

#### Joanne Bialas

**Outage Coordination** 

To: NEPOOL Participants

From: Joanne Bialas

Subject: 2009 Annual Maintenance Schedule – Draft #4

Date: December 12, 2008

Following this transmittal letter, you will find the 2009 Annual Maintenance Schedule (AMS) – Draft #4 dated December 12, 2008, with rounded weekly planned outage totals only, and an Operable Capacity Analysis (with forecasted external transactions) for 2009. Periodically, individual Participants will receive a copy of the AMS that depicts only the maintenance requests that they submitted to ISO New England. Participants that own entitlements in units must contact the Lead Participant to obtain the maintenance schedule for each unit.

# 2009 AMS - DRAFT #4 - DATED DECEMBER 12, 2008

Draft #4 of the 2009 AMS - dated December 12, 2008 reflects all planned maintenance requests for 2009 that have been submitted to the ISO through December 11, 2008. Those generator owners who have not yet submitted their anticipated maintenance schedules for 2009 are encouraged to do so.

# 2009 OPERABLE CAPACITY ANALYSIS

The Operable Capacity Analysis for 2009 presently forecasts the lowest Long Term Operable Capacity Margin, LTOCM, of negative 1,750 MW for weeks beginning May 30<sup>th</sup>, June 6<sup>th</sup>, 13<sup>th</sup>, and 20<sup>st</sup>. Negative capacity margins are also being forecasted for all remaining weeks in June, July and August, with positive capacity margins for the remaining weeks of the year. However, it is possible that additional maintenance that may be added in upcoming editions of the 2009 AMS will reduce those margins.

### Peak Load Exposures (PLE)

The Peak Load Exposures (PLE) for the winter and summer of 2009 are 23,030 MW and 28,480 MW respectively, and reflect the seasonal peak loads based on the 2008 CELT Report.

## Generating Unit Capabilities

Generating unit capabilities are based upon the December 1, 2008 Seasonal Claimed Capabilities report and includes assets receiving credit as part of the Energy Management System (EMS). New unit additions are factored into the New Generation column at the appropriate points in time.

#### Miscellaneous Assumptions

The weekly Total Known Maintenance values include all generation scheduled out-of-service as reflected within this draft of the 2009 AMS.

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Only known capacity-backed (ICAP) contracts have been included in the Interchange column of the 2008 Operable Capacity Analysis. This column combines monthly data, as it becomes available, with contract totals recorded in the 2008 CELT Report.

Allowances for unplanned outages, as documented in ISO New England OP-5, range from 2,100 MW during the summer months to 3,600 MW.

# **External Transmission**

No maintenance of Hydro-Quebec Phase II or Highgate has been included in the analysis.

# Weekly Operating Reserve

The weekly operating reserve is equal to one hundred percent (100%) of the largest contingency plus one-half (50%) of the second-largest contingency.

## Generation at Risk Due to Gas Supply Issues

A column has been included in the Operable Capacity Analysis to reflect natural gas-fired generating capability that may not be available around the time of the winter peak load due to the unavailability of gas.

If you have any questions or comments concerning this edition of the 2008 AMS or Operable Capacity Analysis, please feel free to contact me at (413) 535-4162 or by email at opamoreq@iso-ne.com.

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### 2009 ANNUAL MAINTENANCE SCHEDULE

Edition: Draft #4

Information Received through December 11, 2008 Dates indicate Saturday week beginning

Sorted by Area and Local Control Center 2009 | Dec | January | February | March | M 26 3 10 17 24 31 7 14 21 Plant Name

round planned TOTAL 300 800 500 400 400 600 600 600 300 1300 1900 2200 2900 3100 4900 4900 4500 5600 5600 3600 2200 1300

Page 1 of 1

December

28 5 12 19 26

November

October

# ISO-NE 2009 OPERABLE CAPACITY ANALYSIS

#### December 12, 2008 - WITH KNOWN EXTERNAL CONTRACTS - 50/50 FORECAST

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 exp                         | pected that                                | the system pe              | ak will occur                     | every week du                                   | ring June, July                    | , and Augus  | t  |                           |                                      |   |
|--------------------------|------------|----------|---|--|------|---------------------------------------|--|----------------------------|-----------------------------------|---|------------------------------------|--|--|---------------------------|--------------------------------------|---|
| Week Beginning, Saturday |            |          |   |  |      |                                       |  |                            |                                   |   |                                    |  |  |                           |                                      |   |
| Year                     | Month      | Day      | Installed<br>Seasonal<br>Claimed<br>Capability<br>(SCC)<br>[Note 1] | Net<br>Interchange<br>(NYPP, NB,<br>HQ,<br>Highgate)<br>[Note 2] | Note | New<br>Generation<br>[Note 3]<br>(MW) | De-listed<br>ICAP<br>resources<br>[Note 4] | Net Capacity [Note 5] (MW) | Peak Load<br>Exposure<br>[Note 6] | Operating<br>Reserve<br>Requirement<br>[Note 7] | Total Known<br>Maintenance<br>(MW) | Allowance<br>for<br>Unplanned<br>Outages<br>[Note 8] | Generation at<br>Risk Due to<br>Gas Supply<br>[Note 9] | Total<br>Capacity<br>(MW) | Operable<br>Capacity<br>Margin (+/-) | Extent of OP 4 Actions That May be Necessary (Or 4 Actions up to and including, [Note 10] |
| 2008                     | December   | 27       | 33,321  | 48   | +    | 200                                   | 290  | 33,568                     | 22,549                            | 1,800   | 300                                | 2,000  | 0  | 31,268                    | 6,920                                |   |
| 2009                     | January    | 3        | 33,321  | 48   | H    | 200                                   | 290  | 33,568                     | 23,030                            | 1,800   | 800                                | 2,800  | 0  | 29,968                    | 5,140                                |   |
|                          | January    | 10       | 33,321  | 48   | t    | 200                                   | 290  | 33,568                     | 23,030                            | 1,800   | 500                                | 2,800  | 3,900  | 26,368                    | 1,540                                |   |
|                          |            | 17       | 33,321  | 48   | T    | 200                                   | 290  | 33,568                     | 23,030                            | 1,800   | 400                                | 2,800  | 3,900  | 26,468                    | 1,640                                |   |
|                          |            | 24       | 33,321  | 48   | T    | 200                                   | 290  | 33,568                     | 22,800                            | 1,800   | 400                                | 2,800  | 3,900  | 26,468                    | 1,870                                |   |
|                          |            | 31       | 33,321  | 48   | T    | 200                                   | 290  | 33,568                     | 22,523                            | 1,800   | 600                                | 2,800  | 3,900  | 26,268                    | 1,950                                |   |
| 2009                     | February   | 7        | 33,327  | 48   |      | 200                                   | 290  | 33,578                     | 22,493                            | 1,800   | 600                                | 3,100  | 3,900  | 25,978                    | 1,690                                |   |
|                          |            | 14       | 33,327  | 48   |      | 200                                   | 290  | 33,578                     | 22,222                            | 1,800   | 600                                | 3,100  | 3,900  | 25,978                    | 1,960                                |   |
|                          |            | 21       | 33,327  | 48   | L    | 200                                   | 290  | 33,578                     | 21,199                            | 1,800   | 300                                | 3,100  | 3,900  | 26,278                    | 3,280                                |   |
| 2000                     | Manual     | 28       | 33,327  | 48   | 1    | 200                                   | 290  | 33,578                     | 20,838                            | 1,800   | 1,300                              | 3,100  | 0  | 29,178                    | 6,540                                |   |
| 2009                     | March      | 7        | 33,373<br>33,373  | 48<br>48   | ╄    | 200<br>200                            | 290<br>290                                 | 33,618<br>33,618           | 20,635<br>20,257                  | 1,800<br>1,800                                  | 1,900<br>2,200                     | 2,200<br>2,200                                       | 0  | 29,518<br>29,218          | 7,080<br>7,160                       |   |
|                          |            | 21       | 33,373  | 48   | ╁    | 200                                   | 290  | 33,618                     | 19.672                            | 1,800   | 2,200                              | 2,200  | 0  | 29,218                    | 7,160                                |   |
|                          |            | 28       | 33,373  | 48   | t    | 200                                   | 290  | 33,618                     | 19,072                            | 1,800   | 3,100                              | 2,200  | 0  | 28,318                    | 7,030                                |   |
| 2009                     | April      | 4        | 33,376  | 48   | t    | 300                                   | 290  | 33,728                     | 18,901                            | 1,800   | 4,900                              | 2,700  | 0  | 26,128                    | 5,430                                |   |
|                          |            | 11       | 33,376  | 48   | T    | 300                                   | 290  | 33,728                     | 18,373                            | 1,800   | 4,900                              | 2,700  | 0  | 26,128                    | 5,960                                |   |
|                          |            | 18       | 33,376  | 48   | T    | 300                                   | 290  | 33,728                     | 18,099                            | 1,800   | 4,500                              | 2,700  | 0  | 26,528                    | 6,630                                |   |
|                          |            | 25       | 33,376  | 48   |      | 300                                   | 290  | 33,728                     | 18,072                            | 1,800   | 5,600                              | 2,700  | 0  | 25,428                    | 5,560                                |   |
|                          | May        | 2        | 33,376  | 48   |      | 300                                   | 290  | 33,728                     | 21,517                            | 1,800   | 5,600                              | 3,400  | 0  | 24,728                    | 1,410                                |   |
|                          |            | 9        | 33,376  | 48   |      | 300                                   | 290  | 33,728                     | 22,516                            | 1,800   | 3,600                              | 3,400  | 0  | 26,728                    | 2,410                                |   |
|                          |            | 16       | 33,376  | 48   | 1    | 300                                   | 290  | 33,728                     | 23,445                            | 1,800   | 2,200                              | 3,400  | 0  | 28,128                    | 2,880                                |   |
|                          |            | 23       | 33,376  | 48   | 4    | 300                                   | 290  | 33,728                     | 24,464                            | 1,800   | 1,300                              | 3,400  | 0  | 29,028                    | 2,760                                |   |
| 2009                     | June       | 30<br>6  | 30,981  | 48<br>48   | +    | 300<br>300                            | 290<br>290                                 | 31,328<br>31,328           | 28,480<br>28,480                  | 1,800<br>1,800                                  | 0                                  | 2,800<br>2,800                                       | 0  | 28,528                    | (1,750)                              | Action 11   |
|                          | June       | 13       | 30,981<br>30,981  | 48   | ╁    | 300                                   | 290  | 31,328                     | 28,480                            | 1,800   | 0                                  | 2,800  | 0  | 28,528<br>28,528          | (1,750)<br>(1,750)                   | Action 11<br>Action 11  |
|                          |            | 20       | 30,981  | 48   | t    | 300                                   | 290  | 31,328                     | 28,480                            | 1,800   | 0                                  | 2,800  | 0  | 28,528                    | (1,750)                              | Action 11   |
|                          |            | 27       | 30,890  | 48   | t    | 300                                   | 290  | 31,238                     | 28,480                            | 1,800   | 0                                  | 2,100  | 0  | 29,138                    | (1,140)                              | Action 9  |
|                          | July       | 4        | 30,890  | 48   | T    | 400                                   | 290  | 31,338                     | 28,480                            | 1,800   | 0                                  | 2,100  | 0  | 29,238                    | (1,040)                              | Action 9  |
|                          | ,          | 11       | 30,890  | 48   | T    | 400                                   | 290  | 31,338                     | 28,480                            | 1,800   | 0                                  | 2,100  | 0  | 29,238                    | (1,040)                              | Action 9  |
|                          |            | 18       | 30,890  | 48   |      | 400                                   | 290  | 31,338                     | 28,480                            | 1,800   | 0                                  | 2,100  | 0  | 29,238                    | (1,040)                              | Action 9  |
|                          |            | 25       | 30,890  | 48   |      | 400                                   | 290  | 31,338                     | 28,480                            | 1,800   | 0                                  | 2,100  | 0  | 29,238                    | (1,040)                              | Action 9  |
| 2009                     | August     | 1        | 30,890  | 48   |      | 400                                   | 290  | 31,338                     | 28,480                            | 1,800   | 0                                  | 2,100  | 0  | 29,238                    | (1,040)                              | Action 9  |
|                          |            | 8        | 30,859  | 48   | L    | 400                                   | 290  | 31,308                     | 28,480                            | 1,800   | 0                                  | 2,100  | 0  | 29,208                    | (1,070)                              | Action 9  |
|                          |            | 15       | 30,859  | 48   | 4    | 400                                   | 290  | 31,308                     | 28,480                            | 1,800   | 0                                  | 2,100  | 0  | 29,208                    | (1,070)                              | Action 9  |
|                          |            | 22       | 30,859  | 48   | +    | 400                                   | 290  | 31,308                     | 28,480                            | 1,800   | 0                                  | 2,100  | 0  | 29,208                    | (1,070)                              | Action 9  |
| 2009                     | September  | 29<br>5  | 30,859<br>30,852  | 48<br>48   | ╀    | 400<br>400                            | 290<br>290                                 | 31,308<br>31,298           | 26,190<br>24,775                  | 1,800<br>1,800                                  | 100<br>300                         | 2,100<br>2,100                                       | 0  | 29,108<br>28,898          | 1,120<br>2,320                       | -   |
| 2003                     | September  | 12       | 30,852  | 48   | ۲    | 400                                   | 290  | 31,298                     | 24,775                            | 1,800   | 1,300                              | 2,100  | 0  | 27,898                    | 1,700                                |   |
|                          |            | 19       | 30,852  | 48   | t    | 400                                   | 290  | 31,298                     | 24,399                            | 1,800   | 1,800                              | 2,100  | 0  | 27,398                    | 1,700                                |   |
|                          |            | 26       | 30,852  | 48   | t    | 400                                   | 290  | 31,298                     | 18,337                            | 1,800   | 4,400                              | 2,100  | 0  | 24,798                    | 4,660                                |   |
| 2009                     | October    | 3        | 30,852  | 48   | T    | 400                                   | 290  | 31,298                     | 18,374                            | 1,800   | 5,600                              | 2,800  | 0  | 22,898                    | 2,720                                |   |
|                          |            | 10       | 33,377  | 48   | İ    | 400                                   | 290  | 33,828                     | 19,344                            | 1,800   | 5,700                              | 2,800  | 0  | 25,328                    | 4,180                                |   |
|                          |            | 17       | 33,377  | 48   |      | 400                                   | 290  | 33,828                     | 19,726                            | 1,800   | 5,000                              | 2,800  | 0  | 26,028                    | 4,500                                |   |
|                          |            | 24       | 33,377  | 48   | Г    | 400                                   | 290  | 33,828                     | 19,943                            | 1,800   | 4,200                              | 2,800  | 0  | 26,828                    | 5,090                                |   |
|                          |            | 31       | 33,377  | 48   | L    | 400                                   | 290  | 33,828                     | 20,065                            | 1,800   | 3,300                              | 3,600  | 0  | 26,928                    | 5,060                                |   |
| 2009                     | November   | 7        | 33,437  | 48   | ╄    | 400                                   | 290  | 33,888                     | 20,426                            | 1,800   | 3,300                              | 3,600  | 0  | 26,988                    | 4,760                                |   |
|                          |            | 14       | 33,437  | 48   | ╄    | 400                                   | 290  | 33,888                     | 21,200                            | 1,800   | 2,300                              | 3,600  | 0  | 27,988                    | 4,990                                | -   |
|                          |            | 21<br>28 | 33,437<br>33,437  | 48<br>48   | ╀    | 400<br>400                            | 290<br>290                                 | 33,888<br>33,888           | 21,956<br>22,166                  | 1,800<br>1,800                                  | 900<br>1,100                       | 3,600<br>3,600                                       | 0  | 29,388<br>29,188          | 5,630<br>5,220                       | -   |
|                          | December   |          | 33,431  | 48   | ۲    | 400                                   | 290  | 33,878                     | 22,166                            | 1,800   | 1,100                              | 3,200  | 0  | 30.578                    | 6,310                                |   |
| 2009                     | Pecellinel | 12       | 33,431  | 48   | t    | 400                                   | 290  | 33,878                     | 22,480                            | 1,800   | 100                                | 3,200  | 0  | 30,578                    | 6,300                                |   |
|                          | -          | 10       | 22,424  | 40   | ┿    | 100                                   | 200  | 00,070                     | 22, .00                           | 1,000   |                                    | 0,200  | <u> </u>   | 30,678                    | 0,000                                | <b> </b>  |

26 33.431 48 400 290 33,878 22,265 1,800 Notes: Please note that the information contained within the Capacity Analysis is a deterministic projection of system conditions which could materialize during any given week of the year

- 1. Installed Capability per the December 1, 2008 SCC report, Energy Management System units, with an adjustment for capability increases and decreases expected during the analysis period (SCC = Seasonal Claimed Capability). The Operable Capability does not reflect possible transmission constraints within the ISO New England system.
- 2. Net Interchange is based on known capacity-backed (ICAP) contracts. This column combines monthly data, as it becomes available, with contract totals recorded in the 2008 Capacity, Energy, Loads, and Transmission - CELT Report.
- 3. New Generation information includes a) generation recently commercial but not yet reflected in the ISO New England SCC Report totals used in the Installed Capability Column, and b) future generation as assumed by ISO-NE System Planning Department. This value is rounded to the nearest hundred.

1 OF 1

3,200

3 200

- 4. Delisted capacity is only known for the current month. Projections are based on known delisted capacity sales.
- 5. Net Capacity = (SCC) + (Interchange) + (New Generation) (Delisted ICAP Sold) In this equation, values for SCC, Interchange and De-listed ICAP sold are rounded to the nearest ten (SCC = Seasonal Claimed Capability).
- 6. Peak Load Exposure per data to be included in the 2008 CELT Report.
- Operating Reserve Requirement based on first largest contingency plus 1/2 the second largest contingency.
   Allowance for Unplanned Outages includes forced outages and maintenance outages scheduled less than 14 days in advance.
- 9. Generation at Risk due to Gas Supply reflects dual fuel conversions scheduled to be complete prior to the upcoming winter.

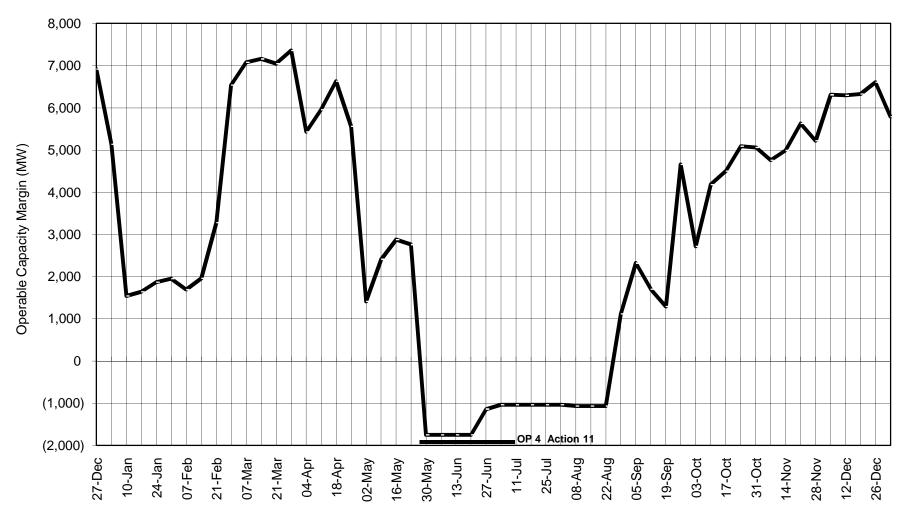
19 33,431 48 400 290 33,878 22,546 1,800

10. Relief from certain OP 4 Actions varies depending on system conditions.

30,678 6,330

30 678 6 610

# New England Operable Capacity Margins WITH KNOWN EXTERNAL TRANSACTIONS - 50/50 FORECAST



January - December 2009, W/B Saturday