

7 For Month of:		Peak Costs		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24		Apr-24		May-24		Peak Period	
8		May 22 - Oct 23		(c)		(d)		(e)		(f)		(g)		(h)		(i)		Nov - Apr	
9 I. Gas Volumes (Therms)		(a)	(b)	(c)		(d)		(e)		(f)		(g)		(h)		(i)		(k)	
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	<u>Pipeline Gas:</u>																		
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	<u>Storage Gas:</u>																		
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	<u>Produced Gas:</u>																		
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	<u>Less - Gas Refill:</u>																		
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	Ins 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							

Demand Costs

			Peak Costs May 22 - Oct 23 (c)	Nov-23 (d)	Dec-23 (e)	Jan-24 (f)	Feb-24 (g)	Mar-24 (h)	Apr-24 (i)	May-24 (j)	Peak Period Nov - Apr (k)
56 For Month of:	(a)	(b)									
58 <u>Supply</u>											
59	Niagara Supply	Sch.5A, In 12		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
60	Subtotal Supply Demand			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
61	Less Capacity Credit			-	-	-	-	-	-	-	-
62	Net Pipeline Demand Costs			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
64 <u>Pipeline:</u>											
65	Iroquois Gas Trans Service RTS 470-0	Sch.5A, In 16		\$ 19,585	\$ 19,585	\$ 19,585	\$ 19,585	\$ 19,585	\$ 19,585		\$ 117,508
66	Tenn Gas Pipeline 95346 Z5-Z6	Sch.5A, In 17		24,362	24,362	24,362	24,362	24,362	24,362		146,172
67	Tenn Gas Pipeline 2302 Z5-Z6	Sch.5A, In 18		19,015	19,015	19,015	19,015	19,015	19,015		114,087
68	Tenn Gas Pipeline 8587 Z0-Z6	Sch.5A, In 19		138,564	138,564	138,564	138,564	138,564	138,564		831,385
69	Tenn Gas Pipeline 8587 Z1-Z6	Sch.5A, In 20		254,628	254,628	254,628	254,628	254,628	254,628		1,527,769
70	Tenn Gas Pipeline 8587 Z4-Z6	Sch.5A, In 21		26,411	26,411	26,411	26,411	26,411	26,411		158,464
71	Tenn Gas Pipeline (Dracut) 42076 Z6-Z6	Sch.5A, In 22		80,948	80,948	80,948	80,948	80,948	80,948		971,376
72	Tenn Gas Pipeline (Dracut) 358905 Z6-Z7	Sch.5A, In 23		161,896	161,896	161,896	161,896	161,896	161,896		971,376
73	Tenn Gas Pipeline (Concord Lateral) Z6-Z6	Sch.5A, In 24		366,471	366,471	366,471	366,471	366,471	366,471		4,397,652
74	Portland Natural Gas Trans Service	Sch.5A, In 25		18,263	18,263	18,263	18,263	18,263	18,263		109,580
75	Portland Natural Gas	Sch.5A, In 26		113,971	113,971	113,971	113,971	113,971	113,971		683,828
76	ANE (TransCanada via Union to Iroquois)	Sch.5A, In 27		51,622	51,622	51,622	51,622	51,622	51,622		309,732
77	TransCanada via Union to Portland	Sch.5A, In 28		98,086	98,086	98,086	98,086	98,086	98,086		588,517
78	Tenn Gas Pipeline Z4-Z6 stg 632	Sch.5A, In 29		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, In 30		49,079	49,079	49,079	49,079	49,079	49,079		588,948
80	Tenn Gas Pipeline Z5-Z6 stg 11234	Sch.5A, In 31		11,919	11,919	11,919	11,919	11,919	11,919		143,029
81	National Fuel FST 2358	Sch.5A, In 32		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
86 <u>Peaking Supply:</u>											
87	Tenn Gas Pipeline (Concord Lateral) Z6-Z6	Sch.5A, In 37		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -
88	Demand FLS	Sch.5A, In 38		-	-	-	-	-	-		-
89	Peaking Demand	Sch.5A, In 39		310,000	310,000	310,000	310,000	310,000	-		1,550,000
90	Subtotal Peaking Demand		\$ 310,000	\$ 310,000	\$ 310,000	\$ 310,000	\$ 310,000	\$ 310,000	\$ -		\$ 1,550,000
91	Less Capacity Credit		(77,779)	(77,779)	(77,779)	(77,779)	(77,779)	(77,779)	-		(707,021)
92	Net Peaking Supply Demand Costs		\$ 232,221	\$ 232,221	\$ 232,221	\$ 232,221	\$ 232,221	\$ 232,221	\$ -		\$ 842,979
94 <u>Storage:</u>											
95	Dominion - Demand	Sch.5A, In 49		\$ 2,502	\$ 2,502	\$ 2,502	\$ 2,502	\$ 2,502	\$ 2,502		\$ 30,020
96	Dominion - Storage	Sch.5A, In 50		2,650	2,650	2,650	2,650	2,650	2,650		31,796
97	Honeoye - Demand	Sch.5A, In 51		9,443	9,443	9,443	9,443	9,443	9,443		113,319
98	National Fuel - Demand	Sch.5A, In 52		16,141	16,141	16,141	16,141	16,141	16,141		193,690
99	National Fuel - Capacity	Sch.5A, In 53		32,064	32,064	32,064	32,064	32,064	32,064		384,771
100	Tenn Gas Pipeline - Demand	Sch.5A, In 54		27,644	27,644	27,644	27,644	27,644	27,644		331,723
101	Tenn Gas Pipeline - Capacity	Sch.5A, In 55		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
106	Total Demand Charges	Ins 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	Ins 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

112 B. Commodity Costs

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118 Pipeline:

119 Dawn Supply Sch. 6, In 12

120 Niagara Supply Sch. 6, In 13

121 TGP Supply (Direct) Sch. 6, In 14

122 Dracut Supply 1 - Baseload Sch. 6, In 15

123 Dracut Supply 2 - Swing Sch. 6, In 16

124 Dracut Supply 3 - Swing Sch. 6, In 17

125 Constellation COMBO Sch. 6, In 18

126 LNG Truck Sch. 6, In 19

127 Propane Truck Sch. 6, In 20

128 PNGTS Sch. 6, In 21

129 Portland Natural Gas Sch. 6, In 22

130 TGP Supply (Z4) Sch. 6, In 23

131 Subtotal Pipeline Commodity Costs

132

133 Storage:

134 TGP Storage - Withdrawals Sch. 6, In 50

135

136 Produced Gas Costs:

137 LNG Vapor Sch. 6, In 53

138 Propane Sch. 6, In 54

139 Subtotal Produced Gas Costs

140

141 Less Storage Refills:

142 LNG Truck Sch. 6, In 40

143 Propane Sch. 6, In 41

144 TGP Storage Refill Sch. 6, In 42

145 Storage Refill (Trans.) Sch. 6, In 43

146 Subtotal Storage Refill

147

148 Total Supply Commodity Costs

149

150 C. Supply Volumetric Transportation Costs:

151 Dawn Supply Sch. 6, In 28

152 Niagara Supply Sch. 6, In 29

153 TGP Supply (Direct) Sch. 6, In 30

154 Dracut Supply 1 - Baseload Sch. 6, In 31

155 Dracut Supply 2 - Swing Sch. 6, In 32

156 Dracut Supply 3 - Swing Sch. 6, In 33

157 Subtotal Pipeline Volumetric Trans. Costs

158

159 TGP Storage - Withdrawals Sch. 6, In 35

160

161 Total Supply Volumetric Trans. Costs Ins 157 + 159

162

163 Total Commodity Gas & Trans. Costs Ins 148 + 161

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REDACTED

Schedule 1

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Peak Costs

May 22 - Oct 23

Nov-23

Dec-23

Jan-24

Feb-24

Mar-24

Apr-24

May-24

Peak Period

Nov - Apr

(a)

(b)

(c)

(d)

(e)

(f)

(g)

(h)

(i)

(j)

(k)

\$

-

\$

246,446

\$

309,181

\$

326,427

\$

308,737

\$

316,980

\$

234,826

\$

1,742,599

192,299

241,521

255,117

241,130

247,699

189,997.27

1,367,763.92

1,343,645

1,091,272

1,192,366

1,099,994

1,022,831

200,927

5,951,036

-

-

5,680,440

2,646,105

-

-

8,326,545

1,417,285

3,682,701

2,436,463

4,552,135

4,776,945

654,219

17,519,747

193,371

773,932

452,598

2,586,448

1,781,654

14,442

5,802,444

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-

5,991,952

-

1,364,936

2,314,084

2,287,309

25,623

-

-

402,021

104,593

288,777

404,237

345,374

177,814

92,279

1,413,074

(20,811)

88,055

48,079

174,181

373,501

64,609

727,615

367,702

577,590

633,723

600,056

596,577

1,156,290

3,931,939

\$

-

\$

3,844,531

\$

8,417,966

\$

14,025,422

\$

14,847,613

\$

9,319,625

\$

2,721,579

\$

53,176,735

\$

-

\$

259,137

\$

1,406,663

\$

1,404,646

\$

1,176,064

\$

314,643

\$

299,583

\$

4,860,737

\$

25,651

\$

1,415,002

\$

2,339,994

\$

2,181,305

\$

27,370

\$

26,716

\$

6,016,038

-

-

1,246,369

7,134

-

-

1,253,503

\$

-

\$

25,651

\$

1,415,002

\$

3,586,363

\$

2,188,439

\$

27,370

\$

26,716

\$

7,269,540

\$

-

\$

(1,364,936)

\$

(2,314,084)

\$

(2,287,309)

\$

(25,623)

\$

-

\$

(5,991,952)

-

-

(281,887)

(6,143)

-

(113,990)

(402,021)

(539,160)

-

-

-

(327,540)

(866,700)

(61,840)

-

-

-

(37,431)

(99,272)

\$

-

\$

(601,001)

\$

(1,364,936)

\$

(2,595,971)

\$

(2,293,452)

\$

(25,623)

\$

(478,961)

\$

(7,359,945)

\$

-

\$

3,528,318

\$

9,874,694

\$

16,420,459

\$

15,918,664

\$

9,636,015

\$

2,568,917

\$

57,947,067

\$

-

\$

7,792

\$

10,024

\$

11,048

\$

9,979

\$

10,249

\$

7,395

\$

56,487

6,400

7,078

7,185

6,716

7,059

6,150

40,587

165,136

116,555

119,416

110,368

113,339

23,489

648,303

-

-

11,789

5,510

-

-

17,299

10,143

5,839

3,159

6,506

13,857

5,265

44,768

1,384

1,227

587

3,696

5,168

116

12,179

\$

-

\$

190,854

\$

140,723

\$

153,184

\$

142,775

\$

149,672

\$

42,414

\$

819,622

\$

-

\$

14,421

\$

78,281

\$

78,169

\$

65,448

\$

17,510

\$

13,395

\$

267,224

\$

-

\$

205,275

\$

219,004

\$

231,353

\$

208,223

\$

167,182

\$

55,809

\$

1,086,846

\$

-

\$

3,733,593

\$

10,093,699

\$

16,651,812

\$

16,126,887

\$

9,803,196

\$

2,624,726

\$

59,033,914

166 **D. Supply and Demand Costs by Source**

REDACTED
Schedule 1
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			Peak Costs								Peak Period
	(a)	(b)	(c)	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Nov - Apr
			(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	
173	<u>Purchased Gas Demand Costs</u>										
174	Pipeline Gas Demand Costs	Ins 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	Ins 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	Ins 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	<u>Storage Gas Demand Costs</u>										
181	Storage Demand	Ins 102	\$ 704,628	\$ 117,438	\$ 117,438	\$ 117,438	\$ 117,438	\$ 117,438	117,437.93		1,409,255.17
182	Less Capacity Credit	Ins 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	Ins 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	<u>Purchased Gas Supply</u>										
188	Commodity Costs	Ins 131									
189	Less Storage Inj.(TGP Storage)	Ins 144									
190	Less Storage Transportation	Ins 145									
191	Less LNG Truck	Ins 142									
192	Less Propane Truck	Ins 143									
193	Plus Transportation Costs	Ins 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	<u>Storage Commodity Costs</u>										
197	Commodity Costs	Ins 134	\$ -	\$ 259,137	\$ 1,406,663	\$ 1,404,646	\$ 1,176,064	\$ 314,643	\$ 299,583		\$ 4,860,737
198	Transportation Costs	Ins 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	<u>Produced Gas Commodity Costs</u>	Ins 139	\$ -	\$ 25,651	\$ 1,415,002	\$ 3,586,363	\$ 2,188,439	\$ 27,370	\$ 26,716		\$ 7,269,540
202											
203	Subtotal Commodity Costs	Ins 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	Ins 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	Ins 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	Ins 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	Ins 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

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

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

	Supplier	Contract	Contract Type	Contract Unit	Unit Dth (MDQ/ACQ)	Peak Period Cost per Unit Dth
	(a)	(b)	(c)	(d)	(e)	(f)

10 Demand Costs

12	Dominion - Capacity Reservation	GSS 300076	Storage	ACQ	102,700
13	Tenn Gas Pipeline - Cap. Reservations	FS-MA 523	Storage	ACQ	1,560,391
14	National Fuel - Capacity Reservation	FSS-002357	Storage	ACQ	670,800
15	Tenn Gas Pipeline - Demand	FS-MA 523	Storage	MDQ	21,844
16	Dominion - Demand	GSS 300076	Storage	MDQ	934
17	National Fuel - Demand	FSS-002357	Storage	MDQ	6,098
18	National Fuel	FST N02358	Transportation	MDQ	6,098
19	Tenn Gas Pipeline	42076 FTA Z6-Z6	Transportation	MDQ	20,000
20	Tenn Gas Pipeline	358905 FTA Z6-Z6	Transportation	MDQ	40,000
21	Iroquois Gas Trans Service	RTS 470-01	Transportation	MDQ	4,047
22	Honeoye - Demand	SS-NY	Storage	MDQ	1,362
23	Tenn Gas Pipeline	2302 Z5-Z6	Transportation	MDQ	3,122
24	Tenn Gas Pipeline	95346 Z5-Z6	Transportation	MDQ	4,000
25	Tenn Gas Pipeline (short haul)	11234 Z5-Z6(stg)	Transportation	MDQ	1,957
26	Tenn Gas Pipeline (short haul)	11234 Z4-Z6(stg)	Transportation	MDQ	7,082
27	Tenn Gas Pipeline (short haul)	8587 Z4-Z6	Transportation	MDQ	3,811
28	Tenn Gas Pipeline (short haul)	632 Z4-Z6 (stg)	Transportation	MDQ	15,265
29	Tenn Gas Pipeline (Concord Lateral) Z6-Z6	Firm Transportation	Transportation	MDQ	30,000
30	ANE (TransCanada via Union to Iroquois)	Dawn - Parkway to Iroquois	Transportation	MDQ	4,047
31	TransCanada via Union to Portland	Dawn -Parkway to Portland	Transportation	MDQ	5,077
32	Tenn Gas Pipeline (long haul)	8587 Z1-Z6	Transportation	MDQ	14,561
33	Tenn Gas Pipeline (long haul)	8587 Z0-Z6	Transportation	MDQ	7,035
34	Portland Natural Gas Trans Service	FT-208544	Transportation	MDQ	1,000
35	Portland Natural Gas	FT 233320	Transportation	MDQ	5,000
36	Peaking Demand	NSB041	Peaking	MDQ	4,000

38 Supply Costs - Commodity

39	TGP Supply (Z4)	Pipeline	Dkt	1,389,359
40	Niagara Supply	Pipeline	Dkt	422,148
41	Constellation COMBO	Pipeline	Dkt	-
42	TGP Supply (Direct)	Pipeline	Dkt	1,749,255
43	Dawn Supply	Pipeline	Dkt	532,561
44	Dracut Supply 1 - Baseload	Pipeline	Dkt	455,000
45	TGP Storage	Storage	Dkt	2,120,856
46	PNGTS	Pipeline	Dkt	134,597
47	Propane Truck	Pipeline	Dkt	29,560
48	LNG Truck	Pipeline	Dkt	484,821
49	Dracut Supply 2 - Swing	Pipeline	Dkt	1,350,620
50	Dracut Supply 3 - Swing	Pipeline	Dkt	358,993
51	Portland Natural Gas	Pipeline	Dkt	644,257
52	Propane	Produced	Dkt	79,275
53	LNG Vapor (Storage)	Produced	Dkt	487,452

55 Supply Costs - Volumetric Transportation

56	Dracut Supply 1 - Baseload	Pipeline	Dkt	455,000
57	Dracut Supply 2 - Swing	Pipeline	Dkt	1,350,620
58	Niagara Supply	Pipeline	Dkt	422,148
59	Dawn Supply	Pipeline	Dkt	532,561
60	TGP Storage - Withdrawals	Pipeline	Dkt	2,120,856
61	TGP Supply (Direct)	Pipeline	Dkt	1,749,255

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

Schedule 3
Page 1 of 3

			Prior Period Bal 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	Peak Period
	Days in Month	Ending Bal Plus May Billings	31	30	31	31	30	30	31	30	31	31	29	31	30	31	Total
(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																	
12	Beginning Balance	Account 1920-1740	\$ (8,577,690)	\$ (8,577,690)	\$ (9,178,836)	\$ (8,648,459)	\$ (7,144,751)	\$ (6,572,606)	\$ (5,994,872)	\$ (5,414,425)	\$ (7,708,803)	\$ (7,045,820)	\$ (1,990,993)	\$ 4,410,178	\$ 6,104,080	\$ 4,238,905	\$ (8,577,690)
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	65,297,512
14	Production & Storage & Misc Overhead								614,243	614,243	614,243	614,243	614,243	614,243	614,243	3,685,458	3,685,458
15	Projected Revenues w/o Int.	In 52 * 59		(832,431)	(9,278)	(45,832)	-	-	(7,169,484)	(10,439,076)	(12,313,718)	(10,708,834)	(9,178,742)	(5,594,777)	-	(56,292,171)	(56,292,171)
16	Projected Unbilled Revenue			(217,507)	(106,882)	(86,712)	-	-	219,292	730,324	1,201,237	1,434,065	2,002,357	2,290,304	-	7,466,478	7,466,478
17	Reverse Prior Month Unbilled			423,146	217,507	106,882	-	-	-	(219,292)	(730,324)	(1,201,237)	(1,434,065)	(2,002,357)	(2,290,304)	(7,130,044)	(7,130,044)
18	Adjustment			(14,335)	(3,854)	(44,34)	-	-	-	-	-	-	-	-	-	(18,234)	(18,234)
19	Add Net Adjustments	Schedule 4		(446,111)	(234,724)	-	-	-	(376,170)	(793,677)	(1,065,752)	(601,923)	(880,732)	(583,327)	-	(4,982,416)	(4,982,416)
20	Gas Cost Billed	Account 1920-1740		544,700	724,038	1,579,638	-	-	-	-	-	-	-	-	-	2,848,376	2,848,376
21	Monthly (Over)/Under Recovery		\$ (8,577,690)	\$ (9,120,227)	\$ (8,592,029)	\$ (7,094,528)	\$ (6,523,270)	\$ (5,951,125)	\$ (5,373,391)	\$ (7,663,121)	\$ (6,992,753)	\$ (1,958,492)	\$ 4,402,036	\$ 6,066,265	\$ 4,202,901	\$ 1,948,600	\$ 2,297,269
22	Average Monthly Balance	(In 12 + 21)/2	\$	(8,848,959)	\$ (8,885,433)	\$ (7,871,493)	\$ (6,834,010)	\$ (6,261,865)	\$ (5,684,131)	\$ (6,538,773)	\$ (7,350,778)	\$ (4,502,156)	\$ 1,205,521	\$ 5,238,221	\$ 5,153,491	\$ 3,093,752	
23	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%		
26	Interest Applied	In 22 * In 24 / 365 * Days of Month	\$	(58,609)	\$ (56,430)	\$ (50,223)	\$ (49,336)	\$ (43,747)	\$ (41,035)	\$ (45,682)	\$ (53,067)	\$ (32,502)	\$ 8,141	\$ 37,816	\$ 36,004	\$ -	\$ (348,669)
28	(Over)/Under Balance	In 21 + In 26	\$	(8,577,690)	\$ (9,178,836)	\$ (8,648,459)	\$ (7,144,751)	\$ (6,572,606)	\$ (5,994,872)	\$ (5,414,425)	\$ (7,708,803)	\$ (7,045,820)	\$ (1,990,993)	\$ 4,410,178	\$ 6,104,080	\$ 4,238,905	\$ 1,948,600
Calculation of COG with Interest																	
33	Beginning Balance	In 12	\$ (8,577,690)	\$ (8,577,690)	\$ (9,180,352)	\$ (8,653,806)	\$ (7,155,066)	\$ (6,582,995)	\$ (6,005,334)	\$ (5,424,963)	\$ (7,719,214)	\$ (7,055,839)	\$ (2,000,654)	\$ 4,400,664	\$ 6,095,018	\$ 4,230,042	\$ (8,577,690)
34	Fcst Direct Gas Costs(Inc U/G Hedges)	In 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	In 14		-	-	-	-	-	-	614,243	614,243	614,243	614,243	614,243	614,243	-	3,685,458
36	Projected Revenues with int.	In 52 * In 61		(832,431)	(9,278)	(45,832)	-	-	-	(7,169,484)	(10,439,076)	(12,313,718)	(10,708,834)	(9,178,742)	(5,594,777)	-	(56,292,171)
37	Projected Unbilled Revenue			(217,507)	(106,882)	(86,712)	-	-	-	219,492	730,989	1,202,331	1,435,371	2,004,181	2,292,391	-	7,473,653
38	Reverse Prior Month Unbilled			423,146	217,507	106,882	-	-	-	-	(219,492)	(730,989)	(1,202,331)	(1,435,371)	(2,004,181)	(2,292,391)	(7,137,220)
39	Add Net Adjustments	In 19		(460,446)	(238,579)	(44)	-	-	-	(376,170)	(793,677)	(1,065,752)	(601,923)	(880,732)	(583,327)	-	(5,000,649)
40	Gas Cost Billed	In 20		544,700	724,038	1,579,638	-	-	-	-	-	-	-	-	-	-	2,848,376
41	Add Interest	In 26															
42	(Over)/Under Balance		\$ (8,577,690)	\$ (9,120,227)	\$ (8,593,545)	\$ (7,099,874)	\$ (6,533,585)	\$ (5,961,514)	\$ (5,383,853)	\$ (7,673,459)	\$ (7,002,699)	\$ (1,968,082)	\$ 4,392,588	\$ 6,057,269	\$ 4,194,101	\$ 1,937,652	\$ 2,297,269
44	Average Monthly Balance		\$	(8,848,959)	\$ (8,886,948)	\$ (7,876,840)	\$ (6,844,326)	\$ (6,272,255)	\$ (5,694,593)	\$ (6,549,211)	\$ (7,360,957)	\$ (4,511,960)	\$ 1,195,967	\$ 5,228,967	\$ 5,144,559	\$ 3,083,847	
46	Interest Applied	In 24 * In 44 / 365 * Days of Month		(60,124)	(60,261)	(55,192)	(49,410)	(43,820)	(41,110)	(45,755)	(53,140)	(32,573)	8,077	37,749	35,941	-	(359,618)
48	(Over)/Under Balance	-In 41 +In 42 + In 46	\$	(8,577,690)	\$ (9,180,352)	\$ (8,653,806)	\$ (7,155,066)	\$ (6,582,995)	\$ (6,005,334)	\$ (5,424,963)	\$ (7,719,214)	\$ (7,055,839)	\$ (2,000,654)	\$ 4,400,664	\$ 6,095,018	\$ 4,230,042	\$ 1,937,652
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, In 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	
59	COB w/o Interest	Sch. 3, pg. 4, In 202 col. (c)								\$0.5859	\$0.5859	\$0.5859	\$0.5859	\$0.5859	\$0.5859	\$0.5859	
61	COG With Interest	Sch. 3, pg. 4, In 202 col. (d)								\$0.5864	\$0.5864	\$0.5864	\$0.5864	\$0.5864	\$0.5864	\$0.5864	

		Prior Period 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
	Days in Month	Apr-23 Ending Bal + May Collections	31	30	31	31	30	31	30	31	31	29	31	30	31	Total
(a)	(b)		(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
Account 1163 1422 Working Capital (Over)/Under Balance Interest Calculation																
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)
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	0.0705	0.0705	
Prime Rate		8.00%	8.25%	8.25%	8.25%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	
Forecast Working Capital	In 34 * 0.091%	-	-	-	3,722	3,722	3,722	26,734	64,828	104,109	100,965	63,088	20,213	-	391,105	
Projected Revenues w/o Int.	In 113 * In 117	-	-	-	-	-	-	(31,028)	(45,178)	(53,292)	(46,346)	(39,724)	(24,213)	-	(239,781)	
Projected Unbilled Revenue								949	3,161	5,199	6,206	8,666	9,912	-	34,093	
Reverse Prior Month Unbilled									(949)	(3,161)	(5,199)	(6,206)	(8,666)	(9,912)	(34,093)	
Add Net Adjustments		2,112	2,808	6,125	-	-	-	-	-	-	-	-	-	-	-	11,045
Working Capital Billed	Account 1163-1422	(22,014)	(759)	(203)												(22,975)
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)
Average Monthly Balance	(In 69 + In 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)		
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%	8.50%	8.50%	
Interest Applied	In 85 * In 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)	
(Over)/Under Balance	In 83 + In 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)
Calculation of Working Capital with Interest																
Beginning Balance	In 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)
Forecast Working Capital	In 73	-	-	-	3,722	3,722	3,722	26,734	64,828	104,109	100,965	63,088	20,213	-	391,105	
Projected Rev. with interest	In 113 * In 119	-	-	-	-	-	-	(30,994)	(45,128)	(53,233)	(46,295)	(39,680)	(24,186)	-	(239,516)	
Projected Unbilled Revenue								948	3,157	5,193	6,200	8,656	9,901	-	34,055	
Reverse Prior Month Unbilled									(948)	(3,157)	(5,193)	(6,200)	(8,656)	(9,901)	(34,055)	
Add Net Adjustments	In 79	-	2,112	2,808	6,125	-	-	-	-	-	-	-	-	-	-	11,045
Working Capital Billed	In 81	(22,014)	(759)	(203)												(22,975)
Add Interest	In 89															-
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)
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)		
Interest Applied	In 87 * In 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)	
(Over)/Under Balance	-In 104 +In 105 + In 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)
Forecast Therm Sales	In 52								12,237,353	17,818,111	21,017,875	18,278,553	15,666,889	9,549,539	0	94,568,321
Unbilled Therm	In 55								(374,302)	(872,263)	(803,786)	(397,406)	(969,999)	(491,488)		
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)		
Working Cap. Rate w/out Int.	Sch. 3, pg. 4, In 219 col. (c)								\$0.0025	\$0.0025	\$0.0025	\$0.0025	\$0.0025	\$0.0025	\$0.0025	
Working Capital Rate w/ Int.	Sch. 3 pg. 4 In 219 col. (d)								\$0.0025	\$0.0025	\$0.0025	\$0.0025	\$0.0025	\$0.0025	\$0.0025	

121																	Schedule 3										
122																	Page 3 of 3										
123			Prior Period Bal																								
124		Days in Month	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										
125	(a)	(b)	Ending Bal	31	30	31	31	30	31	30	31	31	29	31	30	31	Total										
126			+ May Collections	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)										
127	Account 1920 1743 Bad Debt (Over)/Under Balance Interest Calculation																										
128																											
129	Forecast Direct Gas Costs	In 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	In 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	In 42		-	-	-	-	625,204	625,204	625,204	(1,429,615)	(1,429,615)	(1,429,615)	(1,429,615)	(1,429,615)	(1,429,615)	(8,577,690)										
132	Total Forecast Direct Gas Costs & Working Capital			-	-	-	-	625,204	625,204	625,204	2,898,172	9,458,741	16,056,135	15,528,066	9,166,499	1,965,333	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)	\$ (426,508)	\$ (359,307)	\$ (266,956)	\$ (181,709)	\$ (119,826)	\$ (90,293)	\$ (389,248)										
135																											
136	Forecast Bad Debt	In 132 * 0.00231908326307407		-	-	-	1,450	1,450	1,450	6,721	21,936	37,236	36,011	21,258	4,558		132,068										
137																											
138	Projected Revenues w/o int	In 175 * In 179		-	-	-	-	-	-	34,730	50,568	59,649	51,874	44,463	27,102	-	268,384										
139	Projected Unbilled Revenue									(1,062)	(3,538)	(5,819)	(6,947)	(9,700)	(11,094)	-	(38,160)										
140	Reverse Prior Month Unbilled										1,062	3,538	5,819	6,947	9,700	11,094	38,160										
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)	\$ (423,409)	\$ (356,481)	\$ (264,704)	\$ (180,199)	\$ (118,741)	\$ (89,561)	\$ (79,198)	\$ (48,947)										
147																											
148	Average Monthly Balance	(In 134 + In 146)/2	\$ (410,365)	\$ (437,606)	\$ (449,532)	\$ (457,580)	\$ (459,433)	\$ (461,193)	\$ (443,603)	\$ (391,495)	\$ (312,005)	\$ (223,578)	\$ (150,225)	\$ (104,694)	\$ (84,746)												
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%	8.50%												
151																											
152	Interest Applied	In 148 * In 150 / 365 * Days of Month	\$ (2,788)	\$ (2,967)	\$ (3,150)	\$ (3,303)	\$ (3,210)	\$ (3,329)	\$ (3,099)	\$ (2,826)	\$ (2,252)	\$ (1,510)	\$ (1,085)	\$ (731)		\$ (30,252)											
153																											
154	(Over)/Under Balance	In 146 + In 152	\$ (389,248)	\$ (434,271)	\$ (443,908)	\$ (458,305)	\$ (460,158)	\$ (461,918)	\$ (463,798)	\$ (426,508)	\$ (359,307)	\$ (266,956)	\$ (181,709)	\$ (119,826)	\$ (90,293)	\$ (79,198)	\$ (79,198)										
155																											
156																											
157	Calculation of Bad Debt with Interest																										
158																											
159	Beginning Balance	In 134	\$ (389,248)	\$ (389,248)	\$ (434,271)	\$ (443,908)	\$ (458,305)	\$ (460,158)	\$ (461,918)	\$ (463,798)	\$ (425,792)	\$ (357,562)	\$ (263,996)	\$ (177,672)	\$ (114,905)	\$ (84,827)	\$ (389,248)										
160	Forecast Bad Debt	In 136	-	-	-	-	1,450	1,450	1,450	6,721	21,936	37,236	36,011	21,258	4,558	-	132,068										
161	Projected Revenues with int.	In 175 * In 181								35,466	51,640	60,913	52,974	45,405	27,676	-	274,074										
162	Projected Unbilled Revenue									(1,085)	(3,613)	(5,942)	(7,094)	(9,905)	(11,330)	-	(38,969)										
163	Reverse Prior Month Unbilled									1,085	3,613	5,942	7,094	9,905	11,330	-	38,969										
164	Bad Debt Billed	In 142	(46,937)	(1,658)	(352)		-	-	-								(48,947)										
165	Add Interest	In 152															0										
166	Add Net Adjustments	In 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)	\$ (422,696)	\$ (354,745)	\$ (261,743)	\$ (176,162)	\$ (113,820)	\$ (84,095)	\$ (73,497)	\$ (43,257)										
168																											
169	Average Monthly Balance		\$ (410,365)	\$ (437,606)	\$ (449,532)	\$ (457,580)	\$ (459,433)	\$ (461,193)	\$ (443,247)	\$ (390,268)	\$ (309,653)	\$ (220,079)	\$ (145,746)	\$ (99,500)	\$ (79,162)												
170																											
171	Interest Applied	In 150 * In 169 / 365 * Days of Month	(2,788)	(2,967)	(3,150)	(3,303)	(3,210)	(3,329)	(3,097)	(2,817)	(2,252)	(1,510)	(1,085)	(731)	-	(30,240)											
172																											
173	(Over)/Under Balance	-In 165 + In 167 + In 171	\$ (389,248)	\$ (434,271)	\$ (443,908)	\$ (458,305)	\$ (460,158)	\$ (461,918)	\$ (463,798)	\$ (425,792)	\$ (357,562)	\$ (263,996)	\$ (177,672)	\$ (114,905)	\$ (84,827)	\$ (73,497)	\$ (73,497)										
174																											
175	Forecast Term Sales	In 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 Term	In 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, In 236 col. (c)								-\$0.0028	-\$0.0028	-\$0.0028	-\$0.0028	-\$0.0028	-\$0.0028	-\$0.0028											
180																											
181	COG With Interest	Sch. 3, pg. 4, In 236 col. (d)								-\$0.0029	-\$0.0029	-\$0.0029	-\$0.0029	-\$0.0029	-\$0.0029	-\$0.0029											
182																											
183																											
184	Total Interest	In 46 + 109 + 171	\$ -	\$ (64,083)	\$ (64,465)	\$ (59,601)	\$ (53,985)	\$ (48,243)	\$ (45,675)	\$ (50,054)	\$ (57,142)	\$ (35,748)	\$ 6,064	\$ 36,417	\$ 35,050	\$ -	\$ (401,465)										

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

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Schedule 4

3 Peak 2023 – 2024 Winter Cost of Gas Filing

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4 Adjustments to Gas Costs

5

		Fixed Price Option										
		Administrative Costs										
		Total 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	Option Administrative Costs	Total Adjustments
		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(m)
6	<u>Adjustments</u>											
7	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(m)
8												
9	May-23	\$ -	\$ -	(\$202,607)	\$ -	\$ (36,912)	\$ -	\$ -	\$ (206,592)	\$ -	\$ -	\$ (446,111)
10	Jun-23	-	-	(13,057)	-	(6,723)	-	-	(214,945)	-	-	(234,724)
11	Jul-23	-	-	1,033,336	-	537	-	-	(373,811)	-	-	660,062
12	Aug-23 1/	-	-	-	-	-	-	-	-	-	-	-
13	Sep-23 1/	-	-	-	-	-	-	-	-	-	-	-
14	Oct-23 1/	-	-	-	-	-	-	-	-	-	-	-
15	Nov-23 1/	-	-	(52,108)	-	(11,638)	-	-	(312,424)	-	-	(376,170)
16	Dec-23 1/	-	-	(406,806)	-	(13,901)	-	-	(372,970)	-	-	(793,677)
17	Jan-24 1/	-	-	(687,773)	-	(15,794)	-	-	(362,184)	-	-	(1,065,752)
18	Feb-24 1/	-	-	(237,534)	-	(13,947)	-	-	(350,442)	-	-	(601,923)
19	Mar-24 1/	-	-	(538,880)	-	(12,893)	-	-	(328,959)	-	-	(880,732)
20	Apr-24 1/	-	-	(235,050)	-	(9,656)	-	-	(338,621)	-	-	(583,327)
21												
22	Subtotal May 23 - Oct 23	\$ -	\$ -	\$ 817,672	\$ -	\$ (43,097)	\$ -	\$ -	\$ (795,348)	\$ -	\$ -	\$ (20,773)
23												
24	Subtotal Nov 23 - Apr 24	\$ -	\$ -	\$ (2,158,152)	\$ -	\$ (77,829)	\$ -	\$ -	\$ (2,065,600)	\$ -	\$ -	\$ (4,301,581)
25												
26	Total Peak Period	\$ -	\$ -	\$ (1,340,480)	\$ -	\$ (120,926)	\$ -	\$ -	\$ (2,860,948)	\$ -	\$ -	\$ (4,322,354)
27												

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

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2
3 Peak 2023 – 2024 Winter Cost of Gas Filing
4 Demand Costs

Schedule 5A
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	Peak (a)	Reference (b)	Deferred to Peak May 23 -Oct 23 (d)	Nov-23 (e)	Dec-23 (f)	Jan-24 (g)	Feb-24 (h)	Mar-24 (i)	Apr-24 (j)	Peak Nov-Apr Total (k)
10										
11 Supply										
12 Niagara Supply		Sch 5B, In 9 * Sch 5C In 9 x days	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
13 Subtotal Supply Demand & Reservation Charges			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
14										
15 Pipeline										
16 Iroquois Gas Trans Service RTS 470-0		Sch 5B, In 12 * Sch 5C In 12 x days	\$ -	\$ 19,585	\$ 19,585	\$ 19,585	\$ 19,585	\$ 19,585	\$ 19,585	
17 Tenn Gas Pipeline 95346 Z5-Z6		Sch 5B, In 13 * Sch 5C In 14 x days	-	24,362	24,362	24,362	24,362	24,362	24,362	
18 Tenn Gas Pipeline 2302 Z5-Z6		Sch 5B, In 14 * Sch 5C In 16 x days	-	19,015	19,015	19,015	19,015	19,015	19,015	
19 Tenn Gas Pipeline 8587 Z0-Z6		Sch 5B, In 15 * Sch 5C In 18 x days	-	138,564	138,564	138,564	138,564	138,564	138,564	
20 Tenn Gas Pipeline 8587 Z1-Z6		Sch 5B, In 16 * Sch 5C In 20 x days	-	254,628	254,628	254,628	254,628	254,628	254,628	
21 Tenn Gas Pipeline 8587 Z4-Z6		Sch 5B, In 17 * Sch 5C In 22 x days	-	26,411	26,411	26,411	26,411	26,411	26,411	
22 Tenn Gas Pipeline (Dracut) 42076 Z6-Z6	peak	Sch 5B, In 18 * Sch 5C In 24 x days	485,688	80,948	80,948	80,948	80,948	80,948	80,948	
23 Tenn Gas Pipeline (Dracut) 358905 Z6-Z7	peak	Sch 5B, In 19 * Sch 5C In 25 x days	971,376	161,896	161,896	161,896	161,896	161,896	161,896	
24 Tenn Gas Pipeline (Concord Lateral) Z6-Z6	peak	Sch 5B, In 20 * Sch 5C In 28 x days	2,198,826	366,471	366,471	366,471	366,471	366,471	366,471	
25 Portland Natural Gas Trans Service		Sch 5B, In 21 * Sch 5C In 30 x days	-	18,263	18,263	18,263	18,263	18,263	18,263	
26 Portland Natural Gas		Sch 5B, In 22 * Sch 5C In 31 x days	-	113,971	113,971	113,971	113,971	113,971	113,971	
27 ANE (TransCanada via Union to Iroquois)		Sch 5B, In 23 * Sch 5C In 32 x days	-	51,622	51,622	51,622	51,622	51,622	51,622	
28 TransCanada via Union to Portland		Sch 5B, In 24 * Sch 5C In 33 x days	-	98,086	98,086	98,086	98,086	98,086	98,086	
29 Tenn Gas Pipeline Z4-Z6 stg 632	peak	Sch 5B, In 25 * Sch 5C In 34 x days	634,728	105,788	105,788	105,788	105,788	105,788	105,788	
30 Tenn Gas Pipeline Z4-Z6 stg 11234	peak	Sch 5B, In 26 * Sch 5C In 36 x days	294,474	49,079	49,079	49,079	49,079	49,079	49,079	
31 Tenn Gas Pipeline Z5-Z6 stg 11234	peak	Sch 5B, In 27 * Sch 5C In 38 x days	71,515	11,919	11,919	11,919	11,919	11,919	11,919	
32 National Fuel FST 2358	peak	Sch 5B, In 28 * Sch 5C In 40 x days	183,580	30,597	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, In 31 * Sch 5C In 28 x days	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
38 Demand FLS	peak	Per Contract	-	-	-	-	-	-	-	
39 Peaking Demand	peak	Per Contract	-	310,000	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		In 13 + In 34 + In 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, In 36 * Sch 5C In 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, In 37 * Sch 5C In 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, In 38 * Sch 5C In 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, In 40 * Sch 5C In 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, In 41 * Sch 5C In 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, In 42 * Sch 5C In 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, In 43 * Sch 5C In 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		In 57 + In 59	\$ 473,862	\$ 87,973	\$ 87,973	\$ 87,973	\$ 87,973	\$ 87,973	\$ 87,973	\$ 1,001,699
62										
63 Total Demand Charges		In 42 + In 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		In 44 + In 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.		In 63 + In 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**

	(a)	Peak (b)	Reference (c)	Nov-23 (d)	Dec-23 (e)	Jan-24 (f)	Feb-24 (g)	Mar-24 (h)	Apr-24 (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

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

2

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

4 **Demand Rates**

5

6 **Tariff Rates**

7

8 **Supply**

9 Niagara Supply \$ - Per Contract \$0.0000 \$0.0000 \$0.0000 \$0.0000

10

11 **Pipeline**

12 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

13

14 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

15

16 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

17

18 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

19

20 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

21

22 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

23

24 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

25

26 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

27

28 TGP Concord Lateral Firm Transportation \$ 12.2157 Per contract \$ 0.4072 \$ 0.3941 \$ 0.3941 \$ 0.4212 \$ 0.3941 \$ 0.4072 \$ 0.4030

29

30 Portland Natural Gas FT-208544 \$ 18.2633 Negot Dmd /CMDY=Part 4.1 Vt \$ 0.6088 \$ 0.5891 \$ 0.5891 \$ 0.6298 \$ 0.5891 \$ 0.6088 \$ 0.6025

31

32 Portland Natural Gas FT 233320 \$ 22.7943 Negot Dmd /CMDY=Part 4.1 Vt \$ 0.7598 \$ 0.7353 \$ 0.7353 \$ 0.7860 \$ 0.7353 \$ 0.7598 \$ 0.7519

33

34 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

35

36 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

37

38 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

39

40 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

41

42

REDACTED

Schedule 5C

Page 1 of 2

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

Schedule 5C
Page 2 of 2

3 Peak 2023 – 2024 Winter Cost of Gas Filing

43	ANE	Union Gas	\$	3.7600																
44		TransCanada Pipelines Limited	\$	11.9355	Dawn - Parkway to Iroquois															
45		Delivery Pressure Demand Charge	\$	0.6083	Dawn - Parkway to Iroquois															
46		Sub Total Demand Charges	\$	16.3038																
47		Conversion rate GJ to MMBTU	\$	1.0551																
48		Conversion rate to US\$	\$	1.3486	1/0/1900															
49		Demand Rate/US\$	\$	12.7551		\$	0.4252	\$	0.4115	\$	0.4115	\$	0.4398	\$	0.4115	\$	0.4252	\$	0.4208	
50																				
51		Union Gas	\$	3.7600																
52		TransCanada Pipelines Limited	\$	20.3244	Dawn -Parkway to Portland															
53		Delivery Pressure Demand Charge	\$	0.6083	Dawn -Parkway to Portland															
54		Sub Total Demand Charges	\$	24.6928																
55		Conversion rate GJ to MMBTU	\$	1.0551																
56		Conversion rate to US\$	\$	1.3486	1/0/1900															
57		Demand Rate/US\$	\$	19.3180		\$	0.6439	\$	0.6232	\$	0.6232	\$	0.6661	\$	0.6232	\$	0.6439	\$	0.6372	
58																				
59	Peaking																			
60		Demand FLS			Per Contract															
61		Subtotal Peaking Demand Charges			Per Contract	\$	2.5833	\$	2.5000	\$	2.5000	\$	2.6724							
62																				
63	Storage																			
64		Dominion - Demand	GSS 300076	\$	2.6784	GSS Settled,Tariff Rec #10.30 \	\$	0.0893	\$	0.0864	\$	0.0864	\$	0.0924	\$	0.0864	\$	0.0893	\$	0.0882
65		Dominion - Capacity	GSS 300076	\$	0.0258	GSS Settled,Tariff Rec #10.30 \	\$	0.0009	\$	0.0008	\$	0.0008	\$	0.0009	\$	0.0008	\$	0.0009	\$	0.0008
66				\$	2.7042		\$	0.0901	\$	0.0872	\$	0.0872	\$	0.0932	\$	0.0872	\$	0.0901	\$	0.0890
67																				
68		Honeoye - Demand	SS-NY	\$	6.9317	Sub 1st Rev Sheet No. 5	\$	0.2311	\$	0.2236	\$	0.2236	\$	0.2390	\$	0.2236	\$	0.2311	\$	0.2282
69																				
70		National Fuel - Demand	FSS-O02357	\$	2.6469	4.020 Version 30.0.0 Pg 1	\$	0.0882	\$	0.0854	\$	0.0854	\$	0.0913	\$	0.0854	\$	0.0882	\$	0.0871
71		National Fuel - Capacity	FSS-O02357	\$	0.0478	4.020 Version 30.0.0 Pg 1	\$	0.0016	\$	0.0015	\$	0.0015	\$	0.0016	\$	0.0015	\$	0.0016	\$	0.0016
72				\$	2.6947		\$	0.0898	\$	0.0869	\$	0.0869	\$	0.0929	\$	0.0869	\$	0.0898	\$	0.0887
73																				
74		Tenn Gas Pipeline	FS-MA 523	\$	1.2655	Rate Sheet #61-24th Rev	\$	0.0422	\$	0.0408	\$	0.0408	\$	0.0436	\$	0.0408	\$	0.0422	\$	0.0417
75		Tenn Gas Pipeline - Space	FS-MA 523	\$	0.0173	Rate Sheet #61-24th Rev	\$	0.0006	\$	0.0006	\$	0.0006	\$	0.0006	\$	0.0006	\$	0.0006	\$	0.0006
76					\$1.2828		\$	0.0428	\$	0.0414	\$	0.0414	\$	0.0442	\$	0.0414	\$	0.0428	\$	0.0422

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) <u>Rate/GJ</u>	<u>Fuel and Commodity Charges</u>		
		<u>Union Supplied Fuel</u> Fuel and Commodity Charge <u>Rate/GJ</u>	<u>Shipper Supplied Fuel</u>	
			<u>Fuel Ratio %</u>	<u>AND</u> <u>Commodity Charge Rate/GJ</u>
<u>Firm Transportation (1), (5)</u>				
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			
<u>M12-X Firm Transportation</u>				
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".	
<u>Limited Firm/Interruptible Transportation (1)</u>				
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%	
<u>Carbon Charge (applied to all quantities transported)</u>				
Facility Carbon Charge		\$0.004		\$0.004

Effective
2023-07-01
Rate M12
Page 2 of 4

(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
<u>Transportation Overrun</u>			
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
<u>M12-X Firm Transportation</u>			
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
<u>Carbon Charge (applied to all quantities transported)</u>			
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	Emera 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 LTFF 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 LTFF) Service

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

Note: The toll for NBJ LTFF is inclusive of the applicable Abandonment Surcharge for FT service from Empress to North Bay Junction. The NBJ LTFF 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.

TransCanada Pipelines Limited
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Line No.	Receipt Point	Delivery Point	FT Toll (\$/GJ/Month)	Daily Equivalent FT for (T / 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	Enbridge 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	-	0.0280	-	-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	Incoits	-	0.5008	-	0.0235	-	-0.0242
12	Union NDA	Kirkwall	-	0.4785	-	0.0221	-	-0.0242
13	Union NDA	Naperville	-	0.6225	-	0.0311	-	-0.0242
14	Union NDA	Niagara Falls	-	0.5401	-	0.0255	-	-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	Enbridge NDA	13.73008	0.4514	0.61442	0.0202	-0.71783	-0.0236
32	Union Parkway Belt	Union SMDA	16.31854	0.5365	1.06154	0.0349	-1.71248	-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	4.16105	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	0.41083	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	Enbridge 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	Incoits	11.37888	0.3741	0.55663	0.0183	0.00000	0.0000
51	Union Parkway Belt	Kirkwall	5.67736	0.1209	0.07908	0.0026	0.00000	0.0000
52	Union Parkway Belt	Naperville	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-ABase
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%.

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

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

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

Fifth Revised Sheet No. 4
Superseding
Fourth Revised Sheet No. 4

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

	Minimum	RP19-445 Rates	RP22-1065 Rates		
		Maximum 1/ 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)

Issued On: September 9, 2022

Effective On: October 1, 2022

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

National Fuel Gas Supply Corporation
FERC Gas Tariff
Fifth Revised Volume No. 1

Part 4 - Applicable Rates
§ 4.010 - Transportation Rates
Version 37.0.0
Page 1 of 1

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.

Effective On: April 1, 2023

National Fuel Gas Supply Corporation
FERC Gas Tariff
Fifth Revised Volume No. 1

Part 4 - Applicable Rates
§ 4.020 - Part 284 Storage Rates
Version 30.0.0
Page 1 of 1

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.

Effective On: April 1, 2023

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	Rate Component	Base Tariff Rate [1]	Current Acct 858 Base (4)	Current EPCA Base (5)	TCRA [5] Surcharge (6)	EPCA [6] Surcharge (7)	Current Rate [7] (8)	FERC ACA (9)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(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

Page 1 of 2

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 01/17/1999	Deal Time (hh:mm) 08:00	Master Agreement -- None --	Units Dth	
Contact Name Sarah Grant	Contact Number 1 803-2183569	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						
	<table><tr><td>From</td><td>To</td><td>Rate</td></tr><tr><td>05/01/10</td><td>01/01/50</td><td>9,443.28000</td></tr></table>	From	To	Rate	05/01/10	01/01/50	9,443.28000
From	To	Rate					
05/01/10	01/01/50	9,443.28000					

FERC Information

Capacity Release Contract: ☐ Yes ☒ No	Award:
Shipper Affiliation: NONE	Negotiated Rate Indicator: ☒ Yes ☐ No
Maximum Tariff Rate: 0 OR ☐ Market Based Rates	Rate Schedule: 157

Contract Quantity Limits

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

Portland Natural Gas Transmission System
FERC Gas Tariff
Third Revised Volume No. 1

PART 4.1
Part 4.1 - Stmt of Rates
Recourse Reservation and Usage Rates
v.8.0.0 Superseding v.7.0.0

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.

Issued: September 17, 2021
Effective: November 1, 2021

Docket No. RP21-1126-000
Accepted: October 12, 2021

Peak
Nov- Apr
(i)

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

Schedule 6

Page 2 of 5

5								Peak
6	For Month of:	Reference	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Nov- Apr
7	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(i)
62								
63	<u>Volumes (Therms)</u>							
64								
65	Pipeline Gas:	See Schedule 11A						
66	Dawn Supply		878,284	929,589	928,933	865,053	916,923	5,325,605
67	Niagara Supply		692,721	732,770	732,254	681,352	722,786	4,221,481
68	TGP Supply (Direct)		4,635,387	3,115,032	3,112,834	2,898,568	3,072,588	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	13,506,197
71	Dracut Supply 3 - Swing		433,227	381,887	154,291	972,751	1,611,335	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	-	295,604
75	PNGTS		219,571	232,397	232,233	216,075	229,231	1,345,972
76	Portland Natural Gas		1,072,719	1,134,734	1,133,934	1,056,283	1,119,273	6,442,568
77	TGP Supply (Z4)		1,819,408	1,931,092	1,929,730	1,797,112	1,904,780	13,893,595
78							4,511,472	
79	Subtotal Pipeline Volumes		12,926,593	11,379,896	14,235,825	13,505,820	13,914,381	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	21,208,557
83								
84	Produced Gas:							
85	LNG Vapor		21,440	1,149,117	1,894,933	1,766,244	21,654	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	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)	-	(295,604)
93	TGP Storage Refill		(1,735,867)	-	-	-	-	(2,784,665)
94								
95	Subtotal Refills		(1,735,867)	(1,105,212)	(2,081,022)	(1,856,589)	(17,174)	(7,928,478)
96								
97	Total Sendout Volumes		12,360,292	17,656,136	21,061,366	18,630,638	15,312,912	94,459,064
98								
99								
100								

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

2

3 Peak 2023 – 2024 Winter Cost of Gas Filing

4 Supply and Commodity Costs, Volumes and Rates

5

6 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

105 NYMEX Price

Sch 7, In 10/10

106 Basis Differential

107 Net Commodity Costs

108

109 Niagara Supply

110 NYMEX Price

Sch 7, In 10/10

111 Basis Differential

112 Net Commodity Costs

113

114 Dracut Supply 1 - Baseload

115 Commodity Costs - NYMEX Price

Sch 7, In 10 / 10

116 Basis Differential

117 Net Commodity Costs

118

119 Dracut Supply 2 - Swing

120 Commodity Costs - NYMEX Price

Sch 7, In 10 / 10

121 Basis Differential

122 Net Commodity Costs

123

124 Dracut Supply 3 - Swing

125 Commodity Costs - NYMEX Price

Sch 7, In 10 / 10

126 Basis Differential

127 Net Commodity Costs

128

129 TGP Supply (Direct)

130 NYMEX Price

Sch 7, In 10/10

131 Basis Differential

132 Net Commodity Costs

133

134

135 Constellation COMBO

136 NYMEX Price

Sch 7, In 10/10

137 Basis Differential

138 Net Commodity Costs

139

140 LNG Truck

141

142 Propane Truck

Propane WACOG

143

144 PNGTS

145 NYMEX Price

Sch 7, In 10/10

146 Basis Differential

147 Net Commodity Cost

148

149 PNGTS EXP

150 NYMEX Price

Sch 7, In 10/10

151 Basis Differential

152 Net Commodity Cost

153

154 TGP Supply (Z4)

155 NYMEX Price

Sch 7, In 10/10

156 Basis Differential

157 Net Commodity Cost

158

159 LNG Vapor (Storage)

#REF!

160

161 Propane

#REF!

162

163 Storage Refill:

164 LNG Truck

In 140

165 Propane

In 142

166

167

REDACTED

Schedule 6

Page 3 of 5

Average Rate

\$0.3469

(\$0.0213)

(\$0.0205)

\$0.3264

\$0.3469

(\$0.0210)

(\$0.0235)

\$0.3234

\$0.3469

(\$0.0144)

\$0.4809

\$0.8279

\$0.3469

\$0.0840

\$1.2476

\$1.5945

\$0.3469

\$0.0840

\$1.2476

\$1.5945

\$0.3469

(\$0.0070)

(\$0.0068)

\$0.3402

\$0.3469

\$0.0516

\$0.0520

\$0.3990

\$1.3378

\$1.3600

\$0.3469

\$0.4320

\$0.6964

\$1.0433

\$0.3469

(\$0.0100)

(\$0.2354)

\$0.1115

\$0.3469

(\$0.0305)

(\$0.0560)

(\$0.0581)

\$0.2888

\$1.2376

\$1.5891

\$1.2376

\$1.5891

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

2

3 Peak 2023 – 2024 Winter Cost of Gas Filing

4 Supply and Commodity Costs, Volumes and Rates

5

6 For Month of:

Reference

Nov-23

Dec-23

Jan-24

Feb-24

Mar-24

Apr-24

Peak

Nov- Apr

(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

In 171 + In 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

In 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\$

In 188 x In 189 x In 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

In 186 x In 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

In 186 x In 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

In 186 x In 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

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

In 208 x In 213

215 Total Volumetric Transportation Rate - Niagara Supply

216

217

REDACTED

Schedule 6

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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								
223	Ln 130								
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	In 222 x In 236	\$0.00422	\$0.00486	\$0.00520	\$0.00510	\$0.00467	\$0.00425	\$0.00472
241	TGP - Fuel Charge % - Z 1-6	In 222 x In 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								
246	Ln 130								
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	In 245 x In 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								
257	Ln 117								
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	In 256 x In 261							
263	Total Volumetric Transportation Rate - TGP Dracut								

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

2

Schedule 7

3 Peak 2023 – 2024 Winter Cost of Gas Filing

Page 1 of 1

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		Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	Winter Nov-Apr
5		84	118	137	131	104	66	640
6	average Usage (Therms)							
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)	\$ 0.6175	\$ 0.6175	\$ 0.6175	\$ 0.6175	\$ 0.6175	\$ 0.6175	\$ 0.6175
23	COG amount	\$ 52.08	\$ 73.13	\$ 84.48	\$ 80.65	\$ 64.11	\$ 40.74	\$ 395.19
24								
25	LDAC	\$ 0.1180	\$ 0.1180	\$ 0.1212	\$ 0.2006	\$ 0.2006	\$ 0.2006	\$ 0.1575
26	LDAC amount	\$ 9.95	\$ 13.98	\$ 16.58	\$ 26.20	\$ 20.83	\$ 13.23	\$ 100.77
27								
28	Total Bill	\$ 129.44	\$ 175.54	\$ 200.83	\$ 202.78	\$ 164.35	\$ 110.04	\$ 982.97

29 November 1, 2022 - April 30, 2023

31 Residential Heating (R3)

		Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Winter Nov-Apr
32	CURRENT	84	118	137	131	104	66	640
33	average Usage (Therms)							
34	9/1/2022 - 7/31/2023 9/1/2023 - Current							
35	Winter							
36	Cust. Chg \$ 15.39 \$ 15.39	\$ 15.39	\$ 15.39	\$ 15.39	\$ 15.39	\$ 15.39	\$ 15.39	\$ 92.34
37	Headblock \$ 0.6519 \$ 0.6167							
38	Tailblock \$ 0.6519 \$ 0.6167	\$ 54.98	\$ 77.21	\$ 89.19	\$ 85.14	\$ 67.68	\$ 43.00	\$ 417.20
39	HB Threshold -							
40								
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	(\$70.70)	(\$78.57)	(\$100.83)	\$28.61	\$44.36	\$35.56	(\$141.57)
60	% Change	-35.33%	-30.92%	-33.43%	16.43%	36.97%	47.74%	-12.59%
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	\$ (67.74)	\$ (74.40)	\$ (96.02)	\$ 33.21	\$ 48.02	\$ 37.88	\$ (119.04)
66	% Change	-52.20%	-46.07%	-48.72%	45.10%	130.06%	235.42%	-19.36%

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

1 FPO Rate

2 November 1, 2023 - April 30, 2024

3 Residential Heating (R3-FPO)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
4 PROPOSED		Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	Winter Nov-Apr
5		84	118	137	131	104	66	640
6 average Usage (Therms)								
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)		\$ 0.6375	\$ 0.6375	\$ 0.6375	\$ 0.6375	\$ 0.6375	\$ 0.6375	\$ 0.6375
23 COG amount		\$ 53.77	\$ 75.50	\$ 87.22	\$ 83.26	\$ 66.19	\$ 42.05	\$ 407.99
24								
25 LDAC		\$ 0.1180	\$ 0.1180	\$ 0.1212	\$ 0.2006	\$ 0.2006	\$ 0.2006	\$ 0.1575
26 LDAC amount		\$ 9.95	\$ 13.98	\$ 16.58	\$ 26.20	\$ 20.83	\$ 13.23	\$ 100.77
27								
28 Total Bill		\$ 131.12	\$ 177.90	\$ 203.57	\$ 205.39	\$ 166.43	\$ 111.36	\$ 995.77

30 November 1, 2022 - April 30, 2023

31 Residential Heating (R3-FPO)

32 CURRENT		Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Winter Nov-Apr
33		84	118	137	131	104	66	640
34 average Usage (Therms)								
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

58 DIFFERENCE

59 Total Bill		(\$70.70)	(\$99.28)	(\$114.62)	(\$99.05)	(\$78.74)	(\$50.03)	(\$512.43)
60 % Change		-35.03%	-35.82%	-36.02%	-32.53%	-32.12%	-31.00%	-33.98%
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		\$ (67.74)	\$ (95.11)	\$ (109.81)	\$ (94.45)	\$ (75.08)	\$ (47.71)	\$ (489.90)
66 % Change		-51.53%	-51.53%	-51.41%	-46.32%	-46.32%	-46.32%	-49.06%

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

1 GAP Rate

2 November 1, 2023 - April 30, 2024

3 Residential Heating (R4-GAP)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
4 PROPOSED		Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	Winter Nov-Apr
5		84	118	137	131	104	66	640
6	average Usage (Therms)							
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)	\$ 0.3396	\$ 0.3396	\$ 0.3396	\$ 0.3396	\$ 0.3396	\$ 0.3396	\$ 0.3396
23	COG amount	\$ 28.64	\$ 40.22	\$ 46.47	\$ 44.36	\$ 35.26	\$ 22.40	\$ 217.35
24								
25	LDAC	\$ 0.1180	\$ 0.1180	\$ 0.1212	\$ 0.2006	\$ 0.2006	\$ 0.2006	\$ 0.1575
26	LDAC amount	\$ 9.95	\$ 13.98	\$ 16.58	\$ 26.20	\$ 20.83	\$ 13.23	\$ 100.77
27								
28	Total Bill	\$ 75.68	\$ 102.84	\$ 117.93	\$ 123.32	\$ 99.77	\$ 66.48	\$ 586.02

29 November 1, 2022 - April 30, 2023

31 Residential Heating (R4-GAP)

		Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Winter Nov-Apr
32	CURRENT	84	118	137	131	104	66	640
33	average Usage (Therms)							
34								
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	(\$70.19)	(\$84.37)	(\$101.90)	(\$24.24)	(\$8.80)	(\$4.06)	(\$293.58)
60	% Change	-48.12%	-45.07%	-46.36%	-16.43%	-8.11%	-5.76%	-33.38%
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	\$ (36.90)	\$ (40.42)	\$ (52.20)	\$ 23.51	\$ 30.58	\$ 23.48	\$ (51.94)
66	% Change	-48.87%	-42.72%	-45.29%	49.99%	119.90%	193.23%	-14.03%

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		Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	Winter Nov-Apr
5		261	390	482	458	334	185	2,111
6 average Usage (Therms)								
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)		\$ 0.6173	\$ 0.6173	\$ 0.6173	\$ 0.6173	\$ 0.6173	\$ 0.6173	\$ 0.6173
23 COG amount		\$ 161.02	\$ 240.94	\$ 297.48	\$ 282.86	\$ 206.43	\$ 114.20	\$ 1,302.93
24								
25 LDAC		\$ 0.0957	\$ 0.0957	\$ 0.0979	\$ 0.0909	\$ 0.0909	\$ 0.0909	\$ 0.0940
26 LDAC amount		\$ 24.96	\$ 37.35	\$ 47.18	\$ 41.65	\$ 30.40	\$ 16.82	\$ 198.36
27								
28 Total Bill		\$350.60	\$486.80	\$584.22	\$556.04	\$426.38	\$269.92	\$2,673.95

29 November 1, 2022 - April 30, 2023

31 Commercial Rate (G-41)

		Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Winter Nov-Apr
32 CURRENT		261	390	482	458	334	185	2,111
33								
34 average Usage (Therms)								
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 DIFFERENCE

58								
59 Total Bill		\$ (165.58)	\$ (254.40)	\$ (349.03)	\$ 66.52	\$ 117.50	\$ 84.55	\$ (500.45)
60 % Change		-32.08%	-34.32%	-37.40%	13.59%	38.04%	45.61%	-15.77%
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		\$ (209.80)	\$ (245.67)	\$ (338.83)	\$ 76.34	\$ 125.34	\$ 90.00	\$ (502.62)
66 % Change		-53.01%	-46.89%	-49.57%	30.76%	112.42%	219.44%	-25.08%

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

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
4 PROPOSED		Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	Winter 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)		\$ 0.6173	\$ 0.6173	\$ 0.6173	\$ 0.6173	\$ 0.6173	\$ 0.6173	\$ 0.6173
23 COG amount		\$ 1,569.80	\$ 2,172.06	\$ 2,576.92	\$ 2,468.04	\$ 1,917.23	\$ 1,171.40	\$ 11,875.46
24								
25 LDAC		\$ 0.0957	\$ 0.0957	\$ 0.0979	\$ 0.0909	\$ 0.0909	\$ 0.0909	\$ 0.0939
26 LDAC amount		\$ 243.37	\$ 336.74	\$ 408.68	\$ 363.43	\$ 282.32	\$ 172.49	\$ 1,807.03
27								
28 Total Bill		\$ 2,916.71	\$ 3,911.18	\$ 4,588.87	\$ 4,380.72	\$ 3,475.49	\$ 2,249.76	\$ 21,522.74

30 November 1, 2022 - April 30, 2023

31 C&I High Winter Use Medium G-42

		Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Winter Nov-Apr
32 CURRENT		Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Winter 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

58 DIFFERENCE

59 Total Bill	\$ (2,090.65)	\$ (2,274.49)	\$ (3,004.71)	\$ 599.10	\$ 1,110.37	\$ 887.50	\$ (4,772.89)
60 % Change	-41.75%	-36.77%	-39.57%	15.84%	46.95%	65.15%	-18.15%
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	\$ (2,045.34)	\$ (2,214.64)	\$ (2,935.09)	\$ 666.09	\$ 1,164.07	\$ 923.19	\$ (4,441.72)
66 % Change	-53.01%	-46.89%	-49.57%	30.76%	112.42%	219.44%	-24.51%

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-52)			(1)	(2)	(3)	(4)	(5)	(6)	(7)
4 PROPOSED									
5			Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	Winter
6 average Usage (Therms)			1,907	2,294	2,692	2,308	2,175	1,933	Nov-Apr
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)			\$0.6185	\$0.6185	\$0.6185	\$0.6185	\$0.6185	\$0.6185	\$ 0.6185
23 COG amount			\$ 1,179.66	\$ 1,418.55	\$ 1,664.92	\$ 1,427.47	\$ 1,345.53	\$ 1,195.57	\$ 8,231.71
24									
25 LDAC			\$ 0.0957	\$ 0.0957	\$ 0.0979	\$ 0.0909	\$ 0.0909	\$ 0.0909	\$ 0.0938
26 LDAC amount			\$ 182.53	\$ 219.49	\$ 263.53	\$ 209.79	\$ 197.75	\$ 175.71	\$ 1,248.81
27									
28 Total Bill			\$1,959.14	\$2,302.54	\$2,662.63	\$2,304.29	\$2,187.13	\$1,972.72	\$13,388.45
29									
30 November 1, 2022 - April 30, 2023									
31 Commercial Rate (G-52)									
32 CURRENT									
33			Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Winter
34 average Usage (Therms)			1,907	2,294	2,692	2,308	2,175	1,933	Nov-Apr
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			\$ (1,554.70)	\$ (1,466.91)	\$ (1,918.81)	\$ 361.04	\$ 792.83	\$ 919.57	\$ (2,866.99)
60 % Change			-44.25%	-38.92%	-41.88%	18.58%	56.86%	87.32%	-17.64%
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			\$ (1,530.80)	\$ (1,439.65)	\$ (1,888.08)	\$ 388.43	\$ 819.07	\$ 943.70	\$ (2,707.34)
66 % Change			-52.91%	-46.78%	-49.47%	31.10%	113.10%	220.71%	-22.21%

1 **Residential Heating**

2		<u>Winter 2022-2023</u>	<u>Winter 2023-2024</u>
3	Customer Charge	\$ 15.39	\$ 15.39
4	First 100 Therms	\$ 0.6519	\$ 0.6167
5	Excess 100 Therms	\$ 0.6519	\$ 0.6167
6	LDAC	\$ 0.1104	\$ 0.1575
7	COG	\$ 0.8505	\$ 0.6175
8	Total Adjust	\$ 0.9610	\$ 0.7750

				Total		Base Rate		COG		LDAC	
				\$ Impact	% Impact	\$ Impact	% Impact	\$ Impact	% Impact	\$ Impact	% Impact
14		<u>Winter 2022-23 @</u>	<u>Winter 2023-24 @</u>								
15		\$0.9610	\$0.7750	(\$0.19)	-19%						
16	Cooking alone	5 \$23.28	\$22.35	(\$0.93)	-4.00%	\$0.00	0%	-\$1.17	-5%	\$0.24	1.01%
17											
18		10 \$31.17	\$29.31	(\$1.86)	-5.97%	\$0.00	0%	-\$2.33	-8%	\$0.47	1.51%
19											
20		20 \$46.94	\$43.22	(\$3.72)	-7.92%	\$0.00	0%	-\$4.66	-11%	\$0.94	2.00%
21											
22	Water Heating alone	30 \$62.72	\$57.14	(\$5.58)	-8.90%	\$0.00	0%	-\$6.99	-12%	\$1.41	2.25%
23											
24		45 \$86.38	\$78.01	(\$8.37)	-9.69%	\$0.00	0%	-\$10.49	-13%	\$2.12	2.45%
25											
26		50 \$94.27	\$84.97	(\$9.30)	-9.87%	\$0.00	0%	-\$11.65	-14%	\$2.35	2.49%
27											
28	Heating Alone	80 \$133.71	\$119.76	(\$13.95)	-10.43%	\$0.00	0%	-\$17.48	-15%	\$3.53	2.64%
29											
30		125 \$225.22	\$200.48	(\$24.74)	-10.98%	\$0.00	0%	-\$30.99	-15%	\$6.25	2.78%
31											
32		150 \$252.04	\$224.14	(\$27.90)	-11.07%	\$0.00	0%	-\$34.95	-16%	\$7.05	2.80%
33											
34		200 \$330.92	\$293.72	(\$37.20)	-11.24%	\$0.00	0%	-\$46.60	-16%	\$9.40	2.84%
35											

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

Schedule 9

Page 1 of 1

2
3 **Peak 2023 – 2024 Winter Cost of Gas Filing**

4 **Variance Analysis of the Components of the Winter 2022-2023 Actual Results vs Proposed Winter 2023-2024 Cost of Gas Rate**

	WINTER 2022-2023 ACTUAL RESULTS (6 months actual)			WINTER 2023-2024 (6 months Proposed)		
	THERM SENDOUT	COSTS	EFFECT ON COST OF GAS	THERM SENDOUT	COSTS	EFFECT ON COST OF GAS
11 Therm Sales (COG)	78,721,321			94,568,321		
16 Demand Charges		\$ 11,440,974	\$ 0.1453		\$ 12,479,766	\$ 0.1320
18 Purchased Gas		49,229,232	0.6254	67,583,235	46,903,637	0.4960
20 Storage/Produced Gas		-	-	26,875,829	12,130,277	0.1283
22 Hedging (Gain)/Loss		-	-		-	-
25 Total Volumes and Cost	81,062,417	\$ 60,670,206	\$ 0.7707	94,459,064	\$ 71,513,680	\$ 0.7562
27 Direct Costs						
28 Prior Period Balance		\$ (3,286,163)	\$ (0.0417)		\$ (8,577,690)	\$ (0.0907)
29 Interest		(424,323)	(0.0054)		(401,465)	(0.0042)
30 Prior Period Adjustment		4,196,806	0.0533		861,872	0.0091
31 Broker Revenues		(2,158,152)	(0.0274)		(1,340,480)	(0.0142)
32 Refunds from Suppliers		-	-		-	-
33 Fuel Financing		-	-		-	-
34 Transportation CGA Revenues		(120,566)	(0.0015)		(120,926)	(0.0013)
35 280 Day Margin		-	-		-	-
36 Interruptible Sales Margin		-	-		-	-
37 Capacity Release and Off System Sales Margins		(2,065,600)	(0.0262)		(2,860,948)	(0.0303)
38 Hedging Costs		-	-		-	-
39 FPO Admin Costs		-	-		-	-
40 Indirect Costs		-	-		-	-
41 Misc Overhead		-	-		-	-
42 Occupant Disallowance/Credits		-	-		-	-
43 Production & Storage		3,685,458	0.0468		3,685,458	0.0390
44 Bad Debt Adjustment %		-	-		(12,927)	(0.0001)
45 Cashout, Broker penalty, Canadian Managed,...		-	-		-	-
46 Total Adjusted Cost	\$	60,497,665	\$ 0.7685	\$	62,746,574	\$ 0.6635

Basic assumptions:

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

		Column A	Column B	Column C	Column D	Column E	Column F
		Design Day Demand, 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	<u>\$1,550,000</u>	<u>19,855</u>	<u>\$6.5054</u>			
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	<u>1,550,000</u>	<u>19,855</u>	<u>\$6.5054</u>			
42	Total	21,569,375	167,688	\$10.7190			
43							
44							
45	Residential Allocation						
46	Pipeline - Base	Line 38 * Line 13 Col C	692,181	5,204	\$11.0848		
47	Pipeline - Remaining	Line 39 * Line 13 Col C	6,374,839	47,925	\$11.0848		
48	Storage	Line 40 * Line 13 Col C	1,817,181	12,477	\$12.1370		
49	Peaking	Line 41 * Line 13 Col C	<u>687,829</u>	<u>8,811</u>	<u>\$6.5054</u>		
50	Total	44.378%	9,572,024	74,416	\$10.7190		

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

2023 – 2024 Winter Cost of Gas Filing

Correction Factor Calculation

	d	e	f	g	h	i	Total Sales
Data Source: Schedule 10B	Nov	Dec	Jan	Feb	Mar	Apr	
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%	

2

3 Peak 2023 – 2024 Winter Cost of Gas Filing

4

5

6

7 Firm Sales

Dry Therms

	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
9 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
10 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
11 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
12 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
13															
14 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
15 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
16 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
17 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
18 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
19 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
20 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
21 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
22															
23 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
24															
25 Transportation Sales															
26 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
27 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
28 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
29 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
30 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
31 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
32 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
33															
34 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
35															
36 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

7 Volumes (Therms)

Normal Year

8

9 For the Months of May 23 - October 23

10

11

12

13 Pipeline Gas:

14 Dawn Supply

15 Niagara Supply

16 TGP Supply (Gulf)

17 Dracut Supply 1 - Baseload

18 Dracut Supply 2 - Swing

19 Dracut Supply 3 - Swing

20 Constellation Combo

21 LNG Truck

22 Propane Truck

23 PNGTS

24 Portland Natural Gas

25 TGP Supply (Z4)

26 Subtotal Pipeline Volumes

27

28 Storage Gas:

29 TGP Storage

30

31 Produced Gas:

32 LNG Vapor

33 Propane

34 Subtotal Produced Gas

35

36 Less - Gas Refills:

37 LNG Truck

38 Propane

39 TGP Storage Refill

40 Subtotal Refills

41

42 Total Sendout Volumes

43

	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

44 Normal and Design Year Volumes

45

46

47 Volumes (Therms)

Design Year

48

49 For the Months of May 23 - October 23

50

51

52

53 Pipeline Gas:

54 Dawn Supply

55 Niagara Supply

56 TGP Supply (Gulf)

57 Dracut Supply 1 - Baseload

58 Dracut Supply 2 - Swing

59 Dracut Supply 3 - Swing

60 Constellation Combo

61 LNG Truck

62 Propane Truck

63 PNGTS

64 Portland Natural Gas

65 TGP Supply (Z4)

66 Subtotal Pipeline Volumes

67

68 Storage Gas:

69 TGP Storage

70

71 Produced Gas:

72 LNG Vapor

73 Propane

74 Subtotal Produced Gas

75

76 Less - Gas Refills:

77 LNG Truck

78 Propane

79 TGP Storage Refill

80 Subtotal Refills

81

82 Total Sendout Volumes

	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	Peak Nov - Apr
53 Pipeline Gas:							
54 Dawn Supply	1,072,719	1,134,734	1,133,934	1,056,283	1,119,273	921,251	6,438,195
55 Niagara Supply	692,721	732,770	732,254	681,352	722,786	659,598	4,221,481
56 TGP Supply (Gulf)	4,650,912	3,115,032	3,112,834	2,898,568	3,072,588	653,039	17,502,972
57 Dracut Supply 1 - Baseload			3,100,000	1,450,000			4,550,000
58 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
59 Dracut Supply 3 - Swing	1,314,469	3,170,282	1,689,149	2,434,833	2,399,829	52,476	11,061,039
60 Constellation Combo							0
61 LNG Truck	-	1,105,212	2,042,443	1,684,181	17,174	-	4,849,009
62 Propane Truck	-	-	211,809	-	-	56,121	267,929
63 PNGTS	219,571	232,397	232,233	216,075	229,231	216,465	1,345,972
64 Portland Natural Gas	878,284	929,589	928,933	865,053	916,923	805,366	5,324,148
65 TGP Supply (Z4)	1,818,669	1,931,092	1,929,730	1,797,112	1,904,780	4,510,743	13,892,126
66 Subtotal Pipeline Volumes	14,468,026	14,135,355	17,107,348	15,651,512	15,771,374	9,475,586	86,609,200
67							
68 Storage Gas:							
69 TGP Storage	1,101,551	5,751,643	6,439,746	5,416,181	1,450,799	1,000,000	21,159,920
70							0
71 Produced Gas:							0
72 LNG Vapor	21,440	1,172,584	2,047,738	1,590,824	21,654	21,136	4,875,376
73 Propane	-	-	792,770	-	-	-	792,770
74 Subtotal Produced Gas	21,440	1,172,584	2,840,508	1,590,824	21,654	21,136	5,668,146
75							
76 Less - Gas Refills:							
77 LNG Truck	-	(1,105,212)	(2,042,443)	(1,684,181)	(17,174)	-	-4,849,009
78 Propane	-	-	(211,809)	-	-	(56,121)	-267,929
79 TGP Storage Refill	(1,704,078)	-	-	-	-	(1,048,798)	-2,752,875
80 Subtotal Refills	(1,704,078)	(1,105,212)	(2,254,252)	(1,684,181)	(17,174)	(1,104,918)	(7,869,813)
81							
82 Total Sendout Volumes	13,886,939	19,954,370	24,133,351	20,974,336	17,226,653	9,391,804	105,567,453

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

	Peak Period Normal Year		Seasonal Quantity	Utilization	Peak Period Design Year		Seasonal Quantity	Utilization
	Use	MDQ	(Therms)	Rate	Use	MDQ	(Therms)	Rate
	(Therms)	(MMBtu/day)			(Therms)	(MMBtu/day)		
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			

3 Peak 2023 – 2024 Winter Cost of Gas Filing

4

5

Forecast of Upcoming Winter Period

6

Design Day Report

7

2023/2024 Heating Season

8

(Therms)

9

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

11

12

13

14

15

16

17

Requirements

18

19

Firm Sales 1,256,152

20

Interruptible Sales 0

21

Firm Transportation 420,730

22

Interruptible Transportation 0

23

24

Total Requirements 1,676,882

25

26

27

Resources

28

29

Purchased Pipeline Gas 1,197,180

30

Underground Storage Gas 281,150

31

Propane Air Production 72,552

32

LNG Produced Gas 126,000

33

34

Total Resources 1,676,882

35

36

37

Please refer to the ENNG 2022 IRP filing (DG 22-064)

38

for a complete description of the methodology and

39

assumptions used in the derivation of this data.

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Preparation of this report was supervised by:

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45

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47

48

Deborah Gilbertson

49

Sr. Manager, Energy Procurement

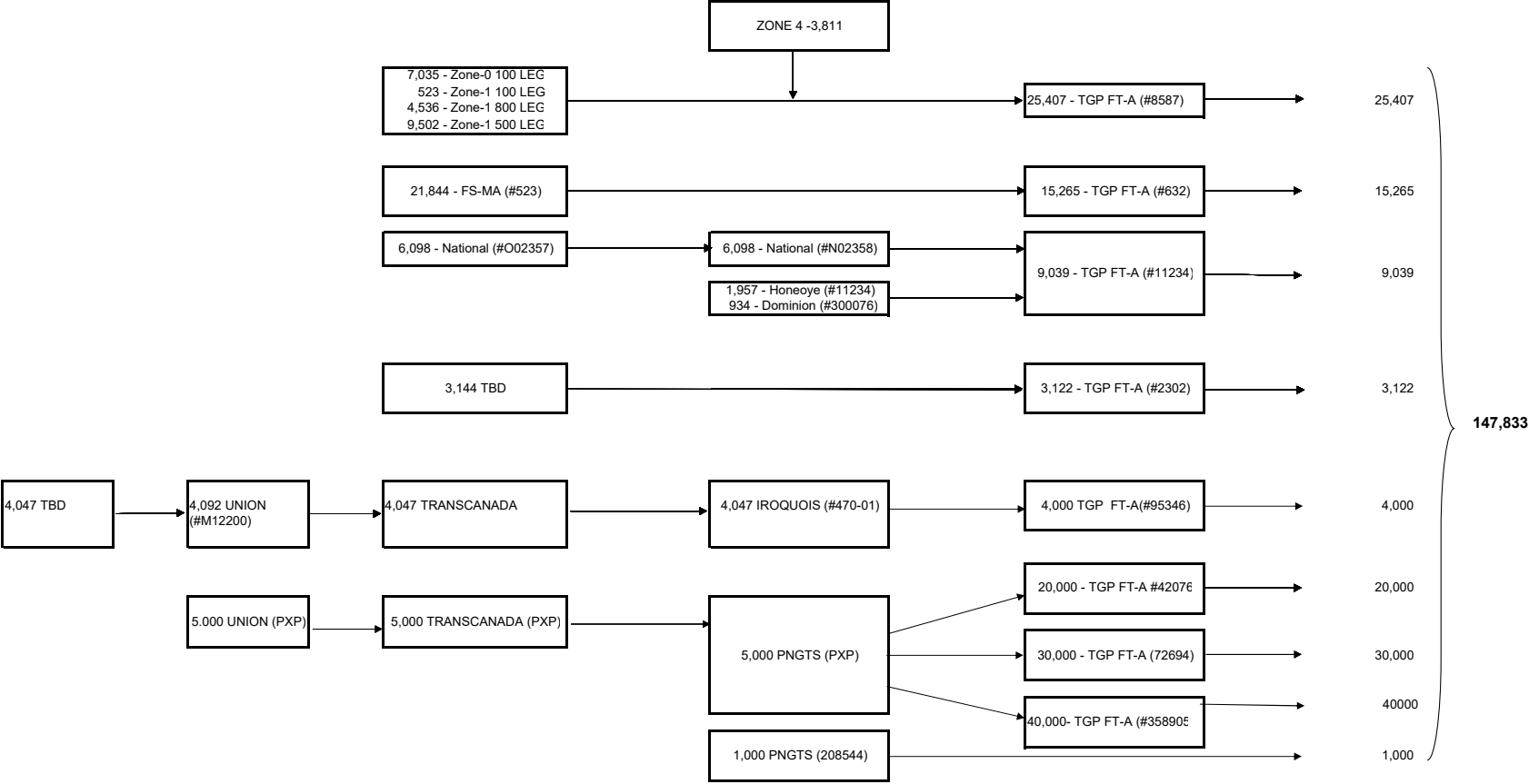
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Note: Forecasted Firm Transportation volumes are for customers
using utility capacity only.

52

53



Agreements for Gas Supply and Transportation

Schedule 12
Page 2 of 2

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	002358	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.

1 **Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**2 **Peak 2023 – 2024 Winter Cost of Gas Filing**4 **Load Migration From Sales to Transportation in the C&I High and Low Winter Use Classes**6 **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%	

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

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

3

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

5

6

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9

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

13

14 Total Winter Supplies 81,062,417

15 Total Pipeline Deliveries 96,275,660

16

17 Ratio Winter Supplies to Pipeline Supplies 0.842

3 **Peak 2023 – 2024 Winter Cost of Gas Filing**4 **July and August Consumption of C&I High and Low Winter Classes as a Percentage of Their Annual Consumption**

5

6

7

8 **C&I Sales**9 **Normalized (Therms)**10 **Jul-22**11 **Aug-22**12 **Jul - Aug 2022 Total**13 **Total Annual**14 **% of Jul-Aug to Total**

15 (a)

16 (b)

17 (c)

18 (e)=(c)+(d)

19 (f)

20 (g)=(e)/(f)

21 G-41

22 207,393

23 152,071

24 359,464

25 19,151,339

26 1.88%

27 G-42

28 234,970

29 179,709

30 414,679

31 15,945,700

32 2.60%

33 G-43

34 101,723

35 76,059

36 177,781

37 4,264,567

38 4.17%

39 G-51

40 178,735

41 179,423

42 358,159

43 3,013,523

44 11.89%

45 G-52

46 203,230

47 202,062

48 405,292

49 3,367,796

50 12.03%

51 G-53

52 68,896

53 66,493

54 135,389

55 1,150,486

56 11.77%

57 G-54

58 27,687

59 28,258

60 55,945

61 367,476

62 15.22%

63 Total C/I

64 1,022,634

65 884,075

66 1,906,709

67 47,260,890

68 4.03%

3
4 Storage Inventory, Underground, LPG and LNG including Calculation of Money Pool Interest Costs Associated with Natural Gas

5
6 Underground Storage Gas

		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
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
Injections (MMBtu)	Sch 11A In 39 /10	276,445	223,693	213,865	236,665	236,665	236,665		-	-	-	-	104,880	347,659	347,659	1,876,537
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	
Storage Sale/Adjustments		(7,098)	(3,940)	(2,118)	-	-	-	-	-	-	-	-	-	-	-	(13,156)
Withdrawals (MMBtu)	Sch 11A In 29 /10	-	-	-	-	-	-	(114,813)	(623,233)	(622,340)	(521,065)	(139,405)	(100,000)	(188,034)	-	(2,308,890)
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
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
Injections	In 11 * In 36	\$ 482,639	\$ 315,767	\$ 304,339	\$ 407,542	\$ 407,542	\$ 407,542	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 268,807	\$ 1,205,847	\$ 1,296,075	\$ 3,800,026
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	
Storage Sale/Adjustments		\$ (15,148)	\$ (4,457)	\$ 718			\$ -									\$ (18,886)
Withdrawals	In 17 * In 34	-	-	-	-	-	-	(259,137)	(1,406,663)	(1,404,646)	(1,176,064)	(314,643)	(299,583)	\$ (563,319)	\$ -	\$ (5,424,055)
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
Average Rate For Withdrawals	In 22 /In 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	
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	
For Informational Purposes								Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Aug-24	Total
Summer Hedge Contracts - Vols Dth								\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
Average Hedge Price								\$ 3.1060	\$ 3.5760	\$ 3.8240	\$ 3.7490	\$ 3.4370	\$ 3.1230	\$ 3.4692	#REF!	
NYMEX								\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Hedged Volumes at Hedged Price								\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Less Hedged Volumes at NYMEX								\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	#REF!	\$ -
Hedge (Savings)/Loss								\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	#REF!	\$ -
Month Dollar Average	In (22 + In 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		
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%	0.00%			
Inventory Finance Charge	In 47 * In 49	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Financial Expenses		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total Inventory Finance Charges		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	

Liquid Propane Gas (LPG)

		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
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
Injections	Sch 11A In 38 /10	-	-	-	6,454	6,454	6,454	-	-	20,727	452	-	8,382	-	7,179	48,922
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	
Withdrawals	Sch 11A In 33 /10	-	-	-	-	-	-	-	-	(78,823)	(452)	-	-	-	-	(79,275)
Adjustment for change in temperature		-	(812)	-	-	-	-	-	-	-	-	-	-	-	-	(812)
Adjustment for Transfer		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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
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
Injections	In 46 * In 69	-	-	-	85,193	85,193	85,193	-	-	281,887	6,143	-	113,990	-	-	657,599
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	
Withdrawals/ Adjust	In 52 * In 67	-	(13,732)	-	-	-	-	-	-	(1,246,369)	(7,134)	-	-	-	-	(1,267,234)
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
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	
Propane Rate for Injections	Actual or Sch. 6, In 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	
Month Dollar Average	In (57 * In 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			
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%			
Inventory Finance Charge	In 72 * In 74				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	

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
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
Injections	Sch 11A In 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
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	
Withdrawals	Sch 11A In 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)
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
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
Injections	In 83 * In 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
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	
Withdrawals	In 87 * In 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)
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
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	
LNG Rate for Injections	Actual or Sch. 6, In 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	
Month Dollar Average	In (92 + In 100) /2				\$ 133,603	\$ 145,425	\$ 156,853	\$ 149,660	\$ 111,802	\$ 73,814	\$ 113,861	\$ 165,989	\$ 151,758			
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%			
Inventory Finance Charge	In 107 * In 109				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total Fuel Financing	Ins 53 + 76 + 111				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	

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

Schedule 17
Page 1 of 1

3
4 **Forecast of Firm Transportation Volumes and Cost of Gas Revenues**

5
6
7 **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	<u>5,362,810</u>	0.0018	<u>9,656</u>
Total	<u>43,224,605</u>		<u>\$ 77,829</u>

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
			<u>153,641,897</u>	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**

<u>Date</u>	<u>Forecasted DD</u>	<u>Actual DD</u>	<u>Forecaster Error DD</u>	<u>Forecasted Sendout (MMBtu)</u>	<u>Actual Sendout (MMBtu)</u>	<u>Sendout Error (MMBtu)</u>	<u>Abs.Value Sendout Error (MMBtu)</u>	<u>Injections (MMBtu)</u>	<u>Withdrawals (MMBtu)</u>
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	2,207,316	2,205,290	2,026	103,313	52,670	50,644
Mar	841	820	21	1,964,675	1,919,714	44,961	100,628	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	425,971	425,971	0	3,429	1,714	1,714
Jul	0	0	0	351,822	351,822	0	0	0	0
Aug	-	-	-	362,437	362,437	0	0	0	0
Sep	133	115	18	463,120	449,821	13,299	20,688	16,993	3,694
Oct	391	365	26	886,863	859,519	27,344	56,792	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

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	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	285.724211
14	Jun 19, 2022	6	7	-1	15570.50452	15856.22873	-285.724211	285.724211	0	285.724211
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

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

Date	Predicted	Actual	Forecaster	Calculated	Calculated	Sendout	Abs.Value	Injections	Withdrawals
	MAN HDD	MAN HDD	Error MAN HDD	on Predicted MAN HDD	on Actual MAN HDD	Error (MMBtu)	Sendout Error (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

Liberty Utilities (EnergyNorth Natural Gas) Corp.
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	Date	Predicted		Actual		Forecaster Error	Calculated on Predicted	Calculated on Actual	Sendout Error	Abs.Value Sendout Error	Injections (MMBtu)	Withdrawals (MMBtu)
		MAN	HDD	MAN	HDD		MAN	MAN	(MMBtu)	(MMBtu)		
1	10/18/2022	19	17	2	35325.82478	33222.41449	2103.41029	2103.41029	2103.41029	2103.41029	2103.41029	0
2	10/19/2022	21	19	2	37429.23508	35325.82478	2103.41029	2103.41029	2103.41029	2103.41029	2103.41029	0
3	10/20/2022	20	19	1	36377.52993	35325.82478	1051.70515	1051.70515	1051.70515	1051.70515	1051.70515	0
4	10/21/2022	18	18	0	34274.11964	34274.11964	0	0	0	0	0	0
5	10/22/2022	14	12	2	30067.29905	27963.88876	2103.41029	2103.41029	2103.41029	2103.41029	2103.41029	0
6	10/23/2022	11	9	2	26912.18361	24808.77332	2103.41029	2103.41029	2103.41029	2103.41029	2103.41029	0
7	10/24/2022	8	6	2	23757.06817	21653.65787	2103.41029	2103.41029	2103.41029	2103.41029	2103.41029	0
8	10/25/2022	4	1	3	19550.24758	16395.13214	3155.11544	3155.11544	3155.11544	3155.11544	3155.11544	0
9	10/26/2022	4	2	2	19550.24758	17446.83729	2103.41029	2103.41029	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	1051.705147	0
11	10/28/2022	22	24	-2	38480.94023	40584.35052	-2103.41029	2103.41029	0	2103.410294	2103.410294	0
12	10/29/2022	20	22	-2	36377.52993	38480.94023	-2103.41029	2103.41029	0	2103.410294	2103.410294	0
13	10/30/2022	16	17	-1	32170.70934	33222.41449	-1051.70515	1051.70515	0	1051.705147	1051.705147	0
14	10/31/2022	9	6	3	24808.77332	21653.65787	3155.11544	3155.11544	3155.11544	3155.11544	3155.11544	0
15	11/1/2022	8	8	0	26775.30759	26775.30759	0	0	0	0	0	0
16	11/2/2022	16	15	1	40595.62893	38868.08876	1727.54017	1727.54017	1727.54017	1727.54017	1727.54017	0
17	11/3/2022	14	12	2	37140.54859	33685.46826	3455.08033	3455.08033	3455.08033	3455.08033	3455.08033	0
18	11/4/2022	6	2	4	23320.22726	16410.06659	6910.16067	6910.16067	6910.16067	6910.16067	6910.16067	0
19	11/5/2022	0	0	0	12954.98626	12954.98626	0	0	0	0	0	0
20	11/6/2022	0	0	0	12954.98626	12954.98626	0	0	0	0	0	0
21	11/7/2022	12	7	5	33685.46826	25047.76743	8637.70083	8637.70083	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	1727.540167	0
23	11/9/2022	22	21	1	50960.86993	49233.32976	1727.54017	1727.54017	1727.54017	1727.54017	1727.54017	0
24	11/10/2022	9	8	1	28502.84776	26775.30759	1727.54017	1727.54017	1727.54017	1727.54017	1727.54017	0
25	11/11/2022	0	0	0	12954.98626	12954.98626	0	0	0	0	0	0
26	11/12/2022	7	6	1	25047.76743	23320.22726	1727.54017	1727.54017	1727.54017	1727.54017	1727.54017	0
27	11/13/2022	23	23	0	52688.4101	52688.4101	0	0	0	0	0	0
28	11/14/2022	31	33	-2	66508.73143	69963.81177	-3455.08033	3455.08033	0	3455.080334	3455.080334	0
29	11/15/2022	27	27	0	59598.57077	59598.57077	0	0	0	0	0	0
30	11/16/2022	27	26	1	59598.57077	57871.0306	1727.54017	1727.54017	1727.54017	1727.54017	1727.54017	0
31	11/17/2022	31	30	1	66508.73143	64781.19127	1727.54017	1727.54017	1727.54017	1727.54017	1727.54017	0
32	11/18/2022	31	30	1	66508.73143	64781.19127	1727.54017	1727.54017	1727.54017	1727.54017	1727.54017	0
33	11/19/2022	33	32	1	69963.81177	68236.2716	1727.54017	1727.54017	1727.54017	1727.54017	1727.54017	0
34	11/20/2022	37	37	0	76873.97243	76873.97243	0	0	0	0	0	0
35	11/21/2022	31	30	1	66508.73143	64781.19127	1727.54017	1727.54017	1727.54017	1727.54017	1727.54017	0
36	11/22/2022	29	27	2	63053.6511	59598.57077	3455.08033	3455.08033	3455.08033	3455.08033	3455.08033	0
37	11/23/2022	30	30	0	64781.19127	64781.19127	0	0	0	0	0	0
38	11/24/2022	27	26	1	59598.57077	57871.0306	1727.54017	1727.54017	1727.54017	1727.54017	1727.54017	0
39	11/25/2022	24	21	3	54415.95026	49233.32976	5182.6205	5182.6205	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	1727.540167	0
41	11/27/2022	15	17	-2	38868.08876	42323.1691	-3455.08033	3455.08033	0	3455.080334	3455.080334	0
42	11/28/2022	28	26	2	61326.11093	57871.0306	3455.08033	3455.08033	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	1727.540167	0
44	11/30/2022	23	22	1	52688.4101	50960.86993	1727.54017	1727.54017	1727.54017	1727.54017	1727.54017	0
45	12/1/2022	32	31	1	74162.0669	72381.70779	1780.35911	1780.35911	1780.35911	1780.35911	1780.35911	0
46	12/2/2022	28	24	4	67040.63045	59919.19401	7121.43645	7121.43645	7121.43645	7121.43645	7121.43645	0
47	12/3/2022	23	18	5	58138.8349	49237.03934	8901.79556	8901.79556	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	3560.718223	0
49	12/5/2022	27	25	2	65260.27134	61699.55312	3560.71822	3560.71822	3560.71822	3560.71822	3560.71822	0
50	12/6/2022	18	14	4	49237.03934	42115.60289	7121.43645	7121.43645	7121.43645	7121.43645	7121.43645	0
51	12/7/2022	15	13	2	43895.962	40335.24378	3560.71822	3560.71822	3560.71822	3560.71822	3560.71822	0
52	12/8/2022	28	27	1	67040.63045	65260.27134	1780.35911	1780.35911	1780.35911	1780.35911	1780.35911	0
53	12/9/2022	32	30	2	74162.0669	70601.34868	3560.71822	3560.71822	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	1780.359111	0
55	12/11/2022	38	40	-2	84844.22157	88404.93979	-3560.71822	3560.71822	0	3560.718223	3560.718223	0
56	12/12/2022	38	38	0	84844.22157	84844.22157	0	0	0	0	0	0
57	12/13/2022	37	36	1	83063.86245	81283.50334	1780.35911	1780.35911	1780.35911	1780.35911	1780.35911	0
58	12/14/2022	33	32	1	75942.42601	74162.0669	1780.35911	1780.35911	1780.35911	1780.35911	1780.35911	0
59	12/15/2022	27	27	0	65260.27134	65260.27134	0	0	0	0	0	0
60	12/16/2022	27	30	-3	65260.27134	70601.34868	-5341.07733	5341.07733	0	5341.077334	5341.077334	0
61	12/17/2022	33	31	2	75942.42601	72381.70779	3560.71822	3560.71822	3560.71822	3560.71822	3560.71822	0
62	12/18/2022	36	32	4	81283.50334	74162.0669	7121.43645	7121.43645	7121.43645	7121.43645	7121.43645	0
63	12/19/2022	34	32	2	77722.78512	74162.0669	3560.71822	3560.71822	3560.71822	3560.71822	3560.71822	0
64	12/20/2022	38	36	2	84844.22157	81283.50334	3560.71822	3560.71822	3560.71822	3560.71822	3560.71822	0
65	12/21/2022	37	36	1	83063.86245	81283.50334	1780.35911	1780.35911	1780.35911	1780.35911	1780.35911	0
66	12/22/2022	23	23	0	58138.8349	58138.8349	0	0	0	0	0	0
67	12/23/2022	36	36	0	81283.50334	81283.50334	0	0	0	0	0	0

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2023-2024
Estimated Daily Imbalances

	Date	Predicted		Actual		Forecaster Error	Calculated		Calculated on Actual	Sendout Error (MMBtu)	Abs.Value Sendout Error (MMBtu)		Injections (MMBtu)	Withdrawals (MMBtu)
		MAN	HDD	MAN	HDD		MAN	HDD						
1	12/24/2022	48	51	-3	102647.8127	107988.89	-5341.07733	5341.07733	0	5341.07733	0	5341.07733	0	1780.359111
2	12/25/2022	43	44	-1	93746.01712	95526.37623	-1780.35911	1780.35911	0	1780.35911	0	1780.35911	0	1780.359111
3	12/26/2022	39	37	2	86624.58068	83063.86245	3560.71822	3560.71822	0	3560.71822	0	3560.71822	0	1780.359111
4	12/27/2022	40	40	0	88404.93979	88404.93979	0	0	0	0	0	0	0	1780.359111
5	12/28/2022	34	33	1	77722.78512	75942.42601	1780.35911	1780.35911	0	1780.35911	0	1780.35911	0	1780.359111
6	12/29/2022	28	28	0	67040.63045	67040.63045	0	0	0	0	0	0	0	1780.359111
7	12/30/2022	19	14	5	51017.39845	42115.60289	8901.79556	8901.79556	0	8901.79556	0	8901.79556	0	1780.359111
8	12/31/2022	14	13	1	42115.60289	40335.24378	1780.35911	1780.35911	0	1780.35911	0	1780.35911	0	1780.359111
9	1/1/2023	24	25	-1	59838.79218	61654.15728	-1815.3651	1815.3651	0	1815.3651	0	1815.3651	0	1815.3651
10	1/2/2023	27	30	-3	65284.88748	70730.98277	-5446.0953	5446.0953	0	5446.0953	0	5446.0953	0	1815.3651
11	1/3/2023	26	28	-2	63469.52238	67100.25258	-3630.7302	3630.7302	0	3630.7302	0	3630.7302	0	1815.3651
12	1/4/2023	23	23	0	58023.42708	58023.42708	0	0	0	0	0	0	0	1815.3651
13	1/5/2023	31	30	1	72546.34787	70730.98277	1815.3651	1815.3651	0	1815.3651	0	1815.3651	0	1815.3651
14	1/6/2023	32	32	0	74361.71297	74361.71297	0	0	0	0	0	0	0	1815.3651
15	1/7/2023	36	33	3	81623.17336	76177.07807	5446.0953	5446.0953	0	5446.0953	0	5446.0953	0	1815.3651
16	1/8/2023	38	35	3	85253.90356	79807.80826	5446.0953	5446.0953	0	5446.0953	0	5446.0953	0	1815.3651
17	1/9/2023	34	30	4	77992.44317	70730.98277	7261.46039	7261.46039	0	7261.46039	0	7261.46039	0	1815.3651
18	1/10/2023	40	38	2	88884.63376	85253.90356	3630.7302	3630.7302	0	3630.7302	0	3630.7302	0	1815.3651
19	1/11/2023	37	36	1	83438.53846	81623.17336	1815.3651	1815.3651	0	1815.3651	0	1815.3651	0	1815.3651
20	1/12/2023	23	28	-5	58023.42708	67100.25258	-9076.82549	9076.82549	0	9076.82549	0	9076.82549	0	1815.3651
21	1/13/2023	25	25	0	61654.15728	61654.15728	0	0	0	0	0	0	0	1815.3651
22	1/14/2023	34	33	1	77992.44317	76177.07807	1815.3651	1815.3651	0	1815.3651	0	1815.3651	0	1815.3651
23	1/15/2023	33	31	2	76177.07807	72546.34787	3630.7302	3630.7302	0	3630.7302	0	3630.7302	0	1815.3651
24	1/16/2023	33	33	0	76177.07807	76177.07807	0	0	0	0	0	0	0	1815.3651
25	1/17/2023	26	25	1	63469.52238	61654.15728	1815.3651	1815.3651	0	1815.3651	0	1815.3651	0	1815.3651
26	1/18/2023	27	23	4	65284.88748	58023.42708	7261.46039	7261.46039	0	7261.46039	0	7261.46039	0	1815.3651
27	1/19/2023	30	30	0	70730.98277	70730.98277	0	0	0	0	0	0	0	1815.3651
28	1/20/2023	36	34	2	81623.17336	77992.44317	3630.7302	3630.7302	0	3630.7302	0	3630.7302	0	1815.3651
29	1/21/2023	42	38	4	92515.36395	85253.90356	7261.46039	7261.46039	0	7261.46039	0	7261.46039	0	1815.3651
30	1/22/2023	30	32	-2	70730.98277	74361.71297	-3630.7302	3630.7302	0	3630.7302	0	3630.7302	0	1815.3651
31	1/23/2023	33	33	0	76177.07807	76177.07807	0	0	0	0	0	0	0	1815.3651
32	1/24/2023	35	31	4	79807.80826	72546.34787	7261.46039	7261.46039	0	7261.46039	0	7261.46039	0	1815.3651
33	1/25/2023	27	29	-2	65284.88748	68915.61767	-3630.7302	3630.7302	0	3630.7302	0	3630.7302	0	1815.3651
34	1/26/2023	32	30	2	74361.71297	70730.98277	3630.7302	3630.7302	0	3630.7302	0	3630.7302	0	1815.3651
35	1/27/2023	35	33	2	79807.80826	76177.07807	3630.7302	3630.7302	0	3630.7302	0	3630.7302	0	1815.3651
36	1/28/2023	32	30	2	74361.71297	70730.98277	3630.7302	3630.7302	0	3630.7302	0	3630.7302	0	1815.3651
37	1/29/2023	25	24	1	61654.15728	59838.79218	1815.3651	1815.3651	0	1815.3651	0	1815.3651	0	1815.3651
38	1/30/2023	29	27	2	68915.61767	65284.88748	3630.7302	3630.7302	0	3630.7302	0	3630.7302	0	1815.3651
39	1/31/2023	42	42	0	92515.36395	92515.36395	0	0	0	0	0	0	0	1815.3651
40	2/1/2023	42	41	1	95906.90668	93881.15501	2025.75167	2025.75167	0	2025.75167	0	2025.75167	0	1815.3651
41	2/2/2023	37	36	1	85778.14832	83752.39665	2025.75167	2025.75167	0	2025.75167	0	2025.75167	0	1815.3651
42	2/3/2023	67	68	-1	146550.6985	148576.4502	-2025.75167	2025.75167	0	2025.75167	0	2025.75167	0	1815.3651
43	2/4/2023	48	50	-2	108061.4167	112112.9201	-4051.50334	4051.50334	0	4051.50334	0	4051.50334	0	1815.3651
44	2/5/2023	29	28	1	69572.13494	67546.38327	2025.75167	2025.75167	0	2025.75167	0	2025.75167	0	1815.3651
45	2/6/2023	33	32	1	77675.14163	75649.38996	2025.75167	2025.75167	0	2025.75167	0	2025.75167	0	1815.3651
46	2/7/2023	31	32	-1	73623.63829	75649.38996	-2025.75167	2025.75167	0	2025.75167	0	2025.75167	0	1815.3651
47	2/8/2023	30	29	1	71597.88662	69572.13494	2025.75167	2025.75167	0	2025.75167	0	2025.75167	0	1815.3651
48	2/9/2023	21	26	-5	53366.12157	63494.87993	-10128.7584	10128.7584	0	10128.7584	0	10128.7584	0	1815.3651
49	2/10/2023	27	22	5	65520.6316	55391.87324	10128.7584	10128.7584	0	10128.7584	0	10128.7584	0	1815.3651
50	2/11/2023	33	30	3	77675.14163	71597.88662	6077.25502	6077.25502	0	6077.25502	0	6077.25502	0	1815.3651
51	2/12/2023	28	28	0	67546.38327	67546.38327	0	0	0	0	0	0	0	1815.3651
52	2/13/2023	28	27	1	67546.38327	65520.6316	2025.75167	2025.75167	0	2025.75167	0	2025.75167	0	1815.3651
53	2/14/2023	29	29	0	69572.13494	69572.13494	0	0	0	0	0	0	0	1815.3651
54	2/15/2023	15	14	1	41211.61153	39185.85986	2025.75167	2025.75167	0	2025.75167	0	2025.75167	0	1815.3651
55	2/16/2023	13	15	-2	37160.10819	41211.61153	-4051.50334	4051.50334	0	4051.50334	0	4051.50334	0	1815.3651
56	2/17/2023	31	33	-2	73623.63829	77675.14163	-4051.50334	4051.50334	0	4051.50334	0	4051.50334	0	1815.3651
57	2/18/2023	32	33	-1	75649.38996	77675.14163	-2025.75167	2025.75167	0	2025.75167	0	2025.75167	0	1815.3651
58	2/19/2023	25	26	-1	61469.12826	63494.87993	-2025.75167	2025.75167	0	2025.75167	0	2025.75167	0	1815.3651
59	2/20/2023	25	22	3	61469.12826	55391.87324	6077.25502	6077.25502	0	6077.25502	0	6077.25502	0	1815.3651
60	2/21/2023	31	32	-1	73623.63829	75649.38996	-2025.75167	2025.75167	0	2025.75167	0	2025.75167	0	1815.3651
61	2/22/2023	32	32	0	75649.38996	75649.38996	0	0	0	0	0	0	0	1815.3651
62	2/23/2023	40	40	0	91855.40334	91855.40334	0	0	0	0	0	0	0	1815.3651
63	2/24/2023	51	47	4	114138.6717	106035.665	8103.00669	8103.00669	0	8103.00669	0	8103.00669	0	1815.3651
64	2/25/2023	50	50	0	112112.9201	112112.9201	0	0	0	0	0	0	0	1815.3651
65	2/26/2023	39	48	-9	89829.65167	108061.4167	-18231.765	18231.765	0	18231.765	0	18231.765	0	1815.3651
66	2/27/2023	38	36	2	87803.89999	83752.39665	4051.50334	4051.50334	0	4051.50334	0	4051.50334	0	1815.3651
67	2/28/2023	35	33	2	81726.64498	77675.14163	4051.50334	4051.50334	0	4051.50334	0	4051.50334	0	1815.3651

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

Date	Predicted	Actual	Forecaster	Calculated	Calculated	Sendout	Abs.Value	Injections	Withdrawals
	MAN HDD	MAN HDD	Error	on Predicted	on Actual	Error	Sendout		
			MAN HDD	MAN HDD	MAN HDD	(MMBtu)	(MMBtu)	(MMBtu)	(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:

Attachment B Page 2 of 3: EnergyNorth Capacity Resources

Attachment B Page 3 of 3: EnergyNorth Capacity Resources

Line 1 - Line 12 - Line 19

Attachment B Page 3 Line 11
Summary Page Line 68
Attachment B Page 3 Line 1
Sum Line 27 - 29

Line 30 divided by Line 22

Line 32 divided by 6 month

1	Peak Day		167,688	Dekatherm
2				
3	Pipeline MDQ			
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			
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
23				
24				
25	Peaking Costs			
26				
27	Gas Supply	\$	1,550,000	
28	Indirect Production & Storage Capacity	\$	3,685,458	
29	Granite Ridge	\$	-	
30	Total	\$	5,235,458	
31				
32	Annual Peaking Rate per MDQ	\$	263.68	
33				
34	Monthly Peaking MDQ	\$	43.95	/Dekatherm

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					
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

			Pipeline	% of Peak Day Requirement		Total
				Storage	Peaking	
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

Allocate Class Design Day Throughput to Supply Sources

% of Peak Day Requirement

Design DD		69,390			Base		Remaining	Sub-total				
		Base load	Heat load	Total	Pipeline	Pipeline	Pipeline	Storage	Peaking	Total		
HLF	R-1 RNSH	129	390	519	R-1 RNSH	129	270	399	70	49.62	519	
LLF	R-3 RSH	3,452	70,445	73,897	R-3 RSH	3,452	48,778	52,230	12,699	8,968	73,897	
LLF	G-41 SL	919	29,247	30,167	G-41 SL	919	20,252	21,171	5,272	3,723	30,167	
HLF	G-51 SH	774	1,543	2,317	G-51 SH	774	1,068	1,842	278	196	2,317	
LLF	G-42 ML	1,581	37,044	38,624	G-42 ML	1,581	25,650	27,231	6,678	4,716	38,624	
HLF	G-52 MH	1,710	3,482	5,192	G-52 MH	1,710	2,411	4,121	628	443	5,192	
LLF	G-43 LL	903	9,594	10,497	G-43 LL	903	6,643	7,546	1,730	1,221	10,497	
HLF	G-53 LLL90	1,871	3,372	5,243	G-53 LLL90	1,871	2,335	4,206	608	429	5,243	
HLF	G-54 LLG90	387	844	1,232	G-54 LLG90	387	585	972	152	108	1,232	
TOTAL		11,726	155,962	167,688	TOTAL	11,726	107,992	119,718	28,115	19,855	167,688	
HLF		4,871	9,631	14,502	HLF		4,871	6,669	11,540	1,736	1,226	14,502
LLF		6,855	146,331	153,186	LLF		6,855	101,323	108,178	26,379	18,629	153,186
Total		11,726	155,962	167,688	Total		11,726	107,992	119,718	28,115	19,855	167,688

	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%
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

Schedule 22
Page 3 of 6

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)

**Allocate Design Day Sendout to
Rate Classes**

Baseload as % of Total Class Load	Heat Load as % of Total	
25%	0.250%	
5%	45.168%	
3%	18.753%	
33%	0.989%	
4%	23.752%	
33%	2.233%	
8%	6.152%	
35%	2.162%	
31%	0.541%	
	100.000%	

Base Load	Heat Load	Total
129	390	519
3,452	70,445	73,897
919	29,247	30,167
774	1,543	2,317
1,581	37,044	38,624
1,710	3,482	5,192
903	9,594	10,497
1,871	3,372	5,243
387	844	1,232
11,726	155,962	167,688

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

Schedule 22
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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	Daily Baseload
															(Jul+Aug)/2	
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
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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

Schedule 23
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		<u>Participation</u>	<u>Premium</u>	<u>FPO Volumes</u>	<u>Premium Revenue</u>	<u>FPO Rate</u>	<u>Residential Average COG Rate</u>	<u>Residential Total Bill FPO Rate</u>	<u>Residential Total Bill COG Rate</u>	<u>Difference</u>	<u>% Difference</u>	<u>FPO Rate</u>	<u>C&I Average COG Rate</u>	<u>C&I Total Bill FPO Rate</u>	<u>C&I Total Bill COG Rate</u>	<u>Difference</u>	<u>% Difference</u>
1	Nov 98 - Mar 99	6.0%				0.3927	0.3722	\$ 943	\$ 926.93	\$ 16.44	1.77%	0.3927	0.3736	\$ 1,570.86	\$ 1,546.08	\$ 24.79	1.60%
2	Nov 99 - Mar 00	9.0%				0.4724	0.4628	\$ 680	\$ 672.22	\$ 7.63	1.13%	0.4724	0.4636	\$ 1,161.81	\$ 1,149.15	\$ 12.67	1.10%
3	Nov 00 - Mar 01	20.0%				0.6408	0.7656	\$ 816	\$ 916.09	\$ (99.84)	-10.90%	0.6408	0.7189	\$ 1,376.64	\$ 1,533.43	\$ (156.79)	-10.22%
4	Nov 01 - Apr 02	24.0%				0.5141	0.4818	\$ 791	\$ 760.55	\$ 30.10	3.96%	0.5238	0.4928	\$ 1,301.07	\$ 1,256.88	\$ 44.19	3.52%
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%	0.5658	0.5860	\$ 1,344.02	\$ 1,372.86	\$ (28.84)	-2.10%
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%	0.8759	0.8352	\$ 1,798.38	\$ 1,740.30	\$ 58.08	3.34%
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%	0.9092	0.9562	\$ 1,844.75	\$ 1,911.86	\$ (67.10)	-3.51%
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%	1.3192	1.1686	\$ 2,450.66	\$ 2,235.77	\$ 214.89	9.61%
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%	1.2666	1.1647	\$ 2,321.15	\$ 2,175.70	\$ 145.45	6.68%
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%	1.2044	1.1725	\$ 2,232.39	\$ 2,186.92	\$ 45.47	2.08%
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%	1.2836	1.0958	\$ 2,467.49	\$ 2,199.54	\$ 267.95	12.18%
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%	0.9865	0.9408	\$ 1,984.29	\$ 1,919.03	\$ 65.26	3.40%
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%	0.8434	0.8030	\$ 1,880.96	\$ 1,823.34	\$ 57.63	3.16%
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%	0.8129	0.7327	\$ 1,845.28	\$ 1,730.88	\$ 114.40	6.61%
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%	0.6936	0.7724	\$ 1,989.86	\$ 2,132.90	\$ (143.03)	-6.71%
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%	0.9108	1.1158	\$ 2,995.66	\$ 3,393.08	\$ (397.41)	-11.71%
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					0.6375	0.6175	\$ 996	\$ 982.97	\$ 12.80	1.30%						
27	Total									\$ 798.21						\$ 257.59	

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

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	<u>For Purposes of Fuel Financing</u>	
Total Direct Gas Costs	\$	54,722,319
Total Indirect Gas Costs		<u>3,672,531</u>
Total Gas Costs	\$	58,394,850
% of Debt to Total Gas Costs		30%
Short Term Debt	\$	17,518,455

	<u>For Purposes Other Than Fuel Financing</u>	
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

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	(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	<u>\$ 140,047</u>	\$ 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 Statutory Tax Rate of 27.08%				
		\$ 678,212					
7	Income Tax Gross-up	1.2708					
8	Revenue Requirement	<u>\$ 861,872</u>					

Liberty Utilities (EnergyNorth Natural Gas) Corp.**Off Peak 2024 Summer Cost of Gas Filing****Table of Contents**

Tab	Title	Description
Summary	Summary	Summary
1	Schedule 1	Summary of Supply and Demand Forecast
2	Schedule 2	Contracts Ranked on a per Unit Cost Basis
3	Schedule 3	COG (Over)/Under Cumulative Recovery Balances and Interest Calculation
4	Schedule 4	Adjustments to Gas Costs
5	Schedule 5A Schedule 5B Schedule 5C	Demand Costs Demand Volumes Demand Rates
6	Schedule 6 Attachment	Supply and Commodity Costs, Volumes and Rates Pipeline Tariff Sheets
7	Schedule 7	NYMEX Futures @ Henry Hub and Hedged Contracts
8	Schedule 8, Page 1 Schedule 8, Page 2 Schedule 8, Page 3 Schedule 8, Page 4 Schedule 8, Page 5	Annual Bill Comparisons, May 23 - Oct 23 Filing vs May 24 - Oct 24 Annual Bill Comparisons, May 22 - Oct 22 Filing vs May 23 - Oct 23 Annual Bill Comparisons, May 23 - Oct 23 Filing vs May 24 - Oct 24 Annual Bill Comparisons, May 23 - Oct 23 Filing vs May 24 - Oct 24 Residential Heating
9	Schedule 9	This schedule is no longer relevant
10	Schedule 10A Pages 1-2 Schedule 10A Page 3 Schedule 10B	Capacity Assignment Calculations 2023-2024 Derivation of Class Assignments and Weightings Correction Factor Calculation Off Peak 2024 Summer Cost of Gas Filing
11	Schedule 11A Schedule 11B Schedule 11C	Normal and Design Year Volumes Normal Year Normal and Design Year Volumes Design Year Capacity Utilization
12	Schedule 12, Page 1 Schedule 12, Page 2	Transportation Available for Pipeline Supply and Storage Agreements for Gas Supply and Transportation
13	Schedule 13	Storage Inventory

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), In 46	\$ 3,222,250
12	Supply Costs	Sch. 6, col (i), In 47	5,741,685
13			
14	Storage Gas:		
15	Demand, Capacity:	Sch. 5A, col (j), In 61	\$ -
16	Commodity Costs:	Sch. 6, col (i), In 50	-
17			
18	Produced Gas:	Sch. 6, col (i), In 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) In 28	\$ 9,879,800
28	Interest 11/01/23 - 10/31/24	Sch. 3, col (q) In 193	702,520
29	Prior Period Adjustments	Sch. 4, In 22 col (b)	-
30	Refunds from Suppliers	Sch. 4, In 22 col (c)	-
31	Broker Revenue	Sch. 4, In 22 col (d)	-
32	Fuel Financing	Sch. 4, In 22 col (e)	-
33	Transportation CGA Revenues	Sch. 4, In 22 col (f)	-
34	Interruptible Sales Margin	Sch. 4, In 22 col (g)	-
35	Capacity Release and Off System Sales Margins	Sch. 4, In 22 col (h) + col (i)	(2,027,770)
36	Hedging Costs	Sch. 4, In 22 col (j)	-
37	FPO Premium - Collection		-
38	Fixed Price Option Administrative Costs	Sch. 4, In 22 col (k)	-
39			
40	Total Adjustments		\$ 8,554,550
41			
42	Total Anticipated Direct Costs	Ins 23 + 40	\$ 14,694,886
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	In 47 * In 48	0.599%
50	Working Capital	In 46 * In 49	36,778
51	Plus: Working Capital Reconciliation	Sch. 3, col (c), In 98	39,326
52			
53	Total Working Capital Allowance	Ins 50 + 51	\$ 76,104
54			
55	Bad Debt		
56	Total Unadjusted Anticipated Cost of Gas	In 23	\$ 6,140,336
57	Less Refunds	In 30	-
58	Plus Working Capital	In 53	76,104
59	Plus Prior Period (Over) Under Recovery	In 27	9,879,800
60	Subtotal		\$ 16,096,240
61	Bad Debt Percentage	per GTC 17(f)	0.23%
62			
63	Bad Debt Allowance	In 60 * In 61	\$ 37,329
64	Prior Period Bad Debt Allowance	Sch. 3, col (c), In 163	698,114
65			
66	Total Bad Debt Allowance	Ins 63 + 64	\$ 735,443
67			
68	Production and Storage Capacity	per GTC17(f)	\$ -
69			
70	Miscellaneous Overhead	per GTC 17(f)	\$ -
71	Sales Volume	Sch. 10B, In 23/1000	24,743
72	Divided by Total Sales	Sch. 10B, In 23/1000	119,311
73	Ratio		20.74%
74			
75	Miscellaneous Overhead	Ins 70 * 73	\$ -
76			
77	Total Anticipated Indirect Cost of Gas	Ins 53 + 66 + 68 + 75	\$ 811,547
78			
79	Total Cost of Gas	Ins 42 + 77	\$ 15,506,433
80			
81	Projected Forecast Sales (Therms)	Sch. 3, col (q), In 52	24,742,661

7 For Month of:		May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Off Peak Period May - Oct
8 (a)	(b)	(c)	(d)	(e)	(d)	(e)	(f)	(g)	(h)
9 I. Gas Volumes (Therms)									
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
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
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
34 Storage Gas:									
35 TGP Storage	Sch. 6, ln 82	-	-	-	-	-	-		-
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
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	Ins 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

52 A. Demand Costs

53 Supply

117

\$ - \$ - \$ - \$ - \$ - \$ - \$ -

\$	25,864	\$	24,020	\$	21,977	\$	19,209	\$	12,677	\$	10,745	\$	114,493
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\$	(1,410,494)	\$	(1,306,566)	\$	(838,737)	\$	(743,560)	\$	(690,275)	\$	(1,523,003)	\$	(6,512,635)
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\$	1,274,159	\$	638,500	\$	659,836	\$	752,700	\$	690,547	\$	1,424,473	\$	5,440,216
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\$ - \$ - \$ - \$ - \$ - \$ -

\$	83,062	\$	77,493	\$	56,991	\$	54,973	\$	53,621	\$	89,822	\$	415,962
\$	(489,682)	\$	(489,682)	\$	(489,682)	\$	(489,682)	\$	(489,682)	\$	(489,682)	\$	(2,938,092)
\$	867,538	\$	226,311	\$	227,146	\$	317,991	\$	254,486	\$	1,024,614	\$	2,938,086

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

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

REDACTED

2

Schedule 2

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

Page 1 of 1

4 **Contracts Ranked on a per Unit Cost Basis**

Off Peak

5

Cost per

6 **Supplier**

Contract

Contract Type

Contract

Unit Dth

Unit Dth

7 (a)

(b)

(c)

(d)

(MDQ/ACQ)

(e)

(f)

9 **Demand Costs**

10

11

12 ANE (TransCanada via Union to Iroquois) Dawn - Parkway to Iroquois Transportation MDQ 4,047

13 Dominion - Capacity Reservation GSS 300076 Storage ACQ 102,700

14 Tenn Gas Pipeline - Cap. Reservations FS-MA 523 Storage ACQ 1,560,391

15 National Fuel - Capacity Reservation FSS-1 2357 Storage ACQ 670,800

16 Tenn Gas Pipeline - Demand FS-MA 523 Storage MDQ 21,844

17 Dominion - Demand GSS 300076 Storage MDQ 934

18 National Fuel - Demand FSS-1 2357 Storage MDQ 6,098

19 Tenn Gas Pipeline 42076 FTA Z6-Z6 Transportation MDQ 20,000

20 Tenn Gas Pipeline 42076 FTA Z6-Z6 Transportation MDQ 40,000

21 National Fuel FST N02358 Transportation MDQ 6,098

22 Iroquois Gas Trans Service RTS 470-01 Transportation MDQ 4,047

23 Honeoye - Demand SS-NY Storage MDQ 1,362

24 Tenn Gas Pipeline 2302 Z5-Z6 Transportation MDQ 3,122

25 Tenn Gas Pipeline (short haul) 11234 Z5-Z6(stg) Transportation MDQ 1,957

26 Tenn Gas Pipeline (short haul) 8587 Z4-Z6 Transportation MDQ 3,811

27 Tenn Gas Pipeline (short haul) 632 Z4-Z6 (stg) Transportation MDQ 15,265

28 Tenn Gas Pipeline (short haul) 11234 Z4-Z6(stg) Transportation MDQ 7,082

29 Tenn Gas Pipeline (Concord Lateral) Z6-Z6 Firm Transportation MDQ 30,000

30 Tenn Gas Pipeline 95346 Z5-Z6 Transportation MDQ 4,000

31 TransCanada via Union to Portland Union Parkway to Portland Transportation MDQ 5,077

32 Portland Natural Gas Trans Service FT-1999-001 Transportation MDQ 1,000

33 Tenn Gas Pipeline (long haul) 8587 Z1-Z6 Transportation MDQ 14,561

34 Tenn Gas Pipeline (long haul) 8587 Z0-Z6 Transportation MDQ 7,035

35 Portland Natural Gas FTN Transportation MDQ 5,000

36

37 **Supply Costs - Commodity**

38 LNG Truck Pipeline Dkt 14,181

39 TGP Supply (Zone 4) Pipeline Dkt 2,935,321

40 Niagara Supply Pipeline Dkt 370,112

41 Dracut Supply 2 - Swing Pipeline Dkt 50,498

42 Dawn Supply Pipeline Dkt 402,559

43 TGP Citygate Supply Pipeline Dkt -

44 PNGTS Pipeline Dkt 110,907

45 Dracut Supply 1 - Baseload Pipeline Dkt -

46 TGP Supply (Gulf) Pipeline Dkt 175,724

47 LNG Vapor Produced Dkt 11,492

48 Propane Pipeline Dkt -

49

50 **Supply Costs - Volumetric Transportation**

51 Dracut Supply 1 - Baseload Pipeline Dkt -

52 TGP Supply (Zone 4) Pipeline Dkt 175,724

53 Dracut Supply 2 - Swing Pipeline Dkt 50,498

54 Dawn Supply Storage Dkt 402,559

55 Niagara Supply Pipeline Dkt 370,112

56

57

1 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
2
3 Off Peak 2024 Summer Cost of Gas Filing
4 COG (Over)/Under Cumulative Recovery Balances and Interest Calculation

Schedule 3
Page 1 of 3

		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
		Plus Nov Collections		30	31	31	29	31	30	31	30	31	31	30	31	30	Total
(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																	
13	Beginning Balance	Account 1920-1741 1/	\$ 9,879,800	\$ 9,879,800	\$ 9,948,824	\$ 10,020,646	\$ 10,092,987	\$ 10,161,149	\$ 10,234,504	\$ 10,306,005	\$ 8,255,971	\$ 6,625,746	\$ 5,456,214	\$ 4,381,860	\$ 2,978,854	\$ (362,530)	\$ 9,879,800
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.	In 54 * In 64	-	-	-	-	-	-	-	(766,223)	(2,138,736)	(1,709,944)	(1,544,419)	(2,209,010)	(5,240,164)	(3,064,891)	(16,673,387)
17	Projected Unbilled Revenue	In 58 * In 64	-	-	-	-	-	-	-	(2,862,621)	(3,278,422)	(3,654,808)	(4,184,315)	(4,304,618)	(4,086,059)	-	(22,370,844)
18	Reverse Prior Month Unbilled		-	-	-	-	-	-	-	2,862,621	3,278,422	3,654,808	4,184,315	4,304,618	4,086,059	4,086,059	22,370,844
19	Add Net Adjustments (with TGP Refund)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	Gas Cost Billed	Account 1920-1741 2/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	Monthly (Over)/Under Recovery		\$ 9,879,800	\$ 9,879,800	\$ 9,948,824	\$ 10,020,646	\$ 10,092,987	\$ 10,161,149	\$ 10,234,504	\$ 8,189,211	\$ 6,573,943	\$ 5,412,760	\$ 4,346,477	\$ 2,953,231	\$ (371,939)	\$ 658,639	\$ -
22	Average Monthly Balance	(In 13 + 21) / 2	\$ -	\$ 9,879,800	\$ 9,948,824	\$ 10,020,646	\$ 10,092,987	\$ 10,161,149	\$ 10,234,504	\$ 9,247,608	\$ 7,414,957	\$ 6,019,253	\$ 4,901,345	\$ 3,667,546	\$ 1,303,457	\$ 148,055	\$ -
23	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%		
24	Interest 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	Interest Applied	In 22 * In 24 /365 *Days/Mo.	\$ -	\$ 69,023	\$ 71,822	\$ 72,341	\$ 68,162	\$ 73,355	\$ 71,501	\$ 66,760	\$ 51,803	\$ 43,454	\$ 35,384	\$ 25,623	\$ 9,410	\$ -	\$ 658,639
27	(Over)/Under Balance	In 21 + In 26	\$ 9,879,800	\$ 9,948,824	\$ 10,020,646	\$ 10,092,987	\$ 10,161,149	\$ 10,234,504	\$ 10,306,005	\$ 8,255,971	\$ 6,625,746	\$ 5,456,214	\$ 4,381,860	\$ 2,978,854	\$ (362,530)	\$ 658,639	\$ 658,639
31 Calculation of COG with Interest																	
33	Beginning Balance	In 13	\$ 9,879,800	\$ 9,879,800	\$ 9,948,824	\$ 10,020,646	\$ 10,092,987	\$ 10,161,149	\$ 10,234,504	\$ 10,306,005	\$ 8,213,302	\$ 6,552,745	\$ 5,358,154	\$ 4,258,707	\$ 2,827,455	\$ (574,068)	\$ 9,879,800
34	Forecast Direct Gas Costs	In 14	-	-	-	-	-	-	-	1,512,050	872,508	873,344	964,189	900,684	1,670,812	-	6,793,586
35	Prod Storage & Misc Overhead	In 15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	Projected Revenues with int.	In 54 * 66	-	-	-	-	-	-	-	(775,200)	(2,163,794)	(1,729,977)	(1,562,513)	(2,234,891)	(5,301,558)	(3,100,799)	(16,868,733)
37	Projected Unbilled Revenue	In 58 * 66	-	-	-	-	-	-	-	(2,896,160)	(3,316,832)	(3,697,628)	(4,233,339)	(4,355,051)	(4,133,932)	-	(22,632,942)
38	Reverse Prior Month Unbilled		-	-	-	-	-	-	-	2,896,160	3,316,832	3,697,628	4,233,339	4,355,051	4,133,932	4,133,932	22,632,942
39	Add Net Adjustments	In 19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	Gas Cost Billed	In 20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	Gas Cost Unbilled		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	Reverse Prior Month Unbilled		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	Add Interest	In 26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	(Over)/Under Balance		\$ 9,879,800	\$ 9,879,800	\$ 9,948,824	\$ 10,020,646	\$ 10,092,987	\$ 10,161,149	\$ 10,234,504	\$ 8,146,695	\$ 6,501,345	\$ 5,315,315	\$ 4,224,119	\$ 2,802,788	\$ (582,172)	\$ 459,065	\$ (195,346)
45	Average Monthly Balance		\$ 9,879,800	\$ 9,948,824	\$ 10,020,646	\$ 10,092,987	\$ 10,161,149	\$ 10,234,504	\$ 10,306,005	\$ 9,226,350	\$ 7,357,323	\$ 5,934,030	\$ 4,791,137	\$ 3,530,747	\$ 1,122,641		
46	Interest Applied	In 24 * In 46 /365 *Days/Mo.	\$ 69,023	\$ 71,822	\$ 72,341	\$ 68,162	\$ 73,355	\$ 71,501	\$ 66,607	\$ 51,400	\$ 42,839	\$ 34,588	\$ 24,667	\$ 8,105	\$ -	\$ -	\$ 654,411
48	(Over)/Under Balance	In 43 +In 44 + In 48	\$ 9,879,800	\$ 9,948,824	\$ 10,020,646	\$ 10,092,987	\$ 10,161,149	\$ 10,234,504	\$ 10,306,005	\$ 8,213,302	\$ 6,552,745	\$ 5,358,154	\$ 4,258,707	\$ 2,827,455	\$ (574,068)	\$ 459,065	\$ 459,065
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
Less Forecast Billing Therm Sales Sch. 10B, In 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
Less Forecast Unaccounted For Sch 1										217,975	145,065	122,465	130,699	147,320	280,300		1,043,824
Less Forecast Company Use Sch 1										3,613	2,405	2,030	2,166	2,442	4,646		17,302
Unbilled Volumes										4,248,019	410,014	488,005	937,061	361,457	(851,412)	(4,548,180)	1,044,965
Gross Unbilled										4,248,019	4,865,052	5,423,594	6,209,362	6,387,887	6,063,554	1,789,632	
Beg Balance										-	4,248,019	4,658,034	5,146,039	6,083,100	6,444,556	5,593,145	
Incremental										4,248,019	410,014	488,005	937,061	361,457	(851,412)	(4,548,180)	
Ending Balance										4,248,019	4,658,034	5,146,039	6,083,100	6,444,556	5,593,145	1,044,965	
COG w/o Interest Sch. 3, pg. 4, In 211 col. (c)										\$ 0.6739	\$ 0.6739	\$ 0.6739	\$ 0.6739	\$ 0.6739	\$ 0.6739	\$ 0.6739	
COG W th Interest Sch. 3 pg. 4 In 211 col. (d)										\$ 0.6818	\$ 0.6818	\$ 0.6818	\$ 0.6818	\$ 0.6818	\$ 0.6818	\$ 0.6818	

																Schedule 3	
																Page 2 of 3	
	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
	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)		(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
76	Account 8840 2 0000 10 1163 1424 (formerly, 142.40) Working Capital (Over)/Under Balance Interest Calculation																
77	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	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	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)
84	Projected Unbilled Revenue	In 124 * In 126								(13,738)	(15,064)	(16,642)	(19,672)	(20,841)	(18,088)		(104,046)
85	Reverse Prior Month Unbilled										13,738	15,064	16,642	19,672	20,841	18,088	104,046
86	Add Net Adjustments			-	-	-	-	-	-	-	-	-	-	-	-	-	-
87	Working Capital Billed	Account 1163-1424 2/															
88	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	\$ -
89	Average Monthly Balance	(In 78 + 92) / 2	\$ 39,326	\$ 39,601	\$ 39,886	\$ 40,174	\$ 40,446	\$ 40,738	\$ 40,738	\$ 36,843	\$ 29,748	\$ 24,497	\$ 20,064	\$ 14,688	\$ 5,410		
90	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%		
91	Interest Applied	In 94 * In 96 / 365 * Days of Month	\$ 275	\$ 286	\$ 288	\$ 271	\$ 292	\$ 285	\$ 285	\$ 266	\$ 208	\$ 177	\$ 145	\$ 103	\$ 39		\$ 2,634
92	(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
93																	
94	Calculation of Working Capital with Interest																
95	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
96	Forecast Working Capital	In 82		-	-	-	-	-	-	9,057	5,226	5,231	5,775	5,395	10,007	-	40,691
97	Projected Rev. with interest	In 123 * In 128		-	-	-	-	-	-	(3,686)	(10,288)	(8,226)	(7,429)	(10,626)	(25,208)	(14,744)	(80,208)
98	Projected Unbilled Revenue	In 124 * In 128								(13,771)	(15,100)	(16,682)	(19,719)	(20,891)	(18,131)		(104,294)
99	Reverse Prior Month Unbilled										13,771	15,100	16,682	19,719	20,891	18,131	104,294
100	Add Net Adjustments	In 88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
101	Working Capital Billed	In 90	-							-	-	-	-	-	-	-	-
102	WC Unbilled									-	-	-	-	-	-	-	-
103	Reverse WC Unbilled										-	-	-	-	-	-	-
104	Add Interest	In 98															-
105	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)
106	Average Monthly Balance		\$ 39,326	\$ 39,601	\$ 39,886	\$ 40,174	\$ 40,446	\$ 40,738	\$ 40,738	\$ 36,822	\$ 29,692	\$ 24,416	\$ 19,957	\$ 14,554	\$ 5,234		
107	Interest Applied	In 96 * In 117 / 365 * Days of Month	275	286	288	271	292	285	285	266	207	176	144	102	38	-	\$ 2,630
108	(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
109																	
110	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
111	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	
112	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	
113	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	

		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
(a)	Days in Month (b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
Account 8840 2 0000 10 1163 1754 (formerly, 175.54) Bad Debt (Over)/Under Balance Interest Calculation																
Forecast Direct Gas Costs	In 34 In 106 + (May includes prior period)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,512,050	\$ 872,508	\$ 873,344	\$ 964,189	\$ 900,684	\$ 1,670,812	\$ -	6,793,586
Forecast Working Capital	In 21 / 6	-	-	-	-	-	-	-	48,382	5,226	5,231	5,775	5,395	10,007	-	80,017
Prior Period Balance (with Refund)	In 21 / 6	-	-	-	-	-	-	-	1,646,633	1,646,633	1,646,633	1,646,633	1,646,633	1,646,633	-	9,879,800
Total Forecast Direct Gas Costs & Working Capital		-	-	-	-	-	-	-	3,207,066	2,524,368	2,525,208	2,616,597	2,552,712	3,327,452	-	6,873,603
Beginning Balance	Account 1163-1754 1/ Oct Collections & Unbilled	\$ 698,114	\$ 698,114	\$ 702,991	\$ 708,066	\$ 713,178	\$ 717,994	\$ 723,178	\$ 728,230	\$ 579,977	\$ 479,086	\$ 397,982	\$ 310,424	\$ 209,750	\$ 12,007	\$ 698,114
Forecast Bad Debt	In 142 * 0.00231908326307407	-	-	-	-	-	-	-	7,437	5,854	5,856	6,068	5,920	7,717	-	38,853
Projected Revenues w/o int	In 184 * In 187	-	-	-	-	-	-	-	(33,867)	(94,533)	(75,580)	(68,264)	(97,639)	(231,616)	(135,469)	(736,967)
Projected Unbilled Revenue	In 185 * In 187	-	-	-	-	-	-	-	(126,528)	(138,741)	(153,276)	(181,187)	(191,953)	(166,593)	166,593	(958,278)
Reverse Prior Month Unbilled		-	-	-	-	-	-	-	126,528	138,741	153,276	181,187	191,953	191,953	-	958,278
Bad Debt Billed	Account 1163-1754 2/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Add Net Adjustments		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monthly (Over)/Under Recovery		\$ 698,114	\$ 698,114	\$ 702,991	\$ 708,066	\$ 713,178	\$ 717,994	\$ 723,178	\$ 575,272	\$ 479,086	\$ 394,827	\$ 307,876	\$ 207,939	\$ 11,210	\$ 43,132	\$ -
Average Monthly Balance	(In 144 + 155)/ 2	\$ 698,114	\$ 702,991	\$ 708,066	\$ 713,178	\$ 717,994	\$ 723,178	\$ 728,230	\$ 651,751	\$ 529,532	\$ 436,957	\$ 352,929	\$ 259,181	\$ 110,480	\$ 27,569	\$ -
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%	8.50%	8.50%	8.50%
Interest Applied	In 157 * In 159 / 365 * Days of Mo.	\$ 4,877	\$ 5,075	\$ 5,112	\$ 4,816	\$ 5,183	\$ 5,052	\$ 5,052	\$ 4,705	\$ 3,699	\$ 3,154	\$ 2,548	\$ 1,811	\$ 798	\$ -	\$ 46,831
(Over)/Under Balance	In 155 + In 161	\$ 698,114	\$ 702,991	\$ 708,066	\$ 713,178	\$ 717,994	\$ 723,178	\$ 728,230	\$ 579,977	\$ 482,786	\$ 397,982	\$ 310,424	\$ 209,750	\$ 12,007	\$ 27,569	\$ 46,831
Calculation of Bad Debt with Interest																
Beginning Balance		\$ 698,114	\$ 698,114	\$ 702,991	\$ 708,066	\$ 713,178	\$ 717,994	\$ 723,178	\$ 728,230	\$ 565,095	\$ 457,897	\$ 368,279	\$ 271,583	\$ 160,580	\$ (56,654)	\$ 698,114
Forecast Bad Debt	In 146	-	-	-	-	-	-	-	7,437	5,854	5,856	6,068	5,920	7,717	-	38,853
Projected Revenues with int.	In 184 * 189	-	-	-	-	-	-	-	(36,998)	(103,272)	(82,567)	(74,574)	(106,665)	(253,029)	(147,993)	(805,098)
Projected Unbilled Revenue	In 185 * 189	-	-	-	-	-	-	-	(138,226)	(151,567)	(167,446)	(197,937)	(209,699)	(181,995)	181,995	(1,046,869)
Reverse Prior Month Unbilled		-	-	-	-	-	-	-	138,226	151,567	167,446	197,937	209,699	209,699	-	1,046,869
Bad Debt Billed	In 152	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Add Interest	In 161	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Add Net Adjustments	In 153	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monthly (Over)/Under Recovery		\$ 698,114	\$ 698,114	\$ 702,991	\$ 708,066	\$ 713,178	\$ 717,994	\$ 723,178	\$ 560,444	\$ 454,336	\$ 365,307	\$ 269,281	\$ 159,076	\$ (57,028)	\$ (22,652)	\$ (68,131)
Average Monthly Balance	(In 168 + 176)/ 2	\$ 698,114	\$ 702,991	\$ 708,066	\$ 713,178	\$ 717,994	\$ 723,178	\$ 728,230	\$ 644,337	\$ 509,716	\$ 411,602	\$ 318,780	\$ 215,329	\$ 51,776	\$ (39,653)	\$ -
Interest Applied	In 159 * In 178 / 365 * Days of Month	4,877	5,075	5,112	4,816	5,183	5,052	5,052	4,652	3,561	2,971	2,301	1,504	374	\$ -	\$ 45,479
(Over)/Under Balance	-In 174 +In 176 + In 180	\$ 698,114	\$ 702,991	\$ 708,066	\$ 713,178	\$ 717,994	\$ 723,178	\$ 728,230	\$ 565,095	\$ 457,897	\$ 368,279	\$ 271,583	\$ 160,580	\$ (56,654)	\$ (22,652)	\$ (22,652)
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
Unbilled Therm	In 55	-	-	-	-	-	-	-	4,248,019	4,658,034	5,146,039	6,083,100	6,444,556	5,593,145	-	-
COG Rate Without Interest	Sch. 3, pg. 4, In 245 col. (c)	-	-	-	-	-	-	-	\$ 0.0298	\$ 0.0298	\$ 0.0298	\$ 0.0298	\$ 0.0298	\$ 0.0298	\$ 0.0298	\$ 0.0298
COG With Interest	Sch. 3, pg. 4, In 245 col. (d)	-	-	-	-	-	-	-	\$ 0.0325	\$ 0.0325	\$ 0.0325	\$ 0.0325	\$ 0.0325	\$ 0.0325	\$ 0.0325	\$ 0.0325
Total Interest	In 48 + 119 + 180	\$ 74,175	\$ 77,183	\$ 77,740	\$ 73,250	\$ 78,830	\$ 76,838	\$ 76,838	\$ 71,524	\$ 55,169	\$ 45,987	\$ 37,033	\$ 26,273	\$ 8,516	\$ -	\$ 702,520

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

Schedule 4

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3 Off Peak 2024 Summer Cost of Gas Filing

4 Adjustments to Gas Costs

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			Prior Period		Refunds from	Broker	Transportation		Interruptible	Off System	Capacity	Net Option	Fixed Price	Total	
6 Adjustments			Adjustments		Suppliers /	Revenue	CGA Revenues		Sales Margin	Sales Margin	Release Margin	Premiums	Option	Adjustments	
7 (a)			7 (b)		Pipelines	(d)	7 (e)		7 (g)	7 (h)	7 (i)	7 (j)	Administrative	7 (m)	
8					7 (c)								Costs		
9	Nov-23	1/	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$
10	Dec-23	1/		-		-		-		-		-		-	
11	Jan-24	1/		-		-		-		-		-		-	
12	Feb-24	1/		-		-		-		-		-		-	
13	Mar-24	1/		-		-		-		-		-		-	
14	Apr-24	1/		-		-		-		-		-		-	
15	May-24	1/		-		-		-		-	(124,520)	-		-	(124,520)
16	Jun-24	1/		-		-		-		-	(248,319)	-		-	(248,319)
17	Jul-24	1/		-		-		-		-	(376,373)	-		-	(376,373)
18	Aug-24	1/		-		-		-		-	(664,024)	-		-	(664,024)
19	Sep-24	1/		-		-		-		-	(399,253)	-		-	(399,253)
20	Oct-24	1/		-		-		-		-	(215,280)	-		-	(215,280)
21															
22	Total Off Peak Period		\$	-	\$	-	\$	-	\$	-	\$	(2,027,770)	\$	-	\$ (2,027,770)

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

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Schedule 5A

3 Off Peak 2024 Summer Cost of Gas Filing

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4 Demand Costs

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(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)
Supply										
Niagara Supply		Sch 5B, ln 9 * Sch 5C ln 9 x days	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal Supply Demand & Reservation Charges			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pipeline										
Iroquois Gas Trans Service RTS 470-0		Sch 5B, ln 12 * Sch 5C ln 12 x days								
Tenn Gas Pipeline 95346 Z5-Z6		Sch 5B, ln 13 * Sch 5C ln 14 x days								
Tenn Gas Pipeline 2302 Z5-Z6		Sch 5B, ln 14 * Sch 5C ln 16 x days								
Tenn Gas Pipeline 8587 Z0-Z6		Sch 5B, ln 15 * Sch 5C ln 18 x days								
Tenn Gas Pipeline 8587 Z1-Z6		Sch 5B, ln 16 * Sch 5C ln 20 x days								
Tenn Gas Pipeline 8587 Z4-Z6		Sch 5B, ln 17 * Sch 5C ln 22 x days								
Tenn Gas Pipeline (Dracut) 42076 Z6-Z6	peak	Sch 5B, ln 18 * Sch 5C ln 24 x days								
Tenn Gas Pipeline (Dracut) 358905 Z6-Z7	peak	Sch 5B, ln 19 * Sch 5C ln 25 x days								
Tenn Gas Pipeline (Concord Lateral) Z6-Z6	peak	Sch 5B, ln 20 * Sch 5C ln 28 x days								
Portland Natural Gas Trans Service		Sch 5B, ln 21 * Sch 5C ln 30 x days								
Portland Natural Gas		Sch 5B, ln 22 * Sch 5C ln 31 x days								
ANE (TransCanada via Union to Iroquois)		Sch 5B, ln 23 * Sch 5C ln 48 x days								
TransCanada via Union to Portland		Sch 5B, ln 24 * Sch 5C ln 49 x days								
Tenn Gas Pipeline Z4-Z6 stg 632	peak	Sch 5B, ln 25 * Sch 5C ln 34 x days								
Tenn Gas Pipeline Z4-Z6 stg 11234	peak	Sch 5B, ln 26 * Sch 5C ln 36 x days								
Tenn Gas Pipeline Z5-Z6 stg 11234	peak	Sch 5B, ln 27 * Sch 5C ln 38 x days								
National Fuel FST 2358	peak	Sch 5B, ln 28 * Sch 5C ln 40 x days								
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
Peaking Supply										
Tenn Gas Pipeline (Concord Lateral) Z6-Z6	peak	Sch 5B, ln 31 * Sch 5C ln 28 x days	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Granite Ridge Demand	peak	Sch 5B, ln 32 * Sch 5C ln 59 x days	-	-	-	-	-	-	-	-
DOMAC Demand NSB041	peak	Per Contract	-	-	-	-	-	-	-	-
Subtotal Peaking Demand Charges			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
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
Less Transportation Capacity Credit			\$ (525,042)	\$ (525,864)	\$ (525,864)	\$ (525,864)	\$ (525,864)	\$ (525,864)	\$ (1,569,200)	\$ (1,585,161)
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

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

Schedule 5B
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Off Peak 2024 Summer Cost of Gas Filing

Demand Volumes

	(a)	Peak (b)	Reference (c)	May-24 (d)	Jun-24 (e)	Jul-24 (f)	Aug-24 (g)	Sep-24 (h)	Oct-24 (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

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

Schedule 5C

2

Page 1 of 1

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

4 **Demand Rates**

5

6 **Tariff Rates**

7

8 **Supply**

9 Niagara Supply

\$ - Per Contract

May-24
31
Unit Rate

Jun-24
30
Unit Rate

Jul-24
31
Unit Rate

Aug-24
31
Unit Rate

Sep-24
30
Unit Rate

Oct-24
31
Unit Rate

\$ - \$ - \$ - \$ - \$ - \$ -

11 **Pipeline**

12 Iroquois Gas

RTS 470-01

\$ 4.8393 Fifth Revised Sheet No. 4

\$ 0.1561 \$ 0.1613 \$ 0.1561 \$ 0.1561 \$ 0.1613 \$ 0.1561

14 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

16 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

18 Tenn Gas Pipeline

8587 Z0-Z6

\$ 19.6964 FT-A (Z0 - Z6)

\$ 0.6354 \$ 0.6565 \$ 0.6354 \$ 0.6354 \$ 0.6565 \$ 0.6354

20 Tenn Gas Pipeline

8587 Z1-Z6

\$ 17.4870 FT-A (Z1 - Z6)

\$ 0.5641 \$ 0.5829 \$ 0.5641 \$ 0.5641 \$ 0.5829 \$ 0.5641

22 Tenn Gas Pipeline

8587 Z4-Z6

\$ 6.9301 FT-A (Z4 - Z6)

\$ 0.2236 \$ 0.2310 \$ 0.2236 \$ 0.2236 \$ 0.2310 \$ 0.2236

24 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

26 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

28 TGP Concord Lateral

Firm Transportator

\$ 12.2157 Per contract

\$ 0.3941 \$ 0.4072 \$ 0.3941 \$ 0.3941 \$ 0.4072 \$ 0.3941

30 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

32 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

34 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

36 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

38 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

40 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

42 ANE Union Gas

\$ 3.7600

43 TransCanada Pipelines Limited

\$ 11.9355

Union Parkway to Iroquois

44 Delivery Pressure Demand Charge

\$ 0.6083

Union Parkway to Iroquois

45 Sub Total Demand Charges

\$ 16.3038

46 Conversion rate GJ to MMBTU

\$ 1.0551

47 Conversion rate to US\$

\$ 1.3486

1/0/1900

48 Demand Rate/US\$

\$ 12.7551

\$ 0.4115 \$ 0.4252 \$ 0.4115 \$ 0.4115 \$ 0.4252 \$ 0.4115

50 Union Gas

\$ 3.7600

51 TransCanada Pipelines Limited

\$ 20.3244

52 Delivery Pressure Demand Charge

\$ 0.6083

53 Sub Total Demand Charges

\$ 24.6928

54 Conversion rate GJ to MMBTU

\$ 1.0551

55 Conversion rate to US\$

\$ 1.3486

\$0.0000

56 Demand Rate/US\$

\$ 19.3180

\$ 0.6232 \$ 0.6439 \$ 0.6232 \$ 0.6232 \$ 0.6439 \$ 0.6232

57

58 **Peaking**

59 Granite Ridge Demand

\$ -

Per Contract

\$ - \$ - \$ - \$ - \$ - \$ -

60 DOMAC Demand NSB041

\$ -

Per Contract

\$ - \$ - \$ - \$ - \$ - \$ -

61

62 **Storage**

63 Dominion - Demand

GSS 300076

\$ 2.6784 GSS Settled,Tariff Rec #10.30 \

\$ 0.0864 \$ 0.0893 \$ 0.0864 \$ 0.0864 \$ 0.0893 \$ 0.0864

64 Dominion - Capacity

GSS 300076

\$ 0.0258 GSS Settled,Tariff Rec #10.30 \

\$ 0.0008 \$ 0.0009 \$ 0.0008 \$ 0.0008 \$ 0.0009 \$ 0.0008

65

\$ 2.7042

\$ 0.0872 \$ 0.0901 \$ 0.0872 \$ 0.0872 \$ 0.0901 \$ 0.0872

66

67 Honeoye - Demand

SS-NY

\$ 6.9317 Sub 1st Rev Sheet No. 5

\$ 0.2236 \$ 0.2311 \$ 0.2236 \$ 0.2236 \$ 0.2311 \$ 0.2236

68

69 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

70 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

71

\$ 2.6947

\$ 0.0869 \$ 0.0898 \$ 0.0869 \$ 0.0869 \$ 0.0898 \$ 0.0869

72

73 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

6 For Month of:	Reference	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Off-Peak
7 (a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	May - Oct
8								(i)
9 <u>Supply and Commodity Costs</u>								
10								
11 Pipeline Gas:								
12 Dawn Supply	In 66 * In 108							
13 Niagara Supply	In 67 * In 113							
14 TGP Supply (Gulf)	In 68 * In 133							
15 Dracut Supply 1 - Baseload	In 69 * In 118							
16 Dracut Supply 2 - Swing	In 70 * In 123							
17 Dracut Supply 3 - Swing								
18 City Gate Delivered Supply	In 72 * In 139							
19 LNG Truck	In 73 * In 141							
20 Propane Truck	In 74 * In 143							
21 PNGTS	In 75 * In 148							
22 Portland Natural Gas								
23 TGP Supply (Zone 4)	In 77 * In 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	In 66 * In 206							
29 Niagara Supply	In 67 * In 217							
30 TGP Supply (Zone 4)	In 77 * In 255							
31 Dracut Supply 1 - Baseload	In 69 * In 266							
32 Dracut Supply 2 - Swing	In 70 * In 266							
33 Dracut Supply 3 - Swing								
34 City Gate Delivered Supply	In 72 * In 266							
35 TGP Storage - Withdrawals	In 82 * In 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	In 91 * In 165							
41 Propane	In 92 * In 166							
42 TGP Storage Refill	In 93 * In 131							
43 Storage Refill (Trans.)	In 93 * In 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 In 25 + In 37 + In 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	In 82 * In 173	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
51								
52 Produced Gas:								
53 LNG Vapor	In 85 * In 160							
54 Propane	In 86 * In 162							
55								
56 Total Produced Gas	In 53 + In 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	In 47 + In 50 + In 56	\$ 867,538	\$ 226,311	\$ 227,146	\$ 317,991	\$ 254,486	\$ 1,024,614	\$ 2,918,086
60								
61								

62								Schedule 6
63	Volumes (Therms)							Page 2 of 5
64								
65	Pipeline Gas:	See Schedule 11A						
66	Dawn Supply		842,983	655,282	518,079	495,174	612,922	901,154
67	Niagara Supply		667,764	585,319	584,500	583,125	492,567	787,845
68	TGP Supply (Gulf)		929,663	-	-	-	-	827,579
69	Dracut Supply 1 - Baseload		-	-	-	-	-	-
70	Dracut Supply 2 - Swing		-	-	-	-	-	504,981
71	Dracut Supply 3 - Swing		-	-	-	-	-	504,981
72	City Gate Delivered Supply		-	-	-	-	-	-
73	LNG Truck		-	-	4,473	18,729	17,901	100,708
74	Propane Truck		81,143	75,360	49,199	71,793	73,523	80,427
75	PNGTS		216,617	194,624	196,156	93,643	189,881	218,149
76	Portland Natural Gas		889,892	29,984	-	-	-	922,990
77	TGP Supply (Zone 4)		5,759,165	5,591,074	3,885,012	3,831,718	3,863,377	6,422,862
78								29,353,208
79	Subtotal Pipeline Volumes		9,387,227	7,131,644	5,237,418	5,094,181	5,250,171	10,766,696
80								42,867,337
81	Storage Gas:							
82	TGP Storage		-	-	-	-	-	-
83								
84	Produced Gas:							
85	LNG Vapor		20,462	19,004	18,529	18,104	18,541	20,282
86	Propane		-	-	-	-	-	-
87								
88	Subtotal Produced Gas		20,462	19,004	18,529	18,104	18,541	20,282
89								114,922
90	Less - Gas Refill:							
91	LNG Truck		-	-	(6,389)	(9,989)	(53,704)	(69,936)
92	Propane		(81,143)	(75,360)	(49,199)	(71,793)	(73,523)	(80,427)
93	TGP Storage Refill		(3,719,893)	(3,344,003)	(2,050,369)	(1,668,719)	(1,352,181)	(3,426,880)
94								(15,562,044)
95	Subtotal Refills		(3,801,037)	(3,419,362)	(2,105,957)	(1,750,500)	(1,479,408)	(3,577,243)
96								(16,133,507)
97	Total Sendout Volumes		5,606,653	3,731,286	3,149,990	3,361,785	3,789,304	7,209,735
98								26,848,752
99								
100								

101									REDACTED
102	Gas Costs and Volumetric Transportation Rates								Schedule 6
103									Page 3 of 5
104	Pipeline Gas:								
105	Dawn Supply								Average Rate
106	NYMEX Price	Sch 7, In 10/10							
107	Basis Differential								
108	Net Commodity Costs								
109									
110	Niagara Supply								
111	NYMEX Price	Sch 7, In 10/10							
112	Basis Differential								
113	Net Commodity Costs								
114									
115	Dracut Supply 1 - Baseload								
116	Commodity Costs - NYMEX Price	Sch 7, In 10 / 10							
117	Basis Differential								
118	Net Commodity Costs								
119									
120	Dracut Supply 2 - Swing								
121	Commodity Costs - NYMEX Price	Sch 7, In 10 / 10							
122	Basis Differential								
123	Net Commodity Costs								
124									
125	Dracut Supply 3 - Swing	Sch 7, In 10 / 10							
126	Commodity Costs - NYMEX Price								
127	Basis Differential								
128	Net Commodity Costs								
129									
130	TGP Supply (Gulf)								
131	NYMEX Price	Sch 7, In 10/10							
132	Basis Differential								
133	Net Commodity Costs								
134									
135									
136	TGP Citygate Supply								
137	NYMEX Price	Sch 7, In 10/10							
138	Basis Differential								
139	Net Commodity Costs								
140									
141	LNG Truck	Sch 7, In 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, In 10/10							
147	Additional Cost								
148	Net Commodity Cost								
149									
150	PNGTS EXP								
151	NYMEX Price	Sch 7, In 10/10							
152	Basis Differential								
153	Net Commodity Cost								
154									
155	TGP Supply (Zone 4)								
156	NYMEX Price	Sch 7, In 10/10							
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, In 97 /10	\$1.2640	\$1.2640	\$1.1861	\$1.0610	\$0.6838	\$0.5298	\$0.9981
161									
162	Propane	Sch 13, In 67 /10	\$1.5472	\$1.5472	\$1.4251	\$1.2779	\$1.1556	\$1.1750	\$0.0000
163									
164	Storage Refill:								
165	LNG Truck	In 141	\$1.4920	\$1.4920	\$1.4920	\$1.4920	\$1.4920	\$1.4920	\$1.4920
166	Propane	In 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, In 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	\$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	\$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	\$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%	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	\$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	\$0.00087
181	Total Volumetric Transportation Rate - TGP (Storage)		\$0.01340	\$0.01403	\$0.01431	\$0.01425	\$0.01424	\$0.01423	\$0.01408	\$0.01408
182										
183	Total TGP - Comm. & Vol. Trans. Rate	In 173 + In 181	\$0.31298	\$0.37007	\$0.39490	\$0.38973	\$0.38891	\$0.38796	\$0.37409	\$0.37409
184										
185										
186	Per Unit Volumetric Transportation Rates									
187	Dawn Supply Volumetric Transportation Charge									Average Rate
188	Commodity Costs	In 108								
189										
190	TransCanada - Commodity Rate/GJ	Dawn - Parkway to Iroquois	\$0.00040	\$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	1.0551
192	Conversion Rate to US\$	1/0/1900	1.3486	1.3486	1.3486	1.3486	1.3486	1.3486	1.3486	1.3486
193	Commodity Rate/US\$	In 190 x In 191 x In 192	\$0.00057	\$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%	0.35%
195	TransCanada Fuel * Percentage	In 108 x In 194	\$0.00218	\$0.00162	\$0.00242	\$0.00000	\$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	\$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	\$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	\$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	\$0.00000
200	Subtotal IGTS - Trans Charge - Z1 RTS	Commodity	\$0.00049	\$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	\$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%	1.00%
203	IGTS -Fuel Use Factor - Fuel * Percentage	In 108 x In 202	\$0.00287	\$0.00295	\$0.00305	\$0.00307	\$0.00305	\$0.00312	\$0.00302	\$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%	0.81%
205	TGP FTA Fuel * Percentage	In 108 x In 204	\$0.00232	\$0.00239	\$0.00247	\$0.00248	\$0.00247	\$0.00253	\$0.00244	\$0.00244
206	Total Volumetric Transportation Charge - Dawn Supply		\$0.00859	\$0.00817	\$0.00915	\$0.00676	\$0.00672	\$0.00686	\$0.00771	\$0.00771
207										

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

2 Schedule 7

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

4 **NYMEX Futures @ Henry Hub**

5 May - Oct

6 For Month of: 8/28/2023 Reference May-24 Jun-24 Jul-24 Aug-24 Sep-24 Oct-24 May - Oct

7 (a) (b) (c) (d) (e) (f) (g) (h) Off Peak

8 **I. NYMEX Opening Prices as of:** Strip Average

9 Opening Prices Line 206 \$3.1120 \$3.2130 \$3.3240 \$3.3620 \$3.3410 \$3.4280 \$ 3.2967

10 \$3.1120 \$3.2130 \$3.3240 \$3.3620 \$3.3410 \$3.4280 \$ 3.2967

Annual Bill Comparisons, May 2023										Oct 23 Filing vs May 2023																															
2 November 2023										October 2024																															
										(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)		(11)		(12)		(13)		(14)		(15)			
Residential Heating (R3)										November 1, 2023										April 30, 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)										84		118		137		131		104		66		640				37		19		14		12		21		52		155		795	
Winter:																																									
Cust. Chg										\$ 15.39		\$ 15.39		\$ 15.39		\$ 15.39		\$ 15.39		\$ 15.39		\$ 92.34																			
Headblock										\$ 0.6519		\$ 0.6167		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -																	
Tailblock										\$ 0.6519		\$ 0.6167		\$ 52.01		\$ 73.04		\$ 84.37		\$ 80.54		\$ 64.03		\$ 40.68																	
HB Threshold										-		-																													
Summer:																																									
Cust. Chg										\$ 15.39		\$ 15.39		\$ 15.39		\$ 15.39		\$ 15.39		\$ 15.39		\$ 92.34																			
Headblock										\$ 0.6519		\$ 0.6167		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -																	
Tailblock										\$ 0.6519		\$ 0.6167		\$ 52.01		\$ 73.04		\$ 84.37		\$ 80.54		\$ 64.03		\$ 40.68																	
HB Threshold										-		-																													
Total Base Rate Amount										\$ 67.40		\$ 88.43		\$ 99.76		\$ 95.93		\$ 79.42		\$ 56.07		\$ 487.02																			
COG Rate - (Seasonal)										\$ 0.6175		\$ 0.6175		\$ 0.6175		\$ 0.6175		\$ 0.6175		\$ 0.6175		\$ 0.6175																			
COG amount										\$ 52.08		\$ 73.13		\$ 84.48		\$ 80.65		\$ 64.11		\$ 40.74		\$ 395.19																			
LDAC										\$ 0.1180		\$ 0.1180		\$ 0.1212		\$ 0.2006		\$ 0.2006		\$ 0.2006		\$ 0.1575																			
LDAC amount										\$ 9.95		\$ 13.98		\$ 16.58		\$ 26.20		\$ 20.83		\$ 13.23		\$ 100.77																			
Total Bill										\$ 129.44		\$ 175.54		\$ 200.83		\$ 202.78		\$ 164.35		\$ 110.04		\$ 982.97																			
November 2022										October 2023																															
Residential Heating (R3)										November 1, 2022										April 30, 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)										84		118		137		131		104		66		640				37		19		14		12		21		52		155		795	
Winter:																																									
Cust. Chg										\$ 15.39		\$ 15.39		\$ 15.39		\$ 15.39		\$ 15.39		\$ 92.34																					
Headblock										\$ 0.6519		\$ 0.6167		\$ -		\$ -		\$ -		\$ -		\$ -																			
Tailblock										\$ 0.6519		\$ 0.6167		\$ 54.98		\$ 77.21		\$ 89.19		\$ 85.14		\$ 67.68		\$ 43.00																	
HB Threshold										-		-		\$ 46.97																											
Summer:																																									
Cust. Chg										\$ 15.39		\$ 15.39		\$ 15.39		\$ 15.39		\$ 15.39		\$ 92.34																					
Headblock										\$ 0.6519		\$ 0.6167		\$ -		\$ -		\$ -		\$ -		\$ -																			
Tailblock										\$ 0.6519		\$ 0.6167		\$ 54.98		\$ 77.21		\$ 89.19		\$ 85.14		\$ 67.68		\$ 43.00																	
HB Threshold										-		-		\$ 46.97																											
Total Base Rate Amount										\$ 70.37		\$ 92.60		\$ 104.58		\$ 100.53		\$ 83.07		\$ 58.39		\$ 509.54																			
COG Rate - (Seasonal)										\$ 1.4300		\$ 1.2551		\$ 1.3292		\$ 0.4525		\$ 0.2443		\$ 0.1326		\$ 0.8505																			
COG amount										\$ 120.61		\$ 148.65		\$ 181.86		\$ 59.10		\$ 25.36		\$ 8.75		\$ 544.32																			
LDAC										\$ 0.1086		\$ 0.1086		\$ 0.1113		\$ 0.1113		\$ 0.1113		\$ 0.1113		\$ 0.1104																			
LDAC amount										\$ 9.16		\$ 12.86		\$ 15.23		\$ 14.54		\$ 11.56		\$ 7.34		\$ 70.68																			
Total Bill										\$ 200.14		\$ 254.10		\$ 301.66		\$ 174.16		\$ 119.99		\$ 74.48		\$ 1,124.55																			
DIFFERENCE:																																									
Total Bill										\$ (70.70)		\$ (78.57)		\$ (100.83)		\$ 28.61		\$ 44.36		\$ 35.56		\$ (141.57)																			
% Change										35.33%		30.92%		33.43%		16.43%		36.97%		47.74%		12.59%																			
Base Rate										\$ (2.97)		\$ (4.17)		\$ (4.82)		\$ (4.60)		\$ (3.65)		\$ (2.32)		\$ (22.53)																			
% Change										-4.22%		-4.50%		-4.60%		-4.57%		-4.40%		-3.98%		-4.42%																			
COG & LDAC										\$ (67.74)		\$ (74.40)		\$ (96.02)		\$ 33.21		\$ 48.02		\$ 37.88		\$ (119.04)																			
% Change										-52.20%		-46.07%		-48.72%		45.10%		130.06%		235.42%		-19.36%																			
										\$ (22.52)		\$ (11.03)		\$ (7.37)		\$ (2.31)		\$ (0.84)		\$ (2.06)		\$ (46.14)																			
										24.52%		20.29%		17.25%		6.50%		1.81%		2.24%		12.71%																			
										\$ (1.31)		\$ (0.68)		\$ (0.49)		\$ -		\$ -		\$ (2.48)																					
										-3.31%		-2.43%		-1.99%		0.00%		0.00%		-1.30%																					
										\$ (21.20)		\$ (10.35)		\$ (6.88)		\$ (2.31)		\$ (0.84)		\$ (2.06)		\$ (43.65)																			
										-40.69%		-39.25%		-37.57%		-18.44%		-4.61%		-4.61%		-25.34%																			

1 Annual Bill Comparisons, May 23 Oct 23 Filing vs May 24 Oct 24										Schedule 8									
2 November 2023 October 2024										Off-Peak									
3 Commercial Rate (G 41)										Page 2 of 5									
										(15)									

1 Annual Bill Comparisons, May 23 Oct 23 Filing vs May 24 Oct 24
2 November 2023 October 2024
3 C&I High Winter Use Medium G 42

		(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)		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
Winter: 9/1/2022 9/1/2023																
Cust. Chg	\$ 189.84 \$ 182.42	\$ 182.42	\$ 182.42	\$ 182.42	\$ 182.42	\$ 182.42	\$ 182.42	\$ 1,094.52								
Headblock	\$ 0.4634 \$ 0.4485	\$ 448.50	\$ 448.50	\$ 448.50	\$ 448.50	\$ 448.50	\$ 448.50	\$ 2,691.00								
Tailblock	\$ 0.3212 \$ 0.3063	\$ 472.62	\$ 771.46	\$ 972.35	\$ 918.33	\$ 645.02	\$ 274.94	\$ 4,054.72								
HB Threshold	1,000 1,000															
Summer: 9/1/2022 9/1/2023																
Cust. Chg	\$ 189.84 \$ 182.42								\$ 182.42	\$ 182.42	\$ 182.42	\$ 182.42	\$ 182.42	\$ 182.42	\$ 1,094.52	\$ 2,189.04
Headblock	\$ 0.4634 \$ 0.4485								\$ 179.40	\$ 179.40	\$ 179.40	\$ 153.66	\$ 179.40	\$ 179.40	\$ 1,050.66	\$ 3,741.66
Tailblock	\$ 0.3212 \$ 0.3063								\$ 193.36	\$ 52.72	\$ 5.99	\$ -	\$ 67.22	\$ 370.54	\$ 689.83	\$ 4,744.55
HB Threshold	400 400															
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
COG Rate - (Seasonal)		\$ 0.6173	\$ 0.6173	\$ 0.6173	\$ 0.6173	\$ 0.6173	\$ 0.6173	\$ 0.6173	\$ 0.6261	\$ 0.6261	\$ 0.6261	\$ 0.6261	\$ 0.6261	\$ 0.6261	\$ 0.6261	\$ 0.6190
COG amount		\$ 1,569.80	\$ 2,172.06	\$ 2,576.92	\$ 2,468.04	\$ 1,917.23	\$ 1,171.40	\$ 11,875.46	\$ 645.69	\$ 358.20	\$ 262.68	\$ 214.51	\$ 387.83	\$ 1,007.86	\$ 2,876.77	\$ 14,752.23
LDAC		\$ 0.0957	\$ 0.0957	\$ 0.0957	\$ 0.0957	\$ 0.0957	\$ 0.0957	\$ 0.0957	\$ 0.0909	\$ 0.0909	\$ 0.0909	\$ 0.0909	\$ 0.0909	\$ 0.0909	\$ 0.0909	\$ 0.0948
LDAC amount		\$ 243.37	\$ 336.74	\$ 399.50	\$ 382.62	\$ 297.23	\$ 181.60	\$ 1,841.05	\$ 93.74	\$ 52.01	\$ 38.14	\$ 31.14	\$ 56.31	\$ 146.33	\$ 417.66	\$ 2,258.71
Total Bill		\$ 2,916.71	\$ 3,911.18	\$ 4,579.69	\$ 4,399.91	\$ 3,490.40	\$ 2,258.87	\$ 21,556.76	\$ 1,294.62	\$ 824.74	\$ 668.62	\$ 581.74	\$ 873.18	\$ 1,886.54	\$ 6,129.43	\$ 27,686.19

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							
		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)		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
Winter: 9/1/2022 9/1/2023																
Cust. Chg	\$ 189.84 \$ 182.42	\$ 189.84	\$ 189.84	\$ 189.84	\$ 189.84	\$ 189.84	\$ 189.84	\$ 1,139.04								
Headblock	\$ 0.4634 \$ 0.4485	\$ 463.40	\$ 463.40	\$ 463.40	\$ 463.40	\$ 463.40	\$ 463.40	\$ 2,780.40								
Tailblock	\$ 0.3212 \$ 0.3063	\$ 495.62	\$ 808.99	\$ 1,019.65	\$ 963.00	\$ 676.39	\$ 288.32	\$ 4,251.97								
HB Threshold	1,000 1,000															
Summer: 9/1/2022 9/1/2023																
Cust. Chg	\$ 189.84 \$ 182.42								\$ 189.84	\$ 189.84	\$ 189.84	\$ 182.42	\$ 182.42	\$ 182.42	\$ 1,116.78	\$ 2,255.82
Headblock	\$ 0.4634 \$ 0.4485								\$ 185.36	\$ 185.36	\$ 185.36	\$ 153.66	\$ 179.40	\$ 179.40	\$ 1,068.54	\$ 3,848.94
Tailblock	\$ 0.3212 \$ 0.3063								\$ 202.77	\$ 55.28	\$ -	\$ -	\$ -	\$ -	\$ 258.05	\$ 4,510.02
HB Threshold	400 400															
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
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
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
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
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
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 DIFFERENCE:

58 Total Bill	\$ (2,090.65)	\$ (2,274.49)	\$ (3,013.89)	\$ 618.29	\$ 1,125.28	\$ 896.61	\$ (4,738.86)		\$ (699.21)	\$ (372.26)	\$ (253.29)	\$ (94.36)	\$ (12.26)	\$ 164.01	\$ (1,267.35)	\$ (6,006.22)
59 % Change	41.75%	36.77%	39.69%	16.35%	47.58%	65.82%	18.02%		35.07%	31.10%	27.47%	13.96%	1.38%	9.52%	17.13%	17.83%
60 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
61 % 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%
62 COG & LDAC	\$ (2,045.34)	\$ (2,214.64)	\$ (2,944.27)	\$ 685.28	\$ 1,178.98	\$ 932.30	\$ (4,407.70)		\$ (676.42)	\$ (356.31)	\$ (245.89)	\$ (94.36)	\$ (79.47)	\$ (206.53)	\$ (1,658.99)	\$ (6,066.69)
63 % Change	-53.01%	-46.89%	-49.73%	31.65%	113.86%	221.61%	-24.32%		-47.77%	-46.48%	-44.98%	-27.75%	-15.18%	-15.18%	-33.49%	-26.29%

1 Annual Bill Comparisons, May 23 Oct 23 Filing vs May 24 Oct 24															Schedule 8	
2 November 2023 October 2024															Off-Peak	
3 Commercial Rate (G 52)															Page 4 of 5	

1 **Residential Heating**

2		<u>Summer 2022</u>	<u>Summer 2023</u>
3	Customer Charge	\$ 15.39	\$ 15.39
4	First 20 Therms	\$ 0.6519	\$ 0.6167
5	Excess 20 Therms	\$ 0.6519	\$ 0.6167
6	LDAC	\$ 0.1164	\$ 0.2006
7	COG	\$ 0.8073	\$ 0.6267
8	Total Adjust	\$ 0.9237	\$ 0.8273

9			
10			
11			
12			
13		<u>Summer 2022 COG @</u>	<u>Summer 2023 Cog @</u>
14		\$ 0.9237	\$ 0.8273
15			
16	Cooking alone	5 \$ 23.27	\$ 22.61
17			
18		10 \$ 31.15	\$ 29.83
19			
20		20 \$ 46.90	\$ 44.27
21			
22	Water Heating alone	30 \$ 62.66	\$ 58.71
23			
24		45 \$ 86.29	\$ 80.37
25			
26		50 \$ 94.17	\$ 87.59
27			
28	Heating Alone	80 \$ 133.56	\$ 123.69
29			
30		125 \$ 224.94	\$ 207.44
31			
32		150 \$ 251.73	\$ 231.99
33			
34		200 \$ 330.50	\$ 304.19
35			

Total		Base Rate		COG		LDAC	
\$ Impact	% Impact	\$ Impact	% Impact	\$ Impact	% Impact	\$ Impact	% Impact
\$ (0.10)	-10%						
\$ (0.66)	-3%	\$ (0.18) -1%		\$ (0.90) -4%		\$ 0.42	2%
\$ (1.32)	-4%	\$ (0.35) -1%		\$ (1.81) -6%		\$ 0.84	3%
\$ (2.63)	-6%	\$ (0.70) -2%		\$ (3.61) -8%		\$ 1.68	4%
\$ (3.95)	-6%	\$ (1.06) -2%		\$ (5.42) -9%		\$ 2.53	4%
\$ (5.92)	-7%	\$ (1.58) -2%		\$ (8.13) -10%		\$ 3.79	4%
\$ (6.58)	-7%	\$ (1.76) -2%		\$ (9.03) -10%		\$ 4.21	4%
\$ (9.87)	-7%	\$ (2.64) -2%		\$ (13.54) -11%		\$ 6.32	5%
\$ (17.50)	-8%	\$ (4.68) -2%		\$ (24.02) -12%		\$ 11.20	5%
\$ (19.74)	-8%	\$ (5.28) -2%		\$ (27.09) -12%		\$ 12.63	5%
\$ (26.31)	-8%	\$ (7.04) -2%		\$ (36.12) -12%		\$ 16.84	5%

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

Basic assumptions:

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

		Column A	Column B	Column C	Column D	Column E	Column F
		Design Day Demand, Dekatherm	Adjusted Design Day Demand, Dt	Percent of Total		Avg Daily Base Use Load, Dt	Remaining Design Day Demand
1	RATE R-1-Resi Non-Htg	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	<u>13,984</u>	8.339%		<u>4,742</u>	<u>9,242</u>
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)	<u>\$0</u>					
34	Subtotal Peaking Costs	<u>\$1,550,000</u>	<u>19,855</u>	\$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	<u>1,550,000</u>	<u>19,855</u>	<u>\$6.5054</u>			
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% <u>687,829</u>	<u>8,811</u>	<u>\$6.5054</u>		
50	Total		44.378% 9,572,024	74,416	\$10.7190		
51							

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

				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
65						1.0000
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
73			41.782%	86%		0.9987 (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
81						1.0080 (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**

Schedule 10A

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3 **2024 Summer Cost of Gas Filing**

4 **Correction Factor Calculation**

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6

7

8 Data Source: Schedule 10B

	d	e	f	g	h	i	Total Sales
	May	June	July	Aug	Sep	Oct	
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
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
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

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 Correction Factor =

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

33 Correction Factor =

99.7638%

34

35

36 **Allocation Calculation for Miscellaneous Overhead**

37

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%

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

Schedule 10B

2

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

4 **2024 Summer Cost of Gas Filing**

5

6

7 **Firm Sales**

8

	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Subtotal OP 24	Total
9 R-1	52,662	43,099	40,191	37,249	39,636	55,445	268,282	770,550
10 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
11 R-4	233,018	116,445	85,399	75,793	114,474	292,951	918,079	4,624,673
12 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
13								
14 G-41	670,264	314,756	225,458	174,609	303,478	1,041,040	2,729,606	19,431,458
15 G-42	644,811	334,760	251,143	205,135	369,043	1,081,152	2,886,045	16,233,175
16 G-43	254,936	171,717	145,923	120,884	140,285	316,189	1,149,934	4,557,243
17 G-51	218,961	192,564	190,743	185,001	178,225	233,815	1,199,310	3,086,675
18 G-52	237,398	207,695	208,635	215,082	201,292	255,186	1,325,289	3,437,812
19 G-53	293,608	257,701	252,979	259,409	261,685	321,410	1,646,791	4,184,845
20 G-54	80,753	32,231	33,170	33,365	26,568	28,270	234,356	467,619
21 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
22								
23 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
24								
25 Transportation Sales								
26								
27 G-41	238,915	132,942	94,957	72,754	139,002	364,497	1,043,068	5,333,513
28 G-42	934,466	516,154	392,978	321,440	553,593	1,398,354	4,116,985	19,618,724
29 G-43	498,607	335,688	271,980	236,013	382,815	701,647	2,426,750	8,844,196
30 G-51	65,138	57,470	55,740	57,207	59,924	72,792	368,271	900,430
31 G-52	379,452	325,244	320,657	318,602	339,845	421,831	2,105,631	5,400,561
32 G-53	629,281	616,772	573,484	638,181	679,871	775,145	3,912,734	9,217,170
33 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
34								
35 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
36								
37 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

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

11

12

	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Off Peak May - Oct
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13 Pipeline Gas:

14 Dawn Supply	842,983	655,282	518,079	495,174	612,922	901,154	4,025,595
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15 Niagara Supply	667,764	585,319	584,500	583,125	492,567	787,845	3,701,120
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16 TGP Supply (Gulf)	929,663	-	-	-	-	827,579	1,757,242
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17 Dracut Supply 1 - Baseload	-	-	-	-	-	-	0
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18 Dracut Supply 2 - Swing	-	-	-	-	-	504,981	504,981
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19 Dracut Supply 3 - Swing	-	-	-	-	-	-	-
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20 Constellation Combo	-	-	-	-	-	-	0
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21 LNG Truck	-	-	4,473	18,729	17,901	100,708	141,811
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22 Propane Truck	81,143	75,360	49,199	71,793	73,523	80,427	431,444
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23 PNGTS	216,617	194,624	196,156	93,643	189,881	218,149	1,109,071
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24 Portland Natural Gas	889,892	29,984	-	-	-	922,990	1,842,866
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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
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26	9,387,227	7,131,644	5,237,418	5,094,181	5,250,171	10,766,696	42,867,337
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27

28 Storage Gas:

29	-	-	-	-	-	-	0
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30

31 Produced Gas:

32 LNG Vapor	20,462	19,004	18,529	18,104	18,541	20,282	114,922
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33 Propane	-	-	-	-	-	-	0
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34	20,462	19,004	18,529	18,104	18,541	20,282	114,922
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35

36 Less - Gas Refills:

37 LNG Truck	-	-	(6,389)	(9,989)	(53,704)	(69,936)	(140,018)
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38 Propane	(81,143)	(75,360)	(49,199)	(71,793)	(73,523)	(80,427)	(431,444)
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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)
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40	(3,801,037)	(3,419,362)	(2,105,957)	(1,750,500)	(1,479,408)	(3,577,243)	(16,133,507)
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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
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43

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

Schedule 11B

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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

52

	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Off Peak 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

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

4 **Capacity Utilization**

5 **Volumes (Therms)**

6

7

8

9

10

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)

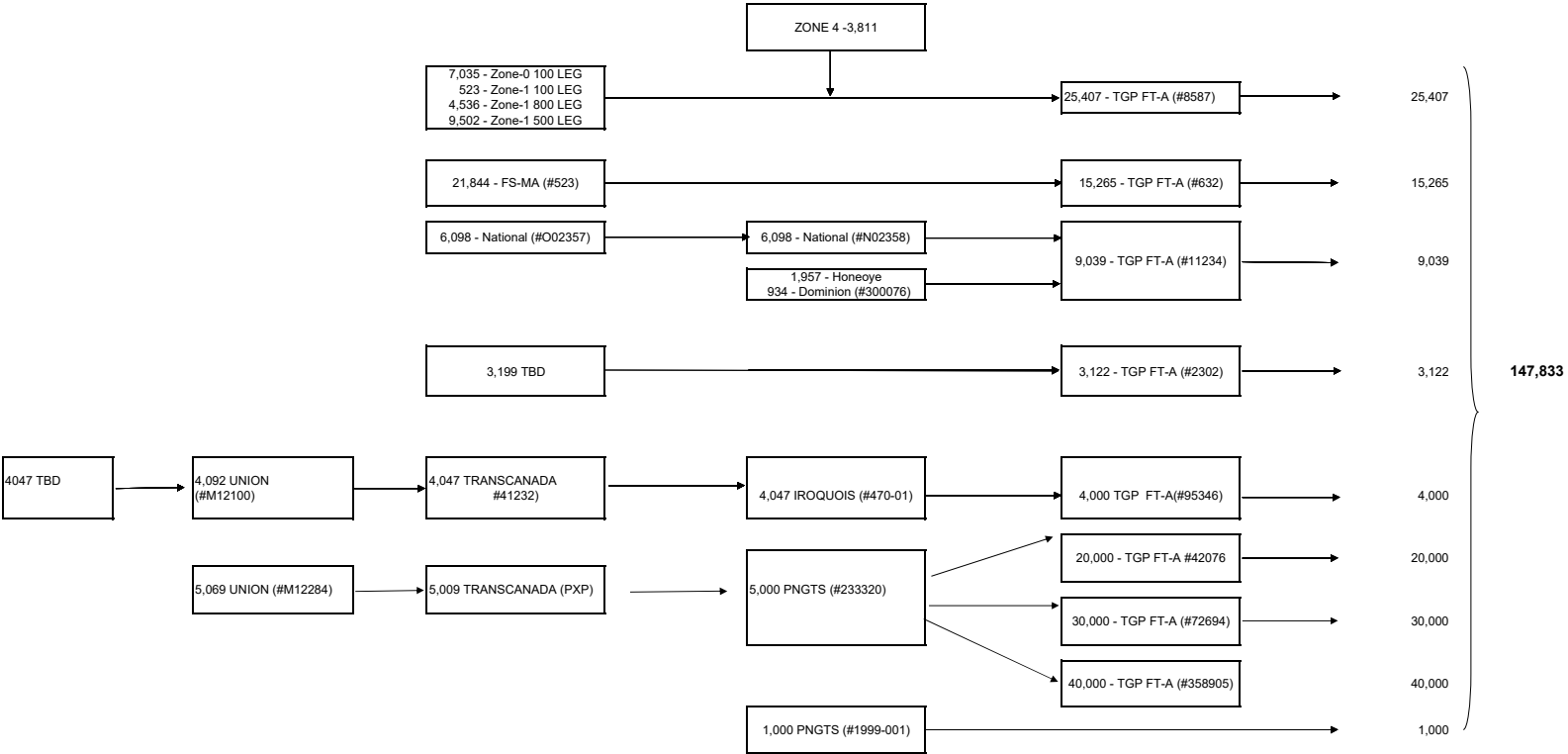
36 TGP Storage Refill (15,562,044) (16,989,374)

37

38 Subtotal Refills (16,133,507) (17,586,909)

39

40 Total Sendout Volumes 26,848,752 26,721,201



Agreements for Gas Supply and Transportation

Schedule 12
Page 2 of 2

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	002358	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.

3 Storage Inventory

4 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 In 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 In 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	In 11 * In 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	In 17 * In 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	In 22 /In 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	

40	Liquid Propane Gas (LPG)									
42			May-24 (Estimate)	Jun-24 (Estimate)	Jul-24 (Estimate)	Aug-24 (Estimate)	Sep-24 (Estimate)	Oct-24 (Estimate)	Total	
44	Beginning Balance		57,408	57,408	57,408	62,328	69,508	76,860	57,408	
46	Injections	Sch 11A In 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 In 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	In 46 * In 69	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 109,380	109,380	
61	Subtotal		\$ 888,223	\$ 888,223	\$ 888,223	\$ 888,223	\$ 888,223	\$ 997,604		
63	Withdrawals	In 52 * In 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, In 166 * 10	0	0	0	0	0	\$ 13.60		

70 Liberty Utilities (EnergyNorth Natural Gas) Corp.

Schedule 13

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72 Off Peak 2024 Summer Cost of Gas Filing

73

74 Liquid Natural Gas (LNG)

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