

#### Joanne Bialas

**Outage Coordination** 

To: NEPOOL Participants

From: Joanne Bialas

### Subject: 2013-14 Current Year Annual Maintenance Schedule

Date: June 5, 2013

Following this transmittal letter, you will find the 2013-14 Annual Maintenance Schedule (AMS) dated June 5, 2013 with an Operable Capacity Analysis (with forecasted external transactions) for June 8, 2013 - May 31, 2014. This schedule covers the fourth 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.

#### 2013-14 AMS- DATED June 5, 2013

The 2013-14 AMS - dated June 5, 2013 reflects all planned maintenance requests and also includes any known long-term Forced Outages for June 8, 2013 - May 31, 2014 that have been submitted to the ISO through June 3, 2013. Those generator owners who have not yet submitted their anticipated maintenance schedules for Procurement Period 2013-14 are encouraged to do so.

#### 2013-14 OPERABLE CAPACITY ANALYSIS

The Operable Capacity Analysis for June 8, 2013 - May 31, 2014 presently forecasts the lowest Long Term Operable Capacity Margin, LTOCM, of negative 2,962 MW for week beginning June 8<sup>th</sup>. The overall margin has become less positive since resources have been removed 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 2013-14 is 26,690 MW and 21,299 MW respectively, and reflects the seasonal peak load based on the 2013 CELT Report.

#### Generating Unit Capabilities

Resource Capacity Supply Obligations, CSO, are based upon data as of May 28, 2013 and include Energy Management System (EMS) assets. New unit additions are factored into the New Generation column at the appropriate points in time.

#### <u>Interchange</u>

Only external resources with a Capacity Supply Obligation, CSO, are represented in the analysis.



## **Unplanned Outage Allotment**

Allowances for unplanned outages, as documented in ISO New England SOP-OUTSCH.0030.0040 range from 2,700 MW to 3,400 MW during the winter and summer months.

#### **External Transmission**

Maintenance outages of Hydro-Quebec Phase II and Highgate are included in the analysis when the Capacity Supply Obligation (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.

## 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 due to the unavailability of gas.

If you have any questions or comments concerning this edition of the 2013-14 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.

## **ISO-NE 2013-14 OPERABLE CAPACITY ANALYSIS**

June 5, 2013 - 50/50- FORECAST - CSO

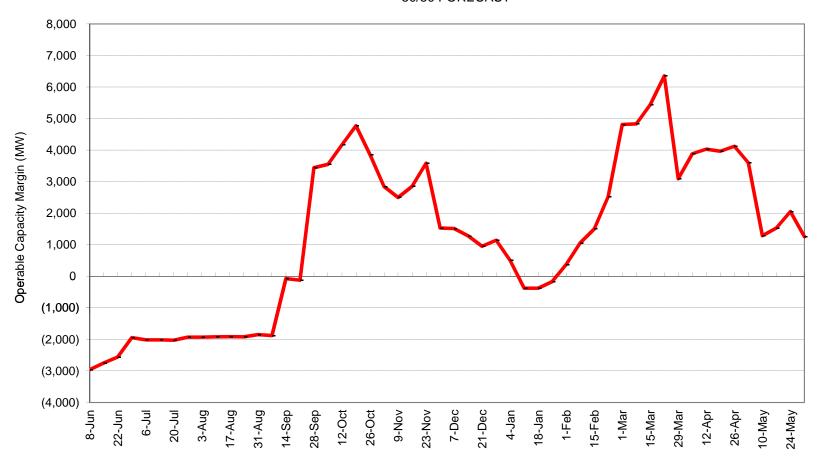
rino analysis is	a tabulation of weekly assessments shown in one single table. The information shows the operable capacity situation under ass OPCAP SUPPLY								LOAD OBLIGATIONS			ne system peak will occur every week during June, July, and August and Mid September.  OPCAP MARGINS				
STUDY WEEK (Week Beginning,	AVAILABLE OPCAP MW	EXTERNAL NODE AVAIL CAPACITY MW	NON COMMERCIA L 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	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	
Saturday)	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	
06/08/2013	29,520	1,258	50	1,925	2,800	0	26,103	26,690	2,375	29,065	(2,962)	355	(2,607)	170	(2,437)	
06/15/2013	29,520	1,258	50	1,712	2,800	0	26,316	26,690	2,375	29,065	(2,749)	355	(2,394)	170	(2,224)	
06/22/2013	29,520	1,258	50	1,522	2,800	0	26,506	26,690	2,375	29,065	(2,559)	355	(2,204)	170	(2,034)	
06/29/2013	29,458	1,039	50	1,328	2,100	0	27,119	26,690	2,375	29,065	(1,946)	428	(1,518)	234	(1,284)	
07/06/2013	29,458	1,039	50	1,399	2,100	0	27,048	26,690	2,375	29,065	(2,017)	428	(1,589)	234	(1,355)	
07/13/2013	29,458	1,039	50	1,399	2,100	0	27,048	26,690	2,375	29,065	(2,017)	428	(1,589)	234	(1,355)	
07/20/2013	29,458	1,039	50	1,407	2,100	0	27,040	26,690	2,375	29,065	(2,025)	428	(1,597)	234	(1,363)	
07/27/2013	29,419	1,183	50	1,416	2,100	0	27,136	26,690	2,375	29,065	(1,929)	467	(1,462)	234	(1,228)	
08/03/2013	29,419	1,183	50	1,416	2,100	0	27,136	26,690	2,375	29,065	(1,929)	467	(1,462)	234	(1,228)	
08/10/2013	29,419	1,183	50	1,405	2,100	0	27,147	26,690	2,375	29,065	(1,918)	467	(1,451)	234	(1,217)	
08/17/2013	29,419	1,183	50	1,402	2,100	0	27,150	26,690	2,375	29,065	(1,915)	467	(1,448)	234	(1,214)	
08/24/2013	29,419	1,183	50	1,407	2,100	0	27,145	26,690	2,375	29,065	(1,920)	467	(1,453)	234	(1,219)	
08/31/2013	29,419	1,183	50	1,336	2,100	0	27,216	26,690	2,375	29,065	(1,849)	467	(1,382)	234	(1,148)	
09/07/2013	29,419	1,183	50	1,366	2,100	0	27,186	26,690	2,375	29,065	(1,879)	467	(1,412)	234	(1,178)	
09/14/2013	29,419	803	50	3,168	2,100	0	25,004	22,701	2,375	25,076	(72)	467	395	234	629	
09/21/2013	29,419	1,183	50	3,692	2,100	0	24,860	22,609	2,375	24,984	(124)	467	343	234	577	
09/28/2013	29,560	1,183	50	5,678	2,800	0	22,315	16,499	2,375	18,874	3,441	467	3,908	234	4,142	
10/05/2013	29,560	1,183	50	5,537	2,800	0	22,456	16,534	2,375	18,909	3,547	467	4,014	234	4,248	
10/12/2013	29,560	1,183	50	3,979	2,800	0	24,014	17,468	2,375	19,843	4,171	467	4,638	234	4,872	
10/19/2013	29,560	1,183	50	3,011	2,800	0	24,982	17,836	2,375	20,211	4,771	467	5,238	234	5,472	
10/26/2013	29,560	1,183	50	2,921	3,600	0	24,272	18,045	2,375	20,420	3,852	467	4,319	234	4,553	
11/02/2013	29,560	1,183	50	3,809	3,600	0	23,384	18,162	2,375	20,537	2,847	467	3,314	234	3,548	
11/09/2013	29,560	1,183	50	3,809	3,600	0	23,384	18,510	2,375	20,885	2,499	467	2,966	234	3,200	
11/16/2013	29,560	1,183	50	2,443	3,600	271	24,479	19,255	2,375	21,630	2,849	467	3,316	234	3,550	
11/23/2013	29,560	1,183	50 50	1,151	3,600	101 751	25,941	19,982	2,375	22,357	3,584	467 404	4,051	234 168	4,285	
11/30/2013	29,714	1,183		2,903	3,200		24,093	20,188	2,375	22,563	1,530		1,934		2,102	
12/07/2013	29,714	1,183	50	2,006	3,200	1,371	24,370	20,480	2,375	22,855	1,515	404	1,919	168	2,087	
12/14/2013 12/21/2013	29,714 29,714	1,183 1,183	50 50	1,475 974	3,200 3,200	2,127 2,895	24,145 23,878	20,491	2,375 2,375	22,866 22,929	1,279 949	404 404	1,683 1,353	168 168	1,851 1,521	
12/21/2013	29,714		50	573	3,200	3,101	24.073	20,554	2,375	22,929	1.144	404	1,555	168	1,521	
01/04/2014	29,714	1,183	50	1.324	2,800	3,101	23,711	20,554	2,375	22,929	1,144 506	404	910	168	1,716	
01/04/2014	29,714	1,183	50	1,324	2,800	3,777	23,711	21,299	2,375	23,205	(377)	404	27	168	1,078	
01/11/2014	29,714	1,183	50	1,073	2,800	3,777	23,297	21,299	2,375	23,674	(377)	404	27	168	195	
		1,183		714		3,929		,				404	234	168	402	
01/25/2014 02/01/2014	29,714 29,714	1,183	50 50	1,467	2,800 3,100	2,555	23,504	21,299 21,075	2,375 2,375	23,674 23,450	(170) 375	404	779	168	947	
02/01/2014	29,714	1,183	50	1,467	3,100	2,555	24,238	20,805	2,375	23,450	1,058	404	1,462	168	1,630	
02/08/2014	29,714	1,183	50	1,090	3,100	2,105	24,236	20,776	2,375	23,151	1,501	404	1,905	168	2,073	
02/15/2014	29,714	1,183	50	579	3,100	1,861	25,407	20,776	2,375	22,886	2,521	404	2,925	168	3,093	
03/01/2014	29,714	1,183	50	1,079	2,200	968	26,700	19,515	2,375	21,890	4,810	404	5,214	168	5,382	
03/08/2014	29,714	1,183	50	1,861	2,200	519	26,367	19,162	2,375	21,537	4,830	404	5,234	168	5,402	
03/15/2014	29,714	1,183	50	1.861	2,200	106	26,780	18,965	2,375	21,340	5.440	404	5,844	168	6.012	
03/22/2014	29,714	1,183	50	1,423	2,200	0	27,324	18,597	2,375	20,972	6,352	404	6,756	168	6,924	
03/22/2014	29,560	1,183	50	4,604	2,700	0	23,489	18,023	2,375	20,372	3,091	467	3,558	234	3,792	
04/05/2014	29,560	1,183	50	4,313	2,700	0	23,780	17,524	2,375	19,899	3,881	467	4,348	234	4,582	
04/12/2014	29,560	1,183	50	4,420	2,700	0	23,673	17,324	2,375	19,646	4,027	467	4,494	234	4,728	
04/19/2014	29,560	1,183	50	4,998	2,700	0	23,095	16,757	2,375	19,132	3,963	467	4,430	234	4,664	
04/26/2014	29,560	1,183	50	4,408	3,400	0	22,985	16,490	2,375	18,865	4,120	467	4,587	234	4,821	
05/03/2014	29,560	1,183	50	4.957	3,400	0	22,436	16,463	2,375	18,838	3.598	467	4,065	234	4.299	
05/10/2014	29,560	1,183	50	3,510	3,400	0	23,883	20,223	2,375	22,598	1,285	467	1,752	234	1,986	
05/17/2014	29,560	1,183	50	2,271	3,400	0	25,122	21,216	2,375	23,591	1,531	467	1,998	234	2,232	
05/24/2014	29,560	1,183	50	827	3,400	0	26,566	22,138	2,375	24,513	2.053	467	2.520	234	2,754	
05/31/2014	29,560	1,183	50	823	3,400	0	26,570	22,130	2,375	25,315	1,255	467	1.722	234	1.956	
								lement Only			-,		.,. ==		.,	

- 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 .
- . New resources that have acquired a CSO but have not become commercial.
- . 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.
- 6. 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.
- . Net OpCap Supply MW Available (1 + 2 + 3 4 5 6 = 7)
- 8. Peak Load Forecast per data included in the 2013 CELT Report adjusted for Other Demand Resources.
- 9. Operating Reserve Requirement based on 125% of first largest contingency plus 50% the second largest contingency.
- 10. Total Net Load Obligation per the formula(8 + 9 = 10)
- 11. Net OPCAP Margin MW = Net Op Cap Supply MW 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).

# New England Operable Capacity Margins - CSO - 50/50 FORECAST



June, 2013 - May 31, 2014, W/B Saturday