

# Day Ahead Limiting Constraints

| Time Stamp       | Time Zone | Limiting Facility           | Facility PTID | Contingency               | Constraint Cost (\$) |
|------------------|-----------|-----------------------------|---------------|---------------------------|----------------------|
| 01/26/2016 07:00 | EST       | SCH - OH - NY               | 23317         | BASE CASE                 | 0.03                 |
| 01/26/2016 08:00 | EST       | SCH - OH - NY               | 23317         | BASE CASE                 | 0.58                 |
| 01/26/2016 09:00 | EST       | SCH - OH - NY               | 23317         | BASE CASE                 | 1.24                 |
| 01/26/2016 10:00 | EST       | SCH - OH - NY               | 23317         | BASE CASE                 | 2.32                 |
| 01/26/2016 11:00 | EST       | SCH - OH - NY               | 23317         | BASE CASE                 | 3.24                 |
| 01/26/2016 12:00 | EST       | SCH - OH - NY               | 23317         | BASE CASE                 | 3.18                 |
| 01/26/2016 13:00 | EST       | SCH - OH - NY               | 23317         | BASE CASE                 | 2.31                 |
| 01/26/2016 14:00 | EST       | SCH - OH - NY               | 23317         | BASE CASE                 | 1.53                 |
| 01/26/2016 15:00 | EST       | SCH - OH - NY               | 23317         | BASE CASE                 | 1.11                 |
| 01/26/2016 17:00 | EST       | SCH - OH - NY               | 23317         | BASE CASE                 | 1.09                 |
| 01/26/2016 18:00 | EST       | SCH - OH - NY               | 23317         | BASE CASE                 | 0.94                 |
| 01/26/2016 01:00 | EST       | SCH - NE - NY               | 23318         | BASE CASE                 | -2.43                |
| 01/26/2016 02:00 | EST       | SCH - NE - NY               | 23318         | BASE CASE                 | -1.19                |
| 01/26/2016 03:00 | EST       | SCH - NE - NY               | 23318         | BASE CASE                 | -1.44                |
| 01/26/2016 05:00 | EST       | SCH - NE - NY               | 23318         | BASE CASE                 | -3.08                |
| 01/26/2016 01:00 | EST       | SCH - HQ - NY               | 23324         | BASE CASE                 | 0.04                 |
| 01/26/2016 04:00 | EST       | SCH - HQ - NY               | 23324         | BASE CASE                 | 0.1                  |
| 01/26/2016 05:00 | EST       | SCH - HQ - NY               | 23324         | BASE CASE                 | 0.74                 |
| 01/26/2016 00:00 | EST       | CENTRAL EAST - VC           | 23330         | BASE CASE                 | 3.81                 |
| 01/26/2016 01:00 | EST       | CENTRAL EAST - VC           | 23330         | BASE CASE                 | 1.02                 |
| 01/26/2016 02:00 | EST       | CENTRAL EAST - VC           | 23330         | BASE CASE                 | 3.16                 |
| 01/26/2016 03:00 | EST       | CENTRAL EAST - VC           | 23330         | BASE CASE                 | 3.64                 |
| 01/26/2016 04:00 | EST       | CENTRAL EAST - VC           | 23330         | BASE CASE                 | 2.47                 |
| 01/26/2016 06:00 | EST       | CENTRAL EAST - VC           | 23330         | BASE CASE                 | 8.31                 |
| 01/26/2016 07:00 | EST       | CENTRAL EAST - VC           | 23330         | BASE CASE                 | 17.18                |
| 01/26/2016 08:00 | EST       | CENTRAL EAST - VC           | 23330         | BASE CASE                 | 10.57                |
| 01/26/2016 09:00 | EST       | CENTRAL EAST - VC           | 23330         | BASE CASE                 | 4.03                 |
| 01/26/2016 17:00 | EST       | CENTRAL EAST - VC           | 23330         | BASE CASE                 | 0.33                 |
| 01/26/2016 21:00 | EST       | CENTRAL EAST - VC           | 23330         | BASE CASE                 | 5.29                 |
| 01/26/2016 22:00 | EST       | CENTRAL EAST - VC           | 23330         | BASE CASE                 | 11.29                |
| 01/26/2016 23:00 | EST       | CENTRAL EAST - VC           | 23330         | BASE CASE                 | 12.48                |
| 01/26/2016 00:00 | EST       | EGRDNCTY 138 VALLYSTR 138 1 | 25244         | FREEPORT-NEWBRDGE_138_461 | 0.27                 |
| 01/26/2016 01:00 | EST       | EGRDNCTY 138 VALLYSTR 138 1 | 25244         | FREEPORT-NEWBRDGE_138_461 | 0.16                 |
| 01/26/2016 02:00 | EST       | EGRDNCTY 138 VALLYSTR 138 1 | 25244         | FREEPORT-NEWBRDGE_138_461 | 0.08                 |
| 01/26/2016 03:00 | EST       | EGRDNCTY 138 VALLYSTR 138 1 | 25244         | FREEPORT-NEWBRDGE_138_461 | 0.08                 |
| 01/26/2016 04:00 | EST       | EGRDNCTY 138 VALLYSTR 138 1 | 25244         | FREEPORT-NEWBRDGE_138_461 | 0.08                 |
| 01/26/2016 05:00 | EST       | EGRDNCTY 138 VALLYSTR 138 1 | 25244         | FREEPORT-NEWBRDGE_138_461 | 0.08                 |
| 01/26/2016 09:00 | EST       | EGRDNCTY 138 VALLYSTR 138 1 | 25244         | FREEPORT-NEWBRDGE_138_461 | 0.08                 |
| 01/26/2016 11:00 | EST       | EGRDNCTY 138 VALLYSTR 138 1 | 25244         | FREEPORT-NEWBRDGE_138_461 | 0.16                 |
| 01/26/2016 12:00 | EST       | EGRDNCTY 138 VALLYSTR 138 1 | 25244         | FREEPORT-NEWBRDGE_138_461 | 2.39                 |
| 01/26/2016 13:00 | EST       | EGRDNCTY 138 VALLYSTR 138 1 | 25244         | FREEPORT-NEWBRDGE_138_461 | 3.72                 |
| 01/26/2016 14:00 | EST       | EGRDNCTY 138 VALLYSTR 138 1 | 25244         | FREEPORT-NEWBRDGE_138_461 | 3.78                 |
| 01/26/2016 15:00 | EST       | EGRDNCTY 138 VALLYSTR 138 1 | 25244         | FREEPORT-NEWBRDGE_138_461 | 3.14                 |
| 01/26/2016 16:00 | EST       | EGRDNCTY 138 VALLYSTR 138 1 | 25244         | FREEPORT-NEWBRDGE_138_461 | 1.61                 |
| 01/26/2016 20:00 | EST       | EGRDNCTY 138 VALLYSTR 138 1 | 25244         | FREEPORT-NEWBRDGE_138_461 | 1.99                 |
| 01/26/2016 21:00 | EST       | EGRDNCTY 138 VALLYSTR 138 1 | 25244         | FREEPORT-NEWBRDGE_138_461 | 4.43                 |
| 01/26/2016 22:00 | EST       | EGRDNCTY 138 VALLYSTR 138 1 | 25244         | FREEPORT-NEWBRDGE_138_461 | 2.44                 |
| 01/26/2016 23:00 | EST       | EGRDNCTY 138 VALLYSTR 138 1 | 25244         | FREEPORT-NEWBRDGE_138_461 | 0.16                 |
| 01/26/2016 00:00 | EST       | DUNWODIE 345 SHORE_RD 345 1 | 25091         | NEPTUNE HVDC TIE LINE     | 0.49                 |
| 01/26/2016 01:00 | EST       | DUNWODIE 345 SHORE_RD 345 1 | 25091         | NEPTUNE HVDC TIE LINE     | 0.02                 |
| 01/26/2016 06:00 | EST       | DUNWODIE 345 SHORE_RD 345 1 | 25091         | NEPTUNE HVDC TIE LINE     | 4.04                 |
| 01/26/2016 07:00 | EST       | DUNWODIE 345 SHORE_RD 345 1 | 25091         | NEPTUNE HVDC TIE LINE     | 2.9                  |
| 01/26/2016 08:00 | EST       | DUNWODIE 345 SHORE_RD 345 1 | 25091         | NEPTUNE HVDC TIE LINE     | 5.09                 |
| 01/26/2016 09:00 | EST       | DUNWODIE 345 SHORE_RD 345 1 | 25091         | NEPTUNE HVDC TIE LINE     | 3.3                  |
| 01/26/2016 12:00 | EST       | DUNWODIE 345 SHORE_RD 345 1 | 25091         | NEPTUNE HVDC TIE LINE     | 0.63                 |
| 01/26/2016 13:00 | EST       | DUNWODIE 345 SHORE_RD 345 1 | 25091         | NEPTUNE HVDC TIE LINE     | 0.99                 |
| 01/26/2016 14:00 | EST       | DUNWODIE 345 SHORE_RD 345 1 | 25091         | NEPTUNE HVDC TIE LINE     | 3.02                 |
| 01/26/2016 15:00 | EST       | DUNWODIE 345 SHORE_RD 345 1 | 25091         | NEPTUNE HVDC TIE LINE     | 3.36                 |
| 01/26/2016 16:00 | EST       | DUNWODIE 345 SHORE_RD 345 1 | 25091         | NEPTUNE HVDC TIE LINE     | 0.14                 |
| 01/26/2016 17:00 | EST       | DUNWODIE 345 SHORE_RD 345 1 | 25091         | NEPTUNE HVDC TIE LINE     | 0.51                 |
| 01/26/2016 18:00 | EST       | DUNWODIE 345 SHORE_RD 345 1 | 25091         | NEPTUNE HVDC TIE LINE     | 0.39                 |
| 01/26/2016 20:00 | EST       | DUNWODIE 345 SHORE_RD 345 1 | 25091         | NEPTUNE HVDC TIE LINE     | 3.78                 |
| 01/26/2016 21:00 | EST       | DUNWODIE 345 SHORE_RD 345 1 | 25091         | NEPTUNE HVDC TIE LINE     | 3.24                 |

|                  |     |                             |       |                          |        |
|------------------|-----|-----------------------------|-------|--------------------------|--------|
| 01/26/2016 22:00 | EST | DUNWODIE 345 SHORE_RD 345 1 | 25091 | NEPTUNE HVDC TIE LINE    | 1.67   |
| 01/26/2016 12:00 | EST | ELWOOD 138 NRTHPORT 138 1   | 25544 | NRTHPORT-ELWOOD__138_678 | -0.12  |
| 01/26/2016 13:00 | EST | ELWOOD 138 NRTHPORT 138 1   | 25544 | NRTHPORT-ELWOOD__138_678 | -0.2   |
| 01/26/2016 14:00 | EST | ELWOOD 138 NRTHPORT 138 1   | 25544 | NRTHPORT-ELWOOD__138_678 | -0.2   |
| 01/26/2016 15:00 | EST | ELWOOD 138 NRTHPORT 138 1   | 25544 | NRTHPORT-ELWOOD__138_678 | -0.17  |
| 01/26/2016 16:00 | EST | ELWOOD 138 NRTHPORT 138 1   | 25544 | NRTHPORT-ELWOOD__138_678 | -0.08  |
| 01/26/2016 20:00 | EST | ELWOOD 138 NRTHPORT 138 1   | 25544 | NRTHPORT-ELWOOD__138_678 | -0.1   |
| 01/26/2016 21:00 | EST | ELWOOD 138 NRTHPORT 138 1   | 25544 | NRTHPORT-ELWOOD__138_678 | -0.24  |
| 01/26/2016 18:00 | EST | ADIRNDCK 230 PORTER 230 1   | 25082 | TWR:11& UCC2-41          | 10.08  |
| 01/26/2016 20:00 | EST | ADIRNDCK 230 PORTER 230 1   | 25082 | TWR:11& UCC2-41          | 11.22  |
| 01/26/2016 08:00 | EST | COOPERS 345 MARCY 345 1     | 25113 | TWR:12& UNS-18           | -16.43 |
| 01/26/2016 09:00 | EST | COOPERS 345 MARCY 345 1     | 25113 | TWR:12& UNS-18           | -43.88 |
| 01/26/2016 10:00 | EST | COOPERS 345 MARCY 345 1     | 25113 | TWR:12& UNS-18           | -45.34 |
| 01/26/2016 11:00 | EST | COOPERS 345 MARCY 345 1     | 25113 | TWR:12& UNS-18           | -26.87 |
| 01/26/2016 12:00 | EST | COOPERS 345 MARCY 345 1     | 25113 | TWR:12& UNS-18           | -18.55 |
| 01/26/2016 13:00 | EST | COOPERS 345 MARCY 345 1     | 25113 | TWR:12& UNS-18           | -21.12 |
| 01/26/2016 14:00 | EST | COOPERS 345 MARCY 345 1     | 25113 | TWR:12& UNS-18           | -17.42 |
| 01/26/2016 15:00 | EST | COOPERS 345 MARCY 345 1     | 25113 | TWR:12& UNS-18           | -17.78 |
| 01/26/2016 16:00 | EST | COOPERS 345 MARCY 345 1     | 25113 | TWR:12& UNS-18           | -35.78 |
| 01/26/2016 17:00 | EST | COOPERS 345 MARCY 345 1     | 25113 | TWR:12& UNS-18           | -74.74 |
| 01/26/2016 18:00 | EST | COOPERS 345 MARCY 345 1     | 25113 | TWR:12& UNS-18           | -61.37 |
| 01/26/2016 19:00 | EST | COOPERS 345 MARCY 345 1     | 25113 | TWR:12& UNS-18           | -50.24 |
| 01/26/2016 20:00 | EST | COOPERS 345 MARCY 345 1     | 25113 | TWR:12& UNS-18           | -21.81 |
| 01/26/2016 21:00 | EST | COOPERS 345 MARCY 345 1     | 25113 | TWR:12& UNS-18           | -7.56  |