| Ln | (a) | Reference (b) | | OP 16 May - Oct (c) |
|---|---|---|---|---|
| 1 | **Liberty Utilities (EnergyNorth Natural Gas) Corp.** | | | |
| 3 | **Off Peak 2018 Summer Cost of Gas Filing** | | | |
| 4 | **Summary** | | | |
| 9 | **Anticipated Direct Cost of Gas** | | | |
| 10 | Purchased Gas: | | | |
| 11 | Demand Costs: | Sch. 5A, col (j), ln 43 | $ | 3,898,265 |
| 12 | Supply Costs | Sch. 6, col (i), ln 44 | | 2,728,951 |
| 14 | Storage Gas: | | | |
| 15 | Demand, Capacity: | Sch. 5A, col (j), ln 58 | $ | - |
| 16 | Commodity Costs: | Sch. 6, col (i), ln 47 | | - |
| 18 | Produced Gas: | Sch. 6, col (i), ln 53 | $ | 91,892 |
| 20 | Hedge Contract (Savings)/Loss | Sch. 7, col (i), ln 32 | $ | - |
| 23 | **Total Unadjusted Cost of Gas** | | $ | 6,719,108 |
| 25 | **Adjustments:** | | | |
| 27 | Prior Period (Over)/Under Recovery) | Sch. 3, col (c) ln 26 | $ | (767,503) |
| 28 | Interest 11/01/17 - 10//31/18 | Sch. 3, col (q) ln 191 | | (32,590) |
| 29 | Prior Period Adjustments | Sch. 4, ln 26 col (b) | | - |
| 30 | Refunds from Suppliers | Sch. 4, ln 26 col (c) | | - |
| 31 | Broker Revenue | Sch. 4, ln 26 col (d) | | - |
| 32 | Fuel Financing | Sch. 4, ln 26 col (e) | | - |
| 33 | Transportation CGA Revenues | Sch. 4, ln 26 col (f) | | - |
| 34 | Interruptible Sales Margin | Sch. 4, ln 26 col (g) | | - |
| 35 | Capacity Release and Off System Sales Margins | Sch. 4, ln 26 col (h) + col (i) | | - |
| 36 | Hedging Costs | Sch. 4, ln 26 col (j) | | - |
| 37 | FPO Premium - Collection | | | - |
| 38 | Fixed Price Option Administrative Costs | Sch. 4, ln 26 col (k) | | - |
| 40 | **Total Adjustments** | | $ | (800,093) |
| 42 | **Total Anticipated Direct Costs** | lns 23 + 40 | $ | 5,919,015 |
| 44 | **Anticipated Indirect Cost of Gas** | | | |
| 45 | **Working Capital** | | | |
| 46 | Total Unadjusted Anticipated Cost of Gas | Ln 23 | $ | 6,719,108 |
| 47 | Lead Lag Days / 365 | DG 10-017, 14.27 / 365 | | 0.0391 |
| 48 | Prime Rate | | | 4.25% |
| 49 | Working Capital Percentage | ln 47 * ln 48 | | 0.166% |
| 50 | Working Capital | ln 46 * ln 49 | | 11,167 |
| 51 | Plus: Working Capital Reconciliation | Sch. 3, col (c), ln 98 | | 1,490 |
| 53 | **Total Working Capital Allowance** | lns 50 + 51 | $ | 12,657 |
| 55 | **Bad Debt** | | | |
| 56 | Total Unadjusted Anticipated Cost of Gas | ln 23 | $ | 6,719,108 |
| 57 | Less Refunds | ln 30 | | - |
| 58 | Plus Working Capital | ln 53 | | 12,657 |
| 59 | Plus Prior Period (Over) Under Recovery | ln 27 | | (767,503) |
| 60 | Subtotal | | $ | 5,964,262 |
| 61 | Bad Debt Percentage | per GTC 16(f), docket 14-220 Sch 6 Pg 3 | | 1.11% |
| 63 | Bad Debt Allowance | ln 60 * ln 61 | $ | 66,203 |
| 64 | Prior Period Bad Debt Allowance | Sch. 3, col (c), ln 161 | | 96,420 |
| 66 | **Total Bad Debt Allowance** | lns 63 + 64 | $ | 162,623 |
| 68 | **Production and Storage Capacity** | per GTC16(f) | $ | - |
| 70 | **Miscellaneous Overhead** | per GTC 16(f) | $ | 13,170 |
| 71 | Sales Volume | Sch. 10B, ln 23/1000 | | 19,351 |
| 72 | Divided by Total Sales | Sch. 10B, ln 23/1000 | | 104,762 |
| 73 | Ratio | | | 18.47% |
| 75 | **Miscellaneous Overhead** | lns 70 * 73 | $ | 2,433 |
| 77 | **Total Anticipated Indirect Cost of Gas** | lns 53 + 66 + 68 + 75 | $ | 177,713 |
| 79 | **Total Cost of Gas** | lns 42 + 77 | $ | 6,096,728 |
| 81 | **Projected Forecast Sales (Therms)** | Sch. 3, col (q), ln 52 | | 19,395,370 |

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

3 **Off Peak 2018 Summer Cost of Gas Filing**
4 **Summary of Supply and Demand Forecast**

| Ln | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | Off Peak Period |
| 7 | For Month of: | | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Nov-18 | May - Oct |
| 8 | (a) | (b) | (c) | (d) | (e) | (d) | (e) | (f) | (g) | (h) |
| 9 | **I. Gas Volumes (Therms)** | | | | | | | | | |
| 10 | | | | | | | | | | |
| 11 | **A. Firm Demand Volumes** | | | | | | | | | |
| 12 | Firm Gas Sales | Sch. 10B, ln 23 | 1,099,305 | 3,174,528 | 1,812,041 | 1,576,174 | 2,124,689 | 3,934,454 | 5,674,179 | 19,395,370 |
| 13 | Lost Gas (Unaccounted for) | | 82,997 | 45,525 | 31,778 | 30,515 | 41,444 | 91,222 | | 323,482 |
| 14 | Company Use | | 2,697 | 1,480 | 1,033 | 992 | 1,347 | 2,965 | | 10,513 |
| 15 | Unbilled Therms | | 3,189,452 | (822,093) | (169,961) | 664 | 16,886 | 779,297 | (5,674,179) | (2,679,933) |
| 16 | | | | | | | | | | |
| 17 | **Total Firm Volumes** | Sch. 6, ln 92 | 4,374,452 | 2,399,439 | 1,674,891 | 1,608,346 | 2,184,367 | 4,807,937 | | 17,049,432 |
| 18 | | | | | | | | | | |
| 19 | **B. Supply Volumes (Therms)** | | | | | | | | | |
| 20 | Pipeline Gas: | | | | | | | | | |
| 21 | Dawn Supply | Sch. 6, ln 63 | 172,790 | - | - | - | - | 311,076 | | 483,866 |
| 22 | Niagara Supply | Sch. 6, ln 64 | 601,658 | 533,652 | 508,721 | 491,439 | 510,667 | 604,662 | | 3,250,799 |
| 23 | TGP Supply (Gulf) | Sch. 6, ln 65 | 126,796 | - | - | - | - | - | | 126,796 |
| 24 | Dracut Supply 1 - Baseload | Sch. 6, ln 66 | - | - | - | - | - | - | | - |
| 25 | Dracut Supply 2 - Swing | Sch. 6, ln 67 | 57,804 | - | - | - | - | 229,871 | | 287,675 |
| 26 | City Gate Delivered Supply | Sch. 6, ln 68 | - | - | - | - | - | - | | - |
| 27 | LNG Truck | Sch. 6, ln 69 | 44,130 | 16,516 | - | - | 47,415 | 14,367 | | 122,428 |
| 28 | Propane Truck | Sch. 6, ln 70 | 71,478 | 65,496 | 60,437 | 58,384 | 62,675 | 71,835 | | 390,305 |
| 29 | PNGTS | Sch. 6, ln 71 | 30,456 | 19,934 | 17,343 | 16,754 | 21,800 | 38,728 | | 145,014 |
| 30 | TGP Supply (Zone 4) | Sch. 6, ln 72 | 4,848,071 | 4,278,896 | 3,861,131 | 3,744,684 | 4,062,988 | 4,873,525 | | 25,669,295 |
| 31 | Subtotal Pipeline Volumes | | 5,953,182 | 4,914,494 | 4,447,632 | 4,311,260 | 4,705,545 | 6,144,065 | | 30,476,179 |
| 32 | | | | | | | | | | |
| 33 | Storage Gas: | | | | | | | | | |
| 34 | TGP Storage | Sch. 6, ln 77 | - | - | - | - | - | - | | - |
| 35 | | | | | | | | | | |
| 36 | Produced Gas: | | | | | | | | | |
| 37 | LNG Vapor | Sch. 6, ln 80 | 18,025 | 16,516 | 15,241 | 14,723 | 15,260 | 18,115 | | 97,880 |
| 38 | Propane | Sch. 6, ln 81 | - | - | - | - | - | - | | - |
| 39 | Subtotal Produced Gas | | 18,025 | 16,516 | 15,241 | 14,723 | 15,260 | 18,115 | | 97,880 |
| 40 | | | | | | | | | | |
| 41 | Less - Gas Refill: | | | | | | | | | |
| 42 | LNG Truck | Sch. 6, ln 86 | (44,130) | (16,516) | - | - | (47,415) | (14,367) | | (122,428) |
| 43 | Propane | Sch. 6, ln 87 | (71,478) | (65,496) | (60,437) | (58,384) | (62,675) | (71,835) | | (390,305) |
| 44 | TGP Storage Refill | Sch. 6, ln 88 | (1,481,148) | (2,449,558) | (2,727,545) | (2,659,253) | (2,426,348) | (1,268,041) | | (13,011,893) |
| 45 | Subtotal Refills | | (1,596,756) | (2,531,571) | (2,787,982) | (2,717,637) | (2,536,438) | (1,354,243) | | (13,524,627) |
| 46 | | | | | | | | | | |
| 47 | Total Firm Sendout Volumes | lns 31 + 34 + 39 + 45 | 4,374,452 | 2,399,439 | 1,674,891 | 1,608,346 | 2,184,367 | 4,807,937 | | 17,049,432 |
| 48 | | | | | | | | | | |

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

3 **Off Peak 2018 Summer Cost of Gas Filing**
4 **Summary of Supply and Demand Forecast**
5
6

| Line | Description | Reference | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Nov-18 | Off Peak Period May - Oct |
|---|---|---|---|---|---|---|---|---|---|---|
| 7 | For Month of: | | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Nov-18 | May - Oct |
| 49 | **II. Gas Costs** | | | | | | | | | |
| 50 | | | | | | | | | | **REDACTED** |
| 51 | **A. Demand Costs** | | | | | | | | | |
| 52 | Supply | | | | | | | | | |
| 53 | Niagara Supply | Sch.5A, ln 12 | $ - | $ - | $ - | $ - | $ - | $ - | | $ - |
| 54 | Subtotal Supply Demand | | $ - | $ - | $ - | $ - | $ - | $ - | | $ - |
| 55 | Less Capacity Credit | | - | - | - | - | - | - | | - |
| 56 | Net Pipeline Demand Costs | | $ - | $ - | $ - | $ - | $ - | $ - | | $ - |
| 57 | | | | | | | | | | |
| 58 | Pipeline: | | | | | | | | | |
| 59 | Iroquois Gas Trans Service RTS 470-0 | Sch.5A, ln 16 | [redacted] | | | | | | | |
| 60 | Tenn Gas Pipeline 95346 Z5-Z6 | Sch.5A, ln 17 | | | | | | | | |
| 61 | Tenn Gas Pipeline 2302 Z5-Z6 | Sch.5A, ln 18 | | | | | | | | |
| 62 | Tenn Gas Pipeline 8587 Z0-Z6 | Sch.5A, ln 19 | | | | | | | | |
| 63 | Tenn Gas Pipeline 8587 Z1-Z6 | Sch.5A, ln 20 | | | | | | | | |
| 64 | Tenn Gas Pipeline 8587 Z4-Z6 | Sch.5A, ln 21 | | | | | | | | |
| 65 | Tenn Gas Pipeline (Dracut) 42076 Z6-Z6 | Sch.5A, ln 22 | | | | | | | | |
| 66 | Tenn Gas Pipeline (Concord Lateral) Z6-Z6 | Sch.5A, ln 23 | | | | | | | | |
| 67 | Portland Natural Gas Trans Service | Sch.5A, ln 24 | | | | | | | | |
| 68 | ANE (TransCanada via Union to Iroquois) | Sch.5A, ln 25 | | | | | | | | |
| 69 | Tenn Gas Pipeline Z4-Z6 stg 632 | Sch.5A, ln 26 | | | | | | | | |
| 70 | Tenn Gas Pipeline Z4-Z6 stg 11234 | Sch.5A, ln 27 | | | | | | | | |
| 71 | Tenn Gas Pipeline Z5-Z6 stg 11234 | Sch.5A, ln 28 | | | | | | | | |
| 72 | National Fuel FST 2358 | Sch.5A, ln 29 | | | | | | | | |
| 73 | Subtotal Pipeline Demand | | $ 1,143,645 | $ 1,149,480 | $ 1,149,480 | $ 1,149,480 | $ 1,149,480 | $ 1,149,480 | | $ 6,891,047 |
| 74 | Less Capacity Credit | | (496,685) | (499,219) | (499,219) | (499,219) | (499,219) | (499,219) | | (2,992,782) |
| 75 | Net Pipeline Demand Costs | | $ 646,960 | $ 650,261 | $ 650,261 | $ 650,261 | $ 650,261 | $ 650,261 | | $ 3,898,265 |
| 76 | | | | | | | | | | |
| 77 | Peaking Supply: | | | | | | | | | |
| 78 | Tenn Gas Pipeline (Concord Lateral) Z6-Z6 | Sch.5A, ln 34 | $ - | $ - | $ - | $ - | $ - | $ - | | $ - |
| 79 | Granite Ridge Demand | Sch.5A, ln 35 | $ - | $ - | $ - | $ - | $ - | $ - | | $ - |
| 80 | DOMAC Demand NSB041 | Sch.5A, ln 36 | - | - | - | - | - | - | | - |
| 81 | Subtotal Peaking Demand | | $ - | $ - | $ - | $ - | $ - | $ - | | $ - |
| 82 | Less Capacity Credit | | - | - | - | - | - | - | | - |
| 83 | Net Peaking Supply Demand Costs | | $ - | $ - | $ - | $ - | $ - | $ - | | $ - |
| 84 | | | | | | | | | | |
| 85 | Storage: | | | | | | | | | |
| 86 | Dominion - Demand | Sch.5A, ln 46 | $ - | $ - | $ - | $ - | $ - | $ - | | $ - |
| 87 | Dominion - Storage | Sch.5A, ln 47 | - | - | - | - | - | - | | - |
| 88 | Honeoye - Demand | Sch.5A, ln 48 | - | - | - | - | - | - | | - |
| 89 | National Fuel - Demand | Sch.5A, ln 49 | - | - | - | - | - | - | | - |
| 90 | National Fuel - Capacity | Sch.5A, ln 50 | - | - | - | - | - | - | | - |
| 91 | Tenn Gas Pipeline - Demand | Sch.5A, ln 51 | - | - | - | - | - | - | | - |
| 92 | Tenn Gas Pipeline - Capacity | Sch.5A, ln 52 | - | - | - | - | - | - | | - |
| 93 | Subtotal Storage Demand | | $ - | $ - | $ - | $ - | $ - | $ - | | $ - |
| 94 | Less Capacity Credit | | - | - | - | - | - | - | | - |
| 95 | Net Storage Demand Costs | | $ - | $ - | $ - | $ - | $ - | $ - | | $ - |
| 96 | | | | | | | | | | |
| 97 | Total Demand Charges | lns 54 + 73 + 81 + 93 | $ 1,143,645 | $ 1,149,480 | $ 1,149,480 | $ 1,149,480 | $ 1,149,480 | $ 1,149,480 | | $ 6,891,047 |
| 98 | Total Capacity Credit | lns 55 + 74 + 82 + 94 | (496,685) | (499,219) | (499,219) | (499,219) | (499,219) | (499,219) | | (2,992,782) |
| 99 | Net Demand Charges | | $ 646,960 | $ 650,261 | $ 650,261 | $ 650,261 | $ 650,261 | $ 650,261 | | $ 3,898,265 |
| 100 | | | | | | | | | | |
| 101 | | | | | | | | | | |

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

3 **Off Peak 2018 Summer Cost of Gas Filing**
4 **Summary of Supply and Demand Forecast**
5
6

| Line | | Reference | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Nov-18 | Off Peak Period May - Oct |
|---|---|---|---|---|---|---|---|---|---|---|
| 7 | For Month of: | | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Nov-18 | Off Peak Period May - Oct |
| 102 | **B. Commodity Costs** | | | | | | | | | **REDACTED** |
| 103 | Pipeline: | | | | | | | | | |
| 104 | Dawn Supply | Sch. 6, In 12 | [redacted] | | | | | | | |
| 105 | Niagara Supply | Sch. 6, In 13 | | | | | | | | |
| 106 | TGP Supply (Gulf) | Sch. 6, In 14 | | | | | | | | |
| 107 | Dracut Supply 1 - Baseload | Sch. 6, In 15 | | | | | | | | |
| 108 | Dracut Supply 2 - Swing | Sch. 6, In 16 | | | | | | | | |
| 109 | City Gate Delivered Supply | Sch. 6, In 17 | | | | | | | | |
| 110 | LNG Truck | Sch. 6, In 18 | | | | | | | | |
| 111 | Propane Truck | Sch. 6, In 19 | | | | | | | | |
| 112 | PNGTS | Sch. 6, In 20 | | | | | | | | |
| 113 | TGP Supply (Zone 4) | Sch. 6, In 21 | | | | | | | | |
| 114 | Subtotal Pipeline Commodity Costs | | $ 1,312,823 | $ 1,063,113 | $ 1,034,000 | $ 981,160 | $ 894,573 | $ 1,286,870 | | $ 6,572,539 |
| 115 | | | | | | | | | | |
| 116 | Storage: | | | | | | | | | |
| 117 | TGP Storage - Withdrawals | Sch. 6, In 47 | $ - | $ - | $ - | $ - | $ - | $ - | | $ - |
| 118 | | | | | | | | | | |
| 119 | Produced Gas Costs: | | | | | | | | | |
| 120 | LNG Vapor | Sch. 6, In 50 | [redacted] | | | | | | | |
| 121 | Propane | Sch. 6, In 51 | | | | | | | | |
| 122 | Subtotal Produced Gas Costs | | $ 25,182 | $ 16,278 | $ 13,348 | $ 12,895 | $ 13,365 | $ 10,825 | | $ 91,892 |
| 123 | | | | | | | | | | |
| 124 | Less Storage Refills: | | | | | | | | | |
| 125 | LNG Truck | Sch. 6, In 37 | [redacted] | | | | | | | |
| 126 | Propane | Sch. 6, In 38 | | | | | | | | |
| 127 | TGP Storage Refill | Sch. 6, In 39 | | | | | | | | |
| 128 | Storage Refill (Trans.) | Sch. 6, In 40 | | | | | | | | |
| 129 | Subtotal Storage Refill | | $ (474,052) | $ (790,321) | $ (887,232) | $ (866,398) | $ (785,197) | $ (412,930) | | $ (4,216,131) |
| 130 | | | | | | | | | | |
| 131 | Total Supply Commodity Costs | | $ 863,953 | $ 289,069 | $ 160,116 | $ 127,657 | $ 122,741 | $ 884,765 | | $ 2,448,301 |
| 132 | | | | | | | | | | |
| 133 | **C. Supply Volumetric Transportation Costs:** | | | | | | | | | |
| 134 | Dawn Supply | Sch. 6, In 26 | [redacted] | | | | | | | |
| 135 | Niagara Supply | Sch. 6, In 27 | | | | | | | | |
| 136 | TGP Supply (Zone 4) | Sch. 6, In 28 | | | | | | | | |
| 137 | Dracut Supply 1 - Baseload | Sch. 6, In 29 | | | | | | | | |
| 138 | Dracut Supply 2 - Swing | Sch. 6, In 30 | | | | | | | | |
| 139 | Subtotal Pipeline Volumetric Trans. Costs | | $ 71,517 | $ 61,302 | $ 56,367 | $ 54,407 | $ 56,935 | $ 72,015 | | $ 372,542 |
| 140 | | | | | | | | | | |
| 141 | TGP Storage - Withdrawals | Sch. 6, In 32 | $ - | $ - | $ - | $ - | $ - | $ - | | $ - |
| 142 | | | | | | | | | | |
| 143 | Total Supply Volumetric Trans. Costs | Ins 139 + 141 | $ 71,517 | $ 61,302 | $ 56,367 | $ 54,407 | $ 56,935 | $ 72,015 | | $ 372,542 |
| 144 | | | | | | | | | | |
| 145 | Total Commodity Gas & Trans. Costs | Ins 131 + 143 | $ 935,470 | $ 350,371 | $ 216,483 | $ 182,064 | $ 179,676 | $ 956,780 | | $ 2,820,843 |
| 146 | | | | | | | | | | |
| 147 | | | | | | | | | | |

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

3 **Off Peak 2018 Summer Cost of Gas Filing**
4 **Summary of Supply and Demand Forecast**
5
6

| Ln | | | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Nov-18 | Off Peak Period May - Oct |
|---|---|---|---|---|---|---|---|---|---|---|
| 7 | For Month of: | | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Nov-18 | Off Peak Period May - Oct |
| 148 | **D. Supply and Demand Costs by Source** | | | | | | | | | **REDACTED** |
| 149 | | | | | | | | | | |
| 150 | Purchased Gas Demand Costs | | | | | | | | | |
| 151 | Pipeline Gas Demand Costs | Ins 54 + 73 | $ 1,143,645 | $ 1,149,480 | $ 1,149,480 | $ 1,149,480 | $ 1,149,480 | $ 1,149,480 | | $ 6,891,047 |
| 152 | Peaking Gas Demand Costs | In 81 | - | - | - | - | - | - | | - |
| 153 | Subtotal Purchased Gas Demand Costs | | $ 1,143,645 | $ 1,149,480 | $ 1,149,480 | $ 1,149,480 | $ 1,149,480 | $ 1,149,480 | | $ 6,891,047 |
| 154 | Less Capacity Credit | Ins 55 + 74 + 82 | (496,685) | (499,219) | (499,219) | (499,219) | (499,219) | (499,219) | | (2,992,782) |
| 155 | Net Purchased Gas Demand Costs | | $ 646,960 | $ 650,261 | $ 650,261 | $ 650,261 | $ 650,261 | $ 650,261 | | $ 3,898,265 |
| 156 | | | | | | | | | | |
| 157 | Storage Gas Demand Costs | | | | | | | | | |
| 158 | Storage Demand | In 93 | $ - | $ - | $ - | $ - | $ - | $ - | | $ - |
| 159 | Less Capacity Credit | In 94 | - | - | - | - | - | - | | - |
| 160 | Net Storage Demand Costs | | $ - | $ - | $ - | $ - | $ - | $ - | | $ - |
| 161 | | | | | | | | | | |
| 162 | **Total Demand Costs** | Ins 155 + 160 | $ 646,960 | $ 650,261 | $ 650,261 | $ 650,261 | $ 650,261 | $ 650,261 | | $ 3,898,265 |
| 163 | | | | | | | | | | |
| 164 | Purchased Gas Supply | | | | | | | | | |
| 165 | Commodity Costs | In 114 | $ 1,312,823 | $ 1,063,113 | $ 1,034,000 | $ 981,160 | $ 894,573 | $ 1,286,870 | | $ 6,572,539 |
| 166 | Less Storage Inj.(TGP Storage) | In 127 | [redacted] | | | | | | | |
| 167 | Less Storage Transportation | In 128 | | | | | | | | |
| 168 | Less LNG Truck | In 125 | | | | | | | | |
| 169 | Less Propane Truck | In 126 | | | | | | | | |
| 170 | Plus Transportation Costs | In 139 | | | | | | | | |
| 171 | Subtotal Purchased Gas Supply | | $ 910,288 | $ 334,093 | $ 203,135 | $ 169,170 | $ 166,311 | $ 945,955 | | $ 2,728,951 |
| 172 | | | | | | | | | | |
| 173 | Storage Commodity Costs | | | | | | | | | |
| 174 | Commodity Costs | In 117 | $ - | $ - | $ - | $ - | $ - | $ - | | $ - |
| 175 | Transportation Costs | In 141 | - | - | - | - | - | - | | - |
| 176 | Subtotal Storage Commodity Costs | | $ - | $ - | $ - | $ - | $ - | $ - | | $ - |
| 177 | | | | | | | | | | |
| 178 | Produced Gas Commodity Costs | In 122 | $ 25,182 | $ 16,278 | $ 13,348 | $ 12,895 | $ 13,365 | $ 10,825 | | $ 91,892 |
| 179 | | | | | | | | | | |
| 180 | **Subtotal Commodity Costs** | Ins 171 + 176 + 178 | $ 935,470 | $ 350,371 | $ 216,483 | $ 182,064 | $ 179,676 | $ 956,780 | | $ 2,820,843 |
| 181 | | | | | | | | | | |
| 182 | Hedge Contract (Savings)/Loss | Sch 7, In 32 | $ - | $ - | $ - | $ - | $ - | $ - | | $ - |
| 183 | | | | | | | | | | |
| 184 | **Total Commodity Costs** | Ins 180 + 182 | $ 935,470 | $ 350,371 | $ 216,483 | $ 182,064 | $ 179,676 | $ 956,780 | | $ 2,820,843 |
| 185 | | | | | | | | | | |
| 186 | **Total Demand Costs** | In 99 | $ 646,960 | $ 650,261 | $ 650,261 | $ 650,261 | $ 650,261 | $ 650,261 | | $ 3,898,265 |
| 187 | **Total Supply Costs** | In 184 | 935,470 | 350,371 | 216,483 | 182,064 | 179,676 | 956,780 | | 2,820,843 |
| 188 | | | | | | | | | | |
| 189 | **Total Direct Gas Costs** | Ins 186 + 187 | $ 1,582,430 | $ 1,000,632 | $ 866,744 | $ 832,325 | $ 829,937 | $ 1,607,041 | | $ 6,719,108 |
| 190 | | | | | | | | | | |
| 191 | | | | | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | **Liberty Utilities (EnergyNorth Natural Gas) Corp.** | | | | | **REDACTED** |
| 2 | | | | | | |
| 3 | **Off Peak 2018 Summer Cost of Gas Filing** | | | | | |
| 4 | **Contracts Ranked on a per Unit Cost Basis** | | | | | **Off Peak** |
| 5 | | | | **Contract** | **Unit Dth** | **Cost per** |
| 6 | **Supplier** | **Contract** | **Contract Type** | **Unit** | **(MDQ/ACQ)** | **Unit Dth** |
| 7 | (a) | (b) | (c) | (d) | (e) | (f) |
| 8 | | | | | | |
| 9 | **Demand Costs** | | | | | |
| 10 | Granite Ridge Demand | | Peaking | MDQ | - | [redacted] |
| 11 | Niagara Supply | | Supply | MDQ | - | |
| 12 | Dominion - Capacity Reservation | GSS 300076 | Storage | ACQ | 102,700 | |
| 13 | Tenn Gas Pipeline - Cap. Reservations | FS-MA 523 | Storage | ACQ | 1,560,391 | |
| 14 | National Fuel - Capacity Reservation | FSS-1 2357 | Storage | ACQ | 670,800 | |
| 15 | Tenn Gas Pipeline - Demand | FS-MA 523 | Storage | MDQ | 21,844 | |
| 16 | Dominion - Demand | GSS 300076 | Storage | MDQ | 934 | |
| 17 | National Fuel - Demand | FSS-1 2357 | Storage | MDQ | 6,098 | |
| 18 | National Fuel | FST N02358 | Transportation | MDQ | 6,098 | |
| 19 | Tenn Gas Pipeline | 42076 FTA Z6-Z6 | Transportation | MDQ | 20,000 | |
| 20 | Iroquois Gas Trans Service | RTS 470-01 | Transportation | MDQ | 4,047 | |
| 21 | Honeoye - Demand | SS-NY | Storage | MDQ | 1,362 | |
| 22 | Tenn Gas Pipeline | 2302 Z5-Z6 | Transportation | MDQ | 3,122 | |
| 23 | Tenn Gas Pipeline (short haul) | 11234 Z5-Z6(stg) | Transportation | MDQ | 1,957 | |
| 24 | Tenn Gas Pipeline (short haul) | 8587 Z4-Z6 | Transportation | MDQ | 3,811 | |
| 25 | Tenn Gas Pipeline (short haul) | 632 Z4-Z6 (stg) | Transportation | MDQ | 15,265 | |
| 26 | Tenn Gas Pipeline (short haul) | 11234 Z4-Z6(stg) | Transportation | MDQ | 7,082 | |
| 27 | Tenn Gas Pipeline (Concord Lateral) Z6-Z6 | Firm Transportation | Transportation | MDQ | 30,000 | |
| 28 | Tenn Gas Pipeline | 95346 Z5-Z6 | Transportation | MDQ | 4,000 | |
| 29 | ANE (TransCanada via Union to Iroquois) | Union Parkway to Iroquois | Transportation | MDQ | 4,047 | |
| 30 | Tenn Gas Pipeline (long haul) | 8587 Z1-Z6 | Transportation | MDQ | 14,561 | |
| 31 | Tenn Gas Pipeline (long haul) | 8587 Z0-Z6 | Transportation | MDQ | 7,035 | |
| 32 | Portland Natural Gas Trans Service | FT-1999-001 | Transportation | MDQ | 1,000 | |
| 33 | | | | | | |
| 34 | **Supply Costs - Commodity** | | | | | |
| 35 | LNG Truck | | Pipeline | Dkt | 12,243 | |
| 36 | TGP Supply (Zone 4) | | Pipeline | Dkt | 2,566,930 | |
| 37 | Niagara Supply | | Pipeline | Dkt | 325,080 | |
| 38 | Dracut Supply 2 - Swing | | Pipeline | Dkt | 28,768 | |
| 39 | TGP Citygate Supply | | Pipeline | Dkt | - | |
| 40 | Dracut Supply 1 - Baseload | | Pipeline | Dkt | - | |
| 41 | TGP Supply (Gulf) | | Pipeline | Dkt | 12,680 | |
| 42 | Dawn Supply | | Pipeline | Dkt | 48,387 | |
| 43 | PNGTS | | Pipeline | Dkt | 14,501 | |
| 44 | Propane | | Pipeline | Dkt | - | |
| 45 | LNG Vapor (Storage) | | Produced | Dkt | 9,788 | |
| 46 | | | | | | |
| 47 | **Supply Costs - Volumetric Transportation** | | | | | |
| 48 | Dracut Supply 1 - Baseload | | Pipeline | Dkt | - | |
| 49 | Dracut Supply 2 - Swing | | Pipeline | Dkt | 28,768 | |
| 50 | Dawn Supply | | Storage | Dkt | 48,387 | |
| 51 | Niagara Supply | | Pipeline | Dkt | 325,080 | |
| 52 | TGP Supply (Zone 4) | | Pipeline | Dkt | 12,680 | |
| 53 | | | | | | |
| 54 | | | | | | |

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

2

3 **Off Peak 2018 Summer Cost of Gas Filing**

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

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | | | Prior Period Balance | | | | | | | | | | | | | | |
| 6 | | | Plus Nov Collections | Nov-17 | Dec-17 | Jan-18 | Feb-18 | Mar-18 | Apr-18 | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Nov-18 | Off Peak Period |
| 7 | | Days in Month | October 31, 2017 | 30 | 31 | 31 | 28 | 31 | 30 | 31 | 30 | 31 | 31 | 30 | 31 | 30 | Total |
| 8 | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) | (n) | (o) | (p) | (q) |
| 9 | **Account 8840-2-0000-10-1920-1741 (formerly, 175.40) COG (Over)/Under Balance - Interest Calculation** | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |
| 11 | **Beginning Balance** | Account 1920-1741 1/ | **$ (767,503)** | $ (767,503) | $ (770,184) | $ (772,964) | $ (775,754) | $ (778,283) | $ (781,093) | $ (783,821) | $ (1,005,917) | $ (996,629) | $ (822,595) | $ (654,956) | $ (726,699) | $ (1,102,795) | $ (767,503) |
| 12 | Forecast Direct Gas Costs | | - | - | - | - | - | - | - | 1,582,430 | 1,000,632 | 866,744 | 832,325 | 829,937 | 1,607,041 | - | 6,719,108 |
| 13 | Production & Storage & Misc Overhead | | - | - | - | - | - | - | - | 405 | 405 | 405 | 405 | 405 | 405 | | 2,433 |
| 14 | Projected Revenues w/o Int. | ln 52 * ln 62 | | - | - | - | - | - | - | (461,818) | (1,333,619) | (761,238) | (662,151) | (892,582) | (1,652,864) | (2,383,722) | (8,147,995) |
| 15 | Projected Unbilled Revenue | ln 56 * ln 62 | | | | | | | | (1,339,889) | (994,528) | (923,127) | (923,406) | (930,500) | (1,257,883) | | (6,369,332) |
| 16 | Reverse Prior Month Unbilled | | | | | | | | | | 1,339,889 | 994,528 | 923,127 | 923,406 | 930,500 | 1,257,883 | 6,369,332 |
| 17 | Add Net Adjustments (with TGP Refund) | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 18 | Gas Cost Billed | Account 1920-1741 2/ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 19 | Monthly (Over)/Under Recovery | | $ (767,503) | $ (767,503) | $ (770,184) | $ (772,964) | $ (775,754) | $ (778,283) | $ (781,093) | $ (1,002,693) | $ (993,137) | $ (819,318) | $ (652,294) | $ (724,290) | $ (1,099,499) | $ (2,228,635) | $ (2,193,957) |
| 20 | Average Monthly Balance | (ln 11 + 19)/ 2 | $ - | $ (767,503) | $ (770,184) | $ (772,964) | $ (775,754) | $ (778,283) | $ (781,093) | $ (893,257) | $ (999,527) | $ (907,973) | $ (737,445) | $ (689,623) | $ (913,099) | $ (1,665,715) | |
| 21 | | | | | | | | | | | | | | | | | |
| 22 | Interest Rate | Prime Rate | | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | | |
| 23 | | | | | | | | | | | | | | | | | |
| 24 | Interest Applied | ln 20 * ln 22 /365 *Days/Mo. | $ - | $ (2,681) | $ (2,780) | $ (2,790) | $ (2,529) | $ (2,809) | $ (2,728) | $ (3,224) | $ (3,491) | $ (3,277) | $ (2,662) | $ (2,409) | $ (3,296) | $ - | $ (34,678) |
| 25 | | | | | | | | | | | | | | | | | |
| 26 | **(Over)/Under Balance** | ln 19 + ln 24 | $ (767,503) | $ (770,184) | $ (772,964) | $ (775,754) | $ (778,283) | $ (781,093) | $ (783,821) | $ (1,005,917) | $ (996,629) | $ (822,595) | $ (654,956) | $ (726,699) | $ (1,102,795) | $ (2,228,635) | (2,228,635) |
| 27 | | | | | | | | | | | | | | | | | |
| 28 | | | | | | | | | | | | | | | | | |
| 29 | **Calculation of COG with Interest** | | | | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | | | | | |
| 31 | **Beginning Balance** | ln 11 | $ (767,503) | $ (767,503) | $ (770,184) | $ (772,964) | $ (775,754) | $ (778,283) | $ (781,093) | $ (783,821) | $ (1,004,634) | $ (994,640) | $ (820,112) | $ (651,995) | $ (723,088) | $ (1,097,760) | $ (767,503) |
| 32 | Forecast Direct Gas Costs | ln 12 | | - | - | - | - | - | - | 1,582,430 | 1,000,632 | 866,744 | 832,325 | 829,937 | 1,607,041 | - | 6,719,108 |
| 33 | Prod Storage & Misc Overhead | ln 13 | | - | - | - | - | - | - | 405 | 405 | 405 | 405 | 405 | 405 | - | 2,433 |
| 34 | Projected Revenues with int. | ln 52 * 64 | | - | - | - | - | - | - | (461,488) | (1,332,667) | (760,695) | (661,678) | (891,945) | (1,651,684) | (2,382,020) | (8,142,176) |
| 35 | Projected Unbilled Revenue | ln 56 * 64 | | | | | | | | (1,338,932) | (993,817) | (922,468) | (922,747) | (929,836) | (1,256,984) | | (6,364,784) |
| 36 | Reverse Prior Month Unbilled | | | | | | | | | | 1,338,932 | 993,817 | 922,468 | 922,747 | 929,836 | 1,256,984 | 6,364,784 |
| 37 | Add Net Adjustments | ln 17 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 38 | Gas Cost Billed | ln 18 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 39 | Gas Cost Unbilled | | | | | | | | | - | - | - | - | - | - | - | - |
| 40 | Reverse Prior Month Unbilled | | | | | | | | | | - | - | - | - | - | - | - |
| 41 | Add Interest | ln 24 | | - | - | - | - | - | - | (3,224) | (3,491) | (3,277) | (2,662) | (2,409) | (3,296) | - | (18,360) |
| 42 | **(Over)/Under Balance** | | $ (767,503) | $ (767,503) | $ (770,184) | $ (772,964) | $ (775,754) | $ (778,283) | $ (781,093) | $ (1,004,630) | $ (994,640) | $ (820,114) | $ (652,000) | $ (723,095) | $ (1,097,770) | $ (2,222,796) | $ (2,206,498) |
| 43 | | | | | | | | | | | | | | | | | |
| 44 | Average Monthly Balance | | | $ (767,503) | $ (770,184) | $ (772,964) | $ (775,754) | $ (778,283) | $ (781,093) | $ (894,226) | $ (999,637) | $ (907,377) | $ (736,056) | $ (687,545) | $ (910,429) | | |
| 45 | | | | | | | | | | | | | | | | | |
| 46 | Interest Applied | ln 22 * ln 44 /365 *Days/Mo. | | (2,681) | (2,780) | (2,790) | (2,529) | (2,809) | (2,728) | (3,228) | (3,492) | (3,275) | (2,657) | (2,402) | (3,286) | - | $ (34,658) |
| 47 | | | | | | | | | | | | | | | | | |
| 48 | **(Over)/Under Balance** | ln 41 +ln 42 + ln 46 | $ (767,503) | $ (770,184) | $ (772,964) | $ (775,754) | $ (778,283) | $ (781,093) | $ (783,821) | $ (1,004,634) | $ (994,640) | $ (820,112) | $ (651,995) | $ (723,088) | $ (1,097,760) | $ (2,222,796) | (2,222,796) |
| 49 | | | | | | | | | | | | | | | | | |
| 50 | | | | | | | | | | | | | | | | | |
| 51 | Forecast Sendout Therms | Sch 1 | | | | | | | | 4,374,452 | 2,399,439 | 1,674,891 | 1,608,346 | 2,184,367 | 4,807,937 | | 17,049,432 |
| 52 | Less 'Forecast Billing Therm Sales | Sch. 10B, ln 23 May - Oct | | | | | | | | 1,099,305 | 3,174,528 | 1,812,041 | 1,576,174 | 2,124,689 | 3,934,454 | 5,674,179 | 19,395,370 |
| 53 | Less Forecast Unaccounted For | Sch 1 | | | | | | | | 82,997 | 45,525 | 31,778 | 30,515 | 41,444 | 91,222 | | 323,482 |
| 54 | Less Forecast Company Use | Sch 1 | | | | | | | | 2,697 | 1,480 | 1,033 | 992 | 1,347 | 2,965 | | 10,513 |
| 55 | Unbilled Volumes | | | | | | | | | 3,189,452 | (822,093) | (169,961) | 664 | 16,886 | 779,297 | (5,674,179) | (2,679,933) |
| 56 | Gross Unbilled | | | | | | | | | 3,189,452 | 2,367,359 | 2,197,398 | 2,198,063 | 2,214,949 | 2,994,246 | (2,679,933) | |
| 57 | | | | | | | | | | | | | | | | | |
| 58 | Beg Balance | | | | | | | | | - | 3,189,452 | 2,367,359 | 2,197,398 | 2,198,063 | 2,214,949 | 2,994,246 | |
| 59 | Incremental | | | | | | | | | 3,189,452 | (822,093) | (169,961) | 664 | 16,886 | 779,297 | (5,674,179) | |
| 60 | Ending Balance | | | | | | | | | 3,189,452 | 2,367,359 | 2,197,398 | 2,198,063 | 2,214,949 | 2,994,246 | (2,679,933) | |
| 61 | | | | | | | | | | | | | | | | | |
| 62 | COG w/o Interest | Sch. 3, pg. 4, ln 209 col. (c) | | | | | | | | $0.4201 | $0.4201 | $0.4201 | $0.4201 | $0.4201 | $0.4201 | $0.4201 | |
| 63 | | | | | | | | | | | | | | | | | |
| 64 | COG With Interest | Sch. 3, pg. 4, ln 209 col. (d) | | | | | | | | $0.4198 | $0.4198 | $0.4198 | $0.4198 | $0.4198 | $0.4198 | $0.4198 | |
| 65 | | | | | | | | | | | | | | | | | |
| 66 | | | | | | | | | | | | | | | | | |
| 67 | | | | | | | | | | | | | | | | | |
| 68 | | | | | | | | | | | | | | | | | |

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

3 **Off Peak 2018 Summer Cost of Gas Filing**
4 **COG (Over)/Under Cumulative Recovery Balances and Interest Calculation**

| Line | | | Prior Period Balance | Nov-17 | Dec-17 | Jan-18 | Feb-18 | Mar-18 | Apr-18 | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Nov-18 | Off Peak Period |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 70 | | Days in Month | Plus Nov Collections | 30 | 31 | 31 | 28 | 31 | 30 | 31 | 30 | 31 | 31 | 30 | 31 | 30 | Total |
| 71 | | | October 31, 2017 | | | | | | | | | | | | | | |
| 72 | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) | (n) | (o) | (p) | (q) |
| 73 | | | | | | | | | | | | | | | | | |
| 74 | **Account 8840-2-0000-10-1163-1424 (formerly, 142.40) Working Capital (Over)/Under Balance - Interest Calculation** | | | | | | | | | | | | | | | | |
| 75 | | | | | | | | | | | | | | | | | |
| 76 | **Beginning Balance** | Account 1163-1424 1/ | **$ 1,490** | $ 1,490 | $ 1,495 | $ 1,501 | $ 1,506 | $ 1,511 | $ 1,516 | $ 1,522 | $ (135) | $ (826) | $ (1,031) | $ (1,228) | $ (1,996) | $ (4,050) | $ 1,490 |
| 77 | | | | | | | | | | | | | | | | | |
| 78 | Days Lag | | | | | | | | | 0.0391 | 0.0391 | 0.0391 | 0.0391 | 0.0391 | 0.0391 | 0.0391 | |
| 79 | Prime Rate | | | | | | | | | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | |
| 80 | Forecast Working Capital | ln 32 * ln 78 / 365 * ln 79 | | - | - | - | - | - | - | 2,630 | 1,663 | 1,440 | 1,383 | 1,379 | 2,671 | - | 11,167 |
| 81 | | | | | | | | | | | | | | | | | |
| 82 | Projected Revenues w/o Int. | ln 121 * ln 124 | | - | - | - | - | - | - | (1,099) | (3,175) | (1,812) | (1,576) | (2,125) | (3,934) | (5,674) | (19,395) |
| 83 | Projected Unbilled Revenue | ln 122 * ln 124 | | | | | | | | (3,189) | (2,367) | (2,197) | (2,198) | (2,215) | (2,994) | | (15,161) |
| 84 | Reverse Prior Month Unbilled | | | | | | | | | | 3,189 | 2,367 | 2,197 | 2,198 | 2,215 | 2,994 | 15,161 |
| 85 | | | | | | | | | | | | | | | | | |
| 86 | Add Net Adjustments | | | - | - | | - | - | - | - | - | - | - | - | - | - | - |
| 87 | | | | | | | | | | | | | | | | | |
| 88 | Working Capital Billed | Account 1163-1424 2/ | | | | | | | | | | | | | | | - |
| 89 | | | | | | | | | | | | | | | | | |
| 90 | Monthly (Over)/Under Recovery | | $ 1,490 | $ 1,490 | $ 1,495 | $ 1,501 | $ 1,506 | $ 1,511 | $ 1,516 | $ (137) | $ (824) | $ (1,027) | $ (1,224) | $ (1,990) | $ (4,039) | $ (6,730) | $ (6,739) |
| 91 | | | | | | | | | | | | | | | | | |
| 92 | Average Monthly Balance | (ln 76 + 90)/ 2 | | $ 1,490 | $ 1,495 | $ 1,501 | $ 1,506 | $ 1,511 | $ 1,516 | $ 692 | $ (479) | $ (926) | $ (1,127) | $ (1,609) | $ (3,017) | | |
| 93 | | | | | | | | | | | | | | | | | |
| 94 | Interest Rate | Prime Rate | | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | | |
| 95 | | | | | | | | | | | | | | | | | |
| 96 | Interest Applied | ln 92 * ln 94 / 365 * Days of Month | | $ 5 | $ 5 | $ 5 | $ 5 | $ 5 | 5 | $ 2 | $ (2) | $ (3) | $ (4) | $ (6) | $ (11) | | $ 9 |
| 97 | | | | | | | | | | | | | | | | | |
| 98 | **(Over)/Under Balance** | ln 90 + ln 96 | $ 1,490 | $ 1,495 | $ 1,501 | $ 1,506 | $ 1,511 | $ 1,516 | **$ 1,522** | $ (135) | $ (826) | $ (1,031) | $ (1,228) | $ (1,996) | $ (4,050) | $ (6,730) | (6,730) |
| 99 | | | | | | | | | | | | | | | | | |
| 100 | | | | | | | | | | | | | | | | | |
| 101 | **Calculation of Working Capital with Interest** | | | | | | | | | | | | | | | | |
| 102 | | | | | | | | | | | | | | | | | |
| 103 | **Beginning Balance** | | $ 1,490 | $ 1,490 | $ 1,495 | $ 1,501 | $ 1,506 | $ 1,511 | $ 1,516 | $ 1,522 | $ (135) | $ (826) | $ (1,031) | $ (1,228) | $ (1,996) | $ (4,050) | $ 1,490 |
| 104 | Forecast Working Capital | ln 80 | | - | - | - | - | - | - | 2,630 | 1,663 | 1,440 | 1,383 | 1,379 | 2,671 | - | 11,167 |
| 105 | Projected Rev. with interest | ln 121 * ln 126 | | - | - | - | - | - | - | (1,099) | (3,175) | (1,812) | (1,576) | (2,125) | (3,934) | (5,674) | (19,395) |
| 106 | Projected Unbilled Revenue | ln 122 * ln 126 | | | | | | | | (3,189) | (2,367) | (2,197) | (2,198) | (2,215) | (2,994) | | (15,161) |
| 107 | Reverse Prior Month Unbilled | | | | | | | | | | 3,189 | 2,367 | 2,197 | 2,198 | 2,215 | 2,994 | 15,161 |
| 108 | Add Net Adjustments | ln 86 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 109 | Working Capital Billed | ln 88 | - | | | - | | | | | | | | | | | - |
| 110 | WC Unbilled | | | | | | | | | - | - | - | - | - | - | - | - |
| 111 | Reverse WC Unbilled | | | | | | | | | | - | - | - | - | - | - | - |
| 112 | Add Interest | ln 96 | | - | - | - | - | - | - | 2 | (2) | (3) | (4) | (6) | (11) | | (23) |
| 113 | Monthly (Over)/Under Recovery | | $ 1,490 | $ 1,490 | $ 1,495 | $ 1,501 | $ 1,506 | $ 1,511 | $ 1,516 | $ (135) | $ (826) | $ (1,031) | $ (1,228) | $ (1,996) | $ (4,050) | $ (6,730) | $ (6,762) |
| 114 | | | | | | | | | | | | | | | | | |
| 115 | Average Monthly Balance | | | $ 1,490 | $ 1,495 | $ 1,501 | $ 1,506 | $ 1,511 | $ 1,516 | $ 693 | $ (480) | $ (928) | $ (1,130) | $ (1,612) | $ (3,023) | | |
| 116 | | | | | | | | | | | | | | | | | |
| 117 | Interest Applied | ln 94 * ln 115 / 365 * Days of Month | | 5 | 5 | 5 | 5 | 5 | 5 | 3 | (2) | (3) | (4) | (6) | (11) | - | $ 9 |
| 118 | | | | | | | | | | | | | | | | | |
| 119 | **(Over)/Under Balance** | -ln 112 +ln 113 + ln 117 | $ 1,490 | $ 1,495 | $ 1,501 | $ 1,506 | $ 1,511 | $ 1,516 | $ 1,522 | $ (135) | $ (826) | $ (1,031) | $ (1,228) | $ (1,996) | $ (4,050) | $ (6,730) | $ (6,730) |
| 120 | | | | | | | | | | | | | | | | | |
| 121 | Forecast Therm Sales | ln 51 | | | | | | | | 1,099,305 | 3,174,528 | 1,812,041 | 1,576,174 | 2,124,689 | 3,934,454 | 5,674,179 | 19,395,370 |
| 122 | Unbilled Therm | ln 53 | | | | | | | | 3,189,452 | 2,367,359 | 2,197,398 | 2,198,063 | 2,214,949 | 2,994,246 | (2,679,933) | |
| 123 | | | | | | | | | | | | | | | | | |
| 124 | Working Cap. Rate w/out Int. | Sch. 3, pg. 4, ln 226 col. (c) | | | | | | | | $0.0010 | $0.0010 | $0.0010 | $0.0010 | $0.0010 | $0.0010 | $0.0010 | |
| 125 | | | | | | | | | | | | | | | | | |
| 126 | Working Capital Rate w/ Int. | Sch. 3, pg. 4, ln 226 col. (d) | | | | | | | | $0.0010 | $0.0010 | $0.0010 | $0.0010 | $0.0010 | $0.0010 | $0.0010 | |

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128
129

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

3 **Off Peak 2018 Summer Cost of Gas Filing**

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

| Line | (a) | Days in Month (b) | Prior Period Balance Plus Nov Collections October 31, 2017 (c) | Nov-17 30 (d) | Dec-17 31 (e) | Jan-18 31 (f) | Feb-18 28 (g) | Mar-18 31 (h) | Apr-18 30 (i) | May-18 31 (j) | Jun-18 30 (k) | Jul-18 31 (l) | Aug-18 31 (m) | Sep-18 30 (n) | Oct-18 31 (o) | Nov-18 30 (p) | Off Peak Period Total (q) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 135 | **Account 8840-2-0000-10-1163-1754 (formerly, 175.54) Bad Debt (Over)/Under Balance - Interest Calculation** | | | | | | | | | | | | | | | | |
| 137 | Forecast Direct Gas Costs | ln 32 | | $ - | $ - | $ - | $ - | $ - | $ - | $ 1,582,430 | $ 1,000,632 | $ 866,744 | $ 832,325 | $ 829,937 | $ 1,607,041 | $ - | 6,719,108 |
| 138 | Forecast Working Capital | ln 104 + (May includes prior period ) | | - | - | - | - | - | - | 4,120 | 1,663 | 1,440 | 1,383 | 1,379 | 2,671 | | 12,657 |
| 139 | Prior Period Balance (with Refund) | ln 19 / 6 | | - | - | - | - | - | - | (127,917) | (127,917) | (127,917) | (127,917) | (127,917) | (127,917) | | (767,503) |
| 140 | Total Forecast Direct Gas Costs & Working Capital | | | - | - | - | - | - | - | 1,458,632 | 874,378 | 740,267 | 705,791 | 703,399 | 1,481,795 | - | 6,731,765 |
| 142 | **Beginning Balance** | Account 1163-1754 1/ | **$ 96,420** | $ 96,420 | $ 96,757 | $ 97,106 | $ 97,457 | $ 97,774 | $ 98,127 | $ 98,470 | $ 46,302 | $ 18,368 | $ 346 | $ (17,080) | $ (43,643) | $ (102,879) | $ 96,420 |
| 143 | | **Oct Collections & Unbilled** | | | | | | | | | | | | | | | |
| 144 | Forecast Bad Debt | ln 140 * 0.0111 | | - | - | - | - | - | - | 16,191 | 9,706 | 8,217 | 7,834 | 7,808 | 16,448 | | 66,203 |
| 146 | Projected Revenues w/o int | ln 182 * ln 185 | | - | - | - | - | - | - | (17,589) | (50,792) | (28,993) | (25,219) | (33,995) | (62,951) | (90,787) | (310,326) |
| 147 | Projected Unbilled Revenue | ln 183 * ln 185 | | | | | | | | (51,031) | (37,878) | (35,158) | (35,169) | (35,439) | (47,908) | | (242,583) |
| 148 | Reverse Prior Month Unbilled | | | | | | | | | | 51,031 | 37,878 | 35,158 | 35,169 | 35,439 | 47,908 | 242,583 |
| 149 | | | | | | | | | | | | | | | | | - |
| 150 | Bad Debt Billed | Account 1163-1754 2/ | | | - | | - | - | - | | | | | | | | - |
| 151 | Add Net Adjustments | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 153 | Monthly (Over)/Under Recovery | | $ 96,420 | $ 96,420 | $ 96,757 | $ 97,106 | $ 97,457 | $ 97,774 | $ 98,127 | $ 46,041 | $ 18,368 | $ 312 | $ (17,050) | $ (43,537) | $ (102,615) | $ (145,758) | $ (147,703) |
| 155 | Average Monthly Balance | (ln 142 + 153)/ 2 | | $ 96,420 | $ 96,757 | $ 97,106 | $ 97,457 | $ 97,774 | $ 98,127 | $ 72,255 | $ 32,335 | $ 9,340 | $ (8,352) | $ (30,308) | $ (73,129) | $ (124,319) | |
| 157 | Interest Rate | Prime Rate | | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | | |
| 159 | Interest Applied | ln 155 * ln 157 / 365 * Days of Mo. | | $ 337 | $ 349 | $ 351 | $ 318 | $ 353 | $ 343 | $ 261 | $ 113 | $ 34 | $ (30) | $ (106) | (264) | | $ 2,057 |
| 161 | **(Over)/Under Balance** | ln 153 + ln 159 | $ 96,420 | $ 96,757 | $ 97,106 | $ 97,457 | $ 97,774 | $ 98,127 | **$ 98,470** | $ 46,302 | $ 18,481 | $ 346 | $ (17,080) | $ (43,643) | $ (102,879) | $ (124,319) | (145,645) |
| 164 | **Calculation of Bad Debt with Interest** | | | | | | | | | | | | | | | | |
| 166 | **Beginning Balance** | | $ 96,420 | $ 96,420 | $ 96,757 | $ 97,106 | $ 97,457 | $ 97,774 | $ 98,127 | $ 98,470 | $ 46,302 | $ 18,482 | $ 460 | $ (16,965) | $ (43,528) | $ (102,765) | $ 96,420 |
| 167 | Forecast Bad Debt | ln 144 | | - | - | - | - | - | - | 16,191 | 9,706 | 8,217 | 7,834 | 7,808 | 16,448 | - | 66,203 |
| 168 | Projected Revenues with int. | ln 182 * 187 | | - | - | - | - | - | - | (17,589) | (50,792) | (28,993) | (25,219) | (33,995) | (62,951) | (90,787) | (310,326) |
| 169 | Projected Unbilled Revenue | ln 183 * 187 | | | | | | | | (51,031) | (37,878) | (35,158) | (35,169) | (35,439) | (47,908) | | (242,583) |
| 170 | Reverse Prior Month Unbilled | | | | | | | | | | 51,031 | 37,878 | 35,158 | 35,169 | 35,439 | 47,908 | 242,583 |
| 171 | Bad Debt Billed | ln 150 | - | | - | - | - | - | - | | | | | | | | - |
| 172 | Add Interest | ln 159 | | - | - | - | - | - | - | 261 | 113 | 34 | (30) | (106) | (264) | | 7 |
| 173 | Add Net Adjustments | ln 151 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 174 | Monthly (Over)/Under Recovery | | $ 96,420 | $ 96,420 | $ 96,757 | $ 97,106 | $ 97,457 | $ 97,774 | $ 98,127 | $ 46,302 | $ 18,482 | $ 459 | $ (16,966) | $ (43,529) | $ (102,764) | $ (145,643) | $ (147,695) |
| 176 | Average Monthly Balance | (ln 166 + 174)/ 2 | | $ 96,420 | $ 96,757 | $ 97,106 | $ 97,457 | $ 97,774 | $ 98,127 | $ 72,386 | $ 32,392 | $ 9,470 | $ (8,253) | $ (30,247) | $ (73,146) | $ (124,204) | |
| 178 | Interest Applied | ln 157 * ln 176 / 365 * Days of Month | | 337 | 349 | 351 | 318 | 353 | 343 | 261 | 113 | 34 | (30) | (106) | (264) | - | $ 2,059 |
| 180 | **(Over)/Under Balance** | -ln 172 +ln 174 + ln 178 | $ 96,420 | $ 96,757 | $ 97,106 | $ 97,457 | $ 97,774 | $ 98,127 | $ 98,470 | $ 46,302 | $ 18,482 | $ 460 | $ (16,965) | $ (43,528) | $ (102,765) | $ (145,643) | $ (145,644) |
| 182 | Forecast Therm Sales | ln 51 | | | | | | | | 1,099,305 | 3,174,528 | 1,812,041 | 1,576,174 | 2,124,689 | 3,934,454 | 5,674,179 | 19,395,370 |
| 183 | Unbilled Therm | ln 53 | | | | | | | | 3,189,452 | 2,367,359 | 2,197,398 | 2,198,063 | 2,214,949 | 2,994,246 | | |
| 185 | COG Rate Without Interest | Sch. 3, pg. 4, ln 243 col. (c) | | | | | | | | $0.0160 | $0.0160 | $0.0160 | $0.0160 | $0.0160 | $0.0160 | $0.0160 | |
| 187 | COG With Interest | Sch. 3, pg. 4, ln 243 col. (d) | | | | | | | | $0.0160 | $0.0160 | $0.0160 | $0.0160 | $0.0160 | $0.0160 | $0.0160 | |
| 191 | **Total Interest** | lns 46 + 117 + 178 | | $ (2,339) | $ (2,425) | $ (2,434) | $ (2,207) | $ (2,451) | $ (2,380) | $ (2,964) | $ (3,380) | $ (3,244) | $ (2,691) | $ (2,513) | $ (3,561) | $ - | $ (32,590) |

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

**Off Peak 2018 Summer Cost of Gas Filing**
**COG (Over)/Under Cumulative Recovery Balances and Interest Calculation**

1 **Liberty Utilities (EnergyNorth Natural Gas) Corp.**
2
3 **Off Peak 2018 Summer Cost of Gas Filing**
4 **Adjustments to Gas Costs**
5

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | **Adjustments** | **Prior Period Adjustments** | **Refunds from Suppliers / Pipelines** | **Broker Revenue** | **Fuel Financing** | **Transportation CGA Revenues** | **Interruptible Sales Margin** | **Off System Sales Margin** | **Capacity Release Margin** | **Net Option Premiums** | **Fixed Price Option Administrative Costs** | **Total Adjustments** |
| 7 | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (m) |
| 8 | | | | | | | | | | | | |
| 9 | Nov-16 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 10 | Dec-16 | - | - | - | - | - | - | - | - | - | - | - |
| 11 | Jan-17 | - | - | - | - | - | - | - | - | - | - | - |
| 12 | Feb-17 | - | | - | - | - | - | - | - | - | - | - |
| 13 | Mar-17 | - | - | - | - | - | - | - | - | - | - | - |
| 14 | Apr-17 | - | - | - | - | - | - | - | - | - | - | - |
| 15 | May-17 | - | - | - | - | - | - | - | - | - | - | - |
| 16 | Jun-17 | - | - | - | - | - | - | - | - | - | - | - |
| 17 | Jul-17 | - | - | - | - | - | - | - | - | - | - | - |
| 18 | Aug-17 | - | - | - | - | - | - | - | - | - | - | - |
| 19 | Sep-17 | - | - | - | - | - | - | - | - | - | - | - |
| 20 | Oct-17 | - | - | - | - | - | - | - | - | - | - | - |
| 21 | | | | | | | | | | | | |
| 22 | Total Off Peak Period | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |

**REDACTED**

| Line | | Peak | Reference | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Off Peak May - Oct Total | Peak May - Oct Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | **Liberty Utilities (EnergyNorth Natural Gas) Corp.** | | | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | **Off Peak 2018 Summer Cost of Gas Filing** | | | | | | | | | | |
| 4 | **Demand Costs** | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | Off Peak | Peak |
| 7 | | | | | | | | | | May - Oct | May - Oct |
| 8 | | Peak | Reference | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Total | Total |
| 9 | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) |
| 10 | | | | | | | | | | | |
| 11 | **Supply** | | | | | | | | | | |
| 12 | Niagara Supply | | Sch 5B, ln 9 * Sch 5C ln 9 x days | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 13 | Subtotal Supply Demand & Reservation Charges | | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 14 | | | | | | | | | | | |
| 15 | **Pipeline** | | | | | | | | | | |
| 16 | Iroquois Gas Trans Service RTS 470-0 | | Sch 5B, ln 12 * Sch 5C ln 12 x days | [redacted] | | | | | | | |
| 17 | Tenn Gas Pipeline 95346 Z5-Z6 | | Sch 5B, ln 13 * Sch 5C ln 14 x days | | | | | | | | |
| 18 | Tenn Gas Pipeline 2302 Z5-Z6 | | Sch 5B, ln 14 * Sch 5C ln 16 x days | | | | | | | | |
| 19 | Tenn Gas Pipeline 8587 Z0-Z6 | | Sch 5B, ln 15 * Sch 5C ln 18 x days | | | | | | | | |
| 20 | Tenn Gas Pipeline 8587 Z1-Z6 | | Sch 5B, ln 16 * Sch 5C ln 20 x days | | | | | | | | |
| 21 | Tenn Gas Pipeline 8587 Z4-Z6 | | Sch 5B, ln 17 * Sch 5C ln 22 x days | | | | | | | | |
| 22 | Tenn Gas Pipeline (Dracut) 42076 Z6-Z6 | | Sch 5B, ln 18 * Sch 5C ln 24 x days | | | | | | | | |
| 23 | Tenn Gas Pipeline (Concord Lateral) Z6-Z6 | | Sch 5B, ln 19 * Sch 5C ln 26 x days | | | | | | | | |
| 24 | Portland Natural Gas Trans Service | | Sch 5B, ln 20 * Sch 5C ln 28 x days | | | | | | | | |
| 25 | ANE (TransCanada via Union to Iroquois) | | Sch 5B, ln 21 * Sch 5C ln 44 x days | | | | | | | | |
| 26 | Tenn Gas Pipeline Z4-Z6 stg 632 | peak | Sch 5B, ln 22 * Sch 5C ln 30 x days | | | | | | | | |
| 27 | Tenn Gas Pipeline Z4-Z6 stg 11234 | peak | Sch 5B, ln 23 * Sch 5C ln 32 x days | | | | | | | | |
| 28 | Tenn Gas Pipeline Z5-Z6 stg 11234 | peak | Sch 5B, ln 24 * Sch 5C ln 34 x days | | | | | | | | |
| 29 | National Fuel FST 2358 | peak | Sch 5B, ln 25 * Sch 5C ln 36 x days | | | | | | | | |
| 30 | | | | | | | | | | | |
| 31 | Subtotal Pipeline Demand Charges | | | $ 1,361,854 | $ 1,367,689 | $ 1,367,689 | $ 1,367,689 | $ 1,367,689 | $ 1,367,689 | $ 6,891,047 | $ 1,309,251 |
| 32 | | | | | | | | | | | |
| 33 | **Peaking Supply** | | | | | | | | | | |
| 34 | Tenn Gas Pipeline (Concord Lateral) Z6-Z6 | peak | Sch 5B, ln 28 * Sch 5C ln 26 x days | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 35 | Granite Ridge Demand | peak | Sch 5B, ln 29 * Sch 5C ln 47 x days | - | - | - | - | - | - | - | - |
| 36 | DOMAC Demand NSB041 | peak | Per Contract | - | - | - | - | - | - | - | |
| 37 | Subtotal Peaking Demand Charges | | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 38 | | | | | | | | | | | |
| 39 | **Subtotal Supply, Pipeline & Peaking** | | ln 13 + ln 31 + ln 37 | $ 1,361,854 | $ 1,367,689 | $ 1,367,689 | $ 1,367,689 | $ 1,367,689 | $ 1,367,689 | $ 6,891,047 | $ 1,309,251 |
| 40 | | | | | | | | | | | |
| 41 | Less Transportation Capacity Credit | | | $ (591,453) | $ (593,987) | $ (593,987) | $ (593,987) | $ (593,987) | $ (593,987) | $ (2,992,782) | $ (568,608) |
| 42 | | | | | | | | | | | |
| 43 | **Total Supply, Pipeline & Peaking Demand** | | | $ 770,401 | $ 773,702 | $ 773,702 | $ 773,702 | $ 773,702 | $ 773,702 | $ 3,898,265 | $ 740,643 |
| 44 | | | | | | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | **Liberty Utilities (EnergyNorth Natural Gas) Corp.** | | | | | | | | | | |
| 3 | **Off Peak 2018 Summer Cost of Gas Filing** | | | | | | | | | | |
| 4 | **Demand Costs** | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | Off Peak | Peak |
| 7 | | | | | | | | | | May - Oct | May - Oct |
| 8 | | Peak | Reference | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Total | Total |
| 9 | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) |
| 45 | **Storage** | | | | | | | | | | |
| 46 | Dominion - Demand | peak | Sch 5B, ln 33 * Sch 5C ln 51 x days | $ 1,745 | $ 1,745 | $ 1,745 | $ 1,745 | $ 1,745 | $ 1,745 | $ - | $ 10,470 |
| 47 | Dominion - Storage | peak | Sch 5B, ln 34 * Sch 5C ln 52 x days | 1,489 | 1,489 | 1,489 | 1,489 | 1,489 | 1,489 | - | 8,935 |
| 48 | Honeoye - Demand | peak | Sch 5B, ln 35 * Sch 5C ln 55 x days | 8,744 | 8,744 | 8,744 | 8,744 | 8,744 | 8,744 | - | 52,466 |
| 49 | National Fuel - Demand | peak | Sch 5B, ln 37 * Sch 5C ln 57 x days | 14,533 | 14,533 | 14,533 | 14,533 | 14,533 | 14,533 | - | 87,200 |
| 50 | National Fuel - Capacity | peak | Sch 5B, ln 38 * Sch 5C ln 58 x days | 24,551 | 24,551 | 24,551 | 24,551 | 24,551 | 24,551 | - | 147,308 |
| 51 | Tenn Gas Pipeline - Demand | peak | Sch 5B, ln 39 * Sch 5C ln 61 x days | 32,631 | 32,631 | 32,631 | 32,631 | 32,631 | 32,631 | - | 195,783 |
| 52 | Tenn Gas Pipeline - Capacity | peak | Sch 5B, ln 40 * Sch 5C ln 62 x days | 31,988 | 31,988 | 31,988 | 31,988 | 31,988 | 31,988 | - | 191,928 |
| 53 | | | | | | | | | | | |
| 54 | **Subtotal Storage Demand Costs** | | | $ 115,682 | $ 115,682 | $ 115,682 | $ 115,682 | $ 115,682 | $ 115,682 | $ - | $ 694,091 |
| 55 | | | | | | | | | | | |
| 56 | Less Transportation Capacity Credit | | | $ (50,241) | $ (50,241) | $ (50,241) | $ (50,241) | $ (50,241) | $ (50,241) | $ - | $ (301,444) |
| 57 | | | | | | | | | | | |
| 58 | **Total Storage Demand Costs** | | ln 54 + ln 56 | $ 65,441 | $ 65,441 | $ 65,441 | $ 65,441 | $ 65,441 | $ 65,441 | $ - | $ 392,647 |
| 59 | | | | | | | | | | | |
| 60 | **Total Demand Charges** | | ln 39 + ln 54 | $ 1,477,535 | $ 1,483,371 | $ 1,483,371 | $ 1,483,371 | $ 1,483,371 | $ 1,483,371 | $ 6,891,047 | $ 2,003,342 |
| 61 | | | | | | | | | | | |
| 62 | Total Transportation Capacity Credit | | ln 41 + ln 56 | $ (641,694) | $ (644,228) | $ (644,228) | $ (644,228) | $ (644,228) | $ (644,228) | $ (2,992,782) | $ (870,051) |
| 63 | | | | | | | | | | | |
| 64 | **Total Demand Charges less Cap. Cr.** | | ln 60 + ln 62 | $ 835,842 | $ 839,143 | $ 839,143 | $ 839,143 | $ 839,143 | $ 839,143 | $ 3,898,265 | $ 1,133,290 |
| 65 | | | | | | | | | | | |
| 66 | | | | | | | | | | | |
| 67 | Monthly Off Peak Demand | | | $ 1,143,645 | $ 1,149,480 | $ 1,149,480 | $ 1,149,480 | $ 1,149,480 | $ 1,149,480 | $ 6,891,047 | $ - |
| 68 | Monthly Off Peak Transportation Cap Credit | | | (496,685) | (499,219) | (499,219) | (499,219) | (499,219) | (499,219) | (2,992,782) | - |
| 69 | **Total Off Peak Demand** | | | $ 646,960 | $ 650,261 | $ 650,261 | $ 650,261 | $ 650,261 | $ 650,261 | $ 3,898,265 | $ - |
| 70 | | | | | | | | | | | |
| 71 | Monthly Peak Demand | | | $ 333,890 | $ 333,890 | $ 333,890 | $ 333,890 | $ 333,890 | $ 333,890 | $ - | $ 2,003,342 |
| 72 | Monthly Peak Transportation Cap Credit | | | (145,009) | (145,009) | (145,009) | (145,009) | (145,009) | (145,009) | - | (870,051) |
| 73 | **Total Peak Demand** | | | $ 188,882 | $ 188,882 | $ 188,882 | $ 188,882 | $ 188,882 | $ 188,882 | $ - | $ 1,133,290 |

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

2

3 **Off Peak 2018 Summer Cost of Gas Filing**

4 **Demand Volumes**

5

| Line | | Peak | Reference | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 |
|---|---|---|---|---|---|---|---|---|---|
| 7 | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) |
| 8 | **Supply** | | | | | | | | |
| 9 | Niagara Supply | | | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | | | | | | | | | |
| 11 | **Pipeline** | | | | | | | | |
| 12 | Iroquois Gas Trans Service | | RTS 470-01 | 4,047 | 4,047 | 4,047 | 4,047 | 4,047 | 4,047 |
| 13 | Tenn Gas Pipeline | | 95346 Z5-Z6 | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 |
| 14 | Tenn Gas Pipeline | | 2302 Z5-Z6 | 3,122 | 3,122 | 3,122 | 3,122 | 3,122 | 3,122 |
| 15 | Tenn Gas Pipeline (long haul) | | 8587 Z0-Z6 | 7,035 | 7,035 | 7,035 | 7,035 | 7,035 | 7,035 |
| 16 | Tenn Gas Pipeline (long haul) | | 8587 Z1-Z6 | 14,561 | 14,561 | 14,561 | 14,561 | 14,561 | 14,561 |
| 17 | Tenn Gas Pipeline (short haul) | | 8587 Z4-Z6 | 3,811 | 3,811 | 3,811 | 3,811 | 3,811 | 3,811 |
| 18 | Tenn Gas Pipeline | | 42076 FTA Z6-Z6 | 20,000 | 20,000 | 20,000 | 20,000 | 20,000 | 20,000 |
| 19 | Tenn Gas Pipeline (Concord Lateral) | | Firm Transportation | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 |
| 20 | Portland Natural Gas Trans Service | | FT-1999-001 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 |
| 21 | ANE (TransCanada via Union to Iroquois) | | Union Parkway to Iroquois | 4,047 | 4,047 | 4,047 | 4,047 | 4,047 | 4,047 |
| 22 | Tenn Gas Pipeline (short haul) | peak | 632 Z4-Z6 (stg) | 15,265 | 15,265 | 15,265 | 15,265 | 15,265 | 15,265 |
| 23 | Tenn Gas Pipeline (short haul) | peak | 11234 Z4-Z6(stg) | 7,082 | 7,082 | 7,082 | 7,082 | 7,082 | 7,082 |
| 24 | Tenn Gas Pipeline (short haul) | peak | 11234 Z5-Z6(stg) | 1,957 | 1,957 | 1,957 | 1,957 | 1,957 | 1,957 |
| 25 | National Fuel | peak | FST N02358 | 6,098 | 6,098 | 6,098 | 6,098 | 6,098 | 6,098 |
| 26 | | | | | | | | | |
| 27 | **Peaking** | | | | | | | | |
| 28 | Tenn Gas Pipeline (Concord Lateral) | peak | | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | Granite Ridge Demand | peak | | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | DOMAC Liquid Demand Charge | peak | NSB041 | | | | | | |
| 31 | | | | | | | | | |
| 32 | **Storage** | | | | | | | | |
| 33 | Dominion - Demand | peak | GSS 300076 | 934 | 934 | 934 | 934 | 934 | 934 |
| 34 | Dominion - Capacity Reservation | peak | GSS 300076 | 102,700 | 102,700 | 102,700 | 102,700 | 102,700 | 102,700 |
| 35 | Honeoye - Demand | peak | SS-NY | 1,362 | 1,362 | 1,362 | 1,362 | 1,362 | 1,362 |
| 36 | Honeoye - Capacity | peak | SS-NY | 245,380 | 245,380 | 245,380 | 245,380 | 245,380 | 245,380 |
| 37 | National Fuel - Demand | peak | FSS-1 2357 | 6,098 | 6,098 | 6,098 | 6,098 | 6,098 | 6,098 |
| 38 | National Fuel - Capacity Reservation | peak | FSS-1 2357 | 670,800 | 670,800 | 670,800 | 670,800 | 670,800 | 670,800 |
| 39 | Tenn Gas Pipeline - Demand | peak | FS-MA 523 | 21,844 | 21,844 | 21,844 | 21,844 | 21,844 | 21,844 |
| 40 | Tenn Gas Pipeline - Cap. Reservations | peak | FS-MA 523 | 1,560,391 | 1,560,391 | 1,560,391 | 1,560,391 | 1,560,391 | 1,560,391 |

1 **Liberty Utilities (EnergyNorth Natural Gas) Corp.**
2 **d/b/a Liberty Utilities**
3 **Off Peak 2018 Summer Cost of Gas Filing**
4 **Demand Rates**

| Line | | | | | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Nov-18 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | | | | | | | | | | | |
| 6 | **Tariff Rates** | | | | 31 | 30 | 31 | 31 | 30 | 31 | 184 |
| 7 | | | | | Unit Rate | Unit Rate | Unit Rate | Unit Rate | Unit Rate | Unit Rate | Avg Rate |
| 8 | **Supply** | | | | | | | | | | |
| 9 | Niagara Supply | | $0.0000 | Per Contract | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 |
| 10 | | | | | | | | | | | |
| 11 | **Pipeline** | | | | | | | | | | |
| 12 | Iroquois Gas Trans Service | RTS 470-01 | $5.9982 | First Revised Sheet No. 4 | $0.1935 | $0.1999 | $0.1935 | $0.1935 | $0.1999 | $0.1935 | $0.1956 |
| 13 | | | | | | | | | | | |
| 14 | Tenn Gas Pipeline | 95346 Z5-Z6 | $7.1563 | 10th Rev Sheet No. 14 | $0.4746 | $0.4904 | $0.4746 | $0.4746 | $0.4904 | $0.4746 | $0.4799 |
| 15 | | | | | | | | | | | |
| 16 | Tenn Gas Pipeline | 2302 Z5-Z6 | $7.1563 | 10th Rev Sheet No. 14 | $0.2308 | $0.2385 | $0.2308 | $0.2308 | $0.2385 | $0.2308 | $0.2334 |
| 17 | | | | | | | | | | | |
| 18 | Tenn Gas Pipeline | 8587 Z0-Z6 | $23.2169 | FT-A (Z0 - Z6) | $0.7489 | $0.7739 | $0.7489 | $0.7489 | $0.7739 | $0.7489 | $0.7573 |
| 19 | | | | | | | | | | | |
| 20 | Tenn Gas Pipeline | 8587 Z1-Z6 | $20.6088 | FT-A (Z1 - Z6) | $0.6648 | $0.6870 | $0.6648 | $0.6648 | $0.6870 | $0.6648 | $0.6722 |
| 21 | | | | | | | | | | | |
| 22 | Tenn Gas Pipeline | 8587 Z4-Z6 | $8.1475 | FT-A (Z4 - Z6) | $0.2628 | $0.2716 | $0.2628 | $0.2628 | $0.2716 | $0.2628 | $0.2657 |
| 23 | | | | | | | | | | | |
| 24 | TGP Dracut | 42076 FTA Z6-Z6 | $4.7447 | 10th Rev Sheet No. 14 | $0.1531 | $0.1582 | $0.1531 | $0.1531 | $0.1582 | $0.1531 | $0.1548 |
| 25 | | | | | | | | | | | |
| 26 | TGP Concord Lateral | Firm Transportatio | $12.1910 | Per contract | $0.3933 | $0.4064 | $0.3933 | $0.3933 | $0.4064 | $0.3933 | $0.3976 |
| 27 | | | | | | | | | | | |
| 28 | Portland Natural Gas | FT-1999-001 | $25.9843 | Part 4.1 v.5.0.0 | $0.8382 | $0.8661 | $0.8382 | $0.8382 | $0.8661 | $0.8382 | $0.8475 |
| 29 | | | | | | | | | | | |
| 30 | Tenn Gas Pipeline | 632 Z4-Z6 (stg) | $8.1475 | 10th Rev Sheet No. 14 | $0.2628 | $0.2716 | $0.2628 | $0.2628 | $0.2716 | $0.2628 | $0.2657 |
| 31 | | | | | | | | | | | |
| 32 | Tenn Gas Pipeline | 11234 Z4-Z6(stg) | $8.1475 | 10th Rev Sheet No. 14 | $0.2628 | $0.2716 | $0.2628 | $0.2628 | $0.2716 | $0.2628 | $0.2657 |
| 33 | | | | | | | | | | | |
| 34 | Tenn Gas Pipeline | 11234 Z5-Z6(stg) | $7.1563 | 10th Rev Sheet No. 14 | $0.2308 | $0.2385 | $0.2308 | $0.2308 | $0.2385 | $0.2308 | $0.2334 |
| 35 | | | | | | | | | | | |
| 36 | National Fuel | FST N02358 | $3.6293 | 4.010 Version 17.0.0 Pg 1 | $0.1171 | $0.1210 | $0.1171 | $0.1171 | $0.1210 | $0.1171 | $0.1184 |
| 37 | | | | | | | | | | | |
| 38 | ANE Union Gas | | $3.4020 | | | | | | | | |
| 39 | TransCanada Pipelines Limited | | $15.26585 | Union Parkway to Iroquois | | | | | | | |
| 40 | Delivery Pressure Demand Charge | | 1.0123 | Union Parkway to Iroquois | | | | | | | |
| 41 | Sub Total Demand Charges | | 19.6801 | | | | | | | | |
| 42 | Conversion rate GJ to MMBTU | | 1.0551 | | | | | | | | |
| 43 | Conversion rate to US$ | | 1.3351 | updated 7/28/15 | | | | | | | |
| 44 | Demand Rate/US$ | | $15.5526 | | $0.5017 | $0.5184 | $0.5017 | $0.5017 | $0.5184 | $0.5017 | $0.5073 |
| 45 | | | | | | | | | | | |
| 46 | **Peaking** | | | | | | | | | | |
| 47 | Granite Ridge Demand | | $0.0000 | Per Contract | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 |
| 48 | DOMAC Demand NSB041 | | $0.0000 | Per Contract | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 |
| 49 | | | | | | | | | | | |
| 50 | **Storage** | | | | | | | | | | |
| 51 | Dominion - Demand | GSS 300076 | $1.8683 | GSS Settled,Tariff Rec #10.30 | $0.0603 | $0.0623 | $0.0603 | $0.0603 | $0.0623 | $0.0603 | $0.0611 |
| 52 | 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 |
| 53 | | | $1.8828 | | $0.0607 | $0.0628 | $0.0607 | $0.0607 | $0.0628 | $0.0607 | $0.0615 |
| 54 | | | | | | | | | | | |
| 55 | Honeoye - Demand | SS-NY | $6.4187 | Sub 1st Rev Sheet No. 5 | $0.2071 | $0.2140 | $0.2071 | $0.2071 | $0.2140 | $0.2071 | $0.2098 |
| 56 | | | | | | | | | | | |
| 57 | National Fuel - Demand | FSS-1 2357 | $2.3833 | 4.020 Version 13.0.0 Pg 1 | $0.0769 | $0.0794 | $0.0769 | $0.0769 | $0.0794 | $0.0769 | $0.0779 |
| 58 | National Fuel - Capacity | FSS-1 2357 | $0.0366 | 4.020 Version 13.0.0 Pg 1 | $0.0012 | $0.0012 | $0.0012 | $0.0012 | $0.0012 | $0.0012 | $0.0012 |
| 59 | | | $2.4199 | | $0.0781 | $0.0807 | $0.0781 | $0.0781 | $0.0807 | $0.0781 | $0.0791 |
| 60 | | | | | | | | | | | |
| 61 | Tenn Gas Pipeline | FS-MA 523 | $1.4938 | 13th Rev Sheet No.61 | $0.0482 | $0.0498 | $0.0482 | $0.0482 | $0.0498 | $0.0482 | $0.0488 |
| 62 | Tenn Gas Pipeline - Space | FS-MA 523 | $0.0205 | 13th Rev Sheet No.61 | $0.0007 | $0.0007 | $0.0007 | $0.0007 | $0.0007 | $0.0007 | $0.0007 |
| 63 | | | $1.5143 | | $0.0488 | $0.0505 | $0.0488 | $0.0488 | $0.0505 | $0.0488 | $0.0495 |
| 64 | | | | | | | | | | | |
| 65 | | | | | | | | | | | |

| Ln | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **Liberty Utilities (EnergyNorth Natural Gas) Corp.** | | | | | | | | **REDACTED** |
| 2 | | | | | | | | | |
| 3 | **Off Peak 2018 Summer Cost of Gas Filing** | | | | | | | | |
| 4 | **Supply and Commodity Costs, Volumes and Rates** | | | | | | | | |
| 5 | | | | | | | | | Off-Peak |
| 6 | For Month of: | Reference | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | May - Oct |
| 7 | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) |
| 8 | | | | | | | | | |
| 9 | **Supply and Commodity Costs** | | | | | | | | |
| 10 | | | | | | | | | |
| 11 | **Pipeline Gas:** | | | | | | | | |
| 12 | Dawn Supply | ln 63 * ln 102 | [redacted] | | | | | | |
| 13 | Niagara Supply | ln 64 * ln 107 | | | | | | | |
| 14 | TGP Supply (Gulf) | ln 65 * ln 123 | | | | | | | |
| 15 | Dracut Supply 1 - Baseload | ln 66 * ln 112 | | | | | | | |
| 16 | Dracut Supply 2 - Swing | ln 67 * ln 117 | | | | | | | |
| 17 | City Gate Delivered Supply | ln 68 * ln 129 | | | | | | | |
| 18 | LNG Truck | ln 69 * ln 131 | | | | | | | |
| 19 | Propane Truck | ln 70 * ln 133 | | | | | | | |
| 20 | PNGTS | ln 71 * ln 138 | | | | | | | |
| 21 | TGP Supply (Zone 4) | ln 72 * ln 143 | | | | | | | |
| 22 | | | | | | | | | |
| 23 | Subtotal Pipeline Gas Costs | | $ 1,312,823 | $ 1,063,113 | $ 1,034,000 | $ 981,160 | $ 894,573 | $ 1,286,870 | $ 6,588,692 |
| 24 | | | | | | | | | |
| 25 | **Volumetric Transportation Costs** | | | | | | | | |
| 26 | Dawn Supply | ln 63 * ln 176 | [redacted] | | | | | | |
| 27 | Niagara Supply | ln 64 * ln 187 | | | | | | | |
| 28 | TGP Supply (Zone 4) | ln 72 * ln 224 | | | | | | | |
| 29 | Dracut Supply 1 - Baseload | ln 66 * ln 235 | | | | | | | |
| 30 | Dracut Supply 2 - Swing | ln 67 * ln 235 | | | | | | | |
| 31 | City Gate Delivered Supply | ln 68 * ln 235 | | | | | | | |
| 32 | TGP Storage - Withdrawals | ln 77 * ln 165 | | | | | | | |
| 33 | | | | | | | | | |
| 34 | **Total Volumetric Transportation Costs** | | $ 71,517 | $ 61,302 | $ 56,367 | $ 54,407 | $ 56,935 | $ 72,015 | $ 372,542 |
| 35 | | | | | | | | | |
| 36 | **Less - Gas Refill:** | | | | | | | | |
| 37 | LNG Truck | ln 86 * ln 150 | [redacted] | | | | | | |
| 38 | Propane | ln 87 * ln 151 | | | | | | | |
| 39 | TGP Storage Refill | ln 88 * ln 121 | | | | | | | |
| 40 | Storage Refill (Trans.) | ln 88 * ln 214 | | | | | | | |
| 41 | | | | | | | | | |
| 42 | Subtotal Refills | | $ (474,052) | $ (790,321) | $ (887,232) | $ (866,398) | $ (785,197) | $ (412,930) | $ (4,216,131) |
| 43 | | | | | | | | | |
| 44 | **Total Supply & Pipeline Commodity Costs** | ln 23 + ln 34 + ln 42 | $ 910,288 | $ 334,093 | $ 203,135 | $ 169,170 | $ 166,311 | $ 945,955 | $ 2,728,951 |
| 45 | | | | | | | | | |
| 46 | **Storage Gas:** | | | | | | | | |
| 47 | TGP Storage - Withdrawals | ln 77 * ln 157 | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 48 | | | | | | | | | |
| 49 | **Produced Gas:** | | | | | | | | |
| 50 | LNG Vapor | ln 80 * ln 145 | [redacted] | | | | | | |
| 51 | Propane | ln 81 * ln 147 | | | | | | | |
| 52 | | | | | | | | | |
| 53 | **Total Produced Gas** | ln 50 + ln 51 | $ 25,182 | $ 16,278 | $ 13,348 | $ 12,895 | $ 13,365 | $ 10,825 | $ 91,892 |
| 54 | | | | | | | | | |
| 55 | | | | | | | | | |
| 56 | **Total Commodity Gas & Trans. Costs** | ln 44 + ln 47 + ln 53 | $ 935,470 | $ 350,371 | $ 216,483 | $ 182,064 | $ 179,676 | $ 956,780 | $ 2,820,843 |
| 57 | | | | | | | | | |
| 58 | | | | | | | | | |

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

3 **Off Peak 2018 Summer Cost of Gas Filing**
4 **Supply and Commodity Costs, Volumes and Rates**

| Line | | | | | | | | | Off-Peak |
|---|---|---|---|---|---|---|---|---|---|
| 6 | For Month of: | Reference | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | May - Oct |
| 7 | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) |
| 59 | | | | | | | | | |
| 60 | **Volumes (Therms)** | | | | | | | | |
| 61 | | | | | | | | | |
| 62 | **Pipeline Gas:** | See Schedule 11A | | | | | | | |
| 63 | Dawn Supply | | 172,790 | - | - | - | - | 311,076 | 483,866 |
| 64 | Niagara Supply | | 601,658 | 533,652 | 508,721 | 491,439 | 510,667 | 604,662 | 3,250,799 |
| 65 | TGP Supply (Gulf) | | 126,796 | - | - | - | - | - | 126,796 |
| 66 | Dracut Supply 1 - Baseload | | - | - | - | - | - | - | - |
| 67 | Dracut Supply 2 - Swing | | 57,804 | - | - | - | - | 229,871 | 287,675 |
| 68 | City Gate Delivered Supply | | - | - | - | - | - | - | - |
| 69 | LNG Truck | | 44,130 | 16,516 | - | - | 47,415 | 14,367 | 122,428 |
| 70 | Propane Truck | | 71,478 | 65,496 | 60,437 | 58,384 | 62,675 | 71,835 | 390,305 |
| 71 | PNGTS | | 30,456 | 19,934 | 17,343 | 16,754 | 21,800 | 38,728 | 145,014 |
| 72 | TGP Supply (Zone 4) | | 4,848,071 | 4,278,896 | 3,861,131 | 3,744,684 | 4,062,988 | 4,873,525 | 25,669,295 |
| 73 | | | | | | | | | |
| 74 | Subtotal Pipeline Volumes | | 5,953,182 | 4,914,494 | 4,447,632 | 4,311,260 | 4,705,545 | 6,144,065 | 30,476,179 |
| 75 | | | | | | | | | |
| 76 | **Storage Gas:** | | | | | | | | |
| 77 | TGP Storage | | - | - | - | - | - | - | - |
| 78 | | | | | | | | | |
| 79 | **Produced Gas:** | | | | | | | | |
| 80 | LNG Vapor | | 18,025 | 16,516 | 15,241 | 14,723 | 15,260 | 18,115 | 97,880 |
| 81 | Propane | | - | - | - | - | - | - | - |
| 82 | | | | | | | | | |
| 83 | Subtotal Produced Gas | | 18,025 | 16,516 | 15,241 | 14,723 | 15,260 | 18,115 | 97,880 |
| 84 | | | | | | | | | |
| 85 | **Less - Gas Refill:** | | | | | | | | |
| 86 | LNG Truck | | (44,130) | (16,516) | - | - | (47,415) | (14,367) | (122,428) |
| 87 | Propane | | (71,478) | (65,496) | (60,437) | (58,384) | (62,675) | (71,835) | (390,305) |
| 88 | TGP Storage Refill | | (1,481,148) | (2,449,558) | (2,727,545) | (2,659,253) | (2,426,348) | (1,268,041) | (13,011,893) |
| 89 | | | | | | | | | |
| 90 | Subtotal Refills | | (1,596,756) | (2,531,571) | (2,787,982) | (2,717,637) | (2,536,438) | (1,354,243) | (13,524,627) |
| 91 | | | | | | | | | |
| 92 | **Total Sendout Volumes** | | 4,374,452 | 2,399,439 | 1,674,891 | 1,608,346 | 2,184,367 | 4,807,937 | 17,049,432 |
| 93 | | | | | | | | | |
| 94 | | | | | | | | | |
| 95 | | | | | | | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **Liberty Utilities (EnergyNorth Natural Gas) Corp.** | | | | | | | | **REDACTED** |
| 2 | | | | | | | | | |
| 3 | **Off Peak 2018 Summer Cost of Gas Filing** | | | | | | | | |
| 4 | **Supply and Commodity Costs, Volumes and Rates** | | | | | | | | |
| 5 | | | | | | | | | Off-Peak |
| 6 | For Month of: | Reference | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | May - Oct |
| 7 | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) |
| 96 | **Gas Costs and Volumetric Transportation Rates** | | | | | | | | |
| 97 | | | | | | | | | |
| 98 | **Pipeline Gas:** | | | | | | | | |
| 99 | **Dawn Supply** | | | | | | | | Average Rate |
| 100 | NYMEX Price | Sch 7, ln 10/10 | [redacted] | | | | | | |
| 101 | Basis Differential | | | | | | | | |
| 102 | **Net Commodity Costs** | | | | | | | | |
| 103 | | | | | | | | | |
| 104 | **Niagara Supply** | | | | | | | | |
| 105 | NYMEX Price | Sch 7, ln 10/10 | [redacted] | | | | | | |
| 106 | Basis Differential | | | | | | | | |
| 107 | **Net Commodity Costs** | | | | | | | | |
| 108 | | | | | | | | | |
| 109 | **Dracut Supply 1 - Baseload** | | | | | | | | |
| 110 | Commodity Costs - NYMEX Price | Sch 7, ln 10 / 10 | [redacted] | | | | | | |
| 111 | Basis Differential | | | | | | | | |
| 112 | **Net Commodity Costs** | | | | | | | | |
| 113 | | | | | | | | | |
| 114 | **Dracut Supply 2 - Swing** | | | | | | | | |
| 115 | Commodity Costs - NYMEX Price | Sch 7, ln 10 / 10 | [redacted] | | | | | | |
| 116 | Basis Differential | | | | | | | | |
| 117 | **Net Commodity Costs** | | | | | | | | |
| 118 | | | | | | | | | |
| 119 | | | | | | | | | |
| 120 | **TGP Supply (Gulf)** | | | | | | | | |
| 121 | NYMEX Price | Sch 7, ln 10/10 | [redacted] | | | | | | |
| 122 | Basis Differential | | | | | | | | |
| 123 | **Net Commodity Costs** | | | | | | | | |
| 124 | | | | | | | | | |
| 125 | | | | | | | | | |
| 126 | **TGP Citygate Supply** | | | | | | | | |
| 127 | NYMEX Price | Sch 7, ln 10/10 | [redacted] | | | | | | |
| 128 | Basis Differential | | | | | | | | |
| 129 | **Net Commodity Costs** | | | | | | | | |
| 130 | | | | | | | | | |
| 131 | **LNG Truck** | Sch 7, ln 10/10 | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** |
| 132 | | | | | | | | | |
| 133 | **Propane Truck** | NYMEX - Propane | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** |
| 134 | | | | | | | | | |
| 135 | **PNGTS** | | | | | | | | |
| 136 | NYMEX Price | Sch 7, ln 10/10 | [redacted] | | | | | | |
| 137 | Additional Cost | | | | | | | | |
| 138 | **Net Commodity Cost** | | | | | | | | |
| 139 | | | | | | | | | |
| 140 | **TGP Supply (Zone 4)** | | | | | | | | |
| 141 | NYMEX Price | Sch 7, ln 10/10 | [redacted] | | | | | | |
| 142 | Basis Differential | | | | | | | | |
| 143 | **Net Commodity Cost** | | | | | | | | |
| 144 | | | | | | | | | |
| 145 | **LNG Vapor (Storage)** | Sch 13, ln 95 /10 | **$1.3970** | **$0.9856** | **$0.8758** | **$0.8758** | **$0.8758** | **$0.5976** | **$0.9346** |
| 146 | | | | | | | | | |
| 147 | **Propane** | Sch 13, ln 66 /10 | **$0.5401** | **$0.4514** | **$0.3924** | **$0.3501** | **$0.3171** | **$0.2880** | **$0.3899** |
| 148 | | | | | | | | | |
| 149 | **Storage Refill:** | | | | | | | | |
| 150 | **LNG Truck** | ln 131 | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** |
| 151 | **Propane** | ln 133 | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** |
| 152 | | | | | | | | | |
| 153 | | | | | | | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **Liberty Utilities (EnergyNorth Natural Gas) Corp.** | | | | | | | | **REDACTED** |
| 3 | **Off Peak 2018 Summer Cost of Gas Filing** | | | | | | | | |
| 4 | **Supply and Commodity Costs, Volumes and Rates** | | | | | | | | |
| 5 | | | | | | | | | Off-Peak |
| 6 | For Month of: | Reference | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | May - Oct |
| 7 | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) |
| 154 | | | | | | | | | |
| 155 | | | | | | | | | Average Rate |
| 156 | **Per Unit Volumetric Transportation Rates** | | | | | | | | |
| 157 | **Dawn Supply Volumetric Transportation Charge** | | | | | | | | |
| 158 | **Commodity Costs** | ln 102 | **$0.2930** | **$0.2931** | **$0.2901** | **$0.2906** | **$0.2885** | **$0.2955** | **$0.2918** |
| 159 | | | | | | | | | |
| 160 | TransCanada - Commodity Rate/GJ | Union Parkway to Iroquois | $0.00090 | $0.00090 | $0.00090 | $0.00090 | $0.00090 | $0.00090 | $0.00090 |
| 161 | Conversion Rate GL to MMBTU | | 1.0551 | 1.0551 | 1.0551 | 1.0551 | 1.0551 | 1.0551 | 1.0551 |
| 162 | Conversion Rate to US$ | updated 7/28/15 | 1.3351 | 1.3351 | 1.3351 | 1.3351 | 1.3351 | 1.3351 | 1.3351 |
| 163 | Commodity Rate/US$ | ln 160 x ln 161 x ln 162 | $0.00127 | $0.00127 | $0.00127 | $0.00127 | $0.00127 | $0.00127 | $0.00127 |
| 164 | TransCanada Fuel % | Union Parkway to Iroquois | 1.12% | 1.33% | 0.90% | 0.00% | 0.00% | 0.00% | 0.56% |
| 165 | TransCanada Fuel * Percentage | ln 158 x ln 164 | $0.00328 | $0.00389 | $0.00262 | $0.00000 | $0.00000 | $0.00000 | $0.00163 |
| 166 | Subtotal TransCanada | | **$0.00455** | **$0.00516** | **$0.00389** | **$0.00127** | **$0.00127** | **$0.00127** | **$0.00290** |
| 167 | IGTS - Z1 RTS Commodity | First Revised Sheet No. 4 | $0.00034 | $0.00034 | $0.00034 | $0.00034 | $0.00034 | $0.00034 | $0.00034 |
| 168 | IGTS - Z1 RTS ACA Rate Commodity | Fifth Revised Sheet 4A | $0.00013 | $0.00013 | $0.00013 | $0.00013 | $0.00013 | $0.00013 | $0.00013 |
| 169 | IGTS - Z1 RTS Deferred Asset Surcharge | Fifth Revised Sheet 4A | $0.00000 | $0.00000 | $0.00000 | $0.00000 | $0.00000 | $0.00000 | $0.00000 |
| 170 | Subtotal IGTS - Trans Charge - Z1 RTS Commodity | | **$0.00047** | **$0.00047** | **$0.00047** | **$0.00047** | **$0.00047** | **$0.00047** | **$0.00047** |
| 171 | TGP NET-NE - Comm. Segments 3 & 4 | 13th Rev Sheet No. 15 | $0.00013 | $0.00013 | $0.00013 | $0.00013 | $0.00013 | $0.00013 | $0.00013 |
| 172 | IGTS -Fuel Use Factor - Percentage | Fifth Revised Sheet 4A | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% |
| 173 | IGTS -Fuel Use Factor - Fuel * Percentage | ln 158 x ln 172 | **$0.00293** | **$0.00293** | **$0.00290** | **$0.00291** | **$0.00288** | **$0.00295** | **$0.00292** |
| 174 | TGP FTA Fuel Charge % Z 5-6 | 12th Rev Sheet No. 32 | 0.81% | 0.81% | 0.81% | 0.81% | 0.81% | 0.81% | 0.81% |
| 175 | TGP FTA Fuel * Percentage | ln 158 x ln 174 | **$0.00237** | **$0.00237** | **$0.00235** | **$0.00235** | **$0.00234** | **$0.00239** | **$0.00236** |
| 176 | **Total Volumetric Transportation Charge - Dawn Supply** | | **$0.01046** | **$0.01106** | **$0.00974** | **$0.00713** | **$0.00709** | **$0.00722** | **$0.00878** |
| 177 | | | | | | | | | |
| 178 | | | | | | | | | |
| 179 | **Niagara Supply Volumetric Transportation Charge** | | | | | | | | |
| 180 | **Commodity Costs** | Ln 107 | [redacted] | | | | | | |
| 181 | | | | | | | | | |
| 182 | TGP FTA - FTA Z 5-6 Comm. Rate | 13th Rev Sheet No. 15 | [redacted] | | | | | | |
| 183 | TGP FTA - FTA Z 5-6 - ACA Rate | 13th Rev Sheet No. 15 | | | | | | | |
| 184 | Subtotal TGP FTA - FTA Z 5-6 Commodity Rate | | | | | | | | |
| 185 | TGP FTA Fuel Charge % Z 5-6 | 12th Rev Sheet No. 32 | | | | | | | |
| 186 | TGP FTA Fuel * Percentage | ln 180 x ln 185 | | | | | | | |
| 187 | **Total Volumetric Transportation Rate - Niagara Supply** | | | | | | | | |
| 188 | | | | | | | | | |
| 189 | | | | | | | | | |
| 190 | | | | | | | | | |

| Ln | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **Liberty Utilities (EnergyNorth Natural Gas) Corp.** | | | | | | | | **REDACTED** |
| 3 | **Off Peak 2018 Summer Cost of Gas Filing** | | | | | | | | |
| 4 | **Supply and Commodity Costs, Volumes and Rates** | | | | | | | | |
| 5 | | | | | | | | | Off-Peak |
| 6 | For Month of: | Reference | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | May - Oct |
| 7 | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) |
| 191 | | | | | | | | | |
| 192 | | | | | | | | | |
| 193 | **TGP Direct Volumetric Transportation Charge** | | | | | | | | Average Rate |
| 194 | **Commodity Costs** | Ln 121 | [redacted] | | | | | | |
| 195 | | | | | | | | | |
| 196 | TGP - Max Comm. Base Rate - Z 0-6 | 13th Rev Sheet No. 15 | $0.03039 | $0.03039 | $0.03039 | $0.03039 | $0.03039 | $0.03039 | $0.03039 |
| 197 | TGP - Max Commodity ACA Rate - Z 0-6 | 13th Rev Sheet No. 15 | $0.00013 | $0.00013 | $0.00013 | $0.00013 | $0.00013 | $0.00013 | $0.00013 |
| 198 | Subtotal TGP - Max Comm. Rate Z 0-6 | | $0.03052 | $0.03052 | $0.03052 | $0.03052 | $0.03052 | $0.03052 | $0.03052 |
| 199 | Prorated Percentage | | 32.60% | 32.60% | 32.60% | 32.60% | 32.60% | 32.60% | 32.60% |
| 200 | Prorated TGP - Max Commodity Rate - Z 0-6 | | **$0.00995** | **$0.00995** | **$0.00995** | **$0.00995** | **$0.00995** | **$0.00995** | **$0.00995** |
| 201 | TGP - Max Comm. Base Rate - Z 1-6 | 13th Rev Sheet No. 15 | $0.02650 | $0.02650 | $0.02650 | $0.02650 | $0.02650 | $0.02650 | $0.02650 |
| 202 | TGP - Max Commodity ACA Rate - Z 1-6 | 13th Rev Sheet No. 15 | $0.00013 | $0.00013 | $0.00013 | $0.00013 | $0.00013 | $0.00013 | $0.00013 |
| 203 | Subtotal TGP - Max Commodity Rate - Z 1-6 | | $0.02663 | $0.02663 | $0.02663 | $0.02663 | $0.02663 | $0.02663 | $0.02663 |
| 204 | Prorated Percentage | | 67.40% | 67.40% | 67.40% | 67.40% | 67.40% | 67.40% | 67.40% |
| 205 | Prorated TGP - Trans Charge - Max Commodity Rate - Z 1-6 | | **$0.01795** | **$0.01795** | **$0.01795** | **$0.01795** | **$0.01795** | **$0.01795** | **$0.01795** |
| 206 | TGP - Fuel Charge % - Z 0 -6 | 12th Rev Sheet No. 32 | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% | 4.25% |
| 207 | Prorated Percentage | | 32.6% | 32.6% | 32.6% | 32.6% | 32.6% | 32.6% | 32.6% |
| 208 | Prorated TGP Fuel Charge % - Z 0-6 | | 1.39% | 1.39% | 1.39% | 1.39% | 1.39% | 1.39% | 1.39% |
| 209 | TGP - Fuel Charge % - Z 1 -6 | 12th Rev Sheet No. 32 | 3.70% | 3.70% | 3.70% | 3.70% | 3.70% | 3.70% | 3.70% |
| 210 | Prorated Percentage | | 67.40% | 67.40% | 67.40% | 67.40% | 67.40% | 67.40% | 67.40% |
| 211 | Prorated TGP Fuel Charge - Fuel Charge % - Z 1-6 | | 2.49% | 2.49% | 2.49% | 2.49% | 2.49% | 2.49% | 2.49% |
| 212 | TGP - Fuel Charge % - Z 0-6 | ln 194 x ln 208 | **$0.00379** | **$0.00381** | **$0.00385** | **$0.00386** | **$0.00383** | **$0.00384** | **$0.00383** |
| 213 | TGP - Fuel Charge % - Z 1-6 | ln 194 x ln 211 | **$0.00681** | **$0.00687** | **$0.00693** | **$0.00695** | **$0.00690** | **$0.00691** | **$0.00690** |
| 214 | **Total Volumetric Transportation Rate - TGP (Direct)** | | **$0.03850** | **$0.03858** | **$0.03869** | **$0.03871** | **$0.03863** | **$0.03865** | **$0.03863** |
| 215 | | | | | | | | | |
| 216 | **TGP (Zone 4 Purchase) Volumetric Transportation Charge** | | | | | | | | |
| 217 | **Commodity Costs** | Ln 121 | [redacted] | | | | | | |
| 218 | | | | | | | | | |
| 219 | TGP - Max Comm. Base Rate - Z 4-6 | 13th Rev Sheet No. 15 | $0.01050 | $0.01050 | $0.01050 | $0.01050 | $0.01050 | $0.01050 | $0.01050 |
| 220 | TGP - Max Commodity ACA Rate - Z 4-6 | 13th Rev Sheet No. 15 | $0.00013 | $0.00013 | $0.00013 | $0.00013 | $0.00013 | $0.00013 | $0.00013 |
| 221 | Subtotal TGP - Max Commodity Rate - Z 4-6 | | **$0.01063** | **$0.01063** | **$0.01063** | **$0.01063** | **$0.01063** | **$0.01063** | **$0.01063** |
| 222 | TGP - Fuel Charge % - Z 4-6 | 12th Rev Sheet No. 32 | 1.13% | 1.13% | 1.13% | 1.13% | 1.13% | 1.13% | 1.13% |
| 223 | TGP - Fuel Charge | ln 217 x ln 222 | **$0.00245** | **$0.00243** | **$0.00264** | **$0.00257** | **$0.00211** | **$0.00226** | **$0.00241** |
| 224 | **Total Vol. Trans. Rate - TGP (Zone 6)** | | **$0.01308** | **$0.01306** | **$0.01327** | **$0.01320** | **$0.01274** | **$0.01289** | **$0.01304** |
| 225 | | | | | | | | | |
| 226 | | | | | | | | | |
| 227 | **TGP Dracut** | | | | | | | | |
| 228 | **Commodity Costs - NYMEX Price** | Ln 112 | [redacted] | | | | | | |
| 229 | | | | | | | | | |
| 230 | TGP - Trans Charge - Comm. - Z 6-6 | 13th Rev Sheet No. 15 | [redacted] | | | | | | |
| 231 | TGP - Trans Charge - ACA Rate - Z6-6 | 13th Rev Sheet No. 15 | | | | | | | |
| 232 | Subtotal TGP - Trans Charge - Max Commodity Rate - Z 6-6 | | | | | | | | |
| 233 | TGP - Fuel Charge % - Z 6-6 | 12th Rev Sheet No. 32 | | | | | | | |
| 234 | TGP - Fuel Charge | ln 228 x ln 233 | | | | | | | |
| 235 | **Total Volumetric Transportation Rate - TGP Dracut** | | | | | | | | |
| 236 | | | | | | | | | |

| Line | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **Liberty Utilities (EnergyNorth Natural Gas) Corp.** | | | | | | | | |
| 3 | **Off Peak 2018 Summer Cost of Gas Filing** | | | | | | | | |
| 4 | **NYMEX Futures @ Henry Hub** | | | | | | | | May - Oct |
| 5 | | | | | | | | | Off Peak |
| 6 | For Month of: | Reference | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Strip Average |
| 7 | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) |
| 8 | **I. NYMEX Opening Prices as of:** | | | | | | | | |
| 9 | Opening Prices (15 day average) | Line 206 | $2.8156 | $2.8406 | $2.8660 | $2.8709 | $2.8498 | $2.8699 | $ 2.8521 |
| 10 | | | $2.8156 | $2.8406 | $2.8660 | $2.8709 | $2.8498 | $2.8699 | $ 2.8521 |
| 11 | | | | | | | | | |
| 12 | | | | | | | | | |
| 13 | | | | | | | | | |
| 14 | | | | | | | | | |

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

3 **Off Peak 2018 Summer Cost of Gas Filing**

4 **NYMEX Futures @ Henry Hub**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 4 | | | | | | | | | | May - Oct |
| 5 | | | | | | | | | | Off Peak |
| 6 | For Month of: | Reference | | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Strip Average |
| 15 | NYMEX Settlement - 15 Day Average | | | | | | | | | |
| 16 | | Days | Date | | | | | | | |
| 17 | | | 7/24/2017 | 2.793 | 2.819 | 2.844 | 2.85 | 2.828 | 2.848 | |
| 18 | | | 7/25/2017 | 2.809 | 2.833 | 2.857 | 2.863 | 2.841 | 2.861 | |
| 19 | | | 7/26/2017 | 2.803 | 2.827 | 2.852 | 2.857 | 2.836 | 2.856 | |
| 20 | | | 7/27/2017 | 2.819 | 2.842 | 2.866 | 2.871 | 2.85 | 2.87 | |
| 21 | | | 7/28/2017 | 2.823 | 2.847 | 2.871 | 2.876 | 2.856 | 2.876 | |
| 22 | | | 7/31/2017 | 2.769 | 2.795 | 2.821 | 2.826 | 2.806 | 2.826 | |
| 23 | | | 8/1/2017 | 2.78 | 2.804 | 2.828 | 2.833 | 2.814 | 2.836 | |
| 24 | | | 8/2/2017 | 2.802 | 2.827 | 2.852 | 2.857 | 2.838 | 2.86 | |
| 25 | | | 8/3/2017 | 2.813 | 2.838 | 2.863 | 2.868 | 2.849 | 2.87 | |
| 26 | | | 8/4/2017 | 2.802 | 2.829 | 2.856 | 2.861 | 2.841 | 2.862 | |
| 27 | | | 8/7/2017 | 2.814 | 2.84 | 2.867 | 2.872 | 2.851 | 2.871 | |
| 28 | | | 8/8/2017 | 2.829 | 2.855 | 2.882 | 2.887 | 2.866 | 2.886 | |
| 29 | | | 8/9/2017 | 2.844 | 2.869 | 2.895 | 2.899 | 2.875 | 2.894 | |
| 30 | | | 8/10/2017 | 2.865 | 2.89 | 2.916 | 2.92 | 2.896 | 2.914 | |
| 31 | | | 8/11/2017 | 2.869 | 2.894 | 2.92 | 2.924 | 2.9 | 2.919 | |
| 32 | | | | | | | | | | |
| 33 | | | | | | | | | | |
| 34 | | | 15 Day Average | 2.8156 | 2.8406 | 2.8660 | 2.8709 | 2.8498 | 2.8699 | |

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

**Off Peak 2018 Summer Cost of Gas Filing**
**Annual Bill Comparisons, May 17 - Oct 17 vs May 18 - Oct 18 - Residential Heating Rate R-3**

**November 1, 2017 - April 30, 2018** — **May 1, 2018 - October 31, 2018**
**Residential Heating (R3)**

| | | Nov-17 | Dec-17 | Jan-18 | Feb-18 | Mar-18 | Apr-18 | Winter Nov-Apr | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Summer May-Oct | Total Nov-Oct |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Typical Usage (Therms)** | | 51 | 90 | 136 | 144 | 116 | 100 | 638 | 48 | 27 | 16 | 14 | 14 | 22 | 141 | 779 |
| | 7/1/2016 | | | | | | | | | | | | | | | |
| **Winter:** | | | | | | | | | | | | | | | | |
| Cust. Chg | $24.43 | $24.43 | $24.43 | $24.43 | $24.43 | $24.43 | $24.43 | $146.58 | | | | | | | | |
| Headblock | $0.3863 | $19.61 | $34.76 | $38.63 | $38.63 | $38.63 | $38.63 | $208.89 | | | | | | | | |
| Tailblock | $0.3197 | $0.00 | $0.00 | $11.66 | $14.13 | $5.15 | $0.12 | $31.06 | | | | | | | | |
| HB Threshold | 100 | | | | | | | | | | | | | | | |
| **Summer:** | | | | | | | | | | | | | | | | |
| Cust. Chg | $24.43 | | | | | | | | $24.43 | $24.43 | $24.43 | $24.43 | $24.43 | $24.43 | $146.58 | $293.16 |
| Headblock | $0.3863 | | | | | | | | $7.73 | $7.73 | $6.26 | $5.45 | $5.43 | $7.73 | $40.31 | $249.20 |
| Tailblock | $0.3197 | | | | | | | | $8.99 | $2.23 | $0.00 | $0.00 | $0.00 | $0.52 | $11.74 | $42.80 |
| HB Threshold | 20 | | | | | | | | | | | | | | | |
| Total Base Rate Amount | | $44.04 | $59.19 | $74.72 | $77.19 | $68.21 | $63.18 | $386.53 | $41.15 | $34.38 | $30.69 | $29.88 | $29.86 | $32.67 | $198.63 | $585.16 |
| COG Rate - (Seasonal) | | $0.6659 | $0.6659 | $0.6659 | $0.6659 | $0.6659 | $0.6659 | $0.6659 | $0.3144 | $0.3144 | $0.3144 | $0.3144 | $0.3144 | $0.3144 | $0.3144 | $0.6022 |
| COG amount | | $33.81 | $59.92 | $90.88 | $96.03 | $77.32 | $66.83 | $424.79 | $15.13 | $8.48 | $5.09 | $4.43 | $4.42 | $6.80 | $44.35 | $469.14 |
| LDAC | | $0.0856 | $0.0856 | $0.0856 | $0.0856 | $0.0856 | $0.0856 | 0.0856 | $0.0856 | $0.0856 | $0.0856 | $0.0856 | $0.0856 | $0.0856 | $0.0856 | $0.0856 |
| LDAC amount | | $4.35 | $7.70 | $11.69 | $12.35 | $9.94 | $8.59 | $54.62 | $4.12 | $2.31 | $1.39 | $1.21 | $1.20 | $1.85 | $12.08 | $66.70 |
| **Total Bill** | | **$82.19** | **$126.81** | **$177.29** | **$185.57** | **$155.47** | **$138.60** | **$865.94** | **$60.40** | **$45.17** | **$37.17** | **$35.51** | **$35.48** | **$41.32** | **$255.06** | **$1,121.00** |

**November 1, 2016 - April 30, 2017** — **May 1, 2017 - October 31, 2017**
**Residential Heating (R3)**

| | | Nov-16 | Dec-16 | Jan-17 | Feb-17 | Mar-17 | Apr-17 | Winter Nov-Apr | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Summer May-Oct | Total Nov-Oct |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Typical Usage (Therms)** | | 51 | 90 | 136 | 144 | 116 | 100 | 638 | 48 | 27 | 16 | 14 | 14 | 22 | 141 | 779 |
| **Winter:** | | | | | | | | | | | | | | | | |
| Cust. Chg | | $22.10 | $22.10 | $22.10 | $22.10 | $22.10 | $22.10 | $132.60 | | | | | | | | |
| Headblock | | $17.74 | $31.45 | $34.95 | $34.95 | $34.95 | $34.95 | $188.99 | | | | | | | | |
| Tailblock | | $0.00 | $0.00 | $10.55 | $12.79 | $4.66 | $0.11 | $28.10 | | | | | | | | |
| HB Threshold | | | | | | | | | | | | | | | | |
| **Summer:** | | | | | | | | | | | | | | | | |
| Cust. Chg | | | | | | | | | $22.10 | $22.10 | $24.43 | $24.43 | $24.43 | $24.43 | $141.92 | $274.52 |
| Headblock | | | | | | | | | $6.99 | $6.99 | $6.26 | $5.45 | $5.43 | $7.73 | $38.84 | $227.83 |
| Tailblock | | | | | | | | | $8.14 | $2.02 | $0.00 | $0.00 | $0.00 | $0.52 | $10.67 | $38.77 |
| HB Threshold | | | | | | | | | | | | | | | | |
| Total Base Rate Amount | | $39.84 | $53.55 | $67.60 | $69.84 | $61.71 | $57.16 | $349.69 | $37.23 | $31.11 | $30.69 | $29.88 | $29.86 | $32.67 | $191.43 | $541.12 |
| COG Rate - (Seasonal) | | $0.7162 | $0.6439 | $0.7276 | $0.6012 | $0.4841 | $0.4002 | $0.5905 | $0.4368 | $0.4368 | $0.4368 | $0.4002 | $0.4002 | $0.4002 | $0.4239 | $0.5603 |
| COG amount | | $36.36 | $57.94 | $99.30 | $86.70 | $56.21 | $40.17 | $376.68 | $21.02 | $11.78 | $7.08 | $5.64 | $5.63 | $8.65 | $59.79 | $436.47 |
| LDAC | | $0.0553 | $0.0553 | $0.0640 | $0.0640 | $0.0640 | $0.0640 | 0.0621 | $0.0640 | $0.0640 | $0.0640 | $0.0640 | $0.0640 | $0.0640 | $0.0640 | $0.0624 |
| LDAC amount | | $2.81 | $4.98 | $8.73 | $9.23 | $7.43 | $6.42 | $39.60 | $3.08 | $1.73 | $1.04 | $0.90 | $0.90 | $1.38 | $9.03 | $48.63 |
| **Total Bill** | | **$79.01** | **$116.46** | **$175.64** | **$165.76** | **$125.35** | **$103.74** | **$765.97** | **$61.33** | **$44.61** | **$38.80** | **$36.42** | **$36.38** | **$42.71** | **$260.25** | **$1,026.22** |

**DIFFERENCE:**

| | Nov | Dec | Jan | Feb | Mar | Apr | Winter Nov-Apr | May | Jun | Jul | Aug | Sep | Oct | Summer May-Oct | Total Nov-Oct |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total Bill** | **$3.18** | **$10.35** | **$1.65** | **$19.81** | **$30.12** | **$34.86** | **$99.97** | **($0.93)** | **$0.56** | **($1.63)** | **($0.90)** | **($0.90)** | **($1.39)** | **($5.19)** | **$94.78** |
| % Change | **4.03%** | **8.89%** | **0.94%** | **11.95%** | **24.03%** | **33.60%** | **13.05%** | **-1.51%** | **1.26%** | **-4.21%** | **-2.48%** | **-2.48%** | **-3.25%** | **-2.00%** | **9.24%** |
| **Base Rate** | $4.20 | $5.64 | $7.12 | $7.36 | $6.50 | $6.02 | $36.84 | $3.92 | $3.28 | $0.00 | $0.00 | $0.00 | $0.00 | $7.20 | $44.05 |
| % Change | 10.54% | 10.53% | 10.54% | 10.54% | 10.54% | 10.53% | 10.54% | 10.54% | 10.54% | 0.00% | 0.00% | 0.00% | 0.00% | 3.76% | 8.14% |
| **COG & LDAC** | ($1.01) | $4.71 | ($5.47) | $12.45 | $23.62 | $28.84 | $63.13 | ($4.85) | ($2.72) | ($1.63) | ($0.90) | ($0.90) | ($1.39) | ($12.39) | $50.73 |
| % Change | -2.59% | 7.48% | -5.06% | 12.98% | 37.11% | 61.90% | 15.16% | -20.12% | -20.12% | -20.12% | -13.83% | -13.83% | -13.83% | -18.01% | 10.46% |
| check | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |

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

**Off Peak 2018 Summer Cost of Gas Filing**
**Annual Bill Comparisons, May 16 - Oct 16 vs May 17 - Oct 17 - Commercial Rate G-41**

**November 1, 2017 - April 30, 2018** — **May 1, 2018 - October 31, 2018**
**Commercial Rate (G-41)**

| | | Nov-17 | Dec-17 | Jan-18 | Feb-18 | Mar-18 | Apr-18 | Winter Nov-Apr | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Summer May-Oct | Total Nov-Oct |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Typical Usage (Therms)** | | 119 | 248 | 418 | 448 | 356 | 304 | 1,892 | 122 | 49 | 27 | 24 | 23 | 43 | 288 | 2,180 |
| **Winter:** | 7/1/2016 | | | | | | | | | | | | | | | |
| Cust. Chg | $53.45 | $53.45 | $53.45 | $53.45 | $53.45 | $53.45 | $53.45 | $320.70 | | | | | | | | |
| Headblock | $0.4383 | $43.83 | $43.83 | $43.83 | $43.83 | $43.83 | $43.83 | $262.98 | | | | | | | | |
| Tailblock | $0.2944 | $5.45 | $43.57 | $93.56 | $102.35 | $75.36 | $60.02 | $380.30 | | | | | | | | |
| HB Threshold | 100 | | | | | | | | | | | | | | | |
| **Summer:** | | | | | | | | | | | | | | | | |
| Cust. Chg | $53.45 | | | | | | | | $53.45 | $53.45 | $53.45 | $53.45 | $53.45 | $53.45 | $320.70 | $641.40 |
| Headblock | $0.4383 | | | | | | | | $8.77 | $8.77 | $8.77 | $8.77 | $8.77 | $8.77 | $52.60 | $315.58 |
| Tailblock | $0.2944 | | | | | | | | $30.07 | $8.67 | $2.20 | $1.08 | $0.86 | $6.66 | $49.54 | $429.84 |
| HB Threshold | 20 | | | | | | | | | | | | | | | |
| Total Base Rate Amount | | $102.73 | $140.85 | $190.84 | $199.63 | $172.64 | $157.30 | $963.98 | $92.29 | $70.88 | $64.42 | $63.29 | $63.08 | $68.88 | $422.84 | $1,386.82 |
| COG Rate - (Seasonal) | | $0.6647 | $0.6647 | $0.6647 | $0.6647 | $0.6647 | $0.6647 | $0.6647 | $0.3095 | $0.3095 | $0.3095 | $0.3095 | $0.3095 | $0.3095 | $0.3095 | $0.6177 |
| COG amount | | $78.77 | $164.84 | $277.70 | $297.55 | $236.61 | $201.99 | $1,257.47 | $37.81 | $15.30 | $8.50 | $7.32 | $7.10 | $13.19 | $89.23 | $1,346.69 |
| LDAC | | $0.0674 | $0.0674 | $0.0674 | $0.0674 | $0.0674 | $0.0674 | 0.0674 | $0.0674 | $0.0674 | $0.0674 | $0.0674 | $0.0674 | $0.0674 | $0.0674 | $0.0674 |
| LDAC amount | | $7.99 | $16.72 | $28.17 | $30.18 | $24.00 | $20.49 | $127.56 | $8.24 | $3.33 | $1.85 | $1.60 | $1.55 | $2.87 | $19.44 | $147.00 |
| **Total Bill** | | **$189.49** | **$322.42** | **$496.71** | **$527.36** | **$433.25** | **$379.79** | **$2,349.01** | **$138.33** | **$89.52** | **$74.77** | **$72.21** | **$71.72** | **$84.95** | **$531.51** | **$2,880.51** |

**November 1, 2016 - April 30, 2017** — **May 1, 2017 - October 31, 2017**
**Commercial Rate (G-41)**

| | Nov-16 | Dec-16 | Jan-17 | Feb-17 | Mar-17 | Apr-17 | Winter Nov-Apr | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Summer May-Oct | Total Nov-Oct |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Typical Usage (Therms)** | 119 | 248 | 418 | 448 | 356 | 304 | 1,892 | 122 | 49 | 27 | 24 | 23 | 43 | 288 | 2,180 |
| **Winter:** | | | | | | | | | | | | | | | |
| Cust. Chg | $48.36 | $48.36 | $48.36 | $48.36 | $48.36 | $48.36 | $290.16 | | | | | | | | |
| Headblock | $39.65 | $39.65 | $39.65 | $39.65 | $39.65 | $39.65 | $237.90 | | | | | | | | |
| Tailblock | $4.93 | $39.41 | $84.63 | $92.58 | $68.16 | $54.29 | $344.00 | | | | | | | | |
| HB Threshold | | | | | | | | | | | | | | | |
| **Summer:** | | | | | | | | | | | | | | | |
| Cust. Chg | | | | | | | | $48.36 | $48.36 | $53.45 | $53.45 | $53.45 | $53.45 | $310.52 | $600.68 |
| Headblock | | | | | | | | $7.93 | $7.93 | $8.77 | $8.77 | $8.77 | $8.77 | $50.92 | $288.82 |
| Tailblock | | | | | | | | $27.20 | $7.84 | $2.20 | $1.08 | $0.86 | $6.66 | $45.85 | $389.85 |
| HB Threshold | | | | | | | | | | | | | | | |
| Total Base Rate Amount | $92.94 | $127.42 | $172.64 | $180.59 | $156.17 | $142.30 | $872.06 | $83.49 | $64.13 | $64.42 | $63.29 | $63.08 | $68.88 | $407.29 | $1,279.35 |
| COG Rate - (Seasonal) | $0.7121 | $0.6398 | $0.7235 | $0.5971 | $0.4800 | $0.3961 | $0.5835 | $0.4206 | $0.4206 | $0.4206 | $0.4563 | $0.4563 | $0.4563 | $0.4316 | $0.5634 |
| COG amount | $84.38 | $158.67 | $302.27 | $267.29 | $170.86 | $120.37 | $1,103.84 | $51.38 | $20.79 | $11.55 | $10.80 | $10.46 | $19.45 | $124.44 | $1,228.28 |
| LDAC | $0.0370 | $0.0370 | $0.0450 | $0.0450 | $0.0450 | $0.0450 | 0.0435 | $0.0450 | $0.0450 | $0.0450 | $0.0450 | $0.0450 | $0.0450 | $0.0450 | $0.0437 |
| LDAC amount | $4.38 | $9.18 | $18.80 | $20.14 | $16.02 | $13.67 | $82.20 | $5.50 | $2.22 | $1.24 | $1.06 | $1.03 | $1.92 | $12.97 | $95.17 |
| **Total Bill** | **$181.71** | **$295.27** | **$493.71** | **$468.02** | **$343.05** | **$276.35** | **$2,058.10** | **$140.37** | **$87.15** | **$77.21** | **$75.16** | **$74.57** | **$90.25** | **$544.70** | **$2,602.81** |

**DIFFERENCE:**

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total Bill** | **$7.78** | **$27.15** | **$3.00** | **$59.34** | **$90.19** | **$103.44** | **$290.90** | **($2.04)** | **$2.37** | **($2.44)** | **($2.94)** | **($2.85)** | **($5.30)** | **($13.20)** | **$277.71** |
| % Change | **4.28%** | **9.20%** | **0.61%** | **12.68%** | **26.29%** | **37.43%** | **14.13%** | **-1.45%** | **2.72%** | **-3.16%** | **-3.92%** | **-3.82%** | **-5.88%** | **-2.42%** | **10.67%** |
| **Base Rate** | $9.79 | $13.43 | $18.20 | $19.04 | $16.46 | $15.00 | $91.92 | $8.80 | $6.75 | $0.00 | $0.00 | $0.00 | $0.00 | $15.55 | $107.47 |
| % Change | 10.53% | 10.54% | 10.54% | 10.54% | 10.54% | 10.54% | 10.54% | 10.54% | 10.53% | 0.00% | 0.00% | 0.00% | 0.00% | 3.82% | 8.40% |
| **COG & LDAC** | ($2.01) | $13.72 | ($15.20) | $40.30 | $73.73 | $88.44 | $198.99 | ($10.83) | ($4.38) | ($2.44) | ($2.94) | ($2.85) | ($5.30) | ($28.75) | $170.24 |
| % Change | -2.27% | 8.18% | -4.73% | 14.02% | 39.45% | 65.98% | 16.78% | -19.04% | -19.04% | -19.04% | -24.81% | -24.81% | -24.81% | -20.92% | 12.86% |
| check | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |

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

**Off Peak 2018 Summer Cost of Gas Filing**
**Annual Bill Comparisons, May 16 - Oct 16 vs May 17 - Oct 17 - Commercial Rate G-42**

**November 1, 2017 - April 30, 2018** / **May 1, 2018 - October 31, 2018**
**C&I High Winter Use Medium G-42**

| | | Nov-17 | Dec-17 | Jan-18 | Feb-18 | Mar-18 | Apr-18 | Winter Nov-Apr | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Summer May-Oct | Total Nov-Oct |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Typical Usage (Therms)** | | 938 | 1,648 | 2,668 | 2,696 | 2,751 | 2,348 | 13,049 | 1,081 | 517 | 269 | 267 | 264 | 435 | 2,834 | 15,883 |
| | 7/1/2016 | | | | | | | | | | | | | | | |
| **Winter:** | | | | | | | | | | | | | | | | |
| Cust. Chg | $160.36 | $160.36 | $160.36 | $160.36 | $160.36 | $160.36 | $160.36 | $962.16 | | | | | | | | |
| Headblock | $0.3986 | $373.70 | $398.60 | $398.60 | $398.60 | $398.60 | $398.60 | $2,366.70 | | | | | | | | |
| Tailblock | $0.2655 | $0.00 | $172.09 | $442.83 | $450.39 | $464.79 | $358.00 | $1,888.11 | | | | | | | | |
| HB Threshold | 1,000 | | | | | | | | | | | | | | | |
| **Summer:** | | | | | | | | | | | | | | | | |
| Cust. Chg | $160.36 | | | | | | | | $160.36 | $160.36 | $160.36 | $160.36 | $160.36 | $160.36 | $962.16 | $1,924.32 |
| Headblock | $0.3986 | | | | | | | | $159.44 | $159.44 | $107.22 | $106.46 | $105.25 | $159.44 | $797.25 | $3,163.95 |
| Tailblock | $0.2655 | | | | | | | | $180.88 | $31.05 | $0.00 | $0.00 | $0.00 | $9.42 | $221.35 | $2,109.45 |
| HB Threshold | 400 | | | | | | | | | | | | | | | |
| Total Base Rate Amount | | $534.06 | $731.05 | $1,001.79 | $1,009.35 | $1,023.75 | $916.96 | $5,216.96 | $500.68 | $350.85 | $267.58 | $266.82 | $265.61 | $329.22 | $1,980.76 | $7,197.72 |
| COG Rate - (Seasonal) | | $0.6647 | $0.6647 | $0.6647 | $0.6647 | $0.6647 | $0.6647 | $0.6647 | $0.3095 | $0.3095 | $0.3095 | $0.3095 | $0.3095 | $0.3095 | $0.3095 | $0.6013 |
| COG amount | | $623.18 | $1,095.55 | $1,773.35 | $1,792.29 | $1,828.34 | $1,560.99 | $8,673.69 | $334.66 | $159.99 | $83.25 | $82.66 | $81.72 | $134.78 | $877.07 | $9,550.77 |
| LDAC | | $0.0674 | $0.0674 | $0.0674 | $0.0674 | $0.0674 | $0.0674 | 0.0674 | $0.0674 | $0.0674 | $0.0674 | $0.0674 | $0.0674 | $0.0674 | $0.0674 | $0.0674 |
| LDAC amount | | $63.22 | $111.13 | $179.89 | $181.81 | $185.47 | $158.35 | $879.88 | $72.91 | $34.86 | $18.14 | $18.01 | $17.80 | $29.36 | $191.08 | $1,070.96 |
| **Total Bill** | | **$1,220.45** | **$1,937.73** | **$2,955.03** | **$2,983.46** | **$3,037.56** | **$2,636.30** | **$14,770.54** | **$908.25** | **$545.70** | **$368.97** | **$367.49** | **$365.14** | **$493.36** | **$3,048.91** | **$17,819.45** |

**November 1, 2016 - April 30, 2017** / **May 1, 2017 - October 31, 2017**
**C&I High Winter Use Medium G-42**

| | Nov-16 | Dec-16 | Jan-17 | Feb-17 | Mar-17 | Apr-17 | Winter Nov-Apr | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Summer May-Oct | Total Nov-Oct |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Typical Usage (Therms)** | 938 | 1,648 | 2,668 | 2,696 | 2,751 | 2,348 | 13,049 | 1,081 | 517 | 269 | 267 | 264 | 435 | 2,834 | 15,883 |
| **Winter:** | | | | | | | | | | | | | | | |
| Cust. Chg | $145.08 | $145.08 | $145.08 | $145.08 | $145.08 | $145.08 | $870.48 | | | | | | | | |
| Headblock | $338.07 | $360.60 | $360.60 | $360.60 | $360.60 | $360.60 | $2,141.07 | | | | | | | | |
| Tailblock | $0.00 | $155.69 | $400.63 | $407.47 | $420.50 | $323.89 | $1,708.18 | | | | | | | | |
| HB Threshold | | | | | | | | | | | | | | | |
| **Summer:** | | | | | | | | | | | | | | | |
| Cust. Chg | | | | | | | | $145.08 | $145.08 | $160.36 | $160.36 | $160.36 | $160.36 | $931.60 | $1,802.08 |
| Headblock | | | | | | | | $144.24 | $144.24 | $107.22 | $106.46 | $105.25 | $159.44 | $766.85 | $2,907.92 |
| Tailblock | | | | | | | | $163.65 | $28.09 | $0.00 | $0.00 | $0.00 | $9.42 | $201.15 | $1,909.34 |
| HB Threshold | | | | | | | | | | | | | | | |
| Total Base Rate Amount | $483.15 | $661.37 | $906.31 | $913.15 | $926.18 | $829.57 | $4,719.74 | $452.97 | $317.41 | $267.58 | $266.82 | $265.61 | $329.22 | $1,899.60 | $6,619.34 |
| COG Rate - (Seasonal) | $0.7121 | $0.6398 | $0.7235 | $0.5971 | $0.4800 | $0.3961 | $0.5757 | $0.4206 | $0.4206 | $0.4206 | $0.4563 | $0.4563 | $0.4563 | $0.4328 | $0.5502 |
| COG amount | $667.61 | $1,054.51 | $1,930.22 | $1,610.02 | $1,320.30 | $930.21 | $7,512.87 | $454.79 | $217.43 | $113.14 | $121.87 | $120.49 | $198.71 | $1,226.42 | $8,739.28 |
| LDAC | $0.0370 | $0.0370 | $0.0450 | $0.0450 | $0.0450 | $0.0450 | 0.0434 | $0.0450 | $0.0450 | $0.0450 | $0.0450 | $0.0450 | $0.0450 | $0.0450 | $0.0437 |
| LDAC amount | $34.69 | $60.98 | $120.06 | $121.34 | $123.78 | $105.68 | $566.52 | $48.66 | $23.26 | $12.10 | $12.02 | $11.88 | $19.60 | $127.52 | $694.04 |
| **Total Bill** | **$1,185.46** | **$1,776.86** | **$2,956.59** | **$2,644.51** | **$2,370.26** | **$1,865.45** | **$12,799.12** | **$956.42** | **$558.10** | **$392.82** | **$400.71** | **$397.98** | **$547.52** | **$3,253.55** | **$16,052.67** |

**DIFFERENCE:**

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total Bill** | **$35.00** | **$160.87** | **($1.56)** | **$338.95** | **$667.30** | **$770.85** | **$1,971.41** | **($48.16)** | **($12.40)** | **($23.85)** | **($33.22)** | **($32.84)** | **($54.16)** | **($204.63)** | **$1,766.78** |
| % Change | **2.95%** | **9.05%** | **-0.05%** | **12.82%** | **28.15%** | **41.32%** | **15.40%** | **-5.04%** | **-2.22%** | **-6.07%** | **-8.29%** | **-8.25%** | **-9.89%** | **-6.29%** | **11.01%** |
| **Base Rate** | $50.91 | $69.68 | $95.48 | $96.20 | $97.57 | $87.39 | $497.23 | $47.72 | $33.44 | $0.00 | $0.00 | $0.00 | $0.00 | $81.16 | $578.38 |
| % Change | 10.54% | 10.54% | 10.53% | 10.53% | 10.53% | 10.53% | 10.54% | 10.53% | 10.53% | 0.00% | 0.00% | 0.00% | 0.00% | 4.27% | 8.74% |
| **COG & LDAC** | ($15.91) | $91.19 | ($97.03) | $242.75 | $569.73 | $683.46 | $1,474.19 | ($95.88) | ($45.84) | ($23.85) | ($33.22) | ($32.84) | ($54.16) | ($285.79) | $1,188.40 |
| % Change | -2.27% | 8.18% | -4.73% | 14.02% | 39.45% | 65.98% | 18.25% | -19.04% | -19.04% | -19.04% | -24.81% | -24.81% | -24.81% | -21.11% | 12.60% |
| check | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |

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

**Off Peak 2018 Summer Cost of Gas Filing**
**Annual Bill Comparisons, May 16 - Oct 16 vs May 17 - Oct 17 - Commercial Rate G-52**

**November 1, 2017 - April 30, 2018** / **May 1, 2018 - October 31, 2018**
**Commercial Rate (G-52)**

| | | Nov-17 | Dec-17 | Jan-18 | Feb-18 | Mar-18 | Apr-18 | Winter Nov-Apr | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Summer May-Oct | Total Nov-Oct |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Typical Usage (Therms)** | | 1,156 | 1,463 | 2,024 | 1,273 | 2,179 | 1,858 | 9,953 | 1,353 | 1,084 | 818 | 759 | 782 | 897 | 5,693 | 15,645 |
| **Winter:** | 7/1/2016 | | | | | | | | | | | | | | | |
| Cust. Chg | $160.36 | $160.36 | $160.36 | $160.36 | $160.36 | $160.36 | $160.36 | $962.16 | | | | | | | | |
| Headblock | $0.2268 | $226.80 | $226.80 | $226.80 | $226.80 | $226.80 | $226.80 | $1,360.80 | | | | | | | | |
| Tailblock | $0.1511 | $23.60 | $69.93 | $154.66 | $41.25 | $178.16 | $129.66 | $597.25 | | | | | | | | |
| HB Threshold | 1,000 | | | | | | | | | | | | | | | |
| **Summer:** | | | | | | | | | | | | | | | | |
| Cust. Chg | $160.36 | | | | | | | | $160.36 | $160.36 | $160.36 | $160.36 | $160.36 | $160.36 | $962.16 | $1,924.32 |
| Headblock | $0.1644 | | | | | | | | $164.40 | $164.40 | $134.43 | $124.85 | $128.59 | $147.43 | $864.10 | $2,224.90 |
| Tailblock | $0.0934 | | | | | | | | $32.97 | $7.82 | $0.00 | $0.00 | $0.00 | $0.00 | $40.79 | $638.04 |
| HB Threshold | 1,000 | | | | | | | | | | | | | | | |
| Total Base Rate Amount | | $410.76 | $457.09 | $541.82 | $428.41 | $565.32 | $516.82 | $2,920.21 | $357.73 | $332.58 | $294.79 | $285.21 | $288.95 | $307.79 | $1,867.05 | $4,787.26 |
| COG Rate - (Seasonal) | | $0.6774 | $0.6774 | $0.6774 | $0.6774 | $0.6774 | $0.6774 | $0.6774 | $0.3310 | $0.3310 | $0.3310 | $0.3310 | $0.3310 | $0.3310 | $0.3310 | $0.5514 |
| COG amount | | $783.19 | $990.89 | $1,370.78 | $862.31 | $1,476.10 | $1,258.69 | $6,741.95 | $447.83 | $358.72 | $270.65 | $251.38 | $258.90 | $296.84 | $1,884.32 | $8,626.27 |
| LDAC | | $0.0674 | $0.0674 | $0.0674 | $0.0674 | $0.0674 | $0.0674 | 0.0674 | $0.0674 | $0.0674 | $0.0674 | $0.0674 | $0.0674 | $0.0674 | $0.0674 | $0.0674 |
| LDAC amount | | $77.96 | $98.63 | $136.45 | $85.84 | $146.93 | $125.29 | $671.10 | $91.23 | $73.08 | $55.13 | $51.21 | $52.74 | $60.47 | $383.86 | $1,054.96 |
| **Total Bill** | | **$1,271.90** | **$1,546.61** | **$2,049.05** | **$1,376.56** | **$2,188.34** | **$1,900.80** | **$10,333.26** | **$896.78** | **$764.38** | **$620.57** | **$587.80** | **$600.59** | **$665.10** | **$4,135.22** | **$14,468.48** |

**November 1, 2016 - April 30, 2017** / **May 1, 2017 - October 31, 2017**
**Commercial Rate (G-52)**

| | | Nov-16 | Dec-16 | Jan-17 | Feb-17 | Mar-17 | Apr-17 | Winter Nov-Apr | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Summer May-Oct | Total Nov-Oct |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Typical Usage (Therms)** | | 1,156 | 1,463 | 2,024 | 1,273 | 2,179 | 1,858 | 9,953 | 1,353 | 1,084 | 818 | 759 | 782 | 897 | 5,693 | 15,645 |
| **Winter:** | | | | | | | | | | | | | | | | |
| Cust. Chg | | $145.08 | $145.08 | $145.08 | $145.08 | $145.08 | $145.08 | $870.48 | | | | | | | | |
| Headblock | | $205.20 | $205.20 | $205.20 | $205.20 | $205.20 | $205.20 | $1,231.20 | | | | | | | | |
| Tailblock | | $21.35 | $63.26 | $139.92 | $37.32 | $161.18 | $117.30 | $540.33 | | | | | | | | |
| HB Threshold | | | | | | | | | | | | | | | | |
| **Summer:** | | | | | | | | | | | | | | | | |
| Cust. Chg | | | | | | | | | $145.08 | $145.08 | $160.36 | $160.36 | $160.36 | $160.36 | $931.60 | $1,802.08 |
| Headblock | | | | | | | | | $148.70 | $148.70 | $134.43 | $124.85 | $128.59 | $147.43 | $832.70 | $2,063.90 |
| Tailblock | | | | | | | | | $32.97 | $7.82 | $0.00 | $0.00 | $0.00 | $0.00 | $40.79 | $581.12 |
| HB Threshold | | | | | | | | | | | | | | | | |
| Total Base Rate Amount | | $371.63 | $413.54 | $490.20 | $387.60 | $511.46 | $467.58 | $2,642.01 | $326.75 | $301.60 | $294.79 | $285.21 | $288.95 | $307.79 | $1,805.09 | $4,447.10 |
| COG Rate - (Seasonal) | | $0.7305 | $0.6582 | $0.7419 | $0.6155 | $0.4984 | $0.4145 | $0.5977 | $0.4574 | $0.4574 | $0.4574 | $0.4931 | $0.4931 | $0.4931 | $0.4727 | $0.5522 |
| COG amount | | $844.58 | $962.81 | $1,501.30 | $783.52 | $1,086.04 | $770.19 | $5,948.43 | $618.84 | $495.70 | $374.01 | $374.49 | $385.69 | $442.21 | $2,690.94 | $8,639.37 |
| LDAC | | $0.0370 | $0.0370 | $0.0450 | $0.0450 | $0.0450 | $0.0450 | 0.0429 | $0.0450 | $0.0450 | $0.0450 | $0.0450 | $0.0450 | $0.0450 | $0.0450 | $0.0437 |
| LDAC amount | | $42.78 | $54.12 | $91.06 | $57.28 | $98.06 | $83.62 | $426.92 | $60.88 | $48.77 | $36.80 | $34.18 | $35.20 | $40.36 | $256.18 | $683.10 |
| **Total Bill** | | **$1,258.98** | **$1,430.47** | **$2,082.57** | **$1,228.40** | **$1,695.56** | **$1,321.39** | **$9,017.36** | **$1,006.47** | **$846.07** | **$705.59** | **$693.88** | **$709.84** | **$790.35** | **$4,752.20** | **$13,769.57** |

**DIFFERENCE:**

| | | Nov | Dec | Jan | Feb | Mar | Apr | Winter Nov-Apr | May | Jun | Jul | Aug | Sep | Oct | Summer May-Oct | Total Nov-Oct |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total Bill** | | **$12.92** | **$116.14** | **($33.52)** | **$148.16** | **$492.78** | **$579.41** | **$1,315.89** | **($109.69)** | **($81.70)** | **($85.01)** | **($106.07)** | **($109.25)** | **($125.26)** | **($616.98)** | **$698.92** |
| % Change | | **1.03%** | **8.12%** | **-1.61%** | **12.06%** | **29.06%** | **43.85%** | **14.59%** | **-10.90%** | **-9.66%** | **-12.05%** | **-15.29%** | **-15.39%** | **-15.85%** | **-12.98%** | **5.08%** |
| **Base Rate** | | $39.13 | $43.54 | $51.62 | $40.81 | $53.86 | $49.24 | $278.20 | $30.98 | $30.98 | $0.00 | $0.00 | $0.00 | $0.00 | $61.96 | $340.16 |
| % Change | | 10.53% | 10.53% | 10.53% | 10.53% | 10.53% | 10.53% | 10.53% | 9.48% | 10.27% | 0.00% | 0.00% | 0.00% | 0.00% | 3.43% | 7.65% |
| **COG & LDAC** | | ($26.21) | $72.60 | ($85.13) | $107.35 | $438.93 | $530.17 | $1,037.70 | ($140.67) | ($112.68) | ($85.01) | ($106.07) | ($109.25) | ($125.26) | ($678.94) | $358.76 |
| % Change | | -2.95% | 7.14% | -5.35% | 12.77% | 37.07% | 62.10% | 16.28% | -20.69% | -20.69% | -20.69% | -25.96% | -25.96% | -25.96% | -23.04% | 3.85% |
| check | | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |

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

**Off Peak 2018 Summer Cost of Gas Filing**

**Residential Heating**

| | Summer 2017 | Summer 2018 |
|---|---|---|
| Customer Charge | $24.43 | $24.43 |
| First 20 Therms | $0.3863 | $0.3863 |
| Excess 20 Therms | $0.3197 | $0.3197 |
| LDAC | $0.0640 | $0.0856 |
| COG | $0.4239 | $0.3144 |
| Total Adjust | $0.4879 | $0.4000 |

| | | Summer 2017 COG @ | Summer 2018 Cog @ | Total | | Base Rate | | COG | | LDAC | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | $ Impact | % Impact | $ Impact | % Impact | $ Impact | % Impact | $ Impact | % Impact |
| | | $0.4879 | $0.4000 | ($0.09) | -18% | | | | | | |
| Cooking alone | 5 | $2.44 | $28.36 | $25.92 | 1063% | $26.36 | 1081% | -$0.55 | -2% | $0.11 | 4% |
| | 10 | $4.88 | $32.29 | $27.41 | 562% | $28.29 | 580% | -$1.09 | -3% | $0.22 | 4% |
| | 20 | $9.76 | $40.16 | $30.40 | 312% | $32.16 | 330% | -$2.19 | -5% | $0.43 | 4% |
| Water Heating alone | 30 | $14.64 | $47.35 | $32.72 | 224% | $35.35 | 242% | -$3.28 | -7% | $0.65 | 4% |
| | 45 | $21.95 | $58.15 | $36.19 | 165% | $40.15 | 183% | -$4.93 | -8% | $0.97 | 4% |
| | 50 | $24.39 | $61.75 | $37.35 | 153% | $41.75 | 171% | -$5.47 | -9% | $1.08 | 4% |
| Heating Alone | 80 | $36.59 | $79.74 | $43.15 | 118% | $49.74 | 136% | -$8.21 | -10% | $1.62 | 4% |
| | 125 | $64.89 | $121.48 | $56.60 | 87% | $68.28 | 105% | -$14.56 | -12% | $2.88 | 4% |
| | 150 | $73.18 | $133.72 | $60.54 | 83% | $73.72 | 101% | -$16.42 | -12% | $3.24 | 4% |
| | 200 | $97.58 | $169.71 | $72.13 | 74% | $89.70 | 92% | -$21.90 | -13% | $4.32 | 4% |

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

**2018 Summer Cost of Gas Filing**
**Capacity Assignment Calculations 2016-2017**
**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

| Line | | | | **Column A** | **Column B** | **Column C** | **Column D** | **Column E** | **Column F** |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Design Day Demand. Dekatherm | Adjusted Design Day Demand, Dt | Percent of Total | | Avg Daily Base Use Load, Dt | Remaining Design Day Demand |
| 1 | RATE R-1-Resi Non-Htg | | | 554 | 548 | 0.3% | | 99 | 450 |
| 2 | RATE R-3-Resi Htg | | | 67,351 | 66,495 | 42.3% | | 3,710 | 62,785 |
| 3 | RATE G-41 (T) | | | 27,438 | 27,082 | 17.2% | | 973 | 26,109 |
| 4 | RATE G-51 (S) | | | 2,631 | 2,604 | 1.7% | | 624 | 1,980 |
| 5 | RATE G-42 (V) | | | 36,637 | 36,174 | 23.0% | | 2,164 | 34,009 |
| 6 | RATE G-52 | | | 4,655 | 4,610 | 2.9% | | 1,365 | 3,246 |
| 7 | RATE G-43 | | | 9,973 | 9,851 | 6.3% | | 886 | 8,965 |
| 8 | RATE G-53 | | | 4,956 | 4,916 | 3.1% | | 1,995 | 2,921 |
| 9 | RATE G-54 | | | 4,979 | 4,978 | 3.2% | | 4,895 | 83 |
| 10 | | | | | | | | | |
| 11 | Total | | | 159,173 | 157,258 | 100.0% | | 16,711 | 140,548 |
| 12 | | | | | | | | | - |
| 13 | Residential Total | | | 67,905 | 67,044 | **42.633%** | | 3,809 | 63,235 |
| 14 | LLF Total | | | 74,048 | 73,107 | **46.488%** | | 4,024 | 69,083 |
| 15 | HLF Total | | | 17,220 | 17,108 | **10.879%** | | 8,878 | 8,230 |
| 16 | Total | | | 159,173 | 157,258 | 100.0% | | 16,711 | 140,548 |
| 17 | | | | | | | | | |
| 18 | C&I Breakdown | | | | | | | | |
| 19 | LLF Total | | | | | | | 4,024 | 69,083 |
| 20 | HLF Total | | | | | | | 8,878 | 8,230 |
| 21 | Total | | | | | | | 12,902 | 77,313 |
| 22 | | | | | | | | | |
| 23 | C&I Breakdown Percentage | | | | | | | | |
| 24 | LLF Total | | | | | | | 31.186% | 89.355% |
| 25 | HLF Total | | | | | | | 68.814% | 10.645% |
| 26 | Total | | | | | | | **100.0%** | **100.0%** |
| 27 | | | | | | | | | |
| 28 | | | | Capacity Cost | MDQ, Dt | $/Dt-Mo. | | | |
| 29 | Pipeline | | | $13,574,999 | 79,718 | $14.1906 | | | |
| 30 | Storage | | | $4,006,683 | 28,115 | $11.8759 | | | |
| 31 | | | | | | | | | |
| 32 | Peaking | | | $3,969,000 | | | | | |
| 33 | Peaking Additional Costs (Concord Lateral Peaking x Differential) | | | $0 | | | | | |
| 34 | Subtotal Peaking Costs | | | $3,969,000 | 49,425 | $6.6919 | | | |
| 35 | Total | | | $21,550,682 | 157,258 | $11.4200 | | | |
| 36 | | | | | | | | | |
| 37 | | | | Capacity Cost | MDQ, Dt | $/Dt-Mo. | | | |
| 38 | Pipeline - Baseload | | | 2,845,602 | 16,711 | $14.1906 | | | |
| 39 | Pipeline - Remaining | | | 10,729,397 | 63,007 | $14.1907 | | | |
| 40 | Storage | | | 4,006,683 | 28,115 | $11.8759 | | | |
| 41 | Peaking | | | 3,969,000 | 49,425 | $6.6919 | | | |
| 42 | Total | | | 21,550,682 | 157,258 | $11.4200 | | | |
| 43 | | | | | | | | | |
| 44 | | | | | | | | | |
| 45 | Residential Allocation | | | Capacity Cost | MDQ, Dt | $/Dt-Mo. | | | |
| 46 | Pipeline - Base | Line 38 * Line 13 Col C | **42.633%** | 1,213,165 | 7,124 | $14.1906 | | | |
| 47 | Pipeline - Remaining | Line 39 * Line 13 Col C | **42.633%** | 4,574,277 | 26,862 | $14.1907 | | | |
| 48 | Storage | Line 40 * Line 13 Col C | **42.633%** | 1,708,173 | 11,986 | $11.8759 | | | |
| 49 | Peaking | Line 41 * Line 13 Col C | **42.633%** | 1,692,141 | 21,072 | $6.6919 | | | |
| 50 | Total | | **42.633%** | 9,187,770 | 67,044 | $11.4200 | | | |

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

**2018 Summer Cost of Gas Filing**
**Capacity Assignment Calculations 2016-2017**
**Derivation of Class Assignments and Weightings**

| | | | | | | | Ratios for COG |
|---|---|---|---|---|---|---|---|
| 51 | | | | | | | |
| 52 | | | | | | | **Ratios for COG** |
| 53 | C&I Allocation | | | Capacity Cost | MDQ, Dt | $/Dt-Mo. | |
| 54 | Pipeline - Base | Line 38 - Line 46 | | 1,632,437 | 9,586 | $14.1906 | |
| 55 | Pipeline - Remaining | Line 39 - Line 47 | | 6,155,120 | 36,145 | $14.1906 | |
| 56 | Storage | Line 40 - Line 48 | | 2,298,511 | 16,129 | $11.8759 | |
| 57 | Peaking | Line 41 - Line 49 | | 2,276,859 | 28,353 | $6.6920 | |
| 58 | Total | | **57.367%** | 12,362,926 | 90,214 | $11.4201 | **1.0000** |
| 59 | | | | | | | |
| 60 | | | | | | | |
| 61 | LLF - C&I Allocation | | | Capacity Cost | MDQ, Dt | $/Dt-Mo. | |
| 62 | Pipeline - Base | Line 54 * Line 24 Col E | | 509,094 | 2,990 | $14.1888 | |
| 63 | Pipeline - Remaining | Line 55 * Line 24 Col F | | 5,499,921 | 32,298 | $14.1906 | |
| 64 | Storage | Line 56 * Line 24 Col F | | 2,053,839 | 14,412 | $11.8757 | |
| 65 | Peaking | Line 57 * Line 24 Col F | | 2,034,493 | 25,335 | $6.6920 | |
| 66 | Total | | **46.8540%** | 10,097,347 | 75,035 | $11.2140 | **0.9820** |
| 67 | | | 31.186% | 82% | | | (Line 66 / Line 58) |
| 68 | | | | | | | |
| 69 | HLF - C&I Allocation | | | Capacity Cost | MDQ, Dt | $/Dt-Mo. | |
| 70 | Pipeline - Base | Line 54 - Line 62 | | 1,123,343 | 6,596 | $14.1922 | |
| 71 | Pipeline - Remaining | Line 55 - Line 63 | | 655,199 | 3,847 | $14.1929 | |
| 72 | Storage | Line 56 - Line 64 | | 244,672 | 1,717 | $11.8750 | |
| 73 | Peaking | Line 57 - Line 65 | | 242,366 | 3,018 | $6.6922 | |
| 74 | Total | | **10.5128%** | 2,265,580 | 15,178 | $12.4389 | **1.0892** |
| 75 | | | | | | | (Line 74 / Line 58) |
| 76 | | | | | | | |
| 77 | Unit Cost | | | Residential | LLF C&I | HLF C&I | |
| 78 | | | | | | | |
| 79 | Pipeline | | | $ 14.1906 | $ 14.1906 | $ 14.1906 | |
| 80 | Storage | | | $ 11.8759 | $ 11.8759 | $ 11.8759 | |
| 81 | Peaking | | | $ - | $ - | $ - | |
| 82 | Total | | | $ 11.4200 | $ 11.2140 | $ 12.4389 | |
| 83 | | | | | | | |
| 84 | | | | | | | |
| 85 | Load Makeup | | | Residential | **LLF C&I** | **HLF C&I** | |
| 86 | | | | | | | |
| 87 | Pipeline | | | 50.69% | **47.03%** | **68.80%** | |
| 88 | Storage | | | 17.88% | **19.21%** | **11.31%** | |
| 89 | Peaking | | | 31.43% | **33.76%** | **19.88%** | |
| 90 | Total | | | 100.00% | **100.00%** | **100.00%** | |
| 91 | | | | | | | |
| 92 | | | | | | | |
| 93 | Supply Makeup | | | Residential | LLF C&I | HLF C&I | Total |
| 94 | | | | | | | |
| 95 | Pipeline | | | 42.63% | 44.27% | 13.10% | 100.00% |
| 96 | Storage | | | 42.63% | 51.26% | 6.11% | 100.00% |
| 97 | Peaking | | | 42.63% | 51.26% | 6.11% | 100.00% |

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

**2018 Summer Cost of Gas Filing**
**Correction Factor Calculation**

| | d | e | f | g | h | i | |
|---|---|---|---|---|---|---|---|
| Data Source: Schedule 10B | | | | | | | Total |
| | May | June | July | Aug | Sep | Oct | Sales |
| G-41 | 800,752 | 362,799 | 221,003 | 168,494 | 181,681 | 460,017 | 2,194,746 |
| G-42 | 817,806 | 502,755 | 252,343 | 126,836 | 81,887 | 248,961 | 2,030,588 |
| G-43 | 231,121 | 150,438 | 102,345 | 80,518 | 92,255 | 145,983 | 802,660 |
| High Winter Use | 1,849,679 | 1,015,992 | 575,691 | 375,848 | 355,822 | 854,961 | 5,027,994 |
| | | | | | | | |
| G-51 | 123,414 | 79,565 | 60,119 | 60,427 | 76,255 | 101,798 | 501,577 |
| G-52 | 125,965 | 84,837 | 66,025 | 66,047 | 80,932 | 103,486 | 527,290 |
| G-53 | 65,831 | 46,531 | 37,351 | 35,453 | 38,931 | 45,666 | 269,763 |
| G-54 | 26,582 | 21,741 | 19,064 | 19,946 | 23,411 | 24,666 | 135,409 |
| Low Winter Use | 341,792 | 232,673 | 182,558 | 181,872 | 219,528 | 275,615 | 1,434,039 |
| | | | | | | | |
| Gross Total | 2,191,471 | 1,248,665 | 758,249 | 557,720 | 575,351 | 1,130,577 | 6,462,033 |

| | | |
|---|---|---|
| Total Sales | 6,462,033 | |
| Low Winter Use | 1,434,039 | |
| Summer Ratio for Low Winter Use | **1.0892** | Schedule 10A p 2, ln 74 |
| High Winter Use | 5,027,994 | |
| Summer Ratio for High Winter Use | **0.9820** | Schedule 10A p 2, ln 66 |

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

Correction Factor = **99.4244%**

**Allocation Calculation for Miscellaneous Overhead**

| | | | |
|---|---|---|---|
| Projected Winter Sales Volume | 11/1/17 - 4/30/18 | 85,410,999 | Sch.10B, ln 23 |
| Projected Annual Sales Volume | 11/1/17 - 10/31/18 | 104,762,210 | Sch.10B, ln 23 |
| Percentage of Winter Sales to Annual Sales | | 81.53% | |

1 **Liberty Utilities (EnergyNorth Natural Gas) Corp.**
2 **d/b/a Liberty Utilities**
3 **Off Peak 2018 Summer Cost of Gas Filing**
4 **2016 Summer Cost of Gas Filing**
5
6 **Dry Therms**

| Line | | Nov-17 | Dec-17 | Jan-18 | Feb-18 | Mar-18 | Apr-18 | Subtotal PK 17-18 | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Subtotal OP 18 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | **Firm Sales** | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | |
| 9 | R-1 | 57,623 | 72,661 | 84,359 | 86,699 | 79,383 | 60,378 | 441,104 | 43,684 | 29,768 | 23,029 | 24,282 | 31,635 | 42,827 | 195,224 | 636,328 |
| 10 | R-3 | 4,079,242 | 7,475,896 | 10,601,656 | 11,353,277 | 9,618,787 | 6,468,165 | 49,597,025 | 3,724,993 | 1,790,044 | 1,015,816 | 990,808 | 1,495,623 | 2,684,292 | 11,701,577 | 61,298,601 |
| 11 | R-4 | 233,466 | 440,531 | 693,701 | 853,546 | 755,650 | 594,932 | 3,571,826 | 374,489 | 184,989 | 93,885 | 82,302 | 101,018 | 155,695 | 992,377 | 4,564,203 |
| 12 | Total Residential. | 4,370,332 | 7,989,089 | 11,379,716 | 12,293,522 | 10,453,820 | 7,123,475 | 53,609,954 | 4,143,166 | 2,004,800 | 1,132,729 | 1,097,392 | 1,628,276 | 2,882,815 | 12,889,178 | 66,499,132 |
| 13 | | | | | | | | | | | | | | | | |
| 14 | G-41 | 1,321,111 | 2,319,295 | 3,165,324 | 3,498,898 | 2,926,489 | 1,918,432 | 15,149,549 | 800,752 | 362,799 | 221,003 | 168,494 | 181,681 | 460,017 | 2,194,746 | 17,344,295 |
| 15 | G-42 | 978,411 | 1,695,282 | 2,275,930 | 2,377,110 | 1,979,683 | 1,404,182 | 10,710,597 | 817,806 | 502,755 | 252,343 | 126,836 | 81,887 | 248,961 | 2,030,588 | 12,741,185 |
| 16 | G-43 | 274,121 | 383,394 | 557,113 | 635,485 | 555,751 | 454,729 | 2,860,593 | 231,121 | 150,438 | 102,345 | 80,518 | 92,255 | 145,983 | 802,660 | 3,663,253 |
| 17 | G-51 | 145,709 | 190,756 | 233,577 | 243,976 | 225,059 | 174,292 | 1,213,369 | 123,414 | 79,565 | 60,119 | 60,427 | 76,255 | 101,798 | 501,577 | 1,714,946 |
| 18 | G-52 | 140,479 | 175,745 | 215,637 | 228,808 | 215,572 | 171,476 | 1,147,717 | 125,965 | 84,837 | 66,025 | 66,047 | 80,932 | 103,486 | 527,290 | 1,675,006 |
| 19 | G-53 | 35,436 | 56,344 | 139,247 | 114,987 | 104,323 | 93,403 | 543,741 | 65,831 | 46,531 | 37,351 | 35,453 | 38,931 | 45,666 | 269,763 | 813,504 |
| 20 | G-54 | 26,753 | 27,864 | 29,471 | 31,094 | 31,443 | 28,854 | 175,480 | 26,582 | 21,741 | 19,064 | 19,946 | 23,411 | 24,666 | 135,409 | 310,889 |
| 21 | Total C/I | 2,922,019 | 4,848,678 | 6,616,300 | 7,130,359 | 6,038,320 | 4,245,368 | 31,801,045 | 2,191,471 | 1,248,665 | 758,249 | 557,720 | 575,351 | 1,130,577 | 6,462,033 | 38,263,077 |
| 22 | | | | | | | | | | | | | | | | |
| 23 | **Sales Volume** | **7,292,351** | **12,837,767** | **17,996,016** | **19,423,880** | **16,492,140** | **11,368,843** | **85,410,999** | **6,334,637** | **3,253,466** | **1,890,979** | **1,655,112** | **2,203,627** | **4,013,391** | **19,351,211** | **104,762,210** |
| 24 | | | | | | | | | | | | | | | | |
| 25 | Transportation Sales | | | | | | | | | | | | | | | |
| 26 | | | | | | | | | | | | | | | | |
| 27 | G-41 | 539,128 | 767,088 | 1,039,425 | 1,121,625 | 930,642 | 730,368 | 5,128,276 | 419,152 | 223,968 | 126,739 | 130,012 | 177,081 | 307,285 | 1,384,236 | 6,512,512 |
| 28 | G-42 | 1,628,897 | 2,359,192 | 3,236,038 | 3,506,931 | 2,907,187 | 2,278,846 | 15,917,091 | 1,277,699 | 653,670 | 331,128 | 308,102 | 424,112 | 829,661 | 3,824,373 | 19,741,464 |
| 29 | G-43 | 1,114,669 | 1,636,244 | 2,104,524 | 2,324,958 | 2,147,547 | 1,701,680 | 11,029,622 | 1,166,024 | 718,428 | 474,845 | 407,575 | 463,279 | 699,961 | 3,930,112 | 14,959,734 |
| 30 | G-51 | 66,126 | 73,032 | 85,860 | 99,636 | 94,845 | 91,257 | 510,757 | 77,824 | 67,235 | 64,233 | 77,040 | 88,667 | 80,334 | 455,334 | 966,091 |
| 31 | G-52 | 282,820 | 298,833 | 328,371 | 353,283 | 342,688 | 316,601 | 1,922,596 | 283,695 | 260,424 | 264,769 | 323,847 | 380,983 | 356,910 | 1,870,628 | 3,793,224 |
| 32 | G-53 | 515,413 | 675,134 | 870,468 | 981,648 | 976,626 | 894,346 | 4,913,637 | 739,996 | 529,662 | 363,450 | 297,063 | 282,627 | 351,494 | 2,564,292 | 7,477,928 |
| 33 | G-54 | 2,242,756 | 2,253,199 | 2,330,289 | 1,981,930 | 1,908,058 | 1,825,916 | 12,542,149 | 1,781,763 | 1,808,656 | 1,788,616 | 1,955,455 | 2,061,440 | 2,219,044 | 11,614,976 | 24,157,124 |
| 34 | | | | | | | | | | | | | | | | |
| 35 | Total Trans. Sales | **6,389,809** | **8,062,724** | **9,994,975** | **10,370,011** | **9,307,593** | **7,839,016** | **51,964,128** | **5,746,154** | **4,262,044** | **3,413,780** | **3,499,094** | **3,878,188** | **4,844,690** | **25,643,949** | **77,608,077** |
| 36 | | | | | | | | | | | | | | | | |
| 37 | Total All Sales | **13,682,160** | **20,900,491** | **27,990,992** | **29,793,891** | **25,799,733** | **19,207,859** | **137,375,127** | **12,080,790** | **7,515,509** | **5,304,758** | **5,154,206** | **6,081,815** | **8,858,081** | **44,995,160** | **182,370,287** |

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

**Off Peak 2018 Summer Cost of Gas Filing**

**Normal and Design Year Volumes**



**Volumes (Therms)** **Normal Year**

**For the Months of May 18 -October 18**

| | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Off Peak May - Oct |
|---|---|---|---|---|---|---|---|
| Pipeline Gas: | | | | | | | |
| Dawn Supply | 172,790 | - | - | - | - | 311,076 | 483,866 |
| Niagara Supply | 601,658 | 533,652 | 508,721 | 491,439 | 510,667 | 604,662 | 3,250,799 |
| TGP Supply (Gulf) | 126,796 | - | - | - | - | - | 126,796 |
| Dracut Supply 1 - Baseload | - | - | - | - | - | - | 0 |
| Dracut Supply 2 - Swing | 57,804 | - | - | - | - | 229,871 | 287,675 |
| ENGIE Combo | - | - | - | - | - | - | 0 |
| LNG Truck | 44,130 | 16,516 | - | - | 47,415 | 14,367 | 122,428 |
| Propane Truck | 71,478 | 65,496 | 60,437 | 58,384 | 62,675 | 71,835 | 390,305 |
| PNGTS | 30,456 | 19,934 | 17,343 | 16,754 | 21,800 | 38,728 | 145,014 |
| TGP Supply (Z4) | 4,848,071 | 4,278,896 | 3,861,131 | 3,744,684 | 4,062,988 | 4,873,525 | 25,669,295 |
| | 5,953,182 | 4,914,494 | 4,447,632 | 4,311,260 | 4,705,545 | 6,144,065 | 30,476,179 |
| | | | | | | | |
| Storage Gas: | | | | | | | |
| | - | - | - | - | - | - | 0 |
| | | | | | | | |
| Produced Gas: | | | | | | | |
| LNG Vapor | 18,025 | 16,516 | 15,241 | 14,723 | 15,260 | 18,115 | 97,880 |
| Propane | - | - | - | - | - | - | 0 |
| | 18,025 | 16,516 | 15,241 | 14,723 | 15,260 | 18,115 | 97,880 |
| | | | | | | | |
| Less - Gas Refills: | | | | | | | |
| LNG Truck | (44,130) | (16,516) | - | - | (47,415) | (14,367) | (122,428) |
| Propane | (71,478) | (65,496) | (60,437) | (58,384) | (62,675) | (71,835) | (390,305) |
| TGP Storage Refill | (1,481,148) | (2,449,558) | (2,727,545) | (2,659,253) | (2,426,348) | (1,268,041) | (13,011,893) |
| | (1,596,756) | (2,531,571) | (2,787,982) | (2,717,637) | (2,536,438) | (1,354,243) | (13,524,627) |
| | | | | | | | |
| Total Sendout Volumes | 4,374,452 | 2,399,439 | 1,674,891 | 1,608,346 | 2,184,367 | 4,807,937 | 17,049,432 |

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

3 **Off Peak 2018 Summer Cost of Gas Filing**

42 **Normal and Design Year Volumes** — **Schedule 11B**

43 **Page 1 of 1**

44

45 **Volumes (Therms)** — **Design Year**

46

47 **For the Months of May 18 -October 18**

48

| Line | | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Off Peak May - Oct |
|---|---|---|---|---|---|---|---|---|
| 51 | Pipeline Gas: | | | | | | | |
| 52 | Dawn Supply | 172,916 | - | - | - | - | 353,750 | 526,666 |
| 53 | Niagara Supply | 602,096 | 534,090 | 509,168 | 491,744 | 510,665 | 605,000 | 3,252,763 |
| 54 | TGP Supply (Gulf) | 127,510 | - | - | - | - | - | 127,510 |
| 55 | Dracut Supply 1 - Baseload | - | - | - | - | - | - | 0 |
| 56 | Dracut Supply 2 - Swing | 58,468 | - | - | - | - | 476,875 | 535,343 |
| 57 | ENGIE Combo | - | - | - | - | - | - | 0 |
| 58 | LNG Truck | 44,162 | 16,530 | - | - | 47,415 | 14,375 | 122,482 |
| 59 | Propane Truck | 71,530 | 65,550 | 60,490 | 58,420 | 62,675 | 71,875 | 390,540 |
| 60 | PNGTS | 30,478 | 19,950 | 17,358 | 16,764 | 21,800 | 38,750 | 145,100 |
| 61 | TGP Supply (Z4) | 4,850,978 | 4,282,410 | 3,868,204 | 3,750,564 | 4,064,065 | 4,875,625 | 25,691,846 |
| 62 | Subtotal Pipeline Volumes | 5,958,138 | 4,918,530 | 4,455,220 | 4,317,492 | 4,706,620 | 6,436,250 | 30,792,250 |
| 63 | | | | | | | | |
| 64 | Storage Gas: | | | | | | | |
| 65 | TGP Storage | - | - | - | - | - | - | 0 |
| 66 | | | | | | | | |
| 67 | Produced Gas: | | | | | | | |
| 68 | LNG Vapor | 18,038 | 16,530 | 15,254 | 14,732 | 15,260 | 18,125 | 97,939 |
| 69 | Propane | - | - | - | - | - | - | - |
| 70 | Subtotal Produced Gas | 18,038 | 16,530 | 15,254 | 14,732 | 15,260 | 18,125 | 97,939 |
| 71 | | | | | | | | |
| 72 | Less - Gas Refills: | | | | | | | |
| 73 | LNG Truck | (44,162) | (16,530) | - | - | (47,415) | (14,375) | (122,482) |
| 74 | Propane | (71,530) | (65,550) | (60,490) | (58,420) | (62,675) | (71,875) | (390,540) |
| 75 | TGP Storage Refill | (1,472,274) | (2,447,010) | (2,728,888) | (2,659,888) | (2,421,980) | (1,451,250) | (13,181,290) |
| 76 | Subtotal Refills | (1,587,966) | (2,529,090) | (2,789,378) | (2,718,308) | (2,532,070) | (1,537,500) | (13,694,312) |
| 77 | | | | | | | | |
| 78 | Total Sendout Volumes | 4,388,210 | 2,405,970 | 1,681,096 | 1,613,916 | 2,189,810 | 4,916,875 | 17,195,877 |

difference

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

**Off Peak 2018 Summer Cost of Gas Filing** **Page 1 of 1**

**Capacity Utilization**

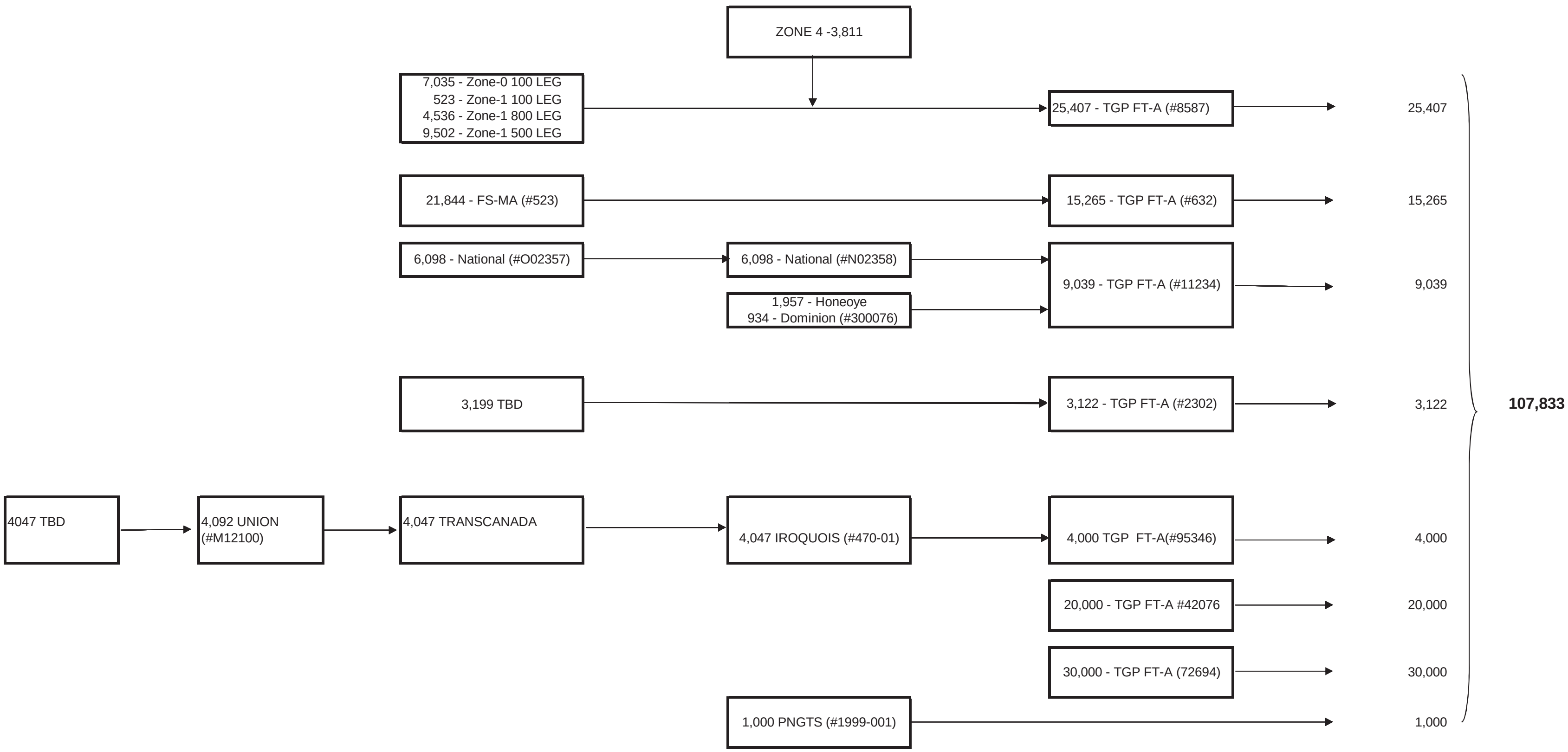
**Volumes (Therms)**

| | Off-Peak Period Normal Year Use (Therms) | MDQ (MMBtu/day) | Seasonal Quantity (Therms) | Utilization Rate | Off-Peak Period Design Year Use (Therms) | MDQ (MMBtu/day) | Seasonal Quantity (Therms) | Utilization Rate |
|---|---|---|---|---|---|---|---|---|
| **Pipeline Gas:** | | | | | | | | |
| Dawn Supply | 483,866 | 4,000 | 7,360,000 | 7% | 526,666 | 4,000 | 7,360,000 | 7% |
| Niagara Supply | 3,250,799 | 3,122 | 5,744,480 | 57% | 3,252,763 | 3,122 | 5,744,480 | 57% |
| TGP Supply (Gulf) | 126,796 | 21,596 | 39,736,640 | 0% | 127,510 | 21,596 | 39,736,640 | 0% |
| Dracut Supply 1 & 2 | 287,675 | 50,000 | 92,000,000 | 0% | 535,343 | 50,000 | 92,000,000 | 1% |
| LNG Truck | 122,428 | - | - | - | 122,482 | - | - | - |
| Propane Truck | 390,305 | - | - | - | 390,540 | - | - | - |
| PNGTS | 145,014 | 1,000 | 1,840,000 | 8% | 145,100 | 1,000 | 1,840,000 | 8% |
| TGP Supply (Z4) | 25,669,295 | 21,596 | 39,736,640 | 65% | 25,691,846 | 21,596 | 39,736,640 | 65% |
| Other Purchased Resources | - | | - | | - | | - | |
| | | | | | | | | |
| Subtotal Pipeline Volumes | 30,476,179 | | | | 30,792,250 | | | |
| | | | | | | | | |
| **Storage Gas:** | | | | | | | | |
| 0 | 0 | | 25,792,710 | 0% | - | | 25,792,710 | 0% |
| | | | | | | | | |
| **Produced Gas:** | | | | | | | | |
| LNG Vapor | 97,880 | | | | 97,939 | | | |
| Propane | - | | | | - | | | |
| | | | | | | | | |
| Subtotal Produced Gas | 97,880 | | | | 97,939 | | | |
| | | | | | | | | |
| **Less - Gas Refills:** | | | | | | | | |
| LNG Truck | (122,428) | | | | (122,482) | | | |
| Propane | (390,305) | | | | (390,540) | | | |
| TGP Storage Refill | (13,011,893) | | | | (13,181,290) | | | |
| | | | | | | | | |
| Subtotal Refills | (13,524,627) | | | | (13,694,312) | | | |
| | | | | | | | | |
| Total Sendout Volumes | 17,049,432 | | | | 17,195,877 | | | |

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

**Off Peak 2018 Summer Cost of Gas Filing**

**Transportation Available for Pipeline Supply and Storage**
**(MMBtu)**



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

**Off Peak 2018 Summer Cost of Gas Filing**
**Agreements for Gas Supply and Transportation**

| SOURCE | RATE SCHEDULE | CONTRACT NUMBER | TYPE | MDQ MMBTU | MAQ * MMBTU | EXPIRATION DATE | NOTIFICATION DATE | RENEWAL OPTIONS |
|---|---|---|---|---|---|---|---|---|
| **Niagara** | - | - | Supply | 3,147 | 1,148,655 | 3/31/2018 | N/a | Terminates |
| **ANE** | - | - | Supply | 4,047 | 611,097 | Peak Only | N/a | Terminates |
| **ENGIE** | FCS | | Firm Combination | Up to 7 trucks | 630,000<br>- | Peak Only | - | Terminates |
| **Dracut or Z6** | NA | NA | Supply | Up to 20,000 / day<br>- | 1,412,000<br>- | 2/28/2018 | - | Terminates |
| **TGP Long-Haul** | - | - | Supply | 21,596 | 3,908,876 | 4/30/2018 | N/a | Terminates |
| **Northern Transport** | - | - | Trucking | 28,500 Gallons | 900,000 Gallons | | N/a | Terminates |
| **Dominion Transmission** | | | Storage | 934 | 102,700 | 3/31/2021 | 3/31/2019 | Mutually |
| **Honeoye Storage Corporation** | SS-NY | 11234 | Storage | 1,957 | 245,380 | 3/31/2020 | 12 months notice | Evergreen Provision |
| **National Fuel Gas Supply Corporation** | FSS | O02358 | Storage | 6,098 | 670,800 | 3/31/2019 | 3/31/2018 | Evergreen Provision |
| **National Fuel Gas Supply Corporation** | FSST | N02358 | Transportation | 6,098 | 670,800 | 3/31/2019 | 3/31/2018 | Evergreen Provision |
| **Iroquois Gas Transmission System** | RTS | 47001 | Transportation | 4,047 | 1,477,155 | 11/1/2018 | 11/1/2017 | Evergreen Provision |
| **Portland Natural Gas Transmission System** | FT 1999-01 | 1999-001 | Transportation | 1,000 | 365,000 | 10/31/2019 | 10/31/2018 | Evergreen Provision |
| **Tennessee Gas Pipeline Company** | FS-MA | 523 | Storage | 21,844 | 1,560,391 | 10/31/2020 | 10/31/2019 | Evergreen Provision |
| **Tennessee Gas Pipeline Company** | FTA | 8587 | Transportation | 25,407 | 9,273,555 | 10/31/2020 | 10/31/2019 | Evergreen Provision |
| **Tennessee Gas Pipeline Company** | FTA | 2302 | Transportation | 3,122 | 1,139,530 | 10/31/2020 | 10/31/2019 | Evergreen Provision |
| **Tennessee Gas Pipeline Company** | FTA | 632 | Transportation | 15,265 | 5,571,725 | 10/31/2020 | 10/31/2019 | Evergreen Provision |
| **Tennessee Gas Pipeline Company** | FTA | 11234 | Transportation | 9,039 | 3,299,235 | 10/31/2020 | 10/31/2019 | Evergreen Provision |
| **Tennessee Gas Pipeline Company** | FTA | 72694 | Transportation | 30,000 | 10,950,000 | 10/31/2029 | 10/31/2029 | Evergreen Provision |
| **Tennessee Gas Pipeline Company** | FTA | 95346 | Transportation | 4,000 | 1,460,000 | 11/30/2021 | 11/30/2020 | Evergreen Provision |
| **Tennessee Gas Pipeline Company** | FTA | 42076 | Transportation | 20,000 | 7,300,000 | 10/31/2020 | 10/31/2019 | Evergreen Provision |
| **TransCanada Pipeline** | FT | 41232 | Transportation | 4,047 | 1,477,155 | 10/31/2022 | 10/31/2020 | Evergreen Provision |
| **Union Gas Limited** | M12 | M12200 | Transportation | 4,092 | 1,493,580 | 10/31/2022 | 10/31/2020 | Evergreen Provision |

* MAQ is calculated on a 365 day calendar year.

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

3 **Off Peak 2018 Summer Cost of Gas Filing**
4 **Storage Inventory**

6 **Underground Storage Gas**

| Ln | | | May-17 (Estimate) | Jun-17 (Estimate) | Jul-17 (Estimate) | Aug-17 (Estimate) | Sep-17 (Estimate) | Oct-17 (Estimate) | Total |
|---|---|---|---|---|---|---|---|---|---|
| 9 | Beginning Balance (MMBtu) | | 302,217 | 452,381 | 600,496 | 845,452 | 1,118,206 | 1,384,131 | 1,951,935 |
| 11 | Injections (MMBtu) | Sch 11A ln 37 /10 | 150,164 | 148,115 | 244,956 | 272,754 | 265,925 | 242,635 | 1,778,439 |
| 13 | Subtotal | | 452,381 | 600,496 | 845,452 | 1,118,206 | 1,384,131 | 1,626,766 | |
| 15 | Storage Sale | | | | | | | | |
| 17 | Withdrawals (MMBtu) | Sch 11A ln 27 /10 | - | - | - | - | - | - | (1,368,064) |
| 19 | Ending Balance (MMBtu) | | 452,381 | 600,496 | 845,452 | 1,118,206 | 1,384,131 | 1,626,766 | 2,362,310 |
| 22 | Beginning Balance | | $ 696,202 | $ 1,079,455 | $ 1,455,376 | $ 2,121,486 | $ 2,847,668 | $ 3,447,722 | 3,609,668 |
| 24 | Injections | ln 11 * ln 36 | 383,253 | 375,920 | 666,111 | 726,182 | 600,054 | 579,313 | 4,356,249 |
| 26 | Subtotal | | $ 1,079,455 | $ 1,455,376 | $ 2,121,486 | $ 2,847,668 | $ 3,447,722 | $ 4,027,035 | |
| 28 | Storage Sale | | | | | | | | |
| 30 | Withdrawals | ln 17 * ln 34 | $ - | $ - | $ - | $ - | $ - | $ - | (2,634,626) |
| 32 | Ending Balance | | $ 1,079,455 | $ 1,455,376 | $ 2,121,486 | $ 2,847,668 | $ 3,447,722 | $ 4,027,035 | $ 5,331,291 |
| 34 | Average Rate For Withdrawals | ln 22 /ln 9 | $2.3037 | $2.3862 | $2.4236 | $2.5093 | $2.5466 | $2.4909 | |
| 36 | TGP Storage Rate for Injections | Actual or NYMEX plus TGP Transportation | $2.5522 | $2.5380 | $2.7193 | $2.6624 | $2.2565 | $2.3876 | |

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

3 **Off Peak 2018 Summer Cost of Gas Filing**

4 **Storage Inventory**

| Ln | Description | Reference | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Total |
|---|---|---|---|---|---|---|---|---|---|
| 5 | | | | | | | | | |
| 39 | | | | | | | | | |
| 40 | **Liquid Propane Gas (LPG)** | | | | | | | | |
| 41 | | | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Total |
| 42 | | | (Estimate) | (Estimate) | (Estimate) | (Estimate) | (Estimate) | (Estimate) | |
| 43 | Beginning Balance | | 36,379 | 36,379 | 43,527 | 50,076 | 56,120 | 61,958 | 96,655 |
| 44 | | | | | | | | | |
| 45 | Injections | Sch 11A ln 36 /10 | - | 7,148 | 6,550 | 6,044 | 5,838 | 6,268 | 44,927 |
| 46 | | | | | | | | | |
| 47 | Subtotal | | 36,379 | 43,527 | 50,076 | 56,120 | 61,958 | 68,226 | |
| 48 | | | | | | | | | |
| 49 | Withdrawals | Sch 11A ln 31 /10 | - | - | - | - | - | - | (61,632) |
| 50 | | | | | | | | | |
| 51 | Adjustment for change in temperature | | - | - | - | - | - | - | - |
| 52 | Adjustment for Transfer | | | | | | | | - |
| 53 | Ending Balance | | 36,379 | 43,527 | 50,076 | 56,120 | 61,958 | 68,226 | 79,950 |
| 54 | | | | | | | | | |
| 55 | | | | | | | | | |
| 56 | Beginning Balance | | $ 196,492 | $ 196,492 | $ 196,492 | $ 196,492 | $ 196,492 | $ 196,492 | $ 1,193,497 |
| 57 | | | | | | | | | |
| 58 | Injections | ln 45 * ln 68 | - | - | - | - | - | - | 168,840 |
| 59 | | | | | | | | | |
| 60 | Subtotal | | $ 196,492 | $ 196,492 | $ 196,492 | $ 196,492 | $ 196,492 | $ 196,492 | |
| 61 | | | | | | | | | |
| 62 | Withdrawals | ln 51 * ln 66 | - | - | - | - | - | - | (763,126) |
| 63 | | | | | | | | | |
| 64 | Ending Balance | | $ 196,492 | $ 196,492 | $ 196,492 | $ 196,492 | $ 196,492 | $ 196,492 | $ 599,211 |
| 65 | | | | | | | | | |
| 66 | Average Rate For Withdrawals | | $5.4013 | $4.5143 | $3.9239 | $3.5013 | $3.1714 | $2.8800 | |
| 67 | | | | | | | | | |
| 68 | Propane Rate for Injections | Actual or Sch. 6, ln 151 * 10 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | |
| 69 | | | | | | | | | |
| 70 | | | | | | | | | |

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

3 **Off Peak 2018 Summer Cost of Gas Filing**

4 **Storage Inventory**

| Line | | | | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 5 | | | | | | | | | | |
| 71 | | | | | | | | | | |
| 72 | **Liquid Natural Gas (LNG)** | | | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Total |
| 73 | | | | (Estimate) | (Estimate) | (Estimate) | (Estimate) | (Estimate) | (Estimate) | |
| 74 | | Beginning Balance | | 12,667 | 10,570 | 13,180 | 13,180 | 11,656 | 10,184 | 12,057 |
| 75 | | | | | | | | | | |
| 76 | | Injections | Sch 11A ln 35 /10 | - | 4,413 | 1,652 | - | - | 4,742 | 135,754 |
| 77 | | | | | | | | | | |
| 78 | | Subtotal | | 12,667 | 14,983 | 14,832 | 13,180 | 11,656 | 14,926 | |
| 79 | | | | | | | | | | |
| 80 | | Withdrawals | Sch 11A ln 30 /10 | (2,097) | (1,802) | (1,652) | (1,524) | (1,472) | (1,526) | (131,457) |
| 81 | | | | | | | | | | |
| 82 | | Ending Balance | | 10,570 | 13,180 | 13,180 | 11,656 | 10,184 | 13,399 | 16,354 |
| 83 | | | | | | | | | | |
| 84 | | | | | | | | | | |
| 85 | | Beginning Balance | | 176,962 | 147,665 | 129,901 | 115,435 | 102,087 | 89,193 | $ 135,659 |
| 86 | | | | | | | | | | |
| 87 | | Injections | ln 76 * ln 97 | - | - | - | - | - | - | 653,097 |
| 88 | | | | | | | | | | |
| 89 | | Subtotal | | $ 176,962 | $ 147,665 | $ 129,901 | $ 115,435 | $ 102,087 | $ 89,193 | |
| 90 | | | | | | | | | | |
| 91 | | Withdrawals | ln 80 * ln 95 | (29,297) | (17,765) | (14,465) | (13,348) | (12,895) | (9,119) | (839,451) |
| 92 | | | | | | | | | | |
| 93 | | Ending Balance | | $ 147,665 | $ 129,901 | $ 115,435 | $ 102,087 | $ 89,193 | $ 80,074 | $ (50,694) |
| 94 | | | | | | | | | | |
| 95 | | Average Rate For Withdrawals | | $13.9705 | $9.8556 | $8.7582 | $8.7582 | $8.7582 | $5.9759 | |
| 96 | | | | | | | | | | |
| 97 | | LNG Rate for Injections | Actual or Sch. 6, ln 150 * 10 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | |