# Monthly Report

May 2012

Rick Gonzales
Rana Mukerji
Robert Fernandez

# TABLE OF CONTENTS

# *Operations Performance Metrics Monthly Report*


## *May 2012 Report*

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

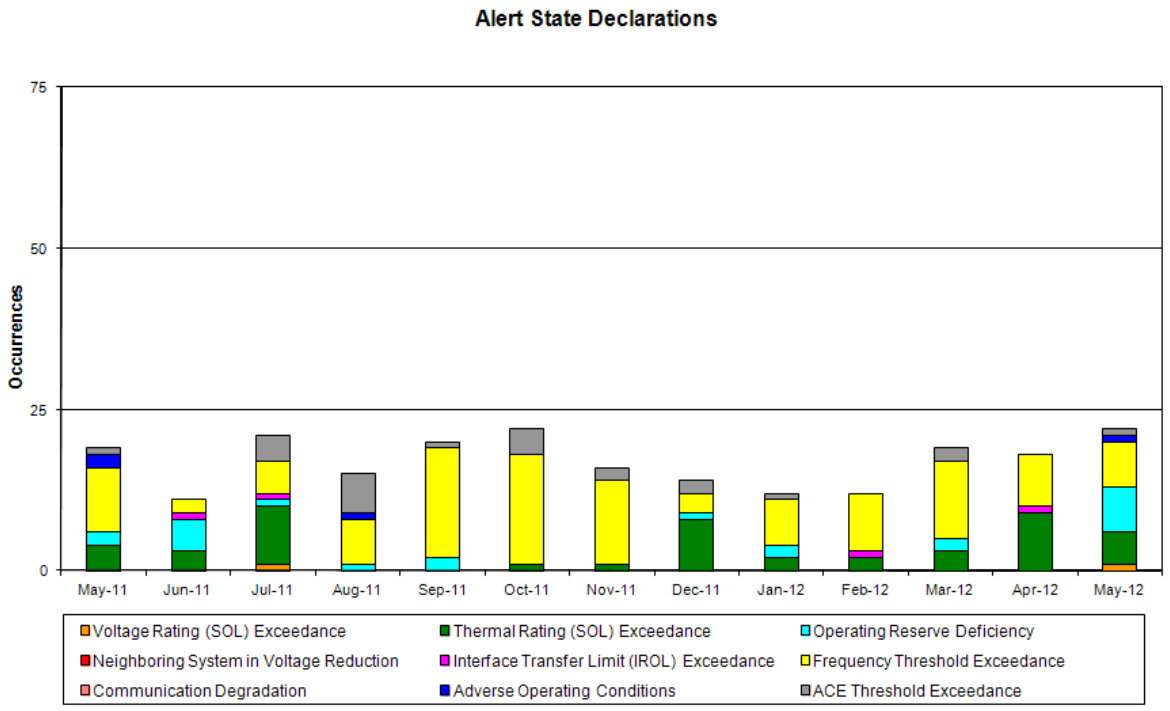
Prepared by NYISO Operations Analysis and Services, based on settlements initial invoice data collected on or before June 8, 2012.

# Table of Contents

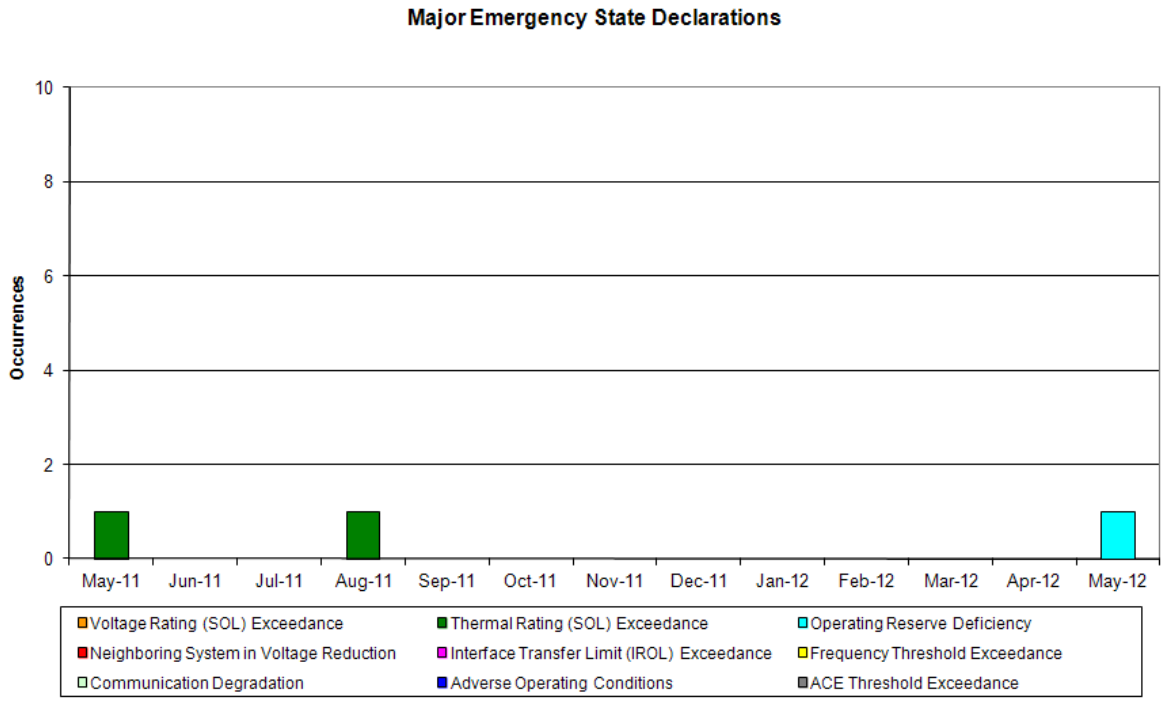
## May 2012 Operations Performance Highlights

- Peak load of 28,242 MW occurred on 5/29/2012 HB 12
- All-time summer capability period peak load of 33,939 MW occurred on 8/2/2006 HB13
- 34 hours of Thunder Storm Alerts were declared
- 81 hours of NERC TLR level 3 curtailments
- EDRP/SCR resources were activated on 5/29/2012

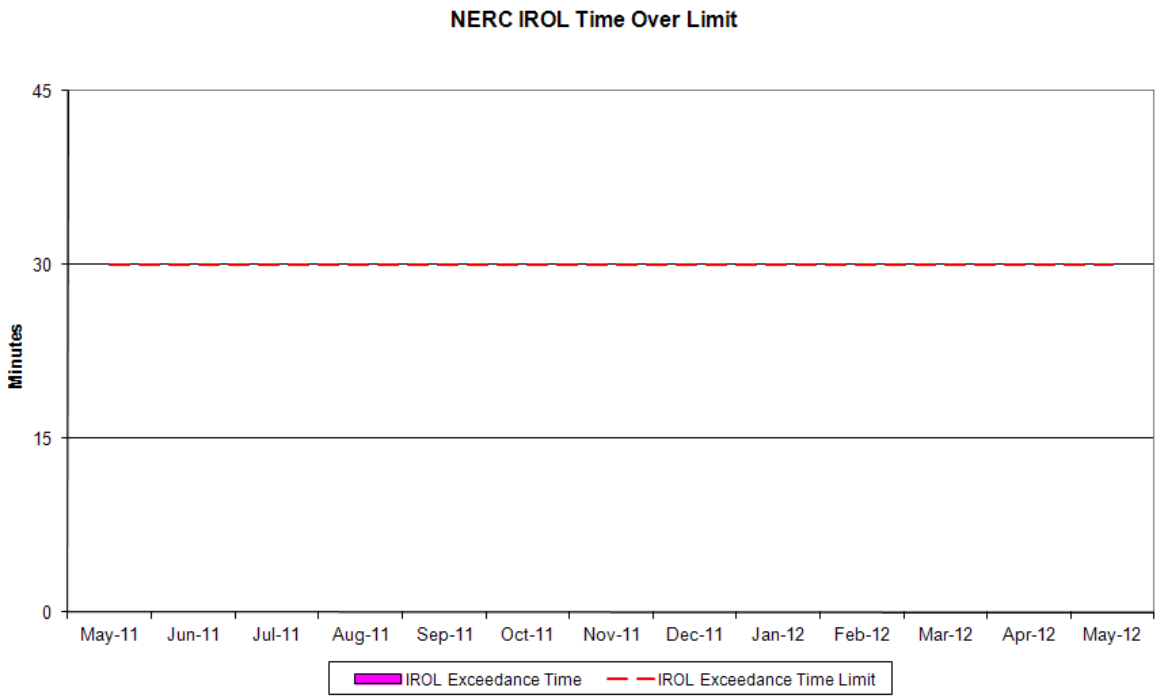
# Reliability Performance Metrics



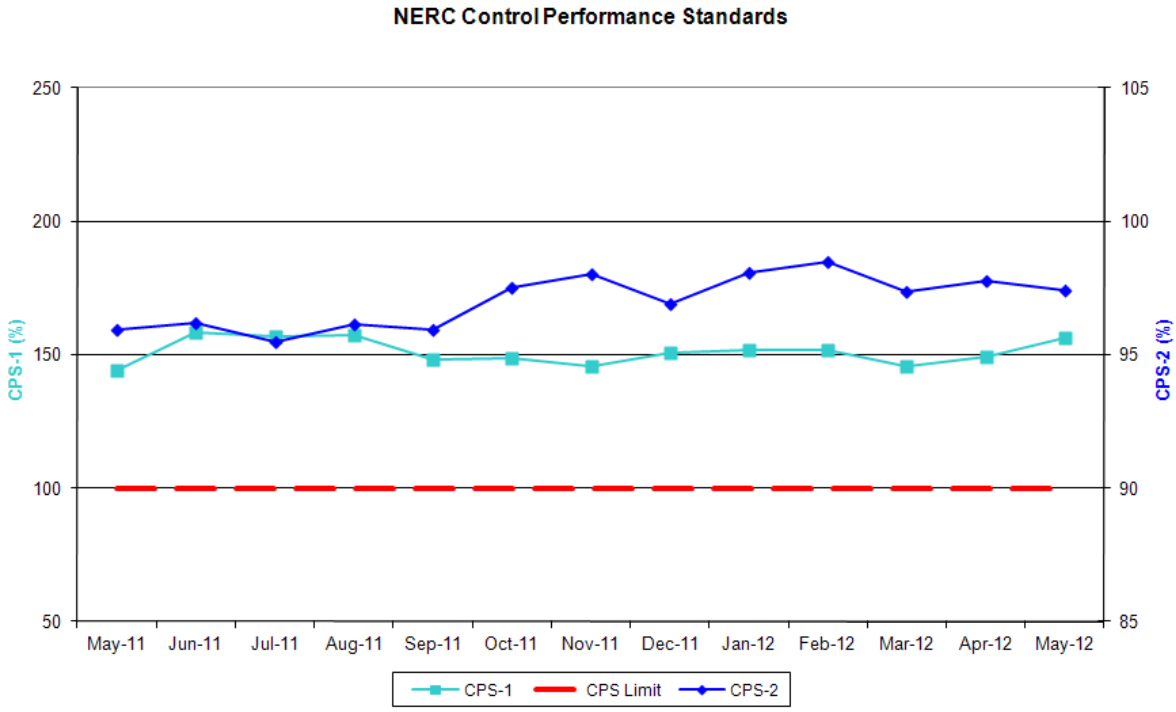

**The number and causes of Alert State declarations reflect system operating conditions beyond thresholds associated with Normal and Warning States. Declaration of the Alert State allows the NYISO to take corrective actions not available in the Normal and Warning States.**



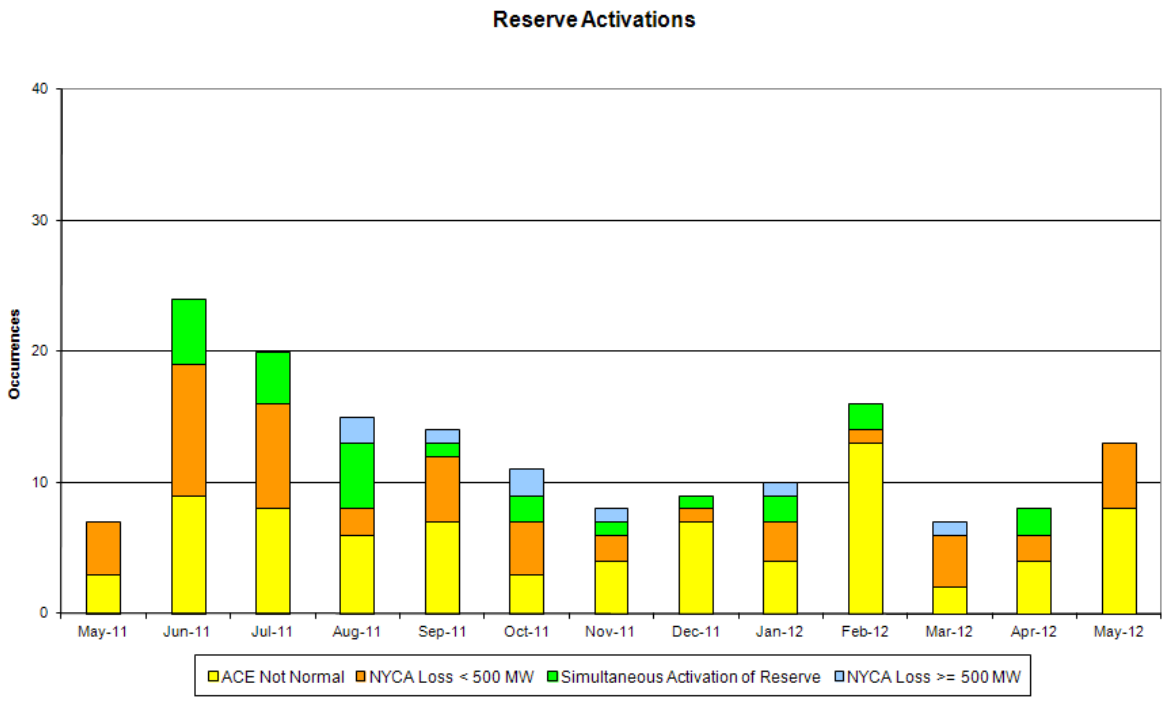

**The number and causes of Major Emergency State declarations reflect system operating conditions beyond thresholds associated with the Alert State. Declaration of the Major Emergency State allows the NYISO to take additional corrective actions not available in the Alert State.**



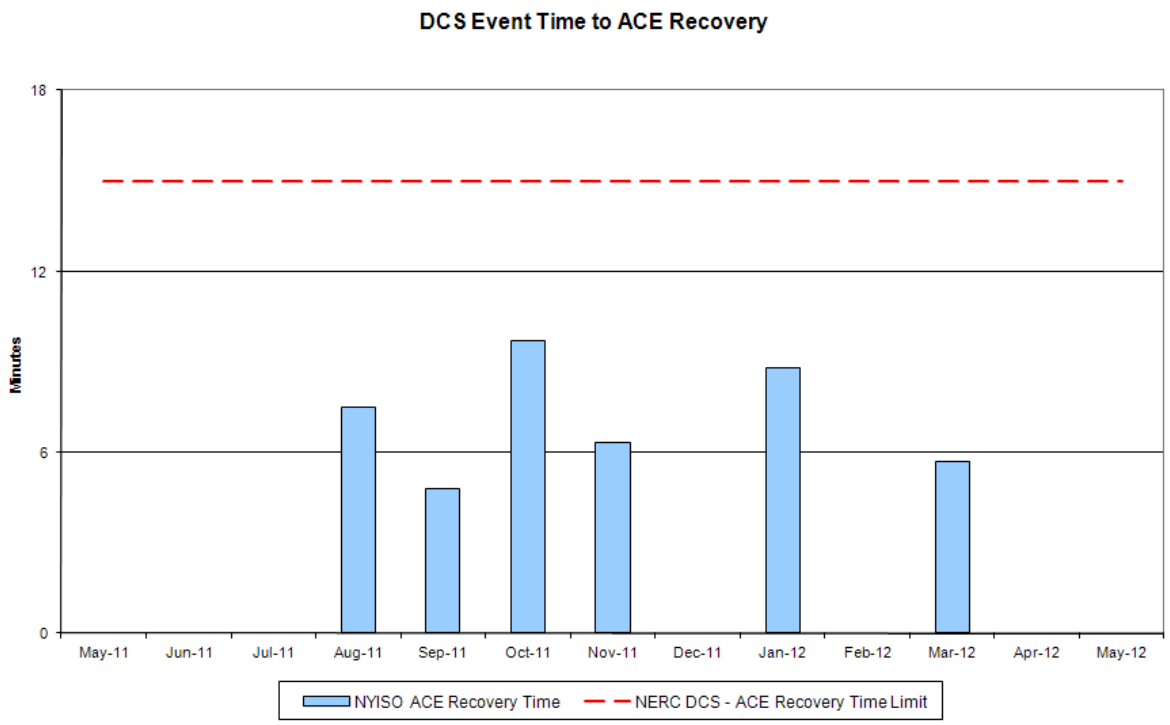

**For IROL exceedances leading to Major Emergency State declarations, the maximum IROL exceedence time is identified. IROL exceedances of less than thirty minutes are considered NERC compliant.**




**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.**

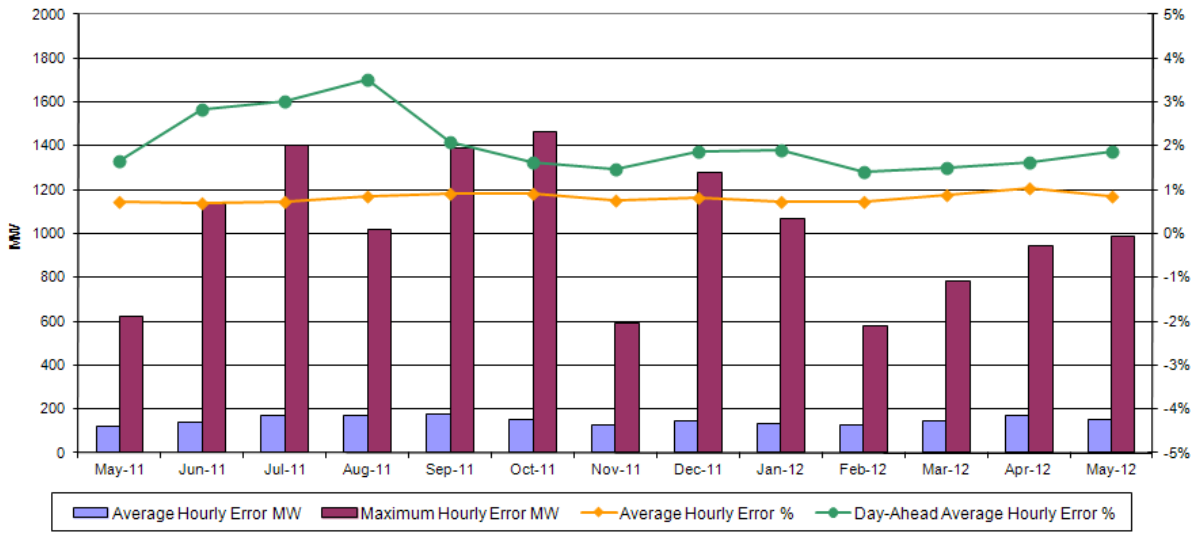



**NYISO Reserve Activations are indicators of the need to respond to unexpected operational conditions within the NYISO Area or to assist a neighboring Area (Shared Activation of Reserves) by activating an immediate resource and demand balancing operation.**



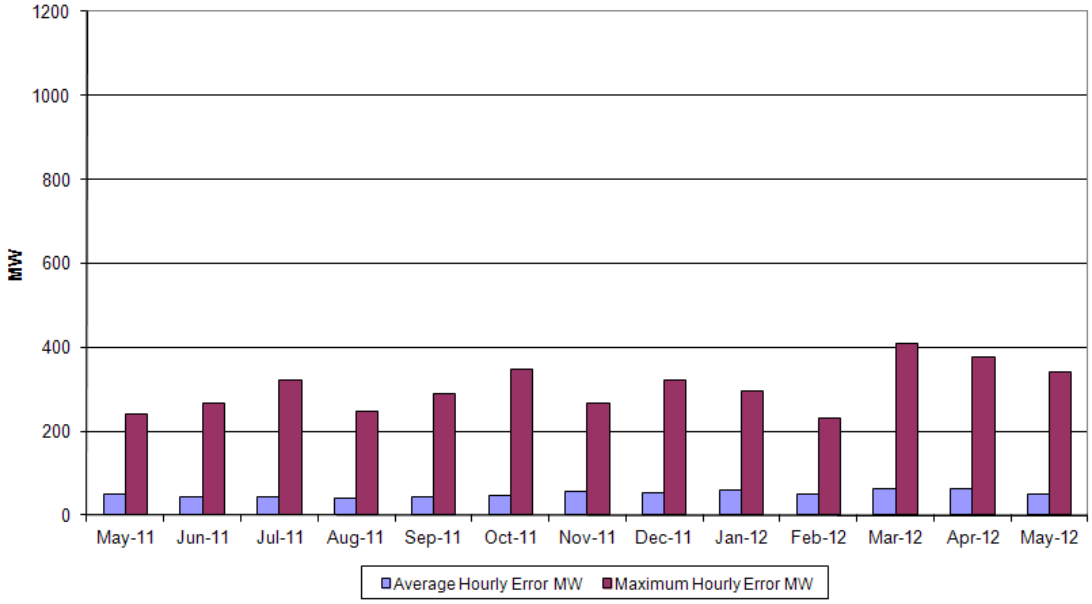

**For NYISO initiated Reportable Disturbances, the maximum ACE recovery time is identified. Recovery times of less than 15 minutes are considered NERC compliant.**

## Load Forecast Performance

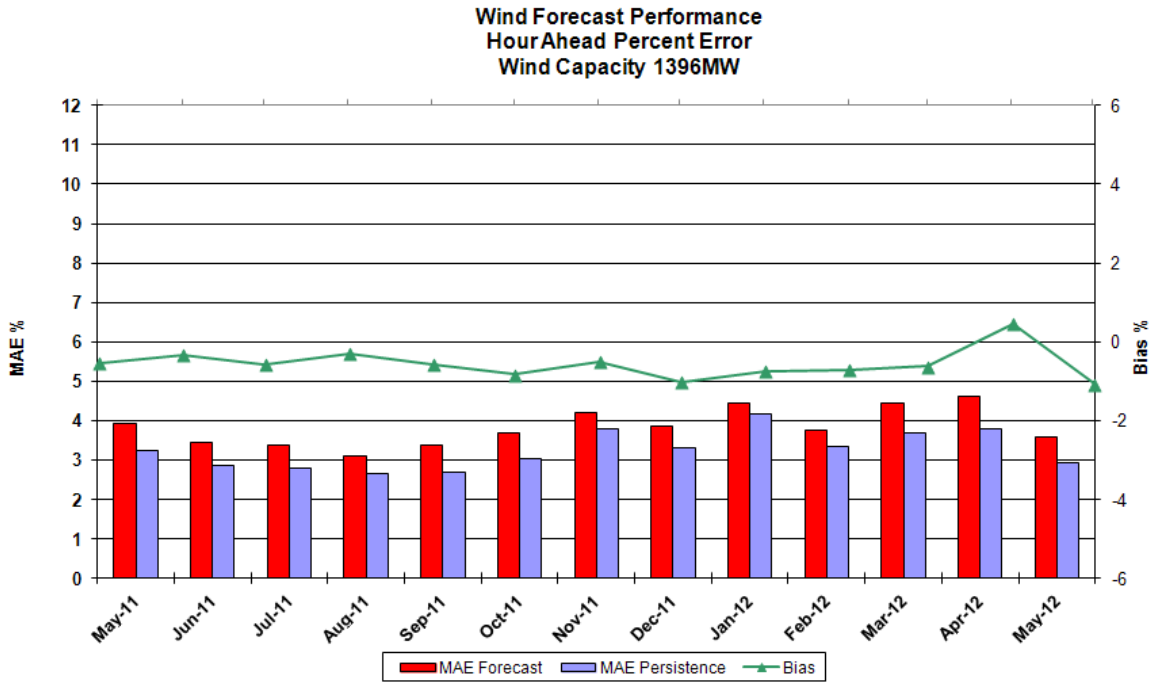



**Hourly Error MW - Absolute value of the difference between the hourly average actual load demand and the average hour ahead forecast load demand.**
**Average Hourly Error % - Average value of the ratio of hourly average error magnitude to hourly average actual load demand.**
**Day-Ahead Average Hourly Error % - Average across all hours of the month of the absolute value of the difference between actual load demand and the Day-Ahead forecast load demand, divided by the actual load demand.**

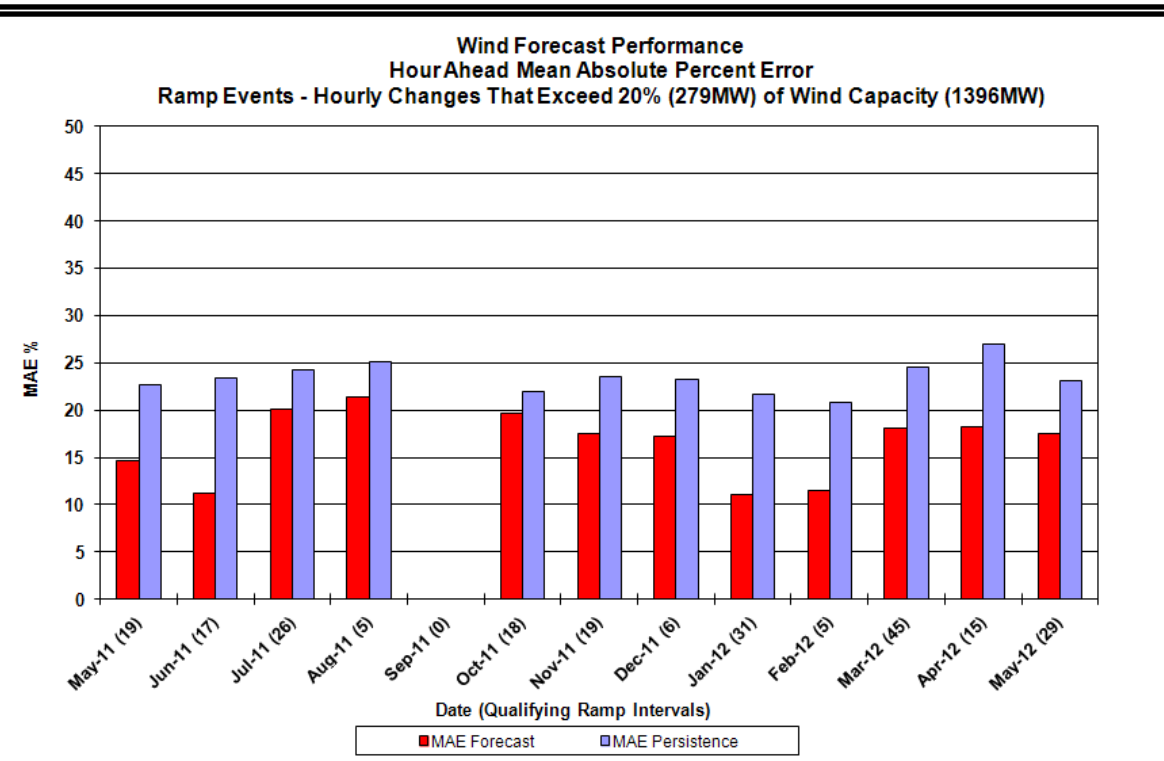
## Wind Forecast Performance
## Hour Ahead MW Error



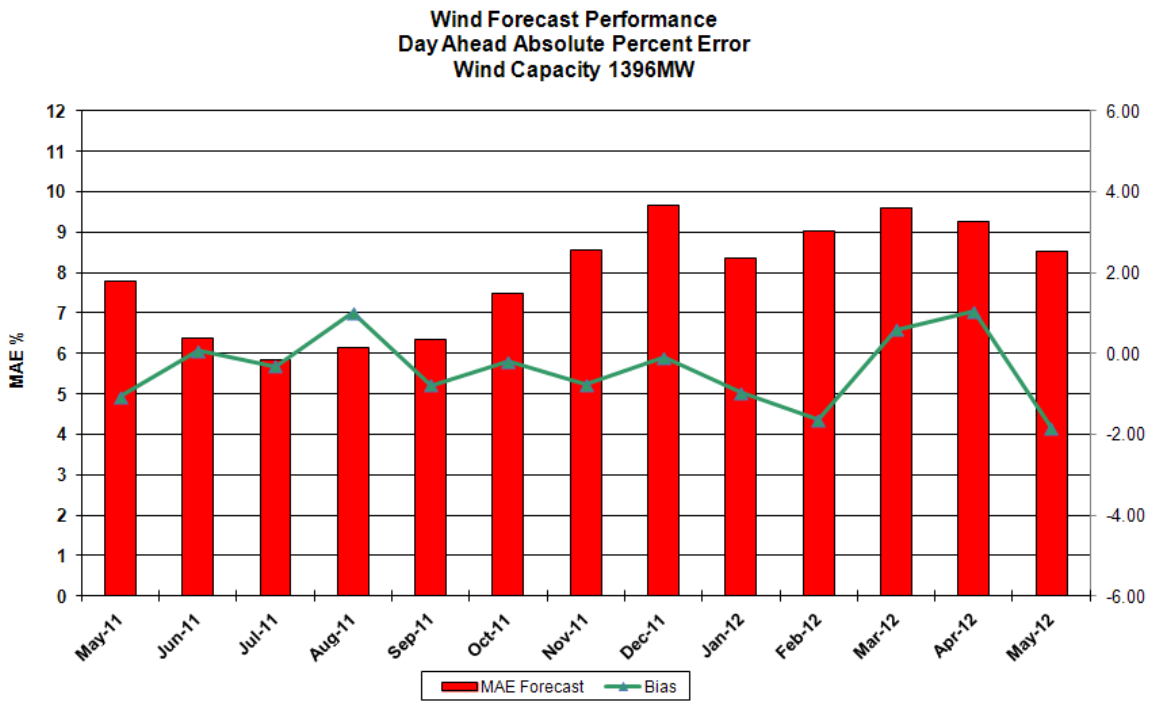

**Hourly Error MW - Absolute value of the difference between the hourly average actual wind generation and the average hour ahead forecast wind generation.**



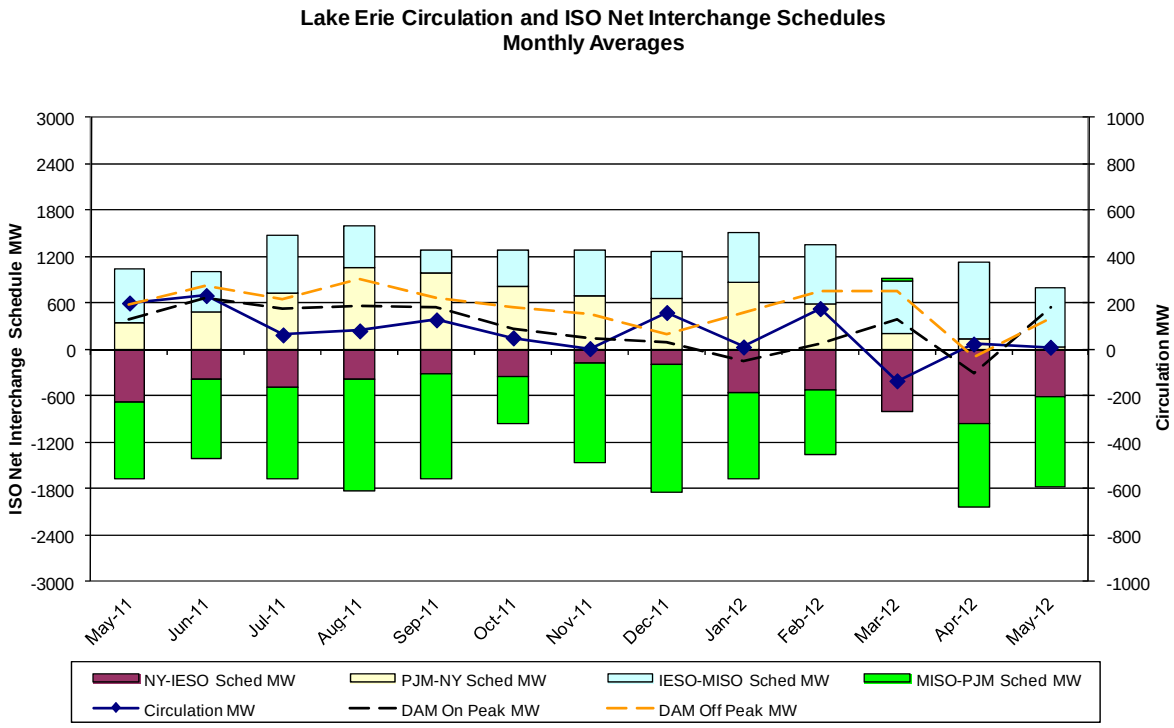

MAE Forecast - Avg |actual wind generation - hour ahead forecast wind generation| / Wind Capacity
MAE Persistence - Avg |actual wind generation - hour ahead actual wind generation| / Wind Capacity
Bias - Avg (actual wind generation - hour ahead forecast wind generation) / Wind Capacity



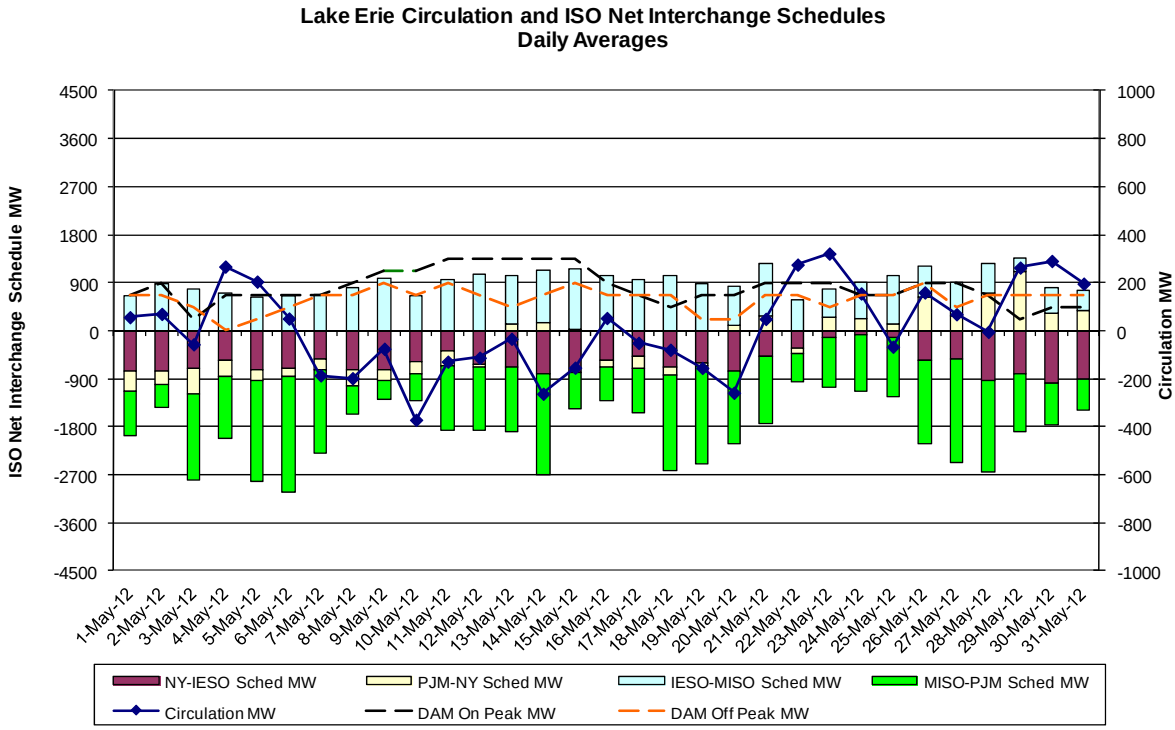

MAE Forecast - Avg |actual wind generation - hour ahead forecast wind generation| / Wind Capacity
MAE Persistence - Avg |actual wind generation - hour ahead actual wind generation| / Wind Capacity




**MAE Forecast** - Avg |actual wind generation - Day Ahead forecast wind generation| / Wind Capacity
**Bias** - Avg (actual wind generation - Day Ahead forecast wind generation) / Wind Capacity

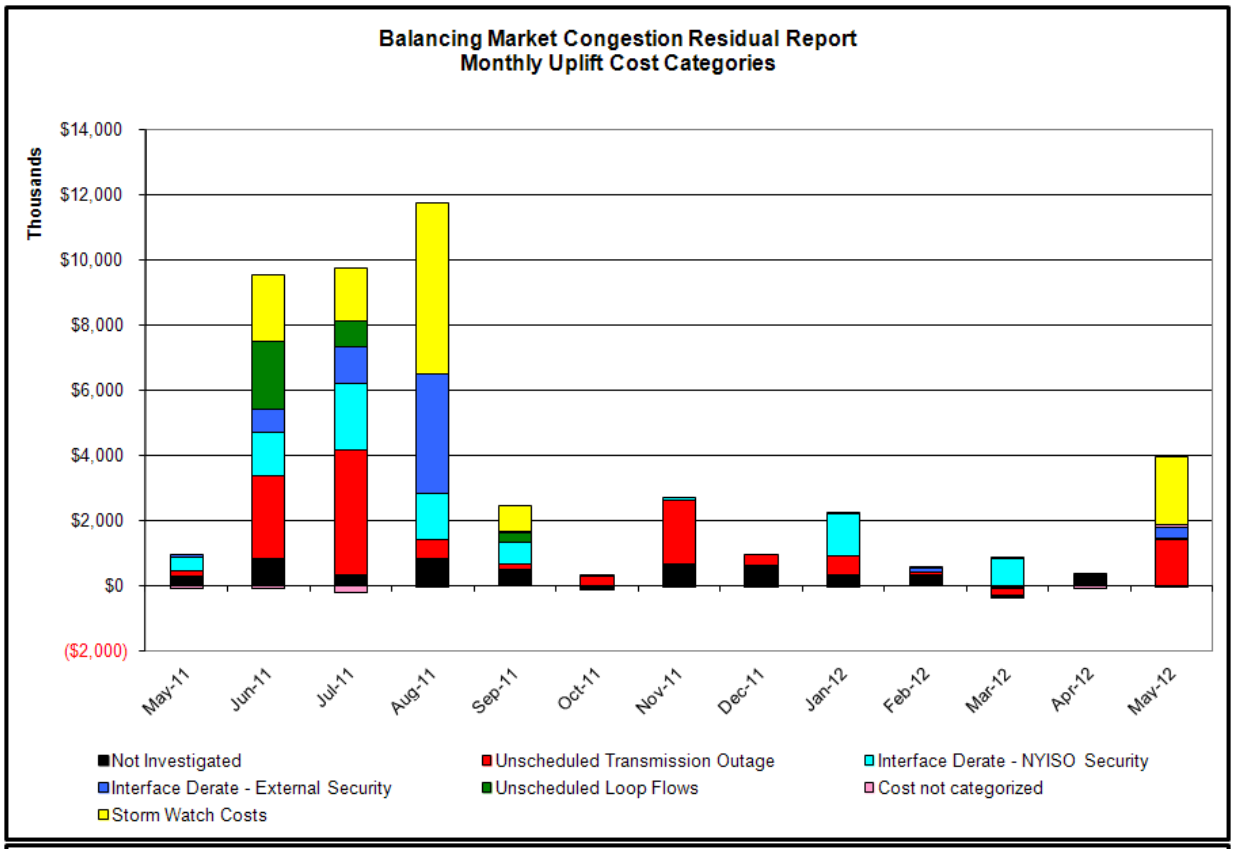


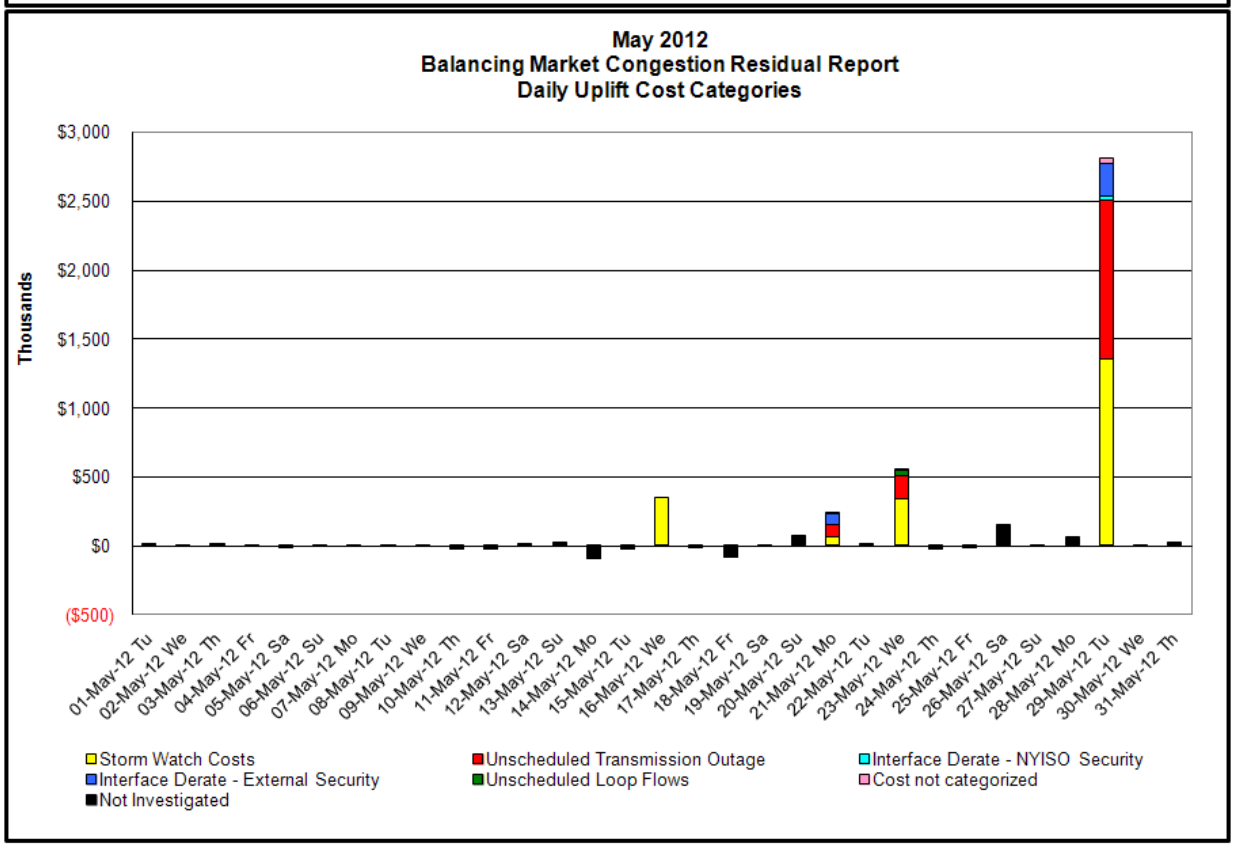

**Interchange schedules with positive values aggravate clockwise Lake Erie Circulation.**




**Interchange schedules with positive values aggravate clockwise Lake Erie Circulation.**

# Market Performance Metrics



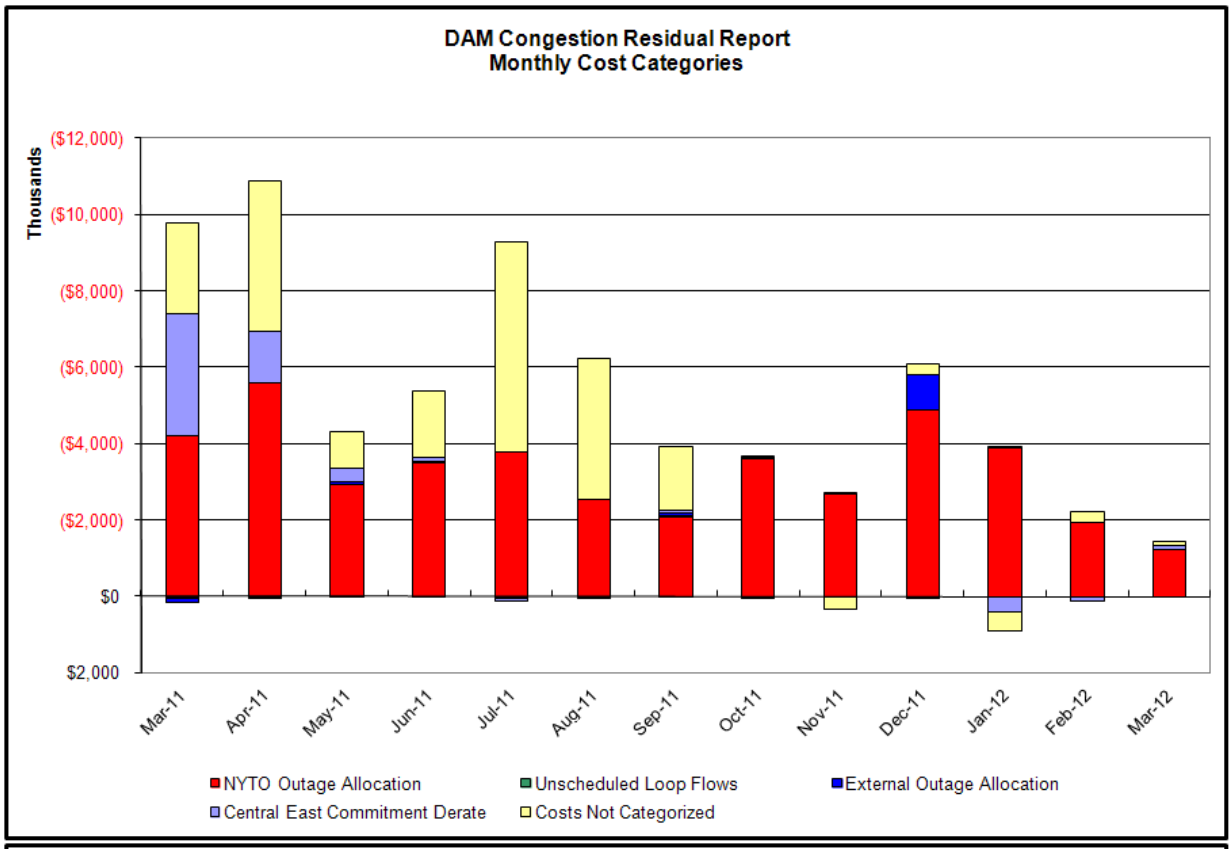
| Day's investigated in May: 16,21,23,29 | | | |
|---|---|---|---|
| Event | Date (yyyymm | Hours | Description |
| | 5/16/2012 | 14-20 | Thunder Storm Alert |
| | 5/21/2012 | 10-13 | Thunder Storm Alert |
| | 5/21/2012 | 10-12,15,16 | Extended outage Willowbrook-Freshkills 138kV (#29211-2) |
| | 5/21/2012 | 14 | PJM DNI Ramp Limit |
| | 5/21/2012 | 10,11 | IESO_AC - NY Scheduling Limit |
| | 5/21/2012 | 12,14-16 | NE_AC - NY Scheduling Limit |
| | 5/23/2012 | 13-18 | Thunder Storm Alert |
| | 5/23/2012 | 9-13 | Forced outage Leeds-Hurley Avenue 345kV (#301) |
| | 5/23/2012 | 12,13 | Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Leeds-Pleasant Valley (#92) |
| | 5/29/2012 | 14-21 | Thunder Storm Alert |
| | 5/29/2012 | 12,14-19 | Forced outage Hellgate-East 179th St 138kV (#15054), Hellgate-Astoria East 138kV (#34052) |
| | 5/29/2012 | 10,13 | Uprate Dunwoodie-Shore Road 345kV (#Y50) for SCB Sprainbrook RNS2 W/ RNS4 OUT |
| | 5/29/2012 | 13,14,19 | NYCA DNI Ramp Limit |
| | 5/29/2012 | 15,18,19 | NE_AC - NY Scheduling Limit |
| | 5/29/2012 | 12 | IESO_AC - NY Scheduling Limit |

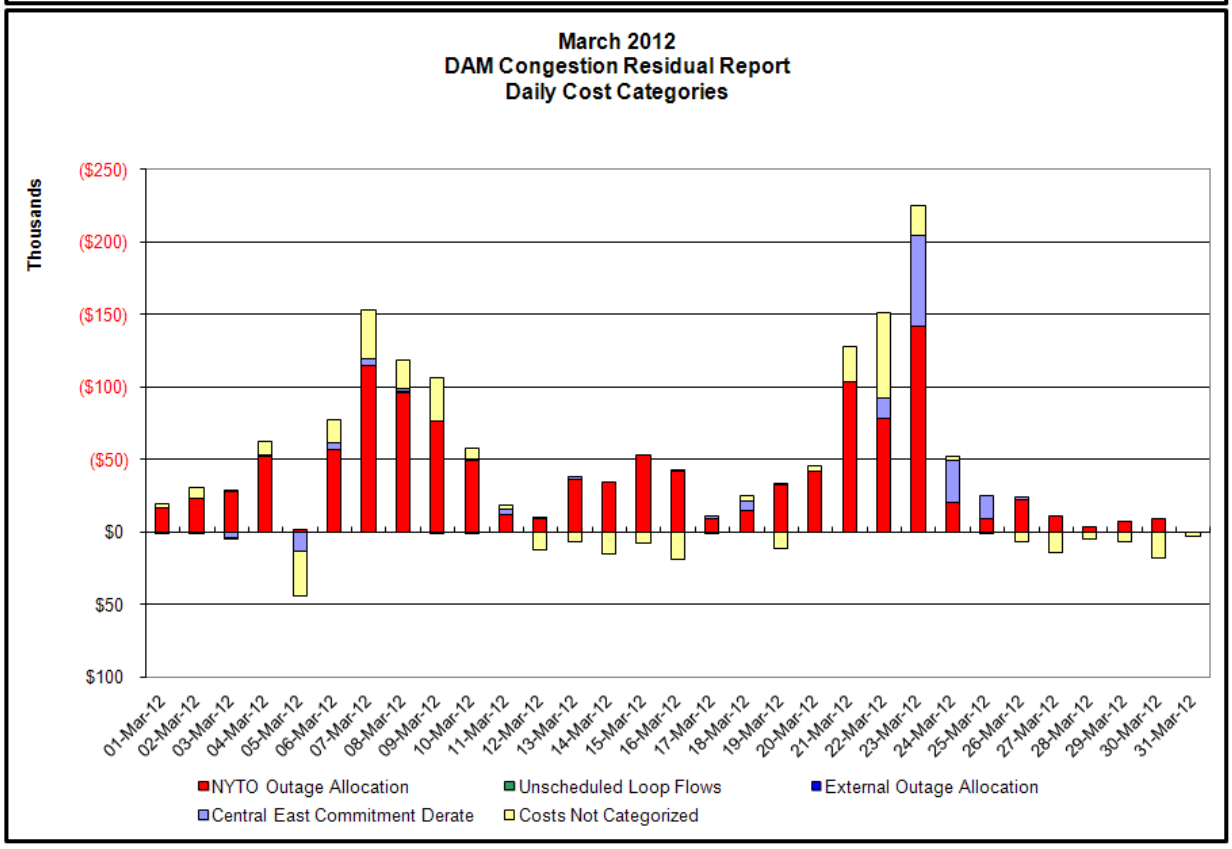
## Real-Time Balancing Market Congestion Residual (Uplift Cost) Categories

| *Category* | *Cost Assignment* | *Events Types* | *Event Examples* |
|---|---|---|---|
| **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***

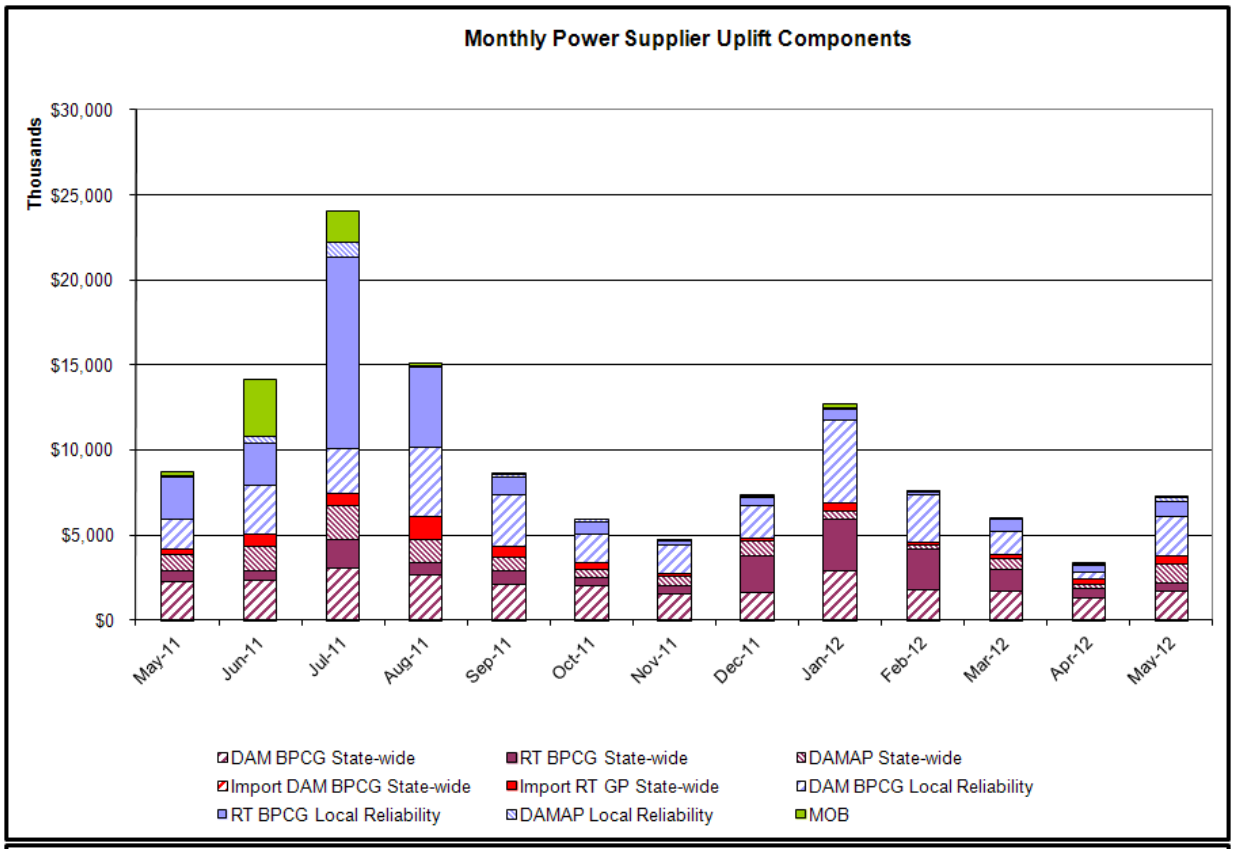
*1) Storm Watch Costs are identified as daily total uplift costs*
*2) At a minimum those days with $ 100 K/HR, shortfall of $ 200 K/Day or more, or surplus of $ 100 K/Day or more are investigated*
*3) Uplift costs associated with multiple event types are apportioned equally by hour*
*4) Investigations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

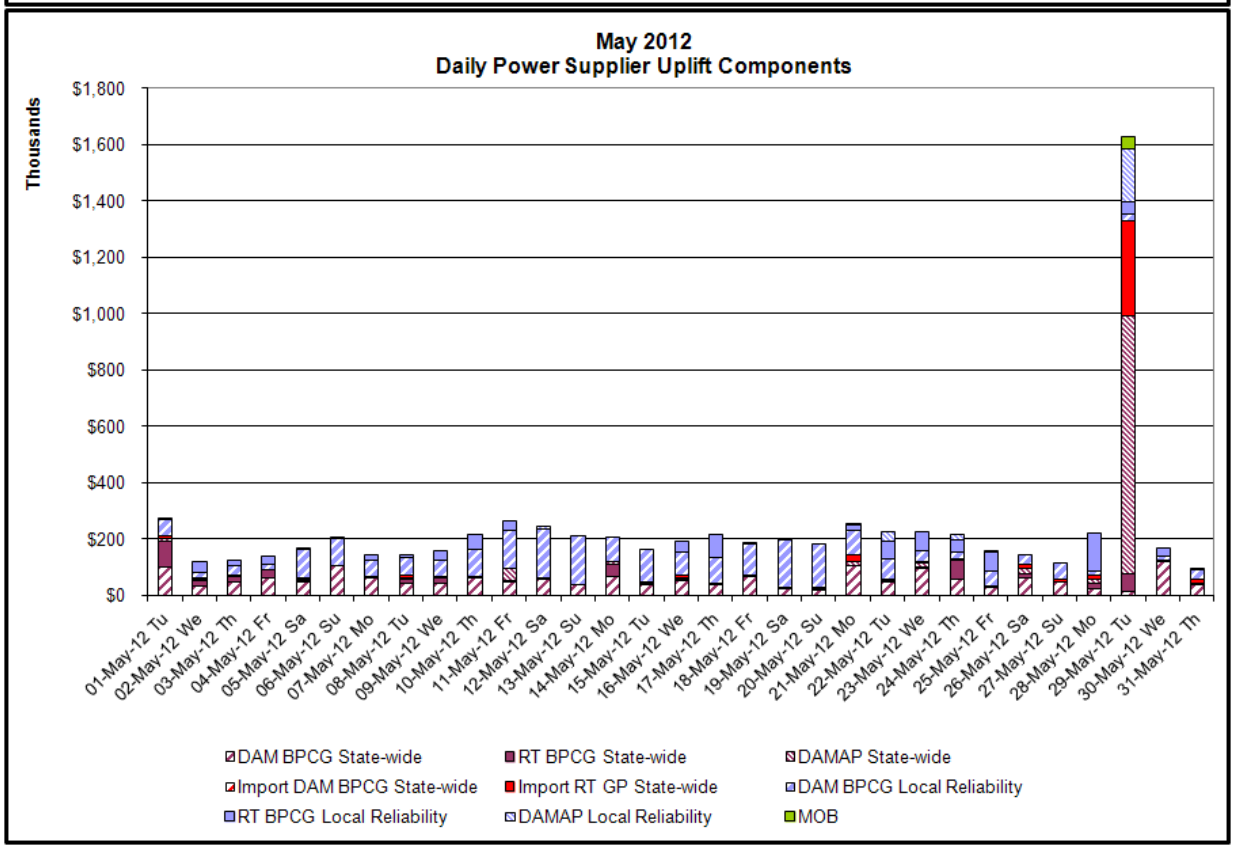

DAM Congestion Residual Report
Monthly Cost Categories
Thousands
($12,000)
($10,000)
($8,000)
($6,000)
($4,000)
($2,000)
$0
$2,000
Mar-11
Apr-11
May-11
Jun-11
Jul-11
Aug-11
Sep-11
Oct-11
Nov-11
Dec-11
Jan-12
Feb-12
Mar-12
NYTO Outage Allocation
Unscheduled Loop Flows
External Outage Allocation
Central East Commitment Derate
Costs Not Categorized

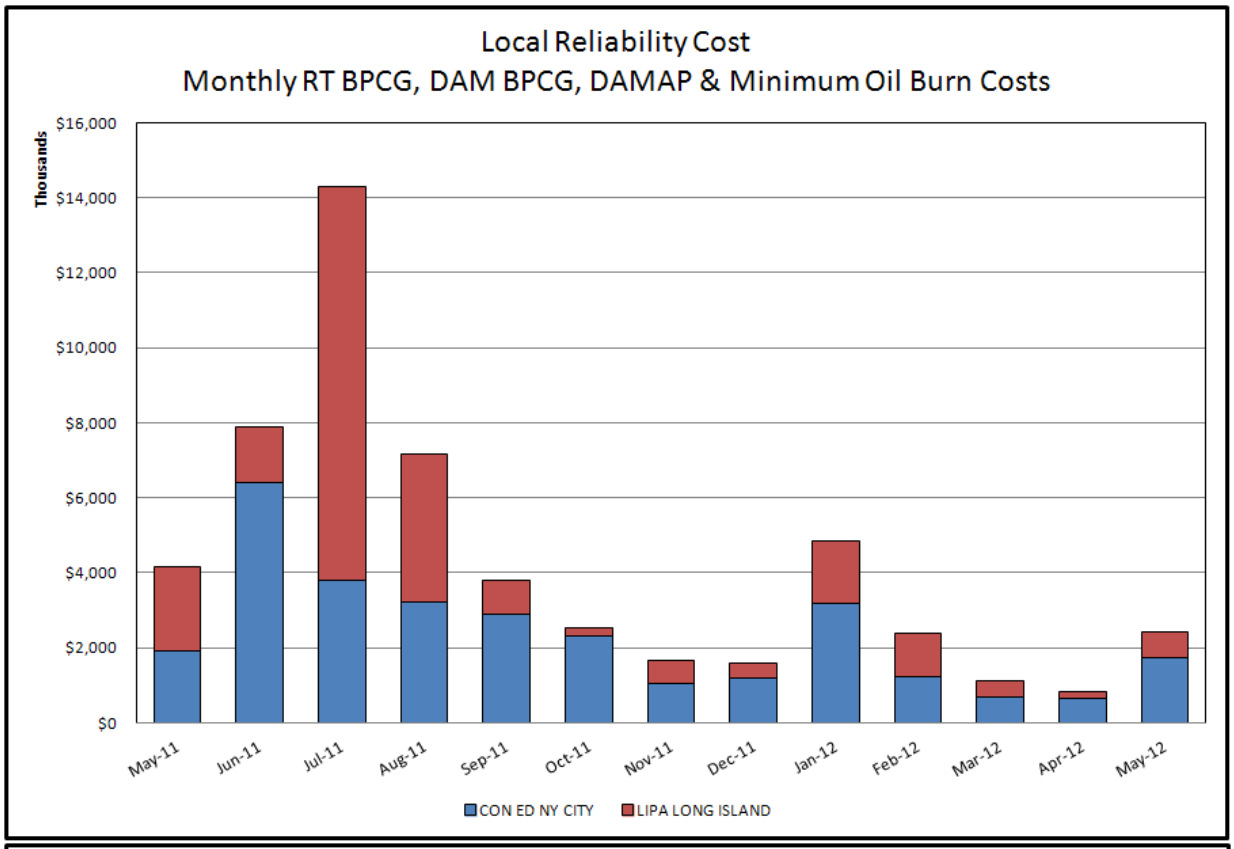

March 2012
DAM Congestion Residual Report
Daily Cost Categories
Thousands
($250)
($200)
($150)
($100)
($50)
$0
$50
$100
01-Mar-12
02-Mar-12
03-Mar-12
04-Mar-12
05-Mar-12
06-Mar-12
07-Mar-12
08-Mar-12
09-Mar-12
10-Mar-12
11-Mar-12
12-Mar-12
13-Mar-12
14-Mar-12
15-Mar-12
16-Mar-12
17-Mar-12
18-Mar-12
19-Mar-12
20-Mar-12
21-Mar-12
22-Mar-12
23-Mar-12
24-Mar-12
25-Mar-12
26-Mar-12
27-Mar-12
28-Mar-12
29-Mar-12
30-Mar-12
31-Mar-12
NYTO Outage Allocation
Unscheduled Loop Flows
External Outage Allocation
Central East Commitment Derate
Costs Not Categorized

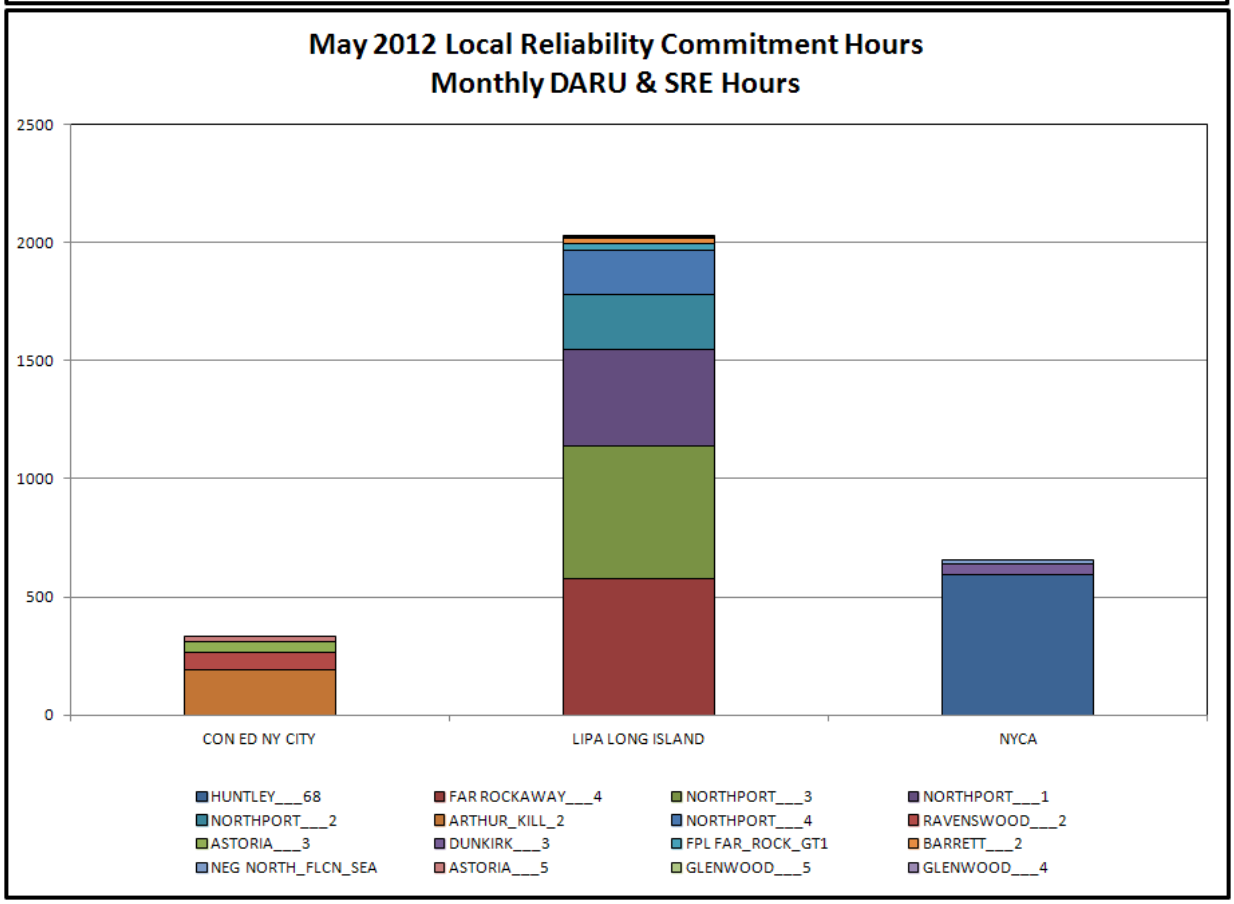
## Day-Ahead Market Congestion Residual Categories

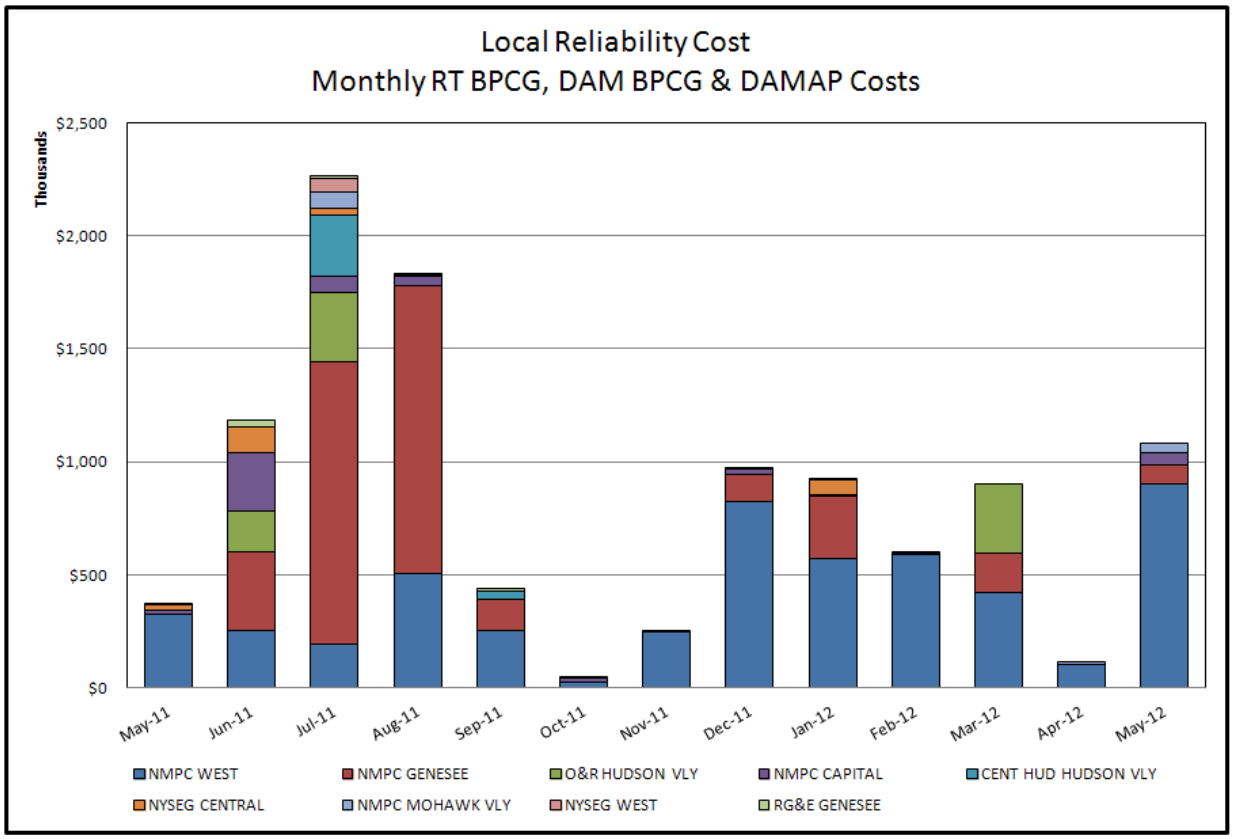
| *Category* | *Cost Assignment* | *Events Types* | *Event Examples* |
|---|---|---|---|
| NYTO Outage Allocation | Responsible TO | Direct allocation to NYTO's responsible for transmission equipment status change. | DAM scheduled outage for equipment modeled in-service for the TCC Auction. |
| Unscheduled 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. | |

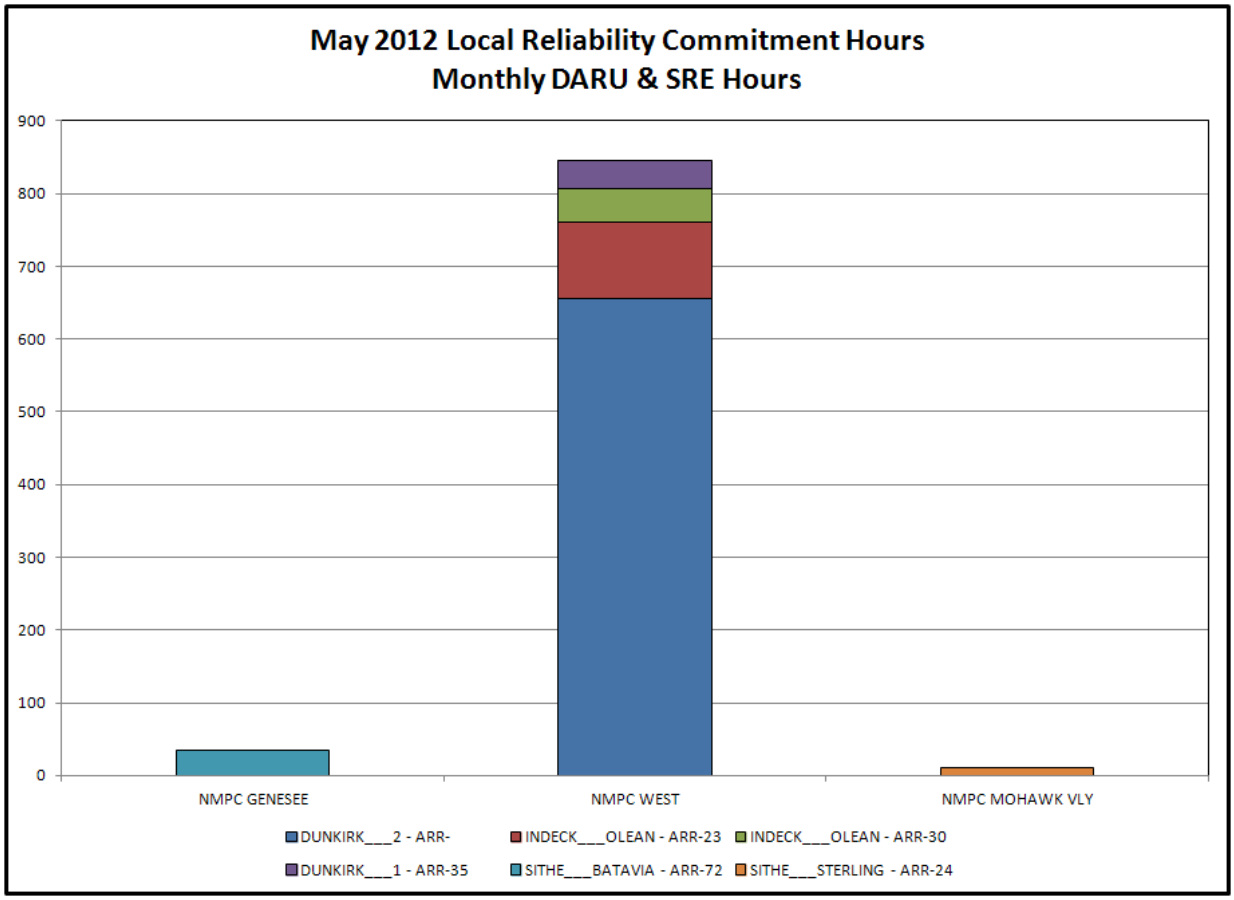

Monthly Power Supplier Uplift Components
Thousands
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
May-11
Jun-11
Jul-11
Aug-11
Sep-11
Oct-11
Nov-11
Dec-11
Jan-12
Feb-12
Mar-12
Apr-12
May-12
DAM BPCG State-wide
RT BPCG State-wide
DAMAP State-wide
Import DAM BPCG State-wide
Import RT GP State-wide
DAM BPCG Local Reliability
RT BPCG Local Reliability
DAMAP Local Reliability
MOB

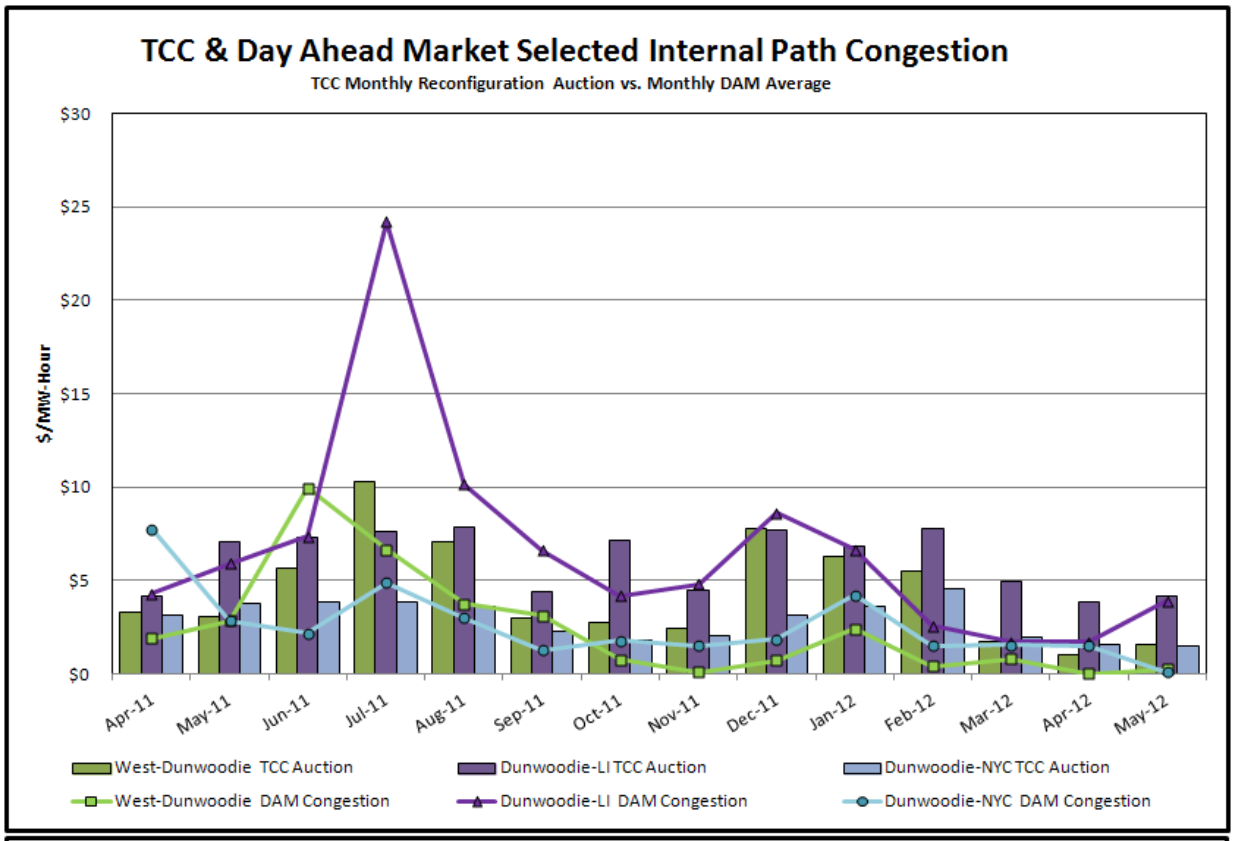

May 2012
Daily Power Supplier Uplift Components
Thousands
$1,800
$1,600
$1,400
$1,200
$1,000
$800
$600
$400
$200
$0
01-May-12 Tu
02-May-12 We
03-May-12 Th
04-May-12 Fr
05-May-12 Sa
06-May-12 Su
07-May-12 Mo
08-May-12 Tu
09-May-12 We
10-May-12 Th
11-May-12 Fr
12-May-12 Sa
13-May-12 Su
14-May-12 Mo
15-May-12 Tu
16-May-12 We
17-May-12 Th
18-May-12 Fr
19-May-12 Sa
20-May-12 Su
21-May-12 Mo
22-May-12 Tu
23-May-12 We
24-May-12 Th
25-May-12 Fr
26-May-12 Sa
27-May-12 Su
28-May-12 Mo
29-May-12 Tu
30-May-12 We
31-May-12 Th
DAM BPCG State-wide
RT BPCG State-wide
DAMAP State-wide
Import DAM BPCG State-wide
Import RT GP State-wide
DAM BPCG Local Reliability
RT BPCG Local Reliability
DAMAP Local Reliability
MOB

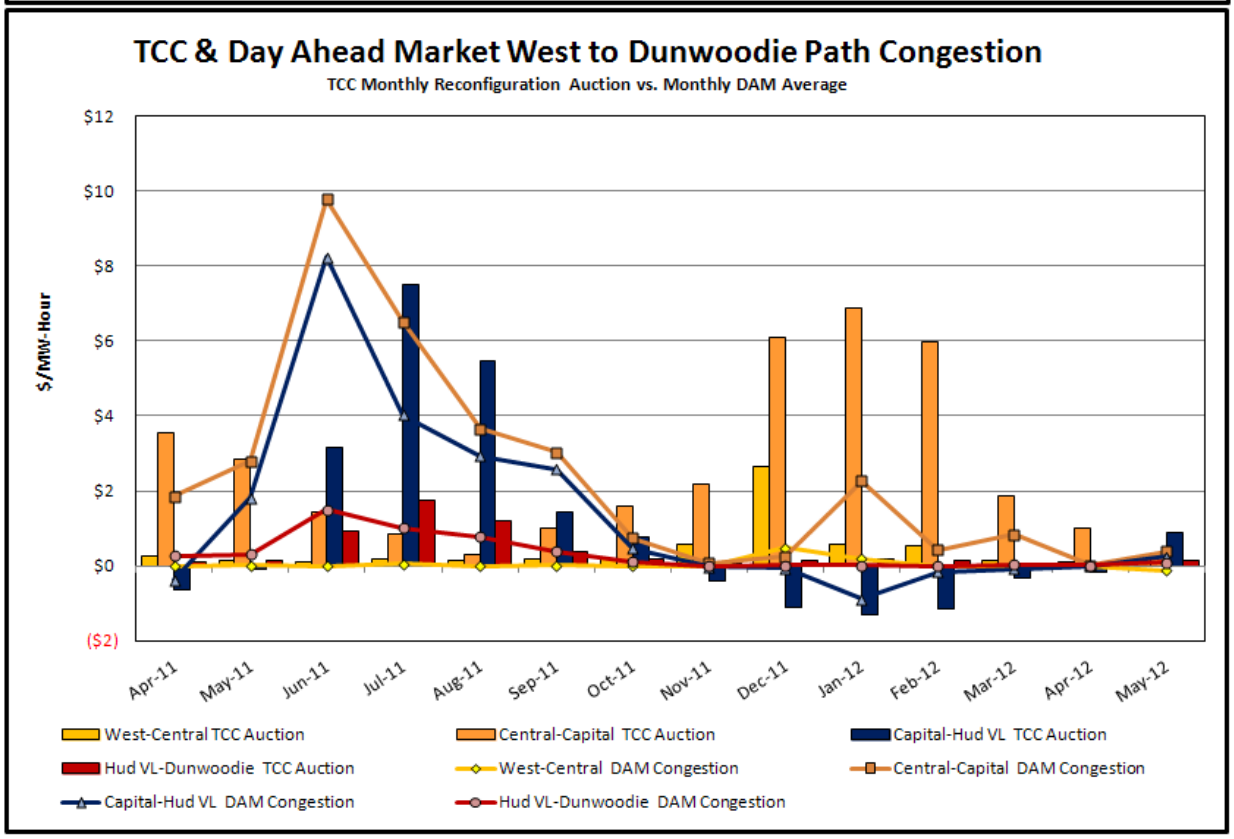

Local Reliability Cost
Monthly RT BPCG, DAM BPCG, DAMAP & Minimum Oil Burn Costs
Thousands
$16,000
$14,000
$12,000
$10,000
$8,000
$6,000
$4,000
$2,000
$0
May-11
Jun-11
Jul-11
Aug-11
Sep-11
Oct-11
Nov-11
Dec-11
Jan-12
Feb-12
Mar-12
Apr-12
May-12
CON ED NY CITY
LIPA LONG ISLAND

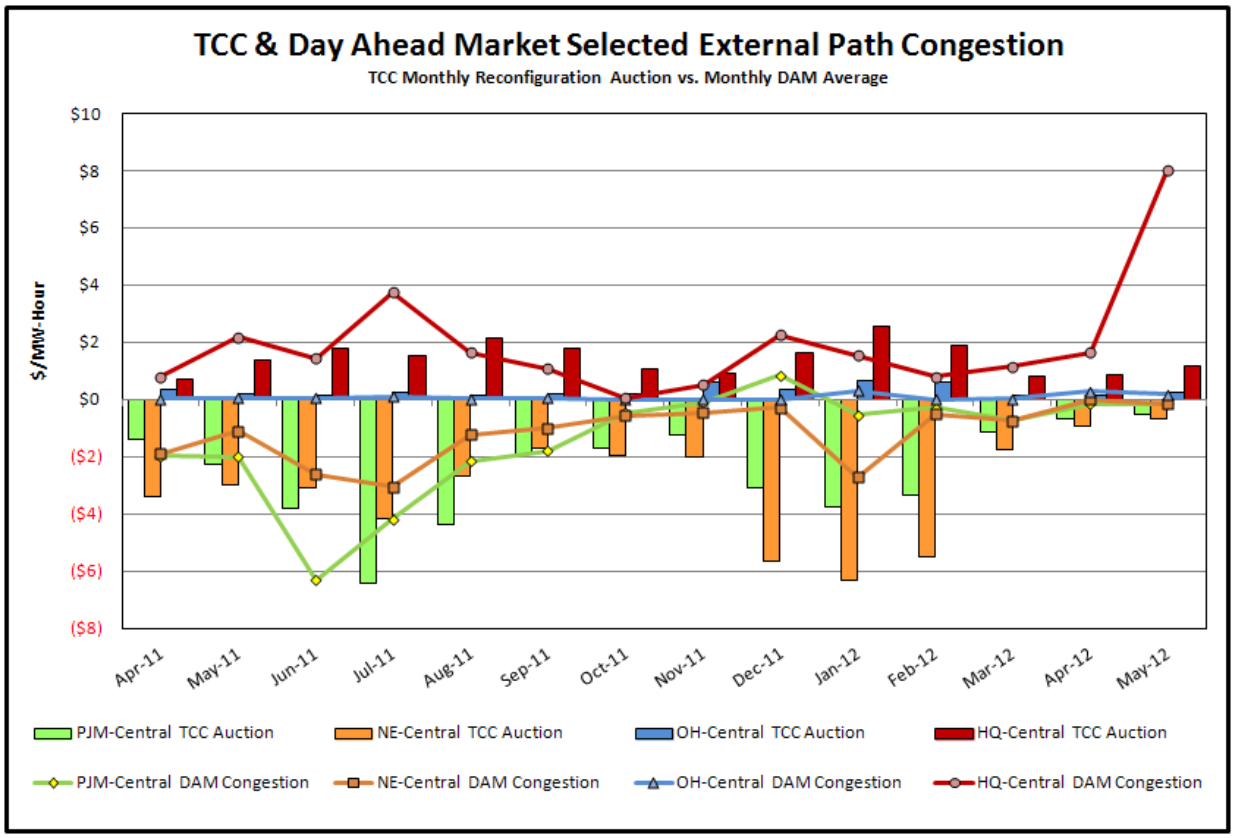

May 2012 Local Reliability Commitment Hours
Monthly DARU & SRE Hours
2500
2000
1500
1000
500
0
CON ED NY CITY
LIPA LONG ISLAND
NYCA
HUNTLEY___68
FAR ROCKAWAY___4
NORTHPORT___3
NORTHPORT___1
NORTHPORT___2
ARTHUR_KILL_2
NORTHPORT___4
RAVENSWOOD___2
ASTORIA___3
DUNKIRK___3
FPL FAR_ROCK_GT1
BARRETT___2
NEG NORTH_FLCN_SEA
ASTORIA___5
GLENWOOD___5
GLENWOOD___4

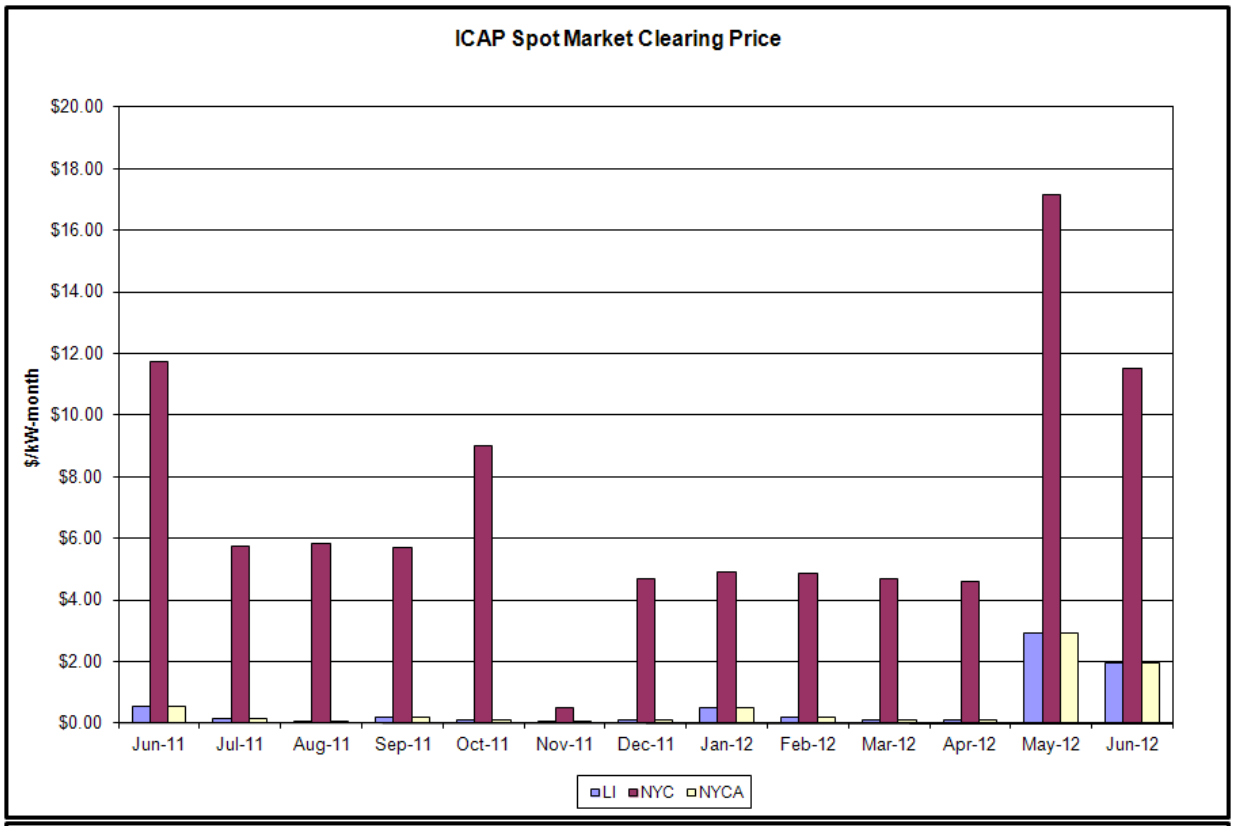

Local Reliability Cost
Monthly RT BPCG, DAM BPCG & DAMAP Costs
Thousands
$2,500
$2,000
$1,500
$1,000
$500
$0
May-11
Jun-11
Jul-11
Aug-11
Sep-11
Oct-11
Nov-11
Dec-11
Jan-12
Feb-12
Mar-12
Apr-12
May-12
NMPC WEST
NMPC GENESEE
O&R HUDSON VLY
NMPC CAPITAL
CENT HUD HUDSON VLY
NYSEG CENTRAL
NMPC MOHAWK VLY
NYSEG WEST
RG&E GENESEE

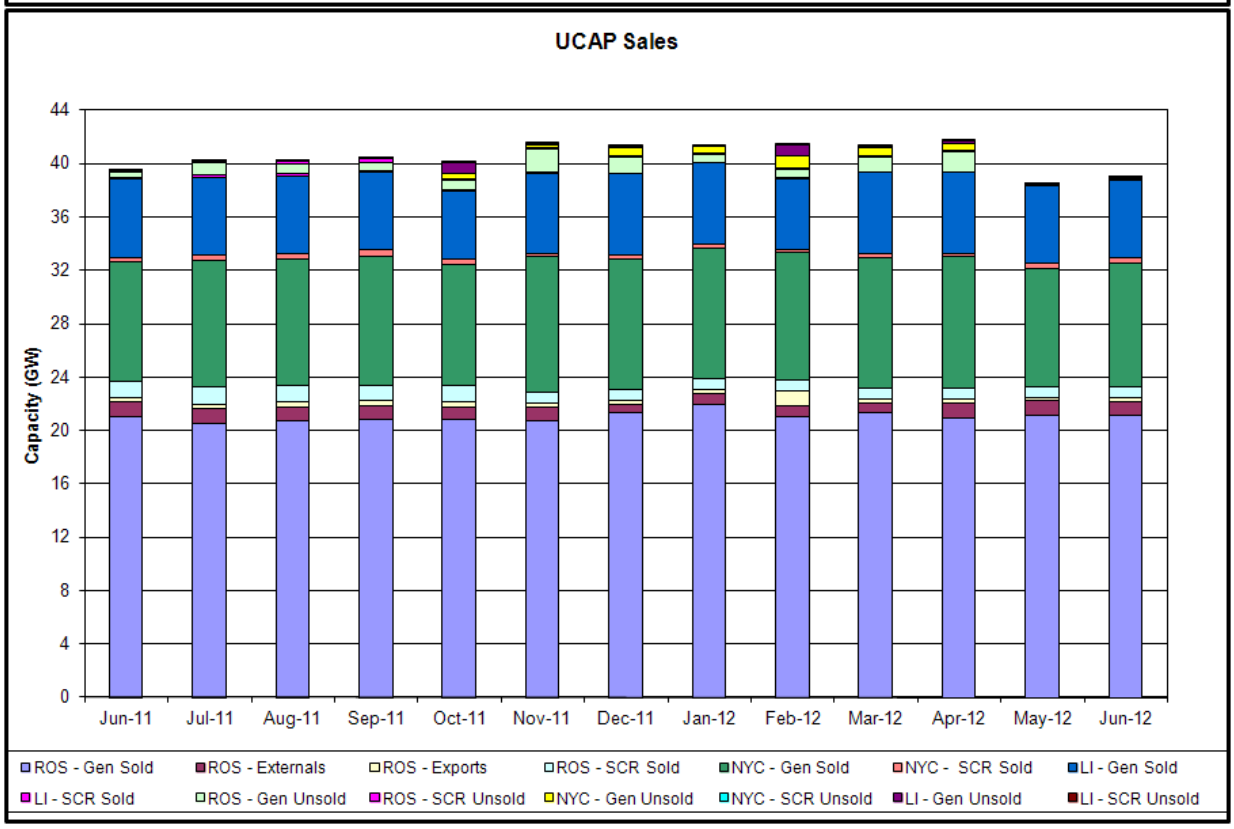

May 2012 Local Reliability Commitment Hours
Monthly DARU & SRE Hours
900
800
700
600
500
400
300
200
100
0
NMPC GENESEE
NMPC WEST
NMPC MOHAWK VLY
DUNKIRK___2 - ARR-
INDECK___OLEAN - ARR-23
INDECK___OLEAN - ARR-30
DUNKIRK___1 - ARR-35
SITHE___BATAVIA - ARR-72
SITHE___STERLING - ARR-24


TCC & Day Ahead Market Selected Internal Path Congestion
TCC Monthly Reconfiguration Auction vs. Monthly DAM Average
$/MW-Hour
$30
$25
$20
$15
$10
$5
$0
Apr-11
May-11
Jun-11
Jul-11
Aug-11
Sep-11
Oct-11
Nov-11
Dec-11
Jan-12
Feb-12
Mar-12
Apr-12
May-12
West-Dunwoodie TCC Auction
Dunwoodie-LI TCC Auction
Dunwoodie-NYC TCC Auction
West-Dunwoodie DAM Congestion
Dunwoodie-LI DAM Congestion
Dunwoodie-NYC DAM Congestion


TCC & Day Ahead Market West to Dunwoodie Path Congestion
TCC Monthly Reconfiguration Auction vs. Monthly DAM Average
$/MW-Hour
$12
$10
$8
$6
$4
$2
$0
($2)
Apr-11
May-11
Jun-11
Jul-11
Aug-11
Sep-11
Oct-11
Nov-11
Dec-11
Jan-12
Feb-12
Mar-12
Apr-12
May-12
West-Central TCC Auction
Central-Capital TCC Auction
Capital-Hud VL TCC Auction
Hud VL-Dunwoodie TCC Auction
West-Central DAM Congestion
Central-Capital DAM Congestion
Capital-Hud VL DAM Congestion
Hud VL-Dunwoodie DAM Congestion

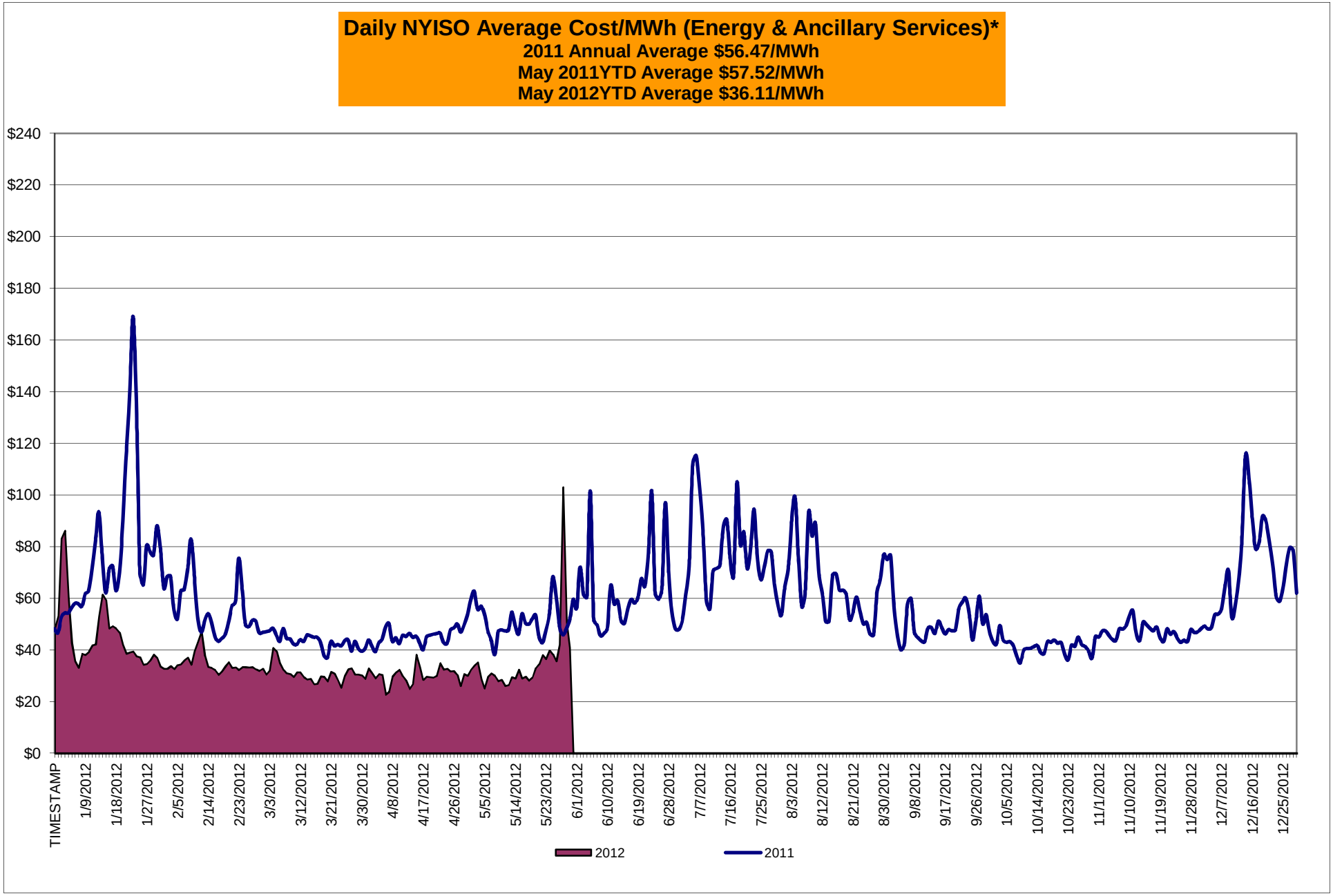

TCC & Day Ahead Market Selected External Path Congestion
TCC Monthly Reconfiguration Auction vs. Monthly DAM Average
$/MW-Hour
$10
$8
$6
$4
$2
$0
($2)
($4)
($6)
($8)
Apr-11
May-11
Jun-11
Jul-11
Aug-11
Sep-11
Oct-11
Nov-11
Dec-11
Jan-12
Feb-12
Mar-12
Apr-12
May-12
PJM-Central TCC Auction
NE-Central TCC Auction
OH-Central TCC Auction
HQ-Central TCC Auction
PJM-Central DAM Congestion
NE-Central DAM Congestion
OH-Central DAM Congestion
HQ-Central DAM Congestion


ICAP Spot Market Clearing Price
$/kW-month
$20.00
$18.00
$16.00
$14.00
$12.00
$10.00
$8.00
$6.00
$4.00
$2.00
$0.00
Jun-11
Jul-11
Aug-11
Sep-11
Oct-11
Nov-11
Dec-11
Jan-12
Feb-12
Mar-12
Apr-12
May-12
Jun-12
LI
NYC
NYCA


UCAP Sales
Capacity (GW)
44
40
36
32
28
24
20
16
12
8
4
0
Jun-11
Jul-11
Aug-11
Sep-11
Oct-11
Nov-11
Dec-11
Jan-12
Feb-12
Mar-12
Apr-12
May-12
Jun-12
ROS - Gen Sold
ROS - Externals
ROS - Exports
ROS - SCR Sold
NYC - Gen Sold
NYC - SCR Sold
LI - Gen Sold
LI - SCR Sold
ROS - Gen Unsold
ROS - SCR Unsold
NYC - Gen Unsold
NYC - SCR Unsold
LI - Gen Unsold
LI - SCR Unsold

# Market Performance Highlights for May 2012

- **LBMP for May is $34.66MWh, higher compared to $28.30/MWh in April 2012.**
  - Day Ahead and Real Time Load Weighted LBMPs are higher compared to April 2012.
- **Average monthly year-to-date cost of $36.11/MWh, is comparable to the previous month, $36.05/MWh.**
- **Average daily sendout is 420 GWh/day in May; higher compared to 396 GWh/day in April 2012 and 411 GWh/day in May 2011.**
- **Natural gas is up but distillate prices are down compared to the previous month.**
  - Natural Gas is $2.59/MMBtu, up from $2.13/MMBtu in April.
  - Kerosene is $22.74/MMBtu, down from $24.32/MMBtu in April.
  - No. 2 Fuel Oil is $20.83/MMBtu, down from $22.45/MMBtu in April.
  - No. 6 Fuel Oil is $18.24/MMBtu, down from $20.37/MMBtu in April.
- **Uplift per MWh is lower compared to the previous month.**
  - Uplift (not including NYISO cost of operations) is ($0.26)/MWh, lower than ($0.18)/MWh in April.
    - The Local Reliability Share is $0.24/MWh, significantly higher than $0.07/MWh in April.
    - The Statewide Share is ($0.50)/MWh, significantly lower than ($0.26)/MWh in April.
  - TSA $ per NYC MWh is $3.15/MWh.
  - Total uplift (Schedule 1 components including NYISO Cost of Operations) is higher than April due to increased Local Reliability DAM and Residual Balancing uplift costs.




* Excludes ICAP payments.

Data reflects true-ups thru April 2012.

Market Mitigation and Analysis
Prepared: 6/5/2012 11:50 AM

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

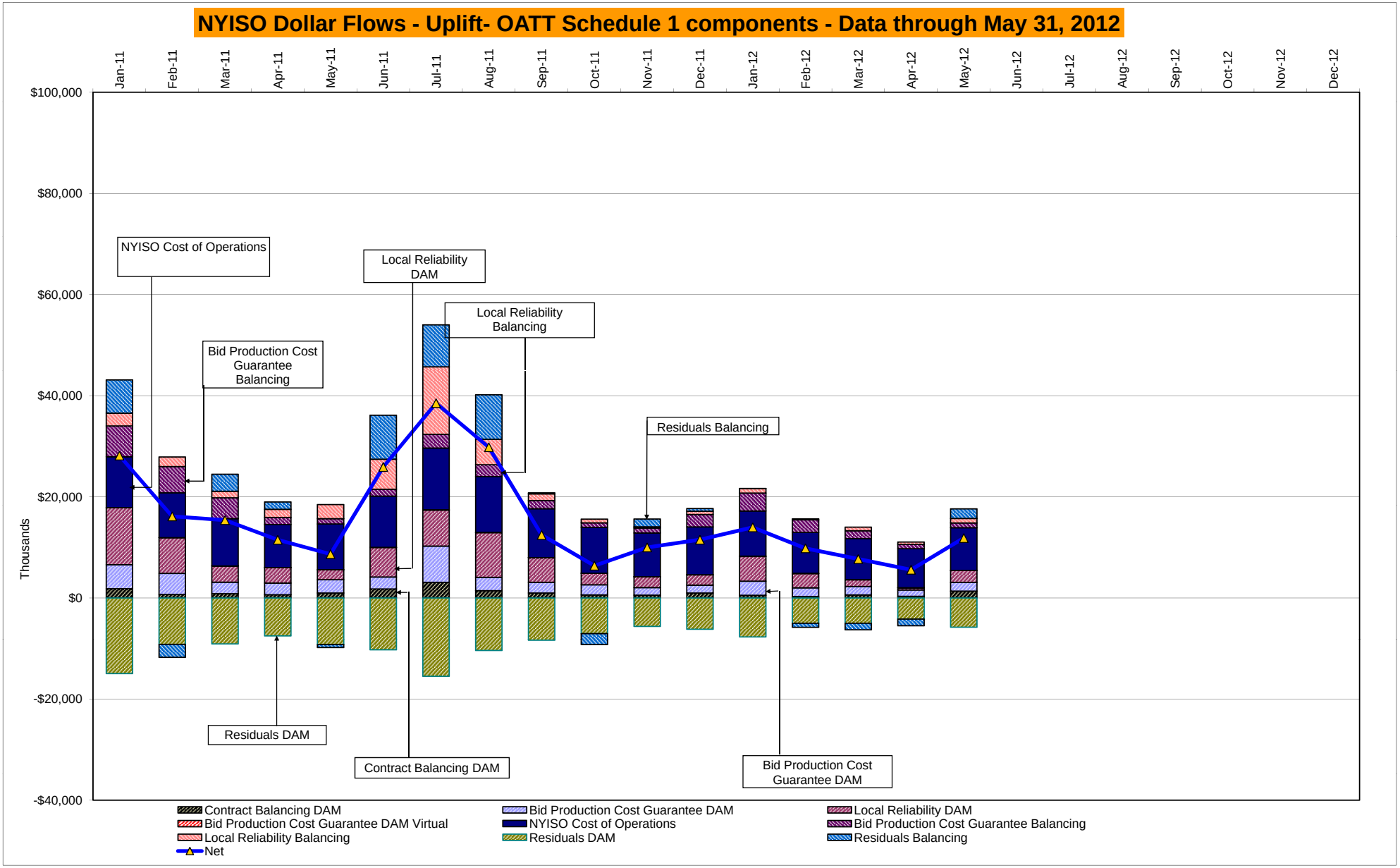
| 2012 | January | February | March | April | May | June | July | August | September | October | November | December |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LBMP | 44.00 | 32.44 | 28.98 | 28.30 | 34.66 | | | | | | | |
| NTAC | 0.85 | 0.80 | 0.68 | 0.71 | 0.72 | | | | | | | |
| Reserve | 0.35 | 0.25 | 0.38 | 0.32 | 0.13 | | | | | | | |
| Regulation | 0.10 | 0.08 | 0.13 | 0.12 | 0.09 | | | | | | | |
| NYISO Cost of Operations | 0.64 | 0.64 | 0.64 | 0.64 | 0.64 | | | | | | | |
| Uplift | 0.36 | 0.13 | (0.03) | (0.18) | (0.26) | | | | | | | |
| Uplift: Local Reliability Share | 0.41 | 0.24 | 0.16 | 0.07 | 0.24 | | | | | | | |
| Uplift: Statewide Share | (0.05) | (0.10) | (0.19) | (0.26) | (0.50) | | | | | | | |
| Voltage Support and Black Start | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | | | | | | | |
| **Avg Monthly Cost** | 46.67 | 34.72 | 31.15 | 30.28 | 36.35 | | | | | | | |
| Avg YTD Cost | 46.67 | 41.05 | 37.91 | 36.05 | 36.11 | | | | | | | |
| TSA $ per NYC MWh | 0.00 | 0.00 | 0.00 | 0.00 | 3.15 | | | | | | | |

| 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 |
| **Avg Monthly Cost** | 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 | 0.25 | 0.00 | 2.90 | 0.70 | 2.77 | 0.28 | 0.01 | 0.00 | 0.00 |

* Excludes ICAP payments.



These numbers reflect true-ups thru April 2012.




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

| 2012 | January | February | March | April | May | June | July | August | September | October | November | December |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Day Ahead Market MWh** | 14,877,279 | 13,473,786 | 13,590,456 | 12,482,692 | 13,324,441 | | | | | | | |
| DAM LSE Internal LBMP Energy Sales | 58% | 57% | 58% | 59% | 61% | | | | | | | |
| DAM External TC LBMP Energy Sales | 1% | 1% | 0% | 1% | 1% | | | | | | | |
| DAM Bilateral - Internal Bilaterals | 38% | 40% | 40% | 38% | 36% | | | | | | | |
| DAM Bilateral - Importl/Non-LBMP Market Bilaterals | 0% | 0% | 0% | 0% | 0% | | | | | | | |
| DAM Bilateral - Export/Non-LBMP Market Bilaterals | 1% | 2% | 2% | 2% | 1% | | | | | | | |
| DAM Bilateral - Wheel Through Bilaterals | 1% | 0% | 1% | 1% | 1% | | | | | | | |
| **Balancing Energy Market MWh** | -878,258 | -814,169 | -896,046 | -374,825 | -31,291 | | | | | | | |
| Balancing Energy LSE Internal LBMP Energy Sales | -110% | -111% | -110% | -126% | -563% | | | | | | | |
| Balancing Energy External TC LBMP Energy Sales | 9% | 7% | 7% | 19% | 348% | | | | | | | |
| Balancing Energy Bilateral - Internal Bilaterals | 1% | 1% | 1% | 4% | 107% | | | | | | | |
| Balancing Energy Bilateral - Importl/Non-LBMP Market Bilaterals | 0% | 0% | 0% | 0% | 0% | | | | | | | |
| Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals | 4% | 3% | 3% | 6% | 54% | | | | | | | |
| Balancing Energy Bilateral - Wheel Through Bilaterals | -3% | 0% | -1% | -4% | -47% | | | | | | | |
| **Transactions Summary** | | | | | | | | | | | | |
| LBMP | 57% | 56% | 55% | 59% | 61% | | | | | | | |
| Internal Bilaterals | 41% | 42% | 43% | 39% | 36% | | | | | | | |
| Import Bilaterals | 0% | 0% | 0% | 0% | 0% | | | | | | | |
| Export Bilaterals | 2% | 2% | 2% | 2% | 2% | | | | | | | |
| Wheels Through | 1% | 0% | 1% | 1% | 1% | | | | | | | |
| **Market Share of Total Load** | | | | | | | | | | | | |
| Day Ahead Market | 106.3% | 106.4% | 107.1% | 103.1% | 100.2% | | | | | | | |
| Balancing Energy + | -6.3% | -6.4% | -7.1% | -3.1% | -0.2% | | | | | | | |
| Total MWH | 13,999,021 | 12,659,617 | 12,694,410 | 12,107,867 | 13,293,151 | | | | | | | |
| Average Daily Energy Sendout/Month GWh | 443 | 431 | 407 | 396 | 420 | | | | | | | |

| 2011 | January | February | March | April | May | June | July | August | September | October | November | December |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Day Ahead Market MWh** | 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 - Importl/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% |
| **Balancing Energy Market MWh** | 311,996 | 210,141 | 250,339 | 35,941 | 192,443 | 44,238 | 221,519 | -31,911 | -203,622 | -205,236 | -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 - Importl/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% |
| **Transactions Summary** | | | | | | | | | | | | |
| 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% |
| **Market Share of Total Load** | | | | | | | | | | | | |
| 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 | 13,057,931 | 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.

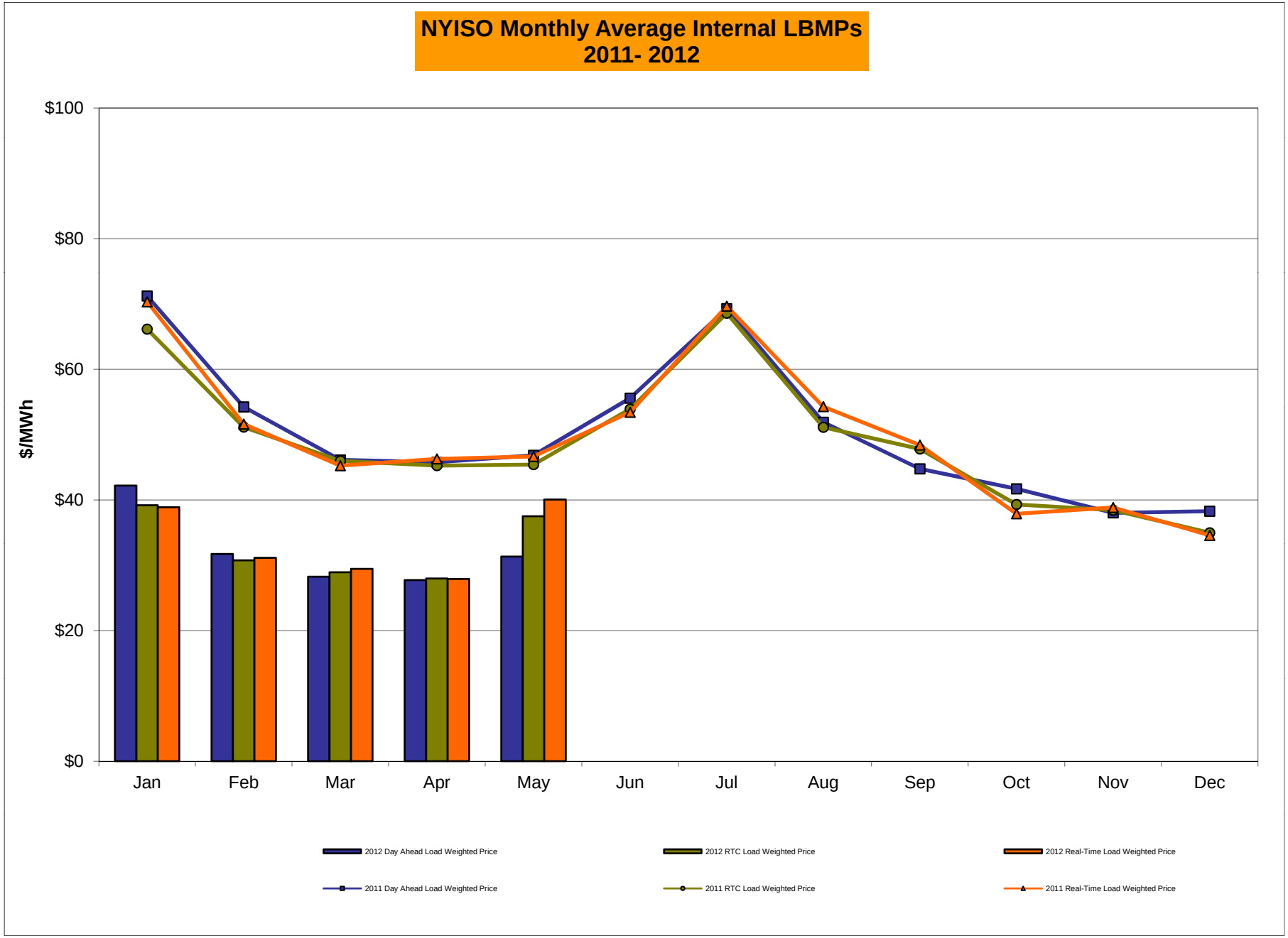
## NYISO Markets 2012 Energy Statistics

| | January | February | March | April | May | June | July | August | September | October | November | December |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DAY AHEAD LBMP** | | | | | | | | | | | | |
| Price * | $40.91 | $31.15 | $27.44 | $26.88 | $29.79 | | | | | | | |
| Standard Deviation | $15.62 | $6.23 | $7.00 | $7.04 | $10.22 | | | | | | | |
| Load Weighted Price ** | $42.20 | $31.73 | $28.25 | $27.72 | $31.33 | | | | | | | |
| **RTC LBMP** | | | | | | | | | | | | |
| Price * | $37.93 | $30.31 | $28.15 | $27.19 | $34.27 | | | | | | | |
| Standard Deviation | $23.43 | $7.26 | $22.87 | $15.67 | $46.03 | | | | | | | |
| Load Weighted Price ** | $39.19 | $30.75 | $28.93 | $27.97 | $37.49 | | | | | | | |
| **REAL TIME LBMP** | | | | | | | | | | | | |
| Price * | $37.35 | $30.54 | $28.47 | $27.00 | $35.22 | | | | | | | |
| Standard Deviation | $23.75 | $9.77 | $20.94 | $15.14 | $56.38 | | | | | | | |
| Load Weighted Price ** | $38.88 | $31.14 | $29.44 | $27.89 | $40.06 | | | | | | | |
| Average Daily Energy Sendout/Month GWh | 443 | 431 | 407 | 396 | 420 | | | | | | | |

## NYISO Markets 2011 Energy Statistics

| | January | February | March | April | May | June | July | August | September | October | November | December |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DAY AHEAD LBMP** | | | | | | | | | | | | |
| 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 |
| **RTC LBMP** | | | | | | | | | | | | |
| 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 |
| **REAL TIME LBMP** | | | | | | | | | | | | |
| 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
$100
$80
$60
$40
$20
$0
$/MWh
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
2012 Day Ahead Load Weighted Price
2012 RTC Load Weighted Price
2012 Real-Time Load Weighted Price
2011 Day Ahead Load Weighted Price
2011 RTC Load Weighted Price
2011 Real-Time Load Weighted Price

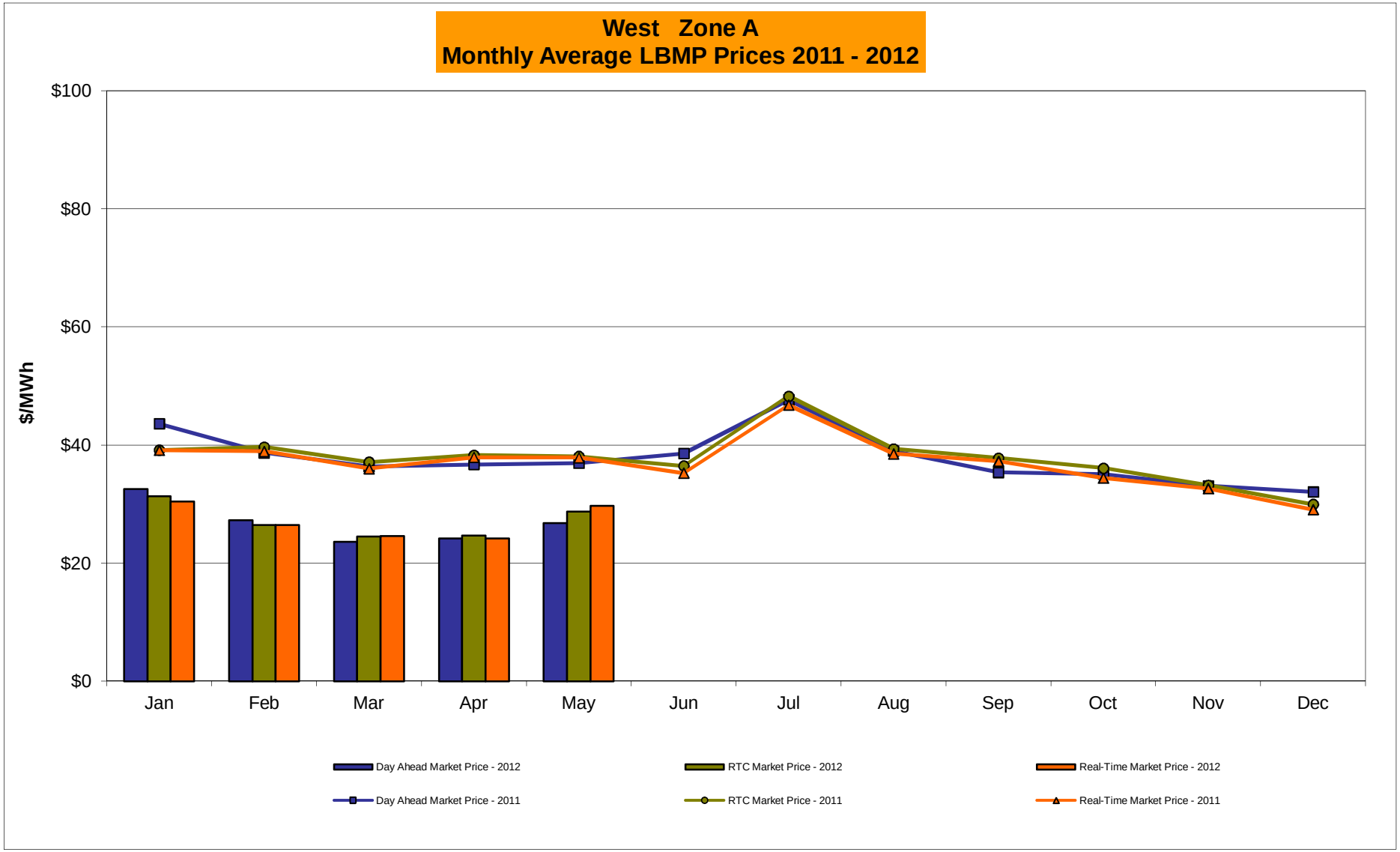
## May 2012 Zonal LBMP Statistics for NYISO ($/MWh)

| | WEST Zone A | GENESEE Zone B | NORTH Zone D | CENTRAL Zone C | MOHAWK VALLEY Zone E | CAPITAL Zone F | HUDSON VALLEY Zone G | MILLWOOD Zone H | DUNWOODIE Zone I | NEW YORK CITY Zone J | LONG ISLAND Zone K |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **DAY AHEAD LBMP** | | | | | | | | | | | |
| Unweighted Price * | 26.81 | 27.15 | 25.69 | 27.64 | 27.91 | 28.55 | 30.15 | 30.13 | 30.15 | 30.48 | 34.72 |
| Standard Deviation | 7.61 | 7.97 | 7.53 | 8.15 | 8.41 | 8.41 | 9.89 | 10.13 | 10.13 | 10.15 | 19.74 |
| **RTC LBMP** | | | | | | | | | | | |
| Unweighted Price * | 28.75 | 29.06 | 27.05 | 29.46 | 29.71 | 30.28 | 35.16 | 35.70 | 35.75 | 36.06 | 43.01 |
| Standard Deviation | 28.25 | 29.88 | 28.09 | 30.33 | 30.91 | 30.85 | 51.28 | 56.06 | 56.58 | 56.95 | 92.25 |
| **REAL TIME LBMP** | | | | | | | | | | | |
| Unweighted Price * | 29.69 | 29.68 | 27.60 | 30.11 | 30.35 | 32.01 | 35.92 | 36.46 | 36.50 | 36.76 | 43.52 |
| Standard Deviation | 41.54 | 39.05 | 36.78 | 40.04 | 40.39 | 45.59 | 62.15 | 67.35 | 67.87 | 68.22 | 82.74 |

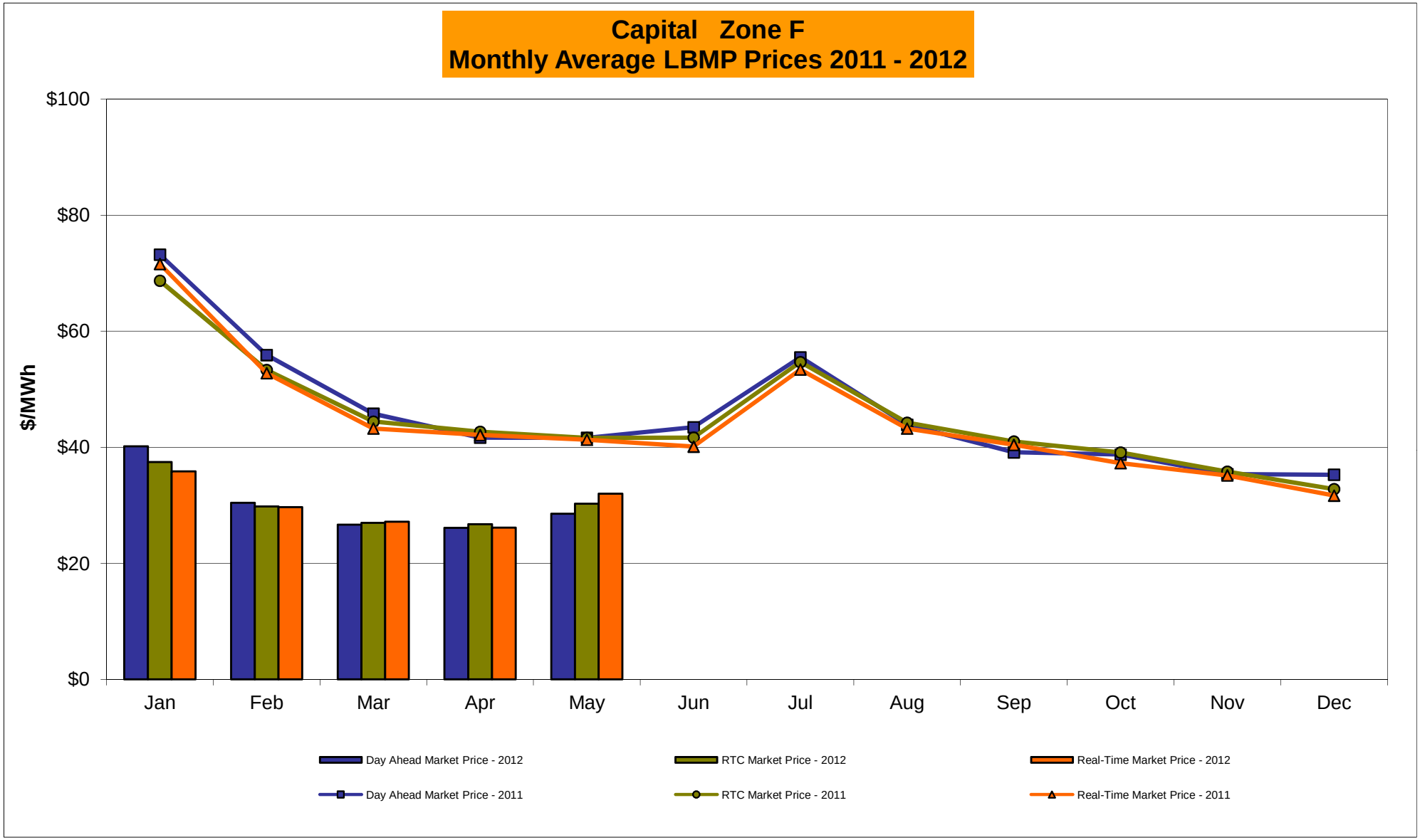
| | ONTARIO IESO Zone O | HYDRO QUEBEC (Wheel) Zone M | HYDRO QUEBEC (Import/Export) Zone M | PJM Zone P | NEW ENGLAND Zone N | CROSS SOUND CABLE Controllable Line | NORTHPORT-NORWALK Controllable Line | NEPTUNE Controllable Line | LINDEN VFT Controllable Line | Dennison Controllable Line |
|---|---|---|---|---|---|---|---|---|---|---|
| **DAY AHEAD LBMP** | | | | | | | | | | |
| Unweighted Price * | 26.07 | 24.44 | 18.27 | 27.94 | 28.90 | 34.58 | 33.20 | 34.59 | 29.88 | 25.23 |
| Standard Deviation | 7.21 | 7.69 | 2.79 | 8.46 | 8.82 | 20.41 | 18.33 | 20.77 | 8.93 | 7.34 |
| **RTC LBMP** | | | | | | | | | | |
| Unweighted Price * | 26.22 | 24.83 | 23.33 | 29.28 | 29.64 | 39.70 | 39.00 | 39.52 | 31.55 | 24.17 |
| Standard Deviation | 13.60 | 13.74 | 9.71 | 22.27 | 21.47 | 87.25 | 87.11 | 87.28 | 40.21 | 15.37 |
| **REAL TIME LBMP** | | | | | | | | | | |
| Unweighted Price * | 26.46 | 27.03 | 23.85 | 32.21 | 30.79 | 43.21 | 39.08 | 42.81 | 34.77 | 26.58 |
| Standard Deviation | 23.98 | 36.01 | 15.09 | 44.68 | 38.92 | 81.66 | 61.73 | 81.38 | 59.52 | 35.20 |

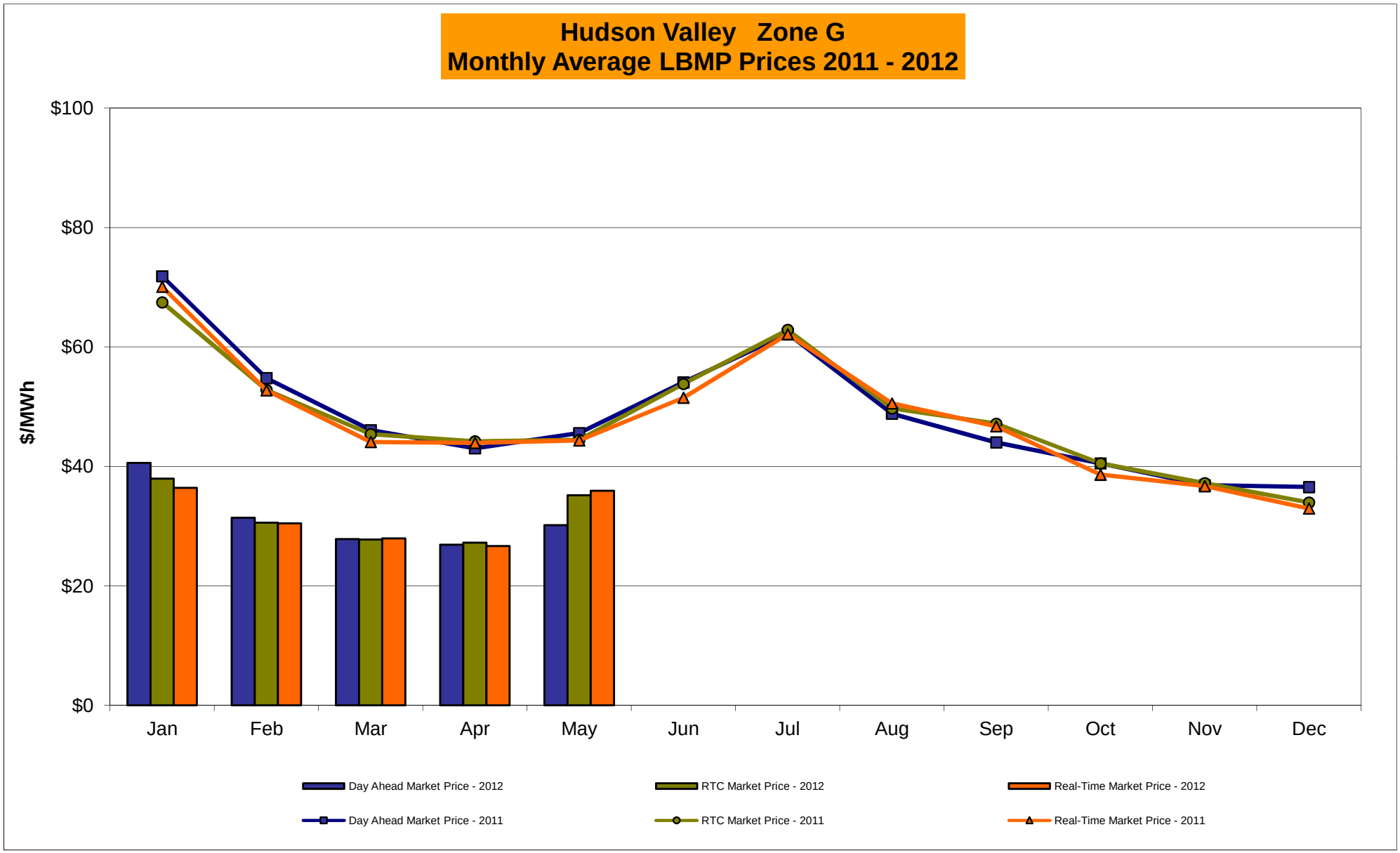
* Straight LBMP averages

Market Mitigation and Analysis
Prepared: 6/4/2012 3:39 PM

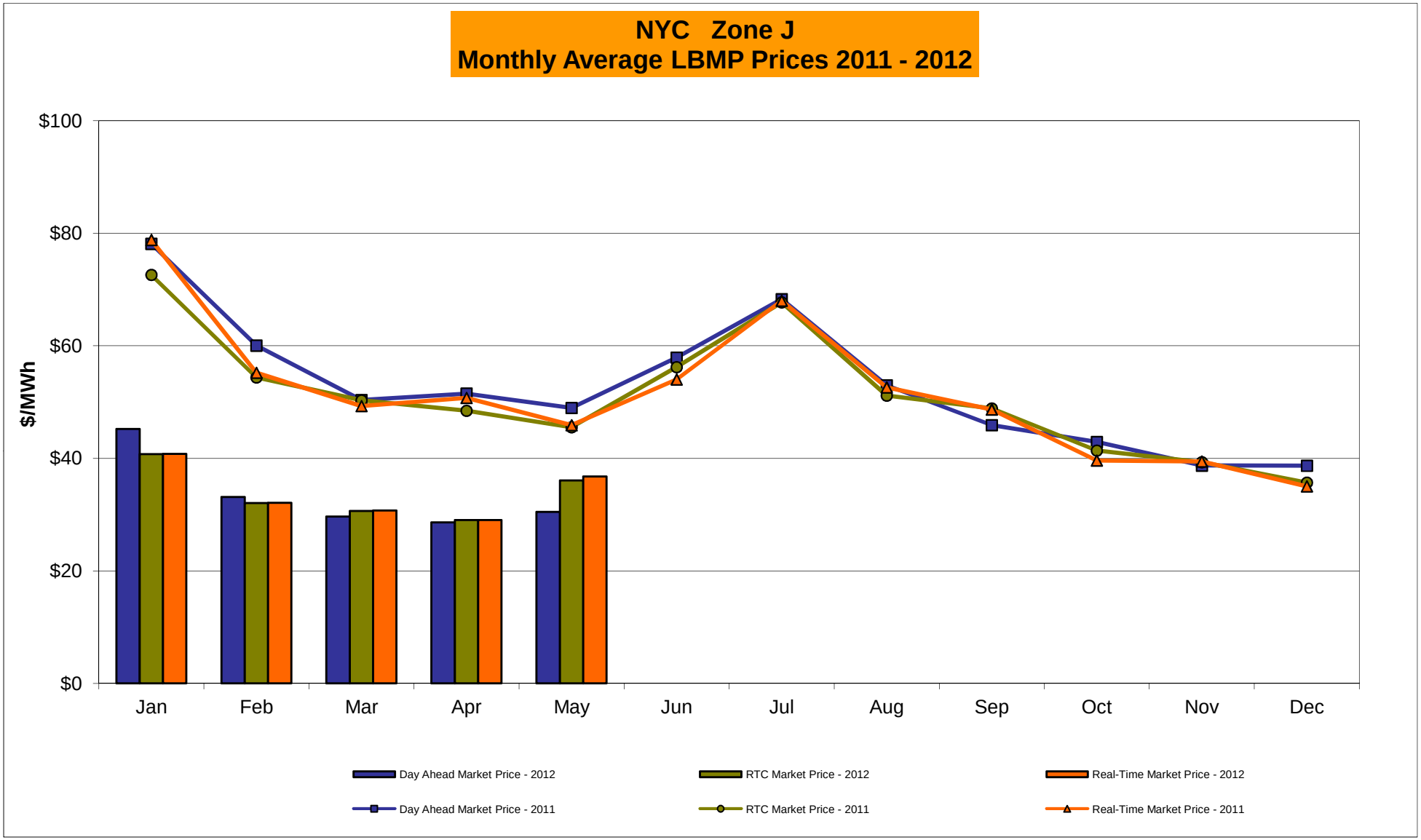



Market Mitigation and Analysis
Prepared:6/4/2012 3:40 PM

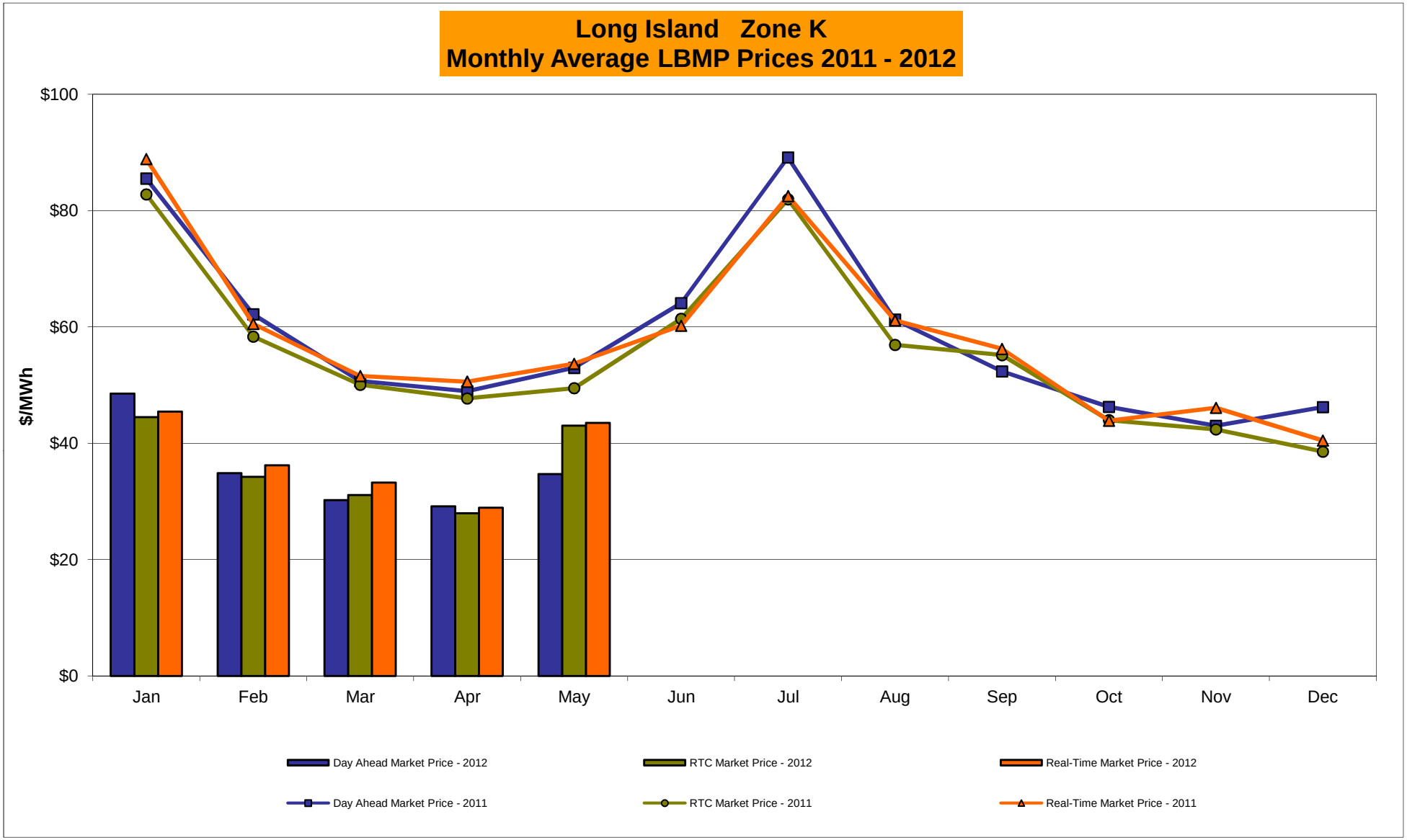

Capital Zone F
Monthly Average LBMP Prices 2011 - 2012
$/MWh
$100
$80
$60
$40
$20
$0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Day Ahead Market Price - 2012
RTC Market Price - 2012
Real-Time Market Price - 2012
Day Ahead Market Price - 2011
RTC Market Price - 2011
Real-Time Market Price - 2011



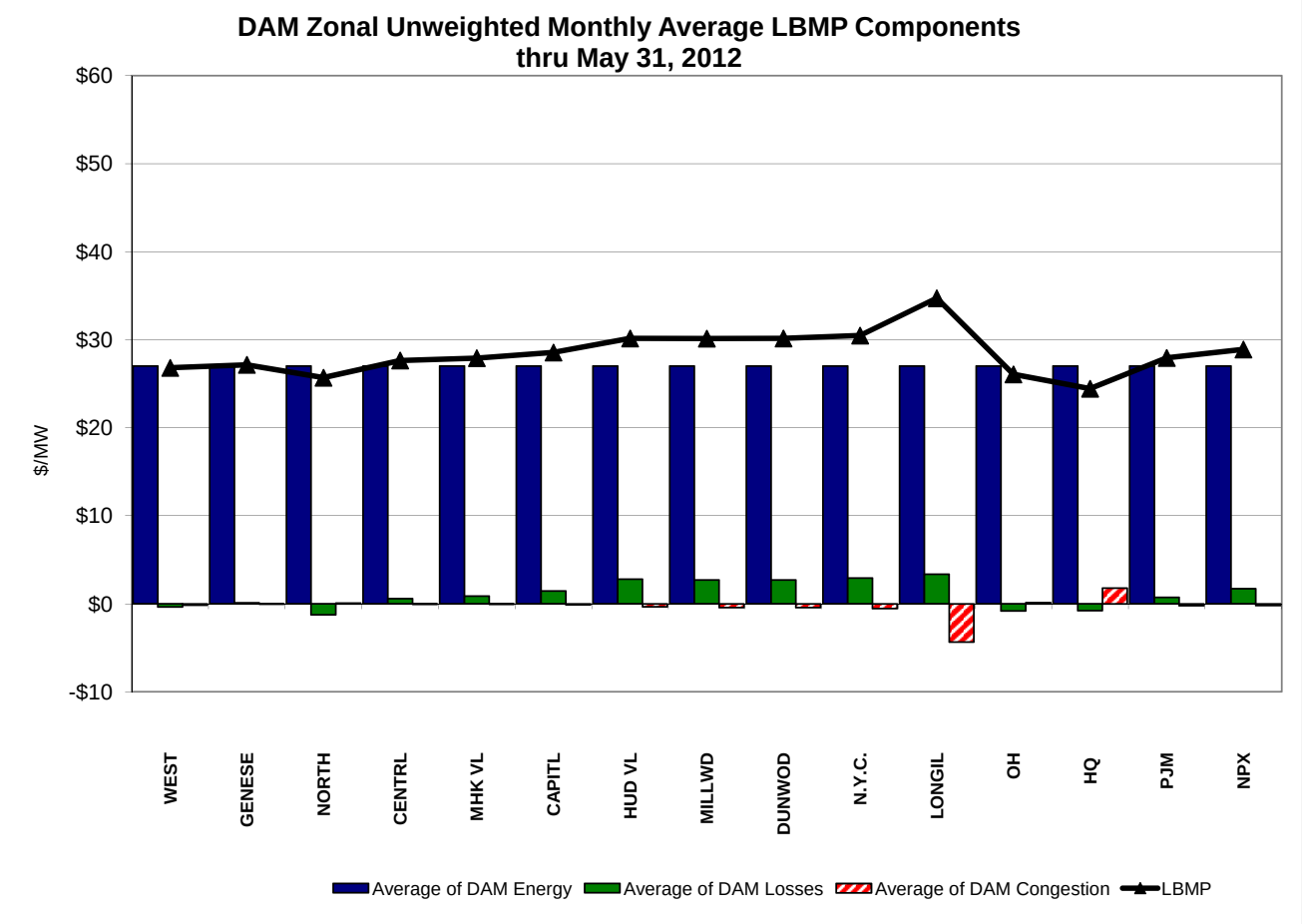

Market Mitigation and Analysis
Prepared:6/4/2012 3:44 PM

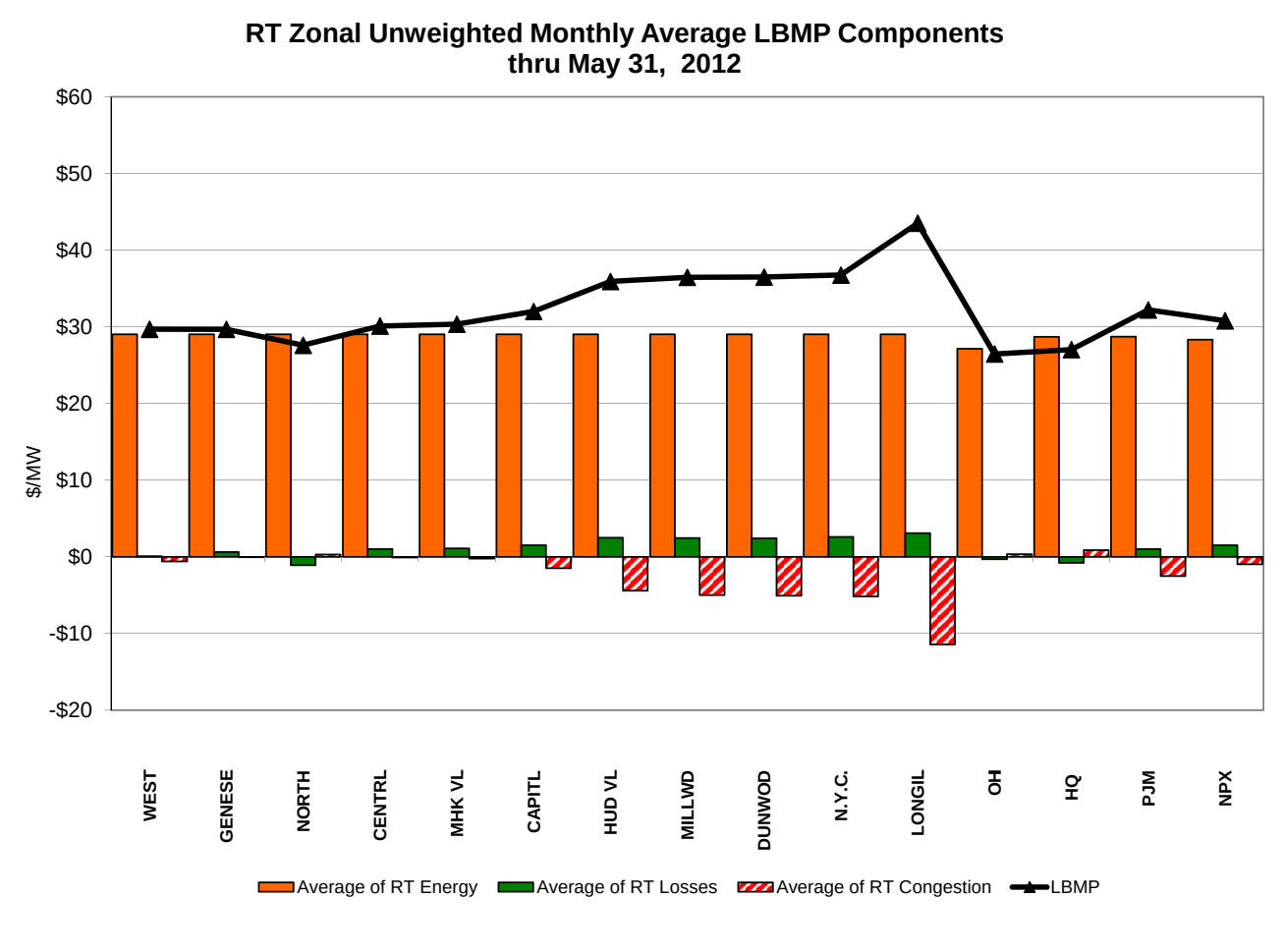



Market Mitigation and Analysis
Prepared:6/4/2012 3:46 PM

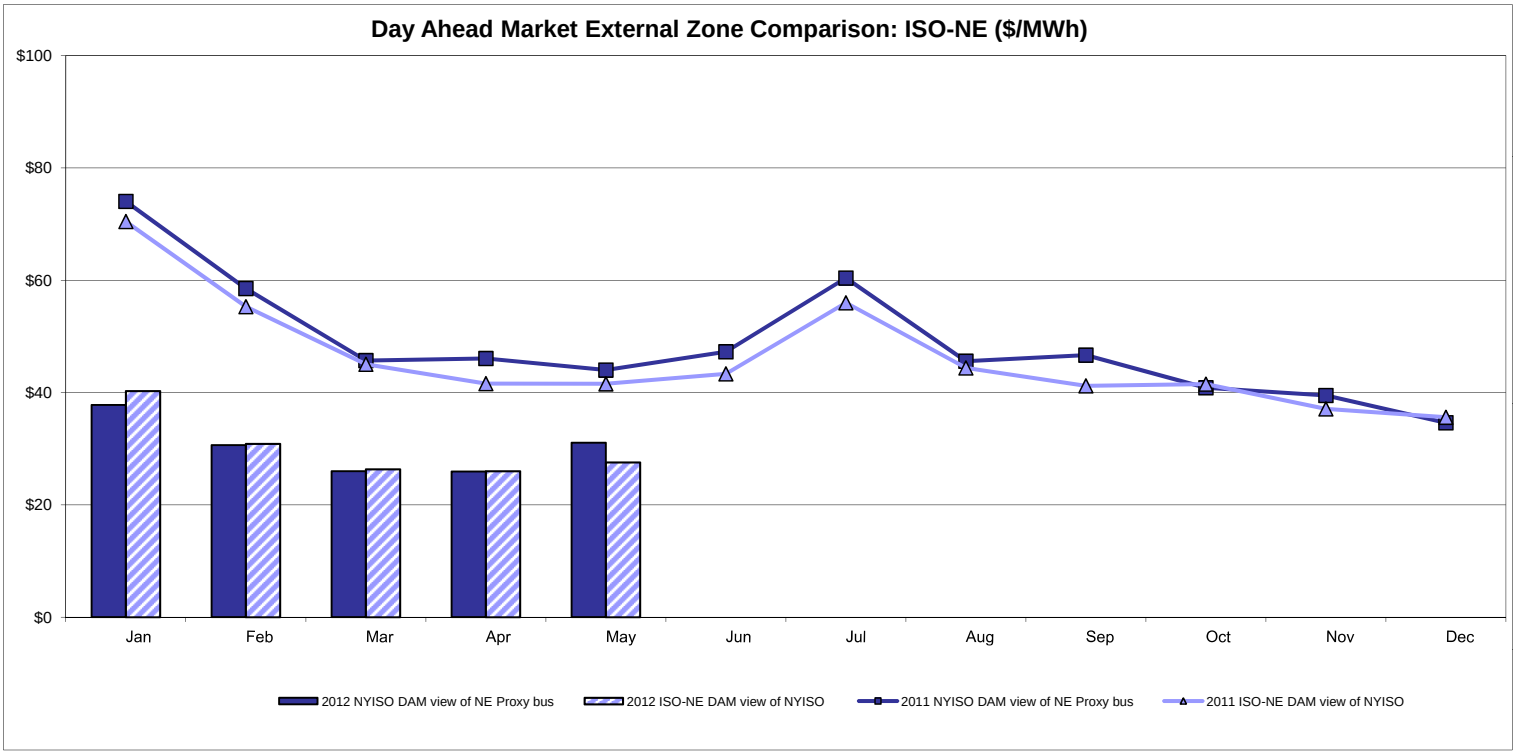


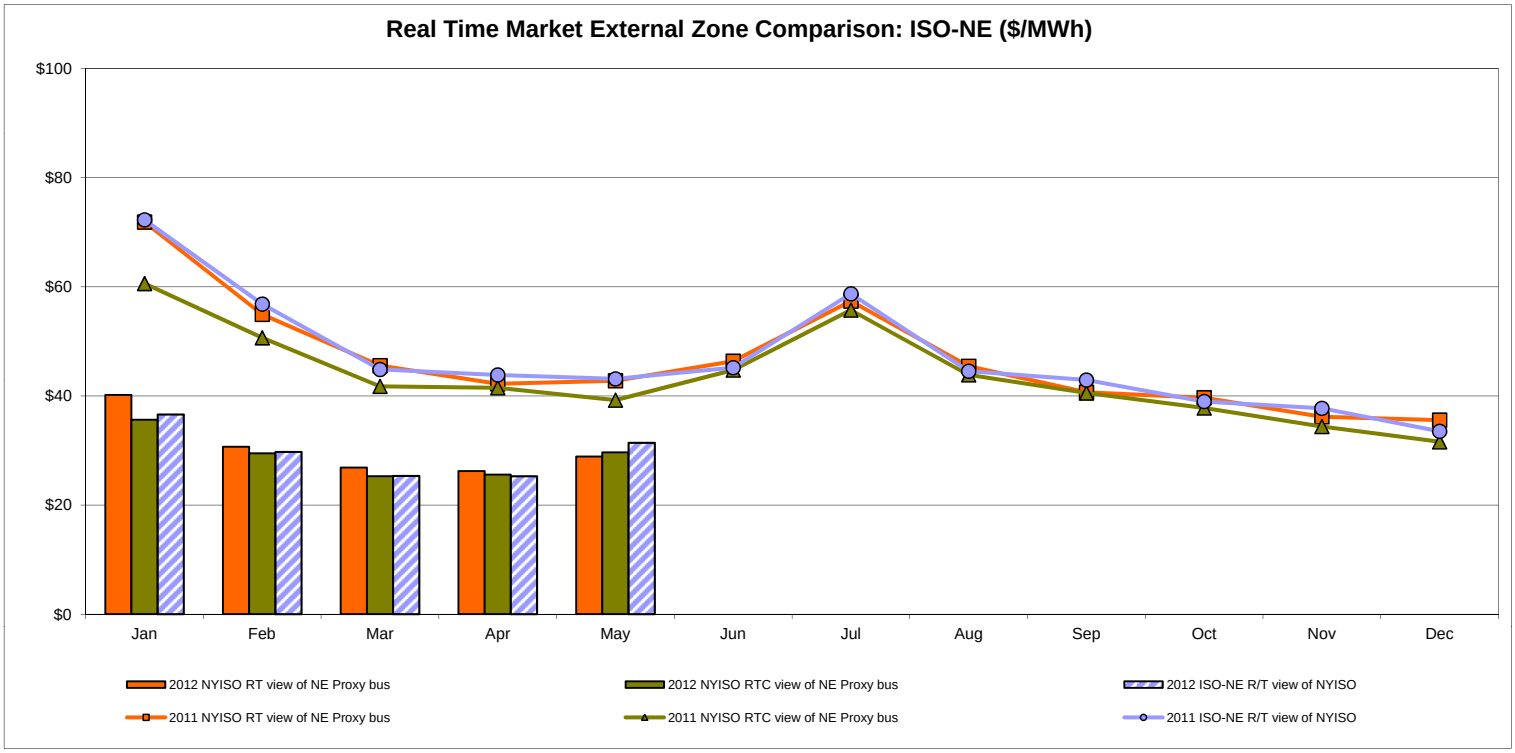

Market Mitigation and Analysis
Prepared:6/4/2012 3:47 PM


DAM Zonal Unweighted Monthly Average LBMP Components
thru May 31, 2012
$60
$50
$40
$30
$20
$10
$0
-$10
$/MW
WEST
GENESE
NORTH
CENTRL
MHK VL
CAPITL
HUD VL
MILLWD
DUNWOD
N.Y.C.
LONGIL
OH
HQ
PJM
NPX
Average of DAM Energy
Average of DAM Losses
Average of DAM Congestion
LBMP

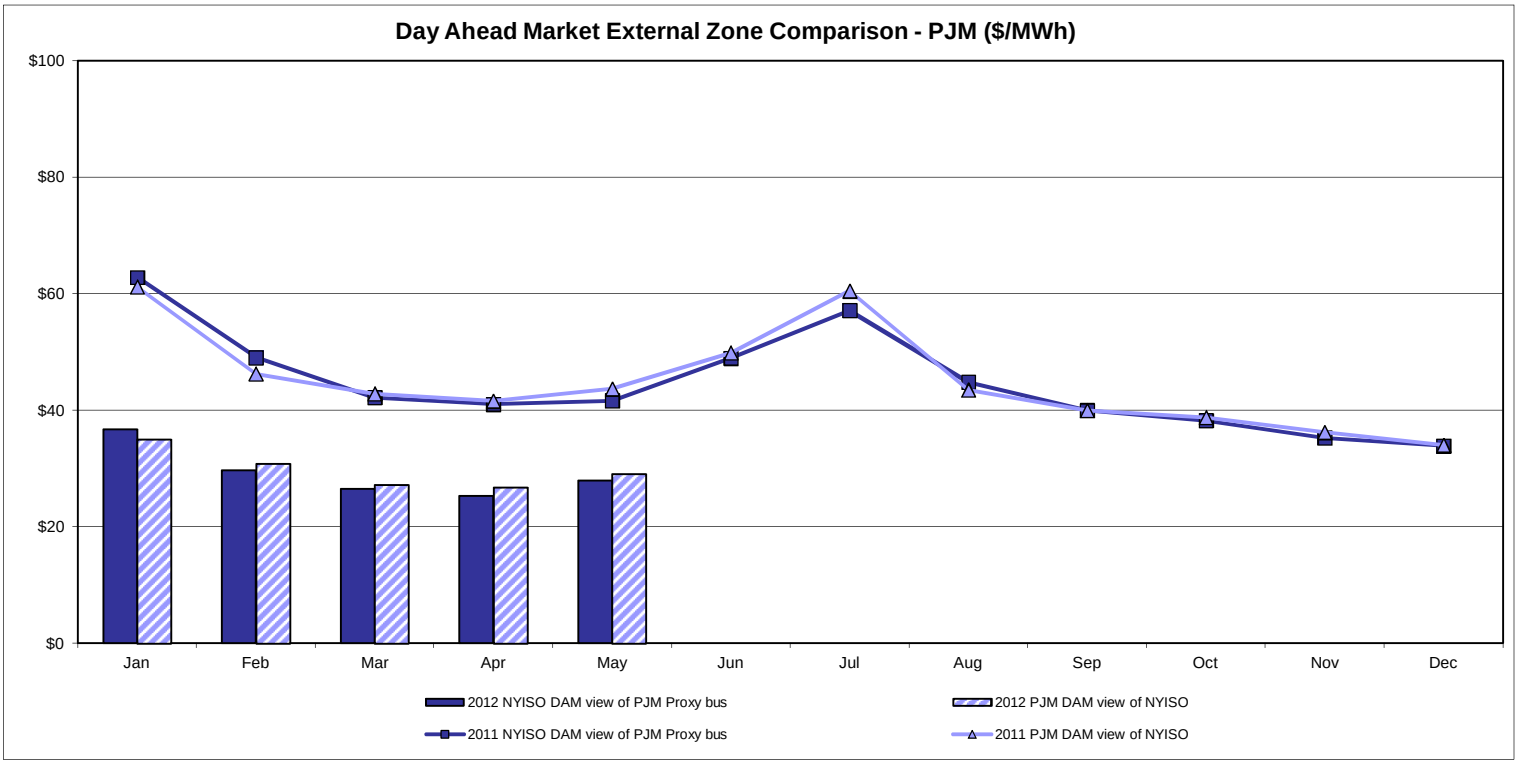

RT Zonal Unweighted Monthly Average LBMP Components
thru May 31, 2012
$60
$50
$40
$30
$20
$10
$0
-$10
-$20
$/MW
WEST
GENESE
NORTH
CENTRL
MHK VL
CAPITL
HUD VL
MILLWD
DUNWOD
N.Y.C.
LONGIL
OH
HQ
PJM
NPX
Average of RT Energy
Average of RT Losses
Average of RT Congestion
LBMP

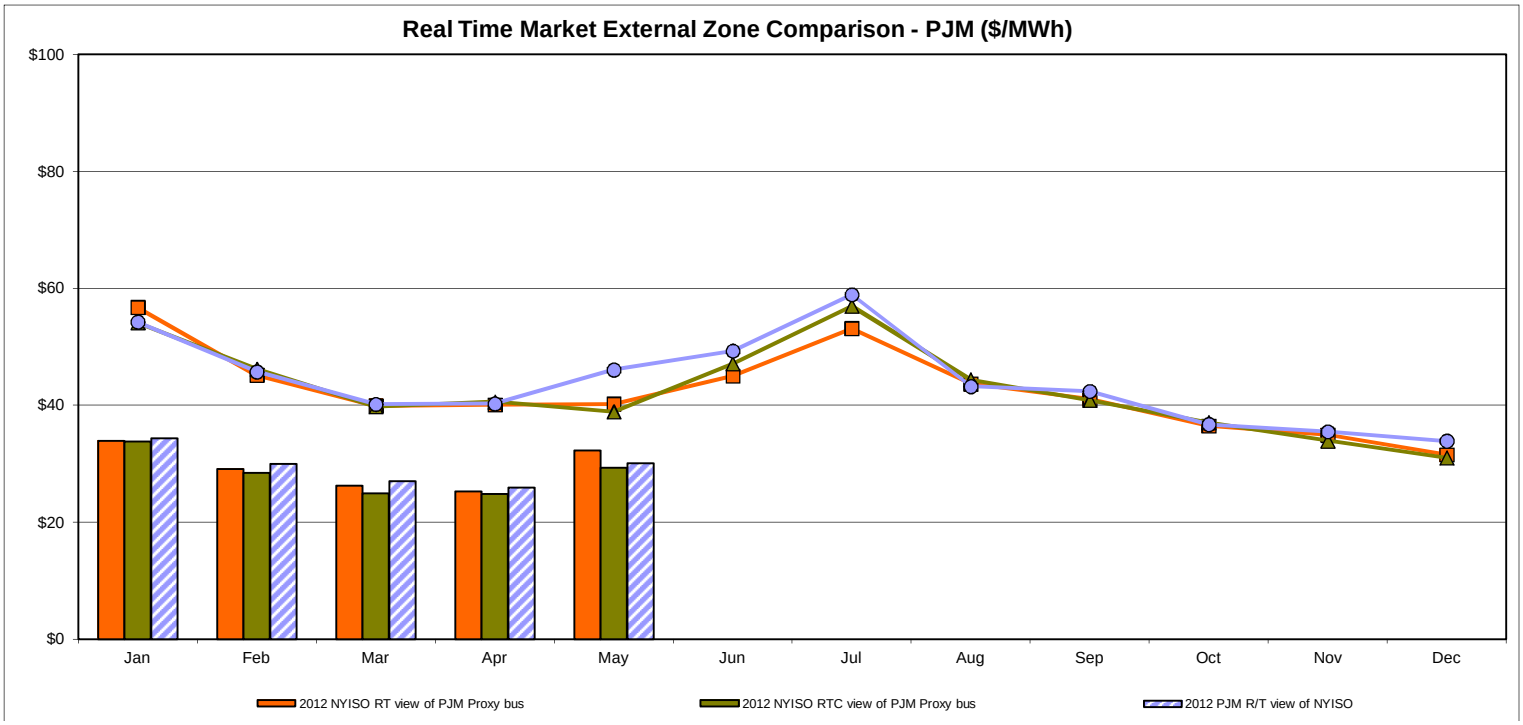
# External Comparison ISO-New England



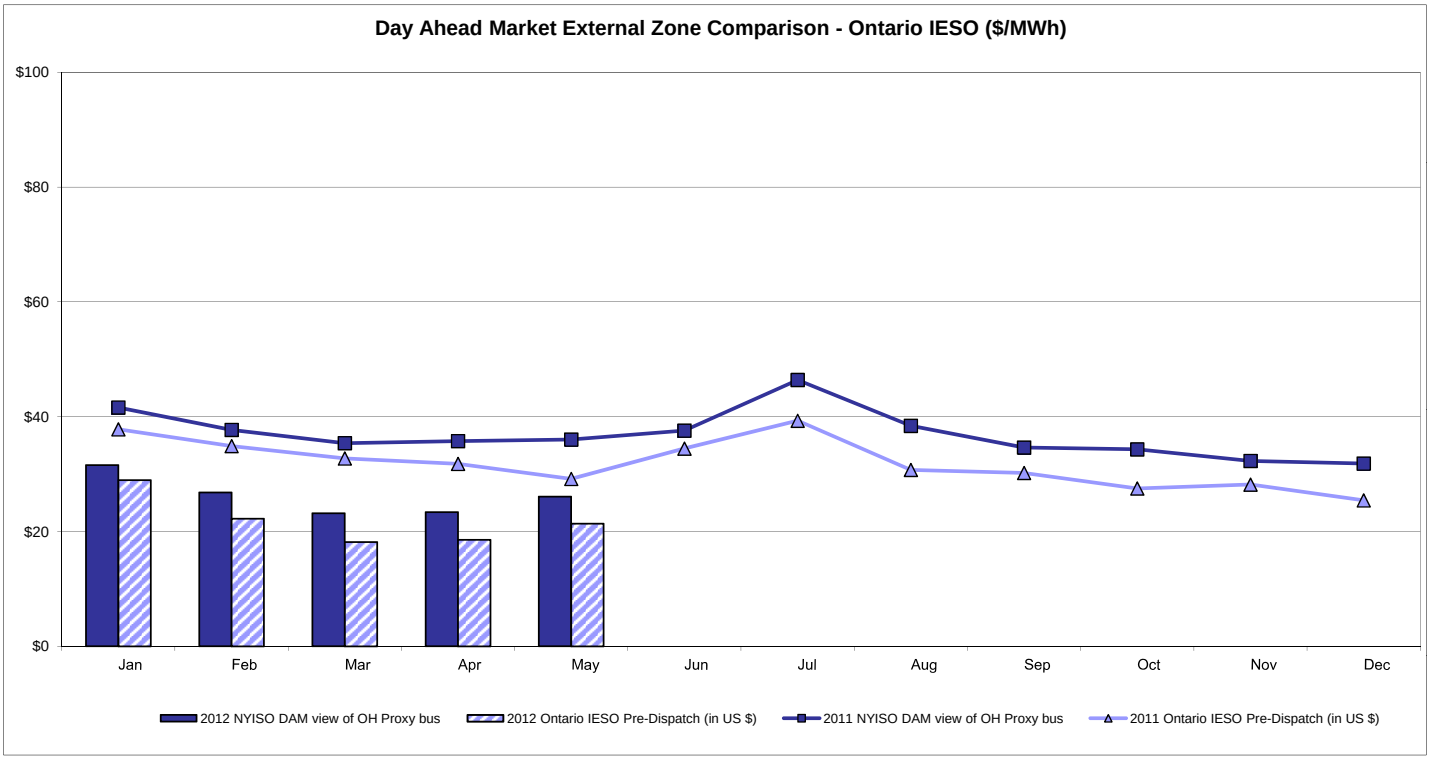



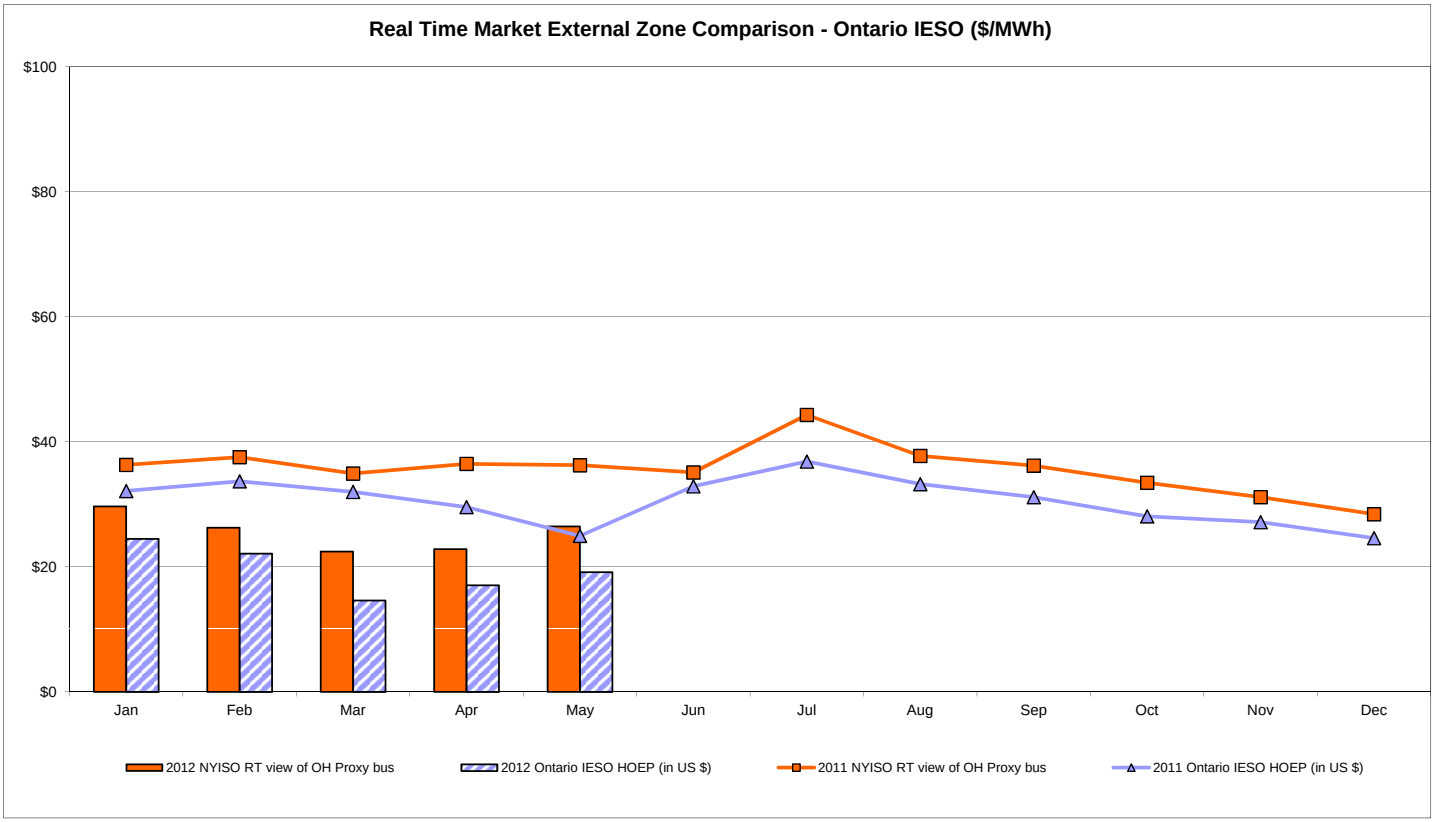
# External Comparison PJM



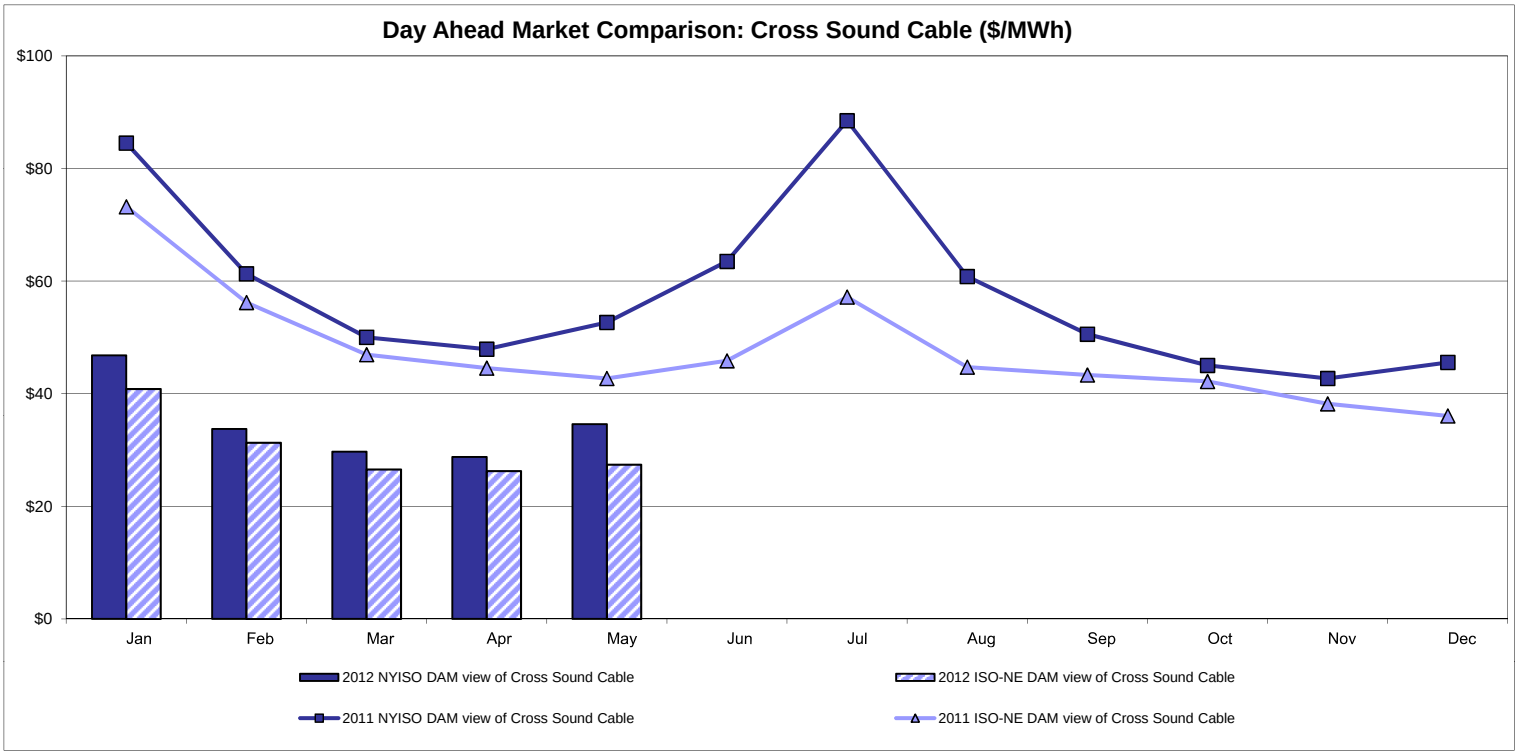
# External Comparison Ontario IESO

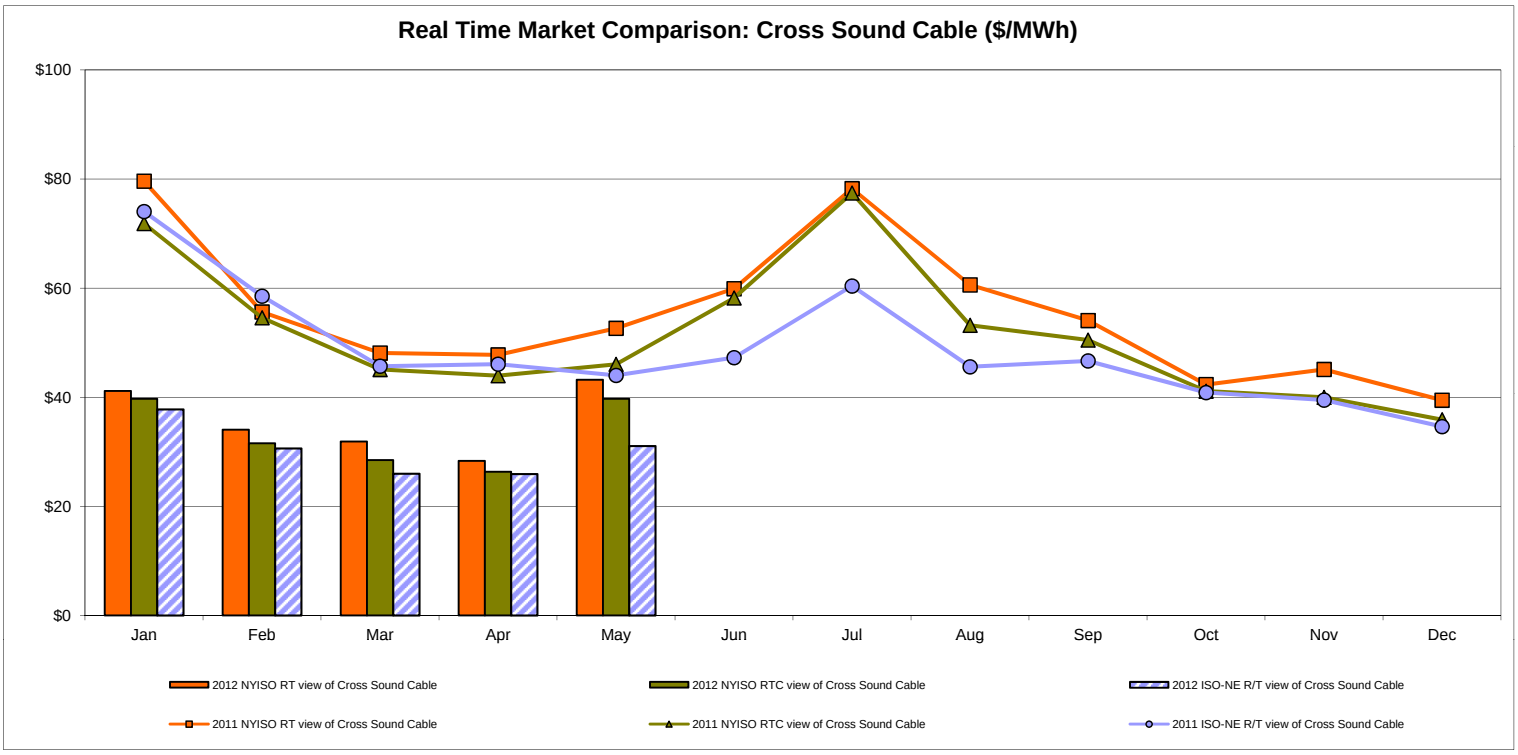



Notes: Exchange factor used for May 2012 was 1.00 to US $
HOEP: Hourly Ontario Energy Price
Pre-Dispatch: Projected Energy Price

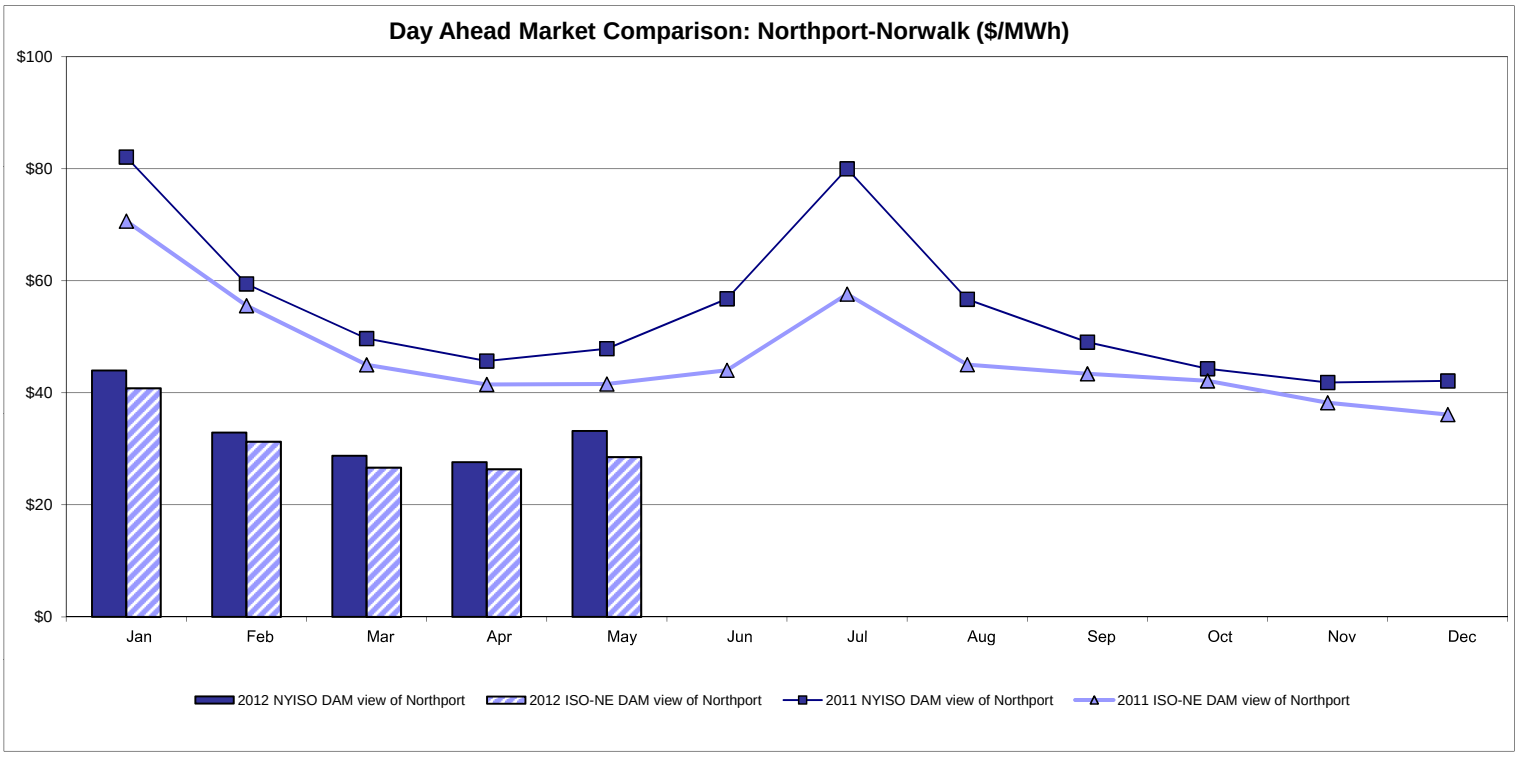
# External Controllable Line: Cross Sound Cable (New England)

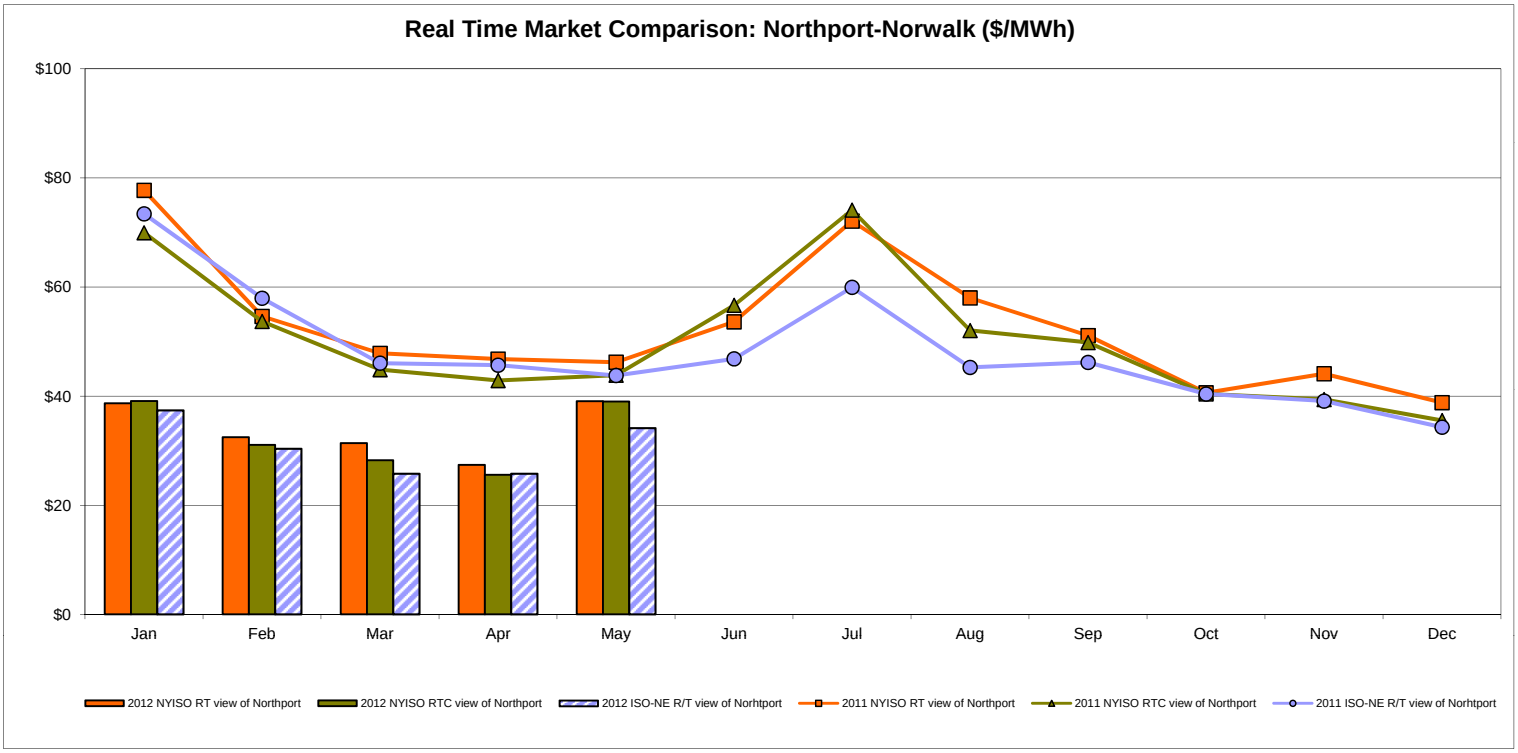



Note:
ISO-NE Forecast is an advisory posting @ 18:00 day before.
The DAM and R/T prices at the Shorham 13899 interface are used for ISO-NE.
The DAM and R/T prices at the CSC interface are used for NYISO.

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

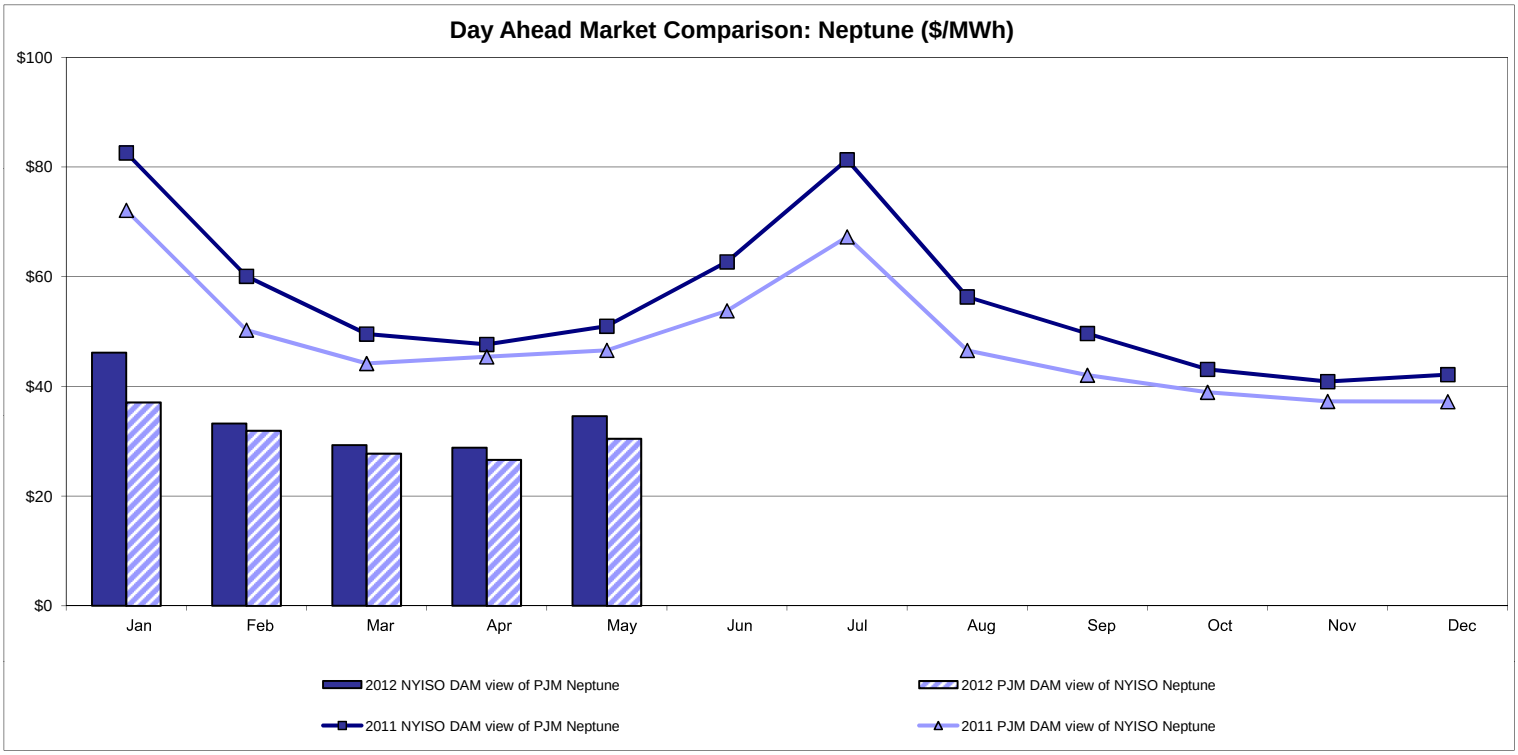


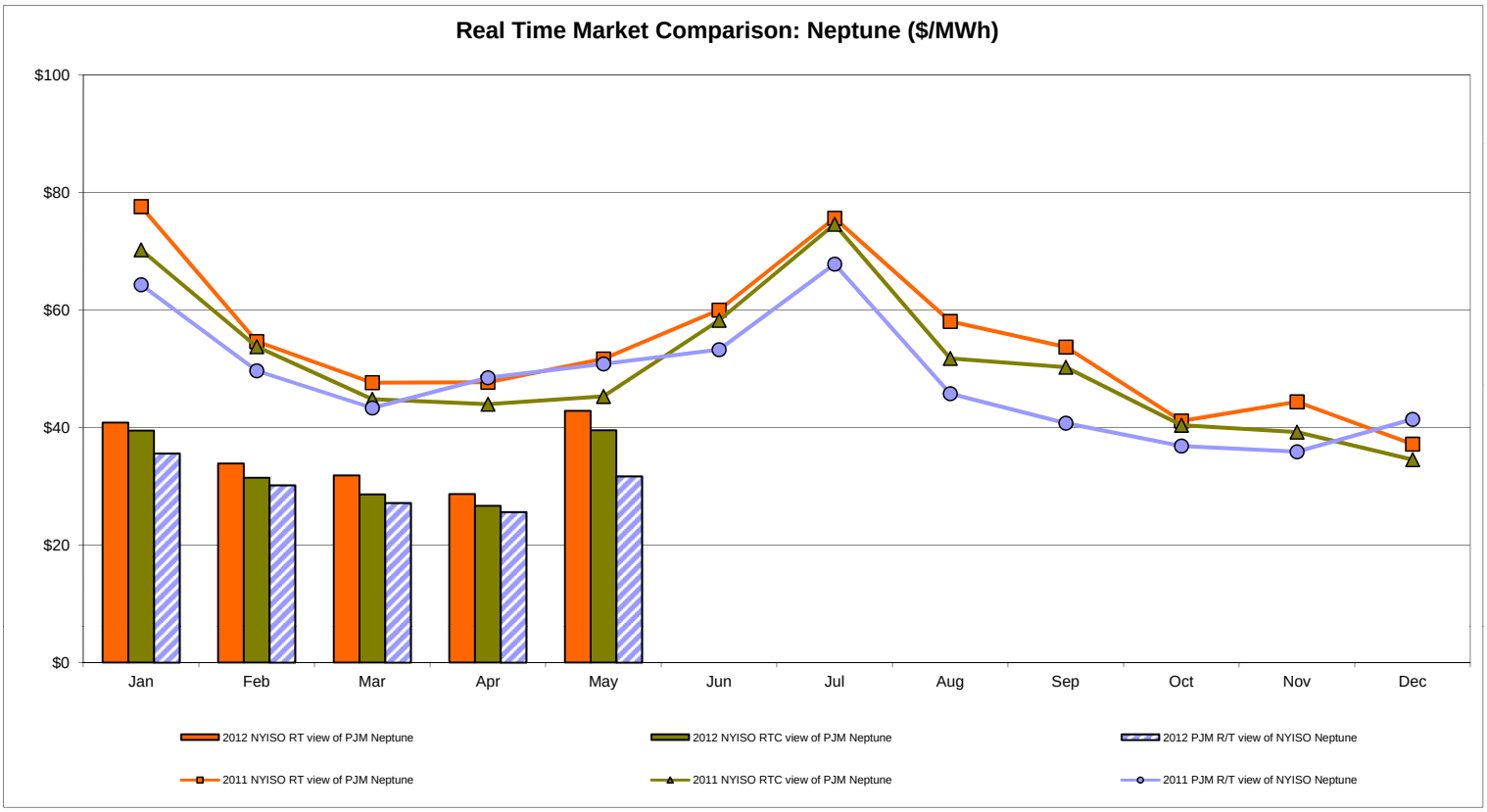




Note:

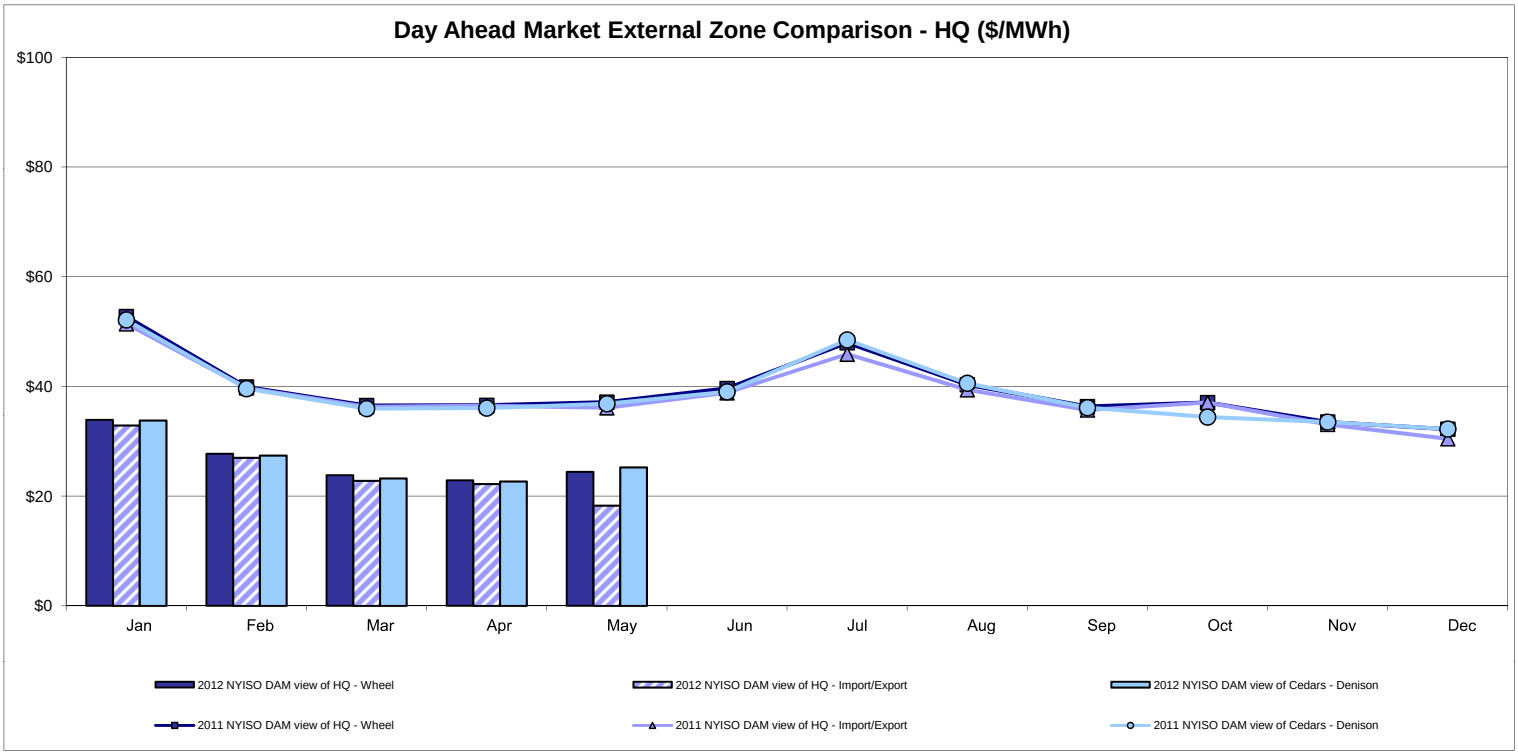
ISO-NE Forecast is an advisory posting @ 18:00 day before.
The DAM and R/T prices at the Northport 138 interface are used for ISO-NE.
The DAM and R/T prices at the 1385 interface are used for NYISO.

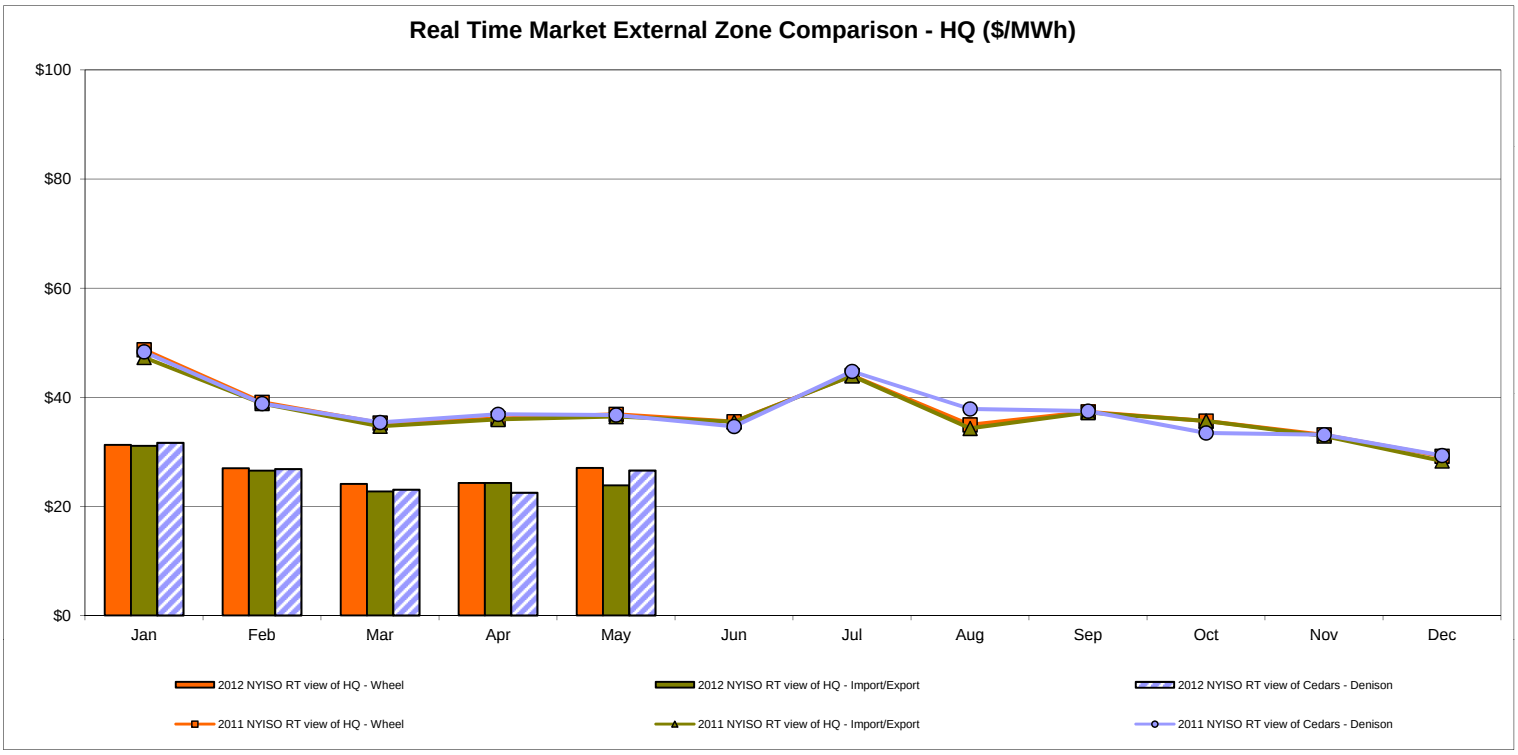
# External Controllable Line: Neptune (PJM)



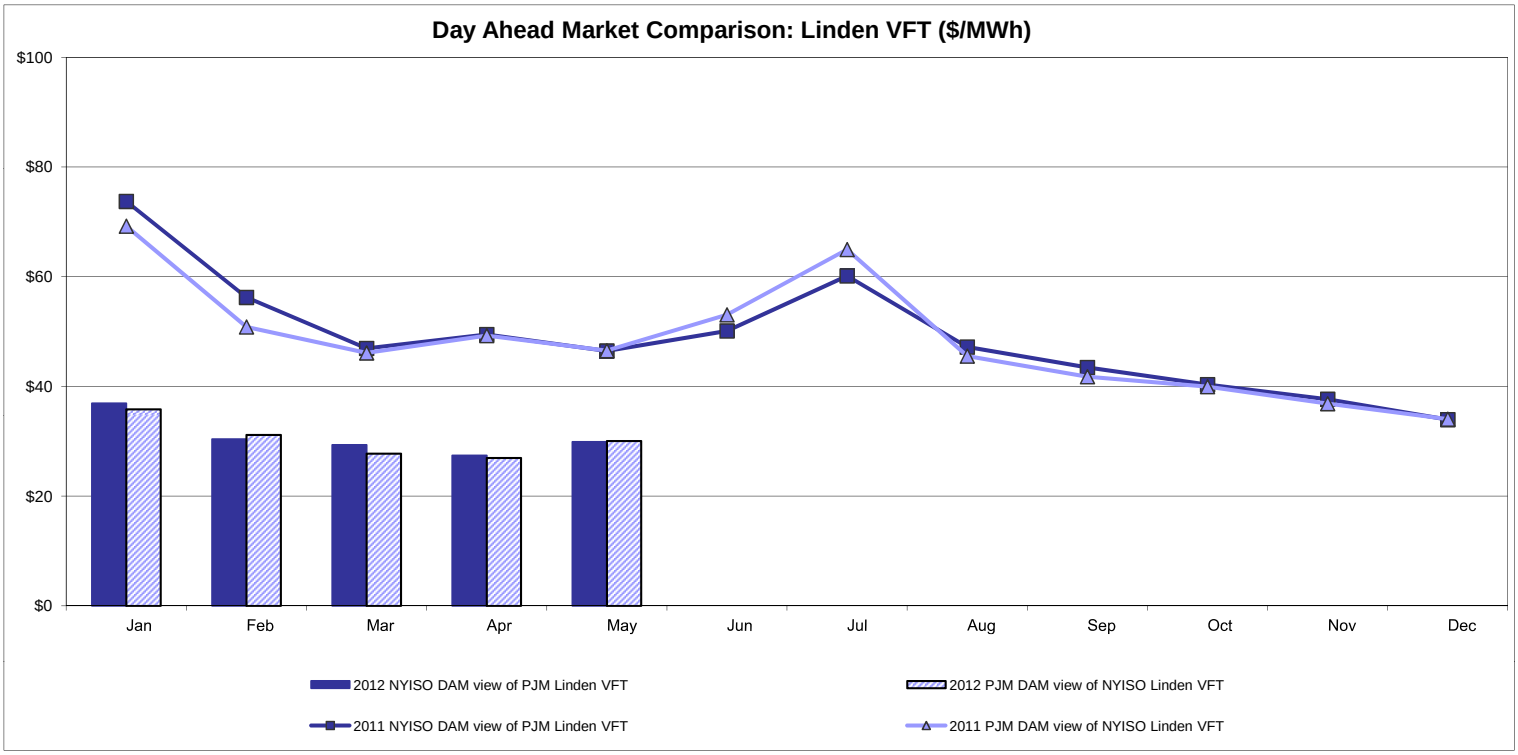
# External Comparison Hydro-Quebec

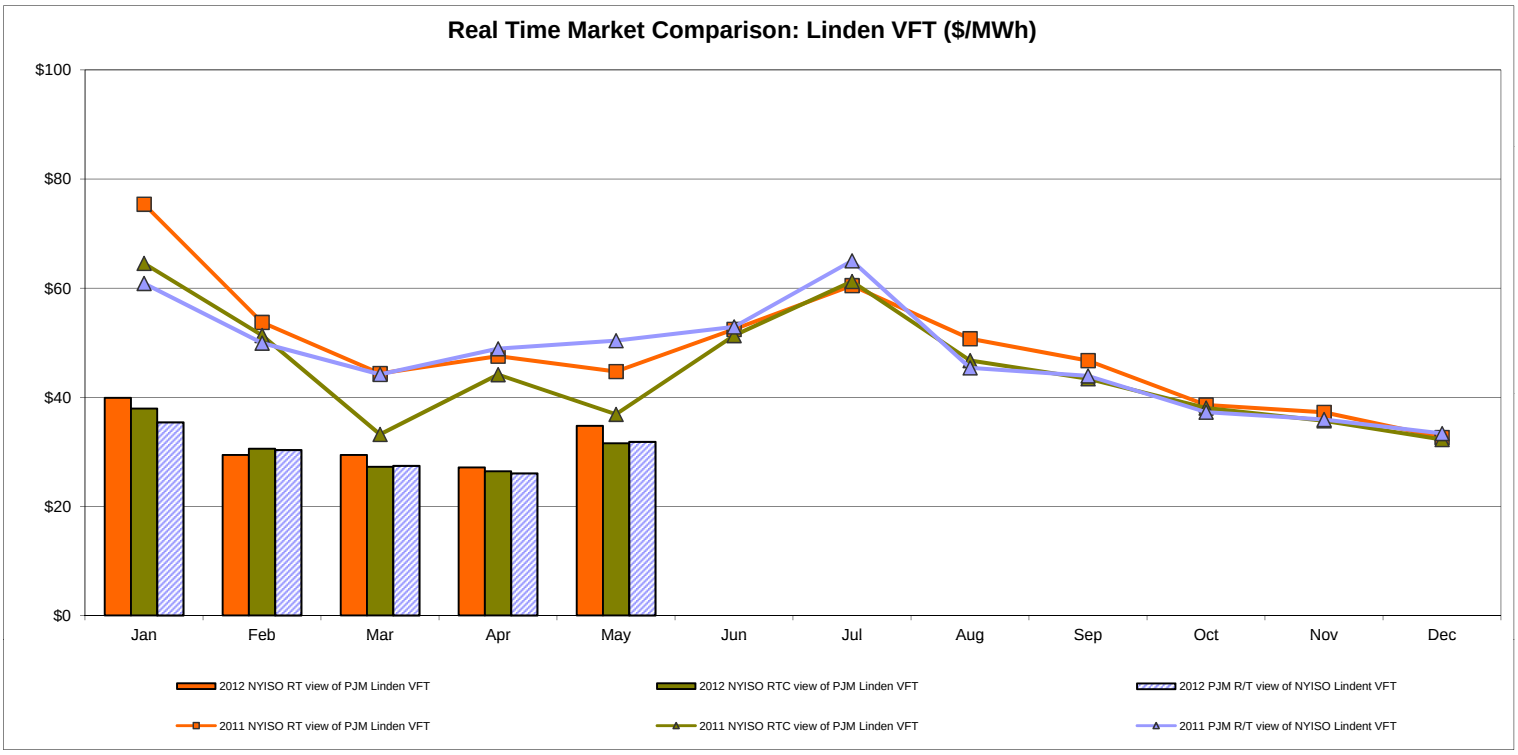



Note:
Hydro-Quebec Prices are unavailable.

# External Controllable Line: Linden VFT (PJM)



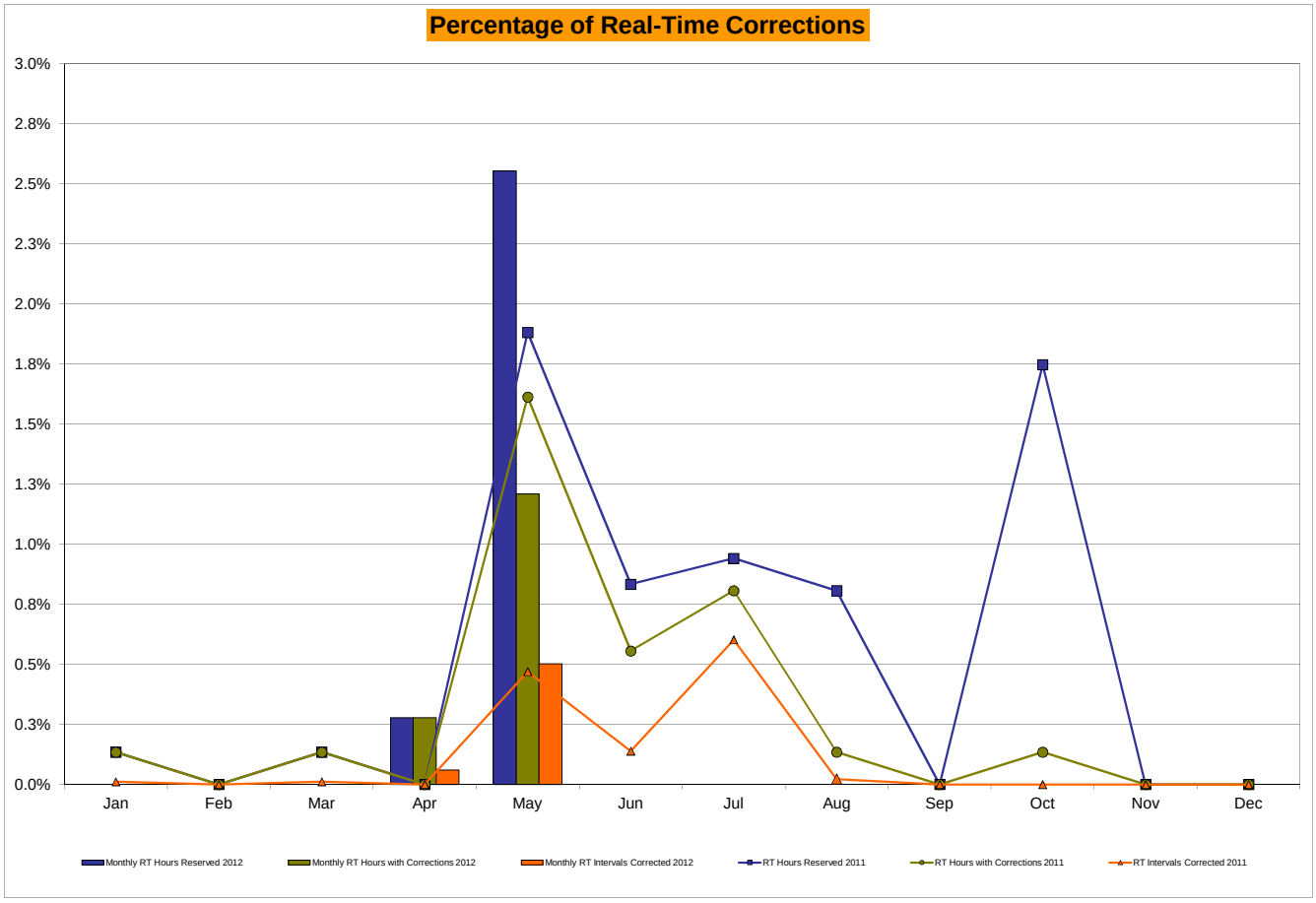
# NYISO Real Time Price Correction Statistics

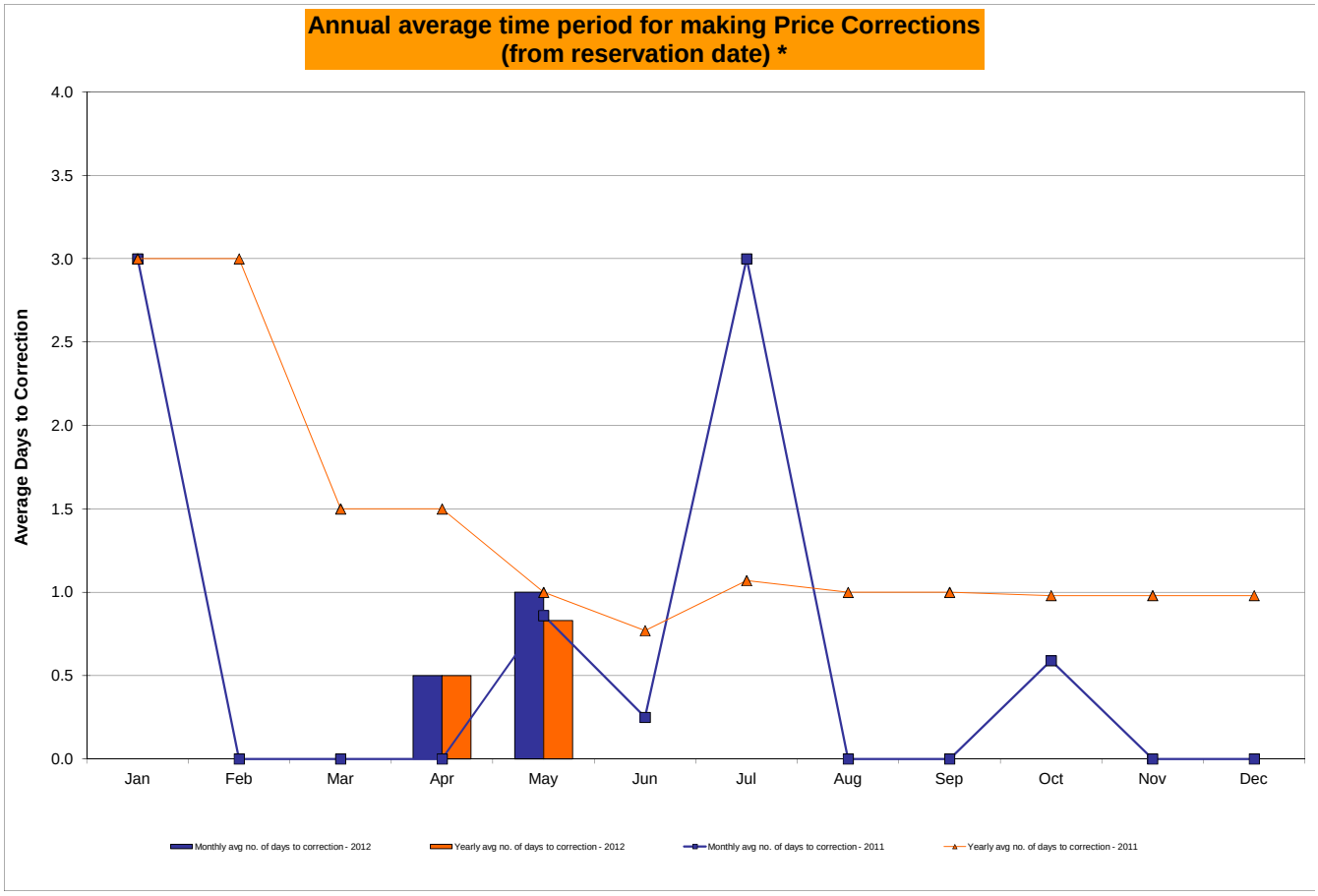
| 2012 | | January | February | March | April | May | June | July | August | September | October | November | December |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Hour Corrections** | | | | | | | | | | | | | |
| Number of hours with corrections | in the month | 0 | 0 | 0 | 2 | 9 | | | | | | | |
| Number of hours | in the month | 744 | 696 | 744 | 720 | 744 | | | | | | | |
| % of hours with corrections | in the month | 0.00% | 0.00% | 0.00% | 0.28% | 1.21% | | | | | | | |
| % of hours with corrections | year-to-date | 0.00% | 0.00% | 0.00% | 0.07% | 0.30% | | | | | | | |
| **Interval Corrections** | | | | | | | | | | | | | |
| Number of intervals corrected | in the month | 0 | 0 | 0 | 5 | 45 | | | | | | | |
| Number of intervals | in the month | 8,987 | 8,082 | 8,950 | 8,375 | 8,956 | | | | | | | |
| % of intervals corrected | in the month | 0.00% | 0.00% | 0.00% | 0.06% | 0.50% | | | | | | | |
| % of intervals corrected | year-to-date | 0.00% | 0.00% | 0.00% | 0.01% | 0.12% | | | | | | | |
| **Hours Reserved** | | | | | | | | | | | | | |
| Number of hours reserved | in the month | 0 | 0 | 0 | 2 | 19 | | | | | | | |
| Number of hours | in the month | 744 | 696 | 744 | 720 | 744 | | | | | | | |
| % of hours reserved | in the month | 0.00% | 0.00% | 0.00% | 0.28% | 2.55% | | | | | | | |
| % of hours reserved | year-to-date | 0.00% | 0.00% | 0.00% | 0.07% | 0.58% | | | | | | | |
| **Days to Correction *** | | | | | | | | | | | | | |
| Avg. number of days to correction | in the month | 0.00 | 0.00 | 0.00 | 0.50 | 1.00 | | | | | | | |
| Avg. number of days to correction | year-to-date | 0.00 | 0.00 | 0.00 | 0.50 | 0.83 | | | | | | | |
| **Days Without Corrections** | | | | | | | | | | | | | |
| Days without corrections | in the month | 31 | 29 | 31 | 27 | 27 | | | | | | | |
| Days without corrections | year-to-date | 31 | 60 | 91 | 118 | 145 | | | | | | | |

| 2011 | | January | February | March | April | May | June | July | August | September | October | November | December |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Hour Corrections** | | | | | | | | | | | | | |
| 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% |
| **Interval Corrections** | | | | | | | | | | | | | |
| 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% |
| **Hours Reserved** | | | | | | | | | | | | | |
| 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% |
| **Days to Correction *** | | | | | | | | | | | | | |
| 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 |
| **Days Without Corrections** | | | | | | | | | | | | | |
| 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.

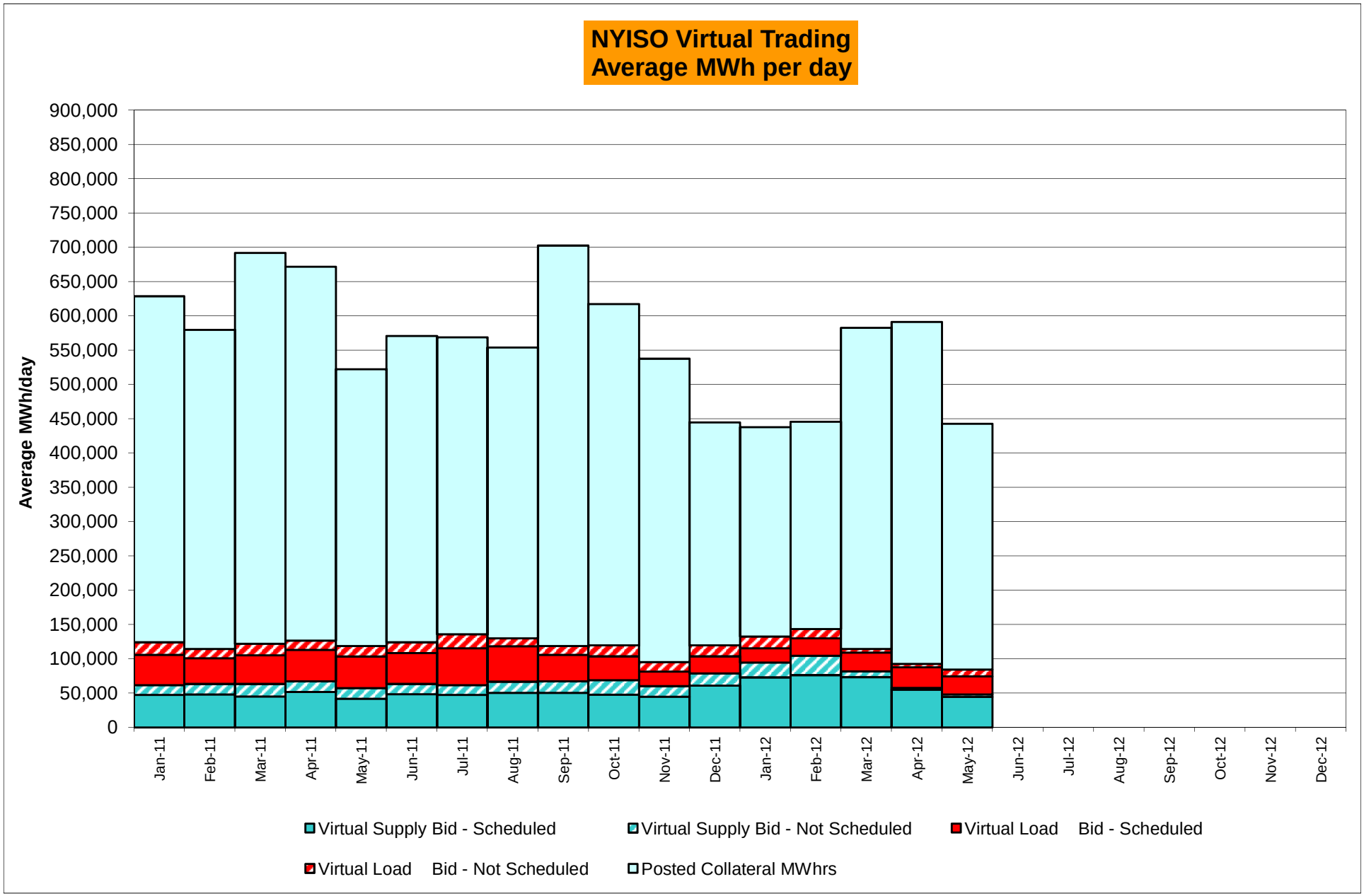
Market Mitigation and Analysis
Prepared: 6/8/2012 2:27 PM



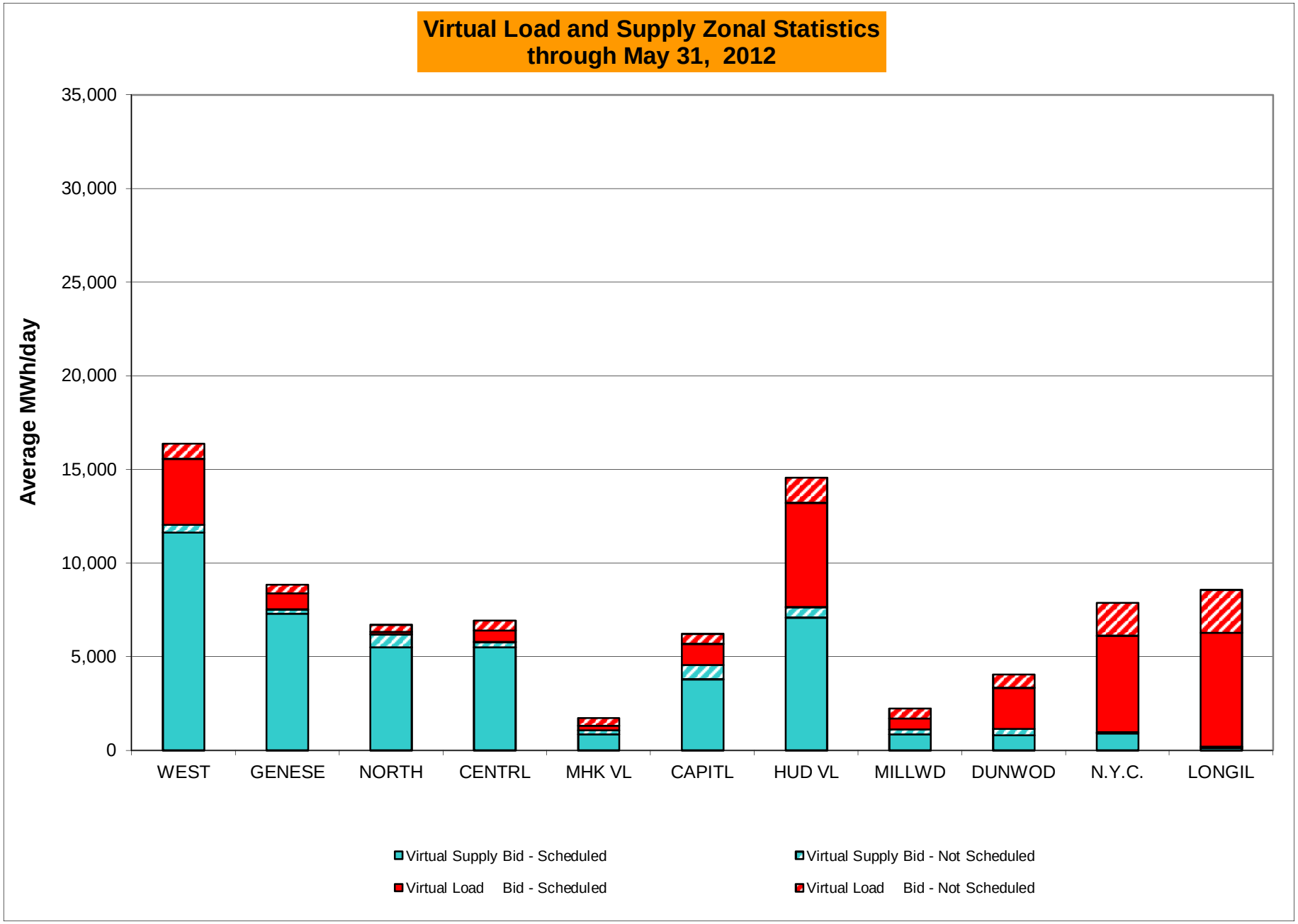

* Calendar days from reservation date.

Market Mitigation and Analysis
Prepared: 6/8/2012 2:25 PM




Market Mitigation and Analysis
Prepared: 6/5/2012 1:59 PM

X

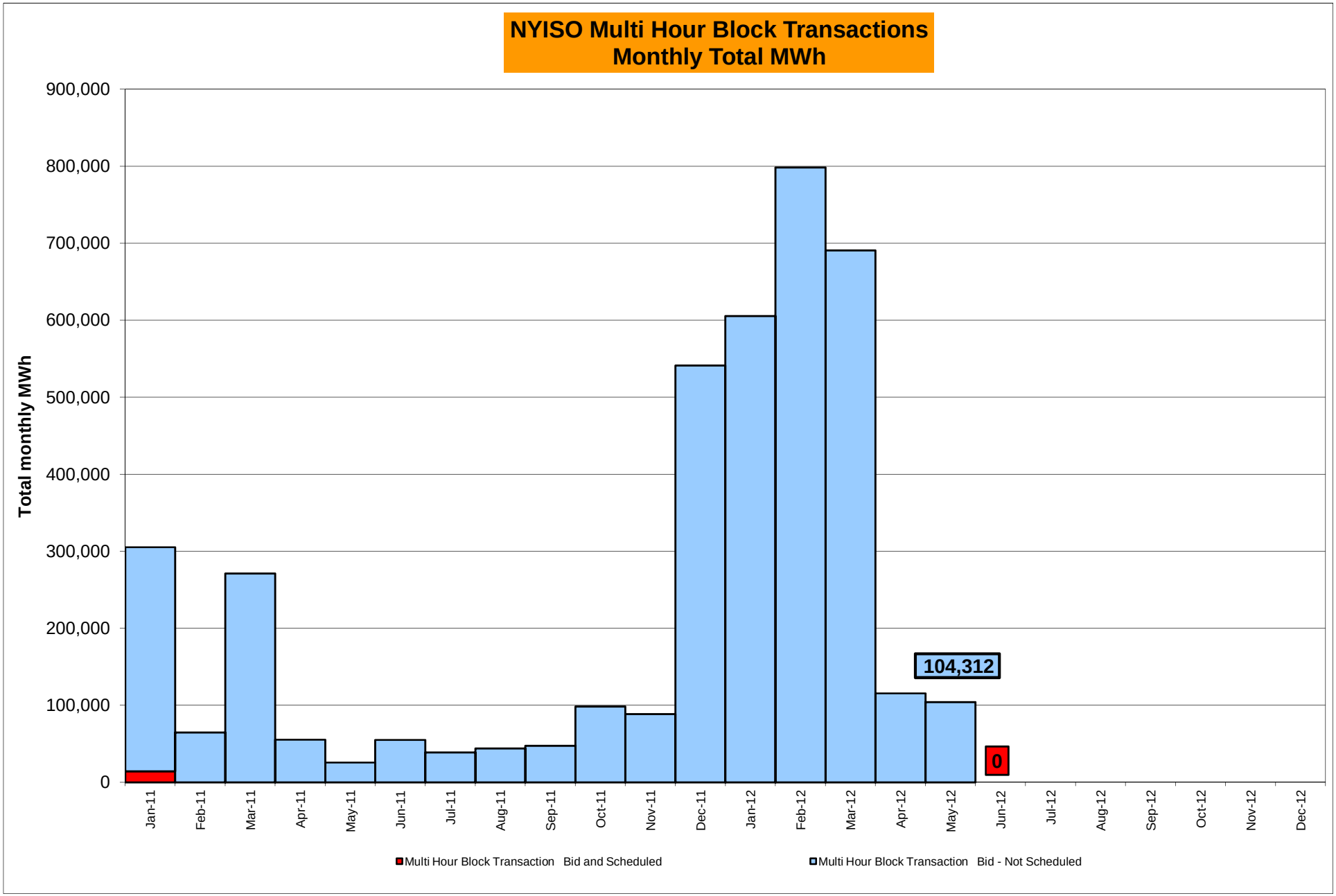



Market Mitigation and Analysis
Prepared: 6/5/2012 2:01 PM

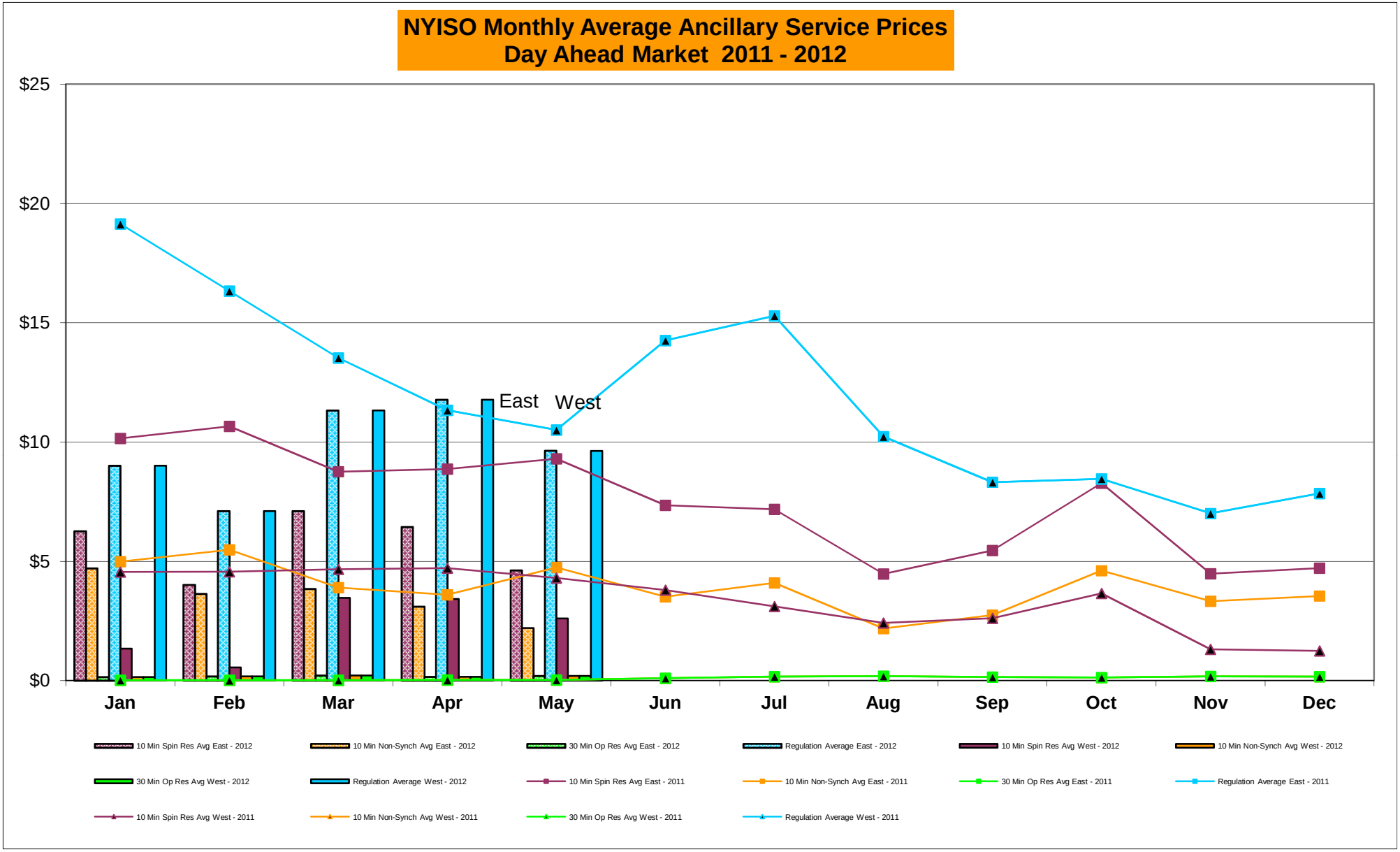
Y

# 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 |
| **WEST** | Jan-12 | 2,246 | 938 | 13,593 | 956 | | **MHK VL** | Jan-12 | 419 | 967 | 1,488 | 1,127 | | **DUNWOD** | 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 | | | | | | | Jun-12 | | | | | | | Jun-12 | | | | |
| | Jul-12 | | | | | | | Jul-12 | | | | | | | Jul-12 | | | | |
| | 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 | | | | |
| **GENESE** | Jan-12 | 257 | 102 | 5,254 | 64 | | **CAPITL** | Jan-12 | 1,903 | 5,590 | 3,842 | 3,364 | | **N.Y.C.** | 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 | | | | | | | Jun-12 | | | | | | | Jun-12 | | | | |
| | Jul-12 | | | | | | | Jul-12 | | | | | | | Jul-12 | | | | |
| | 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 | | | | |
| **NORTH** | Jan-12 | 289 | 967 | 7,215 | 1,189 | | **HUD VL** | Jan-12 | 3,466 | 693 | 9,513 | 2,413 | | **LONGIL** | 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 | | | | | | | Jun-12 | | | | | | | Jun-12 | | | | |
| | Jul-12 | | | | | | | Jul-12 | | | | | | | Jul-12 | | | | |
| | 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 | | | | |
| **CENTRL** | Jan-12 | 526 | 1,178 | 26,589 | 1,270 | | **MILLWD** | Jan-12 | 505 | 206 | 929 | 50 | | **NYISO** | 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 | | | | | | | Jun-12 | | | | | | | Jun-12 | | | | |
| | Jul-12 | | | | | | | Jul-12 | | | | | | | Jul-12 | | | | |
| | 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 | | | | |

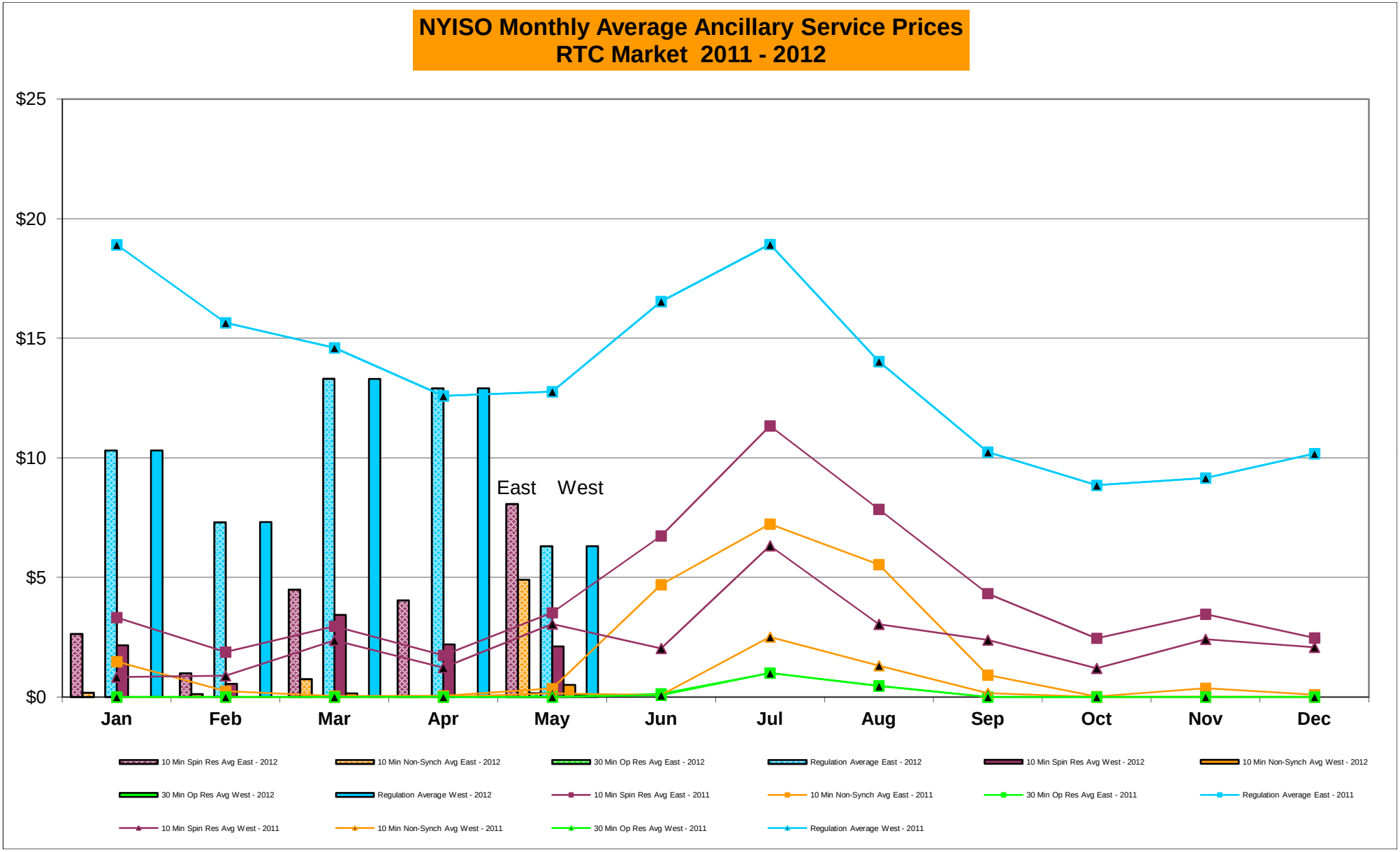



Market Mitigation and Analysis
Prepared: 6/5/2012 2:26 PM



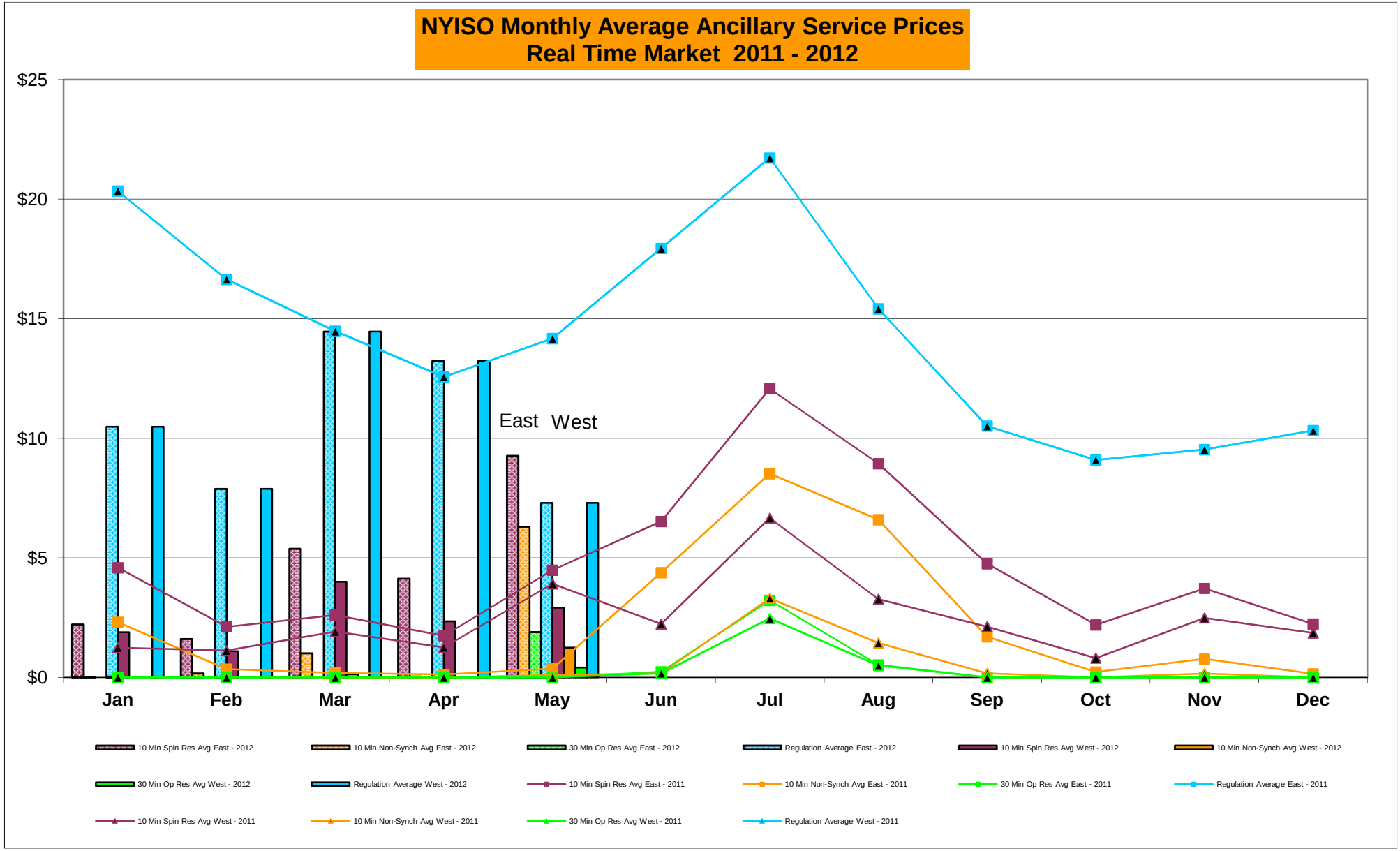

Market Mitigation and Analysis
Prepared: 6/5/2012 9:06 AM

AB




Market Mitigation and Analysis.
Prepared: 6/5/2012 9:07 AM

AC



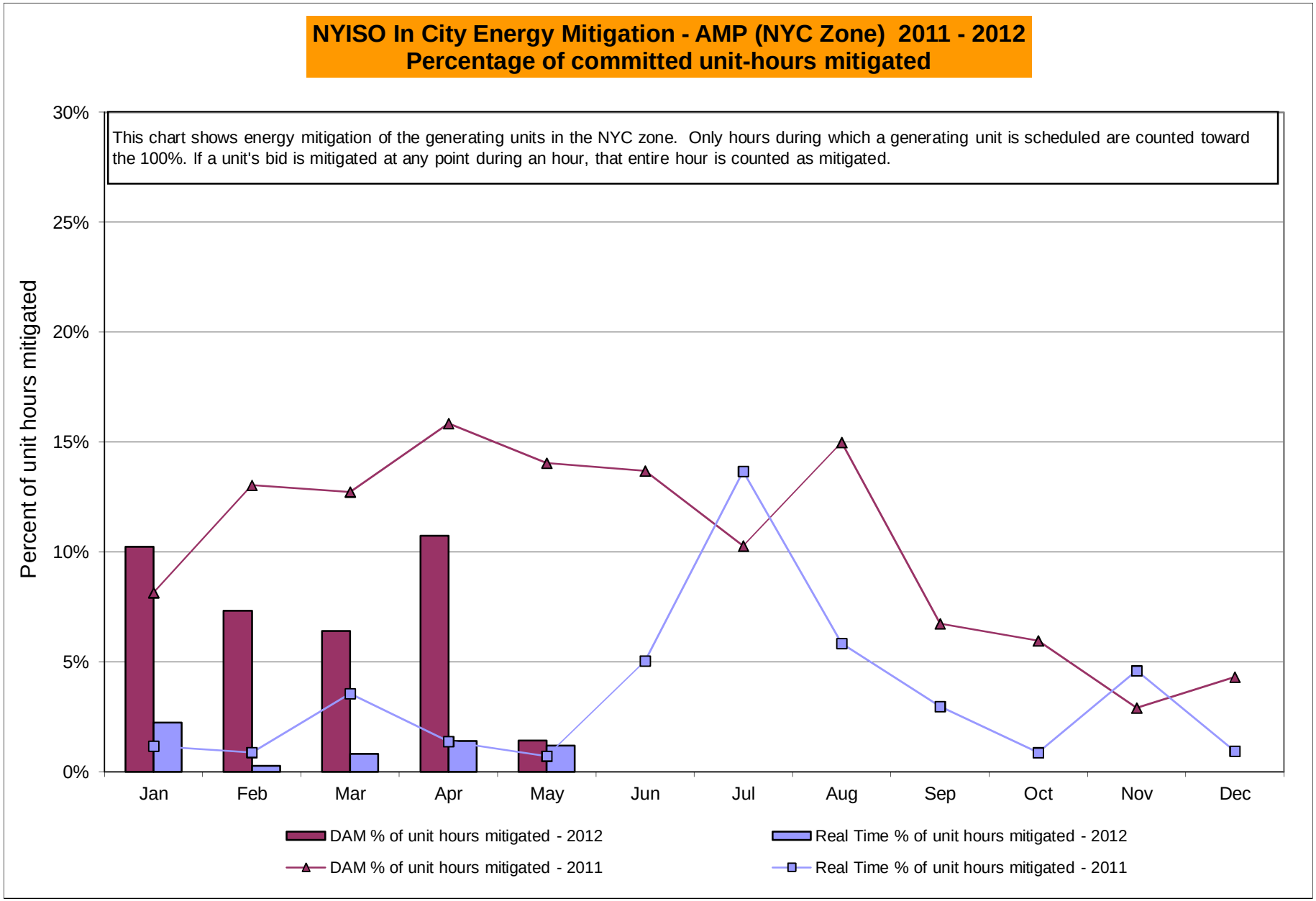

Market Mitigation and Analysis
Prepared: 6/5/2012 9:07 AM

AD

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

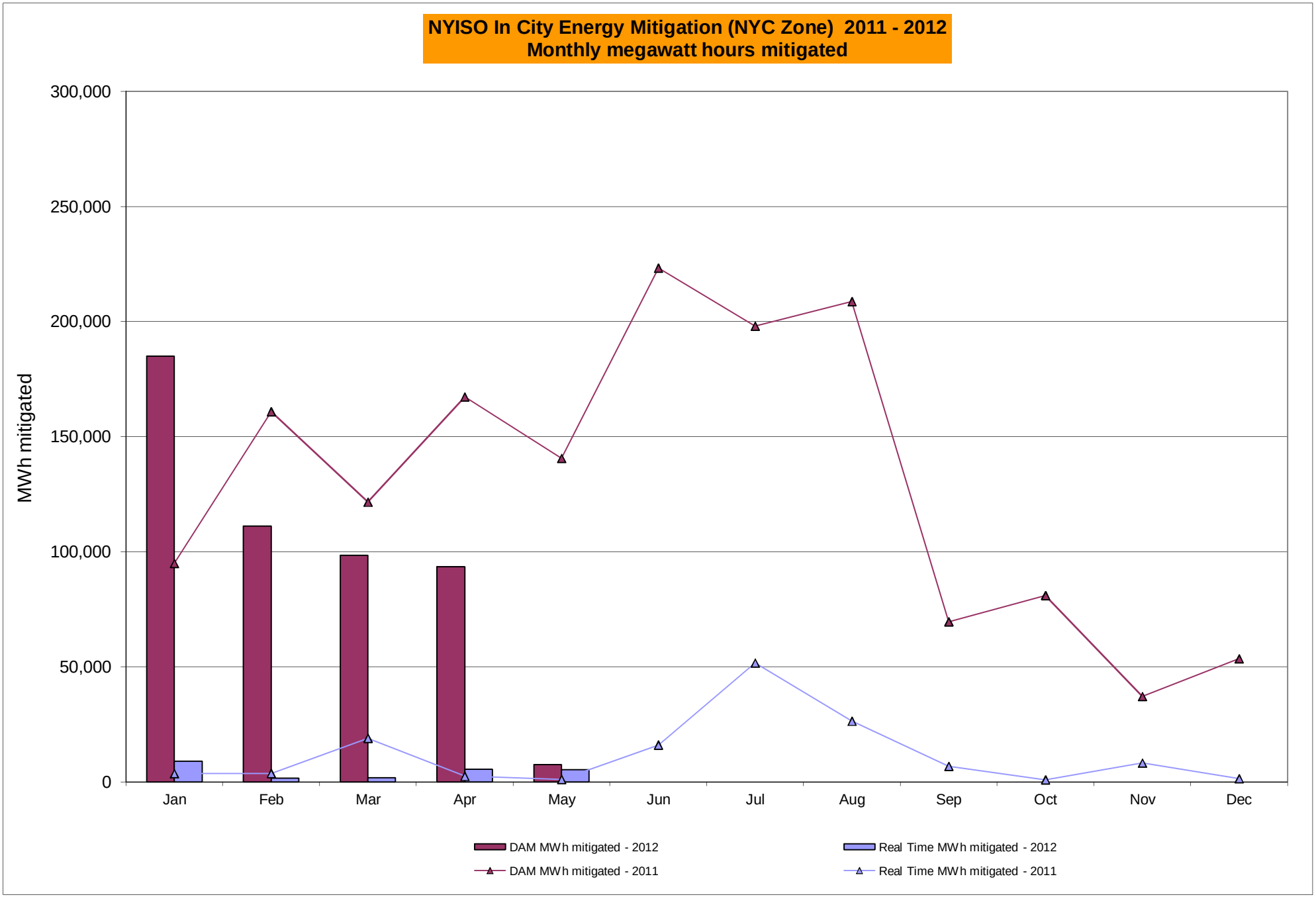
| 2012 | January | February | March | April | May | June | July | August | September | October | November | December |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Day Ahead Market** | | | | | | | | | | | | |
| 10 Min Spin East | 6.26 | 4.01 | 7.11 | 6.44 | 4.62 | | | | | | | |
| 10 Min Spin West | 1.34 | 0.56 | 3.46 | 3.43 | 2.61 | | | | | | | |
| 10 Min Non Synch East | 4.71 | 3.64 | 3.85 | 3.11 | 2.21 | | | | | | | |
| 10 Min Non Synch West | 0.15 | 0.18 | 0.22 | 0.16 | 0.20 | | | | | | | |
| 30 Min East | 0.15 | 0.18 | 0.22 | 0.16 | 0.20 | | | | | | | |
| 30 Min West | 0.15 | 0.18 | 0.22 | 0.16 | 0.20 | | | | | | | |
| Regulation East | 9.01 | 7.11 | 11.33 | 11.77 | 9.63 | | | | | | | |
| Regulation West | 9.01 | 7.11 | 11.33 | 11.77 | 9.63 | | | | | | | |
| **RTC Market** | | | | | | | | | | | | |
| 10 Min Spin East | 2.64 | 0.99 | 4.49 | 4.05 | 8.07 | | | | | | | |
| 10 Min Spin West | 2.16 | 0.55 | 3.43 | 2.20 | 2.11 | | | | | | | |
| 10 Min Non Synch East | 0.17 | 0.13 | 0.75 | 0.02 | 4.90 | | | | | | | |
| 10 Min Non Synch West | 0.00 | 0.00 | 0.15 | 0.00 | 0.50 | | | | | | | |
| 30 Min East | 0.00 | 0.00 | 0.00 | 0.00 | 0.16 | | | | | | | |
| 30 Min West | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | | | | | | | |
| Regulation East | 10.31 | 7.31 | 13.30 | 12.91 | 6.31 | | | | | | | |
| Regulation West | 10.31 | 7.31 | 13.30 | 12.91 | 6.31 | | | | | | | |
| **Real Time Market** | | | | | | | | | | | | |
| 10 Min Spin East | 2.21 | 1.61 | 5.38 | 4.14 | 9.27 | | | | | | | |
| 10 Min Spin West | 1.89 | 1.09 | 4.00 | 2.34 | 2.92 | | | | | | | |
| 10 Min Non Synch East | 0.03 | 0.17 | 1.01 | 0.03 | 6.31 | | | | | | | |
| 10 Min Non Synch West | 0.00 | 0.00 | 0.13 | 0.00 | 1.24 | | | | | | | |
| 30 Min East | 0.00 | 0.00 | 0.00 | 0.00 | 1.90 | | | | | | | |
| 30 Min West | 0.00 | 0.00 | 0.00 | 0.00 | 0.41 | | | | | | | |
| Regulation East | 10.49 | 7.89 | 14.46 | 13.23 | 7.30 | | | | | | | |
| Regulation West | 10.49 | 7.89 | 14.46 | 13.23 | 7.30 | | | | | | | |

| 2011 | January | February | March | April | May | June | July | August | September | October | November | December |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Day Ahead Market** | | | | | | | | | | | | |
| 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 |
| **RTC Market** | | | | | | | | | | | | |
| 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 |
| **Real Time Market** | | | | | | | | | | | | |
| 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 |



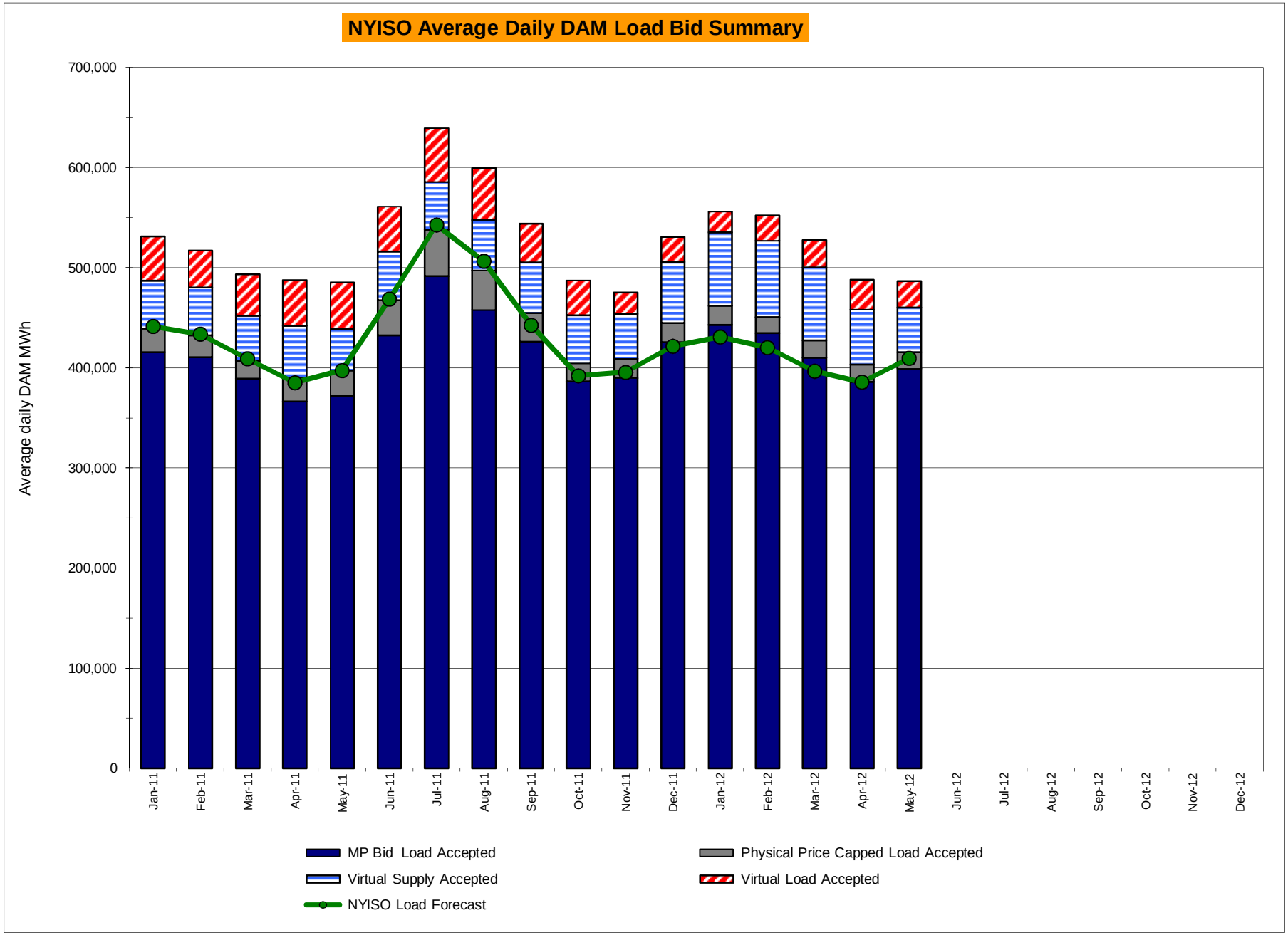

Market Mitigation and Analysis
Prepared: 6/5/2012 2:51 PM

AF



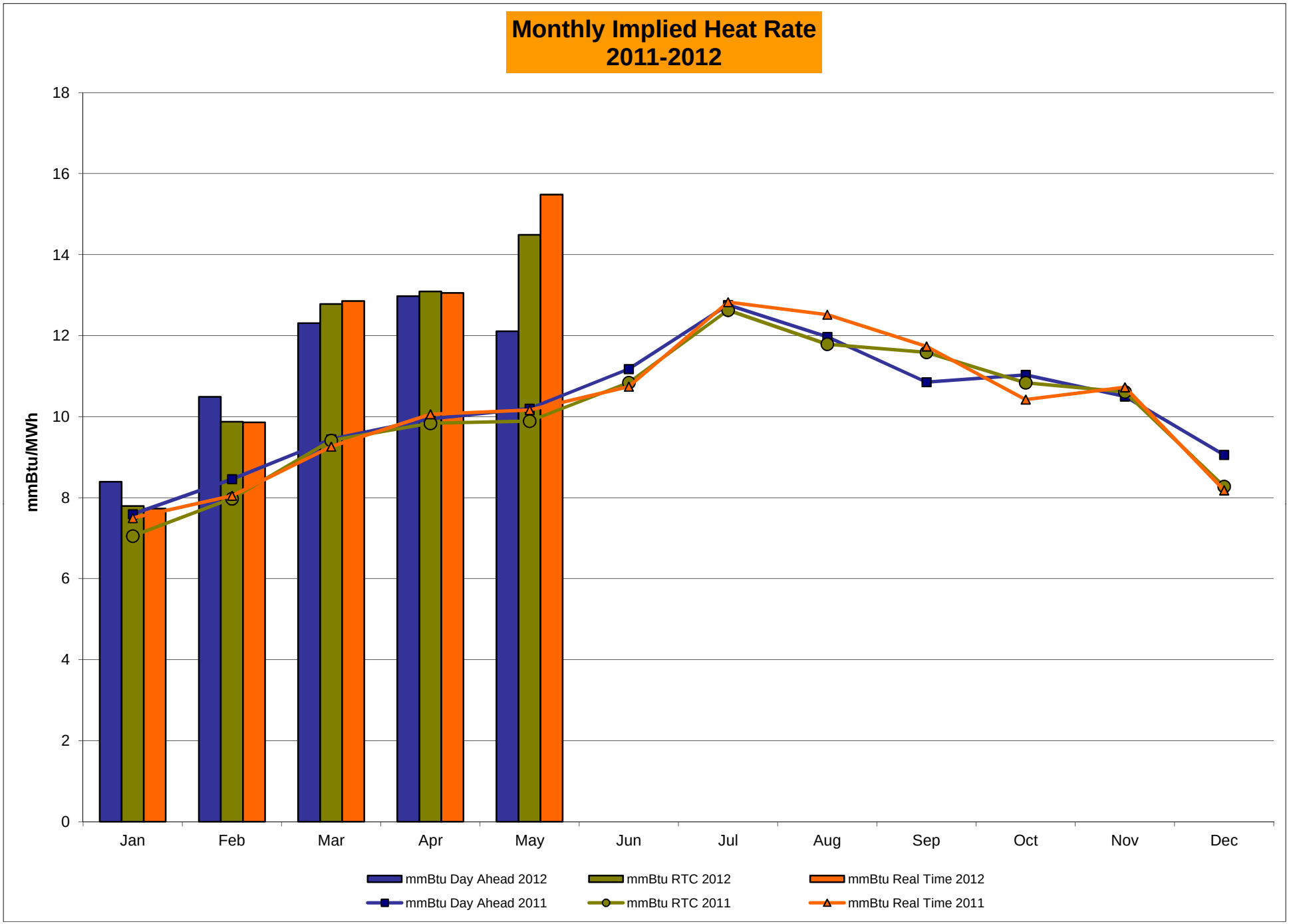

Market Mitigation and Analysis
Prepared: 6/5/2012 2:53 PM

AG



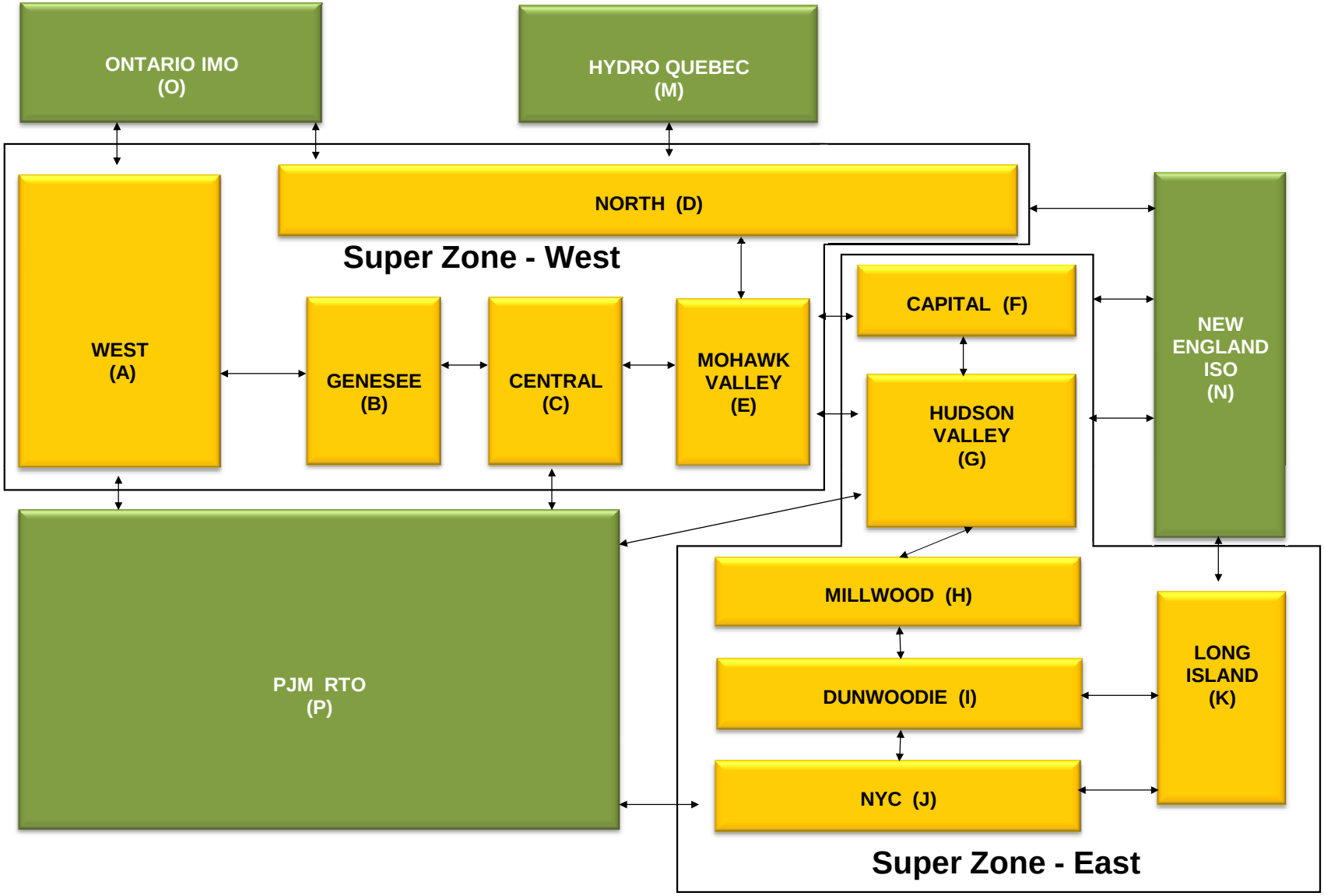

Market Mitigation and Analysis
Prepared: 6/5/2012 2:56 PM

AH




Market Mitigation and Analysis
Prepared: 6/5/2012 3:01 PM

# NYISO LBMP ZONES

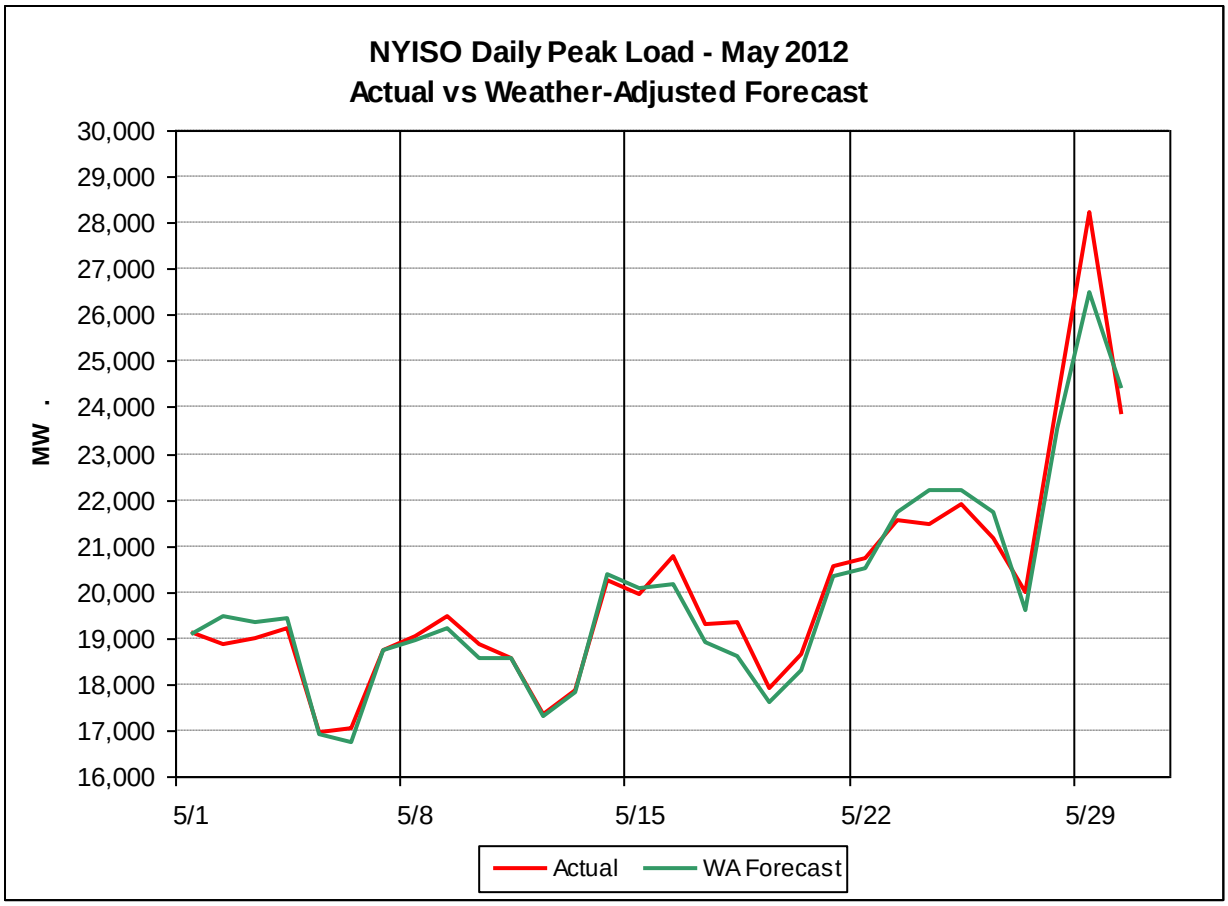


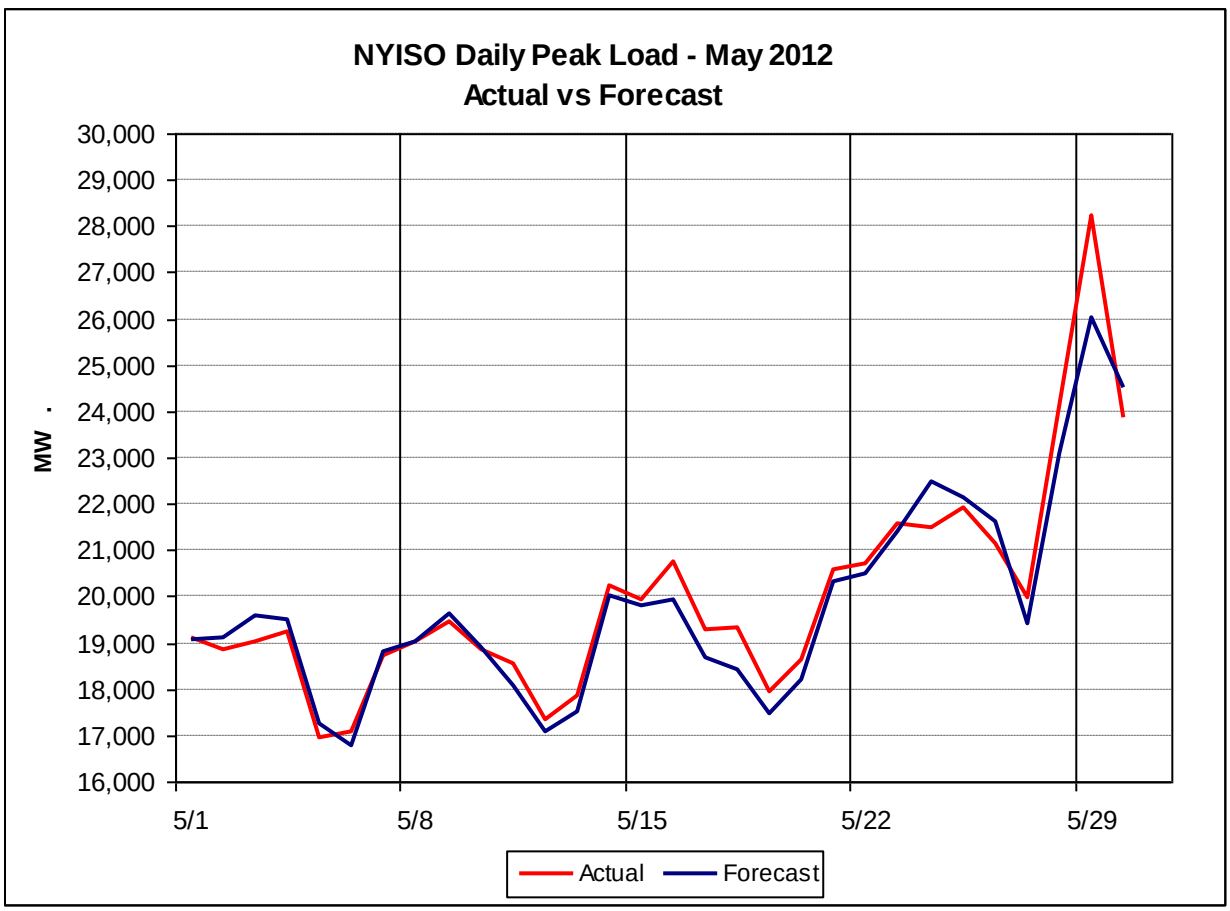

Market Mitigation and Analysis
Prepared: 6/5/2012 3:06 PM

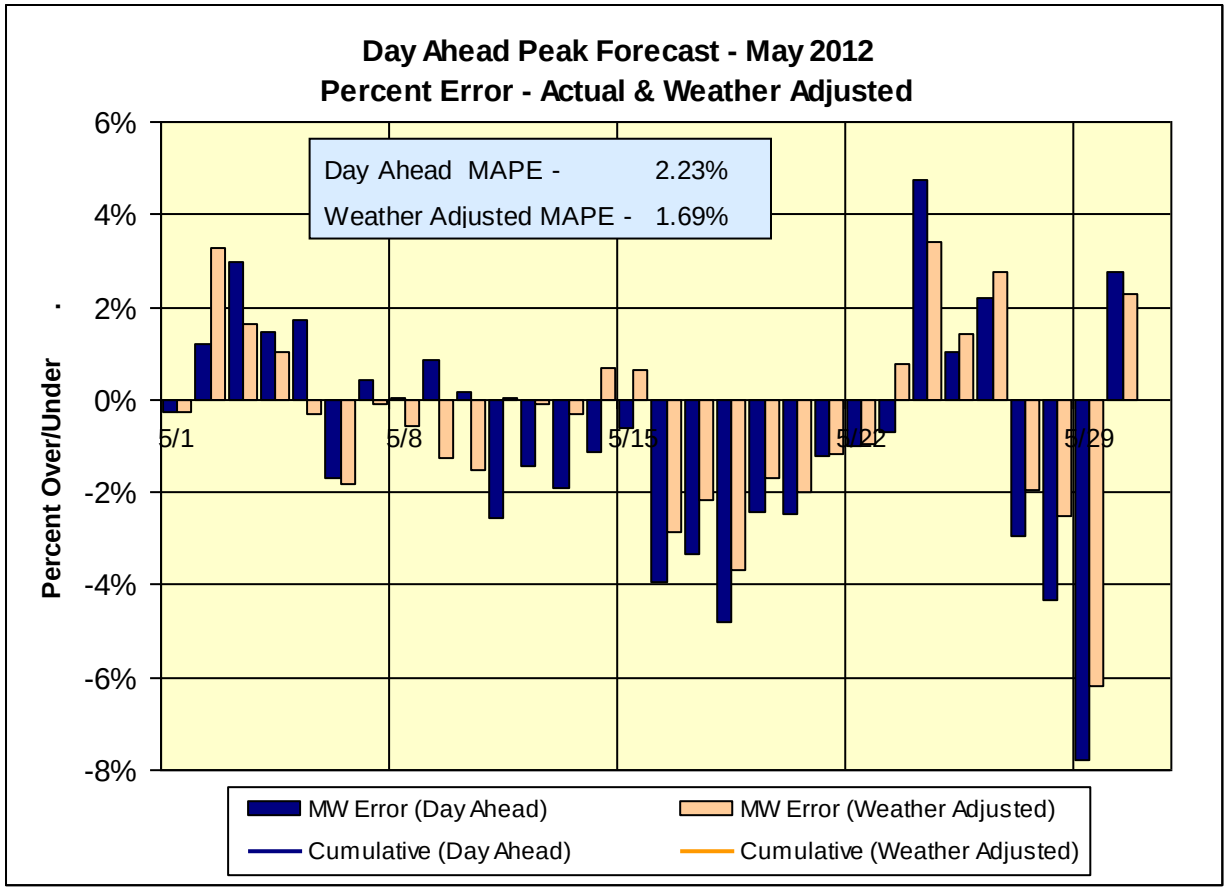
AJ

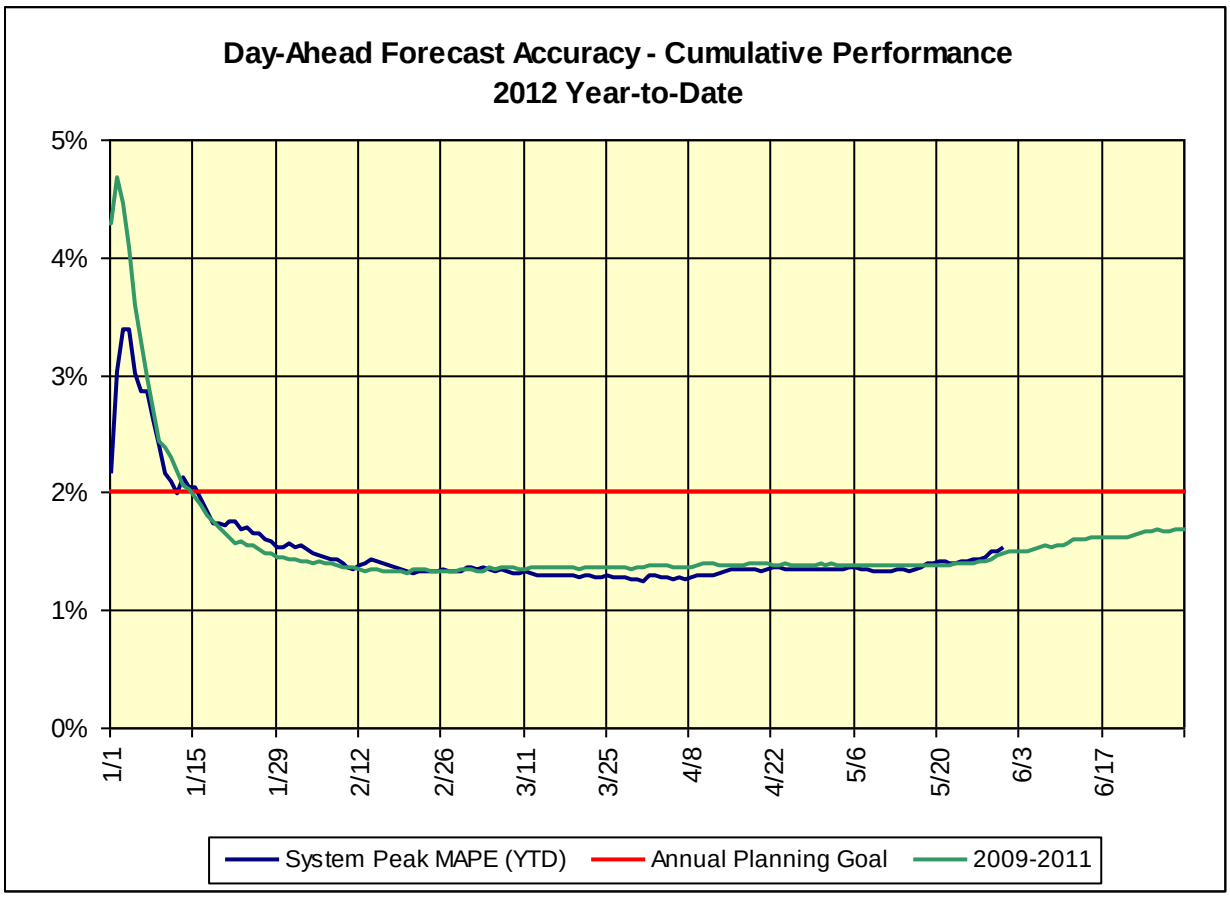
## Billing Codes for Chart 4-C

| Chart 4-C Category Name | Billing Code | Billing Category Name |
|---|---|---|
| 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 - May 2012
Actual vs Weather-Adjusted Forecast
MW
30,000
29,000
28,000
27,000
26,000
25,000
24,000
23,000
22,000
21,000
20,000
19,000
18,000
17,000
16,000
5/1
5/8
5/15
5/22
5/29
Actual
WA Forecast


NYISO Daily Peak Load - May 2012
Actual vs Forecast
MW
30,000
29,000
28,000
27,000
26,000
25,000
24,000
23,000
22,000
21,000
20,000
19,000
18,000
17,000
16,000
5/1
5/8
5/15
5/22
5/29
Actual
Forecast


Day Ahead Peak Forecast - May 2012
Percent Error - Actual & Weather Adjusted
Day Ahead MAPE - 2.23%
Weather Adjusted MAPE - 1.69%
Percent Over/Under
6%
4%
2%
0%
-2%
-4%
-6%
-8%
5/1
5/8
5/15
5/22
5/29
MW Error (Day Ahead)
MW Error (Weather Adjusted)
Cumulative (Day Ahead)
Cumulative (Weather Adjusted)


Day-Ahead Forecast Accuracy - Cumulative Performance
2012 Year-to-Date
5%
4%
3%
2%
1%
0%
1/1
1/15
1/29
2/12
2/26
3/11
3/25
4/8
4/22
5/6
5/20
6/3
6/17
System Peak MAPE (YTD)
Annual Planning Goal
2009-2011

| Project | Status and Milestone Deliverables |
|---|---|
| **Business Intelligence Products** | |
| Market and Settlement Data Management Phase I: Broader Regional Markets | **Status:** 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 4th quarter in support of Market to Market with PJM.<br><br>**Deliverables:** 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. |
| eTariff Public Website Module | **Status:** This project will add the eTariff Public Website module to www.nyiso.com. This deployment is targeted for the 4th quarter.<br><br>**Deliverables:** The 2012 project will provide Market Participants with new functionality that allows searching and viewing capabilities for NYISO tariffs, filings and docket numbers. |
| Public Website: Publishing Process | **Status:** The NYISO public website uses several older systems to maintain the content on the website. This deployment is scheduled for the 4th quarter.<br><br>**Deliverables:** 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. |
| **Capacity Market Products** | |
| Additional Capacity Zones | **Status:** 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.<br><br>**Deliverables:** The 2012 project will focus on completing the functional requirements specification for additional capacity zones and initiating the software development process. |

| Project | Status and Milestone Deliverables |
|---|---|
| **Demand Response Products** | |
| DSASP Direct Communication Phase 2 | **Status:** 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 is targeted for 4thQ 2012.<br><br>**Deliverables:** The focus of the 2012 project is the implementation of the required rule changes and software changes. |
| Demand Response Information System: Event Notification | **Status:** 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 deployment is targeted for 2nd quarter 2012.<br><br>**Deliverables:** 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). |
| Demand Response – Real Time Energy Market | **Status:** 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 4th quarter 2012.<br><br>**Deliverables:** Market Design Approval is the focus of the project in 2012. |
| Order 745 – Day Ahead Demand Response Program (DADRP) Compliance | **Status:** 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.<br><br>**Deliverables:** 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. |

| Project | Status and Milestone Deliverables |
|---|---|
| **Energy Markets Products** | |
| Ancillary Services Mitigation | **Status:** 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 4th quarter of 2011. Tariff changes and software changes are planned for 4th quarter 2012.<br><br>**Deliverables:** This project will focus on implementation of required tariff changes and software changes to support the market design. |
| Market to Market Coordination - PJM | **Status:** 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 4th quarter 2012.<br><br>**Deliverables:** 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. |
| Interregional Transaction Coordination Phases I and III | **Status:** 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 is targeted for deployment in June 2012.<br><br>**Deliverables:** 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. |
| Interregional Transaction Coordination Phase IV – ISO-NE Intra-hour Transaction Scheduling (IRIS) | **Status:** 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 4th Q 2011. The Architectural Design Specification is targeted for 4th quarter 2012.<br><br>**Deliverables:** The focus of the project in 2012 is to complete the Architectural Design Specification. |
| Interregional Transaction Coordination | **Status:** This project expands upon the work of Phase 4 by leveraging the designs with New England on Coordinated |

| Project | Status and Milestone Deliverables |
|---|---|
| Phase V – PJM Coordinated Transaction Scheduling | 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 4th quarter 2012.<br><br>**Deliverables:** The focus of this project in 2012 is the proposal of a market design concept. |
| Order 755: Regulation Compensation | **Status:** 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 4th quarter 2012.<br><br>**Deliverables:** The focus of this project in 2012 is the deployment of software changes necessary to support NYISO's compliance filing submitted in April 2012. |
| Scheduling and Pricing: Enhanced Scarcity Pricing | **Status:** 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.<br><br>**Deliverables:** The focus of this project in 2012 is stakeholder approval of the market design. |
| **Enterprise Technology Products** | |
| Ranger Messaging Integration | **Status:** 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 4th quarter 2012 in support of Market to Market Coordination with PJM.<br><br>**Deliverables:** The focus of this project in 2012 is to implement a new platform to enable near real-time message exchange. |
| Enterprise Project Management (EPM) Platform: Phase I | **Status:** 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 is scheduled for implementation in 2nd quarter 2012.<br><br>**Deliverables:** The focus of Phase I is implementation of the hosted solution combined with training and updated business process to effectively utilize the platform. |
| **Finance Products** | |

| Project | Status and Milestone Deliverables |
|---|---|
| Bad Debt Processing Flexibility | **Status:** 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.<br><br>**Deliverables:** The focus of this project is implementation of the required software changes. |
| ICAP Weekly Invoicing Automation | **Status:** 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.<br><br>**Deliverables:** The focus of this project is the automation of the existing manual process. |
| Transaction Credit Enhancements | **Status:** 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 Regional Markets initiatives. Market rules have been approved by stakeholders and detailed requirements are complete. Completion of the software development is scheduled for 4th quarter 2012 with plans to implement in 2013.<br><br>**Deliverables:** The focus of this project in 2012 is to complete all of the software development. |
| **Operations & Reliability Products** | |
| Energy Management System (EMS) Visualization | **Status:** 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 3rd quarter.<br><br>**Deliverables:** The focus of this project in 2012 is completion of the Architectural Design. |
| Phase I Meter Upgrade | **Status:** 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 3rd quarter.<br><br>**Deliverables:** The focus of this project in 2012 is completion of the Architectural Design. |

| Project | Status and Milestone Deliverables |
|---|---|
| Hudson Transmission Partners (HTP) Controllable Tie Line | **Status:** 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 1st quarter 2013 based on a revised schedule from HTP.<br><br>**Deliverables:** The focus of this project in 2012 is to deploy the required software changes in support of the targeted commercial operation date. |
| Rest of State (ROS) DAM Mitigation Automation | **Status:** 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 4th quarter 2012.<br><br>**Deliverables:** The focus of this project in 2012 is stakeholder approval of the market design. |
| **Planning and TCC Market Products** | |
| TCC Multi-Duration/Non-Historic Fixed-Price TCC Phase I | **Status:** 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 4th quarter software deployment to support offering Non-Historic Fixed Price TCCs beginning with the Spring 2013 Capability Period Auction.<br><br>**Deliverables:** The focus of this project is a software deployment in support of NYISO's Non-Historic Fixed-Price TCC Compliance Filing. |
| High Performance Computing for Planning Studies Phase II | **Status:** 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.<br><br>**Deliverables:** The focus of this project in 2012 is the implementation of the solution for MAPS. |
| Siemens PTI Model-on-Demand Phase II | **Status:** 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. The software design is targeted for completion in the 4th quarter 2012.<br><br>**Deliverables:** The focus of this project in 2012 is the completion of the software design. |

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

| Filing Date | Filing Summary | Docket | Order Date | Order Summary | Outcome |
|---|---|---|---|---|---|
| 02/28/2012 | NYISO filing of a petition for a declaratory order re: FERC's 12/30/10 PARs allocation order in MISO Docket No. ER11-1844-000 | EL12-38-000 | 05/22/2012 | FERC order granting petition on a limited basis – NYISO petition has insufficient information – it can develop cost allocation & recovery mechanism | Accepted- partial |
| 03/06/2012 | NYISO 205 filing re: day-ahead margin assurance payments to gas turbines and request for waivers | ER12-1215-000 | 05/08/2012 | Letter order accepting revisions effective 3/7/12, as requested | Accepted |
| 03/09/2012 | NYISO errata filing re: day-ahead margin assurance payments to gas turbines and request for waivers (correct tariff records) | ER12-1215-001 | 05/08/2012 | Letter order accepting revisions effective 3/7/12, as requested | Accepted |
| 04/05/2012 | NYISO filing of tariff revisions re: Order No. 741, MP verification of risk management procedures | ER11-3949-004 | 05/09/2012 | FERC letter order accepting filing effective 6/30/12, as requested | Accepted |
| 05/01/2012 | NYISO answer to the answers of the Indicated NYTOs, Energy Spectrum and Riverbay Corp. re: TB 217 | EL12-56-000 | | | |
| 05/01/2012 | NYISO/PJM joint compliance filing re: market to market coordination | ER12-718-001 | | | |
| 05/02/2012 | NYISO filing of a request for time extension, shortened notice and comment period and expedited action re: Interface Pricing compliance filing, | ER08-1281-010 | | | |
| 05/04/2012 | NYISO motion to intervene and comments re: AES petition | EC12-93-000 | | | |
| 05/08/2012 | NYISO motion to intervene and comment re: Con Ed/NYPA SA #1873 | ER12-1624-000 | | | |
| 05/09/2012 | NYISO filing of 2nd supplemental list of reviewing representatives re: the proposed protective order by Astoria Generating Company | EL12-58-000 | | | |
| 05/11/2012 | NYISO filing of answering testimony of Wesley J. Yeomans, Robert Pike and Zachary G. Smith to FERC re: PAR-Related Charges of MISO/ITC Filing | ER11-1844-000 | | | |

| Filing Date | Filing Summary | Docket | Order Date | Order Summary | Outcome |
|---|---|---|---|---|---|
| 05/18/2012 | NYISO filing of a motion to intervene and comment supporting NYPA's request for limited tariff waiver and request for expedited action re: SCR registration procedure issue | ER12-1806-000 | | | |
| 05/21/2012 | NYISO answer filing re: 4/20/12 complaint by Astoria Generating concerning NYISO's decision to not issue going-forward costs for Astoria units for the March, April, and May ICAP Spot Market Auctions | EL12-58-000 | | | |
| 05/23/2012 | NYISO filing of supplemental comments to its 5/18/12, motion to intervene with supporting and explicatory comments concerning NYPA's request for limited tariff waiver and expedited action re: SCR registration procedure issue | ER12-1806-000 | | | |
| 05/24/2012 | NYISO filing of an answer to the 5/4/12 Linden VFT complaint re: CRIS value | EL12-64-000 | | | |
| 05/29/2012 | NYISO, ISONE, MISO joint filing of an answer to the Exelon comments | ER11-3949-005, ER11-3951-001 | | | |
| 05/29/2012 | NYISO filing, on behalf of the ISO/RTO Council, of a motion to intervene and comment re: NERC rules concerning recovery of ISO/RTO penalty costs | RR12-8-000 | | | |
| 05/30/2012 | NYISO annual filing: FERC Form 714 electric balancing authority area and planning area report | No docket | | No order | |
| 05/30/2012 | NYISO compliance tariff filing re: new non-historic fixed price TCC product | ER12-1868-000 | | | |
| 05/30/2012 | NYISO Filing of an LGIA SA #1757 among NYISO, NIMO, NYSEG and Nine Mile Point Nuclear Station | ER12-1869-000 | | | |
| 05/31/2012 | NYISO filing of 3rd supplemental list of reviewing representatives re: the proposed Protective Order by Astoria Generating Company | EL12-58-000 | | | |
| 05/31/2012 | NYISO filing of an answer to NRG's limited protest and answer re: Con Ed | ER12-1624-000 | | | |

| Filing Date | Filing Summary | Docket | Order Date | Order Summary | Outcome |
|---|---|---|---|---|---|
| | NYPA transmission agreement and related cost allocation issues | | | | |
| 05/31/2012 | NYISO filing, on behalf of the ISO/RTO Council, of a revised motion to intervene and comment re: NERC rules concerning recovery of ISO/RTO penalty costs | RR12-8-000 | | | |