

Day Ahead Limiting Constraints

| Time Stamp | Time Zone | Limiting Facility | Facility PTID | Contingency | Constraint Cost (\$) |
|------------------|-----------|-----------------------------|---------------|-------------|----------------------|
| 11/30/2017 06:00 | EST | SCH - OH - NY | 23317 | BASE CASE | 0.5 |
| 11/30/2017 07:00 | EST | SCH - OH - NY | 23317 | BASE CASE | 0.46 |
| 11/30/2017 08:00 | EST | SCH - OH - NY | 23317 | BASE CASE | 0.03 |
| 11/30/2017 09:00 | EST | SCH - OH - NY | 23317 | BASE CASE | 0.21 |
| 11/30/2017 10:00 | EST | SCH - OH - NY | 23317 | BASE CASE | 0.22 |
| 11/30/2017 11:00 | EST | SCH - OH - NY | 23317 | BASE CASE | 0.52 |
| 11/30/2017 12:00 | EST | SCH - OH - NY | 23317 | BASE CASE | 0.93 |
| 11/30/2017 13:00 | EST | SCH - OH - NY | 23317 | BASE CASE | 0.54 |
| 11/30/2017 14:00 | EST | SCH - OH - NY | 23317 | BASE CASE | 0.3 |
| 11/30/2017 16:00 | EST | SCH - OH - NY | 23317 | BASE CASE | 2.11 |
| 11/30/2017 17:00 | EST | SCH - OH - NY | 23317 | BASE CASE | 1.24 |
| 11/30/2017 20:00 | EST | SCH - OH - NY | 23317 | BASE CASE | 0.27 |
| 11/30/2017 01:00 | EST | SCH - HQ - NY | 23324 | BASE CASE | 0.19 |
| 11/30/2017 02:00 | EST | SCH - HQ - NY | 23324 | BASE CASE | 0.18 |
| 11/30/2017 05:00 | EST | SCH - HQ - NY | 23324 | BASE CASE | 0.12 |
| 11/30/2017 06:00 | EST | SCH - HQ - NY | 23324 | BASE CASE | 3.57 |
| 11/30/2017 07:00 | EST | SCH - HQ - NY | 23324 | BASE CASE | 1.39 |
| 11/30/2017 08:00 | EST | SCH - HQ - NY | 23324 | BASE CASE | 1.85 |
| 11/30/2017 09:00 | EST | SCH - HQ - NY | 23324 | BASE CASE | 2.34 |
| 11/30/2017 10:00 | EST | SCH - HQ - NY | 23324 | BASE CASE | 2.23 |
| 11/30/2017 11:00 | EST | SCH - HQ - NY | 23324 | BASE CASE | 2.6 |
| 11/30/2017 12:00 | EST | SCH - HQ - NY | 23324 | BASE CASE | 2.64 |
| 11/30/2017 13:00 | EST | SCH - HQ - NY | 23324 | BASE CASE | 2.5 |
| 11/30/2017 14:00 | EST | SCH - HQ - NY | 23324 | BASE CASE | 2.38 |
| 11/30/2017 15:00 | EST | SCH - HQ - NY | 23324 | BASE CASE | 0.99 |
| 11/30/2017 16:00 | EST | SCH - HQ - NY | 23324 | BASE CASE | 2.16 |
| 11/30/2017 17:00 | EST | SCH - HQ - NY | 23324 | BASE CASE | 2.14 |
| 11/30/2017 20:00 | EST | SCH - HQ - NY | 23324 | BASE CASE | 0.83 |
| 11/30/2017 21:00 | EST | SCH - HQ - NY | 23324 | BASE CASE | 0.06 |
| 11/30/2017 00:00 | EST | CENTRAL EAST - VC | 23330 | BASE CASE | 16.39 |
| 11/30/2017 01:00 | EST | CENTRAL EAST - VC | 23330 | BASE CASE | 11.9 |
| 11/30/2017 02:00 | EST | CENTRAL EAST - VC | 23330 | BASE CASE | 12.48 |
| 11/30/2017 03:00 | EST | CENTRAL EAST - VC | 23330 | BASE CASE | 14.81 |
| 11/30/2017 04:00 | EST | CENTRAL EAST - VC | 23330 | BASE CASE | 16.78 |
| 11/30/2017 05:00 | EST | CENTRAL EAST - VC | 23330 | BASE CASE | 12.09 |
| 11/30/2017 06:00 | EST | CENTRAL EAST - VC | 23330 | BASE CASE | 1.84 |
| 11/30/2017 07:00 | EST | CENTRAL EAST - VC | 23330 | BASE CASE | 2.55 |
| 11/30/2017 13:00 | EST | CENTRAL EAST - VC | 23330 | BASE CASE | 0.65 |
| 11/30/2017 14:00 | EST | CENTRAL EAST - VC | 23330 | BASE CASE | 0.45 |
| 11/30/2017 15:00 | EST | CENTRAL EAST - VC | 23330 | BASE CASE | 1.09 |
| 11/30/2017 18:00 | EST | CENTRAL EAST - VC | 23330 | BASE CASE | 2.35 |
| 11/30/2017 19:00 | EST | CENTRAL EAST - VC | 23330 | BASE CASE | 3.14 |
| 11/30/2017 20:00 | EST | CENTRAL EAST - VC | 23330 | BASE CASE | 1.07 |
| 11/30/2017 21:00 | EST | CENTRAL EAST - VC | 23330 | BASE CASE | 1.01 |
| 11/30/2017 22:00 | EST | CENTRAL EAST - VC | 23330 | BASE CASE | 4.89 |
| 11/30/2017 23:00 | EST | CENTRAL EAST - VC | 23330 | BASE CASE | 17.39 |
| 11/30/2017 00:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | BASE CASE | 0.23 |
| 11/30/2017 01:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | BASE CASE | 0.21 |
| 11/30/2017 02:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | BASE CASE | 0.22 |
| 11/30/2017 03:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | BASE CASE | 0.23 |
| 11/30/2017 04:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | BASE CASE | 0.23 |
| 11/30/2017 05:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | BASE CASE | 0.21 |
| 11/30/2017 06:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | BASE CASE | 0.38 |
| 11/30/2017 07:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | BASE CASE | 0.3 |
| 11/30/2017 14:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | BASE CASE | 0.02 |
| 11/30/2017 16:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | BASE CASE | 0.1 |
| 11/30/2017 17:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | BASE CASE | 0.53 |
| 11/30/2017 18:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | BASE CASE | 0.37 |
| 11/30/2017 19:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | BASE CASE | 0.44 |
| 11/30/2017 10:00 | EST | E179THST 138 HELLGATE 138 1 | 25288 | BASE CASE | 0.24 |
| 11/30/2017 11:00 | EST | E179THST 138 HELLGATE 138 1 | 25288 | BASE CASE | 0.1 |
| 11/30/2017 12:00 | EST | E179THST 138 HELLGATE 138 1 | 25288 | BASE CASE | 0.49 |
| 11/30/2017 13:00 | EST | E179THST 138 HELLGATE 138 1 | 25288 | BASE CASE | 0.79 |

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| 11/30/2017 14:00 | EST | E179THST 138 HELLGATE 138 1 | 25288 | BASE CASE | 0.71 |
| 11/30/2017 16:00 | EST | E179THST 138 HELLGATE 138 1 | 25288 | BASE CASE | 0.02 |
| 11/30/2017 21:00 | EST | E179THST 138 HELLGATE 138 1 | 25288 | BASE CASE | 0.13 |
| 11/30/2017 22:00 | EST | E179THST 138 HELLGATE 138 1 | 25288 | BASE CASE | 0.05 |
| 11/30/2017 14:00 | EST | E179THST 138 HELLGATE 138 1 | 25289 | BASE CASE | 1.42 |
| 11/30/2017 10:00 | EST | E179THST 138 HELLGATE 138 1 | 25290 | BASE CASE | 0.48 |
| 11/30/2017 11:00 | EST | E179THST 138 HELLGATE 138 1 | 25290 | BASE CASE | 0.2 |
| 11/30/2017 12:00 | EST | E179THST 138 HELLGATE 138 1 | 25290 | BASE CASE | 0.98 |
| 11/30/2017 13:00 | EST | E179THST 138 HELLGATE 138 1 | 25290 | BASE CASE | 1.57 |
| 11/30/2017 21:00 | EST | E179THST 138 HELLGATE 138 1 | 25290 | BASE CASE | 0.26 |
| 11/30/2017 22:00 | EST | E179THST 138 HELLGATE 138 1 | 25290 | BASE CASE | 0.1 |
| 11/30/2017 10:00 | EST | FARRAGUT 138 HUDS_AVE 138 1 | 25292 | BASE CASE | -0.03 |
| 11/30/2017 12:00 | EST | FARRAGUT 138 HUDS_AVE 138 1 | 25292 | BASE CASE | -0.05 |
| 11/30/2017 13:00 | EST | FARRAGUT 138 HUDS_AVE 138 1 | 25293 | BASE CASE | -0.09 |
| 11/30/2017 14:00 | EST | FARRAGUT 138 HUDS_AVE 138 1 | 25293 | BASE CASE | -0.08 |
| 11/30/2017 10:00 | EST | RAINEY 138 VERNON 138 1 | 25297 | BASE CASE | 0.06 |
| 11/30/2017 11:00 | EST | RAINEY 138 VERNON 138 1 | 25297 | BASE CASE | 0.02 |
| 11/30/2017 12:00 | EST | RAINEY 138 VERNON 138 1 | 25297 | BASE CASE | 0.15 |
| 11/30/2017 13:00 | EST | RAINEY 138 VERNON 138 1 | 25297 | BASE CASE | 0.24 |
| 11/30/2017 14:00 | EST | RAINEY 138 VERNON 138 1 | 25297 | BASE CASE | 0.22 |
| 11/30/2017 16:00 | EST | RAINEY 138 VERNON 138 1 | 25297 | BASE CASE | 0.02 |
| 11/30/2017 21:00 | EST | RAINEY 138 VERNON 138 1 | 25297 | BASE CASE | 0.03 |
| 11/30/2017 06:00 | EST | SCH - NPX_1385 | 325277 | BASE CASE | 4.11 |
| 11/30/2017 07:00 | EST | SCH - NPX_1385 | 325277 | BASE CASE | 2.66 |
| 11/30/2017 08:00 | EST | SCH - NPX_1385 | 325277 | BASE CASE | 0.35 |
| 11/30/2017 09:00 | EST | SCH - NPX_1385 | 325277 | BASE CASE | 3.75 |
| 11/30/2017 10:00 | EST | SCH - NPX_1385 | 325277 | BASE CASE | 2.78 |
| 11/30/2017 11:00 | EST | SCH - NPX_1385 | 325277 | BASE CASE | 3.27 |
| 11/30/2017 12:00 | EST | SCH - NPX_1385 | 325277 | BASE CASE | 3.78 |
| 11/30/2017 13:00 | EST | SCH - NPX_1385 | 325277 | BASE CASE | 2.99 |
| 11/30/2017 14:00 | EST | SCH - NPX_1385 | 325277 | BASE CASE | 3.73 |
| 11/30/2017 15:00 | EST | SCH - NPX_1385 | 325277 | BASE CASE | 2.59 |
| 11/30/2017 17:00 | EST | SCH - NPX_1385 | 325277 | BASE CASE | 6.51 |
| 11/30/2017 18:00 | EST | SCH - NPX_1385 | 325277 | BASE CASE | 2.46 |
| 11/30/2017 19:00 | EST | SCH - NPX_1385 | 325277 | BASE CASE | 5.05 |
| 11/30/2017 20:00 | EST | SCH - NPX_1385 | 325277 | BASE CASE | 0.4 |
| 11/30/2017 21:00 | EST | SCH - NPX_1385 | 325277 | BASE CASE | 3.09 |
| 11/30/2017 22:00 | EST | SCH - NPX_1385 | 325277 | BASE CASE | 0.74 |
| 11/30/2017 00:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -8.4 |
| 11/30/2017 01:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -7.73 |
| 11/30/2017 02:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -7.81 |
| 11/30/2017 03:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -8.16 |
| 11/30/2017 04:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -8.46 |
| 11/30/2017 05:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -7.76 |
| 11/30/2017 06:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -13.45 |
| 11/30/2017 07:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -10.81 |
| 11/30/2017 08:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -8.77 |
| 11/30/2017 09:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -12.14 |
| 11/30/2017 10:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -10.25 |
| 11/30/2017 11:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -11.67 |
| 11/30/2017 12:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -12.44 |
| 11/30/2017 13:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -10.14 |
| 11/30/2017 14:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -12.05 |
| 11/30/2017 15:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -12.05 |
| 11/30/2017 16:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -7.63 |
| 11/30/2017 17:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -18.63 |
| 11/30/2017 18:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -13.02 |
| 11/30/2017 19:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -15.5 |
| 11/30/2017 20:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -9.05 |
| 11/30/2017 21:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -12.69 |
| 11/30/2017 22:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -11.71 |
| 11/30/2017 23:00 | EST | GLENWOOD 138 SHORE_RD 138 1 | 25205 | NEPTUNE HVDC TIE LINE | -7.01 |
| 11/30/2017 08:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | SCB:NEWBRDG 1380 461&BK6+4 | 5.26 |
| 11/30/2017 09:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | SCB:NEWBRDG 1380 461&BK6+4 | 3.9 |
| 11/30/2017 10:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | SCB:NEWBRDG 1380 461&BK6+4 | 4.42 |
| 11/30/2017 11:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | SCB:NEWBRDG 1380 461&BK6+4 | 3.55 |
| 11/30/2017 12:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | SCB:NEWBRDG 1380 461&BK6+4 | 4.88 |
| 11/30/2017 13:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | SCB:NEWBRDG 1380 461&BK6+4 | 4.19 |
| 11/30/2017 14:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | SCB:NEWBRDG 1380 461&BK6+4 | 3.46 |

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| 11/30/2017 15:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | SCB:NEWBRDG 1380 461&BK6+4 | 3.86 |
| 11/30/2017 16:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | SCB:NEWBRDG 1380 461&BK6+4 | 1.25 |
| 11/30/2017 20:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | SCB:NEWBRDG 1380 461&BK6+4 | 5.44 |
| 11/30/2017 21:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | SCB:NEWBRDG 1380 461&BK6+4 | 3.86 |
| 11/30/2017 22:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | SCB:NEWBRDG 1380 461&BK6+4 | 6.38 |
| 11/30/2017 23:00 | EST | EGRDNCTY 138 VALLYSTR 138 1 | 25244 | SCB:NEWBRDG 1380 461&BK6+4 | 12.39 |
| 11/30/2017 09:00 | EST | E13THSTA 345 W49TH_ST 345 1 | 25222 | SCB:SPBK(RS3):W75&99941 | -0.02 |
| 11/30/2017 10:00 | EST | E13THSTA 345 W49TH_ST 345 1 | 25222 | SCB:SPBK(RS3):W75&99941 | -0.86 |
| 11/30/2017 11:00 | EST | E13THSTA 345 W49TH_ST 345 1 | 25222 | SCB:SPBK(RS3):W75&99941 | -0.36 |
| 11/30/2017 12:00 | EST | E13THSTA 345 W49TH_ST 345 1 | 25222 | SCB:SPBK(RS3):W75&99941 | -1.75 |
| 11/30/2017 13:00 | EST | E13THSTA 345 W49TH_ST 345 1 | 25222 | SCB:SPBK(RS3):W75&99941 | -2.81 |
| 11/30/2017 14:00 | EST | E13THSTA 345 W49TH_ST 345 1 | 25222 | SCB:SPBK(RS3):W75&99941 | -2.54 |
| 11/30/2017 15:00 | EST | E13THSTA 345 W49TH_ST 345 1 | 25222 | SCB:SPBK(RS3):W75&99941 | -0.02 |
| 11/30/2017 21:00 | EST | E13THSTA 345 W49TH_ST 345 1 | 25222 | SCB:SPBK(RS3):W75&99941 | -0.46 |
| 11/30/2017 22:00 | EST | E13THSTA 345 W49TH_ST 345 1 | 25222 | SCB:SPBK(RS3):W75&99941 | -0.17 |
| 11/30/2017 06:00 | EST | SHORE_RD 345 SHORE_RD 138 1 | 25439 | SHORE_RD_345/138_BK_2 | 0.35 |