



# Monthly Report

May 2011

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# ***Operations Performance Metrics Monthly Report***



## ***May 2011 Report***

### **Operations & Reliability Department New York Independent System Operator**

Prepared by NYISO Operations Analysis and Services, based on settlements initial process data.

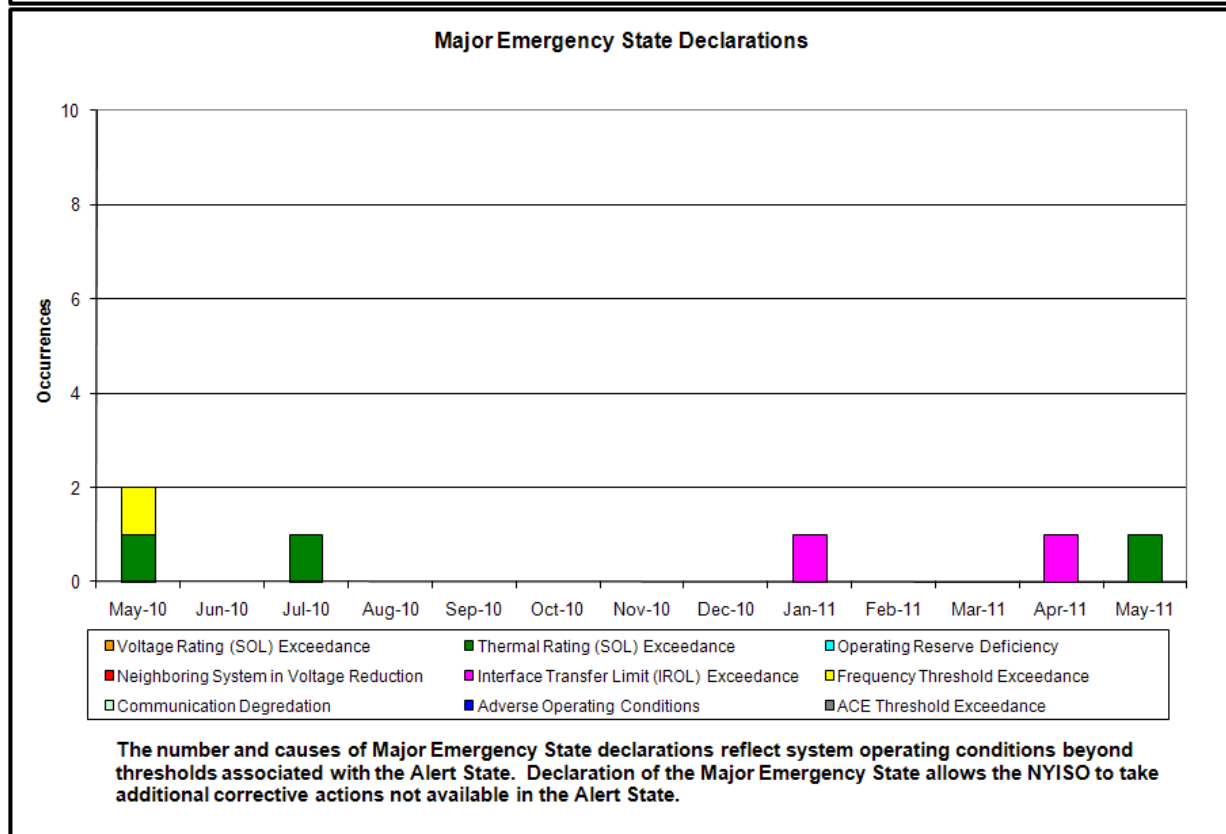
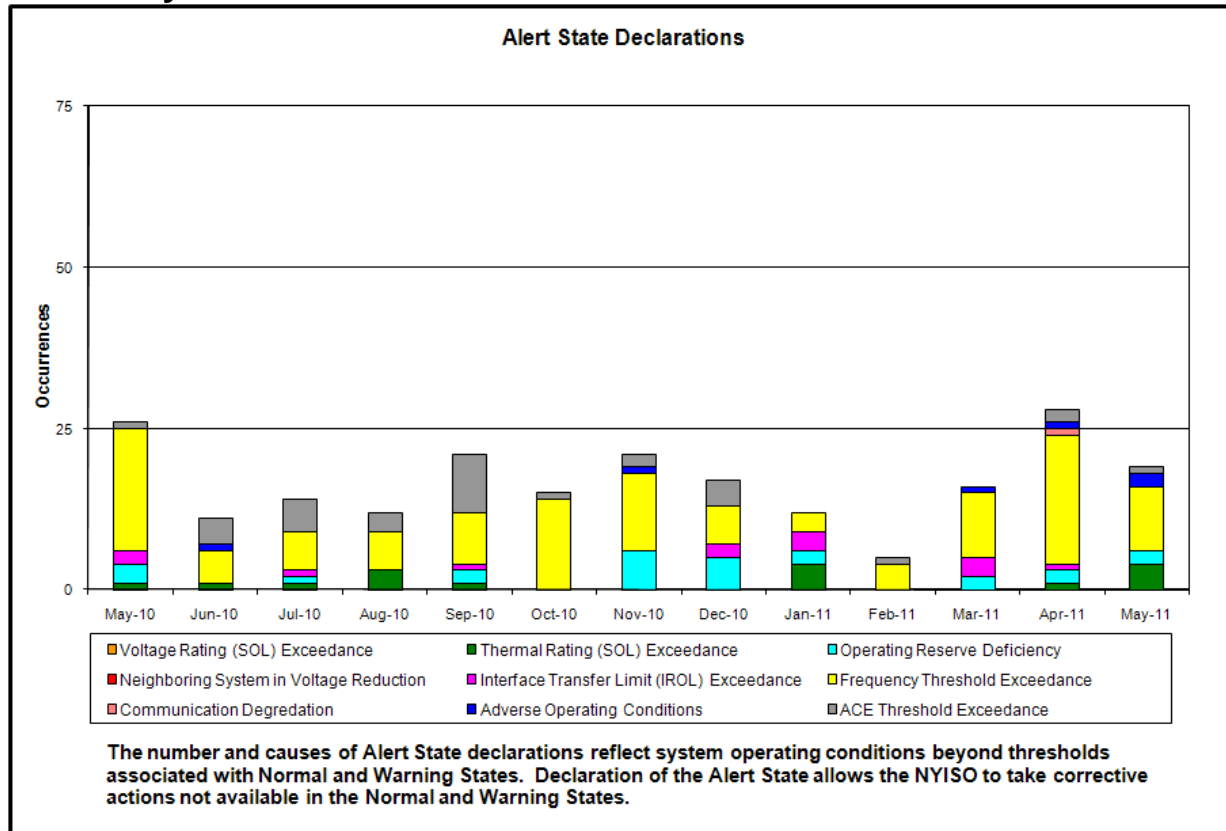
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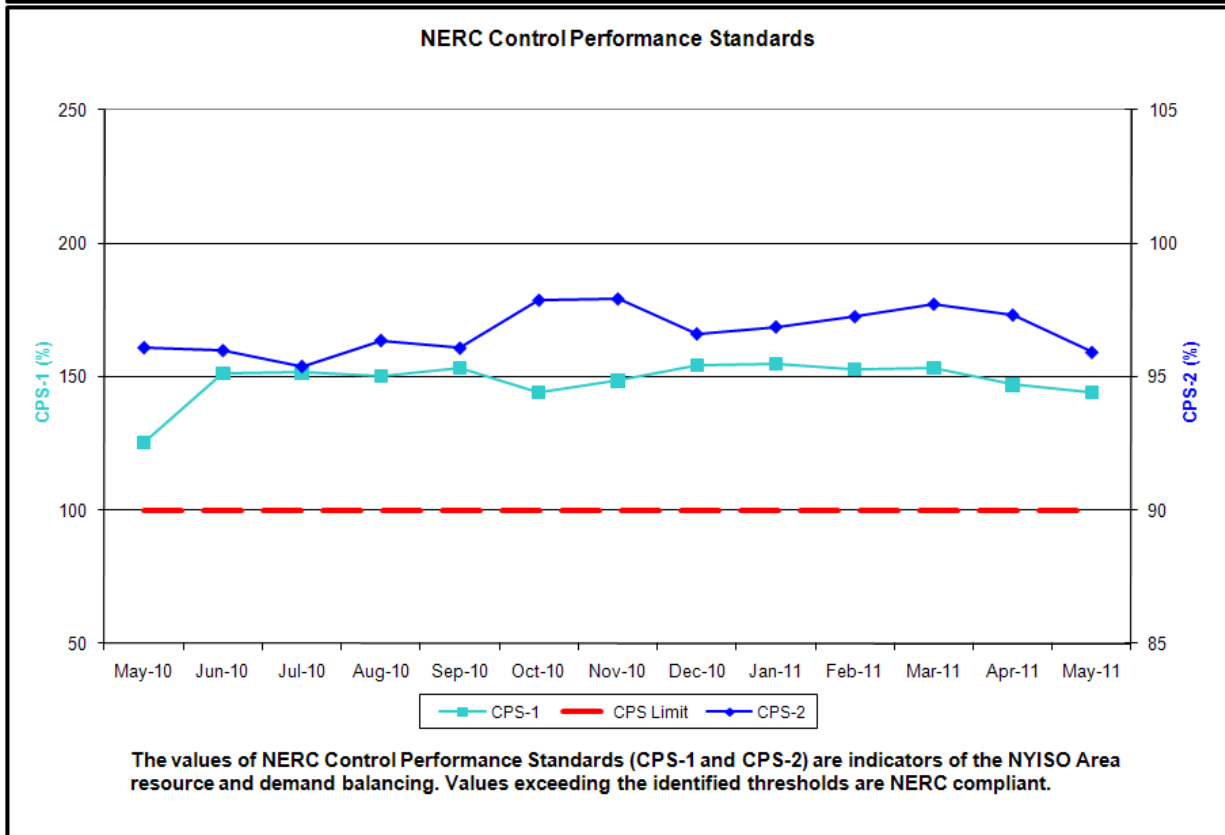
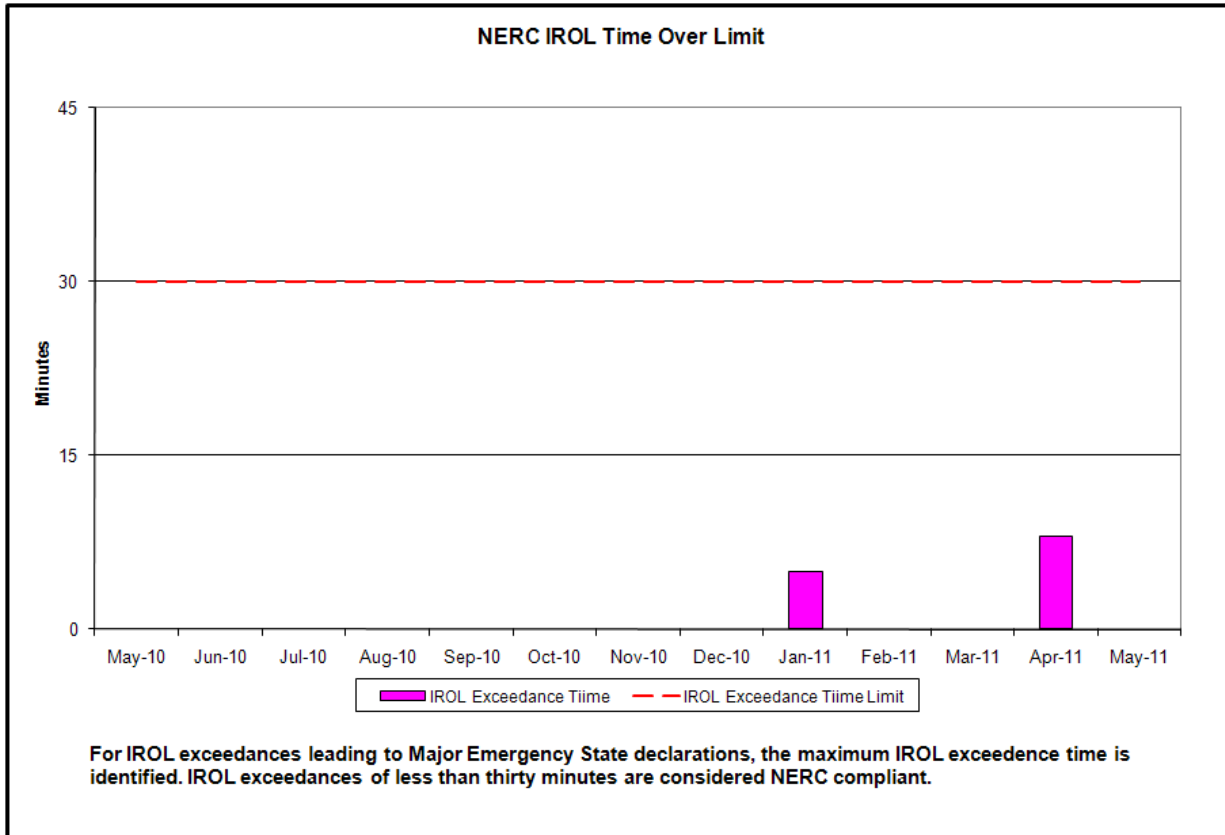
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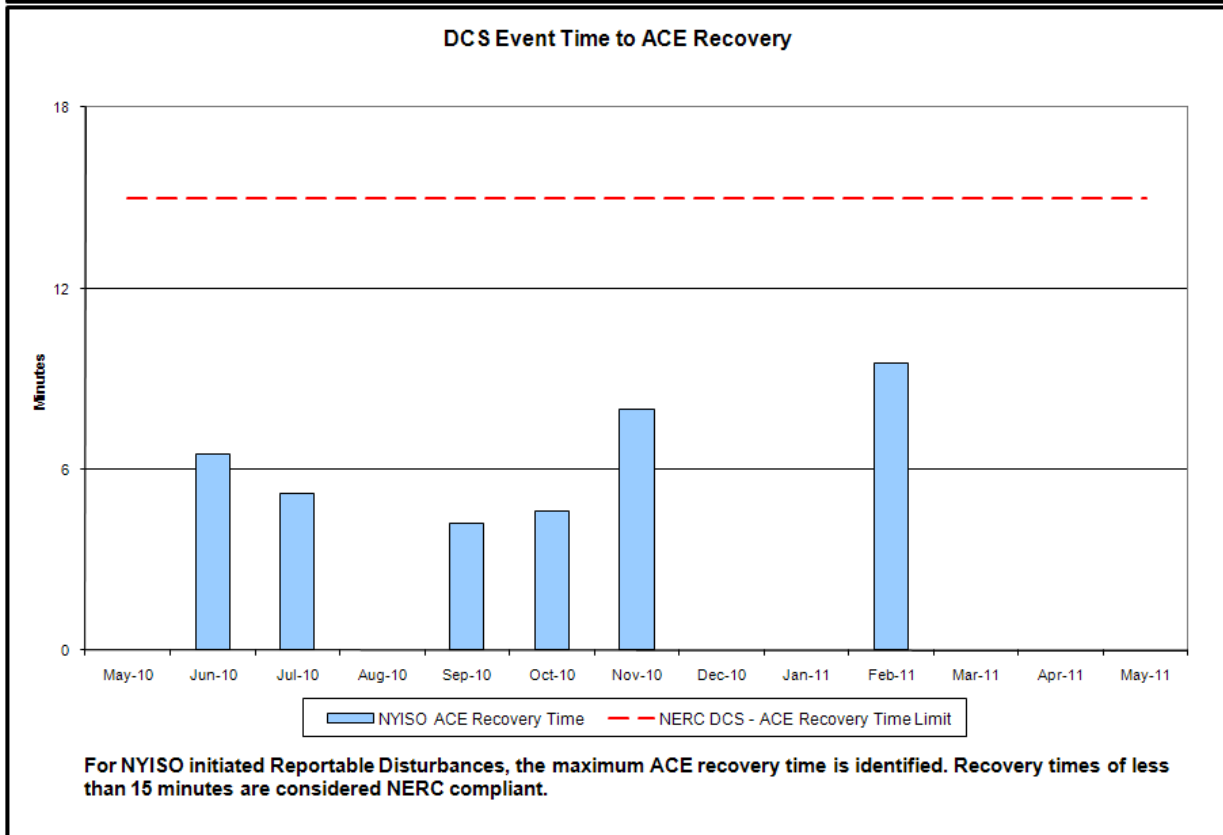
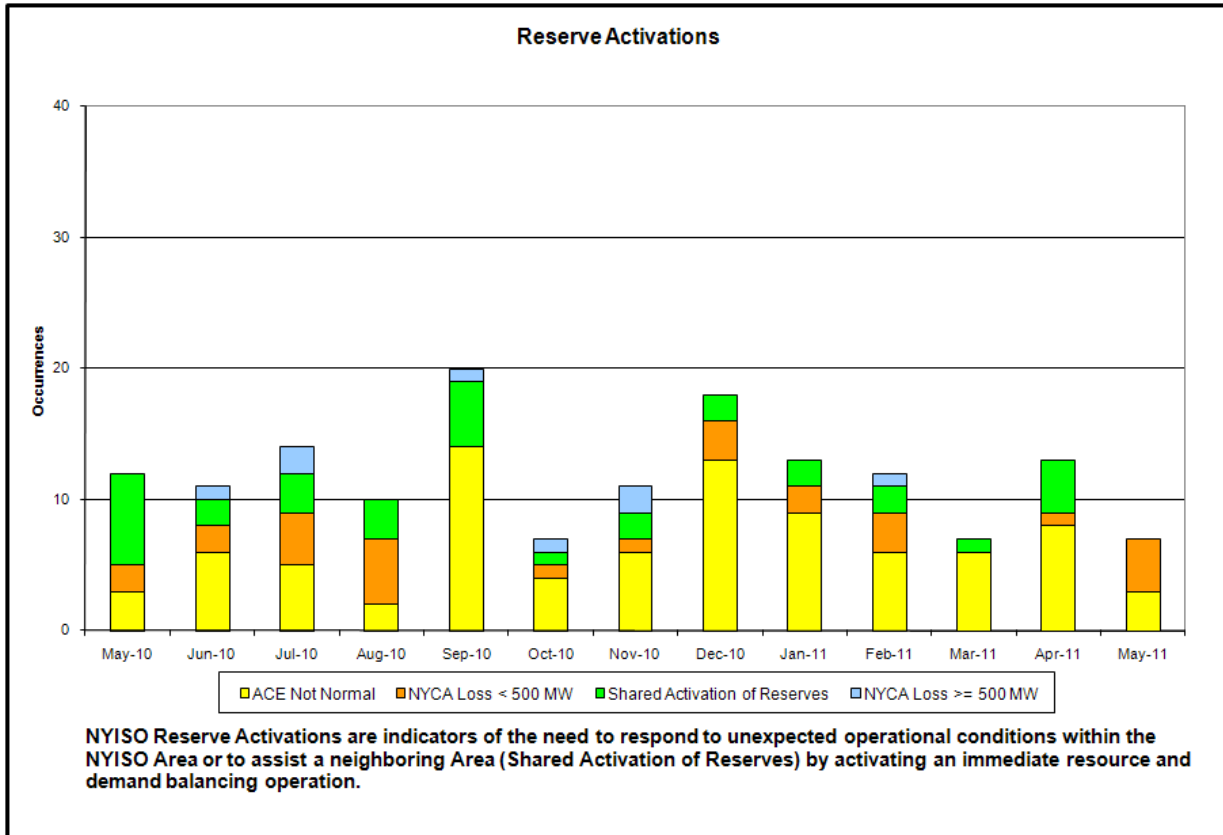
## May 2011 Operations Performance Highlights

- Peak load of 27,738 MW occurred on 5/31/2011 HB16
- All-time summer capability period peak load of 33,939 MW occurred on 8/2/2006 HB13
- **Continued levels of Clockwise Lake Erie Loop Flows**
  - Increased IESO to MISO exports
  - Decreased PJM to MISO exports
  - 128 hours of NERC TLR level 3 curtailments
- **Daily Uplift Monitoring / Review Process**
  - Low levels of transmission congestion related uplift costs
  - Decreased supplier related uplift costs

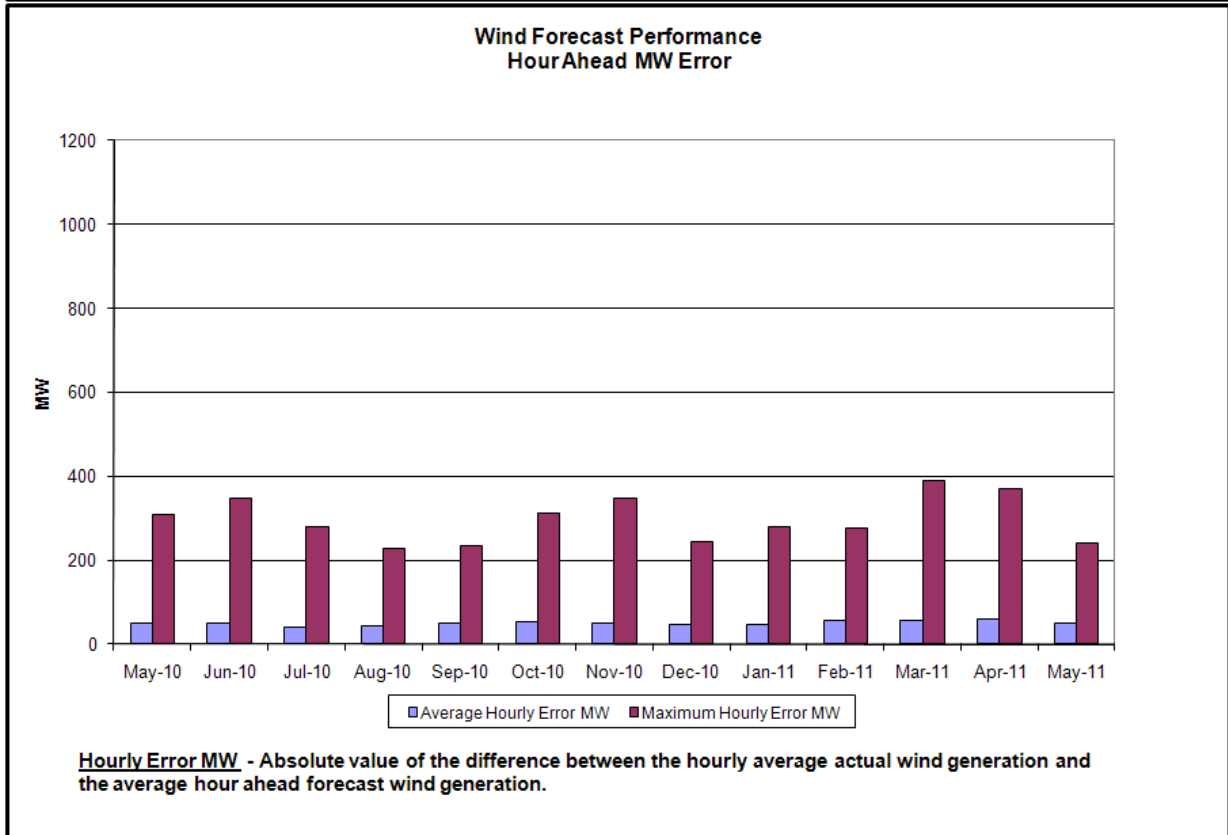
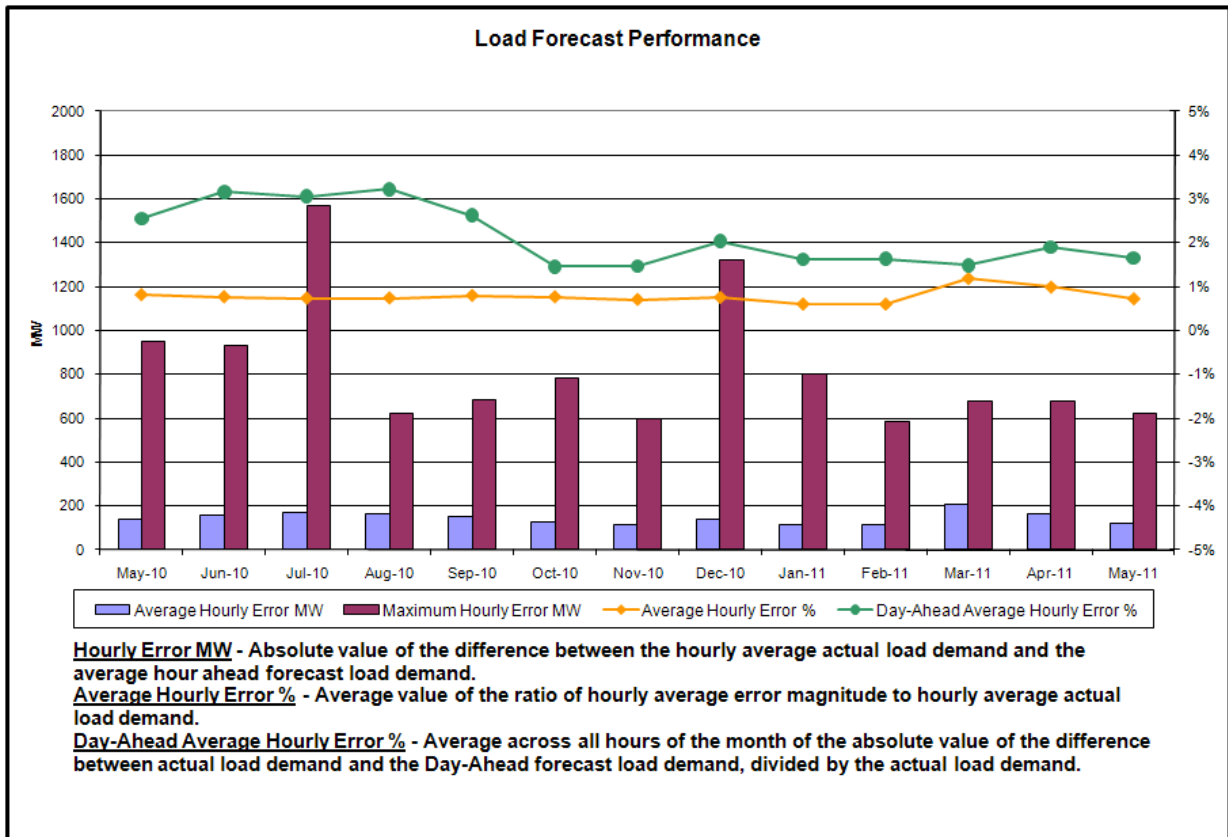
## Reliability Performance Metrics

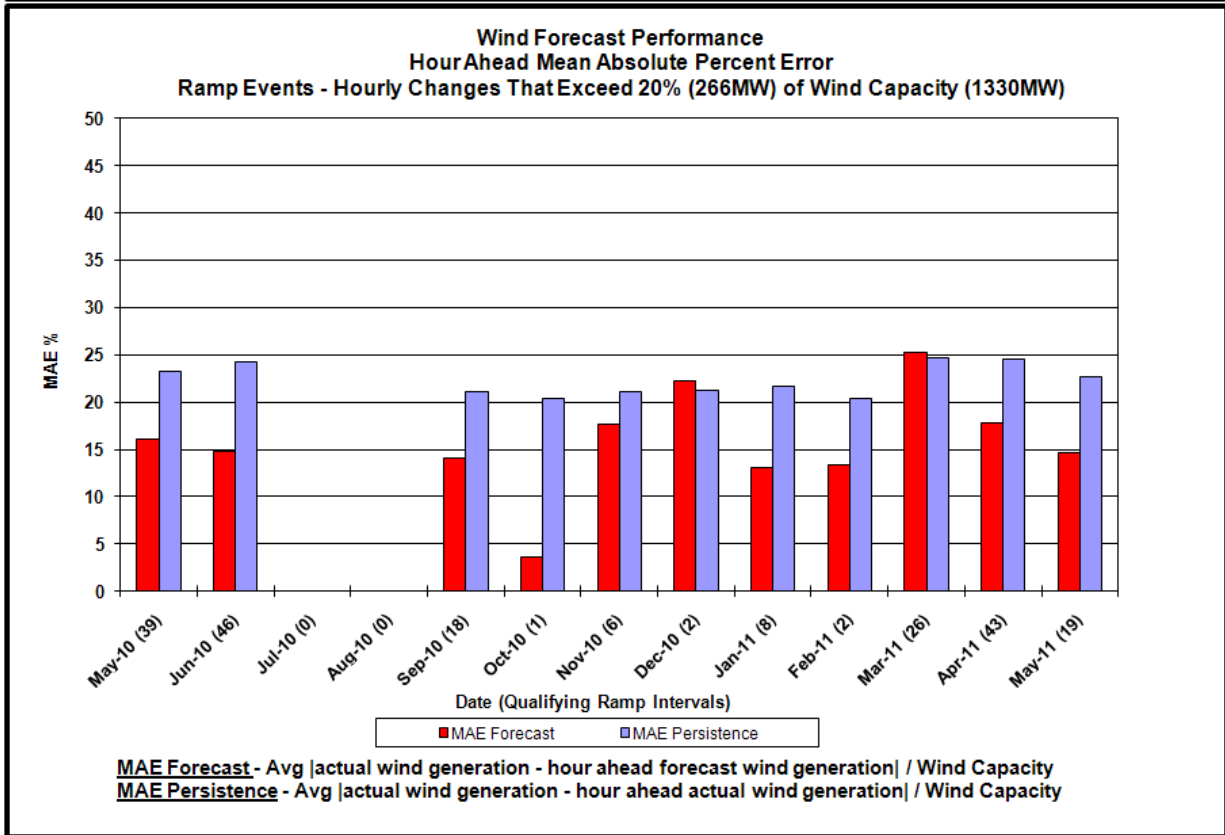
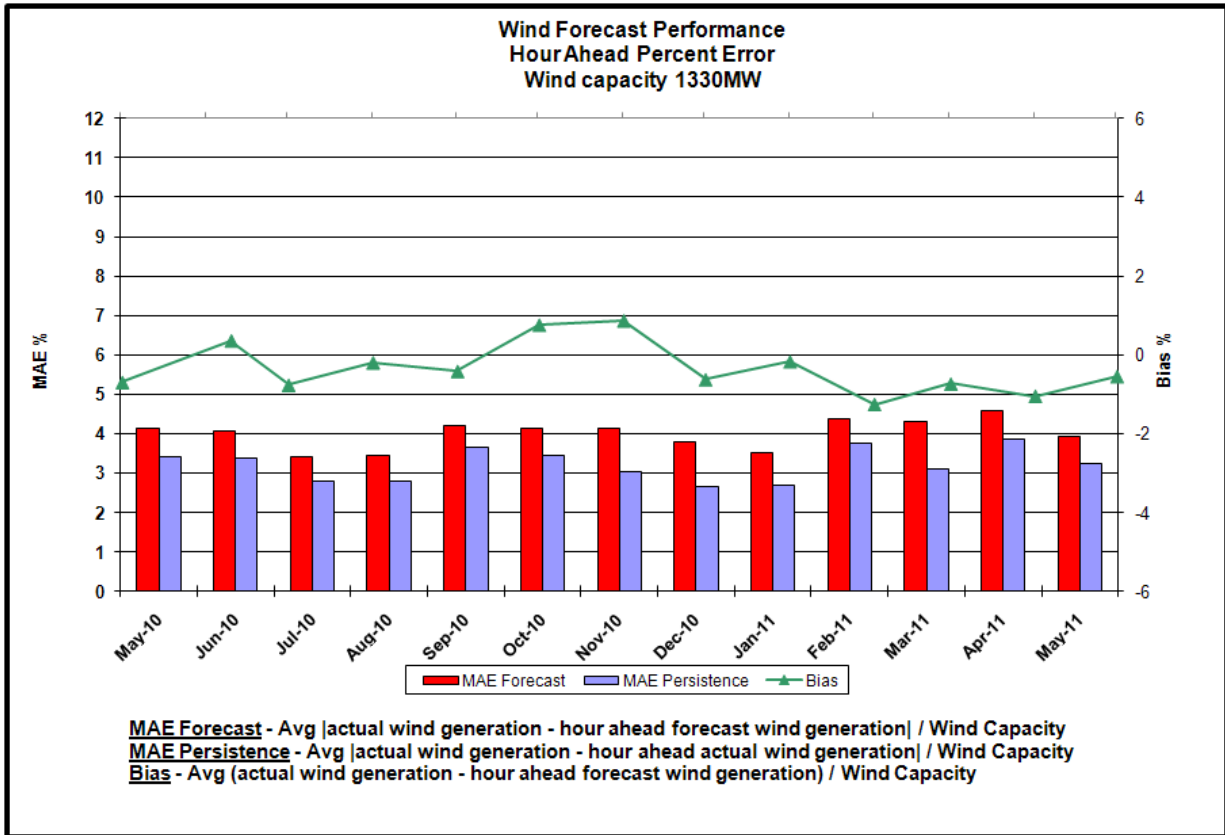


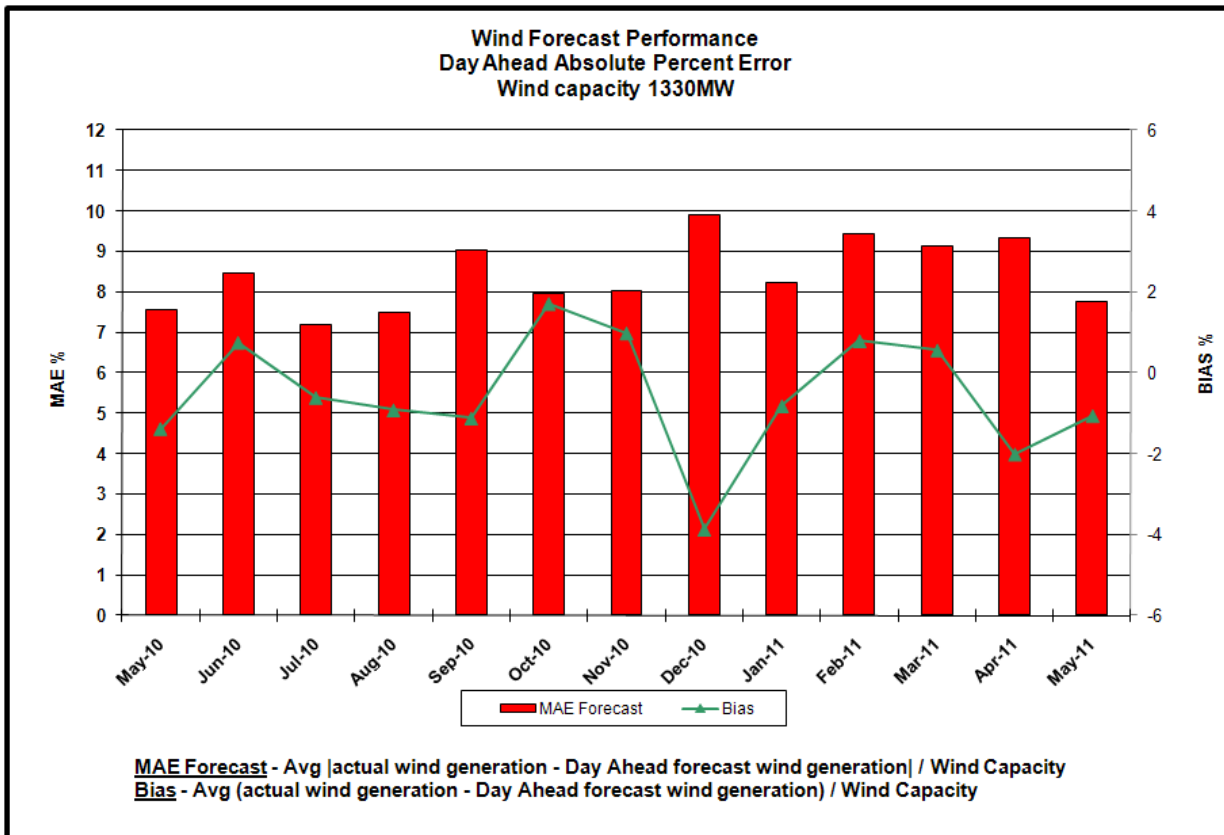


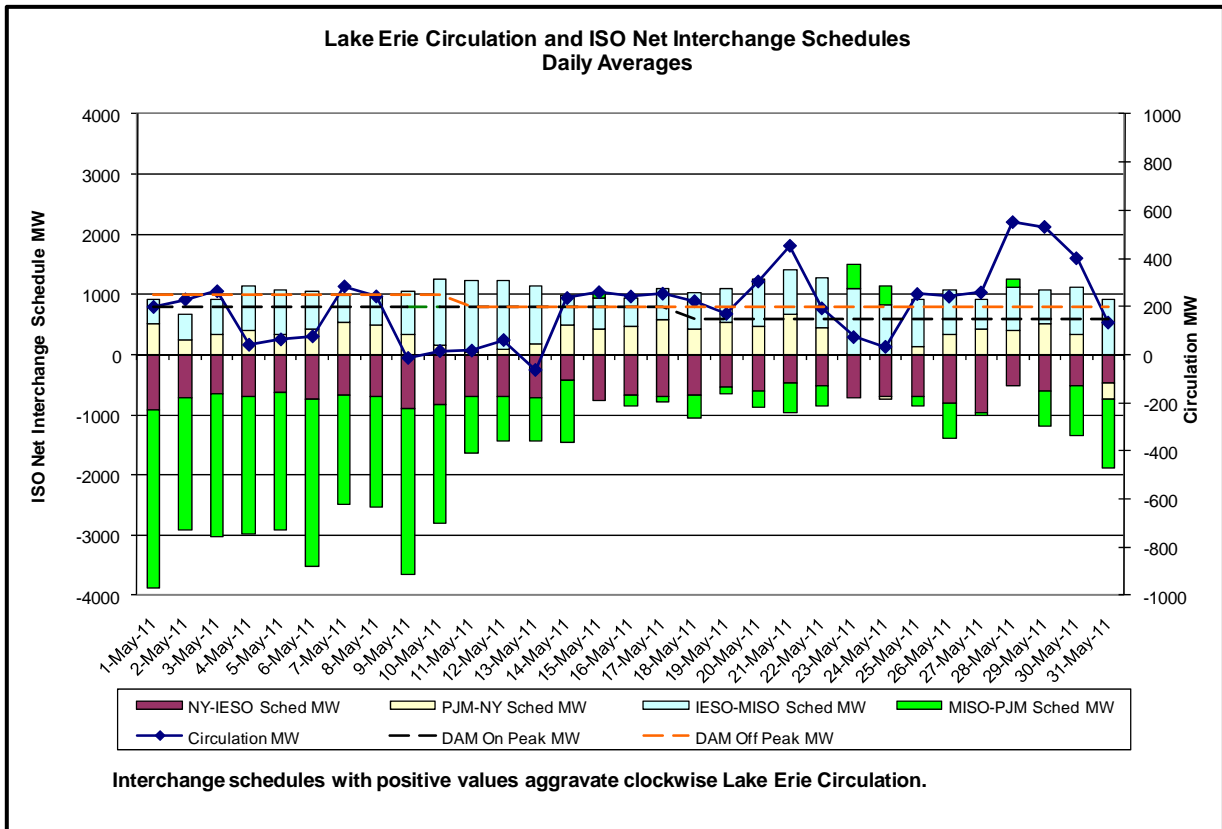
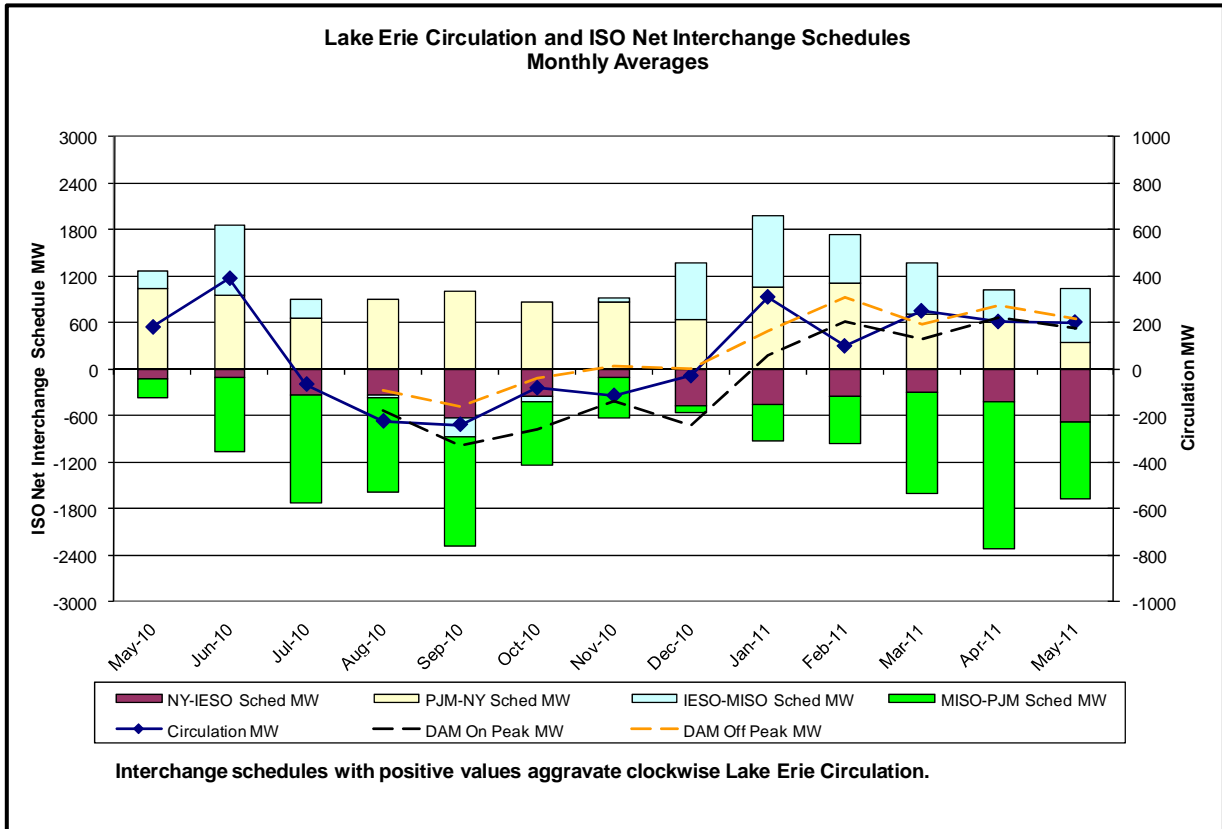




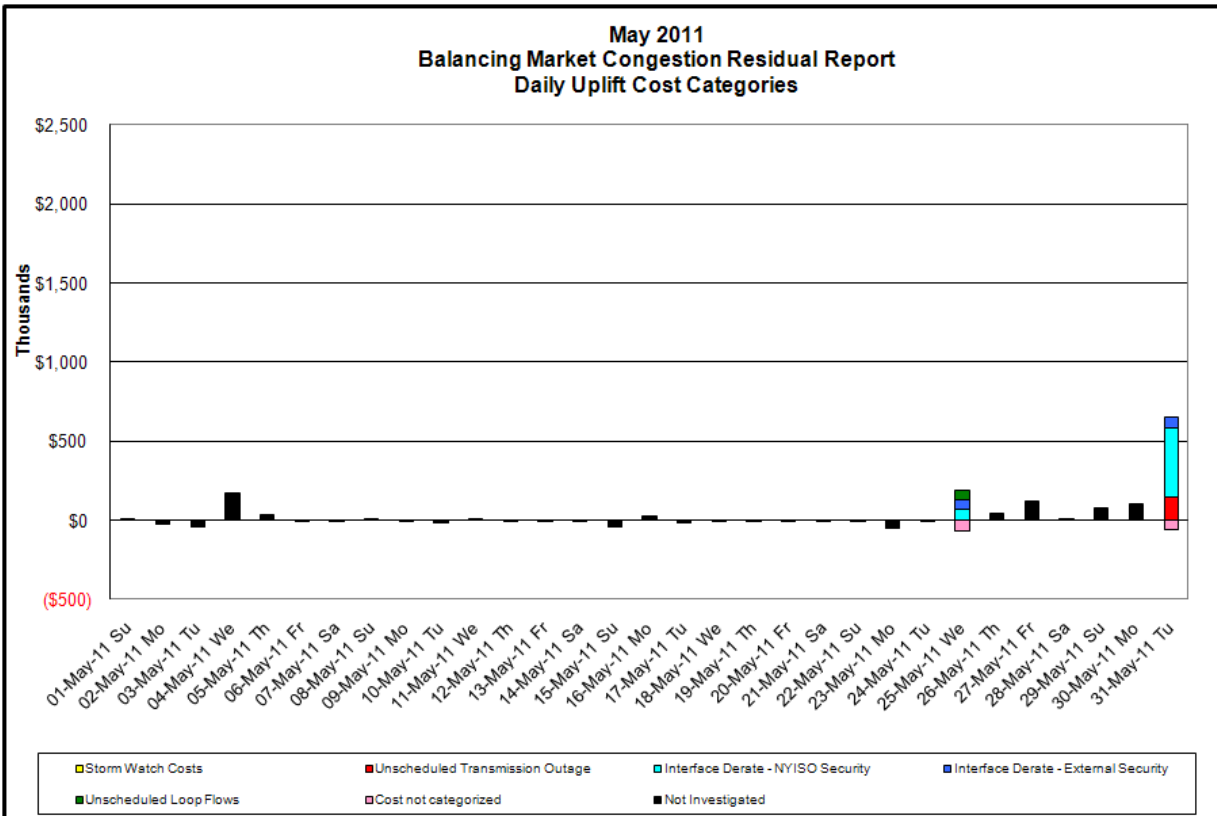
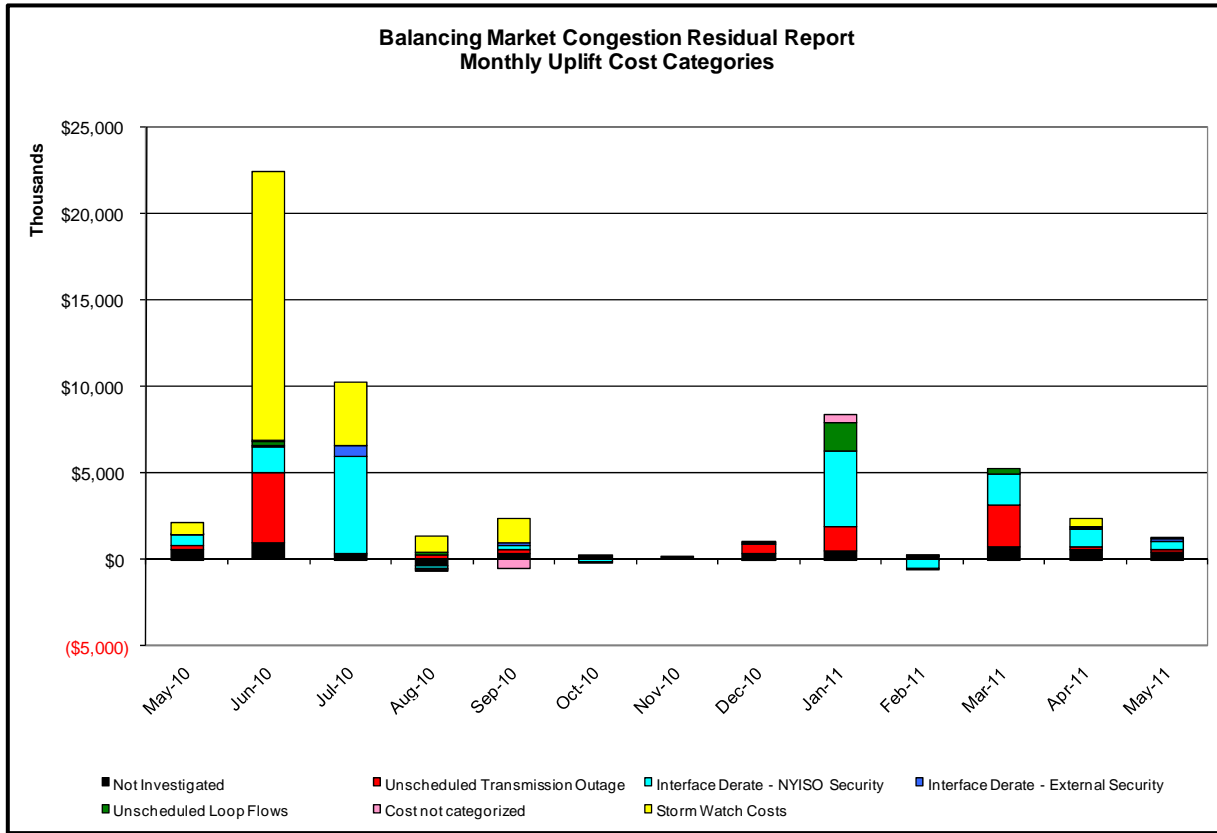








## Market Performance Metrics



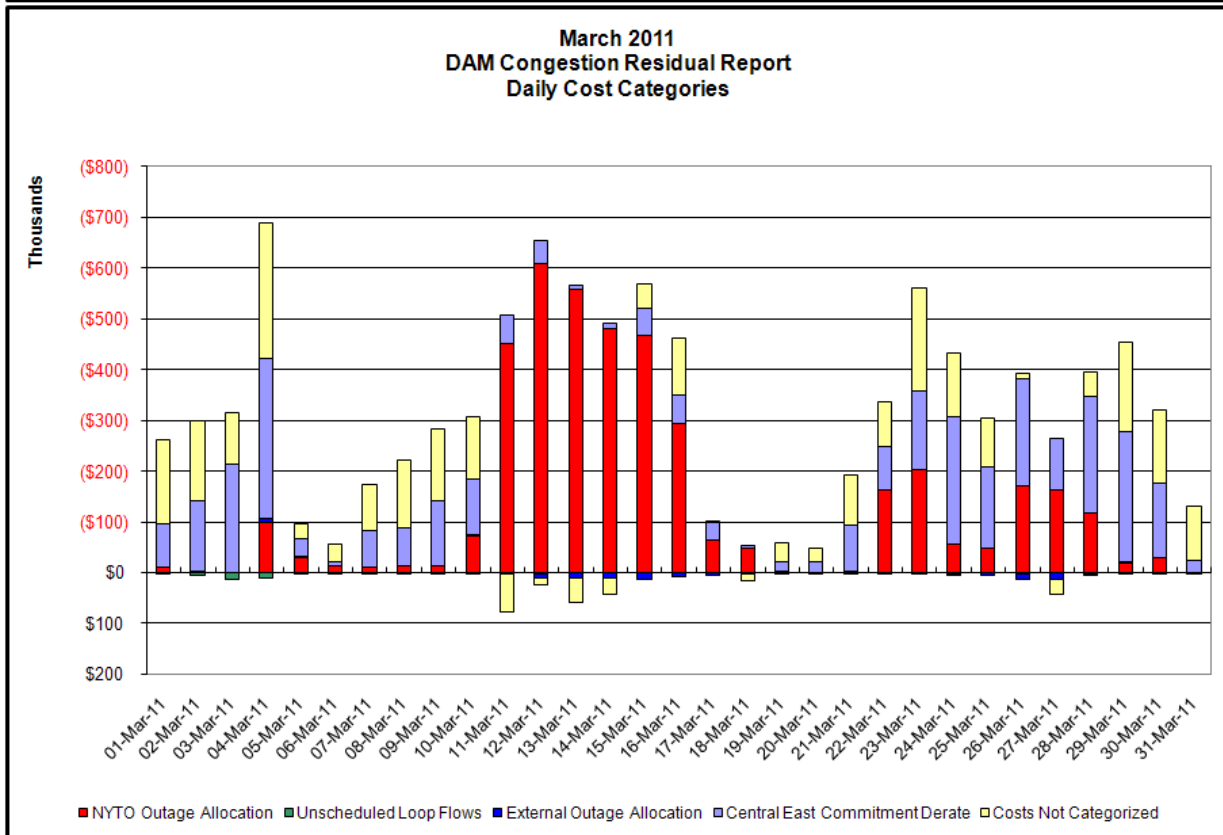
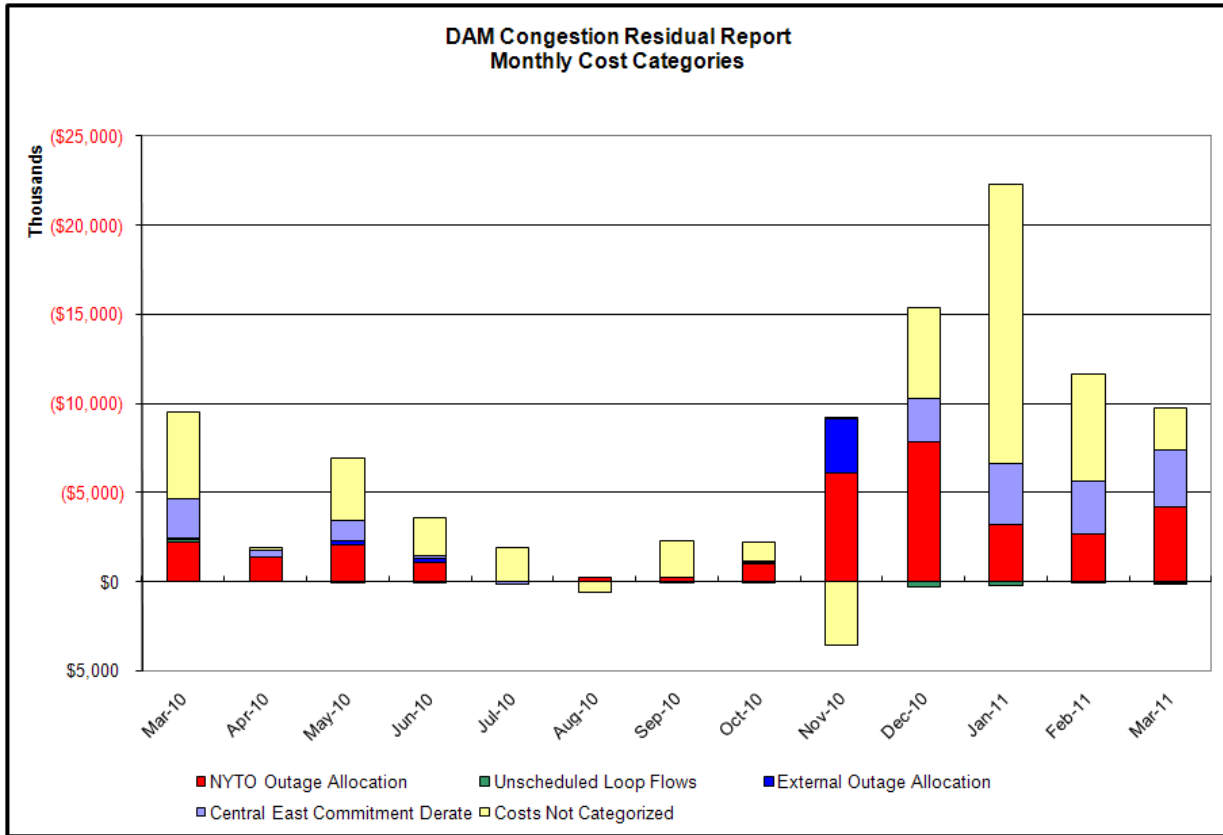
Day's investigated in May:25,31			
Event	Date (yyyy)	Hours	Description
	5/25/2011	12,13	Derate Leeds-New Scotland 345kV (#93) for I/o Leeds-New Scotland 345kV (#94)
	5/25/2011	13	IESO DNI Ramp Limit
	5/25/2011	13	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Leeds-New Scotland (#93)
	5/31/2011	10-12,14-16	Forced outage of Norwalk Harbor-Northport 138kV (#1385)
	5/31/2011	10-12,14-16	Derate Dunwoodie-Shore Road 345kV (#Y50) for I/o SCB Sprainbrook #RNS2
	5/31/2011	10-12,14-16,18-20	Derate Leeds-New Scotland 345kV (#93) for I/o Leeds-New Scotland 345kV (#94)
	5/31/2011	17	Uprate GoethalsS-GowanusS 345kV (#26)
	5/31/2011	15	NE_AC-NY Scheduling Limit

**Real-Time Balancing Market Congestion Residual (Uplift Cost) Categories**

<u>Category</u>	<u>Cost Assignment</u>	<u>Events Types</u>	<u>Event Examples</u>
Storm Watch	Zone J	Thunderstorm Alert (TSA)	TSA Activations
Unscheduled Transmission Outage	Market-wide	Reduction in DAM to RTM transfers related to unscheduled transmission outage	Forced Line Outage, Unit AVR Outages
Interface Derate - NYISO Security	Market-wide	Reduction in DAM to RTM transfers not related to transmission outage	Interface Derates due to RTM voltages
Interface Derate - External Security	Market-wide	Reduction in DAM to RTM transfers related to External Control Area Security Events	TLR Events, External Transaction Curtailments
Unscheduled Loop Flows	Market-wide	Changes in DAM to RTM unscheduled loop flows impacting NYISO Interface transmission constraints	DAM to RTM Clockwise Lake Erie Loop Flows greater than 125 MW

**Monthly Balancing Market Congestion Report Assumptions/Notes**

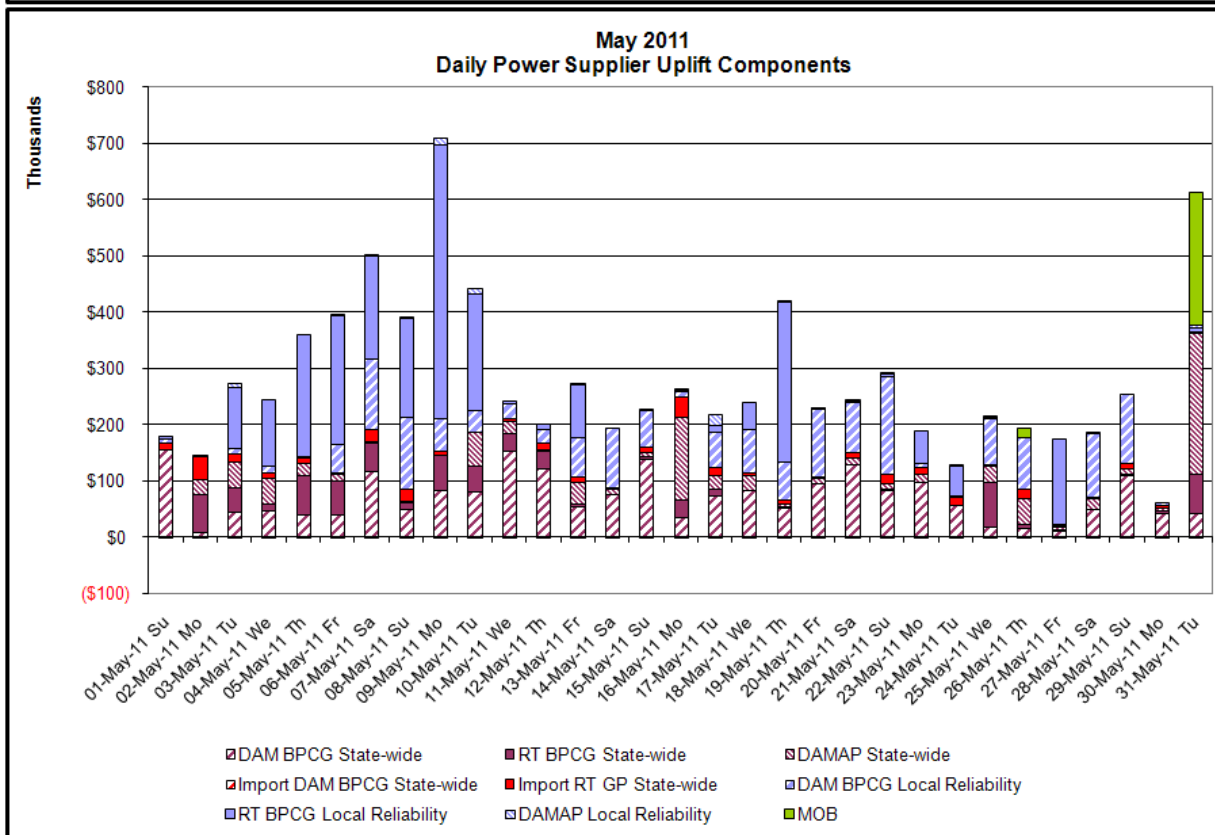
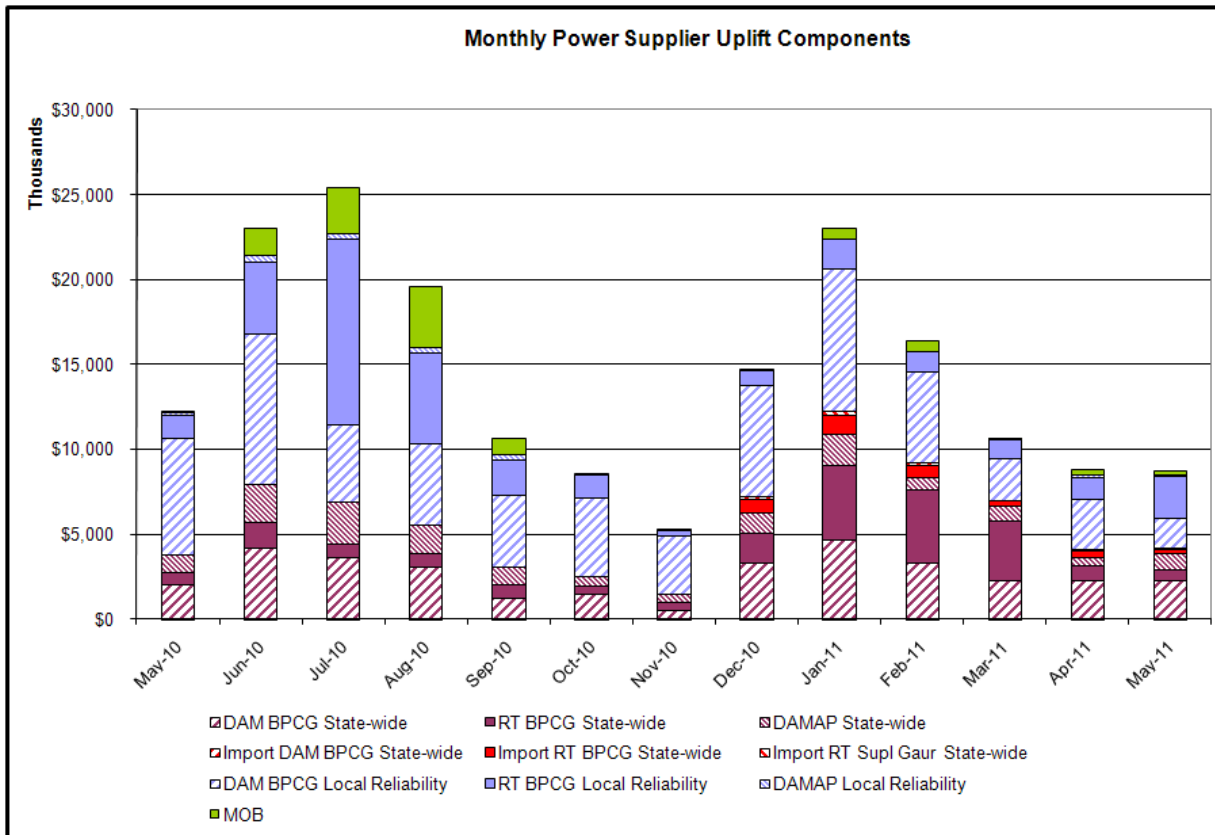
- 1) Storm Watch Costs are identified as daily total uplift costs
- 2) At a minimum those days with \$ 100 K/HR, shortfall of \$ 200 K/Day or more, or surplus of \$ 100 K/Day or more are investigated
- 3) Uplift costs associated with multiple event types are apportioned equally by hour
- 4) Investigations began with Dec 2008. Prior months are reported as Not Investigated.

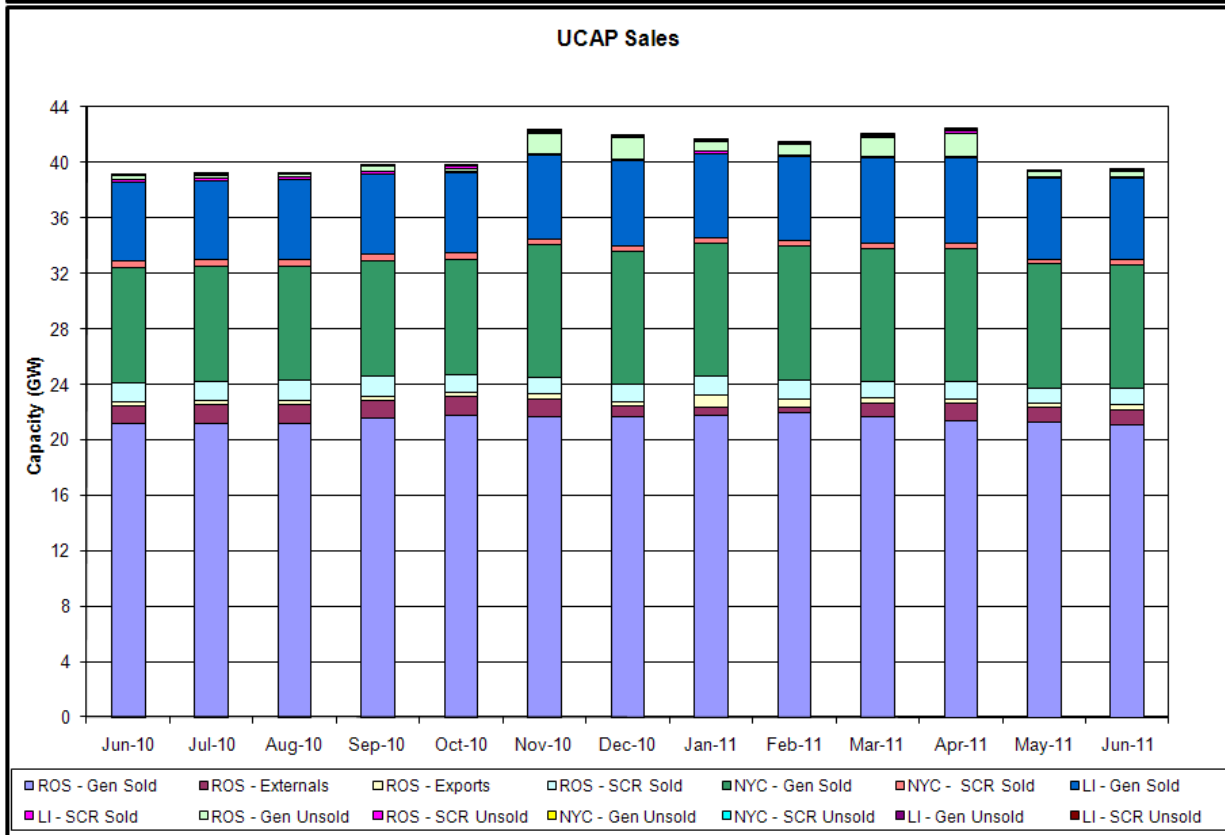
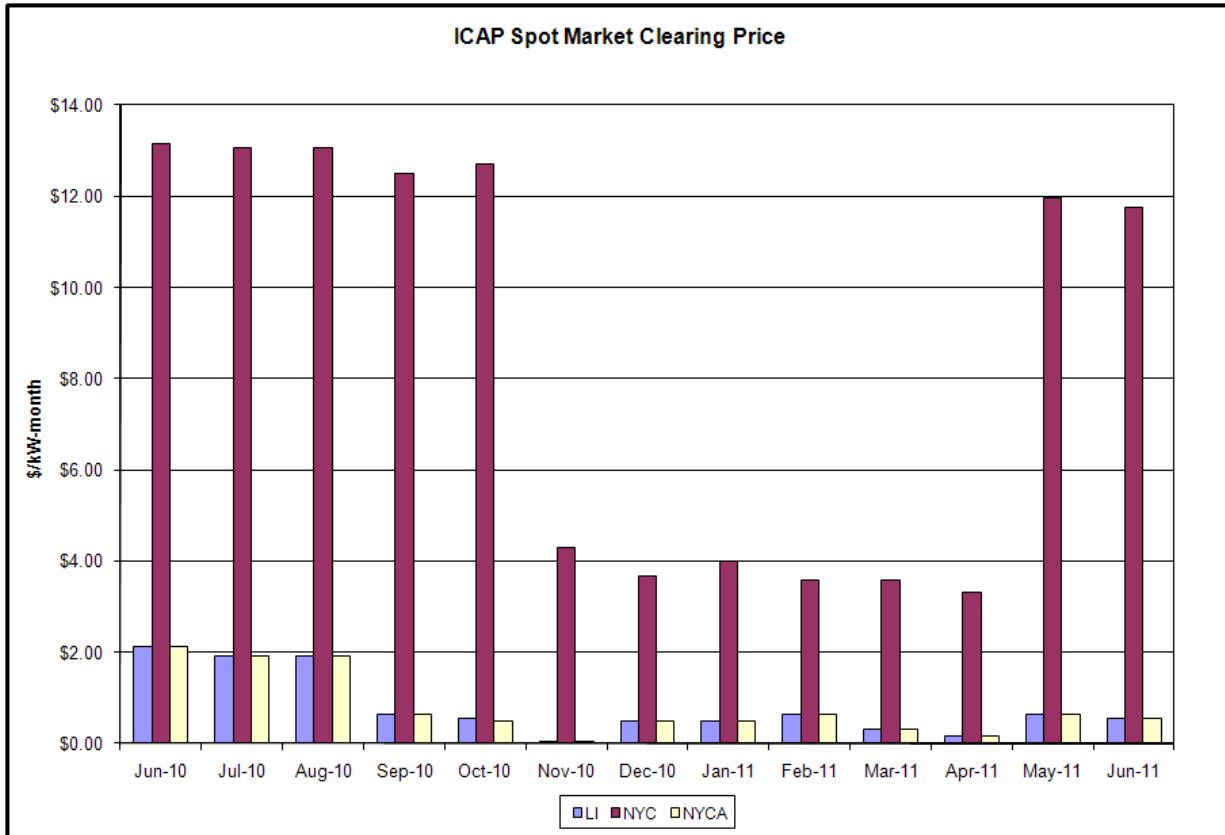


**Day-Ahead Market Congestion Residual Categories**

<u>Category</u>	<u>Cost Assignment</u>	<u>Events Types</u>	<u>Event Examples</u>
NYTO Outage Allocation	Responsible TO	Direct allocation to NYTO's responsible for transmission equipment status change.	DAM scheduled outage for equipment modeled in-service for the TCC Auction.
Unscheduled Loop Flows	All TO by Monthly Allocation Factor	Residual impact of Lake Erie circulation, MW difference between the DAM and TCC Auction.	Lake Erie Loop Flow Assumptions
External Outage Allocation	All TO by Monthly Allocation Factor	Direct allocation to transmission equipment status change caused by change in status of external equipment.	Tie line required out-of-service by TO of neighboring control area.
Central East Commitment Derate	All TO by Monthly Allocation Factor	Reductions in the DAM Central East_VC limit as compared to the TCC Auction limit, which are not associated with transmission line outages.	



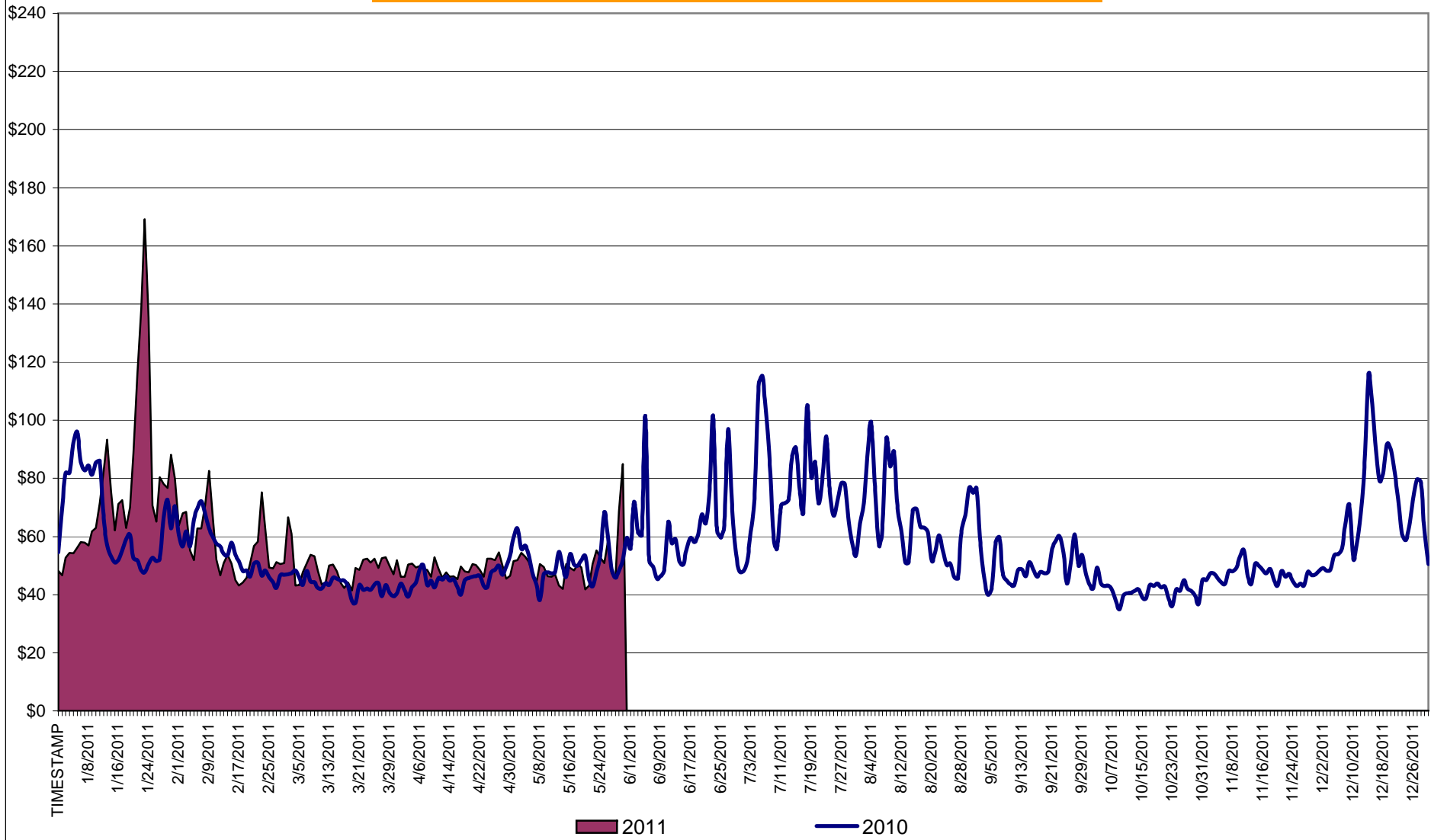




# Market Performance Highlights for May 2011

- **LBMP for May is \$48.91/MWh, up from \$46.44/MWh in April 2011.**
  - Average monthly year-to-date cost is \$57.55/MWh, down from previous month, \$59.07/MWh.
  - Day Ahead LBMPs have increased while Real Time LBMPs have decreased from April 2011.
- **Average daily sendout is 411GWh/day in May; higher than 398GWh/day in April 2011 and lower than 415GWh/day in May 2010.**
- **Fuel Prices are down or comparable to last month.**
  - Kerosene is \$23.51/MMBtu, down from \$24.88/MMBtu in April.
  - No. 2 Fuel Oil is \$21.08/MMBtu, down from \$22.77/MMBtu in April.
  - No. 6 Fuel Oil is \$17.96/MMBtu, down from \$19.55/MMBtu in April.
  - Natural Gas is \$4.59/MMBtu, down from \$4.60/MMBtu in April.
- **Uplift per MWh is down compared to the previous month.**
  - May 30<sup>th</sup> excluded due to generator metering issue as it skewed the total values enough that it was not a true representation of the month. May 30<sup>th</sup> will be included on the 4 month adjustment.
  - Uplift (not including NYISO cost of operations) is 0.00MWh, down from \$0.23/ MWh in April:
    - The TSA Share is \$0.00/MWh
    - The Local Reliability Share is \$0.00/MWh
    - The Other Share is \$0.00/MWh
  - Total uplift (Schedule 1 components including NYISO Cost of Operations) is down compared to April.

**Daily NYISO Average Cost/MWh (Energy & Ancillary Services)\***  
 2010 Annual Average \$58.94/MWh  
 May 2010YTD Average \$53.27/MWh  
 May 2011YTD Average \$57.55/MWh



\* Excludes ICAP payments.

Market Mitigation and Analysis  
 Prepared: 6/8/2011 11:47 AM

A  
 May 30th excluded due to  
 generator metering issues.  
 Will be included on 4 month  
 adjustment.

Data reflects true-ups through May 2011.

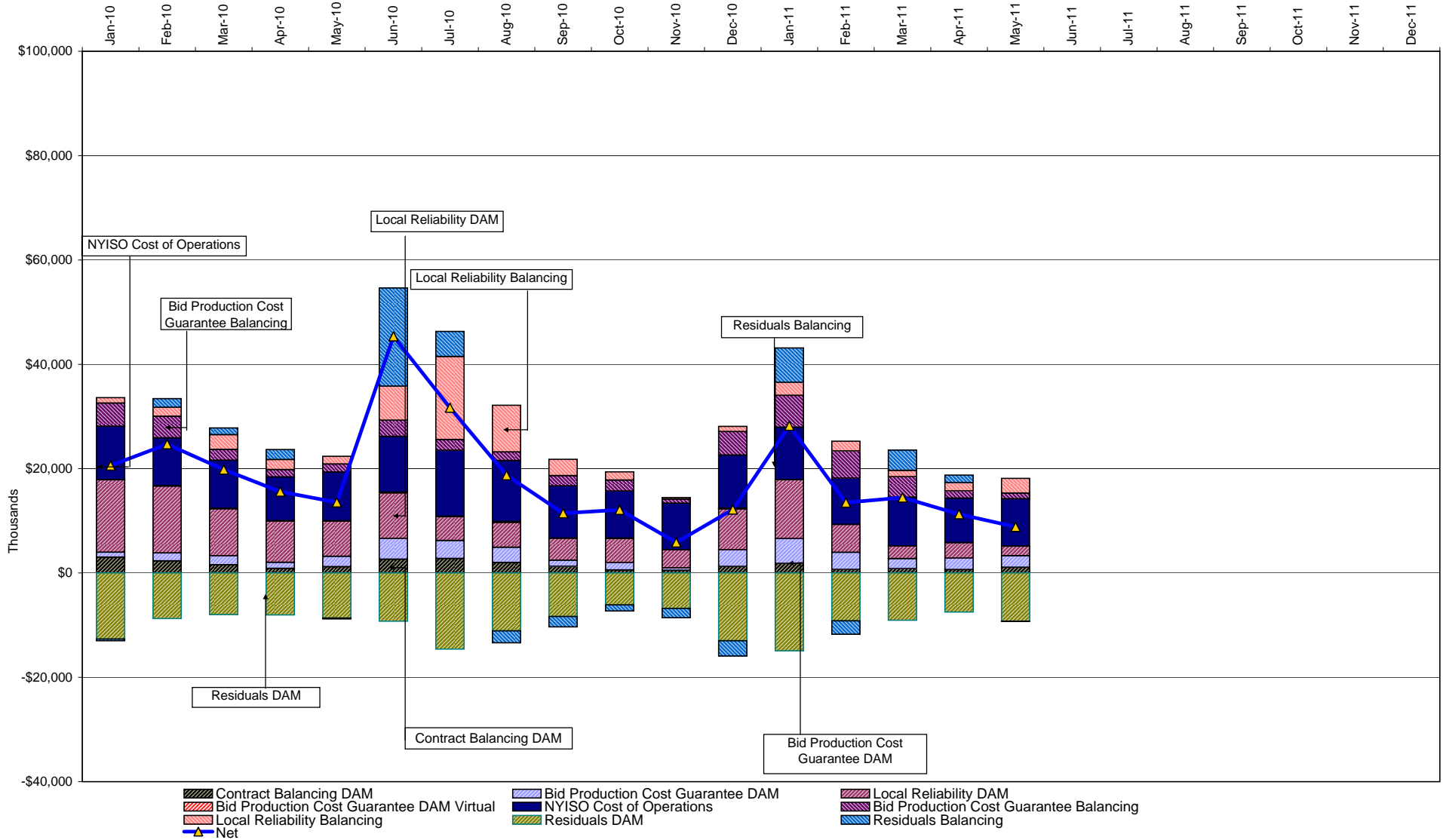
May 30th excluded due to generator metering issue. Will be included on 4 month adjustment.

**NYISO Average Cost/MWh (Energy and Ancillary Services) \***  
**from the LBMP Customer point of view**

<b>2011</b>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
LBMP	74.91	55.60	46.90	46.44	48.91							
NTAC	0.62	0.75	0.86	0.81	1.13							
Reserve	0.44	0.50	0.41	0.43	0.47							
Regulation	0.20	0.18	0.15	0.12	0.10							
NYISO Cost of Operations	0.70	0.70	0.70	0.70	0.70							
Uplift	1.27	0.37	0.38	0.23	-							
Uplift: TSA Share	-	-	-	0.01	-							
Uplift: Local Reliability Share	0.62	0.20	0.10	0.09	-							
Uplift: Other Share	0.65	0.17	0.29	0.13	-							
Voltage Support and Black Start	<u>0.37</u>	<u>0.37</u>	<u>0.37</u>	<u>0.37</u>	<u>0.37</u>							
<b>Avg Monthly Cost</b>	<b>78.52</b>	<b>58.48</b>	<b>49.78</b>	<b>49.10</b>	<b>51.68</b>							
 Avg YTD Cost	 78.52	 68.73	 62.25	 59.07	 57.55							
 <b>2010</b>	 <u>January</u>	 <u>February</u>	 <u>March</u>	 <u>April</u>	 <u>May</u>	 <u>June</u>	 <u>July</u>	 <u>August</u>	 <u>September</u>	 <u>October</u>	 <u>November</u>	 <u>December</u>
LBMP	63.90	52.42	40.18	41.57	48.83	59.12	74.84	65.00	51.33	39.29	44.96	67.33
NTAC	0.70	0.77	0.88	1.18	0.95	1.45	0.95	0.60	0.30	0.45	0.64	0.59
Reserve	0.19	0.17	0.26	0.29	0.32	0.14	0.21	0.18	0.21	0.32	0.25	0.40
Regulation	0.44	0.37	0.40	0.32	0.30	0.31	0.32	0.35	0.27	0.16	0.14	0.16
NYISO Cost of Operations	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Uplift	0.73	1.21	0.81	0.62	0.32	2.36	1.09	0.43	0.12	0.24	(0.24)	0.13
Uplift: TSA Share	-	-	-	-	0.03	0.69	0.30	0.02	0.04	0.00	-	-
Uplift: Local Reliability Share	0.53	0.71	0.48	0.39	0.19	0.79	0.71	0.32	0.08	0.12	(0.15)	0.10
Uplift: Other Share	0.20	0.50	0.33	0.23	0.10	0.88	0.08	0.09	0.01	0.12	(0.08)	0.04
Voltage Support and Black Start	<u>0.44</u>	<u>0.44</u>	<u>0.44</u>	<u>0.44</u>	<u>0.44</u>	<u>0.44</u>	<u>0.44</u>	<u>0.44</u>	<u>0.44</u>	<u>0.44</u>	<u>0.44</u>	<u>0.44</u>
<b>Avg Monthly Cost</b>	<b>67.11</b>	<b>56.09</b>	<b>43.70</b>	<b>45.13</b>	<b>51.87</b>	<b>64.55</b>	<b>78.57</b>	<b>67.70</b>	<b>53.38</b>	<b>41.61</b>	<b>46.90</b>	<b>69.77</b>
 Avg YTD Cost	 67.11	 62.03	 56.28	 53.62	 53.27	 55.48	 60.15	 61.29	 60.43	 58.89	 57.99	 58.94

\* Excludes ICAP payments.

## NYISO Dollar Flows - Uplift- OATT Schedule 1 components - Data through May 31, 2011



DAM Contract Balancing amounts are for payments made to generating units to make them whole for being dispatched below their Day-Ahead schedule, as a result of out-of-merit dispatches.

DAM Bid Production Cost Guarantees for Virtual Transactions are included in the chart and are shown from the inception of Virtual Transactions. These values are small and cannot be identified on the chart.

DAM residuals consist of both energy and loss revenue collections and payments. By design, there is a net over collection of revenues due to the difference between the marginal losses paid to generation and the average losses charged to loads.

## NYISO Markets Transactions

2011	January	February	March	April	May	June	July	August	September	October	November	December
<b>Day Ahead Market MWh</b>	14,047,703	12,514,435	13,164,026	12,191,562	12,809,240							
DAM LSE Internal LBMP Energy Sales	49%	54%	53%	55%	55%							
DAM External TC LBMP Energy Sales	1%	1%	2%	2%	1%							
DAM Bilateral - Internal Bilaterals	43%	43%	43%	41%	41%							
DAM Bilateral - Import/Non-LBMP Market Bilaterals	5%	0%	0%	0%	0%							
DAM Bilateral - Export/Non-LBMP Market Bilaterals	2%	1%	2%	2%	2%							
DAM Bilateral - Wheel Through Bilaterals	1%	1%	1%	0%	1%							
<b>Balancing Energy Market MWh</b>	311,995	211,807	248,802	32,372	212,388							
Balancing Energy LSE Internal LBMP Energy Sales	28%	24%	38%	-262%	46%							
Balancing Energy External TC LBMP Energy Sales	48%	50%	50%	219%	35%							
Balancing Energy Bilateral - Internal Bilaterals	15%	7%	8%	52%	12%							
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	0%	0%	0%	0%	0%							
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	6%	14%	13%	92%	9%							
Balancing Energy Bilateral - Wheel Through Bilaterals	3%	5%	-10%	-2%	-2%							
<b>Transactions Summary</b>												
LBMP	51%	55%	55%	57%	57%							
Internal Bilaterals	42%	42%	42%	41%	41%							
Import Bilaterals	4%	0%	0%	0%	0%							
Export Bilaterals	2%	2%	2%	2%	2%							
Wheels Through	1%	1%	1%	0%	1%							
<b>Market Share of Total Load</b>												
Day Ahead Market	97.8%	98.3%	98.1%	99.7%	98.4%							
Balancing Energy +	2.2%	1.7%	1.9%	0.3%	1.6%							
Total MWh	14,359,698	12,726,241	13,412,827	12,223,934	13,021,628							
Average Daily Energy Sendout/Month GWh	457	447	422	398	411							

2010	January	February	March	April	May	June	July	August	September	October	November	December
<b>Day Ahead Market MWh</b>	14,034,781	12,593,305	12,922,930	11,769,468	12,795,110	14,263,543	16,608,041	15,536,711	13,386,982	12,377,928	12,151,670	13,790,802
DAM LSE Internal LBMP Energy Sales	49%	46%	47%	53%	47%	49%	53%	51%	47%	43%	45%	46%
DAM External TC LBMP Energy Sales	2%	3%	1%	1%	1%	2%	3%	2%	3%	4%	2%	2%
DAM Bilateral - Internal Bilaterals	41%	43%	43%	39%	44%	42%	38%	40%	43%	45%	46%	45%
DAM Bilateral - Import/Non-LBMP Market Bilaterals	6%	5%	5%	4%	5%	5%	4%	4%	5%	6%	5%	5%
DAM Bilateral - Export/Non-LBMP Market Bilaterals	1%	1%	2%	2%	2%	1%	1%	1%	1%	2%	2%	1%
DAM Bilateral - Wheel Through Bilaterals	2%	1%	1%	1%	1%	1%	1%	1%	1%	0%	0%	1%
<b>Balancing Energy Market MWh</b>	377,241	287,393	29,273	-358	341,917	735,317	1,162,369	899,856	698,095	300,393	393,673	527,915
Balancing Energy LSE Internal LBMP Energy Sales	40%	54%	-280%	-25177%	61%	87%	94%	75%	76%	74%	57%	55%
Balancing Energy External TC LBMP Energy Sales	56%	49%	429%	30394%	44%	11%	9%	26%	23%	25%	30%	32%
Balancing Energy Bilateral - Internal Bilaterals	10%	7%	137%	12155%	7%	10%	3%	4%	4%	5%	5%	10%
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	0%	0%	2%	63%	1%	0%	0%	0%	1%	0%	0%	0%
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	7%	8%	84%	6409%	6%	3%	1%	2%	3%	8%	7%	3%
Balancing Energy Bilateral - Wheel Through Bilaterals	-12%	-18%	-272%	-23944%	-19%	-10%	-7%	-7%	-6%	-12%	0%	-1%
<b>Transactions Summary</b>												
LBMP	52%	50%	49%	54%	50%	54%	59%	56%	53%	48%	48%	49%
Internal Bilaterals	40%	43%	43%	39%	43%	40%	36%	38%	41%	44%	45%	43%
Import Bilaterals	5%	5%	5%	4%	5%	5%	4%	4%	5%	6%	5%	5%
Export Bilaterals	2%	2%	2%	2%	2%	1%	1%	1%	1%	2%	2%	2%
Wheels Through	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Market Share of Total Load</b>												
Day Ahead Market	97.4%	97.8%	99.8%	100.0%	97.4%	95.1%	93.5%	94.5%	95.0%	97.6%	96.9%	96.3%
Balancing Energy +	2.6%	2.2%	0.2%	0.0%	2.6%	4.9%	6.5%	5.5%	5.0%	2.4%	3.1%	3.7%
Total MWh	14,412,023	12,880,698	12,952,203	11,769,109	13,137,026	14,998,860	17,770,410	16,436,568	14,085,076	12,678,320	12,545,343	14,318,718
Average Daily Energy Sendout/Month GWh	451	444	410	387	415	491	558	514	451	393	405	453

+ Balancing Energy: Load(MW) purchased at Real Time LBMP.

\* The signs for the detail section intuitively reflect the direction of power flow eliminating the use of double negatives when Balancing Energy is negative.

Notes: Percent totals may not equal 100% due to rounding.  
Virtual Transactions are not reflected in this chart.

### NYISO Markets 2011 Energy Statistics

	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
<b><u>DAY AHEAD LBMP</u></b>												
Price *	\$69.03	\$52.87	\$45.20	\$44.80	\$45.20							
Standard Deviation	\$30.78	\$14.77	\$9.06	\$8.22	\$11.77							
Load Weighted Price **	\$71.22	\$54.24	\$46.13	\$45.77	\$46.83							
<b><u>RTC LBMP</u></b>												
Price *	\$64.48	\$50.15	\$45.13	\$44.32	\$43.69							
Standard Deviation	\$39.41	\$18.83	\$18.96	\$15.44	\$25.19							
Load Weighted Price **	\$66.15	\$51.15	\$45.98	\$45.25	\$45.41							
<b><u>REAL TIME LBMP</u></b>												
Price *	\$67.92	\$50.26	\$44.22	\$45.20	\$44.26							
Standard Deviation	\$58.47	\$22.39	\$17.41	\$19.98	\$26.27							
Load Weighted Price **	\$70.32	\$51.61	\$45.24	\$46.28	\$46.66							
Average Daily Energy Sendout/Month GWh	457	447	422	398	411							

### NYISO Markets 2010 Energy Statistics

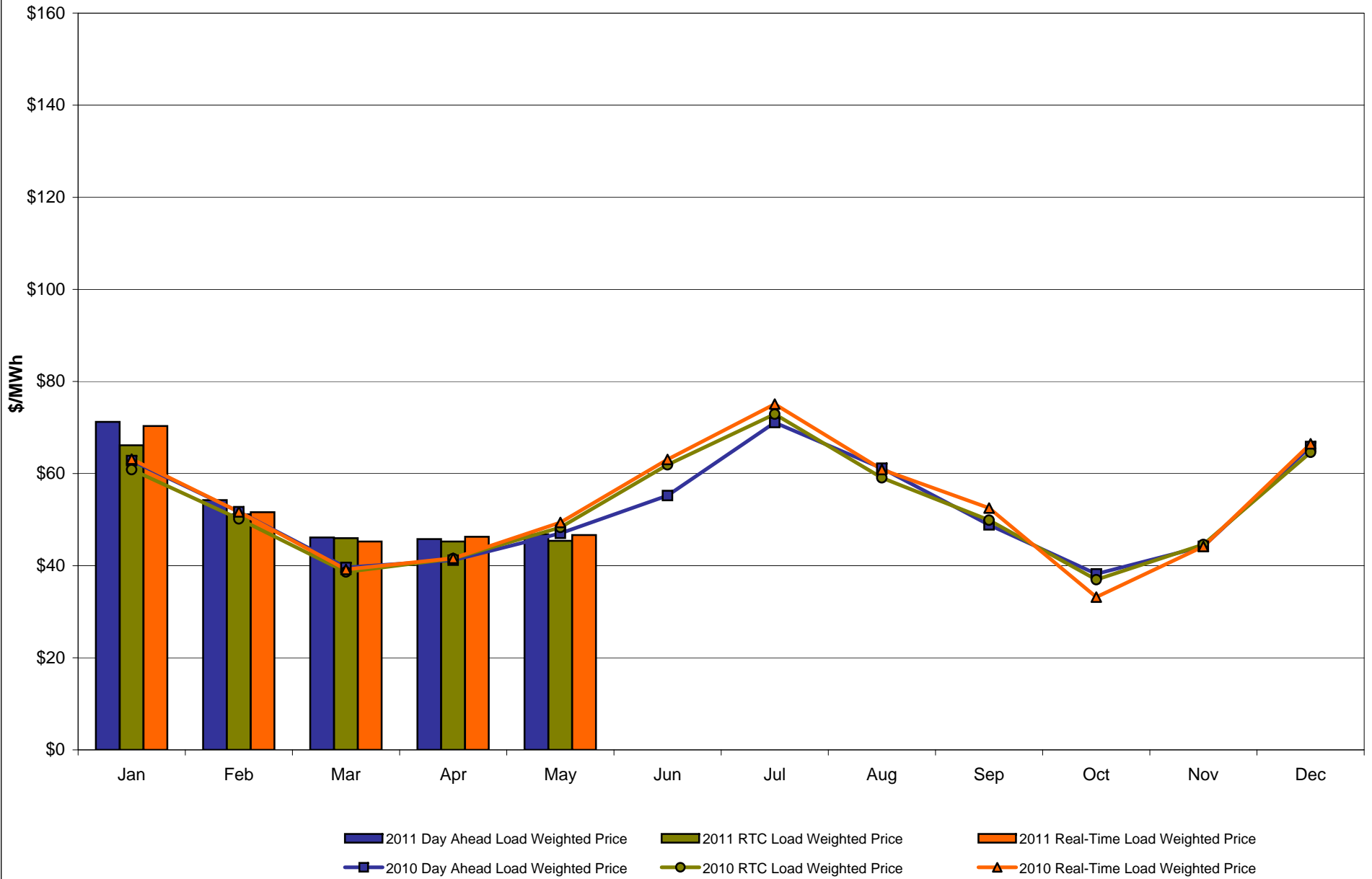
	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
<b><u>DAY AHEAD LBMP</u></b>												
Price *	\$60.96	\$50.47	\$38.69	\$40.13	\$45.29	\$52.71	\$66.67	\$57.80	\$46.64	\$37.10	\$43.31	\$63.69
Standard Deviation	\$20.86	\$13.07	\$7.78	\$8.09	\$11.45	\$16.14	\$28.01	\$21.60	\$13.36	\$8.27	\$7.59	\$22.45
Load Weighted Price **	\$62.80	\$51.71	\$39.60	\$41.18	\$47.04	\$55.22	\$71.08	\$61.16	\$48.85	\$38.21	\$44.20	\$65.87
<b><u>RTC LBMP</u></b>												
Price *	\$59.32	\$49.38	\$37.94	\$40.58	\$46.70	\$58.69	\$68.36	\$55.78	\$47.79	\$35.78	\$43.67	\$62.82
Standard Deviation	\$33.92	\$24.97	\$14.48	\$13.84	\$21.47	\$58.47	\$51.68	\$48.01	\$21.55	\$21.49	\$17.26	\$35.62
Load Weighted Price **	\$60.85	\$50.16	\$38.64	\$41.54	\$48.31	\$61.91	\$72.92	\$59.07	\$49.88	\$36.95	\$44.59	\$64.61
<b><u>REAL TIME LBMP</u></b>												
Price *	\$60.40	\$50.45	\$38.09	\$40.49	\$47.17	\$58.49	\$69.42	\$56.28	\$49.38	\$34.57	\$43.04	\$64.06
Standard Deviation	\$42.06	\$30.38	\$19.24	\$17.00	\$28.15	\$56.05	\$56.60	\$41.46	\$32.03	\$27.89	\$16.63	\$44.71
Load Weighted Price **	\$63.13	\$51.69	\$39.19	\$41.62	\$49.38	\$63.06	\$75.08	\$60.89	\$52.51	\$36.23	\$44.16	\$66.48
Average Daily Energy Sendout/Month GWh	451	444	410	387	415	491	558	514	451	393	405	453

\* Average zonal load weighted prices.

\*\* Average zonal load weighted prices, load weighted in each hour.



## NYISO Monthly Average Internal LBMPs 2010 - 2011

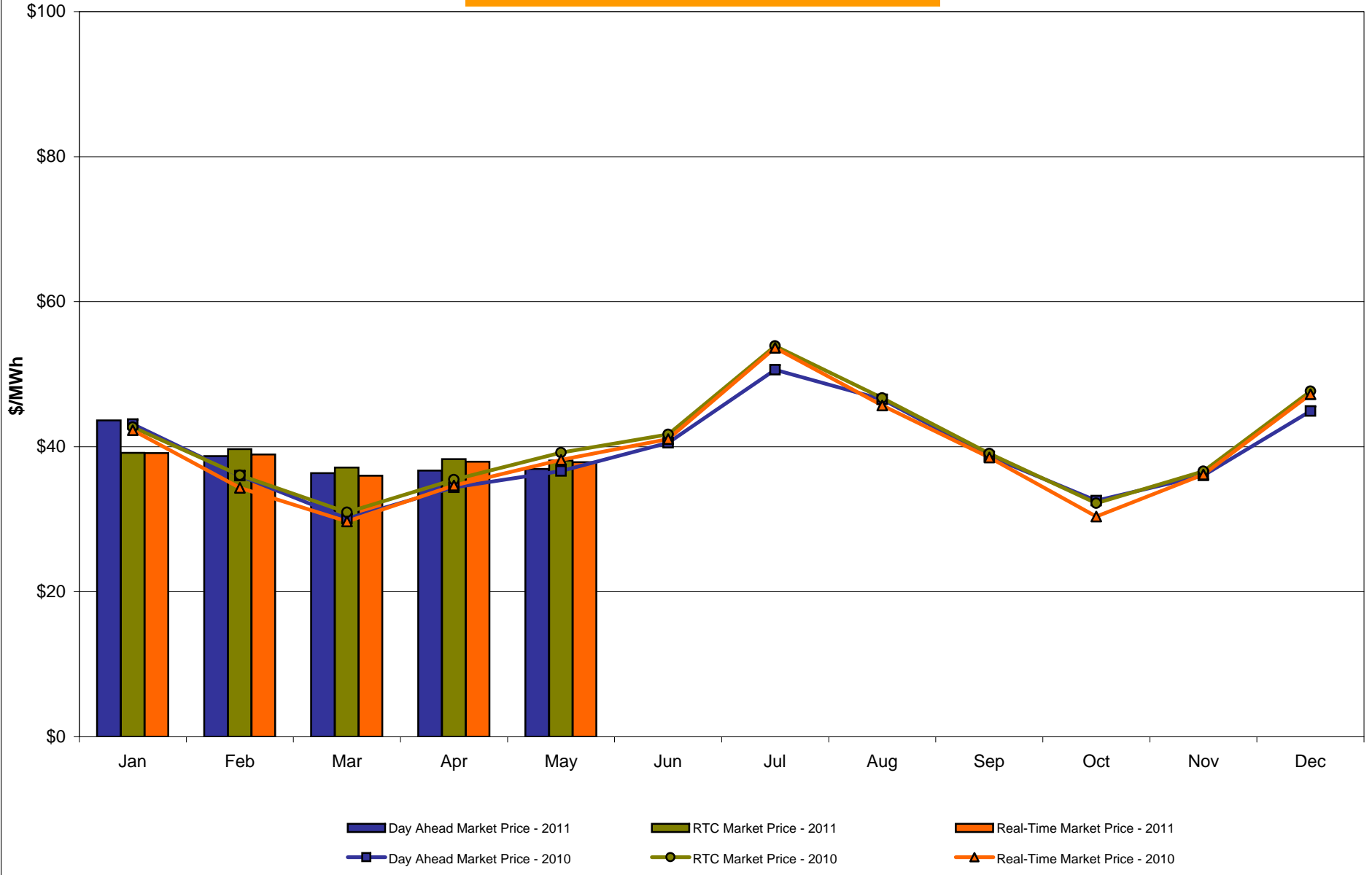


**May 2011 Zonal LBMP Statistics for NYISO (\$/MWh)**

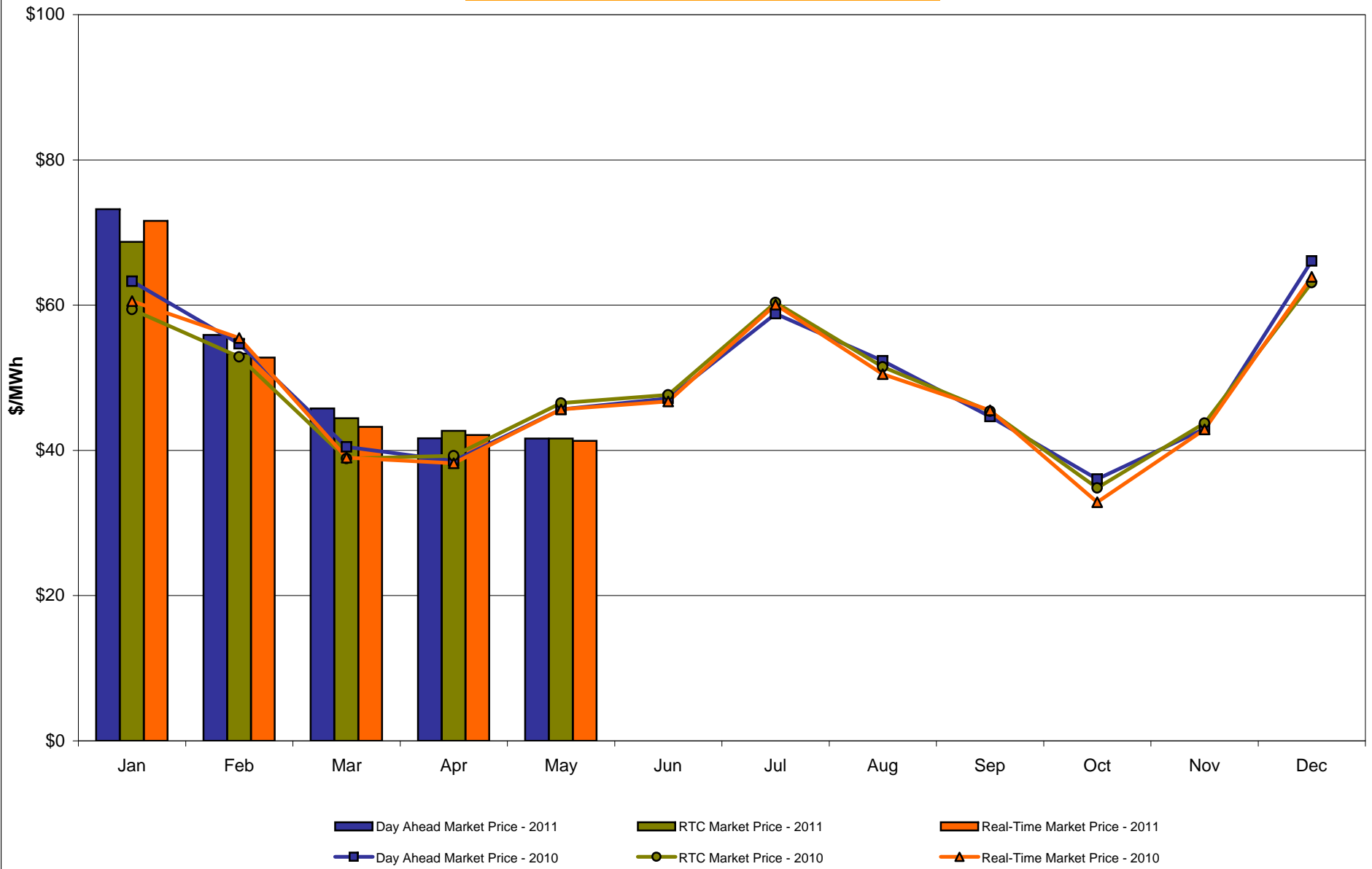
	<b>WEST</b>	<b>GENESEE</b>	<b>NORTH</b>	<b>CENTRAL</b>	<b>MOHAWK</b>	<b>CAPITAL</b>	<b>HUDSON</b>	<b>MILLWOOD</b>	<b>DUNWOODIE</b>	<b>NEW YORK</b>	<b>LONG</b>
	<b><u>Zone A</u></b>	<b><u>Zone B</u></b>	<b><u>Zone D</u></b>	<b><u>Zone C</u></b>	<b><u>Zone E</u></b>	<b><u>Zone F</u></b>	<b><u>Zone G</u></b>	<b><u>Zone H</u></b>	<b><u>Zone I</u></b>	<b><u>Zone J</u></b>	<b><u>Zone K</u></b>
<b><u>DAY AHEAD LBMP</u></b>											
Unweighted Price *	36.93	39.21	37.42	39.57	40.18	41.64	45.58	45.73	45.79	48.95	52.98
Standard Deviation	6.05	6.47	5.49	6.64	6.82	7.32	12.90	13.66	13.78	14.64	20.95
<b><u>RTC LBMP</u></b>											
Unweighted Price *	38.09	40.18	37.70	40.56	40.73	41.64	44.44	44.48	44.50	45.53	49.48
Standard Deviation	21.34	22.67	23.44	22.54	22.46	22.62	26.19	26.48	26.46	26.68	33.00
<b><u>REAL TIME LBMP</u></b>											
Unweighted Price *	37.87	39.95	37.59	40.33	40.48	41.31	44.35	44.42	44.43	45.89	53.68
Standard Deviation	20.77	21.97	20.61	22.12	22.15	22.32	27.64	28.08	28.13	29.04	45.64
	<b>ONTARIO</b>	<b>HYDRO</b>	<b>HYDRO</b>		<b>NEW</b>	<b>CROSS</b>	<b>NORTHPORT-</b>				
	<b>IESO</b>	<b>QUEBEC</b>	<b>QUEBEC</b>	<b>PJM</b>	<b>ENGLAND</b>	<b>SOUND</b>	<b>NORWALK</b>	<b>NEPTUNE</b>	<b>LINDEN VFT</b>	<b>Dennison</b>	
		<b>(Wheel)</b>	<b>(Import/Export)</b>			<b>CABLE</b>					
	<b><u>Zone O</u></b>	<b><u>Zone M</u></b>	<b><u>Zone M</u></b>	<b><u>Zone P</u></b>	<b><u>Zone N</u></b>	<b><u>Controllable</u></b>	<b><u>Controllable</u></b>	<b><u>Controllable</u></b>	<b><u>Controllable</u></b>	<b><u>Controllable</u></b>	<b><u>Controllable</u></b>
						<b><u>Line</u></b>	<b><u>Line</u></b>	<b><u>Line</u></b>	<b><u>Line</u></b>	<b><u>Line</u></b>	
<b><u>DAY AHEAD LBMP</u></b>											
Unweighted Price *	36.02	37.14	36.10	41.62	42.78	52.66	47.89	50.98	46.47	36.85	
Standard Deviation	5.63	4.98	3.95	10.63	8.32	20.63	11.14	20.45	11.68	5.19	
<b><u>RTC LBMP</u></b>											
Unweighted Price *	33.75	26.64	26.56	38.91	39.23	46.04	43.84	45.28	36.87	29.33	
Standard Deviation	8.03	92.28	92.27	11.55	9.85	21.64	22.46	21.63	59.46	58.84	
<b><u>REAL TIME LBMP</u></b>											
Unweighted Price *	36.25	36.88	36.46	40.22	41.60	52.64	46.22	51.66	44.71	36.75	
Standard Deviation	16.30	16.65	16.04	19.38	18.62	41.51	35.23	41.39	22.75	17.01	

\* Straight LBMP averages

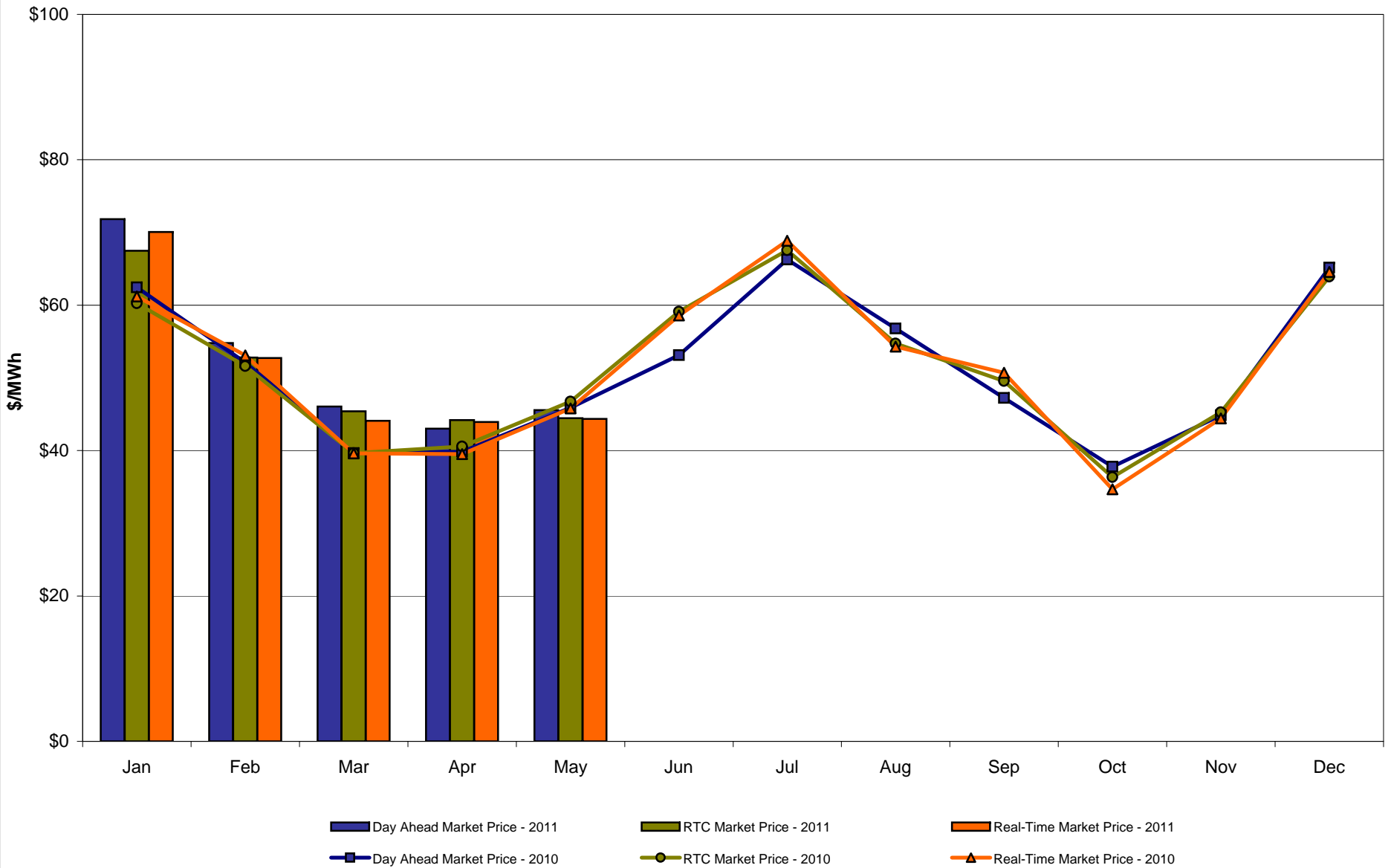
**West Zone A**  
**Monthly Average LBMP Prices 2010 - 2011**



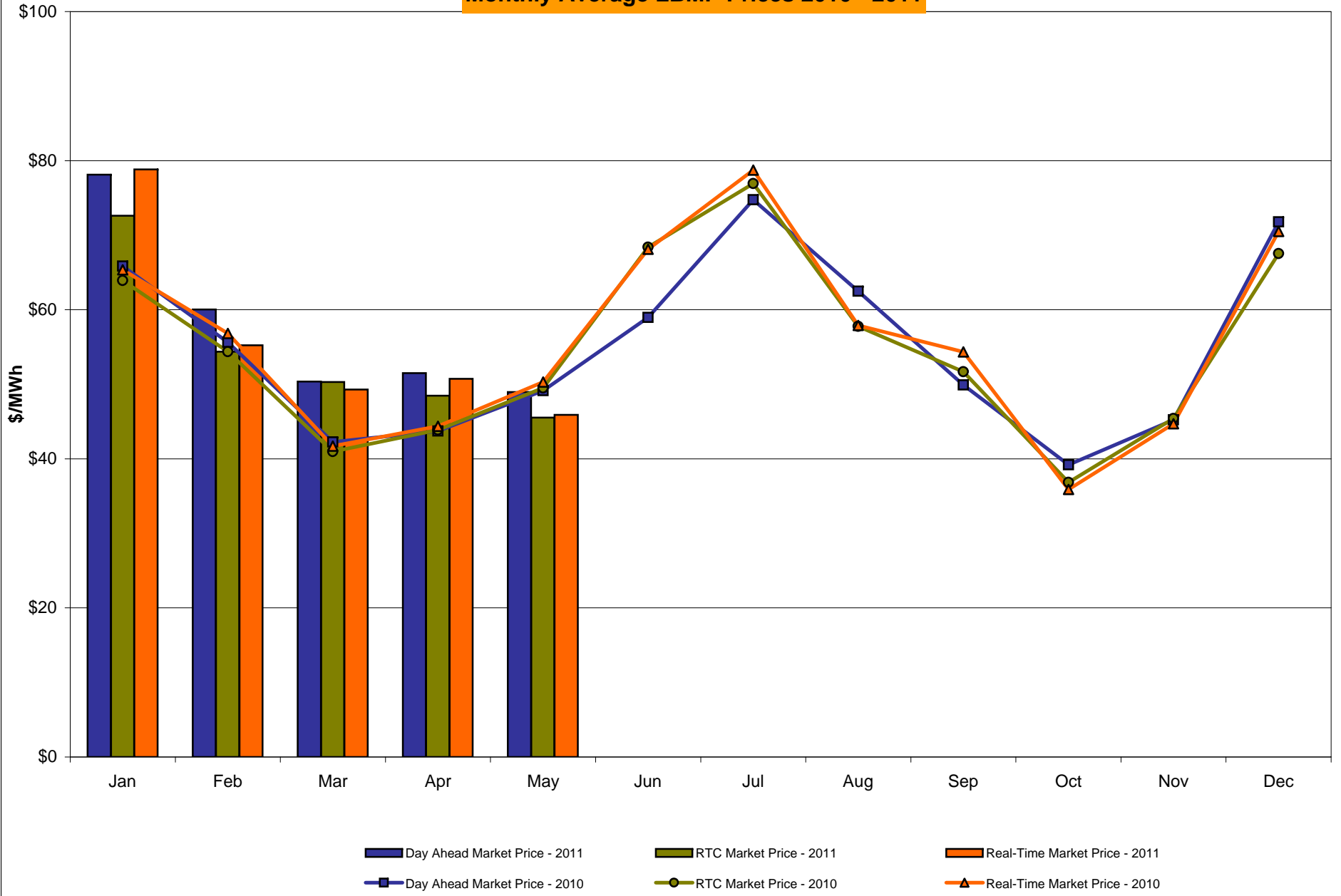
**Capital Zone F  
Monthly Average LBMP Prices 2010 - 2011**



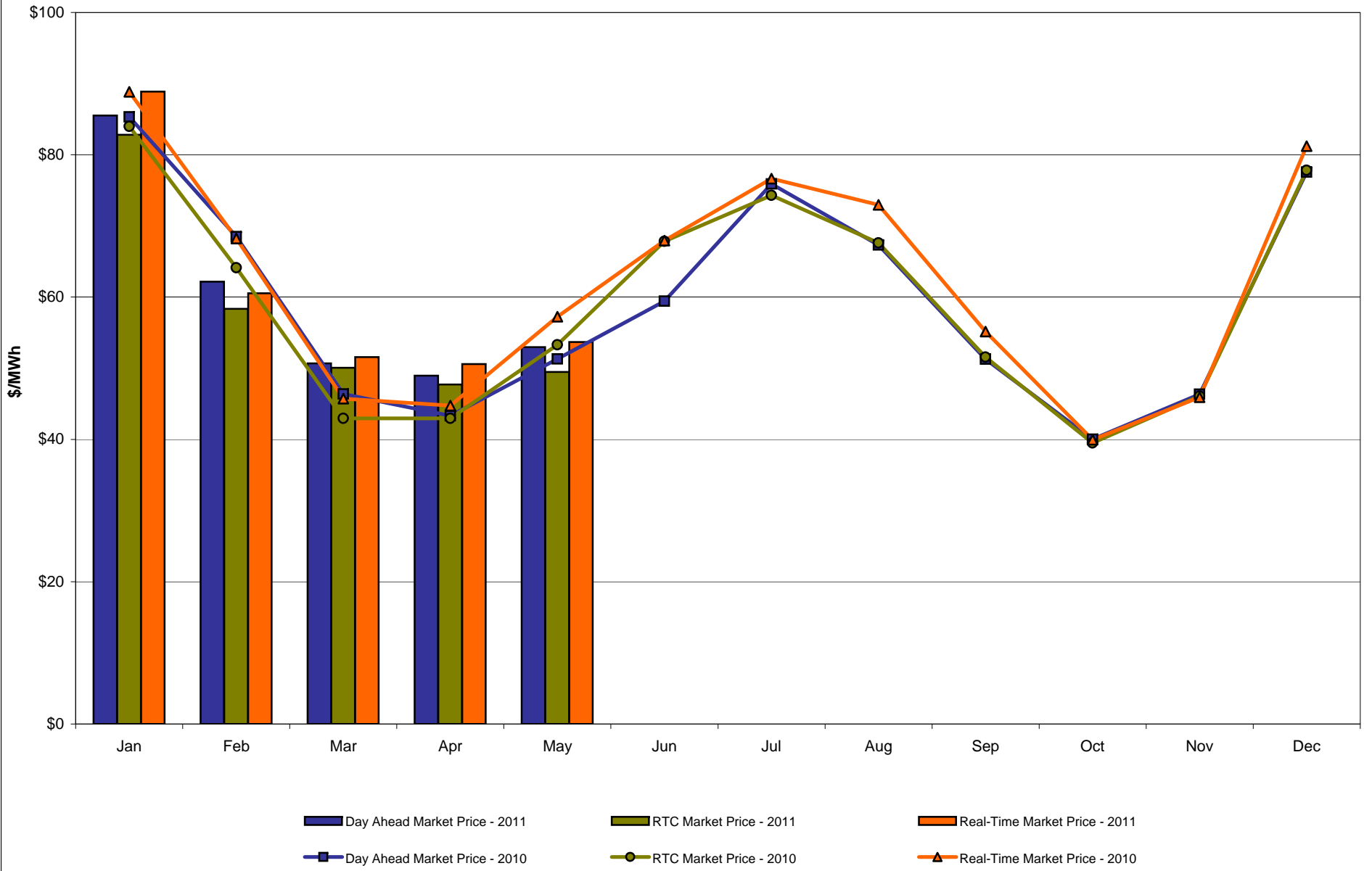
## Hudson Valley Zone G Monthly Average LBMP Prices 2010 - 2011



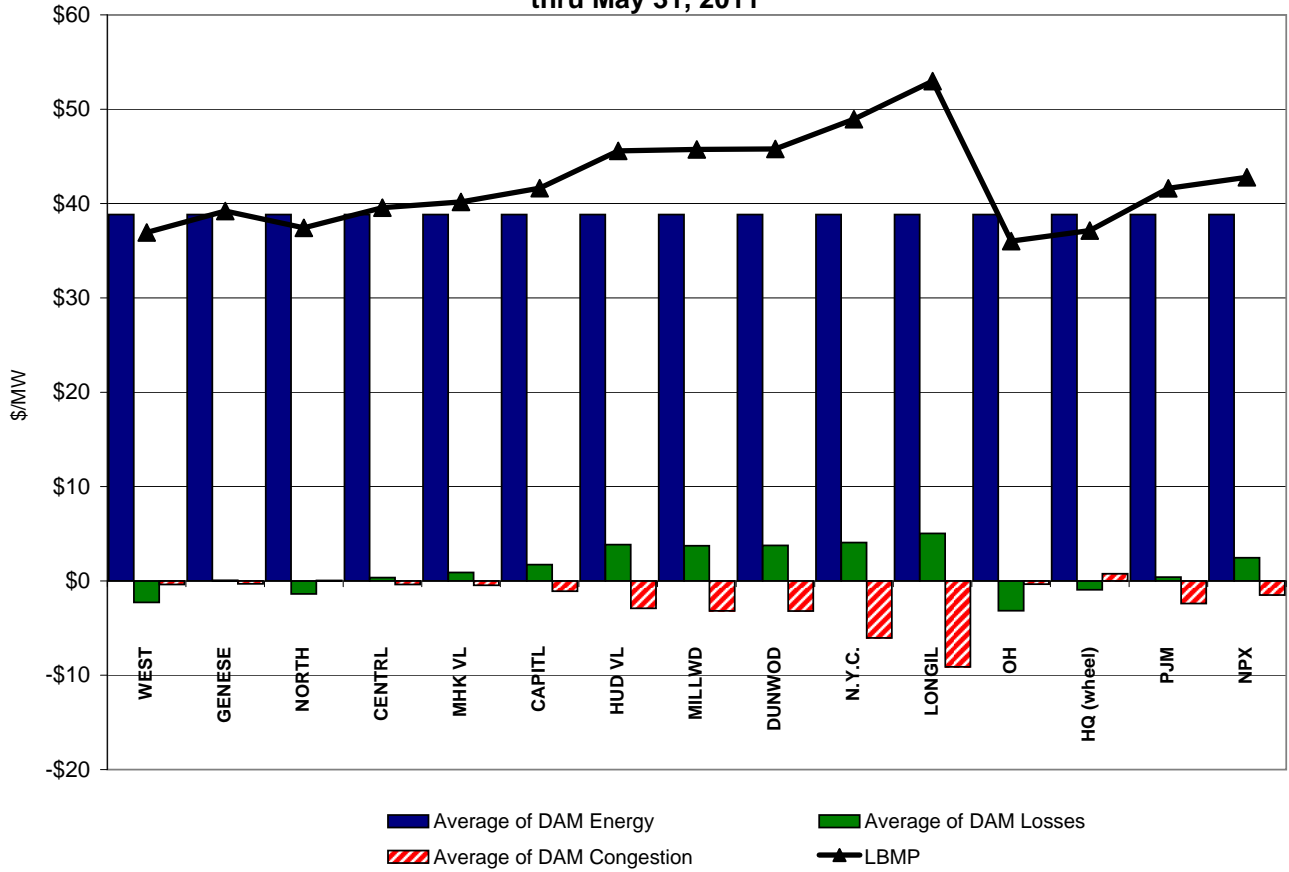
**NYC Zone J  
Monthly Average LBMP Prices 2010 - 2011**



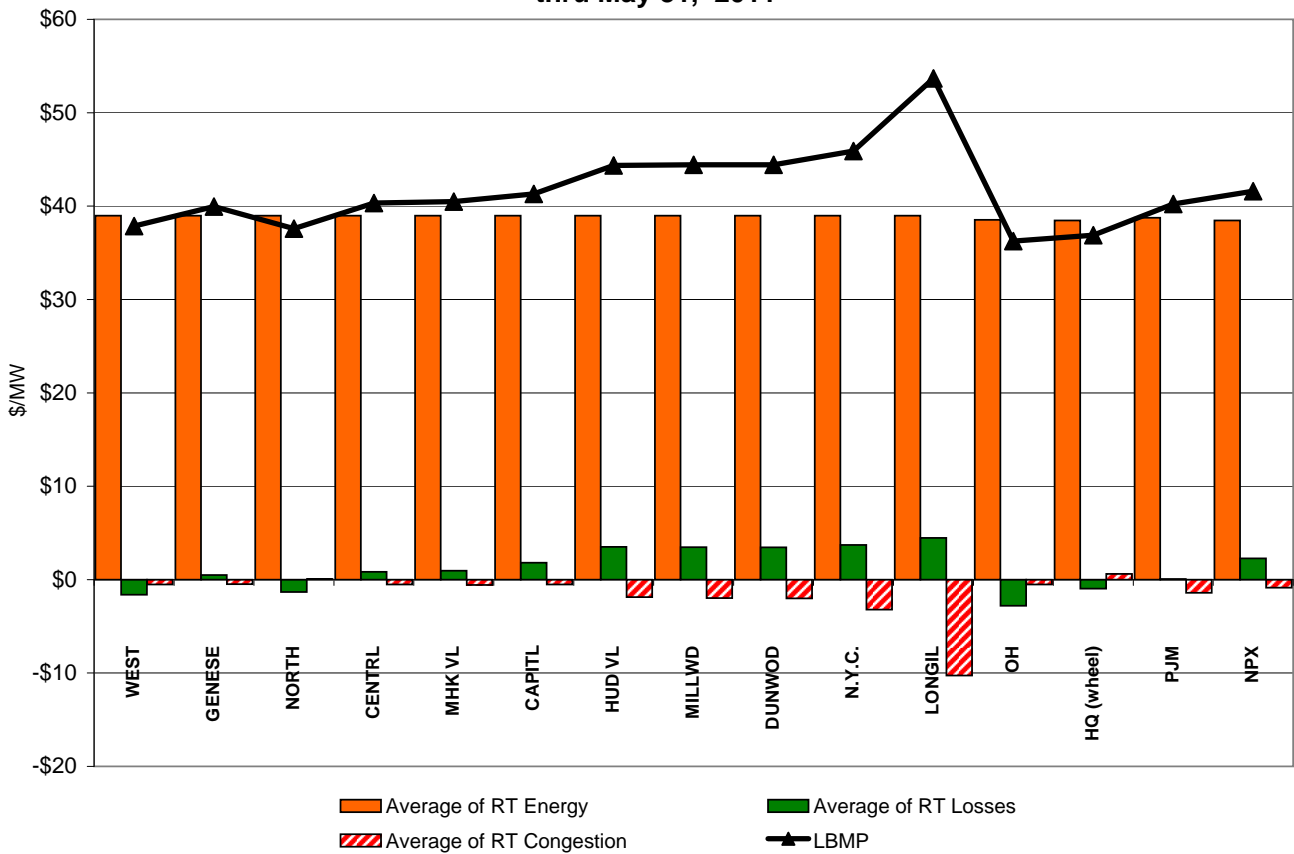
## Long Island Zone K Monthly Average LBMP Prices 2010 - 2011



**DAM Zonal Unweighted Monthly Average LBMP Components  
thru May 31, 2011**



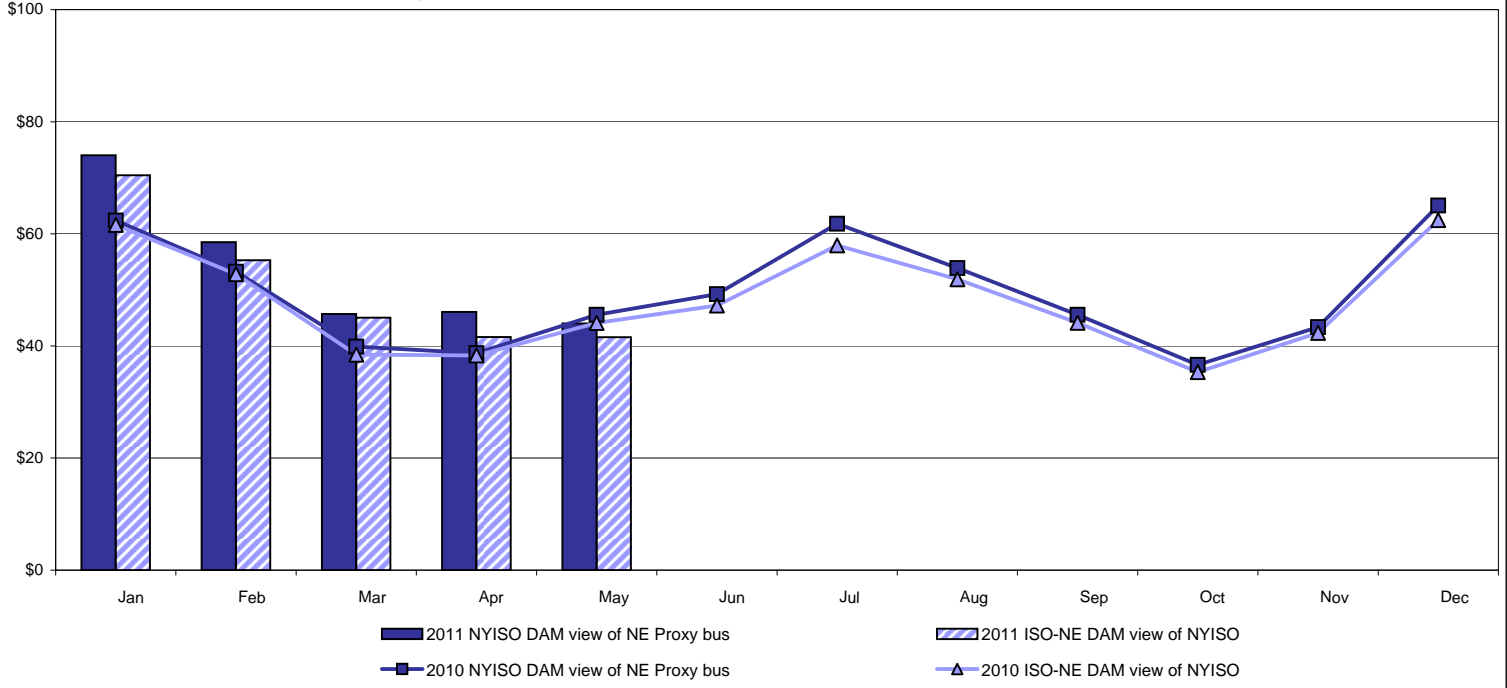
**RT Zonal Unweighted Monthly Average LBMP Components  
thru May 31, 2011**



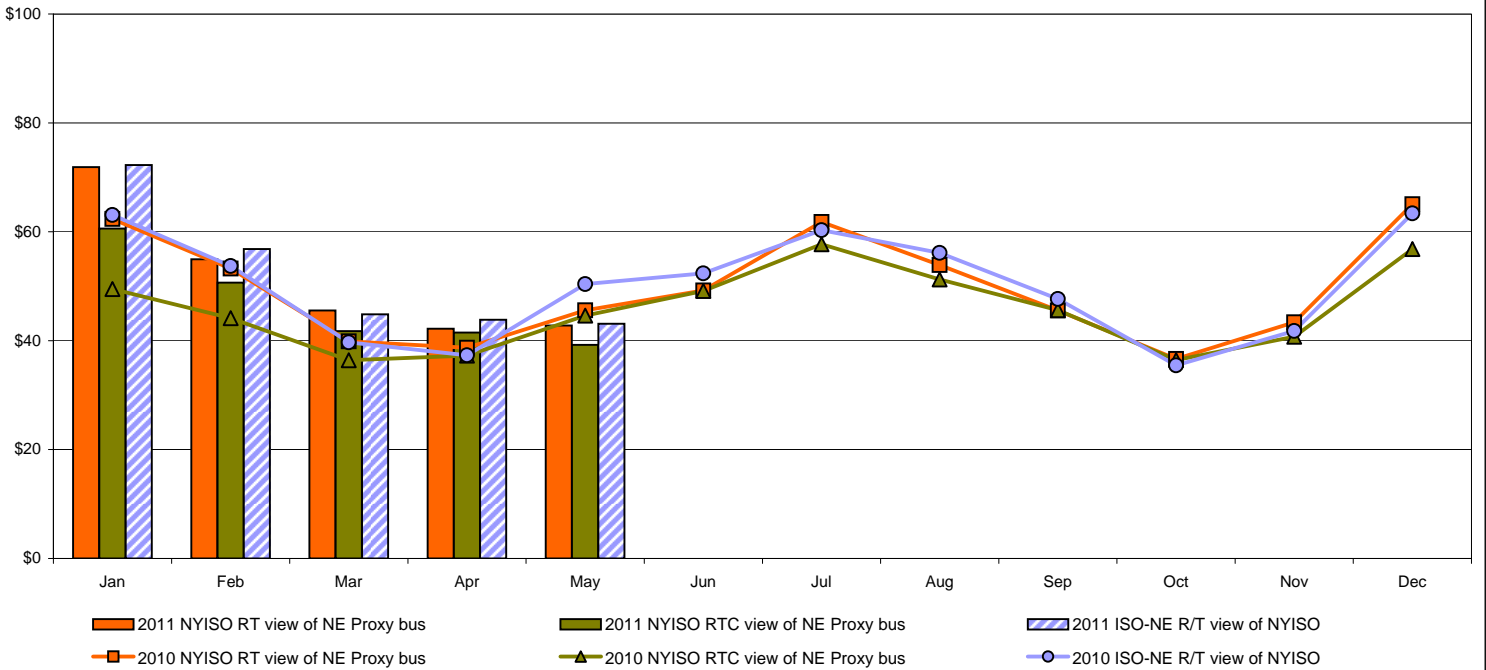


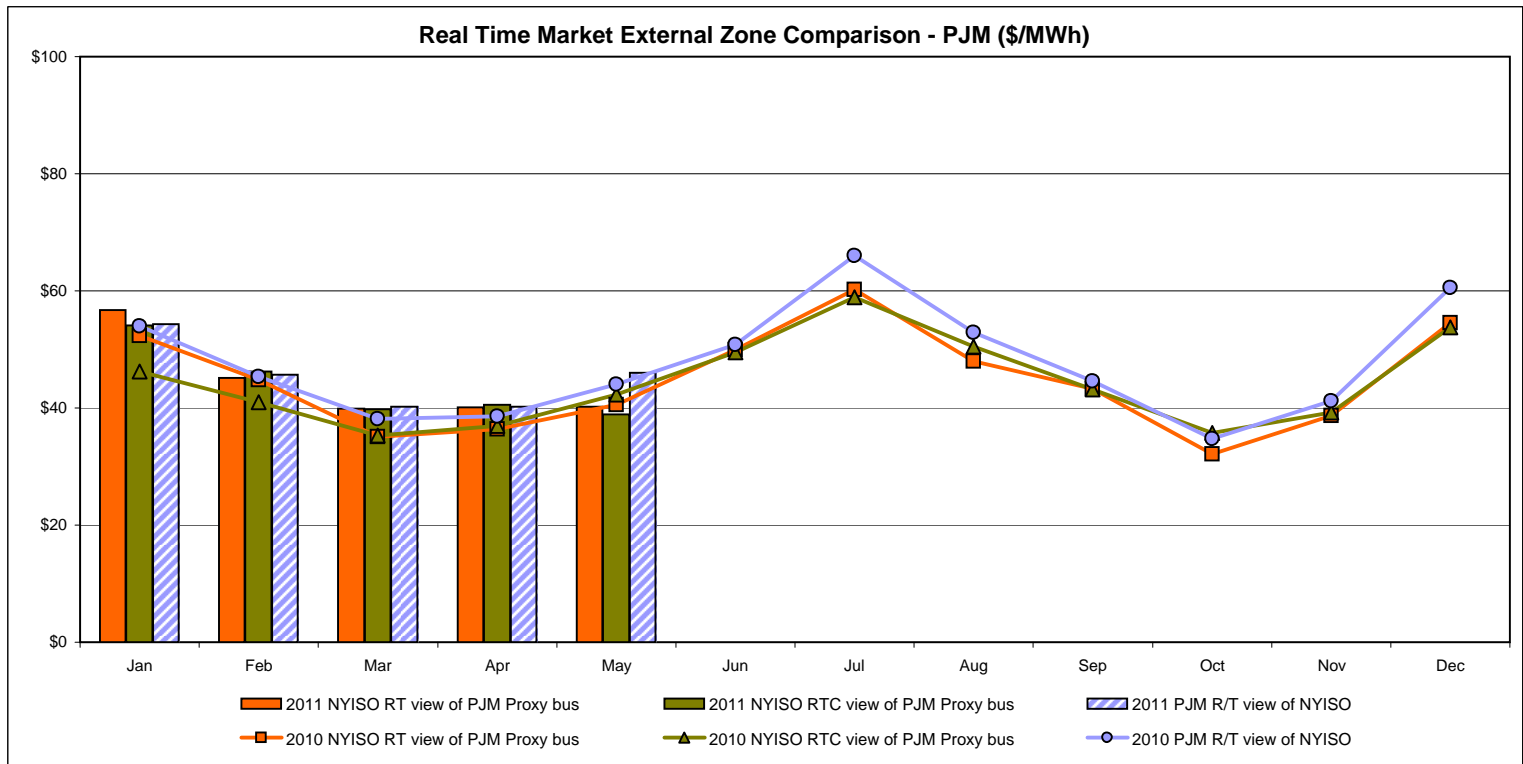
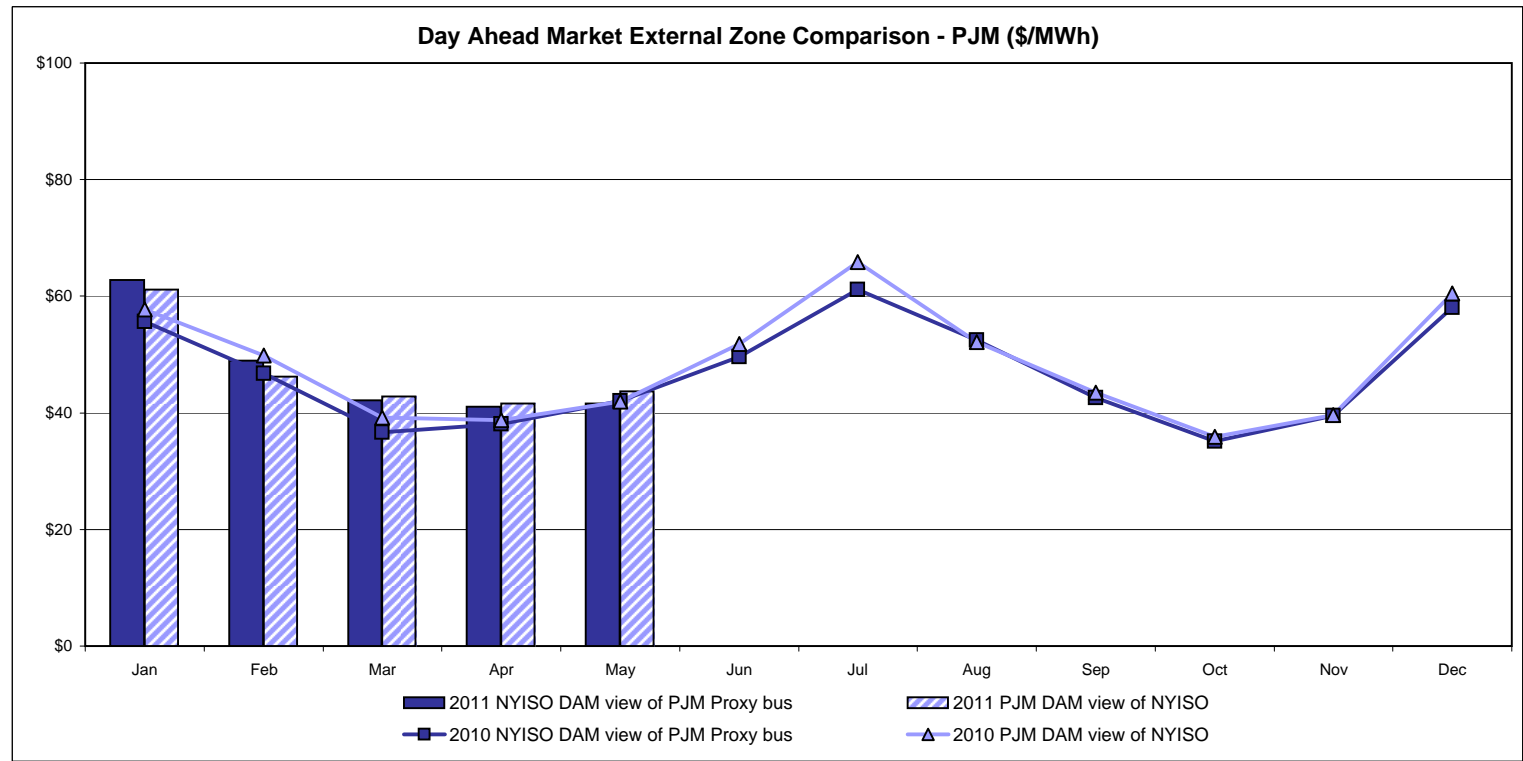
# External Comparison ISO-New England

## Day Ahead Market External Zone Comparison: ISO-NE (\$/MWh)



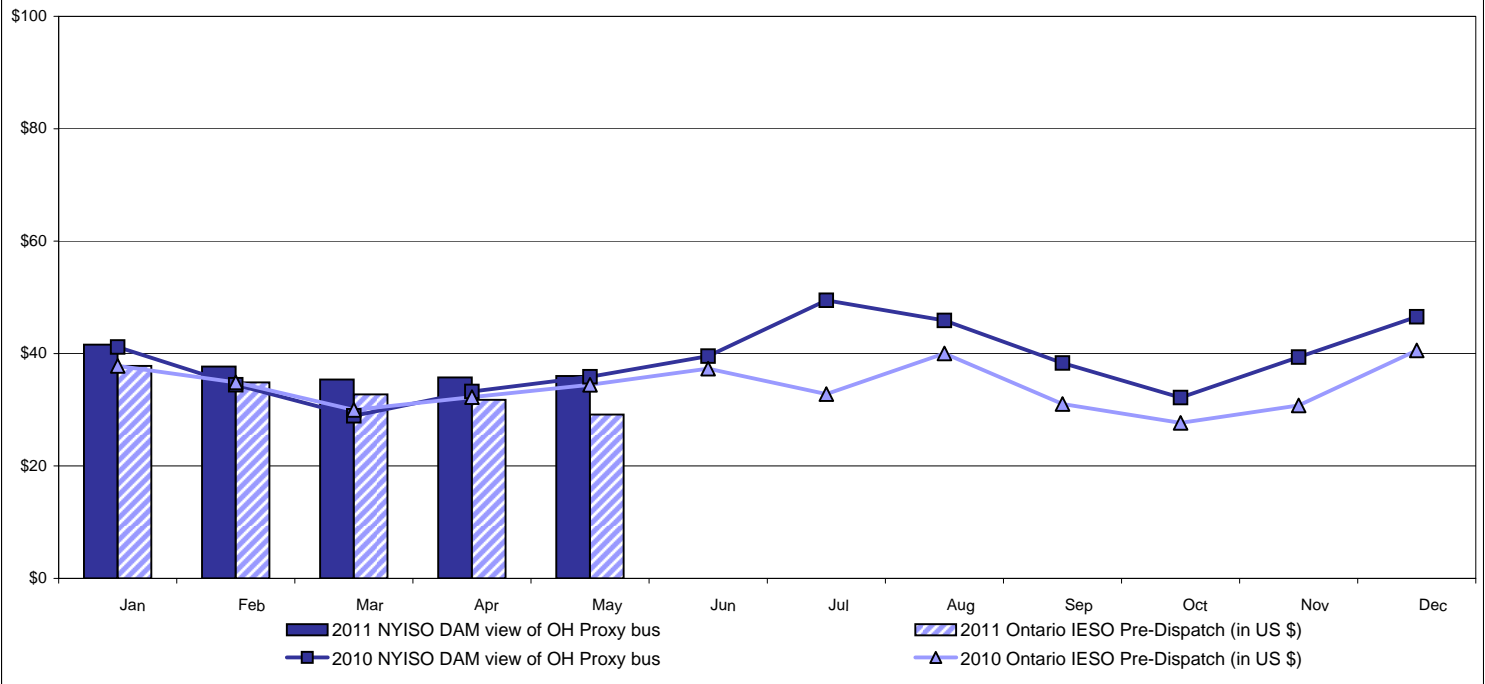
## Real Time Market External Zone Comparison: ISO-NE (\$/MWh)



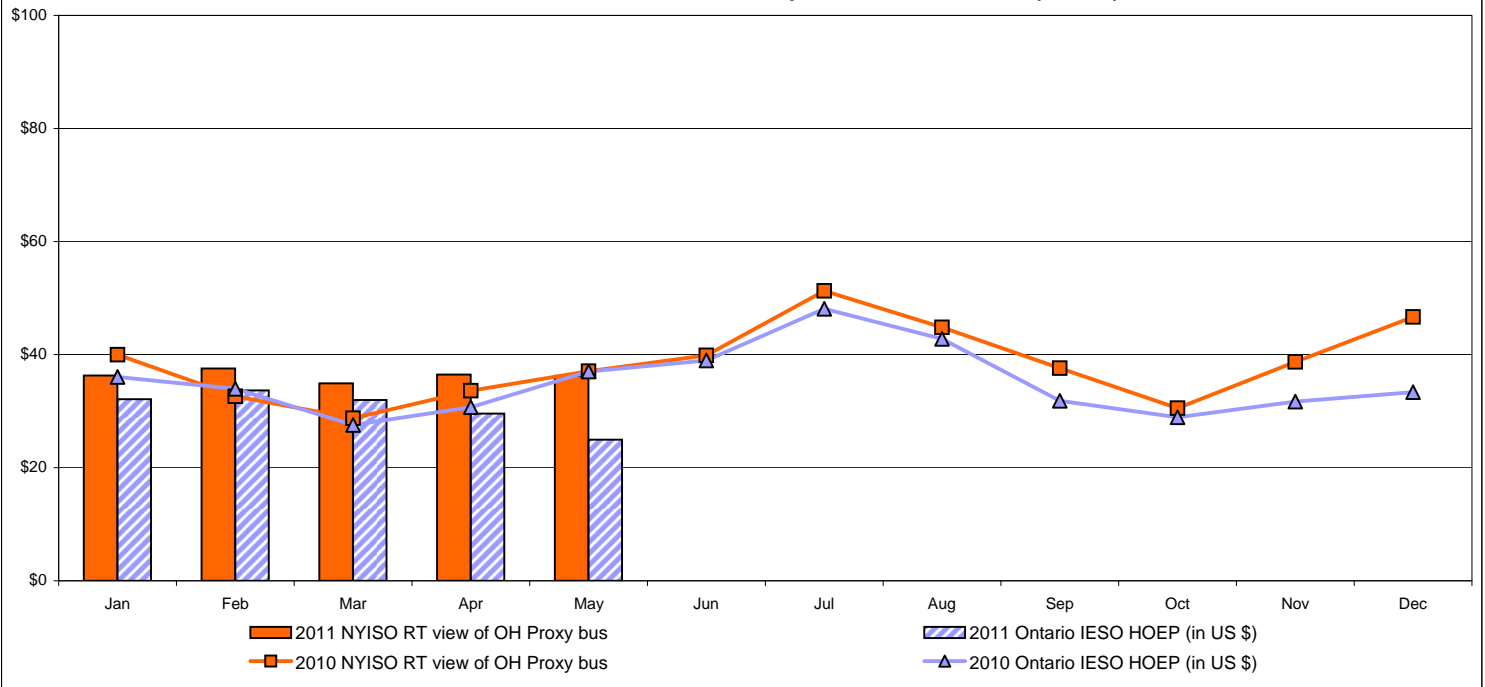


# External Comparison Ontario IESO

## Day Ahead Market External Zone Comparison - Ontario IESO (\$/MWh)

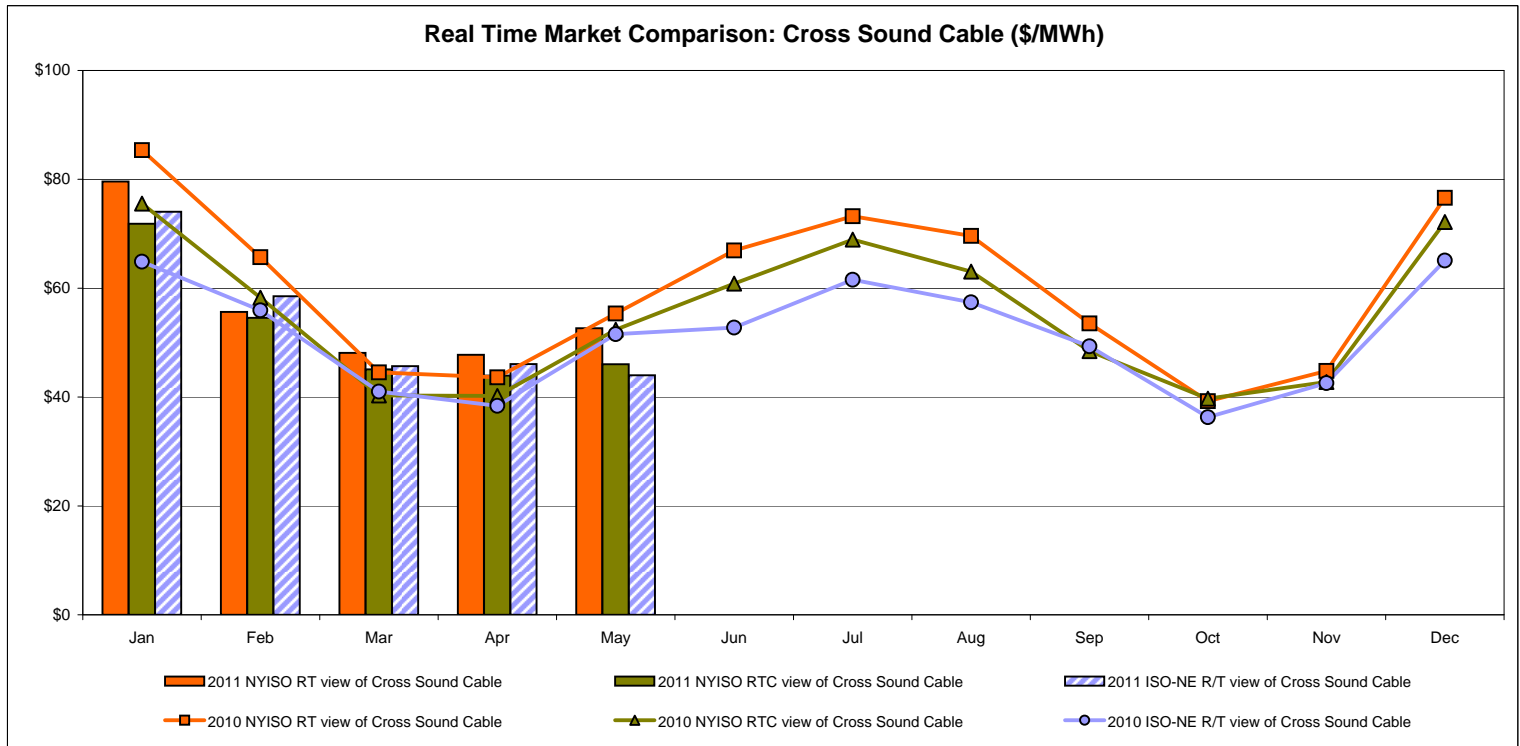
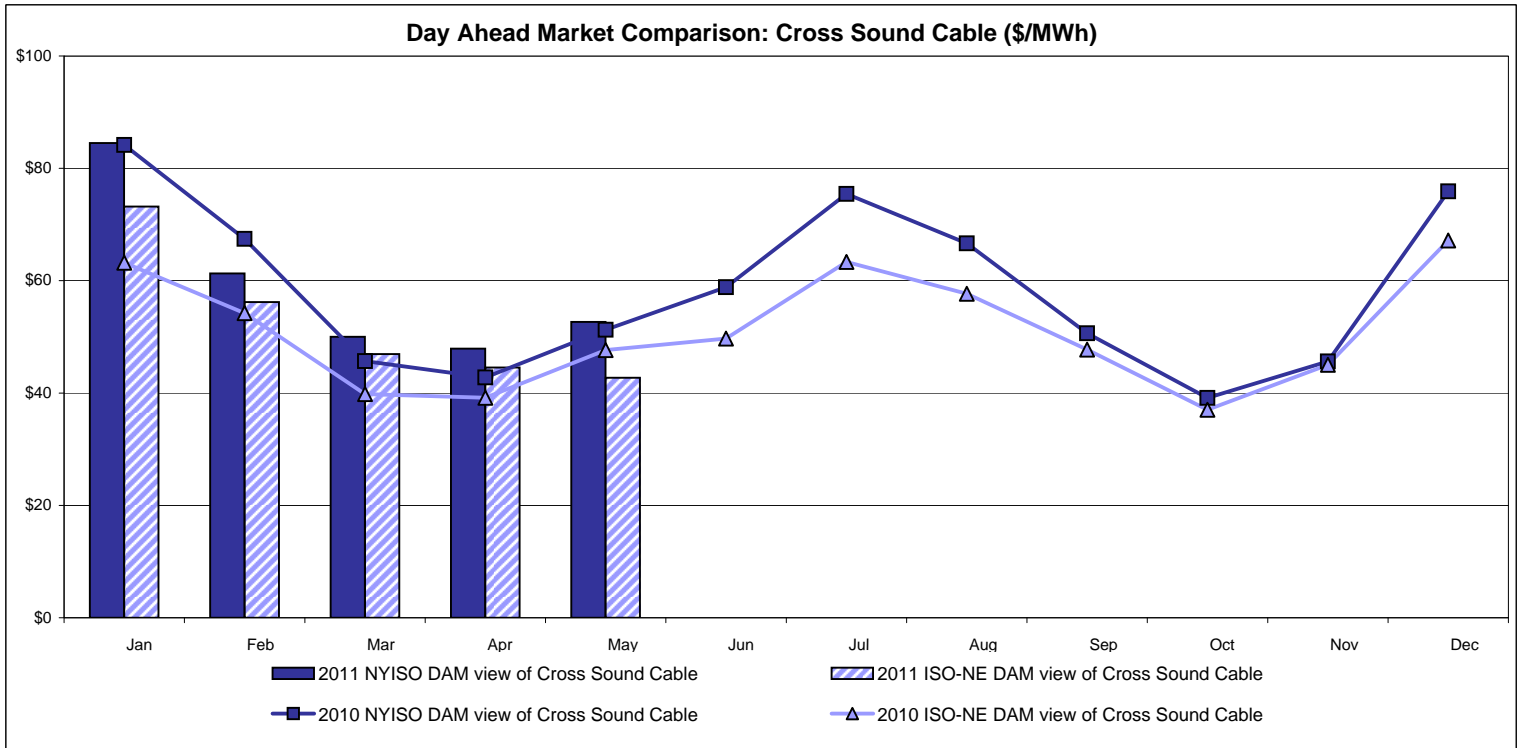


## Real Time Market External Zone Comparison - Ontario IESO (\$/MWh)



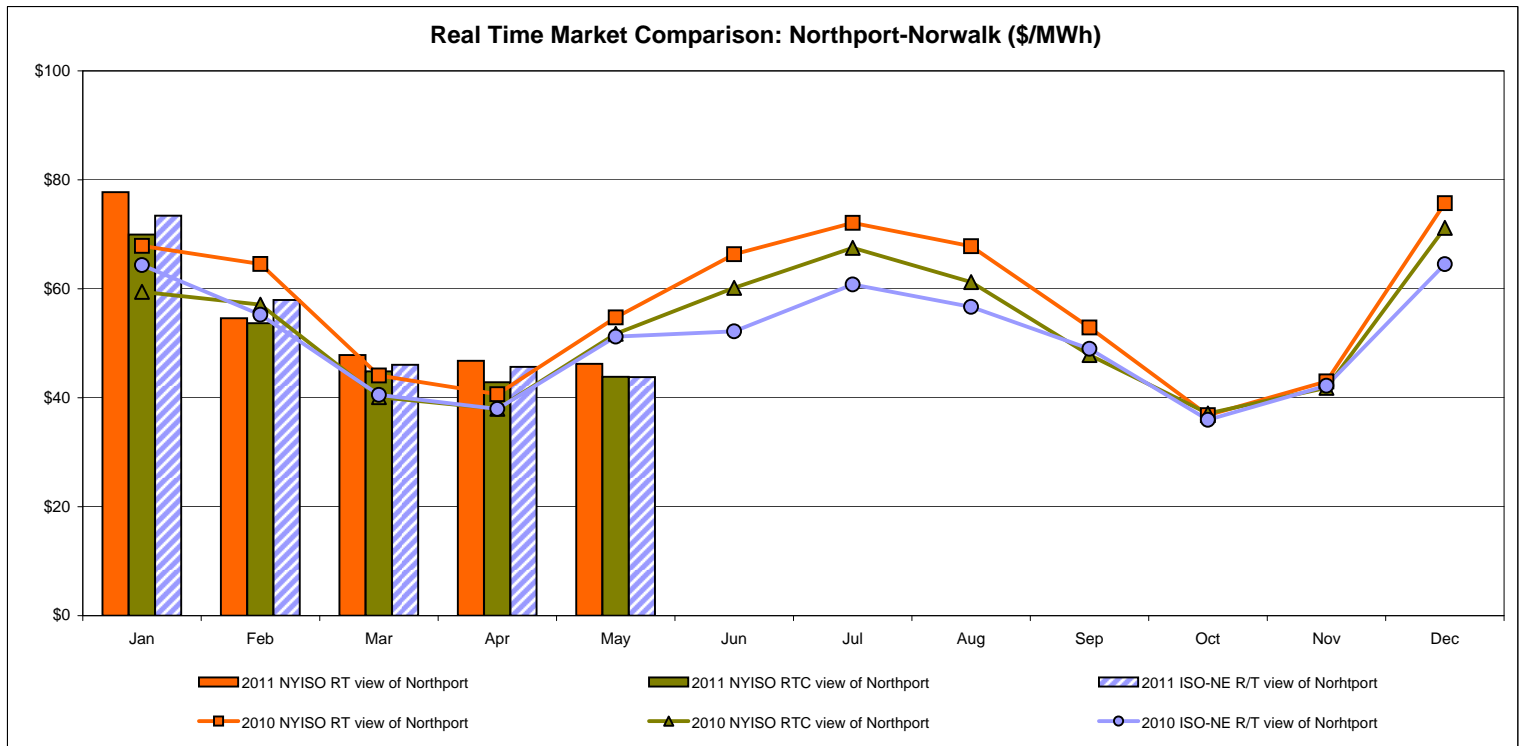
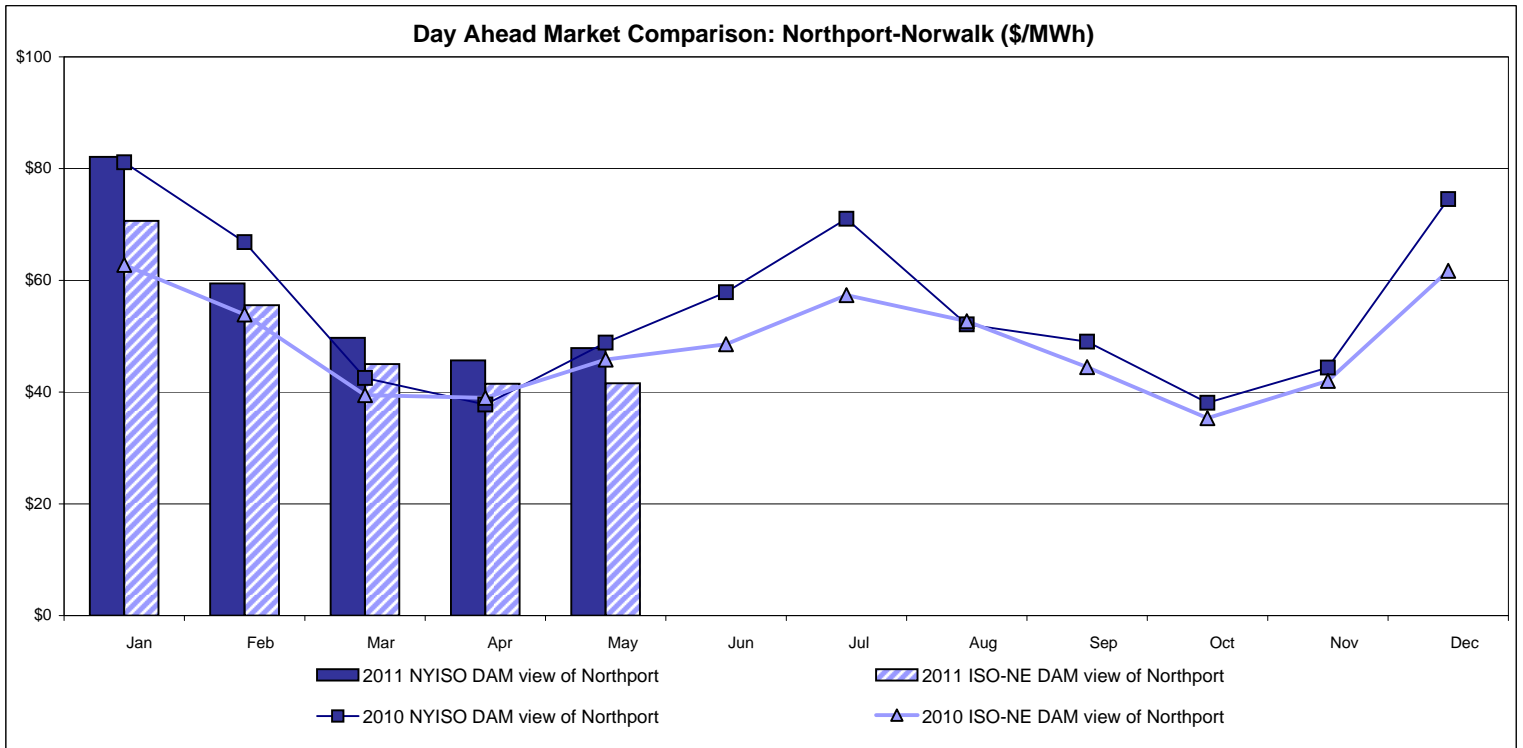
Notes: Exchange factor used for May 2011 was 1.04 to US \$  
 HOEP: Hourly Ontario Energy Price  
 Pre-Dispatch: Projected Energy Price

# External Controllable Line: Cross Sound Cable (New England)



Note:  
 ISO-NE Forecast is an advisory posting @ 18:00 day before.  
 The DAM and R/T prices at the Shorham138 99 interface are used for ISO-NE.  
 The DAM and R/T prices at the CSC interface are used for NYISO.

# External Controllable Line: Northport - Norwalk (New England)

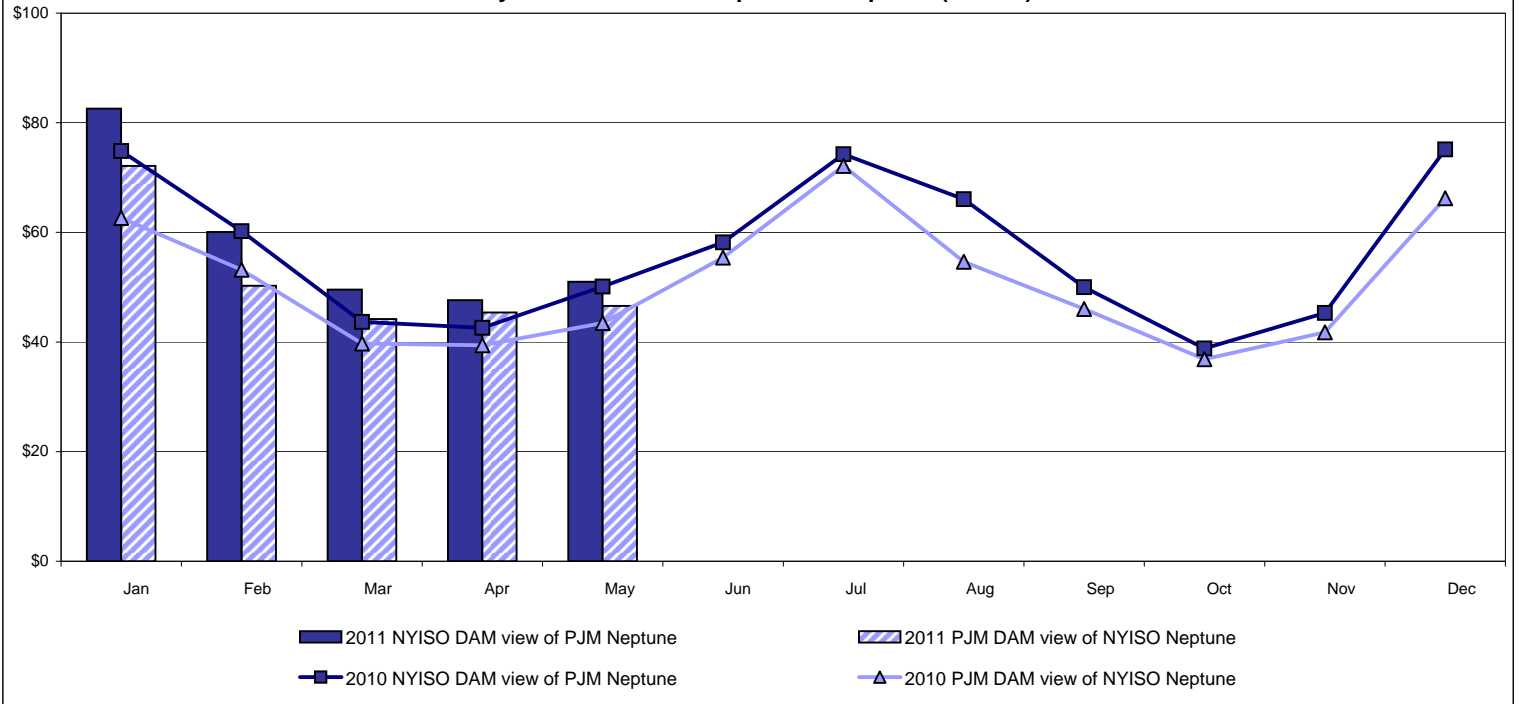


**Note:**

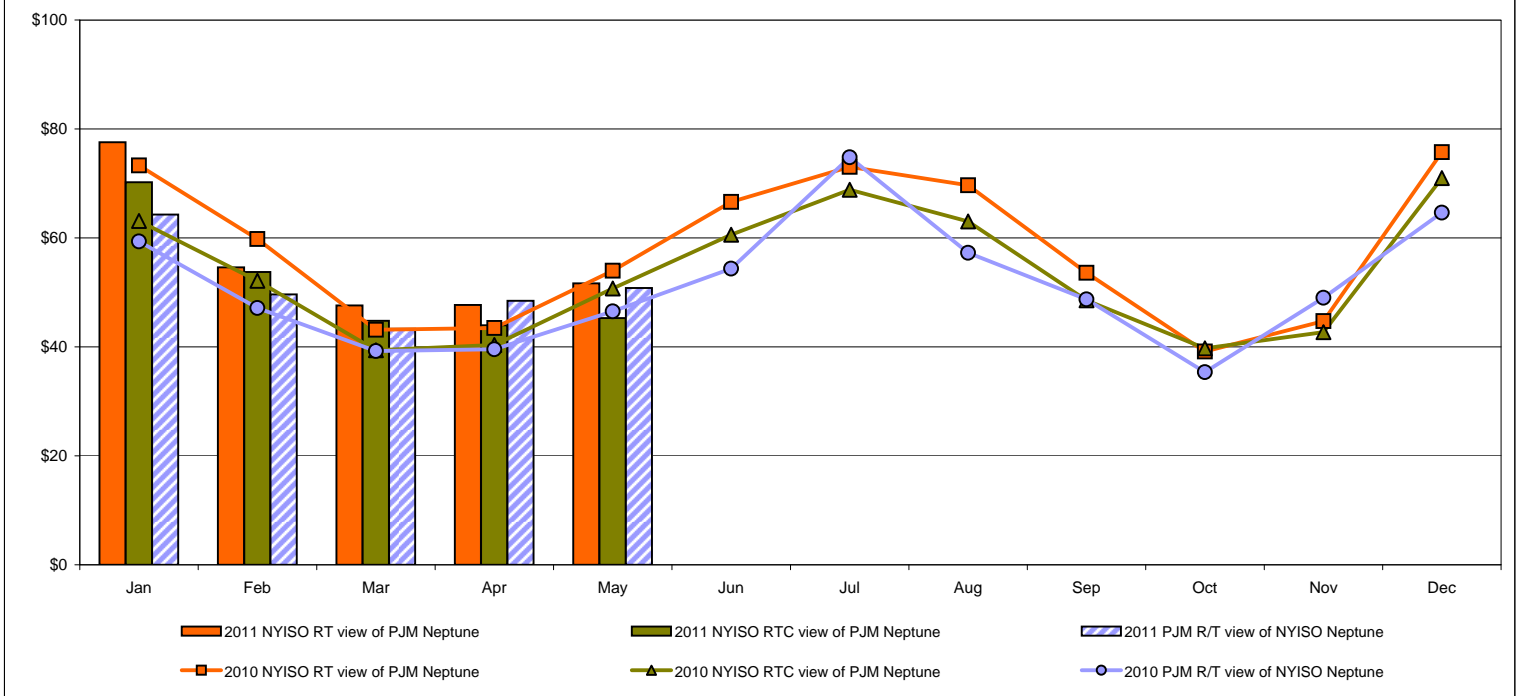
ISO-NE Forecast is an advisory posting @ 18:00 day before.  
 The DAM and R/T prices at the Northport 138 interface are used for ISO-NE.  
 The DAM and R/T prices at the 1385 interface are used for NYISO.

## External Controllable Line: Neptune (PJM)

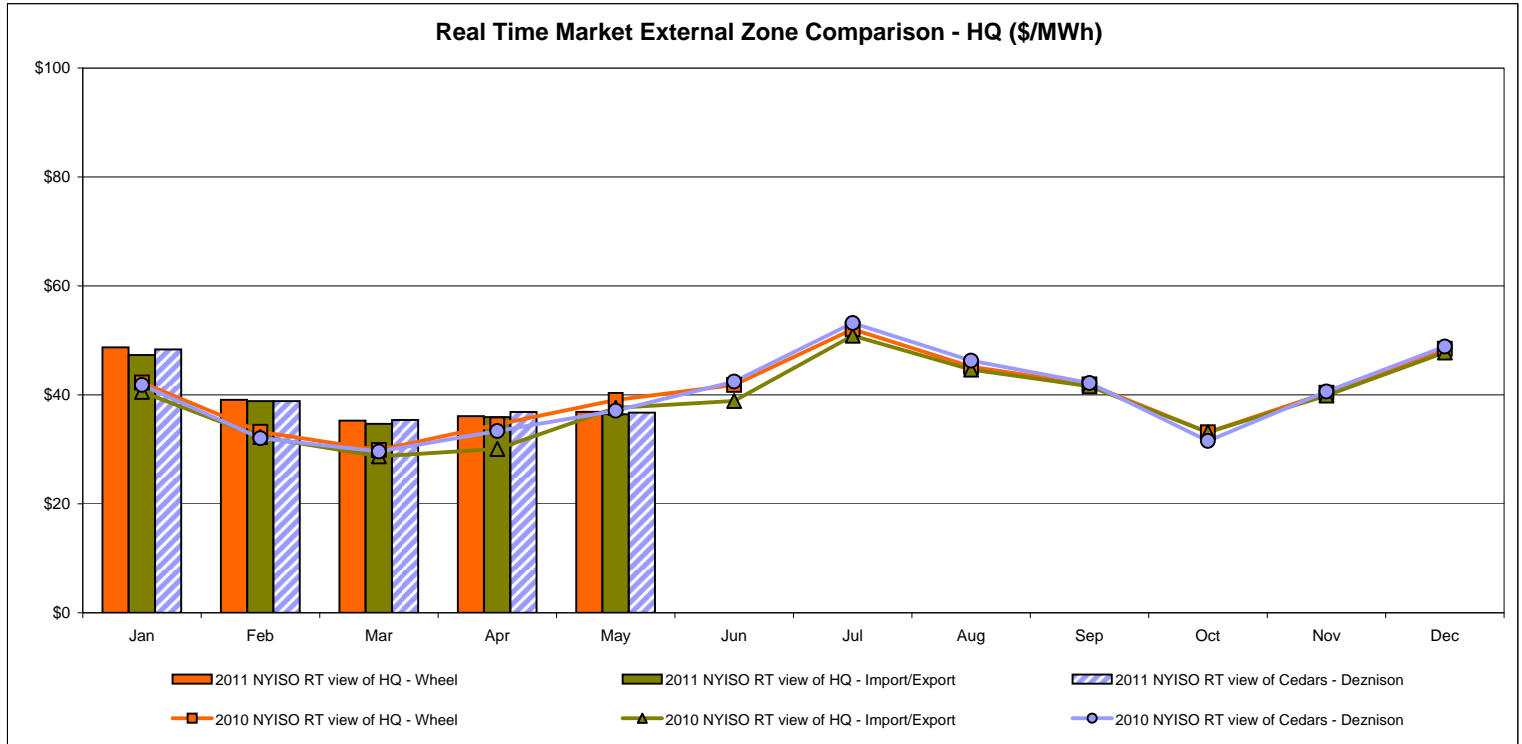
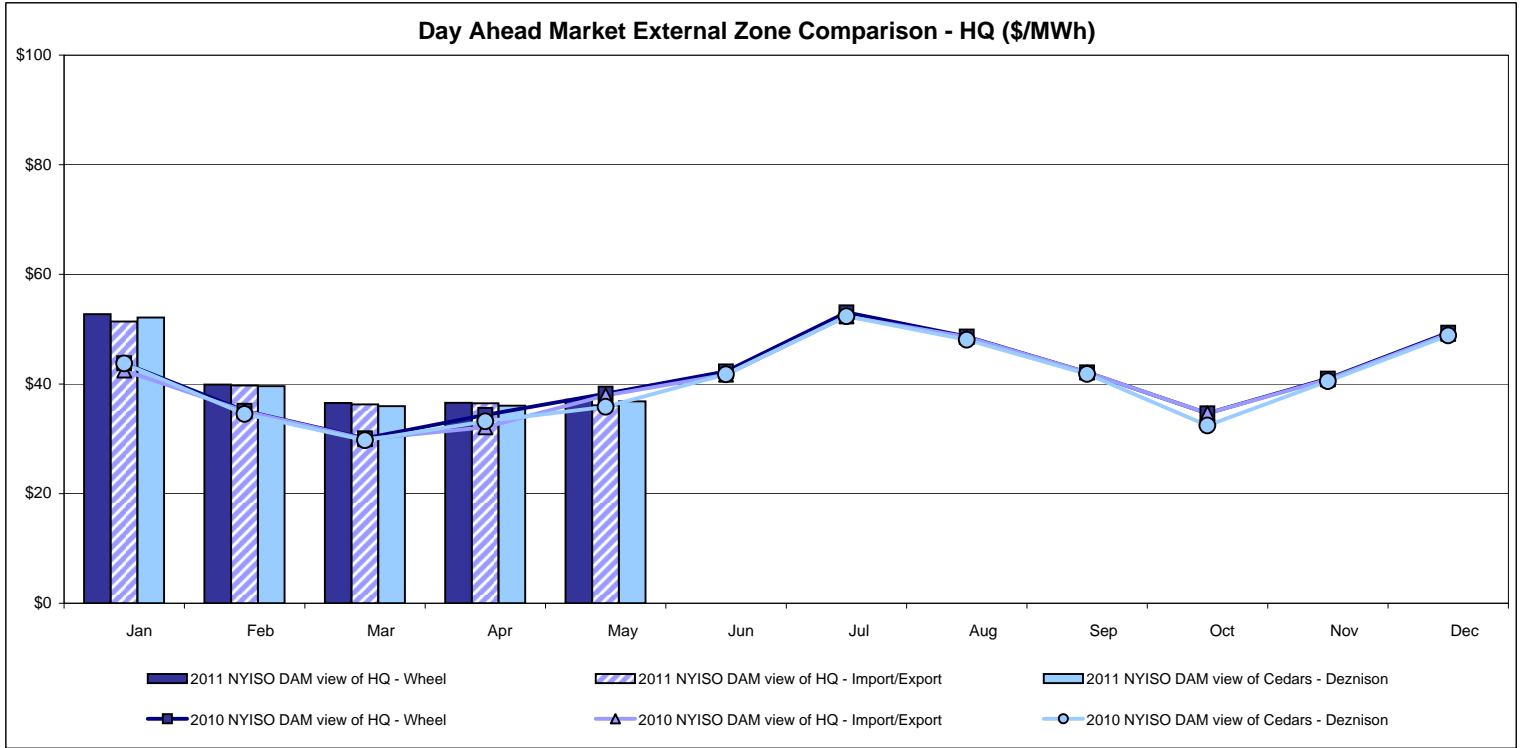
**Day Ahead Market Comparison: Neptune (\$/MWh)**



**Real Time Market Comparison: Neptune (\$/MWh)**



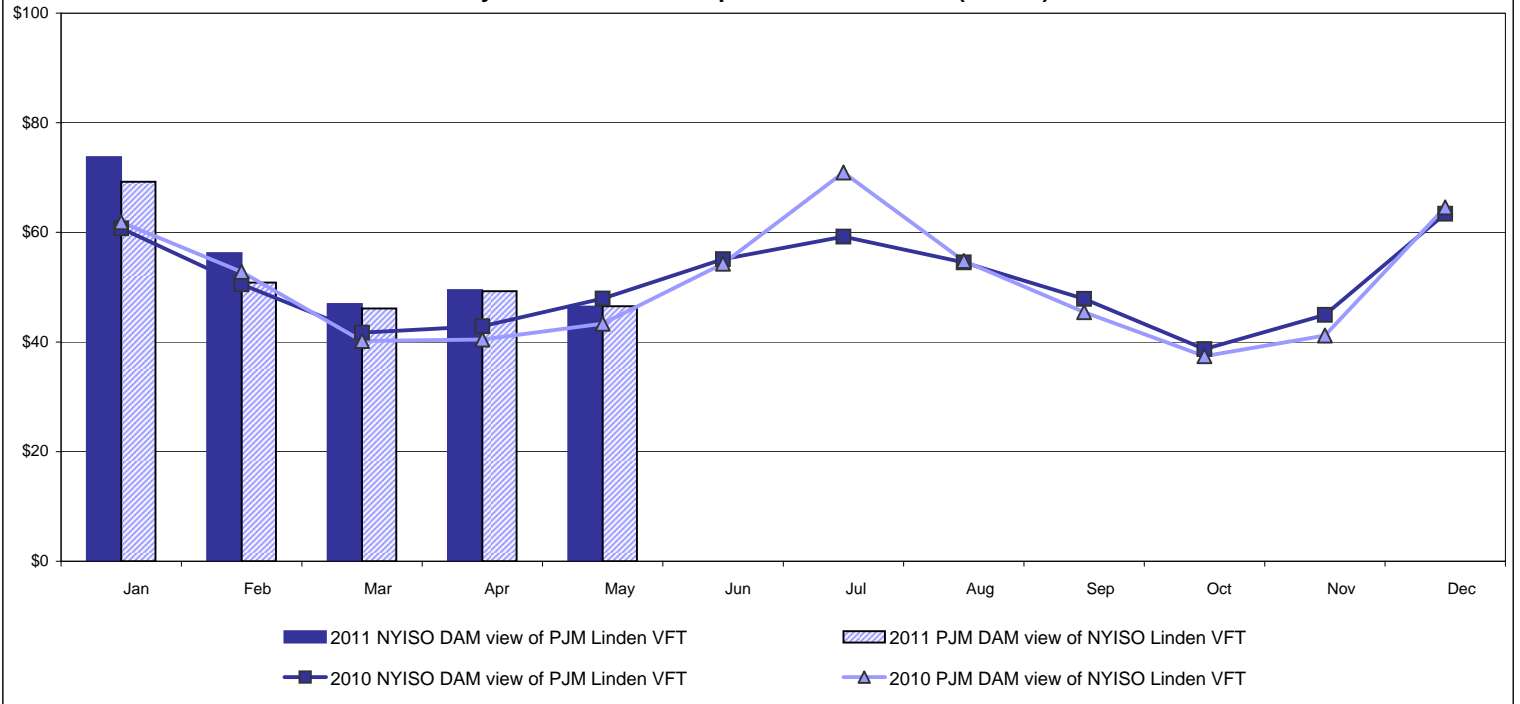
# External Comparison Hydro-Quebec



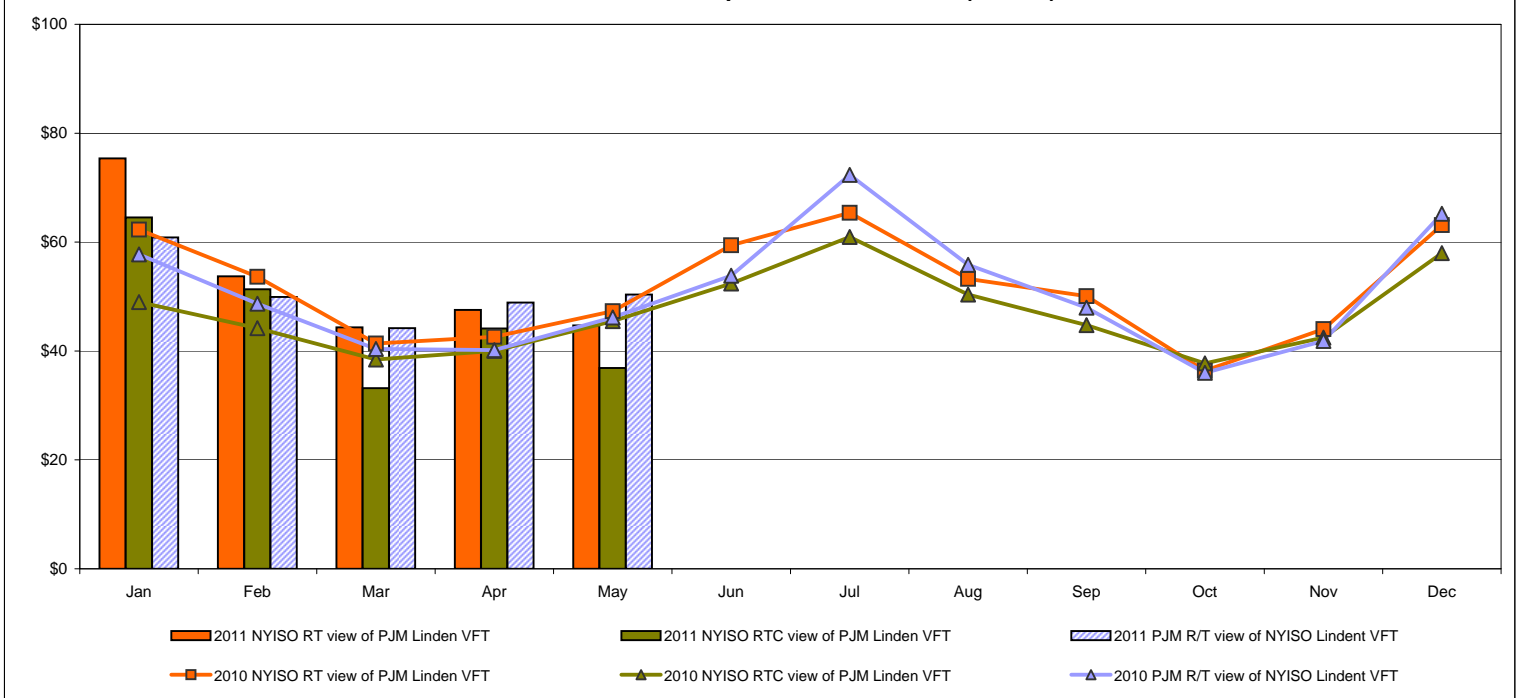
Note:  
Hydro-Quebec Prices are unavailable.

## External Controllable Line: Linden VFT (PJM)

**Day Ahead Market Comparison: Linden VFT (\$/MWh)**



**Real Time Market Comparison: Linden VFT (\$/MWh)**



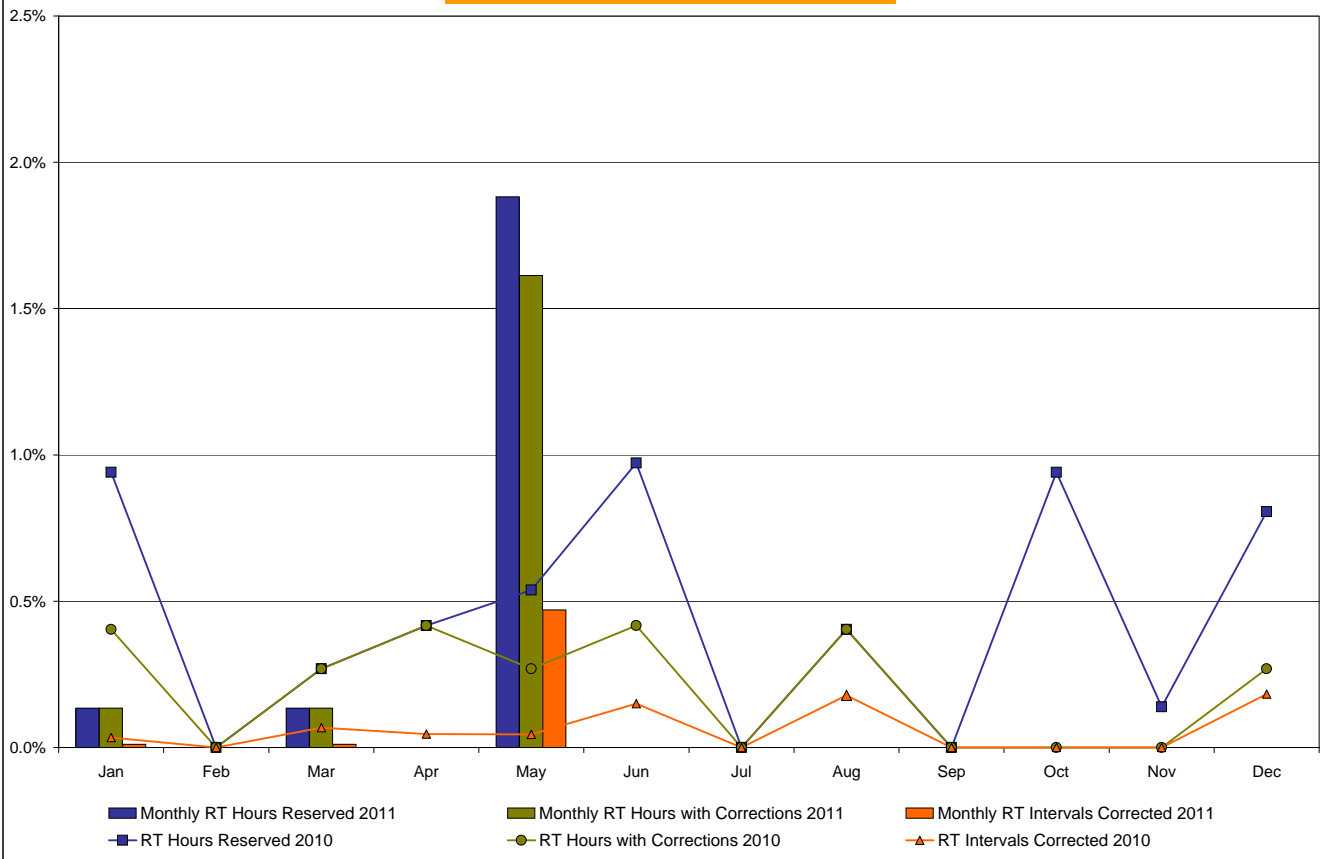


**NYISO Real Time Price Correction Statistics**

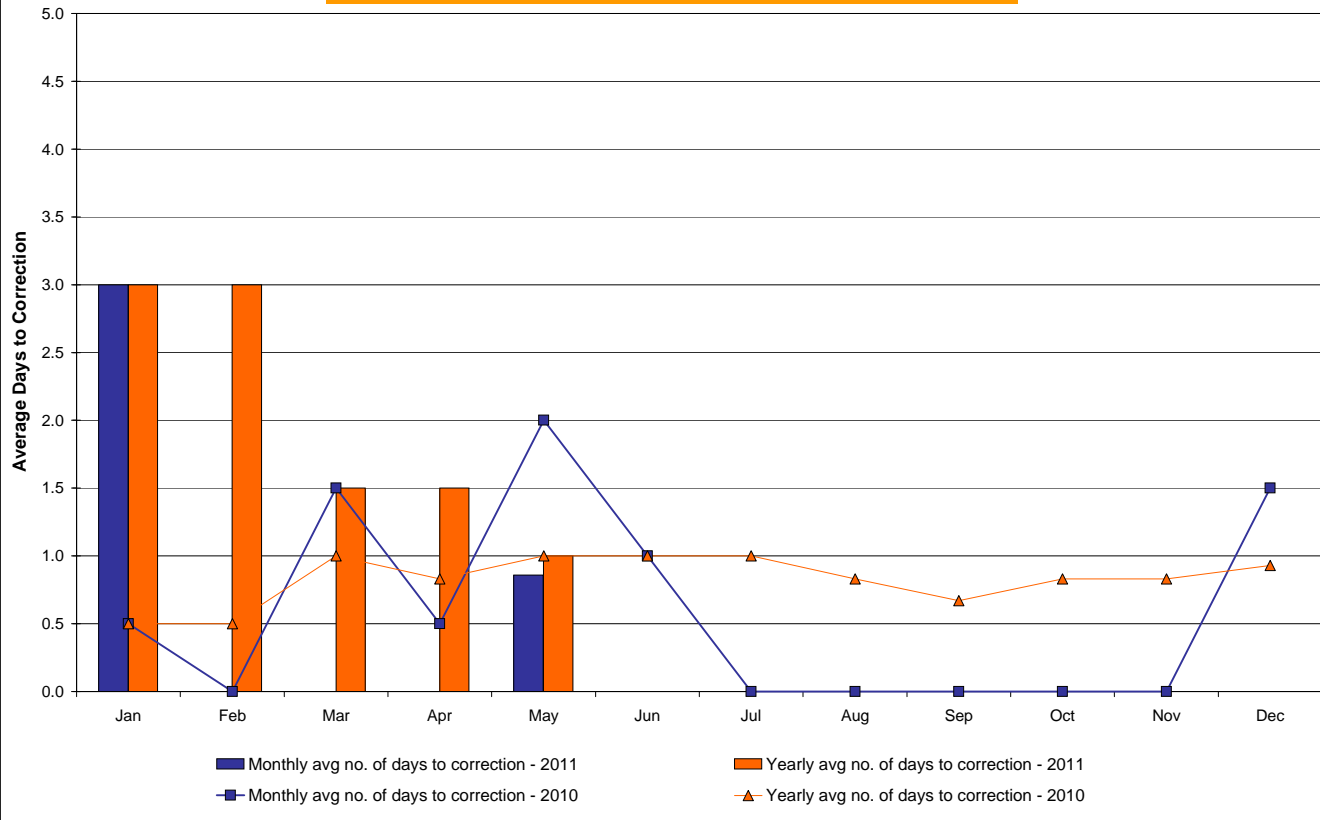
<b>2011</b>		<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
<b>Hour Corrections</b>													
Number of hours with corrections	in the month	1	0	1	0	12							
Number of hours	in the month	744	672	744	720	744							
% of hours with corrections	in the month	0.13%	0.00%	0.13%	0.00%	1.61%							
% of hours with corrections	year-to-date	0.13%	0.07%	0.09%	0.07%	0.39%							
<b>Interval Corrections</b>													
Number of intervals corrected	in the month	1	0	1	0	42							
Number of intervals	in the month	8,938	8,049	8,924	8,671	8,939							
% of intervals corrected	in the month	0.01%	0.00%	0.01%	0.00%	0.47%							
% of intervals corrected	year-to-date	0.01%	0.01%	0.01%	0.01%	0.10%							
<b>Hours Reserved</b>													
Number of hours reserved	in the month	1	0	1	0	14							
Number of hours	in the month	744	672	744	720	744							
% of hours reserved	in the month	0.13%	0.00%	0.13%	0.00%	1.88%							
% of hours reserved	year-to-date	0.13%	0.07%	0.09%	0.07%	0.44%							
<b>Days to Correction *</b>													
Avg. number of days to correction	in the month	3.00	0.00	0.00	0.00	0.86							
Avg. number of days to correction	year-to-date	3.00	3.00	1.50	1.50	1.00							
<b>Days Without Corrections</b>													
Days without corrections	in the month	30	28	30	30	24							
Days without corrections	year-to-date	30	58	88	118	142							
<b>2010</b>		<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
<b>Hour Corrections</b>													
Number of hours with corrections	in the month	3	0	2	3	2	3	0	3	0	0	0	2
Number of hours	in the month	744	672	744	720	744	720	744	744	720	744	432	744
% of hours with corrections	in the month	0.40%	0.00%	0.27%	0.42%	0.27%	0.42%	0.00%	0.40%	0.00%	0.00%	0.00%	0.27%
% of hours with corrections	year-to-date	0.40%	0.21%	0.23%	0.28%	0.28%	0.30%	0.26%	0.27%	0.24%	0.22%	0.21%	0.21%
<b>Interval Corrections</b>													
Number of intervals corrected	in the month	3	0	6	4	4	13	0	16	0	0	0	10
Number of intervals	in the month	8,934	8,057	8,913	8,640	8,946	8,660	8,955	8,955	8,654	8,944	5,196	5,474
% of intervals corrected	in the month	0.03%	0.00%	0.07%	0.05%	0.04%	0.15%	0.00%	0.18%	0.00%	0.00%	0.00%	0.18%
% of intervals corrected	year-to-date	0.03%	0.02%	0.03%	0.04%	0.04%	0.06%	0.05%	0.07%	0.06%	0.05%	0.05%	0.06%
<b>Hours Reserved</b>													
Number of hours reserved	in the month	7	0	2	3	4	7	0	3	0	7	1	6
Number of hours	in the month	744	672	744	720	744	720	744	744	720	744	432	744
% of hours reserved	in the month	0.94%	0.00%	0.27%	0.42%	0.54%	0.97%	0.00%	0.40%	0.00%	0.94%	0.23%	0.81%
% of hours reserved	year-to-date	0.94%	0.49%	0.42%	0.42%	0.44%	0.53%	0.45%	0.45%	0.40%	0.45%	0.44%	0.46%
<b>Days to Correction *</b>													
Avg. number of days to correction	in the month	0.50	0.00	1.50	0.50	2.00	1.00	0.00	0.00	0.00	0.00	0.00	1.50
Avg. number of days to correction	year-to-date	0.50	0.50	1.00	0.83	1.00	1.00	1.00	0.83	0.67	0.83	0.83	0.93
<b>Days Without Corrections</b>													
Days without corrections	in the month	29	28	29	28	30	28	31	29	30	31	18	18
Days without corrections	year-to-date	29	57	86	114	144	172	203	232	262	293	311	341

\* Calendar days from reservation date.

### Percentage of Real-Time Corrections

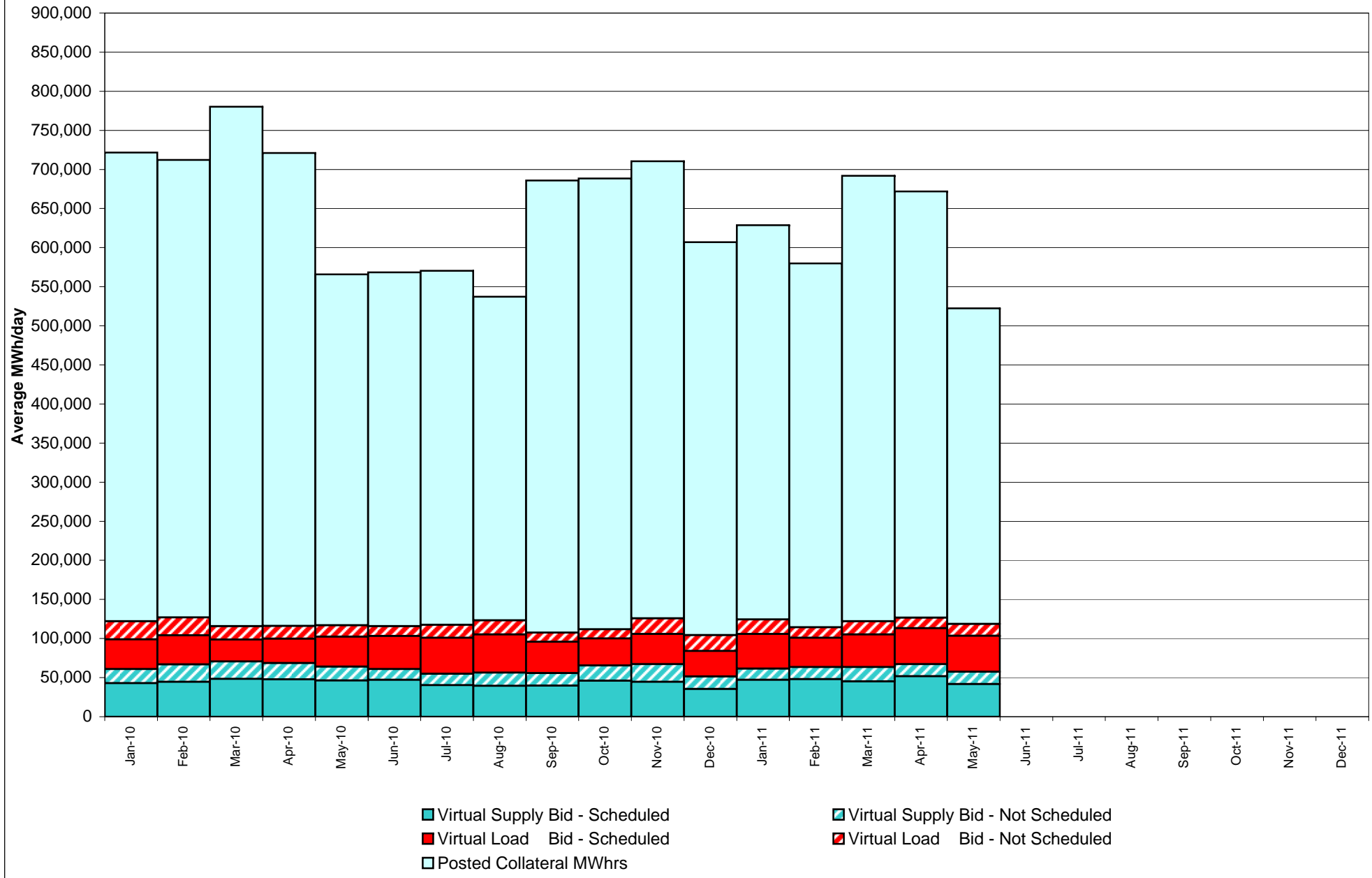


### Annual average time period for making Price Corrections (from reservation date) \*

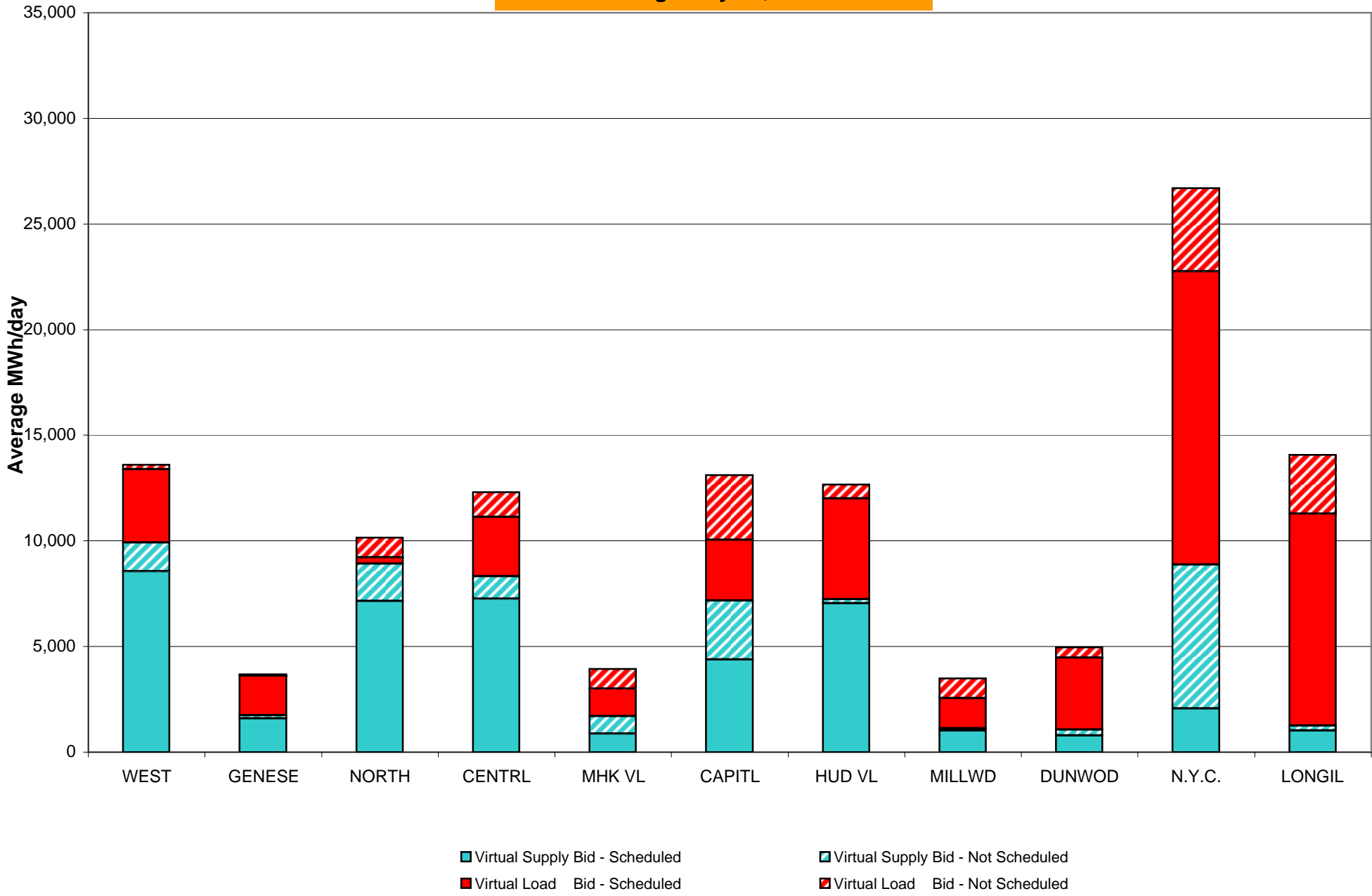


\* Calendar days from reservation date.

**NYISO Virtual Trading  
Average MWh per day**



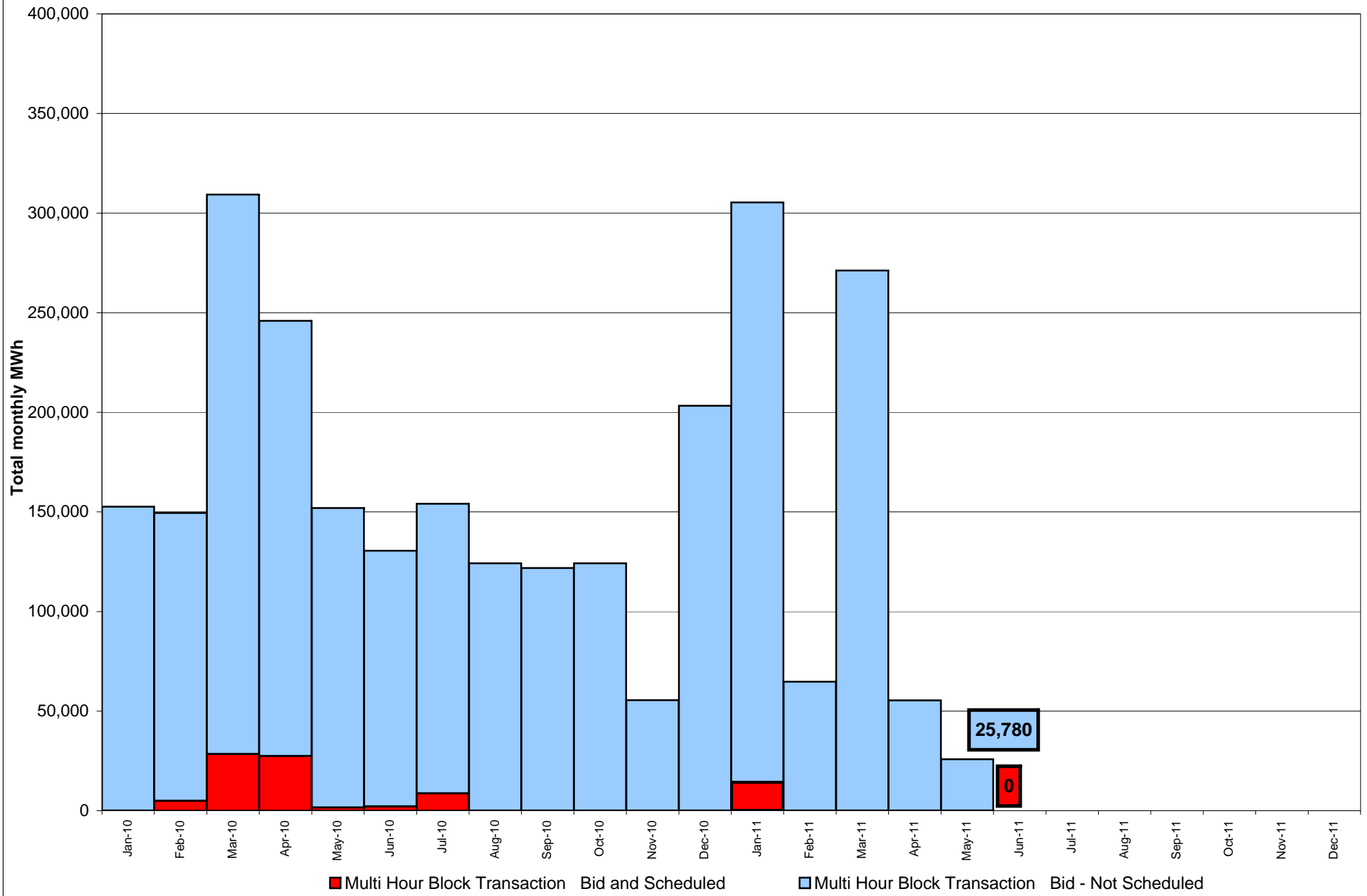
**Virtual Load and Supply Zonal Statistics  
through May 31, 2011**



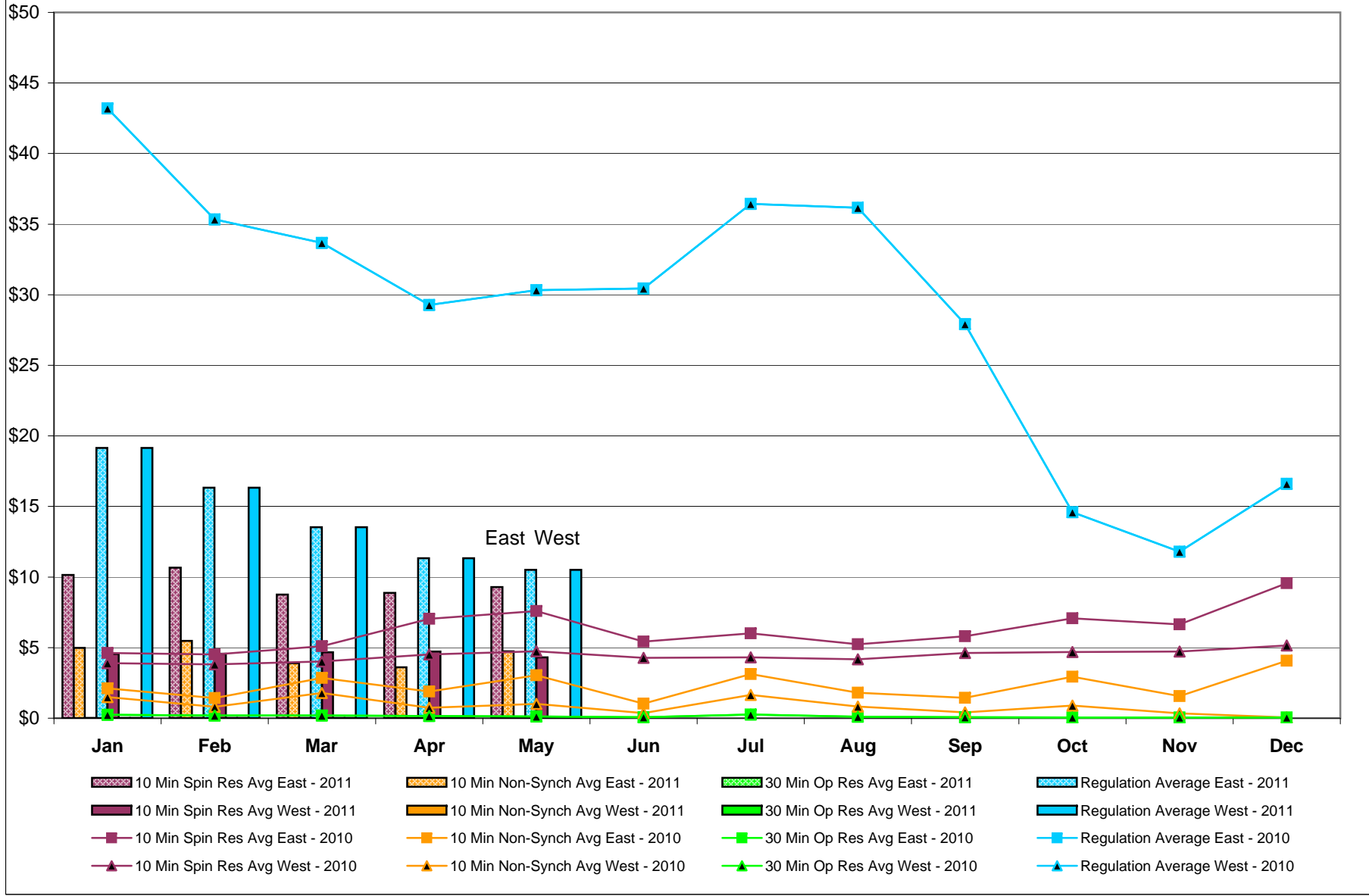
**Virtual Load and Supply Zonal Statistics (Average MWh/day) - 2011**

		Virtual Load Bid		Virtual Supply Bid				Virtual Load Bid		Virtual Supply Bid				Virtual Load Bid		Virtual Supply Bid	
Zone	Date	Scheduled	Not Scheduled	Scheduled	Not Scheduled	Zone	Date	Scheduled	Not Scheduled	Scheduled	Not Scheduled	Zone	Date	Scheduled	Not Scheduled	Scheduled	Not Scheduled
<b>WEST</b>	Jan-11	4,493	1,486	10,304	1,379	<b>MHK VL</b>	Jan-11	1,418	879	1,774	824	<b>DUNWOD</b>	Jan-11	4,000	778	334	21
	Feb-11	2,635	279	11,402	1,710		Feb-11	1,043	921	1,387	816		Feb-11	2,698	246	583	378
	Mar-11	4,314	2,204	10,336	1,964		Mar-11	972	1,059	1,321	965		Mar-11	1,986	385	1,183	271
	Apr-11	5,782	387	8,832	1,245		Apr-11	1,033	897	1,517	715		Apr-11	3,103	489	941	379
	May-11	3,475	213	8,553	1,362		May-11	1,311	928	864	831		May-11	3,421	474	782	274
	Jun-11						Jun-11						Jun-11				
	Jul-11						Jul-11						Jul-11				
	Aug-11						Aug-11						Aug-11				
	Sep-11						Sep-11						Sep-11				
	Oct-11						Oct-11						Oct-11				
	Nov-11						Nov-11						Nov-11				
	Dec-11						Dec-11						Dec-11				
	<b>GENESE</b>	Jan-11	1,624	196	10,028		173	<b>CAPITL</b>	Jan-11	3,641	3,492		3,497	2,467	<b>N.Y.C.</b>	Jan-11	11,837
Feb-11		1,448	242	10,172	160	Feb-11	2,633		3,168	3,799	2,736	Feb-11	12,797	4,018		618	7,081
Mar-11		1,852	230	11,022	210	Mar-11	3,484		3,193	3,379	2,752	Mar-11	13,626	4,203		964	7,692
Apr-11		1,873	53	9,642	149	Apr-11	2,446		2,749	4,364	2,721	Apr-11	13,897	4,199		1,650	6,786
May-11		1,873	54	1,587	167	May-11	2,870		3,052	4,378	2,804	May-11	13,883	3,940		2,056	6,815
Jun-11						Jun-11						Jun-11					
Jul-11						Jul-11						Jul-11					
Aug-11						Aug-11						Aug-11					
Sep-11						Sep-11						Sep-11					
Oct-11						Oct-11						Oct-11					
Nov-11						Nov-11						Nov-11					
Dec-11						Dec-11						Dec-11					
<b>NORTH</b>		Jan-11	737	812	5,769	1,124	<b>HUD VL</b>		Jan-11	4,291	830	6,284	134	<b>LONGIL</b>		Jan-11	7,063
	Feb-11	420	953	6,287	1,375	Feb-11		3,680	165	6,736	99	Feb-11	6,741		2,224	343	45
	Mar-11	516	1,075	6,145	1,597	Mar-11		4,296	707	5,404	1,344	Mar-11	7,086		2,358	353	184
	Apr-11	458	912	6,572	1,927	Apr-11		4,782	233	13,182	470	Apr-11	8,723		2,085	280	8
	May-11	298	937	7,148	1,777	May-11		4,766	674	7,057	175	May-11	10,015		2,788	1,018	245
	Jun-11					Jun-11						Jun-11					
	Jul-11					Jul-11						Jul-11					
	Aug-11					Aug-11						Aug-11					
	Sep-11					Sep-11						Sep-11					
	Oct-11					Oct-11						Oct-11					
	Nov-11					Nov-11						Nov-11					
	Dec-11					Dec-11						Dec-11					
	<b>CENTRL</b>	Jan-11	4,378	1,512	6,326	1,045		<b>MILLWD</b>	Jan-11	859	71	1,380	30		<b>NYISO</b>	Jan-11	44,340
Feb-11		2,788	1,183	5,706	1,068	Feb-11	460		148	886	96	Feb-11	37,342	13,546		47,919	15,563
Mar-11		2,844	1,359	4,073	1,178	Mar-11	738		220	916	202	Mar-11	41,713	16,995		45,097	18,360
Apr-11		2,888	1,121	4,069	942	Apr-11	1,100		164	783	57	Apr-11	46,085	13,290		51,832	15,400
May-11		2,814	1,172	7,261	1,063	May-11	1,420		941	1,025	110	May-11	46,146	15,174		41,729	15,622
Jun-11						Jun-11						Jun-11					
Jul-11						Jul-11						Jul-11					
Aug-11						Aug-11						Aug-11					
Sep-11						Sep-11						Sep-11					
Oct-11						Oct-11						Oct-11					
Nov-11						Nov-11						Nov-11					
Dec-11						Dec-11						Dec-11					

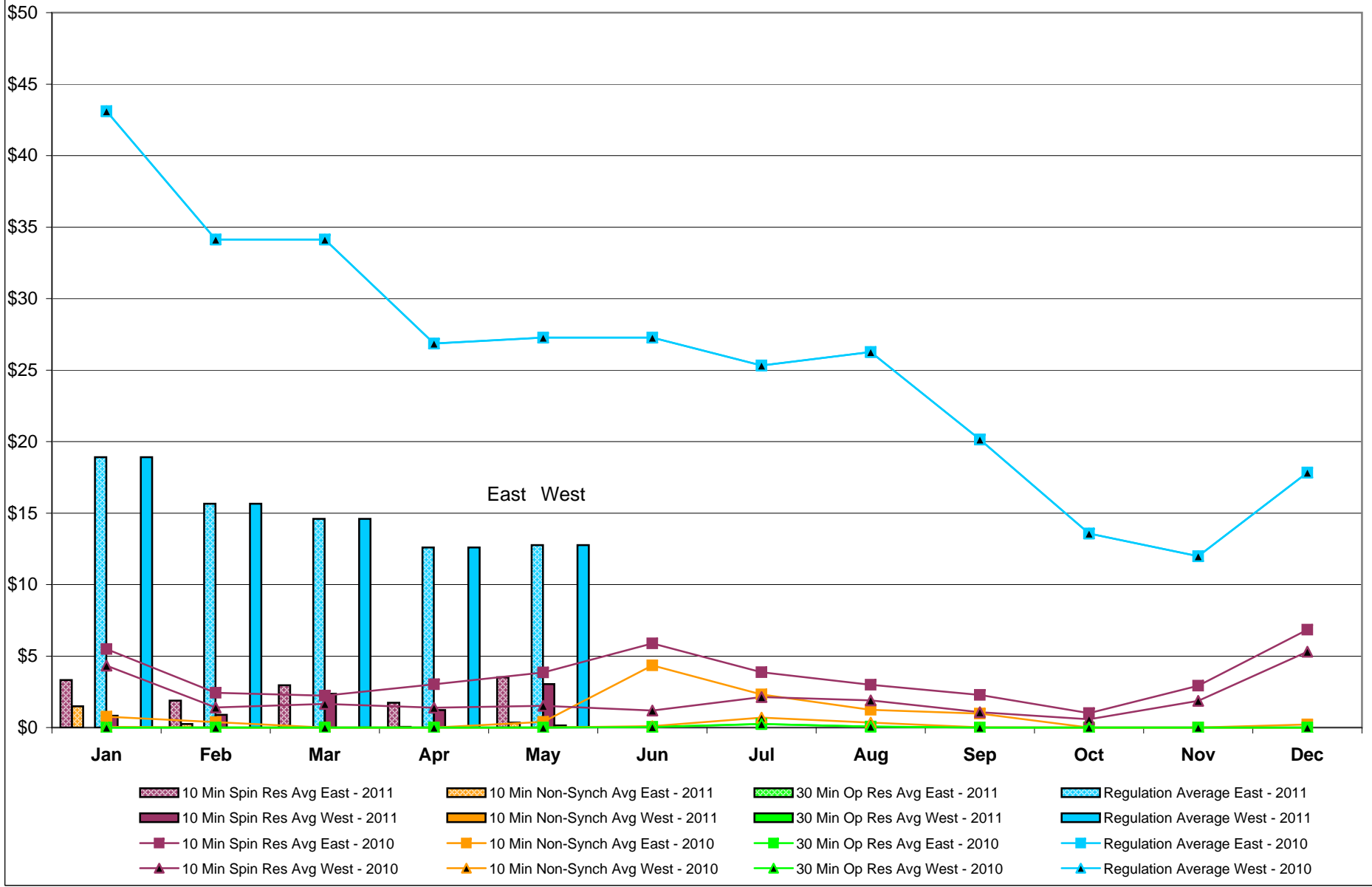
## NYISO Multi Hour Block Transactions Monthly Total MWh



## NYISO Monthly Average Ancillary Service Prices Day Ahead Market 2010 - 2011

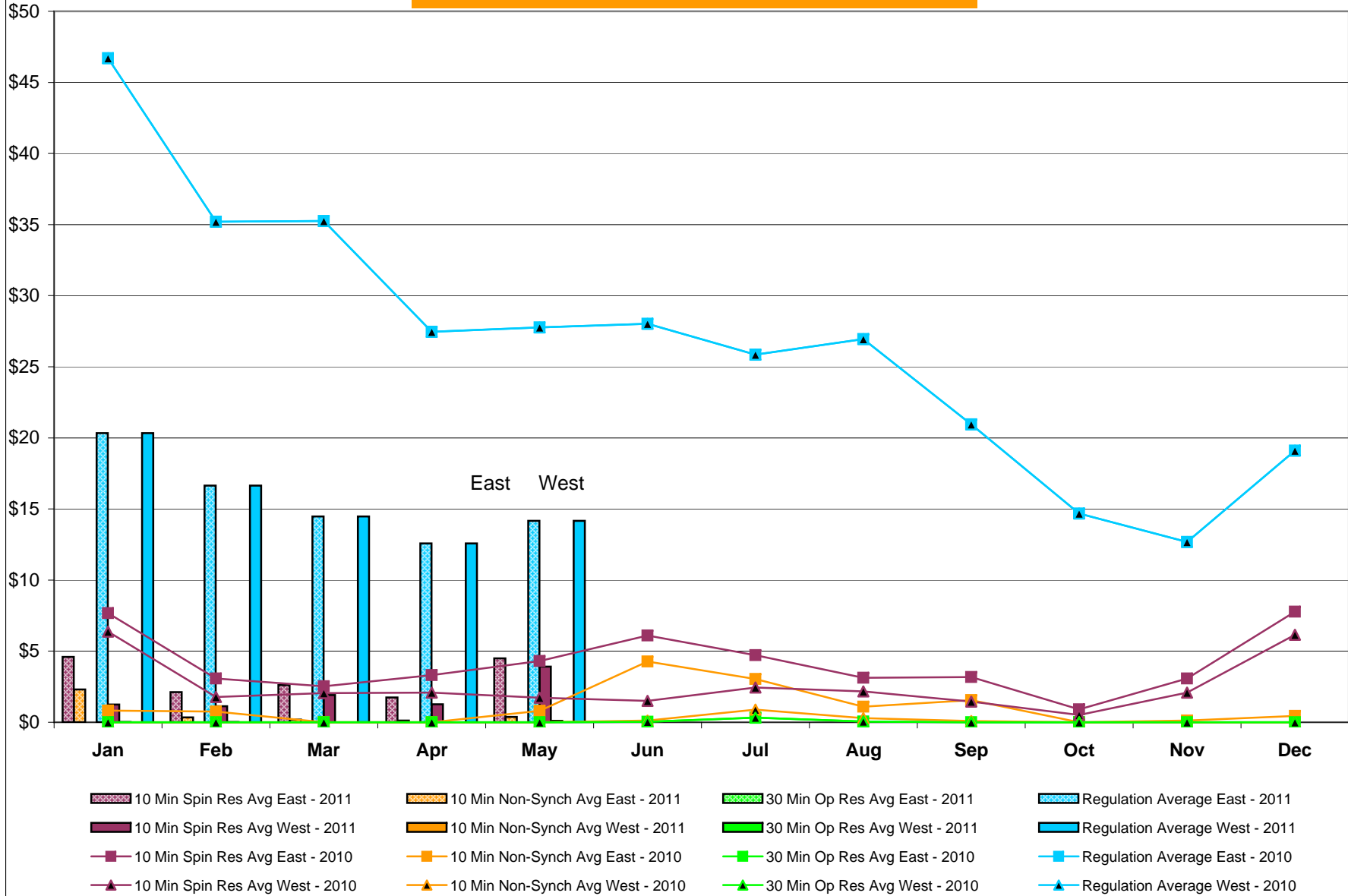


## NYISO Monthly Average Ancillary Service Prices RTC Market 2010 - 2011





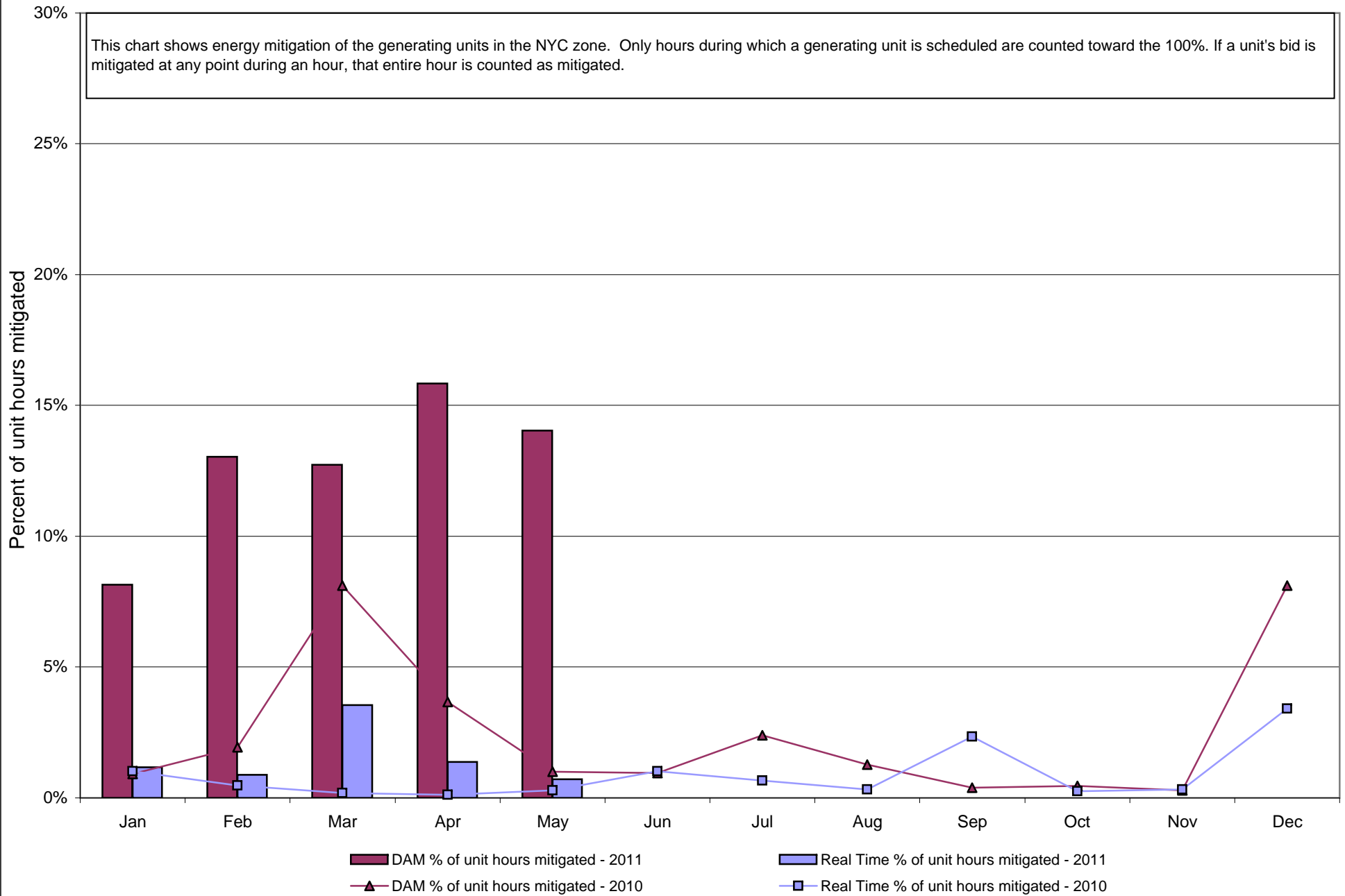
## NYISO Monthly Average Ancillary Service Prices Real Time Market 2010 - 2011



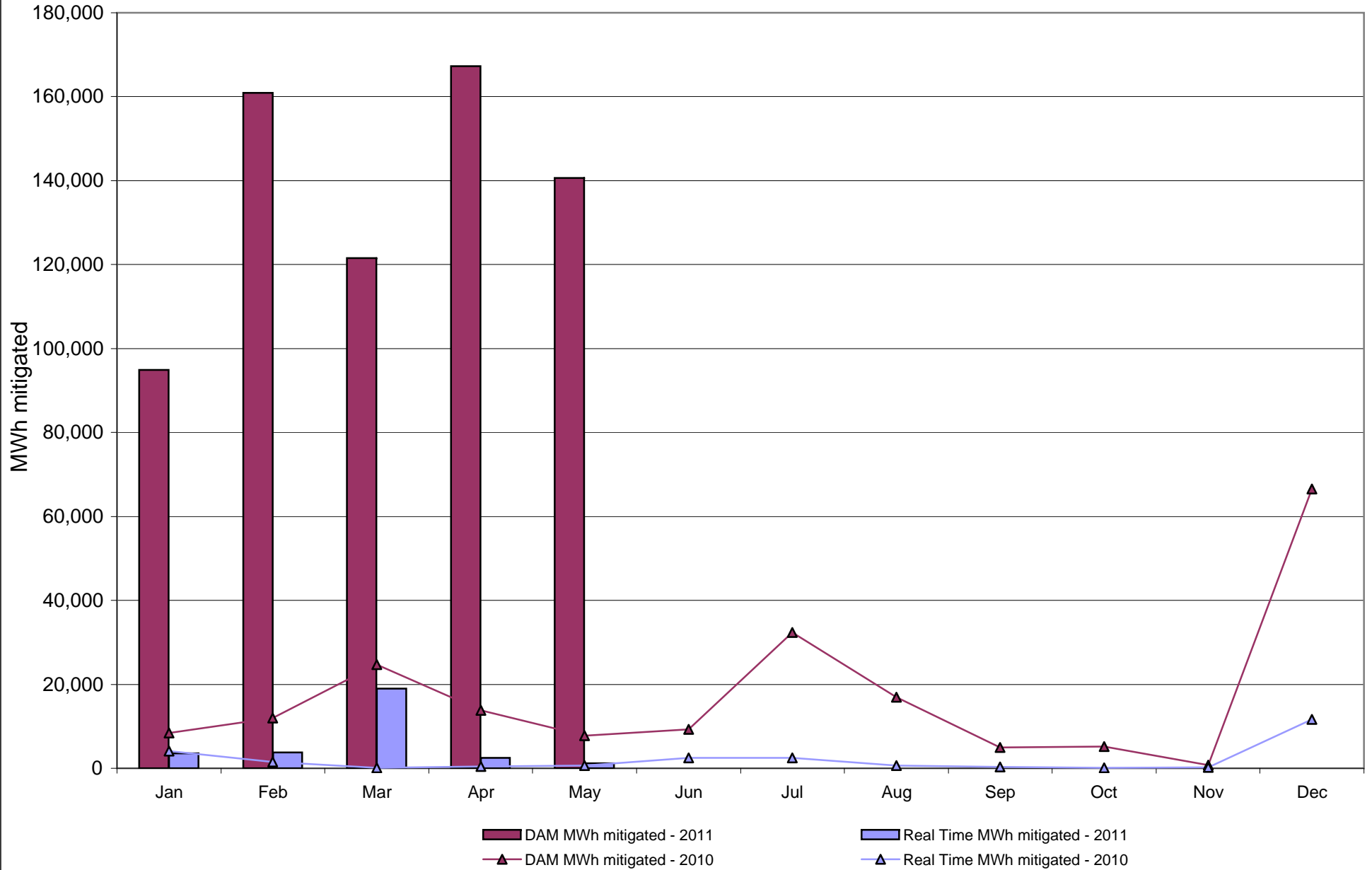
	A	B	C	D	E	F	G	H	I	J	K	L	M
1	<b>NYISO Markets Ancillary Services Statistics - Unweighted Price (\$/MWH)</b>												
2													
3	<b>2011</b>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
4	<b>Day Ahead Market</b>												
5	10 Min Spin East	10.15	10.66	8.76	8.87	9.30							
6	10 Min Spin West	4.55	4.56	4.67	4.72	4.30							
7	10 Min Non Synch East	4.99	5.48	3.90	3.60	4.75							
8	10 Min Non Synch West	0.02	0.02	0.02	0.03	0.03							
9	30 Min East	0.02	0.02	0.02	0.03	0.03							
10	30 Min West	0.02	0.02	0.02	0.03	0.03							
11	Regulation East	19.14	16.33	13.53	11.34	10.51							
12	Regulation West	19.14	16.33	13.53	11.34	10.51							
13													
14	<b>RTC Market</b>												
15	10 Min Spin East	3.32	1.88	2.96	1.74	3.52							
16	10 Min Spin West	0.83	0.89	2.37	1.23	3.05							
17	10 Min Non Synch East	1.48	0.25	0.04	0.05	0.35							
18	10 Min Non Synch West	0.00	0.00	0.00	0.00	0.15							
19	30 Min East	0.00	0.00	0.00	0.00	0.00							
20	30 Min West	0.00	0.00	0.00	0.00	0.00							
21	Regulation East	18.91	15.65	14.60	12.59	12.77							
22	Regulation West	18.91	15.65	14.60	12.59	12.77							
23													
24	<b>Real Time Market</b>												
25	10 Min Spin East	4.59	2.12	2.61	1.74	4.49							
26	10 Min Spin West	1.25	1.12	1.92	1.26	3.92							
27	10 Min Non Synch East	2.31	0.35	0.19	0.13	0.37							
28	10 Min Non Synch West	0.02	0.02	0.00	0.00	0.10							
29	30 Min East	0.00	0.00	0.00	0.00	0.00							
30	30 Min West	0.00	0.00	0.00	0.00	0.00							
31	Regulation East	20.34	16.65	14.48	12.57	14.17							
32	Regulation West	20.34	16.65	14.48	12.57	14.17							
33													
34	<b>2010</b>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
35	<b>Day Ahead Market</b>												
36	10 Min Spin East	4.62	4.51	5.10	7.04	7.59	5.43	6.00	5.23	5.80	7.07	6.64	9.56
37	10 Min Spin West	3.90	3.80	4.02	4.51	4.73	4.27	4.31	4.16	4.62	4.69	4.71	5.14
38	10 Min Non Synch East	2.11	1.42	2.85	1.89	3.04	1.04	3.12	1.81	1.44	2.94	1.57	4.08
39	10 Min Non Synch West	1.49	0.80	1.78	0.74	1.02	0.37	1.65	0.82	0.42	0.89	0.35	0.04
40	30 Min East	0.24	0.18	0.18	0.16	0.12	0.07	0.27	0.10	0.06	0.05	0.06	0.04
41	30 Min West	0.24	0.18	0.18	0.16	0.12	0.07	0.27	0.10	0.06	0.05	0.06	0.04
42	Regulation East	43.21	35.33	33.67	29.28	30.33	30.44	36.44	36.15	27.92	14.60	11.80	16.60
43	Regulation West	43.21	35.33	33.67	29.28	30.33	30.44	36.44	36.15	27.92	14.60	11.80	16.60
44													
45	<b>RTC Market</b>												
46	10 Min Spin East	5.49	2.42	2.22	3.03	3.86	5.89	3.87	2.99	2.28	1.00	2.93	6.84
47	10 Min Spin West	4.32	1.40	1.66	1.38	1.53	1.19	2.13	1.90	1.08	0.57	1.87	5.31
48	10 Min Non Synch East	0.77	0.37	0.00	0.00	0.39	4.35	2.31	1.23	0.97	0.00	0.00	0.21
49	10 Min Non Synch West	0.05	0.00	0.00	0.00	0.00	0.11	0.69	0.35	0.02	0.00	0.00	0.00
50	30 Min East	0.00	0.00	0.00	0.00	0.00	0.04	0.26	0.07	0.00	0.00	0.00	0.00
51	30 Min West	0.00	0.00	0.00	0.00	0.00	0.03	0.26	0.07	0.00	0.00	0.00	0.00
52	Regulation East	43.11	34.13	34.13	26.86	27.28	27.26	25.32	26.27	20.15	13.58	11.99	17.83
53	Regulation West	43.11	34.13	34.13	26.86	27.28	27.26	25.32	26.27	20.15	13.58	11.99	17.83
54													
55	<b>Real Time Market</b>												
56	10 Min Spin East	7.67	3.08	2.54	3.31	4.30	6.10	4.71	3.13	3.17	0.91	3.07	7.78
57	10 Min Spin West	6.37	1.78	2.05	2.09	1.73	1.51	2.44	2.17	1.46	0.51	2.09	6.16
58	10 Min Non Synch East	0.83	0.74	0.00	0.00	0.81	4.28	3.05	1.09	1.55	0.00	0.12	0.44
59	10 Min Non Synch West	0.00	0.00	0.00	0.00	0.00	0.12	0.89	0.28	0.09	0.00	0.00	0.00
60	30 Min East	0.00	0.00	0.00	0.00	0.00	0.03	0.33	0.04	0.00	0.00	0.00	0.00
61	30 Min West	0.00	0.00	0.00	0.00	0.00	0.03	0.33	0.04	0.00	0.00	0.00	0.00
62	Regulation East	46.71	35.21	35.26	27.47	27.78	28.03	25.85	26.94	20.94	14.67	12.69	19.11
63	Regulation West	46.71	35.21	35.26	27.47	27.78	28.03	25.85	26.94	20.94	14.67	12.69	19.11

## NYISO In City Energy Mitigation - AMP (NYC Zone) 2010 - 2011

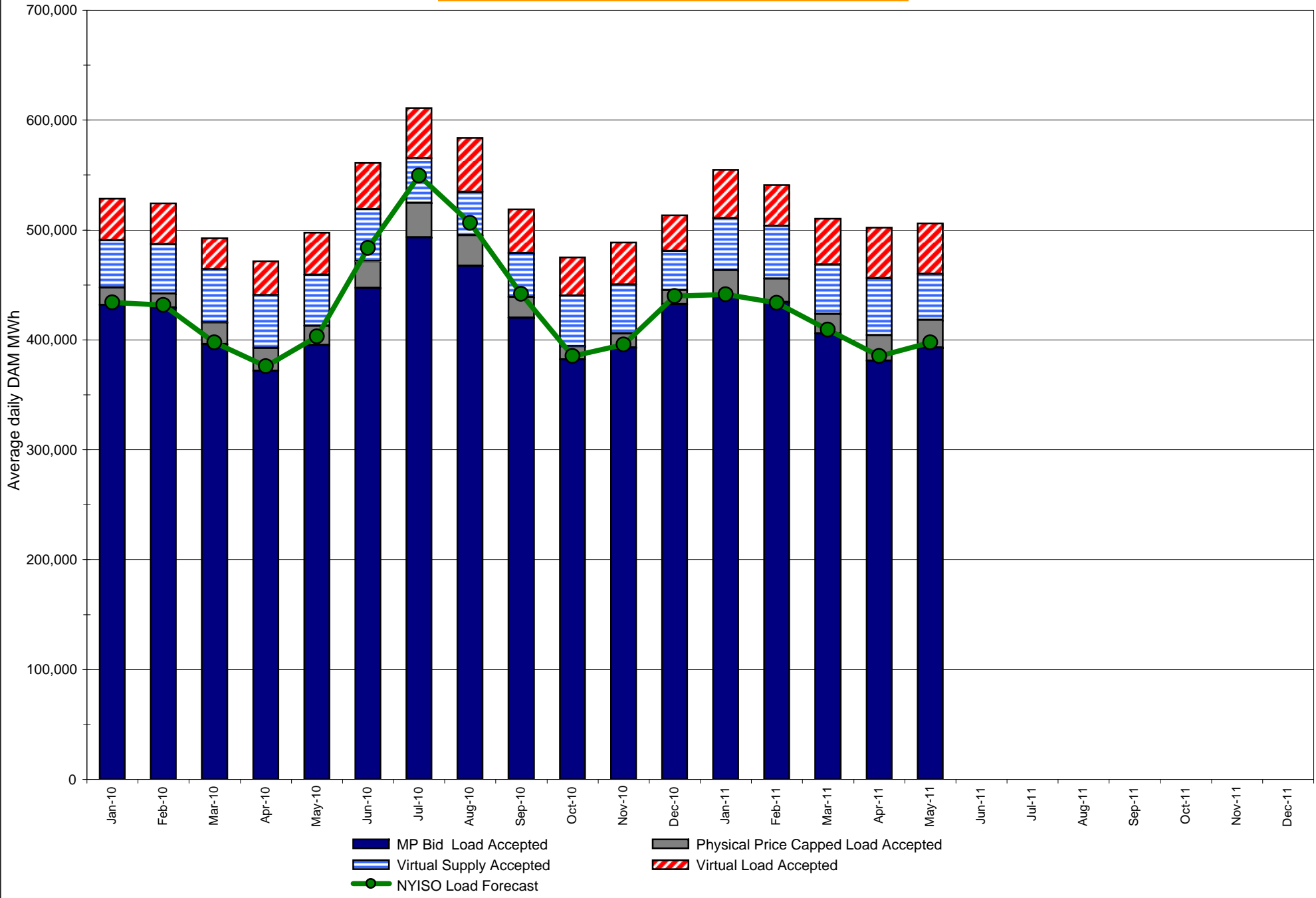
### Percentage of committed unit-hours mitigated



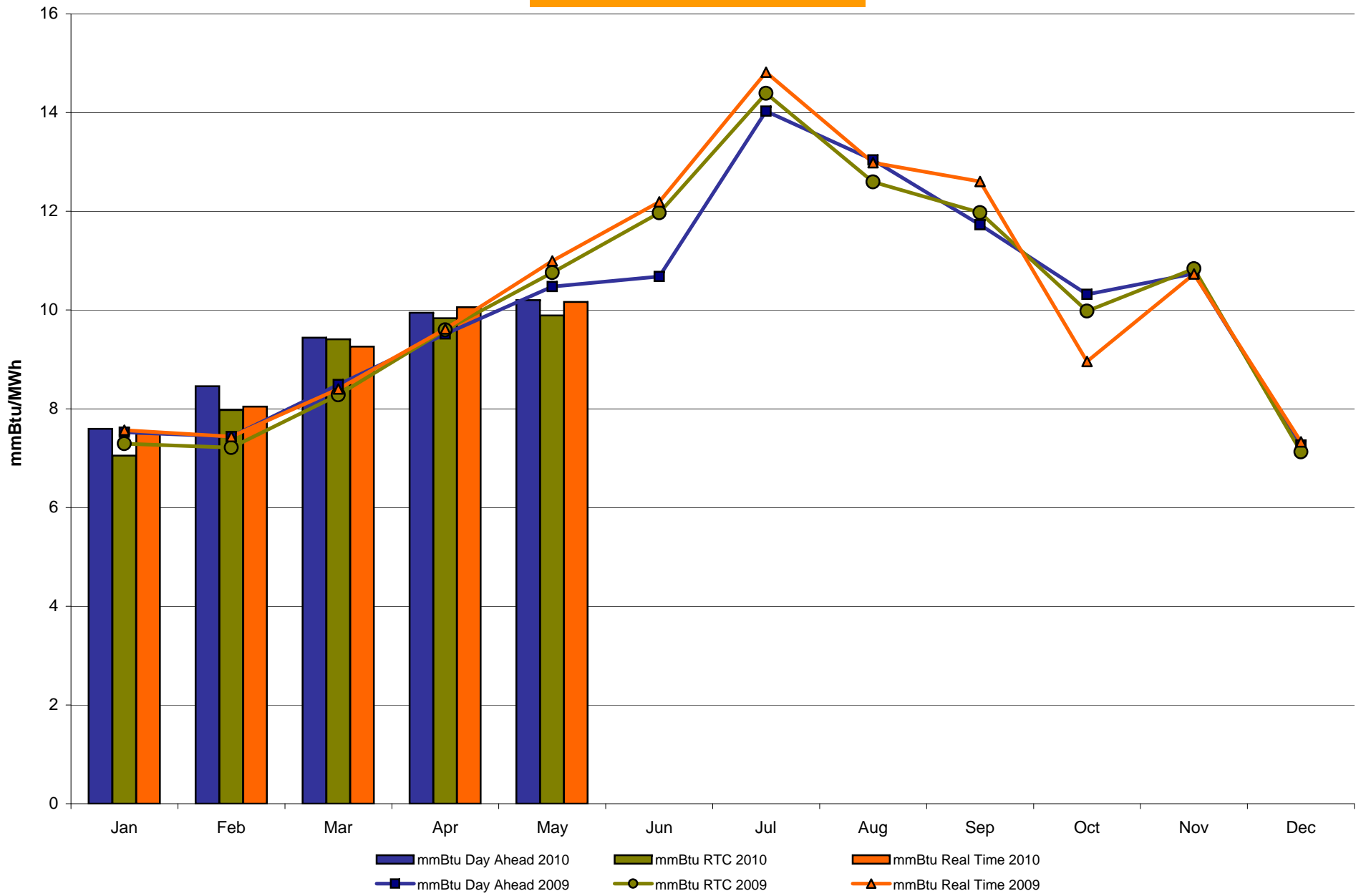
## NYISO In City Energy Mitigation (NYC Zone) 2010 - 2011 Monthly megawatt hours mitigated



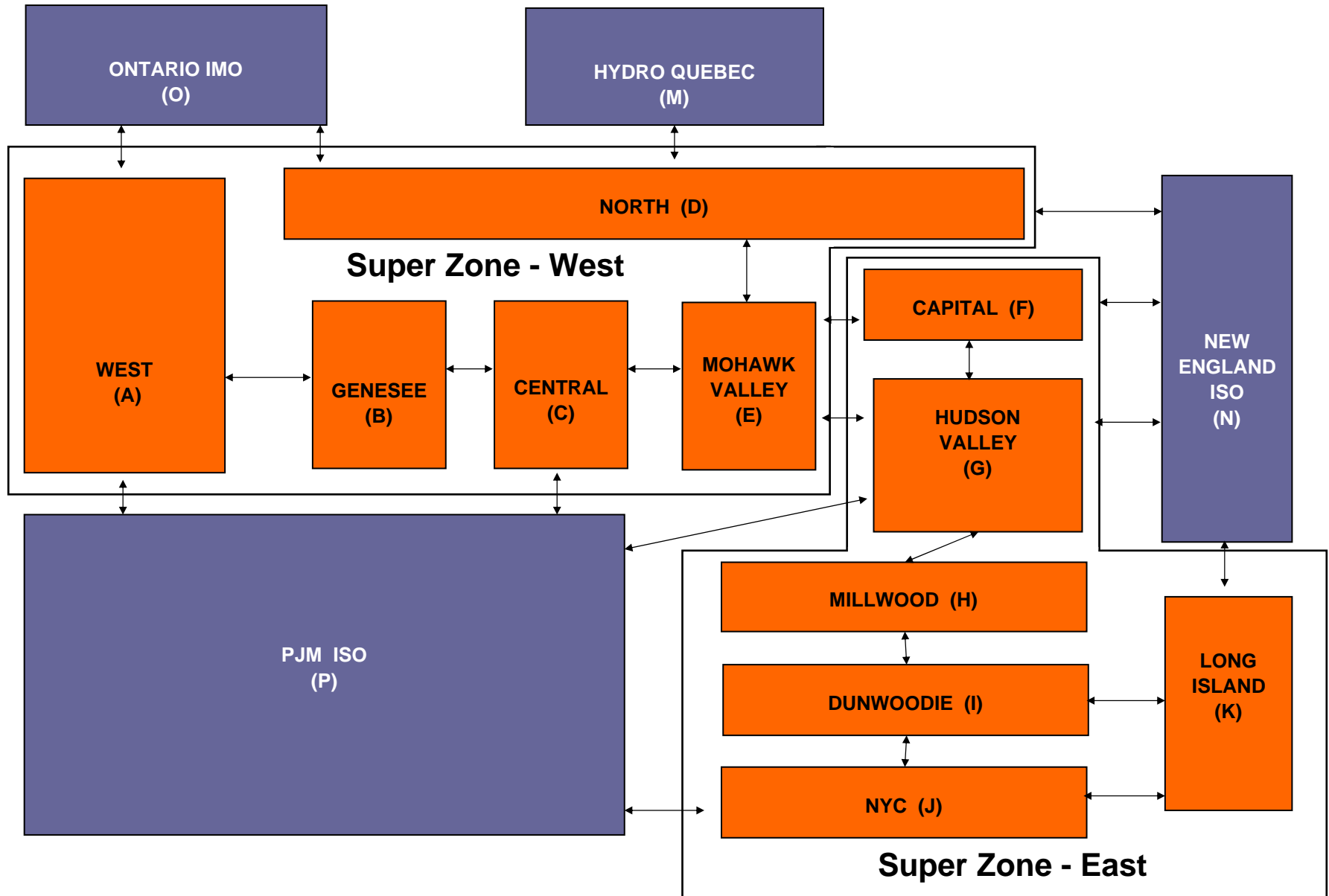
# NYISO Average Daily DAM Load Bid Summary



## Monthly Implied Heat Rate 2010-2011



# NYISO LBMP ZONES

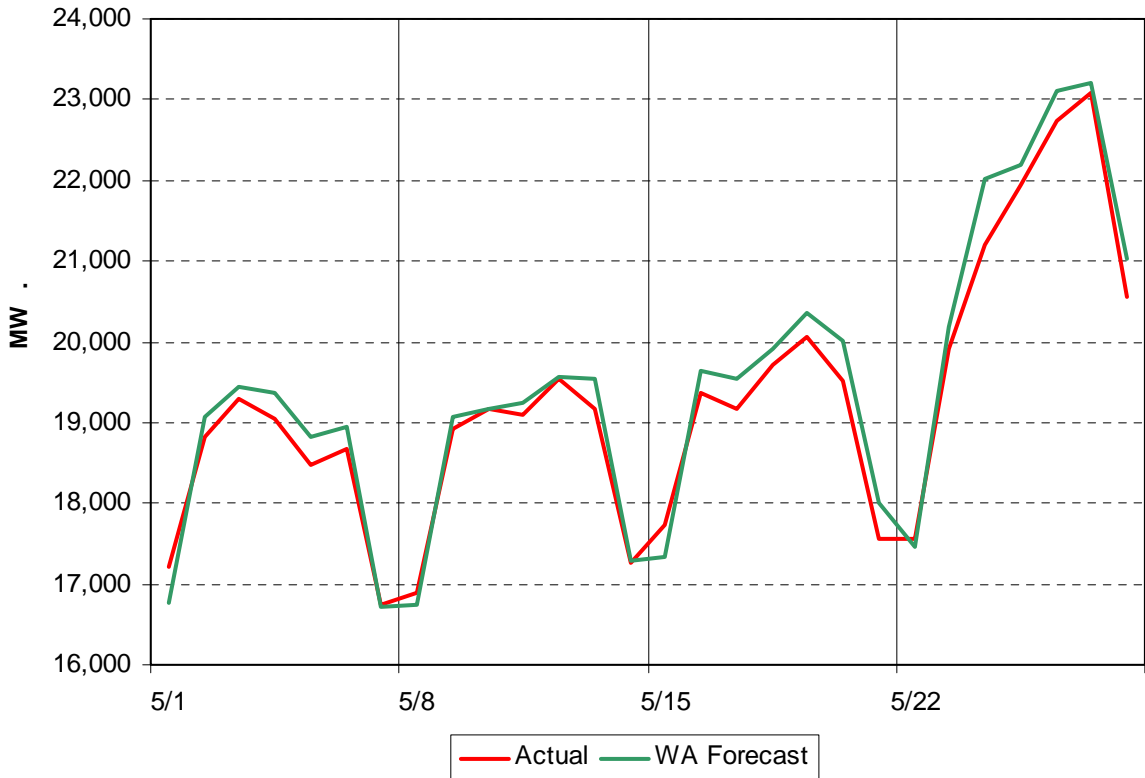


**Billing Codes for Chart 4-C**

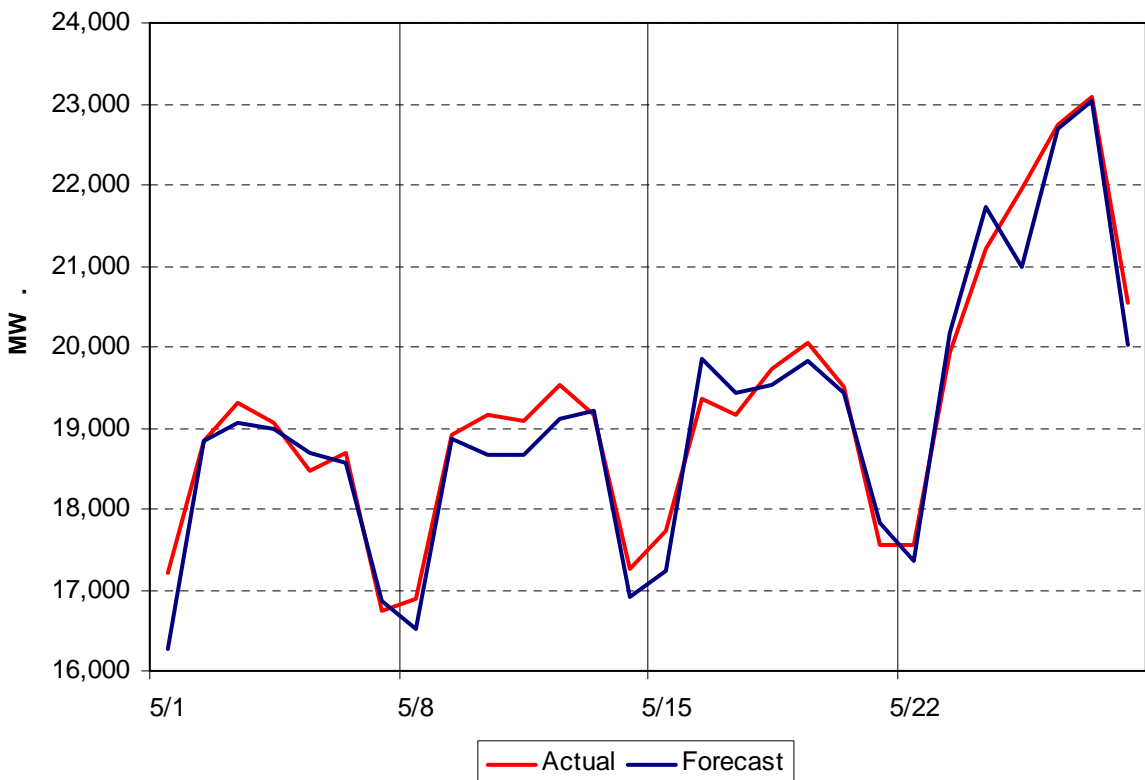
<b>Chart 4-C Category Name</b>	<b>Billing Code</b>	<b>Billing Category Name</b>
Bid Production Cost Guarantee Balancing	81203	Balancing NYISO Bid Production Cost Guarantee - Internal Units
Bid Production Cost Guarantee Balancing	81204	Balancing NYISO Bid Production Cost Guarantee - External Units
Bid Production Cost Guarantee Balancing	81205	Balancing NYISO Bid Production Cost Guarantee Expenditure due to Curtailed Imports
Bid Production Cost Guarantee Balancing	81208	Balancing NYISO Bid Production Cost Guarantee - Internal Units
Bid Production Cost Guarantee Balancing	81209	Balancing NYISO Bid Production Cost Guarantee - External Units
Bid Production Cost Guarantee Balancing	81213	Balancing NYISO Bid Production Cost Guarantee Expenditure due to Curtailed Imports
Bid Production Cost Guarantee DAM	81201	DAM NYISO Bid Production Cost Guarantee - Internal Units
Bid Production Cost Guarantee DAM	81202	DAM NYISO Bid Production Cost Guarantee - External Units
Bid Production Cost Guarantee DAM	81206	DAM NYISO Bid Production Cost Guarantee - Internal Units
Bid Production Cost Guarantee DAM	81207	DAM NYISO Bid Production Cost Guarantee - External Units
Bid Production Cost Guarantee DAM Virtual	81501	DAM Virtual Bid Production Cost Guarantee
DAM Contract Balancing	81315	DAM Contract Balancing
DAM Contract Balancing	81317	DAM Contract Balancing
Local Reliability Balancing	81002	Balancing Local Reliability Bid Production Cost Guarantee
Local Reliability Balancing	83901	Margin Restoration (MOB) Revenue
Local Reliability DAM	81001	DAM Local Reliability Bid Production Cost Guarantee
NYISO Cost of Operations	80901	NYISO Cost Of Operations
NYISO Cost of Operations	80902	NYISO Cost Of Operations
NYISO Cost of Operations	83501	NYISO Cost Of Operations
NYISO Cost of Operations	83502	NYISO Cost Of Operations
Residuals Balancing	81302	Balancing Market Energy Residual
Residuals Balancing	81304	Balancing Market Loss Residual
Residuals Balancing	81305	Balancing Market Congestion Balancing
Residuals Balancing	81306	Emergency Energy Purchases
Residuals Balancing	81307	Emergency Energy Sales
Residuals Balancing	81309	Balancing Market Energy Residual
Residuals Balancing	81311	Balancing Market Loss Residual
Residuals Balancing	81312	Balancing Market Congestion Balancing
Residuals Balancing	81313	Emergency Energy Purchases
Residuals Balancing	81314	Emergency Energy Sales
Residuals DAM	81301	Day Ahead Market Energy Residual
Residuals DAM	81303	Day Ahead Market Loss Residual
Residuals DAM	81308	Day Ahead Market Energy Residual
Residuals DAM	81310	Day Ahead Market Loss Residual



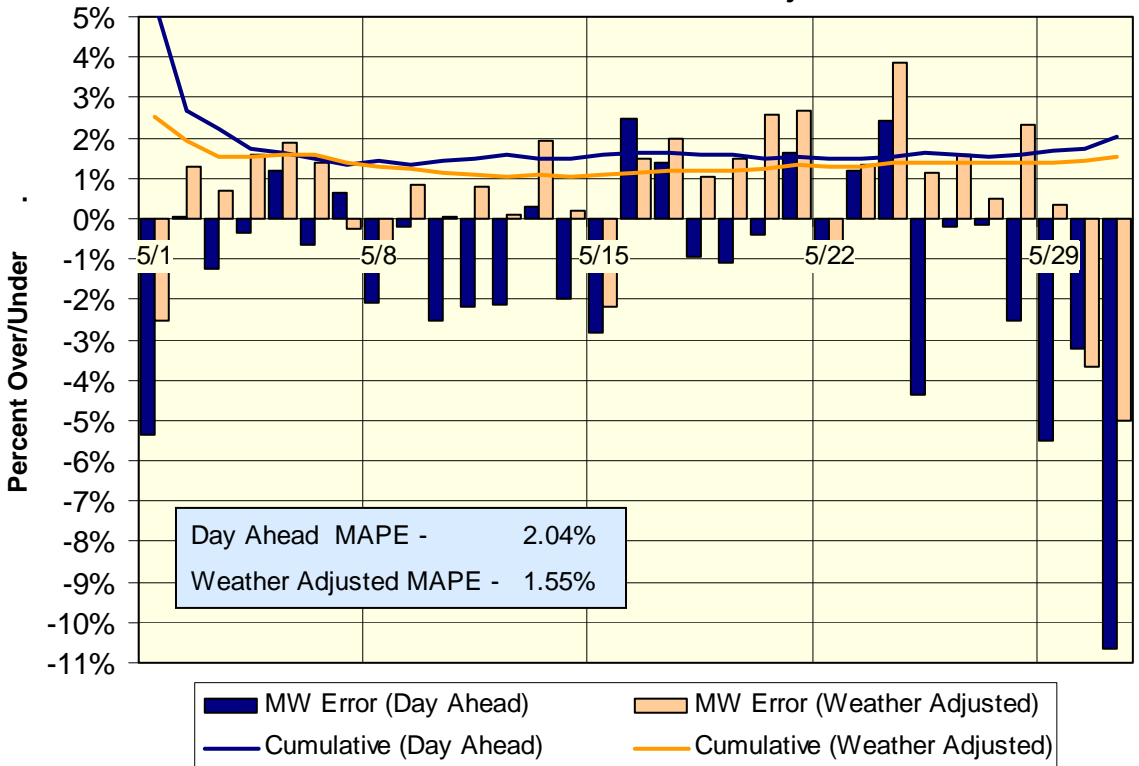
**NYISO Daily Peak Load - May 2011**  
**Actual vs Weather-Adjusted Forecast**



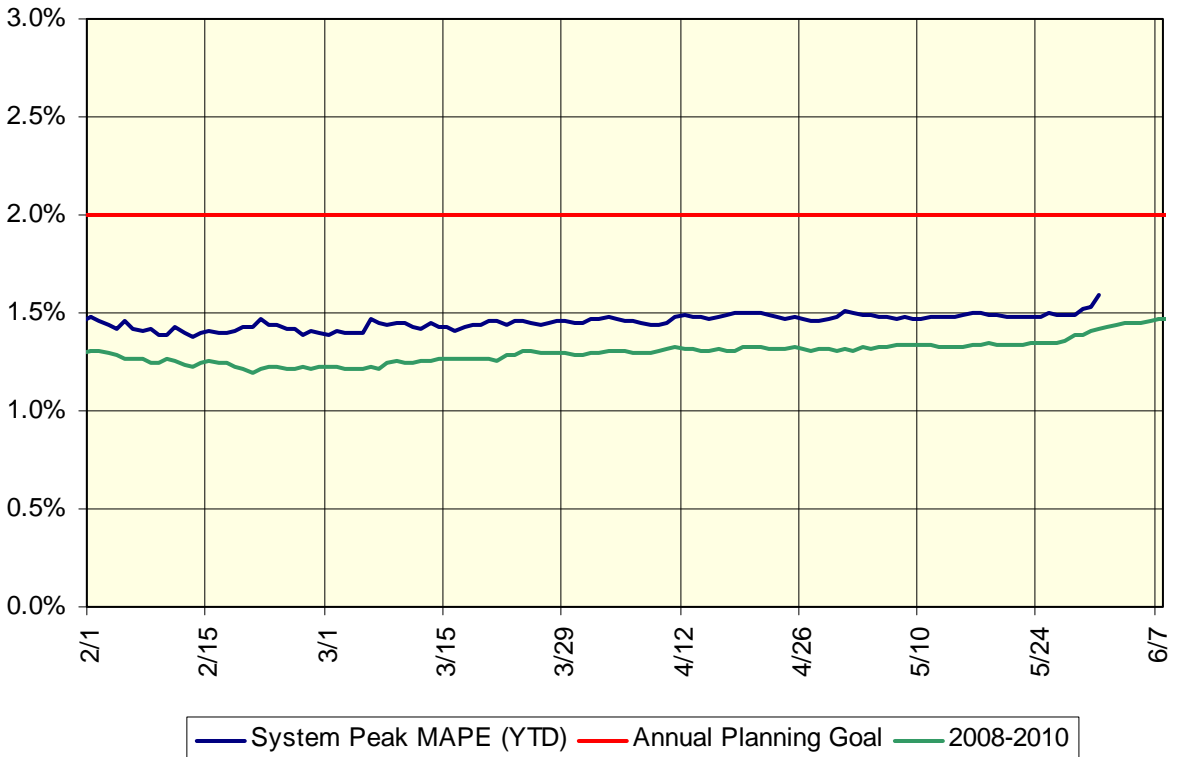
**NYISO Daily Peak Load - May 2011**  
**Actual vs Forecast**



### Day Ahead Forecast - May 2011 Percent Error - Actual & Weather Adjusted



### Day-Ahead Forecast Accuracy - Cumulative Performance 2011 Year-to-Date



Project	Status and Milestone Deliverables
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Business Intelligence Products	
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E-Planning Enhancements	<p><b>Status:</b> E-Planning is a comprehensive collaboration system for NYISO System Resource Planning. The 2010 deployment was specific for Interconnection Studies.</p> <p><b>Deliverables:</b> The focus of the 2011 project will be extending functionality to include other types of studies conducted by System Resource Planning, such as Transmission Studies.</p>
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Web Posting Enhancements: Operational Events	<p><b>Status:</b> "Web Postings" refers to a series of processes that generate and publish various CSV, PDF, and HTML files to NYISO's OASIS site (<a href="http://mis.nyiso.com/public">http://mis.nyiso.com/public</a>). These files include zonal and generator pricing data for the Real-Time, Hour-Ahead, and Day-Ahead markets, outage data, interface limits &amp; flows, PAR schedules &amp; flows, actual load and load forecasts, various reports, and other publicly available data used by Market Participants.</p> <p><b>Deliverables:</b> The focus of the 2011 project is to enable the real time posting of operational events, such as Major Emergency, Thunder Storm Alert, Reserve Pickup and Area Control Error (ACE), to nyiso.com. Implementation is scheduled for 4<sup>th</sup> Q 2011.</p>
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Capacity Market Products	
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Additional Capacity Zones	<p><b>Status:</b> The NYISO and stakeholders developed the rationale in 2010 for creating additional capacity zones, identified as a recommendation in the 2009 State of the Market report. NYISO submitted a FERC compliance filing in January 2011 to define the criteria for creating new capacity zones. A Lower Hudson Valley capacity zone is under consideration to reduce the impact of deliverability and better reflect the cost of new entry.</p> <p><b>Deliverables:</b> The 2011 project will focus on the functional design of the logic to generalize the addition, and possibly subtraction, of capacity zones within the ICAP Automated Market System.</p>
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Buyer Side Mitigation Rules	<p><b>Status:</b> In February 2011 FERC accepted NYISO's compliance filing, which was submitted based on 2010 stakeholder discussions.</p> <p><b>Deliverables:</b> Implement the necessary rule changes within the ICAP Automated Market System, including floor price adjustment, duration of mitigation, and exemption tests. Implementation is scheduled for 3rd Q 2011 to be effective for the Winter Capability Period.</p>
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Project	Status and Milestone Deliverables
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Demand Response Products	
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Demand Response Aggregations in DSASP	<p><b>Status:</b> Based on the NYISO's response to FERC Order 719, in 2010 NYISO and stakeholders discussed the changes needed to accommodate aggregated small demand response resources providing ancillary services (DSASP). The Market Design Concept to treat aggregations in the same manner as individual DSASP resources was proposed and approved by Market Participants at the December 2010 BIC</p> <p><b>Deliverables:</b> Implement the required rule changes and software changes in 2011. Implementation is planned for 3<sup>rd</sup> Q 2011.</p>
Demand Side Ancillary Services Program (DSASP) Direct Metering	<p><b>Status:</b> In 2010 NYISO and stakeholders discussed the stakeholder need to enable direct communications from the NYISO to the DSASP provider/aggregator.</p> <p><b>Deliverables:</b> The 2011 project will address the required market rule, software, and hardware changes needed to enable direct communications from the NYISO to the DSASP provider/aggregator. Completion of the functional requirements is scheduled for the 3<sup>rd</sup> Q 2011.</p>
Demand Response – Real Time Energy Market	<p><b>Status:</b> NYISO and Market Participants are awaiting further direction from FERC on the concepts for permitting demand response entities to participate in the NYISO's real time energy market.</p> <p><b>Deliverables:</b> The focus of this project in 2011 is the development of the architectural design specification for the software changes required to enable this functionality. Completion of the architectural design is scheduled for the 4<sup>th</sup> Q 2011.</p>
SCR Baseline/Aggregation Rules	<p><b>Status:</b> Stakeholders approved market rule changes at the February 2011 Management Committee. These changes will result in improved estimates of the demand reduction capabilities (and Installed Capacity) of SCRs, better alignment with operational expectations during an SCR event, and greater clarity in applying performance deficiency penalties to the entities that represent SCRs in the NYISO market: Responsible Interface Parties. At the request of the Market Participants, NYISO will be seeking expedited treatment from FERC.</p> <p><b>Deliverables:</b> The focus of the 2011 project is implementation of the required software changes within the Demand Response Information System (DRIS) to implement the market rules approved by stakeholders. Implementation is scheduled for 3<sup>rd</sup> Q 2011.</p>

Project	Status and Milestone Deliverables
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<b>Energy Markets Products</b>	
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Ancillary Services Mitigation	<p><b>Status:</b> Per recommendation of NYISO's Market Advisor, NYISO should modify two mitigation provisions that may limit competitive 10-minute reserves offers in the day-ahead market.</p> <p><b>Deliverables:</b> This project will focus on an evaluation of these two mitigation provisions and identification of appropriate modifications, if necessary. A market design concept proposal is scheduled for 3<sup>rd</sup> Q 2011.</p>
Buy-through of Congestion	<p><b>Status:</b> Buy-Through of Congestion is a Broader Regional Markets initiative that addresses congestion costs created by loop flow from external transactions. Parties scheduling transactions with any of the ISOs surrounding Lake Erie would be billed for real-time congestion costs incurred by neighboring systems supporting the loop flow created by the transaction to maintain the schedule. Parties scheduling transactions would specify if they are, or are not, willing to pay for off-contract path congestion. This project will implement this functionality.</p> <p><b>Deliverables:</b> Given FERC's reprioritization of this BRM initiative in the December 30, 2010 FERC Order, there are no planned deliverables for 2011.</p>
Enhanced Shortage Pricing Phase I	<p><b>Status:</b> The NYISO implemented reserve demand curves as part of the SMD2 implementation to accurately and consistently capture shortage conditions directly into the market clearing prices. During the development of the market rules, set points (or set point/ MW pairs) were established for the Ancillary Service products. The demand curve will be modified to better reflect the value of reserves during shortage conditions, consistent with operational practices and reserve scheduling requirements.</p> <p><b>Deliverables:</b> The focus of this project for 2011 is to implement the required software changes. This project was successfully implemented in May. This project is complete.</p>
Interregional Transaction Coordination Phases I and III	<p><b>Status:</b> Interregional Transaction Coordination is a Broader Regional Markets initiative that provides more frequent scheduling of external energy transactions with the interfaces. Currently, energy transactions between NY and other control areas are evaluated economically once for the hour. The 2008 and 2009 State of the Market recommendation #2 is, "NYISO continue its work with neighboring control areas to better utilize the transfer capability between regions." Phase I of this project will enable more frequent scheduling with Hydro Quebec (HQ). Phase III will enable more frequent scheduling with PJM.</p> <p><b>Deliverables:</b> The focus of this project in 2011 is to deliver the necessary software enhancements and tools to implement Intra-hour energy transaction scheduling capabilities with HQ in May 2011 and PJM in September 2011. The Phase I software changes were deployed in May.</p>

Project	Status and Milestone Deliverables
<p>Interregional Transaction Coordination Phase IV – ISO-NE Intra-hour Transaction Scheduling</p>	<p><b>Status:</b> This project expands upon the work completed in Phases 1 and 3 by implementing Intra-hour energy transaction scheduling capabilities with ISO-NE. The 2008 and 2009 State of the Market recommendation #2 is, “NYISO continue its work with neighboring control areas to better utilize the transfer capability between regions.”</p> <p><b>Deliverables:</b> The focus of this project in 2011 is to develop the functional requirements and complete the tariff filing in 4<sup>th</sup> Q 2011.</p>
<p>Market to Market Coordination - PJM</p>	<p><b>Status:</b> In late-2006, PJM approached NYISO, interested in developing a program to allow inter-control area dispatch to help manage congestion. PJM has implemented a program with MISO. In 2007, NYISO initiated discussions with PJM to further understand the MISO program and begin to outline a conceptual straw proposal for a similar program between PJM and NY. NYISO has continued to define the details of a Market to Market (formerly known as Congestion Management) protocol between NYISO and PJM. In 2009, NYISO worked with PJM and NYISO stakeholders to develop a Market to Market protocol. Protocol development was not completed in 2009. The question of entitlement rights on coordinated flowgates could not be addressed until the NYISO had developed or procured a market flow calculator. The December 30, 2010 FERC Order regarding the NYISO’s Lake Erie Loop Flow response directs the NYISO to implement market to market with PJM faster than originally planned.</p> <p><b>Deliverables:</b> In 2011 the NYISO will implement the market flow calculator necessary for this project. The deployment of this project is scheduled for 4<sup>th</sup> Q 2012.</p>
<p>Interface Pricing (PAR Modeling Upgrades)</p>	<p><b>Status:</b> PAR Modeling Upgrades is a Broader Regional Markets initiative that modifies how power flows are represented on the SCUC, RTC and RTD models. This requires changes to the current PAR modeling techniques used by SCUC, RTC and RTD, where PARs will need to be modeled as free flow devices for the purposes of pricing and dispatch, but also provide the ability to offset the PAR schedules with an injection or withdrawal to represent extrinsic power flow effects like Lake Erie Loop Flow.</p> <p><b>Deliverables:</b> This project is targeted for deployment in October 2011.</p>
<p>Scheduling and Pricing: Regulation Ramp</p>	<p><b>Status:</b> Today, some generators have a physical limitation on the regulation that can be provided within certain unit operating ranges. This project will allow generators to specify different regulation response rates for different energy output levels, similarly to the three energy response rates allowed today. With these additional regulation response rates, SCUC, RTC, RTD and AGC will know how best to co-optimize the output of a generating unit while meeting the physical operating characteristics of that unit. Additionally, these responses rates will still need to be maintained at a rate that is equal to or lower than the energy response rate. An alternative solution may be to create a distinct regulation upper limit.</p> <p><b>Deliverables:</b> The focus of this project in 2011 is to develop a market design concept in 4<sup>th</sup> Q 2011.</p>

Project	Status and Milestone Deliverables
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<b>Enterprise Technology Products</b>	
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Enterprise Data Storage Migration	<p><b>Status:</b> This project focuses on migrating from leased storage hardware onto purchased storage hardware with a longer lifespan that can be upgraded with minimal disruptions to the organization. This new storage hardware supports increased performance and storage requirements, which are required for upcoming market design and Smart Grid initiatives.</p> <p><b>Deliverables:</b> The hardware migration is scheduled for completion in 3<sup>rd</sup> Q 2011.</p>
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Identity and Access Management	<p><b>Status:</b> This project continues the roadmap initiated in 2010. This project will help address NERC Critical Infrastructure Protection (CIP) compliance requirements and deliver a foundation for enterprise-wide identity and access management. Technical controls and workflows will manage employee user identities and access rights to widely used critical cyber assets defined by NERC CIP. The solution will provide reporting and visibility to current access entitlements and immediate revocation of rights on employee exit.</p> <p><b>Deliverables:</b> The focus of this project in 2011 is the implementation of the functionality to automate the controls and management of employer user identities and access rights. Implementation is scheduled for 3<sup>rd</sup> Q 2011.</p>
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Ranger Hardware Migration	<p><b>Status:</b> This project focuses on migrating from leased servers onto purchased servers for the benefits of a scalable solution that can be upgraded with minimal disruptions to the organization, extends the lifespan of the Ranger platform, and enables software performance tuning to support data volumes anticipated with future market initiatives.</p> <p><b>Deliverables:</b> The hardware migration was successfully completed. This project is now complete.</p>
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<b>Finance Products</b>	
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Bid Production Cost Guarantee Enhancements	<p><b>Status:</b> These changes were requested as part of the Strategic Tariff review and specifically impact the Day Ahead and Real Time Bid Production Cost Guarantee (BPCG) calculations with respect to Bilateral transactions and RT BPCG for regulation providers. Modifications are needed to the DA and RT BPCG calculations for generators with bilateral transactions to use implied revenues based on LBMPs and actual bid costs; and, start up costs need to be included in the calculation of BPCG regardless of the existence of bilateral transactions. Modification needed to the RT BPCG calculations for generators providing RT regulation that do not have a DA schedule for energy to include both the cost and revenue components associated with Incremental energy from the units Min Gen to Min Gen plus scheduled regulation MW's. The incremental energy costs are currently not included in the calculation.</p> <p><b>Deliverables:</b> The focus of this project is the implementation of the software changes needed to support the market rule changes to be approved by Stakeholders, the Board, and FERC. Implementation is scheduled for 2<sup>nd</sup> Q 2011.</p>
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Project	Status and Milestone Deliverables
Consolidated Invoice Redesign	<p><b>Status:</b> This is a multi-year project focused on implementing weekly invoicing in compliance with FERC Order 741 and replacing old technology. This project will include modifications to Consolidated Invoice, Credit Management System, Oracle Financials and Finance Department processes, and the Customer Settlements Data Mart to support flexible invoicing.</p> <p><b>Deliverables:</b> This project will implement the software needed to support a shortened settlement cycle and other credit reforms included in FERC Order #741. Implementation is scheduled for 3<sup>rd</sup> Q 2011 to support production of the first weekly invoice October 12, 2011.</p>
<b>Operations &amp; Reliability Products</b>	
Dynamic Pricing	<p><b>Status:</b> This project will make available LBMP data directly to the Transmission Owners in support of on-going Smart Grid efforts. Today TOs must gather LBMP data from the NYISO web.</p> <p><b>Deliverables:</b> The focus of this project in 2011 is the development of an architectural design specification in 4<sup>th</sup> Q 2011.</p>
Operational Tools and Enhancements	<p><b>Status:</b> The focus of this project is to provide the tools necessary to improve NYISO Operations' analytical capabilities for purposes of improving reliability. There are several initiatives, including support for continuing to provide NERC IDC mandated data exchanges to meet NERC and NASB standards. Existing manual processes used by Security Constrained Unit Commitment (SCUC) Engineers in determining Day Ahead Market (DAM) Unit Commitment will be reviewed and automated where possible.</p> <p><b>Deliverables:</b> Two deployments are scheduled, one for June and one for September, to implement the prioritized functionality.</p>
Ranger Enhancements for Optimization and Performance	<p><b>Status:</b> Over the next few years, projects like Disaggregated Virtual Trading and the Broader Regional Market initiatives are expected to significantly increase data and transaction volumes processed in the Ranger system. This project aims to analyze and deploy optimization requirements from ABB that are appropriate to improve processing. The primary focus will be on optimization of processing time.</p> <p><b>Deliverables:</b> The focus of this project for 2011 is the completion of an architectural design specification in 4<sup>th</sup> Q 2011.</p>
Reference Level Software Enhancements	<p><b>Status:</b> This project will focus on enhancing the Reference Level Software (RLS) application that was implemented in November 2010. The enhancements to the RLS application will focus on automating manual processes and providing long term monitoring tools to Market Mitigation and Analysis.</p> <p><b>Deliverables:</b> The implementation of these prioritized enhancements is scheduled for 2<sup>nd</sup> Q 2011.</p>



Project	Status and Milestone Deliverables
Reliability Commitment Transparency	<p><b>Status:</b> This project will provide Dispatchers with a drop down list of available Application of Reliability Rules (ARR) to select the ARR in effect when TOs call to inform dispatchers of a Day Ahead Reliability Unit (DARU).</p> <p><b>Deliverables:</b> Implementation of this functionality is scheduled for 2<sup>nd</sup> Q 2011.</p>
<b>Planning and TCC Market Products</b>	
TCC Multi-Duration and Balance of Period Centralized Auction	<p><b>Status:</b> This project continues the 2010 efforts to provide for TCC Auction 'End State' functionality; in 2010 NYISO implemented functionality for MPs to sell TCCs in any round. Continuing efforts will focus on the implementation of Non-Historic Long Term Fixed Price TCCs, multi-duration capability period auctions, and balance of period TCCs. Consistent with NYISO's response to a FERC Order, NYISO is planning a June 2012 implementation to support offering Non-Historic Long Term Fixed Price TCCs beginning with the Autumn 2012 Capability Period Auction.</p> <p><b>Deliverables:</b> The focus of this project is the completion of the functional requirements specifications for all of the functionality in 2<sup>nd</sup> Q 2011.</p>
High Performance Computing for Planning Studies	<p><b>Status:</b> This is a project to put in place the infrastructure required to enable System Resource Planning to conduct large, data intensive planning studies. NYISO is in the process of evaluating and selecting the appropriate hardware solution.</p> <p><b>Deliverables:</b> The focus of this project in 2011 is the implementation of the solution in 4<sup>th</sup> Q 2011.</p>
Siemens PTI Model-on-Demand Phase II	<p><b>Status:</b> The second phase of this project will focus on maintenance and consulting for implementation of the Siemens PTI Model-on-Demand (MOD) web portal, which will allow TOs and MPs to review and approve data in a structured, interactive manor.</p> <p><b>Deliverables:</b> The focus of this project in 2011 is the completion of the architectural design specification in 3<sup>rd</sup> Q 2011.</p>

## Summary Description of FERC Regulatory Filings, Investigations and Rulemakings and Related Orders in NYISO Matters 2007-2009

<b>Filing Date</b>	<b>Filing Summary</b>	<b>Docket</b>	<b>Order Date</b>	<b>Order Summary</b>	<b>Outcome</b>
3/30/2011	NYISO 205 Filing of Tariff Revisions to Clarify the Calculation Methodology for BPCGs	ER11-3236-000	05/13/2011	FERC letter order accepting revisions effective 6/1/11	Accepted
4/18/2011	NYISO Compliance Filing of Market Services Tariff Attachment H to correct FERC's eTariff Viewer	ER10-3043-005	05/11/2011	FERC letter order accepting refiling of MST Attachment H	Accepted
4/19/2011	NYISO Filing of an Offer of Settlement Related to the Compensation of TC Ravenswood for Complying with Minimum Oil Burn Rule	EL10-70-000	05/12/2011	FERC letter order accepting settlement and directing tariff filing	
4/20/2011	NYISO Errata Filing to Revise the Calculation of Bid Production Cost Guarantees and Request for Shortened Comment Period (MST sec. 4.6 and sec. 18 attachment C)	ER11-3236-001	05/13/2011	FERC letter order accepting revisions effective 6/1/11	Accepted
5/2/2011	NYISO compliance filing to incorporate ICAP Manual provisions re: ACL calculations into the Services Tariff	ER11-2906-001	05/31/2011	FERC letter order accepting compliance filing effective 4/11/11	Accepted
5/4/2011	NYISO Request for Leave to Answer and Answer to Protest and Comments of the New York City Suppliers, IPPNY and Consumer Interests in response to the NYISO's March 29, 2011 compliance filing	ER11-2224-004, 005	05/19/2011	FERC order granting in part and denying in part various request for rehearing of 1/28/11 order; denies request for rehearing of its 3/9/11 order; and directing NYISO to submit a compliance filing	Accepted - Compliance Rqrd
5/9/2011	NYISO compliance filing re: OATT attachment Z cost study for class year 2011 and later	ER11-2842-001			
5/9/2011	NYISO Motion to defer effective date of previously accepted tariff revisions re: Enhanced Shortage Pricing	ER11-2454-000			
5/9/2011	NYISO Motion to defer effective date of previously accepted tariff revisions re: Enhanced Interface Transaction Coordination	ER11-2547-000			
5/12/2011	NYISO compliance filing re: ATC OATT revision attachment C in compliance with the Commission's March 31, 2011 order	ER11-2048-000, 001, and 002			

<b>Filing Date</b>	<b>Filing Summary</b>	<b>Docket</b>	<b>Order Date</b>	<b>Order Summary</b>	<b>Outcome</b>
	revisions to its OATT that were necessary for full compliance with Order Nos. 729 and 890				
5/17/2011	NYISO Request for Leave to Answer and Answer to the Request for Rehearing of Astoria Generating Company and TC Ravenswood	ER11-2224-007			
5/18/2011	NYISO Filing re: Notice of Implementation of Bi-Directional Flow Over Linden VFT Scheduled Line on June 1, 2011	ER09-981-00__			
5/18/2011	NYISO filing of proposed revisions to its Code of Conduct and ISO Agreement to conform to NYSRC Agreement. This filing is incomplete as of 5/18/11. The NYISO was only able to file the OATT revisions and was not able to file the ISO Agreement.	ER11-3595-000			
5/19/2011	NYISO filing of proposed revisions to its ISO Agreement to conform to NYSRC Agreement. Completes filing of 5/18/11	ER11-3604-000			
5/23/2011	NYIS filing of compliance amendments to the OATT regarding ATC Calculations	ER11-2048-004			
5/27/2011	NYISO 205 filing re: ministerial correction to reinstate effective date to OATT att. CC NYISO PJM JOA	ER11-3663-000			
5/31/2011	NYISO 205 Filed at FERC an Errata to July 30, 2010 RLS Filing Concerning Correction of Formula under Original Docket no. ER10-2062-000	ER11-3674-000			