



# Monthly Report

September 2015

## TABLE OF CONTENTS

- Operations Performance Metrics Report
- Market Operation's Report
- Daily Loads
- Regulatory Filings

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



## ***September 2015 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 October 8, 2015.

## **Table of Contents**

- ◆ **Highlights**
  - *Operations Performance*
  
- ◆ **Reliability Performance Metrics**
  - *Alert State Declarations*
  - *Major Emergency State Declarations*
  - *IROL Exceedance Times*
  - *Balancing Area Control Performance*
  - *Reserve Activations*
  - *Disturbance Recovery Times*
  - *Load Forecasting Performance*
  - *Wind Forecasting Performance*
  - *Wind Curtailment Performance*
  - *Lake Erie Circulation and ISO Schedules*
  
- ◆ **Broader Regional Market Performance Metrics**
  - *Ramapo Interconnection Congestion Coordination Monthly Value*
  - *Ramapo Interconnection Congestion Coordination Daily Value*
  - *Regional Generation Congestion Coordination Monthly Value*
  - *Regional Generation Congestion Coordination Daily Value*
  - *Regional RT Scheduling - PJM Monthly Value*
  - *Regional RT Scheduling - PJM Daily Value*
  
- ◆ **Market Performance Metrics**
  - *Monthly Statewide Uplift Components and Rate*
  - *RTM Congestion Residuals Monthly Trend*
  - *RTM Congestion Residuals Daily Costs*
  - *RTM Congestion Residuals Event Summary*
  - *RTM Congestion Residuals Cost Categories*
  - *DAM Congestion Residuals Monthly Trend*
  - *DAM Congestion Residuals Daily Costs*
  - *DAM Congestion Residuals Cost Categories*
  - *NYCA Unit Uplift Components Monthly Trend*
  - *NYCA Unit Uplift Components Daily Costs*
  - *Local Reliability Costs Monthly Trend & Commitment Hours*
  - *TCC Monthly Clearing Price with DAM Congestion*
  - *ICAP Spot Market Clearing Price*
  - *UCAP Awards*

## September 2015 Operations Performance Highlights

- Peak load of 31,058 MW occurred on 9/8/2015 HB 16
- All-time summer capability period peak load of 33,956 MW occurred on 7/19/2013 HB 16
- 0.2 hours of Thunder Storm Alerts were declared
- 0 hours of NERC TLR level 3 curtailment
- The Regional Scheduling charts (Monthly & Daily) on pg. 14 have been updated to include the forecasted and realized production cost savings to New York associated with both CTS & LBMP transaction energy schedules, and this change is reflected in the following table as well.
- The following table identifies the estimated production cost savings associated with the Broader Regional Market initiatives.

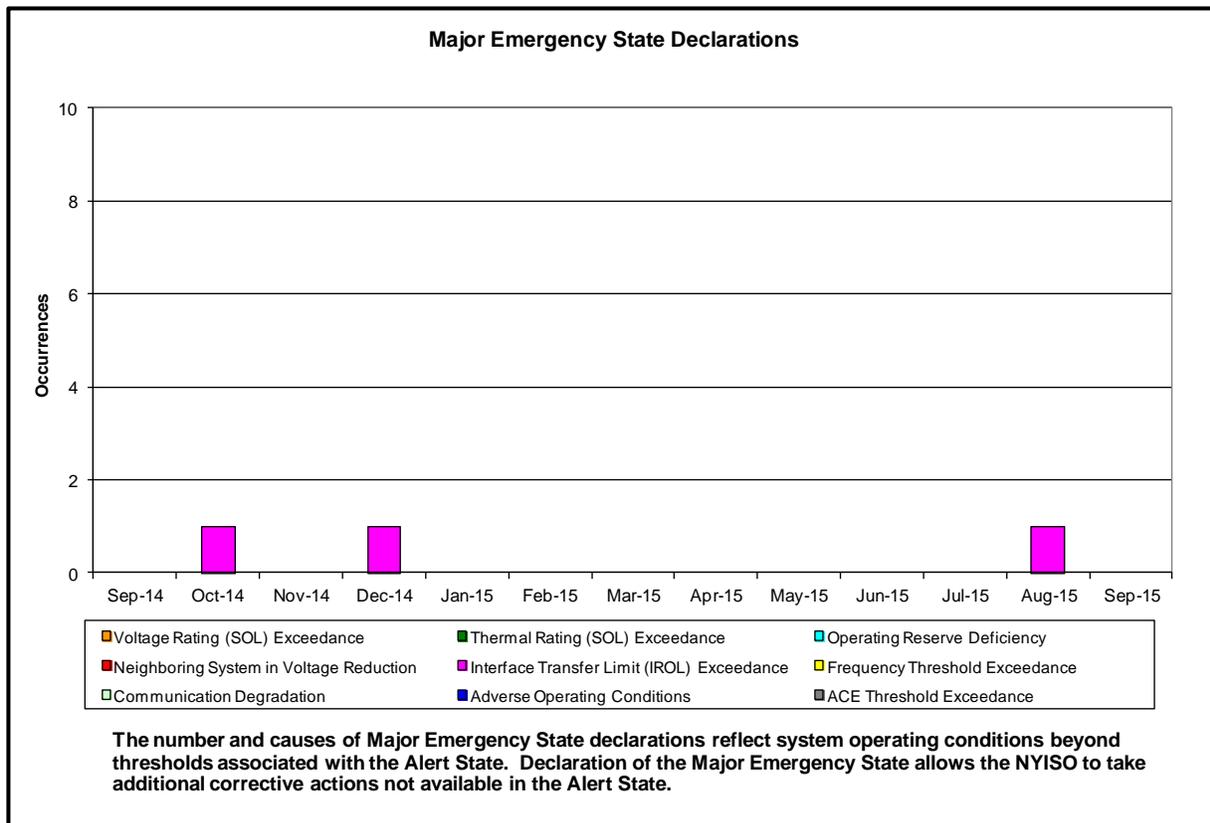
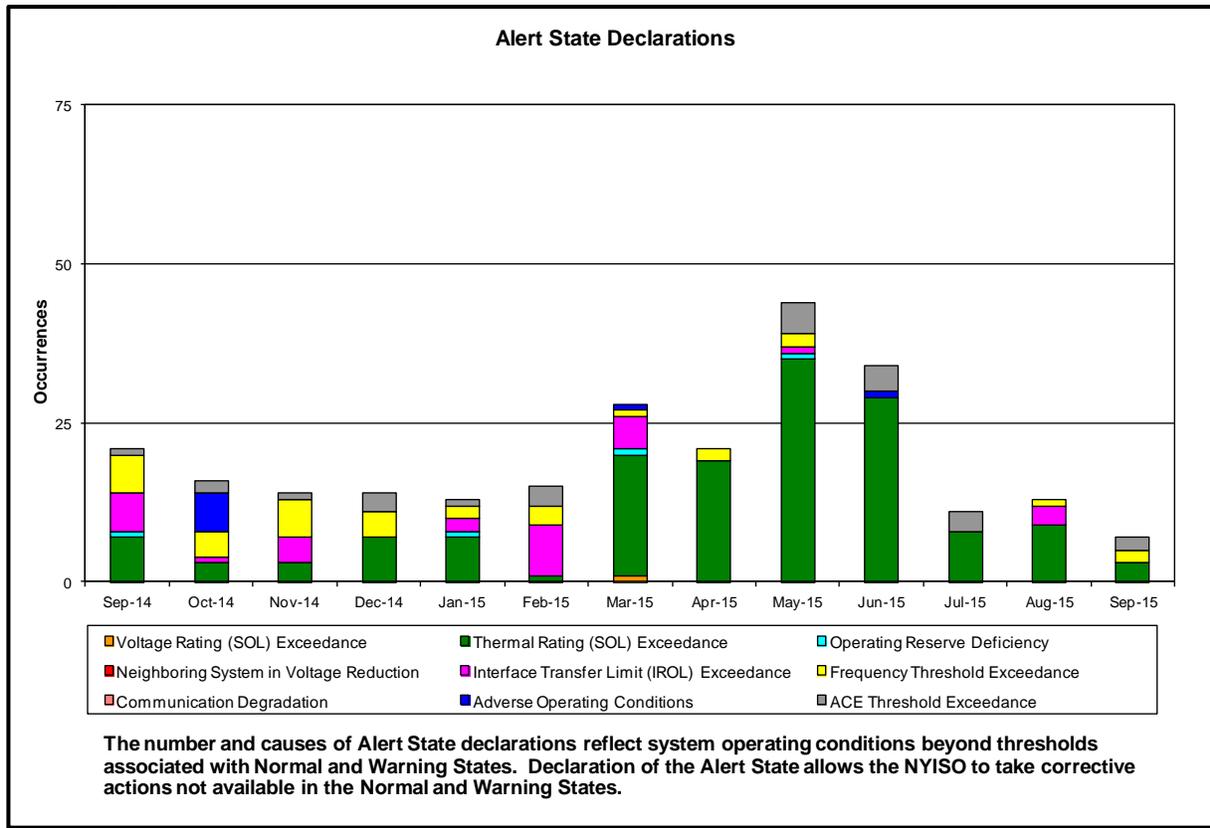
	Current Month Value (\$M)	Year-to-Date Value (\$M)
<b>Regional Congestion Coordination</b>	\$0.82	\$10.94
<b>Regional PJM-NY RT Scheduling</b>	\$0.09	\$2.59
<b>Total</b>	\$0.91	\$13.53

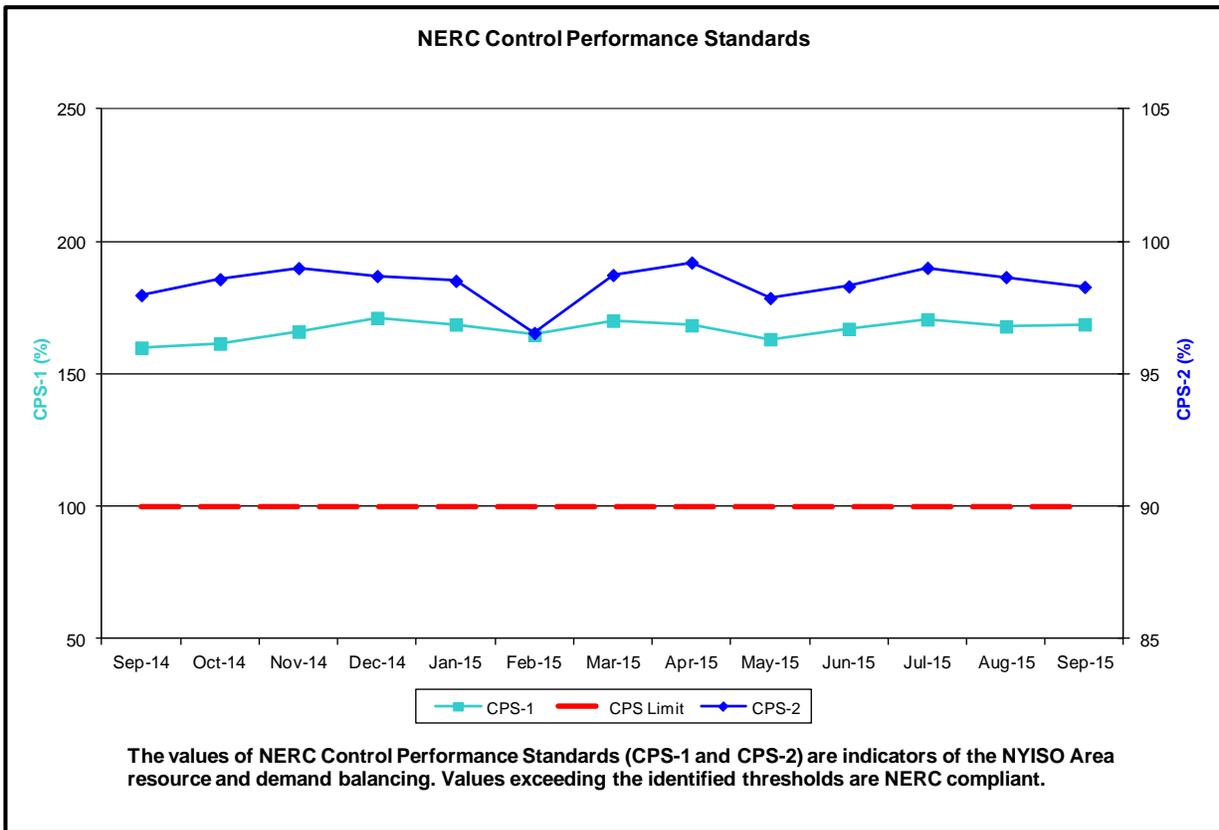
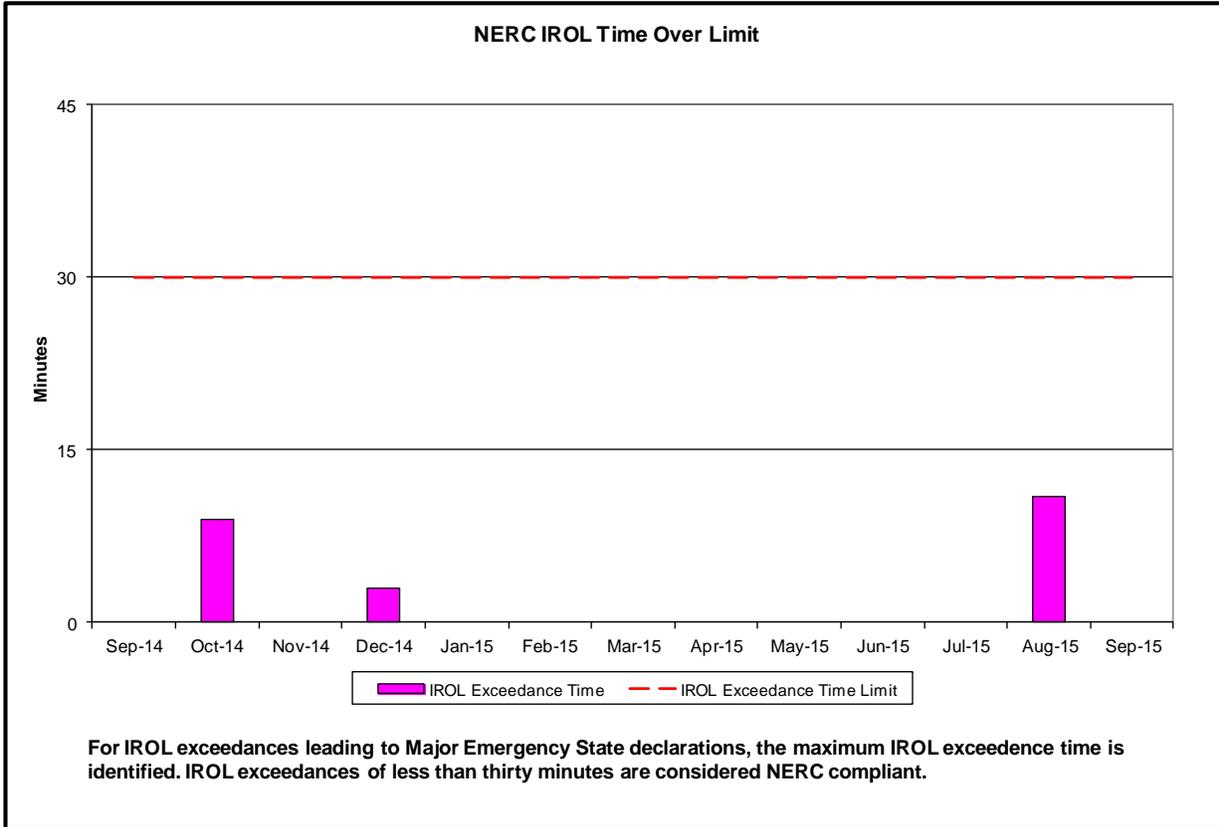
- Statewide uplift cost monthly average was **(\$0.36)/MWh**
- The following table identifies the Monthly ICAP spot market prices by locality and the price changes from the prior month.

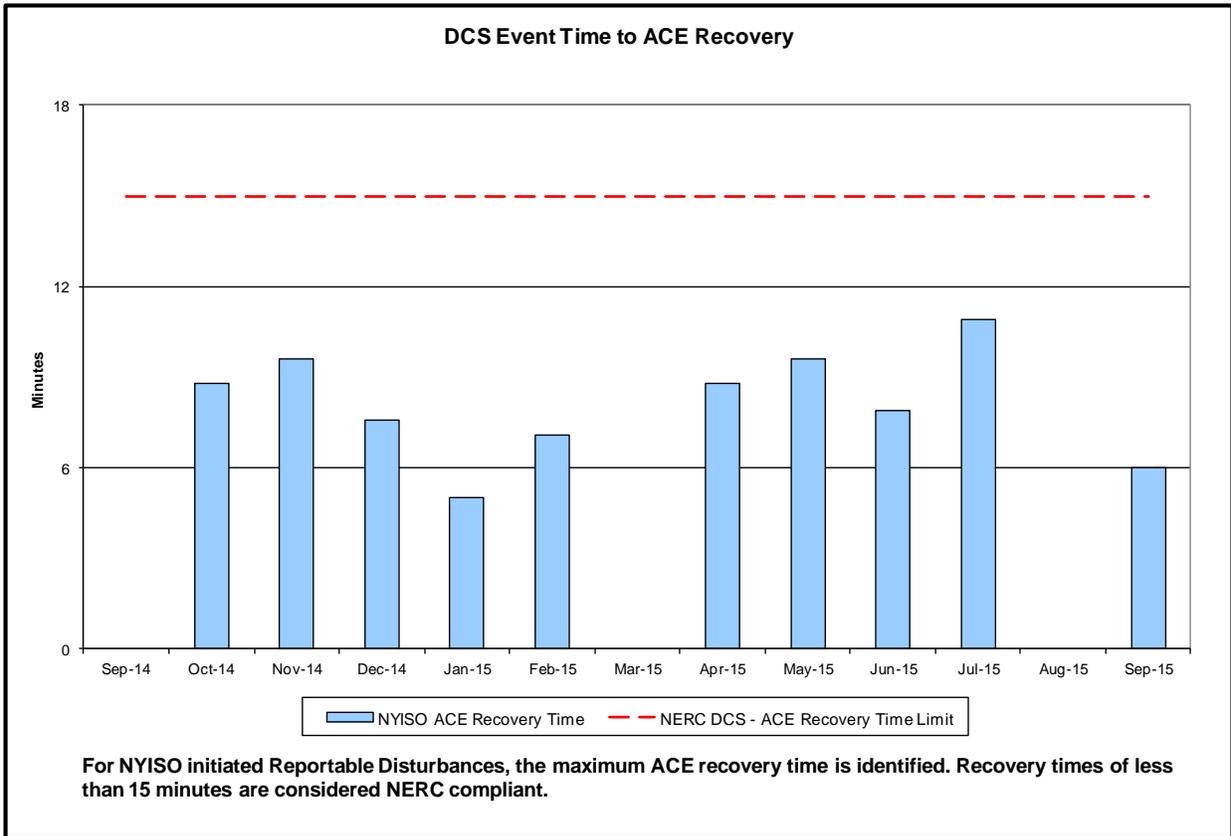
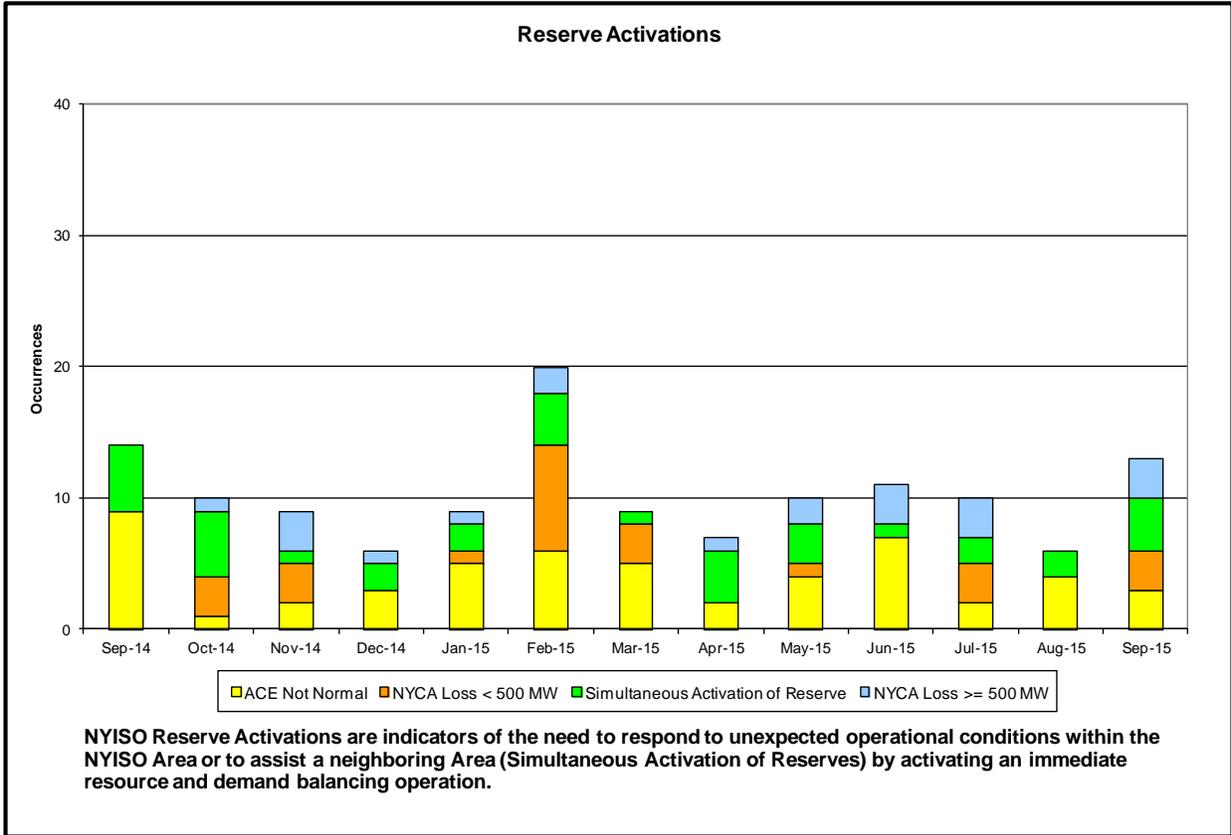
Spot Auction Price Results	NYCA	Lower Hudson Valley Zones	New York City Zone	Long Island Zone
October 2015 Spot Price	\$2.96	\$8.13	\$15.01	\$5.61
Change from Prior Month	<b>(\$0.52)</b>	<b>(\$0.14)</b>	<b>(\$0.25)</b>	<b>(\$0.01)</b>

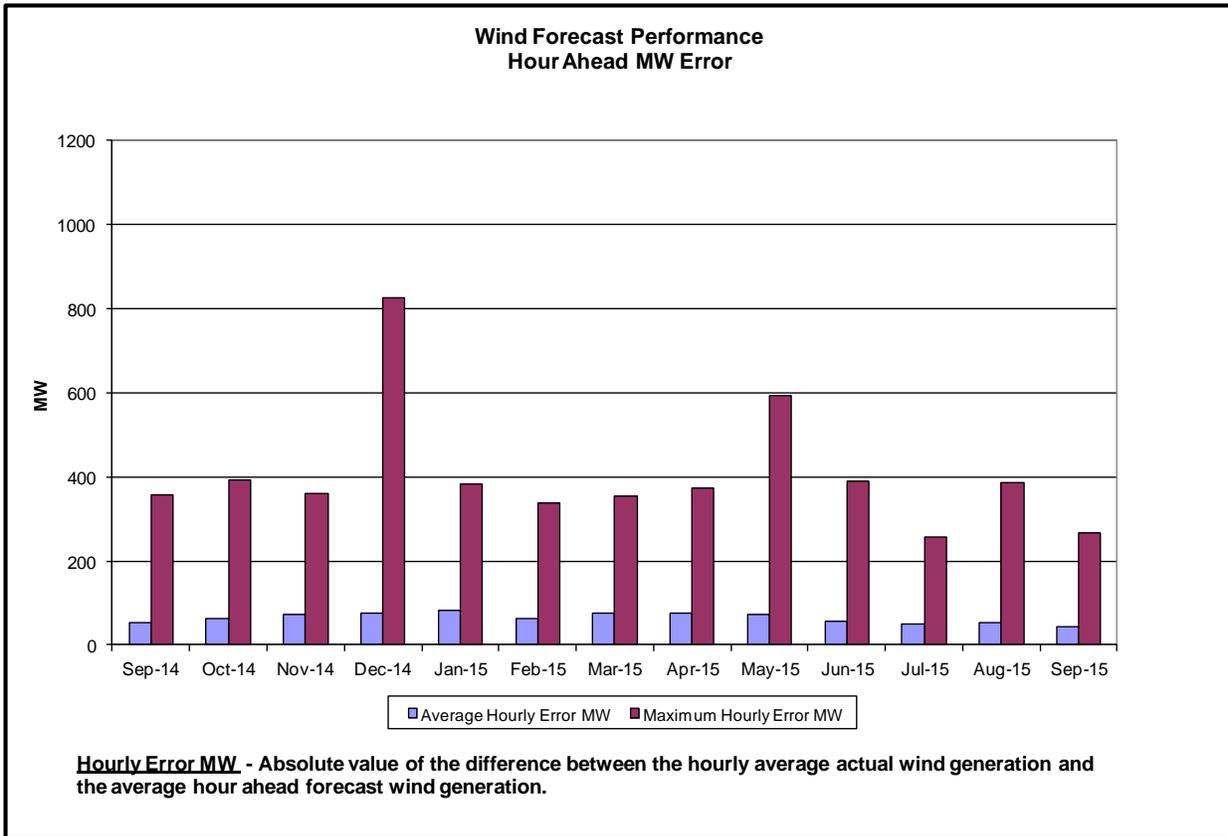
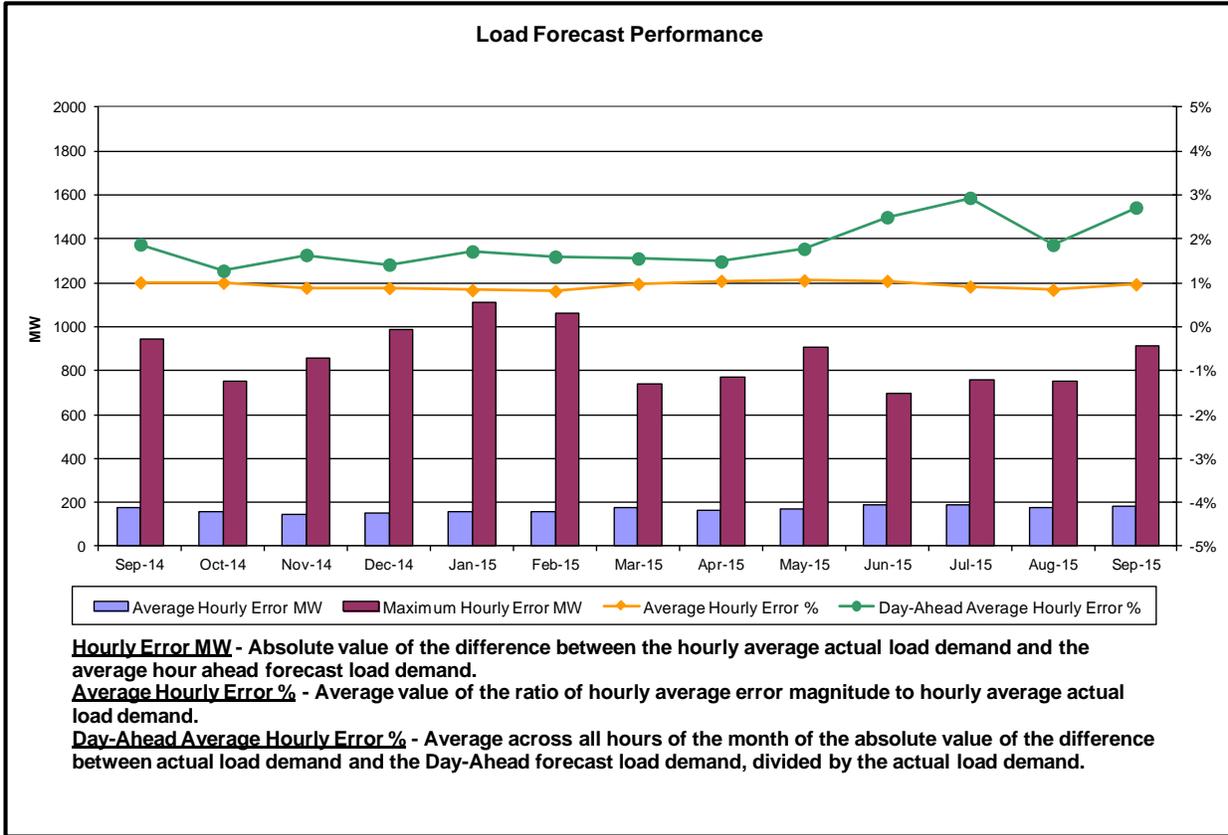
- NYCA - Price decreases by \$0.52 due to an approximate increase of 225.4 MW of UCAP sold.
- LHV - Price decreases by \$0.14 due to an approximate 22.6 MW increase in UCAP sold.
- NYC - Price decreases by \$0.25 due to an approximate 20.6 MW increase of UCAP sold.

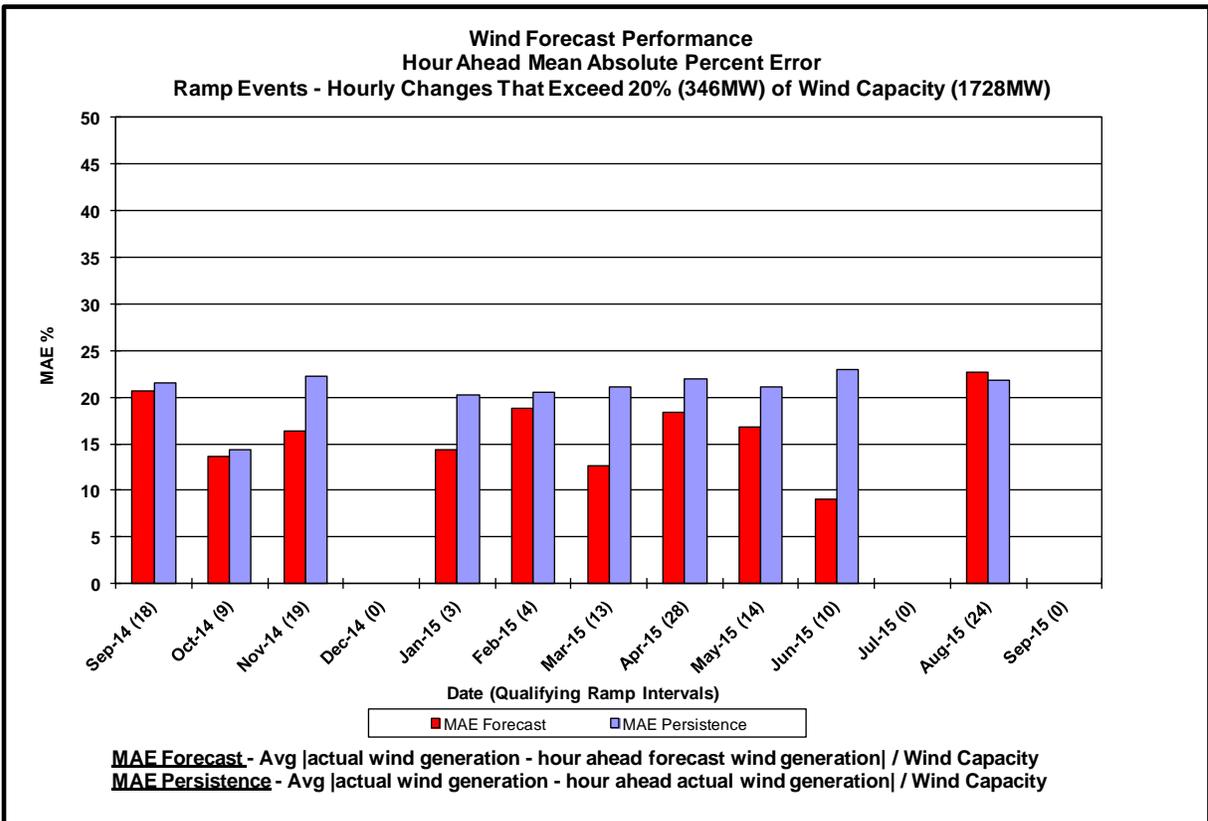
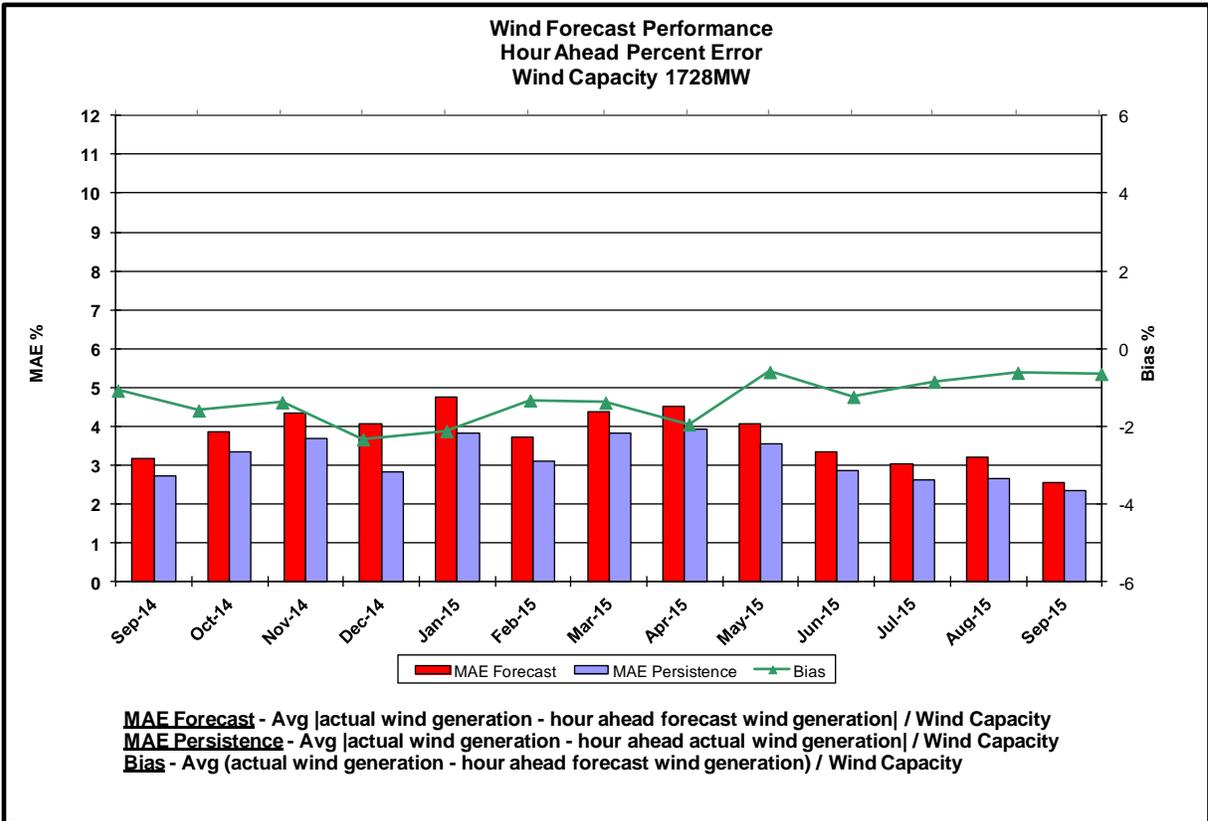
## Reliability Performance Metrics

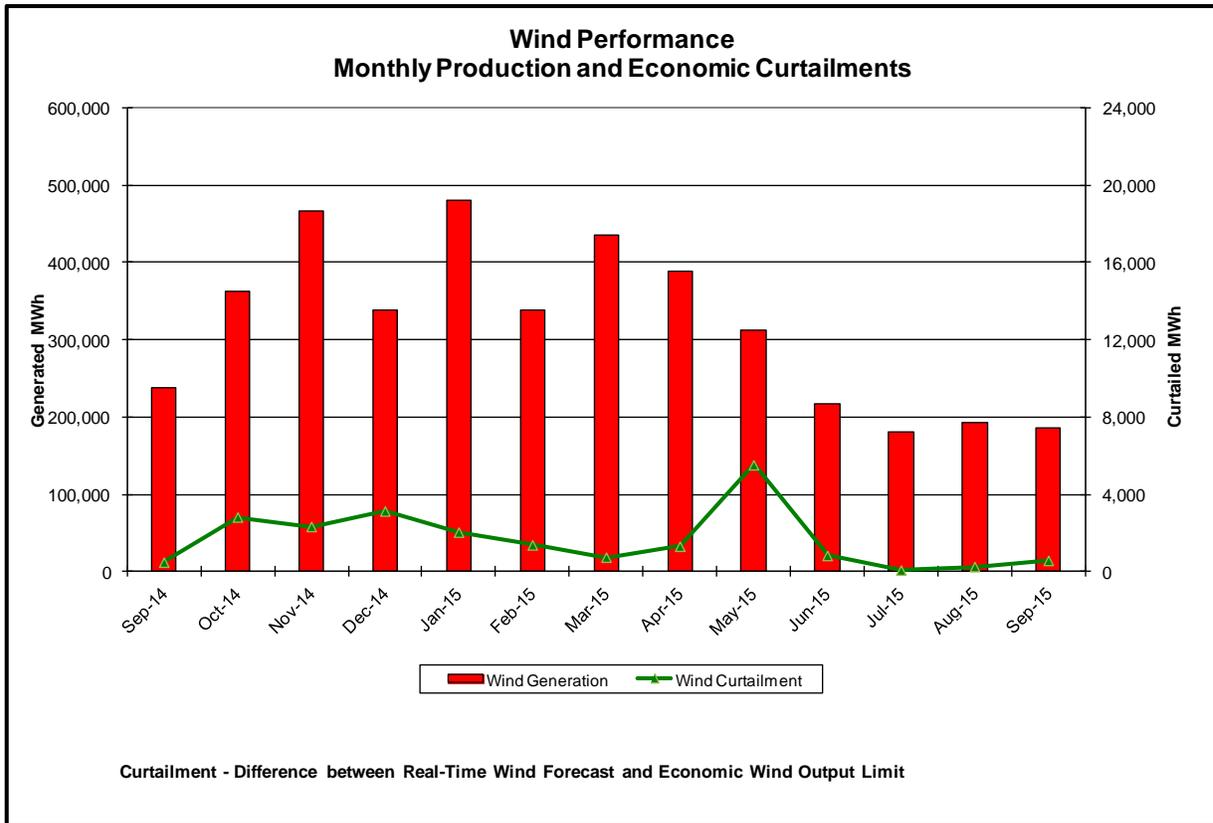
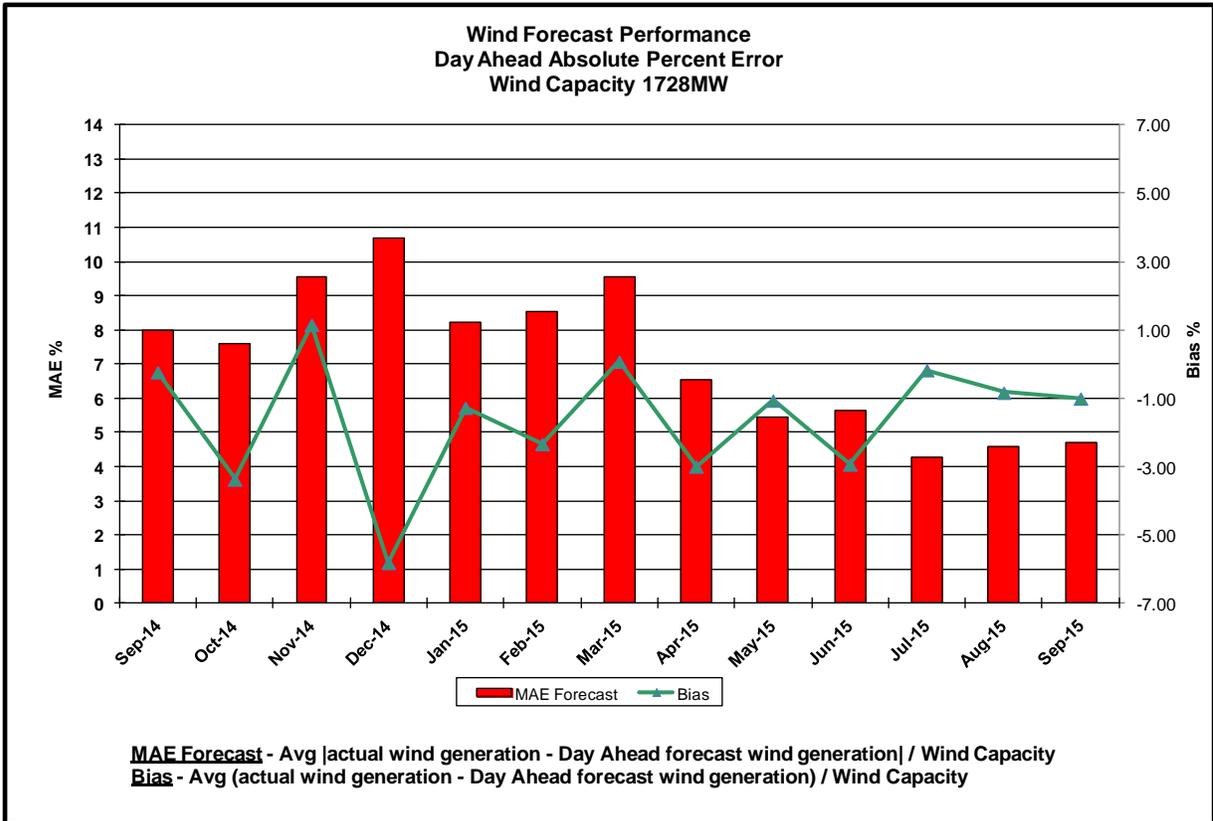


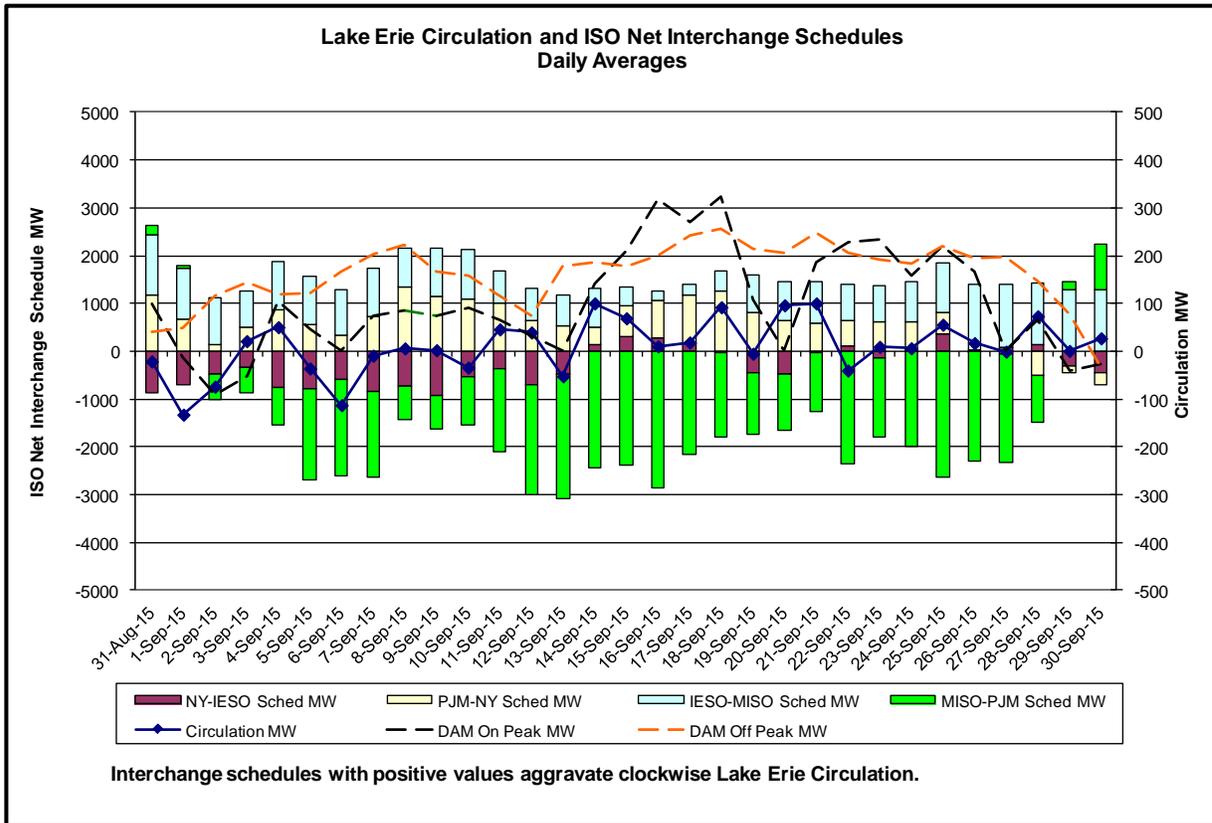
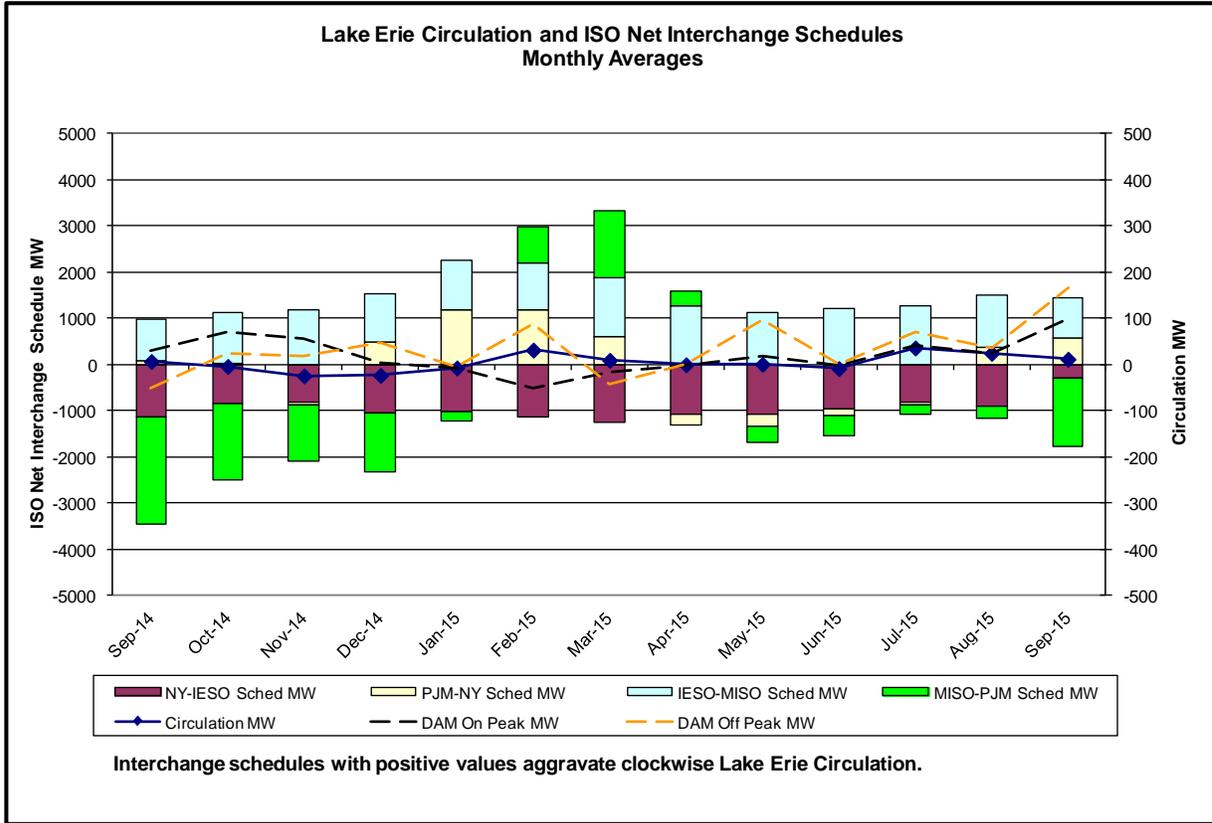




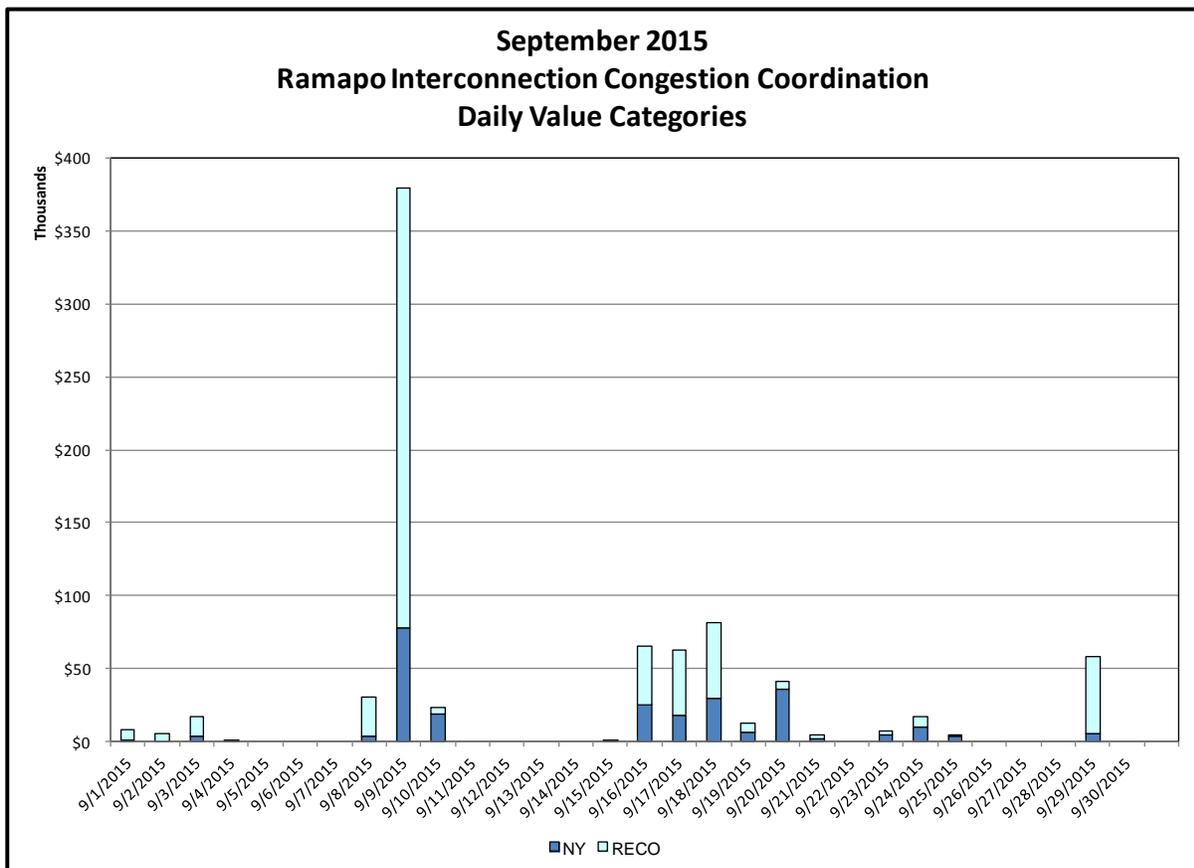
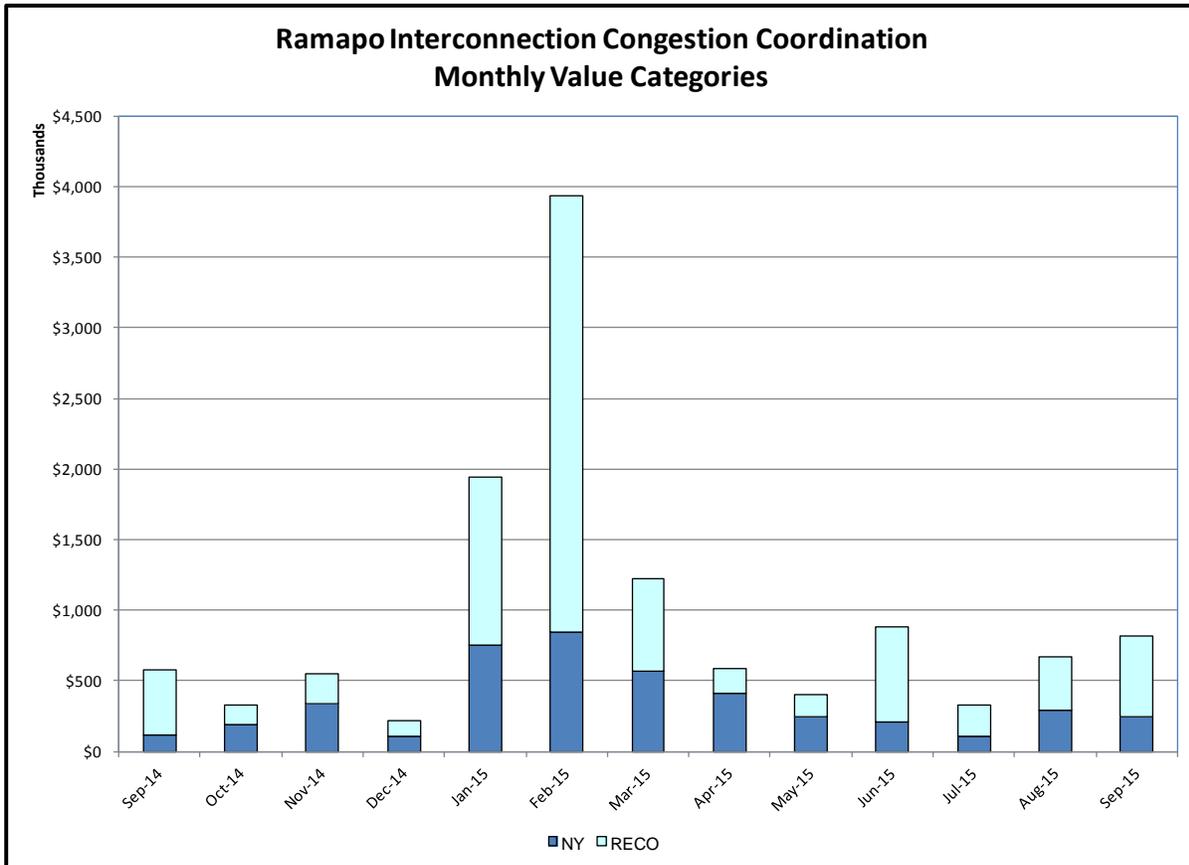






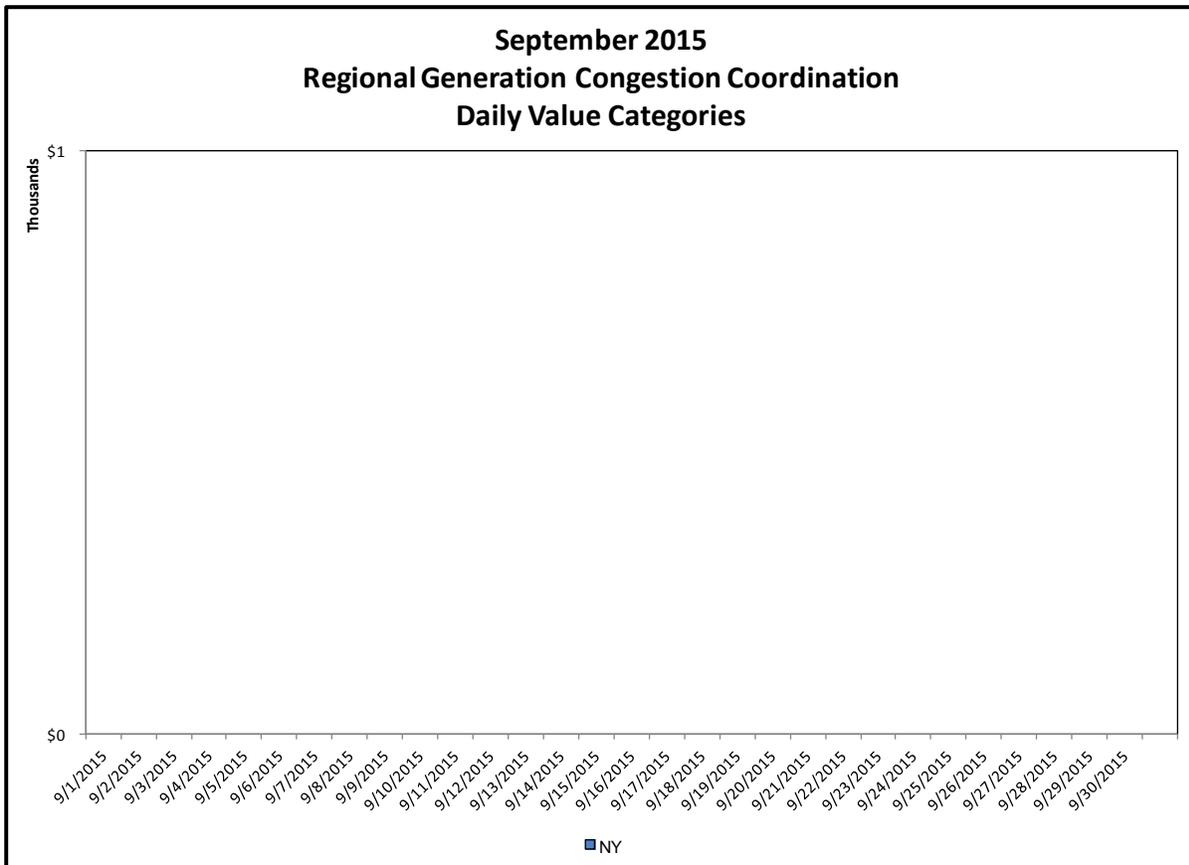
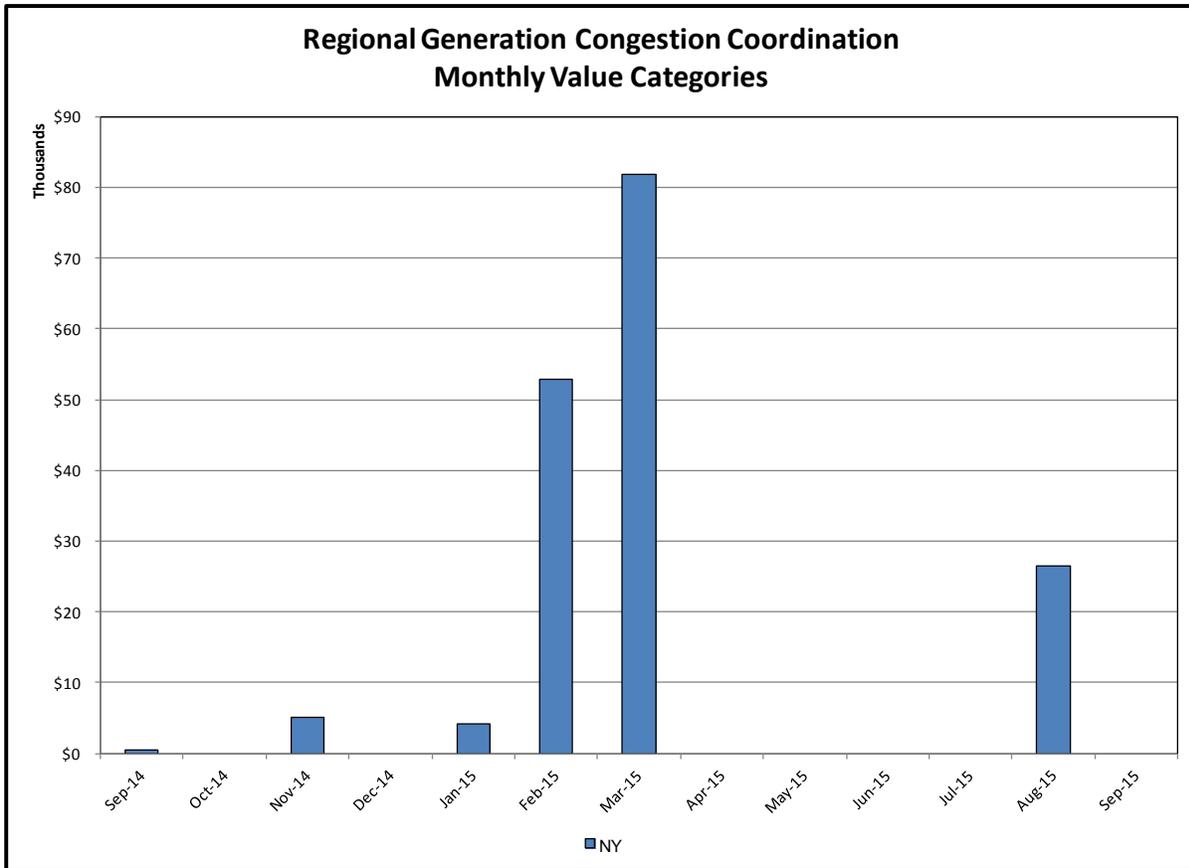


## Broader Regional Market Performance Metrics



**Ramapo Interconnection Congestion Coordination**

<u>Category</u>	<u>Description</u>
NY	Represents the value NY realizes from Market-to-Market Ramapo Coordination. When experiencing congestion, this includes (1) the estimated savings to NY for additional deliveries into NY, plus (2) PJM compensation to NY for additional deliveries into PJM (as compared to the Ramapo Target level, excluding RECO). This is net of any settlements to PJM when they are congested.
RECO	Represents the value of PJM's obligation to deliver 80% of service to RECO load over Ramapo 5018. This includes (1) the estimated reduction in NYCA congestion due to the PJM delivery of RECO over Ramapo 5018, plus (2) PJM compensation to NY for NYCA congestion for the under-delivery or inability to deliver service to RECO load over Ramapo 5018.



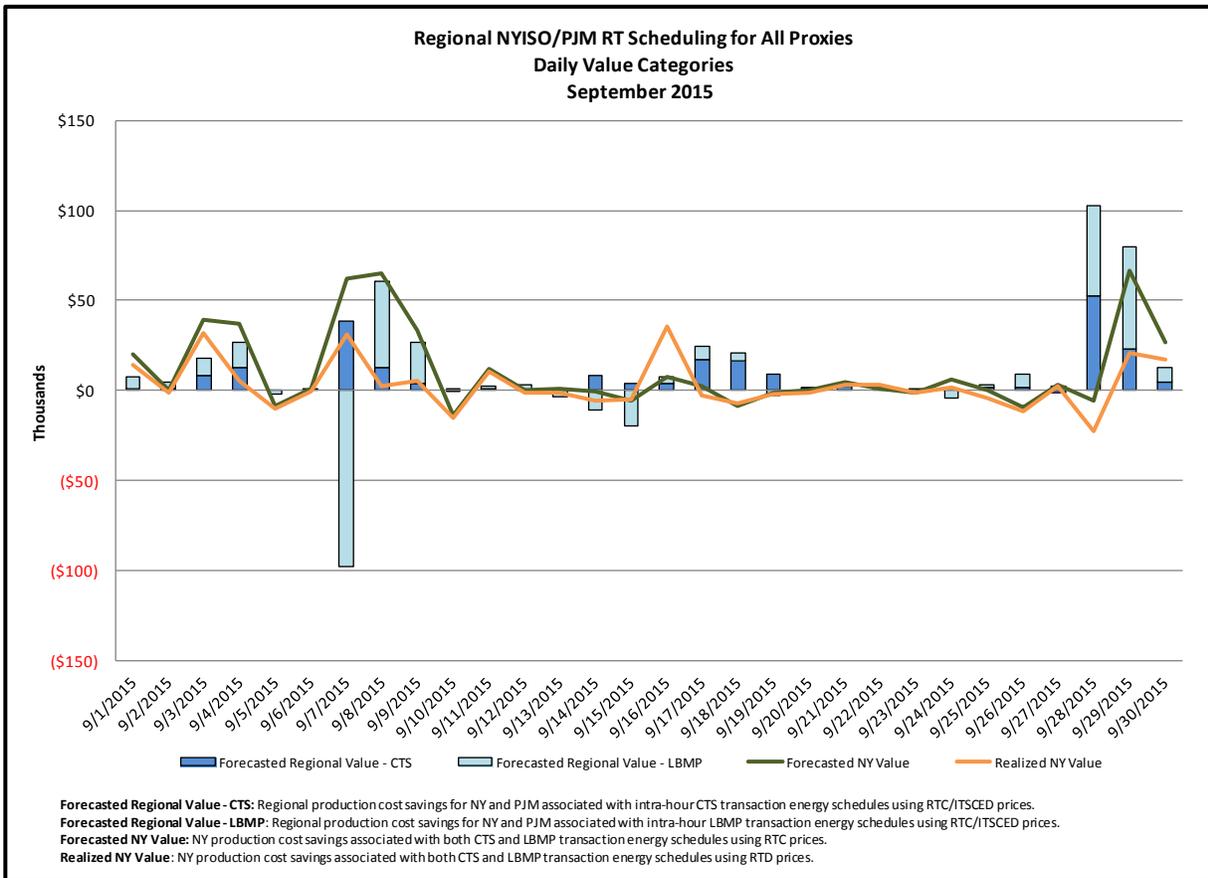
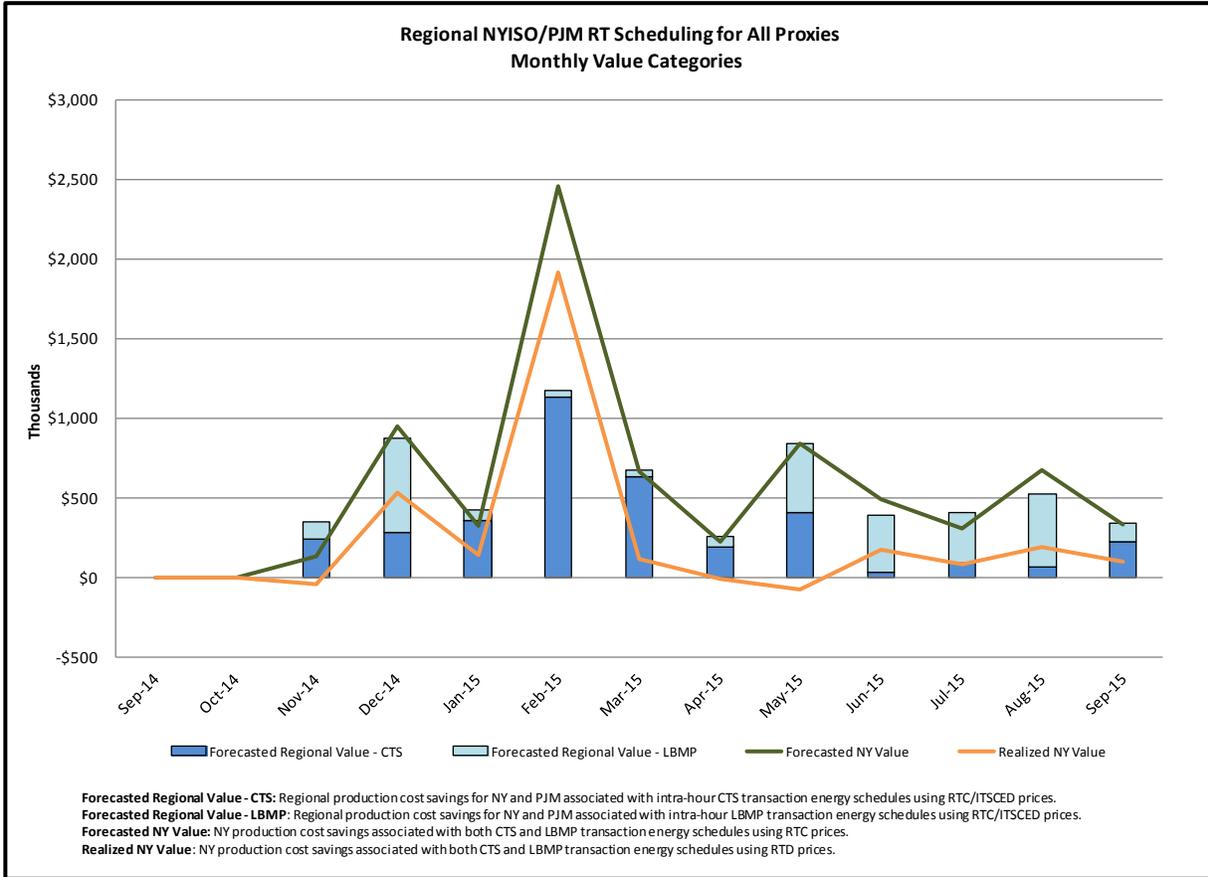
### Regional Generation Congestion Coordination

Category

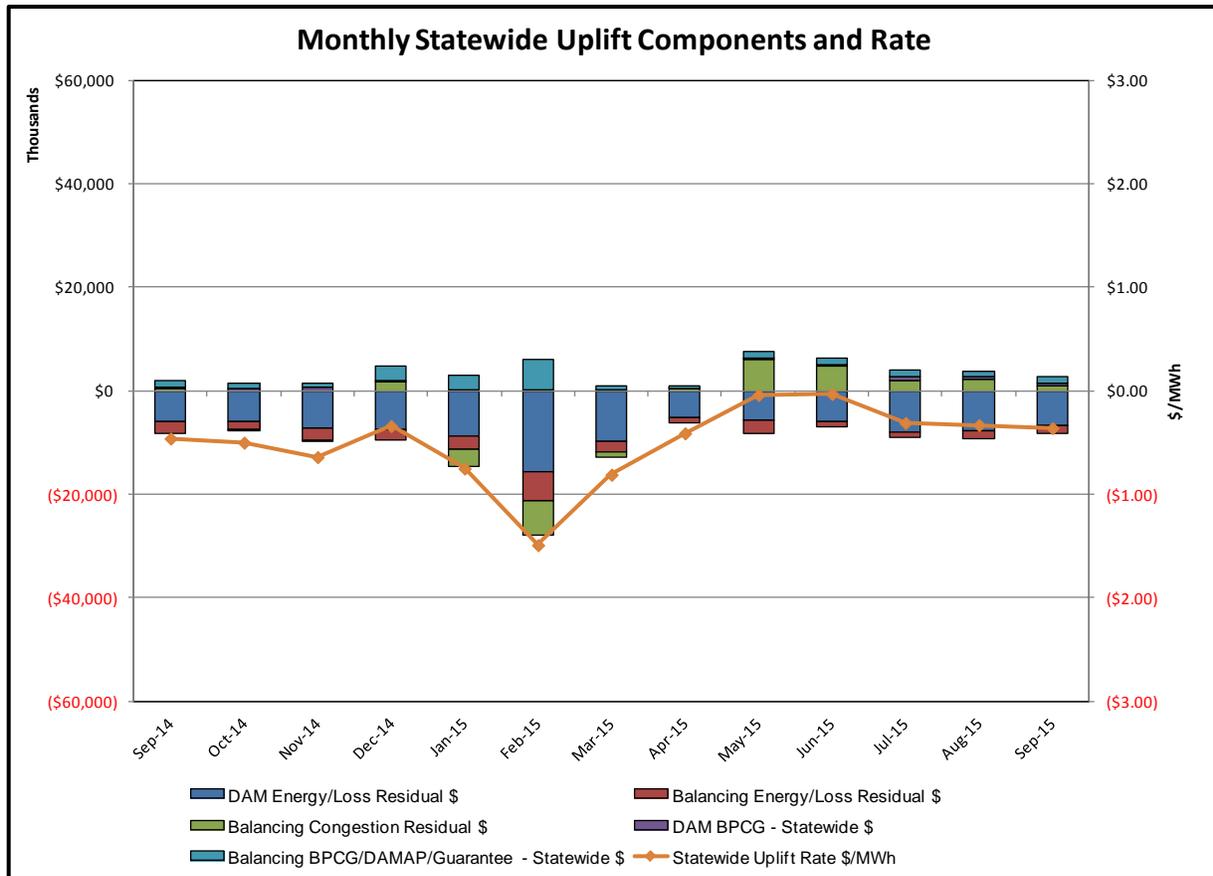
NY

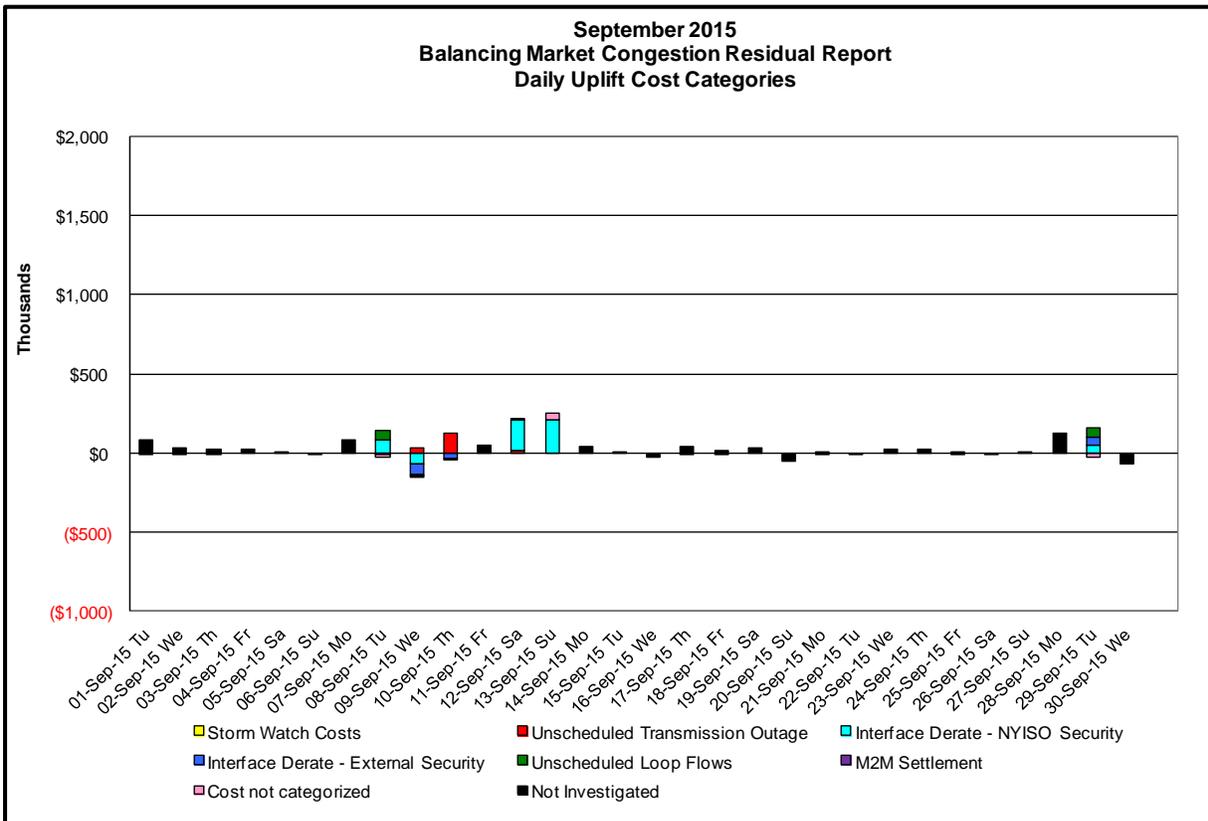
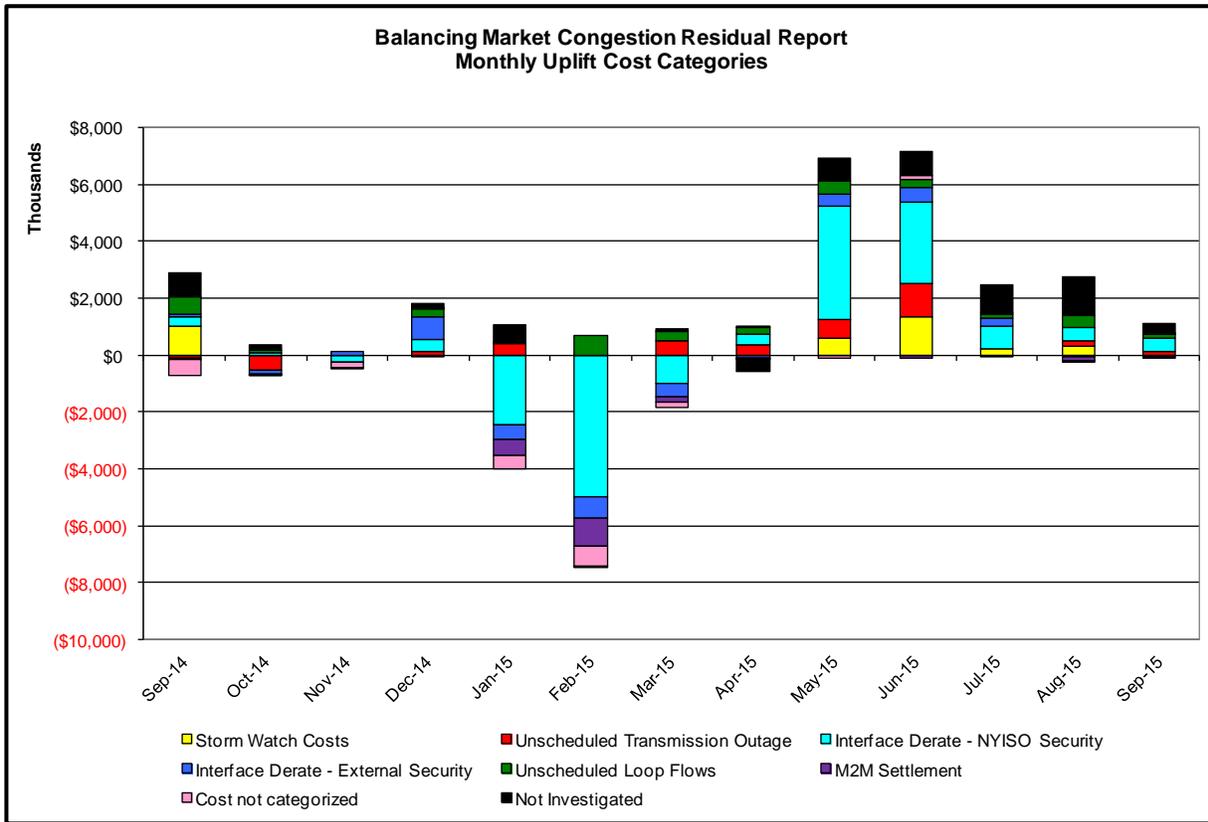
Description

NYISO savings that result from PJM payments to NYISO when PJM's transmission use (PJM's market flow) is greater than PJM's entitlement of the NY transmission system and NYISO is incurring Western or Central NY congestion. Additionally, NYISO savings may result from the more efficient regional utilization of PJM's generation resources to directly address Western or Central NY transmission congestion.



## Market Performance Metrics





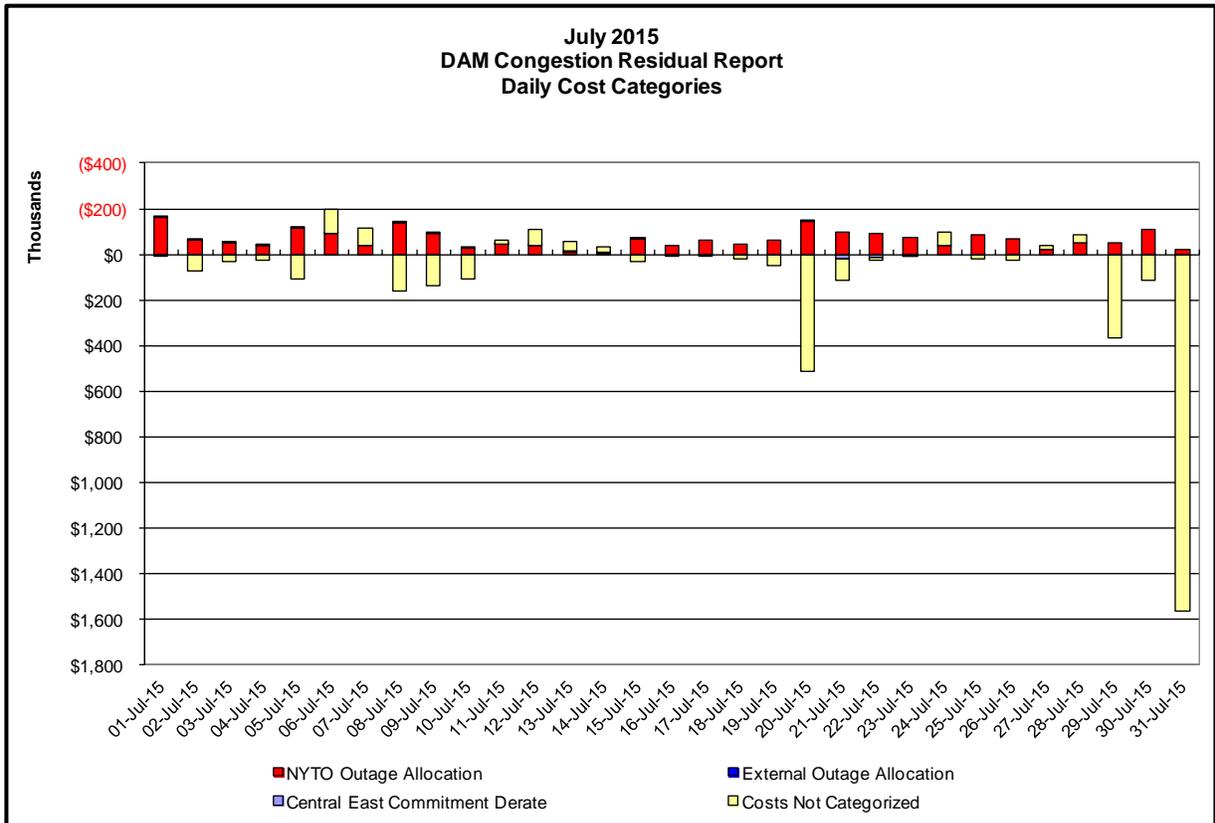
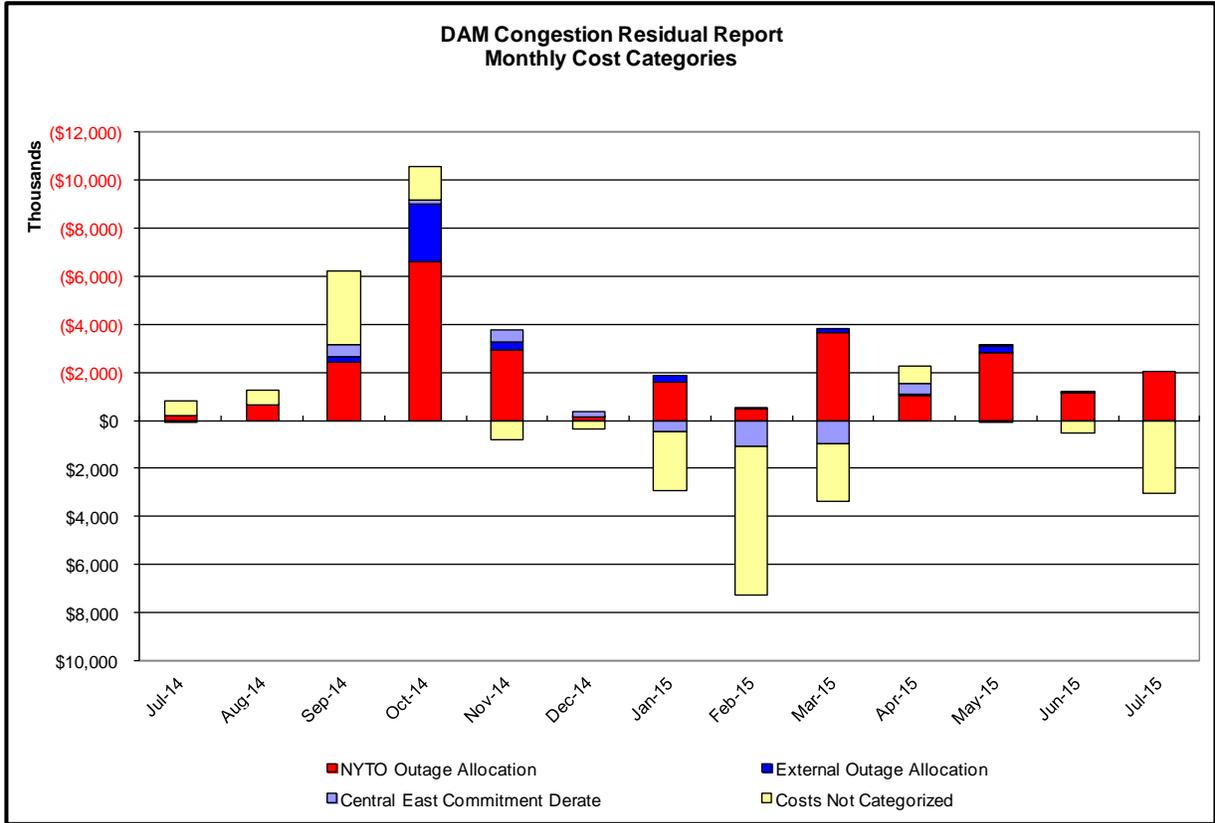
Day's investigated in September: 8,9,10,12,13,29			
Event	Date (yyyymmdd)	Hours	Description
	9/8/2015	12	Uprate Foxhills-Willowbrook 138kV (#29212-1)
	9/8/2015	12	Uprate Freshkill-Willowbrook 138kV (#29211-2)
	9/8/2015	14	Derate Dunwoodie-Shore Road 345kV (#Y50) I/o SCB:SPBK(RNS2):Y49 & M29
	9/8/2015	14	Derate Goethals-Gowanus 345kV (#26) I/o GOWANUS _GOETHALS_345_25
	9/8/2015	14	Derate Niagara-Packard 230kV (#62) I/o TWR:NIAGARA 61 & 64
	9/8/2015	14,16	Derate Packard-Sawyer 230kV (#78) I/o Packard-Sawyer 230kV (#77)
	9/8/2015	12	NE_AC-NY Scheduling Limit
	9/8/2015	14	Lake Erie Clockwise Circultion, DAM-RTM exceeds 125MW; Niagra-Packard 230kV (#62) and Packard-Sawyer 230kV (#78)
	9/9/2015	21,22	Forced outage Dunwoodie-Shore Road 345kV (#Y50)
	9/9/2015	14	Forced outage Barrett-Valley Stream 138kV (#292)
	9/9/2015	16,21	Derate Gowanus-Greenwood 138kV (#42231)
	9/9/2015	9,10	Derate Packard-Sawyer 230kV (#78) I/o Packard-Sawyer 230kV (#77)
	9/9/2015	14	Derate Leeds-Pleasant Valley 345kV (#92) for I/o Athens-Pleasant Valley 345kV (#91)
	9/9/2015	1,2	Uprate Central East
	9/9/2015	0,12,13	Uprate Freshkill-Willowbrook 138kV (#29211-2)
	9/9/2015	13,14,15,16	NYCA DNI Ramp Limit
	9/9/2015	13	HQ_CHAT-NY Scheduling Limit
	9/9/2015	12	NE_NNC1385-NY Scheduling limit
	9/9/2015	13,17,18	NE_AC-NY Scheduling Limit
	9/9/2015	13	PJM_AC DNI Ramp Limit
	9/10/2015	0,5,7	Forced outage Dunwoodie-Shore Road 345kV (#Y50)
	9/10/2015	14	IESO_AC DNI Ramp Limit
	9/10/2015	9-12,14	NE_AC-NY Scheduling Limit
	9/10/2015	11,12	NE_NNC1385-NY Scheduling limit
	9/12/2015	12	Extended outage Goethals-Freshkills 345kV (#21)
	9/12/2015	9,10,12-16,18,20-23	Derate Greenwood-Vernon 138kV (#31231) for I/o SCB:GOWANUS(6): 25&42232
	9/13/2015	16,23	NYCA DNI Ramp Limit
	9/13/2015	10,13-19	Derate Greenwood-Vernon 138kV (#31231) for I/o SCB:GOWANUS(6): 25&42232
	9/29/2015	11,17,19	Derate East 179th Street-HellGate East 138kV (#15053)
	9/29/2015	11,19	Derate East 179th Street-HellGate East 138kV (#15054)
	9/29/2015	11,17,19	Derate Farragut-Hudson Avenue 138kV (#32711)
	9/29/2015	17,19	Derate Huntley-Sawyer 230kV (#80) for I/o Niagara-Robinson Road 230kV (#64)
	9/29/2015	13,14	Uprate Leeds-Pleasant Valley 345kV (#92) for I/o Athens-Pleasant Valley 345kV (#91)
	9/29/2015	11,14,17	NYCA DNI Ramp Limit
	9/29/2015	19	HQ_CEDARS-NY Scheduling Limit
	9/29/2015	11,17,19	HQ_CHAT-NY Scheduling Limit
	9/29/2015	13	IESO_AC DNI Ramp Limit
	9/29/2015	14,17	PJM_AC-NY Scheduling Limit
	9/29/2015	17,19	Lake Erie Clockwise Circultion, DAM-RTM exceeds 125MW; Huntley-Sawyer 230kV (#80)

**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
M2M Settlement	Market-wide	Settlement result inclusive of coordinated redispatch and Ramapo flowgates	

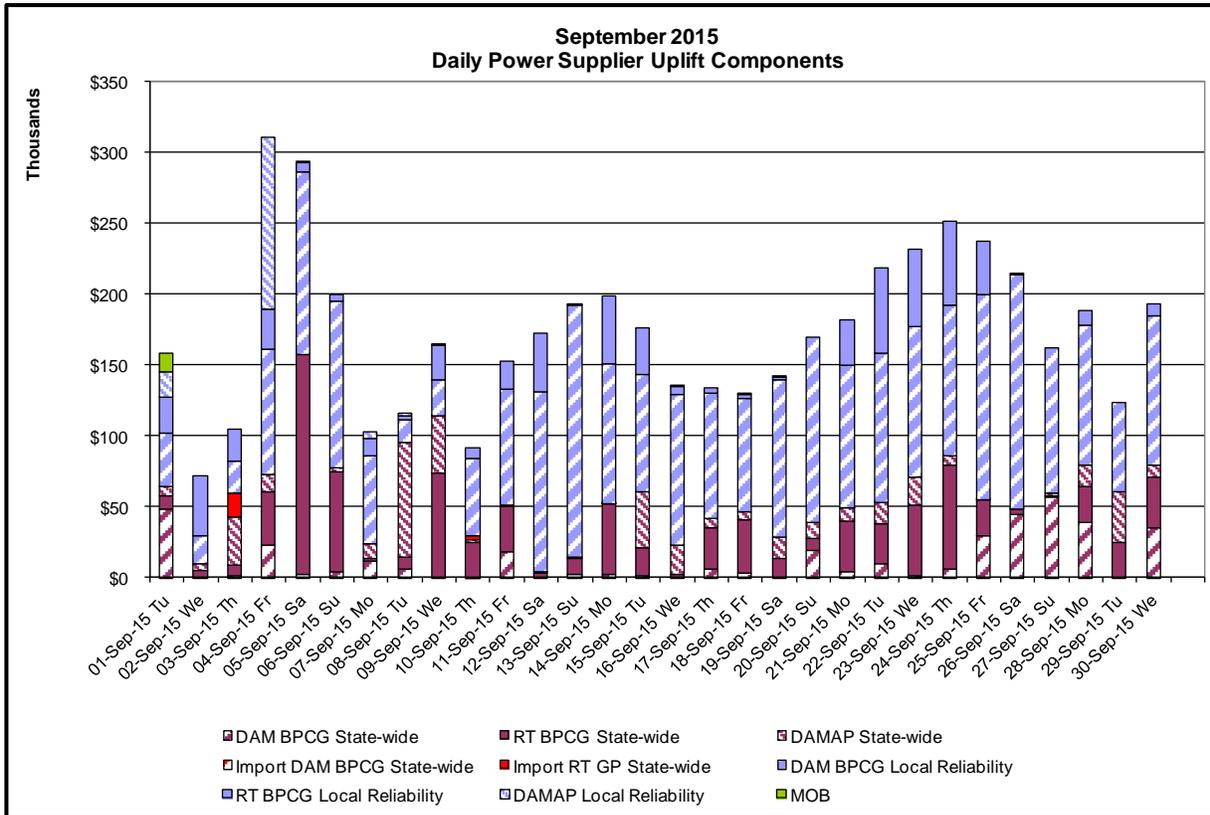
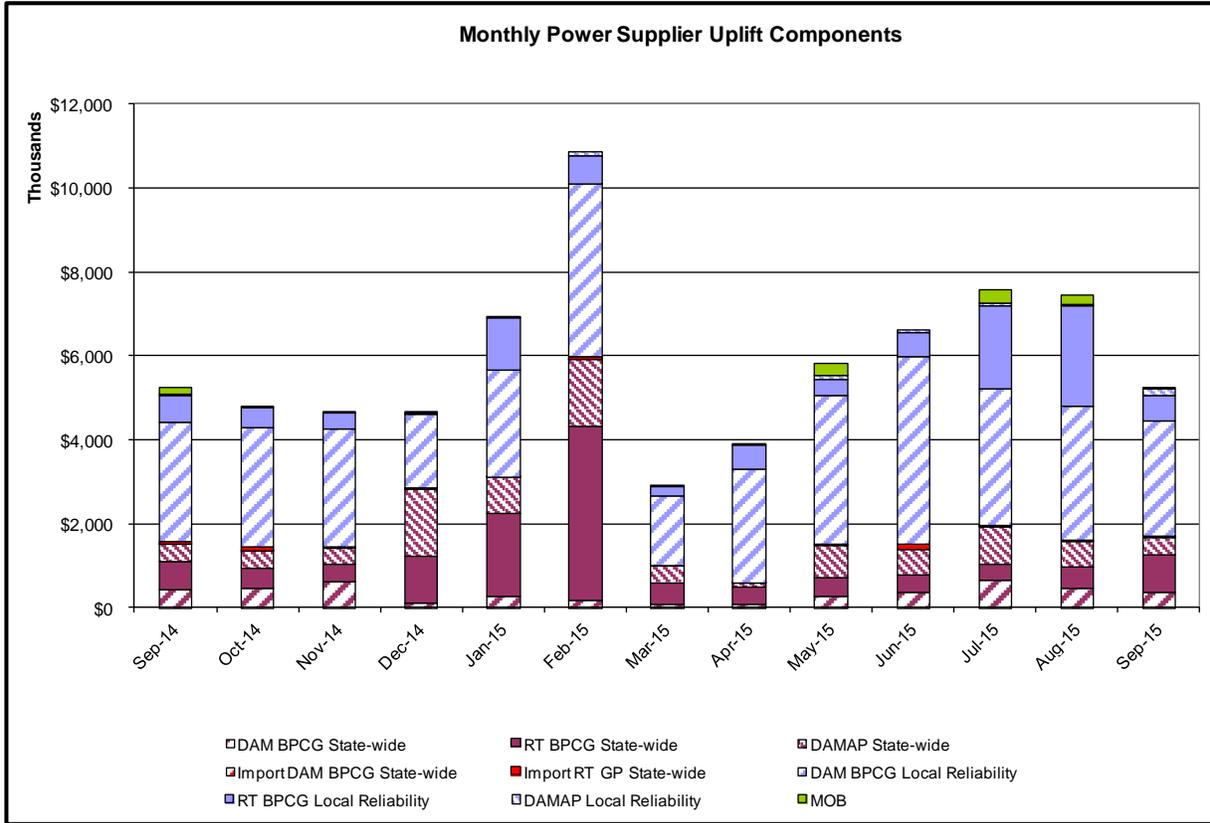
**Monthly Balancing Market Congestion Report Assumptions/Notes**

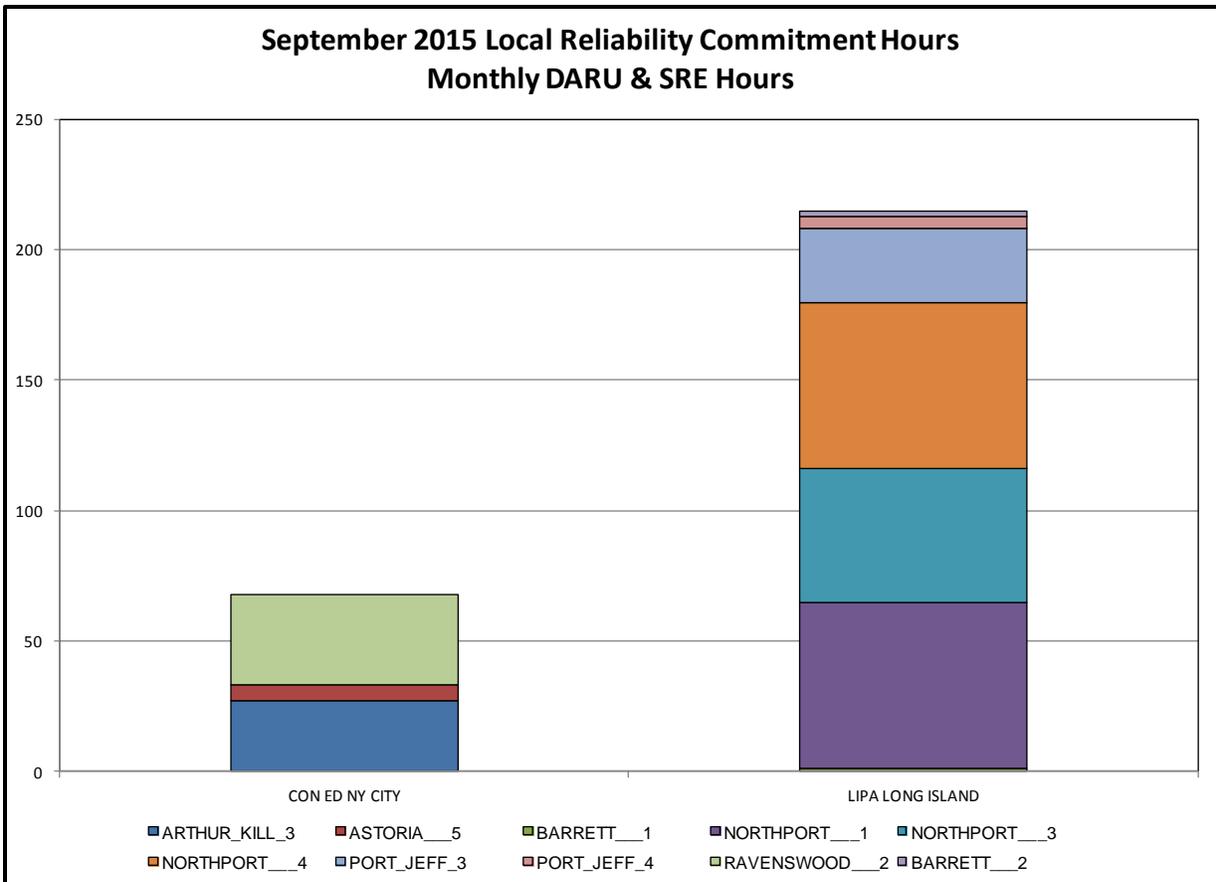
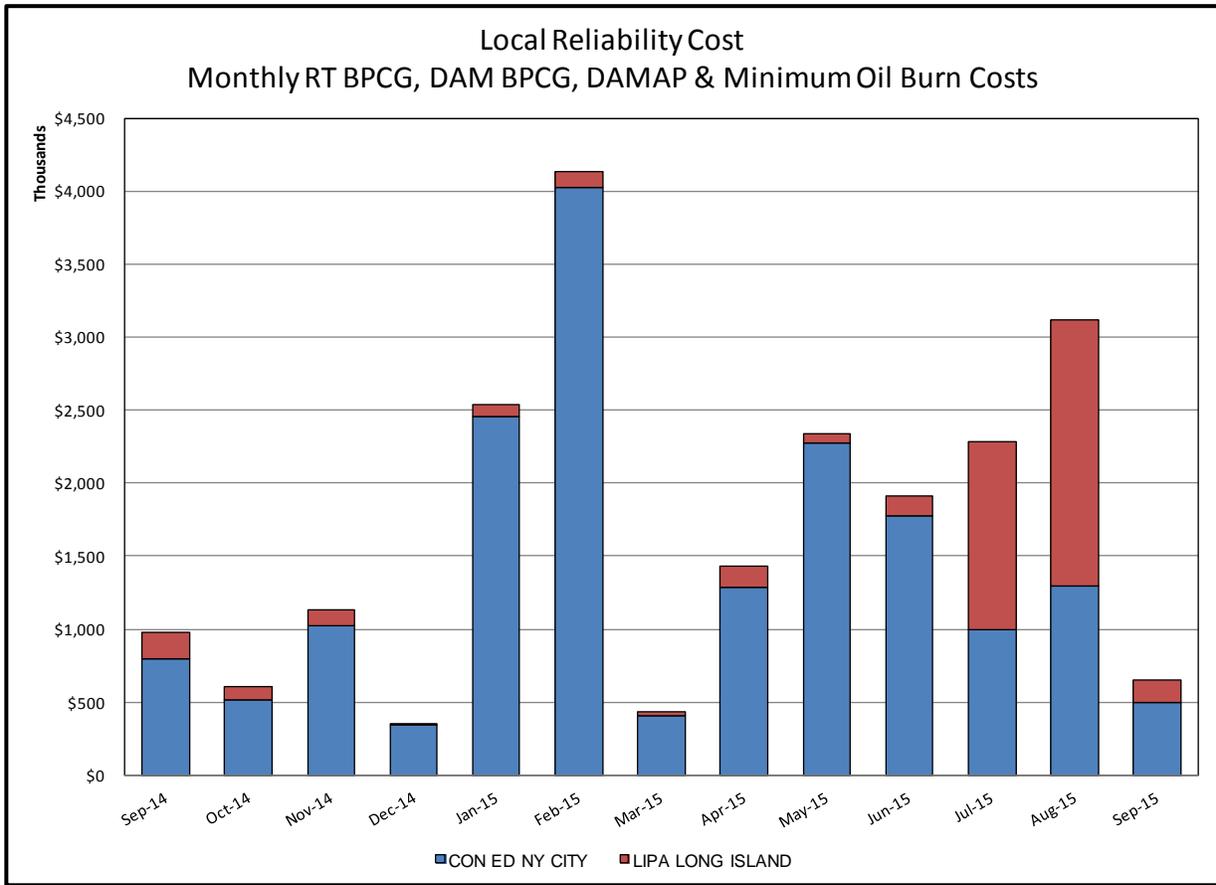
- 1) Storm Watch Costs are identified as daily total uplift costs
- 2) Days with a value of BMCR less M2M Settlement of \$100K/HR, shortfall of \$200K/Day or more, or surplus of \$100K/Day or more are investigated.
- 3) Uplift costs associated with multiple event types are apportioned equally by hour

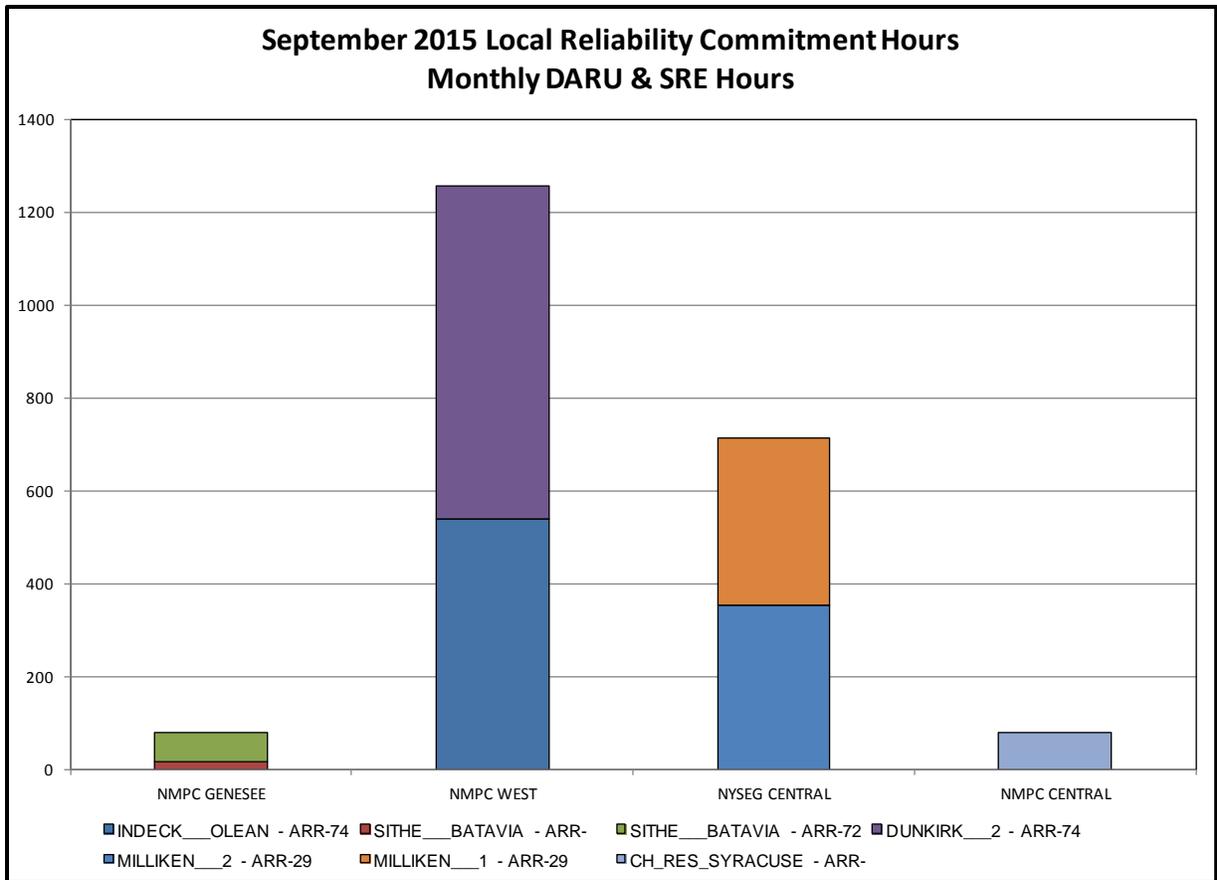
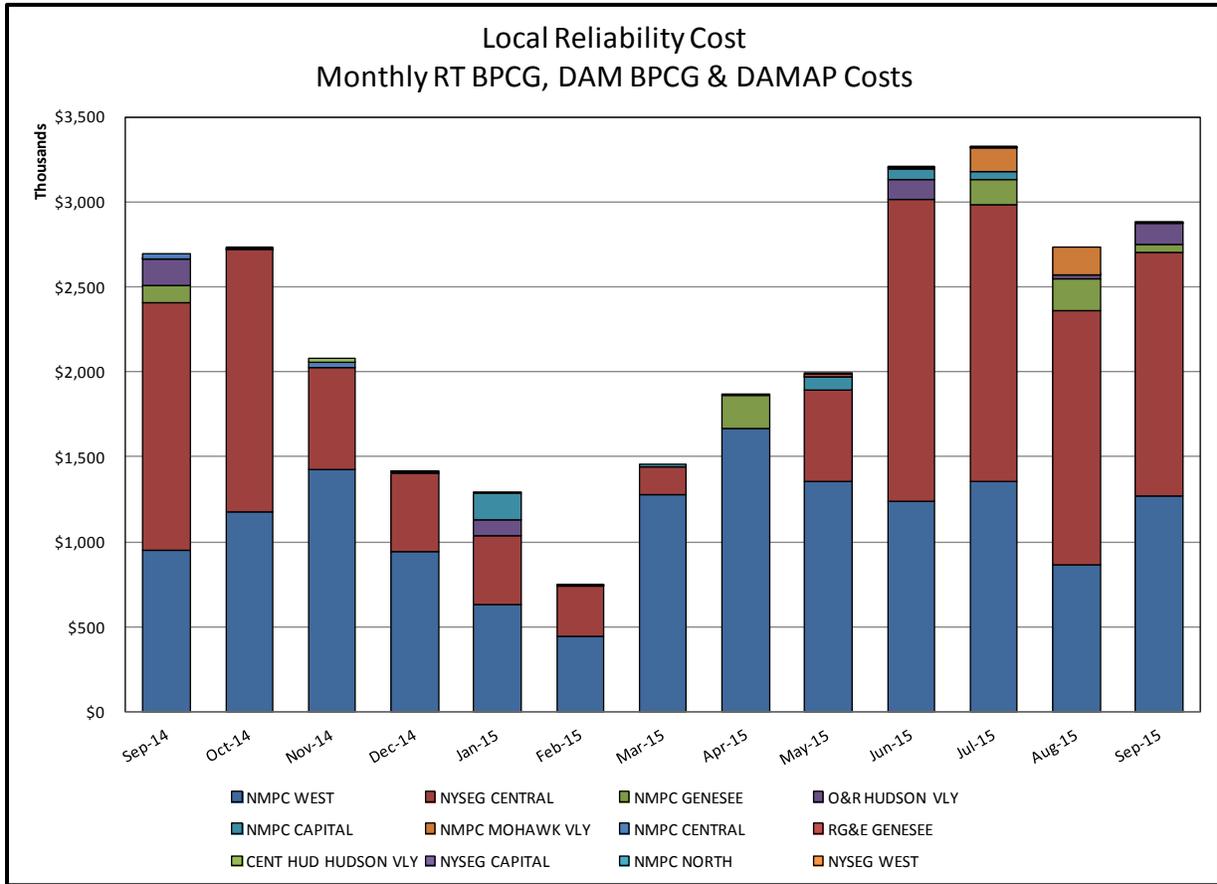


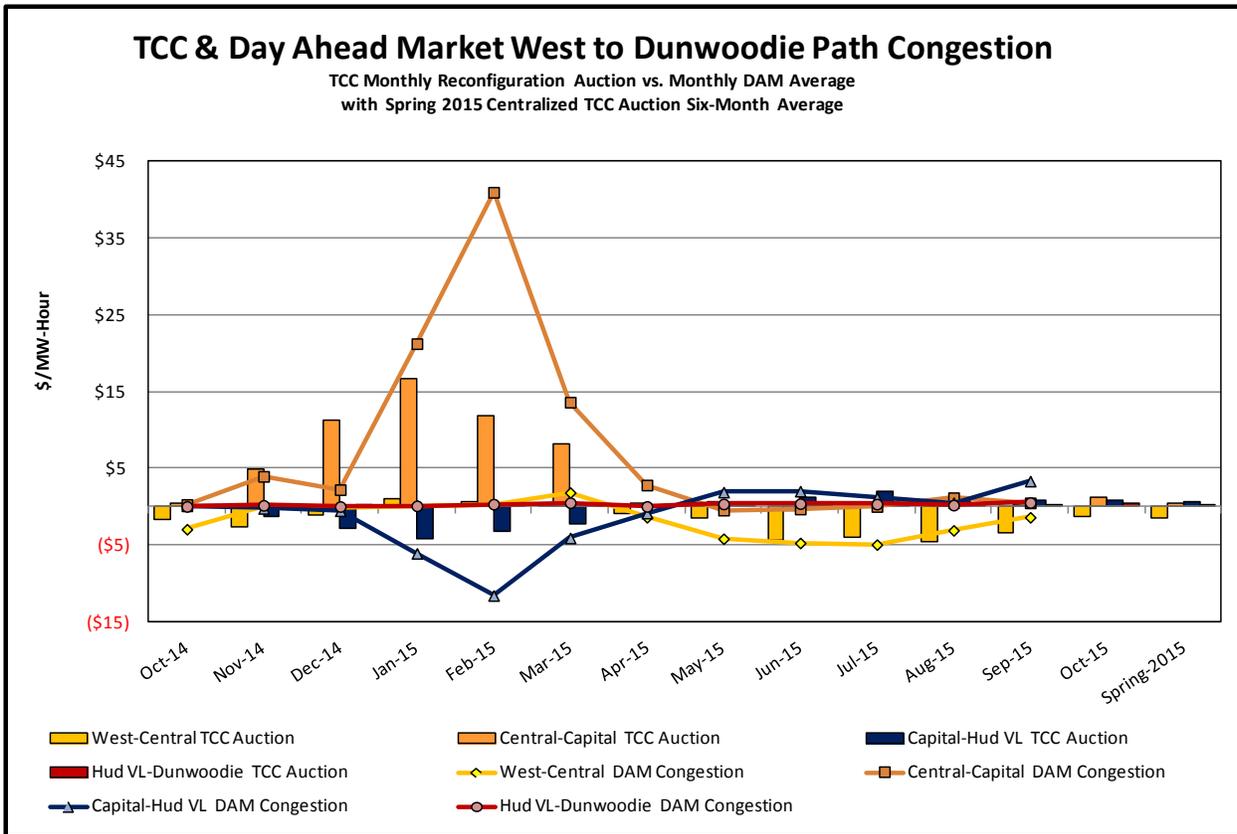
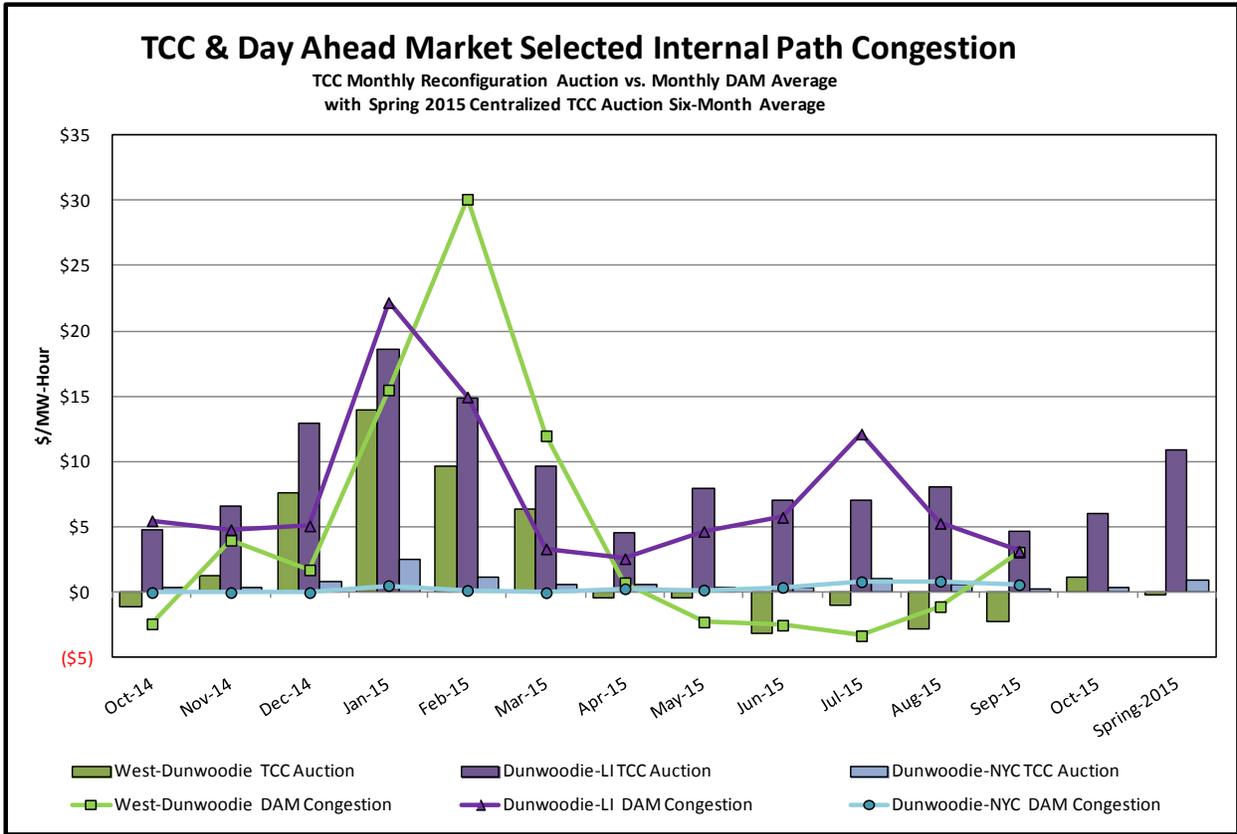
Day-Ahead Market Congestion Residual Categories

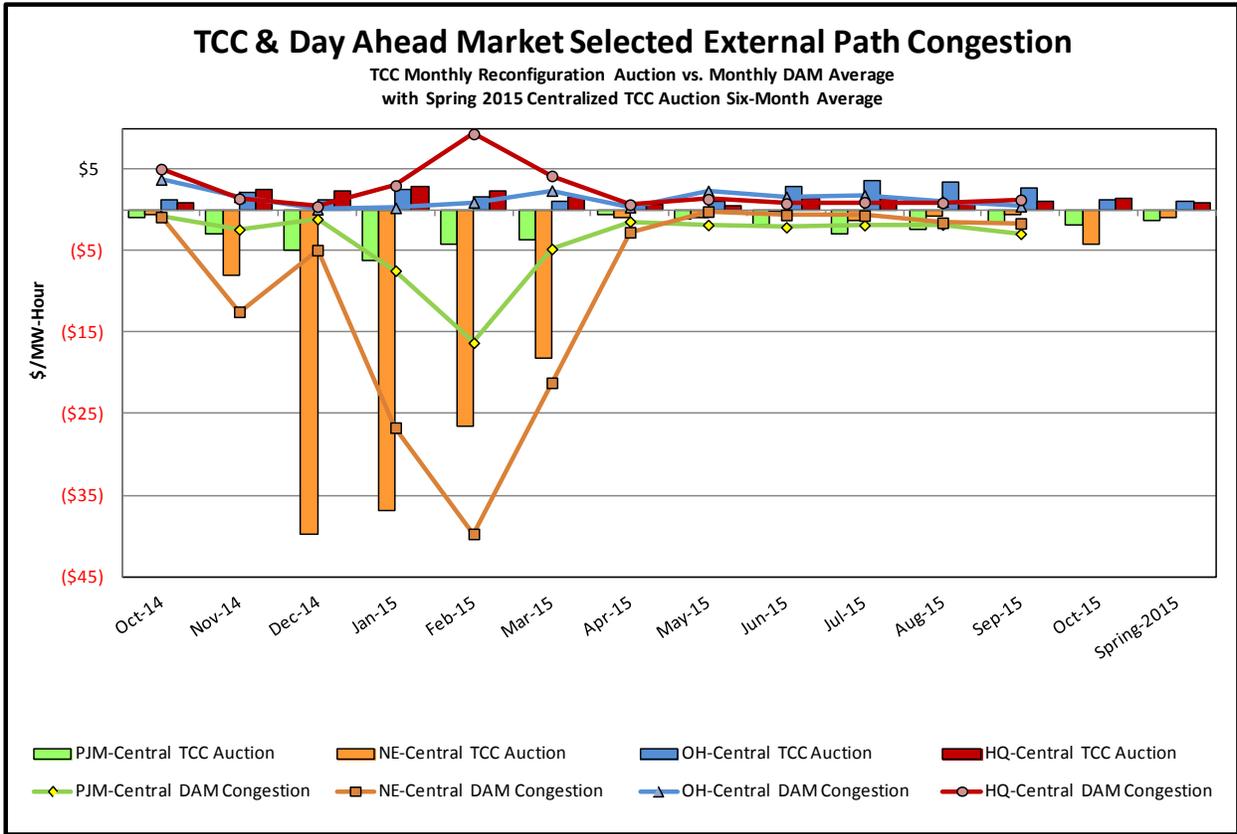
<u>Category</u>	<u>Cost Assignment</u>	<u>Events Types</u>	<u>Event Examples</u>
NYTO Outage Allocation	Responsible TO	Direct allocation to NYTO's responsible for transmission equipment status change.	DAM scheduled outage for equipment modeled in-service for the TCC Auction.
External Outage Allocation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



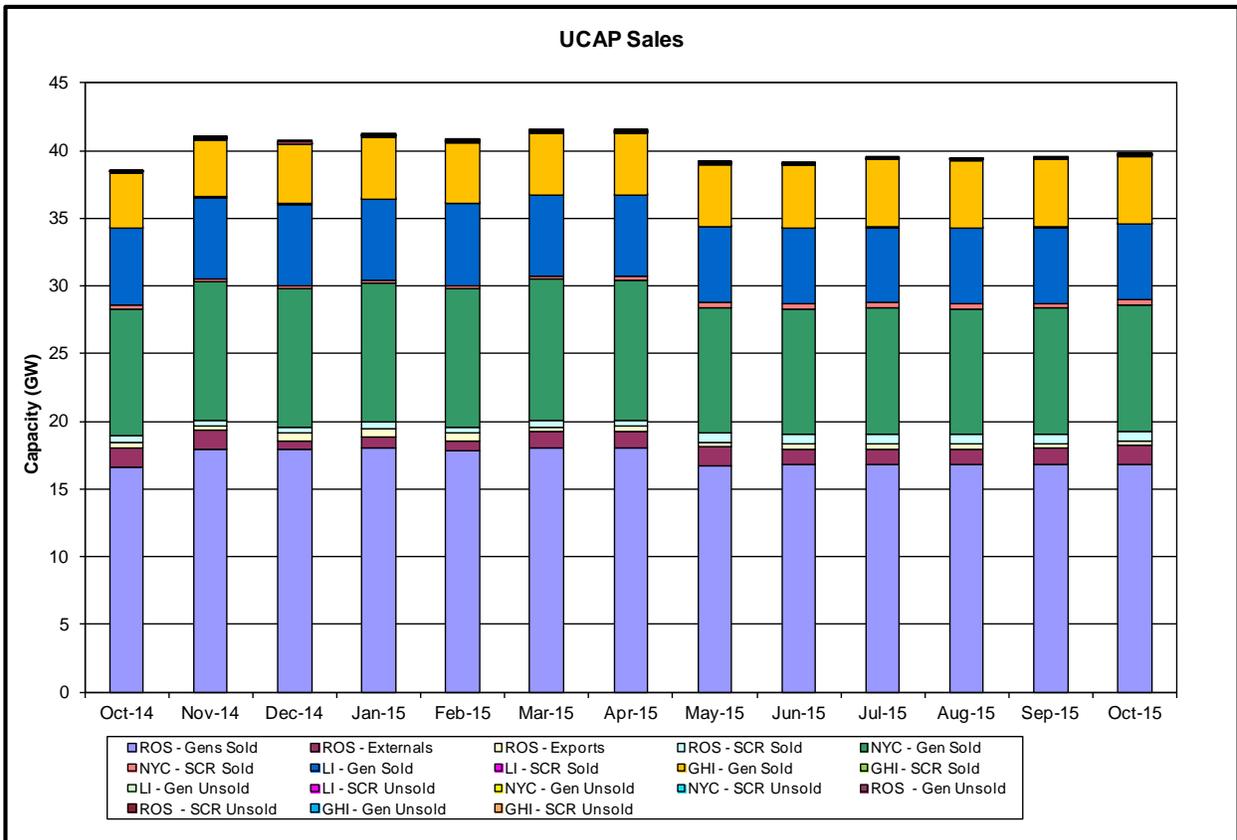
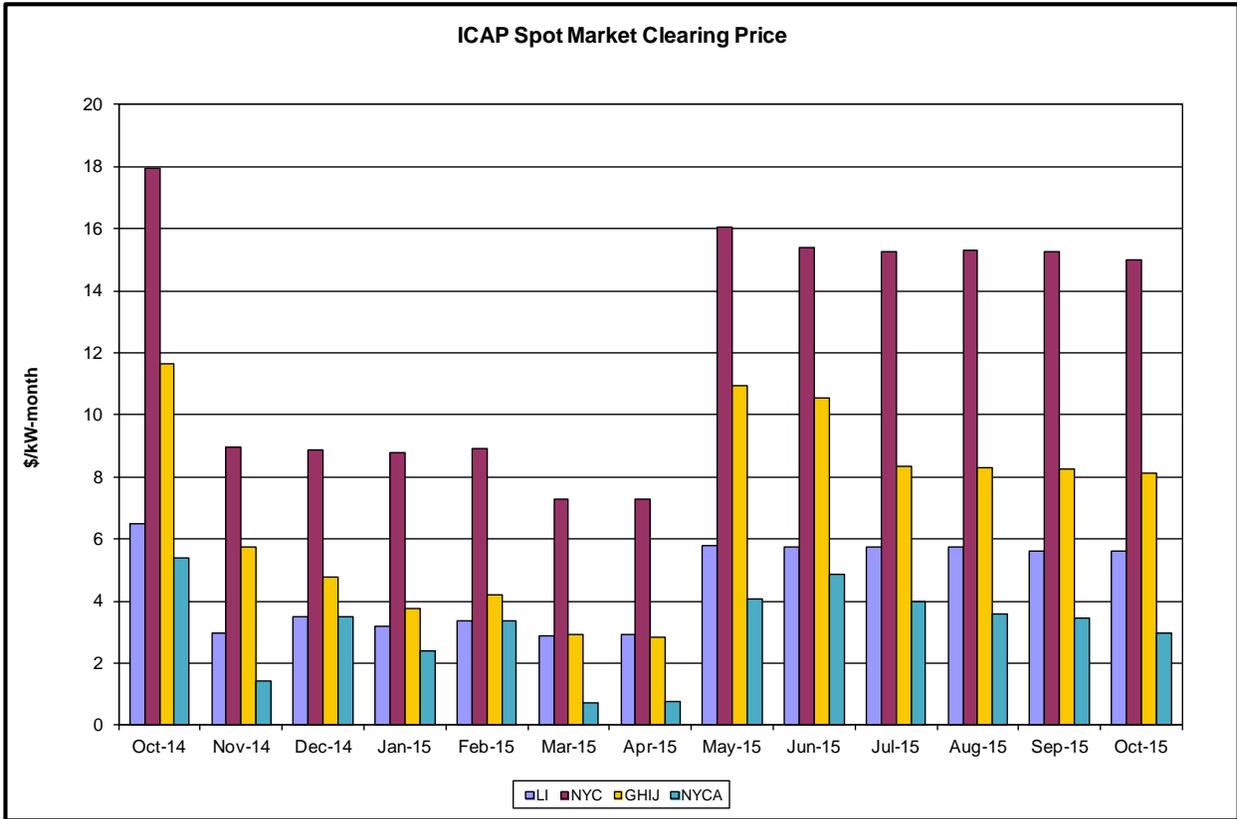








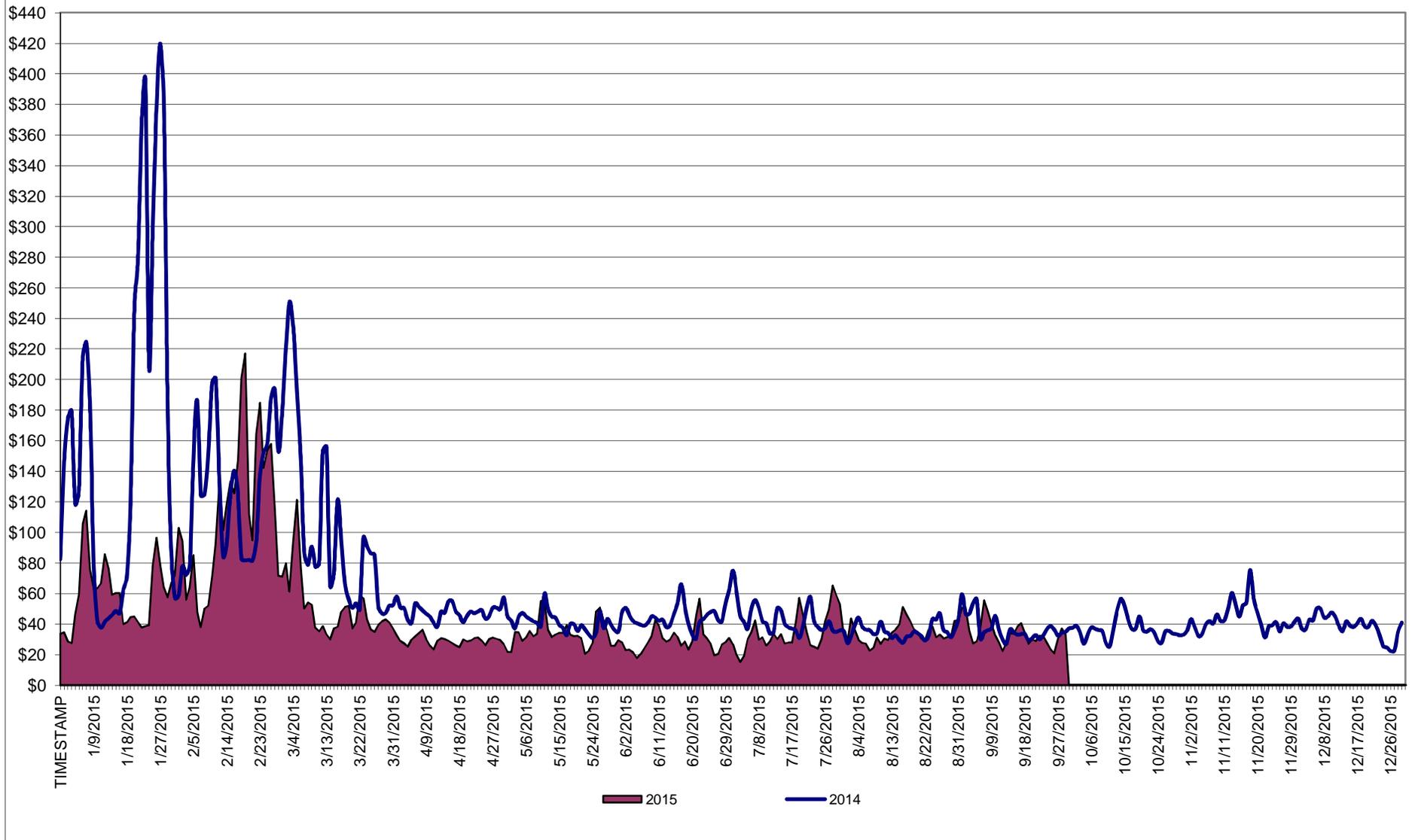
+



# Market Performance Highlights for September 2015

- **LBMP for September is \$34.39/MWh; higher than \$33.09/MWh in August 2015 and lower than \$37.63/MWh in September 2014.**
  - Day Ahead and Real Time Load Weighted LBMPs are higher compared to August.
- **September 2015 average year-to-date monthly cost of \$48.60/MWh is a 38% decrease from \$78.07/MWh in September 2014.**
- **Average daily sendout is 473 GWh/day in September; lower than 511 GWh/day in August 2015 and higher than 442 GWh/day in September 2014.**
- **Natural gas prices were lower compared to the previous month and distillate prices were mixed compared to the previous month.**
  - Natural Gas (Transco Z6 NY) was \$2.09/MMBtu, down from \$2.38/MMBtu in August.
  - Jet Kerosene Gulf Coast was \$10.39/MMBtu, up from \$10.34/MMBtu in August.
  - Ultra Low Sulfur No.2 Diesel NY Harbor was \$10.79/MMBtu, down from \$10.86/MMBtu in August.
- **Uplift per MWh is lower compared to the previous month.**
  - Uplift (not including NYISO cost of operations) is (\$0.14)/MWh; lower than \$0.03/MWh in August.
    - The Local Reliability Share is \$0.22/MWh, lower than \$0.36 in August.
    - The Statewide Share is (\$0.36)/MWh, lower than (\$0.33)/MWh in August.
  - TSA \$ per NYC MWh is \$0.01/MWh.
- Total uplift costs (Schedule 1 components including NYISO Cost of Operations) are lower than August.

**Daily NYISO Average Cost/MWh (Energy & Ancillary Services)\***  
 2014 Annual Average \$69.31/MWh  
 September 2014 YTD Average \$78.07/MWh  
 September 2015 YTD Average \$48.60/MWh



\* Excludes ICAP payments.

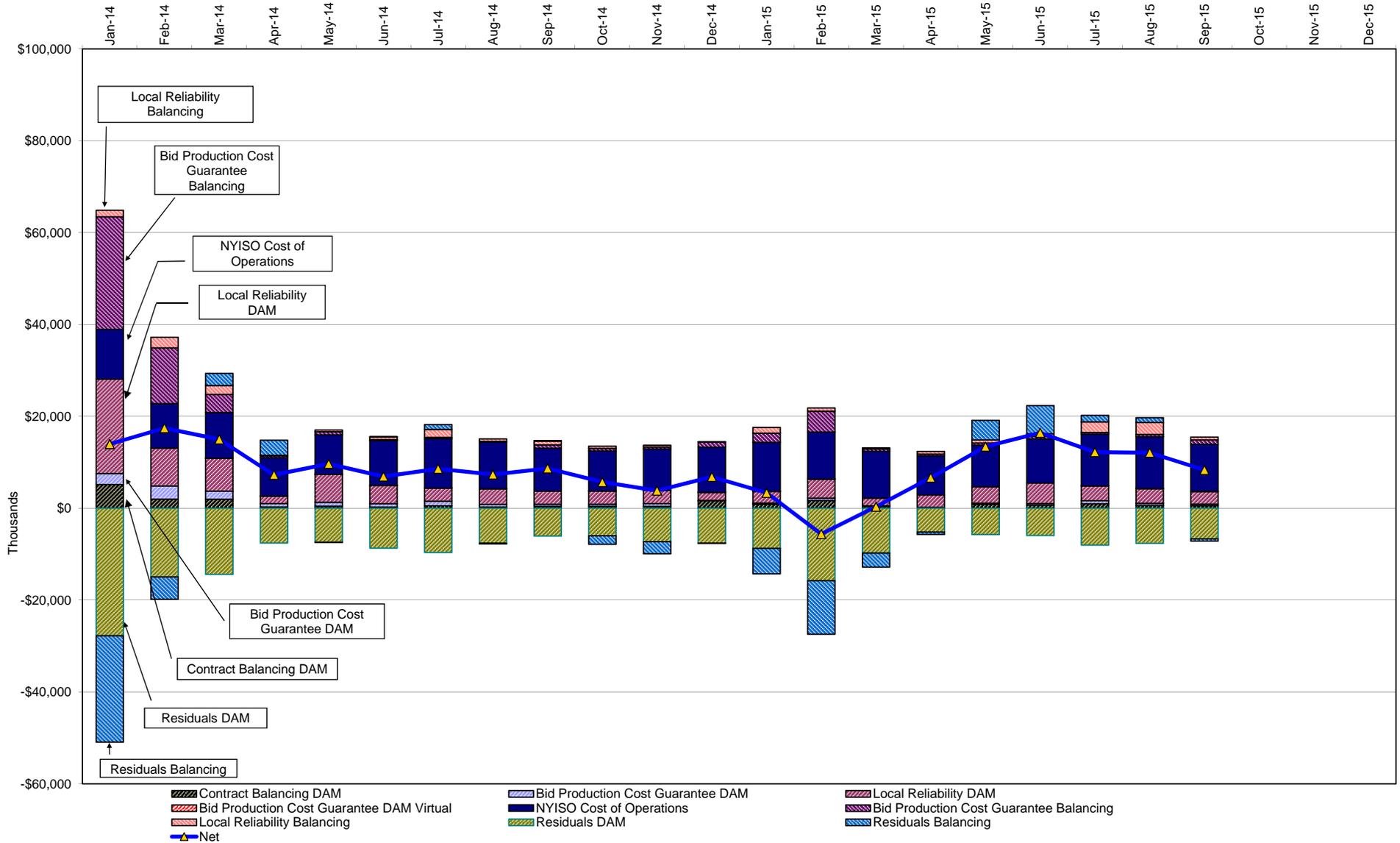
**NYISO Average Cost/MWh (Energy and Ancillary Services) \***  
**from the LBMP Customer point of view**

<b>2015</b>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
LBMP	59.61	114.37	52.09	28.36	32.98	28.19	34.78	33.09	34.39			
NTAC	0.32	0.35	0.41	0.64	0.56	0.80	0.55	0.60	0.73			
Reserve	0.27	0.37	0.56	0.36	0.38	0.24	0.27	0.20	0.28			
Regulation	0.10	0.18	0.11	0.12	0.10	0.13	0.12	0.12	0.10			
NYISO Cost of Operations	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70			
Uplift	(0.48)	(1.09)	(0.68)	(0.15)	0.28	0.33	0.04	0.03	(0.14)			
Uplift: Local Reliability Share	0.25	0.33	0.13	0.27	0.32	0.37	0.34	0.36	0.22			
Uplift: Statewide Share	(0.73)	(1.42)	(0.81)	(0.42)	(0.04)	(0.03)	(0.31)	(0.33)	(0.37)			
Voltage Support and Black Start	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39			
<b>Avg Monthly Cost</b>	<b>60.91</b>	<b>115.27</b>	<b>53.58</b>	<b>30.41</b>	<b>35.39</b>	<b>30.79</b>	<b>36.84</b>	<b>35.13</b>	<b>36.45</b>			
Avg YTD Cost	60.91	87.73	76.64	66.82	60.97	56.02	52.77	50.20	48.60			
TSA \$ per NYC MWh	0.00	0.00	0.00	0.00	0.17	0.50	0.07	0.06	0.01			
<b>2014</b>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
LBMP	183.36	123.19	109.58	46.09	40.30	43.39	43.97	34.48	37.63	35.61	42.89	38.08
NTAC	0.56	0.64	0.39	1.18	0.69	0.78	0.43	0.41	0.50	0.57	0.68	0.86
Reserve	0.78	0.49	0.56	0.46	0.28	0.27	0.26	0.26	0.29	0.48	0.37	0.23
Regulation	0.27	0.21	0.22	0.13	0.12	0.12	0.12	0.13	0.11	0.12	0.11	0.08
NYISO Cost of Operations	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Uplift	0.22	0.56	0.35	(0.09)	0.07	(0.21)	(0.26)	(0.19)	(0.20)	(0.24)	(0.40)	(0.20)
Uplift: Local Reliability Share	1.43	0.75	0.62	0.15	0.51	0.32	0.29	0.27	0.26	0.26	0.24	0.13
Uplift: Statewide Share	(1.21)	(0.19)	(0.27)	(0.24)	(0.44)	(0.53)	(0.55)	(0.45)	(0.46)	(0.50)	(0.64)	(0.33)
Voltage Support and Black Start	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
<b>Avg Monthly Cost</b>	<b>186.24</b>	<b>126.14</b>	<b>112.15</b>	<b>48.82</b>	<b>42.51</b>	<b>45.39</b>	<b>45.57</b>	<b>36.14</b>	<b>39.38</b>	<b>37.59</b>	<b>44.71</b>	<b>40.09</b>
Avg YTD Cost	186.24	157.93	142.77	121.97	108.36	97.84	89.46	82.60	78.07	74.63	72.06	69.31
TSA \$ per NYC MWh	0.00	0.00	0.00	0.00	0.00	0.03	0.35	0.00	0.42	0.00	0.00	0.00
<b>2013</b>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
LBMP	79.77	85.76	48.94	44.47	52.21	50.17	68.49	40.81	44.24	39.85	43.30	66.41
NTAC	0.79	0.83	0.76	0.90	0.85	0.86	0.66	0.28	0.57	0.87	1.08	0.59
Reserve	0.38	0.44	0.43	0.36	0.49	0.34	0.50	0.32	0.38	0.42	0.38	0.44
Regulation	0.13	0.13	0.10	0.11	0.09	0.13	0.11	0.13	0.13	0.16	0.13	0.12
NYISO Cost of Operations	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Uplift	0.21	(0.15)	(0.33)	0.02	0.41	0.49	2.06	0.03	(0.05)	0.18	(0.07)	(0.25)
Uplift: Local Reliability Share	0.44	0.40	0.19	0.37	0.58	0.81	1.27	0.49	0.31	0.38	0.19	0.12
Uplift: Statewide Share	(0.23)	(0.55)	(0.52)	(0.35)	(0.17)	(0.31)	0.79	(0.46)	(0.36)	(0.19)	(0.25)	(0.37)
Voltage Support and Black Start	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
<b>Avg Monthly Cost</b>	<b>82.34</b>	<b>88.06</b>	<b>50.96</b>	<b>46.91</b>	<b>55.10</b>	<b>53.05</b>	<b>72.87</b>	<b>42.62</b>	<b>46.31</b>	<b>42.54</b>	<b>45.88</b>	<b>68.36</b>
Avg YTD Cost	82.34	85.08	74.02	67.80	65.46	63.36	65.10	62.27	60.74	59.30	58.24	59.13
TSA \$ per NYC MWh	0.00	0.00	0.00	0.04	0.58	0.61	1.52	0.43	0.22	0.01	0.00	0.00

\* Excludes ICAP payments.  
Market Mitigation and Analysis  
Prepared: 10/7/2015 2:19 PM

Data reflects true-ups thru April 2015.

## NYISO Dollar Flows - Uplift- OATT Schedule 1 components - Data through September 30, 2015



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

2015	January	February	March	April	May	June	July	August	September	October	November	December
<b>Day Ahead Market MWh</b>	15,961,306	14,967,371	15,059,207	12,589,321	13,291,917	14,277,299	16,573,027	16,333,932	14,740,907			
DAM LSE Internal LBMP Energy Sales	55%	54%	53%	55%	57%	57%	62%	61%	58%			
DAM External TC LBMP Energy Sales	5%	6%	6%	4%	2%	1%	1%	1%	3%			
DAM Bilateral - Internal Bilaterals	35%	33%	33%	33%	35%	33%	30%	31%	31%			
DAM Bilateral - Import/Non-LBMP Market Bilaterals	3%	5%	5%	6%	4%	5%	4%	4%	5%			
DAM Bilateral - Export/Non-LBMP Market Bilaterals	2%	2%	1%	2%	1%	1%	1%	1%	1%			
DAM Bilateral - Wheel Through Bilaterals	0%	1%	1%	1%	0%	2%	2%	2%	2%			
<b>Balancing Energy Market MWh</b>	-650,944	-296,616	-396,739	-409,205	-327,906	-545,880	-500,469	-225,362	-31,706			
Balancing Energy LSE Internal LBMP Energy Sales	-149%	-247%	-192%	-147%	-143%	-106%	-121%	-139%	-357%			
Balancing Energy External TC LBMP Energy Sales	30%	113%	64%	36%	36%	17%	25%	51%	115%			
Balancing Energy Bilateral - Internal Bilaterals	13%	14%	19%	5%	6%	6%	13%	25%	251%			
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	0%	0%	0%	0%	0%	1%	0%	0%	0%			
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	6%	8%	12%	12%	10%	4%	3%	8%	48%			
Balancing Energy Bilateral - Wheel Through Bilaterals	0%	12%	-4%	-5%	-9%	-22%	-21%	-44%	-157%			
<b>Transactions Summary</b>												
LBMP	58%	59%	57%	57%	58%	57%	61%	61%	61%			
Internal Bilaterals	37%	34%	35%	35%	36%	35%	32%	32%	32%			
Import Bilaterals	3%	5%	5%	6%	4%	5%	5%	5%	5%			
Export Bilaterals	2%	2%	2%	2%	2%	1%	1%	1%	1%			
Wheels Through	0%	1%	1%	0%	0%	1%	1%	1%	1%			
<b>Market Share of Total Load</b>												
Day Ahead Market	104.3%	102.0%	102.7%	103.4%	102.5%	104.0%	103.1%	101.4%	100.2%			
Balancing Energy +	-4.3%	-2.0%	-2.7%	-3.4%	-2.5%	-4.0%	-3.1%	-1.4%	-0.2%			
Total MWh	15,310,362	14,670,755	14,662,468	12,180,116	12,964,011	13,731,419	16,072,558	16,108,570	14,709,201			
Average Daily Energy Sendout/Month GWh	462	481	436	387	409	450	512	511	473			
<b>2014</b>	January	February	March	April	May	June	July	August	September	October	November	December
<b>Day Ahead Market MWh</b>	16,034,264	14,409,515	14,633,570	12,101,747	12,984,458	14,719,929	16,528,338	15,536,610	14,312,509	13,684,158	13,945,509	14,992,656
DAM LSE Internal LBMP Energy Sales	52%	50%	53%	56%	53%	54%	58%	57%	56%	54%	54%	54%
DAM External TC LBMP Energy Sales	5%	7%	6%	3%	2%	3%	1%	0%	1%	2%	5%	5%
DAM Bilateral - Internal Bilaterals	36%	36%	35%	33%	38%	36%	34%	35%	36%	38%	36%	36%
DAM Bilateral - Import/Non-LBMP Market Bilaterals	5%	5%	5%	6%	5%	5%	4%	5%	4%	4%	3%	3%
DAM Bilateral - Export/Non-LBMP Market Bilaterals	2%	1%	1%	2%	2%	1%	1%	1%	2%	2%	2%	2%
DAM Bilateral - Wheel Through Bilaterals	1%	1%	1%	0%	1%	1%	1%	1%	1%	0%	0%	0%
<b>Balancing Energy Market MWh</b>	-249,484	-298,340	-116,173	54,298	-510,467	-558,413	-854,501	-764,108	-674,285	-999,342	-750,627	-705,848
Balancing Energy LSE Internal LBMP Energy Sales	-232%	-203%	-294%	-190%	-133%	-114%	-116%	-117%	-129%	-124%	-134%	-137%
Balancing Energy External TC LBMP Energy Sales	105%	76%	97%	207%	21%	22%	18%	15%	24%	14%	20%	28%
Balancing Energy Bilateral - Internal Bilaterals	20%	26%	69%	27%	3%	7%	4%	7%	7%	7%	9%	4%
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	0%	0%	12%	0%	3%	0%	0%	0%	2%	1%	0%	0%
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	11%	6%	25%	67%	4%	3%	2%	2%	3%	3%	5%	3%
Balancing Energy Bilateral - Wheel Through Bilaterals	-4%	-6%	-10%	-12%	1%	-18%	-8%	-7%	-7%	-1%	0%	1%
<b>Transactions Summary</b>												
LBMP	56%	56%	57%	59%	53%	55%	57%	55%	55%	52%	55%	56%
Internal Bilaterals	37%	37%	36%	33%	39%	38%	36%	37%	38%	42%	39%	38%
Import Bilaterals	5%	5%	5%	6%	5%	5%	5%	5%	5%	4%	4%	3%
Export Bilaterals	2%	1%	2%	2%	2%	1%	1%	2%	2%	2%	2%	2%
Wheels Through	1%	1%	1%	0%	1%	1%	1%	1%	1%	0%	1%	0%
<b>Market Share of Total Load</b>												
Day Ahead Market	101.6%	102.1%	100.8%	99.6%	104.1%	103.9%	105.5%	105.2%	104.9%	107.9%	105.7%	104.9%
Balancing Energy +	-1.6%	-2.1%	-0.8%	0.4%	-4.1%	-3.9%	-5.5%	-5.2%	-4.9%	-7.9%	-5.7%	-4.9%
Total MWh	15,784,780	14,111,175	14,517,397	12,156,045	12,473,991	14,161,516	15,673,837	14,772,502	13,638,224	12,684,816	13,194,882	14,286,808
Average Daily Energy Sendout/Month GWh	475	460	440	390	391	456	496	470	442	394	413	433

+ 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 2015 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 *	\$53.35	\$101.48	\$46.59	\$26.07	\$29.21	\$24.30	\$30.27	\$30.01	\$30.18			
Standard Deviation	\$24.61	\$48.85	\$21.51	\$6.73	\$13.44	\$11.96	\$17.67	\$12.05	\$13.37			
Load Weighted Price **	\$55.40	\$104.52	\$48.01	\$26.84	\$31.08	\$26.12	\$32.94	\$31.81	\$32.46			
<b><u>RTC LBMP</u></b>												
Price *	\$46.98	\$95.06	\$43.43	\$25.11	\$32.85	\$24.73	\$27.51	\$31.83	\$32.39			
Standard Deviation	\$22.84	\$47.55	\$29.42	\$12.31	\$35.40	\$24.71	\$21.84	\$23.25	\$22.99			
Load Weighted Price **	\$48.59	\$97.62	\$45.10	\$26.00	\$35.08	\$26.73	\$29.76	\$34.04	\$34.99			
<b><u>REAL TIME LBMP</u></b>												
Price *	\$48.51	\$98.83	\$44.38	\$25.46	\$30.39	\$23.96	\$27.71	\$31.54	\$34.82			
Standard Deviation	\$25.99	\$52.53	\$29.07	\$12.66	\$31.69	\$31.14	\$23.42	\$26.51	\$34.85			
Load Weighted Price **	\$50.18	\$101.34	\$46.10	\$26.28	\$32.52	\$26.86	\$30.50	\$34.05	\$38.48			
Average Daily Energy Sendout/Month GWh	462	481	436	387	409	450	512	511	473			

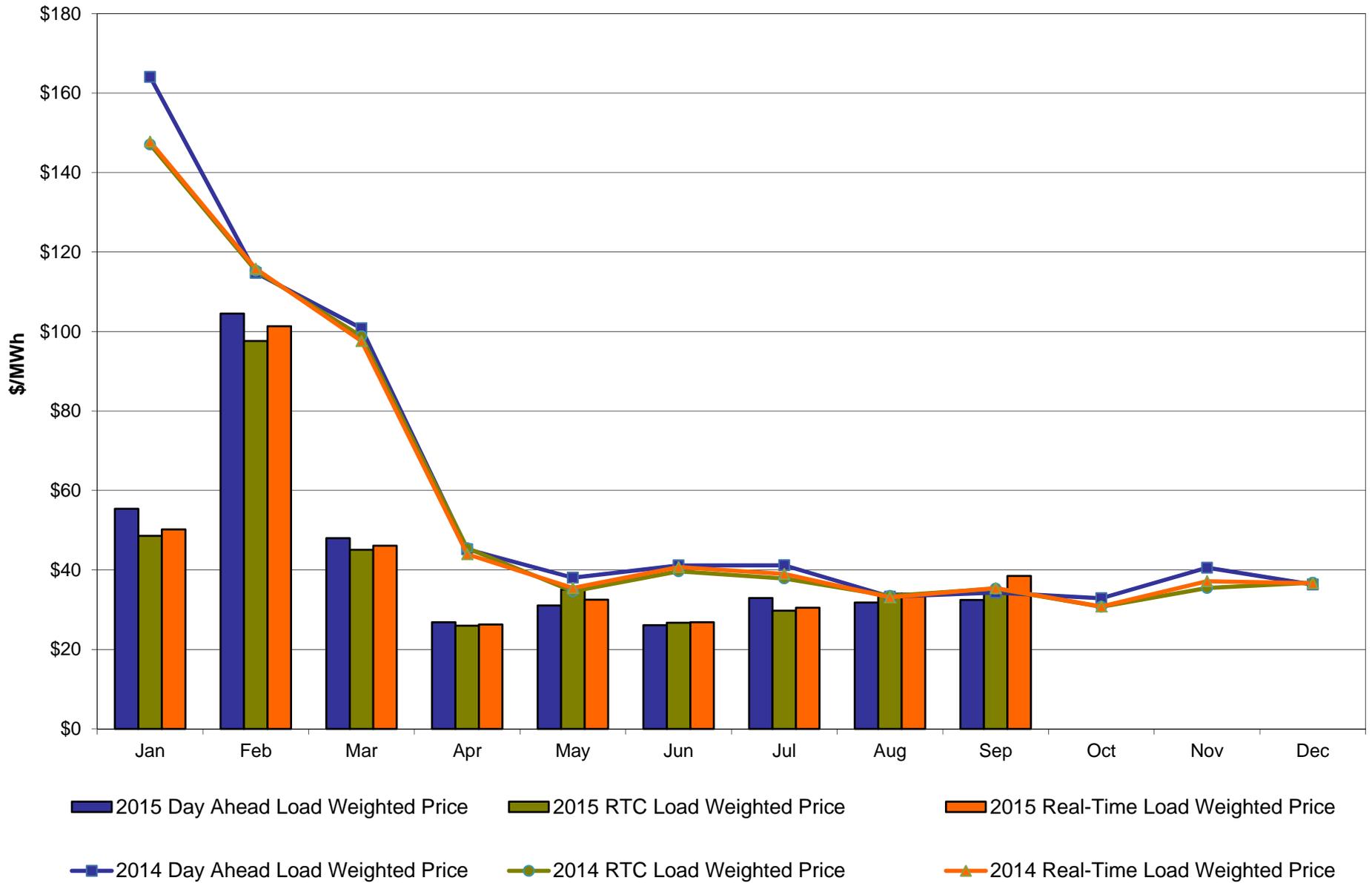
### NYISO Markets 2014 Energy Statistics

	<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 *	\$155.11	\$110.69	\$97.07	\$44.16	\$36.61	\$39.17	\$38.82	\$31.78	\$32.49	\$31.65	\$39.19	\$35.12
Standard Deviation	\$121.52	\$50.86	\$59.89	\$8.90	\$10.99	\$12.29	\$15.56	\$9.90	\$11.59	\$9.77	\$13.38	\$11.21
Load Weighted Price **	\$164.06	\$114.77	\$100.81	\$45.19	\$38.05	\$41.14	\$41.18	\$33.28	\$34.31	\$32.89	\$40.57	\$36.33
<b><u>RTC LBMP</u></b>												
Price *	\$138.41	\$110.71	\$94.71	\$44.00	\$33.16	\$37.34	\$35.32	\$31.74	\$32.89	\$29.23	\$34.27	\$34.99
Standard Deviation	\$125.42	\$72.22	\$97.72	\$27.44	\$17.51	\$25.39	\$24.90	\$23.34	\$33.68	\$20.45	\$14.23	\$35.81
Load Weighted Price **	\$147.06	\$115.31	\$98.80	\$45.48	\$34.63	\$39.64	\$37.85	\$33.48	\$35.31	\$30.74	\$35.46	\$36.79
<b><u>REAL TIME LBMP</u></b>												
Price *	\$137.90	\$111.51	\$93.37	\$42.79	\$34.06	\$38.23	\$35.97	\$31.21	\$32.50	\$29.36	\$36.01	\$34.80
Standard Deviation	\$122.32	\$70.35	\$89.05	\$19.38	\$17.15	\$23.33	\$27.27	\$18.18	\$33.51	\$21.14	\$17.99	\$42.67
Load Weighted Price **	\$147.77	\$115.80	\$97.58	\$43.97	\$35.46	\$40.71	\$39.00	\$33.13	\$35.42	\$30.81	\$37.17	\$36.69
Average Daily Energy Sendout/Month GWh	475	460	440	390	391	456	496	470	442	394	413	433

\* Average zonal load weighted prices.

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

## NYISO Monthly Average Internal LBMPs 2014- 2015

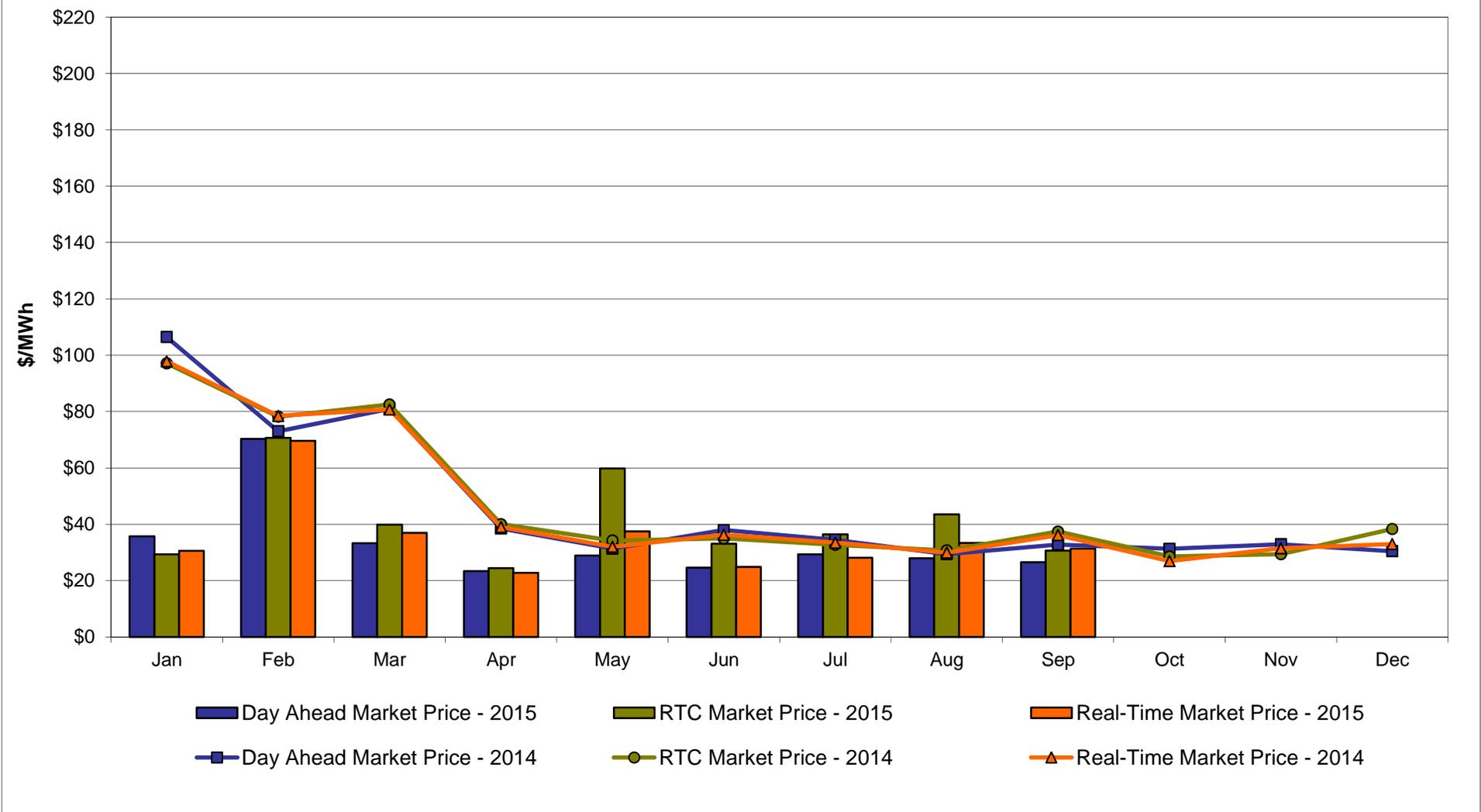


**September 2015 Zonal LBMP Statistics for NYISO (\$/MWh)**

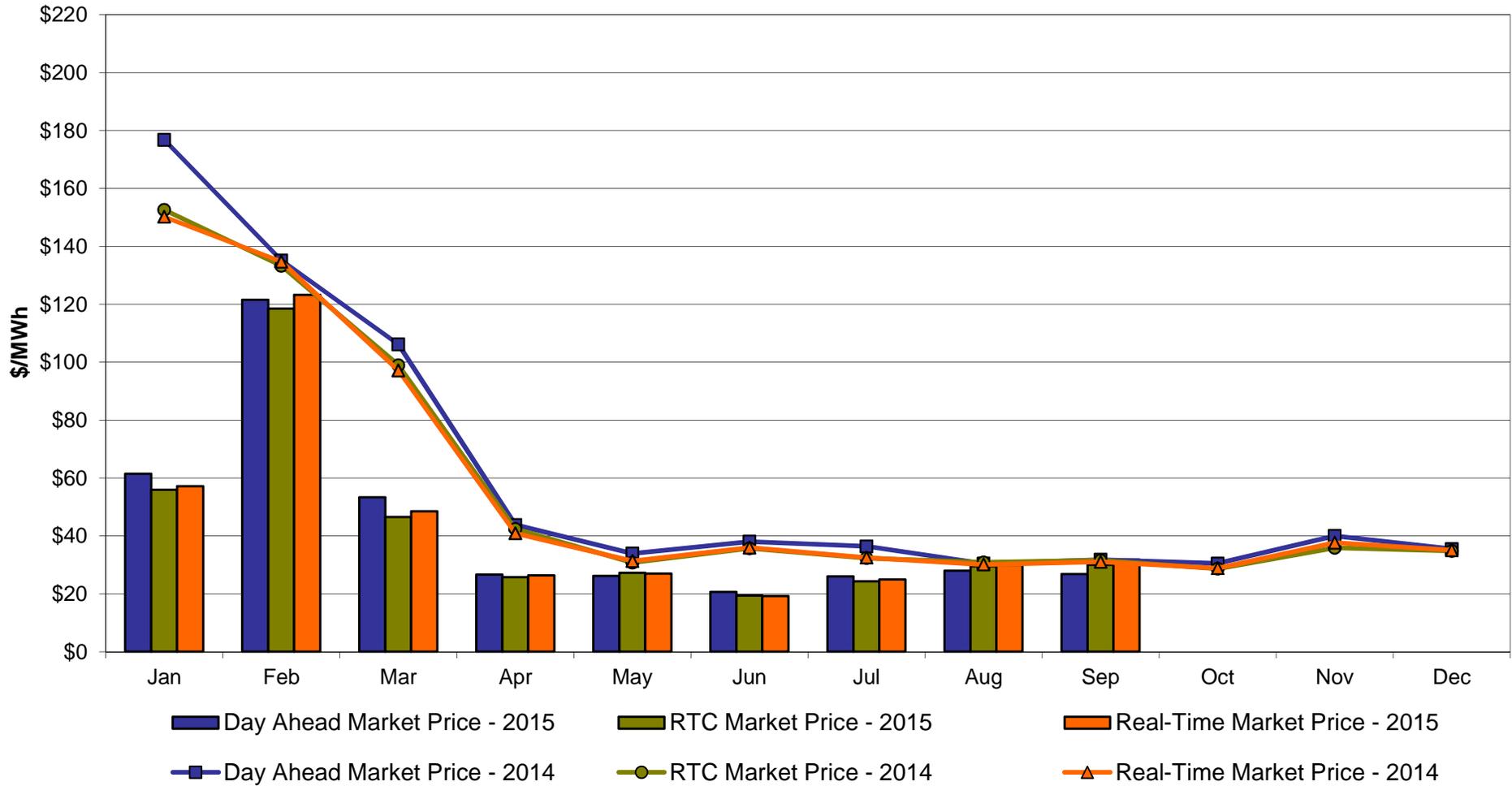
	<u>WEST</u> <u>Zone A</u>	<u>GENESEE</u> <u>Zone B</u>	<u>NORTH</u> <u>Zone D</u>	<u>CENTRAL</u> <u>Zone C</u>	<u>MOHAWK</u> <u>VALLEY</u> <u>Zone E</u>	<u>CAPITAL</u> <u>Zone F</u>	<u>HUDSON</u> <u>VALLEY</u> <u>Zone G</u>	<u>MILLWOOD</u> <u>Zone H</u>	<u>DUNWOODIE</u> <u>Zone I</u>	<u>NEW YORK</u> <u>CITY</u> <u>Zone J</u>	<u>LONG</u> <u>ISLAND</u> <u>Zone K</u>
<b>DAY AHEAD LBMP</b>											
Unweighted Price *	26.56	24.72	21.75	25.14	25.51	26.78	31.16	31.70	31.73	32.45	35.58
Standard Deviation	12.77	9.55	9.54	9.98	10.13	10.59	13.96	14.59	14.61	14.67	17.50
<b>RTC LBMP</b>											
Unweighted Price *	30.62	27.62	24.65	28.21	28.49	30.03	32.06	32.25	32.22	33.45	39.26
Standard Deviation	33.54	17.85	38.22	19.25	19.43	19.52	22.05	22.59	22.56	22.54	44.79
<b>REAL TIME LBMP</b>											
Unweighted Price *	31.30	29.43	26.84	29.89	30.39	31.79	34.67	35.02	35.00	36.94	41.17
Standard Deviation	41.23	25.57	32.38	27.90	27.34	28.15	36.71	39.13	39.31	39.24	52.56
	<u>ONTARIO</u> <u>IESO</u> <u>Zone O</u>	<u>HYDRO</u> <u>QUEBEC</u> <u>(Wheel)</u> <u>Zone M</u>	<u>HYDRO</u> <u>QUEBEC</u> <u>(Import/Export)</u> <u>Zone M</u>	<u>PJM</u> <u>Zone P</u>	<u>NEW</u> <u>ENGLAND</u> <u>Zone N</u>	<u>CROSS</u> <u>SOUND</u> <u>CABLE</u> <u>Controllable</u> <u>Line</u>	<u>NORTHPORT-</u> <u>NORWALK</u> <u>Controllable</u> <u>Line</u>	<u>NEPTUNE</u> <u>Controllable</u> <u>Line</u>	<u>LINDEN VFT</u> <u>Controllable</u> <u>Line</u>	<u>HUDSON</u> <u>Controllable</u> <u>Line</u>	<u>Dennison</u> <u>Controllable</u> <u>Line</u>
<b>DAY AHEAD LBMP</b>											
Unweighted Price *	24.07	22.42	22.42	29.00	28.17	34.78	32.82	33.86	30.08	31.83	21.29
Standard Deviation	8.57	9.46	9.46	13.00	12.14	17.01	14.64	16.52	13.02	14.64	9.29
<b>RTC LBMP</b>											
Unweighted Price *	26.34	22.74	22.74	30.93	30.76	37.00	36.53	36.06	27.74	32.51	25.12
Standard Deviation	18.64	41.62	41.62	23.61	21.72	41.65	41.43	41.24	20.42	23.77	38.76
<b>REAL TIME LBMP</b>											
Unweighted Price *	28.46	24.51	24.51	33.07	34.67	39.65	36.67	38.92	34.07	35.30	26.46
Standard Deviation	22.44	34.68	34.68	34.89	36.46	51.72	48.65	50.69	38.77	39.49	32.47

\* Straight LBMP averages

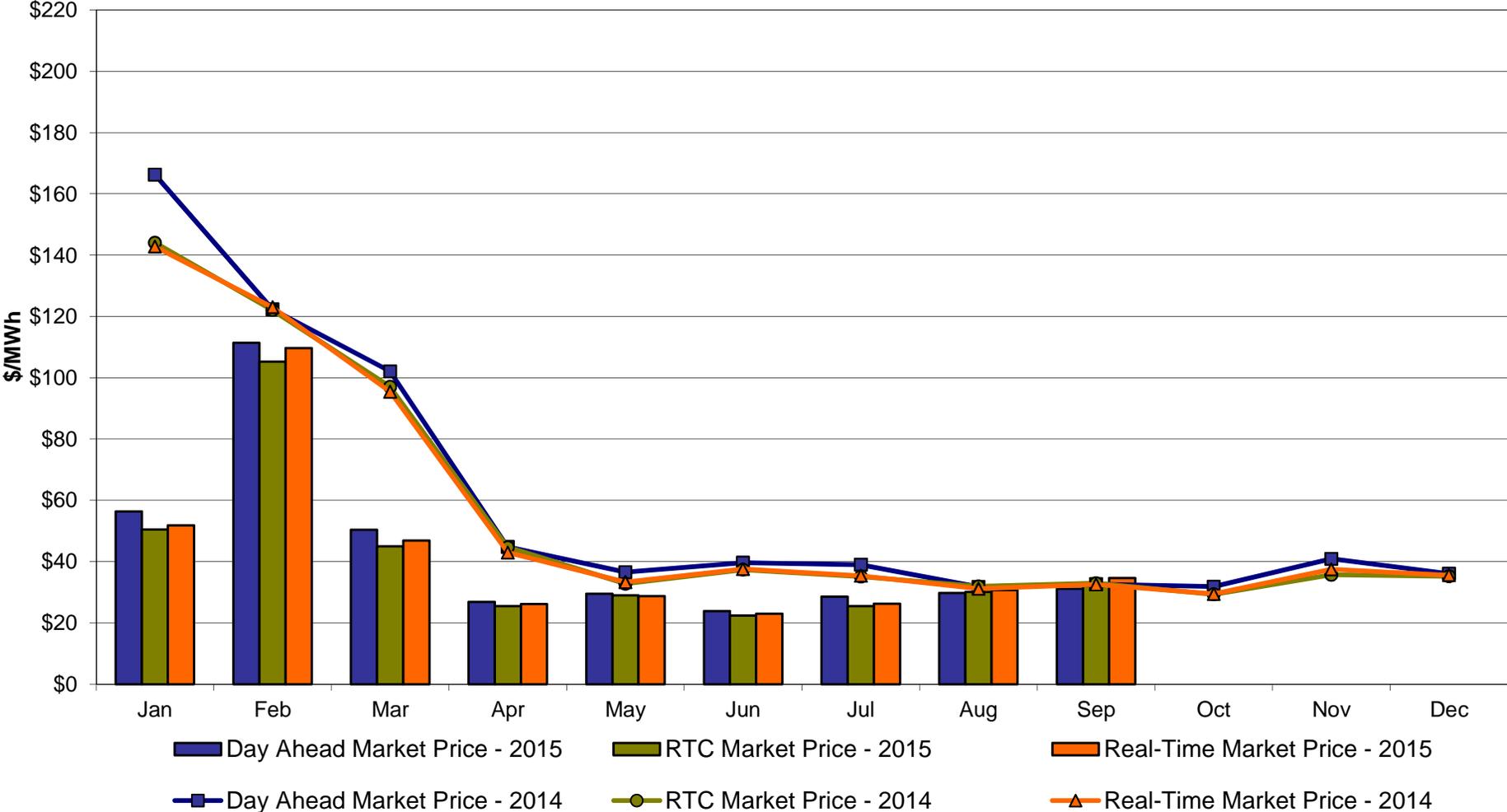
### West Zone A Monthly Average LBMP Prices 2014 - 2015



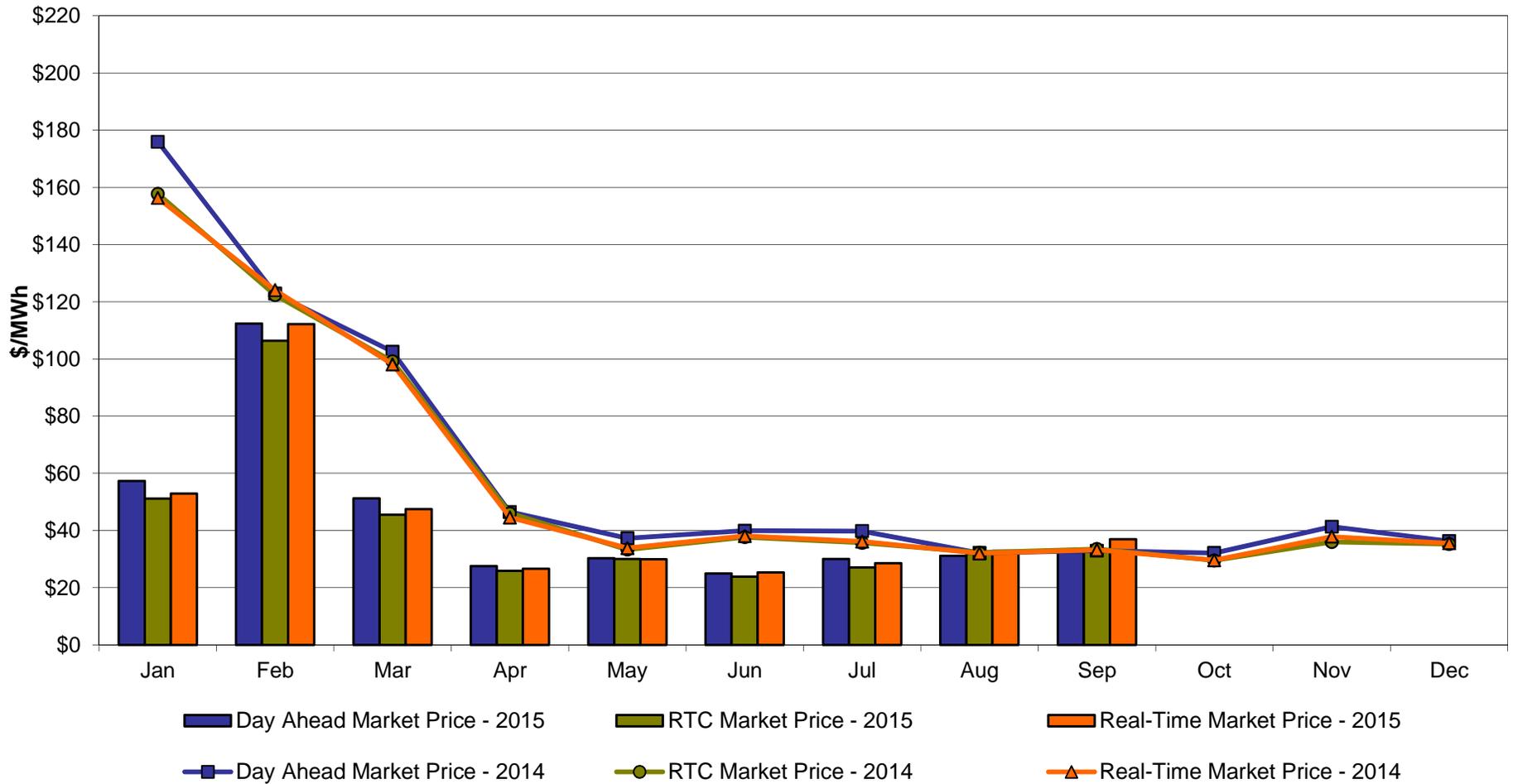
## Capital Zone F Monthly Average LBMP Prices 2014 - 2015



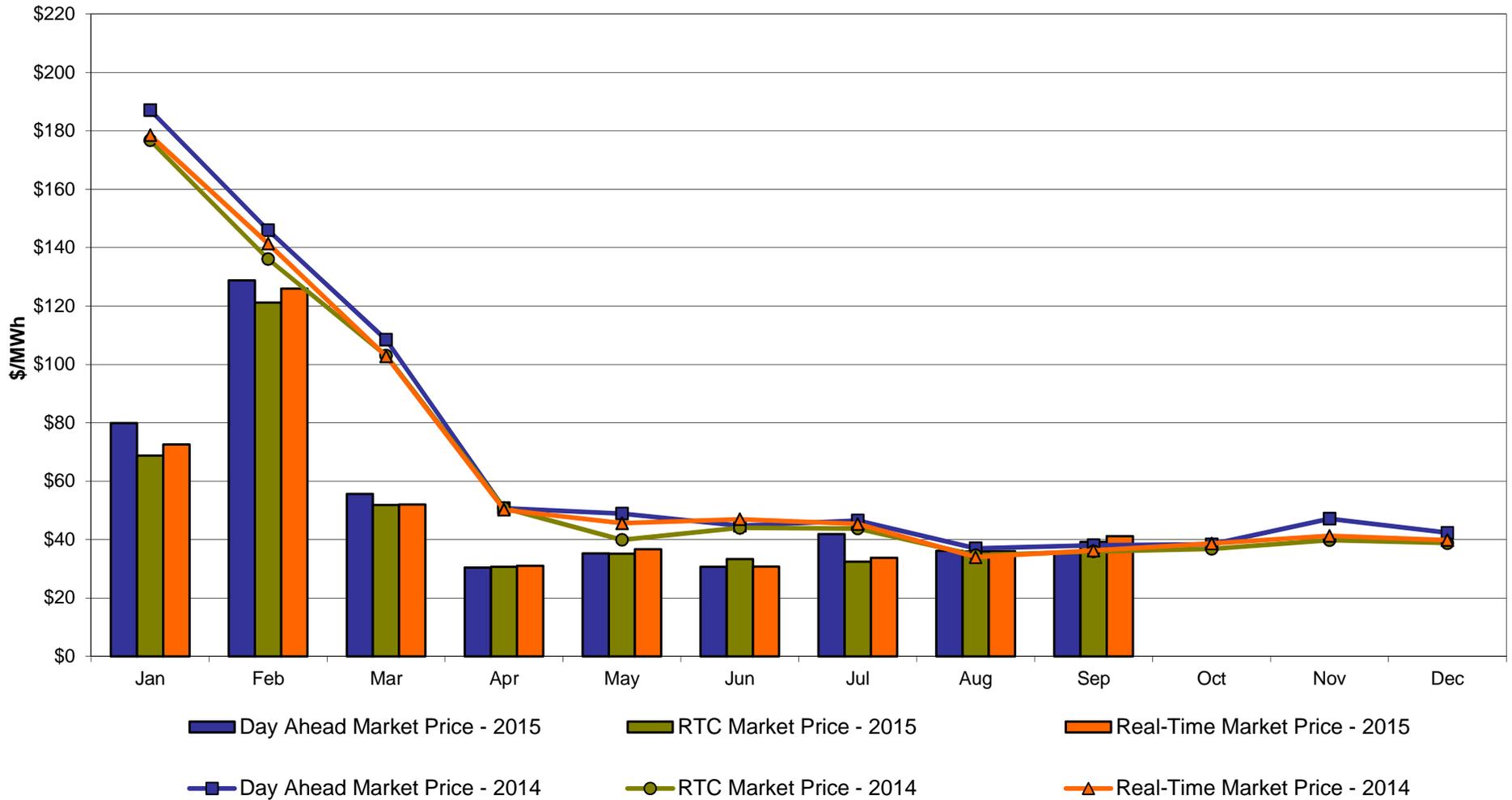
## Hudson Valley Zone G Monthly Average LBMP Prices 2014 - 2015



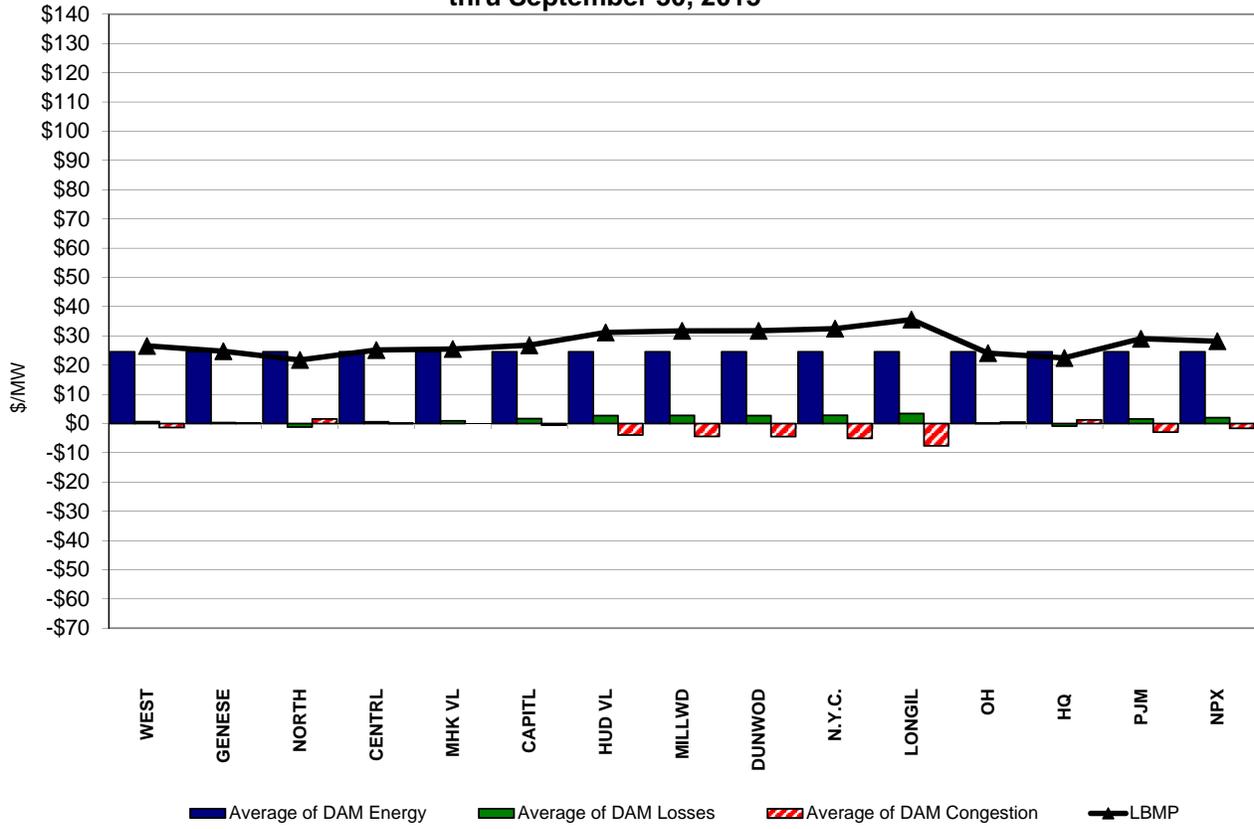
## NYC Zone J Monthly Average LBMP Prices 2014 - 2015



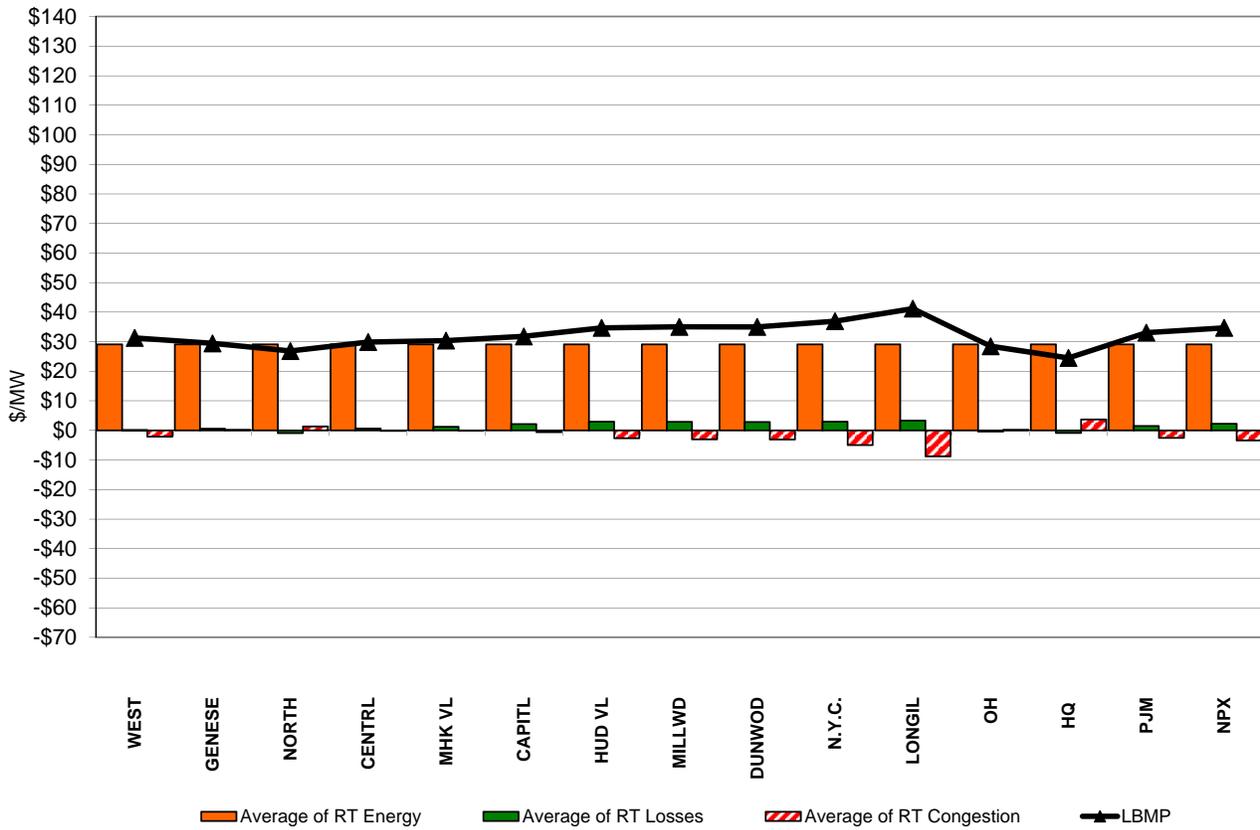
## Long Island Zone K Monthly Average LBMP Prices 2014 - 2015



### DAM Zonal Unweighted Monthly Average LBMP Components thru September 30, 2015

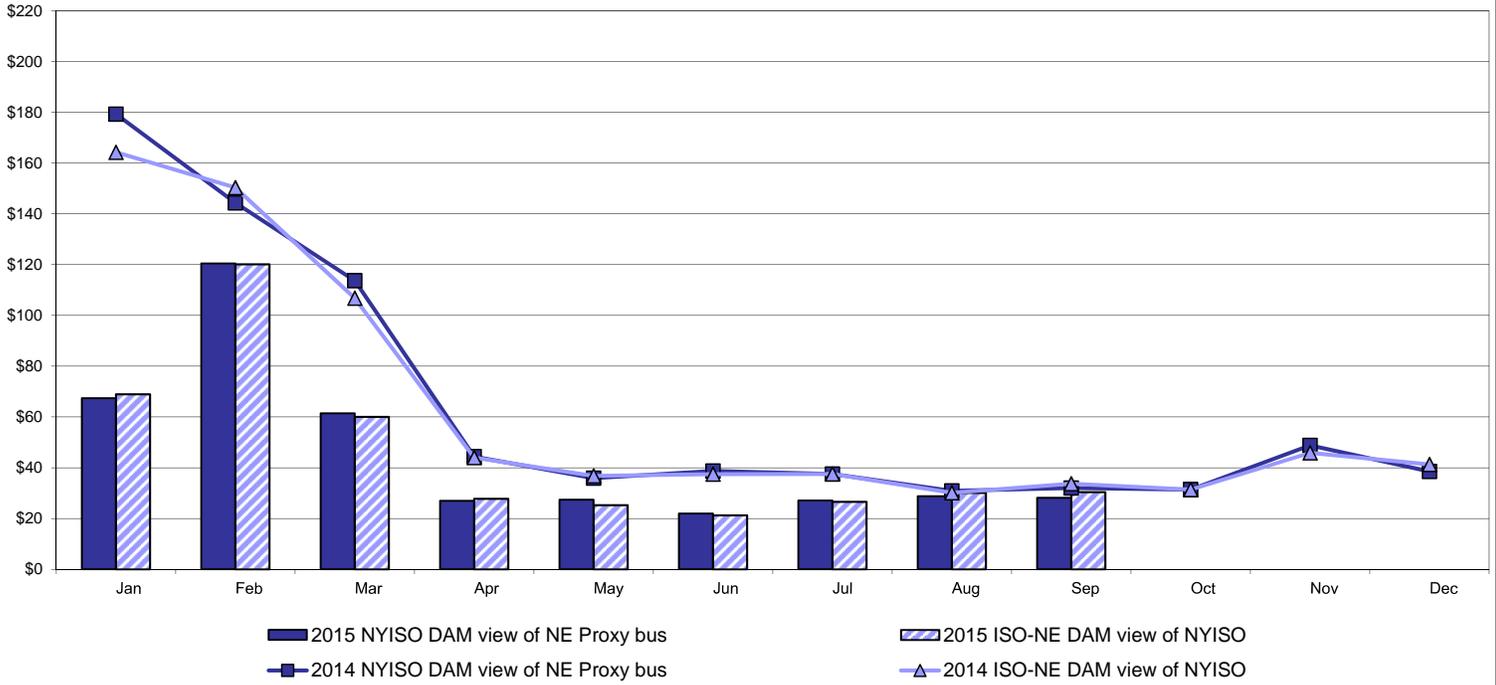


### RT Zonal Unweighted Monthly Average LBMP Components thru September 30, 2015

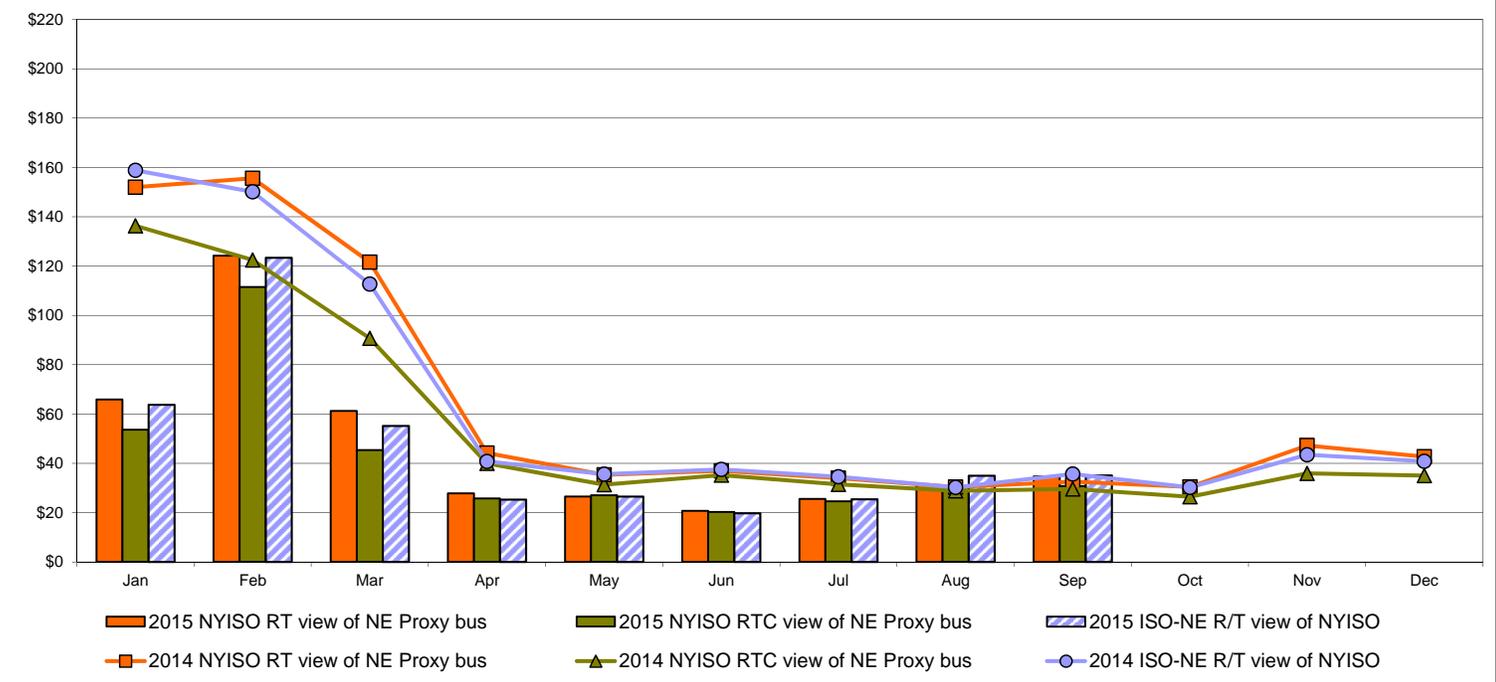


# External Comparison ISO-New England

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

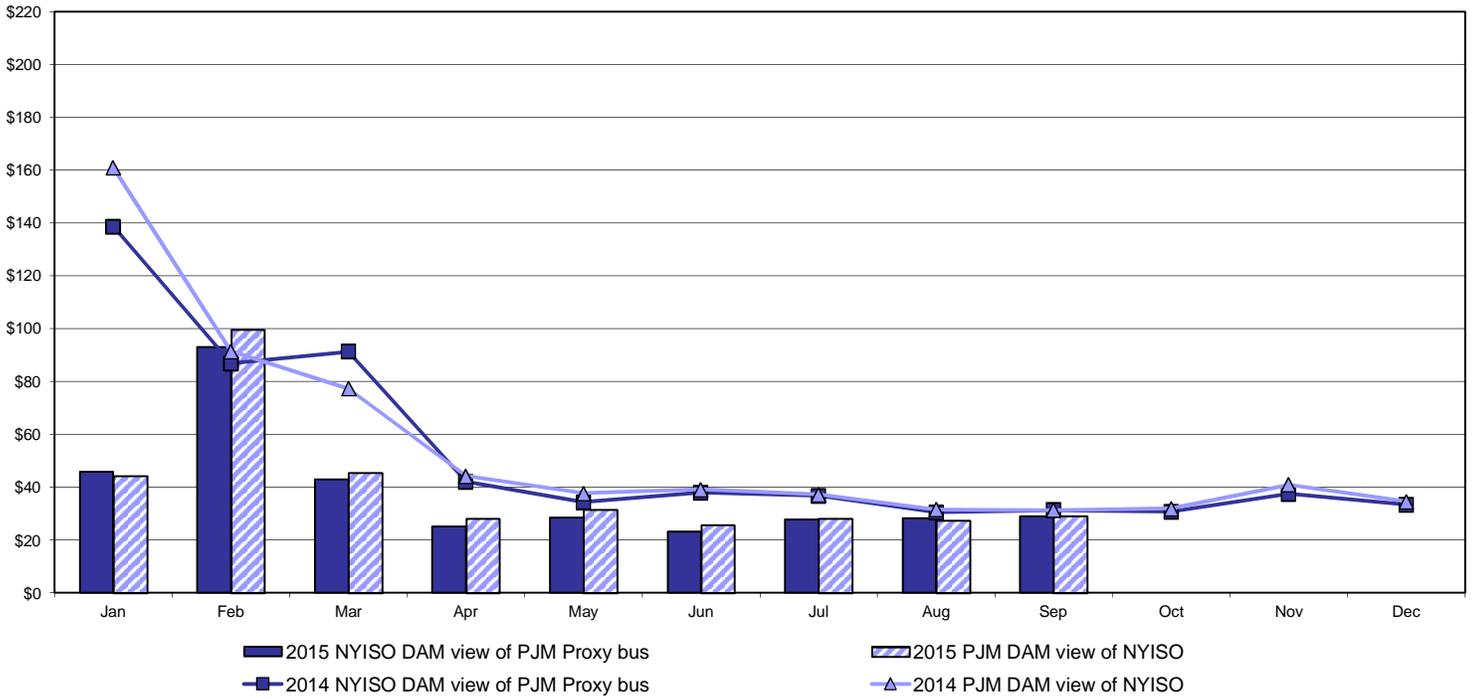


### Real Time Market External Zone Comparison: ISO-NE (\$/MWh)

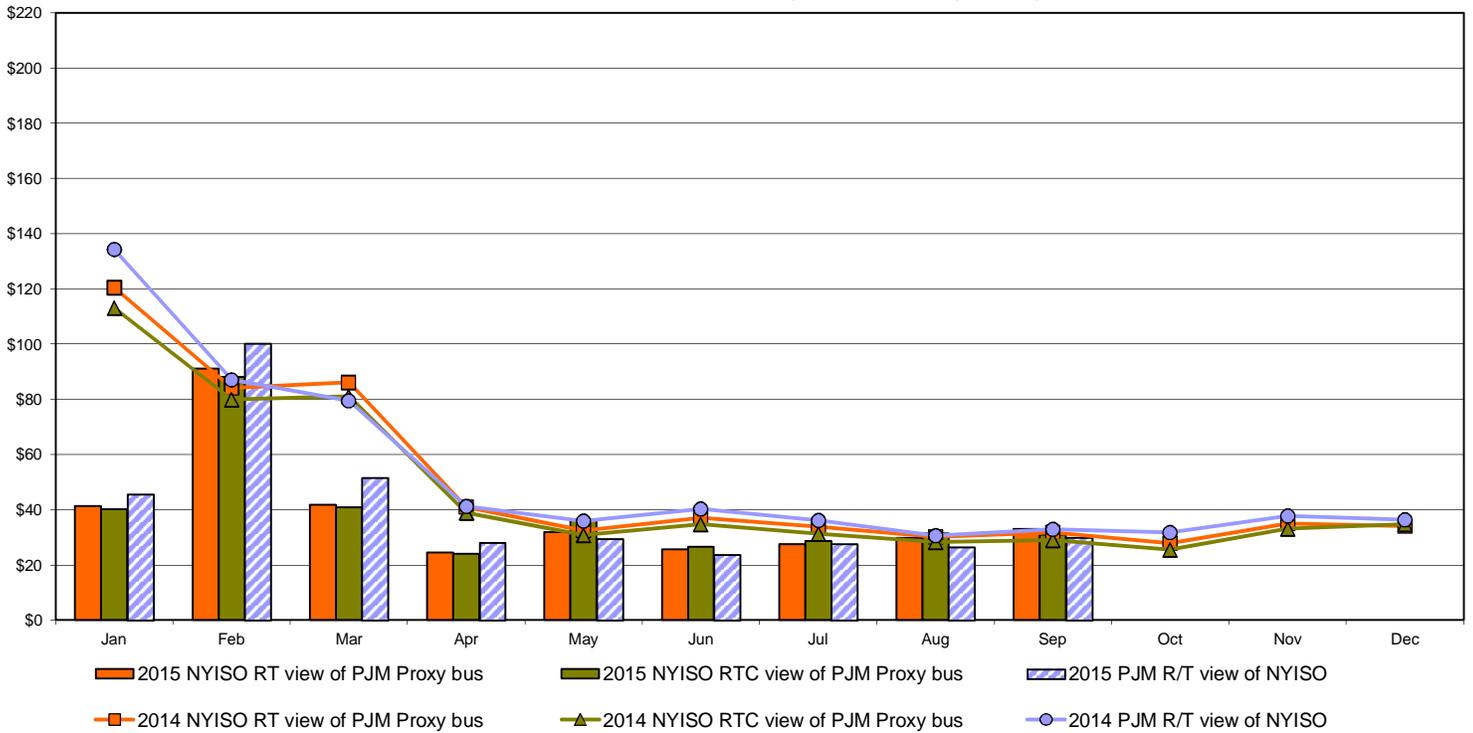


# External Comparison PJM

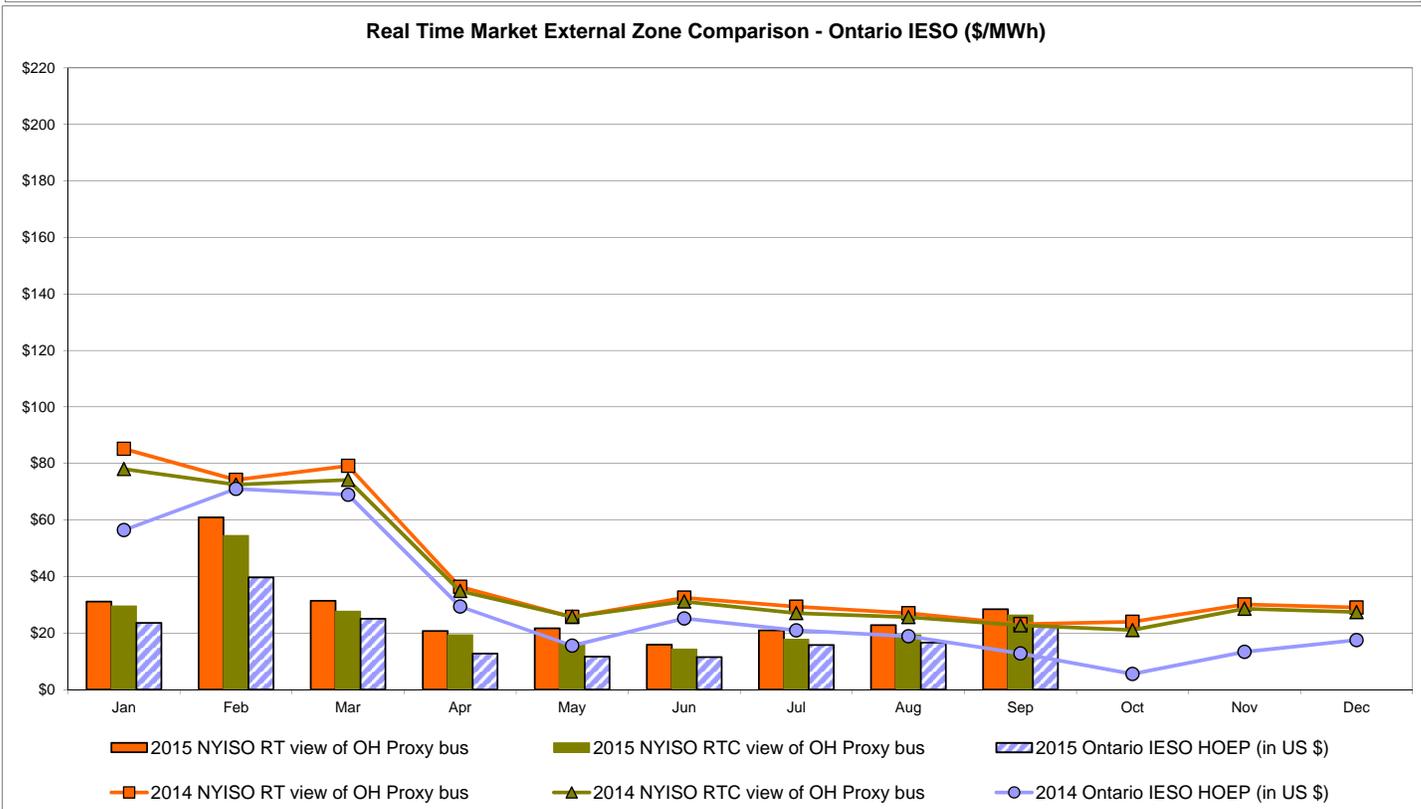
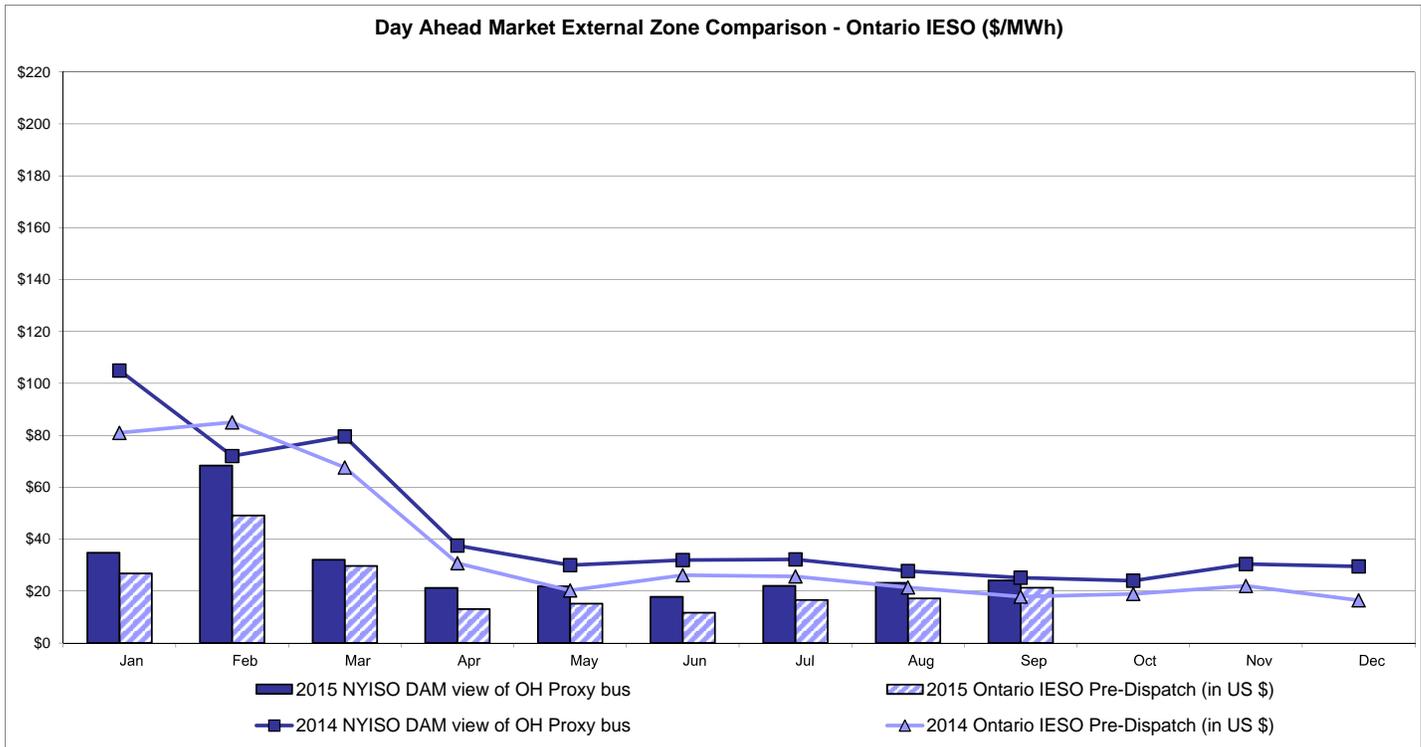
## Day Ahead Market External Zone Comparison - PJM (\$/MWh)



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

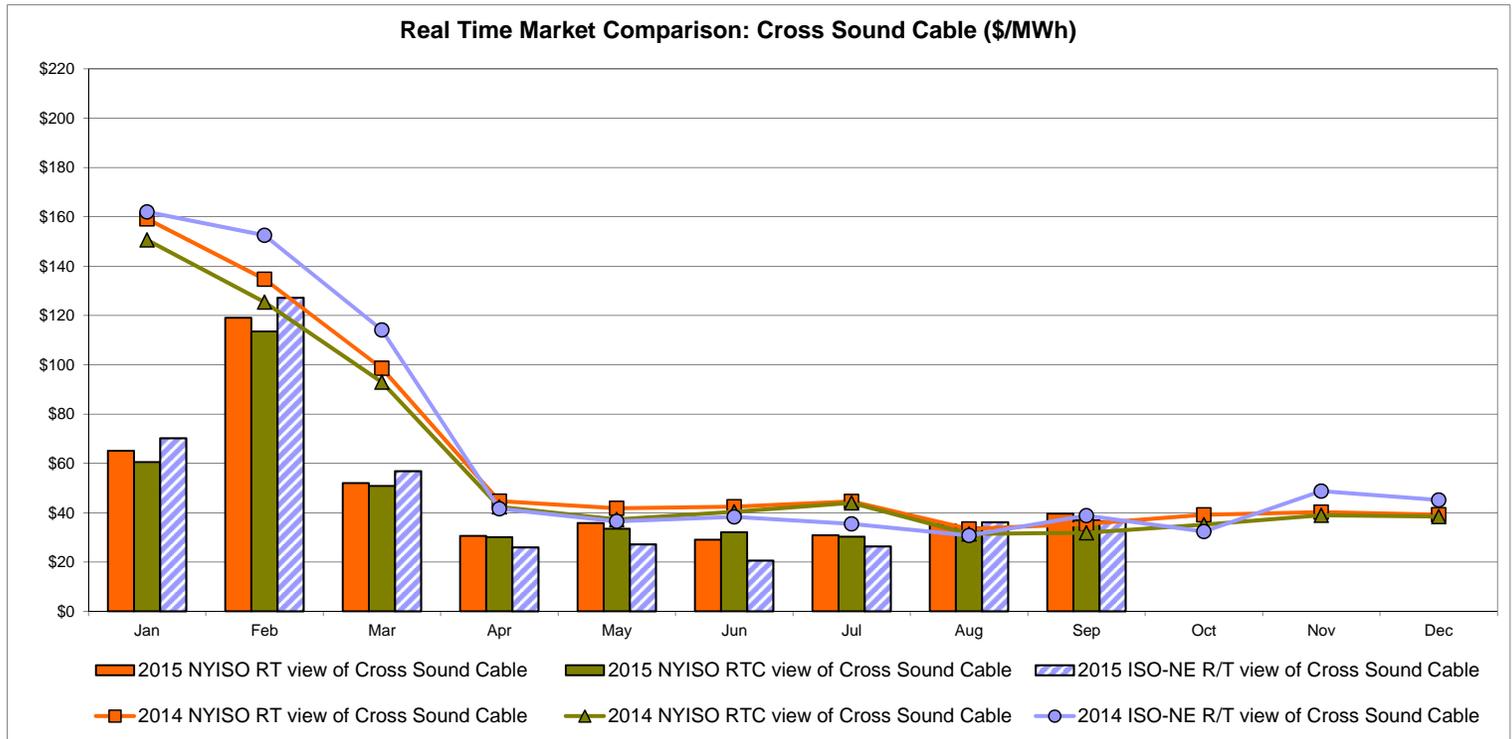
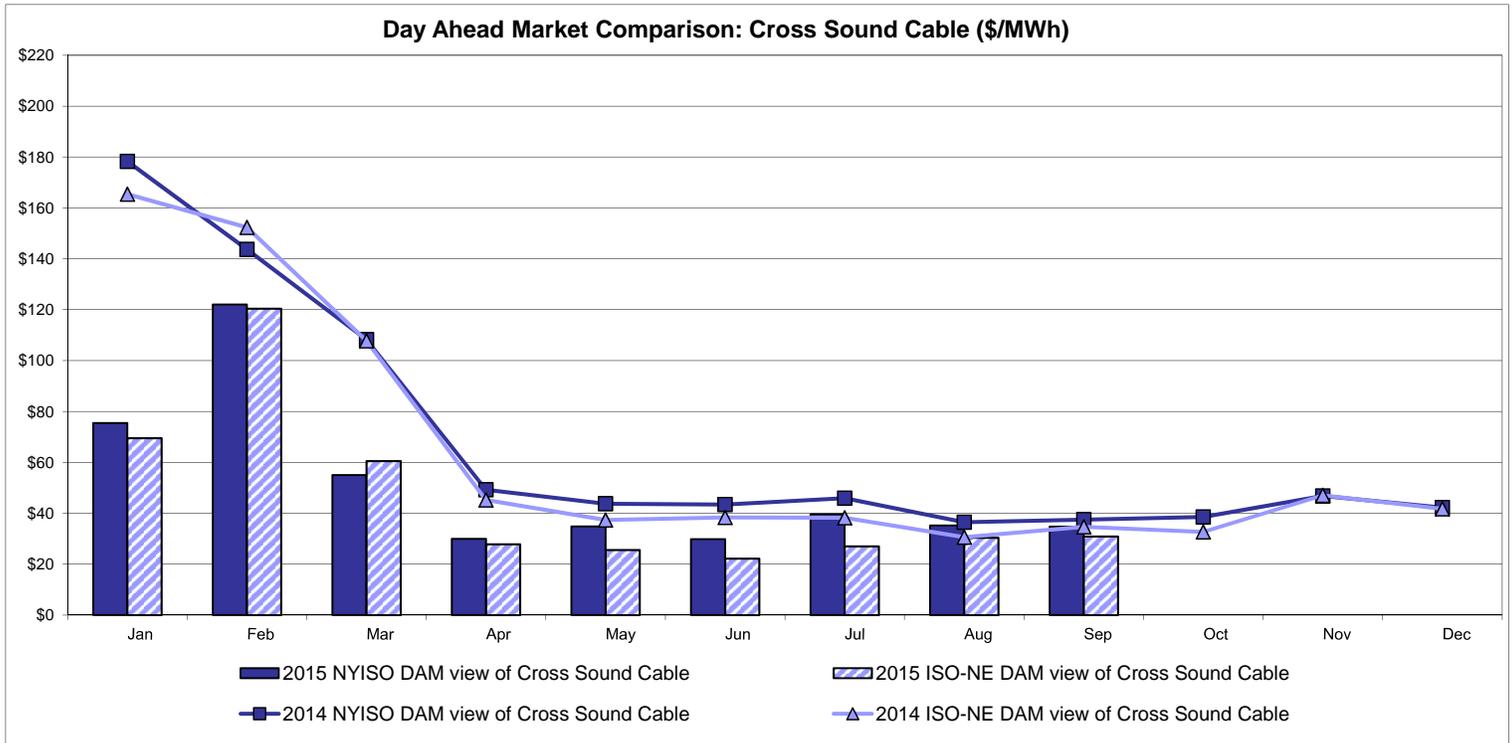


## External Comparison Ontario IESO



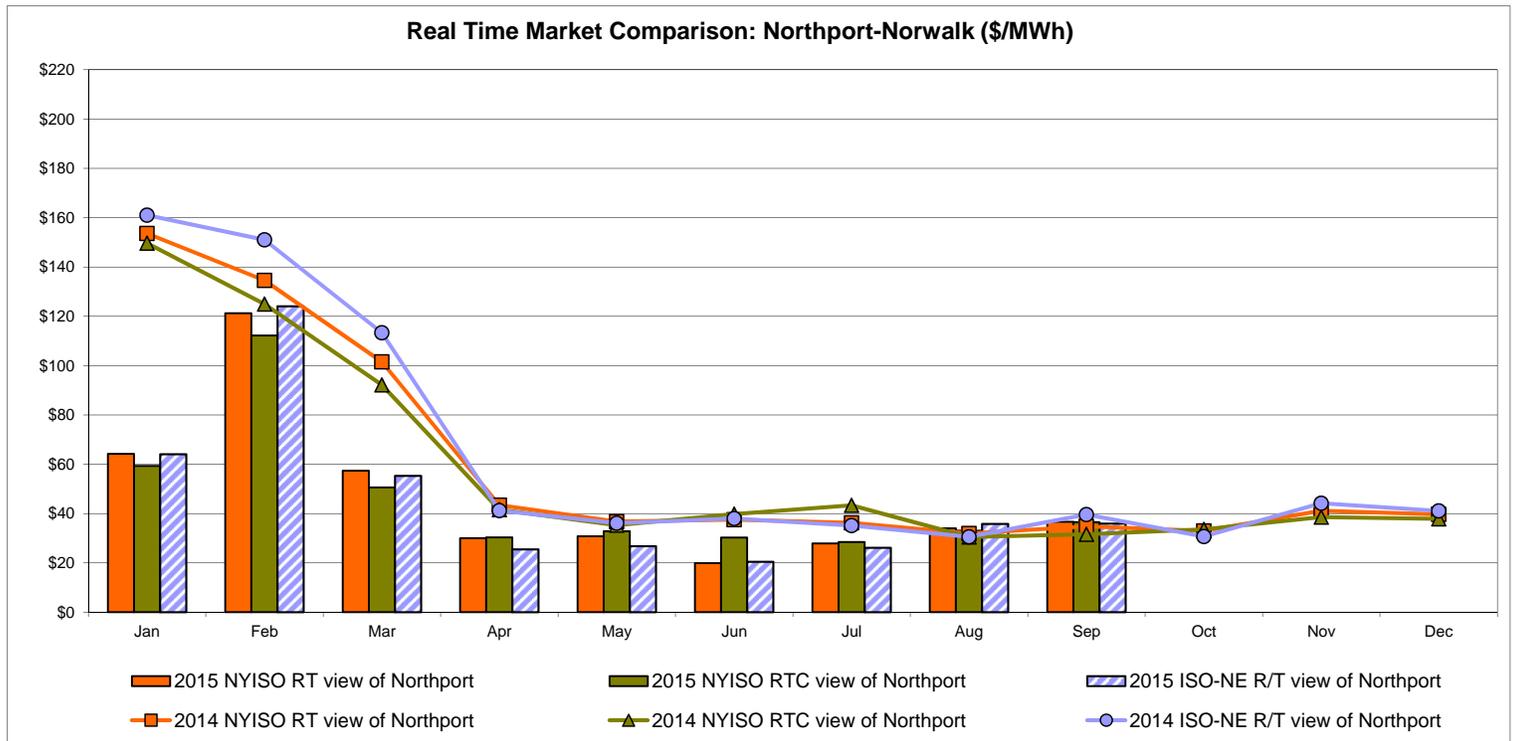
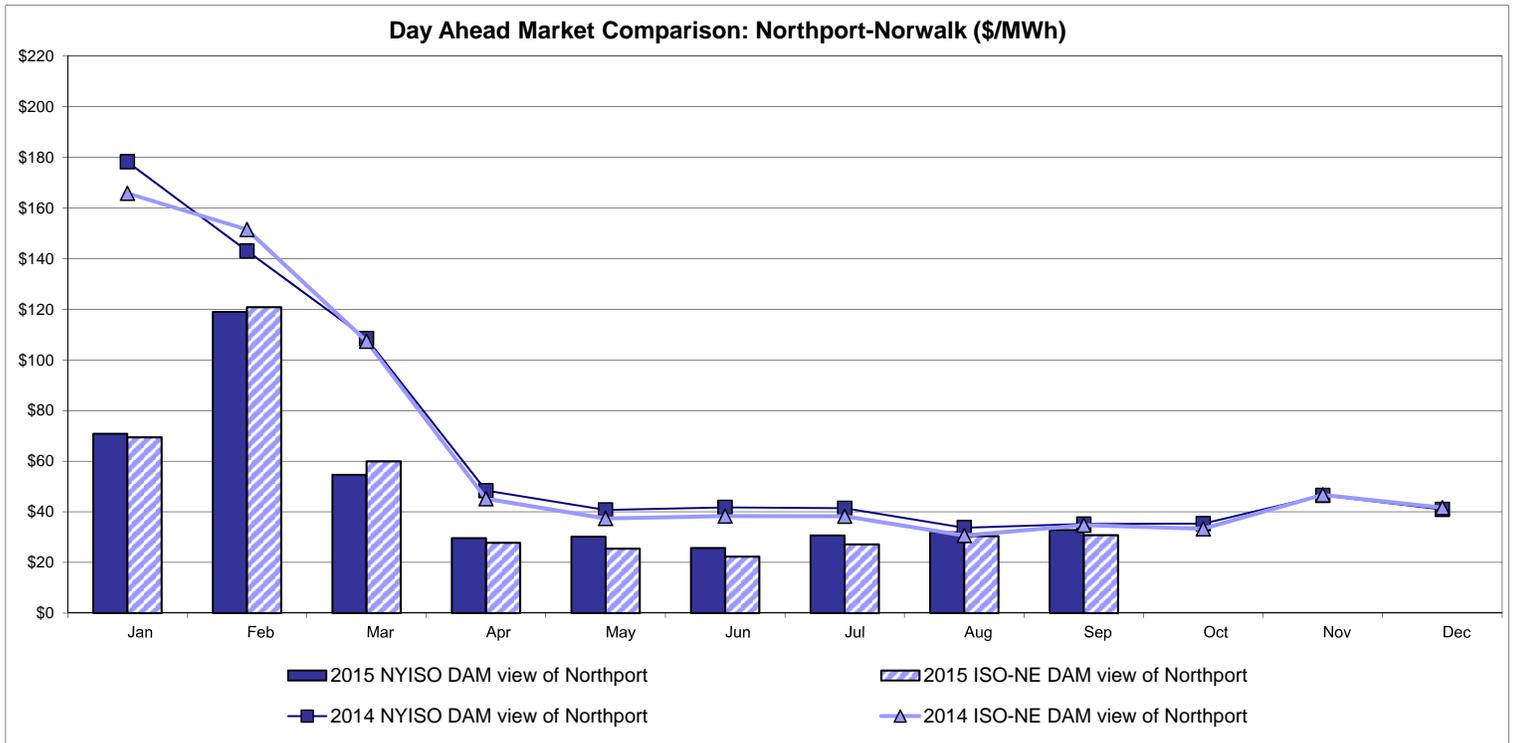
Notes: Exchange factor used for September 2015 was 0.7538 to US  
 HOEP: Hourly Ontario Energy Price  
 Pre-Dispatch: Projected Energy Price

# 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.

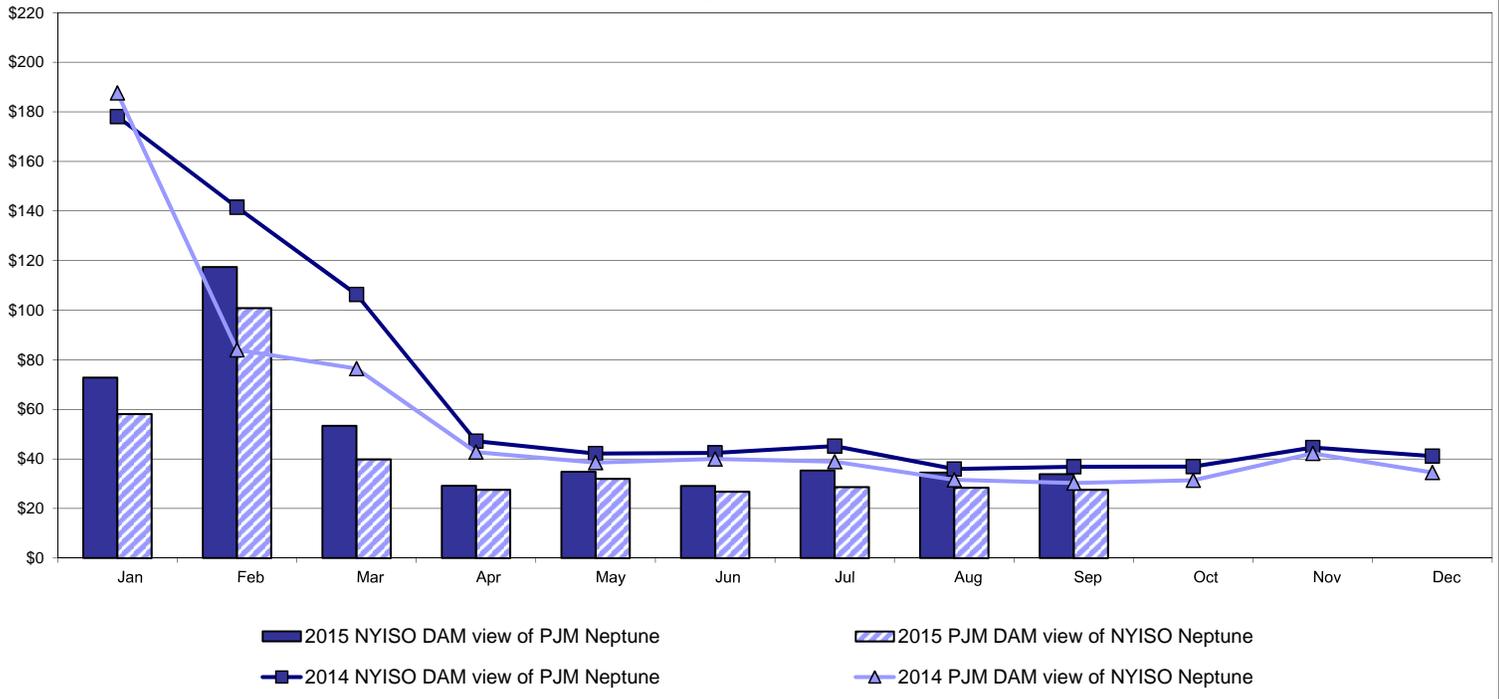
# External Controllable Line: Northport - Norwalk (New England)



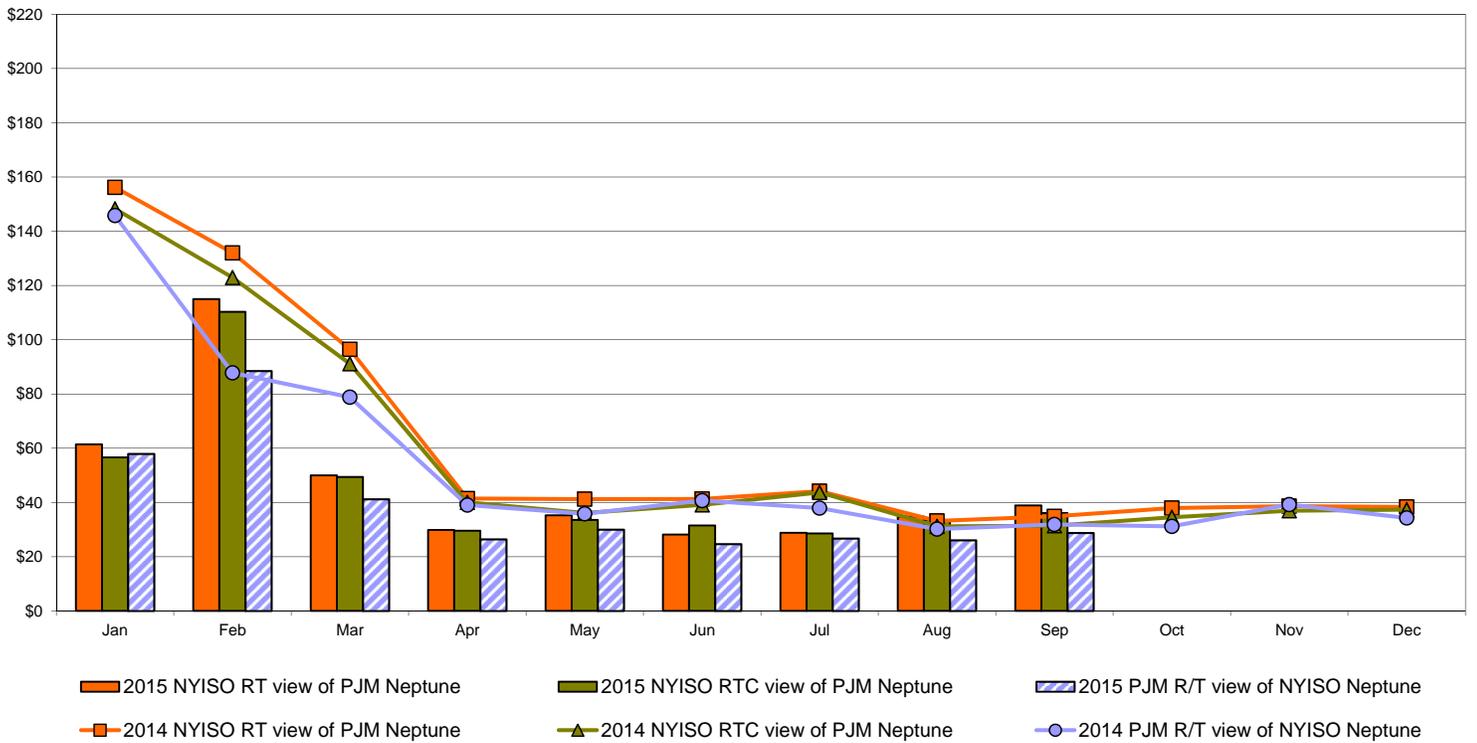
Note:  
 ISO-NE Forecast is an advisory posting @ 18:00 day before.  
 The DAM and R/T prices at the Northport 138 interface are used for ISO-NE.  
 The DAM and R/T prices at the 1385 interface are used for NYISO.

## External Controllable Line: Neptune (PJM)

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

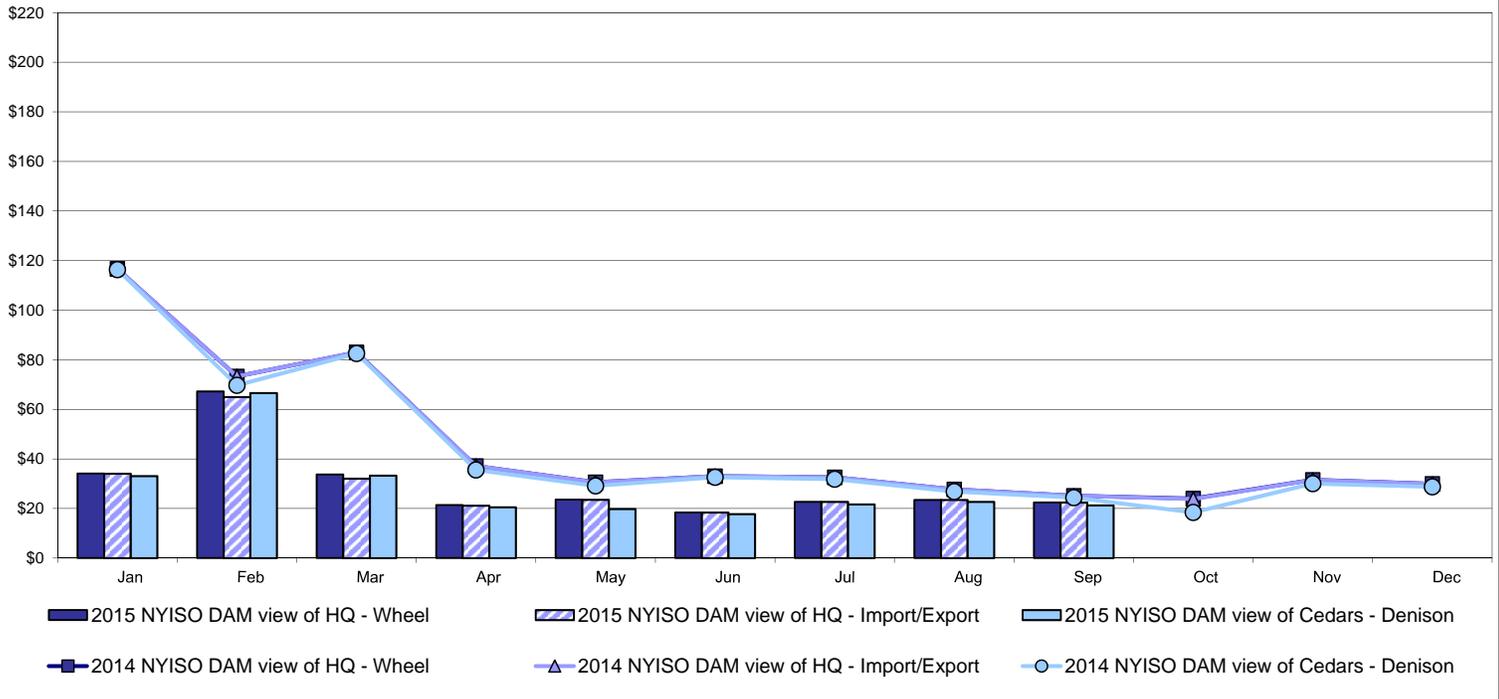


**Real Time Market Comparison: Neptune (\$/MWh)**

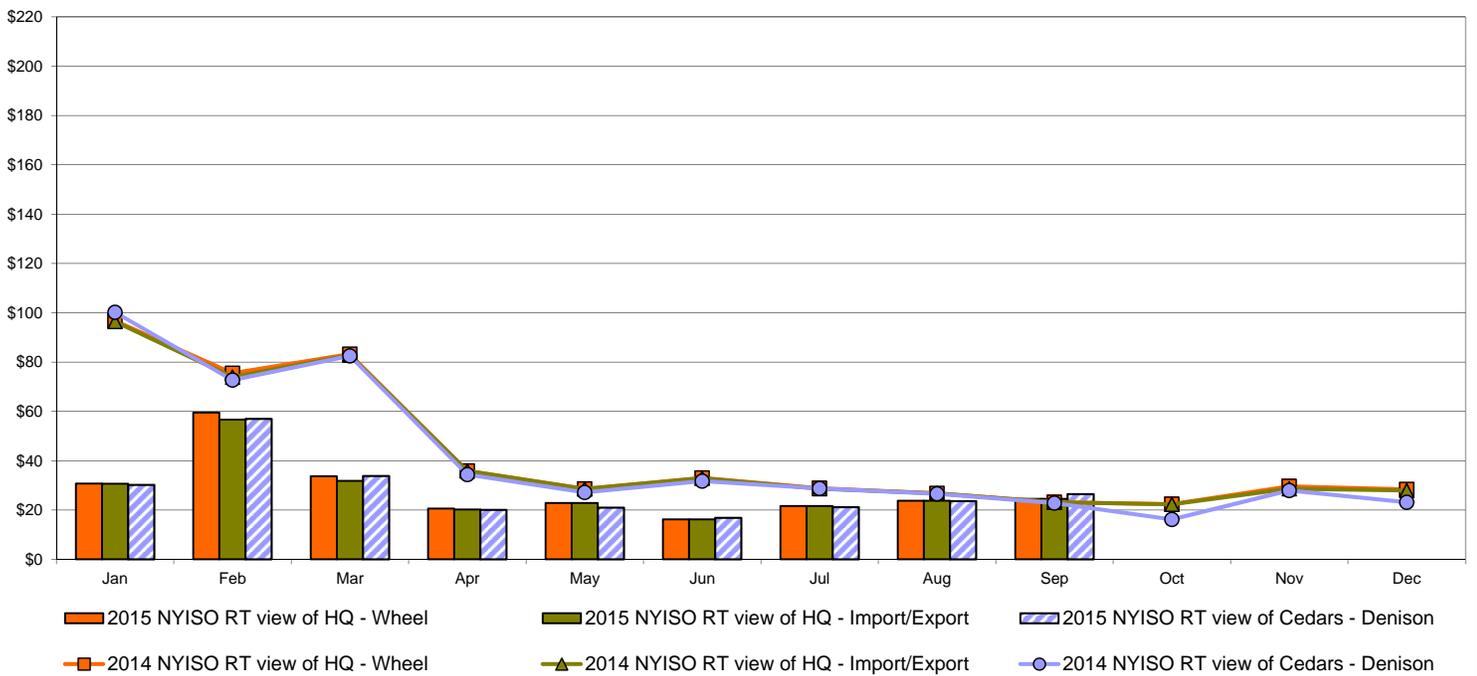


# External Comparison Hydro-Quebec

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

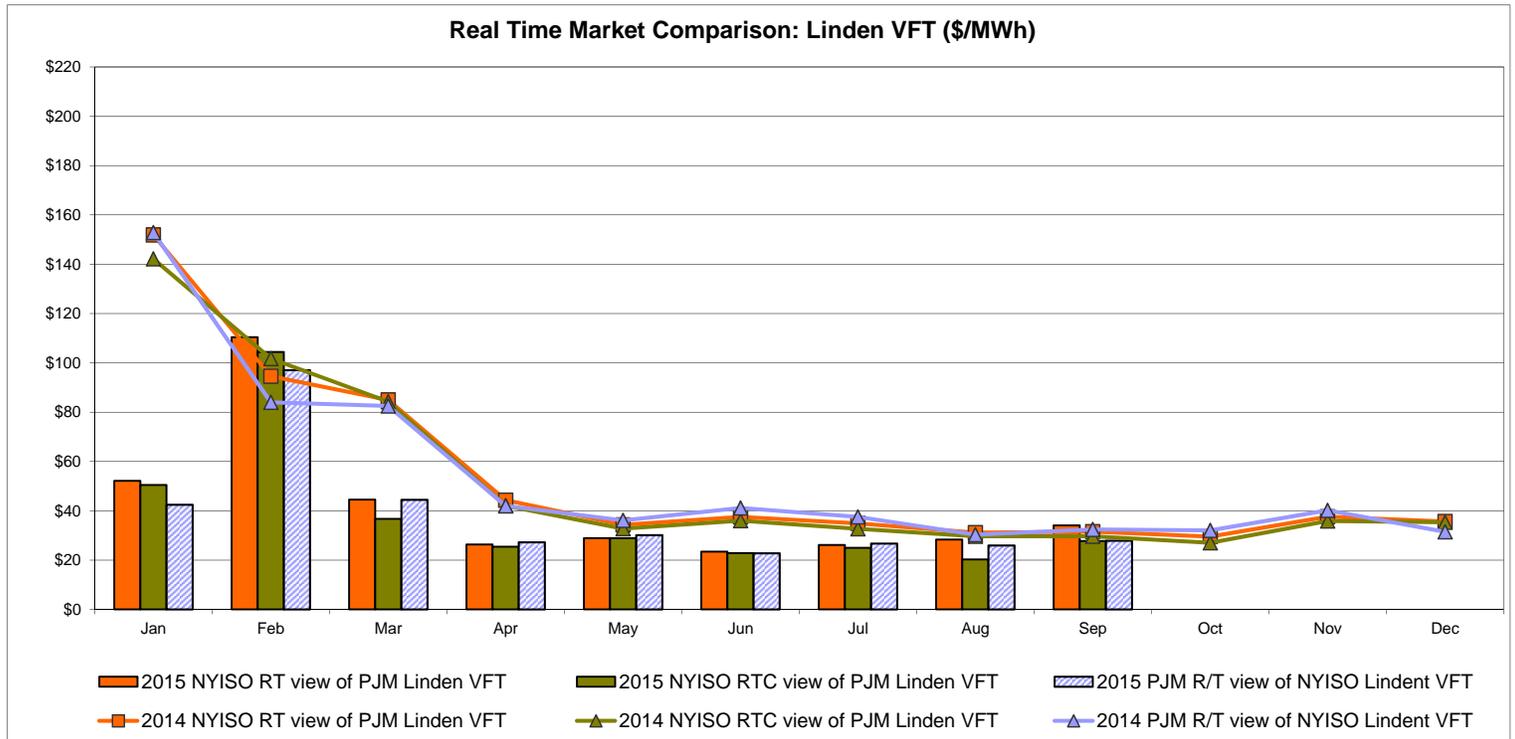
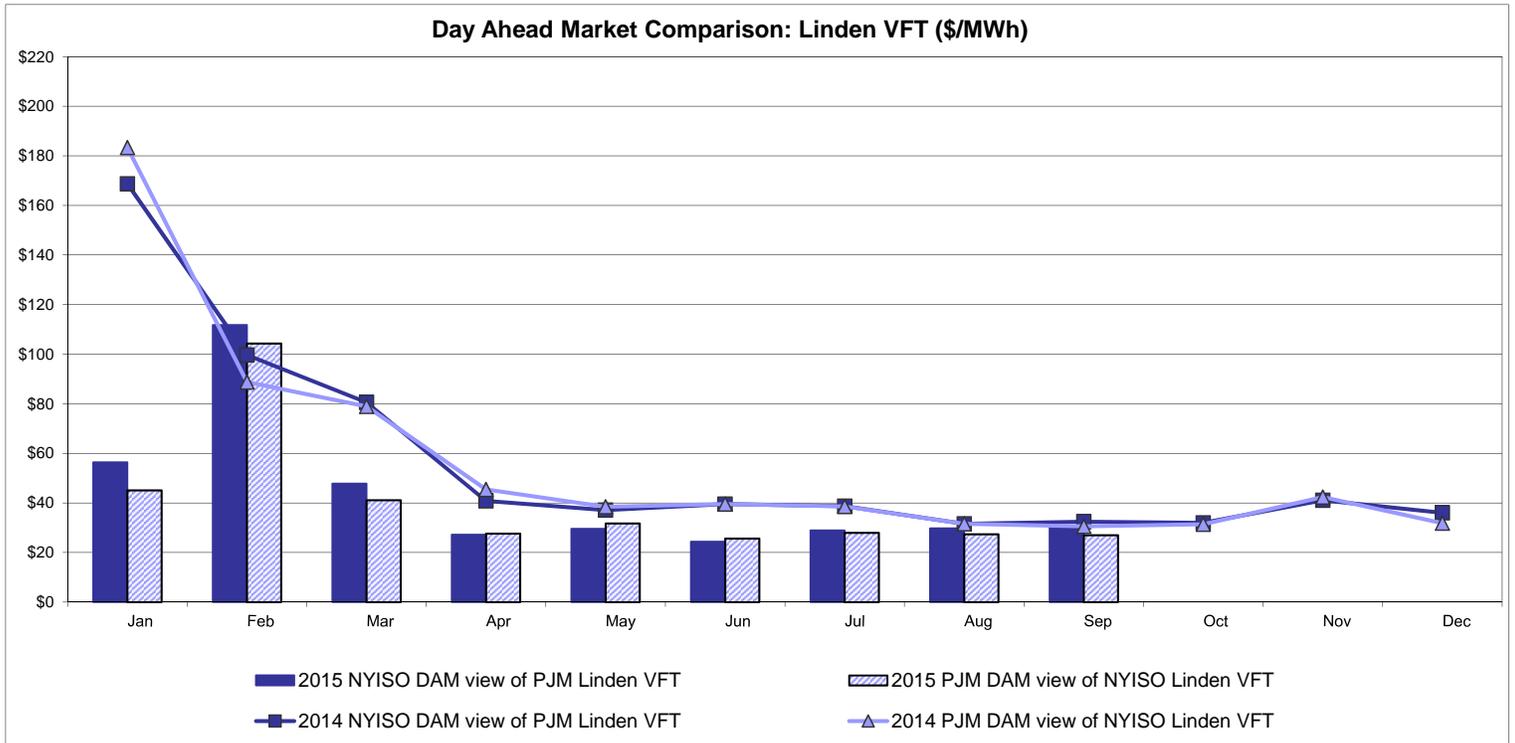


## Real Time Market External Zone Comparison - HQ (\$/MWh)

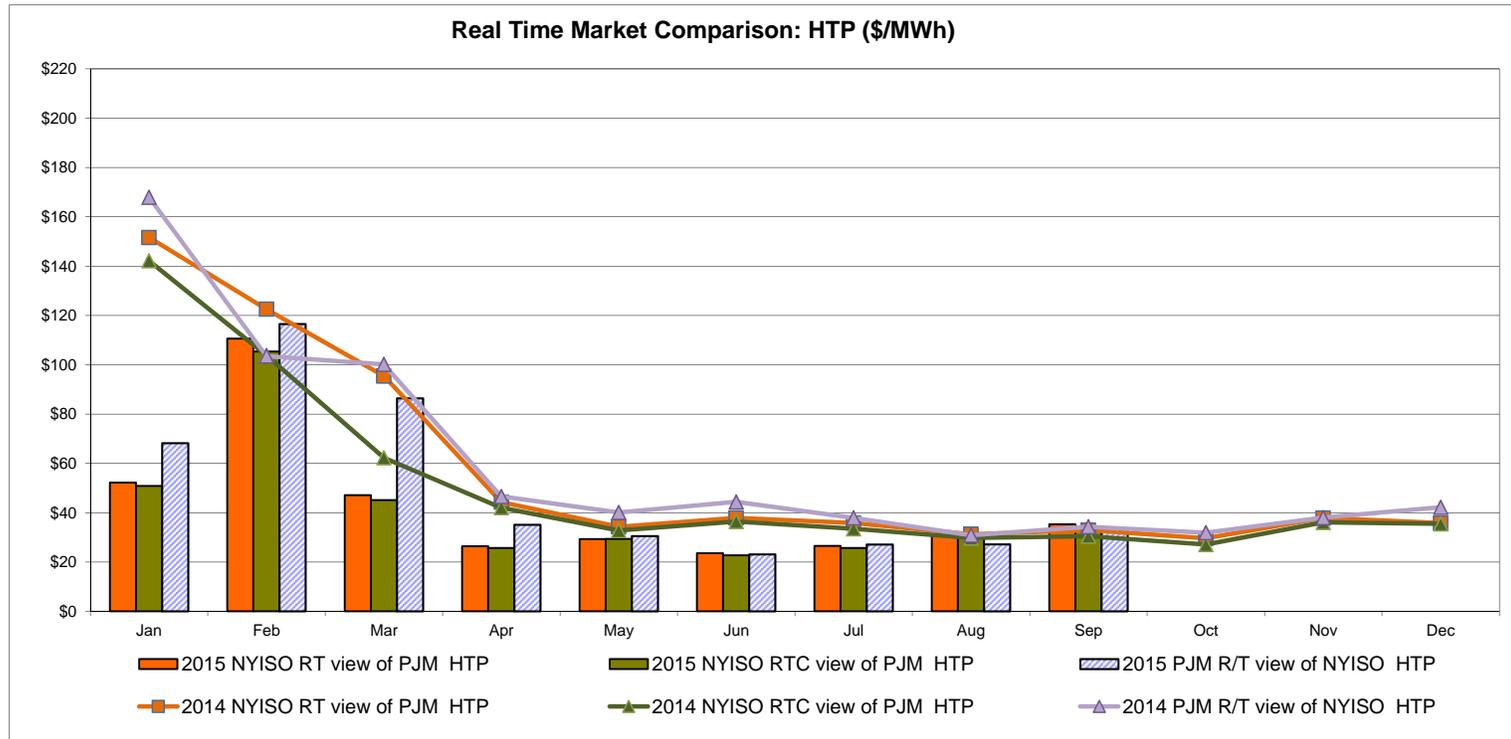
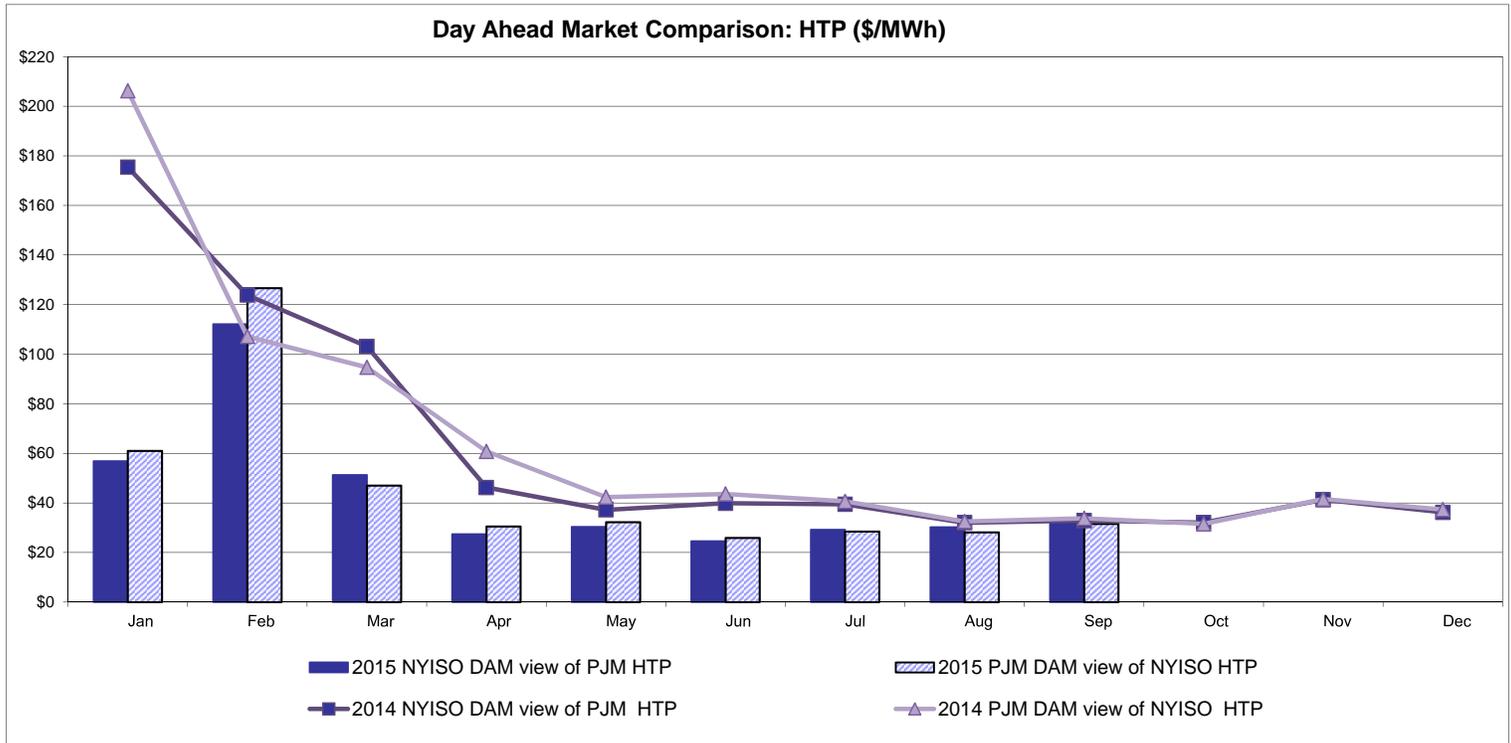


Note:  
Hydro-Quebec Prices are unavailable.

## External Controllable Line: Linden VFT (PJM)



## External Controllable Line: Hudson (PJM)

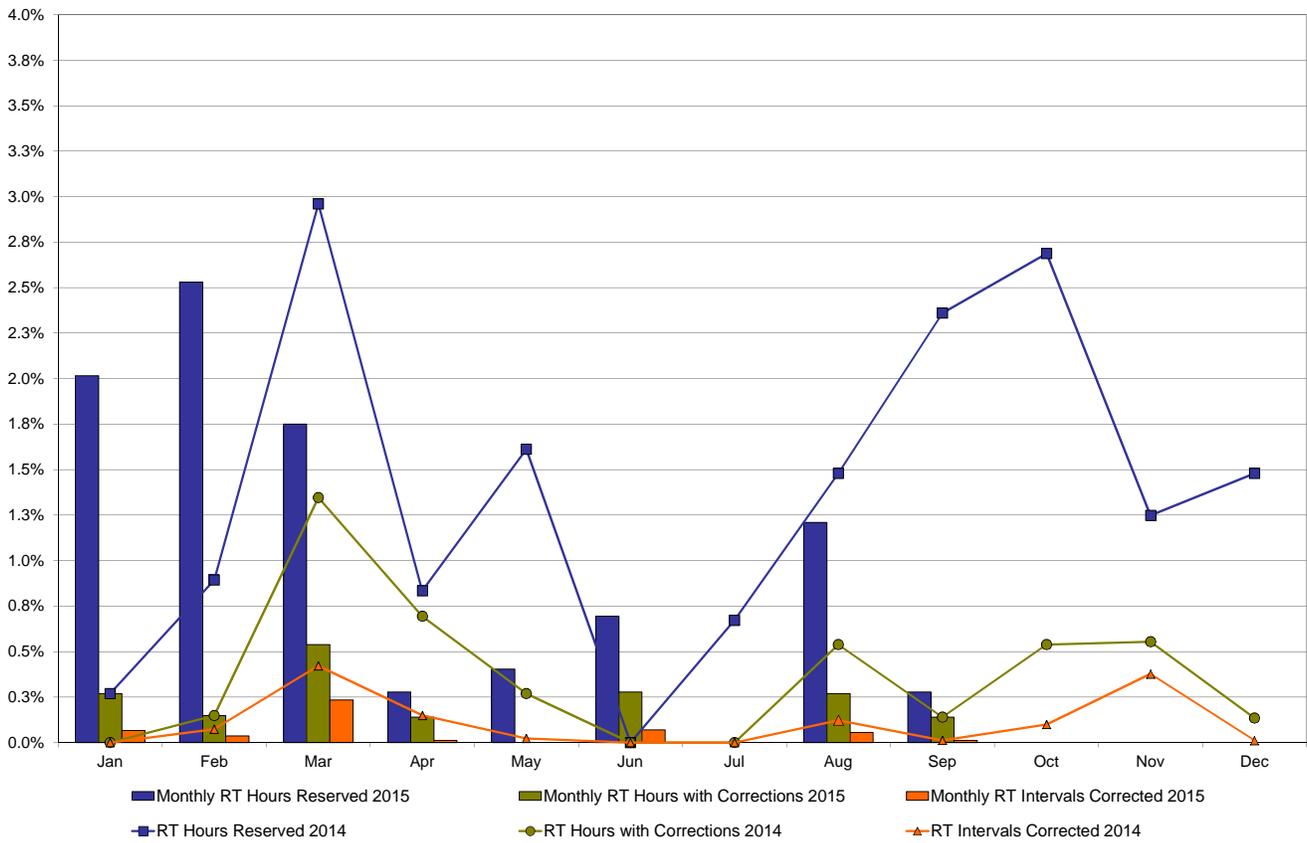


**NYISO Real Time Price Correction Statistics**

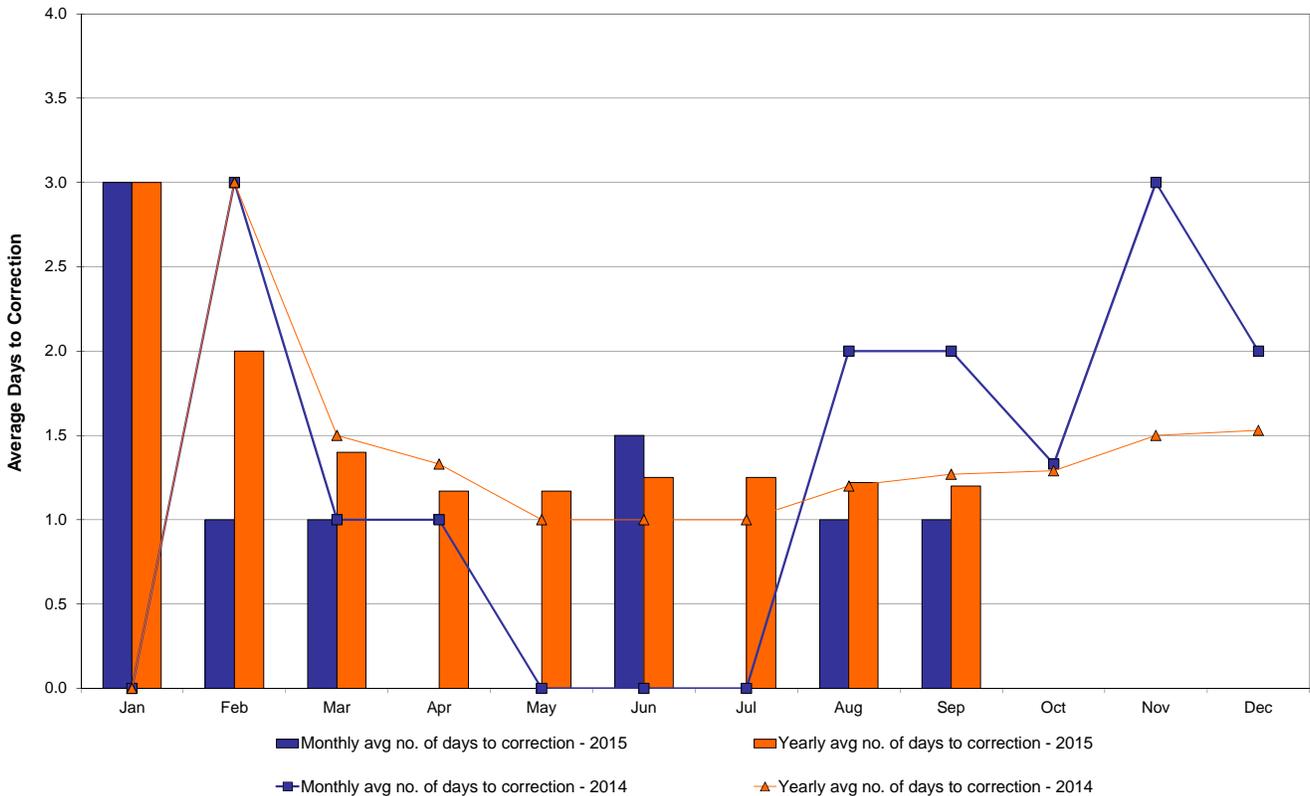
<b>2015</b>		<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
<b>Hour Corrections</b>													
Number of hours with corrections	in the month	2	1	4	1	0	2	0	2	1			
Number of hours	in the month	744	672	743	720	744	720	744	744	720			
% of hours with corrections	in the month	0.27%	0.15%	0.54%	0.14%	0.00%	0.28%	0.00%	0.27%	0.14%			
% of hours with corrections	year-to-date	0.27%	0.21%	0.32%	0.28%	0.22%	0.23%	0.20%	0.21%	0.20%			
<b>Interval Corrections</b>													
Number of intervals corrected	in the month	6	3	21	1	0	6	0	5	1			
Number of intervals	in the month	9,066	8,231	9,005	8,696	9,032	8,731	9,025	8,987	8,728			
% of intervals corrected	in the month	0.07%	0.04%	0.23%	0.01%	0.00%	0.07%	0.00%	0.06%	0.01%			
% of intervals corrected	year-to-date	0.07%	0.05%	0.11%	0.09%	0.07%	0.07%	0.06%	0.06%	0.05%			
<b>Hours Reserved</b>													
Number of hours reserved	in the month	15	17	13	2	3	5	0	9	2			
Number of hours	in the month	744	672	743	720	744	720	744	744	720			
% of hours reserved	in the month	2.02%	2.53%	1.75%	0.28%	0.40%	0.69%	0.00%	1.21%	0.28%			
% of hours reserved	year-to-date	2.02%	2.26%	2.08%	1.63%	1.38%	1.27%	1.08%	1.10%	1.01%			
<b>Days to Correction *</b>													
Avg. number of days to correction	in the month	3.00	1.00	1.00	0.00	0.00	1.50	0.00	1.00	1.00			
Avg. number of days to correction	year-to-date	3.00	2.00	1.40	1.17	1.17	1.25	1.25	1.22	1.20			
<b>Days Without Corrections</b>													
Days without corrections	in the month	30	27	28	29	31	28	31	30	29			
Days without corrections	year-to-date	30	57	85	114	145	173	204	234	263			
<b>2014</b>		<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
<b>Hour Corrections</b>													
Number of hours with corrections	in the month	0	1	10	5	2	0	0	4	1	4	4	1
Number of hours	in the month	744	672	743	720	744	720	744	744	720	744	721	744
% of hours with corrections	in the month	0.00%	0.15%	1.35%	0.69%	0.27%	0.00%	0.00%	0.54%	0.14%	0.54%	0.55%	0.13%
% of hours with corrections	year-to-date	0.00%	0.07%	0.51%	0.56%	0.50%	0.41%	0.35%	0.38%	0.35%	0.37%	0.39%	0.37%
<b>Interval Corrections</b>													
Number of intervals corrected	in the month	0	6	38	13	2	0	0	11	1	9	33	1
Number of intervals	in the month	9,232	8,205	9,023	8,720	9,030	8,729	8,999	8,975	8,779	9,026	8,763	9,030
% of intervals corrected	in the month	0.00%	0.07%	0.42%	0.15%	0.02%	0.00%	0.00%	0.12%	0.01%	0.10%	0.38%	0.01%
% of intervals corrected	year-to-date	0.00%	0.03%	0.17%	0.16%	0.13%	0.11%	0.10%	0.10%	0.09%	0.09%	0.12%	0.11%
<b>Hours Reserved</b>													
Number of hours reserved	in the month	2	6	22	6	12	0	5	11	17	20	9	11
Number of hours	in the month	744	672	743	720	744	720	744	744	720	744	721	744
% of hours reserved	in the month	0.27%	0.89%	2.96%	0.83%	1.61%	0.00%	0.67%	1.48%	2.36%	2.69%	1.25%	1.48%
% of hours reserved	year-to-date	0.27%	0.56%	1.39%	1.25%	1.32%	1.11%	1.04%	1.10%	1.24%	1.38%	1.37%	1.38%
<b>Days to Correction *</b>													
Avg. number of days to correction	in the month	0.00	3.00	1.00	1.00	0.00	0.00	0.00	2.00	2.00	1.33	3.00	2.00
Avg. number of days to correction	year-to-date	0.00	3.00	1.50	1.33	1.00	1.00	1.00	1.20	1.27	1.29	1.50	1.53
<b>Days Without Corrections</b>													
Days without corrections	in the month	31	27	28	28	29	30	31	29	29	28	28	30
Days without corrections	year-to-date	31	58	86	114	143	173	204	233	262	290	318	348

\* Calendar days from reservation date.

### Percentage of Real-Time Corrections

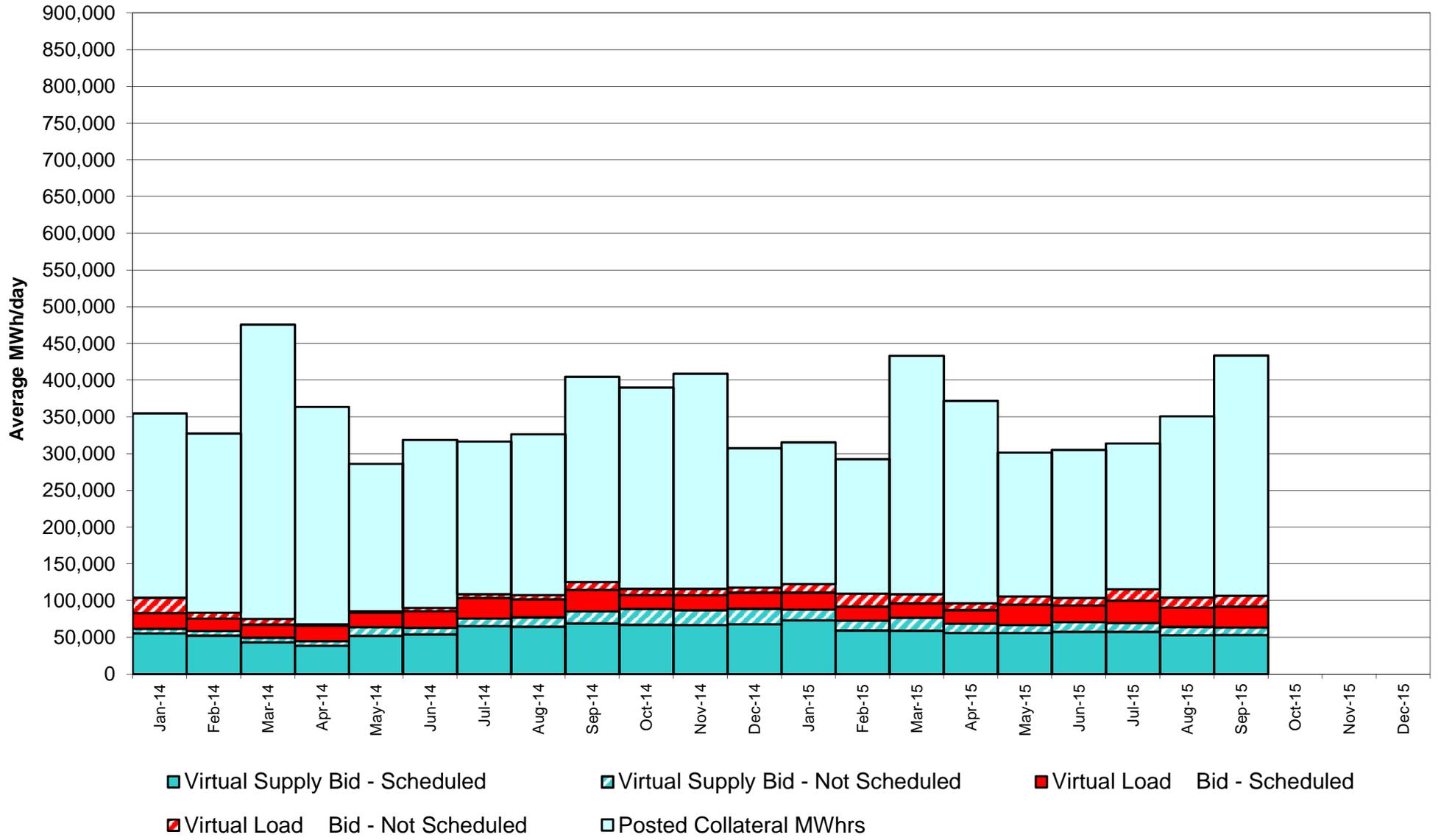


### Annual average time period for making Price Corrections (from reservation date) \*

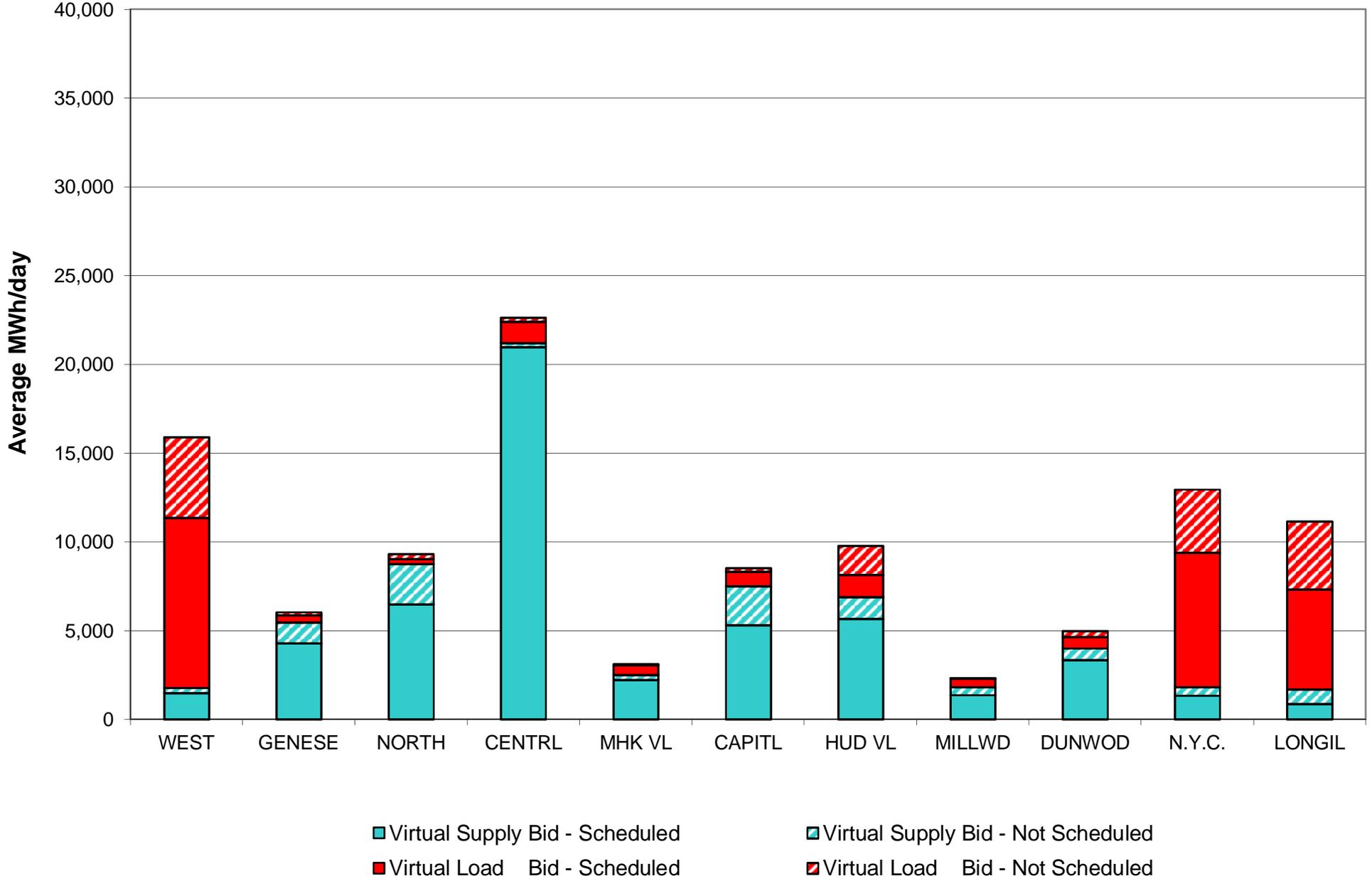


\* Calendar days from reservation date.

## NYISO Virtual Trading Average MWh per day



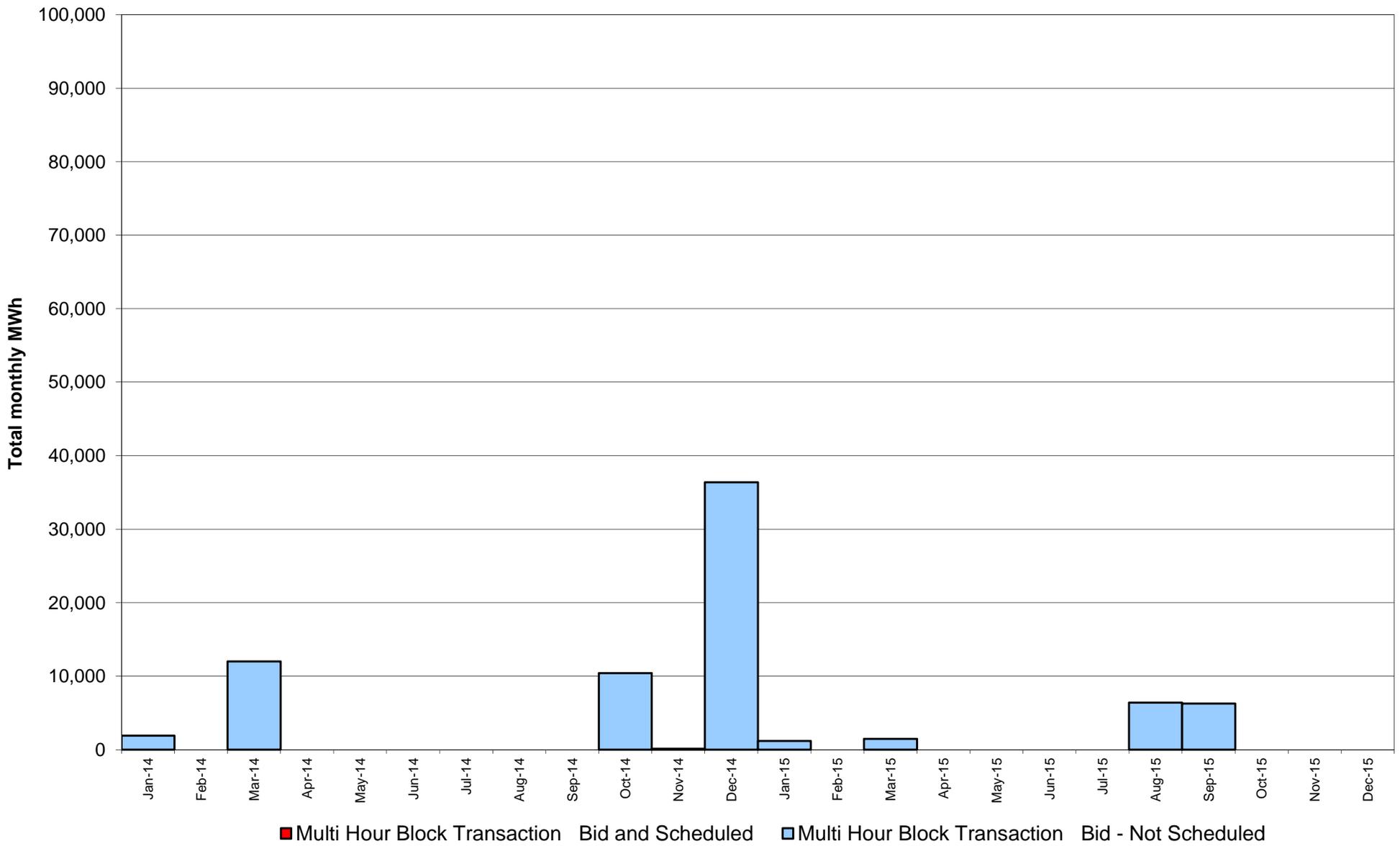
## Virtual Load and Supply Zonal Statistics through September 30, 2015



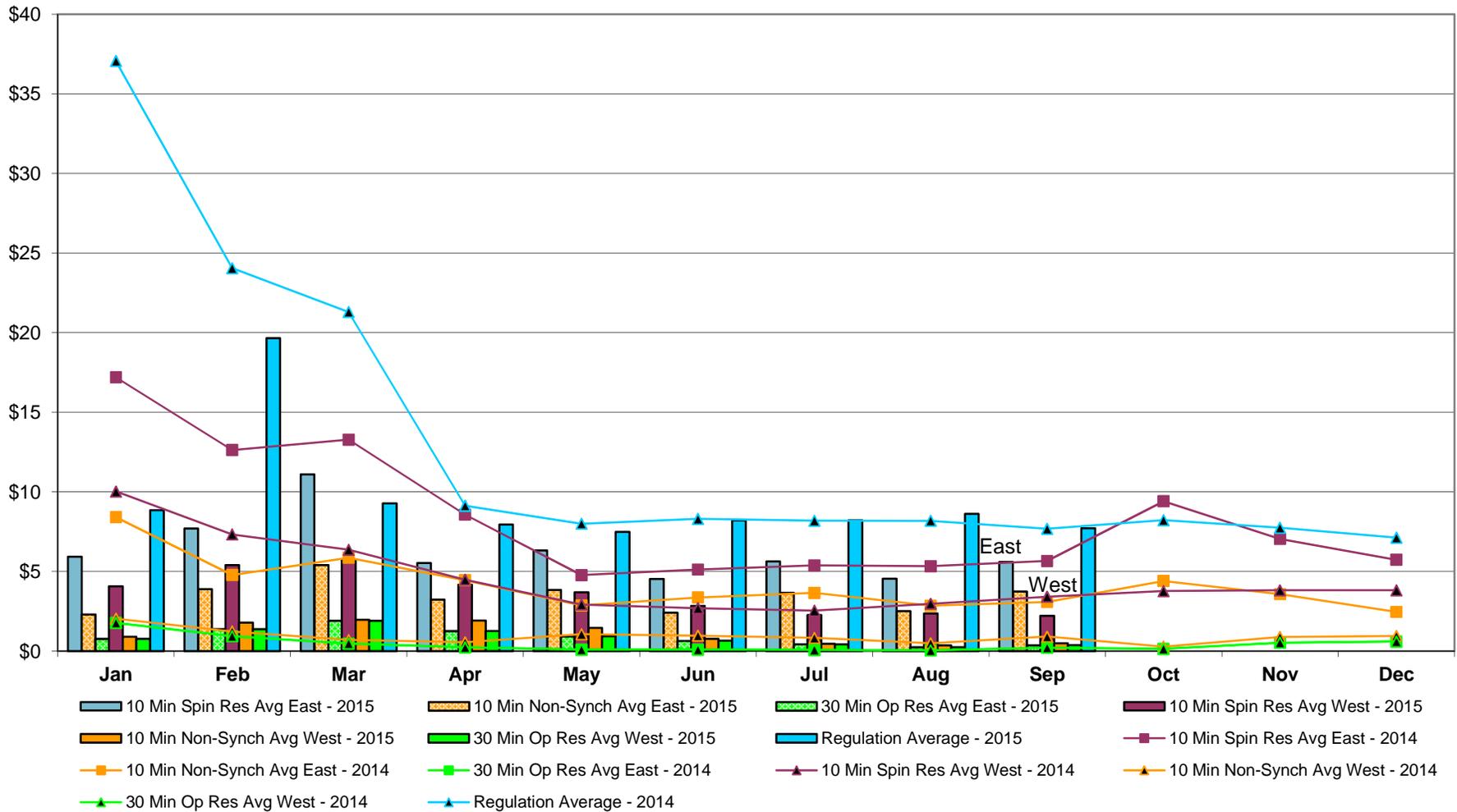
## Virtual Load and Supply Zonal Statistics (Average MWh/day) - 2015

		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-15	6,244	977	3,837	688	<b>MHK VL</b>	Jan-15	534	185	1,757	1,021	<b>DUNWOD</b>	Jan-15	669	444	831	166
	Feb-15	3,180	1,570	3,288	936		Feb-15	901	790	1,446	812		Feb-15	647	663	725	156
	Mar-15	5,796	1,992	3,185	1,223		Mar-15	626	458	2,120	718		Mar-15	621	566	1,224	536
	Apr-15	6,734	1,797	1,790	419		Apr-15	293	226	3,094	867		Apr-15	433	299	1,517	366
	May-15	9,778	3,320	1,381	465		May-15	248	102	1,746	482		May-15	1,385	308	904	400
	Jun-15	8,135	3,156	1,800	584		Jun-15	151	24	2,252	734		Jun-15	1,107	434	1,435	462
	Jul-15	9,099	5,102	2,521	434		Jul-15	632	70	2,726	521		Jul-15	1,674	375	1,220	427
	Aug-15	9,631	5,063	1,898	560		Aug-15	251	50	2,250	427		Aug-15	755	170	1,531	297
	Sep-15	9,570	4,543	1,494	278		Sep-15	568	53	2,202	292		Sep-15	663	333	3,365	622
	Oct-15						Oct-15						Oct-15				
	Nov-15						Nov-15						Nov-15				
	Dec-15						Dec-15						Dec-15				
<b>GENESE</b>	Jan-15	444	147	9,467	1,422	<b>CAPITL</b>	Jan-15	1,816	1,292	9,400	1,563	<b>N.Y.C.</b>	Jan-15	3,367	1,572	887	2,429
	Feb-15	229	347	7,477	1,425		Feb-15	3,192	3,267	6,354	2,035		Feb-15	2,944	2,375	658	690
	Mar-15	452	350	7,559	2,735		Mar-15	2,234	2,029	6,772	2,411		Mar-15	2,687	1,133	894	1,593
	Apr-15	161	254	4,771	1,991		Apr-15	1,558	991	7,368	2,215		Apr-15	2,470	377	808	500
	May-15	349	167	4,831	1,643		May-15	1,518	201	7,032	1,751		May-15	5,397	1,487	918	367
	Jun-15	188	229	4,911	2,115		Jun-15	563	230	8,840	2,709		Jun-15	3,683	1,091	864	494
	Jul-15	820	256	5,043	1,871		Jul-15	1,268	320	8,358	2,958		Jul-15	7,008	2,468	1,081	174
	Aug-15	264	123	4,307	1,740		Aug-15	1,002	271	6,591	2,846		Aug-15	6,991	2,435	981	252
	Sep-15	419	162	4,275	1,182		Sep-15	809	212	5,319	2,181		Sep-15	7,568	3,565	1,344	472
	Oct-15						Oct-15						Oct-15				
	Nov-15						Nov-15						Nov-15				
	Dec-15						Dec-15						Dec-15				
<b>NORTH</b>	Jan-15	537	300	7,590	2,868	<b>HUD VL</b>	Jan-15	1,006	1,747	4,703	2,133	<b>LONGIL</b>	Jan-15	5,510	3,925	547	1,487
	Feb-15	274	423	7,361	1,898		Feb-15	769	2,147	2,841	2,800		Feb-15	4,383	3,985	613	1,722
	Mar-15	422	572	6,213	2,540		Mar-15	747	1,578	5,045	3,272		Mar-15	4,639	2,844	464	1,719
	Apr-15	223	366	8,249	3,243		Apr-15	1,180	1,056	6,875	1,292		Apr-15	4,399	3,064	760	678
	May-15	263	255	7,237	3,146		May-15	1,267	1,372	5,580	1,488		May-15	6,102	3,728	936	394
	Jun-15	169	196	6,060	2,977		Jun-15	825	914	5,600	1,251		Jun-15	6,015	3,918	768	792
	Jul-15	233	291	6,047	2,798		Jul-15	1,700	1,241	4,983	1,200		Jul-15	5,715	5,340	1,191	766
	Aug-15	299	288	5,619	2,871		Aug-15	1,195	1,663	5,086	863		Aug-15	4,341	3,681	1,086	1,236
	Sep-15	286	249	6,481	2,280		Sep-15	1,244	1,629	5,648	1,236		Sep-15	5,628	3,802	860	842
	Oct-15						Oct-15						Oct-15				
	Nov-15						Nov-15						Nov-15				
	Dec-15						Dec-15						Dec-15				
<b>CENTRL</b>	Jan-15	2,414	939	33,426	776	<b>MILLWD</b>	Jan-15	418	244	716	192	<b>NYISO</b>	Jan-15	22,958	11,774	73,161	14,746
	Feb-15	2,306	1,265	28,050	579		Feb-15	562	674	627	186		Feb-15	19,386	17,506	59,440	13,238
	Mar-15	1,168	538	24,644	587		Mar-15	377	389	947	287		Mar-15	19,769	12,449	59,066	17,619
	Apr-15	927	311	20,024	588		Apr-15	174	239	979	298		Apr-15	18,550	8,979	56,234	12,458
	May-15	908	249	24,901	400		May-15	497	126	668	200		May-15	27,711	11,315	56,132	10,736
	Jun-15	1,104	194	24,287	791		Jun-15	588	24	790	277		Jun-15	22,528	10,411	57,608	13,186
	Jul-15	1,401	358	23,806	636		Jul-15	866	45	776	121		Jul-15	30,416	15,865	57,752	11,905
	Aug-15	975	105	22,347	222		Aug-15	542	48	1,024	187		Aug-15	26,248	13,898	52,720	11,501
	Sep-15	1,206	240	20,987	217		Sep-15	509	34	1,380	415		Sep-15	28,471	14,820	53,355	10,017
	Oct-15						Oct-15						Oct-15				
	Nov-15						Nov-15						Nov-15				
	Dec-15						Dec-15						Dec-15				

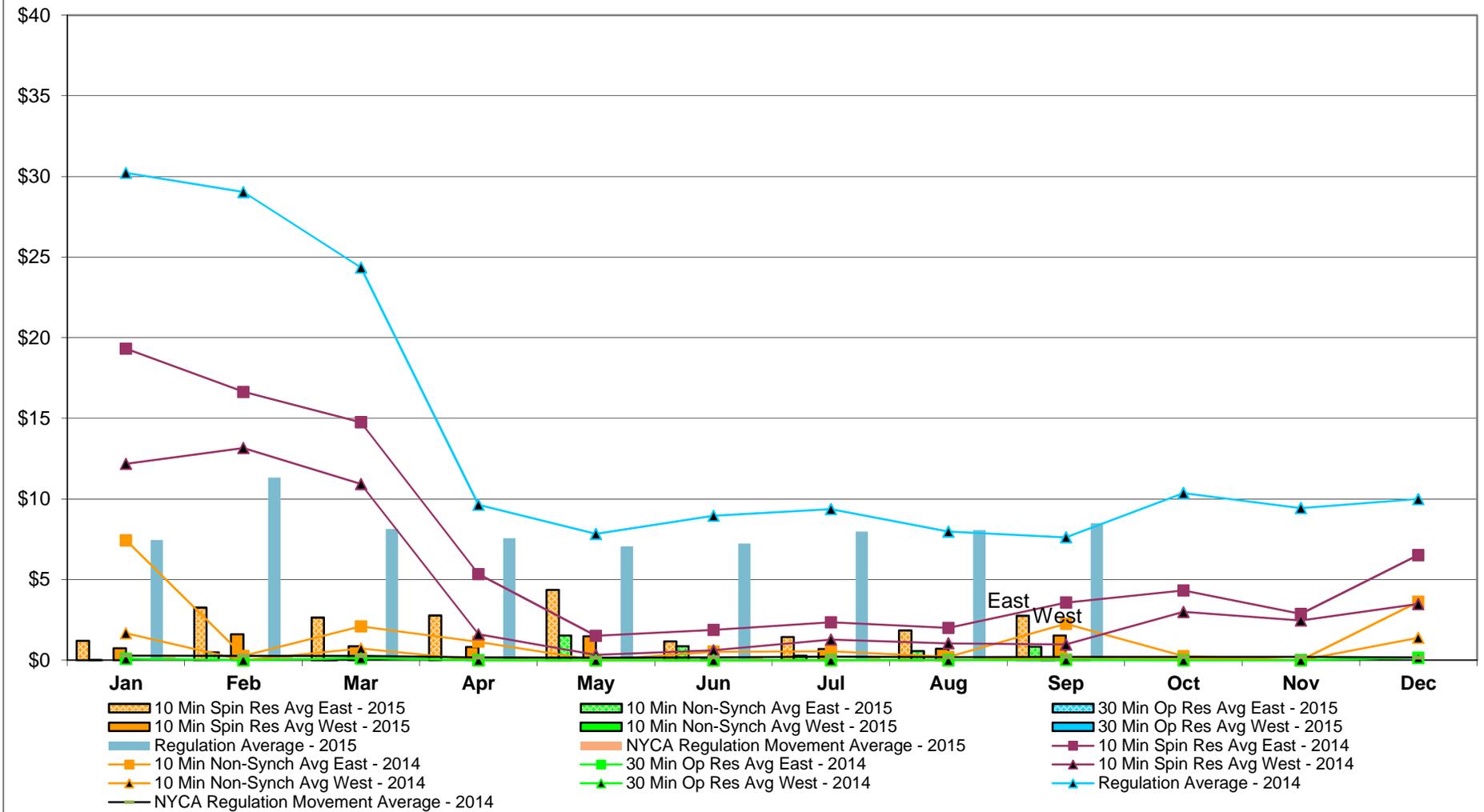
## NYISO Multi Hour Block Transactions Monthly Total MWh



### NYISO Monthly Average Ancillary Service Prices Day Ahead Market 2014 - 2015



## NYISO Monthly Average Ancillary Service Prices RTC Market 2014 - 2015

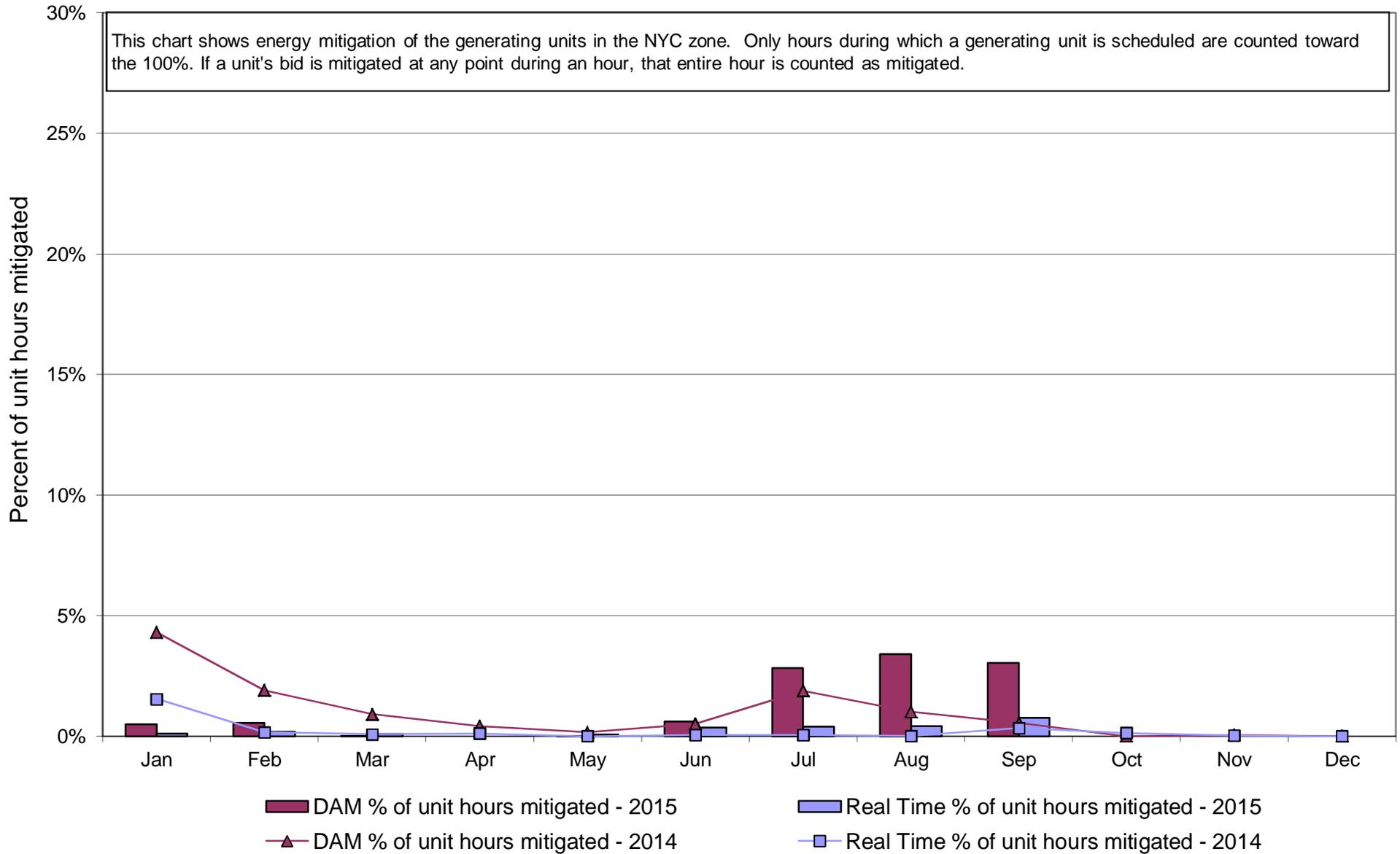




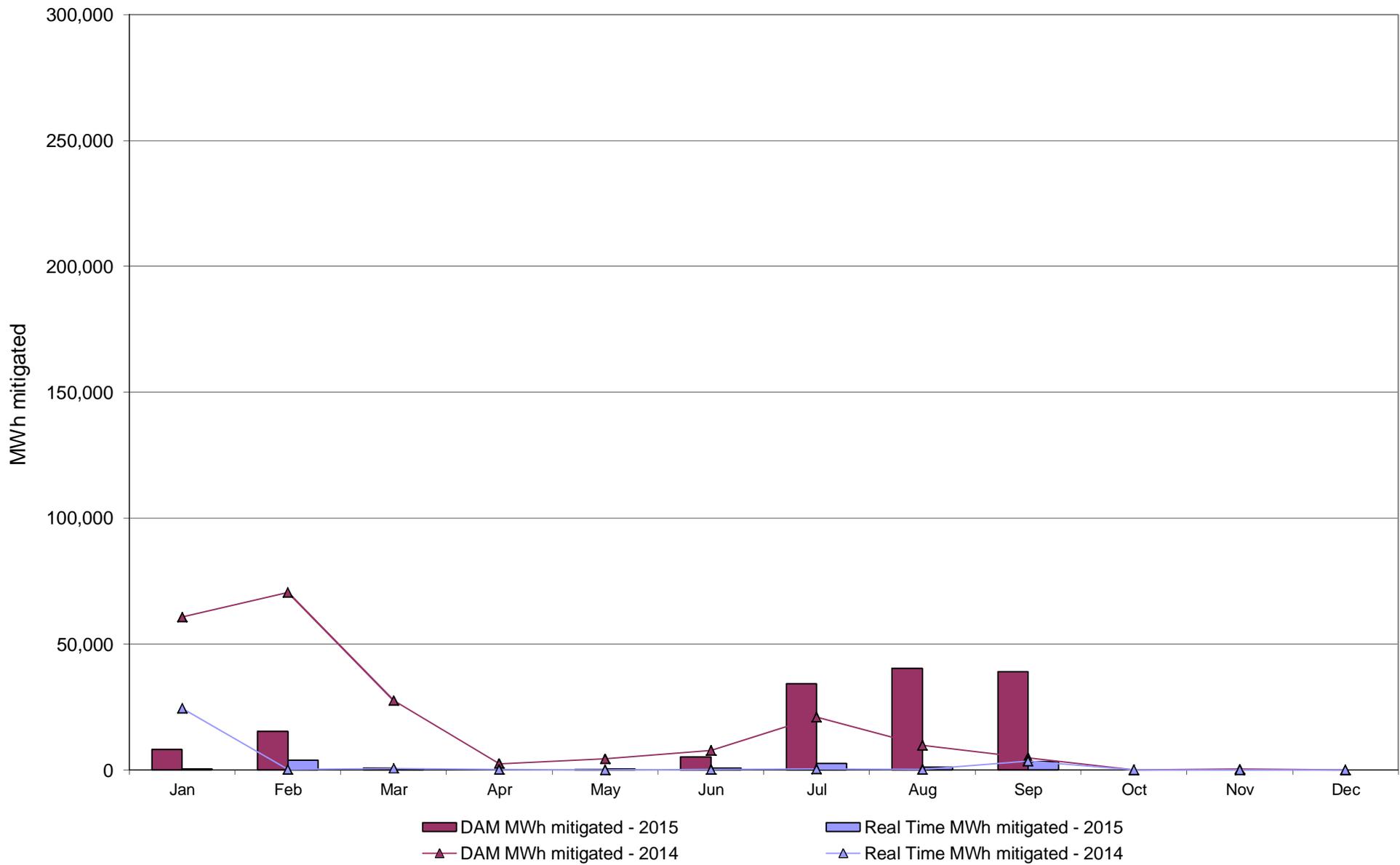
**NYISO Markets Ancillary Services Statistics - Unweighted Price (\$/MWH)**

<b>2015</b>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
<b>Day Ahead Market</b>												
10 Min Spin East	5.92	7.69	11.09	5.53	6.31	4.53	5.62	4.54	5.60			
10 Min Spin West	4.07	5.40	5.68	4.16	3.69	2.84	2.26	2.36	2.20			
10 Min Non Synch East	2.30	3.89	5.40	3.22	3.84	2.42	3.66	2.51	3.74			
10 Min Non Synch West	0.90	1.79	1.97	1.91	1.45	0.77	0.45	0.36	0.49			
30 Min East	0.77	1.38	1.91	1.26	0.93	0.64	0.43	0.24	0.37			
30 Min West	0.77	1.38	1.91	1.26	0.93	0.64	0.43	0.24	0.37			
Regulation	8.84	19.65	9.27	7.94	7.48	8.20	8.20	8.61	7.71			
<b>RTC Market</b>												
10 Min Spin East	1.20	3.27	2.64	2.77	4.36	1.18	1.44	1.86	2.76			
10 Min Spin West	0.74	1.61	0.86	0.81	1.48	0.04	0.69	0.70	1.53			
10 Min Non Synch East	0.01	0.48	0.01	0.00	1.54	0.87	0.28	0.57	0.84			
10 Min Non Synch West	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02			
30 Min East	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02			
30 Min West	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02			
Regulation	7.45	11.32	8.13	7.56	7.06	7.24	7.97	8.07	8.49			
NYCA Regulation Movement	0.21	0.21	0.16	0.22	0.16	0.24	0.25	0.23	0.24			
<b>Real Time Market</b>												
10 Min Spin East	2.12	5.31	3.84	3.44	4.59	2.56	2.47	2.59	4.79			
10 Min Spin West	1.44	3.11	1.83	1.46	0.81	0.38	1.04	0.59	2.65			
10 Min Non Synch East	0.12	1.03	0.17	0.01	2.41	2.01	0.83	1.19	1.97			
10 Min Non Synch West	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.02	0.33			
30 Min East	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00			
30 Min West	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00			
Regulation	8.12	12.91	9.11	8.32	7.30	7.97	8.80	8.60	9.69			
NYCA Regulation Movement	0.20	0.21	0.17	0.15	0.16	0.24	0.24	0.24	0.24			
<b>2014</b>												
	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
<b>Day Ahead Market</b>												
10 Min Spin East	17.19	12.62	13.27	8.57	4.77	5.11	5.37	5.33	5.66	9.41	7.04	5.73
10 Min Spin West	10.02	7.32	6.36	4.47	2.92	2.69	2.54	2.96	3.41	3.76	3.82	3.82
10 Min Non Synch East	8.40	4.78	5.86	4.44	2.86	3.37	3.65	2.85	3.08	4.40	3.58	2.45
10 Min Non Synch West	2.02	1.23	0.70	0.55	1.06	0.96	0.83	0.49	0.91	0.27	0.89	0.95
30 Min East	1.77	0.93	0.47	0.24	0.09	0.08	0.08	0.04	0.21	0.14	0.53	0.60
30 Min West	1.77	0.93	0.47	0.24	0.09	0.08	0.08	0.04	0.21	0.14	0.53	0.60
Regulation	37.05	24.05	21.29	9.12	7.99	8.30	8.18	8.18	7.67	8.21	7.74	7.12
<b>RTC Market</b>												
10 Min Spin East	19.32	16.64	14.76	5.34	1.52	1.87	2.35	2.00	3.57	4.32	2.86	6.51
10 Min Spin West	12.18	13.16	10.93	1.61	0.33	0.61	1.27	1.04	0.98	2.99	2.46	3.48
10 Min Non Synch East	7.43	0.26	2.10	1.14	0.00	0.52	0.55	0.20	2.25	0.25	0.00	3.62
10 Min Non Synch West	1.68	0.00	0.72	0.00	0.00	0.00	0.00	0.00	0.17	0.13	0.00	1.39
30 Min East	0.08	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.15
30 Min West	0.08	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.15
Regulation	30.21	29.03	24.35	9.64	7.83	8.95	9.36	7.97	7.62	10.36	9.42	9.99
NYCA Regulation Movement	0.28	0.27	0.26	0.17	0.15	0.17	0.21	0.18	0.21	0.20	0.20	0.17
<b>Real Time Market</b>												
10 Min Spin East	19.64	15.48	12.19	4.15	1.78	1.92	2.57	1.96	3.23	4.47	4.51	8.45
10 Min Spin West	13.10	11.80	9.11	0.94	0.61	0.72	1.08	0.76	0.60	3.10	4.12	4.14
10 Min Non Synch East	9.03	0.70	1.59	0.93	0.00	0.48	0.92	0.44	2.09	0.42	0.00	5.23
10 Min Non Synch West	3.37	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.05	0.20	0.00	1.69
30 Min East	1.10	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
30 Min West	0.92	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
Regulation	31.50	29.02	23.52	9.02	7.87	9.21	9.21	8.13	7.31	10.39	10.96	10.94
NYCA Regulation Movement	0.27	0.27	0.27	0.17	0.15	0.18	0.21	0.19	0.21	0.19	0.20	0.17

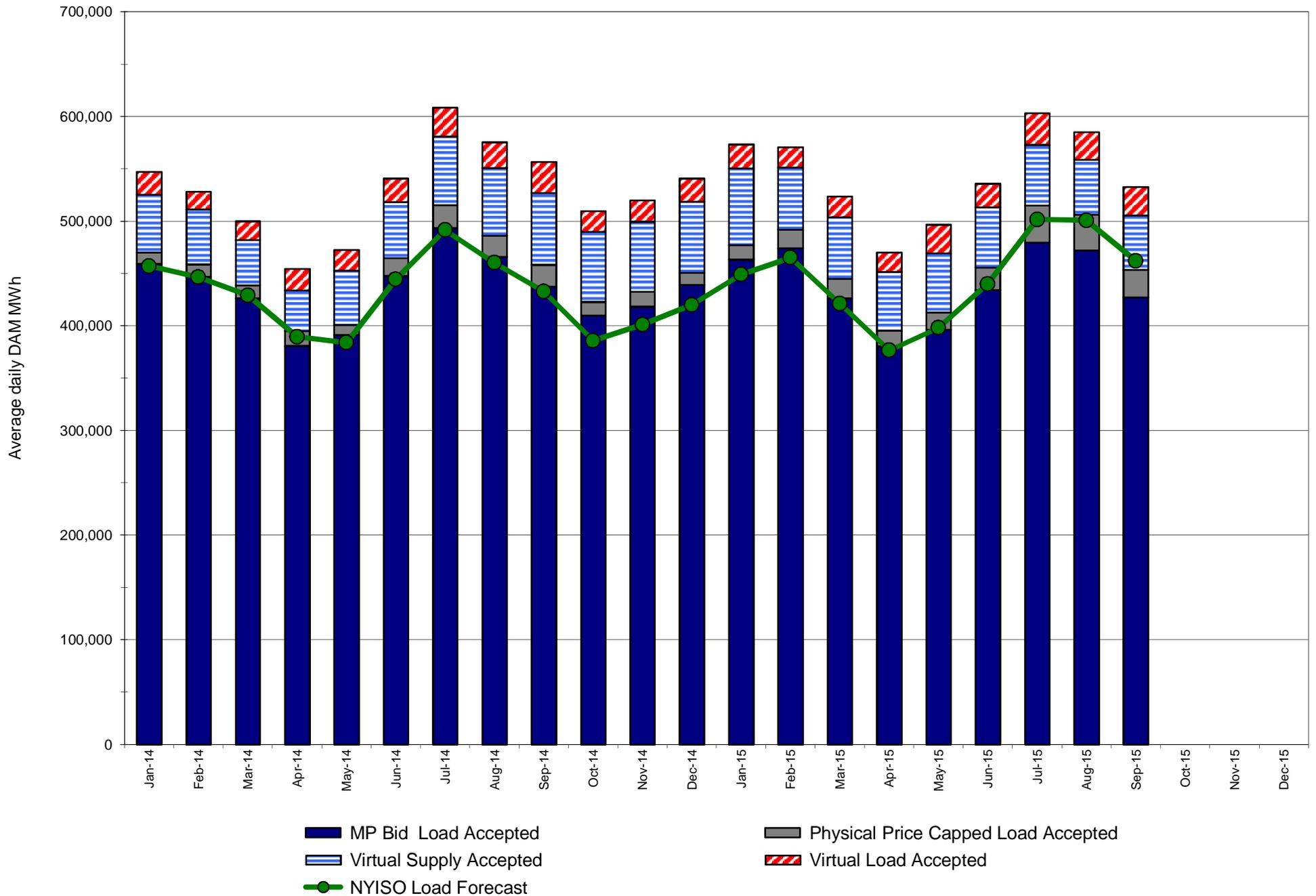
## NYISO In City Energy Mitigation - AMP (NYC Zone) 2014 - 2015 Percentage of committed unit-hours mitigated



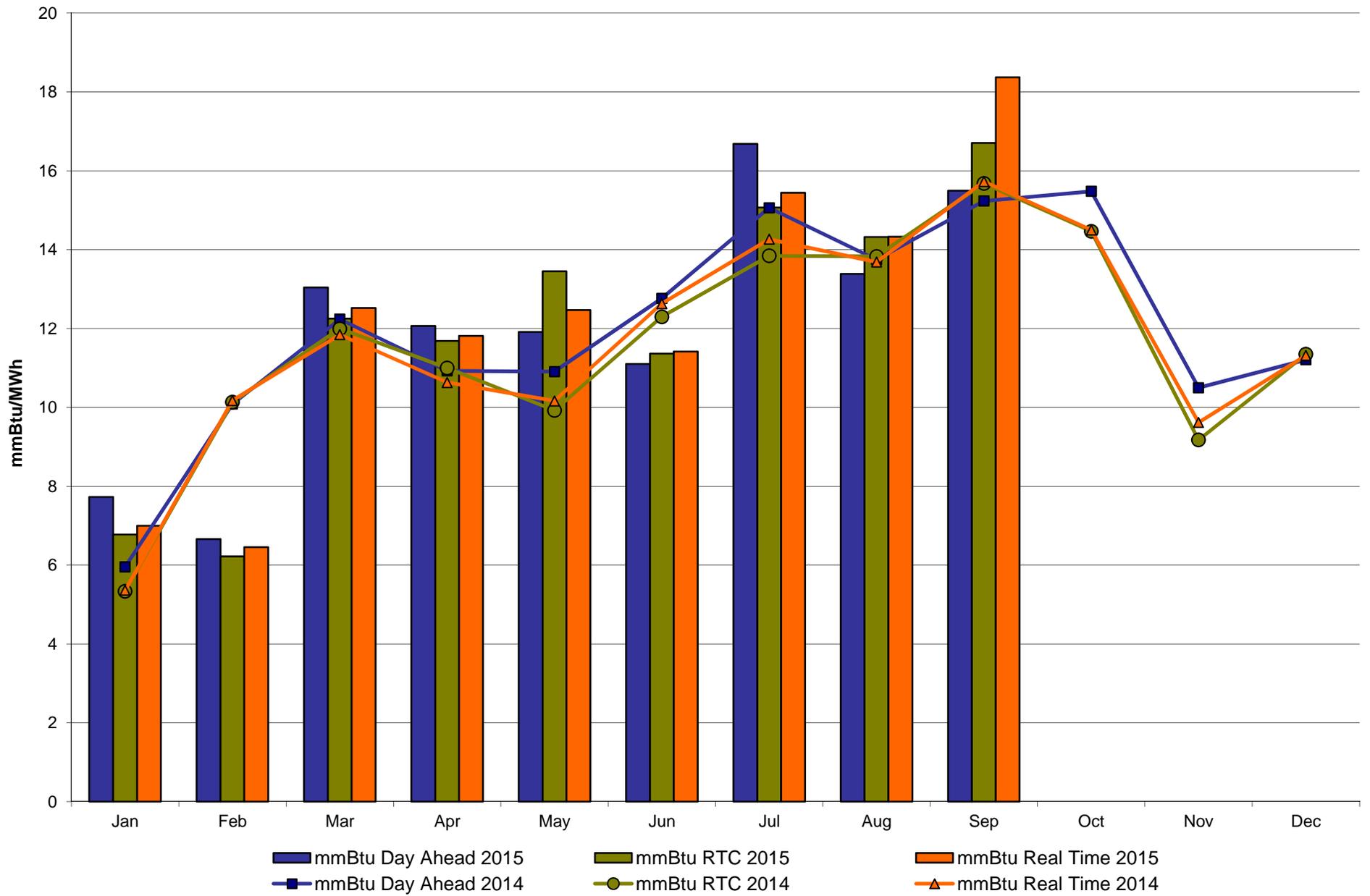
**NYISO In City Energy Mitigation (NYC Zone) 2014 - 2015**  
**Monthly megawatt hours mitigated**



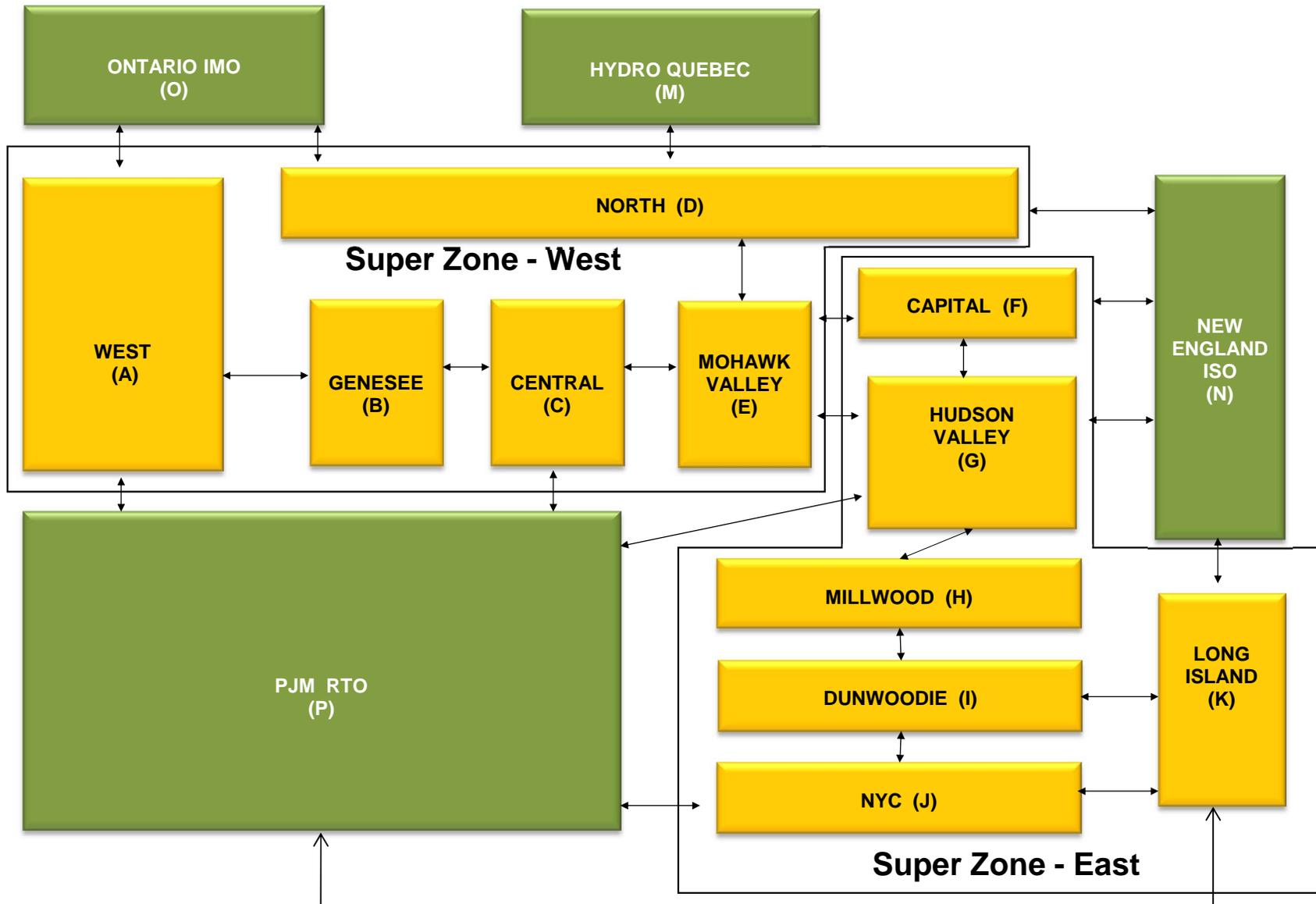
### NYISO Average Daily DAM Load Bid Summary



## Monthly Implied Heat Rate 2014-2015



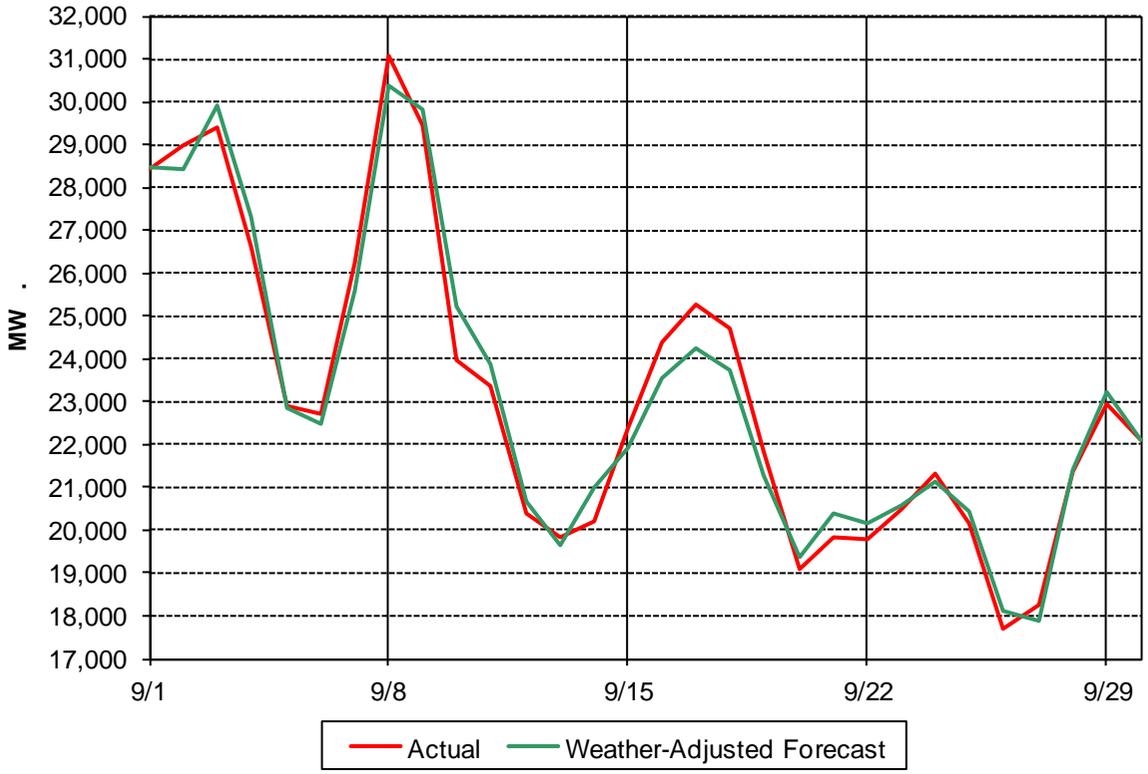
# NYISO LBMP ZONES



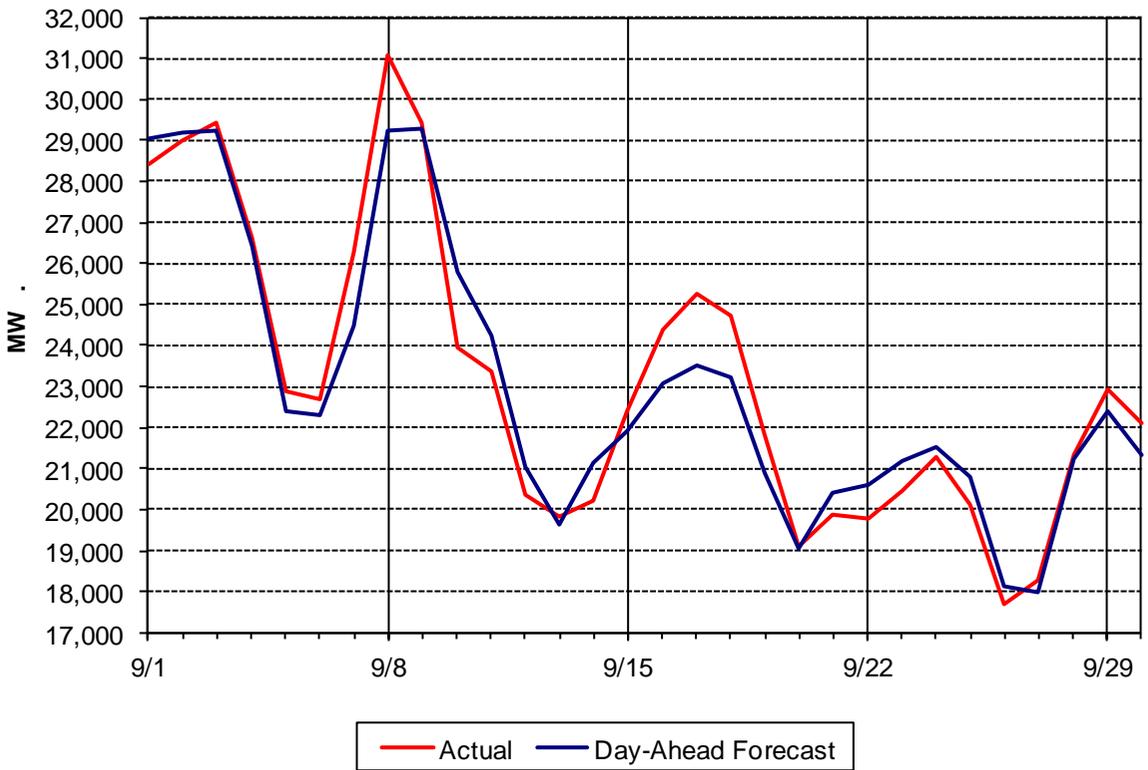
**Billing Codes for Chart 4-C**

<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

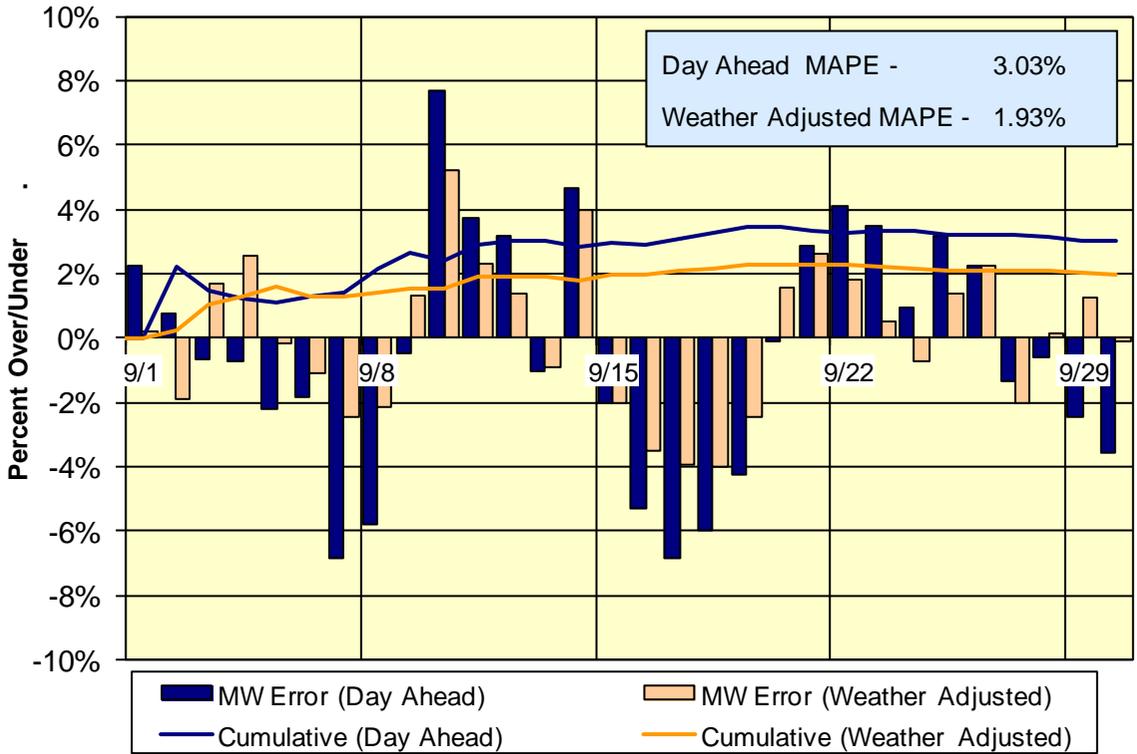
**NYISO Daily Peak Load - September 2015  
Actual vs. Weather-Adjusted Forecast**



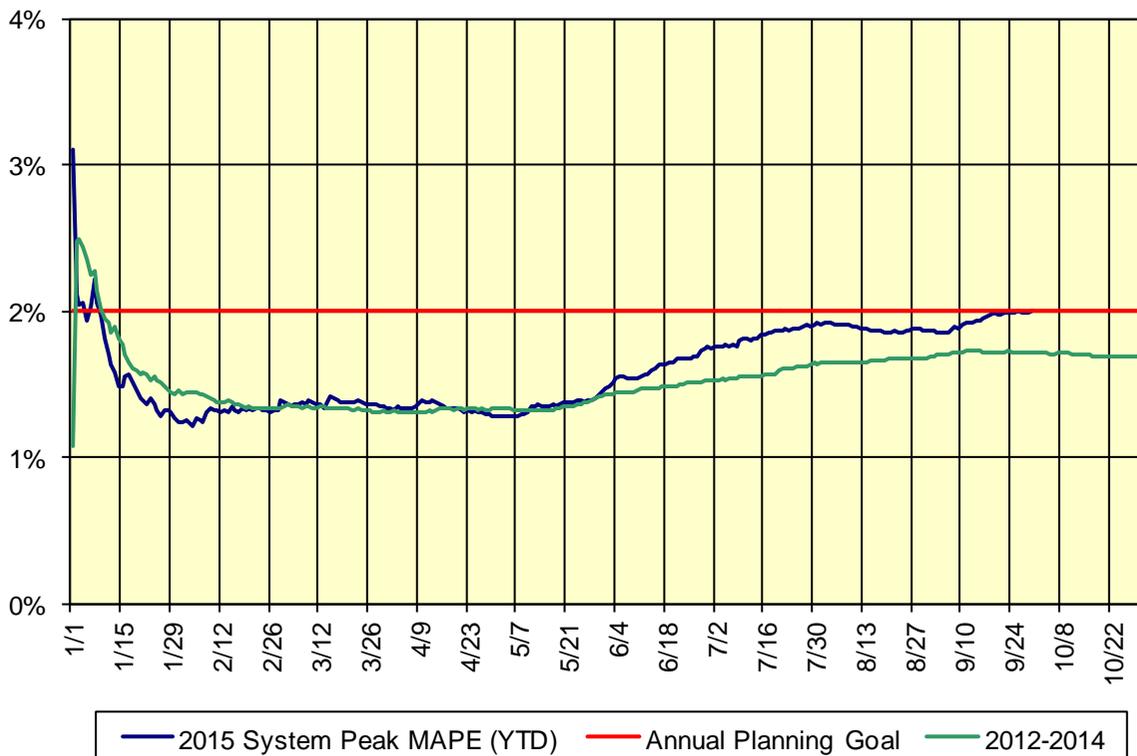
**NYISO Daily Peak Load - September 2015  
Actual vs. Forecast**



### Day Ahead Peak Forecast - September 2015 Percent Error - Actual & Weather Adjusted



### Day-Ahead Forecast Accuracy - Cumulative Performance 2015 Year-to-Date



## Summary Description of Regulatory Filings, Investigations, Rulemakings and Related Orders in NYISO Matters – September 2015

Filing Date	Filing Summary	Docket	Order Date	Order Summary
07/10/2015	Caithness complaint v. NYISO re: alleging NYISO's application of a local reliability rule (i.e., Long Island Guideline) is a violation of its OATT and Order No. 2003	EL15-84-000	09/30/2015	Order granted the complaint stating that the guideline conflicted with NYISO's requirement to offer two separate levels of interconnection service
07/20/2015	NYISO compliance filing re: waiver of certain NAESB WEQ Version 003 Business Practice Standards	ER15-2226-000	09/04/2015	Letter order accepted compliance filing effective 05/15/2015
07/31/2015	NYISO 205 filing re: change to the timeframe for requiring credit support for External Transactions	ER15-2344-000	09/17/2015	Letter order accepted the filing effective 10/28/2015, as requested
07/31/2015	NYISO 205 filing re: to create an independent mechanism for recovery of the annual FERC fee	ER15-2345-000	09/17/2015	Letter order accepted the filing effective 01/01/2016, as requested
07/31/2015	NYISO 205 filing re: change to the ICAP Spot Market Auction credit requirement to more accurately reflect the NYISO's credit exposure	ER15-2349-000	09/17/2015	Letter order accepted the filing effective 10/28/2015, as requested
08/07/2015	NYISO filing re: an executed wires to wires interconnection agreement among NYISO, NYSEG, and Trans-Allegheny Interstate Line Company (TrAILCo)	ER15-2398-000	09/18/2015	Letter order accepted the filing effective 08/08/2015, as requested
09/08/2015	NYISO filing of comments re: the AWEA petition for rulemaking to revise the FERC <i>pro forma</i> LGIP and LGIA	RM15-21-000		
09/08/2015	IRC filing of comments re: the AWEA petition for rulemaking to revise the FERC <i>pro forma</i> LGIP and LGIA	RM15-21-000		
09/08/2015	NYISO, MISO, CAISO, and PJM filing of joint comments re: the AWEA petition for rulemaking to revise the FERC <i>pro forma</i> LGIP and LGIA	RM15-21-000		
09/10/2015	NYISO 205 filing re: tariff revisions to implement external coordinated transaction scheduling with ISO New England	ER15-2640-000		
09/14/2015	NYISO confidential PSC filing re: three-month reliability commitment data report	PSC Matter No. 10-02007		
09/18/2015	NYISO filing re: 10 <sup>th</sup> informational report on efforts to develop rules addressing compensation to generators that are determined to be needed for reliability	ER10-2220-000		
09/21/2015	ISO/RTO Council filing re: comments on the revised critical infrastructure protection reliability standards	RM15-14-000		

09/22/2015	NYISO filing re: amendment to SGIA No. 2219 among NYISO, National Grid and Monroe County	ER15-2285-001		
09/24/2015	NYISO letter filing to the NYPSC re: potential reliability impacts on the NYS transmission system due to the retirement of NRG's Huntley unit and the mothballing of the Dunkirk facility	PSC Case Nos. 15-E-0505 12-E-0577 12-E-0136		
09/30/2015	NYISO compliance filing re: clarifying language to a sentence in the competitive entry exemption provisions under the buyer side capacity market power mitigation measures	ER15-1498-001		