

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

Summary
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3 Off Peak 2022 Summer Cost of Gas Filing

4 Summary

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9 Anticipated Direct Cost of Gas

	Reference (b)	OP 22 May – Oct (c)
10 Purchased Gas:		
11 Demand Costs:	Sch. 5A, col (j), In 46	\$ 3,276,842
12 Supply Costs	Sch. 6, col (i), In 45	14,026,699
13		
14 Storage Gas:		
15 Demand, Capacity:	Sch. 5A, col (j), In 61	\$ -
16 Commodity Costs:	Sch. 6, col (i), In 48	-
17		
18 Produced Gas:	Sch. 6, col (i), In 54	\$ 82,504
19		
20 Hedge Contract (Savings)/Loss		\$ -
21		
22		
23 Total Unadjusted Cost of Gas		<u>\$ 17,386,045</u>

24

25 Adjustments

26		
27 Prior Period (Over)/Under Recovery)	Sch. 3, col (c) In 28	\$ 7,707,954
28 Interest 11/01/21 - 10/31/22	Sch. 3, col (q) In 193	167,582
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>\$ 7,875,536</u>

41

42 Total Anticipated Direct Costs	In 23 + 40	<u>\$ 25,261,581</u>
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43

44 Anticipated Indirect Cost of Gas

45 Working Capital

46 Total Unadjusted Anticipated Cost of Gas	Ln 23	\$ 17,386,045
47 Lead Lag Days / 365	DG 10-017, 14 27 / 365	0.0023
48 Prime Rate		3.25%
49 Working Capital Percentage	In 47 * In 48	0.007%
50 Working Capital	In 46 * In 49	1,294
51 Plus: Working Capital Reconciliation	Sch. 3, col (c), In 98	25,064
52		
53 Total Working Capital Allowance	In 50 + 51	<u>\$ 26,358</u>

54

55 Bad Debt

56 Total Unadjusted Anticipated Cost of Gas	In 23	\$ 17,386,045
57 Less Refunds	In 30	-
58 Plus Working Capital	In 53	26,358
59 Plus Prior Period (Over) Under Recovery	In 27	7,707,954
60 Subtotal		<u>\$ 25,120,357</u>
61 Bad Debt Percentage	per GTC 17(f)	0.70%
62		
63 Bad Debt Allowance	In 60 * In 61	\$ 175,843
64 Prior Period Bad Debt Allowance	Sch. 3, col (c), In 163	464,841
65		
66 Total Bad Debt Allowance	In 63 + 64	<u>\$ 640,683</u>

67

68 Production and Storage Capacity	per GTC17(f)	<u>\$ -</u>
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69

70 Miscellaneous Overhead

70 Miscellaneous Overhead	per GTC 17(f)	\$ -
71 Sales Volume	Sch. 10B, In 23/1000	23,366
72 Divided by Total Sales	Sch. 10B, In 23/1000	115,043
73 Ratio		<u>20.31%</u>
74		
75 Miscellaneous Overhead	In 70 * 73	<u>\$ -</u>

76

77 Total Anticipated Indirect Cost of Gas	In 53 + 66 + 68 + 75	<u>\$ 667,042</u>
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78

79 Total Cost of Gas	In 42 + 77	<u>\$ 25,928,623</u>
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80

81 Projected Forecast Sales (Therms)	Sch. 3, col (q), In 52	<u>23,366,130</u>
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4 Summary of Supply and Demand Forecast

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7 For Month of:

8 (a)

(b)

May-22

Jun-22

Jul-22

Aug-22

Sep-22

Oct-22

Nov-22

Off Peak Period

May - Oct

9 I. Gas Volumes (Therms)

10

11 A. Firm Demand Volumes

		May-22 (c)	Jun-22 (d)	Jul-22 (e)	Aug-22 (d)	Sep-22 (e)	Oct-22 (f)	Nov-22 (g)	Off Peak Period May - Oct (h)
12 Firm Gas Sales	Sch. 10B, In 23	94,947	275,183	228,617	231,803	343,419	730,106	855,832	
13 Lost Gas (Unaccounted for)		949,473	2,751,830	2,286,170	2,318,030	3,434,190	7,301,060	8,558,316	27,599,069
14 Company Use		53,988	29,666	24,501	25,149	36,419	78,230		247,952
15 Unbilled Therms		3,081	1,693	1,398	1,435	2,079	4,465		14,152
16		3,990,670	(37,254)	(44,266)	(16,829)	(101,704)	(142,654)	(8,558,316)	(4,910,353)
17 Total Firm Volumes	Sch. 6, In 93	4,997,212	2,745,936	2,267,802	2,327,785	3,370,983	7,241,101		22,950,820

18

19 B. Supply Volumes (Therms)

20 Pipeline Gas:

21 Dawn Supply	Sch. 6, In 63	739,535	95,658	-	-	206,295	636,518		1,678,006
22 Niagara Supply	Sch. 6, In 64	668,413	540,809	542,484	545,801	591,423	687,667		3,576,596
23 TGP Supply (Gulf)	Sch. 6, In 65	13,120	-	-	-	-	384,326		397,446
24 Dracut Supply 1 - Baseload	Sch. 6, In 66	-	-	-	-	-	-		-
25 Dracut Supply 2 - Swing	Sch. 6, In 67	-	-	-	-	-	436,185		436,185
26 City Gate Delivered Supply	Sch. 6, In 68	-	-	-	-	-	-		-
27 LNG Truck	Sch. 6, In 69	44,883	18,131	-	-	55,566	20,602		139,181
28 Propane Truck	Sch. 6, In 70	79,409	71,899	69,472	69,279	73,449	81,696		445,204
29 PNGTS	Sch. 6, In 71	205,081	146,300	119,612	125,908	176,916	218,093		991,910
30 Portland Natural Gas	Sch. 6, In 72	152,602	3,126	-	-	2,555	574,003		732,286
31 TGP Supply (Zone 4)	Sch. 6, In 73	5,386,659	4,708,479	4,708,982	4,696,535	4,819,522	5,546,088		29,866,267
32 Subtotal Pipeline Volumes		7,289,702	5,584,403	5,440,551	5,437,523	5,925,726	8,585,177		38,263,081

33 Storage Gas:

34 TGP Storage	Sch. 6, In 78	-	-	-	-	-	-		-
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36 Produced Gas:

37 LNG Vapor	Sch. 6, In 81	20,024.76	18,131.18	17,518.99	17,470.44	18,521.89	20,601.58		112,268.82
38 Propane	Sch. 6, In 82	-	-	-	-	-	-		-
39 Subtotal Produced Gas		20,024.76	18,131.18	17,518.99	17,470.44	18,521.89	20,601.58		112,268.82

41

42 Less - Gas Refill:

43 LNG Truck	Sch. 6, In 87	(44,883.07)	(18,131.18)	-	-	(55,565.66)	(20,601.58)		(139,181.49)
44 Propane	Sch. 6, In 88	(79,408.52)	(71,899.50)	(69,471.84)	(69,279.32)	(73,448.86)	(81,695.93)		(445,203.96)
45 TGP Storage Refill	Sch. 6, In 89	(2,188,222.48)	(2,766,567.68)	(3,120,795.80)	(3,057,928.82)	(2,444,250.24)	(1,262,379.73)		(14,840,144.76)
46 Subtotal Refills		(2,312,514.07)	(2,856,598.36)	(3,190,267.64)	(3,127,208.14)	(2,573,264.76)	(1,364,677.25)		(15,424,530.21)

47

48 Total Firm Sendout Volumes	Ins 32 + 35 + 40 + 46	4,997,212.39	2,745,935.65	2,267,802.45	2,327,785.06	3,370,983.22	7,241,101.08		22,950,819.85
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3 Off Peak 2022 Summer Cost of Gas Filing

4 Summary of Supply and Demand Forecast

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50 II. Gas Costs

51

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

59 Pipeline:

60 Iroquois Gas Trans Service RTS 470-0 Sch.5A, In 16

61 Tenn Gas Pipeline 95346 Z5-Z6 Sch.5A, In 17

62 Tenn Gas Pipeline 2302 Z5-Z6 Sch.5A, In 18

63 Tenn Gas Pipeline 8587 Z0-Z6 Sch.5A, In 19

64 Tenn Gas Pipeline 8587 Z1-Z6 Sch.5A, In 20

65 Tenn Gas Pipeline 8587 Z4-Z6 Sch.5A, In 21

66 Tenn Gas Pipeline (Dracut) 42076 Z6-Z6 Sch.5A, In 22

67 Tenn Gas Pipeline (Dracut) 358905 Z6-Z7 Sch.5A, In 23

68 Tenn Gas Pipeline (Concord Lateral) Z6-Z6 Sch.5A, In 24

69 Portland Natural Gas Trans Service Sch.5A, In 25

70 ANE (TransCanada via Union to Iroquois) Sch.5A, In 27

71 Portland Natural Gas Sch.5A, In 25

72 TransCanada via Union to Portland Sch.5A, In 27

73 Tenn Gas Pipeline Z4-Z6 stg 632 Sch.5A, In 29

74 Tenn Gas Pipeline Z4-Z6 stg 11234 Sch.5A, In 30

75 Tenn Gas Pipeline Z5-Z6 stg 11234 Sch.5A, In 31

76 National Fuel FST 2358 Sch.5A, In 32

77 Subtotal Pipeline Demand

78 Less Capacity Credit

79 Net Pipeline Demand Costs

80

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

89 Storage:

90 Dominion - Demand Sch.5A, In 49

91 Dominion - Storage Sch.5A, In 50

92 Honeoye - Demand Sch.5A, In 51

93 National Fuel - Demand Sch.5A, In 52

94 National Fuel - Capacity Sch.5A, In 53

95 Tenn Gas Pipeline - Demand Sch.5A, In 54

96 Tenn Gas Pipeline - Capacity Sch.5A, In 55

97 Subtotal Storage Demand

98 Less Capacity Credit

99 Net Storage Demand Costs

100

101 Total Demand Charges Ins 55 + 77 + 85 + 97

102 Total Capacity Credit Ins 56 + 78 + 86 + 98

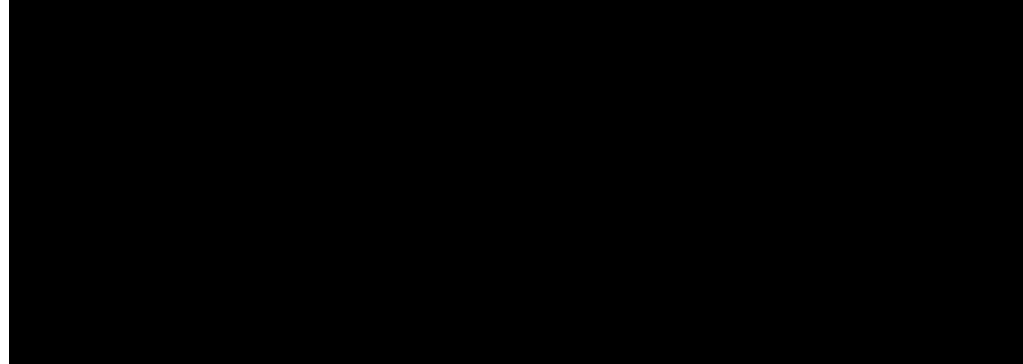
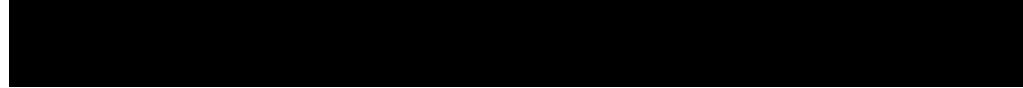
103 Net Demand Charges

104

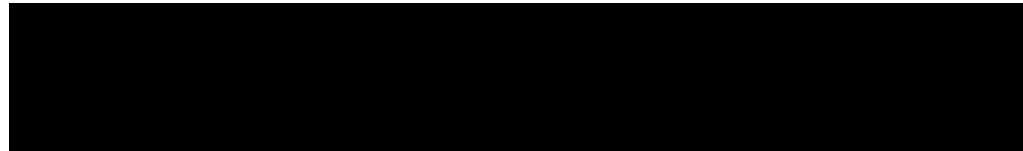
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\$	823,110	\$	826,258	\$	826,258	\$	826,258	\$	826,258	\$	826,258	\$	3,703,482	\$	4,954,402
	(278,705)		(279,771)		(279,771)		(279,771)		(279,771)		(279,771)		(1,253,999)		(1,677,561)
\$	544,405	\$	546,487	\$	546,487	\$	546,487	\$	546,487	\$	546,487	\$	2,449,483	\$	3,276,842



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

\$	823,110	\$	826,258	\$	826,258	\$	826,258	\$	826,258	\$	826,258	\$	3,703,482	\$	4,954,402
	(278,705)		(279,771)		(279,771)		(279,771)		(279,771)		(279,771)		(1,253,999)		(1,677,561)
\$	544,405	\$	546,487	\$	546,487	\$	546,487	\$	546,487	\$	546,487	\$	2,449,483	\$	3,276,842

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107 **B. Commodity Costs**

108 Pipeline:

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
115	City Gate Delivered Supply	Sch. 6, In 17
116	LNG Truck	Sch. 6, In 18
117	Portland Natural Gas	Sch. 6, In 21
118	PNGTS	Sch. 6, In 20
119	TGP Supply (Zone 4)	Sch. 6, In 22
120	Subtotal Pipeline Commodity Costs	

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\$	4,801,442	\$	3,736,158	\$	3,729,693	\$	3,700,091	\$	3,769,526	\$	5,497,023	\$	25,233,933

121

122 Storage:

123	TGP Storage - Withdrawals	Sch. 6, In 48
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\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
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124

125 Produced Gas Costs:

126	LNG Vapor	Sch. 6, In 51
127	Propane	Sch. 6, In 52
128	Subtotal Produced Gas Costs	

\$	13,993	\$	13,159	\$	12,913	\$	12,877	\$	13,652	\$	15,911	\$	82,504

129

130 Less Storage Refills:

131	LNG Truck	Sch. 6, In 38
132	Propane	Sch. 6, In 39
133	TGP Storage Refill	Sch. 6, In 40
134	Storage Refill (Trans.)	Sch. 6, In 41
135	Subtotal Storage Refill	

\$	(1,710,006)	\$	(2,196,633)	\$	(2,504,819)	\$	(2,447,549)	\$	(1,943,912)	\$	(1,002,621)	\$	(11,805,539)

136

137 Total Supply Commodity Costs

\$	3,105,429	\$	1,552,684	\$	1,237,786	\$	1,265,419	\$	1,839,266	\$	4,510,313	\$	13,510,898
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138

139 **C. Supply Volumetric Transportation Costs**

140	Dawn Supply	Sch. 6, In 27
141	Niagara Supply	Sch. 6, In 28
142	TGP Supply (Zone 4)	Sch. 6, In 29
143	Dracut Supply 1 - Baseload	Sch. 6, In 30
144	Dracut Supply 2 - Swing	Sch. 6, In 31
145	Dracut Supply 3 - Swing	Sch. 6, In
146	Subtotal Pipeline Volumetric Trans. Costs	

\$	117,228	\$	92,048	\$	91,165	\$	90,661	\$	93,690	\$	113,513	\$	598,305

147

148	TGP Storage - Withdrawals	Sch. 6, In 33
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\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
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149

150 Total Supply Volumetric Trans. Costs Ins 146 + 148

\$	117,228	\$	92,048	\$	91,165	\$	90,661	\$	93,690	\$	113,513	\$	598,305
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151

152 Total Commodity Gas & Trans. Costs Ins 137 + 150

\$	3,222,657	\$	1,644,732	\$	1,328,952	\$	1,356,080	\$	1,932,957	\$	4,623,826	\$	14,109,203
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157 D. Supply and Demand Costs by Source

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160 Purchased Gas Demand Costs

161	Pipeline Gas Demand Costs	Ins 55 + 77	\$ 823,110	\$ 826,258	\$ 826,258	\$ 826,258	\$ 826,258	\$ 826,258	\$ 4,954,402
162	Peaking Gas Demand Costs	In 85	-	-	-	-	-	-	-
163	Subtotal Purchased Gas Demand Costs		\$ 823,110	\$ 826,258	\$ 826,258	\$ 826,258	\$ 826,258	\$ 826,258	\$ 4,954,402
164	Less Capacity Credit	Ins 56 + 78 + 86	(278,705)	(279,771)	(279,771)	(279,771)	(279,771)	(279,771)	(1,677,561)
165	Net Purchased Gas Demand Costs		\$ 544,405	\$ 546,487	\$ 546,487	\$ 546,487	\$ 546,487	\$ 546,487	\$ 3,276,842

167 Storage Gas Demand Costs

168	Storage Demand	In 97	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
169	Less Capacity Credit	In 98	-	-	-	-	-	-	-
170	Net Storage Demand Costs		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

172 Total Demand Costs

Ins 165 + 170	\$ 544,405	\$ 546,487	\$ 546,487	\$ 546,487	\$ 546,487	\$ 546,487	\$ 546,487	\$ 3,276,842
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173

174 Purchased Gas Supply

175	Commodity Costs	In 120							\$ 14,026,699
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		\$ 3,208,664	\$ 1,631,573	\$ 1,316,039	\$ 1,343,203	\$ 1,919,305	\$ 4,607,915	\$ 14,026,699

183 Storage Commodity Costs

184	Commodity Costs	In 123	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
185	Transportation Costs	In 148	-	-	-	-	-	-	-
186	Subtotal Storage Commodity Costs		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

188 Produced Gas Commodity Costs

In 128	\$ 13,993	\$ 13,159	\$ 12,913	\$ 12,877	\$ 13,652	\$ 15,911	\$ 82,504
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190 Subtotal Commodity Costs

Ins 181 + 186 + 188	\$ 3,222,657	\$ 1,644,732	\$ 1,328,952	\$ 1,356,080	\$ 1,932,957	\$ 4,623,826	\$ 14,109,203
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191

192 Hedge Contract (Savings)/Loss

	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
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193

194 Total Commodity Costs

Ins 190 + 192	\$ 3,222,657	\$ 1,644,732	\$ 1,328,952	\$ 1,356,080	\$ 1,932,957	\$ 4,623,826	\$ 14,109,203
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195

196 Total Demand Costs

In 103	\$ 544,405	\$ 546,487	\$ 546,487	\$ 546,487	\$ 546,487	\$ 546,487	\$ 3,276,842
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197 Total Supply Costs

In 194	3,222,657	1,644,732	1,328,952	1,356,080	1,932,957	4,623,826	14,109,203
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198

199 Total Direct Gas Costs

Ins 196 + 197	\$ 3,767,062	\$ 2,191,219	\$ 1,875,439	\$ 1,902,568	\$ 2,479,444	\$ 5,170,313	\$ 17,386,045
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4 Contracts Ranked on a per Unit Cost Basis

Off Peak

5

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

8

9 Demand Costs

10

11						
12	ANE (TransCanada via Union to Iroquois)	Dawn - Parkway to Iroquois	Transportation	MDQ	4,047	
13	Dominion - Capacity Reservation	GSS 300076	Storage	ACQ	102,700	
14	Tenn Gas Pipeline - Cap. Reservations	FS-MA 523	Storage	ACQ	1,560,391	
15	National Fuel - Capacity Reservation	FSS-1 2357	Storage	ACQ	670,800	
16	Tenn Gas Pipeline - Demand	FS-MA 523	Storage	MDQ	21,844	
17	Dominion - Demand	GSS 300076	Storage	MDQ	934	
18	National Fuel - Demand	FSS-1 2357	Storage	MDQ	6,098	
19	Tenn Gas Pipeline	42076 FTA Z6-Z6	Transportation	MDQ	20,000	
20	Tenn Gas Pipeline	42076 FTA Z6-Z6	Transportation	MDQ	40,000	
21	National Fuel	FST N02358	Transportation	MDQ	6,098	
22	Iroquois Gas Trans Service	RTS 470-01	Transportation	MDQ	4,047	
23	Honeoye - Demand	SS-NY	Storage	MDQ	1,362	
24	Tenn Gas Pipeline	2302 Z5-Z6	Transportation	MDQ	3,122	
25	Tenn Gas Pipeline (short haul)	11234 Z5-Z6(stg)	Transportation	MDQ	1,957	
26	Tenn Gas Pipeline (short haul)	8587 Z4-Z6	Transportation	MDQ	3,811	
27	Tenn Gas Pipeline (short haul)	632 Z4-Z6 (stg)	Transportation	MDQ	15,265	
28	Tenn Gas Pipeline (short haul)	11234 Z4-Z6(stg)	Transportation	MDQ	7,082	
29	Tenn Gas Pipeline (Concord Lateral) Z6-Z6	Firm Transportation	Transportation	MDQ	30,000	
30	Tenn Gas Pipeline	95346 Z5-Z6	Transportation	MDQ	4,000	
31	TransCanada via Union to Portland	Union Parkway to Portland	Transportation	MDQ	5,077	
32	Portland Natural Gas Trans Service	FT-1999-001	Transportation	MDQ	1,000	
33	Tenn Gas Pipeline (long haul)	8587 Z1-Z6	Transportation	MDQ	14,561	
34	Tenn Gas Pipeline (long haul)	8587 Z0-Z6	Transportation	MDQ	7,035	
35	Portland Natural Gas	FTN	Transportation	MDQ	5,000	

36

37 Supply Costs - Commodity

38	LNG Truck		Pipeline	Dkt	13,918	
39	TGP Supply (Zone 4)		Pipeline	Dkt	2,986,627	
40	Niagara Supply		Pipeline	Dkt	357,660	
41	Dracut Supply 2 - Swing		Pipeline	Dkt	43,619	
42	Dawn Supply		Pipeline	Dkt	167,801	
43	TGP Citygate Supply		Pipeline	Dkt	-	
44	PNGTS		Pipeline	Dkt	99,191	
45	Dracut Supply 1 - Baseload		Pipeline	Dkt	-	
46	TGP Supply (Gulf)		Pipeline	Dkt	39,745	
47	LNG Vapor		Produced	Dkt	11,227	
48	Propane		Pipeline	Dkt	-	

49

50 Supply Costs - Volumetric Transportation

51	Dracut Supply 1 - Baseload		Pipeline	Dkt	-	
52	TGP Supply (Zone 4)		Pipeline	Dkt	39,745	
53	Dracut Supply 2 - Swing		Pipeline	Dkt	43,619	
54	Dawn Supply		Storage	Dkt	167,801	
55	Niagara Supply		Pipeline	Dkt	357,660	

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3 Off Peak 2022 Summer Cost of Gas Filing
4 COG (Over)/Under Cumulative Recovery Balances and Interest Calculation

	Days in Month	Prior Period Balance Plus Nov Collections October 31, 2021	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	Nov-22 30	Off Peak Period Total	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	
Account 8840-2-0000-10-1920-1741 (formerly, 175.40) COG (Over)/Under Balance - Interest Calculation																	
13	Beginning Balance	Account 1920-1741 1/	\$ 8,665,170	\$ 8,665,170	\$ 9,223,873	\$ 9,148,110	\$ 7,022,829	\$ 7,042,250	\$ 7,063,101	\$ 7,083,418	\$ 5,785,269	\$ 5,250,646	\$ 4,896,389	\$ 4,505,643	\$ 3,604,663	\$ 1,366,420	\$ 8,665,170
14	Forecast Direct Gas Costs		-	(105)	-	(2,143,633)	20	-	-	3,877,696	2,301,853	1,986,073	2,013,201	2,590,078	5,280,947	-	15,906,130
15	Production & Storage & Misc Overhead		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	Projected Revenues w/o Int.	In 54 * In 64	-	(1,439,782)	(101,084)	(3,936)	1,890	1,410	-	(998,445)	(2,893,763)	(2,404,085)	(2,437,588)	(3,611,317)	(7,677,631)	(4,548,470)	(26,112,801)
17	Projected Unbilled Revenue	In 58 * In 64	-	1,974,730	-	-	-	-	-	(4,196,499)	(4,157,324)	(4,110,774)	(4,093,078)	(3,986,128)	(3,836,116)	-	(22,405,189)
18	Reverse Prior Month Unbilled		-	-	-	-	-	-	-	4,196,499	4,157,324	4,110,774	4,093,078	3,986,128	3,836,116	-	24,379,918
19	Add Net Adjustments (with TGP Refund)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	Gas Cost Billed		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	Monthly (Over)/Under Recovery	Account 1920-1741 2/	\$ 8,665,170	\$ 9,200,012	\$ 9,122,789	\$ 7,000,542	\$ 7,024,739	\$ 7,043,661	\$ 7,063,101	\$ 5,766,171	\$ 5,232,534	\$ 4,879,183	\$ 4,489,699	\$ 3,591,353	\$ 1,357,991	\$ 654,066	\$ 433,228
22	Average Monthly Balance	(In 13 + 21) / 2	\$ -	\$ 8,932,591	\$ 9,173,331	\$ 8,074,326	\$ 7,023,784	\$ 7,042,955	\$ 7,063,101	\$ 6,424,794	\$ 5,508,902	\$ 5,064,914	\$ 4,693,044	\$ 4,048,498	\$ 2,481,327	\$ 1,010,243	-
24	Interest Rate	Prime Rate		3.25%	3.25%	3.25%	3.25%	3.25%	3.50%	3.50%	4.00%	4.00%	4.00%	4.00%	4.00%	-	-
26	Interest Applied	In 22 * In 24 /365 *Days/Mo.	\$ -	\$ 23,861	\$ 25,321	\$ 22,287	\$ 17,511	\$ 19,440	\$ 20,317	\$ 19,098	\$ 18,111	\$ 17,207	\$ 15,943	\$ 13,310	\$ 8,430	\$ -	\$ 220,838
28	(Over)/Under Balance	In 21 + In 26	\$ 8,665,170	\$ 9,223,873	\$ 9,148,110	\$ 7,022,829	\$ 7,042,250	\$ 7,063,101	\$ 7,083,418	\$ 5,785,269	\$ 5,250,646	\$ 4,896,389	\$ 4,505,643	\$ 3,604,663	\$ 1,366,420	\$ 654,066	\$ 654,066
Calculation of COG with Interest																	
33	Beginning Balance	In 13	\$ 8,665,170	\$ 8,665,170	\$ 7,246,506	\$ 7,165,285	\$ 5,034,531	\$ 5,048,995	\$ 5,064,344	\$ 5,078,912	\$ 3,733,471	\$ 3,169,400	\$ 2,789,328	\$ 2,372,178	\$ 1,436,300	\$ (869,242)	\$ 8,665,170
34	Forecast Direct Gas Costs	In 14	-	(105)	-	(2,143,633)	20	-	-	3,877,696	2,301,853	1,986,073	2,013,201	2,590,078	5,280,947	-	15,906,130
35	Prod Storage & Misc Overhead	In 15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	Projected Revenues with int.	In 54 * 66	-	(1,439,782)	(101,084)	(3,936)	1,890	1,410	-	(1,006,382)	(2,916,769)	(2,423,198)	(2,456,968)	(3,640,028)	(7,738,670)	(4,584,631)	(26,308,147)
37	Projected Unbilled Revenue	In 58 * 66	-	1,974,730	-	-	-	-	-	(4,229,862)	(4,190,375)	(4,143,456)	(4,125,618)	(4,017,818)	(3,866,613)	-	(24,573,743)
38	Reverse Prior Month Unbilled		-	-	-	-	-	-	-	4,229,862	4,190,375	4,143,456	4,125,618	4,017,818	3,866,613	-	24,573,743
39	Add Net Adjustments	In 19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	Gas Cost Billed	In 20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	Gas Cost Unbilled		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	Reverse Prior Month Unbilled		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	Add Interest	In 26	-	-	-	-	-	-	-	19,098	18,111	17,207	15,943	13,310	8,430	-	92,100
44	(Over)/Under Balance		\$ 8,665,170	\$ 7,225,282	\$ 7,145,422	\$ 5,017,716	\$ 5,036,440	\$ 5,050,405	\$ 5,064,344	\$ 3,739,462	\$ 3,176,153	\$ 2,796,401	\$ 2,379,342	\$ 1,443,338	\$ (861,788)	\$ (1,587,259)	\$ (1,644,748)
46	Average Monthly Balance			\$ 7,945,226	\$ 7,195,964	\$ 6,091,501	\$ 5,035,485	\$ 5,049,700	\$ 5,064,344	\$ 4,409,187	\$ 3,454,812	\$ 2,982,900	\$ 2,584,335	\$ 1,907,758	\$ 287,256	-	-
48	Interest Applied	In 24 * In 46 /365 *Days/Mo.	\$ 21,224	\$ 19,863	\$ 16,814	\$ 12,554	\$ 13,939	\$ 14,569	\$ 13,107	\$ 11,358	\$ 10,134	\$ 8,780	\$ 6,272	\$ 976	\$ -	\$ -	\$ 149,588
50	(Over)/Under Balance	In 43 + In 44 + In 48	\$ 8,665,170	\$ 7,246,506	\$ 7,165,285	\$ 5,034,531	\$ 5,048,995	\$ 5,064,344	\$ 5,078,912	\$ 3,733,471	\$ 3,169,400	\$ 2,789,328	\$ 2,372,178	\$ 1,436,300	\$ (869,242)	\$ (1,587,259)	\$ (1,587,260)
53	Forecast Sendout Therms	Sch 1								4,997,212	2,745,936	2,267,802	2,327,785	3,370,983	7,241,101		22,950,820
54	Less Forecast Billing Therm Sales	Sch. 10B, In 23 May - Oct								949,473	2,751,830	2,286,170	2,318,030	3,434,190	7,301,060	4,325,377	23,366,130
55	Less Forecast Unaccounted For	Sch 1								53,988	29,666	24,501	25,149	36,419	78,230		247,952
56	Less Forecast Company Use	Sch 1								3,081	1,693	1,398	1,435	2,079	4,465		14,152
57	Unbilled Volumes									3,990,670	(37,254)	(44,266)	(16,829)	(101,704)	(142,654)	(4,325,377)	(677,415)
58	Gross Unbilled									3,990,670	3,953,416	3,909,150	3,892,321	3,790,617	3,647,962		(677,415)
59	Beg Balance									-	3,990,670	3,953,416	3,909,150	3,892,321	3,790,617	3,647,962	
61	Incremental									3,990,670	(37,254)	(44,266)	(16,829)	(101,704)	(142,654)	(4,325,377)	
62	Ending Balance									3,990,670	3,953,416	3,909,150	3,892,321	3,790,617	3,647,962		(677,415)
64	COG w/o Interest	Sch. 3, pg. 4, In 211 col. (c)								\$ 1,0516	\$ 1,0516	\$ 1,0516	\$ 1,0516	\$ 1,0516	\$ 1,0516	\$ 1,0516	
66	COG With Interest	Sch. 3, pg. 4, In 211 col. (d)								\$ 1,0599	\$ 1,0599	\$ 1,0599	\$ 1,0599	\$ 1,0599	\$ 1,0599	\$ 1,0599	

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

	Days in Month	Prior Period Balance Plus Nov Collections October 31, 2021	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	Nov-22 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																	
77																	
78	Beginning Balance	Account 1163-1424 1/	\$ 25,064	\$ 25,064	\$ 27,157	\$ 27,335	\$ 27,415	\$ 27,480	\$ 27,553	\$ 27,633	\$ 22,408	\$ 19,565	\$ 17,222	\$ 14,808	\$ 11,277	\$ 3,623	\$ 25,064
79																	
80	Days Lag									0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
81	Prime Rate									3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	
82	Forecast Working Capital	In 34 * In 80 / 365 * In 81															
83																	
84	Projected Revenues w/o Int.	In 123 * In 126		2,023	103	5	(3)	(3)		(1,018)	(2,952)	(2,452)	(2,486)	(3,684)	(7,832)	(4,640)	(22,940)
85	Projected Unbilled Revenue	In 124 * In 126								(4,281)	(4,241)	(4,193)	(4,175)	(4,066)	(3,913)	(4,640)	(24,869)
86	Reverse Prior Month Unbilled										4,281	4,241	4,193	4,175	4,066	3,913	24,869
87																	
88	Add Net Adjustments																
89																	
90	Working Capital Billed	Account 1163-1424 2/															
91																	
92	Monthly (Over)/Under Recovery		\$ 25,064	\$ 27,087	\$ 27,260	\$ 27,340	\$ 27,412	\$ 27,478	\$ 27,553	\$ 22,334	\$ 19,496	\$ 17,160	\$ 14,754	\$ 11,234	\$ 3,598	\$ 2,897	\$ 2,125
93																	
94	Average Monthly Balance	(In 78 + 92) / 2	\$ 26,076	\$ 27,208	\$ 27,337	\$ 27,413	\$ 27,479	\$ 27,553	\$ 24,983	\$ 20,952	\$ 18,362	\$ 15,988	\$ 13,021	\$ 7,437			
95																	
96	Interest Rate		3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.50%	3.50%	4.00%	4.00%	4.00%	4.00%	4.00%		
97																	
98	Interest Applied	In 94 * In 96 / 365 * Days of Month	\$ 70	\$ 75	\$ 75	\$ 68	\$ 76	\$ 79	\$ 74	\$ 69	\$ 62	\$ 54	\$ 43	\$ 25			\$ 772
99																	
100	(Over)/Under Balance	In 92 + In 98	\$ 25,064	\$ 27,157	\$ 27,335	\$ 27,415	\$ 27,480	\$ 27,553	\$ 22,408	\$ 19,565	\$ 17,222	\$ 14,808	\$ 11,277	\$ 3,623	\$ 2,897		2,896
101																	
102																	
103	Calculation of Working Capital with Interest																
104																	
105	Beginning Balance		\$ 25,064	\$ 25,064	\$ 27,157	\$ 27,335	\$ 27,415	\$ 27,480	\$ 27,553	\$ 27,633	\$ 22,367	\$ 19,502	\$ 17,141	\$ 14,708	\$ 11,149	\$ 3,436	\$ 25,064
106	Forecast Working Capital	In 82															
107	Projected Rev. with interest	In 123 * In 128		2,023	103	5	(3)	(3)		(1,026)	(2,974)	(2,471)	(2,505)	(3,712)	(7,891)	(4,675)	(23,131)
108	Projected Unbilled Revenue	In 124 * In 128								(4,313)	(4,273)	(4,225)	(4,207)	(4,097)	(3,943)	(4,675)	(25,059)
109	Reverse Prior Month Unbilled										4,313	4,273	4,225	4,207	4,097	3,943	25,059
110	Add Net Adjustments	In 88															
111	Working Capital Billed	In 90															
112	W/C Unbilled																
113	Reverse W/C Unbilled																
114	Add Interest	In 98								74	69	62	54	43	25		328
115	Monthly (Over)/Under Recovery		\$ 25,064	\$ 27,087	\$ 27,260	\$ 27,340	\$ 27,412	\$ 27,478	\$ 27,553	\$ 22,367	\$ 19,502	\$ 17,141	\$ 14,708	\$ 11,149	\$ 3,437	\$ 2,704	\$ 2,262
116																	
117	Average Monthly Balance		\$ 26,076	\$ 27,208	\$ 27,337	\$ 27,413	\$ 27,479	\$ 27,553	\$ 25,000	\$ 20,935	\$ 18,322	\$ 15,925	\$ 12,929	\$ 7,293			
118																	
119	Interest Applied	In 96 * In 117 / 365 * Days of Month	70	75	75	68	76	79	74	69	62	54	43	25			\$ 770
120																	
121	(Over)/Under Balance	-In 114 +In 115 + In 119	\$ 25,064	\$ 27,157	\$ 27,335	\$ 27,415	\$ 27,480	\$ 27,553	\$ 22,367	\$ 19,502	\$ 17,141	\$ 14,708	\$ 11,149	\$ 3,436	\$ 2,704		2,704
122																	
123	Forecast Therm Sales	In 53							949,473	2,751,830	2,286,170	2,318,030	3,434,190	7,301,060	4,325,377		23,366,130
124	Unbilled Therm	In 55							3,990,670	3,953,416	3,909,150	3,892,321	3,790,617	3,647,962	(677,415)		
125																	
126	Working Cap. Rate w/out Int.	Sch. 3, pg. 4, In 228 col. (c)							\$0.0011	\$0.0011	\$0.0011	\$0.0011	\$0.0011	\$0.0011	\$0.0011		
127																	
128	Working Capital Rate w/ Int.	Sch. 3, pg. 4, In 228 col. (d)							\$0.0011	\$0.0011	\$0.0011	\$0.0011	\$0.0011	\$0.0011	\$0.0011		
129																	

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

		Prior Period Balance Plus Nov Collections October 31, 2021	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	Nov-22 30	Off Peak Period Total
(a)	Days in Month (b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
Account 8840-2-0000-10-1163-1754 (formerly, 175.54) Bad Debt (Over)/Under Balance - Interest Calculation																
Forecast Direct Gas Costs	In 34 In 106 + (May includes prior period)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,877,696	\$ 2,301,853	\$ 1,986,073	\$ 2,013,201	\$ 2,590,078	\$ 5,280,947	\$ -	18,049,847
Forecast Working Capital		-	-	-	-	-	-	-	25,064	-	-	-	-	-	-	25,064
Prior Period Balance (with Refund)	In 21 / 6	-	-	-	-	-	-	-	1,444,195	1,444,195	1,444,195	1,444,195	1,444,195	1,444,195	-	8,665,170
Total Forecast Direct Gas Costs & Working Capital		-	-	-	-	-	-	-	5,346,955	3,746,048	3,430,267	3,457,396	4,034,273	6,725,142	-	18,074,912
Beginning Balance	Account 1163-1754 1/ Oct Collections & Unbilled	\$ 464,841	\$ 464,841	\$ 581,472	\$ 591,177	\$ 593,131	\$ 594,447	\$ 595,954	\$ 597,731	\$ 498,935	\$ 449,409	\$ 412,322	\$ 373,643	\$ 310,013	\$ 158,131	\$ 464,841
Forecast Bad Debt	In 142 * 0.007	-	-	-	-	-	-	-	37,429	26,222	24,012	24,202	28,240	47,076	-	187,181
Projected Revenues w/o int	In 184 * In 187	115,235	8,089	322	(162)	(134)	63		(26,495)	(76,789)	(63,795)	(64,684)	(95,830)	(203,733)	(120,698)	(528,608)
Projected Unbilled Revenue	In 185 * In 187	-	-	-	-	-	-	-	(111,358)	(110,318)	(109,083)	(108,613)	(105,775)	(101,795)	-	(646,943)
Reverse Prior Month Unbilled		-	-	-	-	-	-	-	-	111,358	110,318	109,083	108,613	105,775	101,795	646,943
Bad Debt Billed	Account 1163-1754 2/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Add Net Adjustments		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monthly (Over)/Under Recovery		\$ 464,841	\$ 580,076	\$ 589,561	\$ 591,499	\$ 592,969	\$ 594,313	\$ 596,017	\$ 497,308	\$ 449,409	\$ 410,861	\$ 372,310	\$ 308,891	\$ 157,337	\$ 139,228	\$ 123,413
Average Monthly Balance	(In 144 + 155) / 2	\$ 522,458	\$ 585,516	\$ 591,338	\$ 593,050	\$ 594,380	\$ 595,985	\$ 597,731	\$ 547,520	\$ 474,172	\$ 430,135	\$ 392,316	\$ 341,267	\$ 233,675	\$ 148,680	
Interest Rate	Prime Rate	3.25%	3.25%	3.25%	3.25%	3.25%	3.50%		3.50%	4.00%	4.00%	4.00%	4.00%	4.00%		
Interest Applied	In 157 * In 159 / 365 * Days of Mo.	\$ 1,396	\$ 1,616	\$ 1,632	\$ 1,479	\$ 1,641	\$ 1,714		\$ 1,628	\$ 1,559	\$ 1,461	\$ 1,333	\$ 1,122	\$ 794		\$ 17,374
(Over)/Under Balance	In 155 + In 161	\$ 464,841	\$ 581,472	\$ 591,177	\$ 593,131	\$ 594,447	\$ 595,954	\$ 597,731	\$ 498,935	\$ 450,967	\$ 412,322	\$ 373,643	\$ 310,013	\$ 158,131	\$ 148,680	140,787
Calculation of Bad Debt with Interest																
Beginning Balance		\$ 464,841	\$ 464,841	\$ 581,472	\$ 591,177	\$ 593,131	\$ 594,447	\$ 595,954	\$ 597,731	\$ 494,539	\$ 444,141	\$ 405,043	\$ 364,291	\$ 297,665	\$ 139,366	\$ 464,841
Forecast Bad Debt	In 146	-	-	-	-	-	-	-	37,429	26,222	24,012	24,202	28,240	47,076	-	187,181
Projected Revenues with int.	In 184 * 189	115,235	8,089	322	(162)	(134)	63		(27,339)	(79,235)	(65,827)	(66,745)	(98,883)	(210,225)	(124,544)	(549,385)
Projected Unbilled Revenue	In 185 * 189	-	-	-	-	-	-	-	(114,906)	(113,834)	(112,559)	(112,074)	(109,146)	(105,038)	-	(667,557)
Reverse Prior Month Unbilled		-	-	-	-	-	-	-	-	114,906	113,834	112,559	112,074	109,146	105,038	667,557
Bad Debt Billed	In 152	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Add Interest	In 161	-	-	-	-	-	-	-	1,628	1,559	1,461	1,333	1,122	794	-	7,896
Add Net Adjustments	In 153	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monthly (Over)/Under Recovery		\$ 464,841	\$ 580,076	\$ 589,561	\$ 591,499	\$ 592,969	\$ 594,313	\$ 596,017	\$ 494,543	\$ 444,157	\$ 405,062	\$ 364,317	\$ 297,699	\$ 139,418	\$ 119,861	\$ 110,533
Average Monthly Balance	(In 168 + 176) / 2	\$ 522,458	\$ 585,516	\$ 591,338	\$ 593,050	\$ 594,380	\$ 595,985	\$ 597,731	\$ 546,137	\$ 469,348	\$ 424,601	\$ 384,680	\$ 330,995	\$ 218,541	\$ 129,613	
Interest Applied	In 159 * In 178 / 365 * Days of Month	\$ 1,396	\$ 1,616	\$ 1,632	\$ 1,479	\$ 1,641	\$ 1,714		1,623	1,543	1,442	1,307	1,088	742	-	\$ 17,224
(Over)/Under Balance	-In 174 +In 176 + In 180	\$ 464,841	\$ 581,472	\$ 591,177	\$ 593,131	\$ 594,447	\$ 595,954	\$ 597,731	\$ 494,539	\$ 444,141	\$ 405,043	\$ 364,291	\$ 297,665	\$ 139,366	\$ 119,861	\$ 119,861
Forecast Therm Sales Unbilled Therm	In 53 In 55								949,473	2,751,830	2,286,170	2,318,030	3,434,190	7,301,060	4,325,377	23,366,130
									3,990,670	3,953,416	3,909,150	3,892,321	3,790,617	3,647,962		
COG Rate Without Interest	Sch. 3, pg. 4, In 245 col. (c)								\$0.0279	\$0.0279	\$0.0279	\$0.0279	\$0.0279	\$0.0279	\$0.0279	\$0.0279
COG With Interest	Sch. 3, pg. 4, In 245 col. (d)								\$0.0288	\$0.0288	\$0.0288	\$0.0288	\$0.0288	\$0.0288	\$0.0288	\$0.0288
Total Interest	In 48 + 119 + 180	\$ 22,689	\$ 21,554	\$ 18,522	\$ 14,101	\$ 15,655	\$ 16,362		\$ 14,805	\$ 12,970	\$ 11,638	\$ 10,141	\$ 7,403	\$ 1,743	\$ -	\$ 167,582

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

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3 Off Peak 2022 Summer Cost of Gas Filing

4 Adjustments to Gas Costs

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		Prior Period	Refunds from	Broker	Fuel Financing	Transportation	Interruptible	Off System	Capacity	Net Option	Fixed Price	Total
		Adjustments	Suppliers /	Revenue		CGA Revenues	Sales Margin	Sales Margin	Release Margin	Premiums	Option	Adjustments
6	<u>Adjustments</u>	(b)	Pipelines	(d)	(e)	(f)	(g)	(h)	(i)	(j)	Administrative	(m)
7	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(m)
8												
9	Nov-20	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	Dec-20	-	-	-	-	-	-	-	-	-	-	-
11	Jan-21	-	-	-	-	-	-	-	-	-	-	-
12	Feb-21	-	-	-	-	-	-	-	-	-	-	-
13	Mar-21	-	-	-	-	-	-	-	-	-	-	-
14	Apr-21	-	-	-	-	-	-	-	-	-	-	-
15	May-21	-	-	-	-	-	-	-	(149,464)	-	-	(149,464)
16	Jun-21	-	-	-	-	-	-	-	(141,180)	-	-	(141,180)
17	Jul-21	-	-	-	-	-	-	-	(211,505)	-	-	(211,505)
18	Aug-21	-	-	-	-	-	-	-	(224,684)	-	-	(224,684)
19	Sep-21	-	-	-	-	-	-	-	(162,433)	-	-	(162,433)
20	Oct-21	-	-	-	-	-	-	-	(191,448)	-	-	(191,448)
21												
22	Total Off Peak Period	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (1,080,715)	\$ -	\$ -	\$ (1,080,715)

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

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Schedule 5A
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3 Off Peak 2022 Summer Cost of Gas Filing

4 Demand Costs

	(a)	Peak (b)	Reference (c)	May-22 (d)	Jun-22 (e)	Jul-22 (f)	Aug-22 (g)	Sep-22 (h)	Oct-22 (i)	Off Peak May – Oct Total (j)	Peak May – Oct Total (k)
11 Supply											
12 Niagara Supply			Sch 5B, In 9 * Sch 5C In 9 x days	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13 Subtotal Supply Demand & Reservation Charges				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
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 * Sch 5C In 25 x days								
24 Tenn Gas Pipeline (Concord Lateral) Z6-Z6			Sch 5B, In 19 * Sch 5C In 28 x days								
25 Portland Natural Gas Trans Service			Sch 5B, In 20 * Sch 5C In 30 x days								
26 Portland Natural Gas			Sch 5B, In 21 * Sch 5C In 31 x days								
27 ANE (TransCanada via Union to Iroquois)			Sch 5B, In 22 * Sch 5C In 48 x days								
28 TransCanada via Union to Portland			Sch 5B, In 23 * Sch 5C In 49 x days								
29 Tenn Gas Pipeline Z4-Z6 stg 632		peak	Sch 5B, In 24 * Sch 5C In 34 x days								
30 Tenn Gas Pipeline Z4-Z6 stg 11234		peak	Sch 5B, In 25 * Sch 5C In 36 x days								
31 Tenn Gas Pipeline Z5-Z6 stg 11234		peak	Sch 5B, In 26 * Sch 5C In 38 x days								
32 National Fuel FST 2358		peak	Sch 5B, In 27 * Sch 5C In 40 x days								
34 Subtotal Pipeline Demand Charges				\$ 1,640,391	\$ 1,643,539	\$ 1,643,539	\$ 1,643,539	\$ 1,643,539	\$ 1,643,539	\$ 4,954,402	\$ 4,903,685
36 Peaking Supply											
37 Tenn Gas Pipeline (Concord Lateral) Z6-Z6		peak	Sch 5B, In 30 * Sch 5C In 28 x days	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
38 Granite Ridge Demand		peak	Sch 5B, In 31 * Sch 5C In 59 x days	-	-	-	-	-	-	-	-
39 DOMAC Demand NSB041		peak	Per Contract	-	-	-	-	-	-	-	-
40 Subtotal Peaking Demand Charges				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
42 Subtotal Supply, Pipeline & Peaking			In 13 + In 34 + In 40	\$ 1,640,391	\$ 1,643,539	\$ 1,643,539	\$ 1,643,539	\$ 1,643,539	\$ 1,643,539	\$ 4,954,402	\$ 4,903,685
44 Less Transportation Capacity Credit				\$ (555,436)	\$ (556,502)	\$ (556,502)	\$ (556,502)	\$ (556,502)	\$ (556,502)	\$ (1,677,561)	\$ (1,660,388)
46 Total Supply, Pipeline & Peaking Demand				\$ 1,084,955	\$ 1,087,037	\$ 1,087,037	\$ 1,087,037	\$ 1,087,037	\$ 1,087,037	\$ 3,276,842	\$ 3,243,297

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

2

3 Off Peak 2022 Summer Cost of Gas Filing

4 Demand Costs

47

48 **Storage**

49	Dominion - Demand	peak	Sch 5B, In 35 * Sch 5C In 63 x days	\$ 1,748	\$ 1,748	\$ 1,748	\$ 1,748	\$ 1,748	\$ 1,748	\$ -	\$ 10,488
50	Dominion - Storage	peak	Sch 5B, In 36 * Sch 5C In 64 x days	1,489	1,489	1,489	1,489	1,489	1,489	-	8,935
51	Honeoye - Demand	peak	Sch 5B, In 37 * 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 39 * Sch 5C In 69 x days	16,053	16,053	16,053	16,053	16,053	16,053	-	96,318
53	National Fuel - Capacity	peak	Sch 5B, In 40 * Sch 5C In 70 x days	31,930	31,930	31,930	31,930	31,930	31,930	-	191,580
54	Tenn Gas Pipeline - Demand	peak	Sch 5B, In 41 * Sch 5C In 73 x days	28,603	28,603	28,603	28,603	28,603	28,603	-	171,615
55	Tenn Gas Pipeline - Capacity	peak	Sch 5B, In 42 * Sch 5C In 74 x days	27,931	27,931	27,931	27,931	27,931	27,931	-	167,586

56											
57	Subtotal Storage Demand Costs			\$ 116,105	\$ 116,105	\$ 116,105	\$ 116,105	\$ 116,105	\$ 116,105	\$ -	\$ 696,628

58											
59	Less Transportation Capacity Credit			\$ (39,313)	\$ (39,313)	\$ (39,313)	\$ (39,313)	\$ (39,313)	\$ (39,313)	\$ -	\$ (235,878)

60											
61	Total Storage Demand Costs		In 57 + In 59	\$ 76,792	\$ 76,792	\$ 76,792	\$ 76,792	\$ 76,792	\$ 76,792	\$ -	\$ 460,750

62											
63	Total Demand Charges		In 42 + In 57	\$ 1,756,496	\$ 1,759,644	\$ 1,759,644	\$ 1,759,644	\$ 1,759,644	\$ 1,759,644	\$ 4,954,402	\$ 5,600,313

64											
65	Total Transportation Capacity Credit		In 44 + In 59	\$ (594,749)	\$ (595,815)	\$ (595,815)	\$ (595,815)	\$ (595,815)	\$ (595,815)	\$ (1,677,561)	\$ (1,896,266)

66											
67	Total Demand Charges less Cap. Cr.		In 63 + In 65	\$ 1,161,746	\$ 1,163,829	\$ 1,163,829	\$ 1,163,829	\$ 1,163,829	\$ 1,163,829	\$ 3,276,842	\$ 3,704,047

68											
69											

70	Monthly Off Peak Demand			\$ 990,382	\$ 993,530	\$ 993,530	\$ 993,530	\$ 993,530	\$ 993,530	\$ 4,954,402	\$ -
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71	Monthly Off Peak Transportation Cap Credit			(335,343)	(336,409)	(336,409)	(336,409)	(336,409)	(336,409)	(1,677,561)	-
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72	Total Off Peak Demand			\$ 655,039	\$ 657,121	\$ 657,121	\$ 657,121	\$ 657,121	\$ 657,121	\$ 3,276,842	\$ -
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73											
74	Monthly Peak Demand			\$ 766,114	\$ 766,114	\$ 766,114	\$ 766,114	\$ 766,114	\$ 766,114	\$ -	\$ 5,600,313

75	Monthly Peak Transportation Cap Credit			(259,406)	(259,406)	(259,406)	(259,406)	(259,406)	(259,406)	-	(1,896,266)
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76	Total Peak Demand			\$ 506,708	\$ 506,708	\$ 506,708	\$ 506,708	\$ 506,708	\$ 506,708	\$ -	\$ 3,704,047
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1 **Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**

2
3 **Off Peak 2022 Summer Cost of Gas Filing**

4 **Demand Volumes**

5				May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22
6		Peak	Reference	(d)	(e)	(f)	(g)	(h)	(i)
7	(a)	(b)	(c)						
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
	Tenn Gas Pipeline		358905 FTA Z6-Z6	40,000	40,000	40,000	40,000	40,000	40,000
19	Tenn Gas Pipeline (Concord Lateral)		Firm Transportation	30,000	30,000	30,000	30,000	30,000	30,000
20	Portland Natural Gas Trans Service		FT-1999-001	1,000	1,000	1,000	1,000	1,000	1,000
21	Portland Natural Gas		FTN	5,000	5,000	5,000	5,000	5,000	5,000
22	ANE (TransCanada via Union to Iroquois)		Dawn - Parkway to Iroquois	4,047	4,047	4,047	4,047	4,047	4,047
23	TransCanada via Union to Portland		Union Parkway to Portland	5,077	5,077	5,077	5,077	5,077	5,077
24	Tenn Gas Pipeline (short haul)	peak	632 Z4-Z6 (stg)	15,265	15,265	15,265	15,265	15,265	15,265
25	Tenn Gas Pipeline (short haul)	peak	11234 Z4-Z6(stg)	7,082	7,082	7,082	7,082	7,082	7,082
26	Tenn Gas Pipeline (short haul)	peak	11234 Z5-Z6(stg)	1,957	1,957	1,957	1,957	1,957	1,957
27	National Fuel	peak	FST N02358	6,098	6,098	6,098	6,098	6,098	6,098
28									
29	Peaking								
30	Tenn Gas Pipeline (Concord Lateral)	peak		-	-	-	-	-	-
31	Granite Ridge Demand	peak		-	-	-	-	-	-
32	DOMAC Liquid Demand Charge	peak	NSB041	-	-	-	-	-	-
33									
34	Storage								
35	Dominion - Demand	peak	GSS 300076	934	934	934	934	934	934
36	Dominion - Capacity Reservation	peak	GSS 300076	102,700	102,700	102,700	102,700	102,700	102,700
37	Honeoye - Demand	peak	SS-NY	1,362	1,362	1,362	1,362	1,362	1,362
38	Honeoye - Capacity	peak	SS-NY	245,380	245,380	245,380	245,380	245,380	245,380
39	National Fuel - Demand	peak	FSS-1 2357	6,098	6,098	6,098	6,098	6,098	6,098
40	National Fuel - Capacity Reservation	peak	FSS-1 2357	670,800	670,800	670,800	670,800	670,800	670,800
41	Tenn Gas Pipeline - Demand	peak	FS-MA 523	21,844	21,844	21,844	21,844	21,844	21,844
42	Tenn Gas Pipeline - Cap. Reservations	peak	FS-MA 523	1,560,391	1,560,391	1,560,391	1,560,391	1,560,391	1,560,391

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

2

3 Off Peak 2022 Summer Cost of Gas Filing

4 Demand Rates

5
6 **Tariff Rates**

7
8 **Supply**

9 Niagara Supply

10

11 **Pipeline**

12 Iroquois Gas

13

14 Tenn Gas Pipeline

15

16 Tenn Gas Pipeline

17

18 Tenn Gas Pipeline

19

20 Tenn Gas Pipeline

21

22 Tenn Gas Pipeline

23

24 TGP Dracut

25

26 TGP Dracut

27

28 TGP Concord Lateral

29

30 Portland Natural Gas

31

32 Portland Natural Gas

33

34 Tenn Gas Pipeline

35

36 Tenn Gas Pipeline

37

38 Tenn Gas Pipeline

39

40 National Fuel

41

42 ANE Union Gas

43

44 TransCanada Pipelines Limited

45

46 Delivery Pressure Demand Charge

47

48 Sub Total Demand Charges

49

50 Conversion rate GJ to MMBTU

51

52 Conversion rate to US\$

53

54 Demand Rate/US\$

55

56 Union Gas

57

58 TransCanada Pipelines Limited

59

60 Delivery Pressure Demand Charge

61

62 Sub Total Demand Charges

63

64 Conversion rate GJ to MMBTU

65

66 Conversion rate to US\$

67

68 Demand Rate/US\$

69

70 **Peaking**

71

72 Granite Ridge Demand

73

74 DOMAC Demand NSB041

75

76 **Storage**

77

78 Dominion - Demand

79

80 Dominion - Capacity

81

82 Honeoye - Demand

83

84 National Fuel - Demand

85

86 National Fuel - Capacity

87

88

89 Tenn Gas Pipeline

			May-22 31	Jun-22 30	Jul-22 31	Aug-22 31	Sep-22 30	Oct-22 31	Nov-22 184	Nov-22 30	Dec-22 31	Jan-23 31	Feb-23 28	Mar-23 31	Apr-23 30	
			Unit Rate	Unit Rate	Unit Rate	Unit Rate	Unit Rate	Unit Rate	Avg Rate							
Niagara Supply	\$ -	Per Contract	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Iroquois Gas	RTS 470-01	\$ 5.2357	Forth 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
Tenn Gas Pipeline	95346 Z5-Z6	\$ 6.2957	17th 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
Tenn Gas Pipeline	2302 Z5-Z6	\$ 6.2957	17th Rev Sheet No. 14	\$ 0.2031	\$ 0.2099	\$ 0.2031	\$ 0.2031	\$ 0.2099	\$ 0.2031	\$ 0.2053	\$ 0.2099	\$ 0.2031	\$ 0.2031	\$ 0.2248	\$ 0.2031	\$ 0.2099
Tenn Gas Pipeline	8587 Z0-Z6	\$ 20.3736	FT-A (Z0 - Z6)	\$ 0.6572	\$ 0.6791	\$ 0.6572	\$ 0.6572	\$ 0.6791	\$ 0.6572	\$ 0.6645	\$ 0.6791	\$ 0.6572	\$ 0.6572	\$ 0.7276	\$ 0.6572	\$ 0.6791
Tenn Gas Pipeline	8587 Z1-Z6	\$ 18.0875	FT-A (Z1 - Z6)	\$ 0.5835	\$ 0.6029	\$ 0.5835	\$ 0.5835	\$ 0.6029	\$ 0.5835	\$ 0.5900	\$ 0.6029	\$ 0.5835	\$ 0.5835	\$ 0.6460	\$ 0.5835	\$ 0.6029
Tenn Gas Pipeline	8587 Z4-Z6	\$ 7.1645	FT-A (Z4 - Z6)	\$ 0.2311	\$ 0.2388	\$ 0.2311	\$ 0.2311	\$ 0.2388	\$ 0.2311	\$ 0.2337	\$ 0.2388	\$ 0.2311	\$ 0.2311	\$ 0.2559	\$ 0.2311	\$ 0.2388
TGP Dracut	42076 FTA Z6-Z6	\$ 4.1818	17th Rev Sheet No. 14	\$ 0.1349	\$ 0.1394	\$ 0.1349	\$ 0.1349	\$ 0.1394	\$ 0.1349	\$ 0.1364	\$ 0.1394	\$ 0.1349	\$ 0.1349	\$ 0.1494	\$ 0.1349	\$ 0.1394
TGP Dracut	358905 FTA Z6-Z6	\$ 4.1818	17th Rev Sheet No. 14	\$ 0.1349	\$ 0.1394	\$ 0.1349	\$ 0.1349	\$ 0.1394	\$ 0.1349	\$ 0.1364	\$ 0.1394	\$ 0.1349	\$ 0.1349	\$ 0.1494	\$ 0.1349	\$ 0.1394
TGP Concord Lateral	Firm Transportation	\$ 12.2113	Per contract	\$ 0.3939	\$ 0.4070	\$ 0.3939	\$ 0.3939	\$ 0.4070	\$ 0.3939	\$ 0.3983	\$ 0.4070	\$ 0.3939	\$ 0.3939	\$ 0.4361	\$ 0.3939	\$ 0.4070
Portland Natural Gas	FT-1999-001	\$ 18.2633	Negot Dmd /CMDY=Part 4.1 V1	\$ 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
Portland Natural Gas	FTN	\$ 22.8125	Negot Dmd /CMDY=Part 4.1 V1	\$ 0.7359	\$ 0.7604	\$ 0.7359	\$ 0.7359	\$ 0.7604	\$ 0.7359	\$ 0.7441	\$ 0.7604	\$ 0.7359	\$ 0.7359	\$ 0.8147	\$ 0.7359	\$ 0.7604
Tenn Gas Pipeline	632 Z4-Z6 (stg)	\$ 7.1645	17th Rev Sheet No. 14	\$ 0.2311	\$ 0.2388	\$ 0.2311	\$ 0.2311	\$ 0.2388	\$ 0.2311	\$ 0.2337	\$ 0.2388	\$ 0.2311	\$ 0.2311	\$ 0.2559	\$ 0.2311	\$ 0.2388
Tenn Gas Pipeline	11234 Z4-Z6(stg)	\$ 7.1645	17th Rev Sheet No. 14	\$ 0.2311	\$ 0.2388	\$ 0.2311	\$ 0.2311	\$ 0.2388	\$ 0.2311	\$ 0.2337	\$ 0.2388	\$ 0.2311	\$ 0.2311	\$ 0.2559	\$ 0.2311	\$ 0.2388
Tenn Gas Pipeline	11234 Z5-Z6(stg)	\$ 6.2957	17th Rev Sheet No. 14	\$ 0.2031	\$ 0.2099	\$ 0.2031	\$ 0.2031	\$ 0.2099	\$ 0.2031	\$ 0.2053	\$ 0.2099	\$ 0.2031	\$ 0.2031	\$ 0.2248	\$ 0.2031	\$ 0.2099
National Fuel	FST N02358	\$ 4.5274	4.010 Version 31.0.1 Pg 1	\$ 0.1460	\$ 0.1509	\$ 0.1460	\$ 0.1460	\$ 0.1509	\$ 0.1460	\$ 0.1477	\$ 0.1509	\$ 0.1460	\$ 0.1460	\$ 0.1617	\$ 0.1460	\$ 0.1509
ANE Union Gas		\$ 3.6665														
TransCanada Pipelines Limited		\$ 11.9842	Union Parkway to Iroquois													
Delivery Pressure Demand Charge		\$ 0.6083	Union Parkway to Iroquois													
Sub Total Demand Charges		\$ 16.2590														
Conversion rate GJ to MMBTU		\$ 1.0551														
Conversion rate to US\$		\$ 1.2589	1/0/1900													
Demand Rate/US\$		\$ 13.6260		\$ 0.4395	\$ 0.4542	\$ 0.4395	\$ 0.4395	\$ 0.4542	\$ 0.4395	\$ 0.4444	\$ 0.4542	\$ 0.4395	\$ 0.4395	\$ 0.4866	\$ 0.4395	\$ 0.4542
Union Gas		\$ 3.6665														
TransCanada Pipelines Limited		\$ 20.4218														
Delivery Pressure Demand Charge		\$ 0.6083														
Sub Total Demand Charges		\$ 24.6986														
Conversion rate GJ to MMBTU		\$ 1.0551														
Conversion rate to US\$		\$ 1.2589	\$0.0000													
Demand Rate/US\$		\$ 20.6972		\$ 0.6677	\$ 0.6899	\$ 0.6677	\$ 0.6677	\$ 0.6899	\$ 0.6677	\$ 0.6751	\$ 0.6899	\$ 0.6677	\$ 0.6677	\$ 0.7392	\$ 0.6677	\$ 0.6899
Granite Ridge Demand	\$ -	Per Contract	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
DOMAC Demand NSB041	\$ -	Per Contract	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Dominion - Demand	GSS 300076	\$ 1.8716	GSS Settled,Tariff Rec #10.30	\$ 0.0604	\$ 0.0624	\$ 0.0604	\$ 0.0604	\$ 0.0624	\$ 0.0604	\$ 0.0612	\$ 0.0624	\$ 0.0604	\$ 0.0604	\$ 0.0668	\$ 0.0604	\$ 0.0624
Dominion - Capacity	GSS 300076	\$ 0.0145	GSS Settled,Tariff Rec #10.30	\$ 0.0005	\$ 0.0005	\$ 0.0005	\$ 0.0005	\$ 0.0005	\$ 0.0005	\$ 0.0005	\$ 0.0005	\$ 0.0005	\$ 0.0005	\$ 0.0005	\$ 0.0005	\$ 0.0005
		\$ 1.8861		\$ 0.0608	\$ 0.0629	\$ 0.0608	\$ 0.0608	\$ 0.0629	\$ 0.0608	\$ 0.0617	\$ 0.0629	\$ 0.0608	\$ 0.0608	\$ 0.0674	\$ 0.0608	\$ 0.0629
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
National Fuel - Demand	FSS-1 2357	\$ 2.6325	4.020 Version 26.0.0 Pg 1	\$ 0.0849	\$ 0.0878	\$ 0.0849	\$ 0.0849	\$ 0.0878	\$ 0.0849	\$ 0.0861	\$ 0.0878	\$ 0.0849	\$ 0.0849	\$ 0.0940	\$ 0.0849	\$ 0.0878
National Fuel - Capacity	FSS-1 2357	\$ 0.0476	4.020 Version 26.0.0 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
		\$ 2.6801		\$ 0.0865	\$ 0.0893	\$ 0.0865	\$ 0.0865	\$ 0.0893	\$ 0.0865	\$ 0.0876	\$ 0.0893	\$ 0.0865	\$ 0.0865	\$ 0.0957	\$ 0.0865	\$ 0.0893
Tenn Gas Pipeline	FS-MA 523	\$ 1.3094	20th Rev Sheet No.61	\$ 0.0422	\$ 0.0436	\$ 0.0422	\$ 0.0422	\$ 0.0436	\$ 0.0422	\$ 0.0428	\$ 0.0436	\$ 0.0422	\$ 0.0422	\$ 0.0468	\$ 0.0422	\$ 0.0436

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

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Schedule 6
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5	6 For Month of:	Reference	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	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 63 * In 104	[REDACTED]													
13	Niagara Supply	In 64 * In 109														
14	TGP Supply (Gulf)	In 65 * In 129														
15	Dracut Supply 1 - Baseload	In 66 * In 114														
16	Dracut Supply 2 - Swing	In 67 * In 119														
17	Dracut Supply 3 - Swing	In 68 * In 135														
18	City Gate Delivered Supply	In 69 * In 137														
19	LNG Truck	In 70 * In 139														
20	Propane Truck	In 71 * In 144														
21	PNGTS	In 71 * In 144														
22	Portland Natural Gas		[REDACTED]													
23	TGP Supply (Zone 4)	In 73 * In 154														
24	Subtotal Pipeline Gas Costs									\$ 4,801,442	\$ 3,736,158	\$ 3,729,693	\$ 3,700,091	\$ 3,769,526	\$ 5,497,023	\$ 25,271,639
25	Volometric Transportation Costs															
27	Dawn Supply	In 63 * In 202								[REDACTED]						
28	Niagara Supply	In 64 * In 213														
29	TGP Supply (Zone 4)	In 73 * In 251														
30	Dracut Supply 1 - Baseload	In 66 * In 262														
31	Dracut Supply 2 - Swing	In 67 * In 262														
32	Dracut Supply 3 - Swing	In 68 * In 262														
33	City Gate Delivered Supply	In 78 * In 177														
34	TGP Storage - Withdrawals		[REDACTED]													
35	Total Volometric Transportation Costs									\$ 117,228	\$ 92,048	\$ 91,165	\$ 90,661	\$ 93,690	\$ 113,513	\$ 598,305
36	Less - Gas Refill:															
38	LNG Truck	In 87 * In 161								[REDACTED]						
39	Propane	In 88 * In 162														
40	TGP Storage Refill	In 89 * In 127														
41	Storage Refill (Trans.)	In 89 * In 241														
42	Subtotal Refills									\$ (1,710,006)	\$ (2,196,633)	\$ (2,504,819)	\$ (2,447,549)	\$ (1,943,912)	\$ (1,002,621)	\$ (11,805,539)
44	Total Supply & Pipeline Commodity Costs In 24 + In 35 + In 43															
45										\$ 3,208,664	\$ 1,631,573	\$ 1,316,039	\$ 1,343,203	\$ 1,919,305	\$ 4,607,915	\$ 14,026,699
46	Storage Gas:															
47	TGP Storage - Withdrawals	In 78 * In 169	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -							
48	Produced Gas:															
51	LNG Vapor	In 81 * In 156	[REDACTED]													
52	Propane	In 82 * In 158														
53	Total Produced Gas	In 51 + In 52	\$ 13,993	\$ 13,159	\$ 12,913	\$ 12,877	\$ 13,652	\$ 15,911	\$ 82,504							
54	Total Commodity Gas & Trans. Costs In 45 + In 48 + In 54															
55			\$ 3,222,657	\$ 1,644,732	\$ 1,328,952	\$ 1,356,080	\$ 1,932,957	\$ 4,623,826	\$ 14,109,203							

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

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3 Off Peak 2022 Summer Cost of Gas Filing

4 Supply and Commodity Costs, Volumes and Rates

59

Schedule 6

60 **Volumes (Therms)**

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61

62 **Pipeline Gas:** See Schedule 11A

63	Dawn Supply	739,535	95,658	-	-	206,295	636,518	1,678,006
64	Niagara Supply	668,413	540,809	542,484	545,801	591,423	687,667	3,576,596
65	TGP Supply (Gulf)	13,120	-	-	-	-	384,326	397,446
66	Dracut Supply 1 - Baseload	-	-	-	-	-	-	-
67	Dracut Supply 2 - Swing	-	-	-	-	-	436,185	436,185
	Dracut Supply 3 - Swing	-	-	-	-	-	-	-
68	City Gate Delivered Supply	-	-	-	-	-	-	-
69	LNG Truck	44,883	18,131	-	-	55,566	20,602	139,181
70	Propane Truck	79,409	71,899	69,472	69,279	73,449	81,696	445,204
71	PNGTS	205,081	146,300	119,612	125,908	176,916	218,093	991,910
72	Portland Natural Gas	152,602	3,126	-	-	2,555	574,003	732,286
73	TGP Supply (Zone 4)	5,386,659	4,708,479	4,708,982	4,696,535	4,819,522	5,546,088	29,866,267
74								
75	Subtotal Pipeline Volumes	7,289,702	5,584,403	5,440,551	5,437,523	5,925,726	8,585,177	38,263,081
76								
77	Storage Gas:							
78	TGP Storage	-	-	-	-	-	-	-
79								
80	Produced Gas:							
81	LNG Vapor	20,025	18,131	17,519	17,470	18,522	20,602	112,269
82	Propane	-	-	-	-	-	-	-
83								
84	Subtotal Produced Gas	20,025	18,131	17,519	17,470	18,522	20,602	112,269
85								
86	Less - Gas Refill:							
87	LNG Truck	(44,883)	(18,131)	-	-	(55,566)	(20,602)	(139,181)
88	Propane	(79,409)	(71,899)	(69,472)	(69,279)	(73,449)	(81,696)	(445,204)
89	TGP Storage Refill	(2,188,222)	(2,766,568)	(3,120,796)	(3,057,929)	(2,444,250)	(1,262,380)	(14,840,145)
90								
91	Subtotal Refills	(2,312,514)	(2,856,598)	(3,190,268)	(3,127,208)	(2,573,265)	(1,364,677)	(15,424,530)
92								
93	Total Sendout Volumes	4,997,212	2,745,936	2,267,802	2,327,785	3,370,983	7,241,101	22,950,820
94								
95								
96								

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

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3 Off Peak 2022 Summer Cost of Gas Filing

4 Supply and Commodity Costs, Volumes and Rates

97

98 Gas Costs and Volumetric Transportation Rates

99

REDACTED

Schedule 6

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100 Pipeline Gas:

101 Dawn Supply

102 NYMEX Price Sch 7, In 10/10

103 Basis Differential

104 Net Commodity Costs

105

106 Niagara Supply

107 NYMEX Price Sch 7, In 10/10

108 Basis Differential

109 Net Commodity Costs

110

111 Dracut Supply 1 - Baseload

112 Commodity Costs - NYMEX Price Sch 7, In 10 / 10

113 Basis Differential

114 Net Commodity Costs

115

116 Dracut Supply 2 - Swing

117 Commodity Costs - NYMEX Price Sch 7, In 10 / 10

118 Basis Differential

119 Net Commodity Costs

120

121 Dracut Supply 3 - Swing

122 Commodity Costs - NYMEX Price Sch 7, In 10 / 10

123 Basis Differential

124 Net Commodity Costs

125

126 TGP Supply (Gulf)

127 NYMEX Price Sch 7, In 10/10

128 Basis Differential

129 Net Commodity Costs

130

131

132 TGP Citygate Supply

133 NYMEX Price Sch 7, In 10/10

134 Basis Differential

135 Net Commodity Costs

136

137 LNG Truck

Sch 7, In 10/10

138

139 Propane Truck

NYMEX - Propane

140

141 PNGTS

142 NYMEX Price Sch 7, In 10/10

143 Additional Cost

144 Net Commodity Cost

145

146 PNGTS EXP

147 NYMEX Price Sch 7, In 10/10

148 Basis Differential

149 Net Commodity Cost

150

151 TGP Supply (Zone 4)

152 NYMEX Price Sch 7, In 10/10

153 Basis Differential

154 Net Commodity Cost

155

156 LNG Vapor (Storage)

Sch 13, In 97 /10

157

158 Propane

Sch 13, In 67 /10

159

160 Storage Refill:

161 LNG Truck In 137

162 Propane In 139

163

164

Average Rate

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
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[REDACTED]

[REDACTED]

\$0.7267	\$0.7385	\$0.7467	\$0.7446	\$0.7400	\$0.7391	\$0.7393
(\$0.0647)	(\$0.0625)	(\$0.0553)	(\$0.0588)	(\$0.0993)	(\$0.1170)	(\$0.0762)
\$0.6620	\$0.6760	\$0.6915	\$0.6859	\$0.6408	\$0.6221	\$0.6630

\$0.6988	\$0.7258	\$0.7371	\$0.7371	\$0.7371	\$0.7723	\$0.7347
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\$1.1475	\$1.0155	\$0.9197	\$0.8429	\$0.7781	\$0.7194	\$0.9038
----------	----------	----------	----------	----------	----------	----------

\$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

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

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3 Off Peak 2022 Summer Cost of Gas Filing

4 Supply and Commodity Costs, Volumes and Rates

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Schedule 6

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167

182 Per Unit Volumetric Transportation Rates

183 Dawn Supply Volumetric Transportation Charge

Average Rate

184 Commodity Costs In 104

185

186 TransCanada - Commodity Rate/GJ	Dawn - Parkway to Iroquois	\$0.00030	\$0.00030	\$0.00030	\$0.00030	\$0.00030	\$0.00030	\$0.00030
187 Conversion Rate GL to MMBTU		1.0551	1.0551	1.0551	1.0551	1.0551	1.0551	1.0551
188 Conversion Rate to US\$	1/0/1900	1.2589	1.2589	1.2589	1.2589	1.2589	1.2589	1.2589
189 Commodity Rate/US\$	In 186 x In 187 x In 188	\$0.00040	\$0.00040	\$0.00040	\$0.00040	\$0.00040	\$0.00040	\$0.00040
190 TransCanada Fuel %	Dawn - Parkway to Iroquois	0.74%	0.67%	0.00%	0.00%	0.00%	0.00%	0.23%
191 TransCanada Fuel * Percentage	In 184 x In 190	\$0.00528	\$0.00479	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00168
192 Subtotal TransCanada		\$0.00567	\$0.00519	\$0.00040	\$0.00040	\$0.00040	\$0.00040	\$0.00208
193 IGTS - Z1 RTS Commodity	Forth Revised Sheet No. 4	\$0.00034	\$0.00034	\$0.00034	\$0.00034	\$0.00034	\$0.00034	\$0.00034
194 IGTS - Z1 RTS ACA Rate Commodity	Forth Revised Sheet No. 4	\$0.00012	\$0.00012	\$0.00012	\$0.00012	\$0.00012	\$0.00012	\$0.00012
195 IGTS - Z1 RTS Deferred Asset Surcharge	Forth Revised Sheet No. 4	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000
196 Subtotal IGTS - Trans Charge - Z1 RTS	Commodity	\$0.00046	\$0.00046	\$0.00046	\$0.00046	\$0.00046	\$0.00046	\$0.00046
197 TGP NET-NE - Comm. Segments 3 & 4	19th Rev Sheet No. 15	\$0.00012	\$0.00012	\$0.00012	\$0.00012	\$0.00012	\$0.00012	\$0.00012
198 IGTS -Fuel Use Factor - Percentage	Forth Revised Sheet No. 4	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
199 IGTS -Fuel Use Factor - Fuel * Percentage	In 184 x In 198	\$0.00713	\$0.00719	\$0.00725	\$0.00724	\$0.00714	\$0.00704	\$0.00716
200 TGP FTA Fuel Charge % Z 5-6	17th Rev Sheet No. 32	0.86%	0.86%	0.86%	0.86%	0.86%	0.86%	0.86%
201 TGP FTA Fuel * Percentage	In 184 x In 200	\$0.00613	\$0.00618	\$0.00623	\$0.00622	\$0.00614	\$0.00605	\$0.00616
202 Total Volumetric Transportation Charge - Dawn Supply		\$0.01952	\$0.01913	\$0.01446	\$0.01444	\$0.01426	\$0.01407	\$0.01598

203

204

205 Niagara Supply Volumetric Transportation Charge

206 Commodity Costs Ln 109

207

208 TGP FTA - FTA Z 5-6 Comm. Rate	19th Rev Sheet No. 15	\$0.00705	\$0.00705	\$0.00705	\$0.00705	\$0.00705	\$0.00705	\$0.00705
209 TGP FTA - FTA Z 5-6 - ACA Rate	19th Rev Sheet No. 15	\$0.00012	\$0.0001	\$0.0001	\$0.0001	\$0.0001	\$0.0001	\$0.0001
210 Subtotal TGP FTA - FTA Z 5-6 Commodity Rate		\$0.00717	\$0.0072	\$0.0072	\$0.0072	\$0.0072	\$0.0072	\$0.0072
211 TGP FTA Fuel Charge % Z 5-6	17th Rev Sheet No. 32	0.86%	0.86%	0.86%	0.86%	0.86%	0.86%	0.86%
212 TGP FTA Fuel * Percentage	In 206 x In 211	\$0.00578	\$0.00601	\$0.00606	\$0.00605	\$0.00597	\$0.00588	\$0.00596
213 Total Volumetric Transportation Rate - Niagara Supply		\$0.01295	\$0.01318	\$0.01323	\$0.01322	\$0.01314	\$0.01305	\$0.01313

214

215

216

SUBJECT TO CONFIDENTIAL TREATMENT

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

CONFIDENTIAL
 Schedule 6
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 Average Rate

217
 218
 219

220 TGP Direct Volumetric Transportation Charge

221 Commodity Costs Ln 127

222								
223	TGP - Max Comm. Base Rate - Z 0-6	19th Rev Sheet No. 15	\$0.02672	\$0.02672	\$0.02672	\$0.02672	\$0.02672	\$0.02672
224	TGP - Max Commodity ACA Rate - Z 0-6	19th Rev Sheet No. 15	\$0.00012	\$0.00012	\$0.00012	\$0.00012	\$0.00012	\$0.00012
225	Subtotal TGP - Max Comm. Rate Z 0-6		\$0.02684	\$0.02684	\$0.02684	\$0.02684	\$0.02684	\$0.02684
226	Prorated Percentage		32.60%	32.60%	32.60%	32.60%	32.60%	32.60%
227	Prorated TGP - Max Commodity Rate - Z 0-6		\$0.00875	\$0.00875	\$0.00875	\$0.00875	\$0.00875	\$0.00875
228	TGP - Max Comm. Base Rate - Z 1-6	19th Rev Sheet No. 15	\$0.02331	\$0.02331	\$0.02331	\$0.02331	\$0.02331	\$0.02331
229	TGP - Max Commodity ACA Rate - Z 1-6	19th Rev Sheet No. 15	\$0.00012	\$0.00012	\$0.00012	\$0.00012	\$0.00012	\$0.00012
230	Subtotal TGP - Max Commodity Rate - Z 1-6		\$0.02343	\$0.02343	\$0.02343	\$0.02343	\$0.02343	\$0.02343
231	Prorated Percentage		67.40%	67.40%	67.40%	67.40%	67.40%	67.40%
232	Prorated TGP - Trans Charge - Max Commodity Rate - Z 1-6		\$0.01579	\$0.01579	\$0.01579	\$0.01579	\$0.01579	\$0.01579
233	TGP - Fuel Charge % - Z 0-6	17th Rev Sheet No. 32	4.66%	4.66%	4.66%	4.66%	4.66%	4.66%
234	Prorated Percentage		32.6%	32.6%	32.6%	32.6%	32.6%	32.6%
235	Prorated TGP Fuel Charge % - Z 0-6		1.52%	1.52%	1.52%	1.52%	1.52%	1.52%
236	TGP - Fuel Charge % - Z 1-6	17th Rev Sheet No. 32	4.06%	4.06%	4.06%	4.06%	4.06%	4.06%
237	Prorated Percentage		67.40%	67.40%	67.40%	67.40%	67.40%	67.40%
238	Prorated TGP Fuel Charge - Fuel Charge % - Z 1-6		2.74%	2.74%	2.74%	2.74%	2.74%	2.74%
239	TGP - Fuel Charge % - Z 0-6	In 221 x In 235	\$0.01079	\$0.01105	\$0.01120	\$0.01116	\$0.01098	\$0.01102
240	TGP - Fuel Charge % - Z 1-6	In 221 x In 238	\$0.01943	\$0.01990	\$0.02018	\$0.02010	\$0.01978	\$0.01984
241	Total Volumetric Transportation Rate - TGP (Direct)		\$0.05476	\$0.05549	\$0.05592	\$0.05579	\$0.05530	\$0.05540

242

243 TGP (Zone 4 Purchase) Volumetric Transportation Charge

244 Commodity Costs Ln 127

245								
246	TGP - Max Comm. Base Rate - Z 4-6	19th Rev Sheet No. 15	\$0.00928	\$0.00928	\$0.00928	\$0.00928	\$0.00928	\$0.00928
247	TGP - Max Commodity ACA Rate - Z 4-6	19th Rev Sheet No. 15	\$0.00012	\$0.00012	\$0.00012	\$0.00012	\$0.00012	\$0.00012
248	Subtotal TGP - Max Commodity Rate - Z 4-6		\$0.00940	\$0.00940	\$0.00940	\$0.00940	\$0.00940	\$0.00940
249	TGP - Fuel Charge % - Z 4-6	17th Rev Sheet No. 32	1.22%	1.22%	1.22%	1.22%	1.22%	1.22%
250	TGP - Fuel Charge	In 244 x In 249	\$0.00808	\$0.00825	\$0.00844	\$0.00837	\$0.00782	\$0.00759
251	Total Vol. Trans. Rate - TGP (Zone 6)		\$0.01748	\$0.01765	\$0.01784	\$0.01777	\$0.01722	\$0.01749

252

253

254 TGP Dracut

255 Commodity Costs - NYMEX Price Ln 114

256								
257	TGP - Trans Charge - Comm. - Z 6-6	19th Rev Sheet No. 15	\$0.00300	\$0.00300	\$0.00300	\$0.00300	\$0.00300	\$0.00300
258	TGP - Trans Charge - ACA Rate - Z6-6	19th Rev Sheet No. 15	\$0.00012	\$0.00012	\$0.00012	\$0.00012	\$0.00012	\$0.00012
259	Subtotal TGP - Trans Charge - Max Commodity Rate - Z 6-6		\$0.00312	\$0.00312	\$0.00312	\$0.00312	\$0.00312	\$0.00312
260	TGP - Fuel Charge % - Z 6-6	17th Rev Sheet No. 32	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
261	TGP - Fuel Charge	In 255 x In 260	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00000
262	Total Volumetric Transportation Rate - TGP Dracut		\$0.00312	\$0.00312	\$0.00312	\$0.00312	\$0.00312	\$0.00312

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

3 Off Peak 2022 Summer Cost of Gas Filing

4 NYMEX Futures @ Henry Hub

5	6 For Month of:	Reference	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	May – Oct
7	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	Off Peak
8	I. NYMEX Opening Prices as of:	5/10/2022							Strip Average
9	Opening Prices								(i)

Line 206	\$7.2670	\$7.3850	\$7.4670	\$7.4460	\$7.4000	\$7.3910	\$ 7.3927
	\$7.2670	\$7.3850	\$7.4670	\$7.4460	\$7.4000	\$7.3910	\$ 7.3927

1 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
 2 Off Peak 2022 Summer Cost of Gas Filing
 3 Annual Bill Comparisons, May 21–Oct 21 vs May 22–Oct 22 — Residential Heating Rate R-3

Schedule 8
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4
 5
 6 May 1, 2022 – October 31, 2022
 7 Residential Heating (R3)

		May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Summer May–Oct
8								
9								
10	Typical Usage (Therms)	51	28	16	14	14	21	144
17								
18	Summer	8/1/2021 - Current						
19	Cust. Chg	\$ 15.39	\$ 15.39	\$ 15.39	\$ 15.39	\$ 15.39	\$ 15.39	\$ 92.34
20	Headblock	\$ 0.5632	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
21	Tailblock	\$ 0.5632	\$ 15.77	\$ 9.01	\$ 7.88	\$ 7.88	\$ 11.83	\$ 81.10
22	HB Threshold	-						
23								
24	Total Base Rate Amount	\$ 44.11	\$ 31.16	\$ 24.40	\$ 23.27	\$ 23.27	\$ 27.22	\$ 173.44
25								
26	COG Rate - (Seasonal)	\$ 1.2295	\$ 1.2295	\$ 1.2295	\$ 1.2295	\$ 1.2295	\$ 1.2295	\$ 1.2295
27	COG amount	\$ 62.70	\$ 34.43	\$ 19.67	\$ 17.21	\$ 17.21	\$ 25.82	\$ 177.05
28								
29	LDAC	\$ 0.1318	\$ 0.1318	\$ 0.1318	\$ 0.1318	\$ 0.1318	\$ 0.1318	\$ 0.1318
30	LDAC amount	\$ 6.72	\$ 3.69	\$ 2.11	\$ 1.85	\$ 1.85	\$ 2.77	\$ 18.98
31								
32	Total Bill	\$ 113.54	\$ 69.28	\$ 46.18	\$ 42.33	\$ 42.33	\$ 55.80	\$ 369.47

33
 34 May 1, 2021 – October 31, 2021
 35 Residential Heating (R3)

		May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer May–Oct
36								
37								
38	Typical Usage (Therms)	51	28	16	14	14	21	144
39								
46	Summer	7/1/20 - 7/31/21		8/1/2021 - Current				
47	Cust. Chg	\$ 15.50	\$ 15.50	\$ 15.50	\$ 15.39	\$ 15.39	\$ 15.39	\$ 92.67
48	Headblock	\$ 0.5678	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
49	Tailblock	\$ 0.5678	\$ 15.90	\$ 9.08	\$ 7.88	\$ 7.88	\$ 11.83	\$ 81.54
50	HB Threshold	-						
51								
52	Total Base Rate Amount	\$ 44.46	\$ 31.40	\$ 24.58	\$ 23.27	\$ 23.27	\$ 27.22	\$ 174.21
53								
54	COG Rate - (Seasonal)	\$ 0.3935	\$ 0.3935	\$ 0.3935	\$ 0.3935	\$ 0.3935	\$ 0.3935	\$ 0.3935
55	COG amount	\$ 20.07	\$ 11.02	\$ 6.30	\$ 5.51	\$ 5.51	\$ 8.26	\$ 56.66
56								
57	LDAC	\$ 0.0589	\$ 0.0589	\$ 0.0589	\$ 0.0589	\$ 0.0589	\$ 0.0589	\$ 0.0589
58	LDAC amount	\$ 3.00	\$ 1.65	\$ 0.94	\$ 0.82	\$ 0.82	\$ 1.24	\$ 8.48
59								
60	Total Bill	\$ 67.53	\$ 44.07	\$ 31.82	\$ 29.61	\$ 29.61	\$ 36.72	\$ 239.35

61
 62 **DIFFERENCE Residential Heating (R3)**

63	Total Bill	\$ 46.01	\$ 25.21	\$ 14.36	\$ 12.72	\$ 12.72	\$ 19.09	\$ 130.11
64	% Change	68.13%	57.21%	45.12%	42.98%	42.98%	51.98%	54.36%
65								
66	Base Rate	\$ (0.34)	\$ (0.24)	\$ (0.18)	\$ -	\$ -	\$ -	\$ (0.77)
67	% Change	-0.78%	-0.76%	-0.75%	0.00%	0.00%	0.00%	-0.44%
68								
69	COG	\$ 42.64	\$ 23.41	\$ 13.38	\$ 11.70	\$ 11.70	\$ 17.56	\$ 120.38
70	% Change	212.45%	212.45%	212.45%	212.45%	212.45%	212.45%	212.45%
71								
72	LDAC	\$ 3.72	\$ 2.04	\$ 1.17	\$ 1.02	\$ 1.02	\$ 1.53	\$ 10.50
73	% Change	123.77%	123.77%	123.77%	123.77%	123.77%	123.77%	123.77%

1 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
 2 Off Peak 2022 Summer Cost of Gas Filing
 3 Annual Bill Comparisons, May 21–Oct 21 vs May 22–Oct 22 — Commercial Rate G-41

4 May 1, 2022 – October 31, 2022
 5 Commercial Rate (G-41)

			May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Summer May–Oct	
6										
7										
8	Typical Usage (Therms)			153	39	26	34	25	29	306
9										
16	Summer									
17		8/1/2021 - Current								
17	Cust. Chg	\$ 57.06	\$ 57.06	\$ 57.06	\$ 57.06	\$ 57.06	\$ 57.06	\$ 57.06	\$ 342.36	
18	Headblock	\$ 0.4688	\$ 9.38	\$ 9.38	\$ 9.38	\$ 9.38	\$ 9.38	\$ 9.38	\$ 56.26	
19	Tailblock	\$ 0.3149	\$ 41.88	\$ 5.98	\$ 1.89	\$ 4.41	\$ 1.57	\$ 2.83	\$ 58.57	
20	HB Threshold	20								
21										
22	Total Base Rate Amount			\$ 108.32	\$ 72.42	\$ 68.33	\$ 70.84	\$ 68.01	\$ 69.27	\$ 457.19
23										
24	COG Rate - (Seasonal)			\$ 1.2303	\$ 1.2303	\$ 1.2303	\$ 1.2303	\$ 1.2303	\$ 1.2303	
25	COG amount			\$ 188.24	\$ 47.98	\$ 31.99	\$ 41.83	\$ 30.76	\$ 35.68	\$ 376.47
26										
27	LDAC			\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991	
28	LDAC amount			\$ 15.16	\$ 3.86	\$ 2.58	\$ 3.37	\$ 2.48	\$ 2.87	\$ 30.32
29										
30	Total Bill			\$ 311.72	\$ 124.27	\$ 102.89	\$ 116.04	\$ 101.25	\$ 107.82	\$ 863.98

31 May 1, 2021 – October 31, 2021
 32 Commercial Rate (G-41)

			May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer May–Oct	
34										
35										
36	Typical Usage (Therms)			153	39	26	34	25	29	306
37										
44	Summer									
45		7/1/20 - 7/31/21	8/1/2021 - Current							
45	Cust. Chg	\$ 57.46	\$ 57.06	\$ 57.46	\$ 57.06	\$ 57.06	\$ 57.06	\$ 57.06	\$ 343.56	
46	Headblock	\$ 0.4711	\$ 0.4688	\$ 9.42	\$ 9.42	\$ 9.42	\$ 9.38	\$ 9.38	\$ 56.39	
47	Tailblock	\$ 0.3165	\$ 0.3149	\$ 42.09	\$ 6.01	\$ 1.90	\$ 4.41	\$ 1.57	\$ 2.83	\$ 58.82
48	HB Threshold	20	20							
49										
50	Total Base Rate Amount			\$ 108.98	\$ 72.90	\$ 68.78	\$ 70.84	\$ 68.01	\$ 69.27	\$ 458.78
51										
52	COG Rate - (Seasonal)			\$ 0.3886	\$ 0.3886	\$ 0.3886	\$ 0.3886	\$ 0.3886	\$ 0.3886	
53	COG amount			\$ 59.46	\$ 15.16	\$ 10.10	\$ 13.21	\$ 9.72	\$ 11.27	\$ 118.91
54										
55	LDAC			\$ 0.0555	\$ 0.0555	\$ 0.0555	\$ 0.0555	\$ 0.0555	\$ 0.0555	
56	LDAC amount			\$ 8.49	\$ 2.16	\$ 1.44	\$ 1.89	\$ 1.39	\$ 1.61	\$ 16.98
57										
58	Total Bill			\$ 176.92	\$ 90.22	\$ 80.33	\$ 85.94	\$ 79.11	\$ 82.15	\$ 594.67

59
 60 DIFFERENCE Commercial Rate (G-41)

61	Total Bill			\$ 134.79	\$ 34.05	\$ 22.56	\$ 30.10	\$ 22.13	\$ 25.67	\$ 269.31
62	% Change			76.19%	37.74%	28.09%	35.02%	27.98%	31.25%	45.29%
63										
64	Base Rate			\$ (0.66)	\$ (0.48)	\$ (0.46)	\$ -	\$ -	\$ -	\$ (1.59)
65	% Change			-0.60%	-0.65%	-0.66%	0.00%	0.00%	0.00%	-0.35%
66										
67	COG			\$ 128.78	\$ 32.83	\$ 21.88	\$ 28.62	\$ 21.04	\$ 24.41	\$ 257.56
68	% Change			216.60%	216.60%	216.60%	216.60%	216.60%	216.60%	216.60%
69										
70	LDAC			\$ 6.67	\$ 1.70	\$ 1.13	\$ 1.48	\$ 1.09	\$ 1.26	\$ 13.34
71	% Change			78.56%	78.56%	78.56%	78.56%	78.56%	78.56%	78.56%

1 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
 2 Off Peak 2022 Summer Cost of Gas Filing
 1 Annual Bill Comparisons, May 19–Oct 19 vs May 20–Oct 20 — Commercial Rate G-42

Schedule 8
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4 May 1, 2022 – October 31, 2022

		May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Summer May-Oct
8	Typical Usage (Therms)	1,319	484	285	247	269	340	2,944
16	Summer	8/1/2021 - Current						
17	Cust. Chg	\$ 171.19	\$ 171.19	\$ 171.19	\$ 171.19	\$ 171.19	\$ 171.19	\$ 1,027.14
18	Headblock	\$ 0.4261	\$ 0.4261	\$ 121.44	\$ 105.25	\$ 114.62	\$ 144.87	\$ 827.06
19	Tailblock	\$ 0.2839	\$ 23.85	\$ -	\$ -	\$ -	\$ -	\$ 284.75
20	HB Threshold	400						
22	Total Base Rate Amount	\$ 602.53	\$ 365.48	\$ 292.63	\$ 276.44	\$ 285.81	\$ 316.06	\$ 2,138.95
24	COG Rate - (Seasonal)	\$ 1.2303	\$ 1.2303	\$ 1.2303	\$ 1.2303	\$ 1.2303	\$ 1.2303	\$ 1.2303
25	COG amount	\$ 1,622.77	\$ 595.47	\$ 350.64	\$ 303.88	\$ 330.95	\$ 418.30	\$ 3,622.00
27	LDAC	\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991
28	LDAC amount	\$ 130.71	\$ 47.96	\$ 28.24	\$ 24.48	\$ 26.66	\$ 33.69	\$ 291.75
30	Total Bill	\$ 2,356.01	\$ 1,008.91	\$ 671.51	\$ 604.80	\$ 643.42	\$ 768.06	\$ 6,052.71

32 May 1, 2021 – October 31, 2021

		May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer May-Oct
36	Typical Usage (Therms)	1,319	484	285	247	269	340	2,944
44	Summer	7/1/20 - 7/31/21		8/1/2021 - Current				
45	Cust. Chg	\$ 172.39	\$ 171.36	\$ 172.39	\$ 171.19	\$ 171.19	\$ 171.19	\$ 1,030.74
46	Headblock	\$ 0.4284	\$ 0.2839	\$ 122.09	\$ 105.25	\$ 114.62	\$ 144.87	\$ 829.56
47	Tailblock	\$ 0.2855	\$ 23.98	\$ -	\$ -	\$ -	\$ -	\$ 286.36
48	HB Threshold	400	400					
50	Total Base Rate Amount	\$ 606.12	\$ 367.73	\$ 294.48	\$ 276.44	\$ 285.81	\$ 316.06	\$ 2,146.65
52	COG Rate - (Seasonal)	\$ 0.3886	\$ 0.3886	\$ 0.3886	\$ 0.3886	\$ 0.3886	\$ 0.3886	\$ 0.3886
53	COG amount	\$ 512.56	\$ 188.08	\$ 110.75	\$ 95.98	\$ 104.53	\$ 132.12	\$ 1,144.04
55	LDAC	\$ 0.0555	\$ 0.0555	\$ 0.0555	\$ 0.0555	\$ 0.0555	\$ 0.0555	\$ 0.0555
56	LDAC amount	\$ 73.20	\$ 26.86	\$ 15.82	\$ 13.71	\$ 14.93	\$ 18.87	\$ 163.39
58	Total Bill	\$ 1,191.89	\$ 582.68	\$ 421.05	\$ 386.13	\$ 405.27	\$ 467.06	\$ 3,454.08

60 DIFFERENCE C&I High Winter Use Medium G-42

61	Total Bill	\$ 1,164.12	\$ 426.23	\$ 250.46	\$ 218.67	\$ 238.15	\$ 301.00	\$ 2,598.62
62	% Change	97.67%	73.15%	59.48%	56.63%	58.76%	64.45%	75.23%
64	Base Rate	\$ (3.59)	\$ (2.25)	\$ (1.86)	\$ -	\$ -	\$ -	\$ (7.70)
65	% Change	-0.59%	-0.61%	-0.63%	0.00%	0.00%	0.00%	-0.36%
67	COG	\$ 1,110.20	\$ 407.38	\$ 239.88	\$ 207.90	\$ 226.42	\$ 286.18	\$ 2,477.96
68	% Change	216.60%	216.60%	216.60%	216.60%	216.60%	216.60%	216.60%
70	LDAC	\$ 57.51	\$ 21.10	\$ 12.43	\$ 10.77	\$ 11.73	\$ 14.82	\$ 128.36
71	% Change	78.56%	78.56%	78.56%	78.56%	78.56%	78.56%	78.56%

1 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty
 2 Off Peak 2022 Summer Cost of Gas Filing
 3 Annual Bill Comparisons, May 21–Oct 21 vs May 22–Oct 22 — Commercial Rate G-52

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4 May 1, 2022 – October 31, 2022

5 Commercial Rate (G-52)

			May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Summer May–Oct
6									
7			1,497	1,128	1,032	1,025	1,050	897	6,629
8	Typical Usage (Therms)								
9									
16	Summer	8/1/2021 - Current							
17	Cust. Chg	\$ 171.19	\$ 171.19	\$ 171.19	\$ 171.19	\$ 171.19	\$ 171.19	\$ 171.19	\$ 1,027.14
18	Headblock	\$ 0.1749	\$ 174.90	\$ 174.90	\$ 174.90	\$ 174.90	\$ 174.90	\$ 156.89	\$ 1,031.39
19	Tailblock	\$ 0.1000	\$ 49.70	\$ 12.80	\$ 3.20	\$ 2.50	\$ 5.00	\$ -	\$ 73.20
20	HB Threshold	1,000							
21									
22	Total Base Rate Amount		\$ 395.79	\$ 358.89	\$ 349.29	\$ 348.59	\$ 351.09	\$ 328.08	\$ 2,131.73
23									
24	COG Rate - (Seasonal)		\$ 1.2284	\$ 1.2284	\$ 1.2284	\$ 1.2284	\$ 1.2284	\$ 1.2284	\$ 1.2284
25	COG amount		\$ 1,838.91	\$ 1,385.64	\$ 1,267.71	\$ 1,259.11	\$ 1,289.82	\$ 1,101.87	\$ 8,143.06
26									
27	LDAC		\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991	\$ 0.0991
28	LDAC amount		\$ 148.35	\$ 111.78	\$ 102.27	\$ 101.58	\$ 104.06	\$ 88.89	\$ 656.93
29									
30	Total Bill		\$ 2,383.06	\$ 1,856.31	\$ 1,719.27	\$ 1,709.28	\$ 1,744.97	\$ 1,518.84	\$ 10,931.72

31 May 1, 2021 – October 31, 2021

32 Commercial Rate (G-52)

			May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer May–Oct
33									
34			1,497	1,128	1,032	1,025	1,050	897	6,629
35	Typical Usage (Therms)								
36									
37									
44	Summer	7/1/20 - 7/31/21 8/1/2021 - Current							
45	Cust. Chg	\$ 172.39 \$ 171.19	\$ 172.39	\$ 172.39	\$ 172.39	\$ 171.19	\$ 171.19	\$ 171.19	\$ 1,030.74
46	Headblock	\$ 0.1767 \$ 0.1749	\$ 176.70	\$ 176.70	\$ 176.70	\$ 174.90	\$ 174.90	\$ 156.89	\$ 1,036.79
47	Tailblock	\$ 0.1004 \$ 0.1000	\$ 49.90	\$ 12.85	\$ 3.21	\$ 2.50	\$ 5.00	\$ -	\$ 73.46
48	HB Threshold	1,000 1,000							
49									
50	Total Base Rate Amount		\$ 398.99	\$ 361.94	\$ 352.30	\$ 348.59	\$ 351.09	\$ 328.08	\$ 2,140.99
51									
52	COG Rate - (Seasonal)		\$ 0.3999	\$ 0.3999	\$ 0.3999	\$ 0.3999	\$ 0.3999	\$ 0.3999	\$ 0.3999
53	COG amount		\$ 598.65	\$ 451.09	\$ 412.70	\$ 409.90	\$ 419.90	\$ 358.71	\$ 2,650.94
54									
55	LDAC		\$ 0.0555	\$ 0.0555	\$ 0.0555	\$ 0.0555	\$ 0.0555	\$ 0.0555	\$ 0.0555
56	LDAC amount		\$ 83.08	\$ 62.60	\$ 57.28	\$ 56.89	\$ 58.28	\$ 49.78	\$ 367.91
57									
58	Total Bill		\$ 1,080.72	\$ 875.63	\$ 822.28	\$ 815.38	\$ 829.26	\$ 736.57	\$ 5,159.83

59

60 **DIFFERENCE Commercial Rate (G-52)**

61	Total Bill		\$ 1,302.33	\$ 980.68	\$ 896.99	\$ 893.90	\$ 915.71	\$ 782.27	\$ 5,771.89
62	% Change		120.51%	112.00%	109.09%	109.63%	110.42%	106.21%	111.86%
63									
64	Base Rate		\$ (3.20)	\$ (3.05)	\$ (3.01)	\$ -	\$ -	\$ -	\$ (9.26)
65	% Change		-0.80%	-0.84%	-0.86%	0.00%	0.00%	0.00%	-0.43%
66									
67	COG		\$ 1,240.26	\$ 934.55	\$ 855.01	\$ 849.21	\$ 869.93	\$ 743.16	\$ 5,492.13
68	% Change		207.18%	207.18%	207.18%	207.18%	207.18%	207.18%	207.18%
69									
70	LDAC		\$ 65.27	\$ 49.18	\$ 45.00	\$ 44.69	\$ 45.78	\$ 39.11	\$ 289.02
71	% Change		78.56%	78.56%	78.56%	78.56%	78.56%	78.56%	78.56%

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

2 Off Peak 2022 Summer Cost of Gas Filing

3 Residential Heating

		Summer 2021
4		
5 Customer Charge	\$	15.50
6 First 20 Therms	\$	0.5678
7 Excess 20 Therms	\$	0.5678
8 LDAC	\$	0.0589
9 COG	\$	1.2295
10 Total Adjust	\$	1.2884

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		Summer 2021 COG @	COG	% Impact	LDAC	% Impact
		\$	\$ Impact		\$ Impact	
		\$ 1.2884				
18 Cooking alone	5 \$	24.78	\$ -	0%	\$ 0.36	1%
	10 \$	34.06	\$ -	0%	\$ 0.73	2%
	20 \$	52.62	\$ -	0%	\$ 1.46	3%
24 Water Heating alone	30 \$	71.19	\$ -	0%	\$ 2.19	3%
	45 \$	99.03	\$ -	0%	\$ 3.28	3%
	50 \$	108.31	\$ -	0%	\$ 3.65	3%
30 Heating Alone	80 \$	154.72	\$ -	0%	\$ 5.47	4%
	125 \$	262.37	\$ -	0%	\$ 9.70	4%
	150 \$	293.93	\$ -	0%	\$ 10.94	4%
	200 \$	386.74	\$ -	0%	\$ 14.58	4%

2022 Summer Cost of Gas Filing
Capacity Assignment Calculations 2020-2021
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

	(a)	(b)	(c)	(d)	(e)	(f)
	Design Day Demand, Dekatherm	Adjusted Design Day Demand, Dt	Percent of Total		Avg Daily Base Use Load, Dt	Remaining Design Day Demand
1	RATE R-1-Resi Non-Htg	659	715	0.4%	103	613
2	RATE R-3-Resi Htg	66,114	72,399	42.2%	3,617	68,783
3	RATE G-41 (T)	28,689	31,499	18.4%	750	30,749
4	RATE G-51 (S)	2,361	2,534	1.5%	641	1,893
5	RATE G-42 (V)	36,728	40,301	23.5%	1,198	39,104
6	RATE G-52	5,125	5,490	3.2%	1,498	3,992
7	RATE G-43	9,793	10,710	6.2%	678	10,031
8	RATE G-53	5,922	6,346	3.7%	1,715	4,631
9	RATE G-54	1,495	1,608	0.9%	378	1,230
10						
11	Total	156,887	171,602	100.0%	10,577	161,025
12						
13	Residential Total	66,773	73,115	42.607%	3,719	69,396
14	LLF Total	75,211	82,510	48.083%	2,626	79,885
15	HLF Total	14,903	<u>15,977</u>	9.310%	<u>4,232</u>	<u>11,745</u>
16	Total	156,887	171,602	100.0%	10,577	161,025
17						
18	C&I Breakdown					
19	LLF Total				2,626	79,885
20	HLF Total				4,232	11,745
21	Total				6,858	91,630
22						
23	C&I Breakdown Percentage					
24	LLF Total				38.291%	87.182%
25	HLF Total				61.709%	12.818%
26	Total				100.0%	100.0%
27						
28		Capacity Cost	MDQ, Dt	\$/Dt-Mo.		
29	Pipeline	\$16,344,325	119,718	\$11.3770		
30	Storage	\$4,121,310	28,115	\$12.2156		
31						
32	Peaking	\$4,119,000				
33	Peaking Additional Costs (Concord Lateral Peaking x Differential)	\$0				
34	Subtotal Peaking Costs	<u>\$4,119,000</u>	<u>23,769</u>	<u>\$14.4412</u>		
35	Total	\$24,584,635	171,602	\$11.9388		
36						
37		Capacity Cost	MDQ, Dt	\$/Dt-Mo.		
38	Pipeline - Baseload	1,443,958	10,577	\$11.3770		
39	Pipeline - Remaining	14,900,367	109,141	\$11.3770		
40	Storage	4,121,310	28,115	\$12.2156		
41	Peaking	<u>4,119,000</u>	<u>23,769</u>	<u>\$14.4412</u>		
42	Total	24,584,635	171,602	\$11.9388		
43						
44						
45	Residential Allocation		Capacity Cost	MDQ, Dt	\$/Dt-Mo.	
46	Pipeline - Base	Line 38 * Line 13 Col C	42.607% 615,228	4,506	\$11.3770	
47	Pipeline - Remaining	Line 39 * Line 13 Col C	42.607% 6,348,623	46,502	\$11.3770	
48	Storage	Line 40 * Line 13 Col C	42.607% 1,755,962	11,979	\$12.2156	
49	Peaking	Line 41 * Line 13 Col C	42.607% <u>1,754,952</u>	<u>10,127</u>	<u>\$14.4412</u>	
50	Total		42.607% 10,474,751	73,114	\$11.9388	
51						

53

54 **2022 Summer Cost of Gas Filing**
 55 **Capacity Assignment Calculations 2020-2021**
 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	828,730	6,070	\$11.3770		
61	Pipeline - Remaining	Line 39 - Line 47	8,551,745	62,640	\$11.3769		
62	Storage	Line 40 - Line 48	2,365,348	16,136	\$12.2157		
63	Peaking	Line 41 - Line 49	<u>2,364,048</u>	<u>13,642</u>	<u>\$14.4410</u>		
64	Total		57.393%	14,109,870	98,488	\$11.9388	1.0000
65							
66							
67	LLF - C&I Allocation		Capacity Cost	MDQ, Dt	\$/Dt-Mo.		
68	Pipeline - Base	Line 60 * Line 24 Col E	317,329	2,324	\$11.3787		
69	Pipeline - Remaining	Line 61 * Line 24 Col F	7,455,589	54,610	\$11.3770		
70	Storage	Line 62 * Line 24 Col F	2,062,160	14,068	\$12.2154		
71	Peaking	Line 63 * Line 24 Col F	<u>2,061,026</u>	<u>11,893</u>	<u>\$14.4415</u>		
72	Total		48.3884%	11,896,104	82,895	\$11.9590	1.0017
73			38.291%	84%			(Line 72 / Line 64)
74							
75	HLF - C&I Allocation		Capacity Cost	MDQ, Dt	\$/Dt-Mo.		
76	Pipeline - Base	Line 60 - Line 68	511,401	3,746	\$11.3766		
77	Pipeline - Remaining	Line 61 - Line 69	1,096,156	8,030	\$11.3756		
78	Storage	Line 62 - Line 70	303,188	2,068	\$12.2174		
79	Peaking	Line 63 - Line 71	<u>303,022</u>	<u>1,749</u>	<u>\$14.4379</u>		
80	Total		9.0047%	2,213,767	15,593	\$11.8310	0.9910
81							(Line 80 / Line 64)
82							
83	Unit Cost		Residential	LLF C&I	HLF C&I		
84							
85	Pipeline		\$ 11.3770	\$ 11.3770	\$ 11.3770		
86	Storage		\$ 12.2156	\$ 12.2156	\$ 12.2156		
87	Peaking		\$ -	\$ -	\$ -		
88	Total		\$ 11.9388	\$ 11.9590	\$ 11.8310		
89							
90							
91	Load Makeup		Residential	LLF C&I	HLF C&I		
92							
93	Pipeline		69.77%	68.68%	75.52%		
94	Storage		16.38%	16.97%	13.26%		
95	Peaking		<u>13.85%</u>	<u>14.35%</u>	<u>11.22%</u>		
96	Total		100.00%	100.00%	100.00%		
97							
98							
99	Supply Makeup		Residential	LLF C&I	HLF C&I	Total	
100							
101	Pipeline		42.61%	47.56%	9.84%	100.00%	
102	Storage		42.61%	50.04%	7.36%	100.00%	
103	Peaking		42.61%	50.04%	7.36%	100.00%	

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

2

3 **2022 Summer Cost of Gas Filing**

4 **Correction Factor Calculation**

5

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8 Data Source: Schedule 10B

9

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11 G-41

12 G-42

13 G-43

14 High Winter Use

15

16 G-51

17 G-52

18 G-53

19 G-54

21 Low Winter Use

22

23 **Gross Total**

24

25

26 Total Sales

27 Low Winter Use

28 Summer Ratio for Low Winter Use

29 High Winter Use

30 Summer Ratio for High Winter Use

31

32 Correction Factor =

33 Correction Factor =

34

35

36 **Allocation Calculation for Miscellaneous Overhead**

37

38 Projected Winter Sales Volume

39 Projected Annual Sales Volume

40 Percentage of Winter Sales to Annual Sales

	(d)	(e)	(f)	(g)	(h)	(i)	Total Sales
	May	June	July	Aug	Sep	Oct	
G-41	735,770	276,570	203,130	205,140	361,450	944,100	2,726,160
G-42	689,280	298,640	221,790	230,200	400,180	866,050	2,706,140
G-43	179,740	73,660	58,680	59,440	100,920	204,000	676,440
High Winter Use	1,604,790	648,870	483,600	494,780	862,550	2,014,150	6,108,740
G-51	201,180	178,670	180,600	181,250	187,340	243,850	1,172,890
G-52	222,310	202,670	214,620	214,540	214,530	259,620	1,328,290
G-53	308,310	268,810	269,370	265,280	270,620	322,980	1,705,370
G-54	15,120	18,750	22,560	24,140	22,080	24,180	126,830
Low Winter Use	746,920	668,900	687,150	685,210	694,570	850,630	4,333,380
Gross Total	2,351,710	1,317,770	1,170,750	1,179,990	1,557,120	2,864,780	10,442,120

10,442,120

4,333,380

0.9910 Schedule 10A p 2, In 80

6,108,740

1.0017 Schedule 10A p 2, In 72

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

100.2748%

11/1/21- 4/30/22

11/1/21 - 10/31/22

91,676,680 Sch.10B, In 23

115,042,810 Sch.10B, In 23

79.69%

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

2
3 Off Peak 2022 Summer Cost of Gas Filing
4 2022 Summer Cost of Gas Filing

5
6 Dry Therms

7 Firm Sales

	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	Subtotal PK 21-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Subtotal OP 22	Total
9 R-1	68,340	87,950	100,820	86,060	85,740	64,450	493,360	51,360	38,850	33,950	34,160	38,040	51,620	247,980	741,340
10 R-3	6,259,770	9,415,520	10,967,410	9,270,440	7,794,900	4,711,810	48,419,850	2,667,890	1,294,670	1,005,090	1,028,340	1,719,640	4,100,280	11,815,910	60,235,760
11 R-4	454,380	670,430	779,980	661,890	559,780	360,860	3,487,320	203,890	100,540	76,380	75,540	119,390	284,380	860,120	4,347,440
12 Total Residential.	6,782,490	10,173,900	11,848,210	10,018,390	8,440,420	5,137,120	52,400,530	2,923,140	1,434,060	1,115,420	1,138,040	1,877,070	4,436,280	12,924,010	65,324,540
13															
14 G-41	1,993,710	3,256,330	3,928,840	3,309,510	2,686,900	1,577,780	16,753,070	735,770	276,570	203,130	205,140	361,450	944,100	2,726,160	19,479,230
15 G-42	1,614,090	2,539,420	3,002,840	2,538,570	2,173,870	1,204,090	13,072,880	689,280	298,640	221,790	230,200	400,180	866,050	2,706,140	15,779,020
16 G-43	351,200	532,700	648,170	538,750	488,120	288,000	2,846,940	179,740	73,660	58,680	59,440	100,920	204,000	676,440	3,523,380
17 G-51	269,320	351,810	388,860	324,250	336,580	212,980	1,883,800	201,180	178,670	180,600	181,250	187,340	243,850	1,172,890	3,056,690
18 G-52	317,340	408,180	446,890	364,850	374,660	242,020	2,153,940	222,310	202,670	214,620	214,540	214,530	259,620	1,328,290	3,482,230
19 G-53	360,520	440,110	480,670	393,940	408,840	343,630	2,427,710	308,310	268,810	269,370	265,280	270,620	322,980	1,705,370	4,133,080
20 G-54	35,050	39,900	17,030	15,360	16,670	13,800	137,810	15,120	18,750	22,560	24,140	22,080	24,180	126,830	264,640
21 Total C/I	4,941,230	7,568,450	8,913,300	7,485,230	6,485,640	3,882,300	39,276,150	2,351,710	1,317,770	1,170,750	1,179,990	1,557,120	2,864,780	10,442,120	49,718,270
22															
23 Sales Volume	11,723,720	17,742,350	20,761,510	17,503,620	14,926,060	9,019,420	91,676,680	5,274,850	2,751,830	2,286,170	2,318,030	3,434,190	7,301,060	23,366,130	115,042,810
24															
25 Transportation Sales															
26															
27 G-41	574,020	867,030	1,039,180	856,480	763,130	450,870	4,550,710	261,840	140,990	106,460	95,760	156,800	326,870	1,088,720	5,639,430
28 G-42	1,968,530	2,914,590	3,391,170	2,830,750	2,515,270	1,523,590	15,143,900	906,300	496,460	395,030	398,340	659,800	1,261,210	4,117,140	19,261,040
29 G-43	771,060	1,044,290	1,235,960	1,039,110	971,040	538,960	5,600,420	365,460	237,030	213,480	240,670	339,080	530,620	1,926,340	7,526,760
30 G-51	84,590	105,400	113,700	94,860	99,260	81,810	579,620	77,390	64,770	61,300	61,170	63,740	76,000	404,370	983,990
31 G-52	497,790	617,920	679,580	565,210	579,610	430,990	3,371,100	389,470	360,850	367,700	363,660	373,650	442,840	2,298,170	5,669,270
32 G-53	855,560	987,600	1,082,920	916,680	934,740	840,440	5,617,940	724,650	621,190	623,930	659,410	675,470	791,330	4,095,980	9,713,920
33 G-54	1,585,390	1,292,050	1,269,400	1,054,210	1,161,320	1,357,730	7,720,100	1,561,020	1,567,000	1,631,330	1,739,250	1,682,640	1,755,260	9,936,500	17,656,600
34															
35 Total Trans. Sales	6,336,940	7,828,880	8,811,910	7,357,300	7,024,370	5,224,390	42,583,790	4,286,130	3,488,290	3,399,230	3,558,260	3,951,180	5,184,130	23,867,220	66,451,010
36															
37 Total All Sales	18,060,660	25,571,230	29,573,420	24,860,920	21,950,430	14,243,810	134,260,470	9,560,980	6,240,120	5,685,400	5,876,290	7,385,370	12,485,190	47,233,350	181,493,820

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

Schedule 11A

2

Page 1 of 1

3 Off Peak 2022 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 22 -October 22

10

11

Off Peak

12

May-22

Jun-22

Jul-22

Aug-22

Sep-22

Oct-22

May – Oct

13 Pipeline Gas:

14 Dawn Supply 739,535 95,658 - - 206,295 636,518 1,678,006

15 Niagara Supply 668,413 540,809 542,484 545,801 591,423 687,667 3,576,596

16 TGP Supply (Gulf) 13,120 - - - - 384,326 397,446

17 Dracut Supply 1 - Baseload - - - - - - 0

18 Dracut Supply 2 - Swing - - - - - 436,185 436,185

19 Dracut Supply 3 - Swing - - - - - - -

20 Constellation Combo - - - - - - 0

21 LNG Truck 44,883 18,131 - - 55,566 20,602 139,181

22 Propane Truck 79,409 71,899 69,472 69,279 73,449 81,696 445,204

23 PNGTS 205,081 146,300 119,612 125,908 176,916 218,093 991,910

24 Portland Natural Gas 152,602 3,126 - - 2,555 574,003 732,286

25 TGP Supply (Z4) 5,386,659 4,708,479 4,708,982 4,696,535 4,819,522 5,546,088 29,866,267

26 7,289,702 5,584,403 5,440,551 5,437,523 5,925,726 8,585,177 38,263,081

27

28 Storage Gas:

29 - - - - - - 0

30

31 Produced Gas:

32 LNG Vapor 20,025 18,131 17,519 17,470 18,522 20,602 112,269

33 Propane - - - - - - 0

34 20,025 18,131 17,519 17,470 18,522 20,602 112,269

35

36 Less - Gas Refills:

37 LNG Truck (44,883) (18,131) - - (55,566) (20,602) (139,181)

38 Propane (79,409) (71,899) (69,472) (69,279) (73,449) (81,696) (445,204)

39 TGP Storage Refill (2,188,222) (2,766,568) (3,120,796) (3,057,929) (2,444,250) (1,262,380) (14,840,145)

40 (2,312,514) (2,856,598) (3,190,268) (3,127,208) (2,573,265) (1,364,677) (15,424,530)

41

42 Total Sendout Volumes 4,997,212 2,745,936 2,267,802 2,327,785 3,370,983 7,241,101 22,950,820

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3 Off Peak 2022 Summer Cost of Gas Filing

44 Normal and Design Year Volumes

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47 Volumes (Therms)

Design Year

48

49 For the Months of May 22 -October 22

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53 Pipeline Gas:

54 Dawn Supply

55 Niagara Supply

56 TGP Supply (Gulf)

57 Dracut Supply 1 - Baseload

58 Dracut Supply 2 - Swing

Dracut Supply 3 - 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

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70 Produced Gas:

71 LNG Vapor

72 Propane

73 Subtotal Produced Gas

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75 Less - Gas Refills:

76 LNG Truck

77 Propane

78 TGP Storage Refill

79 Subtotal Refills

80

81 Total Sendout Volumes

	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Off Peak May – Oct
Dawn Supply	738,844	49,392	-	-	102,190	658,540	1,548,966
Niagara Supply	668,413	540,809	542,484	545,801	591,423	687,667	3,576,596
TGP Supply (Gulf)	12,429	-	-	-	-	384,326	396,755
Dracut Supply 1 - Baseload	-	-	-	-	-	-	0
Dracut Supply 2 - Swing	-	-	-	-	-	436,185	436,185
Dracut Supply 3 - Swing	-	-	-	-	-	-	-
Constellation Combo	-	-	-	-	-	-	0
LNG Truck	44,883	18,131	-	-	55,566	20,602	139,181
Propane Truck	79,409	71,899	69,472	69,279	73,449	81,696	445,204
PNGTS	205,081	146,300	119,612	125,908	176,916	218,093	991,910
Portland Natural Gas	133,959	3,126	-	-	2,555	574,003	713,642
TGP Supply (Z4)	5,536,500	4,925,428	4,951,832	4,939,917	5,049,449	5,697,403	31,100,529
Subtotal Pipeline Volumes	7,419,517	5,755,086	5,683,400	5,680,904	6,051,547	8,758,514	39,348,969
Storage Gas:							
TGP Storage	-	-	-	-	-	-	0
Produced Gas:							
LNG Vapor	20,025	18,131	17,519	17,470	18,522	20,602	112,269
Propane	-	-	-	-	-	-	-
Subtotal Produced Gas	20,025	18,131	17,519	17,470	18,522	20,602	112,269
Less - Gas Refills:							
LNG Truck	(44,883)	(18,131)	-	-	(55,566)	(20,602)	(139,181)
Propane	(79,409)	(71,899)	(69,472)	(69,279)	(73,449)	(81,696)	(445,204)
TGP Storage Refill	(2,340,825)	(2,937,251)	(3,363,645)	(3,301,310)	(2,570,071)	(1,435,717)	(15,948,820)
Subtotal Refills	(2,465,117)	(3,027,282)	(3,433,117)	(3,370,589)	(2,699,086)	(1,538,015)	(16,533,205)
Total Sendout Volumes	4,974,426	2,745,936	2,267,802	2,327,785	3,370,983	7,241,101	22,928,033

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

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3 **Off Peak 2022 Summer Cost of Gas Filing**

4 **Capacity Utilization**

5 **Volumes (Therms)**

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11 **Pipeline Gas:**

12 Dawn Supply 1,678,006 4,000 7,360,000 23% 1,548,966 4,000 7,360,000 21%

13 Niagara Supply 3,576,596 3,122 5,744,480 62% 3,576,596 3,122 5,744,480 62%

14 TGP Supply (Gulf) 397,446 21,596 39,736,640 1% 396,755 21,596 39,736,640 1%

15 Dracut Supply 1 & 2 & 3 436,185 50,000 92,000,000 0% 436,185 50,000 92,000,000 0%

16 LNG Truck 139,181 - - - 139,181 - - -

17 Propane Truck 445,204 - - - 445,204 - - -

18 PNGTS 991,910 1,000 1,840,000 54% 991,910 1,000 1,840,000 54%

Portland Natural Gas 732,286 1,784 3,282,560 22% 713,642 1,784 3,282,560 22%

19 TGP Supply (Z4) 29,866,267 21,596 39,736,640 75% 31,100,529 21,596 39,736,640 78%

20 Other Purchased Resources - - - - - - - -

21

22 Subtotal Pipeline Volumes 38,263,081 39,348,969

23

24 **Storage Gas:**

25 0 0 25,792,710 0% - 25,792,710 0%

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27 **Produced Gas:**

28 LNG Vapor 112,269 112,269

29 Propane - -

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31 Subtotal Produced Gas 112,269 112,269

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33 **Less - Gas Refills:**

34 LNG Truck (139,181) (139,181)

35 Propane (445,204) (445,204)

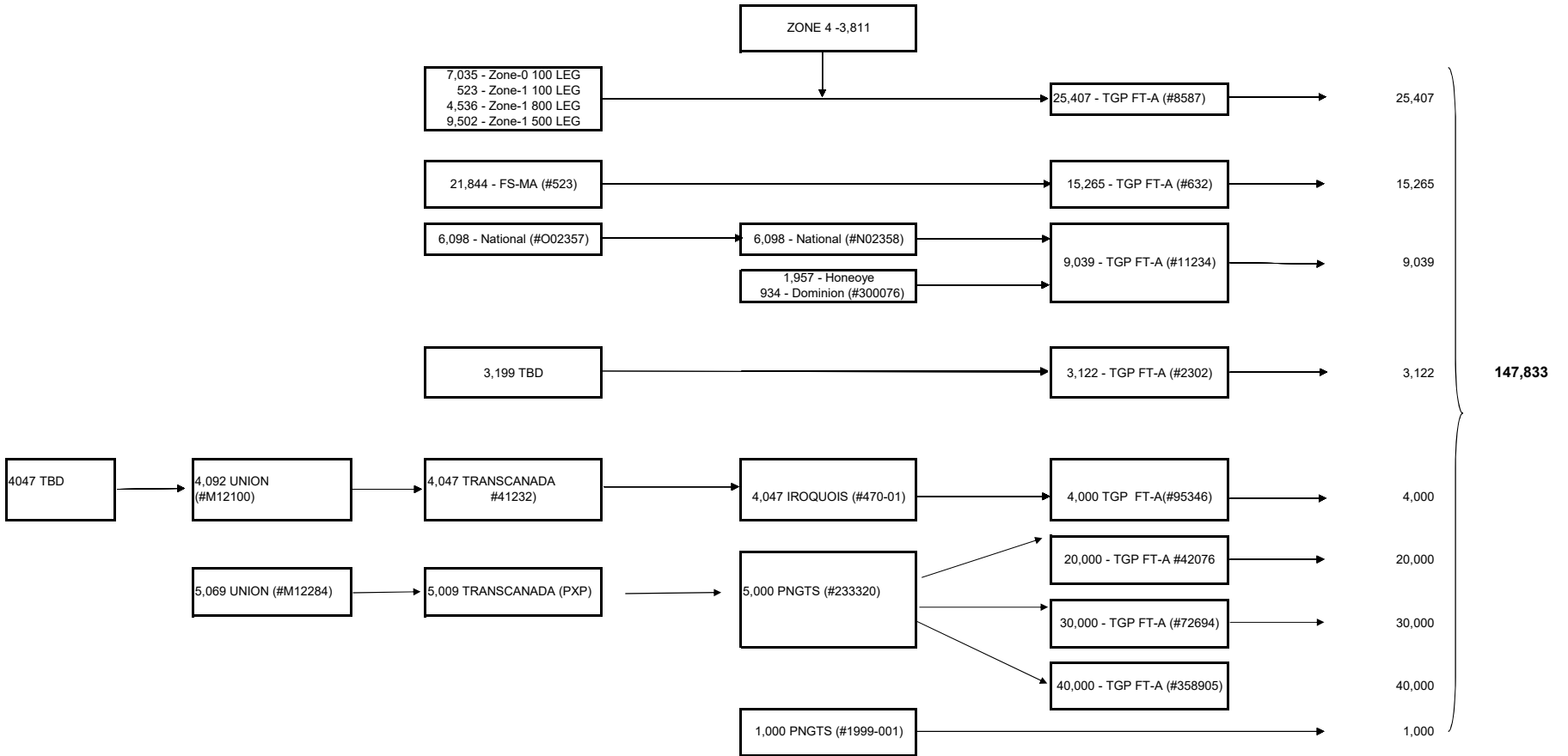
36 TGP Storage Refill (14,840,145) (15,948,820)

37

38 Subtotal Refills (15,424,530) (16,533,205)

39

40 Total Sendout Volumes 22,950,820 22,928,033



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		N/A	Terminates
Dominion Transmission Incorporated	GSS	300076	Storage	934	102,700	3/31/2024	3/31/2022	Mutually agreed upon
Honeoye Storage Corporation	SS-NY	11234	Storage	1,957	245,380	3/31/2023	12 months notice	Evergreen Provision
National Fuel Gas Supply Corporation	FSS	O02358	Storage	6,098	670,800	3/31/2023	3/31/2022	Evergreen Provision
National Fuel Gas Supply Corporation	FSST	N02358	Transportation	6,098	670,800	3/31/2023	3/31/2022	Evergreen Provision
Iroquois Gas Transmission System	RTS	47001	Transportation	4,047	1,477,155	11/1/2022	11/1/2021	Evergreen Provision
Portland Natural Gas Transmission System	FT 1999-01	1999-001	Transportation	1,000	365,000	11/30/2032	11/31/2031	Evergreen Provision
Portland Natural Gas Transmission System	FT	PXP	Transportation	4,432	1,617,680	10/31/2040	10/31/2039	Precedent Agreement
Tennessee Gas Pipeline Company	FS-MA	523	Storage	21,844	1,560,391	10/31/2025	10/31/2024	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	8587	Transportation	25,407	9,273,555	10/31/2025	10/31/2024	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	2302	Transportation	3,122	1,139,530	10/31/2025	10/31/2024	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	632	Transportation	15,265	5,571,725	10/31/2025	10/31/2024	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	11234	Transportation	9,039	3,299,235	10/31/2025	10/31/2024	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	72694	Transportation	30,000	10,950,000	10/31/2029	10/31/2028	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	95346	Transportation	4,000	1,460,000	11/30/2022	11/30/2021	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	42076	Transportation	20,000	7,300,000	10/31/2025	10/31/2024	Evergreen Provision
Tennessee Gas Pipeline Company	FTA	358905	Transportation	40,000	14,600,000	10/31/2041	10/31/2040	Evergreen Provision
TransCanada Pipeline	FT	41232	Transportation	4,047	1,477,155	10/31/2026	10/31/2024	Evergreen Provision
TransCanada Pipeline	FT	PXP	Transportation	4,432	1,617,680	10/31/2040		Precedent Agreement
Union Gas Limited	M12	M12200	Transportation	4,092	1,493,580	10/31/2023	10/31/2021	Evergreen Provision
Union Gas Limited	M12	PXP	Transportation	4,432	1,617,680	10/31/2040		Precedent Agreement

* MAQ is calculated on a 365 day calendar year.

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

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3 **Off Peak 2022 Summer Cost of Gas Filing**

4 **Storage Inventory**

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6 **Underground Storage Gas**

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	May-21 (Actual)	Jun-21 (Actual)	Jul-21 (Estimate)	Aug-21 (Estimate)	Sep-21 (Estimate)	Oct-21 (Estimate)	Total
Beginning Balance (MMBtu)	1,895,479	1,901,645	1,929,241	1,929,241	1,929,241	2,113,358	1,951,935
Injections (MMBtu) Sch 11A In 39 /10	11,436	27,746	-	-	184,117	184,117	1,961,830
Subtotal	1,906,915	1,929,391	1,929,241	1,929,241	2,113,358	2,297,475	
Storage Sale	-	-	-	-	-	-	
Withdrawals (MMBtu) Sch 11A In 29 /10	(5,270)	(150)	-	-	-	-	(1,368,064)
Ending Balance (MMBtu)	1,901,645	1,929,241	1,929,241	1,929,241	2,113,358	2,297,475	2,545,701
Beginning Balance	\$ 9,092,272	\$ 9,085,950	\$ 9,164,894	\$ 9,164,894	\$ 9,164,894	\$ 9,798,690	\$ 3,609,668
Injections In 11 * In 36	18,859	78,943	-	-	633,796	637,943	11,868,368
Subtotal	\$ 9,111,130	\$ 9,164,894	\$ 9,164,894	\$ 9,164,894	\$ 9,798,690	\$ 10,436,633	
Storage Sale	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Withdrawals In 17 * In 34	\$ (25,180)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (2,634,626)
Ending Balance	\$ 9,085,950	\$ 9,164,894	\$ 9,164,894	\$ 9,164,894	\$ 9,798,690	\$ 10,436,633	\$ 12,843,410
Average Rate For Withdrawals In 22 /In 9	\$ 4.7779	\$ 4.7501	\$ 4.7505	\$ 4.7505	\$ 4.6365	\$ 4.5427	
TGP Storage Rate for Injections Actual or NYMEX plus TGP Transportation	\$ 1.6490	\$ 2.8452	\$ -	\$ -	\$ 3.4424	\$ 3.4649	

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

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39 **Off Peak 2022 Summer Cost of Gas Filing**

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41 **Liquid Propane Gas (LPG)**

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	May-21 (Actual)	Jun-21 (Actual)	Jul-21 (Estimate)	Aug-21 (Estimate)	Sep-21 (Estimate)	Oct-21 (Estimate)	Total
Beginning Balance	93,824	93,828	94,844	94,844	94,844	94,844	96,655
Injections Sch 11A In 38 /10	72	1,016	-	-	-	-	49,431
Subtotal	93,896	94,844	94,844	94,844	94,844	94,844	
Withdrawals Sch 11A In 33 /10	(68)	-	-	-	-	-	(61,632)
Adjustment for change in temperature	-	-	-	-	-	-	-
Adjustment for Transfer	-	-	-	-	-	-	-
Ending Balance	93,828	94,844	94,844	94,844	94,844	94,844	84,454
<hr/>							
Beginning Balance	\$ 1,382,938	\$ 1,382,997	\$ 1,396,098	\$ 1,406,774	\$ 1,406,774	\$ 1,406,774	\$ 1,193,497
Injections In 46 * In 69	1,061	13,101	-	-	-	-	168,840
Subtotal	\$ 1,384,000	\$ 1,396,098	\$ 1,396,098	\$ 1,406,774	\$ 1,406,774	\$ 1,406,774	
Withdrawals In 52 * In 67	(1,002)	-	10,676	-	-	-	(763,126)
Ending Balance	\$ 1,382,997	\$ 1,396,098	\$ 1,406,774	\$ 1,406,774	\$ 1,406,774	\$ 1,406,774	\$ 599,211
<hr/>							
Average Rate For Withdrawals	\$ 14.7397	\$ 14.7199	\$ 14.7199	\$ 14.8325	\$ 14.8325	\$ 14.8325	
<hr/>							
Propane Rate for Injections Actual or Sch. 6, In 162 * 10	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	

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

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72 **Off Peak 2022 Summer Cost of Gas Filing**

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74 **Liquid Natural Gas (LNG)**

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	May-21 (Actual)	Jun-21 (Actual)	Jul-21 (Estimate)	Aug-21 (Estimate)	Sep-21 (Estimate)	Oct-21 (Estimate)	Total
Beginning Balance	7,885	5,928	10,583	10,583	10,583	10,583	12,057
Injections Sch 11A In 37 /10	797	6,395	-	-	-	-	136,806
Subtotal	8,682	12,323	10,583	10,583	10,583	10,583	
Withdrawals Sch 11A In 32 /10	(2,754)	(1,740)	-	-	-	-	(132,648)
Ending Balance	5,928	10,583	10,583	10,583	10,583	10,583	16,216
Beginning Balance	\$ 34,430	\$ 25,885	\$ 42,850	\$ 42,850	\$ 42,850	\$ 42,850	\$ 135,659
Injections In 78 * In 99	3,480	24,011	-	-	-	-	653,097
Subtotal	\$ 37,910	\$ 49,896	\$ 42,850	\$ 42,850	\$ 42,850	\$ 42,850	
Withdrawals In 82 * In 97	(12,025)	(7,045)	-	-	-	-	(825,208)
Ending Balance	\$ 25,885	\$ 42,850	\$ 42,850	\$ 42,850	\$ 42,850	\$ 42,850	\$ (36,451)
Average Rate For Withdrawals	\$ 4.3665	\$ 4.0490	\$ 4.0490	\$ 4.0490	\$ 4.0490	\$ 4.0490	
LNG Rate for Injections Actual or Sch. 6, In 161 * 10	\$ 4.3665	\$ 3.7546	\$ 11.2630	\$ 11.1000	\$ -	\$ -	