Ln												
4												
5												
6				Peak Costs								Peak Period
7	For Month of:			May 22 - Oct 23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Nov - Apr
8		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
9	**I. Gas Volumes (Therms)**											
10											3,799,988	4.0%
11	**A.**	**Firm Demand Volumes**										
12		Firm Gas Sales	Sch. 10B, ln 23	-	7,444,594	17,818,111	21,017,875	18,278,553	15,666,889	9,549,539	1,970,044	91,745,606
13		Lost Gas (Unaccounted for)		-	480,543	686,434	818,823	724,321	595,335	366,919		3,672,374
14		Company Use		-	16,699	23,853	28,454	25,170	20,688	12,750		127,614
15		Unbilled Therms		-	4,418,457	(872,263)	(803,786)	(397,406)	(969,999)	(491,488)	(1,970,044)	(1,086,529)
16												
17	**Total Firm Volumes**		Sch. 6, ln 97	-	12,360,292	17,656,136	21,061,366	18,630,638	15,312,912	9,437,721		94,459,064
18												
19	**B.**	**Supply Volumes (Therms)**										
20	Pipeline Gas:											
21		Dawn Supply	Sch. 6, ln 66	-	878,284	929,589	928,933	865,053	916,923	806,823		5,325,605
22		Niagara Supply	Sch. 6, ln 67	-	692,721	732,770	732,254	681,352	722,786	659,598		4,221,481
23		TGP Supply (Direct)	Sch. 6, ln 68	-	4,635,387	3,115,032	3,112,834	2,898,568	3,072,588	658,141		17,492,549
24		Dracut Supply 1 - Baseload	Sch. 6, ln 69	-	-	-	3,100,000	1,450,000	-	-		4,550,000
25		Dracut Supply 2 - Swing	Sch. 6, ln 70	-	3,175,277	1,817,182	830,593	1,712,037	4,320,290	1,650,818		13,506,197
26		Dracut Supply 3 - Swing	Sch. 6, ln 71		433,227	381,887	154,291	972,751	1,611,335	36,442		3,589,934
27		Constellation COMBO	Sch. 6, ln 72	-	-	-	-	-	-	-		-
28		LNG Truck	Sch. 6, ln 73	-	-	1,105,212	1,873,752	1,852,072	17,174	-		4,848,209
29		Propane Truck	Sch. 6, ln 74	-	-	-	207,270	4,517	-	83,816		295,604
30		PNGTS	Sch. 6, ln 75	-	219,571	232,397	232,233	216,075	229,231	216,465		1,345,972
31		Portland Natural Gas	Sch. 6, ln 76		1,072,719	1,134,734	1,133,934	1,056,283	1,119,273	925,624		6,442,568
32		TGP Supply (Z4)	Sch. 6, ln 77	-	1,819,408	1,931,092	1,929,730	1,797,112	1,904,780	4,511,472		13,893,595
33		Subtotal Pipeline Volumes		-	12,926,593	11,379,896	14,235,825	13,505,820	13,914,381	9,549,199		75,511,713
34												
35	Storage Gas:											
36		TGP Storage	Sch. 6, ln 82	-	1,148,127	6,232,334	6,223,398	5,210,646	1,394,051	1,000,000		21,208,557
37												
38	Produced Gas:											
39		LNG Vapor	Sch. 6, ln 85	-	21,440	1,149,117	1,894,933	1,766,244	21,654	21,136		4,874,524
40		Propane	Sch. 6, ln 86	-	-	-	788,232	4,517	-	-		792,749
41		Subtotal Produced Gas		-	21,440	1,149,117	2,683,164	1,770,761	21,654	21,136		5,667,273
42												
43	Less - Gas Refill:											
44		LNG Truck	Sch. 6, ln 91	-	-	(1,105,212)	(1,873,752)	(1,852,072)	(17,174)	-		(4,848,209)
45		Propane	Sch. 6, ln 92	-	-	-	(207,270)	(4,517)	-	(83,816)		(295,604)
46		TGP Storage Refill	Sch. 6, ln 93	-	(1,735,867)	-	-	-	-	(1,048,798)		(2,784,665)
47		Subtotal Refills		-	(1,735,867)	(1,105,212)	(2,081,022)	(1,856,589)	(17,174)	(1,132,614)		(7,928,478)
48												
49	Total Firm Sendout Volumes		lns 33 + 36 + 41 + 47	-	12,360,292	17,656,136	21,061,366	18,630,638	15,312,912	9,437,721		94,459,064

50

51 **II. Gas Costs** **REDACTED**

52 **A.** **Demand Costs**

53

54

Line											
55			Peak Costs								Peak Period
56	For Month of:		May 22 - Oct 23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Nov - Apr
57	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
58	Supply										
59	Niagara Supply	Sch.5A, ln 12	[redacted]	$ -	$ -	$ -	$ -	$ -	$ -		$ -
60	Subtotal Supply Demand		[redacted]	$ -	$ -	$ -	$ -	$ -	$ -		$ -
61	Less Capacity Credit		[redacted]	-	-	-	-	-	-		-
62	Net Pipeline Demand Costs		[redacted]	$ -	$ -	$ -	$ -	$ -	$ -		$ -
63											
64	Pipeline:										
65	Iroquois Gas Trans Service RTS 470-0	Sch.5A, ln 16	[redacted]	$ 19,585	$ 19,585	$ 19,585	$ 19,585	$ 19,585	$ 19,585		$ 117,508
66	Tenn Gas Pipeline 95346 Z5-Z6	Sch.5A, ln 17	[redacted]	24,362	24,362	24,362	24,362	24,362	24,362		146,172
67	Tenn Gas Pipeline 2302 Z5-Z6	Sch.5A, ln 18	[redacted]	19,015	19,015	19,015	19,015	19,015	19,015		114,087
68	Tenn Gas Pipeline 8587 Z0-Z6	Sch.5A, ln 19	[redacted]	138,564	138,564	138,564	138,564	138,564	138,564		831,385
69	Tenn Gas Pipeline 8587 Z1-Z6	Sch.5A, ln 20	[redacted]	254,628	254,628	254,628	254,628	254,628	254,628		1,527,769
70	Tenn Gas Pipeline 8587 Z4-Z6	Sch.5A, ln 21	[redacted]	26,411	26,411	26,411	26,411	26,411	26,411		158,464
71	Tenn Gas Pipeline (Dracut) 42076 Z6-Z6	Sch.5A, ln 22	[redacted]	80,948	80,948	80,948	80,948	80,948	80,948		971,376
72	Tenn Gas Pipeline (Dracut) 358905 Z6-Z7	Sch.5A, ln 23	[redacted]	161,896	161,896	161,896	161,896	161,896	161,896		971,376
73	Tenn Gas Pipeline (Concord Lateral) Z6-Z6	Sch.5A, ln 24	[redacted]	366,471	366,471	366,471	366,471	366,471	366,471		4,397,652
74	Portland Natural Gas Trans Service	Sch.5A, ln 25	[redacted]	18,263	18,263	18,263	18,263	18,263	18,263		109,580
75	Portland Natural Gas	Sch.5A, ln 26	[redacted]	113,971	113,971	113,971	113,971	113,971	113,971		683,828
76	ANE (TransCanada via Union to Iroquois)	Sch.5A, ln 27	[redacted]	51,622	51,622	51,622	51,622	51,622	51,622		309,732
77	TransCanada via Union to Portland	Sch.5A, ln 28	[redacted]	98,086	98,086	98,086	98,086	98,086	98,086		588,517
78	Tenn Gas Pipeline Z4-Z6 stg 632	Sch.5A, ln 29	[redacted]	105,788	105,788	105,788	105,788	105,788	105,788		1,269,456
79	Tenn Gas Pipeline Z4-Z6 stg 11234	Sch.5A, ln 30	[redacted]	49,079	49,079	49,079	49,079	49,079	49,079		588,948
80	Tenn Gas Pipeline Z5-Z6 stg 11234	Sch.5A, ln 31	[redacted]	11,919	11,919	11,919	11,919	11,919	11,919		143,029
81	National Fuel FST 2358	Sch.5A, ln 32	[redacted]	30,597	30,597	30,597	30,597	30,597	30,597		367,161
82	Subtotal Pipeline Demand		$ 3,868,811	$ 1,571,205	$ 1,571,205	$ 1,571,205	$ 1,571,205	$ 1,571,205	$ 1,571,205		$ 13,296,039
83	Less Capacity Credit		(1,267,035)	(394,215)	(394,215)	(394,215)	(394,215)	(394,215)	(394,215)		(3,632,327)
84	Net Pipeline Demand Costs		$ 2,601,775	$ 1,176,989	$ 1,176,989	$ 1,176,989	$ 1,176,989	$ 1,176,989	$ 1,176,989		$ 9,663,712
85											
86	Peaking Supply:										
87	Tenn Gas Pipeline (Concord Lateral) Z6-Z6	Sch.5A, ln 37	[redacted]	$ -	$ -	$ -	$ -	$ -	$ -		$ -
88	Demand FLS	Sch.5A, ln 38	[redacted]	-	-	-	-	-	-		-
89	Peaking Demand	Sch.5A, ln 39	[redacted]	310,000	310,000	310,000	310,000	310,000	-		1,550,000
90	Subtotal Peaking Demand		[redacted]	$ 310,000	$ 310,000	$ 310,000	$ 310,000	$ 310,000	$ -		$ 1,550,000
91	Less Capacity Credit		[redacted]	(77,779)	(77,779)	(77,779)	(77,779)	(77,779)	-		(707,021)
92	Net Peaking Supply Demand Costs		[redacted]	$ 232,221	$ 232,221	$ 232,221	$ 232,221	$ 232,221	$ -		$ 842,979
93											
94	Storage:										
95	Dominion - Demand	Sch.5A, ln 49	[redacted]	$ 2,502	$ 2,502	$ 2,502	$ 2,502	$ 2,502	$ 2,502		$ 30,020
96	Dominion - Storage	Sch.5A, ln 50	[redacted]	2,650	2,650	2,650	2,650	2,650	2,650		31,796
97	Honeoye - Demand	Sch.5A, ln 51	[redacted]	9,443	9,443	9,443	9,443	9,443	9,443		113,319
98	National Fuel - Demand	Sch.5A, ln 52	[redacted]	16,141	16,141	16,141	16,141	16,141	16,141		193,690
99	National Fuel - Capacity	Sch.5A, ln 53	[redacted]	32,064	32,064	32,064	32,064	32,064	32,064		384,771
100	Tenn Gas Pipeline - Demand	Sch.5A, ln 54	[redacted]	27,644	27,644	27,644	27,644	27,644	27,644		331,723
101	Tenn Gas Pipeline - Capacity	Sch.5A, ln 55	[redacted]	26,995	26,995	26,995	26,995	26,995	26,995		323,937
102	Subtotal Storage Demand		$ 704,628	$ 117,438	$ 117,438	$ 117,438	$ 117,438	$ 117,438	$ 117,438		$ 1,409,255
103	Less Capacity Credit		(230,766)	(29,465)	(29,465)	(29,465)	(29,465)	(29,465)	(29,465)		(407,557)
104	Net Storage Demand Costs		$ 473,862	$ 87,973	$ 87,973	$ 87,973	$ 87,973	$ 87,973	$ 87,973		$ 1,001,699
105											
106	Total Demand Charges	lns 60 + 82 + 90 + 102	$ 4,573,438	$ 1,998,643	$ 1,998,643	$ 1,998,643	$ 1,998,643	$ 1,998,643	$ 1,688,643		$ 16,255,294
107	Total Capacity Credit	lns 61 + 83 + 91 + 103	(1,815,927)	(501,459)	(501,459)	(501,459)	(501,459)	(501,459)	(423,680)		(4,746,904)
108	Net Demand Charges		$ 2,757,512	$ 1,497,183	$ 1,497,183	$ 1,497,183	$ 1,497,183	$ 1,497,183	$ 1,264,962		$ 11,508,390
109											
110											

111	**B.** **Commodity Costs**										
112											
113											
114											
115			Peak Costs								Peak Period
116			May 22 - Oct 23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Nov - Apr
117	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
118	Pipeline:										
119	Dawn Supply	Sch. 6, ln 12	[redacted]	$ 246,446	$ 309,181	$ 326,427	$ 308,737	$ 316,980	$ 234,826		$ 1,742,599
120	Niagara Supply	Sch. 6, ln 13		192,299	241,521	255,117	241,130	247,699	189,997.27		1,367,763.92
121	TGP Supply (Direct)	Sch. 6, ln 14		1,343,645	1,091,272	1,192,366	1,099,994	1,022,831	200,927		5,951,036
122	Dracut Supply 1 - Baseload	Sch. 6, ln 15		-	-	5,680,440	2,646,105	-	-		8,326,545
123	Dracut Supply 2 - Swing	Sch. 6, ln 16		1,417,285	3,682,701	2,436,463	4,552,135	4,776,945	654,219		17,519,747
124	Dracut Supply 3 - Swing	Sch. 6, ln 17		193,371	773,932	452,598	2,586,448	1,781,654	14,442		5,802,444
125	Constellation COMBO	Sch. 6, ln 18		-	-	-	-	-	-		-
126	LNG Truck	Sch. 6, ln 19		-	1,364,936	2,314,084	2,287,309	25,623	-		5,991,952
127	Propane Truck	Sch. 6, ln 20		-	-	281,887	6,143	-	113,990		402,021
128	PNGTS	Sch. 6, ln 21		104,593	288,777	404,237	345,374	177,814	92,279		1,413,074
129	Portland Natural Gas	Sch. 6, ln 22		(20,811)	88,055	48,079	174,181	373,501	64,609		727,615
130	TGP Supply (Z4)	Sch. 6, ln 23		367,702	577,590	633,723	600,056	596,577	1,156,290		3,931,939
131	Subtotal Pipeline Commodity Costs		$ -	$ 3,844,531	$ 8,417,966	$ 14,025,422	$ 14,847,613	$ 9,319,625	$ 2,721,579		$ 53,176,735
132											
133	Storage:										
134	TGP Storage - Withdrawals	Sch. 6, ln 50	$ -	$ 259,137	$ 1,406,663	$ 1,404,646	$ 1,176,064	$ 314,643	$ 299,583		$ 4,860,737
135											
136	Produced Gas Costs:										
137	LNG Vapor	Sch. 6, ln 53	[redacted]	$ 25,651	$ 1,415,002	$ 2,339,994	$ 2,181,305	$ 27,370	$ 26,716		$ 6,016,038
138	Propane	Sch. 6, ln 54		-	-	1,246,369	7,134	-	-		1,253,503
139	Subtotal Produced Gas Costs		$ -	$ 25,651	$ 1,415,002	$ 3,586,363	$ 2,188,439	$ 27,370	$ 26,716		$ 7,269,540
140											
141	Less Storage Refills:										
142	LNG Truck	Sch. 6, ln 40	[redacted]	$ -	$ (1,364,936)	$ (2,314,084)	$ (2,287,309)	$ (25,623)	$ -		$ (5,991,952)
143	Propane	Sch. 6, ln 41		-	-	(281,887)	(6,143)	-	(113,990)		(402,021)
144	TGP Storage Refill	Sch. 6, ln 42		(539,160)	-	-	-	-	(327,540)		(866,700)
145	Storage Refill (Trans.)	Sch. 6, ln 43		(61,840)	-	-	-	-	(37,431)		(99,272)
146	Subtotal Storage Refill		$ -	$ (601,001)	$ (1,364,936)	$ (2,595,971)	$ (2,293,452)	$ (25,623)	$ (478,961)		$ (7,359,945)
147											
148	Total Supply Commodity Costs		$ -	$ 3,528,318	$ 9,874,694	$ 16,420,459	$ 15,918,664	$ 9,636,015	$ 2,568,917		$ 57,947,067
149											
150	**C. Supply Volumetric Transportation Costs:**										
151	Dawn Supply	Sch. 6, ln 28	[redacted]	$ 7,792	$ 10,024	$ 11,048	$ 9,979	$ 10,249	$ 7,395		$ 56,487
152	Niagara Supply	Sch. 6, ln 29		6,400	7,078	7,185	6,716	7,059	6,150		40,587
153	TGP Supply (Direct)	Sch. 6, ln 30		165,136	116,555	119,416	110,368	113,339	23,489		648,303
154	Dracut Supply 1 - Baseload	Sch. 6, ln 31		-	-	11,789	5,510	-	-		17,299
155	Dracut Supply 2 - Swing	Sch. 6, ln 32		10,143	5,839	3,159	6,506	13,857	5,265		44,768
156	Dracut Supply 3 - Swing	Sch. 6, ln 33		1,384	1,227	587	3,696	5,168	116		12,179
157	Subtotal Pipeline Volumetric Trans. Costs		$ -	$ 190,854	$ 140,723	$ 153,184	$ 142,775	$ 149,672	$ 42,414		$ 819,622
158											
159	TGP Storage - Withdrawals	Sch. 6, ln 35	$ -	$ 14,421	$ 78,281	$ 78,169	$ 65,448	$ 17,510	$ 13,395		$ 267,224
160											
161	Total Supply Volumetric Trans. Costs	lns 157 + 159	$ -	$ 205,275	$ 219,004	$ 231,353	$ 208,223	$ 167,182	$ 55,809		$ 1,086,846
162											
163	Total Commodity Gas & Trans. Costs	lns 148 + 161	$ -	$ 3,733,593	$ 10,093,699	$ 16,651,812	$ 16,126,887	$ 9,803,196	$ 2,624,726		$ 59,033,914
164											
165											

166	**D. Supply and Demand Costs by Source**										**REDACTED**
167											Schedule 1
168											Page 4 of 4
169											
170			Peak Costs								Peak Period
171				Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Nov - Apr
172	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
173	Purchased Gas Demand Costs										
174	Pipeline Gas Demand Costs	lns 60 + 82	$ 3,868,811	$ 1,571,205	$ 1,571,205	$ 1,571,205	$ 1,571,205	$ 1,571,205	$ 1,571,205		$ 13,296,039
175	Peaking Gas Demand Costs	ln 90	-	310,000	310,000	310,000	310,000	310,000	-		1,550,000
176	Subtotal Purchased Gas Demand Costs		$ 3,868,811	$ 1,881,205	$ 1,881,205	$ 1,881,205	$ 1,881,205	$ 1,881,205	$ 1,571,205		$ 14,846,039
177	Less Capacity Credit	lns 61 + 83 + 91	(1,585,161)	(471,994)	(471,994)	(471,994)	(471,994)	(471,994)	(394,215)		(4,339,348)
178	Net Purchased Gas Demand Costs		$ 2,283,649	$ 1,409,210	$ 1,409,210	$ 1,409,210	$ 1,409,210	$ 1,409,210	$ 1,176,989		$ 10,506,691
179											
180	Storage Gas Demand Costs										
181	Storage Demand	ln 102	$ 704,628	$ 117,438	$ 117,438	$ 117,438	$ 117,438	$ 117,438	117,437.93		1,409,255.17
182	Less Capacity Credit	ln 103	(230,766)	(29,465)	(29,465)	(29,465)	(29,465)	(29,465)	(29,465.18)		(407,556.60)
183	Net Storage Demand Costs		$ 473,862	$ 87,973	$ 87,973	$ 87,973	$ 87,973	$ 87,973	$ 87,973		$ 1,001,699
184											
185	**Total Demand Costs**	lns 178 + 183	$ 2,757,512	$ 1,497,183	$ 1,497,183	$ 1,497,183	$ 1,497,183	$ 1,497,183	$ 1,264,962		$ 11,508,390
186											
187	Purchased Gas Supply										
188	Commodity Costs	ln 131	[redacted]								
189	Less Storage Inj.(TGP Storage)	ln 144									
190	Less Storage Transportation	ln 145									
191	Less LNG Truck	ln 142									
192	Less Propane Truck	ln 143									
193	Plus Transportation Costs	ln 157									
194	Subtotal Purchased Gas Supply		$ -	$ 3,434,385	$ 7,193,752	$ 11,582,635	$ 12,696,936	$ 9,443,674	$ 2,285,032		$ 46,636,413
195											
196	Storage Commodity Costs										
197	Commodity Costs	ln 134	$ -	$ 259,137	$ 1,406,663	$ 1,404,646	$ 1,176,064	$ 314,643	$ 299,583		$ 4,860,737
198	Transportation Costs	ln 159	-	14,421	78,281	78,169	65,448	17,510	13,395		267,224
199	Subtotal Storage Commodity Costs		$ -	$ 273,558	$ 1,484,944	$ 1,482,815	$ 1,241,512	$ 332,153	$ 312,979		$ 5,127,961
200											
201	Produced Gas Commodity Costs	ln 139	$ -	$ 25,651	$ 1,415,002	$ 3,586,363	$ 2,188,439	$ 27,370	$ 26,716		$ 7,269,540
202											
203	**Subtotal Commodity Costs**	lns 194 + 199 + 201	$ -	$ 3,733,593	$ 10,093,699	$ 16,651,812	$ 16,126,887	$ 9,803,196	$ 2,624,726		$ 59,033,914
204											
205	Hedge Contract (Savings)/Loss		$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -
206											
207	**Total Commodity Costs**	lns 203 + 205	$ -	$ 3,733,593	$ 10,093,699	$ 16,651,812	$ 16,126,887	$ 9,803,196	$ 2,624,726		$ 59,033,914
208											
209	**Total Demand Costs, Net**	ln 108	$ 2,757,512	$ 1,497,183	$ 1,497,183	$ 1,497,183	$ 1,497,183	$ 1,497,183	$ 1,264,962		$ 11,508,390
210	**Total Supply Costs**	ln 207	-	3,733,593	10,093,699	16,651,812	16,126,887	9,803,196	2,624,726		59,033,914
211											
212	**Total Direct Gas Costs**	lns 209 + 210	$ 2,757,512	$ 5,230,776	$ 11,590,882	$ 18,148,996	$ 17,624,070	$ 11,300,380	$ 3,889,689		$ 70,542,304

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty **REDACTED**

Peak 2023 – 2024 Winter Cost of Gas Filing
Contracts Ranked on a per Unit Cost Basis

Supplier (a)	Contract (b)	Contract Type (c)	Contract Unit (d)	Unit Dth (MDQ/ACQ) (e)	Peak Period Cost per Unit Dth (f)
Demand Costs					
Dominion - Capacity Reservation	GSS 300076	Storage	ACQ	102,700	[redacted]
Tenn Gas Pipeline - Cap. Reservations	FS-MA 523	Storage	ACQ	1,560,391	[redacted]
National Fuel - Capacity Reservation	FSS-O02357	Storage	ACQ	670,800	[redacted]
Tenn Gas Pipeline - Demand	FS-MA 523	Storage	MDQ	21,844	[redacted]
Dominion - Demand	GSS 300076	Storage	MDQ	934	[redacted]
National Fuel - Demand	FSS-O02357	Storage	MDQ	6,098	[redacted]
National Fuel	FST N02358	Transportation	MDQ	6,098	[redacted]
Tenn Gas Pipeline	42076 FTA Z6-Z6	Transportation	MDQ	20,000	[redacted]
Tenn Gas Pipeline	358905 FTA Z6-Z6	Transportation	MDQ	40,000	[redacted]
Iroquois Gas Trans Service	RTS 470-01	Transportation	MDQ	4,047	[redacted]
Honeoye - Demand	SS-NY	Storage	MDQ	1,362	[redacted]
Tenn Gas Pipeline	2302 Z5-Z6	Transportation	MDQ	3,122	[redacted]
Tenn Gas Pipeline	95346 Z5-Z6	Transportation	MDQ	4,000	[redacted]
Tenn Gas Pipeline (short haul)	11234 Z5-Z6(stg)	Transportation	MDQ	1,957	[redacted]
Tenn Gas Pipeline (short haul)	11234 Z4-Z6(stg)	Transportation	MDQ	7,082	[redacted]
Tenn Gas Pipeline (short haul)	8587 Z4-Z6	Transportation	MDQ	3,811	[redacted]
Tenn Gas Pipeline (short haul)	632 Z4-Z6 (stg)	Transportation	MDQ	15,265	[redacted]
Tenn Gas Pipeline (Concord Lateral) Z6-Z6	Firm Transportation	Transportation	MDQ	30,000	[redacted]
ANE (TransCanada via Union to Iroquois)	Dawn - Parkway to Iroquois	Transportation	MDQ	4,047	[redacted]
TransCanada via Union to Portland	Dawn -Parkway to Portland	Transportation	MDQ	5,077	[redacted]
Tenn Gas Pipeline (long haul)	8587 Z1-Z6	Transportation	MDQ	14,561	[redacted]
Tenn Gas Pipeline (long haul)	8587 Z0-Z6	Transportation	MDQ	7,035	[redacted]
Portland Natural Gas Trans Service	FT-208544	Transportation	MDQ	1,000	[redacted]
Portland Natural Gas	FT 233320	Transportation	MDQ	5,000	[redacted]
Peaking Demand	NSB041	Peaking	MDQ	4,000	[redacted]
Supply Costs - Commodity					
TGP Supply (Z4)		Pipeline	Dkt	1,389,359	[redacted]
Niagara Supply		Pipeline	Dkt	422,148	[redacted]
Constellation COMBO		Pipeline	Dkt	-	[redacted]
TGP Supply (Direct)		Pipeline	Dkt	1,749,255	[redacted]
Dawn Supply		Pipeline	Dkt	532,561	[redacted]
Dracut Supply 1 - Baseload		Pipeline	Dkt	455,000	[redacted]
TGP Storage		Storage	Dkt	2,120,856	[redacted]
PNGTS		Pipeline	Dkt	134,597	[redacted]
Propane Truck		Pipeline	Dkt	29,560	[redacted]
LNG Truck		Pipeline	Dkt	484,821	[redacted]
Dracut Supply 2 - Swing		Pipeline	Dkt	1,350,620	[redacted]
Dracut Supply 3 - Swing		Pipeline	Dkt	358,993	[redacted]
Portland Natural Gas		Pipeline	Dkt	644,257	[redacted]
Propane		Produced	Dkt	79,275	[redacted]
LNG Vapor (Storage)		Produced	Dkt	487,452	[redacted]
Supply Costs - Volumetric Transportation					
Dracut Supply 1 - Baseload		Pipeline	Dkt	455,000	[redacted]
Dracut Supply 2 - Swing		Pipeline	Dkt	1,350,620	[redacted]
Niagara Supply		Pipeline	Dkt	422,148	[redacted]
Dawn Supply		Pipeline	Dkt	532,561	[redacted]
TGP Storage - Withdrawals		Pipeline	Dkt	2,120,856	[redacted]
TGP Supply (Direct)		Pipeline	Dkt	1,749,255	[redacted]

1 **Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**

2

3 **Peak 2023   2024 Winter Cost of Gas Filing**

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

Ln																
5			Prior Period Bal													
6			Apr-23													
7			Ending Bal	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Peak Period
8		Days in Month	Plus May Billings	31	30	31	31	30	31	30	31	31	29	31	30	31	Total
9	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
10	**Account 1920 1740 COG (Over)/Under Balance Interest Calculation**																
11																	
12	**Beginning Balance**	Account 1920-1740	**$ 3,674,198**	$ 3,674,198	$ 3,519,163	$ 4,284,264	$ 5,787,972	$ 6,453,481	$ 7,122,219	$ 7,797,360	$ 3,967,281	$ 2,388,756	$ 4,737,329	$ 8,730,340	$ 8,438,298	$ 5,346,366	$ 3,674,198
13	Fcst Direct Gas Costs(Inc U/G Hedges)	Schedule 5A					621,481	621,481	621,481	4,463,422	10,823,528	17,381,642	16,856,716	10,533,026	3,374,735	-	65,297,512
14	Production & Storage & Misc Overhead			-	-	-	-	-	-	614,243	614,243	614,243	614,243	614,243	614,243		3,685,458
15	Projected Revenues w/o Int.	ln 52 * 59		(832,431)	(9,278)	(45,832)	-	-	-	(8,843,007)	(12,875,798)	(15,188,024)	(13,208,524)	(11,321,273)	(6,900,728)	-	(69,224,894)
16	Projected Unbilled Revenue			(217,507)	(106,882)	(86,712)				270,480	900,798	1,481,633	1,768,809	2,469,754	2,824,915		9,305,287
17	Reverse Prior Month Unbilled			423,146	217,507	106,882					(270,480)	(900,798)	(1,481,633)	(1,768,809)	(2,469,754)	(2,824,915)	(8,968,853)
18	Adjustment			(14,335)	(3,854)	(44.34)				-							(18,234)
19	Add Net Adjustments	Schedule 4		-	-	-	-	-	-	(376,170)	(793,677)	(1,065,752)	(601,923)	(880,732)	(583,327)	-	(4,301,581)
20	Gas Cost Billed	Account 1920-1740		544,700	724,038	1,579,638	-	-	-	-	-	-	-	-	-	-	2,848,376
21	Monthly (Over)/Under Recovery		$ 3,674,198	$ 3,577,772	$ 4,340,694	$ 5,838,196	$ 6,409,453	$ 7,074,962	$ 7,743,701	$ 3,926,329	$ 2,365,896	$ 4,711,700	$ 8,685,017	$ 8,376,549	$ 5,298,381	$ 2,521,451	$ 2,297,269
22	Average Monthly Balance	(ln 12 + 21)/2		$ 3,625,985	$ 3,929,928	$ 5,061,230	$ 6,098,713	$ 6,764,222	$ 7,432,960	$ 5,861,845	$ 3,166,589	$ 3,550,228	$ 6,711,173	$ 8,553,444	$ 6,868,339	$ 3,933,908	
23																	
24	Interest Rate	Prime Rate		8.00%	8.25%	8.25%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%		
25																	
26	Interest Applied	ln 22 * ln 24 / 365 * Days of Month		$ (58,609)	$ (56,430)	$ (50,223)	$ 44,028	$ 47,257	$ 53,660	$ 40,953	$ 22,860	$ 25,630	$ 45,323	$ 61,749	$ 47,984	$ -	$ 224,182
27																	
28	**(Over)/Under Balance**	ln 21 + ln 26	$ 3,674,198	$ 3,519,163	$ 4,284,264	$ 5,787,972	$ 6,453,481	$ 7,122,219	$ 7,797,360	$ 3,967,281	$ 2,388,756	$ 4,737,329	$ 8,730,340	$ 8,438,298	$ 5,346,366	$ 2,521,451	2,521,451
29																	
30																	
31	**Calculation of COG with Interest**																
32																	
33	**Beginning Balance**	ln 12	$ 3,674,198	$ 3,674,198	$ 3,602,409	$ 4,451,152	$ 6,041,716	$ 6,709,057	$ 7,379,581	$ 8,056,580	$ 4,228,512	$ 2,652,340	$ 5,003,247	$ 8,998,266	$ 8,708,677	$ 5,618,897	$ 3,674,198
34	Fcst Direct Gas Costs(Inc U/G Hedges)	ln 13		-	-	-	621,481	621,481	621,481	4,463,422	10,823,528	17,381,642	16,856,716	10,533,026	3,374,735	-	65,297,512
35	Prod Storage & Misc Overhead	ln 14		-	-	-	-	-	-	614,243	614,243	614,243	614,243	614,243	614,243	-	3,685,458
36	Projected Revenues with int.	ln 52 * ln 61		(832,431)	(9,278)	(45,832)	-	-	-	(8,843,007)	(12,875,798)	(15,188,024)	(13,208,524)	(11,321,273)	(6,900,728)	-	(69,224,894)
37	Projected Unbilled Revenue			(217,507)	(106,882)	(86,712)				270,679	901,463	1,482,727	1,770,115	2,471,577	2,827,001		9,312,463
38	Reverse Prior Month Unbilled			423,146	217,507	106,882					(270,679)	(901,463)	(1,482,727)	(1,770,115)	(2,471,577)	(2,827,001)	(8,976,029)
39	Add Net Adjustments	ln 19		(14,335)	(3,854)	(44)	-	-	-	(376,170)	(793,677)	(1,065,752)	(601,923)	(880,732)	(583,327)	-	(4,319,814)
40	Gas Cost Billed	ln 20		544,700	724,038	1,579,638	-	-	-	-	-	-	-	-	-	-	2,848,376
41	Add Interest	ln 26															-
42	**(Over)/Under Balance**		$ 3 674 198	$ 3 577 772	$ 4 423 940	$ 6 005 084	$ 6 663 197	$ 7 330 538	$ 8 001 062	$ 4 185 748	$ 2 627 592	$ 4 975 712	$ 8 951 146	$ 8 644 992	$ 5 569 023	$ 2 791 896	$ 2 297 269
43																	
44	Average Monthly Balance			$ 3,625,985	$ 4,013,174	$ 5,228,118	$ 6,352,457	$ 7,019,798	$ 7,690,321	$ 6,121,164	$ 3,428,052	$ 3,814,026	$ 6,977,196	$ 8,821,629	$ 7,138,850	$ 4,205,397	
45																	
46	Interest Applied	ln 24 * ln 44 / 365 * Days of Month		24,637	27,213	36,633	45,860	49,042	55,518	42,764	24,748	27,534	47,120	63,685	49,874	-	494,627
47																	
48	**(Over)/Under Balance**	-ln 41 +ln 42 + ln 46	$ 3,674,198	$ 3,602,409	$ 4,451,152	$ 6,041,716	$ 6,709,057	$ 7,379,581	$ 8,056,580	$ 4,228,512	$ 2,652,340	$ 5,003,247	$ 8,998,266	$ 8,708,677	$ 5,618,897	$ 2,791,896	2,791,896
49																	
50																	
51	Forecast Sendout Therms	Sch 1								12,360,292	17,656,136	21,061,366	18,630,638	15,312,912	9,437,721		94,459,064
52	Less Forecast Billing Therm Sales	Sch. 10B, ln 23 Nov - May								12,237,353	17,818,111	21,017,875	18,278,553	15,666,889	9,549,539		94,568,321
53	Less Forecast Unaccounted For	Sch 1								480,543	686,434	818,823	724,321	595,335	366,919		3,672,374
54	Less Forecast Company Use	Sch 1								16,699	23,853	28,454	25,170	20,688	12,750		127,614
55	Unbilled Volumes									-374,302	-872,263	-803,786	-397,406	-969,999	-491,488	0	(3,909,244)
56	Gross Unbilled									-374,302	-1,246,565	-2,050,351	-2,447,758	-3,417,757	-3,909,244	-3,909,244	
57																	
58																	
59	COB w/o Interest	Sch. 3, pg. 4, ln 202 col. (c)								$0.7226	$0.7226	$0.7226	$0.7226	$0.7226	$0.7226	$0.7226	
60																	
61	COG With Interest	Sch. 3, pg. 4, ln 202 col. (d)								$0.7232	$0.7232	$0.7232	$0.7232	$0.7232	$0.7232	$0.7232	

Ln	(a)	(b)	Prior Period Bal Apr-23 Ending Bal + May Collections	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Peak Period Total
64		Days in Month		31	30	31	31	30	31	30	31	31	29	31	30	31	
65	(a)	(b)		(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	( )	(m)	(n)	(o)	(p)
67	**Account 1163 1422 Working Capital (Over)/Under Balance Interest Calculation**																
69	**Beginning Balance**	Account 1163-1422	**$ (162,369)**	$ (162,369)	$ (183,441)	$ (182,630)	$ (177,966)	$ (175,515)	$ (173,006)	$ (170,519)	$ (175,067)	$ (154,390)	$ (102,459)	$ (47,336)	$ (21,761)	$ (24,676)	$ (162,369)
71	Days Lag			0.0705	0.0705	0.0705	0.0705	0.0705	0.0705	0.0705	0.0705	0.0705	0.0705	0.0705	0.0705		
72	Prime Rate			8.00%	8.25%	8.25%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%		
73	Forecast Working Capital	ln 34 * 0.091%		-	-	-	3,722	3,722	3,722	26,734	64,828	104,109	100,965	63,088	20,213	-	391,105
75	Projected Revenues w/o Int.	ln 113 * ln 117		-	-	-	-	-	-	(31,028)	(45,178)	(53,292)	(46,346)	(39,724)	(24,213)	-	(239,781)
76	Projected Unbilled Revenue									949	3,161	5,199	6,206	8,666	9,912		34,093
77	Reverse Prior Month Unbilled										(949)	(3,161)	(5,199)	(6,206)	(8,666)	(9,912)	(34,093)
79	Add Net Adjustments			2,112	2,808	6,125		-	-	-	-	-	-	-	-	-	11,045
81	Working Capital Billed	Account 1163-1422		(22,014)	(759)	(203)											(22,975)
83	Monthly (Over)/Under Recovery		$ (162,369)	$ (182,271)	$ (181,393)	$ (176,707)	$ (174,244)	$ (171,793)	$ (169,283)	$ (173,864)	$ (153,205)	$ (101,535)	$ (46,832)	$ (21,512)	$ (24,514)	$ (34,588)	$ (22,975)
85	Average Monthly Balance	(ln 69 + ln 83)/2		$ (172,320)	$ (182,417)	$ (179,668)	$ (176,105)	$ (173,654)	$ (171,145)	$ (172,192)	$ (164,136)	$ (127,963)	$ (74,645)	$ (34,424)	$ (23,137)	$ (29,632)	
87	Interest Rate	Prime Rate		8.00%	8.25%	8.25%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%		
89	Interest Applied	ln 85 * ln 87 / 365 * Days of Month		$ (1,171)	$ (1,237)	$ (1,259)	$ (1,271)	$ (1,213)	$ (1,236)	$ (1,203)	$ (1,185)	$ (924)	$ (504)	$ (249)	$ (162)	$ -	$ (11,613)
91	**(Over)/Under Balance**	ln 83 + ln 89	$ (162,369)	$ (183,441)	$ (182,630)	$ (177,966)	$ (175,515)	$ (173,006)	$ (170,519)	$ (175,067)	$ (154,390)	$ (102,459)	$ (47,336)	$ (21,761)	$ (24,676)	$ (34,588)	(34,588)
94	**Calculation of Working Capital with Interest**																
97	**Beginning Balance**	ln 69	$ (162,369)	$ (162,369)	$ (183,441)	$ (182,630)	$ (177,966)	$ (175,515)	$ (173,006)	$ (170,519)	$ (175,034)	$ (154,309)	$ (102,320)	$ (47,146)	$ (21,528)	$ (24,416)	$ (162,369)
98	Forecast Working Capital	ln 73		-	-	-	3,722	3,722	3,722	26,734	64,828	104,109	100,965	63,088	20,213	-	391,105
99	Projected Rev. with interest	ln 113 * ln 119		-	-	-	-	-	-	(30,994)	(45,128)	(53,233)	(46,295)	(39,680)	(24,186)	-	(239,516)
100	Projected Unbilled Revenue									948	3,157	5,193	6,200	8,656	9,901		34,055
101	Reverse Prior Month Unbilled										(948)	(3,157)	(5,193)	(6,200)	(8,656)	(9,901)	(34,055)
102	Add Net Adjustments	ln 79	-	2,112	2,808	6,125	-	-	-	-	-	-	-	-	-	-	11,045
103	Working Capital Billed	ln 81		(22,014)	(759)	(203)	-	-	-								(22,975)
104	Add Interest	ln 89														-	-
105	Monthly (Over)/Under Recovery		$ (162 369)	$ (182 271)	$ (181 393)	$ (176 707)	$ (174 244)	$ (171 793)	$ (169 283)	$ (173 831)	$ (153 124)	$ (101 397)	$ (46 643)	$ (21 281)	$ (24 256)	$ (34 317)	$ (22 710)
107	Average Monthly Balance			$ (172,320)	$ (182,417)	$ (179,668)	$ (176,105)	$ (173,654)	$ (171,145)	$ (172,175)	$ (164,079)	$ (127,853)	$ (74,481)	$ (34,213)	$ (22,892)	$ (29,367)	
109	Interest Applied	ln 87 * ln 107 / 365 * Days of Month		(1,171)	(1,237)	(1,259)	(1,271)	(1,213)	(1,236)	(1,203)	(1,185)	(923)	(503)	(247)	(160)	-	$ (11,607)
111	**(Over)/Under Balance**	-ln 104 +ln 105 + ln 109	$ (162,369)	$ (183,441)	$ (182,630)	$ (177,966)	$ (175,515)	$ (173,006)	$ (170,519)	$ (175,034)	$ (154,309)	$ (102,320)	$ (47,146)	$ (21,528)	$ (24,416)	$ (34,317)	$ (34,317)
113	Forecast Therm Sales	ln 52								12,237,353	17,818,111	21,017,875	18,278,553	15,666,889	9,549,539	0	94,568,321
114	Unbilled Therm	ln 55								(374,302)	(872,263)	(803,786)	(397,406)	(969,999)	(491,488)		
115	Gross Unbilled									(374,302.04)	(1,246,565.12)	(2,050,351.22)	(2,447,757.60)	(3,417,756.76)	(3,909,244.49)		
117	Working Cap. Rate w/out Int.	Sch. 3, pg. 4, ln 219 col. (c)								$0.0025	$0.0025	$0.0025	$0.0025	$0.0025	$0.0025	$0.0025	
119	Working Capital Rate w/ Int.	Sch. 3 pg. 4 ln 219 col. (d)								$0.0025	$0.0025	$0.0025	$0.0025	$0.0025	$0.0025	$0.0025	

Ln			Prior Period Bal														
120																	
121																	
122			Prior Period Bal														
123			Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	DemandPeriod
124		Days in Month	Ending Bal	31	30	31	31	30	31	30	31	31	29	31	30	31	Total
125	(a)	(b)	+ May Collections	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	( )	(m)	(n)	(o)	(p)
126																	
127	**Account 1920 1743 Bad Debt (Over)/Under Balance Interest Calculation**																
128																	
129	Forecast Direct Gas Costs	ln 34		$ -	$ -	$ -	$ 621,481	$ 621,481	$ 621,481	$ 4,463,422	$ 10,823,528	$ 17,381,642	$ 16,856,716	$ 10,533,026	$ 3,374,735	$ -	65,297,512
130	Forecast Working Capital	ln 98		-	-	-	3,722	3,722	3,722	(135,635)	64,828	104,109	100,965	63,088	20,213		228,736
131	Prior Period Balance	ln 42								612,366	612,366	612,366	612,366	612,366	612,366		3,674,198
132	Total Forecast Direct Gas Costs & Working Capital			-	-	-	625,204	625,204	625,204	4,940,154	11,500,723	18,098,117	17,570,047	11,208,480	4,007,314	-	65,526,248
133																	
134	**Beginning Balance**	Account 1920-1743	**$ (389,248)**	$ (389,248)	$ (434,271)	$ (443,908)	$ (458,305)	$ (460,158)	$ (461,918)	$ (463,798)	$ (425,333)	$ (358,480)	$ (267,466)	$ (182,861)	$ (120,666)	$ (89,117)	$ (389,248)
135																	
136	Forecast Bad Debt	ln 132 * 0.00231908326307407		-	-	-	1,450	1,450	1,450	11,457	26,671	41,971	40,746	25,993	9,293		160,482
137																	
138	Projected Revenues w/o int	ln 175 * ln 179		-	-	-	-	-	-	31,053	45,214	53,334	46,383	39,755	24,232	-	239,971
139	Projected Unbilled Revenue									(950)	(3,163)	(5,203)	(6,211)	(8,673)	(9,920)		(34,120)
140	Reverse Prior Month Unbilled										950	3,163	5,203	6,211	8,673	9,920	34,120
141																	
142	Bad Debt Billed	Account 1920-1743		(46,937)	(1,658)	(352)		-	-		-	-	-	-	-	-	(48,947)
143																	
144	Add Net Adjustments		-	4,703	(5,013)	(10,894)		-	-		-	-	-	-	-	-	(11,204)
145																	
146	Monthly (Over)/Under Recovery		$ (389 248)	$ (431 482)	$ (440 941)	$ (455 155)	$ (456 855)	$ (458 708)	$ (460 468)	$ (422 238)	$ (355 661)	$ (265 215)	$ (181 346)	$ (119 574)	$ (88 387)	$ (79 198)	$ (48 947)
147																	
148	Average Monthly Balance	(ln 134 + ln 146)/2		$ (410,365)	$ (437,606)	$ (449,532)	$ (457,580)	$ (459,433)	$ (461,193)	$ (443,018)	$ (390,497)	$ (311,848)	$ (224,406)	$ (151,218)	$ (104,526)	$ (84,157)	
149																	
150	Interest Rate	Prime Rate		8.00%	8.25%	8.25%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%		
151																	
152	Interest Applied	ln 148 * ln 150 / 365 * Days of Month		$ (2,788)	$ (2,967)	$ (3,150)	$ (3,303)	$ (3,210)	$ (3,329)	$ (3,095)	$ (2,819)	$ (2,251)	$ (1,516)	$ (1,092)	$ (730)		$ (30,251)
153																	
154	**(Over)/Under Balance**	ln 146 + ln 152	$ (389 248)	$ (434 271)	$ (443 908)	$ (458 305)	$ (460 158)	$ (461 918)	$ (463 798)	$ (425 333)	$ (358 480)	$ (267 466)	$ (182 861)	$ (120 666)	$ (89 117)	$ (79 198)	(79 198)
155																	
156																	
157	**Calculation of Bad Debt with Interest**																
158																	
159	**Beginning Balance**	ln 134	$ (389,248)	$ (389,248)	$ (434,271)	$ (443,908)	$ (458,305)	$ (460,158)	$ (461,918)	$ (463,798)	$ (424,617)	$ (356,736)	$ (264,506)	$ (178,825)	$ (115,745)	$ (83,651)	$ (389,248)
160	Forecast Bad Debt	ln 136		-	-	-	1,450	1,450	1,450	11,457	26,671	41,971	40,746	25,993	9,293	-	160,482
161	Projected Revenues with int.	ln 175 * ln 181		-	-	-	-	-	-	31,789	46,286	54,598	47,482	40,698	24,807	-	245,661
162	Projected Unbilled Revenue									(972)	(3,238)	(5,326)	(6,359)	(8,878)	(10,155)		(34,929)
163	Reverse Prior Month Unbilled										972	3,238	5,326	6,359	8,878	10,155	34,929
164	Bad Debt Billed	ln 142		(46,937)	(1,658)	(352)	-	-	-	-	-	-	-	-	-	-	(48,947)
165	Add Interest	ln 152															0
166	Add Net Adjustments	ln 144	-	4,703	(5,013)	(10,894)	-	-	-	-	-	-	-	-	-	-	(11,204)
167	Monthly (Over)/Under Recovery		$ (389,248)	$ (431,482)	$ (440,941)	$ (455,155)	$ (456,855)	$ (458,708)	$ (460,468)	$ (421,524)	$ (353,925)	$ (262,254)	$ (177,309)	$ (114,653)	$ (82,921)	$ (73,496)	$ (43,257)
168																	
169	Average Monthly Balance			$ (410,365)	$ (437,606)	$ (449,532)	$ (457,580)	$ (459,433)	$ (461,193)	$ (442,661)	$ (389,271)	$ (309,495)	$ (220,907)	$ (146,739)	$ (99,333)	$ (78,574)	
170																	
171	Interest Applied	ln 150 * ln 169 / 365 * Days of Month		(2,788)	(2,967)	(3,150)	(3,303)	(3,210)	(3,329)	(3,093)	(2,810)	(2,251)	(1,516)	(1,092)	(730)	-	(30,239)
172																	
173	**(Over)/Under Balance**	-ln 165 +ln 167 + ln 171	$ (389,248)	$ (434,271)	$ (443,908)	$ (458,305)	$ (460,158)	$ (461,918)	$ (463,798)	$ (424,617)	$ (356,736)	$ (264,506)	$ (178,825)	$ (115,745)	$ (83,651)	$ (73,496)	$ (73,496)
174																	
175	Forecast Term Sales	ln 52								12,237,353	17,818,111	21,017,875	18,278,553	15,666,889	9,549,539	0	94,568,321
176	Unbilled Therm	ln 55								(374,302.04)	(872,263.08)	(803,786.10)	(397,406.37)	(969,999.17)	(491,487.73)		
177	Gross Unbilled									(374,302.04)	(1,246,565.12)	(2,050,351.22)	(2,447,757.60)	(3,417,756.76)	(3,909,244.49)		
178																	
179	COG Rate Without Interest	Sch. 3, pg. 4, ln 236 col. (c)								-$0.0025	-$0.0025	-$0.0025	-$0.0025	-$0.0025	-$0.0025	-$0.0025	
180																	
181	COG With Interest	Sch. 3, pg. 4, ln 236 col. (d)								-$0.0026	-$0.0026	-$0.0026	-$0.0026	-$0.0026	-$0.0026	-$0.0026	
182																	
183																	
184	**Total Interest**	lns 46 + 109 + 171	$ -	$ 20 678	$ 23 008	$ 32 224	$ 41 285	$ 44 619	$ 50 953	$ 38 469	$ 20 753	$ 24 360	$ 45 101	$ 62 346	$ 48 984	$ -	$ 452 781

010

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

Peak 2023 – 2024 Winter Cost of Gas Filing
Adjustments to Gas Costs

Adjustments		Prior Period Adjustments	Refunds from Suppliers	Broker Revenue	Inventory Finance Charges	Transportation CGA Revenues (Schedule 17)	Interruptible Sales Margin	Off System Sales Margin	Capacity Release	Net Option Premiums	Fixed Price Option Administrative Costs	Total Adjustments
(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(m)
May-23		$ -	$ -	($202,607)	$ -	$ (36,912)	$ -	$ -	$ (206,592)	$ -	$ -	$ (446,111)
Jun-23		-	-	(13,057)	-	(6,723)	-	-	(214,945)	-	-	(234,724)
Jul-23		-	-	1,033,336	-	537	-	-	(373,811)	-	-	660,062
Aug-23	1/	-	-	-	-	-	-	-	-	-	-	-
Sep-23	1/	-	-	-	-	-	-	-	-	-	-	-
Oct-23	1/	-	-	-	-	-	-	-	-	-	-	-
Nov-23	1/	-	-	(52,108)	-	(11,638)	-	-	(312,424)	-	-	(376,170)
Dec-23	1/	-	-	(406,806)	-	(13,901)	-	-	(372,970)	-	-	(793,677)
Jan-24	1/	-	-	(687,773)	-	(15,794)	-	-	(362,184)	-	-	(1,065,752)
Feb-24	1/	-	-	(237,534)	-	(13,947)	-	-	(350,442)	-	-	(601,923)
Mar-24	1/	-	-	(538,880)	-	(12,893)	-	-	(328,959)	-	-	(880,732)
Apr-24	1/	-	-	(235,050)	-	(9,656)	-	-	(338,621)	-	-	(583,327)
Subtotal May 23 - Oct 23		$ -	$ -	$ 817,672	$ -	$ (43,097)	$ -	$ -	$ (795,348)	$ -	$ -	$ (20,773)
Subtotal Nov 23 - Apr 24		$ -	$ -	$ (2,158,152)	$ -	$ (77,829)	$ -	$ -	$ (2,065,600)	$ -	$ -	$ (4,301,581)
Total Peak Period		$ -	$ -	$ (1,340,480)	$ -	$ (120,926)	$ -	$ -	$ (2,860,948)	$ -	$ -	$ (4,322,354)

1/ Estimates are based on prior years actual, except transportation revenue is calculated on Schedule 17. and Inventory Finance Charges for Nov 22 - Apr 23 calculated on Schedule 16

1	**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**											**REDACTED**
2												Schedule 5A
3	**Peak 2023 – 2024 Winter Cost of Gas Filing**											Page 1 of 1
4	**<u>Demand Costs</u>**											
5												
6					Deferred							Peak
7					to Peak							Nov-Apr
8			Peak	Reference	May 23 -Oct 23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	Total
9	(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
10												
11	**Supply**											
12	Niagara Supply			Sch 5B, ln 9 * Sch 5C ln 9 x days	$ -	$ -	$ -	$ -	$ -	$ -	[redacted]	
13	Subtotal Supply Demand & Reservation Charges				$ -	$ -	$ -	$ -	$ -	$ -		
14												
15	**Pipeline**											
16	Iroquois Gas Trans Service RTS 470-0			Sch 5B, ln 12 * Sch 5C ln 12 x days	$ -	$ 19,585	$ 19,585	$ 19,585	$ 19,585	$ 19,585	[redacted]	
17	Tenn Gas Pipeline 95346 Z5-Z6			Sch 5B, ln 13 * Sch 5C ln 14 x days	-	24,362	24,362	24,362	24,362	24,362		
18	Tenn Gas Pipeline 2302 Z5-Z6			Sch 5B, ln 14 * Sch 5C ln 16 x days	-	19,015	19,015	19,015	19,015	19,015		
19	Tenn Gas Pipeline 8587 Z0-Z6			Sch 5B, ln 15 * Sch 5C ln 18 x days	-	138,564	138,564	138,564	138,564	138,564		
20	Tenn Gas Pipeline 8587 Z1-Z6			Sch 5B, ln 16 * Sch 5C ln 20 x days	-	254,628	254,628	254,628	254,628	254,628		
21	Tenn Gas Pipeline 8587 Z4-Z6			Sch 5B, ln 17 * Sch 5C ln 22 x days	-	26,411	26,411	26,411	26,411	26,411		
22	Tenn Gas Pipeline (Dracut) 42076 Z6-Z6		peak	Sch 5B, ln 18 * Sch 5C ln 24 x days	485,688	80,948	80,948	80,948	80,948	80,948		
23	Tenn Gas Pipeline (Dracut) 358905 Z6-Z7		peak	Sch 5B, ln 19 * Sch 5C ln 25 x days	971,376	161,896	161,896	161,896	161,896	161,896		
24	Tenn Gas Pipeline (Concord Lateral) Z6-Z6		peak	Sch 5B, ln 20 * Sch 5C ln 28 x days	2,198,826	366,471	366,471	366,471	366,471	366,471		
25	Portland Natural Gas Trans Service			Sch 5B, ln 21 * Sch 5C ln 30 x days	-	18,263	18,263	18,263	18,263	18,263		
26	Portland Natural Gas			Sch 5B, ln 22 * Sch 5C ln 31 x days	-	113,971	113,971	113,971	113,971	113,971		
27	ANE (TransCanada via Union to Iroquois)			Sch 5B, ln 23 * Sch 5C ln 32 x days	-	51,622	51,622	51,622	51,622	51,622		
28	TransCanada via Union to Portland			Sch 5B, ln 24 * Sch 5C ln 33 x days		98,086	98,086	98,086	98,086	98,086		
29	Tenn Gas Pipeline Z4-Z6 stg 632		peak	Sch 5B, ln 25 * Sch 5C ln 34 x days	634,728	105,788	105,788	105,788	105,788	105,788		
30	Tenn Gas Pipeline Z4-Z6 stg 11234		peak	Sch 5B, ln 26 * Sch 5C ln 36 x days	294,474	49,079	49,079	49,079	49,079	49,079		
31	Tenn Gas Pipeline Z5-Z6 stg 11234		peak	Sch 5B, ln 27 * Sch 5C ln 38 x days	71,515	11,919	11,919	11,919	11,919	11,919		
32	National Fuel FST 2358		peak	Sch 5B, ln 28 * Sch 5C ln 40 x days	183,580	30,597	30,597	30,597	30,597	30,597		
33												
34	Subtotal Pipeline Demand Charges				$ 4,840,187	$ 1,571,205	$ 1,571,205	$ 1,571,205	$ 1,571,205	$ 1,571,205	$ 1,571,205	$ 14,267,415
35												
36	**Peaking Supply**											
37	Tenn Gas Pipeline (Concord Lateral) Z6-Z6		peak	Sch 5B, ln 31 * Sch 5C ln 28 x days	$ -	$ -	$ -	$ -	$ -	$ -	[redacted]	
38	Demand FLS		peak	Per Contract	-	-	-	-	-	-		
39	Peaking Demand		peak	Per Contract	-	310,000	310,000	310,000	310,000	310,000		
40	Subtotal Peaking Demand Charges				$ -	$ 310,000	$ 310,000	$ 310,000	$ 310,000	$ 310,000	$ -	$ 1,550,000
41												
42	**Subtotal Supply, Pipeline & Peaking**			ln 13 + ln 34 + ln 40	$ 4,840,187	$ 1,881,205	$ 1,881,205	$ 1,881,205	$ 1,881,205	$ 1,881,205	$ 1,571,205	$ 15,817,415
43												
44	Less Transportation Capacity Credit				$ (1,585,161)	$ (471,994)	$ (471,994)	$ (471,994)	$ (471,994)	$ (471,994)	$ (394,215)	$ (4,339,348)
45												
46	**Total Supply, Pipeline & Peaking Demand**				$ 3,255,025	$ 1,409,210	$ 1,409,210	$ 1,409,210	$ 1,409,210	$ 1,409,210	$ 1,176,989	$ 11,478,067
47												
48												
49	Dominion - Demand		peak	Sch 5B, ln 36 * Sch 5C ln 64 x days	$ 15,010	$ 2,502	$ 2,502	$ 2,502	$ 2,502	$ 2,502	$ 2,502	$ 30,020
50	Dominion - Storage		peak	Sch 5B, ln 37 * Sch 5C ln 65 x days	15,898	2,650	2,650	2,650	2,650	2,650	2,650	31,796
51	Honeoye - Demand		peak	Sch 5B, ln 38 * Sch 5C ln 68 x days	56,660	9,443	9,443	9,443	9,443	9,443	9,443	113,319
52	National Fuel - Demand		peak	Sch 5B, ln 40 * Sch 5C ln 70 x days	96,845	16,141	16,141	16,141	16,141	16,141	16,141	193,690
53	National Fuel - Capacity		peak	Sch 5B, ln 41 * Sch 5C ln 71 x days	192,385	32,064	32,064	32,064	32,064	32,064	32,064	384,771
54	Tenn Gas Pipeline - Demand		peak	Sch 5B, ln 42 * Sch 5C ln 74 x days	165,861	27,644	27,644	27,644	27,644	27,644	27,644	331,723
55	Tenn Gas Pipeline - Capacity		peak	Sch 5B, ln 43 * Sch 5C ln 75 x days	161,969	26,995	26,995	26,995	26,995	26,995	26,995	323,937
56												
57	**Subtotal Storage Demand Costs**				$ 704,628	$ 117,438	$ 117,438	$ 117,438	$ 117,438	$ 117,438	$ 117,438	$ 1,409,255
58												
59	Less Transportation Capacity Credit				$ (230,766)	$ (29,465)	$ (29,465)	$ (29,465)	$ (29,465)	$ (29,465)	$ (29,465)	$ (407,557)
60												
61	**Total Storage Demand Costs**			ln 57 + ln 59	$ 473,862	$ 87,973	$ 87,973	$ 87,973	$ 87,973	$ 87,973	$ 87,973	$ 1,001,699
62												
63	**Total Demand Charges**			ln 42 + ln 57	$ 5,544,814	$ 1,998,643	$ 1,998,643	$ 1,998,643	$ 1,998,643	$ 1,998,643	$ 1,688,643	$ 17,226,670
64												
65	Total Transportation Capacity Credit			ln 44 + ln 59	$ (1,815,927)	$ (501,459)	$ (501,459)	$ (501,459)	$ (501,459)	$ (501,459)	$ (423,680)	$ (4,746,904)
66												
67	**Total Demand Charges less Cap. Cr.**			ln 63 + ln 65	$ 3,728,888	$ 1,497,183	$ 1,497,183	$ 1,497,183	$ 1,497,183	$ 1,497,183	$ 1,264,962	$ 12,479,766
68												
69												
70	Monthly Off Peak Demand											
71	Monthly Off Peak Transportation Cap Credit											
72	**Total Off Peak Demand**											
73												
74	Monthly Peak Demand											
75	Monthly Peak Transportation Cap Credit											
76	**Total Peak Demand**											

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

Peak 2023 – 2024 Winter Cost of Gas Filing

Demand Volumes

		Peak	Reference	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Supply									
	Niagara Supply			-	-	-	-	-	-
Pipeline									
	Iroquois Gas Trans Service		RTS 470-01	4,047	4,047	4,047	4,047	4,047	4,047
	Tenn Gas Pipeline		95346 Z5-Z6	4,000	4,000	4,000	4,000	4,000	4,000
	Tenn Gas Pipeline		2302 Z5-Z6	3,122	3,122	3,122	3,122	3,122	3,122
	Tenn Gas Pipeline (long haul)		8587 Z0-Z6	7,035	7,035	7,035	7,035	7,035	7,035
	Tenn Gas Pipeline (long haul)		8587 Z1-Z6	14,561	14,561	14,561	14,561	14,561	14,561
	Tenn Gas Pipeline (short haul)		8587 Z4-Z6	3,811	3,811	3,811	3,811	3,811	3,811
	Tenn Gas Pipeline	peak	42076 FTA Z6-Z6	20,000	20,000	20,000	20,000	20,000	20,000
	Tenn Gas Pipeline	peak	358905 FTA Z6-Z6	40,000	40,000	40,000	40,000	40,000	40,000
	Tenn Gas Pipeline (Concord Lateral)	peak	Firm Transportation	30,000	30,000	30,000	30,000	30,000	30,000
	Portland Natural Gas Trans Service		FT-208544	1,000	1,000	1,000	1,000	1,000	1,000
	Portland Natural Gas		FT 233320	5,000	5,000	5,000	5,000	5,000	5,000
	ANE (TransCanada via Union to Iroquois)		Dawn - Parkway to Iroquois	4,047	4,047	4,047	4,047	4,047	4,047
	TransCanada via Union to Portland		Dawn -Parkway to Portland	5,077	5,077	5,077	5,077	5,077	5,077
	Tenn Gas Pipeline (short haul)	peak	632 Z4-Z6 (stg)	15,265	15,265	15,265	15,265	15,265	15,265
	Tenn Gas Pipeline (short haul)	peak	11234 Z4-Z6(stg)	7,082	7,082	7,082	7,082	7,082	7,082
	Tenn Gas Pipeline (short haul)	peak	11234 Z5-Z6(stg)	1,957	1,957	1,957	1,957	1,957	1,957
	National Fuel	peak	FST N02358	6,098	6,098	6,098	6,098	6,098	6,098
Peaking									
	Tenn Gas Pipeline (Concord Lateral)	peak		-	-	-	-	-	-
	Demand FLS	peak		-	-	-	-	-	-
	Peaking Demand	peak	NSB041	4,000	4,000	4,000	4,000	4,000	-
Storage									
	Dominion - Demand	peak	GSS 300076	934	934	934	934	934	934
	Dominion - Capacity Reservation	peak	GSS 300076	102,700	102,700	102,700	102,700	102,700	102,700
	Honeoye - Demand	peak	SS-NY	1,362	1,362	1,362	1,362	1,362	1,362
	Honeoye - Capacity	peak	SS-NY	245,380	245,380	245,380	245,380	245,380	245,380
	National Fuel - Demand	peak	FSS-O02357	6,098	6,098	6,098	6,098	6,098	6,098
	National Fuel - Capacity Reservation	peak	FSS-O02357	670,800	670,800	670,800	670,800	670,800	670,800
	Tenn Gas Pipeline - Demand	peak	FS-MA 523	21,844	21,844	21,844	21,844	21,844	21,844
	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

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty **REDACTED**

Schedule 5C
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Peak 2023 – 2024 Winter Cost of Gas Filing
Demand Rates

				Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	Nov - Apr
Tariff Rates				30	31	31	29	31	30	182
				Unit Rate	Unit Rate	Unit Rate	Unit Rate	Unit Rate	Unit Rate	Avg Rate
Supply										
Niagara Supply		$ -	Per Contract	$0.0000	$0.0000	$0.0000	$0.0000	[redacted]		
Pipeline										
Iroquois Gas Trans Service	RTS 470-01	$ 4.8393	Fifth Revised Sheet No. 4	$ 0.1613	$ 0.1561	$ 0.1561	$ 0.1669	$ 0.1561	$ 0.1613	$ 0.1596
Tenn Gas Pipeline	95346 Z5-Z6	$ 6.0905	Rate Sheet #14 - 21st Rev	$ 0.2030	$ 0.1965	$ 0.1965	$ 0.2100	$ 0.1965	$ 0.2030	$ 0.2009
Tenn Gas Pipeline	2302 Z5-Z6	$ 6.0905	Rate Sheet #14 - 21st Rev	$ 0.2030	$ 0.1965	$ 0.1965	$ 0.2100	$ 0.1965	$ 0.2030	$ 0.2009
Tenn Gas Pipeline	8587 Z0-Z6	$ 19.6964	FT-A (Z0 - Z6)	$ 0.6565	$ 0.6354	$ 0.6354	$ 0.6792	$ 0.6354	$ 0.6565	$ 0.6497
Tenn Gas Pipeline	8587 Z1-Z6	$ 17.4870	FT-A (Z1 - Z6)	$ 0.5829	$ 0.5641	$ 0.5641	$ 0.6030	$ 0.5641	$ 0.5829	$ 0.5768
Tenn Gas Pipeline	8587 Z4-Z6	$ 6.9301	FT-A (Z4 - Z6)	$ 0.2310	$ 0.2236	$ 0.2236	$ 0.2390	$ 0.2236	$ 0.2310	$ 0.2286
TGP Dracut	42076 FTA Z6-Z6	$ 4.0474	Rate Sheet #14 - 21st Rev	$ 0.1349	$ 0.1306	$ 0.1306	$ 0.1396	$ 0.1306	$ 0.1349	$ 0.1335
TGP Dracut	358905 FTA Z6-Z6	$ 4.0474	Rate Sheet #14 - 21st Rev	$ 0.1349	$ 0.1306	$ 0.1306	$ 0.1396	$ 0.1306	$ 0.1349	$ 0.1335
TGP Concord Lateral	Firm Transportatio	$ 12.2157	Per contract	$ 0.4072	$ 0.3941	$ 0.3941	$ 0.4212	$ 0.3941	$ 0.4072	$ 0.4030
Portland Natural Gas	FT-208544	$ 18.2633	Negot Dmd /CMDY=Part 4.1 V	$ 0.6088	$ 0.5891	$ 0.5891	$ 0.6298	$ 0.5891	$ 0.6088	$ 0.6025
Portland Natural Gas	FT 233320	$ 22.7943	Negot Dmd /CMDY=Part 4.1 V	$ 0.7598	$ 0.7353	$ 0.7353	$ 0.7860	$ 0.7353	$ 0.7598	$ 0.7519
Tenn Gas Pipeline	632 Z4-Z6 (stg)	$ 6.9301	Rate Sheet #14 - 21st Rev	$ 0.2310	$ 0.2236	$ 0.2236	$ 0.2390	$ 0.2236	$ 0.2310	$ 0.2286
Tenn Gas Pipeline	11234 Z4-Z6(stg)	$ 6.9301	Rate Sheet #14 - 21st Rev	$ 0.2310	$ 0.2236	$ 0.2236	$ 0.2390	$ 0.2236	$ 0.2310	$ 0.2286
Tenn Gas Pipeline	11234 Z5-Z6(stg)	$ 6.0905	Rate Sheet #14 - 21st Rev	$ 0.2030	$ 0.1965	$ 0.1965	$ 0.2100	$ 0.1965	$ 0.2030	$ 0.2009
National Fuel	FST N02358	$ 5.0175	4.010 Version 37.0.0 Pg 1	$ 0.1673	$ 0.1619	$ 0.1619	$ 0.1730	$ 0.1619	$ 0.1673	$ 0.1655

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

Peak 2023 – 2024 Winter Cost of Gas Filing
Demand Rates

Tariff Rates					**Nov-23**	**Dec-23**	**Jan-24**	**Feb-24**	**Mar-24**	**Apr-24**	**Nov - Apr**
					30	31	31	29	31	30	182
					Unit Rate	Unit Rate	Unit Rate	Unit Rate	Unit Rate	Unit Rate	Avg Rate
Supply											
Niagara Supply		$	-	Per Contract	$0.0000	$0.0000	$0.0000	$0.0000	[redacted]		
Pipeline											
Iroquois Gas Trans Service	RTS 470-01	$	4.8393	Fifth Revised Sheet No. 4	$ 0.1613	$ 0.1561	$ 0.1561	$ 0.1669	$ 0.1561	$ 0.1613	$ 0.1596
Tenn Gas Pipeline	95346 Z5-Z6	$	6.0905	Rate Sheet #14 - 21st Rev	$ 0.2030	$ 0.1965	$ 0.1965	$ 0.2100	$ 0.1965	$ 0.2030	$ 0.2009
Tenn Gas Pipeline	2302 Z5-Z6	$	6.0905	Rate Sheet #14 - 21st Rev	$ 0.2030	$ 0.1965	$ 0.1965	$ 0.2100	$ 0.1965	$ 0.2030	$ 0.2009
Tenn Gas Pipeline	8587 Z0-Z6	$	19.6964	FT-A (Z0 - Z6)	$ 0.6565	$ 0.6354	$ 0.6354	$ 0.6792	$ 0.6354	$ 0.6565	$ 0.6497
Tenn Gas Pipeline	8587 Z1-Z6	$	17.4870	FT-A (Z1 - Z6)	$ 0.5829	$ 0.5641	$ 0.5641	$ 0.6030	$ 0.5641	$ 0.5829	$ 0.5768
Tenn Gas Pipeline	8587 Z4-Z6	$	6.9301	FT-A (Z4 - Z6)	$ 0.2310	$ 0.2236	$ 0.2236	$ 0.2390	$ 0.2236	$ 0.2310	$ 0.2286
TGP Dracut	42076 FTA Z6-Z6	$	4.0474	Rate Sheet #14 - 21st Rev	$ 0.1349	$ 0.1306	$ 0.1306	$ 0.1396	$ 0.1306	$ 0.1349	$ 0.1335
TGP Dracut	358905 FTA Z6-Z6	$	4.0474	Rate Sheet #14 - 21st Rev	$ 0.1349	$ 0.1306	$ 0.1306	$ 0.1396	$ 0.1306	$ 0.1349	$ 0.1335
TGP Concord Lateral	Firm Transportatio	$	12.2157	Per contract	$ 0.4072	$ 0.3941	$ 0.3941	$ 0.4212	$ 0.3941	$ 0.4072	$ 0.4030
Portland Natural Gas	FT-208544	$	18.2633	Negot Dmd /CMDY=Part 4.1 V8	$ 0.6088	$ 0.5891	$ 0.5891	$ 0.6298	$ 0.5891	$ 0.6088	$ 0.6025
Portland Natural Gas	FT 233320	$	22.7943	Negot Dmd /CMDY=Part 4.1 V8	$ 0.7598	$ 0.7353	$ 0.7353	$ 0.7860	$ 0.7353	$ 0.7598	$ 0.7519
Tenn Gas Pipeline	632 Z4-Z6 (stg)	$	6.9301	Rate Sheet #14 - 21st Rev	$ 0.2310	$ 0.2236	$ 0.2236	$ 0.2390	$ 0.2236	$ 0.2310	$ 0.2286
Tenn Gas Pipeline	11234 Z4-Z6(stg)	$	6.9301	Rate Sheet #14 - 21st Rev	$ 0.2310	$ 0.2236	$ 0.2236	$ 0.2390	$ 0.2236	$ 0.2310	$ 0.2286
Tenn Gas Pipeline	11234 Z5-Z6(stg)	$	6.0905	Rate Sheet #14 - 21st Rev	$ 0.2030	$ 0.1965	$ 0.1965	$ 0.2100	$ 0.1965	$ 0.2030	$ 0.2009
National Fuel	FST N02358	$	5.0175	4.010 Version 37.0.0 Pg 1	$ 0.1673	$ 0.1619	$ 0.1619	$ 0.1730	$ 0.1619	$ 0.1673	$ 0.1655

Effective
2023-07-01
Rate M12
Page 1 of 4

ENBRIDGE GAS INC.
UNION SOUTH
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 - Parkway 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 Charges (applied to daily contract demand)	Fuel and Commodity Charges			
		Union Supplied Fuel	Shipper Supplied Fuel		
	Rate/GJ	Fuel and Commodity Charge Rate/GJ	Fuel Ratio %	AND	Commodity Charge Rate/GJ
Firm Transportation (1), (5)					
Dawn to Parkway	$3.760	Monthly fuel and commodity rates shall be in accordance with schedule "C".	Monthly fuel ratios shall be in accordance with schedule "C".		
Dawn to Kirkwall	$3.190				
Kirkwall to Parkway	$0.570				
M12-X Firm Transportation					
Between Dawn, Kirkwall and Parkway	$4.648	Monthly fuel and commodity rates shall be in accordance with schedule "C".	Monthly fuel ratios shall be in accordance with schedule "C".		
Limited Firm/Interruptible Transportation (1)					
Dawn to Parkway – Maximum	$9.024	Monthly fuel and commodity rates shall be in accordance with schedule "C".	Monthly fuel ratios shall be in accordance with schedule "C".		
Dawn to Kirkwall – Maximum	$9.024				
Parkway (TCPL / EGT) to Parkway (Cons) / Lisgar (2)	n/a	n/a	0.173%		
Carbon Charge (applied to all quantities transported)					
Facility Carbon Charge		$0.004			$0.004

(C) Rates (Cont'd)

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.

	Fuel and Commodity Charges		
	Union Supplied Fuel	Shipper Supplied Fuel	
	Fuel and Commodity Charge Rate/GJ	Fuel Ratio % AND	Commodity Charge Rate/GJ
Transportation Overrun			
Dawn to Parkway	Monthly fuel and commodity rates shall be in accordance with schedule "C".	Monthly fuel ratios shall be in accordance with schedule "C".	$0.124
Dawn to Kirkwall			$0.105
Kirkwall to Parkway			$0.019
Parkway (TCPL) Overrun (4)	n/a	0.783%	n/a
M12-X Firm Transportation			
Between Dawn, Kirkwall and Parkway	Monthly fuel and commodity rates shall be in accordance with schedule "C".	Monthly fuel ratios shall be in accordance with schedule "C".	$0.153
Carbon Charge (applied to all quantities transported)			
Facility Carbon Charge	$0.004		$0.004

Unauthorized Overrun

Authorized Overrun rates will be payable on all quantities up to 2% in excess of Union's contractual obligation.

The Unauthorized Overrun shall be the higher of the reported daily spot price of gas at either Dawn, Parkway, Niagara or Iroquois in the month of or the month following the month in which the overrun occurred plus 25% for all usage on any day in excess of 102% of Union's contractual obligation.

Nomination Variances

Where Union and the shipper have entered into a Limited Balancing Agreement ("LBA"), the rate for unauthorized parking or drafting which results from nomination variances shall equal the "Balancing Fee" rate as described under Article XXII of TransCanada PipeLines Transportation Tariff.

Notes for Section (C) Rates:

(1) The annual transportation commodity charge is calculated by application of the YCRR Formula, as per Section (D). The annual transportation fuel required is calculated by application of the YCR Formula, as per Section (D).

(2) This rate is for westerly transportation within the Parkway yard, from Parkway (TCPL) or Parkway (EGT) to Parkway (Cons) or Lisgar.

(3) For purposes of applying the YCRR Formula or YCR Formula (Section (D)) to transportation overrun quantities, the transportation commodity revenue will be deemed to be equal to the commodity charge of the applicable service as detailed in Section (B).

(4) This ratio will be applied to all gas quantities for which Union is obligated to deliver to Parkway (Cons) or Lisgar and has agreed to deliver to Parkway (TCPL) or Parkway (EGT) on an interruptible basis. This will be in addition to any rate or ratio paid for transportation easterly to Parkway (Cons) or Lisgar.

(5) A demand charge of $0.077/GJ/day/month will be applicable for customers contracting for firm all day transportation service in addition to the demand charges appearing on this schedule for firm transportation service to either Kirkwall or Parkway.

TransCanada PipeLines Limited
Mainline Tolls - effective January 1, 2022 to December 31, 2026 (CER Order TG-014-2020)
Abandonment Surcharges - effective January 1, 2023 to December 31, 2023 (CER Order TG-008-2022)
Rate Riders - effective January 1, 2023 to December 31, 2023 (CER Order TG-007-2022)

Storage Transportation Service

Line No.	Particulars	Monthly Toll ($/GJ/Month)	Daily Equivalent ($/GJ)	Abandonment Surcharge ($/GJ/Month)	Daily Equivalent Abandonment Surcharge ($/GJ)	Rate Rider ($/GJ/Month)	Daily Equivalent Rate Rider ($/GJ)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
1	Centram MDA	4.14883	0.1364	0.22813	0.0075	-0.81517	-0.0268
2	Union WDA	23.89229	0.7855	1.86150	0.0612	-2.84700	-0.0936
3	Union NDA	13.80004	0.4537	0.62354	0.0205	-0.73608	-0.0242
4	Union EDA	9.02158	0.2966	0.41063	0.0135	0.00000	0.0000
5	KPUC EDA	8.94250	0.2940	0.40758	0.0134	0.00000	0.0000
6	Energir EDA	15.63721	0.5141	0.82429	0.0271	0.00000	0.0000
7	Enbridge CDA	4.55946	0.1499	0.13383	0.0044	0.00000	0.0000
8	Enbridge EDA	12.02067	0.3952	0.59921	0.0197	0.00000	0.0000
9	Cornwall	12.21838	0.4017	0.61138	0.0201	0.00000	0.0000

Firm Transportation - Short Notice

Line No.	Particulars	Monthly Toll ($/GJ/Month)	Daily Equivalent ($/GJ)	Abandonment Surcharge ($/GJ/Month)	Daily Equivalent Abandonment Surcharge ($/GJ)	Rate Rider ($/GJ/Month)	Daily Equivalent Rate Rider ($/GJ)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
10	Kirkwall to Thorold CDA	5.28946	0.1739	0.14904	0.0049	0.00000	0.0000
11	Union Parkway Belt to Goreway CDA	3.82946	0.1259	0.06692	0.0022	0.00000	0.0000
12	Union Parkway Belt to Victoria Square #2 CDA	4.59900	0.1512	0.10950	0.0036	0.00000	0.0000
13	Union Parkway Belt to Schomberg #2 CDA	4.54729	0.1495	0.10646	0.0035	0.00000	0.0000
14	Union Parkway Belt to Napanee #2 EDA	9.17063	0.3015	0.36804	0.0121	0.00000	0.0000

Dawn Long Term Fixed Price

Line No.	Particulars	Monthly Toll ($/GJ/Month)	Daily Equivalent ($/GJ)
	(a)	(b)	(c)
15	For All Dawn LTFP Contract Demand except any portion subject to a reduced term for the final 24 months of such reduced term	23.42083	0.7700
16	Any portion of Contract Demand reduced in term by 12 months for months 85 through 108	26.46250	0.8700
17	Any portion of Contract Demand reduced in term by 24 months for months 73 through 96	28.89583	0.9500
18	Any portion of Contract Demand reduced in term by 36 months for months 61 through 84	30.41667	1.0000
19	Any portion of Contract Demand reduced in term by 48 months for months 49 through 72	31.63333	1.0400
20	Any portion of Contract Demand reduced in term by 60 months for months 37 through 60	31.93750	1.0500

Notes: The tolls are inclusive of Delivery Pressure Toll and Abandonment Surcharge.
The Abandonment Surcharges are the same as the Empress to Emerson 2 Abandonment Surcharges for FT service.

Herbert Long Term Fixed Price

Line No.	Particulars	Monthly Toll ($/GJ/Month)	Daily Equivalent ($/GJ)	Abandonment Surcharge ($/GJ/Month)	Daily Equivalent Abandonment Surcharge ($/GJ)
	(a)	(b)	(c)	(d)	(e)
21	Empress to Herbert	3.65000	0.1200	0.26767	0.0088

North Bay Junction Long Term Fixed Price (NBJ LTFP) Service

Line No.	Particulars	Monthly Toll ($/GJ/Month)	Daily Equivalent ($/GJ)
	(a)	(b)	(c)
1	NBJ LTFP	28.28750	0.9300
2	NBJ LTFP Differential Surcharge	0.00000	0.0000

Note: The toll for NBJ LTFP is inclusive of the applicable Abandonment Surcharge for FT service from Empress to North Bay Junction.
The NBJ LTFP Differential Surcharge is zero provided the Abandonment Surcharge for FT service from Empress to North Bay Junction is equal or less than $6.69167/GJ/Month.

Market Driven Service (MDS)

Line No.	Particulars	Monthly Toll ($/GJ/Month)	Daily Equivalent ($/GJ)	Abandonment Surcharge ($/GJ/Month)	Daily Equivalent Abandonment Surcharge ($/GJ)
	(a)	(b)	(c)	(d)	(e)
3	Empress to Emerson 2 (May 2021 Open Season) (Effective November 1, 2022)	10.53938	0.3465	1.29575	0.0426

Enhanced Market Balancing Service

Line No.	Particulars	Monthly Toll ($/GJ/Month)	Daily Equivalent ($/GJ)	Abandonment Surcharge ($/GJ/Month)	Daily Equivalent Abandonment Surcharge ($/GJ)	Rate Rider ($/GJ/Month)	Daily Equivalent Rate Rider ($/GJ)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
4	Union Parkway Belt to Union EDA	9.92374	0.3262	0.41063	0.0135	0.00000	0.0000

Delivery Pressure

Line No.	Particulars	Monthly Toll ($/GJ/Month)	Daily Equivalent ($/GJ)
	(a)	(b)	(c)
5	Average Delivery Pressure Toll	0.60833	0.0200

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 and STFT.

Union Dawn Receipt Point Surcharge

Line No.	Particulars	Monthly Toll ($/GJ/Month)	Daily Equivalent ($/GJ)
	(a)	(b)	(c)
6	Union Dawn Receipt Point Surcharge	0.13135	0.0043

Short Notice Balancing (SNB) Service

Line No.	Particulars	Monthly Toll ($/GJ/Month)	Daily Equivalent ($/GJ)
	(a)	(b)	(c)
7	SNB Toll	2.97597	0.0978

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

Energy Deficient Gas Allowance (EDGA) Service

Line No.	Particulars	Capacity Charge ($/GJ/D)
	(a)	(b)
8	Western Section	0.9388
9	Eastern Section	0.3302

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)	Rate Rider ($/GJ/Month)	Daily Equivalent Rate Rider ($/GJ)
1	Union NDA	Enbridge EDA	-	0.4769	-	0.0220	-	-0.0242
2	Union NDA	KPUC EDA	-	0.5748	-	0.0281	-	-0.0242
3	Union NDA	Energir EDA	-	0.6348	-	0.0318	-	-0.0242
4	Union NDA	Enbridge SWDA	-	0.6014	-	0.0298	-	-0.0242
5	Union NDA	Union SWDA	-	0.6029	-	0.0298	-	-0.0242
6	Union NDA	Chippawa	-	0.5417	-	0.0260	-	-0.0242
7	Union NDA	Cornwall	-	0.5224	-	0.0248	-	-0.0242
8	Union NDA	East Hereford	-	0.7544	-	0.0393	-	-0.0242
9	Union NDA	Emerson 1	-	0.6135	-	0.0660	-	-0.1267
10	Union NDA	Emerson 2	-	0.6135	-	0.0660	-	-0.1267
11	Union NDA	Iroquois	-	0.5008	-	0.0235	-	-0.0242
12	Union NDA	Kirkwall	-	0.4785	-	0.0221	-	-0.0242
13	Union NDA	Napierville	-	0.6225	-	0.0311	-	-0.0242
14	Union NDA	Niagara Falls	-	0.5401	-	0.0259	-	-0.0242
15	Union NDA	North Bay Junction	-	0.1241	-	0.0060	-	-0.0242
16	Union NDA	Philipsburg	-	0.6339	-	0.0318	-	-0.0242
17	Union NDA	Spruce	-	0.5665	-	0.0602	-	-0.1168
18	Union NDA	St. Clair	-	0.6170	-	0.0307	-	-0.0242
19	Union NDA	Welwyn	-	0.6959	-	0.0761	-	-0.1439
20	Union NDA	Dawn Export	-	0.6014	-	0.0298	-	-0.0242
21	Union Parkway Belt	Empress	36.52433	1.2008	3.53746	0.1163	-5.94038	-0.1953
22	Union Parkway Belt	TransGas SSDA	32.93821	1.0829	3.09946	0.1019	-5.18908	-0.1706
23	Union Parkway Belt	Centram SSDA	30.35888	0.9981	2.78313	0.0915	-4.65071	-0.1529
24	Union Parkway Belt	Centram MDA	27.81908	0.9146	2.47288	0.0813	-4.11842	-0.1354
25	Union Parkway Belt	Centrat MDA	28.49738	0.9369	2.42421	0.0797	-3.80817	-0.1252
26	Union Parkway Belt	Union WDA	23.89229	0.7855	1.86150	0.0612	-2.84700	-0.0936
27	Union Parkway Belt	Nipigon WDA	21.91217	0.7204	1.61817	0.0532	-2.43029	-0.0799
28	Union Parkway Belt	Union NDA	13.80004	0.4537	0.62354	0.0205	-0.73608	-0.0242
29	Union Parkway Belt	Calstock NDA	18.57850	0.6108	1.21058	0.0398	-1.73375	-0.0570
30	Union Parkway Belt	Tunis NDA	15.95354	0.5245	0.88817	0.0292	-1.18321	-0.0389
31	Union Parkway Belt	Energir NDA	13.73008	0.4514	0.61442	0.0202	-0.71783	-0.0236
32	Union Parkway Belt	Union SSMDA	16.31854	0.5365	1.06154	0.0349	-1.71246	-0.0563
33	Union Parkway Belt	Union NCDA	6.64604	0.2185	0.26158	0.0086	0.00000	0.0000
34	Union Parkway Belt	Union CDA	4.16100	0.1368	0.10950	0.0036	0.00000	0.0000
35	Union Parkway Belt	Union ECDA	3.47358	0.1142	0.06388	0.0021	0.00000	0.0000
36	Union Parkway Belt	Union EDA	9.02158	0.2966	0.41063	0.0135	0.00000	0.0000
37	Union Parkway Belt	Union Parkway Belt	2.92000	0.0960	0.03042	0.0010	0.00000	0.0000
38	Union Parkway Belt	Enbridge CDA	4.55946	0.1499	0.13383	0.0044	0.00000	0.0000
39	Union Parkway Belt	Enbridge Parkway CDA	2.92000	0.0960	0.03042	0.0010	0.00000	0.0000
40	Union Parkway Belt	Enbridge EDA	12.02067	0.3952	0.59921	0.0197	0.00000	0.0000
41	Union Parkway Belt	KPUC EDA	8.94250	0.2940	0.40758	0.0134	0.00000	0.0000
42	Union Parkway Belt	Energir EDA	15.63721	0.5141	0.82429	0.0271	0.00000	0.0000
43	Union Parkway Belt	Enbridge SWDA	7.41558	0.2438	0.31025	0.0102	0.00000	0.0000
44	Union Parkway Belt	Union SWDA	7.45817	0.2452	0.31329	0.0103	0.00000	0.0000
45	Union Parkway Belt	Chippawa	5.59667	0.1840	0.19771	0.0065	0.00000	0.0000
46	Union Parkway Belt	Cornwall	12.21838	0.4017	0.61138	0.0201	0.00000	0.0000
47	Union Parkway Belt	East Hereford	19.27504	0.6337	1.04938	0.0345	0.00000	0.0000
48	Union Parkway Belt	Emerson 1	26.21004	0.8617	2.27517	0.0748	-3.78079	-0.1243
49	Union Parkway Belt	Emerson 2	26.21004	0.8617	2.27517	0.0748	-3.78079	-0.1243
50	Union Parkway Belt	Iroquois	11.37888	0.3741	0.55663	0.0183	0.00000	0.0000
51	Union Parkway Belt	Kirkwall	3.67738	0.1209	0.07908	0.0026	0.00000	0.0000
52	Union Parkway Belt	Napierville	15.26004	0.5017	0.79996	0.0263	0.00000	0.0000
53	Union Parkway Belt	Niagara Falls	5.55104	0.1825	0.19467	0.0064	0.00000	0.0000
54	Union Parkway Belt	North Bay Junction	10.04358	0.3302	0.47450	0.0156	0.00000	0.0000
55	Union Parkway Belt	Philipsburg	15.60679	0.5131	0.82125	0.0270	0.00000	0.0000
56	Union Parkway Belt	Spruce	28.49738	0.9369	2.42421	0.0797	-3.80817	-0.1252
57	Union Parkway Belt	St. Clair	7.88704	0.2593	0.34067	0.0112	0.00000	0.0000
58	Union Parkway Belt	Welwyn	30.35888	0.9981	2.78313	0.0915	-4.65071	-0.1529
59	Union Parkway Belt	Dawn Export	7.41558	0.2438	0.31025	0.0102	0.00000	0.0000

Tennessee Gas Pipeline Company, L.L.C.
FERC NGA Gas Tariff
Sixth Revised Volume No. 1

Twenty First Revised Sheet No. 14
Superseding
Twentieth Revised Sheet No. 14

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	$4.6943		$9.80960	$13.1952	$13.4288	$14.7555	$15.6623	$19.6507
L		$4.1674						
1	$7.0668		$6.7741	$9.0149	$12.7706	$12.5770	$14.1840	$17.4413
2	$13.1953		$8.9608	$4.6605	$4.3567	$5.5746	$7.6672	$9.8974
3	$13.4288		$7.0978	$4.6982	$3.3894	$5.2064	$9.4162	$10.8807
4	$17.0500		$15.7186	$5.9901	$9.1033	$4.4560	$4.8190	$6.8844
5	$20.3297		$14.2853	$6.2836	$7.6032	$4.9501	$4.6433	$6.0448
6	$23.5176		$16.4078	$11.2924	$12.4403	$8.7873	$4.6228	$4.0017

Daily Base
Reservation Rate 1/

RECEIPT ZONE	DELIVERY ZONE 0	L	1	2	3	4	5	6
0	$0.1543		$0.3225	$0.4338	$0.4415	$0.4851	$0.5149	$0.6461
L		$0.1370						
1	$0.2323		$0.2227	$0.2964	$0.4199	$0.4135	$0.4663	$0.5734
2	$0.4338		$0.2946	$0.1532	$0.1432	$0.1833	$0.2521	$0.3254
3	$0.4415		$0.2334	$0.1545	$0.1114	$0.1712	$0.3096	$0.3577
4	$0.5605		$0.5168	$0.1969	$0.2993	$0.1465	$0.1584	$0.2263
5	$0.6684		$0.4697	$0.2066	$0.2500	$0.1627	$0.1527	$0.1987
6	$0.7732		$0.5394	$0.3713	$0.4090	$0.2889	$0.1520	$0.1316

Maximum Reservation
Rates 2/, 3/

RECEIPT ZONE	DELIVERY ZONE 0	L	1	2	3	4	5	6
0	$4.7400		$9.8553	$13.2409	$13.4745	$14.8012	$15.7080	$19.6964
L		$4.2131						
1	$7.1125		$6.8198	$9.0606	$12.8163	$12.6227	$14.2297	$17.4870
2	$13.2410		$9.0065	$4.7062	$4.4024	$5.6203	$7.7129	$9.9431
3	$13.4745		$7.1435	$4.7439	$3.4351	$5.2521	$9.4619	$10.9264
4	$17.0957		$15.7643	$6.0358	$9.1490	$4.5017	$4.8647	$6.9301
5	$20.3754		$14.3310	$6.3293	$7.6489	$4.9958	$4.6890	$6.0905
6	$23.5633		$16.4535	$11.3381	$12.4860	$8.8330	$4.6685	$4.0474

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 $0.0457.

Issued: September 27, 2022
Effective: November 1, 2022

Docket No. RP22-1245-000
Accepted: October 20, 2022

Tennessee Gas Pipeline Company, L.L.C.
FERC NGA Gas Tariff
Sixth Revised Volume No. 1

Twenty Third Revised Sheet No. 15
Superseding
Twenty Second Revised Sheet No. 15

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	$0.2260	$0.2157	$0.2567
L		$0.0012						
1	$0.0042		$0.0081	$0.0147	$0.0179	$0.1922	$0.1960	$0.2238
2	$0.0167		$0.0087	$0.0012	$0.0028	$0.0622	$0.0997	$0.1105
3	$0.0207		$0.0169	$0.0026	$0.0002	$0.0831	$0.1150	$0.1256
4	$0.0250		$0.0205	$0.0087	$0.0105	$0.0385	$0.0544	$0.0881
5	$0.0284		$0.0256	$0.0100	$0.0118	$0.0541	$0.0536	$0.0666
6	$0.0346		$0.0300	$0.0143	$0.0163	$0.0833	$0.0452	$0.0274

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	$0.0050		$0.0133	$0.0195	$0.0237	$0.2278	$0.2175	$0.2585
L		$0.0030						
1	$0.0060		$0.0099	$0.0165	$0.0197	$0.1940	$0.1978	$0.2256
2	$0.0185		$0.0105	$0.0030	$0.0046	$0.0640	$0.1015	$0.1123
3	$0.0225		$0.0187	$0.0044	$0.0020	$0.0849	$0.1168	$0.1274
4	$0.0268		$0.0223	$0.0105	$0.0123	$0.0403	$0.0562	$0.0899
5	$0.0302		$0.0274	$0.0118	$0.0136	$0.0559	$0.0554	$0.0684
6	$0.0364		$0.0318	$0.0161	$0.0181	$0.0851	$0.0470	$0.0292

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 $0.0018.

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Tennessee Gas Pipeline Company, L.L.C.
FERC NGA Gas Tariff
Sixth Revised Volume No. 1

Nineteenth Revised Sheet No. 32
Superseding
Eighteenth Revised Sheet No. 32

FUEL AND EPCR

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

RECEIPT ZONE	DELIVERY ZONE 0	L	1	2	3	4	5	6
0	0.43%		1.41%	2.12%	2.67%	3.21%	3.51%	4.17%
L		0.20%						
1	0.55%		1.01%	1.78%	2.15%	2.63%	3.19%	3.64%
2	2.16%		1.08%	0.19%	0.39%	0.75%	1.30%	1.78%
3	2.67%		2.15%	0.39%	0.08%	1.06%	1.53%	2.04%
4	3.11%		2.44%	1.08%	1.29%	0.40%	0.64%	1.13%
5	3.63%		3.19%	1.32%	1.55%	0.63%	0.63%	0.81%
6	4.34%		3.77%	1.78%	2.04%	1.05%	0.49%	0.23%

Broad Run Expansion Project – Market Component (Z3-Z1): 5/ 6.50%

EPCR 3/, 4/

RECEIPT ZONE	DELIVERY ZONE 0	L	1	2	3	4	5	6
0	$0.0041		$0.0158	$0.0245	$0.0304	$0.0368	$0.0418	$0.0502
L		$0.0014						
1	$0.0055		$0.0111	$0.0203	$0.0248	$0.0308	$0.0377	$0.0433
2	$0.0245		$0.0119	$0.0013	$0.0036	$0.0080	$0.0146	$0.0199
3	$0.0304		$0.0248	$0.0036	$0.0000	$0.0116	$0.0173	$0.0230
4	$0.0368		$0.0284	$0.0118	$0.0144	$0.0038	$0.0066	$0.0124
5	$0.0418		$0.0377	$0.0146	$0.0173	$0.0065	$0.0065	$0.0086
6	$0.0502		$0.0433	$0.0199	$0.0230	$0.0116	$0.0049	$0.0018

Broad Run Expansion Project – Market Component (Z3-Z1): 5/ $0.0828

1/ Included in the above F&LR is the Losses component of the F&LR equal to 0.04%.
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 0.04%.
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.
5/ The incremental F&LR and EPCR set forth above are applicable to a Shipper(s) utilizing capacity on the Broad Run Expansion Project – Market Component facilities, from any receipt point(s) to any delivery point(s) located on the project's transportation path. Any service provided to a Shipper(s) outside the project's transportation path shall be subject to the greater of the incremental F&LR and EPCR for the project or the applicable F&LR and EPCR for the applicable receipt(s) and delivery point(s) as shown in the rate matrices above. Included in the above F&LR is the Losses component of the F&LR equal to 0.04%.

Issued: March 1, 2023
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Docket No. RP23-522-000
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Tennessee Gas Pipeline Company, L.L.C.
FERC NGA Gas Tariff
Sixth Revised Volume No. 1

Twenty Fourth Revised Sheet No. 61
Superseding
Twenty Third Revised Sheet No. 61

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/
FIRM STORAGE SERVICE (FS) - PRODUCTION AREA				
Deliverability Rate	$1.7226	$1.7226 1/		
Space Rate	$0.0175	$0.0175 1/		
Injection Rate	$0.0073	$0.0073	1.29%	$0.0000
Withdrawal Rate	$0.0073	$0.0073		
Overrun Rate	$0.2067	$0.2067 1/		
FIRM STORAGE SERVICE (FS) - MARKET AREA				
Deliverability Rate	$1.2655	$1.2655 1/		
Space Rate	$0.0173	$0.0173 1/		
Injection Rate	$0.0087	$0.0087	1.29%	$0.0000
Withdrawal Rate	$0.0087	$0.0087		
Overrun Rate	$0.1519	$0.1519 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 -0.06%.

Issued: March 1, 2023
Effective: April 1, 2023

Docket No. RP23-522-000
Accepted: March 30, 2023

---------- NON-EASTCHESTER RATES (All in $ Per Dth) ----------

	Minimum	RP19-445 Rates Maximum 1/	RP22-1065 Rates Maximum		
		Effective 4/1/2020	Effective 9/1/2022	Effective 9/1/2023	Effective 9/1/2024
RTS DEMAND (Monthly):					
Zone 1	$0.0000	$5.2357	$4.8393	$4.5655	$4.2918
Zone 2	$0.0000	$4.4878	$4.3344	$4.1823	$4.0302
Inter-Zone	$0.0000	$8.2304	$7.4217	$7.2240	$7.0567
RTS COMMODITY (Daily):					
Zone 1	$0.0034	$0.0034	$0.0034	$0.0034	$0.0034
Zone 2	$0.0022	$0.0022	$0.0022	$0.0022	$0.0022
Inter-Zone	$0.0056	$0.0056	$0.0056	$0.0056	$0.0056
ITS COMMODITY (Daily):					
Zone 1	$0.0034	$0.1755	$0.1625	$0.1535	$0.1445
Zone 2	$0.0022	$0.1497	$0.1447	$0.1397	$0.1347
Inter-Zone	$0.0056	$0.2762	$0.2496	$0.2431	$0.2376
VOLUMETRIC CAPACITY RELEASE (Daily) 2/:					
Zone 1	$0.0000	$0.1721	$0.1591	$0.1501	$0.1411
Zone 2	$0.0000	$0.1475	$0.1425	$0.1375	$0.1325
Inter-Zone	$0.0000	$0.2706	$0.2440	$0.2375	$0.2320

**SEE SHEET NOS. 4A, 4B, AND 4C FOR ADJUSTMENTS TO RATES WHICH MAY BE APPLICABLE

(Footnotes continued on Sheet 4.01)

Iroquois Gas Transmission System, L.P.
FERC Gas Tariff
Second Revised Volume No. 1

Sixth Revised Sheet No. 4A
Superseding
Fifth Revised Sheet No. 4A

To the extent applicable, the following adjustments apply:

ACA ADJUSTMENT:
Commodity 1/

FUEL AND LOSSES RETENTION PERCENTAGE:

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.

Issued On: June 12, 2019

Effective On: July 1, 2019

RATES FOR TRANSPORTATION SERVICES

Rate Sch. (1)	Rate Component 1/ (2)		Base Rate (3)	TSCA (4)	TSCA Surch. (5)	Current Rate 2/ (6)
FT/FT-S						
	Reservation	(Max)	$4.9375	-	-	$4.9375 [4/]
		(Min)	0.0000	-	-	$0.0000
	Commodity	(Max)	0.0140	-	-	$0.0140 plus ACA [3/]
		(Min)	0.0140	-	-	$0.0140 plus ACA [3/]
	Overrun	(Max)	0.1763	-	-	$0.1763 plus ACA [3/]
		(Min)	0.0140	-	-	$0.0140 plus ACA [3/]
EFT	Reservation	(Max)	$5.0811	0.0000	0.0000	$5.0811 [4/]
		(Min)	0.0000	0.0000	0.0000	$0.0000
	Commodity	(Max)	0.0148	0.0000	0.0000	$0.0148 plus ACA [3/]
		(Min)	0.0148	0.0000	0.0000	$0.0148 plus ACA [3/]
	Overrun	(Max)	0.1818	-	-	$0.1818 plus ACA [3/]
		(Min)	0.0148	-	-	$0.0148 plus ACA [3/]
FST	Reservation	(Max)	$4.9375	-	-	$4.9375 [4/]
		(Min)	0.0000	-	-	$0.0000
	Commodity	(Max)	0.0140	-	-	$0.0140 plus ACA [3/]
		(Min)	0.0140	-	-	$0.0140 plus ACA [3/]
	Overrun	(Max)	0.1763	-	-	$0.1763 plus ACA [3/]
		(Min)	0.0140	-	-	$0.0140 plus ACA [3/]
IT	Commodity	(Max)	$0.1763	-		$0.1763 plus ACA [3/]
		(Min)	0.0000	-	-	$0.0000 plus ACA [3/]
	Overrun	(Max)	0.1763	-		$0.1763 plus ACA [3/]
		(Min)	0.0000	-	-	$0.0000 plus ACA [3/]

The NA15 Retention is 1.09% applicable to use of the Northern Access 2015 Lease. [2/ 3/]

1/ The unit of measure for each rate component is Dth (dekatherms) unless otherwise indicated.
2/ All rates exclusive of Transportation Fuel and Company Use Retention[/5] and Transportation LAUF Retention. The Transportation Fuel and Company Use Retention for all applicable rate schedules is 0.72% and the Transportation LAUF Retention for all applicable rate schedules is 0.10%. 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.
4/ Pursuant to Section 42 of the General Terms and Conditions, a per Dth charge of $0.0800 shall be added as a Transmission PS/GHG Surcharge, in addition to the specified rate.
5/ Transportation and Storage Retainage definitions are provided in General Terms and Conditions Section 41.2.

RATES FOR PART 284 STORAGE SERVICES

Rate Sch. (1)	Rate Component [1/] (2)		Rate [2/] (3)
ESS	Demand	(Max)	$2.6433 [5/]
		(Min)	$0.0000
	Capacity	(Max)	$0.0485 [6/]
		(Min)	$0.0000
	Injection/Withdrawal	(Max)	$0.0458 plus ACA [3/]
		(Min)	$0.0000
	Storage Balance Transfer	(Max)[4/]	$3.8600
		(Min)[4/]	$0.0000
ISS	Injection	(Max)	$1.1271 plus ACA [3/]
		(Min)	$0.0000
	Storage Balance Transfer	(Max)[4/]	$3.8600
		(Min)[4/]	$0.0000
FSS	Demand	(Max)	$2.5326 [5/]
		(Min)	$0.0000
	Capacity	(Max)	$0.0462 [6/]
		(Min)	$0.0000
	Injection/Withdrawal	(Max)	$0.0439 plus ACA [3/]
		(Min)	$0.0000
	Storage Balance Transfer	(Max)[4/]	$3.8600
		(Min)[4/]	$0.0000

1/ The unit of measure for each rate component is 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 0.45%.
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/ Rate per nomination.
5/ Pursuant to Section 42 of the General Terms and Conditions, a per Dth charge of $0.1143 shall be added as a Storage PS/GHG Demand/Deliverability Surcharge, in addition to the specified rate.
6/ Pursuant to Section 42 of the General Terms and Conditions, a per Dth charge of $0.0016 shall be added as a Storage PS/GHG Capacity Surcharge, in addition to the specified rate.

Eastern Gas Transmission and Storage, Inc.
FERC Gas Tariff
Sixth Revised Volume No. 1

GSS, GSS-E & ISS Rates
Tariff Record No. 10.30.
Version 7.0.0
Superseding Version 6.1.0

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], [3]								
	Maximum							
	Storage Demand	$2.6065	$0.0696	$0.0041	($0.0009)	($0.0009)	$2.6784	-
	Storage Capacity	$0.0258	-	-	-	-	$0.0258	-
	Injection Charge	$0.0252	-	$0.0134	$0.0000	$0.0010	$0.0396	-
	Withdrawal Charge	$0.0252	-	-	$0.0000	$0.0010	$0.0262	[8]
	GSS-TE Surcharge	-	-	-	($0.0008)	-	($0.0008)	-
	From Customers Balance	$0.7282	$0.0149	$0.0009	($0.0002)	$0.0008	$0.7446	[8]
	Minimum							
	Storage Demand	$0.0000	-	-	-	-	$0.0000	-
	Storage Capacity	$0.0000	-	-	-	-	$0.0000	-
	Injection Charge	$0.0252	-	-	-	-	$0.0252	-
	Withdrawal Charge	$0.0252	-	-	-	-	$0.0252	[8]
	GSS-TE Surcharge	$0.0000	-	-	-	-	$0.0000	-
	From Customers Balance	$0.7282	$0.0149	$0.0009	($0.0002)	$0.0008	$0.7446	[8]
GSS-E [2], [3]								
	Maximum							
	Storage Demand	$2.4565	$0.0696	$0.0041	($0.0009)	($0.0009)	$2.5284	-
	Storage Capacity	$0.0409	-	-	-	-	$0.0409	-
	Injection Charge	$0.0252	-	$0.0134	$0.0000	$0.0010	$0.0396	-
	Withdrawal Charge	$0.0252	-	-	$0.0000	$0.0010	$0.0262	[8]
	Authorized Overruns	$1.4160	$0.0149	$0.0009	($0.0002)	$0.0008	$1.4324	[8]
	Minimum							
	Storage Demand	$0.0000	-	-	-	-	$0.0000	-
	Storage Capacity	$0.0000	-	-	-	-	$0.0000	-
	Injection Charge	$0.0252	-	-	-	-	$0.0252	-
	Withdrawal Charge	$0.0252	-	-	-	-	$0.0252	[8]
	Authorized Overruns	$1.4160	$0.0149	$0.0009	($0.0002)	$0.0008	$1.4324	[8]

Issued On: March 31, 2023

Effective On: May 1, 2023

View Contract

General Information

Customer **Energy North Natural Gas Inc.**	Contract Category **Storage**	Contract Number **EN-11234**	Service Type FT	Status Active	Currency USD
Deal Maker Richard Norman	Deal Date 01/17/1986	Deal Time (hh:mm) 08:00	Master Agreement -- None --	Units Dth	
Contact Name Sarah Grant	Contact Number 1 603-2163569	Contact Number 2	Contact Email sarah.finegan@libertyutilities.com		

Contract Dates

Effective Date (First Gas Day) 05/01/2010	Termination Date (Last Gas Day) 01/01/2050

Nomination Deadlines

Day Before Flow Deadline (hh:mm 24-hr CCT)	Day of Flow Deadline (hh:mm 24-hr CCT)

Transaction Types and Rates

Transaction Type	Allow Transaction			Use Hourly Profiles	Volumetric Charge ($/Dth)	Other Rate ($/Dth)	Fuel Percentage	Invoice Qty Type
	Yes	No	D.E.R Only					
Storage Injection	◉	○	○	☐	0	0	0	Sch Qty
Storage Withdrawal	◉	○	○	☐	0	0	0	Sch Qty
Authorized Injection Overrun	◉	○	○	☐	0	0	0	Sch Qty
Authorized Withdrawal Overrun	◉	○	○	☐	0	0	0	Sch Qty

Storage and Other Rates

☑ Use Monthly Flat Storage Fee ($/Month)

Monthly Flat Storage Fee Table

From	To	Rate
05/01/10	01/01/50	9,443.28000

FERC Information

Capacity Release Contract: ○ Yes ◉ No

Shipper Affiliation: NONE

Maximum Tariff Rate: 0 OR ☐ Market Based Rates

Award:

Negotiated Rate Indicator: ◉ Yes ○ No

Rate Schedule: 157

Contract Quantity Limits

Monthly MSQ Table

From	To	Max Qty	Min Qty
05/01/10	01/01/50	245,280	0

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	---------
	Recourse Usage Rate		
	-- Maximum	$00.0000	2/
	-- Minimum	$00.0000	2/
	-- PXP Project	$00.0091	
FT-FLEX	Recourse Reservation Rate		
	--Maximum	$17.4406	---------
	--Minimum	$00.0000	---------
	Recourse Usage Rate		
	--Maximum	$00.2809	2/
	--Minimum	$00.0000	2/

The following adjustment applies to all Rate Schedules above:

MEASUREMENT VARIANCE FACTOR-LAUF:

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

MEASUREMENT VARIANCE FACTOR-FUEL 3/

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) is incorporated herein by reference.

1 **Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty** **REDACTED**
2 Schedule 6
3 **Peak 2023 – 2024 Winter Cost of Gas Filing** Page 1 of 5
4 **Supply and Commodity Costs, Volumes and Rates**

Line	For Month of: (a)	Reference (b)	Nov-23 (c)	Dec-23 (d)	Jan-24 (e)	Feb-24 (f)	Mar-24 (g)	Apr-24 (h)	Peak Nov- Apr (i)
8									
9	**Supply and Commodity Costs**								
10									
11	**Pipeline Gas:**								
12	Dawn Supply	In 66 * In 107	[redacted]	[redacted]	[redacted]	$ 308,737	$ 316,980	$ 234,826	$ 1,742,599
13	Niagara Supply	In 67 * In 112	[redacted]	[redacted]	[redacted]	241,130	247,699	189,997	1,367,764
14	TGP Supply (Direct)	In 68 * In 132	[redacted]	[redacted]	[redacted]	1,099,994	1,022,831	200,927	5,951,036
15	Dracut Supply 1 - Baseload	In 69 * In 117	[redacted]	[redacted]	[redacted]	2,646,105	-	-	8,326,545
16	Dracut Supply 2 - Swing	In 70 * In 122	[redacted]	[redacted]	[redacted]	4,552,135	4,776,945	654,219	17,519,747
17	Dracut Supply 3 - Swing	In 71 * In 123	[redacted]	[redacted]	[redacted]	2,586,448	1,781,654	14,442	5,802,444
18	Constellation COMBO	In 72 * In 138	[redacted]	[redacted]	[redacted]	-	-	-	-
19	LNG Truck	In 73 * In 140	[redacted]	[redacted]	[redacted]	2,287,309	25,623	-	5,991,952
20	Propane Truck	In 74 * In 142	[redacted]	[redacted]	[redacted]	6,143	-	113,990	402,021
21	PNGTS	In 75 * In 147	[redacted]	[redacted]	[redacted]	345,374	177,814	92,279	1,413,074
22	Portland Natural Gas	In 76 * In 152	[redacted]	[redacted]	[redacted]	174,181	373,501	64,609	727,615
23	TGP Supply (Z4)	In 77 * In 157	[redacted]	[redacted]	[redacted]	600,056	596,577	1,156,290	3,931,939
24									
25	Subtotal Pipeline Gas Costs		$ 3,844,531	$ 8,417,966	$ 14,025,422	$ 14,847,613	$ 9,319,625	$ 2,721,579	$ 53,176,735
26									
27	**Volumetric Transportation Costs**								
28	Dawn Supply	In 66 * In 204	[redacted]	[redacted]	[redacted]	$ 9,979	$ 10,249	$ 7,395	$ 56,487
29	Niagara Supply	In 67 * In 215	[redacted]	[redacted]	[redacted]	6,716	7,059	6,150	40,587
30	TGP Supply (Direct)	In 68 * In 242	[redacted]	[redacted]	[redacted]	110,368	113,339	23,489	648,303
31	Dracut Supply 1 - Baseload	In 69 * In 263	[redacted]	[redacted]	[redacted]	5,510	-	-	17,299
32	Dracut Supply 2 - Swing	In 70 * In 263	[redacted]	[redacted]	[redacted]	6,506	13,857	5,265	44,768
33	Dracut Supply 3 - Swing	In 71 * In	[redacted]	[redacted]	[redacted]	3,696	5,168	116	12,179
34	Constellation COMBO	In 72 * In 263	[redacted]	[redacted]	[redacted]	-	-	-	-
35	TGP Storage - Withdrawals	In 82 * In 179	[redacted]	[redacted]	[redacted]	65,448	17,510	13,395	267,224
36									
37	**Total Volumetric Transportation Costs**		$ 205,275	$ 219,004	$ 231,353	$ 208,223	$ 167,182	$ 55,809	$ 1,086,846
38									
39	**Less - Gas Refill:**								
40	LNG Truck	In 91 * In 164	[redacted]	[redacted]	[redacted]	$ (2,287,309)	$ (25,623)	$ -	$ (5,991,952)
41	Propane	In 92 * In 165	[redacted]	[redacted]	[redacted]	(6,143)	-	(113,990)	(402,021)
42	TGP Storage Refill	In 93 * In 130	[redacted]	[redacted]	[redacted]	-	-	(327,540)	(866,700)
43	Storage Refill (Trans.)	In 93 * In 242	[redacted]	[redacted]	[redacted]	-	-	(37,431)	(99,272)
44									
45	Subtotal Refills		$ (601,001)	$ (1,364,936)	$ (2,595,971)	$ (2,293,452)	$ (25,623)	$ (478,961)	$ (7,359,945)
46									
47	**Total Supply & Pipeline Commodity Costs**	In 25 + In 37 + In 45	$ 3,448,806	$ 7,272,033	$ 11,660,803	$ 12,762,384	$ 9,461,183	$ 2,298,427	$ 46,903,637
48									
49	**Storage Gas:**								
50	TGP Storage - Withdrawals	In 82 * In 171	$ 259,137	$ 1,406,663	$ 1,404,646	$ 1,176,064	$ 314,643	$ 299,583	$ 4,860,737
51									
52	**Produced Gas:**								
53	LNG Vapor	In 85 * In 159	[redacted]	[redacted]	[redacted]	$ 2,181,305	$ 27,370	$ 26,716	$ 6,016,038
54	Propane	In 86 * In 161	[redacted]	[redacted]	[redacted]	7,134	-	-	1,253,503
55									
56	**Total Produced Gas**	In 53 + In 54	$ 25,651	$ 1,415,002	$ 3,586,363	$ 2,188,439	$ 27,370	$ 26,716	$ 7,269,540
57									
58	**AMA Credits**		$ (767,354)	$ (767,354)	$ (767,354)	$ (767,354)	$ (767,354)	$ (514,954)	$ (4,351,724)
59	**Total Commodity Gas & Trans. Costs**	In 47 + In 50 + In 56	$ 2,966,239	$ 9,326,345	$ 15,884,458	$ 15,359,533	$ 9,035,842	$ 2,109,772	$ 54,682,190
60									$ 94,459,064
61									

1 **Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty** **Schedule 11C**
2 **Page 1 of 1**
3 **Peak 2023 – 2024 Winter Cost of Gas Filing**
4 **Capacity Utilization**
5 **Volumes (Therms)**
6

Line		Peak Period Normal Year Use (Therms)	MDQ (MMBtu/day)	Seasonal Quantity (Therms)	Utilization Rate	Peak Period Design Year Use (Therms)	MDQ (MMBtu/day)	Seasonal Quantity (Therms)	Utilization Rate
11	**Pipeline Gas:**								
12	Dawn Supply	5,325,605	4,000	7,240,000	74%	6,438,195	4,000	7,240,000	89%
13	Niagara Supply	4,221,481	3,122	5,650,820	75%	4,221,481	3,122	5,650,820	75%
14	TGP Supply (Gulf + Z4)	31,386,143	21,596	39,088,760	80%	31,395,098	21,596	39,088,760	80%
15	Dracut Supply 1 & 2 & 3	21,646,131	90,000	162,900,000	13%	32,767,369	90,000	162,900,000	20%
16	LNG Truck	4,848,209	-	-	-	4,849,009	-	-	-
17	Propane Truck	295,604	-	-	-	267,929	-	-	-
18	PNGTS	1,345,972	1,000	1,810,000	74%	1,345,972	1,000	1,810,000	74%
19	Portland Natural Gas	6,442,568	5,000	9,050,000	71%	5,324,148	5,000	9,050,000	59%
20	Constellation Vapor	-				-	-	-	-
21									
22									
23	Subtotal Pipeline Volumes	75,511,713				86,609,200			
24									
25	**Storage Gas:**								
26	TGP Storage	21,208,557		25,791,710	82%	21,159,920		25,791,710	82%
27									
28	**Produced Gas:**								
29	LNG Vapor	4,874,524				4,875,376			
30	Propane	792,748.8				792,770			
31									
32	Subtotal Produced Gas	5,667,273				5,668,146			
33									
34	**Less - Gas Refills:**								
35	LNG Truck	(4,848,209)				(4,849,009)			
36	Propane	(295,604)				(267,929)			
37	TGP Storage Refill	(2,784,665)				(2,752,875)			
38									
39	Subtotal Refills	(7,928,478)				(7,869,813)			
40									
41	Total Sendout Volumes	94,459,064				105,567,453			

1 **Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**
2 **d/b/a Liberty**
3 **Peak 2023 – 2024 Winter Cost of Gas Filing**
4 **Supply and Commodity Costs, Volumes and Rates**

Line									
5									Peak
6	For Month of:	Reference	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	Nov- Apr
7	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
62									
63	**Volumes (Therms)**								
64									
65	**Pipeline Gas:**	See Schedule 11A							
66	Dawn Supply		878,284	929,589	928,933	865,053	916,923	806,823	5,325,605
67	Niagara Supply		692,721	732,770	732,254	681,352	722,786	659,598	4,221,481
68	TGP Supply (Direct)		4,635,387	3,115,032	3,112,834	2,898,568	3,072,588	658,141	17,492,549
69	Dracut Supply 1 - Baseload		-	-	3,100,000	1,450,000	-	-	4,550,000
70	Dracut Supply 2 - Swing		3,175,277	1,817,182	830,593	1,712,037	4,320,290	1,650,818	13,506,197
71	Dracut Supply 3 - Swing		433,227	381,887	154,291	972,751	1,611,335	36,442	3,589,934
72	Constellation COMBO		-	-	-	-	-	-	-
73	LNG Truck		-	1,105,212	1,873,752	1,852,072	17,174	-	4,848,209
74	Propane Truck		-	-	207,270	4,517	-	83,816	295,604
75	PNGTS		219,571	232,397	232,233	216,075	229,231	216,465	1,345,972
76	Portland Natural Gas		1,072,719	1,134,734	1,133,934	1,056,283	1,119,273	925,624	6,442,568
77	TGP Supply (Z4)		1,819,408	1,931,092	1,929,730	1,797,112	1,904,780	4,511,472	13,893,595
78									
79	Subtotal Pipeline Volumes		12,926,593	11,379,896	14,235,825	13,505,820	13,914,381	9,549,199	75,511,713
80									
81	**Storage Gas:**								
82	TGP Storage		1,148,127	6,232,334	6,223,398	5,210,646	1,394,051	1,000,000	21,208,557
83									
84	**Produced Gas:**								
85	LNG Vapor		21,440	1,149,117	1,894,933	1,766,244	21,654	21,136	4,874,524
86	Propane		-	-	788,232	4,517	-	-	792,749
87									
88	Subtotal Produced Gas		21,440	1,149,117	2,683,164	1,770,761	21,654	21,136	5,667,273
89									
90	**Less - Gas Refill:**								
91	LNG Truck		-	(1,105,212)	(1,873,752)	(1,852,072)	(17,174)	-	(4,848,209)
92	Propane		-	-	(207,270)	(4,517)	-	(83,816)	(295,604)
93	TGP Storage Refill		(1,735,867)	-	-	-	-	(1,048,798)	(2,784,665)
94									
95	Subtotal Refills		(1,735,867)	(1,105,212)	(2,081,022)	(1,856,589)	(17,174)	(1,132,614)	(7,928,478)
96									
97	**Total Sendout Volumes**		12,360,292	17,656,136	21,061,366	18,630,638	15,312,912	9,437,721	94,459,064
98									
99									
100									

1 **Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty** **REDACTED**

2 Schedule 6

3 **Peak 2023 – 2024 Winter Cost of Gas Filing** Page 3 of 5

4 **Supply and Commodity Costs, Volumes and Rates**

5

Line	For Month of:	Reference	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	Peak Nov- Apr
7	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
101	**Gas Costs and Volumetric Transportation Rates**								
102									
103	**Pipeline Gas:**								
104	**Dawn Supply**								Average Rate
105	NYMEX Price	Sch 7, ln 10/10	[redacted]			$0.3749	$0.3437	$0.3123	$0.3469
106	Basis Differential					($0.0180)	$0.0020	($0.0213)	($0.0205)
107	**Net Commodity Costs**					**$0.3569**	**$0.3457**	**$0.2911**	**$0.3264**
108									
109	**Niagara Supply**								
110	NYMEX Price	Sch 7, ln 10/10				$0.3749	$0.3437	$0.3123	$0.3469
111	Basis Differential					($0.0210)	($0.0010)	($0.0243)	($0.0235)
112	**Net Commodity Costs**					**$0.3539**	**$0.3427**	**$0.2881**	**$0.3234**
113									
114	**Dracut Supply 1 - Baseload**								
115	Commodity Costs - NYMEX Price	Sch 7, ln 10 / 10				$0.3749	$0.3437	$0.3123	$0.3469
116	Basis Differential					$1.4500	$0.0000	($0.0144)	$0.4809
117	**Net Commodity Costs**					**$1.8249**	**$0.3437**	**$0.2979**	**$0.8279**
118									
119	**Dracut Supply 2 - Swing**								
120	Commodity Costs - NYMEX Price	Sch 7, ln 10 / 10				$0.3749	$0.3437	$0.3123	$0.3469
121	Basis Differential					$2.2840	$0.7620	$0.0840	$1.2476
122	**Net Commodity Costs**					**$2.6589**	**$1.1057**	**$0.3963**	**$1.5945**
123									
124	**Dracut Supply 3 - Swing**								
125	Commodity Costs - NYMEX Price	Sch 7, ln 10 / 10				$0.3749	$0.3437	$0.3123	$0.3469
126	Basis Differential					$2.2840	$0.7620	$0.0840	$1.2476
127	**Net Commodity Costs**					**$2.6589**	**$1.1057**	**$0.3963**	**$1.5945**
128									
129	**TGP Supply (Direct)**								
130	NYMEX Price	Sch 7, ln 10/10				$0.3749	$0.3437	$0.3123	$0.3469
131	Basis Differential					$0.0046	($0.0108)	($0.0070)	($0.0068)
132	**Net Commodity Costs**					**$0.3795**	**$0.3329**	**$0.3053**	**$0.3402**
133									
134									
135	**Constellation COMBO**								
136	NYMEX Price	Sch 7, ln 10/10				$0.3749	$0.3437	$0.3123	$0.3469
137	Basis Differential					$0.0562	$0.0516	$0.0468	$0.0520
138	**Net Commodity Costs**					**$0.4311**	**$0.3953**	**$0.3591**	**$0.3990**
139									
140	**LNG Truck**	Sch 7, ln 10/10				**$1.2350**	**$1.4920**	**$1.4920**	$1.3378
141									
142	**Propane Truck**	Propane WACOG				**$1.3600**	**$1.3600**	**$1.3600**	$1.3600
143									
144	**PNGTS**								
145	NYMEX Price	Sch 7, ln 10/10				$0.3749	$0.3437	$0.3123	$0.3469
146	Basis Differential					$1.2235	$0.4320	$0.1140	$0.6964
147	**Net Commodity Cost**					**$1.5984**	**$0.7757**	**$0.4263**	**$1.0433**
148									
149	**PNGTS EXP**								
150	NYMEX Price	Sch 7, ln 10/10				$0.3749	$0.3437	$0.3123	$0.3469
151	Basis Differential					($0.2100)	($0.0100)	($0.2425)	($0.2354)
152	**Net Commodity Cost**					**$0.1649**	**$0.3337**	**$0.0698**	**$0.1115**
153									
154	**TGP Supply (Z4)**								
155	NYMEX Price	Sch 7, ln 10/10				$0.3749	$0.3437	$0.3123	$0.3469
156	Basis Differential					($0.0410)	($0.0305)	($0.0560)	($0.0581)
157	**Net Commodity Cost**					**$0.3339**	**$0.3132**	**$0.2563**	**$0.2888**
158									
159	**LNG Vapor (Storage)**	#REF!				**$1.2350**	**$1.2640**	**$1.2640**	$1.2376
160									
161	**Propane**	#REF!				**$1.5792**	**$1.5792**	**$1.5472**	$1.5891
162									
163	**Storage Refill:**								
164	**LNG Truck**	ln 140				**$1.2350**	**$1.4920**	**$1.4920**	**$1.2376**
165	**Propane**	ln 142				**$1.3600**	**$1.3600**	**$1.3600**	**$1.5891**
166									
167									

Ln									
1	**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**								**REDACTED**
2									Schedule 6
3	**Peak 2023 – 2024 Winter Cost of Gas Filing**								Page 4 of 5
4	**Supply and Commodity Costs, Volumes and Rates**								
5									Peak
6	For Month of:	Reference	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	Nov- Apr
7	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
168									
169									
170	**TGP Storage**								
171	**Commodity Costs - Storage withdrawal**	#REF!	$0.2257	$0.2257	$0.2257	$0.2257	$0.2257	$0.2996	$0.2380
172									
173	TGP - Max Commodity - Z 4-6	Rate Sheet #15 - 23rd Rev	$0.00899	$0.00899	$0.00899	$0.00899	$0.00899	$0.00899	$0.00899
174	TGP - Max Comm. ACA Rate - Z 4-6	Rate Sheet #15 - 23rd Rev	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015
175	Subtotal TGP - Trans Charge - Max Commodity Rate - Z 4-6		$0.00914	$0.00914	$0.00914	$0.00914	$0.00914	$0.00914	$0.00914
176	TGP - Fuel Charge % - Z 4-6	Rate Sheet #32- 19th Rev	1.13%	1.13%	1.13%	1.13%	1.13%	1.13%	1.13%
177	TGP - Fuel Charge % - Z 4-6 - (NYMEX * Percentage)		$0.00255	$0.00255	$0.00255	$0.00255	$0.00255	$0.00339	$0.00269
178	TGP - Withdrawal Charge	Rate Sheet #61-24th Rev	$0.00087	$0.00087	$0.00087	$0.00087	$0.00087	$0.00087	$0.00087
179	**Total Volumetric Transportation Rate - TGP (Storage)**		$0.01256	$0.01256	$0.01256	$0.01256	$0.01256	$0.01340	$0.01270
180									
181	**Total TGP - Comm. & Vol. Trans. Rate**	ln 171 + ln 179	**$0.23826**	**$0.23826**	**$0.23826**	**$0.23826**	**$0.23826**	**$0.31298**	**$0.25072**
182									
183									
184	**Per Unit Volumetric Transportation Rates**								
185	**Dawn Supply Volumetric Transportation Charge**								
186	**Commodity Costs**	ln 107	**$0.2806**	**$0.3326**	**$0.3514**	**$0.3569**	**$0.3457**	**$0.2911**	**$0.3264**
187									
188	TransCanada - Commodity Rate/GJ	Dawn - Parkway to Iroquois	$0.00040	$0.00040	$0.00040	$0.00040	$0.00040	$0.00040	$0.00040
189	Conversion Rate GL to MMBTU		1.0551	1.0551	1.0551	1.0551	1.0551	1.0551	1.0551
190	Conversion Rate to US$	1/0/1900	1.3486	1.3486	1.3486	1.3486	1.3486	1.3486	1.3486
191	Commodity Rate/US$	ln 188 x ln 189 x ln 190	$0.00057	$0.00057	$0.00057	$0.00057	$0.00057	$0.00057	$0.00057
192	TransCanada Fuel %	Dawn - Parkway to Iroquois	0.92%	1.07%	1.23%	1.08%	1.07%	0.92%	1.05%
193	TransCanada Fuel * Percentage	ln 186 x ln 192	$0.00258	$0.00355	$0.00432	$0.00387	$0.00371	$0.00269	$0.00345
194	Subtotal TransCanada		**$0.00315**	**$0.00412**	**$0.00489**	**$0.00444**	**$0.00428**	**$0.00326**	**$0.00402**
195	IGTS - Z1 RTS Commodity	Fifth Revised Sheet No. 4	$0.00034	$0.00034	$0.00034	$0.00034	$0.00034	$0.00034	$0.00034
196	IGTS - Z1 RTS ACA Rate Commodity	Fifth Revised Sheet No. 4	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015
197	IGTS - Z1 RTS Deferred Asset Surcharge	Fifth Revised Sheet No. 4	$0.00000	$0.00000	$0.00000	$0.00000	$0.00000	$0.00000	$0.00000
198	Subtotal IGTS - Trans Charge - Z1 RTS Commodity		**$0.00049**	**$0.00049**	**$0.00049**	**$0.00049**	**$0.00049**	**$0.00049**	**$0.00049**
199	TGP NET-NE - Comm. Segments 3 & 4	Rate Sheet #15 - 23rd Rev	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015
200	IGTS -Fuel Use Factor - Percentage	Fifth Revised Sheet No. 4	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
201	IGTS -Fuel Use Factor - Fuel * Percentage	ln 186 x ln 200	**$0.00281**	**$0.00333**	**$0.00351**	**$0.00357**	**$0.00346**	**$0.00291**	**$0.00326**
202	TGP FTA Fuel Charge % Z 5-6	Rate Sheet #32- 19th Rev	0.81%	0.81%	0.81%	0.81%	0.81%	0.81%	0.81%
203	TGP FTA Fuel * Percentage	ln 186 x ln 202	**$0.00227**	**$0.00269**	**$0.00285**	**$0.00289**	**$0.00280**	**$0.00236**	**$0.00264**
204	**Total Volumetric Transportation Charge - Dawn Supply**		**$0.00887**	**$0.01078**	**$0.01189**	**$0.01154**	**$0.01118**	**$0.00916**	**$0.01057**
205									
206									
207	**Niagara Supply Volumetric Transportation Charge**								
208	**Commodity Costs**	Ln 112	[redacted]						
209									
210	TGP FTA - FTA Z 5-6 Comm. Rate	Rate Sheet #15 - 23rd Rev	$0.00684	$0.00684	$0.00684	$0.00684	$0.00684	$0.00684	$0.00684
211	TGP FTA - FTA Z 5-6 - ACA Rate	Rate Sheet #15 - 23rd Rev	$0.00015	$0.0002	$0.0002	$0.0002	$0.0002	$0.0002	$0.0002
212	Subtotal TGP FTA - FTA Z 5-6 Commodity Rate		**$0.00699**	**$0.0070**	**$0.0070**	**$0.0070**	**$0.0070**	**$0.0070**	**$0.0070**
213	TGP FTA Fuel Charge % Z 5-6	Rate Sheet #32- 19th Rev	0.81%	0.81%	0.81%	0.81%	0.81%	0.81%	0.81%
214	TGP FTA Fuel * Percentage	ln 208 x ln 213	[redacted]						
215	**Total Volumetric Transportation Rate - Niagara Supply**								
216									
217									

Ln									
1	**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**								**REDACTED**
2									Schedule 6
3	**Peak 2023 – 2024 Winter Cost of Gas Filing**								Page 5 of 5
4	**Supply and Commodity Costs, Volumes and Rates**								
5									Peak
6	For Month of:	Reference	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	Nov- Apr
7	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
218									
219									
220									
221	**TGP Direct Volumetric Transportation Charge**								Average Rate
222	**Commodity Costs**	Ln 130	[redacted]						
223									
224	TGP - Max Comm. Base Rate - Z 0-6	Rate Sheet #15 - 23rd Rev	$0.02585	$0.02585	$0.02585	$0.02585	$0.02585	$0.02585	$0.02585
225	TGP - Max Commodity ACA Rate - Z 0-6	Rate Sheet #15 - 23rd Rev	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015
226	Subtotal TGP - Max Comm. Rate Z 0-6		$0.02600	$0.02600	$0.02600	$0.02600	$0.02600	$0.02600	$0.02600
227	Prorated Percentage		32.60%	32.60%	32.60%	32.60%	32.60%	32.60%	32.60%
228	Prorated TGP - Max Commodity Rate - Z 0-6		**$0.00848**	**$0.00848**	**$0.00848**	**$0.00848**	**$0.00848**	**$0.00848**	**$0.00848**
229	TGP - Max Comm. Base Rate - Z 1-6	Rate Sheet #15 - 23rd Rev	$0.02256	$0.02256	$0.02256	$0.02256	$0.02256	$0.02256	$0.02256
230	TGP - Max Commodity ACA Rate - Z 1-6	Rate Sheet #15 - 23rd Rev	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015
231	Subtotal TGP - Max Commodity Rate - Z 1-6		$0.02271	$0.02271	$0.02271	$0.02271	$0.02271	$0.02271	$0.02271
232	Prorated Percentage		67.40%	67.40%	67.40%	67.40%	67.40%	67.40%	67.40%
233	Prorated TGP - Trans Charge - Max Commodity Rate - Z 1-6		**$0.01531**	**$0.01531**	**$0.01531**	**$0.01531**	**$0.01531**	**$0.01531**	**$0.01531**
234	TGP - Fuel Charge % - Z 0 -6	Rate Sheet #32- 19th Rev	4.17%	4.17%	4.17%	4.17%	4.17%	4.17%	4.17%
235	Prorated Percentage		32.6%	32.6%	32.6%	32.6%	32.6%	32.6%	32.6%
236	Prorated TGP Fuel Charge % - Z 0-6		1.36%	1.36%	1.36%	1.36%	1.36%	1.36%	1.36%
237	TGP - Fuel Charge % - Z 1 -6	Rate Sheet #32- 19th Rev	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%
238	Prorated Percentage		67.40%	67.40%	67.40%	67.40%	67.40%	67.40%	67.40%
239	Prorated TGP Fuel Charge - Fuel Charge % - Z 1-6		2.45%	2.45%	2.45%	2.45%	2.45%	2.45%	2.45%
240	TGP - Fuel Charge % - Z 0-6	ln 222 x ln 236	**$0.00422**	**$0.00486**	**$0.00520**	**$0.00510**	**$0.00467**	**$0.00425**	**$0.00472**
241	TGP - Fuel Charge % - Z 1-6	ln 222 x ln 239	**$0.00762**	**$0.00877**	**$0.00938**	**$0.00920**	**$0.00843**	**$0.00766**	**$0.00851**
242	**Total Volumetric Transportation Rate - TGP (Direct)**		**$0.03563**	**$0.03742**	**$0.03836**	**$0.03808**	**$0.03689**	**$0.03569**	**$0.03701**
243									
244	**TGP (Zone 6 Purchase) Volumetric Transportation Charge**								
245	**Commodity Costs**	Ln 130	[redacted]						
246									
247	TGP - Max Comm. Base Rate - Z 6-6	Rate Sheet #15 - 23rd Rev	$0.00292	$0.00292	$0.00292	$0.00292	$0.00292	$0.00292	$0.00292
248	TGP - Max Commodity ACA Rate - Z 6-6	Rate Sheet #15 - 23rd Rev	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015
249	Subtotal TGP - Max Commodity Rate - Z 6-6		**$0.00307**	**$0.00307**	**$0.00307**	**$0.00307**	**$0.00307**	**$0.00307**	**$0.00307**
250	TGP - Fuel Charge % - Z 6-6	Rate Sheet #32- 19th Rev	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%
251	TGP - Fuel Charge	ln 245 x ln 250	**$0.00012**	**$0.00014**	**$0.00015**	**$0.00015**	**$0.00014**	**$0.00012**	**$0.00014**
252	**Total Vol. Trans. Rate - TGP (Zone 6)**		**$0.00319**	**$0.00321**	**$0.00322**	**$0.00322**	**$0.00321**	**$0.00319**	**$0.00321**
253									
254									
255	**TGP Dracut**								
256	**Commodity Costs - NYMEX Price**	Ln 117	[redacted]						
257									
258	TGP - Trans Charge - Comm. - Z 6-6	Rate Sheet #15 - 23rd Rev	$0.00292	$0.00292	$0.00292	$0.00292	$0.00292	$0.00292	$0.00292
259	TGP - Trans Charge - ACA Rate - Z6-6	Rate Sheet #15 - 23rd Rev	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015
260	Subtotal TGP - Trans Charge - Max Commodity Rate - Z 6-6		**$0.00307**	**$0.00307**	**$0.00307**	**$0.00307**	**$0.00307**	**$0.00307**	**$0.00307**
261	TGP - Fuel Charge % - Z 6-6	Rate Sheet #32- 19th Rev	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%
262	TGP - Fuel Charge	ln 256 x ln 261	[redacted]						
263	**Total Volumetric Transportation Rate - TGP Dracut**								

1 **Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**

2

3 **Peak 2023 – 2024 Winter Cost of Gas Filing**

4 **NYMEX Futures @ Henry Hub**

5												Peak
6	For Month of:			Reference		Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	Strip Average
7		(a)		(b)		(c)	(d)	(e)	(f)	(g)	(h)	(i)
8	**I. NYMEX Opening Prices as of**		8/28/2023									
9	Opening Prices					$3.1060	$3.5760	$3.8240	$3.7490	$3.4370	$3.1230	$3.4692
10	NYMEX				**Filed COG**	$3.1060	$3.5760	$3.8240	$3.7490	$3.4370	$3.1230	$3.4692

Annual Bill Comparisons, Nov 22 - Apr 23 Actual Rates vs Nov 23 - Apr 24

1	**Non FPO Rate**									
2	**November 1, 2023 - April 30, 2024**									
3	**Residential Heating (R3)**			(1)	(2)	(3)	(4)	(5)	(6)	(7)
4	**PROPOSED**									**Winter**
5				**Nov-23**	**Dec-23**	**Jan-24**	**Feb-24**	**Mar-24**	**Apr-24**	**Nov-Apr**
6	**average Usage (Therms)**			84	118	137	131	104	66	640
7			9/1/2023 - Current							
8	**Winter**									
9	Cust. Chg		$ 15.39	$ 15.39	$ 15 39	$ 15.39	$ 15.39	$ 15 39	$ 15.39	$ 92.34
10	Headblock		$ 0.6167							
11	Tailblock		$ 0.6167	$ 52.01	$ 73 04	$ 84.37	$ 80.54	$ 64 03	$ 40.68	$ 394.68
12	HB Threshold		-							
13										
20	Total Base Rate Amount			$ 67.40	$ 88.43	$ 99.76	$ 95.93	$ 79.42	$ 56.07	$ 487.02
21										
22	COG Rate - (Seasonal)			$ 0.7563	$ 0.7563	$ 0.7563	$ 0.7563	$ 0.7563	$ 0.7563	$ 0.7563
23	COG amount			$ 63.79	$ 89 57	$ 103.47	$ 98.77	$ 78 52	$ 49.89	$ 484.02
24										
25	LDAC			$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180
26	LDAC amount			$ 9.95	$ 13 98	$ 16.14	$ 15.41	$ 12 25	$ 7.78	$ 75.52
27										
28	**Total Bill**			**$ 141.14**	**$ 191.97**	**$ 219.38**	**$ 210.11**	**$ 170.19**	**$ 113.75**	**$ 1,046.55**
29										
30	**November 1, 2022 - April 30, 2023**									
31	**Residential Heating (R3)**									
32	**CURRENT**									**Winter**
33				**Nov-22**	**Dec-22**	**Jan-23**	**Feb-23**	**Mar-23**	**Apr-23**	**Nov-Apr**
34	**average Usage (Therms)**			84	118	137	131	104	66	640
35										
36	**Winter**	9/1/2022 - 7/31/2023	9/1/2023 - Current							
37	Cust. Chg	$ 15.39	$ 15 39	$ 15.39	$ 15 39	$ 15.39	$ 15.39	$ 15 39	$ 15.39	$ 92.34
38	Headblock	$ 0.6519	$ 0.6167							
39	Tailblock	$ 0.6519	$ 0.6167	$ 54.98	$ 77 21	$ 89.19	$ 85.14	$ 67 68	$ 43.00	$ 417.20
40	HB Threshold	-	-							
41										
48	Total Base Rate Amount			$ 70.37	$ 92 60	$ 104.58	$ 100.53	$ 83 07	$ 58.39	$ 509.54
49										
50	COG Rate - (Seasonal)			$ 1.4300	$ 1.2551	$ 1.3292	$ 0.4525	$ 0.2443	$ 0.1326	$ 0.8505
51	COG amount			$ 120.61	$ 148 65	$ 181.86	$ 59.10	$ 25 36	$ 8.75	$ 544.32
52										
53	LDAC			$ 0.1086	$ 0.1086	$ 0.1113	$ 0.1113	$ 0.1113	$ 0.1113	$ 0.1104
54	LDAC amount			$ 9.16	$ 12 86	$ 15.23	$ 14.54	$ 11 56	$ 7.34	$ 70.68
55										
56	**Total Bill**			**$ 200.14**	**$ 254.10**	**$ 301.66**	**$ 174.16**	**$ 119.99**	**$ 74.48**	**$ 1,124.55**
57										
58	**DIFFERENCE**									
59	**Total Bill**			**($59.00)**	**($62.13)**	**($82.28)**	**$35.95**	**$50.20**	**$39.26**	**($77.99)**
60	% Change			**-29.48%**	**-24.45%**	**-27.28%**	**20.64%**	**41.83%**	**52.71%**	**-6.94%**
61										
62	**Base Rate**			$ (2.97)	$ (4.17)	$ (4.82)	$ (4.60)	$ (3 65)	$ (2.32)	$ (22.53)
63	% Change			-4 22%	-4.50%	-4 60%	-4.57%	-4.40%	-3 98%	-4.42%
64										
65	**COG & LDAC**			**$ (56.03)**	**$ (57.96)**	**$ (77.47)**	**$ 40.55**	**$ 53.85**	**$ 41.59**	**$ (55.46)**
66	% Change			**-43.18%**	**-35.89%**	**-39.31%**	**55.07%**	**145.87%**	**258.47%**	**-9.02%**

Annual Bill Comparisons, Nov 22 - Apr 23 Actual Rates vs Nov 23 - Apr 24

				(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	**FPO Rate**									
2	**November 1, 2023 - April 30, 2024**									
3	**Residential Heating (R3-FPO)**									
4	**PROPOSED**									**Winter**
5				**Nov-23**	**Dec-23**	**Jan-24**	**Feb-24**	**Mar-24**	**Apr-24**	**Nov-Apr**
6	**average Usage (Therms)**			84	118	137	131	104	66	640
7			9/1/2023 - Current							
8	**Winter**									
9	Cust. Chg		$ 15.39	$ 15.39	$ 15 39	$ 15.39	$ 15.39	$ 15 39	$ 15.39	$ 92.34
10	Headblock		$ 0.6167							
11	Tailblock		$ 0.6167	$ 52.01	$ 73 04	$ 84.37	$ 80.54	$ 64 03	$ 40.68	$ 394.68
12	HB Threshold		-							
13										
20	Total Base Rate Amount			$ 67.40	$ 88.43	$ 99.76	$ 95.93	$ 79.42	$ 56.07	$ 487.02
21										
22	COG Rate - (Seasonal)			$ 0.7763	$ 0.7763	$ 0.7763	$ 0.7763	$ 0.7763	$ 0.7763	$ 0.7763
23	COG amount			$ 65.48	$ 91 94	$ 106.21	$ 101.38	$ 80 60	$ 51.21	$ 496.82
24										
25	LDAC			$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180
26	LDAC amount			$ 9.95	$ 13 98	$ 16.14	$ 15.41	$ 12 25	$ 7.78	$ 75.52
27										
28	**Total Bill**			**$ 142.83**	**$ 194.34**	**$ 222.12**	**$ 212.73**	**$ 172.27**	**$ 115.07**	**$ 1,059.35**
29										
30	**November 1, 2022 - April 30, 2023**									
31	**Residential Heating (R3-FPO)**									
32	**CURRENT**									**Winter**
33				**Nov-22**	**Dec-22**	**Jan-23**	**Feb-23**	**Mar-23**	**Apr-23**	**Nov-Apr**
34	**average Usage (Therms)**			84	118	137	131	104	66	640
35										
36	**Winter**	9/1/2022 - 7/31/2023	9/1/2023 - Current							
37	Cust. Chg	$ 15.39	$ 15 39	$ 15.39	$ 15 39	$ 15.39	$ 15.39	$ 15 39	$ 15.39	$ 92.34
38	Headblock	$ 0.6519	$ 0.6167							
39	Tailblock	$ 0.6519	$ 0.6167	$ 54.98	$ 77 21	$ 89.19	$ 85.14	$ 67 68	$ 43.00	$ 417.20
40	HB Threshold	-	-							
41										
48	Total Base Rate Amount			$ 70.37	$ 92 60	$ 104.58	$ 100.53	$ 83 07	$ 58.39	$ 509.54
49										
50	COG Rate - (Seasonal)			$ 1.4500	$ 1.4500	$ 1.4500	$ 1.4500	$ 1.4500	$ 1.4500	$ 1.4500
51	COG amount			$ 122.30	$ 171.73	$ 198.38	$ 189.37	$ 150 54	$ 95.65	$ 927.97
52										
53	LDAC			$ 0.1086	$ 0.1086	$ 0.1113	$ 0.1113	$ 0.1113	$ 0.1113	$ 0.1104
54	LDAC amount			$ 9.16	$ 12 86	$ 15.23	$ 14.54	$ 11 56	$ 7.34	$ 70.68
55										
56	**Total Bill**			**$ 201.83**	**$ 277.19**	**$ 318.19**	**$ 304.43**	**$ 245.17**	**$ 161.39**	**$ 1,508.20**
57										
58	**DIFFERENCE**									
59	**Total Bill**			**($59.00)**	**($82.84)**	**($96.07)**	**($91.71)**	**($72.90)**	**($46.32)**	**($448.85)**
60	% Change			**-29.23%**	**-29.89%**	**-30.19%**	**-30.12%**	**-29.74%**	**-28.70%**	**-29.76%**
61										
62	**Base Rate**			$ (2.97)	$ (4.17)	$ (4.82)	$ (4.60)	$ (3 65)	$ (2.32)	$ (22.53)
63	% Change			-4 22%	-4.50%	-4 60%	-4.57%	-4.40%	-3 98%	-4.42%
64										
65	**COG & LDAC**			**$ (56.03)**	**$ (78.68)**	**$ (91.26)**	**$ (87.11)**	**$ (69.25)**	**$ (44.00)**	**$ (426.32)**
66	% Change			**-42.62%**	**-42.62%**	**-42.72%**	**-42.72%**	**-42.72%**	**-42.72%**	**-42.69%**

Annual Bill Comparisons, Nov 22 - Apr 23 Actual Rates vs Nov 23 - Apr 24

Line	Description			(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	**GAP Rate**									
2	**November 1, 2023 - April 30, 2024**									
3	**Residential Heating (R4-GAP)**									
4	**PROPOSED**									**Winter**
5				**Nov-23**	**Dec-23**	**Jan-24**	**Feb-24**	**Mar-24**	**Apr-24**	**Nov-Apr**
6	**average Usage (Therms)**			84	118	137	131	104	66	640
7			11/1/2023							
8	**Winter**									
9	Cust. Chg		$ 8.47	$ 8.47	$ 8.47	$ 8.47	$ 8.47	$ 8.47	$ 8.47	$ 50.82
10	Headblock		$ 0.3392							
11	Tailblock		$ 0.3392	$ 28.61	$ 40.17	$ 46.41	$ 44.30	$ 35 22	$ 22.38	$ 217 08
12	HB Threshold		-							
13										
20	Total Base Rate Amount			$ 37.08	$ 48 64	$ 54.88	$ 52.77	$ 43 69	$ 30.85	$ 267 90
21										
22	COG Rate - (Seasonal)			$ 0.4160	$ 0.4160	$ 0.4160	$ 0.4160	$ 0.4160	$ 0.4160	$ 0.4160
23	COG amount			$ 35.08	$ 49 26	$ 56.91	$ 54.33	$ 43.19	$ 27.44	$ 266.21
24										
25	LDAC			$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180
26	LDAC amount			$ 9.95	$ 13 98	$ 16.14	$ 15.41	$ 12 25	$ 7.78	$ 75.52
27										
28	**Total Bill**			**$ 82.11**	**$ 111.88**	**$ 127.93**	**$ 122.51**	**$ 99.12**	**$ 66.07**	**$ 609.63**
29										
30	**November 1, 2022 - April 30, 2023**									
31	**Residential Heating (R4-GAP)**									
32	**CURRENT**									**Winter**
33				**Nov-22**	**Dec-22**	**Jan-23**	**Feb-23**	**Mar-23**	**Apr-23**	**Nov-Apr**
34	**average Usage (Therms)**			84	118	137	131	104	66	640
35										
36	**Winter**	11/1/22 to 4/30/23	11/1/23 to 4/30/24							
37	Cust. Chg	$ 8.47	$ 8.47	$ 15.39	$ 15 39	$ 15.39	$ 15.39	$ 15 39	$ 15.39	$ 92.34
38	Headblock	$ 0.3585	$ 0.3392							
39	Tailblock	$ 0.3585	$ 0.3392	$ 54.98	$ 77 21	$ 89.19	$ 85.14	$ 67 68	$ 43.00	$ 417.20
40	HB Threshold	-	-							
41										
48	Total Base Rate Amount			$ 70.37	$ 92 60	$ 104.58	$ 100.53	$ 83 07	$ 58.39	$ 509.54
49										
50	COG Rate - (Seasonal)			$ 0.7865	$ 0.6903	$ 0.7311	$ 0 2489	$ 0.1344	$ 0 0729	$ 0.4678
51	COG amount			$ 66.34	$ 81.76	$ 100.02	$ 32.50	$ 13 95	$ 4.81	$ 299.38
52										
53	LDAC			$ 0.1086	$ 0.1086	$ 0.1113	$ 0.1113	$ 0.1113	$ 0.1113	$ 0.1104
54	LDAC amount			$ 9.16	$ 12 86	$ 15.23	$ 14.54	$ 11 56	$ 7.34	$ 70.68
55										
56	**Total Bill**			**$ 145.87**	**$ 187.21**	**$ 219.83**	**$ 147.57**	**$ 108.58**	**$ 70.55**	**$ 879.60**
57										
58	**DIFFERENCE**									
59	**Total Bill**			**($63.75)**	**($75.33)**	**($91.90)**	**($25.06)**	**($9.45)**	**($4.48)**	**($269.97)**
60	% Change			**-43.71%**	**-40.24%**	**-41.80%**	**-16.98%**	**-8.71%**	**-6.35%**	**-30.69%**
61										
62	**Base Rate**			$ (33.29)	$ (43 95)	$ (49.70)	$ (47.76)	$ (39 39)	$ (27.55)	$ (241.64)
63	% Change			-47 31%	-47.47%	-47 53%	-47.51%	-47.41%	-47.18%	-47.42%
64										
65	**COG & LDAC**			**$ (30.46)**	**$ (31.38)**	**$ (42.19)**	**$ 22.70**	**$ 29.93**	**$ 23.07**	**$ (28.33)**
66	% Change			**-40.35%**	**-33.16%**	**-36.61%**	**48.25%**	**117.35%**	**189.84%**	**-7.66%**

				(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	**Annual Bill Comparisons, Nov 22 - Apr 23 Actual Rates vs Nov 23 - Apr 24**									
2	**November 1, 2023 - April 30, 2024**									
3	**Commercial Rate (G-41)**			(1)	(2)	(3)	(4)	(5)	(6)	(7)
4	**PROPOSED**									**Winter**
5				**Nov-23**	**Dec-23**	**Jan-24**	**Feb-24**	**Mar-24**	**Apr-24**	**Nov-Apr**
6	**average Usage (Therms)**			261	390	482	458	334	185	2,111
7										
8	**Winter**		9/1/2023 - Current							
9	Cust. Chg		$ 60.81	$ 60.81	$ 60 81	$ 60.81	$ 60.81	$ 60 81	$ 60.81	$ 364.86
10	Headblock		$ 0.4928	$ 49.28	$ 49 28	$ 49.28	$ 49.28	$ 49 28	$ 49.28	$ 295.68
11	Tailblock		$ 0.3390	$ 54.53	$ 98.42	$ 129.47	$ 121.44	$ 79.46	$ 28.81	$ 512.12
12	HB Threshold		100							
13										
20	Total Base Rate Amount			$ 164.62	$ 208 51	$ 239.56	$ 231.53	$ 189 55	$ 138.90	$ 1,172.66
21										
22	COG Rate - (Seasonal)			$ 0.7561	$ 0.7561	$ 0.7561	$ 0.7561	$ 0.7561	$ 0.7561	$ 0.7561
23	COG amount			$ 197.23	$ 295.12	$ 364.37	$ 346.46	$ 252 84	$ 139.88	$ 1,595.89
24										
25	LDAC			$ 0 0957	$ 0.0957	$ 0.0957	$ 0 0957	$ 0.0957	$ 0 0957	$ 0.0957
26	LDAC amount			$ 24.96	$ 37 35	$ 46.12	$ 43.85	$ 32 00	$ 17.70	$ 201.99
27										
28	**Total Bill**			**$386.81**	**$540.98**	**$650.04**	**$621.84**	**$474.40**	**$296.48**	**$2,970.55**
29										
30	**November 1, 2022 - April 30, 2023**									
31	**Commercial Rate (G-41)**									
32	**CURRENT**									**Winter**
33				**Nov-22**	**Dec-22**	**Jan-23**	**Feb-23**	**Mar-23**	**Apr-23**	**Nov-Apr**
34	**average Usage (Therms)**			261	390	482	458	334	185	2,111
35										
36	**Winter**	9/1/2022 - 7/31/2023	9/1/2023 - Current							
37	Cust. Chg	$ 63.30	$ 60 81	$ 63.30	$ 63 30	$ 63.30	$ 63.30	$ 63 30	$ 63.30	$ 379.80
38	Headblock	$ 0.5088	$ 0.4928	$ -	$ 50 88	$ 50.88	$ 50.88	$ 50 88	$ 50.88	$ 254.40
39	Tailblock	$ 0.3550	$ 0.3390	$ 57.10	$ 103 06	$ 135.58	$ 127.17	$ 83 21	$ 30.17	$ 536.29
40	HB Threshold	100	100							
41										
48	Total Base Rate Amount			$ 120.40	$ 217 24	$ 249.76	$ 241.35	$ 197 39	$ 144.35	$ 1,170.49
49										
50	COG Rate - (Seasonal)			$ 1.4301	$ 1.2552	$ 1.3293	$ 0.4526	$ 0.2444	$ 0.1327	$ 0.8610
51	COG amount			$ 373.04	$ 489 93	$ 640.60	$ 207.39	$ 81.73	$ 24.55	$ 1,817.23
52										
53	LDAC			$ 0 0872	$ 0.0872	$ 0.0890	$ 0 0890	$ 0.0890	$ 0 0890	$ 0.0884
54	LDAC amount			$ 22.75	$ 34 04	$ 42.89	$ 40.78	$ 29.76	$ 16.46	$ 186.68
55										
56	**Total Bill**			**$516.18**	**$741.21**	**$933.24**	**$489.52**	**$308.89**	**$185.37**	**$3,174.40**
57										
58	**DIFFERENCE**									
59	**Total Bill**			**$ (129.38)**	**$ (200.23)**	**$ (283.20)**	**$ 132.32**	**$ 165.52**	**$ 111.12**	**$ (203.85)**
60	% Change			**-25.06%**	**-27.01%**	**-30.35%**	**27.03%**	**53.58%**	**59.94%**	**-6.42%**
61										
62	**Base Rate**			$ 44.22	$ (8.74)	$ (10.20)	$ (9.82)	$ (7 84)	$ (5.45)	$ 2.17
63	% Change			36.72%	-4.02%	-4 08%	-4.07%	-3.97%	-3.78%	0.19%
64										
65	**COG & LDAC**			$ (173.59)	$ (191.49)	$ (273.00)	$ 142.14	$ 173 36	$ 116.57	$ (206 02)
66	% Change			-43 86%	-36.55%	-39 94%	57.27%	155.49%	284 21%	-10.28%

Line				(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	**Annual Bill Comparisons, Nov 22 - Apr 23 Actual Rates vs Nov 23 - Apr 24**									
2	**November 1, 2023 - April 30, 2024**									
3	**C&I High Winter Use Medium G-42**									
4	**PROPOSED**									**Winter**
5				**Nov-23**	**Dec-23**	**Jan-24**	**Feb-24**	**Mar-24**	**Apr-24**	**Nov-Apr**
6	**average Usage (Therms)**			2,543	3,519	4,174	3,998	3,106	1,898	19,238
7			9/1/2023 - Current							
8	**Winter**									
9	Cust. Chg		$ 182.42	$ 182.42	$ 182.42	$ 182.42	$ 182.42	$ 182.42	$ 182.42	$ 1,094.52
10	Headblock		$ 0.4485	$ 448.50	$ 448 50	$ 448.50	$ 448.50	$ 448 50	$ 448.50	$ 2,691.00
11	Tailblock		$ 0.3063	$ 472.62	$ 771.46	$ 972.35	$ 918.33	$ 645 02	$ 274.94	$ 4,054.72
12	HB Threshold		1,000							
13										
20	Total Base Rate Amount			$ 1,103.54	$ 1,402 38	$ 1,603.27	$ 1,549.25	$ 1,275 94	$ 905.86	$ 7,840.24
21										
22	COG Rate - (Seasonal)			$ 0.7561	$ 0.7561	$ 0.7561	$ 0.7561	$ 0.7561	$ 0.7561	$ 0.7561
23	COG amount			$ 1,922.77	$ 2,660.45	$ 3,156.34	$ 3,022.98	$ 2,348 32	$ 1,434.79	$ 14,545 66
24										
25	LDAC			$ 0 0957	$ 0.0957	$ 0 0957	$ 0.0957	$ 0.0957	$ 0 0957	$ 0.0957
26	LDAC amount			$ 243.37	$ 336.74	$ 399.50	$ 382.62	$ 297 23	$ 181.60	$ 1,841 05
27										
28	**Total Bill**			**$ 3,269.68**	**$ 4,399.57**	**$ 5,159.11**	**$ 4,954.85**	**$ 3,921.49**	**$ 2,522.26**	**$ 24,226.96**
29										
30	**November 1, 2022 - April 30, 2023**									
31	**C&I High Winter Use Medium G-42**									
32	**CURRENT**									**Winter**
33				**Nov-22**	**Dec-22**	**Jan-23**	**Feb-23**	**Mar-23**	**Apr-23**	**Nov-Apr**
34	**average Usage (Therms)**			2,543	3,519	4,174	3,998	3,106	1,898	19,238
35										
36	**Winter**	9/1/2022 - 7/31/2023	9/1/2023 - Current							
37	Cust. Chg	$ 189.84	$ 182.42	$ 189.84	$ 189 84	$ 189.84	$ 189.84	$ 189 84	$ 189.84	$ 1,139.04
38	Headblock	$ 0.4634	$ 0.4485	$ 463.40	$ 463.40	$ 463.40	$ 463.40	$ 463.40	$ 463.40	$ 2,780.40
39	Tailblock	$ 0.3212	$ 0.3063	$ 495.62	$ 808 99	$ 1,019.65	$ 963.00	$ 676 39	$ 288.32	$ 4,251.97
40	HB Threshold	1,000	1,000							
41										
48	Total Base Rate Amount			$ 1,148.86	$ 1,462 23	$ 1,672.89	$ 1,616.24	$ 1,329 63	$ 941.56	$ 8,171.41
49										
50	COG Rate - (Seasonal)			$ 1.4301	$ 1.2552	$ 1 3293	$ 0.4526	$ 0.2444	$ 0.1327	$0.8537
51	COG amount			$ 3,636.76	$ 4,416 61	$ 5,549.16	$ 1,809.55	$ 759 07	$ 251.81	$ 16,422 97
52										
53	LDAC			$ 0 0872	$ 0.0872	$ 0 0890	$ 0.0890	$ 0.0890	$ 0 0890	0.0884
54	LDAC amount			$ 221.75	$ 306 83	$ 371.53	$ 355.83	$ 276.42	$ 168.89	$ 1,701 25
55										
56	**Total Bill**			**$ 5,007.37**	**$ 6,185.67**	**$ 7,593.58**	**$ 3,781.62**	**$ 2,365.12**	**$ 1,362.26**	**$ 26,295.62**
57										
58	**DIFFERENCE**									
59	**Total Bill**			**$ (1,737.68)**	**$ (1,786.10)**	**$ (2,434.47)**	**$ 1,173.23**	**$ 1,556.37**	**$ 1,160.00**	**$ (2,068.66)**
60	% Change			**-34.70%**	**-28.87%**	**-32.06%**	**31.02%**	**65.81%**	**85.15%**	**-7.87%**
61										
62	**Base Rate**			$ (45.31)	$ (59 85)	$ (69.62)	$ (66.99)	$ (53.70)	$ (35.69)	$ (331.16)
63	% Change			-3 94%	-4.09%	-4.16%	-4.14%	-4.04%	-3.79%	-4.05%
64										
65	**COG & LDAC**			$ (1,692.37)	$ (1,726 25)	$ (2,364.85)	$ 1,240.22	$ 1,610 07	$ 1,195.69	$ (1,737 50)
66	% Change			-43 86%	-36.55%	-39 94%	57.27%	155.49%	284 21%	-9.59%

1 **Annual Bill Comparisons, Nov 22 - Apr 23 Actual Rates vs Nov 23 - Apr 24**
2 **November 1, 2023 - April 30, 2024**

Line				(1)	(2)	(3)	(4)	(5)	(6)	(7)
3	**Commercial Rate (G-52)**									
4	**PROPOSED**									**Winter**
5				**Nov-23**	**Dec-23**	**Jan-24**	**Feb-24**	**Mar-24**	**Apr-24**	**Nov-Apr**
6	**average Usage (Therms)**			1,907	2,294	2,692	2,308	2,175	1,933	13,309
7										
8	**Winter**		9/1/2023 - Current							
9	Cust. Chg		$ 182 26	$ 182.26	$ 182 26	$ 182.26	$ 182.26	$ 182 26	$ 182.26	$ 1,093.56
10	Headblock		$ 0.2560	$ 256.00	$ 256 00	$ 256.00	$ 256.00	$ 256 00	$ 256.00	$ 1,536.00
11	Tailblock		$ 0.1749	$ 158.69	$ 226 24	$ 295.91	$ 228.76	$ 205 59	$ 163.18	$ 1,278.37
12	HB Threshold		1,000							
13										
20	Total Base Rate Amount			$ 596.95	$ 664 50	$ 734.17	$ 667.02	$ 643 85	$ 601.44	$ 3,907.93
21										
22	COG Rate - (Seasonal)			$0.7573	$0.7573	$0.7573	$0.7573	$0.7573	$0.7573	$ 0.7573
23	COG amount			$ 1,444.40	$ 1,736 89	$ 2,038.56	$ 1,747.81	$ 1,647.49	$ 1,463.87	$ 10,079 02
24										
25	LDAC			$ 0 0957	$ 0.0957	$ 0.0957	$ 0 0957	$ 0.0957	$ 0 0957	$ 0.0957
26	LDAC amount			$ 182.53	$ 219.49	$ 257.61	$ 220.87	$ 208.19	$ 184.99	$ 1,273.69
27										
28	**Total Bill**			**$2,223.87**	**$2,620.88**	**$3,030.34**	**$2,635.71**	**$2,499.53**	**$2,250.30**	**$15,260.63**
29										
30	**November 1, 2022 - April 30, 2023**									
31	**Commercial Rate (G-52)**									
32	**CURRENT**									**Winter**
33				**Nov-22**	**Dec-22**	**Jan-23**	**Feb-23**	**Mar-23**	**Apr-23**	**Nov-Apr**
34	**average Usage (Therms)**			1,907	2,294	2,692	2,308	2,175	1,933	13,309
35										
36	**Winter**	9/1/2022 - 7/31/2023	9/1/2023 - Current							
37	Cust. Chg	$ 189.57	$ 182 26	$ 189.57	$ 189 57	$ 189.57	$ 189.57	$ 189 57	$ 189.57	$ 1,137.42
38	Headblock	$ 0.2647	$ 0.2560	$ 264.70	$ 264.70	$ 264.70	$ 264.70	$ 264.70	$ 264.70	$ 1,588.20
39	Tailblock	$ 0.1836	$ 0.1749	$ 166.58	$ 237.49	$ 310.63	$ 240.14	$ 215 82	$ 171.30	$ 1,341.96
40	HB Threshold	1,000	1,000							
41										
48	Total Base Rate Amount			$ 620.85	$ 691.76	$ 764.90	$ 694.41	$ 670 09	$ 625.57	$ 4,067.58
49										
50	COG Rate - (Seasonal)			$ 1.4296	$ 1.2547	$ 1.3288	$ 0.4521	$ 0.2439	$ 0.1322	$ 0.8273
51	COG amount			$ 2,726.67	$ 2,877 69	$ 3,576.96	$ 1,043.43	$ 530 60	$ 255.54	$ 11,010.90
52										
53	LDAC			$ 0 0872	$ 0.0872	$ 0.0890	$ 0 0890	$ 0.0890	$ 0 0890	$ 0.0884
54	LDAC amount			$ 166.32	$ 200 00	$ 239.58	$ 205.41	$ 193 62	$ 172.04	$ 1,176.95
55										
56	**Total Bill**			**$3,513.84**	**$3,769.45**	**$4,581.44**	**$1,943.25**	**$1,394.30**	**$1,053.15**	**$16,255.43**
57										
58	**DIFFERENCE**									
59	**Total Bill**			**$ (1,289.97)**	**$ (1,148.57)**	**$ (1,551.10)**	**$ 692.46**	**$ 1,105.23**	**$ 1,197.15**	**$ (994.80)**
60	% Change			**-36.71%**	**-30.47%**	**-33.86%**	**35.63%**	**79.27%**	**113.67%**	**-6.12%**
61										
62	**Base Rate**			$ (23.90)	$ (27 26)	$ (30.73)	$ (27.39)	$ (26 24)	$ (24.13)	$ (159.65)
63	% Change			-3 85%	-3.94%	-4 02%	-3.94%	-3.92%	-3 86%	-3.92%
64										
65	**COG & LDAC**			$ (1,266.07)	$ (1,121 31)	$ (1,520.37)	$ 719.85	$ 1,131.46	$ 1,221.28	$ (835.15)
66	% Change			-43.76%	-36.43%	-39 84%	57.64%	156.23%	285 62%	-6.85%

Residential Heating

	Winter 2022-2023	Winter 2023-2024
Customer Charge	$ 15.39	$ 15 39
First 100 Therms	$ 0.6519	$ 0.6167
Excess 100 Therms	$ 0.6519	$ 0.6167
LDAC	$ 0.1104	$ 0.1180
COG	$ 0.8505	$ 0.7563
Total Adjust	$ 0.9610	$ 0.8743

				Total		Base Rate		COG		LDAC	
		Winter 2022-23 @	Winter 2023-24 @	$ Impact	% Impact	$ Impact	% Impact	$ Impact	% Impact	$ Impact	% Impact
		$0 9610	$0.8743	($0.09)	-9%						
Cooking alone	5	$23 28	$22.85	($0.43)	-1 86%	$0 00	0%	-$0.47	-2%	$0.04	0.16%
	10	$31.17	$30.30	($0.87)	-2.78%	$0 00	0%	-$0 94	-3%	$0.08	0.24%
	20	$46 94	$45.21	($1.73)	-3 69%	$0 00	0%	-$1 88	-4%	$0.15	0.32%
Water Heating alone	30	$62.72	$60.12	($2.60)	-4.15%	$0 00	0%	-$2 83	-5%	$0.23	0.36%
	45	$86 38	$82.49	($3.90)	-4 51%	$0 00	0%	-$4 24	-5%	$0.34	0.39%
	50	$94 27	$89.94	($4.33)	-4 60%	$0 00	0%	-$4.71	-5%	$0.38	0.40%
Heating Alone	80	$133.71	$127 22	($6.50)	-4 86%	$0 00	0%	-$7 07	-6%	$0.57	0.42%
	125	$225.22	$213 69	($11.53)	-5.12%	$0 00	0%	-$12.53	-6%	$1.00	0.45%
	150	$252.04	$239 04	($13.00)	-5.16%	$0 00	0%	-$14.13	-6%	$1.13	0.45%
	200	$330.92	$313 59	($17.33)	-5 24%	$0 00	0%	-$18.84	-6%	$1.51	0.46%

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

Peak 2023 – 2024 Winter Cost of Gas Filing
Variance Analysis of the Components of the Winter 2022-2023 Actual Results vs Proposed Winter 2023-2024 Cost of Gas Rat

	WINTER 2022-2023 ACTUAL RESULTS (6 months actual)			**WINTER 2023-2024 (6 months Proposed)**		
Therm Sales (COG)	78,721,321			94,568,321		
	THERM SENDOUT	COSTS	EFFECT ON COST OF GAS	THERM SENDOUT	COSTS	EFFECT ON COST OF GAS
Demand Charges		$ 11,440,974	$ 0.1453		$ 12,479,766	$ 0.1320
Purchased Gas		49,229,232	0.6254	67,583,235	46,903,637	0.4960
Storage/Produced Gas		-	-	26,875,829	12,130,277	0.1283
Hedging (Gain)/Loss		-	-		-	-
Total Volumes and Cost	81,062,417	$ 60,670,206	$ 0.7707	94,459,064	$ 71,513,680	$ 0.7562
Direct Costs						
Prior Period Balance		$ (3,286,163)	$ (0.0417)		$ 3,674,198	$ 0.0389
Interest		(424,323)	(0.0054)		452,781	0.0048
Prior Period Adjustment		4,196,806	0.0533		861,872	0.0091
Broker Revenues		(2,158,152)	(0.0274)		(1,340,480)	(0.0142)
Refunds from Suppliers		-	-		-	-
Fuel Financing		-	-		-	-
Transportation CGA Revenues		(120,566)	(0.0015)		(120,926)	(0.0013)
280 Day Margin		-	-		-	-
Interruptible Sales Margin		-	-		-	-
Capacity Release and Off System Sales Margins		(2,065,600)	(0.0262)		(2,860,948)	(0.0303)
Hedging Costs		-	-		-	-
FPO Admin Costs		-	-		-	-
Indirect Costs		-	-			
Misc Overhead		-	-		-	-
Occupant Disallowance/Credits		-			-	-
Production & Storage		3,685,458	0.0468		3,685,458	0.0390
Bad Debt Adjustment %		-	-		15,487	0.0002
Cashout, Broker penalty, Canadian Managed,…		-	-		-	-
Total Adjusted Cost		$ 60,497,665	**$ 0.7685**		$ 75,881,122	**$ 0.8024**

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

Line	Description	Reference		Column A	Column B	Column C	Column D	Column E	Column F
				Design Day Demand. Dktherm	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			519	519	0.3%		129	390
2	RATE R-3-Resi Htg			73,897	73,897	44.1%		3,452	70,446
3	RATE G-41 (T)			30,167	30,167	18.0%		919	29,247
4	RATE G-51 (S)			2,317	2,317	1.4%		774	1,543
5	RATE G-42 (V)			38,624	38,625	23.0%		1,581	37,044
6	RATE G-52			5,192	5,192	3.1%		1,710	3,482
7	RATE G-43			10,497	10,497	6.3%		903	9,594
8	RATE G-53			5,243	5,243	3.1%		1,871	3,372
9	RATE G-54			1,232	1,232	0.7%		387	844
10									
11	Total			167,688	167,688	100.0%		11,726	155,962
12									-
13	Residential Total			74,416	74,416	**44.378%**		3,581	70,835
14	LLF Total			79,289	79,289	**47.283%**		3,403	75,885
15	HLF Total			13,984	13,984	**8.339%**		4,742	9,242
16	Total			167,688	167,688	100.0%		11,726	155,962
17									
18	C&I Breakdown								
19	LLF Total							3,403	75,885
20	HLF Total							4,742	9,242
21	Total							8,145	85,127
22									
23	C&I Breakdown Percentage								
24	LLF Total							41.782%	89.144%
25	HLF Total							58.218%	10.856%
26	Total							**100.0%**	**100.0%**
27									
28				Capacity Cost	MDQ, Dt	$/Dt-Mo.			
29	Pipeline			$15,924,599	119,718	$11.0848			
30	Storage			$4,094,776	28,115	$12.1370			
31									
32	Peaking			$1,550,000					
33	Peaking Additional Costs								
34	Subtotal Peaking Costs			$1,550,000	19,855	$6.5054			
35	Total			$21,569,375	167,688	$10.7190			
36									
37				Capacity Cost	MDQ, Dt	$/Dt-Mo.			
38	Pipeline - Baseload			1,559,739	11,726	$11.0848			
39	Pipeline - Remaining			14,364,860	107,992	$11.0848			
40	Storage			4,094,776	28,115	$12.1370			
41	Peaking			1,550,000	19,855	$6.5054			
42	Total			21,569,375	167,688	$10.7190			
43									
44									
45	Residential Allocation			Capacity Cost	MDQ, Dt	$/Dt-Mo.			
46	Pipeline - Base	Line 38 * Line 13 Col C	**44.378%**	692,181	5,204	$11.0848			
47	Pipeline - Remaining	Line 39 * Line 13 Col C	**44.378%**	6,374,839	47,925	$11.0848			
48	Storage	Line 40 * Line 13 Col C	**44.378%**	1,817,181	12,477	$12.1370			
49	Peaking	Line 41 * Line 13 Col C	**44.378%**	687,829	8,811	$6.5054			
50	Total		**44.378%**	9,572,024	74,416	$10.7190			

							Ratios for COG
51							
52							**Ratios for COG**
53	C&I Allocation			Capacity Cost	MDQ, Dt	$/Dt-Mo.	
54	Pipeline - Base	Line 38 - Line 46		867,558	6,522	$11.0848	
55	Pipeline - Remaining	Line 39 - Line 47		7,990,021	60,067	$11.0848	
56	Storage	Line 40 - Line 48		2,277,595	15,638	$12.1370	
57	Peaking	Line 41 - Line 49		862,171	11,044	$6.5056	
58	Total		**55.622%**	11,997,344	93,272	$10.7190	**1.0000**
59							
60							
61	LLF - C&I Allocation			Capacity Cost	MDQ, Dt	$/Dt-Mo.	
62	Pipeline - Base	Line 54 * Line 24 Col E		362,484	2,725	$11.0851	
63	Pipeline - Remaining	Line 55 * Line 24 Col F		7,122,606	53,546	$11.0849	
64	Storage	Line 56 * Line 24 Col F		2,030,334	13,940	$12.1373	
65	Peaking	Line 57 * Line 24 Col F		768,572	9,845	$6.5056	
66	Total		**47.6787%**	10,283,996	80,056	$10.7050	**0.9987**
67			41.782%	86%			(Line 66 / Line 58)
68							
69	HLF - C&I Allocation			Capacity Cost	MDQ, Dt	$/Dt-Mo.	
70	Pipeline - Base	Line 54 - Line 62		505,074	3,797	$11.0849	
71	Pipeline - Remaining	Line 55 - Line 63		867,415	6,521	$11.0849	
72	Storage	Line 56 - Line 64		247,261	1,698	$12.1349	
73	Peaking	Line 57 - Line 65		93,599	1,199	$6.5054	
74	Total		**7.9434%**	1,713,349	13,215	$10.8043	**1.0080**
75							(Line 74 / Line 58)
76							
77	Unit Cost			Residential	LLF C&I	HLF C&I	
78							
79	Pipeline			$ 11.0848	$ 11.0848	$ 11.0848	
80	Storage			$ 12.1370	$ 12.1370	$ 12.1370	
81	Peaking			$ -	$ -	$ -	
82	Total			$ 10.7190	$ 10.7050	$ 10.8043	
83							
84							
85	Load Makeup			Residential	**LLF C&I**	**HLF C&I**	
86							
87	Pipeline			71.39%	**70.29%**	**78.08%**	
88	Storage			16.77%	**17.41%**	**12.85%**	
89	Peaking			11.84%	**12.30%**	**9.07%**	
90	Total			100.00%	**100.00%**	**100.00%**	
91							
92							
93	Supply Makeup			Residential	LLF C&I	HLF C&I	Total
94							
95	Pipeline			44.38%	47.00%	8.62%	100.00%
96	Storage			44.38%	49.58%	6.04%	100.00%
97	Peaking			44.38%	49.58%	6.04%	100.00%

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

2023 – 2024 Winter Cost of Gas Filing
Correction Factor Calculation

Data Source: Schedule 10B	d Nov	e Dec	f Jan	g Feb	h Mar	i Apr	Total Sales
G-41	1,999,252	3,181,831	3,963,289	3,453,170	2,704,427	1,399,884	16,701,853
G-42	1,751,432	2,561,422	3,021,758	2,623,124	2,163,083	1,226,310	13,347,130
G-43	446,957	605,219	733,123	653,983	581,965	386,062	3,407,309
High Winter Use	4,197,642	6,348,471	7,718,170	6,730,278	5,449,476	3,012,256	33,456,292
G-51	257,073	331,330	381,133	341,182	319,631	257,017	1,887,366
G-52	300,566	379,019	422,609	375,659	354,579	280,091	2,112,524
G-53	372,371	434,755	543,007	427,117	423,456	337,347	2,538,054
G-54	33,592	34,306	39,190	37,501	40,734	47,939	233,263
Low Winter Use	963,603	1,179,410	1,385,940	1,181,459	1,138,401	922,394	6,771,206
Gross Total	5,161,245	7,527,881	9,104,110	7,911,736	6,587,876	3,934,650	40,227,498

Total Sales	40,227,498	
Low Winter Use	6,771,206	
Winter Ratio for Low Winter Use	**1.0080**	Schedule 10A p 2, ln 74
High Winter Use	33,456,292	
Winter Ratio for High Winter Use	**0.9987**	Schedule 10A p 2, ln 66

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

Correction Factor = **99.9735%**

Allocation Calculation for Miscellaneous Overhead

Projected Winter Sales Volume	11/1/23 - 4/30/24	94,568,321	Sch.10B, ln 23
Projected Annual Sales Volume	11/1/23 - 10/31/24	119,310,982	Sch.10B, ln 23
Percentage of Winter Sales to Annual Sales		79.26%	

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

Peak 2023 – 2024 Winter Cost of Gas Filing

Dry Therms

Firm Sales	**Nov-23**	**Dec-23**	**Jan-24**	**Feb-24**	**Mar-24**	**Apr-24**	**Subtotal PK 23–24**	**May-24**	**Jun-24**	**Jul-24**	**Aug-24**	**Sep-24**	**Oct-24**	**Subtotal OP 24**	**Total**
R-1	70,204	90,296	103,789	89,187	84,184	64,608	502,268	52,662	43,099	40,191	37,249	39,636	55,445	268,282	770,550
R-3	6,526,515	9,507,022	11,000,092	9,577,230	8,367,217	5,153,885	50,131,960	2,998,814	1,502,833	1,103,849	985,331	1,643,398	4,150,744	12,384,971	62,516,931
R-4	479,389	692,912	809,885	700,400	627,611	396,396	3,706,594	233,018	116,445	85,399	75,793	114,474	292,951	918,079	4,624,673
Total Residential.	7,076,108	10,290,230	11,913,766	10,366,817	9,079,013	5,614,889	54,340,823	3,284,494	1,662,377	1,229,440	1,098,373	1,797,508	4,499,140	13,571,332	67,912,154
G-41	1,999,252	3,181,831	3,963,289	3,453,170	2,704,427	1,399,884	16,701,853	670,264	314,756	225,458	174,609	303,478	1,041,040	2,729,606	19,431,458
G-42	1,751,432	2,561,422	3,021,758	2,623,124	2,163,083	1,226,310	13,347,130	644,811	334,760	251,143	205,135	369,043	1,081,152	2,886,045	16,233,175
G-43	446,957	605,219	733,123	653,983	581,965	386,062	3,407,309	254,936	171,717	145,923	120,884	140,285	316,189	1,149,934	4,557,243
G-51	257,073	331,330	381,133	341,182	319,631	257,017	1,887,366	218,961	192,564	190,743	185,001	178,225	233,815	1,199,310	3,086,675
G-52	300,566	379,019	422,609	375,659	354,579	280,091	2,112,524	237,398	207,695	208,635	215,082	201,292	255,186	1,325,289	3,437,812
G-53	372,371	434,755	543,007	427,117	423,456	337,347	2,538,054	293,608	257,701	252,979	259,409	261,685	321,410	1,646,791	4,184,845
G-54	33,592	34,306	39,190	37,501	40,734	47,939	233,263	80,753	32,231	33,170	33,365	26,568	28,270	234,356	467,619
Total C/I	5,161,245	7,527,881	9,104,110	7,911,736	6,587,876	3,934,650	40,227,498	2,400,731	1,511,425	1,308,051	1,193,485	1,480,577	3,277,062	11,171,330	51,398,828
Sales Volume	**12,237,353**	**17,818,111**	**21,017,875**	**18,278,553**	**15,666,889**	**9,549,539**	**94,568,321**	**5,685,225**	**3,173,802**	**2,537,490**	**2,291,858**	**3,278,085**	**7,776,201**	**24,742,661**	**119,310,982**
Transportation Sales															
G-41	555,713	796,808	957,827	844,345	714,294	421,458	4,290,446	238,915	132,942	94,957	72,754	139,002	364,497	1,043,068	5,333,513
G-42	2,032,790	2,845,171	3,393,716	3,020,642	2,611,743	1,597,676	15,501,738	934,466	516,154	392,978	321,440	553,593	1,398,354	4,116,985	19,618,724
G-43	902,251	1,155,000	1,359,450	1,182,160	1,074,936	743,649	6,417,446	498,607	335,688	271,980	236,013	382,815	701,647	2,426,750	8,844,196
G-51	78,567	94,285	103,348	94,064	89,811	72,084	532,159	65,138	57,470	55,740	57,207	59,924	72,792	368,271	900,430
G-52	470,709	575,955	654,055	586,307	554,912	452,992	3,294,930	379,452	325,244	320,657	318,602	339,845	421,831	2,105,631	5,400,561
G-53	807,777	921,684	1,035,200	922,762	885,082	731,931	5,304,436	629,281	616,772	573,484	638,181	679,871	775,145	3,912,734	9,217,170
G-54	1,615,601	1,331,239	1,268,310	1,095,518	1,229,764	1,343,019	7,883,450	1,559,173	1,580,986	1,641,782	1,742,529	1,696,679	1,750,574	9,971,723	17,855,173
Total Trans. Sales	**6,463,408**	**7,720,141**	**8,771,907**	**7,745,798**	**7,160,542**	**5,362,810**	**43,224,605**	**4,305,032**	**3,565,256**	**3,351,579**	**3,386,725**	**3,851,730**	**5,484,841**	**23,945,162**	**67,169,767**
Total All Sales	**18,700,761**	**25,538,252**	**29,789,782**	**26,024,351**	**22,827,431**	**14,912,349**	**137,792,926**	**9,990,257**	**6,739,058**	**5,889,069**	**5,678,583**	**7,129,815**	**13,261,042**	**48,687,823**	**186,480,749**

Volumes (Therms) **Normal Year**

For the Months of May 23 - October 23

	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	Peak Nov - Apr
Pipeline Gas:							
Dawn Supply	878,284	929,589	928,933	865,053	916,923	806,823	5,325,605
Niagara Supply	692,721	732,770	732,254	681,352	722,786	659,598	4,221,481
TGP Supply (Gulf)	4,635,387	3,115,032	3,112,834	2,898,568	3,072,588	658,141	17,492,549
Dracut Supply 1 - Baseload			3,100,000	1,450,000		-	4,550,000
Dracut Supply 2 - Swing	3,175,277	1,817,182	830,593	1,712,037	4,320,290	1,650,818	13,506,197
Dracut Supply 3 - Swing	433,227	381,887	154,291	972,751	1,611,335	36,442	3,589,934
Constellation Combo							0
LNG Truck	-	1,105,212	1,873,752	1,852,072	17,174	-	4,848,209
Propane Truck	-	-	207,270	4,517	-	83,816	295,604
PNGTS	219,571	232,397	232,233	216,075	229,231	216,465	1,345,972
Portland Natural Gas	1,072,719	1,134,734	1,133,934	1,056,283	1,119,273	925,624	6,442,568
TGP Supply (Z4)	1,819,408	1,931,092	1,929,730	1,797,112	1,904,780	4,511,472	13,893,595
Subtotal Pipeline Volumes	12,926,593	11,379,896	14,235,825	13,505,820	13,914,381	9,549,199	75,511,713
Storage Gas:							
TGP Storage	1,148,127	6,232,334	6,223,398	5,210,646	1,394,051	1,000,000	21,208,557
Produced Gas:							
LNG Vapor	21,440	1,149,117	1,894,933	1,766,244	21,654	21,136	4,874,524
Propane	-	-	788,232	4,517	-	-	792,749
Subtotal Produced Gas	21,440	1,149,117	2,683,164	1,770,761	21,654	21,136	5,667,273
Less - Gas Refills:							
LNG Truck	-	(1,105,212)	(1,873,752)	(1,852,072)	(17,174)	-	(4,848,209)
Propane	-	-	(207,270)	(4,517)	-	(83,816)	(295,604)
TGP Storage Refill	(1,735,867)	-	-	-	-	(1,048,798)	(2,784,665)
Subtotal Refills	(1,735,867)	(1,105,212)	(2,081,022)	(1,856,589)	(17,174)	(1,132,614)	(7,928,478)
Total Sendout Volumes	12,360,292	17,656,136	21,061,366	18,630,638	15,312,912	9,437,721	94,459,064

Normal and Design Year Volumes

Volumes (Therms) **Design Year**

For the Months of May 23 - October 23

	Nov-23	**Dec-23**	**Jan-24**	**Feb-24**	**Mar-24**	**Apr-24**	**Peak Nov - Apr**
Pipeline Gas:							
Dawn Supply	1,072,719	1,134,734	1,133,934	1,056,283	1,119,273	921,251	6,438,195
Niagara Supply	692,721	732,770	732,254	681,352	722,786	659,598	4,221,481
TGP Supply (Gulf)	4,650,912	3,115,032	3,112,834	2,898,568	3,072,588	653,039	17,502,972
Dracut Supply 1 - Baseload			3,100,000	1,450,000			4,550,000
Dracut Supply 2 - Swing	3,820,683	1,784,246	1,994,029	2,568,056	5,388,789	1,600,528	17,156,330
Dracut Supply 3 - Swing	1,314,469	3,170,282	1,689,149	2,434,833	2,399,829	52,476	11,061,039
Constellation Combo							0
LNG Truck	-	1,105,212	2,042,443	1,684,181	17,174	-	4,849,009
Propane Truck	-	-	211,809	-	-	56,121	267,929
PNGTS	219,571	232,397	232,233	216,075	229,231	216,465	1,345,972
Portland Natural Gas	878,284	929,589	928,933	865,053	916,923	805,366	5,324,148
TGP Supply (Z4)	1,818,669	1,931,092	1,929,730	1,797,112	1,904,780	4,510,743	13,892,126
Subtotal Pipeline Volumes	14,468,026	14,135,355	17,107,348	15,651,512	15,771,374	9,475,586	86,609,200
Storage Gas:							
TGP Storage	1,101,551	5,751,643	6,439,746	5,416,181	1,450,799	1,000,000	21,159,920
							0
Produced Gas:							0
LNG Vapor	21,440	1,172,584	2,047,738	1,590,824	21,654	21,136	4,875,376
Propane	-	-	792,770	-	-	-	792,770
Subtotal Produced Gas	21,440	1,172,584	2,840,508	1,590,824	21,654	21,136	5,668,146
Less - Gas Refills:							
LNG Truck	-	(1,105,212)	(2,042,443)	(1,684,181)	(17,174)	-	-4,849,009
Propane	-	-	(211,809)	-	-	(56,121)	-267,929
TGP Storage Refill	(1,704,078)	-	-	-	-	(1,048,798)	-2,752,875
Subtotal Refills	(1,704,078)	(1,105,212)	(2,254,252)	(1,684,181)	(17,174)	(1,104,918)	(7,869,813)
Total Sendout Volumes	13,886,939	19,954,370	24,133,351	20,974,336	17,226,653	9,391,804	105,567,453

Forecast of Upcoming Winter Period
Design Day Report
2023/2024 Heating Season
(Therms)

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

Requirements		
	Firm Sales	1,256,152
	Interruptible Sales	0
	Firm Transportation	420,730
	Interruptible Transportation	0
	Total Requirements	1,676,882
Resources		
	Purchased Pipeline Gas	1,197,180
	Underground Storage Gas	281,150
	Propane Air Production	72,552
	LNG Produced Gas	126,000
	Third-Party Supply	
	Total Resources	1,676,882

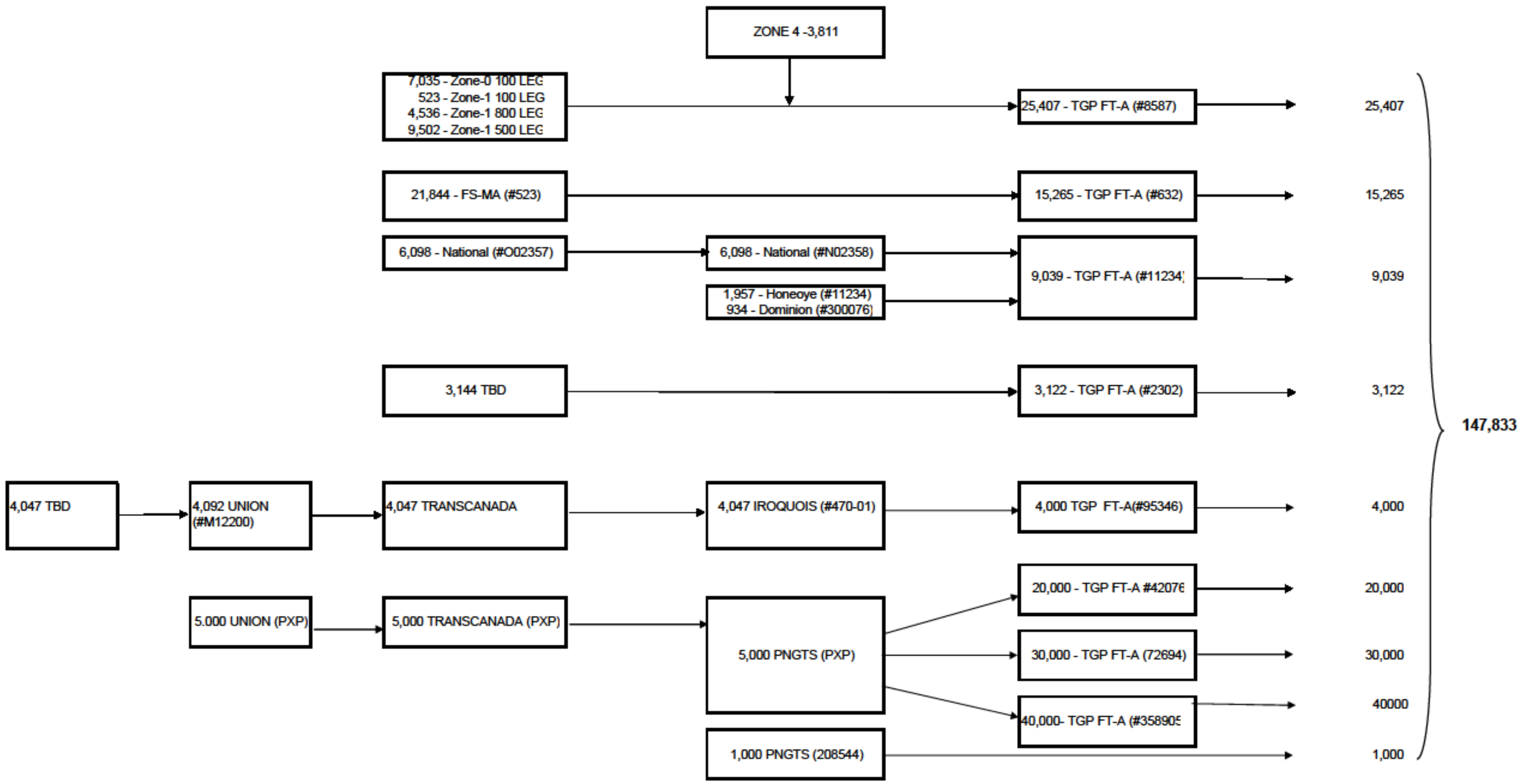
Please refer to the ENNG 2022 IRP filing (DG 22-064) for a complete description of the methodology and assumptions used in the derivation of this data.

Preparation of this report was supervised by:

Deborah Gilbertson
Sr. Manager, Energy Procurement

Note: Forecasted Firm Transportation volumes are for customers using utility capacity only.

(MMBtu)


ZONE 4 -3,811
7,035 - Zone-0 100 LEG
523 - Zone-1 100 LEG
4,536 - Zone-1 800 LEG
9,502 - Zone-1 500 LEG
25,407 - TGP FT-A (#8587)
25,407
21,844 - FS-MA (#523)
15,265 - TGP FT-A (#632)
15,265
6,098 - National (#O02357)
6,098 - National (#N02358)
1,957 - Honeoye (#11234)
934 - Dominion (#300076)
9,039 - TGP FT-A (#11234)
9,039
3,144 TBD
3,122 - TGP FT-A (#2302)
3,122
147,833
4,047 TBD
4,092 UNION (#M12200)
4,047 TRANSCANADA
4,047 IROQUOIS (#470-01)
4,000 TGP FT-A(#95346)
4,000
5.000 UNION (PXP)
5,000 TRANSCANADA (PXP)
5,000 PNGTS (PXP)
20,000 - TGP FT-A #42076
20,000
30,000 - TGP FT-A (72694)
30,000
40,000- TGP FT-A (#358905
40000
1,000 PNGTS (208544)
1,000

Agreements for Gas Supply and Transportation

SOURCE	RATE SCHEDULE	CONTRACT NUMBER	TYPE	MDQ MMBTU	MAQ * MMBTU	EXPIRATION DATE	NOTIFICATION DATE	RENEWAL OPTIONS
Dominion Transmission Incorporated	GSS	300076	Storage	934	102,700	3/31/2026	3/31/2024	Mutually agreed upon
Honeoye Storage Corporation	SS-NY	11234	Storage	1,957	245,380	3/31/2025	12 months notice	Evergreen Provision
National Fuel Gas Supply Corporation	FSS	O02358	Storage	6,098	670,800	3/31/2025	3/31/2023	Evergreen Provision
National Fuel Gas Supply Corporation	FSST	N02358	Transportation	6,098	670,800	3/31/2025	3/31/2023	Evergreen Provision
Iroquois Gas Transmission System	RTS	47001	Transportation	4,047	1,477,155	11/1/2027	11/1/2026	Evergreen Provision
Portland Natural Gas Transmission System	FT	208544	Transportation	1,000	365,000	11/30/2032	11/30/2031	Evergreen Provision
Portland Natural Gas Transmission System	FT	PXP	Transportation	5,000	1,825,000	10/31/2040	10/31/2039	Precedent Agreement
Tennessee Gas Pipeline Company	FS-MA	523	Storage	21,844	1,560,391	10/31/2025	10/31/2024	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	8587	Transportation	25,407	9,273,555	10/31/2025	10/31/2024	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	2302	Transportation	3,122	1,139,530	10/31/2025	10/31/2024	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	632	Transportation	15,265	5,571,725	10/31/2025	10/31/2024	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	11234	Transportation	9,039	3,299,235	10/31/2025	10/31/2024	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	72694	Transportation	30,000	10,950,000	10/31/2029	10/31/2028	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	95346	Transportation	4,000	1,460,000	11/30/2026	11/30/2025	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	42076	Transportation	20,000	7,300,000	10/31/2025	10/31/2024	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	358905	Transportation	40,000	14,600,000	10/31/2041	10/31/2040	Evergreen Provision
TransCanada Pipeline	FT	41232	Transportation	4,047	1,477,155	10/31/2026	10/31/2024	Evergreen Provision
TransCanada Pipeline	FT	PXP	Transportation	5,000	1,825,000	10/31/2040	10/31/2038	Precedent Agreement
Union Gas Limited	M12	M12200	Transportation	4,092	1,493,580	10/31/2025	10/31/2023	Evergreen Provision
Union Gas Limited	M12	PXP	Transportation	5,000	1,825,000	10/31/2040	10/31/2038	Precedent Agreement

* MAQ is calculated on a 365 day calendar year.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Peak 2023 – 2024 Winter Cost of Gas Filing

Load Migration From Sales to Transportation in the C&I High and Low Winter Use Classes

July 2022 - June 2023 Normalized Sales and Transportation Volumes (Therms

C&I Rate Classes	Annual Sales	% of Total by Class	% of Sales to Total Volume by Class
G-41	19,151,339	40.52%	78.39%
G-42	15,945,700	33.74%	45.58%
G-43	4,264,567	9.02%	33.11%
G-51	3,013,523	6.38%	76.64%
G-52	3,367,796	7.13%	38.44%
G-53	1,150,486	2.43%	11.32%
G-54	367,476	0.78%	2.02%
Total C/I	47,260,890	100.00%	

	Annual Transportation	% of Total by Class	% of Transportation to Total Volume by Class
G-41	5,278,049	7.99%	21.61%
G-42	19,040,218	28.82%	54.42%
G-43	8,616,539	13.04%	66.89%
G-51	918,590	1.39%	23.36%
G-52	5,393,304	8.16%	61.56%
G-53	9,010,325	13.64%	88.68%
G-54	17,804,387	26.95%	97.98%
Total C/I	66,061,413	100.00%	

Sales & Transportation	Total	% of Total by Class	
G-41	24,429,389	21.56%	100.00%
G-42	34,985,918	30.87%	100.00%
G-43	12,881,107	11.37%	100.00%
G-51	3,932,114	3.47%	100.00%
G-52	8,761,100	7.73%	100.00%
G-53	10,160,812	8.97%	100.00%
G-54	18,171,864	16.04%	100.00%
Total C/I	113,322,303	100.00%	

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Peak 2023 – 2024 Winter Cost of Gas Filing

Delivered Costs of Winter Supplies to Pipeline Delivered Supplies from the Prior Year

	Off-Peak May 22 - Oct 22 (Therms)	Peak Nov 22 - Apr 23 (Therms)	Total May 22 - Apr 23 (Therms)	Ratio
Pipeline Deliveries	19,184,515	77,091,145	96,275,660	
All Others	78,922	3,971,272	4,050,194	
	19,263,436	81,062,417	100,325,854	
Total Winter Supplies				81,062,417
Total Pipeline Deliveries				96,275,660
Ratio Winter Supplies to Pipeline Supplies				0.842

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

Peak 2023 – 2024 Winter Cost of Gas Filing

July and August Consumption of C&I High and Low Winter Classes as a Percentage of Their Annual Consumption

C&I Sales Normalized (Therms)	Jul-22	Aug-22	Jul - Aug 2022 Total	Total Annual	% of Jul-Aug to Total
(a)	(b)	(c)	(e)=(c)+(d)	(f)	(g)=(e)/(f)
G-41	207,393	152,071	359,464	19,151,339	1.88%
G-42	234,970	179,709	414,679	15,945,700	2.60%
G-43	101,723	76,059	177,781	4,264,567	4.17%
G-51	178,735	179,423	358,159	3,013,523	11.89%
G-52	203,230	202,062	405,292	3,367,796	12.03%
G-53	68,896	66,493	135,389	1,150,486	11.77%
G-54	27,687	28,258	55,945	367,476	15.22%
Total C/I	1,022,634	884,075	1,906,709	47,260,890	4.03%

1 **Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**
2 **Peak 2023 – 2024 Winter Cost of Gas Filing**

4 **Storage Inventory, Undergound, LPG and LNG including Calculation of Money Pool Interest Costs Associated with Natural Gas**

6 **Underground Storage Gas**

Ln			May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Aug-24	Total
8			(Actual)	(Actual)	(Actual)	(Estimate)	(Estimate)	(Estimate)	(Estimate)	(Estimate)	(Estimate)	(Estimate)	(Estimate)	(Estimate)	(Estimate)	(Estimate)	
9	Beginning Balance (MMBtu)		548,568	817,915	1,037,668	1,249,415	1,486,080	1,722,745	1,959,410	1,844,597	1,221,364	599,024	77,960	(61,446)	(56,566)	798,376	548,568
11	Injections (MMBtu)	Sch 11A ln 39 /10	276,445	223,693	213,865	236,665	236,665	236,665		-	-	-	-	104,880	347,659	347,659	1,876,537
13	Subtotal		825,013	1,041,608	1,251,533	1,486,080	1,722,745	1,959,410	1,959,410	1,844,597	1,221,364	599,024	77,960	43,434	291,093	1,146,035	
15	Storage Sale/Adjustments		(7,098)	(3,940)	(2,118)	-	-	-	-	-	-	-	-	-			(13,156)
17	Withdrawals (MMBtu)	Sch 11A ln 29 /10	-	-	-	-	-	-	(114,813)	(623,233)	(622,340)	(521,065)	(139,405)	(100,000)	(188,034)	-	(2,308,890)
19	Ending Balance (MMBtu)		817,915	1,037,668	1,249,415	1,486,080	1,722,745	1,959,410	1,844,597	1,221,364	599,024	77,960	(61,446)	(56,566)	103,059	1,146,035	103,059
22	Beginning Balance		$ 2,115,982	$ 2,583,473	$ 2,894,784	$ 3,199,841	$ 3,607,383	$ 4,014,926	$ 4,422,468	$ 4,163,331	$ 2,756,668	$ 1,352,022	$ 175,958	$ (138,685)	$ (169,462)	$ 2,997,726	$ 2,115,982
24	Injections	ln 11 * ln 36	$ 482,639	$ 315,767	$ 304,339	$ 407,542	$ 407,542	$ 407,542	$ -	$ -	$ -	$ -	$ -	$ 268,807	$ 1,205,847	$ 1,296,075	$ 3,800,026
26	Subtotal		$ 2,598,621	$ 2,899,240	$ 3,199,123	$ 3,607,383	$ 4,014,926	$ 4,422,468	$ 4,422,468	$ 4,163,331	$ 2,756,668	$ 1,352,022	$ 175,958	$ 130,122	$ 1,036,385	$ 4,293,801	
28	Storage Sale/Adjustments		$ (15,148)	$ (4,457)	$ 718			$ -									$ (18,886)
30	Withdrawals	ln 17 * ln 34	-	-	-	-	-	-	(259,137)	(1,406,663)	(1,404,646)	(1,176,064)	(314,643)	(299,583)	$ (563,319)	$ -	$ (5,424,055)
32	Ending Balance		$ 2,583,473	$ 2,894,784	$ 3,199,841	$ 3,607,383	$ 4,014,926	$ 4,422,468	$ 4,163,331	$ 2,756,668	$ 1,352,022	$ 175,958	$ (138,685)	$ (169,462)	$ 473,066	$ 4,293,801	$ 473,066
34	Average Rate For Withdrawals ln 22 /ln 9		$ 3.1498	$ 2.7834	$ 2.5562	$ 2.4274	$ 2.3305	$ 2.2570	$ 2.2570	$ 2.2570	$ 2.2570	$ 2.2570	$ 2.2570	$ 2.9958	$2.9958	$3.7548	
36	TGP Storage Rate for Injections	Actual or NYMEX plus TGP Transportation	$ 1.7459	$ 1.4116	$ 1.4230	$ 1.7220	$ 1.7220	$ 1.7220	$ 2.0210	$ 2.9910	$ 3.2840	$ 3.3390	$ 3.1320	$ 2.5630	$3.4685	$3.7280	
38	For Informational Purposes								Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Aug-24	Total
39	Summer Hedge Contracts - Vols Dth								-	-	-	-	-	-	-	-	-
40	Average Hedge Price								$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
41	NYMEX								$ 3.1060	$ 3.5760	$ 3.8240	$ 3.7490	$ 3.4370	$ 3.1230	$ 3.4692	#REF!	
43	Hedged Volumes at Hedged Price								$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
44	Less Hedged Volumes at NYMEX								$ -	$ -	$ -	$ -	$ -	$ -	$ -	#REF!	$ -
45	Hedge (Savings)/Loss								$ -	$ -	$ -	$ -	$ -	$ -	$ -	#REF!	$ -
47	Month Dollar Average	ln (22 + ln 32) /2				$ 3,403,612	$ 3,811,154	$ 4,218,697	$ 4,292,900	$ 3,460,000	$ 2,054,345	$ 763,990	$ 18,636	$ (154,073)	$ 151,802	$ 3,645,763	
49	Money Pool Finance Rate (per Nov 10 - Apr 11 Actuals)					0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
51	Inventory Finance Charge	ln 47 * ln 49				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -			
52	Financial Expenses					-	-	-	-	-	-	-	-	-			
53	Total Inventory Finance Charges					$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -			

Schedule 16
Page 2 of 2

Ln	Item	Reference	May-23 (Actual)	Jun-23 (Actual)	Jul-23 (Actual)	Aug-23 (Estimate)	Sep-23 (Estimate)	Oct-23 (Estimate)	Nov-23 (Estimate)	Dec-23 (Estimate)	Jan-24 (Estimate)	Feb-24 (Estimate)	Mar-24 (Estimate)	Apr-24 (Estimate)	May-24 (Estimate)	Aug-24 (Estimate)	Total
41	**Liquid Propane Gas (LPG)**																
44	Beginning Balance		88,573	88,573	87,761	87,761	94,215	100,669	107,123	107,123	107,123	49,027	49,027	49,027	57,408	62,328	88,573
46	Injections	Sch 11A ln 38 /10	-	-		6,454	6,454	6,454	-	-	20,727	452	-	8,382	-	7,179	48,922
48	Subtotal		88,573	88,573	87,761	94,215	100,669	107,123	107,123	107,123	127,850	49,479	49,027	57,408	57,408	69,508	
50	Withdrawals	Sch 11A ln 33 /10	-	-	-	-	-	-	-	-	(78,823)	(452)	-	-	-	-	(79,275)
52	Adjustment for change in temperature			(812)		-	-	-	-	-	-	-	-	-	-	-	(812)
53	Adjustment for Transfer		-	-	-	-	-	-	-	-	-	-	-	-			-
54	Ending Balance		88,573	87,761	87,761	94,215	100,669	107,123	107,123	107,123	49,027	49,027	49,027	57,408	57,408	69,508	57,408
57	Beginning Balance		$ 1,497,859	$ 1,497,859	$ 1,484,127	$ 1,484,127	$ 1,569,320	$ 1,654,512	$ 1,739,705	$ 1,739,705	$ 1,739,705	$ 775,223	$ 774,233	$ 774,233	$ 888,223	$ 888,223	$ 1,497,859
59	Injections	ln 46 * ln 69	-	-		85,193	85,193	85,193	-	-	281,887	6,143	-	113,990	-	-	657,599
61	Subtotal		$ 1,497,859	$ 1,497,859	$ 1,484,127	$ 1,569,320	$ 1,654,512	$ 1,739,705	$ 1,739,705	$ 1,739,705	$ 2,021,593	$ 781,367	$ 774,233	$ 888,223	$ 888,223	$ 888,223	
63	Withdrawals/ Adjust	ln 52 * ln 67		(13,732)		-	-	-	-	-	(1,246,369)	(7,134)	-	-	-	-	(1,267,234)
65	Ending Balance		$ 1,497,859	$ 1,484,127	$ 1,484,127	$ 1,569,320	$ 1,654,512	$ 1,739,705	$ 1,739,705	$ 1,739,705	$ 775,223	$ 774,233	$ 774,233	$ 888,223	$ 888,223	$ 888,223	$ 888,223
67	Average Rate For Withdrawals		$16.9110	$16.9110	$16.9110	$16.6568	$16.4352	$16.2403	$16.2403	$16.2403	$15.8122	$15.7920	$15.7920	$15.4720	$15.4720	$12.7788	
69	Propane Rate for Injections	Actual or Sch. 6, ln 165 * 10	0	0	0	$13.2000	$13.2000	$13.2000	$13.6000	$13.6000	$13.6000	$13.6000	$13.6000	$13.6000	$15.8915	$0.0000	
72	Month Dollar Average	ln (57 + ln 65) /2				$ 1,526,723	$ 1,611,916	$ 1,697,109	$ 1,739,705	$ 1,739,705	$ 1,257,464	$ 774,728	$ 774,233	$ 831,228			
74	Money Pool Finance Rate (per Nov 10 - Apr 11 Actuals)					0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
76	Inventory Finance Charge	ln 72 * ln 74				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -			
79	**Liquid Natural Gas (LNG)**		May-23 (Actual)	Jun-23 (Actual)	Jul-23 (Actual)	Aug-23 (Estimate)	Sep-23 (Estimate)	Oct-23 (Estimate)	Nov-23 (Estimate)	Dec-23 (Estimate)	Jan-24 (Estimate)	Feb-24 (Estimate)	Mar-24 (Estimate)	Apr-24 (Estimate)	May-24 (Estimate)	Aug-24 (Estimate)	Total
81	Beginning Balance		11,062	11,235	10,197	11,043	11,889	12,735	13,581	11,437	7,046	4,928	13,511	13,063	10,950	5,789	11,062
83	Injections	Sch 11A ln 37 /10	1,719	4,393	4,446	4,446	4,446	4,446	-	110,521	187,375	185,207	1,717	-	-	999	508,717
85	Subtotal		12,781	15,628	14,643	15,489	16,335	17,181	13,581	121,958	194,422	190,136	15,229	13,063	10,950	6,788	
87	Withdrawals	Sch 11A ln 32 /10	(1,546)	(5,431)	(3,600)	(3,600)	(3,600)	(3,600)	(2,144)	(114,912)	(189,493)	(176,624)	(2,165)	(2,114)	(2,046)	(1,810)	(510,876)
89	Ending Balance		11,235	10,197	11,043	11,889	12,735	13,581	11,437	7,046	4,928	13,511	13,063	10,950	8,903	4,977	8,903
92	Beginning Balance		$ 121,679	$ 124,188	$ 114,826	$ 127,575	$ 139,631	$ 151,220	$ 162,485	$ 136,835	$ 86,769	$ 60,859	$ 166,862	$ 165,116	138,400	68,662	$ 121,679
94	Injections	ln 83 * ln 104	19,588	51,652	54,336	54,336	54,336	54,336	-	1,364,936	2,314,084	2,287,309	25,623	-	-	3,358	6,280,537
96	Subtotal		$ 141,266	$ 175,840	$ 169,163	$ 181,912	$ 193,968	$ 205,556	$ 162,485	$ 1,501,771	$ 2,400,853	$ 2,348,168	$ 192,485	$ 165,116	$ 138,400	$ 72,020	
98	Withdrawals	ln 87 * ln 102	(17,078)	(61,013)	(41,588)	(42,280)	(42,748)	(43,071)	(25,651)	(1,415,002)	(2,339,994)	(2,181,305)	(27,370)	(26,716)	(25,864)	(19,209)	(6,289,680)
100	Ending Balance		$ 124,188	$ 114,826	$ 127,575	$ 139,631	$ 151,220	$ 162,485	$ 136,835	$ 86,769	$ 60,859	$ 166,862	$ 165,116	$ 138,400	$ 112,536	$ 52,811	$ 112,536
102	Average Rate For Withdrawals		$11.0528	$11.2516	$11.5525	$11.7446	$11.8744	$11.9642	$11.9642	$12.3138	$12.3487	$12.3500	$12.6398	$12.6398	$12.6398	$10.6102	
104	LNG Rate for Injections	Actual or Sch. 6, ln 164 * 10	$11.3948	$11.7577	$12.2214	$12.2214	$12.2214	$12.2214	$14.9200	$12.3500	$12.3500	12.35	14.92	14.92	3.11	$3.3620	
107	Month Dollar Average	ln (92 + ln 100) /2				$ 133,603	$ 145,425	$ 156,853	$ 149,660	$ 111,802	$ 73,814	$ 113,861	$ 165,989	$ 151,758			
109	Money Pool Finance Rate (per Nov 10 - Apr 11 Actuals)					0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
111	Inventory Finance Charge	ln 107 * ln 109				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -			
114	Total Fuel Financing	lns 53 + 76 + 111				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -			

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Peak 2023 – 2024 Winter Cost of Gas Filing

Forecast of Firm Transportation Volumes and Cost of Gas Revenues

Firm Transportation

	Therms 1/	Cost of Gas Rate 2/	Cost of Gas Revenue
Nov-23	6,463,408	$ 0.0018	$ 11,638
Dec-23	7,720,141	0.0018	13,901
Jan-24	8,771,907	0.0018	15,794
Feb-24	7,745,798	0.0018	13,947
Mar-24	7,160,542	0.0018	12,893
Apr-24	5,362,810	0.0018	9,656
Total	**43,224,605**		**$ 77,829**

1/ Per Schedule 10B, line 34. Excludes special contract volumes subject to transportation cost of gas.
2/ Refer to Pk Tariff Page 98 for calculation of rate.

III DELIVERY TERMS AND CONDITIONS

ATTACHMENT B
Schedule of Administrative Fees and Charges

I.	Supplier Balancing Charge:	$ 0.14	
II.	Capacity Mitigation Fee	15% of the Proceeds from the Marketing of Capacity for Mitigation.	
III.	Peaking Demand Charge	$ 43.95	MMBTU of Peak MDQ
IV.	Company Allowance Calculation (per Schedule 25)		
		160,052,009	Total Sendout - Therms Jul-2022 - Jun-2023
		153,641,897	Total Throughput - Therms Jul-2022 - Jun-2023
		6,410,112	Variance (Sendout - Throughput)
	Company Allowance Percentage 2023-24	4.0%	Variance / Total Sendout

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

Calculation of Supplier Balancing Charge
2023-2024

Rate: $ 0.1445 /MMBtu

		Rate	**Volume**		**Total**	
Injection Cost		$ 0.0087	482,398	$	4,197	
Fuel	1.29%	$ 0.0330	482,398	$	15,931	
Withdrawal Cost		$ 0.0087	185,955	$	1,618	
Delivery Rate		$ 0.0416	185,955	$	7,741	
FTA Demand Charge		$ 0.2280	185,955	$	42,391	
FTA Commodity Charge		$ 0.1038	185,955	$	19,302	
Fuel	1.13%	$ 0.0289	185,955	$	5,379	
			Total Cost	$	96,559	
		Absolute Value of the	Sendout Error		**668,353**	MMBtu
			Rate	$	0.1445	/MMBTU

NOTES: See Tennessee Gas Pipeline Tariff Pages in PK Schedule 6

TGP FSMA Injection Charge	$	0.0087	/ MMBtu
TGP FSMA Withdrawal Charge	$	0.0087	/ MMBtu
TGP FSMA Deliverability Charge	$	1.2655	/ MMBtu per month
	$	0.0416	/ MMBtu per day
TGP Z4-6 Demand Charge	$	6.9301	/ MMBtu per month
	$	0.2280	/ MMBtu per day
TGP Z4-6 Commodity Charge	$	0.1038	/ MMBtu

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

Calculation of Supplier Balancing Charge
2023-2024
Estimated Monthly Imbalances

Date	Forecasted DD	Actual DD	Forecaster Error DD		Forecasted Sendout (MMBtu)	Actual Sendout (MMBtu)	Sendout Error (MMBtu)	Abs.Value Sendout Error (MMBtu)		Injections (MMBtu)	Withdrawals (MMBtu)
Nov	615	593	22		1,451,087	1,413,081	38,006	62,191		50,099	12,093
Dec	973	942	31		2,265,197	2,210,006	55,191	97,920		76,555	21,364
Jan	977	951	26		2,277,983	2,230,783	47,199	101,660		74,430	27,230
Feb	940	939	1	0	2,207,316	2,205,290	2,026	103,313	0	52,670	50,644
Mar	841	820	21	0	1,964,675	1,919,714	44,961	100,628	0	72,795	27,833
Apr	509	483	26		1,194,438	1,155,105	39,333	84,718		62,025	22,692
May	171	149	22		636,097	607,015	29,082	37,014		33,048	3,966
Jun	36	36	0	0	425,971	425,971	0	3,429	0	1,714	1,714
Jul	0	0	0	0	351,822	351,822	0	0	0	0	0
Aug	-	-	-	-	362,437	362,437	0	0	0	0	0
Sep	133	115	18	-	463,120	449,821	13,299	20,688	0	16,993	3,694
Oct	391	365	26	-	886,863	859,519	27,344	56,792	0	42,068	14,724
Total	**5,586**	**5,393**	**193**		**14,487,007**	**14,190,564**	**296,443**	**668,353**		**482,398**	**185,955**

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Calculation of Supplier Balancing Charge
2023-2024

Estimated Daily Imbalances

	Date	Predicted MAN HDD	Actual MAN HDD	Forecaster Error MAN HDD	Calculated on Predicted MAN HDD	Calculated on Actual MAN HDD	Sendout Error (MMBtu)	Abs.Value Sendout Error (MMBtu)	Injections (MMBtu)	Withdrawals (MMBtu)
1	Apr 1, 2022	23	21	2	48941.93046	45916.299	3025.63146	3025.63146	3025.63146	0
2	Apr 2, 2022	24	23	1	50454.7462	48941.93046	1512.81573	1512.81573	1512.81573	0
3	Apr 3, 2022	23	22	1	48941.93046	47429.11473	1512.81573	1512.81573	1512.81573	0
4	Apr 4, 2022	21	18	3	45916.299	41377.85181	4538.44719	4538.44719	4538.44719	0
5	Apr 5, 2022	16	14	2	38352.22034	35326.58888	3025.63146	3025.63146	3025.63146	0
6	Apr 6, 2022	20	19	1	44403.48327	42890.66754	1512.81573	1512.81573	1512.81573	0
7	Apr 7, 2022	17	18	-1	39865.03608	41377.85181	-1512.81573	1512.81573	0	1512 815731
8	Apr 8, 2022	15	17	-2	36839.40461	39865.03608	-3025.63146	3025.63146	0	3025 631463
9	Apr 9, 2022	19	22	-3	42890.66754	47429.11473	-4538.44719	4538.44719	0	4538.447194
10	Apr 10, 2022	21	20	1	45916.299	44403.48327	1512.81573	1512.81573	1512.81573	0
11	Apr 11, 2022	13	10	3	33813.77315	29275.32596	4538.44719	4538.44719	4538.44719	0
12	Apr 12, 2022	11	10	1	30788.14169	29275.32596	1512.81573	1512.81573	1512.81573	0
13	Apr 13, 2022	8	10	-2	26249.69449	29275.32596	-3025.63146	3025.63146	0	3025 631463
14	Apr 14, 2022	13	18	-5	33813.77315	41377.85181	-7564.07866	7564.07866	0	7564 078657
15	Apr 15, 2022	9	5	4	27762.51023	21711.2473	6051.26293	6051.26293	6051.26293	0
16	Apr 16, 2022	16	17	-1	38352.22034	39865.03608	-1512.81573	1512.81573	0	1512 815731
17	Apr 17, 2022	23	23	0	48941.93046	48941.93046	0	0	0	0
18	Apr 18, 2022	18	16	2	41377.85181	38352.22034	3025.63146	3025.63146	3025.63146	0
19	Apr 19, 2022	21	19	2	45916.299	42890.66754	3025.63146	3025.63146	3025.63146	0
20	Apr 20, 2022	21	20	1	45916.299	44403.48327	1512.81573	1512.81573	1512.81573	0
21	Apr 21, 2022	12	9	3	32300.95742	27762.51023	4538.44719	4538.44719	4538.44719	0
22	Apr 22, 2022	16	12	4	38352.22034	32300.95742	6051.26293	6051.26293	6051.26293	0
23	Apr 23, 2022	16	12	4	38352.22034	32300.95742	6051.26293	6051.26293	6051.26293	0
24	Apr 24, 2022	16	15	1	38352.22034	36839.40461	1512.81573	1512.81573	1512.81573	0
25	Apr 25, 2022	13	11	2	33813.77315	30788.14169	3025.63146	3025.63146	3025.63146	0
26	Apr 26, 2022	10	11	-1	29275.32596	30788.14169	-1512.81573	1512.81573	0	1512 815731
27	Apr 27, 2022	20	20	0	44403.48327	44403.48327	0	0	0	0
28	Apr 28, 2022	21	20	1	45916.299	44403.48327	1512.81573	1512.81573	1512.81573	0
29	Apr 29, 2022	18	17	1	41377.85181	39865.03608	1512.81573	1512.81573	1512.81573	0
30	Apr 30, 2022	15	14	1	36839.40461	35326.58888	1512.81573	1512.81573	1512.81573	0
31	May 1, 2022	10	8	2	26446.56509	23802.73345	2643.83165	2643.83165	2643.83165	0
32	May 2, 2022	15	14	1	33056.14421	31734.22838	1321.91582	1321.91582	1321.91582	0
33	May 3, 2022	14	12	2	31734.22838	29090.39674	2643.83165	2643.83165	2643.83165	0
34	May 4, 2022	13	13	0	30412.31256	30412.31256	0	0	0	0
35	May 5, 2022	8	7	1	23802.73345	22480.81763	1321.91582	1321.91582	1321.91582	0
36	May 6, 2022	9	8	1	25124.64927	23802.73345	1321.91582	1321.91582	1321.91582	0
37	May 7, 2022	17	16	1	35699.97585	34378.06003	1321.91582	1321.91582	1321.91582	0
38	May 8, 2022	17	16	1	35699.97585	34378.06003	1321.91582	1321.91582	1321.91582	0
39	May 9, 2022	13	11	2	30412.31256	27768.48092	2643.83165	2643.83165	2643.83165	0
40	May 10, 2022	12	10	2	29090.39674	26446.56509	2643.83165	2643.83165	2643.83165	0
41	May 11, 2022	6	3	3	21158 9018	17193.15434	3965.74747	3965.74747	3965.74747	0
42	May 12, 2022	0	0	0	13227.40687	13227.40687	0	0	0	0
43	May 13, 2022	0	0	0	13227.40687	13227.40687	0	0	0	0
44	May 14, 2022	0	0	0	13227.40687	13227.40687	0	0	0	0
45	May 15, 2022	0	0	0	13227.40687	13227.40687	0	0	0	0
46	May 16, 2022	0	0	0	13227.40687	13227.40687	0	0	0	0
47	May 17, 2022	4	4	0	18515.07016	18515.07016	0	0	0	0
48	May 18, 2022	5	4	1	19836.98598	18515.07016	1321.91582	1321.91582	1321.91582	0
49	May 19, 2022	9	9	0	25124.64927	25124.64927	0	0	0	0
50	May 20, 2022	0	3	-3	13227.40687	17193.15434	-3965.74747	3965.74747	0	3965.747468
51	May 21, 2022	0	0	0	13227.40687	13227.40687	0	0	0	0
52	May 22, 2022	0	0	0	13227.40687	13227.40687	0	0	0	0
53	May 23, 2022	4	2	2	18515.07016	15871.23851	2643.83165	2643.83165	2643.83165	0
54	May 24, 2022	9	6	3	25124.64927	21158.9018	3965.74747	3965.74747	3965.74747	0
55	May 25, 2022	3	0	3	17193.15434	13227.40687	3965.74747	3965.74747	3965.74747	0
56	May 26, 2022	0	0	0	13227.40687	13227.40687	0	0	0	0
57	May 27, 2022	0	0	0	13227.40687	13227.40687	0	0	0	0
58	May 28, 2022	0	0	0	13227.40687	13227.40687	0	0	0	0
59	May 29, 2022	0	0	0	13227.40687	13227.40687	0	0	0	0
60	May 30, 2022	0	0	0	13227.40687	13227.40687	0	0	0	0
61	May 31, 2022	3	3	0	17193.15434	17193.15434	0	0	0	0
62	Jun 1, 2022	7	9	-2	15856.22873	16427.67715	-571.448422	571.448422	0	571.4484222
63	Jun 2, 2022	5	6	-1	15284.7803	15570.50452	-285.724211	285.724211	0	285.7242111
64	Jun 3, 2022	5	6	-1	15284.7803	15570.50452	-285.724211	285.724211	0	285.7242111
65	Jun 4, 2022	1	0	1	14141.88346	13856.15925	285.724211	285.724211	285.724211	0
66	Jun 5, 2022	1	0	1	14141.88346	13856.15925	285.724211	285.724211	285.724211	0

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	Date	Predicted MAN HDD	Actual MAN HDD	Forecaster Error MAN HDD	Calculated on Predicted MAN HDD	Calculated on Actual MAN HDD	Sendout Error (MMBtu)	Abs.Value Sendout Error (MMBtu)	Injections (MMBtu)	Withdrawals (MMBtu)
1	Jun 6, 2022	0	0	0	13856.15925	13856.15925	0	0	0	0
2	Jun 7, 2022	0	0	0	13856.15925	13856.15925	0	0	0	0
3	Jun 8, 2022	0	0	0	13856.15925	13856.15925	0	0	0	0
4	Jun 9, 2022	2	0	2	14427.60767	13856.15925	571.448422	571.448422	571.448422	0
5	Jun 10, 2022	0	0	0	13856.15925	13856.15925	0	0	0	0
6	Jun 11, 2022	0	0	0	13856.15925	13856.15925	0	0	0	0
7	Jun 12, 2022	0	0	0	13856.15925	13856.15925	0	0	0	0
8	Jun 13, 2022	0	0	0	13856.15925	13856.15925	0	0	0	0
9	Jun 14, 2022	0	0	0	13856.15925	13856.15925	0	0	0	0
10	Jun 15, 2022	0	0	0	13856.15925	13856.15925	0	0	0	0
11	Jun 16, 2022	0	0	0	13856.15925	13856.15925	0	0	0	0
12	Jun 17, 2022	0	0	0	13856.15925	13856.15925	0	0	0	0
13	Jun 18, 2022	7	8	-1	15856.22873	16141.95294	-285.724211	285.724211	0	285.7242111
14	Jun 19, 2022	6	7	-1	15570.50452	15856.22873	-285.724211	285.724211	0	285.7242111
15	Jun 20, 2022	1	0	1	14141.88346	13856.15925	285.724211	285.724211	285.724211	0
16	Jun 21, 2022	0	0	0	13856.15925	13856.15925	0	0	0	0
17	Jun 22, 2022	1	0	1	14141.88346	13856.15925	285.724211	285.724211	285.724211	0
18	Jun 23, 2022	0	0	0	13856.15925	13856.15925	0	0	0	0
19	Jun 24, 2022	0	0	0	13856.15925	13856.15925	0	0	0	0
20	Jun 25, 2022	0	0	0	13856.15925	13856.15925	0	0	0	0
21	Jun 26, 2022	0	0	0	13856.15925	13856.15925	0	0	0	0
22	Jun 27, 2022	0	0	0	13856.15925	13856.15925	0	0	0	0
23	Jun 28, 2022	0	0	0	13856.15925	13856.15925	0	0	0	0
24	Jun 29, 2022	0	0	0	13856.15925	13856.15925	0	0	0	0
25	Jun 30, 2022	0	0	0	13856.15925	13856.15925	0	0	0	0
26	Jul 1, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
27	Jul 2, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
28	Jul 3, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
29	Jul 4, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
30	Jul 5, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
31	Jul 6, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
32	Jul 7, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
33	Jul 8, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
34	Jul 9, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
35	Jul 10, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
36	Jul 11, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
37	Jul 12, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
38	Jul 13, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
39	Jul 14, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
40	Jul 15, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
41	Jul 16, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
42	Jul 17, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
43	Jul 18, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
44	Jul 19, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
45	Jul 20, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
46	Jul 21, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
47	Jul 22, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
48	Jul 23, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
49	Jul 24, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
50	Jul 25, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
51	Jul 26, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
52	Jul 27, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
53	Jul 28, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
54	Jul 29, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
55	Jul 30, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
56	Jul 31, 2022	0	0	0	11349.08588	11349.08588	0	0	0	0
57	Aug 1, 2022	0	0	0	11691.52518	11691.52518	0	0	0	0
58	Aug 2, 2022	0	0	0	11691.52518	11691.52518	0	0	0	0
59	Aug 3, 2022	0	0	0	11691.52518	11691.52518	0	0	0	0
60	Aug 4, 2022	0	0	0	11691.52518	11691.52518	0	0	0	0
61	Aug 5, 2022	0	0	0	11691.52518	11691.52518	0	0	0	0
62	Aug 6, 2022	0	0	0	11691.52518	11691.52518	0	0	0	0
63	Aug 7, 2022	0	0	0	11691.52518	11691.52518	0	0	0	0
64	Aug 8, 2022	0	0	0	11691.52518	11691.52518	0	0	0	0
65	Aug 9, 2022	0	0	0	11691.52518	11691.52518	0	0	0	0
66	Aug 10, 2022	0	0	0	11691.52518	11691.52518	0	0	0	0
67	Aug 11, 2022	0	0	0	11691.52518	11691.52518	0	0	0	0

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	Date	Predicted MAN HDD	Actual MAN HDD	Forecaster Error MAN HDD	Calculated on Predicted MAN HDD	Calculated on Actual MAN HDD	Sendout Error (MMBtu)	Abs.Value Sendout Error (MMBtu)	Injections (MMBtu)	Withdrawals (MMBtu)
1	8/12/2022	0	0	0	11691.52518	11691.52518	0	0	0	0
2	8/13/2022	0	0	0	11691.52518	11691.52518	0	0	0	0
3	8/14/2022	0	0	0	11691.52518	11691.52518	0	0	0	0
4	8/15/2022	0	0	0	11691.52518	11691.52518	0	0	0	0
5	8/16/2022	0	0	0	11691.52518	11691.52518	0	0	0	0
6	8/17/2022	0	0	0	11691.52518	11691.52518	0	0	0	0
7	8/18/2022	0	0	0	11691.52518	11691.52518	0	0	0	0
8	8/19/2022	0	0	0	11691.52518	11691.52518	0	0	0	0
9	8/20/2022	0	0	0	11691.52518	11691.52518	0	0	0	0
10	8/21/2022	0	0	0	11691.52518	11691.52518	0	0	0	0
11	8/22/2022	0	0	0	11691.52518	11691.52518	0	0	0	0
12	8/23/2022	0	0	0	11691.52518	11691.52518	0	0	0	0
13	8/24/2022	0	0	0	11691.52518	11691.52518	0	0	0	0
14	8/25/2022	0	0	0	11691.52518	11691.52518	0	0	0	0
15	8/26/2022	0	0	0	11691.52518	11691.52518	0	0	0	0
16	8/27/2022	0	0	0	11691.52518	11691.52518	0	0	0	0
17	8/28/2022	0	0	0	11691.52518	11691.52518	0	0	0	0
18	8/29/2022	0	0	0	11691.52518	11691.52518	0	0	0	0
19	8/30/2022	0	0	0	11691.52518	11691.52518	0	0	0	0
20	8/31/2022	0	0	0	11691.52518	11691.52518	0	0	0	0
21	9/1/2022	1	1	0	12900.65219	12900.65219	0	0	0	0
22	9/2/2022	0	1	-1	12161.80848	12900.65219	-738.843716	738.843716	0	738.8437157
23	9/3/2022	0	0	0	12161.80848	12161.80848	0	0	0	0
24	9/4/2022	0	0	0	12161.80848	12161.80848	0	0	0	0
25	9/5/2022	4	3	1	15117.18334	14378.33962	738.843716	738.843716	738.843716	0
26	9/6/2022	4	2	2	15117.18334	13639.49591	1477.68743	1477.68743	1477.68743	0
27	9/7/2022	3	2	1	14378.33962	13639.49591	738.843716	738.843716	738.843716	0
28	9/8/2022	2	2	0	13639.49591	13639.49591	0	0	0	0
29	9/9/2022	0	0	0	12161.80848	12161.80848	0	0	0	0
30	9/10/2022	0	0	0	12161.80848	12161.80848	0	0	0	0
31	9/11/2022	0	0	0	12161.80848	12161.80848	0	0	0	0
32	9/12/2022	0	0	0	12161.80848	12161.80848	0	0	0	0
33	9/13/2022	0	0	0	12161.80848	12161.80848	0	0	0	0
34	9/14/2022	0	0	0	12161.80848	12161.80848	0	0	0	0
35	9/15/2022	8	9	-1	18072 5582	18811.40192	-738.843716	738.843716	0	738.8437157
36	9/16/2022	8	7	1	18072 5582	17333.71449	738.843716	738.843716	738.843716	0
37	9/17/2022	2	1	1	13639.49591	12900.65219	738.843716	738.843716	738.843716	0
38	9/18/2022	0	0	0	12161.80848	12161.80848	0	0	0	0
39	9/19/2022	6	6	0	16594.87077	16594.87077	0	0	0	0
40	9/20/2022	5	6	-1	15856.02705	16594.87077	-738.843716	738.843716	0	738.8437157
41	9/21/2022	0	1	-1	12161.80848	12900.65219	-738.843716	738.843716	0	738.8437157
42	9/22/2022	11	9	2	20289.08935	18811.40192	1477.68743	1477.68743	1477.68743	0
43	9/23/2022	16	13	3	23983.30793	21766.77678	2216.53115	2216.53115	2216.53115	0
44	9/24/2022	12	10	2	21027.93306	19550.24563	1477.68743	1477.68743	1477.68743	0
45	9/25/2022	5	3	2	15856.02705	14378.33962	1477.68743	1477.68743	1477.68743	0
46	9/26/2022	5	2	3	15856.02705	13639.49591	2216.53115	2216.53115	2216.53115	0
47	9/27/2022	7	5	2	17333.71449	15856.02705	1477.68743	1477.68743	1477.68743	0
48	9/28/2022	8	6	2	18072 5582	16594.87077	1477.68743	1477.68743	1477.68743	0
49	9/29/2022	14	13	1	22505 6205	21766.77678	738.843716	738.843716	738.843716	0
50	9/30/2022	12	13	-1	21027.93306	21766.77678	-738.843716	738.843716	0	738.8437157
51	10/1/2022	12	10	2	27963.88876	25860.47846	2103.41029	2103.41029	2103.41029	0
52	10/2/2022	17	17	0	33222.41449	33222.41449	0	0	0	0
53	10/3/2022	18	15	3	34274.11964	31119.0042	3155.11544	3155.11544	3155.11544	0
54	10/4/2022	13	9	4	29015 5939	24808.77332	4206.82059	4206.82059	4206.82059	0
55	10/5/2022	9	6	3	24808.77332	21653.65787	3155.11544	3155.11544	3155.11544	0
56	10/6/2022	4	4	0	19550.24758	19550.24758	0	0	0	0
57	10/7/2022	7	3	4	22705.36302	18498.54243	4206.82059	4206.82059	4206.82059	0
58	10/8/2022	18	18	0	34274.11964	34274.11964	0	0	0	0
59	10/9/2022	15	14	1	31119 0042	30067.29905	1051.70515	1051.70515	1051.70515	0
60	10/10/2022	15	18	-3	31119 0042	34274.11964	-3155.11544	3155.11544	0	3155.115441
61	10/11/2022	11	14	-3	26912.18361	30067.29905	-3155.11544	3155.11544	0	3155.115441
62	10/12/2022	5	3	2	20601.95273	18498.54243	2103.41029	2103.41029	2103.41029	0
63	10/13/2022	2	1	1	17446.83729	16395.13214	1051.70515	1051.70515	1051.70515	0
64	10/14/2022	10	11	-1	25860.47846	26912.18361	-1051.70515	1051.70515	0	1051.705147
65	10/15/2022	10	11	-1	25860.47846	26912.18361	-1051.70515	1051.70515	0	1051.705147
66	10/16/2022	13	13	0	29015 5939	29015.5939	0	0	0	0
67	10/17/2022	11	10	1	26912.18361	25860.47846	1051.70515	1051.70515	1051.70515	0

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	Date	Predicted MAN HDD	Actual MAN HDD	Forecaster Error MAN HDD	Calculated on Predicted MAN HDD	Calculated on Actual MAN HDD	Sendout Error (MMBtu)	Abs.Value Sendout Error (MMBtu)	Injections (MMBtu)	Withdrawals (MMBtu)
1	10/18/2022	19	17	2	35325.82478	33222.41449	2103.41029	2103.41029	2103.41029	0
2	10/19/2022	21	19	2	37429.23508	35325.82478	2103.41029	2103.41029	2103.41029	0
3	10/20/2022	20	19	1	36377.52993	35325.82478	1051.70515	1051.70515	1051.70515	0
4	10/21/2022	18	18	0	34274.11964	34274.11964	0	0	0	0
5	10/22/2022	14	12	2	30067.29905	27963.88876	2103.41029	2103.41029	2103.41029	0
6	10/23/2022	11	9	2	26912.18361	24808.77332	2103.41029	2103.41029	2103.41029	0
7	10/24/2022	8	6	2	23757.06817	21653.65787	2103.41029	2103.41029	2103.41029	0
8	10/25/2022	4	1	3	19550.24758	16395.13214	3155.11544	3155.11544	3155.11544	0
9	10/26/2022	4	2	2	19550.24758	17446.83729	2103.41029	2103.41029	2103.41029	0
10	10/27/2022	15	16	-1	31119 0042	32170.70934	-1051.70515	1051.70515	0	1051.705147
11	10/28/2022	22	24	-2	38480.94023	40584.35052	-2103.41029	2103.41029	0	2103.410294
12	10/29/2022	20	22	-2	36377.52993	38480.94023	-2103.41029	2103.41029	0	2103.410294
13	10/30/2022	16	17	-1	32170.70934	33222.41449	-1051.70515	1051.70515	0	1051.705147
14	10/31/2022	9	6	3	24808.77332	21653.65787	3155.11544	3155.11544	3155.11544	0
15	11/1/2022	8	8	0	26775.30759	26775.30759	0	0	0	0
16	11/2/2022	16	15	1	40595.62893	38868.08876	1727.54017	1727.54017	1727.54017	0
17	11/3/2022	14	12	2	37140.54859	33685.46826	3455.08033	3455.08033	3455.08033	0
18	11/4/2022	6	2	4	23320.22726	16410.06659	6910.16067	6910.16067	6910.16067	0
19	11/5/2022	0	0	0	12954.98626	12954.98626	0	0	0	0
20	11/6/2022	0	0	0	12954.98626	12954.98626	0	0	0	0
21	11/7/2022	12	7	5	33685.46826	25047.76743	8637.70083	8637.70083	8637.70083	0
22	11/8/2022	23	24	-1	52688.4101	54415.95026	-1727.54017	1727.54017	0	1727 540167
23	11/9/2022	22	21	1	50960.86993	49233.32976	1727.54017	1727.54017	1727.54017	0
24	11/10/2022	9	8	1	28502.84776	26775.30759	1727.54017	1727.54017	1727.54017	0
25	11/11/2022	0	0	0	12954.98626	12954.98626	0	0	0	0
26	11/12/2022	7	6	1	25047.76743	23320.22726	1727.54017	1727.54017	1727.54017	0
27	11/13/2022	23	23	0	52688.4101	52688.4101	0	0	0	0
28	11/14/2022	31	33	-2	66508.73143	69963.81177	-3455.08033	3455.08033	0	3455 080334
29	11/15/2022	27	27	0	59598.57077	59598.57077	0	0	0	0
30	11/16/2022	27	26	1	59598.57077	57871.0306	1727.54017	1727.54017	1727.54017	0
31	11/17/2022	31	30	1	66508.73143	64781.19127	1727.54017	1727.54017	1727.54017	0
32	11/18/2022	31	30	1	66508.73143	64781.19127	1727.54017	1727.54017	1727.54017	0
33	11/19/2022	33	32	1	69963.81177	68236.2716	1727.54017	1727.54017	1727.54017	0
34	11/20/2022	37	37	0	76873.97243	76873.97243	0	0	0	0
35	11/21/2022	31	30	1	66508.73143	64781.19127	1727.54017	1727.54017	1727.54017	0
36	11/22/2022	29	27	2	63053 6511	59598.57077	3455.08033	3455.08033	3455.08033	0
37	11/23/2022	30	30	0	64781.19127	64781.19127	0	0	0	0
38	11/24/2022	27	26	1	59598.57077	57871.0306	1727.54017	1727.54017	1727.54017	0
39	11/25/2022	24	21	3	54415.95026	49233.32976	5182.6205	5182 6205	5182.6205	0
40	11/26/2022	22	23	-1	50960.86993	52688.4101	-1727.54017	1727.54017	0	1727 540167
41	11/27/2022	15	17	-2	38868.08876	42323.1691	-3455.08033	3455.08033	0	3455 080334
42	11/28/2022	28	26	2	61326.11093	57871.0306	3455.08033	3455.08033	3455.08033	0
43	11/29/2022	29	30	-1	63053 6511	64781.19127	-1727.54017	1727.54017	0	1727 540167
44	11/30/2022	23	22	1	52688.4101	50960.86993	1727.54017	1727.54017	1727.54017	0
45	12/1/2022	32	31	1	74162 0669	72381.70779	1780.35911	1780.35911	1780.35911	0
46	12/2/2022	28	24	4	67040.63045	59919.19401	7121.43645	7121.43645	7121.43645	0
47	12/3/2022	23	18	5	58138 8349	49237.03934	8901.79556	8901.79556	8901.79556	0
48	12/4/2022	33	35	-2	75942.42601	79503.14423	-3560.71822	3560.71822	0	3560.718223
49	12/5/2022	27	25	2	65260.27134	61699.55312	3560.71822	3560.71822	3560.71822	0
50	12/6/2022	18	14	4	49237.03934	42115.60289	7121.43645	7121.43645	7121.43645	0
51	12/7/2022	15	13	2	43895.962	40335.24378	3560.71822	3560.71822	3560.71822	0
52	12/8/2022	28	27	1	67040.63045	65260.27134	1780.35911	1780.35911	1780.35911	0
53	12/9/2022	32	30	2	74162 0669	70601.34868	3560.71822	3560.71822	3560.71822	0
54	12/10/2022	35	36	-1	79503.14423	81283.50334	-1780.35911	1780.35911	0	1780 359111
55	12/11/2022	38	40	-2	84844.22157	88404.93979	-3560.71822	3560.71822	0	3560.718223
56	12/12/2022	38	38	0	84844.22157	84844.22157	0	0	0	0
57	12/13/2022	37	36	1	83063.86245	81283.50334	1780.35911	1780.35911	1780.35911	0
58	12/14/2022	33	32	1	75942.42601	74162.0669	1780.35911	1780.35911	1780.35911	0
59	12/15/2022	27	27	0	65260.27134	65260.27134	0	0	0	0
60	12/16/2022	27	30	-3	65260.27134	70601.34868	-5341.07733	5341.07733	0	5341 077334
61	12/17/2022	33	31	2	75942.42601	72381.70779	3560.71822	3560.71822	3560.71822	0
62	12/18/2022	36	32	4	81283.50334	74162.0669	7121.43645	7121.43645	7121.43645	0
63	12/19/2022	34	32	2	77722.78512	74162.0669	3560.71822	3560.71822	3560.71822	0
64	12/20/2022	38	36	2	84844.22157	81283.50334	3560.71822	3560.71822	3560.71822	0
65	12/21/2022	37	36	1	83063.86245	81283.50334	1780.35911	1780.35911	1780.35911	0
66	12/22/2022	23	23	0	58138 8349	58138.8349	0	0	0	0
67	12/23/2022	36	36	0	81283.50334	81283.50334	0	0	0	0

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Calculation of Supplier Balancing Charge
2023-2024
Estimated Daily Imbalances

	Date	Predicted MAN HDD	Actual MAN HDD	Forecaster Error MAN HDD	Calculated on Predicted MAN HDD	Calculated on Actual MAN HDD	Sendout Error (MMBtu)	Abs.Value Sendout Error (MMBtu)	Injections (MMBtu)	Withdrawals (MMBtu)
1	12/24/2022	48	51	-3	102647 8127	107988 89	-5341.07733	5341.07733	0	5341 077334
2	12/25/2022	43	44	-1	93746.01712	95526.37623	-1780.35911	1780.35911	0	1780 359111
3	12/26/2022	39	37	2	86624.58068	83063.86245	3560.71822	3560.71822	3560.71822	0
4	12/27/2022	40	40	0	88404.93979	88404.93979	0	0	0	0
5	12/28/2022	34	33	1	77722.78512	75942.42601	1780.35911	1780.35911	1780.35911	0
6	12/29/2022	28	28	0	67040.63045	67040.63045	0	0	0	0
7	12/30/2022	19	14	5	51017.39845	42115.60289	8901.79556	8901.79556	8901.79556	0
8	12/31/2022	14	13	1	42115.60289	40335.24378	1780.35911	1780.35911	1780.35911	0
9	1/1/2023	24	25	-1	59838.79218	61654.15728	-1815.3651	1815 3651	0	1815 365098
10	1/2/2023	27	30	-3	65284.88748	70730.98277	-5446.0953	5446 0953	0	5446 095295
11	1/3/2023	26	28	-2	63469.52238	67100.25258	-3630.7302	3630.7302	0	3630.730197
12	1/4/2023	23	23	0	58023.42708	58023.42708	0	0	0	0
13	1/5/2023	31	30	1	72546.34787	70730.98277	1815.3651	1815 3651	1815.3651	0
14	1/6/2023	32	32	0	74361.71297	74361.71297	0	0	0	0
15	1/7/2023	36	33	3	81623.17336	76177.07807	5446.0953	5446 0953	5446.0953	0
16	1/8/2023	38	35	3	85253.90356	79807.80826	5446.0953	5446 0953	5446.0953	0
17	1/9/2023	34	30	4	77992.44317	70730.98277	7261.46039	7261.46039	7261.46039	0
18	1/10/2023	40	38	2	88884.63376	85253.90356	3630.7302	3630.7302	3630.7302	0
19	1/11/2023	37	36	1	83438.53846	81623.17336	1815.3651	1815 3651	1815.3651	0
20	1/12/2023	23	28	-5	58023.42708	67100.25258	-9076.82549	9076.82549	0	9076 825492
21	1/13/2023	25	25	0	61654.15728	61654.15728	0	0	0	0
22	1/14/2023	34	33	1	77992.44317	76177.07807	1815.3651	1815 3651	1815.3651	0
23	1/15/2023	33	31	2	76177.07807	72546.34787	3630.7302	3630.7302	3630.7302	0
24	1/16/2023	33	33	0	76177.07807	76177.07807	0	0	0	0
25	1/17/2023	26	25	1	63469.52238	61654.15728	1815.3651	1815 3651	1815.3651	0
26	1/18/2023	27	23	4	65284.88748	58023.42708	7261.46039	7261.46039	7261.46039	0
27	1/19/2023	30	30	0	70730.98277	70730.98277	0	0	0	0
28	1/20/2023	36	34	2	81623.17336	77992.44317	3630.7302	3630.7302	3630.7302	0
29	1/21/2023	42	38	4	92515.36395	85253.90356	7261.46039	7261.46039	7261.46039	0
30	1/22/2023	30	32	-2	70730.98277	74361.71297	-3630.7302	3630.7302	0	3630.730197
31	1/23/2023	33	33	0	76177.07807	76177.07807	0	0	0	0
32	1/24/2023	35	31	4	79807.80826	72546.34787	7261.46039	7261.46039	7261.46039	0
33	1/25/2023	27	29	-2	65284.88748	68915.61767	-3630.7302	3630.7302	0	3630.730197
34	1/26/2023	32	30	2	74361.71297	70730.98277	3630.7302	3630.7302	3630.7302	0
35	1/27/2023	35	33	2	79807.80826	76177.07807	3630.7302	3630.7302	3630.7302	0
36	1/28/2023	32	30	2	74361.71297	70730.98277	3630.7302	3630.7302	3630.7302	0
37	1/29/2023	25	24	1	61654.15728	59838.79218	1815.3651	1815 3651	1815.3651	0
38	1/30/2023	29	27	2	68915.61767	65284.88748	3630.7302	3630.7302	3630.7302	0
39	1/31/2023	42	42	0	92515.36395	92515.36395	0	0	0	0
40	2/1/2023	42	41	1	95906.90668	93881.15501	2025.75167	2025.75167	2025.75167	0
41	2/2/2023	37	36	1	85778.14832	83752.39665	2025.75167	2025.75167	2025.75167	0
42	2/3/2023	67	68	-1	146550 6985	148576.4502	-2025.75167	2025.75167	0	2025.751672
43	2/4/2023	48	50	-2	108061.4167	112112.9201	-4051.50334	4051.50334	0	4051 503344
44	2/5/2023	29	28	1	69572.13494	67546.38327	2025.75167	2025.75167	2025.75167	0
45	2/6/2023	33	32	1	77675.14163	75649.38996	2025.75167	2025.75167	2025.75167	0
46	2/7/2023	31	32	-1	73623.63829	75649.38996	-2025.75167	2025.75167	0	2025.751672
47	2/8/2023	30	29	1	71597.88662	69572.13494	2025.75167	2025.75167	2025.75167	0
48	2/9/2023	21	26	-5	53366.12157	63494.87993	-10128.7584	10128.7584	0	10128.75836
49	2/10/2023	27	22	5	65520 6316	55391.87324	10128.7584	10128.7584	10128.7584	0
50	2/11/2023	33	30	3	77675.14163	71597.88662	6077.25502	6077.25502	6077.25502	0
51	2/12/2023	28	28	0	67546.38327	67546.38327	0	0	0	0
52	2/13/2023	28	27	1	67546.38327	65520.6316	2025.75167	2025.75167	2025.75167	0
53	2/14/2023	29	29	0	69572.13494	69572.13494	0	0	0	0
54	2/15/2023	15	14	1	41211.61153	39185.85986	2025.75167	2025.75167	2025.75167	0
55	2/16/2023	13	15	-2	37160.10819	41211.61153	-4051.50334	4051.50334	0	4051 503344
56	2/17/2023	31	33	-2	73623.63829	77675.14163	-4051.50334	4051.50334	0	4051 503344
57	2/18/2023	32	33	-1	75649.38996	77675.14163	-2025.75167	2025.75167	0	2025.751672
58	2/19/2023	25	26	-1	61469.12826	63494.87993	-2025.75167	2025.75167	0	2025.751672
59	2/20/2023	25	22	3	61469.12826	55391.87324	6077.25502	6077.25502	6077.25502	0
60	2/21/2023	31	32	-1	73623.63829	75649.38996	-2025.75167	2025.75167	0	2025.751672
61	2/22/2023	32	32	0	75649.38996	75649.38996	0	0	0	0
62	2/23/2023	40	40	0	91855.40334	91855.40334	0	0	0	0
63	2/24/2023	51	47	4	114138 6717	106035.665	8103.00669	8103.00669	8103.00669	0
64	2/25/2023	50	50	0	112112 9201	112112.9201	0	0	0	0
65	2/26/2023	39	48	-9	89829.65167	108061.4167	-18231.765	18231.765	0	18231.76505
66	2/27/2023	38	36	2	87803.89999	83752.39665	4051.50334	4051.50334	4051.50334	0
67	2/28/2023	35	33	2	81726.64498	77675.14163	4051.50334	4051.50334	4051.50334	0

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Calculation of Supplier Balancing Charge
2023-2024
Estimated Daily Imbalances

	Date	Predicted MAN HDD	Actual MAN HDD	Forecaster Error MAN HDD	Calculated on Predicted MAN HDD	Calculated on Actual MAN HDD	Sendout Error (MMBtu)	Abs.Value Sendout Error (MMBtu)	Injections (MMBtu)	Withdrawals (MMBtu)
1	3/1/2023	31	29	2	71664.44365	67382.4055	4282.03815	4282.03815	4282.03815	0
2	3/2/2023	31	28	3	71664.44365	65241.38643	6423.05722	6423.05722	6423.05722	0
3	3/3/2023	31	28	3	71664.44365	65241.38643	6423.05722	6423.05722	6423.05722	0
4	3/4/2023	35	33	2	80228.51994	75946.4818	4282.03815	4282.03815	4282.03815	0
5	3/5/2023	30	27	3	69523.42458	63100.36736	6423.05722	6423.05722	6423.05722	0
6	3/6/2023	33	28	5	75946.4818	65241.38643	10705.0954	10705 0954	10705.0954	0
7	3/7/2023	34	34	0	78087.50087	78087.50087	0	0	0	0
8	3/8/2023	28	27	1	65241.38643	63100.36736	2141.01907	2141.01907	2141.01907	0
9	3/9/2023	29	28	1	67382.4055	65241.38643	2141.01907	2141.01907	2141.01907	0
10	3/10/2023	26	24	2	60959.34828	56677.31014	4282.03815	4282.03815	4282.03815	0
11	3/11/2023	30	30	0	69523.42458	69523.42458	0	0	0	0
12	3/12/2023	27	26	1	63100.36736	60959.34828	2141.01907	2141.01907	2141.01907	0
13	3/13/2023	24	27	-3	56677.31014	63100.36736	-6423.05722	6423.05722	0	6423.05722
14	3/14/2023	30	30	0	69523.42458	69523.42458	0	0	0	0
15	3/15/2023	28	28	0	65241.38643	65241.38643	0	0	0	0
16	3/16/2023	27	25	2	63100.36736	58818.32921	4282.03815	4282.03815	4282.03815	0
17	3/17/2023	22	23	-1	52395.27199	54536.29106	-2141.01907	2141.01907	0	2141 019073
18	3/18/2023	28	26	2	65241.38643	60959.34828	4282.03815	4282.03815	4282.03815	0
19	3/19/2023	35	34	1	80228.51994	78087.50087	2141.01907	2141.01907	2141.01907	0
20	3/20/2023	27	27	0	63100.36736	63100.36736	0	0	0	0
21	3/21/2023	22	19	3	52395.27199	45972.21477	6423.05722	6423.05722	6423.05722	0
22	3/22/2023	19	20	-1	45972.21477	48113.23384	-2141.01907	2141.01907	0	2141 019073
23	3/23/2023	15	17	-2	37408.13848	41690.17662	-4282.03815	4282.03815	0	4282 038147
24	3/24/2023	25	26	-1	58818.32921	60959.34828	-2141.01907	2141.01907	0	2141 019073
25	3/25/2023	25	26	-1	58818.32921	60959.34828	-2141.01907	2141.01907	0	2141 019073
26	3/26/2023	23	23	0	54536.29106	54536.29106	0	0	0	0
27	3/27/2023	20	19	1	48113.23384	45972.21477	2141.01907	2141.01907	2141.01907	0
28	3/28/2023	26	28	-2	60959.34828	65241.38643	-4282.03815	4282.03815	0	4282 038147
29	3/29/2023	24	23	1	56677.31014	54536.29106	2141.01907	2141.01907	2141.01907	0
30	3/30/2023	33	32	1	75946.4818	73805.46272	2141.01907	2141.01907	2141.01907	0
31	3/31/2023	23	25	-2	54536.29106	58818.32921	-4282.03815	4282.03815	0	4282 038147

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

Docket DE 98-124 Gas Restructuring
Peaking Demand Rate

					Source:
1	Peak Day		167,688	Dekatherm	
2					
3	Pipeline MDQ				Attachment B Page 2 of 3: EnergyNorth Capacity Resources
4		PNGTS	1,000	Dekatherm	
5		TGP NET-NE 95346	4,000		
6		TGP FT-A (Z5-Z6) 2302	3,122		
7		TGP FT-A (Z0-Z6) 8587	7,035		
8		TGP FT-A (Z1-Z6) 8587	14,561		
9		TGP FT-A (Z6-Z6) 42076	20,000		
10		TGP FT-A (Z6-Z6) 358905	40,000		
11		TGP FT-A (Z6-Z6) 72694	30,000		
12			119,718	Dekatherm	
13					
14	Underground Storage MDQ				Attachment B Page 3 of 3: EnergyNorth Capacity Resources
15		TGP FT-A (Z4-Z6) 632	15,265	Dekatherm	
16		TGP FT-A (Z4-Z6) 8587	3,811		
17		TGP FT-A (Z4-Z6) 11234	7,082		
18		TGP FT-A (Z5-Z6) 11234	1,957		
19			28,115	Dekatherm	
20					
21					
22	Peaking MDQ		19,855	Dekatherm	Line 1 - Line 12 - Line 19
23					
24					
25	Peaking Costs				
26					
27	Gas Supply		$ 1,550,000		Attachment B Page 3 Line 11
28	Indirect Production & Storage Capacity		$ 3,685,458		Summary Page Line 68
29	Granite Ridge		$ -		Attachment B Page 3 Line 1
30	Total		$ 5,235,458		Sum Line 27 - 29
31					
32	Annual Peaking Rate per MDQ		$ 263.68		Line 30 divided by Line 22
33					
34	**Monthly Peaking MDQ**		**$ 43.95**	**/Dekatherm**	Line 32 divided by 6 month

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

Tennessee Allocations

Resource Type	High Load Factor	Low Load Factor
Pipeline	79 6%	70 6%
Storage	12 0%	17 2%
Peaking	8 5%	12 2%
TOTAL:	100 00%	100 00%

Capacity Resources effective November 1, 2022*

*proposed

Resource	Pipeline Company	Rate Schedule	Contract #	Peak MDQ/ MDWQ	Storage MSQ	Rate $/Dth/Month Demand	Storage Capacity	Termination Date	LDC Managed
Pipeline									
	TCPL + Union	FT to Parkway & IGTS	M12200 & 41232	4,000		$12 7551		10/31/2026	
	Iroquois	RTS to Wright	470-01	4,047		$4 8393		11/1/2027	
	TGP	NET-NE (Z5-Z6)	95346	4,000		$6 0905		11/30/2026	
	TGP	FT-A (Z5-Z6)	2302	3,122		$6 0905		10/31/2025	
	TGP	FT-A (Z0-Z6)	8587	7,035		$19 6964		10/31/2025	
	TGP	FT-A (Z1-Z6)	8587	14,561		$17 4870		10/31/2025	
	TCPL + Union	FT to Parkway & PNGT	M12284 & TC	5,000		$19 3180		10/31/2040	
	PNGTS	FT	225800	5,000		$22 7943		10/31/2040	
	TGP	FT-A (Z6-Z6)	42076	20,000		$4 0474		10/31/2025	
	TGP	FT-A (Z6-Z6)	358905	40,000		$4 0474		10/31/2041	
	TGP	FT-A (Z6-Z6)	72694	30,000		$12 2157		10/31/2029	
Storage									
	TGP	FS-MA (Storage)	523*	21,844	1,560,391	$1 2655	$0 0173	10/31/2025	
	TGP	FT-A (Z4-Z6)	632	15,265		$6 9301		10/31/2025	
	TGP	FT-A (Z4-Z6)	8587	3,811		$6 9301		10/31/2025	
	National Fuel	FSS-1 (Storage)	O02357*	6,098	670,800	$2 6469	$0 0478	3/31/2025	
	National Fuel	FST (Transport)	N02358	6,098		$5 0175		3/31/2025	
	TGP	FT-A (Z4-Z6)	11234	6,150		$6.9301		10/31/2025	
	Honeoye	SS-NY (Storage)	SS-NY**	1,957	245,380	$4.8254	$0 0000	3/31/2025	X
	TGP	FT-A (Z5-Z6)	11234	1,957		$6.0905		10/31/2025	
	Dominion	GSS (Storage)	300076*	934	102,700	$2 6784	$0 0258	3/31/2026	
	TGP	FT-A (Z4-Z6)	11234	932		$6.9301		10/31/2025	
Peaking									
	Energy North	LNG/Propane****		19,855	-	$43.9500	$0 0000		X

* All gas transferred for storage contracts will be based on LDC's monthly WACOG
**All commodity volumes nominated will be invoiced at LDC's WACOG + fuel retention   Demand charge applicable for 6 months

Note **All capacity will be released at maximum tariff rates. Above rates are maximum tariff rates effective 11/01/23. Because rates can change, please refer to the applicable pipeline tariff for current rates.**

Above capacity is for all customers in the EnergyNorth Service territory with the exception of Berlin, NH. Any customers behind the Berlin citygate will be allocated 100% PNGTS capacity at a demand rate of $18.2633 /dth.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

Docket 98-124 Gas Restructuring
Peaking Demand Rate
Peaking Costs

		Volume	Rate	Monthly Cost	Months/Year	Annual Cost	
1		[redacted]					
2							
3							
4	Subtotal					**$ 1,550,000.00**	*
5							
6	**Total**					**$ 1,550,000.00**	

* Effective November 2023

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

Calculation of Capacity Allocators

Docket No DE 98-124

Capacity Assignment Table

			% of Peak Day Requirement			
			Pipeline	**Storage**	**Peaking**	**Total**
G-41	**LAHW**	Low Annual C&I - High Winter Use	70.6%	17.2%	12.2%	100.0%
G-51	**LALW**	Low Annual C&I - Low Winter Use	79.6%	12.0%	8.5%	100.0%
G-42	**MAHW**	Medium C&I - High Winter Use	70.6%	17.2%	12.2%	100.0%
G-52	**MALW**	Medium C&I - Low Winter Use	79.6%	12.0%	8.5%	100.0%
G-43	**HAHW**	High Annual C&I - High Winter Use	70.6%	17.2%	12.2%	100.0%
G-53	**HALW90**	High Annual C&I - LF < 90%	79.6%	12.0%	8.5%	100.0%
G-54	**HALWG90**	High Annual C&I - LF > 90%	79.6%	12.0%	8.5%	100.0%

HLF	High Load Factor	79.57%	11.97%	8.45%	100%
LLF	Low Load Factor	70.62%	17.22%	12.16%	100%
	Total	71.39%	16.77%	11.84%	100%

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Calculation of Capacity Allocators
Docket No DE 98-124

Allocation of Peak Day

Design Day Throughput Allocated to Rate Classes

Design DD			69.390	
		Base load	Heat load	Total
HLF	R-1 RNSH	129	390	519
LLF	R-3 RSH	3,452	70,445	73,897
LLF	G-41 SL	919	29,247	30,167
HLF	G-51 SH	774	1,543	2,317
LLF	G-42 ML	1,581	37,044	38,624
HLF	G-52 MH	1,710	3,482	5,192
LLF	G-43 LL	903	9,594	10,497
HLF	G-53 LLL90	1,871	3,372	5,243
HLF	G-54 LLG90	387	844	1,232
	TOTAL	11,726	155,962	167,688

	Base load	Heat load	Total
HLF	4,871	9,631	14,502
LLF	6,855	146,331	153,186
Total	11,726	155,962	167,688

Allocate Class Design Day Throughput to Supply Sources

	Base Pipeline	Remaining Pipeline	Sub-total Pipeline	Storage	Peaking	Total
R-1 RNSH	129	270	399	70	49.62	519
R-3 RSH	3,452	48,778	52,230	12,699	8,968	73,897
G-41 SL	919	20,252	21,171	5,272	3,723	30,167
G-51 SH	774	1,068	1,842	278	196	2,317
G-42 ML	1,581	25,650	27,231	6,678	4,716	38,624
G-52 MH	1,710	2,411	4,121	628	443	5,192
G-43 LL	903	6,643	7,546	1,730	1,221	10,497
G-53 LLL90	1,871	2,335	4,206	608	429	5,243
G-54 LLG90	387	585	972	152	108	1,232
TOTAL	11,726	107,992	119,718	28,115	19,855	167,688

	Base Pipeline	Remaining Pipeline	Sub-total Pipeline	Storage	Peaking	Total
HLF	4,871	6,669	11,540	1,736	1,226	14,502
LLF	6,855	101,323	108,178	26,379	18,629	153,186
Total	11,726	107,992	119,718	28,115	19,855	167,688

% of Peak Day Requirement

	Pipeline	Storage	Peaking	Total
R-1 RNSH	76.9%	13.5%	9.6%	100.0%
R-3 RSH	70.7%	17.2%	12.1%	100.0%
G-41 SL	70.2%	17.5%	12.3%	100.0%
G-51 SH	79.5%	12.0%	8.5%	100.0%
G-42 ML	70.5%	17.3%	12.2%	100.0%
G-52 MH	79.4%	12.1%	8.5%	100.0%
G-43 LL	71.9%	16.5%	11.6%	100.0%
G-53 LLL90	80.2%	11.6%	8.2%	100.0%
G-54 LLG90	78.9%	12.4%	8.7%	100.0%
TOTAL	71.4%	16.8%	11.8%	100.0%

	Pipeline	Storage	Peaking	Total
High Load Factor	79.57%	11.97%	8.45%	100%
Low Load Factor	70.62%	17.22%	12.16%	100%
Total	71.39%	16.77%	11.84%	100%

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Calculation of Capacity Allocators
Docket No DE 98-124

Allocate Design Day Sendout

Calculate Design Day Throughput (BBTU)

Design DD 69.39

	Daily Baseload * 1000	Heating Factor * 1000	Heat load (Heating Factor * Design DD)	Total
R-1 RNSH	129	5.71	396	525
R-3 RSH	3,452	1,032.55	71,649	75,100
G-41 SL	919	428.69	29,747	30,666
G-51 SH	774	22.61	1,569	2,343
G-42 ML	1,581	542.97	37,677	39,257
G-52 MH	1,710	51.04	3,542	5,251
G-43 LL	903	140.63	9,758	10,661
G-53 LLL90	1,871	49.43	3,430	5,301
G-54 LLG90	387	12.38	859	1,246
TOTAL	11,726	2,284.05	158,626	170,352

HLF	4,871	141	9,796	14,667
LLF	6,855	2,143	148,830	155,685
Total	11,726	2,284	158,626	170,352

Design Day from 2023-2024 COG	**167,688**
Design Day from Gas Load Calculation	170,352
Variance	(2,664)

	Baseload as % of Total Class Load	Heat Load as % of Total
R-1 RNSH	25%	0.250%
R-3 RSH	5%	45.168%
G-41 SL	3%	18.753%
G-51 SH	33%	0.989%
G-42 ML	4%	23.752%
G-52 MH	33%	2.233%
G-43 LL	8%	6.152%
G-53 LLL90	35%	2.162%
G-54 LLG90	31%	0.541%
TOTAL		100.000%

Allocate Design Day Sendout to Rate Classes

	Base Load	Heat Load	Total
R-1 RNSH	129	390	519
R-3 RSH	3,452	70,445	73,897
G-41 SL	919	29,247	30,167
G-51 SH	774	1,543	2,317
G-42 ML	1,581	37,044	38,624
G-52 MH	1,710	3,482	5,192
G-43 LL	903	9,594	10,497
G-53 LLL90	1,871	3,372	5,243
G-54 LLG90	387	844	1,232
TOTAL	11,726	155,962	167,688

CALCULATION OF NORMAL SALES VOLUMES

Actual Volumes

Total Core Sales Volumes(000's) MMBTU

		Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Total	Monthly Baseload (Jul+Aug)/2	Daily Baseload
HLF	R-1 RNSH	7	9	10	9	8	6	5	4	4	4	4	6	76	4 000	0 129
LLF	R-3 RSH	701	1,020	1,181	1,028	900	555	323	162	119	107	175	444	6,715	107 000	3 452
LLF	G-41 SL	255	398	492	430	342	182	91	45	32	25	44	141	2,477	28 500	0 919
HLF	G-51 SH	33	42	48	43	41	33	28	25	25	24	24	31	397	24 000	0 774
LLF	G-42 ML	369	527	627	551	466	274	152	80	60	49	88	241	3,484	49 000	1 581
HLF	G-52 MH	77	95	108	96	91	73	62	53	53	53	54	68	883	53 000	1 710
LLF	G-43 LL	109	143	174	151	136	90	59	41	34	28	41	83	1,089	28 000	0 903
HLF	G-53 LLL90	86	98	116	99	95	77	66	61	58	66	69	82	973	58 000	1 871
HLF	G-54 LLL110	18	20	22	20	20	18	19	12	12	12	13	17	203	12 000	0 387
HLF	G-99 LLG110															
	TOTAL	1,655	2,352	2,778	2,427	2,099	1,308	805	483	397	368	512	1,113	16,297	382 500	12 339
	HLF	221	264	304	267	255	207	180	155	152	159	164	204	2,532	151 000	5 016
	LLF	1,434	2,088	2,474	2,160	1,844	1,101	625	328	245	209	348	909	13,765	212 500	7 323

Baseload (= the lesser of actual volumes or the average of July and August volumes)

		Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Total
		30	31	31	28	31	30	31	30	31	31	30	31	365
HLF	R-1 RNSH	4	4	4	4	4	4	4	4	4	4	4	4	47
LLF	R-3 RSH	104	107	107	97	107	104	107	104	119	107	104	107	1,260
LLF	G-41 SL	28	29	29	26	29	28	29	28	32	25	28	29	336
HLF	G-51 SH	23	24	24	22	24	23	24	23	25	24	23	24	283
LLF	G-42 ML	47	49	49	44	49	47	49	47	60	49	47	49	577
HLF	G-52 MH	51	53	53	48	53	51	53	51	53	53	51	53	624
LLF	G-43 LL	27	28	28	25	28	27	28	27	34	28	27	28	330
HLF	G-53 LLL90	56	58	58	52	58	56	58	56	58	66	56	58	683
HLF	G-54 LLL110	12	12	12	11	12	12	12	12	12	12	12	12	141
HLF	G-63 LLG110	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	352	364	364	328	364	352	364	352	397	368	352	364	4,280
	HLF	146	151	151	136	151	146	151	146	152	159	146	151	1,778
	LLF	206	213	213	192	213	206	213	206	245	209	206	213	2,502

Heating Volumes (= Actual Volumes - Baseload)

		Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Total
HLF	R-1 RNSH	3	5	6	5	4	2	1	0	0	0	0	2	29
LLF	R-3 RSH	597	913	1,074	931	793	451	216	58	0	0	71	337	5,455
LLF	G-41 SL	227	370	464	404	314	154	63	17	0	0	16	113	2,141
HLF	G-51 SH	10	18	24	21	17	10	4	2	0	0	1	7	114
LLF	G-42 ML	322	478	578	507	417	227	103	33	0	0	41	192	2,907
HLF	G-52 MH	26	42	55	48	38	22	9	2	0	0	3	15	259
LLF	G-43 LL	82	115	146	126	108	63	31	14	0	0	14	55	759
HLF	G-53 LLL90	30	40	58	47	37	21	8	5	0	0	13	24	290
HLF	G-54 LLL110	6	8	10	9	8	6	7	0	0	0	1	5	62
HLF	G-63 LLG110	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1,303	1,989	2,415	2,099	1,736	956	442	131	0	0	160	750	12,017

HLF	75	113	153	131	104	61	29	9	0	0	18	53	754
LLF	1,228	1,876	2,262	1,968	1,632	895	413	122	0	0	142	697	11,263

Actual HDD	**694.0**	**913.0**	**1293.0**	**943.0**	**768.0**	**516.0**	**181.0**	**8.0**	**19.0**	**0.0**	**33.0**	**241.0**	5609 0

Heat Factors

		Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Total	AVG	AVG Peak
HLF	R-1 RNSH	0 0045	0 0055	0 0046	0 0057	0 0052	0 0041	0 0055	0 0161	0 0000	0 0000	0 0039	0 0083	0 0057	0 0053	0 0049
LLF	R-3 RSH	0 8609	1 0000	0 8306	0 9877	1.0326	0 8749	1 1934	7 3065	0 0000	0 0000	2 1652	1 3983	1 0326	1 4708	0 9311
LLF	G-41 SL	0 3277	0 4047	0 3585	0 4287	0 4082	0 2993	0 3453	2 1774	0 0000	0 0000	0 4976	0 4668	0 4287	0 4762	0 3712
HLF	G-51 SH	0 0141	0 0197	0 0186	0 0226	0 0221	0 0189	0 0221	0 2218	0 0000	0 0000	0 0235	0 0290	0 0226	0 0344	0 0193
LLF	G-42 ML	0 4634	0 5235	0 4470	0 5374	0 5430	0 4391	0 5691	4 0726	0 0000	0 0000	1 2297	0 7967	0 5430	0 8018	0 4922
HLF	G-52 MH	0 0370	0 0460	0 0425	0 0510	0 0495	0 0421	0 0497	0 2137	0 0000	0 0000	0 0821	0 0622	0 0510	0 0563	0 0447
LLF	G-43 LL	0 1180	0 1260	0 1129	0 1333	0 1406	0 1219	0 1713	1 7379	0 0000	0 0000	0 4213	0 2282	0 1406	0 2760	0 1255
HLF	G-53 LLL90	0 0430	0 0438	0 0449	0 0494	0 0482	0 0404	0 0442	0 6089	0 0000	0 0000	0 3900	0 0996	0 0494	0 1177	0 0450
HLF	G-54 LLL110	0 0092	0 0088	0 0077	0 0097	0 0104	0 0124	0 0387	0 0484	0 0000	0 0000	0 0420	0 0207	0 0104	0 0173	0 0097
HLF	G-63 LLG110	0 0000	0 0000	0 0000	0 0000	0 0000	0 0000	0 0000	0 0000	0 0000	0 0000	0 0000	0 0000	0 0000	0 0000	0 0000
	TOTAL	1 8778	2 1780	1 8674	2 2255	2 2598	1 8532	2 4392	16 4032	0 0000	0 0000	4 8553	3 1100	2 2840	3 2558	2 0436

Actual HDD	**694.0**	**913.0**	**1,293.0**	**943.0**	**768.0**	**516.0**	**181.0**	**8.0**	**19.0**	**0.0**	**33.0**	**241.0**	**5609.0**
Norm HDD	**717.0**	**1,044.0**	**1,220.0**	**1,041.0**	**896.0**	**516.0**	**231.0**	**49.0**	**5.0**	**8.0**	**101.0**	**405.0**	**6233.0**

Normal Volumes (= Heating Volumes * Normal HDD/Actual HDD + Baseload)

		Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Total
HLF	**R-1 RNSH**	7	10	10	10	9	6	5	5	4	4	4	7	80
LLF	**R-3 RSH**	721	1,151	1,120	1,125	1,032	555	383	462	119	107	322	673	7,770
LLF	**G-41 SL**	263	451	466	472	394	182	108	134	32	25	78	218	2,823
HLF	**G-51 SH**	33	45	47	45	44	33	29	34	25	24	26	36	420
LLF	**G-42 ML**	380	596	594	604	536	274	180	247	60	49	172	372	4,062
HLF	**G-52 MH**	78	101	105	101	97	73	64	62	53	53	60	78	925
LLF	**G-43 LL**	112	160	166	164	154	90	68	112	34	28	70	120	1,277
HLF	**G-53 LLL90**	87	104	113	104	101	77	68	86	58	66	96	98	1,057
HLF	**G-54 LLL110**	18	21	21	21	21	18	21	14	12	12	16	20	216
HLF	**G-63 LLG110**	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL	1,698	2,637	2,642	2,645	2,388	1,308	927	1,156	397	368	842	1,623	18,631

HLF	223	280	295	281	272	207	188	200	152	159	201	240	2,699
LLF	1,475	2,357	2,346	2,365	2,116	1,101	739	955	245	209	641	1,383	15,932

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Peak 2023 – 2024 Winter Cost of Gas Filing
Fixed Price Option

		Participation	Premium	FPO Volumes	Premium Revenue	FPO Rate	Residential Average COG Rate	Residential Total Bill FPO Rate	Residential Total Bill COG Rate	Difference	% Difference
1	Nov 98 - Mar 99	6 0%				0 3927	0 3722	$ 943	$ 926.93	$ 16.44	1.77%
2	Nov 99 - Mar 00	9 0%				0.4724	0.4628	$ 680	$ 672.22	$ 7 63	1.13%
3	Nov 00 - Mar 01	20.0%				0 6408	0.7656	$ 816	$ 916 09	$ (99 84)	-10 90%
4	Nov 01 - Apr 02	24.0%				0 5141	0.4818	$ 791	$ 760 55	$ 30.10	3 96%
5	Nov 02 - Apr 03	24.0%	0 0051	25,107,016	$ 128,045.78	0 5553	0 5758	$ 821	$ 840.44	$ (19.11)	-2 27%
6	Nov 03 - Apr 04	23.0%	0 0219	25,220,575	$ 552,330.59	0 8597	0 8220	$ 1,116	$ 1,080.46	$ 35 09	3 25%
7	Nov 04 - Apr 05	29.6%	0 0100	27,378,128	$ 273,781.28	0 8925	0 9425	$ 1,143	$ 1,189 55	$ (46 60)	-3 92%
8	Nov 05 - Apr 06	29.8%	0 0200	25,944,091	$ 518,881.82	1 2951	1.1342	$ 1,526	$ 1,376 01	$ 150 00	10 90%
9	Nov 06 - Apr 07	15.1%	0 0200	13,135,684	$ 262,713.68	1 2664	1.1656	$ 1,510	$ 1,415 80	$ 93 99	6 64%
10	Nov 07 - Apr 08	15.8%	0 0200	14,078,553	$ 281,571.06	1 2043	1.1746	$ 1,433	$ 1,405.40	$ 27 69	1 97%
11	Nov 08 - Apr 09	15.2%	0 0200	13,041,335	$ 260,826.70	1 2835	1 0888	$ 1,555	$ 1,373 85	$ 181.46	13 21%
12	Nov 09 - Apr 10	11.4%	0 0200	8,405,413	$ 168,108.26	0 9863	0 9416	$ 1,251	$ 1,209.12	$ 41 69	3.45%
13	Nov 10 - Apr 11	12.6%	0 0200	10,379,804	$ 207,596.08	0 8420	0 8029	$ 1,175	$ 1,138 58	$ 36.45	3.20%
14	Nov 11 - Apr 12	11.9%	0 0200	7,835,197	$ 156,703.94	0 8126	0.7309	$ 1,166	$ 1,089.44	$ 76.17	6.99%
15	Nov 12 - Apr 13	10.9%	0 0200	8,179,524	$ 163,590.48	0 6919	0.7680	$ 743	$ 792.48	$ (49.45)	-6.24%
16	Nov 13 - Apr 14	10.5%	0 0200	8,930,779	$ 178,615.58	0 9095	1.1086	$ 858	$ 981.21	$ (123.49)	-12 59%
17	Nov 14 - Apr 15	15.1%	0 0795	8,779,742	$ 697,989.49	1 2425	1.1230	$ 1,128	$ 948.07	$ 179 59	18 94%
18	Nov 15 - Apr 16	15.3%	0 0200	4,941,157	$ 98,823.14	0.7716	0.7516	$ 869	$ 712.73	$ 156.42	21 95%
19	Nov 16 - Apr 17	11.5%	0 0106	5,419,967	$ 57,451.65	0.7268	0.7162	$ 827	$ 812 38	$ 14.76	1 82%
20	Nov 17 - Apr 18	10.6%	0 0200	5,298,900	$ 105,978.00	0 6645	0 6445	$ 879	$ 865 94	$ 12.76	1.47%
21	Nov 18 - Apr 19	10.8%	0 0200	5,708,925	$ 114,178.50	0.7611	0.7411	$ 985	$ 972.12	$ 12.71	1 31%
22	Nov 19 - Apr 20	7.2%	0 0200	3,447,167	$ 68,943.34	0 6403	0 6203	$ 930	$ 917.74	$ 12.72	1 39%
23	Nov 20 - Apr 21	11.1%	0 0200	5,373,268	$ 107,465.36	0 5771	0.5571	$ 895	$ 882 60	$ 12.72	1.44%
24	Nov 21 - Apr 22	12.0%	0 0200	5,800,339	$ 116,006.78	1.1539	1.1339	$ 1,333	$ 1,320 63	$ 12.72	0 96%
25	Nov 22 - Apr 23	8.5%	0 0200	3,765,099	$ 75,301.97	1.4500	1.4300	$ 1,466	$ 1,453 54	$ 12 80	0 88%
26	Nov 23 - Apr 24					0.7763	0.7563	$ 1,059	$ 1,046 55	$ 12 80	1 22%
27	Total									$ 798 21	

		FPO Rate	C&I Average COG Rate	C&I Total Bill FPO Rate	C&I Total Bill COG Rate	Difference	% Difference
1	Nov 98 - Mar 99	0.3927	0.3736	$ 1,570 86	$ 1,546 08	$ 24.79	1 60%
2	Nov 99 - Mar 00	0.4724	0.4636	$ 1,161 81	$ 1,149.15	$ 12.67	1.10%
3	Nov 00 - Mar 01	0.6408	0.7189	$ 1,376 64	$ 1,533.43	$ (156.79)	-10 22%
4	Nov 01 - Apr 02	0.5238	0.4928	$ 1,301 07	$ 1,256 88	$ 44.19	3 52%
5	Nov 02 - Apr 03	0.5658	0.5860	$ 1,344 02	$ 1,372 86	$ (28.84)	-2.10%
6	Nov 03 - Apr 04	0.8759	0.8352	$ 1,798 38	$ 1,740 30	$ 58.08	3 34%
7	Nov 04 - Apr 05	0.9092	0.9562	$ 1,844.75	$ 1,911 86	$ (67.10)	-3 51%
8	Nov 05 - Apr 06	1.3192	1.1686	$ 2,450 66	$ 2,235.77	$ 214.89	9 61%
9	Nov 06 - Apr 07	1.2666	1.1647	$ 2,321.15	$ 2,175.70	$ 145.45	6 68%
10	Nov 07 - Apr 08	1.2044	1.1725	$ 2,232 39	$ 2,186 92	$ 45.47	2 08%
11	Nov 08 - Apr 09	1.2836	1.0958	$ 2,467.49	$ 2,199 54	$ 267.95	12.18%
12	Nov 09 - Apr 10	0.9865	0.9408	$ 1,984 29	$ 1,919 03	$ 65.26	3.40%
13	Nov 10 - Apr 11	0.8434	0.8030	$ 1,880 96	$ 1,823 34	$ 57.63	3.16%
14	Nov 11 - Apr 12	0.8129	0.7327	$ 1,845 28	$ 1,730 88	$ 114.40	6.61%
15	Nov 12 - Apr 13	0.6936	0.7724	$ 1,989 86	$ 2,132 90	$ (143.03)	-6.71%
16	Nov 13 - Apr 14	0.9108	1.1158	$ 2,995 66	$ 3,393 08	$ (397.41)	-11.71%
27	Total					$ 257.59	

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Peak 2023 – 2024 Winter Cost of Gas Filing
Short-Term Debt Limitations

		For Purposes of Fuel Financing
Total Direct Gas Costs	$	67,828,453
Total Indirect Gas Costs		3,700,945
Total Gas Costs	$	71,529,398
% of Debt to Total Gas Costs		30%
Short Term Debt	$	21,458,819

		For Purposes Other Than Fuel Financing
12/31/2023 Projected Net Plant	$	671,782,222
% of Debt to Net Plant		20%
Short Term Debt	$	134,356,444

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
2023 – 2024 Winter Cost of Gas Filing
Company Allowance Calculation &
Lost and Unaccounted For Gas ("LAUF") Calculation

Company Allowance Calculation

	Jul-2022	Aug-2022	Sep-2022	Oct-2022	Nov-2022	Dec-2022	Jan-2023	Feb-2023	Mar-2023	Apr-2023	May-2023	Jun-2023	Total
Total Sendout- Therms	5,033,587	5,235,382	6,024,362	10,304,932	15,667,595	23,498,318	24,110,377	23,623,099	20,806,217	11,854,174	8,035,566	5,858,400	160,052,009
Total Throughput- Therms	4,983,541	4,534,539	4,872,246	3,975,082	8,211,788	14,880,452	29,367,630	22,963,129	24,043,959	17,983,941	10,284,381	7,541,209	153,641,897
Variance	50,046	700,843	1,152,115	6,329,849	7,455,806	8,617,866	(5,257,252)	659,970	(3,237,742)	(6,129,767)	(2,248,815)	(1,682,809)	6,410,112
Company Allowance													**4.01%**

Lost and Unaccounted For Gas ("LAUF") Calculation

	Jul-2022	Aug-2022	Sep-2022	Oct-2022	Nov-2022	Dec-2022	Jan-2023	Feb-2023	Mar-2023	Apr-2023	May-2023	Jun-2023	Total
Total Sendout- Therms	5,033,587	5,235,382	6,024,362	10,304,932	15,667,595	23,498,318	24,110,377	23,623,099	20,806,217	11,854,174	8,035,566	5,858,400	160,052,009
Total Throughput- Therms	4,983,541	4,534,539	4,872,246	3,975,082	8,211,788	14,880,452	29,367,630	22,963,129	24,043,959	17,983,941	10,284,381	7,541,209	153,641,897
Company Use	3,562	2,827	4	5,423	17,716	21,733	28,841	48,997	28,107	16,131	9,479	4,798	187,619
Variance	46,483	698,016	1,152,111	6,324,426	7,438,091	8,596,132	(5,286,093)	610,973	(3,265,848)	(6,145,898)	(2,258,294)	(1,687,607)	6,222,493
LAUF													3.89%

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Fuel Inventory Revenue Requirement

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
1		**5 Quarter Avg**	**Q2 2022**	**Q3 2022**	**Q4 2022**	**Q1 2023**	**Q2 2023**
2	Gas Stored Underground	$ 6,136,873	$ 5,462,121	$ 11,140,672	$ 9,592,214	$ 1,594,573	$ 2,894,784
3	Fuel Stock - Propane	$ 1,467,518	$ 566,849	$ 1,581,766	$ 2,025,128	$ 1,608,061	$ 1,555,784
4	UG Storage - LNG	$ 140,047	$ 118,983	$ 163,648	$ 168,244	$ 134,533	$ 114,826
5		$ 7,744,437					
6	ROR	8.76%	Pre-Tax Rate of 6.64% and Statuatory Tax Rate of 27.08%				
		$ 678,212					
7	Income Tax Gross-up	1.2708					
8	Revenue Requirement	$ 861,872					

Liberty Utilities (EnergyNorth Natural Gas) Corp.

Off Peak 2024 Summer Cost of Gas Filing

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Ln	(a)	(b)	(c)
1	**Liberty Utilities (EnergyNorth Natural Gas) Corp.**		Off Peak Summary
2			Page 1 of 1
3	**Off Peak 2024 Summer Cost of Gas Filing**		
4	**Summary**		
5			OP 24
6		Reference	May - Oct
7	(a)	(b)	(c)
8			
9	**Anticipated Direct Cost of Gas**		
10	Purchased Gas:		
11	Demand Costs:	Sch. 5A, col (j), ln 46	$ 3,222,250
12	Supply Costs	Sch. 6, col (i), ln 47	5,741,685
13			
14	Storage Gas:		
15	Demand, Capacity:	Sch. 5A, col (j), ln 61	$ -
16	Commodity Costs:	Sch. 6, col (i), ln 50	-
17			
18	Produced Gas:	Sch. 6, col (i), ln 56	$ 114,493
19			
20	Hedge Contract (Savings)/Loss		$ (2,938,092)
21			
22			
23	**Total Unadjusted Cost of Gas**		$ 6,140,336
24			
25	**Adjustments**		
26			
27	Prior Period (Over)/Under Recovery)	Sch. 3, col (c) ln 28	$ (4,190,137)
28	Interest 11/01/23 - 10/31/24	Sch. 3, col (q) ln 193	(240,092)
29	Prior Period Adjustments	Sch. 4, ln 22 col (b)	-
30	Refunds from Suppliers	Sch. 4, ln 22 col (c)	-
31	Broker Revenue	Sch. 4, ln 22 col (d)	-
32	Fuel Financing	Sch. 4, ln 22 col (e)	-
33	Transportation CGA Revenues	Sch. 4, ln 22 col (f)	-
34	Interruptible Sales Margin	Sch. 4, ln 22 col (g)	-
35	Capacity Release and Off System Sales Margins	Sch. 4, ln 22 col (h) + col (i)	(2,027,770)
36	Hedging Costs	Sch. 4, ln 22 col (j)	-
37	FPO Premium - Collection		-
38	Fixed Price Option Administrative Costs	Sch. 4, ln 22 col (k)	-
39			
40	**Total Adjustments**		$ (6,457,999)
41			
42	**Total Anticipated Direct Costs**	lns 23 + 40	$ (317,663)
43			
44	**Anticipated Indirect Cost of Gas**		
45	**Working Capital**		
46	Total Unadjusted Anticipated Cost of Gas	Ln 23	$ 6,140,336
47	Lead Lag Days / 365	DG 20-105, 25.72/ 365	0.0705
48	Prime Rate		8.50%
49	Working Capital Percentage	ln 47 * ln 48	0.599%
50	Working Capital	ln 46 * ln 49	36,778
51	Plus: Working Capital Reconciliation	Sch. 3, col (c), ln 98	39,326
52			
53	**Total Working Capital Allowance**	lns 50 + 51	$ 76,104
54			
55	**Bad Debt**		
56	Total Unadjusted Anticipated Cost of Gas	ln 23	$ 6,140,336
57	Less Refunds	ln 30	-
58	Plus Working Capital	ln 53	76,104
59	Plus Prior Period (Over) Under Recovery	ln 27	(4,190,137)
60	Subtotal		$ 2,026,303
61	Bad Debt Percentage	per GTC 17(f)	0.23%
62			
63	Bad Debt Allowance	ln 60 * ln 61	$ 4,699
64	Prior Period Bad Debt Allowance	Sch. 3, col (c), ln 163	698,114
65			
66	**Total Bad Debt Allowance**	lns 63 + 64	$ 702,813
67			
68	**Production and Storage Capacity**	per GTC17(f)	$ -
69			
70	**Miscellaneous Overhead**	per GTC 17(f)	$ -
71	Sales Volume	Sch. 10B, ln 23/1000	24,743
72	Divided by Total Sales	Sch. 10B, ln 23/1000	119,311
73	Ratio		20.74%
74			
75	**Miscellaneous Overhead**	lns 70 * 73	$ -
76			
77	**Total Anticipated Indirect Cost of Gas**	lns 53 + 66 + 68 + 75	$ 778,917
78			
79	**Total Cost of Gas**	lns 42 + 77	$ 461,254
80			
81	**Projected Forecast Sales (Therms)**	Sch. 3, col (q), ln 52	24,742,661

Line										
5										
6										Off Peak Period
7	For Month of:		May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	May - Oct
8	(a)	(b)	(c)	(d)	(e)	(d)	(e)	(f)	(g)	(h)
9	**I. Gas Volumes (Therms)**									
10										
11	**A. Firm Demand Volumes**		113,704	317,380	253,749	229,186	327,809	777,620	454,818	
12	Firm Gas Sales	Sch. 10B, ln 23	1,137,045	3,173,802	2,537,490	2,291,858	3,278,085	7,776,201	4,548,180	24,742,661
13	Lost Gas (Unaccounted for)		217,975	145,065	122,465	130,699	147,320	280,300		1,043,824
14	Company Use		3,613	2,405	2,030	2,166	2,442	4,646		17,302
15	Unbilled Therms		4,248,019	410,014	488,005	937,061	361,457	(851,412)	(4,548,180)	1,044,965
16										
17	**Total Firm Volumes**	Sch. 6, ln 97	5,606,653	3,731,286	3,149,990	3,361,785	3,789,304	7,209,735		26,848,752
18										
19	**B. Supply Volumes (Therms)**									
20	Pipeline Gas:									
21	Dawn Supply	Sch. 6, ln 66	842,983	655,282	518,079	495,174	612,922	901,154		4,025,595
22	Niagara Supply	Sch. 6, ln 67	667,764	585,319	584,500	583,125	492,567	787,845		3,701,120
23	TGP Supply (Gulf)	Sch. 6, ln 68	929,663	-	-	-	-	827,579		1,757,242
24	Dracut Supply 1 - Baseload	Sch. 6, ln 69	-	-	-	-	-	-		-
25	Dracut Supply 2 - Swing	Sch. 6, ln 70	-	-	-	-	-	504,981		504,981
26	City Gate Delivered Supply	Sch. 6, ln 72	-	-	-	-	-	-		-
27	LNG Truck	Sch. 6, ln 73	-	-	4,473	18,729	17,901	100,708		141,811
28	Propane Truck	Sch. 6, ln 74	81,143	75,360	49,199	71,793	73,523	80,427		431,444
29	PNGTS	Sch. 6, ln 75	216,617	194,624	196,156	93,643	189,881	218,149		1,109,071
30	Portland Natural Gas	Sch. 6, ln 76	889,892	29,984	-	-	-	922,990		1,842,866
31	TGP Supply (Zone 4)	Sch. 6, ln 77	5,759,165	5,591,074	3,885,012	3,831,718	3,863,377	6,422,862		29,353,208
32	Subtotal Pipeline Volumes		9,387,227	7,131,644	5,237,418	5,094,181	5,250,171	10,766,696		42,867,337
33										
34	Storage Gas:									
35	TGP Storage	Sch. 6, ln 82	-	-	-	-	-	-		-
36										
37	Produced Gas:									
38	LNG Vapor	Sch. 6, ln 85	20,462.24	19,003.74	18,529.35	18,104.32	18,540.54	20,281.53		114,921.72
39	Propane	Sch. 6, ln 86	-	-	-	-	-	-		-
40	Subtotal Produced Gas		20,462.24	19,003.74	18,529.35	18,104.32	18,540.54	20,281.53		114,921.72
41										
42	Less - Gas Refill:									
43	LNG Truck	Sch. 6, ln 91	-	-	(6,389.43)	(9,988.59)	(53,703.64)	(69,936.32)		(140,017.99)
44	Propane	Sch. 6, ln 92	(81,143.35)	(75,359.65)	(49,198.62)	(71,792.99)	(73,522.85)	(80,426.77)		(431,444.24)
45	TGP Storage Refill	Sch. 6, ln 93	(3,719,893.49)	(3,344,002.57)	(2,050,368.61)	(1,668,718.90)	(1,352,181.04)	(3,426,879.82)		(15,562,044.43)
46	Subtotal Refills		(3,801,036.85)	(3,419,362.22)	(2,105,956.66)	(1,750,500.49)	(1,479,407.53)	(3,577,242.91)		(16,133,506.66)
47										
48	Total Firm Sendout Volumes	lns 32 + 35 + 40 + 46	5,606,652.62	3,731,285.61	3,149,990.23	3,361,784.67	3,789,303.98	7,209,735.12		26,848,752.23

49										
50	**II. Gas Costs**									
51										
52	**A. Demand Costs**									
53	Supply									
54	Niagara Supply	Sch.5A, ln 12	$ -	$ -	$ -	$ -	$ -	$ -		$ -
55	Subtotal Supply Demand		$ -	$ -	$ -	$ -	$ -	$ -		$ -
56	Less Capacity Credit		-	-	-	-	-	-		-
57	Net Pipeline Demand Costs		$ -	$ -	$ -	$ -	$ -	$ -		$ -
58										
59	Pipeline:									
60	Iroquois Gas Trans Service RTS 470-0	Sch.5A, ln 16	[redacted]							
61	Tenn Gas Pipeline 95346 Z5-Z6	Sch.5A, ln 17								
62	Tenn Gas Pipeline 2302 Z5-Z6	Sch.5A, ln 18								
63	Tenn Gas Pipeline 8587 Z0-Z6	Sch.5A, ln 19								
64	Tenn Gas Pipeline 8587 Z1-Z6	Sch.5A, ln 20								
65	Tenn Gas Pipeline 8587 Z4-Z6	Sch.5A, ln 21								
66	Tenn Gas Pipeline (Dracut) 42076 Z6-Z6	Sch.5A, ln 22								
67	Tenn Gas Pipeline (Dracut) 358905 Z6-Z7	Sch.5A, ln 23								
68	Tenn Gas Pipeline (Concord Lateral) Z6-Z6	Sch.5A, ln 24								
69	Portland Natural Gas Trans Service	Sch.5A, ln 25								
70	ANE (TransCanada via Union to Iroquois)	Sch.5A, ln 27								
71	Portland Natural Gas	Sch.5A, ln 25								
72	TransCanada via Union to Portland	Sch.5A, ln 27								
73	Tenn Gas Pipeline Z4-Z6 stg 632	Sch.5A, ln 29								
74	Tenn Gas Pipeline Z4-Z6 stg 11234	Sch.5A, ln 30								
75	Tenn Gas Pipeline Z5-Z6 stg 11234	Sch.5A, ln 31								
76	National Fuel FST 2358	Sch.5A, ln 32								
77	Subtotal Pipeline Demand		$ 796,485	$ 798,993	$ 798,993	$ 798,993	$ 798,993	$ 798,993	$ 3,655,890	$ 4,791,450
78	Less Capacity Credit		(260,849)	(261,670)	(261,670)	(261,670)	(261,670)	(261,670)	(1,197,304)	(1,569,200)
79	Net Pipeline Demand Costs		$ 535,636	$ 537,323	$ 537,323	$ 537,323	$ 537,323	$ 537,323	$ 2,458,586	$ 3,222,250
80										
81	Peaking Supply:									
82	Tenn Gas Pipeline (Concord Lateral) Z6-Z6	Sch.5A, ln 37	$ -	$ -	$ -	$ -	$ -	$ -		$ -
83	Granite Ridge Demand	Sch.5A, ln 38	-	-	-	-	-	-		-
84	DOMAC Demand NSB041	Sch.5A, ln 39	-	-	-	-	-	-		-
85	Subtotal Peaking Demand		$ -	$ -	$ -	$ -	$ -	$ -		$ -
86	Less Capacity Credit		-	-	-	-	-	-		-
87	Net Peaking Supply Demand Costs		$ -	$ -	$ -	$ -	$ -	$ -		$ -
88										
89	Storage:									
90	Dominion - Demand	Sch.5A, ln 49	$ -	$ -	$ -	$ -	$ -	$ -		$ -
91	Dominion - Storage	Sch.5A, ln 50	-	-	-	-	-	-		-
92	Honeoye - Demand	Sch.5A, ln 51	-	-	-	-	-	-		-
93	National Fuel - Demand	Sch.5A, ln 52	-	-	-	-	-	-		-
94	National Fuel - Capacity	Sch.5A, ln 53	-	-	-	-	-	-		-
95	Tenn Gas Pipeline - Demand	Sch.5A, ln 54	-	-	-	-	-	-		-
96	Tenn Gas Pipeline - Capacity	Sch.5A, ln 55	-	-	-	-	-	-		-
97	Subtotal Storage Demand		$ -	$ -	$ -	$ -	$ -	$ -		$ -
98	Less Capacity Credit		-	-	-	-	-	-		-
99	Net Storage Demand Costs		$ -	$ -	$ -	$ -	$ -	$ -		$ -
100										
101	Total Demand Charges	lns 55 + 77 + 85 + 97	$ 796,485	$ 798,993	$ 798,993	$ 798,993	$ 798,993	$ 798,993	$ 3,655,890	$ 4,791,450
102	Total Capacity Credit	lns 56 + 78 + 86 + 98	(260,849)	(261,670)	(261,670)	(261,670)	(261,670)	(261,670)	(1,197,304)	(1,569,200)
103	Net Demand Charges		$ 535,636	$ 537,323	$ 537,323	$ 537,323	$ 537,323	$ 537,323	$ 2,458,586	$ 3,222,250
104										

105									
106									
107	**B. Commodity Costs**								
108	Pipeline:								
109	Dawn Supply	Sch. 6, ln 12	[redacted]						
110	Niagara Supply	Sch. 6, ln 13							
111	TGP Supply (Gulf)	Sch. 6, ln 14							
112	Dracut Supply 1 - Baseload	Sch. 6, ln 15							
113	Dracut Supply 2 - Swing	Sch. 6, ln 16							
114	Dracut Supply 3 - Swing	Sch. 6, ln 17							
115	City Gate Delivered Supply	Sch. 6, ln 18							
116	LNG Truck	Sch. 6, ln 19							
	Propane Truck	Sch. 6 Ln 20							
117	Portland Natural Gas	Sch. 6, ln 21							
118	PNGTS	Sch. 6, ln 21							
119	TGP Supply (Zone 4)	Sch. 6, ln 23							
120	Subtotal Pipeline Commodity Costs		$ 2,658,789	$ 1,921,046	$ 1,476,595	$ 1,477,051	$ 1,368,145	$ 2,936,731	$ 11,838,357
121									
122	Storage:								
123	TGP Storage - Withdrawals	Sch. 6, ln 50	$ -	$ -	$ -	$ -	$ -	$ -	$ -
124									
125	Produced Gas Costs:								
126	LNG Vapor	Sch. 6, ln 53	[redacted]						
127	Propane	Sch. 6, ln 54							
128	Subtotal Produced Gas Costs		$ 25,864	$ 24,020	$ 21,977	$ 19,209	$ 12,677	$ 10,745	$ 114,493
129									
130	Less Storage Refills:								
131	LNG Truck	Sch. 6, ln 40	[redacted]						
132	Propane	Sch. 6, ln 41							
133	TGP Storage Refill	Sch. 6, ln 42							
134	Storage Refill (Trans.)	Sch. 6, ln 43							
135	Subtotal Storage Refill		$ (1,410,494)	$ (1,306,566)	$ (838,737)	$ (743,560)	$ (690,275)	$ (1,523,003)	$ (6,512,635)
136									
137	Total Supply Commodity Costs		$ 1,274,159	$ 638,500	$ 659,836	$ 752,700	$ 690,547	$ 1,424,473	$ 5,440,216
138									
139	**C. Supply Volumetric Transportation Costs**								
140	Dawn Supply	Sch. 6, ln 28	[redacted]						
141	Niagara Supply	Sch. 6, ln 29							
142	TGP Supply (Zone 4)	Sch. 6, ln 30							
143	Dracut Supply 1 - Baseload	Sch. 6, ln 31							
144	Dracut Supply 2 - Swing	Sch. 6, ln 32							
145	Dracut Supply 3 - Swing	Sch. 6, ln 33							
146	Subtotal Pipeline Volumetric Trans. Costs		$ 83,062	$ 77,493	$ 56,991	$ 54,973	$ 53,621	$ 89,822	$ 415,962
147									
148	TGP Storage - Withdrawals	Sch. 6, ln 35	$ -	$ -	$ -	$ -	$ -	$ -	$ -
149									
150	Total Supply Volumetric Trans. Costs	lns 146 + 148	$ 83,062	$ 77,493	$ 56,991	$ 54,973	$ 53,621	$ 89,822	$ 415,962
151	AMA Credits	Sch. 6, ln 58	$ (489,682)	$ (489,682)	$ (489,682)	$ (489,682)	$ (489,682)	$ (489,682)	$ (2,938,092)
152	Total Commodity Gas & Trans. Costs	lns 137 + 150	$ 867,538	$ 226,311	$ 227,146	$ 317,991	$ 254,486	$ 1,024,614	$ 2,918,086
153									
154									
155									
156									

REDACTED
Schedule 1
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157	**D. Supply and Demand Costs by Source**									
158										
159										
160	Purchased Gas Demand Costs									
161	Pipeline Gas Demand Costs	lns 55 + 77	$ 796,485	$ 798,993	$ 798,993	$ 798,993	$ 798,993	$ 798,993		$ 4,791,450
162	Peaking Gas Demand Costs	ln 85	-	-	-	-	-	-		-
163	Subtotal Purchased Gas Demand Costs		$ 796,485	$ 798,993	$ 798,993	$ 798,993	$ 798,993	$ 798,993		$ 4,791,450
164	Less Capacity Credit	lns 56 + 78 + 86	(260,849)	(261,670)	(261,670)	(261,670)	(261,670)	(261,670)		(1,569,200)
165	Net Purchased Gas Demand Costs		$ 535,636	$ 537,323	$ 537,323	$ 537,323	$ 537,323	$ 537,323		$ 3,222,250
166										
167	Storage Gas Demand Costs									
168	Storage Demand	ln 97	$ -	$ -	$ -	$ -	$ -	$ -		$ -
169	Less Capacity Credit	ln 98	-	-	-	-	-	-		-
170	Net Storage Demand Costs		$ -	$ -	$ -	$ -	$ -	$ -		$ -
171										
172	**Total Demand Costs**	lns 165 + 170	$ 535,636	$ 537,323	$ 537,323	$ 537,323	$ 537,323	$ 537,323		$ 3,222,250
173										
174	Purchased Gas Supply									
175	Commodity Costs	ln 120	[redacted]							
176	Less Storage Inj.(TGP Storage)	ln 133								
177	Less Storage Transportation	ln 134								
178	Less LNG Truck	ln 131								
179	Less Propane Truck	ln 132								
180	Plus Transportation Costs	ln 146								
181	Less AMA Credits		$ (489,682)	$ (489,682)	$ (489,682)	$ (489,682)	$ (489,682)	$ (489,682)	$ -	$ (2,938,092)
182	Subtotal Purchased Gas Supply		$ 841,675	$ 202,290	$ 205,168	$ 298,782	$ 241,809	$ 1,013,869	$ -	$ 2,803,593
183										
184	Storage Commodity Costs									
185	Commodity Costs	ln 123	$ -	$ -	$ -	$ -	$ -	$ -		$ -
186	Transportation Costs	ln 148	-	-	-	-	-	-		-
187	Subtotal Storage Commodity Costs		$ -	$ -	$ -	$ -	$ -	$ -		$ -
188										
189	Produced Gas Commodity Costs	ln 128	$ 25,864	$ 24,020	$ 21,977	$ 19,209	$ 12,677	$ 10,745		$ 114,493
190										
191	**Subtotal Commodity Costs**	lns 182 + 187 + 189	$ 867,538	$ 226,311	$ 227,146	$ 317,991	$ 254,486	$ 1,024,614		$ 2,918,086
192										
193	Hedge Contract (Savings)/Loss		$ -	$ -	$ -	$ -	$ -	$ -		$ -
194										
195	**Total Commodity Costs**	lns 191 + 193	$ 867,538	$ 226,311	$ 227,146	$ 317,991	$ 254,486	$ 1,024,614		$ 2,918,086
196										
197	**Total Demand Costs**	ln 103	$ 535,636	$ 537,323	$ 537,323	$ 537,323	$ 537,323	$ 537,323		$ 3,222,250
198	**Total Supply Costs**	ln 195	867,538	226,311	227,146	317,991	254,486	1,024,614		2,918,086
199										
200	**Total Direct Gas Costs**	lns 197 + 198	$ 1,403,175	$ 763,633	$ 764,468	$ 855,314	$ 791,809	$ 1,561,937		$ 6,140,336
201										
202										

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty **REDACTED**

Off Peak 2024 Summer Cost of Gas Filing
Contracts Ranked on a per Unit Cost Basis

Supplier (a)	Contract (b)	Contract Type (c)	Contract Unit (d)	Unit Dth (MDQ/ACQ) (e)	Off Peak Cost per Unit Dth (f)
Demand Costs					
ANE (TransCanada via Union to Iroquois)	Dawn - Parkway to Iroquois	Transportation	MDQ	4,047	[redacted]
Dominion - Capacity Reservation	GSS 300076	Storage	ACQ	102,700	
Tenn Gas Pipeline - Cap. Reservations	FS-MA 523	Storage	ACQ	1,560,391	
National Fuel - Capacity Reservation	FSS-1 2357	Storage	ACQ	670,800	
Tenn Gas Pipeline - Demand	FS-MA 523	Storage	MDQ	21,844	
Dominion - Demand	GSS 300076	Storage	MDQ	934	
National Fuel - Demand	FSS-1 2357	Storage	MDQ	6,098	
Tenn Gas Pipeline	42076 FTA Z6-Z6	Transportation	MDQ	20,000	
Tenn Gas Pipeline	42076 FTA Z6-Z6	Transportation	MDQ	40,000	
National Fuel	FST N02358	Transportation	MDQ	6,098	
Iroquois Gas Trans Service	RTS 470-01	Transportation	MDQ	4,047	
Honeoye - Demand	SS-NY	Storage	MDQ	1,362	
Tenn Gas Pipeline	2302 Z5-Z6	Transportation	MDQ	3,122	
Tenn Gas Pipeline (short haul)	11234 Z5-Z6(stg)	Transportation	MDQ	1,957	
Tenn Gas Pipeline (short haul)	8587 Z4-Z6	Transportation	MDQ	3,811	
Tenn Gas Pipeline (short haul)	632 Z4-Z6 (stg)	Transportation	MDQ	15,265	
Tenn Gas Pipeline (short haul)	11234 Z4-Z6(stg)	Transportation	MDQ	7,082	
Tenn Gas Pipeline (Concord Lateral) Z6-Z6	Firm Transportation	Transportation	MDQ	30,000	
Tenn Gas Pipeline	95346 Z5-Z6	Transportation	MDQ	4,000	
TransCanada via Union to Portland	Union Parkway to Portland	Transportation	MDQ	5,077	
Portland Natural Gas Trans Service	FT-1999-001	Transportation	MDQ	1,000	
Tenn Gas Pipeline (long haul)	8587 Z1-Z6	Transportation	MDQ	14,561	
Tenn Gas Pipeline (long haul)	8587 Z0-Z6	Transportation	MDQ	7,035	
Portland Natural Gas	FTN	Transportation	MDQ	5,000	
Supply Costs - Commodity					
LNG Truck		Pipeline	Dkt	14,181	[redacted]
TGP Supply (Zone 4)		Pipeline	Dkt	2,935,321	
Niagara Supply		Pipeline	Dkt	370,112	
Dracut Supply 2 - Swing		Pipeline	Dkt	50,498	
Dawn Supply		Pipeline	Dkt	402,559	
TGP Citygate Supply		Pipeline	Dkt	-	
PNGTS		Pipeline	Dkt	110,907	
Dracut Supply 1 - Baseload		Pipeline	Dkt	-	
TGP Supply (Gulf)		Pipeline	Dkt	175,724	
LNG Vapor		Produced	Dkt	11,492	
Propane		Pipeline	Dkt	-	
Supply Costs - Volumetric Transportation					
Dracut Supply 1 - Baseload		Pipeline	Dkt	-	[redacted]
TGP Supply (Zone 4)		Pipeline	Dkt	175,724	
Dracut Supply 2 - Swing		Pipeline	Dkt	50,498	
Dawn Supply		Storage	Dkt	402,559	
Niagara Supply		Pipeline	Dkt	370,112	

1 **Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**

3 **Off Peak 2024 Summer Cost of Gas Filing**
4 **COG (Over)/Under Cumulative Recovery Balances and Interest Calculation**

Ln		Days in Month	Prior Period Balance Plus Nov Collections October 31, 2023	Nov-23 30	Dec-23 31	Jan-24 31	Feb-24 29	Mar-24 31	Apr-24 30	May-24 31	Jun-24 30	Jul-24 31	Aug-24 31	Sep-24 30	Oct-24 31	Nov-24 30	Off Peak Period Total
10	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
11	**Account 8840 2 0000 10 1920 1741 (formerly, 175.40) COG (Over)/Under Balance Interest Calculation**																
12																	
13	**Beginning Balance**	Account 1920-1741 1/	**$ (4,190,137)**	$ (4,190,137)	$ (4,219,411)	$ (4,249,871)	$ (4,280,552)	$ (4,309,460)	$ (4,340,571)	$ (4,370,896)	$ (3,453,610)	$ (3,002,451)	$ (2,474,574)	$ (1,849,769)	$ (1,323,840)	$ (443,478)	$ (4,190,137)
14	Forecast Direct Gas Costs		-	-	-	-	-	-	-	1,512,050	872,508	873,344	964,189	900,684	1,670,812	-	6,793,586
15	Production & Storage & Misc Overhead		-	-	-	-	-	-	-	-	-	-	-	-	-		-
16	Projected Revenues w/o Int.	ln 54 * ln 64	-	-	-	-	-	-	-	(119,641)	(333,951)	(266,997)	(241,152)	(344,924)	(818,220)	(478,564)	(2,603,449)
17	Projected Unbilled Revenue	ln 58 * ln 64	-	-	-	-	-	-	-	(446,981)	(511,906)	(570,676)	(653,356)	(672,140)	(638,014)		(3,493,073)
18	Reverse Prior Month Unbilled		-	-	-	-	-	-	-		446,981	511,906	570,676	653,356	672,140	638,014	3,493,073
19	Add Net Adjustments (with TGP Refund)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	Gas Cost B lled	Account 1920-1741 2/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	Monthly (Over)/Under Recovery		$ (4,190,137)	$ (4,190,137)	$ (4,219,411)	$ (4,249,871)	$ (4,280,552)	$ (4,309,460)	$ (4,340,571)	$ (3,425,468)	$ (2,979,977)	$ (2,454,875)	$ (1,834,216)	$ (1,312,793)	$ (437,122)	$ (284,029)	$ -
22	Average Monthly Balance	(ln 13 + 21)/ 2	$ -	$ (4,190,137)	$ (4,219,411)	$ (4,249,871)	$ (4,280,552)	$ (4,309,460)	$ (4,340,571)	$ (3,898,182)	$ (3,216,793)	$ (2,728,663)	$ (2,154,395)	$ (1,581,281)	$ (880,481)	$ (363,754)	
23																	
24	Interest Rate	Prime Rate		8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%		
25																	
26	Interest Applied	ln 22 * ln 24 /365 *Days/Mo.	$ -	$ (29,274)	$ (30,461)	$ (30,681)	$ (28,908)	$ (31,111)	$ (30,325)	$ (28,142)	$ (22,473)	$ (19,699)	$ (15,553)	$ (11,047)	$ (6,356)	$ -	$ (284,029)
27																	
28	**(Over)/Under Balance**	ln 21 + ln 26	$ (4 190 137)	$ (4 219 411)	$ (4 249 871)	$ (4 280 552)	$ (4 309 460)	$ (4 340 571)	$ (4 370 896)	$ (3 453 610)	$ (3 002 451)	$ (2 474 574)	$ (1 849 769)	$ (1 323 840)	$ (443 478)	$ (284 029)	$ (284 029)
29																	
30																	
31	**Calculation of COG with Interest**																
32																	
33	**Beginning Balance**	ln 13	$ (4,190,137)	$ (4,190,137)	$ (4,219,411)	$ (4,249,871)	$ (4,280,552)	$ (4,309,460)	$ (4,340,571)	$ (4,370,896)	$ (3,496,279)	$ (3,075,451)	$ (2,572,633)	$ (1,972,922)	$ (1,475,240)	$ (655,016)	$ (4,190,137)
34	Forecast Direct Gas Costs	ln 14	-	-	-	-	-	-	-	1,512,050	872,508	873,344	964,189	900,684	1,670,812	-	6,793,586
35	Prod Storage & Misc Overhead	ln 15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	Projected Revenues with int.	ln 54 * 66	-	-	-	-	-	-	-	(128,618)	(359,008)	(287,031)	(259,246)	(370,804)	(879,614)	(514,473)	(2,798,795)
37	Projected Unbilled Revenue	ln 58 * 66	-	-	-	-	-	-	-	(480,520)	(550,316)	(613,496)	(702,379)	(722,573)	(685,886)		(3,755,170)
38	Reverse Prior Month Unbilled		-	-	-	-	-	-	-		480,520	550,316	613,496	702,379	722,573	685,886	3,755,170
39	Add Net Adjustments	ln 19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	Gas Cost Billed	ln 20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	Gas Cost Unb lled																
42	Reverse Prior Month Unbilled																
43	Add Interest	ln 26	-														-
44	**(Over)/Under Balance**		$ (4 190 137)	$ (4 190 137)	$ (4 219 411)	$ (4 249 871)	$ (4 280 552)	$ (4 309 460)	$ (4 340 571)	$ (3 467 984)	$ (3 052 575)	$ (2 552 319)	$ (1 956 573)	$ (1 463 236)	$ (647 355)	$ (483 603)	$ (195 346)
45																	
46	Average Monthly Balance			$ (4,190,137)	$ (4,219,411)	$ (4,249,871)	$ (4,280,552)	$ (4,309,460)	$ (4,340,571)	$ (3,919,440)	$ (3,274,427)	$ (2,813,885)	$ (2,264,603)	$ (1,718,079)	$ (1,061,297)		
47																	
48	Interest Applied	ln 24 * ln 46 /365 *Days/Mo.		$ (29,274)	$ (30,461)	$ (30,681)	$ (28,908)	$ (31,111)	$ (30,325)	$ (28,295)	$ (22,876)	$ (20,314)	$ (16,349)	$ (12,003)	$ (7,662)	$ -	$ (288,257)
49																	
50	**(Over)/Under Balance**	ln 43 +ln 44 + ln 48	$ (4,190,137)	$ (4,219,411)	$ (4,249,871)	$ (4,280,552)	$ (4,309,460)	$ (4,340,571)	$ (4,370,896)	$ (3,496,279)	$ (3,075,451)	$ (2,572,633)	$ (1,972,922)	$ (1,475,240)	$ (655,016)	$ (483,603)	$ (483,603)
51																	
52																	
53	Forecast Sendout Therms	Sch 1								5,606,653	3,731,286	3,149,990	3,361,785	3,789,304	7,209,735		26,848,752
54	Less 'Forecast Billing Therm Sales	Sch. 10B, ln 23 May - Oct								1,137,045	3,173,802	2,537,490	2,291,858	3,278,085	7,776,201	4,548,180	24,742,661
55	Less Forecast Unaccounted For	Sch 1								217,975	145,065	122,465	130,699	147,320	280,300		1,043,824
56	Less Forecast Company Use	Sch 1								3,613	2,405	2,030	2,166	2,442	4,646		17,302
57	Unbilled Volumes									4,248,019	410,014	488,005	937,061	361,457	(851,412)	(4,548,180)	1,044,965
58	Gross Unbilled									4,248,019	4,865,052	5,423,594	6,209,362	6,387,887	6,063,554	1,789,632	
59																	
60	Beg Balance									-	4,248,019	4,658,034	5,146,039	6,083,100	6,444,556	5,593,145	
61	Incremental									4,248,019	410,014	488,005	937,061	361,457	(851,412)	(4,548,180)	
62	Ending Balance									4,248,019	4,658,034	5,146,039	6,083,100	6,444,556	5,593,145	1,044,965	
63																	
64	COG w/o Interest	Sch. 3, pg. 4, ln 211 col. (c)								$ 0.1052	$ 0.1052	$ 0.1052	$ 0.1052	$ 0.1052	$ 0.1052	$ 0.1052	
65																	
66	COG W th Interest	Sch. 3 pg. 4 ln 211 col. (d)								$ 0.1131	$ 0.1131	$ 0.1131	$ 0.1131	$ 0.1131	$ 0.1131	$ 0.1131	
67																	

Ln	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
68																	
69																	
70																	
71			Prior Period Balance	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Off Peak Period
72		Days in Month	Plus Nov Collections	30	31	31	29	31	30	31	30	31	31	30	31	30	Total
73			October 31, 2023														
74	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
75																	
76	**Account 8840 2 0000 10 1163 1424 (formerly, 142.40) Working Capital (Over)/Under Balance Interest Calculation**																
77																	
78	**Beginning Balance**	Account 1163-1424 1/	**$ 39,326**	$ 39,326	$ 39,601	$ 39,886	$ 40,174	$ 40,446	$ 40,738	$ 41,022	$ 32,930	$ 26,774	$ 22,398	$ 17,876	$ 11,603	$ (745)	$ 39,326
79																	
80	Days Lag									0.0705	0.0705	0.0705	0.0705	0.0705	0.0705	0.0705	
81	Prime Rate									8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	
82	Forecast Working Capital	In 34 * In 80 / 365 * In 81		-	-	-	-	-	-	9,057	5,226	5,231	5,775	5,395	10,007	-	40,691
83																	
84	Projected Revenues w/o Int.	In 123 * In 126		-	-	-	-	-	-	(3,677)	(10,264)	(8,206)	(7,412)	(10,601)	(25,148)	(14,709)	(80,017)
85	Projected Unbilled Revenue	In 124 * In 126								(13,738)	(15,064)	(16,642)	(19,672)	(20,841)	(18,088)		(104,046)
86	Reverse Prior Month Unbilled										13,738	15,064	16,642	19,672	20,841	18,088	104,046
87																	
88	Add Net Adjustments			-	-		-	-	-	-	-	-	-	-	-	-	-
89																	
90	Working Capital Billed	Account 1163-1424 2/															-
91																	
92	Monthly (Over)/Under Recovery		$ 39 326	$ 39 326	$ 39 601	$ 39 886	$ 40 174	$ 40 446	$ 40 738	$ 32 664	$ 26 566	$ 22 221	$ 17 731	$ 11 500	$ (784)	$ 2 635	$ -
93																	
94	Average Monthly Balance	(In 78 + 92)/ 2		$ 39,326	$ 39,601	$ 39,886	$ 40,174	$ 40,446	$ 40,738	$ 36,843	$ 29,748	$ 24,497	$ 20,064	$ 14,688	$ 5,410		
95																	
96	Interest Rate	Prime Rate		8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%		
97																	
98	Interest Applied	In 94 * In 96 / 365 * Days of Month		$ 275	$ 286	$ 288	$ 271	$ 292	$ 285	$ 266	$ 208	$ 177	$ 145	$ 103	$ 39		$ 2,634
99																	
100	**(Over)/Under Balance**	In 92 + In 98	$ 39 326	$ 39 601	$ 39 886	$ 40 174	$ 40 446	$ 40 738	**$ 41,022**	$ 32 930	$ 26 774	$ 22 398	$ 17 876	$ 11 603	$ (745)	$ 2 635	2 634
101																	
102																	
103	**Calculation of Working Capital with Interest**																
104																	
105	**Beginning Balance**		$ 39,326	$ 39,326	$ 39,601	$ 39,886	$ 40,174	$ 40,446	$ 40,738	$ 41,022	$ 32,888	$ 26,704	$ 22,304	$ 17,756	$ 11,454	$ (949)	$ 39,326
106	Forecast Working Capital	In 82		-	-	-	-	-	-	9,057	5,226	5,231	5,775	5,395	10,007	-	40,691
107	Projected Rev. with interest	In 123 * In 128		-	-	-	-	-	-	(3,686)	(10,288)	(8,226)	(7,429)	(10,626)	(25,208)	(14,744)	(80,208)
108	Projected Unbilled Revenue	In 124 * In 128								(13,771)	(15,100)	(16,682)	(19,719)	(20,891)	(18,131)		(104,294)
109	Reverse Prior Month Unbilled										13,771	15,100	16,682	19,719	20,891	18,131	104,294
110	Add Net Adjustments	In 88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
111	Working Capital Billed	In 90	-			-											-
112	WC Unbilled									-	-	-	-	-	-	-	-
113	Reverse WC Unbilled										-	-	-	-	-	-	-
114	Add Interest	In 98															-
115	Monthly (Over)/Under Recovery		$ 39 326	$ 39 326	$ 39 601	$ 39 886	$ 40 174	$ 40 446	$ 40 738	$ 32 622	$ 26 497	$ 22 127	$ 17 611	$ 11 352	$ (987)	$ 2 439	$ (191)
116																	
117	Average Monthly Balance			$ 39,326	$ 39,601	$ 39,886	$ 40,174	$ 40,446	$ 40,738	$ 36,822	$ 29,692	$ 24,416	$ 19,957	$ 14,554	$ 5,234		
118																	
119	Interest Applied	In 96 * In 117 / 365 * Days of Month		275	286	288	271	292	285	266	207	176	144	102	38	-	$ 2,630
120																	
121	**(Over)/Under Balance**	-In 114 +In 115 + In 119	$ 39,326	$ 39,601	$ 39,886	$ 40,174	$ 40,446	$ 40,738	$ 41,022	$ 32,888	$ 26,704	$ 22,304	$ 17,756	$ 11,454	$ (949)	$ 2,439	$ 2,439
122																	
123	Forecast Therm Sales	In 53								1,137,045	3,173,802	2,537,490	2,291,858	3,278,085	7,776,201	4,548,180	24,742,661
124	Unbilled Therm	In 55								4,248,019	4,658,034	5,146,039	6,083,100	6,444,556	5,593,145	1,044,965	
125																	
126	Working Cap. Rate w/out Int.	Sch. 3, pg. 4, In 228 col. (c)								$0.0032	$0.0032	$0.0032	$0.0032	$0.0032	$0.0032	$0.0032	
127																	
128	Working Capital Rate w/ Int.	Sch. 3 pg. 4 In 228 col. (d)								$0.0032	$0.0032	$0.0032	$0.0032	$0.0032	$0.0032	$0.0032	

Schedule 3
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Ln	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
132			Prior Period Balance														
133			Plus Nov Collections	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Off Peak Period
134		Days in Month	October 31, 2023	30	31	31	29	31	30	31	30	31	31	30	31	30	Total
135	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
137	**Account 8840 2 0000 10 1163 1754 (formerly, 175.54) Bad Debt (Over)/Under Balance Interest Calculation**																
139	Forecast Direct Gas Costs	ln 34		$ -	$ -	$ -	$ -	$ -	$ -	$ 1,512,050	$ 872,508	$ 873,344	$ 964,189	$ 900,684	$ 1,670,812	$ -	6,793,586
140	Forecast Working Capital	ln 106 + (May includes prior period)		-	-	-	-	-	-	48,382	5,226	5,231	5,775	5,395	10,007		80,017
141	Prior Period Balance (with Refund)	ln 21 / 6								(698,356)	(698,356)	(698,356)	(698,356)	(698,356)	(698,356)		(4,190,137)
142	Total Forecast Direct Gas Costs & Working Capital			-	-	-	-	-	-	862,076	179,378	180,218	271,608	207,723	982,463	-	6,873,603
144	**Beginning Balance**	Account 1163-1754 1/	**$ 698,114**	$ 698,114	$ 702,991	$ 708,066	$ 713,178	$ 717,994	$ 723,178	$ 728,230	$ 581,646	$ 480,044	$ 397,492	$ 308,746	$ 207,420	$ 13,368	$ 698,114
145		**Oct Collections & Unbilled**															
146	Forecast Bad Debt	ln 142 * 0.00231908326307407		-	-	-	-	-	-	1,999	416	418	630	482	2,278		6,223
148	Projected Revenues w/o int	ln 184 * ln 187		-	-	-	-	-	-	(32,368)	(90,347)	(72,234)	(65,241)	(93,316)	(221,361)	(129,471)	(704,337)
149	Projected Unbilled Revenue	ln 185 * ln 187								(120,926)	(132,598)	(146,490)	(173,165)	(183,454)	(159,217)		(915,850)
150	Reverse Prior Month Unbilled										120,926	132,598	146,490	173,165	183,454	159,217	915,850
151																	-
152	Bad Debt Billed	Account 1163-1754 2/			-		-	-	-								-
153	Add Net Adjustments			-	-	-	-	-	-	-	-	-	-	-	-	-	-
155	Monthly (Over)/Under Recovery		$ 698,114	$ 698,114	$ 702,991	$ 708,066	$ 713,178	$ 717,994	$ 723,178	$ 576,935	$ 480,044	$ 394,336	$ 306,206	$ 205,623	$ 12,574	$ 43,114	$ -
157	Average Monthly Balance	(ln 144 + 155)/ 2		$ 698,114	$ 702,991	$ 708,066	$ 713,178	$ 717,994	$ 723,178	$ 652,583	$ 530,845	$ 437,190	$ 351,849	$ 257,185	$ 109,997	$ 28,241	
159	Interest Rate	Prime Rate		8.50%	8.50%	8.50%	8.50%	8.50%	8.50% #	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%		
161	Interest Applied	ln 157 * ln 159 / 365 * Days of Mo.		$ 4,877	$ 5,075	$ 5,112	$ 4,816	$ 5,183	$ 5,052	$ 4,711	$ 3,709	$ 3,156	$ 2,540	$ 1,797	$ 794		$ 46,823
163	**(Over)/Under Balance**	ln 155 + ln 161	$ 698,114	$ 702,991	$ 708,066	$ 713,178	$ 717,994	$ 723,178	**$ 728,230**	$ 581,646	$ 483,752	$ 397,492	$ 308,746	$ 207,420	$ 13,368	$ 28,241	46,823
166	**Calculation of Bad Debt with Interest**																
168	**Beginning Balance**		$ 698,114	$ 698,114	$ 702,991	$ 708,066	$ 713,178	$ 717,994	$ 723,178	$ 728,230	$ 567,412	$ 459,947	$ 369,253	$ 271,769	$ 160,564	$ (52,130)	$ 698,114
169	Forecast Bad Debt	ln 146		-	-	-	-	-	-	1,999	416	418	630	482	2,278	-	6,223
170	Projected Revenues with int.	ln 184 * 189		-	-	-	-	-	-	(35,362)	(98,706)	(78,917)	(71,277)	(101,949)	(241,842)	(141,450)	(769,503)
171	Projected Unbilled Revenue	ln 185 * 189								(132,115)	(144,866)	(160,043)	(189,186)	(200,427)	(173,948)		(1,000,586)
172	Reverse Prior Month Unbilled										132,115	144,866	160,043	189,186	200,427	173,948	1,000,586
173	Bad Debt Billed	ln 152	-		-	-	-	-	-								-
174	Add Interest	ln 161															-
175	Add Net Adjustments	ln 153	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
176	Monthly (Over)/Under Recovery		$ 698 114	$ 698 114	$ 702 991	$ 708 066	$ 713 178	$ 717 994	$ 723 178	$ 562 752	$ 456 371	$ 366 271	$ 269 463	$ 159 060	$ (52 520)	$ (19 631)	$ (65 166)
178	Average Monthly Balance	(ln 168 + 176)/ 2		$ 698,114	$ 702,991	$ 708,066	$ 713,178	$ 717,994	$ 723,178	$ 645,491	$ 511,891	$ 413,109	$ 319,358	$ 215,414	$ 54,022	$ (35,881)	
180	Interest Applied	ln 159 * ln 178 / 365 * Days of Month		4,877	5,075	5,112	4,816	5,183	5,052	4,660	3,576	2,982	2,306	1,505	390	-	$ 45,535
182	**(Over)/Under Balance**	-ln 174 +ln 176 + ln 180	$ 698,114	$ 702,991	$ 708,066	$ 713,178	$ 717,994	$ 723,178	$ 728,230	$ 567,412	$ 459,947	$ 369,253	$ 271,769	$ 160,564	$ (52,130)	$ (19,631)	$ (19,631)
184	Forecast Therm Sales	ln 53								1,137,045	3,173,802	2,537,490	2,291,858	3,278,085	7,776,201	4,548,180	24,742,661
185	Unbilled Therm	ln 55								4,248,019	4,658,034	5,146,039	6,083,100	6,444,556	5,593,145		
187	COG Rate Without Interest	Sch. 3, pg. 4, ln 245 col. (c)								$0.0285	$0.0285	$0.0285	$0.0285	$0.0285	$0.0285	$0.0285	
189	COG With Interest	Sch. 3, pg. 4, ln 245 col. (d)								$0.0311	$0.0311	$0.0311	$0.0311	$0.0311	$0.0311	$0.0311	
193	**Total Interest**	lns 48 + 119 + 180		$ (24 122)	$ (25 100)	$ (25 281)	$ (23 821)	$ (25 635)	$ (24 988)	$ (23 369)	$ (19 092)	$ (17 155)	$ (13 899)	$ (10 396)	$ (7 234)	$ -	$ (240 092)

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

Off Peak 2024 Summer Cost of Gas Filing
Adjustments to Gas Costs

Adjustments		**Prior Period Adjustments**	**Refunds from Suppliers / Pipelines**	**Broker Revenue**	**Fuel Financing**	**Transportation CGA Revenues**	**Interruptible Sales Margin**	**Off System Sales Margin**	**Capacity Release Margin**	**Net Option Premiums**	**Fixed Price Option Administrative Costs**	**Total Adjustments**
(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(m)
Nov-23	1/	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Dec-23	1/	-	-	-	-	-	-	-	-	-	-	-
Jan-24	1/	-	-	-	-	-	-	-	-	-	-	-
Feb-24	1/	-	-	-	-	-	-	-	-	-	-	-
Mar-24	1/	-	-	-	-	-	-	-	-	-	-	-
Apr-24	1/	-	-	-	-	-	-	-	-	-	-	-
May-24	1/	-	-	-	-	-	-	-	(124,520)	-	-	(124,520)
Jun-24	1/	-	-	-	-	-	-	-	(248,319)	-	-	(248,319)
Jul-24	1/	-	-	-	-	-	-	-	(376,373)	-	-	(376,373)
Aug-24	1/	-	-	-	-	-	-	-	(664,024)	-	-	(664,024)
Sep-24	1/	-	-	-	-	-	-	-	(399,253)	-	-	(399,253)
Oct-24	1/	-	-	-	-	-	-	-	(215,280)	-	-	(215,280)
Total Off Peak Period		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (2,027,770)	$ -	$ -	$ (2,027,770)

Liberty Utilities (EnergyNorth Natural Gas) Corp.

REDACTED
Schedule 5A
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Off Peak 2024 Summer Cost of Gas Filing

<u>Demand Costs</u>

Ln	(a)	Peak (b)	Reference (c)	May-24 (d)	Jun-24 (e)	Jul-24 (f)	Aug-24 (g)	Sep-24 (h)	Oct-24 (i)	Off Peak May - Oct Total (j)	Peak May - Oct Total (k)
10											
11	**Supply**										
12	Niagara Supply		Sch 5B, ln 9 * Sch 5C ln 9 x days	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
13	Subtotal Supply Demand & Reservation Charges			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14											
15	**Pipeline**										
16	Iroquois Gas Trans Service RTS 470-0		Sch 5B, ln 12 * Sch 5C ln 12 x days	[redacted]							
17	Tenn Gas Pipeline 95346 Z5-Z6		Sch 5B, ln 13 * Sch 5C ln 14 x days								
18	Tenn Gas Pipeline 2302 Z5-Z6		Sch 5B, ln 14 * Sch 5C ln 16 x days								
19	Tenn Gas Pipeline 8587 Z0-Z6		Sch 5B, ln 15 * Sch 5C ln 18 x days								
20	Tenn Gas Pipeline 8587 Z1-Z6		Sch 5B, ln 16 * Sch 5C ln 20 x days								
21	Tenn Gas Pipeline 8587 Z4-Z6		Sch 5B, ln 17 * Sch 5C ln 22 x days								
22	Tenn Gas Pipeline (Dracut) 42076 Z6-Z6	peak	Sch 5B, ln 18 * Sch 5C ln 24 x days								
23	Tenn Gas Pipeline (Dracut) 358905 Z6-Z7	peak	Sch 5B, ln 19 * Sch 5C ln 25 x days								
24	Tenn Gas Pipeline (Concord Lateral) Z6-Z6	peak	Sch 5B, ln 20 * Sch 5C ln 28 x days								
25	Portland Natural Gas Trans Service		Sch 5B, ln 21 * Sch 5C ln 30 x days								
26	Portland Natural Gas		Sch 5B, ln 22 * Sch 5C ln 31 x days								
27	ANE (TransCanada via Union to Iroquois)		Sch 5B, ln 23 * Sch 5C ln 48 x days								
28	TransCanada via Union to Portland		Sch 5B, ln 24 * Sch 5C ln 49 x days								
29	Tenn Gas Pipeline Z4-Z6 stg 632	peak	Sch 5B, ln 25 * Sch 5C ln 34 x days								
30	Tenn Gas Pipeline Z4-Z6 stg 11234	peak	Sch 5B, ln 26 * Sch 5C ln 36 x days								
31	Tenn Gas Pipeline Z5-Z6 stg 11234	peak	Sch 5B, ln 27 * Sch 5C ln 38 x days								
32	National Fuel FST 2358	peak	Sch 5B, ln 28 * Sch 5C ln 40 x days								
33											
34	Subtotal Pipeline Demand Charges			$ 1,603,183	$ 1,605,691	$ 1,605,691	$ 1,605,691	$ 1,605,691	$ 1,605,691	$ 4,791,450	$ 4,840,187
35											
36	**Peaking Supply**										
37	Tenn Gas Pipeline (Concord Lateral) Z6-Z6	peak	Sch 5B, ln 31 * Sch 5C ln 28 x days	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
38	Granite Ridge Demand	peak	Sch 5B, ln 32 * Sch 5C ln 59 x days	-	-	-	-	-	-	-	-
39	DOMAC Demand NSB041	peak	Per Contract	-	-	-	-	-	-	-	
40	Subtotal Peaking Demand Charges			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
41											
42	**Subtotal Supply, Pipeline & Peaking**		ln 13 + ln 34 + ln 40	$ 1,603,183	$ 1,605,691	$ 1,605,691	$ 1,605,691	$ 1,605,691	$ 1,605,691	$ 4,791,450	$ 4,840,187
43											
44	Less Transportation Capacity Credit			$ (525,042)	$ (525,864)	$ (525,864)	$ (525,864)	$ (525,864)	$ (525,864)	$ (1,569,200)	$ (1,585,161)
45											
46	**Total Supply, Pipeline & Peaking Demand**			$ 1,078,141	$ 1,079,827	$ 1,079,827	$ 1,079,827	$ 1,079,827	$ 1,079,827	$ 3,222,250	$ 3,255,025

Liberty Utilities (EnergyNorth Natural Gas) Corp.

Off Peak 2024 Summer Cost of Gas Filing
Demand Costs

47											
48	**Storage**										
49	Dominion - Demand	peak	Sch 5B, ln 36 * Sch 5C ln 63 x days	$ 2,502	$ 2,502	$ 2,502	$ 2,502	$ 2,502	$ 2,502	$ -	$ 15,010
50	Dominion - Storage	peak	Sch 5B, ln 37 * Sch 5C ln 64 x days	2,650	2,650	2,650	2,650	2,650	2,650	-	15,898
51	Honeoye - Demand	peak	Sch 5B, ln 38 * Sch 5C ln 67 x days	9,443	9,443	9,443	9,443	9,443	9,443	-	56,660
52	National Fuel - Demand	peak	Sch 5B, ln 40 * Sch 5C ln 69 x days	16,141	16,141	16,141	16,141	16,141	16,141	-	96,845
53	National Fuel - Capacity	peak	Sch 5B, ln 41 * Sch 5C ln 70 x days	32,064	32,064	32,064	32,064	32,064	32,064	-	192,385
54	Tenn Gas Pipeline - Demand	peak	Sch 5B, ln 42 * Sch 5C ln 73 x days	27,644	27,644	27,644	27,644	27,644	27,644	-	165,861
55	Tenn Gas Pipeline - Capacity	peak	Sch 5B, ln 43 * Sch 5C ln 74 x days	26,995	26,995	26,995	26,995	26,995	26,995	-	161,969
56											
57	**Subtotal Storage Demand Costs**			$ 117,438	$ 117,438	$ 117,438	$ 117,438	$ 117,438	$ 117,438	$ -	$ 704,628
58											
59	Less Transportation Capacity Credit			$ (38,461)	$ (38,461)	$ (38,461)	$ (38,461)	$ (38,461)	$ (38,461)	$ -	$ (230,766)
60											
61	**Total Storage Demand Costs**		ln 57 + ln 59	$ 78,977	$ 78,977	$ 78,977	$ 78,977	$ 78,977	$ 78,977	$ -	$ 473,862
62											
63	**Total Demand Charges**		ln 42 + ln 57	$ 1,720,621	$ 1,723,129	$ 1,723,129	$ 1,723,129	$ 1,723,129	$ 1,723,129	$ 4,791,450	$ 5,544,814
64											
65	Total Transportation Capacity Credit		ln 44 + ln 59	$ (563,503)	$ (564,325)	$ (564,325)	$ (564,325)	$ (564,325)	$ (564,325)	$ (1,569,200)	$ (1,815,927)
66											
67	**Total Demand Charges less Cap. Cr.**		ln 63 + ln 65	$ 1,157,118	$ 1,158,804	$ 1,158,804	$ 1,158,804	$ 1,158,804	$ 1,158,804	$ 3,222,250	$ 3,728,888
68											
69											
70	Monthly Off Peak Demand			$ 958,381	$ 960,889	$ 960,889	$ 960,889	$ 960,889	$ 960,889	$ 4,791,450	$ -
71	Monthly Off Peak Transportation Cap Credit			(313,870)	(314,691)	(314,691)	(314,691)	(314,691)	(314,691)	(1,569,200)	-
72	**Total Off Peak Demand**			$ 644,511	$ 646,198	$ 646,198	$ 646,198	$ 646,198	$ 646,198	$ 3,222,250	$ -
73											
74	Monthly Peak Demand			$ 762,240	$ 762,240	$ 762,240	$ 762,240	$ 762,240	$ 762,240	$ -	$ 5,544,814
75	Monthly Peak Transportation Cap Credit			(249,634)	(249,634)	(249,634)	(249,634)	(249,634)	(249,634)	-	(1,815,927)
76	**Total Peak Demand**			$ 512,606	$ 512,606	$ 512,606	$ 512,606	$ 512,606	$ 512,606	$ -	$ 3,728,888

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

Off Peak 2024 Summer Cost of Gas Filing

Demand Volumes

	Peak	Reference	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Supply								
Niagara Supply			-	-	-	-	-	-
Pipeline								
Iroquois Gas Trans Service		RTS 470-01	4,047	4,047	4,047	4,047	4,047	4,047
Tenn Gas Pipeline		95346 Z5-Z6	4,000	4,000	4,000	4,000	4,000	4,000
Tenn Gas Pipeline		2302 Z5-Z6	3,122	3,122	3,122	3,122	3,122	3,122
Tenn Gas Pipeline (long haul)		8587 Z0-Z6	7,035	7,035	7,035	7,035	7,035	7,035
Tenn Gas Pipeline (long haul)		8587 Z1-Z6	14,561	14,561	14,561	14,561	14,561	14,561
Tenn Gas Pipeline (short haul)		8587 Z4-Z6	3,811	3,811	3,811	3,811	3,811	3,811
Tenn Gas Pipeline	peak	42076 FTA Z6-Z6	20,000	20,000	20,000	20,000	20,000	20,000
Tenn Gas Pipeline		358905 FTA Z6-Z6	40,000	40,000	40,000	40,000	40,000	40,000
Tenn Gas Pipeline (Concord Lateral)		Firm Transportation	30,000	30,000	30,000	30,000	30,000	30,000
Portland Natural Gas Trans Service		FT-1999-001	1,000	1,000	1,000	1,000	1,000	1,000
Portland Natural Gas		FTN	5,000	5,000	5,000	5,000	5,000	5,000
ANE (TransCanada via Union to Iroquois)		Dawn - Parkway to Iroquois	4,047	4,047	4,047	4,047	4,047	4,047
TransCanada via Union to Portland		Union Parkway to Portland	5,077	5,077	5,077	5,077	5,077	5,077
Tenn Gas Pipeline (short haul)	peak	632 Z4-Z6 (stg)	15,265	15,265	15,265	15,265	15,265	15,265
Tenn Gas Pipeline (short haul)	peak	11234 Z4-Z6(stg)	7,082	7,082	7,082	7,082	7,082	7,082
Tenn Gas Pipeline (short haul)	peak	11234 Z5-Z6(stg)	1,957	1,957	1,957	1,957	1,957	1,957
National Fuel	peak	FST N02358	6,098	6,098	6,098	6,098	6,098	6,098
Peaking								
Tenn Gas Pipeline (Concord Lateral)	peak		-	-	-	-	-	-
Granite Ridge Demand	peak		-	-	-	-	-	-
DOMAC Liquid Demand Charge	peak	NSB041	-	-	-	-	-	-
Storage								
Dominion - Demand	peak	GSS 300076	934	934	934	934	934	934
Dominion - Capacity Reservation	peak	GSS 300076	102,700	102,700	102,700	102,700	102,700	102,700
Honeoye - Demand	peak	SS-NY	1,362	1,362	1,362	1,362	1,362	1,362
Honeoye - Capacity	peak	SS-NY	245,380	245,380	245,380	245,380	245,380	245,380
National Fuel - Demand	peak	FSS-1 2357	6,098	6,098	6,098	6,098	6,098	6,098
National Fuel - Capacity Reservation	peak	FSS-1 2357	670,800	670,800	670,800	670,800	670,800	670,800
Tenn Gas Pipeline - Demand	peak	FS-MA 523	21,844	21,844	21,844	21,844	21,844	21,844
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

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

Off Peak 2024 Summer Cost of Gas Filing
Demand Rates

				May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24
Tariff Rates				31	30	31	31	30	31
				Unit Rate	Unit Rate	Unit Rate	Unit Rate	Unit Rate	Unit Rate
Supply									
Niagara Supply		$ -	Per Contract	$ -	$ -	$ -	$ -	$ -	$ -
Pipeline									
Iroquois Gas	RTS 470-01	$ 4.8393	Fifth Revised Sheet No. 4	$ 0.1561	$ 0.1613	$ 0.1561	$ 0.1561	$ 0.1613	$ 0.1561
Tenn Gas Pipeline	95346 Z5-Z6	$ 6.0905	Rate Sheet #14 - 21st Rev	$ 0.4746	$ 0.4904	$ 0.4746	$ 0.4746	$ 0.4904	$ 0.4746
Tenn Gas Pipeline	2302 Z5-Z6	$ 6.0905	Rate Sheet #14 - 21st Rev	$ 0.1965	$ 0.2030	$ 0.1965	$ 0.1965	$ 0.2030	$ 0.1965
Tenn Gas Pipeline	8587 Z0-Z6	$ 19.6964	FT-A (Z0 - Z6)	$ 0.6354	$ 0.6565	$ 0.6354	$ 0.6354	$ 0.6565	$ 0.6354
Tenn Gas Pipeline	8587 Z1-Z6	$ 17.4870	FT-A (Z1 - Z6)	$ 0.5641	$ 0.5829	$ 0.5641	$ 0.5641	$ 0.5829	$ 0.5641
Tenn Gas Pipeline	8587 Z4-Z6	$ 6.9301	FT-A (Z4 - Z6)	$ 0.2236	$ 0.2310	$ 0.2236	$ 0.2236	$ 0.2310	$ 0.2236
TGP Dracut	42076 FTA Z6-Z6	$ 4.0474	Rate Sheet #14 - 21st Rev	$ 0.1306	$ 0.1349	$ 0.1306	$ 0.1306	$ 0.1349	$ 0.1306
TGP Dracut	358905 FTA Z6-Z6	$ 4.0474	Rate Sheet #14 - 21st Rev	$ 0.1306	$ 0.1349	$ 0.1306	$ 0.1306	$ 0.1349	$ 0.1306
TGP Concord Lateral	Firm Transportatior	$ 12.2157	Per contract	$ 0.3941	$ 0.4072	$ 0.3941	$ 0.3941	$ 0.4072	$ 0.3941
Portland Natural Gas	FT-1999-001	$ 18.2633	Negot Dmd /CMDY=Part 4.1 V8	$ 0.5891	$ 0.6088	$ 0.5891	$ 0.5891	$ 0.6088	$ 0.5891
Portland Natural Gas	FTN	$ 22.7943	Negot Dmd /CMDY=Part 4.1 V8	$ 0.7353	$ 0.7598	$ 0.7353	$ 0.7353	$ 0.7598	$ 0.7353
Tenn Gas Pipeline	632 Z4-Z6 (stg)	$ 6.9301	Rate Sheet #14 - 21st Rev	$ 0.2236	$ 0.2310	$ 0.2236	$ 0.2236	$ 0.2310	$ 0.2236
Tenn Gas Pipeline	11234 Z4-Z6(stg)	$ 6.9301	Rate Sheet #14 - 21st Rev	$ 0.2236	$ 0.2310	$ 0.2236	$ 0.2236	$ 0.2310	$ 0.2236
Tenn Gas Pipeline	11234 Z5-Z6(stg)	$ 6.0905	Rate Sheet #14 - 21st Rev	$ 0.1965	$ 0.2030	$ 0.1965	$ 0.1965	$ 0.2030	$ 0.1965
National Fuel	FST N02358	$ 5.0175	4.010 Version 37.0.0 Pg 1	$ 0.1619	$ 0.1673	$ 0.1619	$ 0.1619	$ 0.1673	$ 0.1619
ANE Union Gas		$ 3.7600							
TransCanada Pipelines Limited		$ 11.9355	Union Parkway to Iroquois						
Delivery Pressure Demand Charge		0.6083	Union Parkway to Iroquois						
Sub Total Demand Charges		16.3038							
Conversion rate GJ to MMBTU		1.0551							
Conversion rate to US$		1.3486	1/0/1900						
Demand Rate/US$		$ 12.7551		$ 0.4115	$ 0.4252	$ 0.4115	$ 0.4115	$ 0.4252	$ 0.4115
Union Gas		$ 3.7600							
TransCanada Pipelines Limited		$ 20.3244							
Delivery Pressure Demand Charge		$ 0.6083							
Sub Total Demand Charges		$ 24.6928							
Conversion rate GJ to MMBTU		$ 1.0551							
Conversion rate to US$		$ 1.3486	$0.0000						
Demand Rate/US$		$ 19.3180		$ 0.6232	$ 0.6439	$ 0.6232	$ 0.6232	$ 0.6439	$ 0.6232
Peaking									
Granite Ridge Demand		$ -	Per Contract	$ -	$ -	$ -	$ -	$ -	$ -
DOMAC Demand NSB041		$ -	Per Contract	$ -	$ -	$ -	$ -	$ -	$ -
Storage									
Dominion - Demand	GSS 300076	$ 2.6784	GSS Settled,Tariff Rec #10.30 \	$0.0864	$0.0893	$0.0864	$0.0864	$0.0893	$0.0864
Dominion - Capacity	GSS 300076	$ 0.0258	GSS Settled,Tariff Rec #10.30 \	$0.0008	$0.0009	$0.0008	$0.0008	$0.0009	$0.0008
		$ 2.7042		$ 0.0872	$ 0.0901	$ 0.0872	$ 0.0872	$ 0.0901	$ 0.0872
Honeoye - Demand	SS-NY	$ 6.9317	Sub 1st Rev Sheet No. 5	$0.2236	$0.2311	$0.2236	$0.2236	$0.2311	$0.2236
National Fuel - Demand	FSS-1 2357	$ 2.6469	4.020 Version 30.0.0 Pg 1	$0.0854	$0.0882	$0.0854	$0.0854	$0.0882	$0.0854
National Fuel - Capacity	FSS-1 2357	$ 0.0478	4.020 Version 30.0.0 Pg 1	$0.0015	$0.0016	$0.0015	$0.0015	$0.0016	$0.0015
		$ 2.6947		$ 0.0869	$ 0.0898	$ 0.0869	$ 0.0869	$ 0.0898	$ 0.0869
Tenn Gas Pipeline	FS-MA 523	$ 1.2655	Rate Sheet #61-24th Rev	$0.0408	$0.0422	$0.0408	$0.0408	$0.0422	$0.0408

1	**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**								
2									
3	**Off Peak 2024 Summer Cost of Gas Filing**								
4	**Supply and Commodity Costs, Volumes and Rates**								
									REDACTED Schedule 6 Page 1 of 5
5									Off-Peak
6	For Month of:	Reference	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	May - Oct
7	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
8									
9	<u>**Supply and Commodity Costs**</u>								
10									
11	**Pipeline Gas:**								
12	Dawn Supply	ln 66 * ln 108	[redacted]						
13	Niagara Supply	ln 67 * ln 113							
14	TGP Supply (Gulf)	ln 68 * ln 133							
15	Dracut Supply 1 - Baseload	ln 69 * ln 118							
16	Dracut Supply 2 - Swing	ln 70 * ln 123							
17	Dracut Supply 3 - Swing								
18	City Gate Delivered Supply	ln 72 * ln 139							
19	LNG Truck	ln 73 * ln 141							
20	Propane Truck	ln 74 * ln 143							
21	PNGTS	ln 75 * ln 148							
22	Portland Natural Gas								
23	TGP Supply (Zone 4)	ln 77 * ln 158							
24									
25	Subtotal Pipeline Gas Costs		$ 2,658,789	$ 1,921,046	$ 1,476,595	$ 1,477,051	$ 1,368,145	$ 2,936,731	$ 11,838,357
26									
27	**Volumetric Transportation Costs**								
28	Dawn Supply	ln 66 * ln 206	[redacted]						
29	Niagara Supply	ln 67 * ln 217							
30	TGP Supply (Zone 4)	ln 77 * ln 255							
31	Dracut Supply 1 - Baseload	ln 69 * ln 266							
32	Dracut Supply 2 - Swing	ln 70 * ln 266							
33	Dracut Supply 3 - Swing								
34	City Gate Delivered Supply	ln 72 * ln 266							
35	TGP Storage - Withdrawals	ln 82 * ln 181							
36									
37	**Total Volumetric Transportation Costs**		$ 83,062	$ 77,493	$ 56,991	$ 54,973	$ 53,621	$ 89,822	$ 415,962
38									
39	**Less - Gas Refill:**								
40	LNG Truck	ln 91 * ln 165	[redacted]						
41	Propane	ln 92 * ln 166							
42	TGP Storage Refill	ln 93 * ln 131							
43	Storage Refill (Trans.)	ln 93 * ln 245							
44									
45	Subtotal Refills		$ (1,410,494)	$ (1,306,566)	$ (838,737)	$ (743,560)	$ (690,275)	$ (1,523,003)	$ (6,512,635)
46									
47	**Total Supply & Pipeline Commodity Costs**	ln 25 + ln 37 + ln 45	$ 1,331,357	$ 691,972	$ 694,850	$ 788,464	$ 731,491	$ 1,503,551	$ 5,741,685
48									
49	**Storage Gas:**								
50	TGP Storage - Withdrawals	ln 82 * ln 173	$ -	$ -	$ -	$ -	$ -	$ -	$ -
51									
52	**Produced Gas:**								
53	LNG Vapor	ln 85 * ln 160	[redacted]						
54	Propane	ln 86 * ln 162							
55									
56	**Total Produced Gas**	ln 53 + ln 54	$ 25,864	$ 24,020	$ 21,977	$ 19,209	$ 12,677	$ 10,745	$ 114,493
57									
58	**AMA Credits**		$ (489,682)	$ (489,682)	$ (489,682)	$ (489,682)	$ (489,682)	$ (489,682)	$ (2,938,092)
59	**Total Commodity Gas & Trans. Costs**	ln 47 + ln 50 + ln 56	$ 867,538	$ 226,311	$ 227,146	$ 317,991	$ 254,486	$ 1,024,614	$ 2,918,086
60									
61									

Volumes (Therms)

Pipeline Gas:	See Schedule 11A							
Dawn Supply		842,983	655,282	518,079	495,174	612,922	901,154	4,025,595
Niagara Supply		667,764	585,319	584,500	583,125	492,567	787,845	3,701,120
TGP Supply (Gulf)		929,663	-	-	-	-	827,579	1,757,242
Dracut Supply 1 - Baseload		-	-	-	-	-	-	-
Dracut Supply 2 - Swing		-	-	-	-	-	504,981	504,981
Dracut Supply 3 - Swing								
City Gate Delivered Supply		-	-	-	-	-	-	-
LNG Truck		-	-	4,473	18,729	17,901	100,708	141,811
Propane Truck		81,143	75,360	49,199	71,793	73,523	80,427	431,444
PNGTS		216,617	194,624	196,156	93,643	189,881	218,149	1,109,071
Portland Natural Gas		889,892	29,984	-	-	-	922,990	1,842,866
TGP Supply (Zone 4)		5,759,165	5,591,074	3,885,012	3,831,718	3,863,377	6,422,862	29,353,208
Subtotal Pipeline Volumes		9,387,227	7,131,644	5,237,418	5,094,181	5,250,171	10,766,696	42,867,337
Storage Gas:								
TGP Storage		-	-	-	-	-	-	-
Produced Gas:								
LNG Vapor		20,462	19,004	18,529	18,104	18,541	20,282	114,922
Propane		-	-	-	-	-	-	-
Subtotal Produced Gas		20,462	19,004	18,529	18,104	18,541	20,282	114,922
Less - Gas Refill:								
LNG Truck		-	-	(6,389)	(9,989)	(53,704)	(69,936)	(140,018)
Propane		(81,143)	(75,360)	(49,199)	(71,793)	(73,523)	(80,427)	(431,444)
TGP Storage Refill		(3,719,893)	(3,344,003)	(2,050,369)	(1,668,719)	(1,352,181)	(3,426,880)	(15,562,044)
Subtotal Refills		(3,801,037)	(3,419,362)	(2,105,957)	(1,750,500)	(1,479,408)	(3,577,243)	(16,133,507)
Total Sendout Volumes		5,606,653	3,731,286	3,149,990	3,361,785	3,789,304	7,209,735	26,848,752

Line	Description	Reference							Average Rate
101									
102	**Gas Costs and Volumetric Transportation Rates**								
103									
104	**Pipeline Gas:**								
105	**Dawn Supply**								
106	NYMEX Price	Sch 7, ln 10/10	[redacted]						
107	Basis Differential								
108	**Net Commodity Costs**								
109									
110	**Niagara Supply**								
111	NYMEX Price	Sch 7, ln 10/10	[redacted]						
112	Basis Differential								
113	**Net Commodity Costs**								
114									
115	**Dracut Supply 1 - Baseload**								
116	Commodity Costs - NYMEX Price	Sch 7, ln 10 / 10	[redacted]						
117	Basis Differential								
118	**Net Commodity Costs**								
119									
120	**Dracut Supply 2 - Swing**								
121	Commodity Costs - NYMEX Price	Sch 7, ln 10 / 10	[redacted]						
122	Basis Differential								
123	**Net Commodity Costs**								
124									
125	**Dracut Supply 3 - Swing**	Sch 7, ln 10 / 10							
126	Commodity Costs - NYMEX Price		[redacted]						
127	Basis Differential								
128	**Net Commodity Costs**								
129									
130	**TGP Supply (Gulf)**								
131	NYMEX Price	Sch 7, ln 10/10	[redacted]						
132	Basis Differential								
133	**Net Commodity Costs**								
134									
135									
136	**TGP Citygate Supply**								
137	NYMEX Price	Sch 7, ln 10/10	[redacted]						
138	Basis Differential								
139	**Net Commodity Costs**								
140									
141	**LNG Truck**	Sch 7, ln 10/10	**$1.4920**	**$1.4920**	**$1.4920**	**$1.4920**	**$1.4920**	**$1.4920**	**$1.4920**
142									
143	**Propane Truck**	NYMEX - Propane	**$1.4920**	**$1.4920**	**$1.4920**	**$1.4920**	**$1.4920**	**$1.4920**	**$1.4920**
144									
145	**PNGTS**								
146	NYMEX Price	Sch 7, ln 10/10	[redacted]						
147	Additional Cost								
148	**Net Commodity Cost**								
149									
150	**PNGTS EXP**								
151	NYMEX Price	Sch 7, ln 10/10	[redacted]						
152	Basis Differential								
153	**Net Commodity Cost**								
154									
155	**TGP Supply (Zone 4)**								
156	NYMEX Price	Sch 7, ln 10/10	[redacted]						
157	Basis Differential								
158	**Net Commodity Cost**		**$0.2610**	**$0.2463**	**$0.2557**	**$0.2562**	**$0.2186**	**$0.2183**	**$0.2427**
159									
160	**LNG Vapor (Storage)**	Sch 13, ln 97 /10	**$1.2640**	**$1.2640**	**$1.1861**	**$1.0610**	**$0.6838**	**$0.5298**	**$0.9981**
161									
162	**Propane**	Sch 13, ln 67 /10	**$1.5472**	**$1.5472**	**$1.4251**	**$1.2779**	**$1.1556**	**$1.1750**	**$0.0000**
163									
164	**Storage Refill:**								
165	**LNG Truck**	ln 141	**$1.4920**	**$1.4920**	**$1.4920**	**$1.4920**	**$1.4920**	**$1.4920**	**$1.4920**
166	**Propane**	ln 143	**$1.4920**	**$1.4920**	**$1.4920**	**$1.4920**	**$1.4920**	**$1.4920**	**$1.4920**
167									
168									

169									**REDACTED**
170									Schedule 6
171									Page 4 of 5
172	**TGP Storage**								
173	**Commodity Costs - Storage withdrawal**	Sch 13, ln 34 /10	$0.2996	$0.3560	$0.3806	$0.3755	$0.3747	$0.3737	$0.3600
174									
175	TGP - Max Commodity - Z 4-6	Rate Sheet #15 - 23rd Rev	$0.00899	$0.00899	$0.00899	$0.00899	$0.00899	$0.00899	$0.00899
176	TGP - Max Comm. ACA Rate - Z 4-6	Rate Sheet #15 - 23rd Rev	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015
177	Subtotal TGP - Trans Charge - Max Commodity Rate - Z 4-6		$0.00914	$0.00914	$0.00914	$0.00914	$0.00914	$0.00914	$0.00914
178	TGP - Fuel Charge % - Z 4-6	Rate Sheet #32- 19th Rev	1.13%	1.13%	1.13%	1.13%	1.13%	1.13%	1.13%
179	TGP - Fuel Charge % - Z 4-6 - (NYMEX * Percentage)		$0.00339	$0.00402	$0.00430	$0.00424	$0.00423	$0.00422	$0.00407
180	TGP - Withdrawal Charge	Rate Sheet #61-24th Rev	$0.00087	$0.00087	$0.00087	$0.00087	$0.00087	$0.00087	$0.00087
181	**Total Volumetric Transportation Rate - TGP (Storage)**		$0.01340	$0.01403	$0.01431	$0.01425	$0.01424	$0.01423	$0.01408
182									
183	**Total TGP - Comm. & Vol. Trans. Rate**	ln 173 + ln 181	**$0.31298**	**$0.37007**	**$0.39490**	**$0.38973**	**$0.38891**	**$0.38796**	**$0.37409**
184									
185									
186	**Per Unit Volumetric Transportation Rates**								
187	**Dawn Supply Volumetric Transportation Charge**								Average Rate
188	**Commodity Costs**	ln 108	[redacted]						
189									
190	TransCanada - Commodity Rate/GJ	Dawn - Parkway to Iroquois	$0.00040	$0.00040	$0.00040	$0.00040	$0.00040	$0.00040	$0.00040
191	Conversion Rate GL to MMBTU		1.0551	1.0551	1.0551	1.0551	1.0551	1.0551	1.0551
192	Conversion Rate to US$	1/0/1900	1.3486	1.3486	1.3486	1.3486	1.3486	1.3486	1.3486
193	Commodity Rate/US$	ln 190 x ln 191 x ln 192	$0.00057	$0.00057	$0.00057	$0.00057	$0.00057	$0.00057	$0.00057
194	TransCanada Fuel %	Dawn - Parkway to Iroquois	0.76%	0.55%	0.79%	0.00%	0.00%	0.00%	0.35%
195	TransCanada Fuel * Percentage	ln 108 x ln 194	$0.00218	$0.00162	$0.00242	$0.00000	$0.00000	$0.00000	$0.00104
196	Subtotal TransCanada		**$0.00275**	**$0.00219**	**$0.00298**	**$0.00057**	**$0.00057**	**$0.00057**	**$0.00161**
197	IGTS - Z1 RTS Commodity	Fifth Revised Sheet No. 4	$0.00034	$0.00034	$0.00034	$0.00034	$0.00034	$0.00034	$0.00034
198	IGTS - Z1 RTS ACA Rate Commodity	Fifth Revised Sheet No. 4	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015
199	IGTS - Z1 RTS Deferred Asset Surcharge	Fifth Revised Sheet No. 4	$0.00000	$0.00000	$0.00000	$0.00000	$0.00000	$0.00000	$0.00000
200	Subtotal IGTS - Trans Charge - Z1 RTS Commodity		**$0.00049**	**$0.00049**	**$0.00049**	**$0.00049**	**$0.00049**	**$0.00049**	**$0.00049**
201	TGP NET-NE - Comm. Segments 3 & 4	Rate Sheet #15 - 23rd Rev	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015
202	IGTS -Fuel Use Factor - Percentage	Fifth Revised Sheet No. 4	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
203	IGTS -Fuel Use Factor - Fuel * Percentage	ln 108 x ln 202	**$0.00287**	**$0.00295**	**$0.00305**	**$0.00307**	**$0.00305**	**$0.00312**	**$0.00302**
204	TGP FTA Fuel Charge % Z 5-6	Rate Sheet #32- 19th Rev	0.81%	0.81%	0.81%	0.81%	0.81%	0.81%	0.81%
205	TGP FTA Fuel * Percentage	ln 108 x ln 204	**$0.00232**	**$0.00239**	**$0.00247**	**$0.00248**	**$0.00247**	**$0.00253**	**$0.00244**
206	**Total Volumetric Transportation Charge - Dawn Supply**		**$0.00859**	**$0.00817**	**$0.00915**	**$0.00676**	**$0.00672**	**$0.00686**	**$0.00771**
207									
208									
209	**Niagara Supply Volumetric Transportation Charge**								
210	**Commodity Costs**	Ln 113	[redacted]						
211									
212	TGP FTA - FTA Z 5-6 Comm. Rate	Rate Sheet #15 - 23rd Rev	$0.00684	$0.00684	$0.00684	$0.00684	$0.00684	$0.00684	$0.00684
213	TGP FTA - FTA Z 5-6 - ACA Rate	Rate Sheet #15 - 23rd Rev	$0.00015	$0.0002	$0.0002	$0.0002	$0.0002	$0.0002	$0.0002
214	Subtotal TGP FTA - FTA Z 5-6 Commodity Rate		**$0.00699**	**$0.0070**	**$0.0070**	**$0.0070**	**$0.0070**	**$0.0070**	**$0.0070**
215	TGP FTA Fuel Charge % Z 5-6	Rate Sheet #32- 19th Rev	0.81%	0.81%	0.81%	0.81%	0.81%	0.81%	0.81%
216	TGP FTA Fuel * Percentage	ln 215 x ln 113	**$0.00230**	**$0.00237**	**$0.00245**	**$0.00246**	**$0.00244**	**$0.00250**	**$0.00242**
217	**Total Volumetric Transportation Rate - Niagara Supply**		**$0.00929**	**$0.00936**	**$0.00944**	**$0.00945**	**$0.00943**	**$0.00949**	**$0.00941**
218									
219									
220									

Ln	Description	Reference							Average Rate
221									
222									
223									
224	**TGP Direct Volumetric Transportation Charge**								
225	**Commodity Costs**	Ln 133	[redacted]						
226									
227	TGP - Max Comm. Base Rate - Z 0-6	Rate Sheet #15 - 23rd Rev	$0.02585	$0.02585	$0.02585	$0.02585	$0.02585	$0.02585	$0.02585
228	TGP - Max Commodity ACA Rate - Z 0-6	Rate Sheet #15 - 23rd Rev	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015
229	Subtotal TGP - Max Comm. Rate Z 0-6		$0.02600	$0.02600	$0.02600	$0.02600	$0.02600	$0.02600	$0.02600
230	Prorated Percentage		32.60%	32.60%	32.60%	32.60%	32.60%	32.60%	32.60%
231	Prorated TGP - Max Commodity Rate - Z 0-6		**$0.00848**	**$0.00848**	**$0.00848**	**$0.00848**	**$0.00848**	**$0.00848**	**$0.00848**
232	TGP - Max Comm. Base Rate - Z 1-6	Rate Sheet #15 - 23rd Rev	$0.02256	$0.02256	$0.02256	$0.02256	$0.02256	$0.02256	$0.02256
233	TGP - Max Commodity ACA Rate - Z 1-6	Rate Sheet #15 - 23rd Rev	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015
234	Subtotal TGP - Max Commodity Rate - Z 1-6		$0.02271	$0.02271	$0.02271	$0.02271	$0.02271	$0.02271	$0.02271
235	Prorated Percentage		67.40%	67.40%	67.40%	67.40%	67.40%	67.40%	67.40%
236	Prorated TGP - Trans Charge - Max Commodity Rate - Z 1-6		**$0.01531**	**$0.01531**	**$0.01531**	**$0.01531**	**$0.01531**	**$0.01531**	**$0.01531**
237	TGP - Fuel Charge % - Z 0 -6	Rate Sheet #32- 19th Rev	4.17%	4.17%	4.17%	4.17%	4.17%	4.17%	4.17%
238	Prorated Percentage		32.6%	32.6%	32.6%	32.6%	32.6%	32.6%	32.6%
239	Prorated TGP Fuel Charge % - Z 0-6		1.36%	1.36%	1.36%	1.36%	1.36%	1.36%	1.36%
240	TGP - Fuel Charge % - Z 1 -6	Rate Sheet #32- 19th Rev	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%
241	Prorated Percentage		67.40%	67.40%	67.40%	67.40%	67.40%	67.40%	67.40%
242	Prorated TGP Fuel Charge - Fuel Charge % - Z 1-6		2.45%	2.45%	2.45%	2.45%	2.45%	2.45%	2.45%
243	TGP - Fuel Charge % - Z 0-6	ln 225 x ln 239	**$0.00415**	**$0.00428**	**$0.00443**	**$0.00445**	**$0.00436**	**$0.00441**	**$0.00435**
244	TGP - Fuel Charge % - Z 1-6	ln 225 x ln 242	**$0.00749**	**$0.00773**	**$0.00800**	**$0.00803**	**$0.00787**	**$0.00797**	**$0.00785**
245	**Total Volumetric Transportation Rate - TGP (Direct)**		**$0.03543**	**$0.03580**	**$0.03622**	**$0.03627**	**$0.03601**	**$0.03616**	**$0.03598**
246									
247	**TGP (Zone 4 Purchase) Volumetric Transportation Charge**								
248	**Commodity Costs**	Ln 131	[redacted]						
249									
250	TGP - Max Comm. Base Rate - Z 4-6	Rate Sheet #15 - 23rd Rev	$0.00899	$0.00899	$0.00899	$0.00899	$0.00899	$0.00899	$0.00899
251	TGP - Max Commodity ACA Rate - Z 4-6	Rate Sheet #15 - 23rd Rev	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015
252	Subtotal TGP - Max Commodity Rate - Z 4-6		**$0.00914**	**$0.00914**	**$0.00914**	**$0.00914**	**$0.00914**	**$0.00914**	**$0.00914**
253	TGP - Fuel Charge % - Z 4-6	Rate Sheet #32- 19th Rev	1.13%	1.13%	1.13%	1.13%	1.13%	1.13%	1.13%
254	TGP - Fuel Charge	ln 248 x ln 253	**$0.00295**	**$0.00278**	**$0.00289**	**$0.00290**	**$0.00247**	**$0.00247**	**$0.00274**
255	**Total Vol. Trans. Rate - TGP (Zone 6)**		**$0.01209**	**$0.01192**	**$0.01203**	**$0.01204**	**$0.01161**	**$0.01161**	**$0.01188**
256									
257									
258	**TGP Dracut**								
259	**Commodity Costs - NYMEX Price**	Ln 118	[redacted]						
260									
261	TGP - Trans Charge - Comm. - Z 6-6	Rate Sheet #15 - 23rd Rev	$0.00292	$0.00292	$0.00292	$0.00292	$0.00292	$0.00292	$0.00292
262	TGP - Trans Charge - ACA Rate - Z6-6	Rate Sheet #15 - 23rd Rev	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015	$0.00015
263	Subtotal TGP - Trans Charge - Max Commodity Rate - Z 6-6		**$0.00307**	**$0.00307**	**$0.00307**	**$0.00307**	**$0.00307**	**$0.00307**	**$0.00307**
264	TGP - Fuel Charge % - Z 6-6	Rate Sheet #32- 19th Rev	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%
265	TGP - Fuel Charge	ln 259 x ln 264	**$0.00012**	**$0.00014**	**$0.00014**	**$0.00013**	**$0.00012**	**$0.00013**	**$0.00013**
266	**Total Volumetric Transportation Rate - TGP Dracut**		**$0.00319**	**$0.00321**	**$0.00321**	**$0.00320**	**$0.00319**	**$0.00320**	**$0.00320**
267									
268									

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

Off Peak 2024 Summer Cost of Gas Filing
NYMEX Futures @ Henry Hub

For Month of:	8/28/2023	Reference		May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	May - Oct Off Peak Strip Average
	(a)	(b)		(c)	(d)	(e)	(f)	(g)	(h)	(i)
I. NYMEX Opening Prices as of:										
		Opening Prices	Line 206	$3.1120	$3.2130	$3.3240	$3.3620	$3.3410	$3.4280	$ 3.2967
				$3.1120	$3.2130	$3.3240	$3.3620	$3.3410	$3.4280	$ 3.2967

Line				(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	**Annual Bill Comparisons, May 23 Oct 23 Filing vs May 24 Oct 24**																	
2	**November 2023 October 2024**																	
3	**Residential Heating (R3)**					**November 1, 2023 April 30, 2024**								**May 1, 2024 October 31, 2024**				
4										**Winter**							**Summer**	**Total**
5				**Nov 23**	**Dec 23**	**Jan 24**	**Feb 24**	**Mar 24**	**Apr 24**	**Nov Apr**	**May 24**	**Jun 24**	**Jul 24**	**Aug 24**	**Sep 24**	**Oct 24**	**May Oct**	**Nov Oct**
6	**Typical Usage (Therms)**			84	118	137	131	104	66	640	37	19	14	12	21	52	155	795
7		9/1/2022	9/1/2023															
8	**Winter:**																	
9	Cust. Chg	$ 15.39	$ 15.39	$ 15.39	$ 15.39	$ 15.39	$ 15.39	$ 15.39	$ 15.39	$ 92.34								
10	Headblock	$ 0.6519	$ 0.6167	$ -	$ -	$ -	$ -	$ -	$ -	$ -								
11	Tailblock	$ 0.6519	$ 0.6167	$ 52.01	$ 73.04	$ 84.37	$ 80.54	$ 64.03	$ 40.68	$ 394.68								
12	HB Threshold	-	-															
13																		
14	**Summer:**	9/1/2022	9/1/2023															
15	Cust. Chg	$ 15.39	$ 15.39								$ 15.39	$ 15.39	$ 15.39	$ 15.39	$ 15.39	$ 15.39	$ 92.34	$ 184.68
16	Headblock	$ 0.6519	$ 0.6167								$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
17	Tailblock	$ 0.6519	$ 0.6167								$ 23.04	$ 11.94	$ 8.53	$ 7.61	$ 12.98	$ 31.78	$ 95.88	$ 490.56
18	HB Threshold	-	-															
19																		
20	Total Base Rate Amount			$ 67.40	$ 88.43	$ 99.76	$ 95.93	$ 79.42	$ 56.07	$ 487.02	$ 38.43	$ 27.33	$ 23.92	$ 23.00	$ 28.37	$ 47.17	$ 188.22	$ 675.24
21																		
22	COG Rate - (Seasonal)			$ 0.7563	$ 0.7563	$ 0.7563	$ 0.7563	$ 0.7563	$ 0.7563	$ 0.7563	$ 0.0187	$ 0.0187	$ 0.0187	$ 0.0187	$ 0.0187	$ 0.0187	$ 0.0187	$ 0.6121
23	COG amount			$ 63.79	$ 89.57	$ 103.47	$ 98.77	$ 78.52	$ 49.89	$ 484.02	$ 0.70	$ 0.36	$ 0.26	$ 0.23	$ 0.39	$ 0.96	$ 2.91	$ 486.93
24																		
25	LDAC			$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180
26	LDAC amount			$ 9.95	$ 13.98	$ 16.14	$ 15.41	$ 12.25	$ 7.78	$ 75.52	$ 4.41	$ 2.29	$ 1.63	$ 1.46	$ 2.48	$ 6.08	$ 18.35	$ 93.86
27																		
28	**Total Bill**			**$ 141.14**	**$ 191.97**	**$ 219.38**	**$ 210.11**	**$ 170.19**	**$ 113.75**	**$ 1,046.55**	**$ 43.54**	**$ 29.98**	**$ 25.81**	**$ 24.69**	**$ 31.25**	**$ 54.21**	**$ 209.48**	**$ 1,256.03**
29																		
30	**November 2022 October 2023**																	
31	**Residential Heating (R3)**					**November 1, 2022 April 30, 2023**								**May 1, 2023 October 31, 2023**				
32										**Winter**							**Summer**	**Total**
33				**Nov 22**	**Dec 22**	**Jan 23**	**Feb 23**	**Mar 23**	**Apr 23**	**Nov Apr**	**May 23**	**Jun 23**	**Jul 23**	**Aug 23**	**Sep 23**	**Oct 23**	**May Oct**	**Nov Oct**
34	**Typical Usage (Therms)**			84	118	137	131	104	66	640	37	19	14	12	21	52	155	795
35																		
36	**Winter:**	9/1/2022	9/1/2023															
37	Cust. Chg	$ 15.39	$ 15.39	$ 15.39	$ 15.39	$ 15.39	$ 15.39	$ 15.39	$ 15.39	$ 92.34								
38	Headblock	$ 0.6519	$ 0.6167	$ -	$ -	$ -	$ -	$ -	$ -	$ -								
39	Tailblock	$ 0.6519	$ 0.6167	$ 54.98	$ 77.21	$ 89.19	$ 85.14	$ 67.68	$ 43.00	$ 417.20								
40	HB Threshold	-	-	$ 46.97														
41																		
42	**Summer:**	9/1/2022	9/1/2023															
43	Cust. Chg	$ 15.39	$ 15.39								$15.39	$15.39	$15.39	$15.39	$15.39	$15.39	$ 92.34	$ 184.68
44	Headblock	$ 0.6519	$ 0.6167								$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
45	Tailblock	$ 0.6519	$ 0.6167								$ 24.35	$ 12.63	$ 9.01	$ 7.61	$ 12.98	$ 31.78	$ 98.37	$ 515.57
46	HB Threshold	-	-															
47																		
48	Total Base Rate Amount			$ 70.37	$ 92.60	$ 104.58	$ 100.53	$ 83.07	$ 58.39	$ 509.54	$ 39.74	$ 28.02	$ 24.40	$ 23.00	$ 28.37	$ 47.17	$ 190.71	$ 700.25
49																		
50	COG Rate - (Seasonal)			$ 1.4300	$ 1.2551	$ 1.3292	$ 0.4525	$ 0.2443	$ 0.1326	$ 0.8505	$ 1.2836	$ 1.2438	$ 1.2071	$ 0.8964	$ 0.7493	$ 0.7493	$ 0.9917	$ 0.8781
51	COG amount			$ 120.61	$ 148.65	$ 181.86	$ 59.10	$ 25.36	$ 8.75	$ 544.32	$ 47.95	$ 24.09	$ 16.69	$ 11.06	$ 15.78	$ 38.61	$ 154.18	$ 698.50
52																		
53	LDAC			$ 0.1086	$ 0.1086	$ 0.1113	$ 0.1113	$ 0.1113	$ 0.1113	$ 0.1104	$ 0.1113	$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1180	$ 0.1164	$ 0.1116
54	LDAC amount			$ 9.16	$ 12.86	$ 15.23	$ 14.54	$ 11.56	$ 7.34	$ 70.68	$ 4.16	$ 2.29	$ 1.63	$ 1.46	$ 2.48	$ 6.08	$ 18.10	$ 88.78
55																		
56	**Total Bill**			**$ 200.14**	**$ 254.10**	**$ 301.66**	**$ 174.16**	**$ 119.99**	**$ 74.48**	**$ 1,124.55**	**$ 91.85**	**$ 54.39**	**$ 42.73**	**$ 35.52**	**$ 46.63**	**$ 91.86**	**$ 362.99**	**$ 1,487.54**
57																		
58	**DIFFERENCE:**																	
59	**Total Bill**			**$ (59.00)**	**$ (62.13)**	**$ (82.28)**	**$ 35.95**	**$ 50.20**	**$ 39.26**	**$ (77.99)**	**$ (48.32)**	**$ (24.41)**	**$ (16.92)**	**$ (10.83)**	**$ (15.38)**	**$ (37.65)**	**$ (153.51)**	**$ (231.50)**
60	% Change			**29.48%**	**24.45%**	**27.28%**	**20.64%**	**41.83%**	**52.71%**	**6.94%**	**52.60%**	**44.88%**	**39.60%**	**30.50%**	**32.98%**	**40.98%**	**42.29%**	**15.56%**
61																		
62	**Base Rate**			$ (2.97)	$ (4.17)	$ (4.82)	$ (4.60)	$ (3.65)	$ (2.32)	$ (22.53)	$ (1.31)	$ (0.68)	$ (0.49)	$ -	$ -	$ -	$ (2.48)	$ (25.01)
63	% Change			-4.22%	-4.50%	-4.60%	-4.57%	-4.40%	-3.98%	-4.42%	-3.31%	-2.43%	-1.99%	0.00%	0.00%	0.00%	-1.30%	-3.57%
64																		
65	**COG & LDAC**			$ (56.03)	$ (57.96)	$ (77.47)	$ 40.55	$ 53.85	$ 41.59	$ (55.46)	$ (47.00)	$ (23.73)	$ (16.43)	$ (10.83)	$ (15.38)	$ (37.65)	$ (151.03)	$ (206.49)
66	% Change			-43.18%	-35.89%	-39.31%	55.07%	145.87%	258.47%	-9.02%	-90.20%	-89.96%	-89.68%	-86.52%	-84.24%	-84.24%	-87.66%	-26.23%

Annual Bill Comparisons, May 23 Oct 23 Filing vs May 24 Oct 24

November 2023 October 2024

Commercial Rate (G 41)

			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
			November 1, 2023 April 30, 2024							May 1, 2024 October 31, 2024							
			Nov 23	**Dec 23**	**Jan 24**	**Feb 24**	**Mar 24**	**Apr 24**	**Winter Nov Apr**	**May 24**	**Jun 24**	**Jul 24**	**Aug 24**	**Sep 24**	**Oct 24**	**Summer May Oct**	**Total Nov Oct**
Typical Usage (Therms)			261	390	482	458	334	185	2,111	91	47	33	25	47	141	383	2,494
Winter:	9/1/2022	9/1/2023															
Cust. Chg	$ 63.30	$ 60.81	$ 60.81	$ 60.81	$ 60.81	$ 60.81	$ 60.81	$ 60.81	$ 364.86								
Headblock	$ 0.5088	$ 0.4928	$ 49.28	$ 49.28	$ 49.28	$ 49.28	$ 49.28	$ 49.28	$ 295.68								
Tailblock	$ 0.3550	$ 0.3390	$ 54.53	$ 98.42	$ 129.47	$ 121.44	$ 79.46	$ 28.81	$ 512.12								
HB Threshold	100	100	$122.88	$49.28	$49.28	$49.28	$49.28	$49.28									
Summer:	9/1/2022	9/1/2023															
Cust. Chg	$ 63.30	$ 60.81								$ 60.81	$ 60.81	$ 60.81	$ 60.81	$ 60.81	$ 60.81	$ 364.86	$ 729.72
Headblock	$ 0.5088	$ 0.4928								$ 9.86	$ 9.86	$ 9.86	$ 9.86	$ 9.86	$ 9.86	$ 59.14	$ 354.82
Tailblock	$ 0.3550	$ 0.3390								$ 24.01	$ 9.05	$ 4.27	$ 1.79	$ 9.00	$ 41.11	$ 89.23	$ 601.35
HB Threshold	20	20															
Total Base Rate Amount			$ 164.62	$ 208.51	$ 239.56	$ 231.53	$ 189.55	$ 138.90	$ 1,172.66	$ 94.68	$ 79.71	$ 74.94	$ 72.45	$ 79.66	$ 111.78	$ 513.22	$ 1,685.89
COG Rate - (Seasonal)			$ 0.7561	$ 0.7561	$ 0.7561	$ 0.7561	$ 0.7561	$ 0.7561	$ 0.7561	$ 0.0181	$ 0.0181	$ 0.0181	$ 0.0181	$ 0.0181	$ 0.0181	$ 0.0181	$ 0.6427
COG amount			$ 197.23	$ 295.12	$ 364.37	$ 346.46	$ 252.84	$ 139.88	$ 1,595.89	$ 1.64	$ 0.85	$ 0.59	$ 0.46	$ 0.84	$ 2.56	$ 6.94	$ 1,602.83
LDAC			$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957
LDAC amount			$ 24.96	$ 37.35	$ 46.12	$ 43.85	$ 32.00	$ 17.70	$ 201.99	$ 8.69	$ 4.47	$ 3.12	$ 2.42	$ 4.45	$ 13.52	$ 36.67	$ 238.67
Total Bill			**$ 386.81**	**$ 540.98**	**$ 650.04**	**$ 621.84**	**$ 474.40**	**$ 296.48**	**$ 2,970.55**	**$ 105.01**	**$ 85.03**	**$ 78.65**	**$ 75.33**	**$ 84.96**	**$ 127.86**	**$ 556.83**	**$ 3,527.38**

November 2022 October 2023

Commercial Rate (G 41)

			November 1, 2022 April 30, 2023							May 1, 2023 October 31, 2023							
			Nov 22	**Dec 22**	**Jan 23**	**Feb 23**	**Mar 23**	**Apr 23**	**Winter Nov Apr**	**May 23**	**Jun 23**	**Jul 23**	**Aug 23**	**Sep 23**	**Oct 23**	**Summer May Oct**	**Total Nov Oct**
Typical Usage (Therms)			261	390	482	458	334	185	2,111	91	47	33	25	47	141	383	2,494
Winter:	9/1/2022	9/1/2023															
Cust. Chg	$ 63.30	$ 60.81	$ 63.30	$ 63.30	$ 63.30	$ 63.30	$ 63.30	$ 63.30	$ 379.80								
Headblock	$ 0.5088	$ 0.4928	$ -	$ 50.88	$ 50.88	$ 50.88	$ 50.88	$ 50.88	$ 254.40								
Tailblock	$ 0.3550	$ 0.3390	$ 57.10	$ 103.06	$ 135.58	$ 127.17	$ 83.21	$ 30.17	$ 536.29								
HB Threshold	100	100															
Summer:	9/1/2022	9/1/2023															
Cust. Chg	$ 63.30	$ 60.81								$63.30	$ 63.30	$ 63.30	$ 60.81	$ 60.81	$ 60.81	$ 372.33	$ 752.13
Headblock	$ 0.5088	$ 0.4928								$ 10.18	$ 10.18	$ 10.18	$ 9.86	$ 9.86	$ 9.86	$ 60.10	$ 314.50
Tailblock	$ 0.3550	$ 0.3390								$ 25.14	$ 9.47	$ 4.47	$ 1.79	$ 9.00	$ 41.11	$ 90.99	$ 627.28
HB Threshold	20	20															
Total Base Rate Amount			$ 120.40	$ 217.24	$ 249.76	$ 241.35	$ 197.39	$ 144.35	$ 1,170.49	$ 98.62	$ 82.95	$ 77.95	$ 72.45	$ 79.66	$ 111.78	$ 523.41	$ 1,693.91
COG Rate - (Seasonal)			$ 1.4301	$ 1.2552	$ 1.3293	$ 0.4526	$ 0.2444	$ 0.1327	$ 0.8610	$ 1.2839	$ 1.2441	$ 1.2074	$ 0.8967	$ 0.7496	$ 0.7496	$ 0.9851	$ 0.8800
COG amount			$ 373.04	$ 489.93	$ 640.60	$ 207.39	$ 81.73	$ 24.55	$ 1,817.23	$ 116.62	$ 58.09	$ 39.36	$ 22.66	$ 34.89	$ 105.90	$ 377.51	$ 2,194.74
LDAC			$ 0.0872	$ 0.0872	$ 0.0890	$ 0.0890	$ 0.0890	$ 0.0890	$ 0.0884	$ 0.0890	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0941	$ 0.0893
LDAC amount			$ 22.75	$ 34.04	$ 42.89	$ 40.78	$ 29.76	$ 16.46	$ 186.68	$ 8.08	$ 4.47	$ 3.12	$ 2.42	$ 4.45	$ 13.52	$ 36.06	$ 222.74
Total Bill			**$ 516.18**	**$ 741.21**	**$ 933.24**	**$ 489.52**	**$ 308.89**	**$ 185.37**	**$ 3,174.40**	**$ 223.32**	**$ 145.51**	**$ 120.43**	**$ 97.54**	**$ 119.00**	**$ 231.20**	**$ 936.99**	**$ 4,111.39**
DIFFERENCE:																	
Total Bill			**$ (129.38)**	**$ (200.23)**	**$ (283.20)**	**$ 132.32**	**$ 165.52**	**$ 111.12**	**$ (203.85)**	**$ (118.31)**	**$ (60.48)**	**$ (41.78)**	**$ (22.21)**	**$ (34.04)**	**$ (103.34)**	**$ (380.16)**	**$ (584.01)**
% Change			**25.06%**	**27.01%**	**30.35%**	**27.03%**	**53.58%**	**59.94%**	**6.42%**	**52.98%**	**41.56%**	**34.69%**	**22.77%**	**28.61%**	**44.70%**	**40.57%**	**14.20%**
Base Rate			$ 44.22	$ (8.74)	$ (10.20)	$ (9.82)	$ (7.84)	$ (5.45)	$ 2.17	$ (3.94)	$ (3.24)	$ (3.01)	$ -	$ -	$ -	$ (10.19)	$ (8.02)
% Change			36.72%	-4.02%	-4.08%	-4.07%	-3.97%	-3.78%	0.19%	-4.00%	-3.90%	-3.86%	0.00%	0.00%	0.00%	-1.95%	-0.47%
COG & LDAC			$ (173.59)	$ (191.49)	$ (273.00)	$ 142.14	$ 173.36	$ 116.57	$ (206.02)	$ (114.36)	$ (57.24)	$ (38.77)	$ (22.21)	$ (34.04)	$ (103.34)	$ (369.96)	$ (575.99)
% Change			-43.86%	-36.55%	-39.94%	57.27%	155.49%	284.21%	-10.28%	-91.71%	-91.51%	-91.27%	-88.53%	-86.54%	-86.54%	-89.46%	-23.83%

1	**Annual Bill Comparisons, May 23 Oct 23 Filing vs May 24 Oct 24**																	
2	**November 2023 October 2024**			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
3	**C&I High Winter Use Medium G 42**					**November 1, 2023 April 30, 2024**							**May 1, 2024 October 31, 2024**					
4										**Winter**							**Summer**	**Total**
5				**Nov 23**	**Dec 23**	**Jan 24**	**Feb 24**	**Mar 24**	**Apr 24**	**Nov Apr**	**May 24**	**Jun 24**	**Jul 24**	**Aug 24**	**Sep 24**	**Oct 24**	**May Oct**	**Nov Oct**
6	**Typical Usage (Therms)**			2,543	3,519	4,174	3,998	3,106	1,898	19,238	1,031	572	420	343	619	1,610	4,595	23,832
7																		
8	**Winter:**	9/1/2022	9/1/2023															
9	Cust. Chg	$ 189.84	$ 182.42	$ 182.42	$ 182.42	$ 182.42	$ 182.42	$ 182.42	$ 182.42	$ 1,094.52								
10	Headblock	$ 0.4634	$ 0.4485	$ 448.50	$ 448.50	$ 448.50	$ 448.50	$ 448.50	$ 448.50	$ 2,691.00								
11	Tailblock	$ 0.3212	$ 0.3063	$ 472.62	$ 771.46	$ 972.35	$ 918.33	$ 645.02	$ 274.94	$ 4,054.72								
12	HB Threshold	1,000	1,000															
13		-																
14	**Summer:**	9/1/2022	9/1/2023															
15	Cust. Chg	$ 189.84	$ 182.42								$ 182.42	$ 182.42	$ 182.42	$ 182.42	$ 182.42	$ 182.42	$ 1,094.52	$ 2,189.04
16	Headblock	$ 0.4634	$ 0.4485								$ 179.40	$ 179.40	$ 179.40	$ 153.66	$ 179.40	$ 179.40	$ 1,050.66	$ 3,741.66
17	Tailblock	$ 0.3212	$ 0.3063								$ 193.36	$ 52.72	$ 5.99	$ -	$ 67.22	$ 370.54	$ 689.83	$ 4,744.55
18	HB Threshold	400	400															
19																		
20	Total Base Rate Amount			$ 1,103.54	$ 1,402.38	$ 1,603.27	$ 1,549.25	$ 1,275.94	$ 905.86	$ 7,840.24	$ 555.18	$ 414.54	$ 367.81	$ 336.08	$ 429.04	$ 732.36	$ 2,835.01	$ 10,675.25
21																		
22	COG Rate - (Seasonal)			$ 0.7561	$ 0.7561	$ 0.7561	$ 0.7561	$ 0.7561	$ 0.7561	$ 0.7561	$ 0.0181	$ 0.0181	$ 0.0181	$ 0.0181	$ 0.0181	$ 0.0181	$ 0.0181	$ 0.6138
23	COG amount			$ 1,922.77	$ 2,660.45	$ 3,156.34	$ 3,022.98	$ 2,348.32	$ 1,434.79	$ 14,545.66	$ 18.67	$ 10.36	$ 7.59	$ 6.20	$ 11.21	$ 29.14	$ 83.16	$ 14,628.83
24																		
25	LDAC			$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957
26	LDAC amount			$ 243.37	$ 336.74	$ 399.50	$ 382.62	$ 297.23	$ 181.60	$ 1,841.05	$ 98.69	$ 54.75	$ 40.15	$ 32.79	$ 59.28	$ 154.05	$ 439.72	$ 2,280.77
27																		
28	**Total Bill**			**$ 3,269.68**	**$ 4,399.57**	**$ 5,159.11**	**$ 4,954.85**	**$ 3,921.49**	**$ 2,522.26**	**$ 24,226.96**	**$ 672.54**	**$ 479.64**	**$ 415.55**	**$ 375.07**	**$ 499.53**	**$ 915.55**	**$ 3,357.89**	**$ 27,584.85**
29																		
30	**November 2022 October 2023**																	
31	**C&I High Winter Use Medium G 42**					**November 1, 2022 April 30, 2023**							**May 1, 2023 October 31, 2023**					
32										**Winter**							**Summer**	**Total**
33				**Nov 22**	**Dec 22**	**Jan 23**	**Feb 23**	**Mar 23**	**Apr 23**	**Nov Apr**	**May 23**	**Jun 23**	**Jul 23**	**Aug 23**	**Sep 23**	**Oct 23**	**May Oct**	**Nov Oct**
34	**Typical Usage (Therms)**			2,543	3,519	4,174	3,998	3,106	1,898	19,238	1,031	572	420	343	619	1,610	4,595	23,832
35																		
36	**Winter:**	9/1/2022	9/1/2023															
37	Cust. Chg	$ 189.84	$ 182.42	$ 189.84	$ 189.84	$ 189.84	$ 189.84	$ 189.84	$ 189.84	$ 1,139.04								
38	Headblock	$ 0.4634	$ 0.4485	$ 463.40	$ 463.40	$ 463.40	$ 463.40	$ 463.40	$ 463.40	$ 2,780.40								
39	Tailblock	$ 0.3212	$ 0.3063	$ 495.62	$ 808.99	$ 1,019.65	$ 963.00	$ 676.39	$ 288.32	$ 4,251.97								
40	HB Threshold	1,000	1,000															
41		-	-															
42	**Summer:**	9/1/2022	9/1/2023															
43	Cust. Chg	$ 189.84	$ 182.42								$ 189.84	$ 189.84	$ 189.84	$ 182.42	$ 182.42	$ 182.42	$ 1,116.78	$ 2,255.82
44	Headblock	$ 0.4634	$ 0.4485								$ 185.36	$ 185.36	$ 185.36	$ 153.66	$ 179.40	$ 179.40	$ 1,068.54	$ 3,848.94
45	Tailblock	$ 0.3212	$ 0.3063								$ 202.77	$ 55.28	$ -	$ -	$ -	$ -	$ 258.05	$ 4,510.02
46	HB Threshold	400	400															
47																		
48	Total Base Rate Amount			$ 1,148.86	$ 1,462.23	$ 1,672.89	$ 1,616.24	$ 1,329.63	$ 941.56	$ 8,171.41	$ 577.97	$ 430.48	$ 375.20	$ 336.08	$ 361.82	$ 361.82	$ 2,443.37	$ 10,614.78
49																		
50	COG Rate - (Seasonal)			$ 1.4301	$ 1.2552	$ 1.3293	$ 0.4526	$ 0.2444	$ 0.1327	$ 0.8537	$ 1.2839	$ 1.2441	$ 1.2074	$ 0.8967	$ 0.7496	$ 0.7496	$ 0.9839	$ 0.8788
51	COG amount			$ 3,636.76	$ 4,416.61	$ 5,549.16	$ 1,809.55	$ 759.07	$ 251.81	$ 16,422.97	$ 1,324.07	$ 711.77	$ 506.56	$ 307.22	$ 464.33	$ 1,206.66	$ 4,520.61	$ 20,943.58
52																		
53	LDAC			$ 0.0872	$ 0.0872	$ 0.0890	$ 0.0890	$ 0.0890	$ 0.0890	$ 0.0884	$ 0.0890	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0942	$ 0.0895
54	LDAC amount			$ 221.75	$ 306.83	$ 371.53	$ 355.83	$ 276.42	$ 168.89	$ 1,701.25	$ 91.78	$ 54.75	$ 40.15	$ 32.79	$ 59.28	$ 154.05	$ 432.81	$ 2,134.06
55																		
56	**Total Bill**			**$ 5,007.37**	**$ 6,185.67**	**$ 7,593.58**	**$ 3,781.62**	**$ 2,365.12**	**$ 1,362.26**	**$ 26,295.62**	**$ 1,993.83**	**$ 1,197.00**	**$ 921.91**	**$ 676.09**	**$ 885.43**	**$ 1,722.53**	**$ 7,396.79**	**$ 33,692.41**
57																		
58	**DIFFERENCE:**																	
59	**Total Bill**			**$ (1,737.68)**	**$ (1,786.10)**	**$ (2,434.47)**	**$ 1,173.23**	**$ 1,556.37**	**$ 1,160.00**	**$ (2,068.66)**	**$ (1,321.28)**	**$ (717.35)**	**$ (506.36)**	**$ (301.02)**	**$ (385.91)**	**$ (806.98)**	**$ (4,038.90)**	**$ (6,107.56)**
60	% Change			**34.70%**	**28.87%**	**32.06%**	**31.02%**	**65.81%**	**85.15%**	**7.87%**	**66.27%**	**59.93%**	**54.92%**	**44.52%**	**43.58%**	**46.85%**	**54.60%**	**18.13%**
61																		
62	**Base Rate**			$ (45.31)	$ (59.85)	$ (69.62)	$ (66.99)	$ (53.70)	$ (35.69)	$ (331.16)	$ (22.79)	$ (15.94)	$ (7.39)	$ -	$ 67.22	$ 370.54	$ 391.63	$ 60.47
63	% Change			-3.94%	-4.09%	-4.16%	-4.14%	-4.04%	-3.79%	-4.05%	-3.94%	-3.70%	-1.97%	0.00%	18.58%	102.41%	16.03%	0.57%
64																		
65	**COG & LDAC**			$ (1,692.37)	$ (1,726.25)	$ (2,364.85)	$ 1,240.22	$ 1,610.07	$ 1,195.69	$ (1,737.50)	$ (1,298.49)	$ (701.41)	$ (498.96)	$ (301.02)	$ (453.12)	$ (1,177.52)	$ (4,430.53)	$ (6,168.03)
66	% Change			-43.86%	-36.55%	-39.94%	57.27%	155.49%	284.21%	-9.59%	-91.71%	-91.51%	-91.27%	-88.53%	-86.54%	-86.54%	-89.44%	-26.73%

Annual Bill Comparisons, May 23 Oct 23 Filing vs May 24 Oct 24
November 2023 October 2024
Commercial Rate (G 52)

			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
			November 1, 2023 April 30, 2024							**May 1, 2024 October 31, 2024**							
			Nov 23	**Dec 23**	**Jan 24**	**Feb 24**	**Mar 24**	**Apr 24**	**Winter Nov Apr**	**May 24**	**Jun 24**	**Jul 24**	**Aug 24**	**Sep 24**	**Oct 24**	**Summer May Oct**	**Total Nov Oct**
Typical Usage (Therms)			1,907	2,294	2,692	2,308	2,175	1,933	13,309	1,482	1,317	1,269	1,323	1,295	1,611	8,298	21,607
Winter:	9/1/2022	9/1/2023															
Cust. Chg	$ 189.57	$ 182.26	$ 182.26	$ 182.26	$ 182.26	$ 182.26	$ 182.26	$ 182.26	$ 1,093.56								
Headblock	$ 0.2647	$ 0.2560	$ 256.00	$ 256.00	$ 256.00	$ 256.00	$ 256.00	$ 256.00	$ 1,536.00								
Tailblock	$ 0.1836	$ 0.1749	$ 158.69	$ 226.24	$ 295.91	$ 228.76	$ 205.59	$ 163.18	$ 1,278.37								
HB Threshold	1000	1,000															
Summer:	9/1/2022	9/1/2023															
Cust. Chg	$ 189.57	$ 182.26								$ 182.26	$ 182.26	$ 182.26	$ 182.26	$ 182.26	$ 182.26	$ 1,093.56	$ 2,187.12
Headblock	$ 0.1978	$ 0.1891								$ 189.10	$ 189.10	$ 189.10	$ 189.10	$ 189.10	$ 189.10	$ 1,134.60	$ 2,670.60
Tailblock	$ 0.1219	$ 0.1132								$ 54.58	$ 35.94	$ 30.43	$ 36.59	$ 33.40	$ 69.18	$ 260.13	$ 1,538.50
HB Threshold	1000	1,000															
Total Base Rate Amount			$ 596.95	$ 664.50	$ 734.17	$ 667.02	$ 643.85	$ 601.44	$ 3,907.93	$ 425.94	$ 407.30	$ 401.79	$ 407.95	$ 404.76	$ 440.54	$ 2,488.29	$ 6,396.22
COG Rate - (Seasonal)			$ 0.7573	$ 0.7573	$ 0.7573	$ 0.7573	$ 0.7573	$ 0.7573	$ 0.7573	$ 0.0193	$ 0.0193	$ 0.0193	$ 0.0193	$ 0.0193	$ 0.0193	$ 0.0193	$ 0.4739
COG amount			$ 1,444.40	$ 1,736.89	$ 2,038.56	$ 1,747.81	$ 1,647.49	$ 1,463.87	$ 10,079.02	$ 28.61	$ 25.43	$ 24.49	$ 25.54	$ 25.00	$ 31.10	$ 160.15	$ 10,239.17
LDAC			$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957
LDAC amount			$ 182.53	$ 219.49	$ 257.61	$ 220.87	$ 208.19	$ 184.99	$ 1,273.69	$ 141.84	$ 126.08	$ 121.43	$ 126.64	$ 123.94	$ 154.19	$ 794.11	$ 2,067.80
Total Bill			**$ 2,223.87**	**$ 2,620.88**	**$ 3,030.34**	**$ 2,635.71**	**$ 2,499.53**	**$ 2,250.30**	**$ 15,260.63**	**$ 596.38**	**$ 558.81**	**$ 547.70**	**$ 560.13**	**$ 553.70**	**$ 625.83**	**$ 3,442.55**	**$ 18,703.18**

November 2022 October 2023
Commercial Rate (G 52)

			November 1, 2022 April 30, 2023							**May 1, 2023 October 31, 2023**							
			Nov 22	**Dec 22**	**Jan 23**	**Feb 23**	**Mar 23**	**Apr 23**	**Winter Nov Apr**	**May 23**	**Jun 23**	**Jul 23**	**Aug 23**	**Sep 23**	**Oct 23**	**Summer May Oct**	**Total Nov Oct**
Typical Usage (Therms)			1,907	2,294	2,692	2,308	2,175	1,933	13,309	1,482	1,317	1,269	1,323	1,295	1,611	8,298	21,607
Winter:	9/1/2022	9/1/2023															
Cust. Chg	$ 189.57	$ 182.26	$ 189.57	$ 189.57	$ 189.57	$ 189.57	$ 189.57	$ 189.57	$ 1,137.42								
Headblock	$ 0.2647	$ 0.2560	$ 264.70	$ 264.70	$ 264.70	$ 264.70	$ 264.70	$ 264.70	$ 1,588.20								
Tailblock	$ 0.1836	$ 0.1749	$ 166.58	$ 237.49	$ 310.63	$ 240.14	$ 215.82	$ 171.30	$ 1,341.96								
HB Threshold	1,000	1,000															
	-	-															
Summer:	9/1/2022	9/1/2023															
Cust. Chg	$ 189.57	$ 182.26								$ 189.57	$ 189.57	$ 189.57	$ 182.26	$ 182.26	$ 182.26	$ 1,115.49	$ 2,252.91
Headblock	$ 0.1978	$ 0.1891								$ 197.80	$ 197.80	$ 197.80	$ 189.10	$ 189.10	$ 189.10	$ 1,160.70	$ 2,748.90
Tailblock	$ 0.1219	$ 0.1132								$ 58.77	$ 38.70	$ 32.77	$ 36.59	$ 33.40	$ 69.18	$ 269.42	$ 1,611.38
HB Threshold	1,000	1,000															
Total Base Rate Amount			$ 620.85	$ 691.76	$ 764.90	$ 694.41	$ 670.09	$ 625.57	$ 4,067.58	$ 446.14	$ 426.07	$ 420.14	$ 407.95	$ 404.76	$ 440.54	$ 2,545.61	$ 6,613.19
COG Rate - (Seasonal)			$ 1.4296	$ 1.2547	$ 1.3288	$ 0.4521	$ 0.2439	$ 0.1322	$ 0.8273	$ 1.2833	$ 1.2435	$ 1.2068	$ 0.8961	$ 0.7490	$ 0.7490	$ 1.0164	$ 0.8999
COG amount			$ 2,726.67	$ 2,877.69	$ 3,576.96	$ 1,043.43	$ 530.60	$ 255.54	$ 11,010.90	$ 1,902.01	$ 1,638.30	$ 1,531.20	$ 1,185.78	$ 970.03	$ 1,206.76	$ 8,434.08	$ 19,444.98
LDAC			$ 0.0872	$ 0.0872	$ 0.0890	$ 0.0890	$ 0.0890	$ 0.0890	$ 0.0884	$ 0.0890	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0957	$ 0.0945	$ 0.0908
LDAC amount			$ 166.32	$ 200.00	$ 239.58	$ 205.41	$ 193.62	$ 172.04	$ 1,176.95	$ 131.91	$ 126.08	$ 121.43	$ 126.64	$ 123.94	$ 154.19	$ 784.18	$ 1,961.14
Total Bill			**$ 3,513.84**	**$ 3,769.45**	**$ 4,581.44**	**$ 1,943.25**	**$ 1,394.30**	**$ 1,053.15**	**$ 16,255.43**	**$ 2,480.06**	**$ 2,190.45**	**$ 2,072.77**	**$ 1,720.37**	**$ 1,498.73**	**$ 1,801.49**	**$ 11,763.87**	**$ 28,019.31**

DIFFERENCE:

Total Bill			**$ (1,289.97)**	**$(1,148.57)**	**$ (1,551.10)**	**$ 692.46**	**$ 1,105.23**	**$ 1,197.15**	**$ (994.80)**	**$ (1,883.68)**	**########**	**########**	**########**	**$ (945.03)**	**$ (1,175.66)**	**$ (8,321.32)**	**$ (9,316.12)**
% Change			**36.71%**	**30.47%**	**33.86%**	**35.63%**	**79.27%**	**113.67%**	**6.12%**	**75.95%**	**74.49%**	**73.58%**	**67.44%**	**63.06%**	**65.26%**	**70.74%**	**33.25%**
Base Rate			$ (23.90)	$ (27.26)	$ (30.73)	$ (27.39)	$ (26.24)	$ (24.13)	$ (159.65)	$ (20.20)	$ (18.77)	$ (18.35)	$ -	$ -	$ -	$ (57.33)	$ (216.97)
% Change			-3.85%	-3.94%	-4.02%	-3.94%	-3.92%	-3.86%	-3.92%	-4.53%	-4.41%	-4.37%	0.00%	0.00%	0.00%	-2.25%	-3.28%
COG & LDAC			$ (1,266.07)	$(1,121.31)	$ (1,520.37)	$ 719.85	$ 1,131.46	$ 1,221.28	$ (835.15)	$ (1,863.48)	########	########	########	$ (945.03)	$ (1,175.66)	$ (8,263.99)	$ (9,099.15)
% Change			-43.76%	-36.43%	-39.84%	57.64%	156.23%	285.62%	-6.85%	-91.62%	-91.41%	-91.17%	-88.40%	-86.39%	-86.39%	-89.65%	-42.51%

Residential Heating

	Summer 2023	Summer 2024
Customer Charge	$ 15.39	$ 15.39
First 20 Therms	$ 0.6519	$ 0.6167
Excess 20 Therms	$ 0.6519	$ 0.6167
LDAC	$ 0.1164	$ 0.1180
COG	$ 0.8073	$ 0.0187
Total Adjust	$ 0.9237	$ 0.1367

		Summer 2023 COG @	Summer 2024 Cog @	Total $ Impact	Total % Impact	Base Rate $ Impact	Base Rate % Ir	COG $ Impact	COG % Impact	LDAC $ Impact	LDAC % Impact
		$ 0.9237	$ 0.1367	$ (0.79)	-85%						
Cooking alone	5	$ 23.27	$ 19.16	$ (4.11)	-18%	$ (0.18)	-1%	$ (3.94)	-21%	$ 0.01	0%
	10	$ 31.15	$ 22.92	$ (8.22)	-26%	$ (0.35)	-1%	$ (7.89)	-34%	$ 0.02	0%
	20	$ 46.90	$ 30.46	$ (16.44)	-35%	$ (0.70)	-2%	$ (15.77)	-52%	$ 0.03	0%
Water Heating alone	30	$ 62.66	$ 37.99	$ (24.67)	-39%	$ (1.06)	-2%	$ (23.66)	-62%	$ 0.05	0%
	45	$ 86.29	$ 49.29	$ (37.00)	-43%	$ (1.58)	-2%	$ (35.49)	-72%	$ 0.07	0%
	50	$ 94.17	$ 53.06	$ (41.11)	-44%	$ (1.76)	-2%	$ (39.43)	-74%	$ 0.08	0%
Heating Alone	80	$ 133.56	$ 71.90	$ (61.66)	-46%	$ (2.64)	-2%	$ (59.14)	-82%	$ 0.12	0%
	125	$ 224.94	$ 115.59	$ (109.35)	-49%	$ (4.68)	-2%	$ (104.88)	-91%	$ 0.21	0%
	150	$ 251.73	$ 128.40	$ (123.33)	-49%	$ (5.28)	-2%	$ (118.29)	-92%	$ 0.24	0%
	200	$ 330.50	$ 166.07	$ (164.43)	-50%	$ (7.04)	-2%	$ (157.72)	-95%	$ 0.32	0%

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

2024 Summer Cost of Gas Filing
Capacity Assignment Calculations 2023-2024
<u>Derivation of Class Assignments and Weightings</u>

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

Line				**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			519	519	0.3%		129	390
2	RATE R-3-Resi Htg			73,897	73,897	44.1%		3,452	70,446
3	RATE G-41 (T)			30,167	30,167	18.0%		919	29,247
4	RATE G-51 (S)			2,317	2,317	1.4%		774	1,543
5	RATE G-42 (V)			38,624	38,625	23.0%		1,581	37,044
6	RATE G-52			5,192	5,192	3.1%		1,710	3,482
7	RATE G-43			10,497	10,497	6.3%		903	9,594
8	RATE G-53			5,243	5,243	3.1%		1,871	3,372
9	RATE G-54			1,232	1,232	0.7%		387	844
10									
11	Total			167,688	167,688	100.0%		11,726	155,962
12									-
13	Residential Total			74,416	74,416	**44.378%**		3,581	70,835
14	LLF Total			79,289	79,289	**47.283%**		3,403	75,885
15	HLF Total			13,984	13,984	**8.339%**		4,742	9,242
16	Total			167,688	167,688	100 0%		11,726	155,962
17									
18	C&I Breakdown								
19	LLF Total							3,403	75,885
20	HLF Total							4,742	9,242
21	Total							8,145	85,127
22									
23	C&I Breakdown Percentage								
24	LLF Total							41.782%	89.144%
25	HLF Total							58.218%	10 856%
26	Total							**100.0%**	**100.0%**
27									
28				Capacity Cost	MDQ, Dt	$/Dt-Mo.			
29	Pipeline			$15,924,599	119,718	$11.0848			
30	Storage			$4,094,776	28,115	$12.1370			
31									
32	Peaking			$1,550,000					
33	Peaking Additional Costs (Concord Lateral Peaking x Differential)			$0					
34	Subtotal Peaking Costs			$1 550 000	19,855	$6 5054			
35	Total			$21,569,375	167,688	$10.7190			
36									
37				Capacity Cost	MDQ, Dt	$/Dt-Mo.			
38	Pipeline - Baseload			1,559,739	11,726	$11.0848			
39	Pipeline - Remaining			14,364,860	107,992	$11.0848			
40	Storage			4,094,776	28,115	$12.1370			
41	Peaking			1 550 000	19 855	$6 5054			
42	Total			21,569,375	167,688	$10.7190			
43									
44									
45	Residential Allocation			Capacity Cost	MDQ, Dt	$/Dt-Mo.			
46	Pipeline - Base	Line 38 * Line 13 Col C	**44.378%**	692,181	5,204	$11.0848			
47	Pipeline - Remaining	Line 39 * Line 13 Col C	**44.378%**	6,374,839	47,925	$11.0848			
48	Storage	Line 40 * Line 13 Col C	**44.378%**	1,817,181	12,477	$12.1370			
49	Peaking	Line 41 * Line 13 Col C	**44.378%**	687,829	8,811	$6 5054			
50	Total		**44.378%**	9,572,024	74,416	$10.7190			
51									

52 **Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**

54 **2023 Summer Cost of Gas Filing**
55 **Capacity Assignment Calculations 2023-2024**
56 **Derivation of Class Assignments and Weightings**

							Ratios for COG
57							
58							**Ratios for COG**
59	C&I Allocation			Capacity Cost	MDQ, Dt	$/Dt-Mo.	
60	Pipeline - Base	Line 38 - Line 46		867,558	6,522	$11.0848	
61	Pipeline - Remaining	Line 39 - Line 47		7,990,021	60,067	$11.0848	
62	Storage	Line 40 - Line 48		2,277,595	15,638	$12.1370	
63	Peaking	Line 41 - Line 49		862,171	11,044	$6 5056	
64	Total		**55.622%**	11,997,344	93,272	$10.7190	**1.0000**
65							
66							
67	LLF - C&I Allocation			Capacity Cost	MDQ, Dt	$/Dt-Mo.	
68	Pipeline - Base	Line 60 * Line 24 Col E		362,484	2,725	$11.0851	
69	Pipeline - Remaining	Line 61 * Line 24 Col F		7,122,606	53,546	$11.0849	
70	Storage	Line 62 * Line 24 Col F		2,030,334	13,940	$12.1373	
71	Peaking	Line 63 * Line 24 Col F		768,572	9,845	$6 5056	
72	Total		**47.6787%**	10,283,996	80,056	$10.7050	**0.9987**
73			41.782%	86%			(Line 72 / Line 64)
74							
75	HLF - C&I Allocation			Capacity Cost	MDQ, Dt	$/Dt-Mo.	
76	Pipeline - Base	Line 60 - Line 68		505,074	3,797	$11.0849	
77	Pipeline - Remaining	Line 61 - Line 69		867,415	6,521	$11.0849	
78	Storage	Line 62 - Line 70		247,261	1,698	$12.1349	
79	Peaking	Line 63 - Line 71		93,599	1,199	$6 5054	
80	Total		**7.9434%**	1,713,349	13,215	$10.8043	**1.0080**
81							(Line 80 / Line 64)
82							
83	Unit Cost			Residential	LLF C&I	HLF C&I	
84							
85	Pipeline			$ 11 0848	$ 11 0848	$ 11 0848	
86	Storage			$ 12.1370	$ 12.1370	$ 12.1370	
87	Peaking			$ -	$ -	$ -	
88	Total			$ 10.7190	$ 10.7050	$ 10 8043	
89							
90							
91	Load Makeup			Residential	**LLF C&I**	**HLF C&I**	
92							
93	Pipeline			71.39%	**70.29%**	**78.08%**	
94	Storage			16.77%	**17.41%**	**12.85%**	
95	Peaking			11.84%	**12.30%**	**9.07%**	
96	Total			100.00%	**100.00%**	**100.00%**	
97							
98							
99	Supply Makeup			Residential	LLF C&I	HLF C&I	Total
100							
101	Pipeline			44.38%	47.00%	8.62%	100 00%
102	Storage			44.38%	49.58%	6.04%	100 00%
103	Peaking			44.38%	49.58%	6.04%	100 00%

1 **Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**
2
3 **2024 Summer Cost of Gas Filing**
4 **Correction Factor Calculation**
5
6

Ln		d	e	f	g	h	i	
8	Data Source: Schedule 10B							Total
9		May	June	July	Aug	Sep	Oct	Sales
10								
11	G-41	670,264	314,756	225,458	174,609	303,478	1,041,040	2,729,606
12	G-42	644,811	334,760	251,143	205,135	369,043	1,081,152	2,886,045
13	G-43	254,936	171,717	145,923	120,884	140,285	316,189	1,149,934
14	High Winter Use	1,570,012	821,234	622,524	500,628	812,807	2,438,381	6,765,585
15								
16	G-51	218,961	192,564	190,743	185,001	178,225	233,815	1,199,310
17	G-52	237,398	207,695	208,635	215,082	201,292	255,186	1,325,289
18	G-53	293,608	257,701	252,979	259,409	261,685	321,410	1,646,791
19	G-54	80,753	32,231	33,170	33,365	26,568	28,270	234,356
21	Low Winter Use	830,719	690,191	685,527	692,857	667,770	838,681	4,405,745
22								
23	Gross Total	2,400,731	1,511,425	1,308,051	1,193,485	1,480,577	3,277,062	11,171,330

24
25

Ln			
26	Total Sales	11,171,330	
27	Low Winter Use	4,405,745	
28	Summer Ratio for Low Winter Use	**1.0080**	**Schedule 10A p 2, ln 80**
29	High Winter Use	6,765,585	
30	Summer Ratio for High Winter Use	**0.9987**	**Schedule 10A p 2, ln 72**

31
32 Correc ion Factor = Total Sales/((Low Winter Use x Winter Ratio for Low Winter Use)+(High Winter Use x Winter Ratio for High Winter Use
33 Correc ion Factor = $\boxed{\textbf{99.7638\%}}$
34
35
36 **Allocation Calculation for Miscellaneous Overhead**
37

Ln		Period	Volume	Source
38	Projected Winter Sales Volume	11/1/23 - 4/30/24	94,568,321	Sch.10B, ln 23
39	Projected Annual Sales Volume	11/1/23 - 10/31/24	119,310,982	Sch.10B, ln 23
40	Percentage of Winter Sales to Annual Sales		79.26%	

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

Schedule 10B

Off Peak 2024 Summer Cost of Gas Filing
2024 Summer Cost of Gas Filing

Firm Sales	**May-24**	**Jun-24**	**Jul-24**	**Aug-24**	**Sep-24**	**Oct-24**	**Subtotal OP 24**	**Total**
R-1	52,662	43,099	40,191	37,249	39,636	55,445	268,282	770,550
R-3	2,998,814	1,502,833	1,103,849	985,331	1,643,398	4,150,744	12,384,971	62,516,931
R-4	233,018	116,445	85,399	75,793	114,474	292,951	918,079	4,624,673
Total Residential.	3,284,494	1,662,377	1,229,440	1,098,373	1,797,508	4,499,140	13,571,332	67,912,154
G-41	670,264	314,756	225,458	174,609	303,478	1,041,040	2,729,606	19,431,458
G-42	644,811	334,760	251,143	205,135	369,043	1,081,152	2,886,045	16,233,175
G-43	254,936	171,717	145,923	120,884	140,285	316,189	1,149,934	4,557,243
G-51	218,961	192,564	190,743	185,001	178,225	233,815	1,199,310	3,086,675
G-52	237,398	207,695	208,635	215,082	201,292	255,186	1,325,289	3,437,812
G-53	293,608	257,701	252,979	259,409	261,685	321,410	1,646,791	4,184,845
G-54	80,753	32,231	33,170	33,365	26,568	28,270	234,356	467,619
Total C/I	2,400,731	1,511,425	1,308,051	1,193,485	1,480,577	3,277,062	11,171,330	51,398,828
Sales Volume	**5,685,225**	**3,173,802**	**2,537,490**	**2,291,858**	**3,278,085**	**7,776,201**	**24,742,661**	**119,310,982**
Transportation Sales								
G-41	238,915	132,942	94,957	72,754	139,002	364,497	1,043,068	5,333,513
G-42	934,466	516,154	392,978	321,440	553,593	1,398,354	4,116,985	19,618,724
G-43	498,607	335,688	271,980	236,013	382,815	701,647	2,426,750	8,844,196
G-51	65,138	57,470	55,740	57,207	59,924	72,792	368,271	900,430
G-52	379,452	325,244	320,657	318,602	339,845	421,831	2,105,631	5,400,561
G-53	629,281	616,772	573,484	638,181	679,871	775,145	3,912,734	9,217,170
G-54	1,559,173	1,580,986	1,641,782	1,742,529	1,696,679	1,750,574	9,971,723	17,855,173
Total Trans. Sales	**4,305,032**	**3,565,256**	**3,351,579**	**3,386,725**	**3,851,730**	**5,484,841**	**23,945,162**	**67,169,767**
Total All Sales	**9,990,257**	**6,739,058**	**5,889,069**	**5,678,583**	**7,129,815**	**13,261,042**	**48,687,823**	**186,480,749**

1 **Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty** **Schedule 11A**
2
3 **Off Peak 2024 Summer Cost of Gas Filing**
4 **Normal and Design Year Volumes**
5
6
7 **Volumes (Therms)** **Normal Year**
8
9 **For the Months of May 24 -October 24**
10

Line		May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Off Peak May - Oct
13	Pipeline Gas:							
14	Dawn Supply	842,983	655,282	518,079	495,174	612,922	901,154	4,025,595
15	Niagara Supply	667,764	585,319	584,500	583,125	492,567	787,845	3,701,120
16	TGP Supply (Gulf)	929,663	-	-	-	-	827,579	1,757,242
17	Dracut Supply 1 - Baseload	-	-	-	-	-	-	0
18	Dracut Supply 2 - Swing	-	-	-	-	-	504,981	504,981
19	Dracut Supply 3 - Swing	-	-	-	-	-	-	-
20	Constellation Combo	-	-	-	-	-	-	0
21	LNG Truck	-	-	4,473	18,729	17,901	100,708	141,811
22	Propane Truck	81,143	75,360	49,199	71,793	73,523	80,427	431,444
23	PNGTS	216,617	194,624	196,156	93,643	189,881	218,149	1,109,071
24	Portland Natural Gas	889,892	29,984	-	-	-	922,990	1,842,866
25	TGP Supply (Z4)	5,759,165	5,591,074	3,885,012	3,831,718	3,863,377	6,422,862	29,353,208
26		9,387,227	7,131,644	5,237,418	5,094,181	5,250,171	10,766,696	42,867,337
27								
28	Storage Gas:							
29		-	-	-	-	-	-	0
30								
31	Produced Gas:							
32	LNG Vapor	20,462	19,004	18,529	18,104	18,541	20,282	114,922
33	Propane	-	-	-	-	-	-	0
34		20,462	19,004	18,529	18,104	18,541	20,282	114,922
35								
36	Less - Gas Refills:							
37	LNG Truck	-	-	(6,389)	(9,989)	(53,704)	(69,936)	(140,018)
38	Propane	(81,143)	(75,360)	(49,199)	(71,793)	(73,523)	(80,427)	(431,444)
39	TGP Storage Refill	(3,719,893)	(3,344,003)	(2,050,369)	(1,668,719)	(1,352,181)	(3,426,880)	(15,562,044)
40		(3,801,037)	(3,419,362)	(2,105,957)	(1,750,500)	(1,479,408)	(3,577,243)	(16,133,507)
41								
42	Total Sendout Volumes	5,606,653	3,731,286	3,149,990	3,361,785	3,789,304	7,209,735	26,848,752

43

1 **Liberty Utilities (EnergyNorth Natural Gas) Corp.** **Schedule 11B**

2 **Page 1 of 1**

3 **Off Peak 2024 Summer Cost of Gas Filing**

44 **Normal and Design Year Volumes**

45

46

47 **Volumes (Therms)** **Design Year**

48

49 **For the Months of May 24 -October 24**

50

51								**Off Peak**
52		**May-24**	**Jun-24**	**Jul-24**	**Aug-24**	**Sep-24**	**Oct-24**	**May - Oct**
53	Pipeline Gas:							
54	Dawn Supply	842,983	655,282	518,079	495,174	612,922	1,054,324	4,178,765
55	Niagara Supply	667,764	585,319	584,500	583,125	492,567	787,845	3,701,120
56	TGP Supply (Gulf)	1,193,555	-	-	-	-	827,579	2,021,134
57	Dracut Supply 1 - Baseload	-	-	-	-	-	-	0
58	Dracut Supply 2 - Swing	-	-	-	-	-	-	-
	Dracut Supply 3 - Swing	-	-	-	-	-	-	-
59	Constellation Combo	-	-	-	-	-	-	0
60	LNG Truck	-	-	4,473	18,729	17,901	100,708	141,811
61	Propane Truck	81,143	75,360	49,199	71,793	73,523	80,427	431,444
62	PNGTS	216,617	194,624	196,156	93,643	189,881	218,149	1,109,071
63	Portland Natural Gas	889,892	29,984	-	-	-	922,990	1,842,866
64	TGP Supply (Z4)	5,759,165	5,752,278	4,103,530	4,017,756	4,075,634	7,058,615	30,766,978
65	Subtotal Pipeline Volumes	9,651,119	7,292,848	5,455,936	5,280,219	5,462,428	11,050,638	44,193,188
66								
67	Storage Gas:							
68	TGP Storage	-	-	-	-	-	-	0
69								
70	Produced Gas:							
71	LNG Vapor	20,462	19,004	18,529	18,104	18,541	20,282	114,922
72	Propane	-	-	-	-	-	-	-
73	Subtotal Produced Gas	20,462	19,004	18,529	18,104	18,541	20,282	114,922
74								
75	Less - Gas Refills:							
76	LNG Truck	-	-	(4,473)	(18,729)	(17,901)	(100,708)	(141,811)
77	Propane	(81,143)	(75,360)	(73,478)	(71,793)	(73,523)	(80,427)	(455,724)
78	TGP Storage Refill	(4,009,893)	(3,522,900)	(2,261,859)	(1,861,624)	(1,618,781)	(3,714,318)	(16,989,374)
79	Subtotal Refills	(4,091,036)	(3,598,259)	(2,339,810)	(1,952,145)	(1,710,205)	(3,895,453)	(17,586,909)
80								
81	Total Sendout Volumes	5,580,545	3,713,592	3,134,655	3,346,178	3,770,763	7,175,467	26,721,201

1 **Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty** Schedule 11C

2 Page 1 of 1

3 **Off Peak 2024 Summer Cost of Gas Filing**

4 **Capacity Utilization**

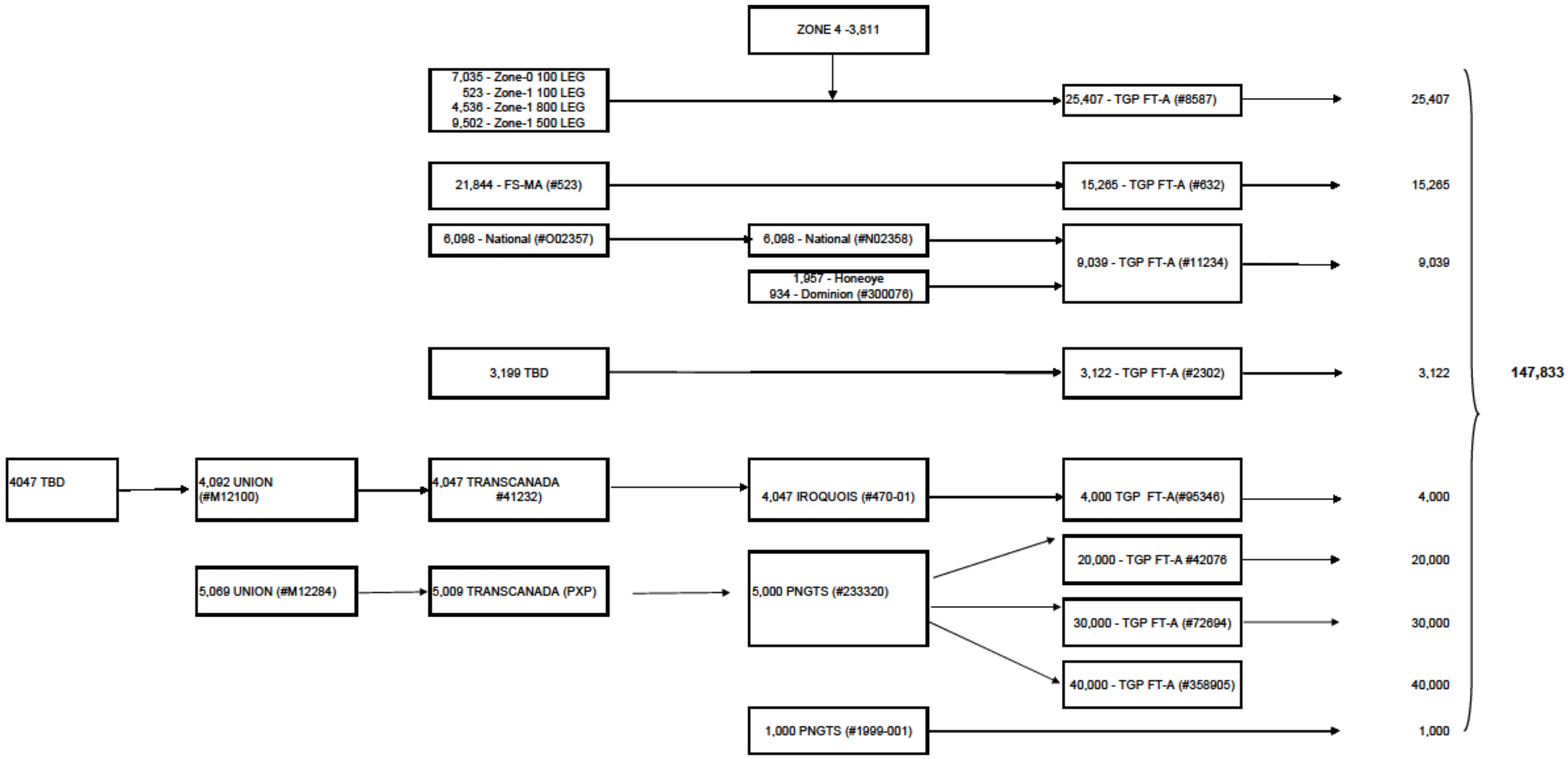
5 **Volumes (Therms)**

6

Line		Off-Peak Period Normal Year Use (Therms)	MDQ (MMBtu/day)	Seasonal Quantity (Therms)	Utilization Rate	Off-Peak Period Design Year Use (Therms)	MDQ (MMBtu/day)	Seasonal Quantity (Therms)	Utilization Rate
11	**Pipeline Gas:**								
12	Dawn Supply	4,025,595	4,000	7,360,000	55%	4,178,765	4,000	7,360,000	57%
13	Niagara Supply	3,701,120	3,122	5,744,480	64%	3,701,120	3,122	5,744,480	64%
14	TGP Supply (Gulf)	1,757,242	21,596	39,736,640	4%	2,021,134	21,596	39,736,640	5%
15	Dracut Supply 1 & 2 & 3	504,981	90,000	165,600,000	0%	-	90,000	165,600,000	0%
16	LNG Truck	141,811	-	-	-	141,811	-	-	-
17	Propane Truck	431,444	-	-	-	431,444	-	-	-
18	PNGTS	1,109,071	1,000	1,840,000	60%	1,109,071	1,000	1,840,000	60%
	Portland Natural Gas	1,842,866	5,000	9,200,000	20%	1,842,866	5,000	9,200,000	20%
19	TGP Supply (Z4)	29,353,208	21,596	39,736,640	74%	30,766,978	21,596	39,736,640	77%
20	Other Purchased Resources	-		-		-		-	
21									
22	Subtotal Pipeline Volumes	42,867,337				44,193,188			
23									
24	**Storage Gas:**								
25	0	0		25,792,710	0%	-		25,792,710	0%
26									
27	**Produced Gas:**								
28	LNG Vapor	114,922				114,922			
29	Propane	-				-			
30									
31	Subtotal Produced Gas	114,922				114,922			
32									
33	**Less - Gas Refills:**								
34	LNG Truck	(140,018)				(141,811)			
35	Propane	(431,444)				(455,724)			
36	TGP Storage Refill	(15,562,044)				(16,989,374)			
37									
38	Subtotal Refills	(16,133,507)				(17,586,909)			
39									
40	Total Sendout Volumes	26,848,752				26,721,201			

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

Off Peak 2024 Summer Cost of Gas Filing
Transportation Available for Pipeline Supply and Storage
(MMBtu)



Agreements for Gas Supply and Transportation

SOURCE	RATE SCHEDULE	CONTRACT NUMBER	TYPE	MDQ MMBTU	MAQ * MMBTU	EXPIRATION DATE	NOTIFICATION DATE	RENEWAL OPTIONS
ANE	NA	NA	Supply	4,047	611,097	Peak Only	N/A	Terminates
Constellation	FCS		Firm Combination Liquid and Vapor Svc	Up to 7 trucks	630,000	3/31/2022 Peak Only	N/A	Terminates
Dracut or Z6	NA	NA	Supply	Up to 20,000 / day	1,412,000	2/28/2022	N/A	Terminates
TGP Long-Haul	NA	NA	Supply	21,596	3,908,876	4/30/2022	N/A	Terminates
Northern Transport	NA	NA	Trucking	28,500 Gallons	900,000 Gallons	3/31/2023	N/A	Terminates
Dominion Transmission Incorporated	GSS	300076	Storage	934	102,700	3/31/2024	3/31/2022	Mutually agreed upon
Honeoye Storage Corporation	SS-NY	11234	Storage	1,957	245,380	3/31/2023	12 months notice	Evergreen Provision
National Fuel Gas Supply Corporation	FSS	O02358	Storage	6,098	670,800	3/31/2023	3/31/2022	Evergreen Provision
National Fuel Gas Supply Corporation	FSST	N02358	Transportation	6,098	670,800	3/31/2023	3/31/2022	Evergreen Provision
Iroquois Gas Transmission System	RTS	47001	Transportation	4,047	1,477,155	11/1/2022	11/1/2021	Evergreen Provision
Portland Natural Gas Transmission System	FT 1999-01	1999-001	Transportation	1,000	365,000	11/30/2032	11/31/2031	Evergreen Provision
Portland Natural Gas Transmission System	FT	PXP	Transportation	4,432	1,617,680	10/31/2040	10/31/2039	Precedent Agreement
Tennessee Gas Pipeline Company	FS-MA	523	Storage	21,844	1,560,391	10/31/2025	10/31/2024	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	8587	Transportation	25,407	9,273,555	10/31/2025	10/31/2024	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	2302	Transportation	3,122	1,139,530	10/31/2025	10/31/2024	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	632	Transportation	15,265	5,571,725	10/31/2025	10/31/2024	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	11234	Transportation	9,039	3,299,235	10/31/2025	10/31/2024	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	72694	Transportation	30,000	10,950,000	10/31/2029	10/31/2028	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	95346	Transportation	4,000	1,460,000	11/30/2022	11/30/2021	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	42076	Transportation	20,000	7,300,000	10/31/2025	10/31/2024	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	358905	Transportation	40,000	14,600,000	10/31/2041	10/31/2040	Evergreen Provision
TransCanada Pipeline	FT	41232	Transportation	4,047	1,477,155	10/31/2026	10/31/2024	Evergreen Provision
TransCanada Pipeline	FT	PXP	Transportation	4,432	1,617,680	10/31/2040		Precedent Agreement
Union Gas Limited	M12	M12200	Transportation	4,092	1,493,580	10/31/2023	10/31/2021	Evergreen Provision
Union Gas Limited	M12	PXP	Transportation	4,432	1,617,680	10/31/2040		Precedent Agreement

* MAQ is calculated on a 365 day calendar year.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liber

Off Peak 2024 Summer Cost of Gas Filing
Storage Inventory

Underground Storage Gas

		May-24 (Estimate)	Jun-24 (Estimate)	Jul-24 (Estimate)	Aug-24 (Estimate)	Sep-24 (Estimate)	Oct-24 (Estimate)	Total
Beginning Balance (MMBtu)		(56,566)	103,059	450,717	798,376	1,146,035	1,493,693	(56,566)
Injections (MMBtu)	Sch 11A ln 39 /10	347,659	347,659	347,659	347,659	347,659	535,693	2,273,986
Subtotal		291,093	450,717	798,376	1,146,035	1,493,693	2,029,386	
Storage Sale/Adjustments		-	-	-	-	-	-	
Withdrawals (MMBtu)	Sch 11A ln 29 /10	(188,034)	-	-	-	-	-	(188,034)
Ending Balance (MMBtu)		103,059	450,717	798,376	1,146,035	1,493,693	2,029,386	2,029,386
Beginning Balance		$ (169,462)	$ 473,066	$ 1,715,365	$ 2,997,726	$ 4,293,801	$ 5,582,297	$ (169,462)
Injections	ln 11 * ln 36	$ 1,205,847	$ 1,242,299	$ 1,282,360	$ 1,296,075	$ 1,288,496	$ 2,033,772	8,348,849
Subtotal		$ 1,036,385	$ 1,715,365	$ 2,997,726	$ 4,293,801	$ 5,582,297	$ 7,616,069	
Storage Sale/Adjustments		$ -	$ -	$ -	$ -	$ -	$ -	
Withdrawals	ln 17 * ln 34	$ (563,319)	$ -	$ -	$ -	$ -	$ -	(563,319)
Ending Balance		$ 473,066	$ 1,715,365	$ 2,997,726	$ 4,293,801	$ 5,582,297	$ 7,616,069	$ 7,616,069
Average Rate For Withdrawals	ln 22 /ln 9	$ 3.5603	$ 3.8059	$ 3.7548	$ 3.7467	$ 3.7372	$ 3.7529	
TGP Storage Rate for Injections	Actual or NYMEX plus TGP Transportation	$ 3.4685	$ 3.5733	$ 3.6886	$ 3.7280	$ 3.7062	$ 3.7965	

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

39 **Off Peak 2024 Summer Cost of Gas Filing**

41 **Liquid Propane Gas (LPG)**

Ln			May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Total
43			(Estimate)	(Estimate)	(Estimate)	(Estimate)	(Estimate)	(Estimate)	
44	Beginning Balance		57,408	57,408	57,408	62,328	69,508	76,860	57,408
46	Injections	Sch 11A ln 38 /10	-	-	4,920	7,179	7,352	8,043	27,494
48	Subtotal		57,408	57,408	62,328	69,508	76,860	84,903	
50	Withdrawals	Sch 11A ln 33 /10	-	-	-	-	-	-	-
52	Adjustment for change in temperature		-	-	-	-	-	-	-
53	Adjustment for Transfer		-	-	-	-	-	-	-
54	Ending Balance		57,408	57,408	62,328	69,508	76,860	84,903	84,903
57	Beginning Balance		$ 888,223	$ 888,223	$ 888,223	$ 888,223	$ 888,223	$ 888,223	$ 888,223
59	Injections	ln 46 * ln 69	$ -	$ -	$ -	$ -	$ -	$ 109,380	109,380
61	Subtotal		$ 888,223	$ 888,223	$ 888,223	$ 888,223	$ 888,223	$ 997,604	
63	Withdrawals	ln 52 * ln 67	$ -	$ -	$ -	$ -	$ -	$ -	-
65	Ending Balance		$ 888,223	$ 888,223	$ 888,223	$ 888,223	$ 888,223	$ 997,604	$ 997,604
67	Average Rate For Withdrawals		$ 15.4720	$ 15.4720	$ 14.2507	$ 12.7788	$ 11.5564	$ 11.7500	
69	Propane Rate for Injections	Actual or Sch. 6, ln 166 * 10	0	0	0	0	0	$ 13.60	

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

71

72 **Off Peak 2024 Summer Cost of Gas Filing**

73

Ln				May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Total
74	**Liquid Natural Gas (LNG)**			May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Total
75					(Estimate)	(Estimate)	(Estimate)	(Estimate)	(Estimate)	
76		Beginning Balance		10,950	8,903	7,003	5,789	4,977	8,494	10,950
77										
78		Injections	Sch 11A ln 37 /10	-	-	639	999	5,370	6,994	14,002
79										
80		Subtotal		10,950	8,903	7,642	6,788	10,348	15,487	
81										
82		Withdrawals	Sch 11A ln 32 /10	(2,046)	(1,900)	(1,853)	(1,810)	(1,854)	(2,028)	(11,492)
83										
84		Ending Balance		8,903	7,003	5,789	4,977	8,494	13,459	13,459
85										
86										
87		Beginning Balance		$ 138,400	$ 112,536	$ 88,516	$ 68,662	$ 52,811	$ 58,076	$ 138,400
88										
89		Injections	ln 78 * ln 99	$ -	$ -	$ 2,124	$ 3,358	$ 17,942	$ 23,974	47,399
90										
91		Subtotal		$ 138,400	$ 112,536	$ 90,639	$ 72,020	$ 70,753	$ 82,050	
92										
93		Withdrawals	ln 82 * ln 97	$ (25,864)	$ (24,020)	$ (21,977)	$ (19,209)	$ (12,677)	$ (10,745)	(114,493)
94										
95		Ending Balance		$ 112,536	$ 88,516	$ 68,662	$ 52,811	$ 58,076	$ 71,305	$ 71,305
96										
97		Average Rate For Withdrawals		$ 12.6398	$ 12.6398	$ 11.8609	$ 10.6102	$ 6.8376	$ 5.2979	
98										
99		LNG Rate for Injections	Actual or Sch. 6, ln 165 * 10	0	0	$ 3.3240	$ 3.3620	$ 3.3410	$ 3.4280	