**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty**
**Peak 2021 - 2022 Winter Cost of Gas Filing**
**Summary**

| | Reference | | PK 21-22 Nov - Apr |
|---|---|---|---|
| (a) | (b) | | (c) |
| **Anticipated Direct Cost of Gas** | | | |
| Purchased Gas: | | | |
| Demand Costs: | Sch. 5A, col (k), ln 46 | $ | 12,877,649 |
| Supply Costs | Sch. 6, col (i), ln 47 | | 53,247,154 |
| Storage Gas: | | | |
| Demand, Capacity: | Sch. 5A, col (k), ln 61 | $ | 981,898 |
| Commodity Costs: | Sch. 6, col (i), ln 50 | | 5,358,244 |
| Produced Gas: | Sch. 6, col (i), ln 56 | $ | 2,215,433 |
| Hedge Contract (Savings)/Loss | Sch. 7, col (i), ln 34 | $ | - |
| Hedge Underground Storage Contract (Savings)/Loss | Sch. 16, col (e), ln 172 | $ | - |
| **Total Unadjusted Cost of Gas** | | $ | 74,680,377 |
| **Adjustments:** | | | |
| Prior Period (Over)/Under Recovery) | Sch. 3, col (c) ln 28 | $ | 1,431,639 |
| Interest 05/01/20 - 4/30/21 | Sch. 3, col (q) ln 189 | | 22,981 |
| Fuel Inventory Revenue Req | Sch. 26, col (b) ln 8 | | 335,667 |
| Refunds from Suppliers | Sch. 4, ln 26 col (c) | | - |
| Broker Revenues | Sch. 4, ln 26 col (d) | | (3,600) |
| Fuel Financing | Sch. 4, ln 26 col (e) | | - |
| Transportation CGA Revenues | Sch. 4, ln 26 col (f) | | (4,622) |
| Interruptible Sales Margin | Sch. 4, ln 26 col (g) | | - |
| Capacity Release and Off System Sales Margins | Sch. 4, ln 26 col (h) + col (i) | | (1,676,512) |
| Hedging Costs | Sch. 4, ln 26 col (j) | | - |
| Fixed Price Option Administrative Costs | Sch. 4, ln 26 col (k) | | 36 800 |
| **Total Adjustments** | | $ | 142,353 |
| **Total Anticipated Direct Costs** | lns 23 + 39 | $ | 74,822,730 |
| **Anticipated Indirect Cost of Gas** | | | |
| **Working Capital** | | | |
| Total Unadjusted An icipated Cost of Gas | Ln 23 | $ | 74,680,377 |
| Lead Lag Days / 365 | DG 20-105, 25.72/ 365 | | 0.0705 |
| Prime Rate | | | 3 25% |
| Working Capital Percentage | per GTC 18(f), ln 47 * ln 48 | | 0.229% |
| Working Capital | ln 45 * ln 48 | | 171,028 |
| Plus: Working Capital Reconciliation | Sch. 3, col (c), ln 94 | | (14 859) |
| **Total Working Capital Allowance** | lns 49 + 50 | $ | 156,169 |
| **Bad Debt** | | | |
| Total Unadjusted An icipated Cost of Gas | ln 23 | $ | 74,680,377 |
| Less Refunds | ln 30 | | - |
| Plus Working Capital | ln 52 | | 156,169 |
| Plus Prior Period (Over) Under Recovery | ln 27 | | 1,431,639 |
| Subtotal | | $ | 76,268,185 |
| Bad Debt Percentage | per GTC 18(f) | | 0.70% |
| Bad Debt Allowance | ln 59 * ln 60 | $ | 533,877 |
| Prior Period Bad Debt Allowance | Sch. 3, col (c), ln 169 | | (223 340) |
| **Total Bad Debt Allowance** | lns 62 + 63 | $ | 310,537 |
| **Production and Storage Capacity** | per GTC18(f) | $ | 3,893 587 |
| **Miscellaneous Overhead** | lns 69 * 72 | $ | - |
| **Total Anticipated Indirect Cost of Gas** | lns 52 + 65 + 67 + 70 | $ | 4,360,293 |
| **Total Cost of Gas** | lns 41 + 72 | $ | 79,183,023 |
| **Projected Forecast Sales (Therms)** | Sch. 3, col (q), ln 52 | | 87,443,741 |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty**
**Peak 2021 - 2022 Winter Cost of Gas Filing**
**Summary of Supply and Demand Forecast**



| For Month of: | (a) | (b) | Peak Costs May 21 - Oct 21 (c) | Nov-21 (d) | Dec-21 (e) | Jan-22 (f) | Feb-22 (g) | Mar-22 (h) | Apr-22 (i) | May-22 (j) | Peak Period Nov - Apr (k) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **I. Gas Volumes (Therms)** | | | | | | | | | | | |
| | | | | | | | | | | 1,139,930 | 1.2% |
| **A.** | **Firm Demand Volumes** | | | | | | | | | | |
| | Firm Gas Sales | Sch. 10B, ln 23 | - | 3,165,404 | 17,742,350 | 20,761,510 | 17,503,620 | 14,926,060 | 9,019,420 | 4,325,377 | 87,443,741 |
| | Lost Gas (Unaccounted for) | | - | 131,257 | 200,043 | 232,437 | 192,597 | 165,642 | 95,906 | | 1,017,882 |
| | Company Use | | - | 15,738 | 23,986 | 27,870 | 23,093 | 19,861 | 11,500 | | 122,048 |
| | Unbilled Therms | | - | 8,836,890 | 549,888 | 492,921 | 107,722 | 220,489 | (249,614) | (4,325,377) | 5,632,919 |
| **Total Firm Volumes** | | Sch. 6, ln 97 | - | 12,149,289 | 18,516,267 | 21,514,739 | 17,827,032 | 15,332,053 | 8,877,211 | | 94,216,591 |
| **B.** | **Supply Volumes (Therms)** | | | | | | | | | | |
| Pipeline Gas: | | | | | | | | | | | |
| | Dawn Supply | Sch. 6, ln 66 | - | 876,821 | 926,304 | 927,705 | 840,605 | 911,138 | 750,758 | | 5,233,331 |
| | Niagara Supply | Sch. 6, ln 67 | - | 691,567 | 730,181 | 731,285 | 662,478 | 718,226 | 679,016 | | 4,212,753 |
| | TGP Supply (Direct) | Sch. 6, ln 68 | - | 4,587,074 | 3,104,022 | 3,109,472 | 2,817,427 | 3,053,203 | 612,346 | | 17,283,547 |
| | Dracut Supply 1 - Baseload | Sch. 6, ln 69 | - | - | 2,800,032 | 4,674,030 | 3,176,712 | - | - | | 10,650,774 |
| | Dracut Supply 2 - Swing | Sch. 6, ln 70 | - | 1,775,785 | 5,569,137 | 771,324 | - | 969,754 | 79,714 | | 9,165,713 |
| | Dracut Supply 3 - Swing | Sch. 6, ln 71 | | - | 596,455 | 290,490 | - | 1,484 | - | | 888,430 |
| | Constellation COMBO | Sch. 6, ln 72 | - | 89,306 | 231,576 | 1,424,042 | 1,188,519 | 1,411,967 | - | | 4,345,410 |
| | LNG Truck | Sch. 6, ln 73 | - | 20,666 | 21,875 | 51,371 | 291,824 | 362,081 | - | | 747,817 |
| | Propane Truck | Sch. 6, ln 74 | - | - | - | - | 695,072 | - | - | | 695,072 |
| | PNGTS | Sch. 6, ln 75 | - | 219,205 | 231,576 | 231,926 | 209,962 | 227,785 | 193,487 | | 1,313,941 |
| | Portland Natural Gas | Sch. 6, ln 76 | | 1,070,932 | 1,130,724 | 1,132,434 | 1,026,311 | 1,112,212 | 812,355 | | 6,284,969 |
| | TGP Supply (Z4) | Sch. 6, ln 77 | - | 1,814,902 | 1,924,268 | 1,927,178 | 1,746,396 | 1,892,764 | 5,448,071 | | 14,753,578 |
| | Subtotal Pipeline Volumes | | - | 11,146,258 | 17,266,150 | 15,271,258 | 12,655,305 | 10,660,614 | 8,575,749 | | 75,575,334 |
| Storage Gas: | | | | | | | | | | | |
| | TGP Storage | Sch. 6, ln 82 | - | 2,752,983 | 850,117 | 5,503,525 | 4,890,514 | 4,760,475 | 1,242,085 | | 19,999,699 |
| Produced Gas: | | | | | | | | | | | |
| | LNG Vapor | Sch. 6, ln 85 | - | 21,404 | 421,875 | 547,315 | 694,098 | 273,045 | 21,015 | | 1,978,752 |
| | Propane | Sch. 6, ln 86 | - | - | - | 244,014 | 574,010 | - | - | | 818,023 |
| | Subtotal Produced Gas | | - | 21,404 | 421,875 | 791,328 | 1,268,108 | 273,045 | 21,015 | | 2,796,775 |
| Less - Gas Refill: | | | | | | | | | | | |
| | LNG Truck | Sch. 6, ln 91 | - | (20,666) | (21,875) | (51,371) | (291,824) | (362,081) | - | | (747,817) |
| | Propane | Sch. 6, ln 92 | - | - | - | - | (695,072) | - | - | | (695,072) |
| | TGP Storage Refill | Sch. 6, ln 93 | - | (1,750,690) | - | - | - | - | (961,638) | | (2,712,328) |
| | Subtotal Refills | | - | (1,771,356) | (21,875) | (51,371) | (986,895) | (362,081) | (961,638) | | (4,155,217) |
| Total Firm Sendout Volumes | | Ins 33 + 36 + 41 + 47 | - | 12,149,289 | 18,516,267 | 21,514,739 | 17,827,032 | 15,332,053 | 8,877,211 | | 94,216,591 |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty**
**Peak 2021 - 2022 Winter Cost of Gas Filing**
**Summary of Supply and Demand Forecast**

**II. Gas Costs**

**A. Demand Costs**

**REDACTED**
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| For Month of: | | | Peak Costs May 21 - Oct 21 | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Peak Period Nov - Apr |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) |
| Supply | | | | | | | | | | | |
| | Niagara Supply | Sch.5A, ln 12 | [redacted] | | | | | | | | |
| | Subtotal Supply Demand | | | | | | | | | | |
| | Less Capacity Credit | | | | | | | | | | |
| | Net Pipeline Demand Costs | | | | | | | | | | |
| Pipeline: | | | | | | | | | | | |
| | Iroquois Gas Trans Service RTS 470-0 | Sch.5A, ln 16 | [redacted] | | | | | | | | |
| | Tenn Gas Pipeline 95346 Z5-Z6 | Sch.5A, ln 17 | | | | | | | | | |
| | Tenn Gas Pipeline 2302 Z5-Z6 | Sch.5A, ln 18 | | | | | | | | | |
| | Tenn Gas Pipeline 8587 Z0-Z6 | Sch.5A, ln 19 | | | | | | | | | |
| | Tenn Gas Pipeline 8587 Z1-Z6 | Sch.5A, ln 20 | | | | | | | | | |
| | Tenn Gas Pipeline 8587 Z4-Z6 | Sch.5A, ln 21 | | | | | | | | | |
| | Tenn Gas Pipeline (Dracut) 42076 Z6-Z6 | Sch.5A, ln 22 | | | | | | | | | |
| | Tenn Gas Pipeline (Dracut) 358905 Z6-Z7 | Sch.5A, ln 23 | | | | | | | | | |
| | Tenn Gas Pipeline (Concord Lateral) Z6-Z6 | Sch.5A, ln 24 | | | | | | | | | |
| | Portland Natural Gas Trans Service | Sch.5A, ln 25 | | | | | | | | | |
| | Portland Natural Gas | Sch.5A, ln 26 | | | | | | | | | |
| | ANE (TransCanada via Union to Iroquois) | Sch.5A, ln 27 | | | | | | | | | |
| | TransCanada via Union to Portland | Sch.5A, ln 28 | | | | | | | | | |
| | Tenn Gas Pipeline Z4-Z6 stg 632 | Sch.5A, ln 29 | | | | | | | | | |
| | Tenn Gas Pipeline Z4-Z6 stg 11234 | Sch.5A, ln 30 | | | | | | | | | |
| | Tenn Gas Pipeline Z5-Z6 stg 11234 | Sch.5A, ln 31 | | | | | | | | | |
| | National Fuel FST 2358 | Sch.5A, ln 32 | | | | | | | | | |
| | Subtotal Pipeline Demand | | $ 3,900,053 | $ 1,609,874 | $ 1,609,874 | $ 1,609,874 | $ 1,609,874 | $ 1,609,874 | $ 1,609,874 | | $ 13,559,298 |
| | Less Capacity Credit | | (1,320,558) | (405,527) | (405,527) | (405,527) | (405,527) | (405,527) | (405,527) | | (3,753,722) |
| | Net Pipeline Demand Costs | | $ 2,579,495 | $ 1,204,347 | $ 1,204,347 | $ 1,204,347 | $ 1,204,347 | $ 1,204,347 | $ 1,204,347 | | $ 9,805,576 |
| Peaking Supply: | | | | | | | | | | | |
| | Tenn Gas Pipeline (Concord Lateral) Z6-Z6 | Sch.5A, ln 37 | [redacted] | | | | | | | | |
| | Demand FLS | Sch.5A, ln 38 | | | | | | | | | |
| | Constellation Demand | Sch.5A, ln 39 | | | | | | | | | |
| | Subtotal Peaking Demand | | | | | | | | | | |
| | Less Capacity Credit | | | | | | | | | | |
| | Net Peaking Supply Demand Costs | | $ - | $ 614,415 | $ 614,415 | $ 614,415 | $ 614,415 | $ 614,415 | $ - | | $ 3,072,073 |
| Storage: | | | | | | | | | | | |
| | Dominion - Demand | Sch.5A, ln 49 | [redacted] | | | | | | | | |
| | Dominion - Storage | Sch.5A, ln 50 | | | | | | | | | |
| | Honeoye - Demand | Sch.5A, ln 51 | | | | | | | | | |
| | National Fuel - Demand | Sch.5A, ln 52 | | | | | | | | | |
| | National Fuel - Capacity | Sch.5A, ln 53 | | | | | | | | | |
| | Tenn Gas Pipeline - Demand | Sch.5A, ln 54 | | | | | | | | | |
| | Tenn Gas Pipeline - Capacity | Sch.5A, ln 55 | | | | | | | | | |
| | Subtotal Storage Demand | | $ 696,628 | $ 116,105 | $ 116,105 | $ 116,105 | $ 116,105 | $ 116,105 | $ 116,105 | | $ 1,393,257 |
| | Less Capacity Credit | | (235,878) | (29,247) | (29,247) | (29,247) | (29,247) | (29,247) | (29,247) | | (411,359) |
| | Net Storage Demand Costs | | $ 460,750 | $ 86,858 | $ 86,858 | $ 86,858 | $ 86,858 | $ 86,858 | $ 86,858 | | $ 981,898 |
| | Total Demand Charges | lns 60 + 82 + 90 + 102 | $ 4,596,681 | $ 2,547,279 | $ 2,547,279 | $ 2,547,279 | $ 2,547,279 | $ 2,547,279 | $ 1,725,979 | | $ 19,059,054 |
| v | Total Capacity Credit | lns 61 + 83 + 91 + 103 | (1,556,436) | (641,660) | (641,660) | (641,660) | (641,660) | (641,660) | (434,774) | | (5,199,508) |
| | Net Demand Charges | | $ 3,040,245 | $ 1,905,619 | $ 1,905,619 | $ 1,905,619 | $ 1,905,619 | $ 1,905,619 | $ 1,291,205 | | $ 13,859,546 |

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**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty**
**Peak 2021 - 2022 Winter Cost of Gas Filing**
**Summary of Supply and Demand Forecast**

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Schedule 1
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**B. Commodity Costs**

| | (a) | (b) | Peak Costs May 21 - Oct 21 (c) | Nov-21 (d) | Dec-21 (e) | Jan-22 (f) | Feb-22 (g) | Mar-22 (h) | Apr-22 (i) | May-22 (j) | Peak Period Nov - Apr (k) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Pipeline: | | | | | | | | | | | |
| | Dawn Supply | Sch. 6, ln 12 | [redacted] | | | | | | | | |
| | Niagara Supply | Sch. 6, ln 13 | | | | | | | | | |
| | TGP Supply (Direct) | Sch. 6, ln 14 | | | | | | | | | |
| | Dracut Supply 1 - Baseload | Sch. 6, ln 15 | | | | | | | | | |
| | Dracut Supply 2 - Swing | Sch. 6, ln 16 | | | | | | | | | |
| | Dracut Supply 3 - Swing | Sch. 6, ln 17 | | | | | | | | | |
| | Constellation COMBO | Sch. 6, ln 18 | | | | | | | | | |
| | LNG Truck | Sch. 6, ln 19 | | | | | | | | | |
| | Propane Truck | Sch. 6, ln 20 | | | | | | | | | |
| | PNGTS | Sch. 6, ln 21 | | | | | | | | | |
| | Portland Natural Gas | Sch. 6, ln 22 | | | | | | | | | |
| | TGP Supply (Z4) | Sch. 6, ln 23 | | | | | | | | | |
| | Subtotal Pipeline Commodity Costs | | $ - | $ 4,329,224 | $ 16,305,008 | $ 15,833,755 | $ 10,333,118 | $ 5,110,201 | $ 2,549,535 | | $ 54,460,842 |
| Storage: | | | | | | | | | | | |
| | TGP Storage - Withdrawals | Sch. 6, ln 50 | $ - | $ 735,222 | $ 227,035 | $ 1,469,791 | $ 1,306,079 | $ 1,271,350 | $ 348,767 | | $ 5,358,244 |
| Produced Gas Costs: | | | | | | | | | | | |
| | LNG Vapor | Sch. 6, ln 53 | [redacted] | | | | | | | | |
| | Propane | Sch. 6, ln 54 | | | | | | | | | |
| | Subtotal Produced Gas Costs | | $ - | $ 13,911 | $ 260,964 | $ 605,584 | $ 1,121,719 | $ 198,015 | $ 15,241 | | $ 2,215,433 |
| Less Storage Refills: | | | | | | | | | | | |
| | LNG Truck | Sch. 6, ln 40 | [redacted] | | | | | | | | |
| | Propane | Sch. 6, ln 41 | | | | | | | | | |
| | TGP Storage Refill | Sch. 6, ln 42 | | | | | | | | | |
| | Storage Refill (Trans.) | Sch. 6, ln 43 | | | | | | | | | |
| | Subtotal Storage Refill | | $ - | $ (783,339) | $ (12,142) | $ (28,875) | $ (995,533) | $ (189,781) | $ (356,450) | | $ (2,366,121) |
| Total Supply Commodity Costs | | | $ - | $ 4,295,018 | $ 16,780,865 | $ 17,880,255 | $ 11,765,383 | $ 6,389,785 | $ 2,557,092 | | $ 59,668,398 |
| **C. Supply Volumetric Transportation Costs:** | | | | | | | | | | | |
| | Dawn Supply | Sch. 6, ln 28 | [redacted] | | | | | | | | |
| | Niagara Supply | Sch. 6, ln 29 | | | | | | | | | |
| | TGP Supply (Direct) | Sch. 6, ln 30 | | | | | | | | | |
| | Dracut Supply 1 - Baseload | Sch. 6, ln 31 | | | | | | | | | |
| | Dracut Supply 2 - Swing | Sch. 6, ln 32 | | | | | | | | | |
| | Dracut Supply 3 - Swing | Sch. 6, ln 33 | | | | | | | | | |
| | Subtotal Pipeline Volumetric Trans. Costs | | $ - | $ 212,029 | $ 175,552 | $ 167,661 | $ 144,339 | $ 144,506 | $ 37,579 | | $ 881,666 |
| | TGP Storage - Withdrawals | Sch. 6, ln 35 | $ - | $ 37,243 | $ 11,501 | $ 74,453 | $ 66,160 | $ 64,401 | $ 17,011 | | $ 270,767 |
| | Total Supply Volumetric Trans. Costs | lns 155 + 157 | $ - | $ 249,272 | $ 187,052 | $ 242,114 | $ 210,498 | $ 208,907 | $ 54,590 | | $ 1,152,433 |
| Total Commodity Gas & Trans. Costs | | lns 147 + 159 | $ - | $ 4,544,290 | $ 16,967,917 | $ 18,122,369 | $ 11,975,881 | $ 6,598,692 | $ 2,611,683 | | $ 60,820,831 |

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**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty**
**Peak 2021 - 2022 Winter Cost of Gas Filing**
**Summary of Supply and Demand Forecast**
**D. Supply and Demand Costs by Source**

**REDACTED**
Schedule 1
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| | (a) | (b) | Peak Costs (c) | Nov-21 (d) | Dec-21 (e) | Jan-22 (f) | Feb-22 (g) | Mar-22 (h) | Apr-22 (i) | May-22 (j) | Peak Period Nov - Apr (k) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Purchased Gas Demand Costs | | | | | | | | | | | |
| | Pipeline Gas Demand Costs | ln 60 + 82 | $ 3,900,053 | $ 1,609,874 | $ 1,609,874 | $ 1,609,874 | $ 1,609,874 | $ 1,609,874 | $ 1,609,874 | | $ 13,559,298 |
| | Peaking Gas Demand Costs | ln 90 | - | 821,300 | 821,300 | 821,300 | 821,300 | 821,300 | - | | 4,106,500 |
| | Subtotal Purchased Gas Demand Costs | | $ 3,900,053 | $ 2,431,174 | $ 2,431,174 | $ 2,431,174 | $ 2,431,174 | $ 2,431,174 | $ 1,609,874 | | $ 17,665,798 |
| | Less Capacity Credit | ln 61 + 83 + 91 | (1,320,558) | (612,413) | (612,413) | (612,413) | (612,413) | (612,413) | (405,527) | | (4,788,149) |
| | Net Purchased Gas Demand Costs | | $ 2,579,495 | $ 1,818,761 | $ 1,818,761 | $ 1,818,761 | $ 1,818,761 | $ 1,818,761 | $ 1,204,347 | | $ 12,877,649 |
| Storage Gas Demand Costs | | | | | | | | | | | |
| | Storage Demand | ln 102 | $ 696,628 | $ 116,105 | $ 116,105 | $ 116,105 | $ 116,105 | $ 116,105 | $ 116,105 | | $ 1,393,257 |
| | Less Capacity Credit | ln 103 | (235,878) | (29,247) | (29,247) | (29,247) | (29,247) | (29,247) | (29,247) | | (411,359) |
| | Net Storage Demand Costs | | $ 460,750 | $ 86,858 | $ 86,858 | $ 86,858 | $ 86,858 | $ 86,858 | $ 86,858 | | $ 981,898 |
| **Total Demand Costs** | | lns 176 + 181 | $ 3,040,245 | $ 1,905,619 | $ 1,905,619 | $ 1,905,619 | $ 1,905,619 | $ 1,905,619 | $ 1,291,205 | | $ 13,859,546 |
| Purchased Gas Supply | | | | | | | | | | | |
| | Commodity Costs | ln 130 | [redacted] | | | | | | | | |
| | Less Storage Inj.(TGP Storage) | ln 143 | | | | | | | | | |
| | Less Storage Transportation | ln 144 | | | | | | | | | |
| | Less LNG Truck | ln 141 | | | | | | | | | |
| | Less Propane Truck | ln 142 | | | | | | | | | |
| | Plus Transportation Costs | ln 155 | | | | | | | | | |
| | Subtotal Purchased Gas Supply | | $ - | $ 3,757,914 | $ 16,468,417 | $ 15,972,541 | $ 9,481,923 | $ 5,064,926 | $ 2,230,664 | | $ 52,976,386 |
| Storage Commodity Costs | | | | | | | | | | | |
| | Commodity Costs | ln 133 | $ - | $ 735,222 | $ 227,035 | $ 1,469,791 | $ 1,306,079 | $ 1,271,350 | $ 348,767 | | $ 5,358,244 |
| | Transportation Costs | ln 157 | - | 37,243 | 11,501 | 74,453 | 66,160 | 64,401 | 17,011 | | 270,767 |
| | Subtotal Storage Commodity Costs | | $ - | $ 772,464 | $ 238,536 | $ 1,544,244 | $ 1,372,238 | $ 1,335,750 | $ 365,778 | | $ 5,629,012 |
| Produced Gas Commodity Costs | | ln 138 | $ - | $ 13,911 | $ 260,964 | $ 605,584 | $ 1,121,719 | $ 198,015 | $ 15,241 | | $ 2,215,433 |
| **Subtotal Commodity Costs** | | lns 192 + 197 + 199 | $ - | $ 4,544,290 | $ 16,967,917 | $ 18,122,369 | $ 11,975,881 | $ 6,598,692 | $ 2,611,683 | | $ 60,820,831 |
| Hedge Contract (Savings)/Loss | | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | | $ - |
| **Total Commodity Costs** | | lns 201 + 203 | $ - | $ 4,544,290 | $ 16,967,917 | $ 18,122,369 | $ 11,975,881 | $ 6,598,692 | $ 2,611,683 | | $ 60,820,831 |
| **Total Demand Costs** | | ln 108 | $ 3,040,245 | $ 1,905,619 | $ 1,905,619 | $ 1,905,619 | $ 1,905,619 | $ 1,905,619 | $ 1,291,205 | | $ 13,859,546 |
| **Total Supply Costs** | | ln 205 | - | 4,544,290 | 16,967,917 | 18,122,369 | 11,975,881 | 6,598,692 | 2,611,683 | | 60,820,831 |
| **Total Direct Gas Costs** | | lns 207 + 208 | $ 3,040,245 | $ 6,449,909 | $ 18,873,536 | $ 20,027,988 | $ 13,881,500 | $ 8,504,311 | $ 3,902,887 | | $ 74,680,377 |

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

Schedule 2

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**Peak 2021 - 2022 Winter Cost of Gas Filing**

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

| Supplier | Contract | Contract Type | Contract Unit | Unit Dth (MDQ/ACQ) | Peak Period Cost per Unit Dth |
|---|---|---|---|---|---|
| (a) | (b) | (c) | (d) | (e) | (f) |
| **Demand Costs** | | | | | |
| Dominion - Capacity Reservation | GSS 300076 | Storage | ACQ | 102,700 | [redacted] |
| Tenn Gas Pipeline - Cap. Reservations | FS-MA 523 | Storage | ACQ | 1,560,391 | |
| National Fuel - Capacity Reservation | FSS-O02357 | Storage | ACQ | 670,800 | |
| Tenn Gas Pipeline - Demand | FS-MA 523 | Storage | MDQ | 21,844 | |
| Dominion - Demand | GSS 300076 | Storage | MDQ | 934 | |
| National Fuel - Demand | FSS-O02357 | Storage | MDQ | 6,098 | |
| National Fuel | FST N02358 | Transportation | MDQ | 6,098 | |
| Tenn Gas Pipeline | 42076 FTA Z6-Z6 | Transportation | MDQ | 20,000 | |
| Tenn Gas Pipeline | 358905 FTA Z6-Z6 | Transportation | MDQ | 40,000 | |
| Iroquois Gas Trans Service | RTS 470-01 | Transportation | MDQ | 4,047 | |
| Honeoye - Demand | SS-NY | Storage | MDQ | 1,362 | |
| Tenn Gas Pipeline | 2302 Z5-Z6 | Transportation | MDQ | 3,122 | |
| Tenn Gas Pipeline | 95346 Z5-Z6 | Transportation | MDQ | 4,000 | |
| Tenn Gas Pipeline (short haul) | 11234 Z5-Z6(stg) | Transportation | MDQ | 1,957 | |
| Tenn Gas Pipeline (short haul) | 11234 Z4-Z6(stg) | Transportation | MDQ | 7,082 | |
| Tenn Gas Pipeline (short haul) | 8587 Z4-Z6 | Transportation | MDQ | 3,811 | |
| Tenn Gas Pipeline (short haul) | 632 Z4-Z6 (stg) | Transportation | MDQ | 15,265 | |
| Tenn Gas Pipeline (Concord Lateral) Z6-Z6 | Firm Transportation | Transportation | MDQ | 30,000 | |
| ANE (TransCanada via Union to Iroquois) | Dawn - Parkway to Iroquois | Transportation | MDQ | 4,047 | |
| TransCanada via Union to Portland | Dawn -Parkway to Portland | Transportation | MDQ | 5,077 | |
| Tenn Gas Pipeline (long haul) | 8587 Z1-Z6 | Transportation | MDQ | 14,561 | |
| Tenn Gas Pipeline (long haul) | 8587 Z0-Z6 | Transportation | MDQ | 7,035 | |
| Portland Natural Gas Trans Service | FT-208544 | Transportation | MDQ | 1,000 | |
| Portland Natural Gas | FT 233320 | Transportation | MDQ | 5,000 | |
| Peaking Demand | NSB041 | Peaking | MDQ | 10,000 | |
| **Supply Costs - Commodity** | | | | | |
| TGP Supply (Z4) | | Pipeline | Dkt | 1,475,358 | [redacted] |
| Niagara Supply | | Pipeline | Dkt | 421,275 | |
| Constellation COMBO | | Pipeline | Dkt | 434,541 | |
| TGP Supply (Direct) | | Pipeline | Dkt | 1,728,355 | |
| Dawn Supply | | Pipeline | Dkt | 523,333 | |
| Dracut Supply 1 - Baseload | | Pipeline | Dkt | 1,065,077 | |
| TGP Storage | | Storage | Dkt | 1,999,970 | |
| PNGTS | | Pipeline | Dkt | 131,394 | |
| Propane Truck | | Pipeline | Dkt | 69,507 | |
| LNG Truck | | Pipeline | Dkt | 74,782 | |
| Dracut Supply 2 - Swing | | Pipeline | Dkt | 916,571 | |
| Dracut Supply 3 - Swing | | Pipeline | Dkt | 88,843 | |
| Portland Natural Gas | | Pipeline | Dkt | 628,497 | |
| Propane | | Produced | Dkt | 81,802 | |
| LNG Vapor (Storage) | | Produced | Dkt | 197,875 | |
| **Supply Costs - Volumetric Transportation** | | | | | |
| Dracut Supply 1 - Baseload | | Pipeline | Dkt | 1,065,077 | [redacted] |
| Dracut Supply 2 - Swing | | Pipeline | Dkt | 916,571 | |
| Niagara Supply | | Pipeline | Dkt | 421,275 | |
| Dawn Supply | | Pipeline | Dkt | 523,333 | |
| TGP Storage - Withdrawals | | Pipeline | Dkt | 1,999,970 | |
| TGP Supply (Direct) | | Pipeline | Dkt | 1,728,355 | |

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**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty**
**Peak 2021 2022 Winter Cost of Gas Filing**
**COG (Over)/Under Cumulative Recovery Balances and Interest Calculation**



| | | | Prior Period Bal Apr-21 Ending Bal Plus May Billings | May-21 | Jun-21 | Jul-21 | Aug-21 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Peak Period |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days in Month | 31 | 30 | 31 | 31 | 30 | 31 | 30 | 31 | 31 | 28 | 31 | 30 | 31 | Total |
| (a) | | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) | (n) | (o) | (p) | (q) |
| **Account 1920 1740 COG (Over)/Under Balance** | **Interest Calculation** | | | | | | | | | | | | | | | | |
| **Beginning Balance** | Account 1920-1740 1/ | $ 1,431,639 | $ 1,431,639 | $ 707,644 | $ 206,908 | $ 714,886 | $ 1,224,266 | $ 1,734,921 | $ 2,247,116 | $ (1,342,992) | $ 1,974,846 | $ 3,875,781 | $ 2,802,769 | $ (1,505,151) | $ (4,873,902) | $ 1,431,639 |
| Fcst Direct Gas Costs(Inc U/G Hedges) | Schedule 5A | | 506 708 | 506 708 | 506 708 | 506 708 | 506 708 | 506 708 | 6 449 909 | 18 873 536 | 20 027 988 | 13 881 500 | 8 504 311 | 3 902 887 | - | 74 680 377 |
| Production & Storage & Misc Overhead | | | - | - | - | - | - | - | 648,931 | 648,931 | 648,931 | 648,931 | 648,931 | 648,931 | | 3,893,587 |
| Projected Revenues w/o Int. | ln 52 * 59 | | - | - | - | - | - | - | (2,755,325) | (15,443,821) | (18,071,847) | (15,236,018) | (12,992,382) | (7,850,950) | (3,765,023) | (76,115,367) |
| Projected Unbilled Revenue | | | | | | | | | (7,692,067) | (8,170,717) | (8,599,780) | (8,693,546) | (8,885,471) | (8,668,194) | | (50,709,775) |
| Reverse Prior Month Unbilled | | | | | | | | | | 7,692,067 | 8,170,717 | 8,599,780 | 8,693,546 | 8,885,471 | 8,668,194 | 50,709,775 |
| Adjustment | | | | (1,233,644) | (1,008,659) | | | | - | | | | | | | (2,242,302) |
| Add Net Adjustments | Schedule 4 | | - | - | - | - | - | - | (242,763) | (283,029) | (283,138) | (281,974) | (278,642) | (278,388) | - | (1,647,934) |
| Gas Cost Billed | Account 1920-1740 2/ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Monthly (Over)/Under Recovery | | $ 1 431 639 | $ 704 703 | $ 205 692 | $ 713 616 | $ 1 221 594 | $ 1 730 974 | $ 2 241 628 | $ (1 344 198) | $ 1 973 976 | $ 3 867 717 | $ 2 794 454 | $ (1 506 939) | $ (4 865 394) | $ 29 270 | $ 0 |
| Average Monthly Balance | (ln 12 + 21)/2 | | $ 1,068,171 | $ 456,668 | $ 460,262 | $ 968,240 | $ 1,477,620 | $ 1,988,274 | $ 451,459 | $ 315,492 | $ 2,921,282 | $ 3,335,117 | $ 647,915 | $ (3,185,272) | $ (2,422,316) | |
| Interest Rate | Prime Rate | | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | | |
| Interest Applied | ln 22 * ln 24 / 365 * Days of Month | | $ 2,940 | $ 1,216 | $ 1,270 | $ 2,673 | $ 3,947 | $ 5,488 | $ 1,206 | $ 871 | $ 8,064 | $ 8,315 | $ 1,788 | $ (8,509) | $ - | $ 29,270 |
| **(Over)/Under Balance** | ln 21 + ln 26 | $ 1 431 639 | $ 707 644 | $ 206 908 | $ 714 886 | $ 1 224 266 | $ 1 734 921 | $ 2 247 116 | $ (1 342 992) | $ 1 974 846 | $ 3 875 781 | $ 2 802 769 | $ (1 505 151) | $ (4 873 902) | $ 29 270 | 29 270 |
| **Calculation of COG with Interest** | | | | | | | | | | | | | | | | |
| **Beginning Balance** | ln 12 | $ 1,431,639 | $ 1,431,639 | $ 707,652 | $ 206,920 | $ 714,898 | $ 1,224,278 | $ 1,734,933 | $ 2,247,129 | $ (1,348,085) | $ 1,969,423 | $ 3,870,069 | $ 2,796,990 | $ (1,511,070) | $ (4,879,704) | $ 1,431,639 |
| Fcst Direct Gas Costs(Inc U/G Hedges) | ln 13 | | 506,708 | 506,708 | 506,708 | 506,708 | 506,708 | 506,708 | 6,449,909 | 18,873,536 | 20,027,988 | 13,881,500 | 8,504,311 | 3,902,887 | - | 74,680,377 |
| Prod Storage & Misc Overhead | ln 14 | | - | - | - | - | - | - | 648,931 | 648,931 | 648,931 | 648,931 | 648,931 | 648,931 | - | 3,893,587 |
| Projected Revenues with int. | ln 52 * ln 61 | | - | - | - | - | - | - | (2,755,325) | (15,443,821) | (18,071,847) | (15,236,018) | (12,992,382) | (7,850,950) | (3,765,023) | (76,115,367) |
| Projected Unbilled Revenue | | | | | | | | | (7,697,167) | (8,176,134) | (8,605,482) | (8,699,310) | (8,891,362) | (8,673,942) | | (50,743,396) |
| Reverse Prior Month Unbilled | | | | | | | | | | 7,697,167 | 8,176,134 | 8,605,482 | 8,699,310 | 8,891,362 | 8,673,942 | 50,743,396 |
| Add Net Adjustments | ln 19 | | (1,233,644) | (1,008,659) | - | - | - | - | (242,763) | (283,029) | (283,138) | (281,974) | (278,642) | (278,388) | - | (3,890,237) |
| Gas Cost Billed | ln 20 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Add Interest | ln 26 | | - | - | - | - | - | - | 1,206 | 871 | 8,064 | 8,315 | 1,788 | (8,509) | - | 11,735 |
| **(Over)/Under Balance** | | $ 1 431 639 | $ 704 703 | $ 205 700 | $ 713 628 | $ 1 221 606 | $ 1 730 986 | $ 2 241 640 | $ (1 348 080) | $ 1 969 436 | $ 3 870 073 | $ 2 796 994 | $ (1 511 056) | $ (4 879 677) | $ 29 215 | $ 11 735 |
| Average Monthly Balance | | | $ 1,068,171 | $ 456,676 | $ 460,274 | $ 968,252 | $ 1,477,632 | $ 1,988,287 | $ 449,524 | $ 310,675 | $ 2,919,748 | $ 3,333,531 | $ 642,967 | $ (3,195,374) | $ (2,425,245) | |
| Interest Applied | ln 24 * ln 44 / 365 * Days of Month | | 2,948 | 1,220 | 1,270 | 2,673 | 3,947 | 5,488 | 1,201 | 858 | 8,059 | 8,311 | 1,775 | (8,536) | - | 29,215 |
| **(Over)/Under Balance** | -ln 41 +ln 42 + ln 46 | $ 1,431,639 | $ 707,652 | $ 206,920 | $ 714,898 | $ 1,224,278 | $ 1,734,933 | $ 2,247,129 | $ (1,348,085) | $ 1,969,423 | $ 3,870,069 | $ 2,796,990 | $ (1,511,070) | $ (4,879,704) | $ 29,215 | 29,215 |
| Forecast Sendout Therms | Sch 1 | | | | | | | | 12,149,289 | 18,516,267 | 21,514,739 | 17,827,032 | 15,332,053 | 8,877,211 | | 94,216,591 |
| Less Forecast Billing Therm Sales | Sch. 10B, ln 23 Nov - May | | | | | | | | 3,165,404 | 17,742,350 | 20,761,510 | 17,503,620 | 14,926,060 | 9,019,420 | 4,325,377 | 87,443,741 |
| Less Forecast Unaccounted For | Sch 1 | | | | | | | | 131,257 | 200,043 | 232,437 | 192,597 | 165,642 | 95,906 | | 1,017,882 |
| Less Forecast Company Use | Sch 1 | | | | | | | | 15,738 | 23,986 | 27,870 | 23,093 | 19,861 | 11,500 | | 122,048 |
| Unbilled Volumes | | | | | | | | | 8,836,890 | 549,888 | 492,921 | 107,722 | 220,489 | -249,614 | -4,325,377 | 5,632,919 |
| Gross Unbilled | | | | | | | | | 8,836,890 | 9,386,778 | 9,879,699 | 9,987,421 | 10,207,910 | 9,958,296 | 5,632,919 | |
| COB w/o Interest | Sch. 3, pg. 4, ln 207 col. (c) | | | | | | | | $0.8704 | $0.8704 | $0.8704 | $0.8704 | $0.8704 | $0.8704 | $0.8704 | |
| COG With Interest | Sch. 3 pg. 4 ln 207 col. (d) | | | | | | | | $0.8710 | $0.8710 | $0.8710 | $0.8710 | $0.8710 | $0.8710 | $0.8710 | |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty**
**Peak 2021 2022 Winter Cost of Gas Filing**
**COG (Over)/Under Cumulative Recovery Balances and Interest Calculation**



| | | Days in Month | Prior Period Bal Apr-21 Ending Bal + May Collections | May-21 31 | Jun-21 30 | Jul-21 31 | Aug-21 31 | Sep-21 30 | Oct-21 31 | Nov-21 30 | Dec-21 31 | Jan-22 31 | Feb-22 28 | Mar-22 31 | Apr-22 30 | May-22 31 | Peak Period Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (a) | (b) | | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) | (n) | (o) | (p) |
| **Account 1163 1422 Working Capital (Over)/Under Balance Interest Calculation** | | | | | | | | | | | | | | | | | |
| | **Beginning Balance** | Account 1163-1422 1/ | **$ (14,859)** | $ (14,859) | $ (14,801) | $ (15,276) | $ (14,156) | $ (13,033) | $ (11,906) | $ (10,777) | $ (17,114) | $ (6,036) | $ 2,513 | $ 3,393 | $ (3,722) | $ (10,198) | $ (14,859) |
| | Days Lag | | | 0.0705 | 0.0705 | 0.0705 | 0.0705 | 0.0705 | 0.0705 | 0.0705 | 0.0705 | 0.0705 | 0.0705 | 0.0705 | 0.0705 | | |
| | Prime Rate | | | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | | |
| | Forecast Working Capital | ln 34 * 0.091% | | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 14,771 | 43,223 | 45,867 | 31,791 | 19,476 | 8,938 | - | 171,028 |
| | Projected Revenues w/o Int. | ln 116 * ln 120 | | - | - | - | - | - | - | (5,557) | (31,148) | (36,448) | (30,729) | (26,203) | (15,834) | (7,593) | (153,512) |
| | Projected Unbilled Revenue | | | | | | | | | (15,514) | (16,479) | (17,344) | (17,533) | (17,921) | (17,482) | | (102,273) |
| | Reverse Prior Month Unbilled | | | | | | | | | | 15,514 | 16,479 | 17,344 | 17,533 | 17,921 | 17,482 | 102,273 |
| | Add Net Adjustments | | | (1,062) | (1,595) | - | - | - | - | - | - | - | - | - | - | - | (2,657) |
| | Working Capital Billed | Account 1163-1422 2/ | - | | | | | | | | | | | | | | - |
| | Monthly (Over)/Under Recovery | | $ (14,859) | $ (14,761) | $ (15,236) | $ (14,116) | $ (12,996) | $ (11,873) | $ (10,746) | $ (17,077) | $ (6,004) | $ 2,518 | $ 3,386 | $ (3,721) | $ (10,180) | $ (309) | $ 0 |
| | Average Monthly Balance | (ln 72 + ln 86)/2 | | $ (14,810) | $ (15,019) | $ (14,696) | $ (13,576) | $ (12,453) | $ (11,326) | $ (13,927) | $ (11,559) | $ (1,759) | $ 2,949 | $ (164) | $ (6,951) | $ (5,254) | |
| | Interest Rate | Prime Rate | | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | | |
| | Interest Applied | ln 88 * ln 90 / 365 * Days of Month | | $ (41) | $ (40) | $ (41) | $ (37) | $ (33) | $ (31) | $ (37) | $ (32) | $ (5) | $ 7 | $ (0) | $ (19) | $ - | $ (309) |
| | **(Over)/Under Balance** | ln 86 + ln 92 | $ (14,859) | $ (14,801) | $ (15,276) | $ (14,156) | $ (13,033) | $ (11,906) | $ (10,777) | $ (17,114) | $ (6,036) | $ 2,513 | $ 3,393 | $ (3,722) | $ (10,198) | $ (309) | (309) |
| **Calculation of Working Capital with Interest** | | | | | | | | | | | | | | | | | |
| | **Beginning Balance** | ln 72 | $ (14,859) | $ (14,859) | $ (14,801) | $ (15,276) | $ (14,156) | $ (13,033) | $ (11,906) | $ (10,777) | $ (17,077) | $ (5,944) | $ 2,670 | $ 3,604 | $ (3,464) | $ (9,913) | $ (14,859) |
| | Forecast Working Capital | ln 76 | | 1 160 | 1 160 | 1 160 | 1 160 | 1 160 | 1 160 | 14 771 | 43 223 | 45 867 | 31 791 | 19 476 | 8 938 | - | 171 028 |
| | Projected Rev. with interest | ln 116 * ln 122 | | - | - | - | - | - | - | (5,547) | (31,094) | (36,385) | (30,675) | (26,158) | (15,807) | (7,580) | (153,247) |
| | Projected Unbilled Revenue | | | | | | | | | (15,487) | (16,451) | (17,314) | (17,503) | (17,890) | (17,452) | | (102,097) |
| | Reverse Prior Month Unbilled | | | | | | | | | | 15,487 | 16,451 | 17,314 | 17,503 | 17,890 | 17,452 | 102,097 |
| | Add Net Adjustments | ln 82 | - | (1.062) | (1,595) | - | - | - | - | - | - | - | - | - | - | - | (2,657) |
| | Working Capital Billed | ln 84 | - | - | - | - | - | - | - | | | | | | | | - |
| | Add Interest | ln 92 | | - | - | - | - | - | - | (37) | (32) | (5) | 7 | (0) | (19) | - | (86) |
| | Monthly (Over)/Under Recovery | | $ (14,859) | $ (14,761) | $ (15,236) | $ (14,116) | $ (12,996) | $ (11,873) | $ (10,746) | $ (17,077) | $ (5,944) | $ 2,669 | $ 3,603 | $ (3,465) | $ (9,914) | $ (42) | $ 180 |
| | Average Monthly Balance | | | $ (14,810) | $ (15,019) | $ (14,696) | $ (13,576) | $ (12,453) | $ (11,326) | $ (13,927) | $ (11,511) | $ (1,637) | $ 3,137 | $ 69 | $ (6,689) | $ (4,978) | |
| | Interest Applied | ln 90 * ln 110 / 365 * Days of Month | | (41) | (40) | (41) | (37) | (33) | (31) | (37) | (32) | (5) | 8 | 0 | (18) | - | $ (307) |
| | **(Over)/Under Balance** | -ln 107 +ln 108 + ln 112 | $ (14,859) | $ (14,801) | $ (15,276) | $ (14,156) | $ (13,033) | $ (11,906) | $ (10,777) | $ (17,077) | $ (5,944) | $ 2,670 | $ 3,604 | $ (3,464) | $ (9,913) | $ (42) | $ (42) |
| | Forecast Therm Sales | ln 52 | | | | | | | | 3,165,404 | 17,742,350 | 20,761,510 | 17,503,620 | 14,926,060 | 9,019,420 | 4,325,377 | 87,443,741 |
| | Unbilled Therm | ln 55 | | | | | | | | 8,836,890 | 549,888 | 492,921 | 107,722 | 220,489 | (249,614) | | |
| | Gross Unbilled | | | | | | | | | 8,836,890 | 9,386,778 | 9,879,699 | 9,987,421 | 10,207,910 | 9,958,296 | | |
| | Working Cap. Rate w/out Int. | Sch. 3, pg. 4, ln 224 col. (c) | | | | | | | | $0.0018 | $0.0018 | $0.0018 | $0.0018 | $0.0018 | $0.0018 | $0.0018 | |
| | Working Capital Rate w/ Int. | Sch. 3 pg. 4 ln 224 col. (d) | | | | | | | | $0.0018 | $0.0018 | $0.0018 | $0.0018 | $0.0018 | $0.0018 | $0.0018 | |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty**
**Peak 2021 2022 Winter Cost of Gas Filing**
**COG (Over)/Under Cumulative Recovery Balances and Interest Calculation**



| | | | Prior Period Bal | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Apr-21 | May-21 | Jun-21 | Jul-21 | Aug-21 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | DemandPeriod |
| | | Days in Month | Ending Bal | 31 | 30 | 31 | 31 | 30 | 31 | 30 | 31 | 31 | 28 | 31 | 30 | 31 | Total |
| | (a) | (b) | + May Collections | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) | (n) | (o) | (p) |
| **Account 1920 1743 Bad Debt (Over)/Under Balance Interest Calculation** | | | | | | | | | | | | | | | | | |
| Forecast Direct Gas Costs | | ln 34 | | $ 506,708 | $ 506,708 | $ 506,708 | $ 506,708 | $ 506,708 | $ 506,708 | $ 6,449,909 | $ 18,873,536 | $ 20,027,988 | $ 13,881,500 | $ 8,504,311 | $ 3,902,887 | $ - | 74,680,377 |
| Forecast Working Capital | | ln 101 | | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | (88) | 43,223 | 45,867 | 31,791 | 19,476 | 8,938 | | 156,169 |
| Prior Period Balance | | ln 42 | | | | | | | | 238 607 | 238 607 | 238 607 | 238 607 | 238 607 | 238 607 | | 1 431 639 |
| Total Forecast Direct Gas Costs & Working Capital | | | | 507,868 | 507,868 | 507,868 | 507,868 | 507,868 | 507,868 | 6,688,427 | 19,155,366 | 20,312,462 | 14,151,897 | 8,762,394 | 4,150,432 | - | 74,836,546 |
| **Beginning Balance** | | Account 1920-1743 1/ | **$ (223,340)** | $ (223,340) | $ (252,014) | $ (257,764) | $ (254,915) | $ (252,059) | $ (249,172) | $ (246,300) | $ (237,232) | $ (160,243) | $ (84,101) | $ (39,638) | $ (25,216) | $ (23,340) | $ (223,340) |
| Forecast Bad Debt | | ln 135 * 0.007 | | 3,555 | 3,555 | 3,555 | 3,555 | 3,555 | 3,555 | 46,819 | 134,088 | 142,187 | 99,063 | 61,337 | 29,053 | | 533,877 |
| Projected Revenues w/o int | | ln 178 * ln 182 | | - | - | - | - | - | - | (9,786) | (54,851) | (64,185) | (54,113) | (46,144) | (27,884) | (13,372) | (270,335) |
| Projected Unbilled Revenue | | | | | | | | | | (27,319) | (29,019) | (30,543) | (30,876) | (31,558) | (30,786) | | (180,103) |
| Reverse Prior Month Unbilled | | | | | | | | | | | 27,319 | 29,019 | 30,543 | 30,876 | 31,558 | 30,786 | 180,103 |
| Bad Debt Billed | | Account 1920-1743 2/ | - | | - | - | - | - | - | | - | - | - | - | - | - | - |
| Add Net Adjustments | | | - | (31,575) | (8,627) | - | - | - | - | | - | - | - | - | - | - | (40,203) |
| Monthly (Over)/Under Recovery | | | $ (223 340) | $ (251 360) | $ (257 086) | $ (254 209) | $ (251 360) | $ (248 504) | $ (245 617) | $ (236 587) | $ (159 695) | $ (83 764) | $ (39 483) | $ (25 127) | $ (23 275) | $ (5 926) | $ - |
| Average Monthly Balance | | (ln 137 + ln 149)/2 | | $ (237,350) | $ (254,550) | $ (255,986) | $ (253,138) | $ (250,281) | $ (247,395) | $ (241,443) | $ (198,463) | $ (122,003) | $ (61,792) | $ (32,382) | $ (24,246) | $ (14,633) | |
| Interest Rate | | Prime Rate | | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | | |
| Interest Applied | | ln 151 * ln 153 / 365 * Days of Month | | $ (653) | $ (678) | $ (707) | $ (699) | $ (669) | $ (683) | $ (645) | $ (548) | $ (337) | $ (154) | $ (89) | $ (65) | | $ (5,926) |
| **(Over)/Under Balance** | | ln 149 + ln 155 | $ (223 340) | $ (252 014) | $ (257 764) | $ (254 915) | $ (252 059) | $ (249 172) | $ (246 300) | $ (237 232) | $ (160 243) | $ (84 101) | $ (39 638) | $ (25 216) | $ (23 340) | $ (5 926) | (5 926) |
| **Calculation of Bad Debt with Interest** | | | | | | | | | | | | | | | | | |
| **Beginning Balance** | | ln 137 | $ (223,340) | $ (223,340) | $ (252,016) | $ (257,768) | $ (254,919) | $ (252,063) | $ (249,176) | $ (246,304) | $ (236,454) | $ (158,272) | $ (80,748) | $ (35,138) | $ (19,731) | $ (17,284) | $ (223,340) |
| Forecast Bad Debt | | ln 139 | | 3 555 | 3 555 | 3 555 | 3 555 | 3 555 | 3 555 | 46 819 | 134 088 | 142 187 | 99 063 | 61 337 | 29 053 | - | 533 877 |
| Projected Revenues with int. | | ln 178 * ln 184 | | - | - | - | - | - | - | (9,580) | (53,696) | (62,834) | (52,974) | (45,173) | (27,297) | (13,091) | (264,645) |
| Projected Unbilled Revenue | | | | | | | | | | (26,744) | (28,409) | (29,900) | (30,227) | (30,894) | (30,138) | | (176,312) |
| Reverse Prior Month Unbilled | | | | | | | | | | | 26,744 | 28,409 | 29,900 | 30,227 | 30,894 | 30,138 | 176,312 |
| Bad Debt Billed | | ln 145 | - | | - | - | - | - | - | - | - | - | - | - | - | - | 0 |
| Add Interest | | ln 155 | - | - | - | - | - | - | - | (645) | (548) | (337) | (154) | (89) | (65) | - | (1 838) |
| Add Net Adjustments | | ln 147 | - | (31,575) | (8,627) | | | | | - | - | - | - | - | - | - | (40,203) |
| Monthly (Over)/Under Recovery | | | $ (223 340) | $ (251 360) | $ (257 088) | $ (254 213) | $ (251 364) | $ (248 508) | $ (245 621) | $ (236 455) | $ (158 275) | $ (80 748) | $ (35 138) | $ (19 731) | $ (17 284) | $ (237) | $ 3 852 |
| Average Monthly Balance | | | | $ (237,350) | $ (254,552) | $ (255,990) | $ (253,142) | $ (250,285) | $ (247,399) | $ (241,379) | $ (197,365) | $ (119,510) | $ (57,943) | $ (27,435) | $ (18,508) | $ (8,761) | |
| Interest Applied | | ln 153 * ln 172 / 365 * Days of Month | | (655) | (680) | (707) | (699) | (669) | (683) | (645) | (545) | (337) | (154) | (89) | (65) | - | $ (5,926) |
| **(Over)/Under Balance** | | -ln 168 +ln 170 + ln 174 | $ (223,340) | $ (252,016) | $ (257,768) | $ (254,919) | $ (252,063) | $ (249,176) | $ (246,304) | $ (236,454) | $ (158,272) | $ (80,748) | $ (35,138) | $ (19,731) | $ (17,284) | $ (237) | $ (237) |
| Forecast Term Sales | | ln 52 | | | | | | | | 3,165,404 | 17,742,350 | 20,761,510 | 17,503,620 | 14,926,060 | 9,019,420 | 4,325,377 | 87,443,741 |
| Unbilled Therm | | ln 55 | | | | | | | | 8,836,890 | 549,888 | 492,921 | 107,722 | 220,489 | (249,614) | | |
| Gross Unbilled | | | | | | | | | | 8,836,890 | 9,386,778 | 9,879,699 | 9,987,421 | 10,207,910 | 9,958,296 | | |
| COG Rate Without Interest | | Sch. 3, pg. 4, ln 241 col. (c) | | | | | | | | $0.0031 | $0.0031 | $0.0031 | $0.0031 | $0.0031 | $0.0031 | $0.0031 | |
| COG With Interest | | Sch. 3 pg. 4 ln 241 col. (d) | | | | | | | | $0.0030 | $0.0030 | $0.0030 | $0.0030 | $0.0030 | $0.0030 | $0.0030 | |
| **Total Interest** | | lns 46 + 112 + 174 | $ - | $ 2 252 | $ 500 | $ 523 | $ 1 936 | $ 3 245 | $ 4 774 | $ 519 | $ 281 | $ 7 718 | $ 8 165 | $ 1 686 | $ (8 618) | $ - | $ 22 981 |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty**
**Peak 2021 - 2022 Winter Cost of Gas Filing**
**Adjustments to Gas Costs**

**REDACTED**
Schedule 4
Page 1 of 1

| **Adjustments** | | **Prior Period Adjustments** | **Refunds from Suppliers** | **Broker Revenue** | **Inventory Finance Charges** | **Transportation CGA Revenues (Schedule 17)** | **Interruptible Sales Margin** | **Off System Sales Margin** | **Capacity Release** | **Net Option Premiums** | **Fixed Price Option Administrative Costs** | **Total Adjustments** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (a) | | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (m) |
| May-20 | | $ - | $ - | $ - | $ - | $ - | $ - | [redacted] | | $ - | $ - | $ - |
| Jun-20 | | - | - | - | - | - | - | | | - | - | - |
| Jul-20 | 1/ | - | - | - | - | - | - | | | - | - | - |
| Aug-20 | 1/ | - | - | - | - | - | - | | | - | - | - |
| Sep-20 | 1/ | - | - | - | - | - | - | | | - | - | - |
| Oct-20 | 1/ | - | - | - | - | - | - | | | - | - | - |
| Nov-20 | 1/ | - | - | (47) | - | (688) | - | | | - | 36,800 | (242,763) |
| Dec-20 | 1/ | - | - | (624) | - | (850) | - | | | - | - | (283,029) |
| Jan-21 | 1/ | - | - | (751) | - | (956) | - | | | - | - | (283,138) |
| Feb-21 | 1/ | - | - | (816) | - | (799) | - | | | - | - | (281,974) |
| Mar-21 | 1/ | - | - | (757) | - | (762) | - | | | - | - | (278,642) |
| Apr-21 | 1/ | - | - | (605) | - | (567) | - | | | - | - | (278,388) |
| Subtotal May 20 - Oct 20 | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Subtotal Nov 20 - Apr 21 | | $ - | $ - | $ (3,600) | $ - | $ (4,622) | $ - | $ - | $ (1,676,512) | $ - | $ 36,800 | $ (1,647,934) |
| Total Peak Period | | $ - | $ - | $ (3,600) | $ - | $ (4,622) | $ - | $ - | $ (1,676,512) | $ - | $ 36,800 | $ (1,647,934) |

1/ Estimates are based on prior years actual, except transportation revenue is calculated on Schedule 17. and Inventory Finance Charges for Nov 20 - Apr 21 calculated on Schedule 16

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**Liberty Utilities (EnergyNorth Natural Gas) Corp.** **REDACTED**
**d/b/a Liberty** **Schedule 5A**
**Peak 2021 - 2022 Winter Cost of Gas Filing** **Page 1 of 1**
**Demand Costs**

| | (a) | Peak (b) | Reference (c) | Deferred to Peak May 20 -Oct 20 (d) | Nov-21 (e) | Dec-21 (f) | Jan-22 (g) | Feb-22 (h) | Mar-22 (i) | Apr-22 (j) | Peak Nov-Apr Total (k) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Supply** | | | | | | | | | | | |
| | Niagara Supply | | Sch 5B, ln 9 * Sch 5C ln 9 x days | [redacted] | | | | | | | |
| | Subtotal Supply Demand & Reservation Charges | | | | | | | | | | |
| **Pipeline** | | | | | | | | | | | |
| | Iroquois Gas Trans Service RTS 470-0 | | Sch 5B, ln 12 * Sch 5C ln 12 x days | [redacted] | | | | | | | |
| | Tenn Gas Pipeline 95346 Z5-Z6 | | Sch 5B, ln 13 * Sch 5C ln 14 x days | | | | | | | | |
| | Tenn Gas Pipeline 2302 Z5-Z6 | | Sch 5B, ln 14 * Sch 5C ln 16 x days | | | | | | | | |
| | Tenn Gas Pipeline 8587 Z0-Z6 | | Sch 5B, ln 15 * Sch 5C ln 18 x days | | | | | | | | |
| | Tenn Gas Pipeline 8587 Z1-Z6 | | Sch 5B, ln 16 * Sch 5C ln 20 x days | | | | | | | | |
| | Tenn Gas Pipeline 8587 Z4-Z6 | | Sch 5B, ln 17 * Sch 5C ln 22 x days | | | | | | | | |
| | Tenn Gas Pipeline (Dracut) 42076 Z6-Z6 | peak | Sch 5B, ln 18 * Sch 5C ln 24 x days | | | | | | | | |
| | Tenn Gas Pipeline (Dracut) 358905 Z6-Z7 | peak | Sch 5B, ln 19 * Sch 5C ln 25 x days | | | | | | | | |
| | Tenn Gas Pipeline (Concord Lateral) Z6-Z6 | peak | Sch 5B, ln 20 * Sch 5C ln 28 x days | | | | | | | | |
| | Portland Natural Gas Trans Service | | Sch 5B, ln 21 * Sch 5C ln 30 x days | | | | | | | | |
| | Portland Natural Gas | | Sch 5B, ln 22 * Sch 5C ln 31 x days | | | | | | | | |
| | ANE (TransCanada via Union to Iroquois) | | Sch 5B, ln 23 * Sch 5C ln 32 x days | | | | | | | | |
| | TransCanada via Union to Portland | | Sch 5B, ln 24 * Sch 5C ln 33 x days | | | | | | | | |
| | Tenn Gas Pipeline Z4-Z6 stg 632 | peak | Sch 5B, ln 25 * Sch 5C ln 34 x days | | | | | | | | |
| | Tenn Gas Pipeline Z4-Z6 stg 11234 | peak | Sch 5B, ln 26 * Sch 5C ln 36 x days | | | | | | | | |
| | Tenn Gas Pipeline Z5-Z6 stg 11234 | peak | Sch 5B, ln 27 * Sch 5C ln 38 x days | | | | | | | | |
| | National Fuel FST 2358 | peak | Sch 5B, ln 28 * Sch 5C ln 40 x days | | | | | | | | |
| | Subtotal Pipeline Demand Charges | | | $ 3,900,053 | $ 1,609,874 | $ 1,609,874 | $ 1,609,874 | $ 1,609,874 | $ 1,609,874 | $ 1,609,874 | $ 13,559,298 |
| **Peaking Supply** | | | | | | | | | | | |
| | Tenn Gas Pipeline (Concord Lateral) Z6-Z6 | peak | Sch 5B, ln 31 * Sch 5C ln 28 x days | [redacted] | | | | | | | |
| | Demand FLS | peak | Per Contract | | | | | | | | |
| | Constellation Demand | peak | Per Contract | | | | | | | | |
| | Subtotal Peaking Demand Charges | | | $ - | $ 821,300 | $ 821,300 | $ 821,300 | $ 821,300 | $ 821,300 | $ - | $ 4,106,500 |
| **Subtotal Supply, Pipeline & Peaking** | | | ln 13 + ln 34 + ln 40 | $ 3,900,053 | $ 2,431,174 | $ 2,431,174 | $ 2,431,174 | $ 2,431,174 | $ 2,431,174 | $ 1,609,874 | $ 17,665,798 |
| | Less Transportation Capacity Credit | | | $ (1,320,558) | $ (612,413) | $ (612,413) | $ (612,413) | $ (612,413) | $ (612,413) | $ (405,527) | $ (4,788,149) |
| **Total Supply, Pipeline & Peaking Demand** | | | | $ 2,579,495 | $ 1,818,761 | $ 1,818,761 | $ 1,818,761 | $ 1,818,761 | $ 1,818,761 | $ 1,204,347 | $ 12,877,649 |
| | Dominion - Demand | peak | Sch 5B, ln 36 * Sch 5C ln 64 x days | $ 10,488 | $ 1,748 | $ 1,748 | $ 1,748 | $ 1,748 | $ 1,748 | $ 1,748 | $ 20,977 |
| | Dominion - Storage | peak | Sch 5B, ln 37 * Sch 5C ln 65 x days | 8,935 | 1,489 | 1,489 | 1,489 | 1,489 | 1,489 | 1,489 | 17,870 |
| | Honeoye - Demand | peak | Sch 5B, ln 38 * Sch 5C ln 68 x days | 50,105 | 8,351 | 8,351 | 8,351 | 8,351 | 8,351 | 8,351 | 100,211 |
| | National Fuel - Demand | peak | Sch 5B, ln 40 * Sch 5C ln 70 x days | 96,318 | 16,053 | 16,053 | 16,053 | 16,053 | 16,053 | 16,053 | 192,636 |
| | National Fuel - Capacity | peak | Sch 5B, ln 41 * Sch 5C ln 71 x days | 191,580 | 31,930 | 31,930 | 31,930 | 31,930 | 31,930 | 31,930 | 383,161 |
| | Tenn Gas Pipeline - Demand | peak | Sch 5B, ln 42 * Sch 5C ln 74 x days | 171,615 | 28,603 | 28,603 | 28,603 | 28,603 | 28,603 | 28,603 | 343,230 |
| | Tenn Gas Pipeline - Capacity | peak | Sch 5B, ln 43 * Sch 5C ln 75 x days | 167,586 | 27,931 | 27,931 | 27,931 | 27,931 | 27,931 | 27,931 | 335,172 |
| **Subtotal Storage Demand Costs** | | | | $ 696,628 | $ 116,105 | $ 116,105 | $ 116,105 | $ 116,105 | $ 116,105 | $ 116,105 | $ 1,393,257 |
| | Less Transportation Capacity Credit | | | $ (235,878) | $ (29,247) | $ (29,247) | $ (29,247) | $ (29,247) | $ (29,247) | $ (29,247) | $ (411,359) |
| **Total Storage Demand Costs** | | | ln 57 + ln 59 | $ 460,750 | $ 86,858 | $ 86,858 | $ 86,858 | $ 86,858 | $ 86,858 | $ 86,858 | $ 981,898 |
| **Total Demand Charges** | | | ln 42 + ln 57 | $ 4 596 681 | $ 2 547 279 | $ 2 547 279 | $ 2 547 279 | $ 2 547 279 | $ 2 547 279 | $ 1 725 979 | $ 19 059 054 |
| | Total Transportation Capacity Credit | | ln 44 + ln 59 | $ (1,556,436) | $ (641,660) | $ (641,660) | $ (641,660) | $ (641,660) | $ (641,660) | $ (434,774) | $ (5,199,508) |
| **Total Demand Charges less Cap. Cr.** | | | ln 63 + ln 65 | $ 3,040,245 | $ 1,905,619 | $ 1,905,619 | $ 1,905,619 | $ 1,905,619 | $ 1,905,619 | $ 1,291,205 | $ 13,859,546 |

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**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty**
**Peak 2021 - 2022 Winter Cost of Gas Filing**
**Demand Volumes**

Schedule 5B
Page 1 of 1

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

**Liberty Utilities (EnergyNorth Natural Gas) Corp.** **REDACTED**
**d/b/a Liberty** Schedule 5C
**Peak 2021 - 2022 Winter Cost of Gas Filing** Page 1 of 2
**Demand Rates**

| | | | | | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | Nov - Apr |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Tariff Rates** | | | | | 30 | 31 | 31 | 28 | 31 | 30 | 181 |
| | | | | | Unit Rate | Unit Rate | Unit Rate | Unit Rate | Unit Rate | Unit Rate | Avg Rate |
| **Supply** | | | | | | | | | | | |
| Niagara Supply | [redacted] | | | | [redacted] | | | | | | |
| **Pipeline** | | | | | | | | | | | |
| Iroquois Gas Trans Service | RTS 470-01 | $ | 5.2357 | Forth Revised Sheet No. 4 | $ 0.1745 | $ 0.1689 | $ 0.1689 | $ 0.1870 | $ 0.1689 | $ 0.1745 | $ 0.1738 |
| Tenn Gas Pipeline | 95346 Z5-Z6 | $ | 6.2957 | 17th Rev Sheet No. 14 | $ 0.2099 | $ 0 2031 | $ 0.2031 | $ 0.2248 | $ 0.2031 | $ 0.2099 | $ 0 2090 |
| Tenn Gas Pipeline | 2302 Z5-Z6 | $ | 6.2957 | 17th Rev Sheet No. 14 | $ 0.2099 | $ 0 2031 | $ 0.2031 | $ 0.2248 | $ 0.2031 | $ 0.2099 | $ 0 2090 |
| Tenn Gas Pipeline | 8587 Z0-Z6 | $ | 20.3736 | FT-A (Z0 - Z6) | $ 0.6791 | $ 0.6572 | $ 0.6572 | $ 0.7276 | $ 0.6572 | $ 0.6791 | $ 0.6763 |
| Tenn Gas Pipeline | 8587 Z1-Z6 | $ | 18.0875 | FT-A (Z1 - Z6) | $ 0.6029 | $ 0 5835 | $ 0.5835 | $ 0.6460 | $ 0.5835 | $ 0.6029 | $ 0.6004 |
| Tenn Gas Pipeline | 8587 Z4-Z6 | $ | 7.1645 | FT-A (Z4 - Z6) | $ 0.2388 | $ 0 2311 | $ 0.2311 | $ 0.2559 | $ 0.2311 | $ 0.2388 | $ 0 2378 |
| TGP Dracut | 42076 FTA Z6-Z6 | $ | 4.1818 | 17th Rev Sheet No. 14 | $ 0.1394 | $ 0.1349 | $ 0.1349 | $ 0.1494 | $ 0.1349 | $ 0.1394 | $ 0.1388 |
| TGP Dracut | 358905 FTA Z6-Z6 | $ | 4.1818 | 17th Rev Sheet No. 14 | $ 0.1394 | $ 0.1349 | $ 0.1349 | $ 0.1494 | $ 0.1349 | $ 0.1394 | $ 0.1388 |
| TGP Concord Lateral | Firm Transportatio | $ | 12.2113 | Per contract | $ 0.4070 | $ 0 3939 | $ 0.3939 | $ 0.4361 | $ 0.3939 | $ 0.4070 | $ 0.4053 |
| Portland Natural Gas | FT-208544 | $ | 18 2633 | Negot Dmd /CMDY=Part 4.1 V7 | $ 0.6088 | $ 0 5891 | $ 0.5891 | $ 0.6523 | $ 0.5891 | $ 0.6088 | $ 0.6062 |
| Portland Natural Gas | FT 233320 | $ | 22.8125 | Negot Dmd /CMDY=Part 4.1 V7 | $ 0.7604 | $ 0.7359 | $ 0.7359 | $ 0.8147 | $ 0.7359 | $ 0.7604 | $ 0.7572 |
| Tenn Gas Pipeline | 632 Z4-Z6 (stg) | $ | 7.1645 | 17th Rev Sheet No. 14 | $ 0.2388 | $ 0 2311 | $ 0.2311 | $ 0.2559 | $ 0.2311 | $ 0.2388 | $ 0 2378 |
| Tenn Gas Pipeline | 11234 Z4-Z6(stg) | $ | 7.1645 | 17th Rev Sheet No. 14 | $ 0.2388 | $ 0 2311 | $ 0.2311 | $ 0.2559 | $ 0.2311 | $ 0.2388 | $ 0 2378 |
| Tenn Gas Pipeline | 11234 Z5-Z6(stg) | $ | 6.2957 | 17th Rev Sheet No. 14 | $ 0.2099 | $ 0 2031 | $ 0.2031 | $ 0.2248 | $ 0.2031 | $ 0.2099 | $ 0 2090 |
| National Fuel | FST N02358 | $ | 4.5274 | 4 010 Version 31.0.1 Pg 1 | $ 0.1509 | $ 0.1460 | $ 0.1460 | $ 0.1617 | $ 0.1460 | $ 0.1509 | $ 0.1503 |

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**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty**
**Peak 2021 - 2022 Winter Cost of Gas Filing**

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ANE | Union Gas | | $ 3.6665 | | | | | | | | | | | | | |
| | TransCanada Pipelines Limited | | $ 11 9842 | Dawn - Parkway to Iroquois | | | | | | | | | | | | |
| | Delivery Pressure Demand Charge | | $ 0.6083 | Dawn - Parkway to Iroquois | | | | | | | | | | | | |
| | Sub Total Demand Charges | | $ 16.2590 | | | | | | | | | | | | | |
| | Conversion rate GJ to MMBTU | | $ 1.0551 | | | | | | | | | | | | | |
| | Conversion rate to US$ | | $ 1.2589 | 1/0/1900 | | | | | | | | | | | | |
| | Demand Rate/US$ | | $ 13.6260 | | $ 0.4542 | $ 0.4395 | $ 0.4395 | $ 0.4866 | $ 0.4395 | $ 0.4542 | $ 0.4523 | | | | | |
| | Union Gas | | $ 3.6665 | | | | | | | | | | | | | |
| | TransCanada Pipelines Limited | | $ 20.4218 | Dawn -Parkway to Portland | | | | | | | | | | | | |
| | Delivery Pressure Demand Charge | | $ 0.6083 | Dawn -Parkway to Portland | | | | | | | | | | | | |
| | Sub Total Demand Charges | | $ 24.6966 | | | | | | | | | | | | | |
| | Conversion rate GJ to MMBTU | | $ 1.0551 | | | | | | | | | | | | | |
| | Conversion rate to US$ | | $ 1.2589 | 1/0/1900 | | | | | | | | | | | | |
| | Demand Rate/US$ | | $ 20.6972 | | $ 0.6899 | $ 0.6677 | $ 0.6677 | $ 0.7392 | $ 0.6677 | $ 0.6899 | $ 0.6870 | | | | | |
| **Peaking** | | | | | | | | | | | | | | | | |
| | Demand FLS | | [redacted] | | [redacted] | | | | | | | | | | | |
| | Subtotal Peaking Demand Charges | | | | | | | | | | | | | | | |
| **Storage** | | | | | | | | | | | | | | | | |
| | Dominion - Demand | GSS 300076 | $ 1 8716 | GSS Settled,Tariff Rec #10.30 \ | $ 0.0624 | $ 0 0604 | $ 0.0604 | $ 0.0668 | $ 0.0604 | $ 0.0624 | $ 0 0621 | | | | | |
| | 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 | | | | | |
| | | | $ 1.8861 | | $ 0.0629 | $ 0 0608 | $ 0.0608 | $ 0.0674 | $ 0.0608 | $ 0.0629 | $ 0 0626 | | | | | |
| | Honeoye - Demand | SS-NY | $ 6.1299 | Sub 1st Rev Sheet No. 5 | $ 0.2043 | $ 0.1977 | $ 0.1977 | $ 0.2189 | $ 0.1977 | $ 0.2043 | $ 0 2033 | | | | | |
| | National Fuel - Demand | FSS-O02357 | $ 2.6325 | 4 020 Version 26.0.0 Pg 1 | $ 0.0878 | $ 0 0849 | $ 0.0849 | $ 0.0940 | $ 0.0849 | $ 0.0878 | $ 0 0873 | | | | | |
| | National Fuel - Capacity | FSS-O02357 | $ 0.0476 | 4 020 Version 26.0.0 Pg 1 | $ 0.0016 | $ 0 0015 | $ 0.0015 | $ 0.0017 | $ 0.0015 | $ 0.0016 | $ 0 0016 | | | | | |
| | | | $ 2.6801 | | $ 0.0893 | $ 0 0865 | $ 0.0865 | $ 0.0957 | $ 0.0865 | $ 0.0893 | $ 0 0889 | | | | | |
| | Tenn Gas Pipeline | FS-MA 523 | $ 1.3094 | 20th Rev Sheet No.61 | $ 0.0436 | $ 0 0422 | $ 0.0422 | $ 0.0468 | $ 0.0422 | $ 0.0436 | $ 0 0434 | | | | | |
| | Tenn Gas Pipeline - Space | FS-MA 523 | $ 0.0179 | 20th Rev Sheet No.61 | $ 0.0006 | $ 0 0006 | $ 0.0006 | $ 0.0006 | $ 0.0006 | $ 0.0006 | $ 0 0006 | | | | | |
| | | | $1.3273 | | $ 0.0442 | $ 0 0428 | $ 0.0428 | $ 0.0474 | $ 0.0428 | $ 0.0442 | $ 0 0440 | | | | | |

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FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

# FY 2021 GAS ANNUAL CHARGES
# CORRECTION FOR ANNUAL CHARGES UNIT CHARGE
June 16, 2021

The annual charges unit charge (ACA) to be applied to in fiscal year 2022 for recovery of FY 2021 Current year and 2020 True-Up is **$0.0012** per Dekatherm (Dth). The new ACA surcharge will become effective October 1, 2021.

The following calculations were used to determine the FY 2021 unit charge:

| | | |
|---|---|---|
| **2021 CURRENT**: | | |
| Estimated Program Cost $73,470,000 divided by 61,333,716,267 Dth | = | 0.0011978730 |
| **2020 TRUE-UP**: | | |
| Debit/Credit Cost ($1,115,938) divided by 60,594,054,316 Dth | = | (0.0000184166) |
| **TOTAL UNIT CHARGE** | = | 0.0011794564 |

If you have any questions, please contact Raven A. Rodriguez at (202)502-6276 or e-mail at Raven.Rodriguez@ferc.gov.

PUBLIC

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

GSS, GSS-E & ISS Rates - Settled Parties
Tariff Record No. 10.30.
Version 1.0.0
Superseding Version 0.0.0

APPLICABLE TO SETTLING PARTIES PURSUANT TO THE DECEMBER 6, 2013 STIPULATION IN DOCKET NO. RP14-262

(FOR RATES APPLICABLE TO SEVERED PARTIES IN THE ABOVE REFERENCED DOCKETS SEE TARIFF RECORD 10.31)

RATES APPLICABLE TO RATE SCHEDULES IN
FERC GAS TARIFF, VOLUME NO. 1
($ per DT)

| Rate Schedule | Rate Component | Base Tariff Rate [1] | Current Acct 858 Base | Current EPCA Base | TCRA [5] Surcharge | EPCA [6] Surcharge | Current Rate [7] | FERC ACA |
|---|---|---|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| [2], [4] | | | | | | | | |
| | Storage Demand | $1.7084 | $0.0673 | $0.0073 | ($0.0022) | $0.0008 | $1.8716 | - |
| | Storage Capacity | $0.0145 | - | - | - | - | $0.0145 | - |
| | Injection Charge | $0.0154 | - | $0.0120 | $0.0000 | ($0.0007) | $0.0267 | - |
| | Withdrawal Charge | $0.0154 | - | - | $0.0000 | ($0.0007) | $0.0147 | [8] |
| | GSS-TE Surcharge [3] | - | $0.0047 | - | $0.0006 | - | $0.0053 | - |
| | From Customers Balance | $0.6163 | $0.0144 | $0.0016 | ($0.0006) | ($0.0005) | $0.6313 | [8] |
| E [2], [4] | | | | | | | | |
| | Storage Demand | $2.2113 | $0.0673 | $0.0073 | ($0.0022) | $0.0008 | $2.2845 | - |
| | Storage Capacity | $0.0369 | - | - | - | - | $0.0369 | - |
| | Injection Charge | $0.0154 | - | $0.0120 | $0.0000 | ($0.0007) | $0.0267 | - |
| | Withdrawal Charge | $0.0154 | - | - | $0.0000 | ($0.0007) | $0.0147 | [8] |
| | Authorized Overruns | $1.0657 | $0.0144 | $0.0016 | ($0.0006) | ($0.0005) | $1.0807 | [8] |
| [2] | | | | | | | | |
| | ISS Capacity | $0.0736 | $0.0022 | $0.0002 | ($0.0001) | $0.0000 | $0.0759 | - |
| | Injection Charge | $0.0154 | - | $0.0120 | $0.0000 | ($0.0007) | $0.0267 | - |
| | Withdrawal Charge | $0.0154 | - | - | $0.0000 | ($0.0007) | $0.0147 | [8] |
| | Authorized Overrun/from Cust. Bal | $0.6163 | $0.0144 | $0.0016 | ($0.0006) | ($0.0005) | $0.6313 | [8] |
| | Excess Injection Charge | $0.2245 | - | $0.0120 | $0.0000 | ($0.0007) | $0.2358 | - |

[1] The base tariff rate is the effective rate on file with the FERC, excluding adjustments approved by the Commission.
[2] Storage Service Fuel Retention Percentage is 1.67% plus Adders of 0.28% (RP00-632 S&A approved 9/13/01) totaling 1.95%.
[3] Applies to withdrawals made under Rate Schedule GSS, Section 5.1.G.
[4] Daily Capacity Release Rate for GSS per Dt is $0.6166. Daily Capacity Release Rate for GSS-E per Dt is $1.0660.
[5] 858 over/under from previous TCRA period.
[6] Electric over/under from previous EPCA period.
[7] The Current Rate shall be increased for the Annual Charge Adjustment (ACA) as applicable.
[8] The applicable ACA rate is set forth on the FERC website (https://www.ferc.gov/industries-data/natural-gas/overview/general-information/annual-charges).

Statement of Transportation Rates
(Rates per DTH)

| Rate Schedule | Rate Component | Base Rate | ACA Unit Charge 1/ |
|---|---|---|---|
| FT | Recourse Reservation Rate | | |
| | – Maximum | $25.9843 | -------- |
| | – Minimum | $00.0000 | -------- |
| | Seasonal Recourse Reservation Rate | | |
| | – Maximum | $49.3701 | -------- |
| | – Minimum | $00.0000 | -------- |
| | Recourse Usage Rate | | |
| | – Maximum | $00.0000 | 2/ |
| | – Minimum | $00.0000 | 2/ |
| | – PXP Project | $00.0091 | |
| FT-FLEX | Recourse Reservation Rate | | |
| | –Maximum | $17.4406 | -------- |
| | –Minimum | $00.0000 | -------- |
| | Recourse Usage Rate | | |
| | –Maximum | $00.2809 | 2/ |
| | –Minimum | $00.0000 | 2/ |

The following adjustment applies to all Rate Schedules above:

MEASUREMENT VARIANCE FACTOR-LAUF:

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

MEASUREMENT VARIANCE FACTOR-FUEL 3/

---

1/ ACA assessed where applicable under Section 154.402 of the Commission's regulations and will be charged pursuant to Section 6.18 of the General Terms and Conditions at such time that initial and successive ACA assessments are made.

2/ The currently effective ACA unit charge as published on the Commission's website (www.ferc.gov) is incorporated herein by reference.

SCHEDULE 1

| | |
|---|---|
| Receipt Point: | 01-0100 Pittsburg, NH |
| Delivery Point: | 02-0260 Berlin, NH |
| Maximum Daily Quantity: | 1000 Dth/day |
| Maximum Contract Demand: | 5478000 Dth |
| Effective Service Period: | Beginning on the In-Service Date as defined in Article VII to this Contract and continuing in full force and effect until fifteen (15) years after such In-Service Date. |

Rate Provision(s) (check if applicable rate):

___ ___ Discounted Rate

__X___ Negotiated Rate

Shipper's charges and fees shall be calculated as follows:

$18.2633/Dth/month ($0.6000/Dth/day)

Additional Terms: Shipper shall have the right to deliver, on a secondary basis, to the following meters, at the Negotiated Rate of $18.2633/Dth/month ($0.6000/Dth/day). Delivery to all other secondary delivery points on this Negotiated Rate contract shall be priced at the Maximum Recourse Rate.

| Meter # | Name | Operator |
|---|---|---|
| 05-0525 | Westbrook | M&NE |
| 05-0600 | Westbrook | Granite State |
| 02-0650 | Gorham | Maine Natural Gas |
| 05-0725 | Eliot | Granite State |
| 05-0750 | Eliot CNG | XPress Natural Gas |
| 02-0775 | Newington | Essential Power |
| 02-0900 | Newington | Eversource Energy |
| 05-0850 | Newington | Granite State |
| 05-1000 | Haverhill | Tennessee Gas Pipeline |
| 05-1025 | Haverhill | National Grid |
| 05-1050 | Methuen | M&NE |
| 05-1150 | Dracut | Tennessee Gas Pipeline |

Revision No. 2

SCHEDULE 1

Primary Receipt Points

| Begin Date | End Date | Scheduling Point No. | Scheduling Point Name | Maximum Daily Quantity (Dth/day) |
|---|---|---|---|---|
| 1/ | 1/ | 10100 | Pittsburg (East Hereford) | 1,855 (Phase I Quantity) plus<br>2,577 (Phase II Quantity) plus<br>568 (Phase III Quantity) |

Primary Delivery Points

| Begin Date | End Date | Scheduling Point No. | Scheduling Point Name | Maximum Daily Quantity (Dth/day) |
|---|---|---|---|---|
| 1/ | 1/ | 51150 | Dracut | 1,855 (Phase I Quantity) plus<br>2,577 (Phase II Quantity) plus<br>568 (Phase III Quantity) |

| | |
|---|---|
| Maximum Contract Demand | 1,855 Dth (Phase I Quantity) |
| plus | 2,577 Dth (Phase II Quantity) |
| plus | 568 Dth (Phase III Quantity) |
| Total Maximum Contract Demand | 5,000 Dth (Phase I, II and III Quantities) |

Effective Service Period 1/ to 1/

Rate Provision(s) (check if applicable rate):

_____ Discounted Rate
__X__ Negotiated Rate

Shipper's charges and fees shall be calculated as follows:

For volumes received at the primary receipt point and delivered to the primary delivery point, the reservation charge shall be $0.7500/Dth/day (the "Negotiated Daily Demand Rate").

CURRENTLY EFFECTIVE RATES

**FIRM STORAGE SERVICE (FSS)***

| | RATE | UNITS |
|---|---|---|
| 1. Reservation Rate | | |
| Deliverability Reservation Rate | Market Based/ Negotiable | |
| Capacity Reservation Rate | Market Based/ Negotiable | |
| 2. Injection/Withdrawal Rates | | |
| Injection Rate | Market Based/ Negotiable | |
| Overrun Injection Rate | Market Based/ Negotiable | |
| Late Withdrawal Rate | $1/Dth/Day | |
| Overrun Withdrawal Rate | Market Based/ Negotiable | |

*All quantities of natural gas are measured in dekatherms (Dth)

# View Contract

## General Information

| Customer | Contract Category | Contract Number | Service Type | Status | Currency |
|---|---|---|---|---|---|
| **Energy North Natural Gas Inc** | **Storage** | **EN-11234** | FT | Active | USD |

| Deal Maker | Deal Date | Deal Time (hh:mm) | Master Agreement | Units |
|---|---|---|---|---|
| Richard Norman | 01/17/1996 | 08:00 | – None – | Dth |

| Contact Name | Contact Number 1 | Contact Number 2 | Contact Email |
|---|---|---|---|
| Sarah Finegan | 603-2153569 | | sarah.finegan@libertyutilities.com |

## Contract Dates

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

## Nomination Deadlines

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

## Transaction Types and Rates

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

## Storage and Other Rates

☐ Use Monthly Flat Storage Fee ($/Month)

### Monthly Flat Storage Fee Table

| From | To | Rate |
|---|---|---|
| 05/01/10 | 01/01/50 | 8,350.68000 |

## FERC Information

Capacity Release Contract: ○ Yes ● No

Shipper Affiliation: NONE

Maximum Tariff Rate: ○ OR ○ Market Based Rates

Award:

Negotiated Rate Indicator: ○ Yes ○ No

Rate Schedule: 167

## Contract Quantity Limits

### Monthly MSQ Table

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

---------- NON-EASTCHESTER RATES (All in $ Per Dth) 1/ ----------

| | Minimum | RP16-301 Rates 2/ Maximum | | | RP19-445 Rates Maximum | |
|---|---|---|---|---|---|---|
| | | Effective 9/1/2016 | Effective 9/1/2017 | Effective 9/1/2018 | Effective 3/1/2019 | Effective 4/1/2020 |
| RTS DEMAND (Monthly): | | | | | | |
| Zone 1 | $0.0000 | $ 6.1928 | $ 5.9982 | $ 5.5997 | $5.4177 | $5.2357 |
| Zone 2 | $0.0000 | $ 5.3381 | $ 5.1678 | $ 4.7998 | $4.6438 | $4.4878 |
| Inter-Zone | $0.0000 | $10.4755 | $ 9.8672 | $ 8.8026 | $8.5165 | $8.2304 |
| | | | | | | |
| RTS COMMODITY (Daily): | | | | | | |
| Zone 1 | $0.0034 | $ 0.0034 | $ 0.0034 | $ 0.0034 | $0.0034 | $0.0034 |
| Zone 2 | $0.0022 | $ 0.0022 | $ 0.0022 | $ 0.0022 | $0.0022 | $0.0022 |
| Inter-Zone | $0.0056 | $ 0.0056 | $ 0.0056 | $ 0.0056 | $0.0056 | $0.0056 |
| | | | | | | |
| ITS COMMODITY (Daily): | | | | | | |
| Zone 1 | $0.0034 | $ 0.2070 | $ 0.2006 | $ 0.1875 | $0.1815 | $0.1755 |
| Zone 2 | $0.0022 | $ 0.1777 | $ 0.1721 | $ 0.1600 | $0.1549 | $0.1497 |
| Inter-Zone | $0.0056 | $ 0.3500 | $ 0.3300 | $ 0.2950 | $0.2856 | $0.2762 |
| | | | | | | |
| VOLUMETRIC CAPACITY RELEASE (Daily) 3/: | | | | | | |
| Zone 1 | $0.0000 | $ 0.2036 | $ 0.1972 | $ 0.1841 | $0.1781 | $0.1721 |
| Zone 2 | $0.0000 | $ 0.1755 | $ 0.1699 | $ 0.1578 | $0.1527 | $0.1475 |
| Inter-Zone | $0.0000 | $ 0.3444 | $ 0.3244 | $ 0.2894 | $0.2800 | $0.2706 |

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

(Footnotes continued on Sheet 4.01)

**RATES FOR TRANSPORTATION SERVICES**

| Rate Sch. (1) | Rate Component [1/] (2) | | Base Rate (3) | TSCA (4) | TSCA Surch. (5) | Current Rate [2/] (6) |
|---|---|---|---|---|---|---|
| FT/FT-S | | | | | | |
| | Reservation | (Max) | $4.5019 | - | - | $4.5019 [4/] |
| | | (Min) | 0.0000 | - | - | $0.0000 |
| | Commodity | (Max) | 0.0140 | - | - | $0.0140 plus ACA [3/] |
| | | (Min) | 0.0140 | - | - | $0.0140 plus ACA [3/] |
| | Overrun | (Max) | 0.1620 | - | - | $0.1620 plus ACA [3/] |
| | | (Min) | 0.0140 | - | - | $0.0140 plus ACA [3/] |
| EFT | Reservation | (Max) | $4.6455 | 0.0000 | 0.0000 | $4.6455 [4/] |
| | | (Min) | 0.0000 | 0.0000 | 0.0000 | $0.0000 |
| | Commodity | (Max) | 0.0148 | 0.0000 | 0.0000 | $0.0148 plus ACA [3/] |
| | | (Min) | 0.0148 | 0.0000 | 0.0000 | $0.0148 plus ACA [3/] |
| | Overrun | (Max) | 0.1675 | - | - | $0.1675 plus ACA [3/] |
| | | (Min) | 0.0148 | - | - | $0.0148 plus ACA [3/] |
| FST | Reservation | (Max) | $4.5019 | - | - | $4.5019 [4/] |
| | | (Min) | 0.0000 | - | - | $0.0000 |
| | Commodity | (Max) | 0.0140 | - | - | $0.0140 plus ACA [3/] |
| | | (Min) | 0.0140 | - | - | $0.0140 plus ACA [3/] |
| | Overrun | (Max) | 0.1620 | - | - | $0.1620 plus ACA [3/] |
| | | (Min) | 0.0140 | - | - | $0.0140 plus ACA [3/] |
| IT | Commodity | (Max) | $0.1620 | - | | $0.1620 plus ACA [3/] |
| | | (Min) | 0.0000 | - | - | $0.0000 plus ACA [3/] |
| | Overrun | (Max) | 0.1620 | - | | $0.1620 plus ACA [3/] |
| | | (Min) | 0.0000 | - | - | $0.0000 plus ACA [3/] |

The NA15 Retention is 1.11% applicable to use of the Northern Access 2015 Lease. [2/ 3/]

1/ The unit of measure for each rate component is Dth unless otherwise indicated.
2/ All rates exclusive of Transportation Fuel and Company Use Retention and Transportation LAUF Retention. The Transportation Fuel and Company Use Retention for all applicable rate schedules is 0.84% and the Transportation LAUF Retention for all applicable rate schedules is 0.53%. Transporter may from time to time identify point pair transactions where the Transportation Fuel and Company Use Retention shall be zero ("Zero Fuel Point Pair Transactions"). Zero Fuel Point Pair Transactions will be assessed the applicable Transportation LAUF Retention.
3/ Pursuant to Section 19 of the General Terms and Conditions, the ACA unit charge, as revised annually and posted on the Commission's website, will be charged in addition to the specified rate.
4/ Pursuant to Section 42 of the General Terms and Conditions, a per Dth charge of $0.0255 shall be added as a Transmission PS/GHG Surcharge, in addition to the specified rate.

Effective On: April 1, 2021

**RATES FOR PART 284 STORAGE SERVICES**

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

1/ The unit of measure for each rate component is Dth unless otherwise indicated.
2/ All rates exclusive of Storage Operating and LAUF Retention, where applicable. The Storage Operating and LAUF Retention for all applicable rate schedules is 1.06%.
3/ Pursuant to Section 19 of the General Terms and Conditions, the ACA unit charge, as revised annually and posted on the Commission's website, will be charged in addition to the specified rate.
4/ Rate per nomination.
5/ Pursuant to Section 42 of the General Terms and Conditions, a per Dth charge of $0.0999 shall be added as a Storage PS/GHG Demand/Deliverability Surcharge, in addition to the specified rate.
6/ Pursuant to Section 42 of the General Terms and Conditions, a per Dth charge of $0.0014 shall be added as a Storage PS/GHG Capacity Surcharge, in addition to the specified rate.

Effective On: April 1, 2021

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

Seventeenth Revised Sheet No. 14
Superseding
Sixteenth Revised Sheet No. 14

RATES PER DEKATHERM

FIRM TRANSPORTATION RATES
RATE SCHEDULE FOR FT-A

Base Reservation Rates

| RECEIPT ZONE \ DELIVERY ZONE | 0 | L | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|
| 0 | $4.8571 | | $10.1498 | $13.6529 | $13.8945 | $15.2673 | $16.2055 | $20.3323 |
| L | | $4.3119 | | | | | | |
| 1 | $7.3119 | | $7.0090 | $9.3276 | $13.2135 | $13.0132 | $14.6759 | $18.0462 |
| 2 | $13.6530 | | $9.2716 | $4.8222 | $4.5078 | $5.7679 | $7.9331 | $10.2407 |
| 3 | $13.8945 | | $7.3440 | $4.8611 | $3.5070 | $5.3870 | $9.7428 | $11.2581 |
| 4 | $17.6413 | | $16.2638 | $6.1979 | $9.4190 | $4.6105 | $4.9861 | $7.1232 |
| 5 | $21.0347 | | $14.7807 | $6.5015 | $7.8669 | $5.1218 | $4.8044 | $6.2544 |
| 6 | $24.3333 | | $16.9768 | $11.6840 | $12.8717 | $9.0920 | $4.7831 | $4.1405 |

Daily Base Reservation Rate 1/

| RECEIPT ZONE \ DELIVERY ZONE | 0 | L | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|
| 0 | $0.1597 | | $0.3337 | $0.4489 | $0.4568 | $0.5019 | $0.5328 | $0.6685 |
| L | | $0.1418 | | | | | | |
| 1 | $0.2404 | | $0.2304 | $0.3067 | $0.4344 | $0.4278 | $0.4825 | $0.5933 |
| 2 | $0.4489 | | $0.3048 | $0.1585 | $0.1482 | $0.1896 | $0.2608 | $0.3367 |
| 3 | $0.4568 | | $0.2414 | $0.1598 | $0.1153 | $0.1771 | $0.3203 | $0.3701 |
| 4 | $0.5800 | | $0.5347 | $0.2038 | $0.3097 | $0.1516 | $0.1639 | $0.2342 |
| 5 | $0.6916 | | $0.4859 | $0.2137 | $0.2586 | $0.1684 | $0.1580 | $0.2056 |
| 6 | $0.8000 | | $0.5581 | $0.3841 | $0.4232 | $0.2989 | $0.1573 | $0.1361 |

Maximum Reservation Rates 2/, 3/

| RECEIPT ZONE \ DELIVERY ZONE | 0 | L | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|
| 0 | $4.8984 | | $10.1911 | $13.6942 | $13.9358 | $15.3086 | $16.2468 | $20.3736 |
| L | | $4.3532 | | | | | | |
| 1 | $7.3532 | | $7.0503 | $9.3689 | $13.2548 | $13.0545 | $14.7172 | $18.0875 |
| 2 | $13.6943 | | $9.3129 | $4.8635 | $4.5491 | $5.8092 | $7.9744 | $10.2820 |
| 3 | $13.9358 | | $7.3853 | $4.9024 | $3.5483 | $5.4283 | $9.7841 | $11.2994 |
| 4 | $17.6826 | | $16.3051 | $6.2392 | $9.4603 | $4.6518 | $5.0274 | $7.1645 |
| 5 | $21.0760 | | $14.8220 | $6.5428 | $7.9082 | $5.1631 | $4.8457 | $6.2957 |
| 6 | $24.3746 | | $17.0181 | $11.7253 | $12.9130 | $9.1333 | $4.8244 | $4.1818 |

Notes:

1/ Applicable to demand charge credits and secondary points under discounted rate agreements.
2/ Includes a per Dth charge for the PCB Surcharge Adjustment per Article XXXII of the General Terms and Conditions of $0.0000.
3/ Includes a per Dth charge for the PS/GHG Surcharge Adjustment per Article XXXVIII of the General Terms and Conditions of $0.0413.

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

Twenty Sixth Revised Sheet No. 19
Superseding
Twenty Fifth Revised Sheet No. 19

FIRM TRANSPORTATION RATES
RATE SCHEDULE FT-A

Recourse Rates Applicable to Shippers Utilizing Capacity
Pursuant to Incremental Capacity Expansions

| | Base Tariff Rate | Total Rate |
|---|---|---|
| CP00-65 300 Line Expansion | | |
| Reservation Charge: | | |
| Maximum | $3.2691 | $3.3104 1/,4/ |
| Minimum | $0.0000 | $0.0000 |
| Commodity Charge: | | |
| Maximum | $0.0000 | $0.0016 2/,3/,4/ |
| Minimum | $0.0000 | $0.0000 2/,3/ |
| CP05-355 Northeast ConneXion - New York/New Jersey Expansion | | |
| Reservation Charge: | | |
| Maximum | $9.1876 | $9.2289 1/,4/ |
| Minimum | $0.0000 | $0.0000 |
| Commodity Charge: | | |
| Maximum | $0.0000 | $0.0016 2/,3/,4/ |
| Minimum | $0.0000 | $0.0000 2/,3/ |
| CP08-65 Concord Expansion | | |
| Reservation Charge: | | |
| Maximum | $10.8352 | $10.8765 1/,4/ |
| Minimum | $0.0000 | $0.0000 |
| Commodity Charge: | | |
| Maximum | $0.0000 | $0.0016 2/,3/,4/ |
| Minimum | $0.0000 | $0.0000 2/,3/ |
| CP09-444 300 Line Project – Market Component | | |
| Reservation Charge: | | |
| Maximum | $22.9057 | $22.9470 1/,4/ |
| Minimum | $0.0000 | $0.0000 |
| Commodity Charge: | | |
| Maximum | $0.0000 | $0.0016 2/,3/,4/ |
| Minimum | $0.0000 | $0.0000 2/,3/ |
| CP11-30-000 Northeast Supply Diversification Project | | |
| Reservation Charge: | | |
| Maximum | $5.5453 | $5.5866 1/,4/ |
| Minimum | $0.0000 | $0.0000 |
| Commodity Charge: | | |
| Maximum | $0.0000 | $0.0016 2/,3/,4/,5/ |
| Minimum | $0.0000 | $0.0000 2/,3/,5/ |
| CP11-36-000 Northampton Expansion Project | | |
| Reservation Charge: | | |
| Maximum | $24.7109 | $24.7522 1/,4/ |
| Minimum | $0.0000 | $0.0000 |
| Commodity Charge: | | |
| Maximum | $0.0000 | $0.0016 2/,3/,4/ |
| Minimum | $0.0000 | $0.0000 2/,3/ |

Notes:
1/ Includes a per Dth charge for the PCB Surcharge Adjustment per Article XXXII of the General Terms and Conditions of $0.0000.
2/ Rates stated above exclude the ACA Surcharge as revised annually and posted on the FERC website at http://www.ferc.gov on the Annual Charges page of the Natural Gas section. The ACA Surcharge is incorporated by reference into Transporter's Tariff and shall apply to all transportation under this Rate Schedule as provided in Article XXIV of the General Terms and Conditions.
3/ The applicable F&LR's and EPCR's, determined pursuant to Article XXXVII of the General Terms and Conditions, are listed on Sheet No. 32.
4/ Includes a per Dth charge for the PS/GHG Surcharge Adjustment per Article XXXVIII of the General Terms and Conditions of $0.0413 Reservation, $0.0016 Commodity.
5/ Applicable fuel and lost and unaccounted for charges pursuant to the Dominion Lease.

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FERC NGA Gas Tariff
Sixth Revised Volume No. 1

Seventeenth Revised Sheet No. 15
Superseding
Sixteenth Revised Sheet No. 15

RATES PER DEKATHERM

COMMODITY RATES
RATE SCHEDULE FOR FT-A

Base Commodity Rates

| RECEIPT ZONE \ DELIVERY ZONE | 0 | L | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|
| 0 | $0.0032 | | $0.0115 | $0.0177 | $0.0219 | $0.2391 | $0.2282 | $0.2716 |
| L | | $0.0012 | | | | | | |
| 1 | $0.0042 | | $0.0081 | $0.0147 | $0.0179 | $0.2033 | $0.2073 | $0.2367 |
| 2 | $0.0167 | | $0.0087 | $0.0012 | $0.0028 | $0.0658 | $0.1055 | $0.1169 |
| 3 | $0.0207 | | $0.0169 | $0.0026 | $0.0002 | $0.0879 | $0.1217 | $0.1329 |
| 4 | $0.0250 | | $0.0205 | $0.0087 | $0.0105 | $0.0407 | $0.0576 | $0.0932 |
| 5 | $0.0284 | | $0.0256 | $0.0100 | $0.0118 | $0.0573 | $0.0567 | $0.0705 |
| 6 | $0.0346 | | $0.0300 | $0.0143 | $0.0163 | $0.0881 | $0.0478 | $0.0290 |

Minimum Commodity Rates 1/, 2/

| RECEIPT ZONE \ DELIVERY ZONE | 0 | L | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|
| 0 | $0.0032 | | $0.0115 | $0.0177 | $0.0219 | $0.0250 | $0.0284 | $0.0346 |
| L | | $0.0012 | | | | | | |
| 1 | $0.0042 | | $0.0081 | $0.0147 | $0.0179 | $0.0210 | $0.0256 | $0.0300 |
| 2 | $0.0167 | | $0.0087 | $0.0012 | $0.0028 | $0.0056 | $0.0100 | $0.0143 |
| 3 | $0.0207 | | $0.0169 | $0.0026 | $0.0002 | $0.0081 | $0.0118 | $0.0163 |
| 4 | $0.0250 | | $0.0205 | $0.0087 | $0.0105 | $0.0028 | $0.0046 | $0.0092 |
| 5 | $0.0284 | | $0.0256 | $0.0100 | $0.0118 | $0.0046 | $0.0046 | $0.0066 |
| 6 | $0.0346 | | $0.0300 | $0.0143 | $0.0163 | $0.0086 | $0.0041 | $0.0020 |

Maximum Commodity Rates 1/, 2/, 3/

| RECEIPT ZONE \ DELIVERY ZONE | 0 | L | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|
| 0 | $0.0039 | | $0.0122 | $0.0184 | $0.0226 | $0.2398 | $0.2289 | $0.2723 |
| L | | $0.0019 | | | | | | |
| 1 | $0.0049 | | $0.0088 | $0.0154 | $0.0186 | $0.2040 | $0.2080 | $0.2374 |
| 2 | $0.0174 | | $0.0094 | $0.0019 | $0.0035 | $0.0665 | $0.1062 | $0.1176 |
| 3 | $0.0214 | | $0.0176 | $0.0033 | $0.0009 | $0.0886 | $0.1224 | $0.1336 |
| 4 | $0.0257 | | $0.0212 | $0.0094 | $0.0112 | $0.0414 | $0.0583 | $0.0939 |
| 5 | $0.0291 | | $0.0263 | $0.0107 | $0.0125 | $0.0580 | $0.0574 | $0.0712 |
| 6 | $0.0353 | | $0.0307 | $0.0150 | $0.0170 | $0.0888 | $0.0485 | $0.0297 |

Notes:

1/ Rates stated above exclude the ACA Surcharge as revised annually and posted on the FERC website at http://www.ferc.gov on the Annual Charges page of the Natural Gas section. The ACA Surcharge is incorporated by reference into Transporter's Tariff and shall apply to all transportation under this Rate Schedule as provided in Article XXIV of the General Terms and Conditions.

2/ The applicable F&LR's and EPCR's, determined pursuant to Article XXXVII of the General Terms and Conditions, are listed on Sheet No. 32.

3/ Includes a per Dth charge for the PS/GHG Surcharge Adjustment per Article XXXVIII of the General Terms and Conditions of $0.0007.

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

Twentieth Revised Sheet No. 61
Superseding
Nineteenth Revised Sheet No. 61

RATES PER DEKATHERM

FIRM STORAGE SERVICE
RATE SCHEDULE FS

| Rate Schedule and Rate | Base Tariff Rate | Max Tariff Rate | F&LR 2/, 3/ | EPCR 2/ |
|---|---|---|---|---|
| FIRM STORAGE SERVICE (FS) - PRODUCTION AREA | | | | |
| Deliverability Rate | $1.7824 | $1.7824 1/ | | |
| Space Rate | $0.0181 | $0.0181 1/ | | |
| Injection Rate | $0.0073 | $0.0073 | 1.62% | $0.0000 |
| Withdrawal Rate | $0.0073 | $0.0073 | | |
| Overrun Rate | $0.2139 | $0.2139 1/ | | |
| FIRM STORAGE SERVICE (FS) - MARKET AREA | | | | |
| Deliverability Rate | $1.3094 | $1.3094 1/ | | |
| Space Rate | $0.0179 | $0.0179 1/ | | |
| Injection Rate | $0.0087 | $0.0087 | 1.62% | $0.0000 |
| Withdrawal Rate | $0.0087 | $0.0087 | | |
| Overrun Rate | $0.1572 | $0.1572 1/ | | |

Notes:

1/ Includes a per Dth charge for the PCB Surcharge Adjustment per Article XXXII of the General Terms and Conditions of $0.000.
2/ The F&LR's and EPCR's determined pursuant to Article XXXVII of the General Terms and Conditions.
3/ The applicable F&LR pursuant to Article XXXVII of the General Terms and Conditions, associated with Losses is equal to 0.03%.

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FERC NGA Gas Tariff
Sixth Revised Volume No. 1

Seventeenth Revised Sheet No. 32
Superseding
Sixteenth Revised Sheet No. 32

## FUEL AND EPCR

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

| RECEIPT ZONE \ DELIVERY ZONE | 0 | L | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|
| 0 | 0.43% | 0.16% | 1.54% | 2.34% | 2.97% | 3.59% | 4.08% | 4.66% |
| L | | | | | | | | |
| 1 | 0.56% | | 1.09% | 1.96% | 2.43% | 2.92% | 3.55% | 4.06% |
| 2 | 2.40% | | 1.17% | 0.15% | 0.38% | 0.79% | 1.44% | 1.96% |
| 3 | 2.97% | | 2.37% | 0.38% | 0.03% | 1.14% | 1.67% | 2.26% |
| 4 | 3.46% | | 2.71% | 1.16% | 1.40% | 0.40% | 0.66% | 1.22% |
| 5 | 4.08% | | 3.55% | 1.42% | 1.67% | 0.66% | 0.65% | 0.86% |
| 6 | 4.88% | | 4.06% | 1.96% | 2.26% | 1.14% | 0.50% | 0.20% |

Broad Run Expansion Project – Market Component (Z3-Z1): 5/ 7.62%

EPCR 3/, 4/

| RECEIPT ZONE \ DELIVERY ZONE | 0 | L | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|
| 0 | $0.0021 | $0.0007 | $0.0081 | $0.0125 | $0.0155 | $0.0188 | $0.0214 | $0.0256 |
| L | | | | | | | | |
| 1 | $0.0028 | | $0.0057 | $0.0104 | $0.0127 | $0.0157 | $0.0193 | $0.0221 |
| 2 | $0.0125 | | $0.0061 | $0.0007 | $0.0018 | $0.0041 | $0.0074 | $0.0102 |
| 3 | $0.0155 | | $0.0127 | $0.0018 | $0.0000 | $0.0060 | $0.0088 | $0.0118 |
| 4 | $0.0188 | | $0.0145 | $0.0060 | $0.0074 | $0.0019 | $0.0034 | $0.0063 |
| 5 | $0.0214 | | $0.0193 | $0.0074 | $0.0088 | $0.0033 | $0.0033 | $0.0044 |
| 6 | $0.0256 | | $0.0221 | $0.0102 | $0.0118 | $0.0059 | $0.0025 | $0.0009 |

Broad Run Expansion Project – Market Component (Z3-Z1): 5/ $0.0272

1/ Included in the above F&LR is the Losses component of the F&LR equal to 0.00%.
2/ For service that is rendered entirely by displacement and for gas scheduled and allocated for receipt at the Dracut, Massachusetts receipt point, Shipper shall render only the quantity of gas associated with Losses of 0.00%.
3/ The F&LR's and EPCR's listed above are applicable to FT-A, FT-BH, FT-G, FT-GS, and IT.
4/ The F&LR's and EPCR's determined pursuant to Article XXXVII of the General Terms and Conditions.
5/ The incremental F&LR and EPCR set forth above are applicable to a Shipper(s) utilizing capacity on the Broad Run Expansion Project – Market Component facilities, from any receipt point(s) to any delivery point(s) located on the project's transportation path. Any service provided to a Shipper(s) outside the project's transportation path shall be subject to the greater of the incremental F&LR and EPCR for the project or the applicable F&LR and EPCR for the applicable receipt(s) and delivery point(s) as shown in the rate matrices above. Included in the above F&LR is the Losses component of the F&LR equal to 0.00%.

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2021-07-01
**Rate M12**
Page 1 of 4

ENBRIDGE GAS INC.
UNION SOUTH
TRANSPORTATION RATES

**(A) Applicability**

The charges under this schedule shall be applicable to a Shipper who enters into a Transportation Service Contract with Union.

Applicable Points
Dawn as a receipt point: Dawn (TCPL), Dawn (Facilities), Dawn (Tecumseh), Dawn (Vector) and Dawn (TSLE).
Dawn as a delivery point: Dawn (Facilities).

**(B) Services**

Transportation Service under this rate schedule shall be for transportation on Union's Dawn - Parkway facilities.

**(C) Rates**

The identified rates represent maximum prices for service. These rates may change periodically.
Multi-year prices may also be negotiated, which may be higher than the identified rates.

| | Monthly Demand Charges (applied to daily contract demand) Rate/GJ | Fuel and Commodity Charges | | | |
|---|---|---|---|---|---|
| | | Union Supplied Fuel | Shipper Supplied Fuel | | |
| | | Fuel and Commodity Charge Rate/GJ | Fuel Ratio % | AND | Commodity Charge Rate/GJ |
| **Firm Transportation (1), (5)** | | | | | |
| Dawn to Parkway | $3.665 | Monthly fuel and commodity rates shall be in accordance with schedule "C". | Monthly fuel ratios shall be in accordance with schedule "C". | | |
| Dawn to Kirkwall | $3.110 | | | | |
| Kirkwall to Parkway | $0.555 | | | | |
| **M12-X Firm Transportation** | | | | | |
| Between Dawn, Kirkwall and Parkway | $4.530 | Monthly fuel and commodity rates shall be in accordance with schedule "C". | Monthly fuel ratios shall be in accordance with schedule "C". | | |
| **Limited Firm/Interruptible Transportation (1)** | | | | | |
| Dawn to Parkway – Maximum | $8.796 | Monthly fuel and commodity rates shall be in accordance with schedule "C". | Monthly fuel ratios shall be in accordance with schedule "C". | | |
| Dawn to Kirkwall – Maximum | $8.796 | | | | |
| Parkway (TCPL / EGT) to Parkway (Cons) / Lisgar (2) | n/a | n/a | 0.165% | | |
| **Carbon Charge (applied to all quantities transported)** | | | | | |
| Facility Carbon Charge | | $0.003 | | | $0.003 |

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

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

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

**Enhanced Market Balancing Service**

| Line No. | Particulars | Monthly Toll ($/GJ/Month) | Daily Equivalent ($/GJ) | Abandonment Surcharge ($/GJ/Month) | Daily Equivalent Abandonment Surcharge ($/GJ) |
|---|---|---|---|---|---|
| | (a) | (b) | (c) | (d) | (e) |
| 3 | Union Parkway Belt to Union EDA | 9.92374 | 0.3262 | 0.44408 | 0.0146 |

**Delivery Pressure**

| Line No. | Particulars | Monthly Toll ($/GJ/Month) | Daily Equivalent ($/GJ) |
|---|---|---|---|
| | (a) | (b) | (c) |
| 4 | Average Delivery Pressure Toll | 0.60833 | 0.0200 |

Note: Delivery Pressure toll applies to the following locations: Emerson 1 , Emerson 2, Union SWDA, Enbridge SWDA, Dawn Export, Niagara Falls, Iroquois, Chippawa and East Hereford.
The Daily Equivalent Toll is only applicable to STS Injections, IT, Diversions and STFT.

**Union Dawn Receipt Point Surcharge**

| Line No. | Particulars | Monthly Toll ($/GJ/Month) | Daily Equivalent ($/GJ) |
|---|---|---|---|
| | (a) | (b) | (c) |
| 5 | Union Dawn Receipt Point Surcharge | 0.13135 | 0.0043 |

**Short Notice Balancing (SNB) Service**

| Line No. | Particulars | Monthly Toll ($/GJ/Month) | Daily Equivalent ($/GJ) |
|---|---|---|---|
| | (a) | (b) | (c) |
| 6 | SNB Toll | 2.97597 | 0.0978 |

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

**Energy Deficient Gas Allowance (EDGA) Service**

| Line No. | Particulars | Capacity Charge ($/GJ/D) |
|---|---|---|
| | (a) | (b) |
| 7 | Western Section | 0.9982 |
| 8 | Eastern Section | 0.3302 |

Note: The EDGA Service capacity charge for the Western Section is the effective Empress to North Bay Junction FT Toll and the capacity charge for the Eastern Section is the effective Parkway to North Bay Junction FT Toll.
The EDGA Service fuel charge for the Western Section includes the effective Empress to North Bay Junction monthly fuel ratio and the fuel charge for the Eastern Section includes the effective Parkway to North Bay Junction monthly fuel ratio.

| Line No. | Receipt Point | Delivery Point | FT Toll ($/GJ/Month) | Daily Equivalent FT for IT / STFT ($/GJ) | Abandonment Surcharge ($/GJ/Month) | Daily Equivalent Abandonment Surcharge ($/GJ) |
|---|---|---|---|---|---|---|
| 1 | Union NDA | Enbridge CDA | - | 0.4489 | - | 0.0220 |
| 2 | Union NDA | Enbridge Parkway CDA | - | 0.4544 | - | 0.0223 |
| 3 | Union NDA | Enbridge EDA | - | 0.4776 | - | 0.0239 |
| 4 | Union NDA | KPUC EDA | - | 0.5755 | - | 0.0307 |
| 5 | Union NDA | Energir EDA | - | 0.6356 | - | 0.0348 |
| 6 | Union NDA | Enbridge SWDA | - | 0.6022 | - | 0.0325 |
| 7 | Union NDA | Union SWDA | - | 0.6036 | - | 0.0326 |
| 8 | Union NDA | Chippawa | - | 0.5424 | - | 0.0284 |
| 9 | Union NDA | Cornwall | - | 0.5231 | - | 0.0271 |
| 10 | Union NDA | East Hereford | - | 0.7551 | - | 0.0430 |
| 11 | Union NDA | Emerson 1 | - | 0.6486 | - | 0.0724 |
| 12 | Union NDA | Emerson 2 | - | 0.6485 | - | 0.0724 |
| 13 | Union NDA | Iroquois | - | 0.5015 | - | 0.0256 |
| 14 | Union NDA | Kirkwall | - | 0.4793 | - | 0.0240 |
| 15 | Union NDA | Napierville | - | 0.6232 | - | 0.0339 |
| 16 | Union NDA | Niagara Falls | - | 0.5408 | - | 0.0283 |
| 17 | Union NDA | North Bay Junction | - | 0.1249 | - | 0.0063 |
| 18 | Union NDA | Philipsburg | - | 0.6346 | - | 0.0347 |
| 19 | Union NDA | Spruce | - | 0.5990 | - | 0.0660 |
| 20 | Union NDA | St. Clair | - | 0.6177 | - | 0.0336 |
| 21 | Union NDA | Welwyn | - | 0.7378 | - | 0.0835 |
| 22 | Union NDA | Dawn Export | - | 0.6022 | - | 0.0325 |
| 23 | Union Parkway Belt | Empress | 38.33717 | 1.2604 | 3.89029 | 0.1279 |
| 24 | Union Parkway Belt | TransGas SSDA | 34.49250 | 1.1340 | 3.40867 | 0.1120 |
| 25 | Union Parkway Belt | Centram SSDA | 31.72783 | 1.0431 | 3.05688 | 0.1005 |
| 26 | Union Parkway Belt | Centram MDA | 29.00533 | 0.9536 | 2.71621 | 0.0893 |
| 27 | Union Parkway Belt | Centrat MDA | 29.57717 | 0.9724 | 2.66450 | 0.0876 |
| 28 | Union Parkway Belt | Union WDA | 24.64054 | 0.8101 | 2.04098 | 0.0671 |
| 29 | Union Parkway Belt | Nipigon WDA | 22.51748 | 0.7403 | 1.77329 | 0.0583 |
| 30 | Union Parkway Belt | Union NDA | 13.82133 | 0.4544 | 0.67829 | 0.0223 |
| 31 | Union Parkway Belt | Calstock NDA | 18.94350 | 0.6228 | 1.32313 | 0.0435 |
| 32 | Union Parkway Belt | Tunis NDA | 16.12998 | 0.5303 | 0.97029 | 0.0319 |
| 33 | Union Parkway Belt | Energir NDA | 13.74529 | 0.4519 | 0.66917 | 0.0220 |
| 34 | Union Parkway Belt | Union SSMDA | 16.67746 | 0.5483 | 1.16192 | 0.0382 |
| 35 | Union Parkway Belt | Union NCDA | 6.64604 | 0.2185 | 0.27983 | 0.0092 |
| 36 | Union Parkway Belt | Union CDA | 4.16100 | 0.1368 | 0.10950 | 0.0036 |
| 37 | Union Parkway Belt | Union ECDA | 3.47358 | 0.1142 | 0.06388 | 0.0021 |
| 38 | Union Parkway Belt | Union EDA | 9.02158 | 0.2966 | 0.44406 | 0.0146 |
| 39 | Union Parkway Belt | Union Parkway Belt | 2.92000 | 0.0960 | 0.02433 | 0.0008 |
| 40 | Union Parkway Belt | Enbridge CDA | 4.55948 | 0.1499 | 0.13688 | 0.0045 |
| 41 | Union Parkway Belt | Enbridge Parkway CDA | 2.92000 | 0.0960 | 0.02433 | 0.0008 |
| 42 | Union Parkway Belt | Enbridge EDA | 12.02067 | 0.3952 | 0.65092 | 0.0214 |
| 43 | Union Parkway Belt | KPUC EDA | 8.94250 | 0.2940 | 0.43800 | 0.0144 |
| 44 | Union Parkway Belt | Energir EDA | 15.63721 | 0.5141 | 0.89729 | 0.0295 |
| 45 | Union Parkway Belt | Enbridge SWDA | 7.41558 | 0.2438 | 0.33458 | 0.0110 |
| 46 | Union Parkway Belt | Union SWDA | 7.45817 | 0.2452 | 0.33763 | 0.0111 |
| 47 | Union Parkway Belt | Chippawa | 5.59667 | 0.1840 | 0.20683 | 0.0068 |
| 48 | Union Parkway Belt | Cornwall | 12.21838 | 0.4017 | 0.66308 | 0.0218 |
| 49 | Union Parkway Belt | East Hereford | 19.27504 | 0.6337 | 1.14571 | 0.0377 |
| 50 | Union Parkway Belt | Emerson 1 | 27.28071 | 0.8969 | 2.49721 | 0.0821 |
| 51 | Union Parkway Belt | Emerson 2 | 27.28071 | 0.8969 | 2.49721 | 0.0821 |
| 52 | Union Parkway Belt | Iroquois | 11.37888 | 0.3741 | 0.60529 | 0.0199 |
| 53 | Union Parkway Belt | Kirkwall | 3.67738 | 0.1209 | 0.07604 | 0.0025 |
| 54 | Union Parkway Belt | Napierville | 15.26004 | 0.5017 | 0.87296 | 0.0287 |
| 55 | Union Parkway Belt | Niagara Falls | 5.55104 | 0.1825 | 0.20379 | 0.0067 |
| 56 | Union Parkway Belt | North Bay Junction | 10.04358 | 0.3302 | 0.51404 | 0.0169 |
| 57 | Union Parkway Belt | Philipsburg | 15.60679 | 0.5131 | 0.89729 | 0.0295 |
| 58 | Union Parkway Belt | Spruce | 29.57717 | 0.9724 | 2.66450 | 0.0876 |
| 59 | Union Parkway Belt | St. Clair | 7.88704 | 0.2593 | 0.36500 | 0.0120 |
| 60 | Union Parkway Belt | Welwyn | 31.72783 | 1.0431 | 3.05688 | 0.1005 |
| 61 | Union Parkway Belt | Dawn Export | 7.41558 | 0.2438 | 0.33458 | 0.0110 |
| 62 | Union SSMDA | Empress | - | 0.8516 | - | 0.0979 |
| 63 | Union SSMDA | TransGas SSDA | - | 0.7252 | - | 0.0819 |
| 64 | Union SSMDA | Centram SSDA | - | 0.6344 | - | 0.0705 |
| 65 | Union SSMDA | Centram MDA | - | 0.5448 | - | 0.0592 |
| 66 | Union SSMDA | Centrat MDA | - | 0.5385 | - | 0.0584 |
| 67 | Union SSMDA | Union WDA | - | 0.7145 | - | 0.0806 |
| 68 | Union SSMDA | Nipigon WDA | - | 1.0474 | - | 0.0877 |
| 69 | Union SSMDA | Union NDA | - | 0.8256 | - | 0.0597 |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.** **REDACTED**
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**Peak 2021 - 2022 Winter Cost of Gas Filing** Page 1 of 5
**Supply and Commodity Costs, Volumes and Rates**

| For Month of: | Reference | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | Peak Nov- Apr |
|---|---|---|---|---|---|---|---|---|
| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) |
| **Supply and Commodity Costs** | | | | | | | | |
| **Pipeline Gas:** | | | | | | | | |
| Dawn Supply | ln 66 * ln 107 | [redacted] | | | | | | |
| Niagara Supply | ln 67 * ln 112 | | | | | | | |
| TGP Supply (Direct) | ln 68 * ln 132 | | | | | | | |
| Dracut Supply 1 - Baseload | ln 69 * ln 117 | | | | | | | |
| Dracut Supply 2 - Swing | ln 70 * ln 122 | | | | | | | |
| Dracut Supply 3 - Swing | ln 71 * ln 123 | | | | | | | |
| Constellation COMBO | ln 72 * ln 138 | | | | | | | |
| LNG Truck | ln 73 * ln 140 | | | | | | | |
| Propane Truck | ln 74 * ln 142 | | | | | | | |
| PNGTS | ln 75 * ln 147 | | | | | | | |
| Portland Natural Gas | ln 76 * ln 152 | | | | | | | |
| TGP Supply (Z4) | ln 77 * ln 157 | | | | | | | |
| Subtotal Pipeline Gas Costs | | $ 4,329,224 | $ 16,305,008 | $ 15,833,755 | $ 10,333,118 | $ 5,110,201 | $ 2,549,535 | $ 54,460,842 |
| **Volumetric Transportation Costs** | | | | | | | | |
| Dawn Supply | ln 66 * ln 204 | [redacted] | | | | | | |
| Niagara Supply | ln 67 * ln 215 | | | | | | | |
| TGP Supply (Direct) | ln 68 * ln 242 | | | | | | | |
| Dracut Supply 1 - Baseload | ln 69 * ln 263 | | | | | | | |
| Dracut Supply 2 - Swing | ln 70 * ln 263 | | | | | | | |
| Dracut Supply 3 - Swing | ln 71 * ln 264 | | | | | | | |
| Constellation COMBO | ln 72 * ln 263 | | | | | | | |
| TGP Storage - Withdrawals | ln 82 * ln 179 | | | | | | | |
| **Total Volumetric Transportation Costs** | | $ 249,272 | $ 187,052 | $ 242,114 | $ 210,498 | $ 208,907 | $ 54,590 | $ 1,152,433 |
| **Less - Gas Refill:** | | | | | | | | |
| LNG Truck | ln 91 * ln 164 | [redacted] | | | | | | |
| Propane | ln 92 * ln 165 | | | | | | | |
| TGP Storage Refill | ln 93 * ln 130 | | | | | | | |
| Storage Refill (Trans.) | ln 93 * ln 242 | | | | | | | |
| Subtotal Refills | | $ (783,339) | $ (12,142) | $ (28,875) | $ (995,533) | $ (189,781) | $ (356,450) | $ (2,366,121) |
| **Total Supply & Pipeline Commodity Costs** | ln 25 + ln 37 + ln 45 | $ 3,795,157 | $ 16,479,918 | $ 16,046,994 | $ 9,548,083 | $ 5,129,327 | $ 2,247,675 | $ 53,247,154 |
| **Storage Gas:** | | | | | | | | |
| TGP Storage - Withdrawals | ln 82 * ln 171 | $ 735,222 | $ 227,035 | $ 1,469,791 | $ 1,306,079 | $ 1,271,350 | $ 348,767 | $ 5,358,244 |
| **Produced Gas:** | | | | | | | | |
| LNG Vapor | ln 85 * ln 159 | [redacted] | | | | | | |
| Propane | ln 86 * ln 161 | | | | | | | |
| **Total Produced Gas** | ln 53 + ln 54 | $ 13,911 | $ 260,964 | $ 605,584 | $ 1,121,719 | $ 198,015 | $ 15,241 | $ 2,215,433 |
| **Total Commodity Gas & Trans. Costs** | ln 47 + ln 50 + ln 56 | $ 4,544,290 | $ 16,967,917 | $ 18,122,369 | $ 11,975,881 | $ 6,598,692 | $ 2,611,683 | $ 60,820,831 |
| | | | | | | | | $ 94,216,591 |

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**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
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**Peak 2021 - 2022 Winter Cost of Gas Filing**
**Supply and Commodity Costs, Volumes and Rates**

Schedule 6
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| For Month of: | Reference | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | Peak Nov- Apr |
|---|---|---|---|---|---|---|---|---|
| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) |
| **Volumes (Therms)** | | | | | | | | |
| **Pipeline Gas:** | See Schedule 11A | | | | | | | |
| Dawn Supply | | 876,821 | 926,304 | 927,705 | 840,605 | 911,138 | 750,758 | 5,233,331 |
| Niagara Supply | | 691,567 | 730,181 | 731,285 | 662,478 | 718,226 | 679,016 | 4,212,753 |
| TGP Supply (Direct) | | 4,587,074 | 3,104,022 | 3,109,472 | 2,817,427 | 3,053,203 | 612,346 | 17,283,547 |
| Dracut Supply 1 - Baseload | | - | 2,800,032 | 4,674,030 | 3,176,712 | - | - | 10,650,774 |
| Dracut Supply 2 - Swing | | 1,775,785 | 5,569,137 | 771,324 | - | 969,754 | 79,714 | 9,165,713 |
| Dracut Supply 3 - Swing | | - | 596,455 | 290,490 | - | 1,484 | - | 888,430 |
| Constellation COMBO | | 89,306 | 231,576 | 1,424,042 | 1,188,519 | 1,411,967 | - | 4,345,410 |
| LNG Truck | | 20,666 | 21,875 | 51,371 | 291,824 | 362,081 | - | 747,817 |
| Propane Truck | | - | - | - | 695,072 | - | - | 695,072 |
| PNGTS | | 219,205 | 231,576 | 231,926 | 209,962 | 227,785 | 193,487 | 1,313,941 |
| Portland Natural Gas | | 1,070,932 | 1,130,724 | 1,132,434 | 1,026,311 | 1,112,212 | 812,355 | 6,284,969 |
| TGP Supply (Z4) | | 1,814,902 | 1,924,268 | 1,927,178 | 1,746,396 | 1,892,764 | 5,448,071 | 14,753,578 |
| Subtotal Pipeline Volumes | | 11,146,258 | 17,266,150 | 15,271,258 | 12,655,305 | 10,660,614 | 8,575,749 | 75,575,334 |
| **Storage Gas:** | | | | | | | | |
| TGP Storage | | 2,752,983 | 850,117 | 5,503,525 | 4,890,514 | 4,760,475 | 1,242,085 | 19,999,699 |
| **Produced Gas:** | | | | | | | | |
| LNG Vapor | | 21,404 | 421,875 | 547,315 | 694,098 | 273,045 | 21,015 | 1,978,752 |
| Propane | | - | - | 244,014 | 574,010 | - | - | 818,023 |
| Subtotal Produced Gas | | 21,404 | 421,875 | 791,328 | 1,268,108 | 273,045 | 21,015 | 2,796,775 |
| **Less - Gas Refill:** | | | | | | | | |
| LNG Truck | | (20,666) | (21,875) | (51,371) | (291,824) | (362,081) | - | (747,817) |
| Propane | | - | - | - | (695,072) | - | - | (695,072) |
| TGP Storage Refill | | (1,750,690) | - | - | - | - | (961,638) | (2,712,328) |
| Subtotal Refills | | (1,771,356) | (21,875) | (51,371) | (986,895) | (362,081) | (961,638) | (4,155,217) |
| **Total Sendout Volumes** | | 12,149,289 | 18,516,267 | 21,514,739 | 17,827,032 | 15,332,053 | 8,877,211 | 94,216,591 |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.** **REDACTED**
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**Peak 2021 - 2022 Winter Cost of Gas Filing** Page 3 of 5
**Supply and Commodity Costs, Volumes and Rates**

| For Month of: | Reference | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | Peak Nov- Apr |
|---|---|---|---|---|---|---|---|---|
| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) |
| **Gas Costs and Volumetric Transportation Rates** | | | | | | | | |
| **Pipeline Gas:** | | | | | | | | |
| **Dawn Supply** | | | | | | | | Average Rate |
| NYMEX Price | Sch 7, ln 10/10 | [redacted] | | | | | | |
| Basis Differential | | | | | | | | |
| **Net Commodity Costs** | | | | | | | | |
| **Niagara Supply** | | | | | | | | |
| NYMEX Price | Sch 7, ln 10/10 | [redacted] | | | | | | |
| Basis Differential | | | | | | | | |
| **Net Commodity Costs** | | | | | | | | |
| **Dracut Supply 1 - Baseload** | | | | | | | | |
| Commodity Costs - NYMEX Price | Sch 7, ln 10 / 10 | [redacted] | | | | | | |
| Basis Differential | | | | | | | | |
| **Net Commodity Costs** | | | | | | | | |
| **Dracut Supply 2 - Swing** | | | | | | | | |
| Commodity Costs - NYMEX Price | Sch 7, ln 10 / 10 | [redacted] | | | | | | |
| Basis Differential | | | | | | | | |
| **Net Commodity Costs** | | | | | | | | |
| **Dracut Supply 3 - Swing** | | | | | | | | |
| Commodity Costs - NYMEX Price | Sch 7, ln 10 / 10 | [redacted] | | | | | | |
| Basis Differential | | | | | | | | |
| **Net Commodity Costs** | | | | | | | | |
| **TGP Supply (Direct)** | | | | | | | | |
| NYMEX Price | Sch 7, ln 10/10 | [redacted] | | | | | | |
| Basis Differential | | | | | | | | |
| **Net Commodity Costs** | | | | | | | | |
| **Constellation COMBO** | | | | | | | | |
| NYMEX Price | Sch 7, ln 10/10 | [redacted] | | | | | | |
| Basis Differential | | | | | | | | |
| **Net Commodity Costs** | | | | | | | | |
| **LNG Truck** | Sch 7, ln 10/10 | [redacted] | | | | | | |
| **Propane Truck** | Propane WACOG | [redacted] | | | | | | |
| **PNGTS** | | | | | | | | |
| NYMEX Price | Sch 7, ln 10/10 | [redacted] | | | | | | |
| Basis Differential | | | | | | | | |
| **Net Commodity Cost** | | | | | | | | |
| **PNGTS EXP** | | | | | | | | |
| NYMEX Price | Sch 7, ln 10/10 | [redacted] | | | | | | |
| Basis Differential | | | | | | | | |
| **Net Commodity Cost** | | | | | | | | |
| **TGP Supply (Z4)** | | | | | | | | |
| NYMEX Price | Sch 7, ln 10/10 | [redacted] | | | | | | |
| Basis Differential | | | | | | | | |
| **Net Commodity Cost** | | | | | | | | |
| **LNG Vapor (Storage)** | Sch 16, ln 95 /10 | [redacted] | | | | | | |
| **Propane** | Sch 16, ln 66 /10 | [redacted] | | | | | | |
| **Storage Refill:** | | | | | | | | |
| **LNG Truck** | ln 140 | [redacted] | | | | | | |
| **Propane** | ln 142 | | | | | | | |

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

| For Month of: | Reference | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | Peak Nov- Apr |
|---|---|---|---|---|---|---|---|---|
| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) |
| **TGP Storage** | | | | | | | | |
| **Commodity Costs - Storage withdrawal** | Sch 16, ln 34 /10 | $0.2671 | $0.2671 | $0.2671 | $0.2671 | $0.2671 | $0.2808 | $0.2694 |
| TGP - Max Commodity - Z 4-6 | 19th Rev Sheet No. 15 | $0.00928 | $0.00928 | $0.00928 | $0.00928 | $0.00928 | $0.00928 | $0.00928 |
| TGP - Max Comm. ACA Rate - Z 4-6 | 19th Rev Sheet No. 15 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 |
| Subtotal TGP - Trans Charge - Max Commodity Rate - Z 4-6 | | $0.00940 | $0.00940 | $0.00940 | $0.00940 | $0.00940 | $0.00940 | $0.00940 |
| TGP - Fuel Charge % - Z 4-6 | 17th Rev Sheet No. 32 | 1.22% | 1.22% | 1.22% | 1.22% | 1.22% | 1.22% | 1.22% |
| TGP - Fuel Charge % - Z 4-6 - (NYMEX * Percentage) | | $0.00326 | $0.00326 | $0.00326 | $0.00326 | $0.00326 | $0.00343 | $0.00329 |
| TGP - Withdrawal Charge | 20th Rev Sheet No.61 | $0.00087 | $0.00087 | $0.00087 | $0.00087 | $0.00087 | $0.00087 | $0.00087 |
| **Total Volumetric Transportation Rate - TGP (Storage)** | | $0.01353 | $0.01353 | $0.01353 | $0.01353 | $0.01353 | $0.01370 | $0.01356 |
| **Total TGP - Comm. & Vol. Trans. Rate** | ln 171 + ln 179 | **$0.28059** | **$0.28059** | **$0.28059** | **$0.28059** | **$0.28059** | **$0.29449** | **$0.28291** |
| **Per Unit Volumetric Transportation Rates** | | | | | | | | |
| **Dawn Supply Volumetric Transportation Charge** | | | | | | | | |
| **Commodity Costs** | ln 107 | **$0.3870** | **$0.3995** | **$0.4054** | **$0.4069** | **$0.3919** | **$0.3180** | **$0.3848** |
| TransCanada - Commodity Rate/GJ | Dawn - Parkway to Iroquois | $0.00030 | $0.00030 | $0.00030 | $0.00030 | $0.00030 | $0.00030 | $0.00030 |
| Conversion Rate GL to MMBTU | | 1.0551 | 1.0551 | 1.0551 | 1.0551 | 1.0551 | 1.0551 | 1.0551 |
| Conversion Rate to US$ | 1/0/1900 | 1.2589 | 1.2589 | 1.2589 | 1.2589 | 1.2589 | 1.2589 | 1.2589 |
| Commodity Rate/US$ | ln 188 x ln 189 x ln 190 | $0.00040 | $0.00040 | $0.00040 | $0.00040 | $0.00040 | $0.00040 | $0.00040 |
| TransCanada Fuel % | Dawn - Parkway to Iroquois | 0.97% | 0.95% | 1.20% | 1.09% | 0.97% | 0.78% | 0.99% |
| TransCanada Fuel * Percentage | ln 186 x ln 192 | $0.00374 | $0.00381 | $0.00487 | $0.00442 | $0.00379 | $0.00249 | $0.00385 |
| Subtotal TransCanada | | **$0.00414** | **$0.00421** | **$0.00527** | **$0.00482** | **$0.00419** | **$0.00289** | **$0.00425** |
| IGTS - Z1 RTS Commodity | Forth Revised Sheet No. 4 | $0.00034 | $0.00034 | $0.00034 | $0.00034 | $0.00034 | $0.00034 | $0.00034 |
| IGTS - Z1 RTS ACA Rate Commodity | Forth Revised Sheet No. 4 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 |
| IGTS - Z1 RTS Deferred Asset Surcharge | Forth Revised Sheet No. 4 | $0.00000 | $0.00000 | $0.00000 | $0.00000 | $0.00000 | $0.00000 | $0.00000 |
| Subtotal IGTS - Trans Charge - Z1 RTS Commodity | | **$0.00046** | **$0.00046** | **$0.00046** | **$0.00046** | **$0.00046** | **$0.00046** | **$0.00046** |
| TGP NET-NE - Comm. Segments 3 & 4 | 19th Rev Sheet No. 15 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 |
| IGTS -Fuel Use Factor - Percentage | Forth Revised Sheet No. 4 | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% |
| IGTS -Fuel Use Factor - Fuel * Percentage | ln 186 x ln 200 | **$0.00387** | **$0.00400** | **$0.00405** | **$0.00407** | **$0.00392** | **$0.00318** | **$0.00385** |
| TGP FTA Fuel Charge % Z 5-6 | 17th Rev Sheet No. 32 | 0.86% | 0.86% | 0.86% | 0.86% | 0.86% | 0.86% | 0.86% |
| TGP FTA Fuel * Percentage | ln 186 x ln 202 | **$0.00333** | **$0.00344** | **$0.00349** | **$0.00350** | **$0.00337** | **$0.00273** | **$0.00331** |
| **Total Volumetric Transportation Charge - Dawn Supply** | | **$0.01192** | **$0.01222** | **$0.01339** | **$0.01296** | **$0.01206** | **$0.00938** | **$0.01199** |
| **Niagara Supply Volumetric Transportation Charge** | | | | | | | | |
| **Commodity Costs** | Ln 112 | [redacted] | | | | | | |
| TGP FTA - FTA Z 5-6 Comm. Rate | 19th Rev Sheet No. 15 | $0.00705 | $0.00705 | $0.00705 | $0.00705 | $0.00705 | $0.00705 | $0.00705 |
| TGP FTA - FTA Z 5-6 - ACA Rate | 19th Rev Sheet No. 15 | $0.00012 | $0.0001 | $0.0001 | $0.0001 | $0.0001 | $0.0001 | $0.0001 |
| Subtotal TGP FTA - FTA Z 5-6 Commodity Rate | | **$0.00717** | **$0.0072** | **$0.0072** | **$0.0072** | **$0.0072** | **$0.0072** | **$0.0072** |
| TGP FTA Fuel Charge % Z 5-6 | 17th Rev Sheet No. 32 | 0.86% | 0.86% | 0.86% | 0.86% | 0.86% | 0.86% | 0.86% |
| TGP FTA Fuel * Percentage | ln 208 x ln 213 | | | | | | | |
| **Total Volumetric Transportation Rate - Niagara Supply** | | [redacted] | | | | | | |

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

| For Month of: | Reference | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | Peak Nov- Apr |
|---|---|---|---|---|---|---|---|---|
| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) |
| | | | | | | | | Average Rate |
| **TGP Direct Volumetric Transportation Charge** | | | | | | | | |
| **Commodity Costs** | Ln 130 | [redacted] | | | | | | |
| TGP - Max Comm. Base Rate - Z 0-6 | 19th Rev Sheet No. 15 | $0.02672 | $0.02672 | $0.02672 | $0.02672 | $0.02672 | $0.02672 | $0.02672 |
| TGP - Max Commodity ACA Rate - Z 0-6 | 19th Rev Sheet No. 15 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 |
| Subtotal TGP - Max Comm. Rate Z 0-6 | | $0.02684 | $0.02684 | $0.02684 | $0.02684 | $0.02684 | $0.02684 | $0.02684 |
| Prorated Percentage | | 32.60% | 32.60% | 32.60% | 32.60% | 32.60% | 32.60% | 32.60% |
| Prorated TGP - Max Commodity Rate - Z 0-6 | | **$0.00875** | **$0.00875** | **$0.00875** | **$0.00875** | **$0.00875** | **$0.00875** | **$0.00875** |
| TGP - Max Comm. Base Rate - Z 1-6 | 19th Rev Sheet No. 15 | $0.02331 | $0.02331 | $0.02331 | $0.02331 | $0.02331 | $0.02331 | $0.02331 |
| TGP - Max Commodity ACA Rate - Z 1-6 | 19th Rev Sheet No. 15 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 |
| Subtotal TGP - Max Commodity Rate - Z 1-6 | | $0.02343 | $0.02343 | $0.02343 | $0.02343 | $0.02343 | $0.02343 | $0.02343 |
| Prorated Percentage | | 67.40% | 67.40% | 67.40% | 67.40% | 67.40% | 67.40% | 67.40% |
| Prorated TGP - Trans Charge - Max Commodity Rate - Z 1-6 | | **$0.01579** | **$0.01579** | **$0.01579** | **$0.01579** | **$0.01579** | **$0.01579** | **$0.01579** |
| TGP - Fuel Charge % - Z 0 -6 | 17th Rev Sheet No. 32 | 4.66% | 4.66% | 4.66% | 4.66% | 4.66% | 4.66% | 4.66% |
| Prorated Percentage | | 32.6% | 32.6% | 32.6% | 32.6% | 32.6% | 32.6% | 32.6% |
| Prorated TGP Fuel Charge % - Z 0-6 | | 1.52% | 1.52% | 1.52% | 1.52% | 1.52% | 1.52% | 1.52% |
| TGP - Fuel Charge % - Z 1 -6 | 17th Rev Sheet No. 32 | 4.06% | 4.06% | 4.06% | 4.06% | 4.06% | 4.06% | 4.06% |
| Prorated Percentage | | 67.40% | 67.40% | 67.40% | 67.40% | 67.40% | 67.40% | 67.40% |
| Prorated TGP Fuel Charge - Fuel Charge % - Z 1-6 | | 2.74% | 2.74% | 2.74% | 2.74% | 2.74% | 2.74% | 2.74% |
| TGP - Fuel Charge % - Z 0-6 | ln 222 x ln 236 | **$0.00607** | **$0.00624** | **$0.00633** | **$0.00621** | **$0.00583** | **$0.00504** | **$0.00595** |
| TGP - Fuel Charge % - Z 1-6 | ln 222 x ln 239 | **$0.01093** | **$0.01123** | **$0.01140** | **$0.01119** | **$0.01050** | **$0.00908** | **$0.01072** |
| **Total Volumetric Transportation Rate - TGP (Direct)** | | **$0.04154** | **$0.04201** | **$0.04227** | **$0.04194** | **$0.04087** | **$0.03867** | **$0.04122** |
| **TGP (Zone 6 Purchase) Volumetric Transportation Charge** | | | | | | | | |
| **Commodity Costs** | Ln 130 | [redacted] | | | | | | |
| TGP - Max Comm. Base Rate - Z 6-6 | 19th Rev Sheet No. 15 | $0.00300 | $0.00300 | $0.00300 | $0.00300 | $0.00300 | $0.00300 | $0.00300 |
| TGP - Max Commodity ACA Rate - Z 6-6 | 19th Rev Sheet No. 15 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 |
| Subtotal TGP - Max Commodity Rate - Z 6-6 | | **$0.00312** | **$0.00312** | **$0.00312** | **$0.00312** | **$0.00312** | **$0.00312** | **$0.00312** |
| TGP - Fuel Charge % - Z 6-6 | 17th Rev Sheet No. 32 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| TGP - Fuel Charge | ln 245 x ln 250 | **$0.00000** | **$0.00000** | **$0.00000** | **$0.00000** | **$0.00000** | **$0.00000** | **$0.00000** |
| **Total Vol. Trans. Rate - TGP (Zone 6)** | | **$0.00312** | **$0.00312** | **$0.00312** | **$0.00312** | **$0.00312** | **$0.00312** | **$0.00312** |
| **TGP Dracut** | | | | | | | | |
| **Commodity Costs - NYMEX Price** | Ln 117 | [redacted] | | | | | | |
| TGP - Trans Charge - Comm. - Z 6-6 | 19th Rev Sheet No. 15 | $0.00300 | $0.00300 | $0.00300 | $0.00300 | $0.00300 | $0.00300 | $0.00300 |
| TGP - Trans Charge - ACA Rate - Z6-6 | 19th Rev Sheet No. 15 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 |
| Subtotal TGP - Trans Charge - Max Commodity Rate - Z 6-6 | | **$0.00312** | **$0.00312** | **$0.00312** | **$0.00312** | **$0.00312** | **$0.00312** | **$0.00312** |
| TGP - Fuel Charge % - Z 6-6 | 17th Rev Sheet No. 32 | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| TGP - Fuel Charge | ln 256 x ln 261 | [redacted] | | | | | | |
| **Total Volumetric Transportation Rate - TGP Dracut** | | | | | | | | |

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**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty**
**Peak 2021 - 2022 Winter Cost of Gas Filing**
**NYMEX Futures @ Henry Hub**



Peak

| For Month of: | Reference | | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | Strip Average |
|---|---|---|---|---|---|---|---|---|---|
| (a) | (b) | | (c) | (d) | (e) | (f) | (g) | (h) | (i) |
| **I. NYMEX Opening Prices as of:** | | | | | | | | | |
| Opening Prices | | | $3.9950 | $4.1050 | $4.1660 | $4.0890 | $3.8360 | $3.3200 | $3.9185 |
| NYMEX | | **Filed COG** | $3.9950 | $4.1050 | $4.1660 | $4.0890 | $3.8360 | $3.3200 | $3.9185 |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty**
**Peak 2021 - 2022 Winter Cost of Gas Filing**
**Annual Bill Comparisons, Nov 19 - Apr 20 vs Nov 20 - Apr 21 - Residential Heating Rate R-3**



**November 1, 2021 - April 30, 2022**
**Residential Heating (R3)**

| **PROPOSED** | | | **Nov-21** | **Dec-21** | **Jan-22** | **Feb-22** | **Mar-22** | **Apr-22** | **Winter Nov-Apr** |
|---|---|---|---|---|---|---|---|---|---|
| **average Usage (Therms)** | | | 62 | 110 | 123 | 148 | 132 | 92 | 667 |
| | | 8/1/2021 - Current | | | | | | | |
| **Winter** | | | | | | | | | |
| Cust. Chg | | $ 15.39 | $ 15 39 | $ 15.39 | $ 15.39 | $ 15.39 | $ 15.39 | $ 15.39 | $ 92.34 |
| Headblock | | $ 0.5632 | | | | | | | |
| Tailblock | | $ 0.5632 | $ 34 92 | $ 61.95 | $ 69.27 | $ 83.35 | $ 74.34 | $ 51.81 | $ 375.65 |
| HB Threshold | | - | | | | | | | |
| Total Base Rate Amount | | | $ 50 31 | $ 77.34 | $ 84.66 | $ 98.74 | $ 89.73 | $ 67.20 | $ 467.99 |
| COG Rate - (Seasonal) | | | $ 0.9056 | $ 0.9056 | $ 0.9056 | $ 0 9056 | $ 0.9056 | $ 0 9056 | $ 0 9056 |
| COG amount | | | $ 56.15 | $ 99.62 | $ 111.39 | $ 134.03 | $ 119.54 | $ 83.32 | $ 604.04 |
| LDAC | | | $ 0.1733 | $ 0.1733 | $ 0.1733 | $ 0.1733 | $ 0.1733 | $ 0.1733 | $ 0.1733 |
| LDAC amount | | | $ 10.74 | $ 19.06 | $ 21.31 | $ 25.65 | $ 22.87 | $ 15.94 | $ 115.58 |
| **Total Bill** | | | **$ 117.20** | **$ 196.02** | **$ 217.37** | **$ 258.42** | **$ 232.14** | **$ 166.46** | **$ 1,187.61** |

**November 1, 2020 - April 30, 2021**
**Residential Heating (R3)**

| **CURRENT** | | | **Nov-20** | **Dec-20** | **Jan-21** | **Feb-21** | **Mar-21** | **Apr-21** | **Winter Nov-Apr** |
|---|---|---|---|---|---|---|---|---|---|
| **average Usage (Therms)** | | | 62 | 110 | 123 | 148 | 132 | 92 | 667 |
| **Winter** | 7/1/20 - 7/31/21 | 8/1/2021 - Current | | | | | | | |
| Cust. Chg | $ 15.50 | $ 15.39 | $ 15 50 | $ 15.50 | $ 15.50 | $ 15.50 | $ 15.50 | $ 15.50 | $ 93.00 |
| Headblock | $ 0.5678 | $ 0.5632 | | | | | | | |
| Tailblock | $ 0.5678 | $ 0.5632 | $ 35.20 | $ 62.46 | $ 69.84 | $ 84.03 | $ 74.95 | $ 52.24 | $ 378.72 |
| HB Threshold | - | - | | | | | | | |
| Total Base Rate Amount | | | $ 50.70 | $ 77.96 | $ 85.34 | $ 99.53 | $ 90.45 | $ 67.74 | $ 471.72 |
| COG Rate - (Seasonal) | | | $ 0 5571 | $ 0.5571 | $ 0.4664 | $ 0.4276 | $ 0.5156 | $ 0 6050 | $ 0 5100 |
| COG amount | | | $ 34.54 | $ 61.28 | $ 57.37 | $ 63.28 | $ 68.06 | $ 55.66 | $ 340.19 |
| LDAC | | | $ 0 0589 | $ 0.0589 | $ 0.0589 | $ 0 0589 | $ 0.0589 | $ 0 0589 | $ 0 0589 |
| LDAC amount | | | $ 3.65 | $ 6.48 | $ 7.24 | $ 8.72 | $ 7.77 | $ 5.42 | $ 39.29 |
| **Total Bill** | | | **$ 88.90** | **$ 145.72** | **$ 149.95** | **$ 171.54** | **$ 166.28** | **$ 128.82** | **$ 851.20** |

| **DIFFERENCE** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Total Bill** | **$28.30** | **$50.30** | **$67.41** | **$86.88** | **$65.86** | **$37.64** | **$336.41** |
| % Change | **31.84%** | **34.52%** | **44.96%** | **50.65%** | **39.61%** | **29.22%** | **39.52%** |
| **Base Rate** | $ (0.40) | $ (0.62) | $ (0.68) | $ (0.79) | $ (0.72) | $ (0.53) | $ (3.73) |
| % Change | -0.78% | -0.79% | -0.79% | -0.79% | -0.79% | -0.79% | -0.79% |
| **COG & LDAC** | **$ 28.70** | **$ 50.92** | **$ 68.09** | **$ 87.67** | **$ 66.58** | **$ 38.18** | **$ 340.13** |
| % Change | **83.09%** | **83.09%** | **118.69%** | **138.54%** | **97.82%** | **68.59%** | **99.98%** |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty**
**Peak 2021 - 2022 Winter Cost of Gas Filing**
**Annual Bill Comparisons, Nov 19 - Apr 20 vs Nov 20 - Apr 21 - Commercial Rate G-41**

**November 1, 2021 - April 30, 2022**
**Commercial Rate (G-41)**

| **PROPOSED** | | **Nov-21** | **Dec-21** | **Jan-22** | **Feb-22** | **Mar-22** | **Apr-22** | **Winter Nov-Apr** |
|---|---|---|---|---|---|---|---|---|
| **average Usage (Therms)** | | 89 | 277 | 504 | 457 | 331 | 297 | 1,955 |
| **Winter** | 8/1/2021 - Current | | | | | | | |
| Cust. Chg | $ 57.06 | $ 57 06 | $ 57.06 | $ 57.06 | $ 57.06 | $ 57.06 | $ 57.06 | $ 342.36 |
| Headblock | $ 0.4688 | $ 41.72 | $ 46.88 | $ 46.88 | $ 46.88 | $ 46.88 | $ 46.88 | $ 276.12 |
| Tailblock | $ 0.3149 | $ - | $ 55.74 | $ 127.22 | $ 112.42 | $ 72.74 | $ 62.04 | $ 430.15 |
| HB Threshold | 100 | | | | | | | |
| Total Base Rate Amount | | $ 98.78 | $ 159.68 | $ 231.16 | $ 216.36 | $ 176.68 | $ 165.98 | $ 1,048.64 |
| COG Rate - (Seasonal) | | $ 0.9058 | $ 0.9058 | $ 0.9058 | $ 0 9058 | $ 0.9058 | $ 0 9058 | $ 0 9058 |
| COG amount | | $ 80.62 | $ 250.91 | $ 456.52 | $ 413.95 | $ 299.82 | $ 269.02 | $ 1,770.84 |
| LDAC | | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0 0860 | $ 0.0860 | $ 0 0860 | $ 0 0860 |
| LDAC amount | | $ 7.66 | $ 23.83 | $ 43.35 | $ 39.31 | $ 28.47 | $ 25.55 | $ 168.16 |
| **Total Bill** | | **$187.05** | **$434.41** | **$731.03** | **$669.62** | **$504.97** | **$460.54** | **$2,987.63** |

**November 1, 2020 - April 30, 2021**
**Commercial Rate (G-41)**

| **CURRENT** | | **Nov-20** | **Dec-20** | **Jan-21** | **Feb-21** | **Mar-21** | **Apr-21** | **Winter Nov-Apr** |
|---|---|---|---|---|---|---|---|---|
| **average Usage (Therms)** | | 89 | 277 | 504 | 457 | 331 | 297 | 1,955 |
| **Winter** | 7/1/20 - 7/31/21 / 8/1/2021 - Current | | | | | | | |
| Cust. Chg | $ 57.46 / $ 57.06 | $ 57.46 | $ 57.46 | $ 57.46 | $ 57.46 | $ 57.46 | $ 57.46 | $ 344.76 |
| Headblock | $ 0.4711 / $ 0.4688 | $ 41 93 | $ 47.11 | $ 47.11 | $ 47.11 | $ 47.11 | $ 47.11 | $ 277.48 |
| Tailblock | $ 0.3165 / $ 0.3149 | $ - | $ 56.02 | $ 127.87 | $ 112.99 | $ 73.11 | $ 62.35 | $ 432.34 |
| HB Threshold | 100 / 100 | | | | | | | |
| Total Base Rate Amount | | $ 99.39 | $ 160.59 | $ 232.44 | $ 217.56 | $ 177.68 | $ 166.92 | $ 1,054.58 |
| COG Rate - (Seasonal) | | $ 0 5552 | $ 0.5552 | $ 0.4645 | $ 0.4257 | $ 0.5137 | $ 0 6031 | $ 0 5018 |
| COG amount | | $ 49.41 | $ 153.79 | $ 234.11 | $ 194.54 | $ 170.03 | $ 179.12 | $ 981.01 |
| LDAC | | $ 0 0555 | $ 0.0555 | $ 0.0555 | $ 0 0555 | $ 0.0555 | $ 0 0555 | $ 0 0555 |
| LDAC amount | | $ 4.94 | $ 15.37 | $ 27.97 | $ 25.36 | $ 18.37 | $ 16.48 | $ 108.50 |
| **Total Bill** | | **$153.74** | **$329.75** | **$494.52** | **$437.47** | **$366.09** | **$362.52** | **$2,144.09** |

| **DIFFERENCE** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Total Bill** | **$ 33.31** | **$ 104.66** | **$ 236.52** | **$ 232.15** | **$ 138.89** | **$ 98.02** | **$ 843.54** |
| % Change | **21.67%** | **31.74%** | **47.83%** | **53.07%** | **37.94%** | **27.04%** | **39.34%** |
| **Base Rate** | $ (0.60) | $ (0.91) | $ (1.28) | $ (1.20) | $ (1.00) | $ (0.95) | $ (5.94) |
| % Change | -0.61% | -0 57% | -0.55% | -0.55% | -0 56% | -0.57% | -0.56% |
| **COG & LDAC** | $ 33.92 | $ 105.57 | $ 237.79 | $ 233.35 | $ 139.88 | $ 98.96 | $ 849.48 |
| % Change | 68.64% | 68 64% | 101 57% | 119.95% | 82 27% | 55.25% | 86.59% |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty**
**Peak 2021 - 2022 Winter Cost of Gas Filing**
**Annual Bill Comparisons, Nov 19 - Apr 20 vs Nov 20 - Apr 21 - Commercial Rate G-42**

**November 1, 2021 - April 30, 2022**
**C&I High Winter Use Medium G-42**

| **PROPOSED** | | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | Winter Nov-Apr |
|---|---|---|---|---|---|---|---|---|
| **average Usage (Therms)** | | 830 | 2,189 | 3,708 | 3,406 | 2,603 | 2,395 | 15,131 |
| | 8/1/2021 - Current | | | | | | | |
| **Winter** | | | | | | | | |
| Cust. Chg | $ 171.19 | $ 171.19 | $ 171.19 | $ 171.19 | $ 171.19 | $ 171.19 | $ 171.19 | $ 1,027.14 |
| Headblock | $ 0.4261 | $ 353 66 | $ 426.10 | $ 426.10 | $ 426.10 | $ 426.10 | $ 426.10 | $ 2,484.16 |
| Tailblock | $ 0.2839 | $ - | $ 337.56 | $ 768.80 | $ 683.06 | $ 455.09 | $ 396 04 | $ 2,640.55 |
| HB Threshold | 1,000 | | | | | | | |
| Total Base Rate Amount | | $ 524 85 | $ 934.85 | $ 1,366.09 | $ 1,280.35 | $ 1,052.38 | $ 993.33 | $ 6,151.86 |
| COG Rate - (Seasonal) | | $ 0.9058 | $ 0.9058 | $ 0.9058 | $ 0 9058 | $ 0.9058 | $ 0 9058 | $ 0 9058 |
| COG amount | | $ 751 81 | $ 1,982.80 | $ 3,358.71 | $ 3,085.15 | $ 2,357.80 | $ 2,169.39 | $ 13,705.66 |
| LDAC | | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0 0860 | $ 0.0860 | $ 0 0860 | $ 0 0860 |
| LDAC amount | | $ 71 39 | $ 188.28 | $ 318.94 | $ 292.96 | $ 223.89 | $ 206.00 | $ 1,301.46 |
| **Total Bill** | | **$ 1,348.06** | **$ 3,105.93** | **$ 5,043.73** | **$ 4,658.47** | **$ 3,634.07** | **$ 3,368.72** | **$ 21,158.98** |

**November 1, 2020 - April 30, 2021**
**C&I High Winter Use Medium G-42**

| **CURRENT** | | | Nov-20 | Dec-20 | Jan-21 | Feb-21 | Mar-21 | Apr-21 | Winter Nov-Apr |
|---|---|---|---|---|---|---|---|---|---|
| **average Usage (Therms)** | | | 830 | 2,189 | 3,708 | 3,406 | 2,603 | 2,395 | 15,131 |
| **Winter** | 7/1/20 - 7/31/21 | 8/1/2021 - Current | | | | | | | |
| Cust. Chg | $ 172.39 | $ 171.19 | $ 172 39 | $ 172.39 | $ 172.39 | $ 172.39 | $ 172.39 | $ 172.39 | $ 1,034.34 |
| Headblock | $ 0.4284 | $ 0.4261 | $ 355 57 | $ 428.40 | $ 428.40 | $ 428.40 | $ 428.40 | $ 428.40 | $ 2,497.57 |
| Tailblock | $ 0.2855 | $ 0.2839 | $ - | $ 339.46 | $ 773.13 | $ 686.91 | $ 457.66 | $ 398.27 | $ 2,655.44 |
| HB Threshold | 1,000 | 1,000 | | | | | | | |
| Total Base Rate Amount | | | $ 527 96 | $ 940.25 | $ 1,373.92 | $ 1,287.70 | $ 1,058.45 | $ 999.06 | $ 6,187.35 |
| COG Rate - (Seasonal) | | | $ 0.5552 | $ 0.5552 | $ 0.4645 | $ 0.4257 | $ 0.5137 | $ 0 6031 | $0.5043 |
| COG amount | | | $ 460.82 | $ 1,215.33 | $ 1,722.37 | $ 1,449.93 | $ 1,337.16 | $ 1,444.42 | $ 7,630.03 |
| LDAC | | | $ 0 0555 | $ 0.0555 | $ 0.0555 | $ 0 0555 | $ 0.0555 | $ 0 0555 | 0.0555 |
| LDAC amount | | | $ 46.07 | $ 121.49 | $ 205.79 | $ 189.03 | $ 144.47 | $ 132.92 | $ 839.77 |
| **Total Bill** | | | **$ 1,034.84** | **$ 2,277.07** | **$ 3,302.08** | **$ 2,926.67** | **$ 2,540.07** | **$ 2,576.41** | **$ 14,657.15** |

| **DIFFERENCE** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Total Bill** | **$ 313.21** | **$ 828.85** | **$ 1,741.65** | **$ 1,731.80** | **$ 1,094.00** | **$ 792.31** | **$ 6,501.82** |
| % Change | **30.27%** | **36.40%** | **52.74%** | **59.17%** | **43.07%** | **30.75%** | **44.36%** |
| **Base Rate** | $ (3.11) | $ (5.40) | $ (7.83) | $ (7.35) | $ (6.06) | $ (5.73) | $ (35.49) |
| % Change | -0 59% | -0.57% | -0.57% | -0.57% | -0.57% | -0 57% | -0.57% |
| **COG & LDAC** | $ 316 32 | $ 834.26 | $ 1,749.48 | $ 1,739.15 | $ 1,100.06 | $ 798 04 | $ 6,537.31 |
| % Change | 68.64% | 68.64% | 101.57% | 119.95% | 82.27% | 55.25% | 85 68% |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty**
**Peak 2021 - 2022 Winter Cost of Gas Filing**
**Annual Bill Comparisons, Nov 19 - Apr 20 vs Nov 20 - Apr 21 - Commercial Rate G-52**



**November 1, 2021 - April 30, 2022**
**Commercial Rate (G-52)**

| **PROPOSED** | | **Nov-21** | **Dec-21** | **Jan-22** | **Feb-22** | **Mar-22** | **Apr-22** | **Winter Nov-Apr** |
|---|---|---|---|---|---|---|---|---|
| **average Usage (Therms)** | | 1,352 | 1,866 | 2,284 | 2,160 | 1,886 | 1,760 | 11,308 |
| **Winter** | 8/1/2021 - Current | | | | | | | |
| Cust. Chg | $ 171.19 | $ 171.19 | $ 171.19 | $ 171.19 | $ 171.19 | $ 171.19 | $ 171.19 | $ 1,027.14 |
| Headblock | $ 0.2428 | $ 242 80 | $ 242.80 | $ 242.80 | $ 242.80 | $ 242.80 | $ 242.80 | $ 1,456.80 |
| Tailblock | $ 0.1617 | $ 56 92 | $ 140.03 | $ 207.62 | $ 187.57 | $ 143.27 | $ 122.89 | $ 858.30 |
| HB Threshold | 1,000 | | | | | | | |
| Total Base Rate Amount | | $ 470 91 | $ 554.02 | $ 621.61 | $ 601.56 | $ 557.26 | $ 536.88 | $ 3,342.24 |
| COG Rate - (Seasonal) | | $0.9041 | $0.9041 | $0.9041 | $0 9041 | $0.9041 | $0.9041 | $ 0 9041 |
| COG amount | | $ 1,222.34 | $ 1,687.05 | $ 2,064.96 | $ 1,952.86 | $ 1,705.13 | $ 1,591.22 | $ 10,223.56 |
| LDAC | | $ 0 0860 | $ 0.0860 | $ 0.0860 | $ 0 0860 | $ 0.0860 | $ 0 0860 | $ 0 0860 |
| LDAC amount | | $ 116.29 | $ 160.50 | $ 196.45 | $ 185.79 | $ 162.22 | $ 151.38 | $ 972.63 |
| **Total Bill** | | **$1,809.54** | **$2,401.57** | **$2,883.03** | **$2,740.21** | **$2,424.61** | **$2,279.48** | **$14,538.44** |

**November 1, 2020 - April 30, 2021**
**Commercial Rate (G-52)**

| **CURRENT** | | | **Nov-20** | **Dec-20** | **Jan-21** | **Feb-21** | **Mar-21** | **Apr-21** | **Winter Nov-Apr** |
|---|---|---|---|---|---|---|---|---|---|
| **average Usage (Therms)** | | | 1,352 | 1,866 | 2,284 | 2,160 | 1,886 | 1,760 | 11,308 |
| **Winter** | 7/1/20 - 7/31/21 | 8/1/2021 - Current | | | | | | | |
| Cust. Chg | $ 172.39 | $ 171.19 | $ 172 39 | $ 172.39 | $ 172.39 | $ 172.39 | $ 172.39 | $ 172.39 | $ 1,034.34 |
| Headblock | $ 0.2439 | $ 0.2428 | $ 243 90 | $ 243.90 | $ 243.90 | $ 243.90 | $ 243.90 | $ 243.90 | $ 1,463.40 |
| Tailblock | $ 0.1624 | $ 0.1617 | $ 57.16 | $ 140.64 | $ 208.52 | $ 188.38 | $ 143.89 | $ 123.42 | $ 862.02 |
| HB Threshold | 1,000 | 1,000 | | | | | | | |
| Total Base Rate Amount | | | $ 473.45 | $ 556.93 | $ 624.81 | $ 604.67 | $ 560.18 | $ 539.71 | $ 3,359.76 |
| COG Rate - (Seasonal) | | | $ 0 5660 | $ 0.5660 | $ 0.4753 | $ 0.4365 | $ 0.5245 | $ 0 6139 | $ 0 5235 |
| COG amount | | | $ 765.23 | $ 1,056.16 | $ 1,085.59 | $ 942.84 | $ 989.21 | $ 1,080.46 | $ 5,919.48 |
| LDAC | | | $ 0 0555 | $ 0.0555 | $ 0.0555 | $ 0 0555 | $ 0.0555 | $ 0 0555 | $ 0 0555 |
| LDAC amount | | | $ 75.04 | $ 103.56 | $ 126.76 | $ 119.88 | $ 104.67 | $ 97.68 | $ 627.59 |
| **Total Bill** | | | **$1,313.72** | **$1,716.65** | **$1,837.16** | **$1,667.39** | **$1,654.06** | **$1,717.86** | **$9,906.84** |

**DIFFERENCE**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Total Bill** | **$ 495.82** | **$ 684.93** | **$ 1,045.87** | **$ 1,072.81** | **$ 770.55** | **$ 561.62** | **$ 4,631.60** |
| % Change | **37.74%** | **39.90%** | **56.93%** | **64.34%** | **46.59%** | **32.69%** | **46.75%** |
| **Base Rate** | $ (2.55) | $ (2.91) | $ (3.20) | $ (3.11) | $ (2.92) | $ (2.83) | $ (17.52) |
| % Change | -0.54% | -0.52% | -0.51% | -0.51% | -0.52% | -0 52% | -0.52% |
| **COG & LDAC** | $ 498.36 | $ 687.83 | $ 1,049.07 | $ 1,075.92 | $ 773.47 | $ 564.45 | $ 4,649.12 |
| % Change | 65.13% | 65.13% | 96.64% | 114.12% | 78.19% | 52.24% | 78 54% |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty**
**Peak 2021 - 2022 Winter Cost of Gas Filing**



**Residential Heating**

| | Winter 2020-21 | Winter 2021-22 |
|---|---|---|
| Customer Charge | $ 15.50 | $ 15.39 |
| First 100 Therms | $ 0.5678 | $ 0.5632 |
| Excess 100 Therms | $ 0.5678 | $ 0.5632 |
| LDAC | $ 0.0589 | $ 0.1733 |
| COG | $ 0.5100 | $ 0.9056 |
| Total Adjust | $ 0.5689 | $ 1.0789 |

| | | Winter 2020-21 COG @ | Winter 2021-22 @ | Total | | Base Rate | | COG | | LDAC | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | $ Impact | % Impact | $ Impact | % Impact | $ Impact | % Impact | $ Impact | % Impact |
| | | $0.5689 | $1.0789 | $0.51 | 90% | | | | | | |
| Cooking alone | 5 | $21.05 | $23.60 | $2.55 | 12.11% | $0 00 | 0% | $1.98 | 8% | $0.57 | 2.72% |
| | 10 | $26.71 | $31.81 | $5.10 | 19.09% | $0 00 | 0% | $3.96 | 12% | $1.14 | 4 28% |
| | 20 | $38.03 | $48.23 | $10.20 | 26.82% | $0 00 | 0% | $7.91 | 16% | $2.29 | 6 01% |
| Water Heating alone | 30 | $49.35 | $64.65 | $15.30 | 31.00% | $0 00 | 0% | $11.87 | 18% | $3.43 | 6 95% |
| | 45 | $66.34 | $89.28 | $22.95 | 34.59% | $0 00 | 0% | $17.80 | 20% | $5.15 | 7.76% |
| | 50 | $72.00 | $97.49 | $25.50 | 35.41% | $0 00 | 0% | $19.78 | 20% | $5.72 | 7 94% |
| Heating Alone | 80 | $100 30 | $138.55 | $38.25 | 38.13% | $0 00 | 0% | $29.67 | 21% | $8.58 | 8 55% |
| | 125 | $165 96 | $233.79 | $67.82 | 40.87% | $0 00 | 0% | $52.61 | 23% | $15.21 | 9.17% |
| | 150 | $185 21 | $261.70 | $76.49 | 41.30% | $0 00 | 0% | $59.33 | 23% | $17.16 | 9.26% |
| | 200 | $241 82 | $343.81 | $101.99 | 42.18% | $0 00 | 0% | $79.11 | 23% | $22.88 | 9.46% |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.** Schedule 9

**d/b/a Liberty** Page 1 of 1

**Peak 2021 - 2022 Winter Cost of Gas Filing**

**Variance Analysis of the Components of the Winter 2020-2021 Actual Results vs Proposed Winter 2021-2022 Cost of Gas Rate**

| | WINTER 2020-2021 ACTUAL RESULTS (6 months actual) | | | WINTER 2021-2022 (6 months Proposed) | | |
|---|---|---|---|---|---|---|
| Therm Sales (COG) | 124,069,459 | | | 87,443,741 | | |
| | THERM SENDOUT | COSTS | EFFECT ON COST OF GAS | THERM SENDOUT | COSTS | EFFECT ON COST OF GAS |
| Demand Charges | | $ 11,374,016 | $ 0.0917 | | $ 13,859,546 | $ 0.1585 |
| Purchased Gas | | 26,038,931 | 0.2099 | 71,420,117 | 53,247,154 | 0.6089 |
| Storage/Produced Gas | | - | - | 22,796,474 | 7,573,677 | 0.0866 |
| Hedging (Gain)/Loss | | - | - | | - | - |
| Total Volumes and Cost | 91,441,600 | $ 37,412,947 | $ 0.3015 | 94,216,591 | $ 74,680,377 | $ 0.8540 |
| Direct Costs | | | | | | |
| Prior Period Balance | | $ 2,901,813 | $ 0.0234 | | $ 1,431,639 | $ 0.0164 |
| Interest | | 29,768 | 0.0002 | | 22,981 | 0.0003 |
| Prior Period Adjustment | | - | - | | 335,667 | 0.0038 |
| Broker Revenues | | (1,528,286) | (0.0123) | | (3,600) | (0.0000) |
| Refunds from Suppliers | | - | - | | - | - |
| Fuel Financing | | - | - | | - | - |
| Transportation CGA Revenues | | (56,511) | (0.0005) | | (4,622) | (0.0001) |
| 280 Day Margin | | - | - | | - | - |
| Interruptible Sales Margin | | - | - | | - | - |
| Capacity Release and Off System Sales Margins | | (1,676,512) | (0.0135) | | (1,676,512) | (0.0192) |
| Hedging Costs | | - | - | | - | - |
| FPO Admin Costs | | - | - | | 36,800 | 0.0004 |
| Indirect Costs | | - | - | | | |
| Misc Overhead | | - | - | | - | - |
| Occupant Disallowance/Credits | | - | | | - | - |
| Production & Storage | | 1,990,996 | 0.0160 | | 3,893,587 | 0.0445 |
| Bad Debt Adjustment % | | - | - | | 466,706 | 0.0053 |
| Cashout, Broker penalty, Canadian Managed,… | | - | - | | - | - |
| Total Adjusted Cost | | $ 39,074,214 | **$ 0.3149** | | $ 79,183,023 | **$ 0.9055** |

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

**d/b/a Liberty**

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



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

| | | Column A | Column B | Column C | Column D | Column E | Column F |
|---|---|---|---|---|---|---|---|
| | | Design Day Demand. Dktherm | Adjusted Design Day Demand, Dt | Percent of Total | | Avg Daily Base Use Load, Dt | Remaining Design Day Demand |
| 1 | RATE R-1-Resi Non-Htg | 659 | 715 | 0.4% | | 103 | 613 |
| 2 | RATE R-3-Resi Htg | 66,114 | 72,399 | 42 2% | | 3,617 | 68,783 |
| 3 | RATE G-41 (T) | 28,689 | 31,499 | 18.4% | | 750 | 30,749 |
| 4 | RATE G-51 (S) | 2,361 | 2,534 | 1 5% | | 641 | 1,893 |
| 5 | RATE G-42 (V) | 36,728 | 40,301 | 23.5% | | 1,198 | 39,104 |
| 6 | RATE G-52 | 5,125 | 5,490 | 3.2% | | 1,498 | 3,992 |
| 7 | RATE G-43 | 9,793 | 10,710 | 6.2% | | 678 | 10,031 |
| 8 | RATE G-53 | 5,922 | 6,346 | 3.7% | | 1,715 | 4,631 |
| 9 | RATE G-54 | 1,495 | 1,608 | 0.9% | | 378 | 1,230 |
| 10 | | | | | | | |
| 11 | Total | 156,887 | 171,602 | 100.0% | | 10,577 | 161,025 |
| 12 | | | | | | | - |
| 13 | Residential Total | 66,773 | 73,115 | **42.607%** | | 3,719 | 69,396 |
| 14 | LLF Total | 75,211 | 82,510 | **48.083%** | | 2,626 | 79,885 |
| 15 | HLF Total | 14 903 | 15 977 | **9.310%** | | 4 232 | 11 745 |
| 16 | Total | 156,887 | 171,602 | 100 0% | | 10,577 | 161,025 |
| 17 | | | | | | | |
| 18 | C&I Breakdown | | | | | | |
| 19 | LLF Total | | | | | 2,626 | 79,885 |
| 20 | HLF Total | | | | | 4,232 | 11,745 |
| 21 | Total | | | | | 6,858 | 91,630 |
| 22 | | | | | | | |
| 23 | C&I Breakdown Percentage | | | | | | |
| 24 | LLF Total | | | | | 38.291% | 87.182% |
| 25 | HLF Total | | | | | 61.709% | 12.818% |
| 26 | Total | | | | | **100.0%** | **100.0%** |
| 27 | | | | | | | |
| 28 | | Capacity Cost | MDQ, Dt | $/Dt-Mo. | | | |
| 29 | Pipeline | $16,344,325 | 119,718 | $11 3770 | | | |
| 30 | Storage | $4,121,310 | 28,115 | $12 2156 | | | |
| 31 | | | | | | | |
| 32 | Peaking | $4,106,500 | | | | | |
| 33 | Peaking Additional Costs | | | | | | |
| 34 | Subtotal Peaking Costs | $4 106 500 | 23,769 | $14.3974 | | | |
| 35 | Total | $24,572,135 | 171,602 | $11.9327 | | | |
| 36 | | | | | | | |
| 37 | | Capacity Cost | MDQ, Dt | $/Dt-Mo. | | | |
| 38 | Pipeline - Baseload | 1,443,958 | 10,577 | $11.3770 | | | |
| 39 | Pipeline - Remaining | 14,900,367 | 109,141 | $11.3770 | | | |
| 40 | Storage | 4,121,310 | 28,115 | $12.2156 | | | |
| 41 | Peaking | 4,106,500 | 23,769 | $14 3974 | | | |
| 42 | Total | 24,572,135 | 171,602 | $11.9327 | | | |
| 43 | | | | | | | |
| 44 | | | | | | | |
| 45 | Residential Allocation | Capacity Cost | MDQ, Dt | $/Dt-Mo. | | | |
| 46 | Pipeline - Base Line 38 * Line 13 Col C | **42.607%** | 615,228 | 4,506 | $11.3770 | | |
| 47 | Pipeline - Remaining Line 39 * Line 13 Col C | **42.607%** | 6,348,623 | 46,502 | $11.3770 | | |
| 48 | Storage Line 40 * Line 13 Col C | **42.607%** | 1,755,962 | 11,979 | $12.2156 | | |
| 49 | Peaking Line 41 * Line 13 Col C | **42.607%** | 1,749,630 | 10,127 | $14 3974 | | |
| 50 | Total | **42.607%** | 10,469,399 | 73,114 | $11.9327 | | |

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

**d/b/a Liberty**

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



| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 51 | | | | | | | |
| 52 | | | | | | | **Ratios for COG** |
| 53 | C&I Allocation | | | Capacity Cost | MDQ, Dt | $/Dt-Mo. | |
| 54 | Pipeline - Base | Line 38 - Line 46 | | 828,730 | 6,070 | $11.3770 | |
| 55 | Pipeline - Remaining | Line 39 - Line 47 | | 8,551,745 | 62,640 | $11.3769 | |
| 56 | Storage | Line 40 - Line 48 | | 2,365,348 | 16,136 | $12.2157 | |
| 57 | Peaking | Line 41 - Line 49 | | 2 356 870 | 13 642 | $14 3971 | |
| 58 | Total | | **57.393%** | 14,102,692 | 98,488 | $11.9327 | **1.0000** |
| 59 | | | | | | | |
| 60 | | | | | | | |
| 61 | LLF - C&I Allocation | | | Capacity Cost | MDQ, Dt | $/Dt-Mo. | |
| 62 | Pipeline - Base | Line 54 * Line 24 Col E | | 317,329 | 2,324 | $11.3787 | |
| 63 | Pipeline - Remaining | Line 55 * Line 24 Col F | | 7,455,589 | 54,610 | $11.3770 | |
| 64 | Storage | Line 56 * Line 24 Col F | | 2,062,160 | 14,068 | $12.2154 | |
| 65 | Peaking | Line 57 * Line 24 Col F | | 2 054 769 | 11 893 | $14 3976 | |
| 66 | Total | | **48.3875%** | 11,889,847 | 82,895 | $11.9527 | **1.0017** |
| 67 | | | 38 291% | 84% | | | (Line 66 / Line 58) |
| 68 | | | | | | | |
| 69 | HLF - C&I Allocation | | | Capacity Cost | MDQ, Dt | $/Dt-Mo. | |
| 70 | Pipeline - Base | Line 54 - Line 62 | | 511,401 | 3,746 | $11.3766 | |
| 71 | Pipeline - Remaining | Line 55 - Line 63 | | 1,096,156 | 8,030 | $11.3756 | |
| 72 | Storage | Line 56 - Line 64 | | 303,188 | 2,068 | $12.2174 | |
| 73 | Peaking | Line 57 - Line 65 | | 302,101 | 1,749 | $14.3940 | |
| 74 | Total | | **9.0055%** | 2,212,846 | 15,593 | $11.8261 | **0.9911** |
| 75 | | | | | | | (Line 74 / Line 58) |
| 76 | | | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 77 | Unit Cost | Residential | LLF C&I | HLF C&I | |
| 78 | | | | | |
| 79 | Pipeline | $ 11.3770 | $ 11.3770 | $ 11.3770 | |
| 80 | Storage | $ 12.2156 | $ 12.2156 | $ 12.2156 | |
| 81 | Peaking | $ - | $ - | $ - | |
| 82 | Total | $ 11.9327 | $ 11 9527 | $ 11.8261 | |
| 83 | | | | | |
| 84 | | | | | |
| 85 | Load Makeup | Residential | **LLF C&I** | **HLF C&I** | |
| 86 | | | | | |
| 87 | Pipeline | 69.77% | **68.68%** | **75.52%** | |
| 88 | Storage | 16 38% | **16.97%** | **13.26%** | |
| 89 | Peaking | 13 85% | **14.35%** | **11.22%** | |
| 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 61% | 47 56% | 9.84% | 100 00% |
| 96 | Storage | 42 61% | 50 04% | 7.36% | 100 00% |
| 97 | Peaking | 42 61% | 50 04% | 7.36% | 100 00% |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty**
**2021 - 2022 Winter Cost of Gas Filing**
**Correction Factor Calculation**

| Data Source: Schedule 10B | d Nov | e Dec | f Jan | g Feb | h Mar | i Apr | Total Sales |
|---|---|---|---|---|---|---|---|
| G-41 | 1,993,710 | 3,256,330 | 3,928,840 | 3,309,510 | 2,686,900 | 1,577,780 | 16,753,070 |
| G-42 | 1,614,090 | 2,539,420 | 3,002,840 | 2,538,570 | 2,173,870 | 1,204,090 | 13,072,880 |
| G-43 | 351,200 | 532,700 | 648,170 | 538,750 | 488,120 | 288,000 | 2,846,940 |
| High Winter Use | 3,959,000 | 6,328,450 | 7,579,850 | 6,386,830 | 5,348,890 | 3,069,870 | 32,672,890 |
| G-51 | 269,320 | 351,810 | 388,860 | 324,250 | 336,580 | 212,980 | 1,883,800 |
| G-52 | 317,340 | 408,180 | 446,890 | 364,850 | 374,660 | 242,020 | 2,153,940 |
| G-53 | 360,520 | 440,110 | 480,670 | 393,940 | 408,840 | 343,630 | 2,427,710 |
| G-54 | 35,050 | 39,900 | 17,030 | 15,360 | 16,670 | 13,800 | 137,810 |
| Low Winter Use | 982,230 | 1,240,000 | 1,333,450 | 1,098,400 | 1,136,750 | 812,430 | 6,603,260 |
| Gross Total | 4,941,230 | 7,568,450 | 8,913,300 | 7,485,230 | 6,485,640 | 3,882,300 | 39,276,150 |

| | | |
|---|---|---|
| Total Sales | 39,276,150 | |
| Low Winter Use | 6,603,260 | |
| Winter Ratio for Low Winter Use | **0.9911** | Schedule 10A p 2, ln 74 |
| High Winter Use | 32,672,890 | |
| Winter Ratio for High Winter Use | **1.0017** | 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 = **100.0082%**

**Allocation Calculation for Miscellaneous Overhead**

| | | | |
|---|---|---|---|
| Projected Winter Sales Volume | 11/1/21- 4/30/22 | 91,676,680 | Sch.10B, ln 23 |
| Projected Annual Sales Volume | 11/1/21 - 10/31/22 | 115,042,810 | Sch.10B, ln 23 |
| Percentage of Winter Sales to Annual Sales | | 79.69% | |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty**
**Peak 2021 - 2022 Winter Cost of Gas Filing**

**Dry Therms**

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

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty**
**Peak 2021 - 2022 Winter Cost of Gas Filing**

**Schedule 11A**
**Page 1 of 1**

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

**For the Months of May 21 - October 21**

| | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | Peak Nov - Apr |
|---|---|---|---|---|---|---|---|
| Pipeline Gas: | | | | | | | |
| Dawn Supply | 876,821 | 926,304 | 927,705 | 840,605 | 911,138 | 750,758 | 5,233,331 |
| Niagara Supply | 691,567 | 730,181 | 731,285 | 662,478 | 718,226 | 679,016 | 4,212,753 |
| TGP Supply (Gulf) | 4,587,074 | 3,104,022 | 3,109,472 | 2,817,427 | 3,053,203 | 612,346 | 17,283,547 |
| Dracut Supply 1 - Baseload | - | 2,800,032 | 4,674,030 | 3,176,712 | - | - | 10,650,774 |
| Dracut Supply 2 - Swing | 1,775,785 | 5,569,137 | 771,324 | - | 969,754 | 79,714 | 9,165,713 |
| Dracut Supply 3 - Swing | - | 596,455 | 290,490 | - | 1,484 | - | 888,430 |
| Constellation Combo | 89,306 | 231,576 | 1,424,042 | 1,188,519 | 1,411,967 | - | 4,345,410 |
| LNG Truck | 20,666 | 21,875 | 51,371 | 291,824 | 362,081 | - | 747,817 |
| Propane Truck | - | - | - | 695,072 | - | - | 695,072 |
| PNGTS | 219,205 | 231,576 | 231,926 | 209,962 | 227,785 | 193,487 | 1,313,941 |
| Portland Natural Gas | 1,070,932 | 1,130,724 | 1,132,434 | 1,026,311 | 1,112,212 | 812,355 | 6,284,969 |
| TGP Supply (Z4) | 1,814,902 | 1,924,268 | 1,927,178 | 1,746,396 | 1,892,764 | 5,448,071 | 14,753,578 |
| Subtotal Pipeline Volumes | 11,146,258 | 17,266,150 | 15,271,258 | 12,655,305 | 10,660,614 | 8,575,749 | 75,575,334 |
| | 11,146,258 | 17,666,150 | 15,671,258 | 12,655,305 | 10,660,614 | 8,575,749 | 76,375,334 |
| Storage Gas: | | | | | | | |
| TGP Storage | 2,752,983 | 850,117 | 5,503,525 | 4,890,514 | 4,760,475 | 1,242,085 | 19,999,699 |
| | | | | | | | |
| Produced Gas: | | | | | | | |
| LNG Vapor | 21,404 | 421,875 | 547,315 | 694,098 | 273,045 | 21,015 | 1,978,752 |
| Propane | - | - | 244,014 | 574,010 | - | - | 818,023 |
| Subtotal Produced Gas | 21,404 | 421,875 | 791,328 | 1,268,108 | 273,045 | 21,015 | 2,796,775 |
| | | | | | | | |
| Less - Gas Refills: | | | | | | | |
| LNG Truck | (20,666) | (21,875) | (51,371) | (291,824) | (362,081) | | (747,817) |
| Propane | - | - | - | (695,072) | - | - | (695,072) |
| TGP Storage Refill | (1,750,690) | - | - | - | - | (961,638) | (2,712,328) |
| Subtotal Refills | (1,771,356) | (21,875) | (51,371) | (986,895) | (362,081) | (961,638) | (4,155,217) |
| | | | | | | | |
| Total Sendout Volumes | 12,149,289 | 18,516,267 | 21,514,739 | 17,827,032 | 15,332,053 | 8,877,211 | 94,216,591 |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty**
**Peak 2021 - 2022 Winter Cost of Gas Filing**
**Normal and Design Year Volumes**

**Schedule 11B**
**Page 1 of 1**

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

**For the Months of May 21 - October 21**

| | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | Peak Nov - Apr |
|---|---|---|---|---|---|---|---|
| Pipeline Gas: | | | | | | | |
| Dawn Supply | 876,821 | 926,304 | 927,705 | 840,605 | 911,138 | 774,673 | 5,257,245 |
| Niagara Supply | 691,567 | 730,181 | 731,285 | 662,478 | 718,226 | 679,016 | 4,212,753 |
| TGP Supply (Gulf) | 4,633,572 | 3,104,022 | 3,109,472 | 2,817,427 | 3,053,203 | 763,078 | 17,480,776 |
| Dracut Supply 1 - Baseload | - | 2,800,032 | 4,674,030 | 3,176,712 | - | - | 10,650,774 |
| Dracut Supply 2 - Swing | 4,407,724 | 6,104,703 | 1,534,339 | 1,478,827 | 2,256,328 | 1,863,127 | 17,645,050 |
| Dracut Supply 3 - Swing | 271,608 | 619,085 | 866,906 | 226,637 | 179,557 | 43,480 | 2,207,273 |
| Constellation Combo | - | 353,776 | 1,356,806 | 1,284,025 | 1,354,094 | - | 4,348,701 |
| LNG Truck | 20,666 | 21,875 | 63,459 | 528,315 | 118,715 | - | 753,030 |
| Propane Truck | - | - | 15,109 | 680,670 | - | - | 695,779 |
| PNGTS | 219,205 | 231,576 | 231,926 | 209,962 | 227,785 | 193,487 | 1,313,941 |
| Portland Natural Gas | 1,070,932 | 1,130,724 | 1,132,434 | 1,026,311 | 1,112,212 | 919,607 | 6,392,220 |
| TGP Supply (Z4) | 1,820,806 | 1,924,268 | 1,927,178 | 1,746,396 | 1,892,764 | 5,620,543 | 14,931,954 |
| Subtotal Pipeline Volumes | 14,012,903 | 17,946,545 | 16,570,649 | 14,678,365 | 11,824,022 | 10,857,011 | 85,889,495 |
| | | | | | | | |
| Storage Gas: | | | | | | | |
| TGP Storage | 2,752,983 | 850,117 | 5,503,525 | 4,890,514 | 4,760,475 | 1,242,085 | 19,999,699 |
| | | | | | | | 0 |
| Produced Gas: | | | | | | | 0 |
| LNG Vapor | 21,404 | 421,875 | 547,315 | 694,098 | 273,045 | 21,015 | 1,978,752 |
| Propane | - | - | 244,014 | 574,010 | - | - | 818,023 |
| Subtotal Produced Gas | 21,404 | 421,875 | 791,328 | 1,268,108 | 273,045 | 21,015 | 2,796,775 |
| | | | | | | | |
| Less - Gas Refills: | | | | | | | |
| LNG Truck | (20,666) | (21,875) | (51,371) | (291,824) | (362,081) | - | -747,817 |
| Propane | - | - | - | (695,072) | - | - | -695,072 |
| TGP Storage Refill | (1,750,690) | - | - | - | - | (961,638) | -2,712,328 |
| Subtotal Refills | (1,771,356) | (21,875) | (51,371) | (986,895) | (362,081) | (961,638) | (4,155,217) |
| | | | | | | | |
| Total Sendout Volumes | 15,015,933 | 19,196,663 | 22,814,130 | 19,850,092 | 16,495,460 | 11,158,474 | 104,530,752 |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.** **Schedule 11C**
**d/b/a Liberty** **Page 1 of 1**
**Peak 2021 - 2022 Winter Cost of Gas Filing**
**Capacity Utilization**
**Volumes (Therms)**

| | Peak Period Normal Year Use (Therms) | MDQ (MMBtu/day) | Seasonal Quantity (Therms) | Utilization Rate | Peak Period Design Year Use (Therms) | MDQ (MMBtu/day) | Seasonal Quantity (Therms) | Utilization Rate |
|---|---|---|---|---|---|---|---|---|
| **Pipeline Gas:** | | | | | | | | |
| Dawn Supply | 5,233,331 | 4,000 | 7,240,000 | 72% | 5,257,245 | 4,000 | 7,240,000 | 73% |
| Niagara Supply | 4,212,753 | 3,122 | 5,650,820 | 75% | 4,212,753 | 3,122 | 5,650,820 | 75% |
| TGP Supply (Gulf + Z4) | 32,037,125 | 21,596 | 39,088,760 | 82% | 32,412,730 | 21,596 | 39,088,760 | 83% |
| Dracut Supply 1 & 2 & 3 | 20,704,916 | 90,000 | 162,900,000 | 13% | 30,503,096 | 90,000 | 162,900,000 | 19% |
| LNG Truck | 747,817 | - | - | - | 753,030 | - | - | - |
| Propane Truck | 695,072 | - | - | - | 695,779 | - | - | - |
| PNGTS | 1,313,941 | 1,000 | 1,810,000 | 73% | 1,313,941 | 1,000 | 1,810,000 | 73% |
| Portland Natural Gas | 6,284,969 | 5,000 | 9,050,000 | 69% | 6,392,220 | 5,000 | 9,050,000 | 71% |
| Constellation Vapor | 4,345,410 | 7,000 | 6,300,000 | 69% | 4,348,701 | 7,000 | 6,300,000 | 69% |
| Subtotal Pipeline Volumes | 75,575,334 | | | | 85,889,495 | | | |
| **Storage Gas:** | | | | | | | | |
| TGP Storage | 19,999,699 | | 25,791,710 | 78% | 19,999,699 | | 25,791,710 | 78% |
| **Produced Gas:** | | | | | | | | |
| LNG Vapor | 1,978,752 | | | | 1,978,752 | | | |
| Propane | 818,023.3 | | | | 818,023 | | | |
| Subtotal Produced Gas | 2,796,775 | | | | 2,796,775 | | | |
| **Less - Gas Refills:** | | | | | | | | |
| LNG Truck | (747,817) | | | | (747,817) | | | |
| Propane | (695,072) | | | | (695,072) | | | |
| TGP Storage Refill | (2,712,328) | | | | (2,712,328) | | | |
| Subtotal Refills | (4,155,217) | | | | (4,155,217) | | | |
| Total Sendout Volumes | 94,216,591 | | | | 104,530,752 | | | |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty**
**Peak 2021 - 2022 Winter Cost of Gas Filing**

Forecast of Upcoming Winter Period
Design Day Report
2020 / 2021 Heating Season
(Therms)

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

| | |
|---|---|
| **Requirements** | |
| Firm Sales | 1,283,926 |
| Interruptible Sales | 0 |
| Firm Transportation | 432,092 |
| Interruptible Transportation | 0 |
| Total Requirements | 1,716,018 |
| **Resources** | |
| Purchased Pipeline Gas | 1,197,180 |
| Underground Storage Gas | 281,150 |
| Propane Air Production | 41,688 |
| LNG Produced Gas | 126,000 |
| Third-Party Supply | 70,000 |
| Total Resources | 1,716,018 |

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

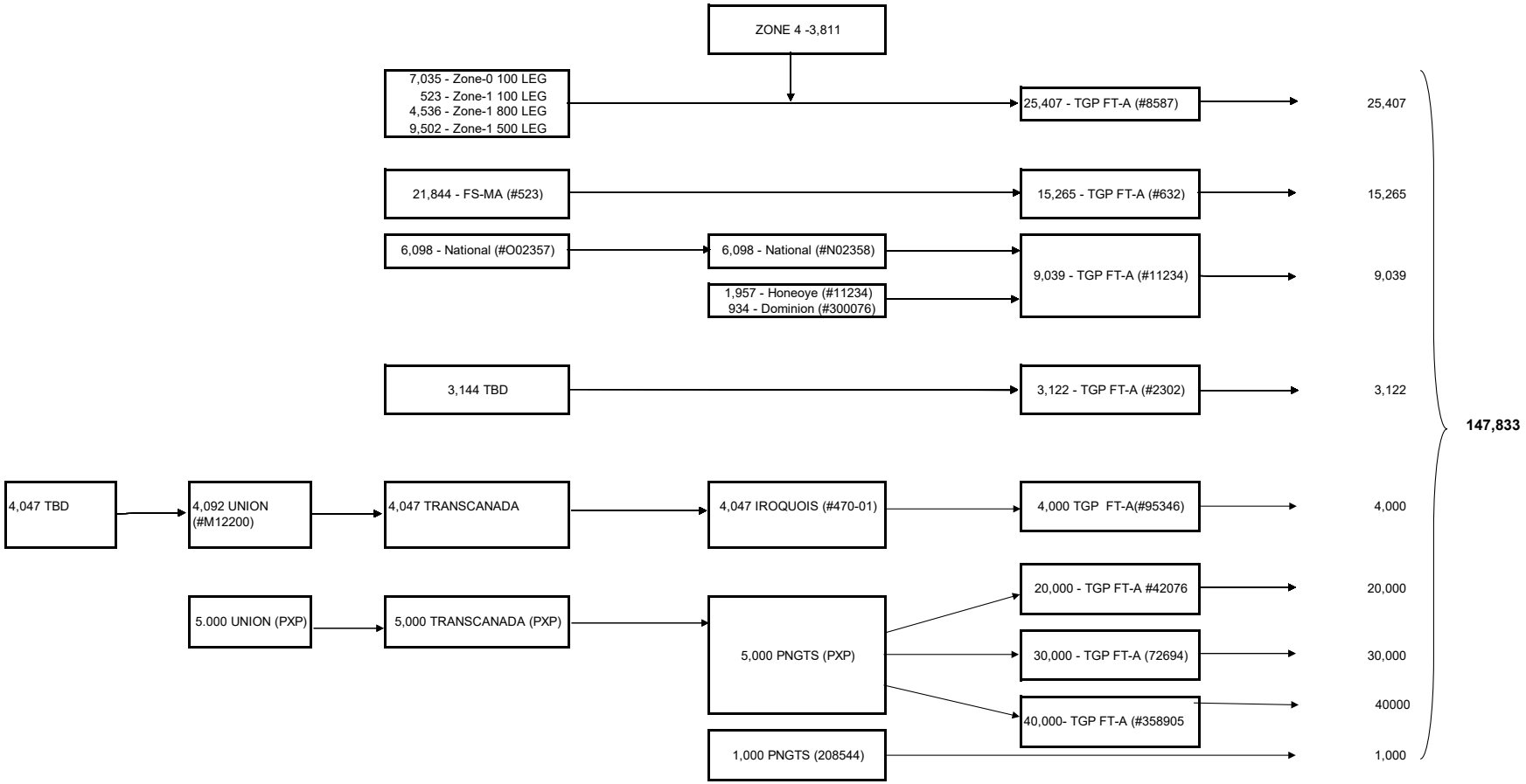
Preparation of this report was supervised by:

Deborah Gilbertson
Sr. Manager, Energy Procurement

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

**LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP.**
**Peak 2021 - 2022 Winter Cost of Gas Filing**
**Transportation Available for Pipeline Supply and Storage**
**(MMBtu)**





**LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP.**
**Peak 2021 - 2022 Winter Cost of Gas Filing**
**Transportation Available for Pipeline Supply and Storage**



**Agreements for Gas Supply and Transportation**

| SOURCE | RATE SCHEDULE | CONTRACT NUMBER | TYPE | MDQ MMBTU | MAQ * MMBTU | EXPIRATION DATE | NOTIFICATION DATE | RENEWAL OPTIONS |
|---|---|---|---|---|---|---|---|---|
| **ANE** | NA | NA | Supply | 4,047 | 611,097 | Peak Only | N/A | Terminates |
| **Constellation** | FCS | | Firm Combination Liquid and Vapor Svc | Up to 10 trucks | 730,000 | 3/31/2021 Peak Only | N/A | Terminates |
| **Dracut or Z6** | NA | NA | Supply | Up to 20,000 / day | 1,412,000 | 2/28/2021 | N/A | Terminates |
| **TGP Long-Haul** | NA | NA | Supply | 21,596 | 3,908,876 | 4/30/2021 | N/A | Terminates |
| **Northern Transport** | NA | NA | Trucking | 28,500 Gallons | 900,000 Gallons | | N/A | |
| **Dominion Transmission Incorporated** | GSS | 300076 | Storage | 934 | 102,700 | 3/31/2023 | 3/31/2021 | Mutually agreed upon |
| **Honeoye Storage Corporation** | SS-NY | 11234 | Storage | 1,957 | 245,380 | 3/31/2022 | 12 months notice | Evergreen Provision |
| **National Fuel Gas Supply Corporation** | FSS | O02358 | Storage | 6,098 | 670,800 | 3/31/2022 | 3/31/2022 | Evergreen Provision |
| **National Fuel Gas Supply Corporation** | FSST | N02358 | Transportation | 6,098 | 670,800 | 3/31/2022 | 3/31/2022 | Evergreen Provision |
| **Iroquois Gas Transmission System** | RTS | 47001 | Transportation | 4,047 | 1,477,155 | 11/1/2022 | 11/1/2021 | Evergreen Provision |
| **Portland Natural Gas Transmission System** | FT | 208544 | Transportation | 1,000 | 365,000 | 11/30/2032 | 11/31/2031 | Evergreen Provision |
| **Portland Natural Gas Transmission System** | FT | PXP | Transportation | 5,000 | 1,825,000 | 10/31/2040 | 10/31/2039 | Precedent Agreement |
| **Tennessee Gas Pipeline Company** | FS-MA | 523 | Storage | 21,844 | 1,560,391 | 10/31/2025 | 10/31/2024 | Evergreen Provision |
| **Tennessee Gas Pipeline Company** | FTA | 8587 | Transportation | 25,407 | 9,273,555 | 10/31/2025 | 10/31/2024 | Evergreen Provision |
| **Tennessee Gas Pipeline Company** | FTA | 2302 | Transportation | 3,122 | 1,139,530 | 10/31/2025 | 10/31/2024 | Evergreen Provision |
| **Tennessee Gas Pipeline Company** | FTA | 632 | Transportation | 15,265 | 5,571,725 | 10/31/2025 | 10/31/2024 | Evergreen Provision |
| **Tennessee Gas Pipeline Company** | FTA | 11234 | Transportation | 9,039 | 3,299,235 | 10/31/2025 | 10/31/2024 | Evergreen Provision |
| **Tennessee Gas Pipeline Company** | FTA | 72694 | Transportation | 30,000 | 10,950,000 | 10/31/2029 | 10/31/2028 | Evergreen Provision |
| **Tennessee Gas Pipeline Company** | FTA | 95346 | Transportation | 4,000 | 1,460,000 | 11/30/2021 | 11/30/2021 | Evergreen Provision |
| **Tennessee Gas Pipeline Company** | FTA | 42076 | Transportation | 20,000 | 7,300,000 | 10/31/2025 | 10/31/2024 | Evergreen Provision |
| **Tennessee Gas Pipeline Company** | FTA | 358905 | Transportation | 40,000 | 14,600,000 | 10/31/2041 | 10/31/2040 | Evergreen Provision |
| **TransCanada Pipeline** | FT | 41232 | Transportation | 4,047 | 1,477,155 | 10/31/2026 | 10/31/2040 | Evergreen Provision |
| **TransCanada Pipeline** | FT | PXP | Transportation | 5,000 | 1,825,000 | 10/31/2040 | 10/31/2024 | Precedent Agreement |
| **Union Gas Limited** | M12 | M12200 | Transportation | 4,092 | 1,493,580 | 10/31/2023 | 10/31/2021 | Evergreen Provision |
| **Union Gas Limited** | M12 | PXP | Transportation | 5,000 | 1,825,000 | 10/31/2040 | 10/31/2021 | Precedent Agreement |

* MAQ is calculated on a 365 day calendar year.

**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Lib**
**Peak 2021 - 2022 Winter Cost of Gas Filing**

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

**July 2020 - June 2021 Normalized Sales and Transportation Volumes (Therms)**

| C&I Rate Classes | Annual Sales | % of Total by Class | % of Sales to Total Volume by Class |
|---|---|---|---|
| G-41 | 18,356,822 | 40.75% | 78.44% |
| G-42 | 15,353,253 | 34.08% | 45.73% |
| G-43 | 3,841,684 | 8.53% | 31.47% |
| G-51 | 2,891,430 | 6.42% | 76.18% |
| G-52 | 3,253,957 | 7.22% | 38.33% |
| G-53 | 1,018,263 | 2.26% | 10.14% |
| G-54 | 330,714 | 0.73% | 1.92% |
| Total C/I | 45,046,124 | 100.00% | |

| | Annual Transportation | % of Total by Class | % of Transportation to Total Volume by Class |
|---|---|---|---|
| G-41 | 5,045,712 | 7.92% | 21.56% |
| G-42 | 18,223,357 | 28.60% | 54.27% |
| G-43 | 8,366,118 | 13.13% | 68.53% |
| G-51 | 903,966 | 1.42% | 23.82% |
| G-52 | 5,236,072 | 8.22% | 61.67% |
| G-53 | 9,026,718 | 14.17% | 89.86% |
| G-54 | 16,915,516 | 26.55% | 98.08% |
| Total C/I | 63,717,458 | 100.00% | |

| Sales & Transportation | Total | % of Total by Class | |
|---|---|---|---|
| G-41 | 23,402,533 | 21.52% | 100.00% |
| G-42 | 33,576,610 | 30.87% | 100.00% |
| G-43 | 12,207,803 | 11.22% | 100.00% |
| G-51 | 3,795,396 | 3.49% | 100.00% |
| G-52 | 8,490,028 | 7.81% | 100.00% |
| G-53 | 10,044,981 | 9.24% | 100.00% |
| G-54 | 17,246,230 | 15.86% | 100.00% |
| Total C/I | 108,763,581 | 100.00% | |

**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty** Schedule 14

**Peak 2021 - 2022 Winter Cost of Gas Filing** Page 1 of 1

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

| | Off-Peak May 20 - Oct 20 (Therms) | Peak Nov 20-Apr 21 (Therms) | Total May 20 - Apr 21 (Therms) |
|---|---|---|---|
| Pipeline Deliveries | 18,824,010 | 84,277,810 | 103,101,820 |
| All Others | 132,500 | 1,914,540 | 2,047,040 |
| | 18,956,510 | 86,192,350 | 105,148,860 |

| | Ratio |
|---|---|
| Total Winter Supplies | 86,192,350 |
| Total Pipeline Deliveries | 103,101,820 |
| Ratio Winter Supplies to Pipeline Supplies | 0.836 |

**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty** Schedule 15

**Peak 2021 - 2022 Winter Cost of Gas Filing** Page 1 of 1

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

| **C&I Sales Normalized (Therms)** | **Jul-20** | **Aug-20** | **Jul - Aug Total** | **Total Annual** | **% of Jul-Aug to Total** |
|---|---|---|---|---|---|
| (a) | (b) | (c) | (e)=(c)+(d) | (f) | (g)=(e)/(f) |
| G-41 | 174,747 | 138,891 | 313,637 | 18,356,822 | 1.71% |
| G-42 | 195,842 | 150,099 | 345,941 | 15,353,253 | 2.25% |
| G-43 | 52,926 | 47,293 | 100,219 | 3,841,684 | 2.61% |
| G-51 | 155,287 | 140,064 | 295,352 | 2,891,430 | 10.21% |
| G-52 | 183,712 | 169,419 | 353,131 | 3,253,957 | 10.85% |
| G-53 | 84,472 | 58,190 | 142,662 | 1,018,263 | 14.01% |
| G-54 | 15,457 | 18,585 | 34,042 | 330,714 | 10.29% |
| Total C/I | 862,442 | 722,541 | 1,584,983 | 45,046,124 | 3.52% |

**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**
**Peak 2021 - 2022 Winter Cost of Gas Filing**



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

**Underground Storage Gas**

| | | May-21 (Actual) | Jun-21 (Actual) | Jul-21 (Actual) | Aug-21 (Estimate) | Sep-21 (Estimate) | Oct-21 (Estimate) | Nov-21 (Estimate) | Dec-21 (Estimate) | Jan-22 (Estimate) | Feb-22 (Estimate) | Mar-22 (Estimate) | Apr-22 (Estimate) | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Beginning Balance (MMBtu) | | 512,647 | 743,431 | 993,080 | 1,249,640 | 1,509,640 | 1,769,640 | 1,897,860 | 1,750,782 | 1,665,770 | 1,115,418 | 626,366 | 150,319 | 512,647 |
| Injections (MMBtu) | Sch 11A ln 39 /10 | 234,130 | 253,870 | 260,938 | 260,000 | 260,000 | 128,220 | 128,220 | - | - | - | - | 96,164 | 1,621,542 |
| Subtotal | | 746,777 | 997,301 | 1,254,018 | 1,509,640 | 1,769,640 | 1,897,860 | 2,026,080 | 1,750,782 | 1,665,770 | 1,115,418 | 626,366 | 246,482 | |
| Storage Sale/Adjustments | | (3,346) | (4,221) | (4,378) | - | - | - | - | - | - | - | - | - | (11,945) |
| Withdrawals (MMBtu) | Sch 11A ln 29 /10 | - | - | - | - | - | - | (275,298) | (85,012) | (550,352) | (489,051) | (476,047) | (124,208) | (1,999,970) |
| Ending Balance (MMBtu) | | 743,431 | 993,080 | 1,249,640 | 1,509,640 | 1,769,640 | 1,897,860 | 1,750,782 | 1,665,770 | 1,115,418 | 626,366 | 150,319 | 122,274 | 122,274 |
| Beginning Balance | | $ 921,816 | $ 1,463,053 | $ 2,088,182 | $ 2,854,560 | $ 3,696,698 | $ 4,538,836 | $ 4,954,140 | $ 4,675,702 | $ 4,448,667 | $ 2,978,875 | $ 1,672,796 | $ 401,446 | $ 921,816 |
| Injections | ln 11 * ln 36 | $ 534,796 | $ 619,603 | $ 760,761 | $ 842,138 | $ 842,138 | $ 415,304 | $ 456,784 | $ - | $ - | $ - | $ - | $ 290,655 | $ 4,762,179 |
| Subtotal | | $ 1,456,612 | $ 2,082,656 | $ 2,848,943 | $ 3,696,698 | $ 4,538,836 | $ 4,954,140 | $ 5,410,924 | $ 4,675,702 | $ 4,448,667 | $ 2,978,875 | $ 1,672,796 | $ 692,101 | |
| Storage Sale/Adjustments | | $ 6,441 | $ 5,526 | $ 5,618 | | | $ - | | | | | | | |
| Withdrawals | ln 17 * ln 34 | - | - | - | - | - | - | (735,222) | (227,035) | (1,469,791) | (1,306,079) | (1,271,350) | (348,767) | $ (5,358,244) |
| Ending Balance | | $ 1,463,053 | $ 2,088,182 | $ 2,854,560 | $ 3,696,698 | $ 4,538,836 | $ 4,954,140 | $ 4,675,702 | $ 4,448,667 | $ 2,978,875 | $ 1,672,796 | $ 401,446 | $ 343,335 | $ 325,750 |
| Average Rate For Withdrawals | ln 22 /ln 9 | $ 1.9505 | $ 2.0883 | $ 2.2719 | $ 2.4487 | $ 2.5648 | $ 2.6104 | $ 2.6706 | $ 2.6706 | $ 2.6706 | $ 2.6706 | $ 2.6706 | $ 2.8079 | |
| TGP Storage Rate for Injections | Actual or NYMEX plus TGP Transportation | $ 2.2842 | $ 2.4406 | $ 2.9155 | $ 3.2390 | $ 3.2390 | $ 3.2390 | $ 3.5625 | $ 3.8475 | $ 3.9185 | $ 3.8390 | $ 3.6110 | $ 3.0225 | |

| For Informational Purposes | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | Total |
|---|---|---|---|---|---|---|---|
| Summer Hedge Contracts - Vols Dth | - | - | - | - | - | - | - |
| Average Hedge Price | $ - | $ - | $ - | $ - | $ - | $ - | |
| NYMEX | $ 3.9950 | $ 4.1050 | $ 4.1660 | $ 4.0890 | $ 3.8360 | $ 3.3200 | |
| Hedged Volumes at Hedged Price | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Less Hedged Volumes at NYMEX | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Hedge (Savings)/Loss | $ - | $ - | $ - | $ - | $ - | $ - | $ - |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Month Dollar Average | ln (22 + ln 32) /2 | $ 3,275,629 | $ 4,117,767 | $ 4,746,488 | $ 4,814,921 | $ 4,562,184 | $ 3,713,771 | $ 2,325,836 | $ 1,037,121 | $ 372,391 | | | | |
| Money Pool Finance Rate (per Nov 10 - Apr 11 Actuals) | | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | | | | |
| Inventory Finance Charge | ln 47 * ln 49 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | | | | |
| Financial Expenses | | - | - | - | - | - | - | - | - | - | | | | |
| Total Inventory Finance Charges | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | | | | |

**Liquid Propane Gas (LPG)**

| | | May-21 (Actual) | Jun-21 (Actual) | Jul-21 (Actual) | Aug-21 (Estimate) | Sep-21 (Estimate) | Oct-21 (Estimate) | Nov-21 (Estimate) | Dec-21 (Estimate) | Jan-22 (Estimate) | Feb-22 (Estimate) | Mar-22 (Estimate) | Apr-22 (Estimate) | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Beginning Balance | | 74,752 | 73,639 | 73,831 | 73,396 | 73,396 | 73,396 | 73,396 | 73,396 | 73,396 | 48,995 | 61,101 | 61,101 | 74,752 |
| Injections | Sch 11A ln 38 /10 | - | - | - | - | - | - | - | - | - | 69,507 | - | - | 69,507 |
| Subtotal | | 74,752 | 73,639 | 73,831 | 73,396 | 73,396 | 73,396 | 73,396 | 73,396 | 73,396 | 118,502 | 61,101 | 61,101 | |
| Withdrawals | Sch 11A ln 33 /10 | - | - | - | - | - | - | - | - | (24,401) | (57,401) | - | - | (81,802) |
| Adjustment for change in temperature | | (1,113) | 192 | (435) | - | - | - | - | - | - | - | - | - | (1,356) |
| Adjustment for Transfer | | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ending Balance | | 73,639 | 73,831 | 73,396 | 73,396 | 73,396 | 73,396 | 73,396 | 73,396 | 48,995 | 61,101 | 61,101 | 61,101 | 61,101 |
| Beginning Balance | | $ 802,029 | $ 790,087 | $ 792,147 | $ 787,480 | $ 787,480 | $ 787,480 | $ 787,480 | $ 787,480 | $ 787,480 | $ 525,673 | $ 701,107 | $ 701,107 | $ 802,029 |
| Injections | ln 46 * ln 69 | - | - | - | - | - | - | - | - | - | 834,086 | - | - | 834,086 |
| Subtotal | | $ 802,029 | $ 790,087 | $ 792,147 | $ 787,480 | $ 787,480 | $ 787,480 | $ 787,480 | $ 787,480 | $ 787,480 | $ 1,359,759 | $ 701,107 | $ 701,107 | |
| Withdrawals/ Adjust | ln 52 * ln 67 | (11,942) | 2,060 | (4,667) | - | - | - | - | - | (261,807) | (658,652) | - | - | (935,008) |
| Ending Balance | | $ 790,087 | $ 792,147 | $ 787,480 | $ 787,480 | $ 787,480 | $ 787,480 | $ 787,480 | $ 787,480 | $ 525,673 | $ 701,107 | $ 701,107 | $ 701,107 | $ 701,107 |
| Average Rate For Withdrawals | | $10.7292 | $10.7292 | $10.7292 | $10.7292 | $10.7292 | $10.7292 | $10.7292 | $10.7292 | $10.7292 | $11.4746 | $11.4746 | $11.4746 | |
| Propane Rate for Injections | Actual or Sch. 6, ln 165 * 10 | $10.7292 | $10.7292 | $10.7292 | $0.0000 | $0.0000 | $0.0000 | $12.0000 | $12.0000 | $12.0000 | $12.0000 | $12.0000 | $12.0000 | |
| Month Dollar Average | ln (57 + ln 65) /2 | | | | $ 787,480 | $ 787,480 | $ 787,480 | $ 787,480 | $ 787,480 | $ 656,576 | $ 613,390 | $ 701,107 | $ 701,107 | |
| Money Pool Finance Rate (per Nov 10 - Apr 11 Actuals) | | | | | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | |
| Inventory Finance Charge | ln 72 * ln 74 | | | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | |

**Liquid Natural Gas (LNG)**

| | | May-21 (Actual) | Jun-21 (Actual) | Jul-21 (Actual) | Aug-21 (Estimate) | Sep-21 (Estimate) | Oct-21 (Estimate) | Nov-21 (Estimate) | Dec-21 (Estimate) | Jan-22 (Estimate) | Feb-22 (Estimate) | Mar-22 (Estimate) | Apr-22 (Estimate) | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Beginning Balance | | 9,988 | 9,326 | 8,208 | 7,858 | 6,740 | 5,622 | 4,504 | 4,430 | (35,570) | (85,164) | (125,392) | (116,488) | 9,988 |
| Injections | Sch 11A ln 37 /10 | 809 | 781 | 1,468 | 781 | 781 | 781 | 2,067 | 2,188 | 5,137 | 29,182 | 36,208 | - | 80,183 |
| Subtotal | | 10,797 | 10,107 | 9,676 | 8,639 | 7,521 | 6,403 | 6,571 | 6,618 | (30,433) | (55,982) | (89,183) | (116,488) | |
| Withdrawals | Sch 11A ln 32 /10 | (1,471) | (1,899) | (1,818) | (1,899) | (1,899) | (1,899) | (2,140) | (42,188) | (54,731) | (69,410) | (27,304) | (2,102) | (208,760) |
| Ending Balance | | 9,326 | 8,208 | 7,858 | 6,740 | 5,622 | 4,504 | 4,430 | (35,570) | (85,164) | (125,392) | (116,488) | (118,589) | (118,589) |
| Beginning Balance | | $ 44,513 | $ 45,885 | $ 44,350 | $ 47,345 | $ 42,683 | $ 37,410 | $ 31,495 | $ 28,793 | $ (220,028) | $ (534,929) | $ (836,549) | $ (844,783) | $ 44,513 |
| Injections | ln 83 * ln 104 | 8,611 | 8,739 | 13,841 | 7,364 | 7,364 | 7,364 | 11,210 | 12,142 | 28,875 | 161,447 | 189,781 | - | 456,739 |
| Subtotal | | $ 53,124 | $ 54,624 | $ 58,192 | $ 54,709 | $ 50,047 | $ 44,774 | $ 42,705 | $ 40,936 | $ (191,152) | $ (373,482) | $ (646,768) | $ (844,783) | |
| Withdrawals | ln 87 * ln 102 | (7,239) | (10,274) | (10,847) | (12,026) | (12,636) | (13,279) | (13,911) | (260,964) | (343,777) | (463,067) | (198,015) | (15,241) | (1,361,275) |
| Ending Balance | | $ 45,885 | $ 44,350 | $ 47,345 | $ 42,683 | $ 37,410 | $ 31,495 | $ 28,793 | $ (220,028) | $ (534,929) | $ (836,549) | $ (844,783) | $ (860,023) | $ (860,023) |
| Average Rate For Withdrawals | | $4.9203 | $5.4046 | $6.0140 | $6.3328 | $6.6543 | $6.9927 | $6.4994 | $6.1858 | $6.2812 | $6.6715 | $7.2521 | $7.2521 | |
| LNG Rate for Injections | Actual or Sch. 6, ln 164 * 10 | $10.6445 | $11.1895 | $9.4287 | $9.4287 | $9.4287 | $9.4287 | $5.4243 | $5.5508 | $5.6209 | $5.5324 | $5.2414 | $0.0000 | |
| Month Dollar Average | ln (92 + ln 100) /2 | | | | $ 45,014 | $ 40,047 | $ 34,453 | $ 30,144 | $ (95,617) | $ (377,478) | $ (685,739) | $ (840,666) | $ (852,403) | |
| Money Pool Finance Rate (per Nov 10 - Apr 11 Actuals) | | | | | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | |
| Inventory Finance Charge | ln 107 * ln 109 | | | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | |
| Total Fuel Financing | lns 53 + 76 + 111 | | | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | |

**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**
**Peak 2021 - 2022 Winter Cost of Gas Filing**

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

**Firm Transportation**

| | Therms 1/ | Cost of Gas Rate 2/ | Cost of Gas Revenue |
|---|---|---|---|
| Nov-21 | 6,336,940 | $ 0.0001 | $ 688 |
| Dec-21 | 7,828,880 | 0.0001 | 850 |
| Jan-22 | 8,811,910 | 0.0001 | 956 |
| Feb-22 | 7,357,300 | 0.0001 | 799 |
| Mar-22 | 7,024,370 | 0.0001 | 762 |
| Apr-22 | 5,224,390 | 0.0001 | 567 |
| Total | **42,583,790** | | **$ 4,622** |

1/ Per Schedule 10B, line 35. Excludes special contract volumes subject to transportation cost of gas.
2/ Refer to Proposed First Revised Page 98 for calculation of rate.

| | | |
|---|---|---|
| 1 | Rate Case Exepense | |
| 2 | Prior Period Balance | ($11,949) |
| 3 | Expenses thru June 30, 2021 | $785,177 |
| 4 | Balance at June 30, 2021 | $773,228 |
| 5 | Less: Accrual Balance | ($26,000) |
| 6 | Adjusted Rate Case Expense | $747,228 |
| 7 | | |
| 8 | Recoupment | |
| 9 | Distribution Recoupment from Docket No. DG 20-105 | ($568,780) |
| 10 | Indirect Costs Recoupment from Docket No. DG 20-105 | $1,900,000 |
| 11 | Total Recoupment | $1,331,220 |
| 12 | | |
| 13 | Beginning Balance | $2,078,448 |
| 14 | | |
| 15 | Estimated Remaining Expenses | $97,375 |
| 16 | | |
| 17 | Plus Estimated Interest from July 2021 through October 2021 | $19,820 |
| 18 | | |
| 19 | Minus Estimated Recoveries from July 2021 through October 2021 | ($7,864) |
| 20 | | |
| 21 | Total Estimated Remaining Recovery As of November 1, 2021 | $2,187,779 |
| 22 | | |
| 23 | Estimated November 2021 - October 2022 Interest | $26,727 |
| 24 | | |
| 25 | Total Remaining Recovery | $2,214,505 |
| 26 | | |
| 27 | Estimated November 2021 - October 2022 Sales (therms) | 182,829,872 |
| 28 | | |
| 29 | RCE & Recoupment rate per therm November 2021 - October 2022 | $0.0121 |

**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**
**JULY 2021 THROUGH OCTOBER 2022**
**RATE CASE EXPENSE AND RECOUPMENT PROJECTION**

| | | (Estimate) | (Estimate) | (Estimate) | (Estimate) | (Estimate) | (Estimate) | (Estimate) | (Estimate) | (Estimate) | (Estimate) | (Estimate) | (Estimate) | (Estimate) | (Estimate) | (Estimate) | (Estimate) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | **FOR THE MONTH OF:** | **Jul-21** | **Aug-21** | **Sep-21** | **Oct-21** | **Nov-21** | **Dec-21** | **Jan-22** | **Feb-22** | **Mar-22** | **Apr-22** | **May-22** | **Jun-22** | **Jul-22** | **Aug-22** | **Sep-22** | **Oct-22** | **Total** |
| 2 | **DAYS IN MONTH** | **31** | **31** | **30** | **31** | **30** | **31** | **31** | **28** | **31** | **31** | **30** | **31** | **31** | **30** | **31** | **30** | |
| 3 | Beginning Balance | $ 747,228 | $ 2,092,979 | $ 2,180,900 | $ 2,184,876 | $ 2,187,779 | $ 1,972,912 | $ 1,665,779 | $ 1,308,911 | $ 1,008,029 | $ 742,408 | $ 570,514 | $ 455,322 | $ 380,344 | $ 311,946 | $ 241,019 | $ 151,743 | $ 10,996,706 |
| 4 | | | | | | | | | | | | | | | | | | |
| 5 | Add Additional Rate Case Expense | 13,875 | 83,501 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 6 | | | | | | | | | | | | | | | | | | |
| 7 | Add Recoupment | 1,331,220 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 8 | | | | | | | | | | | | | | | | | | |
| 9 | Less Collected Revenue | (1,423) | (1,471) | (1,847) | (3,123) | (220,417) | (312,148) | (360,968) | (303,766) | (268,034) | (173,704) | (116,560) | (76,129) | (69,352) | (71,664) | (89,818) | (151,945) | (2,214,506) |
| 10 | | | | | | | | | | | | | | | | | | |
| 11 | Add Administrative and Start Up Costs | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 12 | | | | | | | | | | | | | | | | | | |
| 13 | Ending Balance Pre-Interest | $ 2,090,900 | $ 2,175,009 | $ 2,179,052 | $ 2,181,752 | $ 1,967,362 | $ 1,660,764 | $ 1,304,811 | $ 1,005,145 | $ 739,995 | $ 568,704 | $ 453,953 | $ 379,192 | $ 310,992 | $ 240,282 | $ 151,201 | $ (202) | **$ 8,782,201** |
| 14 | | | | | | | | | | | | | | | | | | |
| 15 | Month's Average Balance | $ 753 454 | $ 2 133 994 | $ 2 179 976 | $ 2 183 314 | $ 2 077 571 | $ 1 816 838 | $ 1 485 295 | $ 1 157 028 | $ 874 012 | $ 655 556 | $ 512 234 | $ 417 257 | $ 345 668 | $ 276 114 | $ 196 110 | $ 75 770 | |
| 16 | | | | | | | | | | | | | | | | | | |
| 17 | Interest Rate | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | |
| 18 | | | | | | | | | | | | | | | | | | |
| 19 | Interest Applied | $ 2 080 | $ 5 890 | $ 5 823 | $ 6 027 | $ 5 550 | $ 5 015 | $ 4 100 | $ 2 885 | $ 2 413 | $ 1 810 | $ 1 368 | $ 1 152 | $ 954 | $ 738 | $ 541 | $ 202 | **26,727** |
| 20 | | | | | | | | | | | | | | | | | | |
| 21 | Ending Balance | **$ 2,092,979** | **$ 2,180,900** | **$ 2,184,876** | **$ 2,187,779** | **$ 1,972,912** | **$ 1,665,779** | **$ 1,308,911** | **$ 1,008,029** | **$ 742,408** | **$ 570,514** | **$ 455,322** | **$ 380,344** | **$ 311,946** | **$ 241,019** | **$ 151,743** | **$ (0)** | |

**Liberty Utilities (Energy North Natural Gas) Corp. d/b/a Liberty Uitilities** | **Schedule 19**
**Revenue Decoupling Adjustment Factor (RDAF)** | **RDAF**
**For LDAC effective November 1, 2021 - October 31, 2022** | **Page 1 of 4**

| | | |
|---|---|---|
| | Residential | |
| 1 | Residential Projected September 1, 2021 Reconciliation Balance of Prior Recoveries / (Refunds) | ($523,704) |
| 2 | Residential Revenue Decoupling Deficiency / (Excess) - Current Period | $1,522,705 |
| 3 | Total Residential Revenue Decoupling Deficiency / (Excess) - Prior to Adjustments | $999,001 |
| 4 | Adjustments to Residential prior year filings for low income customer treatment | |
| 5 | 2019 Filing (total adjustment is $1,932,224 collected over two years) | $966,112 |
| 6 | 2020 Filing (total adjustment is $2,092,605 collected over two years) | $1,046,302 |
| 7 | Total Residential Revenue Decoupling Deficiency / (Excess) - September 1, 2021 | $3,011,416 |
| 8 | Estimated Residential November 2021 - October 2022 Sales (therms) | 65,649,919 |
| 9 | Residential Revenue Decoupling rate per therm November 2020 - October 2021 | $0.0459 |
| | Commercial | |
| 10 | Commercial Projected September 1, 2021 Reconciliation Balance of Prior Recoveries / (Refunds) | ($446,234) |
| 11 | Residential Revenue Decoupling Deficiency / (Excess) - Current Period | $903,659 |
| 12 | Total Commercial Revenue Decoupling Deficiency / (Excess) - Current Period | $457,424 |
| 13 | Estimated Commercial November 2021 - October 2022 Sales (therms) | 117,179,952 |
| 14 | Commercial Revenue Decoupling rate per therm November 2020 - October 2021 | $0.0039 |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**November 2020 through August 2021**
**Revenue Decoupling - Collections by Sector**

| **RESIDENTIAL** | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Estimate) |
|---|---|---|---|---|---|---|---|---|---|---|
| **FOR THE MONTH OF:** | **Nov-20** | **Dec-20** | **Jan-21** | **Feb-21** | **Mar-21** | **Apr-21** | **May-21** | **Jun-21** | **Jul-21** | **Aug-21** |
| **DAYS IN MONTH** | **30** | **31** | **31** | **28** | **31** | **30** | **31** | **30** | **31** | **31** |
| Over / Under Beginning Balance | $ (3,682,012) | $ (3,465,584) | $ (3,070,769) | $ (2,529,984) | $ (1,925,470) | $ (1,325,885) | $ (964,491) | $ (760,172) | $ (654,619) | $ (581,484) |
| Monthly billing activity | $ 225,962 | $ 403,824 | $ 548,504 | $ 610,062 | $ 604,066 | $ 364,448 | $ 206,696 | $ 107,440 | $ 74,839 | $ 59,303 |
| Ending Balance Pre-Interest | $ (3,456,051) | $ (3,061,761) | $ (2,522,265) | $ (1,919,923) | $ (1,321,404) | $ (961,436) | $ (757,795) | $ (652,732) | $ (579,780) | $ (522,181) |
| Month's Average Balance | $ (3,569,032) | $ (3,263,672) | $ (2,796,517) | $ (2,224,953) | $ (1,623,437) | $ (1,143,661) | $ (861,143) | $ (706,452) | $ (617,200) | $ (551,832) |
| Interest Rate | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% |
| Interest Applied | $ (9,534) | $ (9,009) | $ (7,719) | $ (5,547) | $ (4,481) | $ (3,055) | $ (2,377) | $ (1,887) | $ (1,704) | $ (1,523) |
| Ending Balance | **$ (3,465,584)** | **$ (3,070,769)** | **$ (2,529,984)** | **$ (1,925,470)** | **$ (1,325,885)** | **$ (964,491)** | **$ (760,172)** | **$ (654,619)** | **$ (581,484)** | **$ (523,704)** |

| **COMMERCIAL & INDUSTRIAL** | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Estimate) |
|---|---|---|---|---|---|---|---|---|---|---|
| **FOR THE MONTH OF:** | **Nov-20** | **Dec-20** | **Jan-21** | **Feb-21** | **Mar-21** | **Apr-21** | **May-21** | **Jun-21** | **Jul-21** | **Aug-21** |
| **DAYS IN MONTH** | **30** | **31** | **31** | **28** | **31** | **30** | **31** | **30** | **31** | **31** |
| Over / Under Beginning Balance | $ (2,441,102) | $ (2,273,218) | $ (2,038,784) | $ (1,750,239) | $ (1,422,472) | $ (1,089,831) | $ (870,841) | $ (725,225) | $ (617,318) | $ (528,882) |
| Monthly billing activity | $ 174,172 | $ 240,378 | $ 293,767 | $ 331,718 | $ 336,103 | $ 221,606 | $ 147,815 | $ 109,698 | $ 90,016 | $ 83,991 |
| Ending Balance Pre-Interest | $ (2,266,930) | $ (2,032,841) | $ (1,745,017) | $ (1,418,522) | $ (1,086,369) | $ (868,225) | $ (723,025) | $ (615,527) | $ (527,302) | $ (444,890) |
| Month's Average Balance | $ (2,354,016) | $ (2,153,030) | $ (1,891,900) | $ (1,584,380) | $ (1,254,420) | $ (979,028) | $ (796,933) | $ (670,376) | $ (572,310) | $ (486,886) |
| Interest Rate | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% |
| Interest Applied | $ (6,288) | $ (5,943) | $ (5,222) | $ (3,950) | $ (3,463) | $ (2,615) | $ (2,200) | $ (1,791) | $ (1,580) | $ (1,344) |
| Ending Balance | **$ (2,273,218)** | **$ (2,038,784)** | **$ (1,750,239)** | **$ (1,422,472)** | **$ (1,089,831)** | **$ (870,841)** | **$ (725,225)** | **$ (617,318)** | **$ (528,882)** | **$ (446,234)** |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Ending Balance | **$ (5,738,803)** | **$ (5,109,553)** | **$ (4,280,223)** | **$ (3,347,941)** | **$ (2,415,716)** | **$ (1,835,332)** | **$ (1,485,397)** | **$ (1,271,937)** | **$ (1,110,366)** | **$ (969,938)** |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**September 2020 through August 2021**
**Revenue Decoupling Activity by Sector**

| | **RESIDENTIAL** | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Estimate) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | **FOR THE MONTH OF:** | **Sep-20** | **Oct-20** | **Nov-20** | **Dec-20** | **Jan-21** | **Feb-21** | **Mar-21** | **Apr-21** | **May-21** | **Jun-21** | **Jul-21** | **Aug-21** |
| 2 | **DAYS IN MONTH** | **30** | **31** | **30** | **31** | **31** | **28** | **31** | **30** | **31** | **30** | **31** | **31** |
| 3 | Over Under Beginning Balance | | $ 257,090 | $ 810,822 | $ 1,511,842 | $ 1,582,770 | $ 2,215,950 | $ 2,187,009 | $ 2,273,003 | $ 1,546,131 | $ 1,519,036 | $ 1,546,764 | $ 1,364,717 |
| 4 | | | | | | | | | | | | | |
| 5 | Monthly revenue difference Inc/(Dec) revenue | $ 240,943 | $ 517,074 | $ 585,965 | $ (5,280) | $ 630,944 | $ (31,172) | $ 4,026 | $ (790,048) | $ (59,223) | $ 21,114 | $ (186,059) | $ 154,008 |
| 6 | | | | | | | | | | | | | |
| 7 | True up | 15,804 | 35,187 | 111,956 | 71,943 | (2,999) | (3,251) | 75,821 | 58,082 | 27,903 | 2,525 | | |
| 8 | | | | | | | | | | | | | |
| 9 | Ending Balance Pre-Interest | $ 256,747 | $ 809,350 | $ 1,508,744 | $ 1,578,505 | $ 2,210,715 | $ 2,181,527 | $ 2,266,856 | $ 1,541,037 | $ 1,514,811 | $ 1,542,674 | $ 1,360,705 | $ 1,518,726 |
| 10 | | | | | | | | | | | | | |
| 11 | Month's Average Balance | $ 128,373 | $ 533,220 | $ 1,159,783 | $ 1,545,174 | $ 1,896,742 | $ 2,198,738 | $ 2,226,932 | $ 1,907,020 | $ 1,530,471 | $ 1,530,855 | $ 1,453,734 | $ 1,441,721 |
| 12 | | | | | | | | | | | | | |
| 13 | Interest Rate | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% |
| 14 | | | | | | | | | | | | | |
| 15 | Interest Applied | $ 343 | $ 1,472 | $ 3,098 | $ 4,265 | $ 5,236 | $ 5,482 | $ 6,147 | $ 5,094 | $ 4,225 | $ 4,089 | $ 4,013 | $ 3,980 |
| 16 | | | | | | | | | | | | | |
| 17 | Ending Balance | **$ 257,090** | **$ 810,822** | **$ 1,511,842** | **$ 1,582,770** | **$ 2,215,950** | **$ 2,187,009** | **$ 2,273,003** | **$ 1,546,131** | **$ 1,519,036** | **$ 1,546,764** | **$ 1,364,717** | **$ 1,522,705** |

| | **COMMERCIAL & INDUSTRIAL** | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Estimate) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | **FOR THE MONTH OF:** | **Sep-20** | **Oct-20** | **Nov-20** | **Dec-20** | **Jan-21** | **Feb-21** | **Mar-21** | **Apr-21** | **May-21** | **Jun-21** | **Jul-21** | **Aug-21** |
| 19 | **DAYS IN MONTH** | **30** | **31** | **30** | **31** | **31** | **28** | **31** | **30** | **31** | **30** | **31** | **31** |
| 20 | Over Under Beginning Balance | | $ 29,045 | $ (347,758) | $ (718,458) | $ (1,539,810) | $ (908,753) | $ (595,095) | $ 382,115 | $ 405,459 | $ 771,334 | $ 960,953 | $ 838,916 |
| 21 | | | | | | | | | | | | | |
| 22 | Monthly revenue difference Inc/(Dec) revenue | $ 30,086 | $ (399,411) | $ (532,021) | $ (762,675) | $ 638,015 | $ 406,808 | $ 946,452 | $ (57,824) | $ 362,977 | $ 219,735 | $ (124,518) | $ 62,341 |
| 23 | | | | | | | | | | | | | |
| 24 | True up | (1,079) | 23,047 | 162,743 | (55,564) | (3,584) | (91,277) | 31,051 | 80,118 | 1,276 | (32,427) | | |
| 25 | | | | | | | | | | | | | |
| 26 | Ending Balance Pre-Interest | $ 29,007 | $ (347,319) | $ (717,036) | $ (1,536,698) | $ (905,379) | $ (593,222) | $ 382,409 | $ 404,409 | $ 769,712 | $ 958,642 | $ 836,435 | $ 901,257 |
| 27 | | | | | | | | | | | | | |
| 28 | Month's Average Balance | $ 14,503 | $ (159,137) | $ (532,397) | $ (1,127,578) | $ (1,222,594) | $ (750,988) | $ (106,343) | $ 393,262 | $ 587,586 | $ 864,988 | $ 898,694 | $ 870,086 |
| 29 | | | | | | | | | | | | | |
| 30 | Interest Rate | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% |
| 31 | | | | | | | | | | | | | |
| 32 | Interest Applied | $ 39 | $ (439) | $ (1,422) | $ (3,112) | $ (3,375) | $ (1,872) | $ (294) | $ 1,050 | $ 1,622 | $ 2,311 | $ 2,481 | $ 2,402 |
| 33 | | | | | | | | | | | | | |
| 34 | Ending Balance | **$ 29,045** | **$ (347,758)** | **$ (718,458)** | **$ (1,539,810)** | **$ (908,753)** | **$ (595,095)** | **$ 382,115** | **$ 405,459** | **$ 771,334** | **$ 960,953** | **$ 838,916** | **$ 903,659** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 35 | Total Ending Balance | **$ 286,135** | **$ 463,064** | **$ 793,384** | **$ 42,960** | **$ 1,307,197** | **$ 1,591,914** | **$ 2,655,118** | **$ 1,951,590** | **$ 2,290,370** | **$ 2,507,716** | **$ 2,203,633** | **$ 2,426,364** |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**Revenue Decoupling**
**Adjustments to Residential prior year filings for low income customer treatment**

**2019-2020 Filing**

| | **Residential** | **Filing** | **Adjusted (1)** | **Difference** |
|---|---|---|---|---|
| 1. | Allowed Base Revenue | $ 40,585,321 | $ 42,517,544 | $ 1,932,224 |
| 2. | less: Actual and Estimated Base Revenue | 44,670,474 | 44,670,474 | - |
| 3. | Revenue Deficiency / (Excess) | (4,085,152.93) | (2,152,929.54) | $ 1,932,224 |
| | **Commercial** | | | |
| 4. | Allowed Base Revenue | $ 31,436,763 | $ 31,436,763 | $ - |
| 5. | less: Actual and Estimated Base Revenue | 34,368,401 | 34,368,401 | - |
| 6. | Revenue Deficiency / (Excess) | (2,931,638.28) | (2,931,638.28) | $ - |
| **7.** | **TOTAL Revenue Deficiency / (Excess)** | **(7,016,791.21)** | **(5,084,567.82)** | **$ 1,932,224** |

**2020-2021 Filing**

| | **Residential** | **Filing** | **Adjusted (1)** | **Difference** |
|---|---|---|---|---|
| 8. | Allowed Base Revenue | $ 47,055,148 | $ 49,147,752 | $ 2,092,605 |
| 9. | less: Actual and Estimated Base Revenue | 50,205,891 | 50,205,891 | - |
| 10. | Revenue Deficiency / (Excess) | (3,150,743.35) | (1,058,138.97) | $ 2,092,605 |
| | **Commercial** | | | |
| 11. | Allowed Base Revenue | $ 36,558,043 | $ 36,558,043 | $ - |
| 12. | less: Actual and Estimated Base Revenue | 38,373,247 | 38,373,247 | - |
| 13. | Revenue Deficiency / (Excess) | (1,815,203.44) | (1,815,203.44) | $ - |
| **14.** | **TOTAL Revenue Deficiency / (Excess)** | **(4,965,946.79)** | **(2,873,342.41)** | **$ 2,092,605** |

(1) The calculations of the adjusted allowed revenue are included in attachment Attachment 2019-2020 RDAF Adjustment and Attachment 2020-2021 RDAF Adjustment

**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**
**Energy Efficiency Programs**
**For Residential Non-Heating and Heating Classes**
**November 1, 2021 - October 31, 2022**
**Energy Efficiency Charge**

| Month | Actual or Forecast | Beginning Balance (Over)/Under | Residential DSM Rate Per Therm | DSM Collections | Forecasted DSM Expenditures | Actual DSM Expenditures Residential | Actual DSM Expenditures Low-Income | Incentive | Ending Balance (Over)/Under | Average Balance (Over)/Under | Interest Monthly Federal Prime Rate | Interest @ Fed Reserve Bank Loan Rate | Ending Bal. Plus Interest (Over)/Under | Forecasted Residential Therm Sales | Residential Therm Sales | # of Days |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| May 21 | Actual | (765,079) | ($0.0831) | (305,597) | 404,158 | 211,716 | 10,302 | 15,989 | (832,670) | (798,875) | 3.25% | (3,178) | (835,848) | 2,887,019 | 3,677,744 | 31 |
| June 21 | Actual | (835,848) | ($0.0831) | (158,833) | 404,158 | 537,081 | 111,395 | 15,989 | (330,215) | (583,031) | 3.25% | (2,775) | (332,990) | 1,308,632 | 1,911,618 | 30 |
| July 21 | Forecast | (332,990) | ($0.0831) | (93,229) | 404,158 | 0 | 0 | 0 | (22,061) | (177,525) | 3.25% | (490) | (22,551) | 1,121,890 | 0 | 31 |
| August 21 | Forecast | (22,551) | ($0.0831) | (90,152) | 404,158 | 0 | 0 | 0 | 291,456 | 134,453 | 3.25% | 371 | 291,827 | 1,084,856 | 0 | 31 |
| September 21 | Forecast | 291,827 | ($0.0831) | (133,428) | 404,158 | 0 | 0 | 0 | 562,557 | 427,192 | 3.25% | 1,141 | 563,698 | 1,605,635 | 0 | 30 |
| October 21 | Forecast | 563,698 | ($0.0831) | (235,825) | 404,158 | 0 | 0 | 0 | 732,031 | 647,865 | 3.25% | 1,788 | 733,819 | 2,837,843 | 0 | 31 |
| November 21 | Forecast | 733,819 | ($0.0861) | (594,247) | 404,158 | 0 | 0 | 0 | 543,731 | 638,775 | 3.25% | 1,706 | 545,437 | 6,901,820 | 0 | 30 |
| December 21 | Forecast | 545,437 | ($0.0861) | (865,560) | 404,158 | 0 | 0 | 0 | 84,035 | 314,736 | 3.25% | 869 | 84,904 | 10,052,958 | 0 | 31 |
| January 22 | Forecast | 84,904 | ($0.0861) | (995,446) | 412,449 | 0 | 0 | 0 | (498,093) | (206,595) | 3.25% | (570) | (498,664) | 11,561,514 | 0 | 31 |
| February 22 | Forecast | (498,664) | ($0.0861) | (777,324) | 412,449 | 0 | 0 | 0 | (863,539) | (681,101) | 3.25% | (1,698) | (865,237) | 9,028,156 | 0 | 28 |
| March 22 | Forecast | (865,237) | ($0.0861) | (753,706) | 412,449 | 0 | 0 | 0 | (1,206,494) | (1,035,866) | 3.25% | (2,859) | (1,209,354) | 8,753,844 | 0 | 31 |
| April 22 | Forecast | (1,209,354) | ($0.0861) | (448,422) | 412,449 | 0 | 0 | 0 | (1,245,327) | (1,227,340) | 3.25% | (3,279) | (1,248,606) | 5,208,158 | 0 | 30 |
| May 22 | Forecast | (1,248,606) | ($0.0861) | (249,823) | 412,449 | 0 | 0 | 0 | (1,085,980) | (1,167,293) | 3.25% | (3,222) | (1,089,202) | 2,901,545 | 0 | 31 |
| June 22 | Forecast | (1,089,202) | ($0.0861) | (113,450) | 412,449 | 0 | 0 | 0 | (790,203) | (939,703) | 3.25% | (2,510) | (792,713) | 1,317,656 | 0 | 30 |
| July 22 | Forecast | (792,713) | ($0.0861) | (83,483) | 412,449 | 0 | 0 | 0 | (463,747) | (628,230) | 3.25% | (1,734) | (465,481) | 969,602 | 0 | 31 |
| August 22 | Forecast | (465,481) | ($0.0861) | (85,759) | 412,449 | 0 | 0 | 0 | (138,792) | (302,137) | 3.25% | (834) | (139,626) | 996,041 | 0 | 31 |
| September 22 | Forecast | (139,626) | ($0.0861) | (154,591) | 412,449 | 0 | 0 | 0 | 118,232 | (10,697) | 3.25% | (29) | 118,203 | 1,795,484 | 0 | 30 |
| October 22 | Forecast | 118,203 | ($0.0861) | (383,367) | 412,449 | 0 | 0 | 0 | 147,285 | 132,744 | 3.25% | 366 | 147,652 | 4,452,576 | 0 | 31 |
| November 22 | Forecast | 147,652 | ($0.0861) | (594,247) | 412,449 | 0 | 0 | 0 | (34,146) | 56,753 | 3.25% | 152 | (33,995) | 6,901,820 | 0 | 30 |
| December 22 | Forecast | (33,995) | ($0.0861) | (865,560) | 412,449 | 0 | 0 | 0 | (487,105) | (260,550) | 3.25% | (719) | (487,825) | 10,052,958 | 0 | 31 |

| **Estimated Residential Conservation Charge Effective November 1, 2021 - October 31, 2022** | | |
|---|---|---|
| Beginning Balance | $ | 733,819 |
| Program Budget Nov 2021-Oct 2022 | | **4,932,804** |
| Projected Interest | | (13,794) |
| Projected Budget with Interest | $ | 5,652,830 |
| **Total Charges** | **$** | **5,652,830** |
| **Projected Therm Sales** | | **65,649,919** |
| **Residential Rate** | | **$0.0861** |
| **Total Charges with Interest** | **$** | **5,652,830** |
| **Projected Therm Sales** | | **65,649,919** |
| **Residential Rate** | | **$0.0861** |

| | | | | |
|---|---|---|---|---|
| Residential Non Heating Therm Sales | 0% | **741,340** | **741,340** | 0% |
| Residential Heating Therm Sales | 35% | **64,908,579** | **64,908,579** | 35% |
| C&I Therm Sales | 64% | **117 249 138** | **117 249 138** | 64% |
| **Total Therms** | 100% | **182,899,057** | **182,899,057** | 100% |
| | | Budget | Budget | |
| | | **2021** | **2022** | |
| Low-Income Program Budget | | **$ 1,523,570** | **$ 1,627,400** | |
| Other Refund | | - | - | |
| **Total Shared Budget** | | **$ 1,523,570** | **$ 1,627,400** | |
| Residential Program Budget | | **$ 3,926,326** | **$ 4,059,085** | |
| Residential Performance Incentive | | **$ 299,744** | **$ 312,757** | |
| **Total Residential Program Budget** | | **$ 4,226,070** | **$ 4,371,842** | |
| Commercial/Industrial Program Budget | | **$ 3,512,260** | **$ 3,886,433** | |
| Commercial/Industrial Program Incentive | | **$ 193,174** | **$ 213,754** | |
| **Total Commercial/Industrial Program Budget** | | **$ 3,705,434** | **$ 4,100,187** | |
| **Total Program Budget** | | **$ 9,455,074** | **$ 10,099,429** | |
| Shared Expenses Allocation to Residential | | $ 546,871 | $ 577,544 | |
| Shared Expenses Allocation to C&I | | 976,699 | 1,043,260 | |
| **Total Allocated Shared Expenses** | | **$ 1,523,570** | **$ 1,620,804** | |
| Total Residential (including allocation of Shared Budget) | | $ 4,772,941 | $ 4,949,386 | |
| Total C&I (including a location of Shared Budget) | | 4,682,133 | 5,143,447 | |
| **Total Budget** | | **$ 9,455,074** | **$ 10,092,833** | |
| Total Residential (including allocation of Shared Budget) | | $ 4,772,941 | $ 4,949,386 | |
| Total C&I (including a location of Shared Budget) | | 4,682,133 | 5,143,447 | |
| **Total Budget** | | **$ 9,455,074** | **$ 10,092,833** | |

**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**
**Energy Efficiency Programs**
**For Commercial/Industrial Classes**
**November 1, 2021 - October 31, 2022**
**Energy Efficiency Charge**

| Month | Actual or Forecast | Beginning Balance (Over)/Under | DSM Rate Per Therm | DSM Collections | Forecasted DSM Expenditures | Actual DSM Expenditures C&I | Actual DSM Expenditures Low-Income | Incentive | Ending Balance (Over)/Under | Average Balance (Over)/Under | Interest Fed Reserve Prime Rate | Interest @ Fed Reserve Bank Loan Rate | Ending Bal. Plus Interest (Over)/Under | Forecasted Commercial/ Industrial Therm Sales | Actual Commercial/ Industrial Therm Sales | # of Days |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| May 21 | Actual | (1,366,413) | ($0.0441) | (316,425) | 455,607 | 170,075 | 13,657 | 14,818 | (1,484,288) | (1,425,351) | 3.25% | (2,945) | (1,487,233) | 6,635,508 | 7,175,611 | 31 |
| June 21 | Actual | (1,487,233) | ($0.0441) | (234,819) | 455,607 | 224,152 | 147,663 | 14,818 | (1,335,419) | (1,411,326) | 3.25% | (2,572) | (1,337,991) | 4,794,620 | 5,325,135 | 30 |
| July 21 | Forecast | (1,337,991) | ($0.0441) | (194,811) | 455,607 | 0 | 0 | | (1,077,195) | (1,207,593) | 3.25% | (3,333) | (1,080,528) | 4,417,480 | 0 | 31 |
| August 21 | Forecast | (1,080,528) | ($0.0441) | (190,167) | 455,607 | 0 | 0 | | (815,088) | (947,808) | 3.25% | (2,616) | (817,705) | 4,312,181 | 0 | 31 |
| September 21 | Forecast | (817,705) | ($0.0441) | (210,967) | 455,607 | 0 | 0 | | (573,065) | (695,385) | 3.25% | (1,858) | (574,922) | 4,783,833 | 0 | 30 |
| October 21 | Forecast | (574,922) | ($0.0441) | (279,638) | 455,607 | 0 | 0 | | (398,954) | (486,938) | 3.25% | (1,344) | (400,298) | 6,340,998 | 0 | 31 |
| November 21 | Forecast | (400,298) | ($0.0408) | (467,051) | 455,607 | 0 | 0 | | (411,742) | (406,020) | 3.25% | (1,085) | (412,826) | 11,447,324 | 0 | 30 |
| December 21 | Forecast | (412,826) | ($0.0408) | (627,711) | 455,607 | 0 | 0 | | (584,931) | (498,879) | 3.25% | (1,377) | (586,308) | 15,385,075 | 0 | 31 |
| January 22 | Forecast | (586,308) | ($0.0408) | (711,095) | 428,621 | 0 | 0 | | (868,782) | (727,545) | 3.25% | (2,008) | (870,791) | 17,428,801 | 0 | 31 |
| February 22 | Forecast | (870,791) | ($0.0408) | (609,932) | 428,621 | 0 | 0 | | (1,052,102) | (961,446) | 3.25% | (2,397) | (1,054,499) | 14,949,322 | 0 | 28 |
| March 22 | Forecast | (1,054,499) | ($0.0408) | (536,719) | 428,621 | 0 | 0 | | (1,162,598) | (1,108,549) | 3.25% | (3,060) | (1,165,658) | 13,154,881 | 0 | 31 |
| April 22 | Forecast | (1,165,658) | ($0.0408) | (369,458) | 428,621 | 0 | 0 | | (1,106,496) | (1,136,077) | 3.25% | (3,035) | (1,109,530) | 9,055,353 | 0 | 30 |
| May 22 | Forecast | (1,109,530) | ($0.0408) | (272,836) | 428,621 | 0 | 0 | | (953,746) | (1,031,638) | 3.25% | (2,848) | (956,594) | 6,687,163 | 0 | 31 |
| June 22 | Forecast | (956,594) | ($0.0408) | (197,195) | 428,621 | 0 | 0 | | (725,168) | (840,881) | 3.25% | (2,246) | (727,414) | 4,833,207 | 0 | 30 |
| July 22 | Forecast | (727,414) | ($0.0408) | (185,428) | 428,621 | 0 | 0 | | (484,221) | (605,818) | 3.25% | (1,672) | (485,894) | 4,544,800 | 0 | 31 |
| August 22 | Forecast | (485,894) | ($0.0408) | (192,519) | 428,621 | 0 | 0 | | (249,792) | (367,843) | 3.25% | (1,015) | (250,807) | 4,718,593 | 0 | 31 |
| September 22 | Forecast | (250,807) | ($0.0408) | (223,802) | 428,621 | 0 | 0 | | (45,988) | (148,398) | 3.25% | (396) | (46,385) | 5,485,342 | 0 | 30 |
| October 22 | Forecast | (46,385) | ($0.0408) | (324,175) | 428,621 | 0 | 0 | | 58,061 | 5,838 | 3.25% | 16 | 58,077 | 7,945,466 | 0 | 31 |
| November 22 | Forecast | 58,077 | ($0.0408) | (467,051) | 428,621 | 0 | 0 | | 19,646 | 38,862 | 3.25% | 104 | 19,750 | 11,447,324 | 0 | 30 |
| December 22 | Forecast | 19,750 | ($0.0408) | (627,711) | 428,621 | 0 | 0 | | (179,340) | (79,795) | 3.25% | (220) | (179,560) | 15,385,075 | 0 | 31 |

| **Estimated C&I Conservation Charge November 1, 2021 - October 31, 2022** | |
|---|---|
| Beginning Balance | (400,298) |
| Program Budget Nov 2021-Oct 2022 | **5,197,419** |
| Projected Interest | (21,123) |
| Program Budget with Interest | 4,775,998 |
| **Total Charges** | **$4,775,998** |
| Projected Therm Sales | **117,179,952** |
| C&I Rate | $0.0408 |
| Total Charges with Interest | **$4,780,942** |
| Projected Therm Sales | **117,179,952** |
| **C&I Rate** | **$0.0408** |

**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**
**Energy Efficiency Programs**
**For Residential and Commercial/Industrial Classes**
**November 1, 2021 - October 31, 2022**
**Energy Efficiency Charge**

| Month | Actual or Forecast | Beginning Balance (Over)/Under | DSM Rate Per Therm | DSM Collections | Forecasted DSM Expenditures | Actual DSM Expenditures | | | | Incentive | Ending Balance (Over)/Under | Average Balance (Over)/Under | Interest Plus Interest Prime Rate | Interest @ Fed Reserve Bank Loan Rate | Ending Bal. Plus Interest (Over)/Under | Forecasted Therm Sales | Actual Therm Sales | # of Days |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Residential | C&I | Low-Income | Total | | | | | | | | | |
| May 21 | Actual | (2,131,493) | n/a | (622,023) | 859,765 | 211,716 | 170,075 | 23,959 | 405,750 | 30,807 | (2,316,958) | (2,224,225) | 3.25% | (6,123) | (2,323,081) | 12,333,808 | 12,290,578 | 31 |
| June 21 | Actual | (2,323,081) | n/a | (393,652) | 859,765 | 537,081 | 224,152 | 259,058 | 1,020,292 | 30,807 | (1,665,634) | (1,994,358) | 3.25% | (5,346) | (1,670,980) | 7,703,669 | 7,740,734 | 30 |
| July 21 | Forecast | (1,670,980) | n/a | (288,040) | 859,765 | 0 | 0 | 0 | 0 | | (1,099,255) | (1,385,118) | 3.25% | (3,823) | (1,103,079) | 5,471,615 | 2,303,736 | 31 |
| August 21 | Forecast | (1,103,079) | n/a | (280,319) | 859,765 | 0 | 0 | 0 | 0 | | (523,633) | (813,356) | 3.25% | (2,245) | (525,878) | 5,317,216 | 0 | 31 |
| September 21 | Forecast | (525,878) | n/a | (344,395) | 859,765 | 0 | 0 | 0 | 0 | | (10,508) | (268,193) | 3.25% | (716) | (11,225) | 6,269,177 | 0 | 30 |
| October 21 | Forecast | (11,225) | n/a | (515,463) | 859,765 | 0 | 0 | 0 | 0 | | 333,077 | 160,926 | 3.25% | 444 | 333,522 | 9,068,225 | 0 | 31 |
| November 21 | Forecast | 333,522 | n/a | (1,061,298) | 859,765 | 0 | 0 | 0 | 0 | | 131,989 | 232,755 | 3.25% | 622 | 132,611 | 13,857,797 | 0 | 30 |
| December 21 | Forecast | 132,611 | n/a | (1,493,271) | 859,765 | 0 | 0 | 0 | 0 | | (500,895) | (184,142) | 3.25% | (508) | (501,404) | 21,185,695 | 0 | 31 |
| January 22 | Forecast | (501,404) | n/a | (1,706,541) | 841,069 | 0 | 0 | 0 | 0 | | (1,366,876) | (934,140) | 3.25% | (2,578) | (1,369,454) | 28,674,991 | 0 | 31 |
| February 22 | Forecast | (1,369,454) | n/a | (1,387,257) | 841,069 | 0 | 0 | 0 | 0 | | (1,915,641) | (1,642,548) | 3.25% | (4,095) | (1,919,737) | 30,438,317 | 0 | 28 |
| March 22 | Forecast | (1,919,737) | n/a | (1,290,425) | 841,069 | 0 | 0 | 0 | 0 | | (2,369,092) | (2,144,414) | 3.25% | (5,919) | (2,375,011) | 26,349,344 | 0 | 31 |
| April 22 | Forecast | (2,375,011) | n/a | (817,881) | 841,069 | 0 | 0 | 0 | 0 | | (2,351,823) | (2,363,417) | 3.25% | (6,313) | (2,358,136) | 19,706,228 | 0 | 30 |
| May 22 | Forecast | (2,358,136) | n/a | (522,659) | 841,069 | 0 | 0 | 0 | 0 | | (2,039,726) | (2,198,931) | 3.25% | (6,070) | (2,045,796) | 12,611,378 | 0 | 31 |
| June 22 | Forecast | (2,045,796) | n/a | (310,645) | 841,069 | 0 | 0 | 0 | 0 | | (1,515,371) | (1,780,583) | 3.25% | (4,756) | (1,520,128) | 7,850,220 | 0 | 30 |
| July 22 | Forecast | (1,520,128) | n/a | (268,911) | 841,069 | 0 | 0 | 0 | 0 | | (947,969) | (1,234,048) | 3.25% | (3,406) | (951,375) | 5,539,370 | 0 | 31 |
| August 22 | Forecast | (951,375) | n/a | (278,278) | 841,069 | 0 | 0 | 0 | 0 | | (388,583) | (669,979) | 3.25% | (1,849) | (390,433) | 5,397,037 | 0 | 31 |
| September 22 | Forecast | (390,433) | n/a | (378,393) | 841,069 | 0 | 0 | 0 | 0 | | 72,244 | (159,095) | 3.25% | (425) | 71,819 | 6,389,467 | 0 | 30 |
| October 22 | Forecast | 71,819 | n/a | (707,542) | 841,069 | 0 | 0 | 0 | 0 | | 205,346 | 138,582 | 3.25% | 383 | 205,729 | 9,178,841 | 0 | 31 |
| November 22 | Forecast | 205,729 | n/a | (1,061,298) | 841,069 | 0 | 0 | 0 | 0 | | (14,500) | 95,615 | 3.25% | 255 | (14,244) | 13,857,797 | 0 | 30 |
| December 22 | Forecast | (14,244) | n/a | (1,493,271) | 841,069 | 0 | 0 | 0 | 0 | | (666,446) | (340,345) | 3.25% | (939) | (667,385) | 21,185,695 | 0 | 31 |

| **Residential (R-1 & R-3) and C & I Conservation Charge**<br>**November 1, 2021 - October 31, 2022** | | |
|---|---|---|
| Beginning Balance | $ | 333,522 |
| Program Budget Nov 2021-Oct 2022 | $ | 10,130,223 |
| Projected Interest | $ | (34,917) |
| Program Budget with Interest | $ | 10,428,828 |
| **Total Charges** | | **$10,428,828** |

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

**Gas Assistance Program**

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | **Distribution** | **Customer Charge** | | **Block** | | **Total** | |
| 2 | R-3 Base Rates | $ 15.39 | $ | 0.5632 | | | |
| 3 | R-4 Base Rates at 55% of R-3 | $ 8.47 | $ | 0.3098 | | | |
| 4 | Program Distribution Subsidy | $ 6.9260 | $ | 0.2534 | | | |
| 5 | Normal Winter Therms | | | | | 595 | |
| 6 | | | | | | | |
| 7 | Estimated Winter 2021/2022 Distribution Subsidy | $ 41.56 | $ | 150.82 | $ | 192.38 | |
| 8 | | | | | | | |
| 9 | Number of Estimated 2021/2022 Participants | 5,273 | | 47 | | 5,320 | (a) |
| 10 | | | | | | | |
| 11 | **COG** | **ENNG** | | **Keene** | | **Total** | |
| 12 | R-3 COG Rates | $ 0.9056 | $ | 1.2816 | | | |
| 13 | R-4 COG Rates at 55% of R-3 | $ 0.4981 | $ | 0.7049 | | | |
| 14 | Program COG Subsidy | $ 0.4075 | $ | 0.5767 | | | |
| 15 | | | | | | | |
| 16 | Estimated Winter 2021/2022 COG Subsidy (Ln 5 * Ln 14) | $ 242.50 | $ | 343.21 | $ | 585.71 | |
| 17 | | | | | | | |
| 18 | Winter Distribution Subsidy times Number of Participants (Ln 7 * Ln 9) | | | | $ | 1,023,450 | |
| 19 | Winter COG Subsidy times Number of Participants (Ln 9 * Ln 16) | | | | $ | 1,294,851 | |
| 20 | Prior Year Ending Balance - Gas Assistance Page 2 | | | | $ | 208,239 | |
| 21 | Estimated Annual Administrative Costs | | | | | - | |
| 22 | Total Program Costs | | | | $ | 2,526,541 | |
| 23 | | | | | | | |
| 24 | Estimated weather normalized firm therms billed for the | | | | | | |
| 25 | Twelve months ended 10/31/22 sales and transportation | | | | | 182,829,872 | |
| 26 | | | | | | | |
| 27 | **Total Gas Assistance Program Charge** | | | | **$** | **0.0138** | |

(a) Estimated number of participants for 2021/22 is based on the actual number participants as of April 2021.

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

**NOVEMBER 2020 THROUGH OCTOBER 2021**
**RESIDENTIAL GAS ASSISTANCE PROGRAM RECONCILIATION**
**ACCOUNT 175.6**

| | | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Actual) | (Estimate) | (Estimate) | (Estimate) | (Estimate) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | **FOR THE MONTH OF:** | **Nov-20** | **Dec-20** | **Jan-21** | **Feb-21** | **Mar-21** | **Apr-21** | **May-21** | **Jun-21** | **Jul-21** | **Aug-21** | **Sep-21** | **Oct-21** | **Total** |
| 2 | **DAYS IN MONTH** | **30** | **31** | **31** | **28** | **31** | **30** | **31** | **30** | **31** | **31** | **30** | **31** | |
| 3 | Beginning Balance | $ 476,374 | $ 426,171 | $ 451,615 | $ 480,838 | $ 502,871 | $ 554,416 | $ 624,872 | $ 664,070 | $ 586,516 | $ 518,743 | $ 448,452 | $ 359,568 | $ 476,374 |
| 4 | | | | | | | | | | | | | | |
| 5 | Add: Actual Costs | 85,033 7 | 251,496 7 | 331,032 5 | 350,580 8 | 361,433 3 | 277,505 0 | 168,741 3 | 8,335 5 | - | - | - | - | 1,834,159 |
| 6 | | | | | | | | | | | | | | |
| 7 | Less: Collected Revenue | (136,437 3) | (227,260 1) | (303,090 8) | (329,769 2) | (311,340 9) | (208,617 9) | (131,314 9) | (87,553 7) | (69,295 6) | (71,623 9) | (89,962 5) | (152,110 8) | (2,118,378) |
| 8 | | | | | | | | | | | | | | |
| 9 | Add: Administrative and Start Up Costs | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 10 | | | | | | | | | | | | | | |
| 11 | Ending Balance Pre-Interest | $ 424,971 | $ 450,408 | $ 479,556 | $ 501,649 | $ 552,963 | $ 623,304 | $ 662,299 | $ 584,852 | $ 517,220 | $ 447,119 | $ 358,490 | $ 207,457 | **$ 192,156** |
| 12 | | | | | | | | | | | | | | |
| 13 | Month's Average Balance | $ 450,673 | $ 438,290 | $ 465,585 | $ 491,244 | $ 527,917 | $ 588,860 | $ 643,585 | $ 624,461 | $ 551,868 | $ 482,931 | $ 403,471 | $ 283,512 | |
| 14 | | | | | | | | | | | | | | |
| 15 | Interest Rate | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | 3 25% | |
| 16 | | | | | | | | | | | | | | |
| 17 | Interest Applied | $ 1,201 | $ 1,207 | $ 1,282 | $ 1,221 | $ 1,453 | $ 1,569 | $ 1,772 | $ 1,664 | $ 1,523 | $ 1,333 | $ 1,078 | $ 783 | **16,084** |
| 18 | | | | | | | | | | | | | | |
| 19 | Ending Balance | **$ 426,171** | **$ 451,615** | **$ 480,838** | **$ 502,871** | **$ 554,416** | **$ 624,872** | **$ 664,070** | **$ 586,516** | **$ 518,743** | **$ 448,452** | **$ 359,568** | **$ 208,239** | **$ 208,239** |

**Liberty Utilities (EnergyNorth Natural Gas) Corp d/b/a Liberty**
**Quarterly Report**
**Gas Assistance Program (GAP)**
**2020-21 Discounted 45%**

| | | Nov-20 | Dec-20 | Jan-21 | Feb-21 | Mar-21 | Apr-21 | May-21 | Jun-21 | Jul-21 | Aug-21 | Sep-21 | Oct-21 | Summary: Actual/ Projected Total To Date (1) | Summary: Original Projection (2) | Variance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Customer Count** | | Actual | Actual | Actual | Actual | Actual | Actual | Actual | Actual | Projected | Projected | Projected | Projected | | | |
| Actual / Projected No. of Customers | | | | | | | | | | | | | | Average | | |
| LIHEAP | | 4,440 | 4,451 | 4,460 | 4,472 | 4,491 | 4,490 | 0 | 0 | 0 | 0 | 0 | 0 | 4,467 | 4,137 | (330) |
| Non-LIHEAP | | 806 | 812 | 817 | 822 | 825 | 830 | 0 | 0 | 0 | 0 | 0 | 0 | 819 | 743 | (76) |
| Total | (a) | 5,246 | 5,263 | 5,277 | 5,294 | 5,316 | 5,320 | 0 | 0 | 0 | 0 | 0 | 0 | 5,286 | 4,880 | (406) |
| **GAP Recoveries** | | | | | | | | | | | | | | | | |
| Actual / Projected | | | | | | | | | | | | | | | | |
| Therm Sales | | 11,132,422 | 18,766,131 | 25,047,915 | 27,254,709 | 25,732,133 | 17,242,749 | 10,854,036 | 7,237,196 | 5,514,402 | 5,714,634 | 7,280,826 | 12,398,042 | 174,175,195 | 179,574,679 | 5,399,484 |
| GAP Rate Per Therm | | $0.0121 | $0.0121 | $0.0121 | $0.0121 | $0.0121 | $0.0121 | $0.0121 | $0.0121 | $0.0121 | $0.0121 | $0.0121 | $0.0121 | $0.0121 | $0.0121 | |
| Total | | $134,702 | $227,070 | $303,080 | $329,782 | $311,359 | $208,637 | $131,334 | $87,570 | $66,724 | $69,147 | $88,098 | $150,016 | $2,107,520 | $2,172,854 | $65,334 |
| Adjustment | | $1,735 | $190 | $11 | -$13 | -$18 | -$19 | -$19 | -$16 | $0 | $0 | $0 | | $1,851 | $0 | |
| Total Adjusted Recoveries (3) | | $136,438 | $227,260 | $303,091 | $329,769 | $311,341 | $208,618 | $131,315 | $87,554 | $66,724 | $69,147 | $88,098 | $150,016 | $2,109,371 | $2,172,854 | $63,483 |
| **Program Costs** | | | | | | | | | | | | | | | | |
| Actual & Projected Costs | | | | | | | | | | | | | | | | |
| IT | | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| Admin. | (b) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Education | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Prior Period Ending Balance | (c) | 476,374 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 476,374 | 476,754 | 379 |
| Other (incl. Reporting Costs) | | 1,201 | 1,207 | 1,282 | 1,221 | 1,453 | 1,569 | 1,772 | 1,664 | 0 | 0 | 0 | 0 | 11,367 | 0 | (11,367) |
| Fixed Discount | | 26,513 | 35,733 | 36,507 | 35,913 | 40,615 | 40,035 | 31,137 | 1,220 | 0 | 0 | 0 | 0 | 247,674 | 204,228 | (43,446) |
| Variable Discount | | 44,619 | 116,135 | 156,716 | 175,381 | 176,329 | 130,911 | 69,257 | 3,784 | 0 | 0 | 0 | 0 | 873,132 | 749,186 | (123,946) |
| COG Discount | | 13,902 | 99,629 | 137,809 | 139,287 | 144,489 | 106,559 | 68,347 | 3,331 | 0 | 0 | 0 | 0 | 713,353 | 680,631 | (32,722) |
| **Avg Monthly Residential Customer** | | $ 75.51 | $ #REF! | $ 124.17 | $ 608,924.96 | $ 150.19 | $ 899,897.86 | $ 164.78 | $ 1,188,106.50 | $ 169.45 | $ 1,415,164.56 | $ 119.02 | $ 1,579,113.84 | $ 67.25 | $ 1,669,638.64 | $ 42.52 | $ 30.81 | $ 29.06 | $ 29.90 | $ 38.06 | $1,040.71 | $2,005.92 | $965.20 |
| **Avg Monthly Residential Low** | | $ 42.87 | $ 70.73 | $ 85.87 | $ 94.38 | $ 96.77 | $ 67.69 | $ 67.25 | $ 42.52 | $ 30.81 | $ 29.06 | $ 29.90 | $ 38.06 | $695.91 | $228.58 | ($467.33) |
| **Avg Monthly GAP Customer Discou** | | $32.64 | $53.44 | $64.32 | $70.40 | $72.68 | $51.33 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $344.81 | $1,777.34 | $1,432.53 |
| **Avg Monthly GAP Customer Discount as a % to Avg Monthly Residential Customer** | | 43.22% | 43.04% | 42.83% | 42.72% | 42.89% | 43.13% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 33.13% | 88.60% | |
| **Gross Monthly Revenues** | | $10,019,053 | $18,375,801 | $23,706,009 | $23,782,050 | $22,231,744 | $16,855,241 | $10,228,517 | $6,183,812 | $4,997,762 | $6,467,910 | $5,113,368 | $8,930,712 | $156,891,977 | $161,677,049 | $4,785,072 |
| **Total Costs as a percent of Gross** | | 0.86% | 1.38% | 1.40% | 1.48% | 1.63% | 1.66% | 1.67% | 0.16% | 0.00% | 0.00% | 0.00% | 0.00% | 1.48% | 1.31% | |

(1) This column represents actual data for the months in which such data is available plus projected data for the remaining months in the 12-month program year.
(2) GAP Projection on Bates 127 of the 2020-21 Cost of Gas Filing, DG 20-141
(3) Ties to the Company's GAP deferral accounts 8840-2-0000-10-1169-1756 & 8843-2-0000-10-1169-1756.

(a) The actual number of customers provided for this report are the number of registered customers that were billed during the month.
(b) Actual administrative costs consists of bill inserts and advertising.
(c) The Prior Year 2019-20 under/(over) ending balance.

**Environmental Surcharge - Manufactured Gas Plants**

**Manufactured Gas Plants**

| | | |
|---|---|---|
| Required Annual Environmental Increase | $2,351,805 | |
| Second one-third of prior period under recoveries (through June 2019) | $341,389 | |
| July 2020 - June 2021 recovery difference between actual and estimate | $140,090 | |
| Environmental Subtotal | $2,833,284 | |
| Overall Annual Net Increase to Rates | $2,833,284 | |
| Estimated weather normalized firm therms billed for the twelve months ended 10/31/2022 - sales and transportation | 182,829,872 | therms |
| Surcharge per therm | $0.0155 | per therm |
| **Total Environmental Surcharge** | $0.0155 | |

**LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP.**
**d/b/a LIBERTY**

**NASHUA FORMER MGP**

LINE
NO.

1. SITE LOCATION: 38 Bridge Street, Nashua, New Hampshire.

2. DATE SITE WAS FIRST INVESTIGATED: At the end of 1998, the New Hampshire Department of Environmental Services (NHDES) sent a "Notification of Site Listing and Request for Site Investigation" for the former Nashua Manufactured Gas Plant (MGP) to the former plant owners/operators: EnergyNorth Natural Gas, Inc. d/b/a National Grid (ENGI)[1], and Public Service Company of New Hampshire (PSNH) and its parent company, Northeast Utilities Services Company (NU). NHDES designated the site DES #199810022.

3. NATURE AND SCOPE OF SITE CONTAMINATION: Residual materials from the former MGP have been identified at the site and in the adjacent Nashua River. These residuals, which include tars and oils, have been found mainly in subsurface soil at discrete locations, in groundwater, and in localized river sediments.

4. SUMMARY OF MATERIAL DEVELOPMENTS AND INTERACTIONS WITH ENVIRONMENTAL AUTHORITIES:

   - Prior to the time NHDES issued its notice letter to ENGI, the US Environmental Protection Agency (EPA) was remediating contamination (asbestos) at the former Johns Manville plant located adjacent to, and downstream from the 38 Bridge Street property. In the course of that work, EPA detected what it determined to be MGP related residuals in Nashua River sediments containing asbestos. EPA sought reimbursement from ENGI and PSNH of only those incremental additional costs it incurred to dispose of sediments containing MGP related wastes in addition to asbestos. ENGI and PSNH entered into a settlement agreement with the EPA at the end of September 2000. Under the terms of the agreement, each company received a release from liability associated with the so-called Nashua River Superfund Site and contribution protection against future claims associated with that site. The settlement agreement made it clear that EPA does not contend that ENGI or PSNH contributed any asbestos to the Nashua River.

   - In response to the 1998 notice from NHDES, QST Environmental, Inc. (QST, subsequently Environmental Science and Engineering, Inc. (ESE), and later Harding ESE, Inc. (Harding ESE)), submitted a Scoping Phase Field Investigation Scope of Work to NHDES on behalf of ENGI in February 1999.

[1] In July 2012, EnergyNorth was acquired by Liberty Utilities and its legal name changed to Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty. For consistency purposes, the acronym ENGI will be used throughout this document.

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**d/b/a LIBERTY**

**NASHUA FORMER MGP**

LINE
NO.

- In response to comments from NHDES, QST and ENGI refined the Scope of Work for the Scoping Phase Field Investigation and resubmitted to NHDES in April 1999.

- NHDES approved the refined Scoping Phase Field Investigation Scope of Work in May 1999.

- During the summer of 1999, ENGI and QST conducted the Scoping Phase Field Investigation, collecting site background information and soil, groundwater, surface water and sediment samples from the former Nashua MGP and the adjacent Nashua River.

- ENGI and ESE submitted the Scoping Phase Field Investigation Report to NHDES in December 1999.

- NHDES provided comments to ENGI and ESE in February 2000 on the Scoping Phase Field Investigation Report and requested a Phase II Investigation Scope of Work.

- On behalf of ENGI, ESE submitted a Draft Phase II Investigation Work Plan to NHDES in April 2000.

- ENGI and ESE met with the NHDES site manager in April 2000 to discuss the Draft Phase II Investigation Work Plan.

- NHDES provided written comments on the Draft Phase II Investigation Work Plan in June 2000.

- ENGI and ESE met with NHDES in August 2000 to discuss NHDES' comments on the Phase II Work Plan.

- ENGI submitted a letter to NHDES in August 2000 discussing revisions to the Draft Phase II Investigation Work Plan in response to comments from NHDES and PSNH/NU, along with a proposed schedule for implementation of the work.

- NHDES approved the Revised Phase II Work Plan for the site at the end of August 2000.

- NHDES provided comments to ENGI and Harding ESE on the proposed schedule for Phase II Work Plan implementation in September 2000.

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**NASHUA FORMER MGP**

LINE
NO.

- ENGI submitted an addendum to the Phase II Work Plan, including a proposed approach for risk evaluation, to NHDES in November 2000.

- Subsequent to meetings and discussions throughout 2000, ENGI and PSNH reached agreement in late 2000 regarding sharing of costs for the remediation work and transfer of management of the remediation work to ENGI.

- Harding ESE implemented the Phase II Work Plan during the fall and winter of 2000/2001. Work entailed a comprehensive field program that included the advancement of river borings and collection of sediment samples as well as the installation of borings and monitoring wells on and off the property.

- NHDES provided comments on the Phase II Work Plan addendum in February 2001.

- Harding ESE responded to NHDES comments on the Phase II Work Plan addendum in March 2001.

- In May 2001, ENGI submitted to NHDES a Draft Site Conceptual Model to assist with finalization of the Phase II Work Plan Addendum and met with NHDES to discuss.

- ENGI and Harding ESE revised the Draft Site Conceptual Model and outlined supplemental field activities to be included in the Phase II Work Plan Addendum and submitted to NHDES in June 2001.

- In July 2001, ENGI and Harding ESE met with NHDES to review the Site Conceptual Model and proposed Phase II supplemental investigation activities.

- ENGI and NHDES met in August 2001 to discuss the overall site objectives.

- In September 2001, Harding ESE, on behalf of ENGI, submitted a Phase IIB Supplemental Site Investigation (SI) Scope of Work to NHDES.

- NHDES provided verbal approval for the Phase IIB Supplemental SI, and Harding ESE initiated the field program on behalf of ENGI in October 2001.

- NHDES provided written approval of the Phase IIB Supplemental SI in October 2001. A modification to the proposed scope of work relating to investigations adjacent to

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**NASHUA FORMER MGP**

LINE
NO.

the gas lines was proposed and verbal approval was obtained from NHDES on November 19, 2001.

- Property owners north of the Nashua River did not provide access to install monitoring wells proposed in the Phase IIB SOW. Harding ESE completed all on-site work outlined in the Phase IIB SOW in February 2002.

- ENGI received access from PSNH to install Phase IIB monitoring wells west of the site in March 2002.

- Harding ESE installed additional groundwater monitoring wells west of the site in March and sampled all newly installed monitoring wells in April 2002. All work outlined in the Phase IIB SOW was completed except for the proposed monitoring wells north of the Nashua River where access was denied.

- The Phase II Report was submitted to NHDES in February 2003. The report was approved by NHDES in August 2003. At the time of approval, NHDES required ENGI to begin work on the Remedial Action Plan for the site, due in 2004.

- ENGI met with NHDES on November 3, 2003, to review the proposed remedial schedule, which called for the Remedial Action Plan to be submitted in July 2004, and remediation to occur in 2005. NHDES approved the schedule by letter dated December 1, 2003. In that letter they concurred with ENGI's request to divide the site into terrestrial and aquatic portions, to facilitate remediation of sediments concurrent with re-armoring of ENGI's gas mains crossing the river.

- By way of a May 5, 2004 letter, ENGI requested that NHDES waive the Remedial Action Plan (RAP) requirement for the aquatic portion of the site and allow ENGI to proceed with capping sediments in conjunction with gas main rearmoring, which was scheduled for completion in 2004. NHDES approved the request by letter dated May 14, 2004.

- ENGI held pre-application meetings with state and federal agencies (NHDES Wetlands Bureau, United States Army Corps of Engineers, United States Department of Fish and Wildlife, United States Environmental Protection Agency and National Oceanic and Atmospheric Administration) in June 2004. These meetings were held in advance of permit application submission for the capping/rearmoring project, to review the project and expedite the approval process. The application was submitted to these agencies as well as the City of Nashua on July 1, 2004. On July 6, 2004, NHDES deemed the permit application administratively complete. The hearing was closed on July 26, 2004 and the permit was issued in September 2004.

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**NASHUA FORMER MGP**

LINE
NO.

The capping and re-armoring was completed in October 2004 and the Remedial Completion Report, submitted to NHDES in January 2005, was subsequently approved.

- In October 2005, ENGI submitted the Terrestrial Remedial Action Plan to NHDES, and the document was deemed complete by NHDES in March 2006. NHDES requested supplemental information to be submitted before ENGI proceeded with remediation, and in 2007 ENGI gathered the requested data.

- In November 2007, ENGI submitted a Workplan for DNAPL Recovery Pilot Test to NHDES and the document was approved by NHDES on November 14, 2007.

- ENGI applied for three permits required for the implementation of the NHDES-approved DNAPL pilot testing activities: Nashua Conservation Commission Permit, Nashua Zoning Board of Appeals Permit and NHDES Dredge and Fill Permit. ENGI attended numerous hearings related to obtaining the permits and obtained the three permits on April 21, 2008, April 23, 2008, and May 31, 2008, respectively.

- In June 2008, ENGI installed six extraction wells for DNAPL recovery pilot testing at the site. ENGI completed the construction of the coal tar recovery system trailer (i.e., the equipment that will be used to pump, collect and temporarily store the coal tar) in December 2008. Trenching for the subsurface piping and final system installation was delayed in late 2008 due to weather. ENGI performed manual DNAPL recovery throughout 2008 and the first three quarters of 2009.

- In Spring 2009, ENGI began trenching and final system installation activities for the DNAPL recovery pilot testing. The trenching, pump installations and system electrical work were completed in July 2009. Electrical service was installed in late August 2009. The system was started up in November 2009 and has been operational since that time.

- In September 2010, ENGI submitted an Installation Summary and DNAPL Recovery Pilot test summary report to NHDES. This report recommended that DNAPL extraction activities continue. In October 2010, a work plan for an off-site groundwater investigation program to support the delineation of a Groundwater Management Zone was submitted to NHDES. This work plan was approved by NHDES in a letter dated November 5, 2010. Access negotiations and environmental permitting for the NHDES-approved investigation were completed in June 2011.

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**NASHUA FORMER MGP**

LINE
NO.

- The NHDES-approved subsurface soil and groundwater investigation program was initiated on September 26, 2011. The goal of this program was to delineate a Groundwater Management Zone for the site, and allow for the filing of a Groundwater Management Permit (GMP). Due to known asbestos in the off-site area to be investigated, ENGI submitted an "In-active Asbestos Disposal Site (ADS) Work Plan"; NHDES approved the asbestos work plan in October 2011. Soil boring and well installation work was performed between October and December 2011. An In-active ADS Site Completion Report was submitted to and accepted by NHDES on May 4, 2012. Groundwater sampling events were conducted in February and May 2012. A meeting to discuss the preliminary results of the Groundwater Management Zone (GMZ) investigation program with NHDES took place on August 16, 2012. It was agreed that two more rounds of groundwater sampling should occur before a delineation of the GMZ is considered.

- On November 27, 2012 and December 6, 2012, 8.25 feet and 10.83 feet of DNAPL appeared in MW-106, situated in the foot print of historical Holder #2. A weekly monitoring and removal plan was initiated at this time and is ongoing as of July 2013. To date, 109 gallons of DNAPL has been removed manually, in addition to the system removal discussed above.

- In January 2013, a Supplemental Investigation Report (SIR) and DNAPL Recovery System Pilot Test Progress report was submitted to NHDES reporting on additional investigation activities, including the installation of sixteen additional wells in 2011, and the May and September 2012 (second and third of three) rounds of sampling to define groundwater quality and hydrogeologic conditions at the site, so that the GMZ can be delineated. Additionally, the report includes information regarding DNAPL recovery system O&M activities and DNAPL recovery rates demonstrating that the system still effectively recovers DNAPL. A meeting with NHDES took place on March 22, 2013, to discuss these results and next steps.

- NHDES responded to the January 2013 submittal via letter dated May 21, 2013, accepting the SI Report and authorizing ENGI to proceed with the delineation of the GMZ in order to submit a Groundwater Management Permit (GMP) application, and the preparation of a revised Remedial Action Plan (RAP) for the terrestrial portion of the site. NHDES allows ENGI to utilize manual removal of DNAPL as these methods are more effective than the automated recovery system.

- ENGI responded to the NHDES letter on June 19 with a schedule targeting December 31, 2013, for submittal of the GMP application and revised RAP.

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**NASHUA FORMER MGP**

LINE
NO.

- In December 2013, ENGI submitted a request to revise the RAP. The purpose of the request was to summarize activities conducted since submittal of the 2013 Supplemental Investigation Report and to propose a revision to the approved RAP for the area on site known as “Holder # 2.”

- The RAP submitted in 2005 selected asphalt capping in the area of Holder #2. The entire area of the Holder was not designated to be capped with asphalt. At the time of the preparation of the RAP, separate phase NAPL was not considered to be present in recoverable quantities in Holder #2. In order to address what appears to be a limited area and quantity of NAPL in a monitoring well in Holder #2, continued manual NAPL recovery from two additional wells in the Holder #2 area was proposed as part of the GMP monitoring program.

- In addition to the NAPL recovery activity, the area of asphalt capping was proposed to be expanded to include all of former Holder #2. This expansion of paving will also address the asbestos contaminated material (ACM) present in this area of the site. The asphalt cap detail presented in the proposed RAP revision will be modified (as necessary) to address the relevant solid waste regulations for ACM in soil.

- On June 4, 2014, the NHDES approved of the requested RAP revision and required that a RAP Summary Report, with the necessary engineering details for the selected remedies, be provided. ENGI plans to submit this RAP Summary Report by December 31, 2014.

- The GMP Application was submitted in March 2014. The GMP proposed a list of monitoring wells and analytical methods in order to monitor the Groundwater Management Zone.

- On June 5, 2014, the NHDES approved the GMP application. This Permit was issued for a period of five years requiring the monitoring of groundwater quality, assessing and recovering any free product found, and visually inspecting the Nashua River sediment cap area. During the first year of the Permit, monitoring events will be conducted in October 2014 and April 2015, and each successive April and October. Annual summary reports are submitted to the NHDES in January of each year.

- The first groundwater monitoring annual summary report was submitted to NHDES in February 2015, and included the groundwater data from the first GMP round of sampling on October 27, 2014.

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**d/b/a LIBERTY**

**NASHUA FORMER MGP**

LINE
NO.

- ENGI submitted the draft Activity and Use Restriction (AUR) and RAP Engineering Design details for the cap on September 14, 2015. ENGI received comments from NHDES on December 15, 2016. NHDES altered the design to include an impermeable capping layer, and incorporation of standards in the Waste Management Bureau's Asbestos Disposal Site rules. As ENGI is planning to pave the Nashua property in 2018, the cap will be installed in conjunction with this capital project.

- In May 2017, the NHDES requested by letter that all active hazardous waste sites managed by the Hazardous Waste Remediation Bureau include sampling for Per- and Polyfluoroalkyl Substances (PFAS) in one of their groundwater sampling rounds, as part of a statewide study of these compounds. ENGI fulfilled this request during regularly scheduled sampling in 2018.

- The capping remedy was planned for 2018 in conjunction with an overall paving of the property, however a portion of the City's sewer pipe that transects the property collapsed in early February 2018 prompting the City to plan a lining upgrade to it during summer 2018. This event has caused the remedy construction to be pushed out to 2019.

- In a letter dated May 2, 2019, NHDES approved ENGI's 5-year Groundwater Management Permit (GMP) renewal application decreasing the frequency of sampling for all but two wells in the perimeter groundwater management zone. Additionally, NHDES required that a second confirmatory round of PFAS samples be taken in the 2019 GMP monitoring round.

- In the same May 2, 2019 letter, NHDES approved GZA Geoenvironmental's (GZA) proposed cap design transmitted to them on January 30, 2019. The cap design was altered to require an impermeable barrier only under "non-paved" surfaces.

- The cap installation and subsequent paving of the entire property has been pushed out to 2021, due to delays in permitting and the COVID-19 pandemic. **ENGI is still on schedule to complete this project, and has been working toward final design to be used for construction. During the 2020-21 period, ENGI has been working with the City of Nashua to assess the condition of subsurface stormwater and sewer lines, and is preparing applications for NHDES Alteration of Terrain permitting for the property paving.**

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5. NEW HAMPSHIRE SITE REMEDIATION PROGRAM PHASE: All Supplemental Phase II Site Investigation Work that could be performed (based on property access) has been completed. Phase II Report was submitted to NHDES in February 2003, and approved by NHDES on August 28, 2003. Remediation of the Nashua River sediments was completed in the fall of 2004. A Remedial Action Plan (RAP) for the upland and groundwater was submitted in October 2005, and approved by NHDES in March 2006. DNAPL recovery is on-going. A Groundwater Management Permit was granted on June 5, 2014. A RAP Summary, involving the asphalt capping of the area over Holder #2 and continued groundwater monitoring, was submitted on April 2, 2015. A Monitoring Summary and Progress Report was submitted by ENGI on February 7, 2015. NHDES accepted the RAP Summary on April 10, 2015, with the provisions that ENGI submit the draft Activity and Use Restriction (AUR) and final engineering design plan for the cap by September 15, 2015. ENGI submitted the draft Activity and Use Restriction (AUR) and RAP Engineering Design details for the cap on September 14, 2015. NHDES responded to ENGI with their comments on December 15, 2016. **Design for the engineered cap remedy is complete and approved by NHDES. ENGI is in the process of obtain State and City permitting for this construction, now planned for the 2021 construction season.**

6. HISTORY AND CURRENT STATUS OF USE AND OWNERSHIP: The Nashua Gas Light Company built the original coal gas facility in 1852 or 1853. In 1889, the Nashua Gas Light Company merged with the Nashua Electric Company to form the Nashua Light, Heat and Power Company (NHLPC). In 1914, the NLHPC merged with the Manchester Traction Light & Power Company, and PSNH acquired the facility in 1926. The MGP facility was upgraded and expanded. In 1945, PSNH divested the gas operations to Gas Service, Inc. Gas production was eliminated in 1952 when natural gas was supplied to the city via pipeline. In 1981, Gas Service, Inc. merged with Manchester Gas Company to form ENGI. ENGI currently owns the majority of the former gas plant property.

7. LISTING AND STATUS OF INSURANCE AND 3RD PARTY LAWSUITS AND SETTLEMENTS: The EPA made a claim against ENGI and PSNH related to the so-called Nashua River Asbestos Site located adjacent to the former MGP. EPA was removing asbestos from the Nashua River, when some was found to be mixed with wastes allegedly from the MGP. Without admitting any facts or liability, by agreement effective December 21, 2000, ENGI resolved EPA's claim in exchange for a payment of $387,371.46, plus interest accrued between settlement and final approval of an administrative consent order by EPA.

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ENGI and PSNH have entered into a confidential Site Responsibility and Indemnity Agreement effective as of September 15, 2000, which governs the financial and decision-making responsibilities of the two companies through the remainder of site study and remediation. Under this agreement, ENGI will take the lead on site investigation and remediation.

Numerous, confidential insurance settlements have been entered into. A jury trial commenced against the London Market Insurers and Century Indemnity on November 1, 2005. On November 14, 2005, the jury returned a verdict in favor of EnergyNorth finding that the defendants were obligated to indemnify EnergyNorth for response costs incurred at the site. The Court then awarded ENGI its reasonable costs and attorneys fees to be paid by the defendants. Subsequent to the verdict, the London Market and ENGI entered into a confidential settlement. Century appealed to the First Circuit Court of Appeals in the summer of 2006. However, on the day its brief was due at the First Circuit, Century withdrew its appeal. Because the site has not yet been remediated, the jury was not asked to make a damage determination. Future proceedings will take place after the remedy has been approved by the NHDES to determine the indemnification amounts to be paid by Century. The New Hampshire Supreme Court's ruling and guidance on the proper manner in which costs are to be allocated among insurers (discussed in more detail in the Manchester MGP summary) will be used in the calculation of that figure.

***Note: This summary is an overview only and is not intended to be a comprehensive recitation of all relevant information relating to the site and the associated liability.***

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1. SITE LOCATION: 130 Elm Street, Manchester, New Hampshire.

2. DATE SITE WAS FIRST INVESTIGATED: The New Hampshire Department of Environmental Services (NHDES) compiled a list of all former Manufactured Gas Plants (MGPs) in New Hampshire that were not already subject to a site investigation or remediation. In March of 2000, NHDES sent out notice letters to all parties it deemed responsible for the sites. EnergyNorth Natural Gas, Inc. (ENGI)[1] received a "Notification of Site Listing and Request for Site Investigation" for the former Manchester MGP from NHDES, which designated the site DES #200003011.

3. NATURE AND SCOPE OF SITE CONTAMINATION: Residual materials from the former MGP have been identified at the site. These residuals, which include tars and oils, have been found mainly in subsurface soil at discrete locations and in groundwater at the former MGP, as well as in the downgradient Singer Park and river sediment.

4. SUMMARY OF MATERIAL DEVELOPMENTS AND INTERACTIONS WITH ENVIRONMENTAL AUTHORITIES:

   - On behalf of ENGI, Harding ESE, Inc. (Harding ESE), submitted a Scoping Phase Field Investigation Scope of Work to NHDES in March 2000.

   - NHDES approved the Scoping Phase Field Investigation Scope of Work in June 2000.

   - During the summer and fall of 2000, ENGI and Harding ESE conducted the Scoping Phase Field Investigation, collecting site background information and soil, groundwater, surface water and sediment samples from the former Manchester MGP and the nearby Merrimack River.

   - On August 31, 2000, an underground tank containing MGP residuals was discovered at the site. As required by NHDES regulations, the tank contents were removed and disposed of subject to a permit from NHDES. Harding ESE, on behalf of ENGI, submitted a summary report to NHDES in January 2001 documenting the response action.

   - ENGI and Harding ESE submitted the Scoping Phase Field Investigation Report to NHDES in February 2001.

[1] In July 2012, EnergyNorth was acquired by Liberty Utilities and its legal name changed to Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty. For consistency purposes, the acronym ENGI will be used throughout this document.

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- NHDES provided comments to ENGI and Harding ESE in April 2001 on the Scoping Phase Field Investigation Report and requested a Phase II Investigation Scope of Work.

- ENGI responded to NHDES' comments on the Scoping Phase Investigation Report and indicated that ENGI planned to solicit bids for the Phase II Scope of Work.

- In July 2001, on behalf of ENGI, Harding ESE submitted a Scope of Work to NHDES to fence the ravine near the former Manchester MGP to prevent access to impacted sediments. In October 2001, NHDES accepted ENGI's fence installation plan, but requested clarification on the fence location and signage. In correspondence dated April 3, 2002, ENGI provided proposed language to NHDES for the signs to be attached to the ravine fence. NHDES approved the ravine sign language in April 2002.

- On May 1, 2002, ENGI issued a Request for Proposals to eight environmental consultants for the Phase II Site Investigation and Risk Characterization. ENGI received six proposals for the Phase II work in June 2002.

- In June 2002, the City of Manchester approved the ravine fence location and granted access to City property to install. The work was completed in August 2002.

- URS Consultants were awarded the contract to undertake the next phase of work. A Phase II Site Investigation Scope of Work was submitted in September 2002.

- Phase II field investigations began in the fall of 2002.

- In June 2003, the City of Manchester approved a proposal to construct a minor league ballpark, retail shops, parking garage, hotel and high-rise condominium complex on the Singer Park site, in the same general areas that MGP impacts were detected in ongoing Phase II investigations. Following supplemental ravine investigations during the spring and summer of 2003, the Drainage Ravine Engineering Evaluation was submitted to NHDES in January 2004, and presented four potential remedial alternatives for the ravine, which is located on a portion of Singer Park.

- ENGI had been a regular participant in monthly Singer Park redevelopment meetings with NHDES, the City of Manchester and the various developers from April 2003 until the regular meetings ended on November 15, 2004. ENGI had attended these coordination meetings to ensure that the environmental and construction aspects of

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the redevelopment were being addressed concurrently and that ENGI avoided incurring costs associated with another entity's contamination.

- ENGI entered into confidential agreements with Manchester Parkside Place (the owner of the ravine property) for access and cleanup of MGP byproducts in the ravine in January 2005.

- In January 2005, ENGI submitted a Remedial Design Report to NHDES selecting excavation and off-site disposal of source material and impacted soils as the remedial alternative for the ravine. NHDES approved of this alternative via a letter dated February 7, 2005. Eleven contractors were invited to bid on the ravine remediation in January 2005. The contract was awarded to the low bidder (ENTACT) in February 2005. Remediation of the ravine began in March and was completed in July 2005. A remedial completion report was submitted to NHDES on September 2, 2005.

- ENGI submitted a Phase II Site Investigation Report to NHDES in March 2004. The report concluded that MGP impacts (including impacted soil and groundwater and separate phase coal tar) were present in the subsurface beneath the 130 Elm Street property, portions of Singer Park at depth and the Merrimack River sediment. Further investigations were recommended by ENGI to further assess the nature and extent of this contamination and a work plan proposing those investigations was submitted to NHDES in May 2004 and approved in July 2004. These supplemental investigations were completed and documented in the Supplemental Phase II Investigation Report and the Stage I Ecological Screening Report for the Merrimack River, submitted to NHDES in February and March 2005, respectively. The reports concluded that Remedial Action Plans for the upland and Merrimack River portions of the site were required. On September 15, 2005, NHDES issued a letter accepting the reports and requested ENGI prepare a Remedial Action Plan (RAP) to address impacted sediments in the Merrimack River, as well as MGP-related impacts on the upland portion of the site. Preparation of the RAPs began in August 2006.

- Additional Merrimack River investigations were completed in 2007 and the Remedial Design Report for dredging approximately 9,000 cubic yards of coal tar-impacted sediments from the river was submitted to NHDES on May 11, 2007. ENGI applied for, and was granted, a Dredge and Fill Permit for the remedial dredging from NHDES and the United States Army Corps of Engineers on May 18, 2007. Dredging of the river commenced in June 2007 and was substantially completed by the end of the year. Final site restoration activities associated with the sediment remediation were complete in May 2008. A Remedial Action Implementation Report

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documenting the sediment remediation activities was submitted to NHDES in May 2008.

- Certain pre-design investigations were completed on the upland portion of the site in 2008/2009. ENGI also completed interim Phase I Corrective Actions at the site, including pilot scale light non-aqueous phase liquid (LNAPL) recovery, pilot scale dense non-aqueous phase (DNAPL) recovery, and design for repair/replacement of a deteriorated portion of the site drainage system located within a known LNAPL area of the site. Limited surface soil removal activities were conducted during the summer/fall of 2008 in an area with detected Upper Concentration Limit exceedances in shallow soils.

- ENGI was issued a Groundwater Management Zone (GMZ) permit No. GWP-200003011-M-001 for the former MGP site on June 15, 2009. The permit establishes a groundwater management zone in the vicinity of the former MGP site with associated notification/groundwater monitoring requirements. Groundwater monitoring events to support this GMZ permit have been ongoing, every April and October.

- ENGI submitted an RAP for the upland portion of the site to NHDES on June 30, 2010. The remedial objectives for the site include control of mobile DNAPL, reduction in contaminant mass (where practicable), and management of residual contamination through the use of administrative controls. The recommended remedial alternative includes removal of the contents of certain subsurface structures where removal is anticipated to provide a reduction in the potential for the further release of DNAPL to the subsurface; NAPL recovery from the subsurface; construction of a barrier wall proximate to the Merrimack River to mitigate potential DNAPL migration; and use of administrative controls to address potential human exposure to residual soil and groundwater contamination. Additional investigation activities were recommended to support the preparation of Design Plans and Construction Specifications following NHDES approval of the RAP and to confirm the appropriateness of certain remedial alternatives recommended in the RAP.

- In Fall 2010, ENGI performed storm drain rehabilitation activities on a deteriorated portion of the site drainage system that is located within a known LNAPL area. This work was performed to mitigate the migration of LNAPL to the Merrimack River via the storm drain system. These activities were mainly completed in late 2010.

- In April 2011, NHDES approved of the upland RAP and requested that ENGI proceed with the additional investigation activities recommended in the June 2010 RAP. In addition, ENGI was contacted by both the developer and condominium association

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associated with the property directly downgradient of the site regarding potential impacts to the property, as well as the proposed remedy; ENGI met with both parties in early and mid-2011.

- After meeting with the developer of the property directly downgradient of the site at the potential location of the barrier wall regarding potential impacts to the property in September/October 2011, access was obtained to conduct certain approved pre-design off-site investigation activities as recommended in the June 2010 RAP. The off-property investigations were substantially completed in December 2011. A meeting was held with NHDES in December 2011 to discuss the results. A Remedial Design Report for the off-site property is currently being finalized.

- On-site pre-design investigation activities were conducted during the spring and summer of 2012 including: additional groundwater quality monitoring, former gas holder foundation test pit excavations, supplemental LNAPL delineation, cyanide source investigation test pit excavations, cyanide delineation and source investigation monitoring well installation, and storm drain inspection.

- Further storm drain inspections occurred during July and August 2013. The remedial design and construction specifications report was drafted including a summary of the design investigation activities and findings. The remedial design includes the monitoring and practicable recovery of NAPL at strategic on-site and off-site locations, as well as excavation of subsurface structures with concurrent source removal if encountered. The Remedial Design Report drafted, also summarizes the results of cyanide source investigation and delineation work, with further source delineation work anticipated.

- In addition to routine Groundwater Management Permit (GMP) sampling and reporting, an application for GMP renewal was also submitted to NHDES in July 2014, with the Annual Summary Report for the 2013/2014 groundwater Monitoring year. The Remedial Design Report was submitted to NHDES on December 19, 2014. On July 15, 2015, NHDES accepted the proposed remedial design with exceptions involving further remediation of historical Holder 3, and further investigation of the storm drain system beneath and downstream of the site. ENGI responded to NHDES' comments and requests on May 12, 2017.

- Per the 2010 Remedial Action Plan and the 2014 Remedial Design Report ENGI removed material from a tar separator, tar well and other subsurface structures, dug four test pits, and installed three new monitoring wells and an extraction well on-site, prior to property paving in Fall 2017. Further removals from subsurface structures were planned for 2018.

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- During 2017, NHDES required active hazardous waste sites managed by the NHDES Hazardous Waste Remediation Bureau to include Per- and Polyfluoroalkyl Substances (PFAS) in one of their sampling rounds.

- In 2019, ENGI continued to address potential site impacts per the 2014 Remedial Design Report by removing approximately 9,000 gallons of contaminated liquids and sludge from a subsurface tar liquor decanter structure in the gas plant area. After removal, ENGI cleaned the structure and filled it with inert fill. **The details of these activities were reported to NHDES in the 2018/2019 Annual Summary Report dated July 24, 2019.**

- In June 2019, three extraction wells were also installed at the western boundary of the site where an existing well in that area was detecting recoverable product. These wells will be used to remove free product on an ongoing basis. Three additional groundwater monitoring wells were installed in the Holder #3 area to monitor potential impacts detected during previous test pit excavation.

- A pump-down of an existing well on the east side of the property, installed in 2017 to recover oil from a known historical oil tank impact in that area, took place in June 2019. The test succeeded to return recoverable product to the well and it will be used to remove free product on an ongoing basis.

- In addition to routine Groundwater Management Permit (GMP) sampling and reporting, an application for GMP renewal was submitted to NHDES in May 2020 with requests to reduce the frequency of sampling of two wells and adding sampling of the 6 new wells installed in 2017-18. Annual Summary Reports detailing the results of groundwater monitoring at the site continue to be submitted.

- ENGI reconstructed a water supply line near the entrance to the plant generating a substantial amount of soil that required disposal at ESMI, Loudon, NH.

- **ENGI received the renewed GMP on February 26, 2021, effective until 2026, covering the monitoring of 42 groundwater monitoring wells each April and October.**

- **A sinkhole in the LNG Area over Holder #3 was discovered in October 2020. Fill materials were excavated and the sinkhole was repaired. A new sinkhole reappeared in the same area in May 2021, and the process was repeated to**

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**stabilize the area. This area was historically filled with soil and debris when the old holder was decommissioned.**

**5.** NEW HAMPSHIRE SITE REMEDIATION PHASE: Phase I Site Investigation complete. Phase II Site Investigation complete and supplemental report submitted to NHDES in February 2005. Remedial Action Plan (RAP) for the ravine submitted and approved by NHDES in 2005; remediation of ravine completed in July 2005. Remediation of the river sediment was completed in 2007. A RAP for the upland portion of the site was submitted to NHDES for review on June 30, 2010. NHDES issued its approval of the RAP for the upland portion of the site in a letter dated April 11, 2011. The Remedial Design Report summarizing the activities for addressing on-site and off-site impacts was submitted on December 19, 2014. On July 15, 2015, NHDES accepted the proposed remedial design with exceptions. ENGI addressed these concerns and implemented the remedial activities on-site and off-site in 2017.

In 2019, ENGI continued to address potential site impacts per the Remedial Design Report by removing approximately 9,000 gallons of contaminated liquids and sludge from a subsurface structure in the gas plant area, installing three extraction wells at the western boundary of the site, and installing three groundwater monitoring wells in one of the gas holder footprints. Also in 2019, needed reconstruction of a major water supply line near the entrance to the property resulted in the removal of a substantial amount of MGP-impacted soil.

6. HISTORY AND CURRENT STATUS OF USE AND OWNERSHIP: The former Manchester MGP is believed to have started producing coal gas in 1852. Gas was produced at the site by the Manchester Gas Company and its predecessors until the MGP was shut down in 1952 when natural gas was supplied to the city via pipeline. ENGI is the successor by merger to the Manchester Gas Company. ENGI continues to own and operate the 130 Elm Street property as an operations center.

7. LISTING AND STATUS OF INSURANCE AND 3RD PARTY LAWSUITS AND SETTLEMENTS: In late 2000, ENGI filed suit against UGI Utilities, Inc. in the United States District Court for the District of New Hampshire, alleging that during much of the early part of the 20th century, a predecessor to that entity “operated” the Manchester Gas Plant, as defined by the Comprehensive Environmental Response, Compensation and Liability Act (commonly referred to as “CERCLA” or “Superfund”). This claim was similar to a claim litigated and ultimately settled by the parties in the late 1990s, related to the former gas plant in Concord, NH. The case went to trial in June 2003 and was settled after 8 days of trial.

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Insurance recovery efforts are complete, and confidential settlements have been entered into with all insurance company defendants. An agreement with the last remaining insurance carrier was negotiated in August 2008, under which that carrier paid ENGI's legal fees incurred in the litigation. That settlement came about after a ruling from the New Hampshire Supreme Court, in response to a question certified by the United States District Court, on allocation of coverage, and the scope and meaning of NH RSA 491:22-a, as it relates to awards of attorneys' fees. EnergyNorth Natural Gas, Inc. v. Certain Underwriters at Lloyds, 156 N.H. 333 (2007). As to allocation, the Court ruled as proposed by the carrier that insurance coverage should be allocated on a *pro rata* basis when multiple policies are triggered by an ongoing event. ENGI had argued for an "all sums" allocation approach in which the insured could choose the policy years from which to obtain indemnity. With respect to legal fees, the Court held that " [i]f the insured has obtained rulings that require the excess insurer to indemnify it, the insured has prevailed within the meaning of RSA 491:22-b, and is immediately entitled to recover its reasonable attorneys' fees and costs. Recovery of these fees and costs does not depend on whether, after all is said and done; the excess insurer actually has to pay any indemnification. The insured becomes entitled to the fees and costs once it obtains rulings that demonstrate there is coverage under the excess insurance policy." Under that finding, the insurance carrier was obligated to reimburse legal fees even if the *pro rata* allocation analysis resulted in the carrier owning no indemnity.

***Note: This summary is an overview and is not intended to be a comprehensive recitation of all relevant information relating to the site and the associated liability.***

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**LACONIA FORMER MGP AND LIBERTY HILL DISPOSAL AREA**

LINE
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1. SITE LOCATION: The former MGP was located on Messer Street in Laconia. Sometime in the early 1950s, during decommissioning of the MGP, wastes from the MGP were disposed of at a location on Liberty Hill Road in Gilford. At the time of the disposal, the property was utilized as a gravel pit, and the disposal reportedly occurred with the permission of the gravel pit owner. The property currently comprises part of a residential neighborhood.

2. DATE SITE WAS FIRST INVESTIGATED: In 1994 and 1995, Public Service Company of New Hampshire (PSNH), one of the former owners and operators of the Laconia Manufactured Gas Plant (MGP), conducted limited site investigations at the plant. In 1996, the New Hampshire Department of Environmental Services (NHDES) sent a "Notification of Site Listing and Request for Site Investigation" for the former Laconia MGP to PSNH and its parent company, Northeast Utilities Services Company (NU), and to EnergyNorth Natural Gas, Inc. (ENGI)[1], another former owner. NHDES designated the site DES #199312038. ENGI and PSNH reached a settlement, reported previously to the New Hampshire Public Utilities Commission (NHPUC), in September 1999. As a result of that settlement, PSNH has had responsibility for the MGP site remediation and interactions with NHDES.

   Per the aforementioned settlement, ENGI retained responsibility for any decommissioning-related liabilities, including off-site disposal. Therefore, in October 2004, ENGI notified NHDES of the possibility that wastes from the MGP were disposed of at a location on Liberty Hill Road sometime in the early 1950s during decommissioning of the plant. Drinking water samples were collected from two residential properties in the vicinity in December 2004, and from three additional properties in June and July 2005 by the NHDES; no MGP-related contaminants were detected. At the request of NHDES, ENGI began preliminary site investigations in July 2005 that culminated in the submission of a Site Investigation Report to NHDES in June 2006. As detailed in the report, MGP-related constituents have been detected in soil and shallow groundwater on four residential properties, and in the abutting brook. The report concluded that further investigations were necessary to determine the extent of the contamination. Additional investigation activities were completed between 2006 and 2009.

3. NATURE AND SCOPE OF SITE CONTAMINATION: Residual materials from the former MGP have been identified at the Laconia MGP site and in the adjacent Winnipesaukee River. Please contact PSNH and refer to PSNH filings with NHDES for complete information on the nature and extent of site contamination at the MGP. Residual materials

[1] In July 2012, EnergyNorth was acquired by Liberty Utilities and its legal name changed to Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty. For consistency purposes, the acronym ENGI will be used throughout this document.

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from the former MGP were disposed of at the Liberty Hill disposal area, and MGP-related constituents have been detected in soil and ground water.

4. SUMMARY OF MATERIAL DEVELOPMENTS AND INTERACTIONS WITH ENVIRONMENTAL AUTHORITIES: Based on the settlement with PSNH that has previously been reported to the Commission, ENGI has had no further involvement with the MGP site since the summer of 1999, except with regard to the Liberty Hill disposal area. Please contact PSNH and refer to PSNH filings with NHDES for complete information on material developments and interactions with environmental authorities.

With respect to the Liberty Hill disposal area, in October 2004, ENGI notified NHDES of the possible existence of this disposal site; the site was assigned disposal site number 200411113 by NHDES. NHDES collected drinking water samples from two residential wells in the vicinity in December 2004 and from three additional residential wells in June and July 2005; no MGP-related contaminants were detected. In January 2005, NHDES requested that ENGI conduct a preliminary site investigation on the two residential properties. ENGI submitted a scope of work for the investigation to NHDES on March 2, 2005. The investigation began in July 2005 and was completed in June 2006 with the submission of the Site Investigation Report.

Additional site investigations were conducted in 2006 and summarized in the December 20, 2006, Interim Data Report #2 submitted to NHDES. Based upon the results of the investigations, remediation is required at the site. In response, a Remedial Action Plan (RAP) was submitted to NHDES on February 28, 2007. The RAP presented NHDES with several remedial alternatives to address soil and groundwater contamination at the site. The February 2007 RAP identified soil excavation (to a depth of 3 feet), construction of a containment wall and impermeable cap on the four residential properties purchased by ENGI as the recommended alternative. In September 2007, NHDES responded to the February 2007 RAP and required that ENGI evaluate additional remedial alternatives that included further soil removal. In November 2007, a RAP Addendum was submitted to NHDES. The revised RAP recommended a remedial alternative that included removal of tar-saturated soils to a depth of approximately 45 feet, construction of a containment wall and impermeable cap on the four residential properties owned by ENGI. On February 29, 2008, NHDES issued a letter to ENGI indicating that NHDES had reached a preliminary determination that the remedy recommended in the November 2007 RAP met the NHDES requirements and that a final decision would be reached following a public meeting and comment period.

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On March 24, 2008, NHDES held a public comment meeting to discuss the recommended alternative and began 30-day public comment period. In April 2008, NHDES received a request to extend the public comment period closing date to May 8, 2008, to allow the Town time to provide technical comment. On June 26, 2008, NHDES issued a letter deferring its final decision on the recommended remedial alternative for the Liberty Hill site pending further data analysis following the development of a scope prepared collaboratively between the Town of Gilford and ENGI. In July and August 2008, technical representatives from ENGI, the Town of Gilford, the Liberty Hill neighborhood and NHDES met twice to discuss the comments provided to NHDES during the public comment period and discuss the scope for additional groundwater modeling activities and limited additional site data collection. The Company submitted Scopes of Work for additional data collection and groundwater modeling to NHDES in September and October 2008, respectively. The field activities were completed between November 2008 and January 2009. Modeling efforts began in late 2008 and were completed in May 2009. In March and May 2009, technical representatives from ENGI, the Town of Gilford, the Liberty Hill neighborhood and NHDES met to discuss the results of the field investigations and the modeling activities. One topic discussed with the technical team was that the modelling results indicate that low-flow pumping would need to be added to the selected remedy meet the remedial goals for the site. On June 30, 2009, NHDES issued a letter to ENGI requesting that a second RAP Addendum be prepared for the site to evaluate the technical changes (mainly the addition of low-flow pumping) to the proposed remedy that resulted from the modeling effort. ENGI submitted the second RAP Addendum to NHDES on August 17, 2009 and presented the findings at a public meeting held in Gilford on September 10, 2009. In October 2009, NHDES hired a third party consultant to review the RAP cost estimates and the results were presented in a report to NHDES in April 2010. In October 2010, NHDES issued a Preliminary Decision on RAP Addendum No. 2, in which NHDES indicated that it did not concur with ENGI's recommended remedial alternative and further recommended the complete removal of coal tar-impacted soils at the site. On January 28, 2011, ENGI submitted a comment letter to NHDES further explaining its rationale for the remedial alternative recommended in RAP Addendum No. 2. On November 2, 2011, NHDES announced a Final Decision indicating that it did not concur with ENGI's recommended remedial approach and selecting the full removal option as the remedy for the site. On December 2, 2011, ENGI filed an appeal of the NHDES Final Decision with the New Hampshire Waste Management Council. In March 2012, ENGI attended the Pre-Conference Hearing with the Council related to the appeal. Hearings on the matter were scheduled for October 18 and November 15, 2012. On July 26, 2012, the Hearing Officer granted an Assented to Motion to Continue the hearing until a date after January 3, 2013.

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NO.

During the period of time the appeal was subject to the continuance, the company, the New Hampshire Department of Justice and NHDES engaged in settlement discussions on a confidential basis. At the conclusion of those negotiations, NHDES and the company agreed on a final remedy for the site, which was approved by NHDES. That approval allowed ENGI to withdraw its appeal as of December 19, 2012, and proceed with implementation of the remedy. The town of Gilford was briefed on the agreed-upon remedy concurrently with NHDES approval and ENGI's withdrawal of the appeal.

ENGI has also performed numerous other activities requested by NHDES between 2008 and 2011, including remediation of the groundwater seep area near Jewett Brook in accordance with NHDES-approved September 2008 Initial Response Action Plan; evaluation of options for providing financial assurances to NHDES for the site remediation activities; coal tar recovery; semi-annual groundwater and surface water sampling activities; and drinking water well sampling. Groundwater sampling is reported to the NHDES in semi-annual reports. In addition, ENGI developed a Liberty Hill Road site website to assist in updating interested parties.

In conjunction with the Site Investigation work, ENGI has acquired 4 properties on Liberty Hill Road to facilitate remediation activities, and eliminate any potential risk to residents associated with a significant remediation and construction project. The properties were obtained based upon arms-length negotiations, and in one instance to settle potential litigation.

The site was remediated in 2014-2015 construction seasons, and was restored to a grass field by December 2015. NHDES approved the Notice of Activity and Use Restriction (AUR) in February 2017. In May 2017, ENGI received the post-construction groundwater monitoring permit, requiring annual groundwater sampling.

5. NEW HAMPSHIRE SITE REMEDIATION PROGRAM PHASE: On December 10, 2012, ENGI submitted a Conceptual Remedial Design Report to NHDES describing the approach for full removal. NHDES approved this Conceptual RAP Addendum design on December 18, 2012, and ENGI withdrew their appeal before the New Hampshire Waste Management Council on December 19, 2012. A public meeting was held in the Town of Gilford to present the approved Conceptual Remedial Design on January 23, 2013. The pre-design investigation to confirm extent and depth of contamination commenced on February 20, 2013 and was completed first week in April 2013. A public meeting was held on September 25, 2013 to present the design to the Town. The Remedial Design Report was finalized and approved by NHDES in December 2013. Plans and Specifications were developed concurrently, and the bidding process commenced in September 2013 with a Request for

**LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP.**
**d/b/a LIBERTY**

**LACONIA FORMER MGP AND LIBERTY HILL DISPOSAL AREA**

LINE
NO.

Information to ten (10) prospective contractors. On October 28, six (6) contractors were selected to participate in the bidding for the construction, with bids due back on December 6, 2013. On January 9, 2014, three (3) of the bidders were interviewed and Charter Environmental of Boston, MA (the Contractor) was selected for the project. A public meeting took place on February 12, 2014 to further explain details of the anticipated construction and to introduce the project team to the community.

The Contractor mobilized to the site and began set-up in May 2014, with the first load of soil being hauled from the site on June 6, 2014. Construction began to remove tar-impacted soil on the south side of the site in the first season, with little to no impact to the surrounding community. In 2014, approximately 65% of the impacted soil was removed for treatment. On April 8, 2015, ENGI presented the results of the first season of construction at a Gilford Town Select Board meeting, and presented expectations for the second season to the community. Starting on April 13, 2015, the north side of the site was remediated, with the removal of all tar-impacted soil completed on August 3, 2015. The entire project was completed on September 24, 2015 with 2,662 truckloads hauling 93,502 tons of tar-impacted soil removed for thermal treatment. Some additional site restoration work was needed in October 2015 and another seeding in April 2016 to repair damage to the original restoration caused by a heavy rainstorm that occurred on September 30, 2015. Throughout the course of the project there was no disruption to the neighboring community and no safety incidents, logging 26,975 safe working hours. The project was completed within budget parameters.

The only activities on this site during the past year and ongoing are mowing and groundwater and surface sampling, per the new post-remedial Groundwater Management Permit received on May 10, 2017. In May 2017, the NHDES requested by letter that all active hazardous waste sites managed by the Hazardous Waste Remediation Bureau include sampling for Per- and Polyfluoroalkyl Substances (PFAS) in one of their groundwater sampling rounds, as part of a statewide study of these compounds. ENGI fulfilled this request during regularly scheduled sampling in 2018. **ENGI continues to mow the site twice a year and sample the groundwater per the Groundwater Management Permit each September.**

6. HISTORY AND CURRENT STATUS OF USE AND OWNERSHIP: ENGI is the successor by merger to Gas Service, Inc. (GSI). In 1945, GSI acquired the gas manufacturing assets of PSNH. The Laconia MGP, which began operating in 1894, was included in that transaction. Gas manufacturing took place at the property until 1952, when the MGP was converted to propane. Half of the property is now owned by Robert Irwin and maintained

**LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP.**
**d/b/a LIBERTY**

**LACONIA FORMER MGP AND LIBERTY HILL DISPOSAL AREA**

LINE
NO.

as an open field, and the other half is owned by PSNH, which operates an electric substation on the parcel.

The Liberty Hill Road parcel on which disposal was believed to have occurred was utilized as a gravel pit at the time of the disposal. It was subdivided in May 1970, and currently constitutes part of a residential subdivision.

7. LISTING AND STATUS OF INSURANCE AND 3RD PARTY LAWSUITS AND SETTLEMENTS: ENGI and PSNH entered into a confidential settlement in 1999. Under this agreement, PSNH took the lead on the MGP site investigation and remediation and all communications with NHDES. ENGI retained responsibility for any decommissioning-related liabilities, including off-site disposal.

Insurance recovery efforts are complete with respect to the MGP, and numerous confidential settlements have been entered into. In 2003, the United States District Court certified a question to the New Hampshire Supreme Court asking what "trigger of coverage" should be applied to the insurance policies issued by Lloyds of London to ENGI's predecessor, Gas Service, Inc. In May 2004, the Supreme Court responded that a "continuous injury-in-fact" trigger should be applied. The federal court conducted a jury trial against Lloyds of London - the only remaining defendant – in October 5, 2004. At the end of that trial the jury returned a verdict in favor of ENGI. Subsequent to the verdict, ENGI and Lloyds of London entered into a confidential settlement.

With respect to Liberty Hill, insurance carriers have been placed on notice of a potential claim, but no litigation has been initiated. The Company does not expect to pursue any insurance litigation.

***Note: This summary is an overview only and is not intended to be a comprehensive recitation of all relevant information relating to the site and the associated liability.***

**LIBERTYUTILITIES (ENERGYNORTH NATURAL GAS) CORP.**
**d/b/a LIBERTY**

**CONCORD FORMER MGP**

LINE
NO.

1. SITE LOCATION: One Gas Street, Concord, New Hampshire.

2. DATE SITE WAS FIRST INVESTIGATED: EnergyNorth Natural Gas, Inc. (ENGI)[1] received a Notice Letter from the New Hampshire Department of Environmental Services (NHDES) in September 1992. The Notice related primarily to contamination identified in the pond adjacent to Exit 13 off Interstate 93, although it was broad enough to also include the former manufactured gas plant (MGP) site itself.

3. NATURE AND SCOPE OF SITE CONTAMINATION: Residual materials from the historic operation of the MGP were discovered in the area of the Exit 13 pond, as the NHDOT began site preparation work for the reconfiguration of that interchange. Subsequent investigations by ENGI and others indicate that contaminants originating from the MGP on Gas Street are present in soil and groundwater between the MGP and the Merrimack River, including within the Exit 13 pond.

4. SUMMARY OF MATERIAL DEVELOPMENTS AND INTERACTIONS WITH ENVIRONMENTAL AUTHORITIES:

   Concord MGP: The New Hampshire Department of Transportation (NHDOT) contacted ENGI in August 2001 and February 2002 regarding possible coal tar-related impacts in a sewer line on a parcel adjacent to the former gas plant. NHDOT is currently conducting groundwater monitoring as part of a Groundwater Management Zone Permit on this parcel. ENGI met with NHDOT and NHDES in January 2003 to review the results of its 2002 site investigation. Limited coal tar impacts were observed in groundwater and subsurface soils at select locations.

   On July 15, 2003, NHDES issued a letter to ENGI requesting submission of a schedule and scope of work for a site investigation of the MGP site by mid-September 2003. ENGI proposed a May 2005 date for submission of a Site Investigation Report for the MGP site on Gas Street to NHDES by way of a letter dated October 6, 2003. NHDES agreed to the proposed schedule in their response letter dated October 31, 2003.

[1] In July 2012, EnergyNorth was acquired by Liberty Utilities and its legal name changed to Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty. For consistency purposes, the acronym ENGI will be used throughout this document.

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**CONCORD FORMER MGP**

LINE
NO.

ENGI submitted the work plan for the MGP site investigation to NHDES on May 20, 2004. NHDES accepted the work plan on June 16, 2004. The investigation took place between September 2004 and March 2005, and the Site Investigation Report was submitted to NHDES on June 6, 2005. The report indicated that subsurface impacts are present at the MGP, and additional investigation as well as limited remediation will be required. NHDES accepted the report on August 12, 2005, and requested ENGI submit a supplemental scope of work to complete the delineation of MGP-related impacts on and off Site. The document was submitted in November 2005. Site investigation activities at and downgradient of the MGP were conducted in 2006. ENGI submitted an additional supplemental scope of work to further delineate MGP impacts on May 31, 2007 and NHDES subsequently approved the scope on June 5, 2007. ENGI bid the NHDES-approved scope of work in June 2008 and awarded the contract in late July 2008. ENGI met with NHDES at the site in August 2008 to discuss the additional supplemental site investigation activities. The field work took place during October through December 2008, during which time 8 groundwater monitoring wells were installed at 4 off-site locations. The Additional Supplemental Site Investigation Report was submitted to NHDES in September 2009. ENGI met with NHDES to discuss the report findings and strategy for moving forward in October 2009. NHDES issued an approval letter for the Supplemental Site Investigation Report on February 9, 2010. The correspondence approved the report and requested that certain additional activities be completed by ENGI. These requested activities include the following: a) preparation and submission of an Initial Response Action Work Plan to remove approximately 3,500 gallons of liquid and sludge from historic subsurface drip pots and tar wells at the MGP property on Gas Street; b) evaluation of the groundwater conditions in the vicinity of the “Tar Pond” which is depicted on a referenced NHDOT site plan; and c) evaluation of potential indoor air impacts at select locations identified during the additional SSI work.

ENGI submitted the Initial Response Work Plan to NHDES in July 2010 to remove approximately 3,500 gallons of liquid and sludge from historic subsurface drip pots. NHDES issued an approval letter for this Work Plan on August 3, 2010 and the work was completed in June 2011. In addition, ENGI submitted a Supplemental Data Collection Work Plan for the additional off-ENGI-owned property investigation activities (items b and c above) to NHDES in August 2010. NHDES approved of the Work Plan on September 16, 2010. ENGI obtained access to 4 properties in the vicinity of the site in order to conduct the supplemental investigation activities, which included soil, ground water and soil vapor sampling, along with further investigation of the brick tar sewer. ENGI submitted a revised Work Plan with revised sampling locations to NHDES in November 2011; the revision was necessary because site access was not granted by the property owners for some of the originally proposed locations. The investigation work was completed in July 2012, and summarized in a Supplement Data Collection Report that was submitted in August 2013, in preparation for submittal of the Remedial Action Plan. This Supplement Data Collection Report was accepted by NHDES on

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**CONCORD FORMER MGP**

LINE
NO.

October 24, 2013, and ENGI was authorized to prepare a RAP and Groundwater Management Permit (GMP) application. The GMP application was submitted on September 4, 2014, and the permit was received on December 1, 2014.

On June 16, 2013, wind during a thunderstorm caused a tree to fall on the northern side of the roof of the Holder House located on the former Concord MGP property. Damage to the slate roof and brick was sustained. In a letter dated February 24, 2014 NHDES stated that the holder structure "…serves as a physical barrier to prevent infiltration of precipitation into the foundation and thereby limits the amount of MGP byproducts that may be released to the environment."

On March 31, 2015, ENGI submitted a proposed Remedial Action Plan involving removal of shallow soils displaying MGP-related residual impacts, investigation and remediation of remaining known subsurface structures, capping of components of the local storm water drainage system, site capping design, and continued monitoring of groundwater on the site. NHDES approved the RAP on May 29, 2015, with the condition that roof of the brick gas holder either be restored, or the holder be razed and the soils beneath it remediated. Soil vapor monitoring; soil vapor probe installation; and remedial design investigations including subsurface structure location and inspection, shallow tar-saturated soil delineation, and site storm drain system inspections, as approved by the RAP, were performed in December 2015. A Remedial Design Report (RDR) was submitted to NHDES on March 16, 2016 summarizing the above remedial design investigations. The remediation activities, required to be completed prior to site capping, include tar-impacted material removals and plugging of the on-site drain system, took place in 2017.

In early 2016 ENGI was approached by a commercial developer who was interested in purchasing the property and repurposing the holder house structure. Several site meetings took place with the developer, and ENGI was negotiating the terms of the property's sale. If the property is transferred, the purchaser's future use design will be taken into account when the final design of the engineered cap is being developed. This site developer has not contacted ENGI since May 2017, and appears to have lost interest in the redevelopment project.

Although a developer had approached the Company during 2016 and into 2017 regarding potential purchase of the property, there has been no movement or activity on a transfer of the holder site. In 2020, further deterioration of the holder structure was observed. In addition, fencing was repaired and added to the areas around the deteriorated areas near the vestibule and the outside scaffolding where the tree fell in 2013.

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LINE
NO.

In 2019, the City and the Company jointly prepared a report that details various use options for the Gas Holder site on the east side of the highway, including costs for various scenarios ranging from cleaning and fortifying the holder structure for public entry to demolition of the structure. In response to Liberty's communication that the gas holder needed to be demolished, as the condition of the structure raises significant safety concerns, the Concord City Council established a working group in 2020, comprised of representatives of the City Council, City Staff, Liberty, and the New Hampshire Preservation Alliance ("NHPA"), and charged with developing a plan and assigning responsibilities for stabilization and preservation of the holder house structure. The working group discussions resulted in a plan for the NHPA to raise funds to stabilize the holder house and to manage the relevant construction, and for Liberty to seek Commission approval to contribute up to the estimated costs of demolition and remediation beneath the holder house, as the least cost option for customers.

The City, the NHPA, and Liberty met with Commission Staff in February 2021 and obtained Staff's support for the plan, provided Liberty can demonstrate that the Company's contribution toward the stabilization of the holder house is less than the estimated costs of demolition and remediation that would otherwise have been incurred. In April 2021, the City, the NHPA, and Liberty signed an MOU documenting the above understanding as the parties worked toward a formal agreement. As of the date of this report, the parties are near completion of a formal Emergency Stabilization License Agreement to govern the repairs to the holder house. The NHPA has substantially completed the engineering for the stabilization work and has obtained a contractor to complete the work before the end of 2021. Liberty has substantially completed the estimate to demolish the holder house and remedy any contamination, which estimate will serve as the cap of Liberty's contribution toward stabilization.

On January 21, 2020, NHDES issued a renewed GMP for the site and ENGI continues to monitor wells in the groundwater monitoring system on site every June and October under this permit. ENGI requested that soil vapor monitoring be ceased and NHDES removed this requirement from the new permit. The last GMP Annual Summary Report, submitted to NHDES in February 2021, summarized the results of the 2020 GMP sampling rounds and also described various small source remediation activities undertaken on site in late 2020.

Concord Pond: ENGI has continued to monitor groundwater semi-annually at the Exit 13 pond, in May and November, as required by the Groundwater Management Zone Permit that was issued in 1999 as part of the overall remedy following the remediation of the southern end of the Exit 13 pond. The permit was renewed in 2003, 2007,2012

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**CONCORD FORMER MGP**

LINE
NO.

and 2017, and NHDES specified semiannual collection of surface water samples from the pond as an additional condition of the permit.

When the Exit 13 pond was remediated in 1999, NHDES required that the northern portion remained untouched, allowing for storm water input to the pond, with the knowledge that some contamination remained and may require remediation in the future. In 2006, NHDES requested ENGI address the residual contamination in the pond, and in response, ENGI submitted an Interim Data Collection Report and Scope of Work in May 2006, which was approved in July 2006. This Scope of Work was implemented in 2006 and the results were to be used to prepare the Remedial Action Plan (RAP) which NHDES requested be submitted by August 31, 2006. In July 2006, NHDES extended the deadline for submittal of the RAP to June 30, 2007, to allow ENGI additional time for data collection and design. ENGI submitted an Interim Data Collection Report to NHDES in September 2006, and a Conceptual Remedial Design in March 2007. On March 25, 2009, ENGI submitted a Presumptive Remedy Approval Request to NHDES, in order to allow for the design and implementation of an engineered cap without the need to prepare a RAP. On May 4, 2009, NHDES granted the Presumptive Remedy Approval, and the project moved into the remedial design phase.

The proposed remedial work is to be performed on city-owned land and within a NHDOT right-of-way; therefore ENGI is working with these parties to come to agreement on the design features, negotiate access and clarify the responsibilities of the three parties. In April 2010, ENGI met with representatives from NHDES, the City of Concord, and NHDOT to present the proposed remedy, and ENGI submitted the draft design plans to the parties in June 2010. ENGI met with the regulatory permitting agencies in October 2010. The agencies requested that ENGI modify the remedial design to include an upland cap versus a wetland cap to minimize the impacts of the project. The cap was redesigned and ENGI met with the stakeholders in December 2010. At a subsequent meeting in January 2011, the City of Concord requested that the design be further modified to relocate the City's storm water outfall location.

ENGI met with the City in March 2011 to present the feasibility evaluation that was conducted for several alternatives, and concluded that the original design was the appropriate design. Contact was reconvened with the City in 2013, and adjustments to the original design were made to address outfall maintenance and access concerns of the City and NHDOT, respectively. The design was presented to the City on January 26, 2016. A rigorous schedule toward construction in late summer 2017 was agreed to by ENGI and the City in February 2016. The City did not meet an early deadline to determine and communicate details regarding access to their storm water system. Communication was again resumed in July 2016 by the City, however the City remained unresponsive to ENGI on implementation of the joint remedial design.

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LINE
NO.

In March 2018, discussions with the new City Engineer took place and the City's engagement level has increased to come to a design solution on outfall maintenance. These discussions are frequent and ongoing.

Semiannual groundwater monitoring at the pond is ongoing, as is recovery of separate phase coal tar from a monitoring well in the vicinity of the pond. In May 2017, the NHDES requested by letter that all active hazardous waste sites managed by the Hazardous Waste Remediation Bureau include sampling for Per- and Polyfluoroalkyl Substances (PFAS) in one of their groundwater sampling rounds, as part of a statewide study of these compounds. ENGI fulfilled this request during regularly scheduled sampling in 2018.

During May 19 through May 22, 2009, ENGI implemented a NHDES-approved sediment sampling program in the Merrimack River to evaluate potential MGP-related impacts. ENGI met with NHDES in October 2009 to present the results of the sediment investigation, and submitted the sediment sampling data report to NHDES in October 2009. The investigation indicated limited site-related impacts to the shallow near-shore sediments of the Merrimack River. Based upon the results of the sediment investigation, it is unlikely that remedial actions will be necessary in the river. ENGI met with NHDES on February 20, 2013 to discuss all sampling activities to date, summarized in an SIR Addendum Report, submitted in June 2013.

In May 2016, ENGI submitted a proposed plan for monitoring the near-bank sediments to the pond area in the Merrimack River. After discussions regarding frequency, duration of the Monitored Natural Recovery (MNR) program, and methodologies to be used in determining the contaminant trending in the river sediment, NHDES approved a revised MNR Plan in a letter dated July 2017. The 5-year sampling plan began in 2017 with the first of 5 annual samplings. The second round of sediment sampling was conducted in October 2018, the third round of sediment sampling took place in October 2019**, and the fourth in October 2020**. NHDES has accepted the MNR reports submitted by ENGI summarizing the sediment sampling results.

5. NEW HAMPSHIRE SITE REMEDIATION PROGRAM PHASE:

Concord MGP: In July 2003, NHDES requested that ENGI submit a schedule and scope of work for completion of a site investigation of the MGP site. ENGI submitted the scope to NHDES in May 2004 and implemented the work between September 2004 and March 2005. The results of the investigation were documented in the Site Investigation Report, dated June 6, 2005, which was subsequently approved by NHDES. Supplemental investigation activities were performed in 2006. Additional investigation activities were performed in 2008. The additional SSI report was submitted to NHDES in September 2009. In addition, ENGI submitted the Initial Response Work Plan to NHDES in July 2010 to remove approximately 3,500 gallons of liquid and sludge from historic subsurface drip

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**d/b/a LIBERTY**

**CONCORD FORMER MGP**

LINE
NO.

pots. NHDES issued an approval letter for this Work Plan on August 3, 2010 and the work was completed in June 2011. The Supplemental Data Collection report summarizing the investigation activities was accepted in October 2013, authorizing ENGI to prepare a RAP and GMP Application. The GMP application was submitted on September 4, 2014, and the permit was received on December 1, 2014. On March 31, 2015, ENGI submitted a proposed RAP, and NHDES approved the RAP with conditions. A Remedial Design Report, summarizing pre-design investigations, was provided to NHDES in March 2016**.**

**Outstanding remedial activities including the investigation for decommissioning of the deep well (historic water supply well), closure of the "old tar separator" and a small drip pot, closure of the on-site storm drain, and removal of an area of soil containing hardened tar were completed in late 2020, and results of these activities were reported to NHDES in the 2020 Annual Summary Report submitted in February 2021 as a requirement of the GMP.**

Concord Pond: ENGI submitted an application for a five-year Groundwater Management Zone Permit to the NHDES in April 2002 for the Exit 13 pond. The permit was renewed in October 2007, with the collection of pond surface water samples as an additional condition. Under that permit, groundwater monitoring is expected to be required for the foreseeable future. In addition, as requested by NHDES, ENGI undertook a review of remedial technologies to address the residual contamination remaining in the pond. A conceptual remedial design was submitted to NHDES in March 2007, a Presumptive Remedy Approval was granted by NHDES in May 2009, and the engineered cap design has been drafted. The work will be undertaken pending agreement between the City, NHDOT, and ENGI. ENGI met with these parties on several occasions in 2010 and 2011. The Company reinitiated discussion with the City in July 2014 regarding access to the site to implement the approved design of the wetland cap. The design was adjusted to accommodate the City's desire to simplify maintenance of the storm water system. ENGI has altered the design of the construction to provide temporary access through the wetland area and a permanent access road that does not encroach on the NHDOT right-of-way.

**In 2020, ENGI obtained the access agreement from the City to the property to allow access for the wetland cap remedy construction. ENGI has commenced the pre-design investigation in 2021. ENGI is designing the wetland cap remedy and is preparing associated NHDES permit applications, with plans to construct the remedy in late summer 2021.**

A renewal application for the Groundwater Management Permit was submitted on August 24, 2017, and the renewed permit was granted by NHDES on November 22, 2017. Groundwater and surface water monitoring continues under this permit every

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**d/b/a LIBERTY**

**CONCORD FORMER MGP**

LINE
NO.

May and November. The 5-year sediment sampling plan to monitor natural attenuation of MGP residuals in the river began in autumn 2017 and are ongoing each October.

6. HISTORY AND CURRENT STATUS OF USE AND OWNERSHIP: The Concord MGP operated from approximately 1850 to 1952, when the natural gas pipeline was extended to Concord. The plant was constructed and operated by predecessors of the Concord Gas Company, which later became known as the Concord Natural Gas Company. By virtue of a merger, ENGI acquired Concord Natural Gas. As has been reported previously by ENGI, it filed a contribution claim in the United States District Court for the District of New Hampshire against the successor to the United Gas Improvement Company. In that claim, ENGI alleged that under the federal Superfund statute, the United Gas Improvement Company exercised control over the operations of the Concord Gas Plant to the extent that the United Gas Improvement Company should be considered an "operator" under the statute. That matter was settled in 1997.

7. LISTING AND STATUS OF INSURANCE AND 3RD PARTY LAWSUITS AND SETTLEMENTS: Numerous confidential settlements with insurance carriers and with one private party have been entered into. *Insurance recovery efforts at the Concord Site are complete.*

***Note: This summary is an overview only and is not intended to be a comprehensive recitation of all relevant information relating to the site and the associated liability.***

**ENERGYNORTH NATURAL GAS, INC.**
**MANUFACTURED GAS PLANT ENVIRONMENTAL COSTS**

REDACTED
Schedule 20.2


**2021 SUMMARY BY SITE**

| LINE NO. | SITE | REF NO. | 1101 LEGAL EXPENSES | 1102 CONSULTING EXPENSES | 1105 REMEDIATION EXPENSES | 1106 SETTLEMENT EXPENSES | 1107 OTHER EXPENSES | 100 % RECOVERABLE EXPENSES | 1108 INSURANCE & THIRD PARTY EXPENSES | 1109 INSURANCE & THIRD PARTY RECOVERIES | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Concord Pond | DEF056 | 0.00 | 316,868.13 | 0.00 | 0.00 | 45,831.64 | 362,699.77 | [redacted] | [redacted] | 313,043.04 |
| 2 | Concord MGP | DEF077 | 2,734.00 | 84,993.95 | 0.00 | 0.00 | 340,224.44 | 427,952.39 | [redacted] | [redacted] | 383,711.57 |
| 3 | Laconia/Liberty Hill | DEF086 | 0.00 | 12,243.50 | 0.00 | 0.00 | 2,657.60 | 14,901.10 | [redacted] | [redacted] | 14,901.10 |
| 4 | Manchester MGP | DEF057 | 0.00 | 32,277.20 | 0.00 | 0.00 | 12,198.45 | 44,475.65 | [redacted] | [redacted] | 5,080.33 |
| 5 | Nashua MGP | DEF054 | 0.00 | 95,857.14 | 0.00 | 0.00 | 1,006.70 | 96,863.84 | [redacted] | [redacted] | 61,016.23 |
| 6 | General Expenses | DEF064 | 0.00 | 0.00 | 0.00 | 0.00 | 5,645.56 | 5,645.56 | [redacted] | [redacted] | 5,645.56 |
| | **Total Pool Activity** | | **2,734.00** | **542,239.92** | **0.00** | **0.00** | **407,564.39** | **952,538.31** | **0.00** | **(169,140.48)** | **783,397.83** |

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**LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP.**
**MANUFACTURED GAS PLANT ENVIRONMENTAL COSTS**
**NASHUA - REMEDIATION**
**PROJECT DEF054**

| LINE NO. | VENDOR | REF NO. | 1101 LEGAL EXPENSES | 1102 CONSULTING EXPENSES | 1105 REMEDIATION EXPENSES | 1106 SETTLEMENT EXPENSES | 1107 OTHER EXPENSES | SUBTOTAL EXPENSES | 1108 INSURANCE & THIRD PARTY EXPENSE | 1109 INSURANCE & THIRD PARTY RECOVERIES | TOTAL SUBMITTED |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | [redacted] | | | | | | | | | | (3,520.34) |
| 2 | INNOVATIVE ENGINEERING SOLUTIONS, INC. | 13487 | | 2,825.73 | | | | 2,825.73 | | | 2,825.73 |
| 3 | INNOVATIVE ENGINEERING SOLUTIONS, INC. | 13550 | | 17,644.77 | | | | 17,644.77 | | | 17,644.77 |
| 4 | NH DEPT OF ENVIRONMENTAL SERVICES | 199810022 072920 | | | | | 156.85 | 156.85 | | | 156.85 |
| 5 | INNOVATIVE ENGINEERING SOLUTIONS, INC. | 13578 | | 3,686.41 | | | | 3,686.41 | | | 3,686.41 |
| 6 | [redacted] | | | | | | | | | | (4,468.48) |
| 7 | GZA GEOENVIRONMENTAL INC | 0789550 | | 2,385.30 | | | | 2,385.30 | | | 2,385.30 |
| 8 | GZA GEOENVIRONMENTAL INC | 0789549 | | 1,339.50 | | | | 1,339.50 | | | 1,339.50 |
| 9 | INNOVATIVE ENERGY SYSTEMS, LLC | 13658 | | 2,470.09 | | | | 2,470.09 | | | 2,470.09 |
| 10 | INNOVATIVE ENERGY SYSTEMS, LLC | 13686 | | 2,426.35 | | | | 2,426.35 | | | 2,426.35 |
| 11 | INNOVATIVE ENERGY SYSTEMS, LLC | 13631 | | 6,877.47 | | | | 6,877.47 | | | 6,877.47 |
| 12 | [redacted] | | | | | | | | | | (10,454.92) |
| 13 | INNOVATIVE ENGINEERING SOLUTIONS, INC. | 13686 | | 2,426.35 | | | | 2,426.35 | | | 2,426.35 |
| 14 | INNOVATIVE ENGINEERING SOLUTIONS, INC. | 13603 | | 3,371.33 | | | | 3,371.33 | | | 3,371.33 |
| 15 | INNOVATIVE ENGINEERING SOLUTIONS, INC. | 13631 | | 6,877.47 | | | | 6,877.47 | | | 6,877.47 |
| 16 | INNOVATIVE ENGINEERING SOLUTIONS, INC. | 13658 | | 2,470.09 | | | | 2,470.09 | | | 2,470.09 |
| 17 | INNOVATIVE ENGINEERING SOLUTIONS, INC. | 13728 | | 2,842.81 | | | | 2,842.81 | | | 2,842.81 |
| 18 | [redacted] | | | | | | | | | | (6,664.45) |
| 19 | INNOVATIVE ENGINEERING SOLUTIONS, INC. | 13743 | | 6,987.34 | | | | 6,987.34 | | | 6,987.34 |
| 20 | INNOVATIVE ENGINEERING SOLUTIONS, INC. | 13807 | | 2,105.28 | | | | 2,105.28 | | | 2,105.28 |
| 21 | INNOVATIVE ENGINEERING SOLUTIONS, INC. | 13776 | | 2,321.75 | | | | 2,321.75 | | | 2,321.75 |
| 22 | INNOVATIVE ENGINEERING SOLUTIONS, INC. | 13828 | | 21,636.08 | | | | 21,636.08 | | | 21,636.08 |
| 23 | [redacted] | | | | | | | | | | (10,739.42) |
| 24 | INNOVATIVE ENGINEERING SOLUTIONS, INC. | 13856 | | 5,163.02 | | | | 5,163.02 | | | 5,163.02 |
| 25 | | | | | | | | 0.00 | | | 0.00 |
| 26 | Environmental Staff Time | | | | | | 849.85 | 849.85 | | | 849.85 |
| | [redacted] | | | | | | | | | | |

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**LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP.**
**MANUFACTURED GAS PLANT ENVIRONMENTAL COSTS**
**CONCORD POND - REMEDIATION**
**PROJECT DEF056**



| | | | 1101 | 1102.00 | 1105 | 1106 | 1107 | | 1108 | 1109 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| LINE NO. | VENDOR | REF NO. | LEGAL EXPENSES | CONSULTING EXPENSES | REMEDIATION EXPENSES | SETTLEMENT EXPENSES | OTHER EXPENSES | SUBTOTAL EXPENSES | INSURANCE & THIRD PARTY EXPENSES | INSURANCE & THIRD PARTY RECOVERIES | TOTAL SUBMITTED |
| 1 | GEI CONSULTANTS, INC. | 3074183 | | 9,409.09 | | | | 9,409.09 | | | 9,409.09 |
| 2 | ANCHOR QEA LLC | 69017 | | 8,525.67 | | | | 8,525.67 | | | 8,525.67 |
| 3 | ANCHOR QEA LLC | 69459 | | 9,358.75 | | | | 9,358.75 | | | 9,358.75 |
| 4 | [redacted] | | | | | | | | | | (12,852.50) |
| 5 | GEI CONSULTANTS, INC. | 3077029 | | 1,348.99 | | | | 1,348.99 | | | 1,348.99 |
| 6 | ANCHOR QEA LLC | 69892 | | 5,424.75 | | | | 5,424.75 | | | 5,424.75 |
| 7 | GEI CONSULTANTS, INC. | 3075631 | | 3,043.98 | | | | 3,043.98 | | | 3,043.98 |
| 8 | [redacted] | | | | | | | | | | (7,174.35) |
| 9 | ANCHOR QEA LLC | 70380 | | 2,924.64 | | | | 2,924.64 | | | 2,924.64 |
| 10 | NH DEPT OF ENVIRONMENTAL SERVICES | 199212014 | | | | | 1,667.65 | 1,667.65 | | | 1,667.65 |
| 11 | GEI CONSULTANTS, INC. | 3079961 | | 3,474.73 | | | | 3,474.73 | | | 3,474.73 |
| 12 | ANCHOR QEA LLC | 70672 | | 27,832.90 | | | | 27,832.90 | | | 27,832.90 |
| 13 | NH DEPT OF ENVIRONMENTAL SERVICES | CON PD SQG SELF SERT | | | | | 270.00 | 270.00 | | | 270.00 |
| 14 | ANCHOR QEA LLC | 71255 | | 21,545.22 | | | | 21,545.22 | | | 21,545.22 |
| 15 | CLEAN HARBORS | 1003544340 | | | | | 726.00 | 726.00 | | | 726.00 |
| 16 | GEI CONSULTANTS, INC. | 3082478 | | 1,717.02 | | | | 1,717.02 | | | 1,717.02 |
| 17 | GEI CONSULTANTS, INC. | 3082662 | | 935.48 | | | | 935.48 | | | 935.48 |
| 18 | [redacted] | | | | | | | | | | (5,110.09) |
| 19 | ANCHOR QEA LLC | 71773 | | 5,555.03 | | | | 5,555.03 | | | 5,555.03 |
| 20 | NH DEPT OF ENVIRONMENTAL SERVICES | 199212014 012821 | | | | | 215.18 | 215.18 | | | 215.18 |
| 21 | GEI CONSULTANTS, INC. | 3084717 | | 1,765.64 | | | | 1,765.64 | | | 1,765.64 |
| 22 | AON RISK SERVICES NORTHEAST | 6100000228541 | | | | | 39,467.00 | 39,467.00 | | | 39,467.00 |
| 23 | [redacted] | | | | | | | | | | (9,620.64) |
| 24 | CASEY MARY | EXP0317-031721 | | | | | 73.50 | 73.50 | | | 73.50 |
| 25 | ANCHOR QEA LLC | 01198 | | 51,170.32 | | | | 51,170.32 | | | 51,170.32 |
| 26 | AON RISK SERVICES NORTHEAST | 6100000228572 | | | | | 1,081.01 | 1,081.01 | | | 1,081.01 |
| 27 | GEI CONSULTANTS, INC. | 3087661 | | 1,299.12 | | | | 1,299.12 | | | 1,299.12 |
| 28 | GEI CONSULTANTS, INC. | 3089541 | | 1,638.59 | | | | 1,638.59 | | | 1,638.59 |
| 29 | ANCHOR QEA LLC | 01955 | | 83,567.66 | | | | 83,567.66 | | | 83,567.66 |
| 30 | GEI CONSULTANTS, INC. | 3086465 | | 1,719.64 | | | | 1,719.64 | | | 1,719.64 |
| 31 | [redacted] | | | | | | | | | | (14,899.15) |
| 32 | ANCHOR QEA LLC | 02474 | | 70,414.75 | | | | 70,414.75 | | | 70,414.75 |
| 33 | CLEAN HARBORS | 1003747648 | | | | | 933.00 | 933.00 | | | 933.00 |
| 34 | GEI CONSULTANTS, INC. | 3091181 | | 4,196.16 | | | | 4,196.16 | | | 4,196.16 |
| 35 | | | | | | | | - | | | 0.00 |
| 36 | | | | | | | | - | | | 0.00 |
| 37 | Environmental Staff Time | | | | | | 1,398.30 | 1,398.30 | | | 1,398.30 |
| | [redacted] | | | | | | | | | | |

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**LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP.**
**MANUFACTURED GAS PLANT ENVIRONMENTAL COSTS**
**MANCHESTER - REMEDIATION**
**PROJECT DEF057**

| | | | 1101 | 1102 | 1105 | 1106 | 1107 | | 1108 | 1109 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| LINE NO. | VENDOR | REF NO. | LEGAL EXPENSES | CONSULTING EXPENSES | REMEDIATION EXPENSES | SETTLEMENT EXPENSES | OTHER EXPENSES | SUBTOTAL EXPENSES | INSURANCE & THIRD PARTY EXPENSE | INSURANCE & THIRD PARTY RECOVERIES | TOTAL SUBMITTED |
| 1 | [redacted] | | | | | | | | | | (17,964.57) |
| 2 | GZA GEOENVIRONMENTAL INC | 0802008 | | 28,652.90 | | | | 28,652.90 | | | 28,652.90 |
| 3 | CLEAN HARBORS | 1003471907 | | | | | 65.70 | 65.70 | | | 65.70 |
| 4 | [redacted] | | | | | | | | | | (4,560.14) |
| 5 | ENVIRONMENTAL SOIL MANAGEMENT | 1019104 | | | | | 2,193.60 | 2,193.60 | | | 2,193.60 |
| 6 | CLEAN HARBORS | 1003492682 | | | | | 1,895.45 | 1,895.45 | | | 1,895.45 |
| 7 | ENVIRONMENTAL SOIL MANAGEMENT | 1019158 | | | | | 2,010.08 | 2,010.08 | | | 2,010.08 |
| 8 | CLEAN HARBORS | 1003524063 | | | | | 131.40 | 131.40 | | | 131.40 |
| 9 | CLEAN HARBORS | 1003524661 | | | | | 3,496.88 | 3,496.88 | | | 3,496.88 |
| 10 | CLEAN HARBORS | 1003554332 | | | | | 2,011.90 | 2,011.90 | | | 2,011.90 |
| 11 | GZA GEOENVIRONMENTAL INC | 0808710 | | 2,601.30 | | | | 2,601.30 | | | 2,601.30 |
| 12 | GZA GEOENVIRONMENTAL INC | 0810861 | | 1,023.00 | | | | 1,023.00 | | | 1,023.00 |
| 13 | [redacted] | | | | | | | | | | (15,171.72) |
| 14 | [redacted] | | | | | | | | | | (1,359.11) |
| 15 | [redacted] | | | | | | | | | | (339.78) |
| 16 | | | | | | | | 0.00 | | | 0.00 |
| 17 | Environmental Staff Time | | | | | | 393.44 | 393.44 | | | 393.44 |
| | [redacted] | | | | | | | | | | |

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**LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP.**
**MANUFACTURED GAS PLANT ENVIRONMENTAL COSTS**
**GENERAL EXPENSES**
**PROJECT DEF064**



| LINE NO. | VENDOR | REF NO. | 1101 LEGAL EXPENSES | 1102 CONSULTING EXPENSES | 1105 REMEDIATION EXPENSES | 1106 SETTLEMENT EXPENSES | 1107 OTHER EXPENSES | SUBTOTAL EXPENSES | 1108 INSURANCE & THIRD PARTY EXPENSE | 1109 INSURANCE & THIRD PARTY RECOVERIES | TOTAL SUBMITTED |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | 0.00 | | | 0.00 |
| 2 | | | | | | | | 0.00 | | | 0.00 |
| 3 | Environmental Staff Time | | | | | | 5,645.56 | 5,645.56 | | | 5,645.56 |
| | **Total Pool Activity** | | **0.00** | **0.00** | **0.00** | **0.00** | **5,645.56** | **5,645.56** | **0.00** | **0.00** | **5,645.56** |

**LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP.**
**MANUFACTURED GAS PLANT ENVIRONMENTAL COSTS**
**CONCORD MGP - REMEDIATION**
**PROJECT DEF077**



| LINE NO. | VENDOR | REF NO. | 1101 LEGAL EXPENSES | 1102 CONSULTING EXPENSES | 1105 REMEDIATION EXPENSES | 1106 SETTLEMENT EXPENSES | 1107 OTHER EXPENSES | SUBTOTAL EXPENSES | 1108 INSURANCE & THIRD PARTY EXPENSE | 1109 INSURANCE & THIRD PARTY RECOVERIES | TOTAL SUBMITTED |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CLEAN HARBORS | 1003346959 | | | | | 65.70 | 65.70 | | | 65.70 |
| 3 | NH DEPT OF ENVIRONMENTAL SERVICES | 198904063 072920 | | | | | 1,990.42 | 1,990.42 | | | 1,990.42 |
| 4 | JOE GAUCI LANDSCAPING LLC | 2020-7-3576 | | | | | 736.00 | 736.00 | | | 736.00 |
| 5 | COLLINS TREE SERVICE INC. | 41104 | | | | | 10,800.00 | 10,800.00 | | | 10,800.00 |
| 6 | PARKER FENCE | 20-592 | | | | | 6,208.60 | 6,208.60 | | | 6,208.60 |
| 7 | PARKER FENCE | 20-533 | | | | | 29,515.05 | 29,515.05 | | | 29,515.05 |
| 8 | GZA GEOENVIRONMENTAL INC | 0800144 | | 10,500.00 | | | | 10,500.00 | | | 10,500.00 |
| 9 | CITY OF CONCORD GSD | 410184-001 0620 | | | | | 10.21 | 10.21 | | | 10.21 |
| 10 | CITY OF CONCORD GSD | 410184-001 0720 | | | | | 11.01 | 11.01 | | | 11.01 |
| 11 | [redacted] | | | | | | | | | | (8,027.73) |
| 12 | JOE GAUCI LANDSCAPING LLC | 2020-6-3576 | | | | | 667.00 | 667.00 | | | 667.00 |
| 13 | JOE GAUCI LANDSCAPING LLC | 2020-8-3576 | | | | | 618.00 | 618.00 | | | 618.00 |
| 14 | GZA GEOENVIRONMENTAL INC | 0801794 | | 816.50 | | | | 816.50 | | | 816.50 |
| 15 | GZA GEOENVIRONMENTAL INC | 0802009 | | 21,005.73 | | | | 21,005.73 | | | 21,005.73 |
| 16 | [redacted] | | | | | | | | | | (628.61) |
| 17 | JOE GAUCI LANDSCAPING LLC | 2020-9-3576 | | | | | 184.00 | 184.00 | | | 184.00 |
| 18 | CITY OF CONCORD GSD | 410184-001 083020 | | | | | 10.21 | 10.21 | | | 10.21 |
| 19 | CITY OF CONCORD GSD | 410184-001 093020 | | | | | 10.37 | 10.37 | | | 10.37 |
| 20 | JOE GAUCI LANDSCAPING LLC | 2020-10-3576 | | | | | 1,040.00 | 1,040.00 | | | 1,040.00 |
| 21 | NH DEPT OF ENVIRONMENTAL SERVICES | 198904063 | | | | | 3,550.48 | 3,550.48 | | | 3,550.48 |
| 22 | CLEAN HARBORS | 1003524639 | | | | | 40,795.32 | 40,795.32 | | | 40,795.32 |
| 23 | NH DEPT OF ENVIRONMENTAL SERVICES | CON-MGP SQG SELF CER | | | | | 270.00 | 270.00 | | | 270.00 |
| 24 | CITY OF CONCORD GSD | 410184-001 1120 | | | | | 10.36 | 10.36 | | | 10.36 |
| 25 | CLEAN HARBORS | 1003544340 | | | | | 2,072.40 | 2,072.40 | | | 2,072.40 |
| 26 | CLEAN HARBORS | 1003561844 | | | | | 19,411.37 | 19,411.37 | | | 19,411.37 |
| 27 | [redacted] | | | | | | | | | | (9,168.30) |
| 28 | NH DEPT OF ENVIRONMENTAL SERVICES | 198904063 012821 | | | | | 161.39 | 161.39 | | | 161.39 |
| 29 | CLEAN HARBORS | 1003604344 | | | | | 34,067.04 | 34,067.04 | | | 34,067.04 |
| 30 | CITY OF CONCORD GSD | 410184-001 0121 | | | | | 10.36 | 10.36 | | | 10.36 |
| 31 | CITY OF CONCORD GSD | 410184-001 1220 | | | | | 10.36 | 10.36 | | | 10.36 |
| 32 | GZA GEOENVIRONMENTAL INC | 0808711 | | 9,493.66 | | | | 9,493.66 | | | 9,493.66 |
| 33 | GZA GEOENVIRONMENTAL INC | 0810412 | | 16,869.24 | | | | 16,869.24 | | | 16,869.24 |
| 34 | GZA GEOENVIRONMENTAL INC | 0810862 | | 26,308.82 | | | | 26,308.82 | | | 26,308.82 |
| 35 | CITY OF CONCORD GSD | 410184-001 022821 | | | | | 10.21 | 10.21 | | | 10.21 |
| 36 | [redacted] | | | | | | | | | | (10,464.81) |
| 37 | CLEAN HARBORS | 1003679747 | | | | | 95,186.93 | 95,186.93 | | | 95,186.93 |
| 38 | CLEAN HARBORS | 1003626238 | | | | | 69,422.24 | 69,422.24 | | | 69,422.24 |
| 39 | CITY OF CONCORD GSD | 410184-001 033021 | | | | | 10.21 | 10.21 | | | 10.21 |
| 40 | NH DEPT OF ENVIRONMENTAL SERVICES | 198904063 1479A | | | | | 215.18 | 215.18 | | | 215.18 |
| 41 | NH DEPT OF ENVIRONMENTAL SERVICES | 051577452FLE | | | | | 8,412.00 | 8,412.00 | | | 8,412.00 |
| 42 | CLEAN HARBORS | 1003717760 | | | | | 13,177.16 | 13,177.16 | | | 13,177.16 |
| 43 | CITY OF CONCORD GSD | 410184-001 043021 | | | | | 10.68 | 10.68 | | | 10.68 |
| 44 | ORR & RENO, P.A. | 128324 | 2,734.00 | | | | | 2,734.00 | | | 2,734.00 |
| 45 | [redacted] | | | | | | | | | | (15,951.37) |
| 46 | CLEAN HARBORS | 1003747648 | | | | | 621.95 | 621.95 | | | 621.95 |
| 46 | CITY OF CONCORD GSD | 410184-001 0521 | | | | | 10.21 | 10.21 | | | 10.21 |
| 48 | | | | | | | | 0.00 | | | 0.00 |
| 49 | Environmental Staff Time | | | | | | 922.02 | 922.02 | | | 922.02 |
| 50 | [redacted] | | | | | | | | | | |

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**LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP.**
**MANUFACTURED GAS PLANT ENVIRONMENTAL COSTS**
**LIBERTY HILL - REMEDIATION**
**PROJECT DEF086**



| LINE NO. | VENDOR | REF NO. | 1101 LEGAL EXPENSES | 1102 CONSULTING EXPENSES | 1105 REMEDIATION EXPENSES | 1106 SETTLEMENT EXPENSES | 1107 OTHER EXPENSES | SUB-TOTAL EXPENSES | 1108 INSURANCE & THIRD PARTY EXPENSES | 1109 INSURANCE & THIRD PARTY RECOVERIES | TOTAL SUBMITTED |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | GEI CONSULTANTS, INC. | 3077028 | | 1,385.10 | | | | 1,385.10 | | | 1,385.10 |
| 2 | GEI CONSULTANTS, INC. | 3078905 | | 10,858.40 | | | | 10,858.40 | | | 10,858.40 |
| 3 | MULLER'S LAWN & LANDSCAPING, LLC | 5554 | | | | | 800.00 | 800.00 | | | 800.00 |
| 4 | GEI CONSULTANTS, INC. | 3079960 | | | | | 1,516.84 | 1,516.84 | | | 1,516.84 |
| 5 | NH DEPT OF ENVIRONMENTAL SERVICES | LHR SQG SELF CERT | | | | | 270.00 | 270.00 | | | 270.00 |
| 6 | | | | | | | | 0.00 | | | 0.00 |
| 7 | | | | | | | | 0.00 | | | 0.00 |
| 8 | | | | | | | | 0.00 | | | 0.00 |
| 9 | | | | | | | | 0.00 | | | 0.00 |
| 10 | | | | | | | | 0.00 | | | 0.00 |
| 11 | Environmental Staff Time | | | | | | 70.76 | 70.76 | | | 70.76 |
| | **Total Pool Activity** | | **0.00** | **12,243.50** | **0.00** | **0.00** | **2,657.60** | **14,901.10** | | | **14,901.10** |

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



**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**Environmental Remediation MGPs**
**Tariff page 99**

**Concord Pond**

| | | (thru - 9/07) ool #1 - #8 | (9/07 - 9 08) ool #9 | (9/08 - 9/09) ool #10 | (9/09 - 9/10) ool #11 | (9/10 - 9/11) ool #12 | (9/11 - 9/12) ool #13 | (9/12 - 6/13) ool #1 | (7/13 - 6/1 ) ool #15 | (7/1 - 6/15) ool #16 | (7/15 - 6/16) ool #17 | (7/16 - 6/17) ool #18 | (7/17 - 6/18) ool #19 | (7/18 - 6/19) ool #20 | (7/19 - 6/20) ool #21 | DEF056 (7/20 - 6/21) ool #22 | s total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 Remediation costs (i.o. 500061) | 5,883,850 | 95,37 | 128,187 | 1 3,000 | 2 9,160 | 86, 12 | 78,387 | 0,31 | 89,626 | 3,20 | 102,196 | 138,701 | 87,282 | 187,358 | 362,700 | 7,715,7 8 |
| 2 | Remediation costs (i.o. 500005) | | | | | | | | | | | | | | | | 0 |
| 3 | A Subtotal - remediation costs | 5,883,850 | 95,37 | 128,187 | 1 3,000 | 2 9,160 | 86, 12 | 78,387 | 0,31 | 89,626 | 3,20 | 102,196 | 138,701 | 87,282 | 187,358 | 362,700 | 7,715,7 8 |
| | | | | | | | | | | | | | | | | | 0 |
| 5 | Cash recover es (i.o. 500061) | -2,075,70 | 0 | -12,608 | -6,06 | -32, 17 | -5,173 | -19,318 | -7,990 | -11,392 | -8,61 | -1 ,0 7 | -11,3 5 | -1 ,998 | -1 ,59 | - 9,657 | -2,283,920 |
| 6 | Cash recoveries (i.o. 50000 ) | - 5,985 | | | | | | | | | | | | | | | - 5,985 |
| 7 | Recovery costs (i.o. 50000 ) | 623,78 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 623,78 |
| 8 | Transfer Credit from Gas Restructuring | | | | | | | | | | | | | | | | |
| 9 | B Subtotal - net recoveries | -1,897,905 | 0 | -12,608 | -6,06 | -32, 17 | -5,173 | -19,318 | -7,990 | -11,392 | -8,61 | -1 ,0 7 | -11,3 5 | -1 ,998 | -1 ,59 | - 9,657 | -2,106,121 |
| 10 | | | | | | | | | | | | | | | | | |
| 11 | A-B Total net expenses to recover | 3,985,9 | 95,37 | 115,579 | 136,936 | 216,7 3 | 81,238 | 59,069 | 32,32 | 78,235 | 3 ,590 | 88,1 8 | 127,356 | 72,283 | 172,76 | 313,0 3 | 5,609,627 |
| 12 | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | |
| 1 | Surcharge revenue: | | | | | | | | | | | | | | | | |
| 15 | Act June 1998 - October 1998 | -5 ,889 | | | | | | | | | | | | | | | -5 ,889 |
| 16 | Act November 1998 - October 1999 | -538,1 3 | | | | | | | | | | | | | | | -538,1 3 |
| 17 | Act November 1999 - October 2000 | -760,871 | | | | | | | | | | | | | | | -760,871 |
| 18 | Act November 2000 - October 2001 | -6 0,539 | | | | | | | | | | | | | | | -6 0,539 |
| 19 | Act November 2001 - October 2002 | -625,11 | | | | | | | | | | | | | | | -625,11 |
| 20 | Act November 2002 - October 2003 | -607,87 | | | | | | | | | | | | | | | -607,87 |
| 21 | Act November 2003 - October 200 | -305,907 | | | | | | | | | | | | | | | -305,907 |
| 22 | Act November 200 - October 2005 | -85,078 | | | | | | | | | | | | | | | -85,078 |
| 23 | Act November 2005- October 2006 | -13,750 | | | | | | | | | | | | | | | -13,750 |
| 2 | Act November 2006- October 2007 | -1 ,091 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 ,091 |
| 25 | Act November 2007- October 2008 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | Act November 2012- October 2013 | 0 | | | | -5,002 | -5,002 | | | | | | | | | | -10,003 |
| 27 | Act November 2013- October 201 | 0 | | | | -12,7 9 | -12,7 9 | | | | | | | | | | -25, 97 |
| 28 | Act Nov 2009-Oct 2010 Base Rate Rev | 0 | | | | - , 23 | | | | | | | | | | | - , 23 |
| 29 | Act Nov 2010-Oct 2011 Base Rate Rev | 0 | | | | -32,310 | | | | | | | | | | | -32,310 |
| 30 | Act Nov 2011-Oct 2012 Base Rate Rev | 0 | | | | -28, 8 | | | | | | | | | | | -28, 8 |
| 31 | Act Nov 2012-Oct 2013 Base Rate Rev | 0 | | | | -2,1 3 | -2,1 3 | | | | | | | | | | - ,286 |
| 32 | Act Nov 2013-Oct 201 Base Rate Rev | 0 | | | | | | | | | | | | | | | 0 |
| 33 | Act Nov 201 -Oct 2015 Base Rate Rev | 0 | | | | | | | | | | | | | | | 0 |
| 3 | AES co lections | -69,391 | -12,620 | -12,90 | -13,1 5 | -13,221 | -13,738 | -13,725 | -13,9 8 | -1 ,173 | -1 , 05 | -1 ,66 | -1 ,858 | -1 ,999 | -15,312 | -15, 68 | -266,571 |
| 35 | Gas Street overcollection | -23,511 | | | | | | | | | | | | | | | -23,511 |
| 36 | Pr or Period Pool under/overcollect on | 332,837 | 38,5 8 | 5,088 | 50,73 | 155, 09 | 60,721 | 116,708 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 37 | | | | | | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | | | | | | |
| 39 | C Surcharge Subtotal | -3,739,158 | -12,620 | -12,90 | -13,1 5 | -98,295 | -33,631 | -13,725 | -13,9 8 | -1 ,173 | -1 , 05 | -1 ,66 | -1 858 | -1 ,999 | -15,312 | -15, 68 | - ,0 1,305 |
| 0 | | | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | | | |
| 2 | D Net balance to be recovered (A-B C) | 2 6,787 | 82,753 | 102,675 | 123,791 | 118, 8 | 7,608 | 5,3 5 | 18,376 | 6 ,062 | 20,185 | 73, 8 | 112, 98 | 57,28 | 157, 51 | 297,575 | 1,568,323 |
| 3 | | | | | | | | | | | | | | | | | |
| | E Allocat on of Lit gated Recovery | | -329,5 0 | -102,675 | -123,791 | - 8,569 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -60 ,575 |
| 5 | | | | | | | | | | | | | | | | | |
| 6 | Surcharge calculation | | | | | | | | | | | | | | | | |
| 7 | Unrecovered costs (D E) | 0 | -2 6,787 | 0 | 0 | 0 | 0 | 0 | 0 | 9,152 | 5,767 | 31, 93 | 6 ,285 | 0,917 | 13 ,958 | 297,575 | 337,361 |
| 8 | remaining life | 168 | 72 | 8 | 8 | 8 | 12 | 12 | 12 | 12 | 2 | 36 | 8 | 60 | 72 | 8 | |
| 9 | one year | 8 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | |
| 50 | F amortization | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9,152 | 2,88 | 10, 98 | 16,071 | 8,183 | 22, 93 | 2,511 | 111,791 |
| 51 | | | | | | | | | | | | | | | | | |
| 52 | Required annual increase in rates: | | | | | | | | | | | | | | | | |
| 53 | smal er of D or F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9,152 | 2,88 | 10, 98 | 16,071 | 8,183 | 22, 93 | 2,511 | 111,791 |
| 5 | | | | | | | | | | | | | | | | | |
| 55 | forecasted therm sales | 1, 56,39 ,990 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 182,899,057 | 182,899,057 |
| 56 | | | | | | | | | | | | | | | | | |
| #### | surcharge per therm | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0001 | $0.0000 | $0.0001 | $0.0001 | $0.0000 | $0.0001 | $0.0002 | $0.0006 |

1. While the recoveries are displayed on the Summary, Cash Recoveries by s te, are not exclusive to a particu ar site.

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

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**Environmental Remediation MGPs**
**Tariff page 99**

**Laconia & Liberty Hill**

**i.o. no. 500005** **DEF086**

| | | (thru - 9/07) ool #1 - #6 | (9/07 - 9/08) ool #7 Incl. Aud t Corr | (9/08 - 9/09) ool #8 Incl. Audit Corr | (9/09 - 9/10) ool #9 | (9/10 - 9/11) ool #10 | (9/11 - 9/12) ool #11 | (9/12 - 6/13) ool #12 | (7/13 - 6/14) pool #13 | (7/14 - 6/15) pool #14 | (7/15 - 6/16) pool #15 | (7/16 - 6/17) pool #16 | (7/17 - 6/18) pool #17 | (7/18 - 6/19) pool #18 | (7/19 - 6/20) pool #18 | (7/20 - 6/21) pool #19 | s total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 Remediation costs (i.o. 500061) | 0 | | | | | | | | | | | | | | | 0 |
| 2 | Remediation costs (i.o. 500005) | 9,670, 88 | 28,225 | 607,876 | 262,678 | 210,532 | 269,281 | 6 2,986 | | | | | | | | | 2 ,751,360 |
| 3 | A Subtotal - remediation costs | 9,670, 88 | 28,225 | 607,876 | 262,678 | 210,532 | 269,281 | 6 2,986 | | | | | | | | | 2 ,751,360 |
| 5 | Cash recover es (i.o. 500061) | 0 | 0 | 0 | | | | | | | | | | | | | 0 |
| 6 | Cash recover es (i.o. 50000 ) | 0 | 0 | 0 | | | | | | | | | | | | | 0 |
| 7 | Recovery costs (i.o. 50000 ) | 11,6 3 | 21,729 | 0 | 0 | | | | | | | | | | | | 33,372 |
| 8 | Transfer Credit from Gas Restructuring | 0 | 0 | 0 | | | | | | | | | | | | | 0 |
| 9 | B Subtotal - net recoveries | 11,6 3 | 21,729 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | 33,372 |
| 10 | | | | | | | | | | | | | | | | | |
| 11 | A-B Total net expenses to recover | 9,682,131 | 9,95 | 607,876 | 262,678 | 210,532 | 269,281 | 6 2,986 | | | | | | | | | 2 ,78 ,732 |
| 12 | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | |
| 1 | Surcharge revenue: | | | | | | | | | | | | | | | | |
| 15 | Act June 1998 - October 1998 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - | - | - | - | - | 0 |
| 16 | Act November 1998 - October 1999 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - | - | - | - | - | 0 |
| 17 | Act November 1999 - October 2000 | -151,933 | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - | - | - | - | - | -151,933 |
| 18 | Act November 2000 - October 2001 | -696,237 | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - | - | - | - | - | -696,237 |
| 19 | Act November 2001 - October 2002 | -796,71 | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - | - | - | - | - | -796,71 |
| 20 | Act November 2002 - October 2003 | -805, 3 | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - | - | - | - | - | -805, 3 |
| 21 | Act November 2003 - October 200 | -699,215 | | | | | | | | | | | | | | | -699,215 |
| 22 | Act November 200 - October 2005 | -652,26 | | | | | | | | | | | | | | | -652,26 |
| 23 | Act November 2005- October 2006 | -691,159 | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - | - | - | - | - | -691,159 |
| 2 | Act November 2006- October 2007 | -958,171 | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - | - | - | - | - | -958,171 |
| 25 | Act November 2007- October 2008 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - | - | - | - | - | 0 |
| 26 | Act November 2012- October 2013 | 0 | | | | | -20,006 | | | | | | | | | | -20,006 |
| 27 | Act November 2013- October 201 | 0 | | | | | -25, 97 | -76, 91 | | | | | | | | | -101,988 |
| 28 | Act Nov 2009-Oct 2010 Base Rate Rev | 0 | | | | - ,296 | | | | | | | | | | | - ,296 |
| 29 | Act Nov 2010-Oct 2011 Base Rate Rev | 0 | | | | -31,38 | | | | | | | | | | | -31,38 |
| 30 | Act Nov 2011-Oct 2012 Base Rate Rev | 0 | | | | -27,632 | | | | | | | | | | | -27,632 |
| 31 | Act Nov 2012-Oct 2013 Base Rate Rev | 0 | | | | 0 | -1 ,208 | | | | | | | | | | -1 ,208 |
| 32 | Act Nov 2013-Oct 201 Base Rate Rev | 0 | | | | | -28, 33 | -28, 33 | (28,433) | | | | | | | | -85,298 |
| 33 | Act Nov 201 -Oct 2015 Base Rate Rev | 0 | | | | | -21,639 | -21,639 | (21,639) | (21,639) | - | - | - | - | - | - | -86,55 |
| 3 | AES co lections | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - | - | - | - | - | 0 |
| 35 | Gas Street overcollection | 0 | | | | | | | | | | | | | | | 0 |
| 36 | Pr or Period Pool under/overcollect on | 2,395,362 | ,2 2, 38 | 0 | 0 | 0 | -87,311 | 0 | - | - | - | - | - | - | - | - | |
| 37 | | | | | | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | | | | | | |
| 39 | C Surcharge Subtotal | -3,055,765 | ,2 2, 38 | 0 | 0 | -63,313 | -197,093 | -126,563 | (50,071) | (21,639) | - | - | - | - | - | - | -5,822, 9 |
| 0 | | | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | | | |
| 2 | D Net balance to be recovered (A-B C) | 6,626,365 | ,692,393 | 607,876 | 262,678 | 1 7,219 | 72,188 | 516, 2 | | | | | | | | | 18,962,237 |
| 3 | | | | | | | | | | | | | | | | | |
| | E Allocat on of Lit gated Recovery | 0 | - ,692,393 | -607,876 | -262,678 | -23 ,530 | 0 | 0 | | | | | | | | | -5,797, 76 |
| 5 | | | | | | | | | | | | | | | | | |
| 6 | Surcharge calculation | | | | | | | | | | | | | | | | |
| 7 | Unrecovered costs (D E) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | 2,127,600 |
| 8 | remaining life | 1 | 72 | 8 | 8 | 8 | 12 | 12 | | | | | | | | | |
| 9 | one year | 36 | 12 | 12 | 12 | 12 | 12 | 12 | | | | | | | | | |
| 50 | F amortization | | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | 1,588,357 |
| 51 | | | | | | | | | | | | | | | | | |
| 52 | Required annual increase in rates: | | | | | | | | | | | | | | | | |
| 53 | smal er of D or F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | 1,588,357 |
| 5 | | | | | | | | | | | | | | | | | |
| 55 | forecas ed therm sales | 1,10 ,8 9,639 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 182,899,057 | 182,899,057 |
| 56 | | | | | | | | | | | | | | | | | |
| #### | surcharge per therm | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | | 1109 65.25 | 5 68.8086 | 1 333.37571 | 862.888571 | 2199.96 | 3989.371 29 | 2128.728571 | $0.0087 |

SUBJECT TO CONFIDENTIAL TREATMENT

1. While the recoveries are displayed on the Summary, Cash Recoveries by s te, are not exclusive to a particu ar site.

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



**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**Environmental Remediation MGPs**
**Tariff page 99**

**Manchester**

**DEF057**

| | | (9/00 - 9/07) ool #1 - #7 | (9/07 - 9/08) ool #8 Incl. Audit Corr | (9/08 - 9/09) ool #9 | (9/09 - 9/10) ool #10 | (9/10 - 9/11) ool #11 | (9/11 - 9/12) ool #12 | (9/12 - 6/13) ool #13 | (7/13 - 6/1 ) ool #1 | (7/1 - 6/15) ool #15 | (7/15 - 6/16) ool #16 | (7/16 - 6/17) ool #17 | (7/17 - 6/18) ool #18 | (7/18 - 6/19) ool #19 | (7/19 - 6/20) ool #20 | (7/20 - 6/21) ool #21 | s total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 Remediation costs (i.o. 500061) | 3,762,097 | ,387,6 5 | 312,185 | 369,037 | 372,237 | 507,622 | 82,113 | 92,900 | 116, 96 | 71,011 | 5 ,333 | 70,725 | 182,093 | 312, 33 | , 76 | 11,137, 03 |
| 2 | Remediation costs (i.o. 500005) | 825,092 | | | | | | | | | | | | | | | 825,092 |
| 3 | A Subtotal - remediation costs | ,587,189 | ,387,6 5 | 312,185 | 369,037 | 372,237 | 507,622 | 82,113 | 92,900 | 116, 96 | 71,011 | 5 ,333 | 70,725 | 182,093 | 312, 33 | , 76 | 11,962, 95 |
| 5 | Cash recover es (i.o. 500061) | -765,892 | -1,127, 36 | | - 0,359 | -23 ,6 8 | -65,32 | -270,732 | -31,690 | - 1,057 | - 8,322 | -3,810 | -12 ,681 | -1 ,07 | -157, 01 | -39,395 | -3,09 ,822 |
| 6 | Cash recover es (i.o. 50000 ) | 0 | | | | | | | | | | | | | | | 0 |
| 7 | Recovery costs (i.o. 50000 ) | 1,2 ,872 | 0 | | | | | | | | | | | | | | 1,2 ,872 |
| 8 | Transfer Credit from Gas Restructuring | 0 | 0 | | | | | | | | | | | | | | 0 |
| 9 | B Subtotal - net recoveries | 78,979 | -1,127, 36 | 0 | - 0,359 | -23 ,6 8 | -65,32 | -270,732 | -31,690 | - 1,057 | - 8,322 | -3,810 | -12 ,681 | -1 ,07 | -157, 01 | -39,395 | -1,8 9,950 |
| 10 | | | | | | | | | | | | | | | | | |
| 11 | A-B Total net expenses to recover | 5,066,169 | 3,260,209 | 312,185 | 328,678 | 137,589 | 2,298 | -188,619 | 61,210 | 75, 0 | 22,690 | 50,523 | 3 6,0 3 | 38,019 | 155,032 | 5,080 | 10,112,5 5 |
| 12 | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | |
| 1 | Surcharge revenue: | | | | | | | | | | | | | | | | |
| 15 | Act June 1998 - October 1998 | 0 | | | | | | | | | | | | | | | 0 |
| 16 | Act November 1998 - October 1999 | 0 | | | | | | | | | | | | | | | 0 |
| 17 | Act November 1999 - October 2000 | 0 | | | | | | | | | | | | | | | 0 |
| 18 | Act November 2000 - October 2001 | 0 | | | | | | | | | | | | | | | 0 |
| 19 | Act November 2001 - October 2002 | -73,5 3 | | | | | | | | | | | | | | | -73,5 3 |
| 20 | Act November 2002 - October 2003 | -75,98 | | | | | | | | | | | | | | | -75,98 |
| 21 | Act November 2003 - October 200 | -138,576 | | | | | | | | | | | | | | | -138,576 |
| 22 | Act November 200 - October 2005 | -326,132 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -326,132 |
| 23 | Act November 2005- October 2006 | -563,732 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -563,732 |
| 2 | Act November 2006- October 2007 | -662,265 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -662,265 |
| 25 | Act November 2007- October 2008 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | Act November 2012- October 2013 | 0 | | | | | - 0,012 | | | | | | | | | | - 0,012 |
| 27 | Act November 2013- October 201 | 0 | | | | | -50,99 | | | | | | | | | | -50,99 |
| 28 | Act Nov 2009-Oct 2010 Base Rate Rev | 0 | | | | 0 | | | | | | | | | | | 0 |
| 29 | Act Nov 2010-Oct 2011 Base Rate Rev | 0 | | | | 0 | | | | | | | | | | | 0 |
| 30 | Act Nov 2011-Oct 2012 Base Rate Rev | 0 | | | | 0 | | | | | | | | | | | 0 |
| 31 | Act Nov 2012-Oct 2013 Base Rate Rev | 0 | | | | 0 | -23,337 | | | | | | | | | | -23,337 |
| 32 | Act Nov 2013-Oct 201 Base Rate Rev | 0 | | | | | | | | | | | | | | | 0 |
| 33 | Act Nov 201 -Oct 2015 Base Rate Rev | 0 | | | | | | | | | | | | | | | 0 |
| 3 | AES co lections | 0 | | | | | | | | | | | | | | | 0 |
| 35 | Gas Street overcollection | 0 | | | | | | | | | | | | | | | 0 |
| 36 | Pr or Period Pool under/overcollect on | 7,525,691 | 3,302,330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 37 | | | | | | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | | | | | | |
| 39 | C Surcharge Subtotal | 5,685, 59 | 3,302,330 | 0 | 0 | 0 | -11 ,3 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1,95 ,576 |
| 0 | | | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | | | |
| 2 | D Net balance to be recovered (A-B C) | 10,751,628 | 6,562,539 | 312,185 | 328,678 | 137,589 | 327,955 | -188,619 | 61,210 | 75, 0 | 22,690 | 50,523 | 3 6,0 3 | 38,019 | 155,032 | 5,080 | 8,157,969 |
| 3 | | 0 | | | | | | | | | | | | | | | |
| | E Allocat on of Lit gated Recovery | 0 | -6,562,539 | -312,185 | -328,678 | -9 ,3 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -7,297,7 2 |
| 5 | | 0 | | | | | | | | | | | | | | | |
| 6 | Surcharge calculation | 0 | | | | | | | | | | | | | | | |
| 7 | Unrecovered costs (D E) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10,777 | 6, 83 | 21,653 | 197,739 | 27,156 | 132,885 | 5,080 | 01,773 |
| 8 | remaining life | 168 | 70 | 8 | 8 | 12 | 12 | 12 | 12 | 12 | 2 | 36 | 8 | 60 | 72 | 8 | |
| 9 | one year | 8 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | |
| 50 | F amortization | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10,777 | 3,2 1 | 7,218 | 9, 35 | 5, 31 | 22,1 7 | 726 | |
| 51 | | | | | | | | | | | | | | | | | |
| 52 | Required annual increase in rates: | | | | | | | | | | | | | | | | |
| 53 | smal er of D or F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10,777 | 3,2 1 | 7,218 | 9, 35 | 5, 31 | 22,1 7 | 726 | 98,975 |
| 5 | | 0 | | | | | | | | | | | | | | | |
| 55 | forecas ed therm sales | 1,28 , 2 ,318 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 182,899,057 | 182,899,057 |
| 56 | | | | | | | | | | | | | | | | | |
| #### | surcharge per therm | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0001 | $0.0000 | $0.0000 | $0.0003 | $0 0000 | $0.0001 | $0.0000 | $0.0005 |

1. While the recoveries are displayed on the Summary, Cash Recoveries by s te, are not exclusive to a particu ar site.

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

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**Environmental Remediation MGPs**
**Tariff page 99**

**Nashua**

| | | (9/00 - 9/07) ool #1 - #7 | (9/07 - 9/08) ool #8 | (9/08 - 9/09) ool #9 | (9/09 - 9/10) ool #10 | (9/10 - 9/11) ool #11 | Corrected per 2/08 Audit (9/11 - 9/12) ool #12 | (9/12 - 6/13) ool #13 | (7/13 - 6/1 ) ool #1 | (7/1 - 6/15) ool #15 | (7/15 - 6/16) ool #16 | (7/16 - 6/17) ool #17 | (7/17 - 6/18) ool #18 | (7/18 - 6/19) ool #19 | (7/19 - 6/20) ool #20 | DEF054 (7/20 - 6/21) ool #21 | s total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 Remediation costs (i.o. 500061) | 250,299 | 107,605 | 78,535 | 162,729 | 65,118 | 399, 00 | 119,095 | 63,397 | 105,917 | 106,129 | 100,3 2 | 61, 78 | 128,071 | 39 533 | 96,86 | 1,88 ,513 |
| 2 | Remediation costs (i.o. 500005) | 1,771,567 | | | | | | | | | | | | | | | 1,771,567 |
| 3 | A Subtotal - remediation costs | 2,021,866 | 107,605 | 78,535 | 162,729 | 65,118 | 399, 00 | 119,095 | 63,397 | 105,917 | 106,129 | 100,3 2 | 61, 78 | 128,071 | 39 533 | 96,86 | 3,656,080 |
| 5 | Cash recover es (i.o. 500061) | -22,732 | -10, 1 | -62,2 6 | -63,753 | -31,767 | -2,990 | -199,336 | -27, 7 | - 0,699 | - 3,69 | -15,029 | - 5,955 | - 6,103 | -28,062 | -35,8 8 | -676,075 |
| 6 | Cash recover es (i.o. 50000 ) | 0 | | | | | | | | | | | | | | | 0 |
| 7 | Recovery costs (i.o. 50000 ) | 18,388 | 0 | 0 | | | | | | | | | | | | | 18,388 |
| 8 | Transfer Credit from Gas Restructuring | 0 | 0 | 0 | | | | | | | | | | | | | 0 |
| 9 | B Subtotal - net recoveries | - ,3 | -10, 1 | -62,2 6 | -63,753 | -31,767 | -2,990 | -199,336 | -27, 7 | - 0,699 | - 3,69 | -15,029 | - 5,955 | - 6,103 | -28,062 | -35,8 8 | -657,687 |
| 10 | | | | | | | | | | | | | | | | | 0 |
| 11 | A-B Total net expenses to recover | 2,017,521 | 97,191 | 16,289 | 98,975 | 33,351 | 396, 11 | -80,2 1 | 35,950 | 65,217 | 62, 35 | 85,31 | 15,523 | 81,969 | 11, 72 | 61,016 | 2,998,392 |
| 12 | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | |
| 1 | Surcharge revenue: | | | | | | | | | | | | | | | | |
| 15 | Act June 1998 - October 1998 | 0 | | | | | | | | | | | | | | | 0 |
| 16 | Act November 1998 - October 1999 | 0 | | | | | | | | | | | | | | | 0 |
| 17 | Act November 1999 - October 2000 | 0 | | | | | | | | | | | | | | | 0 |
| 18 | Act November 2000 - October 2001 | 0 | | | | | | | | | | | | | | | 0 |
| 19 | Act November 2001 - October 2002 | -183,857 | | | | | | | | | | | | | | | -183,857 |
| 20 | Act November 2002 - October 2003 | -2 3,150 | | | | | | | | | | | | | | | -2 3,150 |
| 21 | Act November 2003 - October 200 | -2 7,639 | | | | | | | | | | | | | | | -2 7,639 |
| 22 | Act November 200 - October 2005 | -2 1,05 | | | | | | | | | | | | | | | -2 1,05 |
| 23 | Act November 2005- October 2006 | -27 ,991 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -27 ,991 |
| 2 | Act November 2006- October 2007 | -281,815 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -281,815 |
| 25 | Act November 2007- October 2008 | 0 | | | | | | | | | | | | | | | 0 |
| 26 | Act November 2012- October 2013 | 0 | | | | | - 0,012 | | | | | | | | | | - 0,012 |
| 27 | Act November 2013- October 201 | 0 | | | | | -38,2 6 | | | | | | | | | | -38,2 6 |
| 28 | Act Nov 2009-Oct 2010 Base Rate Rev | 0 | | | | 0 | | | | | | | | | | | 0 |
| 29 | Act Nov 2010-Oct 2011 Base Rate Rev | 0 | | | | 0 | | | | | | | | | | | 0 |
| 30 | Act Nov 2011-Oct 2012 Base Rate Rev | 0 | | | | 0 | | | | | | | | | | | 0 |
| 31 | Act Nov 2012-Oct 2013 Base Rate Rev | 0 | | | | 0 | -20,916 | | | | | | | | | | -20,916 |
| 32 | Act Nov 2013-Oct 201 Base Rate Rev | 0 | | | | | | | | | | | | | | | 0 |
| 33 | Act Nov 201 -Oct 2015 Base Rate Rev | 0 | | | | | | | | | | | | | | | 0 |
| 3 | AES co lections | 0 | | | | | | | | | | | | | | | 0 |
| 35 | Gas Street overcollection | 0 | | | | | | | | | | | | | | | 0 |
| 36 | Pr or Period Pool under/overcollect on | 3,186,601 | 733, 79 | 0 | 0 | 0 | 0 | 5,616 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 37 | | | | | | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | | | | | | |
| 39 | C Surcharge Subtotal | 1,71 ,096 | 733, 79 | 0 | 0 | 0 | | -93,558 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1,571,680 |
| 0 | | | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | | | |
| 2 | D Net balance to be recovered (A-B C) | 3,731,617 | 830,669 | 16,289 | 98,975 | 33,351 | 302,853 | -80,2 1 | 35,950 | 65,217 | 62, 35 | 85,31 | 15,523 | 81,969 | 11, 72 | 61,016 | 1, 26,713 |
| 3 | | | | | | | | | | | | | | | | | |
| | E Allocat on of Lit gated Recovery | 0 | -830,669 | -16,289 | -98,975 | -27,735 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -973,668 |
| 5 | | | | | | | | | | | | | | | | | |
| 6 | Surcharge calculation | | | | | | | | | | | | | | | | |
| 7 | Unrecovered costs (D E) | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 9,317 | 17,838 | 36,563 | 8,870 | 58,5 9 | 9,833 | 61,016 | 201,987 |
| 8 | remaining life | 36 | 72 | 8 | 8 | 72 | 12 | 12 | 12 | 12 | 2 | 36 | 8 | 60 | 72 | 8 | |
| 9 | one year | 36 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | |
| 50 | F amortization | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9,317 | 8,919 | 12,188 | 2,218 | 11,710 | 1,639 | 8,717 | |
| 51 | | | | | | | | | | | | | | | | | |
| 52 | Required annual increase in rates: | | | | | | | | | | | | | | | | |
| 53 | smal er of D or F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9,317 | 8,919 | 12,188 | 2,218 | 11,710 | 1,639 | 8,717 | 5 ,707 |
| 5 | | | | | | | | | | | | | | | | | |
| 55 | forecas ed therm sales | 738,096,27 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179 57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 182,899,057 | 182,899,057 |
| 56 | | | | | | | | | | | | | | | | | |
| #### | surcharge per therm | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0 0000 | $0.0001 | $0.0000 | $0.0001 | $0.0000 | $0.0001 | $0.0000 | $0.0000 | $0.0003 |

1. While the recoveries are displayed on the Summary, Cash Recoveries by s te, are not exclusive to a particu ar site.

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



**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**Environmental Remediation MGPs**
**Tariff page 99**

| | | Dover | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | DEF059 | |
| | | (9/02 - 9/03) ool #1 | (9/0 - 9/05) ool #2 | (9/05 - 9/06) ool #3 | (9/06 - 9/07) ool # | (9/07 - 9/08) ool #5 | (9/08 - 9/09) ool #6 | (9/09 - 9/10) ool #7 | (9/10 - 9/11) ool #8 | (9/11 - 9/12) ool #9 | (9/12 - 6/13) ool #10 | (7/13 - 6/1 ) ool #11 | (7/1 - 6/15) ool #12 | s total |
| 1 | 1 Remediation costs (i.o. 500061) | 0 | 18,85 | 2,288 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21,1 2 |
| 2 | Remediation costs (i.o. 500005) | 181,066 | | | | | | | | | | | | 181,066 |
| 3 | A Subtotal - remediation costs | 181,066 | 18,85 | 2,288 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 202,208 |
| 5 | Cash recover es (i.o. 500061) | 0 | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | Cash recover es (i.o. 50000 ) | 0 | | | | | | | | | | | | 0 |
| 7 | Recovery costs (i.o. 50000 ) | 0 | | | | | | | | | | | | 0 |
| 8 | Transfer Credit from Gas Restructuring | | | | | | | | | | | | | 0 |
| 9 | B Subtotal - net recoveries | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | | | | | | | | | | | | | | |
| 11 | A-B Total net expenses to recover | 181,066 | 18,85 | 2,288 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 202,208 |
| 12 | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | |
| 1 | Surcharge revenue: | | | | | | | | | | | | | |
| 15 | Act June 1998 - October 1998 | 0 | | | | | | | | | | | | 0 |
| 16 | Act November 1998 - October 1999 | 0 | | | | | | | | | | | | 0 |
| 17 | Act November 1999 - October 2000 | 0 | | | | | | | | | | | | 0 |
| 18 | Act November 2000 - October 2001 | 0 | | | | | | | | | | | | 0 |
| 19 | Act November 2001 - October 2002 | 0 | | | | | | | | | | | | 0 |
| 20 | Act November 2002 - October 2003 | 0 | | | | | | | | | | | | 0 |
| 21 | Act November 2003 - October 200 | -29,13 | | | | | | | | | | | | -29,13 |
| 22 | Act November 200 - October 2005 | -28 359 | | | | | | | | | | | | -28,359 |
| 23 | Act November 2005- October 2006 | -27, 99 | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -27, 99 |
| 2 | Act November 2006- October 2007 | -28,181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -28,181 |
| 25 | Act November 2007- October 2008 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | Act November 2012- October 2013 | | | | | | | | | | | | | 0 |
| 27 | Act November 2013- October 201 | | | | | | | | | | | | | 0 |
| 28 | Act Nov 2009-Oct 2010 Base Rate Rev | | | | | | | | | | | | | 0 |
| 29 | Act Nov 2010-Oct 2011 Base Rate Rev | | | | | | | | | | | | | 0 |
| 30 | Act Nov 2011-Oct 2012 Base Rate Rev | | | | | | | | | | | | | 0 |
| 31 | Act Nov 2012-Oct 2013 Base Rate Rev | | | | | | | | | | | | | 0 |
| 32 | Act Nov 2013-Oct 201 Base Rate Rev | | | | | | | | | | | | | 0 |
| 33 | Act Nov 201 -Oct 2015 Base Rate Rev | | | | | | | | | | | | | 0 |
| 3 | AES co lections | | | | | | | | | | | | | 0 |
| 35 | Gas Street overcollection | | | | | | | | | | | | | 0 |
| 36 | Pr or Period Pool under/overcollect on | | 67,892 | 86,7 6 | 89,03 | 89,03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 37 | | | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | | | |
| 39 | C Surcharge Subtotal | -113,17 | 67,892 | 86,7 6 | 89,03 | 89,03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -113,17 |
| 0 | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | |
| 2 | D Net balance to be recovered (A-B C) | 67,892 | 86,7 6 | 89,03 | 89,03 | 89,03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 89,03 |
| 3 | | | | | | | | | | | | | | |
| | E Allocat on of Lit gated Recovery | | 0 | | 0 | -89,03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -89,03 |
| 5 | | | | | | | | | | | | | | |
| 6 | Surcharge calculation | | | | | | | | | | | | | |
| 7 | Unrecovered costs (D E) | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | remaining life | 2 | 36 | 8 | 60 | 72 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | |
| 9 | one year | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | |
| 50 | F amortization | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 51 | | | | | | | | | | | | | | |
| 52 | Required annual increase in rates: | | | | | | | | | | | | | |
| 53 | smal er of D or F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | | | | | | | | | | | | | | |
| 55 | forecas ed therm sales | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 679 | 182,899,057 |
| 56 | | | | | | | | | | | | | | |
| #### | surcharge per therm | $0.0000 | $0.0000 | $0 0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 |

1. While the recoveries are displayed on the Summary, Cash Recoveries by s te, are not exclusive to a particu ar site.

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

**CONFIDENTIAL**
Schedule 20.3
Page 6 of 9

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**Environmental Remediation MGPs**
**Tariff page 99**

| | | Keene | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | DEF055 | |
| | | (9/03 - 9/0 ) ool #1 | (9/0 - 9/05) ool #2 | (9/05 - 9/06) ool #3 | (9/06 - 9/07) ool # | (9/07 - 9/08) ool #5 | (9/08 - 9/09) ool #6 | (9 09 - 9/10) ool #7 | (9/10 - 9/11) ool #8 | (9/11 - 9/12) ool #9 | (9 12 - 6/13) ool #10 | (7/13 - 6/14) pool #11 | (7/14 - 6/15) pool #12 | subtotal |
| 1 | 1 Remediation costs (i.o. 500061) | 0 | | | | | | | | | | | | |
| 2 | Remediation costs (i.o. 500005) | 10,165 | 6,606 | 35,111 | 8,766 | 32 | 269 | 0 | 0 | 88 | 1, 00 | | | - |
| 3 | A Subtotal - remediation costs | 10,165 | 6,606 | 35,111 | 8,766 | 32 | 269 | 0 | 0 | 88 | 1, 00 | | | - |
| 5 | Cash recover es (i.o. 500061) | 0 | | | | | | | | | | | | |
| 6 | Cash recover es (i.o. 50000 ) | 0 | | | | | | | | | | | | |
| 7 | Recovery costs (i.o. 50000 ) | | | 18,831 | 823 | 0 | 0 | 0 | 0 | | | | | |
| 8 | Transfer Credit from Gas Restructuring | | | | 0 | 0 | 0 | | | | | | | |
| 9 | B Subtotal - net recoveries | 0 | 0 | 18,831 | 823 | 0 | 0 | 0 | 0 | 0 | 0 | | | - |
| 10 | | | | | | | | | | | | | | |
| 11 | A-B Total net expenses to recover | 10,165 | 6,606 | 53,9 2 | 9,589 | 32 | 269 | 0 | 0 | 88 | 1, 00 | | | - |
| 12 | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | |
| 1 | Surcharge revenue: | | | | | | | | | | | | | |
| 15 | Act June 1998 - October 1998 | 0 | | | | | | | | | | | | - |
| 16 | Act November 1998 - October 1999 | 0 | | | | | | | | | | | | - |
| 17 | Act November 1999 - October 2000 | 0 | | | | | | | | | | | | - |
| 18 | Act November 2000 - October 2001 | 0 | | | | | | | | | | | | - |
| 19 | Act November 2001 - October 2002 | 0 | | | | | | | | | | | | - |
| 20 | Act November 2002 - October 2003 | 0 | | | | | | | | | | | | - |
| 21 | Act November 2003 - October 200 | 0 | | | | | | | | | | | | - |
| 22 | Act November 200 - October 2005 | 0 | 0 | | | | 0 | 0 | 0 | 0 | 0 | - | - | - |
| 23 | Act November 2005- October 2006 | 0 | 0 | | | | 0 | 0 | 0 | 0 | 0 | - | - | - |
| 2 | Act November 2006- October 2007 | 0 | 0 | -1 ,091 | | | | | | | | | | (14,091) |
| 25 | Act November 2007- October 2008 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - |
| 26 | Act November 2012- October 2013 | | | | | | | | | | | | | - |
| 27 | Act November 2013- October 201 | | | | | | | | | | | | | - |
| 28 | Act Nov 2009-Oct 2010 Base Rate Rev | | | | | | | | | | | | | - |
| 29 | Act Nov 2010-Oct 2011 Base Rate Rev | | | | | | | | | | | | | - |
| 30 | Act Nov 2011-Oct 2012 Base Rate Rev | | | | | | | | | | | | | - |
| 31 | Act Nov 2012-Oct 2013 Base Rate Rev | | | | | | | | | | | | | - |
| 32 | Act Nov 2013-Oct 201 Base Rate Rev | | | | | | | | | | | | | - |
| 33 | Act Nov 201 -Oct 2015 Base Rate Rev | | | | | | | | | | | | | - |
| 3 | AES co lections | | | | | | | | | | | | | - |
| 35 | Gas Street overcollection | | | | | | | | | | | | | - |
| 36 | Pr or Period Pool under/overcollect on | | 10,165 | 16,771 | 56,622 | 66,211 | 0 | 0 | 0 | 0 | 0 | - | - | |
| 37 | | | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | | | |
| 39 | C Surcharge Subtotal | 0 | 10,165 | 2,680 | 56,622 | 66,211 | 0 | 0 | 0 | 0 | 0 | - | - | (14,091) |
| 0 | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | |
| 2 | D Net balance to be recovered (A-B C) | 10,165 | 16,771 | 56,622 | 66,211 | 66,2 | 269 | 0 | 0 | 88 | 1, 00 | | | |
| 3 | | | | | | | | | | | | | | |
| | E Allocat on of Lit gated Recovery | 0 | 0 | 0 | 0 | -66,2 | -269 | 0 | 0 | 0 | 0 | | | |
| 5 | | | | | | | | | | | | | | |
| 6 | Surcharge calculation | | | | | | | | | | | | | |
| 7 | Unrecovered costs (D E) | 0 | 0 | 0 | | | 0 | 0 | 0 | 0 | 0 | | | |
| 8 | remaining life | 2 | 36 | 8 | 60 | 72 | 8 | 8 | 8 | 12 | 12 | | | |
| 9 | one year | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | | | |
| 50 | F amortization | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| 51 | | | | | | | | | | | | | | |
| 52 | Required annual increase in rates: | | | | | | | | | | | | | |
| 53 | smal er of D or F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| 5 | | | | | | | | | | | | | | |
| 55 | forecas ed therm sales | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,574,679 | 179,574,679 | 182,899,057 |
| 56 | | | | | | | | | | | | | | |
| #### | surcharge per therm | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | | | |

1. While the recoveries are displayed on the Summary, Cash Recoveries by s te, are not exclusive to a particu ar site.

SUBJECT TO CONFIDENTIAL TREATMENT

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**Environmental Remediation MGPs**
**Tariff page 99**

| | | Concord | | | | | | | | | | | | | | | | DEF077 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | (9/03 - 9/07) ool #1 - # | (9/07 - 9/08) ool #5 | (9/08 - 9/09) ool #6 | (9/09 - 9/10) ool #7 | (9/10 - 9/11) ool #8 | Corrected per 2/08 Audit (9/11 - 9/12) ool #9 | (9/12 - 6/13) ool #10 | (7/13 - 6/1 ) ool #11 | (7/1 - 6/15) ool #12 | (7/15 - 6/16) ool #13 | (7/16 - 6/17) pool #14 | (7/17 - 6/18) pool #15 | (7/18 - 6/19) pool #16 | (7/19 - 6/20) pool #17 | (7/20 - 6/21) pool #18 | s total |
| 1 | 1 Remediation costs (i.o. 500061) | 0 | | | | | | | | | | | | | | | |
| 2 | Remediation costs (i.o. 500005) | 397,110 | 8,006 | 77,063 | 9, 03 | 179,732 | 289,103 | 8 ,256 | 135,673 | 192,525 | 11 ,7 9 | | | | | | |
| 3 | A Subtotal - remediation costs | 397,110 | 8,006 | 77,063 | 9, 03 | 179,732 | 289,103 | 8 ,256 | 135,673 | 192,525 | 11 ,7 9 | | | | | | |
| 5 | Cash recover es (i.o. 500061) | -70,215 | -12,601 | 16,623 | -3,213 | -11,39 | -31,575 | -38,871 | -12,319 | -28,7 2 | -19,197 | | | | | | |
| 6 | Cash recover es (i.o. 50000 ) | 0 | | | | | | | | | | | | | | | |
| 7 | Recovery costs (i.o. 50000 ) | | 1, 32 | -1,007 | | | | | | | | | | | | | |
| 8 | Transfer Credit from Gas Restructuring | 0 | | | | | | | | | | | | | | | |
| 9 | B Subtotal - net recoveries | -70,215 | -11,169 | 15,616 | -3,213 | -11,39 | -31,575 | -38,871 | -12,319 | -28,7 2 | -19,197 | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |
| 11 | A-B Total net expenses to recover | 326,89 | -3,163 | 92,679 | 6,190 | 168,338 | 257,528 | 5,38 | 123,355 | 163,783 | 95,553 | | | | | | |
| 12 | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | |
| 1 | Surcharge revenue: | | | | | | | | | | | | | | | | |
| 15 | Act June 1998 - October 1998 | 0 | | | | | | | | | | | | | | | - |
| 16 | Act November 1998 - October 1999 | 0 | | | | | | | | | | | | | | | - |
| 17 | Act November 1999 - October 2000 | 0 | | | | | | | | | | | | | | | - |
| 18 | Act November 2000 - October 2001 | 0 | | | | | | | | | | | | | | | - |
| 19 | Act November 2001 - October 2002 | 0 | | | | | | | | | | | | | | | - |
| 20 | Act November 2002 - October 2003 | 0 | | | | | | | | | | | | | | | - |
| 21 | Act November 2003 - October 200 | 0 | | | | | | | | | | | | | | | - |
| 22 | Act November 200 - October 2005 | 0 | | | | | | | | | | | | | | | - |
| 23 | Act November 2005- October 2006 | -27, 99 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - | - | (27,499) |
| 2 | Act November 2006- October 2007 | -28,181 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - | - | (28,181) |
| 25 | Act November 2007- October 2008 | 0 | | | | | | | | | | | | | | | - |
| 26 | Act November 2012- October 2013 | 0 | | | | -20,006 | -20,006 | | | | | | | | | | (40,012) |
| 27 | Act November 2013- October 201 | 0 | | | | -12,7 9 | -25, 97 | | | | | | | | | | (38,246) |
| 28 | Act Nov 2009-Oct 2010 Base Rate Rev | 0 | | | | -1,891 | | | | | | | | | | | (1,891) |
| 29 | Act Nov 2010-Oct 2011 Base Rate Rev | 0 | | | | -13,816 | | | | | | | | | | | (13,816) |
| 30 | Act Nov 2011-Oct 2012 Base Rate Rev | 0 | | | | -12,16 | | | | | | | | | | | (12,164) |
| 31 | Act Nov 2012-Oct 2013 Base Rate Rev | 0 | | | | -6,79 | -6,79 | | | | | | | | | | (13,588) |
| 32 | Act Nov 2013-Oct 201 Base Rate Rev | 0 | | | | | | | | | | | | | | | - |
| 33 | Act Nov 201 -Oct 2015 Base Rate Rev | 0 | | | | | | | | | | | | | | | - |
| 3 | AES co lections | 0 | | | | | | | | | | | | | | | - |
| 35 | Gas Street overcollection | 0 | | | | | | | | | | | | | | | - |
| 36 | Pr or Period Pool under/overcollect on | 19,182 | 271,21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - | - | |
| 37 | | | | | | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | | | | | | |
| 39 | C Surcharge Subtotal | 363,501 | 271,21 | 0 | 0 | -67, 20 | -52,297 | 0 | 0 | 0 | 0 | - | - | - | - | - | (175,398) |
| 0 | | | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | | | |
| 2 | D Net balance to be recovered (A-B C) | 690,395 | 268,051 | 92,679 | 6,190 | 100,919 | 205,231 | 5,38 | 123,355 | 163,783 | 95,553 | | | | | | |
| 3 | | | | | | | | | | | | | | | | | |
| | E Allocat on of Lit gated Recovery | 0 | -268,051 | -92,679 | - 6,190 | -1 ,702 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 5 | | | | | | | | | | | | | | | | | |
| 6 | Surcharge calculation | | | | | | | | | | | | | | | | |
| 7 | Unrecovered costs (D E) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23,398 | 27,301 | | | | | | |
| 8 | remaining life | 1 | 72 | 8 | 8 | 12 | 12 | 12 | 12 | 12 | 2 | | | | | | |
| 9 | one year | 36 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | | | | | | |
| 50 | F amortization | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23,398 | 13,650 | | | | | | |
| 51 | | | | | | | | | | | | | | | | | |
| 52 | Required annual increase in rates: | | | | | | | | | | | | | | | | |
| 53 | smal er of D or F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23,398 | 13,650 | | | | | | |
| 5 | | | | | | | | | | | | | | | | | |
| 55 | forecas ed therm sales | 553,96 ,622 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,574,679 | 179,574,679 | 179,574,679 | 179,574,679 | 182,899,057 | 182,899,057 |
| 56 | | | | | | | | | | | | | | | | | |
| #### | surcharge per therm | $0.0000 | $0.0000 | $0 0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0001 | $0.0001 | | | | | | |

SUBJECT TO CONFIDENTIAL TREATMENT

1. While the recoveries are displayed on the Summary, Cash Recoveries by s te, are not exclusive to a particu ar site.

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

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**Environmental Remediation MGPs**
**Tariff page 99**

| | | General | | | | | | | | | | | | | | | | DEF064 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | (9/02 - 9/07) ool #1 - #5 | (9/07 - 9/08) ool #6 | (9/08 - 9/09) ool #7 | (9/09 - 9/10) ool #8 | (9/10 - 9/11) ool #9 | (9/11 - 9/12) ool #10 | (9/12 - 6/13) ool #11 | (7/13 - 6/1 ) ool #12 | (7/1 - 6/15) ool #13 | (7/15 - 6/16) ool #1 | (7/16 - 6/17) ool #15 | (7/17 - 6/18) ool #16 | (7/18 - 6/19) ool #17 | (7/19 - 6/20) ool #18 | (7/20 - 6/21) ool #19 | s total | 2021 MGP Remediat on s total |
| 1 | 1 Remediation costs (i.o. 500061) | | | | | | | | | | | | | | | | 0 | |
| 2 | Remediation costs (i.o. 500005) | 806,611 | -181,000 | -26,88 | ,199 | 69,286 | 93 03 | 75,20 | 13,139 | 16,612 | 11,879 | 6,5 7 | 10,799 | 6,868 | 7,111 | 5,6 6 | 919,051 | |
| 3 | A Subtotal - remediation costs | 806,611 | -181,000 | -26,88 | ,199 | 69,286 | 93 03 | 75,20 | 13,139 | 16,612 | 11,879 | 6,5 7 | 10,799 | 6,868 | 7,111 | 5,6 6 | 919,051 | |
| 5 | Cash recover es (i.o. 500061) | 0 | 0 | 0 | | | | | | | | | | | | | 0 | |
| 6 | Cash recover es (i.o. 50000 ) | | | | | | | | | | | | | | | | 0 | |
| 7 | Recovery costs (i.o. 50000 ) | | 16,012 | 23,953 | 0 | 0 | -1 068 | -1,358 | 0 | -2 ,250 | 0 | 0 | 0 | 0 | 0 | 0 | 288 | |
| 8 | Transfer Credit from Gas Restructuring | | -3,331 | | | | | | | | | | | | | | -3,331 | |
| 9 | B Subtotal - net recoveries | 0 | 12,681 | 23,953 | 0 | 0 | -1 068 | -1,358 | 0 | -2 ,250 | 0 | 0 | 0 | 0 | 0 | 0 | -3,0 3 | |
| 10 | | | | | | | | | | | | | | | | | | |
| 11 | A-B Total net expenses to recover | 806,611 | -168,319 | -2,931 | ,199 | 69,286 | 78 967 | 73,8 6 | 13,139 | -7,638 | 11,879 | 6,5 7 | 10,799 | 6,868 | 7,111 | 5,6 6 | 916,009 | |
| 12 | | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | | |
| 1 | Surcharge revenue: | | | | | | | | | | | | | | | | | |
| 15 | Act June 1998 - October 1998 | | | | | | | | | | | | | | | | 0 | (54,889) |
| 16 | Act November 1998 - October 1999 | | | | | | | | | | | | | | | | 0 | (538,143) |
| 17 | Act November 1999 - October 2000 | | | | | | | | | | | | | | | | 0 | (912,804) |
| 18 | Act November 2000 - October 2001 | | | | | | | | | | | | | | | | 0 | (1,336,776) |
| 19 | Act November 2001 - October 2002 | | | | | | | | | | | | | | | | 0 | (1,679,228) |
| 20 | Act November 2002 - October 2003 | | | | | | | | | | | | | | | | 0 | (1,732,442) |
| 21 | Act November 2003 - October 200 | -8,265 | | | | | | | | | | | | | | | -8,265 | (1,428,735) |
| 22 | Act November 200 - October 2005 | -70,898 | | | | | | | | | | | | | | | -70,898 | (1,403,787) |
| 23 | Act November 2005- October 2006 | -96,2 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -96,2 7 | (1,694,877) |
| 2 | Act November 2006- October 2007 | - 9,318 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - 9,318 | (2,036,113) |
| 25 | Act November 2007- October 2008 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 26 | Act November 2012- October 2013 | 0 | 0 | 0 | 0 | -5,002 | -5 002 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -10,003 | (160,048) |
| 27 | Act November 2013- October 201 | | | | | -12,7 9 | -12,7 9 | -12,7 9 | | | | | | | | | -38,2 6 | (293,217) |
| 28 | Act Nov 2009-Oct 2010 Base Rate Rev | | | | | | | | | | | | | | | | 0 | (10,611) |
| 29 | Act Nov 2010-Oct 2011 Base Rate Rev | | | | | | | | | | | | | | | | 0 | (77,509) |
| 30 | Act Nov 2011-Oct 2012 Base Rate Rev | | | | | | | | | | | | | | | | 0 | (68,244) |
| 31 | Act Nov 2012-Oct 2013 Base Rate Rev | | | | | | | | | | | | | | | | 0 | (76,335) |
| 32 | Act Nov 2013-Oct 201 Base Rate Rev | | | | | | | | | | | | | | | | 0 | (85,298) |
| 33 | Act Nov 201 -Oct 2015 Base Rate Rev | | | | | | | | | | | | | | | | 0 | (86,554) |
| 3 | AES co lections | | | | | | | | | | | | | | | | 0 | (266,571) |
| 35 | Gas Street overcollection | | | | | | | | | | | | | | | | 0 | (23,511) |
| 36 | Pr or Period Pool under/overcollect on | 1, 86,6 | 2,068,527 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 37 | | | | | | | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | | | | | | | |
| 39 | C Surcharge Subtotal | 1,261,916 | 2,068,527 | 0 | 0 | -17,750 | -17 750 | -12,7 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -272,977 | (13,965,693) |
| 0 | | | | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | | | | |
| 2 | D Net balance to be recovered (A-B C) | 2,068,527 | 1,900,208 | -2,931 | ,199 | 51,536 | 61,217 | 61,098 | 13,139 | -7,638 | 11,879 | 6,5 7 | 10,799 | 6,868 | 7,111 | 5,6 6 | 6 3,032 | |
| 3 | | | | | | | | | | | | | | | | | | |
| | E Allocat on of Lit gated Recovery | 0 | -1,900,208 | 2,931 | - ,199 | -8,562 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1,910,037 | |
| 5 | | | | | | | | | | | | | | | | | | |
| 6 | Surcharge calculation | | | | | | | | | | | | | | | | | |
| 7 | Unrecovered costs (D E) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1,091 | 3,39 | 2,806 | 6,171 | ,906 | 6,095 | 5,6 6 | 27,926 | |
| 8 | remaining life | 72 | 8 | 8 | 8 | 12 | 12 | 12 | 12 | 12 | 2 | 36 | 8 | 60 | 72 | 8 | | |
| 9 | one year | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | | |
| 50 | F amortization | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1,091 | 1,697 | 935 | 1 5 3 | 981 | 1,016 | 807 | | |
| 51 | | | | | | | | | | | | | | | | | | |
| 52 | Required annual increase in rates: | | | | | | | | | | | | | | | | | |
| 53 | smal er of D or F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1,091 | 1,697 | 935 | 1,5 3 | 981 | 1 016 | 807 | 5,887 | |
| 5 | | | | | | | | | | | | | | | | | | |
| 55 | forecas ed therm sales | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 ,679 | 179,57 679 | 179,57 679 | 182,899,057 | 182,899,057 | **182,899,057** |
| 56 | | | | | | | | | | | | | | | | | | |
| #### | surcharge per therm | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0 0000 | $0.0000 | $0.0000 | **$0.0129** |

SUBJECT TO CONFIDENTIAL TREATMENT

1. While the recoveries are displayed on the Summary, Cash Recoveries by s te, are not exclusive to a particu ar site.

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**Environmental Remediation MGPs**
**Tariff page 99**

**Expense and Collection Summary per Year**

| | | (thru - 9/07) | (9/07 - 9/08) | (9/08 - 9/09) | (9/09 - 9/10) | (9 10 - 9/11) | (9 11 - 9/12) | (7/13 - 6/1 ) | (7/1 - 6/15) | (7/15 - 6/16) | (7/16 - 6/17) | (7/17 - 6/18) | (7/18 - 6/19) | (7/19 - 6/20) | (7/20 - 6/21) | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 Remediation costs (i.o. 500061) | 9,917,388 | ,590,62 | 518,907 | 67 ,766 | 686,515 | 993, 3 | 76,206 | 312,039 | 220,3 | 256,871 | 670,90 | 397, 6 | 539,32 | 50 ,039 | [redacted] |
| 2 | Remediation costs (i.o. 500005) | 13,712,581 | 255,263 | 658,32 | 316,280 | 59,550 | 651,906 | 2,605,250 | 7,975,39 | 3,307,910 | 260,380 | 115,8 1 | 69,261 | 11 ,228 | 8, 99 | [redacted] |
| 3 | A Subtotal - remediation costs | 23,629,969 | ,8 5,887 | 1,177 231 | 991,0 5 | 1,1 6,065 | 1,6 5,3 0 | 3,081, 56 | 8,287, 33 | 3,528,25 | 517,250 | 786,7 5 | 66,707 | 653,552 | 952,538 | [redacted] |
| 5 | Cash recover es (i.o. 500061) | -2,93 ,5 | -1,150, 52 | -58 231 | -113,390 | -310,226 | -105,062 | -607,70 | -121,889 | -119,826 | -53,116 | -195, 23 | -208,5 | -212,660 | -169,1 0 | [redacted] |
| 6 | Cash recover es (i.o. 50000 ) | - 5,985 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | [redacted] |
| 7 | Recovery costs (i.o. 50000 ) | 1,918,3 0 | 39,173 | 22,9 6 | 0 | 0 | -1 ,068 | 2,500,000 | 2, 75,750 | 0 | 0 | 0 | 0 | 0 | 0 | [redacted] |
| 8 | Transfer Credit from Gas Restructuring | 0 | -3 331 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | [redacted] |
| 9 | B Subtotal - net recoveries | -1, 62,188 | -1,11 ,609 | -35 285 | -113,390 | -310,226 | -119,129 | 1,892,296 | 2,353,861 | -119,826 | -53,116 | -195, 23 | -208,5 | -212,660 | -169,1 0 | [redacted] |
| 10 | | | | | | | | | | | | | | | | |
| 11 | A-B Total net expenses to recover | 22,167,780 | 3,731 277 | 1,1 1,9 6 | 877,655 | 835,839 | 1,526,211 | ,973,753 | 10,6 1,29 | 3, 08, 28 | 6 ,13 | 591,322 | 258,163 | 0,892 | 783,398 | [redacted] |
| 12 | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | |
| 1 | Surcharge revenue: | | | | | | | | | | | | | | | |
| 15 | Act June 1998 - October 1998 | -5 ,889 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (5 ,889) |
| 16 | Act November 1998 - October 1999 | -538,1 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (538,1 3) |
| 17 | Act November 1999 - October 2000 | -912 80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (912,80 ) |
| 18 | Act November 2000 - October 2001 | -1,336 776 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (1,336,776) |
| 19 | Act November 2001 - October 2002 | -1,679,228 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (1,679,228) |
| 20 | Act November 2002 - October 2003 | -1,732, 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (1,732, 2) |
| 21 | Act November 2003 - October 200 | -1, 28,735 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (1, 28,735) |
| 22 | Act November 200 - October 2005 | -1, 03,787 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (1, 03,787) |
| 23 | Act November 2005- October 2006 | -1,69 ,877 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (1,69 ,877) |
| 2 | Act November 2006- October 2007 | -2,036,113 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (2,036,113) |
| 25 | Act November 2007- October 2008 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 26 | Act November 2012- October 2013 | 0 | 0 | 0 | 0 | -30,009 | -130,039 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (160,0 8) |
| 27 | Act November 2013- October 201 | 0 | 0 | 0 | 0 | -38,2 6 | -165,731 | -89,2 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (293,217) |
| 28 | Act Nov 2009-Oct 2010 Base Rate Rev | 0 | 0 | 0 | 0 | -10,611 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (10,611) |
| 29 | Act Nov 2010-Oct 2011 Base Rate Rev | 0 | 0 | 0 | 0 | -77,509 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (77,509) |
| 30 | Act Nov 2011-Oct 2012 Base Rate Rev | 0 | 0 | 0 | 0 | -68,2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (68,2 ) |
| 31 | Act Nov 2012-Oct 2013 Base Rate Rev | 0 | 0 | 0 | 0 | -8,937 | -67,398 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (76,335) |
| 32 | Act Nov 2013-Oct 201 Base Rate Rev | 0 | 0 | 0 | 0 | 0 | -28, 33 | -56,865 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (85,298) |
| 33 | Act Nov 201 -Oct 2015 Base Rate Rev | 0 | 0 | 0 | 0 | 0 | -21,639 | - 3,277 | -21,639 | 0 | 0 | 0 | 0 | 0 | 0 | (86 55 ) |
| 3 | AES co lections | -69,391 | -12,620 | -12,90 | -13,1 5 | -13,221 | -13,738 | -27,673 | -1 ,173 | -1 , 05 | -1 ,66 | -1 ,858 | -1 ,999 | -15,312 | -15, 68 | (266 571) |
| 35 | Gas Street overcollection | -23,511 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (23 511) |
| 36 | Pr or Period Pool under/overcollect on | 15,673,5 7 | | | | | | | | | | | | 0 | 0 | [redacted] |
| 37 | | | | | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | | | | | |
| 39 | C Surcharge Subtotal | 2,762,851 | -12,620 | -12,90 | -13,1 5 | -2 6,777 | - 26,978 | -217,055 | -35,811 | -1 , 05 | -1 ,66 | -1 ,858 | -1 ,999 | -15,312 | -15, 68 | 1,707,85 |
| 0 | | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | | |
| 2 | D Net balance to be recovered (A-B C) | 2 ,930,631 | 3,718,657 | 1,129,0 2 | 86 ,510 | 589,062 | 1,099,233 | ,756,698 | 10,605, 83 | 3,39 ,023 | 9, 70 | 576, 6 | 2 3,165 | 25,579 | 767,930 | [redacted] |
| 3 | | | | | | | | | | | | | | | | |
| | E Allocat on of Lit gated Recovery | | | | | | | | | | | | | | | |
| 5 | | | | | | | | SUBJECT TO CONFIDENTIAL TREATMENT | | | | | | | | |
| 6 | Surcharge calculation | | | | | | | | | | | | | | | |
| 7 | Unrecovered costs (D E) | | | | | | | | | | | | | | | |
| 8 | remaining life | | | | | | | | | | | | | | | |
| 9 | one year | | | | | | | | | | | | | | | |
| 50 | F amortization | | | | | | | | | | | | | | | |
| 51 | | | | | | | | | | | | | | | | |
| 52 | Required annual increase in rates: | | | | | | | | | | | | | | | |
| 53 | smal er of D or F | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | |
| 55 | forecas ed therm sales | | | | | | | | | | | | | | | |
| 56 | | | | | | | | | | | | | | | | |
| #### | surcharge per therm | | | | | | | | | | | | | | | |

1. While the recoveries are displayed on the Summary, Cash Recoveries by s te, are not exclusive to a particu ar site.

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

**Calculation of Supplier Balancing Charge**
**2020-2021**

**Rate: $ 0.1807 /MMBtu**

| | Rate | Volume | | Total | |
|---|---|---|---|---|---|
| Injection Cost | $ 0.0087 | **386,014** | $ | 3,358 | |
| Fuel 1.75% | $ 0.0481 | **386,014** | $ | 18,577 | |
| | | | | | |
| Withdrawal Cost | $ 0.0087 | **195,768** | $ | 1,703 | |
| Delivery Rate | $ 0.0431 | 195,768 | $ | 8,432 | |
| FTA Demand Charge | $ 0.2357 | 195,768 | $ | 46,138 | |
| FTA Commodity Charge | $ 0.1003 | 195,768 | $ | 19,636 | |
| Fuel 1.35% | $ 0.0371 | 195,768 | $ | 7,268 | |
| | | | | | |
| | | Total Cost | $ | 105,112 | |
| | | Absolute Value of the Sendout Error | | **581,782** | MMBtu |
| | | Rate | $ | 0.1807 | /MMBTU |

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

| | | | |
|---|---|---|---|
| TGP FSMA Injection Charge | $ | 0.0087 | / MMBtu |
| TGP FSMA Withdrawal Charge | $ | 0.0087 | / MMBtu |
| TGP FSMA Deliverability Charge | $ | 1.3094 | / MMBtu per month |
| | $ | 0.0431 | / MMBtu per day |
| TGP Z4-6 Demand Charge | $ | 7.1645 | / MMBtu per month |
| | $ | 0.2357 | / MMBtu per day |
| TGP Z4-6 Commodity Charge | $ | 0.1003 | / MMBtu |

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

**Calculation of Supplier Balancing Charge**
**2020-2021**
## Estimated Monthly Imbalances

| Date | Forecasted DD | Actual DD | Forecaster Error DD | Forecasted Sendout (MMBtu) | Actual Sendout (MMBtu) | Sendout Error (MMBtu) | Abs.Value Sendout Error (MMBtu) | Injections (MMBtu) | Withdrawals (MMBtu) |
|---|---|---|---|---|---|---|---|---|---|
| Nov | 599 | 589 | 10 | 1,423,420 | 1,408,975 | 14,445 | 66,447 | 40,446 | 26,001 |
| Dec | 986 | 997 | (11) | 2,217,499 | 2,237,310 | (19,812) | 84,649 | 32,419 | 52,230 |
| Jan | 1,122 | 1,118 | 4 | 2,564,525 | 2,556,052 | 8,473 | 84,733 | 46,603 | 38,130 |
| Feb | 1,086 | 1,059 | 27 | 2,484,194 | 2,438,118 | 46,075 | 86,870 | 66,473 | 20,397 |
| Mar | 731 | 724 | 7 | 1,759,139 | 1,745,972 | 13,168 | 69,602 | 41,385 | 28,217 |
| Apr | 595 | 568 | 27 | 1,279,771 | 1,242,675 | 37,097 | 53,584 | 45,340 | 8,244 |
| May | 262 | 237 | 25 | 685,310 | 660,496 | 24,814 | 34,740 | 29,777 | 4,963 |
| Jun | 32 | 21 | 11 | 221,781 | 216,450 | 5,330 | 7,269 | 6,300 | 969 |
| Jul | - | - | - | 432,376 | 432,376 | - | - | - | - |
| Aug | 15 | 5 | 10 | 324,442 | 316,893 | 7,549 | 7,549 | 7,549 | - |
| Sep | 105 | 78 | 27 | 415,806 | 401,671 | 14,135 | 16,155 | 15,145 | 1,010 |
| Oct | 446 | 407 | 39 | 906,155 | 867,184 | 38,971 | 70,184 | 54,578 | 15,607 |
| **Total** | **5,979** | **5,803** | **176** | **14,714,420** | **14,524,173** | **190,246** | **581,782** | **386,014** | **195,768** |

**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**
**Calculation of Supplier Balancing Charge**
**2021-2022**
## Estimated Daily Imbalances

| Date | Predicted MAN HDD | Actual MAN HDD | Forecaster Error MAN HDD | Calculated on Predicted MAN HDD | Calculated on Actual MAN HDD | Sendout Error (MMBtu) | Abs.Value Sendout Error (MMBtu) | Injections (MMBtu) | Withdrawals (MMBtu) |
|---|---|---|---|---|---|---|---|---|---|
| Apr 1, 2020 | 24 | 21 | 3 | 48383 82627 | 44261 97983 | 4121 84644 | 4121 84644 | 4121.84644 | 0 |
| Apr 2, 2020 | 21 | 22 | -1 | 44261 97983 | 45635 92864 | -1373 94881 | 1373 94881 | 0 | 1373.948812 |
| Apr 3, 2020 | 20 | 20 | 0 | 42888 03102 | 42888 03102 | 0 | 0 | 0 | 0 |
| Apr 4, 2020 | 21 | 18 | 3 | 44261 97983 | 40140.1334 | 4121 84644 | 4121 84644 | 4121.84644 | 0 |
| Apr 5, 2020 | 13 | 14 | -1 | 33270 38934 | 34644 33815 | -1373 94881 | 1373 94881 | 0 | 1373.948812 |
| Apr 6, 2020 | 17 | 16 | 1 | 38766.18458 | 37392 23577 | 1373 94881 | 1373 94881 | 1373.94881 | 0 |
| Apr 7, 2020 | 15 | 12 | 3 | 36018 28696 | 31896.44052 | 4121 84644 | 4121 84644 | 4121.84644 | 0 |
| Apr 8, 2020 | 17 | 18 | -1 | 38766.18458 | 40140.1334 | -1373 94881 | 1373 94881 | 0 | 1373.948812 |
| Apr 9, 2020 | 22 | 23 | -1 | 45635 92864 | 47009 87745 | -1373 94881 | 1373 94881 | 0 | 1373.948812 |
| Apr 10, 2020 | 24 | 24 | 0 | 48383 82627 | 48383 82627 | 0 | 0 | 0 | 0 |
| Apr 11, 2020 | 23 | 23 | 0 | 47009 87745 | 47009 87745 | 0 | 0 | 0 | 0 |
| Apr 12, 2020 | 10 | 10 | 0 | 29148.5429 | 29148.5429 | 0 | 0 | 0 | 0 |
| Apr 13, 2020 | 13 | 10 | 3 | 33270 38934 | 29148.5429 | 4121 84644 | 4121 84644 | 4121.84644 | 0 |
| Apr 14, 2020 | 18 | 15 | 3 | 40140.1334 | 36018 28696 | 4121 84644 | 4121 84644 | 4121.84644 | 0 |
| Apr 15, 2020 | 24 | 23 | 1 | 48383 82627 | 47009 87745 | 1373 94881 | 1373 94881 | 1373.94881 | 0 |
| Apr 16, 2020 | 27 | 27 | 0 | 52505.6727 | 52505.6727 | 0 | 0 | 0 | 0 |
| Apr 17, 2020 | 22 | 23 | -1 | 45635 92864 | 47009 87745 | -1373 94881 | 1373 94881 | 0 | 1373.948812 |
| Apr 18, 2020 | 26 | 27 | -1 | 51131.72389 | 52505.6727 | -1373 94881 | 1373 94881 | 0 | 1373.948812 |
| Apr 19, 2020 | 13 | 11 | 2 | 33270 38934 | 30522.49171 | 2747 89762 | 2747 89762 | 2747.89762 | 0 |
| Apr 20, 2020 | 21 | 21 | 0 | 44261 97983 | 44261 97983 | 0 | 0 | 0 | 0 |
| Apr 21, 2020 | 24 | 24 | 0 | 48383 82627 | 48383 82627 | 0 | 0 | 0 | 0 |
| Apr 22, 2020 | 26 | 26 | 0 | 51131.72389 | 51131.72389 | 0 | 0 | 0 | 0 |
| Apr 23, 2020 | 20 | 17 | 3 | 42888 03102 | 38766.18458 | 4121 84644 | 4121 84644 | 4121.84644 | 0 |
| Apr 24, 2020 | 23 | 18 | 5 | 47009 87745 | 40140.1334 | 6869.74406 | 6869.74406 | 6869.74406 | 0 |
| Apr 25, 2020 | 13 | 11 | 2 | 33270 38934 | 30522.49171 | 2747 89762 | 2747 89762 | 2747.89762 | 0 |
| Apr 26, 2020 | 21 | 21 | 0 | 44261 97983 | 44261 97983 | 0 | 0 | 0 | 0 |
| Apr 27, 2020 | 26 | 24 | 2 | 51131.72389 | 48383 82627 | 2747 89762 | 2747 89762 | 2747.89762 | 0 |
| Apr 28, 2020 | 19 | 18 | 1 | 41514 08221 | 40140.1334 | 1373 94881 | 1373 94881 | 1373.94881 | 0 |
| Apr 29, 2020 | 15 | 15 | 0 | 36018 28696 | 36018 28696 | 0 | 0 | 0 | 0 |
| Apr 30, 2020 | 17 | 16 | 1 | 38766.18458 | 37392 23577 | 1373 94881 | 1373 94881 | 1373.94881 | 0 |
| May 1, 2020 | 10 | 9 | 1 | 23643.67895 | 22651.10414 | 992.574817 | 992.574817 | 992.574817 | 0 |
| May 2, 2020 | 7 | 3 | 4 | 20665.9545 | 16695.65524 | 3970 29927 | 3970 29927 | 3970.29927 | 0 |
| May 3, 2020 | 1 | 0 | 1 | 14710 50561 | 13717 93079 | 992.574817 | 992.574817 | 992.574817 | 0 |
| May 4, 2020 | 14 | 12 | 2 | 27613 97822 | 25628 82859 | 1985.14963 | 1985.14963 | 1985.14963 | 0 |
| May 5, 2020 | 17 | 17 | 0 | 30591.70267 | 30591.70267 | 0 | 0 | 0 | 0 |
| May 6, 2020 | 15 | 13 | 2 | 28606 55304 | 26621.4034 | 1985.14963 | 1985.14963 | 1985.14963 | 0 |
| May 7, 2020 | 12 | 10 | 2 | 25628 82859 | 23643.67895 | 1985.14963 | 1985.14963 | 1985.14963 | 0 |
| May 8, 2020 | 18 | 18 | 0 | 31584 27749 | 31584 27749 | 0 | 0 | 0 | 0 |
| May 9, 2020 | 24 | 25 | -1 | 37539.72639 | 38532.3012 | -992.574817 | 992.574817 | 0 | 992.5748165 |
| May 10, 2020 | 16 | 15 | 1 | 29599.12785 | 28606 55304 | 992.574817 | 992.574817 | 992.574817 | 0 |
| May 11, 2020 | 15 | 14 | 1 | 28606 55304 | 27613 97822 | 992.574817 | 992.574817 | 992.574817 | 0 |
| May 12, 2020 | 18 | 18 | 0 | 31584 27749 | 31584 27749 | 0 | 0 | 0 | 0 |
| May 13, 2020 | 15 | 14 | 1 | 28606 55304 | 27613 97822 | 992.574817 | 992.574817 | 992.574817 | 0 |
| May 14, 2020 | 6 | 2 | 4 | 19673 37969 | 15703 08042 | 3970 29927 | 3970 29927 | 3970.29927 | 0 |
| May 15, 2020 | 0 | 0 | 0 | 13717 93079 | 13717 93079 | 0 | 0 | 0 | 0 |
| May 16, 2020 | 4 | 7 | -3 | 17688 23006 | 20665.9545 | -2977.72445 | 2977.72445 | 0 | 2977.72445 |
| May 17, 2020 | 4 | 2 | 2 | 17688 23006 | 15703 08042 | 1985.14963 | 1985.14963 | 1985.14963 | 0 |
| May 18, 2020 | 9 | 7 | 2 | 22651.10414 | 20665.9545 | 1985.14963 | 1985.14963 | 1985.14963 | 0 |
| May 19, 2020 | 10 | 10 | 0 | 23643.67895 | 23643.67895 | 0 | 0 | 0 | 0 |
| May 20, 2020 | 8 | 7 | 1 | 21658 52932 | 20665.9545 | 992.574817 | 992.574817 | 992.574817 | 0 |
| May 21, 2020 | 0 | 0 | 0 | 13717 93079 | 13717 93079 | 0 | 0 | 0 | 0 |
| May 22, 2020 | 0 | 0 | 0 | 13717 93079 | 13717 93079 | 0 | 0 | 0 | 0 |
| May 23, 2020 | 12 | 10 | 2 | 25628 82859 | 23643.67895 | 1985.14963 | 1985.14963 | 1985.14963 | 0 |
| May 24, 2020 | 11 | 9 | 2 | 24636 25377 | 22651.10414 | 1985.14963 | 1985.14963 | 1985.14963 | 0 |
| May 25, 2020 | 3 | 4 | -1 | 16695.65524 | 17688 23006 | -992.574817 | 992.574817 | 0 | 992.5748165 |
| May 26, 2020 | 0 | 0 | 0 | 13717 93079 | 13717 93079 | 0 | 0 | 0 | 0 |
| May 27, 2020 | 0 | 0 | 0 | 13717 93079 | 13717 93079 | 0 | 0 | 0 | 0 |
| May 28, 2020 | 0 | 0 | 0 | 13717 93079 | 13717 93079 | 0 | 0 | 0 | 0 |
| May 29, 2020 | 0 | 0 | 0 | 13717 93079 | 13717 93079 | 0 | 0 | 0 | 0 |
| May 30, 2020 | 0 | 0 | 0 | 13717 93079 | 13717 93079 | 0 | 0 | 0 | 0 |
| May 31, 2020 | 13 | 11 | 2 | 26621.4034 | 24636 25377 | 1985.14963 | 1985.14963 | 1985.14963 | 0 |
| Jun 1, 2020 | 10 | 10 | 0 | 16305 53853 | 16305 53853 | 0 | 0 | 0 | 0 |
| Jun 2, 2020 | 3 | 2 | 1 | 12913.42533 | 12428 83773 | 484.587599 | 484.587599 | 484.587599 | 0 |
| Jun 3, 2020 | 0 | 0 | 0 | 11459.66253 | 11459.66253 | 0 | 0 | 0 | 0 |
| Jun 4, 2020 | 0 | 0 | 0 | 11459.66253 | 11459.66253 | 0 | 0 | 0 | 0 |
| Jun 5, 2020 | 0 | 0 | 0 | 11459.66253 | 11459.66253 | 0 | 0 | 0 | 0 |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**Calculation of Supplier Balancing Charge**
**2019-2020**
## Estimated Daily Imbalances

| Date | Predicted MAN HDD | Actual MAN HDD | Forecaster Error MAN HDD | Calculated on Predicted MAN HDD | Calculated on Actual MAN HDD | Sendout Error (MMBtu) | Abs.Value Sendout Error (MMBtu) | Injections (MMBtu) | Withdrawals (MMBtu) |
|---|---|---|---|---|---|---|---|---|---|
| Jun 6, 2020 | 0 | 0 | 0 | 11459.66253 | 11459.66253 | 0 | 0 | 0 | 0 |
| Jun 7, 2020 | 5 | 2 | 3 | 13882.60053 | 12428 83773 | 1453.7628 | 1453.7628 | 1453.7628 | 0 |
| Jun 8, 2020 | 0 | 0 | 0 | 11459.66253 | 11459.66253 | 0 | 0 | 0 | 0 |
| Jun 9, 2020 | 0 | 0 | 0 | 11459.66253 | 11459.66253 | 0 | 0 | 0 | 0 |
| Jun 10, 2020 | 0 | 1 | -1 | 11459.66253 | 11944 25013 | -484.587599 | 484.587599 | 0 | 484.5875993 |
| Jun 11, 2020 | 0 | 0 | 0 | 11459.66253 | 11459.66253 | 0 | 0 | 0 | 0 |
| Jun 12, 2020 | 0 | 0 | 0 | 11459.66253 | 11459.66253 | 0 | 0 | 0 | 0 |
| Jun 13, 2020 | 3 | 4 | -1 | 12913.42533 | 13398 01293 | -484.587599 | 484.587599 | 0 | 484.5875993 |
| Jun 14, 2020 | 6 | 2 | 4 | 14367.18813 | 12428 83773 | 1938.3504 | 1938.3504 | 1938.3504 | 0 |
| Jun 15, 2020 | 3 | 0 | 3 | 12913.42533 | 11459.66253 | 1453.7628 | 1453.7628 | 1453.7628 | 0 |
| Jun 16, 2020 | 2 | 0 | 2 | 12428 83773 | 11459.66253 | 969.175199 | 969.175199 | 969.175199 | 0 |
| Jun 17, 2020 | 0 | 0 | 0 | 11459.66253 | 11459.66253 | 0 | 0 | 0 | 0 |
| Jun 18, 2020 | 0 | 0 | 0 | 11459.66253 | 11459.66253 | 0 | 0 | 0 | 0 |
| Jun 19, 2020 | 0 | 0 | 0 | 11459.66253 | 11459.66253 | 0 | 0 | 0 | 0 |
| Jun 20, 2020 | 0 | 0 | 0 | 11459.66253 | 11459.66253 | 0 | 0 | 0 | 0 |
| Jun 21, 2020 | 0 | 0 | 0 | 11459.66253 | 11459.66253 | 0 | 0 | 0 | 0 |
| Jun 22, 2020 | 0 | 0 | 0 | 11459.66253 | 11459.66253 | 0 | 0 | 0 | 0 |
| Jun 23, 2020 | 0 | 0 | 0 | 11459.66253 | 11459.66253 | 0 | 0 | 0 | 0 |
| Jun 24, 2020 | 0 | 0 | 0 | 11459.66253 | 11459.66253 | 0 | 0 | 0 | 0 |
| Jun 25, 2020 | 0 | 0 | 0 | 11459.66253 | 11459.66253 | 0 | 0 | 0 | 0 |
| Jun 26, 2020 | 0 | 0 | 0 | 11459.66253 | 11459.66253 | 0 | 0 | 0 | 0 |
| Jun 27, 2020 | 0 | 0 | 0 | 11459.66253 | 11459.66253 | 0 | 0 | 0 | 0 |
| Jun 28, 2020 | 0 | 0 | 0 | 11459.66253 | 11459.66253 | 0 | 0 | 0 | 0 |
| Jun 29, 2020 | 0 | 0 | 0 | 11459.66253 | 11459.66253 | 0 | 0 | 0 | 0 |
| Jun 30, 2020 | 0 | 0 | 0 | 11459.66253 | 11459.66253 | 0 | 0 | 0 | 0 |
| Jul 1, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 2, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 3, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 4, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 5, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 6, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 7, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 8, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 9, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 10, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 11, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 12, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 13, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 14, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 15, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 16, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 17, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 18, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 19, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 20, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 21, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 22, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 23, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 24, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 25, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 26, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 27, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 28, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 29, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 30, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Jul 31, 2020 | 0 | 0 | 0 | 9828.682335 | 9828.682335 | 0 | 0 | 0 | 0 |
| Aug 1, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 2, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 3, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 4, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 5, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 6, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 7, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 8, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 9, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 10, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 11, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**Calculation of Supplier Balancing Charge**
**2019-2020**
## Estimated Daily Imbalances

| Date | Predicted MAN HDD | Actual MAN HDD | Forecaster Error MAN HDD | Calculated on Predicted MAN HDD | Calculated on Actual MAN HDD | Sendout Error (MMBtu) | Abs.Value Sendout Error (MMBtu) | Injections (MMBtu) | Withdrawals (MMBtu) |
|---|---|---|---|---|---|---|---|---|---|
| Aug 12, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 13, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 14, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 15, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 16, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 17, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 18, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 19, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 20, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 21, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 22, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 23, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 24, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 25, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 26, 2020 | 5 | 1 | 4 | 13884 05439 | 10864 54385 | 3019 51054 | 3019 51054 | 3019.51054 | 0 |
| Aug 27, 2020 | 6 | 2 | 4 | 14638 93203 | 11619.42148 | 3019 51054 | 3019 51054 | 3019.51054 | 0 |
| Aug 28, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 29, 2020 | 0 | 0 | 0 | 10109.66621 | 10109.66621 | 0 | 0 | 0 | 0 |
| Aug 30, 2020 | 4 | 2 | 2 | 13129.17676 | 11619.42148 | 1509.75527 | 1509.75527 | 1509.75527 | 0 |
| Aug 31, 2020 | 2 | 0 | 2 | 11619.42148 | 10109.66621 | 1509.75527 | 1509.75527 | 1509.75527 | 0 |
| Sep 1, 2020 | 0 | 0 | 0 | 12143 81609 | 12143 81609 | 0 | 0 | 0 | 0 |
| Sep 2, 2020 | 0 | 0 | 0 | 12143 81609 | 12143 81609 | 0 | 0 | 0 | 0 |
| Sep 3, 2020 | 0 | 0 | 0 | 12143 81609 | 12143 81609 | 0 | 0 | 0 | 0 |
| Sep 4, 2020 | 0 | 0 | 0 | 12143 81609 | 12143 81609 | 0 | 0 | 0 | 0 |
| Sep 5, 2020 | 1 | 0 | 1 | 12648 82604 | 12143 81609 | 505.009947 | 505.009947 | 505.009947 | 0 |
| Sep 6, 2020 | 0 | 0 | 0 | 12143 81609 | 12143 81609 | 0 | 0 | 0 | 0 |
| Sep 7, 2020 | 0 | 0 | 0 | 12143 81609 | 12143 81609 | 0 | 0 | 0 | 0 |
| Sep 8, 2020 | 0 | 0 | 0 | 12143 81609 | 12143 81609 | 0 | 0 | 0 | 0 |
| Sep 9, 2020 | 0 | 0 | 0 | 12143 81609 | 12143 81609 | 0 | 0 | 0 | 0 |
| Sep 10, 2020 | 0 | 0 | 0 | 12143 81609 | 12143 81609 | 0 | 0 | 0 | 0 |
| Sep 11, 2020 | 7 | 4 | 3 | 15678 88572 | 14163 85588 | 1515 02984 | 1515 02984 | 1515.02984 | 0 |
| Sep 12, 2020 | 8 | 5 | 3 | 16183 89567 | 14668 86583 | 1515 02984 | 1515 02984 | 1515.02984 | 0 |
| Sep 13, 2020 | 1 | 0 | 1 | 12648 82604 | 12143 81609 | 505.009947 | 505.009947 | 505.009947 | 0 |
| Sep 14, 2020 | 8 | 5 | 3 | 16183 89567 | 14668 86583 | 1515 02984 | 1515 02984 | 1515.02984 | 0 |
| Sep 15, 2020 | 6 | 8 | -2 | 15173 87577 | 16183 89567 | -1010 01989 | 1010 01989 | 0 | 1010.019895 |
| Sep 16, 2020 | 0 | 0 | 0 | 12143 81609 | 12143 81609 | 0 | 0 | 0 | 0 |
| Sep 17, 2020 | 1 | 0 | 1 | 12648 82604 | 12143 81609 | 505.009947 | 505.009947 | 505.009947 | 0 |
| Sep 18, 2020 | 12 | 10 | 2 | 18203 93546 | 17193 91556 | 1010 01989 | 1010 01989 | 1010.01989 | 0 |
| Sep 19, 2020 | 16 | 13 | 3 | 20223 97525 | 18708 94541 | 1515 02984 | 1515 02984 | 1515.02984 | 0 |
| Sep 20, 2020 | 17 | 14 | 3 | 20728.9852 | 19213 95535 | 1515 02984 | 1515 02984 | 1515.02984 | 0 |
| Sep 21, 2020 | 14 | 14 | 0 | 19213 95535 | 19213 95535 | 0 | 0 | 0 | 0 |
| Sep 22, 2020 | 8 | 4 | 4 | 16183 89567 | 14163 85588 | 2020 03979 | 2020 03979 | 2020.03979 | 0 |
| Sep 23, 2020 | 2 | 0 | 2 | 13153 83598 | 12143 81609 | 1010 01989 | 1010 01989 | 1010.01989 | 0 |
| Sep 24, 2020 | 1 | 0 | 1 | 12648 82604 | 12143 81609 | 505.009947 | 505.009947 | 505.009947 | 0 |
| Sep 25, 2020 | 1 | 1 | 0 | 12648 82604 | 12648 82604 | 0 | 0 | 0 | 0 |
| Sep 26, 2020 | 0 | 0 | 0 | 12143 81609 | 12143 81609 | 0 | 0 | 0 | 0 |
| Sep 27, 2020 | 0 | 0 | 0 | 12143 81609 | 12143 81609 | 0 | 0 | 0 | 0 |
| Sep 28, 2020 | 0 | 0 | 0 | 12143 81609 | 12143 81609 | 0 | 0 | 0 | 0 |
| Sep 29, 2020 | 0 | 0 | 0 | 12143 81609 | 12143 81609 | 0 | 0 | 0 | 0 |
| Sep 30, 2020 | 6 | 3 | 3 | 15173 87577 | 13658 84593 | 1515 02984 | 1515 02984 | 1515.02984 | 0 |
| Oct 1, 2020 | 5 | 3 | 2 | 19175 97949 | 17095 09572 | 2080 88377 | 2080 88377 | 2080.88377 | 0 |
| Oct 2, 2020 | 15 | 14 | 1 | 29580 39835 | 28539 95646 | 1040.44189 | 1040.44189 | 1040.44189 | 0 |
| Oct 3, 2020 | 12 | 12 | 0 | 26459 07269 | 26459 07269 | 0 | 0 | 0 | 0 |
| Oct 4, 2020 | 12 | 10 | 2 | 26459 07269 | 24378.18892 | 2080 88377 | 2080 88377 | 2080.88377 | 0 |
| Oct 5, 2020 | 11 | 8 | 3 | 25418.6308 | 22297 30515 | 3121 32566 | 3121 32566 | 3121.32566 | 0 |
| Oct 6, 2020 | 6 | 4 | 2 | 20216.42137 | 18135.5376 | 2080 88377 | 2080 88377 | 2080.88377 | 0 |
| Oct 7, 2020 | 9 | 5 | 4 | 23337.74703 | 19175 97949 | 4161.76754 | 4161.76754 | 4161.76754 | 0 |
| Oct 8, 2020 | 18 | 16 | 2 | 32701.72401 | 30620 84024 | 2080 88377 | 2080 88377 | 2080.88377 | 0 |
| Oct 9, 2020 | 12 | 9 | 3 | 26459 07269 | 23337.74703 | 3121 32566 | 3121 32566 | 3121.32566 | 0 |
| Oct 10, 2020 | 4 | 0 | 4 | 18135.5376 | 13973.77006 | 4161.76754 | 4161.76754 | 4161.76754 | 0 |
| Oct 11, 2020 | 16 | 14 | 2 | 30620 84024 | 28539 95646 | 2080 88377 | 2080 88377 | 2080.88377 | 0 |
| Oct 12, 2020 | 15 | 14 | 1 | 29580 39835 | 28539 95646 | 1040.44189 | 1040.44189 | 1040.44189 | 0 |
| Oct 13, 2020 | 13 | 13 | 0 | 27499 51458 | 27499 51458 | 0 | 0 | 0 | 0 |
| Oct 14, 2020 | 10 | 10 | 0 | 24378.18892 | 24378.18892 | 0 | 0 | 0 | 0 |
| Oct 15, 2020 | 5 | 0 | 5 | 19175 97949 | 13973.77006 | 5202 20943 | 5202 20943 | 5202.20943 | 0 |
| Oct 16, 2020 | 14 | 15 | -1 | 28539 95646 | 29580 39835 | -1040.44189 | 1040.44189 | 0 | 1040.441886 |
| Oct 17, 2020 | 21 | 21 | 0 | 35823 04967 | 35823 04967 | 0 | 0 | 0 | 0 |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**Calculation of Supplier Balancing Charge**
**2019-2020**
## Estimated Daily Imbalances

| Date | Predicted MAN HDD | Actual MAN HDD | Forecaster Error MAN HDD | Calculated on Predicted MAN HDD | Calculated on Actual MAN HDD | Sendout Error (MMBtu) | Abs.Value Sendout Error (MMBtu) | Injections (MMBtu) | Withdrawals (MMBtu) |
|---|---|---|---|---|---|---|---|---|---|
| Oct 18, 2020 | 17 | 17 | 0 | 31661 28212 | 31661 28212 | 0 | 0 | 0 | 0 |
| Oct 19, 2020 | 13 | 9 | 4 | 27499 51458 | 23337.74703 | 4161.76754 | 4161.76754 | 4161.76754 | 0 |
| Oct 20, 2020 | 7 | 3 | 4 | 21256 86326 | 17095 09572 | 4161.76754 | 4161.76754 | 4161.76754 | 0 |
| Oct 21, 2020 | 4 | 3 | 1 | 18135.5376 | 17095 09572 | 1040.44189 | 1040.44189 | 1040.44189 | 0 |
| Oct 22, 2020 | 7 | 4 | 3 | 21256 86326 | 18135.5376 | 3121 32566 | 3121 32566 | 3121.32566 | 0 |
| Oct 23, 2020 | 8 | 5 | 3 | 22297 30515 | 19175 97949 | 3121 32566 | 3121 32566 | 3121.32566 | 0 |
| Oct 24, 2020 | 16 | 14 | 2 | 30620 84024 | 28539 95646 | 2080 88377 | 2080 88377 | 2080.88377 | 0 |
| Oct 25, 2020 | 21 | 21 | 0 | 35823 04967 | 35823 04967 | 0 | 0 | 0 | 0 |
| Oct 26, 2020 | 16 | 18 | -2 | 30620 84024 | 32701.72401 | -2080 88377 | 2080 88377 | 0 | 2080.883772 |
| Oct 27, 2020 | 21 | 19 | 2 | 35823 04967 | 33742.16589 | 2080 88377 | 2080 88377 | 2080.88377 | 0 |
| Oct 28, 2020 | 22 | 22 | 0 | 36863.49155 | 36863.49155 | 0 | 0 | 0 | 0 |
| Oct 29, 2020 | 25 | 36 | -11 | 39984 81721 | 51429.67796 | -11444.8607 | 11444.8607 | 0 | 11444.86075 |
| Oct 30, 2020 | 35 | 36 | -1 | 50389 23607 | 51429.67796 | -1040.44189 | 1040.44189 | 0 | 1040.441886 |
| Oct 31, 2020 | 30 | 29 | 1 | 45187 02664 | 44146 58475 | 1040.44189 | 1040.44189 | 1040.44189 | 0 |
| Nov 1, 2020 | 21 | 20 | 1 | 48939 99847 | 47495.49736 | 1444 50111 | 1444 50111 | 1444.50111 | 0 |
| Nov 2, 2020 | 29 | 29 | 0 | 60496 00739 | 60496 00739 | 0 | 0 | 0 | 0 |
| Nov 3, 2020 | 31 | 30 | 1 | 63385 00961 | 61940.5085 | 1444 50111 | 1444 50111 | 1444.50111 | 0 |
| Nov 4, 2020 | 20 | 20 | 0 | 47495.49736 | 47495.49736 | 0 | 0 | 0 | 0 |
| Nov 5, 2020 | 9 | 4 | 5 | 31605.9851 | 24383.47953 | 7222 50557 | 7222 50557 | 7222.50557 | 0 |
| Nov 6, 2020 | 7 | 5 | 2 | 28716 98287 | 25827 98065 | 2889 00223 | 2889 00223 | 2889.00223 | 0 |
| Nov 7, 2020 | 6 | 7 | -1 | 27272.48176 | 28716 98287 | -1444 50111 | 1444 50111 | 0 | 1444.501114 |
| Nov 8, 2020 | 10 | 10 | 0 | 33050.48622 | 33050.48622 | 0 | 0 | 0 | 0 |
| Nov 9, 2020 | 9 | 10 | -1 | 31605.9851 | 33050.48622 | -1444 50111 | 1444 50111 | 0 | 1444.501114 |
| Nov 10, 2020 | 2 | 0 | 2 | 21494.4773 | 18605.47508 | 2889 00223 | 2889 00223 | 2889.00223 | 0 |
| Nov 11, 2020 | 2 | 0 | 2 | 21494.4773 | 18605.47508 | 2889 00223 | 2889 00223 | 2889.00223 | 0 |
| Nov 12, 2020 | 18 | 19 | -1 | 44606.49513 | 46050 99624 | -1444 50111 | 1444 50111 | 0 | 1444.501114 |
| Nov 13, 2020 | 25 | 27 | -2 | 54718 00293 | 57607 00516 | -2889 00223 | 2889 00223 | 0 | 2889.002228 |
| Nov 14, 2020 | 27 | 28 | -1 | 57607 00516 | 59051 50627 | -1444 50111 | 1444 50111 | 0 | 1444.501114 |
| Nov 15, 2020 | 19 | 18 | 1 | 46050 99624 | 44606.49513 | 1444 50111 | 1444 50111 | 1444.50111 | 0 |
| Nov 16, 2020 | 23 | 23 | 0 | 51829.0007 | 51829.0007 | 0 | 0 | 0 | 0 |
| Nov 17, 2020 | 29 | 29 | 0 | 60496 00739 | 60496 00739 | 0 | 0 | 0 | 0 |
| Nov 18, 2020 | 40 | 40 | 0 | 76385 51964 | 76385 51964 | 0 | 0 | 0 | 0 |
| Nov 19, 2020 | 25 | 23 | 2 | 54718 00293 | 51829.0007 | 2889 00223 | 2889 00223 | 2889.00223 | 0 |
| Nov 20, 2020 | 16 | 14 | 2 | 41717.4929 | 38828.49067 | 2889 00223 | 2889 00223 | 2889.00223 | 0 |
| Nov 21, 2020 | 25 | 22 | 3 | 54718 00293 | 50384.49959 | 4333 50334 | 4333 50334 | 4333.50334 | 0 |
| Nov 22, 2020 | 21 | 22 | -1 | 48939 99847 | 50384.49959 | -1444 50111 | 1444 50111 | 0 | 1444.501114 |
| Nov 23, 2020 | 27 | 25 | 2 | 57607 00516 | 54718 00293 | 2889 00223 | 2889 00223 | 2889.00223 | 0 |
| Nov 24, 2020 | 34 | 33 | 1 | 67718 51296 | 66274 01184 | 1444 50111 | 1444 50111 | 1444.50111 | 0 |
| Nov 25, 2020 | 24 | 29 | -5 | 53273 50181 | 60496 00739 | -7222 50557 | 7222 50557 | 0 | 7222.505571 |
| Nov 26, 2020 | 21 | 25 | -4 | 48939 99847 | 54718 00293 | -5778 00446 | 5778 00446 | 0 | 5778.004457 |
| Nov 27, 2020 | 20 | 20 | 0 | 47495.49736 | 47495.49736 | 0 | 0 | 0 | 0 |
| Nov 28, 2020 | 24 | 25 | -1 | 53273 50181 | 54718 00293 | -1444 50111 | 1444 50111 | 0 | 1444.501114 |
| Nov 29, 2020 | 25 | 26 | -1 | 54718 00293 | 56162 50404 | -1444 50111 | 1444 50111 | 0 | 1444.501114 |
| Nov 30, 2020 | 10 | 6 | 4 | 33050.48622 | 27272.48176 | 5778 00446 | 5778 00446 | 5778.00446 | 0 |
| Dec 1, 2020 | 20 | 18 | 2 | 50268 23604 | 46666.1398 | 3602 09623 | 3602 09623 | 3602.09623 | 0 |
| Dec 2, 2020 | 29 | 28 | 1 | 66477.66909 | 64676.62097 | 1801 04812 | 1801 04812 | 1801.04812 | 0 |
| Dec 3, 2020 | 25 | 23 | 2 | 59273.47662 | 55671 38039 | 3602 09623 | 3602 09623 | 3602.09623 | 0 |
| Dec 4, 2020 | 21 | 21 | 0 | 52069 28415 | 52069 28415 | 0 | 0 | 0 | 0 |
| Dec 5, 2020 | 30 | 31 | -1 | 68278.71721 | 70079.76533 | -1801 04812 | 1801 04812 | 0 | 1801.048117 |
| Dec 6, 2020 | 34 | 35 | -1 | 75482 90968 | 77283 95779 | -1801 04812 | 1801 04812 | 0 | 1801.048117 |
| Dec 7, 2020 | 35 | 37 | -2 | 77283 95779 | 80886 05403 | -3602 09623 | 3602 09623 | 0 | 3602.096234 |
| Dec 8, 2020 | 38 | 38 | 0 | 82687.10214 | 82687.10214 | 0 | 0 | 0 | 0 |
| Dec 9, 2020 | 33 | 32 | 1 | 73681 86156 | 71880 81344 | 1801 04812 | 1801 04812 | 1801.04812 | 0 |
| Dec 10, 2020 | 31 | 32 | -1 | 70079.76533 | 71880 81344 | -1801 04812 | 1801 04812 | 0 | 1801.048117 |
| Dec 11, 2020 | 27 | 29 | -2 | 62875 57286 | 66477.66909 | -3602 09623 | 3602 09623 | 0 | 3602.096234 |
| Dec 12, 2020 | 24 | 27 | -3 | 57472.42851 | 62875 57286 | -5403.14435 | 5403.14435 | 0 | 5403.144351 |
| Dec 13, 2020 | 25 | 36 | -11 | 59273.47662 | 79085 00591 | -19811.5293 | 19811.5293 | 0 | 19811.52929 |
| Dec 14, 2020 | 33 | 31 | 2 | 73681 86156 | 70079.76533 | 3602 09623 | 3602 09623 | 3602.09623 | 0 |
| Dec 15, 2020 | 42 | 43 | -1 | 89891 29461 | 91692 34273 | -1801 04812 | 1801 04812 | 0 | 1801.048117 |
| Dec 16, 2020 | 43 | 44 | -1 | 91692 34273 | 93493 39085 | -1801 04812 | 1801 04812 | 0 | 1801.048117 |
| Dec 17, 2020 | 45 | 42 | 3 | 95294.43896 | 89891 29461 | 5403.14435 | 5403.14435 | 5403.14435 | 0 |
| Dec 18, 2020 | 45 | 47 | -2 | 95294.43896 | 98896.5352 | -3602 09623 | 3602 09623 | 0 | 3602.096234 |
| Dec 19, 2020 | 41 | 42 | -1 | 88090.2465 | 89891 29461 | -1801 04812 | 1801 04812 | 0 | 1801.048117 |
| Dec 20, 2020 | 34 | 36 | -2 | 75482 90968 | 79085 00591 | -3602 09623 | 3602 09623 | 0 | 3602.096234 |
| Dec 21, 2020 | 34 | 34 | 0 | 75482 90968 | 75482 90968 | 0 | 0 | 0 | 0 |
| Dec 22, 2020 | 34 | 29 | 5 | 75482 90968 | 66477.66909 | 9005 24059 | 9005 24059 | 9005.24059 | 0 |
| Dec 23, 2020 | 34 | 34 | 0 | 75482 90968 | 75482 90968 | 0 | 0 | 0 | 0 |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**Calculation of Supplier Balancing Charge**
**2019-2020**
## Estimated Daily Imbalances

| Date | Predicted MAN HDD | Actual MAN HDD | Forecaster Error MAN HDD | Calculated on Predicted MAN HDD | Calculated on Actual MAN HDD | Sendout Error (MMBtu) | Abs.Value Sendout Error (MMBtu) | Injections (MMBtu) | Withdrawals (MMBtu) |
|---|---|---|---|---|---|---|---|---|---|
| Dec 24, 2020 | 13 | 13 | 0 | 37660 89922 | 37660 89922 | 0 | 0 | 0 | 0 |
| Dec 25, 2020 | 20 | 19 | 1 | 50268 23604 | 48467.18792 | 1801 04812 | 1801 04812 | 1801.04812 | 0 |
| Dec 26, 2020 | 36 | 35 | 1 | 79085 00591 | 77283 95779 | 1801 04812 | 1801 04812 | 1801.04812 | 0 |
| Dec 27, 2020 | 34 | 34 | 0 | 75482 90968 | 75482 90968 | 0 | 0 | 0 | 0 |
| Dec 28, 2020 | 28 | 28 | 0 | 64676.62097 | 64676.62097 | 0 | 0 | 0 | 0 |
| Dec 29, 2020 | 39 | 39 | 0 | 84488.15026 | 84488.15026 | 0 | 0 | 0 | 0 |
| Dec 30, 2020 | 27 | 28 | -1 | 62875 57286 | 64676.62097 | -1801 04812 | 1801 04812 | 0 | 1801.048117 |
| Dec 31, 2020 | 32 | 32 | 0 | 71880 81344 | 71880 81344 | 0 | 0 | 0 | 0 |
| Jan 1, 2021 | 30 | 31 | -1 | 69606.61887 | 71724 95338 | -2118.3345 | 2118.3345 | 0 | 2118.334502 |
| Jan 2, 2021 | 33 | 33 | 0 | 75961.62238 | 75961.62238 | 0 | 0 | 0 | 0 |
| Jan 3, 2021 | 33 | 34 | -1 | 75961.62238 | 78079 95688 | -2118.3345 | 2118.3345 | 0 | 2118.334502 |
| Jan 4, 2021 | 34 | 33 | 1 | 78079 95688 | 75961.62238 | 2118.3345 | 2118.3345 | 2118.3345 | 0 |
| Jan 5, 2021 | 33 | 33 | 0 | 75961.62238 | 75961.62238 | 0 | 0 | 0 | 0 |
| Jan 6, 2021 | 33 | 34 | -1 | 75961.62238 | 78079 95688 | -2118.3345 | 2118.3345 | 0 | 2118.334502 |
| Jan 7, 2021 | 35 | 35 | 0 | 80198 29138 | 80198 29138 | 0 | 0 | 0 | 0 |
| Jan 8, 2021 | 36 | 36 | 0 | 82316.62588 | 82316.62588 | 0 | 0 | 0 | 0 |
| Jan 9, 2021 | 37 | 35 | 2 | 84434 96038 | 80198 29138 | 4236.669 | 4236.669 | 4236.669 | 0 |
| Jan 10, 2021 | 36 | 38 | -2 | 82316.62588 | 86553 29489 | -4236.669 | 4236.669 | 0 | 4236.669003 |
| Jan 11, 2021 | 35 | 36 | -1 | 80198 29138 | 82316.62588 | -2118.3345 | 2118.3345 | 0 | 2118.334502 |
| Jan 12, 2021 | 34 | 32 | 2 | 78079 95688 | 73843 28788 | 4236.669 | 4236.669 | 4236.669 | 0 |
| Jan 13, 2021 | 33 | 31 | 2 | 75961.62238 | 71724 95338 | 4236.669 | 4236.669 | 4236.669 | 0 |
| Jan 14, 2021 | 32 | 31 | 1 | 73843 28788 | 71724 95338 | 2118.3345 | 2118.3345 | 2118.3345 | 0 |
| Jan 15, 2021 | 28 | 26 | 2 | 65369 94987 | 61133 28087 | 4236.669 | 4236.669 | 4236.669 | 0 |
| Jan 16, 2021 | 27 | 24 | 3 | 63251.61537 | 56896.61186 | 6355.0035 | 6355.0035 | 6355.0035 | 0 |
| Jan 17, 2021 | 29 | 25 | 4 | 67488 28437 | 59014 94637 | 8473 33801 | 8473 33801 | 8473.33801 | 0 |
| Jan 18, 2021 | 33 | 32 | 1 | 75961.62238 | 73843 28788 | 2118.3345 | 2118.3345 | 2118.3345 | 0 |
| Jan 19, 2021 | 33 | 32 | 1 | 75961.62238 | 73843 28788 | 2118.3345 | 2118.3345 | 2118.3345 | 0 |
| Jan 20, 2021 | 38 | 39 | -1 | 86553 29489 | 88671.62939 | -2118.3345 | 2118.3345 | 0 | 2118.334502 |
| Jan 21, 2021 | 36 | 38 | -2 | 82316.62588 | 86553 29489 | -4236.669 | 4236.669 | 0 | 4236.669003 |
| Jan 22, 2021 | 34 | 33 | 1 | 78079 95688 | 75961.62238 | 2118.3345 | 2118.3345 | 2118.3345 | 0 |
| Jan 23, 2021 | 46 | 46 | 0 | 103499.9709 | 103499.9709 | 0 | 0 | 0 | 0 |
| Jan 24, 2021 | 43 | 43 | 0 | 97144 96739 | 97144 96739 | 0 | 0 | 0 | 0 |
| Jan 25, 2021 | 38 | 39 | -1 | 86553 29489 | 88671.62939 | -2118.3345 | 2118.3345 | 0 | 2118.334502 |
| Jan 26, 2021 | 34 | 36 | -2 | 78079 95688 | 82316.62588 | -4236.669 | 4236.669 | 0 | 4236.669003 |
| Jan 27, 2021 | 34 | 32 | 2 | 78079 95688 | 73843 28788 | 4236.669 | 4236.669 | 4236.669 | 0 |
| Jan 28, 2021 | 47 | 47 | 0 | 105618.3054 | 105618.3054 | 0 | 0 | 0 | 0 |
| Jan 29, 2021 | 51 | 53 | -2 | 114091.6434 | 118328.3124 | -4236.669 | 4236.669 | 0 | 4236.669003 |
| Jan 30, 2021 | 51 | 53 | -2 | 114091.6434 | 118328.3124 | -4236.669 | 4236.669 | 0 | 4236.669003 |
| Jan 31, 2021 | 46 | 48 | -2 | 103499.9709 | 107736.6399 | -4236.669 | 4236.669 | 0 | 4236.669003 |
| Feb 1, 2021 | 35 | 35 | 0 | 81576 54285 | 81576 54285 | 0 | 0 | 0 | 0 |
| Feb 2, 2021 | 36 | 33 | 3 | 83276 32165 | 78176 98524 | 5099 33642 | 5099 33642 | 5099.33642 | 0 |
| Feb 3, 2021 | 35 | 32 | 3 | 81576 54285 | 76477 20643 | 5099 33642 | 5099 33642 | 5099.33642 | 0 |
| Feb 4, 2021 | 37 | 39 | -2 | 84976.10046 | 88375.65807 | -3399 55761 | 3399 55761 | 0 | 3399.55761 |
| Feb 5, 2021 | 32 | 36 | -4 | 76477 20643 | 83276 32165 | -6799.11522 | 6799.11522 | 0 | 6799.11522 |
| Feb 6, 2021 | 39 | 37 | 2 | 88375.65807 | 84976.10046 | 3399 55761 | 3399 55761 | 3399.55761 | 0 |
| Feb 7, 2021 | 37 | 40 | -3 | 84976.10046 | 90075.43687 | -5099 33642 | 5099 33642 | 0 | 5099.336415 |
| Feb 8, 2021 | 46 | 45 | 1 | 100274.1097 | 98574.3309 | 1699.77881 | 1699.77881 | 1699.77881 | 0 |
| Feb 9, 2021 | 45 | 45 | 0 | 98574.3309 | 98574.3309 | 0 | 0 | 0 | 0 |
| Feb 10, 2021 | 43 | 43 | 0 | 95174.77329 | 95174.77329 | 0 | 0 | 0 | 0 |
| Feb 11, 2021 | 49 | 47 | 2 | 105373.4461 | 101973.8885 | 3399 55761 | 3399 55761 | 3399.55761 | 0 |
| Feb 12, 2021 | 49 | 46 | 3 | 105373.4461 | 100274.1097 | 5099 33642 | 5099 33642 | 5099.33642 | 0 |
| Feb 13, 2021 | 42 | 38 | 4 | 93474 99448 | 86675 87926 | 6799.11522 | 6799.11522 | 6799.11522 | 0 |
| Feb 14, 2021 | 38 | 36 | 2 | 86675 87926 | 83276 32165 | 3399 55761 | 3399 55761 | 3399.55761 | 0 |
| Feb 15, 2021 | 35 | 35 | 0 | 81576 54285 | 81576 54285 | 0 | 0 | 0 | 0 |
| Feb 16, 2021 | 36 | 35 | 1 | 83276 32165 | 81576 54285 | 1699.77881 | 1699.77881 | 1699.77881 | 0 |
| Feb 17, 2021 | 43 | 41 | 2 | 95174.77329 | 91775 21568 | 3399 55761 | 3399 55761 | 3399.55761 | 0 |
| Feb 18, 2021 | 38 | 39 | -1 | 86675 87926 | 88375.65807 | -1699.77881 | 1699.77881 | 0 | 1699.778805 |
| Feb 19, 2021 | 38 | 38 | 0 | 86675 87926 | 86675 87926 | 0 | 0 | 0 | 0 |
| Feb 20, 2021 | 40 | 41 | -1 | 90075.43687 | 91775 21568 | -1699.77881 | 1699.77881 | 0 | 1699.778805 |
| Feb 21, 2021 | 42 | 42 | 0 | 93474 99448 | 93474 99448 | 0 | 0 | 0 | 0 |
| Feb 22, 2021 | 33 | 31 | 2 | 78176 98524 | 74777.42763 | 3399 55761 | 3399 55761 | 3399.55761 | 0 |
| Feb 23, 2021 | 27 | 26 | 1 | 67978 31241 | 66278.5336 | 1699.77881 | 1699.77881 | 1699.77881 | 0 |
| Feb 24, 2021 | 25 | 20 | 5 | 64578.7548 | 56079 86077 | 8498 89403 | 8498 89403 | 8498.89403 | 0 |
| Feb 25, 2021 | 37 | 32 | 5 | 84976.10046 | 76477 20643 | 8498 89403 | 8498 89403 | 8498.89403 | 0 |
| Feb 26, 2021 | 35 | 33 | 2 | 81576 54285 | 78176 98524 | 3399 55761 | 3399 55761 | 3399.55761 | 0 |
| Feb 27, 2021 | 29 | 30 | -1 | 71377 87002 | 73077.64882 | -1699.77881 | 1699.77881 | 0 | 1699.778805 |
| Feb 28, 2021 | 26 | 26 | 0 | 66278.5336 | 66278.5336 | 0 | 0 | 0 | 0 |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**Calculation of Supplier Balancing Charge**
**2019-2020**
**Estimated Daily Imbalances**

| Date | Predicted MAN HDD | Actual MAN HDD | Forecaster Error MAN HDD | Calculated on Predicted MAN HDD | Calculated on Actual MAN HDD | Sendout Error (MMBtu) | Abs.Value Sendout Error (MMBtu) | Injections (MMBtu) | Withdrawals (MMBtu) |
|---|---|---|---|---|---|---|---|---|---|
| Mar 1, 2021 | 39 | 38 | 1 | 86165.16337 | 84284 03473 | 1881.12864 | 1881.12864 | 1881.12864 | 0 |
| Mar 2, 2021 | 41 | 41 | 0 | 89927.42064 | 89927.42064 | 0 | 0 | 0 | 0 |
| Mar 3, 2021 | 29 | 28 | 1 | 67353 87699 | 65472.74835 | 1881.12864 | 1881.12864 | 1881.12864 | 0 |
| Mar 4, 2021 | 38 | 38 | 0 | 84284 03473 | 84284 03473 | 0 | 0 | 0 | 0 |
| Mar 5, 2021 | 42 | 41 | 1 | 91808 54928 | 89927.42064 | 1881.12864 | 1881.12864 | 1881.12864 | 0 |
| Mar 6, 2021 | 42 | 40 | 2 | 91808 54928 | 88046.292 | 3762 25727 | 3762 25727 | 3762.25727 | 0 |
| Mar 7, 2021 | 40 | 37 | 3 | 88046.292 | 82402 90609 | 5643 38591 | 5643 38591 | 5643.38591 | 0 |
| Mar 8, 2021 | 32 | 30 | 2 | 72997.2629 | 69235 00563 | 3762 25727 | 3762 25727 | 3762.25727 | 0 |
| Mar 9, 2021 | 26 | 24 | 2 | 61710.49108 | 57948 23381 | 3762 25727 | 3762 25727 | 3762.25727 | 0 |
| Mar 10, 2021 | 21 | 20 | 1 | 52304 84789 | 50423.71926 | 1881.12864 | 1881.12864 | 1881.12864 | 0 |
| Mar 11, 2021 | 8 | 5 | 3 | 27850.17561 | 22206.78969 | 5643 38591 | 5643 38591 | 5643.38591 | 0 |
| Mar 12, 2021 | 22 | 20 | 2 | 54185 97653 | 50423.71926 | 3762 25727 | 3762 25727 | 3762.25727 | 0 |
| Mar 13, 2021 | 28 | 28 | 0 | 65472.74835 | 65472.74835 | 0 | 0 | 0 | 0 |
| Mar 14, 2021 | 38 | 40 | -2 | 84284 03473 | 88046.292 | -3762 25727 | 3762 25727 | 0 | 3762.257275 |
| Mar 15, 2021 | 43 | 45 | -2 | 93689.67792 | 97451 93519 | -3762 25727 | 3762 25727 | 0 | 3762.257275 |
| Mar 16, 2021 | 31 | 31 | 0 | 71116.13427 | 71116.13427 | 0 | 0 | 0 | 0 |
| Mar 17, 2021 | 21 | 21 | 0 | 52304 84789 | 52304 84789 | 0 | 0 | 0 | 0 |
| Mar 18, 2021 | 24 | 27 | -3 | 57948 23381 | 63591.61972 | -5643 38591 | 5643 38591 | 0 | 5643.385912 |
| Mar 19, 2021 | 32 | 32 | 0 | 72997.2629 | 72997.2629 | 0 | 0 | 0 | 0 |
| Mar 20, 2021 | 22 | 23 | -1 | 54185 97653 | 56067.10517 | -1881.12864 | 1881.12864 | 0 | 1881.128637 |
| Mar 21, 2021 | 17 | 18 | -1 | 44780 33334 | 46661.46198 | -1881.12864 | 1881.12864 | 0 | 1881.128637 |
| Mar 22, 2021 | 16 | 16 | 0 | 42899 20471 | 42899 20471 | 0 | 0 | 0 | 0 |
| Mar 23, 2021 | 13 | 12 | 1 | 37255 81879 | 35374.69016 | 1881.12864 | 1881.12864 | 1881.12864 | 0 |
| Mar 24, 2021 | 11 | 11 | 0 | 33493 56152 | 33493 56152 | 0 | 0 | 0 | 0 |
| Mar 25, 2021 | 7 | 6 | 1 | 25969 04697 | 24087 91833 | 1881.12864 | 1881.12864 | 1881.12864 | 0 |
| Mar 26, 2021 | 7 | 7 | 0 | 25969 04697 | 25969 04697 | 0 | 0 | 0 | 0 |
| Mar 27, 2021 | 16 | 17 | -1 | 42899 20471 | 44780 33334 | -1881.12864 | 1881.12864 | 0 | 1881.128637 |
| Mar 28, 2021 | 17 | 20 | -3 | 44780 33334 | 50423.71926 | -5643 38591 | 5643 38591 | 0 | 5643.385912 |
| Mar 29, 2021 | 25 | 24 | 1 | 59829 36244 | 57948 23381 | 1881.12864 | 1881.12864 | 1881.12864 | 0 |
| Mar 30, 2021 | 15 | 13 | 2 | 41018 07607 | 37255 81879 | 3762 25727 | 3762 25727 | 3762.25727 | 0 |
| Mar 31, 2021 | 7 | 9 | -2 | 25969 04697 | 29731 30424 | -3762 25727 | 3762 25727 | 0 | 3762.257275 |
| | | | | | | | | | |
| Apr | 595 | 568 | 27 | 1279771 | 1242675 | 37097 | 53584 | 45340 | 8244 |
| May | 262 | 237 | 25 | 685310 | 660496 | 24814 | 34740 | 29777 | 4963 |
| Jun | 32 | 21 | 11 | 359297 | 353966 | 5330 | 7269 | 6300 | 969 |
| Jul | 0 | 0 | 0 | 304689 | 304689 | 0 | 0 | 0 | 0 |
| Aug | 17 | 5 | 12 | 326233 | 317174 | 9059 | 9059 | 9059 | 0 |
| Sep | 109 | 81 | 28 | 419361 | 405220 | 14140 | 16160 | 15150 | 1010 |
| Oct | 440 | 404 | 36 | 890981 | 853525 | 37456 | 68669 | 53063 | 15607 |
| Nov | 599 | 589 | 10 | 1423420 | 1408975 | 14445 | 66447 | 40446 | 26001 |
| Dec | 986 | 997 | -11 | 2217499 | 2237310 | -19812 | 84649 | 32419 | 52230 |
| Jan | 1122 | 1118 | 4 | 2564525 | 2556052 | 8473 | 84733 | 46603 | 38130 |
| Feb | 1047 | 1021 | 26 | 2398028 | 2353834 | 44194 | 84989 | 64592 | 20397 |
| Mar | 770 | 762 | 8 | 1845305 | 1830256 | 15049 | 71483 | 43266 | 28217 |
| | | | | | | | | | |
| Total | 5,979 | 5,803 | 176 | 14,714,419 | 14,524,172 | 190,245 | 581,782 | 386,015 | 195,768 |

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

### Docket DE 98-124 Gas Restructuring
### Peaking Demand Rate

| | | | | | Source: |
|---|---|---|---|---|---|
| 1 | Peak Day | | 171,602 | Dekatherm | |
| 2 | | | | | |
| 3 | Pipeline MDQ | | | | Attachment B Page 2 of 3: EnergyNorth Capacity Resources |
| 4 | | PNGTS | 1,000 | Dekatherm | |
| 5 | | TGP NET-NE 95346 | 4,000 | | |
| 6 | | TGP FT-A (Z5-Z6) 2302 | 3,122 | | |
| 7 | | TGP FT-A (Z0-Z6) 8587 | 7,035 | | |
| 8 | | TGP FT-A (Z1-Z6) 8587 | 14,561 | | |
| 9 | | TGP FT-A (Z6-Z6) 42076 | 20,000 | | |
| | | TGP FT-A (Z6-Z6) 358905 | 40,000 | | |
| | | TGP FT-A (Z6-Z6) 72694 | 30,000 | | |
| 10 | | | 119,718 | Dekatherm | |
| 11 | | | | | |
| 12 | Underground Storage MDQ | | | | Attachment B Page 3 of 3: EnergyNorth Capacity Resources |
| 13 | | TGP FT-A (Z4-Z6) 632 | 15,265 | Dekatherm | |
| 14 | | TGP FT-A (Z4-Z6) 8587 | 3,811 | | |
| 15 | | TGP FT-A (Z4-Z6) 11234 | 7,082 | | |
| 16 | | TGP FT-A (Z5-Z6) 11234 | 1,957 | | |
| 17 | | | 28,115 | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | Peaking MDQ | | 23,769 | Dekatherm | Line 1 - Line 10 - Line 18 |
| 21 | | | | | |
| 22 | | | | | |
| 23 | Peaking Costs | | | | |
| 23 | Gas Supply | | $4,106,500 | | Attachment B Page 3 Line 11 |
| 25 | Indirect Production & Storage Capacity | | $3,893,587 | | Summary Page Line 68 |
| 26 | Granite Ridge | | $ - | | Attachment B Page 3 Line 1 |
| 27 | Total | | $8,000,087 | | Sum Line 24 - 26 |
| 28 | | | | | |
| 29 | Annual Peaking Rate per MDQ | | $ 336.58 | | Line 27 divided by Line 20 |
| 30 | | | | | |
| 31 | **Monthly Peaking MDQ** | | **$ 56.10** | **/Dekatherm** | Line 29 divided by 6 month |

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

**Tennessee Allocations:**

| Resource Type | High Load Factor | Low Load Factor |
|---|---|---|
| Pipeline | 76 2% | 69 1% |
| Storage | 12 9% | 16 8% |
| Peaking | 10 9% | 14 1% |
| TOTAL: | 100 00% | 100 00% |

**Capacity Resources effective November 1, 2020*:**

*proposed

| Resource | Pipeline Company | Rate Schedule | Contract # | Peak MDQ/ MDWQ | Storage MSQ | Rate $/Dth/Month Demand | Storage Capacity | Termination Date | LDC Managed |
|---|---|---|---|---|---|---|---|---|---|
| **Pipeline** | | | | | | | | | |
| | TCPL + Union | FT to Parkway & IGTS | M12200 & 41232 | 4,000 | | $13 6260 | | 10/31/2026 | |
| | Iroquois | RTS to Wright | 470-01 | 4,047 | | $5 2357 | | 11/1/2022 | |
| | TGP | NET-NE (Z5-Z6) | 95346 | 4,000 | | $6 2957 | | 11/30/2022 | |
| | | | | | | | | | |
| | TGP | FT-A (Z5-Z6) | 2302 | 3,122 | | $6 2957 | | 10/31/2025 | |
| | | | | | | | | | |
| | TGP | FT-A (Z0-Z6) | 8587 | 7,035 | | $20 3736 | | 10/31/2025 | |
| | TGP | FT-A (Z1-Z6) | 8587 | 14,561 | | $18 0875 | | 10/31/2025 | |
| | | | | | | | | | |
| | TCPL + Union | FT to Parkway & PNGTS | M12284 & TC | 5,000 | | $20 6972 | | 10/31/2040 | |
| | PNGTS | FT | 225800 | 5,000 | | $22 8125 | | 10/31/2040 | |
| | TGP | FT-A (Z6-Z6) | 42076 | 20,000 | | $4 1818 | | 10/31/2025 | |
| | TGP | FT-A (Z6-Z6) | 358905 | 40,000 | | $4 1818 | | 10/31/2041 | |
| | TGP | FT-A (Z6-Z6) | 72694 | 30,000 | | $12 2113 | | 10/31/2029 | |
| **Storage** | | | | | | | | | |
| | TGP | FS-MA (Storage) | 523* | 21,844 | 1,560,391 | $1 3094 | $0 0179 | 10/31/2025 | |
| | TGP | FT-A (Z4-Z6) | 632 | 15,265 | | $7 1645 | | 10/31/2025 | |
| | TGP | FT-A (Z4-Z6) | 8587 | 3,811 | | $7 1645 | | 10/31/2025 | |
| | | | | | | | | | |
| | National Fuel | FSS-1 (Storage) | O02357* | 6,098 | 670,800 | $2 6325 | $0 0476 | 3/31/2023 | |
| | National Fuel | FST (Transport) | N02358 | 6,098 | | $4 5274 | | 3/31/2023 | |
| | TGP | FT-A (Z4-Z6) | 11234 | 6,150 | | $7.1645 | | 10/31/2025 | |
| | | | | | | | | | |
| | Honeoye | SS-NY (Storage) | SS-NY** | 1,957 | 245,380 | $4.2672 | $0.0000 | 3/31/2023 | X |
| | TGP | FT-A (Z5-Z6) | 11234 | 1,957 | | $6.2957 | | 10/31/2025 | |
| | | | | | | | | | |
| | Dominion | GSS (Storage) | 300076* | 934 | 102,700 | $1 8716 | $0 0145 | 3/31/2024 | |
| | TGP | FT-A (Z4-Z6) | 11234 | 932 | | $7.1645 | | 10/31/2025 | |
| **Peaking** | | | | | | | | | |
| | Energy North | LNG/Propane**** | | 23,769 | - | $56.1000 | $0 0000 | | X |
| | | | | | | | | | |

* All gas transferred for storage contracts will be based on LDC's monthly WACOG

**All commodity volumes nominated will be invoiced at LDC's WACOG + fuel retention Demand charge applicable for 6 months

**Note:** **All capacity will be released at maximum tariff rates. Above rates are maximum tariff rates effective 11/01/21. Because rates can change, please refer to the applicable pipeline tariff for current rates.**

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

## ENERGYNORTH NATURAL GAS, INC.

### Docket 98-124 Gas Restructuring
### Peaking Demand Rate
### Peaking Costs

| | | Volume | Rate | Monthly Cost | Months/Year | Annual Cost | |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | Subtotal | | | | | **$ 4,106,500.00** | * |
| 5 | | | | | | | |
| 6 | **Total** | | | | | **$ 4,106,500.00** | |

* Contract currently being negotiated for an effective date of November 1, 2021

**THIS PAGE HAS BEEN REDACTED**

# Liberty Utilities (EnergyNorth Natural Gas) Corp

## Calculation of Capacity Allocators
## Docket No DE 98-124

**Capacity Assignment Table**

| | | | % of Peak Day Requirement | | | |
|---|---|---|---|---|---|---|
| | | | **Pipeline** | **Storage** | **Peaking** | **Total** |
| **G-41** | **LAHW** | Low Annual C&I - High Winter Use | 46.1% | 17.1% | 36.8% | 100.0% |
| **G-51** | **LALW** | Low Annual C&I - Low Winter Use | 59.3% | 12.9% | 27.9% | 100.0% |
| **G-42** | **MAHW** | Medium C&I - High Winter Use | 46.1% | 17.1% | 36.8% | 100.0% |
| **G-52** | **MALW** | Medium C&I - Low Winter Use | 59.3% | 12.9% | 27.9% | 100.0% |
| **G-43** | **HAHW** | High Annual C&I - High Winter Use | 46.1% | 17.1% | 36.8% | 100.0% |
| **G-53** | **HALW90** | High Annual C&I - LF < 90% | 59.3% | 12.9% | 27.9% | 100.0% |
| **G-54** | **HALWG90** | High Annual C&I - LF > 90% | 59.3% | 12.9% | 27.9% | 100.0% |

| | | | | | |
|---|---|---|---|---|---|
| **HLF** | High Load Factor | 59.25% | 12.89% | 27.85% | 100% |
| **LLF** | Low Load Factor | 46.09% | 17.06% | 36.85% | 100% |
| | Total | 47.29% | 16.68% | 36.03% | 100% |

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

**Calculation of Capacity Allocators**
**Docket No DE 98-124**

**Allocation of Peak Day**

**Design Day Throughput Allocated to Rate Classes**

| Design DD | | | 71.544 | |
|---|---|---|---|---|
| | | Base load | Heat load | Total |
| HLF | R-1 RNSH | 102 | 457 | 558 |
| LLF | R-3 RSH | 3,545 | 69,811 | 73,356 |
| LLF | G-41 SL | 770 | 30,823 | 31,593 |
| HLF | G-51 SH | 739 | 1,812 | 2,551 |
| LLF | G-42 ML | 1,473 | 37,931 | 39,404 |
| HLF | G-52 MH | 1,781 | 3,820 | 5,601 |
| LLF | G-43 LL | 663 | 8,239 | 8,901 |
| HLF | G-53 LLL90 | 1,146 | 2,222 | 3,368 |
| HLF | G-54 LLG90 | 461 | 2,780 | 3,241 |
| | TOTAL | 10,678 | 157,896 | 168,574 |
| | HLF | 4,227 | 11,092 | 15,319 |
| | LLF | 6,450 | 146,804 | 153,255 |
| | Total | 10,678 | 157,896 | 168,574 |

**Allocate Class Design Day Throughput to Supply Sources**

| | Base Pipeline | Remaining Pipeline | Sub-total Pipeline | Storage | Peaking | Total |
|---|---|---|---|---|---|---|
| R-1 RNSH | 102 | 200 | 301 | 81 | 175.73 | 558 |
| R-3 RSH | 3,545 | 30,525 | 34,070 | 12,431 | 26,856 | 73,356 |
| G-41 SL | 770 | 13,477 | 14,247 | 5,488 | 11,857 | 31,593 |
| G-51 SH | 739 | 792 | 1,531 | 323 | 697 | 2,551 |
| G-42 ML | 1,473 | 16,585 | 18,058 | 6,754 | 14,592 | 39,404 |
| G-52 MH | 1,781 | 1,670 | 3,451 | 680 | 1,470 | 5,601 |
| G-43 LL | 663 | 3,602 | 4,265 | 1,467 | 3,169 | 8,901 |
| G-53 LLL90 | 1,146 | 972 | 2,117 | 396 | 855 | 3,368 |
| G-54 LLG90 | 461 | 1,216 | 1,676 | 495 | 1,070 | 3,241 |
| TOTAL | 10,678 | 69,040 | 79,718 | 28,115 | 60,741 | 168,574 |
| HLF | 4,227 | 4,850 | 9,077 | 1,975 | 4,267 | 15,319 |
| LLF | 6,450 | 64,190 | 70,641 | 26,140 | 56,474 | 153,255 |
| Total | 10,678 | 69,040 | 79,718 | 28,115 | 60,741 | 168,574 |

**% of Peak Day Requirement**

| | Pipeline | Storage | Peaking | Total |
|---|---|---|---|---|
| R-1 RNSH | 54.0% | 14 6% | 31.5% | 100 0% |
| R-3 RSH | 46.4% | 16 9% | 36.6% | 100 0% |
| G-41 SL | 45.1% | 17.4% | 37.5% | 100 0% |
| G-51 SH | 60.0% | 12 6% | 27.3% | 100 0% |
| G-42 ML | 45.8% | 17.1% | 37.0% | 100 0% |
| G-52 MH | 61.6% | 12.1% | 26.2% | 100 0% |
| G-43 LL | 47.9% | 16 5% | 35.6% | 100 0% |
| G-53 LLL90 | 62.9% | 11.7% | 25.4% | 100 0% |
| G-54 LLG90 | 51.7% | 15 3% | 33.0% | 100 0% |
| TOTAL | 47.3% | 16.7% | 36.0% | 100 0% |
| High Load Factor | 59 25% | 12.89% | 27 85% | 100% |
| Low Load Factor | 46 09% | 17.06% | 36 85% | 100% |
| Total | 47 29% | 16.68% | 36 03% | 100% |

# Liberty Utilities (EnergyNorth Natural Gas) Corp

## Calculation of Capacity Allocators
## Docket No DE 98-124

Allocate Design Day Sendout

**Calculate Design Day Throughput (BBTU)**

**Design DD** **71.544**

| | Daily Baseload * 1000 | Heating Factor * 1000 | Heat load (Heating Factor * Design DD) | Total |
|---|---|---|---|---|
| | | | | |
| **R-1 RNSH** | 102 | 6.01 | 430 | 532 |
| **R-3 RSH** | 3,545 | 918.47 | 65,711 | 69,256 |
| **G-41 SL** | 770 | 405.52 | 29,013 | 29,783 |
| **G-51 SH** | 739 | 23.84 | 1,706 | 2,445 |
| **G-42 ML** | 1,473 | 499.04 | 35,703 | 37,176 |
| **G-52 MH** | 1,781 | 50.26 | 3,596 | 5,376 |
| **G-43 LL** | 663 | 108.39 | 7,755 | 8,418 |
| **G-53 LLL90** | 1,146 | 29.24 | 2,092 | 3,238 |
| **G-54 LLG90** | 461 | 36.58 | 2,617 | 3,078 |
| **TOTAL** | 10,678 | 1,939.15 | 148,622 | 159,300 |

| | | | | |
|---|---|---|---|---|
| **HLF** | 4,227 | 146 | 10,440 | 14,668 |
| **LLF** | 6,450 | 1,793 | 138,182 | 144,632 |
| **Total** | 10,678 | 1,939 | 148,622 | 159,300 |

| | | | |
|---|---|---|---|
| **Design Day from 2020-2021 COG** | | | **168,574** |
| **Design Day from Gas Load Calculation** | | | 159,300 |
| **Variance** | | | 9,274 |

**Allocate Design Day Sendout to Rate Classes**

| Baseload as % of Total Class Load | Heat Load as % of Total |
|---|---|
| | |
| 19% | 0.289% |
| 5% | 44.214% |
| 3% | 19.521% |
| 30% | 1.148% |
| 4% | 24.023% |
| 33% | 2.419% |
| 8% | 5.218% |
| 35% | 1.408% |
| 15% | 1.761% |
| | 100.000% |

| Base Load | Heat Load | Total |
|---|---|---|
| | | |
| 102 | 457 | 558 |
| 3,545 | 69,811 | 73,356 |
| 770 | 30,823 | 31,593 |
| 739 | 1,812 | 2,551 |
| 1,473 | 37,931 | 39,404 |
| 1,781 | 3,820 | 5,601 |
| 663 | 8,239 | 8,901 |
| 1,146 | 2,222 | 3,368 |
| 461 | 2,780 | 3,241 |
| 10,678 | 157,896 | 168,574 |

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

**Calculation of Capacity Allocators**
**Docket No DE 98-124**



**CALCULATION OF NORMAL SALES VOLUMES**

**Actual Volumes**

**Total Core Sales Volumes(000's) MMBTU**

| | | Nov-19 | Dec-19 | Jan-20 | Feb-20 | Mar-20 | Apr-20 | May-19 | Jun-19 | Jul-19 | Aug-19 | Sep-19 | Oct-19 | Total | Monthly Baseload (Jul+Aug)/2 | Daily Baseload |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HLF | R-1 RNSH | 7 | 9 | 9 | 8 | 8 | 6 | 5 | 4 | 3 | 3 | 4 | 5 | 70 | 3 149 | 0 102 |
| LLF | R-3 RSH | 731 | 957 | 994 | 889 | 717 | 509 | 274 | 143 | 111 | 110 | 142 | 327 | 5,904 | 109 892 | 3 545 |
| LLF | G-41 SL | 285 | 394 | 409 | 364 | 274 | 188 | 88 | 36 | 24 | 24 | 36 | 106 | 2,228 | 23 872 | 0 770 |
| HLF | G-51 SH | 36 | 43 | 43 | 40 | 34 | 30 | 30 | 25 | 23 | 25 | 25 | 29 | 383 | 22 908 | 0 739 |
| LLF | G-42 ML | 394 | 516 | 531 | 474 | 375 | 262 | 142 | 64 | 46 | 48 | 71 | 175 | 3,100 | 45 648 | 1 473 |
| HLF | G-52 MH | 91 | 103 | 106 | 98 | 79 | 71 | 67 | 56 | 55 | 58 | 60 | 73 | 917 | 55 198 | 1 781 |
| LLF | G-43 LL | 98 | 127 | 130 | 121 | 102 | 70 | 45 | 25 | 21 | 22 | 27 | 49 | 836 | 20 550 | 0 663 |
| HLF | G-53 LLL90 | 50 | 56 | 61 | 59 | 53 | 44 | 46 | 39 | 38 | 40 | 36 | 48 | 571 | 35 515 | 1 146 |
| HLF | G-54 LLL110 | 20 | 26 | 27 | 25 | 20 | 18 | 18 | 14 | 16 | 16 | 15 | 18 | 233 | 14 280 | 0 461 |
| HLF | G-99 LLG110 | | | | | | | | | | | | | | | |
| | TOTAL | 1,713 | 2,229 | 2,311 | 2,080 | 1,662 | 1,198 | 714 | 406 | 337 | 346 | 416 | 829 | 14,242 | 341 449 | 11 014 |
| | | | | | | | | | | | | | | | | |
| | HLF | 204 | 235 | 246 | 231 | 194 | 168 | 166 | 138 | 136 | 142 | 140 | 173 | 2,174 | 131 050 | 4 480 |
| | LLF | 1,509 | 1,994 | 2,064 | 1,849 | 1,468 | 1,030 | 549 | 268 | 201 | 204 | 276 | 656 | 12,067 | 199 962 | 6 534 |

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

| | | Nov-19 | Dec-19 | Jan-20 | Feb-20 | Mar-20 | Apr-20 | May-19 | Jun-19 | Jul-19 | Aug-19 | Sep-19 | Oct-19 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 30 | 31 | 31 | 29 | 31 | 30 | 31 | 30 | 31 | 31 | 30 | 31 | 366 |
| HLF | R-1 RNSH | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 37 |
| LLF | R-3 RSH | 106 | 110 | 110 | 103 | 110 | 106 | 110 | 106 | 111 | 110 | 106 | 110 | 1,297 |
| LLF | G-41 SL | 23 | 24 | 24 | 22 | 24 | 23 | 24 | 23 | 24 | 24 | 23 | 24 | 282 |
| HLF | G-51 SH | 22 | 23 | 23 | 21 | 23 | 22 | 23 | 22 | 23 | 25 | 22 | 23 | 270 |
| LLF | G-42 ML | 44 | 46 | 46 | 43 | 46 | 44 | 46 | 44 | 46 | 48 | 44 | 46 | 539 |
| HLF | G-52 MH | 53 | 55 | 55 | 52 | 55 | 53 | 55 | 53 | 55 | 58 | 53 | 55 | 652 |
| LLF | G-43 LL | 20 | 21 | 21 | 19 | 21 | 20 | 21 | 20 | 21 | 22 | 20 | 21 | 243 |
| HLF | G-53 LLL90 | 34 | 36 | 36 | 33 | 36 | 34 | 36 | 34 | 38 | 40 | 34 | 36 | 419 |
| HLF | G-54 LLL110 | 14 | 14 | 14 | 13 | 14 | 14 | 14 | 14 | 16 | 16 | 14 | 14 | 169 |
| HLF | G-63 LLG110 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | TOTAL | 320 | 331 | 331 | 310 | 331 | 320 | 331 | 320 | 337 | 346 | 320 | 331 | 3,908 |
| | | | | | | | | | | | | | | |
| | HLF | 127 | 131 | 131 | 123 | 131 | 127 | 131 | 127 | 136 | 142 | 127 | 131 | 1,547 |
| | LLF | 194 | 200 | 200 | 187 | 200 | 194 | 200 | 194 | 201 | 204 | 194 | 200 | 2,361 |

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

**Calculation of Capacity Allocators**
**Docket No DE 98-124**



**Heating Volumes (= Actual Volumes - Baseload)**

| | | Nov-19 | Dec-19 | Jan-20 | Feb-20 | Mar-20 | Apr-20 | May-19 | Jun-19 | Jul-19 | Aug-19 | Sep-19 | Oct-19 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HLF | R-1 RNSH | 4 | 5 | 6 | 5 | 5 | 3 | 2 | 1 | 0 | 0 | 0 | 2 | 32 |
| LLF | R-3 RSH | 625 | 848 | 884 | 786 | 607 | 403 | 164 | 37 | 0 | 0 | 35 | 217 | 4,607 |
| LLF | G-41 SL | 262 | 370 | 386 | 342 | 250 | 165 | 64 | 13 | 0 | 0 | 13 | 82 | 1,946 |
| HLF | G-51 SH | 14 | 20 | 20 | 19 | 11 | 8 | 7 | 2 | 0 | 0 | 3 | 6 | 112 |
| LLF | G-42 ML | 350 | 470 | 485 | 432 | 329 | 218 | 97 | 20 | 0 | 0 | 27 | 129 | 2,561 |
| HLF | G-52 MH | 38 | 48 | 50 | 46 | 24 | 17 | 12 | 3 | 0 | 0 | 7 | 18 | 265 |
| LLF | G-43 LL | 78 | 106 | 110 | 102 | 81 | 50 | 24 | 5 | 0 | 0 | 7 | 29 | 593 |
| HLF | G-53 LLL90 | 15 | 20 | 26 | 26 | 18 | 10 | 11 | 5 | 0 | 0 | 1 | 13 | 152 |
| HLF | G-54 LLL110 | 6 | 11 | 13 | 12 | 6 | 4 | 4 | 0 | 0 | 0 | 2 | 3 | 65 |
| HLF | G-63 LLG110 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | TOTAL | 1,393 | 1,898 | 1,980 | 1,771 | 1,331 | 878 | 383 | 86 | 0 | 0 | 95 | 498 | 10,333 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HLF | 78 | 104 | 115 | 109 | 63 | 42 | 35 | 11 | 0 | 0 | 13 | 42 | 627 | |
| LLF | 1,315 | 1,794 | 1,864 | 1,662 | 1,268 | 836 | 349 | 74 | 0 | 0 | 82 | 456 | 9,707 | |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Actual BDD** | **846.0** | **1054.0** | **1025.0** | **963.0** | **724.0** | **491.0** | **257.0** | **31.0** | **0.0** | **4.0** | **87.0** | **341.0** | 5823 0 | |

**Heat Factors**

| | | Nov-19 | Dec-19 | Jan-20 | Feb-20 | Mar-20 | Apr-20 | May-19 | Jun-19 | Jul-19 | Aug-19 | Sep-19 | Oct-19 | Total | AVG | AVG Peak |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HLF | R-1 RNSH | 0 0046 | 0 0051 | 0 0056 | 0 0054 | 0 0063 | 0 0061 | 0 0072 | 0 0237 | 0 0000 | 0 0000 | 0 0052 | 0 0047 | 0 0063 | 0 0062 | 0 0055 |
| LLF | R-3 RSH | 0 7389 | 0 8042 | 0 8621 | 0 8165 | 0 8388 | 0 8206 | 0 6374 | 1 1853 | 0 0000 | 0 0000 | 0 4063 | 0 6357 | 0 8621 | 0 6455 | 0 8135 |
| LLF | G-41 SL | 0 3101 | 0 3511 | 0 3762 | 0 3553 | 0 3448 | 0 3361 | 0 2481 | 0 4058 | 0 0000 | 0 0000 | 0 1467 | 0 2396 | 0 3762 | 0 2595 | 0 3456 |
| HLF | G-51 SH | 0 0168 | 0 0186 | 0 0200 | 0 0197 | 0 0154 | 0 0154 | 0 0258 | 0 0799 | 0 0000 | 0 0000 | 0 0350 | 0 0178 | 0 0200 | 0 0220 | 0 0177 |
| LLF | G-42 ML | 0 4137 | 0 4462 | 0 4733 | 0 4481 | 0 4550 | 0 4445 | 0 3764 | 0 6498 | 0 0000 | 0 0000 | 0 3128 | 0 3797 | 0 4733 | 0 3666 | 0 4468 |
| HLF | G-52 MH | 0 0448 | 0 0453 | 0 0492 | 0 0481 | 0 0335 | 0 0353 | 0 0449 | 0 0868 | 0 0000 | 0 0000 | 0 0776 | 0 0526 | 0 0492 | 0 0432 | 0 0427 |
| LLF | G-43 LL | 0 0921 | 0 1006 | 0 1073 | 0 1059 | 0 1123 | 0 1019 | 0 0951 | 0 1524 | 0 0000 | 0 0000 | 0 0805 | 0 0837 | 0 1123 | 0 0860 | 0 1034 |
| HLF | G-53 LLL90 | 0 0180 | 0 0191 | 0 0253 | 0 0271 | 0 0242 | 0 0201 | 0 0427 | 0 1650 | 0 0000 | 0 0000 | 0 0132 | 0 0372 | 0 0271 | 0 0326 | 0 0223 |
| HLF | G-54 LLL110 | 0 0074 | 0 0107 | 0 0122 | 0 0126 | 0 0082 | 0 0079 | 0 0139 | 0 0149 | 0 0000 | 0 0000 | 0 0183 | 0 0098 | 0 0126 | 0 0097 | 0 0098 |
| HLF | G-63 LLG110 | 0 0000 | 0 0000 | 0 0000 | 0 0000 | 0 0000 | 0 0000 | 0 0000 | 0 0000 | 0 0000 | 0 0000 | 0 0000 | 0 0000 | 0 0000 | 0 0000 | 0 0000 |
| | TOTAL | 1 6465 | 1 8008 | 1 9312 | 1 8387 | 1 8386 | 1 7879 | 1 4914 | 2 7635 | 0 0000 | 0 0000 | 1 0957 | 1 4609 | 1 9391 | 1 4713 | 1 8073 |

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

**Calculation of Capacity Allocators**
**Docket No DE 98-124**



| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Actual HDD** | **846.0** | **1,054.0** | **1,025.0** | **963.0** | **724.0** | **491.0** | **257.0** | **31.0** | **0.0** | **4.0** | **87.0** | **341.0** | **5823.0** |
| **Norm HDD** | **715.2** | **1,044.9** | **1,216.8** | **1,071.2** | **893.6** | **508.8** | **226.5** | **49.9** | **5.0** | **8.2** | **108.0** | **407.2** | **6255.0** |

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

| | | Nov-19 | Dec-19 | Jan-20 | Feb-20 | Mar-20 | Apr-20 | May-19 | Jun-19 | Jul-19 | Aug-19 | Sep-19 | Oct-19 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **HLF** | **R-1 RNSH** | 6 | 8 | 10 | 9 | 9 | 6 | 5 | 4 | 3 | 3 | 4 | 5 | 72 |
| **LLF** | **R-3 RSH** | 635 | 950 | 1,159 | 977 | 859 | 524 | 254 | 165 | 111 | 110 | 150 | 369 | 6,264 |
| **LLF** | **G-41 SL** | 245 | 391 | 482 | 403 | 332 | 194 | 80 | 43 | 24 | 24 | 39 | 121 | 2,378 |
| **HLF** | **G-51 SH** | 34 | 42 | 47 | 43 | 37 | 30 | 29 | 26 | 23 | 25 | 26 | 30 | 392 |
| **LLF** | **G-42 ML** | 340 | 512 | 622 | 523 | 452 | 270 | 131 | 77 | 46 | 48 | 78 | 200 | 3,298 |
| **HLF** | **G-52 MH** | 85 | 103 | 115 | 103 | 85 | 71 | 65 | 58 | 55 | 58 | 62 | 77 | 937 |
| **LLF** | **G-43 LL** | 86 | 126 | 151 | 133 | 121 | 72 | 42 | 27 | 21 | 22 | 29 | 55 | 883 |
| **HLF** | **G-53 LLL90** | 47 | 55 | 66 | 62 | 57 | 45 | 45 | 43 | 38 | 40 | 36 | 51 | 585 |
| **HLF** | **G-54 LLL110** | 19 | 25 | 29 | 27 | 22 | 18 | 17 | 15 | 16 | 16 | 16 | 18 | 238 |
| **HLF** | **G-63 LLG110** | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | **TOTAL** | 1,498 | 2,213 | 2,681 | 2,279 | 1,974 | 1,230 | 669 | 458 | 337 | 346 | 439 | 926 | 15,049 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **HLF** | 192 | 234 | 268 | 244 | 209 | 170 | 161 | 145 | 136 | 142 | 143 | 181 | 2,225 |
| **LLF** | 1,306 | 1,978 | 2,413 | 2,036 | 1,765 | 1,060 | 507 | 313 | 201 | 204 | 296 | 745 | 12,823 |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**Peak 2021 - 2022 Winter Cost of Gas Filing**
**Fixed Price Option**

| | | | | | | Residential | Residential | Residential | | | C&I | C&I | C&I | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Participation | Premium | FPO Volumes | Premium Revenue | FPO Rate | Average COG Rate | Total Bill FPO Rate | Total Bill COG Rate | Difference | % Difference | FPO Rate | Average COG Rate | Total Bill FPO Rate | Total Bill COG Rate | Difference | % Difference |
| 1 | Nov 98 - Mar 99 | 6.0% | | | | 0.3927 | 0 3722 | 943.3700 | 926.9333 | $ 16.44 | 1.77% | 0 3927 | 0 3736 | $1,570.86 | $ 1,546.08 | $ 24.79 | 1 60% |
| 2 | Nov 99 - Mar 00 | 9.0% | | | | 0.4724 | 0.4628 | 679.8500 | 672.2235 | $ 7.63 | 1.13% | 0.4724 | 0.4636 | $1,161.81 | $ 1,149.15 | $ 12 67 | 1.10% |
| 3 | Nov 00 - Mar 01 | 20.0% | | | | 0.6408 | 0.7656 | 816.2500 | 916.0900 | $ (99.84) | -10 90% | 0 6408 | 0.7189 | $1,376.64 | $ 1,533.43 | $ (156.79) | -10 22% |
| 4 | Nov 01 - Apr 02 | 24.0% | | | | 0.5141 | 0.4818 | 790.6522 | 760.5504 | $ 30.10 | 3 96% | 0 5238 | 0.4928 | $1,301.07 | $ 1,256.88 | $ 44.19 | 3 52% |
| 5 | Nov 02 - Apr 03 | 24.0% | 0 0051 | 25,107,016 | $128,045.78 | 0.5553 | 0 5758 | 821.3224 | 840.4371 | $ (19.11) | -2 27% | 0 5658 | 0 5860 | $1,344.02 | $ 1,372.86 | $ (28 84) | -2.10% |
| 6 | Nov 03 - Apr 04 | 23.0% | 0 0219 | 25,220,575 | $552,330.59 | 0.8597 | 0 8220 | 1,115.5548 | 1,080.4628 | $ 35.09 | 3 25% | 0 8759 | 0 8352 | $1,798.38 | $ 1,740.30 | $ 58 08 | 3 34% |
| 7 | Nov 04 - Apr 05 | 29.6% | 0 0100 | 27,378,128 | $273,781.28 | 0.8925 | 0 9425 | 1,142.9556 | 1,189.5541 | $ (46.60) | -3 92% | 0 9092 | 0 9562 | $1,844.75 | $ 1,911.86 | $ (67.10) | -3 51% |
| 8 | Nov 05 - Apr 06 | 29.8% | 0 0200 | 25,944,091 | $518,881.82 | 1.2951 | 1.1342 | 1,526.0076 | 1,376.0122 | $ 150.00 | 10 90% | 1 3192 | 1.1686 | $2,450.66 | $ 2,235.77 | $ 214 89 | 9 61% |
| 9 | Nov 06 - Apr 07 | 15.1% | 0 0200 | 13,135,684 | $262,713.68 | 1.2664 | 1.1656 | 1,509.7908 | 1,415.8032 | $ 93.99 | 6 64% | 1 2666 | 1.1647 | $2,321.15 | $ 2,175.70 | $ 145.45 | 6 68% |
| 10 | Nov 07 - Apr 08 | 15.8% | 0 0200 | 14,078,553 | $281,571.06 | 1.2043 | 1.1746 | 1,433.0900 | 1,405.4000 | $ 27.69 | 1 97% | 1 2044 | 1.1725 | $2,232.39 | $ 2,186.92 | $ 45.47 | 2 08% |
| 11 | Nov 08 - Apr 09 | 15.2% | 0 0200 | 13,041,335 | $260,826.70 | 1.2835 | 1 0888 | 1,555.3140 | 1,373.8536 | $ 181.46 | 13 21% | 1 2836 | 1 0958 | $2,467.49 | $ 2,199.54 | $ 267 95 | 12.18% |
| 12 | Nov 09 - Apr 10 | 11.4% | 0 0200 | 8,405,413 | $168,108.26 | 0.9863 | 0 9416 | 1,250.8032 | 1,209.1161 | $ 41.69 | 3.45% | 0 9865 | 0 9408 | $1,984.29 | $ 1,919.03 | $ 65 26 | 3.40% |
| 13 | Nov 10 - Apr 11 | 12.6% | 0 0200 | 10,379,804 | $207,596.08 | 0.8420 | 0 8029 | 1,175.0264 | 1,138.5767 | $ 36.45 | 3 20% | 0 8434 | 0 8030 | $1,880.96 | $ 1,823.34 | $ 57 63 | 3.16% |
| 14 | Nov 11 - Apr 12 | 11.9% | 0 0200 | 7,835,197 | $156,703.94 | 0.8126 | 0.7309 | 1,165.6100 | 1,089.4400 | $ 76.17 | 6 99% | 0 8129 | 0.7327 | $1,845.28 | $ 1,730.88 | $ 114.40 | 6 61% |
| 15 | Nov 12 - Apr 13 | 10.9% | 0 0200 | 8,179,524 | $163,590.48 | 0.6919 | 0.7680 | 743.0298 | 792.4756 | $ (49.45) | -6 24% | 0 6936 | 0.7724 | $1,989.86 | $ 2,132.90 | $ (143 03) | -6.71% |
| 16 | Nov 13 - Apr 14 | 10.5% | 0 0200 | 8,930,779 | $178,615.58 | 0.9095 | 1 0980 | 857.7200 | 981.2100 | $ (123.49) | -12 59% | 0 9108 | 1.1058 | $2,899.04 | $ 3,280.18 | $ (381.14) | -11 62% |
| 17 | Nov 14 - Apr 15 | 15.1% | 0 0795 | 8,779,742 | $697,989.49 | 1.2425 | 0 5100 | 1,127.6600 | 948.0700 | $ 179.59 | 18 94% | 0 5143 | 0 9058 | $2,135.42 | $ 2,340.00 | $ (204 58) | -8.74% |
| 18 | Nov 15 - Apr 16 | 15.3% | 0 0200 | 4,941,157 | $ 98,823.14 | 0.7716 | 0.7516 | 869.1500 | 712.7315 | $ 156.42 | 21 95% | | | | | | |
| 19 | Nov 16 - Apr 17 | 11.5% | 0 0106 | 5,419,967 | $ 57,451.65 | 0.7268 | 0.7162 | 827.1400 | 812.3754 | $ 14.76 | 1 82% | | | | | | |
| 20 | Nov 17 - Apr 18 | 10.6% | 0 0200 | 5,298,900 | $105,978.00 | 0.6645 | 0 6445 | 878.7000 | 865.9400 | $ 12.76 | 1.47% | | | | | | |
| 21 | Nov 18 - Apr 19 | 10.8% | 0 0200 | 5,708,925 | $114,178.50 | 0.7611 | 0.7411 | 984.8300 | 972.1200 | $ 12.71 | 1 31% | | | | | | |
| 22 | Nov 19 - Apr 20 | 7.2% | 0 0200 | 3,447,167 | $ 68,943.34 | 0.6403 | 0 6203 | 930.4600 | 917.7400 | $ 12.72 | 1 39% | | | | | | |
| 23 | Nov 20 - Apr 21 | 11.1% | 0 0200 | 5,373,268 | $107,465.36 | 0.5771 | 0 5571 | 895.3200 | 882.6000 | $ 12.72 | 1.44% | | | | | | |
| 24 | Nov 21 - Apr 22 | | | | | 0.9256 | 0 9056 | 1,200.9474 | 1,187.6074 | $ - | 0 00% | | | | | | |
| 24 | Total | | | | | | | | | $ 734.45 | | | | | | $ 273 86 | |

**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**
**Peak 2021 - 2022 Winter Cost of Gas Filing**
**Short-Term Debt Limitations**



| | | For Purposes of Fuel Financing |
|---|---|---|
| Total Direct Gas Costs | $ | 74,822,730 |
| Total Indirect Gas Costs | | 4,360,293 |
| Total Gas Costs | $ | 79,183,023 |
| % of Debt to Total Gas Costs | | 30% |
| Short Term Debt | $ | 23,754,907 |

| | | For Purposes Other Than Fuel Financing |
|---|---|---|
| **12/31/2022 Projected Net Plant** | $ | 577,357,182 |
| % of Debt to Net Plant | | 20% |
| Short Term Debt | $ | 115,471,436 |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty**
**2021 - 2022 Winter Cost of Gas Filing**

**Company Allowance Calculation**

| | Jul-2020 | Aug-2020 | Sep-2020 | Oct-2020 | Nov-2020 | Dec-2020 | Jan-2021 | Feb-2021 | Mar-2021 | Apr-2021 | May-2021 | Jun-2021 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Sendout- Therms | 4,938,887 | 5,112,192 | 5,945,559 | 10,622,623 | 16,152,030 | 24,369,322 | 27,682,105 | 25,333,064 | 19,358,615 | 12,846,303 | 8,102,604 | 5,396,076 | 165,859,380 |
| Total Throughput- Therms | 4,935,276 | 5,092,677 | 5,227,989 | 6,532,773 | 11,027,584 | 18,555,165 | 24,820,512 | 26,998,121 | 25,544,486 | 17,127,373 | 10,787,513 | 7,181,623 | 163,831,092 |
| Variance | 3,611 | 19,515 | 717,570 | 4,089,850 | 5,124,446 | 5,814,157 | 2,861,593 | (1,665,057) | (6,185,871) | (4,281,070) | (2,684,909) | (1,785,547) | 2,028,288 |
| Company Allowance | | | | | | | | | | | | | **1.22%** |

**Lost and Unaccounted For Gas ("LAUF") Calculation**

| | Jul-2020 | Aug-2020 | Sep-2020 | Oct-2020 | Nov-2020 | Dec-2020 | Jan-2021 | Feb-2021 | Mar-2021 | Apr-2021 | May-2021 | Jun-2021 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Sendout- Therms | 4,938,887 | 5,112,192 | 5,945,559 | 10,622,623 | 16,152,030 | 24,369,322 | 27,682,105 | 25,333,064 | 19,358,615 | 12,846,303 | 8,102,604 | 5,396,076 | 165,859,380 |
| Total Throughput- Therms | 4,935,276 | 5,092,677 | 5,227,989 | 6,532,773 | 11,027,584 | 18,555,165 | 24,820,512 | 26,998,121 | 25,544,486 | 17,127,373 | 10,787,513 | 7,181,623 | 163,831,092 |
| Company Use | 3,851 | 3,369 | 4,202 | 7,264 | 17,411 | 30,017 | 40,656 | 56,444 | 38,332 | 18,882 | 10,038 | 5,937 | 236,403 |
| Variance | (240) | 16,146 | 713,368 | 4,082,586 | 5,107,035 | 5,784,140 | 2,820,937 | (1,721,501) | (6,224,203) | (4,299,952) | (2,694,947) | (1,791,484) | 1,791,885 |
| LAUF | | | | | | | | | | | | | **1.08%** |

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

| | (a) | (b) | (c) | (d) | (e) | (f) | (g) |
|---|---|---|---|---|---|---|---|
| 1 | | **5 Quarter Avg** | **Q2 2020** | **Q3 2020** | **Q4 2020** | **Q1 2021** | **Q2 2021** |
| 2 | Gas Stored Underground | $ 1,861,932 | $ 1,684,887 | $ 2,749,506 | $ 2,331,076 | $ 456,008 | $ 2,088,182 |
| 3 | Fuel Stock - Propane | $ 1,103,820 | $ 1,182,985 | $ 1,306,812 | $ 1,314,267 | $ 879,390 | $ 835,646 |
| 4 | UG Storage - LNG | $ 50,349 | $ 48,351 | $ 54,291 | $ 52,792 | $ 51,959 | $ 44,351 |
| 5 | | $ 3,016,100 | | | | | |
| 6 | ROR | 8.76% | Pre-Tax Rate of 6.64% and Statuatory Tax Rate of 27.08% | | | | |
| | | $ 264,132 | | | | | |
| 7 | Income Tax Gross-up | 1.2708 | | | | | |
| 8 | Revenue Requirement | $ 335,667 | | | | | |

**II RATE SCHEDULES**
**FIRM RATE SCHEDULES**

| | Rates effective November 1, 2021 - April 30, 2022<br>~~Rates effective November 1, 2021 - April 30, 2021~~<br>**Winter Period** | | | | Rates Effective May 1, 2022 - October 31, 2022<br>~~Rates Effective May 1, 2021 - October 31, 2021~~<br>**Summer Period** | | | |
|---|---|---|---|---|---|---|---|---|
| | **Delivery Charge** | **Cost of Gas Rate Page 95** | **LDAC Page 101** | **Total Rate** | **Delivery Charge** | **Cost of Gas Rate Page 92** | **LDAC Page 101** | **Total Rate** |
| **Residential Non Heating - R-1** | ~~$ 15.50~~ | | | ~~$ 15.50~~ | ~~$ 15.50~~ | | | ~~$ 15.50~~ |
| Customer Charge per Month per Meter | $ 15.39 | | | $ 15.39 | $ 15.39 | | | $ 15.39 |
| All Therms | $ 0.3844 | $ 0.9056 | $ 0.1733 | $ 1.4633 | $ 0.3844 | $ 0.5002 | $ 0.1733 | $ 1.0579 |
| | ~~$ 0.3860~~ | ~~$ 0.5571~~ | ~~$ 0.0589~~ | ~~$ 1.0020~~ | ~~$ 0.3860~~ | ~~$ 0.4914~~ | ~~$ 0.0589~~ | ~~$ 0.9363~~ |
| **Residential Heating - R-3** | ~~$ 15.50~~ | | | ~~$ 15.50~~ | ~~$ 15.50~~ | | | ~~$ 15.50~~ |
| Customer Charge per Month per Meter | $ 15.39 | | | $ 15.39 | $ 15.39 | | | $ 15.39 |
| Size of the first block | all therms | | | | | | | |
| Therms in the first block per month at | $ 0.5632 | $ 0.9056 | $ 0.1733 | $ 1.6421 | $ 0.5632 | $ 0.5002 | $ 0.1733 | $ 1.2367 |
| | ~~$ 0.5678~~ | ~~$ 0.5571~~ | ~~$ 0.0589~~ | ~~$ 1.1838~~ | ~~$ 0.5678~~ | ~~$ 0.4914~~ | ~~$ 0.0589~~ | ~~$ 1.1181~~ |
| **Residential Heating - R-4** | ~~$ 8.52~~ | | | ~~$ 8.52~~ | ~~$ 15.50~~ | | | ~~$ 15.50~~ |
| Customer Charge per Month per Meter | $ 8.47 | | | $ 8.47 | $ 15.39 | | | $ 15.39 |
| Size of the first block | all therms | | | | 20 therms | | | |
| Therms in the first block per month at | $ 0.3098 | $ 0.4981 | $ 0.1733 | $ 0.9812 | $ 0.5632 | $ 0.5002 | $ 0.1733 | $ 1.2367 |
| | ~~$ 0.3123~~ | ~~$ 0.3064~~ | ~~$ 0.0589~~ | ~~$ 0.6776~~ | ~~$ 0.5678~~ | ~~$ 0.4914~~ | ~~$ 0.0589~~ | ~~$ 1.1181~~ |
| **Commercial/Industrial - G-41** | ~~$ 57.46~~ | | | ~~$ 57.46~~ | ~~$ 57.46~~ | | | ~~$ 57.46~~ |
| Customer Charge per Month per Meter | $ 57.06 | | | $ 57.06 | $ 57.06 | | | $ 57.06 |
| Size of the first block | 100 therms | | | | 20 therms | | | |
| Therms in the first block per month at | $ 0.4688 | $ 0.9058 | $ 0.0860 | $ 1.4606 | $ 0.4688 | $ 0.5007 | $ 0.0860 | $ 1.0555 |
| | ~~$ 0.4711~~ | ~~$ 0.5552~~ | ~~$ 0.0555~~ | ~~$ 1.0818~~ | ~~$ 0.4711~~ | ~~$ 0.4868~~ | ~~$ 0.0555~~ | ~~$ 1.0134~~ |
| All therms over the first block per month at | $ 0.3149 | $ 0.9058 | $ 0.0860 | $ 1.3067 | $ 0.3149 | $ 0.5007 | $ 0.0860 | $ 0.9016 |
| | ~~$ 0.3165~~ | ~~$ 0.5552~~ | ~~$ 0.0555~~ | ~~$ 0.9272~~ | ~~$ 0.3165~~ | ~~$ 0.4868~~ | ~~$ 0.0555~~ | ~~$ 0.8588~~ |
| **Commercial/Industrial - G-42** | ~~$ 172.39~~ | | | ~~$ 172.39~~ | ~~$ 172.39~~ | | | ~~$ 172.39~~ |
| Customer Charge per Month per Meter | $ 171.19 | | | $ 171.19 | $ 171.19 | | | $ 171.19 |
| Size of the first block | 1000 therms | | | | 400 therms | | | |
| Therms in the first block per month at | $ 0.4261 | $ 0.9058 | $ 0.0860 | $ 1.4179 | $ 0.4261 | $ 0.5007 | $ 0.0860 | $ 1.0128 |
| | ~~$ 0.4284~~ | ~~$ 0.5552~~ | ~~$ 0.0555~~ | ~~$ 1.0391~~ | ~~$ 0.4284~~ | ~~$ 0.4868~~ | ~~$ 0.0555~~ | ~~$ 0.9707~~ |
| All therms over the first block per month at | $ 0.2839 | $ 0.9058 | $ 0.0860 | $ 1.2757 | $ 0.2839 | $ 0.5007 | $ 0.0860 | $ 0.8706 |
| | ~~$ 0.2855~~ | ~~$ 0.5552~~ | ~~$ 0.0555~~ | ~~$ 0.8962~~ | ~~$ 0.2855~~ | ~~$ 0.4868~~ | ~~$ 0.0555~~ | ~~$ 0.8278~~ |
| **Commercial/Industrial - G-43** | ~~$ 739.83~~ | | | ~~$ 739.83~~ | ~~$ 739.83~~ | | | ~~$ 739.83~~ |
| Customer Charge per Month per Meter | $ 734.69 | | | $ 734.69 | $ 734.69 | | | $ 734.69 |
| All therms over the first block per month at | $ 0.2620 | $ 0.9058 | $ 0.0860 | $ 1.2538 | $ 0.1198 | $ 0.5007 | $ 0.0860 | $ 0.7065 |
| | ~~$ 0.2633~~ | ~~$ 0.5552~~ | ~~$ 0.0555~~ | ~~$ 0.8740~~ | ~~$ 0.1204~~ | ~~$ 0.4868~~ | ~~$ 0.0555~~ | ~~$ 0.6627~~ |
| **Commercial/Industrial - G-51** | ~~$ 57.46~~ | | | ~~$ 57.46~~ | ~~$ 57.46~~ | | | ~~$ 57.46~~ |
| Customer Charge per Month per Meter | $ 57.06 | | | $ 57.06 | $ 57.06 | | | $ 57.06 |
| Size of the first block | 100 therms | | | | 100 therms | | | |
| Therms in the first block per month at | $ 0.2819 | $ 0.9041 | $ 0.0860 | $ 1.2720 | $ 0.2819 | $ 0.4994 | $ 0.0860 | $ 0.8673 |
| | ~~$ 0.2839~~ | ~~$ 0.5660~~ | ~~$ 0.0555~~ | ~~$ 0.9054~~ | ~~$ 0.2839~~ | ~~$ 0.4985~~ | ~~$ 0.0555~~ | ~~$ 0.8379~~ |
| All therms over the first block per month at | $ 0.1833 | $ 0.9041 | $ 0.0860 | $ 1.1734 | $ 0.1833 | $ 0.4994 | $ 0.0860 | $ 0.7687 |
| | ~~$ 0.1846~~ | ~~$ 0.5660~~ | ~~$ 0.0555~~ | ~~$ 0.8061~~ | ~~$ 0.1846~~ | ~~$ 0.4985~~ | ~~$ 0.0555~~ | ~~$ 0.7386~~ |
| **Commercial/Industrial - G-52** | ~~$ 172.39~~ | | | ~~$ 172.39~~ | ~~$ 172.39~~ | | | ~~$ 172.39~~ |
| Customer Charge per Month per Meter | $ 171.19 | | | $ 171.19 | $ 171.19 | | | $ 171.19 |
| Size of the first block | 1000 therms | | | | 1000 therms | | | |
| Therms in the first block per month at | $ 0.2428 | $ 0.9041 | $ 0.0860 | $ 1.2329 | $ 0.1759 | $ 0.4994 | $ 0.0860 | $ 0.7613 |
| | ~~$ 0.2439~~ | ~~$ 0.5660~~ | ~~$ 0.0555~~ | ~~$ 0.8654~~ | ~~$ 0.1767~~ | ~~$ 0.4985~~ | ~~$ 0.0555~~ | ~~$ 0.7307~~ |
| All therms over the first block per month at | $ 0.1617 | $ 0.9041 | $ 0.0860 | $ 1.1518 | $ 0.1000 | $ 0.4994 | $ 0.0860 | $ 0.6854 |
| | ~~$ 0.1624~~ | ~~$ 0.5660~~ | ~~$ 0.0555~~ | ~~$ 0.7839~~ | ~~$ 0.1004~~ | ~~$ 0.4985~~ | ~~$ 0.0555~~ | ~~$ 0.6544~~ |
| **Commercial/Industrial - G-53** | ~~$ 761.39~~ | | | ~~$ 761.39~~ | ~~$ 761.39~~ | | | ~~$ 761.39~~ |
| Customer Charge per Month per Meter | $ 756.10 | | | $ 756.10 | $ 756.10 | | | $ 756.10 |
| All therms over the first block per month at | $ 0.1697 | $ 0.9041 | $ 0.0860 | $ 1.1598 | $ 0.0814 | $ 0.4994 | $ 0.0860 | $ 0.6668 |
| | ~~$ 0.1705~~ | ~~$ 0.5660~~ | ~~$ 0.0555~~ | ~~$ 0.7920~~ | ~~$ 0.0818~~ | ~~$ 0.4985~~ | ~~$ 0.0555~~ | ~~$ 0.6358~~ |
| **Commercial/Industrial - G-54** | ~~$ 761.39~~ | | | ~~$ 761.39~~ | ~~$ 761.39~~ | | | ~~$ 761.39~~ |
| Customer Charge per Month per Meter | $ 756.10 | | | $ 756.10 | $ 756.10 | | | $ 756.10 |
| All therms over the first block per month at | $ 0.0648 | $ 0.9041 | $ 0.0860 | $ 1.0549 | $ 0.0352 | $ 0.4994 | $ 0.0860 | $ 0.6206 |
| | ~~$ 0.0650~~ | ~~$ 0.9041~~ | ~~$ 0.0860~~ | ~~$ 1.0551~~ | ~~$ 0.0353~~ | ~~$ 0.4985~~ | ~~$ 0.0555~~ | ~~$ 0.5893~~ |

Issued: ~~October xx, 2020~~ October xx, 2021
Effective: ~~November 1, 2020~~ November 1, 2021

Issued by: Neil Proudman
Title: President

Issued in compliance with NHPUC Order No. xx,xxx dated xxxx xx, 2021 in Docket DG 21-xxx.
~~Issued in compliance with NHPUC Order No. 26,419 dated October 31, 2020 in Docket DG 20-141~~

| | Rates effective November 1, 2021 - April 30, 2022<br>~~Rates effective November 1, 2021 April 30, 2021~~<br>**Winter Period** | | | | Rates Effective May 1, 2022 - October 31, 2022<br>~~Rates Effective May 1, 2021 October 31, 2021~~<br>**Summer Period** | | | |
|---|---|---|---|---|---|---|---|---|
| | **Delivery Charge** | **Cost of Gas Rate Page 92** | **LDAC Charge** | **Total Rate** | **Delivery Charge** | **Cost of Gas Rate Page 89** | **LDAC Page 97** | **Total Rate** |
| **Residential Non Heating - R-5** | ~~$ 20.15~~ | | | ~~$ 20.15~~ | ~~$ 20.15~~ | | | ~~$ 20.15~~ |
| Customer Charge per Month per Meter | $ 20.01 | | | $ 20 01 | $ 20 01 | | | $ 20 01 |
| All therms | $ 0.4997 | $ 0.9056 | $ 0.1733 | $ 1.5786 | $ 0.4997 | $ 0.5002 | $ 0.1733 | $ 1.1732 |
| | ~~$ 0 5018~~ | ~~$ 0.5571~~ | ~~$ 0.0589~~ | ~~$ 1.1178~~ | ~~$ 0.5018~~ | ~~$ 0.3148~~ | ~~$ 0.0589~~ | ~~$ 0.8755~~ |
| **Residential Heating - R-6** | ~~$ 20.15~~ | | | ~~$ 20.15~~ | ~~$ 20.15~~ | | | ~~$ 20.15~~ |
| Customer Charge per Month per Meter | $ 20.01 | | | $ 20 01 | $ 20 01 | | | $ 20 01 |
| All therms | $ 0.7322 | $ 0.9056 | $ 0.1733 | $ 1.8111 | $ 0.7322 | $ 0.5002 | $ 0.1733 | $ 1.4057 |
| | ~~$ 0.7381~~ | ~~$ 0.5571~~ | ~~$ 0.0589~~ | ~~$ 1.3541~~ | ~~$ 0.7381~~ | ~~$ 0.3148~~ | ~~$ 0.0589~~ | ~~$ 1.1118~~ |
| **Residential Heating - R-7** | ~~$ 11.08~~ | | | ~~$ 11 08~~ | ~~$ 20.15~~ | | | ~~$ 20.15~~ |
| Customer Charge per Month per Meter | $ 11.01 | | | $ 11 01 | $ 11 01 | | | $ 11 01 |
| All therms | $ 0.4027 | $ 0.4981 | $ 0.1733 | $ 1.0741 | $ 0.4027 | $ 0.5002 | $ 0.1733 | $ 1.0762 |
| | ~~$ 0.4060~~ | ~~$ 0.3064~~ | ~~$ 0.0589~~ | ~~$ 0.7713~~ | ~~$ 0.7381~~ | ~~$ 0.3148~~ | ~~$ 0.0589~~ | ~~$ 1.1118~~ |
| **Commercial/Industrial - G-44** | ~~$ 74.69~~ | | | ~~$ 74.69~~ | ~~$ 74.69~~ | | | ~~$ 74.69~~ |
| Customer Charge per Month per Meter | $ 74.18 | | | $ 74.18 | $ 74.18 | | | $ 74.18 |
| Size of the first block | 100 therms | | | | 20 therms | | | |
| Therms in the first block per month at | $ 0 6094 | $ 0.9058 | $ 0.0860 | $ 1.6012 | $ 0.5539 | $ 0.5007 | $ 0.0860 | $ 1.1406 |
| | ~~$ 0 6126~~ | ~~$ 0.5552~~ | ~~$ 0.0555~~ | ~~$ 1 2233~~ | ~~$ 0 6126~~ | ~~$ 0 3109~~ | ~~$ 0 0555~~ | ~~$ 0 9790~~ |
| All therms over the first block per month a | $ 0.4094 | $ 0.9058 | $ 0.0860 | $ 1.4012 | $ 0.3691 | $ 0.5007 | $ 0.0860 | $ 0.9558 |
| | ~~$ 0.4114~~ | ~~$ 0.5552~~ | ~~$ 0.0555~~ | ~~$ 1.0221~~ | ~~$ 0.4114~~ | ~~$ 0.3109~~ | ~~$ 0.0555~~ | ~~$ 0.7778~~ |
| **Commercial/Industrial - G-45** | ~~$ 224.11~~ | | | ~~$ 224.11~~ | ~~$ 224.11~~ | | | ~~$ 224.11~~ |
| Customer Charge per Month per Meter | $ 222.55 | | | $ 222 55 | $ 222 55 | | | $ 222 55 |
| Size of the first block | 1000 therms | | | | 400 therms | | ~~$ -~~ | |
| Therms in the first block per month at | $ 0 5539 | $ 0.9058 | $ 0.0860 | $ 1.5457 | $ 0.5539 | $ 0.5007 | $ 0.0860 | $ 1.1406 |
| | ~~$ 0 5569~~ | ~~$ 0.5552~~ | ~~$ 0.0555~~ | ~~$ 1.1676~~ | ~~$ 0.5569~~ | ~~$ 0.3109~~ | ~~$ 0.0555~~ | ~~$ 0.9233~~ |
| All therms over the first block per month a | $ 0 3691 | $ 0.9058 | $ 0.0860 | $ 1.3609 | $ 0.3691 | $ 0.5007 | $ 0.0860 | $ 0.9558 |
| | ~~$ 0 3711~~ | ~~$ 0.5552~~ | ~~$ 0.0555~~ | ~~$ 0.9818~~ | ~~$ 0.3711~~ | ~~$ 0.3109~~ | ~~$ 0.0555~~ | ~~$ 0.7375~~ |
| | | | | | | | ~~$ -~~ | |
| **Commercial/Industrial - G-46** | ~~$ 961.78~~ | | | ~~$ 961.78~~ | ~~$ 961.78~~ | | | ~~$ 961.78~~ |
| Customer Charge per Month per Meter | $ 955.10 | | | $ 955.10 | $ 955.10 | | ~~$ -~~ | $ 955.10 |
| All therms over the first block per month a | $ 0 3406 | $ 0.9058 | $ 0.0860 | $ 1.3324 | $ 0.1557 | $ 0.5007 | $ 0.0860 | $ 0.7424 |
| | ~~$ 0 3423~~ | ~~$ 0.5552~~ | ~~$ 0.0555~~ | ~~$ 0.9530~~ | ~~$ 0.1565~~ | ~~$ 0.3109~~ | ~~$ 0.0555~~ | ~~$ 0.5229~~ |
| **Commercial/Industrial - G-55** | ~~$ 74.69~~ | | | ~~$ 74.69~~ | ~~$ 74.69~~ | | | ~~$ 74.69~~ |
| Customer Charge per Month per Meter | $ 74.18 | | | $ 74.18 | $ 74.18 | | | $ 74.18 |
| Size of the first block | 100 therms | | | | 100 therms | | | |
| Therms in the first block per month at | $ 0 3665 | $ 0.9041 | $ 0.0860 | $ 1.3566 | $ 0.3665 | $ 0.4994 | $ 0.0860 | $ 0.9519 |
| | ~~$ 0 3691~~ | ~~$ 0.5660~~ | ~~$ 0.0555~~ | ~~$ 0.9906~~ | ~~$ 0.3691~~ | ~~$ 0.3199~~ | ~~$ 0.0555~~ | ~~$ 0.7445~~ |
| All therms over the first block per month a | $ 0 2383 | $ 0.9041 | $ 0.0860 | $ 1.2284 | $ 0.2383 | $ 0.4994 | $ 0.0860 | $ 0.8237 |
| | ~~$ 0 2400~~ | ~~$ 0.5660~~ | ~~$ 0.0555~~ | ~~$ 0.8615~~ | ~~$ 0.2400~~ | ~~$ 0.3199~~ | ~~$ 0.0555~~ | ~~$ 0.6154~~ |
| **Commercial/Industrial - G-56** | ~~$ 224.11~~ | | | ~~$ 224.11~~ | ~~$ 224.11~~ | | | ~~$ 224.11~~ |
| Customer Charge per Month per Meter | $ 222.55 | | | $ 222 55 | $ 222 55 | | | $ 222 55 |
| Size of the first block | 1000 therms | | | | 1000 therms | | ~~$ -~~ | |
| Therms in the first block per month at | $ 0 3157 | $ 0.9041 | $ 0.0860 | $ 1.3058 | $ 0.2287 | $ 0.4994 | $ 0.0860 | $ 0.8141 |
| | ~~$ 0 3171~~ | ~~$ 0.5660~~ | ~~$ 0.0555~~ | ~~$ 0.9386~~ | ~~$ 0.2297~~ | ~~$ 0.3199~~ | ~~$ 0.0555~~ | ~~$ 0.6051~~ |
| All therms over the first block per month a | $ 0 2102 | $ 0.9041 | $ 0.0860 | $ 1.2003 | $ 0.1300 | $ 0.4994 | $ 0.0860 | $ 0.7154 |
| | ~~$ 0 2111~~ | ~~$ 0.5660~~ | ~~$ 0.0555~~ | ~~$ 0.8326~~ | ~~$ 0.1304~~ | ~~$ 0.3199~~ | ~~$ 0.0555~~ | |
| **Commercial/Industrial - G-57** | ~~$ 989 80~~ | | | ~~$ 989 80~~ | ~~$ 989 80~~ | | | ~~$ 989 80~~ |
| Customer Charge per Month per Meter | $ 982.93 | | | $ 982 93 | $ 982 93 | | | $ 982 93 |
| All therms over the first block per month a | $ 0 2207 | $ 0.9041 | $ 0.0860 | $ 1.2108 | $ 0.1059 | $ 0.4994 | $ 0.0860 | $ 0.6913 |
| | ~~$ 0 2216~~ | ~~$ 0.5660~~ | ~~$ 0.0555~~ | ~~$ 0.8431~~ | ~~$ 0.1063~~ | ~~$ 0.3199~~ | ~~$ 0.0555~~ | ~~$ 0.4817~~ |
| **Commercial/Industrial - G-58** | ~~$ 989 80~~ | | | ~~$ 989 80~~ | ~~$ 989 80~~ | | | ~~$ 989 80~~ |
| Customer Charge per Month per Meter | $ 982.93 | | | $ 982 93 | $ 970 84 | | ~~$ -~~ | $ 970 84 |
| All therms over the first block per month a | $ 0 0842 | $ 0.9041 | $ 0.0860 | $ 1.0743 | $ 0.0457 | $ 0.4994 | $ 0.0860 | $ 0.6311 |
| | ~~$ 0 0846~~ | ~~$ 0.5660~~ | ~~$ 0.0555~~ | ~~$ 0.7061~~ | ~~$ 0.0459~~ | ~~$ 0.3199~~ | ~~$ 0.0555~~ | ~~$ 0.4213~~ |

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Title: President

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**Anticipated Cost of Gas**
**PERIOD COVERED: SUMMER PERIOD, MAY 1, 2022 THROUGH OCTOBER 31, 2022**
~~**PERIOD COVERED: SUMMER PERIOD, MAY 1, 2021 THROUGH OCTOBER 31, 2021**~~
**(REFER TO TEXT ON IN SECTION 16 COST OF GAS CLAUSE)**

| (Col 1) | ~~(Col 2)~~ | ~~(Col 3)~~ | (Col 2) | (Col 3) |
|---|---|---|---|---|
| **ANTICIPATED DIRECT COST OF GAS** | | | | |
| **Purchased Gas:** | | | | |
| Demand Costs: | ~~$ 2,919,324~~ | | $ 3,276,842 | |
| Supply Costs: | ~~2,202,631~~ | | 5,393,517 | |
| **Storage Gas:** | | | | |
| Demand, Capacity: | ~~-~~ | | - | |
| Commodity Costs: | ~~-~~ | | - | |
| **Produced Gas:** | ~~22,682~~ | | 85,626 | |
| **Hedged Contract Savings** | ~~-~~ | | - | |
| | | | - | |
| **Unadjusted Anticipated Cost of Gas** | | ~~$ 5,144,637~~ | | $ 8,755,985 |
| **Adjustments:** | | | | |
| Prior Period (Over)/Under Recovery as of ~~April 30, 2018~~ September 01, 2019 (monthly adjustment filing) | ~~$ 1,885,446~~ | | $ 4,472,186 | |
| Interest | ~~51,144~~ | | 219,275 | |
| Prior Period Adjustments | ~~-~~ | | - | |
| Broker Revenues | ~~-~~ | | - | |
| Refunds from Suppliers | ~~-~~ | | - | |
| Fuel Financing | - | | - | |
| Transportation CGA Revenues | ~~-~~ | | - | |
| Interruptible Sales Margin | ~~-~~ | | - | |
| Capacity Release and Off System Sales Margin | ~~-~~ | | - | |
| Hedging Costs | ~~-~~ | | - | |
| Fixed Price Option Administrative Costs | ~~-~~ | | - | |
| **Total Adjustments** | | ~~1,936,590~~ | | 4,691,461 |
| **Total Anticipated Direct Cost of Gas** | | ~~$ 7,081,227~~ | | $ 13,447,446 |
| **Anticipated Indirect Cost of Gas** | | | | |
| **Working Capital:** | | | | |
| Total anticipated Direct Cost of Gas ~~(05/01/2018 - 10/31/2018)~~(05/01/19 - 10/31/19) | ~~$ 5,144,637~~ | | $ 8,755,985 | |
| Working Capital Rate | ~~0.0391~~ | | - | |
| Prime Rate | ~~3.25%~~ | | 3.25% | |
| Working Capital Percentage | ~~0.127%~~ | | 0.01% | |
| Working Capital | ~~6,538~~ | | $ 652 | |
| Plus: Working Capital Reconciliation ~~(Acct 142.20)~~ (Acct 1163-1424) | ~~(18,982)~~ | | 4,555 | |
| Total Working Capital Allowance | | ~~$ (12,443)~~ | | $ 5,206 |
| **Bad Debt:** | | | | |
| Total anticipated Direct Cost of Gas ~~(05/01/2018 - 10/31/2018)~~(05/01/19 - 10/31/19) | ~~$ 5,144,637~~ | | $ 8,755,985 | |
| Less: Refunds | - | | - | |
| Plus: Total Working Capital | ~~(12,443)~~ | | 5,206 | |
| Plus: Prior Period (Over)/Under Recovery | ~~1,885,446~~ | | 4,472,186 | |
| Subtotal | ~~$ 7,017,640~~ | | $ 13,233,377 | |
| Bad Debt Percentage | ~~1.11%~~ | | 0.70% | |
| Bad Debt Allowance | ~~77,896~~ | | 92,634 | |
| Plus: Bad Debt Reconciliation ~~(Acct 175.52)~~ (Acct 1163-1754) | ~~(280,167)~~ | | 23,159 | |
| Total Bad Debt Allowance | | ~~(202,272)~~ | | 115,792 |
| Production and Storage Capacity | | ~~-~~ | | - |
| Miscellaneous Overhead ~~(05/01/2018 - 10/31/2018)~~ (05/01/19 - 10/31/19) | ~~$ 13,170~~ | | $ - | |
| Times Summer ~~Winter~~ Sales | ~~20,973~~ | | 23,366 | |
| Divided by Total Sales | ~~109,299~~ | | 115,043 | |
| Miscellaneous Overhead | | ~~2,527~~ | | - |
| Total Anticipated Indirect Cost of Gas | | ~~$ (212,188)~~ | | $ 120,999 |
| **Total Cost of Gas** | | ~~$ 6,869,039~~ | | $ 13,568,445 |

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**CALCULATION OF FIRM SALES COST OF GAS RATE**
**PERIOD COVERED: SUMMER PERIOD, MAY 1, 2022 THROUGH OCTOBER 31, 2022**
~~**PERIOD COVERED: SUMMER PERIOD, MAY 1, 2021 THROUGH OCTOBER 31, 2021**~~
**(Refer to Text in Section 17 Cost of Gas Clause)**

| (Col 1) | ~~(Col 2)~~ | ~~(Col 3)~~ | (Col 2) | (Col 3) | |
|---|---|---|---|---|---|
| Total Anticipated Direct Cost of Gas | ~~$ 9,653,380~~ | | $ 13,447,446 | | |
| Projected Prorated Sales (05/01/22 - 10/31/22) ~~(05/01/21 - 10/31/21)~~ | ~~20,973,031~~ | | 27,125,444 | | |
| **Direct Cost of Gas Rate** | | ~~$ 0.4603~~ | | $ 0.4958 | per therm |
| **Demand Cost of Gas Rate** | ~~$ 4,548,346~~ | ~~$ 0.2169~~ | $ 3,276,842 | $ 0.1208 | |
| **Commodity Cost of Gas Rate** | ~~3,136,847~~ | ~~$ 0.1496~~ | 5,479,143 | $ 0.2020 | |
| **Adjustment Cost of Gas Rate** | ~~1,968,188~~ | ~~$ 0.0938~~ | 4,691,461 | $ 0.1730 | |
| **Total Direct Cost of Gas Rate** | ~~$ 9,653,380~~ | ~~$ 0.4603~~ | $ 13,447,446 | $ 0.4958 | |
| Total Anticipated Indirect Cost of Gas | ~~$ (174,652)~~ | | 120,343 | | |
| Projected Prorated Sales (05/01/22 - 10/31/22) ~~(05/01/21 - 10/31/21)~~ | ~~20,973,031~~ | | 27,125,444 | | |
| **Indirect Cost of Gas** | | ~~$ (0.0083)~~ | | $ 0.0044 | per therm |
| **TOTAL PERIOD AVERAGE COST OF GAS EFFECTIVE 05/01/22** | | | | $ 0.5002 | per Therm |
| ~~**TOTAL PERIOD AVERAGE COST OF GAS EFFECTIVE 05/01/21**~~ | | ~~$ 0.4520~~ | | | |

| | | | | | |
|---|---|---|---|---|---|
| **RESIDENTIAL COST OF GAS RATE - 05/01/2022** | | | **COGsr** | **$ 0.5002** | **/therm** |
| ~~**RESIDENTIAL COST OF GAS RATE - 5 01 21**~~ | | | ~~**COGsr**~~ | ~~**$ 0 4520**~~ | ~~**therm**~~ |
| | | Maximum | (COG + 25%) | ~~$ 0 5650~~ | $ 0.6253 |

| | | | | | |
|---|---|---|---|---|---|
| **COM/IND LOW WINTER USE COST OF GAS RATE - 05/01/2022** | | | **COGsl** | **$ 0.4994** | **/therm** |
| ~~**COM/IND LOW WINTER USE COST OF GAS RATE - 05/01/2021**~~ | | | ~~**COGsl**~~ | ~~**$ 0.4591**~~ | ~~**/therm**~~ |

| | | | | | | |
|---|---|---|---|---|---|---|
| Average Demand Cost of Gas Rate Effective ~~05/01/21~~ 05/01/2022 | ~~$ 0 2169~~ | $ 0.1208 | Maximum | (COG + 25%) | ~~$ 0 5739~~ | $ 0.6243 |
| 'Times: Low Winter Use Ratio (Summer) | ~~1.0465~~ | 0.9911 | | | | |
| Times: Correction Factor | ~~0 9867~~ | 1.0027 | | | | |
| Adjusted Demand Cost of Gas Rate | ~~$ 0.2240~~ | $ 0.1200 | | | | |
| Commodity Cost of Gas Rate | ~~$ 0.1496~~ | $ 0.2020 | | | | |
| Adjustment Cost of Gas Rate | ~~0.0938~~ | 0.1730 | | | | |
| Indirect Cost of Gas Rate | ~~(0 0083)~~ | 0.0044 | | | | |
| Adjusted Com/Ind Low Winter Use Cost of Gas Rate | ~~$ 0.4591~~ | $ 0.4994 | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **COM/IND HIGH WINTER USE COST OF GAS RATE - 05/01/2021** | | | **COGsh** | **$ 0.5007** | **/therm** |
| ~~**COM/IND HIGH WINTER USE COST OF GAS RATE - 05/01/2020**~~ | | | ~~**COGsh**~~ | ~~**$ 0.4474**~~ | ~~**/therm**~~ |

| | | | | | | |
|---|---|---|---|---|---|---|
| Average Demand Cost of Gas Rate Effective ~~05/01/20~~ 05/01/2021 | ~~$ 0.2169~~ | $ 0.1208 | Maximum | (COG + 25%) | ~~$ 0.5593~~ | $ 0.6259 |
| 'Times: High Winter Use Ratio (Summer) | ~~0 9918~~ | 1.0017 | | | | |
| Times: Correction Factor | ~~0 9867~~ | 1.0027 | | | | |
| Adjusted Demand Cost of Gas Rate | ~~$ 0.2123~~ | $ 0.1213 | | | | |
| Commodity Cost of Gas Rate | ~~$ 0.1496~~ | $ 0.2020 | Minimum | | | |
| Adjustment Cost of Gas Rate | ~~0.0938~~ | 0.1730 | Maximum | | | |
| Indirect Cost of Gas Rate | ~~(0 0083)~~ | 0.0044 | | | | |
| Adjusted Com/Ind High Winter Use Cost of Gas Rate | ~~$ 0.4474~~ | $ 0.5007 | | | | |

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Title: President

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

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

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**Liberty Utilities (EnergyNorth Natural Gas) Corp.** Summary
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**Off Peak 2022 Summer Cost of Gas Filing**
**Summary**

| | (a) | Reference (b) | OP 22 May - Oct (c) |
|---|---|---|---|
| **Anticipated Direct Cost of Gas** | | | |
| | Purchased Gas: | | |
| | Demand Costs: | Sch. 5A, col (j), ln 46 | $ 3,276,842 |
| | Supply Costs | Sch. 6, col (i), ln 45 | 5,393,517 |
| | Storage Gas: | | |
| | Demand, Capacity: | Sch. 5A, col (j), ln 61 | $ - |
| | Commodity Costs: | Sch. 6, col (i), ln 48 | - |
| | Produced Gas: | Sch. 6, col (i), ln 54 | $ 85,626 |
| | Hedge Contract (Savings)/Loss | | $ - |
| | **Total Unadjusted Cost of Gas** | | $ 8 755 985 |
| **Adjustments** | | | |
| | Prior Period (Over)/Under Recovery) | Sch. 3, col (c) ln 28 | $ 4,472,186 |
| | Interest 11/01/19 - 10/31/20 | Sch. 3, col (q) ln 193 | 219,275 |
| | Prior Period Adjustments | Sch. 4, ln 24 col (b) | - |
| | Refunds from Suppliers | Sch. 4, ln 24 col (c) | - |
| | Broker Revenue | Sch. 4, ln 24 col (d) | - |
| | Fuel Financing | Sch. 4, ln 24 col (e) | - |
| | Transportation CGA Revenues | Sch. 4, ln 24 col (f) | - |
| | Interruptible Sales Margin | Sch. 4, ln 24 col (g) | - |
| | Capacity Release and Off System Sales Margins | Sch. 4, ln 24 col (h) + col (i) | - |
| | Hedging Costs | Sch. 4, ln 24 col (j) | - |
| | FPO Premium - Collection | | - |
| | Fixed Price Option Administrative Costs | Sch. 4, ln 24 col (k) | - |
| | **Total Adjustments** | | $ 4 691 461 |
| **Total Anticipated Direct Costs** | | lns 23 + 40 | $ 13 447 446 |
| **Anticipated Indirect Cost of Gas** | | | |
| **Working Capital** | | | |
| | Total Unadjusted Anticipated Cost of Gas | Ln 23 | $ 8,755,985 |
| | Lead Lag Days / 365 | DG 10-017, 14.27 / 365 | 0.0000 |
| | Prime Rate | | 3 25% |
| | Working Capital Percentage | ln 47 * ln 48 | 0.000% |
| | Working Capital | ln 46 * ln 49 | - |
| | Plus: Working Capital Reconciliation | Sch. 3, col (c), ln 98 | 4,555 |
| | **Total Working Capital Allowance** | lns 50 + 51 | $ 4,555 |
| **Bad Debt** | | | |
| | Total Unadjusted Anticipated Cost of Gas | ln 23 | $ 8,755,985 |
| | Less Refunds | ln 30 | - |
| | Plus Working Capital | ln 53 | 4,555 |
| | Plus Prior Period (Over) Under Recovery | ln 27 | 4 472 186 |
| | Subtotal | | $ 13,232,726 |
| | Bad Debt Percentage | per GTC 17(f) | 0.70% |
| | Bad Debt Allowance | ln 60 * ln 61 | $ 92,629 |
| | Prior Period Bad Debt Allowance | Sch. 3, col (c), ln 163 | 23 159 |
| | **Total Bad Debt Allowance** | lns 63 + 64 | $ 115 788 |
| **Production and Storage Capacity** | | per GTC17(f) | $ - |
| **Miscellaneous Overhead** | | per GTC 17(f) | $ - |
| | Sales Volume | Sch. 10B, ln 23/1000 | 23,366 |
| | Divided by Total Sales | Sch. 10B, ln 23/1000 | 115,043 |
| | Ratio | | 20 31% |
| | **Miscellaneous Overhead** | lns 70 * 73 | $ - |
| **Total Anticipated Indirect Cost of Gas** | | lns 53 + 66 + 68 + 75 | $ 120 343 |
| **Total Cost of Gas** | | lns 42 + 77 | $ 13 567 788 |
| **Projected Forecast Sales (Therms)** | | Sch. 3, col (q), ln 52 | 27 125 444 |

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

**Off Peak 2022 Summer Cost of Gas Filing**
**Summary of Supply and Demand Forecast**



| For Month of: | | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-22 | Oct-22 | Nov-22 | Off Peak Period May - Oct |
|---|---|---|---|---|---|---|---|---|---|
| (a) | (b) | (c) | (d) | (e) | (d) | (e) | (f) | (g) | (h) |
| **I. Gas Volumes (Therms)** | | | | | | | | | |
| **A. Firm Demand Volumes** | | 87,054 | 267,289 | 220,723 | 223,909 | 335,525 | 722,212 | 855,832 | |
| Firm Gas Sales | Sch. 10B, ln 23 | 870,536 | 2,672,893 | 2,207,233 | 2,239,093 | 3,355,253 | 7,222,123 | 8,558,316 | 27,125,444 |
| Lost Gas (Unaccounted for) | | 53,988 | 29,666 | 24,501 | 25,149 | 36,419 | 78,230 | | 247,952 |
| Company Use | | 3,081 | 1,693 | 1,398 | 1,435 | 2,079 | 4,465 | | 14,152 |
| Unbilled Therms | | 4,069,607 | 41,684 | 34,671 | 62,109 | (22,767) | (63,717) | (8,558,316) | (4,436,728) |
| **Total Firm Volumes** | Sch. 6, ln 93 | 4,997,212 | 2,745,936 | 2,267,802 | 2,327,785 | 3,370,983 | 7,241,101 | | 22,950,820 |
| **B. Supply Volumes (Therms)** | | | | | | | | | |
| Pipeline Gas: | | | | | | | | | |
| Dawn Supply | Sch. 6, ln 63 | 739,535 | 95,658 | - | - | 206,295 | 636,518 | | 1,678,006 |
| Niagara Supply | Sch. 6, ln 64 | 668,413 | 540,809 | 542,484 | 545,801 | 591,423 | 687,667 | | 3,576,596 |
| TGP Supply (Gulf) | Sch. 6, ln 65 | 13,120 | - | - | - | - | 384,326 | | 397,446 |
| Dracut Supply 1 - Baseload | Sch. 6, ln 66 | - | - | - | - | - | - | | - |
| Dracut Supply 2 - Swing | Sch. 6, ln 67 | - | - | - | - | - | 436,185 | | 436,185 |
| City Gate Delivered Supply | Sch. 6, ln 68 | - | - | - | - | - | - | | - |
| LNG Truck | Sch. 6, ln 69 | 44,883 | 18,131 | - | - | 55,566 | 20,602 | | 139,181 |
| Propane Truck | Sch. 6, ln 70 | 79,409 | 71,899 | 69,472 | 69,279 | 73,449 | 81,696 | | 445,204 |
| PNGTS | Sch. 6, ln 71 | 205,081 | 146,300 | 119,612 | 125,908 | 176,916 | 218,093 | | 991,910 |
| Portland Natural Gas | Sch. 6, ln 72 | 152,602 | 3,126 | - | - | 2,555 | 574,003 | | 732,286 |
| TGP Supply (Zone 4) | Sch. 6, ln 73 | 5,386,659 | 4,708,479 | 4,708,982 | 4,696,535 | 4,819,522 | 5,546,088 | | 29,866,267 |
| Subtotal Pipeline Volumes | | 7,289,702 | 5,584,403 | 5,440,551 | 5,437,523 | 5,925,726 | 8,585,177 | | 38,263,081 |
| Storage Gas: | | | | | | | | | |
| TGP Storage | Sch. 6, ln 78 | - | - | - | - | - | - | | - |
| Produced Gas: | | | | | | | | | |
| LNG Vapor | Sch. 6, ln 81 | 20,024.76 | 18,131.18 | 17,518.99 | 17,470.44 | 18,521.89 | 20,601 58 | | 112,268.82 |
| Propane | Sch. 6, ln 82 | - | - | - | - | - | - | | - |
| Subtotal Produced Gas | | 20,024.76 | 18,131.18 | 17,518.99 | 17,470.44 | 18,521.89 | 20,601 58 | | 112,268.82 |
| Less - Gas Refill: | | | | | | | | | |
| LNG Truck | Sch. 6, ln 87 | (44,883.07) | (18,131.18) | - | - | (55,565.66) | (20,601 58) | | (139,181.49) |
| Propane | Sch. 6, ln 88 | (79,408.52) | (71,899.50) | (69,471 84) | (69,279.32) | (73,448.86) | (81,695 93) | | (445,203.96) |
| TGP Storage Refill | Sch. 6, ln 89 | (2,188,222.48) | (2,766,567.68) | (3,120,795.80) | (3,057,928.82) | (2,444,250.24) | (1,262,379.73) | | (14,840,144.76) |
| Subtotal Refills | | (2,312,514.07) | (2,856,598.36) | (3,190,267.64) | (3,127,208.14) | (2,573,264.76) | (1,364,677 25) | | (15,424,530.21) |
| Total Firm Sendout Volumes | lns 32 + 35 + 40 + 46 | 4,997,212.39 | 2,745,935 65 | 2,267,802.45 | 2,327,785.06 | 3,370,983.22 | 7,241,101 08 | | 22,950,819.85 |

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

**Off Peak 2022 Summer Cost of Gas Filing**
**Summary of Supply and Demand Forecast**

**REDACTED**

**II. Gas Costs**

Schedule 1
Page 2 of 4

**A. Demand Costs**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Supply | | | | | | | | | | | | | |
| Niagara Supply | Sch.5A, ln 12 | [redacted] | | | | | | | | | | | |
| Subtotal Supply Demand | | | | | | | | | | | | | |
| Less Capacity Credit | | | | | | | | | | | | | |
| Net Pipeline Demand Costs | | | | | | | | | | | | | |
| Pipeline: | | | | | | | | | | | | | |
| Iroquois Gas Trans Service RTS 470-0 | Sch.5A, ln 16 | [redacted] | | | | | | | | | | | |
| Tenn Gas Pipeline 95346 Z5-Z6 | Sch.5A, ln 17 | | | | | | | | | | | | |
| Tenn Gas Pipeline 2302 Z5-Z6 | Sch.5A, ln 18 | | | | | | | | | | | | |
| Tenn Gas Pipeline 8587 Z0-Z6 | Sch.5A, ln 19 | | | | | | | | | | | | |
| Tenn Gas Pipeline 8587 Z1-Z6 | Sch.5A, ln 20 | | | | | | | | | | | | |
| Tenn Gas Pipeline 8587 Z4-Z6 | Sch.5A, ln 21 | | | | | | | | | | | | |
| Tenn Gas Pipeline (Dracut) 42076 Z6-Z6 | Sch.5A, ln 22 | | | | | | | | | | | | |
| Tenn Gas Pipeline (Dracut) 358905 Z6-Z7 | Sch.5A, ln 23 | | | | | | | | | | | | |
| Tenn Gas Pipeline (Concord Lateral) Z6-Z6 | Sch.5A, ln 24 | | | | | | | | | | | | |
| Portland Natural Gas Trans Service | Sch.5A, ln 25 | | | | | | | | | | | | |
| ANE (TransCanada via Union to Iroquois) | Sch.5A, ln 27 | | | | | | | | | | | | |
| Portland Natural Gas | Sch.5A, ln 25 | | | | | | | | | | | | |
| TransCanada via Union to Portland | Sch.5A, ln 27 | | | | | | | | | | | | |
| Tenn Gas Pipeline Z4-Z6 stg 632 | Sch.5A, ln 29 | | | | | | | | | | | | |
| Tenn Gas Pipeline Z4-Z6 stg 11234 | Sch.5A, ln 30 | | | | | | | | | | | | |
| Tenn Gas Pipeline Z5-Z6 stg 11234 | Sch.5A, ln 31 | | | | | | | | | | | | |
| National Fuel FST 2358 | Sch.5A, ln 32 | | | | | | | | | | | | |
| Subtotal Pipeline Demand | | $ 823,110 | $ 826,258 | $ 826,258 | $ 826,258 | $ 826,258 | $ 826,258 | $ 3,703,482 | $ 4,954,402 | | | | |
| Less Capacity Credit | | (278,705) | (279,771) | (279,771) | (279,771) | (279,771) | (279,771) | (1,253,999) | (1,677,561) | | | | |
| Net Pipeline Demand Costs | | $ 544,405 | $ 546,487 | $ 546,487 | $ 546,487 | $ 546,487 | $ 546,487 | $ 2,449,483 | $ 3,276,842 | | | | |
| Peaking Supply: | | | | | | | | | | | | | |
| Tenn Gas Pipeline (Concord Lateral) Z6-Z6 | Sch.5A, ln 37 | [redacted] | | | | | | | | | | | |
| Granite Ridge Demand | Sch.5A, ln 38 | | | | | | | | | | | | |
| DOMAC Demand NSB041 | Sch.5A, ln 39 | | | | | | | | | | | | |
| Subtotal Peaking Demand | | | | | | | | | | | | | |
| Less Capacity Credit | | | | | | | | | | | | | |
| Net Peaking Supply Demand Costs | | | | | | | | | | | | | |
| Storage: | | | | | | | | | | | | | |
| Dominion - Demand | Sch.5A, ln 49 | [redacted] | | | | | | | | | | | |
| Dominion - Storage | Sch.5A, ln 50 | | | | | | | | | | | | |
| Honeoye - Demand | Sch.5A, ln 51 | | | | | | | | | | | | |
| National Fuel - Demand | Sch.5A, ln 52 | | | | | | | | | | | | |
| National Fuel - Capacity | Sch.5A, ln 53 | | | | | | | | | | | | |
| Tenn Gas Pipeline - Demand | Sch.5A, ln 54 | | | | | | | | | | | | |
| Tenn Gas Pipeline - Capacity | Sch 5A, ln 55 | | | | | | | | | | | | |
| Subtotal Storage Demand | | $ - | $ - | $ - | $ - | $ - | $ - | | $ - | | | | |
| Less Capacity Credit | | - | - | - | - | - | - | | - | | | | |
| Net Storage Demand Costs | | $ - | $ - | $ - | $ - | $ - | $ - | | $ - | | | | |
| Total Demand Charges | lns 55 + 77 + 85 + 97 | $ 823,110 | $ 826,258 | $ 826,258 | $ 826,258 | $ 826,258 | $ 826,258 | $ 3,703,482 | $ 4,954,402 | | | | |
| Total Capacity Credit | lns 56 + 78 + 86 + 98 | (278,705) | (279,771) | (279,771) | (279,771) | (279,771) | (279,771) | (1,253,999) | (1,677,561) | | | | |
| Net Demand Charges | | $ 544,405 | $ 546,487 | $ 546,487 | $ 546,487 | $ 546,487 | $ 546,487 | $ 2,449,483 | $ 3,276,842 | | | | |

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

**Off Peak 2022 Summer Cost of Gas Filing**
**Summary of Supply and Demand Forecast**

**REDACTED**

Schedule 1
Page 3 of 4

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **B. Commodity Costs** | | | | | | | | | | | | | |
| Pipeline: | | | | | | | | | | | | | |
| Dawn Supply | Sch. 6, ln 12 | [redacted] | | | | | | | | | | | |
| Niagara Supply | Sch. 6, ln 13 | | | | | | | | | | | | |
| TGP Supply (Gulf) | Sch. 6, ln 14 | | | | | | | | | | | | |
| Dracut Supply 1 - Baseload | Sch. 6, ln 15 | | | | | | | | | | | | |
| Dracut Supply 2 - Swing | Sch. 6, ln 16 | | | | | | | | | | | | |
| Dracut Supply 3 - Swing | Sch. 6, ln | | | | | | | | | | | | |
| City Gate Delivered Supply | Sch. 6, ln 17 | | | | | | | | | | | | |
| LNG Truck | Sch. 6, ln 18 | | | | | | | | | | | | |
| Portland Natural Gas | Sch. 6, ln 21 | | | | | | | | | | | | |
| PNGTS | Sch. 6, ln 20 | | | | | | | | | | | | |
| TGP Supply (Zone 4) | Sch. 6, ln 22 | | | | | | | | | | | | |
| Subtotal Pipeline Commodity Costs | | $ 2,064,142 | $ 1,565,094 | $ 1,535,173 | $ 1,499,288 | $ 1,499,022 | $ 2,269,503 | $ 10,432,223 | | | | | |
| Storage: | | | | | | | | | | | | | |
| TGP Storage - Withdrawals | Sch. 6, ln 48 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | | | | | |
| Produced Gas Costs: | | | | | | | | | | | | | |
| LNG Vapor | Sch. 6, ln 51 | [redacted] | | | | | | | | | | | |
| Propane | Sch. 6, ln 52 | | | | | | | | | | | | |
| Subtotal Produced Gas Costs | | $ 14,522 | $ 13,657 | $ 13,401 | $ 13,364 | $ 14,168 | $ 16,513 | $ 85,626 | | | | | |
| Less Storage Refills: | | | | | | | | | | | | | |
| LNG Truck | Sch. 6, ln 38 | [redacted] | | | | | | | | | | | |
| Propane | Sch. 6, ln 39 | | | | | | | | | | | | |
| TGP Storage Refill | Sch. 6, ln 40 | | | | | | | | | | | | |
| Storage Refill (Trans.) | Sch. 6, ln 41 | | | | | | | | | | | | |
| Subtotal Storage Refill | | $ (794,564) | $ (1,013,238) | $ (1,154,196) | $ (1,133,443) | $ (903,034) | $ (469,125) | $ (5,467,600) | | | | | |
| Total Supply Commodity Costs | | $ 1,284,101 | $ 565,513 | $ 394,378 | $ 379,209 | $ 610,157 | $ 1,816,892 | $ 5,050,249 | | | | | |
| **C. Supply Volumetric Transportation Costs** | | | | | | | | | | | | | |
| Dawn Supply | Sch. 6, ln 27 | [redacted] | | | | | | | | | | | |
| Niagara Supply | Sch. 6, ln 28 | | | | | | | | | | | | |
| TGP Supply (Zone 4) | Sch. 6, ln 29 | | | | | | | | | | | | |
| Dracut Supply 1 - Baseload | Sch. 6, ln 30 | | | | | | | | | | | | |
| Dracut Supply 2 - Swing | Sch. 6, ln 31 | | | | | | | | | | | | |
| Dracut Supply 3 - Swing | Sch. 6, ln | | | | | | | | | | | | |
| Subtotal Pipeline Volumetric Trans. Costs | | $ 82,454 | $ 66,628 | $ 65,857 | $ 65,294 | $ 67,245 | $ 81,415 | $ 428,894 | | | | | |
| TGP Storage - Withdrawals | Sch. 6, ln 33 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | | | | | |
| Total Supply Volumetric Trans. Costs | lns 146 + 148 | $ 82,454 | $ 66,628 | $ 65,857 | $ 65,294 | $ 67,245 | $ 81,415 | $ 428,894 | | | | | |
| Total Commodity Gas & Trans. Costs | lns 137 + 150 | $ 1,366,555 | $ 632,141 | $ 460,235 | $ 444,503 | $ 677,401 | $ 1,898,307 | $ 5,479,143 | | | | | |

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

**Off Peak 2022 Summer Cost of Gas Filing**
**Summary of Supply and Demand Forecast**
**D. Supply and Demand Costs by Source**

**REDACTED**
Schedule 1
Page 4 of 4

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Purchased Gas Demand Costs | | | | | | | | | |
| Pipeline Gas Demand Costs | lns 55 + 77 | $ 823,110 | $ 826,258 | $ 826,258 | $ 826,258 | $ 826,258 | $ 826,258 | $ 4,954,402 |
| Peaking Gas Demand Costs | ln 85 | - | - | - | - | - | - | - |
| Subtotal Purchased Gas Demand Costs | | $ 823,110 | $ 826,258 | $ 826,258 | $ 826,258 | $ 826,258 | $ 826,258 | $ 4,954,402 |
| Less Capacity Credit | lns 56 + 78 + 86 | (278,705) | (279,771) | (279,771) | (279,771) | (279,771) | (279,771) | (1,677,561) |
| Net Purchased Gas Demand Costs | | $ 544,405 | $ 546,487 | $ 546,487 | $ 546,487 | $ 546,487 | $ 546,487 | $ 3,276,842 |
| Storage Gas Demand Costs | | | | | | | | |
| Storage Demand | ln 97 | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Less Capacity Credit | ln 98 | - | - | - | - | - | - | - |
| Net Storage Demand Costs | | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| **Total Demand Costs** | lns 165 + 170 | $ 544,405 | $ 546,487 | $ 546,487 | $ 546,487 | $ 546,487 | $ 546,487 | $ 3,276,842 |
| Purchased Gas Supply | | | | | | | | |
| Commodity Costs | ln 120 | [redacted] | | | | | | |
| Less Storage Inj (TGP Storage) | ln 133 | | | | | | | |
| Less Storage Transportation | ln 134 | | | | | | | |
| Less LNG Truck | ln 131 | | | | | | | |
| Less Propane Truck | ln 132 | | | | | | | |
| Plus Transportation Costs | ln 146 | | | | | | | |
| Subtotal Purchased Gas Supply | | $ 1,352,033 | $ 618,484 | $ 446,834 | $ 431,139 | $ 663,233 | $ 1,881,794 | $ 5,393,517 |
| Storage Commodity Costs | | | | | | | | |
| Commodity Costs | ln 123 | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Transportation Costs | ln 148 | - | - | - | - | - | - | - |
| Subtotal Storage Commodity Costs | | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Produced Gas Commodity Costs | ln 128 | $ 14,522 | $ 13,657 | $ 13,401 | $ 13,364 | $ 14,168 | $ 16,513 | $ 85,626 |
| **Subtotal Commodity Costs** | lns 181 + 186 + 188 | $ 1,366,555 | $ 632,141 | $ 460,235 | $ 444,503 | $ 677,401 | $ 1,898,307 | $ 5,479,143 |
| Hedge Contract (Savings)/Loss | | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| **Total Commodity Costs** | lns 190 + 192 | $ 1,366,555 | $ 632,141 | $ 460,235 | $ 444,503 | $ 677,401 | $ 1,898,307 | $ 5,479,143 |
| **Total Demand Costs** | ln 103 | $ 544,405 | $ 546,487 | $ 546,487 | $ 546,487 | $ 546,487 | $ 546,487 | $ 3,276,842 |
| **Total Supply Costs** | ln 194 | 1,366,555 | 632,141 | 460,235 | 444,503 | 677,401 | 1,898,307 | 5,479,143 |
| **Total Direct Gas Costs** | lns 196 + 197 | $ 1,910,960 | $ 1,178,628 | $ 1,006,722 | $ 990,991 | $ 1,223,889 | $ 2,444,795 | $ 8,755,985 |

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

Schedule 2
Page 1 of 1

**Off Peak 2022 Summer Cost of Gas Filing**
**Contracts Ranked on a per Unit Cost Basis**

| Supplier | Contract | Contract Type | Contract Unit | Unit Dth (MDQ/ACQ) | Off Peak Cost per Unit Dth |
|---|---|---|---|---|---|
| (a) | (b) | (c) | (d) | (e) | (f) |
| **Demand Costs** | | | | | |
| ANE (TransCanada via Union to Iroquois) | Dawn - Parkway to Iroquois | Transportation | MDQ | 4,047 | [redacted] |
| Dominion - Capacity Reservation | GSS 300076 | Storage | ACQ | 102,700 | |
| Tenn Gas Pipeline - Cap. Reservations | FS-MA 523 | Storage | ACQ | 1,560,391 | |
| National Fuel - Capacity Reservation | FSS-1 2357 | Storage | ACQ | 670,800 | |
| Tenn Gas Pipeline - Demand | FS-MA 523 | Storage | MDQ | 21,844 | |
| Dominion - Demand | GSS 300076 | Storage | MDQ | 934 | |
| National Fuel - Demand | FSS-1 2357 | Storage | MDQ | 6,098 | |
| Tenn Gas Pipeline | 42076 FTA Z6-Z6 | Transportation | MDQ | 20,000 | |
| Tenn Gas Pipeline | 42076 FTA Z6-Z6 | Transportation | MDQ | 40,000 | |
| National Fuel | FST N02358 | Transportation | MDQ | 6,098 | |
| Iroquois Gas Trans Service | RTS 470-01 | Transportation | MDQ | 4,047 | |
| Honeoye - Demand | SS-NY | Storage | MDQ | 1,362 | |
| Tenn Gas Pipeline | 2302 Z5-Z6 | Transportation | MDQ | 3,122 | |
| Tenn Gas Pipeline (short haul) | 11234 Z5-Z6(stg) | Transportation | MDQ | 1,957 | |
| Tenn Gas Pipeline (short haul) | 8587 Z4-Z6 | Transportation | MDQ | 3,811 | |
| Tenn Gas Pipeline (short haul) | 632 Z4-Z6 (stg) | Transportation | MDQ | 15,265 | |
| Tenn Gas Pipeline (short haul) | 11234 Z4-Z6(stg) | Transportation | MDQ | 7,082 | |
| Tenn Gas Pipeline (Concord Lateral) Z6-Z6 | Firm Transportation | Transportation | MDQ | 30,000 | |
| Tenn Gas Pipeline | 95346 Z5-Z6 | Transportation | MDQ | 4,000 | |
| TransCanada via Union to Portland | Union Parkway to Portland | Transportation | MDQ | 5,077 | |
| Portland Natural Gas Trans Service | FT-1999-001 | Transportation | MDQ | 1,000 | |
| Tenn Gas Pipeline (long haul) | 8587 Z1-Z6 | Transportation | MDQ | 14,561 | |
| Tenn Gas Pipeline (long haul) | 8587 Z0-Z6 | Transportation | MDQ | 7,035 | |
| Portland Natural Gas | FTN | Transportation | MDQ | 5,000 | |
| **Supply Costs - Commodity** | | | | | |
| LNG Truck | | Pipeline | Dkt | 13,918 | [redacted] |
| TGP Supply (Zone 4) | | Pipeline | Dkt | 2,986,627 | |
| Niagara Supply | | Pipeline | Dkt | 357,660 | |
| Dracut Supply 2 - Swing | | Pipeline | Dkt | 43,619 | |
| Dawn Supply | | Pipeline | Dkt | 167,801 | |
| TGP Citygate Supply | | Pipeline | Dkt | - | |
| PNGTS | | Pipeline | Dkt | 99,191 | |
| Dracut Supply 1 - Baseload | | Pipeline | Dkt | - | |
| TGP Supply (Gulf) | | Pipeline | Dkt | 39,745 | |
| LNG Vapor | | Produced | Dkt | 11,227 | |
| Propane | | Pipeline | Dkt | - | |
| **Supply Costs - Volumetric Transportation** | | | | | |
| Dracut Supply 1 - Baseload | | Pipeline | Dkt | - | [redacted] |
| TGP Supply (Zone 4) | | Pipeline | Dkt | 39,745 | |
| Dracut Supply 2 - Swing | | Pipeline | Dkt | 43,619 | |
| Dawn Supply | | Storage | Dkt | 167,801 | |
| Niagara Supply | | Pipeline | Dkt | 357,660 | |

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

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

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



| | | | Prior Period Balance Plus Nov Collections | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-22 | Oct-22 | Nov-22 | Off Peak Period |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Days in Month | October 31, 2021 | 30 | 31 | 31 | 28 | 31 | 30 | 31 | 30 | 31 | 31 | 30 | 31 | 30 | Total |
| | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) | (n) | (o) | (p) | (q) |
| **Account 8840-2-0000-10-1920-1741 (formerly, 175.40) COG (Over)/Under Balance - Interest Calculation** | | | | | | | | | | | | | | | | | |
| **Beginning Balance** | Account 1920-1741 1/ | | **$ 4,472,186** | $ 4,472,186 | $ 4,491,484 | $ 4,511,511 | $ 4,531,627 | $ 4,549,878 | $ 4,570,165 | $ 4,589,886 | $ 4,100,777 | $ 4,017,278 | $ 4,004,314 | $ 3,945,089 | $ 3,589,139 | $ 2,492,002 | $ 4,472,186 |
| Forecast Direct Gas Costs | | | - | - | - | - | - | - | - | 2,021,594 | 1,289,262 | 1,117,356 | 1,101,624 | 1,334,522 | 2,555,429 | - | 9,419,787 |
| Production & Storage & Misc Overhead | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Projected Revenues w/o Int. | ln 54 * ln 64 | | - | - | - | - | - | - | - | (445,834) | (1,368,890) | (1,130,408) | (1,146,725) | (1,718,353) | (3,698,724) | (4,383,039) | (13,891,973) |
| Projected Unbilled Revenue | ln 58 * ln 64 | | - | - | - | - | - | - | - | (2,084,201) | (2,105,549) | (2,123,305) | (2,155,113) | (2,143,454) | (2,110,822) | | (12,722,444) |
| Reverse Prior Month Unbilled | | | - | - | - | - | - | - | - | | 2,084,201 | 2,105,549 | 2,123,305 | 2,155,113 | 2,143,454 | 2,110,822 | 12,722,444 |
| Add Net Adjustments (with TGP Refund) | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Gas Cost Billed | Account 1920-1741 2/ | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Monthly (Over)/Under Recovery | | $ | 4,472,186 | $ 4,472,186 | $ 4,491,484 | $ 4,511,511 | $ 4,531,627 | $ 4,549,878 | $ 4,570,165 | $ 4,081,445 | $ 3,999,801 | $ 3,986,470 | $ 3,927,406 | $ 3,572,918 | $ 2,478,475 | $ 219,785 | $ 0 |
| Average Monthly Balance | (ln 13 + 21)/ 2 | $ | - | $ 4,472,186 | $ 4,491,484 | $ 4,511,511 | $ 4,531,627 | $ 4,549,878 | $ 4,570,165 | $ 4,335,665 | $ 4,050,289 | $ 4,001,874 | $ 3,965,860 | $ 3,759,004 | $ 3,033,807 | $ 1,355,894 | |
| Interest Rate | Prime Rate | | | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | | |
| Interest Applied | ln 22 * ln 24 /365 *Days/Mo. | $ | - | $ 19,298 | $ 20,027 | $ 20,116 | $ 18,251 | $ 20,287 | $ 19,721 | $ 19,332 | $ 17,477 | $ 17,844 | $ 17,683 | $ 16,220 | $ 13,527 | $ - | $ 219,785 |
| **(Over)/Under Balance** | ln 21 + ln 26 | $ | 4,472,186 | $ 4,491,484 | $ 4,511,511 | $ 4,531,627 | $ 4,549,878 | $ 4,570,165 | $ 4,589,886 | $ 4,100,777 | $ 4,017,278 | $ 4,004,314 | $ 3,945,089 | $ 3,589,139 | $ 2,492,002 | $ 219,785 | $ 219,785 |
| **Calculation of COG with Interest** | | | | | | | | | | | | | | | | | |
| **Beginning Balance** | ln 13 | $ | 4,472,186 | $ 4,472,186 | $ 4,491,484 | $ 4,511,511 | $ 4,531,627 | $ 4,549,878 | $ 4,570,165 | $ 4,589,886 | $ 4,065,164 | $ 3,961,958 | $ 3,932,605 | $ 3,856,491 | $ 3,476,142 | $ 2,326,866 | $ 4,472,186 |
| Forecast Direct Gas Costs | ln 14 | | - | - | - | - | - | - | - | 2,021,594 | 1,289,262 | 1,117,356 | 1,101,624 | 1,334,522 | 2,555,429 | - | 9,419,787 |
| Prod Storage & Misc Overhead | ln 15 | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Projected Revenues with int. | ln 54 * 66 | | - | - | - | - | - | - | - | (452,104) | (1,388,139) | (1,146,303) | (1,162,850) | (1,742,516) | (3,750,735) | (4,444,673) | (14,087,319) |
| Projected Unbilled Revenue | ln 58 * 66 | | - | - | - | - | - | - | - | (2,113,509) | (2,135,157) | (2,153,163) | (2,185,418) | (2,173,594) | (2,140,504) | | (12,901,344) |
| Reverse Prior Month Unbilled | | | - | - | - | - | - | - | - | | 2,113,509 | 2,135,157 | 2,153,163 | 2,185,418 | 2,173,594 | 2,140,504 | 12,901,344 |
| Add Net Adjustments | ln 19 | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Gas Cost Billed | ln 20 | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Gas Cost Unbilled | | | | | | | | | | | | | | | | | |
| Reverse Prior Month Unbilled | | | | | | | | | | | | | | | | | |
| Add Interest | ln 26 | | - | - | - | - | - | - | - | 19,332 | 17,477 | 17,844 | 17,683 | 16,220 | 13,527 | - | 102,085 |
| **(Over)/Under Balance** | | $ | 4,472,186 | $ 4,472,186 | $ 4,491,484 | $ 4,511,511 | $ 4,531,627 | $ 4,549,878 | $ 4,570,165 | $ 4,065,200 | $ 3,962,116 | $ 3,932,848 | $ 3,856,808 | $ 3,476,541 | $ 2,327,454 | $ 22,697 | $ (93,261) |
| Average Monthly Balance | | | | $ 4,472,186 | $ 4,491,484 | $ 4,511,511 | $ 4,531,627 | $ 4,549,878 | $ 4,570,165 | $ 4,327,543 | $ 4,013,640 | $ 3,947,403 | $ 3,894,707 | $ 3,666,516 | $ 2,901,798 | | |
| Interest Applied | ln 24 * ln 46 /365 *Days/Mo. | | | $ 19,298 | $ 20,027 | $ 20,116 | $ 18,251 | $ 20,287 | $ 19,721 | $ 19,296 | $ 17,319 | $ 17,601 | $ 17,366 | $ 15,821 | $ 12,939 | $ - | $ 218,043 |
| **(Over)/Under Balance** | ln 43 +ln 44 + ln 48 | $ | 4,472,186 | $ 4,491,484 | $ 4,511,511 | $ 4,531,627 | $ 4,549,878 | $ 4,570,165 | $ 4,589,886 | $ 4,065,164 | $ 3,961,958 | $ 3,932,605 | $ 3,856,491 | $ 3,476,142 | $ 2,326,866 | $ 22,697 | $ 22,697 |
| Forecast Sendout Therms | Sch 1 | | | | | | | | | 4,997,212 | 2,745,936 | 2,267,802 | 2,327,785 | 3,370,983 | 7,241,101 | | 22,950,820 |
| Less Forecast Billing Therm Sales | Sch. 10B, ln 23 May - Oct | | | | | | | | | 870,536 | 2,672,893 | 2,207,233 | 2,239,093 | 3,355,253 | 7,222,123 | 8,558,316 | 27,125,444 |
| Less Forecast Unaccounted For | Sch 1 | | | | | | | | | 53,988 | 29,666 | 24,501 | 25,149 | 36,419 | 78,230 | | 247,952 |
| Less Forecast Company Use | Sch 1 | | | | | | | | | 3,081 | 1,693 | 1,398 | 1,435 | 2,079 | 4,465 | | 14,152 |
| Unbilled Volumes | | | | | | | | | | 4,069,607 | 41,684 | 34,671 | 62,109 | (22,767) | (63,717) | (8,558,316) | (4,436,728) |
| Gross Unbilled | | | | | | | | | | 4,069,607 | 4,111,291 | 4,145,962 | 4,208,071 | 4,185,304 | 4,121,587 | (4,436,728) | |
| Beg Balance | | | | | | | | | | - | 4,069,607 | 4,111,291 | 4,145,962 | 4,208,071 | 4,185,304 | 4,121,587 | |
| Incremental | | | | | | | | | | 4,069,607 | 41,684 | 34,671 | 62,109 | (22,767) | (63,717) | (8,558,316) | |
| Ending Balance | | | | | | | | | | 4,069,607 | 4,111,291 | 4,145,962 | 4,208,071 | 4,185,304 | 4,121,587 | (4,436,728) | |
| COG w/o Interest | Sch. 3, pg. 4, ln 211 col. (c) | | | | | | | | | $ 0.5121 | $ 0.5121 | $ 0.5121 | $ 0.5121 | $ 0.5121 | $ 0.5121 | $ 0.5121 | |
| COG With Interest | Sch. 3, pg. 4, ln 211 col. (d) | | | | | | | | | $ 0.5193 | $ 0.5193 | $ 0.5193 | $ 0.5193 | $ 0.5193 | $ 0.5193 | $ 0.5193 | |

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

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



| | Days in Month | Prior Period Balance Plus Nov Collections October 31, 2021 | Nov-21 30 | Dec-21 31 | Jan-22 31 | Feb-22 28 | Mar-22 31 | Apr-22 30 | May-22 31 | Jun-22 30 | Jul-22 31 | Aug-22 31 | Sep-22 30 | Oct-22 31 | Nov-22 30 | Off Peak Period Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) | (n) | (o) | (p) | (q) |
| **Account 8840-2-0000-10-1163-1424 (formerly, 142.40) Working Capital (Over)/Under Balance - Interest Calculation** | | | | | | | | | | | | | | | | |
| **Beginning Balance** | Account 1163-1424 1/ | **$ 4,555** | $ 4,555 | $ 4,574 | $ 4,595 | $ 4,615 | $ 4,634 | $ 4,654 | $ 4,675 | $ 3,864 | $ 3,424 | $ 3,062 | $ 2,688 | $ 2,139 | $ 944 | $ 4,555 |
| Days Lag | | | | | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| Prime Rate | | | | | | | | | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | 3.25% | |
| Forecast Working Capital | ln 34 * ln 80 / 365 * ln 81 | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Projected Revenues w/o Int. | ln 123 * ln 126 | | - | - | - | - | - | - | (146) | (449) | (371) | (376) | (563) | (1,213) | (1,437) | (4,555) |
| Projected Unbilled Revenue | ln 124 * ln 126 | | | | | | | | (683) | (690) | (696) | (707) | (703) | (692) | | (4,171) |
| Reverse Prior Month Unbilled | | | | | | | | | | 683 | 690 | 696 | 707 | 703 | 692 | 4,171 |
| Add Net Adjustments | | | | - | - | | - | - | - | - | - | - | - | - | - | - |
| Working Capital Billed | Account 1163-1424 2/ | | | | | | | | | | | | | | | - |
| Monthly (Over)/Under Recovery | | $ 4,555 | $ 4,555 | $ 4,574 | $ 4,595 | $ 4,615 | $ 4,634 | $ 4,654 | $ 3,845 | $ 3,408 | $ 3,048 | $ 2,676 | $ 2,129 | $ 937 | $ 199 | $ - |
| Average Monthly Balance | (ln 78 + 92)/ 2 | | $ 4,555 | $ 4,574 | $ 4,595 | $ 4,615 | $ 4,634 | $ 4,654 | $ 4,260 | $ 3,636 | $ 3,236 | $ 2,869 | $ 2,409 | $ 1,538 | | |
| Interest Rate | Prime Rate | | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | | |
| Interest Applied | ln 94 * ln 96 / 365 * Days of Month | | $ 20 | $ 20 | $ 20 | $ 19 | $ 21 | $ 20 | $ 19 | $ 16 | $ 14 | $ 13 | $ 10 | $ 7 | | $ 199 |
| **(Over)/Under Balance** | ln 92 + ln 98 | $ 4,555 | $ 4,574 | $ 4,595 | $ 4,615 | $ 4,634 | $ 4,654 | **$ 4,675** | $ 3,864 | $ 3,424 | $ 3,062 | $ 2,688 | $ 2,139 | $ 944 | $ 199 | 199 |
| **Calculation of Working Capital with Interest** | | | | | | | | | | | | | | | | |
| **Beginning Balance** | | $ 4,555 | $ 4,555 | $ 4,574 | $ 4,595 | $ 4,615 | $ 4,634 | $ 4,654 | $ 4,675 | $ 3,829 | $ 3,370 | $ 2,992 | $ 2,602 | $ 2,029 | $ 782 | $ 4,555 |
| Forecast Working Capital | ln 82 | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Projected Rev. with interest | ln 123 * ln 128 | | - | - | - | - | - | - | (152) | (468) | (386) | (392) | (587) | (1,264) | (1,497) | (4,746) |
| Projected Unbilled Revenue | ln 124 * ln 128 | | | | | | | | (712) | (719) | (725) | (736) | (732) | (721) | | (4,346) |
| Reverse Prior Month Unbilled | | | | | | | | | | 712 | 719 | 725 | 736 | 732 | 721 | 4,346 |
| Add Net Adjustments | ln 88 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Working Capital Billed | ln 90 | - | | | - | | | | | | | | | | | - |
| WC Unbilled | | | | | | | | | - | - | - | - | - | - | - | - |
| Reverse WC Unbilled | | | | | | | | | | - | - | - | - | - | - | - |
| Add Interest | ln 98 | | - | - | - | - | - | - | 19 | 16 | 14 | 13 | 10 | 7 | | 79 |
| Monthly (Over)/Under Recovery | | $ 4,555 | $ 4,555 | $ 4,574 | $ 4,595 | $ 4,615 | $ 4,634 | $ 4,654 | $ 3,829 | $ 3,370 | $ 2,992 | $ 2,602 | $ 2,029 | $ 783 | $ 6 | $ (112) |
| Average Monthly Balance | | | $ 4,555 | $ 4,574 | $ 4,595 | $ 4,615 | $ 4,634 | $ 4,654 | $ 4,252 | $ 3,600 | $ 3,181 | $ 2,797 | $ 2,315 | $ 1,406 | | |
| Interest Applied | ln 96 * ln 117 / 365 * Days of Month | | 20 | 20 | 20 | 19 | 21 | 20 | 19 | 16 | 14 | 12 | 10 | 6 | - | $ 197 |
| **(Over)/Under Balance** | -ln 114 +ln 115 + ln 119 | $ 4,555 | $ 4,574 | $ 4,595 | $ 4,615 | $ 4,634 | $ 4,654 | $ 4,675 | $ 3,829 | $ 3,370 | $ 2,992 | $ 2,602 | $ 2,029 | $ 782 | $ 6 | $ 6 |
| Forecast Therm Sales | ln 53 | | | | | | | | 870,536 | 2,672,893 | 2,207,233 | 2,239,093 | 3,355,253 | 7,222,123 | 8,558,316 | 27,125,444 |
| Unbilled Therm | ln 55 | | | | | | | | 4,069,607 | 4,111,291 | 4,145,962 | 4,208,071 | 4,185,304 | 4,121,587 | (4,436,728) | |
| Working Cap. Rate w/out Int. | Sch. 3, pg. 4, ln 228 col. (c) | | | | | | | | $0.0002 | $0.0002 | $0.0002 | $0.0002 | $0.0002 | $0.0002 | $0.0002 | |
| Working Capital Rate w/ Int. | Sch. 3, pg. 4, ln 228 col. (d) | | | | | | | | $0.0002 | $0.0002 | $0.0002 | $0.0002 | $0.0002 | $0.0002 | $0.0002 | |

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

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

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

Schedule 3
Page 3 of 3

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Prior Period Balance | | | | | | | | | | | | | | | | |
| | | | Plus Nov Collections | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-22 | Oct-22 | Nov-22 | Off Peak Period |
| | | Days in Month | October 31, 2021 | 30 | 31 | 31 | 28 | 31 | 30 | 31 | 30 | 31 | 31 | 30 | 31 | 30 | Total |
| | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) | (n) | (o) | (p) | (q) |
| **Account 8840-2-0000-10-1163-1754 (formerly, 175.54) Bad Debt (Over)/Under Balance - Interest Calculation** | | | | | | | | | | | | | | | | | |
| Forecast Direct Gas Costs | | ln 34 | | $ - | $ - | $ - | $ - | $ - | $ - | $ 2,021,594 | $ 1,289,262 | $ 1,117,356 | $ 1,101,624 | $ 1,334,522 | $ 2,555,429 | $ - | 9,419,787 |
| Forecast Working Capital | | ln 106 + (May includes prior period ) | | - | - | - | - | - | - | 4,555 | - | - | - | - | - | | 4,555 |
| Prior Period Balance (with Refund) | | ln 21 / 6 | | - | - | - | - | - | - | 745,364 | 745,364 | 745,364 | 745,364 | 745,364 | 745,364 | | 4,472,186 |
| Total Forecast Direct Gas Costs & Working Capital | | | | - | - | - | - | - | - | 2,771,513 | 2,034,626 | 1,862,720 | 1,846,989 | 2,079,887 | 3,300,793 | - | 9,424,342 |
| **Beginning Balance** | | Account 1163-1754 1/ | **$ 23,159** | $ 23,159 | $ 23,259 | $ 23,362 | $ 23,467 | $ 23,561 | $ 23,666 | $ 23,768 | $ 21,335 | $ 23,525 | $ 26,722 | $ 29,559 | $ 29,450 | $ 20,884 | $ 23,159 |
| | | **Oct Collections & Unbilled** | | | | | | | | | | | | | | | |
| Forecast Bad Debt | | ln 142 * 0.007 | | - | - | - | - | - | - | 19,401 | 14,242 | 13,039 | 12,929 | 14,559 | 23,106 | | 97,276 |
| Projected Revenues w/o int | | ln 184 * ln 187 | | - | - | - | - | - | - | (3,865) | (11,867) | (9,800) | (9,941) | (14,897) | (32,066) | (37,998) | (120,435) |
| Projected Unbilled Revenue | | ln 185 * ln 187 | | | | | | | | (18,069) | (18,254) | (18,408) | (18,683) | (18,582) | (18,299) | | (110,295) |
| Reverse Prior Month Unbilled | | | | | | | | | | | 18,069 | 18,254 | 18,408 | 18,683 | 18,582 | 18,299 | 110,295 |
| Bad Debt Billed | | Account 1163-1754 2/ | | | - | | - | - | - | | | | | | | | - |
| Add Net Adjustments | | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Monthly (Over)/Under Recovery | | | $ 23,159 | $ 23,159 | $ 23,259 | $ 23,362 | $ 23,467 | $ 23,561 | $ 23,666 | $ 21,235 | $ 23,525 | $ 26,611 | $ 29,434 | $ 29,323 | $ 20,773 | $ 1,186 | $ - |
| Average Monthly Balance | | (ln 144 + 155)/ 2 | | $ 23,159 | $ 23,259 | $ 23,362 | $ 23,467 | $ 23,561 | $ 23,666 | $ 22,502 | $ 22,430 | $ 25,068 | $ 28,078 | $ 29,441 | $ 25,111 | $ 11,035 | |
| Interest Rate | | Prime Rate | | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% | | |
| Interest Applied | | ln 157 * ln 159 / 365 * Days of Mo. | | $ 100 | $ 104 | $ 104 | $ 95 | $ 105 | $ 102 | $ 100 | $ 97 | $ 112 | $ 125 | $ 127 | $ 112 | | $ 1,283 |
| **(Over)/Under Balance** | | ln 155 + ln 161 | $ 23,159 | $ 23,259 | $ 23,362 | $ 23,467 | $ 23,561 | $ 23,666 | **$ 23,768** | $ 21,335 | $ 23,622 | $ 26,722 | $ 29,559 | $ 29,450 | $ 20,884 | $ 11,035 | 1,283 |
| **Calculation of Bad Debt with Interest** | | | | | | | | | | | | | | | | | |
| **Beginning Balance** | | | $ 23,159 | $ 23,159 | $ 23,259 | $ 23,362 | $ 23,467 | $ 23,561 | $ 23,666 | $ 23,768 | $ 16,797 | $ 16,570 | $ 17,677 | $ 18,360 | $ 15,140 | $ (65) | $ 23,159 |
| Forecast Bad Debt | | ln 146 | | - | - | - | - | - | - | 19,401 | 14,242 | 13,039 | 12,929 | 14,559 | 23,106 | - | 97,276 |
| Projected Revenues with int. | | ln 184 * 189 | | - | - | - | - | - | - | (4,663) | (14,318) | (11,823) | (11,994) | (17,973) | (38,686) | (45,844) | (145,300) |
| Projected Unbilled Revenue | | ln 185 * 189 | | | | | | | | (21,799) | (22,023) | (22,208) | (22,541) | (22,419) | (22,078) | | (133,068) |
| Reverse Prior Month Unbilled | | | | | | | | | | | 21,799 | 22,023 | 22,208 | 22,541 | 22,419 | 22,078 | 133,068 |
| Bad Debt Billed | | ln 152 | - | | - | - | - | - | - | | | | | | | | - |
| Add Interest | | ln 161 | | - | - | - | - | - | - | 100 | 97 | 112 | 125 | 127 | 112 | | 673 |
| Add Net Adjustments | | ln 153 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Monthly (Over)/Under Recovery | | | $ 23,159 | $ 23,159 | $ 23,259 | $ 23,362 | $ 23,467 | $ 23,561 | $ 23,666 | $ 16,807 | $ 16,595 | $ 17,712 | $ 18,404 | $ 15,195 | $ 13 | $ (23,831) | $ (24,193) |
| Average Monthly Balance | | (ln 168 + 176)/ 2 | | $ 23,159 | $ 23,259 | $ 23,362 | $ 23,467 | $ 23,561 | $ 23,666 | $ 20,288 | $ 16,696 | $ 17,141 | $ 18,041 | $ 16,777 | $ 7,577 | $ (11,948) | |
| Interest Applied | | ln 159 * ln 178 / 365 * Days of Month | | 100 | 104 | 104 | 95 | 105 | 102 | 90 | 72 | 76 | 80 | 72 | 34 | - | $ 1,035 |
| **(Over)/Under Balance** | | -ln 174 +ln 176 + ln 180 | $ 23,159 | $ 23,259 | $ 23,362 | $ 23,467 | $ 23,561 | $ 23,666 | $ 23,768 | $ 16,797 | $ 16,570 | $ 17,677 | $ 18,360 | $ 15,140 | $ (65) | $ (23,831) | $ (23,831) |
| Forecast Therm Sales | | ln 53 | | | | | | | | 870,536 | 2,672,893 | 2,207,233 | 2,239,093 | 3,355,253 | 7,222,123 | 8,558,316 | 27,125,444 |
| Unbilled Therm | | ln 55 | | | | | | | | 4,069,607 | 4,111,291 | 4,145,962 | 4,208,071 | 4,185,304 | 4,121,587 | | |
| COG Rate Without Interest | | Sch. 3, pg. 4, ln 245 col. (c) | | | | | | | | $0.0044 | $0.0044 | $0.0044 | $0.0044 | $0.0044 | $0.0044 | $0.0044 | |
| COG With Interest | | Sch. 3, pg. 4, ln 245 col. (d) | | | | | | | | $0.0054 | $0.0054 | $0.0054 | $0.0054 | $0.0054 | $0.0054 | $0.0054 | |
| **Total Interest** | | lns 48 + 119 + 180 | | $ 19,417 | $ 20,151 | $ 20,241 | $ 18,364 | $ 20,413 | $ 19,843 | $ 19,406 | $ 17,407 | $ 17,692 | $ 17,459 | $ 15,904 | $ 12,979 | $ - | $ 219,275 |

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



**Off Peak 2022 Summer Cost of Gas Filing**
**Adjustments to Gas Costs**

| **Adjustments** | **Prior Period Adjustments** | **Refunds from Suppliers / Pipelines** | **Broker Revenue** | **Fuel Financing** | **Transportation CGA Revenues** | **Interruptible Sales Margin** | **Off System Sales Margin** | **Capacity Release Margin** | **Net Option Premiums** | **Fixed Price Option Administrative Costs** | **Total Adjustments** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (m) |
| Nov-19 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Dec-19 | - | - | - | - | - | - | - | - | - | - | - |
| Jan-20 | - | - | - | - | - | - | - | - | - | - | - |
| Feb-20 | - | - | - | - | - | - | - | - | - | - | - |
| Mar-20 | - | - | - | - | - | - | - | - | - | - | - |
| Apr-20 | - | - | - | - | - | - | - | - | - | - | - |
| May-20 | - | - | - | - | - | - | - | (149,464) | - | - | (149,464) |
| Jun-20 | - | - | - | - | - | - | - | (141,180) | - | - | (141,180) |
| Jul-20 | - | - | - | - | - | - | - | (211,505) | - | - | (211,505) |
| Aug-20 | - | - | - | - | - | - | - | (224,684) | - | - | (224,684) |
| Sep-20 | - | - | - | - | - | - | - | (162,433) | - | - | (162,433) |
| Oct-20 | - | - | - | - | - | - | - | (191,448) | - | - | (191,448) |
| Total Off Peak Period | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ (1,080,715) | $ - | $ - | $ (1,080,715) |

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

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

**Demand Costs**

| | Peak | Reference | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-22 | Oct-22 | Off Peak May - Oct Total | Peak May - Oct Total |
|---|---|---|---|---|---|---|---|---|---|---|
| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) |
| **Supply** | | | | | | | | | | |
| Niagara Supply | | Sch 5B, ln 9 * Sch 5C ln 9 x days | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Subtotal Supply Demand & Reservation Charges | | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| **Pipeline** | | | | | | | | | | |
| Iroquois Gas Trans Service RTS 470-0 | | Sch 5B, ln 12 * Sch 5C ln 12 x days | [redacted] | | | | | | | |
| Tenn Gas Pipeline 95346 Z5-Z6 | | Sch 5B, ln 13 * Sch 5C ln 14 x days | | | | | | | | |
| Tenn Gas Pipeline 2302 Z5-Z6 | | Sch 5B, ln 14 * Sch 5C ln 16 x days | | | | | | | | |
| Tenn Gas Pipeline 8587 Z0-Z6 | | Sch 5B, ln 15 * Sch 5C ln 18 x days | | | | | | | | |
| Tenn Gas Pipeline 8587 Z1-Z6 | | Sch 5B, ln 16 * Sch 5C ln 20 x days | | | | | | | | |
| Tenn Gas Pipeline 8587 Z4-Z6 | | Sch 5B, ln 17 * Sch 5C ln 22 x days | | | | | | | | |
| Tenn Gas Pipeline (Dracut) 42076 Z6-Z6 | | Sch 5B, ln 18 * Sch 5C ln 24 x days | | | | | | | | |
| Tenn Gas Pipeline (Dracut) 358905 Z6-Z7 | | Sch 5B, ln * Sch 5C ln 25 x days | | | | | | | | |
| Tenn Gas Pipeline (Concord Lateral) Z6-Z6 | | Sch 5B, ln 19 * Sch 5C ln 28 x days | | | | | | | | |
| Portland Natural Gas Trans Service | | Sch 5B, ln 20 * Sch 5C ln 30 x days | | | | | | | | |
| Portland Natural Gas | | Sch 5B, ln 21 * Sch 5C ln 31 x days | | | | | | | | |
| ANE (TransCanada via Union to Iroquois) | | Sch 5B, ln 22 * Sch 5C ln 48 x days | | | | | | | | |
| TransCanada via Union to Portland | | Sch 5B, ln 23 * Sch 5C ln 49 x days | | | | | | | | |
| Tenn Gas Pipeline Z4-Z6 stg 632 | peak | Sch 5B, ln 24 * Sch 5C ln 34 x days | | | | | | | | |
| Tenn Gas Pipeline Z4-Z6 stg 11234 | peak | Sch 5B, ln 25 * Sch 5C ln 36 x days | | | | | | | | |
| Tenn Gas Pipeline Z5-Z6 stg 11234 | peak | Sch 5B, ln 26 * Sch 5C ln 38 x days | | | | | | | | |
| National Fuel FST 2358 | peak | Sch 5B, ln 27 * Sch 5C ln 40 x days | | | | | | | | |
| Subtotal Pipeline Demand Charges | | | $ 1,640,391 | $ 1,643,539 | $ 1,643,539 | $ 1,643,539 | $ 1,643,539 | $ 1,643,539 | $ 4,954,402 | $ 4,903,685 |
| **Peaking Supply** | | | | | | | | | | |
| Tenn Gas Pipeline (Concord Lateral) Z6-Z6 | peak | Sch 5B, ln 30 * Sch 5C ln 28 x days | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Granite Ridge Demand | peak | Sch 5B, ln 31 * Sch 5C ln 59 x days | - | - | - | - | - | - | - | - |
| DOMAC Demand NSB041 | peak | Per Contract | - | - | - | - | - | - | - | |
| Subtotal Peaking Demand Charges | | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| **Subtotal Supply, Pipeline & Peaking** | | ln 13 + ln 34 + ln 40 | $ 1,640,391 | $ 1,643,539 | $ 1,643,539 | $ 1,643,539 | $ 1,643,539 | $ 1,643,539 | $ 4,954,402 | $ 4,903,685 |
| Less Transportation Capacity Credit | | | $ (555,436) | $ (556,502) | $ (556,502) | $ (556,502) | $ (556,502) | $ (556,502) | $ (1,677,561) | $ (1,660,388) |
| **Total Supply, Pipeline & Peaking Demand** | | | $ 1,084,955 | $ 1,087,037 | $ 1,087,037 | $ 1,087,037 | $ 1,087,037 | $ 1,087,037 | $ 3,276,842 | $ 3,243,297 |

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

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

**Demand Costs**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Storage** | | | | | | | | | | | | |
| Dominion - Demand | peak | Sch 5B, ln 35 * Sch 5C ln 63 x days | $ 1,748 | $ 1,748 | $ 1,748 | $ 1,748 | $ 1,748 | $ 1,748 | $ - | $ 10,488 |
| Dominion - Storage | peak | Sch 5B, ln 36 * Sch 5C ln 64 x days | 1,489 | 1,489 | 1,489 | 1,489 | 1,489 | 1,489 | - | 8,935 |
| Honeoye - Demand | peak | Sch 5B, ln 37 * Sch 5C ln 67 x days | 8,351 | 8,351 | 8,351 | 8,351 | 8,351 | 8,351 | - | 50,105 |
| National Fuel - Demand | peak | Sch 5B, ln 39 * Sch 5C ln 69 x days | 16,053 | 16,053 | 16,053 | 16,053 | 16,053 | 16,053 | - | 96,318 |
| National Fuel - Capacity | peak | Sch 5B, ln 40 * Sch 5C ln 70 x days | 31,930 | 31,930 | 31,930 | 31,930 | 31,930 | 31,930 | - | 191,580 |
| Tenn Gas Pipeline - Demand | peak | Sch 5B, ln 41 * Sch 5C ln 73 x days | 28,603 | 28,603 | 28,603 | 28,603 | 28,603 | 28,603 | - | 171,615 |
| Tenn Gas Pipeline - Capacity | peak | Sch 5B, ln 42 * Sch 5C ln 74 x days | 27 931 | 27 931 | 27 931 | 27 931 | 27 931 | 27 931 | - | 167 586 |
| **Subtotal Storage Demand Costs** | | | $ 116,105 | $ 116,105 | $ 116,105 | $ 116,105 | $ 116,105 | $ 116,105 | $ - | $ 696,628 |
| Less Transportation Capacity Credit | | | $ (39,313) | $ (39,313) | $ (39,313) | $ (39,313) | $ (39,313) | $ (39,313) | $ - | $ (235,878) |
| **Total Storage Demand Costs** | | ln 57 + ln 59 | $ 76,792 | $ 76,792 | $ 76,792 | $ 76,792 | $ 76,792 | $ 76,792 | $ - | $ 460,750 |
| **Total Demand Charges** | | ln 42 + ln 57 | $ 1,756,496 | $ 1,759,644 | $ 1,759,644 | $ 1,759,644 | $ 1,759,644 | $ 1,759,644 | $ 4,954,402 | $ 5,600,313 |
| Total Transportation Capacity Credit | | ln 44 + ln 59 | $ (594,749) | $ (595,815) | $ (595,815) | $ (595,815) | $ (595,815) | $ (595,815) | $ (1,677,561) | $ (1,896,266) |
| **Total Demand Charges less Cap. Cr.** | | ln 63 + ln 65 | $ 1,161,746 | $ 1,163,829 | $ 1,163,829 | $ 1,163,829 | $ 1,163,829 | $ 1,163,829 | $ 3,276,842 | $ 3,704,047 |
| Monthly Off Peak Demand | | | $ 990,382 | $ 993,530 | $ 993,530 | $ 993,530 | $ 993,530 | $ 993,530 | $ 4,954,402 | $ - |
| Monthly Off Peak Transportation Cap Credit | | | (335,343) | (336,409) | (336,409) | (336,409) | (336,409) | (336,409) | (1,677,561) | - |
| **Total Off Peak Demand** | | | $ 655,039 | $ 657,121 | $ 657,121 | $ 657,121 | $ 657,121 | $ 657,121 | $ 3,276,842 | $ - |
| Monthly Peak Demand | | | $ 766,114 | $ 766,114 | $ 766,114 | $ 766,114 | $ 766,114 | $ 766,114 | $ - | $ 5,600,313 |
| Monthly Peak Transportation Cap Credit | | | (259 406) | (259 406) | (259 406) | (259 406) | (259 406) | (259 406) | - | (1 896 266) |
| **Total Peak Demand** | | | $ 506,708 | $ 506,708 | $ 506,708 | $ 506,708 | $ 506,708 | $ 506,708 | $ - | $ 3,704,047 |

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



**Off Peak 2022 Summer Cost of Gas Filing**
**Demand Volumes**

| | (a) | Peak (b) | Reference (c) | May-22 (d) | Jun-22 (e) | Jul-22 (f) | Aug-22 (g) | Sep-22 (h) | Oct-22 (i) |
|---|---|---|---|---|---|---|---|---|---|
| **Supply** | | | | | | | | | |
| | Niagara Supply | | | - | - | - | - | - | - |
| **Pipeline** | | | | | | | | | |
| | Iroquois Gas Trans Service | | RTS 470-01 | 4,047 | 4,047 | 4,047 | 4,047 | 4,047 | 4,047 |
| | Tenn Gas Pipeline | | 95346 Z5-Z6 | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 |
| | Tenn Gas Pipeline | | 2302 Z5-Z6 | 3,122 | 3,122 | 3,122 | 3,122 | 3,122 | 3,122 |
| | Tenn Gas Pipeline (long haul) | | 8587 Z0-Z6 | 7,035 | 7,035 | 7,035 | 7,035 | 7,035 | 7,035 |
| | Tenn Gas Pipeline (long haul) | | 8587 Z1-Z6 | 14,561 | 14,561 | 14,561 | 14,561 | 14,561 | 14,561 |
| | Tenn Gas Pipeline (short haul) | | 8587 Z4-Z6 | 3,811 | 3,811 | 3,811 | 3,811 | 3,811 | 3,811 |
| | Tenn Gas Pipeline | | 42076 FTA Z6-Z6 | 20,000 | 20,000 | 20,000 | 20,000 | 20,000 | 20,000 |
| | Tenn Gas Pipeline | | 358905 FTA Z6-Z6 | 40,000 | 40,000 | 40,000 | 40,000 | 40,000 | 40,000 |
| | Tenn Gas Pipeline (Concord Lateral) | | Firm Transportation | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 |
| | Portland Natural Gas Trans Service | | FT-1999-001 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 |
| | Portland Natural Gas | | FTN | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 |
| | ANE (TransCanada via Union to Iroquois) | | Dawn - Parkway to Iroquois | 4,047 | 4,047 | 4,047 | 4,047 | 4,047 | 4,047 |
| | TransCanada via Union to Portland | | Union Parkway to Portland | 5,077 | 5,077 | 5,077 | 5,077 | 5,077 | 5,077 |
| | Tenn Gas Pipeline (short haul) | peak | 632 Z4-Z6 (stg) | 15,265 | 15,265 | 15,265 | 15,265 | 15,265 | 15,265 |
| | Tenn Gas Pipeline (short haul) | peak | 11234 Z4-Z6(stg) | 7,082 | 7,082 | 7,082 | 7,082 | 7,082 | 7,082 |
| | Tenn Gas Pipeline (short haul) | peak | 11234 Z5-Z6(stg) | 1,957 | 1,957 | 1,957 | 1,957 | 1,957 | 1,957 |
| | National Fuel | peak | FST N02358 | 6,098 | 6,098 | 6,098 | 6,098 | 6,098 | 6,098 |
| **Peaking** | | | | | | | | | |
| | Tenn Gas Pipeline (Concord Lateral) | peak | | - | - | - | - | - | - |
| | Granite Ridge Demand | peak | | - | - | - | - | - | - |
| | DOMAC Liquid Demand Charge | peak | NSB041 | - | - | - | - | - | - |
| **Storage** | | | | | | | | | |
| | Dominion - Demand | peak | GSS 300076 | 934 | 934 | 934 | 934 | 934 | 934 |
| | Dominion - Capacity Reservation | peak | GSS 300076 | 102,700 | 102,700 | 102,700 | 102,700 | 102,700 | 102,700 |
| | Honeoye - Demand | peak | SS-NY | 1,362 | 1,362 | 1,362 | 1,362 | 1,362 | 1,362 |
| | Honeoye - Capacity | peak | SS-NY | 245,380 | 245,380 | 245,380 | 245,380 | 245,380 | 245,380 |
| | National Fuel - Demand | peak | FSS-1 2357 | 6,098 | 6,098 | 6,098 | 6,098 | 6,098 | 6,098 |
| | National Fuel - Capacity Reservation | peak | FSS-1 2357 | 670,800 | 670,800 | 670,800 | 670,800 | 670,800 | 670,800 |
| | Tenn Gas Pipeline - Demand | peak | FS-MA 523 | 21,844 | 21,844 | 21,844 | 21,844 | 21,844 | 21,844 |
| | Tenn Gas Pipeline - Cap. Reservations | peak | FS-MA 523 | 1,560,391 | 1,560,391 | 1,560,391 | 1,560,391 | 1,560,391 | 1,560,391 |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty Utilities**
**Off Peak 2022 Summer Cost of Gas Filing**
**Demand Rates**

Schedule 5C
Page 1 of 1

| | | | | | | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-22 | Oct-22 | Nov-22 | Nov-22 | Dec-22 | Jan-23 | Feb-23 | Mar-23 | Apr-23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Tariff Rates** | | | | | 31 | 30 | 31 | 31 | 30 | 31 | 184 | 30 | 31 | 31 | 28 | 31 | 30 |
| | | | | | | Unit Rate | Unit Rate | Unit Rate | Unit Rate | Unit Rate | Unit Rate | Avg Rate | | | | | | |
| | **Supply** | | | | | | | | | | | | | | | | | |
| | Niagara Supply | | $ - | Per Contract | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| | **Pipeline** | | | | | | | | | | | | | | | | | |
| | Iroquois Gas | RTS 470-01 | $ 5.2357 | Forth Revised Sheet No. 4 | | $0.1689 | $0.1745 | $0.1689 | $0.1689 | $0.1745 | $0.1689 | $0.1708 | $0.1745 | $0.1689 | $0.1689 | $0.1870 | $0.1689 | $0.1745 |
| | Tenn Gas Pipeline | 95346 Z5-Z6 | $ 6.2957 | 17th Rev Sheet No. 14 | | $0.4746 | $0.4904 | $0.4746 | $0.4746 | $0.4904 | $0.4746 | $0.4799 | $0.4904 | $0.4746 | $0.4746 | $0.5254 | $0.4746 | $0.4904 |
| | Tenn Gas Pipeline | 2302 Z5-Z6 | $ 6.2957 | 17th Rev Sheet No. 14 | | $0.2031 | $0.2099 | $0 2031 | $0 2031 | $0.2099 | $0.2031 | $0.2053 | $0 2099 | $0 2031 | $0.2031 | $0.2248 | $0.2031 | $0 2099 |
| | Tenn Gas Pipeline | 8587 Z0-Z6 | $ 20.3736 | FT-A (Z0 - Z6) | | $0.6572 | $0.6791 | $0 6572 | $0 6572 | $0.6791 | $0.6572 | $0.6645 | $0 6791 | $0 6572 | $0.6572 | $0.7276 | $0.6572 | $0 6791 |
| | Tenn Gas Pipeline | 8587 Z1-Z6 | $ 18.0875 | FT-A (Z1 - Z6) | | $0.5835 | $0.6029 | $0 5835 | $0 5835 | $0.6029 | $0.5835 | $0.5900 | $0 6029 | $0 5835 | $0.5835 | $0.6460 | $0.5835 | $0 6029 |
| | Tenn Gas Pipeline | 8587 Z4-Z6 | $ 7.1645 | FT-A (Z4 - Z6) | | $0.2311 | $0.2388 | $0 2311 | $0 2311 | $0.2388 | $0.2311 | $0.2337 | $0 2388 | $0 2311 | $0.2311 | $0.2559 | $0.2311 | $0 2388 |
| | TGP Dracut | 42076 FTA Z6-Z6 | $ 4.1818 | 17th Rev Sheet No. 14 | | $0.1349 | $0.1394 | $0.1349 | $0.1349 | $0.1394 | $0.1349 | $0.1364 | $0.1394 | $0.1349 | $0.1349 | $0.1494 | $0.1349 | $0.1394 |
| | TGP Dracut | 358905 FTA Z6-Z6 | $ 4.1818 | 17th Rev Sheet No. 14 | | $0.1349 | $0.1394 | $0.1349 | $0.1349 | $0.1394 | $0.1349 | $0.0227 | $0.1394 | $0.1349 | $0.1349 | $0.1494 | $0.1349 | $0.1394 |
| | TGP Concord Lateral | Firm Transportatio | $ 12.2113 | Per contract | | $0.3939 | $0.4070 | $0 3939 | $0 3939 | $0.4070 | $0.3939 | $0.3983 | $0.4070 | $0 3939 | $0.3939 | $0.4361 | $0.3939 | $0.4070 |
| | Portland Natural Gas | FT-1999-001 | $ 18.2633 | Negot Dmd /CMDY=Part 4.1 V7 | | $0.5891 | $0.6088 | $0 5891 | $0 5891 | $0.6088 | $0.5891 | $0.5957 | $0 6088 | $0 5891 | $0.5891 | $0.6523 | $0.5891 | $0 6088 |
| | Portland Natural Gas | FTN | $ 22.8125 | Negot Dmd /CMDY=Part 4.1 V7 | | $0.7359 | $0.7604 | $0.7359 | $0.7359 | $0.7604 | $0.7359 | $0.7441 | $0.7604 | $0.7359 | $0.7359 | $0.8147 | $0.7359 | $0.7604 |
| | Tenn Gas Pipeline | 632 Z4-Z6 (stg) | $ 7.1645 | 17th Rev Sheet No. 14 | | $0.2311 | $0.2388 | $0 2311 | $0 2311 | $0.2388 | $0.2311 | $0.2337 | $0 2388 | $0 2311 | $0.2311 | $0.2559 | $0.2311 | $0 2388 |
| | Tenn Gas Pipeline | 11234 Z4-Z6(stg) | $ 7.1645 | 17th Rev Sheet No. 14 | | $0.2311 | $0.2388 | $0 2311 | $0 2311 | $0.2388 | $0.2311 | $0.2337 | $0 2388 | $0 2311 | $0.2311 | $0.2559 | $0.2311 | $0 2388 |
| | Tenn Gas Pipeline | 11234 Z5-Z6(stg) | $ 6.2957 | 17th Rev Sheet No. 14 | | $0.2031 | $0.2099 | $0 2031 | $0 2031 | $0.2099 | $0.2031 | $0.2053 | $0 2099 | $0 2031 | $0.2031 | $0.2248 | $0.2031 | $0 2099 |
| | National Fuel | FST N02358 | $ 4.5274 | 4.010 Version 31 0.1 Pg 1 | | $0.1460 | $0.1509 | $0.1460 | $0.1460 | $0.1509 | $0.1460 | $0.1477 | $0.1509 | $0.1460 | $0.1460 | $0.1617 | $0.1460 | $0.1509 |
| | ANE Union Gas | | $ 3.6665 | | | | | | | | | | | | | | | |
| | TransCanada Pipelines Limited | | $ 11.9842 | Union Parkway to Iroquois | | | | | | | | | | | | | | |
| | Delivery Pressure Demand Charge | | 0.6083 | Union Parkway to Iroquois | | | | | | | | | | | | | | |
| | Sub Total Demand Charges | | 16.2590 | | | | | | | | | | | | | | | |
| | Conversion rate GJ to MMBTU | | 1.0551 | | | | | | | | | | | | | | | |
| | Conversion rate to US$ | | 1.2589 | 1/0/1900 | | | | | | | | | | | | | | |
| | Demand Rate/US$ | | $ 13.6260 | | | $0.4395 | $0.4542 | $0.4395 | $0.4395 | $0.4542 | $0.4395 | $0.4444 | $0.4542 | $0.4395 | $0.4395 | $0.4866 | $0.4395 | $0.4542 |
| | Union Gas | | $ 3.6665 | | | | | | | | | | | | | | | |
| | TransCanada Pipelines Limited | | $ 20.4218 | | | | | | | | | | | | | | | |
| | Delivery Pressure Demand Charge | | $ 0.6083 | | | | | | | | | | | | | | | |
| | Sub Total Demand Charges | | $ 24.6966 | | | | | | | | | | | | | | | |
| | Conversion rate GJ to MMBTU | | $ 1.0551 | | | | | | | | | | | | | | | |
| | Conversion rate to US$ | | $ 1.2589 | | $0.0000 | | | | | | | | | | | | | |
| | Demand Rate/US$ | | $ 20.6972 | | | $0.6677 | $0.6899 | $0 6677 | $0 6677 | $0.6899 | $0.6677 | $0.6751 | $0 6899 | $0 6677 | $0.6677 | $0.7392 | $0.6677 | $0 6899 |
| | **Peaking** | | | | | | | | | | | | | | | | | |
| | Granite Ridge Demand | | $ - | Per Contract | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| | DOMAC Demand NSB041 | | $ - | Per Contract | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | | | | | | |
| | **Storage** | | | | | | | | | | | | | | | | | |
| | Dominion - Demand | GSS 300076 | $ 1.8716 | GSS Settled,Tariff Rec #10.30 ' | | $0.0604 | $0.0624 | $0 0604 | $0 0604 | $0.0624 | $0.0604 | $0.0612 | $0 0624 | $0 0604 | $0.0604 | $0.0668 | $0.0604 | $0 0624 |
| | Dominion - Capacity | GSS 300076 | $ 0.0145 | GSS Settled,Tariff Rec #10.30 ' | | $0.0005 | $0.0005 | $0 0005 | $0 0005 | $0.0005 | $0.0005 | $0.0005 | $0 0005 | $0 0005 | $0.0005 | $0.0005 | $0.0005 | $0 0005 |
| | | | $ 1.8861 | | | $0.0608 | $0.0629 | $0 0608 | $0 0608 | $0.0629 | $0.0608 | $0.0617 | $0 0629 | $0 0608 | $0.0608 | $0.0674 | $0.0608 | $0 0629 |
| | Honeoye - Demand | SS-NY | $ 6.1299 | Sub 1st Rev Sheet No. 5 | | $0.1977 | $0.2043 | $0.1977 | $0.1977 | $0.2043 | $0.1977 | $0.2004 | $0 2043 | $0.1977 | $0.1977 | $0.2189 | $0.1977 | $0 2043 |
| | National Fuel - Demand | FSS-1 2357 | $ 2.6325 | 4.020 Version 26 0 0 Pg 1 | | $0.0849 | $0.0878 | $0 0849 | $0 0849 | $0.0878 | $0.0849 | $0.0861 | $0 0878 | $0 0849 | $0.0849 | $0.0940 | $0.0849 | $0 0878 |
| | National Fuel - Capacity | FSS-1 2357 | $ 0.0476 | 4.020 Version 26 0 0 Pg 1 | | $0.0015 | $0.0016 | $0 0015 | $0 0015 | $0.0016 | $0.0015 | $0.0016 | $0 0016 | $0 0015 | $0.0015 | $0.0017 | $0.0015 | $0 0016 |
| | | | $ 2.6801 | | | $0.0865 | $0.0893 | $0 0865 | $0 0865 | $0.0893 | $0.0865 | $0.0876 | $0 0893 | $0 0865 | $0.0865 | $0.0957 | $0.0865 | $0 0893 |
| | Tenn Gas Pipeline | FS-MA 523 | $ 1.3094 | 20th Rev Sheet No.61 | | $0.0422 | $0.0436 | $0 0422 | $0 0422 | $0.0436 | $0.0422 | $0.0428 | $0 0436 | $0 0422 | $0.0422 | $0.0468 | $0.0422 | $0 0436 |

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

**Off Peak 2022 Summer Cost of Gas Filing**
**Supply and Commodity Costs, Volumes and Rates**

**REDACTED**
Schedule 6
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| For Month of: (a) | Reference (b) | May-22 (c) | Jun-22 (d) | Jul-22 (e) | Aug-22 (f) | Sep-22 (g) | Oct-22 (h) | Off-Peak May - Oct (i) |
|---|---|---|---|---|---|---|---|---|
| **Supply and Commodity Costs** | | | | | | | | |
| **Pipeline Gas:** | | | | | | | | |
| Dawn Supply | ln 63 * ln 104 | [redacted] | | | | | | |
| Niagara Supply | ln 64 * ln 109 | | | | | | | |
| TGP Supply (Gulf) | ln 65 * ln 129 | | | | | | | |
| Dracut Supply 1 - Baseload | ln 66 * ln 114 | | | | | | | |
| Dracut Supply 2 - Swing | ln 67 * ln 119 | | | | | | | |
| Dracut Supply 3 - Swing | | | | | | | | |
| City Gate Delivered Supply | ln 68 * ln 135 | | | | | | | |
| LNG Truck | ln 69 * ln 137 | | | | | | | |
| Propane Truck | ln 70 * ln 139 | | | | | | | |
| PNGTS | ln 71 * ln 144 | | | | | | | |
| Portland Natural Gas | | | | | | | | |
| TGP Supply (Zone 4) | ln 73 * ln 154 | | | | | | | |
| Subtotal Pipeline Gas Costs | | $ 2,064,142 | $ 1,565,094 | $ 1,535,173 | $ 1,499,288 | $ 1,499,022 | $ 2,269,503 | $ 10,443,593 |
| **Volumetric Transportation Costs** | | | | | | | | |
| Dawn Supply | ln 63 * ln 202 | [redacted] | | | | | | |
| Niagara Supply | ln 64 * ln 213 | | | | | | | |
| TGP Supply (Zone 4) | ln 73 * ln 251 | | | | | | | |
| Dracut Supply 1 - Baseload | ln 66 * ln 262 | | | | | | | |
| Dracut Supply 2 - Swing | ln 67 * ln 262 | | | | | | | |
| Dracut Supply 3 - Swing | | | | | | | | |
| City Gate Delivered Supply | ln 68 * ln 262 | | | | | | | |
| TGP Storage - Withdrawals | ln 78 * ln 177 | | | | | | | |
| **Total Volumetric Transportation Costs** | | $ 82,454 | $ 66,628 | $ 65,857 | $ 65,294 | $ 67,245 | $ 81,415 | $ 428,894 |
| **Less - Gas Refill:** | | | | | | | | |
| LNG Truck | ln 87 * ln 161 | [redacted] | | | | | | |
| Propane | ln 88 * ln 162 | | | | | | | |
| TGP Storage Refill | ln 89 * ln 127 | | | | | | | |
| Storage Refill (Trans.) | ln 89 * ln 241 | | | | | | | |
| Subtotal Refills | | $ (794,564) | $ (1,013,238) | $ (1,154,196) | $ (1,133,443) | $ (903,034) | $ (469,125) | $ (5,467,600) |
| **Total Supply & Pipeline Commodity Costs** | ln 24 + ln 35 + ln 43 | $ 1,352,033 | $ 618,484 | $ 446,834 | $ 431,139 | $ 663,233 | $ 1,881,794 | $ 5,393,517 |
| **Storage Gas:** | | | | | | | | |
| TGP Storage - Withdrawals | ln 78 * ln 169 | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| **Produced Gas:** | | | | | | | | |
| LNG Vapor | ln 81 * ln 156 | [redacted] | | | | | | |
| Propane | ln 82 * ln 158 | | | | | | | |
| **Total Produced Gas** | ln 51 + ln 52 | $ 14,522 | $ 13,657 | $ 13,401 | $ 13,364 | $ 14,168 | $ 16,513 | $ 85,626 |
| **Total Commodity Gas & Trans. Costs** | ln 45 + ln 48 + ln 54 | $ 1,366,555 | $ 632,141 | $ 460,235 | $ 444,503 | $ 677,401 | $ 1,898,307 | $ 5,479,143 |

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

**Off Peak 2022 Summer Cost of Gas Filing**
**Supply and Commodity Costs, Volumes and Rates**

Schedule 6
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**Volumes (Therms)**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Pipeline Gas:** | See Schedule 11A | | | | | | | |
| Dawn Supply | | 739,535 | 95,658 | - | - | 206,295 | 636,518 | 1,678,006 |
| Niagara Supply | | 668,413 | 540,809 | 542,484 | 545,801 | 591,423 | 687,667 | 3,576,596 |
| TGP Supply (Gulf) | | 13,120 | - | - | - | - | 384,326 | 397,446 |
| Dracut Supply 1 - Baseload | | - | - | - | - | - | - | - |
| Dracut Supply 2 - Swing | | - | - | - | - | - | 436,185 | 436,185 |
| Dracut Supply 3 - Swing | | | | | | | | |
| City Gate Delivered Supply | | - | - | - | - | - | - | - |
| LNG Truck | | 44,883 | 18,131 | - | - | 55,566 | 20,602 | 139,181 |
| Propane Truck | | 79,409 | 71,899 | 69,472 | 69,279 | 73,449 | 81,696 | 445,204 |
| PNGTS | | 205,081 | 146,300 | 119,612 | 125,908 | 176,916 | 218,093 | 991,910 |
| Portland Natural Gas | | 152,602 | 3,126 | - | - | 2,555 | 574,003 | 732,286 |
| TGP Supply (Zone 4) | | 5,386,659 | 4,708,479 | 4,708,982 | 4,696,535 | 4,819,522 | 5,546,088 | 29,866,267 |
| | | | | | | | | |
| Subtotal Pipeline Volumes | | 7,289,702 | 5,584,403 | 5,440,551 | 5,437,523 | 5,925,726 | 8,585,177 | 38,263,081 |
| | | | | | | | | |
| **Storage Gas:** | | | | | | | | |
| TGP Storage | | - | - | - | - | - | - | - |
| | | | | | | | | |
| **Produced Gas:** | | | | | | | | |
| LNG Vapor | | 20,025 | 18,131 | 17,519 | 17,470 | 18,522 | 20,602 | 112,269 |
| Propane | | - | - | - | - | - | - | - |
| | | | | | | | | |
| Subtotal Produced Gas | | 20,025 | 18,131 | 17,519 | 17,470 | 18,522 | 20,602 | 112,269 |
| | | | | | | | | |
| **Less - Gas Refill:** | | | | | | | | |
| LNG Truck | | (44,883) | (18,131) | - | - | (55,566) | (20,602) | (139,181) |
| Propane | | (79,409) | (71,899) | (69,472) | (69,279) | (73,449) | (81,696) | (445,204) |
| TGP Storage Refill | | (2,188,222) | (2,766,568) | (3,120,796) | (3,057,929) | (2,444,250) | (1,262,380) | (14,840,145) |
| | | | | | | | | |
| Subtotal Refills | | (2,312,514) | (2,856,598) | (3,190,268) | (3,127,208) | (2,573,265) | (1,364,677) | (15,424,530) |
| | | | | | | | | |
| **Total Sendout Volumes** | | 4,997,212 | 2,745,936 | 2,267,802 | 2,327,785 | 3,370,983 | 7,241,101 | 22,950,820 |

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

**Off Peak 2022 Summer Cost of Gas Filing**
**Supply and Commodity Costs, Volumes and Rates**

**REDACTEDD**
Schedule 6
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**Gas Costs and Volumetric Transportation Rates**

| | | Average Rate | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Pipeline Gas:** | | | | | | | | |
| **Dawn Supply** | | | | | | | | |
| NYMEX Price | Sch 7, ln 10/10 | [redacted] | | | | | | |
| Basis Differential | | | | | | | | |
| **Net Commodity Costs** | | | | | | | | |
| **Niagara Supply** | | | | | | | | |
| NYMEX Price | Sch 7, ln 10/10 | [redacted] | | | | | | |
| Basis Differential | | | | | | | | |
| **Net Commodity Costs** | | | | | | | | |
| **Dracut Supply 1 - Baseload** | | | | | | | | |
| Commodity Costs - NYMEX Price | Sch 7, ln 10 / 10 | [redacted] | | | | | | |
| Basis Differential | | | | | | | | |
| **Net Commodity Costs** | | | | | | | | |
| **Dracut Supply 2 - Swing** | | | | | | | | |
| Commodity Costs - NYMEX Price | Sch 7, ln 10 / 10 | [redacted] | | | | | | |
| Basis Differential | | | | | | | | |
| **Net Commodity Costs** | | | | | | | | |
| **Dracut Supply 3 - Swing** | Sch 7, ln 10 / 10 | [redacted] | | | | | | |
| Commodity Costs - NYMEX Price | | | | | | | | |
| Basis Differential | | | | | | | | |
| **Net Commodity Costs** | | | | | | | | |
| **TGP Supply (Gulf)** | | | | | | | | |
| NYMEX Price | Sch 7, ln 10/10 | [redacted] | | | | | | |
| Basis Differential | | | | | | | | |
| **Net Commodity Costs** | | | | | | | | |
| **TGP Citygate Supply** | | | | | | | | |
| NYMEX Price | Sch 7, ln 10/10 | [redacted] | | | | | | |
| Basis Differential | | | | | | | | |
| **Net Commodity Costs** | | | | | | | | |
| **LNG Truck** | Sch 7, ln 10/10 | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** |
| **Propane Truck** | NYMEX - Propane | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** |
| **PNGTS** | | | | | | | | |
| NYMEX Price | Sch 7, ln 10/10 | [redacted] | | | | | | |
| Additional Cost | | | | | | | | |
| **Net Commodity Cost** | | | | | | | | |
| **PNGTS EXP** | | | | | | | | |
| NYMEX Price | Sch 7, ln 10/10 | [redacted] | | | | | | |
| Basis Differential | | | | | | | | |
| **Net Commodity Cost** | | | | | | | | |
| **TGP Supply (Zone 4)** | | | | | | | | |
| NYMEX Price | Sch 7, ln 10/10 | [redacted] | | | | | | |
| Basis Differential | | | | | | | | |
| **Net Commodity Cost** | | | | | | | | |
| **LNG Vapor (Storage)** | Sch 13, ln 97 /10 | **$0.7252** | **$0.7532** | **$0.7650** | **$0.7650** | **$0.7650** | **$0.8016** | **$0.7625** |
| **Propane** | Sch 13, ln 67 /10 | **$1.1475** | **$1.0155** | **$0.9197** | **$0.8429** | **$0.7781** | **$0.7194** | **$0.9038** |
| **Storage Refill:** | | | | | | | | |
| **LNG Truck** | ln 137 | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** |
| **Propane** | ln 139 | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** | **$0.0000** |

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

**Off Peak 2022 Summer Cost of Gas Filing**
**Supply and Commodity Costs, Volumes and Rates**

**REDACTED**
**Schedule 6**
Page 4 of 5

**Per Unit Volumetric Transportation Rates**

**Dawn Supply Volumetric Transportation Charge**

| | | | | | | | | | Average Rate |
|---|---|---|---|---|---|---|---|---|---|
| **Commodity Costs** | ln 104 | [redacted] | | | | | | | |
| TransCanada - Commodity Rate/GJ | Dawn - Parkway to Iroquois | $0.00030 | $0.00030 | $0.00030 | $0.00030 | $0.00030 | $0.00030 | $0.00030 | |
| Conversion Rate GL to MMBTU | | 1.0551 | 1.0551 | 1.0551 | 1.0551 | 1.0551 | 1.0551 | 1.0551 | |
| Conversion Rate to US$ | 1/0/1900 | 1.2589 | 1.2589 | 1.2589 | 1.2589 | 1.2589 | 1.2589 | 1.2589 | |
| Commodity Rate/US$ | ln 186 x ln 187 x ln 188 | $0.00040 | $0.00040 | $0.00040 | $0.00040 | $0.00040 | $0.00040 | $0.00040 | |
| TransCanada Fuel % | Dawn - Parkway to Iroquois | 0.74% | 0.67% | 0.00% | 0.00% | 0.00% | 0.00% | 0.23% | |
| TransCanada Fuel * Percentage | ln 184 x ln 190 | $0.00228 | $0.00206 | $0.00000 | $0.00000 | $0.00000 | $0.00000 | $0.00072 | |
| Subtotal TransCanada | | **$0.00267** | **$0.00246** | **$0.00040** | **$0.00040** | **$0.00040** | **$0.00040** | **$0.00112** | |
| IGTS - Z1 RTS Commodity | Forth Revised Sheet No. 4 | $0.00034 | $0.00034 | $0.00034 | $0.00034 | $0.00034 | $0.00034 | $0.00034 | |
| IGTS - Z1 RTS ACA Rate Commodity | Forth Revised Sheet No. 4 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | |
| IGTS - Z1 RTS Deferred Asset Surcharge | Forth Revised Sheet No. 4 | $0.00000 | $0.00000 | $0.00000 | $0.00000 | $0.00000 | $0.00000 | $0.00000 | |
| Subtotal IGTS - Trans Charge - Z1 RTS | Commodity | **$0.00046** | **$0.00046** | **$0.00046** | **$0.00046** | **$0.00046** | **$0.00046** | **$0.00046** | |
| TGP NET-NE - Comm. Segments 3 & 4 | 19th Rev Sheet No. 15 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | |
| IGTS -Fuel Use Factor - Percentage | Forth Revised Sheet No. 4 | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% | |
| IGTS -Fuel Use Factor - Fuel * Percentage | ln 184 x ln 198 | **$0.00308** | **$0.00309** | **$0.00311** | **$0.00310** | **$0.00309** | **$0.00309** | **$0.00309** | |
| TGP FTA Fuel Charge % Z 5-6 | 17th Rev Sheet No. 32 | 0.86% | 0.86% | 0.86% | 0.86% | 0.86% | 0.86% | 0.86% | |
| TGP FTA Fuel * Percentage | ln 184 x ln 200 | **$0.00265** | **$0.00266** | **$0.00268** | **$0.00266** | **$0.00266** | **$0.00266** | **$0.00266** | |
| **Total Volumetric Transportation Charge - Dawn Supply** | | **$0.00898** | **$0.00879** | **$0.00677** | **$0.00674** | **$0.00672** | **$0.00673** | **$0.00745** | |

**Niagara Supply Volumetric Transportation Charge**

| | | |
|---|---|---|
| **Commodity Costs** | Ln 109 | [redacted] |
| TGP FTA - FTA Z 5-6 Comm. Rate | 19th Rev Sheet No. 15 | |
| TGP FTA - FTA Z 5-6 - ACA Rate | 19th Rev Sheet No. 15 | |
| Subtotal TGP FTA - FTA Z 5-6 Commodity Rate | | |
| TGP FTA Fuel Charge % Z 5-6 | 17th Rev Sheet No. 32 | |
| TGP FTA Fuel * Percentage | ln 206 x ln 211 | |
| **Total Volumetric Transportation Rate - Niagara Supply** | | |

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

**Off Peak 2022 Summer Cost of Gas Filing**
**Supply and Commodity Costs, Volumes and Rates**

**REDACTED**
**Schedule 6**
Page 5 of 5

| | | | | | | | | Average Rate |
|---|---|---|---|---|---|---|---|---|
| **TGP Direct Volumetric Transportation Charge** | | | | | | | | |
| **Commodity Costs** | Ln 127 | [redacted] | | | | | | |
| TGP - Max Comm. Base Rate - Z 0-6 | 19th Rev Sheet No. 15 | $0.02672 | $0.02672 | $0.02672 | $0.02672 | $0.02672 | $0.02672 | $0.02672 |
| TGP - Max Commodity ACA Rate - Z 0-6 | 19th Rev Sheet No. 15 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 |
| Subtotal TGP - Max Comm. Rate Z 0-6 | | $0.02684 | $0.02684 | $0.02684 | $0.02684 | $0.02684 | $0.02684 | $0.02684 |
| Prorated Percentage | | 32.60% | 32.60% | 32.60% | 32.60% | 32.60% | 32.60% | 32.60% |
| Prorated TGP - Max Commodity Rate - Z 0-6 | | **$0.00875** | **$0.00875** | **$0.00875** | **$0.00875** | **$0.00875** | **$0.00875** | **$0.00875** |
| TGP - Max Comm. Base Rate - Z 1-6 | 19th Rev Sheet No. 15 | $0.02331 | $0.02331 | $0.02331 | $0.02331 | $0.02331 | $0.02331 | $0.02331 |
| TGP - Max Commodity ACA Rate - Z 1-6 | 19th Rev Sheet No. 15 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 |
| Subtotal TGP - Max Commodity Rate - Z 1-6 | | $0.02343 | $0.02343 | $0.02343 | $0.02343 | $0.02343 | $0.02343 | $0.02343 |
| Prorated Percentage | | 67.40% | 67.40% | 67.40% | 67.40% | 67.40% | 67.40% | 67.40% |
| Prorated TGP - Trans Charge - Max Commodity Rate - Z 1-6 | | **$0.01579** | **$0.01579** | **$0.01579** | **$0.01579** | **$0.01579** | **$0.01579** | **$0.01579** |
| TGP - Fuel Charge % - Z 0 -6 | 17th Rev Sheet No. 32 | 4.66% | 4.66% | 4.66% | 4.66% | 4.66% | 4.66% | 4.66% |
| Prorated Percentage | | 32.6% | 32.6% | 32.6% | 32.6% | 32.6% | 32.6% | 32.6% |
| Prorated TGP Fuel Charge % - Z 0-6 | | 1.52% | 1.52% | 1.52% | 1.52% | 1.52% | 1.52% | 1.52% |
| TGP - Fuel Charge % - Z 1 -6 | 17th Rev Sheet No. 32 | 4.06% | 4.06% | 4.06% | 4.06% | 4.06% | 4.06% | 4.06% |
| Prorated Percentage | | 67.40% | 67.40% | 67.40% | 67.40% | 67.40% | 67.40% | 67.40% |
| Prorated TGP Fuel Charge - Fuel Charge % - Z 1-6 | | 2.74% | 2.74% | 2.74% | 2.74% | 2.74% | 2.74% | 2.74% |
| TGP - Fuel Charge % - Z 0-6 | ln 221 x ln 235 | **$0.00481** | **$0.00486** | **$0.00493** | **$0.00493** | **$0.00489** | **$0.00488** | **$0.00488** |
| TGP - Fuel Charge % - Z 1-6 | ln 221 x ln 238 | **$0.00866** | **$0.00875** | **$0.00887** | **$0.00888** | **$0.00882** | **$0.00880** | **$0.00880** |
| **Total Volumetric Transportation Rate - TGP (Direct)** | | **$0.03801** | **$0.03814** | **$0.03834** | **$0.03836** | **$0.03825** | **$0.03822** | **$0.03822** |
| **TGP (Zone 4 Purchase) Volumetric Transportation Charge** | | | | | | | | |
| **Commodity Costs** | Ln 127 | [redacted] | | | | | | |
| TGP - Max Comm. Base Rate - Z 4-6 | 19th Rev Sheet No. 15 | $0.00928 | $0.00928 | $0.00928 | $0.00928 | $0.00928 | $0.00928 | $0.00928 |
| TGP - Max Commodity ACA Rate - Z 4-6 | 19th Rev Sheet No. 15 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 | $0.00012 |
| Subtotal TGP - Max Commodity Rate - Z 4-6 | | **$0.00940** | **$0.00940** | **$0.00940** | **$0.00940** | **$0.00940** | **$0.00940** | **$0.00940** |
| TGP - Fuel Charge % - Z 4-6 | 17th Rev Sheet No. 32 | 1.22% | 1.22% | 1.22% | 1.22% | 1.22% | 1.22% | 1.22% |
| TGP - Fuel Charge | ln 244 x ln 249 | **$0.00348** | **$0.00346** | **$0.00347** | **$0.00338** | **$0.00308** | **$0.00306** | **$0.00332** |
| **Total Vol. Trans. Rate - TGP (Zone 6)** | | **$0.01288** | **$0.01286** | **$0.01287** | **$0.01278** | **$0.01248** | **$0.01246** | **$0.01272** |
| **TGP Dracut** | | | | | | | | |
| **Commodity Costs - NYMEX Price** | Ln 114 | [redacted] | | | | | | |
| TGP - Trans Charge - Comm. - Z 6-6 | 19th Rev Sheet No. 15 | | | | | | | |
| TGP - Trans Charge - ACA Rate - Z6-6 | 19th Rev Sheet No. 15 | | | | | | | |
| Subtotal TGP - Trans Charge - Max Commodity Rate - Z 6-6 | | | | | | | | |
| TGP - Fuel Charge % - Z 6-6 | 17th Rev Sheet No. 32 | | | | | | | |
| TGP - Fuel Charge | ln 255 x ln 260 | | | | | | | |
| **Total Volumetric Transportation Rate - TGP Dracut** | | | | | | | | |

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**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**
**Off Peak 2022 Summer Cost of Gas Filing**
**Annual Bill Comparisons, May 20 Oct 20 vs May 21 Oct 21 Residential Heating Rate R 3**



**November 1, 2021 April 30, 2022**
**Residential Heating (R3)**

| | Nov 21 | Dec 21 | Jan 22 | Feb 22 | Mar 22 | Apr 22 | Winter Nov Apr |
|---|---|---|---|---|---|---|---|
| **Typical Usage (Therms)** | 62 | 110 | 123 | 148 | 132 | 92 | 667 |
| | 8/1/2021 - Current | | | | | | |
| **Winter:** | | | | | | | |
| Cust. Chg | $ 15.39 | $ 15.39 | $ 15.39 | $ 15.39 | $ 15.39 | $ 15.39 | $ 92.34 |
| Headblock | $ 0.5632 | $ - | $ - | $ - | $ - | $ - | $ - |
| Tailblock | $ 0.5632 | $ 34.92 | $ 61.95 | $ 69.27 | $ 83.35 | $ 74.34 | $ 51.81 | $ 375.65 |
| HB Threshold | - | | | | | | |
| **Summer:** | 8/1/2021 - Current | | | | | | |
| Cust. Chg | $ 15.39 | | | | | | |
| Headblock | $ 0.5632 | | | | | | |
| Tailblock | $ 0.5632 | | | | | | |
| HB Threshold | - | | | | | | |
| Total Base Rate Amount | | $ 50.31 | $ 77.34 | $ 84.66 | $ 98.74 | $ 89.73 | $ 67.20 | $ 467.99 |
| COG Rate - (Seasonal) | | $ 0.9056 | $ 0.9056 | $ 0.9056 | $ 0.9056 | $ 0.9056 | $ 0.9056 | $ 0.9056 |
| COG amount | | $ 56.15 | $ 99.62 | $ 111.39 | $ 134.03 | $ 119.54 | $ 83.32 | $ 604.04 |
| LDAC | | $ 0.1733 | $ 0.1733 | $ 0.1733 | $ 0.1733 | $ 0.1733 | $ 0.1733 | $ 0.1733 |
| LDAC amount | | $ 10.74 | $ 19.06 | $ 21.31 | $ 25.65 | $ 22.87 | $ 15.94 | $ 115.58 |
| **Total Bill** | **$ 117.20** | **$ 196.02** | **$ 217.37** | **$ 258.42** | **$ 232.14** | **$ 166.46** | **$ 1,187.61** |

**May 1, 2022 October 31, 2022**

| | May 22 | Jun 22 | Jul 22 | Aug 22 | Sep 22 | Oct 22 | Summer May Oct | Total Nov Oct |
|---|---|---|---|---|---|---|---|---|
| **Typical Usage (Therms)** | 51 | 28 | 16 | 14 | 14 | 21 | 144 | 811 |
| Cust. Chg | $ 15.39 | $ 15.39 | $ 15.39 | $ 15.39 | $ 15.39 | $ 15.39 | $ 92.34 | $ 184.68 |
| Headblock | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Tailblock | $ 28.72 | $ 15.77 | $ 9.01 | $ 7.88 | $ 7.88 | $ 11.83 | $ 81.10 | $ 456.76 |
| Total Base Rate Amount | $ 44.11 | $ 31.16 | $ 24.40 | $ 23.27 | $ 23.27 | $ 27.22 | $ 173.44 | $ 641.44 |
| COG Rate - (Seasonal) | $ 0.5002 | $ 0.5002 | $ 0.5002 | $ 0.5002 | $ 0.5002 | $ 0.5002 | $ 0.5002 | $ 0.8336 |
| COG amount | $ 25.51 | $ 14.01 | $ 8.00 | $ 7.00 | $ 7.00 | $ 10.50 | $ 72.03 | $ 676.06 |
| LDAC | $ 0.1733 | $ 0.1733 | $ 0.1733 | $ 0.1733 | $ 0.1733 | $ 0.1733 | $ 0.1733 | $ 0.1733 |
| LDAC amount | $ 8.84 | $ 4.85 | $ 2.77 | $ 2.43 | $ 2.43 | $ 3.64 | $ 24.95 | $ 140.53 |
| **Total Bill** | **$ 78.46** | **$ 50.02** | **$ 35.18** | **$ 32.70** | **$ 32.70** | **$ 41.36** | **$ 270.42** | **$ 1,458.03** |

**November 1, 2020 April 30, 2021**
**Residential Heating (R3)**

| | Nov 20 | Dec 20 | Jan 21 | Feb 21 | Mar 21 | Apr 21 | Winter Nov Apr |
|---|---|---|---|---|---|---|---|
| **Typical Usage (Therms)** | 62 | 110 | 123 | 148 | 132 | 92 | 667 |
| **Winter:** | 7/1/20 - 7/31/21 | 8/1/2021 - Current | | | | | |
| Cust. Chg | $ 15.50 | $ 15.39 | $ 15.50 | $ 15.50 | $ 15.50 | $ 15.50 | $ 15.50 | $ 93.00 |
| Headblock | $ 0.5678 | $ 0.5632 | $ - | $ - | $ - | $ - | $ - | $ - |
| Tailblock | $ 0.5678 | $ 0.5632 | $ 35.20 | $ 62.46 | $ 69.84 | $ 84.03 | $ 74.95 | $ 52.24 | $ 378.72 |
| HB Threshold | - | - | $ 34.53 | | | | | |
| **Summer:** | 7/1/20 - 7/31/21 | 8/1/2021 - Current | | | | | | |
| Cust. Chg | $ 15.50 | $ 15.39 | | | | | | |
| Headblock | $ 0.5678 | $ 0.5632 | | | | | | |
| Tailblock | $ 0.5678 | $ 0.5632 | | | | | | |
| HB Threshold | - | - | | | | | | |
| Total Base Rate Amount | | $ 50.70 | $ 77.96 | $ 85.34 | $ 99.53 | $ 90.45 | $ 67.74 | $ 471.72 |
| COG Rate - (Seasonal) | | $ 0.5571 | $ 0.5571 | $ 0.4664 | $ 0.4276 | $ 0.5156 | $ 0.6050 | $ 0.5100 |
| COG amount | | $ 34.54 | $ 61.28 | $ 57.37 | $ 63.28 | $ 68.06 | $ 55.66 | $ 340.19 |
| LDAC | | $ 0.0589 | $ 0.0589 | $ 0.0589 | $ 0.0589 | $ 0.0589 | $ 0.0589 | $ 0.0589 |
| LDAC amount | | $ 3.65 | $ 6.48 | $ 7.24 | $ 8.72 | $ 7.77 | $ 5.42 | $ 39.29 |
| **Total Bill** | **$ 88.90** | **$ 145.72** | **$ 149.95** | **$ 171.54** | **$ 166.28** | **$ 128.82** | **$ 851.20** |

**May 1, 2021 October 31, 2021**

| | May 21 | Jun 21 | Jul 21 | Aug 21 | Sep 21 | Oct 21 | Summer May Oct | Total Nov Oct |
|---|---|---|---|---|---|---|---|---|
| **Typical Usage (Therms)** | 51 | 28 | 16 | 14 | 14 | 21 | 144 | 811 |
| Cust. Chg | $15.50 | $15.50 | $15.50 | $15.39 | $15.39 | $15.39 | $ 92.67 | $ 185.67 |
| Headblock | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Tailblock | $ 28.96 | $ 15.90 | $ 9.08 | $ 7.88 | $ 7.88 | $ 11.83 | $ 81.54 | $ 460.26 |
| Total Base Rate Amount | $ 44.46 | $ 31.40 | $ 24.58 | $ 23.27 | $ 23.27 | $ 27.22 | $ 174.21 | $ 645.93 |
| COG Rate - (Seasonal) | $ 0.3935 | $ 0.3935 | $ 0.3935 | $ 0.3935 | $ 0.3935 | $ 0.3935 | $ 0.3935 | $ 0.4893 |
| COG amount | $ 20.07 | $ 11.02 | $ 6.30 | $ 5.51 | $ 5.51 | $ 8.26 | $ 56.66 | $ 396.86 |
| LDAC | $ 0.0589 | $ 0.0589 | $ 0.0589 | $ 0.0589 | $ 0.0589 | $ 0.0589 | $ 0.0589 | $ 0.0589 |
| LDAC amount | $ 3.00 | $ 1.65 | $ 0.94 | $ 0.82 | $ 0.82 | $ 1.24 | $ 8.48 | $ 47.77 |
| **Total Bill** | **$ 67.53** | **$ 44.07** | **$ 31.82** | **$ 29.61** | **$ 29.61** | **$ 36.72** | **$ 239.35** | **$ 1,090.55** |

**DIFFERENCE:**

| | Nov 21 | Dec 21 | Jan 22 | Feb 22 | Mar 22 | Apr 22 | Winter Nov Apr |
|---|---|---|---|---|---|---|---|
| **Total Bill** | **$ 28.30** | **$ 50.30** | **$ 67.41** | **$ 86.88** | **$ 65.86** | **$ 37.64** | **$ 336.41** |
| % Change | **31.84%** | **34.52%** | **44.96%** | **50.65%** | **39.61%** | **29.22%** | **39.52%** |
| **Base Rate** | $ (0.40) | $ (0.62) | $ (0.68) | $ (0.79) | $ (0.72) | $ (0.53) | $ (3.73) |
| % Change | -0.78% | -0.79% | -0.79% | -0.79% | -0.79% | -0.79% | -0.79% |
| **COG & LDAC** | $ 28.70 | $ 50.92 | $ 68.09 | $ 87.67 | $ 66.58 | $ 38.18 | $ 340.13 |
| % Change | 75.14% | 75.14% | 105.38% | 121.76% | 87.79% | 62.51% | 89.63% |
| check | $ - | $ - | $ - | $ - | $ - | $ - | $ - |

| | May 22 | Jun 22 | Jul 22 | Aug 22 | Sep 22 | Oct 22 | Summer May Oct | Total Nov Oct |
|---|---|---|---|---|---|---|---|---|
| **Total Bill** | **$ 10.93** | **$ 5.95** | **$ 3.35** | **$ 3.10** | **$ 3.10** | **$ 4.64** | **$ 31.07** | **$ 367.47** |
| % Change | **16.19%** | **13.51%** | **10.54%** | **10.45%** | **10.45%** | **12.64%** | **12.98%** | **33.70%** |
| **Base Rate** | $ (0.34) | $ (0.24) | $ (0.18) | $ - | $ - | $ - | $ (0.77) | $ (4.50) |
| % Change | -0.78% | -0.76% | -0.75% | 0.00% | 0.00% | 0.00% | -0.44% | -0.70% |
| **COG & LDAC** | $ 11.28 | $ 6.19 | $ 3.54 | $ 3.10 | $ 3.10 | $ 4.64 | $ 31.84 | $ 371.97 |
| % Change | 48.87% | 48.87% | 48.87% | 48.87% | 48.87% | 48.87% | 48.87% | 83.66% |
| check | $ - | $ - | $ - | $ (0.00) | $ (0.00) | $ (0.00) | $ (0.00) | $ - |

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



**November 1, 2021 April 30, 2022**
**Commercial Rate (G 41)**

| | Nov 21 | Dec 21 | Jan 22 | Feb 22 | Mar 22 | Apr 22 | Winter Nov Apr |
|---|---|---|---|---|---|---|---|
| **Typical Usage (Therms)** | 89 | 277 | 504 | 457 | 331 | 297 | 1,955 |
| **Winter:** 8/1/2021 - Current | | | | | | | |
| Cust. Chg $ 57.06 | $ 57.06 | $ 57.06 | $ 57.06 | $ 57.06 | $ 57.06 | $ 57.06 | $ 342.36 |
| Headblock $ 0.4688 | $ 41.72 | $ 46.88 | $ 46.88 | $ 46.88 | $ 46.88 | $ 46.88 | $ 276.12 |
| Tailblock $ 0.3149 | $ - | $ 55.74 | $ 127.22 | $ 112.42 | $ 72.74 | $ 62.04 | $ 430.15 |
| HB Threshold 100 | $41.93 | $46.88 | $46.88 | $46.88 | $46.88 | $46.88 | |
| **Summer:** 8/1/2021 - Current | | | | | | | |
| Cust. Chg $ 57.06 | | | | | | | |
| Headblock $ 0.4688 | | | | | | | |
| Tailblock $ 0.3149 | | | | | | | |
| HB Threshold 20 | | | | | | | |
| Total Base Rate Amount | $ 98.78 | $ 159.68 | $ 231.16 | $ 216.36 | $ 176.68 | $ 165.98 | $ 1,048.64 |
| COG Rate - (Seasonal) | $ 0.9058 | $ 0.9058 | $ 0.9058 | $ 0.9058 | $ 0.9058 | $ 0.9058 | $ 0.9058 |
| COG amount | $ 80.62 | $ 250.91 | $ 456.52 | $ 413.95 | $ 299.82 | $ 269.02 | $ 1,770.84 |
| LDAC | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 |
| LDAC amount | $ 7.66 | $ 23.83 | $ 43.35 | $ 39.31 | $ 28.47 | $ 25.55 | $ 168.16 |
| **Total Bill** | **$ 187.05** | **$ 434.41** | **$ 731.03** | **$ 669.62** | **$ 504.97** | **$ 460.54** | **$ 2,987.63** |

**May 1, 2022 October 31, 2022**

| | May 22 | Jun 22 | Jul 22 | Aug 22 | Sep 22 | Oct 22 | Summer May Oct | Total Nov Oct |
|---|---|---|---|---|---|---|---|---|
| **Typical Usage (Therms)** | 153 | 39 | 26 | 34 | 25 | 29 | 306 | 2,261 |
| Cust. Chg | $ 57.06 | $ 57.06 | $ 57.06 | $ 57.06 | $ 57.06 | $ 57.06 | $ 342.36 | $ 684.72 |
| Headblock | $ 9.38 | $ 9.38 | $ 9.38 | $ 9.38 | $ 9.38 | $ 9.38 | $ 56.26 | $ 332.38 |
| Tailblock | $ 41.88 | $ 5.98 | $ 1.89 | $ 4.41 | $ 1.57 | $ 2.83 | $ 58.57 | $ 488.72 |
| Total Base Rate Amount | $ 108.32 | $ 72.42 | $ 68.33 | $ 70.84 | $ 68.01 | $ 69.27 | $ 457.19 | $ 1,505.82 |
| COG Rate - (Seasonal) | $ 0.5007 | $ 0.5007 | $ 0.5007 | $ 0.5007 | $ 0.5007 | $ 0.5007 | $ 0.5007 | $ 0.8510 |
| COG amount | $ 76.61 | $ 19.53 | $ 13.02 | $ 17.02 | $ 12.52 | $ 14.52 | $ 153.21 | $ 1,924.05 |
| LDAC | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 |
| LDAC amount | $ 13.16 | $ 3.35 | $ 2.24 | $ 2.92 | $ 2.15 | $ 2.49 | $ 26.32 | $ 194.47 |
| **Total Bill** | **$ 198.08** | **$ 95.30** | **$ 83.58** | **$ 90.79** | **$ 82.68** | **$ 86.28** | **$ 636.72** | **$ 3,624.35** |

**November 1, 2020 April 30, 2021**
**Commercial Rate (G 41)**

| | Nov 20 | Dec 20 | Jan 21 | Feb 21 | Mar 21 | Apr 21 | Winter Nov Apr |
|---|---|---|---|---|---|---|---|
| **Typical Usage (Therms)** | 89 | 277 | 504 | 457 | 331 | 297 | 1,955 |
| **Winter:** 7/1/20 - 7/31/21 8/1/2021 - Current | | | | | | | |
| Cust. Chg $ 57.46 $ 57.06 | $ 57.46 | $ 57.46 | $ 57.46 | $ 57.46 | $ 57.46 | $ 57.46 | $ 344.76 |
| Headblock $ 0.4711 $ 0.4688 | $ 41.93 | $ 47.11 | $ 47.11 | $ 47.11 | $ 47.11 | $ 47.11 | $ 277.48 |
| Tailblock $ 0.3165 $ 0.3149 | $ - | $ 56.02 | $ 127.87 | $ 112.99 | $ 73.11 | $ 62.35 | $ 432.34 |
| HB Threshold 100 100 | | | | | | | |
| **Summer:** 7/1/20 - 7/31/21 8/1/2021 - Current | | | | | | | |
| Cust. Chg $ 57.46 $ 57.06 | | | | | | | |
| Headblock $ 0.4711 $ 0.4688 | | | | | | | |
| Tailblock $ 0.3165 $ 0.3149 | | | | | | | |
| HB Threshold 20 20 | | | | | | | |
| Total Base Rate Amount | $ 99.39 | $ 160.59 | $ 232.44 | $ 217.56 | $ 177.68 | $ 166.92 | $ 1,054.58 |
| COG Rate - (Seasonal) | $ 0.5552 | $ 0.5552 | $ 0.4645 | $ 0.4257 | $ 0.5137 | $ 0.6031 | $ 0.5018 |
| COG amount | $ 49.41 | $ 153.79 | $ 234.11 | $ 194.54 | $ 170.03 | $ 179.12 | $ 981.01 |
| LDAC | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 |
| LDAC amount | $ 4.94 | $ 15.37 | $ 27.97 | $ 25.36 | $ 18.37 | $ 16.48 | $ 108.50 |
| **Total Bill** | **$ 153.74** | **$ 329.75** | **$ 494.52** | **$ 437.47** | **$ 366.09** | **$ 362.52** | **$ 2,144.09** |
| **DIFFERENCE:** | | | | | | | |
| **Total Bill** | **$ 33.31** | **$ 104.66** | **$ 236.52** | **$ 232.15** | **$ 138.89** | **$ 98.02** | **$ 843.54** |
| % Change | **21.67%** | **31.74%** | **47.83%** | **53.07%** | **37.94%** | **27.04%** | **39.34%** |
| **Base Rate** | $ (0.60) | $ (0.91) | $ (1.28) | $ (1.20) | $ (1.00) | $ (0.95) | $ (5.94) |
| % Change | -0.61% | -0.57% | -0.55% | -0.55% | -0.56% | -0.57% | -0.56% |
| **COG & LDAC** | $ 33.92 | $ 105.57 | $ 237.79 | $ 233.35 | $ 139.88 | $ 98.96 | $ 849.48 |
| % Change | 62.41% | 62.41% | 90.73% | 106.11% | 74.25% | 50.59% | 77.97% |
| check | $ - | $ - | $ - | $ - | $ - | $ - | |

**May 1, 2021 October 31, 2021**

| | May 21 | Jun 21 | Jul 21 | Aug 21 | Sep 21 | Oct 21 | Summer May Oct | Total Nov Oct |
|---|---|---|---|---|---|---|---|---|
| **Typical Usage (Therms)** | 153 | 39 | 26 | 34 | 25 | 29 | 306 | 2,261 |
| Cust. Chg | $57.46 | $ 57.46 | $ 57.46 | $ 57.06 | $ 57.06 | $ 57.06 | $ 343.56 | $ 688.32 |
| Headblock | $ 9.42 | $ 9.42 | $ 9.42 | $ 9.38 | $ 9.38 | $ 9.38 | $ 56.39 | $ 333.87 |
| Tailblock | $ 42.09 | $ 6.01 | $ 1.90 | $ 4.41 | $ 1.57 | $ 2.83 | $ 58.82 | $ 491.16 |
| Total Base Rate Amount | $ 108.98 | $ 72.90 | $ 68.78 | $ 70.84 | $ 68.01 | $ 69.27 | $ 458.78 | $ 1,513.36 |
| COG Rate - (Seasonal) | $ 0.3886 | $ 0.3886 | $ 0.3886 | $ 0.3886 | $ 0.3886 | $ 0.3886 | $ 0.3886 | $ 0.4865 |
| COG amount | $ 59.46 | $ 15.16 | $ 10.10 | $ 13.21 | $ 9.72 | $ 11.27 | $ 118.91 | $ 1,099.92 |
| LDAC | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 |
| LDAC amount | $ 8.49 | $ 2.16 | $ 1.44 | $ 1.89 | $ 1.39 | $ 1.61 | $ 16.98 | $ 125.49 |
| **Total Bill** | **$ 176.92** | **$ 90.22** | **$ 80.33** | **$ 85.94** | **$ 79.11** | **$ 82.15** | **$ 594.67** | **$ 2,738.76** |
| **Total Bill** | **$ 21.16** | **$ 5.09** | **$ 3.25** | **$ 4.85** | **$ 3.57** | **$ 4.14** | **$ 42.05** | **$ 885.59** |
| % Change | **11.96%** | **5.64%** | **4.05%** | **5.64%** | **4.51%** | **5.03%** | **7.07%** | **32.34%** |
| **Base Rate** | $ (0.66) | $ (0.48) | $ (0.46) | $ - | $ - | $ - | $ (1.59) | $ (7.53) |
| % Change | -0.60% | -0.65% | -0.66% | 0.00% | 0.00% | 0.00% | -0.35% | -0.50% |
| **COG & LDAC** | $ 21.82 | $ 5.56 | $ 3.71 | $ 4.85 | $ 3.57 | $ 4.14 | $ 43.64 | $ 893.12 |
| % Change | 32.11% | 32.11% | 32.11% | 32.11% | 32.11% | 32.11% | 32.11% | 72.88% |
| check | $ - | $ 0.00 | $ (0.00) | $ 0.00 | $ 0.00 | $ - | $ (0.00) | $ - |

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



**November 1, 2021 April 30, 2022**
**C&I High Winter Use Medium G 42**

| | | | Nov 21 | Dec 21 | Jan 22 | Feb 22 | Mar 22 | Apr 22 | Winter Nov Apr |
|---|---|---|---|---|---|---|---|---|---|
| **Typical Usage (Therms)** | | | 830 | 2,189 | 3,708 | 3,406 | 2,603 | 2,395 | 15,131 |
| **Winter:** | | 8/1/2021 - Current | | | | | | | |
| Cust. Chg | | $ 171.19 | $ 171.19 | $ 171.19 | $ 171.19 | $ 171.19 | $ 171.19 | $ 171.19 | $ 1,027.14 |
| Headblock | | $ 0.4261 | $ 353.66 | $ 426.10 | $ 426.10 | $ 426.10 | $ 426.10 | $ 426.10 | $ 2,484.16 |
| Tailblock | | $ 0.2839 | $ - | $ 337.56 | $ 768.80 | $ 683.06 | $ 455.09 | $ 396.04 | $ 2,640.55 |
| HB Threshold | | 1,000 | | | | | | | |
| **Summer:** | | 8/1/2021 - Current | | | | | | | |
| Cust. Chg | | $ 171.19 | | | | | | | |
| Headblock | | $ 0.4261 | | | | | | | |
| Tailblock | | $ 0.2839 | | | | | | | |
| HB Threshold | | 400 | | | | | | | |
| Total Base Rate Amount | | | $ 524.85 | $ 934.85 | $ 1,366.09 | $ 1,280.35 | $ 1,052.38 | $ 993.33 | $ 6,151.86 |
| COG Rate - (Seasonal) | | | $ 0.9058 | $ 0.9058 | $ 0.9058 | $ 0.9058 | $ 0.9058 | $ 0.9058 | $ 0.9058 |
| COG amount | | | $ 751.81 | $ 1,982.80 | $ 3,358.71 | $ 3,085.15 | $ 2,357.80 | $ 2,169.39 | $ 13,705.66 |
| LDAC | | | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 |
| LDAC amount | | | $ 71.39 | $ 188.28 | $ 318.94 | $ 292.96 | $ 223.89 | $ 206.00 | $ 1,301.46 |
| **Total Bill** | | | **$ 1,348.06** | **$ 3,105.93** | **$ 5,043.73** | **$ 4,658.47** | **$ 3,634.07** | **$ 3,368.72** | **$ 21,158.98** |

**May 1, 2022 October 31, 2022**

| May 22 | Jun 22 | Jul 22 | Aug 22 | Sep 22 | Oct 22 | Summer May Oct | Total Nov Oct |
|---|---|---|---|---|---|---|---|
| 1,319 | 484 | 285 | 247 | 269 | 340 | 2,944 | 18,075 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| $ 171.19 | $ 171.19 | $ 171.19 | $ 171.19 | $ 171.19 | $ 171.19 | $ 1,027.14 | $ 2,054.28 |
| $ 170.44 | $ 170.44 | $ 121.44 | $ 105.25 | $ 114.62 | $ 144.87 | $ 827.06 | $ 3,311.22 |
| $ 260.90 | $ 23.85 | $ - | $ - | $ - | $ - | $ 284.75 | $ 2,925.31 |
| | | | | | | | |
| $ 602.53 | $ 365.48 | $ 292.63 | $ 276.44 | $ 285.81 | $ 316.06 | $ 2,138.95 | $ 8,290.81 |
| $ 0.5007 | $ 0.5007 | $ 0.5007 | $ 0.5007 | $ 0.5007 | $ 0.5007 | $ 0.5007 | $ 0.8398 |
| $ 660.42 | $ 242.34 | $ 142.70 | $ 123.67 | $ 134.69 | $ 170.24 | $ 1,474.06 | $ 15,179.72 |
| $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 |
| $ 113.45 | $ 41.63 | $ 24.51 | $ 21.25 | $ 23.14 | $ 29.24 | $ 253.22 | $ 1,554.68 |
| **$ 1,376.41** | **$ 649.45** | **$ 459.84** | **$ 421.35** | **$ 443.64** | **$ 515.55** | **$ 3,866.23** | **$ 25,025.21** |

**November 1, 2020 April 30, 2021**
**C&I High Winter Use Medium G 42**

| | | | Nov 20 | Dec 20 | Jan 21 | Feb 21 | Mar 21 | Apr 21 | Winter Nov Apr |
|---|---|---|---|---|---|---|---|---|---|
| **Typical Usage (Therms)** | | | 830 | 2,189 | 3,708 | 3,406 | 2,603 | 2,395 | 15,131 |
| **Winter:** | 7/1/20 - 7/31/21 | 8/1/2021 - Current | | | | | | | |
| Cust. Chg | $ 172.39 | $ 171.19 | $ 172.39 | $ 172.39 | $ 172.39 | $ 172.39 | $ 172.39 | $ 172.39 | $ 1,034.34 |
| Headblock | $ 0.4284 | $ 0.4261 | $ 355.57 | $ 428.40 | $ 428.40 | $ 428.40 | $ 428.40 | $ 428.40 | $ 2,497.57 |
| Tailblock | $ 0.2855 | $ 0.2839 | $ - | $ 339.46 | $ 773.13 | $ 686.91 | $ 457.66 | $ 398.27 | $ 2,655.44 |
| HB Threshold | 1,000 | 1,000 | | | | | | | |
| | - | - | | | | | | | |
| **Summer:** | 7/1/20 - 7/31/21 | 8/1/2021 - Current | | | | | | | |
| Cust. Chg | $ 172.39 | $ 171.19 | | | | | | | |
| Headblock | $ 0.4284 | $ 0.4261 | | | | | | | |
| Tailblock | $ 0.2855 | $ 0.2839 | | | | | | | |
| HB Threshold | 400 | 400 | | | | | | | |
| Total Base Rate Amount | | | $ 527.96 | $ 940.25 | $ 1,373.92 | $ 1,287.70 | $ 1,058.45 | $ 999.06 | $ 6,187.35 |
| COG Rate - (Seasonal) | | | $ 0.5552 | $ 0.5552 | $ 0.4645 | $ 0.4257 | $ 0.5137 | $ 0.6031 | $ 0.5043 |
| COG amount | | | $ 460.82 | $ 1,215.33 | $ 1,722.37 | $ 1,449.93 | $ 1,337.16 | $ 1,444.42 | $ 7,630.03 |
| LDAC | | | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 |
| LDAC amount | | | $ 46.07 | $ 121.49 | $ 205.79 | $ 189.03 | $ 144.47 | $ 132.92 | $ 839.77 |
| **Total Bill** | | | **$ 1,034.84** | **$ 2,277.07** | **$ 3,302.08** | **$ 2,926.67** | **$ 2,540.07** | **$ 2,576.41** | **$ 14,657.15** |

**May 1, 2021 October 31, 2021**

| May 21 | Jun 21 | Jul 21 | Aug 21 | Sep 21 | Oct 21 | Summer May Oct | Total Nov Oct |
|---|---|---|---|---|---|---|---|
| 1,319 | 484 | 285 | 247 | 269 | 340 | 2,944 | 18,075 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| $ 172.39 | $ 172.39 | $ 172.39 | $ 171.19 | $ 171.19 | $ 171.19 | $ 1,030.74 | $ 2,065.08 |
| $ 171.36 | $ 171.36 | $ 122.09 | $ 105.25 | $ 114.62 | $ 144.87 | $ 829.56 | $ 3,327.13 |
| $ 262.37 | $ 23.98 | $ - | $ - | $ - | $ - | $ 286.36 | $ 2,941.79 |
| | | | | | | | |
| $ 606.12 | $ 367.73 | $ 294.48 | $ 276.44 | $ 285.81 | $ 316.06 | $ 2,146.65 | $ 8,334.00 |
| $ 0.3886 | $ 0.3886 | $ 0.3886 | $ 0.3886 | $ 0.3886 | $ 0.3886 | $ 0.3886 | $ 0.4854 |
| $ 512.56 | $ 188.08 | $ 110.75 | $ 95.98 | $ 104.53 | $ 132.12 | $ 1,144.04 | $ 8,774.07 |
| $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 |
| $ 73.20 | $ 26.86 | $ 15.82 | $ 13.71 | $ 14.93 | $ 18.87 | $ 163.39 | $ 1,003.16 |
| **$ 1,191.89** | **$ 582.68** | **$ 421.05** | **$ 386.13** | **$ 405.27** | **$ 467.06** | **$ 3,454.08** | **$ 18,111.24** |

**DIFFERENCE:**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Total Bill** | **$ 313.21** | **$ 828.85** | **$ 1,741.65** | **$ 1,731.80** | **$ 1,094.00** | **$ 792.31** | **$ 6,501.82** | **$ 184.52** | **$ 66.77** | **$ 38.79** | **$ 35.23** | **$ 38.36** | **$ 48.49** | **$ 412.15** | **$ 6,913.98** |
| % Change | **30.27%** | **36.40%** | **52.74%** | **59.17%** | **43.07%** | **30.75%** | **44.36%** | **15.48%** | **11.46%** | **9.21%** | **9.12%** | **9.47%** | **10.38%** | **11.93%** | **38.18%** |
| **Base Rate** | $ (3.11) | $ (5.40) | $ (7.83) | $ (7.35) | $ (6.06) | $ (5.73) | $ (35.49) | $ (3.59) | $ (2.25) | $ (1.86) | $ - | $ - | $ - | $ (7.70) | $ (43.19) |
| % Change | -0.59% | -0.57% | -0.57% | -0.57% | -0.57% | -0.57% | -0.57% | -0.59% | -0.61% | -0.63% | 0.00% | 0.00% | 0.00% | -0.36% | -0.52% |
| **COG & LDAC** | $ 316.32 | $ 834.26 | $ 1,749.48 | $ 1,739.15 | $ 1,100.06 | $ 798.04 | $ 6,537.31 | $ 188.11 | $ 69.02 | $ 40.64 | $ 35.23 | $ 38.36 | $ 48.49 | $ 419.85 | $ 6,957.17 |
| % Change | 62.41% | 62.41% | 90.73% | 106.11% | 74.25% | 50.59% | 77.18% | 32.11% | 32.11% | 32.11% | 32.11% | 32.11% | 32.11% | 32.11% | 71.16% |
| 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. d/b/a Liberty**
**Off Peak 2022 Summer Cost of Gas Filing**
**Annual Bill Comparisons, May 21 Oct 21 vs May 22 Oct 22 Commercial Rate G 52**



**November 1, 2021 April 30, 2022**
**Commercial Rate (G 52)**

| | Nov 21 | Dec 21 | Jan 22 | Feb 22 | Mar 22 | Apr 22 | Winter Nov Apr |
|---|---|---|---|---|---|---|---|
| **Typical Usage (Therms)** | 1,352 | 1,866 | 2,284 | 2,160 | 1,886 | 1,760 | 11,308 |
| **Winter:** 8/1/2021 - Current | | | | | | | |
| Cust. Chg $ 171.19 | $ 171.19 | $ 171.19 | $ 171.19 | $ 171.19 | $ 171.19 | $ 171.19 | $ 1,027.14 |
| Headblock $ 0.2428 | $ 242.80 | $ 242.80 | $ 242.80 | $ 242.80 | $ 242.80 | $ 242.80 | $ 1,456.80 |
| Tailblock $ 0.1617 | $ 56.92 | $ 140.03 | $ 207.62 | $ 187.57 | $ 143.27 | $ 122.89 | $ 858.30 |
| HB Threshold 1,000 | | | | | | | |
| **Summer:** 8/1/2021 - Current | | | | | | | |
| Cust. Chg $ 171.19 | | | | | | | |
| Headblock $ 0.1749 | | | | | | | |
| Tailblock $ 0.1000 | | | | | | | |
| HB Threshold 1,000 | | | | | | | |
| Total Base Rate Amount | $ 470.91 | $ 554.02 | $ 621.61 | $ 601.56 | $ 557.26 | $ 536.88 | $ 3,342.24 |
| COG Rate - (Seasonal) | $ 0.9041 | $ 0.9041 | $ 0.9041 | $ 0.9041 | $ 0.9041 | $ 0.9041 | $ 0.9041 |
| COG amount | $ 1,222.34 | $ 1,687.05 | $ 2,064.96 | $ 1,952.86 | $ 1,705.13 | $ 1,591.22 | $ 10,223.56 |
| LDAC | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 |
| LDAC amount | $ 116.29 | $ 160.50 | $ 196.45 | $ 185.79 | $ 162.22 | $ 151.38 | $ 972.63 |
| **Total Bill** | **$ 1,809.54** | **$ 2,401.57** | **$ 2,883.03** | **$ 2,740.21** | **$ 2,424.61** | **$ 2,279.48** | **$ 14,538.44** |

**May 1, 2022 October 31, 2022**

| | May 22 | Jun 22 | Jul 22 | Aug 22 | Sep 22 | Oct 22 | Summer May Oct | Total Nov Oct |
|---|---|---|---|---|---|---|---|---|
| **Typical Usage (Therms)** | 1,497 | 1,128 | 1,032 | 1,025 | 1,050 | 897 | 6,629 | 17,937 |
| **Winter:** | | | | | | | | |
| Cust. Chg | | | | | | | | |
| Headblock | | | | | | | | |
| Tailblock | | | | | | | | |
| HB Threshold | | | | | | | | |
| **Summer:** | | | | | | | | |
| Cust. Chg | $ 171.19 | $ 171.19 | $ 171.19 | $ 171.19 | $ 171.19 | $ 171.19 | $ 1,027.14 | $ 2,054.28 |
| Headblock | $ 174.90 | $ 174.90 | $ 174.90 | $ 174.90 | $ 174.90 | $ 156.89 | $ 1,031.39 | $ 2,488.19 |
| Tailblock | $ 49.70 | $ 12.80 | $ 3.20 | $ 2.50 | $ 5.00 | $ - | $ 73.20 | $ 931.50 |
| HB Threshold | | | | | | | | |
| Total Base Rate Amount | $ 395.79 | $ 358.89 | $ 349.29 | $ 348.59 | $ 351.09 | $ 328.08 | $ 2,131.73 | $ 5,473.97 |
| COG Rate - (Seasonal) | $ 0.4994 | $ 0.4994 | $ 0.4994 | $ 0.4994 | $ 0.4994 | $ 0.4994 | $ 0.4994 | $ 0.7545 |
| COG amount | $ 747.60 | $ 563.32 | $ 515.38 | $ 511.89 | $ 524.37 | $ 447.96 | $ 3,310.52 | $ 13,534.09 |
| LDAC | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 | $ 0.0860 |
| LDAC amount | $ 128.76 | $ 97.02 | $ 88.77 | $ 88.16 | $ 90.31 | $ 77.15 | $ 570.18 | $ 1,542.81 |
| **Total Bill** | **$ 1,272.15** | **$ 1,019.24** | **$ 953.44** | **$ 948.64** | **$ 965.77** | **$ 853.19** | **$ 6,012.43** | **$ 20,550.87** |

**November 1, 2020 April 30, 2021**
**Commercial Rate (G 52)**

| | Nov 20 | Dec 20 | Jan 21 | Feb 21 | Mar 21 | Apr 21 | Winter Nov Apr |
|---|---|---|---|---|---|---|---|
| **Typical Usage (Therms)** | 1,352 | 1,866 | 2,284 | 2,160 | 1,886 | 1,760 | 11,308 |
| **Winter:** 7/1/20 - 7/31/21 8/1/2021 - Current | | | | | | | |
| Cust. Chg $ 172.39 $ 171.19 | $ 172.39 | $ 172.39 | $ 172.39 | $ 172.39 | $ 172.39 | $ 172.39 | $ 1,034.34 |
| Headblock $ 0.2439 $ 0.2428 | $ 243.90 | $ 243.90 | $ 243.90 | $ 243.90 | $ 243.90 | $ 243.90 | $ 1,463.40 |
| Tailblock $ 0.1624 $ 0.1617 | $ 57.16 | $ 140.64 | $ 208.52 | $ 188.38 | $ 143.89 | $ 123.42 | $ 862.02 |
| HB Threshold 1,000 1,000 | | | | | | | |
| - - | | | | | | | |
| **Summer:** 7/1/20 - 7/31/21 8/1/2021 - Current | | | | | | | |
| Cust. Chg $ 172.39 $ 171.19 | | | | | | | |
| Headblock $ 0.1767 $ 0.1749 | | | | | | | |
| Tailblock $ 0.1004 $ 0.1000 | | | | | | | |
| HB Threshold 1,000 1,000 | | | | | | | |
| Total Base Rate Amount | $ 473.45 | $ 556.93 | $ 624.81 | $ 604.67 | $ 560.18 | $ 539.71 | $ 3,359.76 |
| COG Rate - (Seasonal) | $ 0.5660 | $ 0.5660 | $ 0.4753 | $ 0.4365 | $ 0.5245 | $ 0.6139 | $ 0.5235 |
| COG amount | $ 765.23 | $ 1,056.16 | $ 1,085.59 | $ 942.84 | $ 989.21 | $ 1,080.46 | $ 5,919.48 |
| LDAC | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 |
| LDAC amount | $ 75.04 | $ 103.56 | $ 126.76 | $ 119.88 | $ 104.67 | $ 97.68 | $ 627.59 |
| **Total Bill** | **$ 1,313.72** | **$ 1,716.65** | **$ 1,837.16** | **$ 1,667.39** | **$ 1,654.06** | **$ 1,717.86** | **$ 9,906.84** |

**May 1, 2021 October 31, 2021**

| | May 21 | Jun 21 | Jul 21 | Aug 21 | Sep 21 | Oct 21 | Summer May Oct | Total Nov Oct |
|---|---|---|---|---|---|---|---|---|
| **Typical Usage (Therms)** | 1,497 | 1,128 | 1,032 | 1,025 | 1,050 | 897 | 6,629 | 17,937 |
| **Winter:** | | | | | | | | |
| Cust. Chg | | | | | | | | |
| Headblock | | | | | | | | |
| Tailblock | | | | | | | | |
| HB Threshold | | | | | | | | |
| **Summer:** | | | | | | | | |
| Cust. Chg | $ 172.39 | $ 172.39 | $ 172.39 | $ 171.19 | $ 171.19 | $ 171.19 | $ 1,030.74 | $ 2,065.08 |
| Headblock | $ 176.70 | $ 176.70 | $ 176.70 | $ 174.90 | $ 174.90 | $ 156.89 | $ 1,036.79 | $ 2,500.19 |
| Tailblock | $ 49.90 | $ 12.85 | $ 3.21 | $ 2.50 | $ 5.00 | $ - | $ 73.46 | $ 935.48 |
| HB Threshold | | | | | | | | |
| Total Base Rate Amount | $ 398.99 | $ 361.94 | $ 352.30 | $ 348.59 | $ 351.09 | $ 328.08 | $ 2,140.99 | $ 5,500.75 |
| COG Rate - (Seasonal) | $ 0.3999 | $ 0.3999 | $ 0.3999 | $ 0.3999 | $ 0.3999 | $ 0.3999 | $ 0.3999 | $ 0.4778 |
| COG amount | $ 598.65 | $ 451.09 | $ 412.70 | $ 409.90 | $ 419.90 | $ 358.71 | $ 2,650.94 | $ 8,570.42 |
| LDAC | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 | $ 0.0555 |
| LDAC amount | $ 83.08 | $ 62.60 | $ 57.28 | $ 56.89 | $ 58.28 | $ 49.78 | $ 367.91 | $ 995.50 |
| **Total Bill** | **$ 1,080.72** | **$ 875.63** | **$ 822.28** | **$ 815.38** | **$ 829.26** | **$ 736.57** | **$ 5,159.83** | **$ 15,066.67** |

**DIFFERENCE:**

| | Nov 21 | Dec 21 | Jan 22 | Feb 22 | Mar 22 | Apr 22 | Winter Nov Apr |
|---|---|---|---|---|---|---|---|
| **Total Bill** | **$ 495.82** | **$ 684.93** | **$ 1,045.87** | **$ 1,072.81** | **$ 770.55** | **$ 561.62** | **$ 4,631.60** |
| % Change | **37.74%** | **39.90%** | **56.93%** | **64.34%** | **46.59%** | **32.69%** | **46.75%** |
| **Base Rate** | $ (2.55) | $ (2.91) | $ (3.20) | $ (3.11) | $ (2.92) | $ (2.83) | $ (17.52) |
| % Change | -0.54% | -0.52% | -0.51% | -0.51% | -0.52% | -0.52% | -0.52% |
| **COG & LDAC** | $ 498.36 | $ 687.83 | $ 1,049.07 | $ 1,075.92 | $ 773.47 | $ 564.45 | $ 4,649.12 |
| % Change | 59.31% | 59.31% | 86.53% | 101.24% | 70.71% | 47.91% | 71.01% |
| check | $ - | $ - | $ - | $ - | $ - | $ - | $ - |

| | May 22 | Jun 22 | Jul 22 | Aug 22 | Sep 22 | Oct 22 | Summer May Oct | Total Nov Oct |
|---|---|---|---|---|---|---|---|---|
| **Total Bill** | **$ 191.43** | **$ 143.60** | **$ 131.16** | **$ 133.26** | **$ 136.51** | **$ 116.62** | **$ 852.59** | **$ 5,484.19** |
| % Change | **17.71%** | **16.40%** | **15.95%** | **16.34%** | **16.46%** | **15.83%** | **16.52%** | **36.40%** |
| **Base Rate** | $ (3.20) | $ (3.05) | $ (3.01) | $ - | $ - | $ - | $ (9.26) | $ (26.78) |
| % Change | -0.80% | -0.84% | -0.86% | 0.00% | 0.00% | 0.00% | -0.43% | -0.49% |
| **COG & LDAC** | $ 194.63 | $ 146.65 | $ 134.17 | $ 133.26 | $ 136.51 | $ 116.62 | $ 861.85 | $ 5,510.97 |
| % Change | 28.55% | 28.55% | 28.55% | 28.55% | 28.55% | 28.55% | 28.55% | 57.61% |
| check | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |

**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**
**Off Peak 2022 Summer Cost of Gas Filing**
**Residential Heating**

| | Summer 2021 | Summer 2022 |
|---|---|---|
| Customer Charge | $ 15.50 | $ 15.39 |
| First 20 Therms | $ 0.5678 | $ 0.5632 |
| Excess 20 Therms | $ 0.5678 | $ 0.5632 |
| LDAC | $ 0.0589 | $ 0.1733 |
| COG | $ 0.5002 | $ 0.5002 |
| Total Adjust | $ 0.5591 | $ 0.6735 |

| | | Summer 2021 COG @ $ 0.5591 | Summer 2022 Cog @ $ 0.6735 | Total $ Impact | Total % Impact | Base Rate $ Impact | Base Rate % Impact | COG $ Impact | COG % Impact | LDAC $ Impact | LDAC % Impact |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | $ 0.11 | 20% | | | | | | |
| Cooking alone | 5 | $ 21.13 | $ 21.57 | $ 0.44 | 2% | $ (0.13) | -1% | $ - | 0% | $ 0.57 | 3% |
| | 10 | $ 26.77 | $ 27.76 | $ 0.99 | 4% | $ (0.16) | -1% | $ - | 0% | $ 1.14 | 4% |
| | 20 | $ 38.04 | $ 40.12 | $ 2.09 | 5% | $ (0.20) | -1% | $ - | 0% | $ 2.29 | 6% |
| Water Heating alone | 30 | $ 49.31 | $ 52.49 | $ 3.18 | 6% | $ (0.25) | -1% | $ - | 0% | $ 3.43 | 7% |
| | 45 | $ 66.21 | $ 71.04 | $ 4.83 | 7% | $ (0.32) | 0% | $ - | 0% | $ 5.15 | 8% |
| | 50 | $ 71.85 | $ 77.22 | $ 5.38 | 7% | $ (0.34) | 0% | $ - | 0% | $ 5.72 | 8% |
| Heating Alone | 80 | $ 100.02 | $ 108.14 | $ 8.12 | 8% | $ (0.45) | 0% | $ - | 0% | $ 8.58 | 9% |
| | 125 | $ 165.38 | $ 179.87 | $ 14.49 | 9% | $ (0.72) | 0% | $ - | 0% | $ 15.21 | 9% |
| | 150 | $ 184.54 | $ 200.89 | $ 16.36 | 9% | $ (0.80) | 0% | $ - | 0% | $ 17.16 | 9% |
| | 200 | $ 240.88 | $ 262.73 | $ 21.85 | 9% | $ (1.03) | 0% | $ - | 0% | $ 22.88 | 9% |

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

**2022 Summer Cost of Gas Filing**
**Capacity Assignment Calculations 2020-2021**
**Derivation of Class Assignments and Weightings**

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

| | | 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 | 659 | 715 | 0.4% | | 103 | 613 |
| 2 | RATE R-3-Resi Htg | 66,114 | 72,399 | 42 2% | | 3,617 | 68,783 |
| 3 | RATE G-41 (T) | 28,689 | 31,499 | 18.4% | | 750 | 30,749 |
| 4 | RATE G-51 (S) | 2,361 | 2,534 | 1 5% | | 641 | 1,893 |
| 5 | RATE G-42 (V) | 36,728 | 40,301 | 23 5% | | 1,198 | 39,104 |
| 6 | RATE G-52 | 5,125 | 5,490 | 3 2% | | 1,498 | 3,992 |
| 7 | RATE G-43 | 9,793 | 10,710 | 6 2% | | 678 | 10,031 |
| 8 | RATE G-53 | 5,922 | 6,346 | 3.7% | | 1,715 | 4,631 |
| 9 | RATE G-54 | 1,495 | 1,608 | 0 9% | | 378 | 1,230 |
| 10 | | | | | | | |
| 11 | Total | 156,887 | 171,602 | 100 0% | | 10,577 | 161,025 |
| 12 | | | | | | | - |
| 13 | Residential Total | 66,773 | 73,115 | **42.607%** | | 3,719 | 69,396 |
| 14 | LLF Total | 75,211 | 82,510 | **48.083%** | | 2,626 | 79,885 |
| 15 | HLF Total | 14,903 | 15,977 | **9.310%** | | 4,232 | 11,745 |
| 16 | Total | 156,887 | 171,602 | 100 0% | | 10,577 | 161,025 |
| 17 | | | | | | | |
| 18 | C&I Breakdown | | | | | | |
| 19 | LLF Total | | | | | 2,626 | 79,885 |
| 20 | HLF Total | | | | | 4,232 | 11,745 |
| 21 | Total | | | | | 6,858 | 91,630 |
| 22 | | | | | | | |
| 23 | C&I Breakdown Percentage | | | | | | |
| 24 | LLF Total | | | | | 38.291% | 87.182% |
| 25 | HLF Total | | | | | 61.709% | 12.818% |
| 26 | Total | | | | | **100.0%** | **100.0%** |
| 27 | | | | | | | |
| 28 | | Capacity Cost | MDQ, Dt | $/Dt-Mo. | | | |
| 29 | Pipeline | $16,344,325 | 119,718 | $11.3770 | | | |
| 30 | Storage | $4,121,310 | 28,115 | $12.2156 | | | |
| 31 | | | | | | | |
| 32 | Peaking | $4,106,500 | | | | | |
| 33 | Peaking Additional Costs (Concord Lateral Peaking x Differential) | $0 | | | | | |
| 34 | Subtotal Peaking Costs | $4 106 500 | 23,769 | $14.3974 | | | |
| 35 | Total | $24,572,135 | 171,602 | $11.9327 | | | |
| 36 | | | | | | | |
| 37 | | Capacity Cost | MDQ, Dt | $/Dt-Mo. | | | |
| 38 | Pipeline - Baseload | 1,443,958 | 10,577 | $11.3770 | | | |
| 39 | Pipeline - Remaining | 14,900,367 | 109,141 | $11.3770 | | | |
| 40 | Storage | 4,121,310 | 28,115 | $12.2156 | | | |
| 41 | Peaking | 4 106 500 | 23 769 | $14.3974 | | | |
| 42 | Total | 24,572,135 | 171,602 | $11.9327 | | | |
| 43 | | | | | | | |
| 44 | | | | | | | |
| 45 | Residential Allocation | Capacity Cost | MDQ, Dt | $/Dt-Mo. | | | |
| 46 | Pipeline - Base Line 38 * Line 13 Col C **42.607%** | 615,228 | 4,506 | $11.3770 | | | |
| 47 | Pipeline - Remaining Line 39 * Line 13 Col C **42.607%** | 6,348,623 | 46,502 | $11.3770 | | | |
| 48 | Storage Line 40 * Line 13 Col C **42.607%** | 1,755,962 | 11,979 | $12.2156 | | | |
| 49 | Peaking Line 41 * Line 13 Col C **42.607%** | 1,749,630 | 10,127 | $14.3974 | | | |
| 50 | Total **42.607%** | 10,469,399 | 73,114 | $11.9327 | | | |
| 51 | | | | | | | |

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

**2022 Summer Cost of Gas Filing**
**Capacity Assignment Calculations 2020-2021**
**Derivation of Class Assignments and Weightings**

| | | | | | | | **Ratios for COG** |
|---|---|---|---|---|---|---|---|
| C&I Allocation | | | | Capacity Cost | MDQ, Dt | $/Dt-Mo. | |
| | Pipeline - Base | Line 38 - Line 46 | | 828,730 | 6,070 | $11.3770 | |
| | Pipeline - Remaining | Line 39 - Line 47 | | 8,551,745 | 62,640 | $11.3769 | |
| | Storage | Line 40 - Line 48 | | 2,365,348 | 16,136 | $12.2157 | |
| | Peaking | Line 41 - Line 49 | | 2,356,870 | 13,642 | $14.3971 | |
| | Total | | **57.393%** | 14,102,692 | 98,488 | $11.9327 | **1.0000** |
| | | | | | | | |
| LLF - C&I Allocation | | | | Capacity Cost | MDQ, Dt | $/Dt-Mo. | |
| | Pipeline - Base | Line 60 * Line 24 Col E | | 317,329 | 2,324 | $11.3787 | |
| | Pipeline - Remaining | Line 61 * Line 24 Col F | | 7,455,589 | 54,610 | $11.3770 | |
| | Storage | Line 62 * Line 24 Col F | | 2,062,160 | 14,068 | $12.2154 | |
| | Peaking | Line 63 * Line 24 Col F | | 2,054,769 | 11,893 | $14.3976 | |
| | Total | | **48.3875%** | 11,889,847 | 82,895 | $11.9527 | **1.0017** |
| | | | 38.291% | 84% | | | (Line 72 / Line 64) |
| HLF - C&I Allocation | | | | Capacity Cost | MDQ, Dt | $/Dt-Mo. | |
| | Pipeline - Base | Line 60 - Line 68 | | 511,401 | 3,746 | $11.3766 | |
| | Pipeline - Remaining | Line 61 - Line 69 | | 1,096,156 | 8,030 | $11.3756 | |
| | Storage | Line 62 - Line 70 | | 303,188 | 2,068 | $12.2174 | |
| | Peaking | Line 63 - Line 71 | | 302,101 | 1,749 | $14.3940 | |
| | Total | | **9.0055%** | 2,212,846 | 15,593 | $11.8261 | **0.9911** |
| | | | | | | | (Line 80 / Line 64) |

| Unit Cost | Residential | LLF C&I | HLF C&I |
|---|---|---|---|
| Pipeline | $ 11.3770 | $ 11 3770 | $ 11.3770 |
| Storage | $ 12.2156 | $ 12 2156 | $ 12.2156 |
| Peaking | $ - | $ - | $ - |
| Total | $ 11.9327 | $ 11 9527 | $ 11.8261 |

| Load Makeup | Residential | **LLF C&I** | **HLF C&I** |
|---|---|---|---|
| Pipeline | 69.77% | **68.68%** | **75.52%** |
| Storage | 16.38% | **16.97%** | **13.26%** |
| Peaking | 13.85% | **14.35%** | **11.22%** |
| Total | 100.00% | **100.00%** | **100.00%** |

| Supply Makeup | Residential | LLF C&I | HLF C&I | Total |
|---|---|---|---|---|
| Pipeline | 42.61% | 47.56% | 9.84% | 100.00% |
| Storage | 42.61% | 50.04% | 7.36% | 100.00% |
| Peaking | 42.61% | 50.04% | 7.36% | 100.00% |

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

**2022 Summer Cost of Gas Filing**
**Correction Factor Calculation**

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

| | | | |
|---|---|---|---|
| Total Sales | 10,442,120 | | |
| Low Winter Use | 4,333,380 | | |
| Summer Ratio for Low Winter Use | **0.9911** | **Schedule 10A p 2, ln 80** | |
| High Winter Use | 6,108,740 | | |
| Summer Ratio for High Winter Use | **1.0017** | **Schedule 10A p 2, ln 72** | |
| 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 = | **100.2706%** | | |

**Allocation Calculation for Miscellaneous Overhead**

| | | | |
|---|---|---|---|
| Projected Winter Sales Volume | 11/1/21- 4/30/22 | 91,676,680 | Sch.10B, ln 23 |
| Projected Annual Sales Volume | 11/1/21 - 10/31/22 | 115,042,810 | Sch.10B, ln 23 |
| Percentage of Winter Sales to Annual Sales | | 79.69% | |

**Liberty Utilities (EnergyNorth Natural Gas) Corp.**
**d/b/a Liberty Utilities**
**Off Peak 2022 Summer Cost of Gas Filing**
**2022 Summer Cost of Gas Filing**



**Dry Therms**

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

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



**Off Peak 2022 Summer Cost of Gas Filing**
**Normal and Design Year Volumes**

| **Volumes (Therms)** | **Normal Year** | | | | | | |
|---|---|---|---|---|---|---|---|
| **For the Months of May 22 -October 22** | | | | | | | |
| | **May-22** | **Jun-22** | **Jul-22** | **Aug-22** | **Sep-22** | **Oct-22** | **Off Peak May - Oct** |
| Pipeline Gas: | | | | | | | |
| Dawn Supply | 739,535 | 95,658 | - | - | 206,295 | 636,518 | 1,678,006 |
| Niagara Supply | 668,413 | 540,809 | 542,484 | 545,801 | 591,423 | 687,667 | 3,576,596 |
| TGP Supply (Gulf) | 13,120 | - | - | - | - | 384,326 | 397,446 |
| Dracut Supply 1 - Baseload | - | - | - | - | - | - | 0 |
| Dracut Supply 2 - Swing | - | - | - | - | - | 436,185 | 436,185 |
| Dracut Supply 3 - Swing | - | - | - | - | - | - | - |
| Constellation Combo | - | - | - | - | - | - | 0 |
| LNG Truck | 44,883 | 18,131 | - | - | 55,566 | 20,602 | 139,181 |
| Propane Truck | 79,409 | 71,899 | 69,472 | 69,279 | 73,449 | 81,696 | 445,204 |
| PNGTS | 205,081 | 146,300 | 119,612 | 125,908 | 176,916 | 218,093 | 991,910 |
| Portland Natural Gas | 152,602 | 3,126 | - | - | 2,555 | 574,003 | 732,286 |
| TGP Supply (Z4) | 5,386,659 | 4,708,479 | 4,708,982 | 4,696,535 | 4,819,522 | 5,546,088 | 29,866,267 |
| | 7,289,702 | 5,584,403 | 5,440,551 | 5,437,523 | 5,925,726 | 8,585,177 | 38,263,081 |
| Storage Gas: | | | | | | | |
| | - | - | - | - | - | - | 0 |
| Produced Gas: | | | | | | | |
| LNG Vapor | 20,025 | 18,131 | 17,519 | 17,470 | 18,522 | 20,602 | 112,269 |
| Propane | - | - | - | - | - | - | 0 |
| | 20,025 | 18,131 | 17,519 | 17,470 | 18,522 | 20,602 | 112,269 |
| Less - Gas Refills: | | | | | | | |
| LNG Truck | (44,883) | (18,131) | - | - | (55,566) | (20,602) | (139,181) |
| Propane | (79,409) | (71,899) | (69,472) | (69,279) | (73,449) | (81,696) | (445,204) |
| TGP Storage Refill | (2,188,222) | (2,766,568) | (3,120,796) | (3,057,929) | (2,444,250) | (1,262,380) | (14,840,145) |
| | (2,312,514) | (2,856,598) | (3,190,268) | (3,127,208) | (2,573,265) | (1,364,677) | (15,424,530) |
| Total Sendout Volumes | 4,997,212 | 2,745,936 | 2,267,802 | 2,327,785 | 3,370,983 | 7,241,101 | 22,950,820 |

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



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

**Normal and Design Year Volumes**

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

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

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

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

Schedule 11C
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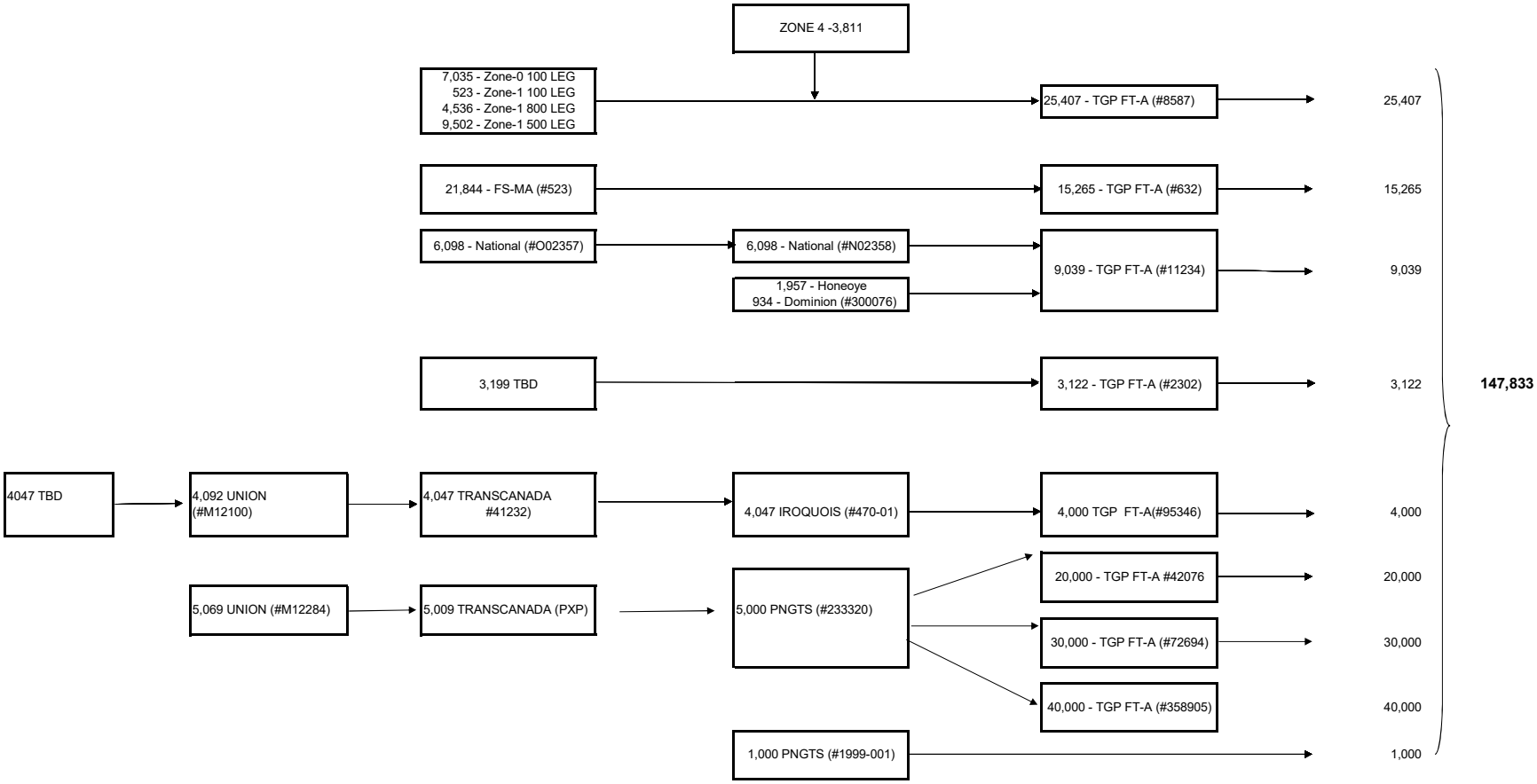
**Off Peak 2022 Summer Cost of Gas Filing**
**Capacity Utilization**
**Volumes (Therms)**

| | 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 | 1,678,006 | 4,000 | 7,360,000 | 23% | 1,548,966 | 4,000 | 7,360,000 | 21% |
| Niagara Supply | 3,576,596 | 3,122 | 5,744,480 | 62% | 3,576,596 | 3,122 | 5,744,480 | 62% |
| TGP Supply (Gulf) | 397,446 | 21,596 | 39,736,640 | 1% | 396,755 | 21,596 | 39,736,640 | 1% |
| Dracut Supply 1 & 2 & 3 | 436,185 | 50,000 | 92,000,000 | 0% | 436,185 | 50,000 | 92,000,000 | 0% |
| LNG Truck | 139,181 | - | - | - | 139,181 | - | - | - |
| Propane Truck | 445,204 | - | - | - | 445,204 | - | - | - |
| PNGTS | 991,910 | 1,000 | 1,840,000 | 54% | 991,910 | 1,000 | 1,840,000 | 54% |
| Portland Natural Gas | 732,286 | 1,784 | 3,282,560 | 22% | 713,642 | 1,784 | 3,282,560 | 22% |
| TGP Supply (Z4) | 29,866,267 | 21,596 | 39,736,640 | 75% | 31,100,529 | 21,596 | 39,736,640 | 78% |
| Other Purchased Resources | - | | - | | - | | - | |
| Subtotal Pipeline Volumes | 38,263,081 | | | | 39,348,969 | | | |
| **Storage Gas:** | | | | | | | | |
| 0 | 0 | | 25,792,710 | 0% | - | | 25,792,710 | 0% |
| **Produced Gas:** | | | | | | | | |
| LNG Vapor | 112,269 | | | | 112,269 | | | |
| Propane | - | | | | - | | | |
| Subtotal Produced Gas | 112,269 | | | | 112,269 | | | |
| **Less - Gas Refills:** | | | | | | | | |
| LNG Truck | (139,181) | | | | (139,181) | | | |
| Propane | (445,204) | | | | (445,204) | | | |
| TGP Storage Refill | (14,840,145) | | | | (15,948,820) | | | |
| Subtotal Refills | (15,424,530) | | | | (16,533,205) | | | |
| Total Sendout Volumes | 22,950,820 | | | | 22,928,033 | | | |

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

**Off Peak 2022 Summer Cost of Gas Filing**
**Transportation Available for Pipeline Supply and Storage**
**(MMBtu)**





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

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

* MAQ is calculated on a 365 day calendar year.

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

**Off Peak 2022 Summer Cost of Gas Filing**
**Storage Inventory**

**Underground Storage Gas**

| | | May-21 (Actual) | Jun-21 (Actual) | Jul-21 (Estimate) | Aug-21 (Estimate) | Sep-21 (Estimate) | Oct-21 (Estimate) | Total |
|---|---|---|---|---|---|---|---|---|
| Beginning Balance (MMBtu) | | 1,895,479 | 1,901,645 | 1,929,241 | 1,929,241 | 1,929,241 | 2,113,358 | 1,951,935 |
| Injections (MMBtu) | Sch 11A ln 39 /10 | 11,436 | 27,746 | - | - | 184,117 | 184,117 | 1,961,830 |
| Subtotal | | 1,906,915 | 1,929,391 | 1,929,241 | 1,929,241 | 2,113,358 | 2,297,475 | |
| Storage Sale | | - | - | - | - | - | - | |
| Withdrawals (MMBtu) | Sch 11A ln 29 /10 | (5,270) | (150) | - | - | - | - | (1,368,064) |
| Ending Balance (MMBtu) | | 1,901,645 | 1,929,241 | 1,929,241 | 1,929,241 | 2,113,358 | 2,297,475 | 2,545,701 |
| | | | | | | | | |
| Beginning Balance | | $ 9,092,272 | $ 9,085,950 | $ 9,164,894 | $ 9,164,894 | $ 9,164,894 | $ 9,767,303 | $ 3,609,668 |
| Injections | ln 11 * ln 36 | 18,859 | 78,943 | - | - | 602,409 | 606,806 | 5,688,924 |
| Subtotal | | $ 9,111,130 | $ 9,164,894 | $ 9,164,894 | $ 9,164,894 | $ 9,767,303 | $ 10,374,109 | |
| Storage Sale | | $ - | $ - | $ - | $ - | $ - | $ - | |
| Withdrawals | ln 17 * ln 34 | $ (25,180) | $ - | $ - | $ - | $ - | $ - | $ (2,634,626) |
| Ending Balance | | $ 9,085,950 | $ 9,164,894 | $ 9,164,894 | $ 9,164,894 | $ 9,767,303 | $ 10,374,109 | $ 6,663,966 |
| Average Rate For Withdrawals | ln 22 /ln 9 | $ 4.7779 | $ 4.7501 | $ 4.7505 | $ 4.7505 | $ 4.6217 | $ 4.5154 | |
| TGP Storage Rate for Injections | Actual or NYMEX plus TGP Transportation | $ 1.6490 | $ 2.8452 | $ - | $ - | $ 3.2719 | $ 3.2958 | |

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

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

**Liquid Propane Gas (LPG)**

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

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

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

| **Liquid Natural Gas (LNG)** | | May-21 (Actual) | Jun-21 (Actual) | Jul-21 (Estimate) | Aug-21 (Estimate) | Sep-21 (Estimate) | Oct-21 (Estimate) | Total |
|---|---|---|---|---|---|---|---|---|
| Beginning Balance | | 7,885 | 5,928 | 10,583 | 10,583 | 10,583 | 10,583 | 12,057 |
| Injections | Sch 11A ln 37 /10 | 797 | 6,395 | - | - | - | - | 136,806 |
| Subtotal | | 8,682 | 12,323 | 10,583 | 10,583 | 10,583 | 10,583 | |
| Withdrawals | Sch 11A ln 32 /10 | (2,754) | (1,740) | - | - | - | - | (132,648) |
| Ending Balance | | 5,928 | 10,583 | 10,583 | 10,583 | 10,583 | 10,583 | 16,216 |
| | | | | | | | | |
| Beginning Balance | | $ 34,430 | $ 25,885 | $ 42,850 | $ 42,850 | $ 42,850 | $ 42,850 | $ 135,659 |
| Injections | ln 78 * ln 99 | 3,480 | 24,011 | - | - | - | - | 653,097 |
| Subtotal | | $ 37,910 | $ 49,896 | $ 42,850 | $ 42,850 | $ 42,850 | $ 42,850 | |
| Withdrawals | ln 82 * ln 97 | (12,025) | (7,045) | - | - | - | - | (828,335) |
| Ending Balance | | $ 25,885 | $ 42,850 | $ 42,850 | $ 42,850 | $ 42,850 | $ 42,850 | $ (39,578) |
| Average Rate For Withdrawals | | $ 4.3665 | $ 4.0490 | $ 4.0490 | $ 4.0490 | $ 4.0490 | $ 4.0490 | |
| LNG Rate for Injections | Actual or Sch. 6, ln 161 * 10 | $ 4.3665 | $ 3.7546 | $ 10.9775 | $ 10.4975 | $ - | $ - | |