

REDACTED

THE STATE OF NEW HAMPSHIRE
BEFORE THE
NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION

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

Winter 2022-2023 and Summer 2023 Cost of Gas

Docket No. DG 22-045

Technical Statement of Heather M. Tebbetts

October 7, 2022

A. Purpose of Technical Statement

On September 2, 2022, Liberty Utilities (EnergyNorth Natural Gas) Corp. (“Liberty” or “the Company”) submitted a winter 2022/2023 and summer 2023 cost of gas (“COG”) filing outlining its proposed COG for the winter period (November 1, 2022, through April 30, 2023) and the summer period (May 1, 2023, through October 31, 2023). The Company requested rates to be approved for effect on November 1, 2022. As part of the procedural schedule in this docket, the Company provides the following updates as discussed below.

The purpose of this technical statement is to include updated actual data through August 2022 for the COG, along with a market pricing update.

The Company has also made adjustments to the LDAC per Commission Order Nos. 26,691 and 26,692, directing the Company to remove RDAF under-collection recovery, remove gas holder cost recovery, and reduce the amount of recoverable rate case expenses to \$680,770.

B. COG

The Company’s September 2, 2022, filing proposed firm sales winter COG rates of \$1.7335 per therm for residential customers, \$1.7336 per therm for commercial high winter use customers, and \$1.7331 per therm for low winter use customers. That filing included actual data only through July 2022. The Company also proposed firm sales summer COG rates of \$1.0109 per therm for residential customers, \$1.0111 per therm for commercial/industrial high winter use customers, and \$1.0106 per therm for commercial/industrial low winter use customers.

The adjustments made to the model that are reflected in this update filing include using August actual revenues and expenses on Peak Schedule 3. For Peak Schedule 8, the rates used to calculate the bill impact have been updated to reflect rates effective as of September 1, 2022, rather than August 1, 2022. Off-Peak Schedule 3, column (c), includes the most recent expected under-recovery using August actual revenues and expenses. Off-Peak Schedule 8 rates used to calculate the bill impact have been updated with September 1, 2022, rates, and the summer period 2022 COG rates were updated to reflect the rates in effect during those months. The original filing did not have those rates updated to reflect 2022 summer COG rates. The FPO rates remain unchanged.

The NYMEX pricing has been updated with clearing pricing as of September 30, 2022. The table below provides a comparison of the NYMEX prices used in the initial and updated filings.

Table 1 – NYMEX Pricing Change

NYMEX Strip Average by Filing			
9/2/2022 filing	10/7/2022 filing	\$ Change	% Change
\$8.3468	\$ 6.5422	(\$1.80)	-22%

C. LDAC

The Company's September 2, 2022, filing proposed a total LDAC rate of \$0.1508 for residential customers and \$0.0915 for commercial customers. That filing included actual data only through July 2022. The adjustments made below provide for proposed rates of \$0.1110 for residential customers and \$0.0888 for commercial customers.

The PTAM was adjusted for August actual data and interest, which resulted in a lower rate of \$0.0124 versus \$0.0129 as filed on September 2, 2022.

The RCEF was adjusted for the orders noted above, which resulted in a lower rate of \$0.0044 versus \$0.0050 as filed on September 2, 2022.

D. Bill Impacts

The table below provides the change in rates from the initial filing made on September 2, 2022, to this October 7, 2022, update filing.

Table 2 – Rate Changes

Winter Rates Comparison				
Rate Class	9/2/22 Rate	10/7/22 Rate	\$ Change	% Change
Residential	\$1.7335	\$1.4300	(\$0.3035)	-18%
Low Income	\$0.9534	\$0.7865	(\$0.1669)	-18%
High Winter Use	\$1.7336	\$1.4301	(\$0.3035)	-18%
Low Winter Use	\$1.7331	\$1.4296	(\$0.3035)	-18%

Summer Rates Comparison				
Rate Class	9/2/22 Rate	10/7/22 Rate	\$ Change	% Change
Residential	\$1.0109	\$1.0269	\$0.0160	2%
Low Income	\$1.0109	\$1.0269	\$0.0160	2%
High Winter Use	\$1.0111	\$1.0271	\$0.0160	2%
Low Winter Use	\$1.0106	\$1.0266	\$0.0160	2%

FPO Winter Rate Comparison				
Rate Class	FPO	10/7/22 Non-FPO	\$ Difference	% Difference
Residential	\$1.7535	\$1.4300	\$0.3235	18%
Low Income	\$0.9644	\$0.7865	\$0.1779	18%

Winter Bill Impact

Rate Class	2022-2023	2021-2022	\$ Change	% Change
Residential	\$ 1,453.54	\$ 1,039.04	\$414.50	40%
Low Income	\$ 830.46	\$ 804.09	\$26.37	3%
High Winter Use	\$4,105.53	\$ 2,784.95	\$1,320.58	47%
Low Winter Use	\$ 34,817.72	\$ 23,469.16	\$11,348.56	48%

Summer Bill Impact

Rate Class	2022-2023	2021-2022	\$ Change	% Change
Residential	\$ 344.40	\$ 317.31	\$27.08	9%
Low Income	\$ 344.40	\$ 317.31	\$27.08	9%
High Winter Use	\$ 853.32	\$ 767.28	\$86.03	11%
Low Winter Use	\$ 19,583.72	\$ 20,691.55	(\$1,107.83)	-5%

THIS PAGE LEFT BLANK INTENTIONALLY

<u>Page</u>	<u>Revision</u>
Title	Original
TOC i	First Revised
TOC ii	Original
TOC iii	First Revised
TOC iv	Original
1	Thirty-first Revised
2	Second Revised
3	Twenty-ninth Revised
4	Twenty-seventh Revised
5	First Revised
6	Original
7	Original
8	Original
9	First Revised
10	Original
11	Original
12	Original
13	Original
14	Original
15	Original
16	Original
17	Original
18	Original
19	Original
20	Original
21	Original
22	Original
23	Original
24	Original
25	Original
26	Original

DATED:

EFFECTIVE: November 1, 2022

ISSUED BY: /s/Neil Proudman
Neil Proudman
TITLE: President

<u>Page</u>	<u>Revision</u>
58	Original
59	Second Revised
60	Original
61	Second Revised
62	Original
63	Second Revised
64	Original
65	Second Revised
66	Original
67	Second Revised
68	Original
69	Second Revised
70	Original
71	Second Revised
72	Original
73	Third Revised
74	Original
75	Second Revised
76	Original
77	Second Revised
78	Original
79	Second Revised
80	Original
81	Second Revised
82	Original
83	Second Revised
84	Original
85	Second Revised
86	Original
87	Fifteenth Revised
88	Seventeenth Revised
89	Fifteenth Revised

DATED:

EFFECTIVE: November 1, 2022

ISSUED BY: /s/Neil Proudman
 Neil Proudman
 TITLE: President

<u>Page</u>	<u>Revision</u>
90	Original
91	Second Revised
92	Fourth Revised
93	Eighth Revised
94	Second Revised
95	Seventh Revised
96	Second Revised
97	Fifth Revised
98	Second Revised
99	Second Revised
100	Second Revised
101	Seventh Revised
102	Original
103	Original
104	Original
105	Original
106	Original
107	Original
108	Original
109	Original
110	Original
111	Original
112	Original
113	Original
114	Original
115	Original
116	Original
117	Original
118	Original
119	Original
120	Original
121	Original
122	Original
123	Original

DATED:

EFFECTIVE: November 1, 2022

ISSUED BY: /s/Neil Proudman

Neil Proudman
TITLE: President

NHPUC NO. 11 GAS
LIBERTY UTILITIES

First Revise Page 5
Superseding Original Page 5
Check Sheet

<u>Page</u>	<u>Revision</u>
124	Original
125	Original
126	Original
127	Original
128	Original
129	Original
130	Original
131	Original
132	Original
133	Original
134	Original
135	Original
136	Original
137	Original
138	Original
139	Original
140	Original
141	Original
142	Original
143	Original
144	Original
145	Original
146	Original
147	Original
148	Original
149	Original
150	Original
151	Original
152	Original
153	Second Revised
154	Second Revised

DATED:

EFFECTIVE: November 1, 2022

ISSUED BY: /s/Neil Proudman

Neil Proudman

TITLE: President

II RATE SCHEDULES
FIRM RATE SCHEDULES
FIRM RATE SCHEDULES EXCLUDING KEENE CUSTOMERS

	Rates Effective November 1, 2022 - April 30, 2023				Rates Effective May 1, 2023 - October 31, 2023			
	Winter Period				Summer Period			
	Delivery Charge	Cost of Gas Rate Page 95	LDAC Page 101	Total Rate	Delivery Charge	Cost of Gas Rate Page 92	LDAC Page 101	Total Rate
Residential Non Heating - R-1								
Customer Charge per Month per Meter	\$ 15.39			\$ 15.39	\$ 15.39			\$ 15.39
All therms	\$ 0.5129	\$ 1.4300	\$ 0.1065	\$ 2.0494	\$ 0.5129	\$ 1.0269	\$ 0.1065	\$ 1.6463
Residential Heating - R-3								
Customer Charge per Month per Meter	\$ 15.39			\$ 15.39	\$ 15.39			\$ 15.39
Therms in the first block per month at	\$ 0.6519	\$ 1.4300	\$ 0.1065	\$ 2.1884	\$ 0.6519	\$ 1.0269	\$ 0.1065	\$ 1.7853
Residential Heating - R-4								
Customer Charge per Month per Meter	\$ 8.47			\$ 8.47	\$ 15.39			\$ 15.39
Therms in the first block per month at	\$ 0.3585	\$ 0.7865	\$ 0.1065	\$ 1.2515	\$ 0.6519	\$ 1.0269	\$ 0.1065	\$ 1.7853
Commercial/Industrial - G-41								
Customer Charge per Month per Meter	\$ 63.30			\$ 63.30	\$ 63.30			\$ 63.30
Size of the first block	100 Therms				20 therms			
Therms in the first block per month at	\$ 0.5088	\$ 1.4301	\$ 0.0843	\$ 2.0232	\$ 0.5088	\$ 1.0271	\$ 0.0843	\$ 1.6202
All therms over the first block per month at	\$ 0.3550	\$ 1.4301	\$ 0.0843	\$ 1.8694	\$ 0.3550	\$ 1.0271	\$ 0.0843	\$ 1.4664
Commercial/Industrial - G-42								
Customer Charge per Month per Meter	\$ 189.84			\$ 189.84	\$ 189.84			\$ 189.84
Size of the first block	1000 Therms				400 therms			
Therms in the first block per month at	\$ 0.4634	\$ 1.4301	\$ 0.0843	\$ 1.9778	\$ 0.4634	\$ 1.0271	\$ 0.0843	\$ 1.5748
All therms over the first block per month at	\$ 0.3212	\$ 1.4301	\$ 0.0843	\$ 1.8356	\$ 0.3212	\$ 1.0271	\$ 0.0843	\$ 1.4326
Commercial/Industrial - G-43								
Customer Charge per Month per Meter	\$ 811.98			\$ 811.98	\$ 811.98			\$ 811.98
All therms over the first block per month at	\$ 0.2863	\$ 1.4301	\$ 0.0843	\$ 1.8007	\$ 0.1441	\$ 1.0271	\$ 0.0843	\$ 1.2555
Commercial/Industrial - G-51								
Customer Charge per Month per Meter	\$ 63.38			\$ 63.38	\$ 63.38			\$ 63.38
Size of the first block	100 therms				100 therms			
Therms in the first block per month at	\$ 0.3070	\$ 1.4296	\$ 0.0843	\$ 1.8209	\$ 0.3070	\$ 1.0266	\$ 0.0843	\$ 1.4179
All therms over the first block per month at	\$ 0.2084	\$ 1.4296	\$ 0.0843	\$ 1.7223	\$ 0.2084	\$ 1.0266	\$ 0.0843	\$ 1.3193
Commercial/Industrial - G-52								
Customer Charge per Month per Meter	\$ 189.57			\$ 189.57	\$ 189.57			\$ 189.57
Size of the first block	1000 therms				1000 therms			
Therms in the first block per month at	\$ 0.2647	\$ 1.4296	\$ 0.0843	\$ 1.7786	\$ 0.1978	\$ 1.0266	\$ 0.0843	\$ 1.3087
All therms over the first block per month at	\$ 0.1836	\$ 1.4296	\$ 0.0843	\$ 1.6975	\$ 0.1219	\$ 1.0266	\$ 0.0843	\$ 1.2328
Commercial/Industrial - G-53								
Customer Charge per Month per Meter	\$ 838.52			\$ 838.52	\$ 838.52			\$ 838.52
All therms over the first block per month at	\$ 0.1851	\$ 1.4296	\$ 0.0843	\$ 1.6990	\$ 0.0968	\$ 1.0266	\$ 0.0843	\$ 1.2077
Commercial/Industrial - G-54								
Customer Charge per Month per Meter	\$ 839.19			\$ 839.19	\$ 839.19			\$ 839.19
All therms over the first block per month at	\$ 0.0705	\$ 1.4296	\$ 0.0843	\$ 1.5844	\$ 0.0409	\$ 1.0266	\$ 0.0843	\$ 1.1518

Issued:

Effective: November 1, 2022

Issued by:

Neil Proudman
Title: President

Issued in compliance with NHPUC Order No. xx,xxx dated October xx, 2022 in Docket DG 22-045

NHPUC NO. 11 - GAS
LIBERTY UTILITIES

Proposed Fifteenth Revised Page 89
Superseding Proposed Fourteenth Revised Page 89

II RATE SCHEDULES
FIRM RATE SCHEDULES
FIRM RATE SCHEDULES EXCLUDING KEENE CUSTOMERS

	Rates Effective November 1, 2022 - April 30, 2023				Rates Effective May 1, 2023 - October 31, 2023			
	Winter Period				Summer Period			
	<u>Delivery Charge</u>	<u>Cost of Gas Rate Page 95</u>	<u>LDAC Page 101</u>	<u>Total Rate</u>	<u>Delivery Charge</u>	<u>Cost of Gas Rate Page 92</u>	<u>LDAC Page 101</u>	<u>Total Rate</u>
Residential Non Heating - R-5								
Customer Charge per Month per Meter	\$ 20.01			\$ 20.01	\$ 20.01			\$ 20.01
All Therms	\$ 0.6668	\$ 1.4300	\$ 0.1065	\$ 2.2033	\$ 0.6668	\$ 1.0269	\$ 0.1065	\$ 1.8002
Residential Heating - R-6								
Customer Charge per Month per Meter	\$ 20.01			\$ 20.01	\$ 20.01			\$ 20.01
Therms in the first block per month at	\$ 0.8475	\$ 1.4300	\$ 0.1065	\$ 2.3840	\$ 0.6668	\$ 1.0269	\$ 0.1065	\$ 1.8002
Residential Heating - R-7								
Customer Charge per Month per Meter	\$ 11.01			\$ 11.01	\$ 20.01			\$ 20.01
Therms in the first block per month at	\$ 0.4531	\$ 0.7865	\$ 0.1065	\$ 1.3461	\$ 0.6668	\$ 1.0269	\$ 0.1065	\$ 1.8002
Commercial/Industrial - G-44								
Customer Charge per Month per Meter	\$ 82.29			\$ 82.29	\$ 82.29			\$ 82.29
Size of the first block	100 therms				20 therms			
Therms in the first block per month at	\$ 0.6614	\$ 1.4301	\$ 0.0843	\$ 2.1758	\$ 0.6614	\$ 1.0271	\$ 0.0843	\$ 1.7728
All therms over the first block per month at	\$ 0.4614	\$ 1.4301	\$ 0.0843	\$ 1.9758	\$ 0.4614	\$ 1.0271	\$ 0.0843	\$ 1.5728
Commercial/Industrial - G-45								
Customer Charge per Month per Meter	\$ 246.78			\$ 246.78	\$ 246.78			\$ 246.78
Size of the first block	1000 therms				400 therms			
Therms in the first block per month at	\$ 0.6023	\$ 1.4301	\$ 0.0843	\$ 2.1167	\$ 0.6023	\$ 1.0271	\$ 0.0843	\$ 1.7137
All therms over the first block per month at	\$ 0.4175	\$ 1.4301	\$ 0.0843	\$ 1.9319	\$ 0.4175	\$ 1.0271	\$ 0.0843	\$ 1.5289
Commercial/Industrial - G-46								
Customer Charge per Month per Meter	\$ 1,055.58			\$ 1,055.58	\$ 1,055.58			\$ 1,055.58
All therms over the first block per month at	\$ 0.3722	\$ 1.4301	\$ 0.0843	\$ 1.8866	\$ 0.1873	\$ 1.0271	\$ 0.0843	\$ 1.2987
Commercial/Industrial - G-55								
Customer Charge per Month per Meter	\$ 82.39			\$ 82.39	\$ 82.39			\$ 82.39
Size of the first block	100 therms				100 therms			
Therms in the first block per month at	\$ 0.3992	\$ 1.4296	\$ 0.0843	\$ 1.9131	\$ 0.3992	\$ 1.0266	\$ 0.0843	\$ 1.5101
All therms over the first block per month at	\$ 0.2710	\$ 1.4296	\$ 0.0843	\$ 1.7849	\$ 0.2710	\$ 1.0266	\$ 0.0843	\$ 1.3819
Commercial/Industrial - G-56								
Customer Charge per Month per Meter	\$ 246.43			\$ 246.43	\$ 246.43			\$ 246.43
Size of the first block	1000 therms				1000 therms			
Therms in the first block per month at	\$ 0.3442	\$ 1.4296	\$ 0.0843	\$ 1.8581	\$ 0.2572	\$ 1.0266	\$ 0.0843	\$ 1.3681
All therms over the first block per month at	\$ 0.2387	\$ 1.4296	\$ 0.0843	\$ 1.7526	\$ 0.1585	\$ 1.0266	\$ 0.0843	\$ 1.2694
Commercial/Industrial - G-57								
Customer Charge per Month per Meter	\$ 1,090.08			\$ 1,090.08	\$ 1,090.08			\$ 1,090.08
All therms over the first block per month at	\$ 0.2407	\$ 1.4296	\$ 0.0843	\$ 1.7546	\$ 0.1259	\$ 1.0266	\$ 0.0843	\$ 1.2368
Commercial/Industrial - G-58								
Customer Charge per Month per Meter	\$ 1,090.95			\$ 1,090.95	\$ 1,090.95			\$ 1,090.95
All therms over the first block per month at	\$ 0.0916	\$ 1.4296	\$ 0.0843	\$ 1.6055	\$ 0.0531	\$ 1.0266	\$ 0.0843	\$ 1.1640

Issued:

Effective November 1, 2022

Issued by:

Neil Proudman
President

Issued in compliance with NHPUC Order No. xx,xxx dated October xx, 2022 in Docket DG 22-045

NHPUC NO. 11 - GAS
LIBERTY UTILITIES

Proposed Third Revised Page 91
Superseding Proposed Second Revised Page 91

Anticipated Cost of Gas
PERIOD COVERED: SUMMER PERIOD, MAY 1, 2023 THROUGH OCTOBER 31, 2023
(REFER TO TEXT IN SECTION 16 COST OF GAS CLAUSE)

	(Col 1)	(Col 2)	(Col 3)
ANTICIPATED DIRECT COST OF GAS			
Purchased Gas:			
Demand Costs:		\$ 3,233,514	
Supply Costs:		\$ 9,171,762	
Storage Gas:			
Demand, Capacity:		\$ -	
Commodity Costs:		\$ -	
Produced Gas:		\$ 152,643	
Hedged Contract (Savings)/Loss		\$ -	
Unadjusted Anticipated Cost of Gas			\$ 12,557,918
Adjustments:			
Prior Period (Over)/Under Recovery (as of 9/1/2022 estimated COG)		\$ 10,637,079	
Interest		\$ 457,126	
Prior Period Adjustments		\$ -	
Broker Revenues		\$ -	
Refunds from Suppliers		\$ -	
Fuel Financing		\$ -	
Transportation CGA Revenues		\$ -	
Interruptible Sales Margin		\$ -	
Capacity Release Margin		\$ -	
Hedging Costs		\$ -	
Fixed Price Option Administrative Costs		\$ -	
Total Adjustments			\$ 11,094,205
Total Anticipated Direct Cost of Gas			\$ 23,652,124
Anticipated Indirect Cost of Gas			
Working Capital:			
Total Unadjusted Anticipated Cost of Gas 05/01/23 - 10/31/23)		\$ 12,557,918	
Working Capital Rate - Lead Lag Days / 365		\$ 0	
Prime Rate		\$ 0	
Working Capital Percentage		\$ 0	
Working Capital		\$ 2,677	
Plus: Working Capital Reconciliation (Acct 1163-1424)		\$ 47,458	
Total Working Capital Allowance			\$ 50,135
Bad Debt:			
Total Unadjusted Anticipated Cost of Gas 05/01/23 - 10/31/23)		\$ 12,557,918	
Less: Refunds		\$ -	
Plus: Total Working Capital		\$ 50,135	
Plus: Prior Period (Over)/Under Recovery		\$ 10,637,079	
Subtotal		\$ 23,245,132	
Bad Debt Percentage		\$ 0	
Bad Debt Allowance		\$ 200,176	
Plus: Bad Debt Reconciliation (Acct 1163-1754)		\$ 337,560	
Total Bad Debt Allowance			\$ 537,736
Production and Storage Capacity			\$ -
Miscellaneous Overhead (05/01/19 - 10/31/19)		\$ -	
Times Summer Sales		\$ 23,649	
Divided by Total Sales		\$ 116,430	
Miscellaneous Overhead			\$ -
Total Anticipated Indirect Cost of Gas			\$ 587,870
Total Cost of Gas			\$ 24,239,994

Issued:

Effective: November 1, 2022

Issued by:

Title:

Neil Proudman
President

NHPUC NO. 11 - GAS
LIBERTY UTILITIES

Proposed Fourth Revised Page 92
Superseding Proposed Third Revised Page 92

CALCULATION OF FIRM SALES COST OF GAS RATE

(Refer to Text in Section 17 Cost of Gas Clause)

(Col 3)

Total Anticipated Direct Cost of Gas	\$	23,652,124		
Projected Prorated Sales (05/01/23 - 10/31/23)	\$	23,648,905		
Direct Cost of Gas Rate			\$ 1.0001	per therm
Demand Cost of Gas Rate	\$	3,233,514	\$ 0.1367	per therm
Commodity Cost of Gas Rate	\$	9,324,405	\$ 0.3943	per therm
Adjustment Cost of Gas Rate	\$	<u>11,094,205</u>	\$ 0.4691	per therm
Total Direct Cost of Gas Rate	\$	23,652,124	\$ 1.0001	per therm
Total Anticipated Indirect Cost of Gas	\$	634,259		
Projected Prorated Sales (05/01/23 - 10/31/23)		23,648,905		
Indirect Cost of Gas			\$ 0.0268	per therm
TOTAL PERIOD AVERAGE COST OF GAS EFFECTIVE 05/01/23			\$ 1.0269	per therm

RESIDENTIAL COST OF GAS RATE - 05/01/2023	COGsr	\$ 1.0269	/therm
--	--------------	------------------	--------

COM/IND HIGH WINTER USE COST OF GAS RATE - 05/01/2023	COGsh	\$ 1.0271	/therm
--	--------------	------------------	--------

Average Demand Cost of Gas Rate Effective 05/01/23	\$	0.1367		
*Times: High Winter Use Ratio (Summer)	\$	1.0005	(COG + 25%)	\$ 1.2839
Times: Correction Factor	\$	1.0009		
Adjusted Demand Cost of Gas Rate	\$	0.1369		
Commodity Cost of Gas Rate	\$	0.3943		
Adjustment Cost of Gas Rate	\$	0.4691		
Indirect Cost of Gas Rate	\$	0.0268		
Adjusted Com/Ind High Winter Use Cost of Gas Rate	\$	1.0271		
			(COG + 25%)	\$ 1.2836

COM/IND LOW WINTER USE COST OF GAS RATE - 05/01/2023	COGsl	\$ 1.0266	/therm
---	--------------	------------------	--------

Average Demand Cost of Gas Rate Effective 05/01/23	\$	0.1367		
*Times: Low Winter Use Ratio (Summer)	\$	0.9971	(COG + 25%)	\$ 1.2833
Times: Correction Factor	\$	1.0009		
Adjusted Demand Cost of Gas Rate	\$	0.1364		
Commodity Cost of Gas Rate	\$	0.3943		
Adjustment Cost of Gas Rate	\$	0.4691		
Indirect Cost of Gas Rate	\$	0.0268		
Adjusted Com/Ind Low Winter Use Cost of Gas Rate	\$	1.0266		

Issued:

Effective: November 1, 2022

Neil Proudman
President

Issued in compliance with NHPUC Order No. xx,xxx dated xxxx xx, 2022 in Docket DG 22-045

NHPUC NO. 11 - GAS
LIBERTY UTILITIES

Proposed Second Revised Page 94
Superseding Proposed First Revised Page 94

II. RATE SCHEDULES
CALCULATION OF FIXED WINTER PERIOD COST OF GAS RATE
PERIOD COVERED: WINTER PERIOD, NOVEMBER 1, 2022 THROUGH APRIL 30, 2023
(Refer to Text in Section 17(A) Fixed Price Option Program)

(Col 1)	(Col 2)	(Col 3)
Total Anticipated Direct Cost of Gas	\$ 127,589,939	
Projected Prorated Sales (11/01/22 - 04/30/23)	92,780,984	
Direct Cost of Gas Rate		\$ 1.3752 per therm
Demand Cost of Gas Rate	\$ 12,510,219	\$ 0.1348 per therm
Commodity Cost of Gas Rate	117,533,374	\$ 1.2668 per therm
Adjustment Cost of Gas Rate	3,568,556	\$ 0.0385 per therm
Hedge Underground Storage Contract (Savings)/Loss	\$ (6,022,210)	\$ (0.0472) per therm
Total Direct Cost of Gas Rate	\$ 127,589,939	\$ 1.3752 per therm
Total Anticipated Indirect Cost of Gas	\$ 5,082,758	
Projected Prorated Sales (11/01/22 - 04/30/23)	92,780,984	
Indirect Cost of Gas		\$ 0.0548 per therm
TOTAL PERIOD AVERAGE COST OF GAS EFFECTIVE (11/01/22)		\$ 1.4300
<u>Calculation of FPO Excluding Low Income - Rate Code R-3</u>		
TOTAL PERIOD AVERAGE COST OF GAS EFFECTIVE (11/01/22)		\$ 1.4300
FPO Risk Premium		\$ 0.0200
TOTAL PERIOD FIXED PRICE OPTION COST OF GAS RATE EFFECTIVE (11/01/22)		\$ 1.7535
RESIDENTIAL FPO COST OF GAS RATE - EXCLUDING LOW INCOME - (R-3) 11/01/22		
	COGwr	\$ 1.4500 /therm
 <u>Calculation of FPO for Gas Assistance Program - Rate Code R-4</u>		
TOTAL PERIOD AVERAGE COST OF GAS EFFECTIVE (11/01/22) FPO (Line 13 * 0.55)		\$ 0.7865
FPO Risk Premium (Line 14 * 0.55)		\$ 0.0110
TOTAL PERIOD FIXED PRICE OPTION COST OF GAS RATE EFFECTIVE (11/01/22) (Line 15 * 0.55)		\$ 0.7975
RESIDENTIAL FPO COST OF GAS RATE - LOW INCOME - (R-4) 11/01/22		
	COGwr	\$ 0.7975 /therm

Issued:
Effective: November 1, 2022

Issued by: _____
Neil Proudman
Title: President

Issued in compliance with NHPUC Order No. xx,xxx dated October xx, 2022 in Docket DG 22-045

NHPUC NO. 11 - GAS
LIBERTY UTILITIES

Proposed Seventh Revised Page 95
Superseding Proposed Sixth Revised Page 95

CALCULATION OF FIRM SALES COST OF GAS RATE
PERIOD COVERED: WINTER PERIOD, NOVEMBER 1, 2022 THROUGH APRIL 30, 2023
(Refer to Text in Section 17 Cost of Gas Clause)

(Col 1)	(Col 2)	(Col 3)
Total Anticipated Direct Cost of Gas	\$ 127,589,939	
Projected Prorated Sales (11/01/2022 - 04/30/2023)	92,780,984	
Direct Cost of Gas Rate		\$ 1.3752 per therm
Demand Cost of Gas Rate	\$ 12,510,219	\$ 0.1348 per therm
Commodity Cost of Gas Rate	117,533,374	\$ 1.2668 per therm
Adjustment Cost of Gas Rate	3,568,556	\$ 0.0385
Hedge Contract (Savings)	\$ (6,022,210)	\$ (0.0649) per therm
Total Direct Cost of Gas Rate	\$ 127,589,939	\$ 1.3752 per therm
Total Anticipated Indirect Cost of Gas	\$ 5,082,758	
Projected Prorated Sales (11/01/2022 - 04/30/2023)	92,780,984	
Indirect Cost of Gas		\$ 0.0548 per therm
TOTAL PERIOD AVERAGE COST OF GAS EFFECTIVE 11/01/22		\$ 1.4300 per therm

RESIDENTIAL COST OF GAS RATE - EXCLUDING LOW INCOME - 11/01/22	COGwr	\$ 1.4300 /therm
---	--------------	-------------------------

Maximum (COG + 25%) \$ 1.7875

GAS ASSISTANCE PLAN RESIDENTIAL COST OF GAS RATE R-4 - 11/01/22	COGwr	\$ 0.7865 /therm
--	--------------	-------------------------

Maximum (COG + 25%) \$ 0.9831

C&I HIGH WINTER USE COST OF GAS RATE - 11/01/22	COGwh	\$ 1.4301 /therm
--	--------------	-------------------------

Average Demand Cost of Gas Rate Effective 11/01/22	\$ 0.1348		
Times: High Winter Use Ratio (Winter)	1.0005	Maximum (COG + 25%)	\$ 1.7876
Times: Correction Factor	1.0001		
Adjusted Demand Cost of Gas Rate	\$ 0.1349		
Commodity Cost of Gas Rate	\$ 1.2668		
Adjustment Cost of Gas Rate	\$ 0.0385		
Indirect Cost of Gas Rate	\$ 0.0548		
Hedge Contract (Savings)	\$ (0.0649)		
Adjusted C&I High Winter Use Cost of Gas Rate	\$ 1.4301		

C&I LOW WINTER USE COST OF GAS RATE - 11/01/22	COGwl	\$ 1.4296 /therm
---	--------------	-------------------------

Average Demand Cost of Gas Rate Effective 11/01/22	\$ 0.1348		
Times: Low Winter Use Ratio (Winter)	0.9971	Maximum (COG + 25%)	\$ 1.7870
Times: Correction Factor	1.0001		
Adjusted Demand Cost of Gas Rate	\$ 0.1344		
Commodity Cost of Gas Rate	\$ 1.2668		
Adjustment Cost of Gas Rate	\$ 0.0385		
Indirect Cost of Gas Rate	\$ 0.0548		
Hedge Contract (Savings)	\$ (0.0649)		
Adjusted C&I Low Winter Use Cost of Gas Rate	\$ 1.4296		

Issued:

Effective: November 1, 2022

Issued by:

Neil Proudman
President

Issued in compliance with NHPUC Order No. xx,xxx dated October xx, 2022 in Docket DG 22-045

**NHPUC NO. 11 - GAS
LIBERTY UTILITIES**

**Proposed Second Revised Page 96
Superseding Proposed First Revised Page 96**

**Anticipated Cost of Gas
PERIOD COVERED: WINTER PERIOD, NOVEMBER 1, 2022 THROUGH APRIL 30, 2023
(REFER TO TEXT ON IN SECTION 17 COST OF GAS CLAUSE)**

(Col 1)	(Col 2)	(Col 3)
ANTICIPATED DIRECT COST OF GAS		
Purchased Gas:		
Demand Costs:	\$ 11,510,320	
Supply Costs:	93,418,619	
Storage Gas:		
Demand, Capacity:	\$ 999,899	
Commodity Costs:	11,469,453	
Produced Gas:	12,645,303	
Hedged Contract (Saving)/Loss	(6,022,210)	
Hedge Underground Storage Contract (Saving)/Loss	<u>-</u>	
Unadjusted Anticipated Cost of Gas		\$ 124,021,383
Adjustments:		
Prior Period (Over)/Under Recovery (as of 05/01/20)	\$ 5,378,797	
Interest	(283,633)	
Fuel Inventory Revenue Requirement	515,609	
Broker Revenues	(3,600)	
Refunds from Suppliers	-	
Fuel Financing	-	
Transportation CGA Revenues	(422,021)	
Interruptible Sales Margin	-	
Capacity Release and Off System Sales Margins	(1,676,512)	
Hedging Costs	-	
Fixed Price Option Administrative Costs	59,917	
Total Adjustments	<u>3,568,556</u>	
Total Anticipated Direct Cost of Gas		\$ 127,589,939
Anticipated Indirect Cost of Gas		
Working Capital:		
Total Unadjusted Anticipated Cost of Gas 11/01/22 - 04/30/23	\$ 124,021,383	
Working Capital Rate: Lead Lag Days / 365	0.0705	
Prime Rate	5.50%	
Working Capital Percentage	<u>0.388%</u>	
Working Capital	\$ 480,659	
Plus: Working Capital Reconciliation (Acct 142.20)	<u>(30,998)</u>	
Total Working Capital Allowance		449,661
Bad Debt:		
Total Unadjusted Anticipated Cost of Gas 11/01/22 - 04/30/23	\$ 124,021,383	
Less: Refunds	-	
Plus: Total Working Capital	449,661	
Plus: Prior Period (Over)/Under Recovery	<u>5,378,797</u>	
Subtotal	\$ 129,849,841	
Bad Debt Percentage	<u>0.86%</u>	
Bad Debt Allowance	\$ 1,118,204	
Plus: Bad Debt Reconciliation (Acct 175.52)	<u>(170,566)</u>	
Total Bad Debt Allowance		\$ 947,639
Production and Storage Capacity		\$ 3,685,458
Miscellaneous Overhead 11/01/202- 04/30/23	\$ -	
Times Winter Sales	92,781	
Divided by Total Sales	<u>116,430</u>	
Miscellaneous Overhead		<u>-</u>
Total Anticipated Indirect Cost of Gas		\$ 5,082,758
Total Cost of Gas		<u>\$ 132,672,697</u>

Issued:

Effective: November 1, 2022

Issued by:

Title:

Neil Proudman
President

**NHPUC NO. 11 - GAS
LIBERTY UTILITIES**

**Proposed Second Revised Page 98
Superseding Proposed First Revised Page 98**

II. RATE SCHEDULES
Calculation of Firm Transportation Cost of Gas Rate
PERIOD COVERED: WINTER PERIOD, NOVEMBER 1, 2022 THROUGH APRIL 30, 2023
(Refer to text in Section 16(Q) Firm Transportation Cost of Gas Clause)

(Col 1)	(Col 2)	(Col 3)	(Col 4)
ANTICIPATED COST OF SUPPLEMENTAL GAS SUPPLIES:			
PROPANE	\$ 2,297,840		
LNG	<u>10,347,463</u>		
TOTAL ANTICIPATED COST OF SUPPLEMENTAL GAS SUPPLIES	12,645,303		
ESTIMATED PERCENTAGE USED FOR PRESSURE SUPPORT PURPOSES	<u>8.7%</u>		
ESTIMATED COST OF LIQUIDS USED FOR PRESSURE SUPPORT PURPOSES	<u>\$ 1,100,141</u>		
PROJECTED FIRM THROUGHPUT (THERMS):			
FIRM SALES	92,780,984	68.3%	
FIRM TRANSPORTATION SUBJECT TO FTGG	<u>43,122,920</u>	<u>31.7%</u>	
TOTAL FIRM THROUGHPUT SUBJECT TO COST OF GAS CHARGE	135,903,904	100.0%	
TRANSPORTATION SHARE OF SUPPLEMENTAL GAS SUPPLIES	31.7%	x	\$ 1,100,141 = \$ 349,080
PRIOR (OVER) OR UNDER COLLECTION			<u>72,941</u>
NET AMOUNT TO COLLECT FROM (RETURNED TO) TRANSPORTATION CUSTOMERS			\$ 422,021
PROJECTED FIRM TRANSPORTATION THROUGHPUT			43,122,920
FIRM TRANSPORTATION COST OF GAS			\$ 0.0098

Issued: October xx, 2022

Effective: November 1, 2022

Issued by: _____
Neil Proudman
Title: President

Issued in compliance with NHPUC Order No. xx,xxx dated October xx, 2022 in Docket DG 22-045

NHPUC NO. 11 - GAS
LIBERTY UTILITIES

Proposed Second Revised Page 99
Superceding First Revised Page 99

34. ENVIRONMENTAL SURCHARGE - MANUFACTURED GAS PLANTS
Environmental Surcharge

Manufactured Gas Plants

Required Annual Environmental Increase	\$983,056
DG 19-145 Audit approved by Order	\$341,389
Estimated Ending Balance on October 31, 2022	<u>\$89,763</u>
Environmental Subtotal	\$1,414,208
Overall Annual Net Increase to Rates	\$1,414,208
Estimated weather normalized firm therms billed for the twelve months ended 10/31/2023 - sales and transportation	186,338,561 therms
MGP Surcharge per therm	<u>\$0.0076 per therm</u>
<u>Gasholder and pond at Gas Street, Concord, NH</u>	
Required Annual Environmental Increase	\$69,514
Estimated weather normalized firm therms billed for the twelve months ended 10/31/2023 - sales and transportation	186,338,561 therms
Gasholder and pond at Gas Street, Concord, NH Surcharge per therm	<u>\$0.0004 per therm</u>
<u>Total Environmental Surcharge</u>	<u>\$0.0080</u>

Issued:

Effective: November 1, 2022

Issued by:

Title:

Neil Proudman
President

Issued in compliance with NHPUC Order No. xx,xxx dated xxxx xx, 2022 in Docket DG 22-045

**NHPUC NO. 11 - GAS
LIBERTY UTILITIES**

**Proposed Second Revised Page 100
Superseding First Page 100**

Liberty Utilities (Energy North Natural Gas) Corp. d/b/a Liberty
Local Distribution Adjustment Charge (LDAC) decrease due to Rate Case Expense and Recoupment
For LDAC effective November 1, 2022 - October 31, 2023

<u>Description</u>	<u>Total</u>
Prior Period Recoupment/Rate Case Expense (Over)/Under Collection, including interest as of October 31, 2022	\$ 129,039
Rate Case Expense DG 17-048	\$ (4,836)
Rate Case Expense DG 20-105	<u>\$ 680,768</u>
Rate Case Expense to Recover as of August 31, 2022	<u>\$ 675,932</u>
Projected Recoupment/Rate Case Expense Recovery	<u>\$ 804,971</u>
Projected Interest	<u>\$ 17,048</u>
Total Projected Recovery, November 1, 2022 - October 31, 2023	<u><u>\$ 822,018</u></u>
Forecast Throughput (Therms)	186,338,561
RCE Factor (\$/Therm)	\$0.0044

Issued:

Effective: November 1, 2022

Issued in compliance with NHPUC Order No. xx,xxx dated xxxx xx, 2022 in Docket DG 22-xxx.

Issued by:

Neil Proudman

Title:

President

NHPUC NO. 11 - GAS
LIBERTY UTILITIES

Proposed Seventh Revised Page 101
Superseding Sixth Revised Page 101
LDAC

36 LOCAL DISTRIBUTION ADJUSTMENT CHARGE CALCULATION

Local Delivery Adjustment Charge Calculation

		Sales Customers	Transportation Customers
<u>Residential Non Heating Rates - R-1</u>			
Energy Efficiency Charge	0.0664		
Demand Side Management Charge	0.0000		
Conservation Charge (CCx)		0.0664	
Relief Holder and pond at Gas Street, Concord, NH	0.0000		
Manufactured Gas Plants	<u>0.0076</u>		
Environmental Surcharge (ES)		0.0076	
Revenue Decoupling Adjustment Factor (RDAF)		0.0000	
Property Tax Adjustment Mechanism (PTAM)		0.0124	
Rate Case Expense Factor (RCEF)		0.0044	
Gas Assistance Program (GAP)		<u>0.0203</u>	
LDAC		0.1110 per therm	
<u>Residential Heating Rates - R-3, R-4, R-6, R-7</u>			
Energy Efficiency Charge	0.0664		
Demand Side Management Charge	<u>0.0000</u>		
Conservation Charge (CCx)		0.0664	
Relief Holder and pond at Gas Street, Concord, NH	0.0000		
Manufactured Gas Plants	<u>0.0076</u>		
Environmental Surcharge (ES)		0.0076	
Revenue Decoupling Adjustment Factor (RDAF)		0.0000	
Property Tax Adjustment Mechanism (PTAM)		0.0124	
Rate Case Expense Factor (RCEF)		0.0044	
Gas Assistance Program (GAP)		<u>0.0203</u>	
LDAC		0.1110 per therm	
<u>Commercial/Industrial Low Annual Use Rates - G-41, G-51, G-44, G-55</u>			
Energy Efficiency Charge	0.0442		
Demand Side Management Charge	<u>0.0000</u>		
Conservation Charge (CCx)		0.0442	0.0442
Relief Holder and pond at Gas Street, Concord, NH	0.0000		
Manufactured Gas Plants	<u>0.0076</u>		
Environmental Surcharge (ES)		0.0076	0.007589455
Revenue Decoupling Adjustment Factor (RDAF)		0.0000	0
Property Tax Adjustment Mechanism (PTAM)		0.0124	0.012353063
Rate Case Expense Factor (RCEF)		0.0044	0.0044
Gas Assistance Program (GAP)		<u>0.0203</u>	0.0203
LDAC		0.0888	0.088842518 per therm
<u>Commercial/Industrial Medium Annual Use Rates - G-42, G-52, G-45, G-56</u>			
Energy Efficiency Charge	0.0442		
Demand Side Management Charge	<u>0.0000</u>		
Conservation Charge (CCx)		0.0442	0.0442
Relief Holder and pond at Gas Street, Concord, NH	0.0000		
Manufactured Gas Plants	<u>0.0076</u>		
Environmental Surcharge (ES)		0.0076	0.007589455
Revenue Decoupling Adjustment Factor (RDAF)		0.0000	0
Property Tax Adjustment Mechanism (PTAM)		0.0124	0.012353063
Rate Case Expense Factor (RCEF)		0.0044	0.0044
Gas Assistance Program (GAP)		<u>0.0203</u>	0.0203
LDAC		0.0888	0.088842518 per therm
<u>Commercial/Industrial Large Annual Use Rates - G-43, G-53, G-54, G-46, G-56, G-57, G-58</u>			
Energy Efficiency Charge	0.0442		
Demand Side Management Charge	<u>0.0000</u>		
Conservation Charge (CCx)		0.0442	0.0442
Relief Holder and pond at Gas Street, Concord, NH	0.0000		
Manufactured Gas Plants	<u>0.0076</u>		
Environmental Surcharge (ES)		0.0076	0.007589455
Revenue Decoupling Adjustment Factor (RDAF)		0.0000	0
Property Tax Adjustment Mechanism (PTAM)		0.0124	0.012353063
Rate Case Expense Factor (RCEF)		0.0044	0.0044
Gas Assistance Program (GAP)		<u>0.0203</u>	0.0203
LDAC		0.0888	0.088842518 per therm

Issued:
Effective: November 1, 2022

Issued by: Neil Proudman
Title: President

Issued in compliance with NHPUC Order No. xx,xxx dated xxx xx, 2022, in Docket DG 22-045

III DELIVERY TERMS AND CONDITIONS

ATTACHMENT B
 Schedule of Administrative Fees and Charges

I.	Supplier Balancing Charge:	\$	0.21	per MMBtu of Daily Imbalance Volumes")
II.	Capacity Mitigation Fee		15%	of the Proceeds from the Marketing of
III.	Peaking Demand Charge	\$	56.69	MMBTU of Peak MDQ
IV.	Company Allowance Calculation (per Schedule 25)		170,377,710	Total Sendout - Therms Jul-2021 - Jun-2022
			166,126,573	Total Throughput - Therms Jul-2021 - Jun-2022
			4,251,137	Variance (Sendout - Throughput)
	Company Allowance Percentage 2022-23		2.5%	Variance / Total Sendout

Issued:

Issued by: _____

Effective: November 1, 2022

Neil Proudman
 President

Issued in compliance with NHPUC Order No. xx,xxx dated October xx, 2022 in Docket DG 22-045

**NHPUC NO. 11 - GAS
LIBERTY UTILITIES**

**Proposed First Second Revised Page 154
Superseding Original First Revised Page 154**

III DELIVERY TERMS AND CONDITIONS

ATTACHMENT C

CAPACITY ALLOCATORS

Rate Class		Pipeline	Storage	Peaking	Total
G-41	Low Annual /High Winter Use	71.5%	17.4%	11.0%	100.0%
G-51	Low Annual /Low Winter Use	79.5%	12.6%	7.9%	100.0%
G-42	Medium Annual / High Winter	71.5%	17.4%	11.0%	100.0%
G-52	High Annual / Low Winter Use	79.5%	12.6%	7.9%	100.0%
G-43	High Annual / High Winter	71.5%	17.4%	11.0%	100.0%
G-53	High Annual / Load Factor < 90%	79.5%	12.6%	7.9%	100.0%
G-54	High Annual / Load Factor < 90%	79.5%	12.6%	7.9%	100.0%

Issued:

Effective: November 1, 2022

Issued by:

Title:

Neil Proudman
President

Issued in compliance with NHPUC Order No. xx,xxx dated October xx, 2022 in Docket DG 22-045

<u>Page</u>	<u>Revision</u>
Title	Original
TOC i	First Revised
TOC ii	Original
TOC iii	First Revised
TOC iv	Original
1	Thirty- first th Revised
2	Second Revised
3	Twenty- ninth th Revised
4	Twenty- seventh th Revised
5	First Revised Original
6	Original
7	Original
8	Original
9	First Revised
10	Original
11	Original
12	Original
13	Original
14	Original
15	Original
16	Original
17	Original
18	Original
19	Original
20	Original
21	Original
22	Original
23	Original
24	Original
25	Original
26	Original

DATED: ~~September 27, 2022~~

ISSUED BY: /s/Neil Proudman
Neil Proudman
TITLE: President

EFFECTIVE: ~~November~~October 1, 2022

<u>Page</u>	<u>Revision</u>
58	Original
59	Second Revised
60	Original
61	Second Revised
62	Original
63	Second Revised
64	Original
65	Second Revised
66	Original
67	Second Revised
68	Original
69	Second Revised
70	Original
71	Second Revised
72	Original
73	Third Revised
74	Original
75	Second Revised
76	Original
77	Second Revised
78	Original
79	Second Revised
80	Original
81	Second Revised
82	Original
83	Second Revised
84	Original
85	Second Revised
86	Original
87	Fifteenth fourteenth Revised
88	Seventeenth sixteenth Revised
89	Fifteenth Revised

DATED: ~~September 27, 2022~~

ISSUED BY: /s/Neil Proudman
Neil Proudman

EFFECTIVE: ~~November 1, 2022~~~~October 1, 2022~~

TITLE: President

NHPUC NO. 11 GAS
LIBERTY UTILITIES

Twenty-~~seventh~~^{sixth} Revised Page 4
Superseding Twenty-~~sixth~~^{fifth} Revised Page 4
Check Sheet

<u>Page</u>	<u>Revision</u>
90	Original
91	Second ^{First} Revised
92	Fourth ^{Third} Revised
93	Eighth ^{Seventh} Revised
94	Second ^{First} Revised
95	Seventh ^{Sixth} Revised
96	Second ^{First} Revised
97	Fifth Revised
98	Second ^{First} Revised
99	Second ^{First} Revised
100	Second ^{First} Revised
101	Seventh ^{sixth} Revised
102	Original
103	Original
104	Original
105	Original
106	Original
107	Original
108	Original
109	Original
110	Original
111	Original
112	Original
113	Original
114	Original
115	Original
116	Original
117	Original
118	Original
119	Original
120	Original
121	Original
122	Original
123	Original

DATED: ~~September 26, 2022~~

ISSUED BY: /s/Neil Proudman
Neil Proudman

EFFECTIVE: ~~November~~^{October} 1, 2022

TITLE: President

NHPUC NO. 11 GAS
LIBERTY UTILITIES

~~First Revised~~ Original Page 5
~~Superseding Original Page 5~~
Check Sheet

<u>Page</u>	<u>Revision</u>
124	Original
125	Original
126	Original
127	Original
128	Original
129	Original
130	Original
131	Original
132	Original
133	Original
134	Original
135	Original
136	Original
137	Original
138	Original
139	Original
140	Original
141	Original
142	Original
143	Original
144	Original
145	Original
146	Original
147	Original
148	Original
149	Original
150	Original
151	Original
152	Original
153	First <u>Second</u> Revised
154	First <u>Second</u> Revised

DATED: ~~November 12, 2021~~

ISSUED BY: /s/Neil Proudman

EFFECTIVE: November 1, 202~~1~~

Neil Proudman
TITLE: President

Authorized by NHPUC Order No. ~~26,541~~ dated ~~October 29, 2021~~, in Docket No. DG ~~21-130~~

NHPUC NO. 11 - GAS
LIBERTY UTILITIES

Proposed ~~Fourteenth~~ Fifteenth Revised Page 87
Superseding ~~Thirteenth~~ Fourteenth Revised Page 87

II RATE SCHEDULES
FIRM RATE SCHEDULES

Rates effective November 1, 2022 - April 30, 2023
Winter Period

Rates Effective May 1, 2023 - October 31, 2023
Summer Period

	Delivery Charge	Cost of Gas Rate Page 95	LDAC Page 101	Total Rate	Delivery Charge	Cost of Gas Rate Page 92	LDAC Page 101	Total Rate
Residential Non Heating - R-1								
Customer Charge per Month per Meter	\$ 15.39			\$ 15.39	\$ 15.39			\$ 15.39
All Therms	\$ 0.5129	\$ 1.4300	\$ 0.1065	\$ 2.0494	\$ 0.5129	\$ 1.0269	\$ 0.1065	\$ 1.6463
		\$ 1.1747	\$ 0.1348	\$ 1.3065	\$ 0.4873	\$ 1.2295	\$ 0.1348	\$ 1.8486
Residential Heating - R-3								
Customer Charge per Month per Meter	\$ 15.39			\$ 15.39	\$ 15.39			\$ 15.39
All Therms	\$ 0.65	\$ 1.4300	\$ 0.1065	\$ 2.1884	\$ 0.6519	\$ 1.0269	\$ 0.1065	\$ 1.7853
		\$ 1.1747	\$ 0.1348	\$ 1.3065		\$ 1.2295	\$ 0.1348	\$ 1.3613
Residential Heating - R-4								
Customer Charge per Month per Meter	\$ 8.47			\$ 8.47	\$ 15.39			\$ 15.39
All Therms	\$ 0.36	\$ 0.7865	\$ 0.1065	\$ 1.2515	\$ 0.6519	\$ 1.0269	\$ 0.1065	\$ 1.7853
		\$ 0.6464	\$ 0.1348	\$ 0.7779		\$ 1.2295	\$ 0.1348	\$ 1.3613
Commercial/Industrial - G-41								
Customer Charge per Month per Meter	\$ 63.30			\$ 63.30	\$ 63.30			\$ 63.30
Size of the first block	100 Therms				20 therms			
Therms in the first block per month at	\$ 0.51	\$ 1.4301	\$ 0.0843	\$ 2.0232	\$ 0.5088	\$ 1.0271	\$ 0.0843	\$ 1.6202
		\$ 1.1749	\$ 0.0994	\$ 1.2740		\$ 1.2303	\$ 0.0994	\$ 1.3294
All therms over the first block per month at	\$ 0.36	\$ 1.4301	\$ 0.0843	\$ 1.8694	\$ 0.3550	\$ 1.0271	\$ 0.0843	\$ 1.4664
		\$ 1.1749	\$ 0.0994	\$ 1.2740		\$ 1.2303	\$ 0.0994	\$ 1.3294
Commercial/Industrial - G-42								
Customer Charge per Month per Meter	\$ 189.84			\$ 189.84	\$ 189.84			\$ 189.84
Size of the first block	1000 therms				400 therms			
Therms in the first block per month at	\$ 0.4634	\$ 1.4301	\$ 0.0843	\$ 1.9778	\$ 0.4634	\$ 1.0271	\$ 0.0843	\$ 1.5748
		\$ 1.1749	\$ 0.0994	\$ 1.2740		\$ 1.2303	\$ 0.0994	\$ 1.3294
All therms over the first block per month at	\$ 0.3212	\$ 1.4301	\$ 0.0843	\$ 1.8356	\$ 0.3212	\$ 1.0271	\$ 0.0843	\$ 1.4326
		\$ 1.1749	\$ 0.0994	\$ 1.2740		\$ 1.2303	\$ 0.0994	\$ 1.3294
Commercial/Industrial - G-43								
Customer Charge per Month per Meter	\$ 811.98			\$ 811.98	\$ 811.98			\$ 811.98
All therms over the first block per month at	\$ 0.2863	\$ 1.4301	\$ 0.0843	\$ 1.8007	\$ 0.1441	\$ 1.0271	\$ 0.0843	\$ 1.2555
		\$ 1.1749	\$ 0.0994	\$ 1.2740		\$ 1.2303	\$ 0.0994	\$ 1.3294
Commercial/Industrial - G-51								
Customer Charge per Month per Meter	\$ 63.38			\$ 63.38	\$ 63.38			\$ 63.38
Size of the first block	100 therms				100 therms			
Therms in the first block per month at	\$ 0.3070	\$ 1.4296	\$ 0.0843	\$ 1.8209	\$ 0.3070	\$ 1.0266	\$ 0.0843	\$ 1.4179
		\$ 1.1732	\$ 0.0994	\$ 1.2723		\$ 1.2284	\$ 0.0994	\$ 1.3275
All therms over the first block per month at	\$ 0.2084	\$ 1.4296	\$ 0.0843	\$ 1.7223	\$ 0.2084	\$ 1.0266	\$ 0.0843	\$ 1.3193
		\$ 1.1732	\$ 0.0994	\$ 1.2723		\$ 1.2284	\$ 0.0994	\$ 1.3275
Commercial/Industrial - G-52								
Customer Charge per Month per Meter	\$ 189.57			\$ 189.57	\$ 189.57			\$ 189.57
Size of the first block	1000 therms				1000 therms			
Therms in the first block per month at	\$ 0.2647	\$ 1.4296	\$ 0.0843	\$ 1.7786	\$ 0.1978	\$ 1.0266	\$ 0.0843	\$ 1.3087
		\$ 1.1732	\$ 0.0994	\$ 1.2723		\$ 1.2284	\$ 0.0994	
All therms over the first block per month at	\$ 0.1836	\$ 1.4296	\$ 0.0843	\$ 1.6975	\$ 0.1219	\$ 1.0266	\$ 0.0843	\$ 1.2328
		\$ 1.1732	\$ 0.0994	\$ 1.2723		\$ 1.2284	\$ 0.0994	
Commercial/Industrial - G-53								
Customer Charge per Month per Meter	\$ 838.52			\$ 838.52	\$ 838.52			\$ 838.52
All therms over the first block per month at	\$ 0.1851	\$ 1.4296	\$ 0.0843	\$ 1.6990	\$ 0.0968	\$ 1.0266	\$ 0.0843	\$ 1.2077
		\$ 1.1732	\$ 0.0994	\$ 1.2723		\$ 1.2284	\$ 0.0994	\$ 1.3275
Commercial/Industrial - G-54								
Customer Charge per Month per Meter	\$ 839.19			\$ 839.19	\$ 839.19			\$ 839.19
All therms over the first block per month at	\$ 0.0705	\$ 1.4296	\$ 0.0843	\$ 1.5844	\$ 0.0409	\$ 1.0266	\$ 0.0843	\$ 1.1518
		\$ 1.1732	\$ 0.0994	\$ 1.2723		\$ 1.2284	\$ 0.0994	\$ 1.3275

Issued: October xx, 2022
~~October xx, 2021~~
Effective: November 1, 2022
~~November 1, 2021~~

Issued by: _____
Neil Proudman
Title: President

Issued in compliance with NHPUC Order No. xx.xxx dated xxxx xx, 2022 in Docket DG 22-045
~~Issued in compliance with NHPUC Order No. 26,654 dated July 27, 2022 in Docket DG 20-105~~

NHPUC NO. 11 - GAS
LIBERTY UTILITIES

Proposed ~~Fourteenth~~ ^{Fifteenth} Revised Page 89
Superseding ~~Thirteenth~~ ^{Fourteenth} Revised Page 89

II RATE SCHEDULES
FIRM RATE SCHEDULES

Rates effective November 1, 2022 - April 30, 2023
Winter Period

Rates Effective May 1, 2023 - October 31, 2023
Summer Period

	Delivery Charge	Cost of Gas Rate Page 95	LDAC Page 101	Total Rate	Delivery Charge	Cost of Gas Rate Page 92	LDAC Page 101	Total Rate
Residential Non Heating - R-5								
Customer Charge per Month per Meter	\$ 20.01			\$ 20.01	\$ 20.01			\$ 20.01
All Therms	\$ 0.6668	\$ 1.4300	\$ 0.1065	\$ 2.2033	\$ 0.6668	\$ 1.0269	\$ 0.1065	\$ 1.8002
		\$ 1.1747	\$ 0.1318	\$ 1.3065		\$ 1.2295	\$ 0.1318	\$ 1.3613
Residential Heating - R-6								
Customer Charge per Month per Meter	\$ 20.01			\$ 20.01	\$ 20.01			\$ 20.01
Therms in the first block per month at	\$ 0.8475	\$ 1.4300	\$ 0.1065	\$ 2.3840	\$ 0.8475	\$ 1.0269	\$ 0.1065	\$ 1.9809
		\$ 1.1747	\$ 0.1318	\$ 1.3065	\$ 0.8238	\$ 1.2295	\$ 0.1318	\$ 2.1851
Residential Heating - R-7								
Customer Charge per Month per Meter	\$ 11.01			\$ 11.01	\$ 20.01			\$ 20.01
Therms in the first block per month at	\$ 0.4531	\$ 0.7865	\$ 0.1065	\$ 1.3461	\$ 0.8475	\$ 1.0269	\$ 0.1065	\$ 1.9809
		\$ 0.6461	\$ 0.1318	\$ 0.7779		\$ 1.2295	\$ 0.1318	\$ 1.3613
Commercial/Industrial - G-44								
Customer Charge per Month per Meter	\$ 82.29			\$ 82.29	\$ 82.29			\$ 82.29
Size of the first block	100 therms				20 therms			
Therms in the first block per month at	\$ 0.6614	\$ 1.4301	\$ 0.0843	\$ 2.1758	\$ 0.6614	\$ 1.0271	\$ 0.0843	\$ 1.7728
		\$ 1.1749	\$ 0.0991	\$ 1.2740		\$ 1.2303	\$ 0.0991	\$ 1.3294
All therms over the first block per month at	\$ 0.4614	\$ 1.4301	\$ 0.0843	\$ 1.9758	\$ 0.4614	\$ 1.0271	\$ 0.0843	\$ 1.5728
		\$ 1.1749	\$ 0.0991	\$ 1.2740		\$ 1.2303	\$ 0.0991	\$ 1.3294
Commercial/Industrial - G-45								
Customer Charge per Month per Meter	\$ 246.78			\$ 246.78	\$ 246.78			\$ 246.78
Size of the first block	1000 therms				400 therms			
Therms in the first block per month at	\$ 0.6023	\$ 1.4301	\$ 0.0843	\$ 2.1167	\$ 0.6023	\$ 1.0271	\$ 0.0843	\$ 1.7137
		\$ 1.1749	\$ 0.0991	\$ 1.2740		\$ 1.2303	\$ 0.0991	\$ 1.3294
All therms over the first block per month at	\$ 0.4175	\$ 1.4301	\$ 0.0843	\$ 1.9319	\$ 0.4175	\$ 1.0271	\$ 0.0843	\$ 1.5289
		\$ 1.1749	\$ 0.0991	\$ 1.2740		\$ 1.2303	\$ 0.0991	\$ 1.3294
Commercial/Industrial - G-46								
Customer Charge per Month per Meter	\$ 1,055.58			\$ 1,055.58	\$ 1,055.58			\$ 1,055.58
All therms over the first block per month at	\$ 0.3722	\$ 1.4301	\$ 0.0843	\$ 1.8866	\$ 0.1873	\$ 1.0271	\$ 0.0843	\$ 1.2987
		\$ 1.1749	\$ 0.0991	\$ 1.2740		\$ 1.2303	\$ 0.0991	\$ 1.3294
Commercial/Industrial - G-55								
Customer Charge per Month per Meter	\$ 82.39			\$ 82.39	\$ 82.39			\$ 82.39
Size of the first block	100 therms				100 therms			
Therms in the first block per month at	\$ 0.3992	\$ 1.4296	\$ 0.0843	\$ 1.9131	\$ 0.3992	\$ 1.0266	\$ 0.0843	\$ 1.5101
		\$ 1.1732	\$ 0.0991	\$ 1.2723		\$ 1.2284	\$ 0.0991	\$ 1.3275
All therms over the first block per month at	\$ 0.2387	\$ 1.4296	\$ 0.0843	\$ 1.7526	\$ 0.2387	\$ 1.0266	\$ 0.0843	\$ 1.3496
		\$ 1.1732	\$ 0.0991	\$ 1.2723		\$ 1.2284	\$ 0.0991	\$ 1.3275
Commercial/Industrial - G-56								
Customer Charge per Month per Meter	\$ 246.43			\$ 246.43	\$ 246.43			\$ 246.43
Size of the first block	1000 therms				1000 therms			
Therms in the first block per month at	\$ 0.3442	\$ 1.4296	\$ 0.0843	\$ 1.8581	\$ 0.2572	\$ 1.0266	\$ 0.0843	\$ 1.3681
		\$ 1.1732	\$ 0.0991	\$ 1.2723		\$ 1.2284	\$ 0.0991	\$ 1.3275
All therms over the first block per month at	\$ 0.2387	\$ 1.4296	\$ 0.0843	\$ 1.7526	\$ 0.1585	\$ 1.0266	\$ 0.0843	\$ 1.2694
		\$ 1.1732	\$ 0.0991	\$ 1.2723		\$ 1.2284	\$ 0.0991	\$ 1.3275
Commercial/Industrial - G-57								
Customer Charge per Month per Meter	\$ 1,090.08			\$ 1,090.08	\$ 1,090.08			\$ 1,090.08
All therms over the first block per month at	\$ 0.2407	\$ 1.4296	\$ 0.0843	\$ 1.7546	\$ 0.1259	\$ 1.0266	\$ 0.0843	\$ 1.2368
		\$ 1.1732	\$ 0.0991	\$ 1.2723		\$ 1.2284	\$ 0.0991	\$ 1.3275
Commercial/Industrial - G-58								
Customer Charge per Month per Meter	\$ 1,090.95			\$ 1,090.95	\$ 1,090.95			\$ 1,090.95
All therms over the first block per month at	\$ 0.0916	\$ 1.4296	\$ 0.0843	\$ 1.6055	\$ 0.0531	\$ 1.0266	\$ 0.0843	\$ 1.1640
		\$ 1.1732	\$ 0.0991	\$ 1.2723		\$ 1.2284	\$ 0.0991	\$ 1.3275

Issued: ~~October xx, 2021~~
Effective: November 1, 2021
November 1, 2022

Issued by: Neil Proudman
Title: President

Issued in compliance with NHPUC Order No. xx,xxx dated xxxx xx, 2022 in Docket DG 22-045
~~Issued in compliance with NHPUC Order No. 26.654 dated July 27, 2022 in Docket DG 20-105~~

NHPUC NO. 11 - GAS
LIBERTY UTILITIES

Proposed Third Revised Page 91
Superseding Proposed Second Revised Page 91

Anticipated Cost of Gas

PERIOD COVERED: SUMMER PERIOD, MAY 1, 2023 THROUGH OCTOBER 31, 2023
~~PERIOD COVERED: SUMMER PERIOD, MAY 1, 2022 THROUGH OCTOBER 31, 2022~~
(REFER TO TEXT ON IN SECTION 16 COST OF GAS CLAUSE)

(Col 1)	(Col-2)	(Col-3)	(Col 2)	(Col 3)
ANTICIPATED DIRECT COST OF GAS				
Purchased Gas:				
Demand Costs:	\$ 3,276,842		\$ -	
Supply Costs:	<u>6,971,475</u>		\$ -	
Storage Gas:				
Demand, Capacity:	-----		-	
Commodity Costs:	-----		-	
Produced Gas:	<u>82,504</u>		-	
Hedged Contract Savings	-----		-	
	-----		-----	
Unadjusted Anticipated Cost of Gas		\$ 10,330,824		\$ -
Adjustments:				
Prior Period (Over)/Under Recovery as of September 1, 2021 September 01, 2022	\$ 4,472,186		\$ -	
Interest	<u>222,837</u>		\$ -	
Prior Period Adjustments	-----		\$ -	
Broker Revenues	-----		\$ -	
Refunds from Suppliers	-----		\$ -	
Fuel Financing	-		\$ -	
Transportation CGA Revenues	-----		\$ -	
Interruptible Sales Margin	-----		\$ -	
Capacity Release and Off System Sales Margin	-----		\$ -	
Hedging Costs	-----		\$ -	
Fixed Price Option Administrative Costs	-----		\$ -	
Total Adjustments		<u>4,695,023</u>		<u>-</u>
Total Anticipated Direct Cost of Gas		\$ 15,025,844		\$ -
Anticipated Indirect Cost of Gas				
Working Capital:				
Total anticipated Direct Cost of Gas (05/01/22 - 10/31/22)(05/01/23 - 10/31/23)	\$ 10,330,824		\$ -	
Working Capital Rate	0.0000		-	
Prime Rate	3.25%		0.00%	
Working Capital Percentage	<u>0.007%</u>		-	
Working Capital	769		\$ -	
Plus: Working Capital Reconciliation (Acct 142.20) (Acct 1163-1424)	<u>4,555</u>		-	
Total Working Capital Allowance		<u>\$ 5,324</u>		<u>\$ -</u>
Bad Debt:				
Total anticipated Direct Cost of Gas (05/01/22 - 10/31/22)(05/01/23 - 10/31/23)	\$ 10,330,824		\$ -	
Less: Refunds	-		\$ -	
Plus: Total Working Capital	<u>5,324</u>		\$ -	
Plus: Prior Period (Over)/Under Recovery	<u>4,472,186</u>		\$ -	
Subtotal	<u>\$ 14,808,334</u>		\$ -	
Bad Debt Percentage	<u>0.70%</u>		0.00%	
Bad Debt Allowance	<u>103,658</u>		-	
Plus: Bad Debt Reconciliation (Acct 175.52) (Acct 1163-1754)	<u>23,159</u>		-	
Total Bad Debt Allowance		<u>126,817</u>		<u>-</u>
Production and Storage Capacity				
Miscellaneous Overhead (05/01/22 - 10/31/22) (05/01/23 - 10/31/23)	\$ -----		\$ -	
Times Summer Winter Sales	<u>23,366</u>		\$ -	
Divided by Total Sales	<u>115,043</u>		\$ -	
Miscellaneous Overhead	-----		-	
Total Anticipated Indirect Cost of Gas		<u>\$ 132,141</u>		<u>\$ -</u>
Total Cost of Gas		\$ 15,157,985		\$ -

Issued: October xx, 2024
Effective: November 1, 2022
~~November 1, 2024~~

Issued by: Neil Proudman
Title: President

NHPUC NO. 11 - GAS
LIBERTY UTILITIES

Proposed Fourth Revised Page 92
Superseding Proposed Third Revised Page 92

CALCULATION OF FIRM SALES COST OF GAS RATE
PERIOD COVERED: SUMMER PERIOD, MAY 1, 2023 THROUGH OCTOBER 31, 2023
PERIOD COVERED: ~~SUMMER PERIOD, MAY 1, 2022 THROUGH OCTOBER 31, 2022~~
(Refer to Text in Section 17 Cost of Gas Clause)

(Col 1)	(Col-2)	(Col-3)	(Col 2)	(Col 3)
Total Anticipated Direct Cost of Gas	\$9,653,380		\$23,652,124	
Projected Prorated Sales (05/01/23 - 10/31/23) (05/01/22 - 10/31/22)	20,973,031		\$23,648,905	
Direct Cost of Gas Rate		\$ -0.4603		\$ 1.0001 per therm
Demand Cost of Gas Rate	\$4,548,346	\$ -0.2169	\$ 3,233,514	\$ 0.1367
Commodity Cost of Gas Rate	3,136,847	\$ -0.1496	\$ 9,324,405	\$ 0.3943
Adjustment Cost of Gas Rate	1,968,188	\$ -0.0938	\$ 11,094,205	\$ 0.4691
Total Direct Cost of Gas Rate	\$9,653,380	\$ -0.4603	\$23,652,124	\$ 1.0001
Total Anticipated Indirect Cost of Gas	\$(174,652)		\$ 634,259	
Projected Prorated Sales (05/01/23 - 10/31/23) (05/01/22 - 10/31/22)	20,973,031		23,648,905	
Indirect Cost of Gas		\$(0.0083)		\$ 0.0268 per therm
TOTAL PERIOD AVERAGE COST OF GAS EFFECTIVE 05/01/23				
TOTAL PERIOD AVERAGE COST OF GAS EFFECTIVE 05/01/22		\$ -0.4520		\$ 1.0269 per Therm

RESIDENTIAL COST OF GAS RATE - 05/01/2023	COGsr	\$ 1.0269 /therm
--	--------------	-------------------------

COM/IND HIGH WINTER USE COST OF GAS RATE - 05/01/2023	COGsh	\$ 1.0271 /therm
--	--------------	-------------------------

Average Demand Cost of Gas Rate Effective 05/01/23	\$ 0.1367		
'Times: High Winter Use Ratio (Summer)	\$ 1.0005	(COG + 25%)	\$ 1.2839
Times: Correction Factor	<u>\$ 1.0009</u>		
Adjusted Demand Cost of Gas Rate	\$ 0.1369		
Commodity Cost of Gas Rate	\$ 0.3943		
Adjustment Cost of Gas Rate	\$ 0.4691		
Indirect Cost of Gas Rate	<u>\$ 0.0268</u>		
Adjusted Com/Ind High Winter Use Cost of Gas Rate	\$ 1.0271		

COM/IND LOW WINTER USE COST OF GAS RATE - 10/01/2023	COGsl	\$ 1.0266 /therm
---	--------------	-------------------------

Average Demand Cost of Gas Rate Effective 05/01/23	\$ 0.1367		
'Times: Low Winter Use Ratio (Summer)	\$ 0.9971	(COG + 25%)	\$ 1.2833
Times: Correction Factor	\$ 1.0009		
Adjusted Demand Cost of Gas Rate	\$ 0.1364		
Commodity Cost of Gas Rate	\$ 0.3943		
Adjustment Cost of Gas Rate	\$ 0.4691		
Indirect Cost of Gas Rate	\$ 0.0268		
Adjusted Com/Ind Low Winter Use Cost of Gas Rate	\$ 1.0266		

Issued: ~~October xx, 2021~~
 Effective: November 1, 2021
 November 1, 2022

Issued by: _____
 Title: Neil Proudman
 President

Issued in compliance with NHPUC Order No. xx,xxx dated xxxx xx, 2022 in Docket DG 22-045
~~Issued in compliance with NHPUC Order No. 26,649 dated July 15, 2022 in Docket DG 21-130~~

NHPUC NO. 11 - GAS
LIBERTY UTILITIES

Proposed First Second Revised Page 94
Superseding Original First Revised Page 94

II. RATE SCHEDULES
CALCULATION OF FIXED WINTER PERIOD COST OF GAS RATE
PERIOD COVERED: WINTER PERIOD, NOVEMBER 1, 2022 THROUGH APRIL 30, 2023
(Refer to Text in Section 17(A) Fixed Price Option Program)

(Col 1)	(Col 2)	(Col 3)	(Col 2)	(Col 3)
Total Anticipated Direct Cost of Gas	\$ 74,822,730		\$ 127,589,939	
Projected Prorated Sales (11/01/22 - 04/30/23)	<u>92,780,984</u>		92,780,984	
Direct Cost of Gas Rate		<u>\$ 0.8557</u>		\$ 1.3752 per therm
Demand Cost of Gas Rate	<u>\$ 13,859,546</u>	<u>\$ 0.1585</u>	\$ 12,510,219	\$ 0.1348 per therm
Commodity Cost of Gas Rate	<u>60,820,831</u>	<u>\$ 0.6955</u>	117,533,374	\$ 1.2668 per therm
Adjustment Cost of Gas Rate	<u>142,353</u>	<u>\$ 0.0046</u>	3,568,556	\$ 0.0385 per therm
Hedge Underground Storage Contract (Savings)/Loss	<u></u>	<u>\$</u>	<u>\$ (6,022,210)</u>	<u>\$(0.0472)</u> per therm
Total Direct Cost of Gas Rate	<u>\$ 74,822,730</u>	<u>\$ 0.8557</u>	\$ 127,589,939	\$ 1.3752 per therm
Total Anticipated Indirect Cost of Gas	\$ 4,360,293		\$ 5,082,758	
Projected Prorated Sales (11/01/22 - 04/30/23)	<u>87,443,741</u>		92,780,984	
Indirect Cost of Gas		<u>\$ 0.0499</u>		\$ 0.0548 per therm
TOTAL PERIOD AVERAGE COST OF GAS EFFECTIVE (11/01/22)		<u>\$ 0.9056</u>		\$ 1.4300
Calculation of FPO Excluding Low Income - Rate Code R-3				
TOTAL PERIOD AVERAGE COST OF GAS EFFECTIVE (11/01/22)		<u>\$ 0.9056</u>		\$ 1.4300
FPO Risk Premium		<u>\$ 0.0200</u>		\$ 0.0200
TOTAL PERIOD FIXED PRICE OPTION COST OF GAS RATE EFFECTIVE (11/01/22)		<u>\$ 0.9256</u>		\$ 1.7535
RESIDENTIAL COST OF GAS RATE - EXCLUDING LOW INCOME - (R-3) 11/01/22				
		<u>\$ 0.9256</u>	COGwr	\$ 1.4500 /therm
Calculation of FPO for Gas Assistance Program - Rate Code R-4				
TOTAL PERIOD AVERAGE COST OF GAS EFFECTIVE (11/01/22) FPO (Line 13 * 0.55)				\$ 0.7865
FPO Risk Premium (Line 14 * 0.55)				\$ 0.0110
TOTAL PERIOD FIXED PRICE OPTION COST OF GAS RATE EFFECTIVE (11/01/22) (Line 15 * 0.55)				\$ 0.7975
RESIDENTIAL COST OF GAS RATE - LOW INCOME - (R-4) 11/01/22				
			COGwr	\$ 0.7975 /therm

Issued: October xx, 2024
Effective: November 1, 2022
November 1, 2024

Issued by: _____
Neil Proudman
President

Issued in compliance with NHPUC Order No. xx,xxx dated xxxx xx, 2022 in Docket DG 22-045
Issued in compliance with NHPUC Order No. 26,541 dated October 29, 2021 in Docket DG 21-130

NHPUC NO. 11 - GAS
LIBERTY UTILITIES

Proposed Sixth Seventh Revised Page 95
Superseding Fifth Sixth Revised Page 95

CALCULATION OF FIRM SALES COST OF GAS RATE
PERIOD COVERED: WINTER PERIOD, NOVEMBER 1, 2022 THROUGH APRIL 30, 2023
(Refer to Text in Section 17 Cost of Gas Clause)

(Col 1)	(Col 2)	(Col 3)	(Col 2)	(Col 3)
Total Anticipated Direct Cost of Gas	\$ 94,810,891		\$ 127,589,939	
Projected Prorated Sales (11/01/21 - 04/30/22) (11/01/20 - 04/30/21)	<u>87,443,741</u>		\$ 92,780,984	
Direct Cost of Gas Rate		<u>1.0843</u>		\$ 1.3752 per therm
Demand Cost of Gas Rate	\$ 13,868,897	<u>0.1586</u>	\$ 12,510,219	\$ 0.1348
Commodity Cost of Gas Rate	<u>80,780,853</u>	<u>0.9238</u>	\$ 117,533,374	\$ 1.2668
Adjustment Cost of Gas Rate	<u>161,141</u>	<u>0.0018</u>	\$ 3,568,556	\$ 0.0385
Hedge Contract (Savings)	<u>-</u>	<u>-</u>	\$ (6,022,210)	\$ (0.0649)
Total Direct Cost of Gas Rate	<u>\$ 94,810,891</u>	<u>1.0843</u>	\$ 127,589,939	\$ 1.3752
Total Anticipated Indirect Cost of Gas	\$ 4,338,002		\$ 5,082,758	
Projected Prorated Sales (11/01/21 - 04/30/22) (11/01/20 - 04/30/21)	<u>87,443,741</u>		92,780,984	
Indirect Cost of Gas		<u>0.0496</u>		\$ 0.0548 per therm
TOTAL PERIOD AVERAGE COST OF GAS EFFECTIVE 11/01/22				\$ 1.4300 per Therm
TOTAL PERIOD AVERAGE COST OF GAS EFFECTIVE 11/01/21		1.1339		

RESIDENTIAL COST OF GAS RATE - 11/01/22	COGwr	\$ 1.4300 /therm
--	--------------	-------------------------

RESIDENTIAL COST OF GAS RATE - 11/01/21	COGwr	\$ 1.1339 /therm
--	------------------	-----------------------------

Maximum (COG + 25%) \$ 1.4474 \$ 1.7875

GAS ASSISTANCE PLAN RESIDENTIAL COST OF GAS RATE R-4 & R-7 - 11/01/22	0	\$ 0.7865 /therm
--	----------	-------------------------

GAS ASSISTANCE PLAN RESIDENTIAL COST OF GAS RATE R-4 & R-7 - 11/01/21	0	\$ 0.6236 /therm
--	--------------	-----------------------------

Maximum (COG + 25%) \$ 0.7796 \$ 0.9831

C&I HIGH WINTER USE COST OF GAS RATE - 11/01/22	COGwr	\$ 1.4301 /therm
--	--------------	-------------------------

C&I HIGH WINTER USE COST OF GAS RATE - 11/01/21	COGwh	\$ 1.4344 /therm
--	------------------	-----------------------------

Average Demand Cost of Gas Rate Effective 11/01/21 - 11/01/22	\$ 0.1586	\$ 0.1348	Maximum (COG + 25%)	\$ 1.4476	\$ 1.7876
Times: High Winter Use Ratio (Winter)	<u>1.0017</u>	1.0005			
Times: Correction Factor	<u>1.0001</u>	1.0001			
Adjusted Demand Cost of Gas Rate	<u>\$ 0.1589</u>	\$ 0.1349			
Commodity Cost of Gas Rate	\$ 0.9238	\$ 1.2668	Minimum		
Adjustment Cost of Gas Rate	<u>0.0018</u>	0.0385	Maximum		
Indirect Cost of Gas Rate	<u>0.0496</u>	0.0548			
Hedge Contract (Savings)	<u>-</u>	(0.0649)			
Adjusted C&I High Winter Use Cost of Gas Rate	<u>\$ 1.4344</u>	\$ 1.4950			

C&I LOW WINTER USE COST OF GAS RATE - 11/01/22	COGsh	\$ 1.4296 /therm
---	--------------	-------------------------

C&I LOW WINTER USE COST OF GAS RATE - 11/01/21	COGwl	\$ 1.4324 /therm
---	------------------	-----------------------------

Average Demand Cost of Gas Rate Effective 11/01/20 - 11/01/21	\$ 0.1586	\$ 0.1348	Maximum (COG + 25%)	\$ 1.4455	\$ 1.7870
Times: Low Winter Use Ratio (Winter)	<u>0.9910</u>	0.9971			
Times: Correction Factor	<u>1.0001</u>	1.0001			
Adjusted Demand Cost of Gas Rate	<u>\$ 0.1572</u>	\$ 0.1344			
Commodity Cost of Gas Rate	\$ 0.9238	\$ 1.2668			
Adjustment Cost of Gas Rate	<u>0.0018</u>	0.0385			
Indirect Cost of Gas Rate	<u>0.0496</u>	0.0548			
Hedge Contract (Savings)	<u>-</u>	(0.0649)			
Adjusted C&I Low Winter Use Cost of Gas Rate	<u>\$ 1.4324</u>	1.4296			

Issued: October xx, 2024
Effective: November 1, 2022
~~November 1, 2021~~

Issued by: _____
Neil Proudman
Title: President

NHPUC NO. 11 - GAS
LIBERTY UTILITIES

Proposed First Second Revised Page 96
Superseding Original First Revised Page 96

Anticipated Cost of Gas
PERIOD COVERED: WINTER PERIOD, NOVEMBER 1, 2022 THROUGH APRIL 30, 2023
(REFER TO TEXT ON IN SECTION 17 COST OF GAS CLAUSE)

(Col 1)	(Col-2)	(Col-3)	(Col 2)	(Col 3)
ANTICIPATED DIRECT COST OF GAS				
Purchased Gas:				
Demand Costs:	\$ 12,887,000		\$ 11,510,320	
Supply Costs:	72,351,034		93,418,619	
Storage Gas:				
Demand, Capacity:	\$ 981,898		\$ 999,899	
Commodity Costs:	6,130,435		11,469,453	
Produced Gas:				
	2,299,384		12,645,303	
Hedged Contract (Saving)/Loss				
			(6,022,210)	
Hedge Underground Storage Contract (Saving)/Loss				
			-	
Unadjusted Anticipated Cost of Gas		\$ 94,649,754		\$ 124,021,383
Adjustments:				
Prior Period (Over)/Under Recovery (as of 05/01/22)	\$ 1,431,639		\$ 5,378,797	
Interest	44,985		(283,633)	
Fuel Inventory Revenue Requirement	335,667		515,609	
Broker Revenues	(3,600)		(3,600)	
Refunds from Suppliers	-		-	
Fuel Financing	-		-	
Transportation CGA Revenues	(6,938)		(422,021)	
Interruptible Sales Margin	-		-	
Capacity Release and Off System Sales Margins	(1,676,512)		(1,676,512)	
Hedging Costs	-		-	
Fixed Price Option Administrative Costs	36,899		59,917	
Total Adjustments	161,144		3,568,556	
Total Anticipated Direct Cost of Gas		\$ 94,810,894		\$ 127,589,939
Anticipated Indirect Cost of Gas				
Working Capital:				
Total Unadjusted Anticipated Cost of Gas 11/01/22 - 04/30/23	\$ 94,649,754		\$ 124,021,383	
Working Capital Rate: Lead Lag Days / 365	0.0705		0	
Prime Rate	3.25%		0	
Working Capital Percentage	0.229%		0	
Working Capital	216,764		480,659	
			-	
Plus: Working Capital Reconciliation (Acct 142.20)	(14,859)		(30,998)	
Total Working Capital Allowance	-	201,902		449,661
Bad Debt:				
Total Unadjusted Anticipated Cost of Gas 11/01/22 - 04/30/23	\$ 94,649,754		\$ 124,021,383	
Less: Refunds	-		-	
Plus: Total Working Capital	201,902		449,661	
Plus: Prior Period (Over)/Under Recovery	1,431,639		5,378,797	
Subtotal	\$ 96,283,294		\$ 129,849,841	
			-	
Bad Debt Percentage	0.70%		0.86%	
Bad Debt Allowance	\$ 673,983		\$ 1,118,204	
Plus: Bad Debt Reconciliation (Acct 175.52)	(223,340)		(170,566)	
Total Bad Debt Allowance	-	\$ 450,643		\$ 947,639
Production and Storage Capacity				
	\$ 3,685,458		\$ 3,685,458	
Miscellaneous Overhead 11/01/202- 04/30/23	\$ -		\$ -	
Times Winter Sales	91,677		92,781	
Divided by Total Sales	115,043		116,430	
Miscellaneous Overhead				
			-	
Total Anticipated Indirect Cost of Gas		\$ 4,338,002		\$ 5,082,758
Total Cost of Gas		\$ 99,148,894		\$ 132,672,697

Issued:	October xx, 2021	Issued by:	Neil Proudman
Effective:	November 1, 2022	Title:	President
	November 1, 2021		

Issued in compliance with NHPUC Order No. xx,xxx dated xxxx xx, 2022 in Docket DG 22-xxx.

NHPUC NO. 11 - GAS
LIBERTY UTILITIES

Proposed ~~First~~ Second Revised Page 98
Superseding ~~Original-First~~ Revised Page 98

II. RATE SCHEDULES
Calculation of Firm Transportation Cost of Gas Rate
~~#REF!~~
~~#REF!~~

(Refer to text in Section 16(Q) Firm Transportation Cost of Gas Clause)

(Col 1)	(Col 2)	(Col 3)	(Col 4)	(Col 2)	(Col 3)	(Col 4)
ANTICIPATED COST OF SUPPLEMENTAL GAS SUPPLIES:						
PROPANE	\$ 920,469			\$ 2,297,840		
LNG	\$ 1,378,925			<u>10,347,463</u>		
TOTAL ANTICIPATED COST OF SUPPLEMENTAL GAS SUPPLIES	<u>2,299,394</u>			12,645,303		
ESTIMATED PERCENTAGE USED FOR PRESSURE SUPPORT PURPOSES	8.7%			8.7%		
ESTIMATED COST OF LIQUIDS USED FOR PRESSURE SUPPORT PURPOSES	<u>\$ 200,046</u>			<u>\$ 1,100,141</u>		
PROJECTED FIRM THROUGHPUT (THERMS):						
FIRM SALES	91,676,680	68.3%		92,780,984	68.3%	
FIRM TRANSPORTATION SUBJECT TO FTCCG	42,583,790	<u>31.7%</u>		<u>43,122,920</u>	<u>31.7%</u>	
TOTAL FIRM THROUGHPUT SUBJECT TO COST OF GAS CHARGE	134,260,470	100.0%		135,903,904	100.0%	
TRANSPORTATION SHARE OF SUPPLEMENTAL GAS SUPPLIES	31.7%	×	200,046	= \$ 63,449	31.7% × \$ 1,100,141	= \$ 349,080
PRIOR (OVER) OR UNDER COLLECTION				(56,511)		<u>72,941</u>
NET AMOUNT TO COLLECT FROM (RETURNED TO) TRANSPORTATION CUSTOMERS				\$ 6,938		\$ 422,021
PROJECTED FIRM TRANSPORTATION THROUGHPUT				42,583,790		43,122,920
FIRM TRANSPORTATION COST OF GAS				\$ 0.0002		\$ 0.0098

Issued: ~~October xx, 2021~~
Effective: ~~November 1, 2021~~
November 1, 2022

Issued by: _____
Neil Proudman
Title: President

Issued in compliance with NHPUC Order No. xx,xxx dated xxxx xx, 2022 in Docket DG 22-045
~~Issued in compliance with NHPUC Order No. 26,541 dated October 29, 2021 in Docket DG 21-130~~

NHPUC NO. 11 - GAS
LIBERTY UTILITIES

Proposed Second Revised Page 99
Superceding First Revised Page 99

34. ENVIRONMENTAL SURCHARGE - MANUFACTURED GAS PLANTS
Environmental Surcharge

Manufactured Gas Plants

Required Annual Environmental Increase	\$ 2,351,805	\$983,056
DG 19-145 Audit adjustment of \$1,024,167 amortized over 3 years, approved	\$ 341,389	\$341,389
Estimated Ending Balance on October 31, 2022		<u>\$89,763</u>
July 2020 – June 2021 recovery difference between actual and estimate		<u>\$ 139,028</u>
Environmental Subtotal		\$1,414,208
		<u>\$ 2,832,222</u>
Overall Annual Net Increase to Rates		\$1,414,208
		<u>\$ 2,832,222</u>
Estimated weather normalized firm therms billed for the twelve months ended 10/31/2023 - sales and transportation		186,338,561 therms
		<u>182,829,872</u>
MGP Surcharge per therm		<u>\$0.0076 per therm</u>
		<u>\$ 0.0155</u>
<u>Gasholder and pond at Gas Street, Concord, NH</u>		
Required Annual Environmental Increase		\$69,514
Estimated weather normalized firm therms billed for the twelve months ended 10/31/2023 - sales and transportation		186,338,561 therms
Gasholder and pond at Gas Street, Concord, NH Surcharge per therm		<u>\$0.0004 per therm</u>
<u>Total Environmental Surcharge</u>		
		<u>\$0.0080</u>
		<u>\$ 0.0155</u>

Issued: ~~November 12, 2021~~
Effective: November 1, 2022
~~November 1, 2021~~

Issued by: _____
Title: Neil Proudman
President

~~November~~ October xx, 2022
~~November~~ November 1, 2022

Issued by: _____
Title: Neil Proudman
President

**NHPUC NO. 11 - GAS
LIBERTY UTILITIES**

**Proposed Second Revised Page 100
Superseding First Page 100**

Liberty Utilities (Energy North Natural Gas) Corp. d/b/a Liberty
Local Distribution Adjustment Charge (LDAC) decrease due to Rate Case Expense and Recoupment
For LDAC effective November 1, 2022 - October 31, 2023
~~For LDAC effective November 1, 2021 - October 31, 2022~~

<u>Description</u>	<u>Total</u>	<u>Total</u>
Prior Period Recoupment/Rate Case Expense (Over)/Under Collection, including interest as of October 31, 2022	\$ 72,693	\$ 129,039
Rate Case Expense DG 17-048	\$ (4,836)	\$ (4,836)
Rate Case Expense DG 20-105	\$ 848,198	\$ 680,768
Rate Case Expense to Recover as of August 31, 2022	<u>\$ 843,361</u>	<u>\$ 675,932</u>
Projected Recoupment/Rate Case Expense Recovery	<u>\$ 916,054</u>	<u>\$ 804,971</u>
Projected Interest	<u>\$ 21,445</u>	<u>\$ 17,048</u>
Total Projected Recovery, November 1, 2022 - October 31, 2023	<u><u>\$ 937,499</u></u>	<u><u>\$ 822,018</u></u>
Forecast Throughput (Therms)	\$ 186,338,561	186,338,561
RCE Factor (\$/Therm)	\$ 0.0050	\$0.0044

Issued:

Issued by:

Effective: November 1, 2022
~~November 1, 2021~~

Neil Proudman
President

Issued in compliance with NHPUC Order No. xx,xxx dated xxxx xx, 2022 in Docket DG 22-045
~~Issued in compliance with NHPUC Order No. 26,541 dated October 29, 2021 in Docket DG 21-130~~

NHPUC NO. 11 - GAS
LIBERTY UTILITIES

Proposed Seventh Revised Page 101
Superseding Sixth Revised Page 101
LDAC

36 LOCAL DISTRIBUTION ADJUSTMENT CHARGE CALCULATION
~~36 LOCAL DISTRIBUTION ADJUSTMENT CLAUSE CALCULATION~~
Local Delivery Adjustment Charge Calculation

		Sales Customers	Transportation Customers	
Residential Non Heating Rates - R-1				
Energy Efficiency Charge		0.0664		
Demand Side Management Charge		0.0000		
Conservation Charge (CCx)			0.0664	
Relief Holder and pond at Gas Street, Concord, NH	0	0.0000		
Manufactured Gas Plants	<u>0.0155</u>	<u>0.0076</u>		
Environmental Surcharge (ES)	0.0155	0.0076		
Revenue Decoupling Adjustment Factor (RDAF)	0.0152	0.0000		
Property Tax Adjustment Mechanism (PTAM)	0.0142	0.0124		
Rate Case Expense Factor (RCEF)	0.0074	0.0044		
Gas Assistance Program (GAP)	0.0156	0.0203		
LDAC	0.0678	0.1110		per therm

Residential Heating Rates - R-3, R-4, R-6, R-7				
Energy Efficiency Charge		0.0664		
Demand Side Management Charge		0.0000		
Conservation Charge (CCx)			0.0664	
Relief Holder and pond at Gas Street, Concord, NH	0	0.0000		
Manufactured Gas Plants	<u>0.0155</u>	<u>0.0076</u>		
Environmental Surcharge (ES)	0.0155	0.0076		
Revenue Decoupling Adjustment Factor (RDAF)	0.0152	0.0000		
Property Tax Adjustment Mechanism (PTAM)	0.0142	0.0124		
Rate Case Expense Factor (RCEF)	0.0074	0.0044		
Gas Assistance Program (GAP)	0.0156	0.0203		
LDAC	0.0678	0.1110		per therm

Commercial/Industrial Low Annual Use Rates - G-41, G-51, G-44, G-55				
Energy Efficiency Charge	0.0426	0.0442		
Demand Side Management Charge	0	0.0000		
Conservation Charge (CCx)	0.0426		0.0442	0.04255
Relief Holder and pond at Gas Street, Concord, NH	0	0.0000		
Manufactured Gas Plants	<u>0.0155</u>	<u>0.0076</u>		
Environmental Surcharge (ES)	0.0155	0.0076	0.01545	0.0076
Revenue Decoupling Adjustment Factor (RDAF)	0.0039	0.0000	0.0039	0.0000
Property Tax Adjustment Mechanism (PTAM)	0.0142	0.0124	0.0142	0.0124
Rate Case Expense Factor (RCEF)	0.0074	0.0044	0.0074	0.0044
Gas Assistance Program (GAP)	0.0156	0.0203	0.0156	0.0203
LDAC	0.0994	0.0888	0.0994	0.0888 per therm

Commercial/Industrial Medium Annual Use Rates - G-42, G-52, G-45, G-56				
Energy Efficiency Charge	0.0426	0.0442		
Demand Side Management Charge	0	0.0000		
Conservation Charge (CCx)	0.0426		0.0442	0.04255
Relief Holder and pond at Gas Street, Concord, NH	0	0.0000		
Manufactured Gas Plants	<u>0.0155</u>	<u>0.0076</u>		
Environmental Surcharge (ES)	0.0155	0.0076	0.01545	0.0076
Revenue Decoupling Adjustment Factor (RDAF)	0.0039	0.0000	0.0039	0.0000
Property Tax Adjustment Mechanism (PTAM)	0.0142	0.0124	0.0142	0.0124
Rate Case Expense Factor (RCEF)	0.0074	0.0044	0.0074	0.0044
Gas Assistance Program (GAP)	0.0156	0.0203	0.0156	0.0203
LDAC	0.0994	0.0888	0.0994	0.0888 per therm

Commercial/Industrial Large Annual Use Rates - G-43, G-53, G-54, G-46, G-56, G-57, G-58				
Energy Efficiency Charge	0.0426	0.0442		
Demand Side Management Charge	0	0.0000		
Conservation Charge (CCx)	0.0426		0.0442	0.04255
Relief Holder and pond at Gas Street, Concord, NH	0	0.0000		
Manufactured Gas Plants	<u>0.0155</u>	<u>0.0076</u>		
Environmental Surcharge (ES)	0.0155	0.0076	0.01545	0.0076
Revenue Decoupling Adjustment Factor (RDAF)	0.0039	0.0000	0.0039	0.0000
Property Tax Adjustment Mechanism (PTAM)	0.0142	0.0124	0.0142	0.0124
Rate Case Expense Factor (RCEF)	0.0074	0.0044	0.0074	0.0044
Gas Assistance Program (GAP)	0.0156	0.0203	0.0156	0.0203
LDAC	0.0994	0.0888	0.0994	0.0888 per therm

Issued:

Effective: November 1, 2022
November 1, 2021

Issued by:

Neil Proudman
President

Issued in compliance with NHPUC Order No. xx,xxx dated xxx xx, 2022, in Docket DG 22-045
Authorized by House Bill #549 signed February 24, 2022

III DELIVERY TERMS AND CONDITIONS

2 ATTACHMENT B
Schedule of Administrative Fees and Charges

I.	Supplier Balancing Charge:		\$	0.18	\$	0.21	
II.	Capacity Mitigation Fee			15%		15%	of the Proceeds from the Marketing of Capacity for Mitigation.
III.	Peaking Demand Charge		\$	54.72	\$	56.69	
IV.	Company Allowance Calculation (per Schedule 25)						
				<u>165,859,380</u>		170,377,710	Total Sendout - Therms Jul-2021 - Jun-2022
				<u>163,831,092</u>		<u>166,126,573</u>	Total Throughput - Therms Jul-2021 - Jun-2022
				<u>2,028,288</u>		4,251,137	Variance (Sendout - Throughput)
Company Allowance Percentage	2022-23	2024-22		4.2%		2.5%	Variance / Total Sendout

Issued: ~~October xx, 2021~~
October xx, 2022
Effective: #####

Issued by: _____
Neil Proudman
Title: President

#####

Issued in compliance with NHPUC Order No. xx,xxx dated xxxx xx, 2022 in Docket DG 22-045
~~Issued in compliance with NHPUC Order No. 26,541 dated October 29, 2021 in Docket DG 21-130~~

III DELIVERY TERMS AND CONDITIONS

NHPUC NO. 11 - GAS
LIBERTY UTILITIES

Proposed First-Second Revised Page 154
Superseding Original-First Revised Page 154

ATTACHMENT C

CAPACITY ALLOCATORS

Rate Class		Pipeline	Storage	Peaking	Total
G-41	Low Annual /High Winter Use	69.4%	46.8%	44.4%	100.0%
		71.5%	17.4%	11.0%	
G-51	Low Annual /Low Winter Use	76.2%	42.9%	40.9%	100.0%
		79.5%	12.6%	7.9%	
G-42	Medium Annual / High Winter	69.4%	46.8%	44.4%	100.0%
		71.5%	17.4%	11.0%	
G-52	High Annual / Low Winter Use	76.2%	42.9%	40.9%	100.0%
		79.5%	12.6%	7.9%	
G-43	High Annual / High Winter	69.4%	46.8%	44.4%	100.0%
		71.5%	17.4%	11.0%	
G-53	High Annual / Load Factor < 90%	76.2%	42.9%	40.9%	100.0%
		79.5%	12.6%	7.9%	
G-54	High Annual / Load Factor > 90%	76.2%	42.9%	40.9%	100.0%
		79.5%	12.6%	7.9%	

Issued: ~~October xx, 2021~~

Issued by:

Effective: ~~November 1, 2021~~
November 1, 2022

Title:

Neil Proudman
President

Issued in compliance with NHPUC Order No. xx,xxx dated xxxx xx, 2022 in Docket DG 22-045
~~Issued in compliance with NHPUC Order No. 26,541 dated October 29, 2021 in Docket DG 21-130~~

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Peak 2022 – 2023 Winter 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 Schedule 5D	Demand Costs Demand Volumes Demand Rates Pipeline Tariff Sheets
6	Schedule 6	Supply and Commodity Costs, Volumes and Rates
7	Schedule 7	NYMEX Futures @ Henry Hub
8	Schedule 8, Page 1 Schedule 8, Page 2 Schedule 8, Page 3 Schedule 8, Page 4 Schedule 8, Page 5	Annual Bill Comparisons, Nov 21 - Apr 22 Actual Rates vs Nov 22 - Apr 23 Annual Bill Comparisons, Nov 21 - Apr 22 Actual Rates vs Nov 22 - Apr 23 Annual Bill Comparisons, Nov 21 - Apr 22 Actual Rates vs Nov 22 - Apr 23 Annual Bill Comparisons, Nov 21 - Apr 22 Actual Rates vs Nov 22 - Apr 23 Residential Heating
9	Schedule 9	Variance Analysis of the Components of the Winter 2021-2022 Actual Results vs Proposed Winter 2022-2023 Cost of Gas Rate
10	Schedule 10A Pages 1-2 Schedule 10A Page 3 Schedule 10B	Capacity Assignment Calculations 2020-2021 Derivation of Class Assignments and Weightings Correction Factor Calculation Firm and Transportation Sales
11	Schedule 11A Schedule 11B Schedule 11C Schedule 11D	Normal and Design Year Volumes Normal Year Normal and Design Year Volumes Design Year Capacity Utilization Forecast of Upcoming Winter Period Design Day Report
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	Load Migration From Sales to Transportation in the C&I High and Low Winter Use Classes
14	Schedule 14	Delivered Costs of Winter Supplies to Pipeline Delivered Supplies from the Prior Year
15	Schedule 15	July and August Consumption of C&I High and Low Winter Classes as a Percentage of Their Annual Consumption
16	Schedule 16	Storage Inventory, Underground, LPG and LNG including Calculation of Money Pool Interest Costs Associated with Natural Gas
17	Schedule 17	Forecast of Firm Transportation Volumes and Cost of Gas Revenues
18	Schedule 18	Cost of Gas Reconciliation is no longer included in this filing
19	Schedule 19	Local Distribution Adjustment Charge Calculation
20	Schedule 20	Environmental Surcharge
21	Schedule 21	Supplier Balancing Charge and Peaking Demand Charge Calculations
22	Schedule 22	Capacity Allocators Calculation
23	Schedule 23	Fixed Price Option (FPO) Historical Summary
24	Schedule 24	Short-Term Debt Limitations
25	Schedule 25	Company Allowance and Lost and Unaccounted For Gas (LAUF) Calculation
26	Schedule 26	Fuel Inventory Revenue Requirement

1 **Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**
2 **Peak 2022 – 2023 Winter Cost of Gas Filing**
3 **Summary**

	Reference	PK 22–23 Nov - Apr (c)
(a)	(b)	(c)
Anticipated Direct Cost of Gas		
Purchased Gas:		
Demand Costs:	Sch. 5A, col (k), ln 46	\$ 11,510,320
Supply Costs	Sch. 6, col (i), ln 47	93,418,619
Storage Gas:		
Demand, Capacity:	Sch. 5A, col (k), ln 61	\$ 999,899
Commodity Costs:	Sch. 6, col (i), ln 50	11,469,453
Produced Gas:	Sch. 6, col (i), ln 56	\$ 12,645,303
Hedge Contract (Savings)	Sch. 6, col (i), ln 58	\$ (6,022,210)
Hedge Underground Storage Contract (Savings)/Loss	Sch. 16, col (e), ln 172	\$ -
Total Unadjusted Cost of Gas		\$ 124,021,383
Adjustments		
Prior Period (Over)/Under Recovery)	Sch. 3, col (c) ln 28	\$ 5,378,797
Interest 05/01/22 - 4/30/23	Sch. 3, col (q) ln 189	(283,633)
Fuel Inventory Revenue Req	Sch. 26, col (b) ln 8	515,609
Refunds from Suppliers	Sch. 4, ln 26 col (c)	-
Broker Revenues	Sch. 4, ln 26 col (d)	(3,600)
Fuel Financing	Sch. 4, ln 26 col (e)	-
Transportation CGA Revenues	Sch. 4, ln 26 col (f)	(422,021)
Interruptible Sales Margin	Sch. 4, ln 26 col (g)	-
Capacity Release and Off System Sales Margins	Sch. 4, ln 26 col (h) + col (i)	(1,676,512)
Hedging Costs	Sch. 4, ln 26 col (j)	-
Fixed Price Option Administrative Costs	Sch. 4, ln 26 col (k)	59,917
Total Adjustments		\$ 3,568,556
Total Anticipated Direct Costs	Ins 23 + 39	\$ 127,589,939
Anticipated Indirect Cost of Gas		
Working Capital		
Total Unadjusted Anticipated Cost of Gas	Ln 23	\$ 124,021,383
Lead Lag Days / 365	DG 20-105, 25.72/ 365	0.0705
Prime Rate		5.50%
Working Capital Percentage	per GTC 18(f), ln 47 * ln 48	0.388%
Working Capital	ln 45 * ln 48	480,659
Plus: Working Capital Reconciliation	Sch. 3, col (c), ln 92	(30,998)
Total Working Capital Allowance	Ins 49 + 50	\$ 449,661
Bad Debt		
Total Unadjusted Anticipated Cost of Gas	ln 23	\$ 124,021,383
Less Refunds	ln 30	-
Plus Working Capital	ln 52	449,661
Plus Prior Period (Over) Under Recovery	ln 27	5,378,797
Subtotal		\$ 129,849,841
Bad Debt Percentage	per GTC 18(f)	0.86%
Bad Debt Allowance	ln 59 * ln 60	\$ 1,118,204
Prior Period Bad Debt Allowance	Sch. 3, col (c), ln 169	(170,566)
Total Bad Debt Allowance	Ins 62 + 63	\$ 947,639
Production and Storage Capacity	per GTC18(f)	\$ 3,685,458
Miscellaneous Overhead		
Sales Volume	per GTC 18(f)	\$ -
Divided by Total Sales	Sch. 10B, ln 23/1000	92,781
Ratio	Sch. 10B, ln 23/1000	116,430
		79.69%
Miscellaneous Overhead	Ins 69 * 72	\$ -
Total Anticipated Indirect Cost of Gas	Ins 52 + 65 + 67 + 74	\$ 5,082,758
Total Cost of Gas	Ins 41 + 76	\$ 132,672,697
Projected Forecast Sales (Therms)	Sch. 3, col (q), ln 52	92,780,984

1 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
2 Peak 2022 – 2023 Winter Cost of Gas Filing
3 Summary of Supply and Demand Forecast

Schedule 1
Page 1 of 4

7 For Month of:	(a)	(b)	Peak Costs							Peak Period	
8			May 21 - Oct 21	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Nov - Apr
9 I. Gas Volumes (Therms)			(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
10										2,292,267	2.5%
11 A. Firm Demand Volumes											
12 Firm Gas Sales		Sch. 10B, ln 23	-	3,196,308	17,917,229	21,029,207	17,732,977	15,124,179	9,139,216	4,380,770	88,519,885
13 Lost Gas (Unaccounted for)			-	285,912	384,395	488,262	419,171	353,351	241,485		2,172,577
14 Company Use			-	15,751	21,177	26,899	23,093	19,466	13,304		119,689
15 Unbilled Therms			-	8,661,334	(1,975,210)	(779,531)	(348,687)	(469,669)	875,901	(4,380,770)	1,583,367
16											
17 Total Firm Volumes		Sch. 6, ln 97	-	12,159,305	16,347,591	20,764,836	17,826,554	15,027,327	10,269,906		92,395,519
18											
19 B. Supply Volumes (Therms)											
20 <u>Pipeline Gas:</u>											
21 Dawn Supply		Sch. 6, ln 66	-	874,251	924,161	926,671	839,868	910,477	771,345		5,246,775
22 Niagara Supply		Sch. 6, ln 67	-	689,540	728,492	730,471	661,898	717,705	678,639		4,206,745
23 TGP Supply (Direct)		Sch. 6, ln 68	-	4,621,463	3,096,843	3,105,255	2,814,958	3,050,989	641,701		17,331,210
24 Dracut Supply 1 - Baseload		Sch. 6, ln 69	-	-	-	3,100,000	1,400,000	-	-		4,500,000
25 Dracut Supply 2 - Swing		Sch. 6, ln 70	-	2,068,620	1,628,571	574,992	2,290,420	4,186,862	1,559,349		12,308,813
26 Dracut Supply 3 - Swing		Sch. 6, ln 71	-	1,267,959	112,886	75,462	292,325	1,410,944	36,213		3,195,790
27 Constellation COMBO		Sch. 6, ln 72	-	-	-	-	-	-	-		-
28 LNG Truck		Sch. 6, ln 73	-	117,744	1,270,345	1,451,131	1,484,347	110,473	-		4,434,041
29 Propane Truck		Sch. 6, ln 74	-	-	-	691,985	-	-	55,769		747,754
30 PNGTS		Sch. 6, ln 75	-	218,563	231,040	231,668	209,778	227,619	196,277		1,314,945
31 Portland Natural Gas		Sch. 6, ln 76	-	1,067,793	1,128,109	1,131,173	1,025,411	1,111,405	840,151		6,304,043
32 TGP Supply (Z4)		Sch. 6, ln 77	-	1,816,941	1,919,817	1,925,032	1,744,865	1,891,391	5,458,808		14,756,854
33 Subtotal Pipeline Volumes			-	12,742,875	11,040,265	13,943,840	12,763,870	13,617,866	10,238,252		74,346,969
34											
35 <u>Storage Gas:</u>											
36 TGP Storage		Sch. 6, ln 82	-	1,157,573	5,220,027	6,244,468	5,052,839	1,498,432	1,000,000		20,173,339
37											
38 <u>Produced Gas:</u>											
39 LNG Vapor		Sch. 6, ln 85	-	119,952	1,357,644	1,456,414	1,485,862	21,502	21,004		4,462,377
40 Propane		Sch. 6, ln 86	-	-	-	1,263,231	8,331	-	-		1,271,562
41 Subtotal Produced Gas			-	119,952	1,357,644	2,719,645	1,494,192	21,502	21,004		5,733,939
42											
43 <u>Less - Gas Refill:</u>											
44 LNG Truck		Sch. 6, ln 91	-	(117,744)	(1,270,345)	(1,451,131)	(1,484,347)	(110,473)	-		(4,434,041)
45 Propane		Sch. 6, ln 92	-	-	-	(691,985)	-	-	(55,769)		(747,754)
46 TGP Storage Refill		Sch. 6, ln 93	-	(1,743,351)	-	-	-	-	(933,581)		(2,676,933)
47 Subtotal Refills			-	(1,861,095)	(1,270,345)	(2,143,116)	(1,484,347)	(110,473)	(989,350)		(7,858,728)
48											
49 Total Firm Sendout Volumes		Ins 33 + 36 + 41 + 47	-	12,159,305	16,347,591	20,764,836	17,826,554	15,027,327	10,269,906		92,395,519

1 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
2 Peak 2022 – 2023 Winter Cost of Gas Filing
3 Summary of Supply and Demand Forecast

			Peak Costs							Peak Period	
			May 21 - Oct 21	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Nov - Apr
			(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
50											
51	II. Gas Costs										
52	A. Demand Costs										
53											
54											
55											
56	For Month of:										
57		(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										
63											
64	<u>Pipeline:</u>										
65	Iroquois Gas Trans Service RTS 470-0	Sch.5A, In 16									
66	Tenn Gas Pipeline 95346 Z5-Z6	Sch.5A, In 17									
67	Tenn Gas Pipeline 2302 Z5-Z6	Sch.5A, In 18									
68	Tenn Gas Pipeline 8587 Z0-Z6	Sch.5A, In 19									
69	Tenn Gas Pipeline 8587 Z1-Z6	Sch.5A, In 20									
70	Tenn Gas Pipeline 8587 Z4-Z6	Sch.5A, In 21									
71	Tenn Gas Pipeline (Dracut) 42076 Z6-Z6	Sch.5A, In 22									
72	Tenn Gas Pipeline (Dracut) 358905 Z6-Z7	Sch.5A, In 23									
73	Tenn Gas Pipeline (Concord Lateral) Z6-Z6	Sch.5A, In 24									
74	Portland Natural Gas Trans Service	Sch.5A, In 25									
75	Portland Natural Gas	Sch.5A, In 26									
76	ANE (TransCanada via Union to Iroquois)	Sch.5A, In 27									
77	TransCanada via Union to Portland	Sch.5A, In 28									
78	Tenn Gas Pipeline Z4-Z6 stg 632	Sch.5A, In 29									
79	Tenn Gas Pipeline Z4-Z6 stg 11234	Sch.5A, In 30									
80	Tenn Gas Pipeline Z5-Z6 stg 11234	Sch.5A, In 31									
81	National Fuel FST 2358	Sch.5A, In 32									
82	Subtotal Pipeline Demand										
83	Less Capacity Credit										
84	Net Pipeline Demand Costs										
85											
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									
90	Subtotal Peaking Demand										
91	Less Capacity Credit										
92	Net Peaking Supply Demand Costs										
93											
94	<u>Storage:</u>										
95	Dominion - Demand	Sch.5A, In 49									
96	Dominion - Storage	Sch.5A, In 50									
97	Honeoye - Demand	Sch.5A, In 51									
98	National Fuel - Demand	Sch.5A, In 52									
99	National Fuel - Capacity	Sch.5A, In 53									
100	Tenn Gas Pipeline - Demand	Sch.5A, In 54									
101	Tenn Gas Pipeline - Capacity	Sch.5A, In 55									
102	Subtotal Storage Demand										
103	Less Capacity Credit										
104	Net Storage Demand Costs										
105											
106	Total Demand Charges	Ins 60 + 82 + 90 + 102									
107	Total Capacity Credit	Ins 61 + 83 + 91 + 103									
108	Net Demand Charges										
109											
110											

REDACTED
Schedule 1
Page 2 of 4

1 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
2 Peak 2022 – 2023 Winter Cost of Gas Filing
3 Summary of Supply and Demand Forecast

			Peak Costs							Peak Period	
			May 21 - Oct 21	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Nov - Apr
			(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
111	B. Commodity Costs										
112											
113											
114											
115											
116											
117		(a)	(b)								
118	<u>Pipeline:</u>										
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			\$ -	\$ 9,197,119	\$ 15,672,833	\$ 26,023,347	\$ 30,089,330	\$ 19,515,529	\$ 4,811,924	\$ 105,310,081
132											
133	<u>Storage:</u>										
134	TGP Storage - Withdrawals		Sch. 6, In 50	\$ -	\$ 661,679	\$ 2,983,813	\$ 3,569,392	\$ 2,888,247	\$ 856,517	\$ 509,805	\$ 11,469,453
135											
136	<u>Produced Gas Costs:</u>										
137	LNG Vapor		Sch. 6, In 53								
138	Propane		Sch. 6, In 54								
139	Subtotal Produced Gas Costs			\$ -	\$ 165,051	\$ 3,099,142	\$ 5,778,047	\$ 3,535,110	\$ 34,374	\$ 33,579	\$ 12,645,303
140											
141	<u>Less Storage Refills:</u>										
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			\$ -	\$ (1,447,433)	\$ (3,046,288)	\$ (4,799,129)	\$ (3,514,340)	\$ (124,702)	\$ (601,872)	\$ (13,533,764)
147											
148	Total Supply Commodity Costs			\$ -	\$ 8,576,416	\$ 18,709,499	\$ 30,571,657	\$ 32,998,346	\$ 20,281,718	\$ 4,753,435	\$ 115,891,072
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			\$ -	\$ 306,097	\$ 219,991	\$ 246,947	\$ 223,412	\$ 214,578	\$ 56,026	\$ 1,267,051
158											
159	TGP Storage - Withdrawals		Sch. 6, In 35	\$ -	\$ 21,585	\$ 97,338	\$ 116,440	\$ 94,220	\$ 27,941	\$ 17,726	\$ 375,251
160											
161	Total Supply Volumetric Trans. Costs		Ins 157 + 159	\$ -	\$ 327,682	\$ 317,329	\$ 363,387	\$ 317,632	\$ 242,519	\$ 73,752	\$ 1,642,302
162											
163	Total Commodity Gas & Trans. Costs		Ins 148 + 161	\$ -	\$ 8,904,098	\$ 19,026,828	\$ 30,935,045	\$ 33,315,979	\$ 20,524,237	\$ 4,827,187	\$ 117,533,374
164											
165											

REDACTED
Schedule 1
Page 3 of 4

1 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
2 Peak 2022 – 2023 Winter Cost of Gas Filing
3 Summary of Supply and Demand Forecast

166 D. Supply and Demand Costs by Source			REDACTED								
167			Schedule 1								
168			Page 4 of 4								
169											
170											
171											
172											
173											
174											
175											
176											
177											
178											
179											
180											
181											
182											
183											
184											
185											
186											
187											
188											
189											
190											
191											
192											
193											
194											
195											
196											
197											
198											
199											
200											
201											
202											
203											
204											
205											
206											
207											
208											
209											
210											
211											
212											
			Peak Costs	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Peak Period
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	Nov - Apr
											(k)
173	Purchased Gas Demand Costs										
174	Pipeline Gas Demand Costs	Ins 60 + 82	\$ 3,907,220	\$ 1,596,276	\$ 1,596,276	\$ 1,596,276	\$ 1,596,276	\$ 1,596,276	\$ 1,596,276	\$ 1,596,276	\$ 13,484,875
175	Peaking Gas Demand Costs	In 90	-	474,102	474,102	474,102	474,102	474,102	-	-	2,370,511
176	Subtotal Purchased Gas Demand Costs		\$ 3,907,220	\$ 2,070,378	\$ 2,070,378	\$ 2,070,378	\$ 2,070,378	\$ 2,070,378	\$ 1,596,276		\$ 15,855,386
177	Less Capacity Credit	Ins 61 + 83 + 91	(1,323,375)	(523,599)	(523,599)	(523,599)	(523,599)	(523,599)	(403,698)		(4,345,067)
178	Net Purchased Gas Demand Costs		\$ 2,583,844	\$ 1,546,780	\$ 1,546,780	\$ 1,546,780	\$ 1,546,780	\$ 1,546,780	\$ 1,192,578		\$ 11,510,320
179											
180	Storage Gas Demand Costs										
181	Storage Demand	In 102	\$ 709,954	\$ 118,326	\$ 118,326	\$ 118,326	\$ 118,326	\$ 118,326	\$ 118,326		\$ 1,419,908
182	Less Capacity Credit	In 103	(240,461)	(29,925)	(29,925)	(29,925)	(29,925)	(29,925)	(29,925)		(420,009)
183	Net Storage Demand Costs		\$ 469,493	\$ 88,401	\$ 88,401	\$ 88,401	\$ 88,401	\$ 88,401	\$ 88,401		\$ 999,899
184											
185	Total Demand Costs	Ins 178 + 183	\$ 3,053,337	\$ 1,635,181	\$ 1,635,181	\$ 1,635,181	\$ 1,635,181	\$ 1,635,181	\$ 1,280,979		\$ 12,510,219
186											
187	Purchased Gas Supply										
188	Commodity Costs	In 131									
189	Less Storage Inj. (TGP Storage)	In 144									
190	Less Storage Transportation	In 145									
191	Less LNG Truck	In 142									
192	Less Propane Truck	In 143									
193	Plus Transportation Costs	In 157									
194	Subtotal Purchased Gas Supply		\$ -	\$ 8,055,783	\$ 12,846,535	\$ 21,471,165	\$ 26,798,402	\$ 19,605,404	\$ 4,266,078		\$ 93,043,368
195											
196	Storage Commodity Costs										
197	Commodity Costs	In 134	\$ -	\$ 661,679	\$ 2,983,813	\$ 3,569,392	\$ 2,888,247	\$ 856,517	\$ 509,805		\$ 11,469,453
198	Transportation Costs	In 159	-	21,585	97,338	116,440	94,220	27,941	17,726		375,251
199	Subtotal Storage Commodity Costs		\$ -	\$ 683,264	\$ 3,081,151	\$ 3,685,833	\$ 2,982,467	\$ 884,458	\$ 527,531		\$ 11,844,703
200											
201	Produced Gas Commodity Costs	In 139	\$ -	\$ 165,051	\$ 3,099,142	\$ 5,778,047	\$ 3,535,110	\$ 34,374	\$ 33,579		\$ 12,645,303
202											
203	Subtotal Commodity Costs	Ins 194 + 199 + 201	\$ -	\$ 8,904,098	\$ 19,026,828	\$ 30,935,045	\$ 33,315,979	\$ 20,524,237	\$ 4,827,187		##### #
204											
205	Hedge Contract (Savings)/Loss		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -
206											
207	Total Commodity Costs	Ins 203 + 205	\$ -	\$ 8,904,098	\$ 19,026,828	\$ 30,935,045	\$ 33,315,979	\$ 20,524,237	\$ 4,827,187		\$ 117,533,374
208											
209	Total Demand Costs	In 108	\$ 3,053,337	\$ 1,635,181	\$ 1,635,181	\$ 1,635,181	\$ 1,635,181	\$ 1,635,181	\$ 1,280,979		\$ 12,510,219
210	Total Supply Costs	In 207	-	8,904,098	19,026,828	30,935,045	33,315,979	20,524,237	4,827,187		117,533,374
211											
212	Total Direct Gas Costs	Ins 209 + 210	\$ 3,053,337	\$ 10,539,279	\$ 20,662,009	\$ 32,570,225	\$ 34,951,159	\$ 22,159,418	\$ 6,108,166		\$ 130,043,593

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

REDACTED

2
3

Schedule 2
Page 1 of 1

4 **Peak 2022 – 2023 Winter Cost of Gas Filing**
5 **Contracts Ranked on a per Unit Cost Basis**

6
7
8
9

10 **Demand Costs**

11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37

Supplier (a)	Contract (b)	Contract Type (c)	Contract Unit (d)	Unit Dth (MDQ/ACQ) (e)	Peak Period Cost per Unit Dth (f)
Dominion - Capacity Reservation	GSS 300076	Storage	ACQ	102,700	
Tenn Gas Pipeline - Cap. Reservations	FS-MA 523	Storage	ACQ	1,560,391	
National Fuel - Capacity Reservation	FSS-O02357	Storage	ACQ	670,800	
Tenn Gas Pipeline - Demand	FS-MA 523	Storage	MDQ	21,844	
Dominion - Demand	GSS 300076	Storage	MDQ	934	
National Fuel - Demand	FSS-O02357	Storage	MDQ	6,098	
National Fuel	FST N02358	Transportation	MDQ	6,098	
Tenn Gas Pipeline	42076 FTA Z6-Z6	Transportation	MDQ	20,000	
Tenn Gas Pipeline	358905 FTA Z6-Z6	Transportation	MDQ	40,000	
Iroquois Gas Trans Service	RTS 470-01	Transportation	MDQ	4,047	
Honeoye - Demand	SS-NY	Storage	MDQ	1,362	
Tenn Gas Pipeline	2302 Z5-Z6	Transportation	MDQ	3,122	
Tenn Gas Pipeline	95346 Z5-Z6	Transportation	MDQ	4,000	
Tenn Gas Pipeline (short haul)	11234 Z5-Z6(stg)	Transportation	MDQ	1,957	
Tenn Gas Pipeline (short haul)	11234 Z4-Z6(stg)	Transportation	MDQ	7,082	
Tenn Gas Pipeline (short haul)	8587 Z4-Z6	Transportation	MDQ	3,811	
Tenn Gas Pipeline (short haul)	632 Z4-Z6 (stg)	Transportation	MDQ	15,265	
Tenn Gas Pipeline (Concord Lateral) Z6-Z6	Firm Transportation	Transportation	MDQ	30,000	
ANE (TransCanada via Union to Iroquois)	Dawn - Parkway to Iroquois	Transportation	MDQ	4,047	
TransCanada via Union to Portland	Dawn -Parkway to Portland	Transportation	MDQ	5,077	
Tenn Gas Pipeline (long haul)	8587 Z1-Z6	Transportation	MDQ	14,561	
Tenn Gas Pipeline (long haul)	8587 Z0-Z6	Transportation	MDQ	7,035	
Portland Natural Gas Trans Service	FT-208544	Transportation	MDQ	1,000	
Portland Natural Gas	FT 233320	Transportation	MDQ	5,000	
Peaking Demand	NSB041	Peaking	MDQ	4,000	

38 **Supply Costs - Commodity**

39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54

TGP Supply (Z4)		Pipeline	Dkt	1,475,685	
Niagara Supply		Pipeline	Dkt	420,674	
Constellation COMBO		Pipeline	Dkt	-	
TGP Supply (Direct)		Pipeline	Dkt	1,733,121	
Dawn Supply		Pipeline	Dkt	524,677	
Dracut Supply 1 - Baseload		Pipeline	Dkt	450,000	
TGP Storage		Storage	Dkt	2,017,334	
PNGTS		Pipeline	Dkt	131,494	
Propane Truck		Pipeline	Dkt	74,775	
LNG Truck		Pipeline	Dkt	443,404	
Dracut Supply 2 - Swing		Pipeline	Dkt	1,230,881	
Dracut Supply 3 - Swing		Pipeline	Dkt	319,579	
Portland Natural Gas		Pipeline	Dkt	630,404	
Propane		Produced	Dkt	127,156	
LNG Vapor (Storage)		Produced	Dkt	446,238	

55 **Supply Costs - Volumetric Transportation**

56
57
58
59
60
61

Dracut Supply 1 - Baseload		Pipeline	Dkt	450,000	
Dracut Supply 2 - Swing		Pipeline	Dkt	1,230,881	
Niagara Supply		Pipeline	Dkt	420,674	
Dawn Supply		Pipeline	Dkt	524,677	
TGP Storage - Withdrawals		Pipeline	Dkt	2,017,334	
TGP Supply (Direct)		Pipeline	Dkt	1,733,121	

1 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
2
3 Peak 2022 2023 Winter Cost of Gas Filing
4 COG (Over)/Under Cumulative Recovery Balances and Interest Calculation

91																																
92	(Over)/Under Balance	In 84 + In 90	\$	(30,998)	\$	(45,677)	\$	(47,007)	\$	(49,156)	\$	(52,274)	\$	(50,534)	\$	(48,793)	\$	(67,714)	\$	(66,610)	\$	(39,493)	\$	10,477	\$	23,816	\$	(3,328)	\$	(15,887)	\$	(15,887)
93																																
94																																
95	Calculation of Working Capital with Interest																															
96																																
97																																
98	Beginning Balance	In 70	\$	(30,998)	\$	(30,998)	\$	(45,677)	\$	(47,007)	\$	(49,156)	\$	(52,274)	\$	(50,534)	\$	(48,793)	\$	(67,681)	\$	(66,532)	\$	(39,357)	\$	10,664	\$	24,046	\$	(3,068)	\$	(30,998)
99	Forecast Working Capital	In 74		1,255		1,434		1,703		1,972		1,972		1,972		1,972		36,956		76,188		122,340		131,567		81,991		19,783		-		479,135
100	Projected Rev. with interest	In 114 * In 120		-		-		-		-		-		-		-		(55,490)		(83,984)		(98,571)		(83,121)		(70,892)		(42,839)		-		(434,897)
101	Projected Unbilled Revenue			-		-		-		-		-		-		-		(91)		9,167		12,821		14,456		16,657		12,551		-		65,561
102	Reverse Prior Month Unbilled			-		-		-		-		-		-		-		91		(9,167)		(12,821)		(14,456)		(16,657)		(12,551)		-		(65,561)
103	Add Net Adjustments	In 80		(2,954)		(1,637)		(3,558)		(4,826)		-		-		-		-		-		-		-		-		-		-		(12,975)
104	Working Capital Billed	In 82		(12,866)		(975)		(101)		(27)		-		-		-		-		-		-		-		-		-		-		(13,970)
105	Add Interest	In 90		-		-		-		-		-		-		-		(263)		(313)		(247)		(61)		80		46		-		(758)
106	Monthly (Over)/Under Recovery		\$	(30,998)	\$	(45,563)	\$	(46,855)	\$	(48,962)	\$	(52,038)	\$	(50,302)	\$	(48,561)	\$	(67,680)	\$	(66,531)	\$	(39,357)	\$	10,663	\$	24,045	\$	(3,069)	\$	(15,620)	\$	(14,462)
107																																
108	Average Monthly Balance		\$	(38,281)	\$	(46,266)	\$	(47,985)	\$	(50,597)	\$	(51,288)	\$	(49,547)	\$	(58,236)	\$	(67,106)	\$	(52,944)	\$	(14,347)	\$	17,354	\$	10,488	\$	(9,344)				
109																																
110	Interest Applied	In 88 * In 108 / 365 * Days of Month		(114)		(152)		(194)		(236)		(232)		(231)		(263)		(313)		(247)		(61)		81		47		-		\$	(1,915)	
111																																
112	(Over)/Under Balance	-In 105 +In 106 + In 110	\$	(30,998)	\$	(45,677)	\$	(47,007)	\$	(49,156)	\$	(52,274)	\$	(50,534)	\$	(48,793)	\$	(67,681)	\$	(66,532)	\$	(39,357)	\$	10,664	\$	24,046	\$	(3,068)	\$	(15,620)	\$	(15,620)
113																																
114	Forecast Therm Sales	In 52																11,838,176		17,917,229		21,029,207		17,732,977		15,124,179		9,139,216		0		92,780,984
115	Unbilled Therm	In 55																19,465		(1,975,210)		(779,531)		(348,687)		(469,669)		875,901				
116	Gross Unbilled																	19,465		(1,955,745)		(2,735,276)		(3,083,964)		(3,553,633)		(2,677,732)				
117																																
118	Working Cap. Rate w/out Int.	Sch. 3, pg. 4, In 220 col. (c)																\$0.0047		\$0.0047		\$0.0047		\$0.0047		\$0.0047		\$0.0047		\$0.0047		\$0.0047
119	Working Capital Rate w Int.	Sch. 3 pg. 4 In 220 col. (d)																\$0.0047		\$0.0047		\$0.0047		\$0.0047		\$0.0047		\$0.0047		\$0.0047		\$0.0047
120																																

1 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
2
3 Peak 2022 2023 Winter Cost of Gas Filing
4 COG (Over)/Under Cumulative Recovery Balances and Interest Calculation

			Prior Period Bal	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Demand/Period
			Apr-22	31	30	31	31	30	31	30	31	31	28	31	30	31	Total
			Ending Bal	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
			+ May Collections														
(a)	Days in Month	(b)															
Account 1920 1743 Bad Debt (Over)/Under Balance Interest Calculation																	
128	Forecast Direct Gas Costs	In 34	\$	508,889	\$ 508,889	\$ 508,889	\$ 508,889	\$ 508,889	\$ 508,889	\$ 9,535,577	\$ 19,658,307	\$ 31,566,524	\$ 33,947,458	\$ 21,155,716	\$ 5,104,465	\$ -	124,021,383
130	Forecast Working Capital	In 99		1,255	1,434	1,703	1,972	1,972	1,972	5,958	76,188	122,340	131,567	81,991	19,783		448,137
131	Prior Period Balance	In 42								896,466	896,466	896,466	896,466	896,466	896,466		5,378,797
132	Total Forecast Direct Gas Costs & Working Capital			510,145	510,324	510,593	510,862	510,862	510,862	10,438,001	20,630,961	32,585,330	34,975,491	22,134,174	6,020,714		124,469,520
133	Beginning Balance	Account 1920-1743	\$	(170,566)	\$ (204,512)	\$ (208,024)	\$ (215,611)	\$ (227,090)	\$ (223,707)	\$ (220,343)	\$ (247,542)	\$ (226,982)	\$ (145,391)	\$ (14,647)	\$ 32,604	\$ (13,507)	\$ (170,566)
134	Forecast Bad Debt	In 133 * 0.00861151933369296		4,393	4,395	4,397	4,399	4,399	4,399	89,887	177,664	280,609	301,192	190,609	51,847		1,118,191
135	Projected Revenues w/o int	In 176 * In 180		-	-	-	-	-	-	(115,841)	(175,327)	(205,778)	(173,524)	(147,996)	(89,431)		(907,895)
136	Projected Unbilled Revenue									(190)	19,138	26,766	30,178	34,774	26,203		136,867
137	Reverse Prior Month Unbilled										190	(19,138)	(26,766)	(30,178)	(34,774)	(26,203)	(136,867)
138	Bad Debt Billed	Account 1920-1743		(28,732)	(2,195)	(237)	(68)	-	-	-	-	-	-	-	-	-	(31,232)
139	Add Net Adjustments			(9,045)	(5,013)	(10,894)	(14,779)	-	-	-	-	-	-	-	-	-	(39,730)
140	Monthly (Over)/Under Recovery		\$	(170,566)	\$ (203,949)	\$ (207,325)	\$ (214,758)	\$ (226,058)	\$ (222,691)	\$ (219,308)	\$ (246,487)	\$ (225,876)	\$ (144,523)	\$ (14,311)	\$ 32,562	\$ (13,550)	\$ (39,710)
141	Average Monthly Balance	(In 135 + In 147)/2	\$	(187,257)	\$ (205,918)	\$ (211,391)	\$ (220,834)	\$ (224,890)	\$ (221,508)	\$ (233,415)	\$ (236,709)	\$ (185,753)	\$ (79,851)	\$ 8,957	\$ 9,527	\$ (26,609)	
142	Interest Rate	Prime Rate		3.50%	4.00%	4.75%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%		
143	Interest Applied	In 149 * In 151 / 365 * Days of Month	\$	(563)	\$ (699)	\$ (853)	\$ (1,032)	\$ (1,017)	\$ (1,035)	\$ (1,055)	\$ (1,106)	\$ (868)	\$ (337)	\$ 42	\$ 43		\$ (8,478)
144	(Over)/Under Balance	In 147 + In 153	\$	(170,566)	\$ (204,512)	\$ (208,024)	\$ (215,611)	\$ (227,090)	\$ (223,707)	\$ (220,343)	\$ (247,542)	\$ (226,982)	\$ (145,391)	\$ (14,647)	\$ 32,604	\$ (13,507)	\$ (39,710)
Calculation of Bad Debt with Interest																	
145	Beginning Balance	In 135	\$	(170,566)	\$ (204,505)	\$ (207,995)	\$ (215,582)	\$ (227,061)	\$ (223,679)	\$ (220,314)	\$ (246,787)	\$ (225,246)	\$ (142,413)	\$ (10,603)	\$ 37,546	\$ (7,950)	\$ (170,566)
146	Forecast Bad Debt	In 137		4,393	4,395	4,397	4,399	4,399	4,399	89,887	177,664	280,609	301,192	190,609	51,847		1,118,191
147	Projected Revenues with int.	In 176 * In 182		-	-	-	-	-	-	(115,115)	(174,228)	(204,489)	(172,436)	(147,068)	(88,870)		(902,206)
148	Projected Unbilled Revenue									(189)	19,018	26,598	29,989	34,556	26,038		136,009
149	Reverse Prior Month Unbilled										189	(19,018)	(26,598)	(29,989)	(34,556)	(26,038)	(136,009)
150	Bad Debt Billed	In 143		(28,732)	(2,195)	(237)	(68)	-	-	-	-	-	-	-	-	-	(31,232)
151	Add Interest	In 153		-	-	-	-	-	-	(1,055)	(1,106)	(868)	(337)	42	43		(3,281)
152	Add Net Adjustments	In 145		(9,045)	(5,013)	(10,894)	(14,779)	-	-	-	-	-	-	-	-	-	(39,730)
153	Monthly (Over)/Under Recovery		\$	(170,566)	\$ (203,949)	\$ (207,319)	\$ (214,730)	\$ (226,030)	\$ (222,662)	\$ (219,279)	\$ (246,786)	\$ (225,249)	\$ (142,413)	\$ (10,603)	\$ 37,546	\$ (7,950)	\$ (33,989)
154	Average Monthly Balance		\$	(187,257)	\$ (205,912)	\$ (211,363)	\$ (220,806)	\$ (224,862)	\$ (221,479)	\$ (233,550)	\$ (236,018)	\$ (183,830)	\$ (76,508)	\$ 13,471	\$ 14,798	\$ (20,970)	
155	Interest Applied	In 151 * In 170 / 365 * Days of Month		(557)	(677)	(853)	(1,031)	(1,016)	(1,035)	(1,056)	(1,102)	(868)	(337)	42	43		(8,447)
156	(Over)/Under Balance	-In 166 + In 168 + In 172	\$	(170,566)	\$ (204,505)	\$ (207,995)	\$ (215,582)	\$ (227,061)	\$ (223,679)	\$ (220,314)	\$ (246,787)	\$ (225,246)	\$ (142,413)	\$ (10,603)	\$ 37,546	\$ (7,950)	\$ (33,989)
157	Forecast Term Sales	In 52								11,838,176	17,917,229	21,029,207	17,732,977	15,124,179	9,139,216	0	92,780,984
158	Unbilled Therm	In 55								19,465	(1,975,210)	(779,531)	(348,687)	(469,869)	875,901		
159	Gross Unbilled									19,465	(1,955,745)	(2,735,276)	(3,083,964)	(3,553,633)	(2,677,732)		
160	COG Rate Without Interest	Sch. 3, pg. 4, In 237 col. (c)			\$0.0098	\$0.0098	\$0.0098	\$0.0098	\$0.0098	\$0.0098	\$0.0098	\$0.0098	\$0.0098	\$0.0098	\$0.0098	\$0.0098	\$0.0098
161	COG With Interest	Sch. 3, pg. 4, In 237 col. (d)			\$0.0097	\$0.0097	\$0.0097	\$0.0097	\$0.0097	\$0.0097	\$0.0097	\$0.0097	\$0.0097	\$0.0097	\$0.0097	\$0.0097	\$0.0097
162	Total Interest	In 46 + In 110 + 172	\$	-	\$ 4,574	\$ (7,872)	\$ (13,140)	\$ (21,649)	\$ (23,537)	\$ (22,025)	\$ (35,889)	\$ (59,383)	\$ (57,776)	\$ (24,465)	\$ (2,204)	\$ (20,267)	\$ -

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

REDACTED

2

Schedule 4

3 **Peak 2022 – 2023 Winter Cost of Gas Filing**

Page 1 of 1

4 **Adjustments to Gas Costs**

5

		Prior Period	Refunds from	Broker	Inventory	Transportation	Interruptible	Off System	Capacity	Net Option	Fixed Price	Total
	<u>Adjustments</u>	Adjustments	Suppliers	Revenue	Finance	CGA Revenues	Sales Margin	Sales Margin	Release	Premiums	Option	Adjustments
	(a)	(b)	(c)	(d)	Charges	(Schedule 17)	(g)	(h)	(i)	(j)	Administrative	(m)
					(e)	(f)					Costs	
9	May-21	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	Jun-21	-	-	-	-	-	-	-	-	-	-	-
11	Jul-21 1/	-	-	-	-	-	-	-	-	-	-	-
12	Aug-21 1/	-	-	-	-	-	-	-	-	-	-	-
13	Sep-21 1/	-	-	-	-	-	-	-	-	-	-	-
14	Oct-21 1/	-	-	-	-	-	-	-	-	-	-	-
15	Nov-21 1/	-	-	(47)	-	(62,864)	-	-	-	-	59,917	(281,823)
16	Dec-21 1/	-	-	(624)	-	(77,703)	-	-	-	-	-	(359,882)
17	Jan-22 1/	-	-	(751)	-	(87,373)	-	-	-	-	-	(369,554)
18	Feb-22 1/	-	-	(816)	-	(72,905)	-	-	-	-	-	(354,081)
19	Mar-22 1/	-	-	(757)	-	(69,548)	-	-	-	-	-	(347,428)
20	Apr-22 1/	-	-	(605)	-	(51,628)	-	-	-	-	-	(329,449)
21												
22	Subtotal May 21 - Oct 21	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
23												
24	Subtotal Nov 21 - Apr 22	\$ -	\$ -	\$ (3,600)	\$ -	\$ (422,021)	\$ -	\$ -	\$ (1,676,512)	\$ -	\$ 59,917	\$ (2,042,217)
25												
26	Total Peak Period	\$ -	\$ -	\$ (3,600)	\$ -	\$ (422,021)	\$ -	\$ -	\$ (1,676,512)	\$ -	\$ 59,917	\$ (2,042,217)
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

REDACTED

2
3 Peak 2022 – 2023 Winter Cost of Gas Filing Schedule 5A
4 Demand Costs Page 1 of 1

	Peak	Reference	Deferred to Peak	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Peak Nov-Apr Total	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
11 Supply											
12 Niagara Supply		Sch 5B, In 9 * Sch 5C In 9 x days									
13 Subtotal Supply Demand & Reservation Charges											
15 Pipeline											
16 Iroquois Gas Trans Service RTS 470-0		Sch 5B, In 12 * Sch 5C In 12 x days									
17 Tenn Gas Pipeline 95346 Z5-Z6		Sch 5B, In 13 * Sch 5C In 14 x days									
18 Tenn Gas Pipeline 2302 Z5-Z6		Sch 5B, In 14 * Sch 5C In 16 x days									
19 Tenn Gas Pipeline 8587 Z0-Z6		Sch 5B, In 15 * Sch 5C In 18 x days									
20 Tenn Gas Pipeline 8587 Z1-Z6		Sch 5B, In 16 * Sch 5C In 20 x days									
21 Tenn Gas Pipeline 8587 Z4-Z6		Sch 5B, In 17 * Sch 5C In 22 x days									
22 Tenn Gas Pipeline (Dracut) 42076 Z6-Z6	peak	Sch 5B, In 18 * Sch 5C In 24 x days									
23 Tenn Gas Pipeline (Dracut) 358905 Z6-Z7	peak	Sch 5B, In 19 * Sch 5C In 25 x days									
24 Tenn Gas Pipeline (Concord Lateral) Z6-Z6	peak	Sch 5B, In 20 * Sch 5C In 28 x days									
25 Portland Natural Gas Trans Service		Sch 5B, In 21 * Sch 5C In 30 x days									
26 Portland Natural Gas		Sch 5B, In 22 * Sch 5C In 31 x days									
27 ANE (TransCanada via Union to Iroquois)		Sch 5B, In 23 * Sch 5C In 32 x days									
28 TransCanada via Union to Portland		Sch 5B, In 24 * Sch 5C In 33 x days									
29 Tenn Gas Pipeline Z4-Z6 stg 632	peak	Sch 5B, In 25 * Sch 5C In 34 x days									
30 Tenn Gas Pipeline Z4-Z6 stg 11234	peak	Sch 5B, In 26 * Sch 5C In 36 x days									
31 Tenn Gas Pipeline Z5-Z6 stg 11234	peak	Sch 5B, In 27 * Sch 5C In 38 x days									
32 National Fuel FST 2358	peak	Sch 5B, In 28 * Sch 5C In 40 x days									
34 Subtotal Pipeline Demand Charges				\$ 3,907,220	\$ 1,596,276	\$ 1,596,276	\$ 1,596,276	\$ 1,596,276	\$ 1,596,276	\$ 1,596,276	\$ 13,484,875
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									
40 Subtotal Peaking Demand Charges				\$ -	\$ 474,102	\$ 474,102	\$ 474,102	\$ 474,102	\$ 474,102	\$ -	\$ 2,370,511
42 Subtotal Supply, Pipeline & Peaking		In 13 + In 34 + In 40		\$ 3,907,220	\$ 2,070,378	\$ 2,070,378	\$ 2,070,378	\$ 2,070,378	\$ 2,070,378	\$ 1,596,276	\$ 15,855,386
44 Less Transportation Capacity Credit				\$ (1,323,375)	\$ (523,599)	\$ (523,599)	\$ (523,599)	\$ (523,599)	\$ (523,599)	\$ (403,698)	\$ (4,345,067)
46 Total Supply, Pipeline & Peaking Demand				\$ 2,583,844	\$ 1,546,780	\$ 1,546,780	\$ 1,546,780	\$ 1,546,780	\$ 1,546,780	\$ 1,192,578	\$ 11,510,320
49 Dominion - Demand	peak	Sch 5B, In 36 * Sch 5C In 64 x days		\$ 18,240	\$ 3,040	\$ 3,040	\$ 3,040	\$ 3,040	\$ 3,040	\$ 3,040	\$ 36,480
50 Dominion - Storage	peak	Sch 5B, In 37 * Sch 5C In 65 x days		19,595	3,266	3,266	3,266	3,266	3,266	3,266	39,190
51 Honeoye - Demand	peak	Sch 5B, In 38 * Sch 5C In 68 x days		50,105	8,351	8,351	8,351	8,351	8,351	8,351	100,211
52 National Fuel - Demand	peak	Sch 5B, In 40 * Sch 5C In 70 x days		97,207	16,201	16,201	16,201	16,201	16,201	16,201	194,414
53 National Fuel - Capacity	peak	Sch 5B, In 41 * Sch 5C In 71 x days		193,190	32,198	32,198	32,198	32,198	32,198	32,198	386,381
54 Tenn Gas Pipeline - Demand	peak	Sch 5B, In 42 * Sch 5C In 74 x days		167,775	27,963	27,963	27,963	27,963	27,963	27,963	335,550
55 Tenn Gas Pipeline - Capacity	peak	Sch 5B, In 43 * Sch 5C In 75 x days		163,841	27,307	27,307	27,307	27,307	27,307	27,307	327,682
57 Subtotal Storage Demand Costs				\$ 709,954	\$ 118,326	\$ 118,326	\$ 118,326	\$ 118,326	\$ 118,326	\$ 118,326	\$ 1,419,908
59 Less Transportation Capacity Credit				\$ (240,461)	\$ (29,925)	\$ (29,925)	\$ (29,925)	\$ (29,925)	\$ (29,925)	\$ (29,925)	\$ (420,009)
61 Total Storage Demand Costs		In 57 + In 59		\$ 469,493	\$ 88,401	\$ 88,401	\$ 88,401	\$ 88,401	\$ 88,401	\$ 88,401	\$ 999,899
63 Total Demand Charges		In 42 + In 57		\$ 4,617,174	\$ 2,188,704	\$ 2,188,704	\$ 2,188,704	\$ 2,188,704	\$ 2,188,704	\$ 1,714,602	\$ 17,275,294
65 Total Transportation Capacity Credit		In 44 + In 59		\$ (1,563,837)	\$ (553,523)	\$ (553,523)	\$ (553,523)	\$ (553,523)	\$ (553,523)	\$ (433,623)	\$ (4,765,075)
67 Total Demand Charges less Cap. Cr.		In 63 + In 65		\$ 3,053,337	\$ 1,635,181	\$ 1,635,181	\$ 1,635,181	\$ 1,635,181	\$ 1,635,181	\$ 1,280,979	\$ 12,510,219
70 Monthly Off Peak Demand											
71 Monthly Off Peak Transportation Cap Credit											
72 Total Off Peak Demand											
74 Monthly Peak Demand											
75 Monthly Peak Transportation Cap Credit											
76 Total Peak Demand											

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

Schedule 5B
Page 1 of 1

2
3 **Peak 2022 – 2023 Winter Cost of Gas Filing**

4 **Demand Volumes**

		Peak	Reference	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Supply									
	Niagara Supply			-	-	-	-	-	-
Pipeline									
	Iroquois Gas Trans Service		RTS 470-01	4,047	4,047	4,047	4,047	4,047	4,047
	Tenn Gas Pipeline		95346 Z5-Z6	4,000	4,000	4,000	4,000	4,000	4,000
	Tenn Gas Pipeline		2302 Z5-Z6	3,122	3,122	3,122	3,122	3,122	3,122
	Tenn Gas Pipeline (long haul)		8587 Z0-Z6	7,035	7,035	7,035	7,035	7,035	7,035
	Tenn Gas Pipeline (long haul)		8587 Z1-Z6	14,561	14,561	14,561	14,561	14,561	14,561
	Tenn Gas Pipeline (short haul)		8587 Z4-Z6	3,811	3,811	3,811	3,811	3,811	3,811
	Tenn Gas Pipeline	peak	42076 FTA Z6-Z6	20,000	20,000	20,000	20,000	20,000	20,000
	Tenn Gas Pipeline	peak	358905 FTA Z6-Z6	40,000	40,000	40,000	40,000	40,000	40,000
	Tenn Gas Pipeline (Concord Lateral)	peak	Firm Transportation	30,000	30,000	30,000	30,000	30,000	30,000
	Portland Natural Gas Trans Service		FT-208544	1,000	1,000	1,000	1,000	1,000	1,000
	Portland Natural Gas		FT 233320	5,000	5,000	5,000	5,000	5,000	5,000
	ANE (TransCanada via Union to Iroquois)		Dawn - Parkway to Iroquois	4,047	4,047	4,047	4,047	4,047	4,047
	TransCanada via Union to Portland		Dawn -Parkway to Portland	5,077	5,077	5,077	5,077	5,077	5,077
	Tenn Gas Pipeline (short haul)	peak	632 Z4-Z6 (stg)	15,265	15,265	15,265	15,265	15,265	15,265
	Tenn Gas Pipeline (short haul)	peak	11234 Z4-Z6(stg)	7,082	7,082	7,082	7,082	7,082	7,082
	Tenn Gas Pipeline (short haul)	peak	11234 Z5-Z6(stg)	1,957	1,957	1,957	1,957	1,957	1,957
	National Fuel	peak	FST N02358	6,098	6,098	6,098	6,098	6,098	6,098
Peaking									
	Tenn Gas Pipeline (Concord Lateral)	peak		-	-	-	-	-	-
	Demand FLS	peak		-	-	-	-	-	-
	Peaking Demand	peak	NSB041	4,000	4,000	4,000	4,000	4,000	-
Storage									
	Dominion - Demand	peak	GSS 300076	934	934	934	934	934	934
	Dominion - Capacity Reservation	peak	GSS 300076	102,700	102,700	102,700	102,700	102,700	102,700
	Honeoye - Demand	peak	SS-NY	1,362	1,362	1,362	1,362	1,362	1,362
	Honeoye - Capacity	peak	SS-NY	245,380	245,380	245,380	245,380	245,380	245,380
	National Fuel - Demand	peak	FSS-O02357	6,098	6,098	6,098	6,098	6,098	6,098
	National Fuel - Capacity Reservation	peak	FSS-O02357	670,800	670,800	670,800	670,800	670,800	670,800
	Tenn Gas Pipeline - Demand	peak	FS-MA 523	21,844	21,844	21,844	21,844	21,844	21,844
	Tenn Gas Pipeline - Cap. Reservations	peak	FS-MA 523	1,560,391	1,560,391	1,560,391	1,560,391	1,560,391	1,560,391

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

REDACTED

2

Schedule 5C

3 Peak 2022 – 2023 Winter Cost of Gas Filing

Page 1 of 2

4 Demand Rates

5

6 Tariff Rates

	Nov-22 30	Dec-22 31	Jan-23 31	Feb-23 28	Mar-23 31	Apr-23 30	Nov - Apr 181
	Unit Rate	Unit Rate	Unit Rate	Unit Rate	Unit Rate	Unit Rate	Avg Rate

7

8 **Supply**

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

10

11 **Pipeline**

12	Iroquois Gas Trans Service	RTS 470-01	\$ 5.2357	Fourth Revised Sheet No. 4	\$ 0.1745	\$ 0.1689	\$ 0.1689	\$ 0.1870	\$ 0.1689	\$ 0.1745	\$ 0.1738
13	Tenn Gas Pipeline	95346 Z5-Z6	\$ 6.1635	19th Rev Sheet No. 14	\$ 0.2055	\$ 0.1988	\$ 0.1988	\$ 0.2201	\$ 0.1988	\$ 0.2055	\$ 0.2046
14	Tenn Gas Pipeline	2302 Z5-Z6	\$ 6.1635	19th Rev Sheet No. 14	\$ 0.2055	\$ 0.1988	\$ 0.1988	\$ 0.2201	\$ 0.1988	\$ 0.2055	\$ 0.2046
15	Tenn Gas Pipeline	8587 Z0-Z6	\$ 19.9267	FT-A (Z0 - Z6)	\$ 0.6642	\$ 0.6428	\$ 0.6428	\$ 0.7117	\$ 0.6428	\$ 0.6642	\$ 0.6614
16	Tenn Gas Pipeline	8587 Z1-Z6	\$ 17.6917	FT-A (Z1 - Z6)	\$ 0.5897	\$ 0.5707	\$ 0.5707	\$ 0.6318	\$ 0.5707	\$ 0.5897	\$ 0.5872
17	Tenn Gas Pipeline	8587 Z4-Z6	\$ 7.1720	FT-A (Z4 - Z6)	\$ 0.2391	\$ 0.2314	\$ 0.2314	\$ 0.2561	\$ 0.2314	\$ 0.2391	\$ 0.2381
18	TGP Dracut	42076 FTA Z6-Z6	\$ 4.0968	19th Rev Sheet No. 14	\$ 0.1366	\$ 0.1322	\$ 0.1322	\$ 0.1463	\$ 0.1322	\$ 0.1366	\$ 0.1360
19	TGP Dracut	358905 FTA Z6-Z6	\$ 4.0968	19th Rev Sheet No. 14	\$ 0.1366	\$ 0.1322	\$ 0.1322	\$ 0.1463	\$ 0.1322	\$ 0.1366	\$ 0.1360
20	TGP Concord Lateral	Firm Transportatio	\$ 12.2188	Per contract	\$ 0.4073	\$ 0.3942	\$ 0.3942	\$ 0.4364	\$ 0.3942	\$ 0.4073	\$ 0.4056
21	Portland Natural Gas	FT-208544	\$ 18.2633	Negot Dmd /CMDY=Part 4.1 V8	\$ 0.6088	\$ 0.5891	\$ 0.5891	\$ 0.6523	\$ 0.5891	\$ 0.6088	\$ 0.6062
22	Portland Natural Gas	FT 233320	\$ 22.7943	Negot Dmd /CMDY=Part 4.1 V8	\$ 0.7598	\$ 0.7353	\$ 0.7353	\$ 0.8141	\$ 0.7353	\$ 0.7598	\$ 0.7566
23	Tenn Gas Pipeline	632 Z4-Z6 (stg)	\$ 7.1720	19th Rev Sheet No. 14	\$ 0.2391	\$ 0.2314	\$ 0.2314	\$ 0.2561	\$ 0.2314	\$ 0.2391	\$ 0.2381
24	Tenn Gas Pipeline	11234 Z4-Z6(stg)	\$ 7.1720	19th Rev Sheet No. 14	\$ 0.2391	\$ 0.2314	\$ 0.2314	\$ 0.2561	\$ 0.2314	\$ 0.2391	\$ 0.2381
25	Tenn Gas Pipeline	11234 Z5-Z6(stg)	\$ 6.1635	19th Rev Sheet No. 14	\$ 0.2055	\$ 0.1988	\$ 0.1988	\$ 0.2201	\$ 0.1988	\$ 0.2055	\$ 0.2046
26	National Fuel	FST N02358	\$ 4.9801	4.020 Version 28.0.0 Pg 1	\$ 0.1660	\$ 0.1606	\$ 0.1606	\$ 0.1779	\$ 0.1606	\$ 0.1660	\$ 0.1653

41

42

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

REDACTED

2
3 Peak 2022 – 2023 Winter Cost of Gas Filing
Schedule 5C
Page 2 of 2

43	ANE	Union Gas	\$	3.6890																
44		TransCanada Pipelines Limited	\$	11.9690	Dawn - Parkway to Iroquois															
45		Delivery Pressure Demand Charge	\$	0.6083	Dawn - Parkway to Iroquois															
46		Sub Total Demand Charges	\$	16.2663																
47		Conversion rate GJ to MMBTU	\$	1.0551																
48		Conversion rate to US\$	\$	1.2706	1/0/1900															
49		Demand Rate/US\$	\$	13.5069		\$	0.4502	\$	0.4357	\$	0.4357	\$	0.4824	\$	0.4357	\$	0.4502	\$	0.4483	
50																				
51		Union Gas	\$	3.6890																
52		TransCanada Pipelines Limited	\$	20.3913	Dawn -Parkway to Portland															
53		Delivery Pressure Demand Charge	\$	0.6083	Dawn -Parkway to Portland															
54		Sub Total Demand Charges	\$	24.6887																
55		Conversion rate GJ to MMBTU	\$	1.0551																
56		Conversion rate to US\$	\$	1.2706	1/0/1900															
57		Demand Rate/US\$	\$	20.5005		\$	0.6833	\$	0.6613	\$	0.6613	\$	0.7322	\$	0.6613	\$	0.6833	\$	0.6805	
58																				
59	Peaking																			
60		Demand FLS			Per Contract	[REDACTED]														
61		Subtotal Peaking Demand Charges			Per Contract	[REDACTED]														
62																				
63	Storage																			
64		Dominion - Demand	GSS 300076	\$	3.2548	GSS Settled,Tariff Rec #10.30 \	\$	0.1085	\$	0.1050	\$	0.1050	\$	0.1162	\$	0.1050	\$	0.1085	\$	0.1079
65		Dominion - Capacity	GSS 300076	\$	0.0318	GSS Settled,Tariff Rec #10.30 \	\$	0.0011	\$	0.0010	\$	0.0010	\$	0.0011	\$	0.0010	\$	0.0011	\$	0.0011
66				\$	3.2866		\$	0.1096	\$	0.1060	\$	0.1060	\$	0.1174	\$	0.1060	\$	0.1096	\$	0.1090
67																				
68		Honeoye - Demand	SS-NY	\$	6.1299	Sub 1st Rev Sheet No. 5	\$	0.2043	\$	0.1977	\$	0.1977	\$	0.2189	\$	0.1977	\$	0.2043	\$	0.2033
69																				
70		National Fuel - Demand	FSS-O02357	\$	2.6568	4.020 Version 28.0.0 Pg 1	\$	0.0886	\$	0.0857	\$	0.0857	\$	0.0949	\$	0.0857	\$	0.0886	\$	0.0881
71		National Fuel - Capacity	FSS-O02357	\$	0.0480	4.020 Version 28.0.0 Pg 1	\$	0.0016	\$	0.0015	\$	0.0015	\$	0.0017	\$	0.0015	\$	0.0016	\$	0.0016
72				\$	2.7048		\$	0.0902	\$	0.0873	\$	0.0873	\$	0.0966	\$	0.0873	\$	0.0902	\$	0.0897
73																				
74		Tenn Gas Pipeline	FS-MA 523	\$	1.2801	22nd Rev Sheet No.61	\$	0.0427	\$	0.0413	\$	0.0413	\$	0.0457	\$	0.0413	\$	0.0427	\$	0.0425
75		Tenn Gas Pipeline - Space	FS-MA 523	\$	0.0175	22nd Rev Sheet No.61	\$	0.0006	\$	0.0006	\$	0.0006	\$	0.0006	\$	0.0006	\$	0.0006	\$	0.0006
76				\$	1.2976		\$	0.0433	\$	0.0419	\$	0.0419	\$	0.0463	\$	0.0419	\$	0.0433	\$	0.0430

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

REDACTED

2
3 Peak 2022 – 2023 Winter Cost of Gas Filing

Schedule 6
Page 1 of 5

4 Supply and Commodity Costs, Volumes and Rates

5	6 For Month of:	Reference	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Peak
7	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	Nov- Apr
8									(i)

9 Supply and Commodity Costs

10
11 Pipeline Gas:

12	Dawn Supply	In 66 * In 107							
13	Niagara Supply	In 67 * In 112							
14	TGP Supply (Direct)	In 68 * In 132							
15	Dracut Supply 1 - Baseload	In 69 * In 117							
16	Dracut Supply 2 - Swing	In 70 * In 122							
17	Dracut Supply 3 - Swing	In 71 * In 123							
18	Constellation COMBO	In 72 * In 138							
19	LNG Truck	In 73 * In 140							
20	Propane Truck	In 74 * In 142							
21	PNGTS	In 75 * In 147							
22	Portland Natural Gas	In 76 * In 152							
23	TGP Supply (Z4)	In 77 * In 157							
24									
25	Subtotal Pipeline Gas Costs		\$ 9,197,119	\$ 15,672,833	\$ 26,023,347	\$ 30,089,330	\$ 19,515,529	\$ 4,811,924	\$ 105,310,081

26
27 Volumetric Transportation Costs

28	Dawn Supply	In 66 * In 204							
29	Niagara Supply	In 67 * In 215							
30	TGP Supply (Direct)	In 68 * In 242							
31	Dracut Supply 1 - Baseload	In 69 * In 263							
32	Dracut Supply 2 - Swing	In 70 * In 263							
33	Dracut Supply 3 - Swing	In 71 * In							
34	Constellation COMBO	In 72 * In 263							
35	TGP Storage - Withdrawals	In 82 * In 179							
36									
37	Total Volumetric Transportation Costs		\$ 327,682	\$ 317,329	\$ 363,387	\$ 317,632	\$ 242,519	\$ 73,752	\$ 1,642,302

38
39 Less - Gas Refill:

40	LNG Truck	In 91 * In 164							
41	Propane	In 92 * In 165							
42	TGP Storage Refill	In 93 * In 130							
43	Storage Refill (Trans.)	In 93 * In 242							
44									
45	Subtotal Refills		\$ (1,447,433)	\$ (3,046,288)	\$ (4,799,129)	\$ (3,514,340)	\$ (124,702)	\$ (601,872)	\$ (13,533,764)

46
47 Total Supply & Pipeline Commodity Costs In 25 + In 37 + In 45

48			\$ 8,077,369	\$ 12,943,873	\$ 21,587,606	\$ 26,892,622	\$ 19,633,346	\$ 4,283,804	\$ 93,418,619
----	--	--	--------------	---------------	---------------	---------------	---------------	--------------	---------------

49 Storage Gas:

50	TGP Storage - Withdrawals	In 82 * In 171	\$ 661,679	\$ 2,983,813	\$ 3,569,392	\$ 2,888,247	\$ 856,517	\$ 509,805	\$ 11,469,453
----	---------------------------	----------------	------------	--------------	--------------	--------------	------------	------------	---------------

51
52 Produced Gas:

53	LNG Vapor	In 85 * In 159							
54	Propane	In 86 * In 161							

55
56 Total Produced Gas

57		In 53 + In 54	\$ 165,051	\$ 3,099,142	\$ 5,778,047	\$ 3,535,110	\$ 34,374	\$ 33,579	\$ 12,645,303
----	--	---------------	------------	--------------	--------------	--------------	-----------	-----------	---------------

58 AMA Credits

59	Total Commodity Gas & Trans. Costs	In 47 + In 50 + In 56	\$ (1,003,702)	\$ (1,003,702)	\$ (1,003,702)	\$ (1,003,702)	\$ (1,003,702)	\$ (1,003,702)	\$ (6,022,210)
----	------------------------------------	-----------------------	----------------	----------------	----------------	----------------	----------------	----------------	----------------

60			\$ 7,900,397	\$ 18,023,126	\$ 29,931,343	\$ 32,312,277	\$ 19,520,535	\$ 3,823,486	\$ 111,511,164
----	--	--	--------------	---------------	---------------	---------------	---------------	--------------	----------------

\$ 92,395,519

61

1 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
 2 d/b/a Liberty
 3 Peak 2022 – 2023 Winter Cost of Gas Filing
 4 Supply and Commodity Costs, Volumes and Rates

Schedule 6
Page 2 of 5

5	Reference	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Peak
6								Nov- Apr
7	(a)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
62								
63	Volumes (Therms)							
64								
65	Pipeline Gas:							
	See Schedule 11A							
66	Dawn Supply	874,251	924,161	926,671	839,868	910,477	771,345	5,246,775
67	Niagara Supply	689,540	728,492	730,471	661,898	717,705	678,639	4,206,745
68	TGP Supply (Direct)	4,621,463	3,096,843	3,105,255	2,814,958	3,050,989	641,701	17,331,210
69	Dracut Supply 1 - Baseload	-	-	3,100,000	1,400,000	-	-	4,500,000
70	Dracut Supply 2 - Swing	2,068,620	1,628,571	574,992	2,290,420	4,186,862	1,559,349	12,308,813
71	Dracut Supply 3 - Swing	1,267,959	112,886	75,462	292,325	1,410,944	36,213	3,195,790
72	Constellation COMBO	-	-	-	-	-	-	-
73	LNG Truck	117,744	1,270,345	1,451,131	1,484,347	110,473	-	4,434,041
74	Propane Truck	-	-	691,985	-	-	55,769	747,754
75	PNGTS	218,563	231,040	231,668	209,778	227,619	196,277	1,314,945
76	Portland Natural Gas	1,067,793	1,128,109	1,131,173	1,025,411	1,111,405	840,151	6,304,043
77	TGP Supply (Z4)	1,816,941	1,919,817	1,925,032	1,744,865	1,891,391	5,458,808	14,756,854
78								
79	Subtotal Pipeline Volumes	12,742,875	11,040,265	13,943,840	12,763,870	13,617,866	10,238,252	74,346,969
80								
81	Storage Gas:							
82	TGP Storage	1,157,573	5,220,027	6,244,468	5,052,839	1,498,432	1,000,000	20,173,339
83								
84	Produced Gas:							
85	LNG Vapor	119,952	1,357,644	1,456,414	1,485,862	21,502	21,004	4,462,377
86	Propane	-	-	1,263,231	8,331	-	-	1,271,562
87								
88	Subtotal Produced Gas	119,952	1,357,644	2,719,645	1,494,192	21,502	21,004	5,733,939
89								
90	Less - Gas Refill:							
91	LNG Truck	(117,744)	(1,270,345)	(1,451,131)	(1,484,347)	(110,473)	-	(4,434,041)
92	Propane	-	-	(691,985)	-	-	(55,769)	(747,754)
93	TGP Storage Refill	(1,743,351)	-	-	-	-	(933,581)	(2,676,933)
94								
95	Subtotal Refills	(1,861,095)	(1,270,345)	(2,143,116)	(1,484,347)	(110,473)	(989,350)	(7,858,728)
96								
97	Total Sendout Volumes	12,159,305	16,347,591	20,764,836	17,826,554	15,027,327	10,269,906	92,395,519
98								
99								
100								

1 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty									REDACTED
2									Schedule 6
3 Peak 2022 – 2023 Winter Cost of Gas Filing									Page 3 of 5
4 Supply and Commodity Costs, Volumes and Rates									
5									
6 For Month of:	Reference	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Peak	
7 (a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	Nov- Apr (i)	
101	Gas Costs and Volumetric Transportation Rates								
102									
103	Pipeline Gas:								
104	Dawn Supply								Average Rate
105	NYMEX Price								
106	Basis Differential								
107	Net Commodity Costs								
108									
109	Niagara Supply								
110	NYMEX Price								
111	Basis Differential								
112	Net Commodity Costs								
113									
114	Dracut Supply 1 - Baseload								
115	Commodity Costs - NYMEX Price								
116	Basis Differential								
117	Net Commodity Costs								
118									
119	Dracut Supply 2 - Swing								
120	Commodity Costs - NYMEX Price								
121	Basis Differential								
122	Net Commodity Costs								
123									
124	Dracut Supply 3 - Swing								
125	Commodity Costs - NYMEX Price								
126	Basis Differential								
127	Net Commodity Costs								
128									
129	TGP Supply (Direct)								
130	NYMEX Price								
131	Basis Differential								
132	Net Commodity Costs								
133									
134									
135	Constellation COMBO								
136	NYMEX Price								
137	Basis Differential								
138	Net Commodity Costs								
139									
140	LNG Truck								
141									
142	Propane Truck								
143									
144	PNGTS								
145	NYMEX Price								
146	Basis Differential								
147	Net Commodity Cost								
148									
149	PNGTS EXP								
150	NYMEX Price								
151	Basis Differential								
152	Net Commodity Cost								
153									
154	TGP Supply (Z4)								
155	NYMEX Price								
156	Basis Differential	(\$0.0820)	(\$0.0523)	(\$0.0498)	(\$0.0398)	(\$0.0395)	(\$0.0523)		
157	Net Commodity Cost								
158									
159	LNG Vapor (Storage)								
160									
161	Propane								
162									
163	Storage Refill:								
164	LNG Truck								
165	Propane								
166									
167									

1 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty									REDACTED
2									Schedule 6
3 Peak 2022 – 2023 Winter Cost of Gas Filing									Page 4 of 5
4 Supply and Commodity Costs, Volumes and Rates									
5									
6 For Month of:	Reference	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Peak	
7 (a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	Nov- Apr	
								(i)	
168									
169									
170	TGP Storage								
171	Commodity Costs - Storage withdrawal	Sch 16, In 34 /10	\$0.5716	\$0.5716	\$0.5716	\$0.5716	\$0.5716	\$0.5098	\$0.5613
172									
173	TGP - Max Commodity - Z 4-6	21st Rev Sheet No. 15	\$0.00911	\$0.00911	\$0.00911	\$0.00911	\$0.00911	\$0.00911	\$0.00911
174	TGP - Max Comm. ACA Rate - Z 4-6	21st Rev Sheet No. 15	\$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		\$0.00926	\$0.00926	\$0.00926	\$0.00926	\$0.00926	\$0.00926	\$0.00926
176	TGP - Fuel Charge % - Z 4-6	18th Rev Sheet No. 32	1.49%	1.49%	1.49%	1.49%	1.49%	1.49%	1.49%
177	TGP - Fuel Charge % - Z 4-6 - (NYMEX * Percentage)		\$0.00852	\$0.00852	\$0.00852	\$0.00852	\$0.00852	\$0.00760	\$0.00836
178	TGP - Withdrawal Charge	22nd Rev Sheet No.61	\$0.00087	\$0.00087	\$0.00087	\$0.00087	\$0.00087	\$0.00087	\$0.00087
179	Total Volumetric Transportation Rate - TGP (Storage)		\$0.01865	\$0.01865	\$0.01865	\$0.01865	\$0.01865	\$0.01773	\$0.01849
180									
181	Total TGP - Comm. & Vol. Trans. Rate	In 171 + In 179	\$0.59026	\$0.59026	\$0.59026	\$0.59026	\$0.59026	\$0.52753	\$0.57980
182									
183									
184	Per Unit Volumetric Transportation Rates								
185	Dawn Supply Volumetric Transportation Charge								
186	Commodity Costs	In 107	\$0.6384	\$0.6802	\$0.7100	\$0.7144	\$0.6356	\$0.4647	\$0.6406
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	1.2706	1.2706	1.2706	1.2706	1.2706	1.2706	1.2706
191	Commodity Rate/US\$	In 188 x In 189 x In 190	\$0.00054	\$0.00054	\$0.00054	\$0.00054	\$0.00054	\$0.00054	\$0.00054
192	TransCanada Fuel %	Dawn - Parkway to Iroquois	0.87%	0.99%	1.10%	1.04%	1.07%	0.82%	0.98%
193	TransCanada Fuel * Percentage	In 186 x In 192	\$0.00552	\$0.00672	\$0.00777	\$0.00742	\$0.00683	\$0.00380	\$0.00635
194	Subtotal TransCanada		\$0.00606	\$0.00726	\$0.00831	\$0.00796	\$0.00737	\$0.00434	\$0.00688
195	IGTS - Z1 RTS Commodity	Fourth 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	Fourth 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	Fourth 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	21st Rev Sheet No. 15	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015
200	IGTS -Fuel Use Factor - Percentage	Fourth 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	\$0.00638	\$0.00680	\$0.00710	\$0.00714	\$0.00636	\$0.00465	\$0.00641
202	TGP FTA Fuel Charge % Z 5-6	18th Rev Sheet No. 32	1.09%	1.09%	1.09%	1.09%	1.09%	1.09%	1.09%
203	TGP FTA Fuel * Percentage	In 186 x In 202	\$0.00696	\$0.00741	\$0.00774	\$0.00779	\$0.00693	\$0.00507	\$0.00698
204	Total Volumetric Transportation Charge - Dawn Supply		\$0.02004	\$0.02212	\$0.02379	\$0.02353	\$0.02129	\$0.01469	\$0.02091
205									
206									
207	Niagara Supply Volumetric Transportation Charge								
208	Commodity Costs	Ln 112							
209									
210	TGP FTA - FTA Z 5-6 Comm. Rate	21st Rev Sheet No. 15	\$0.00693	\$0.00693	\$0.00693	\$0.00693	\$0.00693	\$0.00693	\$0.00693
211	TGP FTA - FTA Z 5-6 - ACA Rate	21st Rev Sheet No. 15	\$0.00015	\$0.0002	\$0.0002	\$0.0002	\$0.0002	\$0.0002	\$0.0002
212	Subtotal TGP FTA - FTA Z 5-6 Commodity Rate		\$0.00708	\$0.0071	\$0.0071	\$0.0071	\$0.0071	\$0.0071	\$0.0071
213	TGP FTA Fuel Charge % Z 5-6	18th Rev Sheet No. 32	1.09%	1.09%	1.09%	1.09%	1.09%	1.09%	1.09%
214	TGP FTA Fuel * Percentage	In 208 x In 213							
215	Total Volumetric Transportation Rate - Niagara Supply								
216									
217									

1 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
2
3 Peak 2022 – 2023 Winter Cost of Gas Filing
4 Supply and Commodity Costs, Volumes and Rates

REDACTED
Schedule 6
Page 5 of 5

6 For Month of:	Reference	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Peak	
7 (a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	Nov- Apr	
								(i)	
221	TGP Direct Volumetric Transportation Charge								Average Rate
222	Commodity Costs Ln 130								
223									
224	TGP - Max Comm. Base Rate - Z 0-6 21st Rev Sheet No. 15	\$0.02616	\$0.02616	\$0.02616	\$0.02616	\$0.02616	\$0.02616	\$0.02616	
225	TGP - Max Commodity ACA Rate - Z 0-6 21st Rev Sheet No. 15	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015	
226	Subtotal TGP - Max Comm. Rate Z 0-6	\$0.02631	\$0.02631	\$0.02631	\$0.02631	\$0.02631	\$0.02631	\$0.02631	
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	\$0.00858	\$0.00858	\$0.00858	\$0.00858	\$0.00858	\$0.00858	\$0.00858	
229	TGP - Max Comm. Base Rate - Z 1-6 21st Rev Sheet No. 15	\$0.02283	\$0.02283	\$0.02283	\$0.02283	\$0.02283	\$0.02283	\$0.02283	
230	TGP - Max Commodity ACA Rate - Z 1-6 21st Rev Sheet No. 15	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015	
231	Subtotal TGP - Max Commodity Rate - Z 1-6	\$0.02298	\$0.02298	\$0.02298	\$0.02298	\$0.02298	\$0.02298	\$0.02298	
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	\$0.01549	\$0.01549	\$0.01549	\$0.01549	\$0.01549	\$0.01549	\$0.01549	
234	TGP - Fuel Charge % - Z 0-6 18th Rev Sheet No. 32	5.31%	5.31%	5.31%	5.31%	5.31%	5.31%	5.31%	
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	1.73%	1.73%	1.73%	1.73%	1.73%	1.73%	1.73%	
237	TGP - Fuel Charge % - Z 1-6 18th Rev Sheet No. 32	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%	
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	3.13%	3.13%	3.13%	3.13%	3.13%	3.13%	3.13%	
240	TGP - Fuel Charge % - Z 0-6 In 222 x In 236	\$0.01190	\$0.01236	\$0.01267	\$0.01213	\$0.01050	\$0.00838	\$0.01132	
241	TGP - Fuel Charge % - Z 1-6 In 222 x In 239	\$0.02150	\$0.02234	\$0.02289	\$0.02192	\$0.01897	\$0.01514	\$0.02046	
242	Total Volumetric Transportation Rate - TGP (Direct)	\$0.05746	\$0.05876	\$0.05963	\$0.05812	\$0.05354	\$0.04759	\$0.05585	
243									
244	TGP (Zone 6 Purchase) Volumetric Transportation Charge								
245	Commodity Costs Ln 130								
246									
247	TGP - Max Comm. Base Rate - Z 6-6 21st Rev Sheet No. 15	\$0.00296	\$0.00296	\$0.00296	\$0.00296	\$0.00296	\$0.00296	\$0.00296	
248	TGP - Max Commodity ACA Rate - Z 6-6 21st Rev Sheet No. 15	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015	
249	Subtotal TGP - Max Commodity Rate - Z 6-6	\$0.00311	\$0.00311	\$0.00311	\$0.00311	\$0.00311	\$0.00311	\$0.00311	
250	TGP - Fuel Charge % - Z 6-6 18th Rev Sheet No. 32	0.13%	0.13%	0.13%	0.13%	0.13%	0.13%	0.13%	
251	TGP - Fuel Charge In 245 x In 250	\$0.00089	\$0.00093	\$0.00095	\$0.00091	\$0.00079	\$0.00063	\$0.00085	
252	Total Vol. Trans. Rate - TGP (Zone 6)	\$0.00400	\$0.00404	\$0.00406	\$0.00402	\$0.00390	\$0.00374	\$0.00396	
253									
254									
255	TGP Dracut								
256	Commodity Costs - NYMEX Price Ln 117								
257									
258	TGP - Trans Charge - Comm. - Z 6-6 21st Rev Sheet No. 15	\$0.00296	\$0.00296	\$0.00296	\$0.00296	\$0.00296	\$0.00296	\$0.00296	
259	TGP - Trans Charge - ACA Rate - Z6-6 21st Rev Sheet No. 15	\$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	\$0.00311	\$0.00311	\$0.00311	\$0.00311	\$0.00311	\$0.00311	\$0.00311	
261	TGP - Fuel Charge % - Z 6-6 18th Rev Sheet No. 32	0.13%	0.13%	0.13%	0.13%	0.13%	0.13%	0.13%	
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
 3 Peak 2022 – 2023 Winter Cost of Gas Filing
 4 NYMEX Futures @ Henry Hub
 5

Schedule 7
Page 1 of 1

Peak

6 For Month of:	(a)	Reference (b)	Nov-22 (c)	Dec-22 (d)	Jan-23 (e)	Feb-23 (f)	Mar-23 (g)	Apr-23 (h)	Strip Average (i)
8 I. NYMEX Opening Prices as of		9/29/2022							
9 Opening Prices			\$6.8740	\$7.1420	\$7.3200	\$7.0090	\$6.0660	\$4.8420	\$6.5422
10 NYMEX			Filed COG \$6.8740	\$7.1420	\$7.3200	\$7.0090	\$6.0660	\$4.8420	\$6.5422

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

Peak 2022 – 2023 Winter Cost of Gas Filing
Annual Bill Comparisons, Nov 21 - Apr 22 Actual Rates vs Nov 22 - Apr 23

Annual Bill Comparisons, Nov 21 - Apr 22 Actual Rates vs Nov 22 - Apr 23

Schedule 8
Page 1 of 7

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Non FPO Rate							
2	November 1, 2022 - April 30, 2023							
3	Residential Heating (R3)							
4	PROPOSED							
5		Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Winter Nov-Apr
6	average Usage (Therms)	45	92	117	148	130	88	621
7								
8	Winter							
9	Cust. Chg	\$ 15.39	\$ 15.39	\$ 15.39	\$ 15.39	\$ 15.39	\$ 15.39	\$ 92.34
10	Headblock	\$ 0.6519						
11	Tailblock	\$ 0.6519	\$ 60.25	\$ 76.41	\$ 96.48	\$ 85.02	\$ 57.27	\$ 404.65
12	HB Threshold	-						
13								
20	Total Base Rate Amount	\$ 44.61	\$ 75.64	\$ 91.80	\$ 111.87	\$ 100.41	\$ 72.66	\$ 496.99
21								
22	COG Rate - (Seasonal)	\$ 1.4300	\$ 1.4300	\$ 1.4300	\$ 1.4300	\$ 1.4300	\$ 1.4300	\$ 1.4300
23	COG amount	\$ 64.11	\$ 132.16	\$ 167.60	\$ 211.65	\$ 186.49	\$ 125.64	\$ 887.65
24								
25	LDAC	\$ 0.1110	\$ 0.1110	\$ 0.1110	\$ 0.1110	\$ 0.1110	\$ 0.1110	\$ 0.1110
26	LDAC amount	\$ 4.98	\$ 10.26	\$ 13.01	\$ 16.43	\$ 14.48	\$ 9.75	\$ 68.90
27								
28	Total Bill	\$ 113.70	\$ 218.06	\$ 272.41	\$ 339.95	\$ 301.38	\$ 208.05	\$ 1,453.54
29								
30	November 1, 2021 - April 30, 2022							
31	Residential Heating (R3)							
32	CURRENT							
33		Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	Winter Nov-Apr
34	average Usage (Therms)	45	92	117	148	130	88	621
35								
36	Winter							
37	Cust. Chg	\$ 15.39	\$ 15.39	\$ 15.39	\$ 15.39	\$ 15.39	\$ 15.39	\$ 92.34
38	Headblock	\$ 0.5632	\$ 0.6519					
39	Tailblock	\$ 0.5632	\$ 52.05	\$ 66.01	\$ 83.36	\$ 73.45	\$ 49.48	\$ 349.60
40	HB Threshold	-						
41								
48	Total Base Rate Amount	\$ 40.64	\$ 67.44	\$ 81.40	\$ 98.75	\$ 88.84	\$ 64.87	\$ 441.94
49								
50	COG Rate - (Seasonal)	\$ 1.1339	\$ 1.0173	\$ 0.7246	\$ 0.5956	\$ 0.7743	\$ 1.1747	\$ 0.8411
51	COG amount	\$ 50.83	\$ 94.02	\$ 84.93	\$ 88.15	\$ 100.98	\$ 103.21	\$ 522.12
52								
53	LDAC	\$ 0.1397	\$ 0.1012	\$ 0.1154	\$ 0.1154	\$ 0.1318	\$ 0.1318	\$ 0.1208
54	LDAC amount	\$ 6.26	\$ 9.35	\$ 13.53	\$ 17.08	\$ 17.19	\$ 11.58	\$ 74.99
55								
56	Total Bill	\$ 97.73	\$ 170.81	\$ 179.85	\$ 203.98	\$ 207.01	\$ 179.66	\$ 1,039.04
57								
58	DIFFERENCE							
59	Total Bill	\$15.96	\$47.25	\$92.56	\$135.97	\$94.37	\$28.40	\$414.50
60	% Change	16.33%	27.66%	51.46%	66.66%	45.59%	15.81%	39.89%
61								
62	Base Rate	\$ 3.98	\$ 8.20	\$ 10.40	\$ 13.13	\$ 11.57	\$ 7.79	\$ 55.06
63	% Change	9.78%	12.16%	12.77%	13.29%	13.02%	12.01%	12.46%
64								
65	COG & LDAC	\$ 11.99	\$ 39.05	\$ 82.16	\$ 122.84	\$ 82.80	\$ 20.60	\$ 359.44
66	% Change	21.00%	37.77%	83.45%	116.74%	70.07%	17.95%	60.20%

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

Peak 2022 – 2023 Winter Cost of Gas Filing
Annual Bill Comparisons, Nov 21 - Apr 22 Actual Rates vs Nov 22 - Apr 23

Annual Bill Comparisons, Nov 21 - Apr 22 Actual Rates vs Nov 22 - Apr 23

Schedule 8
Page 2 of 7

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	FPO Rate							
2	November 1, 2022 - April 30, 2023							
3	Residential Heating (R3-FPO)							
4	PROPOSED							
5		Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Winter Nov-Apr
6	average Usage (Therms)	45	92	117	148	130	88	621
7								
8	Winter							
9	Cust. Chg	\$ 15.39	\$ 15.39	\$ 15.39	\$ 15.39	\$ 15.39	\$ 15.39	\$ 92.34
10	Headblock	\$ 0.6519						
11	Tailblock	\$ 0.6519	\$ 60.25	\$ 76.41	\$ 96.48	\$ 85.02	\$ 57.27	\$ 404.65
12	HB Threshold	-						
13								
20	Total Base Rate Amount	\$ 44.61	\$ 75.64	\$ 91.80	\$ 111.87	\$ 100.41	\$ 72.66	\$ 496.99
21								
22	COG Rate - (Seasonal)	\$ 1.7535	\$ 1.7535	\$ 1.7535	\$ 1.7535	\$ 1.7535	\$ 1.7535	\$ 1.7535
23	COG amount	\$ 78.61	\$ 162.06	\$ 205.52	\$ 259.53	\$ 228.68	\$ 154.06	\$ 1,088.45
24								
25	LDAC	\$ 0.1110	\$ 0.1110	\$ 0.1110	\$ 0.1110	\$ 0.1110	\$ 0.1110	\$ 0.1110
26	LDAC amount	\$ 4.98	\$ 10.26	\$ 13.01	\$ 16.43	\$ 14.48	\$ 9.75	\$ 68.90
27								
28	Total Bill	\$ 128.20	\$ 247.96	\$ 310.32	\$ 387.83	\$ 343.57	\$ 236.47	\$ 1,654.35
29								
30	November 1, 2021 - April 30, 2022							
31	Residential Heating (R3-FPO)							
32	CURRENT							
33		Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	Winter Nov-Apr
34	average Usage (Therms)	45	92	117	148	130	88	621
35								
36	Winter							
37	Cust. Chg	\$ 15.39	\$ 15.39	\$ 15.39	\$ 15.39	\$ 15.39	\$ 15.39	\$ 92.34
38	Headblock	\$ 0.5632	\$ 0.6519					
39	Tailblock	\$ 0.5632	\$ 52.05	\$ 66.01	\$ 83.36	\$ 73.45	\$ 49.48	\$ 349.60
40	HB Threshold	-	-					
41								
48	Total Base Rate Amount	\$ 40.64	\$ 67.44	\$ 81.40	\$ 98.75	\$ 88.84	\$ 64.87	\$ 441.94
49								
50	COG Rate - (Seasonal)	\$ 1.1539	\$ 1.1539	\$ 1.1539	\$ 1.1539	\$ 1.1539	\$ 1.1539	\$ 1.1539
51	COG amount	\$ 51.73	\$ 106.64	\$ 135.24	\$ 170.78	\$ 150.49	\$ 101.38	\$ 716.26
52								
53	LDAC	\$ 0.1397	\$ 0.1012	\$ 0.1154	\$ 0.1154	\$ 0.1318	\$ 0.1318	\$ 0.1208
54	LDAC amount	\$ 6.26	\$ 9.35	\$ 13.53	\$ 17.08	\$ 17.19	\$ 11.58	\$ 74.99
55								
56	Total Bill	\$ 98.63	\$ 183.44	\$ 230.17	\$ 286.61	\$ 256.51	\$ 177.83	\$ 1,233.19
57								
58	DIFFERENCE							
59	Total Bill	\$29.57	\$64.52	\$80.16	\$101.22	\$87.05	\$58.64	\$421.16
60	% Change	29.98%	35.17%	34.83%	35.32%	33.94%	32.98%	34.15%
61								
62	Base Rate	\$ 3.98	\$ 8.20	\$ 10.40	\$ 13.13	\$ 11.57	\$ 7.79	\$ 55.06
63	% Change	9.78%	12.16%	12.77%	13.29%	13.02%	12.01%	12.46%
64								
65	COG & LDAC	\$ 25.59	\$ 56.32	\$ 69.76	\$ 88.09	\$ 75.48	\$ 50.85	\$ 366.10
66	% Change	44.13%	48.55%	46.89%	46.89%	45.02%	45.02%	46.27%

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

Peak 2022 – 2023 Winter Cost of Gas Filing
Annual Bill Comparisons, Nov 21 - Apr 22 Actual Rates vs Nov 22 - Apr 23

Annual Bill Comparisons, Nov 21 - Apr 22 Actual Rates vs Nov 22 - Apr 23

Schedule 8
Page 3 of 7

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	GAP Rate							
2	November 1, 2022 - April 30, 2023							
3	Residential Heating (R4-GAP)							
4	PROPOSED							
5		Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Winter Nov-Apr
6	average Usage (Therms)	45	92	117	148	130	88	621
7								
8	Winter							
9	Cust. Chg	\$ 8.47	\$ 8.47	\$ 8.47	\$ 8.47	\$ 8.47	\$ 8.47	\$ 50.82
10	Headblock	\$ 0.3585	\$ 0.3585	\$ 0.3585	\$ 0.3585	\$ 0.3585	\$ 0.3585	\$ 222.53
11	Tailblock	\$ 16.07	\$ 33.13	\$ 42.02	\$ 53.06	\$ 46.75	\$ 31.50	\$ 222.53
12	HB Threshold	-	-	-	-	-	-	-
13								
20	Total Base Rate Amount	\$ 24.54	\$ 41.60	\$ 50.49	\$ 61.53	\$ 55.22	\$ 39.97	\$ 273.35
21								
22	COG Rate - (Seasonal)	\$ 0.7865	\$ 0.7865	\$ 0.7865	\$ 0.7865	\$ 0.7865	\$ 0.7865	\$ 0.7865
23	COG amount	\$ 35.26	\$ 72.69	\$ 92.18	\$ 116.41	\$ 102.57	\$ 69.10	\$ 488.21
24								
25	LDAC	\$ 0.1110	\$ 0.1110	\$ 0.1110	\$ 0.1110	\$ 0.1110	\$ 0.1110	\$ 0.1110
26	LDAC amount	\$ 4.98	\$ 10.26	\$ 13.01	\$ 16.43	\$ 14.48	\$ 9.75	\$ 68.90
27								
28	Total Bill	\$ 64.78	\$ 124.55	\$ 155.68	\$ 194.36	\$ 172.27	\$ 118.82	\$ 830.46
29								
30	November 1, 2021 - April 30, 2022							
31	Residential Heating (R4-GAP)							
32	CURRENT							
33		Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	Winter Nov-Apr
34	average Usage (Therms)	45	92	117	148	130	88	621
35								
36	Winter							
37	Cust. Chg	\$ 15.39	\$ 15.39	\$ 15.39	\$ 15.39	\$ 15.39	\$ 15.39	\$ 92.34
38	Headblock	\$ 25.25	\$ 52.05	\$ 66.01	\$ 83.36	\$ 73.45	\$ 49.48	\$ 349.60
39	Tailblock	\$ 25.25	\$ 52.05	\$ 66.01	\$ 83.36	\$ 73.45	\$ 49.48	\$ 349.60
40	HB Threshold	-	-	-	-	-	-	-
41								
48	Total Base Rate Amount	\$ 40.64	\$ 67.44	\$ 81.40	\$ 98.75	\$ 88.84	\$ 64.87	\$ 441.94
49								
50	COG Rate - (Seasonal)	\$ 0.6236	\$ 0.5595	\$ 0.3985	\$ 0.3276	\$ 0.4259	\$ 0.6461	\$ 0.4626
51	COG amount	\$ 27.96	\$ 51.71	\$ 46.71	\$ 48.48	\$ 55.54	\$ 56.76	\$ 287.16
52								
53	LDAC	\$ 0.1397	\$ 0.1012	\$ 0.1154	\$ 0.1154	\$ 0.1318	\$ 0.1318	\$ 0.1208
54	LDAC amount	\$ 6.26	\$ 9.35	\$ 13.53	\$ 17.08	\$ 17.19	\$ 11.58	\$ 74.99
55								
56	Total Bill	\$ 74.86	\$ 128.50	\$ 141.63	\$ 164.31	\$ 161.57	\$ 133.21	\$ 804.09
57								
58	DIFFERENCE							
59	Total Bill	(\$10.08)	(\$3.95)	\$14.04	\$30.05	\$10.70	(\$14.40)	\$26.37
60	% Change	-13.47%	-3.08%	9.92%	18.29%	6.62%	-10.81%	3.28%
61								
62	Base Rate	\$ (16.10)	\$ (25.84)	\$ (30.91)	\$ (37.22)	\$ (33.62)	\$ (24.90)	\$ (168.58)
63	% Change	-39.61%	-38.31%	-37.98%	-37.69%	-37.84%	-38.39%	-38.15%
64								
65	COG & LDAC	\$ 6.01	\$ 21.88	\$ 44.96	\$ 67.27	\$ 44.32	\$ 10.51	\$ 194.95
66	% Change	17.57%	35.84%	74.63%	102.61%	60.94%	15.38%	53.83%

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

Peak 2022 – 2023 Winter Cost of Gas Filing
Annual Bill Comparisons, Nov 21 - Apr 22 Actual Rates vs Nov 22 - Apr 23

Schedule 8
Page 4 of 7

1 Annual Bill Comparisons, Nov 21 - Apr 22 Actual Rates vs Nov 22 - Apr 23

2 November 1, 2022 - April 30, 2023

3 Commercial Rate (G-41)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
4 PROPOSED	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Winter Nov-Apr
5	111	274	376	483	425	270	1,939
6 average Usage (Therms)							
7							
8 Winter							
9 Cust. Chg	\$ 63.30	\$ 63.30	\$ 63.30	\$ 63.30	\$ 63.30	\$ 63.30	\$ 379.80
10 Headblock	\$ 0.5088	\$ 0.5088	\$ 0.5088	\$ 0.5088	\$ 0.5088	\$ 0.5088	\$ 305.28
11 Tailblock	\$ 0.3550	\$ 0.3550	\$ 0.3550	\$ 0.3550	\$ 0.3550	\$ 0.3550	\$ 219.75
12 HB Threshold	100	100	100	100	100	100	100
13							
20 Total Base Rate Amount	\$ 118.24	\$ 175.93	\$ 212.06	\$ 250.30	\$ 229.38	\$ 174.51	\$ 1,160.42
21							
22 COG Rate - (Seasonal)	\$ 1.4301	\$ 1.4301	\$ 1.4301	\$ 1.4301	\$ 1.4301	\$ 1.4301	\$ 1,430.10
23 COG amount	\$ 159.38	\$ 391.75	\$ 537.33	\$ 691.36	\$ 607.08	\$ 386.04	\$ 2,772.94
24							
25 LDAC	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.8888
26 LDAC amount	\$ 9.90	\$ 24.33	\$ 33.37	\$ 42.93	\$ 37.70	\$ 23.97	\$ 172.18
27							
28 Total Bill	\$287.52	\$592.00	\$782.76	\$984.58	\$874.16	\$584.51	\$4,105.53

30 November 1, 2021 - April 30, 2022

31 Commercial Rate (G-41)

	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	Winter Nov-Apr
32 CURRENT	111	274	376	483	425	270	1,939
33							
34 average Usage (Therms)							
35							
36 Winter							
37 Cust. Chg	\$ 57.06	\$ 57.06	\$ 57.06	\$ 57.06	\$ 57.06	\$ 57.06	\$ 342.36
38 Headblock	\$ 0.4688	\$ 0.4688	\$ 0.4688	\$ 0.4688	\$ 0.4688	\$ 0.4688	\$ 234.40
39 Tailblock	\$ 0.3149	\$ 0.3149	\$ 0.3149	\$ 0.3149	\$ 0.3149	\$ 0.3149	\$ 201.60
40 HB Threshold	100	100	100	100	100	100	100
41							
48 Total Base Rate Amount	\$ 60.66	\$ 158.71	\$ 190.77	\$ 224.68	\$ 206.13	\$ 157.45	\$ 998.40
49							
50 COG Rate - (Seasonal)	\$ 1.1341	\$ 1.0175	\$ 0.7248	\$ 0.5958	\$ 0.7745	\$ 1.1749	\$ 0.8311
51 COG amount	\$ 126.39	\$ 278.73	\$ 272.33	\$ 288.03	\$ 328.78	\$ 317.15	\$ 1,611.40
52							
53 LDAC	\$ 0.0831	\$ 0.0749	\$ 0.0891	\$ 0.0891	\$ 0.0991	\$ 0.0991	\$ 0.9003
54 LDAC amount	\$ 9.26	\$ 20.52	\$ 33.48	\$ 43.07	\$ 42.07	\$ 26.75	\$ 175.15
55							
56 Total Bill	\$196.31	\$457.96	\$496.58	\$555.79	\$576.97	\$501.35	\$2,784.95

58 DIFFERENCE

59 Total Bill	\$ 91.20	\$ 134.05	\$ 286.19	\$ 428.80	\$ 297.18	\$ 83.16	\$ 1,320.58
60 % Change	46.46%	29.27%	57.63%	77.15%	51.51%	16.59%	47.42%
61							
62 Base Rate	\$ 57.58	\$ 17.21	\$ 21.30	\$ 25.62	\$ 23.25	\$ 17.05	\$ 162.01
63 % Change	94.91%	10.85%	11.16%	11.40%	11.28%	10.83%	16.23%
64							
65 COG & LDAC	\$ 33.62	\$ 116.83	\$ 264.89	\$ 403.18	\$ 273.93	\$ 66.11	\$ 1,158.57
66 % Change	24.79%	39.04%	86.62%	121.77%	73.87%	19.22%	64.85%

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

Peak 2022 – 2023 Winter Cost of Gas Filing
Annual Bill Comparisons, Nov 21 - Apr 22 Actual Rates vs Nov 22 - Apr 23

Schedule 8
Page 5 of 7

1 Annual Bill Comparisons, Nov 21 - Apr 22 Actual Rates vs Nov 22 - Apr 23

2 November 1, 2022 - April 30, 2023

3 C&I High Winter Use Medium G-42

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
4 PROPOSED		Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Winter Nov-Apr
5		1,369	2,729	3,456	4,165	3,658	2,463	17,839
6	average Usage (Therms)							
7	9/1/2022 - Current							
8	Winter							
9	Cust. Chg \$ 189.84	\$ 189.84	\$ 189.84	\$ 189.84	\$ 189.84	\$ 189.84	\$ 189.84	\$ 1,139.04
10	Headblock \$ 0.4634	\$ 463.40	\$ 463.40	\$ 463.40	\$ 463.40	\$ 463.40	\$ 463.40	\$ 2,780.40
11	Tailblock \$ 0.3212	\$ 118.48	\$ 555.24	\$ 788.87	\$ 1,016.45	\$ 853.63	\$ 470.01	\$ 3,802.68
12	HB Threshold 1,000							
13								
20	Total Base Rate Amount	\$ 771.72	\$ 1,208.48	\$ 1,442.11	\$ 1,669.69	\$ 1,506.87	\$ 1,123.25	\$ 7,722.12
21								
22	COG Rate - (Seasonal)	\$ 1.4301	\$ 1.4301	\$ 1.4301	\$ 1.4301	\$ 1.4301	\$ 1.4301	\$ 1.4301
23	COG amount	\$ 1,957.62	\$ 3,902.24	\$ 4,942.45	\$ 5,955.69	\$ 5,230.77	\$ 3,522.74	\$ 25,511.50
24								
25	LDAC	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888
26	LDAC amount	\$ 121.56	\$ 242.30	\$ 306.89	\$ 369.81	\$ 324.80	\$ 218.74	\$ 1,584.10
27								
28	Total Bill	\$ 2,850.90	\$ 5,353.02	\$ 6,691.45	\$ 7,995.18	\$ 7,062.44	\$ 4,864.73	\$ 34,817.72

30 November 1, 2021 - April 30, 2022

31 C&I High Winter Use Medium G-42

32 CURRENT		Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	Winter Nov-Apr
33		1,369	2,729	3,456	4,165	3,658	2,463	17,839
34	average Usage (Therms)							
35	8/1/2021 - 7/31/2022 9/1/2022 - Current							
36	Winter							
37	Cust. Chg \$ 171.19 \$ 189.84	\$ 171.19	\$ 171.19	\$ 171.19	\$ 171.19	\$ 171.19	\$ 171.19	\$ 1,027.14
38	Headblock \$ 0.4261 \$ 0.4634	\$ 426.10	\$ 426.10	\$ 426.10	\$ 426.10	\$ 426.10	\$ 426.10	\$ 2,556.60
39	Tailblock \$ 0.2839 \$ 0.3212	\$ 104.72	\$ 490.76	\$ 697.26	\$ 898.41	\$ 754.50	\$ 415.43	\$ 3,361.08
40	HB Threshold 1,000 1,000							
41								
48	Total Base Rate Amount	\$ 702.01	\$ 1,088.05	\$ 1,294.55	\$ 1,495.70	\$ 1,351.79	\$ 1,012.72	\$ 6,944.82
49								
50	COG Rate - (Seasonal)	\$ 1.1341	\$ 1.0175	\$ 0.7248	\$ 0.5958	\$ 0.7745	\$ 1.1749	\$ 0.8432
51	COG amount	\$ 1,552.43	\$ 2,776.40	\$ 2,504.92	\$ 2,481.22	\$ 2,832.83	\$ 2,894.11	\$ 15,041.92
52								
53	LDAC	\$ 0.0831	\$ 0.0831	\$ 0.0831	\$ 0.0831	\$ 0.0831	\$ 0.0831	\$ 0.0831
54	LDAC amount	\$ 113.75	\$ 226.75	\$ 287.19	\$ 346.07	\$ 303.95	\$ 204.70	\$ 1,482.42
55								
56	Total Bill	\$ 2,368.20	\$ 4,091.20	\$ 4,086.67	\$ 4,322.99	\$ 4,488.57	\$ 4,111.53	\$ 23,469.16

58 DIFFERENCE

59	Total Bill	\$ 482.70	\$ 1,261.82	\$ 2,604.79	\$ 3,672.19	\$ 2,573.87	\$ 753.20	\$ 11,348.56
60	% Change	20.38%	30.84%	63.74%	84.95%	57.34%	18.32%	48.36%
61								
62	Base Rate	\$ 69.71	\$ 120.43	\$ 147.56	\$ 173.99	\$ 155.08	\$ 110.53	\$ 777.29
63	% Change	9.93%	11.07%	11.40%	11.63%	11.47%	10.91%	11.19%
64								
65	COG & LDAC	\$ 412.99	\$ 1,141.39	\$ 2,457.23	\$ 3,498.20	\$ 2,418.79	\$ 642.67	\$ 10,571.27
66	% Change	24.79%	38.01%	88.01%	123.73%	77.11%	20.74%	63.97%

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

Peak 2022 – 2023 Winter Cost of Gas Filing
Annual Bill Comparisons, Nov 21 - Apr 22 Actual Rates vs Nov 22 - Apr 23

Schedule 8
Page 6 of 7

1 Annual Bill Comparisons, Nov 21 - Apr 22 Actual Rates vs Nov 22 - Apr 23

2 November 1, 2022 - April 30, 2023

3 Commercial Rate (G-52)

			(1)	(2)	(3)	(4)	(5)	(6)	(7)
4 PROPOSED			Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Winter Nov-Apr
5	6 average Usage (Therms)		1,340	1,718	1,891	2,207	1,964	1,672	10,793
7									
8	Winter	9/1/2022 - Current							
9	Cust. Chg	\$ 189.87	\$ 189.87	\$ 189.87	\$ 189.87	\$ 189.87	\$ 189.87	\$ 189.87	\$ 1,139.22
10	Headblock	\$ 0.1978	\$ 197.80	\$ 197.80	\$ 197.80	\$ 197.80	\$ 197.80	\$ 197.80	\$ 1,186.80
11	Tailblock	\$ 0.1219	\$ 41.44	\$ 87.58	\$ 108.66	\$ 147.14	\$ 117.52	\$ 81.95	\$ 584.28
12	HB Threshold	1,000							
13									
20	Total Base Rate Amount		\$ 429.11	\$ 475.25	\$ 496.33	\$ 534.81	\$ 505.19	\$ 469.62	\$ 2,910.30
21									
22	COG Rate - (Seasonal)		\$1.4296	\$1.4296	\$1.4296	\$1.4296	\$1.4296	\$1.4296	\$ 1,429.6
23	COG amount		\$ 1,915.58	\$ 2,456.69	\$ 2,703.88	\$ 3,155.21	\$ 2,807.80	\$ 2,390.63	\$ 15,429.80
24									
25	LDAC		\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888
26	LDAC amount		\$ 118.99	\$ 152.60	\$ 167.95	\$ 195.99	\$ 174.41	\$ 148.49	\$ 958.43
27									
28	Total Bill		\$2,463.68	\$3,084.53	\$3,368.16	\$3,886.01	\$3,487.40	\$3,008.74	\$19,298.52

30 November 1, 2021 - April 30, 2022

31 Commercial Rate (G-52)

32 CURRENT			Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	Winter Nov-Apr
33	34 average Usage (Therms)		1,340	1,718	1,891	2,207	1,964	1,672	10,793
35									
36	Winter	8/1/2021 - 7/31/2022 9/1/2022 - Current							
37	Cust. Chg	\$ 171.19 \$ 189.87	\$ 171.19	\$ 171.19	\$ 171.19	\$ 171.19	\$ 171.19	\$ 171.19	\$ 1,027.14
38	Headblock	\$ 0.2428 \$ 0.1978	\$ 242.80	\$ 242.80	\$ 242.80	\$ 242.80	\$ 242.80	\$ 242.80	\$ 1,456.80
39	Tailblock	\$ 0.1617 \$ 0.1219	\$ 54.97	\$ 116.17	\$ 144.13	\$ 195.18	\$ 155.89	\$ 108.70	\$ 775.04
40	HB Threshold	1,000 1,000							
41									
48	Total Base Rate Amount		\$ 468.96	\$ 530.16	\$ 558.12	\$ 609.17	\$ 569.88	\$ 522.69	\$ 3,258.98
49									
50	COG Rate - (Seasonal)		\$ 1.1324	\$ 1.0158	\$ 0.7231	\$ 0.5941	\$ 0.7728	\$ 1.1732	\$ 0.8729
51	COG amount		\$ 1,517.35	\$ 1,745.59	\$ 1,367.64	\$ 1,311.22	\$ 1,517.82	\$ 1,961.87	\$ 9,421.48
52									
53	LDAC		\$ 0.0831	\$ 0.0749	\$ 0.0891	\$ 0.0891	\$ 0.0991	\$ 0.0991	\$ 0.0895
54	LDAC amount		\$ 111.35	\$ 128.71	\$ 168.52	\$ 196.65	\$ 194.64	\$ 165.72	\$ 965.59
55									
56	Total Bill		\$2,097.66	\$2,404.47	\$2,094.28	\$2,117.04	\$2,282.33	\$2,650.28	\$13,646.05

57 DIFFERENCE

59	Total Bill	\$ 366.02	\$ 680.06	\$ 1,273.88	\$ 1,768.98	\$ 1,205.07	\$ 358.46	\$ 5,652.47
60	% Change	17.45%	28.28%	60.83%	83.56%	52.80%	13.53%	41.42%
61								
62	Base Rate	\$ (39.85)	\$ (54.91)	\$ (61.80)	\$ (74.36)	\$ (64.69)	\$ (53.07)	\$ (348.68)
63	% Change	-8.50%	-10.36%	-11.07%	-12.21%	-11.35%	-10.15%	-10.70%
64								
65	COG & LDAC	\$ 405.87	\$ 734.98	\$ 1,335.68	\$ 1,843.34	\$ 1,269.76	\$ 411.54	\$ 6,001.15
66	% Change	24.92%	39.21%	86.95%	122.25%	74.15%	19.34%	57.78%

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

Peak 2022 – 2023 Winter Cost of Gas Filing
Annual Bill Comparisons, Nov 21 - Apr 22 Actual Rates vs Nov 22 - Apr 23

Schedule 8
Page 7 of 7

1 **Residential Heating**

	<u>Winter 2021-22</u>	<u>Winter 2022-2023</u>
2		
3 Customer Charge	\$ 15.39	\$ 15.39
4 First 100 Therms	\$ 0.5632	\$ 0.6519
5 Excess 100 Therms	\$ 0.5632	\$ 0.6519
6 LDAC	\$ 0.1208	\$ 0.1110
7 COG	\$ 0.8411	\$ 1.4300
8 Total Adjust	\$ 0.9619	\$ 1.5410

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

	<u>Winter 2021-22 @</u>	<u>Winter 2022-23 @</u>	Total		Base Rate		COG		LDAC	
			\$ Impact	% Impact	\$ Impact	% Impact	\$ Impact	% Impact	\$ Impact	% Impact
	\$0.9619	\$1.5410	\$0.58	60%						
16 Cooking alone	5 \$23.46	\$26.35	\$2.90	12.34%	\$0.00	0%	\$2.94	11%	-\$0.05	-0.21%
18	10 \$31.53	\$37.32	\$5.79	18.37%	\$0.00	0%	\$5.89	16%	-\$0.10	-0.31%
20	20 \$47.67	\$59.25	\$11.58	24.30%	\$0.00	0%	\$11.78	20%	-\$0.20	-0.41%
22 Water Heating alone	30 \$63.81	\$81.18	\$17.37	27.23%	\$0.00	0%	\$17.67	22%	-\$0.29	-0.46%
24	45 \$88.01	\$114.07	\$26.06	29.61%	\$0.00	0%	\$26.50	23%	-\$0.44	-0.50%
26	50 \$96.08	\$125.04	\$28.95	30.13%	\$0.00	0%	\$29.44	24%	-\$0.49	-0.51%
28 Heating Alone	80 \$136.43	\$179.86	\$43.43	31.83%	\$0.00	0%	\$44.17	25%	-\$0.74	-0.54%
30	125 \$230.03	\$307.05	\$77.02	33.48%	\$0.00	0%	\$78.32	26%	-\$1.30	-0.57%
32	150 \$257.47	\$344.33	\$86.86	33.74%	\$0.00	0%	\$88.33	26%	-\$1.47	-0.57%
34	200 \$338.16	\$453.97	\$115.81	34.25%	\$0.00	0%	\$117.77	26%	-\$1.96	-0.58%

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

Schedule 9

2

Page 1 of 1

3 Peak 2022 – 2023 Winter Cost of Gas Filing

4 Variance Analysis of the Components of the Winter 2021-2022 Actual Results vs Proposed Winter 2022-2023 Cost of Gas Rate

5

6

7

8

9

10

11 Therm Sales (COG)

12

13

14

15

16 Demand Charges

17

18 Purchased Gas

19

20 Storage/Produced Gas

21

22 Hedging (Gain)/Loss

23

24

25 Total Volumes and Cost

26

27 Direct Costs

28 Prior Period Balance

29 Interest

30 Prior Period Adjustment

31 Broker Revenues

32 Refunds from Suppliers

33 Fuel Financing

34 Transportation CGA Revenues

35 280 Day Margin

36 Interruptible Sales Margin

37 Capacity Release and Off System Sales Margins

38 Hedging Costs

39 FPO Admin Costs

40 Indirect Costs

41 Misc Overhead

42 Occupant Disallowance/Credits

43 Production & Storage

44 Bad Debt Adjustment %

45 Cashout, Broker penalty, Canadian Managed,...

46 Total Adjusted Cost

	WINTER 2021-2022 ACTUAL RESULTS (6 months actual)			WINTER 2022-2023 (6 months Proposed)		
	THERM SENDOUT	COSTS	EFFECT ON COST OF GAS	THERM SENDOUT	COSTS	EFFECT ON COST OF GAS
11 Therm Sales (COG)	84,205,453			92,780,984		
16 Demand Charges		\$ 11,731,449	\$ 0.1393		\$ 12,510,219	\$ 0.1348
18 Purchased Gas		64,509,427	0.7661	66,488,241	93,418,619	1.0069
20 Storage/Produced Gas		-	-	25,907,278	24,114,755	0.2599
22 Hedging (Gain)/Loss		-	-		-	-
25 Total Volumes and Cost	90,819,934	\$ 76,240,876	\$ 0.9054	92,395,519	\$ 130,043,593	\$ 1.4016
27 Direct Costs						
28 Prior Period Balance		\$ (3,130,571)	\$ (0.0372)		\$ 5,378,797	\$ 0.0580
29 Interest		2,832	0.0000		(283,633)	(0.0031)
30 Prior Period Adjustment		2,143,613	0.0255		515,609	0.0056
31 Broker Revenues		(396,197)	(0.0047)		(3,600)	(0.0000)
32 Refunds from Suppliers		-	-		-	-
33 Fuel Financing		-	-		-	-
34 Transportation CGA Revenues		72,941	0.0009		(422,021)	(0.0045)
35 280 Day Margin		-	-		-	-
36 Interruptible Sales Margin		-	-		-	-
37 Capacity Release and Off System Sales Margins		(1,462,297)	(0.0174)		(1,676,512)	(0.0181)
38 Hedging Costs		-	-		-	-
39 FPO Admin Costs		-	-		59,917	0.0006
40 Indirect Costs		-	-		-	-
41 Misc Overhead		-	-		-	-
42 Occupant Disallowance/Credits		-	-		-	-
43 Production & Storage		3,685,458	0.0438		3,685,458	0.0397
44 Bad Debt Adjustment %		-	-		1,397,300	0.0151
45 Cashout, Broker penalty, Canadian Managed,...		-	-		-	-
46 Total Adjusted Cost		\$ 77,156,654	\$ 0.9163		\$ 138,694,907	\$ 1.4949

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

Peak 2022 – 2023 Winter Cost of Gas Filing
Capacity Assignment Calculations 2020-2021
Derivation of Class Assignments and Weightings

Schedule 10A
Page 1 of 3

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	639	641	0.4%	97	544
2	RATE R-3-Resi Htg	71,962	72,211	43.6%	3,484	68,728
3	RATE G-41 (T)	30,001	30,106	18.2%	968	29,139
4	RATE G-51 (S)	2,639	2,646	1.6%	742	1,904
5	RATE G-42 (V)	38,016	38,148	23.0%	1,839	36,309
6	RATE G-52	5,466	5,480	3.3%	1,742	3,738
7	RATE G-43	9,590	9,623	5.8%	645	8,977
8	RATE G-53	5,350	5,363	3.2%	1,871	3,492
9	RATE G-54	1,417	1,421	0.9%	419	1,001
10						
11	Total	165,079	165,638	100.0%	11,806	153,832
12						
13	Residential Total	72,601	72,852	43.983%	3,581	69,272
14	LLF Total	77,606	77,877	47.016%	3,452	74,425
15	HLF Total	<u>14,872</u>	<u>14,909</u>	9.001%	<u>4,774</u>	<u>10,135</u>
16	Total	165,079	165,638	100.0%	11,806	153,832
17						
18	C&I Breakdown					
19	LLF Total				3,452	74,425
20	HLF Total				4,774	10,135
21	Total				8,226	84,560
22						
23	C&I Breakdown Percentage					
24	LLF Total				41.961%	88.014%
25	HLF Total				58.039%	11.986%
26	Total				100.0%	100.0%
27						
28		Capacity Cost	MDQ, Dt	\$/Dt-Mo.		
29	Pipeline	\$16,149,021	119,718	\$11.2410		
30	Storage	\$4,130,365	28,115	\$12.2425		
31						
32	Peaking	\$2,370,511				
33	Peaking Additional Costs					
34	Subtotal Peaking Costs	<u>\$2,370,511</u>	<u>17,805</u>	<u>\$11.0948</u>		
35	Total	<u>\$22,649,897</u>	<u>165,638</u>	<u>\$11.3953</u>		
36						
37		Capacity Cost	MDQ, Dt	\$/Dt-Mo.		
38	Pipeline - Baseload	1,592,596	11,806	\$11.2410		
39	Pipeline - Remaining	14,556,425	107,912	\$11.2410		
40	Storage	4,130,365	28,115	\$12.2425		
41	Peaking	<u>2,370,511</u>	<u>17,805</u>	<u>\$11.0948</u>		
42	Total	<u>22,649,897</u>	<u>165,638</u>	<u>\$11.3953</u>		
43						
44						
45	Residential Allocation	Capacity Cost	MDQ, Dt	\$/Dt-Mo.		
46	Pipeline - Base	Line 38 * Line 13 Col C	43.983%	700,471	5,193	\$11.2410
47	Pipeline - Remaining	Line 39 * Line 13 Col C	43.983%	6,402,344	47,463	\$11.2410
48	Storage	Line 40 * Line 13 Col C	43.983%	1,816,663	12,366	\$12.2425
49	Peaking	Line 41 * Line 13 Col C	43.983%	<u>1,042,601</u>	<u>7,831</u>	<u>\$11.0948</u>
50	Total	9,962,098	72,852	\$11.3953		

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

Peak 2022 – 2023 Winter Cost of Gas Filing
Capacity Assignment Calculations 2020-2021
Derivation of Class Assignments and Weightings

Schedule 10A
Page 2 of 3

					Ratios for COG	
		Capacity Cost	MDQ, Dt	\$/Dt-Mo.		
51						
52						
53	C&I Allocation					
54	Pipeline - Base	Line 38 - Line 46	892,125	6,614	\$11.2410	
55	Pipeline - Remaining	Line 39 - Line 47	8,154,081	60,449	\$11.2410	
56	Storage	Line 40 - Line 48	2,313,702	15,749	\$12.2424	
57	Peaking	Line 41 - Line 49	1,327,910	9,974	\$11.0948	
58	Total		12,687,818	92,786	\$11.3953	1.0000
59						
60						
61	LLF - C&I Allocation					
62	Pipeline - Base	Line 54 * Line 24 Col E	374,343	2,775	\$11.2415	
63	Pipeline - Remaining	Line 55 * Line 24 Col F	7,176,761	53,204	\$11.2409	
64	Storage	Line 56 * Line 24 Col F	2,036,390	13,862	\$12.2420	
65	Peaking	Line 57 * Line 24 Col F	1,168,752	8,779	\$11.0942	
66	Total		10,756,246	78,620	\$11.4011	1.0005
67	41.961%	85%				(Line 66 / Line 58)
68						
69	HLF - C&I Allocation					
70	Pipeline - Base	Line 54 - Line 62	517,782	3,839	\$11.2395	
71	Pipeline - Remaining	Line 55 - Line 63	977,320	7,245	\$11.2413	
72	Storage	Line 56 - Line 64	277,312	1,887	\$12.2466	
73	Peaking	Line 57 - Line 65	159,158	1,195	\$11.0989	
74	Total		1,931,572	14,166	\$11.3627	0.9971
75						(Line 74 / Line 58)
76						
77	Unit Cost	Residential	LLF C&I	HLF C&I		
78						
79	Pipeline	\$ 11.2410	\$ 11.2410	\$ 11.2410		
80	Storage	\$ 12.2425	\$ 12.2425	\$ 12.2425		
81	Peaking	\$ -	\$ -	\$ -		
82	Total	\$ 11.3953	\$ 11.4011	\$ 11.3627		
83						
84						
85	Load Makeup	Residential	LLF C&I	HLF C&I		
86						
87	Pipeline	72.28%	71.20%	78.24%		
88	Storage	16.97%	17.63%	13.32%		
89	Peaking	10.75%	11.17%	8.44%		
90	Total	100.00%	100.00%	100.00%		
91						
92						
93	Supply Makeup	Residential	LLF C&I	HLF C&I	Total	
94						
95	Pipeline	43.98%	46.76%	9.26%	100.00%	
96	Storage	43.98%	49.30%	6.71%	100.00%	
97	Peaking	43.98%	49.31%	6.71%	100.00%	

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

2

3 **2022 – 2023 Winter Cost of Gas Filing**

4 **Correction Factor Calculation**

5

6

7

8 Data Source: Schedule 10B

	d	e	f	g	h	i	Total Sales
	Nov	Dec	Jan	Feb	Mar	Apr	
11 G-41	2,024,090	3,305,230	3,990,080	3,360,930	2,728,610	1,602,400	17,011,340
12 G-42	1,638,690	2,577,550	3,049,640	2,578,010	2,207,610	1,222,890	13,274,390
13 G-43	356,550	540,700	658,270	547,120	495,700	292,490	2,890,830
14 High Winter Use	4,019,330	6,423,480	7,697,990	6,486,060	5,431,920	3,117,780	33,176,560
16 G-51	279,050	363,480	398,180	331,040	342,590	216,120	1,930,460
17 G-52	328,800	421,730	457,600	372,490	381,360	245,600	2,207,580
18 G-53	364,036	444,039	483,757	396,097	410,759	345,126	2,443,814
19 G-54	36,310	41,220	17,430	15,680	16,970	14,010	141,620
21 Low Winter Use	1,008,196	1,270,469	1,356,967	1,115,307	1,151,679	820,856	6,723,474
23 Gross Total	5,027,526	7,693,949	9,054,957	7,601,367	6,583,599	3,938,636	39,900,034

24

25

26 Total Sales

39,900,034

27 Low Winter Use

6,723,474

28 Winter Ratio for Low Winter Use

0.9971 Schedule 10A p 2, ln 74

29 High Winter Use

33,176,560

30 Winter Ratio for High Winter Use

1.0005 Schedule 10A p 2, ln 66

31

32 Correction Factor =

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

33 Correction Factor =

100.0073%

34

35

36 **Allocation Calculation for Miscellaneous Overhead**

37

38 Projected Winter Sales Volume

11/1/22 - 4/30/23

92,780,984 Sch.10B, ln 23

39 Projected Annual Sales Volume

11/1/22 - 10/31/23

116,429,889 Sch.10B, ln 23

40 Percentage of Winter Sales to Annual Sales

79.69%

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

Schedule 10 B

2

Page 1 of 1

3 Peak 2022 – 2023 Winter Cost of Gas Filing

4

5

6

7 Firm Sales

Dry Therms

	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Subtotal PK 22-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Subtotal OP 23	Total
9 R-1	68,950	88,860	102,240	87,330	87,040	65,450	499,870	52,140	39,450	34,490	34,700	38,650	52,460	251,890	751,760
10 R-3	6,285,460	9,460,770	11,083,750	9,374,930	7,887,130	4,769,830	48,861,870	2,698,720	1,310,080	1,017,330	1,041,040	1,740,970	4,150,980	11,959,120	60,820,990
11 R-4	456,240	673,650	788,260	669,350	566,410	365,300	3,519,210	206,240	101,740	77,310	76,480	120,880	287,900	870,550	4,389,760
12 Total Residential.	6,810,650	10,223,280	11,974,250	10,131,610	8,540,580	5,200,580	52,880,950	2,957,100	1,451,270	1,129,130	1,152,220	1,900,500	4,491,340	13,081,560	65,962,510
13															
14 G-41	2,024,090	3,305,230	3,990,080	3,360,930	2,728,610	1,602,400	17,011,340	747,050	280,900	206,300	208,340	367,080	958,770	2,768,440	19,779,780
15 G-42	1,638,690	2,577,550	3,049,640	2,578,010	2,207,610	1,222,890	13,274,390	699,850	303,310	225,260	233,780	406,410	879,510	2,748,120	16,022,510
16 G-43	356,550	540,700	658,270	547,120	495,700	292,490	2,890,830	182,490	74,810	59,600	60,370	102,490	207,170	686,930	3,577,760
17 G-51	279,050	363,480	398,180	331,040	342,590	216,120	1,930,460	204,580	181,150	182,590	182,770	188,450	244,780	1,184,320	3,114,780
18 G-52	328,800	421,730	457,600	372,490	381,360	245,600	2,207,580	226,060	205,490	216,980	216,330	215,810	260,610	1,341,280	3,548,860
19 G-53	364,036	444,039	483,757	396,097	410,759	345,126	2,443,814	309,892	269,892	270,211	265,876	271,048	323,306	1,710,225	4,154,039
20 G-54	36,310	41,220	17,430	15,680	16,970	14,010	141,620	15,380	19,010	22,810	24,340	22,210	24,280	128,030	269,650
21 Total C/I	5,027,526	7,693,949	9,054,957	7,601,367	6,583,599	3,938,636	39,900,034	2,385,302	1,334,562	1,183,751	1,191,806	1,573,498	2,898,426	10,567,345	50,467,379
22															
23 Sales Volume	11,838,176	17,917,229	21,029,207	17,732,977	15,124,179	9,139,216	92,780,984	5,342,402	2,785,832	2,312,881	2,344,026	3,473,998	7,389,766	23,648,905	116,429,889
24															
25 Transportation Sales															
26 G-41	582,770	880,040	1,055,350	869,770	774,950	457,900	4,620,780	265,850	143,190	108,120	97,250	159,240	331,950	1,105,600	5,726,380
27 G-42	1,997,440	2,956,400	3,441,830	2,872,700	2,552,380	1,546,030	15,366,780	919,290	503,450	400,550	403,990	669,630	1,280,150	4,177,060	19,543,840
28 G-43	778,960	1,055,230	1,249,450	1,050,480	981,780	544,520	5,660,420	369,150	239,600	215,710	243,220	342,610	535,700	1,945,990	7,606,410
29 G-51	87,610	108,870	116,400	96,830	101,020	83,010	593,740	78,680	65,660	61,970	61,670	64,120	76,290	408,390	1,002,130
30 G-52	515,770	638,420	695,870	577,050	589,970	437,350	3,454,430	396,040	365,860	371,740	366,710	375,870	444,530	2,320,750	5,775,180
31 G-53	871,410	1,003,760	1,096,490	926,310	943,320	847,150	5,688,440	731,010	625,610	627,450	662,150	677,440	792,690	4,116,350	9,804,790
32 G-54	1,589,640	1,297,120	1,272,510	1,056,470	1,163,130	1,359,460	7,738,330	1,562,310	1,567,620	1,631,390	1,738,910	1,681,980	1,754,440	9,936,650	17,674,980
33															
34 Total Trans. Sales	6,423,600	7,939,840	8,927,900	7,449,610	7,106,550	5,275,420	43,122,920	4,322,330	3,510,990	3,416,930	3,573,900	3,970,890	5,215,750	24,010,790	67,133,710
35															
36 Total All Sales	18,261,776	25,857,069	29,957,107	25,182,587	22,230,729	14,414,636	135,903,904	9,664,732	6,296,822	5,729,811	5,917,926	7,444,888	12,605,516	47,659,695	183,563,599

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

2

3 **Peak 2022 – 2023 Winter Cost of Gas Filing**

5

Schedule 11A

6

Page 1 of 1

7 **Volumes (Therms) Normal Year**

8

9 **For the Months of May 22 - October 22**

10

11

12

	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Peak Nov - Apr
13 Pipeline Gas:							
14 Dawn Supply	874,251	924,161	926,671	839,868	910,477	771,345	5,246,775
15 Niagara Supply	689,540	728,492	730,471	661,898	717,705	678,639	4,206,745
16 TGP Supply (Gulf)	4,621,463	3,096,843	3,105,255	2,814,958	3,050,989	641,701	17,331,210
17 Dracut Supply 1 - Baseload			3,100,000	1,400,000		-	4,500,000
18 Dracut Supply 2 - Swing	2,068,620	1,628,571	574,992	2,290,420	4,186,862	1,559,349	12,308,813
19 Dracut Supply 3 - Swing	1,267,959	112,886	75,462	292,325	1,410,944	36,213	3,195,790
20 Constellation Combo							0
21 LNG Truck	117,744	1,270,345	1,451,131	1,484,347	110,473	-	4,434,041
22 Propane Truck	-	-	691,985	-	-	55,769	747,754
23 PNGTS	218,563	231,040	231,668	209,778	227,619	196,277	1,314,945
24 Portland Natural Gas	1,067,793	1,128,109	1,131,173	1,025,411	1,111,405	840,151	6,304,043
25 TGP Supply (Z4)	1,816,941	1,919,817	1,925,032	1,744,865	1,891,391	5,458,808	14,756,854
26 Subtotal Pipeline Volumes	12,742,875	11,040,265	13,943,840	12,763,870	13,617,866	10,238,252	74,346,969
27							
28 Storage Gas:							
29 TGP Storage	1,157,573	5,220,027	6,244,468	5,052,839	1,498,432	1,000,000	20,173,339
30							
31 Produced Gas:							
32 LNG Vapor	119,952	1,357,644	1,456,414	1,485,862	21,502	21,004	4,462,377
33 Propane	-	-	1,263,231	8,331	-	-	1,271,562
34 Subtotal Produced Gas	119,952	1,357,644	2,719,645	1,494,192	21,502	21,004	5,733,939
35							
36 Less - Gas Refills:							
37 LNG Truck	(117,744)	(1,270,345)	(1,451,131)	(1,484,347)	(110,473)	-	(4,434,041)
38 Propane	-	-	(691,985)	-	-	(55,769)	(747,754)
39 TGP Storage Refill	(1,743,351)	-	-	-	-	(933,581)	(2,676,933)
40 Subtotal Refills	(1,861,095)	(1,270,345)	(2,143,116)	(1,484,347)	(110,473)	(989,350)	(7,858,728)
41							
42 Total Sendout Volumes	12,159,305	16,347,591	20,764,836	17,826,554	15,027,327	10,269,906	92,395,519
43							

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

2

3 Peak 2022 – 2023 Winter Cost of Gas Filing

44 Normal and Design Year Volumes

Schedule 11B

45

Page 1 of 1

46

47 Volumes (Therms)

Design Year

48

49 For the Months of May 22 - October 22

50

51

52

	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Peak Nov - Apr
53 Pipeline Gas:							
54 Dawn Supply	1,067,793	1,128,109	1,131,173	1,025,411	1,111,405	836,530	6,300,421
55 Niagara Supply	689,540	728,492	730,471	661,898	717,705	678,639	4,206,745
56 TGP Supply (Gulf)	4,620,727	3,096,843	3,105,255	2,814,958	3,050,989	635,907	17,324,680
57 Dracut Supply 1 - Baseload			3,100,000	1,400,000			4,500,000
58 Dracut Supply 2 - Swing	2,618,338	4,157,974	2,220,815	4,195,080	5,065,458	211,486	18,469,150
59 Dracut Supply 3 - Swing	2,210,649	305,545	1,091,178	657,354	2,425,963	1,346,414	8,037,103
60 Constellation Combo							0
61 LNG Truck	117,744	1,140,150	1,599,791	1,467,686	108,990	-	4,434,362
62 Propane Truck	-	-	691,985	-	-	83,291	775,276
63 PNGTS	218,563	231,040	231,668	209,778	227,619	195,552	1,314,220
64 Portland Natural Gas	874,251	924,161	926,671	839,868	910,477	769,897	5,245,326
65 TGP Supply (Z4)	1,816,941	1,919,817	1,925,032	1,744,865	1,891,391	5,457,359	14,755,405
66 Subtotal Pipeline Volumes	14,234,547	13,632,132	16,754,039	15,016,897	15,509,998	10,215,076	85,362,689
67							
68 Storage Gas:							
69 TGP Storage	1,111,948	4,910,719	6,399,165	5,235,353	1,470,999	1,000,000	20,128,183
70							0
71 Produced Gas:							0
72 LNG Vapor	119,952	1,189,067	1,642,804	1,468,443	21,502	21,004	4,462,772
73 Propane	-	-	1,271,532	-	-	-	1,271,532
74 Subtotal Produced Gas	119,952	1,189,067	2,914,337	1,468,443	21,502	21,004	5,734,305
75							
76 Less - Gas Refills:							
77 LNG Truck	(117,744)	(1,140,150)	(1,599,791)	(1,467,686)	(108,990)	-	-4,434,362
78 Propane	-	-	(691,985)	-	-	(83,291)	-775,276
79 TGP Storage Refill	(1,696,989)	-	-	-	-	(934,306)	-2,631,295
80 Subtotal Refills	(1,814,734)	(1,140,150)	(2,291,776)	(1,467,686)	(108,990)	(1,017,597)	(7,840,933)
81							
82 Total Sendout Volumes	13,651,713	18,591,768	23,775,764	20,253,007	16,893,509	10,218,483	103,384,244

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

Schedule 11C

2

Page 1 of 1

3 **Peak 2022 – 2023 Winter Cost of Gas Filing**

4 **Capacity Utilization**

5 **Volumes (Therms)**

6

7	Peak Period				Peak Period				
8	Normal Year		Seasonal		Design Year		Seasonal		
9	Use	MDQ	Quantity	Utilization	Use	MDQ	Quantity	Utilization	
10	(Therms)	(MMBtu/day)	(Therms)	Rate	(Therms)	(MMBtu/day)	(Therms)	Rate	
11	Pipeline Gas:								
12	Dawn Supply	5,246,775	4,000	7,240,000	72%	6,300,421	4,000	7,240,000	87%
13	Niagara Supply	4,206,745	3,122	5,650,820	74%	4,206,745	3,122	5,650,820	74%
14	TGP Supply (Gulf + Z4)	32,088,064	21,596	39,088,760	82%	32,080,085	21,596	39,088,760	82%
15	Dracut Supply 1 & 2 & 3	20,004,603	90,000	162,900,000	12%	31,006,253	90,000	162,900,000	19%
16	LNG Truck	4,434,041	-	-	-	4,434,362	-	-	-
17	Propane Truck	747,754	-	-	-	775,276	-	-	-
18	PNGTS	1,314,945	1,000	1,810,000	73%	1,314,220	1,000	1,810,000	73%
19	Portland Natural Gas	6,304,043	5,000	9,050,000	70%	5,245,326	5,000	9,050,000	58%
20	Constellation Vapor	-	-	-	-	-	-	-	-
21									
22									
23	Subtotal Pipeline Volumes	74,346,969				85,362,689			
24									
25	Storage Gas:								
26	TGP Storage	20,173,339		25,791,710	78%	20,128,183		25,791,710	78%
27									
28	Produced Gas:								
29	LNG Vapor	4,462,377				4,462,772			
30	Propane	1,271,561.8				1,271,532			
31									
32	Subtotal Produced Gas	5,733,939				5,734,305			
33									
34	Less - Gas Refills:								
35	LNG Truck	(4,434,041)				(4,434,362)			
36	Propane	(747,754)				(775,276)			
37	TGP Storage Refill	(2,676,933)				(2,631,295)			
38									
39	Subtotal Refills	(7,858,728)				(7,840,933)			
40									
41	Total Sendout Volumes	92,395,519				103,384,244			

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

2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53

Peak 2022 – 2023 Winter Cost of Gas Filing

Forecast of Upcoming Winter Period
Design Day Report
2022/2023 Heating Season
(Therms)

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

Requirements

Firm Sales	1,237,481
Interruptible Sales	0
Firm Transportation	418,899
Interruptible Transportation	<u>0</u>
Total Requirements	1,656,380

Resources

Purchased Pipeline Gas	1,197,180
Underground Storage Gas	281,150
Propane Air Production	52,050
LNG Produced Gas	126,000
Third-Party Supply	<u>0</u>
Total Resources	1,656,380

Please refer to the ENNG 2013 IRP filing (DG 13-313)
for a complete description of the methodology and
assumptions used in the derivation of this data.

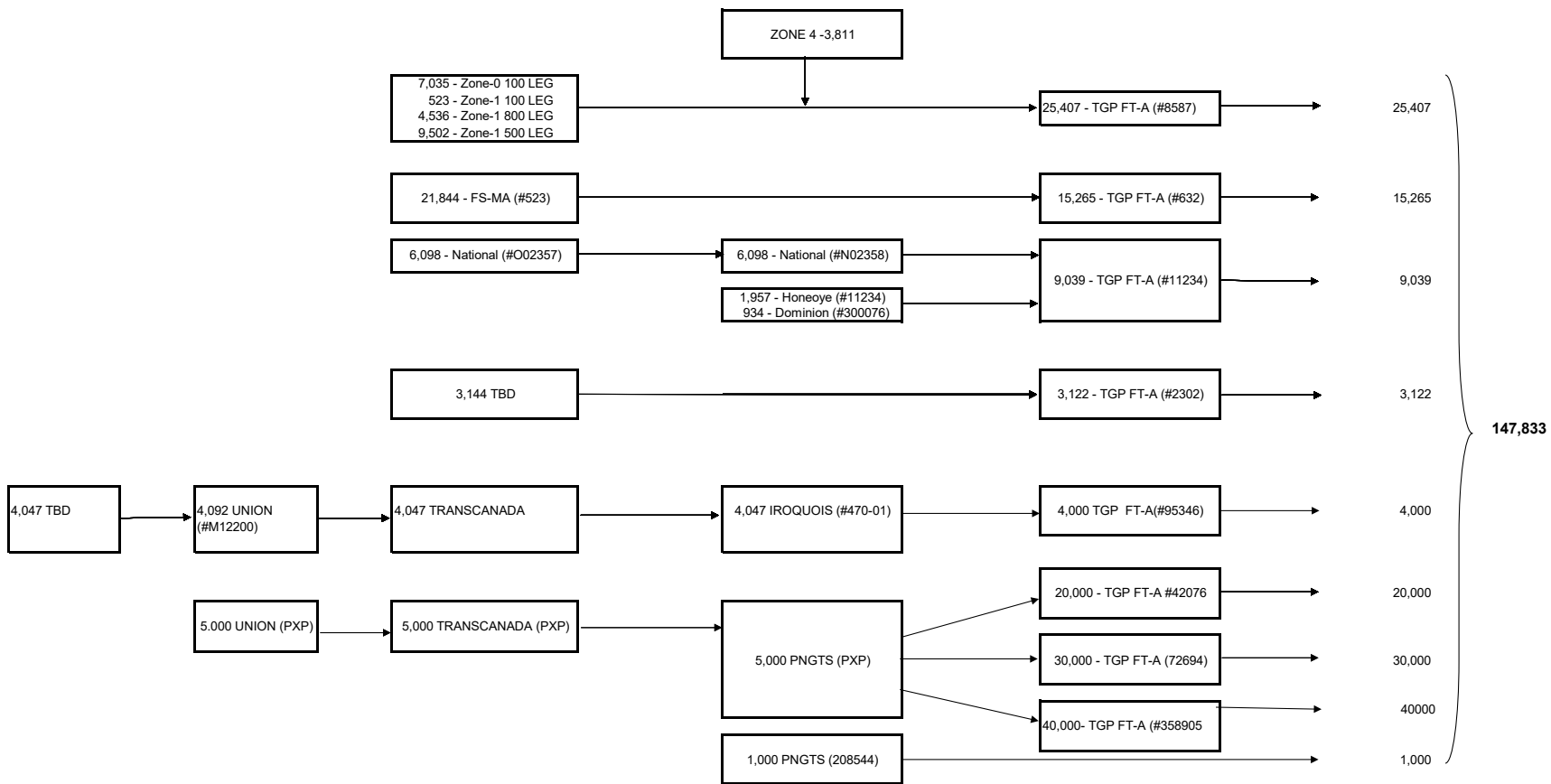
Preparation of this report was supervised by:

Deborah Gilbertson
Sr. Manager, Energy Procurement

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

LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP.
Peak 2022 – 2023 Winter Cost of Gas Filing
Transportation Available for Pipeline Supply and Storage
(MMBtu)

Schedule 12
Page 1 of 2



LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP.
Peak 2022 – 2023 Winter Cost of Gas Filing
Transportation Available for Pipeline Supply and Storage

Schedule 12
Page 2 of 2

Agreements for Gas Supply and Transportation

SOURCE	RATE SCHEDULE	CONTRACT NUMBER	TYPE	MDQ MMBTU	MAQ * MMBTU	EXPIRATION DATE	NOTIFICATION DATE	RENEWAL OPTIONS
ANE	NA	NA	Supply	4,047	611,097	Peak Only	N/A	Terminates
Constellation	FCS		Firm Combination Liquid and Vapor Svc	Up to 10 trucks	665,000	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	4/30/2023	N/A	Terminates
Northern Transport	NA	NA	Trucking	28,000 Gallons	500,000 gallons	3/31/2023	N/A	Terminates
Dominion Transmission Incorporated	GSS	300076	Storage	934	102,700	3/31/2025	3/31/2023	Mutually agreed upon
Honeoye Storage Corporation	SS-NY	11234	Storage	1,957	245,380	3/31/2024	12 months notice	Evergreen Provision
National Fuel Gas Supply Corporation	FSS	O02358	Storage	6,098	670,800	3/31/2024	3/31/2023	Evergreen Provision
National Fuel Gas Supply Corporation	FSST	N02358	Transportation	6,098	670,800	3/31/2024	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	11/30/2023	11/30/2022	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	10/31/2039	Precedent Agreement
Union Gas Limited	M12	M12200	Transportation	4,092	1,493,580	10/31/2024	10/31/2022	Evergreen Provision
Union Gas Limited	M12	PXP	Transportation	5,000	1,825,000	10/31/2040	10/31/2039	Precedent Agreement

* MAQ is calculated on a 365 day calendar year.

1 **Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**
2 **Peak 2022 – 2023 Winter Cost of Gas Filing**

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

6 **July 2021 - June 2022 Normalized Sales and Transportation Volumes (Therms)**

9		Annual	% of Total	% of Sales
10	C&I Rate Classes	Sales	by Class	to Total Volume
11				by Class
11	G-41	19,166,867	46.40%	78.50%
12	G-42	16,268,328	39.38%	45.29%
13	G-43	4,210,173	10.19%	33.83%
14	G-51	3,030,027	7.33%	76.58%
15	G-52	2,850,332	6.90%	33.27%
16	G-53	219,876	0.53%	2.11%
17	G-54	(4,433,944)	-10.73%	-29.14%
18				
19	Total C/I	41,311,658	100.00%	
20				
21				
22		Annual	% of Total	% of Transportation
23		Transportation	by Class	to Total Volume
24				by Class
24	G-41	5,250,441	7.54%	21.50%
25	G-42	19,650,487	28.22%	54.71%
26	G-43	8,233,094	11.82%	66.17%
27	G-51	926,670	1.33%	23.42%
28	G-52	5,717,816	8.21%	66.73%
29	G-53	10,207,700	14.66%	97.89%
30	G-54	19,648,661	28.22%	129.14%
31				
32	Total C/I	69,634,870	100.00%	
33				
34				
35	Sales & Transportation	Total	% of Total	
36			by Class	
36	G-41	24,417,308	22.01%	100.00%
37	G-42	35,918,815	32.37%	100.00%
38	G-43	12,443,268	11.22%	100.00%
39	G-51	3,956,697	3.57%	100.00%
40	G-52	8,568,147	7.72%	100.00%
41	G-53	10,427,576	9.40%	100.00%
42	G-54	15,214,716	13.71%	100.00%
43				
44	Total C/I	110,946,528	100.00%	

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

Schedule 14

2 **Peak 2022 – 2023 Winter Cost of Gas Filing**

Page 1 of 1

3

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

5

6

7

8

9

10

11

12

13

14

15

16

17

	Off-Peak	Peak	Total
	May 21 - Oct 21	Nov 21 - Apr 22	May 21 - Apr 22
	(Therms)	(Therms)	(Therms)
Pipeline Deliveries	17,089,850	88,448,634	105,538,484
All Others	97,860	2,371,300	2,469,160
	<u>17,187,710</u>	<u>90,819,934</u>	<u>108,007,644</u>

Ratio
90,819,934
105,538,484

0.861

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

Schedule 15

2

Page 1 of 1

3 **Peak 2022 – 2023 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

C&I Sales

8

Normalized (Therms) Jul-21 Aug-21 Jul - Aug 2021 Total Total Annual % of Jul-Aug to Total

9

(a) (b) (c) (e)=(c)+(d) (f) (g)=(e)/(f)

10	G-41	203,980	164,223	368,203	19,166,867	1.92%
11	G-42	198,671	75,257	273,928	16,268,328	1.68%
12	G-43	112,543	113,302	225,845	4,210,173	5.36%
13	G-51	193,352	180,705	374,056	3,030,027	12.34%
14	G-52	205,194	202,459	407,652	2,850,332	14.30%
15	G-53	68,611	61,778	130,389	219,876	59.30%
16	G-54	31,618	33,493	65,111	(4,433,944)	-1.47%
17						
18						
19	Total C/I	1,013,969	831,216	1,845,185	41,311,658	4.47%

1 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
2 Peak 2022 – 2023 Winter Cost of Gas Filing

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-22 (Actual)	Jun-22 (Actual)	Jul-22 (Actual)	Aug-22 (Estimate)	Sep-22 (Estimate)	Oct-22 (Estimate)	Nov-22 (Estimate)	Dec-22 (Estimate)	Jan-23 (Estimate)	Feb-23 (Estimate)	Mar-23 (Estimate)	Apr-23 (Estimate)	Total
Beginning Balance (MMBtu)	531,016	808,417	1,005,342	1,245,383	1,508,568	1,771,753	2,034,938	1,919,181	1,397,178	772,731	267,447	117,604	531,016
Injections (MMBtu) Sch 11A In 39 /10	281,796	199,940	243,767	263,185	263,185	263,185	-	-	-	-	-	93,358	1,608,416
Subtotal	812,812	1,008,357	1,249,109	1,508,568	1,771,753	2,034,938	2,034,938	1,919,181	1,397,178	772,731	267,447	210,962	
Storage Sale/Adjustments	(4,395)	(3,015)	(3,726)	-	-	-	-	-	-	-	-	-	(11,136)
Withdrawals (MMBtu) Sch 11A In 29 /10	-	-	-	-	-	-	(115,757)	(522,003)	(624,447)	(505,284)	(149,843)	(100,000)	(2,017,334)
Ending Balance (MMBtu)	808,417	1,005,342	1,245,383	1,508,568	1,771,753	2,034,938	1,919,181	1,397,178	772,731	267,447	117,604	110,962	110,962
Beginning Balance	\$ 1,962,850	\$ 3,828,588	\$ 5,462,121	\$ 6,904,920	\$ 8,480,574	\$ 10,056,229	\$ 11,631,883	\$ 10,970,204	\$ 7,986,391	\$ 4,416,999	\$ 1,528,752	\$ 672,235	\$ 1,962,850
Injections In 11 * In 36	\$ 1,859,310	\$ 1,628,729	\$ 1,443,037	\$ 1,575,654	\$ 1,575,654	\$ 1,575,654	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 403,260	\$ 10,061,301
Subtotal	\$ 3,822,160	\$ 5,457,317	\$ 6,905,159	\$ 8,480,574	\$ 10,056,229	\$ 11,631,883	\$ 11,631,883	\$ 10,970,204	\$ 7,986,391	\$ 4,416,999	\$ 1,528,752	\$ 1,075,496	
Storage Sale/Adjustments	\$ 6,428	\$ 4,804	\$ (239)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Withdrawals In 17 * In 34	-	-	-	-	-	-	(661,679)	(2,983,813)	(3,569,392)	(2,888,247)	(856,517)	(509,805)	\$ (11,469,453)
Ending Balance	\$ 3,828,588	\$ 5,462,121	\$ 6,904,920	\$ 8,480,574	\$ 10,056,229	\$ 11,631,883	\$ 10,970,204	\$ 7,986,391	\$ 4,416,999	\$ 1,528,752	\$ 672,235	\$ 565,691	\$ 554,698
Average Rate For Withdrawals In 22 /In 9	\$ 4.7024	\$ 5.4121	\$ 5.5281	\$ 5.6216	\$ 5.6759	\$ 5.7161	\$ 5.7161	\$ 5.7161	\$ 5.7161	\$ 5.7161	\$ 5.7161	\$ 5.7161	\$ 5.0980
TGP Storage Rate for Injections	\$ 6.5981	\$ 8.1461	\$ 5.9197	\$ 5.9869	\$ 5.9869	\$ 5.9869	\$ 6.0540	\$ 6.6195	\$ 6.8225	\$ 6.6115	\$ 5.6710	\$ 4.3195	
Actual or NYMEX plus TGP Transportation													
For Informational Purposes							Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Total
Summer Hedge Contracts - Vols Dth							\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Average Hedge Price							\$ 6.8740	\$ 7.1420	\$ 7.3200	\$ 7.0090	\$ 6.0660	\$ 4.8420	
NYMEX							\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Hedged Volumes at Hedged Price							\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Less Hedged Volumes at NYMEX							\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Hedge (Savings)/Loss							\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Month Dollar Average In (22 + In 32) /2				\$ 7,692,747	\$ 9,268,401	\$ 10,844,056	\$ 11,301,043	\$ 9,478,297	\$ 6,201,695	\$ 2,972,876	\$ 1,100,494	\$ 618,963	
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 47 * In 49	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Financial Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Inventory Finance Charges	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Liquid Propane Gas (LPG)													Total	
	May-22 (Actual)	Jun-22 (Actual)	Jul-22 (Actual)	Aug-22 (Estimate)	Sep-22 (Estimate)	Oct-22 (Estimate)	Nov-22 (Estimate)	Dec-22 (Estimate)	Jan-23 (Estimate)	Feb-23 (Estimate)	Mar-23 (Estimate)	Apr-23 (Estimate)	Total	
Beginning Balance	32,352	32,015	31,856	42,889	65,583	88,277	110,971	110,971	110,971	110,971	53,846	53,013	32,352	
Injections Sch 11A In 38 /10	-	-	14,266	22,694	22,694	22,694	-	-	69,199	-	-	-	157,123	
Subtotal	32,352	32,015	46,122	65,583	88,277	110,971	110,971	110,971	180,170	53,846	53,013	58,590		
Withdrawals Sch 11A In 33 /10	-	-	-	-	-	-	-	-	(126,323)	(833)	-	-	(127,156)	
Adjustment for change in temperature	(337)	(159)	(3,233)	-	-	-	-	-	-	-	-	-	(3,729)	
Adjustment for Transfer	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ending Balance	32,015	31,856	42,889	65,583	88,277	110,971	110,971	110,971	53,846	53,013	53,013	58,590	58,590	
Beginning Balance	\$ 477,921	\$ 472,943	\$ 470,594	\$ 654,434	\$ 1,085,620	\$ 1,516,806	\$ 1,947,992	\$ 1,947,992	\$ 1,947,992	\$ 1,947,992	\$ 973,058	\$ 958,004	\$ 958,004	\$ 477,921
Injections In 46 * In 69	-	-	231,600	431,186	431,186	431,186	-	-	1,307,852	-	-	-	105,403	2,938,413
Subtotal	\$ 477,921	\$ 472,943	\$ 702,194	\$ 1,085,620	\$ 1,516,806	\$ 1,947,992	\$ 1,947,992	\$ 1,947,992	\$ 3,255,844	\$ 973,058	\$ 958,004	\$ 1,063,407		
Withdrawals/ Adjust In 52 * In 67	(4,978)	(2,349)	(47,760)	-	-	-	-	-	(2,282,786)	(15,054)	-	-	(2,352,927)	
Ending Balance	\$ 472,943	\$ 470,594	\$ 654,434	\$ 1,085,620	\$ 1,516,806	\$ 1,947,992	\$ 1,947,992	\$ 1,947,992	\$ 973,058	\$ 958,004	\$ 958,004	\$ 1,063,407	\$ 1,063,407	
Average Rate For Withdrawals	\$14.7725	\$14.7725	\$15.2247	\$16.5534	\$17.1823	\$17.5541	\$17.5541	\$17.5541	\$18.0710	\$18.0710	\$18.0710	\$18.1499		
Propane Rate for Injections Actual or Sch. 6, In 165 * 10	\$14.7725	\$14.7725	\$15.2247	\$16.5534	\$17.1823	\$17.5541	\$18.9000	\$18.9000	\$18.9000	\$18.9000	\$18.9000	\$18.9000		
Month Dollar Average In (57 + In 65) /2			\$ 870,027	\$ 1,301,213	\$ 1,732,399	\$ 1,947,992	\$ 1,947,992	\$ 1,460,525	\$ 965,531	\$ 958,004	\$ 1,010,705			
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 72 * In 74			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Liquid Natural Gas (LNG)													Total	
	May-22 (Actual)	Jun-22 (Actual)	Jul-22 (Actual)	Aug-22 (Estimate)	Sep-22 (Estimate)	Oct-22 (Estimate)	Nov-22 (Estimate)	Dec-22 (Estimate)	Jan-23 (Estimate)	Feb-23 (Estimate)	Mar-23 (Estimate)	Apr-23 (Estimate)	Total	
Beginning Balance	11,460	10,769	10,761	12,163	13,565	14,967	16,369	16,148	7,418	6,890	6,739	15,636	11,460	
Injections Sch 11A In 37 /10	812	1,638	2,496	2,496	2,496	2,496	11,774	127,035	145,113	148,435	11,047	-	455,838	
Subtotal	12,272	12,407	13,257	14,659	16,061	17,463	28,143	143,183	152,531	155,325	17,786	15,636		
Withdrawals Sch 11A In 32 /10	(1,503)	(1,646)	(1,094)	(1,094)	(1,094)	(1,094)	(11,995)	(135,764)	(145,641)	(148,586)	(2,150)	(2,100)	(453,763)	
Ending Balance	10,769	10,761	12,163	13,565	14,967	16,369	16,148	7,418	6,890	6,739	15,636	13,535	13,535	
Beginning Balance	\$ 88,967	\$ 100,266	\$ 118,983	\$ 150,191	\$ 180,308	\$ 209,643	\$ 238,370	\$ 222,195	\$ 169,342	\$ 165,357	\$ 159,641	\$ 249,969	\$ 88,967	
Injections In 83 * In 104	25,292	36,851	44,659	44,659	44,659	44,659	148,876	3,046,288	3,491,277	3,514,340	124,702	-	10,566,261	
Subtotal	\$ 114,259	\$ 137,117	\$ 163,641	\$ 194,849	\$ 224,966	\$ 254,301	\$ 387,246	\$ 3,268,484	\$ 3,660,618	\$ 3,679,697	\$ 284,344	\$ 249,969		
Withdrawals In 87 * In 102	(13,993)	(18,135)	(13,450)	(14,542)	(15,324)	(15,931)	(165,051)	(3,099,142)	(3,495,261)	(3,520,056)	(34,374)	(33,579)	(10,438,837)	
Ending Balance	\$ 100,266	\$ 118,983	\$ 150,191	\$ 180,308	\$ 209,643	\$ 238,370	\$ 222,195	\$ 169,342	\$ 165,357	\$ 159,641	\$ 249,969	\$ 216,391	\$ 216,391	
Average Rate For Withdrawals	\$9.3105	\$11.0516	\$12.3438	\$13.2921	\$14.0070	\$14.5623	\$13.7597	\$22.8274	\$23.9991	\$23.6903	\$15.9869	\$15.9869		
LNG Rate for Injections Actual or Sch. 6, In 164 * 10	\$31.1481	\$22.4977	\$17.8921	\$17.8921	\$17.8921	\$17.8921	\$12.6440	\$23.9800	\$24.0590	\$23.6760	\$11.2880	\$11.2880		
Month Dollar Average In (92 + In 100) /2			\$ 165,249	\$ 194,975	\$ 224,007	\$ 230,283	\$ 195,769	\$ 167,349	\$ 162,499	\$ 204,805	\$ 233,180			
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 107 * In 109			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Total Fuel Financing Ins 53 + 76 + 111			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		

1 **Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**
2 **Peak 2022 – 2023 Winter Cost of Gas Filing**

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

5
6
7 **Firm Transportation**
8
9
10
11

	Therms 1/	Cost of Gas Rate 2/	Cost of Gas Revenue
14 Nov-22	6,423,600	\$ 0.0098	\$ 62,864
15 Dec-22	7,939,840	0.0098	77,703
16 Jan-23	8,927,900	0.0098	87,373
17 Feb-23	7,449,610	0.0098	72,905
18 Mar-23	7,106,550	0.0098	69,548
19 Apr-23	<u>5,275,420</u>	0.0098	<u>51,628</u>
20			
21 Total	<u>43,122,920</u>		<u>\$ 422,021</u>

22
23

24 1/ Per Schedule 10B, line 34. Excludes special contract volumes subject to transportation cost of gas.

25 2/ Refer to Proposed Second Revised Page 98 for calculation of rate.

III DELIVERY TERMS AND CONDITIONS

ATTACHMENT B
Schedule of Administrative Fees and Charges

I.	Supplier Balancing Charge:	\$	0.21	
II.	Capacity Mitigation Fee			15% of the Proceeds from the Marketing of Capacity for Mitigation.
III.	Peaking Demand Charge	\$	56.69	MMBTU of Peak MDQ
IV.	Company Allowance Calculation (per Schedule 25)			
			170,377,710	Total Sendout - Therms Jul-2021 - Jun-2022
			<u>166,126,573</u>	Total Throughput - Therms Jul-2021 - Jun-2022
			4,251,137	Variance (Sendout - Throughput)
	Company Allowance Percentage 2022-23		2.5%	Variance / Total Sendout

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

**Calculation of Supplier Balancing Charge
2022-2023**

Rate: \$ 0.2109 /MMBtu

	Rate	Volume	Total
Injection Cost	\$ 0.0087	331,633	\$ 2,885
Fuel 1.81%	\$ 0.0498	331,633	\$ 16,507
Withdrawal Cost	\$ 0.0087	229,846	\$ 2,000
Delivery Rate	\$ 0.0421	229,846	\$ 9,678
FTA Demand Charge	\$ 0.2359	229,846	\$ 54,226
FTA Commodity Charge	\$ 0.1030	229,846	\$ 23,674
Fuel 1.49%	\$ 0.0410	229,846	\$ 9,418
		Total Cost	\$ 118,388
	Absolute Value of the	Sendout Error	561,480 MMBtu
		Rate	\$ 0.2109 /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	\$	1.2801	/ MMBtu per month
	\$	0.0421	/ MMBtu per day
TGP Z4-6 Demand Charge	\$	7.1720	/ MMBtu per month
	\$	0.2359	/ MMBtu per day
TGP Z4-6 Commodity Charge	\$	0.1030	/ MMBtu

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

**Calculation of Supplier Balancing Charge
2022-2023
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	696	694	2	1,568,263	1,564,464	3,799	60,784	32,291	28,492
Dec	913	913	-	2,117,278	2,117,278	(0)	80,260	40,130	40,130
Jan	1,315	1,293	22	3,086,621	3,043,588	43,033	117,362	80,197	37,165
Feb	990	975	15	2,369,504	2,342,994	26,510	92,936	59,723	33,213
Mar	761	736	25	1,732,238	1,692,369	39,870	84,524	62,197	22,327
Apr	455	459	(4)	1,094,027	1,100,826	(6,799)	64,589	28,895	35,694
May	185	181	4	607,712	604,152	3,559	23,135	13,347	9,788
Jun	4	6	(2)	205,729	206,626	(897)	897	-	897
Jul	18	21	(3)	478,760	479,522	(762)	1,701	470	1,232
Aug	-	-	-	346,071	346,071	-	-	-	-
Sep	19	22	(3)	363,716	365,812	(2,095)	3,492	698	2,794
Oct	248	252	(4)	696,565	700,996	(4,431)	31,800	13,685	18,115
Total	5,604	5,552	52	14,666,484	14,564,697	101,787	561,480	331,633	229,846

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Calculation of Supplier Balancing Charge
2022-2023
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, 2021	28	30	-2	58280.60622	61680.04141	-3399.43519	3399.43519	0	3399.435186
2 Apr 2, 2021	32	34	-2	65079.47659	68478.91178	-3399.43519	3399.43519	0	3399.435186
3 Apr 3, 2021	25	26	-1	53181.45344	54881.17104	-1699.71759	1699.71759	0	1699.717593
4 Apr 4, 2021	16	14	2	37883.9951	34484.55992	3399.43519	3399.43519	3399.43519	0
5 Apr 5, 2021	17	15	2	39583.7127	36184.27751	3399.43519	3399.43519	3399.43519	0
6 Apr 6, 2021	14	13	1	34484.55992	32784.84232	1699.71759	1699.71759	1699.71759	0
7 Apr 7, 2021	11	8	3	29385.40714	24286.25436	5099.15278	5099.15278	5099.15278	0
8 Apr 8, 2021	10	10	0	27685.68955	27685.68955	0	0	0	0
9 Apr 9, 2021	5	6	-1	19187.10158	20886.81917	-1699.71759	1699.71759	0	1699.717593
10 Apr 10, 2021	2	1	1	14087.9488	12388.23121	1699.71759	1699.71759	1699.71759	0
11 Apr 11, 2021	16	17	-1	37883.9951	39583.7127	-1699.71759	1699.71759	0	1699.717593
12 Apr 12, 2021	19	19	0	42983.14788	42983.14788	0	0	0	0
13 Apr 13, 2021	11	10	1	29385.40714	27685.68955	1699.71759	1699.71759	1699.71759	0
14 Apr 14, 2021	13	12	1	32784.84232	31085.12473	1699.71759	1699.71759	1699.71759	0
15 Apr 15, 2021	21	22	-1	46382.58307	48082.30066	-1699.71759	1699.71759	0	1699.717593
16 Apr 16, 2021	26	27	-1	54881.17104	56580.88863	-1699.71759	1699.71759	0	1699.717593
17 Apr 17, 2021	20	20	0	44682.86548	44682.86548	0	0	0	0
18 Apr 18, 2021	15	14	1	36184.27751	34484.55992	1699.71759	1699.71759	1699.71759	0
19 Apr 19, 2021	9	10	-1	25985.97195	27685.68955	-1699.71759	1699.71759	0	1699.717593
20 Apr 20, 2021	7	7	0	22586.53677	22586.53677	0	0	0	0
21 Apr 21, 2021	17	22	-5	39583.7127	48082.30066	-8498.58797	8498.58797	0	8498.587966
22 Apr 22, 2021	24	25	-1	51481.73585	53181.45344	-1699.71759	1699.71759	0	1699.717593
23 Apr 23, 2021	13	13	0	32784.84232	32784.84232	0	0	0	0
24 Apr 24, 2021	7	4	3	22586.53677	17487.38399	5099.15278	5099.15278	5099.15278	0
25 Apr 25, 2021	16	16	0	37883.9951	37883.9951	0	0	0	0
26 Apr 26, 2021	17	18	-1	39583.7127	41283.43029	-1699.71759	1699.71759	0	1699.717593
27 Apr 27, 2021	9	7	2	25985.97195	22586.53677	3399.43519	3399.43519	3399.43519	0
28 Apr 28, 2021	9	11	-2	25985.97195	29385.40714	-3399.43519	3399.43519	0	3399.435186
29 Apr 29, 2021	12	14	-2	31085.12473	34484.55992	-3399.43519	3399.43519	0	3399.435186
30 Apr 30, 2021	14	14	0	34484.55992	34484.55992	0	0	0	0
31 May 1, 2021	12	11	1	24971.178	24081.36584	889.812165	889.812165	889.812165	0
32 May 2, 2021	4	0	4	17852.68068	14293.43202	3559.24866	3559.24866	3559.24866	0
33 May 3, 2021	11	9	2	24081.36584	22301.74151	1779.62433	1779.62433	1779.62433	0
34 May 4, 2021	14	12	2	26750.80233	24971.178	1779.62433	1779.62433	1779.62433	0
35 May 5, 2021	13	15	-2	25860.99016	27640.61449	-1779.62433	1779.62433	0	1779.624329
36 May 6, 2021	13	9	4	25860.99016	22301.74151	3559.24866	3559.24866	3559.24866	0
37 May 7, 2021	13	14	-1	25860.99016	26750.80233	-889.812165	889.812165	0	889.8121646
38 May 8, 2021	11	11	0	24081.36584	24081.36584	0	0	0	0
39 May 9, 2021	7	8	-1	20522.11718	21411.92934	-889.812165	889.812165	0	889.8121646
40 May 10, 2021	9	7	2	22301.74151	20522.11718	1779.62433	1779.62433	1779.62433	0
41 May 11, 2021	11	11	0	24081.36584	24081.36584	0	0	0	0
42 May 12, 2021	8	8	0	21411.92934	21411.92934	0	0	0	0
43 May 13, 2021	4	5	-1	17852.68068	18742.49285	-889.812165	889.812165	0	889.8121646
44 May 14, 2021	0	0	0	14293.43202	14293.43202	0	0	0	0
45 May 15, 2021	0	0	0	14293.43202	14293.43202	0	0	0	0
46 May 16, 2021	0	0	0	14293.43202	14293.43202	0	0	0	0
47 May 17, 2021	0	0	0	14293.43202	14293.43202	0	0	0	0
48 May 18, 2021	0	0	0	14293.43202	14293.43202	0	0	0	0
49 May 19, 2021	0	0	0	14293.43202	14293.43202	0	0	0	0
50 May 20, 2021	0	0	0	14293.43202	14293.43202	0	0	0	0
51 May 21, 2021	0	0	0	14293.43202	14293.43202	0	0	0	0
52 May 22, 2021	0	0	0	14293.43202	14293.43202	0	0	0	0
53 May 23, 2021	0	0	0	14293.43202	14293.43202	0	0	0	0
54 May 24, 2021	2	4	-2	16073.05635	17852.68068	-1779.62433	1779.62433	0	1779.624329
55 May 25, 2021	0	0	0	14293.43202	14293.43202	0	0	0	0
56 May 26, 2021	0	0	0	14293.43202	14293.43202	0	0	0	0
57 May 27, 2021	0	1	-1	14293.43202	15183.24419	-889.812165	889.812165	0	889.8121646
58 May 28, 2021	11	14	-3	24081.36584	26750.80233	-2669.43649	2669.43649	0	2669.436494
59 May 29, 2021	17	17	0	29420.23882	29420.23882	0	0	0	0
60 May 30, 2021	16	16	0	28530.42666	28530.42666	0	0	0	0
61 May 31, 2021	9	9	0	22301.74151	22301.74151	0	0	0	0
62 Jun 1, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
63 Jun 2, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
64 Jun 3, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
65 Jun 4, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
66 Jun 5, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Calculation of Supplier Balancing Charge
2022-2023
Estimated Daily Imbalances

		Predicted	Actual	Forecaster	Calculated	Calculated	Sendout	Abs.Value		
	Date	MAN HDD	MAN HDD	MAN HDD	on Predicted	on Actual	Error	Sendout	Injections	Withdrawals
					MAN HDD	MAN HDD	(MMBtu)	Error	(MMBtu)	(MMBtu)
1	Jun 6, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
2	Jun 7, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
3	Jun 8, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
4	Jun 9, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
5	Jun 10, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
6	Jun 11, 2021	4	5	-1	13123.90543	13572.45443	-448.549004	448.549004	0	448.5490037
7	Jun 12, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
8	Jun 13, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
9	Jun 14, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
10	Jun 15, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
11	Jun 16, 2021	0	1	-1	11329.70941	11778.25842	-448.549004	448.549004	0	448.5490037
12	Jun 17, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
13	Jun 18, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
14	Jun 19, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
15	Jun 20, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
16	Jun 21, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
17	Jun 22, 2021	1	2	-1	11778.25842	12226.80742	-448.549004	448.549004	0	448.5490037
18	Jun 23, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
19	Jun 24, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
20	Jun 25, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
21	Jun 26, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
22	Jun 27, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
23	Jun 28, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
24	Jun 29, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
25	Jun 30, 2021	0	0	0	11329.70941	11329.70941	0	0	0	0
26	Jul 1, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
27	Jul 2, 2021	5	7	-2	12106.04958	12419.23155	-313.181965	313.181965	0	313.1819651
28	Jul 3, 2021	7	8	-1	12419.23155	12575.82253	-156.590983	156.590983	0	156.5909826
29	Jul 4, 2021	5	2	3	12106.04958	11636.27663	469.772948	469.772948	469.772948	0
30	Jul 5, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
31	Jul 6, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
32	Jul 7, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
33	Jul 8, 2021	0	2	-2	11323.09467	11636.27663	-313.181965	313.181965	0	313.1819651
34	Jul 9, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
35	Jul 10, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
36	Jul 11, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
37	Jul 12, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
38	Jul 13, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
39	Jul 14, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
40	Jul 15, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
41	Jul 16, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
42	Jul 17, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
43	Jul 18, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
44	Jul 19, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
45	Jul 20, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
46	Jul 21, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
47	Jul 23, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
48	Jul 23, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
49	Jul 24, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
50	Jul 25, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
51	Jul 26, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
52	Jul 27, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
53	Jul 28, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
54	Jul 29, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
55	Jul 30, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
56	Jul 31, 2021	0	0	0	11323.09467	11323.09467	0	0	0	0
57	Aug 1, 2021	0	0	0	11158.25093	11158.25093	0	0	0	0
58	Aug 2, 2021	0	0	0	11158.25093	11158.25093	0	0	0	0
59	Aug 3, 2021	0	0	0	11158.25093	11158.25093	0	0	0	0
60	Aug 4, 2021	0	0	0	11158.25093	11158.25093	0	0	0	0
61	Aug 5, 2021	0	0	0	11158.25093	11158.25093	0	0	0	0
62	Aug 6, 2021	0	0	0	11158.25093	11158.25093	0	0	0	0
63	Aug 7, 2021	0	0	0	11158.25093	11158.25093	0	0	0	0
64	Aug 8, 2021	0	0	0	11158.25093	11158.25093	0	0	0	0
65	Aug 8, 2021	0	0	0	11158.25093	11158.25093	0	0	0	0
66	Aug 10, 2021	0	0	0	11158.25093	11158.25093	0	0	0	0
67	Aug 11, 2021	0	0	0	11158.25093	11158.25093	0	0	0	0

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Calculation of Supplier Balancing Charge
2022-2023
Estimated Daily Imbalances

		Predicted	Actual	Forecaster	Calculated	Calculated	Sendout	Abs.Value		
Date	MAN HDD	MAN HDD	MAN HDD	Error	on Predicted	on Actual	Error	Sendout	Injections	Withdrawals
					MAN HDD	MAN HDD	(MMBtu)	(MMBtu)	(MMBtu)	(MMBtu)
1	8/12/2021	0	0	0	11158.25093	11158.25093	0	0	0	0
2	8/13/2021	0	0	0	11158.25093	11158.25093	0	0	0	0
3	8/14/2021	0	0	0	11158.25093	11158.25093	0	0	0	0
4	8/15/2021	0	0	0	11158.25093	11158.25093	0	0	0	0
5	8/16/2021	0	0	0	11158.25093	11158.25093	0	0	0	0
6	8/17/2021	0	0	0	11158.25093	11158.25093	0	0	0	0
7	8/18/2021	0	0	0	11158.25093	11158.25093	0	0	0	0
8	8/19/2021	0	0	0	11158.25093	11158.25093	0	0	0	0
9	8/20/2021	0	0	0	11158.25093	11158.25093	0	0	0	0
10	8/21/2021	0	0	0	11158.25093	11158.25093	0	0	0	0
11	8/22/2021	0	0	0	11158.25093	11158.25093	0	0	0	0
12	8/23/2021	0	0	0	11158.25093	11158.25093	0	0	0	0
13	8/24/2021	0	0	0	11158.25093	11158.25093	0	0	0	0
14	8/25/2021	0	0	0	11158.25093	11158.25093	0	0	0	0
15	8/26/2021	0	0	0	11158.25093	11158.25093	0	0	0	0
16	8/27/2021	0	0	0	11158.25093	11158.25093	0	0	0	0
17	8/28/2021	0	0	0	11158.25093	11158.25093	0	0	0	0
18	8/29/2021	0	0	0	11158.25093	11158.25093	0	0	0	0
19	8/30/2021	0	0	0	11158.25093	11158.25093	0	0	0	0
20	8/31/2021	0	0	0	11158.25093	11158.25093	0	0	0	0
21	9/1/2021	0	1	-1	11699.57295	12398.01574	-698.442789	698.442789	0	698.4427892
22	9/2/2021	1	0	1	12398.01574	11699.57295	698.442789	698.442789	698.442789	0
23	9/3/2021	0	0	0	11699.57295	11699.57295	0	0	0	0
24	9/4/2021	0	0	0	11699.57295	11699.57295	0	0	0	0
25	9/5/2021	0	0	0	11699.57295	11699.57295	0	0	0	0
26	9/6/2021	0	0	0	11699.57295	11699.57295	0	0	0	0
27	9/7/2021	0	0	0	11699.57295	11699.57295	0	0	0	0
28	9/8/2021	0	0	0	11699.57295	11699.57295	0	0	0	0
29	9/9/2021	0	0	0	11699.57295	11699.57295	0	0	0	0
30	9/10/2021	1	1	0	12398.01574	12398.01574	0	0	0	0
31	9/11/2021	0	0	0	11699.57295	11699.57295	0	0	0	0
32	9/12/2021	0	0	0	11699.57295	11699.57295	0	0	0	0
33	9/13/2021	0	0	0	11699.57295	11699.57295	0	0	0	0
34	9/14/2021	0	0	0	11699.57295	11699.57295	0	0	0	0
35	9/15/2021	0	0	0	11699.57295	11699.57295	0	0	0	0
36	9/16/2021	0	0	0	11699.57295	11699.57295	0	0	0	0
37	9/17/2021	0	0	0	11699.57295	11699.57295	0	0	0	0
38	9/18/2021	0	0	0	11699.57295	11699.57295	0	0	0	0
39	9/19/2021	1	1	0	12398.01574	12398.01574	0	0	0	0
40	9/20/2021	2	2	0	13096.45853	13096.45853	0	0	0	0
41	9/21/2021	0	0	0	11699.57295	11699.57295	0	0	0	0
42	9/22/2021	0	0	0	11699.57295	11699.57295	0	0	0	0
43	9/23/2021	0	0	0	11699.57295	11699.57295	0	0	0	0
44	9/24/2021	0	0	0	11699.57295	11699.57295	0	0	0	0
45	9/25/2021	0	0	0	11699.57295	11699.57295	0	0	0	0
46	9/26/2021	1	3	-2	12398.01574	13794.90132	-1396.88558	1396.88558	0	1396.885578
47	9/27/2021	0	0	0	11699.57295	11699.57295	0	0	0	0
48	9/28/2021	5	6	-1	15191.7869	15890.22969	-698.442789	698.442789	0	698.4427892
49	9/29/2021	8	8	0	17287.11527	17287.11527	0	0	0	0
50	9/30/2021	10	11	-1	18684.00084	19382.44363	-698.442789	698.442789	0	698.4427892
51	10/1/2021	8	9	-1	22268.44474	23512.51636	-1244.07162	1244.07162	0	1244.071617
52	10/2/2021	2	3	-1	14804.01504	16048.08666	-1244.07162	1244.07162	0	1244.071617
53	10/3/2021	6	6	0	19780.30151	19780.30151	0	0	0	0
54	10/4/2021	10	9	1	24756.58798	23512.51636	1244.07162	1244.07162	1244.07162	0
55	10/5/2021	9	7	2	23512.51636	21024.37313	2488.14324	2488.14324	2488.14324	0
56	10/6/2021	4	3	1	17292.15828	16048.08666	1244.07162	1244.07162	1244.07162	0
57	10/7/2021	2	2	0	14804.01504	14804.01504	0	0	0	0
58	10/8/2021	4	4	0	17292.15828	17292.15828	0	0	0	0
59	10/9/2021	9	8	1	23512.51636	22268.44474	1244.07162	1244.07162	1244.07162	0
60	10/10/2021	6	4	2	19780.30151	17292.15828	2488.14324	2488.14324	2488.14324	0
61	10/11/2021	4	4	0	17292.15828	17292.15828	0	0	0	0
62	10/12/2021	1	1	0	13559.94342	13559.94342	0	0	0	0
63	10/13/2021	0	0	0	12315.87181	12315.87181	0	0	0	0
64	10/14/2021	0	0	0	12315.87181	12315.87181	0	0	0	0
65	10/15/2021	0	0	0	12315.87181	12315.87181	0	0	0	0
66	10/16/2021	0	0	0	12315.87181	12315.87181	0	0	0	0
67	10/17/2021	8	10	-2	22268.44474	24756.58798	-2488.14324	2488.14324	0	2488.143235

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Calculation of Supplier Balancing Charge
2022-2023
Estimated Daily Imbalances

		Predicted	Actual	Forecaster	Calculated	Calculated	Sendout	Abs.Value		
	Date	MAN HDD	MAN HDD	MAN HDD	on Predicted	on Actual	Error	Sendout	MMBtu	Withdrawals
					MAN HDD	MAN HDD	(MMBtu)	Error	(MMBtu)	(MMBtu)
1	10/18/2021	14	14	0	29732.87445	29732.87445	0	0	0	0
2	10/19/2021	10	11	-1	24756.58798	26000.6596	-1244.07162	1244.07162	0	1244.071617
3	10/20/2021	4	3	1	17292.15828	16048.08666	1244.07162	1244.07162	1244.07162	0
4	10/21/2021	0	1	-1	12315.87181	13559.94342	-1244.07162	1244.07162	0	1244.071617
5	10/22/2021	7	8	-1	21024.37313	22268.44474	-1244.07162	1244.07162	0	1244.071617
6	10/23/2021	16	17	-1	32221.01768	33465.0893	-1244.07162	1244.07162	0	1244.071617
7	10/24/2021	16	15	1	32221.01768	30976.94607	1244.07162	1244.07162	1244.07162	0
8	10/25/2021	16	17	-1	32221.01768	33465.0893	-1244.07162	1244.07162	0	1244.071617
9	10/26/2021	13	13	0	28488.80283	28488.80283	0	0	0	0
10	10/27/2021	17	16	1	33465.0893	32221.01768	1244.07162	1244.07162	1244.07162	0
11	10/28/2021	20	22	-2	37197.30415	39685.44739	-2488.14324	2488.14324	0	2488.143235
12	10/29/2021	16	17	-1	32221.01768	33465.0893	-1244.07162	1244.07162	0	1244.071617
13	10/30/2021	8	10	-2	22268.44474	24756.58798	-2488.14324	2488.14324	0	2488.143235
14	10/31/2021	8	7	1	22268.44474	21024.37313	1244.07162	1244.07162	1244.07162	0
15	11/1/2021	16	16	0	38599.13528	38599.13528	0	0	0	0
16	11/2/2021	20	18	2	46197.08616	42398.11072	3798.97544	3798.97544	3798.97544	0
17	11/3/2021	23	24	-1	51895.54933	53795.03705	-1899.48772	1899.48772	0	1899.487721
18	11/4/2021	25	24	1	55694.52477	53795.03705	1899.48772	1899.48772	1899.48772	0
19	11/5/2021	26	27	-1	57594.01249	59493.50021	-1899.48772	1899.48772	0	1899.487721
20	11/6/2021	24	26	-2	53795.03705	57594.01249	-3798.97544	3798.97544	0	3798.975442
21	11/7/2021	21	22	-1	48096.57389	49996.06161	-1899.48772	1899.48772	0	1899.487721
22	11/8/2021	17	18	-1	40498.623	42398.11072	-1899.48772	1899.48772	0	1899.487721
23	11/9/2021	12	7	5	31001.1844	21503.74579	9497.43861	9497.43861	9497.43861	0
24	11/10/2021	19	21	-2	44297.59844	48096.57389	-3798.97544	3798.97544	0	3798.975442
25	11/11/2021	16	14	2	38599.13528	34800.15984	3798.97544	3798.97544	3798.97544	0
26	11/12/2021	15	16	-1	36699.64756	38599.13528	-1899.48772	1899.48772	0	1899.487721
27	11/13/2021	19	19	0	44297.59844	44297.59844	0	0	0	0
28	11/14/2021	21	21	0	48096.57389	48096.57389	0	0	0	0
29	11/15/2021	24	24	0	53795.03705	53795.03705	0	0	0	0
30	11/16/2021	28	27	1	61392.98793	59493.50021	1899.48772	1899.48772	1899.48772	0
31	11/17/2021	19	20	-1	44297.59844	46197.08616	-1899.48772	1899.48772	0	1899.487721
32	11/18/2021	13	11	2	32900.67212	29101.69668	3798.97544	3798.97544	3798.97544	0
33	11/19/2021	27	27	0	59493.50021	59493.50021	0	0	0	0
34	11/20/2021	26	25	1	57594.01249	55694.52477	1899.48772	1899.48772	1899.48772	0
35	11/21/2021	16	17	-1	38599.13528	40498.623	-1899.48772	1899.48772	0	1899.487721
36	11/22/2021	25	25	0	55694.52477	55694.52477	0	0	0	0
37	11/23/2021	34	34	0	72789.91426	72789.91426	0	0	0	0
38	11/24/2021	30	31	-1	65191.96337	67091.4511	-1899.48772	1899.48772	0	1899.487721
39	11/25/2021	23	20	3	51895.54933	46197.08616	5698.46316	5698.46316	5698.46316	0
40	11/26/2021	27	28	-1	59493.50021	61392.98793	-1899.48772	1899.48772	0	1899.487721
41	11/27/2021	35	36	-1	74689.40198	76588.8897	-1899.48772	1899.48772	0	1899.487721
42	11/28/2021	31	31	0	67091.4511	67091.4511	0	0	0	0
43	11/29/2021	34	35	-1	72789.91426	74689.40198	-1899.48772	1899.48772	0	1899.487721
44	11/30/2021	30	30	0	65191.96337	65191.96337	0	0	0	0
45	12/1/2021	28	27	1	65872.09732	64200.02408	1672.07324	1672.07324	1672.07324	0
46	12/2/2021	20	23	-3	52495.5114	57511.73112	-5016.21972	5016.21972	0	5016.219721
47	12/3/2021	34	33	1	75904.53677	74232.46352	1672.07324	1672.07324	1672.07324	0
48	12/4/2021	29	30	-1	67544.17056	69216.2438	-1672.07324	1672.07324	0	1672.07324
49	12/5/2021	26	25	1	62527.95084	60855.8776	1672.07324	1672.07324	1672.07324	0
50	12/6/2021	19	19	0	50823.43816	50823.43816	0	0	0	0
51	12/7/2021	31	32	-1	70888.31704	72560.39028	-1672.07324	1672.07324	0	1672.07324
52	12/8/2021	34	37	-3	75904.53677	80920.75649	-5016.21972	5016.21972	0	5016.219721
53	12/9/2021	33	35	-2	74232.46352	77576.61001	-3344.14648	3344.14648	0	3344.14648
54	12/10/2021	30	33	-3	69216.2438	74232.46352	-5016.21972	5016.21972	0	5016.219721
55	12/11/2021	17	21	-4	47479.29168	54167.58464	-6688.29296	6688.29296	0	6688.292961
56	12/12/2021	25	25	0	60855.8776	60855.8776	0	0	0	0
57	12/13/2021	22	20	2	55839.65788	52495.5114	3344.14648	3344.14648	3344.14648	0
58	12/14/2021	30	28	2	69216.2438	65872.09732	3344.14648	3344.14648	3344.14648	0
59	12/15/2021	23	25	-2	57511.73112	60855.8776	-3344.14648	3344.14648	0	3344.14648
60	12/16/2021	14	13	1	42463.07196	40790.99872	1672.07324	1672.07324	1672.07324	0
61	12/17/2021	26	21	5	62527.95084	54167.58464	8360.3662	8360.3662	8360.3662	0
62	12/18/2021	32	33	-1	72560.39028	74232.46352	-1672.07324	1672.07324	0	1672.07324
63	12/19/2021	41	42	-1	87609.04945	89281.12269	-1672.07324	1672.07324	0	1672.07324
64	12/20/2021	37	38	-1	80920.75649	82592.82973	-1672.07324	1672.07324	0	1672.07324
65	12/21/2021	34	32	2	75904.53677	72560.39028	3344.14648	3344.14648	3344.14648	0
66	12/22/2021	36	32	4	79248.68325	72560.39028	6688.29296	6688.29296	6688.29296	0
67	12/23/2021	42	42	0	89281.12269	89281.12269	0	0	0	0

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Calculation of Supplier Balancing Charge
2022-2023
Estimated Daily Imbalances

Date	Predicted MAN HDD	Actual MAN HDD	Forecaster Error MAN HDD	Calculated on Predicted MAN HDD	Calculated on Actual MAN HDD	Sendout Error (MMBtu)	Abs.Value Sendout Error (MMBtu)	Injections (MMBtu)	Withdrawals (MMBtu)
1 12/24/2021	39	38	1	84264.90297	82592.82973	1672.07324	1672.07324	1672.07324	0
2 12/25/2021	32	32	0	72560.39028	72560.39028	0	0	0	0
3 12/26/2021	35	33	2	77576.61001	74232.46352	3344.14648	3344.14648	3344.14648	0
4 12/27/2021	34	34	0	75904.53677	75904.53677	0	0	0	0
5 12/28/2021	30	28	2	69216.2438	65872.09732	3344.14648	3344.14648	3344.14648	0
6 12/29/2021	28	28	0	65872.09732	65872.09732	0	0	0	0
7 12/30/2021	27	28	-1	64200.02408	65872.09732	-1672.07324	1672.07324	0	1672.07324
8 12/31/2021	25	26	-1	60855.8776	62527.95084	-1672.07324	1672.07324	0	1672.07324
9 1/1/2022	23	25	-2	61583.49549	65495.56413	-3912.06864	3912.06864	0	3912.068638
10 1/2/2022	36	33	3	87011.94163	81143.83868	5868.10296	5868.10296	5868.10296	0
11 1/3/2022	44	46	-2	102660.2162	106572.2848	-3912.06864	3912.06864	0	3912.068638
12 1/4/2022	38	37	1	90924.01027	88967.97595	1956.03432	1956.03432	1956.03432	0
13 1/5/2022	27	30	-3	69407.63276	75275.73572	-5868.10296	5868.10296	0	5868.102957
14 1/6/2022	36	33	3	87011.94163	81143.83868	5868.10296	5868.10296	5868.10296	0
15 1/7/2022	43	42	1	100704.1819	98748.14755	1956.03432	1956.03432	1956.03432	0
16 1/8/2022	44	44	0	102660.2162	102660.2162	0	0	0	0
17 1/9/2022	34	31	3	83099.87299	77231.77004	5868.10296	5868.10296	5868.10296	0
18 1/10/2022	50	48	2	114396.4221	110484.3535	3912.06864	3912.06864	3912.06864	0
19 1/11/2022	57	58	-1	128088.6623	130044.6966	-1956.03432	1956.03432	0	1956.034319
20 1/12/2022	41	34	7	96792.11323	83099.87299	13692.2402	13692.2402	13692.2402	0
21 1/13/2022	34	32	2	83099.87299	79187.80436	3912.06864	3912.06864	3912.06864	0
22 1/14/2022	48	48	0	110484.3535	110484.3535	0	0	0	0
23 1/15/2022	58	60	-2	130044.6966	133956.7653	-3912.06864	3912.06864	0	3912.068638
24 1/16/2022	38	39	-1	90924.01027	92880.04459	-1956.03432	1956.03432	0	1956.034319
25 1/17/2022	33	30	3	81143.83868	75275.73572	5868.10296	5868.10296	5868.10296	0
26 1/18/2022	47	45	2	108528.3191	104616.2505	3912.06864	3912.06864	3912.06864	0
27 1/19/2022	28	26	2	71363.66708	67451.59844	3912.06864	3912.06864	3912.06864	0
28 1/20/2022	49	47	2	112440.3878	108528.3191	3912.06864	3912.06864	3912.06864	0
29 1/21/2022	53	54	-1	120264.5251	122220.5594	-1956.03432	1956.03432	0	1956.034319
30 1/22/2022	46	47	-1	106572.2848	108528.3191	-1956.03432	1956.03432	0	1956.034319
31 1/23/2022	44	38	6	102660.2162	90924.01027	11736.2059	11736.2059	11736.2059	0
32 1/24/2022	39	38	1	92880.04459	90924.01027	1956.03432	1956.03432	1956.03432	0
33 1/25/2022	40	39	1	94836.07891	92880.04459	1956.03432	1956.03432	1956.03432	0
34 1/26/2022	53	54	-1	120264.5251	122220.5594	-1956.03432	1956.03432	0	1956.034319
35 1/27/2022	41	42	-1	96792.11323	98748.14755	-1956.03432	1956.03432	0	1956.034319
36 1/28/2022	40	38	2	94836.07891	90924.01027	3912.06864	3912.06864	3912.06864	0
37 1/29/2022	52	52	0	118308.4907	118308.4907	0	0	0	0
38 1/30/2022	52	54	-2	118308.4907	122220.5594	-3912.06864	3912.06864	0	3912.068638
39 1/31/2022	47	49	-2	108528.3191	112440.3878	-3912.06864	3912.06864	0	3912.068638
40 2/1/2022	35	36	-1	83559.5075	85316.06341	-1756.55591	1756.55591	0	1756.55591
41 2/2/2022	27	25	2	69507.06022	65993.9484	3513.11182	3513.11182	3513.11182	0
42 2/3/2022	28	25	3	71263.61613	65993.9484	5269.66773	5269.66773	5269.66773	0
43 2/4/2022	43	42	1	97611.95478	95855.39887	1756.55591	1756.55591	1756.55591	0
44 2/5/2022	54	50	4	116934.0698	109907.8462	7026.22364	7026.22364	7026.22364	0
45 2/6/2022	48	44	4	106394.7343	99368.5107	7026.22364	7026.22364	7026.22364	0
46 2/7/2022	29	32	-3	73020.17204	78289.83977	-5269.66773	5269.66773	0	5269.667731
47 2/8/2022	32	30	2	78289.83977	74776.72795	3513.11182	3513.11182	3513.11182	0
48 2/9/2022	30	30	0	74776.72795	74776.72795	0	0	0	0
49 2/10/2022	28	27	1	71263.61613	69507.06022	1756.55591	1756.55591	1756.55591	0
50 2/11/2022	19	17	2	55454.61293	51941.50111	3513.11182	3513.11182	3513.11182	0
51 2/12/2022	26	25	1	67750.50431	65993.9484	1756.55591	1756.55591	1756.55591	0
52 2/13/2022	40	41	-1	92342.28705	94098.84296	-1756.55591	1756.55591	0	1756.55591
53 2/14/2022	50	50	0	109907.8462	109907.8462	0	0	0	0
54 2/15/2022	46	45	1	102881.6225	101125.0666	1756.55591	1756.55591	1756.55591	0
55 2/16/2022	20	21	-1	57211.16884	58967.72475	-1756.55591	1756.55591	0	1756.55591
56 2/17/2022	8	7	1	36132.49792	34375.94201	1756.55591	1756.55591	1756.55591	0
57 2/18/2022	37	39	-2	87072.61932	90585.73114	-3513.11182	3513.11182	0	3513.111821
58 2/19/2022	39	42	-3	90585.73114	95855.39887	-5269.66773	5269.66773	0	5269.667731
59 2/20/2022	32	34	-2	78289.83977	81802.95159	-3513.11182	3513.11182	0	3513.111821
60 2/21/2022	26	24	2	67750.50431	64237.39249	3513.11182	3513.11182	3513.11182	0
61 2/22/2022	12	14	-2	43158.72156	46671.83338	-3513.11182	3513.11182	0	3513.111821
62 2/23/2022	29	28	1	73020.17204	71263.61613	1756.55591	1756.55591	1756.55591	0
63 2/24/2022	39	41	-2	90585.73114	94098.84296	-3513.11182	3513.11182	0	3513.111821
64 2/25/2022	46	47	-1	102881.6225	104638.1784	-1756.55591	1756.55591	0	1756.55591
65 2/26/2022	44	40	4	99368.5107	92342.28705	7026.22364	7026.22364	7026.22364	0
66 2/27/2022	41	39	2	94098.84296	90585.73114	3513.11182	3513.11182	3513.11182	0
67 2/28/2022	51	48	3	111664.4021	106394.7343	5269.66773	5269.66773	5269.66773	0

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Calculation of Supplier Balancing Charge
2022-2023
Estimated Daily Imbalances

		Predicted	Actual	Forecaster	Calculated	Calculated	Sendout	Abs.Value		
Date	MAN HDD	MAN HDD	MAN HDD	Error	on Predicted	on Actual	Error	Sendout	Injections	Withdrawals
					MAN HDD	MAN HDD	(MMBtu)	(MMBtu)	(MMBtu)	(MMBtu)
1	3/1/2022	31	32	-1	66725.24099	68320.02821	-1594.78723	1594.78723	0	1594.787227
2	3/2/2022	34	32	2	71509.60267	68320.02821	3189.57445	3189.57445	3189.57445	0
3	3/3/2022	46	44	2	90647.04939	87457.47494	3189.57445	3189.57445	3189.57445	0
4	3/4/2022	43	40	3	85862.68771	81078.32603	4784.36168	4784.36168	4784.36168	0
5	3/5/2022	30	28	2	65130.45376	61940.87931	3189.57445	3189.57445	3189.57445	0
6	3/6/2022	12	10	2	36424.28368	33234.70922	3189.57445	3189.57445	3189.57445	0
7	3/7/2022	19	21	-2	47587.79427	50777.36872	-3189.57445	3189.57445	0	3189.574454
8	3/8/2022	31	31	0	66725.24099	66725.24099	0	0	0	0
9	3/9/2022	32	35	-3	68320.02821	73104.38989	-4784.36168	4784.36168	0	4784.36168
10	3/10/2022	27	27	0	60346.09208	60346.09208	0	0	0	0
11	3/11/2022	23	21	2	53966.94317	50777.36872	3189.57445	3189.57445	3189.57445	0
12	3/12/2022	38	38	0	77888.75157	77888.75157	0	0	0	0
13	3/13/2022	36	34	2	74699.17712	71509.60267	3189.57445	3189.57445	3189.57445	0
14	3/14/2022	23	21	2	53966.94317	50777.36872	3189.57445	3189.57445	3189.57445	0
15	3/15/2022	21	20	1	50777.36872	49182.58149	1594.78723	1594.78723	1594.78723	0
16	3/16/2022	20	17	3	49182.58149	44398.21981	4784.36168	4784.36168	4784.36168	0
17	3/17/2022	14	13	1	39613.85813	38019.0709	1594.78723	1594.78723	1594.78723	0
18	3/18/2022	9	6	3	31639.922	26855.56032	4784.36168	4784.36168	4784.36168	0
19	3/19/2022	16	21	-5	42803.43258	50777.36872	-7973.93613	7973.93613	0	7973.936134
20	3/20/2022	17	16	1	44398.21981	42803.43258	1594.78723	1594.78723	1594.78723	0
21	3/21/2022	22	20	2	52372.15595	49182.58149	3189.57445	3189.57445	3189.57445	0
22	3/22/2022	28	25	3	61940.87931	57156.51763	4784.36168	4784.36168	4784.36168	0
23	3/23/2022	23	22	1	53966.94317	52372.15595	1594.78723	1594.78723	1594.78723	0
24	3/24/2022	24	25	-1	55561.7304	57156.51763	-1594.78723	1594.78723	0	1594.787227
25	3/25/2022	16	14	2	42803.43258	39613.85813	3189.57445	3189.57445	3189.57445	0
26	3/26/2022	21	19	2	50777.36872	47587.79427	3189.57445	3189.57445	3189.57445	0
27	3/27/2022	29	30	-1	63535.66653	65130.45376	-1594.78723	1594.78723	0	1594.787227
28	3/28/2022	41	42	-1	82673.11326	84267.90048	-1594.78723	1594.78723	0	1594.787227
29	3/29/2022	34	33	1	71509.60267	69914.81544	1594.78723	1594.78723	1594.78723	0
30	3/30/2022	24	22	2	55561.7304	52372.15595	3189.57445	3189.57445	3189.57445	0
31	3/31/2022	8	9	-1	30045.13477	31639.922	-1594.78723	1594.78723	0	1594.787227

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

Docket DE 98-124 Gas Restructuring
Peaking Demand Rate

Source:

1	Peak Day		165,638	Dekatherm	
2					
3	Pipeline MDQ				Attachment B Page 2 of 3: EnergyNorth Capacity Resources
4		PNGTS	1,000	Dekatherm	
5		TGP NET-NE 95346	4,000		
6		TGP FT-A (Z5-Z6) 2302	3,122		
7		TGP FT-A (Z0-Z6) 8587	7,035		
8		TGP FT-A (Z1-Z6) 8587	14,561		
9		TGP FT-A (Z6-Z6) 42076	20,000		
10		TGP FT-A (Z6-Z6) 358905	40,000		
11		TGP FT-A (Z6-Z6) 72694	30,000		
12			<u>119,718</u>	Dekatherm	
13					
14	Underground Storage MDQ				Attachment B Page 3 of 3: EnergyNorth Capacity Resources
15		TGP FT-A (Z4-Z6) 632	15,265	Dekatherm	
16		TGP FT-A (Z4-Z6) 8587	3,811		
17		TGP FT-A (Z4-Z6) 11234	7,082		
18		TGP FT-A (Z5-Z6) 11234	1,957		
19			<u>28,115</u>	Dekatherm	
20					
21					
22	Peaking MDQ		17,805	Dekatherm	Line 1 - Line 12 - Line 19
23					
24					
25	Peaking Costs				
26					
27	Gas Supply		\$ 2,370,511		Attachment B Page 3 Line 11
28	Indirect Production & Storage Capacity		\$ 3,685,458		Summary Page Line 68
29	Granite Ridge		\$ -		Attachment B Page 3 Line 1
30	Total		<u>\$ 6,055,969</u>		Sum Line 27 - 29
31					
32	Annual Peaking Rate per MDQ		\$ 340.13		Line 30 divided by Line 22
33					
34	Monthly Peaking MDQ		\$ 56.69	/Dekatherm	Line 32 divided by 6 month

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

Tennessee Allocations

Resource Type	High Load Factor	Low Load Factor
Pipeline	79.5%	71.5%
Storage	12.6%	17.4%
Peaking	7.9%	11.0%
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		\$13 5069		10/31/2026	
	Iroquois	RTS to Wright	470-01	4,047		\$5 2357		11/1/2022	
	TGP	NET-NE (Z5-Z6)	95346	4,000		\$6 1635		11/30/2022	
	TGP	FT-A (Z5-Z6)	2302	3,122		\$6 1635		10/31/2025	
	TGP	FT-A (Z0-Z6)	8587	7,035		\$19 9267		10/31/2025	
	TGP	FT-A (Z1-Z6)	8587	14,561		\$17 6917		10/31/2025	
	TCPL + Union	FT to Parkway & PNGTS	M12284 & TC	5,000		\$20 5005		10/31/2040	
	PNGTS	FT	225800	5,000		\$22 7943		10/31/2040	
	TGP	FT-A (Z6-Z6)	42076	20,000		\$4 0968		10/31/2025	
	TGP	FT-A (Z6-Z6)	358905	40,000		\$4 0968		10/31/2041	
	TGP	FT-A (Z6-Z6)	72694	30,000		\$12 2188		10/31/2029	
Storage									
	TGP	FS-MA (Storage)	523*	21,844	1,560,391	\$1 2801	\$0 0175	10/31/2025	
	TGP	FT-A (Z4-Z6)	632	15,265		\$7 0128		10/31/2025	
	TGP	FT-A (Z4-Z6)	8587	3,811		\$7 0128		10/31/2025	
	National Fuel	FSS-1 (Storage)	O02357*	6,098	670,800	\$2 6568	\$0 0480	3/31/2023	
	National Fuel	FST (Transport)	N02358	6,098		\$4 9801		3/31/2023	
	TGP	FT-A (Z4-Z6)	11234	6,150		\$7 0128		10/31/2025	
	Honeoye	SS-NY (Storage)	SS-NY**	1,957	245,380	\$4 2672	\$0.0000	3/31/2023	X
	TGP	FT-A (Z5-Z6)	11234	1,957		\$6.1635		10/31/2025	
	Dominion	GSS (Storage)	300076*	934	102,700	\$3 2548	\$0 0318	3/31/2024	
	TGP	FT-A (Z4-Z6)	11234	932		\$7 0128		10/31/2025	
Peaking									
	Energy North	LNG/Propane****		17,805	-	\$56.6900	\$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 11/01/22. 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.

REDACTED
Schedule 21
Page 11 of 11

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					\$ 2,370,511.00 *
5					
6 Total					\$ 2,370,511.00

* Effective November 2022

**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	71.5%	17.4%	11.0%	100.0%
G-51	LALW	Low Annual C&I - Low Winter Use	79.5%	12.6%	7.9%	100.0%
G-42	MAHW	Medium C&I - High Winter Use	71.5%	17.4%	11.0%	100.0%
G-52	MALW	Medium C&I - Low Winter Use	79.5%	12.6%	7.9%	100.0%
G-43	HAHW	High Annual C&I - High Winter Use	71.5%	17.4%	11.0%	100.0%
G-53	HALW90	High Annual C&I - LF < 90%	79.5%	12.6%	7.9%	100.0%
G-54	HALWG90	High Annual C&I - LF > 90%	79.5%	12.6%	7.9%	100.0%

HLF	High Load Factor	79.50%	12.55%	7.95%	100%
LLF	Low Load Factor	71.53%	17.43%	11.04%	100%
	Total	72.28%	16.97%	10.75%	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 load	Heat load	Total	Base Pipeline	Remaining Pipeline	Sub-total Pipeline	Storage	Peaking	Total	Pipeline	Storage	Peaking	Total		
HLF	R-1 RNSH	97	544	641	R-1 RNSH	97	382	478	99	62.97	641	R-1 RNSH	74.7%	15.5%	9.8%	100.0%
LLF	R-3 RSH	3,484	68,728	72,211	R-3 RSH	3,484	48,212	51,696	12,561	7,955	72,211	R-3 RSH	71.6%	17.4%	11.0%	100.0%
LLF	G-41 SL	968	29,139	30,106	G-41 SL	968	20,441	21,408	5,326	3,373	30,106	G-41 SL	71.1%	17.7%	11.2%	100.0%
HLF	G-51 SH	742	1,904	2,646	G-51 SH	742	1,336	2,078	348	220	2,646	G-51 SH	78.5%	13.2%	8.3%	100.0%
LLF	G-42 ML	1,839	36,309	38,148	G-42 ML	1,839	25,470	27,309	6,636	4,203	38,148	G-42 ML	71.6%	17.4%	11.0%	100.0%
HLF	G-52 MH	1,742	3,738	5,480	G-52 MH	1,742	2,622	4,364	683	433	5,480	G-52 MH	79.6%	12.5%	7.9%	100.0%
LLF	G-43 LL	645	8,977	9,623	G-43 LL	645	6,298	6,943	1,641	1,039	9,623	G-43 LL	72.2%	17.1%	10.8%	100.0%
HLF	G-53 LLL90	1,871	3,492	5,363	G-53 LLL90	1,871	2,449	4,320	638	404	5,363	G-53 LLL90	80.6%	11.9%	7.5%	100.0%
HLF	G-54 LLL90	419	1,001	1,421	G-54 LLL90	419	702	1,122	183	116	1,421	G-54 LLL90	79.0%	12.9%	8.2%	100.0%
	TOTAL	11,806	153,832	165,638	TOTAL	11,806	107,912	119,718	28,115	17,805	165,638	TOTAL	72.3%	17.0%	10.7%	100.0%
HLF		4,871	10,679	15,550	HLF	4,871	7,491	12,362	1,952	1,236	15,550	High Load Factor	79.50%	12.55%	7.95%	100%
LLF		6,935	143,152	150,088	LLF	6,935	100,420	107,356	26,163	16,569	150,088	Low Load Factor	71.53%	17.43%	11.04%	100%
Total		11,806	153,832	165,638	Total	11,806	107,912	119,718	28,115	17,805	165,638	Total	72.28%	16.97%	10.75%	100%

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

Allocate Design Day Sendout

Calculate Design Day Throughput (BBTU)

Design DD	69.39			
	Daily Baseload * 1000	Heating Factor * 1000	Heat load (Heating Factor * Design DD)	Total
R-1 RNSH	97	7.81	542	639
R-3 RSH	3,484	986.86	68,478	71,962
G-41 SL	968	418.40	29,033	30,001
G-51 SH	742	27.34	1,897	2,639
G-42 ML	1,839	521.36	36,177	38,016
G-52 MH	1,742	53.67	3,724	5,466
G-43 LL	645	128.91	8,945	9,590
G-53 LLL90	1,871	50.14	3,479	5,350
G-54 LLL90	419	14.38	998	1,417
TOTAL	11,806	2,152.00	153,273	165,079
HLF	4,871	153	10,640	15,511
LLF	6,935	1,999	142,633	149,568
Total	11,806	2,152	153,273	165,079
Design Day from 2022-2023 COG				165,638
Design Day from Gas Load Calculation				165,079
Variance				559

**Allocate Design Day Sendout to
Rate Classes**

Baseload as % of Total Class Load	Heat Load as % of Total	Base Load	Heat Load	Total
15%	0.354%	97	544	641
5%	44.677%	3,484	68,728	72,211
3%	18.942%	968	29,139	30,106
28%	1.238%	742	1,904	2,646
5%	23.603%	1,839	36,309	38,148
32%	2.430%	1,742	3,738	5,480
7%	5.836%	645	8,977	9,623
35%	2.270%	1,871	3,492	5,363
30%	0.651%	419	1,001	1,421
	100.000%	11,806	153,832	165,638

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

Schedule 22
Page 4 of 6

CALCULATION OF NORMAL SALES VOLUMES

Actual Volumes

Total Core Sales Volumes(000's) MMBTU

		Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Total	Monthly Baseload (Jul+Aug)/2	Daily Baseload
HLF	R-1 RNSH	7	9	10	9	9	6	5	4	3	3	4	5	74	3 000	0 097
LLF	R-3 RSH	671	1,009	1,175	993	835	507	285	139	108	110	183	435	6,450	108 000	3 484
LLF	G-41 SL	257	412	497	416	345	203	98	41	30	30	51	125	2,505	30 000	0 968
HLF	G-51 SH	35	46	50	42	44	29	26	23	23	23	24	31	396	23 000	0 742
LLF	G-42 ML	351	533	626	525	457	265	151	74	57	58	102	205	3,404	57 000	1 839
HLF	G-52 MH	82	103	113	93	95	67	58	54	56	56	57	68	902	54 000	1 742
LLF	G-43 LL	87	127	153	128	119	65	42	24	20	22	33	53	873	20 000	0 645
HLF	G-53 LLL90	80	93	106	87	91	82	67	58	59	60	63	74	920	58 000	1 871
HLF	G-54 LLL110	17	21	19	16	17	20	15	14	14	14	13	16	196	13 000	0 419
HLF	G-99 LLG110															
	TOTAL	1,587	2,353	2,749	2,309	2,012	1,244	747	431	370	376	530	1,012	15,720	373 000	12 032
HLF		221	272	298	247	256	204	171	153	155	156	161	194	2,488	151 000	5 016
LLF		1,366	2,081	2,451	2,062	1,756	1,040	576	278	215	220	369	818	13,232	215 000	7 016

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

		Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Total
		30	31	31	28	31	30	31	30	31	31	30	31	365
HLF	R-1 RNSH	3	3	3	3	3	3	3	3	3	3	3	3	35
LLF	R-3 RSH	105	108	108	98	108	105	108	105	108	110	105	108	1,272
LLF	G-41 SL	29	30	30	27	30	29	30	29	30	30	29	30	353
HLF	G-51 SH	22	23	23	21	23	22	23	22	23	23	22	23	271
LLF	G-42 ML	55	57	57	51	57	55	57	55	57	58	55	57	671
HLF	G-52 MH	52	54	54	49	54	52	54	52	56	56	52	54	636
LLF	G-43 LL	19	20	20	18	20	19	20	19	20	22	19	20	235
HLF	G-53 LLL90	56	58	58	52	58	56	58	56	59	60	56	58	683
HLF	G-54 LLL110	13	13	13	12	13	13	13	13	14	14	13	13	153
HLF	G-63 LLG110	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	354	366	366	331	366	354	366	354	370	376	354	366	4,309
HLF		146	151	151	136	151	146	151	146	155	156	146	151	1,778
LLF		208	215	215	194	215	208	215	208	215	220	208	215	2,531

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

Schedule 22
Page 4 of 6

Schedule 22
Page 5 of 6

Heating Volumes (= Actual Volumes - Baseload)

	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Total
HLF R-1 RNSH	4	6	7	6	6	3	2	1	0	0	1	2	39
LLF R-3 RSH	566	901	1,067	895	727	402	177	34	0	0	78	327	5,178
LLF G-41 SL	228	382	467	389	315	174	68	12	0	0	22	95	2,152
HLF G-51 SH	13	23	27	21	21	7	3	1	0	0	2	8	125
LLF G-42 ML	296	476	569	474	400	210	94	19	0	0	47	148	2,733
HLF G-52 MH	30	49	59	44	41	15	4	2	0	0	5	14	266
LLF G-43 LL	68	107	133	110	99	46	22	5	0	0	14	33	638
HLF G-53 LLL90	24	35	48	35	33	26	9	2	0	0	7	16	237
HLF G-54 LLL110	4	8	6	4	4	7	2	1	0	0	0	3	43
HLF G-63 LLG110	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1,233	1,987	2,383	1,978	1,646	890	381	77	0	0	176	646	11,411

HLF	75	121	147	111	105	58	20	7	0	0	15	43	710
LLF	1,158	1,866	2,236	1,868	1,541	832	361	70	0	0	161	603	10,701

Actual HDD	694.0	913.0	1293.0	943.0	768.0	516.0	181.0	8.0	19.0	0.0	33.0	241.0	5609.0
-------------------	--------------	--------------	---------------	--------------	--------------	--------------	--------------	------------	-------------	------------	-------------	--------------	---------------

Heat Factors

	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Total	AVG	AVG Peak
HLF R-1 RNSH	0.0059	0.0066	0.0054	0.0067	0.0078	0.0060	0.0110	0.1371	0.0000	0.0000	0.0332	0.0083	0.0078	0.0190	0.0064
LLF R-3 RSH	0.8163	0.9869	0.8252	0.9496	0.9466	0.7800	0.9779	4.3105	0.0000	0.0000	2.3783	1.3568	0.9496	1.1940	0.8841
LLF G-41 SL	0.3285	0.4184	0.3612	0.4124	0.4102	0.3371	0.3757	1.4960	0.0000	0.0000	0.6657	0.3942	0.4124	0.4333	0.3780
HLF G-51 SH	0.0184	0.0252	0.0209	0.0225	0.0273	0.0131	0.0166	0.0927	0.0000	0.0000	0.0528	0.0332	0.0273	0.0269	0.0212
LLF G-42 ML	0.4263	0.5214	0.4401	0.5021	0.5208	0.4067	0.5193	2.3548	0.0000	0.0000	1.4194	0.6141	0.5208	0.6437	0.4696
HLF G-52 MH	0.0429	0.0537	0.0456	0.0469	0.0534	0.0286	0.0221	0.2177	0.0000	0.0000	0.1437	0.0581	0.0534	0.0594	0.0452
LLF G-43 LL	0.0975	0.1172	0.1029	0.1166	0.1289	0.0885	0.1215	0.5806	0.0000	0.0000	0.4135	0.1369	0.1289	0.1587	0.1086
HLF G-53 LLL90	0.0344	0.0383	0.0371	0.0367	0.0430	0.0501	0.0497	0.2339	0.0000	0.0000	0.2082	0.0664	0.0430	0.0665	0.0399
HLF G-54 LLL110	0.0064	0.0088	0.0046	0.0045	0.0052	0.0144	0.0110	0.1774	0.0000	0.0000	0.0127	0.0124	0.0088	0.0215	0.0073
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	1.7764	2.1763	1.8430	2.0980	2.1432	1.7244	2.1050	9.6008	0.0000	0.0000	5.3275	2.6805	2.1520	2.6229	1.9602

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

Schedule 22
Page 4 of 6

Schedule 22
Page 6 of 6

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-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Total
HLF	R-1 RNSH	7	10	10	10	10	6	6	10	3	3	6	6	86
LLF	R-3 RSH	690	1,138	1,115	1,086	956	507	334	316	108	110	345	658	7,362
LLF	G-41 SL	265	467	471	456	398	203	117	102	30	30	96	190	2,824
HLF	G-51 SH	35	49	48	44	48	29	27	27	23	23	28	36	418
LLF	G-42 ML	361	601	594	574	524	265	177	171	57	58	199	306	3,886
HLF	G-52 MH	83	110	110	98	102	67	59	63	56	56	67	78	947
LLF	G-43 LL	89	142	145	139	136	65	48	48	20	22	61	75	991
HLF	G-53 LLL90	81	98	103	91	97	82	69	68	59	60	77	85	969
HLF	G-54 LLL110	17	22	19	16	18	20	16	21	14	14	14	18	209
HLF	G-63 LLG110	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL	1,628	2,638	2,614	2,515	2,286	1,244	852	825	370	376	892	1,452	17,692

HLF	223	289	290	258	274	204	177	188	155	156	192	223	2,629
LLF	1,404	2,349	2,325	2,256	2,013	1,040	676	636	215	220	701	1,228	15,063

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Peak 2022 – 2023 Winter Cost of Gas Filing
Fixed Price Option

	Participation	Premium	FPO Volumes	Premium Revenue	FPO Rate	Residential	Residential	Residential	Difference	% Difference	FPO Rate	C&I	C&I	C&I	Difference	% Difference
						Average COG Rate	Total Bill FPO Rate	Total Bill COG Rate				Average COG Rate	Total Bill FPO Rate	Total Bill COG Rate		
1	Nov 98 - Mar 99	6.0%			0.3927	0.3722	943.3700	926.9333	\$ 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	679.8500	672.2235	\$ 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	816.2500	916.0900	\$ (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	790.6522	760.5504	\$ 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	\$28,045.78	0.5553	0.5758	821.3224	840.4371	\$ (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	\$552,330.59	0.8597	0.8220	1,115.5548	1,080.4628	\$ 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	\$273,781.28	0.8925	0.9425	1,142.9556	1,189.5541	\$ (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	\$518,881.82	1.2951	1.1342	1,526.0076	1,376.0122	\$ 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	\$262,713.68	1.2664	1.1656	1,509.7908	1,415.8032	\$ 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	\$281,571.06	1.2043	1.1746	1,433.0900	1,405.4000	\$ 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	\$260,826.70	1.2835	1.0888	1,555.3140	1,373.8536	\$ 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	\$168,108.26	0.9863	0.9416	1,250.8032	1,209.1161	\$ 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	\$207,596.08	0.8420	0.8029	1,175.0264	1,138.5767	\$ 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	\$156,703.94	0.8126	0.7309	1,165.6100	1,089.4400	\$ 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	\$163,590.48	0.6919	0.7680	743.0298	792.4756	\$ (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	\$178,615.58	0.9095	1.1086	857.7200	981.2100	\$ (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	\$697,989.49	1.2425	0.8411	1,127.6600	948.0700	\$ 179.59	18.94%	0.5143	1.4301	\$2,135.42	\$ 2,340.00	\$ (204.58)	-8.74%
18	Nov 15 - Apr 16	15.3%	0 0200	\$ 98,823.14	0.7716	0.7516	869.1500	712.7315	\$ 156.42	21.95%						
19	Nov 16 - Apr 17	11.5%	0 0106	\$ 57,451.65	0.7268	0.7162	827.1400	812.3754	\$ 14.76	1.82%						
20	Nov 17 - Apr 18	10.6%	0 0200	\$105,978.00	0.6645	0.6445	878.7000	865.9400	\$ 12.76	1.47%						
21	Nov 18 - Apr 19	10.8%	0 0200	\$114,178.50	0.7611	0.7411	984.8300	972.1200	\$ 12.71	1.31%						
22	Nov 19 - Apr 20	7.2%	0 0200	\$ 68,943.34	0.6403	0.6203	930.4600	917.7400	\$ 12.72	1.39%						
23	Nov 20 - Apr 21	11.1%	0 0200	\$107,465.36	0.5771	0.5571	895.3200	882.6000	\$ 12.72	1.44%						
24	Nov 21 - Apr 22	12.0%	0 0200	\$116,006.78	1.1539	1.1339	1,333.3500	1,320.6300	\$ 12.72	0.96%						
25	Nov 22 - Apr 23				1.7535	1.4300	1,465.9567	1,453.5421	\$ 12.41	0.85%						
24	Total								\$ 785.03						\$ 53.01	

**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Peak 2022 – 2023 Winter Cost of Gas Filing
Short-Term Debt Limitations**

Schedule 24
Page 1 of 1

	<u>For Purposes of Fuel Financing</u>	
Total Direct Gas Costs	\$	127,589,939
Total Indirect Gas Costs		<u>5,082,758</u>
Total Gas Costs	\$	132,672,697
% of Debt to Total Gas Costs		30%
Short Term Debt	\$	39,801,809
	<u>For Purposes Other Than Fuel Financing</u>	
12/31/2023 Projected Net Plant	\$	576,165,518
% of Debt to Net Plant		20%
Short Term Debt	\$	115,233,104

**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
2022 – 2023 Winter Cost of Gas Filing
Company Allowance Calculation &
Lost and Unaccounted For Gas ("LAUF") Calculation**

Company Allowance Calculation

	Jul-2021	Aug-2021	Sep-2021	Oct-2021	Nov-2021	Dec-2021	Jan-2022	Feb-2022	Mar-2022	Apr-2022	May-2022	Jun-2022	Total
Total Sendout- Therms	5,442,090	5,497,110	5,819,000	8,688,720	17,720,430	23,111,810	32,399,870	24,437,270	20,340,550	13,464,370	7,737,350	5,719,140	170,377,710
Total Throughput- Therms	5,660,411	5,151,765	5,330,413	5,973,857	9,442,192	19,179,124	24,588,310	28,267,925	25,235,810	17,808,587	12,357,817	7,130,362	166,126,573
Variance	(218,321)	345,345	488,587	2,714,863	8,278,238	3,932,686	7,811,560	(3,830,655)	(4,895,260)	(4,344,217)	(4,620,467)	(1,411,222)	4,251,137
Company Allowance													2.50%

Lost and Unaccounted For Gas ("LAUF") Calculation

	Jul-2021	Aug-2021	Sep-2021	Oct-2021	Nov-2021	Dec-2021	Jan-2022	Feb-2022	Mar-2022	Apr-2022	May-2022	Jun-2022	Total
Total Sendout- Therms	5,442,090	5,497,110	5,819,000	8,688,720	17,720,430	23,111,810	32,399,870	24,437,270	20,340,550	13,464,370	7,737,350	5,719,140	170,377,710
Total Throughput- Therms	5,660,411	5,151,765	5,330,413	5,973,857	9,442,192	19,179,124	24,588,310	28,267,925	25,235,810	17,808,587	12,357,817	7,130,362	166,126,573
Company Use	4,279	3,683	4,176	5,423	15,918	27,834	54,807	49,573	39,450	25,474	9,761	4,516	244,895
Variance	(222,601)	341,662	484,411	2,709,440	8,262,320	3,904,852	7,756,752	(3,880,228)	(4,934,710)	(4,369,691)	(4,630,228)	(1,415,738)	4,006,241
LAUF													2.35%

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

Schedule 26
Page 1 of 1

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
1		5 Quarter Avg	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022
2	Gas Stored Underground	\$ 3,558,724	\$ 2,088,182	\$ 4,691,440	\$ 4,613,879	\$ 937,996	\$ 5,462,121
3	Fuel Stock - Propane	\$ 999,078	\$ 835,646	\$ 1,493,834	\$ 1,469,329	\$ 629,733	\$ 566,849
4	UG Storage - LNG	\$ 75,141	\$ 44,351	\$ 45,826	\$ 90,614	\$ 75,930	\$ 118,983
5		\$ 4,632,943					
6	ROR	8.76%	Pre-Tax Rate of 6.64% and Statutory Tax Rate of 27.08%				
		\$ 405,726					
7	Income Tax Gross-up	1.2708					
8	Revenue Requirement	<u>\$ 515,609</u>					

Liberty Utilities (EnergyNorth Natural Gas) Corp.**Off Peak 2023 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 22 - Oct 22 Filing vs May 23 - Oct 23 Annual Bill Comparisons, May 22 - Oct 22 Filing vs May 23 - Oct 23 Annual Bill Comparisons, May 22 - Oct 22 Filing vs May 23 - Oct 23 Annual Bill Comparisons, May 22 - Oct 22 Filing vs May 23 - Oct 23 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 2022-2023 Derivation of Class Assignments and Weightings Correction Factor Calculation Off Peak 2023 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 2023 Summer Cost of Gas Filing		
4	Summary		
5			OP 23
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	\$ 3,233,514
12	Supply Costs	Sch. 6, col (i), In 47	9,171,762
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	\$ 152,643
19			
20	Hedge Contract (Savings)/Loss		\$ -
21			
22			
23	Total Unadjusted Cost of Gas		<u>\$ 12,557,918</u>
24			
25	Adjustments		
26			
27	Prior Period (Over)/Under Recovery	Sch. 3, col (c) In 28	\$ 10,637,079
28	Interest 11/01/19 - 10/31/20	Sch. 3, col (q) In 193	457,126
29	Prior Period Adjustments	Sch. 4, In 24 col (b)	-
30	Refunds from Suppliers	Sch. 4, In 24 col (c)	-
31	Broker Revenue	Sch. 4, In 24 col (d)	-
32	Fuel Financing	Sch. 4, In 24 col (e)	-
33	Transportation CGA Revenues	Sch. 4, In 24 col (f)	-
34	Interruptible Sales Margin	Sch. 4, In 24 col (g)	-
35	Capacity Release and Off System Sales Margins	Sch. 4, In 24 col (h) + col (i)	-
36	Hedging Costs	Sch. 4, In 24 col (j)	-
37	FPO Premium - Collection		-
38	Fixed Price Option Administrative Costs	Sch. 4, In 24 col (k)	-
39			
40	Total Adjustments		<u>\$ 11,094,205</u>
41			
42	Total Anticipated Direct Costs	Ins 23 + 40	<u>\$ 23,652,124</u>
43			
44	Anticipated Indirect Cost of Gas		
45	Working Capital		
46	Total Unadjusted Anticipated Cost of Gas	Ln 23	\$ 12,557,918
47	Lead Lag Days / 365	DG 20-105, 25.72/ 365	0.0705
48	Prime Rate		5.50%
49	Working Capital Percentage	In 47 * In 48	0.388%
50	Working Capital	In 46 * In 49	48,670
51	Plus: Working Capital Reconciliation	Sch. 3, col (c), In 98	47,458
52			
53	Total Working Capital Allowance	Ins 50 + 51	<u>\$ 96,127</u>
54			
55	Bad Debt		
56	Total Unadjusted Anticipated Cost of Gas	In 23	\$ 12,557,918
57	Less Refunds	In 30	-
58	Plus Working Capital	In 53	96,127
59	Plus Prior Period (Over) Under Recovery	In 27	10,637,079
60	Subtotal		<u>\$ 23,291,125</u>
61	Bad Debt Percentage	per GTC 17(f)	0.86%
62			
63	Bad Debt Allowance	In 60 * In 61	\$ 200,572
64	Prior Period Bad Debt Allowance	Sch. 3, col (c), In 163	337,560
65			
66	Total Bad Debt Allowance	Ins 63 + 64	<u>\$ 538,132</u>
67			
68	Production and Storage Capacity	per GTC17(f)	<u>\$ -</u>
69			
70	Miscellaneous Overhead	per GTC 17(f)	\$ -
71	Sales Volume	Sch. 10B, In 23/1000	23,649
72	Divided by Total Sales	Sch. 10B, In 23/1000	116,430
73	Ratio		<u>20.31%</u>
74			
75	Miscellaneous Overhead	Ins 70 * 73	<u>\$ -</u>
76			
77	Total Anticipated Indirect Cost of Gas	Ins 53 + 66 + 68 + 75	<u>\$ 634,259</u>
78			
79	Total Cost of Gas	Ins 42 + 77	<u>\$ 24,286,383</u>
80			
81	Projected Forecast Sales (Therms)	Sch. 3, col (q), In 52	<u>23,648,905</u>

1 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
2
3 Off Peak 2023 Summer Cost of Gas Filing
4 Summary of Supply and Demand Forecast

Schedule 1
Page 1 of 4

5									
6									
7	For Month of:	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Off Peak Period
8	(a)	(c)	(d)	(e)	(d)	(e)	(f)	(g)	May - Oct
9	(b)								(h)
9	I. Gas Volumes (Therms)								
10									
11	A. Firm Demand Volumes								
12	Firm Gas Sales	106,848	278,583	231,288	234,403	347,400	738,977	427,392	
13	Lost Gas (Unaccounted for)	1,068,480	2,785,832	2,312,881	2,344,026	3,473,998	7,389,766	4,273,922	23,648,905
14	Company Use	127,414	82,682	69,188	75,413	88,009	170,244		612,950
15	Unbilled Therms	3,341	2,168	1,814	1,978	2,308	4,464		16,074
16		4,219,447	645,605	558,542	785,768	178,525	(324,333)	(4,273,922)	1,789,632
17	Total Firm Volumes	Sch. 6, In 97	5,418,683	3,516,286	2,942,425	3,207,185	3,742,840	7,240,141	26,067,561
18									
19	B. Supply Volumes (Therms)								
20	<u>Pipeline Gas:</u>								
21	Dawn Supply	Sch. 6, In 66	842,983	655,282	518,079	495,174	712,922	601,154	3,825,595
22	Niagara Supply	Sch. 6, In 67	667,764	585,319	584,500	583,125	598,573	687,845	3,707,126
23	TGP Supply (Gulf)	Sch. 6, In 68	29,663	-	-	-	-	327,579	357,242
24	Dracut Supply 1 - Baseload	Sch. 6, In 69	-	-	-	-	-	-	-
25	Dracut Supply 2 - Swing	Sch. 6, In 70	-	-	-	-	435,588		435,588
26	City Gate Delivered Supply	Sch. 6, In 72	-	-	-	-	-	-	-
27	LNG Truck	Sch. 6, In 73	-	-	4,831	10,843	17,887	110,141	143,701
28	Propane Truck	Sch. 6, In 74	79,331	71,837	69,440	69,276	73,464	81,717	445,066
29	PNGTS	Sch. 6, In 75	211,780	185,528	182,354	184,937	189,729	218,149	1,172,479
30	Portland Natural Gas	Sch. 6, In 76	889,892	29,984	-	-	-	522,990	1,442,866
31	TGP Supply (Zone 4)	Sch. 6, In 77	5,379,362	4,713,785	4,706,794	4,696,924	4,822,444	5,548,240	29,867,549
32	Subtotal Pipeline Volumes		8,100,776	6,241,736	6,065,997	6,040,279	6,415,019	8,533,404	41,397,212
33									
34	<u>Storage Gas:</u>								
35	TGP Storage	Sch. 6, In 82	-	-	-	-	-	-	-
36									
37	<u>Produced Gas:</u>								
38	LNG Vapor	Sch. 6, In 85	20,005.32	18,115.53	17,510.84	17,469.64	18,525.75	20,606.94	112,234.02
39	Propane	Sch. 6, In 86	-	-	-	-	-	-	-
40	Subtotal Produced Gas		20,005.32	18,115.53	17,510.84	17,469.64	18,525.75	20,606.94	112,234.02
41									
42	<u>Less - Gas Refill:</u>								
43	LNG Truck	Sch. 6, In 91	-	-	(4,830.58)	(10,843.23)	(17,886.93)	(110,140.53)	(143,701.26)
44	Propane	Sch. 6, In 92	(79,331.45)	(71,837.44)	(69,439.55)	(69,276.17)	(73,464.17)	(81,717.17)	(445,065.94)
45	TGP Storage Refill	Sch. 6, In 93	(2,622,766.74)	(2,671,727.92)	(3,066,812.74)	(2,770,444.31)	(2,599,354.02)	(1,122,012.26)	(14,853,117.98)
46	Subtotal Refills		(2,702,098.19)	(2,743,565.35)	(3,141,082.87)	(2,850,563.70)	(2,690,705.12)	(1,313,869.96)	(15,441,885.18)
47									
48	Total Firm Sendout Volumes	Ins 32 + 35 + 40 + 46	5,418,682.98	3,516,286.29	2,942,425.38	3,207,185.36	3,742,839.81	7,240,141.15	26,067,560.98

1 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
2
3 Off Peak 2023 Summer Cost of Gas Filing
4 Summary of Supply and Demand Forecast

REDACTED
Schedule 1
Page 2 of 4

50 II. Gas Costs

52 A. Demand Costs

53 Supply

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

58 Pipeline:

59	Iroquois Gas Trans Service RTS 470-0	Sch.5A, In 16																
60	Tenn Gas Pipeline 95346 Z5-Z6	Sch.5A, In 17																
61	Tenn Gas Pipeline 2302 Z5-Z6	Sch.5A, In 18																
62	Tenn Gas Pipeline 8587 Z0-Z6	Sch.5A, In 19																
63	Tenn Gas Pipeline 8587 Z1-Z6	Sch.5A, In 20																
64	Tenn Gas Pipeline 8587 Z4-Z6	Sch.5A, In 21																
65	Tenn Gas Pipeline (Dracut) 42076 Z6-Z6	Sch.5A, In 22																
66	Tenn Gas Pipeline (Dracut) 358905 Z6-Z7	Sch.5A, In 23																
67	Tenn Gas Pipeline (Concord Lateral) Z6-Z6	Sch.5A, In 24																
68	Portland Natural Gas Trans Service	Sch.5A, In 25																
69	ANE (TransCanada via Union to Iroquois)	Sch.5A, In 27																
70	Portland Natural Gas	Sch.5A, In 25																
71	TransCanada via Union to Portland	Sch.5A, In 27																
72	Tenn Gas Pipeline Z4-Z6 stg 632	Sch.5A, In 29																
73	Tenn Gas Pipeline Z4-Z6 stg 11234	Sch.5A, In 30																
74	Tenn Gas Pipeline Z5-Z6 stg 11234	Sch.5A, In 31																
75	National Fuel FST 2358	Sch.5A, In 32																
76	Subtotal Pipeline Demand		\$	812,659	\$	815,395	\$	815,395	\$	815,395	\$	815,395	\$	815,395	\$	3,674,232	\$	4,889,632
77	Less Capacity Credit			(275,248)		(276,174)		(276,174)		(276,174)		(276,174)		(276,174)		(1,244,462)		(1,656,118)
78	Net Pipeline Demand Costs		\$	537,411	\$	539,220	\$	539,220	\$	539,220	\$	539,220	\$	539,220	\$	2,429,770	\$	3,233,514

81 Peaking Supply:

82	Tenn Gas Pipeline (Concord Lateral) Z6-Z6	Sch.5A, In 37	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
83	Granite Ridge Demand	Sch.5A, In 38		-		-		-		-		-		-		-		-
84	DOMAC Demand NSB041	Sch.5A, In 39		-		-		-		-		-		-		-		-
85	Subtotal Peaking Demand		\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
86	Less Capacity Credit			-		-		-		-		-		-		-		-
87	Net Peaking Supply Demand Costs		\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-

88 Storage:

89	Dominion - Demand	Sch.5A, In 49	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
90	Dominion - Storage	Sch.5A, In 50		-		-		-		-		-		-		-		-
91	Honeoye - Demand	Sch.5A, In 51		-		-		-		-		-		-		-		-
92	National Fuel - Demand	Sch.5A, In 52		-		-		-		-		-		-		-		-
93	National Fuel - Capacity	Sch.5A, In 53		-		-		-		-		-		-		-		-
94	Tenn Gas Pipeline - Demand	Sch.5A, In 54		-		-		-		-		-		-		-		-
95	Tenn Gas Pipeline - Capacity	Sch.5A, In 55		-		-		-		-		-		-		-		-
96	Subtotal Storage Demand		\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
97	Less Capacity Credit			-		-		-		-		-		-		-		-
98	Net Storage Demand Costs		\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-

100	Total Demand Charges	Ins 55 + 77 + 85 + 97	\$	812,659	\$	815,395	\$	815,395	\$	815,395	\$	815,395	\$	815,395	\$	3,674,232	\$	4,889,632
101	Total Capacity Credit	Ins 56 + 78 + 86 + 98		(275,248)		(276,174)		(276,174)		(276,174)		(276,174)		(276,174)		(1,244,462)		(1,656,118)
102	Net Demand Charges		\$	537,411	\$	539,220	\$	539,220	\$	539,220	\$	539,220	\$	539,220	\$	2,429,770	\$	3,233,514

104

1 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
2
3 Off Peak 2023 Summer Cost of Gas Filing
4 Summary of Supply and Demand Forecast

		REDACTED								
		Schedule 1								
		Page 3 of 4								
105										
106										
107	B. Commodity Costs									
108	<u>Pipeline:</u>									
109	Dawn Supply	Sch. 6, In 12								
110	Niagara Supply	Sch. 6, In 13								
111	TGP Supply (Gulf)	Sch. 6, In 14								
112	Dracut Supply 1 - Baseload	Sch. 6, In 15								
113	Dracut Supply 2 - Swing	Sch. 6, In 16								
114	Dracut Supply 3 - Swing	Sch. 6, In 17								
115	City Gate Delivered Supply	Sch. 6, In 18								
116	LNG Truck	Sch. 6, In 19								
117	Portland Natural Gas	Sch. 6, In 21								
118	PNGTS	Sch. 6, In 21								
119	TGP Supply (Zone 4)	Sch. 6, In 23								
120	Subtotal Pipeline Commodity Costs		\$ 3,360,808	\$ 2,540,243	\$ 2,530,670	\$ 2,539,484	\$ 2,381,438	\$ 3,295,802	\$ 16,648,446	
121										
122	<u>Storage:</u>									
123	TGP Storage - Withdrawals	Sch. 6, In 50	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
124										
125	<u>Produced Gas Costs:</u>									
126	LNG Vapor	Sch. 6, In 53								
127	Propane	Sch. 6, In 54								
128	Subtotal Produced Gas Costs		\$ 31,982	\$ 28,961	\$ 27,072	\$ 24,905	\$ 23,154	\$ 16,568	\$ 152,643	
129										
130	<u>Less Storage Refills:</u>									
131	LNG Truck	Sch. 6, In 40								
132	Propane	Sch. 6, In 41								
133	TGP Storage Refill	Sch. 6, In 42								
134	Storage Refill (Trans.)	Sch. 6, In 43								
135	Subtotal Storage Refill		\$ (1,450,419)	\$ (1,484,992)	\$ (1,716,203)	\$ (1,568,171)	\$ (1,481,300)	\$ (819,579)	\$ (8,520,664)	
136										
137	Total Supply Commodity Costs		\$ 1,942,371	\$ 1,084,213	\$ 841,539	\$ 996,219	\$ 923,293	\$ 2,492,791	\$ 8,280,425	
138										
139	C. Supply Volumetric Transportation Costs:									
140	Dawn Supply	Sch. 6, In 28								
141	Niagara Supply	Sch. 6, In 29								
142	TGP Supply (Zone 4)	Sch. 6, In 30								
143	Dracut Supply 1 - Baseload	Sch. 6, In 31								
144	Dracut Supply 2 - Swing	Sch. 6, In 32								
145	Dracut Supply 3 - Swing	Sch. 6, In 33								
146	Subtotal Pipeline Volumetric Trans. Costs		\$ 102,300	\$ 88,216	\$ 84,967	\$ 84,780	\$ 84,686	\$ 96,641	\$ 541,590	
147										
148	TGP Storage - Withdrawals	Sch. 6, In 35	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
149										
150	Total Supply Volumetric Trans. Costs	Ins 146 + 148	\$ 102,300	\$ 88,216	\$ 84,967	\$ 84,780	\$ 84,686	\$ 96,641	\$ 541,590	
151										
152	Total Commodity Gas & Trans. Costs	Ins 137 + 150	\$ 2,044,671	\$ 1,172,429	\$ 926,506	\$ 1,080,998	\$ 1,007,978	\$ 2,589,432	\$ 8,822,014	
153										
154										
155										
156										

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

2
3 Off Peak 2023 Summer Cost of Gas Filing
4 Summary of Supply and Demand Forecast

157 D. Supply and Demand Costs by Source

REDACTED
Schedule 1
Page 4 of 4

158										
159										
160	<u>Purchased Gas Demand Costs</u>									
161	Pipeline Gas Demand Costs	In 55 + 77	\$ 812,659	\$ 815,395	\$ 815,395	\$ 815,395	\$ 815,395	\$ 815,395	\$	4,889,632
162	Peaking Gas Demand Costs	In 85	-	-	-	-	-	-		-
163	Subtotal Purchased Gas Demand Costs		\$ 812,659	\$ 815,395	\$ 815,395	\$ 815,395	\$ 815,395	\$ 815,395	\$	4,889,632
164	Less Capacity Credit	In 56 + 78 + 86	(275,248)	(276,174)	(276,174)	(276,174)	(276,174)	(276,174)		(1,656,118)
165	Net Purchased Gas Demand Costs		\$ 537,411	\$ 539,220	\$ 539,220	\$ 539,220	\$ 539,220	\$ 539,220	\$	3,233,514
166										
167	<u>Storage Gas Demand Costs</u>									
168	Storage Demand	In 97	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
169	Less Capacity Credit	In 98	-	-	-	-	-	-		-
170	Net Storage Demand Costs		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
171										
172	Total Demand Costs	In 165 + 170	\$ 537,411	\$ 539,220	\$ 539,220	\$ 539,220	\$ 539,220	\$ 539,220	\$	3,233,514
173										
174	<u>Purchased Gas Supply</u>									
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	Subtotal Purchased Gas Supply		\$ 2,012,688	\$ 1,143,468	\$ 899,434	\$ 1,056,093	\$ 984,824	\$ 2,572,864	\$	8,669,372
182										
183	<u>Storage Commodity Costs</u>									
184	Commodity Costs	In 123	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
185	Transportation Costs	In 148	-	-	-	-	-	-		-
186	Subtotal Storage Commodity Costs		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-
187										
188	<u>Produced Gas Commodity Costs</u>	In 128	\$ 31,982	\$ 28,961	\$ 27,072	\$ 24,905	\$ 23,154	\$ 16,568	\$	152,643
189										
190	Subtotal Commodity Costs	In 181 + 186 + 188	\$ 2,044,671	\$ 1,172,429	\$ 926,506	\$ 1,080,998	\$ 1,007,978	\$ 2,589,432	\$	8,822,014
191										
192	Hedge Contract (Savings)/Loss		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	ERROR	\$ -
193										
194	Total Commodity Costs	In 190 + 192	\$ 2,044,671	\$ 1,172,429	\$ 926,506	\$ 1,080,998	\$ 1,007,978	\$ 2,589,432	\$	8,822,014
195										
196	Total Demand Costs	In 103	\$ 537,411	\$ 539,220	\$ 539,220	\$ 539,220	\$ 539,220	\$ 539,220	\$	3,233,514
197	Total Supply Costs	In 194	2,044,671	1,172,429	926,506	1,080,998	1,007,978	2,589,432		8,822,014
198										
199	Total Direct Gas Costs	In 196 + 197	\$ 2,582,082	\$ 1,711,649	\$ 1,465,726	\$ 1,620,219	\$ 1,547,199	\$ 3,128,652	\$	12,055,528
200										
201										

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

2

3 **Off Peak 2023 Summer Cost of Gas Filing**

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

5

6

7

8

9 **Demand Costs**

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37 **Supply Costs - Commodity**

38

39

40

41

42

43

44

45

46

47

48

49

50 **Supply Costs - Volumetric Transportation**

51

52

53

54

55

56

57

REDACTED

Schedule 2

Page 1 of 1

Off Peak

Cost per

Unit Dth

(f)

Supplier (a)	Contract (b)	Contract Type (c)	Contract Unit (d)	Unit Dth (MDQ/ACQ) (e)	Cost per Unit Dth (f)
ANE (TransCanada via Union to Iroquois)	Dawn - Parkway to Iroquois	Transportation	MDQ	4,047	
Dominion - Capacity Reservation	GSS 300076	Storage	ACQ	102,700	
Tenn Gas Pipeline - Cap. Reservations	FS-MA 523	Storage	ACQ	1,560,391	
National Fuel - Capacity Reservation	FSS-1 2357	Storage	ACQ	670,800	
Tenn Gas Pipeline - Demand	FS-MA 523	Storage	MDQ	21,844	
Dominion - Demand	GSS 300076	Storage	MDQ	934	
National Fuel - Demand	FSS-1 2357	Storage	MDQ	6,098	
Tenn Gas Pipeline	42076 FTA Z6-Z6	Transportation	MDQ	20,000	
Tenn Gas Pipeline	42076 FTA Z6-Z6	Transportation	MDQ	40,000	
National Fuel	FST N02358	Transportation	MDQ	6,098	
Iroquois Gas Trans Service	RTS 470-01	Transportation	MDQ	4,047	
Honeoye - Demand	SS-NY	Storage	MDQ	1,362	
Tenn Gas Pipeline	2302 Z5-Z6	Transportation	MDQ	3,122	
Tenn Gas Pipeline (short haul)	11234 Z5-Z6(stg)	Transportation	MDQ	1,957	
Tenn Gas Pipeline (short haul)	8587 Z4-Z6	Transportation	MDQ	3,811	
Tenn Gas Pipeline (short haul)	632 Z4-Z6 (stg)	Transportation	MDQ	15,265	
Tenn Gas Pipeline (short haul)	11234 Z4-Z6(stg)	Transportation	MDQ	7,082	
Tenn Gas Pipeline (Concord Lateral) Z6-Z6	Firm Transporta ion	Transportation	MDQ	30,000	
Tenn Gas Pipeline	95346 Z5-Z6	Transportation	MDQ	4,000	
TransCanada via Union to Portland	Union Parkway to Portland	Transportation	MDQ	5,077	
Portland Natural Gas Trans Service	FT-1999-001	Transportation	MDQ	1,000	
Tenn Gas Pipeline (long haul)	8587 Z1-Z6	Transportation	MDQ	14,561	
Tenn Gas Pipeline (long haul)	8587 Z0-Z6	Transportation	MDQ	7,035	
Portland Natural Gas	FTN	Transportation	MDQ	5,000	
LNG Truck		Pipeline	Dkt	14,370	
TGP Supply (Zone 4)		Pipeline	Dkt	2,986,755	
Niagara Supply		Pipeline	Dkt	370,713	
Dracut Supply 2 - Swing		Pipeline	Dkt	43,559	
Dawn Supply		Pipeline	Dkt	382,559	
TGP Citygate Supply		Pipeline	Dkt	-	
PNGTS		Pipeline	Dkt	117,248	
Dracut Supply 1 - Baseload		Pipeline	Dkt	-	
TGP Supply (Gulf)		Pipeline	Dkt	35,724	
LNG Vapor		Produced	Dkt	11,223	
Propane		Pipeline	Dkt	-	
Dracut Supply 1 - Baseload		Pipeline	Dkt	-	
TGP Supply (Zone 4)		Pipeline	Dkt	35,724	
Dracut Supply 2 - Swing		Pipeline	Dkt	43,559	
Dawn Supply		Storage	Dkt	382,559	
Niagara Supply		Pipeline	Dkt	370,713	

1 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
2
3 Off Peak 2023 Summer Cost of Gas Filing
4 COG (Over)/Under Cumulative Recovery Balances and Interest Calculation

Schedule 3
Page 1 of 3

		Prior Period Balance Plus Nov Collections	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Off Peak Period Total	
		October 31, 2022	30	31	31	28	31	30	31	30	31	31	30	31	30	(a)	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)		
Account 8840 2 0000 10 1920 1741 (formerly, 175.40) COG (Over)/Under Balance Interest Calculation																	
13	Beginning Balance	Account 1920-1741 1/	\$ 10,637,079	\$ 10,637,079	\$ 10,685,165	\$ 10,735,078	\$ 10,785,224	\$ 10,830,729	\$ 10,881,321	\$ 10,930,511	\$ 8,423,789	\$ 6,899,533	\$ 5,686,080	\$ 4,360,503	\$ 2,431,472	\$ (1,360,852)	\$ 10,637,079
14	Forecast Direct Gas Costs		-	-	-	-	-	-	-	2,780,000	1,901,108	1,652,478	1,806,786	1,738,494	3,329,263	-	13,208,130
15	Production & Storage & Misc Overhead		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	Projected Revenues w/o Int.	In 54 * In 64	-	-	-	-	-	-	-	(1,077,350)	(2,808,957)	(2,332,080)	(2,363,483)	(3,502,835)	(7,451,107)	(4,309,398)	(23,845,209)
17	Projected Unbilled Revenue	In 58 * In 64	-	-	-	-	-	-	-	(4,254,472)	(4,905,435)	(5,468,614)	(6,260,904)	(6,440,912)	(6,113,886)	-	(33,444,223)
18	Reverse Prior Month Unbilled		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	Add Net Adjustments (with TGP Refund)		-	-	-	-	-	-	-	4,254,472	4,905,435	5,468,614	6,260,904	6,440,912	6,113,886	-	33,444,223
20	Gas Cost Billed	Account 1920-1741 2/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	Monthly (Over)/Under Recovery		\$ 10,637,079	\$ 10,637,079	\$ 10,685,165	\$ 10,735,078	\$ 10,785,224	\$ 10,830,729	\$ 10,881,321	\$ 8,378,690	\$ 6,864,976	\$ 5,656,753	\$ 4,337,092	\$ 2,416,154	\$ (1,363,346)	\$ 443,636	\$ (0)
22	Average Monthly Balance	(In 13 + 21) 2	\$ -	\$ 10,637,079	\$ 10,685,165	\$ 10,735,078	\$ 10,785,224	\$ 10,830,729	\$ 10,881,321	\$ 9,654,600	\$ 7,644,383	\$ 6,278,143	\$ 5,011,586	\$ 3,388,329	\$ 534,063	\$ (458,608)	
23	Interest Rate	Prime Rate		5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%		
25	Interest Applied	In 22 * In 24 /365 *Days/Mo.	\$ -	\$ 48,085	\$ 49,913	\$ 50,146	\$ 45,505	\$ 50,593	\$ 49,190	\$ 45,099	\$ 34,557	\$ 29,327	\$ 23,410	\$ 15,317	\$ 2,495	\$ -	\$ 443,636
28	(Over)/Under Balance	In 21 + In 26	\$ 10,637,079	\$ 10,685,165	\$ 10,735,078	\$ 10,785,224	\$ 10,830,729	\$ 10,881,321	\$ 10,930,511	\$ 8,423,789	\$ 6,899,533	\$ 5,686,080	\$ 4,360,503	\$ 2,431,472	\$ (1,360,852)	\$ 443,636	\$ 443,636
Calculation of COG with Interest																	
33	Beginning Balance	In 13	\$ 10,637,079	\$ 10,637,079	\$ 10,685,165	\$ 10,735,078	\$ 10,785,224	\$ 10,830,729	\$ 10,881,321	\$ 10,930,511	\$ 8,380,112	\$ 6,827,329	\$ 5,589,833	\$ 4,237,947	\$ 2,278,158	\$ (1,573,374)	\$ 10,637,079
34	Forecast Direct Gas Costs	In 14	-	-	-	-	-	-	-	2,780,000	1,901,108	1,652,478	1,806,786	1,738,494	3,329,263	-	13,208,130
35	Prod Storage & Misc Overhead	In 15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	Projected Revenues with int.	In 54 * 66	-	-	-	-	-	-	-	(1,086,176)	(2,831,968)	(2,351,185)	(2,382,845)	(3,531,531)	(7,512,148)	(4,344,702)	(24,040,555)
37	Projected Unbilled Revenue	In 58 * 66	-	-	-	-	-	-	-	(4,289,325)	(4,945,622)	(5,513,414)	(6,312,195)	(6,493,677)	(6,163,973)	-	(33,718,206)
38	Reverse Prior Month Unbilled		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	Add Net Adjustments	In 19	-	-	-	-	-	-	-	4,289,325	4,945,622	5,513,414	6,312,195	6,493,677	6,163,973	-	33,718,206
40	Gas Cost Billed	In 20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	Gas Cost Unbilled		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	Reverse Prior Month Unbilled		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	Add Interest	In 26	-	-	-	-	-	-	-	45,099	34,557	29,327	23,410	15,317	2,495	-	150,204
44	(Over)/Under Balance		\$ 10,637,079	\$ 10,637,079	\$ 10,685,165	\$ 10,735,078	\$ 10,785,224	\$ 10,830,729	\$ 10,881,321	\$ 8,380,109	\$ 6,827,512	\$ 5,590,157	\$ 4,238,403	\$ 2,278,745	\$ (1,572,528)	\$ 245,896	\$ (45,142)
46	Average Monthly Balance		\$ 10,637,079	\$ 10,685,165	\$ 10,735,078	\$ 10,785,224	\$ 10,830,729	\$ 10,881,321	\$ 10,930,511	\$ 9,655,310	\$ 7,603,812	\$ 6,208,743	\$ 4,914,118	\$ 3,258,346	\$ 352,815		
48	Interest Applied	In 24 * In 46 /365 *Days/Mo.	\$ 48,085	\$ 49,913	\$ 50,146	\$ 45,505	\$ 50,593	\$ 49,190	\$ 45,102	\$ 34,373	\$ 29,002	\$ 22,955	\$ 14,730	\$ 1,648	\$ -	\$ -	\$ 441,242
50	(Over)/Under Balance	In 43 +In 44 + In 48	\$ 10,637,079	\$ 10,685,165	\$ 10,735,078	\$ 10,785,224	\$ 10,830,729	\$ 10,881,321	\$ 10,930,511	\$ 8,380,112	\$ 6,827,329	\$ 5,589,833	\$ 4,237,947	\$ 2,278,158	\$ (1,573,374)	\$ 245,896	\$ 245,896
53	Forecast Sendout Therms	Sch 1							5,418,683	3,516,286	2,942,425	3,207,185	3,742,840	7,240,141			26,067,561
54	Less Forecast Billing Therm Sales	Sch. 10B, In 23 May - Oct							1,068,480	2,785,832	2,312,881	2,344,026	3,473,998	7,389,766	4,273,922		23,648,905
55	Less Forecast Unaccounted For	Sch 1							127,414	82,682	69,188	75,413	88,009	170,244			612,950
56	Less Forecast Company Use	Sch 1							3,341	2,168	1,814	1,978	2,308	4,464			16,074
57	Unbilled Volumes								4,219,447	645,605	558,542	785,768	178,525	(324,333)	(4,273,922)		1,789,632
58	Gross Unbilled								4,219,447	4,865,052	5,423,594	6,209,362	6,387,887	6,063,554	1,789,632		
59	Beg Balance								-	4,219,447	4,865,052	5,423,594	6,209,362	6,387,887	6,063,554		
60	Incremental								4,219,447	645,605	558,542	785,768	178,525	(324,333)	(4,273,922)		
62	Ending Balance								4,219,447	4,865,052	5,423,594	6,209,362	6,387,887	6,063,554	1,789,632		
63	COG w/o Interest	Sch. 3, pg. 4, In 211 col. (c)							\$ 1,0083	\$ 1,0083	\$ 1,0083	\$ 1,0083	\$ 1,0083	\$ 1,0083	\$ 1,0083	\$ 1,0083	
65	COG With Interest	Sch. 3 pg. 4 In 211 col. (d)							\$ 1,0166	\$ 1,0166	\$ 1,0166	\$ 1,0166	\$ 1,0166	\$ 1,0166	\$ 1,0166	\$ 1,0166	

1 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
2
3 Off Peak 2023 Summer Cost of Gas Filing
4 COG (Over)/Under Cumulative Recovery Balances and Interest Calculation

Schedule 3
Page 2 of 3

	Days in Month	Prior Period Balance Plus Nov Collections October 31, 2022	Nov-22 30	Dec-22 31	Jan-23 31	Feb-23 28	Mar-23 31	Apr-23 30	May-23 31	Jun-23 30	Jul-23 31	Aug-23 31	Sep-23 30	Oct-23 31	Nov-23 30	Off Peak Period Total	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	
Account 8840 2 0000 10 1163 1424 (formerly, 142.40) Working Capital (Over)/Under Balance Interest Calculation																	
76	Beginning Balance	Account 1163-1424 1/	\$ 47,458	\$ 47,458	\$ 47,672	\$ 47,895	\$ 48,119	\$ 48,322	\$ 48,547	\$ 48,767	\$ 37,685	\$ 30,894	\$ 25,452	\$ 19,504	\$ 11,075	\$ (5,481)	\$ 47,458
77	Days Lag									0.0705	0.0705	0.0705	0.0705	0.0705	0.0705	0.0705	
78	Prime Rate									5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	
79	Forecast Working Capital	In 34 * In 80 / 365 * In 81	-	-	-	-	-	-	-	10,774	7,368	6,404	7,002	6,738	12,903	-	51,190
80	Projected Revenues w/o Int.	In 123 * In 126	-	-	-	-	-	-	-	(4,457)	(11,621)	(9,648)	(9,778)	(14,491)	(30,825)	(17,828)	(98,647)
81	Projected Unbilled Revenue	In 124 * In 126	-	-	-	-	-	-	-	(17,601)	(20,294)	(22,624)	(25,901)	(26,646)	(25,293)	-	(138,358)
82	Reverse Prior Month Unbilled		-	-	-	-	-	-	-	17,601	20,294	22,624	25,901	26,646	25,293	-	138,358
83	Add Net Adjustments		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84	Working Capital Billed	Account 1163-1424 2/															
85	Monthly (Over)/Under Recovery		\$ 47,458	\$ 47,458	\$ 47,672	\$ 47,895	\$ 48,119	\$ 48,322	\$ 48,547	\$ 37,484	\$ 30,739	\$ 25,321	\$ 19,399	\$ 11,006	\$ (5,494)	\$ 1,984	\$ -
86	Average Monthly Balance	(In 78 + 92) / 2	\$ 47,458	\$ 47,672	\$ 47,895	\$ 48,119	\$ 48,322	\$ 48,547	\$ 43,125	\$ 34,212	\$ 28,108	\$ 22,426	\$ 15,255	\$ 2,790			
87	Interest Rate	Prime Rate		5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%			
88	Interest Applied	In 94 * In 96 / 365 * Days of Month	\$ 215	\$ 223	\$ 224	\$ 203	\$ 226	\$ 219	\$ 201	\$ 155	\$ 131	\$ 105	\$ 69	\$ 13			\$ 1,983
89	(Over)/Under Balance	In 92 + In 98	\$ 47,458	\$ 47,672	\$ 47,895	\$ 48,119	\$ 48,322	\$ 48,547	\$ 37,685	\$ 30,894	\$ 25,452	\$ 19,504	\$ 11,075	\$ (5,481)	\$ 1,984		\$ 1,983
90	Calculation of Working Capital with Interest																
91	Beginning Balance		\$ 47,458	\$ 47,458	\$ 47,672	\$ 47,895	\$ 48,119	\$ 48,322	\$ 48,547	\$ 48,767	\$ 37,643	\$ 30,824	\$ 25,359	\$ 19,385	\$ 10,926	\$ (5,688)	\$ 47,458
92	Forecast Working Capital	In 82	-	-	-	-	-	-	-	10,774	7,368	6,404	7,002	6,738	12,903	-	51,190
93	Projected Rev. w/ th interest	In 123 * In 128	-	-	-	-	-	-	-	(4,466)	(11,643)	(9,666)	(9,797)	(14,519)	(30,885)	(17,862)	(98,838)
94	Projected Unbilled Revenue	In 124 * In 128	-	-	-	-	-	-	-	(17,635)	(20,333)	(22,667)	(25,951)	(26,698)	(25,342)	-	(138,626)
95	Reverse Prior Month Unbilled		-	-	-	-	-	-	-	17,635	20,333	22,667	25,951	26,698	25,342	-	138,626
96	Add Net Adjustments	In 88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
97	Working Capital Billed	In 90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
98	WC Unbilled		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
99	Reverse WC Unbilled		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	Add Interest	In 98	-	-	-	-	-	-	201	155	131	105	69	13			674
101	Monthly (Over)/Under Recovery		\$ 47,458	\$ 47,672	\$ 47,895	\$ 48,119	\$ 48,322	\$ 48,547	\$ 37,642	\$ 30,824	\$ 25,359	\$ 19,385	\$ 10,926	\$ (5,688)	\$ 1,791		\$ 483
102	Average Monthly Balance		\$ 47,458	\$ 47,672	\$ 47,895	\$ 48,119	\$ 48,322	\$ 48,547	\$ 43,205	\$ 34,233	\$ 28,091	\$ 22,372	\$ 15,156	\$ 2,619			
103	Interest Applied	In 96 * In 117 / 365 * Days of Month		215	223	224	203	226	202	155	131	105	69	12			\$ 1,982
104	(Over)/Under Balance	-In 114 +In 115 + In 119	\$ 47,458	\$ 47,672	\$ 47,895	\$ 48,119	\$ 48,322	\$ 48,547	\$ 37,643	\$ 30,824	\$ 25,359	\$ 19,385	\$ 10,926	\$ (5,688)	\$ 1,791		\$ 1,791
105	Forecast Therm Sales	In 53							1,068,480	2,785,832	2,312,881	2,344,026	3,473,998	7,389,766	4,273,922		23,648,905
106	Unbilled Therm	In 55							4,219,447	4,865,052	5,423,594	6,209,362	6,387,887	6,063,554	1,789,632		
107	Working Cap. Rate w/out Int.	Sch. 3, pg. 4, In 228 col. (c)							\$0.0042	\$0.0042	\$0.0042	\$0.0042	\$0.0042	\$0.0042	\$0.0042		\$0.0042
108	Working Capital Rate w/ Int.	Sch. 3, pg. 4, In 228 col. (d)							\$0.0042	\$0.0042	\$0.0042	\$0.0042	\$0.0042	\$0.0042	\$0.0042		\$0.0042

1 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
2
3 Off Peak 2023 Summer Cost of Gas Filing
4 COG (Over)/Under Cumulative Recovery Balances and Interest Calculation

																	Schedule 3 Page 3 of 3	
	Days in Month	Prior Period Balance Plus Nov Collections October 31, 2022	Nov-22 30	Dec-22 31	Jan-23 31	Feb-23 28	Mar-23 31	Apr-23 30	May-23 31	Jun-23 30	Jul-23 31	Aug-23 31	Sep-23 30	Oct-23 31	Nov-23 30	Off Peak Period Total		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)		
137 Account 8840 2 0000 10 1163 1754 (formerly, 175.54) Bad Debt (Over)/Under Balance Interest Calculation																		
138																		
139	Forecast Direct Gas Costs	In 34 In 106 + (May includes prior period)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,780,000	\$ 1,901,108	\$ 1,652,478	\$ 1,806,786	\$ 1,738,494	\$ 3,329,263	\$ -	13,208,130		
140	Forecast Working Capital	In 21 / 6							58,232	7,368	6,404	7,002	6,738	12,903		98,647		
141	Prior Period Balance (with Refund)	In 21 / 6							1,772,847	1,772,847	1,772,847	1,772,847	1,772,847	1,772,847		10,637,079		
142	Total Forecast Direct Gas Costs & Working Capital								4,611,079	3,681,322	3,431,729	3,586,635	3,518,078	5,115,013		13,306,777		
143																		
144	Beginning Balance	Account 1163-1754 1/ Oct Collections & Unbilled In 142 * 0.00861151933369296	\$ 337,560	\$ 337,560	\$ 339,086	\$ 340,670	\$ 342,261	\$ 343,705	\$ 345,311	\$ 346,872	\$ 266,425	\$ 219,229	\$ 183,699	\$ 143,385	\$ 90,226	\$ (28,035)	\$ 337,560	
145	Forecast Bad Debt	In 142 * 0.00861151933369296							39,708	31,702	29,552	30,886	30,296	44,048		206,193		
146	Projected Revenues w/o int	In 184 * In 187							(24,567)	(64,054)	(53,179)	(53,896)	(79,877)	(169,911)	(98,269)	(543,753)		
147	Projected Unbilled Revenue	In 185 * In 187							(97,017)	(111,861)	(124,703)	(142,770)	(146,875)	(139,418)	(139,418)	(762,644)		
148	Reverse Prior Month Unbilled									97,017	111,861	124,703	142,770	146,875	139,418	762,644		
149	Bad Debt Billed	Account 1163-1754 2/																
150	Add Net Adjustments																	
151	Monthly (Over)/Under Recovery		\$ 337,560	\$ 337,560	\$ 339,086	\$ 340,670	\$ 342,261	\$ 343,705	\$ 345,311	\$ 264,996	\$ 219,229	\$ 182,760	\$ 142,622	\$ 89,699	\$ (28,180)	\$ 13,114	\$ (0)	
152	Average Monthly Balance	(In 144 + 155) / 2	\$ 337,560	\$ 339,086	\$ 340,670	\$ 342,261	\$ 343,705	\$ 345,311	\$ 305,934	\$ 242,827	\$ 200,994	\$ 163,160	\$ 116,542	\$ 31,023	\$ (7,461)			
153	Interest Rate	Prime Rate	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%				
154	Interest Applied	In 157 * In 159 / 365 * Days of Mo.	\$ 1,526	\$ 1,584	\$ 1,591	\$ 1,444	\$ 1,606	\$ 1,561	\$ 1,429	\$ 1,098	\$ 939	\$ 762	\$ 527	\$ 145		\$ 14,211		
155	(Over)/Under Balance	In 155 + In 161	\$ 337,560	\$ 339,086	\$ 340,670	\$ 342,261	\$ 343,705	\$ 345,311	\$ 266,425	\$ 220,327	\$ 183,699	\$ 143,385	\$ 90,226	\$ (28,035)	\$ (7,461)	\$ 14,211		
156																		
157	Calculation of Bad Debt with Interest																	
158	Beginning Balance		\$ 337,560	\$ 337,560	\$ 339,086	\$ 340,670	\$ 342,261	\$ 343,705	\$ 345,311	\$ 346,872	\$ 260,983	\$ 211,328	\$ 172,805	\$ 129,219	\$ 72,235	\$ (53,386)	\$ 337,560	
159	Forecast Bad Debt	In 146							39,708	31,702	29,552	30,886	30,296	44,048		-	206,193	
160	Projected Revenues with int.	In 184 * 189							(25,665)	(66,916)	(55,556)	(56,304)	(83,446)	(177,504)	(102,661)	(568,053)		
161	Projected Unbilled Revenue	In 185 * 189							(101,352)	(116,860)	(130,276)	(149,151)	(153,439)	(145,648)	(145,648)	(796,726)		
162	Reverse Prior Month Unbilled									101,352	116,860	130,276	149,151	153,439	145,648	796,726		
163	Bad Debt Billed	In 152							1,429	1,098	939	762	527	145		4,900		
164	Add Interest	In 161																
165	Add Net Adjustments	In 153																
166	Monthly (Over)/Under Recovery		\$ 337,560	\$ 337,560	\$ 339,086	\$ 340,670	\$ 342,261	\$ 343,705	\$ 345,311	\$ 260,992	\$ 211,358	\$ 172,847	\$ 129,275	\$ 72,307	\$ (53,285)	\$ (10,398)	\$ (19,401)	
167	Average Monthly Balance	(In 168 + 176) / 2	\$ 337,560	\$ 339,086	\$ 340,670	\$ 342,261	\$ 343,705	\$ 345,311	\$ 303,932	\$ 236,170	\$ 192,087	\$ 151,040	\$ 100,763	\$ 9,475	\$ (31,892)			
168	Interest Applied	In 159 * In 178 / 365 * Days of Month	1,526	1,584	1,591	1,444	1,606	1,561	1,420	1,068	897	706	456	44		\$ 13,902		
169	(Over)/Under Balance	-In 174 + In 176 + In 180	\$ 337,560	\$ 339,086	\$ 340,670	\$ 342,261	\$ 343,705	\$ 345,311	\$ 260,983	\$ 211,328	\$ 172,805	\$ 129,219	\$ 72,235	\$ (53,386)	\$ (10,398)	\$ (10,398)		
170	Forecast Therm Sales	In 53							1,068,480	2,785,832	2,312,881	2,344,026	3,473,998	7,389,766	4,273,922		23,648,905	
171	Unbilled Therm	In 55							4,219,447	4,865,052	5,423,594	6,209,362	6,387,887	6,063,554				
172	COG Rate Without Interest	Sch. 3, pg. 4, In 245 col. (c)	\$ 0.0230	\$ 0.0230	\$ 0.0230	\$ 0.0230	\$ 0.0230	\$ 0.0230	\$ 0.0230	\$ 0.0230	\$ 0.0230	\$ 0.0230	\$ 0.0230	\$ 0.0230	\$ 0.0230	\$ 0.0230		
173	COG With Interest	Sch. 3 pg. 4, In 245 col. (d)	\$ 0.0240	\$ 0.0240	\$ 0.0240	\$ 0.0240	\$ 0.0240	\$ 0.0240	\$ 0.0240	\$ 0.0240	\$ 0.0240	\$ 0.0240	\$ 0.0240	\$ 0.0240	\$ 0.0240	\$ 0.0240		
174																		
175	Total Interest	In 48 + 119 + 180	\$ 49,826	\$ 51,720	\$ 51,961	\$ 47,152	\$ 52,424	\$ 50,970	\$ 46,724	\$ 35,596	\$ 30,031	\$ 23,765	\$ 15,254	\$ 1,705	\$ -	\$ 457,126		

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

Schedule 4

2

Page 1 of 1

3 Off Peak 2023 Summer Cost of Gas Filing

4 Adjustments to Gas Costs

5

6	<u>Adjustments</u>	Prior Period	Refunds from	Broker	Fuel	Transportation	Interruptible	Off System	Capacity	Net Option	Fixed Price	Total
7	(a)	Adjustments	Suppliers /	Revenue	Financing	CGA Revenues	Sales Margin	Sales Margin	Release Margin	Premiums	Option	Adjustments
8		(b)	Pipelines	(d)	(e)	(f)	(g)	(h)	(i)	(j)	Administrative	(m)
9			(c)								Costs	
9	Nov-20	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	Dec-20	-	-	-	-	-	-	-	-	-	-	-
11	Jan-21	-	-	-	-	-	-	-	-	-	-	-
12	Feb-21	-	-	-	-	-	-	-	-	-	-	-
13	Mar-21	-	-	-	-	-	-	-	-	-	-	-
14	Apr-21	-	-	-	-	-	-	-	-	-	-	-
15	May-21	-	-	-	-	-	-	-	(165,367)	-	-	(165,367)
16	Jun-21	-	-	-	-	-	-	-	(247,836)	-	-	(247,836)
17	Jul-21	-	-	-	-	-	-	-	(389,505)	-	-	(389,505)
18	Aug-21	-	-	-	-	-	-	-	(298,763)	-	-	(298,763)
19	Sep-21	-	-	-	-	-	-	-	(301,189)	-	-	(301,189)
20	Oct-21	-	-	-	-	-	-	-	(158,109)	-	-	(158,109)
21												
22	Total Off Peak Period	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (1,560,769)	\$ -	\$ -	\$ (1,560,769)

REDACTED
Schedule 5A
Page 1 of 2

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

3 Off Peak 2023 Summer Cost of Gas Filing

4 Demand Costs

	Peak	Reference	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Off Peak May - Oct Total	Peak May - Oct Total
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
11 Supply										
12 Niagara Supply	Sch	5B, In 9 * Sch 5C In 9 x days	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13 Subtotal Supply Demand & Reservation Charges			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15 Pipeline										
16 Iroquois Gas Trans Service RTS 470-0	Sch	5B, In 12 * Sch 5C In 12 x days								
17 Tenn Gas Pipeline 95346 Z5-Z6	Sch	5B, In 13 * Sch 5C In 14 x days								
18 Tenn Gas Pipeline 2302 Z5-Z6	Sch	5B, In 14 * Sch 5C In 16 x days								
19 Tenn Gas Pipeline 8587 Z0-Z6	Sch	5B, In 15 * Sch 5C In 18 x days								
20 Tenn Gas Pipeline 8587 Z1-Z6	Sch	5B, In 16 * Sch 5C In 20 x days								
21 Tenn Gas Pipeline 8587 Z4-Z6	Sch	5B, In 17 * Sch 5C In 22 x days								
22 Tenn Gas Pipeline (Dracut) 42076 Z6-Z6	Sch	5B, In 18 * Sch 5C In 24 x days								
23 Tenn Gas Pipeline (Dracut) 358905 Z6-Z7	Sch	5B, In 19 * Sch 5C In 25 x days								
24 Tenn Gas Pipeline (Concord Lateral) Z6-Z6	Sch	5B, In 20 * Sch 5C In 28 x days								
25 Portland Natural Gas Trans Service	Sch	5B, In 21 * Sch 5C In 30 x days								
26 Portland Natural Gas	Sch	5B, In 22 * Sch 5C In 31 x days								
27 ANE (TransCanada via Union to Iroquois)	Sch	5B, In 23 * Sch 5C In 48 x days								
28 TransCanada via Union to Portland	Sch	5B, In 24 * Sch 5C In 49 x days								
29 Tenn Gas Pipeline Z4-Z6 stg 632	peak	Sch 5B, In 25 * Sch 5C In 34 x days								
30 Tenn Gas Pipeline Z4-Z6 stg 11234	peak	Sch 5B, In 26 * Sch 5C In 36 x days								
31 Tenn Gas Pipeline Z5-Z6 stg 11234	peak	Sch 5B, In 27 * Sch 5C In 38 x days								
32 National Fuel FST 2358	peak	Sch 5B, In 28 * Sch 5C In 40 x days								
33										
34 Subtotal Pipeline Demand Charges			\$ 1,627,734	\$ 1,630,470	\$ 1,630,470	\$ 1,630,470	\$ 1,630,470	\$ 1,630,470	\$ 4,889,632	\$ 4,890,452
36 Peaking Supply										
37 Tenn Gas Pipeline (Concord Lateral) Z6-Z6	peak	Sch 5B, In 31 * Sch 5C In 28 x days	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
38 Granite Ridge Demand	peak	Sch 5B, In 32 * Sch 5C In 59 x days	-	-	-	-	-	-	-	-
39 DOMAC Demand NSB041	peak	Per Contract	-	-	-	-	-	-	-	-
40 Subtotal Peaking Demand Charges			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
41										
42 Subtotal Supply, Pipeline & Peaking		In 13 + In 34 + In 40	\$ 1,627,734	\$ 1,630,470	\$ 1,630,470	\$ 1,630,470	\$ 1,630,470	\$ 1,630,470	\$ 4,889,632	\$ 4,890,452
43										
44 Less Transportation Capacity Credit			\$ (551,314)	\$ (552,240)	\$ (552,240)	\$ (552,240)	\$ (552,240)	\$ (552,240)	\$ (1,656,118)	\$ (1,656,396)
45										
46 Total Supply, Pipeline & Peaking Demand			\$ 1,076,421	\$ 1,078,230	\$ 1,078,230	\$ 1,078,230	\$ 1,078,230	\$ 1,078,230	\$ 3,233,514	\$ 3,234,056

Liberty Utilities (EnergyNorth Natural Gas) Corp.

Schedule 5A
Page 2 of 2

**Off Peak 2023 Summer Cost of Gas Filing
Demand Costs**

47																				
48	Storage																			
49	Dominion - Demand	peak	Sch 5B, In 36 * Sch 5C In 63 x days	\$	3,040	\$	3,040	\$	3,040	\$	3,040	\$	3,040	\$	3,040	\$	-	\$	18,240	
50	Dominion - Storage	peak	Sch 5B, In 37 * Sch 5C In 64 x days		3,266		3,266		3,266		3,266		3,266		3,266		-		19,595	
51	Honeoye - Demand	peak	Sch 5B, In 38 * Sch 5C In 67 x days		8,351		8,351		8,351		8,351		8,351		8,351		-		50,105	
52	National Fuel - Demand	peak	Sch 5B, In 40 * Sch 5C In 69 x days		16,201		16,201		16,201		16,201		16,201		16,201		-		97,207	
53	National Fuel - Capacity	peak	Sch 5B, In 41 * Sch 5C In 70 x days		32,198		32,198		32,198		32,198		32,198		32,198		-		193,190	
54	Tenn Gas Pipeline - Demand	peak	Sch 5B, In 42 * Sch 5C In 73 x days		27,963		27,963		27,963		27,963		27,963		27,963		-		167,775	
55	Tenn Gas Pipeline - Capacity	peak	Sch 5B, In 43 * Sch 5C In 74 x days		27,307		27,307		27,307		27,307		27,307		27,307		-		163,841	
56																				
57	Subtotal Storage Demand Costs			\$	118,326	\$	118,326	\$	118,326	\$	118,326	\$	118,326	\$	118,326	\$	-	\$	709,954	
58																				
59	Less Transportation Capacity Credit			\$	(40,077)	\$	(40,077)	\$	(40,077)	\$	(40,077)	\$	(40,077)	\$	(40,077)	\$	-	\$	(240,461)	
60																				
61	Total Storage Demand Costs		In 57 + In 59	\$	78,249	\$	78,249	\$	78,249	\$	78,249	\$	78,249	\$	78,249	\$	-	\$	469,493	
62																				
63	Total Demand Charges		In 42 + In 57	\$	1,746,060	\$	1,748,796	\$	1,748,796	\$	1,748,796	\$	1,748,796	\$	1,748,796	\$	4,889,632	\$	5,600,406	
64																				
65	Total Transportation Capacity Credit		In 44 + In 59	\$	(591,391)	\$	(592,317)	\$	(592,317)	\$	(592,317)	\$	(592,317)	\$	(592,317)	\$	(1,656,118)	\$	(1,896,857)	
66																				
67	Total Demand Charges less Cap. Cr.		In 63 + In 65	\$	1,154,669	\$	1,156,479	\$	1,156,479	\$	1,156,479	\$	1,156,479	\$	1,156,479	\$	3,233,514	\$	3,703,548	
68																				
69																				
70	Monthly Off Peak Demand			\$	976,531	\$	979,267	\$	979,267	\$	979,267	\$	979,267	\$	979,267	\$	4,889,632	\$	-	
71	Monthly Off Peak Transportation Cap Credit				(330,751)		(331,678)		(331,678)		(331,678)		(331,678)		(331,678)		(1,656,118)		-	
72	Total Off Peak Demand			\$	645,780	\$	647,589	\$	647,589	\$	647,589	\$	647,589	\$	647,589	\$	3,233,514	\$	-	
73																				
74	Monthly Peak Demand			\$	769,529	\$	769,529	\$	769,529	\$	769,529	\$	769,529	\$	769,529	\$	-	\$	5,600,406	
75	Monthly Peak Transportation Cap Credit				(260,639)		(260,639)		(260,639)		(260,639)		(260,639)		(260,639)		-		(1,896,857)	
76	Total Peak Demand			\$	508,889	\$	508,889	\$	508,889	\$	508,889	\$	508,889	\$	508,889	\$	-	\$	3,703,548	

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

2
3 **Off Peak 2023 Summer Cost of Gas Filing**
4 **Demand Volumes**

6		Peak	Reference	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23
7	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
8	Supply								
9	Niagara Supply			-	-	-	-	-	-
10									
11	Pipeline								
12	Iroquois Gas Trans Service		RTS 470-01	4,047	4,047	4,047	4,047	4,047	4,047
13	Tenn Gas Pipeline		95346 Z5-Z6	4,000	4,000	4,000	4,000	4,000	4,000
14	Tenn Gas Pipeline		2302 Z5-Z6	3,122	3,122	3,122	3,122	3,122	3,122
15	Tenn Gas Pipeline (long haul)		8587 Z0-Z6	7,035	7,035	7,035	7,035	7,035	7,035
16	Tenn Gas Pipeline (long haul)		8587 Z1-Z6	14,561	14,561	14,561	14,561	14,561	14,561
17	Tenn Gas Pipeline (short haul)		8587 Z4-Z6	3,811	3,811	3,811	3,811	3,811	3,811
18	Tenn Gas Pipeline		42076 FTA Z6-Z6	20,000	20,000	20,000	20,000	20,000	20,000
19	Tenn Gas Pipeline		358905 FTA Z6-Z6	40,000	40,000	40,000	40,000	40,000	40,000
20	Tenn Gas Pipeline (Concord Lateral)		Firm Transportation	30,000	30,000	30,000	30,000	30,000	30,000
21	Portland Natural Gas Trans Service		FT-1999-001	1,000	1,000	1,000	1,000	1,000	1,000
22	Portland Natural Gas		FTN	5,000	5,000	5,000	5,000	5,000	5,000
23	ANE (TransCanada via Union to Iroquois)		Dawn - Parkway to Iroquois	4,047	4,047	4,047	4,047	4,047	4,047
24	TransCanada via Union to Portland		Union Parkway to Portland	5,077	5,077	5,077	5,077	5,077	5,077
25	Tenn Gas Pipeline (short haul)	peak	632 Z4-Z6 (stg)	15,265	15,265	15,265	15,265	15,265	15,265
26	Tenn Gas Pipeline (short haul)	peak	11234 Z4-Z6(stg)	7,082	7,082	7,082	7,082	7,082	7,082
27	Tenn Gas Pipeline (short haul)	peak	11234 Z5-Z6(stg)	1,957	1,957	1,957	1,957	1,957	1,957
28	National Fuel	peak	FST N02358	6,098	6,098	6,098	6,098	6,098	6,098
29									
30	Peaking								
31	Tenn Gas Pipeline (Concord Lateral)	peak		-	-	-	-	-	-
32	Granite Ridge Demand	peak		-	-	-	-	-	-
33	DOMAC Liquid Demand Charge	peak	NSB041	-	-	-	-	-	-
34									
35	Storage								
36	Dominion - Demand	peak	GSS 300076	934	934	934	934	934	934
37	Dominion - Capacity Reservation	peak	GSS 300076	102,700	102,700	102,700	102,700	102,700	102,700
38	Honeoye - Demand	peak	SS-NY	1,362	1,362	1,362	1,362	1,362	1,362
39	Honeoye - Capacity	peak	SS-NY	245,380	245,380	245,380	245,380	245,380	245,380
40	National Fuel - Demand	peak	FSS-1 2357	6,098	6,098	6,098	6,098	6,098	6,098
41	National Fuel - Capacity Reservation	peak	FSS-1 2357	670,800	670,800	670,800	670,800	670,800	670,800
42	Tenn Gas Pipeline - Demand	peak	FS-MA 523	21,844	21,844	21,844	21,844	21,844	21,844
43	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 Off Peak 2023 Summer Cost of Gas Filing
4 Demand Rates

5
6 Tariff Rates

7
8 Supply

				May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24
				31	30	31	31	30	31	184	30	31	31	28	31	30
				Unit Rate	Unit Rate	Unit Rate	Unit Rate	Unit Rate	Unit Rate	Avg Rate						
9	Niagara Supply		\$ - Per Contract	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10																
11	Pipeline															
12	Iroquois Gas	RTS 470-01	\$ 5.2357 Fourth Revised Sheet No. 4	\$0.1689	\$0.1745	\$0.1689	\$0.1689	\$0.1745	\$0.1689	\$0.1708	\$0.1745	\$0.1689	\$0.1689	\$0.1870	\$0.1689	\$0.1745
13																
14	Tenn Gas Pipeline	95346 Z5-Z6	\$ 6.1635 19th Rev Sheet No. 14	\$0.4746	\$0.4904	\$0.4746	\$0.4746	\$0.4904	\$0.4746	\$0.4799	\$0.4904	\$0.4746	\$0.4746	\$0.5254	\$0.4746	\$0.4904
15																
16	Tenn Gas Pipeline	2302 Z5-Z6	\$ 6.1635 19th Rev Sheet No. 14	\$0.1988	\$0.2055	\$0.1988	\$0.1988	\$0.2055	\$0.1988	\$0.2010	\$0.2055	\$0.1988	\$0.1988	\$0.2201	\$0.1988	\$0.2055
17																
18	Tenn Gas Pipeline	8587 Z0-Z6	\$ 19.9267 FT-A (Z0 - Z6)	\$0.6428	\$0.6642	\$0.6428	\$0.6428	\$0.6642	\$0.6428	\$0.6499	\$0.6642	\$0.6428	\$0.6428	\$0.7117	\$0.6428	\$0.6642
19																
20	Tenn Gas Pipeline	8587 Z1-Z6	\$ 17.6917 FT-A (Z1 - Z6)	\$0.5707	\$0.5897	\$0.5707	\$0.5707	\$0.5897	\$0.5707	\$0.5770	\$0.5897	\$0.5707	\$0.5707	\$0.6318	\$0.5707	\$0.5897
21																
22	Tenn Gas Pipeline	8587 Z4-Z6	\$ 7.1720 FT-A (Z4 - Z6)	\$0.2314	\$0.2391	\$0.2314	\$0.2314	\$0.2391	\$0.2314	\$0.2339	\$0.2391	\$0.2314	\$0.2314	\$0.2561	\$0.2314	\$0.2391
23																
24	TGP Dracut	42076 FTA Z6-Z6	\$ 4.0968 19th Rev Sheet No. 14	\$0.1322	\$0.1366	\$0.1322	\$0.1322	\$0.1366	\$0.1322	\$0.1336	\$0.1366	\$0.1322	\$0.1322	\$0.1463	\$0.1322	\$0.1366
25																
26	TGP Dracut	358905 FTA Z6-Z6	\$ 4.0968 19th Rev Sheet No. 14	\$0.1322	\$0.1366	\$0.1322	\$0.1322	\$0.1366	\$0.1322	\$0.0223	\$0.1366	\$0.1322	\$0.1322	\$0.1463	\$0.1322	\$0.1366
27																
28	TGP Concord Lateral	Firm Transportatio	\$ 12.2188 Per contract	\$0.3942	\$0.4073	\$0.3942	\$0.3942	\$0.4073	\$0.3942	\$0.3985	\$0.4073	\$0.3942	\$0.3942	\$0.4364	\$0.3942	\$0.4073
29																
30	Portland Natural Gas	FT-1999-001	\$ 18.2633 Negot Dmd /CMDY=Part 4.1 Vi	\$0.5891	\$0.6088	\$0.5891	\$0.5891	\$0.6088	\$0.5891	\$0.5957	\$0.6088	\$0.5891	\$0.5891	\$0.6523	\$0.5891	\$0.6088
31																
32	Portland Natural Gas	FTN	\$ 22.7943 Negot Dmd /CMDY=Part 4.1 Vi	\$0.7353	\$0.7598	\$0.7353	\$0.7353	\$0.7598	\$0.7353	\$0.7435	\$0.7598	\$0.7353	\$0.7353	\$0.8141	\$0.7353	\$0.7598
33																
34	Tenn Gas Pipeline	632 Z4-Z6 (stg)	\$ 7.1720 19th Rev Sheet No. 14	\$0.2314	\$0.2391	\$0.2314	\$0.2314	\$0.2391	\$0.2314	\$0.2339	\$0.2391	\$0.2314	\$0.2314	\$0.2561	\$0.2314	\$0.2391
35																
36	Tenn Gas Pipeline	11234 Z4-Z6(stg)	\$ 7.1720 19th Rev Sheet No. 14	\$0.2314	\$0.2391	\$0.2314	\$0.2314	\$0.2391	\$0.2314	\$0.2339	\$0.2391	\$0.2314	\$0.2314	\$0.2561	\$0.2314	\$0.2391
37																
38	Tenn Gas Pipeline	11234 Z5-Z6(stg)	\$ 6.1635 19th Rev Sheet No. 14	\$0.1988	\$0.2055	\$0.1988	\$0.1988	\$0.2055	\$0.1988	\$0.2010	\$0.2055	\$0.1988	\$0.1988	\$0.2201	\$0.1988	\$0.2055
39																
40	National Fuel	FST N02358	\$ 4.9801 4.020 Version 28.0.0 Pg 1	\$0.1606	\$0.1660	\$0.1606	\$0.1606	\$0.1660	\$0.1606	\$0.1624	\$0.1660	\$0.1606	\$0.1606	\$0.1779	\$0.1606	\$0.1660
41																
42	ANE Union Gas		\$ 3.6890													
43	TransCanada Pipelines Limited		\$ 11.9690 Union Parkway to Iroquois													
44	Delivery Pressure Demand Charge		<u>0.6083</u> Union Parkway to Iroquois													
45	Sub Total Demand Charges		<u>16.2663</u>													
46	Conversion rate GJ to MMBTU		1.0551													
47	Conversion rate to US\$	1/0/1900	1.2706													
48	Demand Rate/US\$		\$ 13.5069	\$0.4357	\$0.4502	\$0.4357	\$0.4357	\$0.4502	\$0.4357	\$0.4405	\$0.4502	\$0.4357	\$0.4357	\$0.4824	\$0.4357	\$0.4502
49																
50	Union Gas		\$ 3.6890													
51	TransCanada Pipelines Limited		\$ 20.3913													
52	Delivery Pressure Demand Charge		\$ 0.6083													
53	Sub Total Demand Charges		<u>\$ 24.6887</u>													
54	Conversion rate GJ to MMBTU		\$ 1.0551													
55	Conversion rate to US\$	\$0.0000	\$ 1.2706													
56	Demand Rate/US\$		\$ 20.5005	\$0.6613	\$0.6833	\$0.6613	\$0.6613	\$0.6833	\$0.6613	\$0.6687	\$0.6833	\$0.6613	\$0.6613	\$0.7322	\$0.6613	\$0.6833
57																
58	Peaking															
59	Granite Ridge Demand		\$ - Per Contract	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
60	DOMAC Demand NSB041		\$ - Per Contract	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
61																
62	Storage															
63	Dominion - Demand	GSS 300076	\$ 3.2548 GSS Settled,Tariff Rec #10.30	\$0.1050	\$0.1085	\$0.1050	\$0.1050	\$0.1085	\$0.1050	\$0.1064	\$0.1085	\$0.1050	\$0.1050	\$0.1162	\$0.1050	\$0.1085
64	Dominion - Capacity	GSS 300076	\$ 0.0318 GSS Settled,Tariff Rec #10.30	\$0.0010	\$0.0011	\$0.0010	\$0.0010	\$0.0011	\$0.0010	\$0.0010	\$0.0011	\$0.0010	\$0.0010	\$0.0011	\$0.0010	\$0.0011
65			\$ 3.2866	\$0.1060	\$0.1096	\$0.1060	\$0.1060	\$0.1096	\$0.1060	\$0.1074	\$0.1096	\$0.1060	\$0.1060	\$0.1174	\$0.1060	\$0.1096
66																
67	Honeoye - Demand	SS-NY	\$ 6.1299 Sub 1st Rev Sheet No. 5	\$0.1977	\$0.2043	\$0.1977	\$0.1977	\$0.2043	\$0.1977	\$0.2004	\$0.2043	\$0.1977	\$0.1977	\$0.2189	\$0.1977	\$0.2043
68																
69	National Fuel - Demand	FSS-1 2357	\$ 2.6568 4.020 Version 28.0.0 Pg 1	\$0.0857	\$0.0886	\$0.0857	\$0.0857	\$0.0886	\$0.0857	\$0.0868	\$0.0886	\$0.0857	\$0.0857	\$0.0949	\$0.0857	\$0.0886
70	National Fuel - Capacity	FSS-1 2357	\$ 0.0480 4.020 Version 28.0.0 Pg 1	\$0.0015	\$0.0016	\$0.0015	\$0.0015	\$0.0016	\$0.0015	\$0.0016	\$0.0016	\$0.0015	\$0.0015	\$0.0017	\$0.0015	\$0.0016
71			\$ 2.7048	\$0.0873	\$0.0902	\$0.0873	\$0.0873	\$0.0902	\$0.0873	\$0.0884	\$0.0902	\$0.0873	\$0.0873	\$0.0966	\$0.0873	\$0.0902
72																
73	Tenn Gas Pipeline	FS-MA 523	\$ 1.2801 22nd Rev Sheet No.61	\$0.0413	\$0.0427	\$0.0413	\$0.0413	\$0.0427	\$0.0413	\$0.0418	\$0.0427	\$0.0413	\$0.0413	\$0.0457	\$0.0413	\$0.0427

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

REDACTED
Schedule 6
Page 1 of 5

5	6 For Month of:	Reference	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Off-Peak
7	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	May - Oct
8									(i)
9	Supply and Commodity Costs								
10	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		\$ 3,450,357	\$ 2,621,333	\$ 2,609,054	\$ 2,617,683	\$ 2,464,364	\$ 3,388,045	\$ 17,176,831
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		\$ 102,300	\$ 88,216	\$ 84,967	\$ 84,780	\$ 84,686	\$ 96,641	\$ 541,590
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		\$ (1,450,419)	\$ (1,484,992)	\$ (1,716,203)	\$ (1,568,171)	\$ (1,481,300)	\$ (819,579)	\$ (8,520,664)
46									
47	Total Supply & Pipeline Commodity Costs	In 25 + In 37 + In 45	\$ 2,102,238	\$ 1,224,558	\$ 977,817	\$ 1,134,292	\$ 1,067,750	\$ 2,665,107	\$ 9,171,762
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	\$ 31,982	\$ 28,961	\$ 27,072	\$ 24,905	\$ 23,154	\$ 16,568	\$ 152,643
57									
58									
59	Total Commodity Gas & Trans. Costs	In 47 + In 50 + In 56	\$ 2,134,220	\$ 1,253,519	\$ 1,004,889	\$ 1,159,197	\$ 1,090,905	\$ 2,681,674	\$ 9,324,405
60									
61									

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

Schedule 6
Page 2 of 5

63 **Volumes (Therms)**

		See Schedule 11A						
64	Pipeline Gas:							
66	Dawn Supply	842,983	655,282	518,079	495,174	712,922	601,154	3,825,595
67	Niagara Supply	667,764	585,319	584,500	583,125	598,573	687,845	3,707,126
68	TGP Supply (Gulf)	29,663	-	-	-	-	327,579	357,242
69	Dracut Supply 1 - Baseload	-	-	-	-	-	-	-
70	Dracut Supply 2 - Swing	-	-	-	-	-	435,588	435,588
71	Dracut Supply 3 - Swing	-	-	-	-	-	-	-
72	City Gate Delivered Supply	-	-	-	-	-	-	-
73	LNG Truck	-	-	4,831	10,843	17,887	110,141	143,701
74	Propane Truck	79,331	71,837	69,440	69,276	73,464	81,717	445,066
75	PNGTS	211,780	185,528	182,354	184,937	189,729	218,149	1,172,479
76	Portland Natural Gas	889,892	29,984	-	-	-	522,990	1,442,866
77	TGP Supply (Zone 4)	5,379,362	4,713,785	4,706,794	4,696,924	4,822,444	5,548,240	29,867,549
78								
79	Subtotal Pipeline Volumes	8,100,776	6,241,736	6,065,997	6,040,279	6,415,019	8,533,404	41,397,212
80								
81	Storage Gas:							
82	TGP Storage	-	-	-	-	-	-	-
83								
84	Produced Gas:							
85	LNG Vapor	20,005	18,116	17,511	17,470	18,526	20,607	112,234
86	Propane	-	-	-	-	-	-	-
87								
88	Subtotal Produced Gas	20,005	18,116	17,511	17,470	18,526	20,607	112,234
89								
90	Less - Gas Refill:							
91	LNG Truck	-	-	(4,831)	(10,843)	(17,887)	(110,141)	(143,701)
92	Propane	(79,331)	(71,837)	(69,440)	(69,276)	(73,464)	(81,717)	(445,066)
93	TGP Storage Refill	(2,622,767)	(2,671,728)	(3,066,813)	(2,770,444)	(2,599,354)	(1,122,012)	(14,853,118)
94								
95	Subtotal Refills	(2,702,098)	(2,743,565)	(3,141,083)	(2,850,564)	(2,690,705)	(1,313,870)	(15,441,885)
96								
97	Total Sendout Volumes	5,418,683	3,516,286	2,942,425	3,207,185	3,742,840	7,240,141	26,067,561
98								
99								
100								

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

REDACTED
Schedule 6
Page 3 of 5

		Average Rate						
101	Gas Costs and Volumetric Transportation Rates							
102								
103								
104	Pipeline Gas:							
105	Dawn Supply							
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							
126	Commodity Costs - NYMEX Price	Sch 7, In 10 / 10						
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	\$1.1288	\$1.1288	\$1.1288	\$1.1288	\$1.1288	\$1.1288
142								
143	Propane Truck	NYMEX - Propane	\$1.1288	\$1.1288	\$1.1288	\$1.1288	\$1.1288	\$1.1288
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		\$0.4059	\$0.4007	\$0.4106	\$0.4138	\$0.3511	\$0.3491
159								\$0.3885
160	LNG Vapor (Storage)	Sch 13, In 97 /10	\$1.5987	\$1.5987	\$1.5460	\$1.4256	\$1.2499	\$0.8040
161								\$1.3705
162	Propane	Sch 13, In 67 /10	\$1.8150	\$1.8150	\$1.8229	\$1.6482	\$1.5064	\$1.5607
163								\$0.0000
164	Storage Refill:							
165	LNG Truck	In 141	\$1.1288	\$1.1288	\$1.1288	\$1.1288	\$1.1288	\$1.1288
166	Propane	In 143	\$1.1288	\$1.1288	\$1.1288	\$1.1288	\$1.1288	\$1.1288
167								
168								

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

169
170
171
172 TGP Storage
173 Commodity Costs - Storage withdrawal Sch 13, In 34 /10
174
175 TGP - Max Commodity - Z 4-6 21st Rev Sheet No. 15
176 TGP - Max Comm. ACA Rate - Z 4-6 21st Rev Sheet No. 15
177 Subtotal TGP - Trans Charge - Max Commodity Rate - Z 4-6
178 TGP - Fuel Charge % - Z 4-6 18th Rev Sheet No. 32
179 TGP - Fuel Charge % - Z 4-6 - (NYMEX * Percentage)
180 TGP - Withdrawal Charge 22nd Rev Sheet No.61
181 Total Volumetric Transportation Rate - TGP (Storage)
182
183 Total TGP - Comm. & Vol. Trans. Rate In 173 + In 181
184
185

REDACTED
Schedule 6
Page 4 of 5

173	Commodity Costs - Storage withdrawal	Sch 13, In 34 /10	\$0.5098	\$0.5173	\$0.5251	\$0.5280	\$0.5298	\$0.5302	\$0.5234
175	TGP - Max Commodity - Z 4-6	21st Rev Sheet No. 15	\$0.00911	\$0.00911	\$0.00911	\$0.00911	\$0.00911	\$0.00911	\$0.00911
176	TGP - Max Comm. ACA Rate - Z 4-6	21st Rev Sheet No. 15	\$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		\$0.00926	\$0.00926	\$0.00926	\$0.00926	\$0.00926	\$0.00926	\$0.00926
178	TGP - Fuel Charge % - Z 4-6	18th Rev Sheet No. 32	1.49%	1.49%	1.49%	1.49%	1.49%	1.49%	1.49%
179	TGP - Fuel Charge % - Z 4-6 - (NYMEX * Percentage)		\$0.00760	\$0.00771	\$0.00782	\$0.00787	\$0.00789	\$0.00790	\$0.00780
180	TGP - Withdrawal Charge	22nd Rev Sheet No.61	\$0.00087	\$0.00087	\$0.00087	\$0.00087	\$0.00087	\$0.00087	\$0.00087
181	Total Volumetric Transportation Rate - TGP (Storage)		\$0.01773	\$0.01784	\$0.01795	\$0.01800	\$0.01802	\$0.01803	\$0.01793
183	Total TGP - Comm. & Vol. Trans. Rate	In 173 + In 181	\$0.52753	\$0.53517	\$0.54304	\$0.54605	\$0.54779	\$0.54820	\$0.54130

186 Per Unit Volumetric Transportation Rates

187 Dawn Supply Volumetric Transportation Charge			Average Rate						
188 Commodity Costs	In 108								
190 TransCanada - Commodity Rate/GJ	Dawn - Parkway to Iroquois		\$0.00040	\$0.00040	\$0.00040	\$0.00040	\$0.00040	\$0.00040	\$0.00040
191 Conversion Rate GL to MMBTU			1.0551	1.0551	1.0551	1.0551	1.0551	1.0551	1.0551
192 Conversion Rate to US\$	1/0/1900		1.2706	1.2706	1.2706	1.2706	1.2706	1.2706	1.2706
193 Commodity Rate/US\$	In 190 x In 191 x In 192		\$0.00054	\$0.00054	\$0.00054	\$0.00054	\$0.00054	\$0.00054	\$0.00054
194 TransCanada Fuel %	Dawn - Parkway to Iroquois		0.82%	0.82%	0.00%	0.00%	0.00%	0.00%	0.27%
195 TransCanada Fuel * Percentage	In 108 x In 194		\$0.00367	\$0.00371	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00123
196 Subtotal TransCanada			\$0.00420	\$0.00424	\$0.00054	\$0.00054	\$0.00054	\$0.00054	\$0.00177
197 IGTS - Z1 RTS Commodity	Fourth Revised Sheet No. 4		\$0.00034	\$0.00034	\$0.00034	\$0.00034	\$0.00034	\$0.00034	\$0.00034
198 IGTS - Z1 RTS ACA Rate Commodity	Fourth Revised Sheet No. 4		\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015
199 IGTS - Z1 RTS Deferred Asset Surcharge	Fourth Revised Sheet No. 4		\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000
200 Subtotal IGTS - Trans Charge - Z1 RTS Commodity			\$0.00049	\$0.00049	\$0.00049	\$0.00049	\$0.00049	\$0.00049	\$0.00049
201 TGP NET-NE - Comm. Segments 3 & 4	21st Rev Sheet No. 15		\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015
202 IGTS -Fuel Use Factor - Percentage	Fourth Revised Sheet No. 4		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
203 IGTS -Fuel Use Factor - Fuel * Percentage	In 108 x In 202		\$0.00448	\$0.00453	\$0.00457	\$0.00457	\$0.00455	\$0.00460	\$0.00455
204 TGP FTA Fuel Charge % Z 5-6	18th Rev Sheet No. 32		1.09%	1.09%	1.09%	1.09%	1.09%	1.09%	1.09%
205 TGP FTA Fuel * Percentage	In 108 x In 204		\$0.00489	\$0.00494	\$0.00498	\$0.00498	\$0.00496	\$0.00502	\$0.00496
206 Total Volumetric Transportation Charge - Dawn Supply			\$0.01422	\$0.01436	\$0.01072	\$0.01073	\$0.01068	\$0.01079	\$0.01192

209 Niagara Supply Volumetric Transportation Charge

210 Commodity Costs	Ln 113								
212 TGP FTA - FTA Z 5-6 Comm. Rate	21st Rev Sheet No. 15		\$0.00693	\$0.00693	\$0.00693	\$0.00693	\$0.00693	\$0.00693	\$0.00693
213 TGP FTA - FTA Z 5-6 - ACA Rate	21st Rev Sheet No. 15		\$0.00015	\$0.0002	\$0.0002	\$0.0002	\$0.0002	\$0.0002	\$0.0002
214 Subtotal TGP FTA - FTA Z 5-6 Commodity Rate			\$0.00708	\$0.0071	\$0.0071	\$0.0071	\$0.0071	\$0.0071	\$0.0071
215 TGP FTA Fuel Charge % Z 5-6	18th Rev Sheet No. 32		1.09%	1.09%	1.09%	1.09%	1.09%	1.09%	1.09%
216 TGP FTA Fuel * Percentage	In 215 x In 113		\$0.00485	\$0.00491	\$0.00495	\$0.00495	\$0.00493	\$0.00498	\$0.00493
217 Total Volumetric Transportation Rate - Niagara Supply			\$0.01193	\$0.01199	\$0.01203	\$0.01203	\$0.01201	\$0.01206	\$0.01201

218
219
220

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

			REDACTED						
			Schedule 6						
			Page 5 of 5						
224 TGP Direct Volumetric Transportation Charge			Average Rate						
225 Commodity Costs Ln 133									
226									
227	TGP - Max Comm. Base Rate - Z 0-6	21st Rev Sheet No. 15	\$0.02616	\$0.02616	\$0.02616	\$0.02616	\$0.02616	\$0.02616	\$0.02616
228	TGP - Max Commodity ACA Rate - Z 0-6	21st Rev Sheet No. 15	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015
229	Subtotal TGP - Max Comm. Rate Z 0-6		\$0.02631	\$0.02631	\$0.02631	\$0.02631	\$0.02631	\$0.02631	\$0.02631
230	Prorated Percentage		32.60%	32.60%	32.60%	32.60%	32.60%	32.60%	32.60%
231	Prorated TGP - Max Commodity Rate - Z 0-6		\$0.00858	\$0.00858	\$0.00858	\$0.00858	\$0.00858	\$0.00858	\$0.00858
232	TGP - Max Comm. Base Rate - Z 1-6	21st Rev Sheet No. 15	\$0.02283	\$0.02283	\$0.02283	\$0.02283	\$0.02283	\$0.02283	\$0.02283
233	TGP - Max Commodity ACA Rate - Z 1-6	21st Rev Sheet No. 15	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015
234	Subtotal TGP - Max Commodity Rate - Z 1-6		\$0.02298	\$0.02298	\$0.02298	\$0.02298	\$0.02298	\$0.02298	\$0.02298
235	Prorated Percentage		67.40%	67.40%	67.40%	67.40%	67.40%	67.40%	67.40%
236	Prorated TGP - Trans Charge - Max Commodity Rate - Z 1-6		\$0.01549	\$0.01549	\$0.01549	\$0.01549	\$0.01549	\$0.01549	\$0.01549
237	TGP - Fuel Charge % - Z 0-6	18th Rev Sheet No. 32	5.31%	5.31%	5.31%	5.31%	5.31%	5.31%	5.31%
238	Prorated Percentage		32.6%	32.6%	32.6%	32.6%	32.6%	32.6%	32.6%
239	Prorated TGP Fuel Charge % - Z 0-6		1.73%	1.73%	1.73%	1.73%	1.73%	1.73%	1.73%
240	TGP - Fuel Charge % - Z 1-6	18th Rev Sheet No. 32	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%	4.64%
241	Prorated Percentage		67.40%	67.40%	67.40%	67.40%	67.40%	67.40%	67.40%
242	Prorated TGP Fuel Charge - Fuel Charge % - Z 1-6		3.13%	3.13%	3.13%	3.13%	3.13%	3.13%	3.13%
243	TGP - Fuel Charge % - Z 0-6	In 225 x In 239	\$0.00780	\$0.00791	\$0.00805	\$0.00803	\$0.00785	\$0.00794	\$0.00793
244	TGP - Fuel Charge % - Z 1-6	In 225 x In 242	\$0.01410	\$0.01429	\$0.01455	\$0.01450	\$0.01418	\$0.01434	\$0.01433
245	Total Volumetric Transportation Rate - TGP (Direct)		\$0.04597	\$0.04627	\$0.04667	\$0.04659	\$0.04610	\$0.04634	\$0.04632
246									
247	TGP (Zone 4 Purchase) Volumetric Transportation Charge								
248	Commodity Costs Ln 131								
249									
250	TGP - Max Comm. Base Rate - Z 4-6	21st Rev Sheet No. 15	\$0.00911	\$0.00911	\$0.00911	\$0.00911	\$0.00911	\$0.00911	\$0.00911
251	TGP - Max Commodity ACA Rate - Z 4-6	21st Rev Sheet No. 15	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015
252	Subtotal TGP - Max Commodity Rate - Z 4-6		\$0.00926	\$0.00926	\$0.00926	\$0.00926	\$0.00926	\$0.00926	\$0.00926
253	TGP - Fuel Charge % - Z 4-6	18th Rev Sheet No. 32	1.49%	1.49%	1.49%	1.49%	1.49%	1.49%	1.49%
254	TGP - Fuel Charge	In 248 x In 253	\$0.00605	\$0.00597	\$0.00612	\$0.00617	\$0.00523	\$0.00520	\$0.00579
255	Total Vol. Trans. Rate - TGP (Zone 6)		\$0.01531	\$0.01523	\$0.01538	\$0.01543	\$0.01449	\$0.01446	\$0.01505
256									
257									
258	TGP Dracut								
259	Commodity Costs - NYMEX Price Ln 118								
260									
261	TGP - Trans Charge - Comm. - Z 6-6	21st Rev Sheet No. 15	\$0.00296	\$0.00296	\$0.00296	\$0.00296	\$0.00296	\$0.00296	\$0.00296
262	TGP - Trans Charge - ACA Rate - Z6-6	21st Rev Sheet No. 15	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015	\$0.00015
263	Subtotal TGP - Trans Charge - Max Commodity Rate - Z 6-6		\$0.00311	\$0.00311	\$0.00311	\$0.00311	\$0.00311	\$0.00311	\$0.00311
264	TGP - Fuel Charge % - Z 6-6	18th Rev Sheet No. 32	0.13%	0.13%	0.13%	0.13%	0.13%	0.13%	0.13%
265	TGP - Fuel Charge	In 259 x In 264	\$0.00059	\$0.00064	\$0.00065	\$0.00062	\$0.00058	\$0.00061	\$0.00062
266	Total Volumetric Transportation Rate - TGP Dracut		\$0.00370	\$0.00375	\$0.00376	\$0.00373	\$0.00369	\$0.00372	\$0.00373
267									
268									

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

2 Schedule 7

3 **Off Peak 2023 Summer Cost of Gas Filing** Page 1 of 1

4 **NYMEX Futures @ Henry Hub** May - Oct

5 Off Peak

6 For Month of: 9/29/2022 Reference May-23 Jun-23 Jul-23 Aug-23 Sep-23 Oct-23 Strip Average

7 (a) (b) (c) (d) (e) (f) (g) (h) (i)

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

9 Opening Prices Line 206 \$4.7290 \$4.7920 \$4.8560 \$4.8680 \$4.8410 \$4.9110 \$ 4.8328

10 \$4.7290 \$4.7920 \$4.8560 \$4.8680 \$4.8410 \$4.9110 \$ 4.8328

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Off Peak 2023 Summer Cost of Gas Filing

Schedule 8
Off-Peak
Page 1 of 5

1 Annual Bill Comparisons, May 22 Oct 22 Filing vs May 23 Oct 23																	
2 November 2022 October 2023		(1) (2)		(3) (4)		(5) (6)		(7)		(8) (9)		(10) (11)		(12) (13)		(14) (15)	
3 Residential Heating (R3)		November 1, 2022 April 30, 2023															
		Nov 22		Dec 22		Jan 23		Feb 23		Mar 23		Apr 23		Winter Nov Apr			
4 Typical Usage (Therms)		45		92		117		148		130		88		621			
5 8/1/2021 9/1/2022																	
6 Winter:																	
7 Cust. Chg		\$ 15.39		\$ 15.39		\$ 15.39		\$ 15.39		\$ 15.39		\$ 15.39		\$ 92.34			
8 Headblock		\$ 0.5632		\$ 0.6519		\$ -		\$ -		\$ -		\$ -		\$ -			
9 Tailblock		\$ 0.5632		\$ 0.6519		\$ 29.22		\$ 60.25		\$ 76.41		\$ 96.48		\$ 85.02		\$ 57.27	
10 HB Threshold																	
11 Summer:																	
12 8/1/2021 9/1/2022																	
13 Cust. Chg		\$ 15.39		\$ 15.39		\$ -		\$ -		\$ -		\$ -		\$ -		\$ 184.68	
14 Headblock		\$ 0.5632		\$ 0.6519		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	
15 Tailblock		\$ 0.5632		\$ 0.6519		\$ 29.22		\$ 60.25		\$ 76.41		\$ 96.48		\$ 85.02		\$ 57.27	
16 HB Threshold																	
17 Total Base Rate Amount		\$ 44.61		\$ 75.64		\$ 91.80		\$ 111.87		\$ 100.41		\$ 72.66		\$ 496.99		\$ 681.14	
18 COG Rate - (Seasonal)		\$ 1.4300		\$ 1.4300		\$ 1.4300		\$ 1.4300		\$ 1.4300		\$ 1.4300		\$ 1.4300		\$ 1.3555	
19 COG amount		\$ 64.11		\$ 132.16		\$ 167.60		\$ 211.65		\$ 186.49		\$ 125.64		\$ 887.65		\$ 1,032.26	
20 LDAC		\$ 0.1110		\$ 0.1110		\$ 0.1110		\$ 0.1110		\$ 0.1110		\$ 0.1110		\$ 0.1110		\$ 0.1110	
21 LDAC amount		\$ 4.98		\$ 10.26		\$ 13.01		\$ 16.43		\$ 14.48		\$ 9.75		\$ 68.90		\$ 84.53	
22 Total Bill		\$ 113.70		\$ 218.06		\$ 272.41		\$ 339.95		\$ 301.38		\$ 208.05		\$ 1,453.54		\$ 1,797.94	
23																	
24 November 2021 October 2022		November 1, 2021 April 30, 2022															
25 Residential Heating (R3)		May 1, 2022 October 31, 2022															
		Nov 21		Dec 21		Jan 22		Feb 22		Mar 22		Apr 22		Winter Nov Apr			
26 Typical Usage (Therms)		45		92		117		148		130		88		621			
27 8/1/2021 9/1/2022																	
28 Winter:																	
29 Cust. Chg		\$ 15.39		\$ 15.39		\$ 15.39		\$ 15.39		\$ 15.39		\$ 15.39		\$ 92.34			
30 Headblock		\$ 0.5632		\$ 0.6519		\$ -		\$ -		\$ -		\$ -		\$ -			
31 Tailblock		\$ 0.5632		\$ 0.6519		\$ 25.25		\$ 52.05		\$ 66.01		\$ 83.36		\$ 73.45		\$ 49.48	
32 HB Threshold						\$ 24.97											
33 Summer:																	
34 8/1/2021 9/1/2022																	
35 Cust. Chg		\$ 15.39		\$ 15.39		\$ -		\$ -		\$ -		\$ -		\$ -		\$ 184.68	
36 Headblock		\$ 0.5632		\$ 0.6519		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	
37 Tailblock		\$ 0.5632		\$ 0.6519		\$ 25.25		\$ 52.05		\$ 66.01		\$ 83.36		\$ 73.45		\$ 49.48	
38 HB Threshold																	
39 Total Base Rate Amount		\$ 40.64		\$ 67.44		\$ 81.40		\$ 98.75		\$ 88.84		\$ 64.87		\$ 441.94		\$ 617.70	
40 COG Rate - (Seasonal)		\$ 1.1339		\$ 1.0173		\$ 0.7246		\$ 0.5956		\$ 0.7743		\$ 1.1747		\$ 0.8411		\$ 0.8471	
41 COG amount		\$ 50.83		\$ 94.02		\$ 84.93		\$ 88.15		\$ 100.98		\$ 103.21		\$ 522.12		\$ 645.10	
42 LDAC		\$ 0.1397		\$ 0.1012		\$ 0.1154		\$ 0.1154		\$ 0.1318		\$ 0.1318		\$ 0.1208		\$ 0.1228	
43 LDAC amount		\$ 6.26		\$ 9.35		\$ 13.53		\$ 17.08		\$ 17.19		\$ 11.58		\$ 74.99		\$ 93.55	
44 Total Bill		\$ 97.73		\$ 170.81		\$ 179.85		\$ 203.98		\$ 207.01		\$ 179.66		\$ 1,039.04		\$ 1,356.35	
45																	
46 DIFFERENCE:																	
47 Total Bill		\$ 15.96		\$ 47.25		\$ 92.56		\$ 135.97		\$ 94.37		\$ 28.40		\$ 414.50		\$ 441.58	
48 % Change		16.33%		27.66%		51.46%		66.66%		45.59%		15.81%		39.89%		23.69%	
49 Base Rate		\$ 3.98		\$ 8.20		\$ 10.40		\$ 13.13		\$ 11.57		\$ 7.79		\$ 55.06		\$ 63.44	
50 % Change		9.78%		12.16%		12.77%		13.29%		13.02%		12.01%		12.46%		10.27%	
51 COG & LDAC		\$ 11.99		\$ 39.05		\$ 82.16		\$ 122.84		\$ 82.80		\$ 20.60		\$ 359.44		\$ 378.15	
52 % Change		21.00%		37.77%		83.45%		116.74%		70.07%		17.95%		60.20%		37.06%	

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Off Peak 2023 Summer Cost of Gas Filing

Schedule 8
Off-Peak
Page 2 of 5
(15)

1 Annual Bill Comparisons, May 22 Oct 22 Filing vs May 23 Oct 23		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
2 November 2022 October 2023		November 1, 2022 April 30, 2023							May 1, 2023 October 31, 2023							
3 Commercial Rate (G 41)		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
4 Typical Usage (Therms)		111	274	376	483	425	270	1,939	154	55	24	21	13	44	310	2,249
5 Winter:																
6 8/1/2021 9/1/2022																
7 Cust. Chg	\$ 57.06 \$ 63.30	\$ 63.30	\$ 63.30	\$ 63.30	\$ 63.30	\$ 63.30	\$ 63.30	\$ 379.80	\$ 63.30	\$ 63.30	\$ 63.30	\$ 63.30	\$ 63.30	\$ 63.30	\$ 379.80	\$ 759.60
8 Headblock	\$ 0.4688 \$ 0.5088	\$ 50.88	\$ 50.88	\$ 50.88	\$ 50.88	\$ 50.88	\$ 50.88	\$ 305.28	\$ 10.18	\$ 10.18	\$ 10.18	\$ 10.18	\$ 6.55	\$ 10.18	\$ 57.43	\$ 362.71
9 Tailblock	\$ 0.3149 \$ 0.3550	\$ 4.06	\$ 61.75	\$ 97.88	\$ 136.12	\$ 115.20	\$ 60.33	\$ 475.34	\$ 47.56	\$ 12.35	\$ 1.53	\$ 0.16	\$ -	\$ 8.40	\$ 70.02	\$ 545.36
10 HB Threshold	100 100	\$52.50	\$50.88	\$50.88	\$50.88	\$50.88	\$50.88									
11 Summer:																
12 8/1/2021 9/1/2022																
13 Cust. Chg	\$ 57.06 \$ 63.30	\$ 63.30	\$ 63.30	\$ 63.30	\$ 63.30	\$ 63.30	\$ 63.30	\$ 379.80	\$ 63.30	\$ 63.30	\$ 63.30	\$ 63.30	\$ 63.30	\$ 63.30	\$ 379.80	\$ 759.60
14 Headblock	\$ 0.4688 \$ 0.5088	\$ 50.88	\$ 50.88	\$ 50.88	\$ 50.88	\$ 50.88	\$ 50.88	\$ 305.28	\$ 10.18	\$ 10.18	\$ 10.18	\$ 10.18	\$ 6.55	\$ 10.18	\$ 57.43	\$ 362.71
15 Tailblock	\$ 0.3149 \$ 0.3550	\$ 4.06	\$ 61.75	\$ 97.88	\$ 136.12	\$ 115.20	\$ 60.33	\$ 475.34	\$ 47.56	\$ 12.35	\$ 1.53	\$ 0.16	\$ -	\$ 8.40	\$ 70.02	\$ 545.36
16 HB Threshold	100 100	\$52.50	\$50.88	\$50.88	\$50.88	\$50.88	\$50.88									
17 Total Base Rate Amount		\$ 118.24	\$ 175.93	\$ 212.06	\$ 250.30	\$ 229.38	\$ 174.51	\$ 1,160.42	\$ 121.04	\$ 85.83	\$ 75.00	\$ 73.66	\$ 69.85	\$ 81.87	\$ 507.25	\$ 1,667.67
18 COG Rate - (Seasonal)		\$ 1.4301	\$ 1.4301	\$ 1.4301	\$ 1.4301	\$ 1.4301	\$ 1.4301	\$ 1.4301	\$ 1.0271	\$ 1.0271	\$ 1.0271	\$ 1.0271	\$ 1.0271	\$ 1.0271	\$ 1.0271	\$ 1.3745
19 COG amount		\$ 159.38	\$ 391.75	\$ 537.33	\$ 691.36	\$ 607.08	\$ 386.04	\$ 2,772.94	\$ 158.16	\$ 56.27	\$ 24.96	\$ 21.07	\$ 13.22	\$ 44.84	\$ 318.53	\$ 3,091.46
20 LDAC		\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888
21 LDAC amount		\$ 9.90	\$ 24.33	\$ 33.37	\$ 42.93	\$ 37.70	\$ 23.97	\$ 172.18	\$ 13.67	\$ 4.87	\$ 2.16	\$ 1.82	\$ 1.14	\$ 3.68	\$ 27.54	\$ 199.72
22 Total Bill		\$ 287.52	\$ 592.00	\$ 782.76	\$ 984.58	\$ 874.16	\$ 584.51	\$ 4,105.53	\$ 292.87	\$ 146.96	\$ 102.13	\$ 96.55	\$ 84.21	\$ 130.59	\$ 853.32	\$ 4,958.85
23 November 2021 October 2022																
24 Commercial Rate (G 41)		November 1, 2021 April 30, 2022							May 1, 2022 October 31, 2022							
25 Typical Usage (Therms)		Nov 21	Dec 21	Jan 22	Feb 22	Mar 22	Apr 22	Winter Nov Apr	May 22	Jun 22	Jul 22	Aug 22	Sep 22	Oct 22	Summer May Oct	Total Nov Oct
26 8/1/2021 9/1/2022																
27 Cust. Chg	\$ 57.06 \$ 63.30	\$ 57.06	\$ 57.06	\$ 57.06	\$ 57.06	\$ 57.06	\$ 57.06	\$ 342.36	\$ 57.06	\$ 57.06	\$ 57.06	\$ 63.30	\$ 63.30	\$ 63.30	\$ 361.08	\$ 703.44
28 Headblock	\$ 0.4688 \$ 0.5088	\$ -	\$ 46.88	\$ 46.88	\$ 46.88	\$ 46.88	\$ 46.88	\$ 234.40	\$ 9.38	\$ 9.38	\$ 9.38	\$ 10.18	\$ 6.55	\$ 10.18	\$ 55.03	\$ 289.43
29 Tailblock	\$ 0.3149 \$ 0.3550	\$ 3.60	\$ 54.77	\$ 86.83	\$ 120.74	\$ 102.19	\$ 53.51	\$ 421.64	\$ 42.19	\$ 10.95	\$ 1.36	\$ 0.18	\$ -	\$ 8.40	\$ 63.08	\$ 484.73
30 HB Threshold	100 100															
31 Summer:																
32 8/1/2021 9/1/2022																
33 Cust. Chg	\$ 57.06 \$ 63.30	\$ 57.06	\$ 57.06	\$ 57.06	\$ 57.06	\$ 57.06	\$ 57.06	\$ 342.36	\$ 57.06	\$ 57.06	\$ 57.06	\$ 63.30	\$ 63.30	\$ 63.30	\$ 361.08	\$ 703.44
34 Headblock	\$ 0.4688 \$ 0.5088	\$ -	\$ 46.88	\$ 46.88	\$ 46.88	\$ 46.88	\$ 46.88	\$ 234.40	\$ 9.38	\$ 9.38	\$ 9.38	\$ 10.18	\$ 6.55	\$ 10.18	\$ 55.03	\$ 289.43
35 Tailblock	\$ 0.3149 \$ 0.3550	\$ 3.60	\$ 54.77	\$ 86.83	\$ 120.74	\$ 102.19	\$ 53.51	\$ 421.64	\$ 42.19	\$ 10.95	\$ 1.36	\$ 0.18	\$ -	\$ 8.40	\$ 63.08	\$ 484.73
36 HB Threshold	100 100															
37 Total Base Rate Amount		\$ 60.66	\$ 158.71	\$ 190.77	\$ 224.68	\$ 206.13	\$ 157.45	\$ 998.40	\$ 108.63	\$ 77.39	\$ 67.79	\$ 73.66	\$ 69.85	\$ 81.87	\$ 479.19	\$ 1,477.60
38 COG Rate - (Seasonal)		\$ 1.1341	\$ 1.0175	\$ 0.7248	\$ 0.5958	\$ 0.7745	\$ 1.1749	\$ 0.8311	\$ 0.6975	\$ 0.6975	\$ 0.6975	\$ 1.2303	\$ 1.2303	\$ 1.2303	\$ 0.8299	\$ 0.8309
39 COG amount		\$ 126.39	\$ 278.73	\$ 272.33	\$ 288.03	\$ 328.78	\$ 317.15	\$ 1,611.40	\$ 107.41	\$ 38.21	\$ 16.95	\$ 25.24	\$ 15.83	\$ 53.71	\$ 257.36	\$ 1,868.76
40 LDAC		\$ 0.0831	\$ 0.0749	\$ 0.0891	\$ 0.0891	\$ 0.0991	\$ 0.0991	\$ 0.0903	\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0915
41 LDAC amount		\$ 9.26	\$ 20.52	\$ 33.48	\$ 43.07	\$ 42.07	\$ 26.75	\$ 175.15	\$ 15.26	\$ 5.43	\$ 2.41	\$ 2.03	\$ 1.28	\$ 4.33	\$ 30.73	\$ 205.88
42 Total Bill		\$ 196.31	\$ 457.96	\$ 496.58	\$ 555.79	\$ 576.97	\$ 501.35	\$ 2,784.95	\$ 231.29	\$ 121.03	\$ 87.15	\$ 100.93	\$ 86.96	\$ 139.92	\$ 767.28	\$ 3,552.24
43 DIFFERENCE:																
44 Total Bill		\$ 91.20	\$ 134.05	\$ 286.19	\$ 428.80	\$ 297.19	\$ 83.16	\$ 1,320.58	\$ 61.58	\$ 25.93	\$ 14.97	\$ (4.38)	\$ (2.75)	\$ (9.32)	\$ 86.03	\$ 1,406.61
45 % Change		46.46%	23.27%	57.63%	77.15%	51.51%	16.59%	47.42%	26.62%	21.42%	17.18%	4.34%	3.16%	6.66%	11.21%	39.60%
46 Base Rate		\$ 57.58	\$ 17.21	\$ 21.30	\$ 25.62	\$ 23.25	\$ 17.05	\$ 162.01	\$ 12.41	\$ 8.43	\$ 7.21	\$ -	\$ -	\$ -	\$ 28.06	\$ 190.07
47 % Change		94.91%	10.85%	11.16%	11.40%	11.28%	10.83%	16.23%	11.43%	10.90%	10.64%	0.00%	0.00%	0.00%	5.86%	12.86%
48 COG & LDAC		\$ 33.62	\$ 116.83	\$ 264.89	\$ 403.18	\$ 273.93	\$ 66.11	\$ 1,158.57	\$ 49.17	\$ 17.49	\$ 7.76	\$ (4.38)	\$ (2.75)	\$ (9.32)	\$ 57.97	\$ 1,216.54
49 % Change		24.79%	39.04%	86.62%	121.77%	73.87%	19.22%	64.85%	40.08%	40.08%	40.08%	-16.06%	-16.06%	-16.06%	20.12%	58.64%

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Off Peak 2023 Summer Cost of Gas Filing

Schedule 8
Off-Peak
Page 3 of 5

1 Annual Bill Comparisons, May 22	2 Oct 22 Filing vs May 23	3 Oct 23	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
2 November 2022	3 October 2023		November 1, 2022	April 30, 2023						May 1, 2023	October 31, 2023						
3 C&I High Winter Use Medium G 42			November 1, 2021	April 30, 2022						May 1, 2022	October 31, 2022						
			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
4 Typical Usage (Therms)			1,369	2,729	3,456	4,165	3,658	2,463	17,839	1,201	1,412	257	100	(1,437)	978	2,510	20,349
5 Winter:	8/1/2021	9/1/2022															
6 Cust. Chg	\$ 171.19	\$ 189.84	\$ 189.84	\$ 189.84	\$ 189.84	\$ 189.84	\$ 189.84	\$ 189.84	\$ 1,139.04								
7 Headblock	\$ 0.4261	\$ 0.4634	\$ 463.40	\$ 463.40	\$ 463.40	\$ 463.40	\$ 463.40	\$ 463.40	\$ 2,780.40								
8 Tailblock	\$ 0.2839	\$ 0.3212	\$ 118.48	\$ 555.24	\$ 788.87	\$ 1,016.45	\$ 853.63	\$ 470.01	\$ 3,802.68								
9 HB Threshold	1,000	1,000															
10 Summer:	8/1/2021	9/1/2022															
11 Cust. Chg	\$ 171.19	\$ 189.84	\$ 189.84	\$ 189.84	\$ 189.84	\$ 189.84	\$ 189.84	\$ 189.84	\$ 1,139.04	\$ 189.84	\$ 189.84	\$ 189.84	\$ 189.84	\$ 189.84	\$ 189.84	\$ 1,139.04	\$ 2,278.08
12 Headblock	\$ 0.4261	\$ 0.4634	\$ 463.40	\$ 463.40	\$ 463.40	\$ 463.40	\$ 463.40	\$ 463.40	\$ 2,780.40	\$ 185.36	\$ 185.36	\$ 118.87	\$ 46.15	\$ (666.03)	\$ 185.36	\$ 55.07	\$ 2,835.47
13 Tailblock	\$ 0.2839	\$ 0.3212	\$ 118.48	\$ 555.24	\$ 788.87	\$ 1,016.45	\$ 853.63	\$ 470.01	\$ 3,802.68	\$ 257.22	\$ 325.06	\$ -	\$ -	\$ -	\$ 185.66	\$ 787.94	\$ 4,570.62
14 HB Threshold	400	400															
15 Total Base Rate Amount			\$ 771.72	\$ 1,208.48	\$ 1,442.11	\$ 1,669.69	\$ 1,506.87	\$ 1,123.25	\$ 7,722.12	\$ 632.42	\$ 700.26	\$ 308.71	\$ 235.99	\$ (476.19)	\$ 560.86	\$ 1,962.05	\$ 9,684.17
16 COG Rate - (Seasonal)			\$ 1.4301	\$ 1.4301	\$ 1.4301	\$ 1.4301	\$ 1.4301	\$ 1.4301	\$ 1.4301	\$ 1.0271	\$ 1.0271	\$ 1.0271	\$ 1.0271	\$ 1.0271	\$ 1.0271	\$ 1.0271	\$ 1.3804
17 COG amount			\$ 1,957.62	\$ 3,902.24	\$ 4,942.45	\$ 5,955.69	\$ 5,230.77	\$ 3,522.74	\$ 25,511.50	\$ 1,233.36	\$ 1,450.30	\$ 263.47	\$ 102.28	\$ (1,476.22)	\$ 1,004.52	\$ 2,577.70	\$ 28,089.21
18 LDAC			\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888
19 LDAC amount			\$ 121.56	\$ 242.30	\$ 306.89	\$ 369.81	\$ 324.80	\$ 218.74	\$ 1,584.10	\$ 106.63	\$ 125.39	\$ 22.78	\$ 8.84	\$ (127.63)	\$ 86.85	\$ 222.86	\$ 1,806.96
20 Total Bill			\$ 2,850.90	\$ 5,353.02	\$ 6,691.45	\$ 7,995.18	\$ 7,062.44	\$ 4,864.73	\$ 34,817.72	\$ 1,972.41	\$ 2,275.95	\$ 594.96	\$ 347.11	\$ (2,080.03)	\$ 1,652.22	\$ 4,762.61	\$ 39,580.33
21																	
22																	
23																	
24																	
25																	
26																	
27																	
28																	
29																	
30																	
31																	
32																	
33																	
34																	
35																	
36																	
37																	
38																	
39																	
40																	
41																	
42																	
43																	
44																	
45																	
46																	
47																	
48																	
49																	
50																	
51																	
52																	
53																	
54																	
55																	
56																	
57																	
58																	
59																	
60																	
61																	
62																	
63																	
64																	
65																	
66																	

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Off Peak 2023 Summer Cost of Gas Filing

Schedule 8
Off-Peak
Page 4 of 5

1 Annual Bill Comparisons, May 22 Oct 22 Filing vs May 23 Oct 23																																																																																																																			
2 November 2022 October 2023		(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)		(11)		(12)		(13)		(14)		(15)																																																																																					
3 Commercial Rate (G 52)		November 1, 2022 April 30, 2023																May 1, 2023 October 31, 2023																																																																																																	
		Nov 22							Dec 22							Jan 23							Feb 23							Mar 23							Apr 23							Winter Nov Apr							May 23							Jun 23							Jul 23							Aug 23							Sep 23							Oct 23							Summer May Oct							Total Nov Oct															
4 Typical Usage (Therms)		1,340							1,718							1,891							2,207							1,964							1,672							10,793							1,339							1,123							1,070							1,088							8,875							1,097							14,592							25,385															
5 Winter:		8/1/2021 9/1/2022																																																																																																																	
6 Cust. Chg		\$ 171.19 \$ 189.87																																																																																																																	
7 Headblock		\$ 0.2428 \$ 0.1978																																																																																																																	
8 Tailblock		\$ 0.1617 \$ 0.1219																																																																																																																	
9 HB Threshold		1000 1,000																																																																																																																	
10 Summer:		8/1/2021 9/1/2022																																																																																																																	
11 Cust. Chg		\$ 171.19 \$ 189.87																																																																																																																	
12 Headblock		\$ 0.1759 \$ 0.1933																																																																																																																	
13 Tailblock		\$ 0.1000 \$ 0.1174																																																																																																																	
14 HB Threshold		1000 1,000																																																																																																																	
15 Total Base Rate Amount		\$ 429.11							\$ 475.25							\$ 496.33							\$ 534.81							\$ 505.19							\$ 469.62							\$ 2,910.30							\$ 423.00							\$ 397.57							\$ 391.43							\$ 393.49							\$ 1,307.73							\$ 394.50							\$ 3,307.73							\$ 6,218.03															
16 COG Rate - (Seasonal)		\$ 1.4296							\$ 1.4296							\$ 1.4296							\$ 1.4296							\$ 1.4296							\$ 1.4296							\$ 1.4296							\$ 1.0266							\$ 1.0266							\$ 1.0266							\$ 1.0266							\$ 1.0266							\$ 1.0266							\$ 1.0266							\$ 1.1979															
17 COG amount		\$ 1,915.58							\$ 2,456.69							\$ 2,703.88							\$ 3,155.21							\$ 2,807.80							\$ 2,390.63							\$ 15,429.80							\$ 1,374.91							\$ 1,152.48							\$ 1,098.86							\$ 1,116.84							\$ 9,111.42							\$ 1,125.70							\$ 14,980.21							\$ 30,410.01															
18 LDAC		\$ 0.0888							\$ 0.0888							\$ 0.0888							\$ 0.0888							\$ 0.0888							\$ 0.0888							\$ 0.0888							\$ 0.0888							\$ 0.0888							\$ 0.0888							\$ 0.0888							\$ 0.0888							\$ 0.0888							\$ 0.0888							\$ 0.0888							\$ 0.0888								
19 LDAC amount		\$ 118.99							\$ 152.60							\$ 167.95							\$ 195.99							\$ 174.41							\$ 148.49							\$ 958.43							\$ 118.93							\$ 99.69							\$ 95.05							\$ 96.61							\$ 788.13							\$ 97.37							\$ 1,295.76							\$ 2,254.20															
20 Total Bill		\$ 2,463.68							\$ 3,084.53							\$ 3,368.16							\$ 3,886.01							\$ 3,487.40							\$ 3,008.74							\$ 19,298.52							\$ 1,916.83							\$ 1,649.73							\$ 1,585.35							\$ 1,606.94							\$ 11,207.29							\$ 1,617.58							\$ 19,583.72							\$ 38,882.24															
21 November 2021 October 2022		November 1, 2021 April 30, 2022																May 1, 2022 October 31, 2022																																																																																																	
22 Commercial Rate (G 52)		Nov 21																Dec 21							Jan 22							Feb 22							Mar 22							Apr 22							Winter Nov Apr							May 22							Jun 22							Jul 22							Aug 22							Sep 22							Oct 22							Summer May Oct							Total Nov Oct						
23 Typical Usage (Therms)		1,340							1,718							1,891							2,207							1,964							1,672							10,793							1,339							1,123							1,070							1,088							8,875							1,097							14,592							25,385															
24 Winter:		8/1/2021 9/1/2022																																																																																																																	
25 Cust. Chg		\$ 171.19 \$ 189.87																																																																																																																	
26 Headblock		\$ 0.2428 \$ 0.1978																																																																																																																	
27 Tailblock		\$ 0.1617 \$ 0.1219																																																																																																																	
28 HB Threshold		1,000 1,000																																																																																																																	
29 Summer:		8/1/2021 9/1/2022																																																																																																																	
30 Cust. Chg		\$ 171.19 \$ 189.87																																																																																																																	
31 Headblock		\$ 0.1759 \$ 0.1933																																																																																																																	
32 Tailblock		\$ 0.1000 \$ 0.1174																																																																																																																	
33 HB Threshold		1,000 1,000																																																																																																																	
34 Total Base Rate Amount		\$ 468.96							\$ 530.16							\$ 558.12							\$ 609.17							\$ 569.88							\$ 522.69							\$ 3,258.98							\$ 381.02							\$ 359.35							\$ 354.13							\$ 393.49							\$ 1,307.73							\$ 394.50							\$ 3,190.23							\$ 6,449.21															
35 COG Rate - (Seasonal)		\$ 1.1324							\$ 1.0158							\$ 0.7231							\$ 0.5941							\$ 0.7728							\$ 1.1732							\$ 0.8729							\$ 0.6991							\$ 0.6991							\$ 0.6991							\$ 1.2284							\$ 1.2284							\$ 1.2284							\$ 1.0003							\$ 1.0036															
36 COG amount		\$ 1,517.35							\$ 1,745.59							\$ 1,367.64							\$ 1,311.22							\$ 1,517.82							\$ 1,961.87							\$ 9,421.48							\$ 936.29							\$ 784.82							\$ 748.31							\$ 1,336.38							\$ 10,902.46							\$ 1,346.98							\$ 16,055.25							\$ 25,476.73															
37 LDAC		\$ 0.0831							\$ 0.0749							\$ 0.0891							\$ 0.0891							\$ 0.0991							\$ 0.0991							\$ 0.0895							\$ 0.0991							\$ 0.0991							\$ 0.0991							\$ 0.0991							\$ 0.0991							\$ 0.0991							\$ 0.0991							\$ 0.0950															
38 LDAC amount		\$ 111.35							\$ 128.71							\$ 168.52							\$ 196.65							\$ 194.64							\$ 165.72							\$ 965.59							\$ 132.72							\$ 111.25							\$ 106.08							\$ 107.81							\$ 879.55							\$ 108.67							\$ 1,446.07							\$ 2,411.66															
39 Total Bill		\$ 2,097.66							\$ 2,404.47							\$ 2,094.28							\$ 2,117.04							\$ 2,282.33							\$ 2,650.28							\$ 13,646.05							\$ 1,450.03							\$ 1,255.42							\$ 1,208.62							\$ 1,837.68							\$ 13,089.74							\$ 1,850.15							\$ 20,691.55							\$ 34,337.60															
40 DIFFERENCE:																																																																																																																			
41 Total Bill		\$ 366.02							\$ 680.06							\$ 1,273.88							\$ 1,768.98							\$ 1,205.07							\$ 358.46							\$ 5,652.47							\$ 466.80							\$ 394.31							\$ 376.83							\$ (230.74)							\$ (1,882.46)							\$ (232.58)							\$ (1,107.83)							\$ 4,544.63															
42 % Change		17.45%							28.28%							60.83%							83.56%							52.80%							13.53%							41.42%							32.19%							31.41%							31.18%							12.56%							14.38%							12.57%							5.35%							13.24%															
43 Base Rate		\$ (39.85)							\$ (54.91)							\$ (61.80)							\$ (74.36)							\$ (64.69)							\$ (53.07)							\$ (348.68)							\$ 41.98							\$ 38.21							\$ 37.30							\$ -							\$ -							\$ 117.50							\$ (231.18)																						
44 % Change		-8.50%							-10.36%							-11.07%							-12.21%							-11.35%							-10.15%							-10.70%							11.02%							10.63%							10.53%							0.00%							0.00%							0.00%							3.68%							-3.58%															
45 COG & LDAC		\$ 405.87							\$ 734.98							\$ 1,335.68							\$ 1,843.34							\$ 1,269.76							\$ 411.54							\$ 6,001.15							\$ 424.82							\$ 356.09							\$ 339.53							\$ (230.74)							\$ (1,882.46)							\$ (232.58)							\$ (1,225.34)							\$ 4,775.82															
46 % Change		24.92%							39.21%							86.95%							122.25%							74.15%							19.34%							57.78%							39.74%							39.74%							39.74%							-15.98%							-15.98%							-15.98%							-7.00%							17.12%															

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Off Peak 2023 Summer Cost of Gas Filing

Schedule 8
Off-Peak
Page 5 of 5

1 Residential Heating

	Summer 2022	Summer 2023
2		
3 Customer Charge	\$ 15.39	\$ 15.39
4 First 20 Therms	\$ 0.5632	\$ 0.6519
5 Excess 20 Therms	\$ 0.5632	\$ 0.6519
6 LDAC	\$ 0.1318	\$ 0.1110
7 COG	\$ 0.9034	\$ 1.0269
8 Total Adjust	\$ 1.0352	\$ 1.1379
9		
10		
11		
12		
13		

	Summer 2022 COG @	Summer 2023 Cog @
14	\$ 1.0352	\$ 1.1379
15		
16 Cooking alone	5 \$ 23.38	\$ 24.34
17		
18	10 \$ 31.37	\$ 33.29
19		
20	20 \$ 47.36	\$ 51.19
21		
22 Water Heating alone	30 \$ 63.34	\$ 69.08
23		
24	45 \$ 87.32	\$ 95.93
25		
26	50 \$ 95.31	\$ 104.88
27		
28 Heating Alone	80 \$ 135.27	\$ 149.63
29		
30	125 \$ 227.98	\$ 253.43
31		
32	150 \$ 255.15	\$ 283.86
33		
34	200 \$ 335.07	\$ 373.35
35		

Total			Base Rate		COG		LDAC	
\$ Impact	% Impact		\$ Impact	% Impact	\$ Impact	% Impact	\$ Impact	% Impact
\$ 0.10	10%							
\$ 0.96	4%		\$ 0.44	2%	\$ 0.62	3%	\$ (0.10)	0%
\$ 1.91	6%		\$ 0.89	3%	\$ 1.24	4%	\$ (0.21)	-1%
\$ 3.83	8%		\$ 1.77	4%	\$ 2.47	5%	\$ (0.42)	-1%
\$ 5.74	9%		\$ 2.66	4%	\$ 3.70	5%	\$ (0.62)	-1%
\$ 8.61	10%		\$ 3.99	5%	\$ 5.56	6%	\$ (0.94)	-1%
\$ 9.57	10%		\$ 4.44	5%	\$ 6.18	6%	\$ (1.04)	-1%
\$ 14.36	11%		\$ 6.65	5%	\$ 9.26	6%	\$ (1.56)	-1%
\$ 25.46	11%		\$ 11.80	5%	\$ 16.43	6%	\$ (2.77)	-1%
\$ 28.71	11%		\$ 13.31	5%	\$ 18.53	7%	\$ (3.12)	-1%
\$ 38.28	11%		\$ 17.74	5%	\$ 24.70	7%	\$ (4.16)	-1%

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

Schedule 10A
Page 1 of 3

2023 Summer Cost of Gas Filing
Capacity Assignment Calculations 2022-2023
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.	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	639	641	0.4%	97	544	
2	RATE R-3-Resi Htg	71,962	72,211	43.6%	3,484	68,728	
3	RATE G-41 (T)	30,001	30,106	18.2%	968	29,139	
4	RATE G-51 (S)	2,639	2,646	1.6%	742	1,904	
5	RATE G-42 (V)	38,016	38,148	23.0%	1,839	36,309	
6	RATE G-52	5,466	5,480	3.3%	1,742	3,738	
7	RATE G-43	9,590	9,623	5.8%	645	8,977	
8	RATE G-53	5,350	5,363	3.2%	1,871	3,492	
9	RATE G-54	1,417	1,421	0.9%	419	1,001	
10							
11	Total	165,079	165,638	100.0%	11,806	153,832	
12							
13	Residential Total	72,601	72,852	43.983%	3,581	69,272	
14	LLF Total	77,606	77,877	47.016%	3,452	74,425	
15	HLF Total	14,872	14,909	9.001%	4,774	10,135	
16	Total	165,079	165,638	100.0%	11,806	153,832	
17							
18	C&I Breakdown						
19	LLF Total				3,452	74,425	
20	HLF Total				4,774	10,135	
21	Total				8,226	84,560	
22							
23	C&I Breakdown Percentage						
24	LLF Total				41.961%	88.014%	
25	HLF Total				58.039%	11.986%	
26	Total				100.0%	100.0%	
27							
28		Capacity Cost	MDQ, Dt	\$/Dt-Mo.			
29	Pipeline	\$16,149,021	119,718	\$11 2410			
30	Storage	\$4,130,365	28,115	\$12 2425			
31							
32	Peaking	\$2,370,511					
33	Peaking Additional Costs (Concord Lateral Peaking x Differential)	\$0					
34	Subtotal Peaking Costs	\$2,370,511	17,805	\$11 0948			
35	Total	\$22,649,897	165,638	\$11 3953			
36							
37		Capacity Cost	MDQ, Dt	\$/Dt-Mo.			
38	Pipeline - Baseload	1,592,596	11,806	\$11 2410			
39	Pipeline - Remaining	14,556,425	107,912	\$11 2410			
40	Storage	4,130,365	28,115	\$12 2425			
41	Peaking	2,370,511	17,805	\$11 0948			
42	Total	22,649,897	165,638	\$11 3953			
43							
44							
45	Residential Allocation	Capacity Cost	MDQ, Dt	\$/Dt-Mo.			
46	Pipeline - Base	Line 38 * Line 13 Col C	43.983%	700,471	5,193	\$11 2410	
47	Pipeline - Remaining	Line 39 * Line 13 Col C	43.983%	6,402,344	47,463	\$11 2410	
48	Storage	Line 40 * Line 13 Col C	43.983%	1,816,663	12,366	\$12 2425	
49	Peaking	Line 41 * Line 13 Col C	43.983%	1,042,601	7,831	\$11 0948	
50	Total		43.983%	9,962,098	72,852	\$11 3953	
51							

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

53
54 **2023 Summer Cost of Gas Filing**
55 **Capacity Assignment Calculations 2022-2023**
56 **Derivation of Class Assignments and Weightings**
57

				Ratios for COG		
58						
59	C&I Allocation		Capacity Cost	MDQ, Dt	\$/Dt-Mo.	
60	Pipeline - Base	Line 38 - Line 46	892,125	6,614	\$11 2410	
61	Pipeline - Remaining	Line 39 - Line 47	8,154,081	60,449	\$11 2410	
62	Storage	Line 40 - Line 48	2,313,702	15,749	\$12 2424	
63	Peaking	Line 41 - Line 49	1,327,910	9,974	\$11 0948	
64	Total		56.017% 12,687,818	92,786	\$11 3953	1.0000
65						
66						
67	LLF - C&I Allocation		Capacity Cost	MDQ, Dt	\$/Dt-Mo.	
68	Pipeline - Base	Line 60 * Line 24 Col E	374,343	2,775	\$11 2415	
69	Pipeline - Remaining	Line 61 * Line 24 Col F	7,176,761	53,204	\$11 2409	
70	Storage	Line 62 * Line 24 Col F	2,036,390	13,862	\$12 2420	
71	Peaking	Line 63 * Line 24 Col F	1 168 752	8 779	\$11 0942	
72	Total		47.4892% 10,756,246	78,620	\$11.4011	1.0005
73			41.961% 85%			(Line 72 / Line 64)
74						
75	HLF - C&I Allocation		Capacity Cost	MDQ, Dt	\$/Dt-Mo.	
76	Pipeline - Base	Line 60 - Line 68	517,782	3,839	\$11 2395	
77	Pipeline - Remaining	Line 61 - Line 69	977,320	7,245	\$11 2413	
78	Storage	Line 62 - Line 70	277,312	1,887	\$12 2466	
79	Peaking	Line 63 - Line 71	159 158	1 195	\$11 0989	
80	Total		8.5280% 1,931,572	14,166	\$11 3627	0.9971
81						(Line 80 / Line 64)
82						
83	Unit Cost		Residential	LLF C&I	HLF C&I	
84						
85	Pipeline		\$ 11.2410	\$ 11.2410	\$ 11.2410	
86	Storage		\$ 12.2425	\$ 12.2425	\$ 12.2425	
87	Peaking		\$ -	\$ -	\$ -	
88	Total		\$ 11.3953	\$ 11.4011	\$ 11.3627	
89						
90						
91	Load Makeup		Residential	LLF C&I	HLF C&I	
92						
93	Pipeline		72 28%	71.20%	78.24%	
94	Storage		16 97%	17.63%	13.32%	
95	Peaking		10 75%	11.17%	8.44%	
96	Total		100 00%	100.00%	100.00%	
97						
98						
99	Supply Makeup		Residential	LLF C&I	HLF C&I	Total
100						
101	Pipeline		43 98%	46.76%	9.26%	100 00%
102	Storage		43 98%	49 30%	6.71%	100 00%
103	Peaking		43 98%	49 31%	6.71%	100 00%

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

Schedule 10A
Page 3 of 3

2
3 **2023 Summer Cost of Gas Filing**
4 **Correction Factor Calculation**

	d	e	f	g	h	i	Total Sales
8 Data Source: Schedule 10B	May	June	July	Aug	Sep	Oct	
11 G-41	747,050	280,900	206,300	208,340	367,080	958,770	2,768,440
12 G-42	699,850	303,310	225,260	233,780	406,410	879,510	2,748,120
13 G-43	182,490	74,810	59,600	60,370	102,490	207,170	686,930
14 High Winter Use	1,629,390	659,020	491,160	502,490	875,980	2,045,450	6,203,490
16 G-51	204,580	181,150	182,590	182,770	188,450	244,780	1,184,320
17 G-52	226,060	205,490	216,980	216,330	215,810	260,610	1,341,280
18 G-53	309,892	269,892	270,211	265,876	271,048	323,306	1,710,225
19 G-54	15,380	19,010	22,810	24,340	22,210	24,280	128,030
21 Low Winter Use	755,912	675,542	692,591	689,316	697,518	852,976	4,363,855
23 Gross Total	2,385,302	1,334,562	1,183,751	1,191,806	1,573,498	2,898,426	10,567,345

26 Total Sales	10,567,345
27 Low Winter Use	4,363,855
28 Summer Ratio for Low Winter Use	0.9971 Schedule 10A p 2, ln 80
29 High Winter Use	6,203,490
30 Summer Ratio for High Winter Use	1.0005 Schedule 10A p 2, ln 72
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 =	100.0905%

36 **Allocation Calculation for Miscellaneous Overhead**

38 Projected Winter Sales Volume	11/1/22 - 4/30/23	92,780,984	Sch.10B, ln 23
39 Projected Annual Sales Volume	11/1/22 - 10/31/23	116,429,889	Sch.10B, ln 23
40 Percentage of Winter Sales to Annual Sales		79.69%	

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

Schedule 10B

2

Page 1 of 1

3 Off Peak 2023 Summer Cost of Gas Filing

4 2023 Summer Cost of Gas Filing

5

6

Dry Therms

7 Firm Sales

8

	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	Subtotal PK 22-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Subtotal OP 23	Total
9 R-1	68,950	88,860	102,240	87,330	87,040	65,450	499,870	52,140	39,450	34,490	34,700	38,650	52,460	251,890	751,760
10 R-3	6,285,460	9,460,770	11,083,750	9,374,930	7,887,130	4,769,830	48,861,870	2,698,720	1,310,080	1,017,330	1,041,040	1,740,970	4,150,980	11,959,120	60,820,990
11 R-4	456,240	673,650	788,260	669,350	566,410	365,300	3,519,210	206,240	101,740	77,310	76,480	120,880	287,900	870,550	4,389,760
12 Total Residential.	6,810,650	10,223,280	11,974,250	10,131,610	8,540,580	5,200,580	52,880,950	2,957,100	1,451,270	1,129,130	1,152,220	1,900,500	4,491,340	13,081,560	65,962,510
13															
14 G-41	2,024,090	3,305,230	3,990,080	3,360,930	2,728,610	1,602,400	17,011,340	747,050	280,900	206,300	208,340	367,080	958,770	2,768,440	19,779,780
15 G-42	1,638,690	2,577,550	3,049,640	2,578,010	2,207,610	1,222,890	13,274,390	699,850	303,310	225,260	233,780	406,410	879,510	2,748,120	16,022,510
16 G-43	356,550	540,700	658,270	547,120	495,700	292,490	2,890,830	182,490	74,810	59,600	60,370	102,490	207,170	686,930	3,577,760
17 G-51	279,050	363,480	398,180	331,040	342,590	216,120	1,930,460	204,580	181,150	182,590	182,770	188,450	244,780	1,184,320	3,114,780
18 G-52	328,800	421,730	457,600	372,490	381,360	245,600	2,207,580	226,060	205,490	216,980	216,330	215,810	260,610	1,341,280	3,548,860
19 G-53	364,036	444,039	483,757	396,097	410,759	345,126	2,443,814	309,892	269,892	270,211	265,876	271,048	323,306	1,710,225	4,154,039
20 G-54	36,310	41,220	17,430	15,680	16,970	14,010	141,620	15,380	19,010	22,810	24,340	22,210	24,280	128,030	269,650
21 Total C/I	5,027,526	7,693,949	9,054,957	7,601,367	6,583,599	3,938,636	39,900,034	2,385,302	1,334,562	1,183,751	1,191,806	1,573,498	2,898,426	10,567,345	50,467,379
22															
23 Sales Volume	11,838,176	17,917,229	21,029,207	17,732,977	15,124,179	9,139,216	92,780,984	5,342,402	2,785,832	2,312,881	2,344,026	3,473,998	7,389,766	23,648,905	116,429,889
24															
25 Transportation Sales															
26															
27 G-41	582,770	880,040	1,055,350	869,770	774,950	457,900	4,620,780	265,850	143,190	108,120	97,250	159,240	331,950	1,105,600	5,726,380
28 G-42	1,997,440	2,956,400	3,441,830	2,872,700	2,552,380	1,546,030	15,366,780	919,290	503,450	400,550	403,990	669,630	1,280,150	4,177,060	19,543,840
29 G-43	778,960	1,055,230	1,249,450	1,050,480	981,780	544,520	5,660,420	369,150	239,600	215,710	243,220	342,610	535,700	1,945,990	7,606,410
30 G-51	87,610	108,870	116,400	96,830	101,020	83,010	593,740	78,680	65,660	61,970	61,670	64,120	76,290	408,390	1,002,130
31 G-52	515,770	638,420	695,870	577,050	589,970	437,350	3,454,430	396,040	365,860	371,740	366,710	375,870	444,530	2,320,750	5,775,180
32 G-53	871,410	1,003,760	1,096,490	926,310	943,320	847,150	5,688,440	731,010	625,610	627,450	662,150	677,440	792,690	4,116,350	9,804,790
33 G-54	1,589,640	1,297,120	1,272,510	1,056,470	1,163,130	1,359,460	7,738,330	1,562,310	1,567,620	1,631,390	1,738,910	1,681,980	1,754,440	9,936,650	17,674,980
34															
35 Total Trans. Sales	6,423,600	7,939,840	8,927,900	7,449,610	7,106,550	5,275,420	43,122,920	4,322,330	3,510,990	3,416,930	3,573,900	3,970,890	5,215,750	24,010,790	67,133,710
36															
37 Total All Sales	18,261,776	25,857,069	29,957,107	25,182,587	22,230,729	14,414,636	135,903,904	9,664,732	6,296,822	5,729,811	5,917,926	7,444,888	12,605,516	47,659,695	183,563,599

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

Schedule 11A

2

Page 1 of 1

3 Off Peak 2023 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 23 -October 23

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Off Peak May - Oct
13 Pipeline Gas:							
14 Dawn Supply	842,983	655,282	518,079	495,174	712,922	601,154	3,825,595
15 Niagara Supply	667,764	585,319	584,500	583,125	598,573	687,845	3,707,126
16 TGP Supply (Gulf)	29,663	-	-	-	-	327,579	357,242
17 Dracut Supply 1 - Baseload	-	-	-	-	-	-	0
18 Dracut Supply 2 - Swing	-	-	-	-	-	435,588	435,588
19 Dracut Supply 3 - Swing	-	-	-	-	-	-	-
20 Constellation Combo	-	-	-	-	-	-	0
21 LNG Truck	-	-	4,831	10,843	17,887	110,141	143,701
22 Propane Truck	79,331	71,837	69,440	69,276	73,464	81,717	445,066
23 PNGTS	211,780	185,528	182,354	184,937	189,729	218,149	1,172,479
24 Portland Natural Gas	889,892	29,984	-	-	-	522,990	1,442,866
25 TGP Supply (Z4)	5,379,362	4,713,785	4,706,794	4,696,924	4,822,444	5,548,240	29,867,549
	8,100,776	6,241,736	6,065,997	6,040,279	6,415,019	8,533,404	41,397,212
28 Storage Gas:							
29	-	-	-	-	-	-	0
31 Produced Gas:							
32 LNG Vapor	20,005	18,116	17,511	17,470	18,526	20,607	112,234
33 Propane	-	-	-	-	-	-	0
	20,005	18,116	17,511	17,470	18,526	20,607	112,234
36 Less - Gas Refills:							
37 LNG Truck	-	-	(4,831)	(10,843)	(17,887)	(110,141)	(143,701)
38 Propane	(79,331)	(71,837)	(69,440)	(69,276)	(73,464)	(81,717)	(445,066)
39 TGP Storage Refill	(2,622,767)	(2,671,728)	(3,066,813)	(2,770,444)	(2,599,354)	(1,122,012)	(14,853,118)
	(2,702,098)	(2,743,565)	(3,141,083)	(2,850,564)	(2,690,705)	(1,313,870)	(15,441,885)
42 Total Sendout Volumes	5,418,683	3,516,286	2,942,425	3,207,185	3,742,840	7,240,141	26,067,561

43

1 Liberty Utilities (EnergyNorth Natural Gas) Corp.

Schedule 11B

2

Page 1 of 1

3 Off Peak 2023 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 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 Constellation Combo

60 LNG Truck

61 Propane Truck

62 PNGTS

63 Portland Natural Gas

64 TGP Supply (Z4)

65 Subtotal Pipeline Volumes

66

67 Storage Gas:

68 TGP Storage

69

70 Produced Gas:

71 LNG Vapor

72 Propane

73 Subtotal Produced Gas

74

75 Less - Gas Refills:

76 LNG Truck

77 Propane

78 TGP Storage Refill

79 Subtotal Refills

80

81 Total Sendout Volumes

	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Off Peak May - Oct
Pipeline Gas:							
Dawn Supply	842,293	650,910	512,645	413,850	711,005	595,469	3,726,172
Niagara Supply	667,764	585,319	584,500	583,125	598,573	687,845	3,707,126
TGP Supply (Gulf)	26,904	-	-	-	-	321,895	348,798
Dracut Supply 1 - Baseload	-	-	-	-	-	-	0
Dracut Supply 2 - Swing	-	-	-	-	-	-	-
Constellation Combo	-	-	-	-	-	-	0
LNG Truck	-	-	1,811	18,674	19,165	103,035	142,685
Propane Truck	53,118	71,837	69,440	69,276	73,464	81,717	418,852
PNGTS	211,780	185,528	180,543	184,937	189,729	218,149	1,170,667
Portland Natural Gas	-	-	-	515,884	-	546,389	1,062,273
TGP Supply (Z4)	5,381,432	4,713,785	4,708,001	4,696,322	4,819,888	5,548,240	29,867,669
Subtotal Pipeline Volumes	7,183,290	6,207,379	6,056,940	6,482,068	6,411,825	8,102,740	40,444,243
Storage Gas:							
TGP Storage	-	-	-	-	-	-	0
Produced Gas:							
LNG Vapor	20,005	18,116	17,511	17,470	18,526	20,607	112,234
Propane	-	-	-	-	-	-	-
Subtotal Produced Gas	20,005	18,116	17,511	17,470	18,526	20,607	112,234
Less - Gas Refills:							
LNG Truck	-	-	(1,811)	(18,674)	(19,165)	(103,035)	(142,685)
Propane	(53,118)	(71,837)	(69,440)	(69,276)	(73,464)	(81,717)	(418,852)
TGP Storage Refill	(2,646,221)	(2,685,471)	(3,076,474)	(2,705,987)	(2,615,324)	(1,128,408)	(14,857,885)
Subtotal Refills	(2,699,339)	(2,757,308)	(3,147,725)	(2,793,938)	(2,707,953)	(1,313,159)	(15,419,422)
Total Sendout Volumes	4,503,957	3,468,186	2,926,726	3,705,600	3,722,398	6,810,188	25,137,055

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

2

3 **Off Peak 2023 Summer Cost of Gas Filing**

4 **Capacity Utilization**

5 **Volumes (Therms)**

6

7

8

9

10

11 **Pipeline Gas:**

12 Dawn Supply

13 Niagara Supply

14 TGP Supply (Gulf)

15 Dracut Supply 1 & 2 & 3

16 LNG Truck

17 Propane Truck

18 PNGTS

Portland Natural Gas

19 TGP Supply (Z4)

20 Other Purchased Resources

21

22 Subtotal Pipeline Volumes

23

24 **Storage Gas:**

25 0

26

27 **Produced Gas:**

28 LNG Vapor

29 Propane

30

31 Subtotal Produced Gas

32

33 **Less - Gas Refills:**

34 LNG Truck

35 Propane

36 TGP Storage Refill

37

38 Subtotal Refills

39

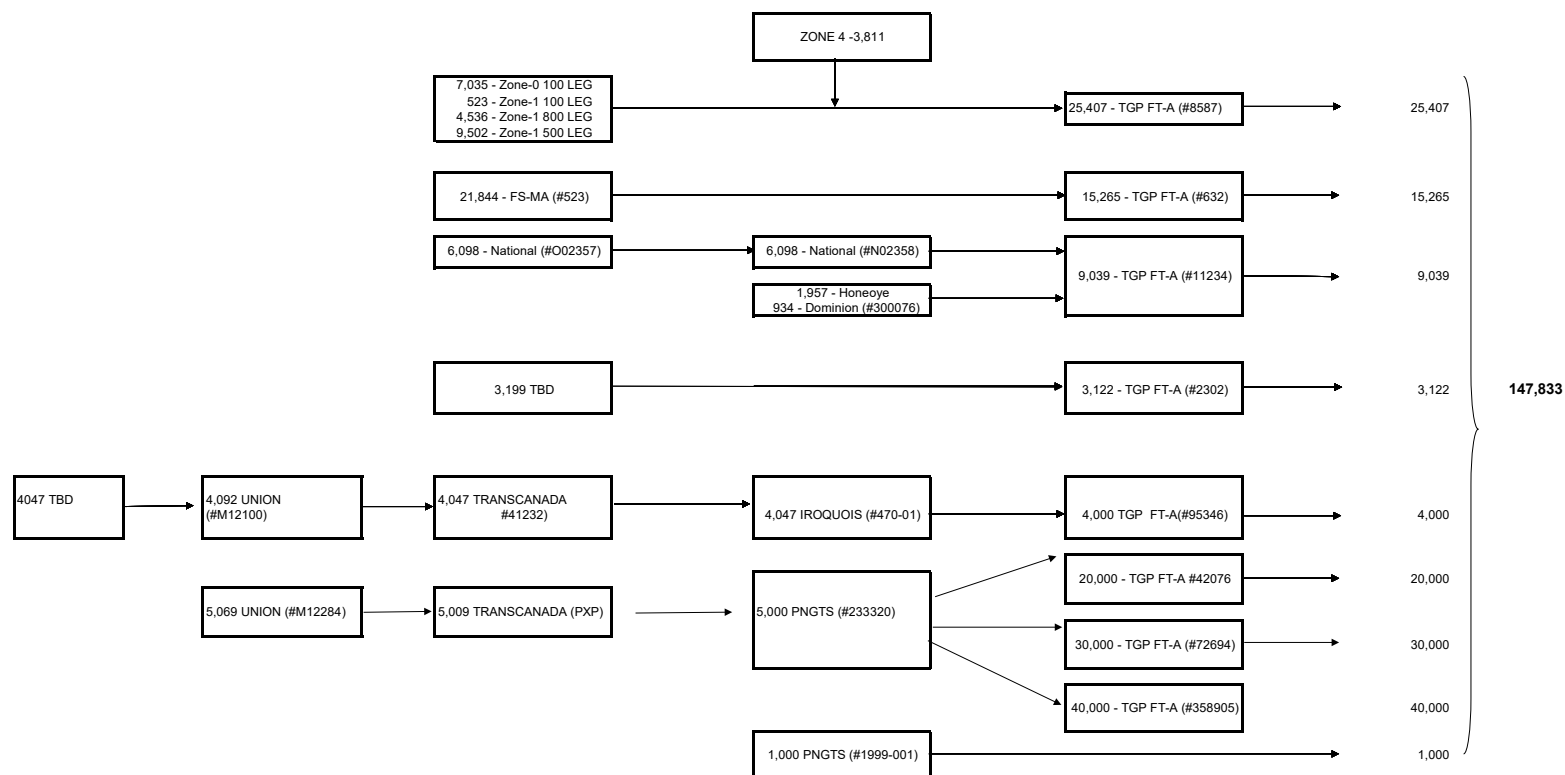
40 Total Sendout Volumes

	Off-Peak Period				Off-Peak Period			
	Normal Year		Seasonal	Utilization	Design Year		Seasonal	Utilization
	Use	MDQ	Quantity	Rate	Use	MDQ	Quantity	Rate
	(Therms)	(MMBtu/day)	(Therms)		(Therms)	(MMBtu/day)	(Therms)	
Dawn Supply	3,825,595	4,000	7,360,000	52%	3,726,172	4,000	7,360,000	51%
Niagara Supply	3,707,126	3,122	5,744,480	65%	3,707,126	3,122	5,744,480	65%
TGP Supply (Gulf)	357,242	21,596	39,736,640	1%	348,798	21,596	39,736,640	1%
Dracut Supply 1 & 2 & 3	435,588	90,000	165,600,000	0%	-	90,000	165,600,000	0%
LNG Truck	143,701	-	-	-	142,685	-	-	-
Propane Truck	445,066	-	-	-	418,852	-	-	-
PNGTS	1,172,479	1,000	1,840,000	64%	1,170,667	1,000	1,840,000	64%
Portland Natural Gas	1,442,866	5,000	9,200,000	16%	1,062,273	5,000	9,200,000	12%
TGP Supply (Z4)	29,867,549	21,596	39,736,640	75%	29,867,669	21,596	39,736,640	75%
Other Purchased Resources	-	-	-	-	-	-	-	-
Subtotal Pipeline Volumes	41,397,212				40,444,243			
Storage Gas:								
0	0		25,792,710	0%	-		25,792,710	0%
Produced Gas:								
LNG Vapor	112,234				112,234			
Propane	-				-			
Subtotal Produced Gas	112,234				112,234			
Less - Gas Refills:								
LNG Truck	(143,701)				(142,685)			
Propane	(445,066)				(418,852)			
TGP Storage Refill	(14,853,118)				(14,857,885)			
Subtotal Refills	(15,441,885)				(15,419,422)			
Total Sendout Volumes	26,067,561				25,137,055			

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

Off Peak 2023 Summer Cost of Gas Filing
Transportation Available for Pipeline Supply and Storage
(MMBtu)

Schedule 12
Page 1 of 2



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

Off Peak 2023 Summer Cost of Gas Filing
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.

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

Schedule 13

2
3 Off Peak 2023 Summer Cost of Gas Filing

Page 1 of 3

4 Storage Inventory

5
6 Underground Storage Gas

		Mar-23 (Estimate)	Apr-23 (Estimate)	May-23 (Estimate)	Jun-23 (Estimate)	Jul-23 (Estimate)	Aug-23 (Estimate)	Sep-23 (Estimate)	Oct-23 (Estimate)	Total
7	Beginning Balance (MMBtu)	267,447	117,604	110,962	242,666	562,403	882,140	1,201,877	1,521,615	110,962
9	Injections (MMBtu) Sch 11A In 39 /10	-	93,358	319,737	319,737	319,737	319,737	319,737	507,771	2,106,458
10	Subtotal	267,447	210,962	430,700	562,403	882,140	1,201,877	1,521,615	2,029,386	
11	Storage Sale									
12	Withdrawals (MMBtu) Sch 11A In 29 /10	(149,843)	(100,000)	(188,034)	-	-	-	-	-	(188,034)
13	Ending Balance (MMBtu)	117,604	110,962	242,666	562,403	882,140	1,201,877	1,521,615	2,029,386	2,029,386
14										
15	Beginning Balance	1,528,752	672,235	565,691	1,269,530	2,953,097	4,658,122	6,367,170	8,067,166	\$ 565,691
16	Injections In 11 * In 36	-	403,260	1,662,445	1,683,568	1,705,025	1,709,048	1,699,996	2,737,016	11,197,098
17	Subtotal	\$ 1,528,752	\$ 1,075,496	\$ 2,228,136	\$ 2,953,097	\$ 4,658,122	\$ 6,367,170	\$ 8,067,166	\$ 10,804,182	
18	Storage Sale									
19	Withdrawals In 17 * In 34	(858,517)	(509,805)	(958,606)	-	-	-	-	-	(958,606)
20	Ending Balance	\$ 672,235	\$ 565,691	\$ 1,269,530	\$ 2,953,097	\$ 4,658,122	\$ 6,367,170	\$ 8,067,166	\$ 10,804,182	\$ 10,804,182
21										
22	Average Rate For Withdrawals In 22 /In 9	\$ 5.7161	\$ 5.0980	\$ 5.1733	\$ 5.2509	\$ 5.2805	\$ 5.2977	\$ 5.3017	\$ 5.3239	
23	TGP Storage Rate for Injections									
24	Actual or NYMEX plus TGP Transportation	\$ -	\$ 4.5187	\$ 4.4697	\$ 4.4697	\$ 4.5727	\$ 4.6039	\$ 3.9720	\$ 3.9544	

37 Liberty Utilities (EnergyNorth Natural Gas) Corp.

Schedule 13

38

Page 2 of 3

39 Off Peak 2023 Summer Cost of Gas Filing

40

41 Liquid Propane Gas (LPG)

		Mar-23 (Estimate)	Apr-23 (Estimate)	May-23 (Estimate)	Jun-23 (Estimate)	Jul-23 (Estimate)	Aug-23 (Estimate)	Sep-23 (Estimate)	Oct-23 (Estimate)	Total
42	Beginning Balance	53,013	53,013	58,590	58,590	58,590	65,534	72,462	79,808	58,590
43										
44	Injections									
45	Sch 11A In 38 /10	-	5,577	-	-	6,944	6,928	7,346	8,172	29,390
46										
47	Subtotal	53,013	58,590	58,590	58,590	65,534	72,462	79,808	87,980	
48										
49	Withdrawals									
50	Sch 11A In 33 /10	-	-	-	-	-	-	-	-	-
51										
52	Adjustment for change in temperature	-	-	-	-	-	-	-	-	-
53	Adjustment for Transfer	-	-	-	-	-	-	-	-	-
54	Ending Balance	53,013	58,590	58,590	58,590	65,534	72,462	79,808	87,980	87,980
55										
56										
57	Beginning Balance	\$ 694,991	\$ 1,063,407	\$ 1,063,407	\$ 1,063,407	\$ 1,063,407	\$ 1,063,407	\$ 1,063,407	\$ 1,218,669	\$ 1,126,358
58										
59	Injections									
60	In 46 * In 69	-	62,952	-	-	131,241	130,932	138,847	154,445	555,465
61										
62	Subtotal	\$ 694,991	\$ 1,126,358	\$ 1,063,407	\$ 1,063,407	\$ 1,194,647	\$ 1,194,339	\$ 1,202,254	\$ 1,373,115	
63										
64	Withdrawals									
65	In 52 * In 67	-	-	-	-	-	-	-	-	-
66										
67	Ending Balance	\$ 694,991	\$ 1,126,358	\$ 1,063,407	\$ 1,063,407	\$ 1,194,647	\$ 1,194,339	\$ 1,202,254	\$ 1,373,115	\$ 1,681,824
68										
69	Average Rate For Withdrawals	\$ 13.1097	\$ 19.2243	\$ 18.1499	\$ 18.1499	\$ 18.2294	\$ 16.4823	\$ 15.0643	\$ 15.6071	
	Propane Rate for									
	Injections									
	Actual or Sch. 6, In 166 * 10	\$ -	\$ 11.2880	\$ 18.9000	\$ 18.9000	\$ 18.9000	\$ 18.9000	\$ 18.9000	\$ 18.9000	

70 Liberty Utilities (EnergyNorth Natural Gas) Corp.

Schedule 13

71
72 Off Peak 2023 Summer Cost of Gas Filing

Page 3 of 3

73	Liquid Natural Gas (LNG)		Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Total
74			(Estimate)	(Estimate)		(Estimate)	(Estimate)	(Estimate)	(Estimate)	(Estimate)	
75	Beginning Balance		6,739	15,636	13,535	11,535	9,723	8,455	7,793	7,729	13,535
76	Injections	Sch 11A In 37 /10	11,047	-	-	-	483	1,084	1,789	11,014	14,370
77	Subtotal		17,786	15,636	13,535	11,535	10,206	9,540	9,581	18,743	
78	Withdrawals	Sch 11A In 32 /10	(2,150)	(2,100)	(2,001)	(1,812)	(1,751)	(1,747)	(1,853)	(2,061)	(11,223)
79	Ending Balance		15,636	13,535	11,535	9,723	8,455	7,793	7,729	16,682	16,682
80	Beginning Balance		159,641	249,969	216,391	184,408	155,447	130,721	111,094	96,599	\$ 216,391
81	Injections	In 78 * In 99	124,702	-	-	-	2,346	5,278	8,659	54,090	70,373
82	Subtotal		\$ 284,344	\$ 249,969	\$ 216,391	\$ 184,408	\$ 157,793	\$ 135,999	\$ 119,753	\$ 150,689	
83	Withdrawals	In 82 * In 97	(34,374)	(33,579)	(31,982)	(28,961)	(27,072)	(24,905)	(23,154)	(16,568)	(152,643)
84	Ending Balance		\$ 249,969	\$ 216,391	\$ 184,408	\$ 155,447	\$ 130,721	\$ 111,094	\$ 96,599	\$ 134,121	\$ 134,121
85	Average Rate For Withdrawals		\$ 15.9869	\$ 15.9869	\$ 15.9869	\$ 15.9869	\$ 15.4601	\$ 14.2562	\$ 12.4985	\$ 8.0398	
86	LNG Rate for Injections	Actual or Sch. 6, In 165 * 10	\$ -	\$ 11.2880	\$ 11.2880	\$ 11.2880	\$ 11.2880	\$ 11.2880	\$ 11.2880	\$ 11.2880	\$ 11.2880

THIS PAGE LEFT BLANK INTENTIONALLY

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
November 2022 – October 2023 LDAC
Factor Summary (EnergyNorth & Keene Service Area)
Table of Schedules

Summary of LDAC Rate Components	Schedule 1
Energy Efficiency Charge	Schedule 2
Environmental Surcharge	Schedule 3
Revenue Decoupling Adjustment Factor	Schedule 4
Property Tax Adjustment Mechanism	Schedule 5
Rate Case Expense Factor	Schedule 6
Gas Assistance Program	Schedule 7
Bill Impact	Schedule 8
Tariff Page 99	Tariff Page 99
Tariff Page 100	Tariff Page 100

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
November 2022 – October 2023 LDAC
Factor Summary (EnergyNorth & Keene Service Area)
(\$/Therm)

Line No.	Rate Schedule	Energy Efficiency Charge	Demand Side Management Charge	Conservation Charge (CCx)	Relief Holder and pond at Gas Street, Concord, NH*	Manufactured Gas Plants	Environmental Surcharge (ES)	Revenue Decoupling Adjustment Factor* (RDAF)	Property Tax Adjustment Mechanism (PTAM)	Rate Case Expense Factor (RCEF)	Gas Assistance Program (GAP)	Total
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(K)	(D)+(G)+(H)+(I)+(J)+(K)
Reference	Schedule 2	N/A	(B)+(C)	Schedule 3	Schedule 3	(E)+(F)	Schedule 4	Schedule 5	Schedule 6	Schedule 7		
<u>Residential Customers</u>												
1	R-1 Non-Heating	\$0.0664	\$0.0000	\$0.0664	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.1110
2	R-5 Non-Heating (MEP)	\$0.0664	\$0.0000	\$0.0664	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.1110
3	R-3 Heating	\$0.0664	\$0.0000	\$0.0664	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.1110
4	R-6 Heating (MEP)	\$0.0664	\$0.0000	\$0.0664	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.1110
5	R-4 Heating Gas Assistance Program	\$0.0664	\$0.0000	\$0.0664	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.1110
6	R-7 Heating Gas Assistance Program (MEP)	\$0.0664	\$0.0000	\$0.0664	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.1110
<u>Commercial/Industrial Sales Customers</u>												
7	G-41 Low Annual/High Winter Use	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
8	G-44 Low Annual/High Winter Use (MEP)	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
9	G-51 Low Annual/Low Winter Use	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
10	G-55 Low Annual/Low Winter Use (MEP)	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
11	G-42 Medium Annual/High Winter Use	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
12	G-45 Medium Annual/High Winter Use (MEP)	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
13	G-52 Medium Annual/Low Winter Use	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
14	G-56 Medium Annual/Low Winter Use (MEP)	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
15	G-43 High Annual/High Winter Use	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
16	G-46 High Annual/High Winter Use (MEP)	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
17	G-53 High Annual/Load Factor < 90%	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
18	G-57 High Annual/Load Factor < 90% (MEP)	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
19	G-54 High Annual/Load Factor > 90%	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
20	G-58 High Annual/Load Factor > 90% (MEP)	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
<u>Commercial/Industrial Transportation Customers</u>												
21	G-41 Low Annual/High Winter Use	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
22	G-44 Low Annual/High Winter Use (MEP)	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
23	G-51 Low Annual/Low Winter Use	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
24	G-55 Low Annual/Low Winter Use (MEP)	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
25	G-42 Medium Annual/High Winter Use	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
26	G-45 Medium Annual/High Winter Use (MEP)	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
27	G-52 Medium Annual/Low Winter Use	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
28	G-56 Medium Annual/Low Winter Use (MEP)	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
29	G-43 High Annual/High Winter Use	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
30	G-46 High Annual/High Winter Use (MEP)	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
31	G-53 High Annual/Load Factor < 90%	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
32	G-57 High Annual/Load Factor < 90% (MEP)	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
33	G-54 High Annual/Load Factor > 90%	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
34	G-58 High Annual/Load Factor > 90% (MEP)	\$0.0442	\$0.0000	\$0.0442	\$0.0000	\$0.0076	\$0.0076	\$0.0000	\$0.0124	\$0.0044	\$0.0203	\$0.0888
35	The application of the CC, RDAF, ES, RCE, and GAP applies to all therms and therefore the application to all customers, including Managed Expansion Program											
36	*Per Order No. 26,692, Relief Holder and Pond at Gas Street, Concord and RDAF to be reviewed on a longer timeframe from rest of LDAC components effective November 1, 2022											

36 LOCAL DISTRIBUTION ADJUSTMENT CHARGE CALCULATION

Local Delivery Adjustment Charge Calculation

		Sales Customers	Transportation Customers	
<u>Residential Non Heating Rates - R-1</u>				
Energy Efficiency Charge	0.0664			
Demand Side Management Charge	0.0000			
Conservation Charge (CCx)		0.0664		
Relief Holder and pond at Gas Street, Concord, NH	0.0000			
Manufactured Gas Plants	0.0076			
Environmental Surcharge (ES)		0.0076		
Revenue Decoupling Adjustment Factor (RDAF)		0.0000		
Property Tax Adjustment Mechanism (PTAM)		0.0124		
Rate Case Expense Factor (RCEF)		0.0044		
Gas Assistance Program (GAP)		0.0203		
LDAC		0.1110		per therm
<u>Residential Heating Rates - R-3, R-4, R-6, R-7</u>				
Energy Efficiency Charge	0.0664			
Demand Side Management Charge	0.0000			
Conservation Charge (CCx)		0.0664		
Relief Holder and pond at Gas Street, Concord, NH	0.0000			
Manufactured Gas Plants	0.0076			
Environmental Surcharge (ES)		0.0076		
Revenue Decoupling Adjustment Factor (RDAF)		0.0000		
Property Tax Adjustment Mechanism (PTAM)		0.0124		
Rate Case Expense Factor (RCEF)		0.0044		
Gas Assistance Program (GAP)		0.0203		
LDAC		0.1110		per therm
<u>Commercial/Industrial Low Annual Use Rates - G-41, G-51, G-44, G-55</u>				
Energy Efficiency Charge	0.0442			
Demand Side Management Charge	0.0000			
Conservation Charge (CCx)		0.0442	0.0442	
Relief Holder and pond at Gas Street, Concord, NH	0.0000			
Manufactured Gas Plants	0.0076			
Environmental Surcharge (ES)		0.0076	0.0076	
Revenue Decoupling Adjustment Factor (RDAF)		0.0000	0.0000	
Property Tax Adjustment Mechanism (PTAM)		0.0124	0.0124	
Rate Case Expense Factor (RCEF)		0.0044	0.0044	
Gas Assistance Program (GAP)		0.0203	0.0203	
LDAC		0.0888	0.0888	per therm
<u>Commercial/Industrial Medium Annual Use Rates - G-42, G-52, G-45, G-56</u>				
Energy Efficiency Charge	0.0442			
Demand Side Management Charge	0.0000			
Conservation Charge (CCx)		0.0442	0.0442	
Relief Holder and pond at Gas Street, Concord, NH	0.0000			
Manufactured Gas Plants	0.0076			
Environmental Surcharge (ES)		0.0076	0.0076	
Revenue Decoupling Adjustment Factor (RDAF)		0.0000	0.0000	
Property Tax Adjustment Mechanism (PTAM)		0.0124	0.0124	
Rate Case Expense Factor (RCEF)		0.0044	0.0044	
Gas Assistance Program (GAP)		0.0203	0.0203	
LDAC		0.0888	0.0888	per therm
<u>Commercial/Industrial Large Annual Use Rates - G-43, G-53, G-54, G-46, G-56, G-57, G-58</u>				
Energy Efficiency Charge	0.0442			
Demand Side Management Charge	0.0000			
Conservation Charge (CCx)		0.0442	0.0442	
Relief Holder and pond at Gas Street, Concord, NH	0.0000			
Manufactured Gas Plants	0.0076			
Environmental Surcharge (ES)		0.0076	0.0076	
Revenue Decoupling Adjustment Factor (RDAF)		0.0000	0.0000	
Property Tax Adjustment Mechanism (PTAM)		0.0124	0.0124	
Rate Case Expense Factor (RCEF)		0.0044	0.0044	
Gas Assistance Program (GAP)		0.0203	0.0203	
LDAC		0.0888	0.0888	per therm

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
 November 2022 – October 2023 LDAC
Energy Efficiency Charge

<u>Line No.</u>	<u>Description</u> (A)	<u>Residential</u> (B)	<u>Commercial & Industrial</u> (C)	<u>Total</u> (D)	<u>Reference</u> (E)
<u>2022 and 2023 EEC Rates (as set by Statute in HB549)</u>					
1	Energy Efficiency Charge Factor (\$/Therm) Eff 1/1/22 - 12/31/22	\$0.0664	\$0.0442		HB549

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
November 2022 – October 2023 LDAC
Environmental Surcharge

Schedule 3
Page 1 of 2

Manufactured Gas Plants

1 Required Annual Environmental Increase	\$983,056
2 DG 19-145 Audit adjustment of \$1,024,167 amortized over 3 years, 3 approved by Order No. 26,419 in Docket No. DG 20-141	\$341,389
4 Estimated Ending Balance on October 31, 2022	<u>\$89,763</u>
5 Environmental Subtotal	\$1,414,208
6 Overall Annual Net Increase to Rates	\$1,414,208
7 Estimated weather normalized firm therms billed for the 8 twelve months ended 10/31/2023 - sales and transportation	186,338,561 therms
9 MGP Surcharge per therm	<u>\$0.0076</u> per therm

Gasholder and pond at Gas Street, Concord, NH

10 Required Annual Environmental Increase	\$69,514
11 Estimated weather normalized firm therms billed for the 12 twelve months ended 10/31/2023 - sales and transportation	186,338,561 therms
13 Gasholder and pond at Gas Street, Concord, NH Surcharge per therm	<u>\$0.0004</u> per therm
14 <u>Total Environmental Surcharge (excluding Gasholder per Order No. 26,692)</u>	<u>\$0.0076</u>

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
November 2022 - October 2023
Environmental Collections Reconciliation

	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Estimate)	(Estimate)
1 FOR THE MONTH OF:	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22
2 DAYS IN MONTH	30	31	31	28	31	30	31	30	31	31	30	31
3 Beginning Balance	\$ 2,833,284	\$ 2,656,186	\$ 2,354,611	\$ 1,967,918	\$ 1,526,129	\$ 1,131,620	\$ 853,408	\$ 660,155	\$ 548,839	\$ 470,864	\$ 399,857	\$ 284,616
4 Less: Collected Revenue	(177,098)	(301,575)	(386,693)	(441,789)	(394,508)	(278,213)	(193,253)	(111,316)	(77,975)	(71,006)	(115,241)	(194,853)
5												
6												
7 Ending Balance	\$ 2,656,186	\$ 2,354,611	\$ 1,967,918	\$ 1,526,129	\$ 1,131,620	\$ 853,408	\$ 660,155	\$ 548,839	\$ 470,864	\$ 399,857	\$ 284,616	\$ 89,763

LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP. d/b/a LIBERTY
MANUFACTURED GAS PLANT ENVIRONMENTAL COSTS

REDACTED
Schedule 3.2
MGP Sites
Page 1 of 9

2022 SUMMARY BY SITE

		1101	1102	1105	1106	1107		1108	1109		
LINE NO.	SITE	REF NO.	LEGAL EXPENSES	CONSULTING EXPENSES	REMEDATION EXPENSES	SETTLEMENT EXPENSES	OTHER EXPENSES	100 % RECOVERABLE EXPENSES	INSURANCE & THIRD PARTY EXPENSES	INSURANCE & THIRD PARTY RECOVERIES	TOTAL
1	Concord Pond	DEF056	0.00	371,194.82	0.00	0.00	9,888.99	381,083.81			302,532.29
2	Concord MGP (excludes Relief Holder)	DEF077	0.00	81,185.19	0.00	0.00	27,222.25	108,407.44			38,415.91
3	Concord MGP (Relief Holder)	DEF077	37,199.00	157,345.37	0.00	0.00	36.26	194,580.63			486,595.63
4	Laconia/Liberty Hill	DEF086	0.00	46,580.03	0.00	0.00	2,304.75	48,884.78			48,884.78
5	Manchester MGP	DEF057	0.00	139,492.16	0.00	0.00	33,180.09	172,672.25			120,888.65
6	Nashua MGP	DEF054	0.00	247,416.41	0.00	0.00	182,710.49	430,126.90			331,326.67
7	General Expenses	DEF064	0.00	0.00	0.00	0.00	8,345.91	8,345.91			8,345.91
8											0.00
9	Total Pool Activity		37,199.00	1,043,213.98	0.00	0.00	263,688.74	1,344,101.72	292,015.00	(299,126.88)	1,336,989.84

LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP. d/b/a LIBERTY
MANUFACTURED GAS PLANT ENVIRONMENTAL COSTS
NASHUA - REMEDIATION
PROJECT DEF054

REDACTED
Schedule 3.2
MGP Sites
Page 2 of 9

LINE NO.	VENDOR	REF NO.	1101	1102	1105	1106	1107	SUBTOTAL EXPENSES	1108	1109	TOTAL SUBMITTED
			LEGAL EXPENSES	CONSULTING EXPENSES	REMEDIATION EXPENSES	SETTLEMENT EXPENSES	OTHER EXPENSES		INSURANCE & THIRD PARTY EXPENSE	INSURANCE & THIRD PARTY RECOVERIES	
1	GZA GEOENV RONMENTAL INC	0815089		3,065.00				3,065.00			3,065.00
2	GZA GEOENV RONMENTAL INC	0816668		1,182.90				1,182.90			1,182.90
3	INNOVATIVE ENG NEERING SOLUTIONS, INC.	13882		2,058.64				2,058.64			2,058.64
4	INNOVATIVE ENG NEERING SOLUTIONS, INC.	13914		3,457.67				3,457.67			3,457.67
5	CLEAN HARBORS	1003857553					9,973.81	9,973.81			9,973.81
6	CLEAN HARBORS	1003857551					1,006.07	1,006.07			1,006.07
7	CASEY MARY	EXP0801-091021					50.52	50.52			50.52
9	INNOVATIVE ENG NEERING SOLUTIONS, INC.	13943		20,467.15				20,467.15			20,467.15
10	ANDREW MILLS	EXP0802-083121					60.48	60.48			60.48
11	ANDERSON WELDING LLC	596					7,185.00	7,185.00			7,185.00
12	INNOVATIVE ENG NEERING SOLUTIONS, INC.	13969		6,405.06				6,405.06			6,405.06
13	NH DEPT OF ENVIRONMENTAL SERVICES	199810022 8323 A					313.68	313.68			313.68
14	INNOVATIVE ENG NEERING SOLUTIONS, INC.	13943		20,467.15				20,467.15			20,467.15
15	ANDREW MILLS	EXP09-103121					20.16	20.16			20.16
17	INNOVATIVE ENG NEERING SOLUTIONS, INC.	13996		5,580.00				5,580.00			5,580.00
18	ANDERSON WELDING LLC	610		2,275.00				2,275.00			2,275.00
19	INNOVATIVE ENG NEERING SOLUTIONS, INC.	14023		4,976.49				4,976.49			4,976.49
20	ANDREW MILLS	EXP1101-122121					20.16	20.16			20.16
21	GZA GEOENV RONMENTAL INC	0827823		20,298.36				20,298.36			20,298.36
22	GZA GEOENV RONMENTAL INC	0827307		48,324.46				48,324.46			48,324.46
23	NH DEPT OF ENVIRONMENTAL SERVICES	199810022 012722					90.68	90.68			90.68
24	INNOVATIVE ENG NEERING SOLUTIONS, INC.	14054		16,544.55				16,544.55			16,544.55
25	INNOVATIVE ENG NEERING SOLUTIONS, INC.	14081		7,377.50				7,377.50			7,377.50
26	GZA GEOENV RONMENTAL INC	0830818		14,231.80				14,231.80			14,231.80
28	CLEAN HARBORS	1004068680					1,626.34	1,626.34			1,626.34
29	ESMI OF NH	424890					2,123.30	2,123.30			2,123.30
30	INNOVATIVE ENG NEERING SOLUTIONS, INC.	14104		5,102.72				5,102.72			5,102.72
31	ESMI OF NH	425786					3,086.10	3,086.10			3,086.10
32	ESMI OF NH	425786					175.92	175.92			175.92
33	ESMI OF NH	426111					2,064.60	2,064.60			2,064.60
34	ESMI OF NH	426111					117.68	117.68			117.68
35	ESMI OF NH	427055					4,833.90	4,833.90			4,833.90
36	ESMI OF NH	427055					275.53	275.53			275.53
37	ESMI OF NH	428087					997.20	997.20			997.20

LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP. d/b/a LIBERTY
MANUFACTURED GAS PLANT ENVIRONMENTAL COSTS
NASHUA - REMEDIATION
PROJECT DEF054

REDACTED
Schedule 3.2
MGP Sites
Page 3 of 9

LINE NO.	VENDOR	REF NO.	1101 LEGAL EXPENSES	1102 CONSULTING EXPENSES	1105 REMEDIATION EXPENSES	1106 SETTLEMENT EXPENSES	1107 OTHER EXPENSES	SUBTOTAL EXPENSES	1108 INSURANCE & THIRD PARTY EXPENSE	1109 INSURANCE & THIRD PARTY RECOVERIES	TOTAL SUBMITTED
38	ESMI OF NH	428087					56.85	56.85			56.85
39	INNOVATIVE ENG NEERING SOLUTIONS, INC.	14135		11,358.10				11,358.10			11,358.10
40	ESMI OF NH	429270					476.38	476.38			476.38
41	ESMI OF NH	429250					4,136.85	4,136.85			4,136.85
42	ESMI OF NH	429250					235.80	235.80			235.80
43	ESMI OF NH	429266					1,393.20	1,393.20			1,393.20
44	ESMI OF NH	429270					8,357.85	8,357.85			8,357.85
45	ESMI OF NH	430161					581.15	581.15			581.15
46	ESMI OF NH	430161					10,195.65	10,195.65			10,195.65
47	NH DEPT OF ENVIRONMENTAL SERVICES	199810022 042822					154.95	154.95			154.95
48	ESMI OF NH	431318					7,938.45	7,938.45			7,938.45
49	ESMI OF NH	431318					452.50	452.50			452.50
50	GZA GEOENV RONMENTAL INC	0835263		27,218.46				27,218.46			27,218.46
51	ESMI OF NH	432120					5,043.15	5,043.15			5,043.15
52	ESMI OF NH	432120					287.45	287.45			287.45
53	ESMI OF NH	432893					50.17	50.17			50.17
54	ESMI OF NH	432893					880.20	880.20			880.20
55	ESMI OF NH	433522					4,360.05	4,360.05			4,360.05
56	ESMI OF NH	433522					196.76	196.76			196.76
57	ESMI OF NH	434619					1,004.10	1,004.10			1,004.10
58	LEIGHTON A. WHITE INC.	23024					57,653.27	57,653.27			57,653.27
59	LEIGHTON A. WHITE INC.	23082					18,752.47	18,752.47			18,752.47
60	INNOVATIVE ENG NEERING SOLUTIONS, INC.	14188		19,524.50				19,524.50			19,524.50
61	ESMI OF NH	437288					4,050.90	4,050.90			4,050.90
62	ESMI OF NH	437288					230.91	230.91			230.91
64	ESMI OF NH	437876					19,180.35	19,180.35			19,180.35
65	ESMI OF NH	437876					1,093.28	1,093.28			1,093.28
66	INNOVATIVE ENG NEERING SOLUTIONS, INC.	14163		7,500.90				7,500.90			7,500.90
67								0.00			0.00
68	Environmental Staff Time						1,926.67	1,926.67			1,926.67
69	Total Pool Activity		-	247,416.41	-	-	182,710.49	430,126.90	-	(98,800.23)	331,326.67

LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP. d/b/a LIBERTY
MANUFACTURED GAS PLANT ENVIRONMENTAL COSTS
CONCORD POND - REMEDIATION
PROJECT DEF056

REDACTED
Schedule 3 2
MGP Sites
Page 4 of 9

LINE NO.	VENDOR	REF NO.	1101 LEGAL EXPENSES	1102.00 CONSULTING EXPENSES	1105 REMEDIAION EXPENSES	1106 SETTLEMENT EXPENSES	1107 OTHER EXPENSES	SUBTOTAL EXPENSES	1108 INSURANCE & THIRD PARTY EXPENSES	1109 INSURANCE & THIRD PARTY RECOVERIES	TOTAL SUBMITTED
1	ANCHOR QEA LLC	02955		48,037.20				48,037.20			48,037.20
2	GEI CONSULTANTS, INC.	3092954		6,182.42				6,182.42			6,182.42
3	CITY OF CONCORD	22000267					1,020.00	1,020.00			1,020.00
4	ANCHOR QEA LLC	03612		66,021.94				66,021.94			66,021.94
5	GEI CONSULTANTS, INC.	3094516		4,132.45				4,132.45			4,132.45
6	NH DEPT OF ENV RONMENTAL SERVICES	199212014 4042B					1,452.47	1,452.47			1,452.47
7	ANCHOR QEA LLC	04148		24,148.20				24,148.20			24,148.20
9	ANCHOR QEA LLC	04425		19,797.63				19,797.63			19,797.63
10	GEI CONSULTANTS, INC.	3096258		1,017.42				1,017.42			1,017.42
11	GEI CONSULTANTS, INC.	3097711		1,007.08				1,007.08			1,007.08
12	CLEAN HARBORS	1003899569					1,646.51	1,646.51			1,646.51
14	ANCHOR QEA LLC	05119		51,443.85				51,443.85			51,443.85
15	ANCHOR QEA LLC	05659		31,461.32				31,461.32			31,461.32
16	GEI CONSULTANTS, INC.	3100642		223.18				223.18			223.18
17	ANCHOR QEA LLC	06332		28,984.48				28,984.48			28,984.48
18	GEI CONSULTANTS, INC.	3099637		973.83				973.83			973.83
19	GEI CONSULTANTS, INC.	3102182		2,182.09				2,182.09			2,182.09
20	NH DEPT OF ENV RONMENTAL SERVICES	199212014 012722					979.76	979.76			979.76
21	CLEAN HARBORS	1004036917					2,892.94	2,892.94			2,892.94
22	ANCHOR QEA LLC	06944		31,527.44				31,527.44			31,527.44
23	GEI CONSULTANTS, INC.	3104287		1,853.93				1,853.93			1,853.93
24	ANCHOR QEA LLC	07407		19,944.50				19,944.50			19,944.50
26	GEI CONSULTANTS, INC.	3105662		2,635.65				2,635.65			2,635.65
27	ANCHOR QEA LLC	08072		8,715.22				8,715.22			8,715.22
28	ANCHOR QEA LLC	08380		5,995.25				5,995.25			5,995.25
29	NH DEPT OF ENV RONMENTAL SERVICES	199212014 042822					54.43	54.43			54.43
30	CLEAN HARBORS	1004068680					1,626.34	1,626.34			1,626.34
31	ANCHOR QEA LLC	08984		4,043.50				4,043.50			4,043.50
33	GEI CONSULTANTS, INC.	3111045		8,535.29				8,535.29			8,535.29
34	GEI CONSULTANTS, INC.	3109033		2,330.95				2,330.95			2,330.95
35								-			0.00
36	Environmental Staff Time						216.54	216.54			216.54
Total Pool Activity			0.00	371,194.82	0.00	0.00	9,888.99	381,083.81	0.00	(78,551.52)	302,532.29

LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP. d/b/a LIBERTY
MANUFACTURED GAS PLANT ENVIRONMENTAL COSTS
MANCHESTER - REMEDIATION
PROJECT DEF057

REDACTED
Schedule 3.2
MGP Sites
Page 5 of 9

LINE NO.	VENDOR	REF NO.	1101	1102	1105	1106	1107	SUBTOTAL EXPENSES	1108	1109	TOTAL SUBMITTED
			LEGAL EXPENSES	CONSULTING EXPENSES	REMEDIATION EXPENSES	SETTLEMENT EXPENSES	OTHER EXPENSES		INSURANCE & THIRD PARTY EXPENSE	INSURANCE & THIRD PARTY RECOVERIES	
2	GZA GEOENV RONMENTAL NC	0818690		22,733.68				22,733.68			22,733.68
3	GZA GEOENV RONMENTAL NC	0807134		15,469.92				15,469.92			15,469.92
4	ESMI OF NH	398407					783.84	783.84			783.84
5	CLEAN HARBORS	1003857554					2,712.91	2,712.91			2,712.91
6	CLEAN HARBORS	1003857552					4,135.74	4,135.74			4,135.74
7	GZA GEOENV RONMENTAL NC	0820374		12,363.69				12,363.69			12,363.69
9	CLEAN HARBORS	1003899586					6,764.09	6,764.09			6,764.09
10	CLEAN HARBORS	1003899580					125.95	125.95			125.95
11	CLEAN HARBORS	1003926677					220.99	220.99			220.99
14	GZA GEOENV RONMENTAL NC	0825914		28,248.14				28,248.14			28,248.14
15	GZA GEOENV RONMENTAL NC	0827858		7,723.30				7,723.30			7,723.30
16	CLEAN HARBORS	1004036920					948.88	948.88			948.88
19	CLEAN HARBORS	1004102481					5,777.31	5,777.31			5,777.31
20	NH DEPT OF ENVIRONMENTAL SERVICES	2000003011 042822					581.87	581.87			581.87
21	CLEAN HARBORS	1004148869					10,981.62	10,981.62			10,981.62
23	GZA GEOENV RONMENTAL NC	0832766		8,282.41				8,282.41			8,282.41
24	GZA GEOENV RONMENTAL NC	0837385		44,671.02				44,671.02			44,671.02
26								0.00			0.00
27	Environmental Staff Time							146.89			146.89
Total Pool Activity			0.00	139,492.16	0.00	0.00	33,180.09	172,672.25	0.00	(51,783.60)	120,888.65

LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP. d/b/a LIBERTY
MANUFACTURED GAS PLANT ENVIRONMENTAL COSTS
GENERAL EXPENSES
PROJECT DEF064

Schedule 3.2
MGP Sites
Page 6 of 9

LINE NO.	VENDOR	REF NO.	1101 LEGAL EXPENSES	1102 CONSULTING EXPENSES	1105 REMEDIATION EXPENSES	1106 SETTLEMENT EXPENSES	1107 OTHER EXPENSES	SUBTOTAL EXPENSES	1108 INSURANCE & THIRD PARTY EXPENSE	1109 INSURANCE & THIRD PARTY RECOVERIES	TOTAL SUBMITTED
1	CASEY MARY	EXP0801-091021					7.42	7.42			7.42
2								0.00			0.00
3	Environmental Staff Time						8,338.49	8,338.49			8,338.49
Total Pool Activity			0.00	0.00	0.00	0.00	8,345.91	8,345.91	0.00	0.00	8,345.91

LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP. d/b/a LIBERTY
MANUFACTURED GAS PLANT ENVIRONMENTAL COSTS
CONCORD MGP - REMEDIATION
PROJECT DEF077

REDACTED
Schedule 3 2
MGP Sites
Page 7 of 9

LINE NO.	VENDOR	REF NO.	1101 LEGAL EXPENSES	1102 CONSULTING EXPENSES	1105 REMEDATION EXPENSES	1106 SETTLEMENT EXPENSES	1107 OTHER EXPENSES	SUBTOTAL EXPENSES	1108 INSURANCE & THIRD PARTY EXPENSE	1109 INSURANCE & THIRD PARTY RECOVERIES	TOTAL SUBMITTED
1	JOE GAUCI LANDSCAP NG LLC	2021-5A-3576					585.00	585.00			585.00
2	JOE GAUCI LANDSCAP NG LLC	2021-6-3576					660.00	660.00			660.00
3	CITY OF CONCORD	22000267					1,020.00	1,020.00			1,020.00
4	GZA GEOENVIRONMENTAL INC	0818976		11,426.25				11,426.25			11,426.25
5	GZA GEOENVIRONMENTAL INC	0807135		24,782.95				24,782.95			24,782.95
6	CASEY MARY	EXP0701-073121					39.09	39.09			39.09
7	JOE GAUCI LANDSCAP NG LLC	2021-7-3576					700.00	700.00			700.00
8	CITY OF CONCORD GSD	410184-001 083021					10.20	10.20			10.20
9	NH DEPT OF ENV RONMENTAL SERVICES	198904063 1479B					2,369.54	2,369.54			2,369.54
11	GZA GEOENVIRONMENTAL INC	0821673		8,996.49				8,996.49			8,996.49
12	CITY OF CONCORD GSD	410184-001 0921					10.20	10.20			10.20
13	CITY OF CONCORD GSD	410184-001 0721					10.50	10.50			10.50
14	NH DEPT OF ENV RONMENTAL SERVICES	198904063 1479 A					1,829.05	1,829.05			1,829.05
15	CITY OF CONCORD GSD	410184-001 1021					10.20	10.20			10.20
16	JOE GAUCI LANDSCAP NG LLC	2021-8-3576 REVISED					1,715.00	1,715.00			1,715.00
18	JOE GAUCI LANDSCAP NG LLC	2021-9-3576					525.00	525.00			525.00
19	CITY OF CONCORD GSD	410184-001 113021					10.20	10.20			10.20
20	JOE GAUCI LANDSCAP NG LLC	2021-10-3576					467.00	467.00			467.00
21	CLEAN HARBORS	1003968358					7,545.36	7,545.36			7,545.36
22	GZA GEOENVIRONMENTAL INC	0825959		16,215.59				16,215.59			16,215.59
23	JOE GAUCI LANDSCAP NG LLC	2021-11-3576					245.00	245.00			245.00
24	CITY OF CONCORD	410184-001 NOV 2021					10.20	10.20			10.20
25	CLEAN HARBORS	1003899595					506.09	506.09			506.09
26	GZA GEOENVIRONMENTAL INC	0828847		10,685.71				10,685.71			10,685.71
27	CLEAN HARBORS	1004024891					245.25	245.25			245.25
28	NH DEPT OF ENV RONMENTAL SERVICES	198904063 012722					3,211.43	3,211.43			3,211.43
29	CITY OF CONCORD GSD	410184-001 0122					10.20	10.20			10.20
30	CLEAN HARBORS	1004036917					2,892.93	2,892.93			2,892.93
31	NH DEPT OF ENV RONMENTAL SERVICES	015477748FLE Q1 2021					1,296.00	1,296.00			1,296.00
32	CITY OF CONCORD GSD	410184-001 030122					10.20	10.20			10.20
34	CITY OF CONCORD GSD	410184-001 0422					10.20	10.20			10.20
35	CITY OF CONCORD GSD	410184-001 0522					10.20	10.20			10.20
37	GZA GEOENVIRONMENTAL INC	0837477		9,078.20				9,078.20			9,078.20
38								0.00			0.00
39	Environmental Staff Time						1,268.21	1,268.21			1,268.21
40	Total Pool Activity		0.00	81,185.19	0.00	0.00	27,222.25	108,407.44	0.00	(69,991.53)	38,415.91

LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP. d/b/a LIBERTY
MANUFACTURED GAS PLANT ENVIRONMENTAL COSTS
CONCORD GAS HOLDER
PROJECT DEF077

Schedule 3.2
MGP Sites
Page 8 of 9

LINE NO.	VENDOR	REF NO.	1101 LEGAL EXPENSES	1102 CONSULTING EXPENSES	1105 REMEDIATION EXPENSES	1106 SETTLEMENT EXPENSES	1107 OTHER EXPENSES	SUBTOTAL EXPENSES	1108 INSURANCE & THIRD PARTY EXPENSE	1109 INSURANCE & THIRD PARTY RECOVERIES	TOTAL SUBMITTED
1	ORR & RENO, P A.	129019	8,359.00					8,359.00			8,359.00
2	ORR & RENO, P A.	129341	546.00					546.00			546.00
3	ORR & RENO, P A.	129824	468.00					468.00			468.00
4	ORR & RENO, P A.	130445	546.00					546.00			546.00
5	GZA GEOENVIRONMENTAL INC	0820439		9,471.98				9,471.98			9,471.98
6	ORR & RENO, P A.	131917	3,315.00					3,315.00			3,315.00
7	ORR & RENO, P A.	131081	13,152.00					13,152.00			13,152.00
8	ORR & RENO, P A.	131223	7,520.50					7,520.50			7,520.50
9	GZA GEOENVIRONMENTAL INC	0825957		15,357.31				15,357.31			15,357.31
10	HISTORIC PRESERVATION REDEVELOPMENT, LLC	APP #1						0.00	84,745.00		84,745.00
11	ORR & RENO, P A.	132501	702.00					702.00			702.00
12	ORR & RENO, P A.	133029	1,245.50					1,245.50			1,245.50
13	GZA GEOENVIRONMENTAL INC	0818835		32,123.49				32,123.49			32,123.49
14	ORR & RENO, P A.	133570	156.00					156.00			156.00
15	CASEY MARY	EXP0118-011822					36.26	36.26			36.26
16	ORR & RENO, P A.	014684-0126	369.00					369.00			369.00
17	ORR & RENO, P A.	134689	656.00					656.00			656.00
18	ORR & RENO, P A.	135704	164.00					164.00			164.00
19	HISTORIC PRESERVATION REDEVELOPMENT, LLC	APPLICATION #2						0.00	33,750.00		33,750.00
20	HISTORIC PRESERVATION REDEVELOPMENT, LLC	APP# 3						0.00	173,520.00		173,520.00
21	GZA GEOENVIRONMENTAL INC	0836284		10,380.43				10,380.43			10,380.43
22	GZA GEOENVIRONMENTAL INC	0836285		12,807.97				12,807.97			12,807.97
23	GZA GEOENVIRONMENTAL INC	0837392		77,204.19				77,204.19			77,204.19
24	Total Pool Activity		37,199.00	157,345.37	0.00	0.00	36.26	194,580.63	292,015.00	0.00	486,595.63

LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP. d/b/a LIBERTY
MANUFACTURED GAS PLANT ENVIRONMENTAL COSTS
LIBERTY HILL - REMEDIATION
PROJECT DEF086

Schedule 3.2
MGP Sites
Page 9 of 9

LINE NO.	VENDOR	REF NO.	1101 LEGAL EXPENSES	1102 CONSULTING EXPENSES	1105 REMEDIAION EXPENSES	1106 SETTLEMENT EXPENSES	1107 OTHER EXPENSES	SUB-TOTAL EXPENSES	1108 INSURANCE & THIRD PARTY EXPENSES	1109 INSURANCE & THIRD PARTY RECOVERIES	TOTAL SUBMITTED
1	MULLER'S LAWN & LANDSCAP NG, LLC	5711					800.00	800.00			800.00
2	GEI CONSULTANTS, NC.	3096256		912.45				912.45			912.45
3	MULLER'S LAWN & LANDSCAP NG, LLC	5755					800.00	800.00			800.00
4	GEI CONSULTANTS, NC.	3097710		14,013.37				14,013.37			14,013.37
5	CLEAN HARBORS	1003926676					704.75	704.75			704.75
6	GEI CONSULTANTS, NC.	3100640		7,625.60				7,625.60			7,625.60
7	GEI CONSULTANTS, NC.	3099043		11,904.23				11,904.23			11,904.23
8	GEI CONSULTANTS, NC.	3102181		263.84				263.84			263.84
9	GEI CONSULTANTS, NC.	3104286		957.58				957.58			957.58
10	GEI CONSULTANTS, NC.	3105660		1,105.68				1,105.68			1,105.68
11	GEI CONSULTANTS, NC.	3107208		7,100.94				7,100.94			7,100.94
12	GEI CONSULTANTS, NC.	3109032		2,696.34				2,696.34			2,696.34
13								0.00			0.00
14	Environmental Staff Time						0.00	0.00			0.00
Total Pool Activity			0.00	46,580.03	0.00	0.00	2,304.75	48,884.78			48,884.78

Filed under the following protective orders:
 Order No 22 853 dated February 18 1998 in Docket No DR 97 130
 Order No 23 316 dated October 11 1999 in Docket No DG 99 132

Liberty Utilities (Energy/North Natural Gas) Corp d/b/a Liberty
 Environmental Remediation MGPs
 ariff page 99

Updated 7/29/22

REDACTED
 Schedule 3.3
 Page 8 of 9

MGP
 Remediation
 subtotal

		General															(7/21 - 6/22)	Total of each sub total	MGP Remediation subtotal		
		(9/02 - 9/07) pool #1 - #5	(9/07 - 9/08) pool #6	(9/08 - 9/09) pool #7	(9/09 - 9/10) pool #8	(9/10 - 9/11) pool #9	(9/11 - 9/12) pool #10	(9/12 - 6/13) pool #11	(7/13 - 6/1) pool #12	(7/1 - 6/15) pool #13	(7/15 - 6/16) pool #14	(7/16 - 6/17) pool #15	(7/17 - 6/18) pool #16	(7/18 - 6/19) pool #17	(7/19 - 6/20) pool #18	(7/20 - 6/21) pool #19	(7/21 - 6/22) pool #20	subtotal			
1	1 Remediation costs (i.o. 500061)																		0		
2	2 Remediation costs (i.o. 500005)	806,611	-181,000	-26,88	,199	69,286	93,03	75,20	13,139	16,612	11,879	6,5 7	10,799	6,868	7,111	5,6 6	8,3 6	927,397			
3	A Subtotal - remediation costs	806,611	-181,000	-26,88	,199	69,286	93,03	75,20	13,139	16,612	11,879	6,5 7	10,799	6,868	7,111	5,6 6	8,3 6	927,397			
	Cash recoveries (i.o. 500061)	0	0	0														0			
	Cash recoveries (i.o. 50000)																	0			
6	6 Recovery costs (i.o. 50000)		16,012	-23,953	0	0	-1 ,068	-1,358	0	-2 ,250	0	0	0	0	0	0	0	288			
7	7 Transfer Credit from Gas Restructuring		-3,331															-3,331			
8	B Subtotal - net recoveries	0	12,681	-23,953	0	0	-1,068	-1,358	0	-2,250	0	0	0	0	0	0	0	-3,0 3			
9	A-B Total net expenses to recover	806,611	-168,319	-2,931	,199	69,286	78,967	73,8 6	13,139	-7,638	11,879	6,5 7	10,799	6,868	7,111	5,6 6	8,3 6	92 ,355			
10	10 Surcharge revenue:																	0		(5 ,889)	
11	11 Act June 1998 - October 1998																	0		(538,1 3)	
12	12 Act November 1998 - October 1999																	0		(912,80 1)	
13	13 Act November 1999 - October 2000																	0		(1,336,776)	
14	14 Act November 2000 - October 2001																	0		(1,679,228)	
15	15 Act November 2001 - October 2002																	0		(1,732, 2)	
16	16 Act November 2002 - October 2003																	0		(1, 28,735)	
17	17 Act November 2003 - October 2004	-8,265																-8,265		(1, 03,787)	
18	18 Act November 2004 - October 2005	-70,898																-70,898		(1,69 ,877)	
19	19 Act November 2005- October 2006	-96,2 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-96,2 7		(2,036,113)	
20	20 Act November 2006- October 2007	- 9,318	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	- 9,318		-	
21	21 Act November 2007- October 2008	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		(160,0 8)	
22	22 Act November 2012- October 2013	0	0	0	0	-5,002	-5,002	0	0	0	0	0	0	0	0	0	0	-10,003		(293,217)	
23	23 Act November 2013- October 2014					-12,7 9	-12,7 9											-25,4 8		(10,611)	
24	24 Act Nov 2009-Oct 2010 Base Rate Rev																	0		(77,509)	
25	25 Act Nov 2010-Oct 2011 Base Rate Rev																	0		(68,2)	
26	26 Act Nov 2011-Oct 2012 Base Rate Rev																	0		(76,335)	
27	27 Act Nov 2012-Oct 2013 Base Rate Rev																	0		(85,298)	
28	28 Act Nov 2013-Oct 2014 Base Rate Rev																	0		(86,55)	
29	29 Act Nov 2014-Oct 2015 Base Rate Rev																	0		(282,039)	
30	30 AES collect ons																	0		(23,511)	
31	31 Gas Street overco lection																	0			
32	32 Prior Period Pool under/overcollect on	1, 86,6	2,088,527	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
33	C Surcharge Subtotal	1,261,916	2,088,527	0	0	-17,750	-17,750	-12,7 9	0	0	0	0	0	0	0	0	0	-272,977	128 642	13 981 161 (13,981,161)	
3	D Net balance to be recovered (A-B C)	2,068,527	1,900,208	-2,931	,199	51,536	61,217	61,098	13,139	-7,638	11,879	6,5 7	10,799	6,868	7,111	5,6 6	8,3 6	651,378	3 424 480	38 710 469	
35	E Allocation of L tigated Recovery	0	-1,900,208	2,931	- ,199	-8,562	0	0	0	0	0	0	0	0	0	0	0	-1,910,037	89 034	17 160 666	
36	36 Surcharge calculation																				
37	37 Unrecovered costs (D E)		0	0	0	0	0	0	0	1,697	1,870	1,5 3	628	3,925	5,079	839	8,3 6	30,38	834 926	2 652 278	
38	38 remaining life	72	8	8	8	12	12	12	12	12	2	36	8	60	72	9					
39	39 one year	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12				
0	F amortization	0	0	0	0	0	0	0	0	0	1,697	935	1,5 3	981	1,016	807	1,192				
1	1 Required annual increase in rates:																				
2	2 smaller of D or F	0	0	0	0	0	0	0	0	0	1,697	935	1,5 3	981	1,016	807	1,192	8,171	119 275	983 056	
3	3 forecasted them sa es	179,57 ,679	179,57 ,679	179,57 ,679	179,57 ,679	179,57 ,679	179,57 ,679	179,57 ,679	179,57 ,679	179,57 ,679	179,57 ,679	179,57 ,679	179,57 ,679	179,57 ,679	179,57 ,679	186,338,561	186,338,561	186,338,561	367,99	186 338 561	
	surcharge per them	\$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	\$0.0000	\$0.0000		\$0 0053	

LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP. d/b/a LIBERTY
ENVIRONMENTAL OVER/UNDER CALCULATION

REDACTED
Schedule 3.4
Page 1 of 1

	Spend Period	Jul 11 - Jun 12	Jul 12 - Jun 13	Jul 13 - Jun 14	Jul 14 - Jun 15	Jul 15 - Jun 16	Jul 16 - Jun 17	Jul 17 - Jun 18	Jul 18 - Jun 19	Jul 19 - Jun 20	Jul 20 - Jun 21	Jul 21 - Jun 22
	Collection Period	Jul 12 - Jun 13	Jul 13 - Jun 14	Jul 14 - Jun 15	Jul 15 - Jun 16	Jul 16 - Jun 17	Jul 17 - Jun 18	Jul 18 - Jun 19	Jul 19 - Jun 20	Jul 20 - Jun 21	Jul 21 - Jun 22	Jul 22 - Jun 23
1 BEGINNING BALANCE		\$ (364,633)	\$ 942,575	\$ 1,123,799	\$ 4,619,173	\$ 13,369,967	\$ 14,299,456	\$ 12,011,196	\$ 9,615,113	\$ 7,352,013	\$ 4,692,809	\$ 2,830,563
2 SPEND / THIRD PARTY RECOVERIES												
3 Concord Pond		81,238	59,069	32,324	78,235	34,590	88,148	127,356	72,283	172,764	313,043	302,532
4 Liberty Hill												
5 Manchester		442,298	(188,619)	61,210	75,440	22,690	50,523	346,043	38,019	155,032	5,080	120,889
6 Nashua		396,411	(80,241)	35,950	65,217	62,435	85,314	15,523	81,969	11,472	61,016	331,327
7 Keene												
8 Concord (excluding gas holder)												
9 General		78,967	73,846	13,139	(7,638)	11,879	6,547	10,799	6,868	7,111	5,646	8,346
10 Difference between the GL and Filing		-	9,545	(10,312)	(921)	(2,506)	(783)	(84,532)	811	16,776	78,185	(192,396)
11 TOTAL SPEND		\$ 1,526,211	\$ 563,370	\$ 4,408,258	\$ 10,640,893	\$ 3,405,922	\$ 463,352	\$ 506,790	\$ 258,974	\$ 457,668	\$ 861,583	\$ 657,998
12 ENVIRONMENTAL COSTS RECOVERED IN BASE RATES (DG 10-017)		\$ (78,892)	\$ (78,892)	\$ (78,892)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13 ACTUAL ENVIROMENTAL COLLECTIONS PER GL		\$ (140,111)	\$ (303,254)	\$ (833,991)	\$ (1,890,100)	\$ (2,476,432)	\$ (2,751,612)	\$ (2,902,873)	\$ (2,522,075)	\$ (3,116,872)	\$ (2,723,828)	\$ -
14 Current Pool Under (Over) Collection		\$ 942,575	\$ 181,224	\$ 3,495,375	\$ 8,750,793	\$ 929,490	\$ (2,288,261)	\$ (2,396,083)	\$ (2,263,100)	\$ (2,659,204)	\$ (1,862,246)	\$ 657,998
15 ENDING BALANCE - UNDER (OVER) COLLECTION		\$ 942,575	\$ 1,123,799	\$ 4,619,173	\$ 13,369,967	\$ 14,299,456	\$ 12,011,196	\$ 9,615,113	\$ 7,352,013	\$ 4,692,809	\$ 2,830,563	\$ 3,488,561
16 Regulatory Filing Reconciliation (Balance through June 2019)												
17 Balance in GL	Per Audit Staff	\$ 9,874,087										
18 Actual Balance per Filing		\$ 8,844,611										
19 Adjustment to Tie to Audit Report dated April 9, 2020		\$ 5,309										
20 Adjustment Necessary to Filing		\$ 1,024,167										

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
November 2022 – October 2023 LDAC
Revenue Decoupling Adjustment Factor (RDAF)

<u>Residential</u>		
1	Residential Projected October 31, 2022 Reconciliation Balance of Prior Recoveries / (Refunds)	\$307,157 Sch 4, Pg 2 Col. I Line 16 + Col. M Line 16
2	Residential Revenue Decoupling Deficiency / (Excess) - Current Decoupling Period	\$2,551,253 Sch 4, Pg 3 Line 10
3	Residential Revenue Decoupling Deficiency / (Excess) - Current Decoupling Period (removed per Order No. 26,692)	<u>(\$2,858,410)</u> -(Line 1 + Line 2)
4	Total Residential Revenue Decoupling Deficiency / (Excess) - October 31, 2022	\$0 Line 1 + Line 2 + Line 3
5	Estimated Residential November 2022 - October 2023 Sales (therms)	67,543,787 Company Forecast
6	Residential Revenue Decoupling Adjustment Factor rate per therm November 2022 - October 2023	\$0.0000 Line 4 / Line 5
<u>Commercial</u>		
7	Commercial Projected October 31, 2022 Reconciliation Balance of Prior Recoveries / (Refunds)	\$420,513 Sch 4, Pg 2 Col. I Line 41 + Col. M Line 41
8	Commercial Revenue Decoupling Deficiency / (Excess) - Current Decoupling Period	\$232,515 Sch 4, Pg 3 Line 20
9	Commercial Revenue Decoupling Deficiency / (Excess) - Current Decoupling Period (removed per Order No. 26,692)	<u>(\$653,028)</u> -(Line 7 + Line 8)
10	Total Commercial Revenue Decoupling Deficiency / (Excess) - October 31, 2022	\$0 Line 7 + Line 8 + Line 9
11	Estimated Commercial November 2022 - October 2023 Sales (therms)	118,794,774 Company Forecast
12	Commercial Revenue Decoupling Adjustment Factor rate per therm November 2022 - October 2023	\$0.0000 Line 10 / Line 11

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Revenue Decoupling Reconciliation
Reconciliation of Previous Period November 2021 – October 2022

Residential								
Month	Beginning Balance	Collections	(Over)/Under Ending Balance	Balance Subject to Interest	Interest Rate	Days per Month	Interest	Cumulative Interest
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
DY 20/21 Deficiency/(Surplus)	\$1,431,746							
Nov-21	\$1,039,034	\$87,443	\$1,126,477	\$1,082,756	3.25%	30	\$2,892	\$2,892
Dec-21	\$1,129,369	(\$102,982)	\$1,026,387	\$1,077,878	3.25%	31	\$2,975	\$5,868
Jan-22	\$1,029,362	(\$146,295)	\$883,068	\$956,215	3.25%	31	\$2,639	\$8,507
Feb-22	\$885,707	(\$179,954)	\$705,754	\$795,730	3.25%	28	\$1,984	\$10,491
Mar-22	\$707,737	(\$149,368)	\$558,369	\$633,053	3.25%	31	\$1,747	\$12,238
Apr-22	\$560,117	(\$103,150)	\$456,966	\$508,542	3.50%	30	\$1,463	\$13,701
May-22	\$458,429	(\$60,488)	\$397,942	\$428,186	3.50%	31	\$1,273	\$14,974
Jun-22	\$399,215	(\$27,256)	\$371,959	\$385,587	4.00%	30	\$1,268	\$16,242
Jul-22	\$373,226	(\$17,818)	\$355,408	\$364,317	4.75%	31	\$1,470	\$17,711
Aug-22	\$356,878	(\$16,434)	\$340,444	\$348,661	5.50%	31	\$1,629	\$19,340
Sep-22	\$342,072	(\$17,136)	\$324,936	\$333,504	5.50%	30	\$1,508	\$20,848
Oct-22	\$326,443	(\$20,763)	\$305,681	\$316,062	5.50%	31	\$1,476	\$22,324
Total		(\$754,201)					\$22,324	
Projected Cumulative Collection		(\$754,201)						
Total Approved Collection		\$1,039,034						
(Over)/Under Collection, excluding interest		\$284,833						
Cumulative Interest		\$22,324						
Total (Over)/Under Collection, including interest		\$307,157						

Commercial								
Month	Beginning Balance	Collections	(Over)/Under Ending Balance	Balance Subject to Interest	Interest Rate	Days per Month	Interest	Cumulative Interest
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
DY 20/21 Deficiency/(Surplus)	\$943,031							
Nov-21	\$677,519	\$98,009	\$775,527	\$726,523	3.25%	30	\$1,941	\$1,941
Dec-21	\$777,468	(\$42,314)	\$735,154	\$756,311	3.25%	31	\$2,088	\$4,028
Jan-22	\$737,241	(\$49,658)	\$687,583	\$712,412	3.25%	31	\$1,966	\$5,995
Feb-22	\$689,550	(\$66,175)	\$623,375	\$656,462	3.25%	28	\$1,637	\$7,631
Mar-22	\$625,012	(\$60,403)	\$564,608	\$594,810	3.25%	31	\$1,642	\$9,273
Apr-22	\$566,250	(\$43,469)	\$522,781	\$544,516	3.50%	30	\$1,566	\$10,840
May-22	\$524,347	(\$30,800)	\$493,547	\$508,947	3.50%	31	\$1,513	\$12,353
Jun-22	\$495,060	(\$20,842)	\$474,218	\$484,639	4.00%	30	\$1,593	\$13,946
Jul-22	\$475,812	(\$14,440)	\$461,372	\$468,592	4.75%	31	\$1,890	\$15,836
Aug-22	\$463,262	(\$14,154)	\$449,108	\$456,185	5.50%	31	\$2,131	\$17,967
Sep-22	\$451,239	(\$16,562)	\$434,677	\$442,958	5.50%	30	\$2,002	\$19,970
Oct-22	\$436,679	(\$18,164)	\$418,515	\$427,597	5.50%	31	\$1,997	\$21,967
Total		(\$278,973)					\$21,967	
Projected Cumulative Collection		(\$278,973)						
Total Approved Collection		\$677,519						
(Over)/Under Collection, excluding interest		\$398,545						
Cumulative Interest		\$21,967						
Total (Over)/Under Collection, including interest		\$420,513						

References

- (a) Line 4 (Res) and Line 29 (Com): DG 21-130, revised with actuals through August 2021
- (b) Company records
- (c) Column (a) + Column (b)
- (d) [Column (a) + Column (c)] ÷ 2
- (e) Prime Rate effective first of each month
- (f) Days per month
- (g) [Column (d) × ((Column (e) / 365) × Column (f))]
- (h) Column (g) + Prior Month Column (h)
- * Projected

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
September 2021 through August 2022
Revenue Decoupling Activity by Sector

RESIDENTIAL		(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)
1	FOR THE MONTH OF:	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22
2	DAYS IN MONTH	30	31	30	31	31	28	31	30	31	30	31	31
3	Over Under Beginning Balance	\$ -	\$ 187,568	\$ 921,342	\$ 1,529,463	\$ 1,951,823	\$ 1,933,976	\$ 2,352,273	\$ 2,447,842	\$ 2,334,214	\$ 2,332,558	\$ 2,449,586	\$ 2,439,812
4	Monthly revenue difference Inc/(Dec) revenue	\$ 170,543	\$ 695,995	\$ 602,442	\$ 288,165	\$ (52,190)	\$ 276,867	\$ (263,559)	\$ (180,617)	\$ (103,419)	\$ 59,549	\$ (67,861)	\$ 105,253
5	True up	\$ 16,775	\$ 36,250	\$ 2,410	\$ 129,397	\$ 28,989	\$ 136,093	\$ 352,512	\$ 60,121	\$ 94,837	\$ 49,631	\$ 48,244	\$ (5,442)
6	Ending Balance Pre-Interest	\$ 187,318	\$ 919,814	\$ 1,526,194	\$ 1,947,025	\$ 1,928,621	\$ 2,346,936	\$ 2,441,226	\$ 2,327,345	\$ 2,325,632	\$ 2,441,738	\$ 2,429,969	\$ 2,539,622
7	Month's Average Balance	\$ 93,659	\$ 553,691	\$ 1,223,788	\$ 1,738,244	\$ 1,940,222	\$ 2,140,456	\$ 2,396,749	\$ 2,387,594	\$ 2,329,923	\$ 2,387,148	\$ 2,439,777	\$ 2,489,717
8	Interest Rate	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.50%	3.50%	4.00%	4.75%	5.50%
9	Interest Applied	\$ 250	\$ 1,528	\$ 3,269	\$ 4,798	\$ 5,356	\$ 5,336	\$ 6,616	\$ 6,868	\$ 6,926	\$ 7,848	\$ 9,843	\$ 11,630
10	Ending Balance	\$ 187,568	\$ 921,342	\$ 1,529,463	\$ 1,951,823	\$ 1,933,976	\$ 2,352,273	\$ 2,447,842	\$ 2,334,214	\$ 2,332,558	\$ 2,449,586	\$ 2,439,812	\$ 2,551,253
COMMERCIAL & INDUSTRIAL		(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)
11	FOR THE MONTH OF:	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22
12	DAYS IN MONTH	30	31	30	31	31	28	31	30	31	30	31	31
13	Over Under Beginning Balance	\$ -	\$ 46,351	\$ (184,811)	\$ (1,155,183)	\$ (1,027,733)	\$ (2,041,973)	\$ (213,584)	\$ 79,689	\$ (311,294)	\$ 126,301	\$ 131,532	\$ 217,203
14	Monthly revenue difference Inc/(Dec) revenue	\$ 43,875	\$ (239,968)	\$ (949,941)	\$ 25,392	\$ (1,055,358)	\$ 1,765,498	\$ 9,429	\$ (364,478)	\$ 249,240	\$ (59,661)	\$ 90,541	\$ (54,411)
15	True up	\$ 2,414	\$ 8,997	\$ (18,644)	\$ 105,067	\$ 45,348	\$ 65,699	\$ 284,028	\$ (26,173)	\$ 188,630	\$ 64,469	\$ (5,572)	\$ 68,675
16	Ending Balance Pre-Interest	\$ 46,290	\$ (184,620)	\$ (1,153,395)	\$ (1,024,724)	\$ (2,037,742)	\$ (210,776)	\$ 79,874	\$ (310,962)	\$ 126,576	\$ 131,109	\$ 216,501	\$ 231,467
17	Month's Average Balance	\$ 23,145	\$ (69,134)	\$ (669,103)	\$ (1,089,953)	\$ (1,532,737)	\$ (1,126,374)	\$ (66,855)	\$ (115,636)	\$ (92,359)	\$ 128,705	\$ 174,017	\$ 224,335
18	Interest Rate	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.50%	3.50%	4.00%	4.75%	5.50%
19	Interest Applied	\$ 62	\$ (191)	\$ (1,787)	\$ (3,009)	\$ (4,231)	\$ (2,808)	\$ (185)	\$ (333)	\$ (275)	\$ 423	\$ 702	\$ 1,048
20	Ending Balance	\$ 46,351	\$ (184,811)	\$ (1,155,183)	\$ (1,027,733)	\$ (2,041,973)	\$ (213,584)	\$ 79,689	\$ (311,294)	\$ 126,301	\$ 131,532	\$ 217,203	\$ 232,515
21	Total Ending Balance	\$ 233,919.74	\$ 736,531.39	\$ 374,279.82	\$ 924,090.05	\$ (107,996.70)	\$ 2,138,688.79	\$ 2,527,530.75	\$ 2,022,919.52	\$ 2,458,858.79	\$ 2,581,118.33	\$ 2,657,014.89	\$ 2,783,767.73

**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Property Tax Adjustment Mechanism
Summary**

<u>Line</u>	<u>Property Tax Reconciliation</u>	
1	Projected Prior Period (Over)/Under Balance through October 31, 2022, including interest	\$241,127
2	PTY 2021 Municipal Property Taxes Variance	\$2,013,469
3	Projected Interest	\$47,256
4	Total Estimated Recovery	<u>\$2,301,852</u>
5	Estimated November 2022 - October 2023 Sales (therms)	186,338,561
6	PTAM LDAC rate per therm November 2022 - October 2023	\$0.0124

Reference:

- 1 Schedule 5 page 2, Col. C, Line 12 + Col. F, Line 12
- 2 Schedule 5 page 3, Line 3
- 3 Schedule 5 page 5, Col. F, Line 15
- 4 Line 1 + Line 2 + Line 3
- 5 Company Forecast
- 6 Line 4 divided by Line 5

**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Property Tax Adjustment Mechanism
Reconciliation of Previous Period January 2022 – October 2022**

1	Month	Beginning Balance	Collections	(Over)/Under Ending Balance	Balance Subject to Interest	Interest Rate	Days per Month	Interest	Cumulative Interest
2		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
3	Jan-22	\$1,972,667	(\$100,243)	\$1,872,424	\$1,922,545	3.25%	31	\$5,307	\$5,307
4	Feb-22	\$1,877,730	(\$400,615)	\$1,477,115	\$1,677,423	3.25%	28	\$4,182	\$9,489
5	Mar-22	\$1,481,297	(\$358,337)	\$1,122,960	\$1,302,129	3.25%	31	\$3,594	\$13,083
6	Apr-22	\$1,126,554	(\$255,384)	\$871,170	\$998,862	3.25%	30	\$2,668	\$15,751
7	May-22	\$873,838	(\$171,971)	\$701,868	\$787,853	3.25%	31	\$2,175	\$17,926
8	Jun-22	\$704,043	(\$100,091)	\$603,951	\$653,997	3.25%	30	\$1,747	\$19,673
9	Jul-22	\$605,698	(\$69,283)	\$536,415	\$571,056	4.00%	31	\$1,940	\$21,613
10	Aug-22	\$538,355	(\$66,973)	\$471,382	\$504,868	4.00%	31	\$1,715	\$23,328
* 11	Sep-22	\$473,097	(\$86,847)	\$386,250	\$429,673	4.00%	30	\$1,413	\$24,741
* 12	Oct-22	\$387,663	(\$148,001)	\$239,661	\$313,662	5.50%	31	\$1,465	\$26,206
13			(\$1,757,746)						
14			Projected Cumulative Collection		(\$1,757,746)				
15			Total Approved Collection		\$1,972,667				
16			(Over)/Under Collection, excluding interest		\$214,921				
17			Cumulative Interest		\$26,206				
18			Total (Over)/Under Collection, including interest		\$241,127				

- (a) Prior Period Col. (c) + Prior Period Col. (f); 1/1/22 Beginning balance approved in DG 21-128
- (b) Actuals: Company financials; Forecast: PTAM Rate * Forecasted Therms
- (c) Column (a) + Column (b)
- (d) [Column (a) + Column (c)] ÷ 2
- (e) Quarterly interest rate - <https://www.energy.nh.gov/consumers/your-utility-service/utility-deposits>
- (f) Days per month
- (g) [Column (d) x ((Column (e) / 365) * Column (f))]
- (h) Column (g) + Prior Month Column (h)
- * Projected

**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Property Tax Adjustment Mechanism
Calculation of 2021 Municipal Property Taxes**

<u>Line</u>	<u>Amount</u>	<u>Reference</u>	<u>Source</u>
1	\$8,924,897	Calculated Municipal Property Taxes Included in Rates through 12/31/2021	Settlement Agreement - DG 20-105 Bates 32
2	<u>\$10,938,366</u>	Municipal Property Taxes Billed April 2021 – March 2022	Schedule 5 Page 4, Line 68
3	<u>\$2,013,469</u>	Increase To Rates Due To Municipal Property Tax Reconciliation	Line 2 minus Line 1

**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Property Tax Adjustment Mechanism
Municipal Property Tax 2021 Invoices**

Line	Municipality	Parcel	Installment #1	Installment #2	Tax Year 2021		Total Due
					Installment #3	Installment #4	
1	Allenstown	000400-000001-000000	31,268.00	25,077.00	-	-	56,345.00
2	Amherst	002-033-008	69,909.00	41,932.00	-	-	111,841.00
3	Amherst	002-033-007	3,592.00	1,829.00	-	-	5,421.00
4	Auburn	000001/000001/000UTL	687.00	918.00	-	-	1,605.00
5	Bedford	1-1-A	68,725.58	87,658.02	-	-	156,383.60
6	Belmont	999-000-000-001	20,581.07	21,482.20	-	-	42,063.27
7	Berlin	000404-000051.0000L1	9,747.00	9,491.00	-	-	19,238.00
8	Boscawen	000099-000002-000000	13,058.00	15,109.00	-	-	28,167.00
9	Bow	0-9-99	74,046.00	66,330.00	-	-	140,376.00
10	Canterbury	000000-000002-000000	3,450.00	1,916.00	-	-	5,366.00
11	Derry	35-102	46,778.41	61,748.78	-	-	108,527.19
12	Franklin	000-001-00	52,458.91	54,519.08	-	-	106,977.99
13	Gilford	200-003.000	3,886.00	2,411.00	-	-	6,297.00
14	Goffstown	99-4-3	46,701.04	46,537.41	-	-	93,238.45
15	Goffstown	99-4-2	1,381.22	1,376.37	-	-	2,757.59
16	Goffstown	99-4-1	N/A	N/A	-	-	-
17	Hollis	056-027-001	2,381.00	1,753.00	-	-	4,134.00
18	Hooksett	0GAS-0001	152,381.00	145,397.00	-	-	297,778.00
19	Hooksett	0036-0041-0001	3,095.00	2,953.00	-	-	6,048.00
20	Hudson	100-006-000	205,572.02	179,499.88	-	-	385,071.90
21	Hudson	167-030-000	846.31	875.24	-	-	1,721.55
22	Hudson	167-029-000	807.71	1,304.48	-	-	2,112.19
23	Laconia	425/44/83/1	156,290.00	161,711.00	-	-	318,001.00
24	Litchfield	000UTL-000UTL-000001	10,444.00	19,150.00	-	-	29,594.00
25	Londonderry	81-7-0	55,967.00	37,246.00	-	-	93,213.00
26	Londonderry	81-7-1	237,336.00	245,313.00	-	-	482,649.00
27	Londonderry	81-14-0	19,151.30	14,104.30	-	-	33,255.60
28	Londonderry	81-14-0	1,815.10	21,268.80	-	-	23,083.90
29	Loudon	000070-000004-000000	102,350.00	60,796.00	-	-	163,146.00
30	Manchester	0999A-0075	1,175,690.57	1,175,515.66	-	-	2,351,206.23
31	Manchester	0752-0001	24,155.36	17,292.84	-	-	41,448.20
32	Manchester	0508-0002A	74.71	50.48	-	-	125.19
33	Manchester	0394-0004	323.35	209.51	-	-	532.86
34	Manchester	0471-0008	551.93	361.32	-	-	913.25
35	Merrimack	006D-3-000000-000000	191,500.00	78,677.00	-	-	270,177.00
36	Milford	036-183-000-000	767.66	968.62	-	-	1,736.28
37	Milford	055-007-000-000	75,708.86	44,120.43	-	-	119,829.29
38	Nashua	0039-00026	1,544.88	1,630.67	-	-	3,175.55
39	Nashua	0038-00063	94.44	99.68	-	-	194.12
40	Nashua	0038-00020	148.84	157.11	-	-	305.95
41	Nashua	0041-00011	39,779.95	40,925.44	-	-	80,705.39
42	Nashua	0000PC-00005	1,284,551.84	1,342,094.32	-	-	2,626,646.16
43	Northfield	000999-000001-000001	30,147.00	21,438.00	-	-	51,585.00
44	Pembroke	999-11	77,788.00	76,893.00	-	-	154,681.00
45	Sanbornton	00 003.000.000	2,664.00	1,673.00	-	-	4,337.00
46	Tilton	000R23-000013-000000	129,478.00	120,987.00	-	-	250,465.00
47	Tilton	000R23-000014-000000	11,634.00	8,984.00	-	-	20,618.00
48	7 DELTA DRIVE, LLC	2021P01001303	14,659.00	13,709.00	-	-	28,368.00
49	Concord	77Z/12	8,106.05	8,106.05	7,174.62	7,832.47	31,219.19
50	Concord	77Z/11	573.67	573.68	503.35	550.18	2,200.88
51	Concord	77Z/10	6,644.38	6,644.40	5,880.91	6,420.15	25,589.84
52	Concord	77Z/9	322.95	322.94	285.84	312.06	1,243.79
53	Concord	77Z/7	591.76	591.76	523.76	571.78	2,279.06
54	Concord	77Z/6	933.99	934.61	827.23	903.08	3,598.91
55	Concord	77Z/6/A	5.69	5.68	4.99	5.47	21.83
56	Concord	NO00/1/13	11,744.34	11,744.35	13,628.82	22,179.03	59,296.54
57	Concord	P000/1/6	933.91	933.93	785.38	1,635.83	4,289.05
58	Concord	792Z/2/1	424.99	425.01	262.39	125.68	1,238.07
59	Concord	P000/1/3	31,122.34	31,122.32	26,182.08	28,405.53	116,832.27
60	Concord	NO00/1/2	391,483.61	391,483.60	454,308.04	437,962.67	1,675,237.92
61	Concord	202Z/2/1	263.83	263.84	233.52	254.94	1,016.13
62	Concord	743Z/19	1,834.39	1,834.40	1,623.61	1,780.19	7,072.59
63	Concord	494Z/3	300.54	300.56	266.02	290.38	1,157.50
64	Keene	583038000001000	122,879.38	115,131.72	-	-	238,011.10
65	Keene	116039000000000	8080.69	10733.51	-	-	18,814.20
66	R&M REALTY	582014000000000	5301.22	4902.31	-	-	10,203.53
67	Keene Propane	047020020000	3549.06	4033.21	-	-	7,582.27
68	Total		5,051,064.85	4,865,581.52	512,490.56	509,229.44	10,938,366.37

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Property Tax Adjustment Mechanism
Forecasted Period November 2022 – October 2023

1	Month	Beginning Balance	Rate (\$/Therm)	Forecasted Therms	Collections	(Over)/Under Ending Balance	Balance Subject to Interest	Interest Rate	Days per Month	Interest	Cumulative Interest
2		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
* 3	Nov-22	\$2,254,596	\$0.0124	18,136,869	(\$224,897)	\$2,029,699	\$2,142,147	5.50%	30	\$9,684	\$9,684
* 4	Dec-22	\$2,039,382	\$0.0124	25,743,913	(\$319,225)	\$1,720,158	\$1,879,770	5.50%	31	\$8,781	\$18,465
* 5	Jan-23	\$1,728,939	\$0.0124	29,871,794	(\$370,410)	\$1,358,529	\$1,543,734	5.50%	31	\$7,211	\$25,676
* 6	Feb-23	\$1,365,740	\$0.0124	25,118,132	(\$311,465)	\$1,054,275	\$1,210,007	5.50%	28	\$5,105	\$30,781
* 7	Mar-23	\$1,059,380	\$0.0124	22,114,523	(\$274,220)	\$785,160	\$922,270	5.50%	31	\$4,308	\$35,089
* 8	Apr-23	\$789,468	\$0.0124	14,278,524	(\$177,054)	\$612,414	\$700,941	5.50%	30	\$3,169	\$38,258
* 9	May-23	\$615,583	\$0.0124	10,395,230	(\$128,901)	\$486,682	\$551,133	5.50%	31	\$2,574	\$40,832
* 10	Jun-23	\$489,257	\$0.0124	6,716,470	(\$83,284)	\$405,972	\$447,615	5.50%	30	\$2,023	\$42,856
* 11	Jul-23	\$407,996	\$0.0124	6,090,557	(\$75,523)	\$332,473	\$370,234	5.50%	31	\$1,729	\$44,585
* 12	Aug-23	\$334,202	\$0.0124	6,296,037	(\$78,071)	\$256,132	\$295,167	5.50%	31	\$1,379	\$45,964
* 13	Sep-23	\$257,510	\$0.0124	7,971,933	(\$98,852)	\$158,658	\$208,084	5.50%	30	\$941	\$46,905
* 14	Oct-23	\$159,599	\$0.0124	13,604,579	(\$168,697)	(\$9,098)	\$75,251	5.50%	31	\$352	\$47,256
15	Total			186,338,561	(\$2,310,598)					\$47,256	
16		Projected Cumulative Collection			(\$2,310,598)						
17		Total Approved Collection			\$2,254,596						
18		(Over)/Under Collection, excluding interest			(\$56,002)						
19		Cumulative Interest			\$47,256						
20		Total (Over)/Under Collection, including interest			(\$8,746)						

- (a) Prior period Column (e) + Prior period Column (h); 11/1/22 Beginning balance Schedule 5, Page 2, Col. (c), Line 12 + Col. (f), Line 12 + Page 3, Line 3
- (b) Schedule 5, Page 1, Line 6
- (c) Company forecast
- (d) Column (a) * Column (b)
- (e) Column (a) * Column (d)
- (f) [Column (a) + Column (e)] ÷ 2
- (g) Interest rate effective first of the month
- (h) Days per month
- (i) [Column (f) x ((Column (g) / 365) * Column (h))]
- (j) Column (i) + Prior Month Column (j)
- * Projected

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
November 2022 – October 2023 LDAC
Local Delivery Adjustment Charge (LDAC) - Recovery of Rate Case Expense and Recoupment

<u>Line No.</u>	<u>Description</u> (A)	<u>Total</u> (B)
1	Prior Period Recoupment/Rate Case Expense (Over)/Under Collection, including interest as of October 31, 2022	\$ 129,039
2	Rate Case Expense DG 17-048	\$ (4,836)
3	Rate Case Expense DG 20-105 approved per Order No. 26,691	<u>\$ 680,768</u>
4	Rate Case Expense to Recover as of August 31, 2022	<u>\$ 675,932</u>
5	Projected Recoupment/Rate Case Expense Recovery	<u>\$ 804,971</u>
6	Projected Interest	<u>\$ 17,048</u>
7	Total Projected Recovery, November 1, 2022 - October 31, 2023	<u><u>\$ 822,018</u></u>
8	Forecast Throughput (Therms)	186,338,561
9	RCE Factor (\$/Therm)	\$0.0044

**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Recoupment/Rate Case Expense Reconciliation
Reconciliation of Previous Period November 2021 – October 2022**

	Month	Beginning Balance	Collections	(Over)/Under Ending Balance	Balance Subject to Interest	Interest Rate	Days per Month	Interest	Cumulative Interest
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
3	Nov-21	\$1,331,220	(\$20,125)	\$1,311,095	\$1,321,157	3.25%	30	\$3,529	\$3,529
4	Dec-21	\$1,314,624	(\$139,641)	\$1,174,983	\$1,244,804	3.25%	31	\$3,436	\$6,965
5	Jan-22	\$1,178,419	(\$179,012)	\$999,407	\$1,088,913	3.25%	31	\$3,006	\$9,971
6	Feb-22	\$1,002,413	(\$209,491)	\$792,921	\$897,667	3.25%	28	\$2,238	\$12,209
7	Mar-22	\$795,159	(\$186,570)	\$608,589	\$701,874	3.25%	31	\$1,937	\$14,146
8	Apr-22	\$610,526	(\$131,744)	\$478,783	\$544,655	3.50%	30	\$1,567	\$15,713
9	May-22	\$480,349	(\$90,760)	\$389,589	\$434,969	3.50%	31	\$1,293	\$17,006
10	Jun-22	\$390,882	(\$52,709)	\$338,173	\$364,528	4.00%	30	\$1,198	\$18,204
11	Jul-22	\$339,371	(\$36,523)	\$302,848	\$321,110	4.75%	31	\$1,295	\$19,500
12	Aug-22	\$304,143	(\$33,545)	\$270,599	\$287,371	5.50%	31	\$1,342	\$20,842
* 13	Sep-22	\$271,941	(\$53,556)	\$218,386	\$245,163	5.50%	30	\$1,108	\$21,951
* 14	Oct-22	\$219,494	(\$91,267)	\$128,227	\$173,860	5.50%	31	\$812	\$22,763
15			#####						
16			Projected Cumulative Collection		(\$1,224,944)				
17			Total Approved Collection		\$1,331,220				
18			(Over)/Under Collection, excluding interest		\$106,276				
19			Cumulative Interest		\$22,763				
20			Total (Over)/Under Collection, including interest		\$129,039				

- (a) October 19, 2021, Updated Filing Bates 126
- (b) Company records
- (c) Column (a) + Column (b)
- (d) [Column (a) + Column (c)] ÷ 2
- (e) Prime Rate effective first of each month
- (f) Days per month
- (g) [Column (d) x ((Column (e) / 365) * Column (f))]
- (h) Column (g) + Prior Month Column (h)
- * Projected

**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Recoupment/Rate Case Expense Reconciliation
Forecasted Recovery November 2022 – October 2023**

1	Month	Beginning Balance	Rate (\$/Therm)	Therm Sales	Collections	(Over)/Under Ending Balance	Balance Subject to Interest	Interest Rate	Days per Month	Interest	Cumulative Interest
2		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
* 3	Nov-22	\$804,971	\$0.0044	18,136,869	(\$79,802)	\$725,169	\$765,070	5.50%	30	\$3,459	\$3,459
* 4	Dec-22	\$728,627	\$0.0044	25,743,913	(\$113,273)	\$615,354	\$671,991	5.50%	31	\$3,139	\$6,598
* 5	Jan-23	\$618,493	\$0.0044	29,871,794	(\$131,436)	\$487,057	\$552,775	5.50%	31	\$2,582	\$9,180
* 6	Feb-23	\$489,639	\$0.0044	25,118,132	(\$110,520)	\$379,119	\$434,379	5.50%	28	\$1,833	\$11,012
* 7	Mar-23	\$380,952	\$0.0044	22,114,523	(\$97,304)	\$283,648	\$332,300	5.50%	31	\$1,552	\$12,565
* 8	Apr-23	\$285,200	\$0.0044	14,278,524	(\$62,826)	\$222,375	\$253,788	5.50%	30	\$1,147	\$13,712
* 9	May-23	\$223,522	\$0.0044	10,395,230	(\$45,739)	\$177,783	\$200,653	5.50%	31	\$937	\$14,649
* 10	Jun-23	\$178,721	\$0.0044	6,716,470	(\$29,552)	\$149,168	\$163,944	5.50%	30	\$741	\$15,390
* 11	Jul-23	\$149,909	\$0.0044	6,090,557	(\$26,798)	\$123,111	\$136,510	5.50%	31	\$638	\$16,028
* 12	Aug-23	\$123,748	\$0.0044	6,296,037	(\$27,703)	\$96,046	\$109,897	5.50%	31	\$513	\$16,541
* 13	Sep-23	\$96,559	\$0.0044	7,971,933	(\$35,077)	\$61,483	\$79,021	5.50%	30	\$357	\$16,899
* 14	Oct-23	\$61,840	\$0.0044	13,604,579	(\$59,860)	\$1,980	\$31,910	5.50%	31	\$149	\$17,048
15	Total			186,338,561	(\$819,890)					\$17,048	
16		Projected Cumulative Collection			(\$819,890)						
17		Total Approved Collection			\$804,971						
18		(Over)/Under Collection, excluding interest			(\$14,919)						
19		Cumulative Interest			\$17,048						
20		Total (Over)/Under Collection, including interest			\$2,129						

(a) Prior period Column (e) + Prior period Column (h); 11/1/22 Balance: Schedule 6, Page 2, Col. (e), Line 21 + Col (h), Line 21 + Page 1, Line 4

(b) Schedule 6, Page 1, Line 9

(c) Company forecast

(d) Column (b) * Column (c)

(e) Column (a) + Column (d)

(f) [Column (a) + Column (e)] ÷ 2

(g) Interest rate effective first of the month

(h) Days per month

(i) [Column (f) x ((Column (g) / 365) * Column (h))]

(j) Column (i) + Prior Month Column (j)

* Projected

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
Docket No. DG 20-105 Rate Case Expense
To be Recovered November 2022 – October 2023
As of August 31, 2022

Line No	Service Provider	Expense as of 8/31/22	DOE Recommended Reduction	Post Audit Expense - Approved	Amount Approved for Recovery per Order No. 26,691	Post Audit Expense - to be Reviewed	Description of Service
1	Concentric Energy Advisors	\$ 48,381.75	\$ (48,381.75)	\$ -	\$ -	\$ -	Review of Decoupling Mechanism
	FTI Consulting						Revenue Requirement, Rate Design, Marginal Cost of Service, Functional Cost of Service, Decoupling Effects on
2		\$ 385,965.46	-	-	385,965.46	-	EE, Cost of Capital
3	Keegan Werlin	\$ 114,463.50	(12,892.50)	-	101,571.00	33,943.00	Legal Services
4	ScottMadden	\$ 34,215.00	(34,215.00)	-	-	-	Testimony Support
5	Management Applications Consulting	\$ 33,245.63	-	-	33,245.63	37,996.91	Review Status of Depreciation Base
6	Court Reporter	\$ 3,053.00	-	(1,310.00)	1,743.00	-	Court Reporter
7	Customer Notice	\$ 46,241.00	-	-	46,241.00	-	Customer Notice
8	Legal Notices	\$ 466.50	-	-	466.50	-	Legal Notices
9	Printing Expenses	\$ 159.60	-	-	159.60	-	Printing Expenses
10							
11	Subtotal	\$ 666,191.44	(95,489.25)	(1,310.00)	569,392.19	71,939.91	
12							
13							
14	<u>DOE Consultants</u>						
15	Blue Ridge Consulting	\$ 62,402.50	-	2,250.00	64,652.50	-	Revenue Requirement
16	J. Randall Woolridge	\$ -	-	33,800.00	33,800.00	-	Cost of Capital
17							
18	<u>OCA Consultants</u>						
19	Exeter Associates	\$ 12,923.70	-	-	12,923.70	-	Cost of Service/Rate Design
20							
21	Subtotal DOE/OCA	\$ 75,326.20	-	36,050.00	111,376.20	-	
22							
23	Grand Total	\$ 741,517.64	\$ (95,489.25)	\$ 34,740.00	\$ 680,768.39	\$ 71,939.91	Total Estimated Amount
24							
25							
26							

Note: Amounts in "Post Audit Expense" column represent costs for which invoices were received after the completion of the Audit.

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

	Customer Charge	Block	Total
1 Distribution			
2 R-3 Base Rates	\$ 15.39	\$ 0.5632	
3 R-4 Base Rates at 55% of R-3	\$ 8.47	\$ 0.3098	
4 Program Distribution Subsidy	\$ 6.9260	\$ 0.2534	
5 Normal Winter Therms			621
6 Estimated Winter 2022/2023 Distribution Subsidy	\$ 41.56	\$ 157.32	\$ 198.87
7			
8 Number of Estimated 2022/2023 Participants	6,032	65	6,097 (a)
9 COG			
10 R-3 COG Rates	\$ 1.2295	\$ 0.1778	
11 R-4 COG Rates at 55% of R-3	\$ 0.6762	\$ 0.0978	
12 Program COG Subsidy	\$ 0.5533	\$ 0.0800	\$ -
13 Estimated Winter 2022/2023 COG Subsidy (Ln 5 * Ln 14)	\$ 343.44	\$ 49.66	\$ 393.10
14 Winter Distribution Subsidy times Number of Participants (Ln 7 * Ln 9)			\$ 1,212,534
15 Winter COG Subsidy times Number of Participants (Ln 9 * Ln 16)			\$ 2,074,829
16 Prior Year Ending Balance - Gas Assistance Page 2			\$ 494,571
17 Estimated Annual Administrative Costs			-
18 Total Program Costs			\$ 3,781,934
19 Estimated weather normalized firm therms billed for the			
20 Twelve months ended 10/31/22 sales and transportation			186,338,561
21 Total Gas Assistance Program Charge			\$ 0.0203

(a) Estimated number of participants for 2022/2023 is based on the actual number

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
November 2021 through October 2022
Residential Gas Assistance Program Reconciliation
Account 175.6

1 2	FOR THE MONTH OF DAYS IN MONTH	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Estimate)	(Estimate)	Total
		Nov-21 30	Dec-21 31	Jan-22 31	Feb-22 28	Mar-22 31	Apr-22 30	May-22 31	Jun-22 30	Jul-22 31	Aug-22 31	Sep-22 30	Oct-22 31	
3	Beginning Balance	\$ 318,947	\$ 252,743	\$ 367,814	\$ 472,282	\$ 549,335	\$ 641,439	\$ 773,225	\$ 839,851	\$ 741,214	\$ 680,255	\$ 626,159	\$ 564,366	\$ 318,947
4	Add: Actual Costs	56,232.0	412,301.2	485,497.5	516,893.4	484,054.4	407,554.0	256,657.9	9,968.5	13,906.8	13,564.3	-	-	2,656,630
5	Less: Collected Revenue	(123,198.4)	(298,085.1)	(382,187.5)	(441,112.0)	(393,591.4)	(277,800.2)	(192,426.4)	(111,199.4)	(77,727.7)	(70,704.9)	(64,477.2)	(72,263.2)	(2,504,773)
6	Add: Administrative and Start Up Costs	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Ending Balance Pre-Interest	\$ 251,980	\$ 366,959	\$ 471,124	\$ 548,063	\$ 639,798	\$ 771,193	\$ 837,457	\$ 738,620	\$ 677,394	\$ 623,115	\$ 561,682	\$ 492,103	\$ 470,803
8	Month's Average Balance	\$ 285,464	\$ 309,851	\$ 419,469	\$ 510,173	\$ 594,567	\$ 706,316	\$ 805,341	\$ 789,235	\$ 709,304	\$ 651,685	\$ 593,920	\$ 528,235	
9	Interest Rate	3.25%	3.25%	3.25%	3.25%	3.25%	3.50%	3.50%	4.00%	4.75%	5.50%	5.50%	5.50%	
10	Interest Applied	\$ 763	\$ 855	\$ 1,158	\$ 1,272	\$ 1,641	\$ 2,032	\$ 2,394	\$ 2,595	\$ 2,862	\$ 3,044	\$ 2,685	\$ 2,468	23,767
11	Ending Balance	\$ 252,743	\$ 367,814	\$ 472,282	\$ 549,335	\$ 641,439	\$ 773,225	\$ 839,851	\$ 741,214	\$ 680,255	\$ 626,159	\$ 564,366	\$ 494,571	\$ 494,571

Liberty Utilities (EnergyNorth Natural Gas) Corp d/b/a Liberty
Quarterly Report
Gas Assistance Program (GAP)
2021 22 Discounted 45%

Schedule 7
RGAP
Page 3 of 3

Customer Count													Summary		
	Nov 21	Dec 21	Jan 22	Feb 22	Mar 22	Apr 22	May 22	Jun 22	Jul 22	Aug 22	Sep 22	Oct 22	Actual/ Projected Total To Date (1)	Original Projection (2)	Variance
Actual / Projected No. of Customers	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Projected	Projected	Projected	Projected	Average		
LIHEAP	4,186	4,333	4,375	4,427	4,563	4,645	4,693	4,580	4,563	4,563	4,563	4,563	4,422	5,320	899
Non-LIHEAP	1,508	1,422	1,413	1,433	1,423	1,452	1,502	1,497	1,423	1,423	1,423	1,423	1,442	743	(699)
Total	(a) 5,694	5,755	5,788	5,860	5,986	6,097	6,195	6,077	5,986	5,986	5,986	5,986	5,863	6,063	200
GAP Recoveries															
Actual / Projected															
Therm Sales	9,552,677	19,373,741	24,840,510	28,516,452	25,446,880	17,948,293	12,446,101	7,178,867	5,533,972	5,725,074	7,237,234	12,333,426	176,133,228	182,829,872	6,696,644
GAP Rate Per Therm	\$0.0156	\$0.0156	\$0.0156	\$0.0156	\$0.0156	\$0.0156	\$0.0156	\$0.0156	\$0.0156	\$0.0156	\$0.0156	\$0.0156	\$0.0156	\$0.0156	
Total	(e) \$123,946	\$302,230	\$387,512	\$444,857	\$396,971.33	\$279,993.37	\$194,159.18	\$111,990.33	\$86,329.97	\$89,311.15	\$112,900.86	\$192,401	\$2,722,503	\$2,852,146	\$129,543
Adjustment	\$854	-\$1,110	-\$1,390	\$134	-\$88	-\$14	-\$356	-\$36	\$0	\$0	\$0	\$0	-\$2,005	\$0	
Total Adjusted Recoveries (3)	\$124,800	\$301,121	\$386,122	\$444,991	\$396,883	\$279,980	\$193,804	\$111,955	\$86,330	\$89,311	\$112,901	\$192,401	\$2,720,598	\$2,852,146	\$131,548
Program Costs															
Actual & Projected Costs															
Prior Period Ending Balance	(c) 322,341	0	0	0	0	0	0	0	0	0	0	0	322,341	208,239	(114,101)
IT	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Admin.	(b) 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Education	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other (incl. Reporting Costs)	773	871.67	1,185	1,309	1,699	2,109	3,420	2,691	0	0	0	0	10,638	0	(10,638)
Fixed Discount	7,364	44,048.77	41,747	41,552	46,657	46,145	34,020	1,290	41,459	41,459	41,459	41,459	428,658	221,076	(207,582)
Variable Discount	15,251	133,633.50	175,701	203,060	204,119	154,189	75,833	3,337	18,820	23,371	49,774	107,896	1,165,085	802,374	(362,711)
COG Discount	35,996	241,168.52	276,420	281,311	243,951	213,535	148,748	5,366	14,533	17,951	38,231	82,875	1,600,085	1,617,433	17,349
Total Monthly Costs (3)	(d) \$59,384.53	\$419,722	\$495,052	\$527,231	\$496,427	\$415,978	\$258,601	\$12,684	\$74,912	\$82,781	\$129,464	\$232,230	\$3,204,466	\$2,640,884	(\$563,582)
Avg Monthly Residential Customer Bill	\$ 129.67	\$ 218.05	\$ 241.99	\$ 288.03	\$ 258.56	\$ 184.91	\$ 79.73	\$ 50.71	\$ 35.58	\$ 33.05	\$ 33.05	\$ 41.88	\$1,595.22	\$3,060.78	\$1,465.56
Avg Monthly Residential Low Income Customer Bill	\$ 57.51	\$ 90.04	\$ 92.71	\$ 105.24	\$ 101.93	\$ 80.26	\$ 75.57	\$ 47.72	\$ 33.84	\$ 31.52	\$ 31.99	\$ 40.81	\$789.13	\$274.01	(\$515.12)
Avg Monthly GAP Customer Discount	\$72.16	\$128.02	\$149.28	\$182.78	\$156.64	\$104.65	\$4.16	\$3.00	\$1.74	\$1.53	\$1.07	\$1.08	\$806.10	\$2,786.77	\$1,980.67
Avg Monthly GAP Customer Discount as a % to Avg Monthly Residential Customer Bill	55.65%	58.71%	61.69%	63.46%	60.58%	56.59%	5.22%	5.91%	4.89%	4.63%	3.23%	2.57%	50.53%	91.05%	
Gross Monthly Revenues	\$9,747,498	\$26,119,602	\$30,570,568	\$31,130,776	\$27,291,640	\$22,365,746	\$15,576,461	\$7,847,069	\$4,997,762	\$6,467,910	\$5,113,368	\$8,930,712	\$196,159,110	\$161,677,049	(\$34,482,061)
Total Costs as a percent of Gross Monthly Revenues	0.61%	1.61%	1.62%	1.69%	1.82%	1.86%	1.66%	0.16%	1.50%	1.28%	2.53%	2.60%	1.63%	1.63%	

(1) This column represents actual data for the months in which such data is available plus projected data for the remaining months in the 12-month program year.

(2) GAP Projection on Bates 135 of the 2021-22 Cost of Gas Filing, DG 21-130.

(3) Ties to the Company's GAP deferral accounts 8840-2-0000-10-1169-1756 & 8843-2-0000-10-1169-1756.

(a) The actual number of customers provided for this report are the number of registered customers that were billed during the month.

(b) Actual administrative costs consists of bill inserts and advertising.

(c) The Prior Year 2020-21 under/(over) ending balance.

(d) The total discount is calculated from the actual Residential Low Income R-4 & R-7 bills for the month plus interest.

(e) The Total GAP recoveries for Nov-21 has an estimated volume split between Peak and Off Peak of 25/75 respectively.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
LDAC 2022 2023 Filing
LDAC Bill Comparisons, Proposed LDAC Rates November 1, 2022 October 31, 2023 vs. Current LDAC Rates

Schedule 8
Page 1 of 4

Proposed LDAC Rates November 1, 2022 October 31, 2023								
Residential Customers (Rate Codes R 3)								
	Nov 22	Dec 22	Jan 23	Feb 23	Mar 23	Apr 23	Winter Nov Apr	
	45	92	117	148	130	88	621	
Typical Usage (Therms)								
6 Energy Efficiency	\$ 0.0664	\$ 0.0664	\$ 0.0664	\$ 0.0664	\$ 0.0664	\$ 0.0664	\$ 0.0664	
7 Energy Efficiency Amount	\$ 2.98	\$ 6.14	\$ 7.78	\$ 9.83	\$ 8.66	\$ 5.83	\$ 41.22	
8 Gas Holder	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
9 Gas Holder Amount	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
10 MGP	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	
11 MGP Amount	\$ 0.3402	\$ 0.7014	\$ 0.8895	\$ 1.1233	\$ 0.9898	\$ 0.6668	\$ 4.71	
12 Environmental	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	
13 Total Environmental	\$ 0.34	\$ 0.70	\$ 0.89	\$ 1.12	\$ 0.99	\$ 0.67	\$ 4.71	
14 RDAF	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
15 RDAF amount	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
16 PTAM	\$ 0.0124	\$ 0.0124	\$ 0.0124	\$ 0.0124	\$ 0.0124	\$ 0.0124	\$ 0.0124	
17 PTAM amount	\$ 0.55	\$ 1.14	\$ 1.45	\$ 1.83	\$ 1.61	\$ 1.09	\$ 7.67	
18 RCE	\$ 0.0044	\$ 0.0044	\$ 0.0044	\$ 0.0044	\$ 0.0044	\$ 0.0044	\$ 0.0044	
19 RCE Amount	\$ 0.20	\$ 0.41	\$ 0.52	\$ 0.65	\$ 0.57	\$ 0.39	\$ 2.73	
20 GAP	\$ 0.0203	\$ 0.0203	\$ 0.0203	\$ 0.0203	\$ 0.0203	\$ 0.0203	\$ 0.0203	
21 GAP Amount	\$ 0.91	\$ 1.88	\$ 2.38	\$ 3.00	\$ 2.65	\$ 1.78	\$ 12.60	
22 LDAC	\$ 0.1110	\$ 0.1110	\$ 0.1110	\$ 0.1110	\$ 0.1110	\$ 0.1110	\$ 0.1110	
23 LDAC Amount	\$ 4.98	\$ 10.26	\$ 13.01	\$ 16.43	\$ 14.48	\$ 9.76	\$ 68.93	

Current LDAC Rates								
Residential Customers (Rate Codes R 3)								
	Nov 21	Dec 21	Jan 22	Feb 22	Mar 22	Apr 22	Winter Nov Apr	
	45	92	117	148	130	88	621	
Typical Usage (Therms)								
28 Energy Efficiency	\$ 0.0640	\$ 0.0640	\$ 0.0640	\$ 0.0640	\$ 0.0640	\$ 0.0640	\$ 0.0640	
29 Energy Efficiency Amount	\$ 2.87	\$ 5.91	\$ 4.99	\$ 4.99	\$ 4.99	\$ 4.99	\$ 28.72	
30 Gas Holder	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
31 Gas Holder Amount	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
32 MGP	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	
33 MGP Amount	\$ 0.6926	\$ 1.4279	\$ 1.2045	\$ 1.2045	\$ 1.2045	\$ 1.2045	\$ 6.94	
34 Environmental	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	
35 Total Environmental	\$ 0.69	\$ 1.43	\$ 1.20	\$ 1.20	\$ 1.20	\$ 1.20	\$ 6.94	
36 RDAF	\$ 0.0152	\$ 0.0152	\$ 0.0152	\$ 0.0152	\$ 0.0152	\$ 0.0152	\$ 0.0152	
37 RDAF amount	\$ 0.68	\$ 1.40	\$ 1.18	\$ 1.18	\$ 1.18	\$ 1.18	\$ 6.83	
38 PTAM	\$ 0.0142	\$ 0.0142	\$ 0.0142	\$ 0.0142	\$ 0.0142	\$ 0.0142	\$ 0.0142	
39 PTAM amount	\$ 0.64	\$ 1.31	\$ 1.11	\$ 1.11	\$ 1.11	\$ 1.11	\$ 6.38	
40 RCE	\$ 0.0074	\$ 0.0074	\$ 0.0074	\$ 0.0074	\$ 0.0074	\$ 0.0074	\$ 0.0074	
41 RCE Amount	\$ 0.33	\$ 0.68	\$ 0.58	\$ 0.58	\$ 0.58	\$ 0.58	\$ 3.32	
42 GAP	\$ 0.0156	\$ 0.0156	\$ 0.0156	\$ 0.0156	\$ 0.0156	\$ 0.0156	\$ 0.0156	
43 GAP Amount	\$ 0.70	\$ 1.44	\$ 1.22	\$ 1.22	\$ 1.22	\$ 1.22	\$ 7.01	
44 Total LDAC	\$ 0.1318	\$ 0.1318	\$ 0.1318	\$ 0.1318	\$ 0.1318	\$ 0.1318	\$ 0.1318	
45 Total LDAC Amount	\$ 5.91	\$ 12.16	\$ 15.45	\$ 19.51	\$ 17.19	\$ 11.58	\$ 81.81	

LDAC Bill Impact : Residential Customers (Rate Codes R 3)								
	Nov 22	Dec 22	Jan 23	Feb 23	Mar 23	Apr 23	Winter Nov Apr	
	45	92	117	148	130	88	621	
49 Energy Efficiency	\$ (0.11)	\$ (0.23)	\$ (2.80)	\$ (4.84)	\$ (3.67)	\$ (0.85)	\$ (12.50)	
50 Energy Efficiency Amount	\$ -3.8%	\$ -3.8%	\$ -56.1%	\$ -97.1%	\$ -73.7%	\$ -17.0%	\$ -15.3%	
51 Environmental	\$ 1.03	\$ 2.13	\$ 2.09	\$ 2.33	\$ 2.19	\$ 1.87	\$ 11.65	
52 Total Environmental	149.1%	149.1%	173.9%	193.3%	182.2%	155.4%	167.9%	
53 RDAF	\$ 0.35	\$ 0.73	\$ 0.31	\$ 0.08	\$ 0.21	\$ 0.54	\$ 2.23	
54 RDAF amount	51.7%	51.7%	26.8%	6.9%	18.1%	45.4%	32.6%	
55 PTAM	\$ 0.35	\$ 0.73	\$ 0.31	\$ 0.08	\$ 0.21	\$ 0.54	\$ 2.23	
56 PTAM amount	55.4%	55.4%	28.4%	7.3%	19.4%	48.6%	34.9%	
57 RCE	\$ 0.68	\$ 1.40	\$ 1.18	\$ 1.18	\$ 1.18	\$ 1.18	\$ 6.83	
58 RCE Amount	205.4%	205.4%	205.4%	205.4%	205.4%	205.4%	205.4%	
59 GAP	\$ 0.08	\$ 0.17	\$ (0.34)	\$ (0.72)	\$ (0.50)	\$ 0.02	\$ (1.29)	
60 GAP Amount	1.4%	1.4%	-2.2%	-3.7%	-2.9%	0.2%	-1.6%	
61 Total LDAC	\$ (0.93)	\$ (1.92)	\$ (2.43)	\$ (3.07)	\$ (2.71)	\$ (1.82)	\$ (12.88)	
62 Total LDAC Amount	-15.7%	-15.7%	-15.7%	-15.7%	-15.7%	-15.7%	-15.7%	

	May 23	Jun 23	Jul 23	Aug 23	Sep 23	Oct 23	Summer May Oct	Total Nov Oct
	55	24	15	14	13	19	141	762
6 Energy Efficiency	\$ 0.0664	\$ 0.0664	\$ 0.0664	\$ 0.0664	\$ 0.0664	\$ 0.0664	\$ 0.0664	\$ 0.0664
7 Energy Efficiency Amount	\$ 3.65	\$ 1.60	\$ 1.03	\$ 0.93	\$ 0.89	\$ 1.26	\$ 9.35	\$ 50.57
8 Gas Holder	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9 Gas Holder Amount	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10 MGP	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076
11 MGP Amount	\$ 0.4169	\$ 0.1828	\$ 0.1172	\$ 0.1065	\$ 0.1017	\$ 0.1437	\$ 1.07	\$ 5.78
12 Environmental	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076
13 Total Environmental	\$ 0.42	\$ 0.18	\$ 0.12	\$ 0.11	\$ 0.10	\$ 0.14	\$ 1.07	\$ 5.78
14 RDAF	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15 RDAF amount	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16 PTAM	\$ 0.0124	\$ 0.0124	\$ 0.0124	\$ 0.0124	\$ 0.0124	\$ 0.0124	\$ 0.0124	\$ 0.0124
17 PTAM amount	\$ 0.68	\$ 0.30	\$ 0.19	\$ 0.17	\$ 0.17	\$ 0.23	\$ 1.74	\$ 9.41
18 RCE	\$ 0.0044	\$ 0.0044	\$ 0.0044	\$ 0.0044	\$ 0.0044	\$ 0.0044	\$ 0.0044	\$ 0.0044
19 RCE Amount	\$ 0.24	\$ 0.11	\$ 0.07	\$ 0.06	\$ 0.06	\$ 0.08	\$ 0.62	\$ 3.35
20 GAP	\$ 0.0203	\$ 0.0203	\$ 0.0203	\$ 0.0203	\$ 0.0203	\$ 0.0203	\$ 0.0203	\$ 0.0203
21 GAP Amount	\$ 1.12	\$ 0.49	\$ 0.31	\$ 0.28	\$ 0.27	\$ 0.38	\$ 2.86	\$ 15.46
22 LDAC	\$ 0.1110	\$ 0.1110	\$ 0.1110	\$ 0.1110	\$ 0.1110	\$ 0.1110	\$ 0.1110	\$ 0.1110
23 LDAC Amount	\$ 6.10	\$ 2.67	\$ 1.72	\$ 1.56	\$ 1.49	\$ 2.10	\$ 15.64	\$ 84.57

	May 22	Jun 22	Jul 22	Aug 22	Sep 22	Oct 22	Summer May Oct	Total Nov Oct
	55	24	15	14	13	19	141	762
28 Energy Efficiency	\$ 0.0640	\$ 0.0640	\$ 0.0640	\$ 0.0640	\$ 0.0640	\$ 0.0640	\$ 0.0640	\$ 0.0640
29 Energy Efficiency Amount	\$ 3.51	\$ 1.54	\$ 0.99	\$ 0.90	\$ 0.86	\$ 1.21	\$ 9.01	\$ 37.72
30 Gas Holder	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
31 Gas Holder Amount	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
32 MGP	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155
33 MGP Amount	\$ 0.8487	\$ 0.3720	\$ 0.2387	\$ 0.2168	\$ 0.2071	\$ 0.2925	\$ 2.18	\$ 9.11
34 Environmental	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155
35 Total Environmental	\$ 0.85	\$ 0.37	\$ 0.24	\$ 0.22	\$ 0.21	\$ 0.29	\$ 2.18	\$ 9.11
36 RDAF	\$ 0.0152	\$ 0.0152	\$ 0.0152	\$ 0.0152	\$ 0.0152	\$ 0.0152	\$ 0.0152	\$ 0.0152
37 RDAF amount	\$ 0.83	\$ 0.37	\$ 0.23	\$ 0.21	\$ 0.20	\$ 0.29	\$ 2.14	\$ 8.97
38 PTAM	\$ 0.0142	\$ 0.0142	\$ 0.0142	\$ 0.0142	\$ 0.0142	\$ 0.0142	\$ 0.0142	\$ 0.0142
39 PTAM amount	\$ 0.78	\$ 0.34	\$ 0.22	\$ 0.20	\$ 0.19	\$ 0.27	\$ 2.00	\$ 8.38
40 RCE	\$ 0.0074	\$ 0.0074	\$ 0.0074	\$ 0.0074	\$ 0.0074	\$ 0.0074	\$ 0.0074	\$ 0.0074
41 RCE Amount	\$ 0.41	\$ 0.18	\$ 0.11	\$ 0.10	\$ 0.10	\$ 0.14	\$ 1.04	\$ 4.37
42 GAP	\$ 0.0156	\$ 0.0156	\$ 0.0156	\$ 0.0156	\$ 0.0156	\$ 0.0156	\$ 0.0156	\$ 0.0156
43 GAP Amount	\$ 0.86	\$ 0.38	\$ 0.24	\$ 0.22	\$ 0.21	\$ 0.30	\$ 2.20	\$ 9.20
44 Total LDAC	\$ 0.1318	\$ 0.1318	\$ 0.1318	\$ 0.1318	\$ 0.1318	\$ 0.1318	\$ 0.1318	\$ 0.1318
45 Total LDAC Amount	\$ 7.24	\$ 3.17	\$ 2.04	\$ 1.85	\$ 1.77	\$ 2.50	\$ 18.56	\$ 100.37

	May 23	Jun 23	Jul 23	Aug 23	Sep 23	Oct 23	Summer May Oct	Total Nov Oct
	55	24	15	14	13	19	141	762
49 Energy Efficiency	\$ (0.13)	\$ (0.06)	\$ (0.04)	\$ (0.03)	\$ (0.03)	\$ (0.05)	\$ (0.35)	\$ (12.84)
50 Energy Efficiency Amount	\$ -3.8%	\$ -4%	\$ -4%	\$ -4%	\$ -4%	\$ -4%	\$ (0.35)	\$ (0.34)
51 Environmental	\$ 1.27	\$ 0.55	\$ 0.36	\$ 0.32	\$ 0.31	\$ 0.44	\$ 3.24	\$ 14.89
52 Total Environmental	149.1%	149.1%	149.1%	149.1%	149.1%	149.1%	149.1%	163.4%
53 RDAF	\$ 0.43	\$ 0.19	\$ 0.12	\$ 0.11	\$ 0.11	\$ 0.15	\$ 1.11	\$ 3.33
54 RDAF amount	51.7%	51.7%	51.7%	51.7%	51.7%	51.7%	51.7%	37.2%
55 PTAM	\$ 0.43	\$ 0.19	\$ 0.12	\$ 0.11	\$ 0.11	\$ 0.15	\$ 1.11	\$ 3.33
56 PTAM amount	55.4%	55.4%	55.4%	55.4%	55.4%	55.4%	55.4%	39.8%
57 RCE	\$ 0.83	\$ 0.37	\$ 0.23	\$ 0.21	\$ 0.20	\$ 0.29	\$ 2.14	\$ 8.97
58 RCE Amount	205.4%	205.4%	205.4%	205.4%	205.4%	205.4%	205.4%	205.4%
59 GAP	\$ 0.10	\$ 0.04	\$ 0.03	\$ 0.03	\$ 0.02	\$ 0.03	\$ 0.26	\$ (1.03)
60 GAP Amount	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	-1.0%
61 Total LDAC	\$ (1.14)	\$ (0.50)	\$ (0.32)	\$ (0.29)	\$ (0.28)	\$ (0.39)	\$ (2.92)	\$ (15.81)
62 Total LDAC Amount	-15.7%	-15.7%	-15.7%	-15.7%	-15.7%	-15.7%	-15.7%	-15.7%

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
LDAC 2022 2023 Filing
LDAC Bill Comparisons, Proposed LDAC Rates November 1, 2022 October 31, 2023 vs. Current LDAC Rates

Schedule 8
Page 2 of 4

1 Proposed LDAC Rates November 1, 2022 October 31, 2023 2 Commercial/Industrial Sales Customers and Commercial/Industrial Transportation Customers (Rate Codes G 41)								
	Nov 22	Dec 22	Jan 23	Feb 23	Mar 23	Apr 23	Winter Nov Apr	
	111	274	376	483	425	270	1,939	
5 Typical Usage (Therms)								
6 Energy Efficiency	\$ 0.0442	\$ 0.0442	\$ 0.0442	\$ 0.0442	\$ 0.0442	\$ 0.0442	\$ 0.0442	
7 Energy Efficiency Amount	\$ 4.93	\$ 12.11	\$ 16.61	\$ 21.37	\$ 18.76	\$ 11.93	\$ 85.70	
8 Gas Holder	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
9 Gas Holder Amount	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
10 MGP	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	
11 MGP Amount	\$ 0.85	\$ 2.0790	\$ 2.8516	\$ 3.6690	\$ 3.2217	\$ 2.0487	\$ 14.72	
12 Environmental	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	
13 Total Environmental	\$ 0.85	\$ 2.08	\$ 2.85	\$ 3.67	\$ 3.22	\$ 2.05	\$ 14.72	
14 RDAF	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
15 RDAF amount	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
16 PTAM	\$ 0.0124	\$ 0.0124	\$ 0.0124	\$ 0.0124	\$ 0.0124	\$ 0.0124	\$ 0.0124	
17 PTAM amount	\$ 1.38	\$ 3.38	\$ 4.64	\$ 5.97	\$ 5.24	\$ 3.33	\$ 23.95	
18 RCE	\$ 0.0044	\$ 0.0044	\$ 0.0044	\$ 0.0044	\$ 0.0044	\$ 0.0044	\$ 0.0044	
19 RCE Amount	\$ 0.49	\$ 1.21	\$ 1.65	\$ 2.13	\$ 1.87	\$ 1.19	\$ 8.53	
20 GAP	\$ 0.0203	\$ 0.0203	\$ 0.0203	\$ 0.0203	\$ 0.0203	\$ 0.0203	\$ 0.0203	
21 GAP Amount	\$ 2.26	\$ 5.56	\$ 7.63	\$ 9.81	\$ 8.62	\$ 5.48	\$ 39.36	
22 LDAC	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	
23 LDAC Amount	\$ 9.90	\$ 24.34	\$ 33.38	\$ 42.95	\$ 37.71	\$ 23.98	\$ 172.26	

	May 23	Jun 23	Jul 23	Aug 23	Sep 23	Oct 23	Summer May Oct	Total Nov Oct
	154	55	24	21	13	44	310	2,249
	\$ 0.0442	\$ 0.0442	\$ 0.0442	\$ 0.0442	\$ 0.0442	\$ 0.0442	\$ 0.0442	\$ 0.0442
	\$ 6.81	\$ 2.42	\$ 1.07	\$ 0.91	\$ 0.57	\$ 1.93	\$ 13.71	\$ 99.41
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076
	\$ 1.1687	\$ 0.4158	\$ 0.1845	\$ 0.1557	\$ 0.0977	\$ 0.3313	\$ 2.35	\$ 17.07
	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076	\$ 0.0076
	\$ 1.17	\$ 0.42	\$ 0.18	\$ 0.16	\$ 0.10	\$ 0.33	\$ 2.35	\$ 17.07
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ 0.0124	\$ 0.0124	\$ 0.0124	\$ 0.0124	\$ 0.0124	\$ 0.0124	\$ 0.0124	\$ 0.0124
	\$ 1.90	\$ 0.68	\$ 0.30	\$ 0.25	\$ 0.16	\$ 0.54	\$ 3.83	\$ 27.78
	\$ 0.0044	\$ 0.0044	\$ 0.0044	\$ 0.0044	\$ 0.0044	\$ 0.0044	\$ 0.0044	\$ 0.0044
	\$ 0.68	\$ 0.24	\$ 0.11	\$ 0.09	\$ 0.06	\$ 0.19	\$ 1.36	\$ 9.90
	\$ 0.0203	\$ 0.0203	\$ 0.0203	\$ 0.0203	\$ 0.0203	\$ 0.0203	\$ 0.0203	\$ 0.0203
	\$ 3.13	\$ 1.11	\$ 0.49	\$ 0.42	\$ 0.26	\$ 0.89	\$ 6.30	\$ 45.66
	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888	\$ 0.0888
	\$ 13.68	\$ 4.87	\$ 2.16	\$ 1.82	\$ 1.14	\$ 3.88	\$ 27.55	\$ 199.82

24 Current LDAC Rates November 1, 2022 October 31, 2023 25 Commercial/Industrial Sales Customers and Commercial/Industrial Transportation Customers (Rate Codes G 41)								
	Nov 21	Dec 21	Jan 22	Feb 22	Mar 22	Apr 22	Winter Nov Apr	
	111	274	376	483	425	270	1,939	
28 Typical Usage (Therms)								
29 Energy Efficiency	\$ 0.0426	\$ 0.0426	\$ 0.0426	\$ 0.0426	\$ 0.0426	\$ 0.0426	\$ 0.0426	
30 Energy Efficiency Amount	\$ 4.74	\$ 11.66	\$ 15.99	\$ 20.57	\$ 18.06	\$ 11.49	\$ 82.50	
31 Gas Holder	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
32 Gas Holder Amount	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
33 MGP	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	
34 MGP Amount	\$ 1.7218	\$ 4.2323	\$ 5.8051	\$ 7.4690	\$ 6.5586	\$ 4.1705	\$ 29.96	
35 Environmental	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	
36 Total Environmental	\$ 1.72	\$ 4.23	\$ 5.81	\$ 7.47	\$ 6.56	\$ 4.17	\$ 29.96	
37 RDAF	\$ 0.0039	\$ 0.0039	\$ 0.0039	\$ 0.0039	\$ 0.0039	\$ 0.0039	\$ 0.0039	
38 RDAF amount	\$ 0.43	\$ 1.07	\$ 1.47	\$ 1.89	\$ 1.66	\$ 1.05	\$ 7.56	
39 PTAM	\$ 0.0142	\$ 0.0142	\$ 0.0142	\$ 0.0142	\$ 0.0142	\$ 0.0142	\$ 0.0142	
40 PTAM amount	\$ 1.58	\$ 3.89	\$ 5.34	\$ 6.86	\$ 6.03	\$ 3.83	\$ 27.53	
41 RCE	\$ 0.0074	\$ 0.0074	\$ 0.0074	\$ 0.0074	\$ 0.0074	\$ 0.0074	\$ 0.0074	
42 RCE Amount	\$ 0.82	\$ 2.03	\$ 2.78	\$ 3.58	\$ 3.14	\$ 2.00	\$ 14.35	
43 GAP	\$ 0.0156	\$ 0.0156	\$ 0.0156	\$ 0.0156	\$ 0.0156	\$ 0.0156	\$ 0.0156	
44 GAP Amount	\$ 1.74	\$ 4.27	\$ 5.86	\$ 7.54	\$ 6.62	\$ 4.21	\$ 30.25	
45 Total LDAC	\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991	
46 Total LDAC Amount	\$ 11.04	\$ 27.15	\$ 37.24	\$ 47.91	\$ 42.07	\$ 26.75	\$ 192.15	

	May 22	Jun 22	Jul 22	Aug 22	Sep 22	Oct 22	Summer May Oct	Total Nov Oct
	154	55	24	21	13	44	310	2,249
	\$ 0.0426	\$ 0.0426	\$ 0.0426	\$ 0.0426	\$ 0.0426	\$ 0.0426	\$ 0.0426	\$ 0.0426
	\$ 6.55	\$ 2.33	\$ 1.03	\$ 0.87	\$ 0.55	\$ 1.86	\$ 13.20	\$ 95.70
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155
	\$ 2.3791	\$ 0.8465	\$ 0.3755	\$ 0.3169	\$ 0.1988	\$ 0.6745	\$ 4.79	\$ 34.75
	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155	\$ 0.0155
	\$ 2.38	\$ 0.85	\$ 0.38	\$ 0.32	\$ 0.20	\$ 0.67	\$ 4.79	\$ 34.75
	\$ 0.0039	\$ 0.0039	\$ 0.0039	\$ 0.0039	\$ 0.0039	\$ 0.0039	\$ 0.0039	\$ 0.0039
	\$ 0.60	\$ 0.21	\$ 0.09	\$ 0.08	\$ 0.05	\$ 0.17	\$ 1.21	\$ 8.77
	\$ 0.0142	\$ 0.0142	\$ 0.0142	\$ 0.0142	\$ 0.0142	\$ 0.0142	\$ 0.0142	\$ 0.0142
	\$ 2.19	\$ 0.78	\$ 0.35	\$ 0.29	\$ 0.18	\$ 0.62	\$ 4.40	\$ 31.94
	\$ 0.0074	\$ 0.0074	\$ 0.0074	\$ 0.0074	\$ 0.0074	\$ 0.0074	\$ 0.0074	\$ 0.0074
	\$ 1.14	\$ 0.41	\$ 0.18	\$ 0.15	\$ 0.10	\$ 0.32	\$ 2.29	\$ 16.64
	\$ 0.0156	\$ 0.0156	\$ 0.0156	\$ 0.0156	\$ 0.0156	\$ 0.0156	\$ 0.0156	\$ 0.0156
	\$ 2.40	\$ 0.85	\$ 0.38	\$ 0.32	\$ 0.20	\$ 0.68	\$ 4.84	\$ 35.09
	\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991
	\$ 15.26	\$ 5.43	\$ 2.41	\$ 2.03	\$ 1.28	\$ 4.33	\$ 30.73	\$ 222.89

47 LDAC Bill Impact : Commercial/Industrial Sales Customers and Commercial/Industrial Transportation Customers (Rate Codes G 41)								
	Nov 22	Dec 22	Jan 23	Feb 23	Mar 23	Apr 23	Winter Nov Apr	
48 Energy Efficiency Amount	\$ 4.74	\$ 11.66	\$ 15.99	\$ 20.57	\$ 18.06	\$ 11.49	\$ 82.50	
49 Energy Efficiency %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
52 Environmental Amount	\$ (0.88)	\$ (2.15)	\$ (2.95)	\$ (3.80)	\$ (3.34)	\$ (2.12)	\$ (15.24)	
53 Environmental %	-50.9%	-50.9%	-50.9%	-50.9%	-50.9%	-50.9%	-50.9%	
54 RDAF amount	\$ (0.43)	\$ (1.07)	\$ (1.47)	\$ (1.89)	\$ (1.66)	\$ (1.05)	\$ (7.56)	
55 RDAF %	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	
56 PTAM amount	\$ (0.21)	\$ (0.51)	\$ (0.69)	\$ (0.89)	\$ (0.78)	\$ (0.50)	\$ (3.58)	
57 PTAM %	-13.0%	-13.0%	-13.0%	-13.0%	-13.0%	-13.0%	-13.0%	
58 RCE Amount	\$ (0.33)	\$ (0.82)	\$ (1.13)	\$ (1.45)	\$ (1.27)	\$ (0.81)	\$ (5.82)	
59 RCE %	-40.5%	-40.5%	-40.5%	-40.5%	-40.5%	-40.5%	-40.5%	
60 GAP Amount	\$ 0.52	\$ 1.29	\$ 1.77	\$ 2.27	\$ 2.00	\$ 1.27	\$ 9.11	
61 GAP %	30.1%	30.1%	30.1%	30.1%	30.1%	30.1%	30.1%	
62 Total LDAC Amount	\$ (1.14)	\$ (2.81)	\$ (3.85)	\$ (4.96)	\$ (4.35)	\$ (2.77)	\$ (19.89)	
63 Total LDAC %	-10.4%	-10.4%	-10.4%	-10.4%	-10.4%	-10.4%	-10.4%	

	May 23	Jun 23	Jul 23	Aug 23	Sep 23	Oct 23	Summer May Oct	Total Nov Oct
	154	55	24	21	13	44	310	2,249
	\$ 6.55	\$ 2.33	\$ 1.03	\$ 0.87	\$ 0.55	\$ 1.86	\$ 13.20	\$ 95.70
	100.0%	100%	100%	100%	100%	100%	1.00	1.00
	\$ (1.21)	\$ (0.43)	\$ (0.19)	\$ (0.16)	\$ (0.10)	\$ (0.34)	\$ (2.44)	\$ (17.68)
	-50.9%	-50.9%	-50.9%	-50.9%	-50.9%	-50.9%	-50.9%	-50.9%
	\$ (0.60)	\$ (0.21)	\$ (0.09)	\$ (0.08)	\$ (0.05)	\$ (0.17)	\$ (1.21)	\$ (8.77)
	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%
	\$ (0.28)	\$ (0.10)	\$ (0.04)	\$ (0.04)	\$ (0.02)	\$ (0.08)	\$ (0.57)	\$ (4.15)
	-13.0%	-13.0%	-13.0%	-13.0%	-13.0%	-13.0%	-13.0%	-13.0%
	\$ (0.46)	\$ (0.16)	\$ (0.07)	\$ (0.06)	\$ (0.04)	\$ (0.13)	\$ (0.93)	\$ (6.75)
	-40.5%	-40.5%	-40.5%	-40.5%	-40.5%	-40.5%	-40.5%	-40.5%
	\$ 0.72	\$ 0.26	\$ 0.11	\$ 0.10	\$ 0.06	\$ 0.21	\$ 1.46	\$ 10.57
	30.1%	30.1%	30.1%	30.1%	30.1%	30.1%	30.1%	30.1%
	\$ (1.58)	\$ (0.56)	\$ (0.25)	\$ (0.21)	\$ (0.13)	\$ (0.45)	\$ (3.18)	\$ (23.07)
	-10.4%	-10.4%	-10.4%	-10.4%	-10.4%	-10.4%	-10.4%	-10.4%

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty LDAC 2022 2023 Filing LDAC 2022 2023 Filing October 31, 2023 vs. Current LDAC Rates

Schedule 8 Page 3 of 4

Table 1: Proposed LDAC Rates November 1, 2022 - October 31, 2023. Commercial/Industrial Sales Customers and Commercial/Industrial Transportation Customers (Rate Codes G 42). Columns include months Nov 22 to Apr 23 and Winter Nov Apr 23. Rows include Typical Usage, Energy Efficiency, Gas Holder, MGP, Environmental, RDAF, PTAM, RCE, GAP, and LDAC amounts.

Table 2: Comparison of Proposed vs. Current LDAC Rates for November 1, 2022 - October 31, 2023. Columns include months May 23 to Oct 23, Summer May Oct, and Total Nov Oct. Rows include Typical Usage, Energy Efficiency, Gas Holder, MGP, Environmental, RDAF, PTAM, RCE, GAP, and LDAC amounts.

Table 3: Current LDAC Rates November 1, 2022 - October 31, 2023. Commercial/Industrial Sales Customers and Commercial/Industrial Transportation Customers (Rate Codes G 42). Columns include months Nov 21 to Apr 22 and Winter Nov Apr 22. Rows include Typical Usage, Energy Efficiency, Gas Holder, MGP, Environmental, RDAF, PTAM, RCE, GAP, and LDAC amounts.

Table 4: Comparison of Proposed vs. Current LDAC Rates for November 1, 2022 - October 31, 2023. Columns include months May 22 to Oct 22, Summer May Oct, and Total Nov Oct. Rows include Typical Usage, Energy Efficiency, Gas Holder, MGP, Environmental, RDAF, PTAM, RCE, GAP, and LDAC amounts.

Table 5: LDAC Bill Impact: Commercial/Industrial Sales Customers and Commercial/Industrial Transportation Customers (Rate Codes G 42). Columns include months Nov 22 to Apr 23 and Winter Nov Apr 23. Rows include Energy Efficiency Amount, Environmental, RDAF, PTAM, RCE, GAP, and Total LDAC Amount and %.

Table 6: Comparison of Proposed vs. Current LDAC Rates for Bill Impact. Columns include months May 23 to Oct 23, Summer May Oct, and Total Nov Oct. Rows include Energy Efficiency Amount, Environmental, RDAF, PTAM, RCE, GAP, and Total LDAC Amount and %.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
LDAC 2022 2023 Filing
LDAC Bill Comparisons, Proposed LDAC Rates November 1, 2022 October 31, 2023 vs. Current LDAC Rates

Schedule 8
Page 4 of 4

Proposed LDAC Rates November 1, 2022 October 31, 2023							
Commercial/Industrial Sales Customers and Commercial/Industrial Transportation Customers (Rate Codes G 52)							
	Nov 22	Dec 22	Jan 23	Feb 23	Mar 23	Apr 23	Winter Nov Apr
4	1,340	1,718	1,891	2,207	1,964	1,672	10,793
5	1,340	1,718	1,891	2,207	1,964	1,672	10,793
6	0.0442	0.0442	0.0442	0.0442	0.0442	0.0442	
7	59.23	75.96	83.60	97.55	86.81	73.91	477.05
8	-	-	-	-	-	-	
9	-	-	-	-	-	-	
10	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	
11	10.17	13.0420	14.3544	16.7504	14.9061	12.6914	81.91
12	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	
13	10.17	13.04	14.35	16.75	14.91	12.69	81.91
14	-	-	-	-	-	-	
15	-	-	-	-	-	-	
16	0.0124	0.0124	0.0124	0.0124	0.0124	0.0124	
17	16.55	21.23	23.36	27.26	24.26	20.66	133.33
18	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	
19	5.90	7.56	8.32	9.71	8.64	7.36	47.49
20	0.0203	0.0203	0.0203	0.0203	0.0203	0.0203	
21	27.20	34.88	38.39	44.80	39.87	33.95	219.10
22	0.0888	0.0888	0.0888	0.0888	0.0888	0.0888	
23	119.04	152.67	168.03	196.08	174.49	148.57	958.89

	May 23	Jun 23	Jul 23	Aug 23	Sep 23	Oct 23	Summer May Oct	Total Nov Oct
	1,339	1,123	1,070	1,088	8,875	1,097	14,592	25,385
	0.0442	0.0442	0.0442	0.0442	0.0442	0.0442		
	59.20	49.62	47.31	48.09	392.29	48.47	644.97	1,122.02
	-	-	-	-	-	-		
	-	-	-	-	-	-		
	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076		
	10.1644	8.5200	8.1237	8.2566	67.3590	8.3221	110.75	192.66
	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076		
	10.16	8.52	8.12	8.26	67.36	8.32	110.75	192.66
	-	-	-	-	-	-		
	-	-	-	-	-	-		
	0.0124	0.0124	0.0124	0.0124	0.0124	0.0124		
	16.54	13.87	13.22	13.44	109.64	13.55	180.26	313.58
	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044		
	5.89	4.94	4.71	4.79	39.05	4.82	64.21	111.69
	0.0203	0.0203	0.0203	0.0203	0.0203	0.0203		
	27.19	22.79	21.73	22.08	180.17	22.26	296.22	515.32
	0.0888	0.0888	0.0888	0.0888	0.0888	0.0888		
	118.99	99.74	95.10	96.65	788.51	97.42	1,296.40	2,255.28

Current LDAC Rates November 1, 2022 October 31, 2023							
Commercial/Industrial Sales Customers and Commercial/Industrial Transportation Customers (Rate Codes G 52)							
	Nov 21	Dec 21	Jan 22	Feb 22	Mar 22	Apr 22	Winter Nov Apr
28	1,340	1,718	1,891	2,207	1,964	1,672	10,793
29	0.0426	0.0426	0.0426	0.0426	0.0426	0.0426	
30	57.01	73.12	80.48	93.91	83.57	71.15	459.25
31	-	-	-	-	-	-	
32	-	-	-	-	-	-	
33	0.0155	0.0155	0.0155	0.0155	0.0155	0.0155	
34	20.7021	26.5499	29.2214	34.0991	30.3446	25.8360	166.75
35	0.0155	0.0155	0.0155	0.0155	0.0155	0.0155	
36	20.70	26.55	29.22	34.10	30.34	25.84	166.75
37	0.0039	0.0039	0.0039	0.0039	0.0039	0.0039	
38	5.23	6.70	7.38	8.61	7.66	6.52	42.09
39	0.0142	0.0142	0.0142	0.0142	0.0142	0.0142	
40	19.03	24.40	26.86	31.34	27.89	23.75	153.26
41	0.0074	0.0074	0.0074	0.0074	0.0074	0.0074	
42	9.92	12.72	14.00	16.33	14.53	12.37	79.87
43	0.0156	0.0156	0.0156	0.0156	0.0156	0.0156	
44	20.90	26.81	29.51	34.43	30.64	26.09	168.37
45	0.0991	0.0991	0.0991	0.0991	0.0991	0.0991	
46	132.79	170.30	187.43	218.72	194.64	165.72	1,069.59

	May 22	Jun 22	Jul 22	Aug 22	Sep 22	Oct 22	Summer May Oct	Total Nov Oct
	1,339	1,123	1,070	1,088	8,875	1,097	14,592	25,385
	0.0426	0.0426	0.0426	0.0426	0.0426	0.0426		
	56.99	47.77	45.55	46.29	377.65	46.66	620.89	1,080.14
	-	-	-	-	-	-		
	-	-	-	-	-	-		
	0.0155	0.0155	0.0155	0.0155	0.0155	0.0155		
	20.6919	17.3444	16.5376	16.8081	137.1240	16.9415	225.45	392.20
	0.0155	0.0155	0.0155	0.0155	0.0155	0.0155		
	20.69	17.34	16.54	16.81	137.12	16.94	225.45	392.20
	0.0039	0.0039	0.0039	0.0039	0.0039	0.0039		
	5.22	6.70	7.38	8.61	7.66	6.52	42.09	99.00
	0.0142	0.0142	0.0142	0.0142	0.0142	0.0142		
	19.02	15.94	15.20	15.45	126.03	15.57	207.21	360.47
	0.0074	0.0074	0.0074	0.0074	0.0074	0.0074		
	9.91	8.31	7.92	8.05	65.68	8.11	107.98	187.85
	0.0156	0.0156	0.0156	0.0156	0.0156	0.0156		
	20.89	17.51	16.70	16.97	138.46	17.11	227.64	396.01
	0.0991	0.0991	0.0991	0.0991	0.0991	0.0991		
	132.72	111.25	106.08	107.81	879.55	108.67	1,446.07	2,515.67

LDAC Bill Impact : Commercial/Industrial Sales Customers and Commercial/Industrial Transportation Customers (Rate Codes G 52)							
	Nov 22	Dec 22	Jan 23	Feb 23	Mar 23	Apr 23	Winter Nov Apr
49	2.21	2,8354	3,1207	3,6417	3,2407	2,7592	
50	3.9%	0.04	0.04	0.04	0.04	0.04	0.23
51	0.23						
52	(10.53)	(13.5079)	(14.8671)	(17.3487)	(15.4385)	(13.1447)	
53	(3.05)	(0.51)	(0.51)	(0.51)	(0.51)	(0.51)	(3.05)
54	(5.23)	(6.7019)	(7.3763)	(8.6075)	(7.6598)	(6.5217)	
55	(6.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(6.00)
56	(2.47)	(3.1739)	(3.4932)	(4.0763)	(3.6275)	(3.0885)	
57	(0.78)	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)	(0.78)
58	(4.02)	(5.1553)	(5.6741)	(6.6212)	(5.8921)	(5.0167)	
59	(2.43)	(0.41)	(0.41)	(0.41)	(0.41)	(0.41)	(2.43)
60	6.30	8.0767	8.8894	10.3732	9.2310	7.8595	
61	1.81	0.30	0.30	0.30	0.30	0.30	1.81
62	(110.71)	(17.6269)	(19.4005)	(22.6389)	(20.1462)	(17.1529)	(110.71)
63	(-10.4%)	(-10.4%)	(-10.4%)	(-10.4%)	(-10.4%)	(-10.4%)	(-10.4%)

	May 23	Jun 23	Jul 23	Aug 23	Sep 23	Oct 23	Summer May Oct	Total Nov Oct
	2,2098	1,8523	1,7681	1,7950	14,6443	1,8093	2,2098	0.47
	0.04	0.04	0.04	0.04	0.04	0.04	0.23	0.47
	(10.5275)	(8.8244)	(8.4139)	(8.5515)	(69.7650)	(8.6194)	(3.05)	(6.11)
	(0.51)	(0.51)	(0.51)	(0.51)	(0.51)	(0.51)	(3.05)	(6.11)
	(5.2232)	(4.3782)	(4.1745)	(4.2428)	(34.6138)	(4.2785)	(6.00)	(12.00)
	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(6.00)	(12.00)
	(2.4736)	(2.0734)	(1.9769)	(2.0093)	(16.3922)	(2.0252)	(0.78)	(1.56)
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)	(0.78)	(1.56)
	(4.0178)	(3.3678)	(3.2112)	(3.2637)	(26.6260)	(3.2896)	(2.43)	(4.86)
	(0.41)	(0.41)	(0.41)	(0.41)	(0.41)	(0.41)	(2.43)	(4.86)
	6.2946	5.2763	5.0308	5.1131	41.7141	5.1537	1.81	3.62
	0.30	0.30	0.30	0.30	0.30	0.30	1.81	3.62
	(13.74)	(11.52)	(10.98)	(11.16)	(91.04)	(11.25)	(149.68)	(260.39)
	(-10.4%)	(-10.4%)	(-10.4%)	(-10.4%)	(-10.4%)	(-10.4%)	(-10.4%)	(-10.4%)