ##	Trade Date Swaps	-	-	-	-	-	-	-
143 Hedge ##	Trade Date Swaps	-	-	-	-	-	-	-
144 Hedge ##	Trade Date Swaps	-	-	-	-	-	-	-
145 Hedge ##	Trade Date Swaps	-	-	-	-	-	-	-
146 Hedge	Trade Date Swaps	-	-	-	-	-	-	-
147 Hedge	Trade Date Swaps	-	-	-	-	-	-	-
148 Hedge	Trade Date Swaps	-	-	-	-	-	-	-
149 Hedge	Trade Date Swaps	-	-	-	-	-	-	-
150 Hedge	Trade Date Swaps	-	-	-	-	-	-	-
151 Hedge	Trade Date Swaps	-	-	-	-	-	-	-
152 Hedge	Trade Date Swaps	-	-	-	-	-	-	-
153 Hedge	Trade Date Swaps	-	-	-	-	-	-	-
154 Hedge	Trade Date Swaps	-	-	-	-	-	-	-
155 Hedge	Trade Date Swaps	-	-	-	-	-	-	-
156 Hedge	Trade Date Swaps	-	-	-	-	-	-	-
157 Hedge	Trade Date Swaps	-	-	-	-	-	-	-
158 Hedge	Trade Date Swaps	-	-	-	-	-	-	-
159								
160 Subtotal Hedge Dollars		\$0	\$0	\$0	\$0	\$0	\$0	\$0
161								
162	Weighted Average Hedged Cost per Unit	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
163								
164								
165								

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2016 Summer Cost of Gas Filing

4 NYMEX Futures @ Henry Hub and Hedged Contracts

May - Oct

Off Peak

Strip Average

6 For Month of:	Reference	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	May - Oct Off Peak Strip Average
166								
167	<u>NYMEX Settlement - 15 Day Average</u>							
168	Days	Date						
169		2/13/2015	2.095	2.163	2.233	2.267	2.277	2.308
170		2/17/2015	2.035	2.104	2.174	2.213	2.228	2.263
171		2/18/2015	2.076	2.144	2.213	2.252	2.266	2.297
172		2/19/2015	2.004	2.077	2.15	2.192	2.208	2.238
173		2/20/2015	1.945	2.018	2.094	2.137	2.154	2.185
174		2/23/2015	1.934	2.007	2.081	2.123	2.138	2.168
175		2/24/2015	1.903	1.975	2.048	2.09	2.107	2.14
176		2/25/2015	1.909	1.982	2.055	2.097	2.112	2.145
177		2/26/2015	1.867	1.944	2.019	2.063	2.079	2.111
178		2/27/2015	1.873	1.951	2.028	2.072	2.088	2.121
179		3/2/2015	1.808	1.896	1.985	2.034	2.054	2.093
180		3/3/2015	1.848	1.939	2.024	2.074	2.091	2.131
181		3/4/2015	1.8	1.903	1.992	2.043	2.061	2.102
182		3/5/2015	1.767	1.88	1.975	2.024	2.044	2.088
183		3/6/2015	1.787	1.9	1.996	2.046	2.065	2.107
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17		15 Day Average	1.9101	1.9922	2.0711	2.1151	2.1315	2.1665

Liberty Utilities (EnergyNorth Natural Gas) Corp.

2 Off Peak 2016 Summer Cost of Gas Filing

3 Annual Bill Comparisons, May 15 - Oct 15 vs May 16 - Oct 16 - Residential Heating Rate R-3

4

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6 November 1, 2015 - April 30, 2016

7 Residential Heating (R3)

			Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	Winter Nov-Apr
8	Typical Usage (Therms)		51	96	121	138	129	93	629
9	12/1/2014	11/1/2014							
10	<b>Winter:</b>								
11	Cust. Chg	\$22.04 \$17.51	\$17.51	\$22.04	\$22.04	\$22.04	\$22.04	\$22.04	\$127.71
12	Headblock	\$0.3486 \$0.2769	\$14.19	\$33.41	\$34.86	\$34.86	\$34.86	\$32.53	\$184.71
13	Tailblock	\$0.2885 \$0.2288	\$0.00	\$0.00	\$6.10	\$10.99	\$8.42	\$0.00	\$25.51
14	HB Threshold	100 100							
15	<b>Summer:</b>								
16	Cust. Chg	\$22.04 \$17.51							
17	Headblock	\$0.3486 \$0.2769							
18	Tailblock	\$0.2885 \$0.2769							
19	HB Threshold	20 20							
20	Total Base Rate Amount		\$31.70	\$55.45	\$63.00	\$67.89	\$65.32	\$54.57	\$337.93
21	COG Rate - (Seasonal)		\$0.7516	\$0.7516	\$0.6256	\$0.4436	\$0.2634	\$0.2634	\$0.4869
22	COG amount		\$38.51	\$72.04	\$75.79	\$61.26	\$34.02	\$24.58	\$306.20
23	LDAC		\$0.1014	\$0.1014	\$0.1014	\$0.1014	\$0.1014	\$0.1014	0.1014
24	LDAC amount		\$5.19	\$9.72	\$12.28	\$14.00	\$13.10	\$9.46	\$63.76
25	<b>Total Bill</b>		<b>\$75.40</b>	<b>\$137.21</b>	<b>\$151.08</b>	<b>\$143.15</b>	<b>\$112.44</b>	<b>\$88.62</b>	<b>\$707.89</b>

May 1, 2016 - October 31, 2016

	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Summer May-Oct	Total Nov-Oct
	57	27	19	15	14	22	154	783
	\$22.04	\$22.04	\$22.04	\$22.04	\$22.04	\$22.04	\$132.24	\$259.95
	\$6.97	\$6.97	\$6.62	\$5.22	\$5.03	\$6.97	\$37.79	\$222.50
	\$10.63	\$2.09	\$0.00	\$0.00	\$0.00	\$0.56	\$13.27	\$38.78
	\$39.64	\$31.10	\$28.66	\$27.26	\$27.07	\$29.57	\$183.30	\$521.23
	\$0.4117	\$0.4117	\$0.4117	\$0.4117	\$0.4117	\$0.4117	\$0.4117	\$0.4721
	\$23.40	\$11.21	\$7.82	\$6.16	\$5.95	\$9.03	\$63.57	\$369.77
	\$0.1014	\$0.1014	\$0.1014	\$0.1014	\$0.1014	\$0.1014	\$0.1014	\$0.1014
	\$5.76	\$2.76	\$1.93	\$1.52	\$1.46	\$2.22	\$15.66	\$79.42
	<b>\$68.81</b>	<b>\$45.07</b>	<b>\$38.41</b>	<b>\$34.94</b>	<b>\$34.48</b>	<b>\$40.83</b>	<b>\$262.54</b>	<b>\$970.43</b>

34 November 1, 2014 - April 30, 2015

35 Residential Heating (R3)

			Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	Winter Nov-Apr
36	Typical Usage (Therms)		51	96	121	138	129	93	629
37	7/1/2015	7/1/2014	12/1/2014						
38	<b>Winter:</b>								
39	Cust. Chg	22.04 \$17.51 \$19.85	\$17.51	\$19.85	\$19.85	\$19.85	\$19.85	\$19.85	\$116.76
40	Headblock	0.3486 0.2769 \$0.3140	14.19	30.10	31.40	31.40	29.30		\$167.79
41	Tailblock	0.2885 0.2288 \$0.2594	\$0.00	\$0.00	\$5.49	\$9.88	\$7.57	\$0.00	\$22.94
42	HB Thresh	100 100 100							
43	<b>Summer:</b>								
44	Cust. Chg	22.04 \$17.51 \$19.85							
45	Headblock	0.3486 0.2769 \$0.3140							
46	Tailblock	0.2885 0.2288 \$0.2594							
47	HB Thresh	20 20 20							
48	Total Base Rate Amount		\$31.70	\$49.95	\$56.74	\$61.13	\$58.82	\$49.15	\$307.48
49	COG Rate - (Seasonal)		\$1.1630	\$1.1630	\$1.0699	\$0.9239	\$0.8722	\$0.6455	\$0.9560
50	COG amount		\$59.58	\$111.47	\$129.62	\$127.59	\$112.66	\$60.24	\$601.16
51	LDAC		\$0.0772	\$0.0772	\$0.0772	\$0.0772	\$0.0772	\$0.0772	0.0772
52	LDAC amount		\$3.96	\$7.40	\$9.35	\$10.66	\$9.97	\$7.20	\$48.54
53	<b>Total Bill</b>		<b>\$95.23</b>	<b>\$168.82</b>	<b>\$195.71</b>	<b>\$199.38</b>	<b>\$181.45</b>	<b>\$116.60</b>	<b>\$957.19</b>

May 1, 2015 - October 31, 2015

	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Summer May-Oct	Total Nov-Oct
	57	27	19	15	14	22	154	783
	\$17.51	\$17.51	\$22.04	\$22.04	\$22.04	\$22.04	\$123.18	\$239.94
	\$5.54	\$5.54	\$6.62	\$5.22	\$5.03	\$6.97	\$34.92	\$202.71
	\$8.43	\$1.65	\$0.00	\$0.00	\$0.00	\$0.56	\$10.64	\$33.58
	\$31.48	\$24.70	\$28.66	\$27.26	\$27.07	\$29.57	\$168.75	\$476.23
	\$0.3073	\$0.3246	\$0.3421	\$0.3421	\$0.3421	\$0.3796	\$0.3315	\$0.8329
	\$17.47	\$8.84	\$6.50	\$5.12	\$4.94	\$8.33	\$51.19	\$652.36
	\$0.0772	\$0.0772	\$0.0937	\$0.0937	\$0.0937	\$0.0937	\$0.0847	\$0.0787
	\$4.39	\$2.10	\$1.78	\$1.40	\$1.35	\$2.06	\$13.08	\$61.63
	<b>\$53.33</b>	<b>\$35.64</b>	<b>\$36.94</b>	<b>\$33.78</b>	<b>\$33.37</b>	<b>\$39.95</b>	<b>\$233.02</b>	<b>\$1,190.21</b>

62 DIFFERENCE:

63	Total Bill	(\$19.84)	(\$31.61)	(\$44.63)	(\$56.23)	(\$69.01)	(\$27.98)	(\$249.30)
64	% Change	-20.83%	-18.72%	-22.80%	-28.20%	-38.03%	-24.00%	-26.04%
65	Base Rate	\$0.00	\$5.51	\$6.27	\$6.76	\$6.50	\$5.42	\$30.45
66	% Change	0.00%	11.02%	11.04%	11.06%	11.05%	11.02%	9.90%
67	COG & LDAC	(\$19.84)	(\$37.11)	(\$50.90)	(\$62.99)	(\$75.51)	(\$33.40)	(\$279.74)
68	% Change	-31.22%	-31.22%	-36.62%	-45.56%	-61.58%	-49.52%	-43.06%
69	check	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

	\$15.47	\$9.43	\$1.47	\$1.16	\$1.12	\$0.87	\$29.51	(\$219.78)
	29.01%	26.45%	3.98%	3.43%	3.35%	2.19%	12.67%	-18.47%
	\$8.16	\$6.40	\$0.00	\$0.00	\$0.00	\$0.00	\$14.56	\$45.01
	25.93%	25.89%	0.00%	0.00%	0.00%	0.00%	8.63%	9.45%
	\$7.31	\$3.03	\$1.47	\$1.16	\$1.12	\$0.87	\$14.96	(\$264.79)
	33.45%	27.70%	17.74%	17.74%	17.74%	8.41%	23.27%	-37.09%
	\$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 2016 Summer Cost of Gas Filing  
3 Annual Bill Comparisons, May 15 - Oct 15 vs May 16 - Oct 16 - Commercial Rate G-41

6 November 1, 2015 - April 30, 2016  
7 Commercial Rate (G-41)

	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	Winter Nov-Apr
Typical Usage (Therms)	121	253	353	426	402	274	1,829
Winter:	12/1/2014	11/1/2014					
Cust. Chg	\$48.24	\$41.19	\$48.24	\$48.24	\$48.24	\$48.24	\$289.44
Headblock	\$0.3956	\$0.3287	\$39.56	\$39.56	\$39.56	\$39.56	\$237.36
Tailblock	\$0.2657	\$0.2138	\$5.58	\$40.69	\$67.29	\$86.49	\$326.66
HB Threshold	100	100					
Summer:							
Cust. Chg	\$48.24	\$41.19					
Headblock	\$0.3956	\$0.3287					
Tailblock	\$0.2657	\$0.2138					
HB Threshold	20	20					
Total Base Rate Amount	\$93.38	\$128.49	\$155.09	\$174.29	\$168.17	\$134.04	\$853.46
COG Rate - (Seasonal)	\$0.7454	\$0.7454	\$0.6194	\$0.0437	\$0.2572	\$0.2572	\$0.3773
COG amount	\$90.20	\$188.68	\$218.80	\$18.61	\$103.52	\$70.48	\$690.29
LDAC	\$0.0685	\$0.0685	\$0.0685	\$0.0685	\$0.0685	\$0.0685	0.0685
LDAC amount	\$8.29	\$17.34	\$24.20	\$29.15	\$27.57	\$18.77	\$125.32
<b>Total Bill</b>	<b>\$191.86</b>	<b>\$334.50</b>	<b>\$398.09</b>	<b>\$222.05</b>	<b>\$299.26</b>	<b>\$223.29</b>	<b>\$1,669.07</b>

34 November 1, 2014 - April 30, 2015  
35 Commercial Rate (G-41)

	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	Winter Nov-Apr
Typical Usage (Therms)	121	253	353	426	402	274	1,829
Winter:	11/1/2014	12/1/2014	7/1/2015				
Cust. Chg	\$41.19	\$46.71	\$48.24	\$41.19	\$46.71	\$46.71	\$274.74
Headblock	\$0.3287	\$0.3727	\$0.3956	32.87	37.27	37.27	\$219.22
Tailblock	\$0.2138	\$0.2424	\$0.2657	\$4.49	\$37.12	\$61.39	\$297.41
HB Thresh	100	100	100				
Summer:							
Cust. Chg	\$41.19	\$46.71	\$48.24				
Headblock	\$0.3287	\$0.3727	\$0.3956				
Tailblock	\$0.2138	\$0.2424	\$0.2657				
HB Thresh	20	20	20				
Total Base Rate Amount	\$78.55	\$121.10	\$145.37	\$162.89	\$157.30	\$126.16	\$791.37
COG Rate - (Seasonal)	\$1.1666	\$1.1666	\$1.0735	\$0.9275	\$0.8758	\$0.6491	\$0.9515
COG amount	\$141.16	\$295.30	\$379.22	\$394.67	\$352.50	\$177.87	\$1,740.72
LDAC	\$0.0628	\$0.0628	\$0.0628	\$0.0628	\$0.0628	\$0.0628	0.0628
LDAC amount	\$7.60	\$15.90	\$22.18	\$26.72	\$25.28	\$17.21	\$114.89
<b>Total Bill</b>	<b>\$227.31</b>	<b>\$432.29</b>	<b>\$546.77</b>	<b>\$584.27</b>	<b>\$535.08</b>	<b>\$321.25</b>	<b>\$2,646.98</b>

62 DIFFERENCE:

Total Bill	(\$35.45)	(\$97.79)	(\$148.68)	(\$362.22)	(\$235.82)	(\$97.96)	(\$977.91)
% Change	-15.59%	-22.62%	-27.19%	-62.00%	-44.07%	-30.49%	-36.94%
Base Rate	\$14.83	\$7.39	\$9.72	\$11.40	\$10.87	\$7.87	\$62.09
% Change	18.88%	6.10%	6.69%	7.00%	6.91%	6.24%	7.85%
COG & LDAC	(\$50.28)	(\$105.17)	(\$158.40)	(\$373.63)	(\$246.69)	(\$105.83)	(\$1,040.00)
% Change	-33.80%	-33.80%	-39.46%	-88.67%	-65.30%	-54.25%	-56.05%
check	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

May 1, 2016 - October 31, 2016

May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Summer May-Oct	Total Nov-Oct
166	59	51	27	26	39	368	2,198
\$48.24	\$48.24	\$48.24	\$48.24	\$48.24	\$48.24	\$289.44	\$578.88
\$7.91	\$7.91	\$7.91	\$7.91	\$7.91	\$7.91	\$47.47	\$284.83
\$38.79	\$10.42	\$8.23	\$1.92	\$1.62	\$5.00	\$65.98	\$392.64
\$94.94	\$66.57	\$64.38	\$58.07	\$57.77	\$61.15	\$402.89	\$1,256.35
\$0.3976	\$0.3976	\$0.3976	\$0.3976	\$0.3976	\$0.3976	\$0.3976	\$0.3807
\$66.00	\$23.55	\$20.27	\$10.83	\$10.38	\$15.43	\$146.45	\$836.74
\$0.0685	\$0.0685	\$0.0685	\$0.0685	\$0.0685	\$0.0685	\$0.0685	\$0.0685
\$11.37	\$4.06	\$3.49	\$1.87	\$1.79	\$2.66	\$25.23	\$150.55
<b>\$172.31</b>	<b>\$94.18</b>	<b>\$88.15</b>	<b>\$70.76</b>	<b>\$69.94</b>	<b>\$79.24</b>	<b>\$574.57</b>	<b>\$2,243.64</b>

May 1, 2015 - October 31, 2015

May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Summer May-Oct	Total Nov-Oct
166	59	51	27	26	39	368	2,198
\$46.71	\$46.71	\$48.24	\$0.00	\$0.00	\$0.00	\$141.66	\$416.40
\$7.45	\$7.45	\$7.91	\$7.91	\$7.91	\$7.91	\$46.56	\$265.78
\$35.39	\$9.51	\$8.23	\$1.92	\$1.62	\$5.00	\$61.67	\$359.08
\$89.55	\$63.67	\$64.38	\$9.83	\$9.53	\$12.91	\$249.88	\$1,041.25
\$0.3210	\$0.3383	\$0.3558	\$0.3558	\$0.3558	\$0.3933	\$0.3413	\$0.8492
\$53.28	\$20.03	\$18.14	\$9.69	\$9.29	\$15.27	\$125.70	\$1,866.41
\$0.0628	\$0.0628	\$0.0793	\$0.0793	\$0.0793	\$0.0793	\$0.0692	\$0.0639
\$10.42	\$3.72	\$4.04	\$2.16	\$2.07	\$3.08	\$25.49	\$140.38
<b>\$153.26</b>	<b>\$87.43</b>	<b>\$86.57</b>	<b>\$21.68</b>	<b>\$20.89</b>	<b>\$31.26</b>	<b>\$401.07</b>	<b>\$3,048.05</b>

\$19.05	\$6.75	\$1.58	\$49.08	\$49.05	\$47.99	\$173.50	(\$804.41)
12.43%	7.72%	1.83%	226.41%	234.82%	153.54%	43.26%	-26.39%
\$5.39	\$2.90	\$0.00	\$48.24	\$48.24	\$48.24	\$153.01	\$215.10
6.02%	4.56%	0.00%	490.63%	506.05%	373.63%	61.23%	20.66%
\$13.66	\$3.85	\$1.58	\$0.84	\$0.81	(\$0.25)	\$20.49	(\$1,019.50)
21.44%	16.21%	7.12%	7.12%	7.12%	-1.38%	13.55%	-50.80%
\$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 2016 Summer Cost of Gas Filing

4 Annual Bill Comparisons, May 15 - Oct 15 vs May 16 - Oct 16 - Commercial Rate G-42

	11/1/2015	12/1/2014	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	Winter Nov-Apr
Typical Usage (Therms)			1,012	1,819	2,289	2,650	2,663	1,822	12,254
Winter:									
Cust. Chg	\$144.73	\$140.13	\$144.73	\$140.13	\$140.13	\$140.13	\$140.13	\$140.13	\$845.38
Headblock	\$0.3598	\$0.3483	\$359.80	\$348.30	\$348.30	\$348.30	\$348.30	\$348.30	\$2,101.30
Tailblock	\$0.2396	\$0.2302	\$2.82	\$188.43	\$296.72	\$379.75	\$382.85	\$189.28	\$1,439.84
HB Threshold	1,000	1,000							
Summer:									
Cust. Chg	\$144.73	\$140.13							
Headblock	\$0.3598	\$0.3483							
Tailblock	\$0.2396	\$0.2302							
HB Threshold	400	400							
Total Base Rate Amount			\$507.35	\$676.86	\$785.15	\$868.18	\$871.28	\$677.71	\$4,386.52
COG Rate - (Seasonal)			\$0.7454	\$0.7454	\$0.6194	\$0.0437	\$0.2572	\$0.2572	\$0.3915
COG amount			\$754.18	\$1,355.54	\$1,417.78	\$115.89	\$684.95	\$468.68	\$4,797.02
LDAC			\$0.0685	\$0.0685	\$0.0685	\$0.0685	\$0.0685	\$0.0685	0.0685
LDAC amount			\$69.31	\$124.57	\$156.79	\$181.50	\$182.42	\$124.82	\$839.42
<b>Total Bill</b>			<b>\$1,330.83</b>	<b>\$2,156.97</b>	<b>\$2,359.71</b>	<b>\$1,165.57</b>	<b>\$1,738.65</b>	<b>\$1,271.22</b>	<b>\$10,022.95</b>

November 1, 2014 - April 30, 2015

	11/1/2014	12/1/2014	7/1/2014	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	Winter Nov-Apr
Typical Usage (Therms)				1,012	1,819	2,289	2,650	2,663	1,822	12,254
Winter:										
Cust. Chg	\$123.58	\$140.13	\$144.73	\$123.58	\$140.13	\$140.13	\$140.13	\$140.13	\$140.13	\$824.23
Headblock	\$0.3072	\$0.3483	\$0.3598	\$0.3072	\$348.30	\$348.30	\$348.30	\$348.30	\$348.30	\$2,048.70
Tailblock	\$0.2030	\$0.2302	\$0.2396	\$2.39	\$188.43	\$296.72	\$379.75	\$382.85	\$189.28	\$1,439.41
HB Thresh	1,000	1,000	1,000							
Summer:										
Cust. Chg	\$123.58	\$140.13	\$144.73							
Headblock	\$0.3072	\$0.3483	\$0.3598							
Tailblock	\$0.2030	\$0.2302	\$0.2396							
HB Thresh	400	400	400							
Total Base Rate Amount				\$433.17	\$676.86	\$785.15	\$868.18	\$871.28	\$677.71	\$4,312.34
COG Rate - (Seasonal)				\$1.1666	\$1.1666	\$1.0735	\$0.9275	\$0.8758	\$0.6491	\$0.9574
COG amount				\$1,180.33	\$2,121.51	\$2,457.19	\$2,457.54	\$2,332.34	\$1,182.82	\$11,731.73
LDAC				\$0.0628	\$0.0628	\$0.0628	\$0.0628	\$0.0628	\$0.0628	0.0628
LDAC amount				\$63.54	\$114.20	\$143.75	\$166.40	\$167.24	\$114.44	\$769.57
<b>Total Bill</b>				<b>\$1,677.04</b>	<b>\$2,912.58</b>	<b>\$3,386.08</b>	<b>\$3,492.11</b>	<b>\$3,370.86</b>	<b>\$1,974.97</b>	<b>\$16,813.64</b>

DIFFERENCE:

<b>Total Bill</b>	<b>(\$346.21)</b>	<b>(\$755.61)</b>	<b>(\$1,026.37)</b>	<b>(\$2,326.54)</b>	<b>(\$1,632.21)</b>	<b>(\$703.75)</b>	<b>(\$6,790.68)</b>
% Change	<b>-20.64%</b>	<b>-25.94%</b>	<b>-30.31%</b>	<b>-66.62%</b>	<b>-48.42%</b>	<b>-35.63%</b>	<b>-40.39%</b>
<b>Base Rate</b>	<b>\$74.18</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$74.18</b>
% Change	<b>17.13%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>1.72%</b>
<b>COG &amp; LDAC</b>	<b>(\$420.39)</b>	<b>(\$755.61)</b>	<b>(\$1,026.37)</b>	<b>(\$2,326.54)</b>	<b>(\$1,632.21)</b>	<b>(\$703.75)</b>	<b>(\$6,864.86)</b>
% Change	<b>-33.80%</b>	<b>-33.80%</b>	<b>-39.46%</b>	<b>-88.67%</b>	<b>-65.30%</b>	<b>-54.25%</b>	<b>-54.91%</b>
check	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

May 1, 2016 - October 31, 2016

May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Summer May-Oct	Total Nov-Oct
1,224	498	485	1,166	280	444	4,097	16,351
\$140.13	\$140.13	\$140.13	\$140.13	\$140.13	\$140.13	\$840.78	\$1,686.16
\$139.32	\$139.32	\$139.32	\$139.32	\$97.46	\$139.32	\$794.06	\$2,895.36
\$189.71	\$22.50	\$19.68	\$176.27	\$0.00	\$10.22	\$418.38	\$1,858.21
\$469.16	\$301.95	\$299.13	\$455.72	\$237.59	\$289.67	\$2,053.21	\$6,439.73
\$0.3976	\$0.3976	\$0.3976	\$0.3976	\$0.3976	\$0.3976	\$0.3976	\$0.3930
\$486.71	\$197.90	\$193.02	\$463.49	\$111.25	\$176.70	\$1,629.07	\$6,426.09
\$0.0685	\$0.0685	\$0.0685	\$0.0685	\$0.0685	\$0.0685	\$0.0685	\$0.0685
\$83.85	\$34.10	\$33.25	\$79.85	\$19.17	\$30.44	\$280.66	\$1,120.08
<b>\$1,039.72</b>	<b>\$533.95</b>	<b>\$525.41</b>	<b>\$999.05</b>	<b>\$368.00</b>	<b>\$496.81</b>	<b>\$3,962.94</b>	<b>\$13,985.89</b>

May 1, 2015 - October 31, 2015

May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Summer May-Oct	Total Nov-Oct
1,224	498	485	1,166	280	444	4,097	16,351
\$140.13	\$140.13	\$144.73	\$144.73	\$144.73	\$144.73	\$859.18	\$1,683.41
\$139.32	\$139.32	\$143.92	\$143.92	\$100.67	\$143.92	\$811.07	\$2,859.77
\$189.71	\$22.50	\$20.48	\$183.46	\$0.00	\$10.64	\$426.80	\$1,866.20
\$469.16	\$301.95	\$309.13	\$472.11	\$245.40	\$299.29	\$2,097.05	\$6,409.39
\$0.3210	\$0.3383	\$0.3558	\$0.3558	\$0.3558	\$0.3933	\$0.3473	\$0.8045
\$392.94	\$168.39	\$172.73	\$414.76	\$99.55	\$174.79	\$1,423.16	\$13,154.89
\$0.0628	\$0.0628	\$0.0793	\$0.0793	\$0.0793	\$0.0793	\$0.0724	\$0.0652
\$76.87	\$31.26	\$38.50	\$92.44	\$22.19	\$35.24	\$296.50	\$1,066.07
<b>\$938.98</b>	<b>\$501.59</b>	<b>\$520.36</b>	<b>\$979.31</b>	<b>\$367.15</b>	<b>\$509.32</b>	<b>\$3,816.71</b>	<b>\$20,630.34</b>

<b>\$100.74</b>	<b>\$32.35</b>	<b>\$5.05</b>	<b>\$19.74</b>	<b>\$0.86</b>	<b>(\$12.51)</b>	<b>\$146.23</b>	<b>(\$6,644.45)</b>
<b>10.73%</b>	<b>6.45%</b>	<b>0.97%</b>	<b>2.02%</b>	<b>0.23%</b>	<b>-2.46%</b>	<b>3.83%</b>	<b>-32.21%</b>
\$0.00	\$0.00	(\$10.00)	(\$16.40)	(\$7.82)	(\$9.62)	(\$43.84)	\$30.34
0.00%	0.00%	-3.24%	-3.47%	-3.19%	-3.21%	-2.09%	0.47%
\$100.74	\$32.35	\$15.05	\$36.14	\$8.67	(\$2.89)	\$190.07	(\$6,674.79)
21.44%	16.21%	7.12%	7.12%	7.12%	-1.38%	11.05%	-46.94%
\$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 2016 Summer Cost of Gas Filing

4 Annual Bill Comparisons, May 15 - Oct 15 vs May 16 - Oct 16 - Commercial Rate G-52

5  
6

7 November 1, 2015 - April 30, 2016

8 Commercial Rate (G-52)

			Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	Winter Nov-Apr
9	Typical Usage (Therms)		1,131	1,460	1,861	1,742	2,042	1,648	9,884
10	Winter:	11/1/2015 12/1/2014							
11	Cust. Chg	\$144.73 \$140.13	\$144.73	\$144.73	\$144.73	\$144.73	\$144.73	\$144.73	\$868.38
12	Headblock	\$0.2047 \$0.1929	\$204.70	\$204.70	\$204.70	\$204.70	\$204.70	\$204.70	\$1,228.20
13	Tailblock	\$0.1364 \$0.1309	\$17.84	\$62.77	\$117.38	\$101.21	\$142.19	\$88.43	\$529.83
14	HB Threshold	1,000 1,000							
15	Summer:								
16	Cust. Chg	\$144.73 \$140.13							
17	Headblock	\$0.1484 \$0.1417							
18	Tailblock	\$0.0843 \$0.0816							
19	HB Threshold	1,000 1,000							
20	Total Base Rate Amount		\$367.27	\$412.20	\$466.81	\$450.64	\$491.62	\$437.86	\$2,626.41
21	COG Rate - (Seasonal)		\$0.7647	\$0.7647	\$0.6387	\$0.4567	\$0.2765	\$0.2765	\$0.5044
22	COG amount		\$864.71	\$1,116.63	\$1,188.36	\$795.59	\$564.75	\$455.75	\$4,985.79
23	LDAC		\$0.0685	\$0.0685	\$0.0685	\$0.0685	\$0.0685	\$0.0685	0.0685
24	LDAC amount		\$77.46	\$100.03	\$127.45	\$119.33	\$139.91	\$112.91	\$677.08
25	<b>Total Bill</b>		<b>\$1,309.44</b>	<b>\$1,628.86</b>	<b>\$1,782.62</b>	<b>\$1,365.57</b>	<b>\$1,196.28</b>	<b>\$1,006.52</b>	<b>\$8,289.29</b>

35 November 1, 2014 - April 30, 2015

36 Commercial Rate (G-52)

			Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	Winter Nov-Apr
37	Typical Usage (Therms)		1,131	1,460	1,861	1,742	2,042	1,648	9,884
38	Winter:	11/1/2014 12/1/2014 7/1/2015							
39	Cust. Chg	\$123.58 \$140.13 \$144.73	\$123.58	\$140.13	\$140.13	\$140.13	\$140.13	\$140.13	\$824.23
40	Headblock	\$0.1701 \$0.1929 \$0.2047	\$170.10	\$192.90	\$192.90	\$192.90	\$192.90	\$192.90	\$1,134.60
41	Tailblock	\$0.1154 \$0.1309 \$0.1364	\$15.09	\$60.24	\$112.65	\$97.13	\$136.46	\$84.86	\$506.44
42	HB Thresh	1,000 1,000 1,000							
43	Summer:								
44	Cust. Chg	\$123.58 \$140.13 \$144.73							
45	Headblock	\$0.1250 \$0.1417 \$0.1484							
46	Tailblock	\$0.0720 \$0.0816 \$0.0843							
47	HB Thresh	1,000 1,000 1,000							
48	Total Base Rate Amount		\$308.77	\$393.27	\$445.68	\$430.16	\$469.49	\$417.89	\$2,465.27
49	COG Rate - (Seasonal)		\$1.1384	\$1.1384	\$1.0453	\$0.8993	\$0.8476	\$0.6209	\$0.9323
50	COG amount		\$1,287.29	\$1,662.32	\$1,944.87	\$1,566.62	\$1,731.21	\$1,023.43	\$9,215.73
51	LDAC		\$0.0628	\$0.0628	\$0.0628	\$0.0628	\$0.0628	\$0.0628	0.0628
52	LDAC amount		\$71.01	\$91.70	\$116.84	\$109.40	\$128.27	\$103.51	\$620.74
53	<b>Total Bill</b>		<b>\$1,667.08</b>	<b>\$2,147.29</b>	<b>\$2,507.40</b>	<b>\$2,106.18</b>	<b>\$2,328.97</b>	<b>\$1,544.83</b>	<b>\$12,301.74</b>

62 DIFFERENCE:

63	Total Bill		(\$357.63)	(\$518.43)	(\$724.78)	(\$740.62)	(\$1,132.69)	(\$538.31)	(\$4,012.45)
64	% Change		-21.45%	-24.14%	-28.91%	-35.16%	-48.63%	-34.85%	-32.62%
65	Base Rate		\$58.50	\$18.93	\$21.13	\$20.48	\$22.13	\$19.97	\$161.14
66	% Change		18.94%	4.81%	4.74%	4.76%	4.71%	4.78%	6.54%
67	COG & LDAC		(\$416.13)	(\$537.36)	(\$745.91)	(\$761.10)	(\$1,154.82)	(\$558.28)	(\$4,173.60)
68	% Change		-30.64%	-30.64%	-36.18%	-45.41%	-62.10%	-49.54%	-42.43%
69	check		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

May 1, 2016 - October 31, 2016

May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Summer May-Oct	Total Nov-Oct
1,148	979	799	788	758	847	5,318	15,203
\$144.73	\$144.73	\$144.73	\$144.73	\$144.73	\$144.73	\$868.38	\$1,736.76
\$148.40	\$145.25	\$118.51	\$116.87	\$112.52	\$125.76	\$767.31	\$1,995.51
\$12.44	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$12.44	\$542.27
\$305.57	\$289.98	\$263.24	\$261.60	\$257.25	\$270.49	\$1,648.13	\$4,274.54
\$0.4415	\$0.4415	\$0.4415	\$0.4415	\$0.4415	\$0.4415	\$0.4415	\$0.4824
\$506.63	\$432.14	\$352.57	\$347.69	\$334.75	\$374.16	\$2,347.93	\$7,333.73
\$0.0685	\$0.0685	\$0.0685	\$0.0685	\$0.0685	\$0.0685	\$0.0685	\$0.0685
\$78.61	\$67.05	\$54.70	\$53.94	\$51.94	\$58.05	\$364.29	\$1,041.37
<b>\$890.80</b>	<b>\$789.17</b>	<b>\$670.52</b>	<b>\$663.23</b>	<b>\$643.93</b>	<b>\$702.70</b>	<b>\$4,360.35</b>	<b>\$12,649.64</b>

May 1, 2015 - October 31, 2015

May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Summer May-Oct	Total Nov-Oct
1,148	979	799	788	758	847	5,318	15,203
\$140.13	\$140.13	\$144.73	\$144.73	\$144.73	\$144.73	\$859.18	\$1,683.41
\$141.70	\$138.70	\$118.51	\$116.87	\$112.52	\$125.76	\$754.05	\$1,888.65
\$12.04	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$12.04	\$518.48
\$293.87	\$278.83	\$263.24	\$261.60	\$257.25	\$270.49	\$1,625.27	\$4,090.54
\$0.2728	\$0.2901	\$0.3076	\$0.3076	\$0.3076	\$0.3451	\$0.3028	\$0.7121
\$313.04	\$283.95	\$245.64	\$242.24	\$233.22	\$292.46	\$1,610.56	\$10,826.29
\$0.0628	\$0.0628	\$0.0793	\$0.0793	\$0.0793	\$0.0793	\$0.0727	\$0.0663
\$72.06	\$61.47	\$63.33	\$62.45	\$60.13	\$67.20	\$386.64	\$1,007.38
<b>\$678.98</b>	<b>\$624.24</b>	<b>\$572.21</b>	<b>\$566.28</b>	<b>\$550.60</b>	<b>\$630.16</b>	<b>\$3,622.47</b>	<b>\$15,924.22</b>

\$211.83	\$164.93	\$98.31	\$96.94	\$93.34	\$72.54	\$737.88	(\$3,274.57)
31.20%	26.42%	17.18%	17.12%	16.95%	11.51%	20.37%	-20.56%
\$11.70	\$11.16	\$0.00	\$0.00	\$0.00	\$0.00	\$22.86	\$184.00
3.98%	4.00%	0.00%	0.00%	0.00%	0.00%	1.41%	4.50%
\$200.13	\$153.77	\$98.31	\$96.94	\$93.34	\$72.54	\$715.02	(\$3,458.57)
51.97%	44.52%	31.82%	31.82%	31.82%	20.17%	35.80%	-29.23%
\$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 2016 Summer Cost of Gas Filing

3 Residential Heating

	Summer 2015	Summer 2016
4		
5 Customer Charge	\$22.04	\$22.04
6 First 20 Therms	\$0.3486	\$0.3486
7 Excess 20 Therms	\$0.2885	\$0.2885
8 LDAC	\$0.0772	\$0.1014
9 COG	\$0.3315	\$0.4117
10 Total Adjust	\$0.4087	\$0.5131

	Summer 2015 COG @		Summer 2016 Cog @	
11				
12				
13				
14				
15				
16		\$0.4087		\$0.5131
17				
18 Cooking alone	5	\$20.94		\$26.35
19				
20	10	\$24.37		\$30.66
21				
22	20	\$31.22		\$39.27
23				
24 Water Heating alone	30	\$37.60		\$47.29
25				
26	45	\$47.16		\$59.31
27				
28	50	\$50.35		\$63.32
29				
30 Heating Alone	80	\$66.29		\$83.36
31				
32	125	\$103.26		\$129.85
33				
34	150	\$114.10		\$143.48
35				
36	200	\$145.98		\$183.56
37				

	Total		Base Rate		COG		LDAC	
	\$ Impact	% Impact	\$ Impact	% Impact	\$ Impact	% Impact	\$ Impact	% Impact
	\$0.10	26%						
	\$5.41	26%	\$4.89	23%	\$0.40	2%	\$0.12	1%
	\$6.29	26%	\$5.25	22%	\$0.80	3%	\$0.24	1%
	\$8.05	26%	\$5.96	19%	\$1.60	4%	\$0.48	2%
	\$9.69	26%	\$6.56	17%	\$2.41	5%	\$0.73	2%
	\$12.15	26%	\$7.46	16%	\$3.61	6%	\$1.09	2%
	\$12.97	26%	\$7.76	15%	\$4.01	6%	\$1.21	2%
	\$17.08	26%	\$9.25	14%	\$6.01	7%	\$1.82	3%
	\$26.59	26%	\$12.71	12%	\$10.66	8%	\$3.22	3%
	\$29.38	26%	\$13.73	12%	\$12.03	8%	\$3.63	3%
	\$37.58	26%	\$16.71	11%	\$16.03	9%	\$4.84	3%

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

3 **Off Peak 2016 Summer Cost of Gas Filing**

4 **Variance Analysis of the Components of the Summer 2015 Actual Results vs Proposed Summer 2016 Cost of Gas Rate**

5  
6  
7  
8  
9  
10

	SUMMER 2015 SALES ACTUAL RESULTS (6 months actual)			SUMMER 2016 (6 months Proposed)		
	THERM SENDOUT	COSTS	EFFECT ON COST OF GAS	THERM SENDOUT	COSTS	EFFECT ON COST OF GAS
11 Therm Sales	19,139,095			19,992,221		
12						
13						
14						
15						
16 Demand Charges		\$ 2,160,548	\$ 0.1129		\$ 4,602,902	\$ 0.2302
17						
18 Purchased Gas	23,425,811	5,231,110	0.2733	18,949,121	2,086,877	0.1044
19						
20 Storage Gas		0	-	1,306,839	240,661	0.0120
21						
22 Produced Gas		6,912	0.0004	109,551	25,890	0.0013
23						
24 Hedging (Gain)/Loss		0	0.0000		0	0.0000
25						
26						
27 Total Volumes and Cost	23,425,811	\$ 7,398,570	\$ 0.3866	20,365,512	\$ 6,956,330	\$ 0.3480
28						
29 Direct Costs						
30 Prior Period Balance		\$ 984,385	\$ 0.0514		963,754	\$ 0.0482
31 Interest		24,777	0.0013		34,202	0.0017
32 Prior Period Adjustment		-	-		-	-
33 Broker Revenues		-	-		-	-
34 Refunds from Suppliers		-	-		-	-
35 Fuel Financing		-	-		-	-
36 Transportation CGA Revenues		-	-		-	-
37 280 Day Margin		-	-		-	-
38 Interruptible Sales Margin		-	-		-	-
39 Capacity Release and Off System Sales Margins		-	-		-	-
40 Hedging Costs		-	-		-	-
41 FPO Admin Costs		-	-		-	-
42 Indirect Costs						
43 Misc Overhead		2,735	0.0001		2,663	0.0001
44 Occupant Disallowance/Credits		-	-		-	-
45 Production & Storage		-	-		-	-
46 Other Indirect Gas Costs		649,615	0.0339		275,971	0.0138
47 Cash out, Broker penalty, Canadian Managed,...		-	-		0	0
48 Total Adjusted Cost		\$ 9,060,082	\$ 0.4734		\$ 8,232,921	\$ 0.4118

Liberty Utilities (EnergyNorth Natural Gas) Corp.

2016 Summer Cost of Gas Filing  
Capacity Assignment Calculations 2015-2016  
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	445	500	0.3%		124	376
2	RATE R-3-Resi Htg	55,069	63,900	43.2%		3,749	60,150
3	RATE G-41 (T)	22,007	25,609	17.3%		1,078	24,531
4	RATE G-51 (S)	2,353	2,647	1.8%		644	2,003
5	RATE G-42 (V)	29,613	34,370	23.2%		1,969	32,401
6	RATE G-52	3,073	3,350	2.3%		1,461	1,889
7	RATE G-43	5,864	6,547	4.4%		1,891	4,656
8	RATE G-53	4,600	4,886	3.3%		2,940	1,946
9	RATE G-54	6,054	6,054	4.1%		6,054	-
10							
11	Total	129,078	147,863	100.0%		19,910	127,953
12							
13	Residential Total	55,514	64,400	<b>43.554%</b>		3,874	60,526
14	LLF Total	57,484	66,526	<b>44.992%</b>		4,938	61,588
15	HLF Total	16,080	16,937	<b>11.455%</b>		11,099	5,838
16	Total	129,078	147,863	100.0%		19,910	127,953
17							
18	C&I Breakdown						
19	LLF Total					4,938	61,588
20	HLF Total					11,099	5,838
21	Total					16,037	67,427
22							
23	C&I Breakdown Percentage						
24	LLF Total					30.791%	91.341%
25	HLF Total					69.209%	8.659%
26	Total					<b>100.0%</b>	<b>100.0%</b>
27							
28		Capacity Cost	MDQ, Dt				
29	Pipeline	\$13,932,735	78,718			\$14.7496	
30	Storage	\$4,138,570	28,115			\$12.2668	
31							
32	Peaking	\$1,500,000					
33	Peaking Additional Costs (Concord Lateral Peaking x Differential)	\$0					
34	Subtotal Peaking Costs	\$1,500,000	41,030			\$3.0466	
35	Total	\$19,571,305	147,863			\$11.0301	
36							
37		Capacity Cost	MDQ, Dt				
38	Pipeline - Baseload	3,524,005	19,910			\$14.7496	
39	Pipeline - Remaining	10,408,730	58,808			\$14.7496	
40	Storage	4,138,570	28,115			\$12.2668	
41	Peaking	1,500,000	41,030			\$3.0466	
42	Total	19,571,305	147,863			\$11.0301	
43							
44							
45	Residential Allocation		Capacity Cost	MDQ, Dt			
46	Pipeline - Base	Line 38 * Line 13 Col C	43.554%	1,534,846	8,672	\$14.7496	
47	Pipeline - Remaining	Line 39 * Line 13 Col C	43.554%	4,533,406	25,613	\$14.7496	
48	Storage	Line 40 * Line 13 Col C	43.554%	1,802,515	12,245	\$12.2668	
49	Peaking	Line 41 * Line 13 Col C	43.554%	653,313	17,870	\$3.0466	
50	Total		43.554%	8,524,068	64,400	\$11.0301	

Liberty Utilities (EnergyNorth Natural Gas) Corp.

2016 Summer Cost of Gas Filing  
Capacity Assignment Calculations 2015-2016

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	1,989,159	11,238	\$14.7496	
55	Pipeline - Remaining	Line 39 - Line 47	5,875,324	33,195	\$14.7497	
56	Storage	Line 40 - Line 48	2,336,055	15,870	\$12.2668	
57	Peaking	Line 41 - Line 49	846,687	23,160	\$3.0465	
58	Total		<b>56.446%</b> 11,047,225	83,463	\$11.0301	<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	612,489	3,460	\$14.7517	
63	Pipeline - Remaining	Line 55 * Line 24 Col F	5,366,583	30,320	\$14.7498	
64	Storage	Line 56 * Line 24 Col F	2,133,778	14,496	\$12.2665	
65	Peaking	Line 57 * Line 24 Col F	773,373	21,155	\$3.0465	
66	Total		<b>45.4043%</b> 8,886,223	69,431	\$10.6655	<b>0.9669</b>
67			30.791%	80%		(Line 66 / Line 58)
68						
69	HLF - C&I Allocation		Capacity Cost	MDQ, Dt	\$/Dt-Mo.	
70	Pipeline - Base	Line 54 - Line 62	1,376,670	7,778	\$14.7496	
71	Pipeline - Remaining	Line 55 - Line 63	508,741	2,875	\$14.7461	
72	Storage	Line 56 - Line 64	202,277	1,374	\$12.2681	
73	Peaking	Line 57 - Line 65	73,314	2,005	\$3.0471	
74	Total		<b>11.0417%</b> 2,161,002	14,032	\$12.8338	<b>1.1635</b>
75						(Line 74 / Line 58)
76						
77	Unit Cost		Residential	LLF C&I	HLF C&I	
78						
79	Pipeline		\$ 14.7496	\$ 14.7496	\$ 14.7496	
80	Storage		\$ 12.2668	\$ 12.2668	\$ 12.2668	
81	Peaking		\$ -	\$ -	\$ -	
82	Total		\$ 11.0301	\$ 10.6655	\$ 12.8338	
83						
84						
85	Load Makeup		Residential	LLF C&I	HLF C&I	
86						
87	Pipeline		53.24%	<b>48.65%</b>	<b>75.92%</b>	
88	Storage		19.01%	<b>20.88%</b>	<b>9.79%</b>	
89	Peaking		<u>27.75%</u>	<u>30.47%</u>	<u>14.29%</u>	
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		43.55%	42.91%	13.53%	100.00%
96	Storage		43.55%	51.56%	4.89%	100.00%
97	Peaking		43.55%	51.56%	4.89%	100.00%

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

3 **2016 Summer Cost of Gas Filing**

4 **Correction Factor Calculation**

5

6

7

8 Data Source: Schedule 10B

	d	e	f	g	h	i	Total Sales
	May	June	July	Aug	Sep	Oct	
11 G-41	850,521	259,310	122,457	96,864	95,057	341,881	1,766,090
12 G-42	1,030,832	470,422	203,188	99,790	67,683	263,560	2,135,475
13 G-43	178,647	80,278	43,061	37,784	49,155	105,653	494,577
14 High Winter Use	2,059,999	810,010	368,706	234,438	211,895	711,093	4,396,142
16 G-51	178,937	127,826	96,754	83,082	83,933	99,025	669,556
17 G-52	185,861	138,670	107,687	93,483	91,206	101,576	718,483
18 G-53	57,859	42,617	32,487	28,775	28,702	30,986	221,426
19 G-54	99,489	90,014	79,499	71,912	68,557	63,482	472,953
21 Low Winter Use	522,146	399,126	316,427	277,252	272,398	295,068	2,082,417
23 <b>Gross Total</b>	<b>2,582,146</b>	<b>1,209,136</b>	<b>685,133</b>	<b>511,690</b>	<b>484,293</b>	<b>1,006,162</b>	<b>6,478,559</b>

24

25

26 Total Sales 6,478,559

27 Low Winter Use 2,082,417

28 Summer Ratio for Low Winter Use **1.1635** Schedule 10A p 2, In 74

29 High Winter Use 4,396,142

30 Summer Ratio for High Winter Use **0.9669** Schedule 10A p 2, In 66

31

32 Correction Factor = Total Sales/((Low Winter Use x Winter Ratio for Low Winter Use)+(High Winter Use x Winter Ratio for High Winter Use)

33 Correction Factor = **97.0786%**

34

35

36 **Allocation Calculation for Miscellaneous Overhead**

37

38 Projected Winter Sales Volume (11/1/15 - 4/30/16) 79,185,106 Sch.10B, In 23

39 Projected Annual Sales Volume (11/1/15 - 10/31/16) 99,258,863 Sch.10B, In 23

40 Percentage of Winter Sales to Annual Sales 79.78%



1 Liberty Utilities (EnergyNorth Natural Gas) Corp.  
 2 d/b/a Liberty Utilities  
 3 Off Peak 2016 Summer Cost of Gas Filing  
 4 2016 Summer Cost of Gas Filing

Dry Therms															
	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	Subtotal PK 15-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Subtotal OP 16	Total
7 Firm Sales															
8															
9 R-1	55,270	73,809	91,550	99,032	86,390	77,129	483,180	64,339	52,848	44,648	41,781	41,239	44,902	289,757	772,937
10 R-3	3,874,644	7,306,248	9,947,611	9,927,210	8,230,076	6,682,212	45,968,001	3,933,849	2,184,955	1,333,358	1,146,303	1,317,457	2,407,925	12,323,845	58,291,846
11 R-4	204,363	407,781	651,605	766,666	675,530	631,396	3,337,341	388,491	212,779	109,377	80,374	74,314	116,260	981,596	4,318,937
12 Total Residential.	4,134,277	7,787,838	10,690,766	10,792,908	8,991,996	7,390,737	49,788,522	4,386,679	2,450,582	1,487,383	1,268,458	1,433,010	2,569,087	13,595,198	63,383,720
13															
14 G-41	942,674	1,825,246	2,573,546	2,731,489	2,139,483	1,627,582	11,840,021	850,521	259,310	122,457	96,864	95,057	341,881	1,766,090	13,606,111
15 G-42	935,865	1,739,756	2,247,525	2,644,346	1,890,855	1,500,449	10,958,795	1,030,832	470,422	203,188	99,790	67,683	263,560	2,135,475	13,094,270
16 G-43	217,427	290,591	360,107	383,731	281,033	258,516	1,791,406	178,647	80,278	43,061	37,784	49,155	105,653	494,577	2,285,982
17 G-51	146,060	296,305	350,428	378,111	357,367	311,269	1,839,539	178,937	127,826	96,754	83,082	83,933	99,025	669,556	2,509,095
18 G-52	142,755	287,160	314,007	355,103	346,270	310,805	1,756,099	185,861	138,670	107,687	93,483	91,206	101,576	718,483	2,474,583
19 G-53	42,615	79,465	94,944	108,051	101,221	96,441	522,738	57,859	42,617	32,487	28,775	28,702	30,986	221,426	744,164
20 G-54	72,554	114,173	115,431	124,388	128,476	132,963	687,986	99,489	90,014	79,499	71,912	68,557	63,482	472,953	1,160,939
21 Total C/I	2,499,951	4,632,697	6,055,988	6,725,219	5,244,704	4,238,025	29,396,584	2,582,146	1,209,136	685,133	511,690	484,293	1,006,162	6,478,559	35,875,143
22															
23 Sales Volume	6,634,228	12,420,535	16,746,755	17,518,127	14,236,700	11,628,762	79,185,106	6,968,824	3,659,718	2,172,515	1,780,148	1,917,302	3,575,248	20,073,757	99,258,863
24															
25 Transportation Sales															
26															
27 G-41	446,515	726,048	952,621	1,102,493	967,149	784,358	4,979,184	450,922	253,555	156,190	143,486	152,773	230,360	1,387,286	6,366,471
28 G-42	1,494,069	2,384,245	3,174,888	3,675,371	3,244,363	2,607,818	16,580,755	1,475,921	823,101	444,414	362,106	404,801	691,876	4,202,220	20,782,975
29 G-43	609,103	925,371	1,189,479	1,357,509	1,512,464	1,254,974	6,848,900	853,637	521,134	290,158	211,247	227,279	369,498	2,472,954	9,321,854
30 G-51	140,158	146,562	161,472	168,678	151,396	158,084	926,350	144,837	154,906	162,156	149,203	136,465	114,413	861,979	1,788,329
31 G-52	498,547	510,497	514,495	520,287	484,063	482,857	3,010,745	462,019	518,923	570,469	527,702	499,851	432,197	3,011,160	6,021,905
32 G-53	575,051	741,704	887,918	976,502	935,228	875,744	4,992,146	749,584	603,336	445,509	336,096	325,410	390,941	2,850,877	7,843,023
33 G-54	1,834,681	1,928,010	1,943,108	1,857,698	1,808,290	1,707,182	11,078,970	1,624,711	1,563,689	1,538,801	1,545,313	1,618,835	1,749,419	9,640,768	20,719,739
34															
35 Total Trans. Sales	5,598,123	7,362,439	8,823,981	9,658,539	9,102,950	7,871,017	48,417,049	5,761,631	4,438,644	3,607,696	3,275,154	3,365,415	3,978,705	24,427,245	72,844,295
36															
37 Total All Sales	12,232,351	19,782,973	25,570,736	27,176,666	23,339,651	19,499,779	127,602,156	12,730,455	8,098,363	5,780,212	5,055,303	5,282,717	7,553,953	44,501,002	172,103,158

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2016 Summer Cost of Gas Filing

4 Normal and Design Year Volumes

Schedule 11A

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5  
6

7 Volumes (Therms) Normal Year

8

9 For the Months of May 16 -October 16

10  
11

12 **May-16 Jun-16 Jul-16 Aug-16 Sep-16 Oct-16 Off Peak May - Oct**

13 Pipeline Gas:							
14 Dawn Supply	-	-	-	-	-	814,589	814,589
15 Niagara Supply	-	-	-	-	-	221,968	221,968
16 TGP Supply (Gulf)	-	-	-	-	-	-	0
17 Dracut Supply 1 - Baseload	-	-	-	-	-	-	0
18 Dracut Supply 2 - Swing	-	-	-	-	-	-	-
19 City Gate Delivered Supply	-	-	-	-	-	-	0
20 LNG Truck	23,896	-	-	-	90,396	19,631	133,924
21 Propane Truck	78,516	72,510	69,277	70,031	71,202	37,908	399,444
22 PNGTS	33,455	22,068	19,879	20,096	24,766	41,970	162,234
23 TGP Supply (Z4)	6,007,477	4,273,200	3,411,416	3,307,286	4,089,268	6,301,990	27,390,637
24 Subtotal Pipeline Volumes	6,143,345	4,367,778	3,500,572	3,397,412	4,275,632	7,438,057	29,122,796
25							
26 Storage Gas:							
27 TGP Storage	120,847	-	-	-	-	1,185,992	1,306,839
28							
29 Produced Gas:							
30 LNG Vapor	19,800	17,654	17,470	17,660	17,336	19,631	109,551
31 Propane	-	-	-	-	-	-	0
32 Subtotal Produced Gas	19,800	17,654	17,470	17,660	17,336	19,631	109,551
33							
34 Less - Gas Refills:							
35 LNG Truck	(23,896)	-	-	-	(90,396)	(19,631)	(133,924)
36 Propane	(78,516)	(72,510)	(69,277)	(70,031)	(71,202)	(37,908)	(399,444)
37 TGP Storage Refill	(1,606,718)	(1,606,718)	(1,606,718)	(1,606,718)	(1,606,718)	(1,606,718)	(9,640,307)
38 Subtotal Refills	(1,709,131)	(1,679,227)	(1,675,994)	(1,676,749)	(1,768,316)	(1,664,257)	(10,173,675)
39							
40 Total Sendout Volumes	4,574,861	2,706,205	1,842,047	1,738,324	2,524,652	6,979,423	20,365,512
41							20,365,512

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2016 Summer Cost of Gas Filing

42 Normal and Design Year Volumes

Schedule 11B

43

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44

45 Volumes (Therms) Design Year

46

47 For the Months of May 16 -October 16

48

49

	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Off Peak May - Oct
51 Pipeline Gas:							
52 Dawn Supply	-					546,288	546,288
53 Niagara Supply	-						0
54 TGP Supply (Gulf)							0
55 Dracut Supply 1 - Baseload	-	-					0
56 Dracut Supply 2 - Swing	-	-					-
57 City Gate Delivered Supply	-	-	-	-	-	-	0
58 LNG Truck	23,896	-	-	-	90,396	19,631	133,924
59 Propane Truck	78,516	72,510	69,277	70,031	71,202	37,908	399,444
60 PNTGS	33,455	22,068	19,879	20,096	24,766	41,970	162,234
61 TGP Supply (Z4)	6,222,552	4,454,436	3,631,029	3,538,490	4,365,894	6,301,990	28,514,391
62 Subtotal Pipeline Volumes	6,358,420	4,549,014	3,720,185	3,628,616	4,552,258	6,947,788	29,756,281
63							
64 Storage Gas:							
65 TGP Storage	120,847	-	-	-	-	1,185,992	1,306,839
66							
67 Produced Gas:							
68 LNG Vapor	19,800	17,654	17,470	17,660	17,336	19,631	109,551
69 Propane	-	-	-	-	-	-	-
70 Subtotal Produced Gas	19,800	17,654	17,470	17,660	17,336	19,631	109,551
71							
72 Less - Gas Refills:							
73 LNG Truck	(23,896)	-	-	-	(90,396)	(19,631)	(133,924)
74 Propane	(78,516)	(72,510)	(69,277)	(70,031)	(71,202)	(37,908)	(399,444)
75 TGP Storage Refill	(1,606,718)	(1,606,718)	(1,606,718)	(1,606,718)	(1,606,718)	(1,606,718)	(9,640,307)
76 Subtotal Refills	(1,709,131)	(1,679,227)	(1,675,994)	(1,676,749)	(1,768,316)	(1,664,257)	(10,173,675)
77							
78 Total Sendout Volumes	4,789,936	2,887,441	2,061,660	1,969,528	2,801,278	6,489,154	20,998,997

20,998,997

difference

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

Schedule 11C

3 Off Peak 2016 Summer Cost of Gas Filing

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4 Capacity Utilization

5 Volumes (Therms)

	Off-Peak Period Normal Year				Off-Peak Period Design Year			
	Use (Therms)	MDQ (MMBtu/day)	Seasonal Quantity (Therms)	Utilization Rate	Use (Therms)	MDQ (MMBtu/day)	Seasonal Quantity (Therms)	Utilization Rate
11 <b>Pipeline Gas:</b>								
12 Dawn Supply	814,589	4,000	7,360,000	11%	546,288	4,000	7,360,000	7%
13 Niagara Supply	221,968	3,122	5,744,480	4%	-	3,122	5,744,480	0%
14 TGP Supply (Gulf)	-	21,596	39,736,640	0%	-	21,596	39,736,640	0%
15 Dracut Supply 1 & 2	-	50,000	92,000,000	0%	-	50,000	92,000,000	0%
16 LNG Truck	133,924	-	-	-	133,924	-	-	-
17 Propane Truck	399,444	-	-	-	399,444	-	-	-
18 PNGTS	162,234	1,000	1,840,000	9%	162,234	1,000	1,840,000	9%
19 TGP Supply (Z4)	27,390,637	21,596	39,736,640	69%	28,514,391	21,596	39,736,640	72%
20 Other Purchased Resources	-	-	-	-	-	-	-	-
21								
22 Subtotal Pipeline Volumes	29,122,796				29,756,281			
23								
24 <b>Storage Gas:</b>								
25 TGP Storage	1,306,839		25,792,710	5%	1,306,839		25,792,710	5%
26								
27 <b>Produced Gas:</b>								
28 LNG Vapor	109,551				109,551			
29 Propane	-				-			
30								
31 Subtotal Produced Gas	109,551				109,551			
32								
33 <b>Less - Gas Refills:</b>								
34 LNG Truck	(133,924)				(133,924)			
35 Propane	(399,444)				(399,444)			
36 TGP Storage Refill	(9,640,307)				(9,640,307)			
37								
38 Subtotal Refills	(10,173,675)				(10,173,675)			
39								
40 Total Sendout Volumes	20,365,512				20,998,997			



Liberty Utilities (EnergyNorth Natural Gas) Corp.  
Off Peak 2016 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
Monthly Purchase - TBD No Off-Peak	-	-	Supply	3,199	1,167,635	3/31/2014	N/a	Terminates
TBD - No Off-Peak NO RFP yet	-	-	Supply	4,047	611,097	Peak Only	N/a	Terminates
Distrigas of Massachusetts Corp. (aka DOMAC or GDF Suez)	FLS		Liquid Refill	Up to 5 trucks	200,000 Total	3/31/2014 Peak Only	-	Terminates
Distrigas of Massachusetts Corp. (aka DOMAC or GDF Suez)								
Dracut or Z6 sent out RFP	-	-	Supply	April 2012 = 10,000 / day	4,491,000	4/30/2013	-	Terminates
Monthly Purchase - TBD	-	-	Supply	21,596	3,908,876	4/30/2013	N/a	Terminates
Northern Transport			Trucking	28,500 Gallons	900,000 Gallons		N/a	Terminates
Dominion Transmission Incorporated	GSS	300076	Storage	934	102,700	3/31/2021	3/31/2019	Evergreen Provision
Honeoye Storage Corporation	SS-NY	11234	Storage	1,957	245,380	3/31/2016	12 months notice	Evergreen Provision
National Fuel Gas Supply Corporation	FSS	002357	Storage	6,098	670,800	3/31/2016	3/31/2015	Evergreen Provision
National Fuel Gas Supply Corporation	FSST	N02358	Transportation	6,098	670,800	3/31/2016	3/31/2015	Evergreen Provision
Iroquois Gas Transmission System	RTS-1	47001	Transportation	4,047	1,477,155	11/1/2017	10/31/2016	Evergreen Provision
Portland Natural Gas Transmission System	FT 1999-01	1999-001	Transportation	1,000	365,000	10/31/2019	10/31/2018	Evergreen Provision
Tennessee Gas Pipeline Company	FS-MA	523	Storage	21,844	1,560,391	10/31/2020	10/31/2019	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	8587	Transportation	25,407	9,273,555	10/31/2020	10/31/2019	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	2302	Transportation	3,122	1,139,530	10/31/2020	10/31/2019	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	632	Transportation	15,265	5,571,725	10/31/2020	10/31/2019	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	11234	Transportation	9,039	3,299,235	10/31/2020	10/31/2019	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	72694	Transportation	30,000	10,950,000	10/31/2029	10/31/2029	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	95346	Transportation	4,000	1,460,000	11/30/2016	10/30/2015	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	42076	Transportation	20,000	7,300,000	10/31/2020	10/31/2019	Evergreen Provision
TransCanada Pipeline	FT	41232	Transportation	4,047	1,477,155	10/31/2017	10/31/2015	Evergreen Provision
Union Gas Limited	M12	M12200	Transportation	4,092	1,493,580	10/31/2017	10/31/2015	Evergreen Provision

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

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2016 Summer Cost of Gas Filing

4 Storage Inventory

6 Underground Storage Gas

		May-16 (Estimate)	Jun-16 (Estimate)	Jul-16 (Estimate)	Aug-16 (Estimate)	Sep-16 (Estimate)	Oct-16 (Estimate)	Total
8	Beginning Balance (MMBtu)	1,037,760	1,187,925	1,336,512	1,497,183	1,657,855	1,818,527	1,951,935
11	Injections (MMBtu) Sch 11A In 37 /10	150,164	160,672	160,672	160,672	160,672	160,672	1,407,412
13	Subtotal	1,187,925	1,348,596	1,497,183	1,657,855	1,818,527	1,979,199	
15	Storage Sale							
17	Withdrawals (MMBtu) Sch 11A In 27 /10	-	(12,085)	-	-	-	-	(1,380,148)
19	Ending Balance (MMBtu)	1 187 925	1 336 512	1 497 183	1 657 855	1 818 527	1 979 199	1 979 199
22	Beginning Balance	\$ 2,000,458	\$ 2,236,150	\$ 2,479,202	\$ 2,758,057	\$ 3,044,171	\$ 3,332,949	3,609,668
24	Injections In 11 * In 36	235,692	265,800	278,855	286,114	288,778	294,528	2,675,183
26	Subtotal	\$ 2,236,150	\$ 2,501,950	\$ 2,758,057	\$ 3,044,171	\$ 3,332,949	\$ 3,627,477	
29	Storage Sale							
30	Withdrawals In 17 * In 34	\$ -	\$ (22,748)	\$ -	\$ -	\$ -	\$ -	(2,657,375)
32	Ending Balance	\$ 2 236 150	\$ 2 479 202	\$ 2 758 057	\$ 3 044 171	\$ 3 332 949	\$ 3 627 477	\$ 3 627 477
34	Average Rate For Withdrawals In 22 /In 9	\$1.9277	\$1.8824	\$1.8550	\$1.8422	\$1.8362	\$1.8328	
36	TGP Storage Rate for Actual or NYMEX plus TGP Injections Transportation	\$1.5696	\$1.6543	\$1.7356	\$1.7807	\$1.7973	\$1.8331	

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2016 Summer Cost of Gas Filing

4 Storage Inventory

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40 Liquid Propane Gas (LPG)

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		May-16 (Estimate)	Jun-16 (Estimate)	Jul-16 (Estimate)	Aug-16 (Estimate)	Sep-16 (Estimate)	Oct-16 (Estimate)	Total
Beginning Balance		48,103	48,103	55,955	63,206	70,133	77,136	96,655
Injections	Sch 11A In 36 /10	-	7,852	7,251	6,928	7,003	7,120	49,234
Subtotal		48,103	55,955	63,206	70,133	77,136	84,257	
Withdrawals	Sch 11A In 31 /10	-	-	-	-	-	-	(61,632)
Adjustment for change in temperature		-	-	-	-	-	-	-
Adjustment for Transfer		-	-	-	-	-	-	-
<u>Ending Balance</u>		<u>48 103</u>	<u>55 955</u>	<u>63 206</u>	<u>70 133</u>	<u>77 136</u>	<u>84 257</u>	<u>84 257</u>
Beginning Balance		\$ 599,211	\$ 599,211	\$ 599,211	\$ 599,211	\$ 599,211	\$ 599,211	\$ 1,193,497
Injections	In 45 * In 68	-	-	-	-	-	-	168,840
Subtotal		\$ 599,211	\$ 599,211	\$ 599,211	\$ 599,211	\$ 599,211	\$ 599,211	
Withdrawals	In 51 * In 66	-	-	-	-	-	-	(763,126)
<u>Ending Balance</u>		<u>\$ 599,211</u>	<u>\$ 599,211</u>	<u>\$ 599,211</u>	<u>\$ 599,211</u>	<u>\$ 599,211</u>	<u>\$ 599,211</u>	<u>\$ 599,211</u>
Average Rate For Withdrawals		\$12.4568	\$10.7089	\$9.4803	\$8.5439	\$7.7682	\$7.1117	
Propane Rate for Injections	Actual or Sch. 6, In 151 * 10	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	



1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2016 Summer Cost of Gas Filing

4 Storage Inventory

71								
72	Liquid Natural Gas (LNG)	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Total
73		(Estimate)	(Estimate)	(Estimate)	(Estimate)	(Estimate)	(Estimate)	
74	Beginning Balance	15,621	13,524	13,934	12,169	10,422	8,656	12,057
75								
76	Injections Sch 11A In 35 /10	-	2,390	-	-	-	9,040	136,378
77								
78	Subtotal	15,621	15,914	13,934	12,169	10,422	17,695	
79								
80	Withdrawals Sch 11A In 30 /10	(2,097)	(1,980)	(1,765)	(1,747)	(1,766)	(1,734)	(132,473)
81								
82	<u>Ending Balance</u>	<u>13,524</u>	<u>13,934</u>	<u>12,169</u>	<u>10,422</u>	<u>8,656</u>	<u>15,962</u>	<u>15,962</u>
83								
84								
85	Beginning Balance	46,194	39,993	35,017	30,581	26,190	21,752	\$ 135,659
86								
87	Injections In 76 * In 97	-	-	-	-	-	-	653,097
88								
89	Subtotal	\$ 46,194	\$ 39,993	\$ 35,017	\$ 30,581	\$ 26,190	\$ 21,752	
90								
91	Withdrawals In 80 * In 95	(6,201)	(4,976)	(4,437)	(4,390)	(4,438)	(2,131)	(769,135)
92								
93	<u>Ending Balance</u>	<u>\$ 39,993</u>	<u>\$ 35,017</u>	<u>\$ 30,581</u>	<u>\$ 26,190</u>	<u>\$ 21,752</u>	<u>\$ 19,621</u>	<u>\$ 19,621</u>
94								
95	Average Rate For Withdrawals	\$2.9571	\$2.5131	\$2.5131	\$2.5131	\$2.5131	\$1.2293	
96								
97	LNG Rate for Injections Actual or Sch. 6, In 150 * 10	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	