



# Monthly Report

July 2012

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



***July 2012 Report***

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

Prepared by NYISO Operations Analysis and Services, based on settlements initial invoice data collected on or before August 8, 2012.

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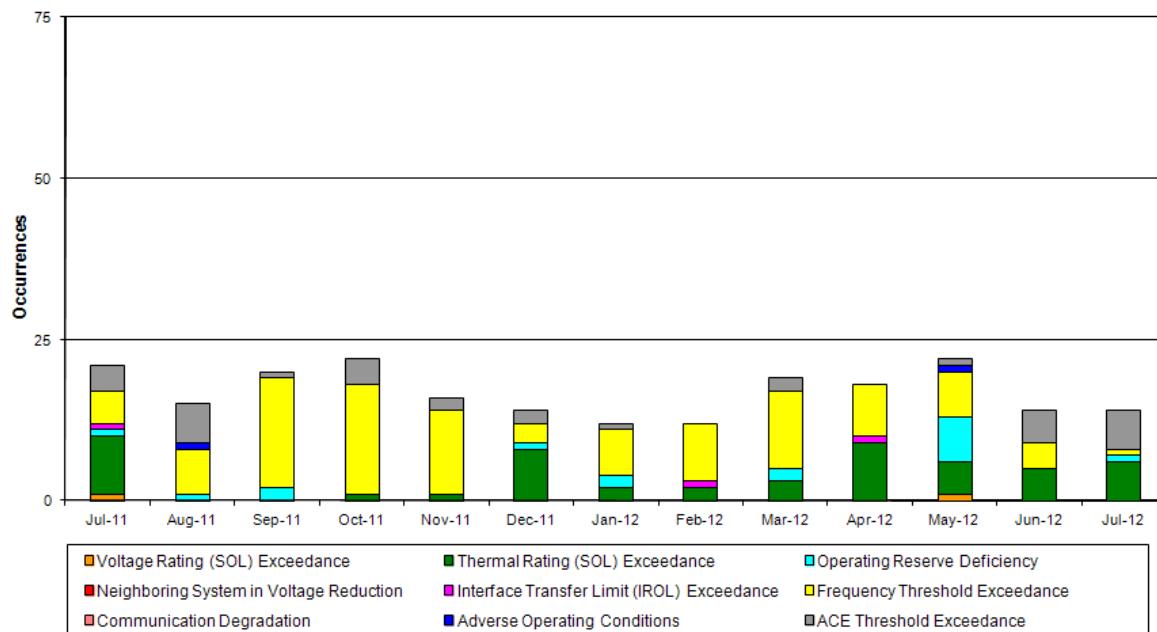
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## July 2012 Operations Performance Highlights

- Peak load of 32,439 MW occurred on 7/17/2012 HB 16
- All-time summer capability period peak load of 33,939 MW occurred on 8/2/2006 HB13
- 49 hours of Thunder Storm Alerts were declared
- 3 hours of NERC TLR level 3 curtailments
- EDRP/SCR resources were activated on 7/17/2012 and 7/18/2012

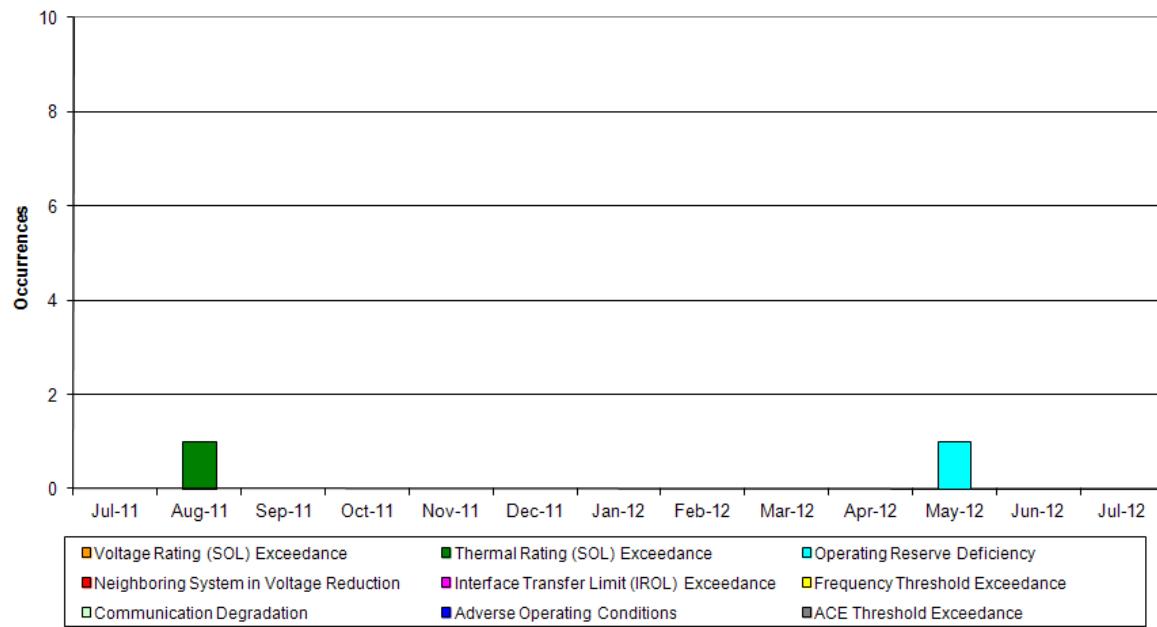
## Reliability Performance Metrics

**Alert State Declarations**



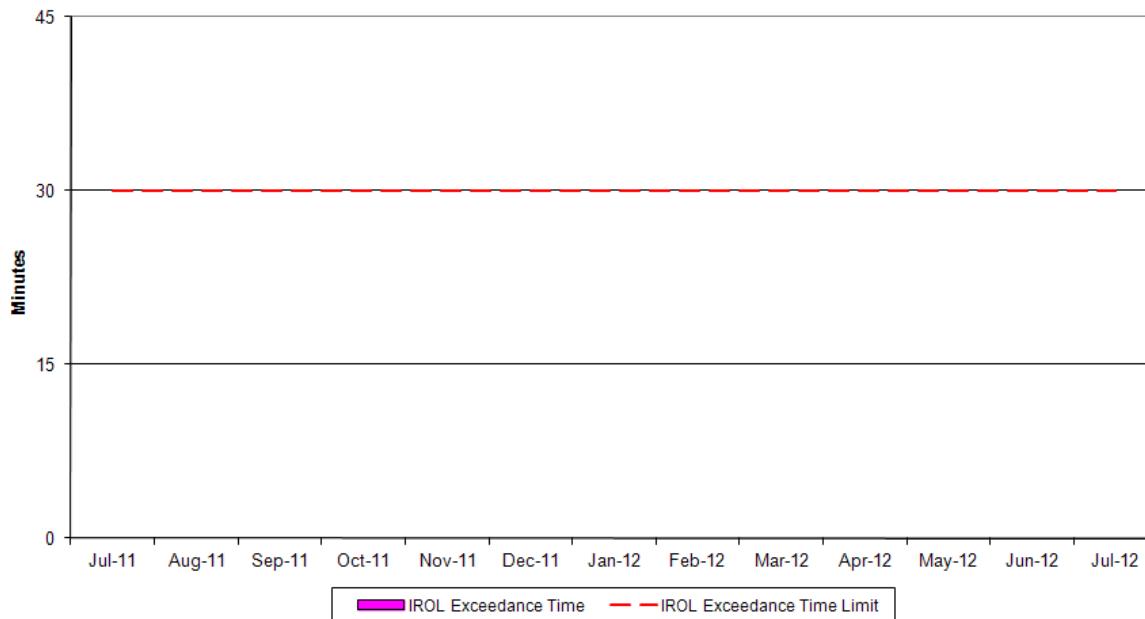
The number and causes of Alert State declarations reflect system operating conditions beyond thresholds associated with Normal and Warning States. Declaration of the Alert State allows the NYISO to take corrective actions not available in the Normal and Warning States.

**Major Emergency State Declarations**



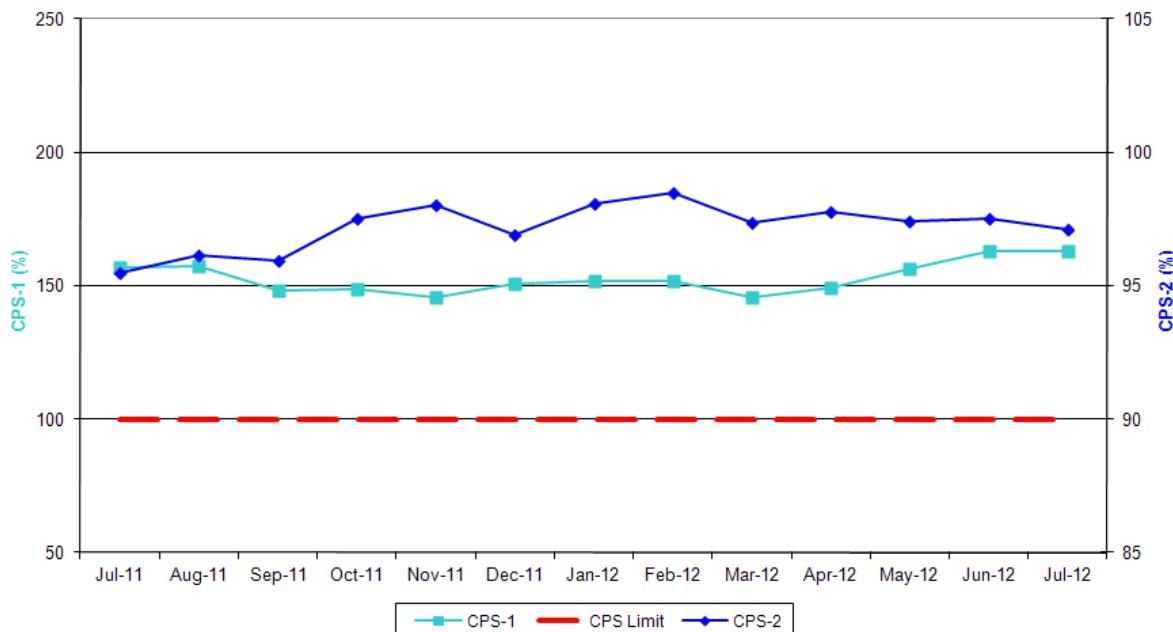
The number and causes of Major Emergency State declarations reflect system operating conditions beyond thresholds associated with the Alert State. Declaration of the Major Emergency State allows the NYISO to take additional corrective actions not available in the Alert State.

### NERC IROL Time Over Limit



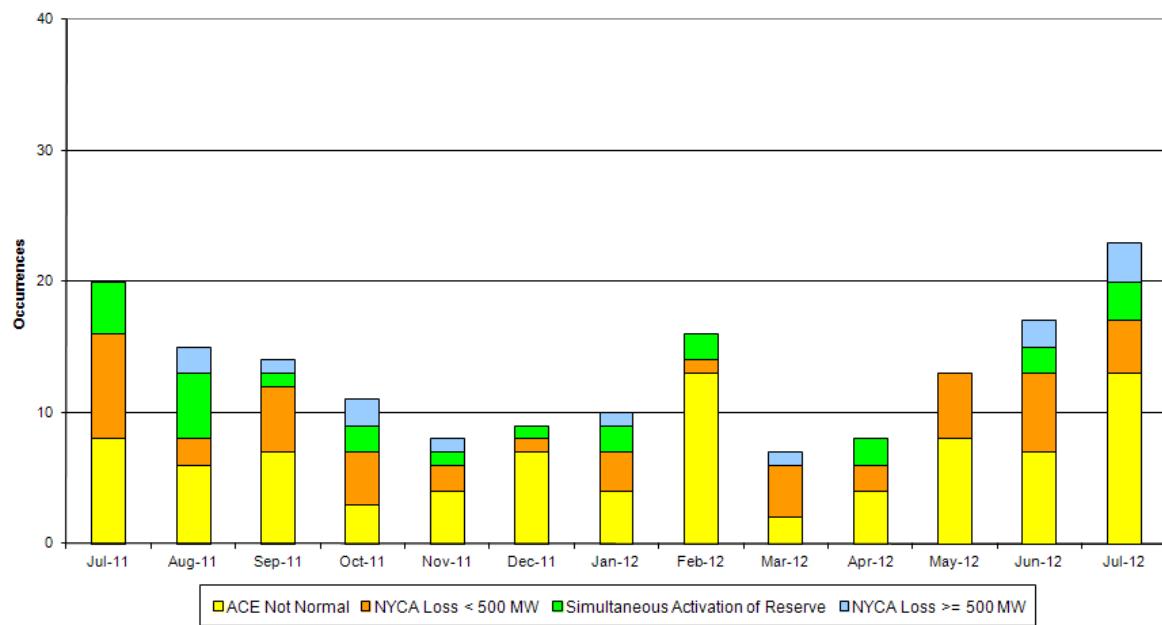
For IROL exceedances leading to Major Emergency State declarations, the maximum IROL exceedance time is identified. IROL exceedances of less than thirty minutes are considered NERC compliant.

### NERC Control Performance Standards



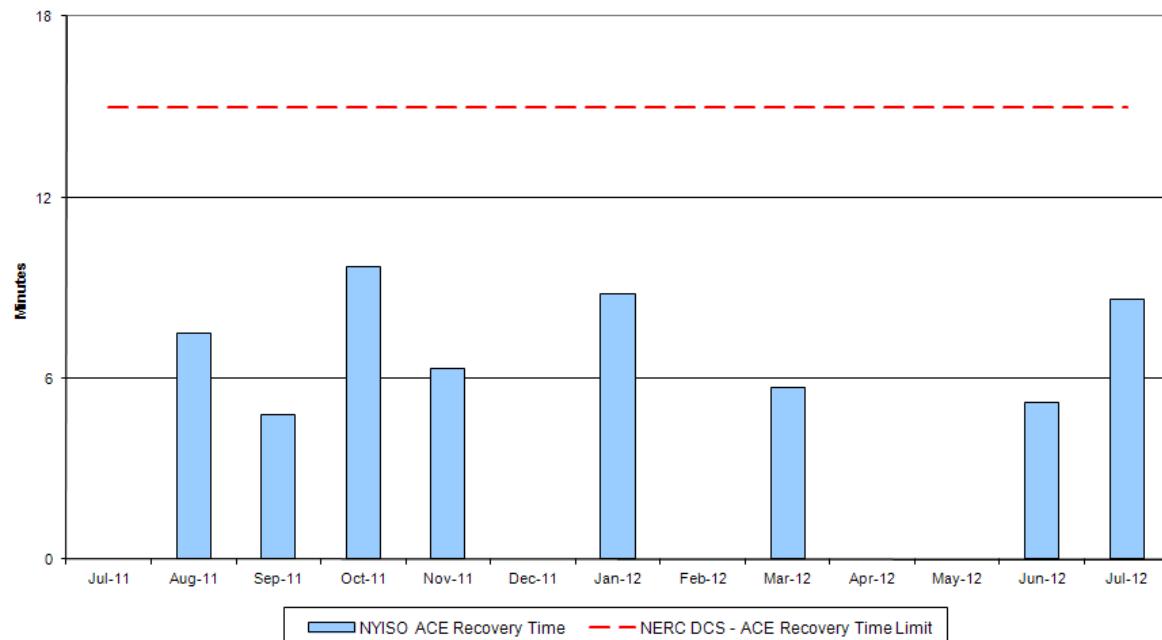
The values of NERC Control Performance Standards (CPS-1 and CPS-2) are indicators of the NYISO Area resource and demand balancing. Values exceeding the identified thresholds are NERC compliant.

### Reserve Activations

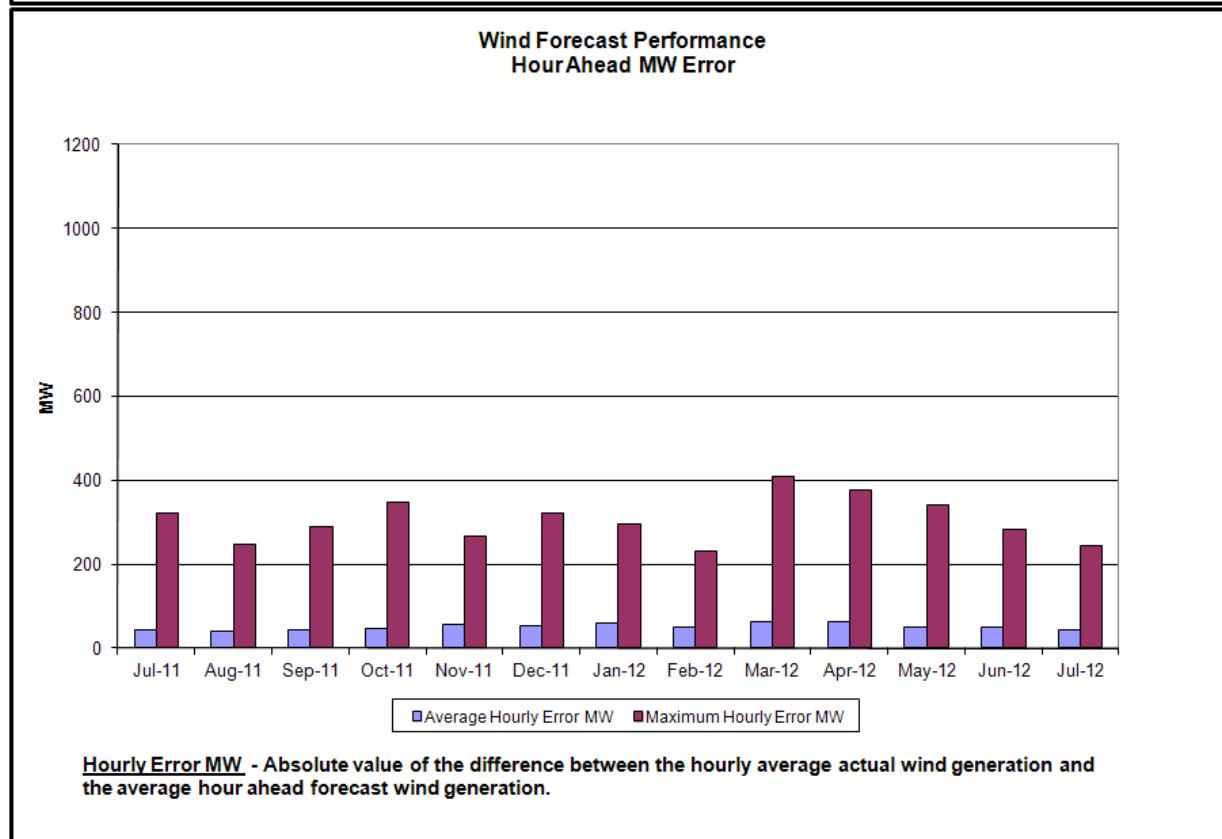
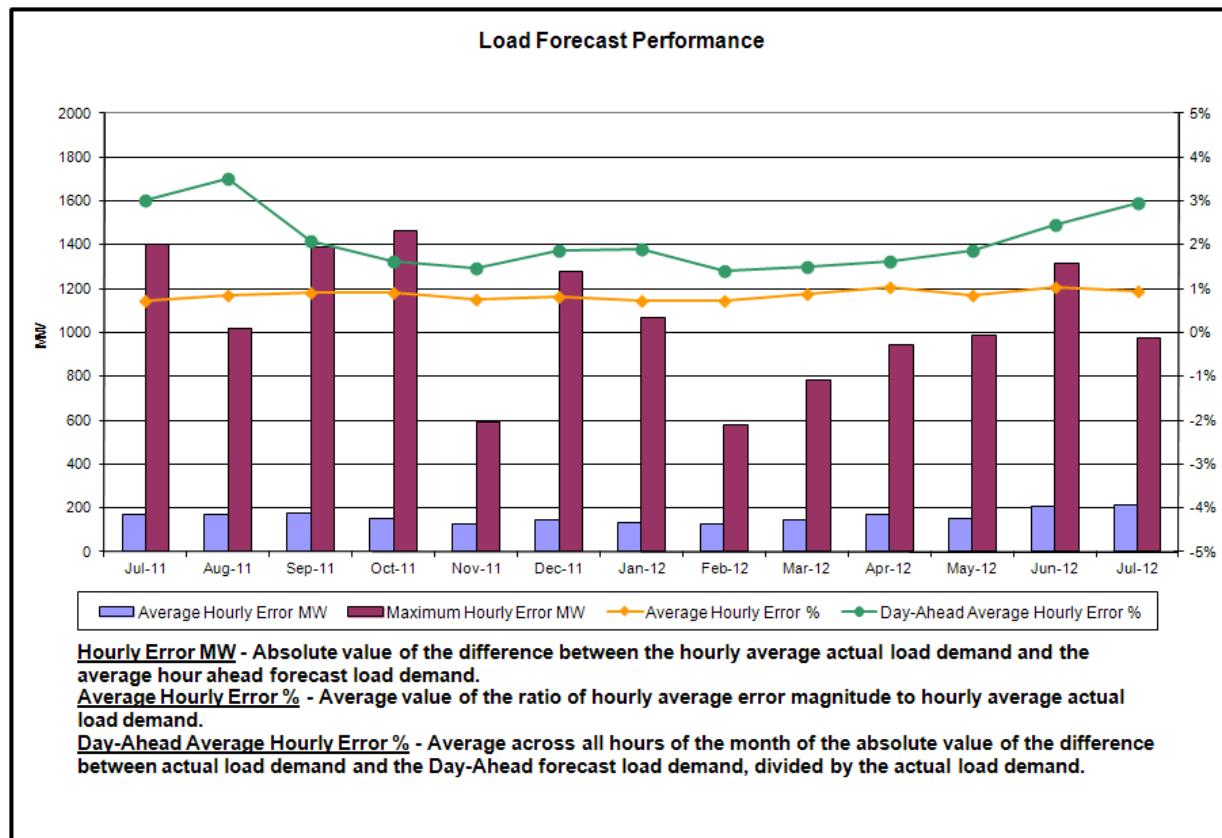


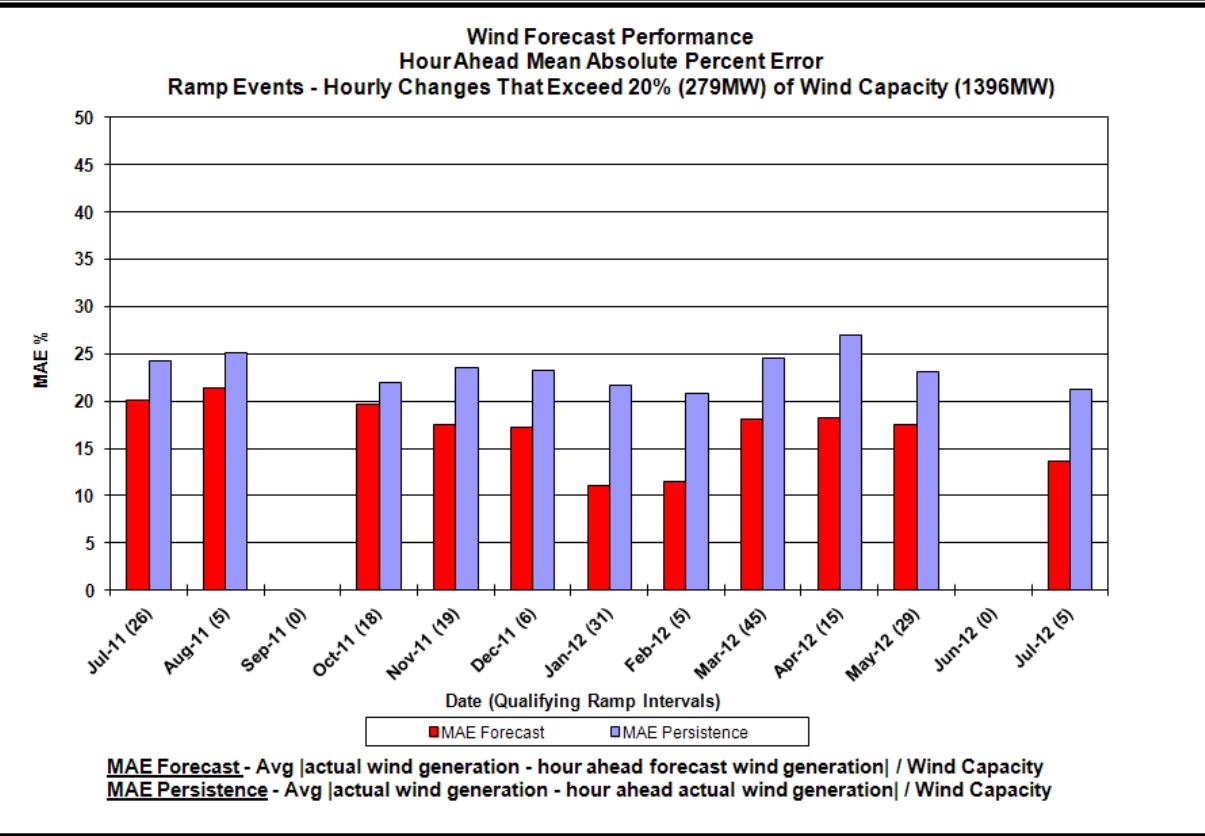
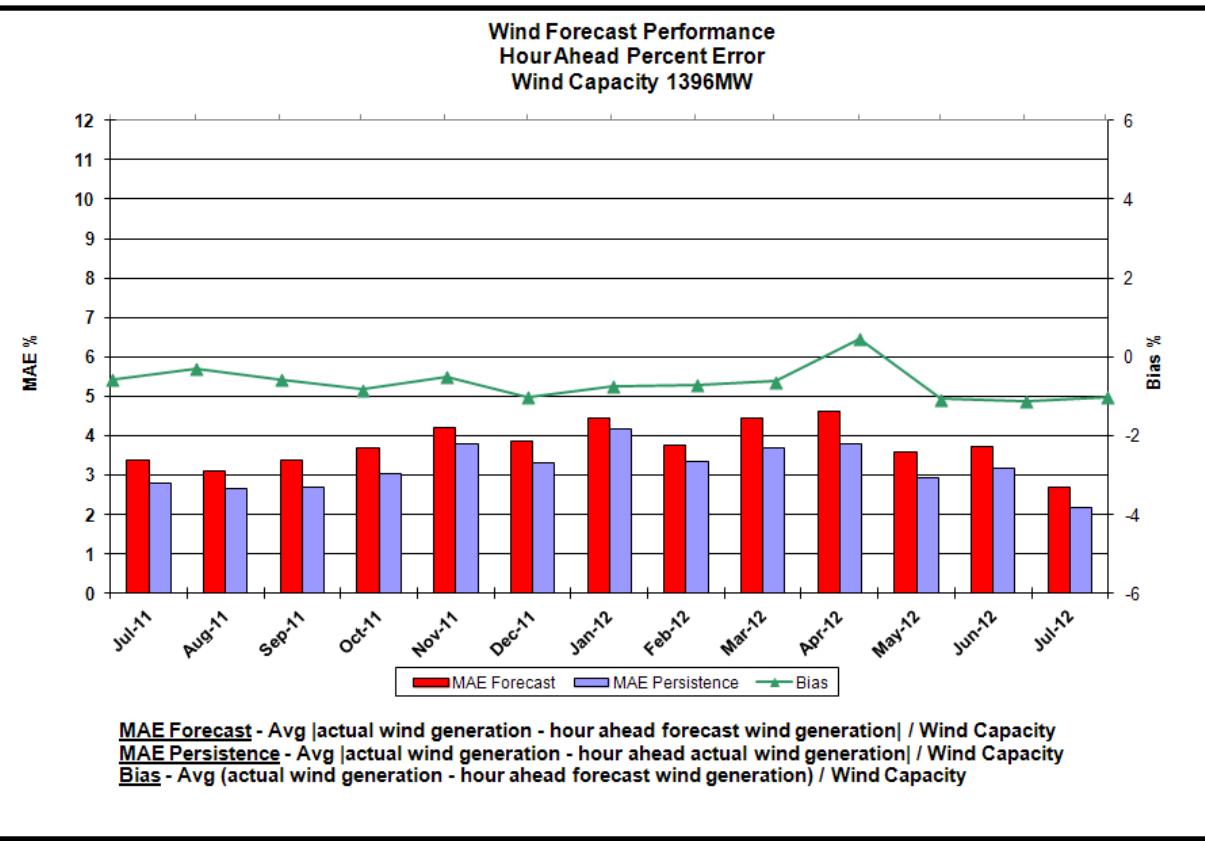
NYISO Reserve Activations are indicators of the need to respond to unexpected operational conditions within the NYISO Area or to assist a neighboring Area (Shared Activation of Reserves) by activating an immediate resource and demand balancing operation.

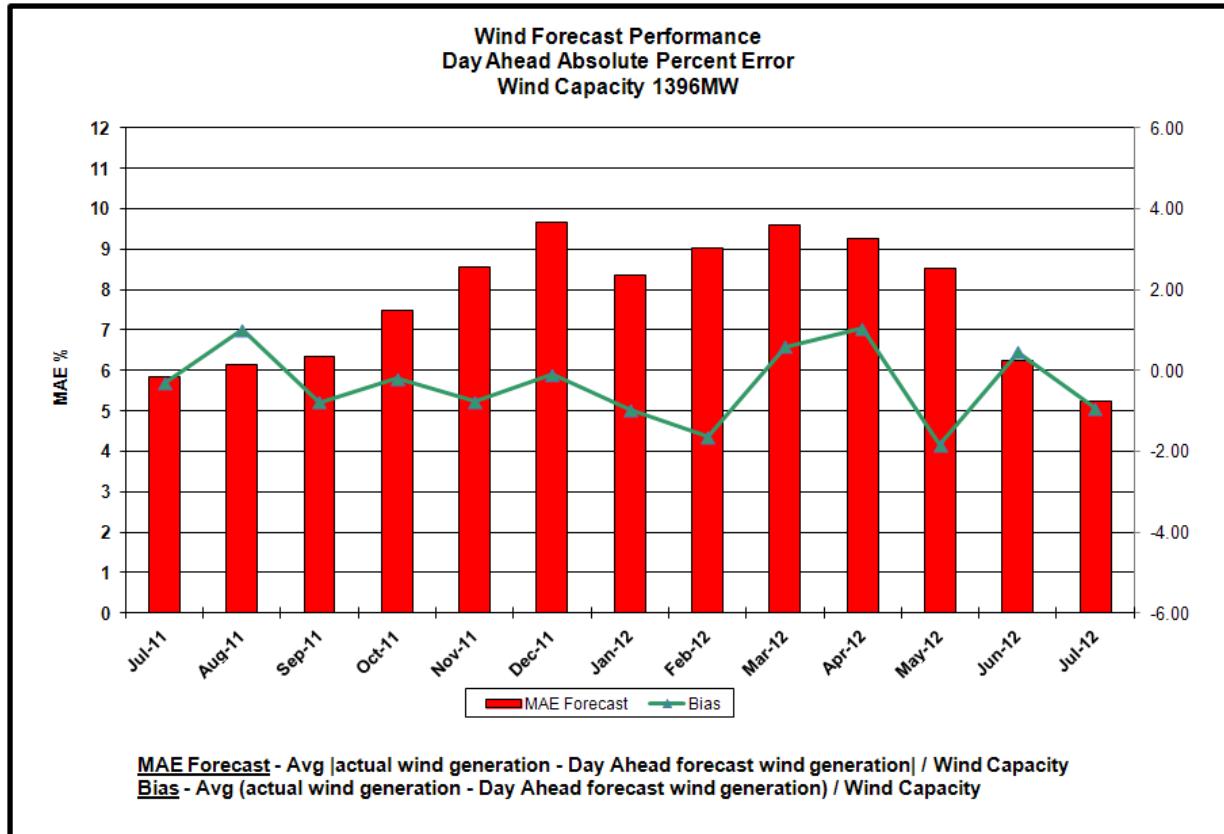
### DCS Event Time to ACE Recovery

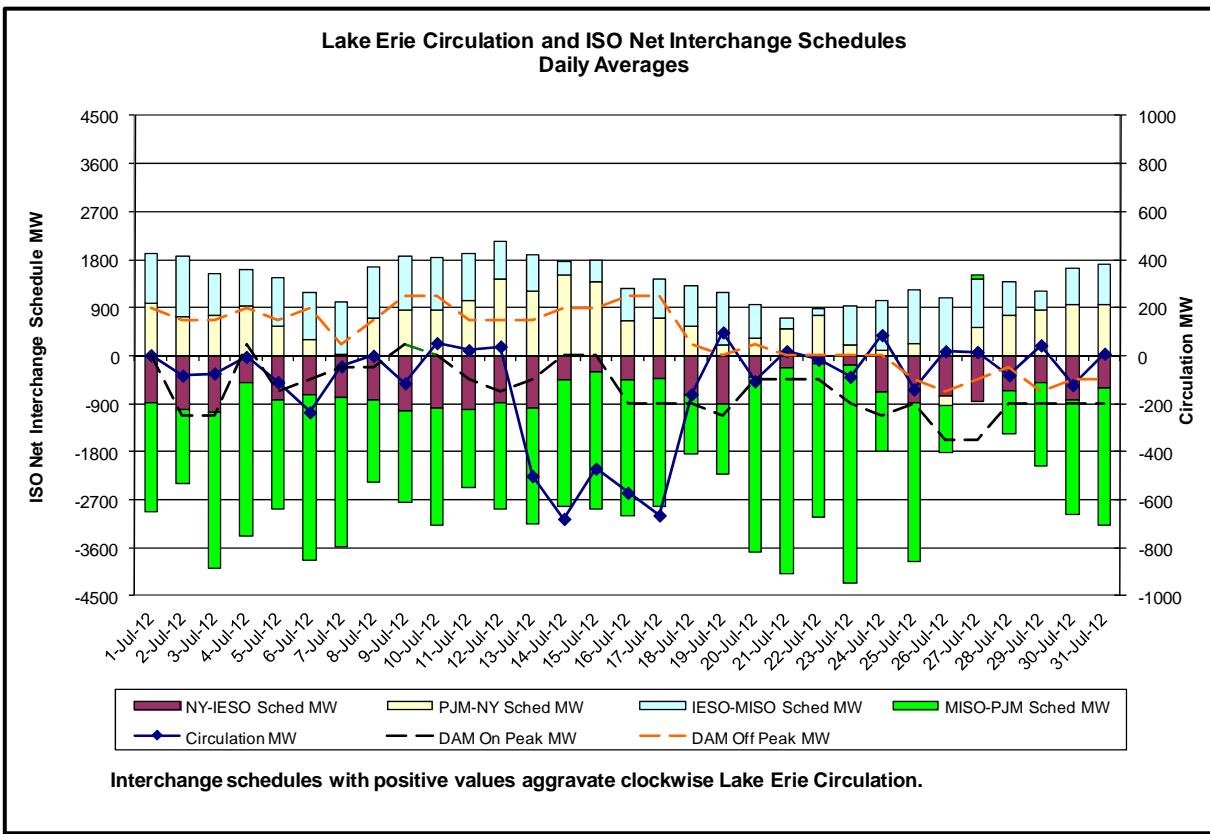
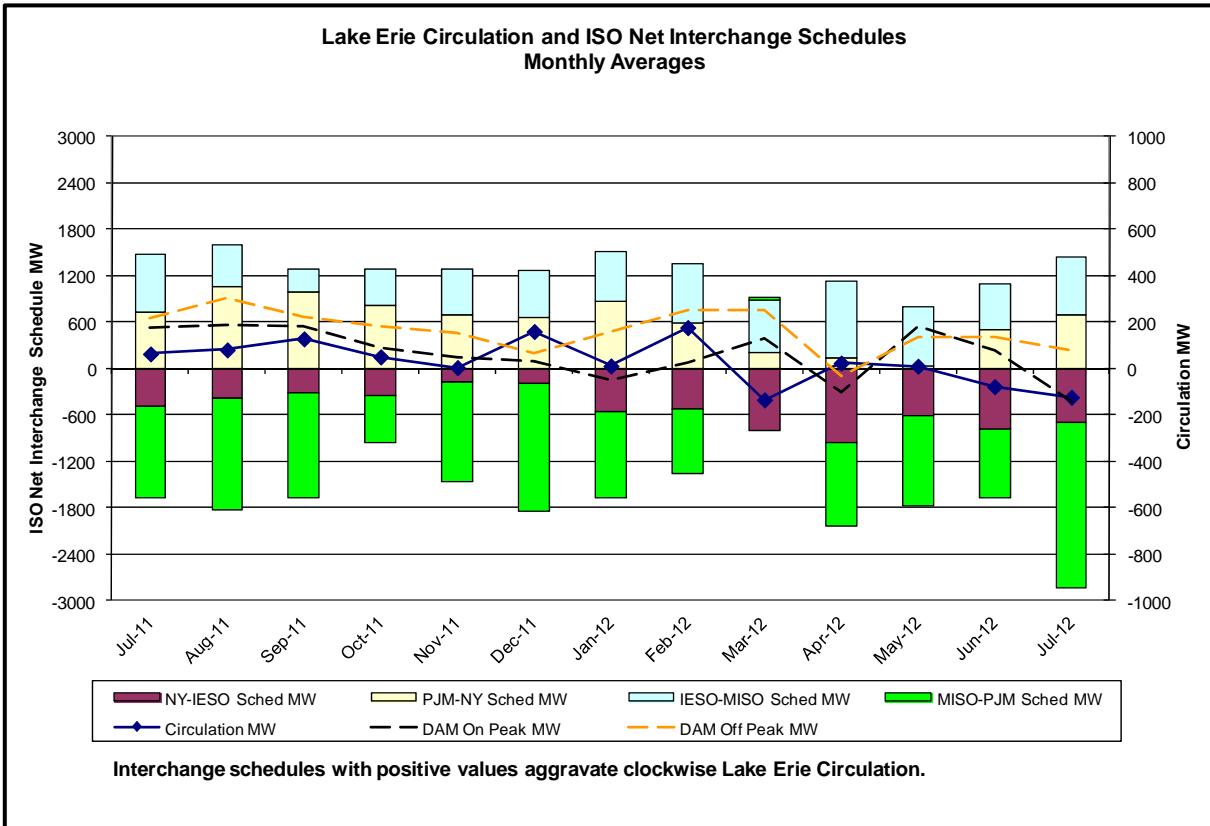


For NYISO initiated Reportable Disturbances, the maximum ACE recovery time is identified. Recovery times of less than 15 minutes are considered NERC compliant.

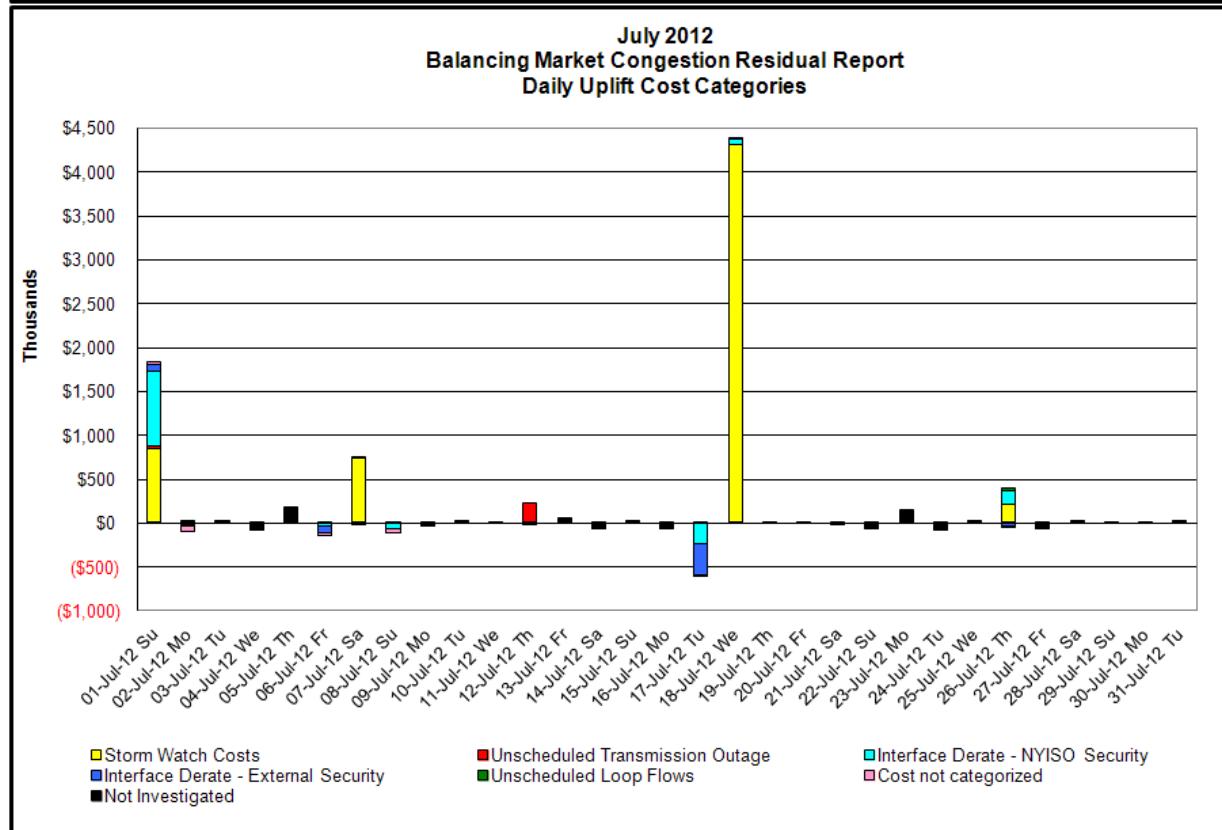
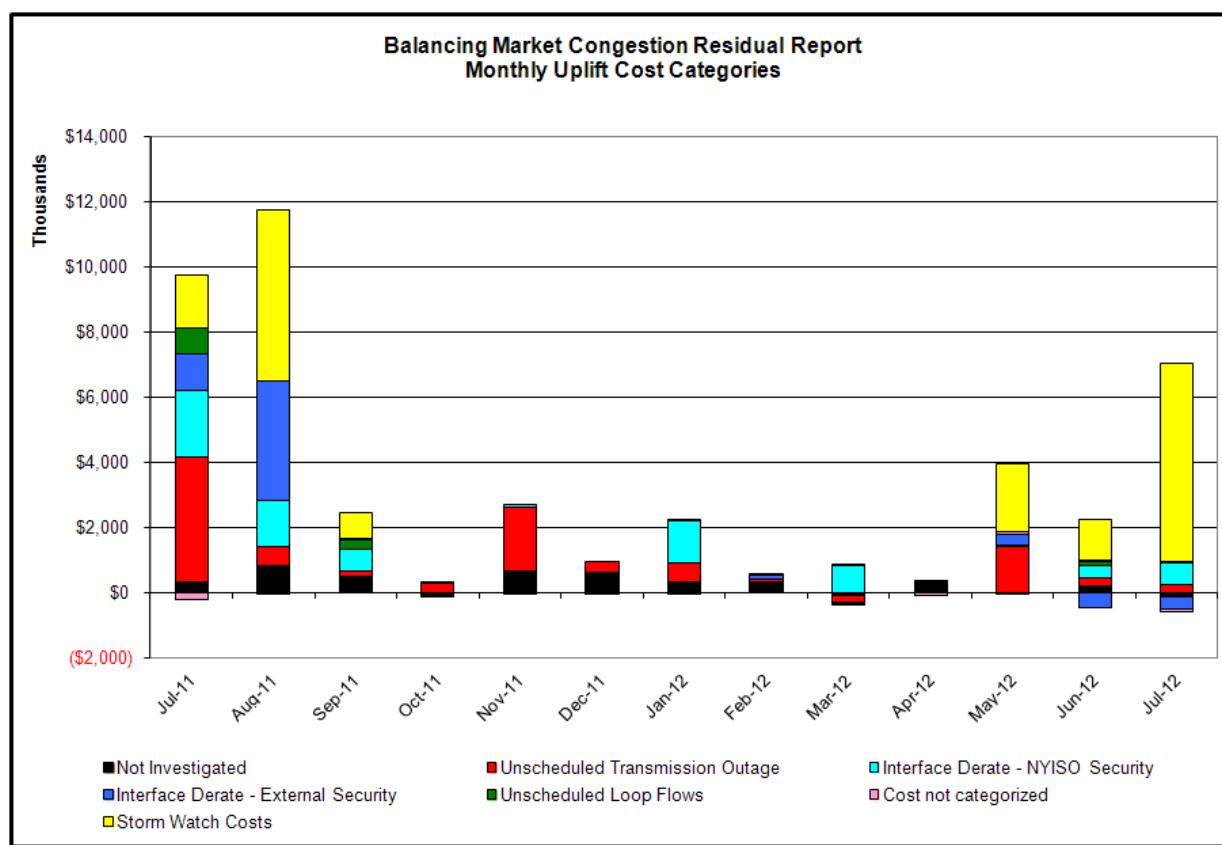








## Market Performance Metrics



Day's investigated in July:1,2,6,7,8,12,17,18,26

Event	Date (yyyymm)	Hours	Description
	7/1/2012	13-18	Thunder Storm Alert
	7/1/2012	10,11,13	Extended outage Pleasant Valley-Long Mountain 345kV (#398)
	7/1/2012	11-13,15-17	Derate Dunwoodie-Shore Road 345kV (#Y50) for I/o SCB:RNS2
	7/1/2012	13,14	Derate Farragut-Hudson Avenue 138kV (#32077)
	7/1/2012	0,11-13,22	Derate Gowanus-Greenwood 138kV (#42232)
	7/1/2012	16	PJM_AC DNI Ramp Limit
	7/1/2012	0	IESO_AC DNI Ramp Limit
	7/2/2012	16-18	Early return to service Pleasant Valley-Long Mountain 345kV (#398)
	7/2/2012	15	Derate Dunwoodie-Shore Road 345kV (#Y50)
	7/2/2012	1	Uprate Freshkills-WillowBrook 138kV (#29212)
	7/2/2012	16,17	Uprate Niagara-Packard 230kV (#62) for I/o TWR:Niagara 61 & 64
	7/2/2012	15,16	PJM_AC DNI Ramp Limit
	7/2/2012	18	IESO_AC DNI Ramp Limit
	7/2/2012	0	HQ_CHAT DNI Ramp Limit
	7/6/2012	19-22	NYCA DNI Ramp Limit
	7/6/2012	11,21	Uprate Freshkills-WillowBrook 138kV (#29212)
	7/6/2012	21	Uprate Gowanus-GoethalsS 345kV (#26)
	7/6/2012	22	Derate Gowanus-Greenwood 138kV (#42232)
	7/6/2012	22	PJM_AC DNI Ramp Limit
	7/6/2012	15	NE_AC-NY Scheduling Limit
	7/6/2012	14,21	IESO_AC DNI Ramp Limit
	7/7/2012	13,14	Thunder Storm Alert [Leeds-Pleasant Valley 345kV]
	7/7/2012	12,16	NYCA DNI Ramp Limit
	7/8/2012	1	Derate Gowanus-Greenwood 138kV (#42232)
	7/8/2012	20-23	Uprate Freshkills-WillowBrook 138kV (#29212)
	7/12/2012	11-18	Forced outage Northport-Pilgrim 138kV (#672)
	7/17/2012	8,11,12,18,20,21	NYCA DNI Ramp Limit
	7/17/2012	8,9,11,20,21	Uprate Freshkills-WillowBrook 138kV (#29212)
	7/17/2012	8	Uprate Gowanus-GoethalsS 345kV (#26)
	7/17/2012	10	Derate Sprainbrook-East Garden City 345kV (#Y49)
	7/17/2012	11-15	IESO_AC DNI Ramp Limit
	7/18/2012	12-19	Thunder Storm Alert
	7/18/2012	0,1	Uprate Freshkills-WillowBrook 138kV (#29212)
	7/18/2012	0	Uprate Gowanus-GoethalsS 345kV (#26)
	7/18/2012	11	Uprate Niagara-Packard 230kV (#62) for I/o TWR:Niagara 61 & 64
	7/18/2012	18,19	Derate Sprainbrook-East Garden City 345kv (#Y49)
	7/26/2012	8-10,17-20	Thunder Storm Alert
	7/26/2012	17	Derate Dunwoodie-Shore Road 345kV (#Y50)
	7/26/2012	20	Derate Dunwoodie-Shore Road 345kV (#Y50) for I/o SCB:RNS2
	7/26/2012	17	Derate Leeds-Pleasant Valley 345kV (#92) for I/o Athens-Pleasant Valley 345kV (#91)
	7/26/2012	15-16	Uprate Scriba-Volney 345kV (#20) for I/o Scriba-Volney 345kV (#21)
	7/26/2012	13,17-22	Derate Sprainbrook-East Garden City 345kv (#Y49)
	7/26/2012	15	IESO_AC DNI Ramp Limit
	7/26/2012	21,22	HQ_CHAT-NY Scheduling Limit
	7/26/2012	17	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Leeds-Pleasant Valley (#92), Dysinger East

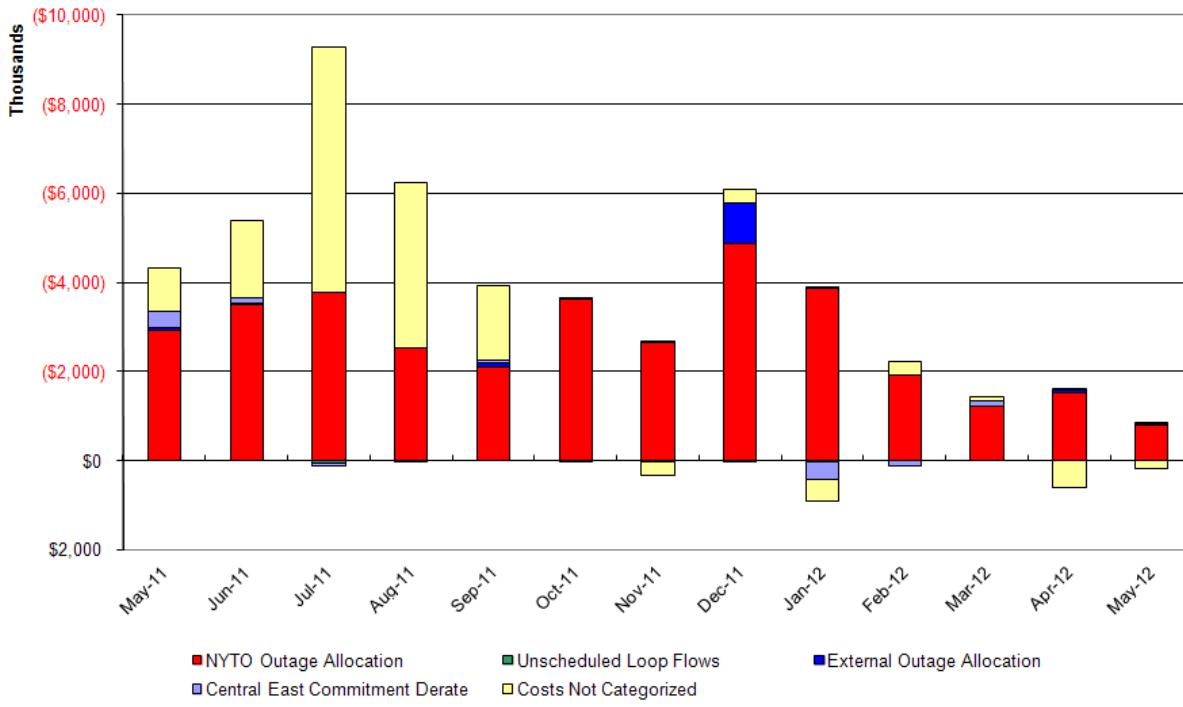
#### Real-Time Balancing Market Congestion Residual (Uplift Cost) Categories

<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

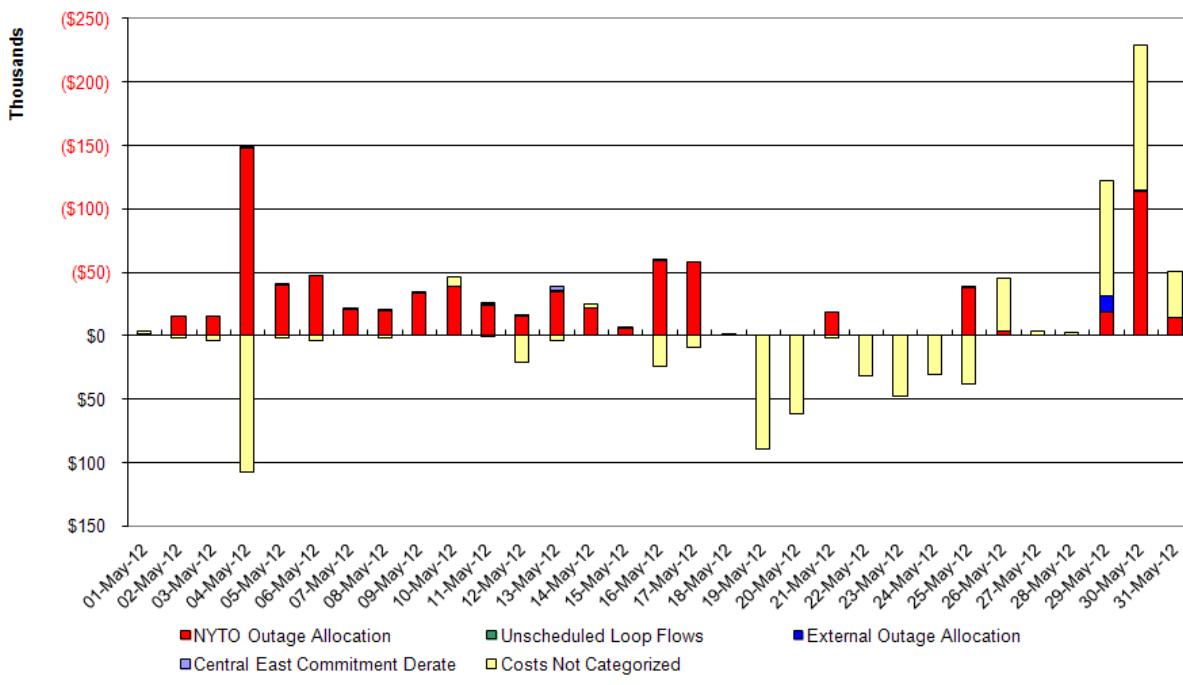
**Monthly Balancing Market Congestion Report Assumptions/Notes**

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.

**DAM Congestion Residual Report**  
**Monthly Cost Categories**



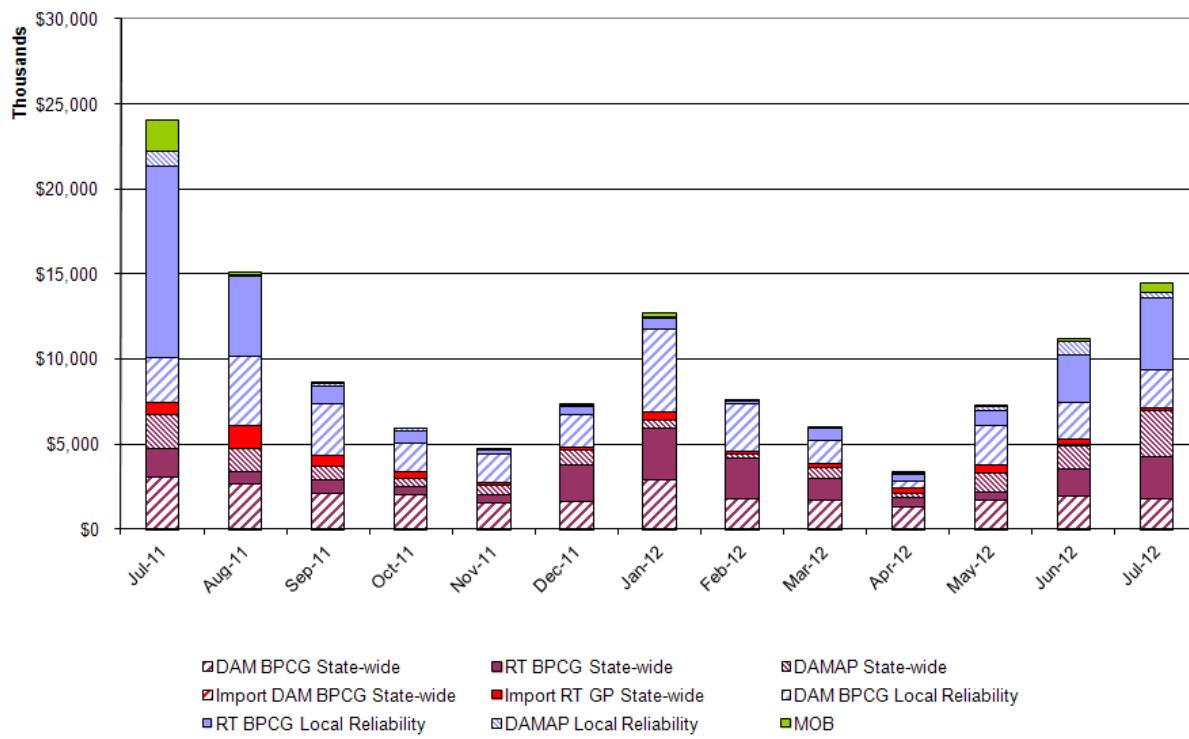
**May 2012**  
**DAM Congestion Residual Report**  
**Daily Cost Categories**



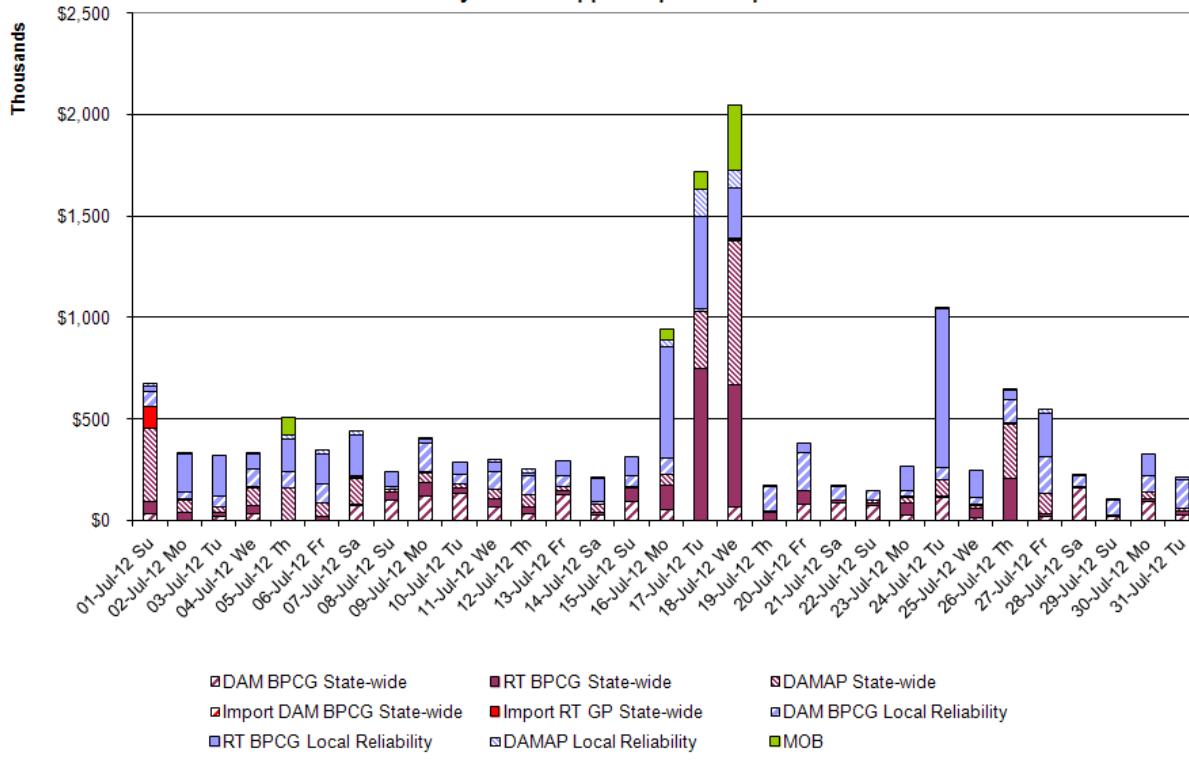
**Day-Ahead Market Congestion Residual Categories**

<u><b>Category</b></u>	<u><b>Cost Assignment</b></u>	<u><b>Events Types</b></u>	<u><b>Event Examples</b></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.	

### Monthly Power Supplier Uplift Components

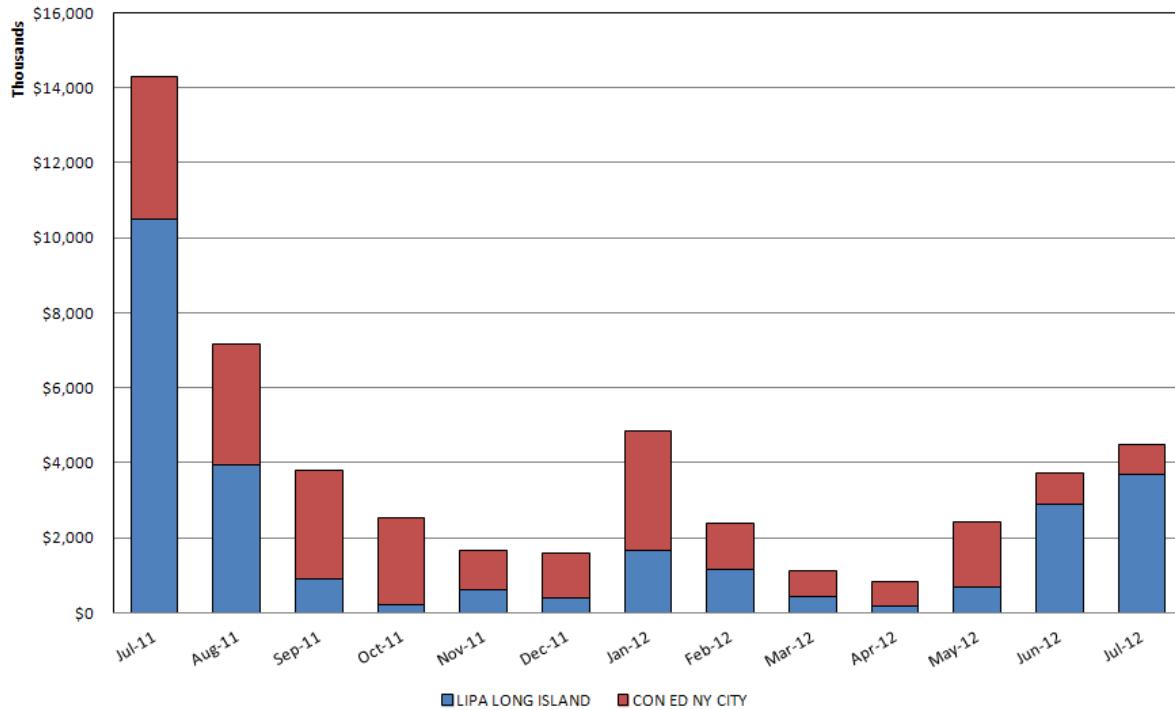


### July 2012 Daily Power Supplier Uplift Components



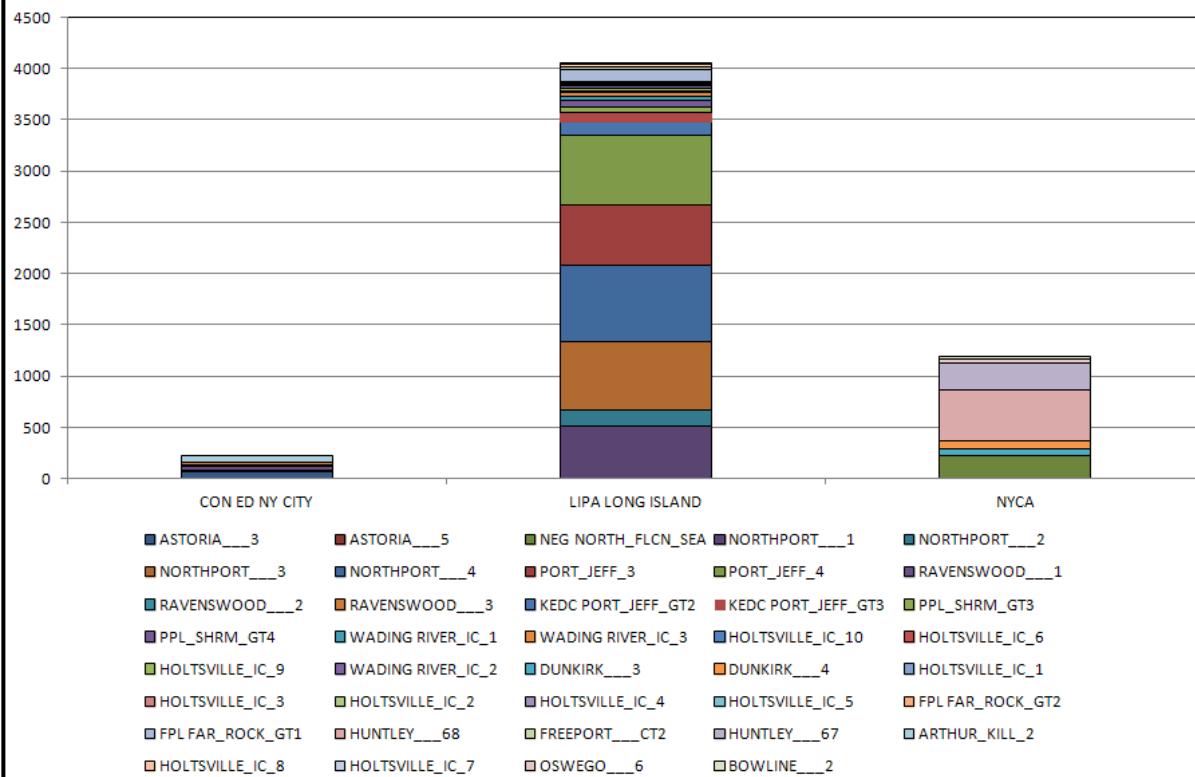
### Local Reliability Cost

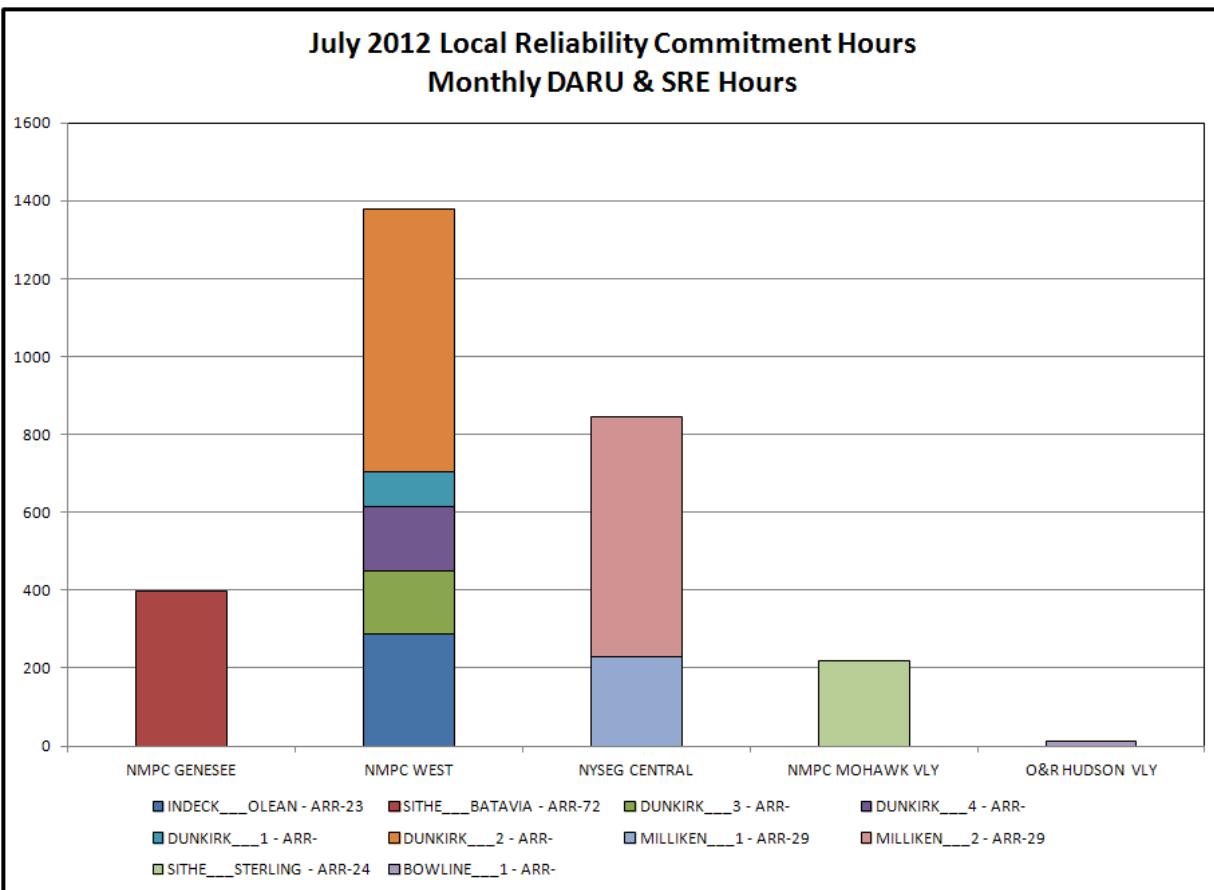
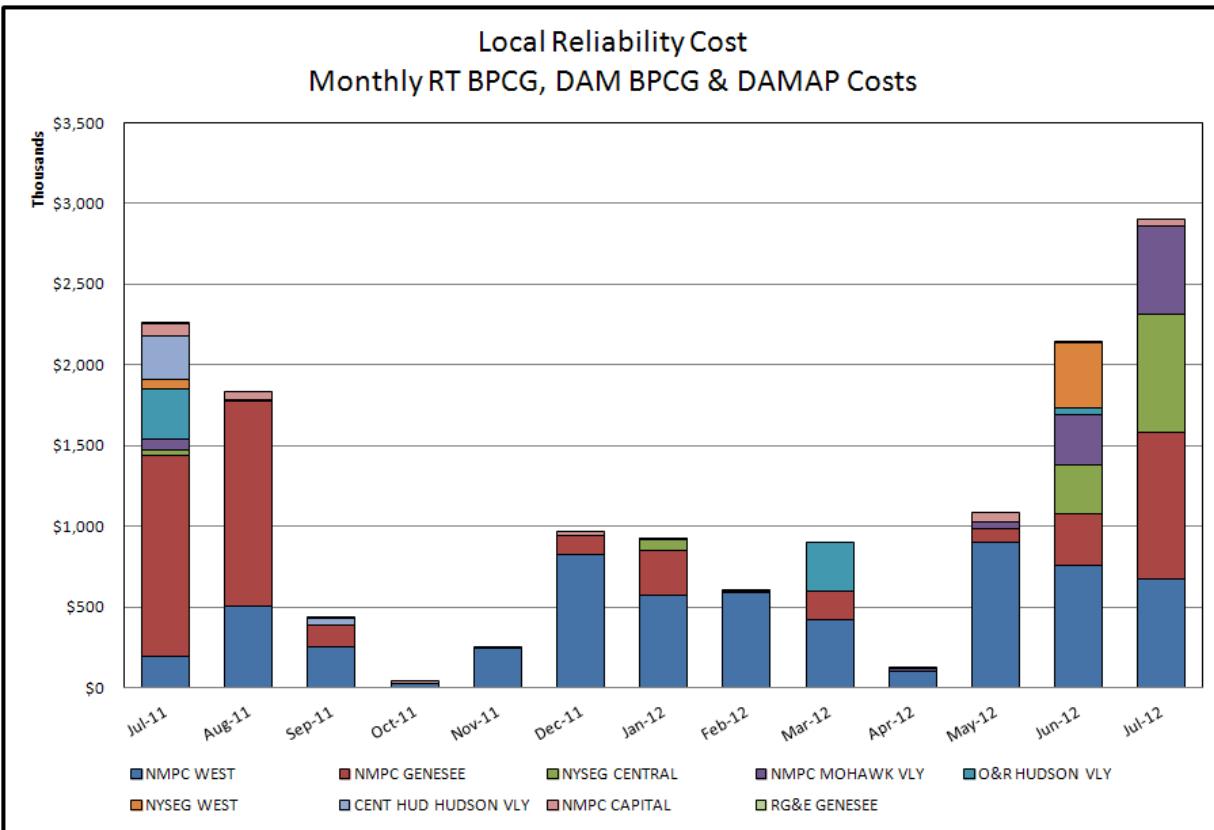
#### Monthly RT BPCG, DAM BPCG, DAMAP & Minimum Oil Burn Costs



### July 2012 Local Reliability Commitment Hours

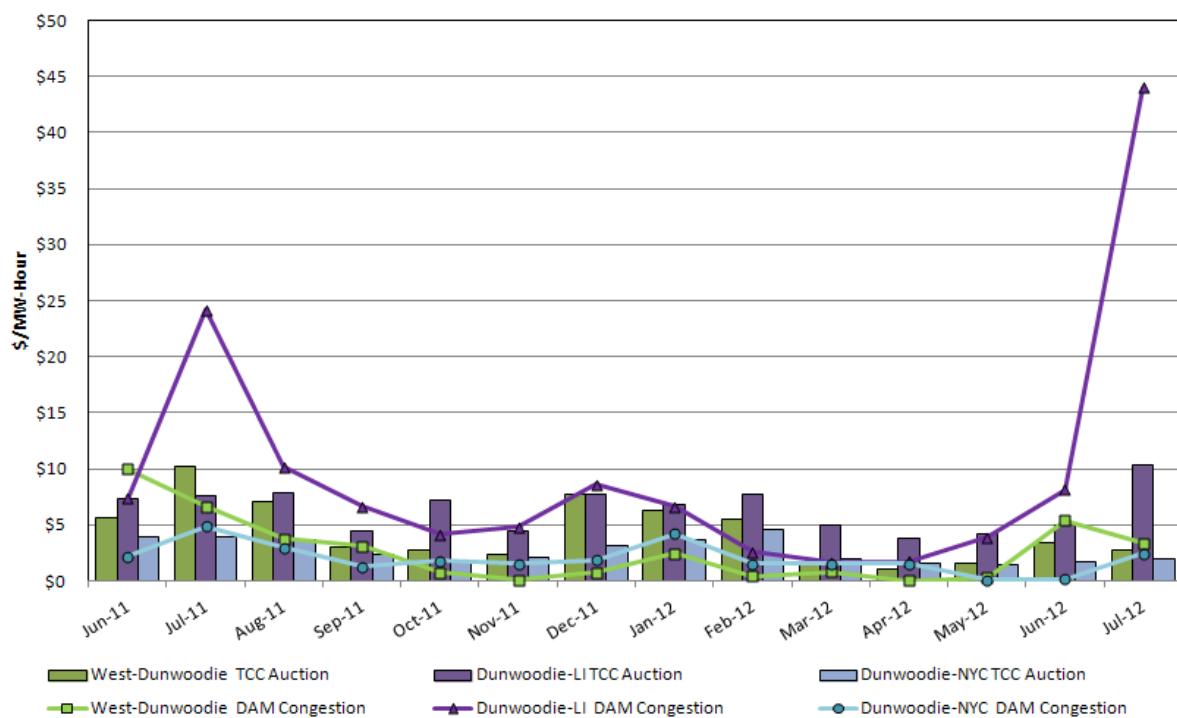
#### Monthly DARU & SRE Hours





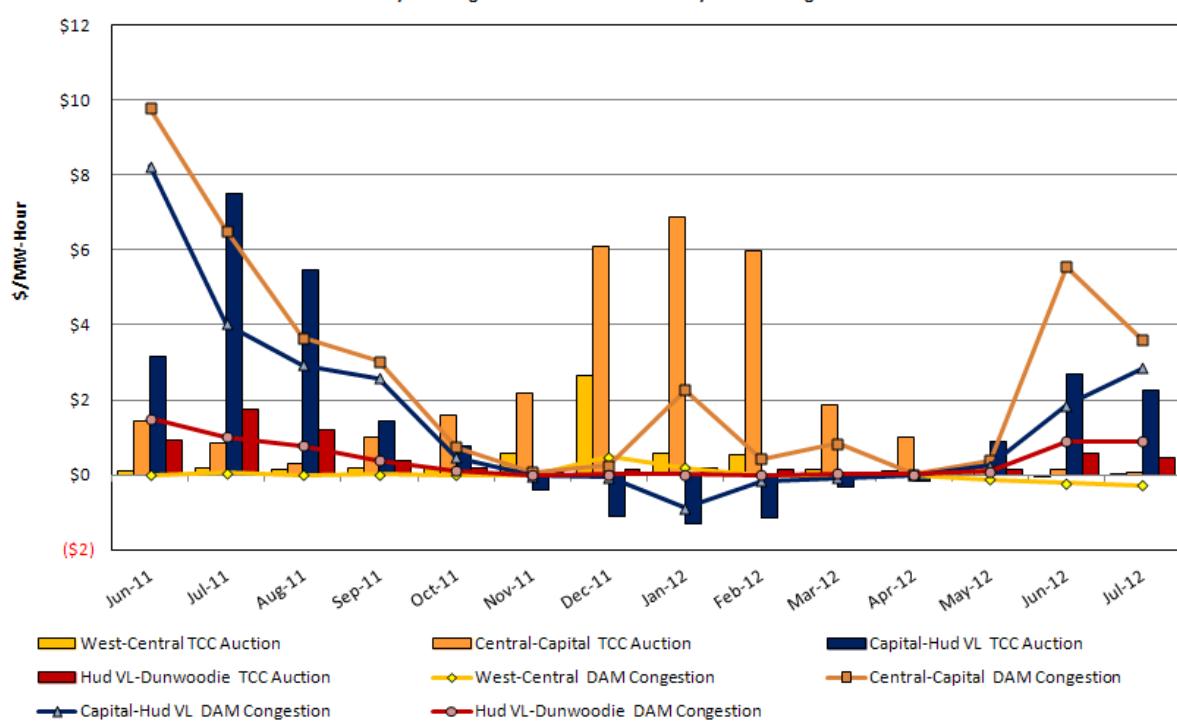
### TCC & Day Ahead Market Selected Internal Path Congestion

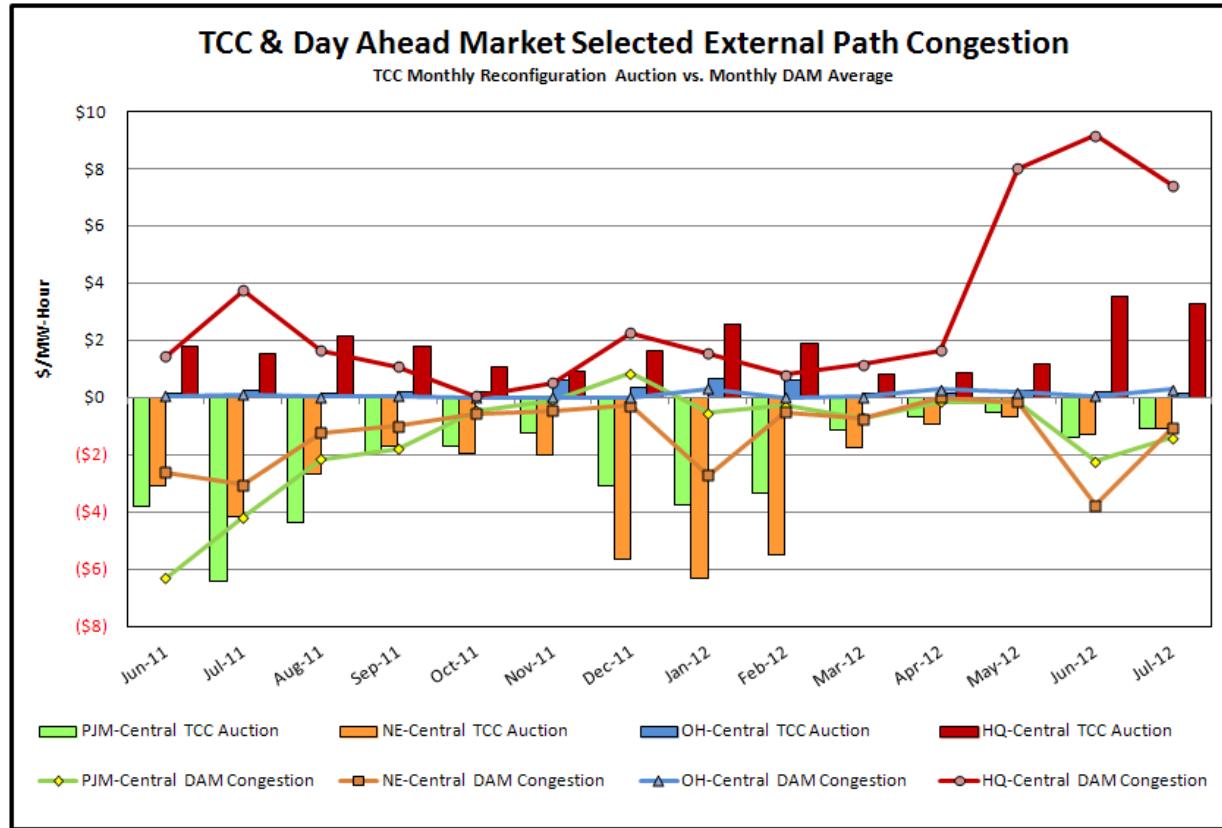
TCC Monthly Reconfiguration Auction vs. Monthly DAM Average

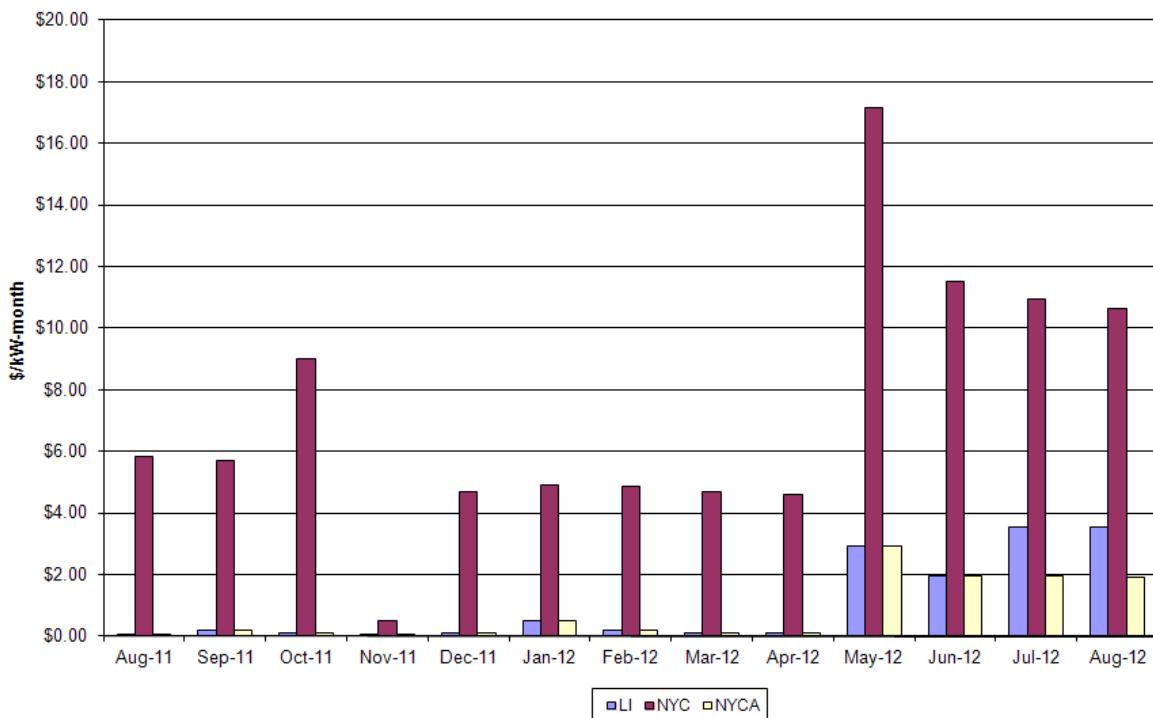
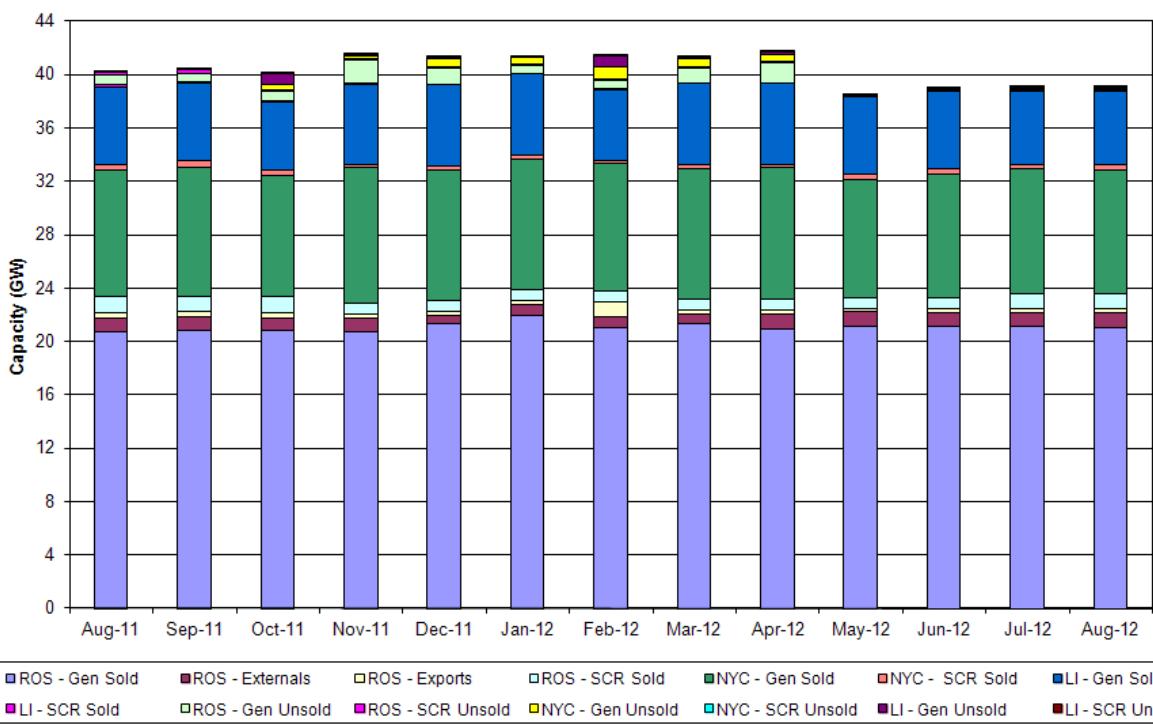


### TCC & Day Ahead Market West to Dunwoodie Path Congestion

TCC Monthly Reconfiguration Auction vs. Monthly DAM Average





**ICAP Spot Market Clearing Price**

**UCAP Sales**


# Market Performance Highlights for July 2012

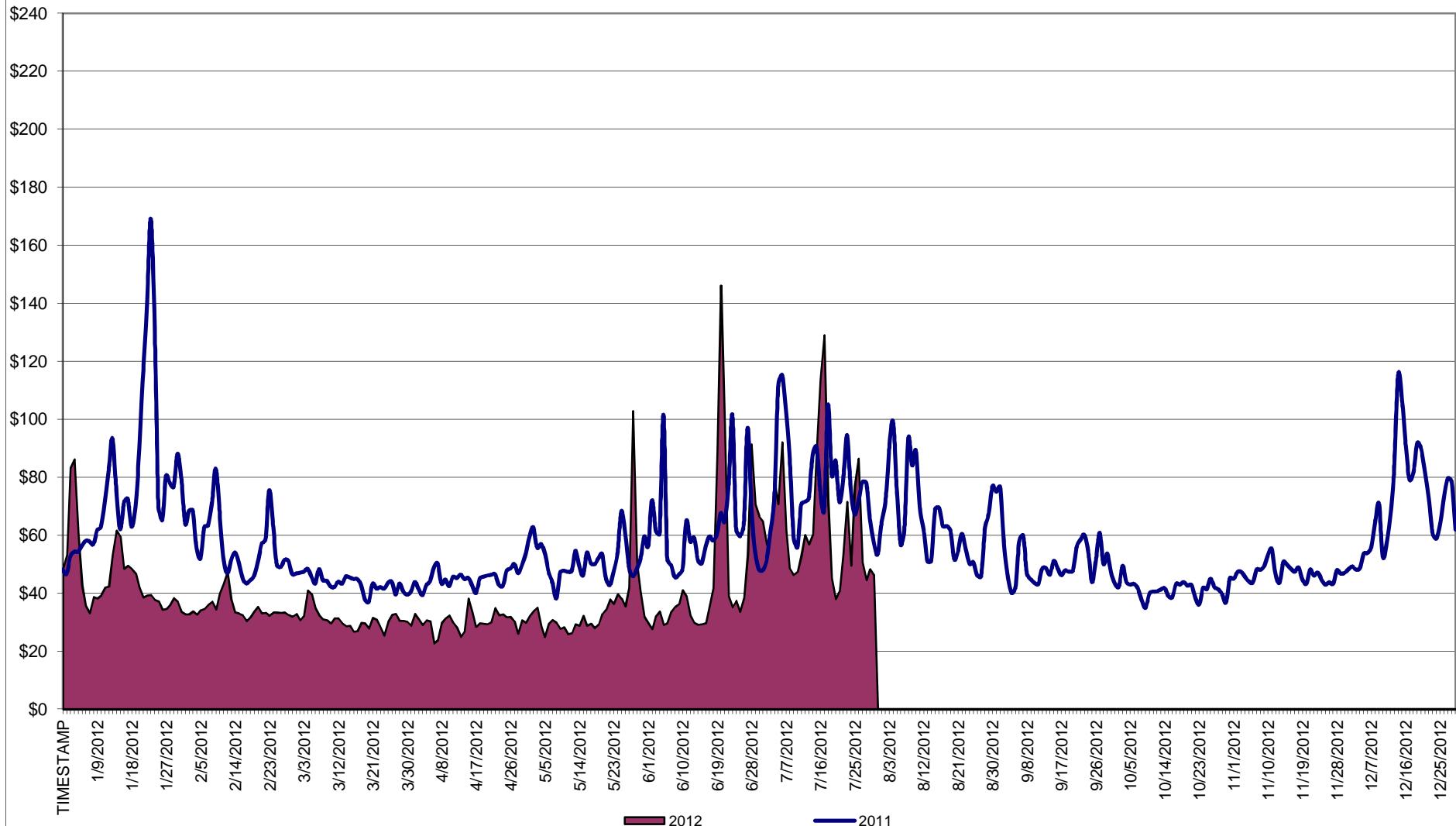
- **LBMP for July is \$63.78/MWh, higher than \$47.35/MWh in June 2012.**
  - Day Ahead and Real Time Load Weighted LBMPs are higher compared to June 2012.
- **Average monthly year-to-date cost of \$44.14/MWh, an increase from the previous month, \$38.79/MWh.**
- **Average daily sendout is 551 GWh/day in July; higher than 471GWh/day in June 2012 and lower than 555 GWh/day in July 2011.**
- **Natural gas and distillate prices are up compared to the previous month.**
  - Natural Gas is \$3.17/MMBtu, up from \$2.66/MMBtu in June.
  - Kerosene is \$22.14/MMBtu, up from \$20.47/MMBtu in June.
  - No. 2 Fuel Oil is \$20.05/MMBtu, up from \$18.67/MMBtu in June.
  - No. 6 Fuel Oil is \$16.91/MMBtu, up from \$15.98/MMBtu in June.
- **Uplift per MWh is lower, while total uplift costs are higher, compared to the previous month.**
  - Uplift (not including NYISO cost of operations) is \$0.08/MWh, lower than \$0.25/MWh in June.
    - The Local Reliability Share is \$0.41/MWh, is higher than \$0.36 in June.
    - The Statewide Share is (\$0.33)/MWh, lower than (\$0.11)/MWh in June.
  - TSA \$ per NYC MWh is \$0.85/MWh.
  - Total uplift costs(Schedule 1 components including NYISO Cost of Operations) are higher than June.

## Daily NYISO Average Cost/MWh (Energy & Ancillary Services)\*

2011 Annual Average \$56.47/MWh

July 2011YTD Average \$62.77/MWh

July 2012YTD Average \$44.14/MWh



\* Excludes ICAP payments.

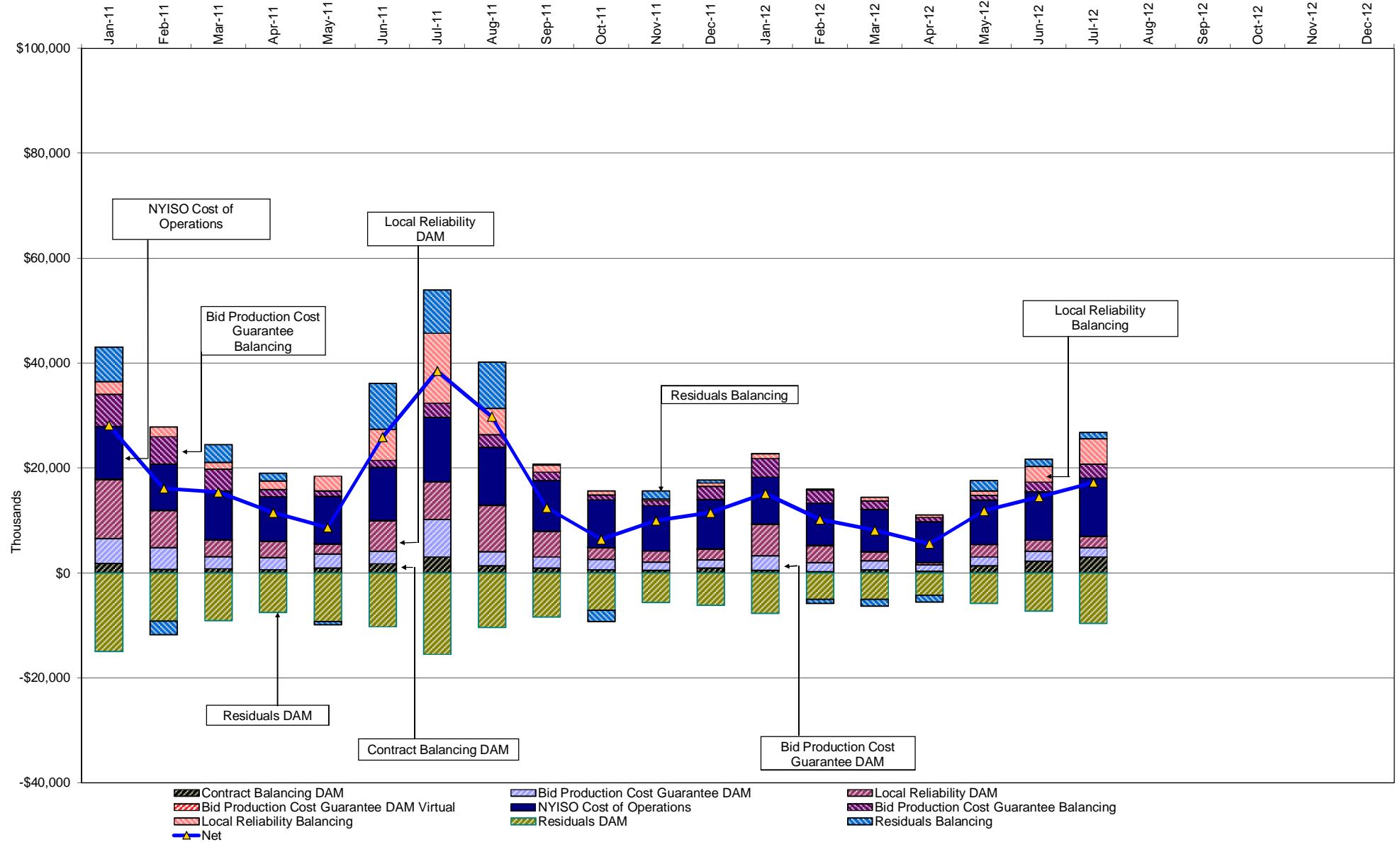
**NYISO Average Cost/MWh (Energy and Ancillary Services)\***  
**from the LBMP Customer point of view**

2012		January	February	March	April	May	June	July	August	September	October	November	December
		LBMP	32.45	28.98	28.30	34.66	47.35	63.78					
	NTAC	0.85	0.80	0.68	0.71	0.72	0.77	0.58					
	Reserve	0.35	0.25	0.38	0.32	0.13	0.36	0.36					
	Regulation	0.10	0.08	0.13	0.12	0.09	0.15	0.15					
	NYISO Cost of Operations	0.64	0.64	0.64	0.64	0.64	0.64	0.64					
	Uplift	0.44	0.17	0.00	(0.18)	(0.26)	0.25	0.08					
	Uplift: Local Reliability Share	0.49	0.27	0.19	0.07	0.24	0.36	0.41					
	Uplift: Statewide Share	(0.04)	(0.10)	(0.19)	(0.26)	(0.50)	(0.11)	(0.33)					
	Voltage Support and Black Start	0.37	0.37	0.37	0.37	0.37	0.37	0.37					
	<b>Avg Monthly Cost</b>	46.75	34.75	31.19	30.28	36.35	49.89	65.97					
	Avg YTD Cost	46.75	41.12	37.96	36.09	36.14	38.79	44.14					
	TSA \$ per NYC MWh	0.00	0.00	0.00	0.00	1.52	0.45	0.85					
2011		January	February	March	April	May	June	July	August	September	October	November	December
	LBMP	74.91	55.60	46.98	46.44	48.49	60.33	75.76	56.04	46.86	42.49	38.97	39.73
	NTAC	0.62	0.75	0.86	0.81	1.13	1.22	0.66	0.60	0.43	0.56	0.62	0.69
	Reserve	0.44	0.50	0.41	0.43	0.48	0.28	0.28	0.13	0.25	0.41	0.26	0.28
	Regulation	0.20	0.18	0.15	0.12	0.10	0.15	0.12	0.09	0.08	0.09	0.08	0.09
	NYISO Cost of Operations	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
	Uplift	1.26	0.58	0.45	0.21	(0.02)	0.61	1.42	0.65	0.15	(0.21)	0.11	0.15
	Uplift: Local Reliability Share	0.95	0.71	0.33	0.38	0.36	0.82	1.19	0.87	0.45	0.23	0.19	0.19
	Uplift: Statewide Share	0.31	(0.12)	0.12	(0.18)	(0.38)	(0.21)	0.24	(0.21)	(0.30)	(0.44)	(0.08)	(0.05)
	Voltage Support and Black Start	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
	<b>Avg Monthly Cost</b>	78.50	58.69	49.92	49.07	51.24	63.67	79.30	58.58	48.83	44.40	41.11	42.00
	Avg YTD Cost	78.50	68.82	62.36	59.14	57.52	58.70	62.77	62.13	60.66	59.18	57.76	56.47
	TSA \$ per NYC MWh	0.00	0.00	0.00	0.13	0.00	1.45	0.38	1.59	0.15	0.00	0.00	0.00

\* Excludes ICAP payments.

Data reflects true-ups thru July 2012.

## NYISO Dollar Flows - Uplift- OATT Schedule 1 components - Data through July 31, 2012



### NYISO Markets Transactions

2012		January	February	March	April	May	June	July	August	September	October	November	December
		14,877,279	13,473,786	13,590,456	12,482,692	13,324,441	14,898,725	17,946,019					
<b>Day Ahead Market MWh</b>													
DAM LSE Internal LBMP Energy Sales		58%	57%	58%	59%	61%	63%	65%					
DAM External TC LBMP Energy Sales		1%	1%	0%	1%	1%	1%	1%					
DAM Bilateral - Internal Bilaterals		38%	40%	40%	38%	36%	35%	32%					
DAM Bilateral - Import/Non-LBMP Market Bilaterals		0%	0%	0%	0%	0%	0%	0%					
DAM Bilateral - Export/Non-LBMP Market Bilaterals		1%	2%	2%	2%	1%	1%	1%					
DAM Bilateral - Wheel Through Bilaterals		1%	0%	1%	1%	1%	1%	1%					
<b>Balancing Energy Market MWh</b>		-878,106	-816,828	-896,684	-374,825	-31,291	-534,794	-575,091					
Balancing Energy LSE Internal LBMP Energy Sales		-110%	-111%	-110%	-126%	-563%	-129%	-126%					
Balancing Energy External TC LBMP Energy Sales		9%	7%	7%	19%	348%	22%	19%					
Balancing Energy Bilateral - Internal Bilaterals		1%	1%	1%	4%	107%	8%	6%					
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals		0%	0%	0%	0%	0%	0%	0%					
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals		4%	3%	3%	6%	54%	3%	2%					
Balancing Energy Bilateral - Wheel Through Bilaterals		-3%	0%	-1%	-4%	-47%	-5%	0%					
<b>Transactions Summary</b>													
LBMP		57%	56%	55%	59%	61%	62%	65%					
Internal Bilaterals		41%	42%	43%	39%	36%	36%	33%					
Import Bilaterals		0%	0%	0%	0%	0%	0%	0%					
Export Bilaterals		2%	2%	2%	2%	2%	1%	1%					
Wheels Through		1%	0%	1%	1%	1%	1%	1%					
<b>Market Share of Total Load</b>													
Day Ahead Market		106.3%	106.5%	107.1%	103.1%	100.2%	103.7%	103.3%					
Balancing Energy +		-6.3%	-6.5%	-7.1%	-3.1%	-0.2%	-3.7%	-3.3%					
Total MWH		13,999,173	12,656,958	12,693,772	12,107,867	13,293,151	14,363,931	17,370,928					
Average Daily Energy Sendout/Month GWh		443	431	407	396	420	471	551					
<b>2011</b>		January	February	March	April	May	June	July	August	September	October	November	December
<b>Day Ahead Market MWh</b>		14,146,283	12,514,435	13,164,026	12,191,562	12,809,240	14,520,490	17,296,367	15,872,137	14,052,940	13,263,167	12,710,654	14,300,553
DAM LSE Internal LBMP Energy Sales		49%	54%	53%	55%	55%	57%	60%	62%	59%	54%	55%	59%
DAM External TC LBMP Energy Sales		1%	1%	2%	2%	1%	1%	2%	1%	1%	4%	2%	1%
DAM Bilateral - Internal Bilaterals		42%	43%	43%	41%	41%	39%	36%	35%	39%	41%	41%	37%
DAM Bilateral - Import/Non-LBMP Market Bilaterals		5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
DAM Bilateral - Export/Non-LBMP Market Bilaterals		1%	1%	2%	2%	2%	1%	1%	1%	1%	2%	2%	1%
DAM Bilateral - Wheel Through Bilaterals		1%	1%	1%	0%	1%	1%	1%	1%	1%	0%	0%	1%
<b>Balancing Energy Market MWh</b>		311,996	210,141	250,339	35,941	192,443	44,238	221,519	-31,911	-203,622	-205,237	-284,573	-689,219
Balancing Energy LSE Internal LBMP Energy Sales		28%	24%	39%	-226%	40%	-141%	29%	-371%	-147%	-181%	-129%	-115%
Balancing Energy External TC LBMP Energy Sales		48%	50%	50%	197%	39%	271%	77%	327%	53%	59%	21%	13%
Balancing Energy Bilateral - Internal Bilaterals		15%	7%	8%	47%	14%	37%	0%	-1%	5%	11%	0%	0%
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals		6%	14%	13%	83%	10%	32%	6%	39%	8%	10%	9%	4%
Balancing Energy Bilateral - Wheel Through Bilaterals		3%	5%	-10%	-1%	-2%	-100%	-12%	-94%	-18%	1%	-2%	-2%
<b>Transactions Summary</b>													
LBMP		51%	55%	55%	57%	57%	59%	63%	63%	59%	56%	56%	58%
Internal Bilaterals		42%	42%	42%	41%	41%	39%	36%	36%	39%	42%	42%	39%
Import Bilaterals		5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Export Bilaterals		2%	2%	2%	2%	2%	1%	1%	1%	1%	2%	2%	2%
Wheels Through		1%	1%	1%	0%	1%	1%	1%	1%	0%	0%	0%	1%
<b>Market Share of Total Load</b>													
Day Ahead Market		97.8%	98.3%	98.1%	99.7%	98.5%	99.7%	98.7%	100.2%	101.5%	101.6%	102.3%	105.1%
Balancing Energy +		2.2%	1.7%	1.9%	0.3%	1.5%	0.3%	1.3%	-0.2%	-1.5%	-1.6%	-2.3%	-5.1%
Total MWH		14,458,279	12,724,575	13,414,365	12,227,503	13,001,683	14,564,728	17,517,885	15,840,226	13,849,318	13,057,930	12,426,081	13,611,334
Average Daily Energy Sendout/Month GWh		457	447	422	398	411	479	555	505	456	403	408	430

\* 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 2012 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 *	\$40.91	\$31.15	\$27.44	\$26.88	\$29.79	\$38.71	\$53.95					
Standard Deviation	\$15.62	\$6.23	\$7.00	\$7.04	\$10.22	\$31.58	\$32.19					
Load Weighted Price **	\$42.20	\$31.73	\$28.25	\$27.72	\$31.33	\$43.17	\$58.33					
<b><u>RTC LBMP</u></b>												
Price *	\$37.93	\$30.31	\$28.15	\$27.19	\$34.27	\$34.58	\$51.05					
Standard Deviation	\$23.43	\$7.26	\$22.87	\$15.67	\$46.03	\$57.26	\$60.86					
Load Weighted Price **	\$39.19	\$30.75	\$28.93	\$27.97	\$37.49	\$38.48	\$55.17					
<b><u>REAL TIME LBMP</u></b>												
Price *	\$37.35	\$30.54	\$28.47	\$27.00	\$35.22	\$34.29	\$50.68					
Standard Deviation	\$23.75	\$9.77	\$20.94	\$15.14	\$56.38	\$55.53	\$51.60					
Load Weighted Price **	\$38.88	\$31.14	\$29.44	\$27.89	\$40.06	\$39.34	\$55.54					
Average Daily Energy Sendout/Month GWh	443	431	407	396	420	471	551					

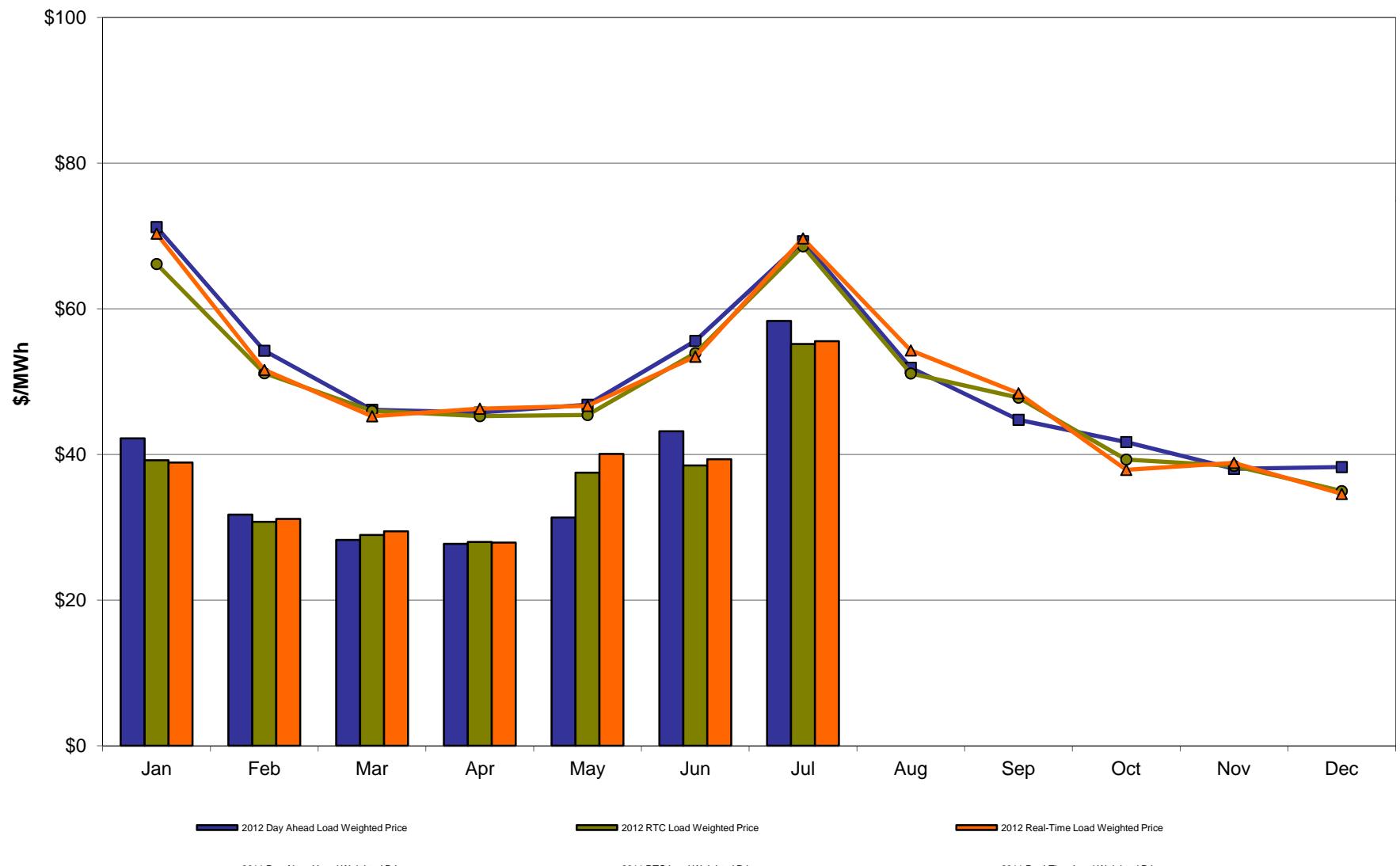
### NYISO Markets 2011 Energy Statistics

	<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	\$52.26	\$64.60	\$49.59	\$43.28	\$40.38	\$37.12	\$37.31
Standard Deviation	\$30.78	\$14.77	\$9.06	\$8.22	\$11.77	\$26.24	\$34.99	\$16.62	\$10.26	\$9.30	\$7.64	\$9.13
Load Weighted Price **	\$71.22	\$54.24	\$46.13	\$45.77	\$46.83	\$55.58	\$69.28	\$51.90	\$44.76	\$41.70	\$38.02	\$38.27
<b><u>RTC LBMP</u></b>												
Price *	\$64.48	\$50.15	\$45.13	\$44.32	\$43.69	\$50.47	\$63.42	\$48.47	\$46.02	\$38.44	\$37.43	\$34.00
Standard Deviation	\$39.41	\$18.83	\$18.96	\$15.44	\$25.19	\$46.41	\$82.29	\$59.95	\$25.18	\$15.45	\$17.55	\$15.60
Load Weighted Price **	\$66.15	\$51.15	\$45.98	\$45.25	\$45.41	\$53.91	\$68.58	\$51.12	\$47.80	\$39.30	\$38.43	\$34.97
<b><u>REAL TIME LBMP</u></b>												
Price *	\$67.92	\$50.26	\$44.22	\$45.20	\$44.26	\$48.68	\$62.96	\$49.39	\$45.92	\$36.91	\$37.67	\$33.50
Standard Deviation	\$58.47	\$22.39	\$17.41	\$19.98	\$26.27	\$44.88	\$64.83	\$62.04	\$26.88	\$13.65	\$19.42	\$14.12
Load Weighted Price **	\$70.32	\$51.61	\$45.24	\$46.28	\$46.66	\$53.42	\$69.66	\$54.28	\$48.40	\$37.88	\$38.84	\$34.57
Average Daily Energy Sendout/Month GWh	457	447	422	398	411	479	555	505	456	402	408	430

\* Average zonal load weighted prices.

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

## NYISO Monthly Average Internal LBMPs 2011- 2012

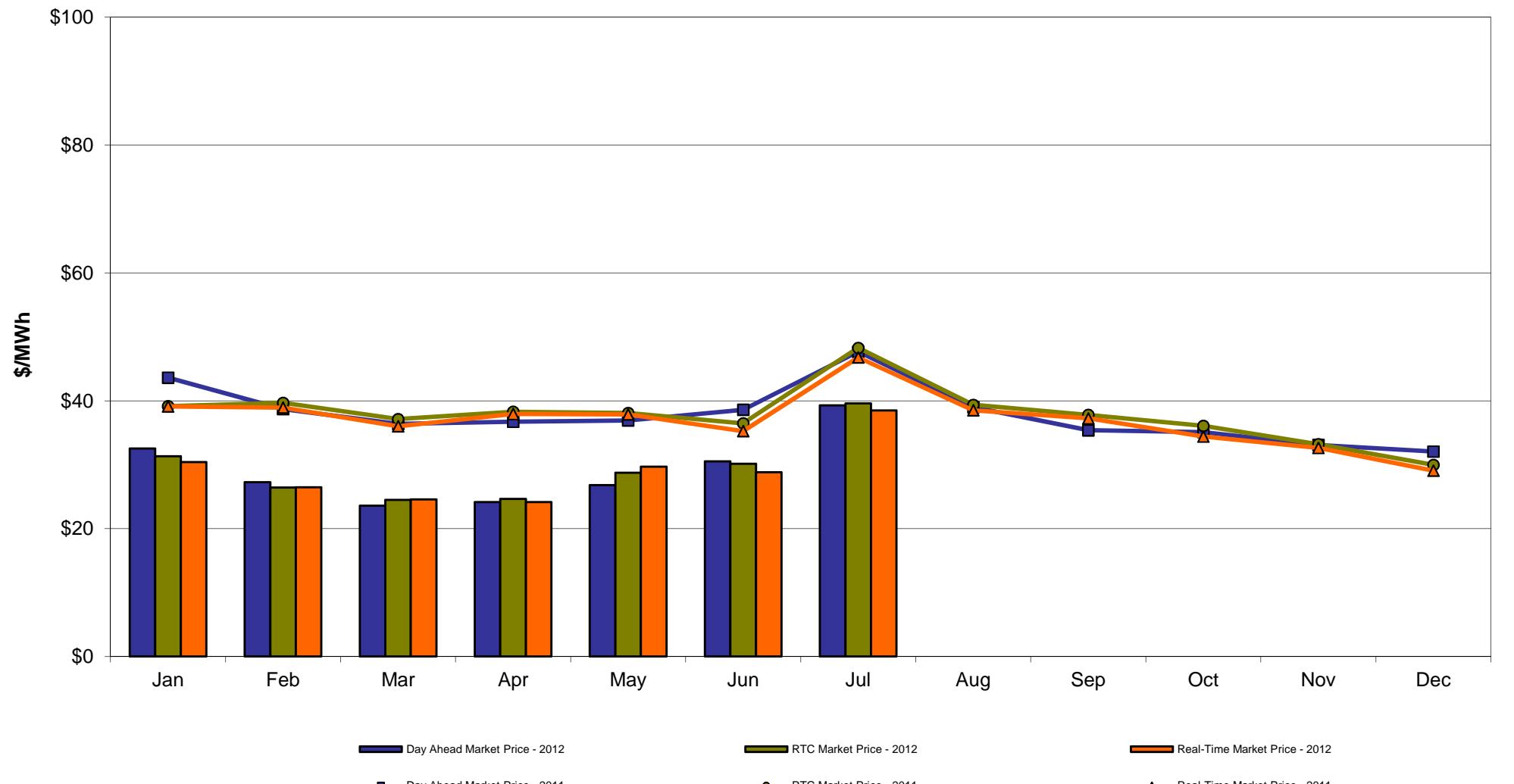


**July 2012 Zonal LBMP Statistics for NYISO (\$/MWh)**

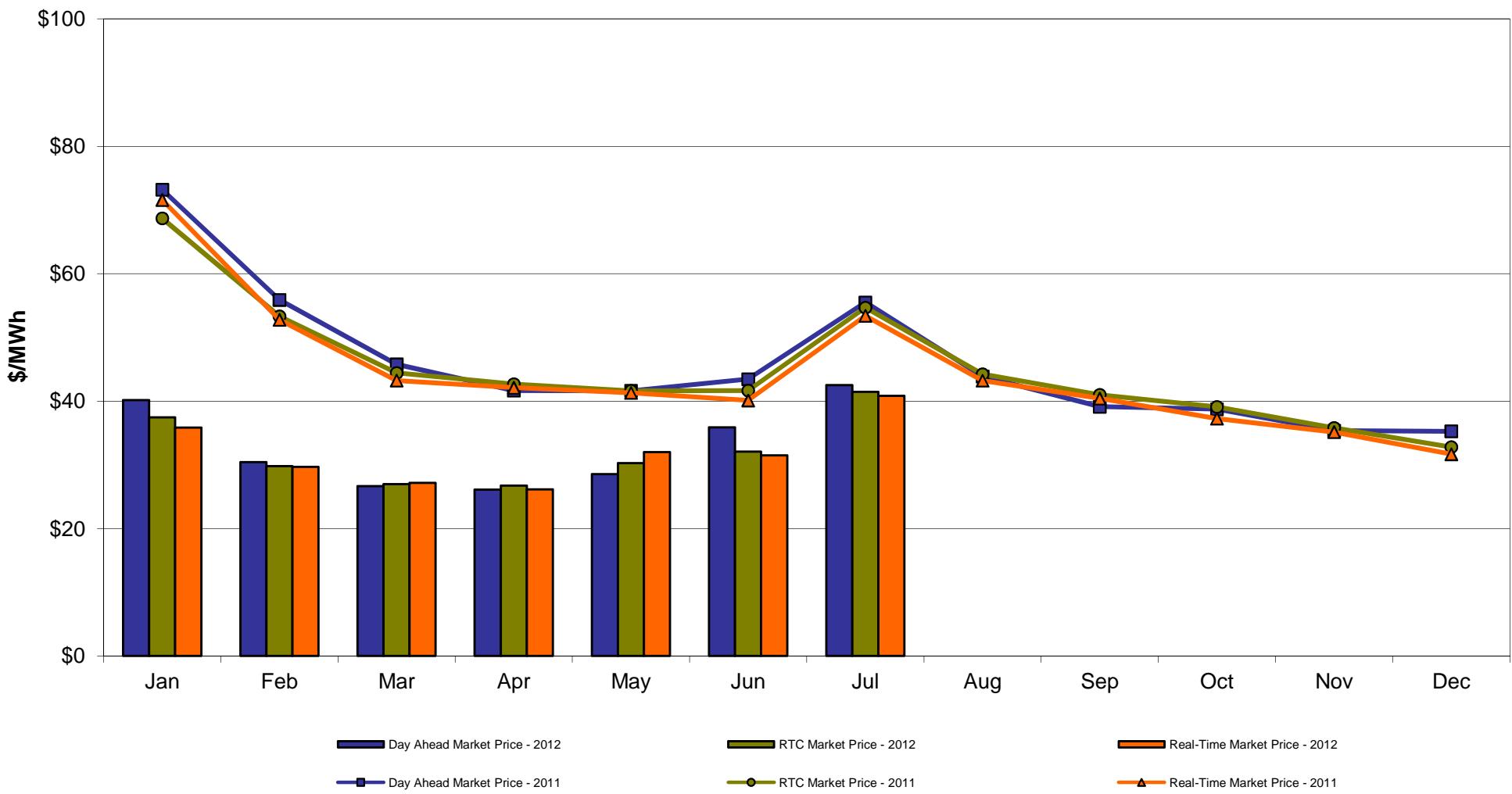
	WEST <u>Zone A</u>	GENESEE <u>Zone B</u>	NORTH <u>Zone D</u>	CENTRAL <u>Zone C</u>	MOHAWK VALLEY <u>Zone E</u>	CAPITAL <u>Zone F</u>	HUDSON VALLEY <u>Zone G</u>	MILLWOOD <u>Zone H</u>	DUNWOODIE <u>Zone I</u>	NEW YORK CITY <u>Zone J</u>	LONG ISLAND <u>Zone K</u>
<b><u>DAY AHEAD LBMP</u></b>											
Unweighted Price *	39.28	40.08	38.83	40.73	42.09	42.53	47.30	48.07	48.14	50.80	93.39
Standard Deviation	15.82	16.24	15.03	16.46	17.11	17.17	26.07	29.34	29.62	29.19	86.20
<b><u>RTC LBMP</u></b>											
Unweighted Price *	39.59	39.17	37.58	39.73	41.08	41.46	47.76	48.75	48.97	50.00	79.63
Standard Deviation	36.36	29.53	27.54	30.45	31.85	32.57	67.04	76.19	79.74	79.41	98.38
<b><u>REAL TIME LBMP</u></b>											
Unweighted Price *	38.47	38.27	36.69	38.82	40.14	40.82	47.03	47.67	47.72	49.26	82.48
Standard Deviation	29.06	24.80	23.07	25.60	26.74	29.20	60.06	66.33	67.00	67.07	97.13
	ONTARIO IESO	HYDRO QUEBEC (Wheel)	HYDRO QUEBEC (Import/Export)	PJM	NEW ENGLAND	CROSS SOUND CABLE	NORTHPORT- NORWALK	NEPTUNE	LINDEN VFT	Dennison	
	<u>Zone O</u>	<u>Zone M</u>	<u>Zone M</u>	<u>Zone P</u>	<u>Zone N</u>	<u>Controllable</u> Line	<u>Controllable</u> Line	<u>Controllable</u> Line	<u>Controllable</u> Line	<u>Controllable</u> Line	<u>Controllable</u> Line
<b><u>DAY AHEAD LBMP</u></b>											
Unweighted Price *	37.99	32.83	31.99	42.25	43.94	92.20	58.93	92.08	41.21	38.45	
Standard Deviation	14.60	10.47	10.47	19.42	20.24	86.05	34.90	86.26	11.38	14.83	
<b><u>RTC LBMP</u></b>											
Unweighted Price *	35.12	32.53	32.23	40.20	41.45	75.56	68.40	75.78	43.42	35.42	
Standard Deviation	20.23	12.42	12.54	33.31	33.83	91.94	62.34	92.15	51.84	19.86	
<b><u>REAL TIME LBMP</u></b>											
Unweighted Price *	36.85	33.55	33.11	42.62	42.79	81.06	65.38	81.34	46.94	36.00	
Standard Deviation	21.16	17.64	17.00	39.86	33.84	97.24	62.30	97.52	61.83	22.54	

\* Straight LBMP averages

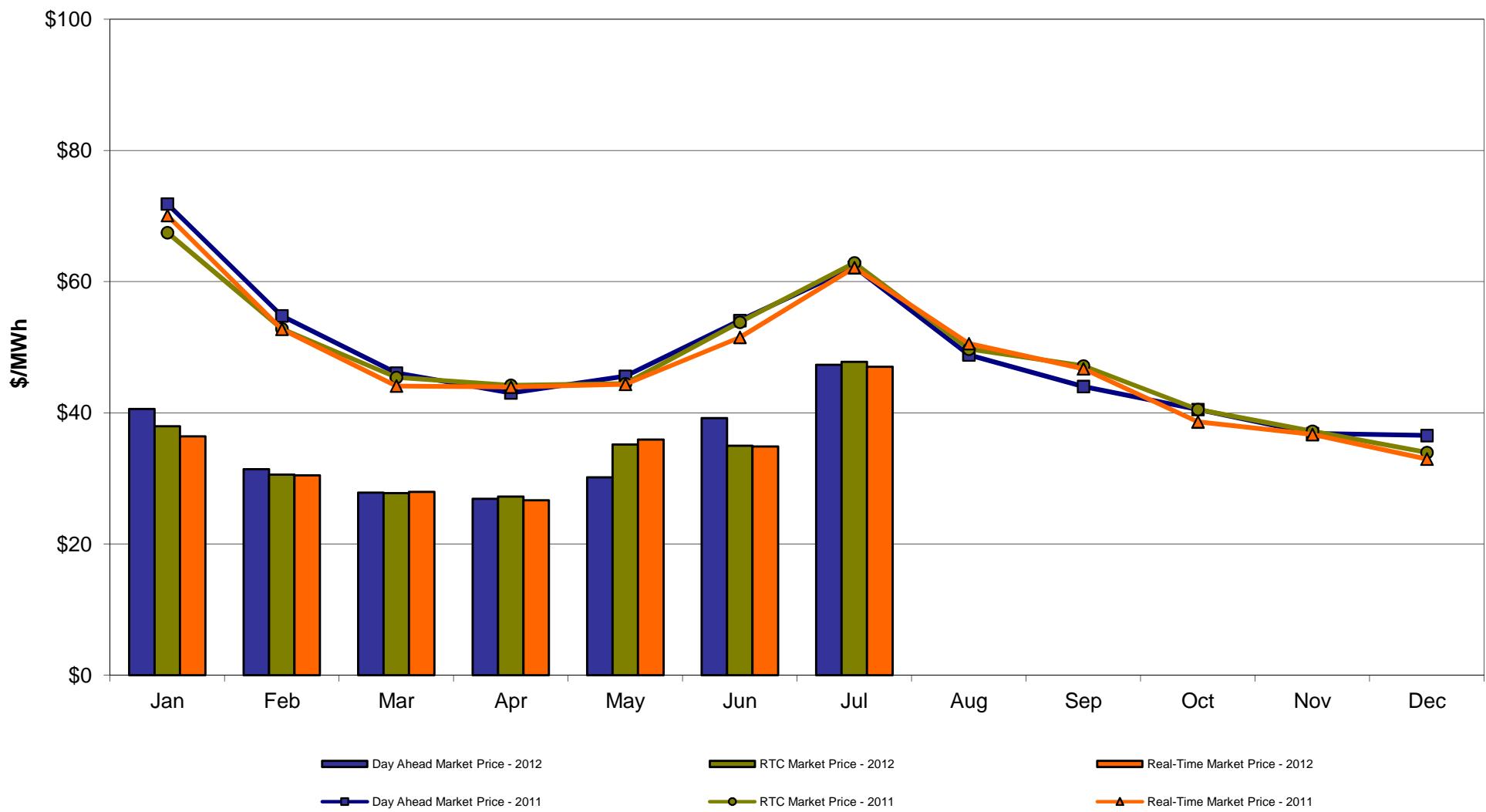
**West Zone A**  
**Monthly Average LBMP Prices 2011 - 2012**



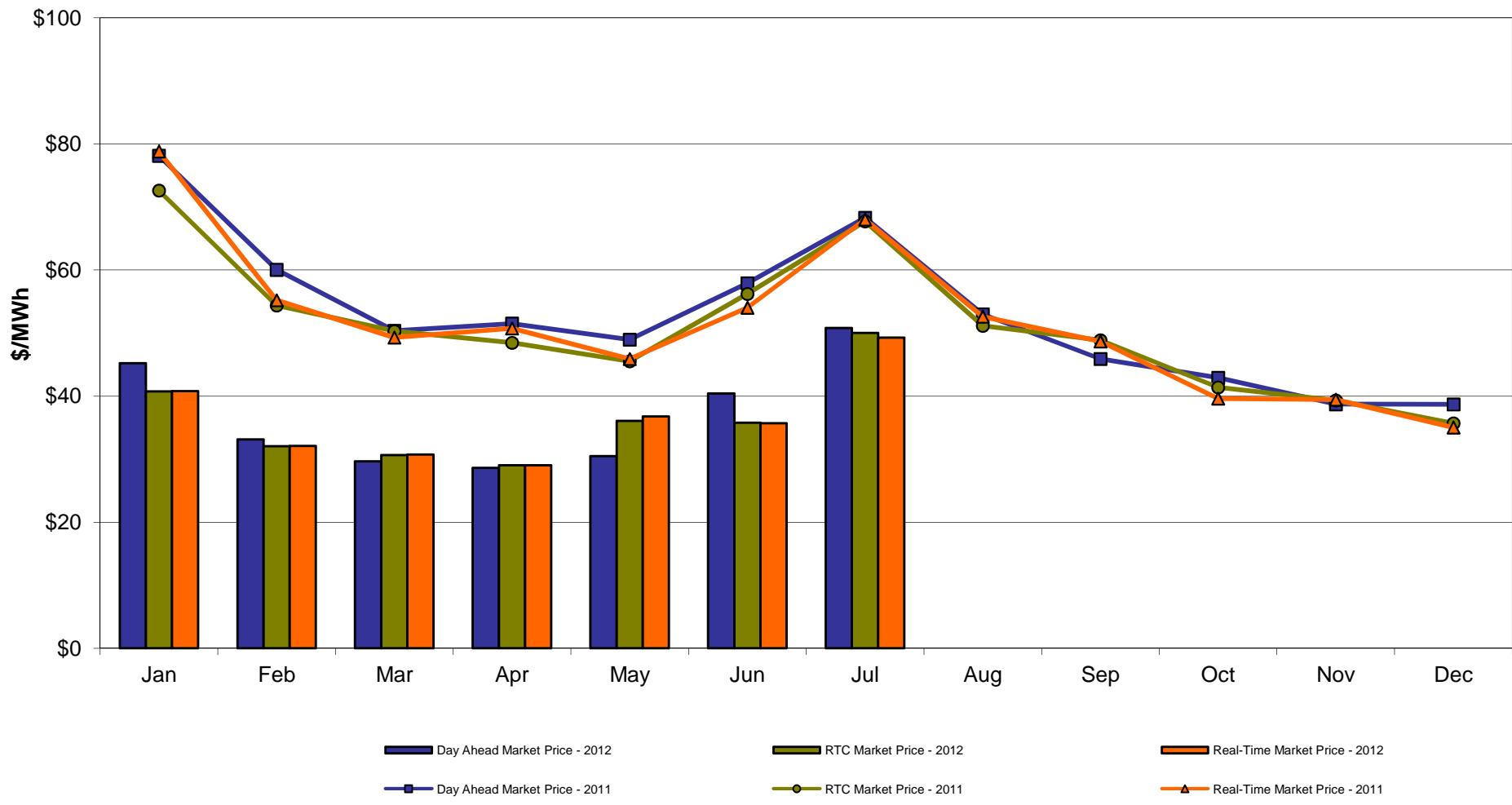
**Capital Zone F**  
**Monthly Average LBMP Prices 2011 - 2012**



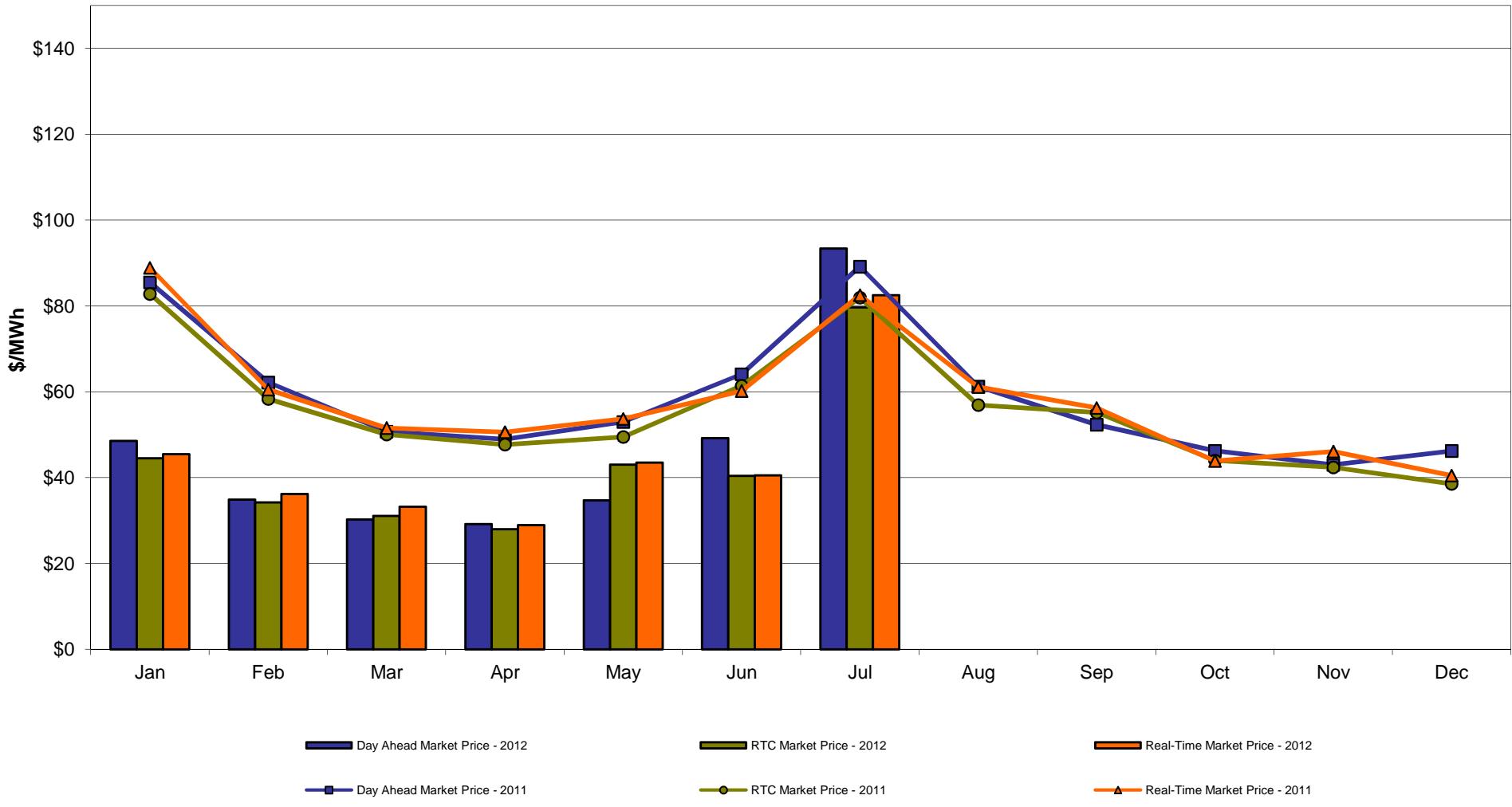
**Hudson Valley Zone G**  
**Monthly Average LBMP Prices 2011 - 2012**



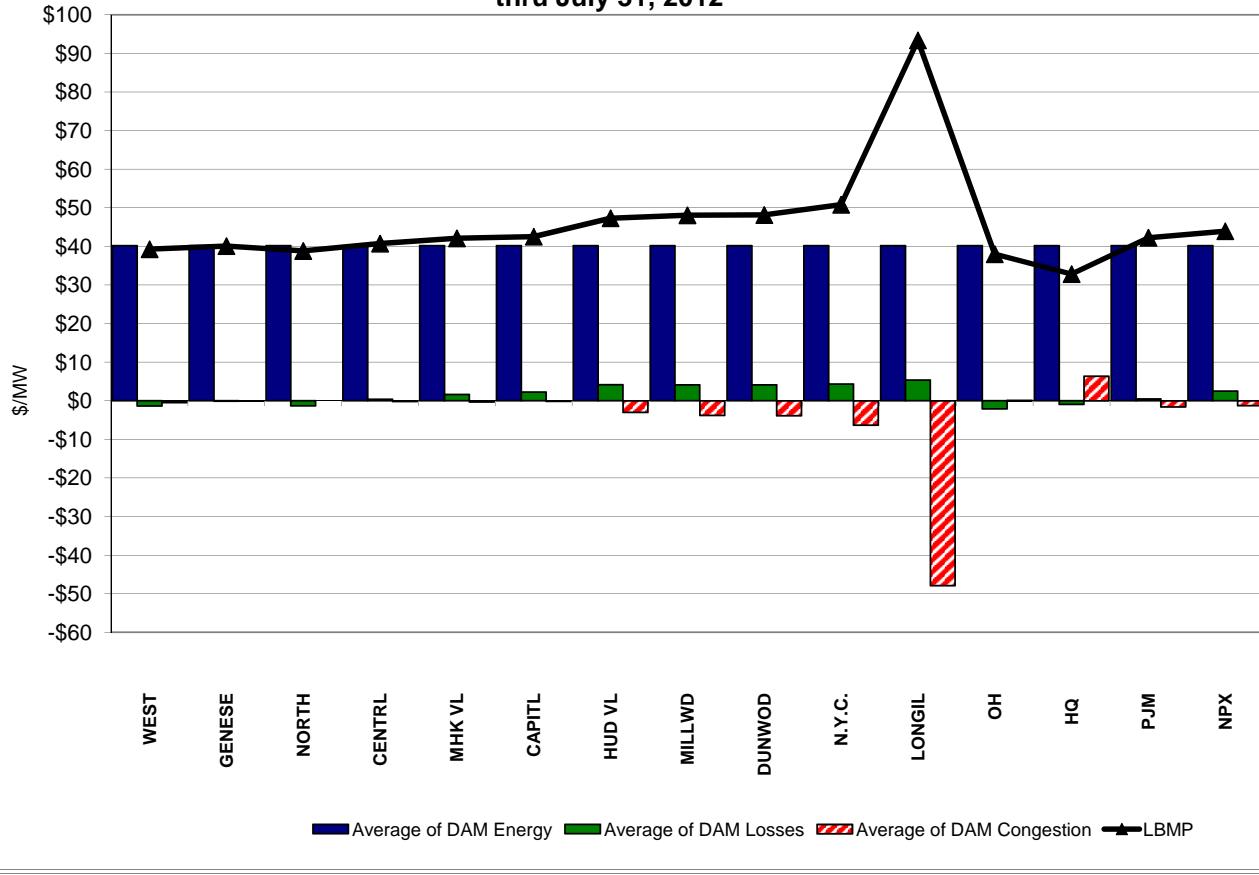
**NYC Zone J**  
**Monthly Average LBMP Prices 2011 - 2012**



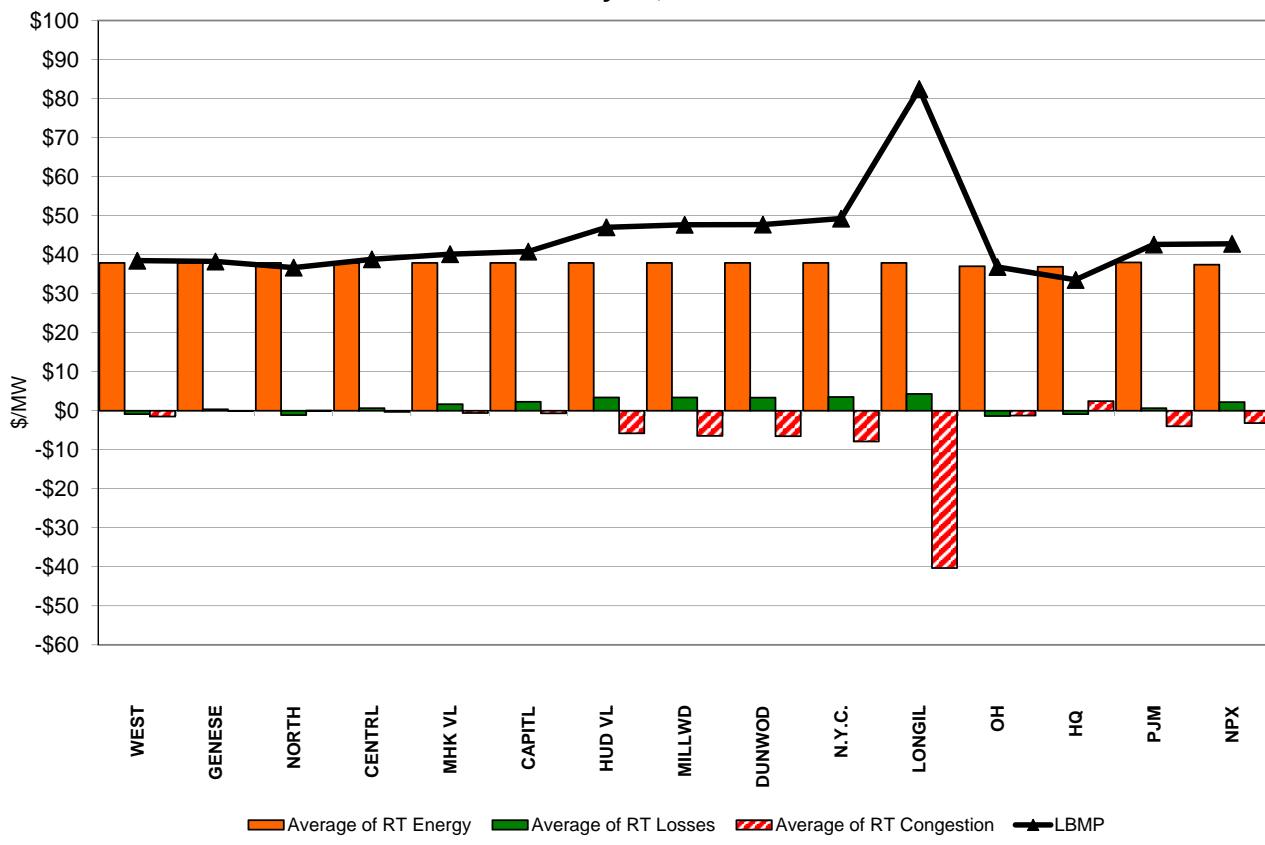
**Long Island Zone K**  
**Monthly Average LBMP Prices 2011 - 2012**



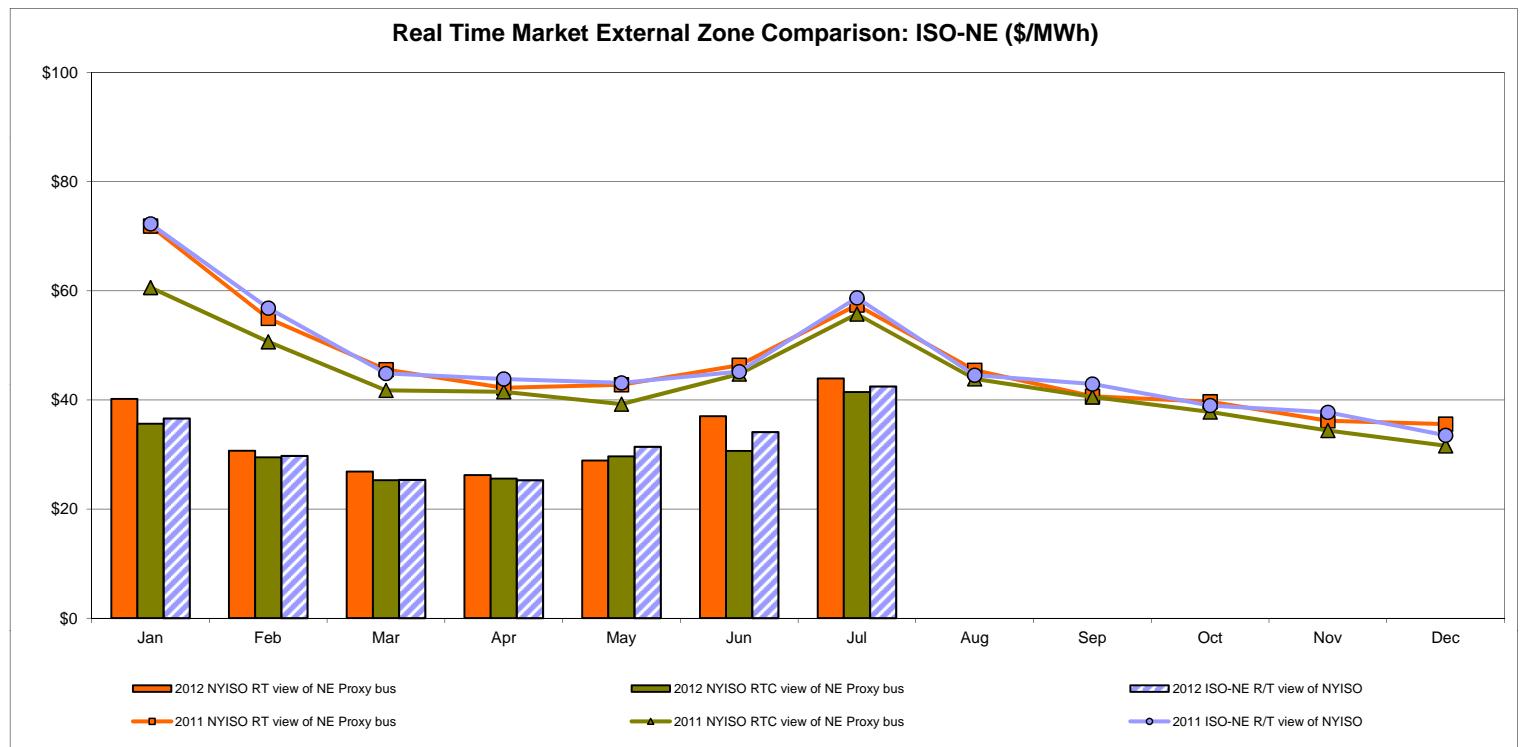
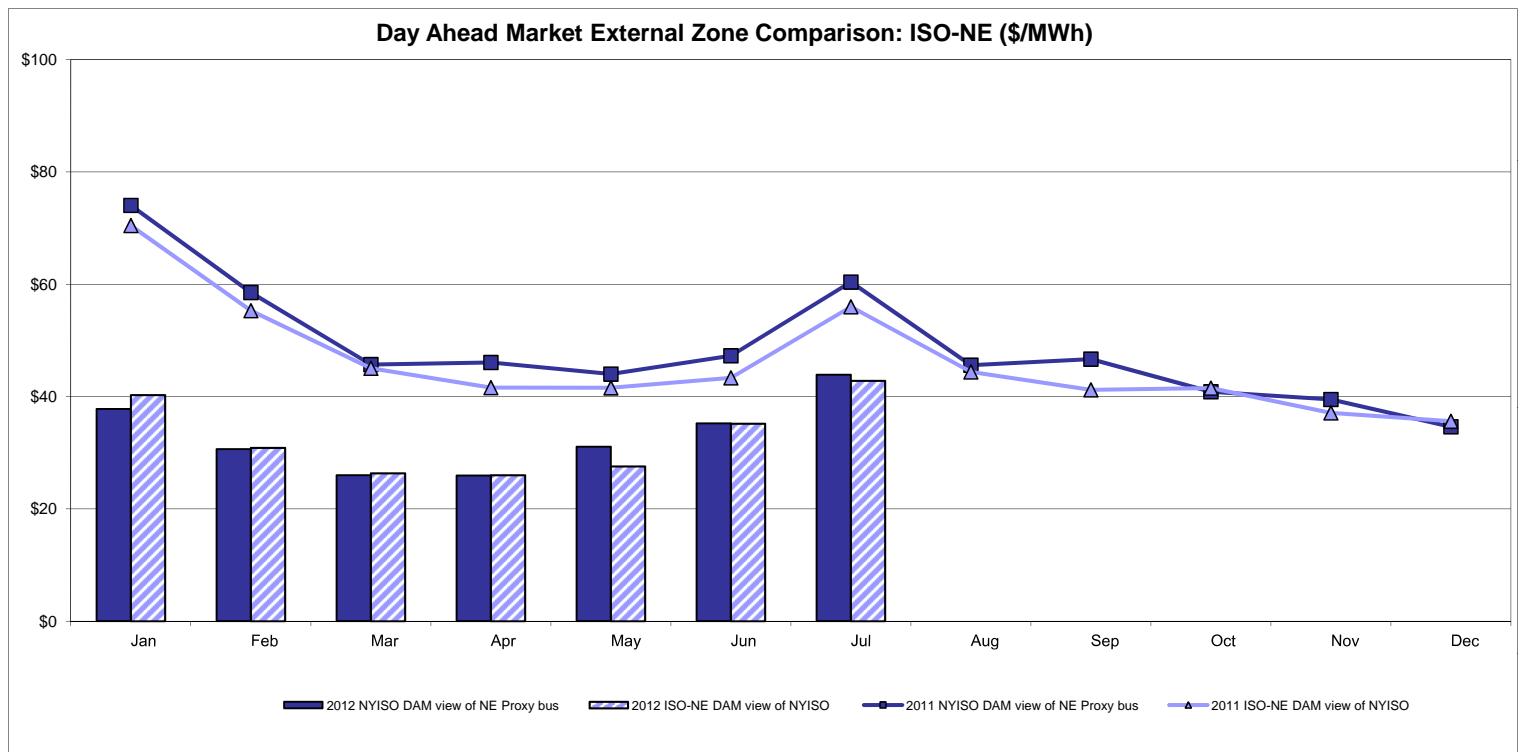
**DAM Zonal Unweighted Monthly Average LBMP Components  
thru July 31, 2012**



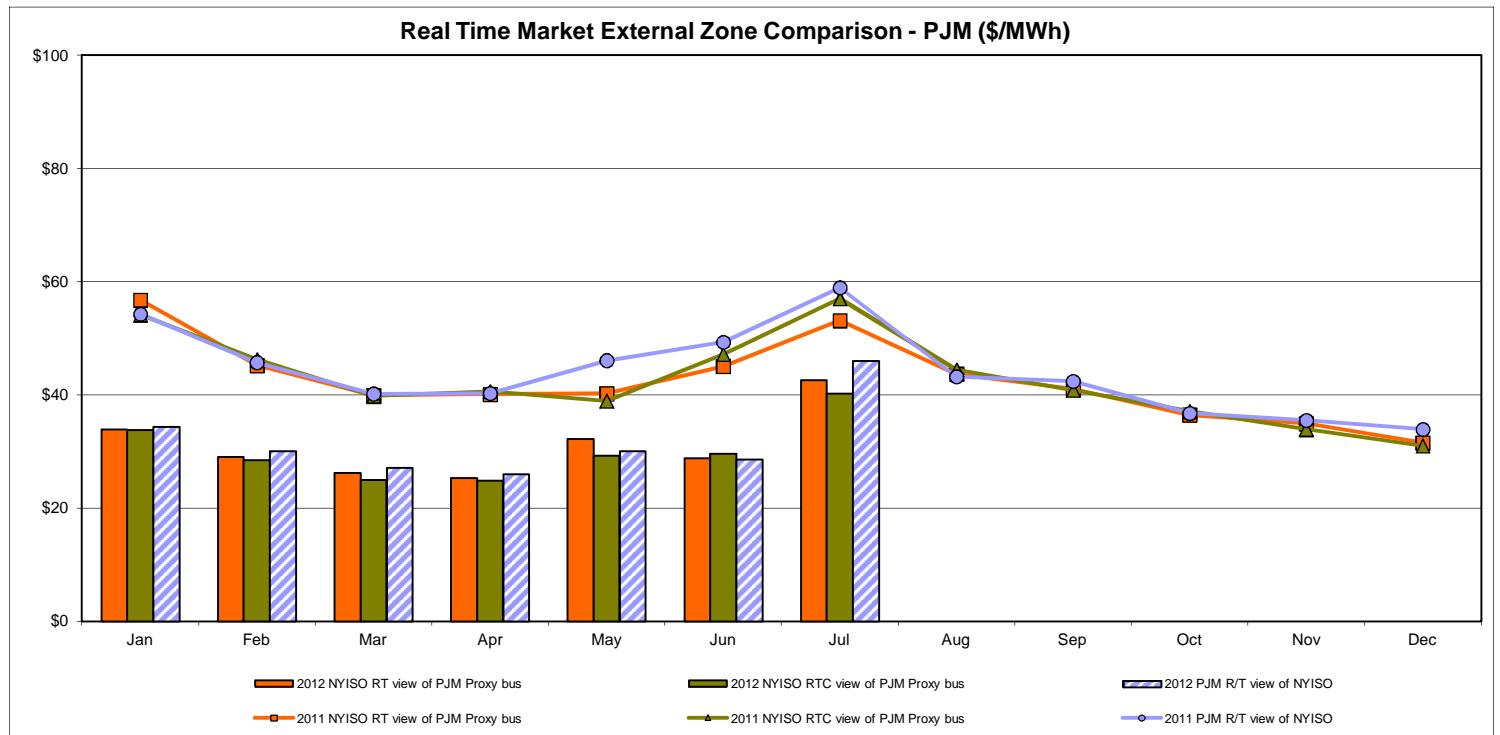
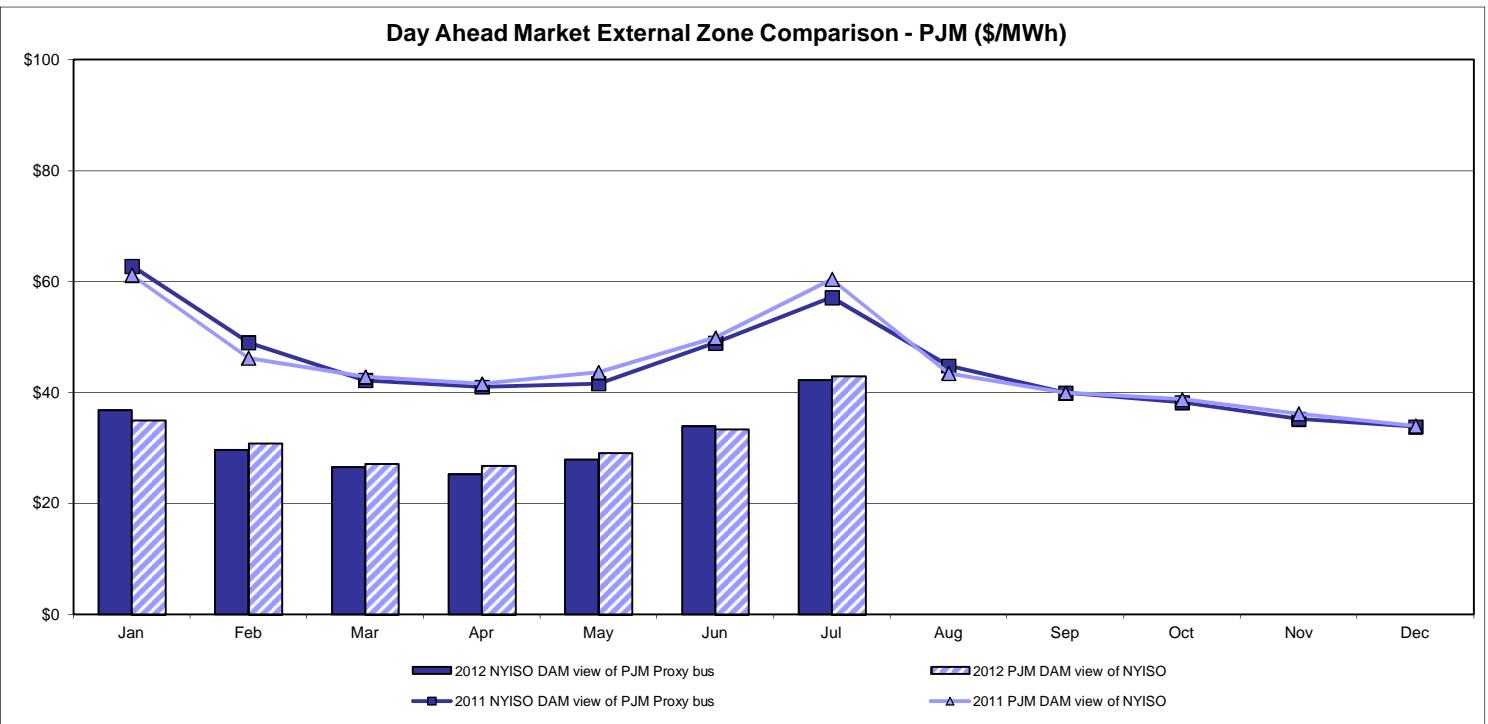
**RT Zonal Unweighted Monthly Average LBMP Components  
thru July 31, 2012**



## External Comparison ISO-New England

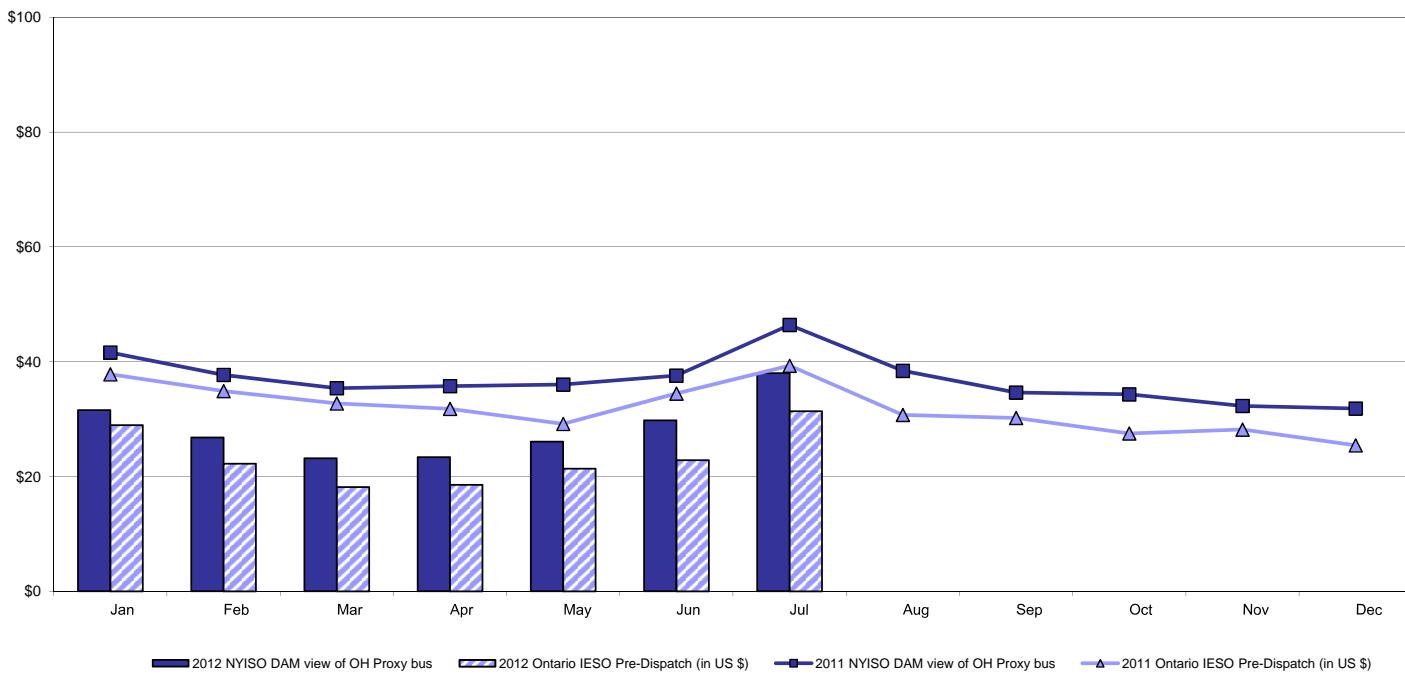


## External Comparison PJM

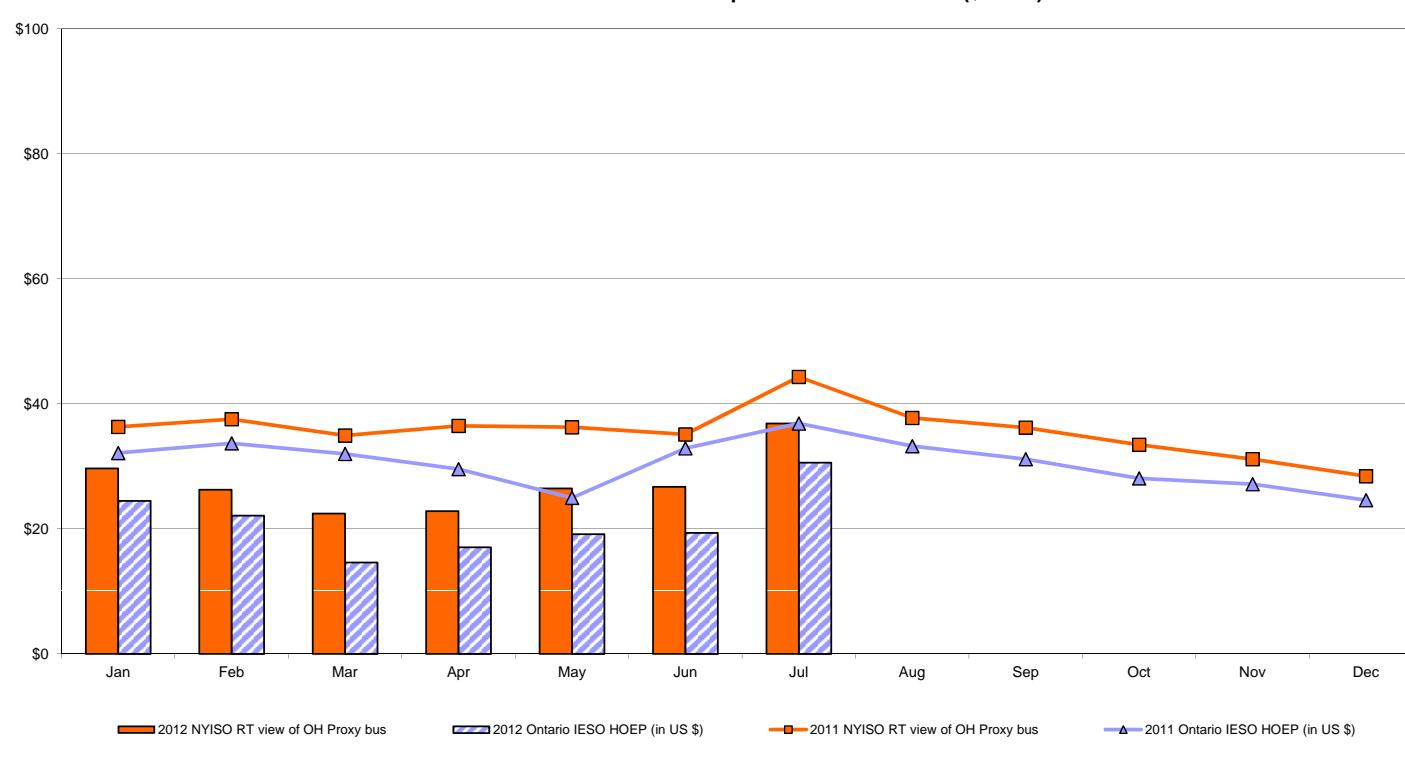


## External Comparison Ontario IESO

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



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



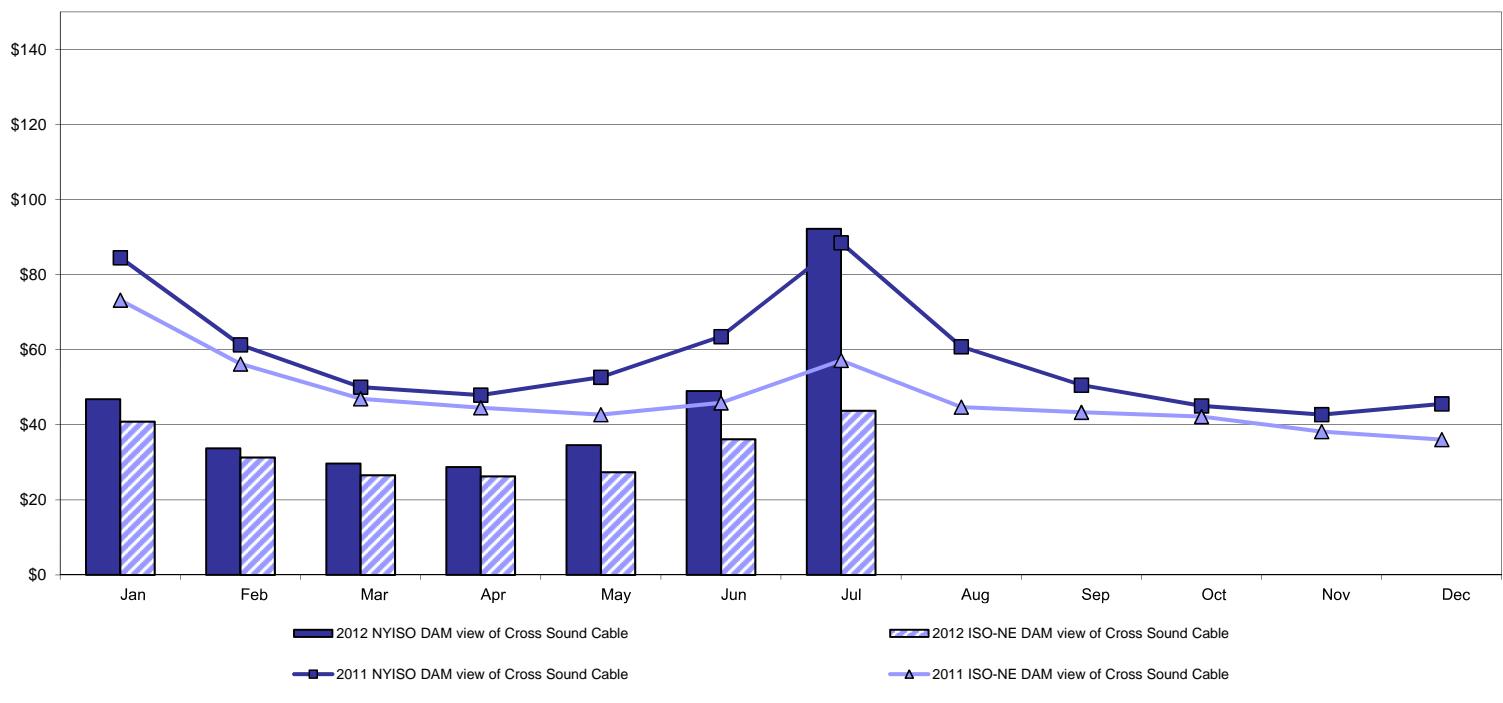
Notes: Exchange factor used for July 2012 was 0.98 to US \$

HOEP: Hourly Ontario Energy Price

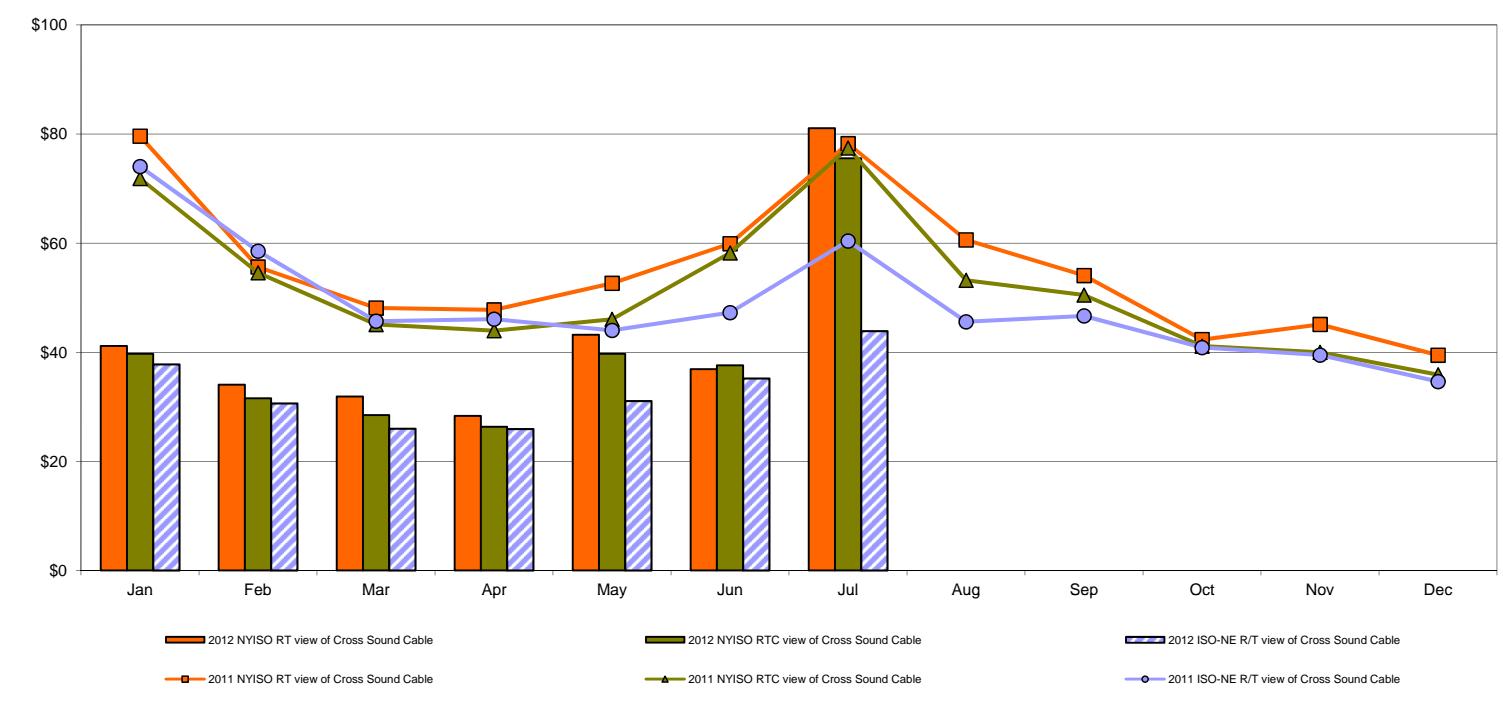
Pre-Dispatch: Projected Energy Price

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

Day Ahead Market Comparison: Cross Sound Cable (\$/MWh)



Real Time Market Comparison: Cross Sound Cable (\$/MWh)



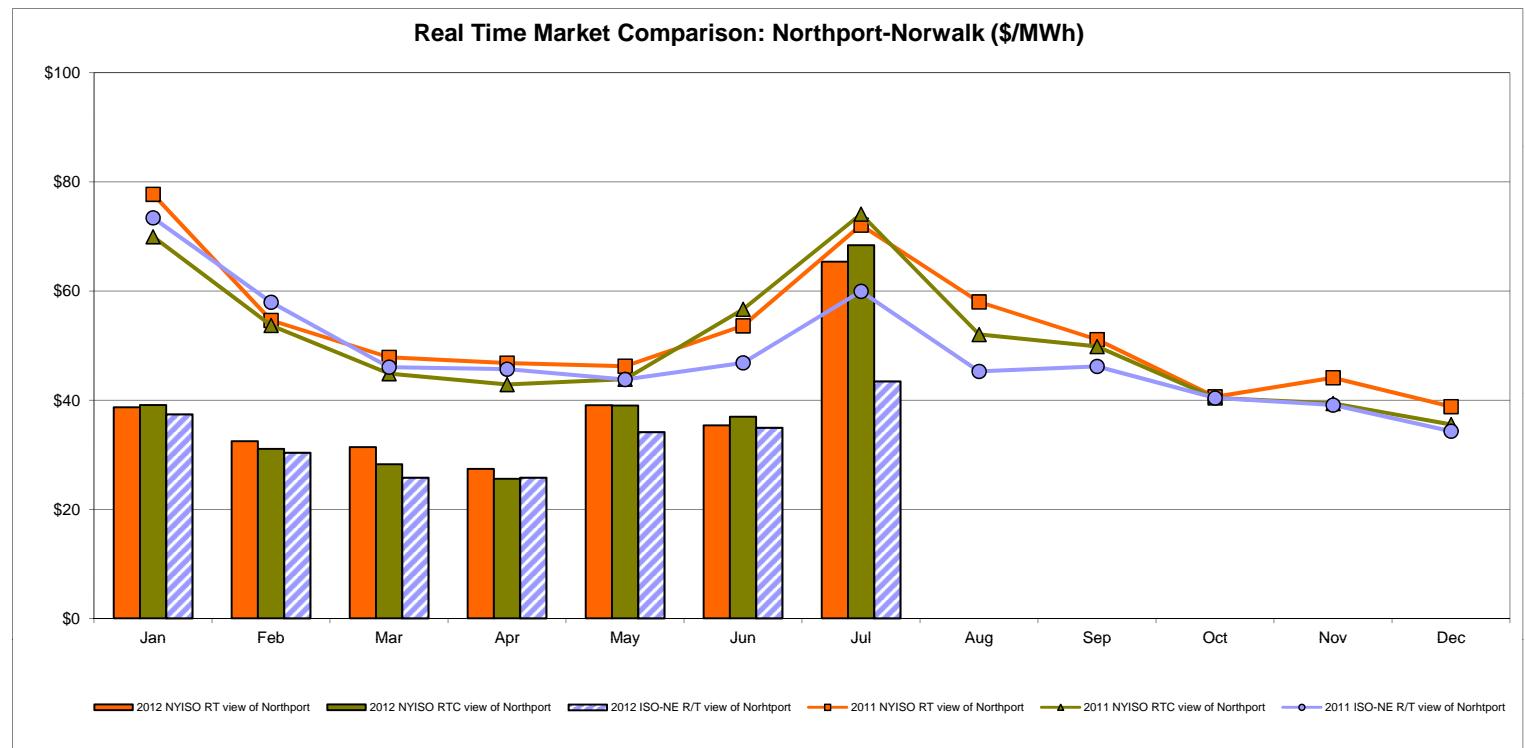
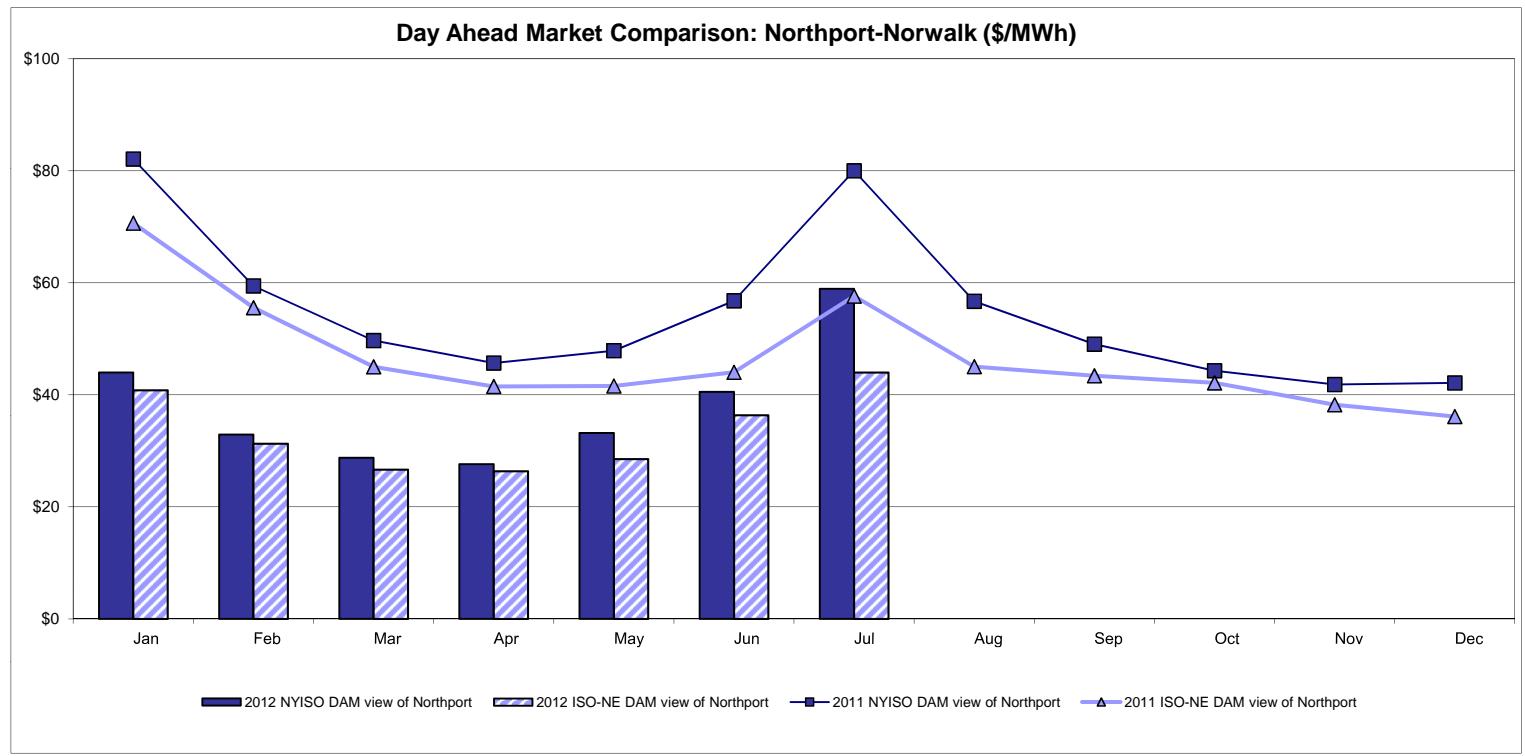
Note:

ISO-NE Forecast is an advisory posting @ 18:00 day before.

The DAM and R/T prices at the Shorham 13899 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:

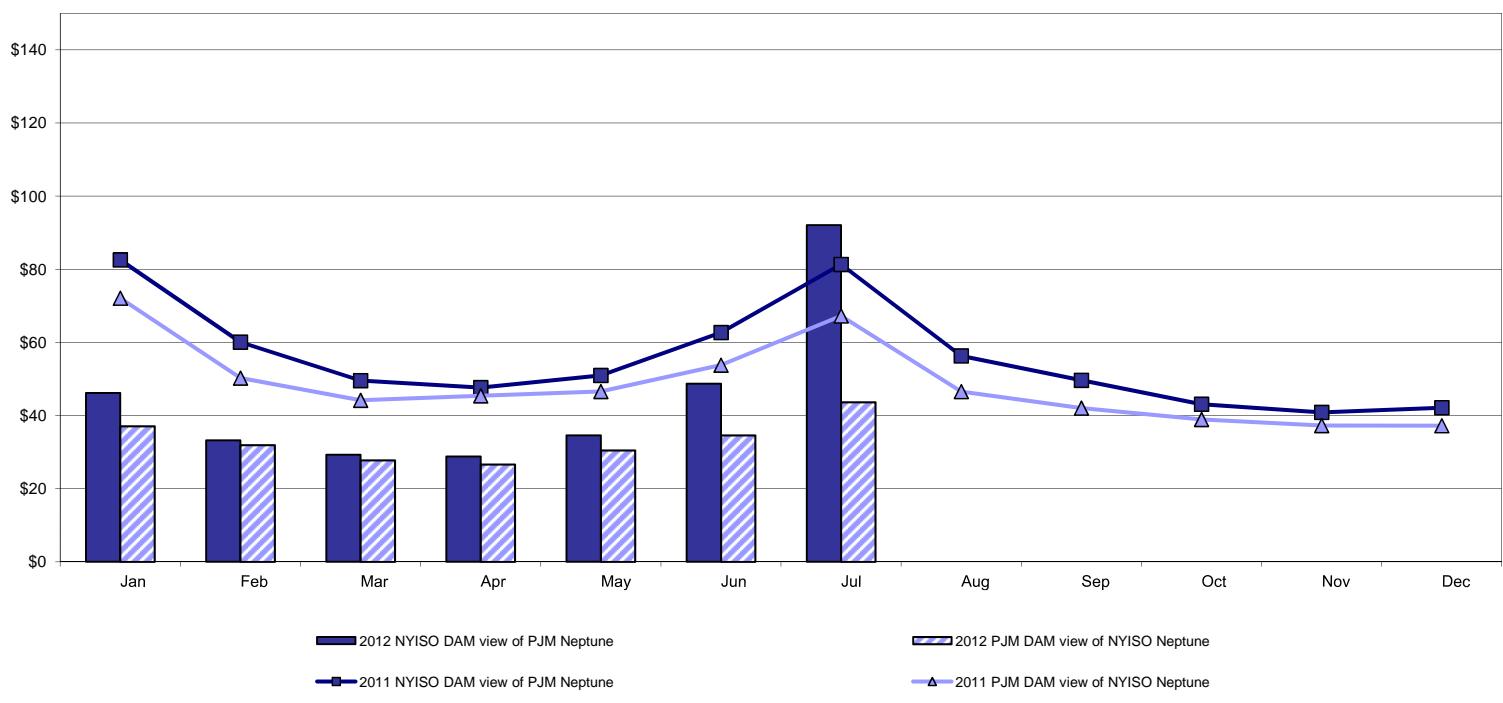
ISO-NE Forecast is an advisory posting @ 18:00 day before.

The DAM and R/T prices at the Northport 138 interface are used for ISO-NE.

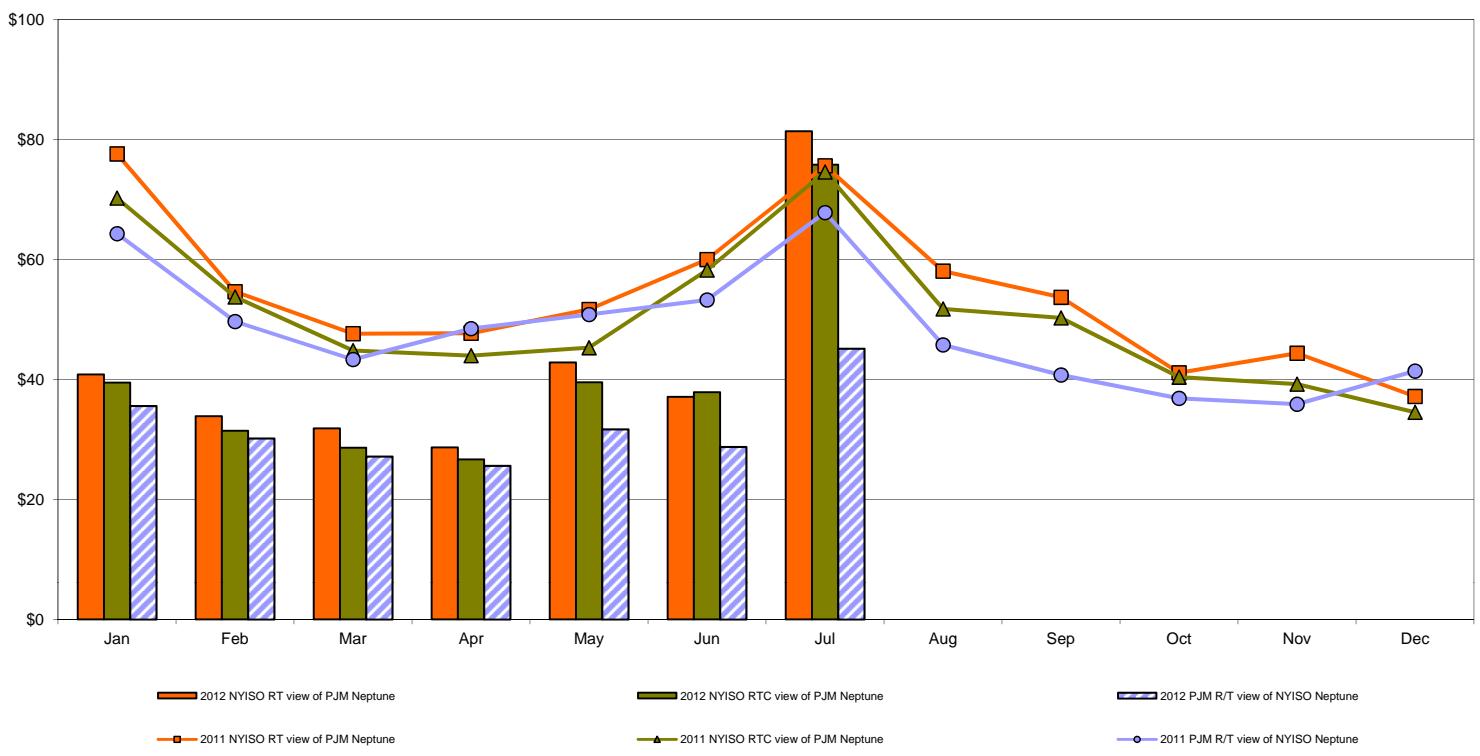
The DAM and R/T prices at the 1385 interface are used for NYISO.

## External Controllable Line: Neptune (PJM)

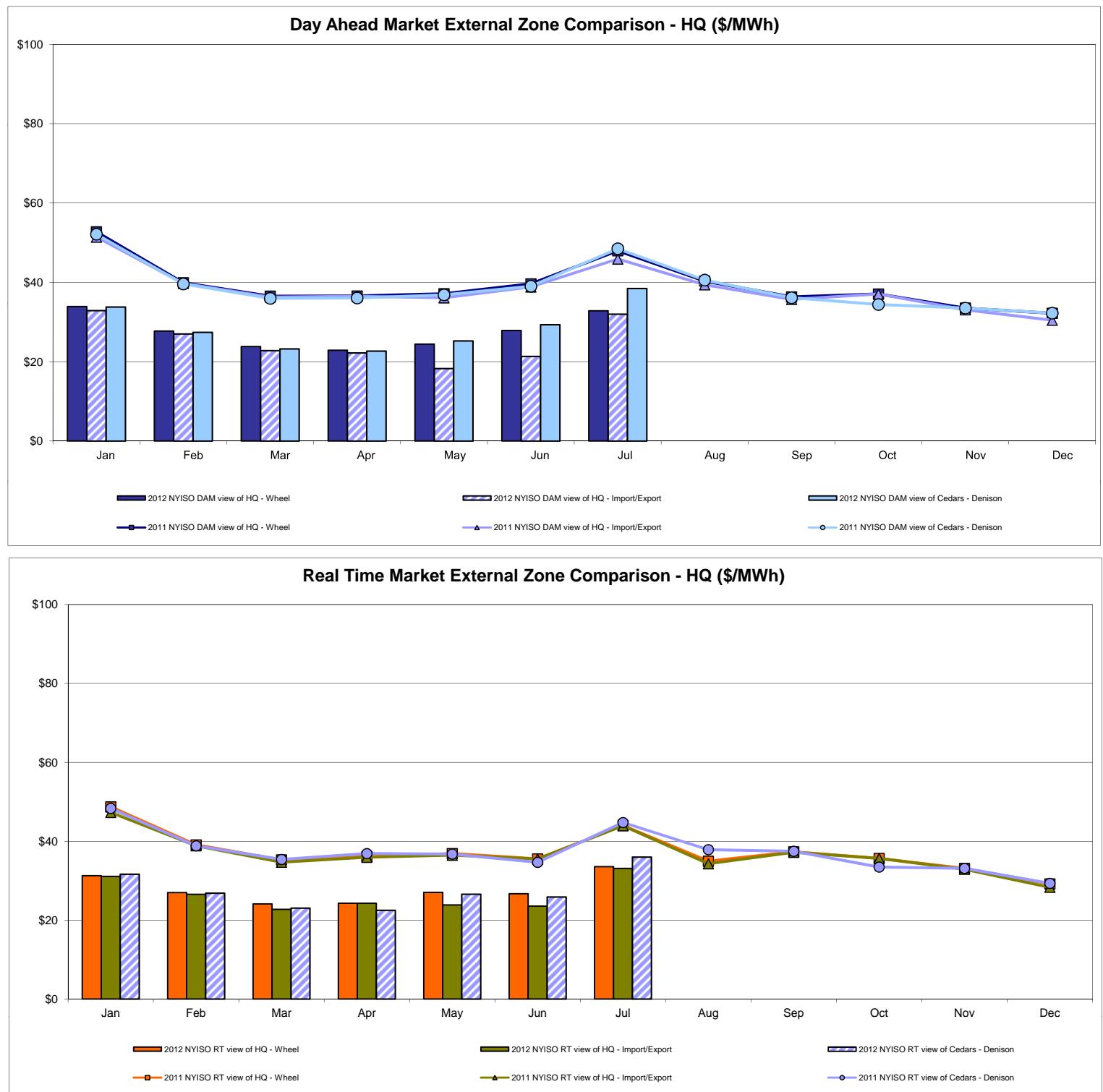
**Day Ahead Market Comparison: Neptune (\$/MWh)**



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



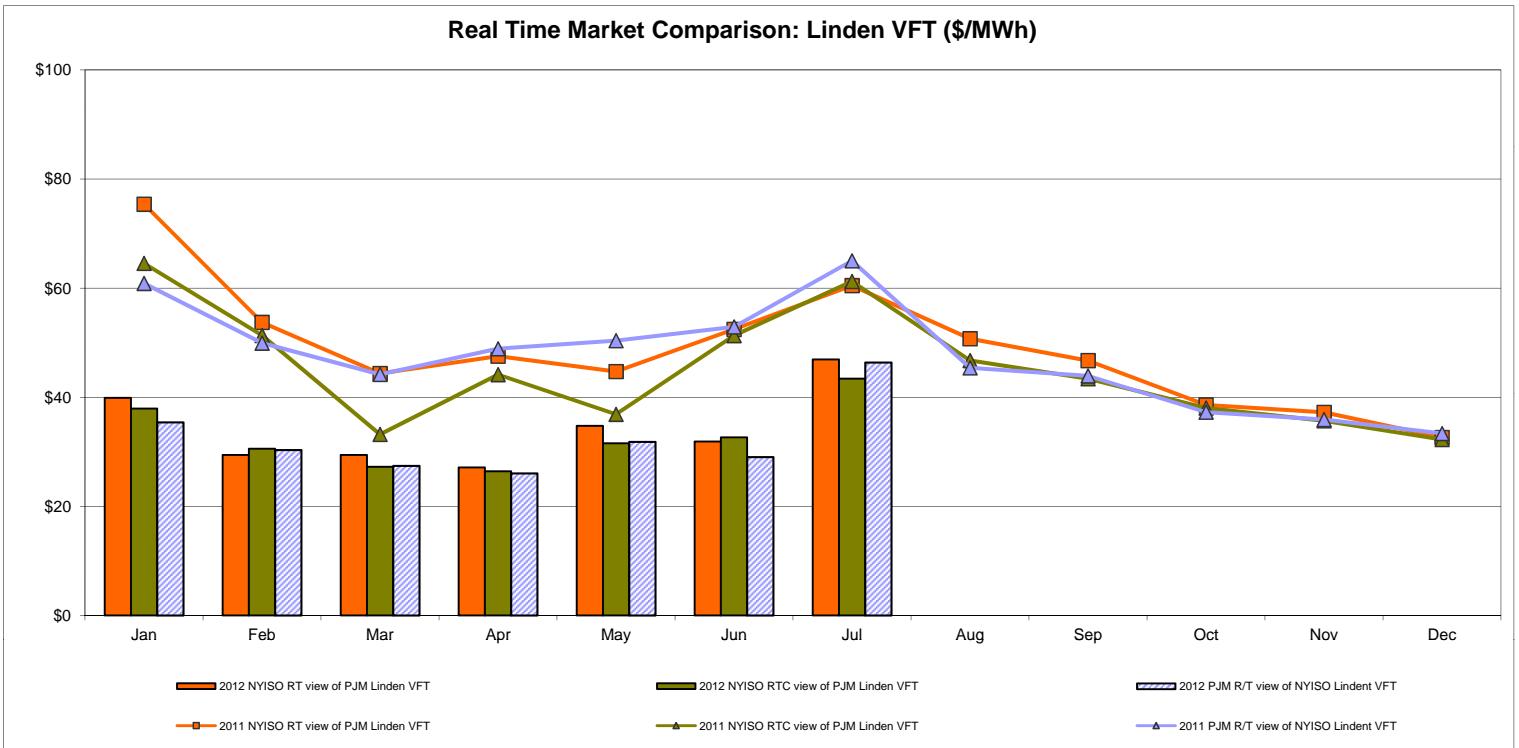
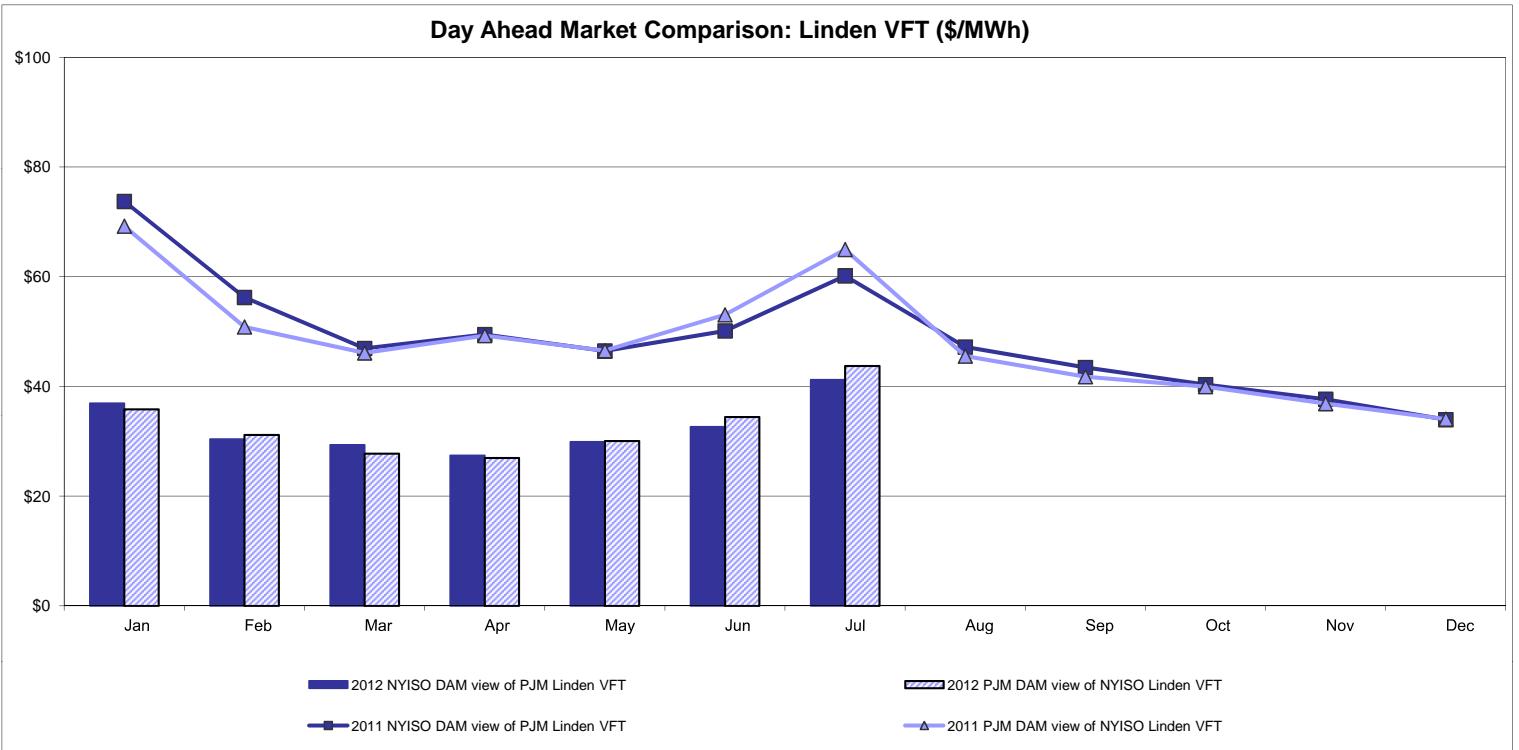
## External Comparison Hydro-Quebec



Note:

Hydro-Quebec Prices are unavailable.

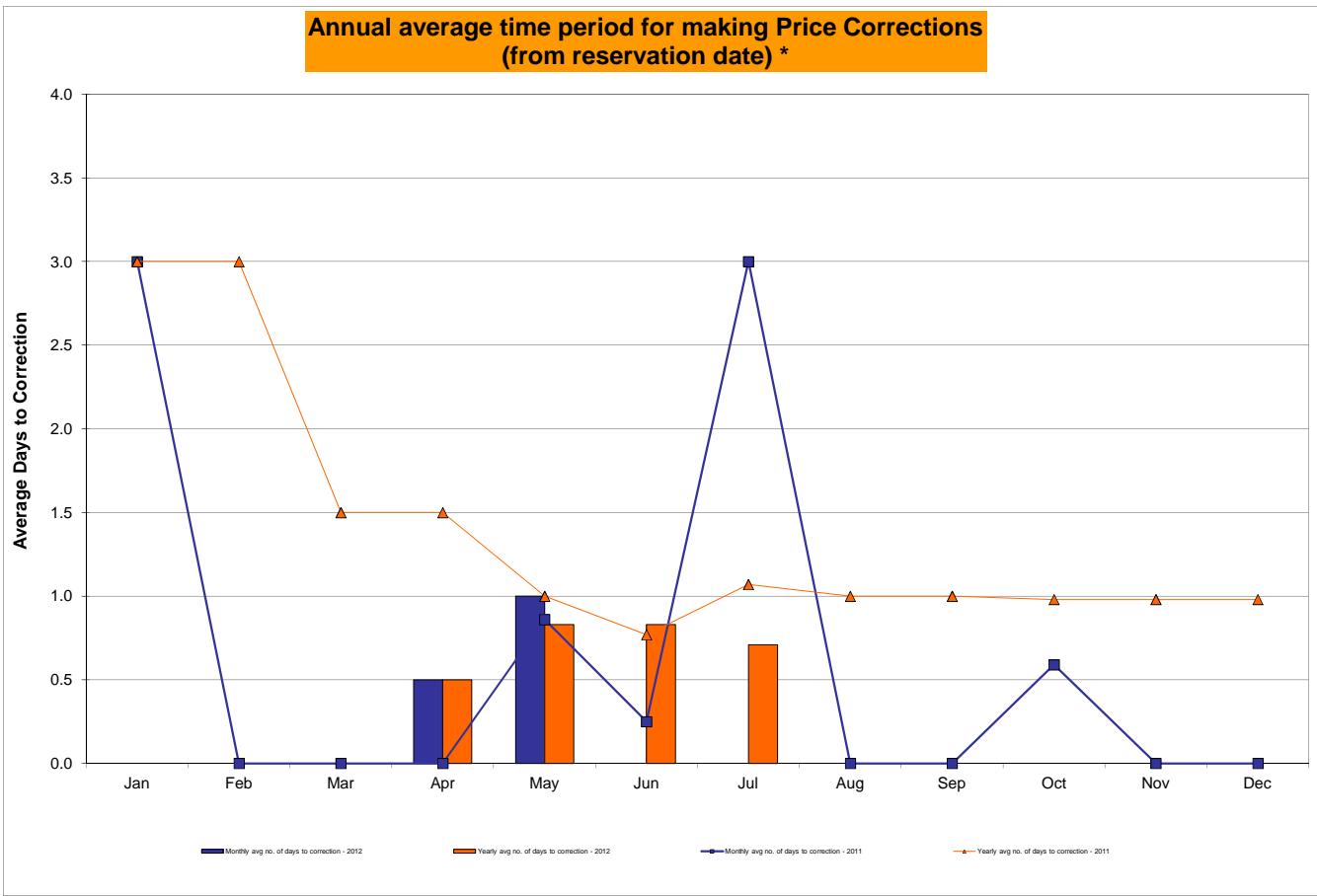
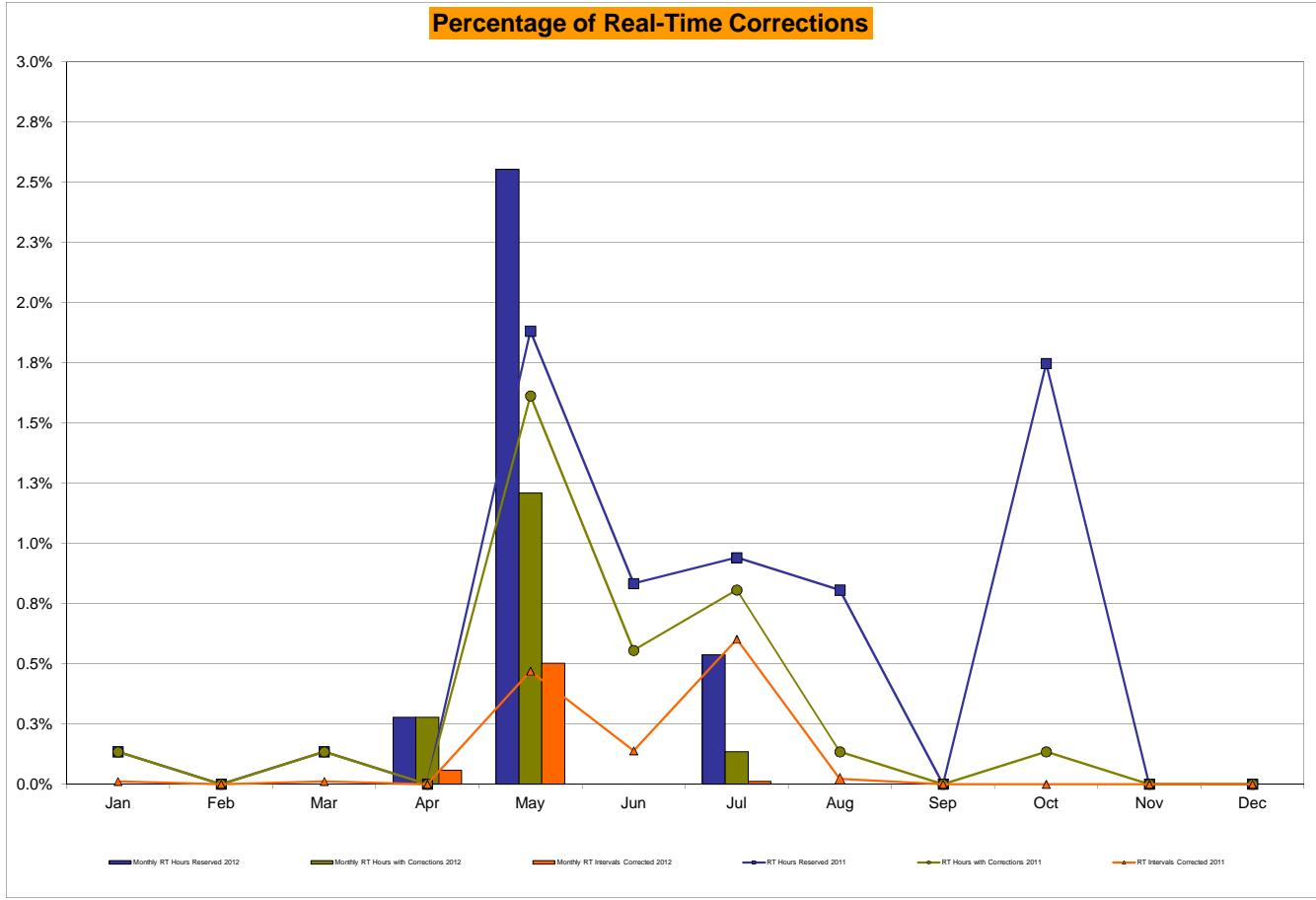
## External Controllable Line: Linden VFT (PJM)



### NYISO Real Time Price Correction Statistics

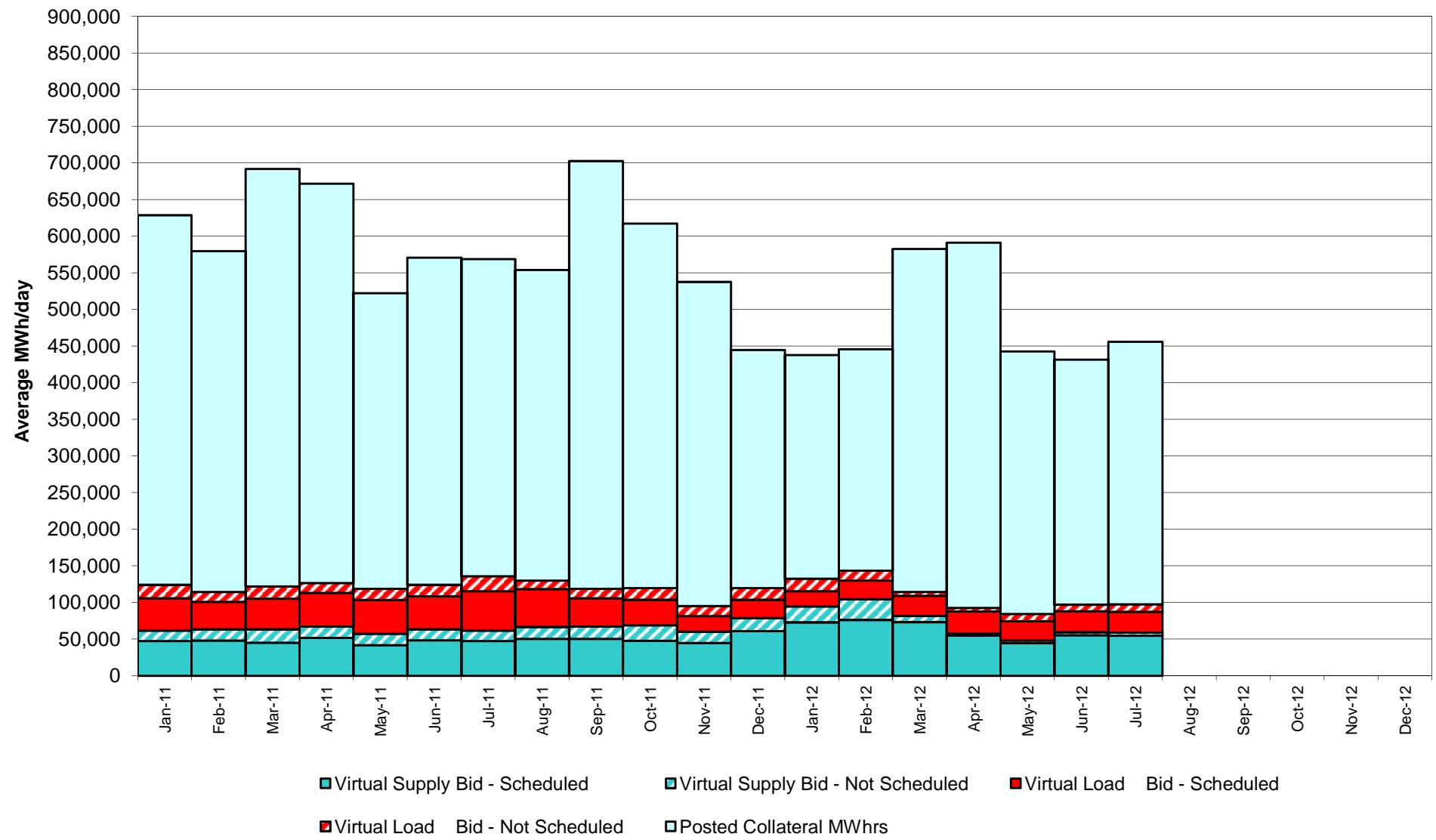
<u>2012</u>		<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
<b><u>Hour Corrections</u></b>													
Number of hours with corrections	in the month	0	0	0	2	9	0	1					
Number of hours	in the month	744	696	744	720	744	720	744					
% of hours with corrections	in the month	0.00%	0.00%	0.00%	0.28%	1.21%	0.00%	0.13%					
% of hours with corrections	year-to-date	0.00%	0.00%	0.00%	0.07%	0.30%	0.25%	0.23%					
<b><u>Interval Corrections</u></b>													
Number of intervals corrected	in the month	0	0	0	5	45	0	1					
Number of intervals	in the month	8,987	8,375	8,945	8,665	8,957	8,773	9,100					
% of intervals corrected	in the month	0.00%	0.00%	0.00%	0.06%	0.50%	0.00%	0.01%					
% of intervals corrected	year-to-date	0.00%	0.00%	0.00%	0.01%	0.11%	0.09%	0.08%					
<b><u>Hours Reserved</u></b>													
Number of hours reserved	in the month	0	0	0	2	19	0	4					
Number of hours	in the month	744	696	744	720	744	720	744					
% of hours reserved	in the month	0.00%	0.00%	0.00%	0.28%	2.55%	0.00%	0.54%					
% of hours reserved	year-to-date	0.00%	0.00%	0.00%	0.07%	0.58%	0.48%	0.49%					
<b><u>Days to Correction *</u></b>													
Avg. number of days to correction	in the month	0.00	0.00	0.00	0.50	1.00	0.00	0.00					
Avg. number of days to correction	year-to-date	0.00	0.00	0.00	0.50	0.83	0.83	0.71					
<b><u>Days Without Corrections</u></b>													
Days without corrections	in the month	31	29	31	28	27	30	30					
Days without corrections	year-to-date	31	60	91	119	146	176	206					
<u>2011</u>		<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>Hour Corrections</u></b>													
Number of hours with corrections	in the month	1	0	1	0	12	4	6	1	0	1	0	0
Number of hours	in the month	744	672	744	720	744	720	744	744	720	744	720	744
% of hours with corrections	in the month	0.13%	0.00%	0.13%	0.00%	1.61%	0.56%	0.81%	0.13%	0.00%	0.13%	0.00%	0.00%
% of hours with corrections	year-to-date	0.13%	0.07%	0.09%	0.07%	0.39%	0.41%	0.47%	0.43%	0.38%	0.36%	0.32%	0.30%
<b><u>Interval Corrections</u></b>													
Number of intervals corrected	in the month	1	0	1	0	42	12	54	2	0	2	0	0
Number of intervals	in the month	8,938	8,049	8,924	8,671	8,939	8,661	8,967	9,021	8,678	8,940	8,671	8,954
% of intervals corrected	in the month	0.01%	0.00%	0.01%	0.00%	0.47%	0.14%	0.60%	0.02%	0.00%	0.02%	0.00%	0.00%
% of intervals corrected	year-to-date	0.01%	0.01%	0.01%	0.01%	0.10%	0.11%	0.18%	0.16%	0.14%	0.13%	0.12%	0.11%
<b><u>Hours Reserved</u></b>													
Number of hours reserved	in the month	1	0	1	0	14	6	7	6	0	13	0	0
Number of hours	in the month	744	672	744	720	744	720	744	744	720	744	720	744
% of hours reserved	in the month	0.13%	0.00%	0.13%	0.00%	1.88%	0.83%	0.94%	0.81%	0.00%	1.75%	0.00%	0.00%
% of hours reserved	year-to-date	0.13%	0.07%	0.09%	0.07%	0.44%	0.51%	0.57%	0.60%	0.53%	0.66%	0.60%	0.55%
<b><u>Days to Correction *</u></b>													
Avg. number of days to correction	in the month	3.00	0.00	0.00	0.00	0.86	0.25	3.00	0.00	0.00	0.59	0.00	0.00
Avg. number of days to correction	year-to-date	3.00	3.00	1.50	1.50	1.00	0.77	1.07	1.00	1.00	0.98	0.98	0.98
<b><u>Days Without Corrections</u></b>													
Days without corrections	in the month	30	28	30	30	24	26	29	30	30	30	30	31
Days without corrections	year-to-date	30	58	88	118	142	168	197	227	257	287	317	348

\* Calendar days from reservation date.

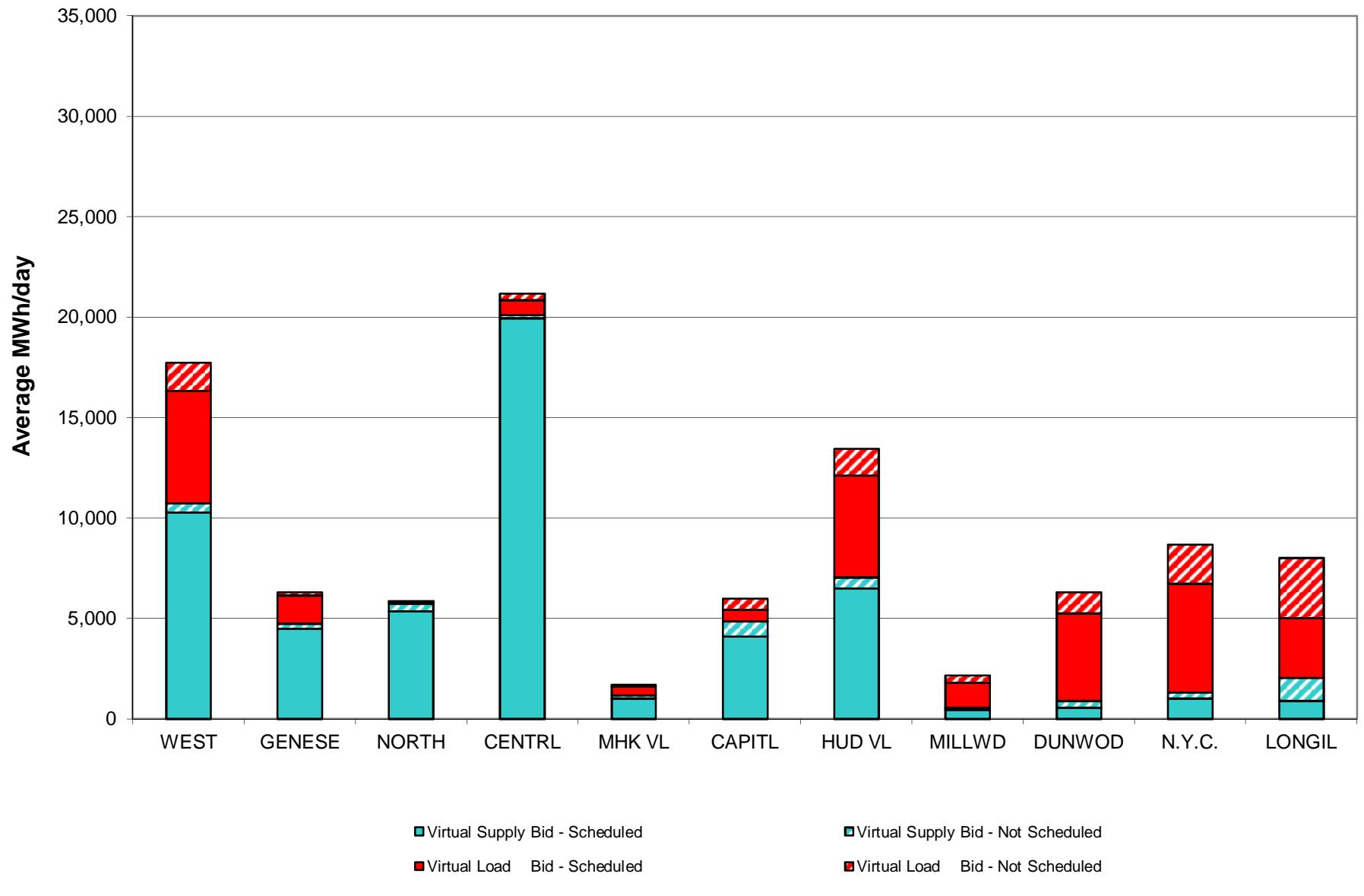


\* Calendar days from reservation date.

**NYISO Virtual Trading**  
**Average MWh per day**



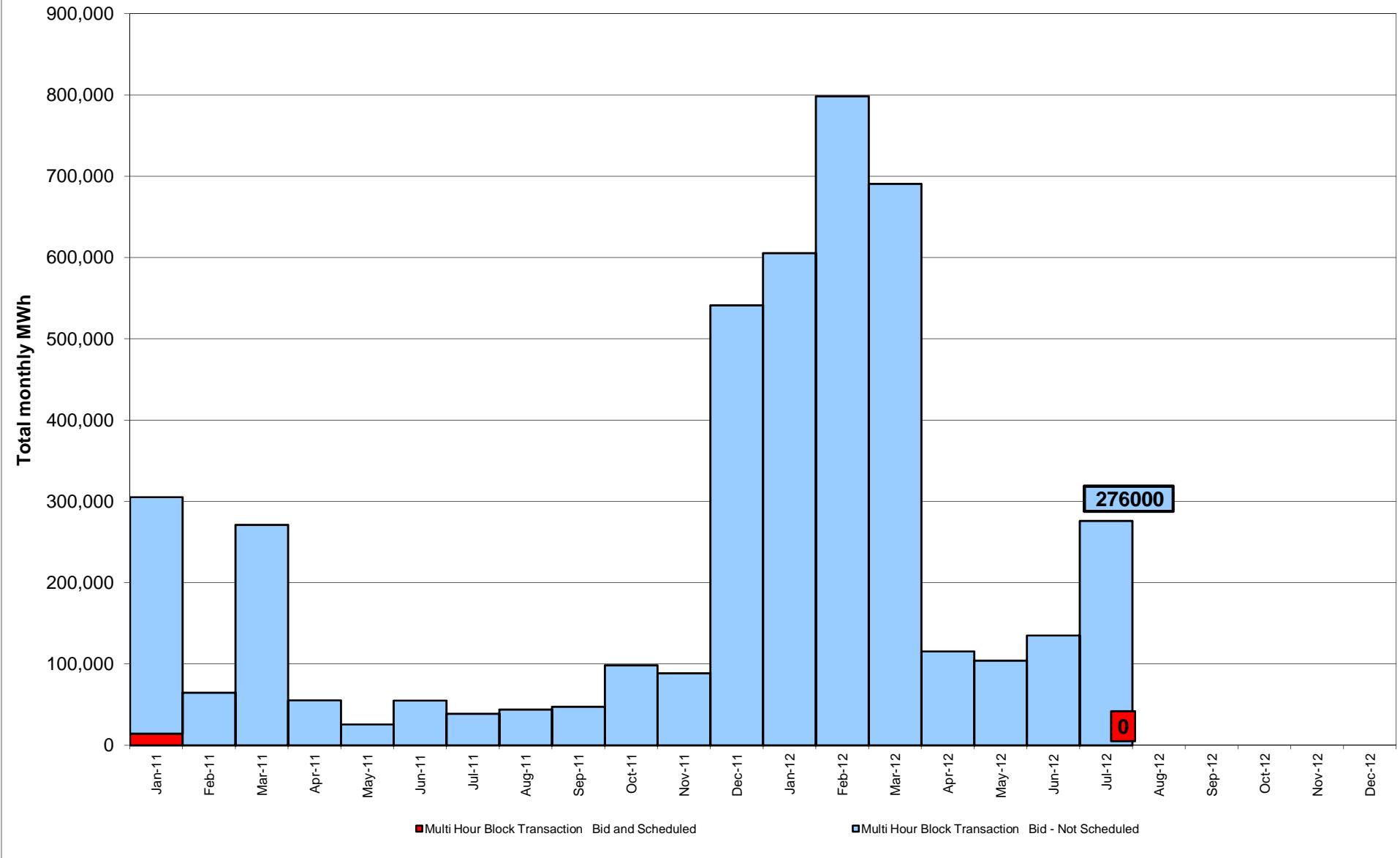
**Virtual Load and Supply Zonal Statistics  
through July 31, 2012**



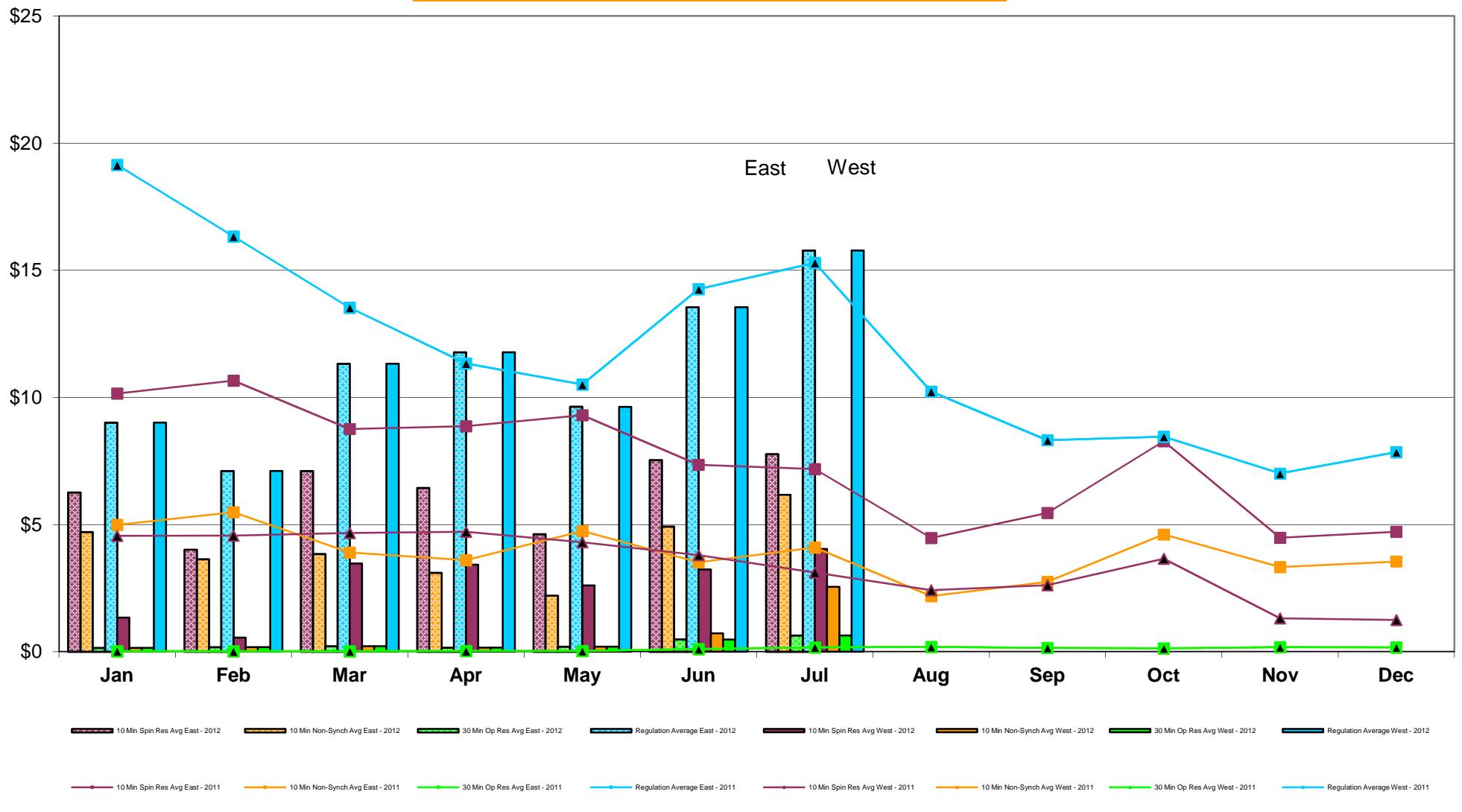
## Virtual Load and Supply Zonal Statistics (Average MWh/day) - 2012

		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-12	2,246	938	13,593	956	<b>MHK VL</b>	Jan-12	419	967	1,488	1,127	<b>DUNWOD</b>	Jan-12	1,401	461	1,432	189
	Feb-12	5,195	315	15,119	1,672		Feb-12	444	935	1,592	1,303		Feb-12	1,805	219	2,922	625
	Mar-12	5,008	874	15,504	1,856		Mar-12	521	101	863	196		Mar-12	816	227	1,039	135
	Apr-12	6,077	492	11,547	427		Apr-12	399	104	872	130		Apr-12	1,476	429	1,084	202
	May-12	3,533	808	11,651	385		May-12	255	407	860	206		May-12	2,192	720	813	333
	Jun-12	4,260	717	12,286	467		Jun-12	385	215	908	164		Jun-12	2,349	780	792	226
	Jul-12	5,598	1,402	10,293	440		Jul-12	441	105	1,026	141		Jul-12	4,354	1,058	572	326
	Aug-12						Aug-12						Aug-12				
	Sep-12						Sep-12						Sep-12				
	Oct-12						Oct-12						Oct-12				
	Nov-12						Nov-12						Nov-12				
	Dec-12						Dec-12						Dec-12				
<b>GENESE</b>	Jan-12	257	102	5,254	64	<b>CAPITL</b>	Jan-12	1,903	5,590	3,842	3,364	<b>N.Y.C.</b>	Jan-12	4,572	4,060	2,511	9,344
	Feb-12	553	52	5,238	271		Feb-12	1,408	4,213	3,379	5,116		Feb-12	2,819	3,414	4,839	10,519
	Mar-12	866	61	6,036	283		Mar-12	1,126	369	2,777	904		Mar-12	5,449	1,074	3,035	1,548
	Apr-12	580	151	7,104	147		Apr-12	1,557	645	2,625	244		Apr-12	6,909	688	1,188	66
	May-12	887	449	7,306	213		May-12	1,126	527	3,813	763		May-12	5,170	1,758	907	56
	Jun-12	1,648	236	6,271	225		Jun-12	2,949	597	3,591	855		Jun-12	4,056	1,578	1,300	137
	Jul-12	1,404	154	4,496	238		Jul-12	600	552	4,115	723		Jul-12	5,402	1,959	1,019	306
	Aug-12						Aug-12						Aug-12				
	Sep-12						Sep-12						Sep-12				
	Oct-12						Oct-12						Oct-12				
	Nov-12						Nov-12						Nov-12				
	Dec-12						Dec-12						Dec-12				
<b>NORTH</b>	Jan-12	289	967	7,215	1,189	<b>HUD VL</b>	Jan-12	3,466	693	9,513	2,413	<b>LONGIL</b>	Jan-12	5,372	2,036	684	1,383
	Feb-12	332	935	7,359	1,119		Feb-12	5,087	794	9,250	3,788		Feb-12	6,810	1,496	473	1,708
	Mar-12	478	131	7,753	691		Mar-12	5,032	665	8,136	1,221		Mar-12	6,675	1,276	298	624
	Apr-12	357	85	6,365	645		Apr-12	3,748	1,147	11,772	442		Apr-12	7,354	943	129	17
	May-12	127	379	5,511	686		May-12	5,563	1,356	7,084	563		May-12	6,077	2,303	135	69
	Jun-12	149	56	6,391	795		Jun-12	4,574	1,246	7,085	426		Jun-12	6,801	2,805	261	195
	Jul-12	108	15	5,360	378		Jul-12	5,085	1,306	6,520	530		Jul-12	2,980	2,990	889	1,147
	Aug-12						Aug-12						Aug-12				
	Sep-12						Sep-12						Sep-12				
	Oct-12						Oct-12						Oct-12				
	Nov-12						Nov-12						Nov-12				
	Dec-12						Dec-12						Dec-12				
<b>CENTRL</b>	Jan-12	526	1,178	26,589	1,270	<b>MILLWD</b>	Jan-12	505	206	929	50	<b>NYISO</b>	Jan-12	20,956	17,198	73,050	21,349
	Feb-12	757	1,175	25,087	2,011		Feb-12	379	161	949	88		Feb-12	25,588	13,708	76,209	28,222
	Mar-12	993	171	27,015	1,187		Mar-12	442	99	736	79		Mar-12	27,405	5,047	73,193	8,725
	Apr-12	991	169	11,465	143		Apr-12	556	134	1,019	109		Apr-12	30,003	4,987	55,170	2,572
	May-12	630	543	5,516	265		May-12	602	540	875	237		May-12	26,162	9,789	44,469	3,776
	Jun-12	596	292	16,084	263		Jun-12	919	583	530	124		Jun-12	28,686	9,104	55,500	3,877
	Jul-12	747	339	19,954	150		Jul-12	1,234	361	455	113		Jul-12	27,954	10,241	54,699	4,491
	Aug-12						Aug-12						Aug-12				
	Sep-12						Sep-12						Sep-12				
	Oct-12						Oct-12						Oct-12				
	Nov-12						Nov-12						Nov-12				
	Dec-12						Dec-12						Dec-12				

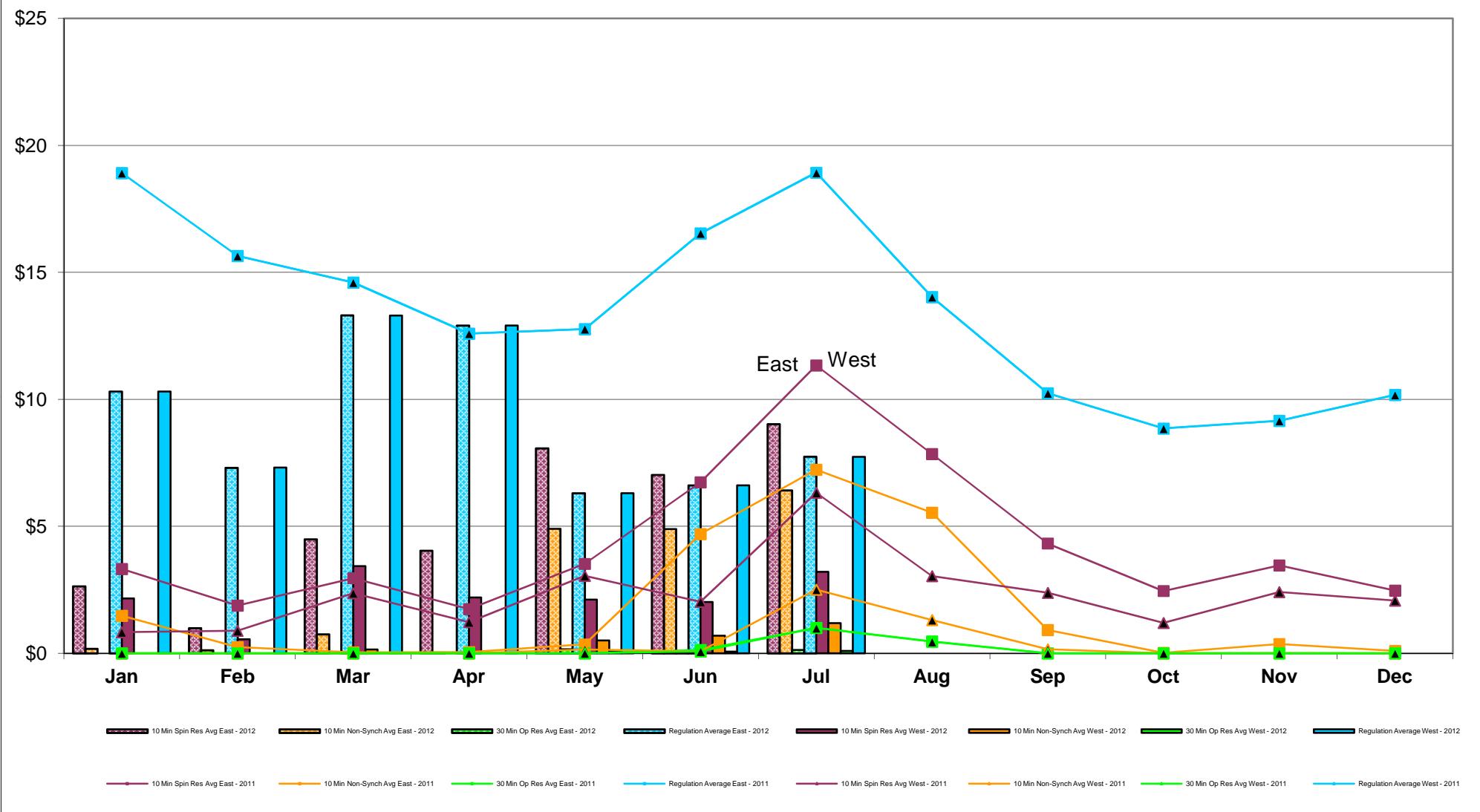
**NYISO Multi Hour Block Transactions**  
**Monthly Total MWh**



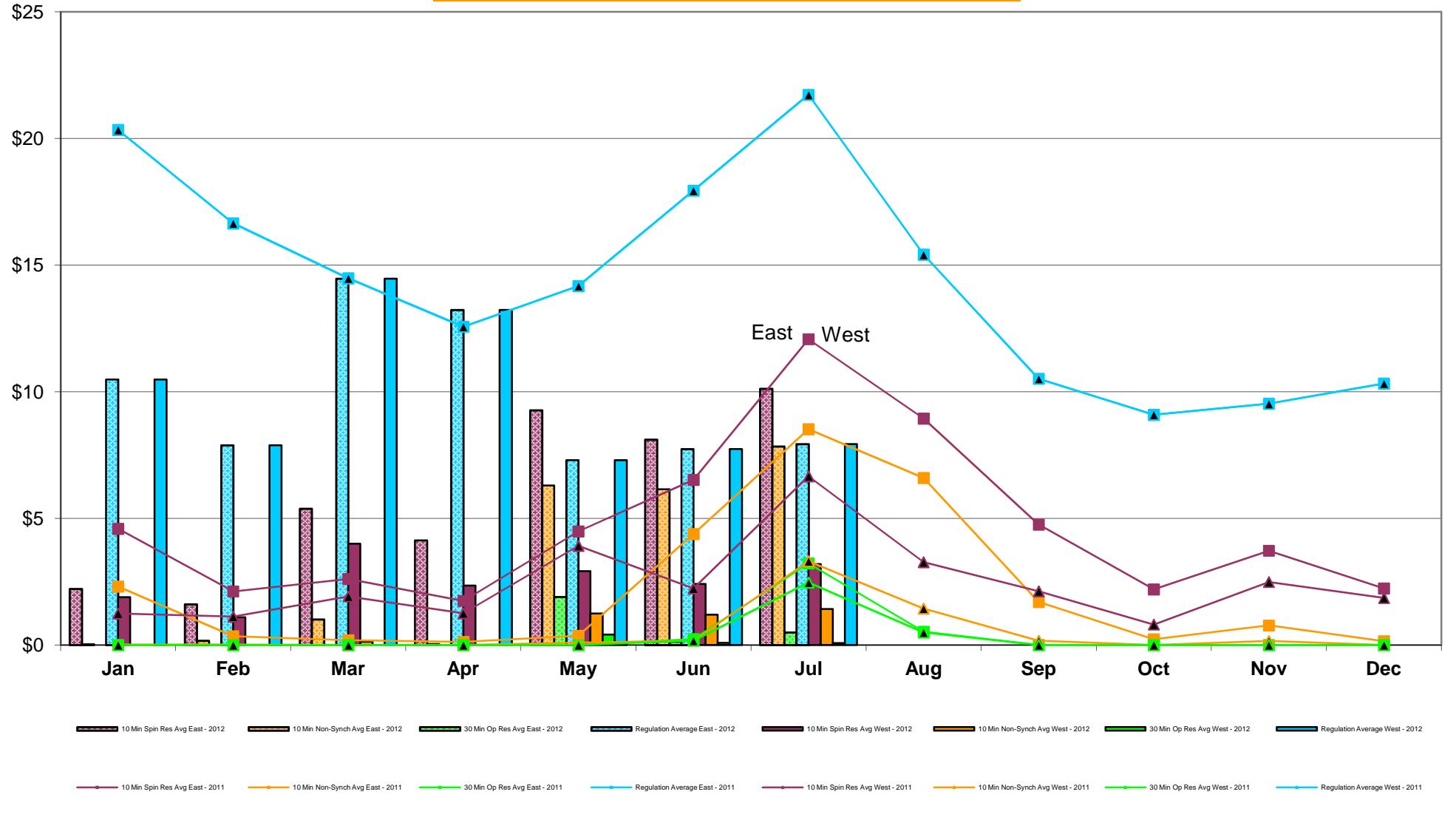
## NYISO Monthly Average Ancillary Service Prices Day Ahead Market 2011 - 2012



## NYISO Monthly Average Ancillary Service Prices RTC Market 2011 - 2012



**NYISO Monthly Average Ancillary Service Prices  
Real Time Market 2011 - 2012**

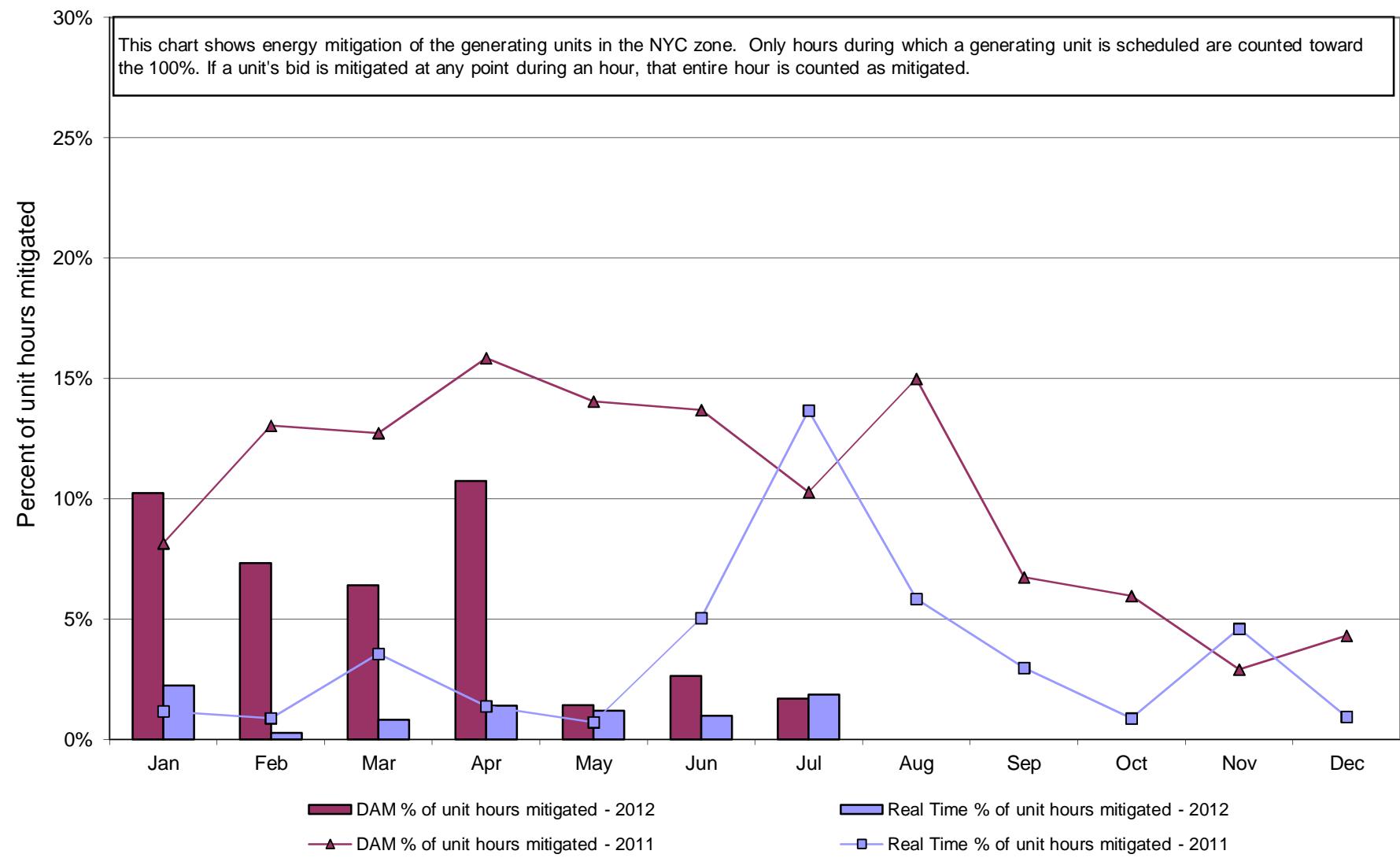


### NYISO Markets Ancillary Services Statistics - Unweighted Price (\$/MWH)

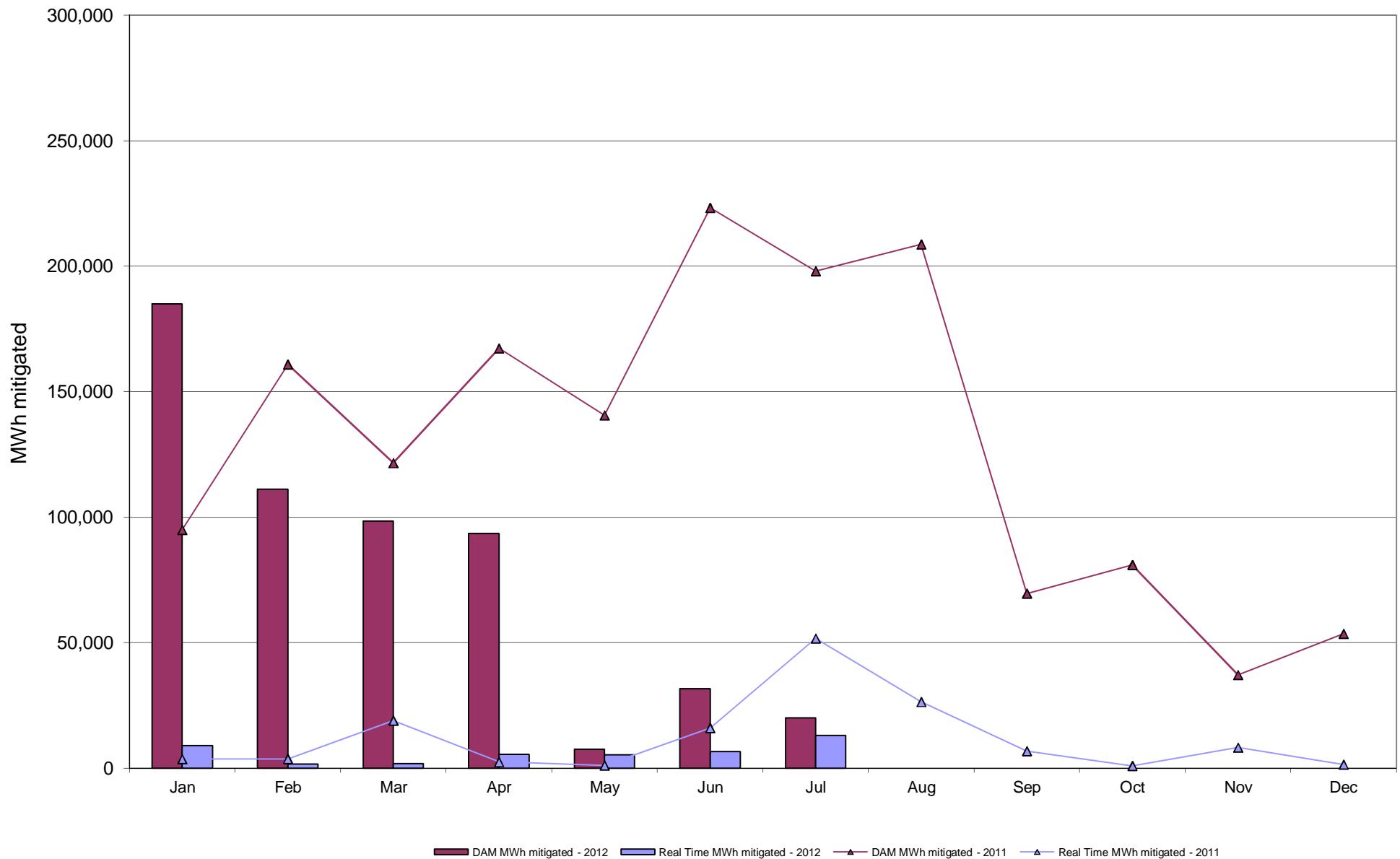
<u>2012</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
<b><u>Day Ahead Market</u></b>												
10 Min Spin East	6.26	4.01	7.11	6.44	4.62	7.54	7.77					
10 Min Spin West	1.34	0.56	3.46	3.43	2.61	3.23	4.04					
10 Min Non Synch East	4.71	3.64	3.85	3.11	2.21	4.92	6.18					
10 Min Non Synch West	0.15	0.18	0.22	0.16	0.20	0.72	2.55					
30 Min East	0.15	0.18	0.22	0.16	0.20	0.48	0.64					
30 Min West	0.15	0.18	0.22	0.16	0.20	0.48	0.64					
Regulation East	9.01	7.11	11.33	11.77	9.63	13.55	15.78					
Regulation West	9.01	7.11	11.33	11.77	9.63	13.55	15.78					
<b><u>RTC Market</u></b>												
10 Min Spin East	2.64	0.99	4.49	4.05	8.07	7.03	9.02					
10 Min Spin West	2.16	0.55	3.43	2.20	2.11	2.02	3.21					
10 Min Non Synch East	0.17	0.13	0.75	0.02	4.90	4.90	6.42					
10 Min Non Synch West	0.00	0.00	0.15	0.00	0.50	0.69	1.19					
30 Min East	0.00	0.00	0.00	0.00	0.16	0.07	0.13					
30 Min West	0.00	0.00	0.00	0.00	0.07	0.07	0.10					
Regulation East	10.31	7.31	13.30	12.91	6.31	6.61	7.74					
Regulation West	10.31	7.31	13.30	12.91	6.31	6.61	7.74					
<b><u>Real Time Market</u></b>												
10 Min Spin East	2.21	1.61	5.38	4.14	9.27	8.11	10.12					
10 Min Spin West	1.89	1.09	4.00	2.34	2.92	2.41	3.20					
10 Min Non Synch East	0.03	0.17	1.01	0.03	6.31	6.15	7.84					
10 Min Non Synch West	0.00	0.00	0.13	0.00	1.24	1.20	1.42					
30 Min East	0.00	0.00	0.00	0.00	1.90	0.13	0.49					
30 Min West	0.00	0.00	0.00	0.00	0.41	0.09	0.08					
Regulation East	10.49	7.89	14.46	13.23	7.30	7.74	7.93					
Regulation West	10.49	7.89	14.46	13.23	7.30	7.74	7.93					
<u>2011</u>	<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 Market</u></b>												
10 Min Spin East	10.15	10.66	8.76	8.87	9.30	7.35	7.18	4.47	5.46	7.76	4.48	4.72
10 Min Spin West	4.55	4.56	4.67	4.72	4.30	3.80	3.12	2.42	2.62	3.15	1.32	1.25
10 Min Non Synch East	4.99	5.48	3.90	3.60	4.75	3.51	4.10	2.19	2.75	4.62	3.33	3.55
10 Min Non Synch West	0.02	0.02	0.02	0.03	0.03	0.10	0.17	0.19	0.15	0.14	0.18	0.17
30 Min East	0.02	0.02	0.02	0.03	0.03	0.10	0.17	0.19	0.15	0.14	0.18	0.17
30 Min West	0.02	0.02	0.02	0.03	0.03	0.10	0.17	0.19	0.15	0.14	0.18	0.17
Regulation East	19.14	16.33	13.53	11.34	10.51	14.26	15.29	10.23	8.32	8.02	7.01	7.85
Regulation West	19.14	16.33	13.53	11.34	10.51	14.26	15.29	10.23	8.32	8.02	7.01	7.85
<b><u>RTC Market</u></b>												
10 Min Spin East	3.32	1.88	2.96	1.74	3.52	6.74	11.34	7.84	4.33	3.84	3.46	2.47
10 Min Spin West	0.83	0.89	2.37	1.23	3.05	2.03	6.33	3.04	2.38	2.23	2.41	2.08
10 Min Non Synch East	1.48	0.25	0.04	0.05	0.35	4.69	7.23	5.54	0.91	0.10	0.37	0.09
10 Min Non Synch West	0.00	0.00	0.00	0.00	0.15	0.07	2.51	1.31	0.16	0.00	0.01	0.00
30 Min East	0.00	0.00	0.00	0.00	0.00	0.13	1.01	0.47	0.00	0.00	0.00	0.00
30 Min West	0.00	0.00	0.00	0.00	0.00	0.07	1.00	0.45	0.00	0.00	0.00	0.00
Regulation East	18.91	15.65	14.60	12.59	12.77	16.54	18.93	14.03	10.24	9.62	9.16	10.18
Regulation West	18.91	15.65	14.60	12.59	12.77	16.54	18.93	14.03	10.24	9.62	9.16	10.18
<b><u>Real Time Market</u></b>												
10 Min Spin East	4.59	2.12	2.61	1.74	4.49	6.52	12.08	8.94	4.75	3.03	3.72	2.24
10 Min Spin West	1.25	1.12	1.92	1.26	3.92	2.23	6.66	3.27	2.12	1.50	2.49	1.86
10 Min Non Synch East	2.31	0.35	0.19	0.13	0.37	4.38	8.52	6.60	1.71	0.21	0.77	0.15
10 Min Non Synch West	0.02	0.02	0.00	0.00	0.10	0.18	3.31	1.44	0.17	0.00	0.16	0.00
30 Min East	0.00	0.00	0.00	0.00	0.00	0.24	3.22	0.52	0.00	0.00	0.00	0.00
30 Min West	0.00	0.00	0.00	0.00	0.00	0.18	2.47	0.50	0.00	0.00	0.00	0.00
Regulation East	20.34	16.65	14.48	12.57	14.17	17.94	21.72	15.41	10.51	9.34	9.53	10.32
Regulation West	20.34	16.65	14.48	12.57	14.17	17.94	21.72	15.41	10.51	9.34	9.53	10.32

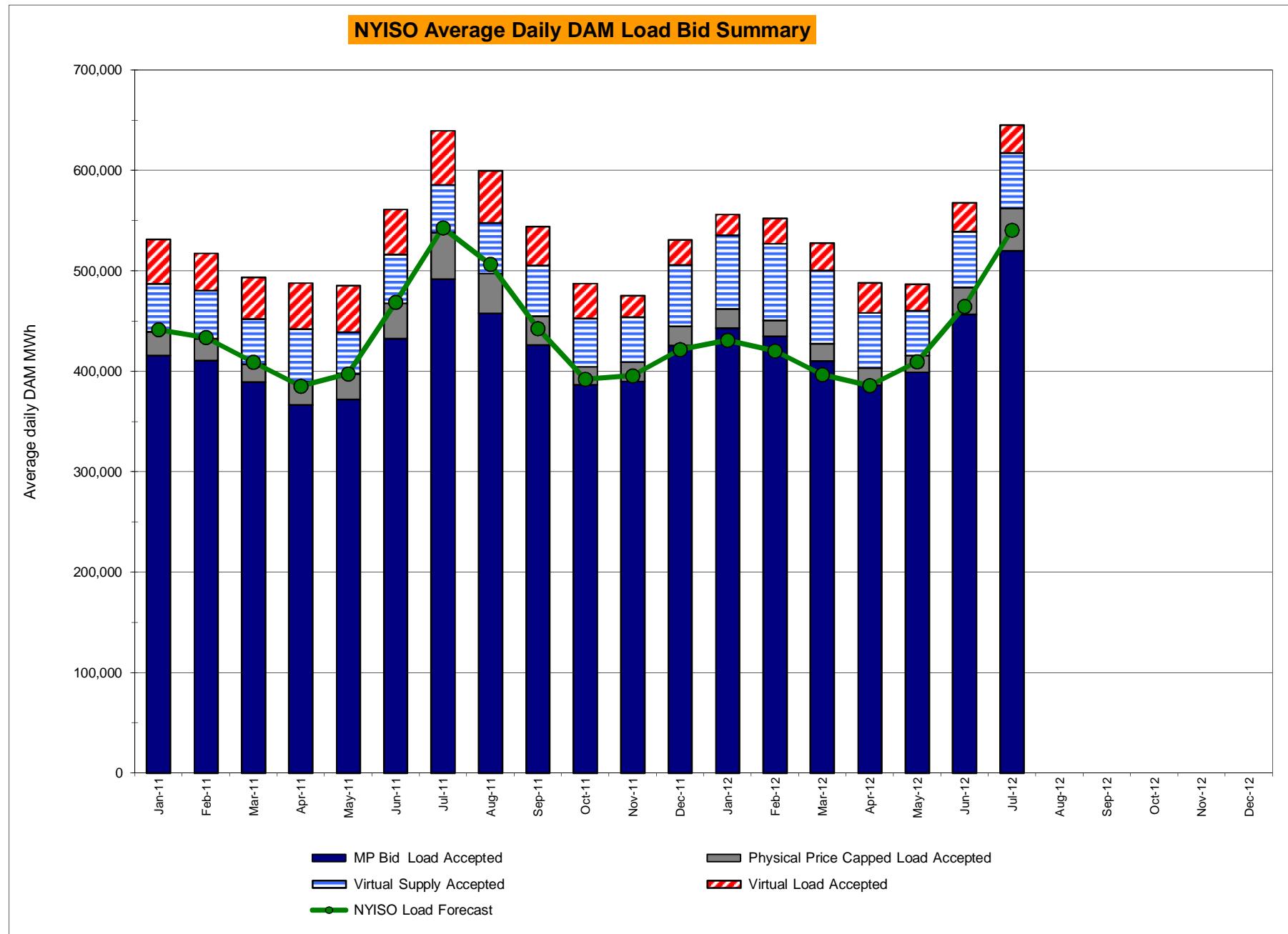
## NYISO In City Energy Mitigation - AMP (NYC Zone) 2011 - 2012

### Percentage of committed unit-hours mitigated

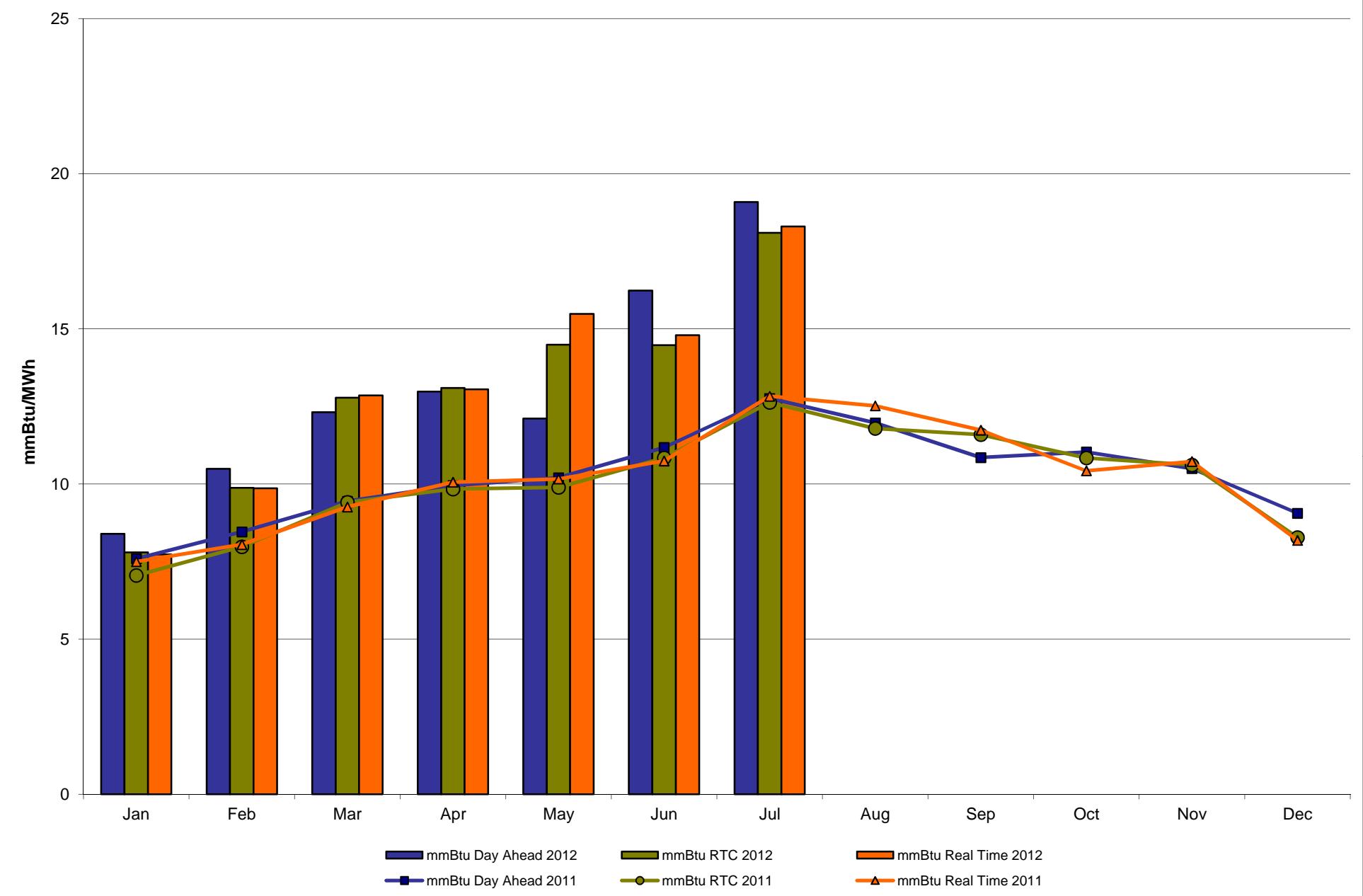


**NYISO In City Energy Mitigation (NYC Zone) 2011 - 2012**  
**Monthly megawatt hours mitigated**

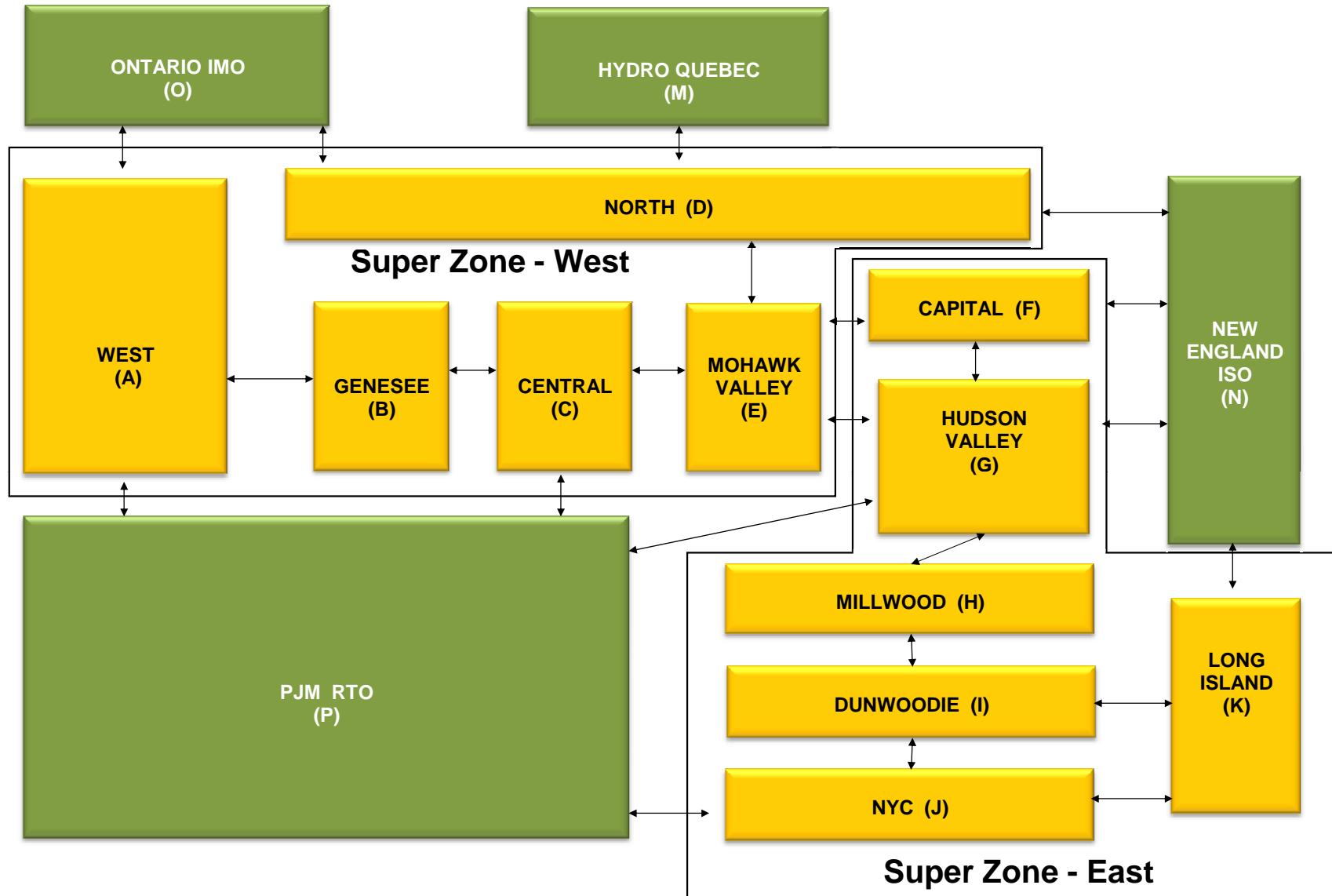




## Monthly Implied Heat Rate 2011-2012



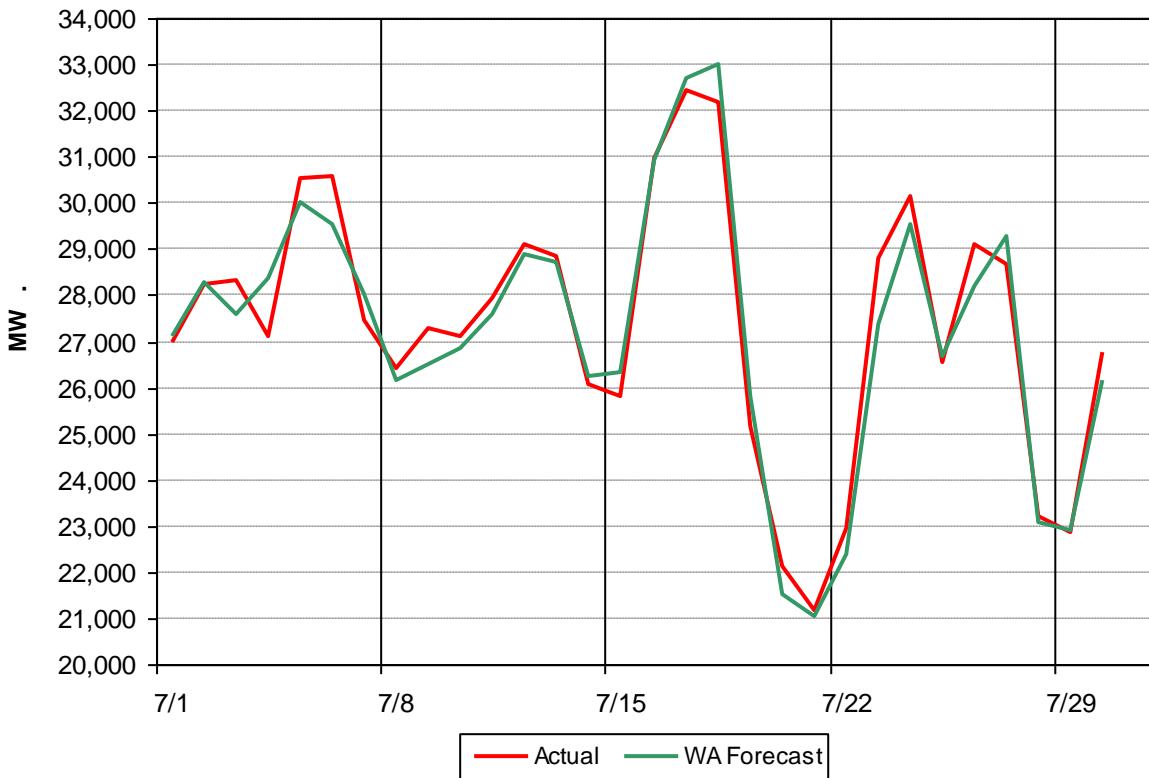
# NYISO LBMP ZONES



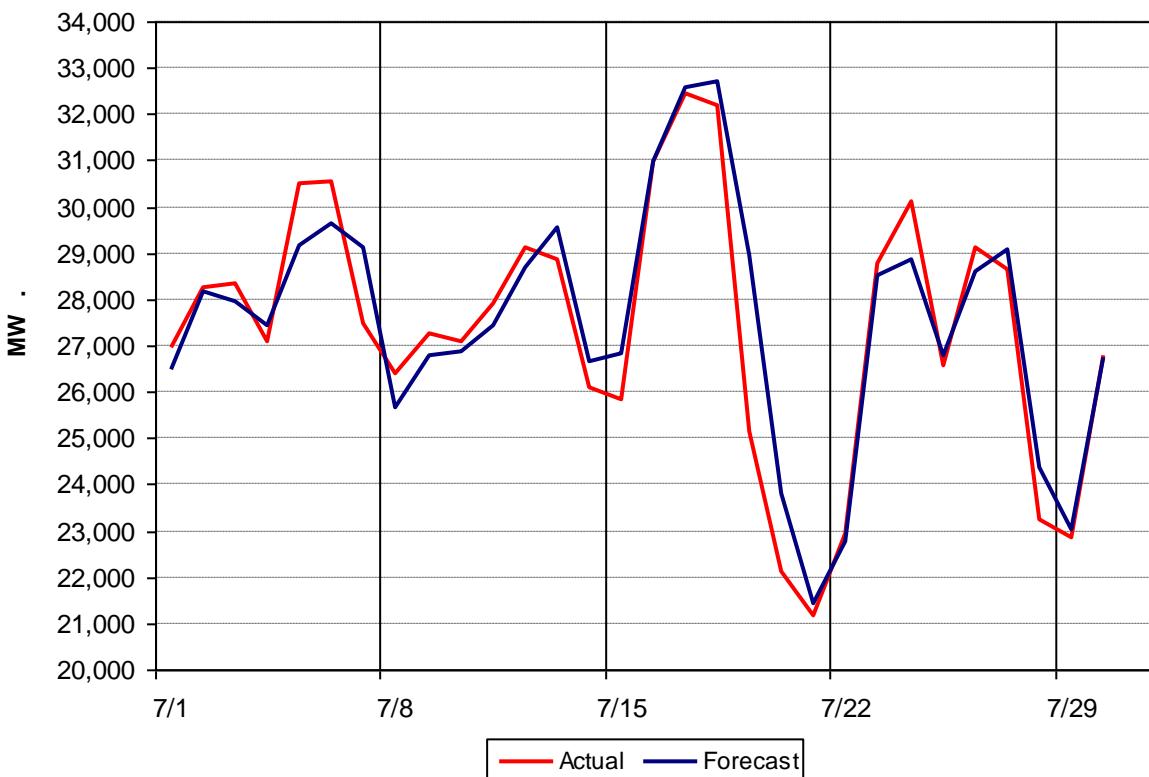
**Billing Codes for Chart 4-C**

<b>Chart - 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	84001	EDRP/SCR Demand Response - Local
Bid Production Cost Guarantee DAM	84101	EDRP/SCR Demand Response - NYISO Wide
Bid Production Cost Guarantee DAM	81401	DAM Price Responsive Load Program
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 - July 2012 Actual vs Weather-Adjusted Forecast

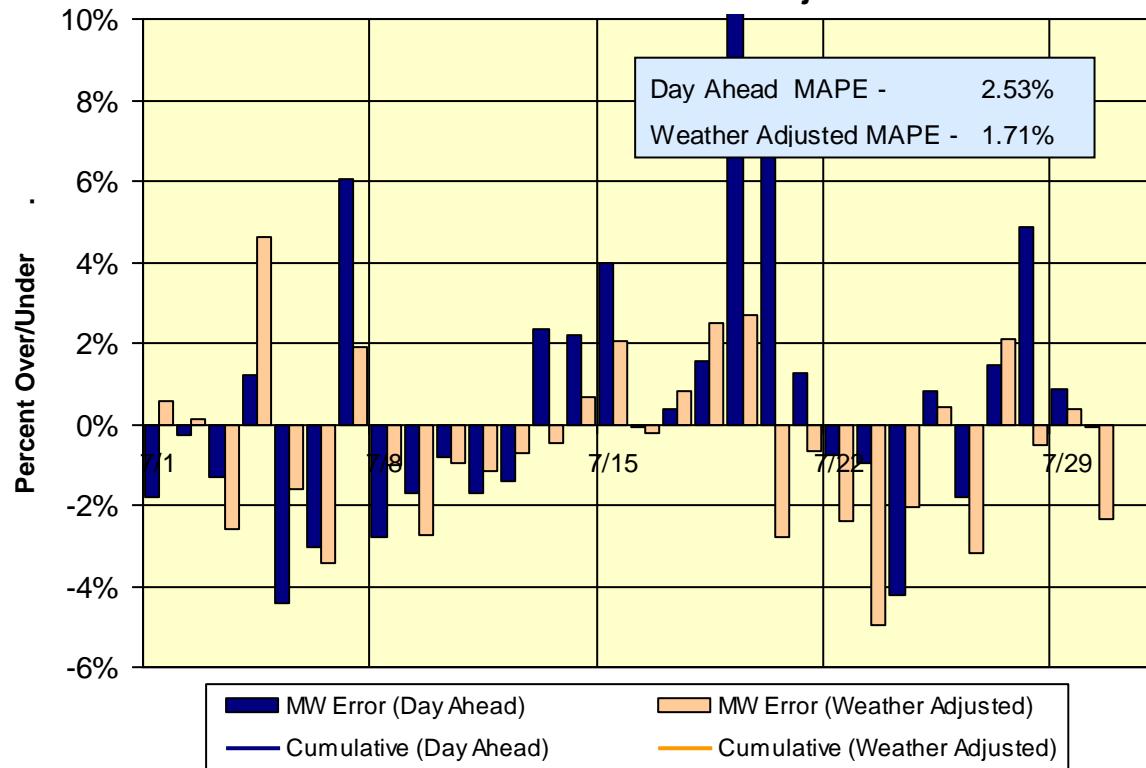


### NYISO Daily Peak Load - July 2012 Actual vs Forecast



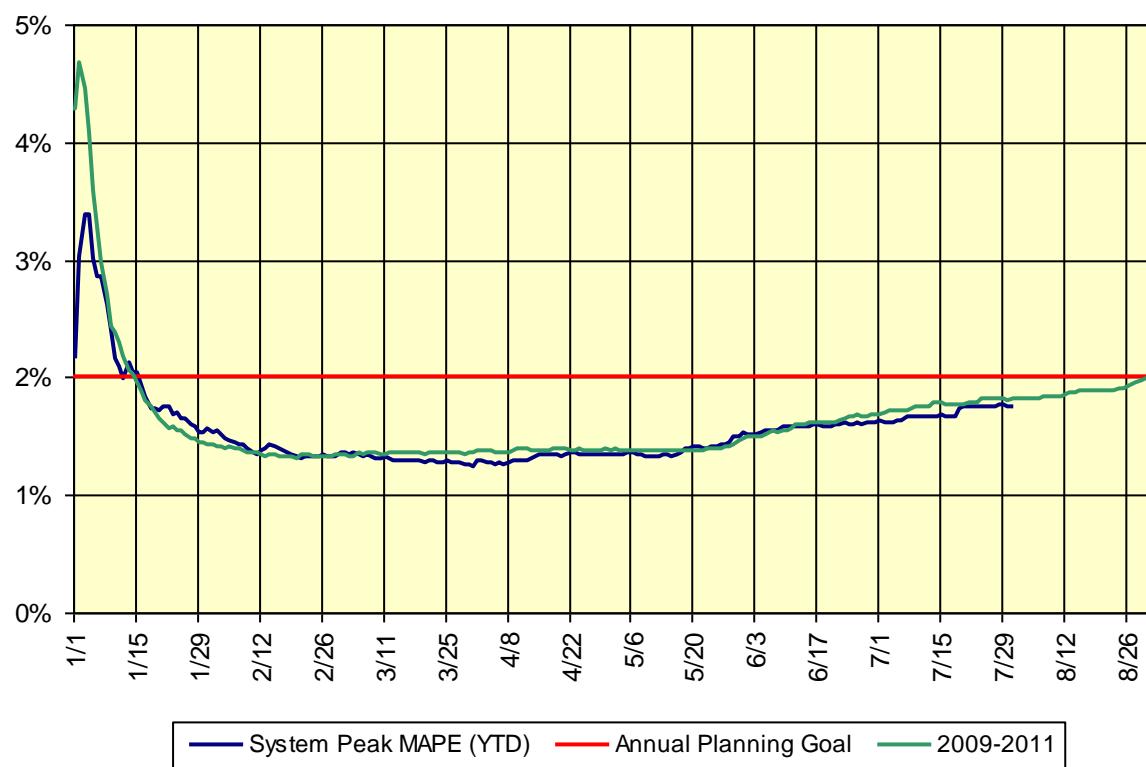
## Day Ahead Peak Forecast - July 2012

### Percent Error - Actual & Weather Adjusted



## Day-Ahead Forecast Accuracy - Cumulative Performance

### 2012 Year-to-Date





## 2012 Major Product Enhancements

Project	Status and Milestone Deliverables
<b>Business Intelligence Products</b>	
Market and Settlement Data Management Phase I: Broader Regional Markets	<p><b>Status:</b> Broader Regional Markets (BRM) initiatives will require reporting and analysis on historical BMS and MIS data beginning in 2012. Analysis will need to be performed over a large time span of data. BMS data that is currently retained for only ten days will be retained for up to five years for analysis. This deployment is scheduled for the 4<sup>th</sup> quarter in support of Market to Market with PJM.</p> <p><b>Deliverables:</b> To achieve BRM reporting and analysis requirements, this project will provide a platform for analytics and reporting as well as analytics of other control area data that may be required.</p>
eTariff Public Website Module	<p><b>Status:</b> This project will add the eTariff Public Website module to <a href="http://www.nyiso.com">www.nyiso.com</a>. This deployment is targeted for the 4<sup>th</sup> quarter.</p> <p><b>Deliverables:</b> The 2012 project will provide Market Participants with new functionality that allows searching and viewing capabilities for NYISO tariffs, filings and docket numbers.</p>
Public Website: Publishing Process	<p><b>Status:</b> The NYISO public website uses several older systems to maintain the content on the website. This deployment is scheduled for the 4<sup>th</sup> quarter.</p> <p><b>Deliverables:</b> This project will replace the current content management technology and the portal technology with a single, more efficient, and cost-effective solution using Microsoft SharePoint to maintain and post documents to the public website.</p>
<b>Capacity Market Products</b>	
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. The Market Design Concept was discussed with stakeholders in late October 2011 and the compliance filing was submitted in November 2011. Deployment is scheduled for 2014 consistent with the next Demand Curve Reset. The functional requirements specification is complete. Software development is under way.</p> <p><b>Deliverables:</b> The 2012 project will focus on completing the functional requirements specification for additional capacity zones and initiating the software development process.</p>



## 2012 Major Product Enhancements

Project	Status and Milestone Deliverables
<b>Demand Response Products</b>	
DSASP Direct Communication Phase 2	<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. Functional requirements for direct communications were successfully completed and communicated to the Market Participants in 2011. Market rule changes and software changes are required to support the implementation of DSASP Aggregations. The deployment targeted for 4thQ 2012 has been rescheduled for 1<sup>st</sup> quarter 2013 due to the resource reallocation required to implement Order 755 in October.</p> <p><b>Deliverables:</b> The focus of the 2012 project is the implementation of the required rule changes and software changes.</p>
Demand Response Information System: Event Notification	<p><b>Status:</b> NYISO currently handles event notification for Demand Response through a vendor who is no longer reliable in delivering notification, which has resulted in NYISO Operations having to utilize manual processes for sending event notification to stakeholders. Replacement of NYISO's existing event notification system with DRIS will enhance reliability by ensuring that demand response aggregators receive notifications in a consistent and timely manner. Integration with DRIS reduces duplication of event information and facilitates event response reporting. This project was successfully deployed in June. This project is complete.</p> <p><b>Deliverables:</b> The focus of the project in 2012 is the implementation of a replacement of the event notification vendor to allow for integration with the Demand Response Information System (DRIS).</p>
Demand Response – Real Time Energy Market	<p><b>Status:</b> NYISO will focus on the development of market rules and identification of software changes required to permit demand response entities to participate in the NYISO's real-time energy market. Market Design approval is targeted for 4<sup>th</sup> quarter 2012.</p> <p><b>Deliverables:</b> Market Design Approval is the focus of the project in 2012.</p>



## 2012 Major Product Enhancements

Project	Status and Milestone Deliverables
Order 745 – Day Ahead Demand Response Program (DADRP) Compliance	<p><b>Status:</b> NYISO will implement the net benefits test based on the compliance filing submitted in 2011. Also, as part of the compliance obligation, NYISO will conduct a study to evaluate the feasibility of incorporating a dynamic net benefits test into the day-ahead and real-time unit commitment and scheduling processes. Implementation of the net benefits test was scheduled for a March deployment; however, as of March 8, 2012, FERC has not responded to NYISO's August 2011 compliance filing on the net benefits test; NYISO notified FERC in mid-February that it would not be able to implement on the proposed effective without an answer from FERC; project is temporarily reprioritized pending a response from FERC. A compliance filing detailing the results of the feasibility study is due to FERC on September 21, 2012.</p> <p><b>Deliverables:</b> The focus of this project in 2012 is the implementation of the Net Benefits test as filed with FERC in 2011 and completion of the dynamic net benefits study.</p>
Energy Markets Products	
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. A market design concept was presented to stakeholders in the 4<sup>th</sup> quarter of 2011. Tariff changes and software changes were originally planned for 4<sup>th</sup> quarter 2012; this project has been rescheduled for delivery in 1<sup>st</sup> quarter 2013 due to the resource reallocation required to implement Order 755 in October.</p> <p><b>Deliverables:</b> This project will focus on implementation of required tariff changes and software changes to support the market design.</p>
Market to Market Coordination - PJM	<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 flow gates could not be addressed until the NYISO had developed or procured a market flow calculator. In 2011 the NYISO implemented the market flow calculator and continued to work with PJM to meet the 2010 FERC Order to implement Market to Market coordination. The software deployment is targeted for 4<sup>th</sup> quarter 2012.</p> <p><b>Deliverables:</b> The focus of this project in 2012 is to deploy all of the required software changes to enable Market to Market coordination between PJM and NY.</p>

Project	Status and Milestone Deliverables
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. Phase I is complete. Phase III was successfully deployed and activated in June. Phase III is complete.</p> <p><b>Deliverables:</b> The focus of this project in 2012 is to deliver the necessary software enhancements and tools to implement intra-hour energy transaction scheduling with PJM.</p>
Interregional Transaction Coordination Phase IV – ISO-NE Intra-hour Transaction Scheduling (IRIS)	<p><b>Status:</b> This project expands upon the work completed in Phases I and III 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." The tariff filing was submitted in 4<sup>th</sup> Q 2011. The Architectural Design Specification is targeted for 4<sup>th</sup> quarter 2012.</p> <p><b>Deliverables:</b> The focus of the project in 2012 is to complete the Architectural Design Specification.</p>
Interregional Transaction Coordination Phase V – PJM Coordinated Transaction Scheduling	<p><b>Status:</b> This project expands upon the work of Phase 4 by leveraging the designs with New England on Coordinated Transaction Scheduling. PJM is hoping to evolve transaction scheduling with the NYISO to gain full efficiencies for both regions. A market design concept is targeted for the 4<sup>th</sup> quarter 2012.</p> <p><b>Deliverables:</b> The focus of this project in 2012 is the proposal of a market design concept.</p>
Order 755: Regulation Compensation	<p><b>Status:</b> FERC issued Order 755 in October 2011 with a compliance filing detailing design and implementation plan due in April 2012, followed by implementation in October 2012. This project is targeted for deployment in the 4<sup>th</sup> quarter 2012.</p> <p><b>Deliverables:</b> The focus of this project in 2012 is the deployment of software changes necessary to support NYISO's compliance filing submitted in April 2012.</p>
Scheduling and Pricing: Enhanced Scarcity Pricing	<p><b>Status:</b> The 2010 State of the Market recommends the NYISO investigate the possibility of more efficient price setting when energy within the NYCA is scarce. The NYISO will evaluate the causes for the pricing inefficiency and, if necessary, develop and review with stakeholders potential market enhancements that will best capture most efficient price for periods with scarce energy.</p> <p><b>Deliverables:</b> The focus of this project in 2012 is stakeholder approval of the market design.</p>



## 2012 Major Product Enhancements

Project	Status and Milestone Deliverables
<b>Enterprise Technology Products</b>	
Ranger Messaging Integration	<p><b>Status:</b> Market to Market Coordination requires near real-time business messages to be exchanged between NYISO and the market systems of its external partners in support of the flow gate coordination process. This project will augment existing integration capabilities to include secure near real-time exchange of structured business data between NYISO's market system, PJM, and other partners. Near real-time messaging will increase as NYISO processes increasingly interact with external partners and customers. Deployment of ranger messaging integration is targeted for 4<sup>th</sup> quarter 2012 in support of Market to Market Coordination with PJM.</p> <p><b>Deliverables:</b> The focus of this project in 2012 is to implement a new platform to enable near real-time message exchange.</p>
Enterprise Project Management (EPM) Platform: Phase I	<p><b>Status:</b> This initiative will deliver Microsoft Project 2010 in a robust, hosted environment that will provide NYISO with up-to-date project scheduling and tracking tools, centralized and consistent project reporting for improved portfolio management, and improved project team collaboration. This platform will also enable future enhancements to NYISO's project resource planning and management process. Phase I was successfully implemented in July.</p> <p><b>Deliverables:</b> The focus of Phase I is implementation of the hosted solution combined with training and updated business process to effectively utilize the platform.</p>
<b>Finance Products</b>	
Bad Debt Processing Flexibility	<p><b>Status:</b> This project will provide NYISO the ability to place Bad Debt Losses on any invoice (Flexible Invoice Period [FIP] or Monthly) to reduce exposure and aid in timely recovery of funds. Currently, bad debt losses can only be applied to a monthly invoice, creating a potential delay of 3-4 weeks should a bad debt loss occur shortly after monthly invoice issuance. This project would reduce the length of time funds are borrowed from Working Capital and reduce credit risk exposure. The software changes were successfully deployed in March. This project is complete.</p> <p><b>Deliverables:</b> The focus of this project is implementation of the required software changes.</p>
ICAP Weekly Invoicing Automation	<p><b>Status:</b> This project will automate the process of assessing ICAP charges/credits on Flexible Invoicing Period (FIP) and Monthly invoices. This is a manually intensive process today spanning multiple departments. This project would eliminate the need for manual entry and reduce the potential for errors associated with manual processes. The software deployment of these changes is planned for January 2012. This project is complete.</p> <p><b>Deliverables:</b> The focus of this project is the automation of the existing manual process.</p>
Transaction Credit Enhancements	<p><b>Status:</b> Enhancements to the CMS application are needed to better align the credit requirements for external transactions (imports, exports, wheels) to the evolving market design for transactions occurring as part of the Broader</p>



## 2012 Major Product Enhancements

Project	Status and Milestone Deliverables
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	<p>Regional Markets initiatives. Market rules have been approved by stakeholders and detailed requirements are complete. Completion of the software development was originally scheduled for 4<sup>th</sup> quarter 2012 with implementation planned for 1<sup>st</sup> quarter 2013; this project has been rescheduled for delivery in 2nd quarter 2013 due to the resource reallocation required to implement Order 755 in October.</p>
<p><b>Deliverables:</b> The focus of this project in 2012 is to complete all of the software development.</p>	
<h3>Operations &amp; Reliability Products</h3>	
Energy Management System (EMS) Visualization	<p><b>Status:</b> This is a multi-year project to determine the requirements, design and to implement the necessary situational awareness, data redundancy and communication infrastructure to facilitate operational control from the new Krey Primary Control Center. The Architectural Design is scheduled for completion in the 3<sup>rd</sup> quarter.</p>
	<p><b>Deliverables:</b> The focus of this project in 2012 is completion of the Architectural Design.</p>
Phase I Meter Upgrade	<p><b>Status:</b> The focus of this project is to move existing and new circuits to a new configuration and to add the new building to the network, which is required in order to fully support Phase I data needs in the new control center. The Architectural Design is scheduled for completion in the 3<sup>rd</sup> quarter.</p>
	<p><b>Deliverables:</b> The focus of this project in 2012 is completion of the Architectural Design.</p>
Hudson Transmission Partners (HTP) Controllable Tie Line	<p><b>Status:</b> This project would support the implementation of a new controllable tie line from PJM into NYCA. Targeted commercial date is early 2013. Software changes are targeted for 1<sup>st</sup> quarter 2013 based on a revised schedule from HTP.</p>
	<p><b>Deliverables:</b> The focus of this project in 2012 is to deploy the required software changes in support of the targeted commercial operation date.</p>
Rest of State (ROS) DAM Mitigation Automation	<p><b>Status:</b> Currently MMA monitors for ROS DAM BPCG mitigation in a very labor intensive and time consuming manner. All other BPCG mitigation has been automated (i.e. DAM and RT for NYC and RT for ROS). The implementation of ROS DAM BPCG is the last remaining tariff defined full threshold BPCG mitigation that needs to be automated. Approval of the market design is targeted for 4<sup>th</sup> quarter 2012.</p>
	<p><b>Deliverables:</b> The focus of this project in 2012 is stakeholder approval of the market design.</p>



## 2012 Major Product Enhancements

Project	Status and Milestone Deliverables
<b>Planning and TCC Market Products</b>	
TCC Multi-Duration/Non-Historic Fixed-Price TCC Phase I	<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 Fixed Price TCCs, multi-duration capability period auctions, and balance of period TCCs. NYISO completed the functional requirements in 2011 as planned. NYISO is targeting a 4<sup>th</sup> quarter software deployment to support offering Non-Historic Fixed Price TCCs beginning with the Spring 2013 Capability Period Auction.</p> <p><b>Deliverables:</b> The focus of this project is a software deployment in support of NYISO's Non-Historic Fixed-Price TCC Compliance Filing.</p>
High Performance Computing for Planning Studies Phase II	<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. The solution for MARs was successfully deployed in August 2011. Phase II of this project will deploy MAPS on the High Performance Computing platform. This deployment is targeted for 4th quarter 2012.</p> <p><b>Deliverables:</b> The focus of this project in 2012 is the implementation of the solution for MAPS.</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 manner. The software design is targeted for completion in the 4<sup>th</sup> quarter 2012.</p> <p><b>Deliverables:</b> The focus of this project in 2012 is the completion of the software design.</p>

## Summary Description of FERC Regulatory Filings, Investigations and Rulemakings and Related Orders in NYISO Matters July 2012

<b>Filing Date</b>	<b>Filing Summary</b>	<b>Docket</b>	<b>Order Date</b>	<b>Order Summary</b>	<b>Outcome</b>
06/25/2012	NYISO filing of an amended and restated LGIA among the NYISO, NYPA, and Marble River, LLC	ER12-2098-000	07/25/2012	FERC letter order accepting LGIA effective 6/13/12, as requested	Accepted
06/28/2012	NYISO filing of a request for tariff waiver, shortened comment period and expedited action re: procurement of black start service from TC Ravenswood	ER12-2133-000	07/20/2012	Order granting in part and dismissing in part NYISO's waiver request	Accepted
07/12/2012	NYISO withdrawal of 6/18/12 letter re: delay in variable scheduling at PJM Keystone proxy generator bus	ER11-2547-005			
07/12/2012	NYISO tariff filing notifying FERC of revised implementation date (6/27/12) for 15 minute variable scheduling at PJM Keystone proxy generator bus	ER11-2547-006			
07/18/2012	NYISO 205 filing to seek recovery of MI/ON PAR charges from NYISO customers	ER12-2260-000			
07/19/2012	NYISO 205 filing re: OATT Attachment L revisions to reflect changes to existing transmission agreements	ER12-2272-000			
07/20/2012	NYISO motion for extension of time to submit data re: FERC Order No. 760-ISO/RTO ongoing data delivery to FERC	RM11-17-000			
07/20/2012	IRC NOPR comments re: transmission system planning performance requirements	RM12-1-000			
07/23/2012	NYISO request for expedited clarification or rehearing of the buyer side mitigation rules order	EL11-42-000			
07/25/2012	NYISO 205 filing re: OATT Attachment Y and MST revisions to improve clarity and consistency of Tariff language and terminology	EL12-2303-000			
07/25/2012	NYISO filing of an answer to Demand Response Supporters' July 10, 2012, request for order	ER11-4338-000			

<b>Filing Date</b>	<b>Filing Summary</b>	<b>Docket</b>	<b>Order Date</b>	<b>Order Summary</b>	<b>Outcome</b>
07/27/2012	NYISO filing on behalf of NYPA: NYPA Revised Transmission Revenue Requirement	ER12-2317-000			
07/27/2012	NYISO motion to intervene and clarifying comments re: Demand Response Partners' request for tariff waiver	ER12-2212-000			
07/30/2012	IRC comments supporting FERC adoption of NAESB demand response and energy efficiency standards	RM05-5-020			
07/30/2012	NYSIO filing of corrected joint statement of issues and proposed witness schedule re: MISO/ITC PARs	ER11-1844-000			
07/31/2012	NYISO filing of its Twelfth Price Validation Informational Report	ER06-1014-000			
07/31/2012	NYISO filing of its second quarter 2012 Electric Quarterly Report	ER02-2001-000	None	No order to be issued	