

## Appendices

### A. SCHEDULE OF SIGNIFICANT INTERCHANGES ASSUMED FOR TRANSFER LIMITS STUDIES

#### SUMMARY OF NET INTERCHANGE SCHEDULES

| TO<br>FROM       | NYISO | PJM | IESO | ISONE | NB/NS | Trans<br>Énergie | Cross-<br>Sound | Neptune-<br>HVdc | Linden<br>VFT | HTP  | NNC<br>Transfer | Other<br>Control<br>Areas | TOTAL<br>EXPORT+<br>IMPORT- |
|------------------|-------|-----|------|-------|-------|------------------|-----------------|------------------|---------------|------|-----------------|---------------------------|-----------------------------|
| NYISO            |       | 37  | 0    | 90    | 0     | -239             | -330            | -660             | -315          | -320 | -100            | 125                       | -1712                       |
| PJM              | -37   |     | 0    | 0     | 0     | 0                | 0               | 660              | 315           | 320  | 0               | -4462                     | -3204                       |
| IESO             | 0     | 0   |      | 0     | 0     | -1250            | 0               | 0                | 0             | 0    | 0               | 0                         | -1250                       |
| ISONE            | -90   | 0   | 0    |       | 0     | -225             | 330             | 0                | 0             | 0    | 100             | 0                         | 115                         |
| NB/NS            | 0     | 0   | 0    | 0     |       | -300             | 0               | 0                | 0             | 0    | 0               | 0                         | -300                        |
| Trans<br>Énergie | 239   | 0   | 1250 | 225   | 300   |                  | 0               | 0                | 0             | 0    | 0               | 45                        | 2059                        |

**APPENDIX A**  
**SUMMARY OF WINTER 2016-17 BASE TRANSFERS**

| <b>NEW BRUNSWICK/NOVA SCOTIA</b>                            |             |
|---|-------------|
| New Brunswick to TransÉnergie: Madawaska and Eel River HVdc | -300        |
| New Brunswick to New England                                | 0           |
| <b>Total Export (+) / Import (-)</b>                        | <b>-300</b> |

| <b>NEW ENGLAND</b>                           |            |
|--|------------|
| New England to New Brunswick                 | 0          |
| New England to TransÉnergie: Sandy Pond HVdc | 0          |
| New England to TransÉnergie: Vermont         | -225       |
| New England to New York                      | -90        |
| New England to NY: Norwalk Harbor-Northport  | 100        |
| New England to NY: Cross-Sound               | 330        |
| <b>Total Export (+) / Import (-)</b>         | <b>115</b> |

| <b>NEW YORK ISO</b>                               |              |
|---|--------------|
| New York to TransÉnergie                          | -239         |
| New York to New England                           | 90           |
| New York to New England: Norwalk Harbor-Northport | -100         |
| New York to New England: Cross-Sound              | -330         |
| New York to PJM: NYPA to PA-RECS                  | 75           |
| New York to PJM: Sithe Allegheny                  | -38          |
| New York to PJM: Non-Firm Energy                  | 0            |
| New York to PJM: Linden VFT                       | -315         |
| New York to PJM: Neptune HVdc                     | -660         |
| New York to PJM: HTP                              | 320          |
| New York to MISO: NYPA to AMP- Ohio               | 125          |
| New York to IESO (Ontario)                        | 0            |
| <b>Total Export (+) / Import (-)</b>              | <b>-1712</b> |

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**SUMMARY OF WINTER 2016-17 BASE TRANSFERS**

| <b>IESO (Ontario)</b>                |              |
|--------------------------------------|--------------|
| IESO to TransÉnergie                 | -1250        |
| IESO to New York                     | 0            |
| IESO to PJM                          | 0            |
| IESO to MISO                         | 0            |
| <b>Total Export (+) / Import (-)</b> | <b>-1250</b> |

| <b>PJM</b>                             |              |
|--|--------------|
| PJM to New York: NYPA to PA-RECS       | -75          |
| PJM to New York: Sithe Allegheny       | 38           |
| PJM to New York: Non Firm Energy       | 0            |
| PJM to New York: Neptune HVdc          | 660          |
| PJM to New York: Linden VFT            | 315          |
| PJM to New York: HTP                   | 320          |
| Miscellaneous Transfers to Other Areas | -4462        |
| <b>Total Export (+) / Import (-)</b>   | <b>-3204</b> |

| <b>TRANSÉNERGIE</b>   |             |
|---|-------------|
| TransÉnergie to New Brunswick: Madawaska and Eel River HVdc | 300         |
| TransÉnergie to New England: Sandy Pond HVdc                | 0           |
| TransÉnergie to New England: Vermont                        | 225         |
| TransÉnergie to New York                                    | 239         |
| TransÉnergie to IESO (Ontario)                              | 1250        |
| TransÉnergie to Cornwall                                    | 45          |
| <b>Total Export (+) / Import (-)</b>                        | <b>2059</b> |

## B. WINTER 2016-17 BASE CASE CONDITIONS

Winter 2016-17 Conditions

### GENERATION FACILITIES (LEVEL OF GENERATION IN CASE)

The status and dispatch of gross generation levels represented in this analysis is listed below.

#### NYISO

|                                 |         |                |
|---------------------------------|---------|----------------|
| Huntley                         | 0 MW    | Retired        |
| Dunkirk                         | 0 MW    | Mothballed     |
| Niagara                         | 2100 MW | In Service     |
| AES/Somerset                    | 665 MW  | In Service     |
| Ginna                           | 582 MW  | In Service     |
| Sithe/Independence              | 999 MW  | In Service     |
| Oswego #5                       | 794 MW  | In Service     |
| Oswego #6                       | 0 MW    | Out of Service |
| Nine Mile Pt #1                 | 625 MW  | In Service     |
| Nine Mile Pt #2                 | 1297 MW | In Service     |
| J.A. Fitzpatrick                | 843 MW  | In Service     |
| Maple Ridge Wind Farm           | 97 MW   | In Service     |
| St. Lawrence/FDR (17-32)        | 700 MW  | In Service     |
| Athens                          | 540 MW  | In Service     |
| Bethlehem Energy Center         | 740 MW  | In Service     |
| Empire                          | 500 MW  | In Service     |
| Gilboa                          | 274 MW  | In Service     |
| Bowline Pt 1                    | 307 MW  | In Service     |
| Bowline Pt 2                    | 0 MW    | Out of Service |
| Roseton 1                       | 537 MW  | In Service     |
| Roseton 2                       | 265 MW  | In Service     |
| Indian Pt #2                    | 1030 MW | In Service     |
| Indian Pt #3                    | 1040 MW | In Service     |
| Astoria Energy II               | 299 MW  | In Service     |
| Bayonne Energy Center           | 0 MW    | Out of Service |
| ConEd Astoria Units (Astoria 3) | 179 MW  | In Service     |
| NYPA Astoria Combined-Cycle     | 201 MW  | In Service     |
| Ravenswood #3                   | 922 MW  | In Service     |
| ECP/Linden Cogen                | 377 MW  | In Service     |
| Arthur Kill #3                  | 0 MW    | Out of Service |

|             |        |            |
|-------------|--------|------------|
| Northport 1 | 128 MW | In Service |
| Northport 2 | 128 MW | In Service |
| Northport 3 | 128 MW | In Service |
| Northport 4 | 128 MW | In Service |

**ISO-NE**

|                        |         |                |
|------------------------|---------|----------------|
| Millstone Point #2     | 933 MW  | In Service     |
| Millstone Point #3     | 1276 MW | In Service     |
| Vermont Yankee         | 0 MW    | Retired        |
| Northfield 1, 2, 3 & 4 | 1120 MW | In Service     |
| Bear Swamp 1 & 2       | 0 MW    | Out of Service |
| Norwalk Harbor 1 & 2   | 336 MW  | In Service     |
| Seabrook               | 1117 MW | In Service     |

**Ontario**

|             |         |                |
|-------------|---------|----------------|
| Beck 1      | 345 MW  | In Service     |
| Beck 2      | 1001 MW | In Service     |
| Thorold     | 200 MW  | In Service     |
| Decew Falls | 126 MW  | In Service     |
| Bruce A     | 1200 MW | In Service     |
| Bruce B     | 1721 MW | In Service     |
| Darlington  | 2737 MW | In Service     |
| Lambton     | 0 MW    | Out of Service |
| Pickering A | 519 MW  | In Service     |
| Pickering B | 1537 MW | In Service     |
| Nanticoke   | 0 MW    | Out of Service |
| Saunders    | 690 MW  | In Service     |

**PJM**

|                 |         |            |
|-----------------|---------|------------|
| Peach Bottom #2 | 646 MW  | In Service |
| Peach Bottom #3 | 998 MW  | In Service |
| Salem #1        | 1185 MW | In Service |
| Salem #2        | 1179 MW | In Service |
| Limerick #1     | 1052 MW | In Service |
| Limerick #2     | 984 MW  | In Service |
| Hope Creek      | 1249 MW | In Service |

|                |         |            |
|----------------|---------|------------|
| Susquehanna #1 | 1240 MW | In Service |
| Susquehanna #2 | 1186 MW | In Service |

**TransÉnergie HVdc CONVERTER SCHEDULES**

|                 |        |                |
|-----------------|--------|----------------|
| Chateaugay HVdc | 127 MW | In Service     |
| Sandy Pond HVdc | 0 MW   | Out of Service |
| Highgate HVdc   | 222 MW | In Service     |
| Madawaska HVdc  | 300 MW | In Service     |
| Eel River HVdc  | 0 MW   | In Service     |

**AREA LOADS & LOSSES**

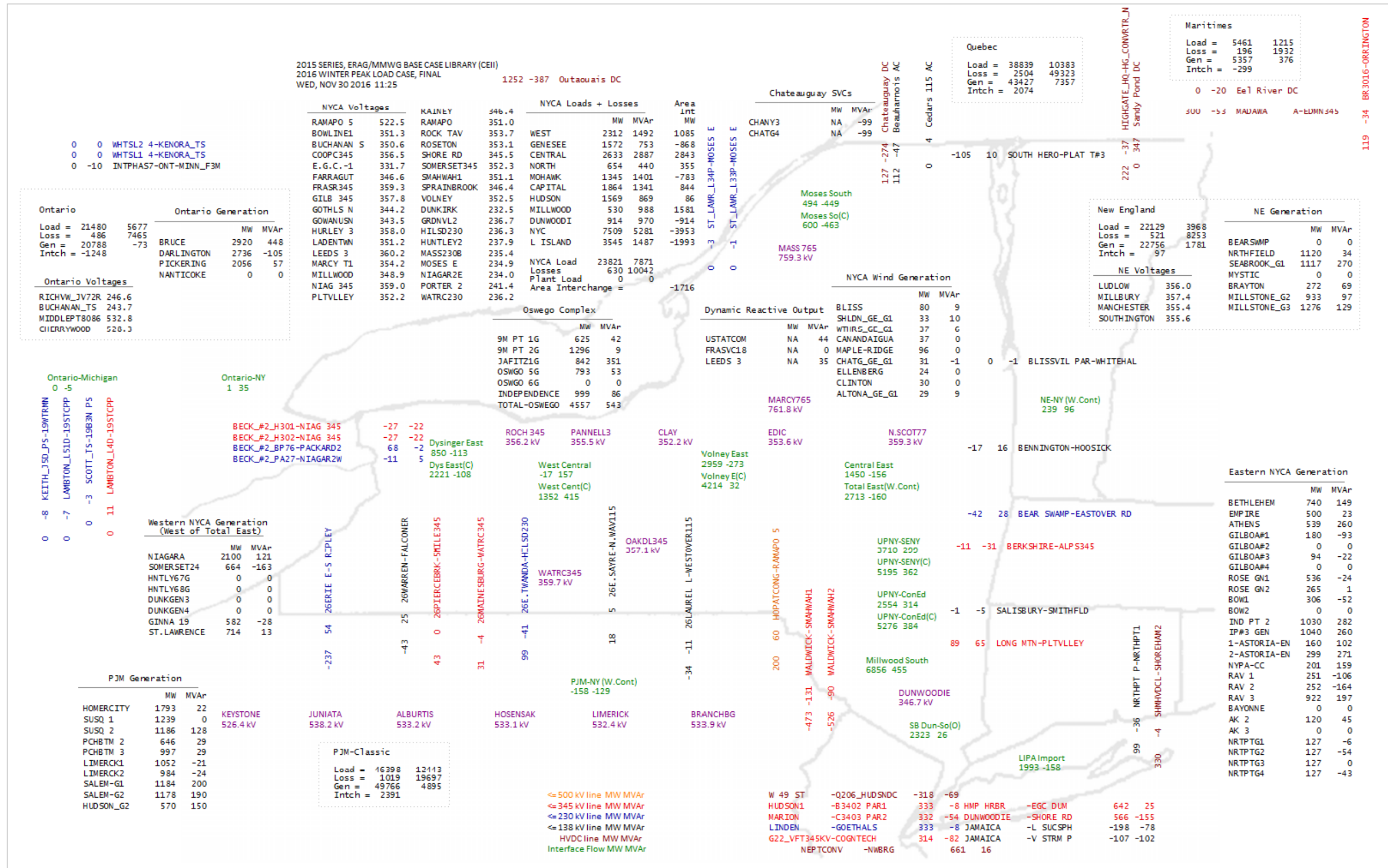
|                |           |
|----------------|-----------|
| NYISO          | 24,445 MW |
| ISO-NE         | 22,651 MW |
| IESO (Ontario) | 21,967 MW |
| PJM            | 47,182 MW |

**PHASE ANGLE REGULATOR SCHEDULES**

|                          |         |
|--------------------------|---------|
| Inghams (CD-ED)          | 120 MW  |
| Sandbar PAR (PV-20)      | 100 MW  |
| St. Lawrence-Moses L33P  | 0 MW    |
| St. Lawrence-Moses L34P  | 0 MW    |
| Norwalk Harbor-Northport | 100 MW  |
| Jamaica-Valley Stream    | -108 MW |
| Jamaica-Lake Success     | -210 MW |
| Hudson-Farragut (B3402)  | 333 MW  |
| Hudson-Farragut (C3403)  | 333 MW  |
| Linden-Goethals          | 333 MW  |
| Waldwick-Hinchmans       | 325 MW  |
| Waldwick-Fairlawn        | 345 MW  |
| Waldwick-Hillsdale       | 330 MW  |
| Ramapo PAR #1 (+ to NY)  | 0 MW    |
| Ramapo PAR #2 (+ to NY)  | 200 MW  |
| East Garden City #1      | 320 MW  |
| East Garden City #2      | 320 MW  |

# C. POWER FLOW TRANSCRIPTION DIAGRAM

## SYSTEM OVERVIEW



## D. RATINGS OF MAJOR TRANSMISSION FACILITIES IN NEW YORK

| EQUIPMENT NAME                 | LINE ID | KV  | NOR  | LTE  | STE  | PTID   | MW FLOW |
|--------------------------------|---------|-----|------|------|------|--------|---------|
| ACADEMY__138A_138B_PAR1        | PAR1    | 138 | 301  | 360  | 451  | 325751 | 150     |
| ACADEMY__138A_138B_PAR8        | PAR8    | 138 | 301  | 360  | 451  | 325750 | 150     |
| ACADEMY__345_138_TR1           | TR1     | 345 | 303  | 368  | 446  | 325753 | 150     |
| ACADEMY__345_138_TR8           | TR8     | 345 | 303  | 368  | 446  | 325752 | 150     |
| ADIRNDCK_230_115_BK 1          | BK1     | 115 | 132  | 166  | 172  | 26697  | 0       |
| ADIRNDCK-CHASLAKE_230_13       | 13      | 230 | 478  | 478  | 634  | 325233 | 9       |
| ADIRNDCK-PORTER__230_12        | 12-AP   | 230 | 478  | 478  | 634  | 25082  | 85      |
| ALBANY__-GREENBSH_115_1        | 1       | 115 | 227  | 248  | 268  | 25860  | 114     |
| ALBANY__-GREENBSH_115_2        | 2       | 115 | 227  | 248  | 268  | 25868  | 114     |
| ALBANY__-TRINITY__115_5        | 5       | 115 | 214  | 247  | 247  | 25861  | 91      |
| ALBANY__-TRINITY__115_9        | 9       | 115 | 159  | 178  | 258  | 25872  | 97      |
| ALCOA__-DENNISON_115_12        | 12-AD   | 115 | 213  | 234  | 251  | 25227  | 24      |
| ALCOA__-NOGDNBRG_115_13        | 13-ANO  | 115 | 156  | 170  | 181  | 25230  | 25      |
| ALCOA_PA-ALCOA__115_R8105      | R8105   | 115 | 263  | 294  | 348  | 25202  | 48      |
| AMAWALK_-MOHANSIC_115_995 U.G. | 995UG   | 115 | 88   | 88   | 98   | 26481  | 10      |
| AMAWALK_-MOHANSIC_115_996 U.G. | 996UG   | 115 | 107  | 107  | 107  | 26480  | 13      |
| ANDOVER_-PALMITER_115_157-932  | 157_932 | 115 | 97   | 117  | 119  | 25094  | 0       |
| ARCADE__-MACHIAS__115_167      | 151     | 115 | 156  | 171  | 182  | 326168 | 46      |
| ASH_____-TEMPLE__115_9         | 9       | 115 | 207  | 233  | 233  | 26062  | 6       |
| ASHLEYRD-MASONCR__115_909      | 909     | 115 | 189  | 207  | 221  | 25847  | 24      |
| ASHLEYRD-PLATSBRG_115_700      | 700     | 115 | 179  | 179  | 239  | 25845  | 3       |
| ASTANNEX_138A_138B_PAR1        | PAR1    | 138 | 415  | 477  | 544  | 325848 | 0       |
| ASTANNEX_345_138_TR1           | TR1     | 345 | 320  | 390  | 468  | 325847 | 0       |
| ASTANNEX-ASTORIAE_138_34091    | 34091   | 138 | 288  | 318  | 346  | 325849 | 0       |
| ASTANNEX-E13THSTA_345_Q35L     | Q35L    | 345 | 415  | 639  | 1595 | 25134  | 154     |
| ASTANNEX-E13THSTA_345_Q35M     | Q35M    | 345 | 415  | 639  | 1595 | 25142  | 145     |
| ASTORIAE-ASTORIA3_138_34123    | 34123   | 138 | 299  | 335  | 400  | 25876  | 0       |
| ASTORIAE-CORONA__138_34181     | 34181   | 138 | 195  | 249  | 378  | 25277  | 64      |
| ASTORIAE-CORONA__138_34182     | 34182   | 138 | 195  | 249  | 378  | 25278  | 62      |
| ASTORIAE-CORONA__138_34183     | 34183   | 138 | 195  | 249  | 378  | 25279  | 64      |
| ASTORIAE-CORONA__138_34184     | 34184   | 138 | 195  | 249  | 378  | 25280  | 60      |
| ASTORIAE-CORONA__138_34185     | 34185   | 138 | 195  | 249  | 378  | 25281  | 57      |
| ASTORIAE-CORONA__138_34186     | 34186   | 138 | 195  | 249  | 378  | 25282  | 58      |
| ASTORIAW-QUENBRDG_138_28241    | 28241   | 138 | 195  | 249  | 378  | 25315  | 46      |
| ASTORIAW-QUENBRDG_138_28242    | 28242   | 138 | 195  | 249  | 378  | 25316  | 47      |
| ASTORIAW-QUENBRDG_138_28243    | 28243   | 138 | 391  | 499  | 688  | 25317  | 87      |
| ASTORIAW-QUENBRDG_138_28244    | 28244   | 138 | 413  | 557  | 688  | 25318  | 99      |
| ATHENS__-PLSNTVLY_345_91       | 91      | 345 | 1624 | 1783 | 1946 | 25054  | 749     |
| BAGATLRD-PILGRIM__138_564      | 564     | 138 | 566  | 611  | 673  | 325607 | 22      |
| BAKER_ST-FALCONER_115_160      | 160-3   | 115 | 222  | 234  | 239  | 26513  | 4       |
| BALLSTON-TAPBLSTN_115_302      | 302     | 115 | 141  | 144  | 165  | 325897 | 15      |
| BARRETT__138_69__BK 1          | BK 1    | 138 | 127  | 156  | 156  | 26600  | 61      |
| BARRETT__138A_138B_PAR         | B_PAR   | 138 | 266  | 271  | 326  | 25590  | 145     |
| BARRETT_-FREEPORT_138_459      | 459     | 138 | 192  | 271  | 325  | 26425  | 145     |
| BATAVIA_-EBATAVIA_115_107      | 107     | 115 | 159  | 159  | 159  | 326099 | 5       |
| BATAVIA_-SEBATVIA_115_117      | 117     | 115 | 239  | 239  | 239  | 26017  | 1       |
| BATH_____-MONTRFL_115_965      | 965     | 115 | 146  | 149  | 149  | 26163  | 7       |



| EQUIPMENT NAME               | LINE ID | KV  | NOR  | LTE  | STE  | PTID   | MW FLOW |
|------------------------------|---------|-----|------|------|------|--------|---------|
| BATH____-SPENCHIL_115_723    | 723     | 115 | 146  | 160  | 178  | 325797 | 30      |
| BATNKILL-EASTOVER_115_10     | 10      | 115 | 227  | 248  | 268  | 26474  | 22      |
| BATHHILL-PYRITES__115_7      | 7-BHP   | 115 | 93   | 101  | 107  | 26065  | 18      |
| BEAR SWP-EASTOVER_230_E205W  | E205W   | 230 | 536  | 586  | 634  | 25030  | 43      |
| BECK____-NIAGARA__230_PA27   | PA27    | 230 | 480  | 540  | 685  | 25025  | 11      |
| BECK____-NIAGARA__345_PA301  | PA301   | 345 | 1180 | 1469 | 1860 | 25040  | 28      |
| BECK____-NIAGARA__345_PA302  | PA302   | 345 | 1180 | 1469 | 1860 | 25041  | 28      |
| BECK____-PACKARD__230_BP76   | BP76    | 230 | 582  | 687  | 687  | 25024  | 68      |
| BENNETT_-MORAINES__115_725   | 725     | 115 | 149  | 172  | 179  | 325858 | 38      |
| BENNETT_-SPENCHIL_115_953    | 953     | 115 | 146  | 160  | 178  | 26164  | 13      |
| BERKSHIR-ALPS_____345_393    | 393     | 345 | 1601 | 1757 | 1912 | 25034  | 11      |
| BERKSHIR-NORTHFLD_345_312    | 312     | 345 | 1345 | 1345 | 1793 | 25366  | 154     |
| BERRY_RD-BAKER_ST_115_160    | 160-2   | 115 | 245  | 257  | 282  | 26512  | 10      |
| BETHLHEM-ALBANY___115_18     | 18-BA   | 115 | 388  | 427  | 474  | 26119  | 150     |
| BIGTREE_-DAVIS_RD_115_904    | 904     | 115 | 179  | 197  | 213  | 25162  | 17      |
| BIGTREE_-LANGNERD_115_903    | 903     | 115 | 179  | 197  | 213  | 326050 | 53      |
| BLACKRVR-CLIMAX___115_1      | 1-BC    | 115 | 141  | 144  | 159  | 26067  | 28      |
| BLACKRVR-EWATRWN_115_5       | 5       | 115 | 141  | 144  | 159  | 325771 | 12      |
| BLACKRVR-FORTDRUM_115_2      | 2-BF    | 115 | 141  | 144  | 159  | 26068  | 7       |
| BLACKRVR-GLENPARK_115_3      | 3       | 115 | 119  | 119  | 119  | 325315 | 15      |
| BLACKRVR-LIGHTHSE_115_6      | 6       | 115 | 141  | 144  | 159  | 25506  | 26      |
| BLISSVIL-WHITEHAL_115_K7     | K7      | 115 | 239  | 239  | 239  | 25028  | 0       |
| BLUESTOR-LAFARGE__115_8      | 8       | 115 | 141  | 144  | 159  | 326091 | 23      |
| BLUESTOR-PLSTVYCH_115_13-987 | 13-987  | 115 | 168  | 187  | 216  | 25505  | 45      |
| BLUESTOR-PLSTVYCH_115_8      | 8       | 115 | 141  | 144  | 159  | 25498  | 22      |
| BNNINGTN-HOOSICK__115_K6     | K6      | 115 | 229  | 265  | 278  | 25029  | 18      |
| BNVLMUNI-PORTER___115_2      | 2       | 115 | 141  | 144  | 159  | 325778 | 19      |
| BOONVLE-BNVLMUNI_115_2       | 2       | 115 | 124  | 124  | 124  | 26073  | 4       |
| BOONVLE-PORTER___115_1       | 1-BP    | 115 | 127  | 127  | 127  | 26074  | 16      |
| BOONVLE-ROME_____115_3       | 3-BR    | 115 | 141  | 144  | 159  | 26071  | 25      |
| BOONVLE-ROME_____115_4       | 4-BR    | 115 | 128  | 135  | 152  | 26072  | 31      |
| BORDRCTY-GUARDIAN_115_969    | 969     | 115 | 179  | 179  | 179  | 325283 | 87      |
| BOWLINE__345_138_BK455       | BK455   | 345 | 506  | 587  | 671  | 25664  | 123     |
| BOWLINE_-WHAVSTRW_345_67-1   | 67-1    | 345 | 777  | 837  | 837  | 25567  | 306     |
| BOWLINOR-CONGERS__138_561    | 561     | 138 | 378  | 414  | 431  | 26723  | 109     |
| BRIGHAM_-LUDLUM___115_161    | 161-2   | 115 | 213  | 225  | 242  | 26020  | 45      |
| BRISTLHL-CLAY_____115_4      | 4       | 115 | 128  | 135  | 135  | 25518  | 33      |
| BRISTLHL-S.OSWEGO_115_4      | 4       | 115 | 128  | 134  | 152  | 25512  | 36      |
| BROOK_RD-SMITHBRD_115_2      | 2       | 115 | 268  | 292  | 317  | 325901 | 23      |
| BROOK_RD-SMITHBRD_115_302    | 302     | 115 | 268  | 292  | 317  | 325902 | 15      |
| BROOK_RD-TAPBROOK_115_2      | 2       | 115 | 268  | 292  | 317  | 325899 | 50      |
| BROOK_RD-TAPBROOK_115_302    | 302     | 115 | 268  | 292  | 317  | 325900 | 28      |
| BROOKHVN_138_69__BK 1        | BK 1    | 138 | 258  | 304  | 338  | 26548  | 86      |
| BROOKHVN_138_69__BK 2        | BK 2    | 138 | 258  | 304  | 338  | 325152 | 80      |
| BROOKHVN-EDWARDAV_138_864    | 864     | 138 | 345  | 382  | 420  | 25553  | 85      |
| BROOKHVN-SILLSRD__138_874    | 874     | 138 | 529  | 584  | 615  | 325617 | 87      |
| BROOKHVN-SILLSRD__138_887    | 887     | 138 | 461  | 494  | 547  | 325619 | 87      |
| BROOKHVN-WILDWOOD_138_861    | 861     | 138 | 521  | 575  | 605  | 325932 | 78      |

| EQUIPMENT NAME               | LINE ID | KV  | NOR  | LTE  | STE  | PTID   | MW FLOW |
|------------------------------|---------|-----|------|------|------|--------|---------|
| BROWNFLS-HIGLEY__115_1       | 1-BH    | 115 | 130  | 144  | 159  | 26078  | 9       |
| BROWNFLS-TAYLORVL_115_3      | 3-BT    | 115 | 130  | 144  | 154  | 26076  | 13      |
| BROWNFLS-TAYLORVL_115_4      | 4-BT    | 115 | 128  | 135  | 152  | 26077  | 13      |
| BUCHAN_N_345_138_BK TA5      | BK TA5  | 345 | 230  | 306  | 381  | 25425  | 0       |
| BUCHAN_N-BUCHANAN_138_95891  | 95891   | 138 | 249  | 296  | 384  | 25568  | 82      |
| BUCHAN_N-EASTVIEW_345_W93    | W93     | 345 | 1823 | 2015 | 2557 | 25133  | 806     |
| BUCHAN_S-MILLWOOD_345_W97    | W97     | 345 | 1840 | 1973 | 2154 | 25146  | 565     |
| BUCHAN_S-MILLWOOD_345_W98    | W98     | 345 | 1840 | 1973 | 2154 | 25247  | 565     |
| BUCHANAN-MILLWOOD_138_96951  | 96951   | 138 | 291  | 322  | 408  | 25283  | 21      |
| BUCHANAN-MILLWOOD_138_96952  | 96952   | 138 | 291  | 322  | 408  | 25284  | 21      |
| BUFAL129-MAPLE140_115_38     | 38      | 115 | 176  | 181  | 209  | 326159 | 86      |
| BUFAL129-MAPLE140_115_39     | 39      | 115 | 176  | 181  | 209  | 326160 | 85      |
| BUFALO54-BUFALO61_115_38     | 38      | 115 | 227  | 249  | 268  | 326155 | 72      |
| BUFALO54-BUFALO61_115_39     | 39      | 115 | 211  | 217  | 255  | 326156 | 70      |
| BUFALO61-URBAN154_115_38     | 38      | 115 | 211  | 217  | 255  | 326153 | 68      |
| BUFALO61-URBAN154_115_39     | 39      | 115 | 211  | 217  | 255  | 326154 | 66      |
| BULYMO__-BOONVILLE_115_6     | 6       | 115 | 140  | 144  | 145  | 325265 | 32      |
| BURDECK_-ALTAMONT_115_17     | 17-BA   | 115 | 141  | 144  | 165  | 26151  | 47      |
| BURDECK_-VORHVSLE_115_19     | 19-BV   | 115 | 128  | 135  | 152  | 26152  | 53      |
| BURNS___138_69_BK 519        | BK 519  | 138 | 208  | 258  | 284  | 25889  | 46      |
| BURNS___-CORPDRIV_138_702    | 702     | 138 | 226  | 248  | 258  | 325812 | 65      |
| BURNS___-N.HEMPST_138_531    | 531     | 138 | 282  | 309  | 321  | 25878  | 6       |
| BURNS___-WHAVSTOR_138_541    | 541     | 138 | 282  | 309  | 321  | 25879  | 47      |
| BUTLER__-MOHICAN__115_18     | 18      | 115 | 141  | 144  | 165  | 26434  | 23      |
| C._ISLIP_138_69_BK 3         | BK 3    | 138 | 259  | 304  | 319  | 26519  | 96      |
| C._ISLIP-RONKOKMA_138_883    | 883     | 138 | 435  | 584  | 662  | 26497  | 25      |
| C_BATNKILL-MULTP-10_115_10   | 10      | 115 | 222  | 234  | 268  | 26121  | 22      |
| CANAL___-RIVRHEAD_138_910    | 910     | 138 | 200  | 269  | 311  | 325242 | 89      |
| CANANDGA-STONYRDG_230_68     | 68      | 230 | 600  | 625  | 653  | 25176  | 97      |
| CARD___-MILSTONE_345_383     | 383     | 345 | 1864 | 2187 | 2390 | 25332  | 313     |
| CARMEL__-CROTONFL_115_991    | 991     | 115 | 261  | 287  | 311  | 26155  | 41      |
| CARMEL__-WOODSTNY_115_992    | 992     | 115 | 261  | 287  | 311  | 325278 | 71      |
| CARR_ST_-BM_CC_GM_115_6      | 6       | 115 | 227  | 249  | 268  | 325216 | 82      |
| CARR_ST_-DEWITT__115_15      | 15-CD   | 115 | 227  | 249  | 268  | 26093  | 8       |
| CARRSCRN-SALAMANC_115_153    | 153     | 115 | 156  | 170  | 181  | 326163 | 33      |
| CARRSCRN-SALAMANC_115_154    | 154     | 115 | 156  | 170  | 181  | 326165 | 36      |
| CASTLEGD-FULLRHLW_115_937    | 937     | 115 | 149  | 149  | 149  | 325222 | 7       |
| CATON___-HILLSIDE_115_960    | 960     | 115 | 119  | 120  | 120  | 325290 | 27      |
| CAVANARD-PORTER__115_7       | 7       | 115 | 141  | 144  | 159  | 325214 | 46      |
| CEDAR___-WHITEHAL_115_6      | 6       | 115 | 141  | 144  | 165  | 26516  | 15      |
| CHADWICK-E.WALDEN_115_DW     | DW-3    | 115 | 225  | 251  | 282  | 26218  | 66      |
| CHADWICK-WBALMVLE_115_DW     | DW-2    | 115 | 219  | 232  | 255  | 26217  | 21      |
| CHASLAKE-PORTER__230_11      | 11      | 230 | 511  | 564  | 586  | 25051  | 104     |
| CHAT_TAP-LYON_MTN_115_1(911) | 911     | 115 | 173  | 191  | 205  | 325704 | 20      |
| CHATEAUG-CHAT_TAP_115_911    | 911     | 115 | 173  | 191  | 205  | 325705 | 17      |
| CHATGUAY-MASSENA__765_7040   | 7040    | 765 | 5300 | 6254 | 6625 | 25301  | 239     |
| CHEMUNG_-NWAVERLY_115_962    | 962     | 115 | 187  | 210  | 230  | 325289 | 22      |
| CHESTROR-SUGRLOAF_138_271    | 271     | 138 | 282  | 309  | 321  | 325424 | 43      |

| EQUIPMENT NAME                | LINE ID | KV  | NOR  | LTE  | STE  | PTID   | MW FLOW |
|-------------------------------|---------|-----|------|------|------|--------|---------|
| CHRCHTWN-BLUESTOR_115_13-987  | 13-987  | 115 | 179  | 179  | 179  | 26685  | 54      |
| CHRCHTWN-CRARYVIL_115_984     | 984     | 115 | 138  | 167  | 179  | 26500  | 9       |
| CHRCHTWN-SCHODACK_115_14-984  | 14/984  | 115 | 168  | 199  | 199  | 26126  | 64      |
| CHURCH_S-ROTRDAM_115_10       | 10-AR   | 115 | 141  | 144  | 155  | 26428  | 16      |
| CLAY____345_115_BK 1          | BK 1    | 345 | 560  | 718  | 796  | 25387  | 229     |
| CLAY____345_115_BK 2          | BK 2    | 345 | 590  | 764  | 796  | 25421  | 231     |
| CLAY____-DEWITT____115_3      | 3-CD    | 115 | 141  | 144  | 165  | 25519  | 70      |
| CLAY____-DEWITT____115_5      | 5-CD    | 115 | 245  | 260  | 282  | 25522  | 49      |
| CLAY____-DEWITT____345_13     | 13      | 345 | 1431 | 1605 | 1721 | 25168  | 446     |
| CLAY____-EDIC____345_1-16     | 42370   | 345 | 1591 | 1745 | 1904 | 25200  | 507     |
| CLAY____-EDIC____345_2-15     | 42036   | 345 | 1591 | 1745 | 1904 | 25169  | 508     |
| CLAY____-HOPKINS____115_11    | 11      | 115 | 268  | 292  | 317  | 25516  | 116     |
| CLAY____-INDPDNCE_345_26      | 26      | 345 | 1918 | 2115 | 2390 | 25858  | 836     |
| CLAY____-TEALLAVE_115_10      | 10-CT   | 115 | 141  | 144  | 165  | 25520  | 74      |
| CLAY____-WETZEL____115_14     | 14-CG   | 115 | 268  | 293  | 317  | 25517  | 51      |
| CLAY____-WOODARD____115_17    | 17      | 115 | 268  | 293  | 317  | 25515  | 70      |
| CLIMAX__-TAYLORVL_115_8       | 8-CT    | 115 | 128  | 135  | 152  | 26431  | 24      |
| CLINTON__-IMC_TAP____115_15   | 15-CI   | 115 | 141  | 144  | 165  | 26128  | 11      |
| CLRKSCRN_345_115_BK1          | BK1     | 345 | 280  | 313  | 336  | 325724 | 35      |
| CLRKSCRN_345_115_BK2          | BK2     | 345 | 280  | 313  | 336  | 325725 | 35      |
| CLRKSCRN-OAKDALE____345_36    | 36      | 345 | 1279 | 1410 | 1781 | 325726 | 549     |
| CLYDE____115_34_TR1           | TR1     | 115 | 152  | 166  | 175  | 25221  | 21      |
| CLYDE____-STATE_ST_115_3-971  | 971     | 115 | 146  | 159  | 159  | 68810  | 9       |
| COBBLENM-COBBLENY_115_BK 1    | BK 1    | 115 | 45   | 47   | 53   | 25426  | 14      |
| COBBLENM-SPRINGVL_115_151     | 151     | 115 | 156  | 171  | 182  | 326166 | 12      |
| COBBLENM-SPRINGVL_115_152     | 152     | 115 | 156  | 171  | 182  | 326170 | 25      |
| CODNIGTN-E.ITHACA_115_981     | 981-1   | 115 | 133  | 149  | 162  | 25730  | 23      |
| CODNIGTN-ETNA____115_998      | 998     | 115 | 266  | 293  | 299  | 25734  | 60      |
| COFFEEN__-EWATRTWN_115_5      | 5       | 115 | 119  | 119  | 119  | 325769 | 24      |
| COFFEEN__-GLENPARK_115_3      | 3-CG    | 115 | 119  | 119  | 119  | 26069  | 47      |
| COLDENHM-ROCKTVRN_115_J       | J       | 115 | 256  | 282  | 349  | 26420  | 3       |
| COLDSPRG-CARRSCRN_115_905     | 905     | 115 | 36   | 40   | 42   | 26440  | 10      |
| COLLIERS-RICHFELD_115_929     | 929     | 115 | 149  | 172  | 215  | 26169  | 3       |
| COLTON__-FLATROCK_115_2       | 2-CF    | 115 | 139  | 146  | 159  | 26088  | 9       |
| COLTON__-HIGLEY____115_1      | 1-HC    | 115 | 130  | 144  | 159  | 26087  | 11      |
| COLTON__-TOWNLIN_115_9        | 9       | 115 | 119  | 119  | 119  | 325641 | 48      |
| COMSTKNM-MOHICAN____115_13    | 13-MW   | 115 | 141  | 144  | 159  | 26484  | 25      |
| CONGERS__-SNKEHLRD_138_563    | 563     | 138 | 212  | 281  | 317  | 25887  | 84      |
| COOPERNY-FERNDALE_115_950     | 950     | 115 | 179  | 179  | 179  | 26171  | 36      |
| COOPERNY-ROCKHILL_115_957     | 957     | 115 | 120  | 120  | 120  | 325614 | 23      |
| COOPERS__345_115_BK 2         | BK 2    | 345 | 256  | 295  | 300  | 25433  | 47      |
| COOPERS__345_115_BK 3         | BK 3    | 345 | 256  | 295  | 300  | 25434  | 48      |
| COOPERS__-MIDDLETP_345_CMT-34 | CMT-34  | 345 | 1786 | 1793 | 1793 | 25110  | 618     |
| COOPERS__-ROCKTVRN_345_CRT-42 | CRT-42  | 345 | 1793 | 1793 | 1793 | 25111  | 555     |
| CORONA____138A_138B_BK R1     | B_BK R1 | 138 | 214  | 285  | 354  | 25621  | 55      |
| CORONA____138A_138C_BK R2     | C_BK R2 | 138 | 214  | 285  | 354  | 25622  | 55      |
| CORONA__-JAMAICA____138_18001 | 18001   | 138 | 168  | 225  | 368  | 25285  | 55      |
| CORONA__-JAMAICA____138_18002 | 18002   | 138 | 168  | 225  | 368  | 25286  | 55      |

| EQUIPMENT NAME                | LINE ID | KV  | NOR  | LTE  | STE  | PTID   | MW FLOW |
|-------------------------------|---------|-----|------|------|------|--------|---------|
| CORPDRIV-HARNGCRN_138_703     | 703     | 138 | 189  | 222  | 250  | 25881  | 50      |
| CORTLAND-FENERWND_115_3       | 3       | 115 | 152  | 166  | 175  | 325248 | 11      |
| CORTLAND-TULLERHL_115_1-716   | 1       | 115 | 156  | 170  | 181  | 25059  | 41      |
| CORTLAND-TULLYCTR_115_18      | 18      | 115 | 224  | 239  | 239  | 26089  | 33      |
| CURRY_RD-WOLF_RD__115_8       | 8       | 115 | 141  | 144  | 165  | 26254  | 32      |
| CURTPALM-EJWEST__115_9        | 9       | 115 | 156  | 170  | 181  | 326146 | 14      |
| DALEROAD-GARDNVLB_115_39      | 39      | 115 | 168  | 212  | 239  | 26036  | 62      |
| DANSKAMR-CHADWICK_115_DW      | DW-1    | 115 | 255  | 282  | 315  | 26219  | 45      |
| DANSKAMR-MARLBORO_115_DB      | DB      | 115 | 227  | 249  | 269  | 26221  | 49      |
| DANSKAMR-NCHELSEA_115_AC      | AC      | 115 | 216  | 231  | 334  | 25829  | 145     |
| DANSKAMR-NCHELSEA_115_DC      | DC      | 115 | 200  | 217  | 334  | 25830  | 150     |
| DANSKAMR-RYNDH_HL_115_DR      | DR      | 115 | 237  | 282  | 315  | 25831  | 55      |
| DAVIS_RD-STOLLERD_115_927     | 927     | 115 | 238  | 239  | 239  | 26172  | 2       |
| DEERFLD_-SCOBIE__345_373      | 373     | 345 | 1677 | 1677 | 1677 | 26383  | 557     |
| DELEMTER-LAKEVIEU_115_141     | 141     | 115 | 107  | 117  | 123  | 325873 | 42      |
| DELEMTER-LAKEVIEU_115_142     | 142     | 115 | 107  | 117  | 123  | 325880 | 53      |
| DELHI___-DELHI_TP_115_951     | 951-1   | 115 | 164  | 164  | 164  | 26174  | 73      |
| DELHI___-GR.GORGE_115_916     | 916     | 115 | 90   | 90   | 90   | 26479  | 19      |
| DELHI___-VINGR_TP_115_917_916 | 917-916 | 115 | 120  | 120  | 120  | 25911  | 40      |
| DELHI_TP-COLLIERS_115_951     | 951-2   | 115 | 239  | 239  | 239  | 26203  | 35      |
| DENNISON-LAWRNCAV_115_4       | 4       | 115 | 268  | 293  | 317  | 25225  | 11      |
| DENNISON-LAWRNCAV_115_5       | 5       | 115 | 268  | 293  | 317  | 25226  | 11      |
| DENNISON-ROSEMNTA_115_1/11    | 1-RD    | 115 | 215  | 235  | 253  | 25523  | 5       |
| DENNISON-ROSEMNTB_115_2/22    | 2-RD    | 115 | 215  | 235  | 253  | 25524  | 6       |
| DEPEW_NG-ERIE_ST__115_54-921  | 54-921  | 115 | 145  | 160  | 178  | 26010  | 20      |
| DEPEW_TP-DEPEW__115_BK 1      | BK 1    | 115 | 120  | 120  | 120  | 25428  | 8       |
| DEWITT__345_115_BK 2          | BK 2    | 345 | 619  | 758  | 796  | 25418  | 218     |
| DEWITT__-TEALLAVE_115_4       | 4-DT    | 115 | 141  | 144  | 165  | 26094  | 44      |
| DULEY___-PATNODE__230_PND-1   | PND-1   | 230 | 506  | 564  | 589  | 325856 | 59      |
| DULEY___-PLATSBRG_230_DP-1    | DP-1    | 230 | 288  | 320  | 356  | 25272  | 88      |
| DUNKIRK__230_115_BK 31        | BK 31   | 230 | 173  | 234  | 250  | 25386  | 52      |
| DUNKIRK__230_115_BK 41        | BK 41   | 230 | 166  | 226  | 250  | 25430  | 52      |
| DUNKIRK_-BERRY_RD_115_160     | 160-1   | 115 | 239  | 239  | 239  | 26025  | 51      |
| DUNKIRK_-BRIGHAM__115_161     | 161-1   | 115 | 211  | 217  | 239  | 26021  | 49      |
| DUNKIRK_-BRIGHAM__115_162     | 162-1   | 115 | 211  | 217  | 239  | 26027  | 43      |
| DUNKIRK_-SILVRCRK_115_141     | 141     | 115 | 107  | 117  | 123  | 26026  | 28      |
| DUNKIRK_-SILVRCRK_115_142     | 142     | 115 | 107  | 117  | 123  | 26018  | 29      |
| DUNWODIE_138__138__BK N1      | BK N1   | 138 | 376  | 428  | 500  | 25624  | 115     |
| DUNWODIE_138__138__BK N2      | BK N2   | 138 | 223  | 312  | 400  | 25623  | 115     |
| DUNWODIE_138__138__BK S1      | BK S1   | 138 | 443  | 585  | 600  | 25626  | 205     |
| DUNWODIE-E179THST_138_99153   | 99153   | 138 | 269  | 370  | 651  | 25287  | 204     |
| DUNWODIE-MOTTHAVN_345_71      | 71      | 345 | 741  | 858  | 1309 | 25151  | 199     |
| DUNWODIE-MOTTHAVN_345_72      | 72      | 345 | 741  | 858  | 1309 | 25191  | 181     |
| DUNWODIE-SHERMCRK_138_99031   | 99031   | 138 | 154  | 196  | 308  | 25193  | 115     |
| DUNWODIE-SHERMCRK_138_99032   | 99032   | 138 | 219  | 307  | 421  | 25239  | 115     |
| DUNWODIE-SHORE_RD_345_Y50     | Y50     | 345 | 677  | 913  | 1563 | 25091  | 567     |
| DUNWOODN_345_138_BK N1        | BK N1   | 345 | 490  | 575  | 667  | 25209  | 0       |
| DUNWOODS_345_138_BK S1        | BK S1   | 345 | 386  | 454  | 511  | 25208  | 219     |

| EQUIPMENT NAME              | LINE ID | KV  | NOR  | LTE  | STE  | PTID   | MW FLOW |
|-----------------------------|---------|-----|------|------|------|--------|---------|
| DUNWOODS-DUNWOODN_138_99997 | 99997   | 138 | 245  | 293  | 342  | 25532  | 1       |
| E.ITHACA-ETNA_115_981       | 981     | 115 | 133  | 149  | 162  | 25733  | 71      |
| E.SAYRE_-NWAVERLY_115_956   | 956     | 115 | 102  | 139  | 139  | 25013  | 19      |
| E.TWANDA-HILLSIDE_230_70    | 70      | 230 | 512  | 564  | 598  | 25014  | 99      |
| E.WALDEN_115_69_TR_3        | TR_3    | 115 | 67   | 81   | 91   | 26681  | 14      |
| E.WALDEN-COLDENHM_115_CW    | CW      | 115 | 256  | 282  | 349  | 26225  | 23      |
| E.WALDEN-MODENA_115_EM      | EM      | 115 | 285  | 310  | 349  | 25832  | 5       |
| E.WALDEN-ROCKTVRN_115_D     | D       | 115 | 256  | 282  | 350  | 26226  | 13      |
| E13THSTA_345_138_BK_10      | BK_10   | 138 | 294  | 326  | 367  | 25467  | 82      |
| E13THSTA_345_138_BK_11      | BK_11   | 138 | 284  | 297  | 315  | 25468  | 73      |
| E13THSTA_345_138_BK_12      | BK_12   | 138 | 284  | 297  | 315  | 25463  | 79      |
| E13THSTA_345_138_BK_13      | BK_13   | 138 | 307  | 373  | 447  | 25464  | 66      |
| E13THSTA_345_138_BK_14      | BK_14   | 138 | 295  | 326  | 369  | 25465  | 65      |
| E13THSTA_345_138_BK_15      | BK_15   | 138 | 323  | 369  | 410  | 25466  | 81      |
| E13THSTA_345_138_BK_16      | BK_16   | 138 | 318  | 372  | 495  | 25469  | 80      |
| E13THSTA-FARRAGUT_345_45    | 45      | 345 | 773  | 944  | 1347 | 25190  | 84      |
| E13THSTA-FARRAGUT_345_46    | 46      | 345 | 786  | 955  | 1353 | 25251  | 121     |
| E13THSTA-FARRAGUT_345_48    | 48      | 345 | 692  | 832  | 1288 | 25252  | 10      |
| E13THSTA-FARRAGUT_345_B47   | B47     | 345 | 537  | 731  | 1157 | 25177  | 42      |
| E179THST-HELLGT_E_138_15053 | 15053   | 138 | 187  | 244  | 374  | 25289  | 184     |
| E179THST-HELLGT_E_138_15054 | 15054   | 138 | 187  | 244  | 374  | 25290  | 184     |
| E179THST-HELLTP_W_138_15055 | 15055   | 138 | 242  | 321  | 400  | 25288  | 205     |
| E179THST-PARKCHTR_138_38X01 | 38X01   | 138 | 191  | 305  | 512  | 25327  | 59      |
| E179THST-PARKCHTR_138_38X02 | 38X02   | 138 | 191  | 305  | 512  | 25328  | 59      |
| E179THST-PARKCHTR_138_38X03 | 38X03   | 138 | 191  | 305  | 512  | 25329  | 44      |
| E179THST-PARKCHTR_138_38X04 | 38X04   | 138 | 191  | 305  | 512  | 25330  | 44      |
| EASTOVER_230_115_TR_1       | TR_1    | 230 | 466  | 579  | 597  | 326097 | 45      |
| EASTRIVR_138_69_BK_111      | BK_111  | 138 | 91   | 121  | 142  | 25526  | 10      |
| EASTRIVR_138_69_BK_112      | BK_112  | 138 | 91   | 121  | 142  | 25527  | 10      |
| EASTRIVR_138_69_BK_113      | BK_113  | 138 | 91   | 121  | 142  | 25528  | 10      |
| EASTRIVR_138_69_BK_114      | BK_114  | 138 | 91   | 121  | 142  | 25529  | 10      |
| EASTVIEW_345_138_BK_1N      | BK_1N   | 138 | 438  | 493  | 493  | 25472  | 109     |
| EASTVIEW_345_138_BK_1S      | BK_1S   | 138 | 438  | 493  | 493  | 25373  | 112     |
| EASTVIEW_345_138_BK_2N      | BK_2N   | 138 | 438  | 493  | 493  | 25471  | 118     |
| EASTVIEW_345_138_BK_2S      | BK_2S   | 138 | 438  | 493  | 493  | 25470  | 108     |
| EASTVIEW-SPRNBK_345_W64     | W64     | 345 | 2430 | 2823 | 3357 | 25143  | 686     |
| EASTVIEW-SPRNBK_345_W65     | W65     | 345 | 1976 | 2387 | 2897 | 25144  | 611     |
| EASTVIEW-SPRNBK_345_W78     | W78     | 345 | 2430 | 2823 | 3357 | 25346  | 575     |
| EASTVIEW-SPRNBK_345_W79     | W79     | 345 | 1976 | 2387 | 2897 | 25153  | 573     |
| EBATAVIA-GOLAH_115_119      | 119     | 115 | 168  | 185  | 196  | 26012  | 6       |
| EDIC_-FRASER_345_EF24-40    | EF24-40 | 345 | 1793 | 1793 | 1793 | 25112  | 0       |
| EDIC_-N.SCTLND_345_14       | 14      | 345 | 1624 | 1783 | 1912 | 25170  | 440     |
| EDIC_PTR_230_115_BK_1P      | BK_1P   | 230 | 320  | 365  | 398  | 25389  | 34      |
| EDIC_PTR_230_115_BK_2P      | BK_2P   | 230 | 320  | 365  | 398  | 25423  | 35      |
| EDIC_PTR_345_115_BK_3E      | BK_3E   | 345 | 524  | 602  | 760  | 25424  | 173     |
| EDIC_PTR_345_115_BK_4E      | BK_4E   | 345 | 603  | 721  | 796  | 25454  | 173     |
| EDIC_PTR_345_230_BK_2E      | BK_2E   | 230 | 551  | 626  | 758  | 25422  | 220     |
| EDWARDAV-RIVRHEAD_138_893   | 893     | 138 | 315  | 346  | 377  | 325654 | 71      |

| EQUIPMENT NAME               | LINE ID | KV  | NOR  | LTE  | STE  | PTID   | MW FLOW |
|------------------------------|---------|-----|------|------|------|--------|---------|
| EELPOTRD-MEYER___115_968     | 968     | 115 | 133  | 149  | 162  | 325288 | 29      |
| EFISHKCH_345_115_BK 1        | BK 1    | 345 | 505  | 531  | 531  | 25724  | 18      |
| EFISHKCH_345_115_BK 2        | BK 2    | 345 | 558  | 560  | 560  | 325845 | 0       |
| EFISHKIL_345_115_BK 1        | BK 1    | 345 | 505  | 531  | 531  | 25724  | 18      |
| EFISHKIL-WOOD_ST__345_F38    | F38     | 345 | 2409 | 2679 | 3406 | 25367  | 643     |
| EFISHKIL-WOOD_ST__345_F39    | F39     | 345 | 2409 | 2679 | 3406 | 25368  | 719     |
| EGRDNCTY_138_69__BK 1        | BK 1    | 138 | 258  | 304  | 338  | 26652  | 87      |
| EGRDNCTY_345_138_BK 1        | BK 1    | 345 | 444  | 556  | 641  | 25551  | 320     |
| EGRDNCTY_345_138_BK 2        | BK 2    | 345 | 444  | 556  | 641  | 25552  | 320     |
| EGRDNCTY_345C_345A_PAR1      | A_PAR1  | 345 | 444  | 812  | 855  | 25678  | 320     |
| EGRDNCTY_345C_345B_PAR2      | B_PAR2  | 345 | 444  | 812  | 855  | 25679  | 320     |
| EGRDNCTY-CARLPLCE_138_361    | 361     | 138 | 315  | 345  | 376  | 25533  | 30      |
| EGRDNCTY-EGRDNCTR_345_Y49_ST | Y49_ST  | 345 | 693  | 940  | 1360 | 325158 | 641     |
| EGRDNCTY-NEWBRDGE_138_462    | 462     | 138 | 186  | 274  | 452  | 25303  | 71      |
| EGRDNCTY-NEWBRDGE_138_463    | 463     | 138 | 203  | 292  | 413  | 25304  | 71      |
| EGRDNCTY-NEWBRDGE_138_465    | 465     | 138 | 212  | 300  | 419  | 25535  | 78      |
| EGRDNCTY-ROSLYN___138_362    | 362     | 138 | 309  | 339  | 369  | 25534  | 6       |
| EJWEST__-SCOFDRD_115_9       | 9       | 115 | 245  | 260  | 282  | 326147 | 34      |
| EKINGSTN-RHINEBCK_115_ER     | ER      | 115 | 219  | 232  | 255  | 26222  | 27      |
| ELBRIDGE_345_115_BK 1        | BK 1    | 345 | 542  | 621  | 796  | 25448  | 222     |
| ELBRIDGE-GRS_LOCK_115_19     | 19-EG   | 115 | 141  | 144  | 165  | 26097  | 7       |
| ELBRIDGE-GRS_LOCK_115_3      | 3       | 115 | 176  | 176  | 176  | 26098  | 11      |
| ELBRIDGE-HYATT___115_15-979  | 15-EH   | 115 | 156  | 171  | 182  | 25109  | 45      |
| ELBRIDGE-LAFAYTTE_345_17-LE  | 17-LE   | 345 | 940  | 1562 | 1912 | 25149  | 399     |
| ELBRIDGE-MILTON_C_115_18     | 18-EM   | 115 | 156  | 159  | 159  | 26095  | 17      |
| ELBRIDGE-STATE_ST_115_5-972  | 5_972   | 115 | 146  | 167  | 178  | 25107  | 33      |
| ELM_ST__-SENECA___230_71     | 71      | 230 | 223  | 254  | 262  | 26426  | 19      |
| ELM_ST__-SENECA___230_72     | 72      | 230 | 223  | 254  | 262  | 26427  | 19      |
| ELWOOD___138_69__BK 3        | BK3     | 138 | 129  | 156  | 208  | 26540  | 49      |
| ENDICOTT-RANGEHL__115_920    | 920     | 115 | 149  | 149  | 149  | 26158  | 16      |
| ENDICOTT-ROBBLEAV_115_948    | 948     | 115 | 254  | 254  | 254  | 26159  | 25      |
| ENORWICH-CTYLINE__115_918    | 918     | 115 | 120  | 120  | 120  | 325280 | 39      |
| ENORWICH-JENNISON_115_946    | 946     | 115 | 117  | 136  | 153  | 25729  | 21      |
| ERIE E__-S.RIPLEY_230_69     | 69      | 230 | 553  | 637  | 637  | 25016  | 238     |
| ERIE_ST__-PAVNTRD_115_926    | 926     | 115 | 252  | 269  | 269  | 26175  | 38      |
| ETNA___-CLRKSCRN_115_715     | 715     | 115 | 304  | 313  | 345  | 325728 | 14      |
| ETNA___-CLRKSCRN_115_947     | 947     | 115 | 292  | 313  | 345  | 325727 | 14      |
| ETNA___-WILLET___115_945     | 945-2   | 115 | 149  | 169  | 175  | 25731  | 90      |
| FAIRFIEL-INGHAM_C_115_3      | 3       | 115 | 141  | 144  | 159  | 26106  | 61      |
| FAIRPORT-ELBRIDGE_115_2      | 2       | 115 | 176  | 181  | 199  | 26099  | 17      |
| FAIRPORT-HOOK_TAP_115_1      | 1       | 115 | 176  | 181  | 183  | 26327  | 3       |
| FALCONER-SOUTHADOW_115_153   | 153     | 115 | 156  | 171  | 182  | 26033  | 25      |
| FALCONER-SOUTHADOW_115_154   | 154     | 115 | 156  | 171  | 182  | 26032  | 18      |
| FARMGTN__115_12__BK 3        | BK 3    | 115 | 15   | 25   | 35   | 325380 | 10      |
| FARMGTN__115_34__BK 1        | BK 1    | 115 | 64   | 74   | 110  | 70259  | 28      |
| FARMGTN__115_34__BK 2        | BK 2    | 115 | 72   | 82   | 107  | 70258  | 17      |
| FARMGTN_-BORDRCTY_115_4-977  | 977     | 115 | 187  | 206  | 219  | 25057  | 76      |
| FARMGTN_-HAMLTNNM_115_7-983  | 7-HF    | 115 | 176  | 181  | 209  | 26101  | 24      |

| EQUIPMENT NAME               | LINE ID | KV  | NOR  | LTE  | STE  | PTID   | MW FLOW |
|------------------------------|---------|-----|------|------|------|--------|---------|
| FARRAGUT_345A_138C_BK 9X     | BK 9X   | 345 | 130  | 174  | 216  | 25636  | 19      |
| FARRAGUT_345A_138D_BK 10X    | BK 10X  | 345 | 130  | 174  | 216  | 25637  | 19      |
| FARRAGUT_345B_345A_TR11      | TR11    | 345 | 543  | 737  | 930  | 25044  | 333     |
| FARRAGUT_345C_345A_TR12      | TR12    | 345 | 549  | 748  | 930  | 25043  | 333     |
| FARRAGUT-GOWANUS__345_41     | 41      | 345 | 653  | 856  | 1316 | 25141  | 149     |
| FARRAGUT-GOWANUS__345_42     | 42      | 345 | 653  | 856  | 1316 | 25140  | 149     |
| FARRAGUT-HUDS_AVE_138_32077  | 32077   | 138 | 130  | 174  | 216  | 25291  | 19      |
| FARRAGUT-HUDS_AVE_138_32078  | 32078   | 138 | 136  | 181  | 216  | 25292  | 19      |
| FARRAGUT-HUDS_AVE_138_32711  | 32711   | 138 | 129  | 154  | 167  | 25293  | 19      |
| FENERWND-ONEIDA__115_8       | 8       | 115 | 159  | 159  | 159  | 25894  | 1       |
| FERNDALE-WWDBURNY_115_959    | 959     | 115 | 90   | 90   | 90   | 26180  | 10      |
| FEURABSH-GREENBSH_115_17     | 17      | 115 | 311  | 341  | 375  | 25862  | 13      |
| FEURABSH-NCATSKLL_115_2      | 2-FN    | 115 | 141  | 144  | 165  | 25067  | 0       |
| FISHKPLN-EFISHKIL_115_HF     | HF      | 115 | 243  | 267  | 293  | 26227  | 14      |
| FISHKPLN-SYLVANLK_115_FP/990 | FP/990  | 115 | 238  | 239  | 239  | 25066  | 115     |
| FITZPTRK-EDIC____345_FE-1    | FE-1    | 345 | 1434 | 1434 | 1661 | 25077  | 730     |
| FIVE_MIL-VALLEY44_115_152    | 152     | 115 | 156  | 171  | 182  | 326174 | 6       |
| FIVE_MIL-VALLEY44_115_167    | 167     | 115 | 156  | 171  | 182  | 326173 | 29      |
| FIVEMILE_345_115_TR1         | TR1     | 345 | 597  | 597  | 597  | 326175 | 62      |
| FIVEMILE-STOLLERD_345_29     | 29      | 345 | 754  | 840  | 840  | 326176 | 19      |
| FLATROCK-BROWNFLS_115_2      | 2-FBF   | 115 | 130  | 144  | 159  | 26079  | 10      |
| FLATSTR_-EELPOTRD_115_968    | 968     | 115 | 133  | 149  | 162  | 325287 | 14      |
| FORGEBRK-MERTPARK_115_WF     | WF      | 115 | 243  | 260  | 282  | 26229  | 76      |
| FORTDRUM-DEFERIET_115_2-FD   | 2-FD    | 115 | 141  | 144  | 165  | 26091  | 7       |
| FORTDRUM-TAYLORVL_115_2      | 2-DT    | 115 | 128  | 135  | 152  | 26090  | 0       |
| FOXHILLS-WILLWBRK_138_29211  | 29211-1 | 138 | 207  | 275  | 450  | 25771  | 194     |
| FOXHILLS-WILLWBRK_138_29212  | 29212-1 | 138 | 207  | 275  | 450  | 25772  | 191     |
| FRASANX-COOPERS__345_UCC2-41 | UCC2-41 | 345 | 1793 | 1793 | 1793 | 326221 | 592     |
| FRASER__345_115_BK 2         | BK 2    | 345 | 356  | 420  | 420  | 25391  | 109     |
| FRASER_-COOPERS__345_33      | 33      | 345 | 1793 | 1793 | 1793 | 25236  | 0       |
| FRASER_-GILBOA__345_GF5-35   | GF5-35  | 345 | 1746 | 1793 | 1793 | 25060  | 125     |
| FRASERNY-DELHI_TP_115_951    | 951-3   | 115 | 239  | 239  | 239  | 26202  | 108     |
| FREEPORT-NEWBRIDGE_138_461   | 461     | 138 | 222  | 289  | 413  | 25155  | 186     |
| FRESHKLS_138C_138A_R1__21191 | 21191   | 138 | 327  | 435  | 539  | 25639  | 259     |
| FRESHKLS_138C_138B_R2__21192 | 21192   | 138 | 329  | 410  | 486  | 25640  | 259     |
| FRESHKLS_345_138_TA 1        | TA 1    | 138 | 327  | 435  | 540  | 25457  | 260     |
| FRESHKLS_345_138_TB 1        | TB 1    | 138 | 329  | 410  | 478  | 25458  | 260     |
| FRONT_ST-ROSA_RD__115_11     | 11      | 115 | 239  | 239  | 239  | 26274  | 63      |
| FROST_BR-LONG_MTN_345_352    | 352     | 345 | 1351 | 1554 | 1841 | 25363  | 167     |
| FROST_BR-SOUTHNGT_345_329    | 329     | 345 | 1350 | 1554 | 1793 | 25364  | 352     |
| FTZPK_NM-LIGHTHSE_115_3      | 3-FLH   | 115 | 119  | 119  | 159  | 25502  | 28      |
| FULLRHWL-MORGANRD_115_937    | 937     | 115 | 149  | 149  | 149  | 325223 | 3       |
| GARDNVLA_115_1__BK6S         | BK6     | 115 | 366  | 420  | 420  | 325885 | 64      |
| GARDNVLA_115_1__BK7S         | BK7     | 115 | 245  | 296  | 300  | 325886 | 51      |
| GARDNVLA_230_1__BK6P         | BK6P    | 230 | 366  | 420  | 420  | 25405  | 87      |
| GARDNVLA_230_1__BK7P         | BK7P    | 230 | 245  | 296  | 300  | 25435  | 71      |
| GARDNVLA-GIRDLERD_115_705    | 705     | 115 | 239  | 239  | 239  | 25116  | 48      |
| GARDNVLA-LANGNERD_115_903    | 903     | 115 | 179  | 197  | 213  | 325284 | 67      |

| EQUIPMENT NAME               | LINE ID | KV  | NOR  | LTE  | STE  | PTID   | MW FLOW |
|------------------------------|---------|-----|------|------|------|--------|---------|
| GARDNVLA-STOLLERD_230_66     | 66      | 230 | 478  | 478  | 478  | 25180  | 211     |
| GARDNVLB_230_115_BK 2        | BK 2    | 230 | 317  | 334  | 396  | 25385  | 70      |
| GARDNVLB_230_115_BK 3        | BK 3    | 230 | 168  | 210  | 250  | 25416  | 46      |
| GARDNVLB_230_115_BK 4        | BK 4    | 230 | 169  | 211  | 250  | 25417  | 46      |
| GARDNVLB-BETHWEST_115_149    | 149     | 115 | 245  | 257  | 294  | 325317 | 12      |
| GARDNVLB-BETHWEST_115_150    | 150     | 115 | 245  | 257  | 294  | 325318 | 3       |
| GARDNVLB-CLVRBANK_115_141    | 141     | 115 | 107  | 117  | 123  | 26038  | 58      |
| GARDNVLB-CLVRBANK_115_142    | 142     | 115 | 107  | 117  | 123  | 26037  | 59      |
| GARDNVLB-COBBLENM_115_151    | 151     | 115 | 199  | 199  | 199  | 26040  | 12      |
| GARDNVLB-COBBLENM_115_152    | 152-1   | 115 | 199  | 199  | 199  | 26023  | 39      |
| GARDNVLB-DUNKIRK__230_73     | 73      | 230 | 637  | 637  | 637  | 25166  | 171     |
| GARDNVLB-DUNKIRK__230_74     | 74      | 230 | 633  | 633  | 633  | 25197  | 173     |
| GARDNVLB-GARDNVLA_115_T1012  | T1012   | 115 | 376  | 403  | 420  | 25085  | 0       |
| GARDNVLB-GARDNVLA_230_T8-12  | T8-12   | 230 | 773  | 773  | 773  | 25089  | 53      |
| GARDNVLB-WALDENNG_115_54-921 | 54-921  | 115 | 168  | 212  | 239  | 26035  | 13      |
| GE_R_D_-GROOMS__115_20_15    | 20_15   | 115 | 245  | 257  | 294  | 26266  | 18      |
| GILBOA_-LEEDS___345_GL3      | GL3     | 345 | 1762 | 1896 | 2241 | 25219  | 398     |
| GILBOA_-N.SCTLND_345_GNS-1   | GNS-1   | 345 | 1747 | 1896 | 2106 | 25052  | 2       |
| GINNA_-PANNELRG_115_912      | 912     | 115 | 265  | 295  | 335  | 25260  | 49      |
| GINNA_-S124_____115_913      | 913     | 115 | 298  | 344  | 414  | 26281  | 148     |
| GINNA_-STA_135__115_909      | 909     | 115 | 282  | 298  | 313  | 325837 | 69      |
| GINNA_-STA_135__115_937      | 937     | 115 | 282  | 298  | 313  | 325838 | 69      |
| GINNA_-STA_204__115_908      | 908-1   | 115 | 322  | 360  | 415  | 26282  | 84      |
| GINNA_-STA_204__115_911      | 911     | 115 | 320  | 358  | 414  | 26283  | 162     |
| GIRDLERD-STOLLERD_115_706    | 706     | 115 | 228  | 229  | 239  | 325161 | 27      |
| GLENWDGT-ROSLYN__138_364     | 364     | 138 | 336  | 372  | 409  | 25556  | 23      |
| GLENWOOD_138_69__BK 5        | BK 5    | 138 | 128  | 156  | 203  | 25735  | 69      |
| GLENWOOD_138_69__BK 6        | BK 6    | 138 | 128  | 156  | 208  | 70637  | 68      |
| GLENWOOD-CARLPLCE_138_363    | 363     | 138 | 338  | 374  | 411  | 25554  | 16      |
| GLENWOOD-GLENWDGT_138_366    | 366     | 138 | 335  | 371  | 407  | 25555  | 23      |
| GOETHALS_345A_345B_BK 1N     | BK 1N   | 345 | 591  | 787  | 978  | 25641  | 333     |
| GOETHALS-FRESHKLS_345_21     | 21      | 345 | 1016 | 1096 | 1362 | 25138  | 260     |
| GOETHALS-FRESHKLS_345_22     | 22      | 345 | 1285 | 1618 | 1817 | 25137  | 260     |
| GOETHALS-LINDN_CG_345_G23L   | G23L    | 345 | 672  | 893  | 1630 | 26000  | 344     |
| GOETHALS-LINDN_CG_345_G23M   | G23M    | 345 | 672  | 893  | 1630 | 325203 | 344     |
| GOETHSLN_345/230_BK 1        | BK 1    | 345 | 630  | 789  | 886  | 25642  | 333     |
| GOLAH_-MORTIMER_115_110      | 110     | 115 | 158  | 159  | 159  | 26034  | 59      |
| GOUDEY_-ROBBLEAV_115_940     | 940     | 115 | 292  | 320  | 351  | 325166 | 15      |
| GOUVNEUR-BATTHILL_115_8      | 8-GBH   | 115 | 93   | 101  | 106  | 26066  | 14      |
| GOWANUS__138A_138B_PAR R14   | PAR R14 | 138 | 309  | 407  | 421  | 25794  | 100     |
| GOWANUS__138A_138B_PAR R2    | PAR R2  | 138 | 305  | 362  | 421  | 25793  | 100     |
| GOWANUS__345_138_BK T14      | BK T14  | 138 | 309  | 407  | 421  | 25475  | 100     |
| GOWANUS__345_138_BK T2       | BK T2   | 138 | 305  | 362  | 421  | 25476  | 100     |
| GOWANUS_-GOETHALS_345_25     | 25      | 345 | 561  | 748  | 1241 | 25139  | 250     |
| GOWANUS_-GOETHALS_345_26     | 26      | 345 | 561  | 748  | 1241 | 25571  | 250     |
| GOWANUS_-GREENWD__138_42231  | 42231   | 138 | 273  | 362  | 421  | 25214  | 100     |
| GOWANUS_-GREENWD__138_42232  | 42232   | 138 | 273  | 338  | 407  | 25215  | 100     |
| GOWANUSA-GREENWD__138_42G24  | 42G24   | 138 | 270  | 307  | 322  | 26007  | 0       |



| EQUIPMENT NAME                 | LINE ID | KV  | NOR | LTE | STE  | PTID   | MW FLOW |
|--------------------------------|---------|-----|-----|-----|------|--------|---------|
| GOWANUSC-GREENWD__138_42G13    | 42G13   | 138 | 259 | 307 | 322  | 26006  | 0       |
| GOWANUSN_345KV_REA_R41_REACTR  | R41_REA | 345 | 687 | 896 | 1315 | 26001  | 149     |
| GOWANUSS_345KV_REA_R42_REACTR  | R42_REA | 345 | 687 | 896 | 1315 | 26003  | 149     |
| GR.GORGE-VINGR_TP_115_916 N.O. | 916 N.O | 115 | 149 | 172 | 215  | 26478  | 0       |
| GREENBSH-FT._ORAN_115_15       | 15      | 115 | 199 | 199 | 199  | 26130  | 33      |
| GREENBSH-RVSD_TAP_115_4        | 4       | 115 | 224 | 239 | 239  | 325649 | 0       |
| GREENBSH-STEPHTWN_115_993      | 993     | 115 | 141 | 144 | 159  | 26447  | 13      |
| GREENDGE-FLATSTR__115_968      | 968     | 115 | 133 | 149 | 162  | 26185  | 3       |
| GREENDGE-MONTRFL__115_967      | 967     | 115 | 133 | 149 | 162  | 26184  | 11      |
| GREENDGE-MONTRFL__115_970      | 970     | 115 | 146 | 160 | 178  | 26183  | 15      |
| GREENLWN_138_69__BK5           | BK5     | 138 | 129 | 156 | 203  | 26655  | 35      |
| GREENLWN-ELWOOD__138_673       | 673     | 138 | 381 | 590 | 668  | 25546  | 16      |
| GREENLWN-SYOSSET__138_676      | 676     | 138 | 263 | 365 | 657  | 25548  | 57      |
| GREENWD_-FOXHILLS_138_29231    | 29231   | 138 | 195 | 249 | 378  | 25321  | 144     |
| GREENWD_-FOXHILLS_138_29232    | 29232   | 138 | 195 | 249 | 378  | 25322  | 152     |
| GRISLD64-NIAGB130_115_182      | 182     | 115 | 211 | 217 | 255  | 26014  | 78      |
| GROOMS__-JOHNSON__115_13-14    | 13      | 115 | 268 | 293 | 317  | 26267  | 47      |
| GRS_LOCK-GELCKHM__115_8        | 8-GS    | 115 | 141 | 144 | 165  | 26103  | 28      |
| GRS_LOCK-S.OSWEGO_115_9        | 9-GS    | 115 | 171 | 171 | 171  | 25510  | 61      |
| GRS_LOCK-TILDEN__115_16        | 16-GT   | 115 | 141 | 144 | 165  | 26102  | 56      |
| GUARDIAN-HALEYRD__115_969      | 969     | 115 | 179 | 179 | 179  | 26167  | 82      |
| HALEYRD_-GREENDGE_115_969      | 969     | 115 | 179 | 179 | 179  | 325294 | 59      |
| HAMLTNM-ELBRIDGE_115_7-983     | 7-HE    | 115 | 189 | 199 | 199  | 26096  | 35      |
| HAMLTNM-HAMLTNNY_115_BK1       | BK 1    | 115 | 34  | 42  | 56   | 25394  | 10      |
| HAMRHILL-INDK-OSW_115_6        | 6-HI    | 115 | 139 | 144 | 159  | 26114  | 78      |
| HANAWAFL-COLTON__115_5         | 5       | 115 | 222 | 234 | 278  | 326185 | 8       |
| HANCOCK_-HAZEL__115_955        | 955-1   | 115 | 119 | 120 | 120  | 26187  | 0       |
| HARSNRAD-ROBNSNRD_115_907      | 907     | 115 | 261 | 287 | 306  | 26162  | 3       |
| HAUPPAUG-C._ISLIP_138_889      | 889     | 138 | 241 | 326 | 413  | 25681  | 95      |
| HAZEL__-FERNDALE_115_955       | 955-2   | 115 | 119 | 120 | 120  | 26181  | 10      |
| HDSNBRDG-DEWITT__115_10        | 10      | 115 | 225 | 251 | 291  | 325260 | 69      |
| HDSNBRDG-DEWITT__115_7         | 7       | 115 | 340 | 374 | 414  | 325261 | 46      |
| HELLGT_E-ASTORIAE_138_34051    | 34051   | 138 | 195 | 249 | 378  | 25323  | 184     |
| HELLGT_E-ASTORIAE_138_34052    | 34052   | 138 | 195 | 249 | 378  | 25324  | 183     |
| HELLGT_W-ASTORIAW_138_24051    | 24051   | 138 | 188 | 264 | 447  | 25210  | 11      |
| HELLGT_W-ASTORIAW_138_24052    | 24052   | 138 | 188 | 264 | 447  | 25211  | 4       |
| HELLGT_W-ASTORIAW_138_24053    | 24053   | 138 | 171 | 207 | 207  | 25212  | 95      |
| HELLGT_W-ASTORIAW_138_24054    | 24054   | 138 | 171 | 207 | 207  | 25213  | 94      |
| HICKLING-CATON__115_958        | 958     | 115 | 119 | 120 | 120  | 26189  | 11      |
| HICKLING-RIDGE_RD_115_964      | 964     | 115 | 127 | 147 | 167  | 26188  | 13      |
| HILLBURN_138_69__BK 317        | BK 317  | 138 | 187 | 230 | 265  | 26330  | 48      |
| HILLBURN-RAMAPOOR_138_52       | 52      | 138 | 187 | 230 | 265  | 25882  | 48      |
| HILLSIDE_115_1_BK3S            | BK3S    | 230 | 299 | 336 | 336  | 325761 | 71      |
| HILLSIDE_115_1_BK4S            | BK4S    | 230 | 462 | 543 | 560  | 325762 | 39      |
| HILLSIDE_230_1_BK3P            | BK3P    | 230 | 299 | 336 | 336  | 325759 | 71      |
| HILLSIDE_230_1_BK4P            | BK4P    | 230 | 462 | 543 | 560  | 325760 | 57      |
| HILLSIDE-CHEMUNG__115_962      | 962     | 115 | 170 | 179 | 179  | 25726  | 25      |
| HILLSIDE-WATRCURE_230_69       | 69      | 230 | 657 | 657 | 657  | 25181  | 7       |

| EQUIPMENT NAME                | LINE ID | KV  | NOR  | LTE  | STE  | PTID   | MW FLOW |
|-------------------------------|---------|-----|------|------|------|--------|---------|
| HINMAN__-HARSNRAD_115_908     | 908     | 115 | 297  | 306  | 306  | 26161  | 170     |
| HISHELDN-STONCREK_230_81      | 81      | 230 | 506  | 556  | 603  | 325622 | 49      |
| HOLBROOK_138_69__BK 1         | BK 1    | 138 | 258  | 304  | 338  | 69378  | 144     |
| HOLBROOK_138_69__BK 2         | BK 2    | 138 | 122  | 142  | 189  | 69376  | 64      |
| HOLBROOK-NSHORBCH_138_884     | 884     | 138 | 404  | 443  | 491  | 25341  | 10      |
| HOLBROOK-SILLSRD__138_872     | 872     | 138 | 531  | 582  | 613  | 25340  | 5       |
| HOLBROOK-WEST BUS_138_888     | 888     | 138 | 575  | 616  | 682  | 25542  | 218     |
| HOLTSVLE-UNIONAVE_138_818     | 818     | 138 | 181  | 236  | 410  | 25584  | 121     |
| HOLTSVLE-WEST BUS_138_876     | 876     | 138 | 346  | 371  | 411  | 325974 | 0       |
| HOLTSVLE-WEST BUS_138_877     | 877     | 138 | 557  | 598  | 662  | 325909 | 0       |
| HOMER_HL-FIVE_MIL_115_169     | 169     | 115 | 270  | 297  | 324  | 26452  | 43      |
| HOMER_HL-FIVE_MIL_115_170     | 170     | 115 | 270  | 297  | 324  | 26022  | 43      |
| HOMER_HL-NILE____115_157      | 157-1   | 115 | 107  | 117  | 123  | 26041  | 30      |
| HOMR_NYW-PIERC_NY_345_48      | 37      | 345 | 1338 | 1494 | 1494 | 326214 | 174     |
| HOMRC_NY-MAINS_NY_345_47      | 47      | 345 | 1440 | 1440 | 1516 | 326121 | 99      |
| HOOK_TAP-FARMGTN__115_7-983   | 7-HF    | 115 | 176  | 181  | 199  | 26100  | 7       |
| HOPATCON-RAMAPO__500_5018     | 5018    | 345 | 1156 | 1450 | 1915 | 25019  | 200     |
| HOPKINS_-TEALLAVE_115_11      | 11      | 115 | 239  | 239  | 239  | 26105  | 76      |
| HUDS_AVE-JAMAICA__138_701     | 701     | 138 | 172  | 234  | 371  | 25294  | 28      |
| HUDS_AVE-JAMAICA__138_702     | 702     | 138 | 172  | 234  | 371  | 25295  | 28      |
| HUDSON__-PLSTVYCH_115_12      | 12-HP   | 115 | 159  | 159  | 159  | 25499  | 45      |
| HUDSON__-VALKIN____115_15     | 15      | 115 | 227  | 238  | 238  | 26514  | 72      |
| HUDSONP_-FARRAGUT_345_B3402   | B3402   | 345 | 547  | 732  | 927  | 25020  | 333     |
| HUNTLEY_-BUFAL129_115_38      | 38      | 115 | 176  | 181  | 199  | 26047  | 89      |
| HUNTLEY_-BUFAL129_115_39      | 39      | 115 | 176  | 181  | 209  | 26044  | 87      |
| HUNTLEY_-ELM_ST____230_70     | 70      | 230 | 432  | 477  | 491  | 25855  | 31      |
| HUNTLEY_-SAWYER____230_79     | 79      | 230 | 691  | 760  | 848  | 25127  | 265     |
| HUNTLEY_-SAWYER____230_80     | 80      | 230 | 691  | 760  | 848  | 25128  | 311     |
| HUNTLEY_-ST_60_36_115_36      | 36-1    | 115 | 199  | 199  | 199  | 26046  | 10      |
| HUNTLEY_-ST_60_37_115_37      | 37-1    | 115 | 190  | 190  | 190  | 26045  | 11      |
| HURLYAVE_115_69__TR 3         | TR 3    | 115 | 119  | 141  | 167  | 25837  | 39      |
| HURLYAVE_345/115_BK 1         | BK 1    | 345 | 486  | 560  | 560  | 25419  | 146     |
| HURLYAVE-LINCNPRK_115_HP      | HP      | 115 | 243  | 267  | 293  | 25833  | 65      |
| HURLYAVE-OHIOVLLI_115_OR      | OR      | 115 | 169  | 213  | 239  | 25834  | 0       |
| HURLYAVE-ROSETON__345_303     | 303     | 345 | 1713 | 1885 | 1912 | 25218  | 379     |
| HYATT____115_34__BK 1         | BK 1    | 115 | 61   | 76   | 100  | 70329  | 13      |
| HYATT____-BORDRCTY_115_15-979 | 979     | 115 | 156  | 171  | 179  | 25106  | 32      |
| IMC_TAP_-MECO____115_15-IM    | 15-IM   | 115 | 152  | 166  | 175  | 26132  | 21      |
| INDCORTH-SPIERFLS_115_18      | 18      | 115 | 340  | 374  | 414  | 26149  | 103     |
| INDK-OSW-LIGHTHSE_115_2       | 2-ILH   | 115 | 139  | 144  | 159  | 25503  | 14      |
| INDN_PT3-BUCHAN_S_345_W96     | W96     | 345 | 1793 | 1793 | 2266 | 25570  | 1038    |
| INDPDNCE_345_18__TB 5         | MT 5    | 345 | 215  | 235  | 255  | 68303  | 177     |
| INDPDNCE_345_18__TB 6         | MT 6    | 345 | 215  | 235  | 255  | 68304  | 177     |
| INDPDNCE-SCRIBA__345_25       | 25      | 345 | 1918 | 2115 | 2390 | 25859  | 156     |
| INGHAM_C_115_115_PAR 2        | PAR 2   | 115 | 197  | 234  | 239  | 25242  | 120     |
| INGHAM_C-INGHAM_E_115_R81     | R81     | 115 | 222  | 234  | 239  | 25243  | 0       |
| INGHAM_E-ESPRGFLD_115_7-942   | 7       | 115 | 114  | 131  | 152  | 25061  | 30      |
| INGHAM_E-IMC_TAP__115_15      | 15-II   | 115 | 128  | 135  | 152  | 25871  | 32      |

| EQUIPMENT NAME                | LINE ID | KV  | NOR  | LTE  | STE  | PTID   | MW FLOW |
|-------------------------------|---------|-----|------|------|------|--------|---------|
| INGHAM_E-STJHNVLE_115_6       | 6-IS    | 115 | 104  | 107  | 122  | 26133  | 31      |
| INGHAM_E-STONER_115_9         | 9-IS    | 115 | 128  | 135  | 152  | 25863  | 32      |
| JAMAICA_-LAKSUCSS_138_903     | 903     | 138 | 271  | 350  | 428  | 25090  | 199     |
| JAMAICA_-VALLYSTR_138_901 L_M | 901 L_M | 138 | 307  | 368  | 441  | 25048  | 107     |
| JENNISON_115_46__BK 1A        | BK 1A   | 115 | 57   | 58   | 61   | 69462  | 17      |
| JENNISON-HANCOCK_115_954      | 954     | 115 | 119  | 120  | 120  | 26186  | 23      |
| JENNISON-KATTLVLE_115_943     | 943     | 115 | 146  | 160  | 178  | 25898  | 60      |
| JENNISON-SIDNEYRR_115_949     | 949     | 115 | 117  | 120  | 120  | 26173  | 1       |
| JOHNSON_-MAPLEWOD_115_12      | 12      | 115 | 239  | 239  | 239  | 26268  | 74      |
| KATONAH_-AMAWALK_115_995      | 995     | 115 | 261  | 287  | 311  | 325279 | 8       |
| KATONAH_-CROTONFL_115_991     | 991     | 115 | 261  | 287  | 311  | 26157  | 47      |
| KENTAVE_-GREENWD_138_31232    | 31231-2 | 138 | 195  | 249  | 310  | 25299  | 49      |
| KINTIGH_-ROCHESTR_345_SR1-39  | SR-1    | 345 | 1591 | 1745 | 1793 | 25073  | 405     |
| KNAPPCRN_115_69__TR 2         | TR 2    | 115 | 48   | 59   | 60   | 25838  | 8       |
| KNAPPCRN-SANDDOCK_115_KB_KC   | KB_KC   | 115 | 238  | 262  | 291  | 26240  | 34      |
| KNAPPCRN-SPACKILL_115_SK      | SK      | 115 | 238  | 262  | 291  | 325777 | 14      |
| KNIFSRNC-SCOTAFILT_115_913    | 913     | 115 | 120  | 120  | 120  | 26207  | 11      |
| LADENTWN-BOWLINE_345_68       | 68      | 345 | 777  | 837  | 837  | 25249  | 123     |
| LADENTWN-BUCHAN_S_345_Y88     | Y88     | 345 | 1823 | 2015 | 2557 | 25185  | 91      |
| LADENTWN-WHAVSTRW_345_67-2    | 67-2    | 345 | 1976 | 2387 | 2895 | 25248  | 153     |
| LAFAYTTE-CLRKSCRN_345_4-46    | 16893   | 345 | 1279 | 1410 | 1781 | 25049  | 621     |
| LAFAYTTE-DEWITT_345_22        | 22      | 345 | 1643 | 1643 | 1643 | 25174  | 228     |
| LAKEVIEU-CLVRBANK_115_142     | 142     | 115 | 107  | 117  | 123  | 325881 | 54      |
| LAKSUCSS_138_69__BK 5         | BK 5    | 138 | 258  | 304  | 338  | 26603  | 98      |
| LAKSUCSS_138_69__BK 6         | BK 6    | 138 | 258  | 304  | 338  | 325098 | 89      |
| LAKSUCSS_138A_138B_PAR        | B_PAR   | 138 | 339  | 356  | 427  | 25593  | 200     |
| LANGDON_-NORTHSDE_115_936     | 936     | 115 | 206  | 227  | 239  | 26160  | 47      |
| LAUREL L-GOUDEY_115_952       | 952     | 115 | 128  | 149  | 162  | 25012  | 35      |
| LAURLEGY-SCOV RCK_345_384     | 384     | 345 | 896  | 1255 | 1434 | 26389  | 473     |
| LAWRNCAV-HANAWAFL_115_5       | 5       | 115 | 222  | 234  | 278  | 26085  | 3       |
| LAWRNCAV-SUGARISL_115_4       | 4       | 115 | 268  | 293  | 317  | 326186 | 2       |
| LEEDS_-ATHENS_345_95          | 95      | 345 | 1624 | 1783 | 1946 | 25789  | 219     |
| LEEDS_-HURLYAVE_345_301       | 301     | 345 | 1713 | 1885 | 1912 | 25055  | 526     |
| LEEDS_-PLSNTVLY_345_92        | 92      | 345 | 1624 | 1783 | 1912 | 25056  | 759     |
| LIGHTHSE-EWATRWN_115_5        | 5       | 115 | 119  | 119  | 119  | 25504  | 30      |
| LIGHTHSE-MALLORY_115_7        | 7-CL    | 115 | 141  | 144  | 165  | 25521  | 0       |
| LINCNPRK-EKINGSTN_115_LR      | LR      | 115 | 243  | 260  | 282  | 26223  | 36      |
| LINDEN_-GOETHALS_230_A2253    | A2253   | 230 | 688  | 785  | 908  | 25017  | 333     |
| LOCKPORT-HINMAN_115_100       | 100     | 115 | 268  | 293  | 317  | 25087  | 150     |
| LOCKPORT-N.AKRON_115_108      | 108     | 115 | 158  | 162  | 187  | 25266  | 32      |
| LOCKPORT-OAKFIELD_115_112     | 112     | 115 | 166  | 175  | 187  | 25300  | 33      |
| LOCKPORT-SHELBY76_115_113     | 113     | 115 | 174  | 191  | 199  | 25263  | 39      |
| LOCKPORT-SWEDEN_115_111       | 111     | 115 | 199  | 199  | 199  | 25262  | 33      |
| LOCKPORT-TELGRAPH_115_107     | 107     | 115 | 268  | 293  | 317  | 25265  | 52      |
| LOCKPORT-TELGRAPH_115_114     | 114-1   | 115 | 174  | 191  | 199  | 25264  | 44      |
| LOCUSTGR-NEWBRIDGE_138_558    | 558     | 138 | 351  | 579  | 659  | 25158  | 261     |
| LONG_MTN-PLSNTVLY_345_398     | 398     | 345 | 1414 | 1549 | 1796 | 25033  | 90      |
| LONG_MTN-PLUM TRE_345_321     | 321     | 345 | 1601 | 1757 | 1984 | 25720  | 78      |

| EQUIPMENT NAME               | LINE ID | KV  | NOR  | LTE  | STE  | PTID   | MW FLOW |
|------------------------------|---------|-----|------|------|------|--------|---------|
| LONGLANE-LAFARGE__115_6      | 6       | 115 | 141  | 144  | 159  | 25864  | 43      |
| LOVETT__138_69__BK 147       | BK 147  | 138 | 94   | 130  | 149  | 26331  | 23      |
| LOVETT__-BOWLINOR_138_56     | 56      | 138 | 279  | 305  | 317  | 25877  | 13      |
| LOVETT__-STONYPNT_138_54     | 54      | 138 | 282  | 309  | 321  | 25885  | 1       |
| LOWVILLE-BOONVILLE_115_5     | 5-LB    | 115 | 128  | 135  | 152  | 26075  | 23      |
| LUDDLW__-CARP HL__345_301    | 301     | 345 | 1569 | 1757 | 1886 | 25722  | 234     |
| LUDDLW__-NORTHFLD_345_354    | 354     | 345 | 1601 | 1757 | 1984 | 25713  | 596     |
| LUTHERFT-MALTA__115_1        | 1       | 115 | 213  | 292  | 324  | 325889 | 73      |
| LUTHERFT-MALTA__115_302      | 2       | 115 | 213  | 292  | 318  | 325890 | 11      |
| LUTHERFT-MULBRYNM_115_3      | 3       | 115 | 227  | 248  | 268  | 26477  | 10      |
| LUTHERFT-MULBRYNM_115_308    | 308     | 115 | 242  | 266  | 292  | 325742 | 70      |
| LYON_MTN-KNTFSRNC_115_1(911) | 911     | 115 | 149  | 171  | 184  | 26205  | 19      |
| MACHIAS_-VALLEY44_115_152    | 152     | 115 | 156  | 171  | 182  | 326172 | 10      |
| MACHIAS_-VALLEY44_115_167    | 151     | 115 | 145  | 160  | 178  | 326169 | 30      |
| MAINESBG-WATRCURE_345_30     | 30      | 345 | 927  | 927  | 927  | 25018  | 32      |
| MALLORY_-WETZEL__115_7       | 7-CL    | 115 | 224  | 224  | 224  | 326206 | 26      |
| MALONE__-NICHVLVLE_115_3     | 3-NM    | 115 | 168  | 197  | 199  | 25585  | 19      |
| MALONE__-WILLIS__115_MW1-910 | 1-MW    | 115 | 168  | 191  | 199  | 25586  | 69      |
| MALTA__-TAPBLSTN_115_1       | 1       | 115 | 268  | 293  | 317  | 325891 | 73      |
| MALTA__-TAPBLSTN_115_302     | 302     | 115 | 268  | 293  | 317  | 325892 | 12      |
| MANCHSTR-SPACKILL_115_MC     | MC      | 115 | 238  | 262  | 291  | 325776 | 7       |
| MAPLE140-BUFALO54_115_38     | 38      | 115 | 211  | 217  | 255  | 326157 | 75      |
| MAPLE140-BUFALO54_115_39     | 39      | 115 | 211  | 217  | 255  | 326158 | 73      |
| MAPLEWOD-WTRVLARS_115_19     | 19      | 115 | 168  | 212  | 239  | 25870  | 0       |
| MAPLEWOD-WTRVLARS_115_31     | 31      | 115 | 168  | 188  | 239  | 25844  | 51      |
| MARCY__765_345_BK 1          | BK 1    | 765 | 1756 | 1756 | 1756 | 25455  | 199     |
| MARCY__765_345_BK 2          | BK 2    | 765 | 1793 | 1793 | 2297 | 25456  | 176     |
| MARCY__-EDIC__345_UE1-7      | UE1-7   | 345 | 1918 | 2115 | 2390 | 25229  | 116     |
| MARCY__-FRASANX_345_UCC2-41  | UCC2-41 | 345 | 1793 | 1793 | 1793 | 25113  | 0       |
| MARCY__-N.SCTLND_345_18      | 18      | 345 | 1793 | 1793 | 2297 | 25276  | 491     |
| MARION__-FARRAGUT_345_C3403  | C3403   | 345 | 525  | 744  | 827  | 25038  | 333     |
| MARSHVLE-CLINTON__115_12     | 12      | 115 | 152  | 159  | 159  | 325267 | 3       |
| MASSENA__765_230_BK 1        | BK 1    | 765 | 1296 | 1390 | 1872 | 25665  | 68      |
| MASSENA__765_230_BK 2        | BK 2    | 765 | 1296 | 1390 | 1872 | 25666  | 68      |
| MASSENA_-MARCY__765_MSU1     | MSU1    | 765 | 5300 | 6254 | 6625 | 25224  | 375     |
| MCADOO__-BATTHILL_115_4      | 6-MBH   | 115 | 93   | 101  | 107  | 26064  | 1       |
| MCINTYRE-COLTON__115_8       | 8-MC    | 115 | 93   | 101  | 106  | 25514  | 13      |
| MCINTYRE-MCADOO__115_6       | 6       | 115 | 156  | 158  | 159  | 26108  | 14      |
| MCKNOWNV-NEWKRMKL_115_8      | 8       | 115 | 291  | 320  | 356  | 26499  | 115     |
| MECO__-CHURCH_S_115_10       | 10-AM   | 115 | 152  | 153  | 153  | 26120  | 0       |
| MENANDS_-REYNOLDS_115_2      | 2-MR    | 115 | 255  | 282  | 316  | 26135  | 91      |
| MENANDS_-RIVERSDE_115_3      | 3-MR    | 115 | 222  | 234  | 239  | 26134  | 95      |
| MERTPARK-WICCOPEE_115_WP     | WP      | 115 | 244  | 260  | 282  | 325772 | 54      |
| MEYER__115_1__BK4S           | BK4S    | 230 | 271  | 331  | 336  | 325766 | 41      |
| MEYER__230_1__BK4P           | BK4P    | 230 | 271  | 331  | 336  | 325765 | 53      |
| MEYER__-CANANDGA_230_60      | 60      | 230 | 591  | 649  | 715  | 325604 | 60      |
| MEYER__-MORAINE__115_966     | 966     | 115 | 149  | 172  | 191  | 26166  | 51      |
| MIDDLEOR-SHOEMAKR_138_29     | 29      | 138 | 506  | 587  | 671  | 26468  | 186     |

| EQUIPMENT NAME               | LINE ID | KV  | NOR  | LTE  | STE  | PTID   | MW FLOW |
|------------------------------|---------|-----|------|------|------|--------|---------|
| MIDDLETP_345_138_BK 114      | BK114   | 345 | 506  | 587  | 671  | 26465  | 186     |
| MIDDLETP-ROCKTVRN_345_MTR-34 | MTR-34  | 345 | 1918 | 2115 | 2390 | 26464  | 428     |
| MILAN___-PLSTVYCH_115_10     | 10      | 115 | 169  | 187  | 199  | 26433  | 6       |
| MILAN___-RHINEBCK_115_MR     | MR      | 115 | 219  | 232  | 239  | 26242  | 2       |
| MILLBURY-CARP HL__345_302    | 302     | 345 | 1475 | 1560 | 1919 | 25721  | 242     |
| MILLERPL-HOLBROOK_138_885    | 885     | 138 | 525  | 586  | 664  | 26691  | 2       |
| MILLIKEN-ETNA_____115_974    | 974     | 115 | 231  | 260  | 286  | 26177  | 122     |
| MILLIKEN-ETNA_____115_975    | 975     | 115 | 231  | 260  | 286  | 26178  | 133     |
| MILLWOOD_345_138_TA 1        | TA 1    | 138 | 248  | 333  | 359  | 25530  | 26      |
| MILLWOOD_345_138_TA 2        | TA 2    | 138 | 234  | 305  | 321  | 25531  | 30      |
| MILLWOOD-EASTVIEW_345_W82    | W82     | 345 | 2430 | 2823 | 3357 | 25147  | 720     |
| MILLWOOD-EASTVIEW_345_W85    | W85     | 345 | 2430 | 2823 | 3357 | 25258  | 683     |
| MILLWOOD-EASTVIEW_345_W99    | W99     | 345 | 2430 | 2823 | 3357 | 25255  | 685     |
| MILTON_C-GRS_LOCK_115_18     | 18-MG   | 115 | 156  | 171  | 182  | 26104  | 20      |
| MNCHESTR-CARD_____345_368    | 368     | 345 | 1350 | 1554 | 1939 | 25710  | 224     |
| MNCHESTR-MILSTONE_345_310    | 310     | 345 | 1811 | 2145 | 2372 | 25336  | 314     |
| MNCHESTR-NO.BLOOM_345_3642   | 3642    | 345 | 956  | 956  | 956  | 26399  | 15      |
| MNCHESTR-SCOV RCK_345_353    | 353     | 345 | 1518 | 1805 | 2217 | 25714  | 343     |
| MNTNDALE-WWDBURNY_115_957    | 957     | 115 | 120  | 120  | 120  | 325616 | 14      |
| MODENA__115_69_BK1           | BK1     | 115 | 40   | 50   | 53   | 26325  | 1       |
| MODENA__-OHIOVLLE_115_PX     | PX      | 115 | 285  | 301  | 349  | 25835  | 4       |
| MOHANSIC_115_13__BK 2        | BK 2    | 115 | 26   | 28   | 33   | 26482  | 10      |
| MOHANSIC_115_13__BK 4        | BK 4    | 115 | 26   | 28   | 33   | 26483  | 13      |
| MOHICAN_-BATNKILL_115_15     | 15      | 115 | 141  | 144  | 165  | 26122  | 20      |
| MOHICAN_-MULBRYNM_115_3      | 3       | 115 | 227  | 248  | 268  | 26687  | 14      |
| MONSEY__-BURNS____138_601    | 601     | 138 | 456  | 478  | 500  | 325608 | 94      |
| MONTRFL_-CODNIGTN_115_982    | 982     | 115 | 133  | 149  | 162  | 25728  | 38      |
| MONTRFL_-RIDGE_RD_115_963    | 963-2   | 115 | 133  | 145  | 149  | 26196  | 17      |
| MONTRFL_-RIDGE_RD_115_978    | 978-2   | 115 | 133  | 149  | 162  | 26197  | 17      |
| MONTVILL-MILSTONE_345_371    | 371     | 345 | 1864 | 2187 | 2390 | 25334  | 766     |
| MORGANRD-LANGDON__115_936    | 936     | 115 | 206  | 227  | 239  | 325224 | 19      |
| MORTIMER-FAIRPORT_115_1      | 1       | 115 | 168  | 181  | 188  | 25163  | 49      |
| MORTIMER-FAIRPORT_115_2      | 2       | 115 | 166  | 175  | 187  | 25240  | 38      |
| MORTIMER-SHELBY76_115_114    | 114     | 115 | 129  | 149  | 153  | 326129 | 12      |
| MORTIMER-STA_56____115_24    | 42393   | 115 | 156  | 171  | 182  | 25096  | 23      |
| MORTIMER-STA_56____115_25    | 42394   | 115 | 139  | 145  | 162  | 25095  | 39      |
| MOSES____115_13__BK 7        | BK 7    | 115 | 258  | 258  | 258  | 70410  | 0       |
| MOSES____115_13__BK 8        | BK 8    | 115 | 258  | 258  | 258  | 70409  | 0       |
| MOSES____230_115_BK 1        | BK 1    | 230 | 526  | 589  | 722  | 25411  | 10      |
| MOSES____230_115_BK 2        | BK 2    | 230 | 526  | 589  | 722  | 25451  | 10      |
| MOSES____230_115_BK 3        | BK 3    | 230 | 220  | 276  | 287  | 25452  | 4       |
| MOSES____230_115_BK 4        | BK 4    | 230 | 598  | 598  | 797  | 25453  | 10      |
| MOSES____-ADIRNDCK_230_MA1   | MA1     | 230 | 447  | 473  | 517  | 25269  | 47      |
| MOSES____-ADIRNDCK_230_MA2   | MA2     | 230 | 447  | 473  | 517  | 25270  | 47      |
| MOSES____-ALCOA_PA_115_MAL4  | MAL4    | 115 | 256  | 282  | 327  | 25582  | 108     |
| MOSES____-ALCOA_PA_115_MAL5  | MAL5    | 115 | 279  | 294  | 327  | 25583  | 98      |
| MOSES____-ALCOA_PA_115_MAL6  | MAL6    | 115 | 279  | 282  | 327  | 25581  | 105     |
| MOSES____-MASSENA_230_MMS1   | MMS1    | 230 | 1279 | 1378 | 1593 | 25274  | 68      |

| EQUIPMENT NAME                | LINE ID | KV  | NOR  | LTE  | STE  | PTID   | MW FLOW |
|-------------------------------|---------|-----|------|------|------|--------|---------|
| MOSES___-MASSENA__230_MMS2    | MMS2    | 230 | 1279 | 1378 | 1593 | 25275  | 68      |
| MOSES___-MED-ENGS_115_MRG1    | MRG1    | 115 | 145  | 145  | 157  | 26328  | 32      |
| MOSES___-MED-ENGS_115_MRG2    | MRG2    | 115 | 145  | 145  | 157  | 26335  | 10      |
| MOSES___-REYNLDPA_115_MR3     | MR3     | 115 | 250  | 265  | 292  | 26332  | 0       |
| MOSES___-WILLIS__230_MW1      | MW1     | 230 | 447  | 473  | 517  | 25188  | 58      |
| MOSES___-WILLIS__230_MW2      | MW2     | 230 | 447  | 473  | 517  | 25271  | 58      |
| MOSHIER_-TAYLORVL_115_7-MT    | 7-MT    | 115 | 49   | 49   | 49   | 26109  | 13      |
| MOTTHAVN_345_138_TR6          | TR6     | 345 | 549  | 651  | 724  | 325428 | 57      |
| MOTTHAVN_345_138_TR7          | TR7     | 345 | 549  | 651  | 724  | 325426 | 57      |
| MOTTHAVN_345_138_TR8          | TR8     | 345 | 549  | 651  | 724  | 325427 | 56      |
| MOTTHAVN_345_138_TR9          | TR9     | 345 | 549  | 651  | 724  | 325429 | 57      |
| MOTTHAVN-RAINEY__345_Q11      | Q11     | 345 | 741  | 858  | 1309 | 325430 | 80      |
| MOTTHAVN-RAINEY__345_Q12      | Q12     | 345 | 741  | 858  | 1309 | 325431 | 74      |
| MOUNTAIN-SWANROAD_115_103     | 103     | 115 | 224  | 250  | 282  | 26054  | 69      |
| MOUNTAIN-SWANROAD_115_104     | 104     | 115 | 224  | 250  | 282  | 26053  | 0       |
| MULBRYNM-EASTOVER_115_308     | 308     | 115 | 227  | 248  | 268  | 26475  | 75      |
| N._SALEM-BATNKILL_115_989     | 989     | 115 | 45   | 52   | 57   | 26448  | 2       |
| N.AKRON_-BATAVIA__115_107     | 107     | 115 | 159  | 159  | 159  | 25124  | 5       |
| N.AKRON_-BATAVIA__115_108     | 108     | 115 | 152  | 159  | 159  | 25125  | 17      |
| N.END___115_46__BK 1          | BK 1    | 115 | 70   | 71   | 75   | 25849  | 40      |
| N.END___-ASHLEYRD_115_702     | 702     | 115 | 351  | 386  | 434  | 25846  | 27      |
| N.END___-PLATSBRG_115_701     | 701     | 115 | 239  | 239  | 239  | 25848  | 42      |
| N.HEMPST-WHAVSTOR_138_530     | 530     | 138 | 282  | 309  | 321  | 26506  | 45      |
| N.SCTLND_345_115_BK 1         | BK 1    | 345 | 529  | 642  | 796  | 25445  | 37      |
| N.SCTLND_345_115_BK 2         | BK 2    | 345 | 629  | 796  | 796  | 25460  | 36      |
| N.SCTLND-ALBANY__115_8        | 8-NA    | 115 | 340  | 373  | 414  | 25496  | 34      |
| N.SCTLND-ALPS____345_2        | 2       | 345 | 1278 | 1410 | 1792 | 25217  | 279     |
| N.SCTLND-ALTAMONT_115_20      | 20-NV   | 115 | 141  | 144  | 165  | 25492  | 72      |
| N.SCTLND-BETHLHEM_115_4       | 4-NB    | 115 | 311  | 313  | 313  | 25497  | 90      |
| N.SCTLND-FEURABSH_115_3       | 3-NF    | 115 | 311  | 341  | 375  | 25495  | 27      |
| N.SCTLND-LEEDS___345_93       | 93      | 345 | 1534 | 1692 | 1912 | 25171  | 561     |
| N.SCTLND-LEEDS___345_94       | 94      | 345 | 1534 | 1692 | 1912 | 25203  | 558     |
| N.SCTLND-OWENSCRN_115_7       | 7       | 115 | 141  | 144  | 165  | 25491  | 47      |
| N.SCTLND-OWENSCRN_115_9       | 9       | 115 | 141  | 144  | 165  | 25490  | 4       |
| N.SCTLND-ROTRDAM_115_13       | 13-NR   | 115 | 255  | 282  | 358  | 25494  | 54      |
| N.SCTLND-VORHVSLE_115_19      | 19-NV   | 115 | 128  | 135  | 152  | 25493  | 54      |
| N.TROY___-EASTOVER_115_306    | 308     | 115 | 227  | 248  | 268  | 326095 | 27      |
| N.TROY___-EASTOVER_115_307    | 10      | 115 | 222  | 234  | 268  | 326096 | 25      |
| N.TROY___-HOOSICK__115_5      | 5-NHF   | 115 | 259  | 292  | 317  | 26131  | 27      |
| N.TROY___-REYNOLDS_115_16     | 16-NR   | 115 | 222  | 234  | 239  | 26139  | 76      |
| N.TROY___-WYNTKLNM_115_14-988 | 14-NW   | 115 | 168  | 212  | 239  | 26137  | 61      |
| NANGOLA_-DELEMTER_115_141     | 141     | 115 | 107  | 117  | 123  | 325872 | 42      |
| NANGOLA_-DELEMTER_115_142     | 142     | 115 | 107  | 117  | 123  | 325879 | 39      |
| NANGOLA_-SILVRCRK_115_141     | 141     | 115 | 107  | 117  | 123  | 325871 | 31      |
| NANGOLA_-SILVRCRK_115_142     | 142     | 115 | 107  | 117  | 123  | 325878 | 29      |
| NBRDWYNM-ERIE_ST__115_181-922 | 922     | 115 | 145  | 160  | 178  | 26011  | 65      |
| NCATSKLL_115_69__TR 4         | TR 4    | 115 | 57   | 71   | 79   | 25839  | 30      |
| NCATSKLL_115_69__TR 5         | TR 5    | 115 | 53   | 65   | 73   | 25818  | 30      |

| EQUIPMENT NAME                | LINE ID | KV  | NOR  | LTE  | STE  | PTID   | MW FLOW |
|-------------------------------|---------|-----|------|------|------|--------|---------|
| NCATSKLL-MILAN___115_T7       | T7      | 115 | 169  | 199  | 199  | 26243  | 5       |
| NHELSEA_115/69__BK TR1        | BK TR1  | 115 | 40   | 50   | 53   | 25836  | 10      |
| NHELSEA-FISHKPLN_115_NF       | NF      | 115 | 255  | 290  | 315  | 26228  | 109     |
| NHELSEA-FORGEBRK_115_FO       | FO      | 115 | 225  | 251  | 282  | 26230  | 105     |
| NEPTUNE_-DUFFYAVE_345_NEPTUNE | NEPTUNE | 345 | 660  | 785  | 785  | 325304 | 660     |
| NEWBRDGE_138_69__BK 6         | BK 6    | 138 | 129  | 159  | 203  | 26604  | 59      |
| NEWBRDGE_138_69__BK 7         | BK 7    | 138 | 129  | 159  | 203  | 26605  | 52      |
| NEWBRDGE_345_138_BK_1         | BK 1    | 345 | 440  | 469  | 562  | 325301 | 331     |
| NEWBRDGE_345_138_BK_2         | BK 2    | 345 | 450  | 469  | 562  | 325302 | 331     |
| NEWBRDGE-BAGATLRD_138_563     | 563     | 138 | 402  | 594  | 658  | 25536  | 46      |
| NEWBRDGE-DUFFYAVE_345_501     | 501     | 345 | 660  | 750  | 750  | 325303 | 660     |
| NEWBRDGE-EGRDNCTY_138_467     | 467     | 138 | 347  | 501  | 676  | 325378 | 63      |
| NEWBRDGE-RULAND___138_561     | 561     | 138 | 300  | 329  | 352  | 25305  | 94      |
| NEWBRDGE-RULAND___138_562     | 562     | 138 | 299  | 327  | 350  | 25306  | 94      |
| NEWBRDGE-RULAND___138_567     | 567     | 138 | 335  | 386  | 425  | 325379 | 89      |
| NEWKRMKL-ALBANY___115_7       | 7       | 115 | 340  | 371  | 413  | 325257 | 129     |
| NEWWALDN-GARDNVLB_115_38      | 38      | 115 | 168  | 203  | 237  | 26039  | 57      |
| NIAGARA_230_115_BK T1         | BK T1   | 230 | 220  | 276  | 288  | 25409  | 72      |
| NIAGARA_230_115_BK T2         | BK T2   | 230 | 286  | 359  | 452  | 25410  | 4       |
| NIAGARA_345_230_BK 3          | BK 3    | 345 | 441  | 552  | 575  | 25408  | 0       |
| NIAGARA_345_230_BK 4          | BK 4    | 345 | 717  | 717  | 956  | 25449  | 3       |
| NIAGARA_345_230_BK 5          | BK 5    | 345 | 441  | 552  | 575  | 25450  | 0       |
| NIAGARA_-KINTIGH_345_NS1-38   | NS1-38  | 345 | 1591 | 1745 | 1793 | 25074  | 259     |
| NIAGARA_-LNGRD209_115_180     | 180     | 115 | 243  | 249  | 297  | 25104  | 121     |
| NIAGARA_-MOUNTAIN_115_120     | 120     | 115 | 224  | 250  | 291  | 25135  | 69      |
| NIAGARA_-PACKARD_115_191      | 191     | 115 | 349  | 359  | 398  | 25075  | 161     |
| NIAGARA_-PACKARD_115_192      | 192     | 115 | 349  | 359  | 398  | 25099  | 169     |
| NIAGARA_-PACKARD_115_193      | 193     | 115 | 349  | 359  | 411  | 25100  | 120     |
| NIAGARA_-PACKARD_115_194      | 194     | 115 | 349  | 359  | 398  | 25101  | 120     |
| NIAGARA_-PACKARD_115_195      | 195     | 115 | 359  | 359  | 475  | 25102  | 138     |
| NIAGARA_-PACKARD_230_61       | 61      | 230 | 717  | 717  | 949  | 25186  | 360     |
| NIAGARA_-PACKARD_230_62       | 62      | 230 | 717  | 717  | 949  | 25220  | 354     |
| NIAGARA_-ROBNSNRD_230_64      | 64      | 230 | 639  | 678  | 717  | 25088  | 248     |
| NIAGARA_-ROCHESTR_345_NR2     | NR2     | 345 | 1591 | 1745 | 1904 | 25084  | 198     |
| NIAGARA_-SANBORN_115_101      | 101     | 115 | 285  | 300  | 318  | 326180 | 72      |
| NIAGARA_-SANBORN_115_102      | 102     | 115 | 319  | 339  | 382  | 25103  | 70      |
| NIAGB130-FRNKYONG_115_181-922 | 181-922 | 115 | 211  | 217  | 255  | 26057  | 112     |
| NICHLVLE-PARISHVL_115_3       | 3-PN    | 115 | 156  | 170  | 181  | 26110  | 26      |
| NILE_____-ANDOVER_115_157     | 157-2   | 115 | 128  | 135  | 152  | 26016  | 15      |
| NINEMILE-CLAY____345_8        | 8       | 345 | 1278 | 1410 | 1624 | 25167  | 661     |
| NINEMILE-FTZPK_NM_115_4       | 4-NF    | 115 | 119  | 119  | 159  | 25500  | 28      |
| NINEMILE-SCRIBA____345_9      | 9       | 345 | 1278 | 1410 | 1792 | 25359  | 42      |
| NOGDNBRG-MCINTYRE_115_9       | 9-NOM   | 115 | 159  | 159  | 159  | 26080  | 18      |
| NORTHFLD-VRNON VT_345_381     | 381     | 345 | 1195 | 1195 | 1580 | 25707  | 365     |
| NRTH1385-NOR HBR___138_601    | 601     | 138 | 147  | 200  | 409  | 325597 | 34      |
| NRTH1385-NOR HBR___138_602    | 602     | 138 | 147  | 200  | 409  | 325598 | 33      |
| NRTH1385-NOR HBR___138_603    | 603     | 138 | 147  | 200  | 409  | 325599 | 33      |
| NRTH1385-NRTHPORT_138_1385    | 1385    | 138 | 441  | 562  | 569  | 25035  | 100     |

| EQUIPMENT NAME                | LINE ID | KV  | NOR  | LTE  | STE  | PTID   | MW FLOW |
|-------------------------------|---------|-----|------|------|------|--------|---------|
| NRTHPORT_138_138_PS2          | 138_PS2 | 138 | 473  | 488  | 586  | 25599  | 183     |
| NRTHPORT_138N_138E_PAR 1      | E_PAR 1 | 138 | 491  | 562  | 569  | 25598  | 100     |
| NRTHPORT-ELWOOD___138_678     | 678     | 138 | 356  | 608  | 674  | 25543  | 31      |
| NRTHPORT-ELWOOD___138_681     | 681     | 138 | 358  | 584  | 662  | 25544  | 42      |
| NRTHPORT-PILGRIM___138_672    | 672     | 138 | 175  | 289  | 418  | 25307  | 102     |
| NRTHPORT-PILGRIM___138_677    | 677     | 138 | 355  | 578  | 670  | 25308  | 218     |
| NRTHPORT-PILGRIM___138_679    | 679     | 138 | 358  | 580  | 668  | 25309  | 218     |
| OAKDALE__230_115_BK 1         | BK 1    | 230 | 318  | 435  | 440  | 25400  | 40      |
| OAKDALE__345_115_BK 2         | BK 2    | 345 | 583  | 600  | 600  | 25401  | 172     |
| OAKDALE__345_115_BK 3         | BK 3    | 345 | 489  | 577  | 600  | 25399  | 0       |
| OAKDALE_-DELHI_____115_919    | 919     | 115 | 171  | 179  | 179  | 25897  | 23      |
| OAKDALE_-ENDICOTT_115_938     | 938     | 115 | 171  | 188  | 239  | 26198  | 82      |
| OAKDALE_-FRASER___345_32      | 32      | 345 | 1494 | 1692 | 1793 | 25235  | 223     |
| OAKDALE_-GOUDEY___115_939     | 939     | 115 | 292  | 321  | 352  | 26182  | 92      |
| OAKDALE_-KATTLVLE_115_943     | 943     | 115 | 171  | 188  | 221  | 26201  | 80      |
| OAKDALE_-NORTHSDE_115_944     | 944     | 115 | 231  | 239  | 239  | 26199  | 45      |
| OAKFIELD-BATAVIA___115_112-2  | 112-2   | 115 | 156  | 162  | 181  | 25126  | 21      |
| OAKWOOD_-ELWOOD___138_674     | 674     | 138 | 381  | 588  | 666  | 25545  | 22      |
| OAKWOOD_-SYOSSET___138_675    | 675     | 138 | 263  | 365  | 658  | 25547  | 57      |
| OHIOVLE_115_69__BK TR1        | BK TR1  | 115 | 40   | 50   | 53   | 25819  | 0       |
| OHIOVLE-HIGHLAND_115_OR       | OR      | 115 | 169  | 213  | 239  | 26247  | 3       |
| ONEIDA__-WALESVIL_115_7       | 7       | 115 | 141  | 144  | 159  | 26115  | 27      |
| ONEIDA__-YAHNUNDA_115_6       | 6       | 115 | 128  | 135  | 152  | 26113  | 28      |
| OSWEGO___345_115_BK 7         | BK 7    | 345 | 576  | 657  | 774  | 25372  | 270     |
| OSWEGO__-ELBRIDGE_345_17      | 17      | 345 | 1278 | 1410 | 1792 | 25234  | 621     |
| OSWEGO__-S.OSWEGO_115_3       | 3-OS    | 115 | 209  | 239  | 239  | 25507  | 114     |
| OSWEGO__-S.OSWEGO_115_5       | 5-OS    | 115 | 209  | 239  | 239  | 25508  | 114     |
| OSWEGO__-S.OSWEGO_115_8       | 8-OS    | 115 | 478  | 478  | 478  | 25509  | 40      |
| OSWEGO__-VOLNEY___345_11      | 11      | 345 | 1278 | 1410 | 1792 | 25199  | 51      |
| OSWEGO__-VOLNEY___345_12      | 12      | 345 | 1278 | 1410 | 1792 | 25201  | 51      |
| OWENSCRN-SABICO___115_7       | 7       | 115 | 141  | 144  | 165  | 325736 | 52      |
| OWENSCRN-SABICO___115_9       | 9       | 115 | 141  | 144  | 165  | 325737 | 26      |
| PACKARD__230_115_BK 3         | BK 3    | 230 | 233  | 250  | 250  | 25414  | 10      |
| PACKARD__230_115_BK 4         | BK 4    | 230 | 235  | 250  | 250  | 25415  | 63      |
| PACKARD_-LNGRD209_115_182     | 182     | 115 | 243  | 249  | 297  | 26056  | 128     |
| PACKARD_-NIAGB130_115_181-922 | 181-922 | 115 | 194  | 199  | 233  | 26055  | 122     |
| PACKARD_-SAWYER___230_77      | 77      | 230 | 680  | 747  | 836  | 25164  | 0       |
| PACKARD_-SAWYER___230_78      | 78      | 230 | 680  | 747  | 836  | 25195  | 0       |
| PACKARD_-WALCK_RD_115_129     | 129     | 115 | 239  | 301  | 301  | 25906  | 104     |
| PACKARD_-ZIMMERM1_115_130     | 130-2   | 115 | 213  | 225  | 242  | 26059  | 118     |
| PALMITER-BENNETT___115_932    | 932     | 115 | 95   | 100  | 111  | 26165  | 8       |
| PANNELL__345_115_BK 1         | BK 1    | 345 | 273  | 329  | 336  | 25396  | 85      |
| PANNELL__345_115_BK 2         | BK 2    | 345 | 273  | 328  | 336  | 25431  | 85      |
| PANNELL__345_115_BK 3         | BK 3    | 345 | 314  | 336  | 336  | 25572  | 69      |
| PANNELL_-CLAY_____345_1       | 1       | 345 | 1195 | 1195 | 1195 | 25058  | 128     |
| PANNELL_-CLAY_____345_2       | 2       | 345 | 1195 | 1195 | 1195 | 25050  | 128     |
| PANNELRG-FARMGTN___115_4-977  | 4-977   | 115 | 258  | 293  | 317  | 25080  | 115     |
| PANNELRG-STA_56___115_24      | 24      | 115 | 139  | 145  | 162  | 26285  | 60      |



| EQUIPMENT NAME               | LINE ID | KV  | NOR  | LTE  | STE  | PTID   | MW FLOW |
|------------------------------|---------|-----|------|------|------|--------|---------|
| PANNELRG-STA_56__115_25      | 25      | 115 | 156  | 171  | 182  | 26284  | 48      |
| PARISHVL-COLTON__115_3       | 3-CP    | 115 | 156  | 170  | 181  | 25241  | 25      |
| PATROON_-MCKNOWNV_115_2-6    | 6       | 115 | 240  | 373  | 414  | 25866  | 74      |
| PATROON_-PATRTAP__115_15     | 15      | 115 | 170  | 188  | 239  | 25867  | 14      |
| PATRTAP_-MENANDS__115_15     | 15      | 115 | 128  | 135  | 152  | 26493  | 14      |
| PAVMNTRD-STOLLERD_115_926    | 926     | 115 | 299  | 335  | 368  | 325220 | 25      |
| PAWLING_-CROTONFL_115_994    | 994     | 115 | 179  | 179  | 179  | 25902  | 40      |
| PEAT ST_-HDSNBRDG_115_10     | 10      | 115 | 225  | 251  | 291  | 26648  | 56      |
| PEAT ST_-HDSNBRDG_115_7      | 7       | 115 | 340  | 374  | 414  | 26649  | 16      |
| PETERBOR-ONEIDA__115_5       | 5       | 115 | 141  | 144  | 165  | 25896  | 27      |
| PIERCBRK-FIVEMILE_345_37     | 37      | 345 | 1338 | 1494 | 1494 | 326196 | 44      |
| PILGRIM_138B_138A_PAR        | 138_PS2 | 138 | 351  | 369  | 443  | 25604  | 140     |
| PILGRIM_-HAUPPAUG_138_871    | 871     | 138 | 345  | 368  | 419  | 25550  | 140     |
| PILGRIM_-WEST BUS_138_881    | 881     | 138 | 559  | 603  | 664  | 25537  | 102     |
| PLATSBRG-KNTFSRNC_115_PS1    | PS1     | 115 | 149  | 172  | 204  | 25078  | 24      |
| PLATTSBURGH PMLD #2          | PS-1/A  | 115 | 179  | 179  | 224  | 69888  | 10      |
| PLSNTVLE_345_13__BK 1        | BK 1    | 138 | 64   | 70   | 70   | 25477  | 23      |
| PLSNTVLE_345_13__BK 2        | BK 2    | 138 | 64   | 70   | 70   | 25478  | 22      |
| PLSNTVLE-DUNWODIE_345_W89    | W89     | 345 | 1976 | 2282 | 2542 | 25182  | 580     |
| PLSNTVLE-DUNWODIE_345_W90    | W90     | 345 | 1976 | 2282 | 2542 | 25250  | 617     |
| PLSNTVLY-EFISHKIL_345_F36    | F36     | 345 | 1976 | 2387 | 2895 | 25256  | 229     |
| PLSNTVLY-EFISHKIL_345_F37    | F37     | 345 | 1976 | 2387 | 2895 | 25257  | 229     |
| PLSNTVLY-WOOD_ST__345_F30    | F30     | 345 | 1976 | 2384 | 2895 | 25237  | 578     |
| PLSNTVLY-WOOD_ST__345_F31    | F31     | 345 | 1976 | 2384 | 2895 | 25238  | 545     |
| PLSTVYCH_115_69__TR 10       | TR 10   | 115 | 134  | 143  | 143  | 25840  | 57      |
| PLSTVYCH_345_115_BK S1       | BK S1   | 345 | 478  | 478  | 478  | 25382  | 14      |
| PLSTVYCH-INWOOD__115_X1      | X-1     | 115 | 219  | 232  | 255  | 26209  | 8       |
| PLSTVYCH-MANCHSTR_115_M      | M       | 115 | 238  | 262  | 291  | 26208  | 21      |
| PLSTVYCH-TODDHILL_115_C      | C       | 115 | 255  | 302  | 334  | 325156 | 34      |
| PORTER__-DERFIELD_115_8      | 8262523 | 115 | 127  | 127  | 127  | 26116  | 10      |
| PORTER__-ROTTRDAM_230_30     | 30-PR   | 230 | 511  | 564  | 634  | 25173  | 170     |
| PORTER__-ROTTRDAM_230_31     | 31-PR   | 230 | 511  | 564  | 634  | 25194  | 170     |
| PORTER__-VALLEY__115_4       | 4-PV    | 115 | 141  | 144  | 165  | 25231  | 65      |
| PORTER__-WATKINRD_115_5      | 5-PW    | 115 | 141  | 144  | 165  | 25232  | 79      |
| PORTJEFF_138_69__BK 7        | BK 7    | 138 | 127  | 156  | 208  | 25601  | 66      |
| PORTJEFF_138_69__BK 8        | BK 8    | 138 | 129  | 159  | 212  | 25600  | 56      |
| PORTJEFF-HOLBROOK_138_862    | 862     | 138 | 340  | 376  | 413  | 25539  | 5       |
| PORTJEFF-HOLBROOK_138_886    | 886     | 138 | 341  | 377  | 415  | 25540  | 4       |
| PYRITES_-COLTON__115_7       | 7-PC    | 115 | 93   | 101  | 107  | 26086  | 26      |
| QUAKERRD-MACEDON__115_930    | 930     | 115 | 68   | 85   | 112  | 25093  | 30      |
| QUAKERRD-PANNELRG_115_914    | 914     | 115 | 265  | 295  | 335  | 25261  | 6       |
| QUAKERRD-PANNELRG_115_925    | 925     | 115 | 351  | 372  | 414  | 25682  | 69      |
| QUAKERRD-SLEIGHT__115_13-980 | 980(13) | 115 | 187  | 206  | 221  | 25079  | 52      |
| QUAKERRD-STA_204__115_908    | 908     | 115 | 289  | 305  | 335  | 26286  | 48      |
| QUENBRDG-VERNON__138_31281   | 31281   | 138 | 413  | 550  | 602  | 25159  | 25      |
| QUENBRDG-VERNON__138_31282   | 31282   | 138 | 413  | 550  | 602  | 25160  | 28      |
| QUENSRY-CEDAR__115_10        | 10      | 115 | 156  | 170  | 181  | 26140  | 44      |
| QUENSRY-SHERMAN__115_17      | 17-QS   | 115 | 141  | 144  | 165  | 26142  | 46      |

| EQUIPMENT NAME               | LINE ID | KV  | NOR  | LTE  | STE  | PTID   | MW FLOW |
|------------------------------|---------|-----|------|------|------|--------|---------|
| RAINEY__-FARRAGUT_345_61     | 61      | 345 | 698  | 840  | 1300 | 25152  | 188     |
| RAINEY__-FARRAGUT_345_62     | 62      | 345 | 739  | 854  | 1293 | 25253  | 173     |
| RAINEY__-FARRAGUT_345_63     | 63      | 345 | 698  | 840  | 1300 | 25254  | 188     |
| RAINEY__-VERNON___138_36311  | 36311   | 138 | 280  | 325  | 413  | 25296  | 6       |
| RAINEY__-VERNON___138_36312  | 36312   | 138 | 295  | 353  | 409  | 25297  | 59      |
| RAMAPO___345_138_BK 1300     | 1300    | 345 | 451  | 546  | 619  | 25441  | 124     |
| RAMAPO___345_138_BK 2300     | 2300    | 345 | 451  | 546  | 619  | 25442  | 127     |
| RAMAPO___345_345_PAR3500     | PAR3500 | 345 | 656  | 849  | 1093 | 25370  | 0       |
| RAMAPO___345_345_PAR4500     | PAR4500 | 345 | 728  | 931  | 1093 | 25371  | 200     |
| RAMAPO___500_345_BK 1500     | BK 1500 | 345 | 1160 | 1419 | 1923 | 25656  | 200     |
| RAMAPO__-BUCHAN_N_345_Y94    | Y94     | 345 | 1823 | 2015 | 2557 | 25184  | 140     |
| RAMAPO__-LADENTWN_345_W72    | W72     | 345 | 1823 | 2015 | 2557 | 25233  | 62      |
| RAMAPO__-SUGARLOF_345_76     | 76      | 345 | 2271 | 2271 | 2271 | 326219 | 509     |
| RAMAPOOR-TALLMAN___138_60    | 60      | 138 | 456  | 478  | 500  | 25880  | 159     |
| RANGEHL_-CASTLEGD_115_937    | 937     | 115 | 149  | 149  | 149  | 325225 | 16      |
| REYNOLDS_345_115_BK 2        | BK 2    | 345 | 585  | 676  | 796  | 25403  | 205     |
| REYNOLDS-ALPS_____345_1      | 1       | 345 | 1912 | 1912 | 1912 | 25587  | 290     |
| REYNOLDS-GREENBSH_115_9      | 9-RG    | 115 | 398  | 398  | 398  | 26129  | 140     |
| REYNOLDS-RVSD_TAP_115_4      | 4       | 115 | 239  | 239  | 239  | 325648 | 12      |
| RICHFELD-ESPRGFLD_115_7-942  | 942     | 115 | 119  | 120  | 120  | 26176  | 26      |
| RIDGE_RD-HILLSIDE_115_963    | 963     | 115 | 133  | 145  | 149  | 26190  | 9       |
| RIDGE_RD-HILLSIDE_115_978    | 978-1   | 115 | 133  | 149  | 162  | 26191  | 8       |
| RIVERSDE-RVSD_TAP_115_4      | 4       | 115 | 239  | 239  | 239  | 26144  | 12      |
| RIVERSDE-TRINITY___115_18    | 18      | 115 | 159  | 178  | 258  | 26491  | 72      |
| RIVERSDE-TRINITY___115_19    | 19      | 115 | 214  | 256  | 311  | 26492  | 84      |
| RIVRHEAD_138_69__BK 7        | BK 7    | 138 | 129  | 159  | 208  | 26622  | 43      |
| RIVRHEAD_138_69__BK 8        | BK 8    | 138 | 127  | 156  | 208  | 26623  | 37      |
| ROBNSNRD-STOLLERD_230_65     | 65      | 230 | 673  | 717  | 717  | 25065  | 230     |
| ROCHESTR_345_115_BK 1        | BK 1    | 345 | 582  | 629  | 630  | 25412  | 118     |
| ROCHESTR_345_115_BK 2        | BK 2    | 345 | 389  | 476  | 478  | 25432  | 140     |
| ROCHESTR_345_115_BK 3        | BK 3    | 345 | 582  | 629  | 630  | 25446  | 116     |
| ROCHESTR_345_115_BK 5        | BK 5    | 345 | 546  | 630  | 630  | 325381 | 239     |
| ROCHESTR-PANNELL___345_RP1   | RP1     | 345 | 1591 | 1745 | 1904 | 25192  | 8       |
| ROCHESTR-PANNELL___345_RP2   | RP2     | 345 | 1591 | 1745 | 1904 | 25172  | 8       |
| ROCKHILL-MNTNDALE_115_957    | 957     | 115 | 120  | 120  | 120  | 325615 | 17      |
| ROCKTVRN_345_115_BK TR1      | BK TR1  | 345 | 485  | 530  | 530  | 25406  | 31      |
| ROCKTVRN_345_115_BK TR3      | BK TR3  | 345 | 485  | 533  | 560  | 26168  | 31      |
| ROCKTVRN-RAMAPO___345_77     | 77      | 345 | 2271 | 2271 | 2271 | 25183  | 551     |
| ROCKTVRN-SUGARLOF_345_76     | 76      | 345 | 2271 | 2271 | 2271 | 326218 | 623     |
| ROCKTVRN-SUGRLOAF_115_SL     | SL      | 115 | 179  | 196  | 206  | 25420  | 0       |
| ROME____-ONEIDA___115_1      | 1-RO    | 115 | 168  | 187  | 216  | 26112  | 58      |
| RONKOKMA-HOLBROOK_138_875    | 875     | 138 | 547  | 590  | 650  | 25541  | 54      |
| ROSA_RD_-GE_R_D___115_14     | 14      | 115 | 245  | 257  | 294  | 26145  | 37      |
| ROSETON_-EFISHKIL_345_RFK305 | RFK305  | 345 | 2528 | 2772 | 3133 | 25108  | 925     |
| ROSETON_-ROCKTVRN_345_311    | 311     | 345 | 1713 | 1885 | 2102 | 25069  | 253     |
| ROTTRDAM_230_115_BK 6        | BK 6    | 230 | 406  | 447  | 585  | 25407  | 91      |
| ROTTRDAM_230_115_BK 7        | BK 7    | 230 | 346  | 396  | 448  | 25392  | 87      |
| ROTTRDAM_230_115_BK 8        | BK 8    | 230 | 377  | 427  | 474  | 25413  | 64      |

| EQUIPMENT NAME              | LINE ID | KV  | NOR  | LTE  | STE  | PTID   | MW FLOW |
|-----------------------------|---------|-----|------|------|------|--------|---------|
| ROTTRDAM-BURDECK__115_17    | 17-RB   | 115 | 141  | 144  | 165  | 25129  | 33      |
| ROTTRDAM-BURDECK__115_19    | 19-RB   | 115 | 128  | 135  | 152  | 26146  | 53      |
| ROTTRDAM-CURRY_RD_115_11    | 11      | 115 | 141  | 144  | 165  | 25869  | 17      |
| ROTTRDAM-EASTOVER_230_38    | 38      | 230 | 511  | 564  | 637  | 326094 | 88      |
| ROTTRDAM-FRONT_ST_115_16    | 16      | 115 | 268  | 293  | 317  | 26147  | 87      |
| ROTTRDAM-SWAGRTWN_115_1     | 1       | 115 | 478  | 478  | 478  | 26429  | 69      |
| ROTTRDAM-SWAGRTWN_115_2     | 2       | 115 | 282  | 288  | 318  | 26430  | 96      |
| ROTTRDAM-WOODLAWN_115_35    | 35      | 115 | 141  | 144  | 165  | 25865  | 5       |
| RULAND__-HOLBROOK_138_882   | 882     | 138 | 568  | 613  | 675  | 25538  | 43      |
| RULAND__-PILGRIM__138_661   | 661     | 138 | 590  | 590  | 590  | 25310  | 30      |
| RULAND__-PILGRIM__138_662   | 662     | 138 | 567  | 589  | 589  | 25311  | 30      |
| RYAN____-PLATSBRG_230_RYP-2 | RYP-2   | 230 | 288  | 320  | 356  | 25273  | 80      |
| RYNDS_HL-HIGHLAND_115_HR    | HR      | 115 | 237  | 267  | 293  | 325825 | 18      |
| RYNDS_HL-INWOOD__115_IR     | IR      | 115 | 219  | 232  | 255  | 26248  | 9       |
| S.MAHWAH-RAMAPOOR_138_51    | 51      | 138 | 282  | 309  | 321  | 25888  | 72      |
| S.OSWEGO-CURTIS__115_10     | 10      | 115 | 199  | 199  | 199  | 25511  | 64      |
| S.OSWEGO-HAMRHILL_115_6     | 6-IH    | 115 | 139  | 144  | 161  | 25513  | 58      |
| S.OSWEGO-NINEMILE_115_1     | 1-SN    | 115 | 141  | 144  | 159  | 25501  | 30      |
| S.OWEGO_-GOUDEY__115_961    | 961     | 115 | 143  | 157  | 167  | 25725  | 7       |
| S.OWEGO_-NWAVERLY_115_962   | 962-2   | 115 | 143  | 157  | 167  | 25727  | 41      |
| S.PERRY_-MEYER____115_934   | 934     | 115 | 106  | 116  | 120  | 26194  | 48      |
| S.RIPLEY-DUNKIRK__230_68    | 68      | 230 | 511  | 564  | 607  | 25045  | 241     |
| S42_____-S124____115_932    | 932     | 115 | 176  | 243  | 358  | 325827 | 134     |
| S42_____-S124____115_938    | 938     | 115 | 213  | 230  | 230  | 325972 | 134     |
| SABICO__-LONGLANE_115_7     | 7       | 115 | 199  | 199  | 199  | 26501  | 40      |
| SALAMANC_HOMER_HL_115_153   | 153     | 115 | 156  | 159  | 159  | 325763 | 44      |
| SALAMANC_HOMER_HL_115_154   | 154     | 115 | 156  | 159  | 159  | 325764 | 47      |
| SANBORN_-LOCKPORT_115_101   | 101     | 115 | 285  | 300  | 318  | 25267  | 70      |
| SANBORN_-SHAWNERD_115_102   | 102     | 115 | 350  | 371  | 413  | 326179 | 70      |
| SAND_BAR-PLATSBRG_115_PV20  | PV20    | 115 | 236  | 274  | 274  | 25027  | 105     |
| SANDDOCK-NCHELSEA_115_SC    | KC      | 115 | 255  | 282  | 315  | 26249  | 57      |
| SANDY PD-TEWKSBRY_345_337   | 337     | 345 | 2022 | 2182 | 2379 | 26366  | 429     |
| SANDY PD-WACHUSST_345_314   | 314     | 345 | 2022 | 2325 | 2795 | 26352  | 54      |
| SANDY PD-WACHUSST_345_343   | 343     | 345 | 1600 | 1760 | 1982 | 25716  | 56      |
| SAWYER__230_23_TB1          | TB1     | 230 | 100  | 140  | 140  | 325047 | 48      |
| SAWYER__230_23_TB2          | TB2     | 230 | 100  | 140  | 140  | 325048 | 49      |
| SAWYER__230_23_TB3          | TB3     | 230 | 100  | 140  | 140  | 325049 | 46      |
| SAWYER__-HUNTLEY__230_77    | 77      | 230 | 691  | 760  | 848  | 325043 | 305     |
| SAWYER__-HUNTLEY__230_78    | 78      | 230 | 691  | 760  | 848  | 325044 | 304     |
| SAWYER__-SUNY_BUF_230_79    | 79      | 230 | 691  | 760  | 800  | 325045 | 265     |
| SAWYER__-SUNY_BUF_230_80    | 80      | 230 | 691  | 760  | 848  | 325046 | 265     |
| SCHODACK-GREENBSH_115_13    | 13      | 115 | 199  | 199  | 199  | 325804 | 72      |
| SCOBIE__-AMHERST_345_380    | 380     | 345 | 1697 | 1697 | 1697 | 25708  | 0       |
| SCOBIE__-SEABROOK_345_363   | 363     | 345 | 1494 | 1494 | 1494 | 26378  | 267     |
| SCOTAFILT-MASONCR__115_909  | 909     | 115 | 189  | 207  | 221  | 325702 | 2       |
| SCRIBA__-FITZPTRK_345_FS-10 | FS-10   | 345 | 1434 | 1434 | 1912 | 25076  | 98      |
| SCRIBA__-VOLNEY__345_20     | 20      | 345 | 1474 | 1626 | 1881 | 25204  | 632     |
| SCRIBA__-VOLNEY__345_21     | 21-SV   | 345 | 1912 | 1912 | 1912 | 25314  | 873     |

| EQUIPMENT NAME              | LINE ID | KV  | NOR  | LTE  | STE  | PTID   | MW FLOW |
|-----------------------------|---------|-----|------|------|------|--------|---------|
| SENECA__-GARDNVLB_230_71    | 71      | 230 | 306  | 354  | 370  | 25856  | 19      |
| SENECA__-GARDNVLB_230_72    | 72      | 230 | 306  | 354  | 370  | 25857  | 19      |
| SHALETON-CLVRBANK_115_141   | 141     | 115 | 107  | 117  | 123  | 325875 | 52      |
| SHALETON-LAKEVIEU_115_141   | 141     | 115 | 107  | 117  | 123  | 325874 | 51      |
| SHAWNERD-LOCKPORT_115_102   | 102     | 115 | 285  | 300  | 318  | 26052  | 63      |
| SHAWNERD-LOCKPORT_115_103   | 103     | 115 | 199  | 199  | 199  | 26051  | 49      |
| SHENDOAH-EFISHKIL_115_EF    | EF      | 115 | 243  | 267  | 293  | 26251  | 4       |
| SHERMAN_-SPIERFLS_115_17    | 17-SS   | 115 | 141  | 144  | 159  | 26148  | 19      |
| SHERMCRK-ACADEMY__138_331   | 331     | 138 | 345  | 431  | 546  | 325755 | 150     |
| SHERMCRK-ACADEMY__138_332   | 332     | 138 | 345  | 431  | 546  | 325754 | 150     |
| SHERMCRK-E179THST_138_15031 | 15031   | 138 | 184  | 235  | 371  | 25156  | 171     |
| SHERMCRK-E179THST_138_15032 | 15032   | 138 | 184  | 235  | 371  | 25157  | 171     |
| SHOEMAKR_138_69__BK_711     | BK_711  | 138 | 212  | 281  | 319  | 26694  | 51      |
| SHOEMAKR_138_69__BK_811     | BK_811  | 138 | 193  | 225  | 253  | 326024 | 59      |
| SHOR_NPX-SHOREHAM_138_CSC   | NPX_CSC | 138 | 601  | 650  | 747  | 325153 | 330     |
| SHORE_RD_345_138_BK_1       | BK_1    | 345 | 487  | 534  | 641  | 25439  | 283     |
| SHORE_RD_345_138_BK_2       | BK_2    | 345 | 487  | 534  | 641  | 25440  | 282     |
| SHORE_RD-GLENWOOD_138_365   | 365     | 138 | 343  | 380  | 418  | 25205  | 84      |
| SHORE_RD-GLENWOOD_138_366   | 366     | 138 | 363  | 425  | 474  | 25154  | 92      |
| SHORE_RD-LAKSUCSS_138_367   | 367     | 138 | 261  | 411  | 640  | 25145  | 193     |
| SHORE_RD-LAKSUCSS_138_368   | 368     | 138 | 262  | 412  | 642  | 25150  | 193     |
| SHOREHAM-MILLERPL_138_879   | 879     | 138 | 526  | 588  | 666  | 25117  | 31      |
| SHOREHAM-WILDWOOD_138_863   | 863     | 138 | 519  | 580  | 657  | 25115  | 137     |
| SHOREHAM-WILDWOOD_138_867   | 867     | 138 | 528  | 590  | 668  | 25114  | 135     |
| SIDNEYRR-DELHI____115_949   | 949     | 115 | 117  | 120  | 120  | 326184 | 21      |
| SLEIGHT__115_34__BK_1       | BK_1    | 115 | 43   | 51   | 67   | 70523  | 19      |
| SLEIGHT__115_34__BK_2       | BK_2    | 115 | 43   | 51   | 67   | 70524  | 21      |
| SLEIGHT_-CLYDE____115_3-971 | 971(3)  | 115 | 176  | 179  | 179  | 26686  | 12      |
| SMAHWAH__345_138_BK_258     | 258     | 345 | 441  | 516  | 559  | 25393  | 82      |
| SMAHWAH_-RAMAPO__345_69     | 69      | 345 | 1601 | 2010 | 2268 | 25021  | 556     |
| SMAHWAH_-RAMAPO__345_70     | 70      | 345 | 1822 | 2010 | 2552 | 25259  | 527     |
| SMITHBRD-WEIBELAV_115_2     | 2       | 115 | 268  | 292  | 317  | 325903 | 12      |
| SMITHBRD-WEIBELAV_115_302   | 302     | 115 | 268  | 292  | 317  | 325904 | 15      |
| SOUTHROW-CARRSCRN_115_153   | 153     | 115 | 156  | 170  | 181  | 326162 | 33      |
| SOUTHROW-CARRSCRN_115_154   | 154     | 115 | 156  | 170  | 181  | 326164 | 26      |
| SPIERFLS-BUTLER____115_4    | 4-SFB   | 115 | 128  | 135  | 152  | 26136  | 34      |
| SPIERFLS-CURTPALM_115_9     | 9       | 115 | 128  | 135  | 152  | 326145 | 42      |
| SPIERFLS-MOHICAN__115_7     | 7       | 115 | 141  | 144  | 165  | 26435  | 29      |
| SPIERFLS-QUENSBRY_115_5     | 5-SFQ   | 115 | 141  | 145  | 165  | 26141  | 39      |
| SPIERFLS-TAPBROOK_115_2     | 2       | 115 | 282  | 288  | 318  | 25874  | 17      |
| SPIERFLS-TAPBROOK_115_302   | 302     | 115 | 222  | 234  | 278  | 25873  | 48      |
| SPRINGVL-ARCADE____115_151  | 151     | 115 | 156  | 171  | 182  | 326167 | 4       |
| SPRINGVL-MACHIAS__115_152   | 152     | 115 | 156  | 171  | 182  | 326171 | 21      |
| SPRNBRK__345_138_BK_N7      | BK_N7   | 345 | 382  | 451  | 472  | 25628  | 188     |
| SPRNBRK__345_138_BK_S6      | BK_S6   | 345 | 382  | 451  | 472  | 25625  | 193     |
| SPRNBRK_-ACADEMY__345_M29   | M29     | 345 | 536  | 775  | 1369 | 325756 | 301     |
| SPRNBRK_-DUNWODIE_138_99941 | 99941   | 138 | 385  | 464  | 464  | 25245  | 193     |
| SPRNBRK_-DUNWODIE_138_99942 | 99942   | 138 | 409  | 438  | 464  | 25246  | 188     |

| EQUIPMENT NAME                | LINE ID | KV  | NOR  | LTE  | STE  | PTID   | MW FLOW |
|-------------------------------|---------|-----|------|------|------|--------|---------|
| SPRNBK_-DUNWODIE_345_W75      | W75     | 345 | 2849 | 3170 | 3640 | 25071  | 213     |
| SPRNBK_-EGRDNCTR_345_Y49      | Y49     | 345 | 693  | 940  | 1360 | 25105  | 645     |
| SPRNBK_-TREMONT_345_X28       | X28     | 345 | 542  | 725  | 1220 | 25175  | 403     |
| SPRNBK_-W49TH_ST_345_M51      | M51     | 345 | 799  | 956  | 1543 | 25053  | 249     |
| SPRNBK_-W49TH_ST_345_M52      | M52     | 345 | 799  | 956  | 1543 | 25223  | 249     |
| ST_60_36-LOCKPORT_115_36      | 36-2    | 115 | 176  | 181  | 199  | 26049  | 51      |
| ST_60_37-LOCKPORT_115_37      | 37-2    | 115 | 176  | 181  | 199  | 26048  | 52      |
| STA_113_-SPEN7071_115_917     | 917     | 115 | 143  | 151  | 161  | 326080 | 41      |
| STA_128_-STA_82__115_906      | 906     | 115 | 155  | 171  | 181  | 26303  | 14      |
| STA_135_-STA_230__115_929     | 929     | 115 | 282  | 298  | 313  | 325839 | 58      |
| STA_158_-STA_128__115_924     | 924     | 115 | 155  | 171  | 181  | 26654  | 9       |
| STA_162_-S.PERRY__115_906- 7X | 906-7X  | 115 | 143  | 157  | 167  | 25062  | 21      |
| STA_162_-STA_158__115_924     | 924     | 115 | 155  | 171  | 181  | 26653  | 17      |
| STA_204__115_34__BK 1         | BK 1    | 115 | 56   | 67   | 112  | 70539  | 30      |
| STA_204__115_34__BK 2         | BK 2    | 115 | 56   | 67   | 112  | 70540  | 36      |
| STA_204_-S124____115_911      | 911     | 115 | 298  | 344  | 414  | 26307  | 132     |
| STA_23__-S42____115_920       | 920     | 115 | 92   | 111  | 137  | 70027  | 0       |
| STA_23__-STA_33__115_901      | 901     | 115 | 92   | 112  | 137  | 70028  | 55      |
| STA_230_-QUAKERRD_115_929     | 929     | 115 | 282  | 298  | 313  | 325840 | 51      |
| STA_251_-MORTIMER_115_901     | 901     | 115 | 223  | 235  | 279  | 25097  | 98      |
| STA_33__115_34__BK10          | BK 1_2  | 115 | 74   | 80   | 90   | 70541  | 47      |
| STA_37__115_34__BK 8          | BK 8    | 115 | 50   | 59   | 100  | 70542  | 31      |
| STA_37__-STA_48__115_926      | 926     | 115 | 351  | 373  | 414  | 26314  | 52      |
| STA_37__-STA_67__115_926      | 926     | 115 | 250  | 280  | 300  | 26313  | 83      |
| STA_418_-STA_113__115_917     | 917_910 | 115 | 155  | 171  | 181  | 326069 | 51      |
| STA_48__115_34__BK 6          | BK 6    | 115 | 60   | 71   | 73   | 70544  | 20      |
| STA_48__115_34__BK 9          | BK 9    | 115 | 67   | 74   | 112  | 70543  | 20      |
| STA_56__115_34__BK 1          | BK 1B   | 115 | 55   | 56   | 56   | 70473  | 25      |
| STA_56__115_34__BK 2          | BK 2    | 115 | 55   | 56   | 56   | 70545  | 24      |
| STA_56__-QUAKERRD_115_23      | 23      | 115 | 176  | 180  | 180  | 26288  | 52      |
| STA_56__-STA_82__115_23       | 23      | 115 | 176  | 181  | 209  | 26287  | 28      |
| STA_67__-ROCHESRG_115_922     | 922     | 115 | 343  | 391  | 416  | 26321  | 140     |
| STA_67__-STA_418__115_910     | 910     | 115 | 225  | 239  | 239  | 326048 | 74      |
| STA_67__-STA_82__115_903      | 903     | 115 | 343  | 416  | 433  | 26322  | 60      |
| STA_7__-STA_48__115_919       | 919     | 115 | 282  | 299  | 314  | 26302  | 35      |
| STA_7__-STA_93__115_917       | 917     | 115 | 143  | 149  | 159  | 26301  | 32      |
| STA_82__-MORTIMER_115_7X8272  | 7X8272  | 115 | 337  | 414  | 460  | 25098  | 187     |
| STA_82__-ROCHESRG_115_904     | 904     | 115 | 608  | 657  | 657  | 25081  | 224     |
| STA_82__-ROCHESRG_115_905     | 905     | 115 | 608  | 657  | 657  | 26305  | 209     |
| STA_82__-STA_251__115_902     | 902     | 115 | 225  | 239  | 239  | 70058  | 30      |
| STATE_ST-WRGHTAVE_115_976     | 976     | 115 | 231  | 239  | 239  | 26200  | 10      |
| STERLING_138_69__BK 3         | BK 3    | 138 | 245  | 304  | 338  | 26524  | 97      |
| STERLING-RULAND__138_663      | 663     | 138 | 237  | 279  | 294  | 26498  | 98      |
| STJHNVLE-MARSHVLE_115_11      | 11      | 115 | 159  | 159  | 159  | 26127  | 27      |
| STLAWRNC_230A_230C_PS 33      | PS 33   | 230 | 285  | 298  | 363  | 25118  | 0       |
| STLAWRNC_230B_230D_PS 34      | PS 34   | 230 | 356  | 375  | 525  | 25119  | 0       |
| STLAWRNC-MOSES____230_L33P    | L33P    | 240 | 448  | 490  | 536  | 25026  | 0       |
| STLAWRNC-MOSES____230_L34P    | L34P    | 240 | 448  | 490  | 536  | 25037  | 0       |

| EQUIPMENT NAME               | LINE ID | KV  | NOR | LTE | STE | PTID   | MW FLOW |
|------------------------------|---------|-----|-----|-----|-----|--------|---------|
| STOLLERD_345_115_BK 3        | BK 3    | 345 | 333 | 378 | 420 | 25461  | 9       |
| STOLLERD_345_115_BK 4        | BK 4    | 345 | 341 | 390 | 420 | 25462  | 9       |
| STOLLERD-HISHELDN_230_67     | 67      | 230 | 506 | 556 | 603 | 25064  | 16      |
| STONCREK-WETHSRFD_230_83     | 83      | 230 | 506 | 556 | 603 | 325973 | 77      |
| STONER__-ROTTRDAM_115_12     | 12-SR   | 115 | 102 | 102 | 102 | 25680  | 6       |
| STONYRDG_230_115_BK1         | BK1     | 230 | 291 | 336 | 336 | 325811 | 75      |
| STONYRDG-HILLSIDE_230_72     | 72      | 230 | 610 | 669 | 737 | 325810 | 22      |
| SUGARISL-COLTON__115_4       | 4       | 115 | 222 | 234 | 278 | 26084  | 5       |
| SUGRLOAF_138_69__BK 6108     | BK 6108 | 115 | 189 | 222 | 250 | 26333  | 47      |
| SUGRLOAF_69__138_BK 7108     | BK 7108 | 138 | 192 | 226 | 253 | 25891  | 41      |
| SUGRLOAF-RAMAPOOR_138_26     | 26      | 138 | 314 | 343 | 356 | 25326  | 0       |
| SULLVNPB-STONYRDG_115_712    | 712     | 115 | 277 | 320 | 320 | 325809 | 75      |
| SUNY_BUF-GARDNVLB_230_79     | 79-1    | 230 | 691 | 760 | 790 | 25165  | 250     |
| SUNY_BUF-GARDNVLB_230_80     | 80-1    | 230 | 691 | 760 | 810 | 25196  | 246     |
| SWAGRTWN-TAPBLSTN_115_1      | 1       | 115 | 331 | 364 | 404 | 325895 | 84      |
| SWAGRTWN-TAPBROOK_115_2      | 2       | 115 | 282 | 288 | 318 | 325894 | 68      |
| SWANROAD-LOCKPORT_115_104    | 104     | 115 | 199 | 199 | 199 | 26050  | 0       |
| SWANROAD-SHAWNERD_115_103    | 103     | 115 | 211 | 217 | 242 | 326181 | 56      |
| SWEDEN__-MORTIMER_115_111    | 111     | 115 | 129 | 149 | 153 | 25347  | 1       |
| SWEDEN__-MORTIMER_115_113    | 113     | 115 | 129 | 149 | 153 | 25348  | 6       |
| SWEDEN__-SHELBY76_115_113    | 113     | 115 | 174 | 191 | 199 | 326131 | 28      |
| SYLVANLK-PAWLING__115_990    | 990     | 115 | 239 | 239 | 239 | 26156  | 99      |
| SYOSSET_138_69__BK 5         | BK 5    | 138 | 258 | 304 | 338 | 26565  | 63      |
| SYOSSET_-LOCUSTGR_138_559    | 559     | 138 | 519 | 579 | 656 | 25904  | 210     |
| TALLMAN_-MONSEY__138_602     | 602     | 138 | 456 | 478 | 500 | 325609 | 123     |
| TAPBLSTN-TAPBROOK_115_302    | 302     | 115 | 268 | 293 | 317 | 325898 | 15      |
| TAYLORVL-BULYMO__115_6       | 6       | 115 | 128 | 135 | 145 | 26070  | 35      |
| TAYLORVL-LOWVILLE_115_5      | 5-TL    | 115 | 128 | 135 | 152 | 26107  | 41      |
| TEALLAVE-ASH____115_7-TA     | 7-TA    | 115 | 123 | 148 | 148 | 26063  | 35      |
| TEALLAVE-ASH____115_8-AT     | 8-AT    | 115 | 123 | 148 | 148 | 26117  | 35      |
| TEALLAVE-BM_CC_GM_115_6      | 6       | 115 | 227 | 239 | 239 | 26154  | 71      |
| TEALLAVE-CURTIS__115_13      | 13      | 115 | 219 | 219 | 219 | 326066 | 9       |
| TEALLAVE-ONEIDA__115_2       | 2-OT    | 115 | 141 | 144 | 159 | 25895  | 52      |
| TEALLAVE-PETERBOR_115_5      | 5       | 115 | 141 | 144 | 165 | 325164 | 62      |
| TELGRAPH_115_34__114__BK 2   | BK 2    | 115 | 66  | 79  | 79  | 26509  | 18      |
| TELGRAPH-N.AKRON__115_107    | 107     | 115 | 231 | 231 | 231 | 26508  | 30      |
| TELGRAPH-SHELBY76_115_114    | 114     | 115 | 129 | 149 | 153 | 25349  | 26      |
| TEMPLE__-PEAT ST__115_10     | 10-TP   | 115 | 145 | 176 | 179 | 26715  | 56      |
| TICONDRG-REPUBLIC_115_914(2) | 914(2)  | 115 | 102 | 113 | 125 | 26470  | 6       |
| TILDEN__-DEWITT__115_19      | 19-TD   | 115 | 222 | 234 | 239 | 26092  | 52      |
| TODDHILL-FISHKPLN_115_A      | A       | 115 | 285 | 301 | 319 | 325157 | 17      |
| TREMONT__138A_138B_BK 11     | BK 11   | 138 | 271 | 329 | 377 | 25649  | 201     |
| TREMONT__138C_138D_BK 12     | BK 12   | 138 | 271 | 329 | 377 | 25650  | 201     |
| TREMONT__345_138_BK 11       | BK 11   | 345 | 299 | 350 | 407 | 25473  | 201     |
| TREMONT__345_138_BK 12       | BK 12   | 138 | 299 | 350 | 407 | 25474  | 201     |
| TREMONT_-PARKCHTR_138_38X01  | 38X01   | 138 | 251 | 363 | 550 | 25120  | 100     |
| TREMONT_-PARKCHTR_138_38X02  | 38X02   | 138 | 251 | 363 | 550 | 25121  | 100     |
| TREMONT_-PARKCHTR_138_38X03  | 38X03   | 138 | 270 | 397 | 550 | 25122  | 100     |

| EQUIPMENT NAME               | LINE ID | KV  | NOR  | LTE  | STE  | PTID   | MW FLOW |
|------------------------------|---------|-----|------|------|------|--------|---------|
| TREMONT_-PARKCHTR_138_38X04  | 38X04   | 138 | 270  | 397  | 550  | 25123  | 100     |
| TULLERHL-CLRKSCRN_115_1-716  | 1-716   | 115 | 156  | 170  | 181  | 26192  | 42      |
| URBAN154-DALEROAD_115_39     | 39      | 115 | 211  | 217  | 255  | 326152 | 65      |
| URBAN154-NEWWALDN_115_38     | 38      | 115 | 211  | 217  | 255  | 326151 | 67      |
| VALKIN_-FT._ORAN_115_15      | 15      | 115 | 159  | 159  | 159  | 325685 | 84      |
| VALLEY_-FAIRFIEL_115_12      | 12      | 115 | 141  | 144  | 159  | 325743 | 45      |
| VALLYSTR_138A_138B_PAR       | B_PAR   | 138 | 350  | 368  | 441  | 25607  | 108     |
| VALLYSTR-BARRETT_138_291     | 291     | 138 | 199  | 282  | 442  | 25312  | 80      |
| VALLYSTR-BARRETT_138_292     | 292     | 138 | 196  | 281  | 394  | 25313  | 91      |
| VALLYSTR-EGRDNCTY_138_262    | 262     | 138 | 203  | 291  | 355  | 25244  | 177     |
| VERNON_-GREENWD_138_31231    | 31231   | 138 | 195  | 249  | 310  | 25337  | 95      |
| VERNON_-KENTAVE_138_31232    | 31232-1 | 138 | 195  | 249  | 310  | 26123  | 49      |
| VINGR_TP-VINEGAR_115_917 TAP | 917 TAP | 115 | 149  | 172  | 215  | 26455  | 8       |
| VOLNEY_-CLAY_345_6           | 6       | 345 | 1431 | 1605 | 1881 | 25198  | 681     |
| VOLNEY_-MARCY_345_19         | 19      | 345 | 1434 | 1793 | 2297 | 25345  | 714     |
| VRNON VT-FITZWILL_345_379    | 379     | 345 | 896  | 896  | 896  | 26388  | 93      |
| VT YANK_-VRNON VT_345_3340   | 3340    | 345 | 1266 | 1266 | 1434 | 25717  | 30      |
| W.NYACK_138_69_BK 221        | BK 221  | 138 | 212  | 281  | 319  | 26334  | 51      |
| W.NYACK_-SNKEHLRD_138_562    | 563     | 138 | 378  | 414  | 431  | 325906 | 51      |
| W_ERIAVE-HICKLING_115_935    | 935     | 115 | 120  | 120  | 120  | 325568 | 11      |
| W_ERIAVE-SULLVNP_115_711     | 711     | 115 | 299  | 327  | 360  | 325808 | 54      |
| W49TH_ST-E13THSTA_345_M54    | M54     | 345 | 772  | 1009 | 1575 | 25228  | 63      |
| W49TH_ST-E13THSTA_345_M55    | M55     | 345 | 772  | 1009 | 1575 | 25222  | 24      |
| WADNGRIV-NSHORBCH_138_878    | 878     | 138 | 566  | 601  | 683  | 325642 | 26      |
| WADNGRIV-SHOREHAM_138_891    | 891     | 138 | 524  | 585  | 662  | 25342  | 26      |
| WALCK_RD-ZIMMERM2_115_133    | 133-1   | 115 | 213  | 225  | 242  | 26153  | 132     |
| WALDEN_-WALDN_A2_115_BK 1    | BK 1    | 115 | 44   | 44   | 51   | 25429  | 9       |
| WALDWICK_345_230_BK1         | BK1     | 345 | 622  | 763  | 850  | 25479  | 337     |
| WALDWICK_345_230_BK2         | BK2     | 345 | 630  | 768  | 841  | 25480  | 337     |
| WALDWICK_345_230_BK3         | BK3     | 345 | 690  | 852  | 952  | 25481  | 326     |
| WALDWICK-SMAHWAH_345_J3410   | J3410   | 345 | 743  | 1094 | 1974 | 25032  | 474     |
| WALDWICK-SMAHWAH_345_K3411   | K3411   | 345 | 746  | 1093 | 1975 | 25039  | 527     |
| WALESVIL-CAVANARD_115_7      | 7       | 115 | 141  | 144  | 159  | 325213 | 35      |
| WARNSBRG-SCOFLDRD_115_10     | 10      | 115 | 119  | 119  | 119  | 326148 | 30      |
| WARREN_-FALCONER_115_171     | 171     | 115 | 136  | 136  | 140  | 25015  | 44      |
| WATKINRD-INGHAM_C_115_2      | 2-WI    | 115 | 141  | 144  | 159  | 25805  | 54      |
| WATRCURE_345_230_BK 1        | BK 1    | 345 | 494  | 590  | 600  | 25402  | 53      |
| WATRCURE-OAKDALE_230_71      | 71      | 230 | 318  | 435  | 440  | 25179  | 40      |
| WATRCURE-OAKDALE_345_31      | 31      | 345 | 1076 | 1076 | 1076 | 25178  | 21      |
| WBALMVLE-MARLBORO_115_MW     | MW      | 115 | 243  | 267  | 293  | 326090 | 34      |
| WEST BUS-SILLSRD_138_873     | 873     | 138 | 571  | 613  | 678  | 325618 | 4       |
| WETHSRFD-MEYER_230_85/87     | 85      | 230 | 506  | 556  | 603  | 325623 | 114     |
| WETZEL_-CLAY_115_7           | 7-CL    | 115 | 268  | 293  | 317  | 326207 | 42      |
| WHAVSTOR-LOVETT_138_53       | 53      | 138 | 282  | 309  | 321  | 25884  | 11      |
| WHAVSTOR-STONYPNT_138_542    | 542     | 138 | 282  | 309  | 321  | 326049 | 17      |
| WHAVSTRW_345_138_BK 194      | BK 194  | 345 | 451  | 546  | 619  | 25447  | 153     |
| WHITEHAL-COMSTKNM_115_13     | 13      | 115 | 141  | 144  | 159  | 25903  | 21      |
| WHITEHAL-TICONDRG_115_3      | 3       | 115 | 141  | 144  | 159  | 26471  | 31      |

| EQUIPMENT NAME               | LINE ID | KV  | NOR  | LTE  | STE  | PTID   | MW FLOW |
|------------------------------|---------|-----|------|------|------|--------|---------|
| WICCOPEE-SHENDOAH_115_FS     | FS      | 115 | 243  | 260  | 282  | 325773 | 54      |
| WILDWOOD_138_69__BK 4        | BK 4    | 138 | 258  | 304  | 338  | 26550  | 86      |
| WILDWOOD-RIVRHEAD_138_890    | 890     | 138 | 349  | 386  | 425  | 25905  | 109     |
| WILLET__-ENORWICH_115_945    | 945-1   | 115 | 133  | 149  | 162  | 25732  | 63      |
| WILLIS__230_115_BK 1         | BK 1    | 230 | 172  | 201  | 225  | 25388  | 53      |
| WILLIS__230_115_BK 2         | BK 2    | 230 | 172  | 201  | 225  | 25390  | 53      |
| WILLIS__-CHAT_TAP_115_1(911) | 1(911)  | 115 | 173  | 187  | 200  | 26204  | 37      |
| WILLIS__-PATNODE__230_WPN-1  | WPN-1   | 230 | 530  | 582  | 612  | 325565 | 14      |
| WILLIS__-RYAN____230_WRY-2   | WRY-2   | 230 | 478  | 478  | 569  | 325566 | 6       |
| WOLF_RD_-MENANDS__115_10     | 10      | 115 | 128  | 135  | 140  | 26255  | 69      |
| WOOD_ST__345_115_BK 1        | BK 1    | 345 | 350  | 400  | 420  | 25437  | 114     |
| WOOD_ST__345_115_BK 2        | BK 2    | 345 | 358  | 412  | 420  | 25438  | 102     |
| WOOD_ST_-MILLWOOD_345_W80    | W80     | 345 | 1976 | 2387 | 2895 | 25148  | 474     |
| WOOD_ST_-PLSNIVLE_345_Y87    | Y87     | 345 | 2103 | 2282 | 2542 | 25132  | 603     |
| WOODARD_-ELBRIDGE_115_4      | 4       | 115 | 190  | 208  | 221  | 325316 | 28      |
| WOODLAWN-STATE_CA_115_12     | 12      | 115 | 148  | 166  | 166  | 26490  | 25      |
| WOODSTNY-AMAWALK__115_996    | 996     | 115 | 261  | 287  | 311  | 25574  | 34      |
| WRGHTAVE-MILLIKEN_115_973    | 973     | 115 | 231  | 260  | 286  | 26195  | 30      |
| WWDBURNY_115_69__BK 1        | BK 1    | 115 | 50   | 50   | 50   | 25404  | 6       |
| WYNTKLMN-REYNOLDS_115_13-988 | 13-WR   | 115 | 227  | 248  | 268  | 26143  | 85      |
| YAHNUNDA-PORTER__115_3       | 3       | 115 | 141  | 144  | 159  | 26515  | 60      |
| ZIMMERM1-HUNTLEY__115_130    | 130-1   | 115 | 211  | 217  | 239  | 26043  | 0       |
| ZIMMERM2-HUNTLEY__115_133    | 133-2   | 115 | 211  | 217  | 242  | 26042  | 106     |



## E. INTERFACE DEFINITIONS

### NYISO OPERATING INTERFACES & OASIS TRANSMISSION PATHS

| <b>DYSINGER EAST</b>                    |                |                     |
|---|----------------|---------------------|
| <i>West (Zone A) – Genesee (Zone B)</i> |                |                     |
| <b>Name</b>                             | <b>Line ID</b> | <b>Voltage (kV)</b> |
| *Somerset-Rochester (Station 80)        | SR1-39         | 345                 |
| Niagara-Rochester*                      | NR2            | 345                 |
| *Lockport-N. Akron                      | 108            | 115                 |
| *Lockport-Oakfield                      | 112            | 115                 |
| *Lockport-Sweden 1                      | 111            | 115                 |
| *Lockport-Shelby                        | 113            | 115                 |
| *Lockport-Telegraph                     | 107            | 115                 |
| *Lockport-Telegraph                     | 114            | 115                 |
| <i>West (Zone A) – Central (Zone C)</i> |                |                     |
| *Stolle Road-High Sheldon               | 67             | 230                 |
| *Andover-Palmiter                       | 157-932        | 115                 |

| <b>MOSES SOUTH</b>                             |                |                     |
|--|----------------|---------------------|
| <i>North (Zone D) – Mohawk Valley (Zone E)</i> |                |                     |
| <b>Name</b>                                    | <b>Line ID</b> | <b>Voltage (kV)</b> |
| *Massena-Marcy                                 | MSU1           | 765                 |
| *Moses-Adirondack                              | MA1            | 230                 |
| *Moses-Adirondack                              | MA2            | 230                 |
| *Dennison-Norfolk                              | 4              | 115                 |
| *Dennison-Sandstone                            | 5              | 115                 |
| *Alcoa-N. Ogdensburg                           | 13             | 115                 |
| Parishville-Colton*                            | 3              | 115                 |

\* indicates the metered end of the circuit

| <b>UPNY-CONED</b>                                 |                |                     |
|---|----------------|---------------------|
| <i>Hudson Valley (Zone G) – Millwood (Zone H)</i> |                |                     |
| <b>Name</b>                                       | <b>Line ID</b> | <b>Voltage (kV)</b> |
| *Ladentown-Buchanan South                         | Y88            | 345                 |
| *Pleasant Valley-Wood St.                         | F30            | 345                 |
| *Pleasant Valley-Wood St.                         | F31            | 345                 |
| *Pleasant Valley-E. Fishkill                      | F36            | 345                 |
| *Pleasant Valley-E. Fishkill                      | F37            | 345                 |
| *Ramapo-Buchanan North                            | Y94            | 345                 |
| Roseton-E. Fishkill*                              | RFK305         | 345                 |
| *Fishkill Plains–Sylvan Lake                      | FP/990         | 115                 |
| East Fishkill 115/345*                            | BK1            | 115/345             |
| East Fishkill 115/345*                            | BK2            | 115/345             |

| <b>CENTRAL EAST</b>                              |                |                     |
|--|----------------|---------------------|
| <i>Mohawk Valley (Zone E) – Capital (Zone F)</i> |                |                     |
| <b>Name</b>                                      | <b>Line ID</b> | <b>Voltage (kV)</b> |
| Edic-New Scotland*                               | 14             | 345                 |
| Marcy-New Scotland*                              | 18             | 345                 |
| Porter-Rotterdam*                                | 30             | 230                 |
| Porter-Rotterdam*                                | 31             | 230                 |
| East Springfield-Inghams*                        | 7-942          | 115                 |
| Inghams PAR                                      | PAR            | 115                 |
| Inghams Bus Tie                                  | R81            | 115                 |
| <i>North (Zone D) – ISONE (Zone N)</i>           |                |                     |
| *Plattsburgh-Sand Bar                            | PV20           | 115                 |

\* indicates the metered end of the circuit

| <b>TOTAL EAST</b>                                       |                |                     |
|---|----------------|---------------------|
| <i>Mohawk Valley (Zone E) – Capital (Zone F)</i>        |                |                     |
| <b>Name</b>   | <b>Line ID</b> | <b>Voltage (kV)</b> |
| Edic-New Scotland*                                      | 14             | 345                 |
| Marcy-New Scotland*                                     | 18             | 345                 |
| *Fraser-Gilboa  | GF5-35         | 345                 |
| Porter-Rotterdam*                                       | 30             | 230                 |
| Porter-Rotterdam*                                       | 31             | 230                 |
| East Springfield-Inghams*                               | 7-942          | 115                 |
| Inghams PAR   | PAR            | 115                 |
| Inghams Bus Tie   | R81            | 115                 |
| <i>Mohawk Valley (Zone E) – Hudson Valley (Zone G)</i>  |                |                     |
| Middletown-Rock Tavern*                                 | CCCRT-34       | 345                 |
| Coopers-Rock Tavern*                                    | CCRT-42        | 345                 |
| Middletown 345*/138                                     | BK114          | 345/138             |
| West Woodbourne 115/69*                                 | BK1            | 115/69              |
| <i>North (Zone D) – ISONE (Zone N)</i>                  |                |                     |
| *Plattsburgh-Sand Bar                                   | PV20           | 115                 |
| <i>PJM East (Zone P) – Hudson Valley (Zone G)</i>       |                |                     |
| Hopatcong-Ramapo*                                       | 5018           | 500                 |
| *Waldwick-S. Mahwah                                     | J3410          | 345                 |
| *Waldwick-S. Mahwah                                     | K3411          | 345                 |
| <i>PJM East (Zone P) – NYC (Zone J)</i>                 |                |                     |
| Marion-Farragut*  | C3403          | 345                 |
| Hudson-Farragut*  | B3402          | 345                 |
| Linden-Goethals*  | A2253          | 230                 |
| <i>PJM (Rockland Electric) – Hudson Valley (Zone G)</i> |                |                     |
| *Cresskill-Sparkill                                     | 751            | 69                  |
| *Harings Corners-W. Nyack                               | 701            | 69                  |
| *Harings Corners-Corporate Drive                        | 703            | 138                 |
| *Montvale-Bluehill                                      | 44             | 69                  |
| *Montvale-Bluehill                                      | 43             | 69                  |
| *Montvale-Pearl River                                   | 491            | 69                  |
| *Harings Corners-Pearl River                            | 45             | 34                  |
| *S. Mahwah-Ramapo                                       | 51             | 138                 |
| *S. Mahwah-Hilburn                                      | 65             | 69                  |
| S. Mahwah 138/345*                                      | BK258          | 138/345             |

\* indicates the metered end of the circuit

| <b>SPRAIN BROOK-DUNWOODIE SOUTH</b>        |                |                     |
|--|----------------|---------------------|
| <i>Dunwoodie (Zone I) – NYC (Zone J)</i>   |                |                     |
| <b>Name</b>                                | <b>Line ID</b> | <b>Voltage (kV)</b> |
| *Dunwoodie-Mott Haven                      | 71             | 345                 |
| *Dunwoodie-Mott Haven                      | 72             | 345                 |
| Sprain Brook-Tremont*                      | X28            | 345                 |
| *Sprain Brook-West 49th Street             | M51            | 345                 |
| *Sprain Brook-West 49th Street             | M52            | 345                 |
| *Sprain Brook-Academy                      | M29            | 345                 |
| *Dunwoodie-Sherman Creek                   | 99031          | 138                 |
| *Dunwoodie-Sherman Creek                   | 99032          | 138                 |
| *Dunwoodie-East 179th Street               | 99153          | 138                 |
| <i>Long Island (Zone K) – NYC (Zone J)</i> |                |                     |
| *Lake Success-Jamaica                      | 903            | 138                 |
| *Valley Stream-Jamaica                     | 901L_M         | 138                 |

| <b>CONED - LIPA</b>                              |                |                     |
|--|----------------|---------------------|
| <i>Dunwoodie (Zone I) – Long Island (Zone K)</i> |                |                     |
| <b>Name</b>                                      | <b>Line ID</b> | <b>Voltage (kV)</b> |
| *Dunwoodie-Shore Road                            | Y50            | 345                 |
| *Sprain Brook-East Garden City                   | Y49            | 345                 |
| <i>NYC (Zone J) – Long Island (Zone K)</i>       |                |                     |
| Jamaica-Valley Stream*                           | 901L_M         | 138                 |
| Jamaica-Lake Success*                            | 903            | 138                 |

| <b>NYISO-ISONE</b>                             |                |                     |
|--|----------------|---------------------|
| <i>North (Zone D) – ISONE (Zone N)</i>         |                |                     |
| <b>Name</b>                                    | <b>Line ID</b> | <b>Voltage (kV)</b> |
| *Plattsburgh-Sand Bar                          | PV20           | 115                 |
| <i>Capital (Zone F) – ISONE (Zone N)</i>       |                |                     |
| *Alps-Berkshire                                | 393            | 345                 |
| Eastover-Bear Swamp*                           | E205W          | 230                 |
| *Hoosick -Bennington                           | K6             | 115                 |
| *Whitehall-Blissville                          | K7             | 115                 |
| <i>Hudson Valley (Zone G) – ISONE (Zone N)</i> |                |                     |
| <b>Name</b>                                    | <b>Line ID</b> | <b>Voltage (kV)</b> |
| *Pleasant Valley-Long Mountain                 | 398            | 345                 |
| Smithfield-Salisbury*                          | 690/FV         | 69                  |

\* indicates the metered end of the circuit

| <b>PJM-NYISO</b>  |                |                     |
|---|----------------|---------------------|
| <i>PJM East (Zone P) – NYC (Zone J)</i>                 |                |                     |
| <b>Name</b>   | <b>Line ID</b> | <b>Voltage (kV)</b> |
| Marion-Farragut*  | C3403          | 345                 |
| Hudson-Farragut*  | B3402          | 345                 |
| Linden-Goethals*  | A2253          | 230                 |
| <i>PJM West – Central (Zone C)</i>                      |                |                     |
| *Mainesburg-Watercure                                   | 30             | 345                 |
| *Mainesburg-Mainesburg NY                               | 47             | 345                 |
| *Homer City-Homer City NY                               | 47             | 345                 |
| E. Towanda-Hillside*                                    | 70             | 230                 |
| Laurel Lake-Goudey*                                     | 952            | 115                 |
| *E. Sayre-N. Waverly                                    | 956            | 115                 |
| <i>PJM West – West (Zone A)</i>                         |                |                     |
| *Pierce Brook-Five Mile Road                            | 37             | 345                 |
| *Pierce Brook-Pierce Brook NY                           | 48             | 345                 |
| *Homer City-Homer City NY                               | 48             | 345                 |
| Erie East-South Ripley*                                 | 69             | 230                 |
| *Warren-Falconer  | 171            | 115                 |
| <i>PJM East (Zone P) – Hudson Valley (Zone G)</i>       |                |                     |
| Hopatcong-Ramapo*                                       | 5018           | 500                 |
| *Waldwick-S. Mahwah                                     | J3410          | 345                 |
| *Waldwick-S. Mahwah                                     | K3411          | 345                 |
| <i>PJM (Rockland Electric) – Hudson Valley (Zone G)</i> |                |                     |
| *Cresskill- Sparkill                                    | 751            | 69                  |
| *Harings Corners- W. Nyack                              | 701            | 69                  |
| *Harings Corners-Corporate Drive                        | 703            | 138                 |
| *Montvale-Bluehill                                      | 44             | 69                  |
| *Montvale-Bluehill                                      | 43             | 69                  |
| *Montvale-Pearl River                                   | 491            | 69                  |
| *Harings Corners- Pearl River                           | 45             | 34                  |
| *S. Mahwah-Ramapo                                       | 51             | 138                 |
| *S. Mahwah- Hilburn                                     | 65             | 69                  |
| S. Mahwah 138/345*                                      | BK258          | 138/345             |

\* indicates the metered end of the circuit

| <b>IESO (Ontario)-NYISO</b>                   |                |                     |
|---|----------------|---------------------|
| <i>Ontario East (Zone O) – North (Zone D)</i> |                |                     |
| <b>Name</b>                                   | <b>Line ID</b> | <b>Voltage (kV)</b> |
| St. Lawrence-Moses*                           | L33P           | 230                 |
| St. Lawrence-Moses*                           | L34P           | 230                 |
| <i>Ontario South (Zone O) – West (Zone A)</i> |                |                     |
| Beck-Niagara*                                 | PA301          | 345                 |
| Beck-Niagara*                                 | PA302          | 345                 |
| Beck-Niagara*                                 | PA27           | 230                 |
| *Beck-Packard                                 | BP76           | 230                 |

\* indicates the metered end of the circuit

## **F. ANNOTATED MUST OUTPUT**

**This Section Is Available Electronically If Requested**

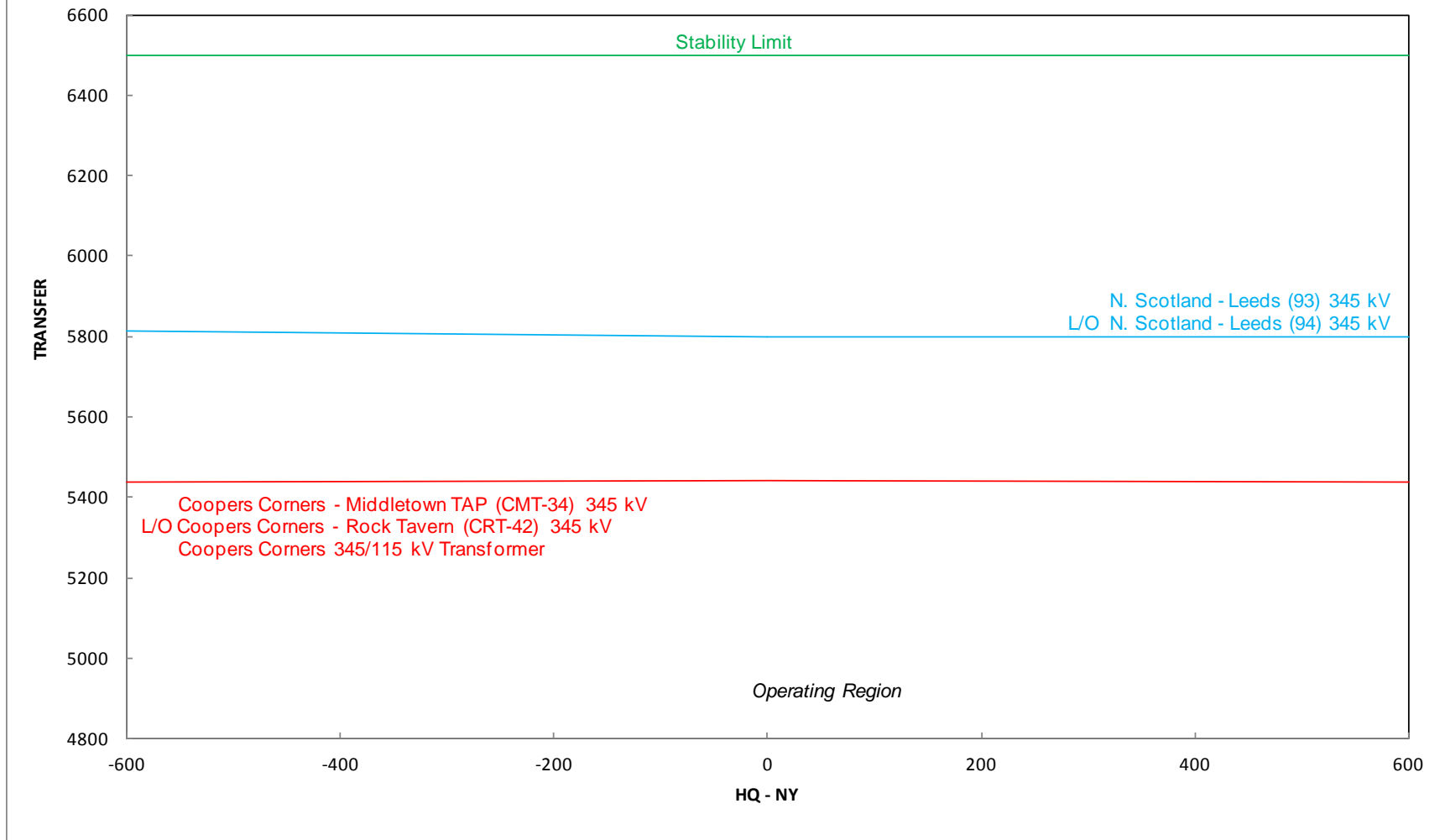
## G. TRANSFER LIMIT SENSITIVITY GRAPHS

### INDEX

|   |       |     |
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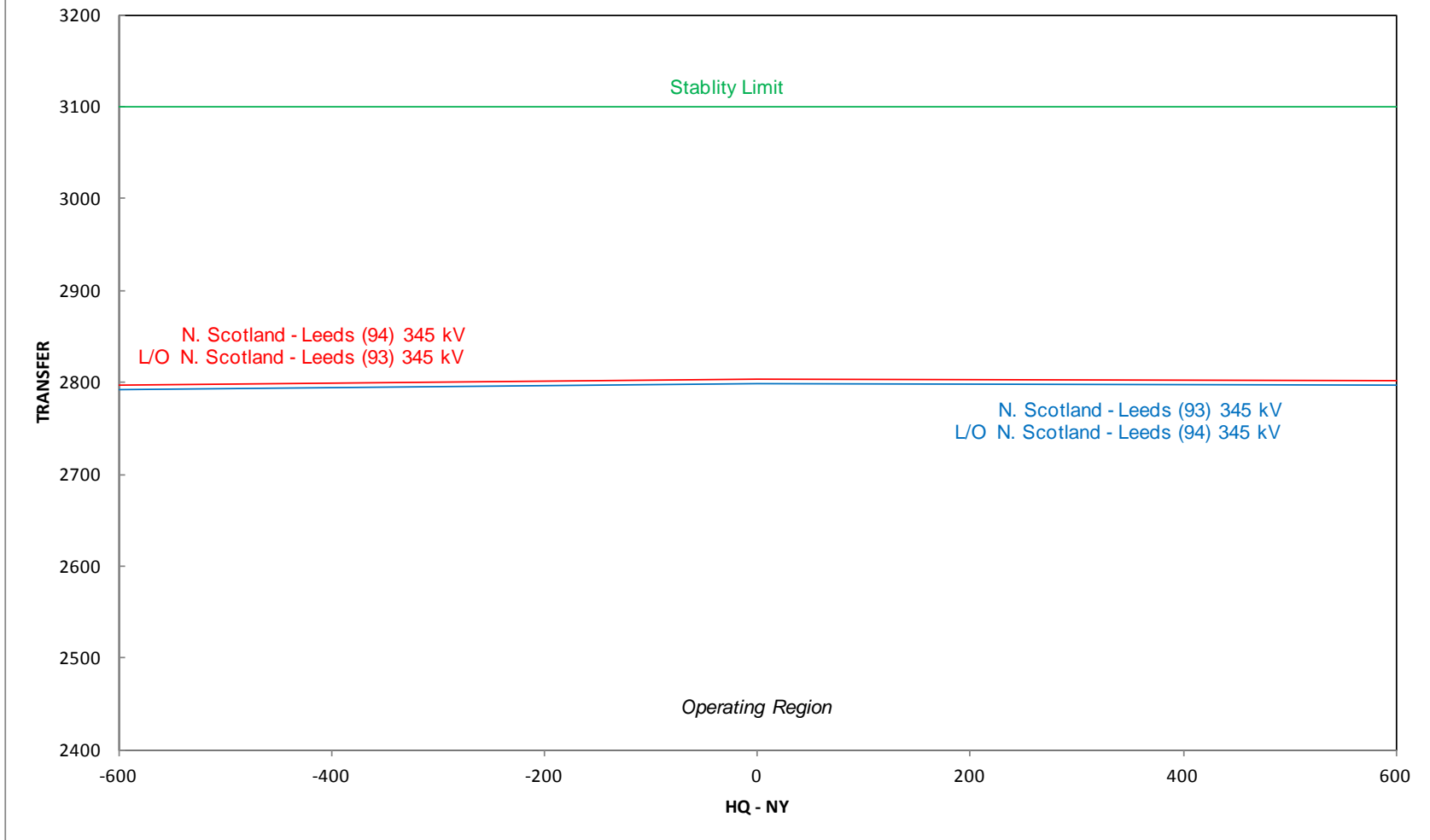


**Total East vs. HQ Export to New York**  
**For Normal Transfer Criteria**  
**Winter 2016-17**



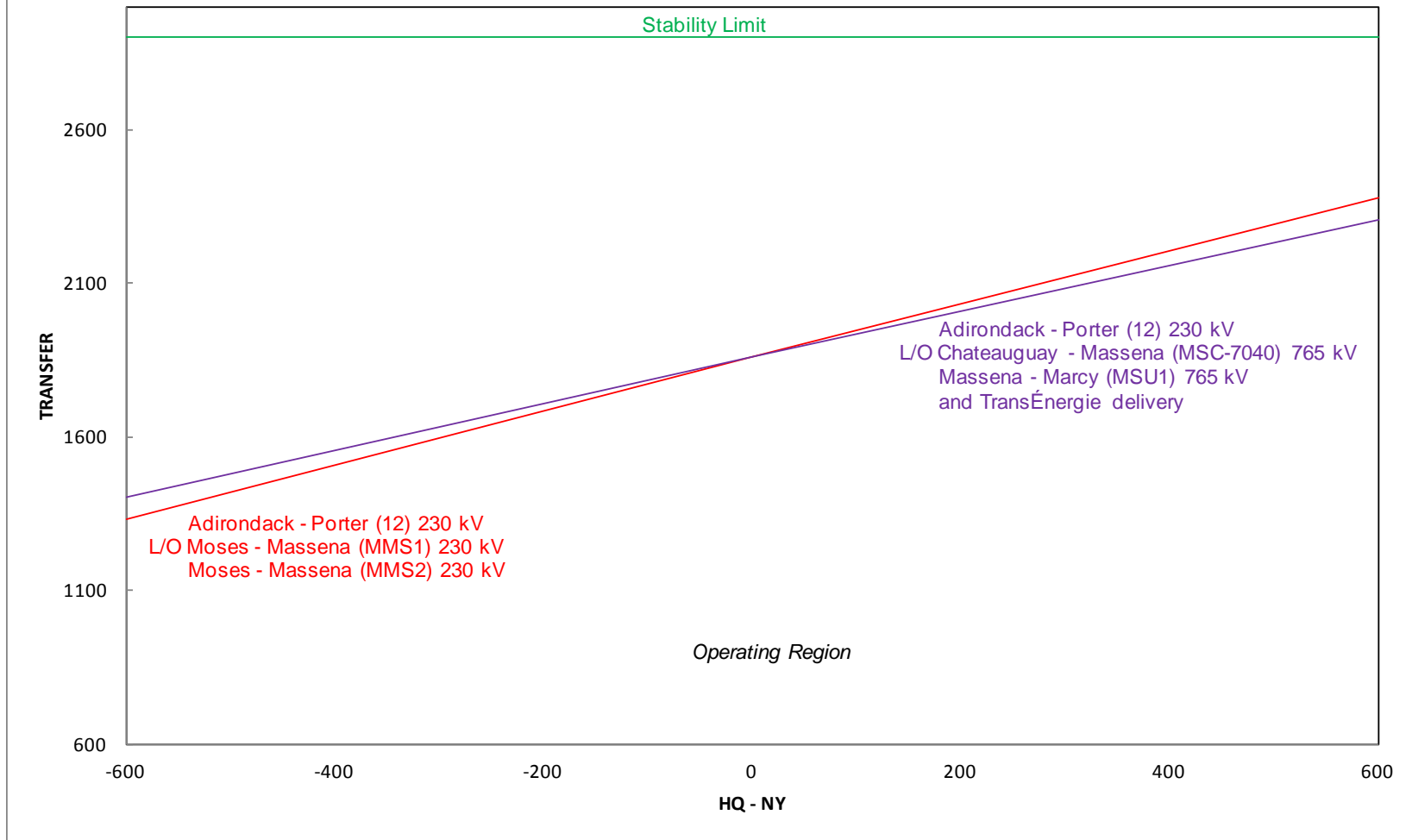
G-1

**Central East vs. HQ Export to New York**  
**For Normal Transfer Criteria**  
**Winter 2016-17**



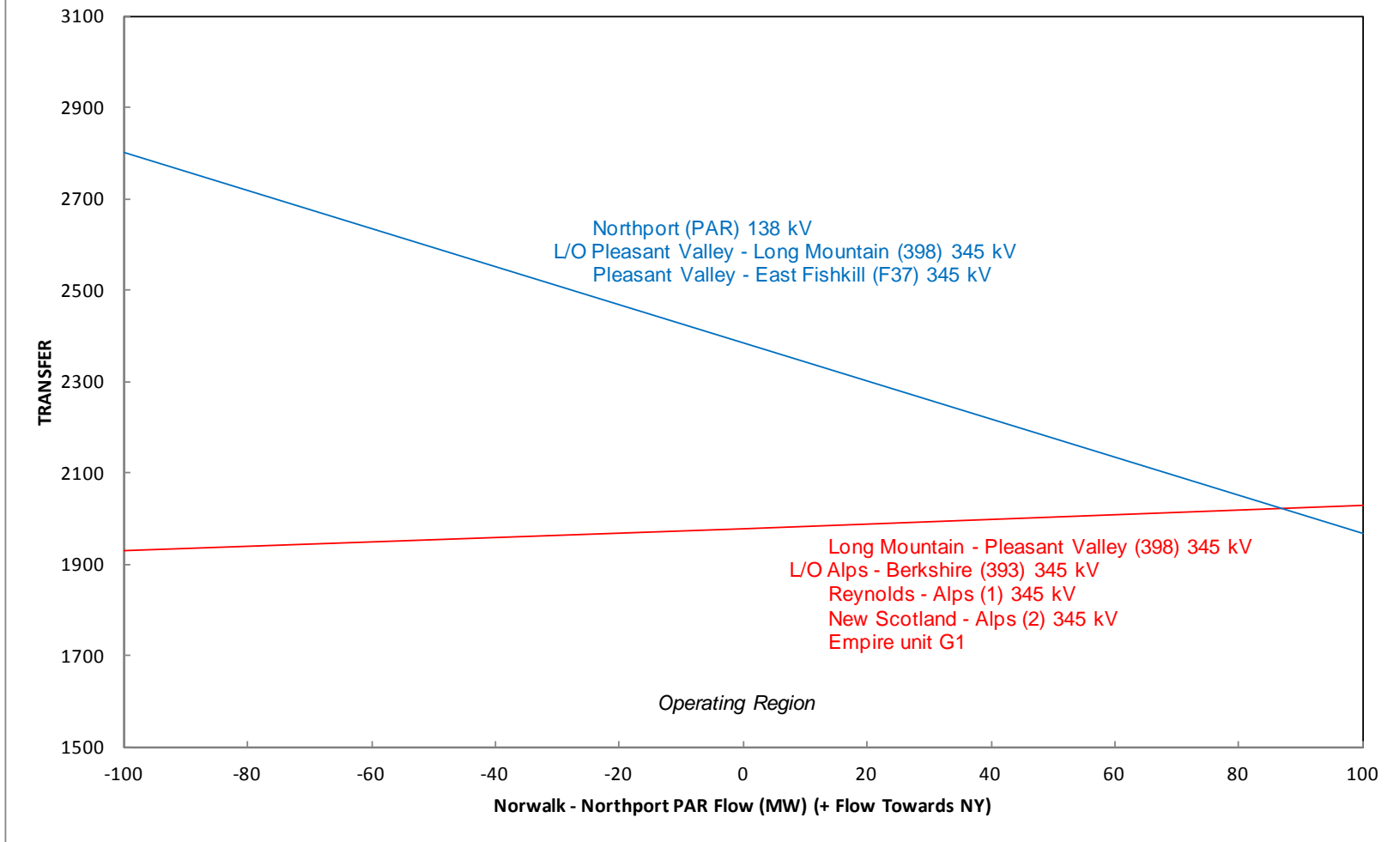
G-2

**Moses South vs. HQ Export to New York**  
**For Normal Transfer Criteria**  
**Winter 2016-17**



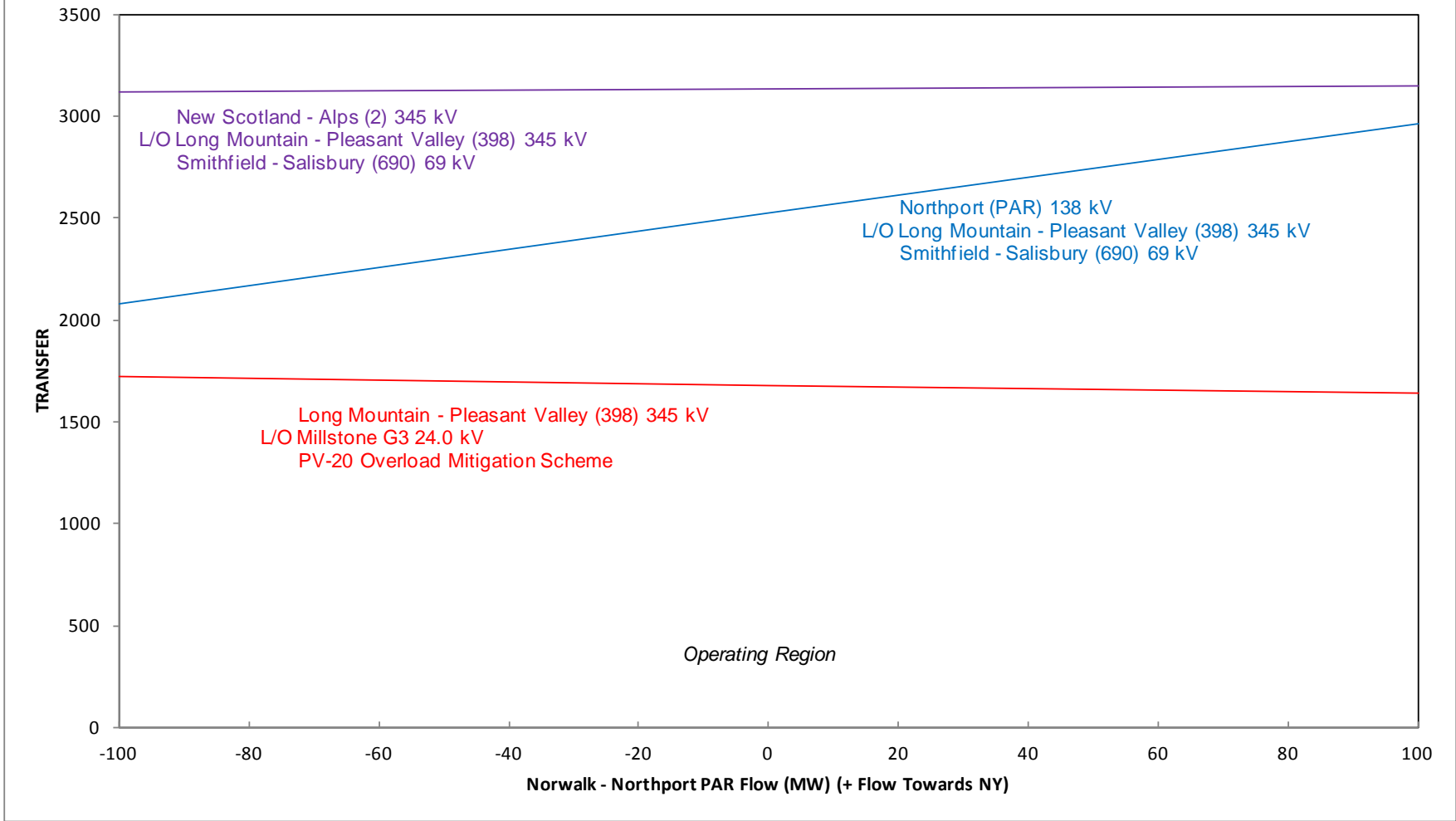
G-3

**NE-NY vs. NORWALK-NORTHPORT PAR Flow**  
**For Normal Transfer Criteria**  
**Winter 2016-17**



G-4

**NY-NE vs. NORWALK-NORTHPORT PAR Flow**  
**For Normal Transfer Criteria**  
**Winter 2016-17**



G-5

## H. COMPARISON OF TRANSFER LIMITS WINTER 2016-17 vs. 2015-16

### Comparison of Winter 2016-17 to Winter 2015-16 Thermal Limits

|                         |                      | WINTER 2016-17     |               | WINTER 2015-16     |               |       |
|-------------------------|----------------------|--------------------|---------------|--------------------|---------------|-------|
| Interface               |                      | Limit (MW)         | Contingency   | Limit (MW)         | Contingency   | Delta |
| Dysinger East           | Normal               | 1875               | 1             | 2925               | 2             | -1050 |
|                         | Emergency            | 2700               | 3             | 3250               | 4             | -550  |
| UPNY - ConEd            | Normal               | 5175               | 5             | 4600               | 5             | 575   |
|                         | Emergency            | 5650               | 6             | 5050               | 6             | 600   |
| Sprain Brook            | Normal               | 4025               | 7             | 4025               | 7             | 0     |
| Dunwoodie-South         | Emergency            | 4125               | 8             | 4125               | 8             | 0     |
| Con Ed - LIPA           | Normal               | 950                | 9             | 950                | 9             | 0     |
|                         | Emergency            | 1550               | 10            | 1550               | 10            | 0     |
| Central East            | <b>MSC-7040 FLOW</b> | <b>HQ -&gt; NY</b> | <b>600 MW</b> | <b>HQ -&gt; NY</b> | <b>600 MW</b> |       |
|                         | Normal               | 2775               | 11            | 2975               | 11            | -200  |
|                         | Emergency            | 3150               | 12            | 3350               | 12            | -200  |
|                         | <b>MSC-7040 FLOW</b> | <b>0 MW</b>        |               | <b>0 MW</b>        |               |       |
|                         | Normal               | 2775               | 11            | 2975               | 11            | -200  |
|                         | Emergency            | 3150               | 12            | 3350               | 12            | -200  |
|                         | <b>MSC-7040 FLOW</b> | <b>NY -&gt; HQ</b> | <b>600 MW</b> | <b>NY -&gt; HQ</b> | <b>600 MW</b> |       |
|                         | Normal               | 2775               | 11            | 2975               | 11            | -200  |
|                         | Emergency            | 3150               | 12            | 3350               | 12            | -200  |
| Total East <sup>3</sup> | <b>MSC-7040 FLOW</b> | <b>HQ -&gt; NY</b> | <b>600 MW</b> | <b>HQ -&gt; NY</b> | <b>600 MW</b> |       |
|                         | Normal               | 5425               | 13            | 5200               | 14            | 225   |
|                         | Emergency            | 5425               | 15            | 6100               | 12            | -675  |
|                         | <b>MSC-7040 FLOW</b> | <b>5425</b>        | <b>0 MW</b>   | <b>0 MW</b>        |               |       |
|                         | Normal               | 5425               | 13            | 5200               | 14            | 225   |
|                         | Emergency            | 5425               | 15            | 6100               | 12            | -675  |
|                         | <b>MSC-7040 FLOW</b> | <b>NY -&gt; HQ</b> | <b>600 MW</b> | <b>NY -&gt; HQ</b> | <b>600 MW</b> |       |
|                         | Normal               | 5425               | 13            | 5200               | 14            | 225   |
|                         | Emergency            | 5425               | 15            | 6100               | 12            | -675  |
| Moses - South           | <b>MSC-7040 FLOW</b> | <b>HQ -&gt; NY</b> | <b>600 MW</b> | <b>HQ -&gt; NY</b> | <b>600 MW</b> |       |
|                         | Normal               | 2300               | 16            | 2150               | 17            | 150   |
|                         | Emergency            | 3100               | 18            | 2325               | 19            | 775   |
|                         | <b>MSC-7040 FLOW</b> | <b>0 MW</b>        |               | <b>0 MW</b>        |               |       |
|                         | Normal               | 1850               | 20            | 1500               | 17            | 350   |
|                         | Emergency            | 2475               | 22            | 1600               | 19            | 875   |
|                         | <b>MSC-7040 FLOW</b> | <b>NY -&gt; HQ</b> | <b>600 MW</b> | <b>NY -&gt; HQ</b> | <b>600 MW</b> |       |
|                         | Normal               | 1325               | 20            | 775                | 21            | 550   |
|                         | Emergency            | 1750               | 22            | 875                | 19            | 875   |

<sup>3</sup> Limits in this report do not include Neptune in the Total East Interface.

**NYISO WINTER 2016-17 CROSS-STATE THERMAL LIMIT CONTINGENCY LIST**

|      | <b>Limiting Element</b>                          |       |         |     | <b>Contingency</b>  |
|------|--|-------|---------|-----|---|
| (1)  | Niagara – Packard (61) 230 kV                    | @STE  | 949 MW  | L/O | Beck – Packard (BP76) 230 kV<br>Niagara – Packard (62) 230 kV   |
| (2)  | Huntley – Sawyer (80) 230 kV                     | @LTE  | 760 MW  | L/O | Huntley – Sawyer (79) 230 kV  |
| (3)  | Niagara 230/115 kV Transformer                   | @STE  | 288 MW  | L/O | Niagara – Robinson Rd. (64) 230 kV  |
| (4)  | Packard – Sawyer (77) 230 kV                     | @STE  | 795 MW  | L/O | Packard – Sawyer (78) 230 kV  |
| (5)  | Leeds – Pleasant Valley (92) 345kV               | @LTE  | 1783 MW | L/O | Athens – Pleasant Valley (91) 345kV   |
| (6)  | Leeds – Pleasant Valley (92) 345kV               | @STE  | 1912 MW | L/O | Athens – Pleasant Valley (91) 345kV   |
| (7)  | Dunwoodie – Mott Haven (71) 345kV                | @SCUC | 1084 MW | L/O | Dunwoodie – Mott Haven (72) 345kV   |
| (8)  | Dunwoodie – Mott Haven (71) 345kV                | @NORM | 741 MW  |     | Pre – Contingency Loading   |
| (9)  | Dunwoodie – Shore Rd. (Y50) 345kV                | @LTE  | 977 MW  | L/O | Sprain Brook – E.G.C. (Y49) 345kV<br>Sprain Brook – Academy (M29) 345 kV                              |
| (10) | Dunwoodie – Shore Rd. (Y50) 345 kV               | @NORM | 741 MW  |     | Pre – Contingency Loading   |
| (11) | New Scotland – Leeds (93) 345kV                  | @LTE  | 1692 MW | L/O | New Scotland – Leeds (94) 345kV   |
| (12) | New Scotland – Leeds (93) 345kV                  | @STE  | 1912 MW | L/O | New Scotland – Leeds (94) 345kV   |
| (13) | Coopers Corners – Middletown TAP (CMT-34) 345 kV | @LTE  | 1793 MW | L/O | Coopers Corners – Rock Tavern (CRT-42) 345 kV<br>Coopers Corners 345/115 kV Transformer               |
| (14) | Rock Tavern – Ramapo (77) 345 kV                 | @LTE  | 2010 MW | L/O | Roseton – East Fishkill (RFK305) 345 kV<br>East Fishkill 345/115 kV Transformer                       |
| (15) | Coopers Corners – Middletown TAP (CMT-34) 345 kV | @STE  | 1793 MW | L/O | Coopers Corners – Rock Tavern (CRT-42) 345 kV   |
| (16) | Adirondack – Porter (12) 230 kV                  | @LTE  | 478 MW  | L/O | Chateauguay – Massena (MSC-7040) 765 kV<br>Massena – Marcy (MSU1) 765 kV<br>and TransÉnergie delivery |
| (17) | Massena – Moses East (MMS2) 230 kV               | @LTE  | 1254 MW | L/O | Moses – Adirondack (MA1) 230 kV<br>Moses – Adirondack (MA2) 230 kV<br>Adirondack – Porter (12) 230 kV |
| (18) | Browns Falls – Taylorville (4) 115 kV            | @STE  | 152 MW  | L/O | Browns Falls – Taylorville (3) 115 kV   |
| (19) | Massena – Moses East (MMS2) 230 kV               | @NORM | 1076 MW |     | Pre – Contingency Loading   |
| (20) | Adirondack – Porter (12) 230 kV                  | @LTE  | 478 MW  | L/O | Moses – Massena (MMS1) 230 kV<br>Moses – Massena (MMS2) 230 kV  |

|      |                                    |      |         |     |   |
|------|------------------------------------|------|---------|-----|---|
| (21) | Massena – Moses East (MMS2) 230 kV | @LTE | 1254 MW | L/O | Volney – Marcy (19) 345 kV<br>Marcy – Edic (UE1-7) 345 kV |
| (22) | Moses – Massena (MMS1) 230 kV      | @STE | 1593 MW | L/O | Moses – Massena (MMS2) 230 kV                             |



# I. GENERATION SHIFTS ASSUMED FOR THERMAL ANALYSIS

| <----- STUDY SYSTEM -----> |              |       |        |      | <----- OPPOSING SYSTEM -----> |          |       |        |       |
|----------------------------|--------------|-------|--------|------|-------------------------------|----------|-------|--------|-------|
| <----- GENERATOR MW----- > |              |       |        |      | <----- GENERATOR MW----- >    |          |       |        |       |
| BUS NAME                   | BASE         | SHIFT | CHANGE |      | BUS NAME                      | BASE     | SHIFT | CHANGE |       |
| <b>DYSINGER EAST</b>       |              |       |        |      |                               |          |       |        |       |
| 155712                     | LENNOX_GS-1  | 400.0 | 405.0  | 5.0  | 126340                        | KEYSPG-1 | 112.4 | 107.4  | -5.0  |
| 155715                     | LENNOX_GS-4  | 400.0 | 405.0  | 5.0  | 126652                        | RAV 3    | 922.0 | 885.0  | -37.0 |
| 156673                     | PICK_A_GS-1  | 0.0   | 15.0   | 15.0 | 126653                        | AK 2     | 120.0 | 119.0  | -1.0  |
| 156685                     | PICK_B_GS-7  | 0.0   | 15.0   | 15.0 | 126658                        | RAV 2    | 252.1 | 244.1  | -8.0  |
| 158740                     | NANTICOKE_G5 | 0.0   | 15.0   | 15.0 | 126660                        | COGENGT2 | 58.9  | 56.9   | -2.0  |
| 158741                     | NANTICOKE_G6 | 0.0   | 15.0   | 15.0 | 126661                        | COGENGT3 | 58.9  | 56.9   | -2.0  |
| 159615                     | BRUCE_A_GS-3 | 800.0 | 801.0  | 1.0  | 126662                        | COGENGT4 | 58.9  | 56.9   | -2.0  |
| 159619                     | BRUCE_B_GS-7 | 0.0   | 10.0   | 10.0 | 126663                        | COGENGT5 | 66.8  | 64.8   | -2.0  |
| 159620                     | BRUCE_B_GS-8 | 0.0   | 19.0   | 19.0 | 126664                        | COGENST1 | 66.8  | 64.8   | -2.0  |
|                            |              |       |        |      | 126665                        | COGENST2 | 66.8  | 64.8   | -2.0  |
|                            |              |       |        |      | 128901                        | BARETG2  | 162.0 | 157.0  | -5.0  |
|                            |              |       |        |      | 129071                        | CAITH-GT | 91.9  | 87.9   | -4.0  |
|                            |              |       |        |      | 129072                        | CAITH-ST | 82.5  | 78.5   | -4.0  |
|                            |              |       |        |      | 147788                        | POLETGT2 | 94.7  | 91.7   | -3.0  |
|                            |              |       |        |      | 147789                        | POLETSTG | 101.8 | 96.8   | -5.0  |
|                            |              |       |        |      | 147790                        | POLETGT1 | 94.7  | 91.7   | -3.0  |
|                            |              |       |        |      | 148708                        | Q308_GT1 | 74.8  | 71.8   | -3.0  |
|                            |              |       |        |      | 148709                        | Q308_GT2 | 74.8  | 71.8   | -3.0  |
|                            |              |       |        |      | 148710                        | Q308_ST  | 149.6 | 142.6  | -7.0  |
| <b>UPNY - CONED</b>        |              |       |        |      |                               |          |       |        |       |
| 136702                     | OSWGO 5G     | 793.9 | 794.9  | 1.0  | 126251                        | ER G6    | 94.2  | 92.2   | -2.0  |
| 136703                     | OSWGO 6G     | 0.0   | 29.0   | 29.0 | 126340                        | KEYSPG-1 | 112.4 | 108.4  | -4.0  |
| 147763                     | MOS17-18     | 14.3  | 16.3   | 2.0  | 126341                        | KEYSPST1 | 65.1  | 63.1   | -2.0  |
| 148706                     | MRBLRV1_8G   | 44.6  | 49.6   | 5.0  | 126652                        | RAV 3    | 922.0 | 891.0  | -31.0 |
| 158740                     | NANTICOKE_G5 | 0.0   | 15.0   | 15.0 | 126653                        | AK 2     | 120.0 | 119.0  | -1.0  |
| 158743                     | NANTICOKE_G8 | 0.0   | 15.0   | 15.0 | 126654                        | AST 3    | 179.3 | 176.3  | -3.0  |
| 159613                     | BRUCE_A_GS-1 | 0.0   | 33.0   | 33.0 | 126657                        | RAV 1    | 251.3 | 244.3  | -7.0  |
|                            |              |       |        |      | 126658                        | RAV 2    | 252.1 | 245.1  | -7.0  |
|                            |              |       |        |      | 126660                        | COGENGT2 | 58.9  | 56.9   | -2.0  |
|                            |              |       |        |      | 126661                        | COGENGT3 | 58.9  | 56.9   | -2.0  |
|                            |              |       |        |      | 126662                        | COGENGT4 | 58.9  | 56.9   | -2.0  |
|                            |              |       |        |      | 126663                        | COGENGT5 | 66.8  | 64.8   | -2.0  |
|                            |              |       |        |      | 126664                        | COGENST1 | 66.8  | 64.8   | -2.0  |
|                            |              |       |        |      | 126665                        | COGENST2 | 66.8  | 64.8   | -2.0  |
|                            |              |       |        |      | 126692                        | SCS18-G4 | 75.0  | 74.0   | -1.0  |
|                            |              |       |        |      | 126710                        | SCS18-G5 | 75.0  | 74.0   | -1.0  |
|                            |              |       |        |      | 126711                        | SCS18-G6 | 100.0 | 98.0   | -2.0  |
|                            |              |       |        |      | 128901                        | BARETG2  | 162.0 | 158.0  | -4.0  |
|                            |              |       |        |      | 128963                        | HEMP RR  | 55.5  | 53.5   | -2.0  |
|                            |              |       |        |      | 129071                        | CAITH-GT | 91.9  | 88.9   | -3.0  |
|                            |              |       |        |      | 129072                        | CAITH-ST | 82.5  | 79.5   | -3.0  |
|                            |              |       |        |      | 129093                        | PTJEFG4  | 90.9  | 88.9   | -2.0  |
|                            |              |       |        |      | 147788                        | POLETGT2 | 94.7  | 91.7   | -3.0  |
|                            |              |       |        |      | 147789                        | POLETSTG | 101.8 | 97.8   | -4.0  |

| STUDY SYSTEM                          |              |       |        |      | OPPOSING SYSTEM |          |       |        |       |
|---------------------------------------|--------------|-------|--------|------|-----------------|----------|-------|--------|-------|
| GENERATOR MW                          |              |       |        |      | GENERATOR MW    |          |       |        |       |
| BUS NAME                              | BASE         | SHIFT | CHANGE |      | BUS NAME        | BASE     | SHIFT | CHANGE |       |
|                                       |              |       |        |      | 147790          | POLETGT1 | 94.7  | 91.7   | -3.0  |
|                                       |              |       |        |      | 147821          | NYPA108  | 80.5  | 87.5   | -3.0  |
| <b>SPRAIN BROOK DUNWOODIE - SOUTH</b> |              |       |        |      |                 |          |       |        |       |
| 136702                                | OSWGO 5G     | 793.9 | 794.9  | 1.0  | 126340          | KEYSPG-1 | 112.4 | 117.4  | -5.0  |
| 136703                                | OSWGO 6G     | 0.0   | 35.0   | 35.0 | 126341          | KEYSPST1 | 65.1  | 62.1   | -3.0  |
| 147763                                | MOS17-18     | 14.3  | 18.3   | 4.0  | 126652          | RAV 3    | 922.0 | 889.0  | -33.0 |
| 147855                                | CHATG_GE_G1  | 31.9  | 34.9   | 3.0  | 126654          | AST 3    | 179.3 | 175.3  | -4.0  |
| 148706                                | MRBLRV1_8G   | 44.6  | 52.6   | 8.0  | 126657          | RAV 1    | 251.3 | 249.3  | -2.0  |
| 158740                                | NANTICOKE_G5 | 0.0   | 22.0   | 22.0 | 126658          | RAV 2    | 252.1 | 244.1  | -8.0  |
| 159613                                | BRUCE_A_GS-1 | 0.0   | 27.0   | 27.0 | 126660          | COGENGT2 | 58.9  | 56.9   | -2.0  |
|                                       |              |       |        |      | 126661          | COGENGT3 | 58.9  | 56.9   | -2.0  |
|                                       |              |       |        |      | 126662          | COGENGT4 | 58.9  | 56.9   | -2.0  |
|                                       |              |       |        |      | 126663          | COGENGT5 | 66.8  | 63.8   | -3.0  |
|                                       |              |       |        |      | 126664          | COGENST1 | 66.8  | 63.8   | -3.0  |
|                                       |              |       |        |      | 126665          | COGENST2 | 66.8  | 63.8   | -3.0  |
|                                       |              |       |        |      | 126692          | SCS18-G4 | 75.0  | 74.0   | -1.0  |
|                                       |              |       |        |      | 126710          | SCS18-G5 | 75.0  | 74.0   | -1.0  |
|                                       |              |       |        |      | 126711          | SCS18-G6 | 100.0 | 98.0   | -2.0  |
|                                       |              |       |        |      | 147788          | POLETGT2 | 94.7  | 90.7   | -4.0  |
|                                       |              |       |        |      | 147789          | POLETSTG | 101.8 | 96.8   | -5.0  |
|                                       |              |       |        |      | 147790          | POLETGT1 | 94.7  | 90.7   | -4.0  |
|                                       |              |       |        |      | 148708          | Q308_GT1 | 74.8  | 71.8   | -3.0  |
|                                       |              |       |        |      | 148709          | Q308_GT2 | 74.8  | 71.8   | -3.0  |
|                                       |              |       |        |      | 148710          | Q308_ST  | 149.6 | 142.6  | -7.0  |
| <b>CONED - LIPA</b>                   |              |       |        |      |                 |          |       |        |       |
| 126650                                | AK 3         | 0.0   | 41.0   | 41.0 | 128901          | BARETG2  | 162.0 | 147.0  | -15.0 |
| 126653                                | AK 2         | 120.0 | 130.0  | 10.0 | 128918          | FRPT-GT1 | 40.3  | 35.3   | -5.0  |
| 126659                                | COGENGT1     | 0.0   | 7.0    | 7.0  | 128963          | HEMP RR  | 55.5  | 49.5   | -6.0  |
| 126660                                | COGENGT2     | 58.9  | 62.9   | 4.0  | 128984          | CALP_CTG | 40.3  | 33.3   | -7.0  |
| 126661                                | COGENGT3     | 58.9  | 62.9   | 4.0  | 128990          | GRUMTBG4 | 35.8  | 29.8   | -6.0  |
| 126662                                | COGENGT4     | 58.9  | 62.9   | 4.0  | 129024          | NRTPTG1  | 127.6 | 123.6  | -4.0  |
| 126664                                | COGENST1     | 66.8  | 69.8   | 3.0  | 129025          | NRTPTG2  | 127.6 | 123.6  | -4.0  |
| 126665                                | COGENST2     | 66.8  | 69.8   | 3.0  | 129026          | NRTPTG3  | 127.6 | 123.6  | -4.0  |
| 126737                                | RNY 7EGT     | 0.0   | 8.0    | 8.0  | 129027          | NRTPTG4  | 127.6 | 123.6  | -4.0  |
| 126738                                | RNY 7WGT     | 0.0   | 8.0    | 8.0  | 129053          | PLWN_CC  | 40.3  | 36.3   | -4.0  |
| 126739                                | RNY 9EGT     | 0.0   | 8.0    | 8.0  | 129071          | CAITH-GT | 91.9  | 81.9   | -10.0 |
|                                       |              |       |        |      | 129072          | CAITH-ST | 82.5  | 71.5   | -9.0  |
|                                       |              |       |        |      | 129093          | PTJEFG4  | 90.9  | 83.9   | -7.0  |
|                                       |              |       |        |      | 147821          | NYPA108  | 80.5  | 70.5   | -10.0 |
|                                       |              |       |        |      | 147822          | NYPA56   | 40.3  | 35.3   | -5.0  |

<-----STUDY SYSTEM-----> <-----OPPOSING SYSTEM----->

| STUDY SYSTEM                    |              |       |        |      | OPPOSING SYSTEM |           |       |        |       |
|---------------------------------|--------------|-------|--------|------|-----------------|-----------|-------|--------|-------|
| BUS NAME                        | BASE         | SHIFT | CHANGE |      | BUS NAME        | BASE      | SHIFT | CHANGE |       |
| <b>CENTRAL EAST, TOTAL EAST</b> |              |       |        |      |                 |           |       |        |       |
| 136703                          | OSWGO 6G     | 0.0   | 24.0   | 24.0 | 126340          | KEYSPG-1  | 112.4 | 109.4  | -3.0  |
| 137924                          | FLATRKGS_V82 | 69.3  | 72.3   | 3.0  | 126341          | KEYSPST1  | 65.1  | 63.1   | -2.0  |
| 147808                          | ALTONA_GE_G1 | 29.2  | 31.2   | 2.0  | 126468          | ERGT1     | 115.7 | 113.7  | -2.0  |
| 147855                          | CHATG_GE_G1  | 31.9  | 33.9   | 2.0  | 126469          | ERGT2     | 118.1 | 116.1  | -2.0  |
| 147971                          | ELNBG_GE_1G  | 24.3  | 25.3   | 1.0  | 126606          | COOP CITY | 40.4  | 39.4   | -1.0  |
| 148706                          | MRBLRV1_8G   | 44.6  | 49.6   | 5.0  | 126652          | RAV 3     | 922.0 | 897.0  | -25.0 |
| 156662                          | DARLINTN_G2  | 0.0   | 18.0   | 18.0 | 126653          | AK 2      | 120.0 | 119.0  | -1.0  |
| 158740                          | NANTICOKE_G5 | 0.0   | 13.0   | 13.0 | 126654          | AST 3     | 179.3 | 176.3  | -3.0  |
| 159613                          | BRUCE_A_GS-1 | 0.0   | 20.0   | 20.0 | 126657          | RAV 1     | 251.3 | 146.3  | -5.0  |
| 159614                          | BRUCE_A_GS-2 | 400.0 | 412.0  | 12.0 | 126658          | RAV 2     | 252.1 | 147.1  | -5.0  |
|                                 |              |       |        |      | 126660          | COGENGT2  | 58.9  | 57.9   | -1.0  |
|                                 |              |       |        |      | 126661          | COGENGT3  | 58.9  | 57.9   | -1.0  |
|                                 |              |       |        |      | 126662          | COGENGT4  | 58.9  | 57.9   | -1.0  |
|                                 |              |       |        |      | 126663          | COGENGT5  | 66.8  | 64.8   | -2.0  |
|                                 |              |       |        |      | 126664          | COGENST1  | 66.8  | 64.8   | -2.0  |
|                                 |              |       |        |      | 126665          | COGENST2  | 66.8  | 64.8   | -2.0  |
|                                 |              |       |        |      | 126674          | JFK G1    | 31.4  | 30.4   | -1.0  |
|                                 |              |       |        |      | 126675          | JFK G2    | 31.4  | 30.4   | -1.0  |
|                                 |              |       |        |      | 126692          | SCS18-G4  | 75.0  | 74.0   | -1.0  |
|                                 |              |       |        |      | 126710          | SCS18-G5  | 75.0  | 74.0   | -1.0  |
|                                 |              |       |        |      | 128901          | BARETG2   | 162.0 | 158.0  | -4.0  |
|                                 |              |       |        |      | 128918          | FRPT-GT1  | 40.3  | 39.3   | -1.0  |
|                                 |              |       |        |      | 128924          | FRPT-GT2  | 40.3  | 39.3   | -1.0  |
|                                 |              |       |        |      | 128963          | HEMP RR   | 55.5  | 54.5   | -1.0  |
|                                 |              |       |        |      | 128970          | TRIGEN    | 37.4  | 36.4   | -1.0  |
|                                 |              |       |        |      | 128984          | CALP_CTG  | 40.3  | 39.3   | -1.0  |
|                                 |              |       |        |      | 128989          | GRMN B    | 41.1  | 40.1   | -1.0  |
|                                 |              |       |        |      | 128990          | GRUMTBG4  | 35.8  | 34.8   | -1.0  |
|                                 |              |       |        |      | 129053          | PLWN_CC   | 40.3  | 39.3   | -1.0  |
|                                 |              |       |        |      | 129071          | CAITH-GT  | 91.9  | 88.9   | -3.0  |
|                                 |              |       |        |      | 129072          | CAITH-ST  | 82.5  | 80.5   | -2.0  |
|                                 |              |       |        |      | 129093          | PTJFG4    | 90.9  | 89.9   | -1.0  |
|                                 |              |       |        |      | 147788          | POLETGT2  | 94.7  | 91.7   | -3.0  |
|                                 |              |       |        |      | 147790          | POLETGT1  | 94.7  | 91.7   | -3.0  |
|                                 |              |       |        |      | 147810          | PAGTFOXH  | 32.2  | 31.2   | -1.0  |
|                                 |              |       |        |      | 147811          | PAGTGOW1  | 31.4  | 30.4   | -1.0  |
|                                 |              |       |        |      | 147812          | PAGTGOW2  | 31.4  | 30.4   | -1.0  |
|                                 |              |       |        |      | 147821          | NYPA108   | 80.5  | 78.5   | -2.0  |
|                                 |              |       |        |      | 147822          | NYPA56    | 40.3  | 39.3   | -1.0  |
|                                 |              |       |        |      | 148708          | Q308_GT1  | 74.8  | 72.8   | -2.0  |
|                                 |              |       |        |      | 148709          | Q308_GT2  | 74.8  | 72.8   | -2.0  |
|                                 |              |       |        |      | 148710          | Q308_ST   | 149.6 | 145.6  | -4.0  |

<-----STUDY SYSTEM-----> <-----OPPOSING SYSTEM----->

| STUDY SYSTEM        |              |       |        |      | OPPOSING SYSTEM |              |       |        |       |
|---------------------|--------------|-------|--------|------|-----------------|--------------|-------|--------|-------|
| BUS NAME            | BASE         | SHIFT | CHANGE |      | BUS NAME        | BASE         | SHIFT | CHANGE |       |
| <b>MOSES SOUTH</b>  |              |       |        |      |                 |              |       |        |       |
| 147763              | MOS17-18     | 93.7  | 143.7  | 50   | 126654          | AST 3        | 179.3 | 175.3  | -4.0  |
| 147766              | MOS21-22     | 100.0 | 150.0  | 50   | 126658          | RAV 2        | 252.1 | 245.1  | -7.0  |
|                     |              |       |        |      | 130873          | SOMERSET24   | 664.8 | 651.8  | -13.0 |
|                     |              |       |        |      | 136702          | OSWGO 5G     | 793.7 | 780.7  | -13.0 |
|                     |              |       |        |      | 136715          | SITH-G1      | 161.5 | 154.5  | -7.0  |
|                     |              |       |        |      | 136716          | SITH-G2      | 161.5 | 154.5  | -7.0  |
|                     |              |       |        |      | 136717          | SITH-G3      | 161.5 | 154.5  | -7.0  |
|                     |              |       |        |      | 136718          | SITH-G4      | 161.5 | 154.5  | -7.0  |
|                     |              |       |        |      | 136719          | SITH-S5      | 176.6 | 168.6  | -8.0  |
|                     |              |       |        |      | 136720          | SITH-S6      | 176.6 | 168.6  | -8.0  |
|                     |              |       |        |      | 148708          | Q308_GT1     | 74.8  | 69.8   | -5.0  |
|                     |              |       |        |      | 148709          | Q308_GT2     | 74.8  | 69.8   | -5.0  |
|                     |              |       |        |      | 148710          | Q308_ST      | 149.6 | 140.6  | -9.0  |
| <b>NY – ONTARIO</b> |              |       |        |      |                 |              |       |        |       |
| 126650              | AK 3         | 141.0 | 152.0  | 11.0 | 156661          | DARLINGTN_G1 | 928.4 | 908.4  | -20.0 |
| 126659              | COGENGT1     | 0.0   | 3.0    | 3.0  | 156663          | DARLINGTN_G3 | 920.1 | 901.1  | -19.0 |
| 126660              | COGENGT2     | 58.9  | 59.9   | 1.0  | 156664          | DARLINGTN_G4 | 888.2 | 869.2  | -19.0 |
| 126661              | COGENGT3     | 58.9  | 59.9   | 1.0  | 156683          | PICK_B_GS-5  | 507.2 | 493.2  | -14.0 |
| 126662              | COGENGT4     | 58.9  | 59.9   | 1.0  | 156684          | PICK_B_GS-6  | 508.3 | 494.3  | -14.0 |
| 126663              | COGENGT5     | 66.8  | 67.8   | 1.0  | 156686          | PICK_B_GS-8  | 522.0 | 508.0  | -14.0 |
| 126664              | COGENST1     | 66.8  | 67.8   | 1.0  |                 |              |       |        |       |
| 129024              | NRTPTG1      | 127.6 | 135.6  | 8.0  |                 |              |       |        |       |
| 129025              | NRTPTG2      | 127.6 | 133.6  | 6.0  |                 |              |       |        |       |
| 129026              | NRTPTG3      | 127.6 | 133.6  | 6.0  |                 |              |       |        |       |
| 129027              | NRTPTG4      | 127.6 | 132.6  | 5.0  |                 |              |       |        |       |
| 129095              | PTJFGT2      | 0.0   | 1.0    | 1.0  |                 |              |       |        |       |
| 129096              | PTJFGT3      | 0.0   | 1.0    | 1.0  |                 |              |       |        |       |
| 136703              | OSWGO 6G     | 0.0   | 27.0   | 27.0 |                 |              |       |        |       |
| 137456              | ATHENSC1     | 115.0 | 120.0  | 5.0  |                 |              |       |        |       |
| 137458              | ATHENSC2     | 115.0 | 119.0  | 4.0  |                 |              |       |        |       |
| 147778              | GILBOA#2     | 0.0   | 9.0    | 9.0  |                 |              |       |        |       |
| 147780              | GILBOA#4     | 0.0   | 9.0    | 9.0  |                 |              |       |        |       |
| <b>ONTARIO - NY</b> |              |       |        |      |                 |              |       |        |       |
| 156673              | PICK_A_GS-1  | 0.0   | 16.0   | 16.0 | 125190          | ROSE GN1     | 536.7 | 532.7  | -4.0  |
| 158740              | NANTICOKE_G5 | 0.0   | 16.0   | 16.0 | 126652          | RAV 3        | 922.0 | 906.0  | -16.0 |
| 158741              | NANTICOKE_G6 | 0.0   | 16.0   | 16.0 | 130873          | SOMERSET24   | 664.8 | 649.8  | -15.0 |
| 158742              | NANTICOKE_G7 | 0.0   | 16.0   | 16.0 | 131461          | CAYUGA 2     | 155.1 | 153.1  | -2.0  |
| 159616              | BRUCE_A_GS-4 | 0.0   | 18.0   | 18.0 | 131462          | CAYUGA 1     | 152.2 | 150.2  | -2.0  |
| 159619              | BRUCE_B_GS-7 | 0.0   | 18.0   | 18.0 | 135552          | OXBOWNUG     | 60.6  | 58.6   | -2.0  |
|                     |              |       |        |      | 136702          | OSWGO 5G     | 793.7 | 788.7  | -5.0  |
|                     |              |       |        |      | 136706          | HMGENBUS     | 58.3  | 57.3   | -1.0  |
|                     |              |       |        |      | 136716          | SITH-G2      | 161.5 | 156.5  | -5.0  |
|                     |              |       |        |      | 136717          | SITH-G3      | 161.5 | 156.5  | -5.0  |
|                     |              |       |        |      | 136719          | SITH-S5      | 176.6 | 172.6  | -4.0  |
|                     |              |       |        |      | 136720          | SITH-S6      | 176.6 | 171.6  | -5.0  |
|                     |              |       |        |      | 137456          | ATHENSC1     | 115.0 | 113.0  | -2.0  |

<-----STUDY SYSTEM-----> <-----OPPOSING SYSTEM----->

| STUDY SYSTEM   |              |       |        |        | OPPOSING SYSTEM |              |        |        |       |
|----------------|--------------|-------|--------|--------|-----------------|--------------|--------|--------|-------|
| BUS NAME       | BASE         | SHIFT | CHANGE |        | BUS NAME        | BASE         | SHIFT  | CHANGE |       |
|                |              |       |        | 137458 | ATHENSC2        | 115.0        | 113.0  | -2.0   |       |
|                |              |       |        | 137459 | ATHENSS2        | 65.0         | 63.0   | -2.0   |       |
|                |              |       |        | 137714 | BETH STM        | 280.1        | 274.1  | -6.0   |       |
|                |              |       |        | 145005 | JAMESGN7        | 45.0         | 44.0   | -1.0   |       |
|                |              |       |        | 146098 | INDEK-OL        | 82.7         | 80.7   | -2.0   |       |
|                |              |       |        | 147797 | JAFITZ1G        | 842.9        | 823.9  | -19.0  |       |
| <b>NY – NE</b> |              |       |        |        |                 |              |        |        |       |
| 125192         | ROSE GN2     | 265.0 | 280.0  | 15.0   | 100425          | NEWPAGE COGN | 100.0  | 98.0   | -2.0  |
| 126252         | ER G7        | 0.0   | 4.0    | 4.0    | 103060          | MIS G1       | 144.6  | 142.6  | -2.0  |
| 126379         | AST 2        | 0.0   | 2.0    | 2.0    | 103061          | MIS G2       | 144.6  | 142.6  | -2.0  |
| 126468         | ERGT1        | 0.0   | 5.0    | 5.0    | 103062          | MIS ST       | 153.7  | 151.7  | -2.0  |
| 126469         | ERGT2        | 0.0   | 5.0    | 5.0    | 103147          | OAKFIELD_STR | 147.6  | 141.6  | -6.0  |
| 126650         | AK 3         | 141.0 | 155.0  | 14.0   | 105476          | NEWINGTON_C1 | 174.5  | 171.5  | -3.0  |
| 126659         | COGENGT1     | 0.0   | 3.0    | 3.0    | 105477          | NEWINGTON_C2 | 174.5  | 171.5  | -3.0  |
| 126662         | COGENGT4     | 58.9  | 59.9   | 1.0    | 105478          | NEWINGTON_S1 | 228.7  | 224.7  | -4.0  |
| 126666         | COGENST3     | 0.0   | 3.0    | 3.0    | 105633          | GRANITE R ST | 256.0  | 251.0  | -5.0  |
| 126737         | RNY 7EGT     | 0.0   | 2.0    | 2.0    | 106056          | GRANITE RDG1 | 259.5  | 254.5  | -5.0  |
| 126738         | RNY 7WGT     | 0.0   | 2.0    | 2.0    | 111251          | CANAL G1     | 566.0  | 549.0  | -17.0 |
| 126739         | RNY 9EGT     | 0.0   | 2.0    | 2.0    | 111252          | CANAL G2     | 439.9  | 428.9  | -11.0 |
| 136703         | OSWGO 6G     | 0.0   | 15.0   | 15.0   | 111288          | CAPE WIND G1 | 158.4  | 152.4  | -6.0  |
| 146840         | BOW2         | 0.0   | 5.0    | 5.0    | 111289          | CAPE WIND G2 | 165.6  | 158.6  | -7.0  |
| 146841         | BOW1         | 306.5 | 317.5  | 11.0   | 111290          | CAPE WIND G3 | 144.0  | 138.0  | -6.0  |
| 147780         | GILBOA#4     | 0.0   | 11.0   | 11.0   | 113405          | MILLENIUM CT | 228.0  | 226.0  | -2.0  |
|                |              |       |        | 114862 | ANP BLLNGHM2    | 279.0        | 277.0  | -2.0   |       |
|                |              |       |        | 116420 | STONY BRK 1S    | 85.0         | 81.0   | -4.0   |       |
|                |              |       |        | 116523 | MOUNT TOM_G1    | 147.0        | 141.0  | -6.0   |       |
|                |              |       |        | 117434 | TIVERTON GT     | 173.0        | 170.0  | -3.0   |       |
|                |              |       |        | 117435 | TIVERTON ST     | 90.0         | 88.0   | -2.0   |       |
| <b>NE – NY</b> |              |       |        |        |                 |              |        |        |       |
| 111063         | MYSTIC 7GT   | 0.0   | 20.0   | 20.0   | 125190          | ROSE GN1     | 534.2  | 517.2  | -17.0 |
| 111068         | MYSTIC 8ST   | 0.0   | 9.0    | 9.0    | 125192          | ROSE GN2     | 265.0  | 256.0  | -9.0  |
| 111070         | MYSTIC 9ST   | 0.0   | 10.0   | 10.0   | 125193          | DANSK G4     | 200.0  | 195.0  | -5.0  |
| 114856         | BRAYTN PT 4  | 0.0   | 20.0   | 20.0   | 125194          | DANSK G3     | 125.0  | 123.0  | -2.0  |
| 114861         | ANP BLLNGHM1 | 0.0   | 11.0   | 11.0   | 125195          | DANSK G2     | 59.5   | 58.5   | -1.0  |
| 116411         | NORTHFIELD 1 | 0.0   | 7.0    | 7.0    | 125196          | DANSK G1     | 60.5   | 59.5   | -1.0  |
| 116412         | NORTHFIELD 2 | 0.0   | 6.0    | 6.0    | 126651          | IND PT 2     | 1030.0 | 1016.0 | -14.0 |
| 121646         | MONTVILLE_G6 | 200.0 | 206.0  | 6.0    | 136700          | 9M PT 2G     | 1296.5 | 1284.5 | -12.0 |
| 122481         | MILFORD_C1   | 0.0   | 11.0   | 11.0   | 137702          | JMC2ST13     | 102.0  | 100.0  | -2.0  |
|                |              |       |        | 137711 | BETHGT1         | 153.4        | 150.4  | -3.0   |       |
|                |              |       |        | 137713 | BETHGT3         | 153.4        | 150.4  | -3.0   |       |
|                |              |       |        | 147777 | GILBOA#1        | 180.0        | 177.0  | -3.0   |       |
|                |              |       |        | 147797 | JAFITZ1G        | 842.9        | 832.9  | -10.0  |       |
|                |              |       |        | 147798 | IP#3 GEN        | 1040.0       | 1022.0 | -18.0  |       |

<-----STUDY SYSTEM-----> <-----OPPOSING SYSTEM----->

| STUDY SYSTEM         |              |       |        | OPPOSING SYSTEM |                    |       |        |       |
|----------------------|--------------|-------|--------|-----------------|--------------------|-------|--------|-------|
| BUS NAME             | BASE         | SHIFT | CHANGE | BUS NAME        | BASE               | SHIFT | CHANGE |       |
| <b>NY – PJM</b>      |              |       |        |                 |                    |       |        |       |
| 125192               | ROSE GN2     | 265.0 | 289.0  | 24.0            | Scale shift to all |       |        |       |
| 126666               | COGENST3     | 0.0   | 8.0    | 8.0             | PJM generation     |       |        |       |
| 126711               | SCS18-G6     | 100.0 | 107.0  | 7.0             |                    |       |        |       |
| 128901               | BARETG2      | 162.0 | 165.0  | 3.0             |                    |       |        |       |
| 129025               | NRTPTG2      | 190.1 | 197.1  | 7.0             |                    |       |        |       |
| 136702               | OSWGO 5G     | 780.4 | 800.4  | 20.0            |                    |       |        |       |
| 137460               | ATHENSC3     | 115.0 | 123.0  | 8.0             |                    |       |        |       |
| 137559               | BESI20G1     | 100.0 | 107.0  | 7.0             |                    |       |        |       |
| 137713               | BETHGT3      | 153.4 | 157.4  | 4.0             |                    |       |        |       |
| 147752               | NIAG. 3      | 150.0 | 152.0  | 2.0             |                    |       |        |       |
| 147754               | NIAG. 5      | 150.0 | 152.0  | 2.0             |                    |       |        |       |
| 147755               | NIAG. 6      | 150.0 | 152.0  | 2.0             |                    |       |        |       |
| 147780               | GILBOA#4     | 0.0   | 4.0    | 4.0             |                    |       |        |       |
| 147787               | BLISS2_GE_1G | 8.6   | 9.6    | 1.0             |                    |       |        |       |
| 147821               | NYPA108      | 80.5  | 81.5   | 1.0             |                    |       |        |       |
| <b>PJM – NY</b>      |              |       |        |                 |                    |       |        |       |
| Scale shift from all |              |       |        | 125190          | ROSE GN1           | 436.1 | 431.1  | -5.0  |
| PJM generation       |              |       |        | 126251          | ER G6              | 94.2  | 93.2   | -1.0  |
|                      |              |       |        | 126652          | RAV 3              | 922.0 | 901.0  | -21.0 |
|                      |              |       |        | 126692          | SCS18-G4           | 75.0  | 74.0   | -1.0  |
|                      |              |       |        | 126710          | SCS18-G5           | 75.0  | 74.0   | -1.0  |
|                      |              |       |        | 126711          | SCS18-G6           | 100.0 | 99.0   | -1.0  |
|                      |              |       |        | 130873          | SOMERSET24         | 331.8 | 330.8  | -1.0  |
|                      |              |       |        | 131461          | CAYUGA 2           | 155.1 | 153.1  | -2.0  |
|                      |              |       |        | 131649          | LEA 4S \$          | 75.9  | 73.9   | -2.0  |
|                      |              |       |        | 135552          | OXBOWNUG           | 60.6  | 58.6   | -2.0  |
|                      |              |       |        | 136702          | OSWGO 5G           | 482.9 | 479.9  | -3.0  |
|                      |              |       |        | 136715          | SITH-G1            | 161.5 | 156.5  | -5.0  |
|                      |              |       |        | 136716          | SITH-G2            | 161.5 | 156.5  | -5.0  |
|                      |              |       |        | 136717          | SITH-G3            | 161.5 | 157.5  | -4.0  |
|                      |              |       |        | 137459          | ATHENSS2           | 65.0  | 63.0   | -2.0  |
|                      |              |       |        | 137561          | BESI20G3           | 250.0 | 245.0  | -5.0  |
|                      |              |       |        | 147777          | GILBOA#1           | 80.0  | 74.0   | -6.0  |
|                      |              |       |        | 147797          | JAFITZ1G           | 842.9 | 822.9  | -20.0 |
|                      |              |       |        | 148708          | Q308_GT1           | 74.8  | 71.8   | -3.0  |
|                      |              |       |        | 148709          | Q308_GT2           | 74.8  | 71.8   | -3.0  |
|                      |              |       |        | 148710          | Q308_ST            | 149.6 | 142.6  | -7.0  |

## J. DISTRIBUTION FACTORS

Table-1 DISTRIBUTION FACTORS FOR DYSINGER EAST CIRCUITS

| Monitored Element | Base Flow    | TRANSFER | NIAGAR-ROCH | SOMMERSET-ROCH | STOLLE-HIGHSHELDON | LOCKPT-SHEL    | LOCKPT-SOUR    | NIAGAR-ROCH    |                |                |
|-------------------|--------------|----------|-------------|----------------|--------------------|----------------|----------------|----------------|----------------|----------------|
| NIAG 345          | 345 ROCH 345 | 345 1    | 196.39      | 36.24%         | TRIP               | 54.08%         | 20.90%         | 19.96%         | 21.98%         | TRIP           |
| SOMERSET345       | 345 ROCH 345 | 345 1    | 405.13      | 24.72%         | 44.54%             | TRIP           | 14.25%         | 13.61%         | 14.99%         | O/S            |
| STOLE230          | 230 SHLDN230 | 230 1    | 15.52       | 10.80%         | 7.01%              | 5.80%          | TRIP           | 5.52%          | 6.08%          | 12.63%         |
| LOCKPORT          | 115 SHEL-113 | 115 1    | 38.52       | 2.73%          | 4.26%              | 3.52%          | 3.51%          | TRIP           | 15.04%         | 7.67%          |
| LOCKPORT          | 115 SOUR-111 | 115 1    | 32.75       | 2.77%          | 4.31%              | 3.57%          | 3.56%          | 13.84%         | TRIP           | 7.78%          |
| LOCKPORT          | 115 NAKR-108 | 115 1    | 31.93       | 0.98%          | 1.53%              | 1.26%          | 1.26%          | 3.50%          | 3.78%          | 2.75%          |
| LOCKPORT          | 115 OAKFLDTP | 115 1    | 33.47       | 1.14%          | 1.78%              | 1.48%          | 1.47%          | 4.08%          | 4.41%          | 3.21%          |
| LOCKPORT          | 115 TELRD107 | 115 1    | 52.32       | 1.32%          | 2.07%              | 1.71%          | 1.70%          | 6.34%          | 6.25%          | 3.72%          |
| LOCKPORT          | 115 TELRD114 | 115 1    | 44.43       | 2.72%          | 4.24%              | 3.51%          | 3.49%          | 18.60%         | 11.42%         | 7.64%          |
| PALMT115          | 115 ANDOVER1 | 115 1    | 0           | 0.00%          | O/S                | O/S            | O/S            | O/S            | O/S            | O/S            |
| <b>SUB-TOTALS</b> |              |          |             | <b>83.41%</b>  | <b>69.73%</b>      | <b>74.93%</b>  | <b>50.14%</b>  | <b>85.44%</b>  | <b>83.96%</b>  | <b>45.41%</b>  |
| L33P-L34P         |              |          | -0.57       | 0.00%          | 10.89%             | 9.02%          | 9.21%          | 4.00%          | 4.40%          | 19.64%         |
| PJM-NYISO         |              |          | 1054.14     | 16.59%         | 19.38%             | 16.05%         | 40.65%         | 10.57%         | 11.64%         | 34.95%         |
| <b>TOTALS</b>     |              |          |             | <b>100.00%</b> | <b>100.00%</b>     | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> |

Table-2 DISTRIBUTION FACTORS FOR WEST CENTRAL CIRCUITS

| Monitored Element |     |          |       | Base Flow | TRANSFER       | CLAY-PANNELL   | STOLLE-SHLDN   | PANNEL-FARM    | S121-SLEGH     | PANNEL-CLAY    |
|-------------------|-----|----------|-------|-----------|----------------|----------------|----------------|----------------|----------------|----------------|
| CLAY              | 345 | PANNELL3 | 345 1 | -128.1    | 30.28%         | TRIP           | 10.15%         | 20.42%         | 19.78%         | O/S            |
| CLAY              | 345 | PANNELL3 | 345 2 | -128.48   | 30.38%         | 57.08%         | 10.18%         | 20.49%         | 19.84%         | TRIP           |
| STOLE230          | 230 | SHLDN230 | 230 1 | 15.52     | 10.80%         | 2.91%          | TRIP           | 8.20%          | 2.59%          | 6.78%          |
| FRMGTN-4          | 115 | PANNELLI | 115 1 | 115.85    | 3.27%          | 6.01%          | 8.42%          | TRIP           | 15.85%         | 14.01%         |
| SLEIG115          | 115 | S121 B#2 | 115 1 | 52.43     | 2.70%          | 3.93%          | 1.80%          | 10.69%         | TRIP           | 9.15%          |
| S.PER115          | 115 | STA 162  | 115 1 | 21.1      | 0.49%          | 2.00%          | 16.74%         | 4.95%          | 2.20%          | 4.67%          |
| MACDN115          | 115 | QUAKER   | 115 1 | 30.03     | 0.33%          | 0.50%          | 0.41%          | 3.29%          | 19.23%         | 1.17%          |
| LAWLER-1          | 115 | MORTIMER | 115 1 | 49.9      | 2.55%          | 2.67%          | 1.31%          | 14.37%         | 4.38%          | 6.23%          |
| MORTIMER          | 115 | LAWLER-2 | 115 1 | 38.13     | 2.62%          | 2.89%          | 1.14%          | 6.06%          | 4.77%          | 6.72%          |
| PALMT115          | 115 | ANDOVER1 | 115 1 | 0         | 0.00%          | O/S            | O/S            | O/S            | O/S            | O/S            |
| <b>SUB-TOTALS</b> |     |          |       |           | <b>83.41%</b>  | <b>78.00%</b>  | <b>50.14%</b>  | <b>88.47%</b>  | <b>88.65%</b>  | <b>48.73%</b>  |
| L33P-L34P         |     |          |       | -0.57     | 0.00%          | 7.93%          | 9.21%          | 2.65%          | 3.50%          | 18.46%         |
| PJM-NYISO         |     |          |       | 1054.14   | 16.59%         | 14.08%         | 40.65%         | 8.88%          | 7.85%          | 32.81%         |
| <b>TOTALS</b>     |     |          |       |           | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> |



Table-3 DISTRIBUTION FACTORS FOR TOTAL EAST CIRCUITS

| Monitored Element               | Base Flow | TRANSFER       | EDIC34-NSCOT   | FRASER-GILBA   | MARCY3-NSCOT   | WALDWK-SMAWA   | PORTER-RTRDM   | HOPATCONG-RAMPO | HUDSON-FARGT   | LINDEN-GOETH   | WALDWK-SMAWA   | MARION-FARGT   |
|---------------------------------|-----------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|
| EDIC 345 N.SCOT77 345 1         | 432       | 16.17%         | TRIP           | 18.82%         | 29.85%         | 0.12%          | 13.11%         | 2.07%           | 1.28%          | 1.68%          | 0.94%          | 2.06%          |
| FRASR345 345 GILB 345 345 1     | 124.42    | 16.70%         | 23.91%         | TRIP           | 24.60%         | 0.07%          | 10.30%         | 2.30%           | 2.13%          | 2.61%          | 0.51%          | 3.45%          |
| N.SCOT99 345 MARCY T1 345 1     | 490.96    | 17.79%         | 32.07%         | 20.80%         | TRIP           | 0.13%          | 14.25%         | 2.27%           | 1.41%          | 1.86%          | 1.02%          | 2.28%          |
| ROCK TAV 345 COOPC345 345 2     | 554.42    | 19.00%         | 7.83%          | 17.93%         | 8.27%          | 0.47%          | 4.66%          | 4.69%           | 0.37%          | 1.11%          | 3.84%          | 0.52%          |
| ROCK TAV 345 MDTN TAP 345 1     | 428.1     | 17.21%         | 7.45%          | 16.92%         | 7.87%          | 0.51%          | 4.42%          | 3.94%           | 0.61%          | 1.23%          | 3.01%          | 0.93%          |
| SMAHWAH1 345 WALDWICK 345 1     | -473.13   | -0.15%         | 1.00%          | 0.36%          | 1.01%          | 87.89%         | 0.61%          | 22.26%          | 15.89%         | 10.39%         | O/S            | 27.00%         |
| SMAHWAH2 345 WALDWICK 345 1     | -525.51   | 0.15%          | 1.00%          | 0.47%          | 1.01%          | TRIP           | 0.62%          | 21.82%          | 15.22%         | 9.94%          | TRIP           | 25.86%         |
| PORTER 2 230 ROTRDM.2 230 1     | 165.99    | 4.38%          | 5.32%          | 3.29%          | 5.38%          | 0.03%          | TRIP           | 0.53%           | 0.33%          | 0.44%          | 0.24%          | 0.54%          |
| PORTER 2 230 ROTRDM.2 230 2     | 165.96    | 4.38%          | 5.32%          | 3.29%          | 5.38%          | 0.03%          | 32.34%         | 0.53%           | 0.33%          | 0.44%          | 0.24%          | 0.54%          |
| CORPORATE DR 138 HCOR138 138 1  | -49.92    | -0.02%         | 0.00%          | -0.01%         | 0.00%          | 0.04%          | 0.00%          | 0.02%           | 0.00%          | -0.01%         | 0.02%          | -0.01%         |
| MDTN TAP 345 SHOEMTAP 138 1     | 186.15    | 2.85%          | 0.68%          | 1.74%          | 0.72%          | -0.04%         | 0.41%          | 1.13%           | -0.32%         | -0.15%         | 1.23%          | -0.55%         |
| RAMP138 138 SMAH138 138 1       | -71.42    | -0.25%         | 0.00%          | -0.09%         | 0.00%          | 2.70%          | 0.00%          | 0.47%           | 0.61%          | 0.41%          | -0.27%         | 1.03%          |
| SMAHWAH1 345 SMAH138 138 1      | -81.66    | 0.41%          | 0.01%          | 0.16%          | 0.01%          | -3.37%         | 0.01%          | -0.45%          | -0.83%         | -0.57%         | 0.51%          | -1.41%         |
| E.SPR115 115 INGHAM-E 115 1     | -30.1     | 0.95%          | -0.07%         | 2.16%          | -0.06%         | 0.01%          | 0.94%          | 0.14%           | 0.09%          | 0.11%          | 0.06%          | 0.14%          |
| INGMS-CD 115 INGHAM-E 115 1     | 119.92    | 0.00%          | 3.39%          | 0.96%          | 3.41%          | 0.02%          | 9.16%          | 0.25%           | 0.16%          | 0.21%          | 0.12%          | 0.25%          |
| NE_PV20_NY 115 PLAT T#3 115 1   | 106.2     | 0.00%          | 2.72%          | 1.77%          | 2.89%          | 0.03%          | 3.15%          | 0.54%           | 0.34%          | 0.44%          | 0.24%          | 0.54%          |
| BLUHILL 69.0 MONTVALE 69.0 1    | 3.46      | 0.00%          | 0.00%          | 0.00%          | 0.00%          | 0.00%          | 0.00%          | 0.00%           | 0.00%          | 0.00%          | 0.00%          | 0.00%          |
| BLUHILL 69.0 MONTVALE 69.0 2    | 3.46      | 0.00%          | 0.00%          | 0.00%          | 0.00%          | 0.00%          | 0.00%          | 0.00%           | 0.00%          | 0.00%          | 0.00%          | 0.00%          |
| HILB69 69.0 SMAH69 69.0 1       | -19.13    | -0.31%         | -0.05%         | -0.15%         | -0.05%         | 0.43%          | -0.03%         | -0.02%          | 0.11%          | 0.07%          | -0.13%         | 0.19%          |
| L491T 69.0 MONTVALE 69.0 1      | -21.34    | 0.03%          | 0.01%          | 0.02%          | 0.01%          | 0.10%          | 0.01%          | 0.01%           | 0.03%          | 0.03%          | -0.02%         | 0.06%          |
| SPARKILL 69.0 CRESSKIL 69.0 1   | -2.58     | 0.03%          | 0.01%          | 0.02%          | 0.01%          | 0.02%          | 0.01%          | -0.01%          | 0.02%          | 0.02%          | -0.02%         | 0.03%          |
| W.WDB115 115 W.WDBR69 69.0 1    | 5.7       | 0.58%          | 0.48%          | 1.02%          | 0.51%          | 0.00%          | 0.35%          | 0.03%           | 0.09%          | 0.10%          | -0.03%         | 0.15%          |
| WNYA69 69.0 HCOR69 69.0 1       | 1.8       | 0.11%          | 0.03%          | 0.06%          | 0.03%          | 0.08%          | 0.02%          | -0.03%          | 0.07%          | 0.06%          | -0.08%         | 0.12%          |
| PEARL34 34.5 HCOR34 34.5 1      | 0.93      | -0.01%         | 0.00%          | 0.00%          | 0.00%          | 0.00%          | 0.00%          | 0.00%           | 0.00%          | 0.00%          | 0.00%          | -0.01%         |
| <b>SUB-TOTALS</b>               |           | <b>100.00%</b> | <b>91.09%</b>  | <b>89.52%</b>  | <b>90.85%</b>  | <b>89.25%</b>  | <b>94.32%</b>  | <b>62.51%</b>   | <b>37.93%</b>  | <b>30.42%</b>  | <b>11.41%</b>  | <b>63.71%</b>  |
| RAMAPO 5 500 HOPATCONG 500 1    | 199.74    | 0.00%          | 2.39%          | 2.09%          | 2.44%          | 2.92%          | 1.50%          | TRIP            | 8.01%          | 12.86%         | 23.91%         | 12.53%         |
| NEPTCONV 345 NWBRG 345 1        | 661.1     | 0.00%          | 0.00%          | 0.00%          | 0.00%          | 0.00%          | 0.00%          | 0.00%           | 0.00%          | 0.00%          | 0.00%          | 0.00%          |
| COGNTECH 345 G22_VFT345KV 345 1 | 314.19    | 0.00%          | 0.37%          | 0.45%          | 0.38%          | 0.26%          | 0.24%          | 2.43%           | 2.66%          | 16.21%         | 2.17%          | 4.24%          |
| B3402 PAR1 345 HUDSON1 345 1    | 332.85    | 0.00%          | 1.86%          | 2.44%          | 1.92%          | 2.58%          | 1.20%          | 10.14%          | TRIP           | 17.24%         | 21.35%         | O/S            |
| C3403 PAR2 345 MARION 345 1     | 331.33    | 0.00%          | 2.55%          | 3.37%          | 2.63%          | 3.78%          | 1.64%          | 13.35%          | 39.15%         | 23.26%         | 31.26%         | TRIP           |
| GOETHALS 230 LINDEN 230 1       | 334.47    | 0.00%          | 1.74%          | 2.13%          | 1.80%          | 1.20%          | 1.12%          | 11.57%          | 12.25%         | TRIP           | 9.91%          | 19.53%         |
| <b>TOTALS</b>                   |           | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b>  | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> |

Table-4 DISTRIBUTION FACTORS FOR UPNY-CONED CIRCUITS

| Monitored Element               | Base Flow | TRANSFER       | LADNTW-BUCHS   | RAMAPO-BUCHN   | PLVLLY-FISHK   | PLVLLY-MILLW   | ROSETN-FISHK   | HUDSON-FARGT   | LINDEN-GOETH   |
|---------------------------------|-----------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| BUCHANAN S 345 LADENTWN 345 1   | 91.48     | 17.78%         | TRIP           | 49.58%         | -4.09%         | 19.29%         | 25.31%         | 18.78%         | 16.67%         |
| BUCHANAN N 345 RAMAPO 345 1     | -139.72   | 15.85%         | 36.63%         | TRIP           | -0.44%         | 4.05%          | 13.83%         | 12.88%         | 11.57%         |
| E FISH I 115 E FISHKILL 345 1   | -17.54    | 1.67%          | 0.82%          | 0.75%          | 2.61%          | -0.51%         | 5.91%          | 0.40%          | 0.41%          |
| E FISH I 115 E FISHKILL 345 2   | 0         | 0.00%          | O/S            | O/S            | O/S            | O/S            | O/S            | O/S            | O/S            |
| MILLWOOD 345 PLTVLLEY 345 1     | 546.96    | 15.50%         | 13.20%         | 3.75%          | 8.86%          | TRIP           | -10.06%        | 1.89%          | 2.22%          |
| PLTVLLEY 345 WOOD B 345 1       | 577.47    | 15.30%         | 12.75%         | 3.70%          | 9.25%          | 33.70%         | -9.74%         | 1.88%          | 2.20%          |
| ROSETON 345 E FISHKILL 345 1    | 924.59    | 17.44%         | 23.73%         | 17.55%         | 16.02%         | -13.78%        | TRIP           | 7.85%          | 7.39%          |
| E FISHKILL 345 PLTVLLEY 345 1   | 228.82    | 7.78%          | -7.54%         | -1.11%         | TRIP           | 23.91%         | 31.52%         | 0.37%          | 0.60%          |
| E FISHKILL 345 PLTVLLEY 345 2   | 228.82    | 7.78%          | -7.54%         | -1.11%         | 65.90%         | 23.91%         | 31.52%         | 0.37%          | 0.60%          |
| FISHKILL 115 SYLVN115 115 1     | 115.32    | 0.90%          | 0.64%          | 0.37%          | -0.05%         | 0.74%          | 0.39%          | 0.19%          | 0.20%          |
| <b>SUB-TOTALS</b>               |           | <b>100.00%</b> | <b>72.68%</b>  | <b>73.48%</b>  | <b>98.06%</b>  | <b>91.30%</b>  | <b>88.69%</b>  | <b>44.60%</b>  | <b>41.85%</b>  |
| B3402 PAR1 345 HUDSON1 345 1    | 332.85    | 0.00%          | 8.27%          | 7.68%          | 0.09%          | 1.22%          | 3.69%          | TRIP           | 17.24%         |
| C3403 PAR2 345 MARION 345 1     | 331.33    | 0.00%          | 11.82%         | 10.96%         | 0.12%          | 1.69%          | 5.24%          | 39.15%         | 23.26%         |
| GOETHALS 230 LINDEN 230 1       | 334.47    | 0.00%          | 5.22%          | 4.90%          | 0.10%          | 1.01%          | 2.47%          | 12.25%         | TRIP           |
| COGNTECH 345 G22_VFT345KV 345 1 | 314.19    | 0.00%          | 1.12%          | 1.05%          | 0.02%          | 0.21%          | 0.53%          | 2.66%          | 16.21%         |
| NRTHPT P 138 NRTHPT1 138 1      | 100.04    | 0.00%          | 0.90%          | 1.93%          | 1.62%          | 4.56%          | -0.61%         | 1.34%          | 1.43%          |
| <b>TOTALS</b>                   |           | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> |

Table-5 DISTRIBUTION FACTORS FOR SPRAINBROOK DUNWOODIE SOUTH CIRCUITS

| Monitored Element |                  |       | Base Flow | TRANSFER       | DUNWDE-RAINY   | SPRAIN-TRMNT   | SPRAIN-W49TH   | VSTR-JAMAICA   | LKSUC-JMAICA   | REAC72-MOTT    |
|-------------------|------------------|-------|-----------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| REAC71            | 345 MOTT HAVEN   | 345 3 | 199.37    | 29.93%         | TRIP           | 5.13%          | 25.27%         | 9.73%          | 10.68%         | 64.65%         |
| REAC72            | 345 MOTT HAVEN   | 345 4 | 182.21    | 27.29%         | 55.06%         | 4.68%          | 23.04%         | 8.87%          | 9.74%          | TRIP           |
| SPRAINBROOK       | 345 TREMONT      | 345 1 | 402.16    | 0.00%          | 0.31%          | TRIP           | 0.56%          | 4.28%          | 4.27%          | 0.41%          |
| SPRAINBROOK       | 345 ACADEMY      | 345 1 | 301.42    | 0.00%          | 0.28%          | 21.44%         | 0.51%          | 3.89%          | 3.87%          | 0.37%          |
| W 49 ST           | 345 REACM51      | 345 1 | 248.03    | 21.39%         | 19.19%         | 7.07%          | TRIP           | 9.02%          | 8.73%          | O/S            |
| W 49 ST           | 345 REACM52      | 345 2 | 248.03    | 21.39%         | 19.19%         | 7.07%          | 43.19%         | 9.02%          | 8.73%          | 27.23%         |
| DUN NO1R          | 138 S CREEK W    | 138 1 | 114.69    | 0.00%          | 0.23%          | 11.92%         | 0.20%          | 2.18%          | 2.20%          | 0.26%          |
| DUN NO2R          | 138 S CREEK E    | 138 1 | 114.58    | 0.00%          | 0.26%          | 13.39%         | 0.23%          | 2.45%          | 2.48%          | 0.30%          |
| DUN SO1R          | 138 E179 ST W    | 138 1 | 204.28    | 0.00%          | 0.34%          | 18.47%         | 0.32%          | 3.38%          | 3.41%          | 0.40%          |
| JAMAICA           | 138 V STRM P     | 138 1 | 107.57    | 0.00%          | 0.64%          | 4.67%          | 0.78%          | TRIP           | 43.66%         | 0.78%          |
| JAMAICA           | 138 L SUCSPH     | 138 1 | 199.79    | 0.00%          | 0.70%          | 4.66%          | 0.76%          | 43.76%         | TRIP           | 0.84%          |
| <b>SUB-TOTALS</b> |                  |       |           | <b>100.00%</b> | <b>96.19%</b>  | <b>98.48%</b>  | <b>94.85%</b>  | <b>96.59%</b>  | <b>97.76%</b>  | <b>95.25%</b>  |
| B3402 PAR1        | 345 HUDSON1      | 345 1 | 332.85    | 0.00%          | 1.20%          | 0.14%          | 1.62%          | 0.99%          | 0.64%          | 1.50%          |
| C3403 PAR2        | 345 MARION       | 345 1 | 331.33    | 0.00%          | 1.67%          | 0.22%          | 2.34%          | 1.43%          | 0.94%          | 2.10%          |
| GOETHALS          | 230 LINDEN       | 230 1 | 334.47    | 0.00%          | 0.77%          | 0.96%          | 0.98%          | 0.81%          | 0.55%          | 0.95%          |
| COGNTECH          | 345 G22_VFT345KV | 345 1 | 314.19    | 0.00%          | 0.17%          | 0.21%          | 0.21%          | 0.17%          | 0.12%          | 0.20%          |
| <b>TOTALS</b>     |                  |       |           | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> |

**Table-6 DISTRIBUTION FACTORS FOR MOSES SOUTH CIRCUITS**

| Monitored Element |                  |       |  | Base Flow | TRANSFER       | MASSEN_CHAT    | MASSEN-MARCY   | MOSES2-ADRON   | MOSES2-ADRONB1 |
|-------------------|------------------|-------|--|-----------|----------------|----------------|----------------|----------------|----------------|
| MARCY765          | 765 MASS 765     | 765 1 |  | 375.68    | 74.87%         | 66.11%         | TRIP           | 44.49%         | O/S            |
| ADRON B1          | 230 MOSES W      | 230 1 |  | 47.74     | 9.23%          | 3.46%          | 18.65%         | TRIP           | TRIP           |
| ADRON B2          | 230 MOSES W      | 230 1 |  | 47.77     | 9.23%          | 3.46%          | 18.65%         | 36.15%         | 48.47%         |
| ALCOA-NM          | 115 BRADY        | 115 1 |  | 24.71     | 1.08%          | 0.45%          | 2.16%          | 0.73%          | 1.84%          |
| ALLENS F          | 115 COLTON       | 115 1 |  | -24.91    | 1.52%          | 0.29%          | 1.83%          | 0.64%          | 1.59%          |
| ANDRWS-4          | 115 DENNISON     | 115 1 |  | 11.66     | 2.03%          | 0.85%          | 4.05%          | 1.37%          | 3.46%          |
| DENNISON          | 115 LWRNCE-B     | 115 1 |  | 11.32     | 2.03%          | 0.85%          | 4.06%          | 1.38%          | 3.47%          |
| <b>SUB-TOTALS</b> |                  |       |  |           | <b>100.00%</b> | <b>75.49%</b>  | <b>49.39%</b>  | <b>84.76%</b>  | <b>58.83%</b>  |
| MOSES E           | 230 ST_LAWR_L33P | 230 1 |  | 0.34      | 0.00%          | 9.37%          | 16.95%         | 4.98%          | 13.66%         |
| MOSES E           | 230 ST_LAWR_L34P | 230 1 |  | 0.23      | 0.00%          | 11.38%         | 20.59%         | 6.05%          | 16.59%         |
| MOSES W           | 230 WILLIS E     | 230 1 |  | 57.65     | 0.71%          | 2.00%          | 7.34%          | 2.38%          | 6.16%          |
| MOSES W           | 230 WILLIS W     | 230 1 |  | 57.29     | 0.71%          | 1.99%          | 7.29%          | 2.37%          | 6.12%          |
| <b>TOTALS</b>     |                  |       |  |           | <b>101.42%</b> | <b>100.23%</b> | <b>101.55%</b> | <b>100.55%</b> | <b>101.35%</b> |

Table-7 DISTRIBUTION FACTORS FOR NEISO NYISO CIRCUITS

| Monitored Element                 | Base Flow | TRANSFER       | NHHAR_GEN      | YRMTH_GEN      | SBRK_GEN       | HIGATE_DC      | ELLRIVER       | MADWAS_DC      | ALPS34-MANY    | PV.345-LNGMT   |
|-----------------------------------|-----------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| NE_393_NY 345 ALPS345 345 1       | -11.12    | 36.33%         | 19.22%         | 30.91%         | 30.67%         | 21.16%         | 30.90%         | 30.90%         | TRIP           | 37.70%         |
| NE_398_NY 345 PLTVLLEY 345 1      | 89.12     | 49.98%         | 49.58%         | 34.39%         | 34.74%         | 21.85%         | 34.36%         | 34.36%         | 45.62%         | TRIP           |
| NE_E205W_NY 230 EASTOVER RD 230 1 | -42.89    | 9.28%          | 4.69%          | 7.93%          | 8.04%          | 3.95%          | 7.92%          | 7.92%          | 15.92%         | 8.24%          |
| NE_PV20_NY 115 PLAT T#3 115 1     | -106.2    | 0.00%          | 4.06%          | 7.24%          | 7.05%          | 36.57%         | 7.28%          | 7.28%          | 7.82%          | 5.22%          |
| NE_K7_NY 115 WHITEHAL 115 1       | -0.03     | 0.00%          | 2.30%          | 4.70%          | 4.55%          | 6.78%          | 4.71%          | 4.71%          | 9.22%          | 4.32%          |
| NE_K6_NY 115 HOOSICK 115 1        | -17.61    | 3.28%          | 1.63%          | 2.59%          | 2.62%          | 1.35%          | 2.59%          | 2.59%          | 8.38%          | 3.02%          |
| NE_690_NY 69.0 SMITHFLD 69.0 1    | -1.72     | 1.13%          | 1.08%          | 0.82%          | 0.83%          | 0.51%          | 0.82%          | 0.82%          | 1.20%          | 2.75%          |
| NE_601_NY 138 NRTHPT P 138 1      | 33.52     | 0.00%          | 5.84%          | 3.82%          | 3.85%          | 2.63%          | 3.82%          | 3.82%          | 3.96%          | 12.97%         |
| NE_602_NY 138 NRTHPT P 138 2      | 33.42     | 0.00%          | 5.82%          | 3.81%          | 3.84%          | 2.62%          | 3.81%          | 3.81%          | 3.95%          | 12.93%         |
| NE_603_NY 138 NRTHPT P 138 3      | 33.2      | 0.00%          | 5.78%          | 3.79%          | 3.82%          | 2.61%          | 3.78%          | 3.78%          | 3.93%          | 12.85%         |
| SHMHVDCL 192 SHOREHAM2 138 1      | 330       | 0.00%          | 0.00%          | 0.00%          | 0.00%          | 0.00%          | 0.00%          | 0.00%          | 0.00%          | 0.00%          |
| <b>TOTALS</b>                     |           | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b> |

Table-8 DISTRIBUTION FACTORS FOR ONTARIO NYISO CIRCUITS

| Monitored Element               | Base Flow | TRANSFER       | BECKB-NIAGAR  | PA27-NIAGAR   | BP76-PACKD2   | STLAWR34-MOSES | STLAWR33-MOSES | BECKA-PA301   |
|---------------------------------|-----------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|
| NIAG 345 345 BECK_#2_H301 345 1 | -28.41    | 33.16%         | 56.49%        | 33.94%        | 31.66%        | 8.02%          | 9.01%          | TRIP          |
| NIAG 345 345 BECK_#2_H302 345 1 | -28.41    | 33.16%         | TRIP          | 33.94%        | 31.66%        | 8.02%          | 9.01%          | O/S           |
| NIAGAR2W 230 BECK_#2_PA27 230 1 | -10.83    | 17.58%         | 20.64%        | TRIP          | 29.82%        | 4.25%          | 4.77%          | 47.44%        |
| PACKARD2 230 BECK_#2_BP76 230 1 | 68.8      | 16.10%         | 16.73%        | 25.92%        | TRIP          | 3.88%          | 4.36%          | 38.46%        |
| MOSES E 230 ST_LAWR_L33P 230 1  | -0.34     | 0.00%          | 1.14%         | 0.99%         | 1.04%         | TRIP           | 57.26%         | 2.61%         |
| MOSES E 230 ST_LAWR_L34P 230 1  | -0.23     | 0.00%          | 1.38%         | 1.20%         | 1.26%         | 61.94%         | TRIP           | 3.17%         |
| <b>SUB-TOTALS</b>               |           | <b>100.00%</b> | <b>96.38%</b> | <b>95.99%</b> | <b>95.45%</b> | <b>86.11%</b>  | <b>84.40%</b>  | <b>91.67%</b> |
| ON-MICH                         | -0.48     | 0.00%          | 3.40%         | 3.76%         | 4.27%         | 12.85%         | 14.43%         | 7.81%         |
| <b>TOTALS</b>                   |           | <b>100.00%</b> | <b>99.78%</b> | <b>99.75%</b> | <b>99.72%</b> | <b>98.96%</b>  | <b>98.83%</b>  | <b>99.48%</b> |

Table-9 DISTRIBUTION FACTORS FOR PJM-NYISO CIRCUITS

| Monitored Element                    | Base Flow | TRANSFER       | HOPATCONG-RAMPO | HUDSON-FARGT  | LINDEN-GOETH  | WALDWK-SMAWA  | PIERCE-5MILE  | ERIESO-SRIPLEY | MAIN-WATER    | E.TOWD-HILLS  | WALDWK-SMAWA  | MARION-FARGT  |
|--------------------------------------|-----------|----------------|-----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|
| RAMAPO 5 500 HOPATCONG 500 1         | 199.74    | 0.00%          | TRIP            | 8.01%         | 12.86%        | 2.92%         | 4.96%         | 5.26%          | 7.99%         | 7.83%         | 23.91%        | 12.53%        |
| COGNTECH 345 G22_VFT345KV 345 1      | 314.19    | 0.00%          | 2.43%           | 2.66%         | 16.21%        | 0.26%         | 0.54%         | 0.58%          | 0.87%         | 0.69%         | 2.17%         | 4.24%         |
| B3402 PAR1 345 HUDSON1 345 1         | 332.85    | 0.00%          | 10.14%          | TRIP          | 17.24%        | 2.58%         | 2.42%         | 2.61%          | 3.86%         | 3.25%         | 21.35%        | O/S           |
| C3403 PAR2 345 MARION 345 1          | 331.33    | 0.00%          | 13.35%          | 39.15%        | 23.26%        | 3.78%         | 3.25%         | 3.50%          | 5.19%         | 4.38%         | 31.26%        | TRIP          |
| GOETHALS 230 LINDEN 230 1            | 334.47    | 0.00%          | 11.57%          | 12.25%        | TRIP          | 1.20%         | 2.56%         | 2.79%          | 4.14%         | 3.26%         | 9.91%         | 19.53%        |
| NEPTCONV 345 NWBRG 345 1             | 661.1     | 0.00%          | 0.00%           | 0.00%         | 0.00%         | 0.00%         | 0.00%         | 0.00%          | 0.00%         | 0.00%         | 0.00%         | 0.00%         |
| SMAHWAH1 345 WALDWICK 345 1          | -473.13   | -0.06%         | 22.26%          | 15.89%        | 10.39%        | 87.89%        | 3.03%         | 3.29%          | 5.00%         | 4.07%         | O/S           | 27.00%        |
| SMAHWAH2 345 WALDWICK 345 1          | -525.51   | 0.06%          | 21.82%          | 15.22%        | 9.94%         | TRIP          | 2.83%         | 3.07%          | 4.67%         | 3.79%         | TRIP          | 25.86%        |
| WATRC345 345 26MAINESBURG 345 1      | 31.58     | 23.77%         | 3.02%           | 1.15%         | 1.74%         | 0.24%         | 14.92%        | 5.44%          | TRIP          | 22.46%        | 1.98%         | 1.83%         |
| NY_HOMER_WAT 345 26HOMER CY 345 Z1   | 99.75     | 20.13%         | 2.34%           | 0.93%         | 1.43%         | 0.19%         | 9.74%         | 5.70%          | -60.80%       | 7.63%         | 1.61%         | 1.48%         |
| NY_MAINESBUR 345 26MAINESBURG 345 Z1 | -99.11    | -20.13%        | -2.34%          | -0.93%        | -1.43%        | -0.19%        | -9.74%        | -5.70%         | 60.80%        | -7.63%        | -1.61%        | -1.48%        |
| SMILE345 345 26PIERCEBRK 345 1       | 43.81     | 16.05%         | 1.64%           | 0.63%         | 0.94%         | 0.13%         | TRIP          | 20.08%         | 13.04%        | 3.37%         | 1.05%         | 1.00%         |
| NY_HOMER_STO 345 26HOMER CY 345 Z1   | 173.57    | 15.11%         | 1.53%           | 0.60%         | 0.91%         | 0.12%         | -74.94%       | 15.64%         | 6.86%         | 1.63%         | 1.01%         | 0.96%         |
| NY_PIERCEBRK 345 26PIERCEBRK 345 Z1  | -172.21   | -15.11%        | -1.53%          | -0.60%        | -0.91%        | -0.12%        | 74.94%        | -15.64%        | -6.86%        | -1.63%        | -1.01%        | -0.96%        |
| HILSD230 230 26E.TWANDA 230 1        | 99.68     | 20.87%         | 3.55%           | 1.16%         | 1.64%         | 0.23%         | 4.62%         | 5.11%          | 26.90%        | TRIP          | 1.93%         | 1.85%         |
| S RIPLEY 230 26ERIE E 230 1          | -237.72   | 19.70%         | 1.78%           | 0.70%         | 1.05%         | 0.14%         | 20.53%        | TRIP           | 4.86%         | 3.81%         | 1.16%         | 1.11%         |
| CORPORATE DR 138 HCOR138 138 1       | -49.92    | -0.01%         | 0.02%           | 0.00%         | -0.01%        | 0.04%         | 0.00%         | 0.00%          | 0.00%         | 0.00%         | 0.02%         | -0.01%        |
| RAMP138 138 SMAH138 138 1            | -71.42    | -0.11%         | 0.47%           | 0.61%         | 0.41%         | 2.70%         | 0.17%         | 0.19%          | 0.29%         | 0.24%         | -0.27%        | 1.03%         |
| SMAHWAH1 345 SMAH138 138 1           | -81.66    | 0.18%          | -0.45%          | -0.83%        | -0.57%        | -3.37%        | -0.26%        | -0.28%         | -0.44%        | -0.37%        | 0.51%         | -1.41%        |
| FALCONER 115 26WARREN 115 1          | -43.18    | 5.93%          | 0.58%           | 0.22%         | 0.33%         | 0.04%         | 16.34%        | 20.19%         | 0.94%         | 1.81%         | 0.37%         | 0.35%         |
| N.WAV115 115 26E.SAYRE 115 1         | 18.95     | 7.11%          | 1.17%           | 0.39%         | 0.55%         | 0.08%         | 1.92%         | 1.56%          | 8.56%         | 24.97%        | 0.65%         | 0.62%         |
| WESTOVER115 115 26LAUREL L 115 1     | -35.33    | 6.57%          | 1.15%           | 0.38%         | 0.54%         | 0.08%         | 0.85%         | 0.80%          | 3.65%         | 9.16%         | 0.63%         | 0.60%         |
| BLUHILL 69.0 MONTVALE 69.0 1         | 3.46      | 0.00%          | 0.00%           | 0.00%         | 0.00%         | 0.00%         | 0.00%         | 0.00%          | 0.00%         | 0.00%         | 0.00%         | 0.00%         |
| BLUHILL 69.0 MONTVALE 69.0 2         | 3.46      | 0.00%          | 0.00%           | 0.00%         | 0.00%         | 0.00%         | 0.00%         | 0.00%          | 0.00%         | 0.00%         | 0.00%         | 0.00%         |
| HILB69 69.0 SMAH69 69.0 1            | -19.13    | -0.14%         | -0.02%          | 0.11%         | 0.07%         | 0.43%         | 0.09%         | 0.09%          | 0.15%         | 0.13%         | -0.13%        | 0.19%         |
| L491T 69.0 MONTVALE 69.0 1           | -21.34    | 0.02%          | 0.01%           | 0.03%         | 0.03%         | 0.10%         | 0.00%         | 0.00%          | 0.00%         | 0.00%         | -0.02%        | 0.06%         |
| SPARKILL 69.0 CRESSKIL 69.0 1        | -2.58     | 0.01%          | -0.01%          | 0.02%         | 0.02%         | 0.02%         | 0.00%         | 0.00%          | 0.00%         | 0.00%         | -0.02%        | 0.03%         |
| WNYA69 69.0 HCOR69 69.0 1            | 1.8       | 0.05%          | -0.03%          | 0.07%         | 0.06%         | 0.08%         | 0.00%         | 0.00%          | -0.01%        | -0.01%        | -0.08%        | 0.12%         |
| PEARL34 34.5 HCOR34 34.5 1           | 0.93      | 0.00%          | 0.00%           | 0.00%         | 0.00%         | 0.00%         | 0.00%         | 0.00%          | 0.00%         | 0.00%         | 0.00%         | -0.01%        |
| <b>SUB-TOTALS</b>                    |           | <b>100.00%</b> | <b>94.45%</b>   | <b>97.82%</b> | <b>96.71%</b> | <b>99.56%</b> | <b>78.75%</b> | <b>74.26%</b>  | <b>89.64%</b> | <b>92.85%</b> | <b>96.36%</b> | <b>96.53%</b> |
| MICH-ON                              | 0.48      | 0.00%          | 5.17%           | 2.04%         | 3.07%         | 0.41%         | 19.88%        | 24.18%         | 9.69%         | 6.68%         | 3.39%         | 3.24%         |
| <b>TOTALS</b>                        |           | <b>100.00%</b> | <b>99.62%</b>   | <b>99.85%</b> | <b>99.77%</b> | <b>99.97%</b> | <b>98.63%</b> | <b>98.44%</b>  | <b>99.33%</b> | <b>99.53%</b> | <b>99.75%</b> | <b>99.76%</b> |

**Table-10a GENERATION SHIFT FACTORS WITH ALL PARS HOLDING MW FLOW**

| <b>Monitored Element</b> | <b>CENTRAL-EAST</b> | <b>ONT-NYISO</b> | <b>ONT-MICH</b> | <b>PJM-NYISO</b> | <b>WEST-CENTRAL</b> | <b>HOPAT-RAMAPO</b> | <b>MARCY-SOUTH</b> | <b>UTICA-ALBANY</b> |
|--------------------------|---------------------|------------------|-----------------|------------------|---------------------|---------------------|--------------------|---------------------|
| <b>Base Flow</b>         | 1450.73             | 0.28             | -0.24           | 817.24           | 66.14               | 199.54              | 1304.31            | 1254.73             |
| <b>DUM1</b>              | 41.56%              | 0.00%            | 0.00%           | 0.00%            | 80.91%              | 0.00%               | 28.41%             | 40.35%              |
| <b>DUM2</b>              | 41.56%              | 0.00%            | 0.00%           | 0.00%            | 80.91%              | 0.00%               | 28.41%             | 40.35%              |
| <b>NIAGARA</b>           | 41.56%              | 0.00%            | 0.00%           | 0.00%            | 80.91%              | 0.00%               | 28.41%             | 40.35%              |
| <b>OSWEGO</b>            | 45.49%              | 0.00%            | 0.00%           | 0.00%            | -2.04%              | 0.00%               | 36.74%             | 44.77%              |
| <b>GILBOA</b>            | 0.07%               | 0.00%            | 0.00%           | 0.00%            | 0.24%               | 0.00%               | 2.37%              | -0.25%              |
| <b>BETH</b>              | -18.18%             | 0.00%            | 0.00%           | 0.00%            | -0.22%              | 0.00%               | 14.16%             | -16.23%             |
| <b>ATHENS</b>            | -7.19%              | 0.00%            | 0.00%           | 0.00%            | -0.05%              | 0.00%               | 6.59%              | -7.08%              |
| <b>ROSETON</b>           | -0.13%              | 0.00%            | 0.00%           | 0.00%            | 0.00%               | 0.00%               | 0.13%              | -0.13%              |
| <b>BOWLINE</b>           | 1.84%               | 0.00%            | 0.00%           | 0.00%            | 0.02%               | 0.00%               | -1.63%             | 1.78%               |
| <b>INDIANPT2</b>         | 1.44%               | 0.00%            | 0.00%           | 0.00%            | 0.01%               | 0.00%               | -1.28%             | 1.39%               |
| <b>NORWALK</b>           | -6.81%              | 0.00%            | 0.00%           | 0.00%            | -0.08%              | 0.00%               | 5.64%              | -6.40%              |
| <b>BRAYTON</b>           | -10.25%             | 0.00%            | 0.00%           | 0.00%            | -0.13%              | 0.00%               | 8.37%              | -9.57%              |
| <b>SBRK</b>              | -10.77%             | 0.00%            | 0.00%           | 0.00%            | -0.14%              | 0.00%               | 8.79%              | -10.05%             |
| <b>BECK</b>              | 41.93%              | 100.00%          | 0.00%           | 0.00%            | 83.41%              | 0.00%               | 29.18%             | 40.76%              |
| <b>CONEMAUGH</b>         | 37.98%              | 0.00%            | 0.00%           | 100.00%          | 40.13%              | 0.00%               | 20.91%             | 36.35%              |
| <b>SALEM</b>             | 37.88%              | 0.00%            | 0.00%           | 100.00%          | 38.58%              | 0.00%               | 20.68%             | 36.23%              |
| <b>PORTLAND</b>          | 37.82%              | 0.00%            | 0.00%           | 100.00%          | 37.80%              | 0.00%               | 20.56%             | 36.16%              |
| <b>EDDYSTONE</b>         | 37.87%              | 0.00%            | 0.00%           | 100.00%          | 38.53%              | 0.00%               | 20.67%             | 36.22%              |
| <b>BRANDON</b>           | 37.96%              | 0.00%            | 0.00%           | 100.00%          | 39.77%              | 0.00%               | 20.87%             | 36.33%              |
| <b>KARNS</b>             | 38.08%              | 0.00%            | 0.00%           | 100.00%          | 41.39%              | 0.00%               | 21.12%             | 36.46%              |
| <b>ZEEL</b>              | 38.08%              | 0.00%            | 0.00%           | 100.00%          | 41.38%              | 0.00%               | 21.12%             | 36.46%              |
| <b>BOWEN</b>             | 38.06%              | 0.00%            | 0.00%           | 100.00%          | 41.02%              | 0.00%               | 21.06%             | 36.43%              |
| <b>BAYSHORE</b>          | 38.10%              | 0.00%            | 0.00%           | 100.00%          | 41.61%              | 0.00%               | 21.16%             | 36.48%              |
| <b>MTSTORM</b>           | 38.03%              | 0.00%            | 0.00%           | 100.00%          | 40.63%              | 0.00%               | 21.00%             | 36.40%              |
| <b>HATFIELD</b>          | 38.04%              | 0.00%            | 0.00%           | 100.00%          | 40.77%              | 0.00%               | 21.02%             | 36.41%              |
| <b>NEWTON</b>            | 38.07%              | 0.00%            | 0.00%           | 100.00%          | 41.20%              | 0.00%               | 21.09%             | 36.45%              |
| <b>HOPATCONG-RAMAPO</b>  | -6.33%              | -5.55%           | 5.17%           | 5.55%            | -6.30%              | TRIP                | -5.52%             | -5.40%              |



**Table-10b GENERATION SHIFT FACTORS WITH ALL PAR ANGLES FIXED**

| <b>Monitored Element</b> | <b>CENTRAL-EAST</b> | <b>ONT-NYISO</b> | <b>ONT-MICH</b> | <b>PJM-NYISO</b> | <b>WEST-CENTRAL</b> | <b>HOPAT-RAMAPO</b> | <b>MARCY-SOUTH</b> | <b>UTICA-ALBANY</b> |
|--------------------------|---------------------|------------------|-----------------|------------------|---------------------|---------------------|--------------------|---------------------|
| <b>Base Flow</b>         | 1450.73             | 0.28             | -0.24           | 817.24           | 66.14               | 199.54              | 1304.31            | 1254.73             |
| <b>DUM1</b>              | 26.51%              | -16.24%          | 15.19%          | 16.24%           | 48.86%              | 7.94%               | 17.67%             | 22.90%              |
| <b>DUM2</b>              | 26.51%              | -16.24%          | 15.19%          | 16.24%           | 48.86%              | 7.94%               | 17.67%             | 22.90%              |
| <b>NIAGARA</b>           | 26.51%              | -16.24%          | 15.19%          | 16.24%           | 48.86%              | 7.94%               | 17.67%             | 22.90%              |
| <b>OSWEGO</b>            | 37.22%              | -8.38%           | 7.81%           | 8.38%            | -13.23%             | 2.96%               | 29.22%             | 33.25%              |
| <b>GILBOA</b>            | -4.80%              | -3.90%           | 3.64%           | 3.90%            | -4.69%              | 0.20%               | -1.20%             | -5.22%              |
| <b>BETH</b>              | -23.33%             | -4.28%           | 3.99%           | 4.28%            | -4.56%              | 0.19%               | 11.34%             | -18.63%             |
| <b>ATHENS</b>            | -10.79%             | -3.01%           | 2.80%           | 3.01%            | -3.42%              | -0.55%              | 4.10%              | -10.36%             |
| <b>ROSETON</b>           | -1.99%              | -1.46%           | 1.36%           | 1.46%            | -1.67%              | -2.02%              | -1.02%             | -1.86%              |
| <b>BOWLINE</b>           | 1.38%               | -0.14%           | 0.13%           | 0.14%            | -0.19%              | -5.02%              | -1.49%             | 1.17%               |
| <b>INDIANPT2</b>         | 1.06%               | -0.11%           | 0.10%           | 0.11%            | -0.15%              | -3.99%              | -1.16%             | 0.90%               |
| <b>NORWALK</b>           | -7.28%              | -1.73%           | 1.62%           | 1.73%            | -1.68%              | -0.70%              | 3.01%              | -4.92%              |
| <b>BRAYTON</b>           | -15.45%             | -3.22%           | 3.00%           | 3.22%            | -2.87%              | -0.32%              | 7.17%              | -9.38%              |
| <b>SBRK</b>              | -16.82%             | -3.46%           | 3.22%           | 3.46%            | -2.97%              | -0.22%              | 7.89%              | -9.55%              |
| <b>BECK</b>              | 27.13%              | 77.51%           | 21.05%          | 22.49%           | 46.32%              | 7.81%               | 18.33%             | 23.31%              |
| <b>CONEMAUGH</b>         | 12.13%              | 9.43%            | -8.81%          | 90.57%           | 11.55%              | 15.33%              | 5.93%              | 10.34%              |
| <b>SALEM</b>             | 8.20%               | 6.09%            | -5.67%          | 93.91%           | 6.83%               | 16.71%              | 3.41%              | 7.00%               |
| <b>PORTLAND</b>          | 6.91%               | 4.36%            | -4.06%          | 95.64%           | 4.92%               | 15.40%              | 2.50%              | 5.89%               |
| <b>EDDYSTONE</b>         | 8.19%               | 6.01%            | -5.60%          | 93.99%           | 6.75%               | 16.88%              | 3.38%              | 6.98%               |
| <b>BRANDON</b>           | 11.23%              | 10.25%           | -9.52%          | 89.75%           | 10.76%              | 15.68%              | 5.46%              | 9.57%               |
| <b>KARNS</b>             | 16.61%              | 25.46%           | -24.45%         | 74.54%           | 18.94%              | 13.09%              | 9.60%              | 14.11%              |
| <b>ZEEL</b>              | 16.45%              | 24.80%           | -23.71%         | 75.20%           | 18.68%              | 13.17%              | 9.47%              | 13.97%              |
| <b>BOWEN</b>             | 14.30%              | 17.12%           | -15.49%         | 82.88%           | 15.32%              | 14.20%              | 7.74%              | 12.17%              |
| <b>BAYSHORE</b>          | 16.33%              | 23.56%           | -22.79%         | 76.44%           | 18.54%              | 13.22%              | 9.35%              | 13.88%              |
| <b>MTSTORM</b>           | 13.04%              | 13.28%           | -12.34%         | 86.72%           | 13.36%              | 14.81%              | 6.75%              | 11.11%              |
| <b>HATFIELD</b>          | 13.27%              | 12.98%           | -12.10%         | 87.02%           | 13.58%              | 14.70%              | 6.87%              | 11.30%              |
| <b>NEWTON</b>            | 14.99%              | 19.25%           | -17.32%         | 80.75%           | 16.38%              | 13.87%              | 8.28%              | 12.75%              |
| <b>HOPATCONG-RAMAPO</b>  | -6.33%              | -5.55%           | 5.17%           | 5.55%            | -6.30%              | TRIP                | -5.52%             | -5.40%              |