



**Richard Boughton**  
Outage Coordination

To: NEPOOL Participants

From: Richard Boughton

**Subject: 2011-12 First Future Year Annual Maintenance Schedule – Draft #2**

Date: April 15, 2011

Following this transmittal letter, you will find the 2011-12 Annual Maintenance Schedule (AMS) – Draft #2 dated April 15, 2011, with rounded weekly planned outage totals only, and an Operable Capacity Analysis (with forecasted external transactions) for June 2011 through May 2012. This schedule covers the second Forward Capacity Market procurement period. 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.

**2011-12 AMS – DRAFT #2 - DATED APRIL 15, 2011**

Draft #2 of the 2011-12 AMS - dated April 15, 2011 reflects all planned maintenance requests for June 2011- May 2012 that have been submitted to the ISO through April 13, 2011. Those generator owners who have not yet submitted their anticipated maintenance schedules for Procurement Period 2011-12 are encouraged to do so.

**2011-12 OPERABLE CAPACITY ANALYSIS**

The Operable Capacity Analysis for June 2011 through May 2012 presently forecasts the lowest Long Term Operable Capacity Margin, LTOCM, of negative 2,680 MW for week beginning June 4<sup>th</sup>.

**Peak Load Exposures (PLE)**

After being adjusted for Other Demand Resources, ODR, the Peak Load Exposure (PLE) for the summer and winter of 2011-12 is 26,776 MW, and reflects the seasonal peak load based on the 2011 CELT Report.

**Generating Unit Capabilities**

Resource Capacity Supply Obligations, CSO, are based upon data as of April 13, 2011 and includes Energy Management System (EMS) assets. 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 2011-12 AMS.

**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 during the winter and summer months.

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 2011-12 AMS or Operable Capacity Analysis, If you have any comments or suggestions please feel free to contact Richard Boughton at (413) 540-4752 or Joanne Bialas at (413) 535-4162 or Rachel Wilkins-Thurman (413) 540-4261 or by email at opamoreq@iso-ne.com.

# ISO-NE 2010 OPERABLE CAPACITY ANALYSIS

April 15, 2011 - 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 expected that the system peak will occur every week during June, July, and August

STUDY WEEK (Week Beginning, Saturday)	OPCAP SUPPLY							LOAD OBLIGATIONS			OPCAP MARGINS				
	AVAILABLE OPCAP MW	EXTERNAL NODE AVAIL. CAPACITY MW	NON COMM.CA PACITY MW	PLANNED OUTAGES	ALLOWANCE FOR UNPLANNED OUTAGES MW	GEN AT RISK DUE TO GAS SUP MW	NET OPCAP SUPPLY MW	PEAK LOAD FORECAST MW	OPER RESERVE REQUIREME NT MW	NET LOAD OBLIGATIO N 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]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]
5/28/2011	28,476	939	0	476	2,800	0	26,140	26,766	2,000	28,766	(2,630)	550	(2,080)	375	(1,705)
6/4/2011	28,481	939	0	532	2,800	0	26,090	26,766	2,000	28,766	(2,680)	550	(2,130)	375	(1,755)
6/11/2011	28,481	939	0	505	2,800	0	26,120	26,766	2,000	28,766	(2,650)	550	(2,100)	375	(1,725)
6/18/2011	28,481	939	0	505	2,800	0	26,120	26,766	2,000	28,766	(2,650)	550	(2,100)	375	(1,725)
6/25/2011	28,325	939	0	255	2,800	0	26,210	26,766	2,000	28,766	(2,560)	550	(2,010)	375	(1,635)
7/2/2011	28,328	939	0	193	2,100	0	26,970	26,766	2,000	28,766	(1,800)	550	(1,250)	375	(875)
7/9/2011	28,333	939	0	226	2,100	0	26,950	26,766	2,000	28,766	(1,820)	550	(1,270)	375	(895)
7/16/2011	28,339	939	0	226	2,100	0	26,950	26,766	2,000	28,766	(1,820)	550	(1,270)	375	(895)
7/23/2011	28,328	939	0	242	2,100	0	26,930	26,766	2,000	28,766	(1,840)	550	(1,290)	375	(915)
7/30/2011	28,335	939	0	211	2,100	0	26,960	26,766	2,000	28,766	(1,810)	550	(1,260)	375	(885)
8/6/2011	28,331	939	0	201	2,100	0	26,970	26,766	2,000	28,766	(1,800)	550	(1,250)	375	(875)
8/13/2011	28,330	939	0	200	2,100	0	26,970	26,766	2,000	28,766	(1,800)	550	(1,250)	375	(875)
8/20/2011	28,333	939	0	224	2,100	0	26,950	26,766	2,000	28,766	(1,820)	550	(1,270)	375	(895)
8/27/2011	28,339	939	0	219	2,100	0	26,960	26,766	2,000	28,766	(1,810)	550	(1,260)	375	(885)
9/3/2011	28,338	939	0	269	2,100	0	26,910	26,766	2,000	28,766	(1,860)	550	(1,310)	375	(935)
9/10/2011	28,353	939	0	838	2,100	0	26,350	26,766	2,000	28,766	(2,420)	550	(1,870)	375	(1,495)
9/17/2011	28,605	939	0	2,365	2,100	0	25,080	22,818	2,000	24,818	260	550	810	375	1,185
9/24/2011	28,770	939	0	3,519	2,100	0	24,090	22,727	2,000	24,727	(640)	550	(90)	375	285
10/1/2011	30,470	493	0	5,771	2,800	0	22,390	16,715	2,000	18,715	3,670	550	4,220	375	4,595
10/8/2011	30,406	493	0	7,124	2,800	0	20,970	16,751	2,000	18,751	2,220	550	2,770	375	3,145
10/15/2011	30,628	493	0	8,108	2,800	0	20,210	17,677	2,000	19,677	530	550	1,080	375	1,455
10/22/2011	30,542	493	0	7,066	2,800	0	21,170	18,042	2,000	20,042	1,130	550	1,680	375	2,055
10/29/2011	30,404	493	0	6,497	3,600	0	20,800	18,248	2,000	20,248	550	550	1,100	375	1,475
11/5/2011	30,304	493	0	5,483	3,600	0	21,710	18,364	2,000	20,364	1,350	550	1,900	375	2,275
11/12/2011	30,240	493	0	4,147	3,600	0	22,990	18,709	2,000	20,709	2,280	550	2,830	375	3,205
11/19/2011	29,946	493	0	2,351	3,600	0	24,490	19,448	2,000	21,448	3,040	550	3,590	375	3,965
11/26/2011	29,848	493	0	2,313	3,600	0	24,430	20,169	2,000	22,169	2,260	550	2,810	375	3,185
12/3/2011	30,005	493	0	2,265	3,200	0	25,030	20,383	2,000	22,383	2,650	550	3,200	375	3,575
12/10/2011	29,901	493	0	1,133	3,200	0	26,060	20,673	2,000	22,673	3,390	550	3,940	375	4,315
12/17/2011	29,806	493	0	758	3,200	0	26,340	20,684	2,000	22,684	3,660	550	4,210	375	4,585
12/24/2011	29,806	493	0	758	3,200	0	26,340	20,746	2,000	22,746	3,590	550	4,140	375	4,515
12/31/2011	29,775	493	0	564	2,800	0	26,900	21,020	2,000	23,020	3,880	550	4,430	375	4,805
1/7/2012	29,775	493	0	564	2,800	0	26,900	21,485	2,000	23,485	3,410	550	3,960	375	4,335
1/14/2012	29,774	493	0	562	2,800	0	26,900	21,485	2,000	23,485	3,410	550	3,960	375	4,335
1/21/2012	29,774	493	0	562	2,800	0	26,900	21,485	2,000	23,485	3,410	550	3,960	375	4,335
1/28/2012	29,652	493	0	270	3,100	0	26,770	21,262	2,000	23,262	3,510	550	4,060	375	4,435
2/4/2012	29,690	493	0	519	3,100	0	26,560	20,995	2,000	22,995	3,560	550	4,110	375	4,485
2/11/2012	29,690	493	0	519	3,100	0	26,560	20,966	2,000	22,966	3,590	550	4,140	375	4,515
2/18/2012	29,690	493	0	519	3,100	0	26,560	20,704	2,000	22,704	3,860	550	4,410	375	4,785
2/25/2012	29,690	493	0	519	3,100	0	26,560	19,716	2,000	21,716	4,840	550	5,390	375	5,765
3/3/2012	29,716	493	0	683	2,200	0	27,330	19,366	2,000	21,366	5,960	550	6,510	375	6,885
3/10/2012	29,695	493	0	957	2,200	0	27,030	19,170	2,000	21,170	5,860	550	6,410	375	6,785
3/17/2012	29,657	493	0	707	2,200	0	27,240	18,806	2,000	20,806	6,430	550	6,980	375	7,355
3/24/2012	29,693	493	0	954	2,200	0	27,030	18,240	2,000	20,240	6,790	550	7,340	375	7,715
3/31/2012	29,617	493	0	1,656	2,700	0	25,750	17,732	2,000	19,732	6,020	550	6,570	375	6,945
4/7/2012	29,488	493	0	517	2,700	0	26,760	17,481	2,000	19,481	7,280	550	7,830	375	8,205
4/14/2012	29,488	493	0	517	2,700	0	26,760	16,971	2,000	18,971	7,790	550	8,340	375	8,715
4/21/2012	29,566	493	0	1,078	2,700	0	26,280	16,706	2,000	18,706	7,570	550	8,120	375	8,495
4/28/2012	29,566	493	0	1,078	3,400	0	25,580	16,680	2,000	18,680	6,900	550	7,450	375	7,825
5/5/2012	29,495	493	0	541	3,400	0	26,050	20,442	2,000	22,442	3,610	550	4,160	375	4,535
5/12/2012	29,498	493	0	667	3,400	0	25,920	21,428	2,000	23,428	2,490	550	3,040	375	3,415
5/19/2012	29,466	493	0	173	3,400	0	26,390	22,344	2,000	24,344	2,050	550	2,600	375	2,975
5/26/2012	29,453	493	0	0	3,400	0	26,550	23,350	2,000	25,350	1,200	550	1,750	375	2,125

1. Available OPCAP MW based on resource Capacity Supply Obligations, CSO, from Forward Capacity Tracking System, FCTS. Does not include Settlement Only Generators. (separate LTOCM run without any generator outages, tab Case Output-System Results-column LZ EXPORT LTD AVAIL OPCAP MW)
2. External Node Available Capacity MW based on external Capacity Supply Obligations, CSO. (LTOCM application Case Output-System Results-EXTERNAL NODE AVAIL OPCAP MW)
3. New resources that have not yet acquired a CSO but will become commercial in the future.
4. Planned Outages includes outages scheduled greater than or equal to 15 days in advance.
5. Allowance for Unplanned Outages includes forced outages and maintenance outages scheduled less than 14 days in advance per ISO New England System Operating Procedure OUTSCH.0030.0040, Perform Generation Outage Coordination - Long Term (LTOCM application Case Output-System Results-UNPLANNED OUTAGES MW)
6. Generation at Risk due to Gas Supply pertains to gas fired capacity expected to be at risk during cold weather conditions. (LTOCM application Case Output-System Results-GEN RISK DUE TO GAS SUP MW)
7. Total OpCap Supply Available per the formula (1 + 2 + 3 - 4 - 5 - 6 = 7)
8. Peak Load Forecast per data included in the 2011 CELT Report adjusted for Other Demand Resources. (LTOCM application-Case Output-System Results-LOAD FORECAST MW)
9. Operating Reserve Requirement based on first largest contingency plus 1/2 the second largest contingency. (LTOCM application Case Output-System Results-OPER RESERVE REQUIREMENT MW)
10. Total Load Obligation per the formula (8 + 9 = 10)
11. Net OPCAP Supply minus Net Load Obligation (7 - 10 = 11)
12. OP 4 Action 2 Real-time Demand Response based on OP 4 Appendix A. Reserve Margins and Distribution Loss Factor Gross Ups are Included.
13. OPCAP Margin taking into account Real Time Demand Response through OP 4 Step 2 (11 + 12 = 13).
14. OP 4 Action 6 Emergency Generation Response without the Voltage Reduction requiring > 10 Minutes based on OP 4 Appendix A. Real Time Emergency Generation is capped at 600MW.
15. OPCAP Margin taking into account Real Time Demand Response and Real Time Emergency Generation through OP 4 Step 6 (13 + 14 = 15). This does not include Emergency Energy Transactions (EETs).

New England Operable Capacity Margins  
50/50 FORECAST

