

#### **Rachel Wilkins-Thurman**

**Outage Coordination** 

To: NEPOOL Participants

From: Rachel Wilkins-Thurman

Subject: 2011-12 Current Year Annual Maintenance Schedule

Date: June 27, 2011

Following this transmittal letter, you will find the 2011-12 Annual Maintenance Schedule (AMS) – dated June 27, 2011, with rounded weekly planned outage totals only, and an Operable Capacity Analysis (with forecasted external transactions) for end of June 2011 through May 31, 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 - DATED JUNE 27, 2011**

The 2011-12 AMS - dated June 27, 2011 reflects all planned maintenance requests for end of June 2011- May 31, 2012 that have been submitted to the ISO through June 23, 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 end of June 2011 through May 31, 2012 presently forecasts the lowest Long Term Operable Capacity Margin, LTOCM, of negative 2,320 MW for week beginning September 10<sup>th</sup>. The overall margin has become less negative since new resources have been added to the overall available capacity since the last publication.

#### 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 June 23, 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 Rachel Wilkins-Thurman (413) 540-4261 or Richard Boughton at (413) 540-4752 or by email at opamoreq@iso-ne.com.

# **ISO-NE 2011 OPERABLE CAPACITY ANALYSIS**

#### June 27 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.

	OPCAP SUPPLY							LOAD OBLIGATIONS			OPCAP MARGINS					
STUDY WEEK (Week Beginning,	AVAILABLE OPCAP MW	EXTERNAL NODE AVAIL CAPACITY MW	NON COMMERCIAL CAPACITY 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 OBLIGATION MW	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	
Saturday)	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15] 325	
6/25/2011	29,265	1,223	0	220	2,100	0	28,170	26,766	2,000	28,766	(600)	550	(50)	375		
7/2/2011	29,266	1,223	0	222	2,100	0	28,170	26,766	2,000	28,766	(600)	550	(50)	375	325	
7/9/2011	29,270	1,223	0	255	2,100	0	28,140	26,766	2,000	28,766	(630)	550	(80)	375	295	
7/16/2011	29,279	1,223	0	275	2,100	0	28,130	26,766	2,000	28,766	(640)	550	(90)	375	285	
7/23/2011	29,280	1,223	0	261	2,100	0	28,140	26,766	2,000	28,766	(630)	550	(80)	375	295	
7/30/2011	28,591	1,223	0	236	2,100	0	27,480	26,766	2,000	28,766	(1,290)	550	(740)	375	(365)	
8/6/2011	28,586	1,223	0	229	2,100	0	27,480	26,766	2,000	28,766	(1,290)	550	(740)	375	(365)	
8/13/2011	28,580	1,223	0	223	2,100	0	27,480	26,766	2,000	28,766	(1,290)	550	(740)	375	(365)	
8/20/2011	28,583	1,223	0	236	2,100	0	27,470	26,766	2,000	28,766	(1,300)	550	(750)	375	(375)	
8/27/2011	28,528	1,223	0	244	2,100	0	27,410	26,766	2,000	28,766	(1,360)	550	(810)	375	(435)	
9/3/2011	28,532	1,223	0	430	2,100	0	27,230	26,766	2,000	28,766	(1,540)	550	(990)	375	(615)	
9/10/2011	28,574	1,223	0	1,250	2,100	0	26,450	26,766	2,000	28,766	(2,320)	550	(1,770)	375	(1,395)	
9/17/2011	28,819	1,223	0	2,361	2,100	0	25,580	22,818	2,000	24,818	760	550	1,310	375	1,685	
9/24/2011	28,902	1,223	0	3,498	2,100	0	24,530	22,727	2,000	24,727	(200)	550	350	375	725	
10/1/2011	30,599	493	0	6,163	2,800	0	22,130	16,715	2,000	18,715	3,410	550	3,960	375	4,335	
10/8/2011	30,734	493	0	8,216	2,800	0	20,210	16,751	2,000	18,751	1,460	550	2,010	375	2,385	
10/15/2011	30,904	493	0	7,828	2,800	0	20,770	17,677	2,000	19,677	1,090	550	1,640	375	2,015	
10/22/2011	30,585	493	0	6,425	2,800	0	21,850	18,042	2,000	20,042	1,810	550	2,360	375	2,735	
10/29/2011	30,368	493	0	6,321	3,600	0	20,940	18,248	2,000	20,248	690	550	1,240	375	1,615	
11/5/2011	30,282	493	0	5,385	3,600	0	21,790	18,364	2,000	20,364	1,430	550	1,980	375	2,355	
11/12/2011	30,079	493	0	3,863	3,600	0	23,110	18,709	2,000	20,709	2,400	550	2,950	375	3,325	
11/19/2011	29,797	493	0	1,582	3,600	0	25,110	19,448	2,000	21,448	3,660	550	4,210	375	4,585	
11/26/2011	29,833	493	0	2,096	3,600	0	24,630	20,169	2,000	22,169	2,460	550	3,010	375	3,385	
12/3/2011	29,979	493	0	2,069	3,200	0	25,200	20,383	2,000	22,383	2,820	550	3,370	375	3,745	
12/10/2011	29,885	493	0	993	3,200	0	26,180	20,673	2,000	22,673	3,510	550	4,060	375	4,435	
12/17/2011	29,780	493	0	572	3,200	0	26,500	20,684	2,000	22,684	3,820	550	4,370	375	4,745	
12/24/2011	29,780	493	0	562	3,200	0	26,510	20,746	2,000	22,746	3,760	550	4,310	375	4,685	
12/31/2011	29,780	493	0	562	2,800	0	26,910	21,020	2,000	23,020	3,890	550	4,440	375	4,815	
1/7/2012	29,780	493	0	564	2,800	2,000	24,910	21,485	2,000	23,485	1,420	550	1,970	375	2,345	
1/14/2012	29,780	493	0	564	2,800	2,000	24,910	21,485	2,000	23,485	1,420	550	1,970	375	2,345	
1/21/2012	29,780	493	0	564	2.800	2.000	24,910	21,485	2,000	23,485	1,420	550	1,970	375	2,345	
1/28/2012	29,765	493	0	564	3,100	2,000	24,590	21,262	2,000	23,262	1,330	550	1,880	375	2,255	
2/4/2012	29,695	493	0	519	3,100	2,000	24,570	20,995	2,000	22,995	1,570	550	2,120	375	2,495	
2/11/2012	29,695	493	0	519	3,100	2,000	24,570	20,966	2,000	22,966	1,600	550	2,150	375	2,525	
2/18/2012	29,703	493	0	530	3,100	2,000	24,570	20,704	2,000	22,704	1,870	550	2,420	375	2,795	
2/25/2012	29,695	493	0	519	3,100	0	26,570	19,716	2,000	21,716	4,850	550	5,400	375	5,775	
3/3/2012	29,721	493	0	683	2,200	0	27,330	19,710	2,000	21,710	5,960	550	6,510	375	6,885	
3/10/2012	29,721	493	0	957	2,200	0	27,040	19,170	2,000	21,170	5,870	550	6,420	375	6,795	
3/17/2012	29,663	493	0	707	2,200	0	27,250	18,806	2,000	20,806	6,440	550	6,990	375	7,365	
3/24/2012	29,698	493	0	954	2,200	0	27,250	18,240	2,000	20,806	6,800	550	7,350	375	7,725	
3/24/2012	29,623	493	0	1,656	2,700	0	25,760	17,732	2,000	19,732	6,030	550	6,580	375	6,955	
3/31/2012 4/7/2012	29,623	493	0	517	2,700		25,760	17,732	2,000		7,290	550		375	1	
			0			0	,		,	19,481		550 550	7,840		8,215	
4/14/2012	29,494	493		535	2,700		26,750	16,971	2,000	18,971	7,780		8,330	375	8,705	
4/21/2012	29,573	493	0	1,093	2,700	0	26,270	16,706	2,000	18,706	7,560	550	8,110	375	8,485	
4/28/2012	29,575	493	0	1,178	3,400	0	25,490	16,680	2,000	18,680	6,810	550	7,360	375	7,735	
5/5/2012	29,500	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	29,505	493	0	669	3,400	0	25,930	21,428	2,000	23,428	2,500	550	3,050	375	3,425	
5/19/2012	29,474	493	0	175	3,400	0	26,390	22,344	2,000	24,344	2,050	550	2,600	375	2,975	
5/26/2012	29,458	493	0	0	3,400	0	26,550	23,350	2,000	25,350	1,200	550	1,750	375	2,125	

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## **ISO-NE 2011 OPERABLE CAPACITY ANALYSIS**

#### June 27 2011 - 50/50 FORECAST

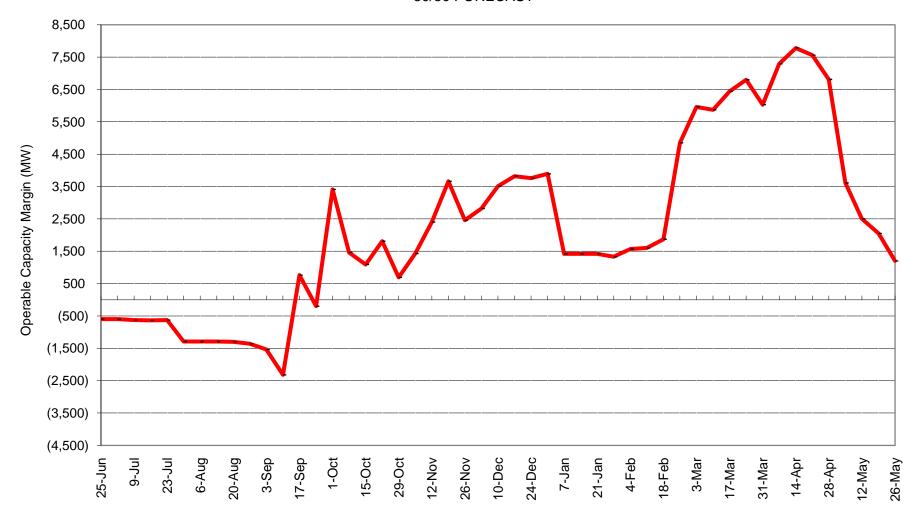
This analysis is a tabulation of weekly assessments shown in one single table. The information shows the operable capacity situation under assumed conditions for each week. It is not expected that the system peak will occur every week during June, July, and August.

	OPCAP SUPPLY								LOAD OBLIGATIONS			OPCAP MARGINS					
															OPCAP		
															MARGIN w/		
													OPCAP		OP4		
		EXTERNAL			ALLOWANCE	GEN AT			OPER			OPCAP FROM	MARGIN w/	OPCAP FROM	actions		
		NODE AVAIL	NON		FOR	RISK DUE		PEAK LOAD	RESERVE	NET LOAD		OP4 ACTIVE	OP4 actions	OP4 REAL-	through		
STUDY WEEK	AVAILABLE	CAPACITY	COMMERCIAL	PLANNED	UNPLANNED	TO GAS	NET OPCAP	FORECAST	REQUIREME	OBLIGATION	OPCAP MARGIN	REAL-TIME DR	through OP4	TIME EMER.	OP4 Step 6		
(Week Beginning,	OPCAP MW	MW	CAPACITY MW	OUTAGES	<b>OUTAGES MW</b>	SUP MW	SUPPLY MW	MW	NT MW	MW	MW	MW	Step 2 MW	GEN MW	MW		

- 1. Available OPCAP MW based on resource Capacity Supply Obligations, CSO, from Forward Capacity Tracking System, FCTS. Does not include Settlement Only Generators.
- ( LTOCM application Case Output-System Results-column PreOutage CSO 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+ ZONAL EXPORT LIMITATIONS 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 Operating Procedure No. 5 Appendix A.
- (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 OP4 Appendix A. Reserve Margins and Distribution Loss Factor Gross Ups are Included.
- 13. OPCAP Margin taking into account Real Time Demand Response through OP4 Step 2 (11 + 12 = 13).
- 14. OP 4 Action 6 Emergency Generation Response without the Voltage Reduction requiring > 10 Minutes based on OP4 Appendix A. Real Time Emergency Generation is capped at 600MW.
- Reserve Margins and Distribution Loss Factor Gross Ups are Included.
- 15. OPCAP Margin taking into account Real Time Demand Response and Real Time Emergency Generation through OP4 Step 6 (13 + 14 = 15). This does not include Emergency Energy Transactions (EETs).

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# New England Operable Capacity Margins 50/50 FORECAST



June 2011 - May 2012, W/B Saturday