**Ingrid Canaday**
Outage Coordination

To: NEPOOL Participants

From: Ingrid Canaday

**Subject: 2014-15 Current Year Annual Maintenance Schedule**

Date: June 5, 2014

Following this transmittal letter, you will find the 2014-15 Annual Maintenance Schedule (AMS) dated June 5, 2014 with an Operable Capacity Analysis (with forecasted external transactions) for June 1, 2014 – May 31, 2015. This schedule covers the fifth Forward Capacity Market procurement period.

**2014-15 AMS - DATED June 5, 2014**
The 2014-15 AMS – dated June 5, 2014 reflects all planned maintenance requests and also includes any known long duration Forced Outages for June 1, 2014 – May 31, 2015 that have been submitted to the ISO through May 20, 2014 . Those generator owners who have not yet submitted their anticipated maintenance schedules for 2014-15 are encouraged to do so.

**2014-15 OPERABLE CAPACITY ANALYSIS**
The Operable Capacity Analysis for June 1, 2014 – May 31, 2015 presently forecasts the lowest Summer Long Term Operable Capacity Margin (LTOCM) of -1,592 MW for week beginning June 7, 2014.

Peak Load Exposures (PLE)
After being adjusted for Other Demand Resources, ODR, the Peak Load Exposures (PLE) for the summer and winter of 2014-15 are 26,658 MW and 21,086 MW respectively, and reflect the seasonal peak load based on the 2014 CELT Report.

Generating Unit Capabilities
Generator Capacity Supply Obligations (CSO) are based upon data as of May 20, 2014 and include Energy Management System (EMS) assets. New unit additions are factored into the Non-Commercial Capacity MW respecting forecasted in-service dates.

Interchange
External Node Available Capacity MW is based on the sum of external import and export CSO.

External Transmission
Transmission outages of NYISO, NBSO, and Hydro-Quebec are included in the analysis when the CSO is impacted.

Weekly Operating Reserve
The weekly operating reserve is equal to one hundred twenty five percent (125%) of the largest contingency plus one-half (50%) of the second-largest contingency.

Unplanned Outage Allotment
Allowances for unplanned outages, as documented in ISO New England SOP-OUTSCH.0030.0040, range from 2,100 MW to 3,600 MW throughout the year.

Generation at Risk Due to Gas Supply Issues
A column has been included in the Operable Capacity Analysis to reflect natural gas-fired capacity that may be unavailable due to cold weather conditions or gas pipeline outages.

If you have any questions or comments concerning this edition of the 2014-15 AMS or Operable Capacity Analysis or if you have any comments or suggestions please feel free to contact Rachel Wilkins-Thurman at (413) 540-4261, Joanne Bialas (413) 535-4162, or Ingrid Canaday (413) 535-4329, or by email at opamoreq@iso-ne.com.

# New England Operable Capacity Margins

## June 5, 2014 - 50/50 FORECAST using CSO values

This analysis is a tabulation of weekly assessments shown in one single table. The information shows the operable capacity situation under assumed conditions for each week. It is not expected that the system peak will occur every week during June, July, and August and Mid September.

| STUDY WEEK (Week Beginning, Saturday) | AVAILABLE OPCAP MW | EXTERNAL NODE AVAIL CAPACITY MW | NON COMMERCIAL CAPACITY MW | PLANNED OUTAGES CSO MW | ALLOWANCE FOR UNPLANNED OUTAGES MW | GAS AT RISK MW | NET OPCAP SUPPLY MW | PEAK LOAD FORECAST MW | OPER RESERVE REQUIREMENT MW | NET LOAD OBLIGATION MW | OPCAP MARGIN MW | OPCAP FROM OP4 ACTIVE REAL-TIME DR MW | OPCAP MARGIN w/ OP4 actions through OP4 Step 2 MW | OPCAP FROM OP4 REAL-TIME EMER. GEN MW | OPCAP MARGIN w/ OP4 actions through OP4 Step 6 MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [1] | [2] | [3] | [4] | [5] | [7] | [8] | [9] | [10] | [11] | [12] | [13] | [14] | [15] | [16] |
| 5/31/2014 | 30,502 | 1,067 | 68 | 438 | 2,800 | 0 | 28,399 | 26,658 | 2,375 | 29,033 | (634) | 310 | (324) | 163 | (161) |
| 6/7/2014 | 29,532 | 1,067 | 68 | 426 | 2,800 | 0 | 27,441 | 26,658 | 2,375 | 29,033 | (1,592) | 345 | (1,247) | 162 | (1,085) |
| 6/14/2014 | 29,532 | 1,067 | 68 | 116 | 2,800 | 0 | 27,751 | 26,658 | 2,375 | 29,033 | (1,282) | 345 | (937) | 162 | (775) |
| 6/21/2014 | 29,532 | 1,067 | 68 | 116 | 2,800 | 0 | 27,751 | 26,658 | 2,375 | 29,033 | (1,282) | 345 | (937) | 162 | (775) |
| 6/28/2014 | 29,532 | 1,067 | 68 | 115 | 2,100 | 0 | 28,452 | 26,658 | 2,375 | 29,033 | (581) | 345 | (236) | 162 | (74) |
| 7/5/2014 | 29,135 | 1,283 | 68 | 60 | 2,100 | 0 | 28,326 | 26,658 | 2,375 | 29,033 | (707) | 477 | (230) | 208 | (22) |
| 7/12/2014 | 29,135 | 1,283 | 68 | 105 | 2,100 | 0 | 28,281 | 26,658 | 2,375 | 29,033 | (752) | 477 | (275) | 208 | (67) |
| 7/19/2014 | 29,135 | 1,283 | 68 | 18 | 2,100 | 0 | 28,368 | 26,658 | 2,375 | 29,033 | (665) | 477 | (188) | 208 | 20 |
| 7/26/2014 | 29,135 | 1,283 | 68 | 18 | 2,100 | 0 | 28,368 | 26,658 | 2,375 | 29,033 | (665) | 477 | (188) | 208 | 20 |
| 8/2/2014 | 29,119 | 1,283 | 68 | 0 | 2,100 | 0 | 28,370 | 26,658 | 2,375 | 29,033 | (663) | 489 | (174) | 211 | 37 |
| 8/9/2014 | 29,119 | 1,283 | 68 | 18 | 2,100 | 0 | 28,352 | 26,658 | 2,375 | 29,033 | (681) | 489 | (192) | 211 | 19 |
| 8/16/2014 | 29,119 | 1,283 | 68 | 9 | 2,100 | 0 | 28,361 | 26,658 | 2,375 | 29,033 | (672) | 489 | (183) | 211 | 28 |
| 8/23/2014 | 29,119 | 1,283 | 68 | 0 | 2,100 | 0 | 28,370 | 26,658 | 2,375 | 29,033 | (663) | 489 | (174) | 211 | 37 |
| 8/30/2014 | 29,119 | 1,283 | 68 | 0 | 2,100 | 0 | 28,370 | 26,658 | 2,375 | 29,033 | (663) | 489 | (174) | 211 | 37 |
| 9/6/2014 | 29,119 | 1,283 | 68 | 15 | 2,100 | 0 | 28,355 | 26,658 | 2,375 | 29,033 | (678) | 489 | (189) | 211 | 22 |
| 9/13/2014 | 29,119 | 1,283 | 68 | 1,313 | 2,100 | 0 | 27,057 | 22,622 | 2,375 | 24,997 | 2,060 | 489 | 2,549 | 211 | 2,760 |
| 9/20/2014 | 29,119 | 1,283 | 68 | 1,826 | 2,100 | 0 | 26,544 | 22,529 | 2,375 | 24,904 | 1,640 | 489 | 2,129 | 211 | 2,340 |
| 9/27/2014 | 29,119 | 812 | 69 | 3,411 | 2,800 | 0 | 23,789 | 16,244 | 2,375 | 18,619 | 5,170 | 489 | 5,659 | 211 | 5,870 |
| 10/4/2014 | 29,680 | 618 | 69 | 6,053 | 2,800 | 0 | 21,514 | 16,280 | 2,375 | 18,655 | 2,859 | 486 | 3,345 | 211 | 3,556 |
| 10/11/2014 | 29,680 | 812 | 69 | 6,458 | 2,800 | 0 | 21,303 | 17,219 | 2,375 | 19,594 | 1,709 | 486 | 2,195 | 211 | 2,406 |
| 10/18/2014 | 29,680 | 812 | 69 | 7,946 | 2,800 | 0 | 19,815 | 17,589 | 2,375 | 19,964 | (149) | 486 | 337 | 211 | 548 |
| 10/25/2014 | 29,680 | 812 | 69 | 6,954 | 2,800 | 0 | 20,807 | 17,799 | 2,375 | 20,174 | 633 | 486 | 1,119 | 211 | 1,330 |
| 11/1/2014 | 29,680 | 812 | 86 | 6,354 | 3,600 | 0 | 20,624 | 17,917 | 2,375 | 20,292 | 332 | 486 | 818 | 211 | 1,029 |
| 11/8/2014 | 29,680 | 812 | 86 | 4,770 | 3,600 | 0 | 22,208 | 18,266 | 2,375 | 20,641 | 1,567 | 486 | 2,053 | 211 | 2,264 |
| 11/15/2014 | 29,680 | 812 | 86 | 4,202 | 3,600 | 0 | 22,776 | 19,016 | 2,375 | 21,391 | 1,385 | 486 | 1,871 | 211 | 2,082 |
| 11/22/2014 | 29,680 | 812 | 86 | 1,826 | 3,600 | 360 | 24,792 | 19,747 | 2,375 | 22,122 | 2,670 | 486 | 3,156 | 211 | 3,367 |
| 11/29/2014 | 29,680 | 812 | 86 | 942 | 3,200 | 1,439 | 24,997 | 19,969 | 2,375 | 22,344 | 2,653 | 486 | 3,139 | 211 | 3,350 |
| 12/6/2014 | 29,833 | 812 | 86 | 946 | 3,200 | 1,619 | 24,966 | 20,262 | 2,375 | 22,637 | 2,329 | 454 | 2,783 | 202 | 2,985 |
| 12/13/2014 | 29,833 | 812 | 86 | 492 | 3,200 | 1,979 | 25,060 | 20,273 | 2,375 | 22,648 | 2,412 | 454 | 2,866 | 202 | 3,068 |
| 12/20/2014 | 29,833 | 812 | 86 | 377 | 3,200 | 2,159 | 24,995 | 20,337 | 2,375 | 22,712 | 2,283 | 454 | 2,737 | 202 | 2,939 |
| 12/27/2014 | 29,833 | 812 | 89 | 992 | 3,200 | 2,519 | 24,023 | 20,337 | 2,375 | 22,712 | 1,311 | 454 | 1,765 | 202 | 1,967 |
| 1/3/2015 | 29,833 | 812 | 89 | 1,154 | 2,800 | 2,879 | 23,901 | 20,614 | 2,375 | 22,989 | 912 | 454 | 1,366 | 202 | 1,568 |
| 1/10/2015 | 29,833 | 812 | 89 | 1,154 | 2,800 | 3,238 | 23,542 | 21,086 | 2,375 | 23,461 | 81 | 454 | 535 | 202 | 737 |
| 1/17/2015 | 29,833 | 812 | 89 | 1,154 | 2,800 | 3,598 | 23,182 | 21,086 | 2,375 | 23,461 | (279) | 454 | 175 | 202 | 377 |
| 1/24/2015 | 29,833 | 812 | 89 | 1,154 | 2,800 | 3,598 | 23,182 | 21,086 | 2,375 | 23,461 | (279) | 454 | 175 | 202 | 377 |
| 1/31/2015 | 29,833 | 812 | 89 | 1,514 | 3,100 | 3,058 | 23,062 | 20,860 | 2,375 | 23,235 | (173) | 454 | 281 | 202 | 483 |
| 2/7/2015 | 29,833 | 812 | 89 | 1,514 | 3,100 | 2,519 | 23,601 | 20,589 | 2,375 | 22,964 | 637 | 454 | 1,091 | 202 | 1,293 |
| 2/14/2015 | 29,833 | 812 | 89 | 1,514 | 3,100 | 2,159 | 23,961 | 20,560 | 2,375 | 22,935 | 1,026 | 454 | 1,480 | 202 | 1,682 |
| 2/21/2015 | 29,833 | 812 | 89 | 1,514 | 3,100 | 1,799 | 24,321 | 20,294 | 2,375 | 22,669 | 1,652 | 454 | 2,106 | 202 | 2,308 |
| 2/28/2015 | 29,833 | 812 | 89 | 1,474 | 2,200 | 1,799 | 25,261 | 19,291 | 2,375 | 21,666 | 3,595 | 454 | 4,049 | 202 | 4,251 |
| 3/7/2015 | 29,833 | 812 | 89 | 1,323 | 2,200 | 1,260 | 25,951 | 18,937 | 2,375 | 21,312 | 4,639 | 454 | 5,093 | 202 | 5,295 |
| 3/14/2015 | 29,833 | 812 | 89 | 1,327 | 2,200 | 900 | 26,307 | 18,738 | 2,375 | 21,113 | 5,194 | 454 | 5,648 | 202 | 5,850 |
| 3/21/2015 | 29,833 | 812 | 89 | 2,043 | 2,200 | 540 | 25,951 | 18,368 | 2,375 | 20,743 | 5,208 | 454 | 5,662 | 202 | 5,864 |

# New England Operable Capacity Margins

## June 5, 2014 - 50/50 FORECAST using CSO values

This analysis is a tabulation of weekly assessments shown in one single table. The information shows the operable capacity situation under assumed conditions for each week. It is not expected that the system peak will occur every week during June, July, and August and Mid September.

| STUDY WEEK (Week Beginning, Saturday) | AVAILABLE OPCAP MW | EXTERNAL NODE AVAIL CAPACITY MW | NON COMMERCIAL CAPACITY MW | PLANNED OUTAGES CSO MW | ALLOWANCE FOR UNPLANNED OUTAGES MW | GAS AT RISK MW | NET OPCAP SUPPLY MW | PEAK LOAD FORECAST MW | OPER RESERVE REQUIREMENT MW | NET LOAD OBLIGATION MW | OPCAP MARGIN MW | OPCAP FROM OP4 ACTIVE REAL-TIME DR MW | OPCAP MARGIN w/ OP4 actions through OP4 Step 2 MW | OPCAP FROM OP4 REAL-TIME EMER. GEN MW | OPCAP MARGIN w/ OP4 actions through OP4 Step 6 MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [1] | [2] | [3] | [4] | [5] | [7] | [8] | [9] | [10] | [11] | [12] | [13] | [14] | [15] | [16] |
| 3/28/2015 | 29,833 | 812 | 89 | 3,040 | 2,700 | 0 | 24,994 | 17,795 | 2,375 | 20,170 | 4,824 | 454 | 5,278 | 202 | 5,480 |
| 4/4/2015 | 29,680 | 812 | 89 | 3,419 | 2,700 | 0 | 24,462 | 17,275 | 2,375 | 19,650 | 4,812 | 486 | 5,298 | 211 | 5,509 |
| 4/11/2015 | 29,680 | 812 | 89 | 4,723 | 2,700 | 0 | 23,158 | 17,020 | 2,375 | 19,395 | 3,763 | 486 | 4,249 | 211 | 4,460 |
| 4/18/2015 | 29,680 | 812 | 89 | 4,736 | 2,700 | 0 | 23,145 | 16,503 | 2,375 | 18,878 | 4,267 | 486 | 4,753 | 211 | 4,964 |
| 4/25/2015 | 29,680 | 812 | 89 | 5,145 | 3,400 | 0 | 22,036 | 16,235 | 2,375 | 18,610 | 3,426 | 486 | 3,912 | 211 | 4,123 |
| 5/2/2015 | 29,680 | 812 | 89 | 3,955 | 3,400 | 0 | 23,226 | 16,208 | 2,375 | 18,583 | 4,643 | 486 | 5,129 | 211 | 5,340 |
| 5/9/2015 | 29,680 | 812 | 89 | 2,765 | 3,400 | 0 | 24,416 | 20,112 | 2,375 | 22,487 | 1,929 | 486 | 2,415 | 211 | 2,626 |
| 5/16/2015 | 29,680 | 812 | 89 | 3,352 | 3,400 | 0 | 23,829 | 21,116 | 2,375 | 23,491 | 338 | 486 | 824 | 211 | 1,035 |
| 5/23/2015 | 29,680 | 812 | 89 | 2,933 | 3,400 | 0 | 24,248 | 22,049 | 2,375 | 24,424 | (176) | 486 | 310 | 211 | 521 |
| 5/30/2015 | 29,680 | 1,508 | 89 | 0 | 2,800 | 0 | 28,477 | 26,930 | 2,375 | 29,305 | (828) | 486 | (342) | 211 | (131) |

**1. Available OPCAP MW based on resource Capacity Supply Obligations, CSO. Does not include Settlement Only Generators.**
**2. External Node Available Capacity MW based on external Capacity Supply Obligations, CSO .**
**3. New resources that have acquired a CSO but have not become commercial.**
**4. Planned Outages is the total of Generator/DARD Outages for the period. This value would also include any known long-term Forced Outages.**
**5. Allowance for Unplanned Outages includes forced outages and maintenance outages scheduled less than 14 days in advance per ISO New England Operating Procedure No. 5 Appendix A.**
**7. Generation at Risk due to Gas Supply pertains to gas fired capacity expected to be at risk during cold weather conditions or gas pipeline maintenance outages.**
**8. Net OpCap Supply MW Available (1 + 2 + 3 - 4 - 5 - 7 = 8)**
**9. Peak Load Forecast per data included in the 2014 CELT Report adjusted for Other Demand Resources.** http://www.iso-ne.com/trans/celt/report/index.html
**10. Operating Reserve Requirement based on 125% of first largest contingency plus 50% the second largest contingency.**
**11. Total Net Load Obligation per the formula(9 + 10 = 11)**
**12. Net OPCAP Margin MW = Net Op Cap Supply MW minus Net Load Obligation (8 - 11 = 12)**
**13. OP 4 Action 2 Real-time Demand Response. Reserve Margins and Distribution Loss Factor Gross Ups are Included.**
**14. OPCAP Margin taking into account Real Time Demand Response through OP4 Step 2 (12 + 13 = 14)**
**15. OP 4 Action 6 Emergency Generation Response without the Voltage Reduction requiring > 10 Minutes. Real Time Emergency Generation is capped at 600MW.**
**Reserve Margins and Distribution Loss Factor Gross Ups are Included.**
**16. OPCAP Margin taking into account Real Time Demand Response and Real Time Emergency Generation through OP4 Step 6 (14 + 15 = 16); This does not include Emergency Energy Transactions (EETs).**

## New England Operable Capacity Margins - CSO

### - 50/50 FORECAST