



Monthly Report

November 2015

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Operations Performance Metrics Monthly Report



November 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 December 8, 2015.

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November 2015 Operations Performance Highlights

- Peak load of 21,086 MW occurred on 11/30/2015 HB 17
- All-time winter capability period peak load of 25,738 MW occurred on 1/7/2014 HB 18
- 0 hours of Thunder Storm Alerts were declared
- 0 hours of NERC TLR level 3 curtailment
- The automated Fuel Availability Self Reporting web application was launched this month
- The Comprehensive Shortage Pricing project was implemented on November 4th. This project established the SENY reserve region, made changes to NYCA and LI requirements, and updated the demand curve values.
- The following table identifies the estimated production cost savings associated with the Broader Regional Market initiatives.

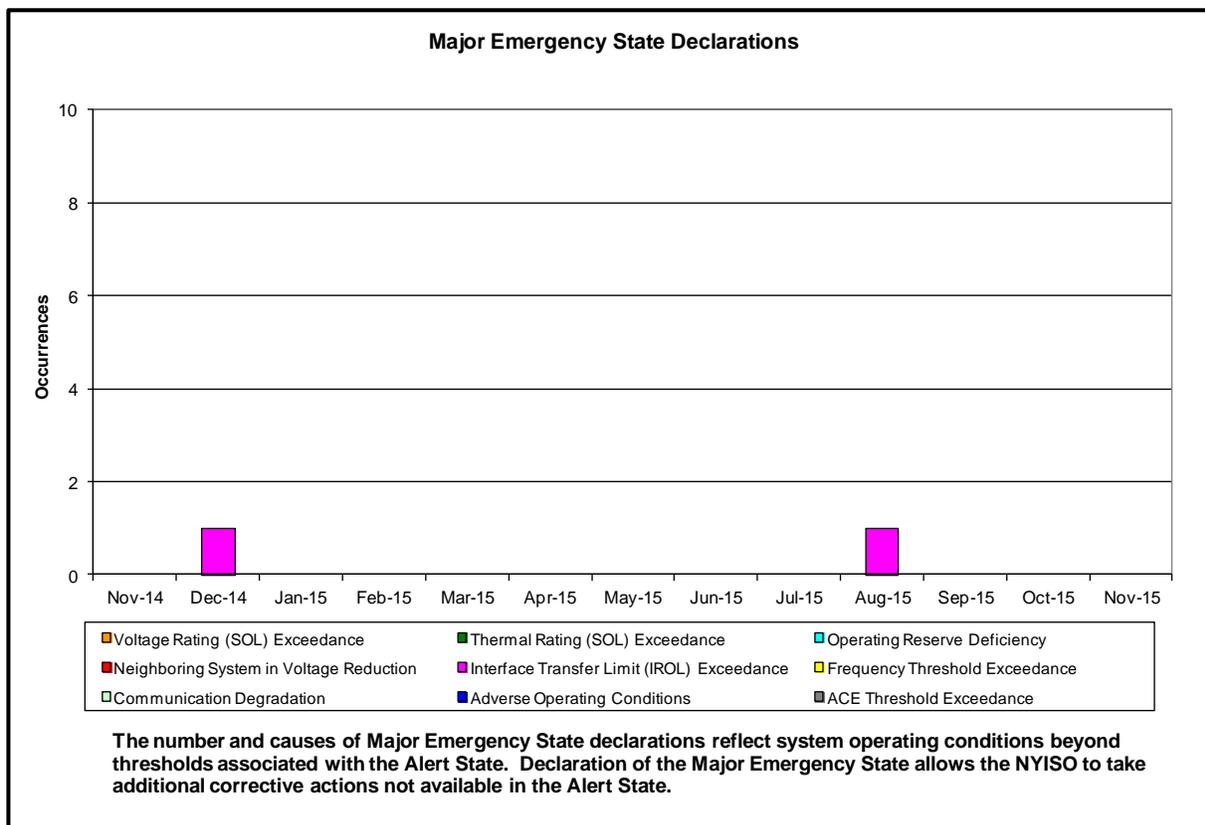
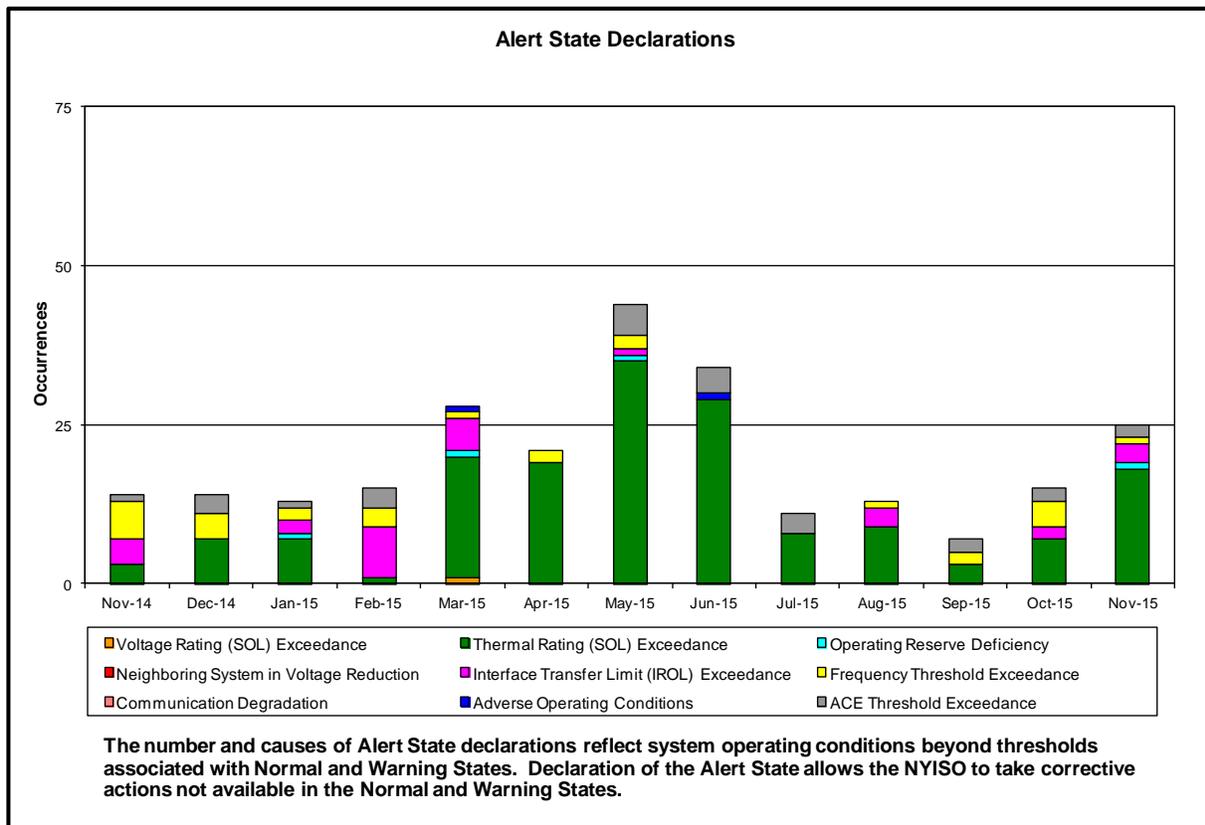
	Current Month Value (\$M)	Year-to-Date Value (\$M)
Regional Congestion Coordination	\$3.04	\$14.71
Regional PJM-NY RT Scheduling	(\$0.15)	\$2.43
Total	\$2.89	\$17.14

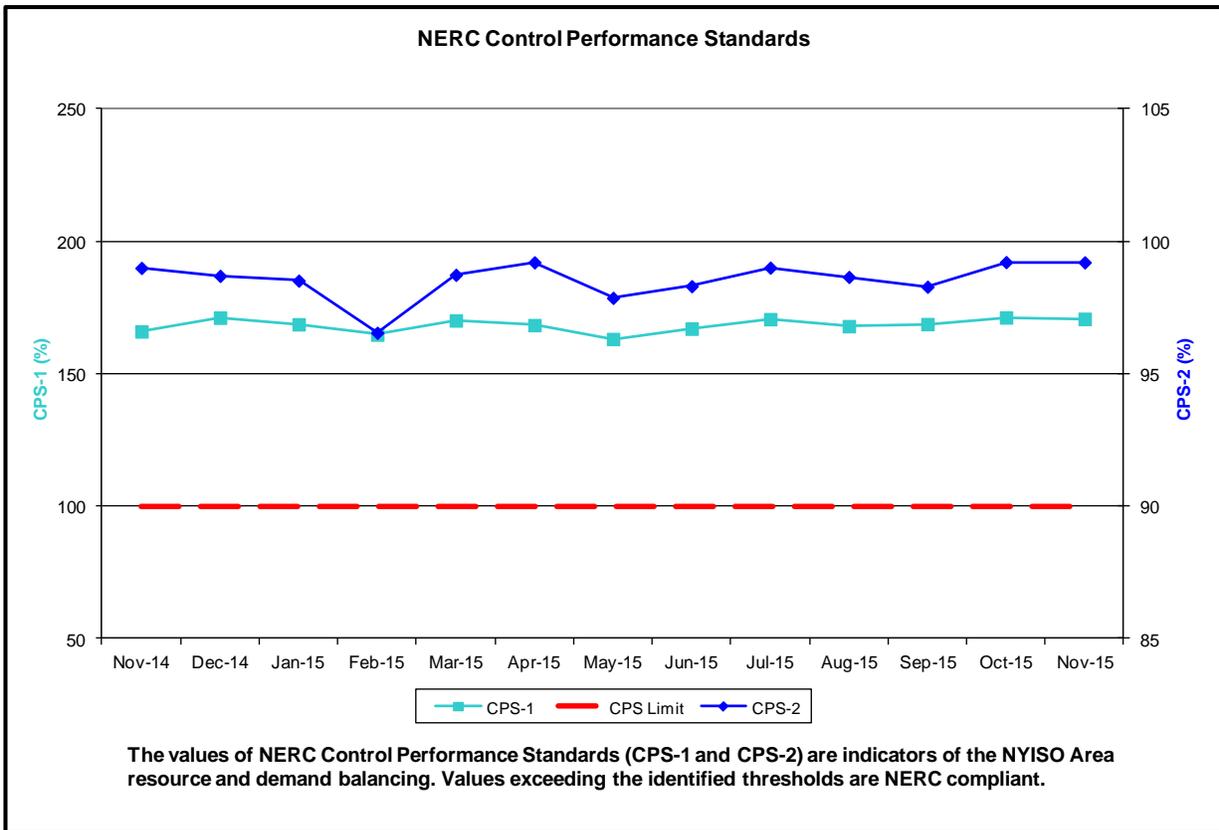
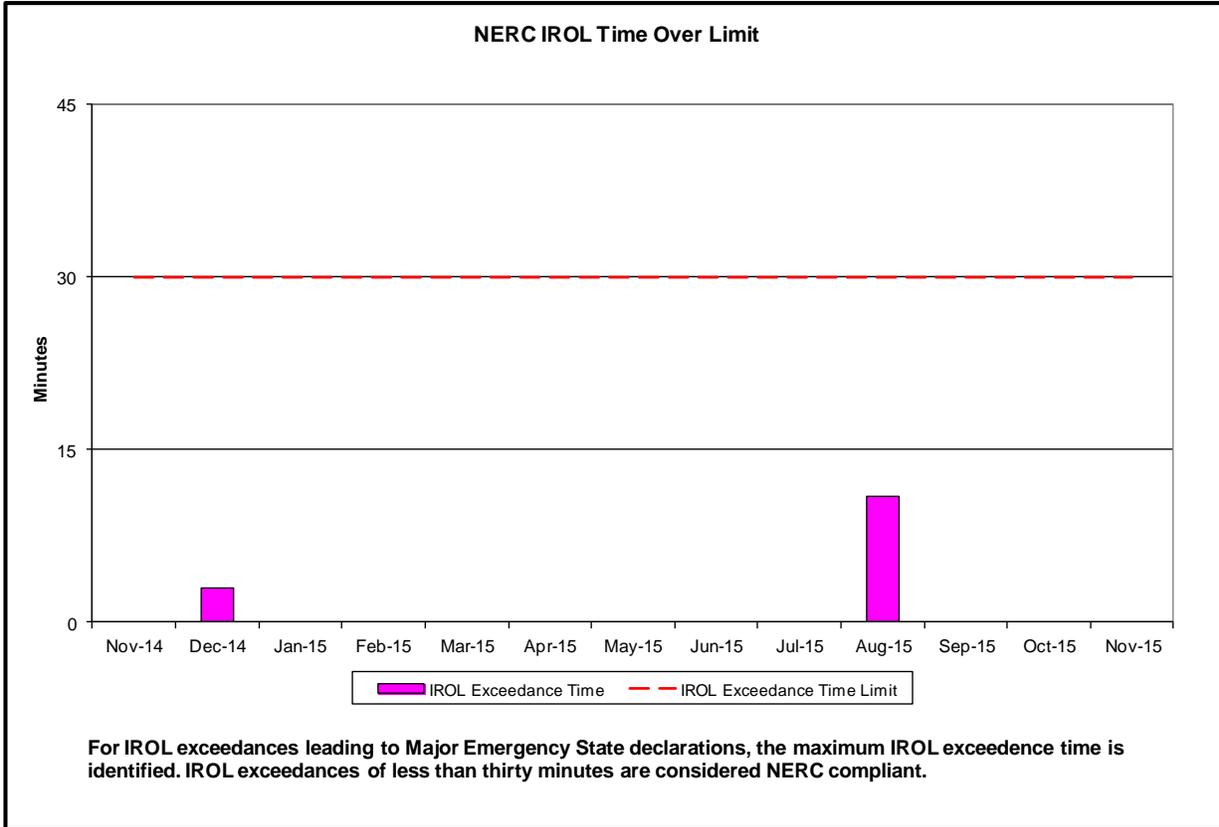
- Statewide uplift cost monthly average was \$0.21/MWh
- The following table identifies the Monthly ICAP spot market prices by locality and changes from the end of the prior Winter Capability period.

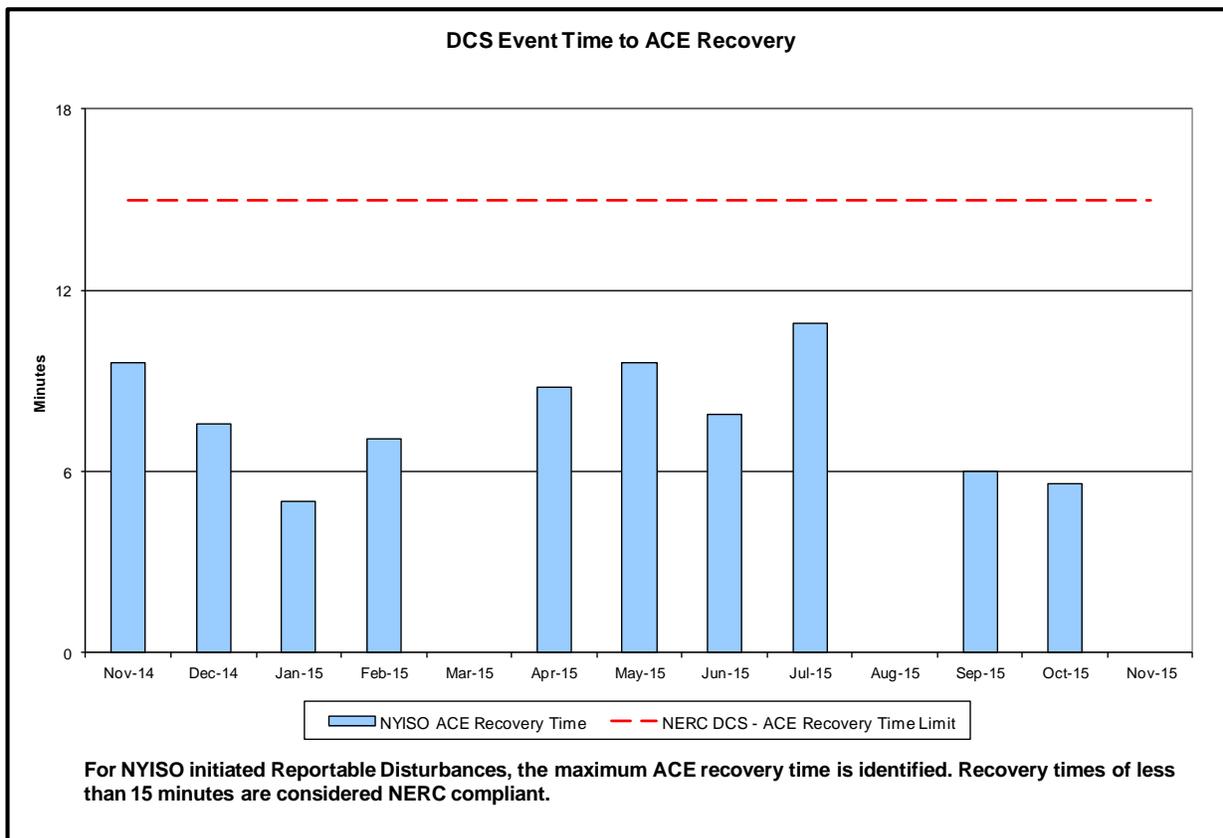
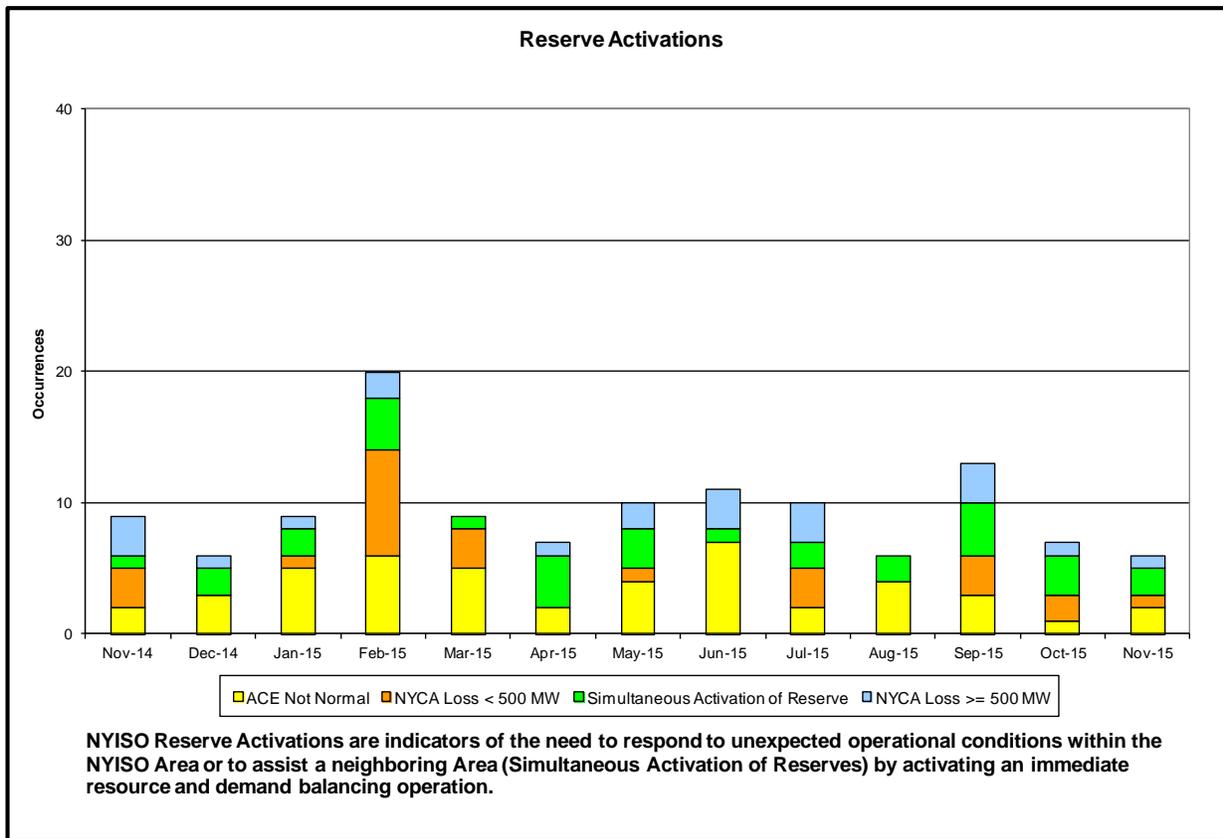
Spot Auction Price Results	NYCA	Lower Hudson Valley Zones	New York City Zone	Long Island Zone
December 2015 Spot Price	\$1.28	\$3.48	\$6.29	\$1.85
November 2015 Spot Price	\$0.46	\$3.46	\$6.36	\$1.82
Delta	\$0.82	\$0.02	(\$0.07)	\$0.03

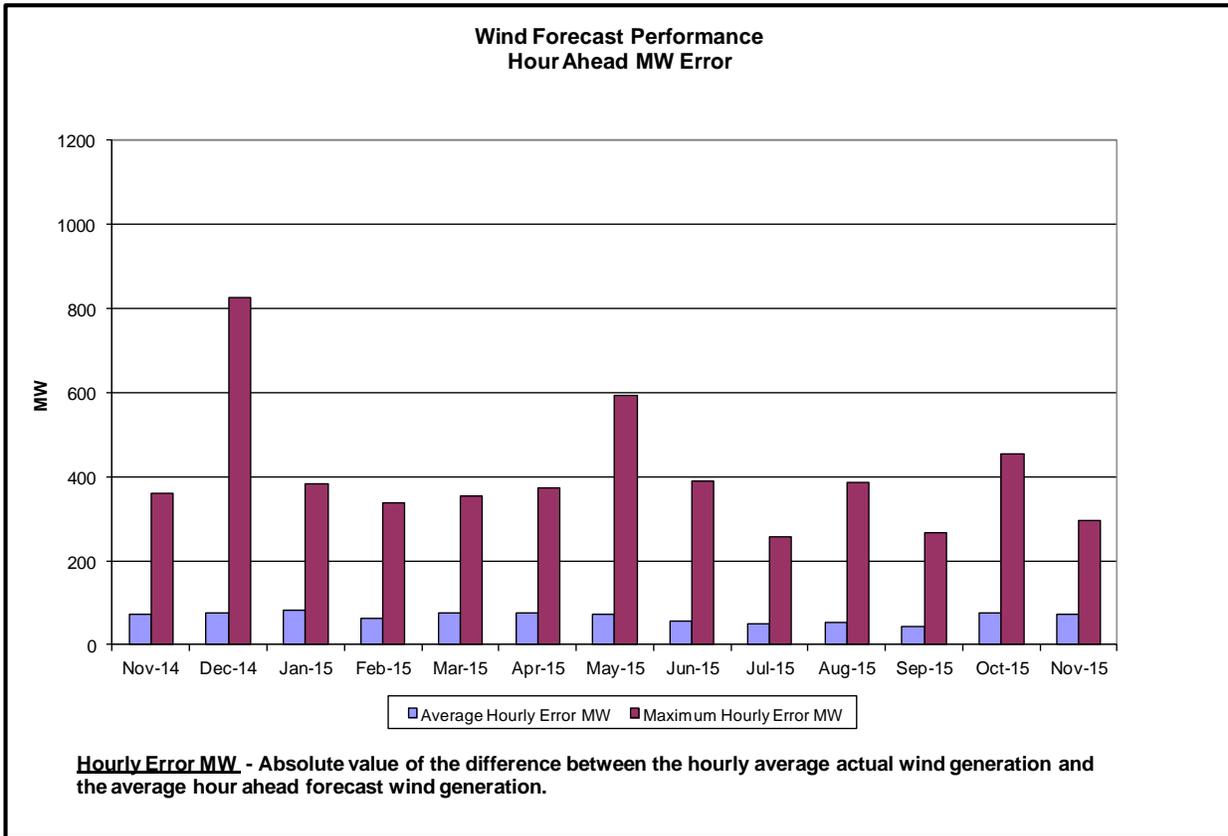
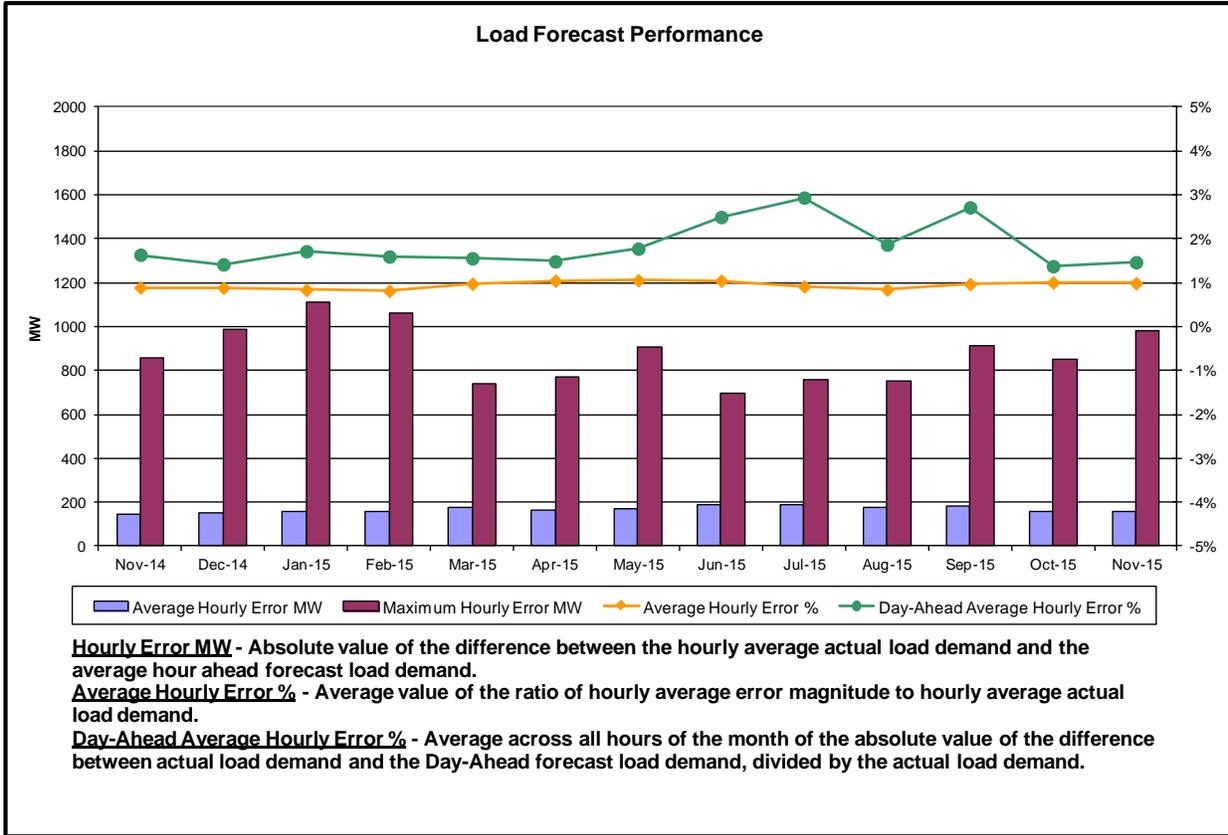
- NYCA - Price change is due to fewer Unsold MW, and a reduction in Net Imports, primarily from the HQ interface.

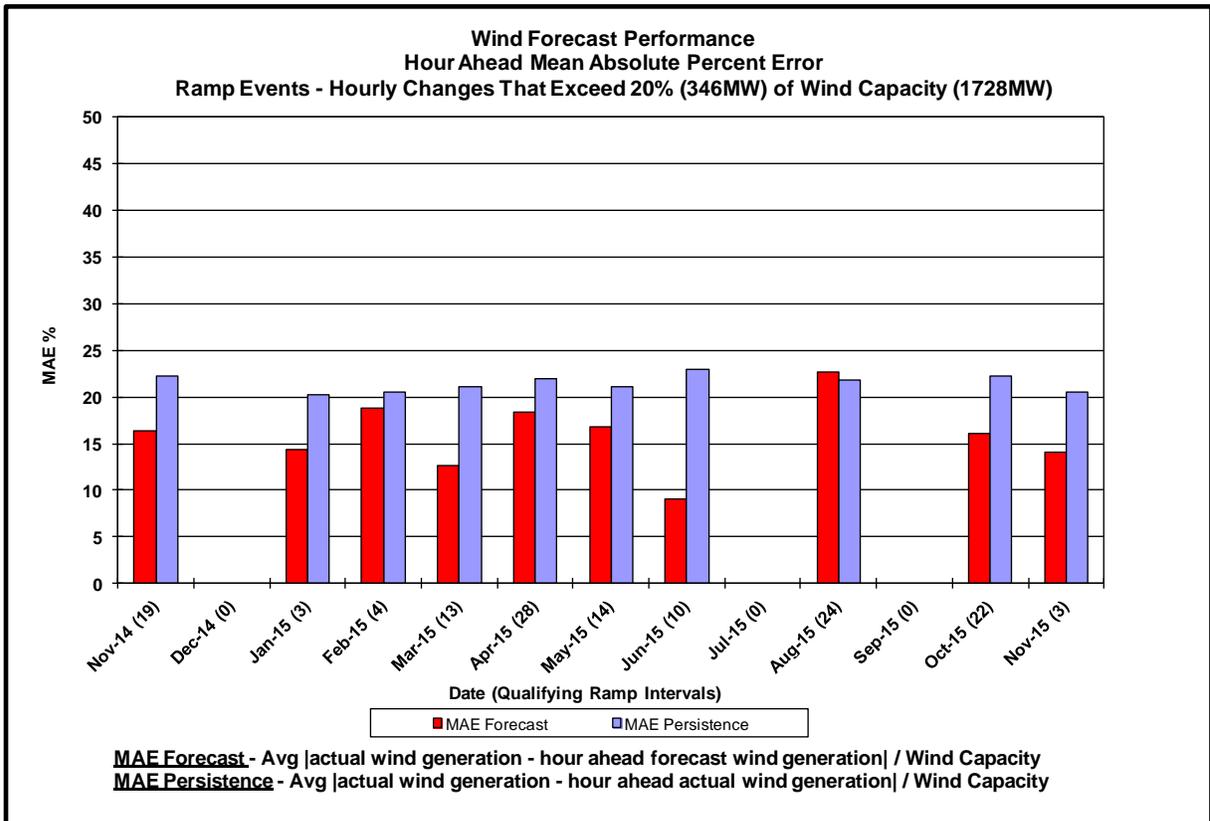
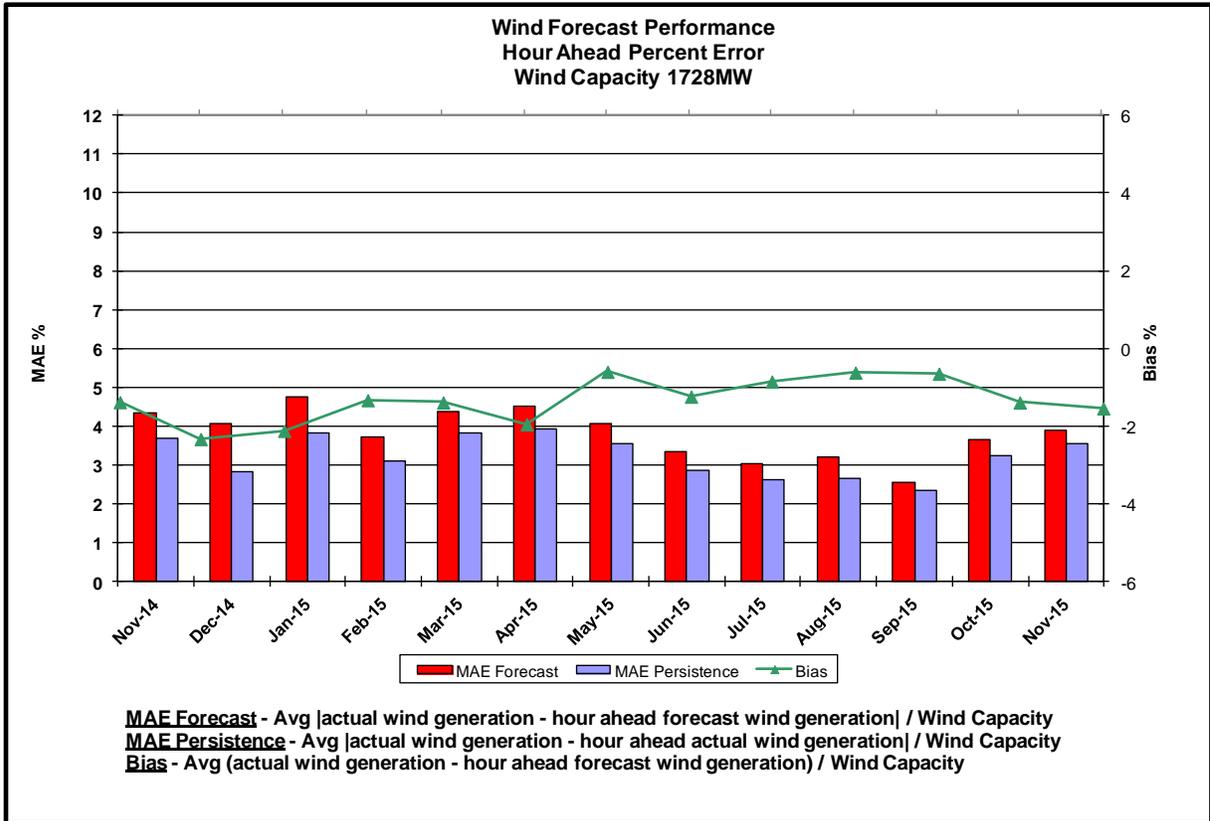
Reliability Performance Metrics

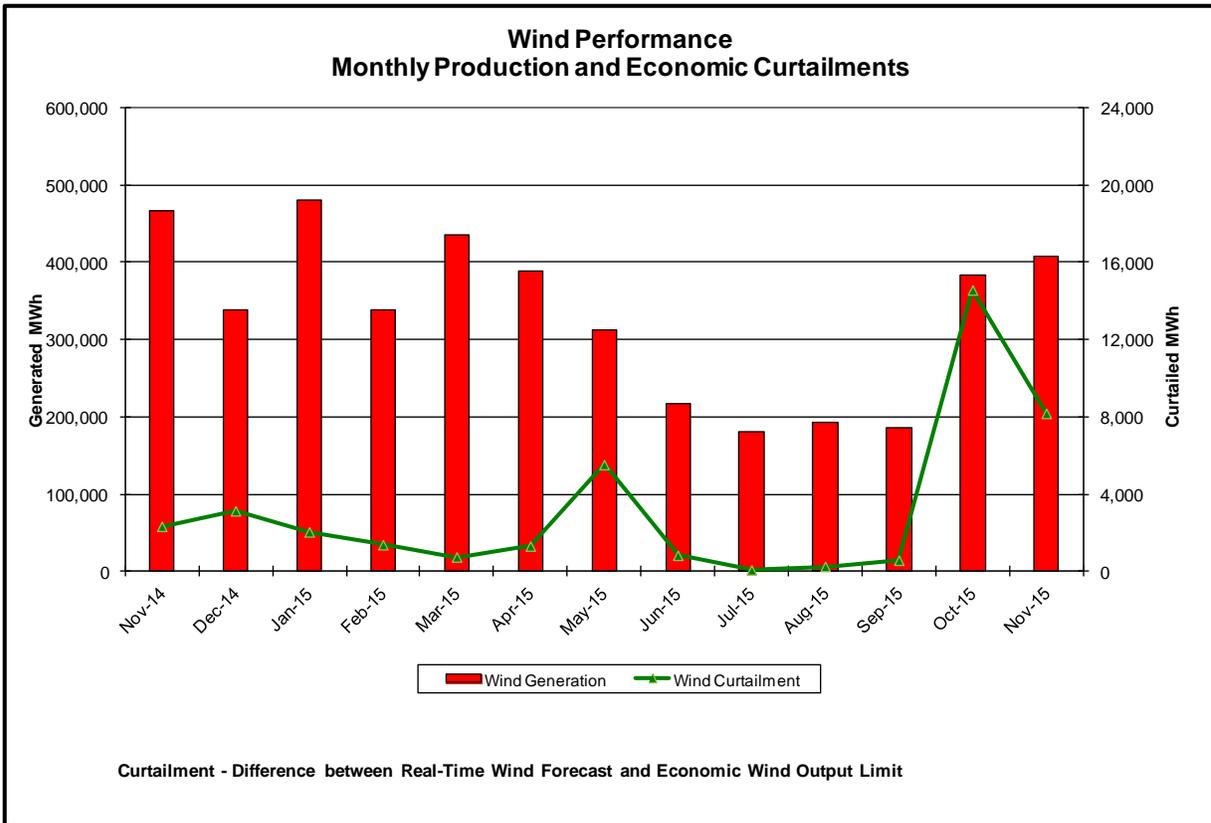
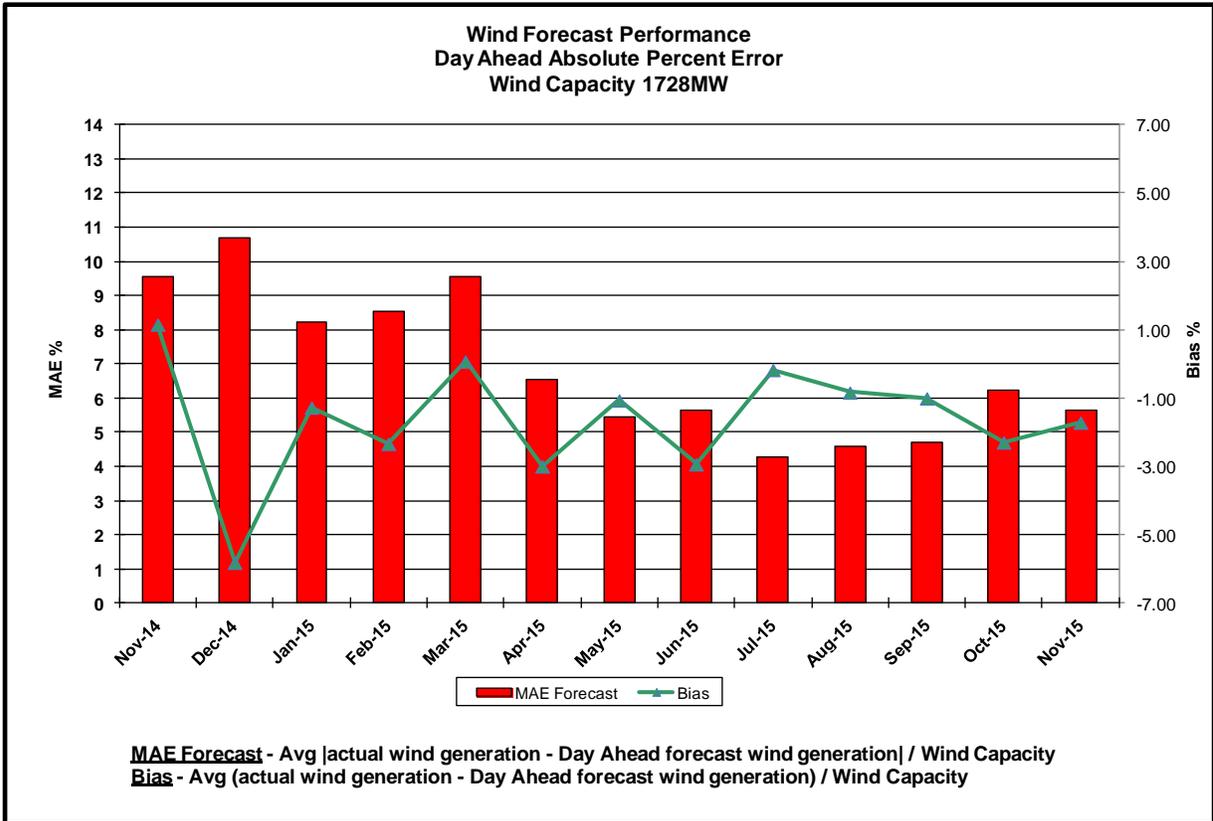


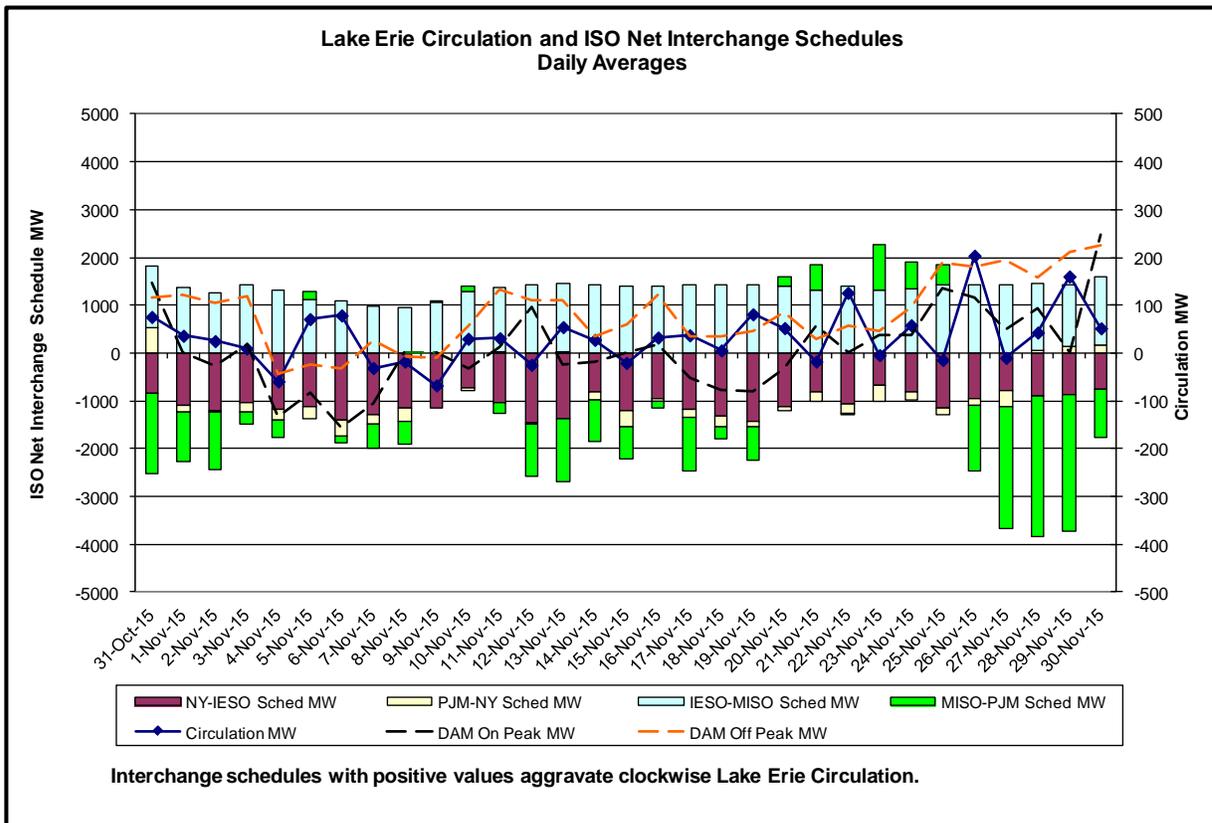
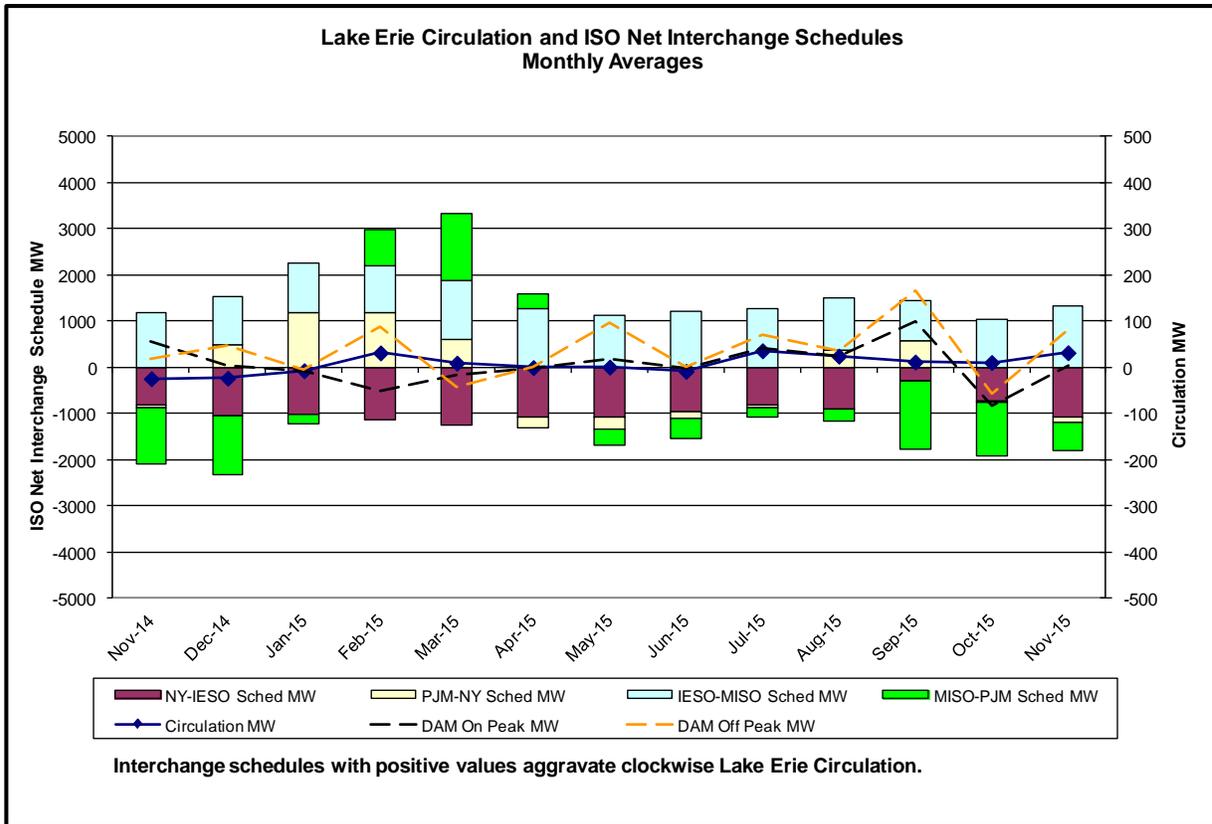




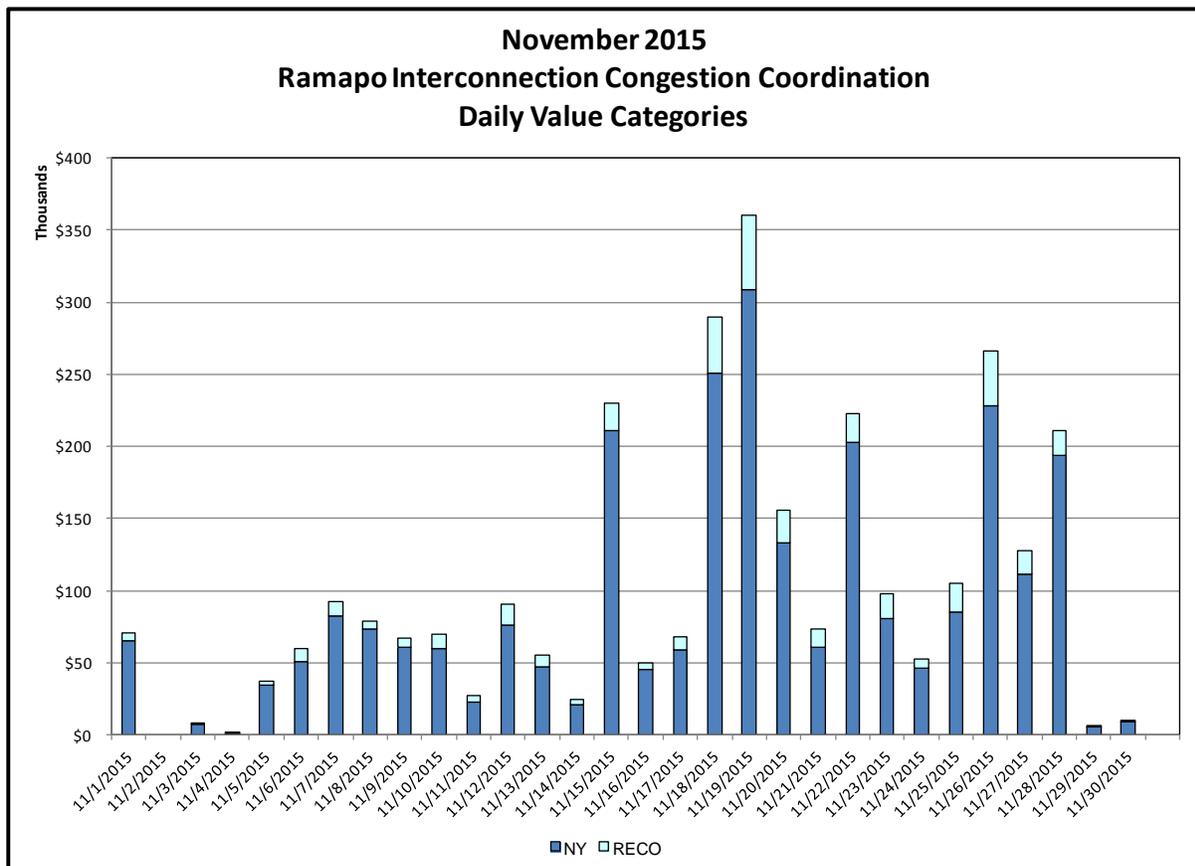
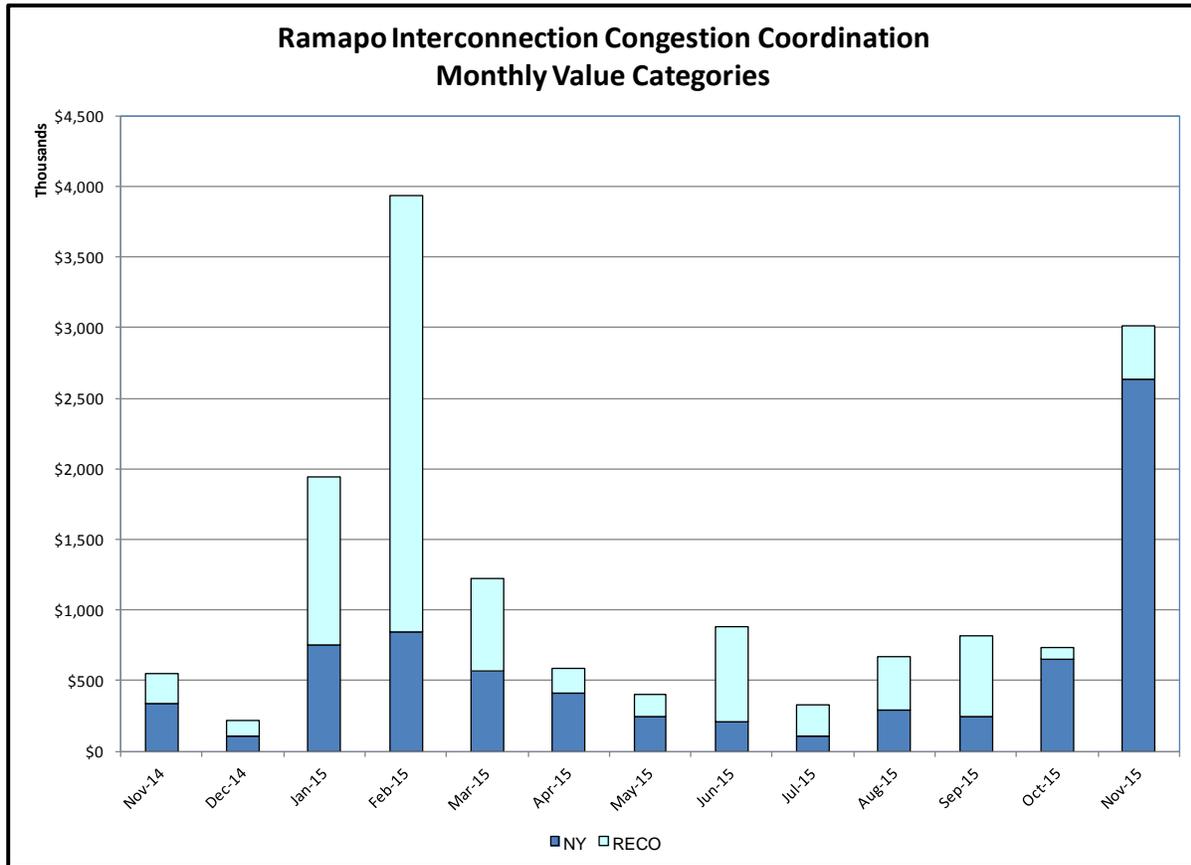






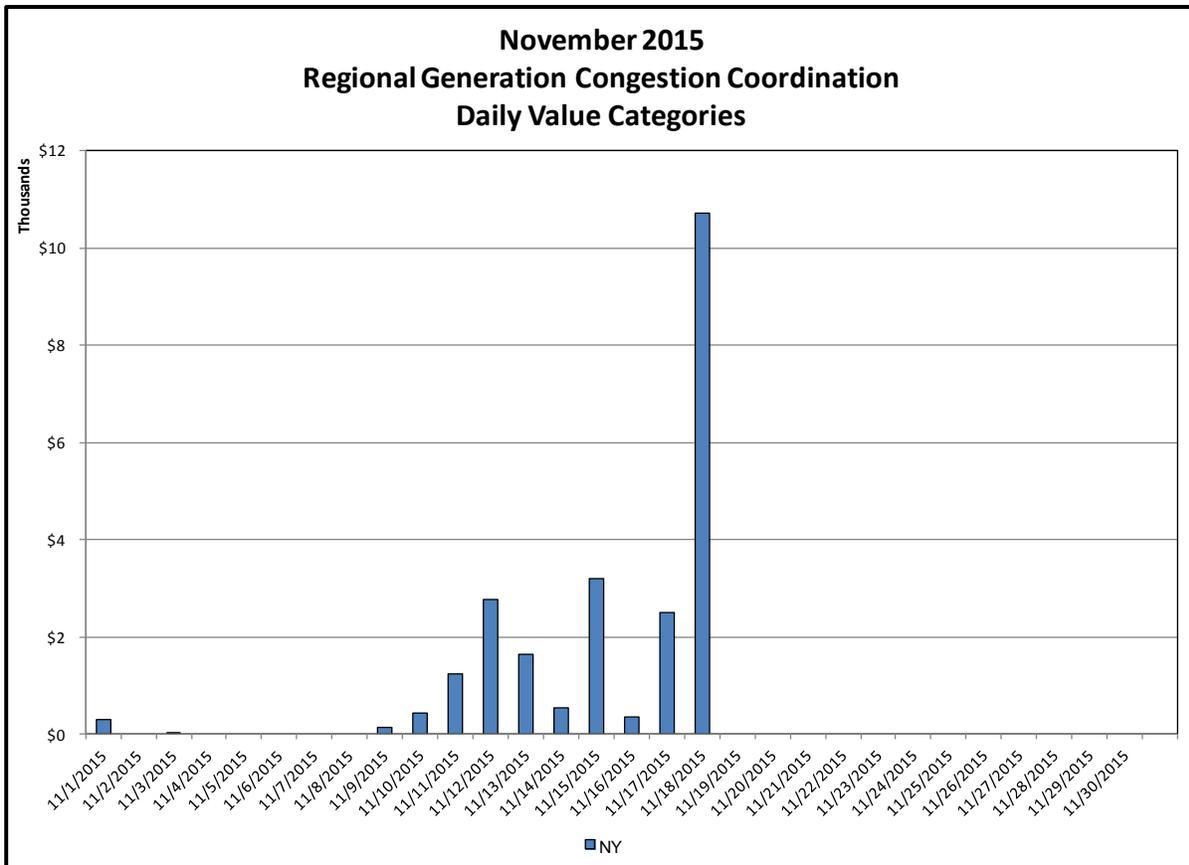
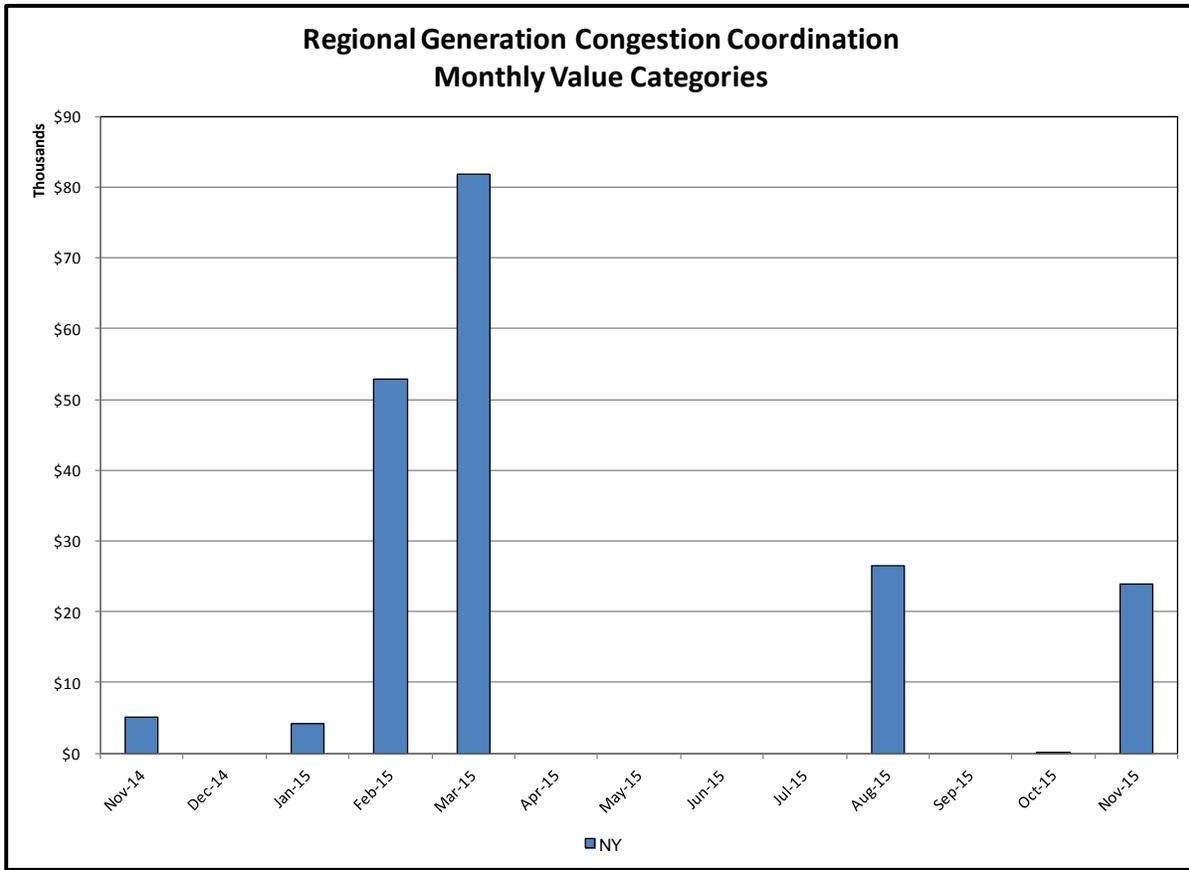


Broader Regional Market Performance Metrics



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.



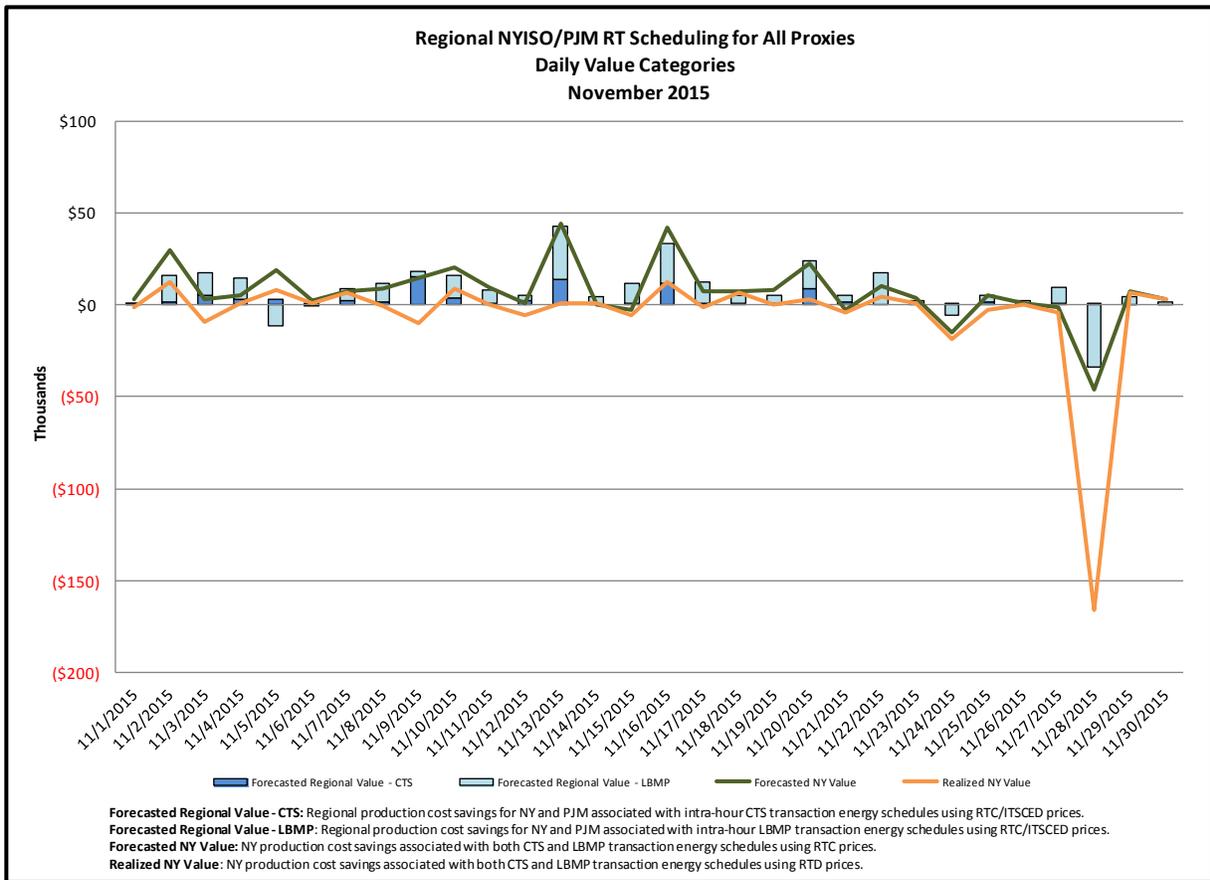
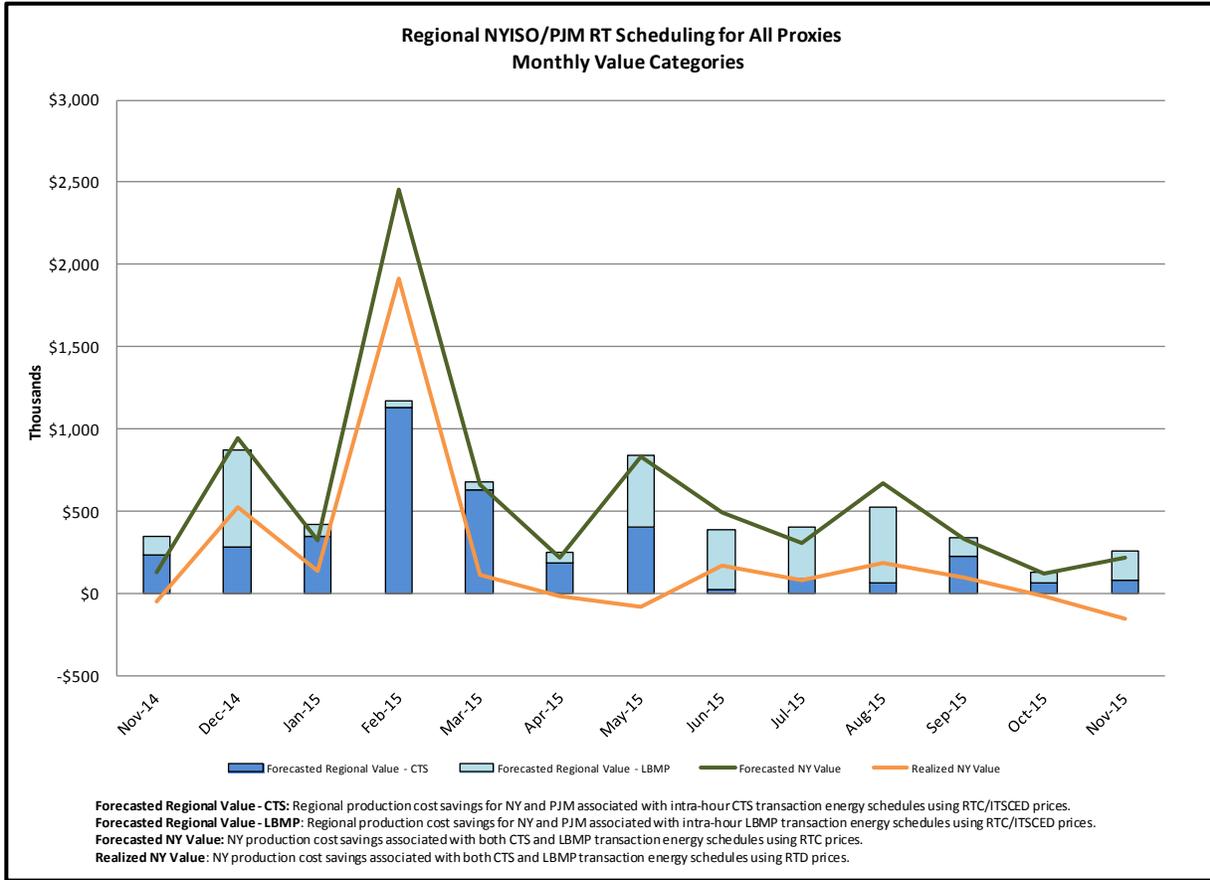
Regional Generation Congestion Coordination

Category

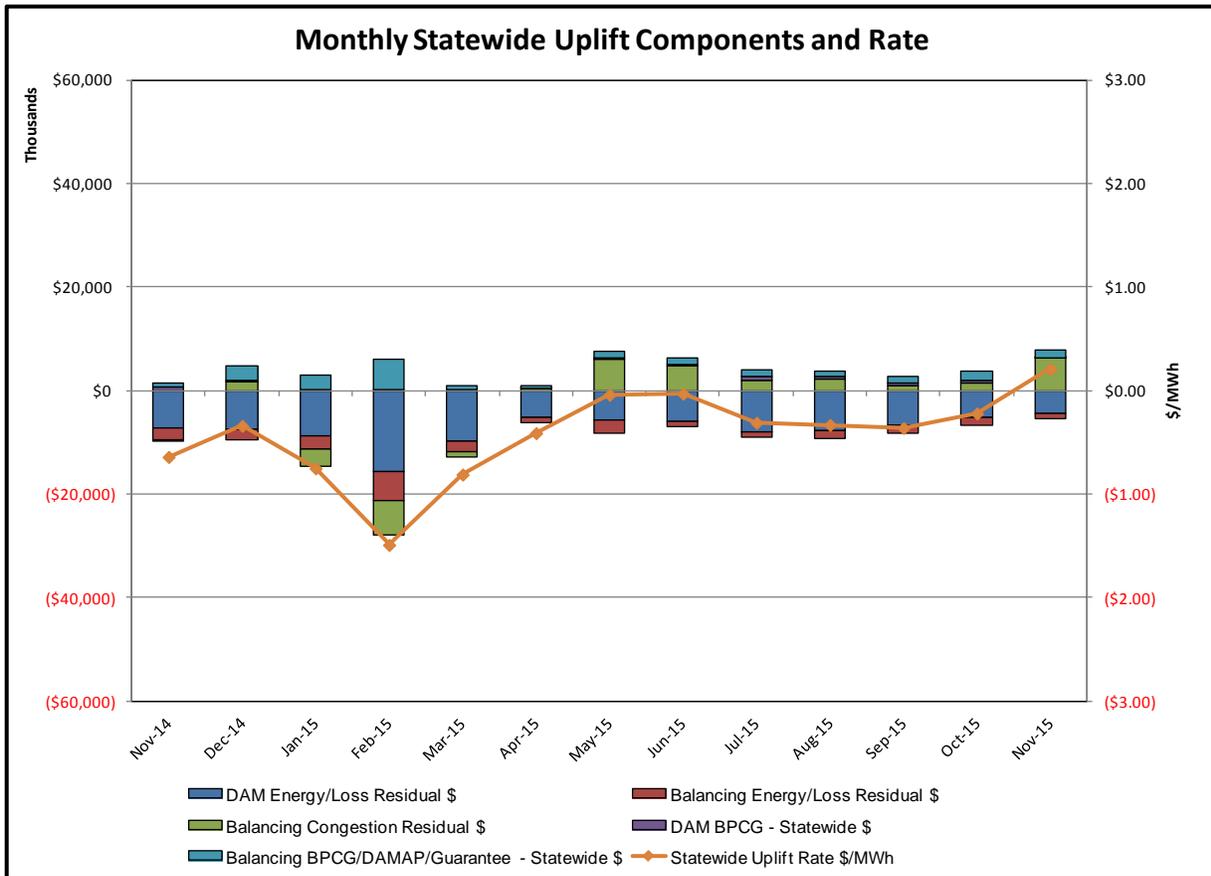
NY

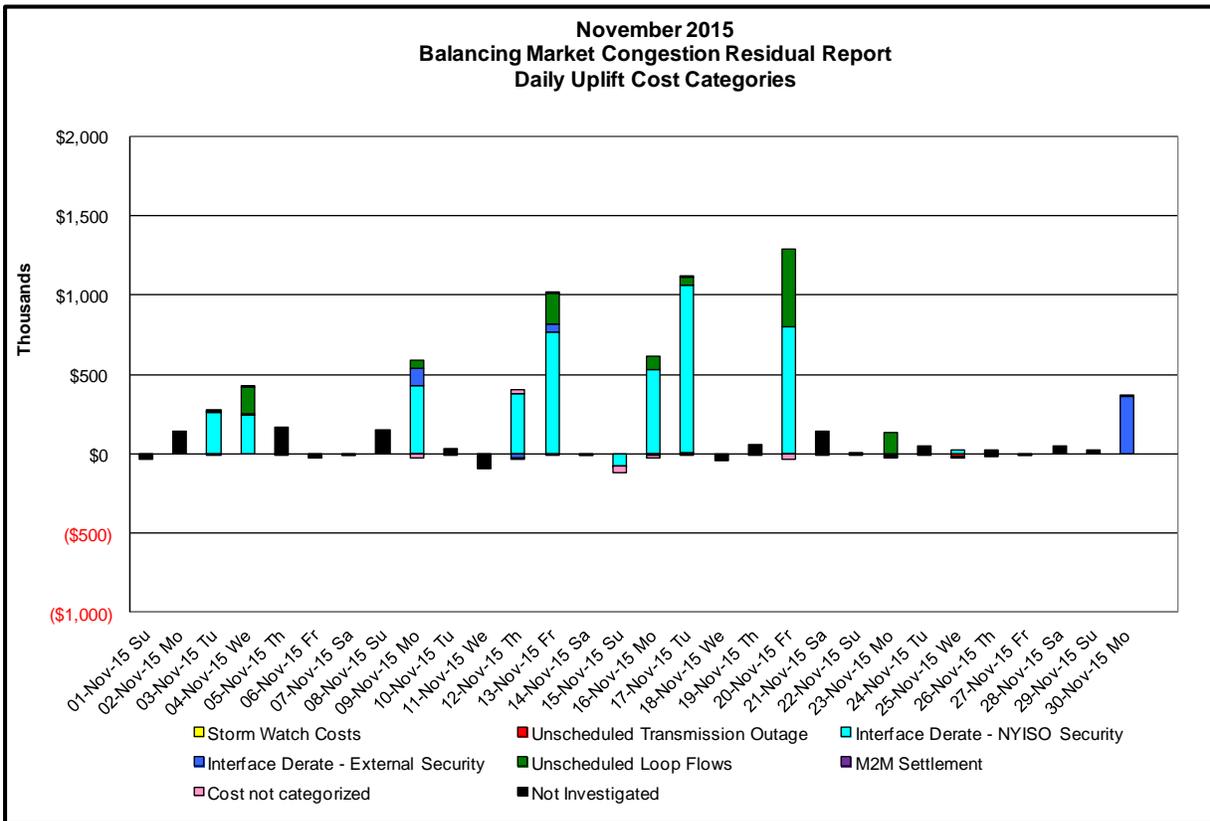
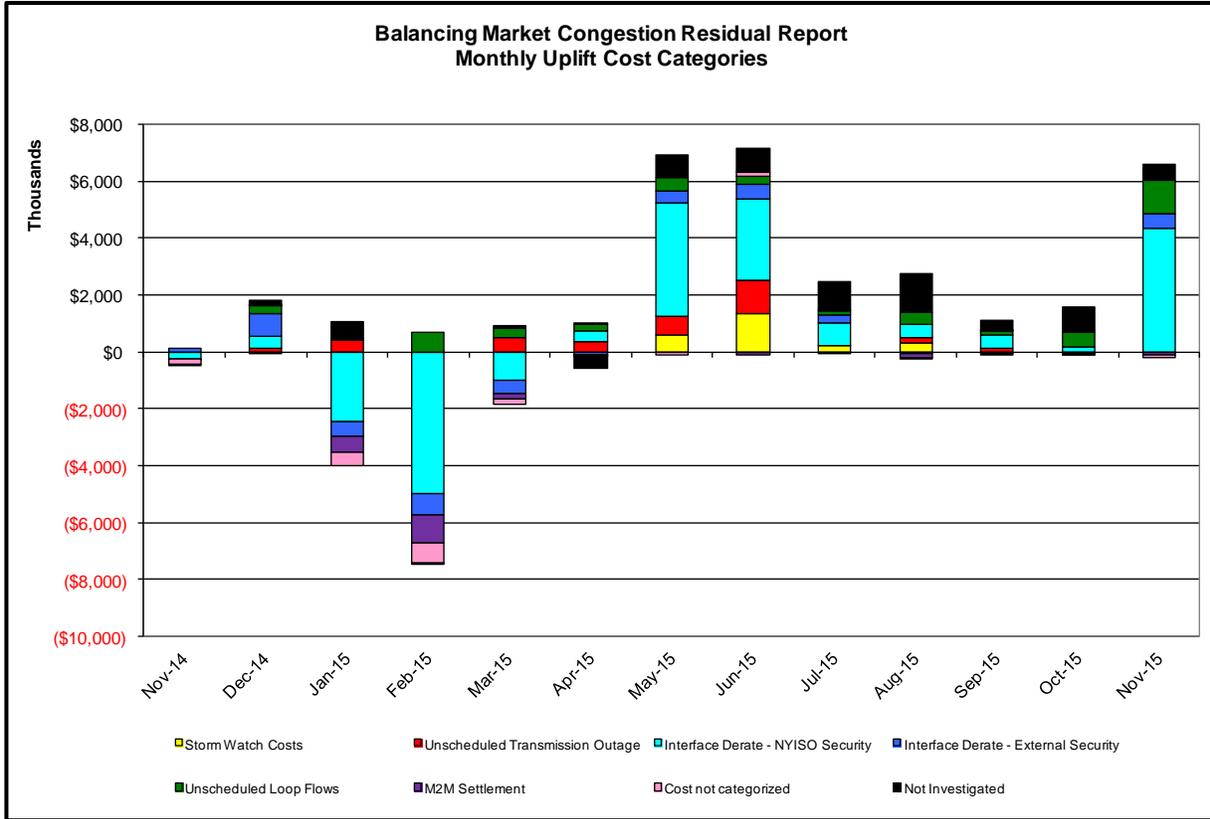
Description

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 November: 3,4,9,12,13,15,16,17,20,23,30

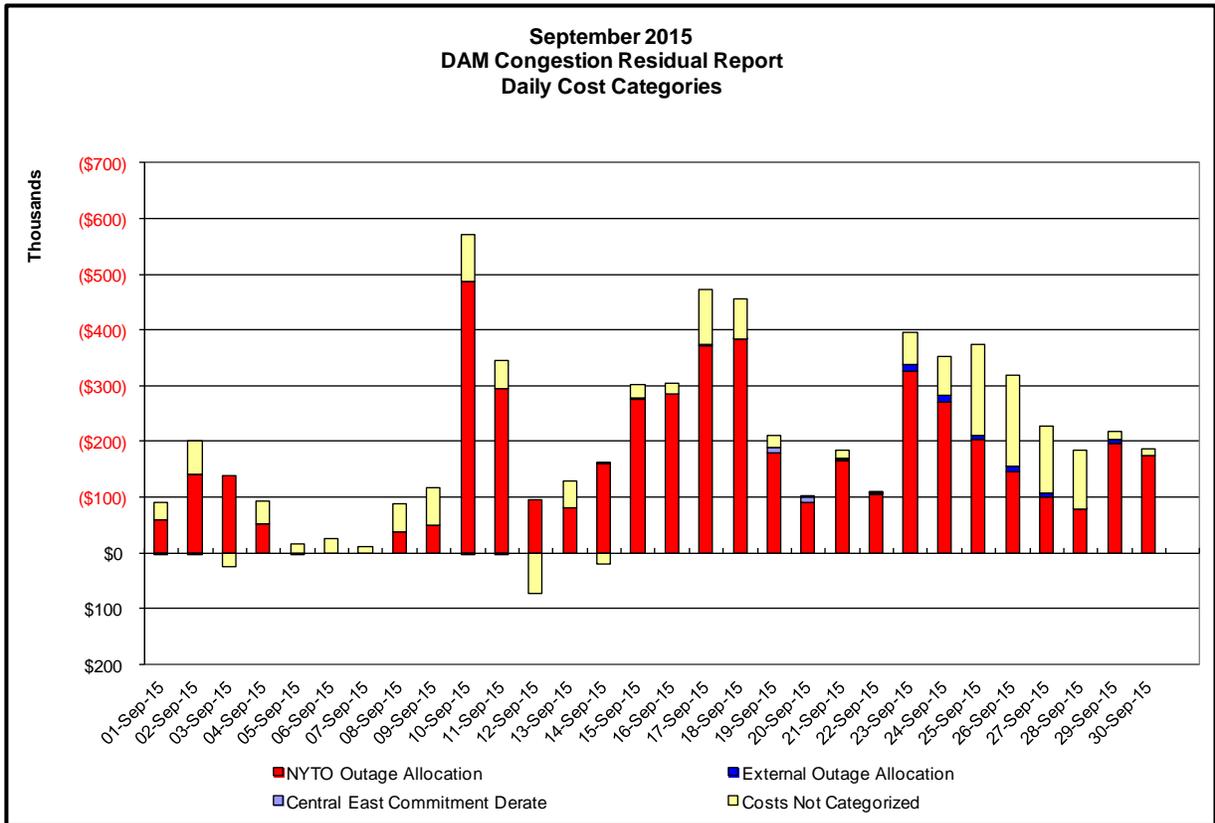
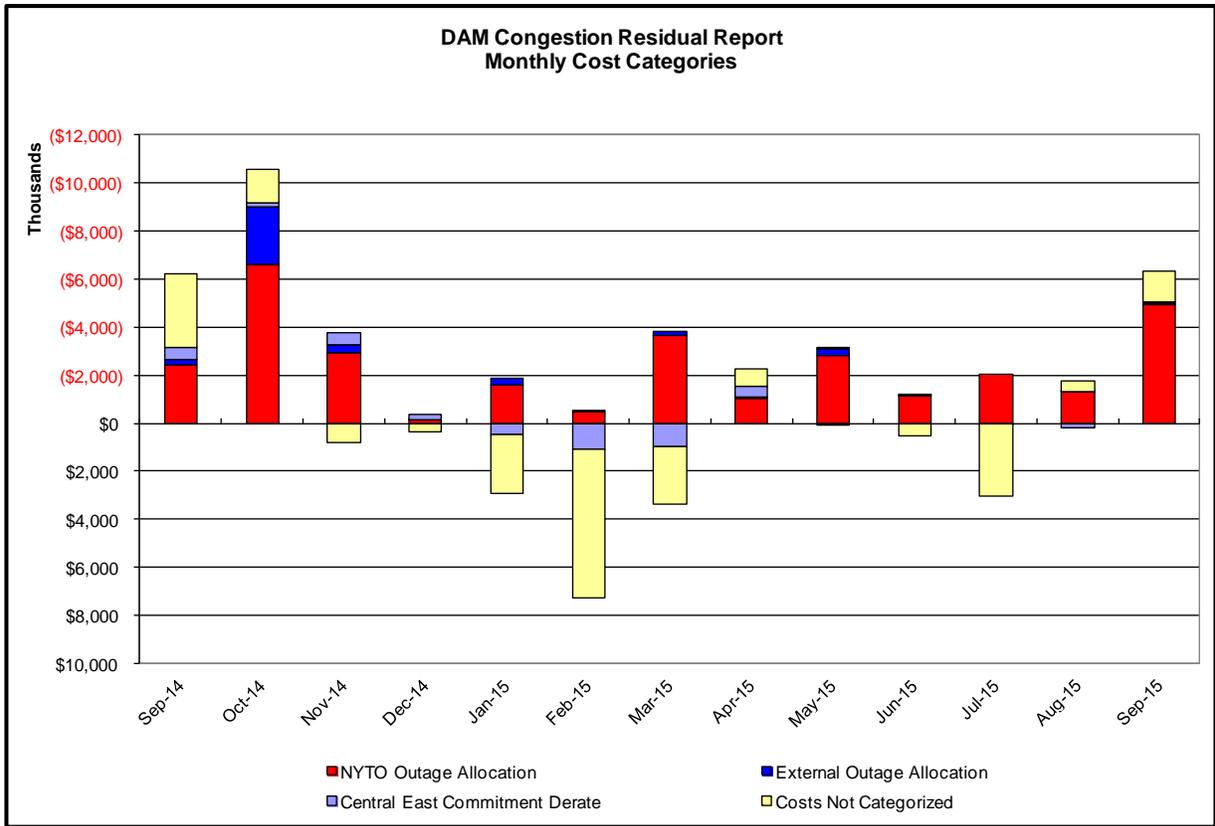
Event	Date (yyyymmdd)	Hours	Description
	11/3/2015	17-19	Derate Astoria East-Hell Gate East 138kV (#34052)
	11/3/2015	19	Derate Dunwoodie-Shore Road 345kV (#Y50)
	11/3/2015	18	Derate Dunwoodie-Shore Road 345kV (#Y50) for I/o SCB:SPBK(RNS2):Y49 & M29
	11/3/2015	17-19	Derate Farragut-Hudson Avenue 138kV (#32077)
	11/3/2015	17-19	Derate Packard-Sawyer 230kV (#78) for I/o Packard-Sawyer 230kV (#77)
	11/3/2015	18	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Packard-Sawyer 230kV (#78)
	11/4/2015	10	Derate Dunwoodie-Shore Road 345kV (#Y50) for I/o SCB:SPBK(RNS2):Y49 & M29
	11/4/2015	10	Derate Huntley-Sawyer 230kV (#80) for I/o Packard-Sawyer 230kV (#77)
	11/4/2015	10,12-19	Derate Packard-Sawyer 230kV (#78) for I/o Packard-Sawyer 230kV (#77)
	11/4/2015	17	HQ_CHAT-NY Scheduling Limit
	11/4/2015	13-19	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Packard-Sawyer 230kV (#78)
	11/9/2015	11,12,14-16,19	Derate Central East
	11/9/2015	14	Derate Dunwoodie-Shore Road 345kV (#Y50)
	11/9/2015	15-Oct	Derate Dunwoodie-Shore Road 345kV (#Y50) for I/o NEPTUNE HVDC TIE LINE
	11/9/2015	15,18	Derate Dunwoodie-Shore Road 345kV (#Y50) for I/o SCB:SPBK(RNS2):Y49 & M29
	11/9/2015	6,10-16,18,19	Derate Packard-Sawyer 230kV (#78) for I/o Packard-Sawyer 230kV (#77)
	11/9/2015	3,23	Uprate Central East
	11/9/2015	21	Uprate East Garden City-Valley Stream (#262) 138kV for I/o SCB:NEWBRDG 1380 461 BK6
	11/9/2015	3	NE_NNC1385-NY Scheduling Limit
	11/9/2015	12,13	HQ_CHAT-NY Scheduling Limit
	11/9/2015	6	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Packard-Sawyer 230kV (#78)
	11/12/2015	15-17,19	Uprate Central East
	11/12/2015	10-14	Derate Dunwoodie-Shore Road 345kV (#Y50) for I/o SCB:SPBK(RNS2):Y49 & M29
	11/12/2015	15-17	Uprate East Garden City-Valley Stream (#262) 138kV for SCB:NEWBRDG 1380 461 BK6
	11/12/2015	6-8,10-14,21,22	Derate Gardenville-Stolle Road 230kV (#66) for I/o TWR:PACKARD 77 & 78
	11/12/2015	17	Derate Leeds-New Scotland 345kV #93) for I/o Leeds-Gilboa 345kV (#GL3)
	11/12/2015	7,10-14	Derate Packard-Sawyer 230kV (#78) for I/o Packard-Sawyer 230kV (#77)
	11/12/2015	15-17,19	NE_AC-NY Scheduling Limit
	11/13/2015	2	Derate Dunwoodie-Shore Road 345kV (#Y50) for I/o SCB:SPBK(RNS2):Y49 & M29
	11/13/2015	6-18	Derate Gardenville-Stolle Road 230kV (#66) for I/o TWR:PACKARD 77 & 78
	11/13/2015	13-18	Derate Packard-Sawyer 230kV (#78) for I/o Packard-Sawyer 230kV (#77)
	11/13/2015	2,6	NE_AC-NY Scheduling Limit
	11/13/2015	17	PJM_AC ACTIVE DNI
	11/13/2015	12-14	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Packard-Sawyer 230kV (#78), Gardenville-Stolle Road 230kV (#66)
	11/15/2015	1-3,7,14,16-19,22	Uprate Central East
	11/15/2015	16,17	NYCA DNI Ramp Limit
	11/16/2015	9,10,20	Derate Central East
	11/16/2015	6-15,20	Derate Packard-Sawyer 230kV (#78) for I/o Packard-Sawyer 230kV (#77)
	11/16/2015	8	NYCA DNI Ramp Limit
	11/16/2015	17	IESO_AC Active DNI
	11/16/2015	6,7,14	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Packard-Sawyer 230kV (#78)
	11/16/2015	14	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Central East
	11/17/2015	1	Forced outage Gowanus-Greenwood 138kV (#42231)
	11/17/2015	21,22	Derate Dunwoodie-Shore Road 345kV (#Y50)
	11/17/2015	20,21	Derate Dunwoodie-Shore Road 345kV (#Y50) for I/o NEPTUNE HVDC TIE LINE
	11/17/2015	18-22	Derate Gardenville-Stolle Road 230kV (#66) for I/o TWR:PACKARD 77 & 78
	11/17/2015	8,9,19	Derate Greenwood-Vernon 138kV (#31232) for SCB GOW 6 W/GOET 8 O/S
	11/17/2015	1	Derate Greenwood-Vernon 138kV (#31232) for SCB:GOW(6):25&42232 G23LM O/S
	11/17/2015	6,8-16,18-21	Derate Packard-Sawyer 230kV (#78) for I/o Packard-Sawyer 230kV (#77)
	11/17/2015	6,10,12	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Packard-Sawyer 230kV (#78)
	11/17/2015	6	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Central East
	11/20/2015	5,6,8,10-13,16	Derate Central East
	11/20/2015	5-13	Derate Gardenville-Stolle Road 230kV (#66) for I/o TWR:PACKARD 77 & 78
	11/20/2015	7,9-11	Derate Packard-Sawyer 230kV (#78) for I/o Packard-Sawyer 230kV (#77)
	11/20/2015	6,9,11,23	NYCA DNI Ramp Limit
	11/20/2015	5,6,7,9,12,13	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Gardenville-Stolle Road 230kV (#66)
	11/20/2015	6,7,9,11	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Packard-Sawyer 230kV (#78)
	11/20/2015	6,7,11,12,13	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Central East
	11/23/2015	14,15	Uprate Central East
	11/23/2015	17	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Niagara-Packard 230kV (62)
	11/30/2015	11-22	NE_AC-NY Scheduling Limit

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

<u>Category</u>	<u>Cost Assignment</u>	<u>Events Types</u>	<u>Event Examples</u>
Storm Watch	Zone J	Thunderstorm Alert (TSA)	TSA Activations
Unscheduled Transmission Outage	Market-wide	Reduction in DAM to RTM transfers related to unscheduled transmission outage	Forced Line Outage, Unit AVR Outages
Interface Derate - NYISO Security	Market-wide	Reduction in DAM to RTM transfers not related to transmission outage	Interface Derates due to RTM voltages
Interface Derate - External Security	Market-wide	Reduction in DAM to RTM transfers related to External Control Area Security Events	TLR Events, External Transaction Curtailments
Unscheduled Loop Flows	Market-wide	Changes in DAM to RTM unscheduled loop flows impacting NYISO Interface transmission constraints	DAM to RTM Clockwise Lake Erie Loop Flows greater than 125 MW
M2M Settlement	Market-wide	Settlement result inclusive of coordinated redispatch and Ramapo flowgates	

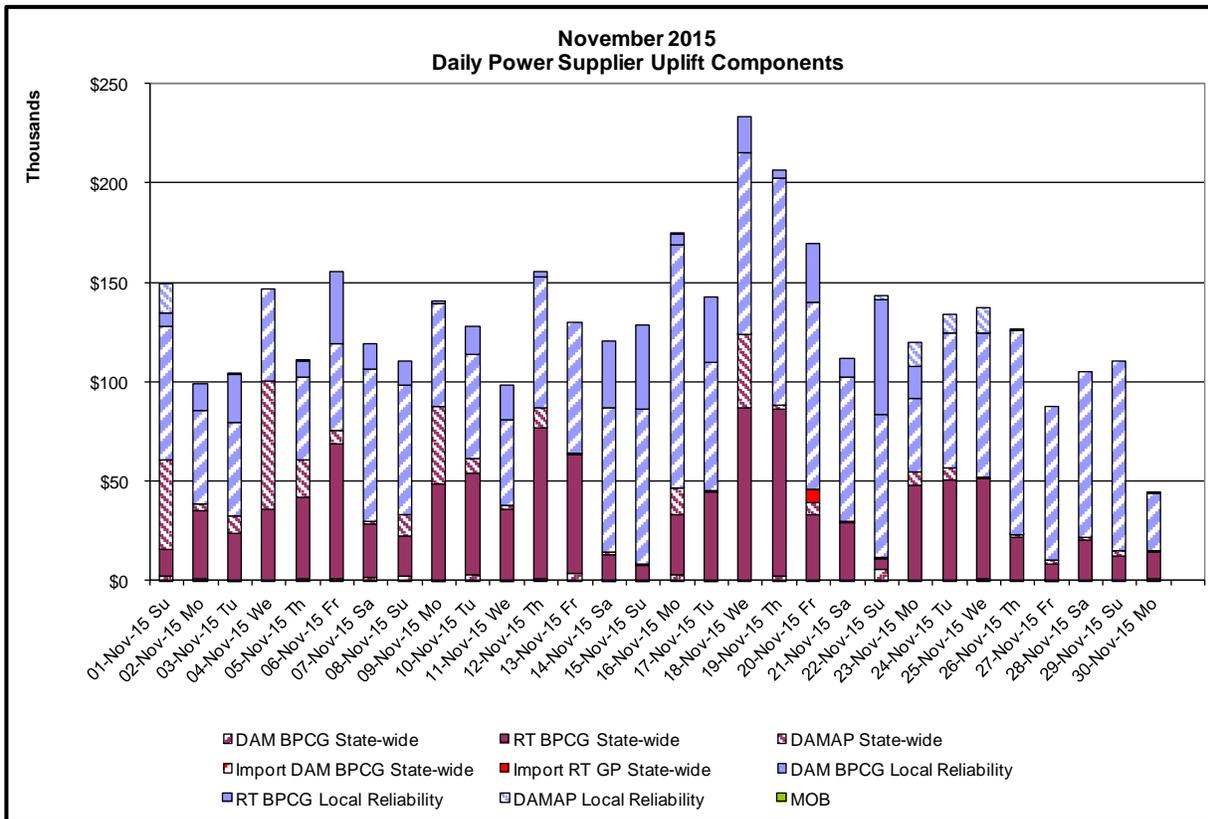
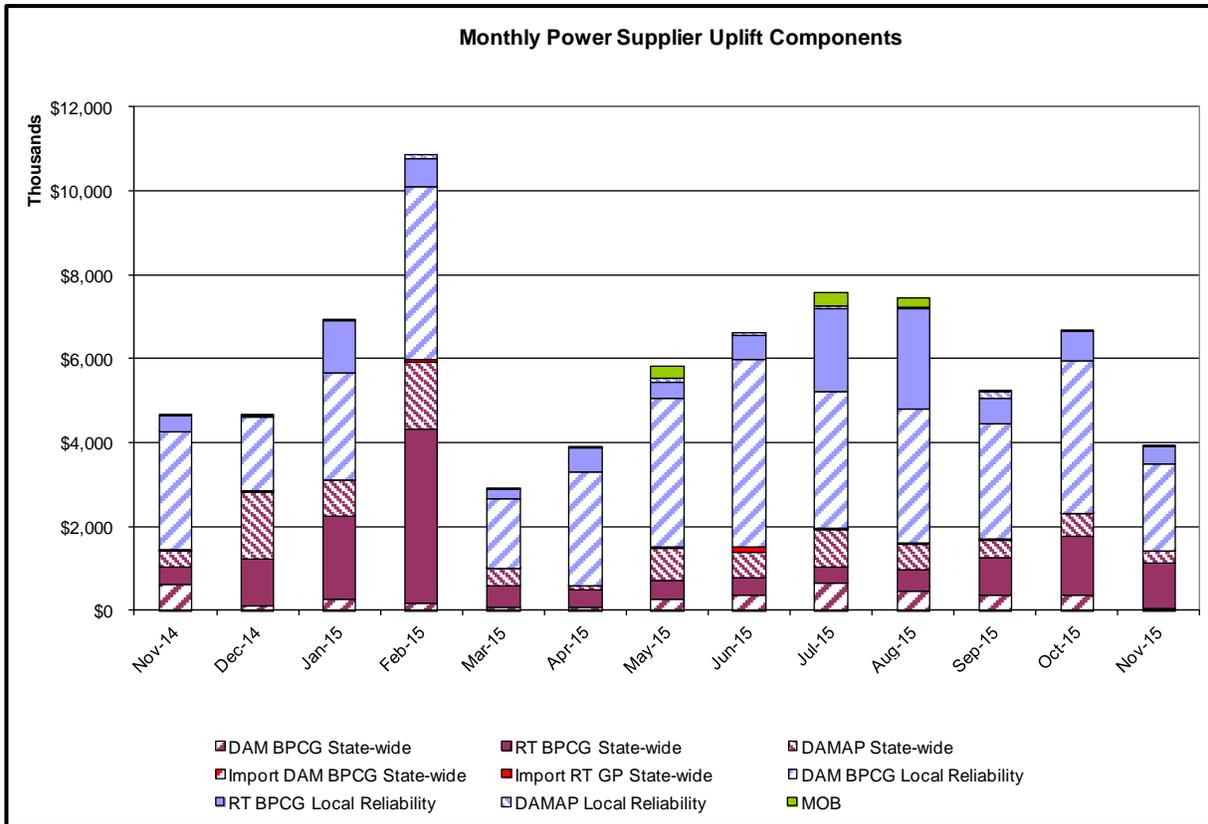
Monthly Balancing Market Congestion Report Assumptions/Notes

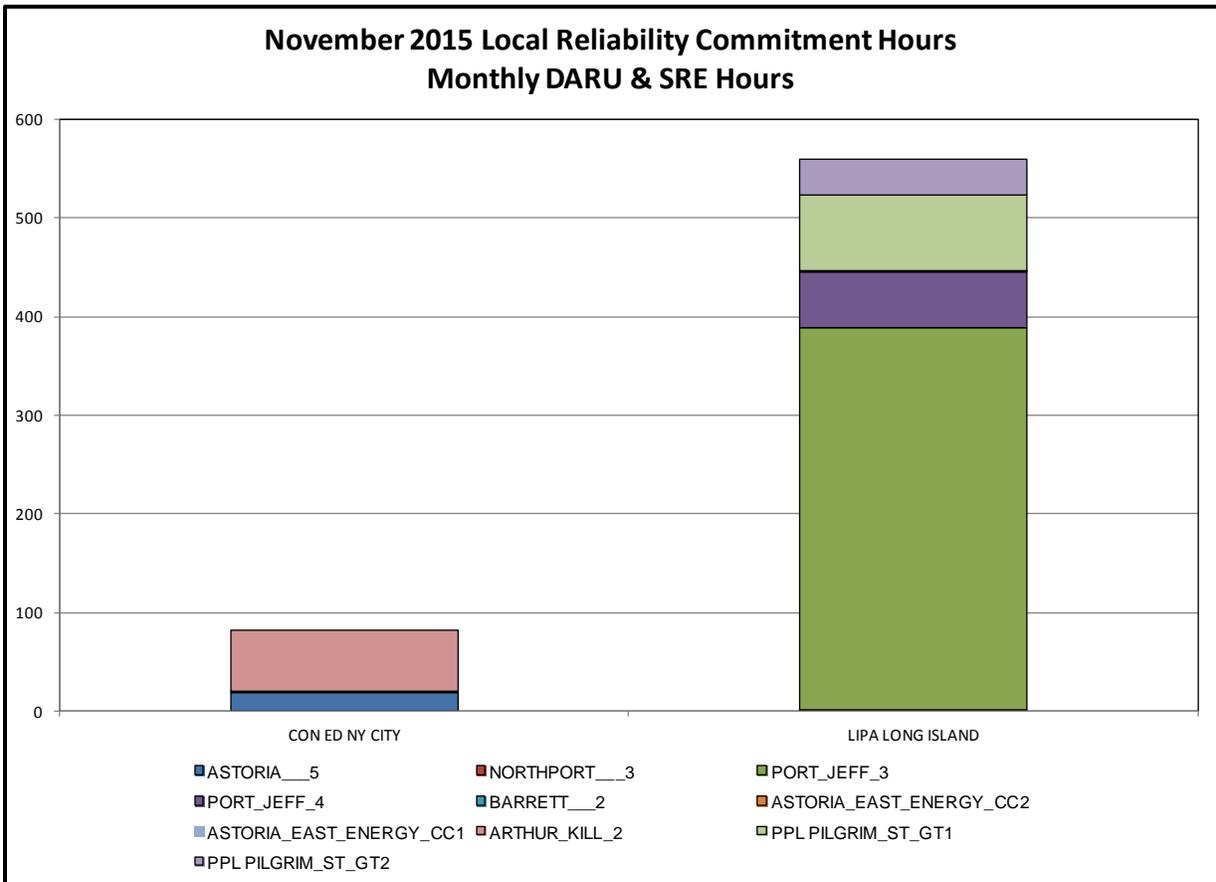
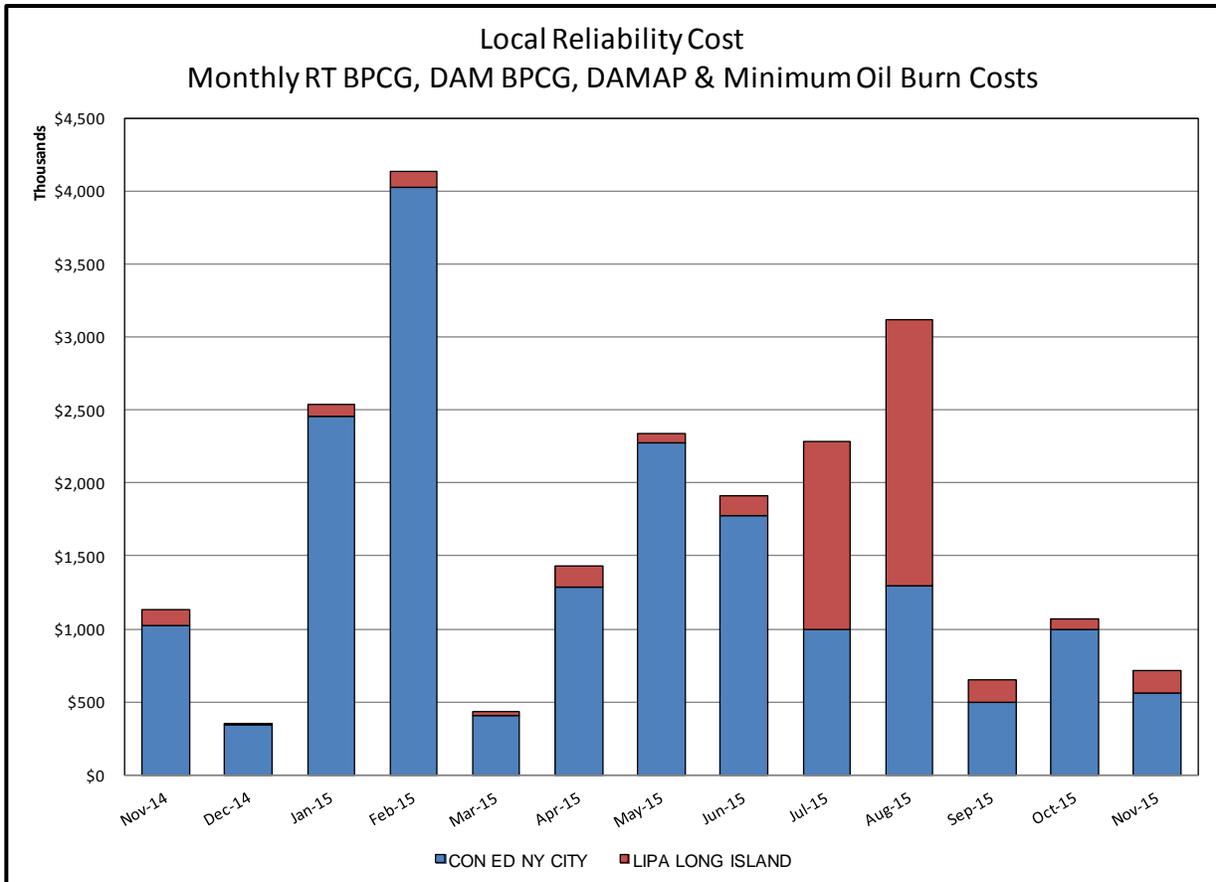
- 1) Storm Watch Costs are identified as daily total uplift costs
- 2) Days with a value of BMCR less M2M Settlement of \$100K/HR, shortfall of \$200K/Day or more, or surplus of \$100K/Day or more are investigated.
- 3) Uplift costs associated with multiple event types are apportioned equally by hour

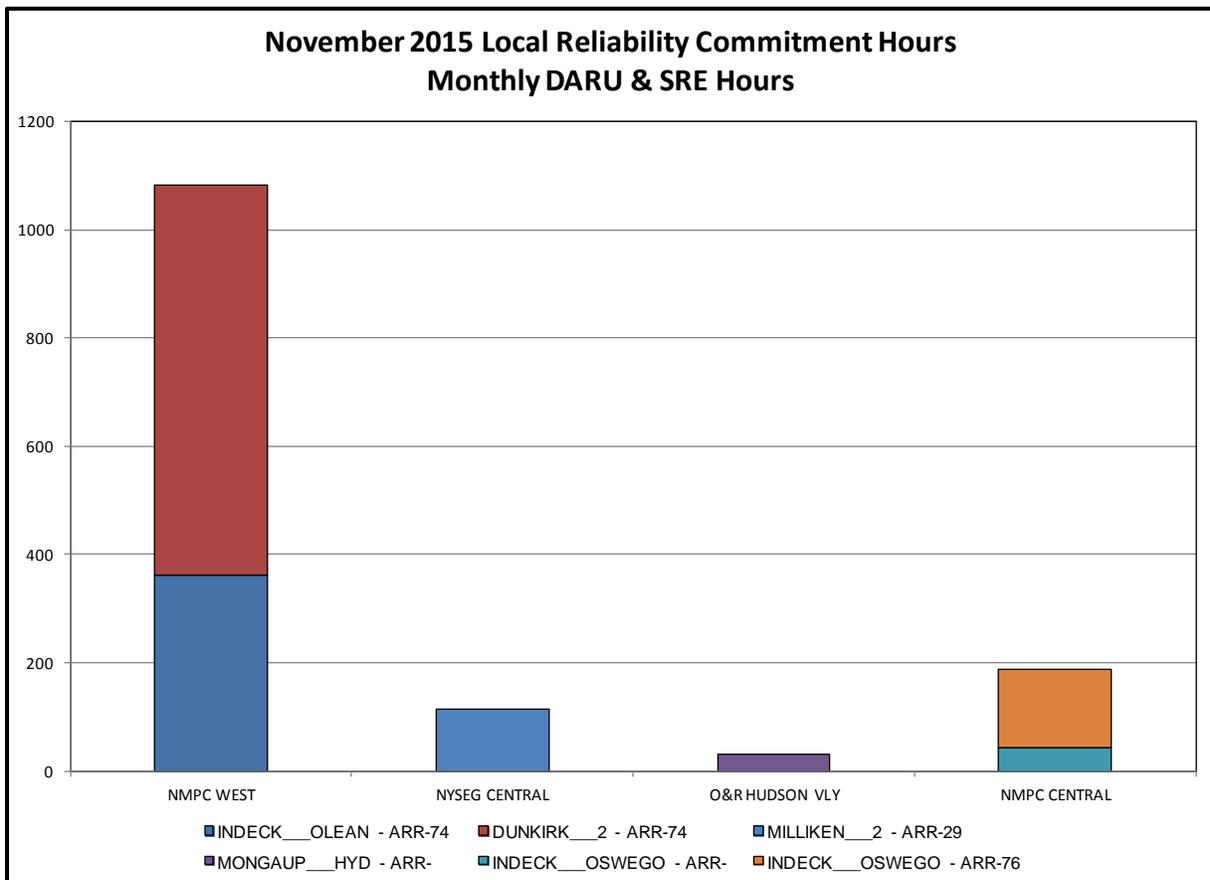
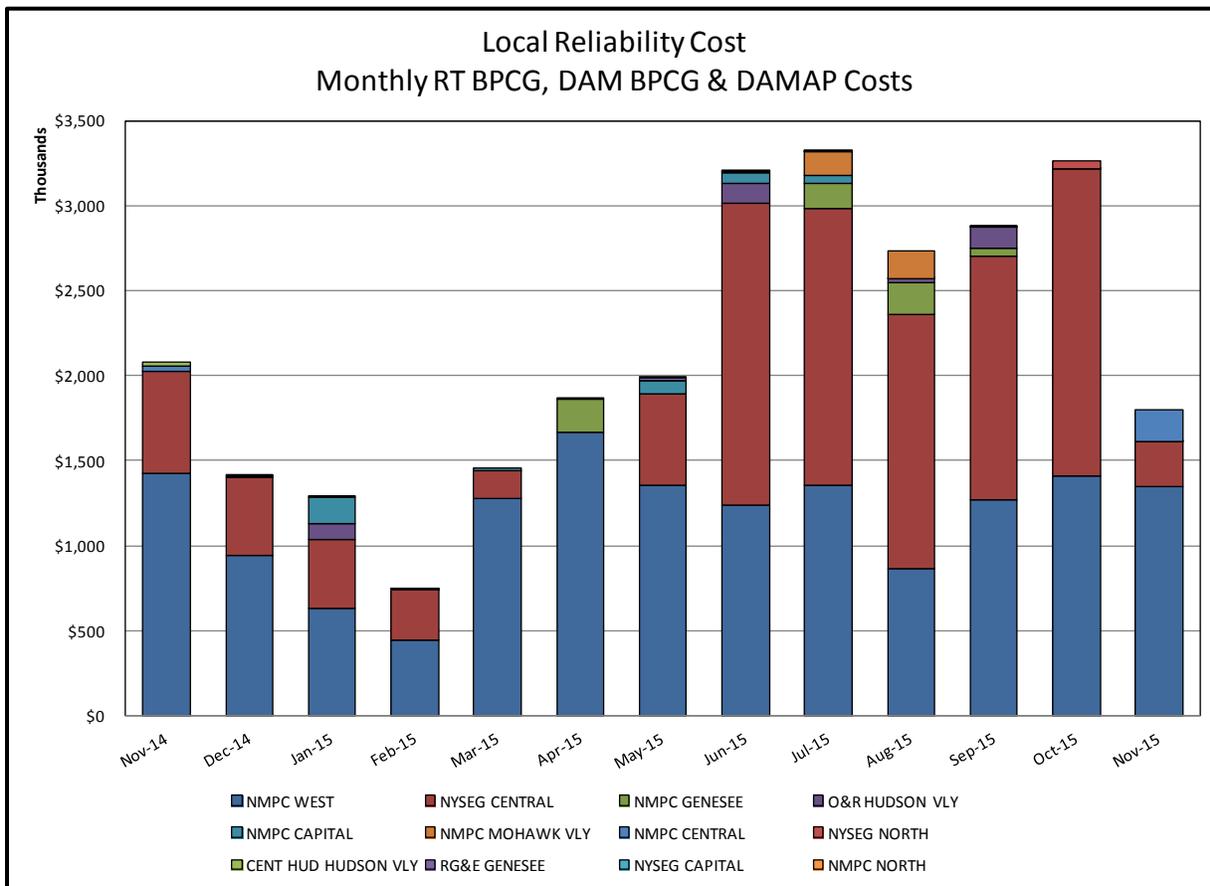


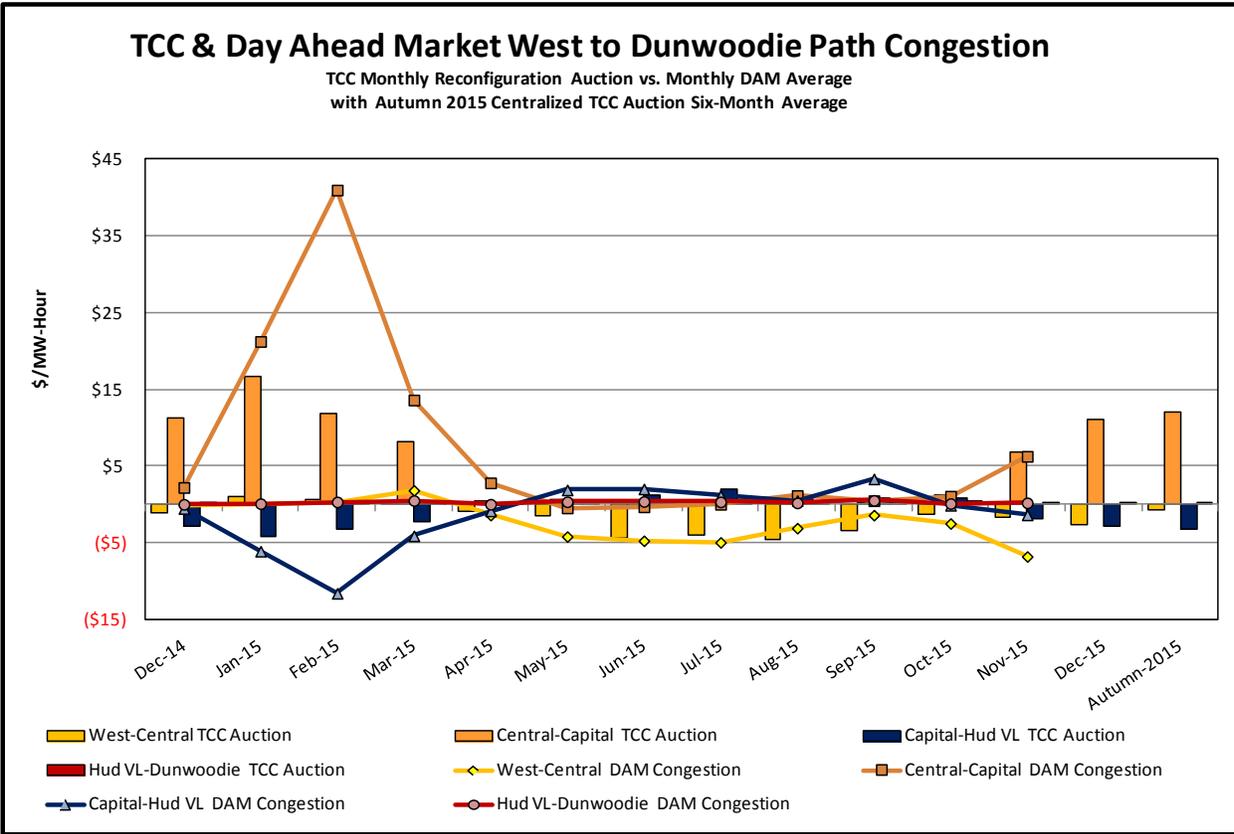
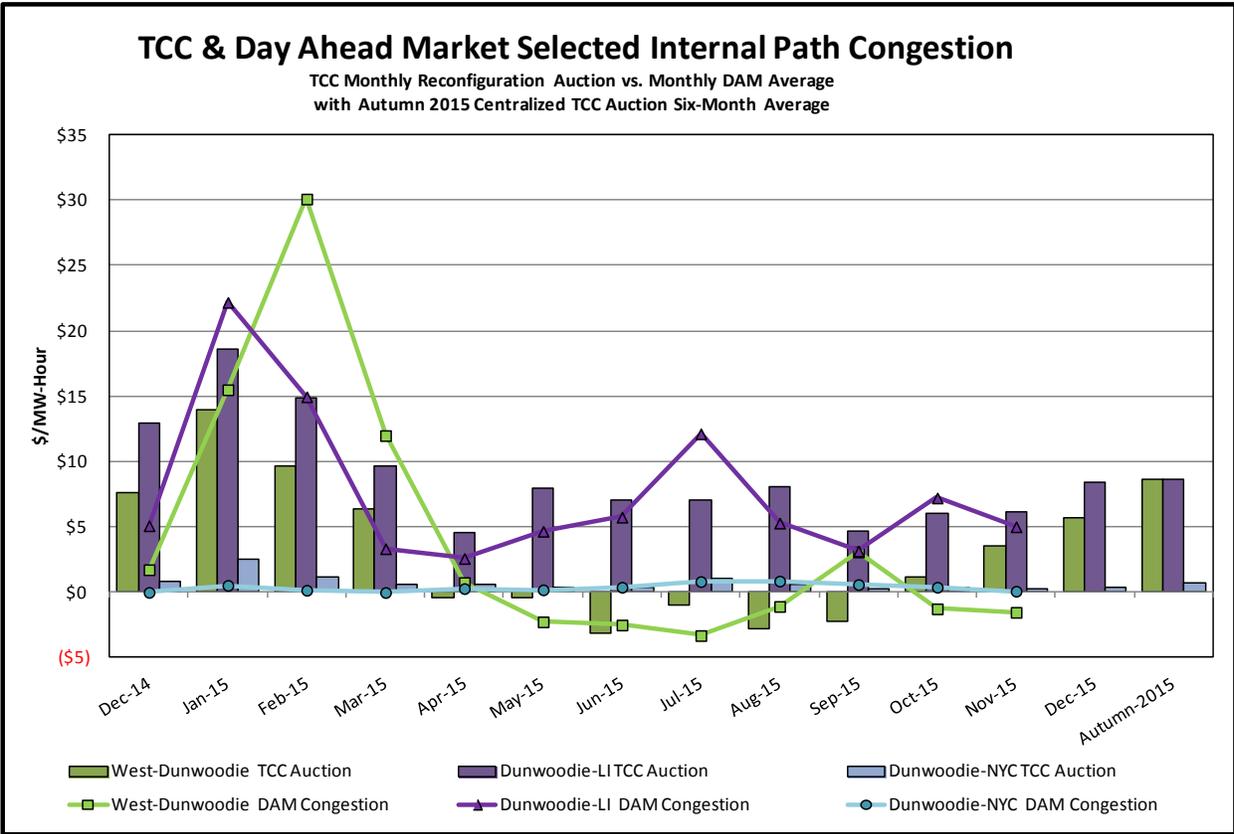
Day-Ahead Market Congestion Residual Categories

<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.	



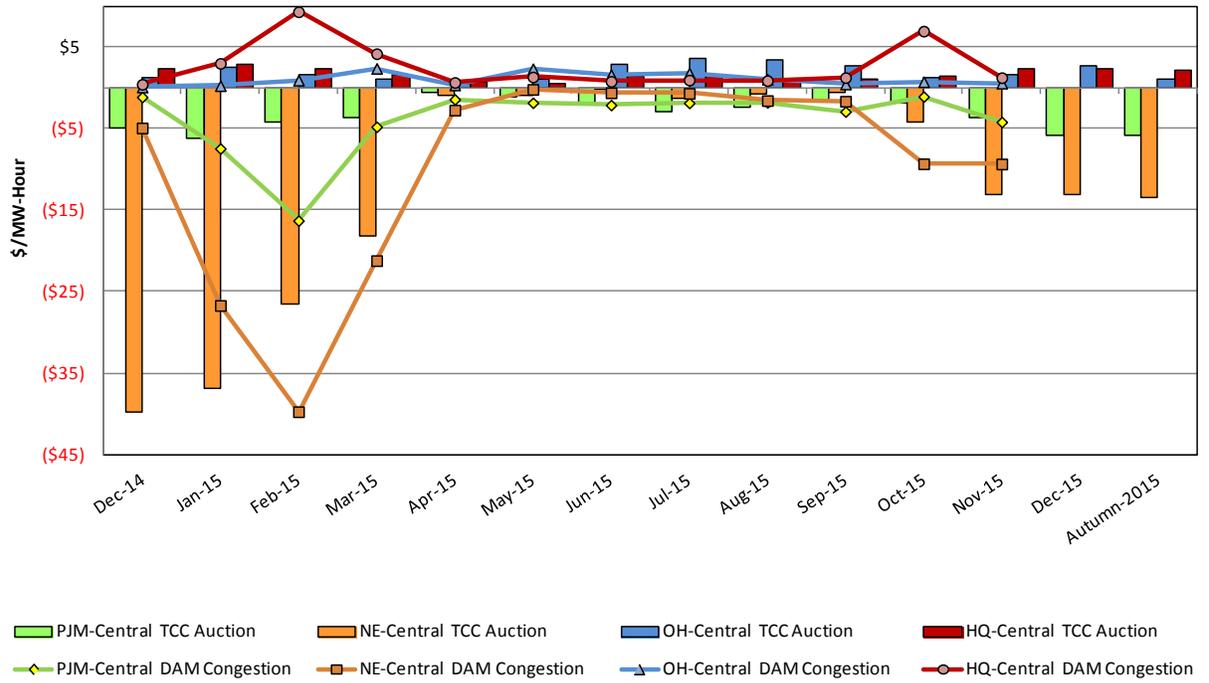


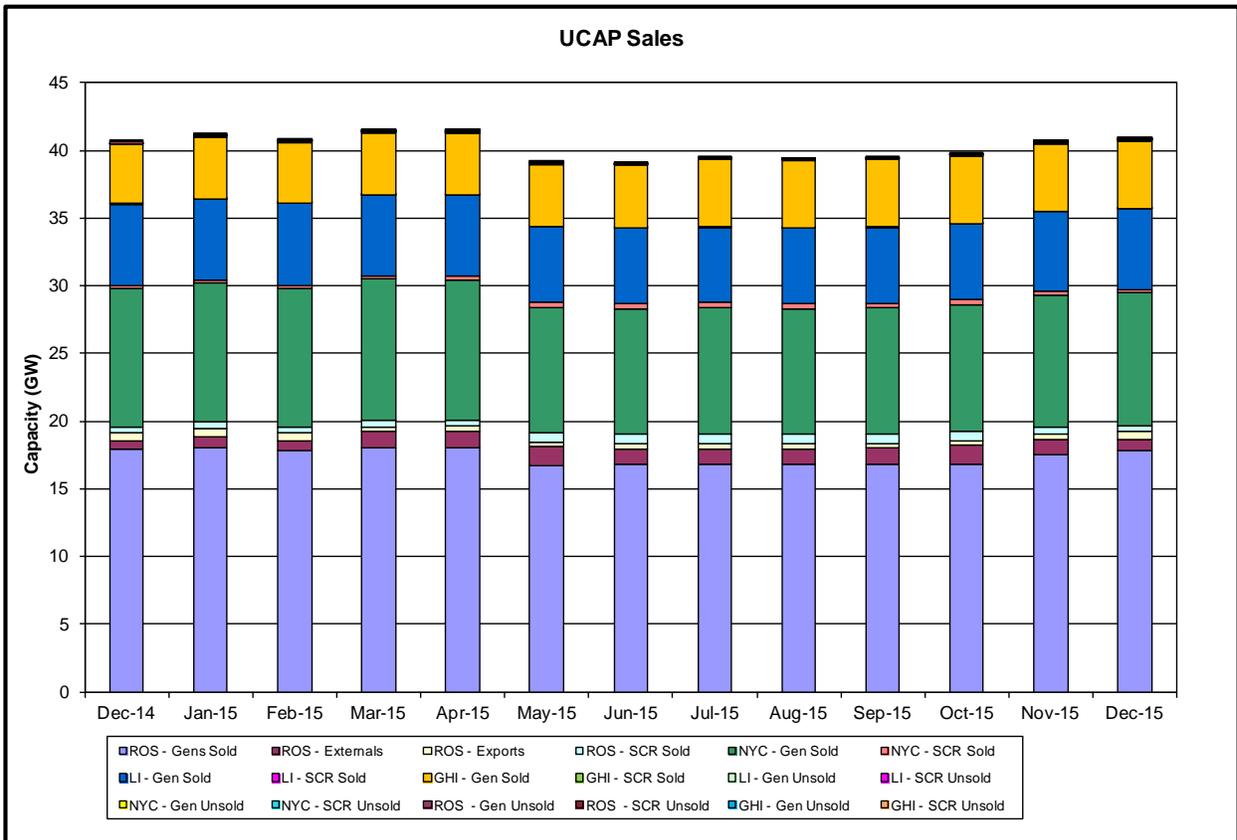
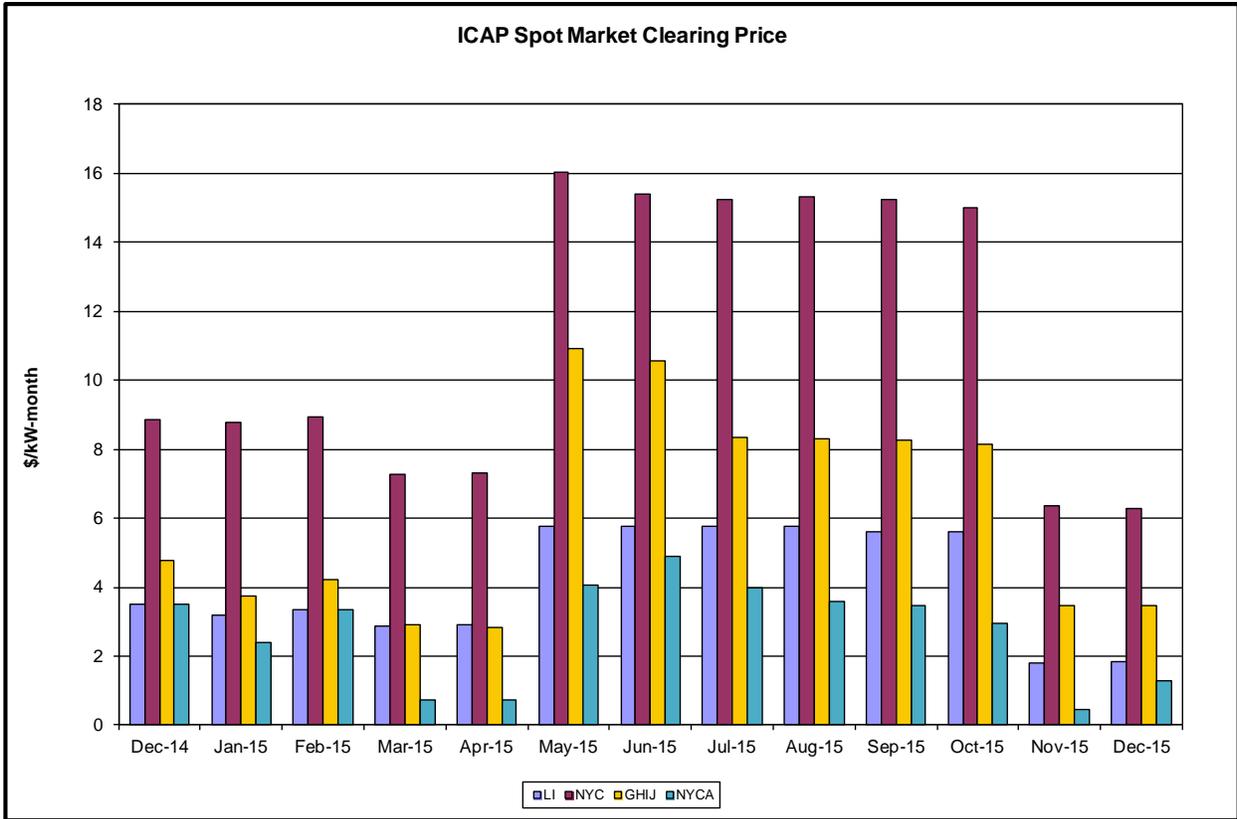




TCC & Day Ahead Market Selected External Path Congestion

TCC Monthly Reconfiguration Auction vs. Monthly DAM Average
with Autumn 2015 Centralized TCC Auction Six-Month Average

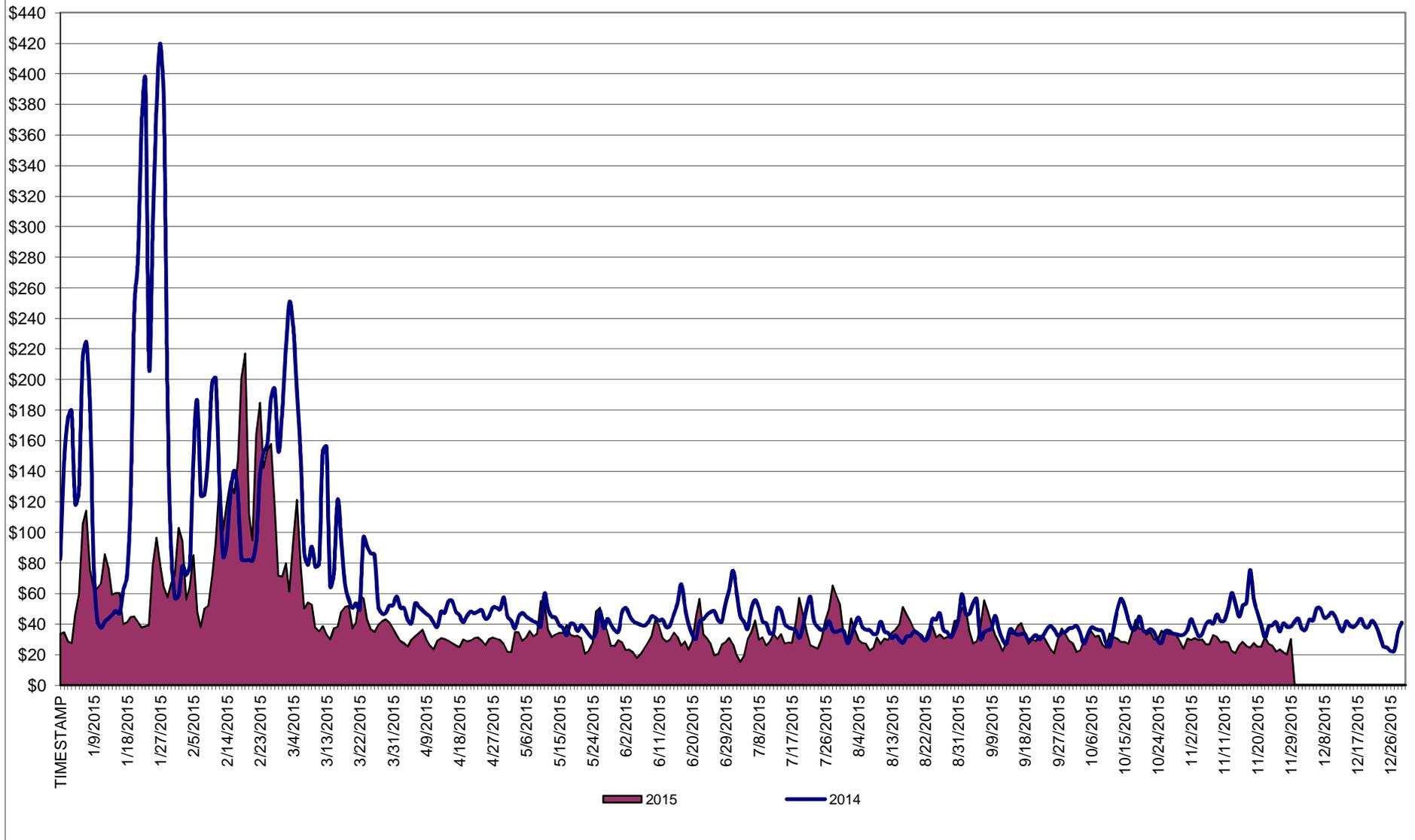




Market Performance Highlights for November 2015

- **LBMP for November is \$24.80/MWh; lower than \$30.03/MWh in October 2015 and \$42.89/MWh in November 2014.**
 - Day Ahead and Real Time Load Weighted LBMPs are lower compared to October.
 - This is the lowest LBMP for any month during NYISO operation.
- **November 2015 average year-to-date monthly cost of \$45.66/MWh is a 37% decrease from \$72.06/MWh in November 2014.**
- **Average daily sendout is 396 GWh/day in November; higher than 389 GWh/day in October 2015 and lower than 413 GWh/day in November 2014.**
- **Natural gas and distillate prices were lower compared to the previous month.**
 - Natural Gas (Transco Z6 NY) was \$1.80/MMBtu, down from \$2.16/MMBtu in October.
 - Natural gas prices are down 54% year-over-year
 - Lowest monthly average gas price in NYISO operation.
 - Jet Kerosene Gulf Coast was \$9.80/MMBtu, down from \$10.33/MMBtu in October.
 - Ultra Low Sulfur No.2 Diesel NY Harbor was \$10.06/MMBtu, down from \$10.53/MMBtu in October.
 - Distillate prices are down 42% year-over-year
- **Uplift per MWh is higher compared to the previous month.**
 - Uplift (not including NYISO cost of operations) is \$0.40/MWh; higher than \$0.11/MWh in October.
 - The Local Reliability Share is \$0.19/MWh, lower than \$0.33 in October.
 - The Statewide Share is \$0.21/MWh, higher than (\$0.22)/MWh in October.
 - TSA \$ per NYC MWh is \$0.00/MWh.
- Total uplift costs (Schedule 1 components including NYISO Cost of Operations) are higher than October.

Daily NYISO Average Cost/MWh (Energy & Ancillary Services)*
 2014 Annual Average \$69.31/MWh
 November 2014 YTD Average \$72.06/MWh
 November 2015 YTD Average \$45.66/MWh



* Excludes ICAP payments.

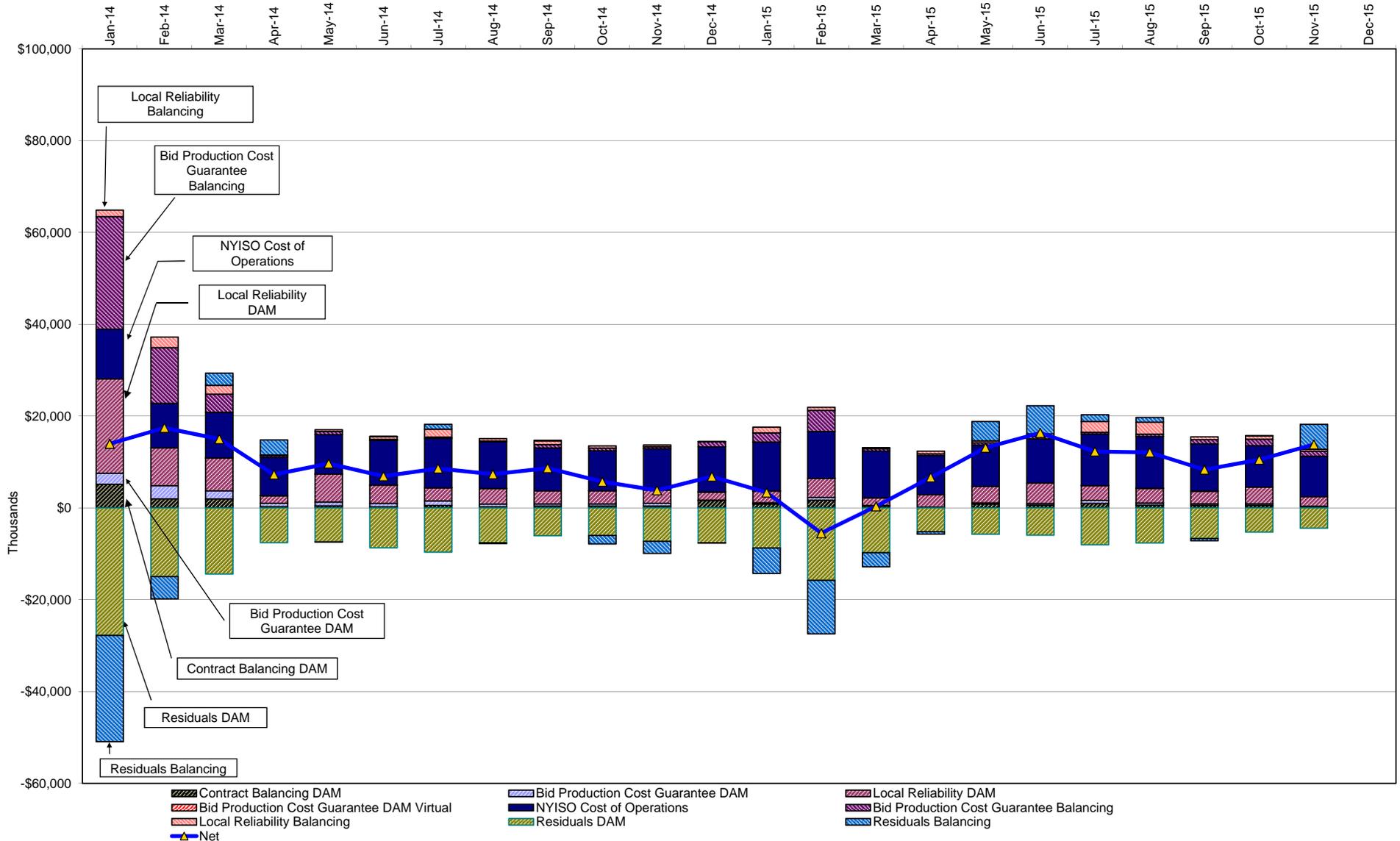
NYISO Average Cost/MWh (Energy and Ancillary Services) *
from the LBMP Customer point of view

2015	<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	28.20	34.77	33.09	34.39	30.03	24.80	
NTAC	0.32	0.35	0.41	0.64	0.56	0.80	0.54	0.60	0.73	0.54	0.68	
Reserve	0.27	0.37	0.56	0.36	0.38	0.24	0.27	0.20	0.28	0.28	0.47	
Regulation	0.10	0.18	0.11	0.12	0.10	0.13	0.12	0.12	0.10	0.12	0.13	
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	
Uplift	(0.48)	(1.08)	(0.68)	(0.15)	0.26	0.33	0.04	0.03	(0.14)	0.11	0.40	
Uplift: Local Reliability Share	0.25	0.33	0.13	0.27	0.30	0.37	0.35	0.36	0.22	0.33	0.19	
Uplift: Statewide Share	(0.73)	(1.41)	(0.81)	(0.42)	(0.05)	(0.04)	(0.30)	(0.33)	(0.37)	(0.22)	0.21	
Voltage Support and Black Start	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	
Avg Monthly Cost	60.91	115.27	53.58	30.41	35.37	30.79	36.84	35.13	36.45	32.17	27.58	
Avg YTD Cost	60.91	87.74	76.64	66.82	60.96	56.02	52.77	50.20	48.60	47.17	45.66	
TSA \$ per NYC MWh	0.00	0.00	0.00	0.00	0.17	0.50	0.07	0.06	0.01	0.00	0.00	
2014	<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
Avg Monthly Cost	186.24	126.14	112.15	48.82	42.51	45.39	45.57	36.14	39.38	37.59	44.71	40.09
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
2013	<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
Avg Monthly Cost	82.34	88.06	50.96	46.91	55.10	53.05	72.87	42.62	46.31	42.54	45.88	68.36
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: 12/4/2015 9:04 AM

Data reflects true-ups thru July 2015.

NYISO Dollar Flows - Uplift- OATT Schedule 1 components - Data through November 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	<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>
Day Ahead Market MWh	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	13,546,033	13,338,332	
DAM LSE Internal LBMP Energy Sales	55%	54%	53%	55%	57%	57%	62%	61%	58%	53%	53%	
DAM External TC LBMP Energy Sales	5%	6%	6%	4%	2%	1%	1%	1%	3%	6%	5%	
DAM Bilateral - Internal Bilaterals	35%	33%	33%	33%	35%	33%	30%	31%	31%	34%	33%	
DAM Bilateral - Import/Non-LBMP Market Bilaterals	3%	5%	5%	6%	4%	5%	4%	4%	5%	5%	5%	
DAM Bilateral - Export/Non-LBMP Market Bilaterals	2%	2%	1%	2%	1%	1%	1%	1%	1%	2%	2%	
DAM Bilateral - Wheel Through Bilaterals	0%	1%	1%	1%	0%	2%	2%	2%	2%	1%	2%	
Balancing Energy Market MWh	-650,944	-296,616	-396,739	-409,205	-331,091	-549,794	-505,637	-225,362	-31,706	-595,704	-684,006	
Balancing Energy LSE Internal LBMP Energy Sales	-149%	-247%	-192%	-147%	-142%	-106%	-120%	-139%	-357%	-116%	-111%	
Balancing Energy External TC LBMP Energy Sales	30%	113%	64%	36%	35%	16%	25%	51%	115%	13%	12%	
Balancing Energy Bilateral - Internal Bilaterals	13%	14%	19%	5%	6%	6%	13%	25%	251%	7%	5%	
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	6%	8%	12%	12%	10%	4%	3%	8%	48%	5%	5%	
Balancing Energy Bilateral - Wheel Through Bilaterals	0%	12%	-4%	-5%	-9%	-22%	-21%	-44%	-157%	-9%	-12%	
Transactions Summary												
LBMP	58%	59%	57%	57%	58%	57%	61%	61%	61%	56%	56%	
Internal Bilaterals	37%	34%	35%	35%	36%	35%	32%	32%	32%	36%	35%	
Import Bilaterals	3%	5%	5%	6%	4%	5%	5%	5%	5%	5%	6%	
Export Bilaterals	2%	2%	2%	2%	2%	1%	1%	1%	1%	2%	2%	
Wheels Through	0%	1%	1%	0%	0%	1%	1%	1%	1%	0%	1%	
Market Share of Total Load												
Day Ahead Market	104.3%	102.0%	102.7%	103.4%	102.6%	104.0%	103.1%	101.4%	100.2%	104.6%	105.4%	
Balancing Energy +	-4.3%	-2.0%	-2.7%	-3.4%	-2.6%	-4.0%	-3.1%	-1.4%	-0.2%	-4.6%	-5.4%	
Total MWh	15,310,362	14,670,755	14,662,468	12,180,116	12,960,826	13,727,505	16,067,390	16,108,570	14,709,201	12,950,329	12,654,326	
Average Daily Energy Sendout/Month GWh	462	481	436	387	409	450	512	511	473	389	396	
2014	<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>
Day Ahead Market MWh	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%	1%	2%	2%	2%
DAM Bilateral - Wheel Through Bilaterals	1%	1%	1%	0%	1%	1%	1%	1%	1%	0%	0%	0%
Balancing Energy Market MWh	-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%
Transactions Summary												
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%
Market Share of Total Load												
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>
<u>DAY AHEAD LBMP</u>												
Price *	\$53.35	\$101.48	\$46.59	\$26.07	\$29.21	\$24.30	\$30.27	\$30.01	\$30.18	\$27.11	\$22.18	
Standard Deviation	\$24.61	\$48.85	\$21.51	\$6.73	\$13.44	\$11.96	\$17.67	\$12.05	\$13.37	\$7.64	\$7.94	
Load Weighted Price **	\$55.40	\$104.52	\$48.01	\$26.84	\$31.08	\$26.12	\$32.94	\$31.81	\$32.46	\$27.95	\$23.12	
<u>RTC LBMP</u>												
Price *	\$46.98	\$95.06	\$43.43	\$25.11	\$32.85	\$24.73	\$27.51	\$31.83	\$32.39	\$23.97	\$20.07	
Standard Deviation	\$22.84	\$47.55	\$29.42	\$12.31	\$35.40	\$24.71	\$21.84	\$23.25	\$22.99	\$10.56	\$15.66	
Load Weighted Price **	\$48.59	\$97.62	\$45.10	\$26.00	\$35.08	\$26.73	\$29.76	\$34.04	\$34.99	\$24.79	\$21.17	
<u>REAL TIME LBMP</u>												
Price *	\$48.51	\$98.83	\$44.38	\$25.46	\$30.39	\$23.96	\$27.71	\$31.54	\$34.82	\$25.50	\$21.33	
Standard Deviation	\$25.99	\$52.53	\$29.07	\$12.66	\$31.69	\$31.14	\$23.42	\$26.51	\$34.85	\$12.56	\$18.76	
Load Weighted Price **	\$50.18	\$101.34	\$46.10	\$26.28	\$32.52	\$26.86	\$30.50	\$34.05	\$38.48	\$26.29	\$22.47	
Average Daily Energy Sendout/Month GWh	462	481	436	387	409	450	512	511	473	389	396	

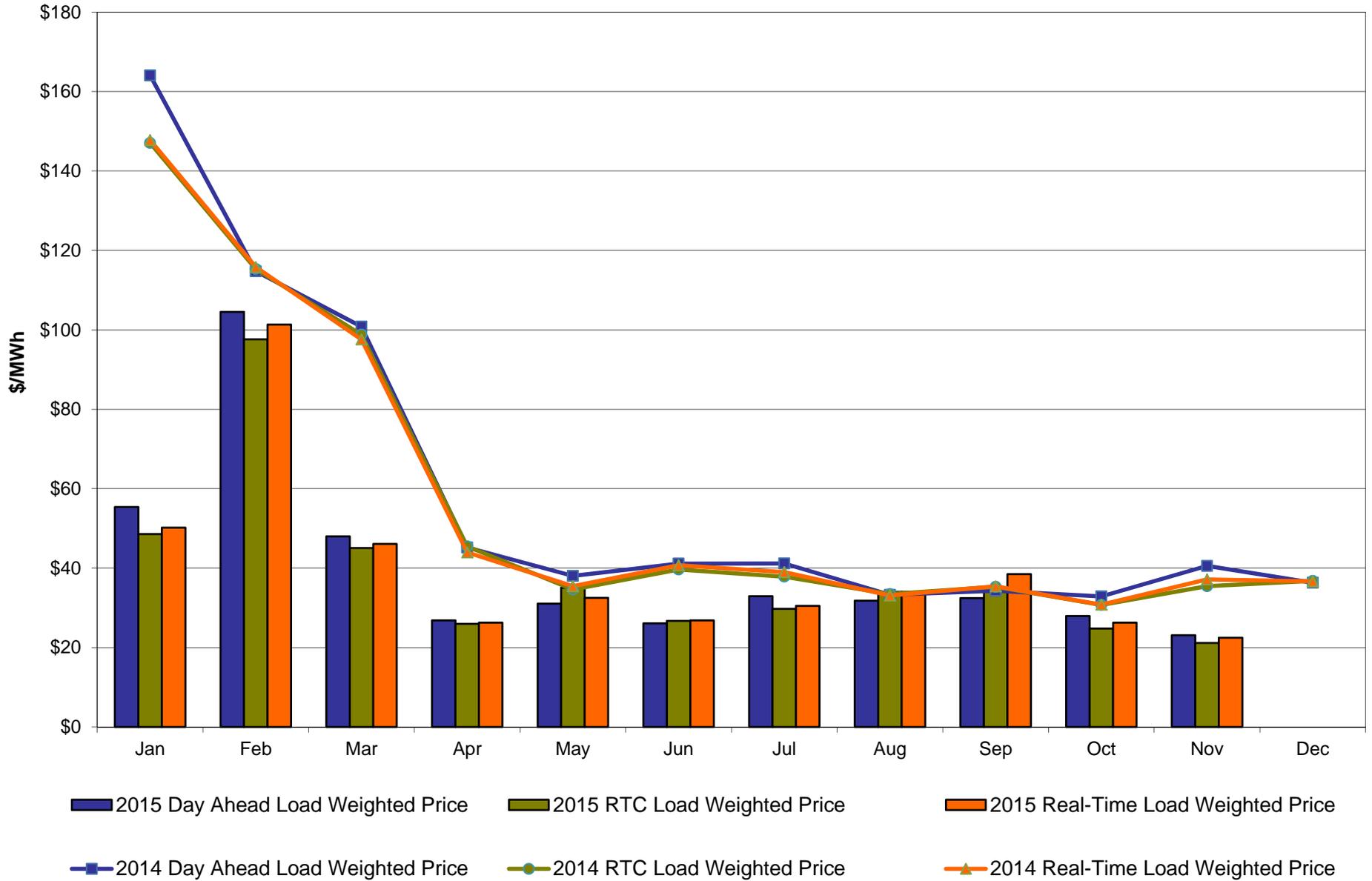
NYISO Markets 2014 Energy Statistics

	<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>
<u>DAY AHEAD LBMP</u>												
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
<u>RTC LBMP</u>												
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
<u>REAL TIME LBMP</u>												
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

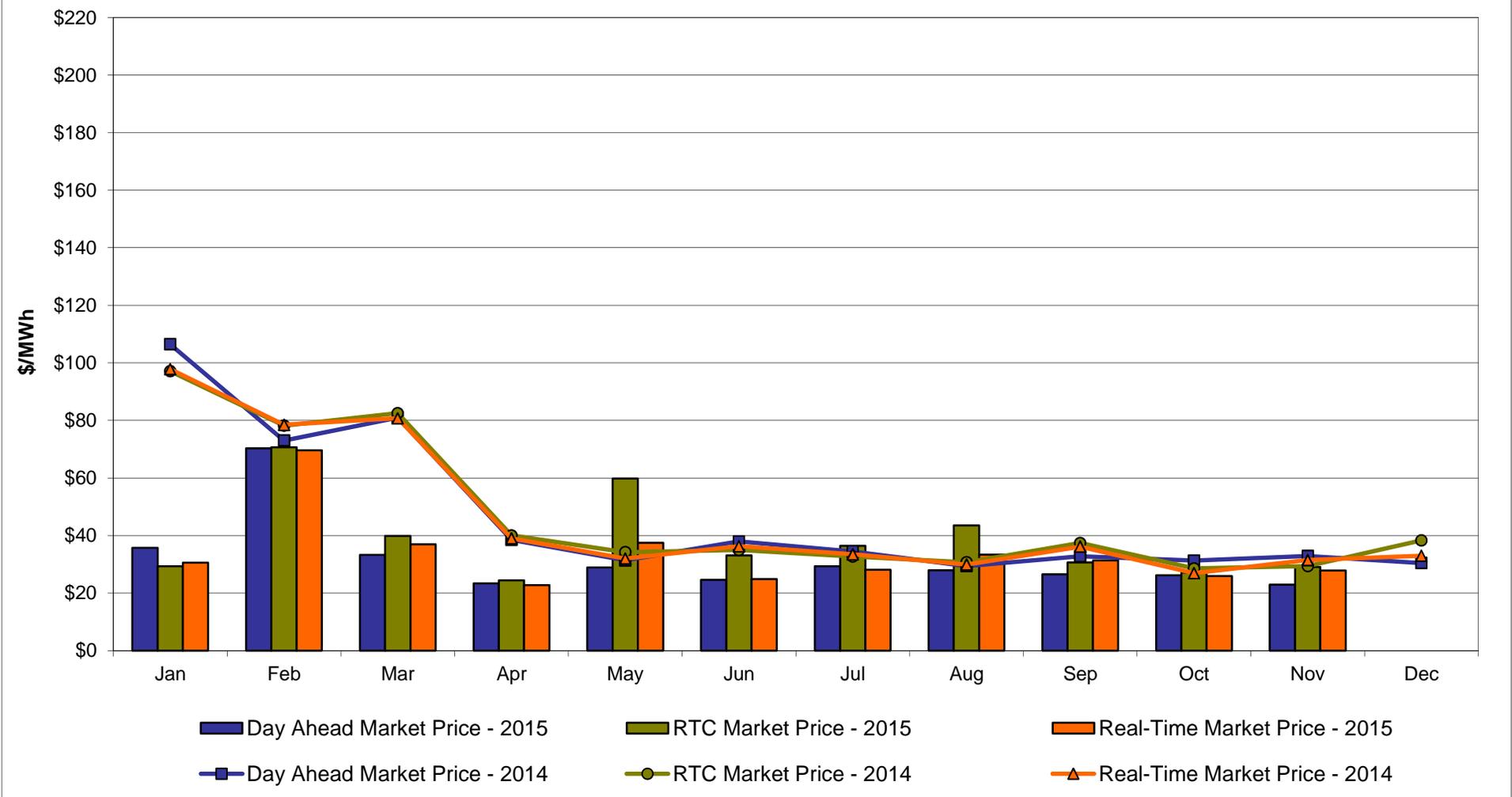


November 2015 Zonal LBMP Statistics for NYISO (\$/MWh)

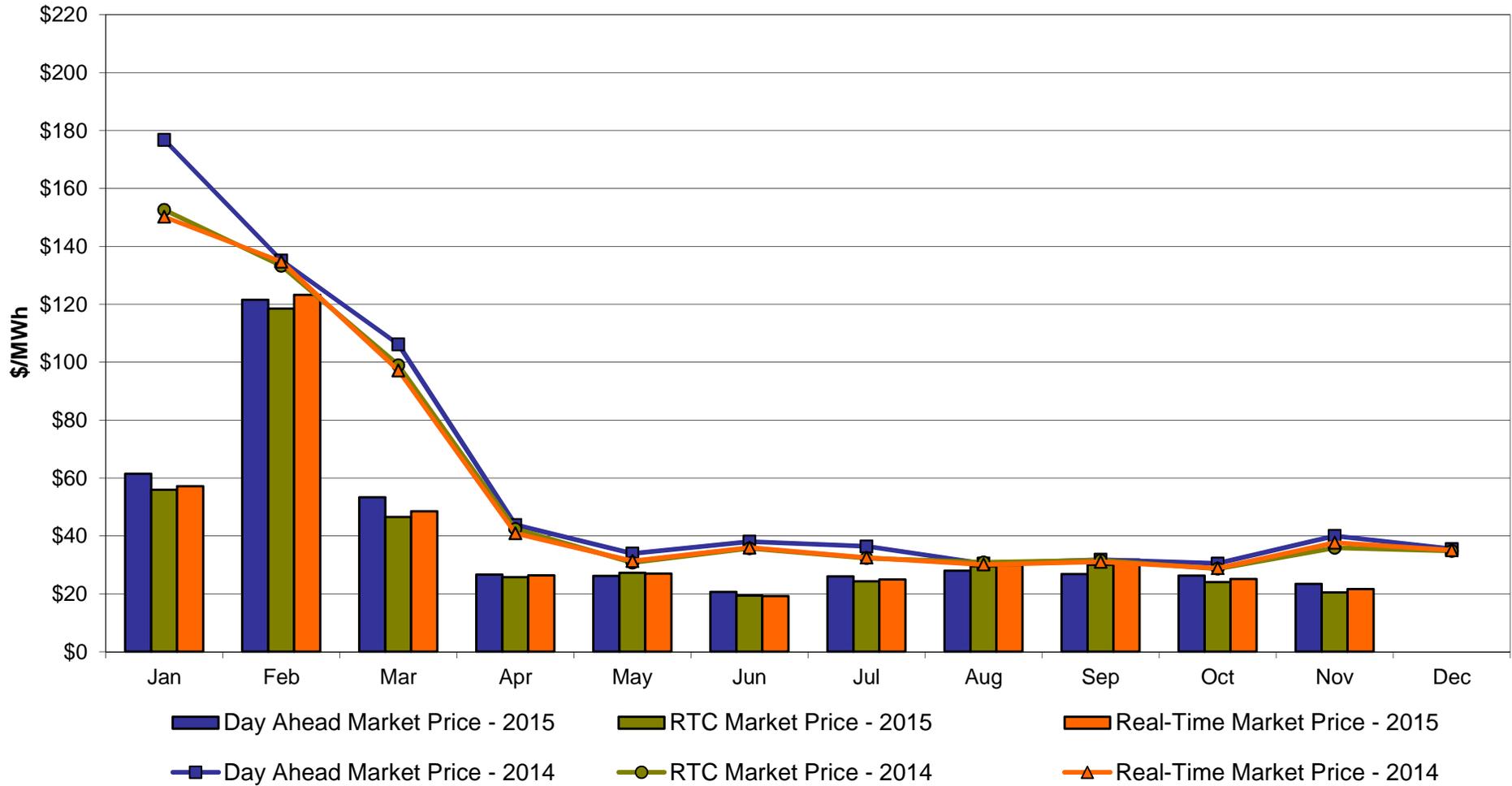
	<u>WEST</u> <u>Zone A</u>	<u>GENESEE</u> <u>Zone B</u>	<u>NORTH</u> <u>Zone D</u>	<u>CENTRAL</u> <u>Zone C</u>	<u>MOHAWK</u> <u>VALLEY</u> <u>Zone E</u>	<u>CAPITAL</u> <u>Zone F</u>	<u>HUDSON</u> <u>VALLEY</u> <u>Zone G</u>	<u>MILLWOOD</u> <u>Zone H</u>	<u>DUNWOODIE</u> <u>Zone I</u>	<u>NEW YORK</u> <u>CITY</u> <u>Zone J</u>	<u>LONG</u> <u>ISLAND</u> <u>Zone K</u>
DAY AHEAD LBMP											
Unweighted Price *	22.94	15.75	14.48	16.33	16.52	23.38	22.78	23.10	23.16	23.35	28.85
Standard Deviation	14.04	7.29	6.92	7.68	7.41	6.64	7.13	7.22	7.24	7.42	10.41
RTC LBMP											
Unweighted Price *	29.06	13.37	11.98	13.93	14.05	20.46	19.45	19.66	19.66	19.93	25.58
Standard Deviation	69.72	12.61	11.97	13.76	12.75	12.40	12.48	12.52	12.49	12.78	24.71
REAL TIME LBMP											
Unweighted Price *	27.84	14.50	13.13	15.11	15.28	21.62	20.66	20.86	20.86	21.55	28.73
Standard Deviation	52.62	17.27	17.20	18.75	17.66	15.45	15.72	15.72	15.70	17.55	33.99
	<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>
DAY AHEAD LBMP											
Unweighted Price *	15.13	14.30	14.30	21.31	26.84	28.43	27.96	26.52	21.82	23.24	14.33
Standard Deviation	6.58	7.06	7.06	7.76	10.11	10.20	9.44	9.41	6.16	7.27	6.77
RTC LBMP											
Unweighted Price *	11.67	11.86	11.87	18.95	19.82	24.92	22.40	21.61	19.09	19.38	11.70
Standard Deviation	10.49	11.18	11.18	14.90	11.21	25.20	16.96	16.02	10.76	11.27	11.09
REAL TIME LBMP											
Unweighted Price *	13.35	12.65	12.65	19.84	28.07	27.27	25.91	23.76	20.60	20.59	12.80
Standard Deviation	14.65	15.64	15.64	16.96	20.52	28.43	24.42	19.98	14.50	14.52	16.50

* Straight LBMP averages

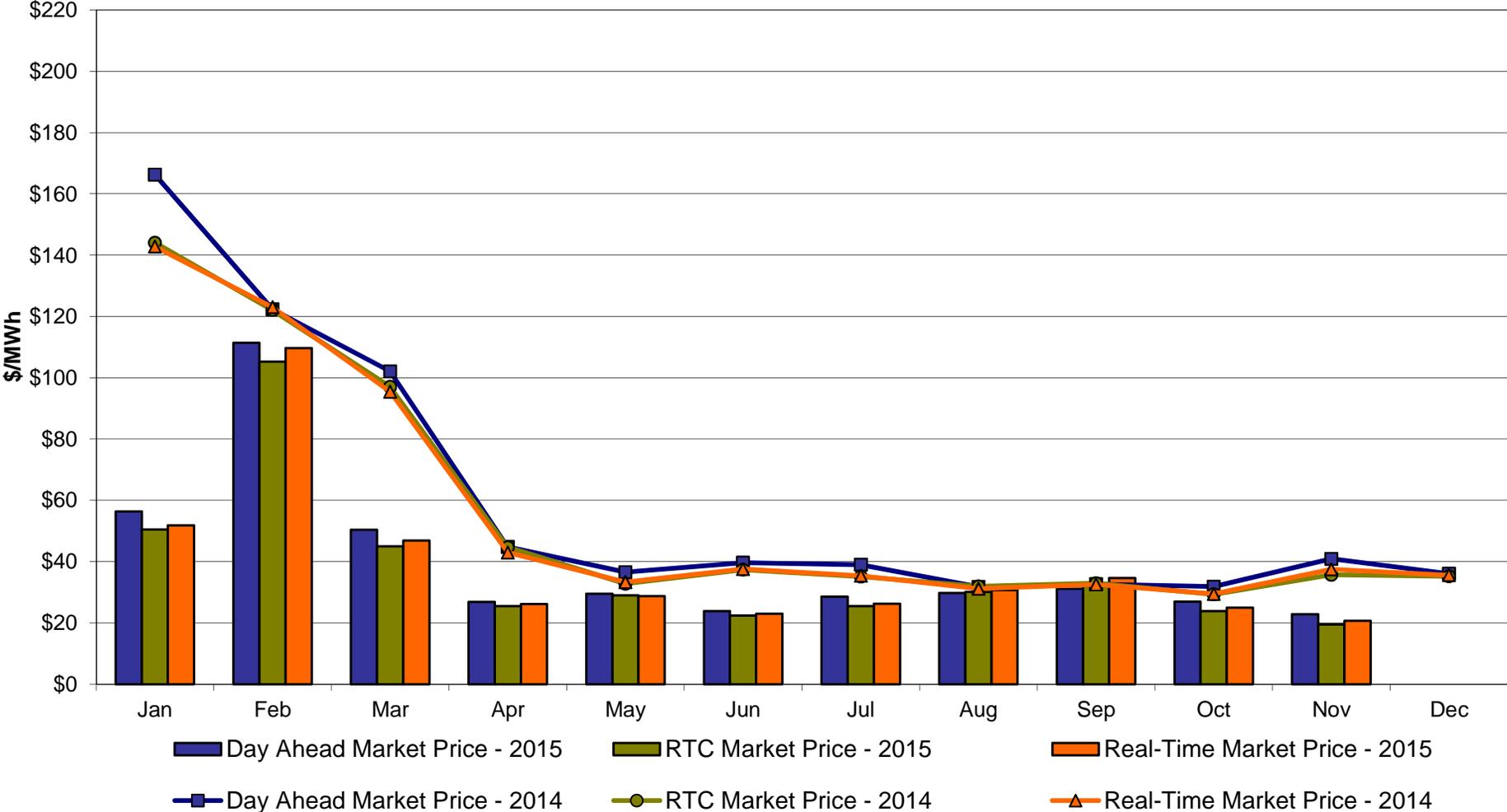
**West Zone A
Monthly Average LBMP Prices 2014 - 2015**



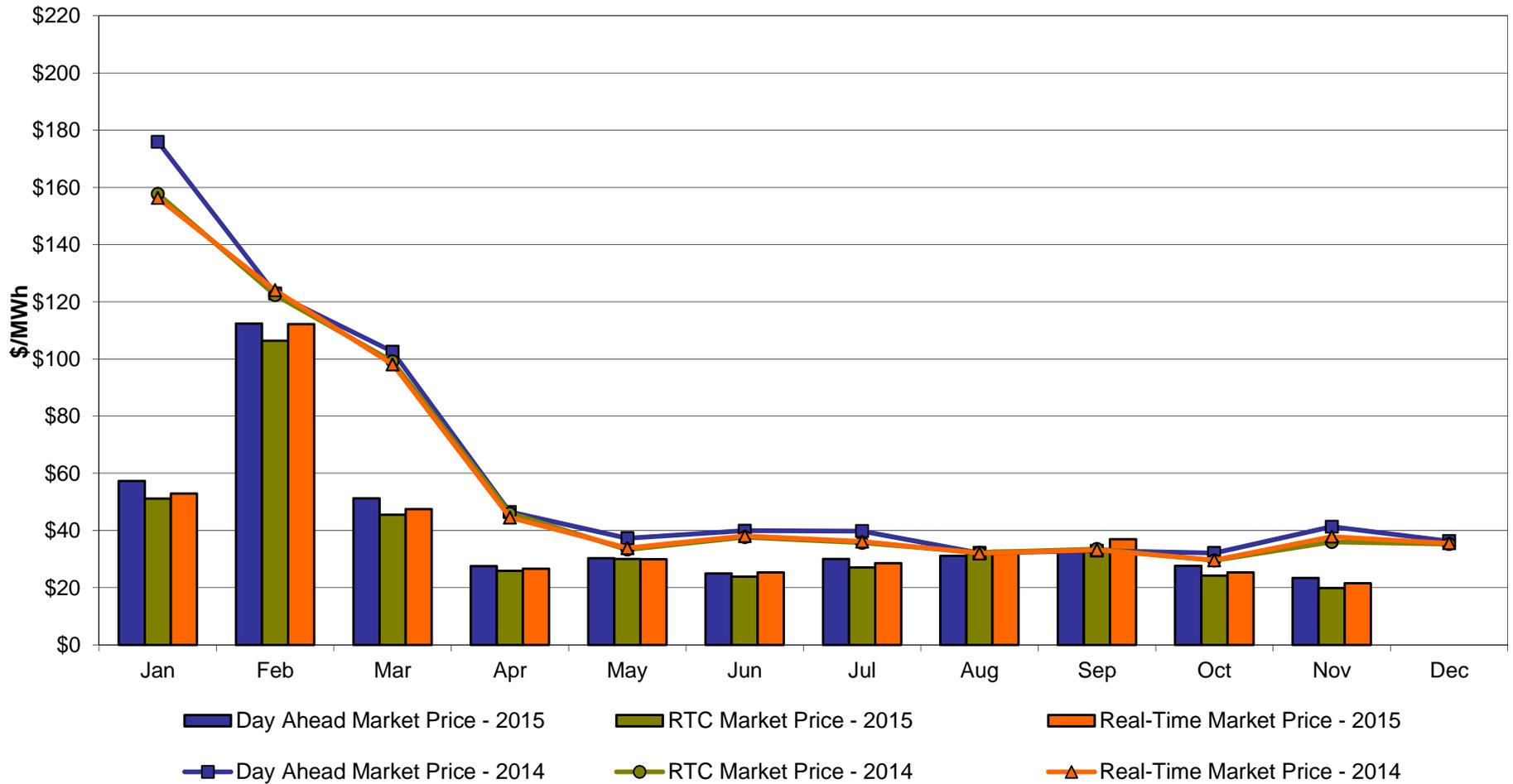
Capital Zone F Monthly Average LBMP Prices 2014 - 2015



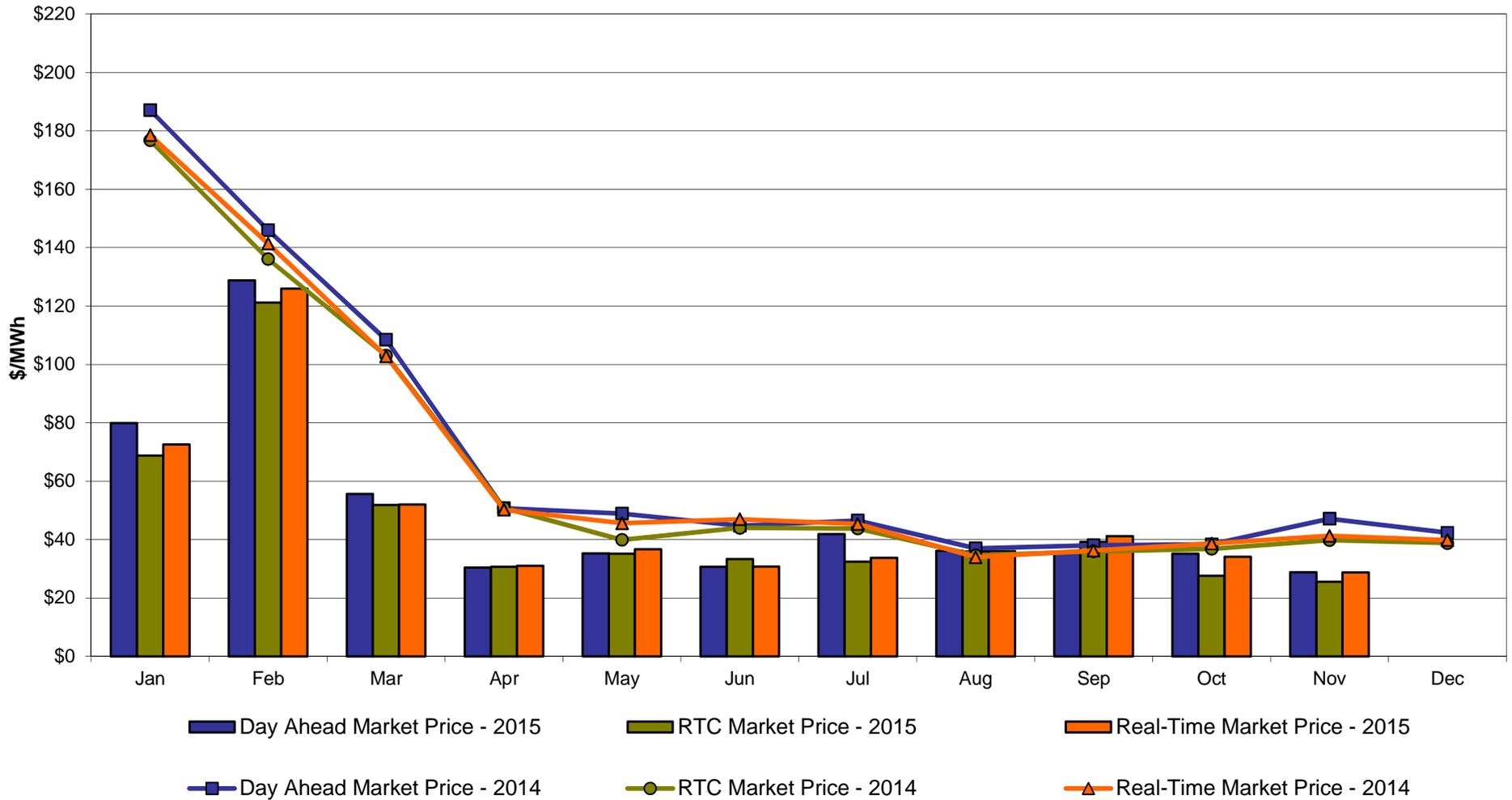
Hudson Valley Zone G Monthly Average LBMP Prices 2014 - 2015



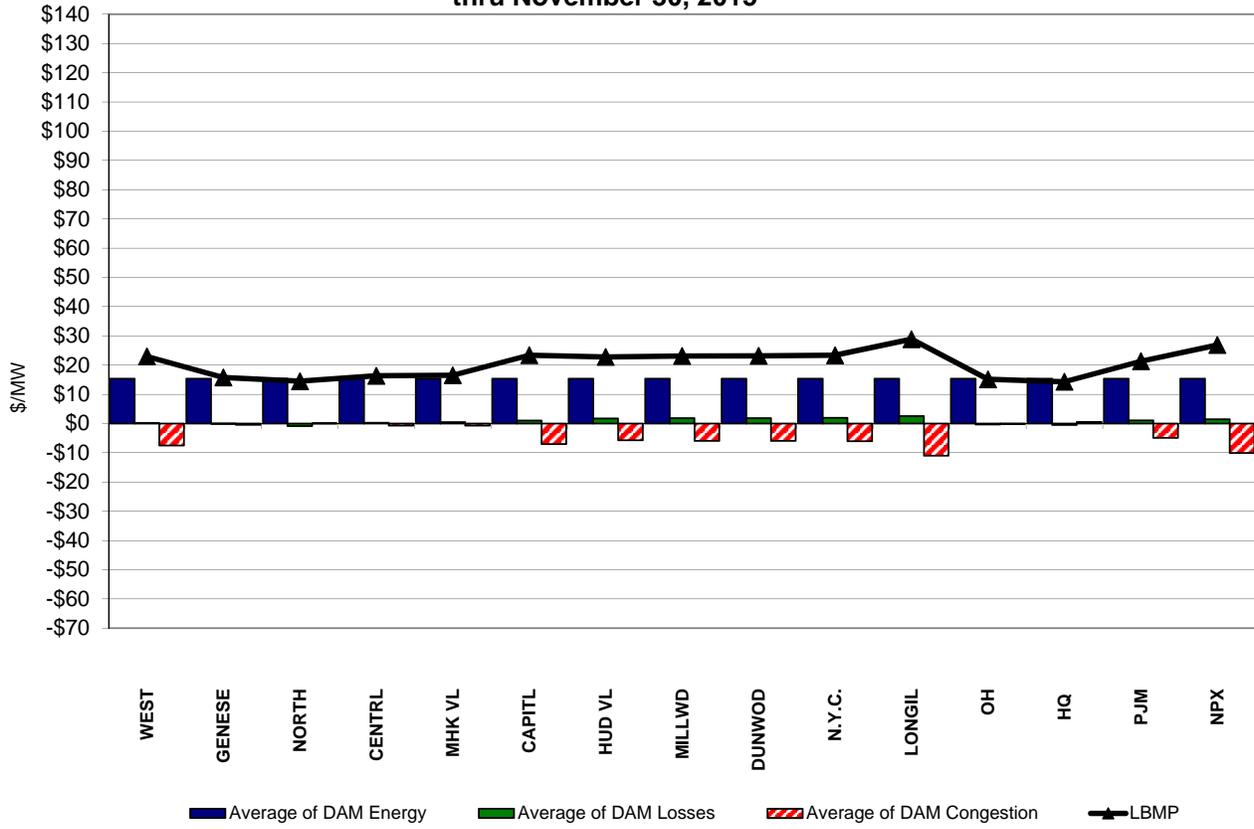
NYC Zone J Monthly Average LBMP Prices 2014 - 2015



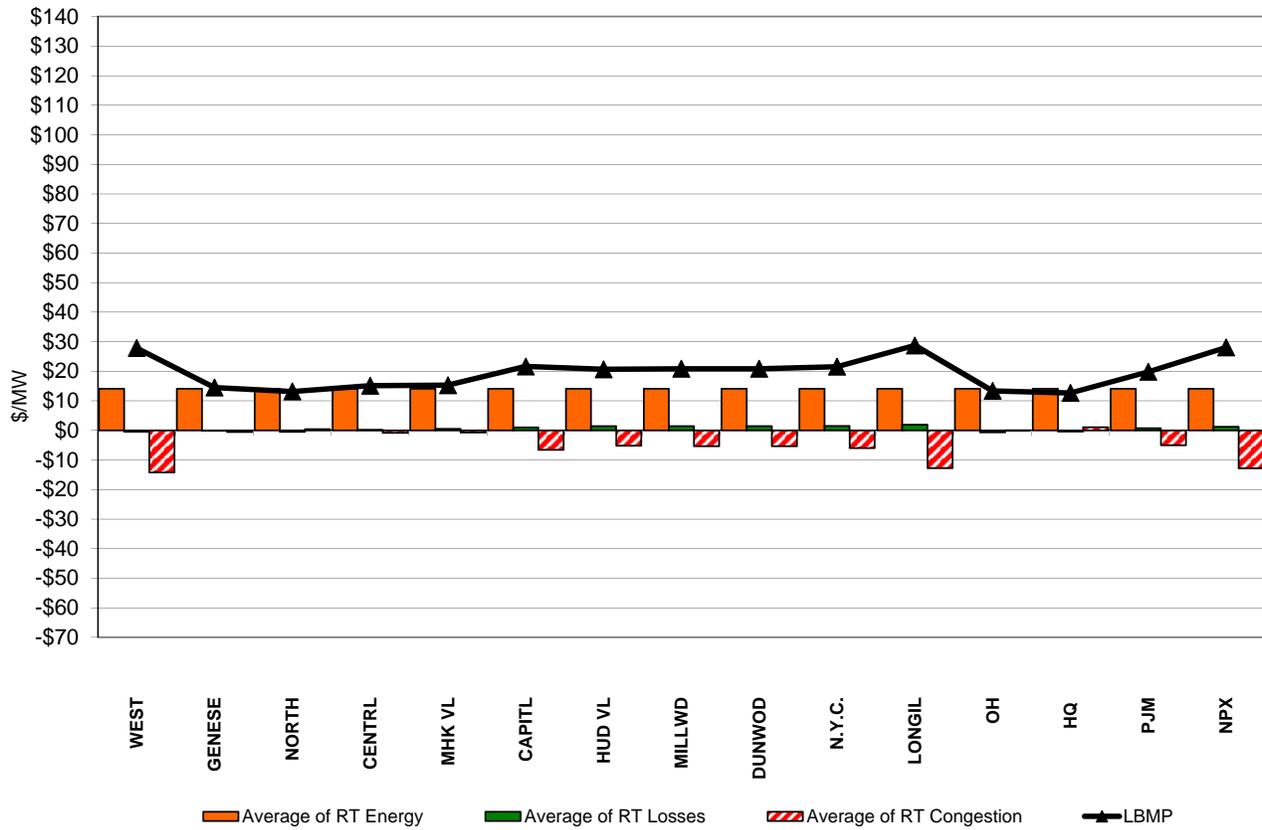
Long Island Zone K Monthly Average LBMP Prices 2014 - 2015



DAM Zonal Unweighted Monthly Average LBMP Components thru November 30, 2015

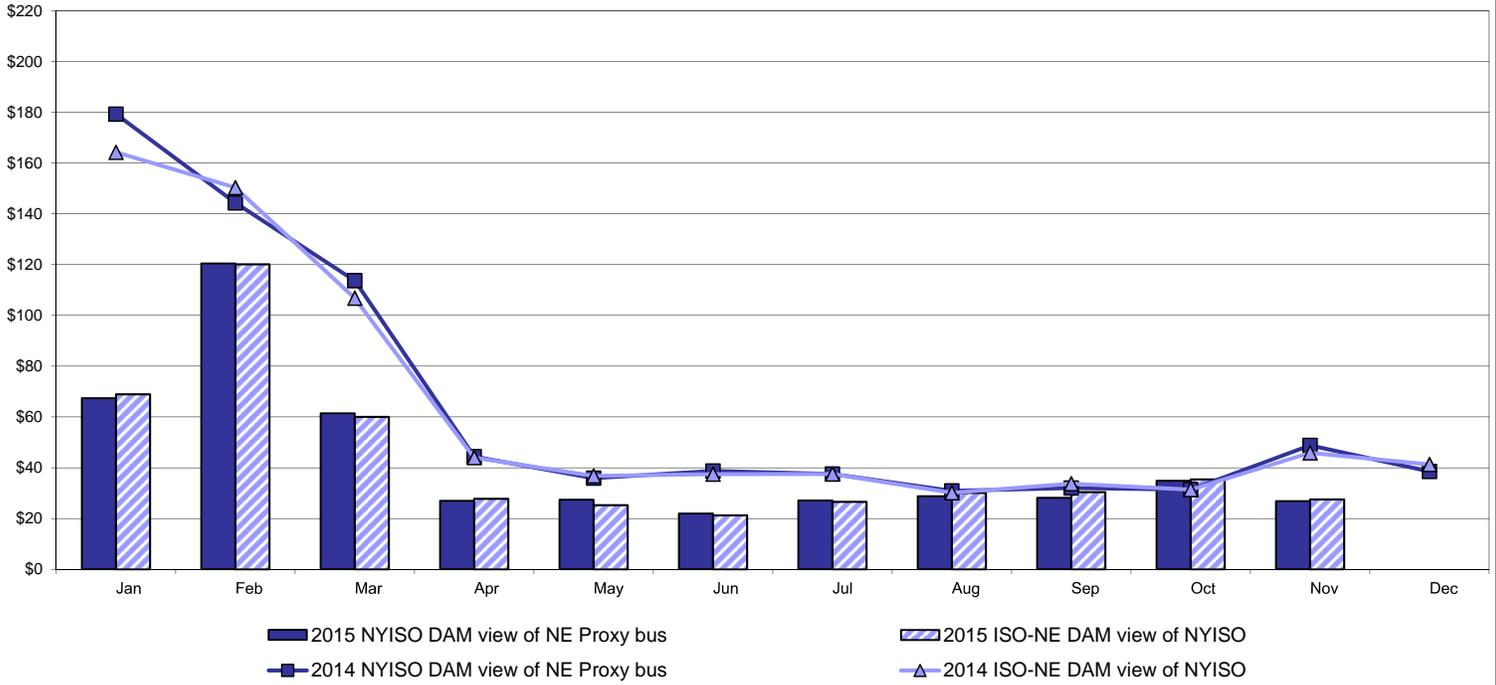


RT Zonal Unweighted Monthly Average LBMP Components thru November 30, 2015

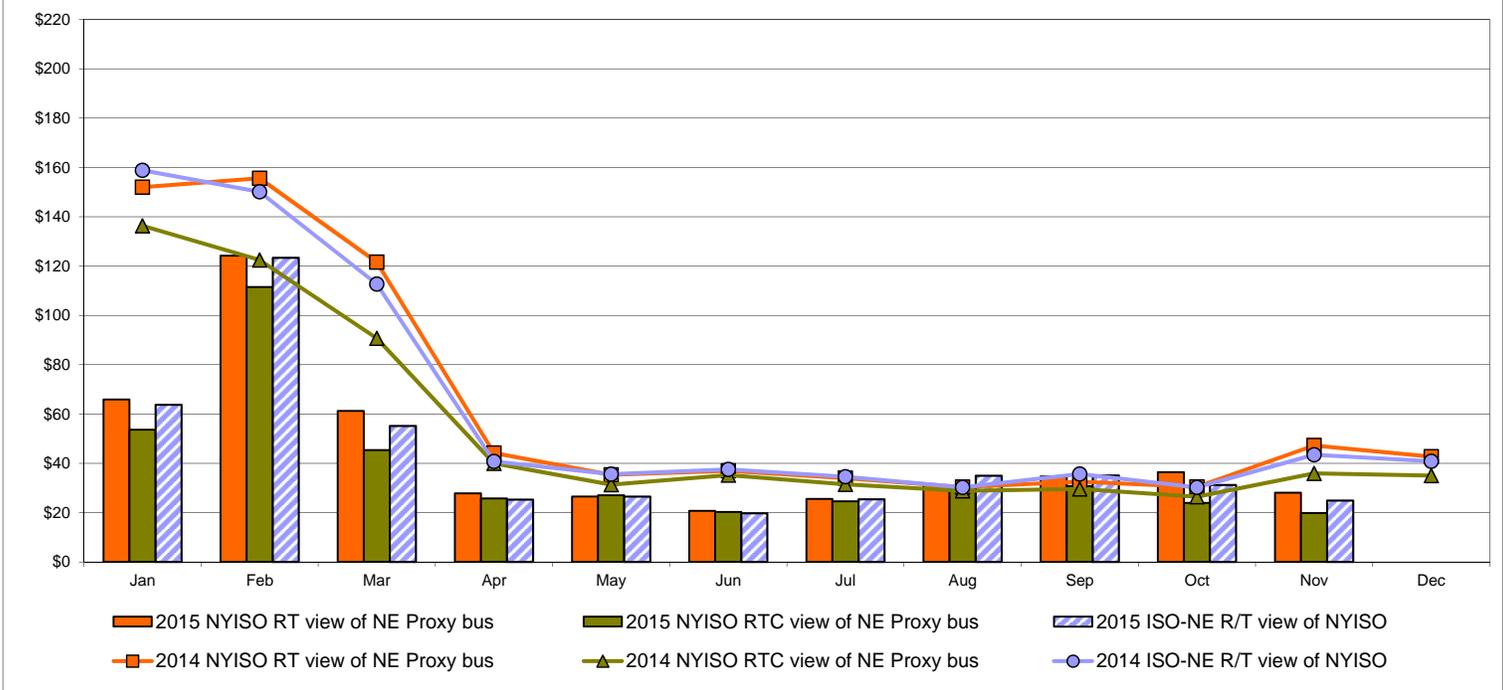


External Comparison ISO-New England

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

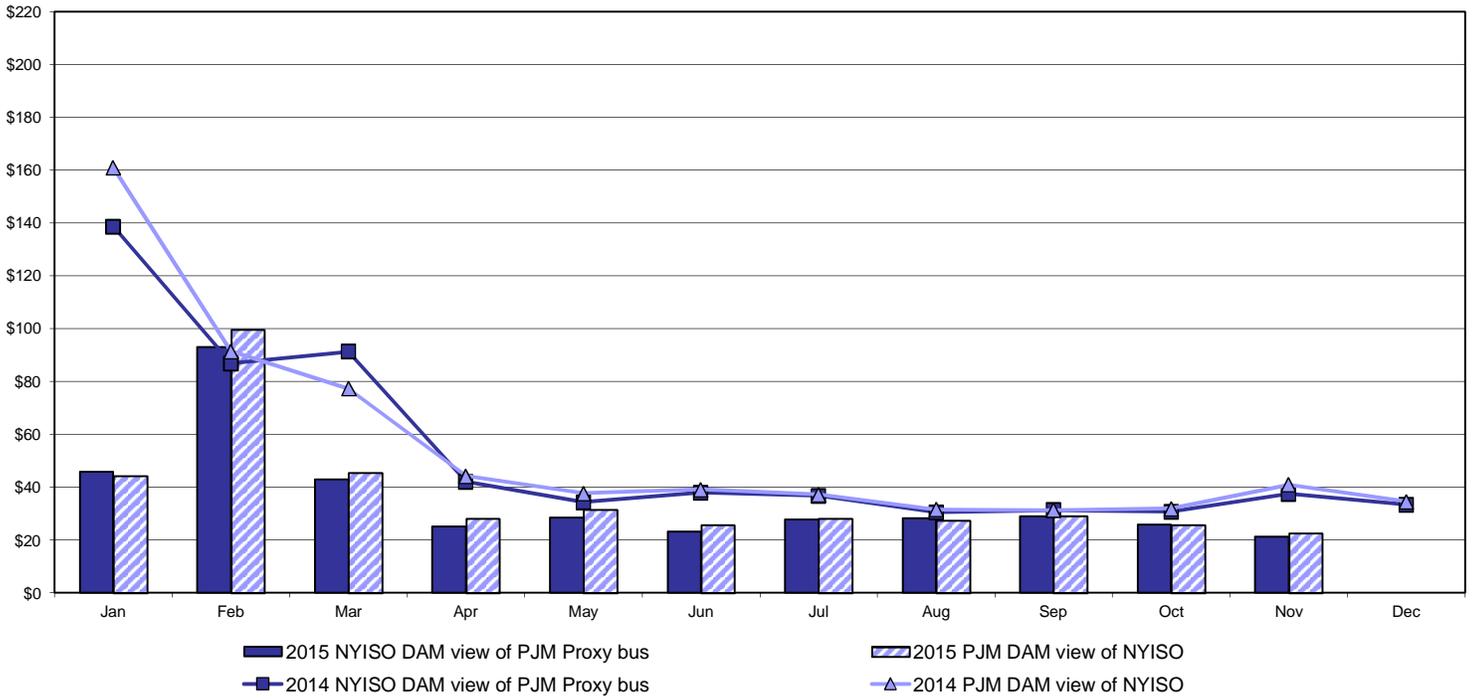


Real Time Market External Zone Comparison: ISO-NE (\$/MWh)

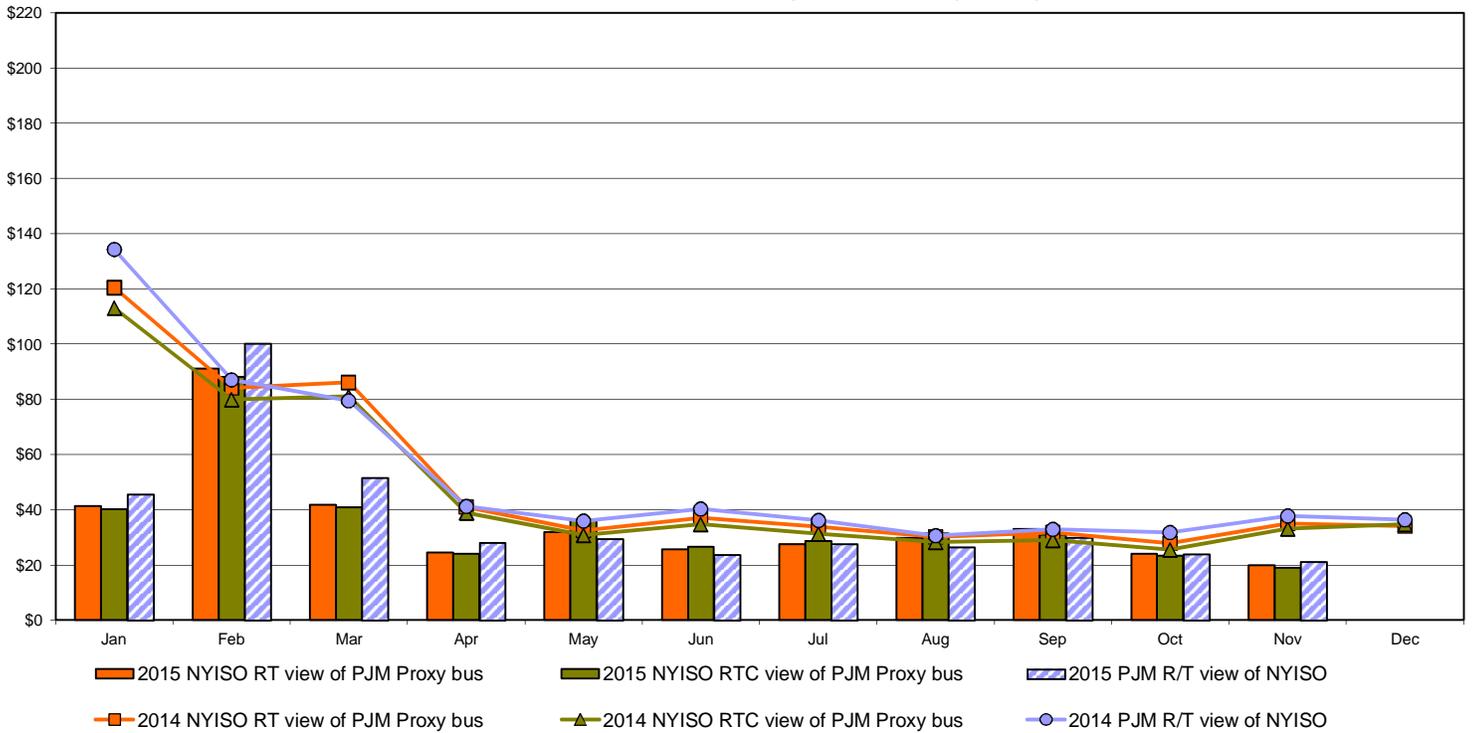


External Comparison PJM

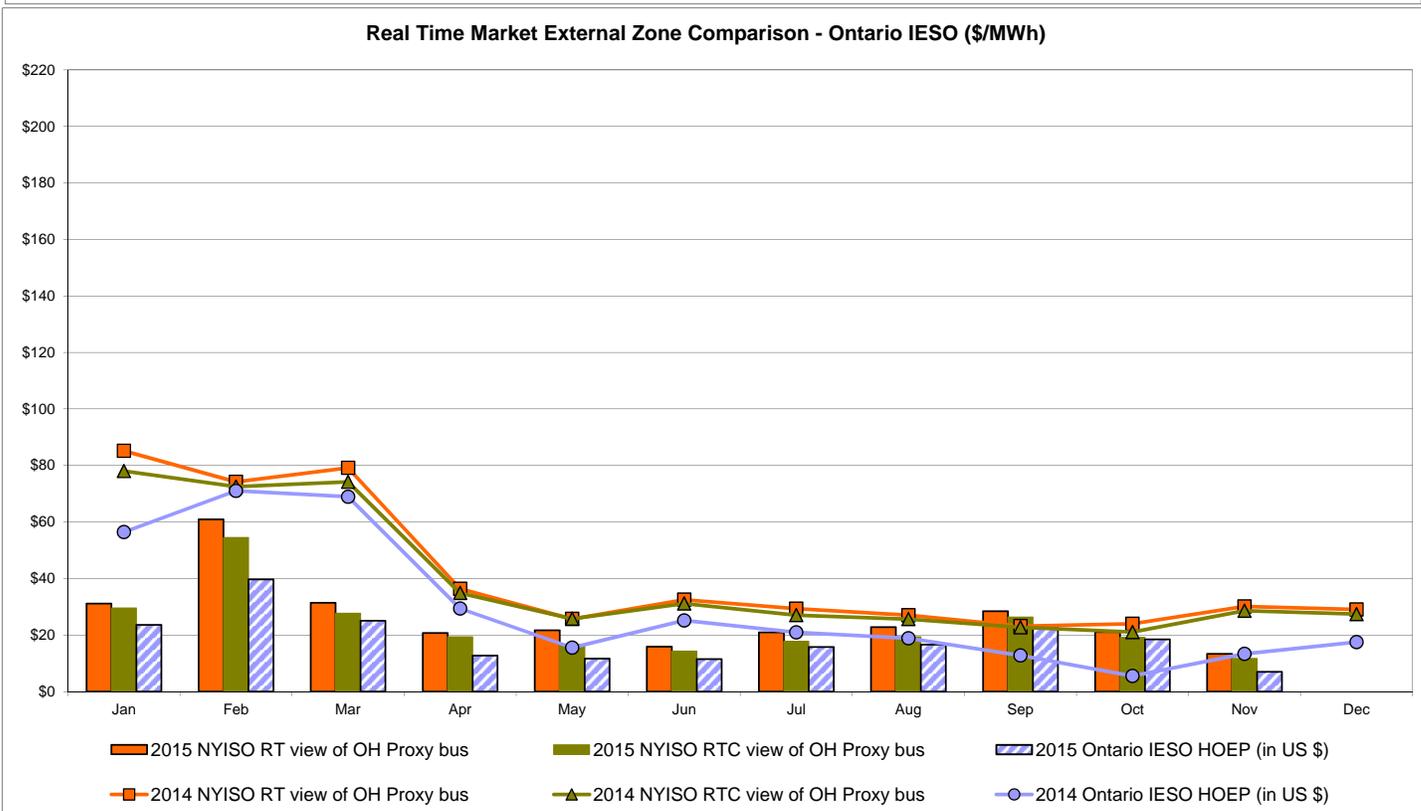
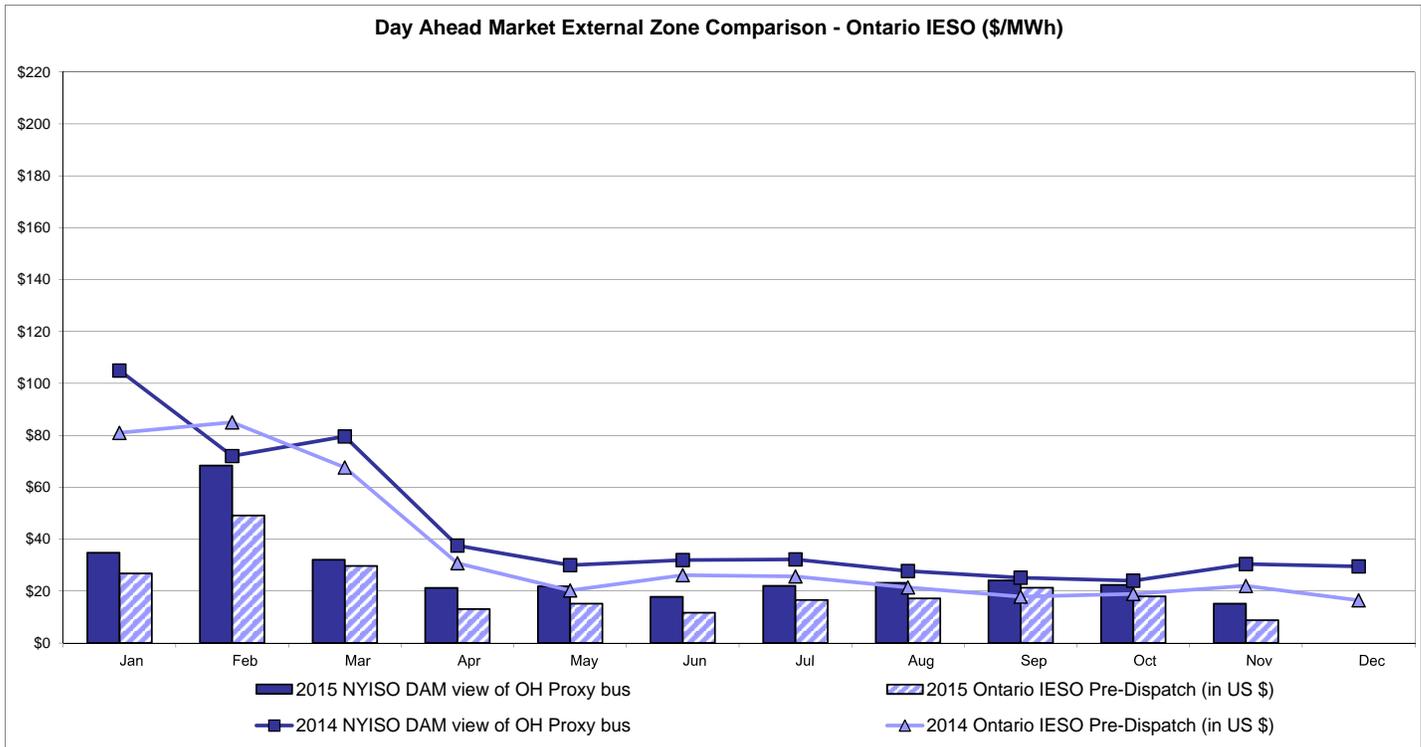
Day Ahead Market External Zone Comparison - PJM (\$/MWh)



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

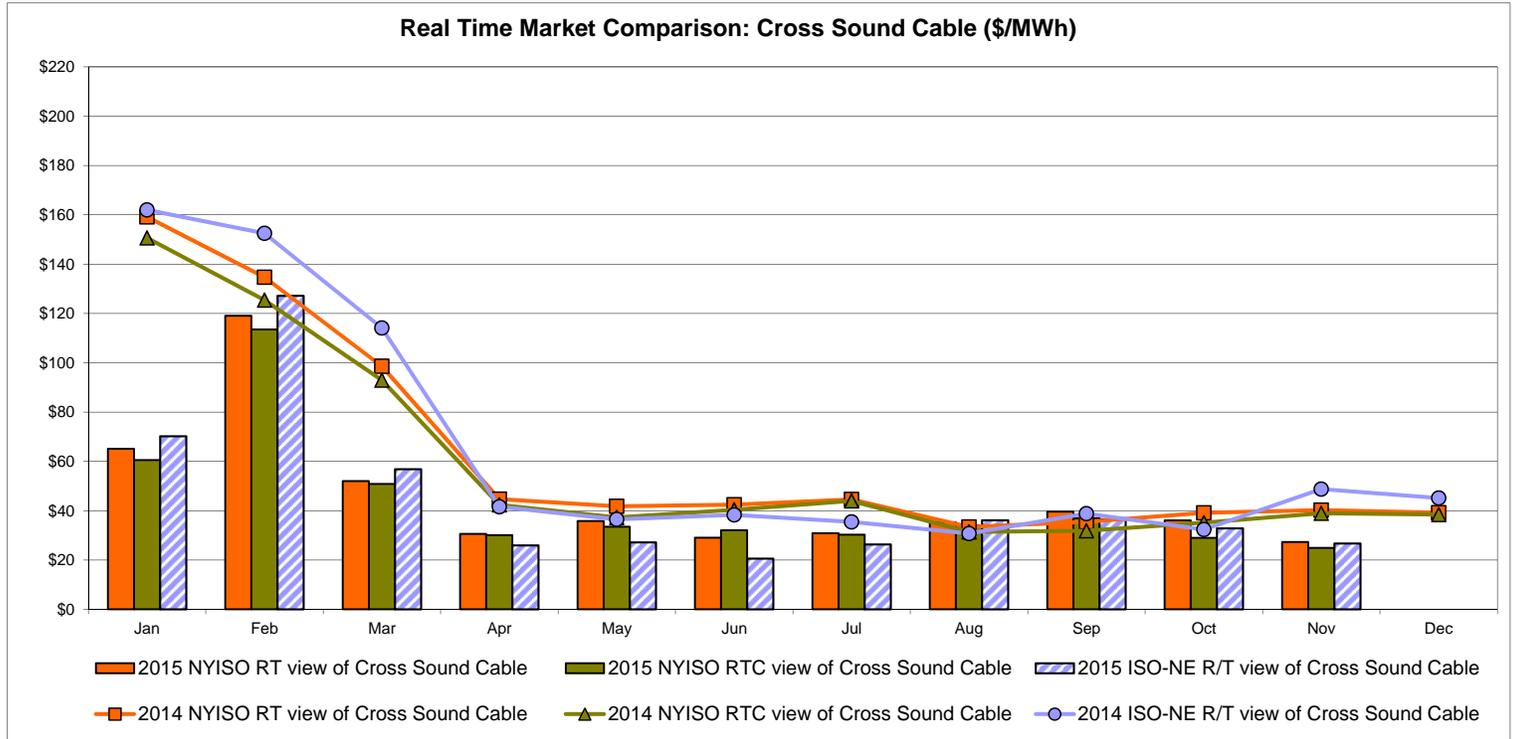
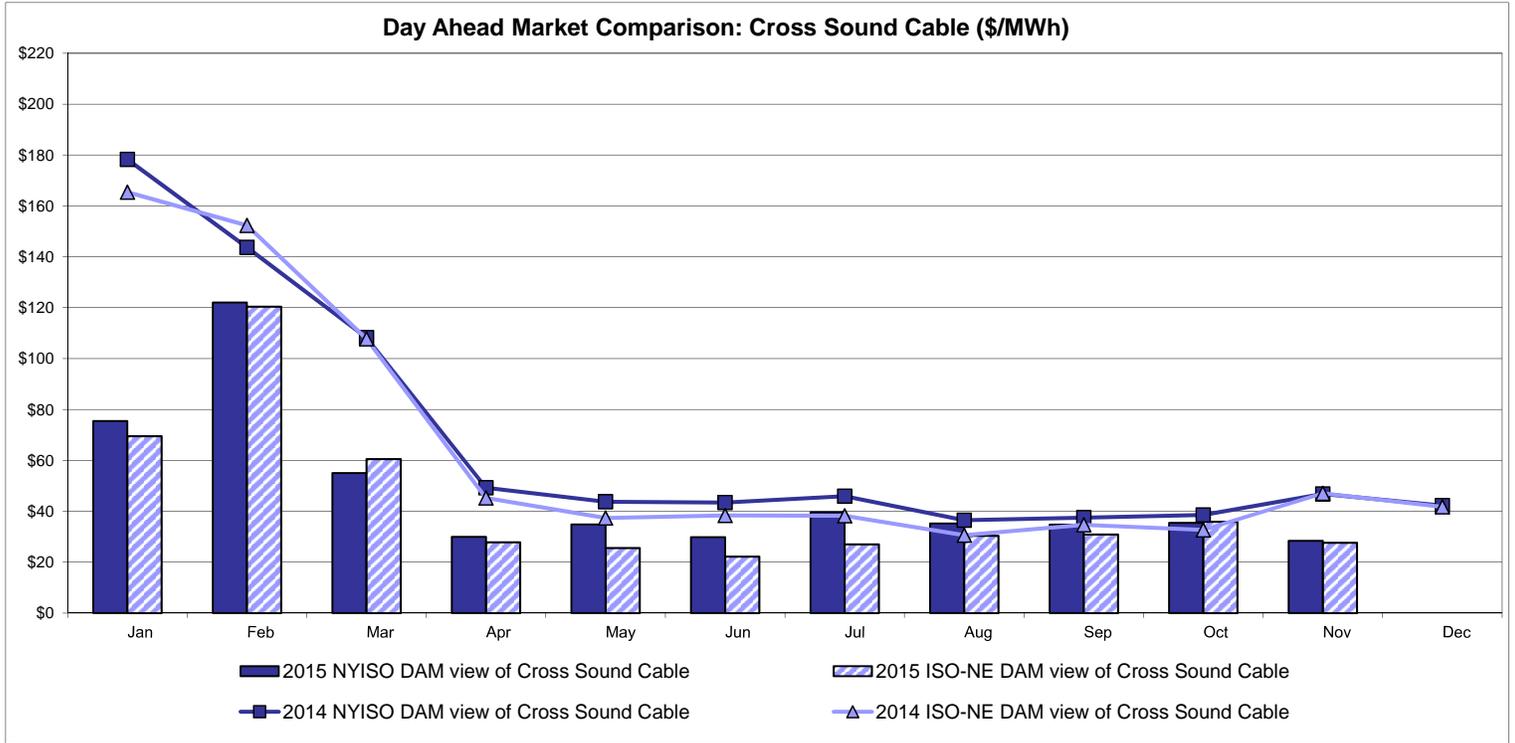


External Comparison Ontario IESO



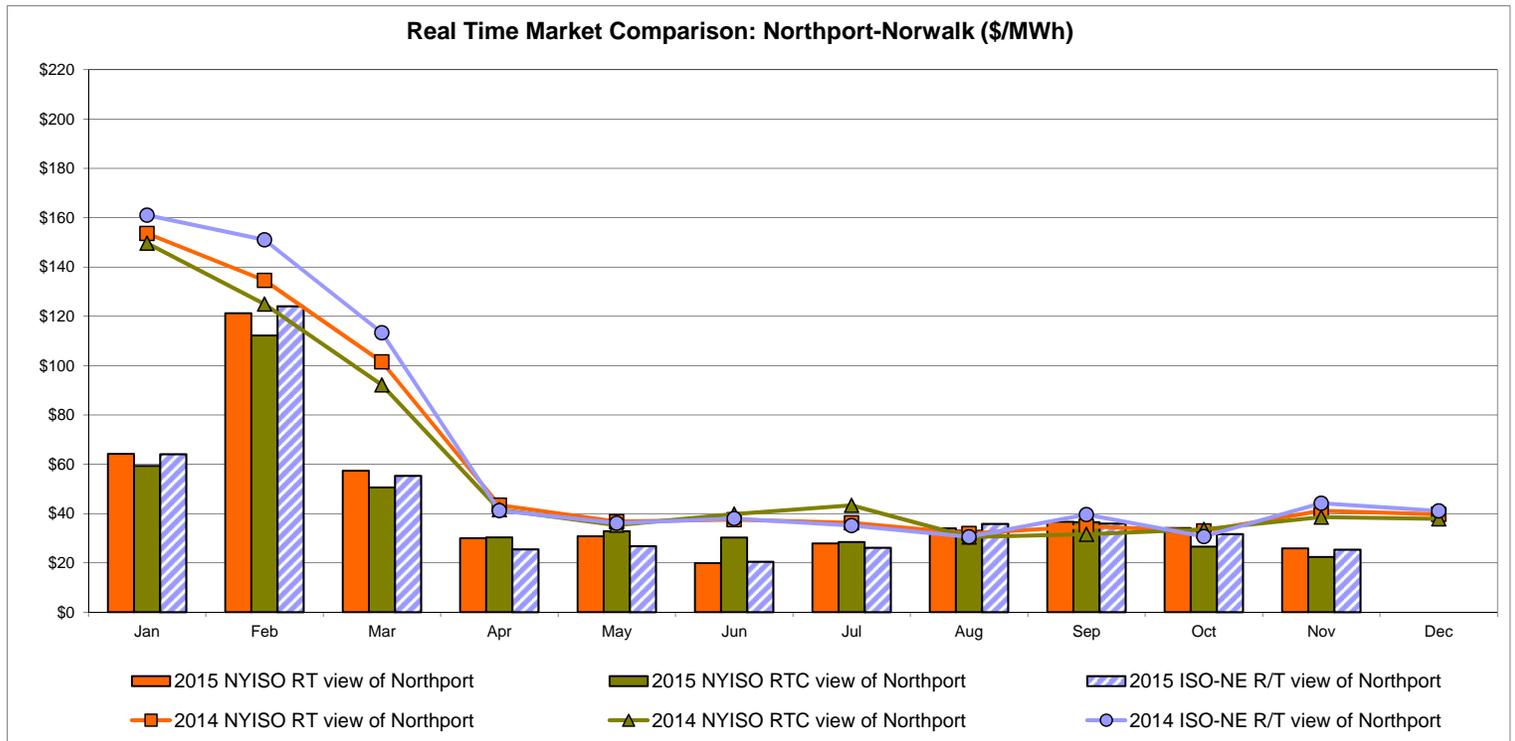
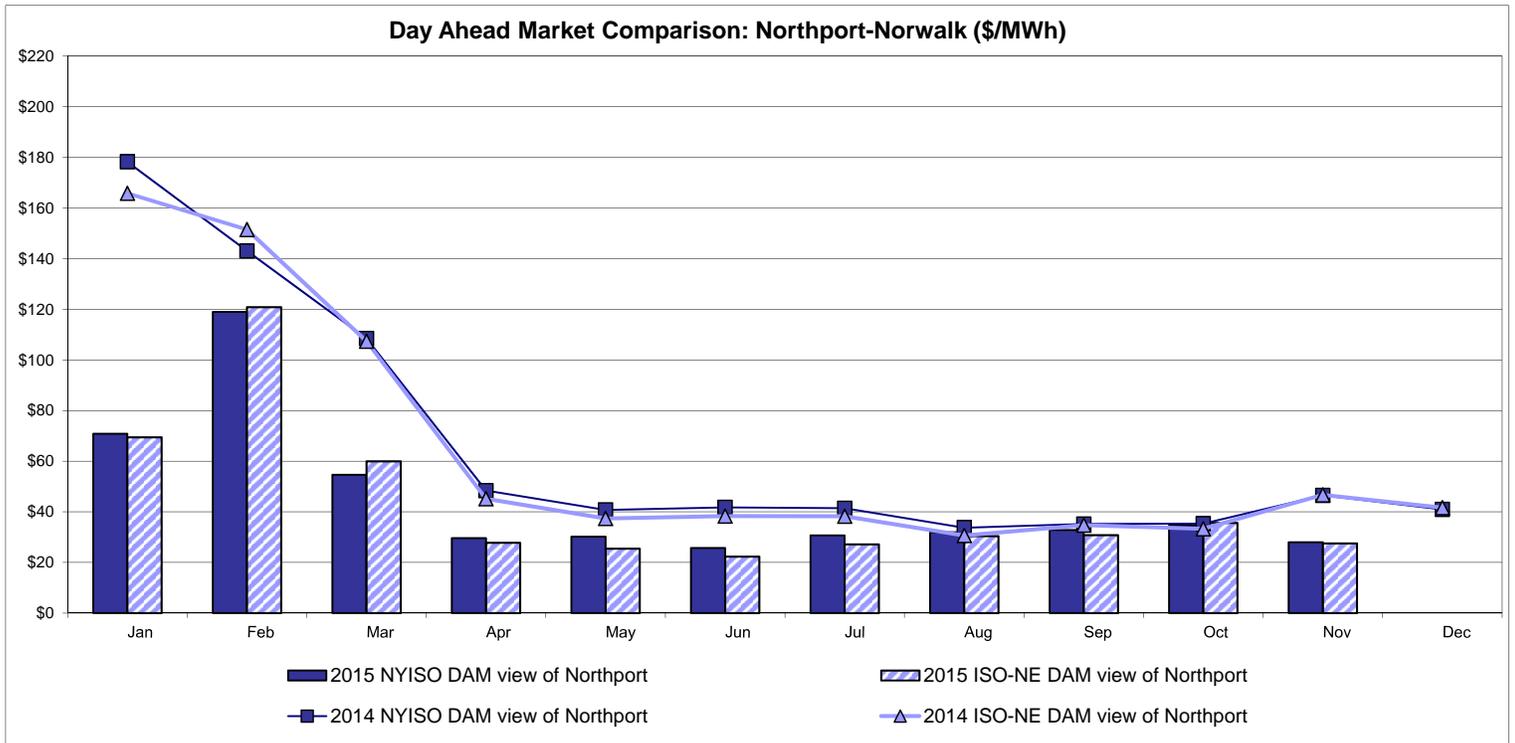
Notes: Exchange factor used for November 2015 was 0.7532 to US
 HOEP: Hourly Ontario Energy Price
 Pre-Dispatch: Projected Energy Price

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.

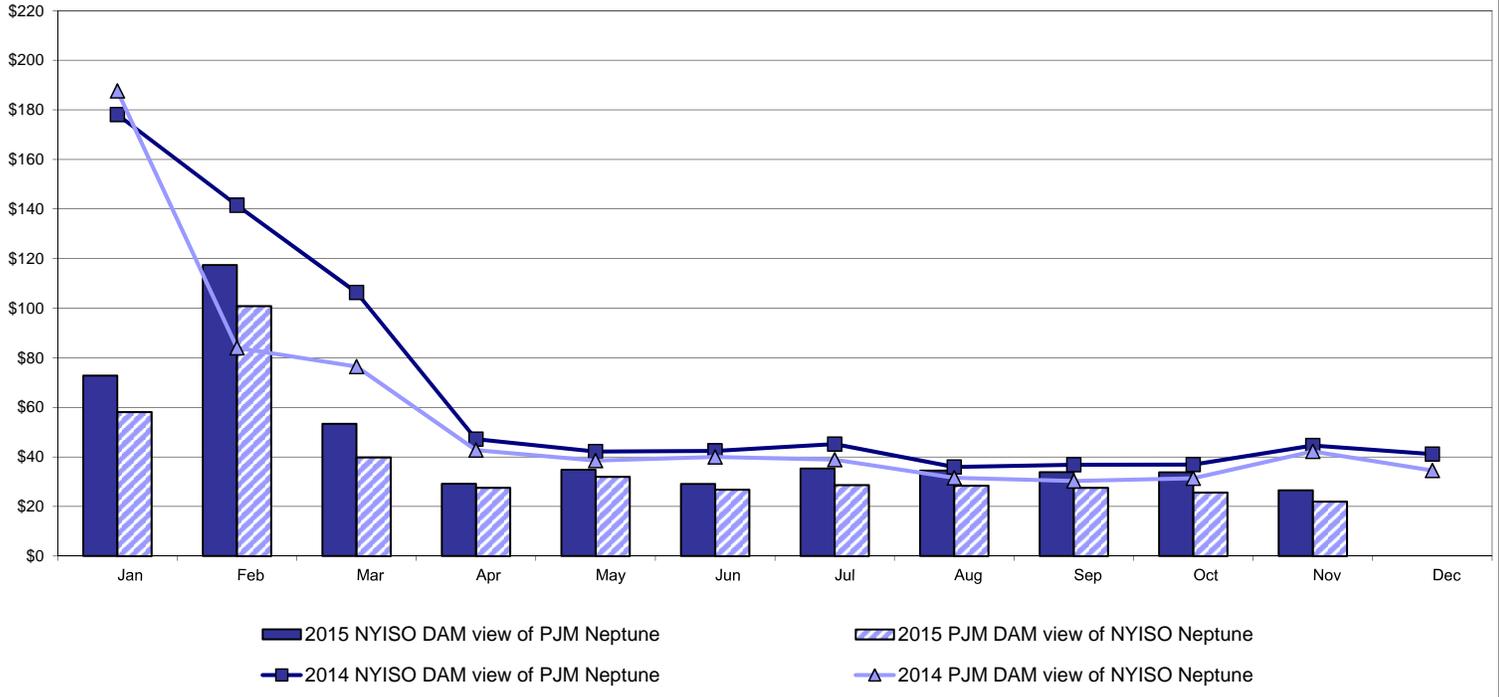
External Controllable Line: Northport - Norwalk (New England)



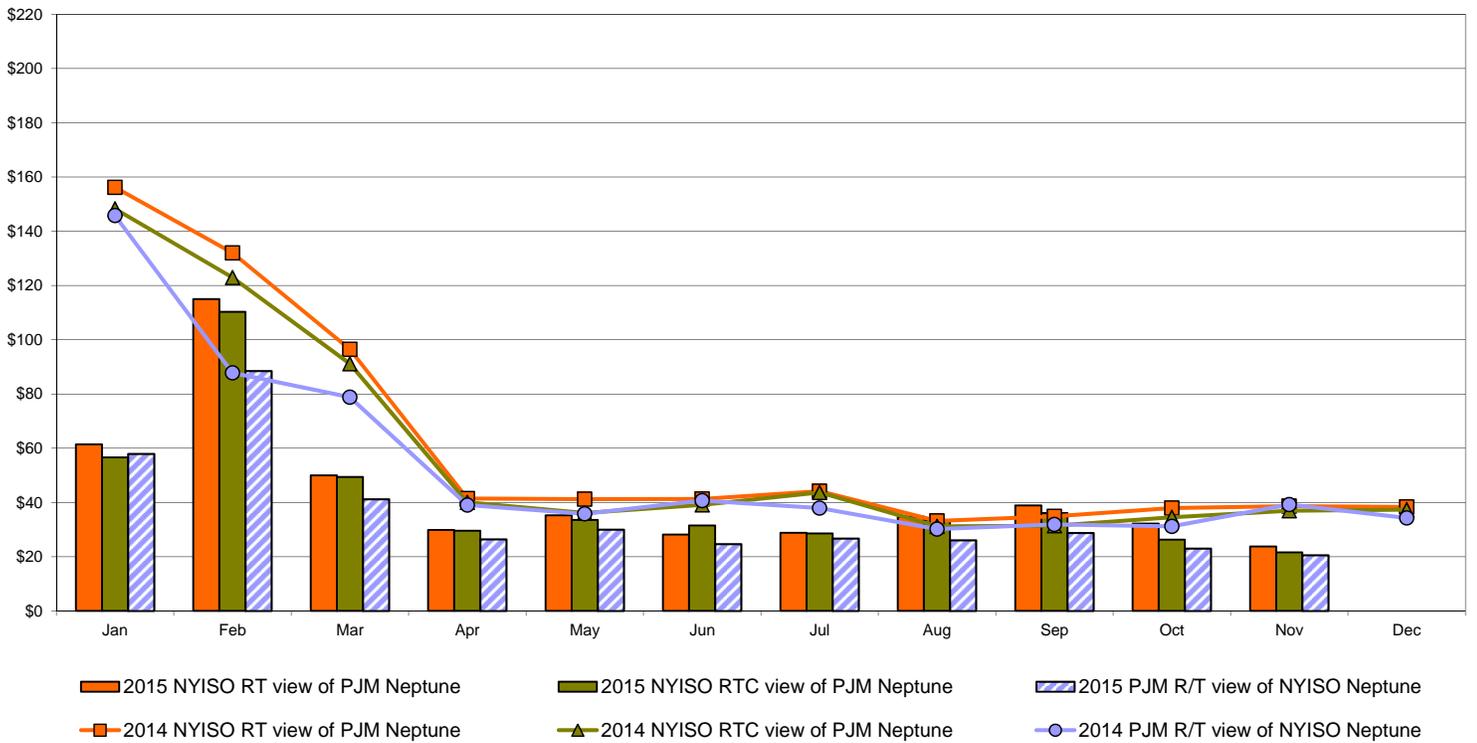
Note:
 ISO-NE Forecast is an advisory posting @ 18:00 day before.
 The DAM and R/T prices at the Northport 138 interface are used for ISO-NE.
 The DAM and R/T prices at the 1385 interface are used for NYISO.

External Controllable Line: Neptune (PJM)

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

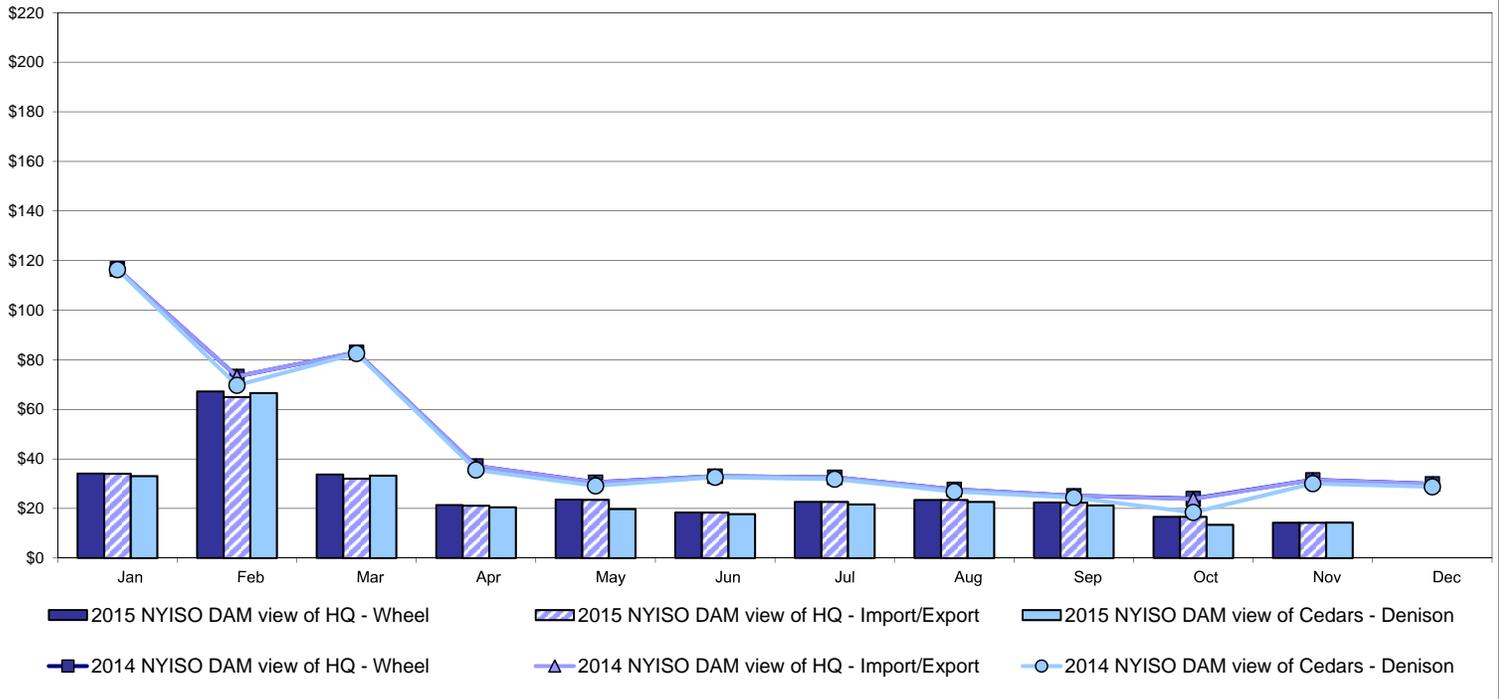


Real Time Market Comparison: Neptune (\$/MWh)

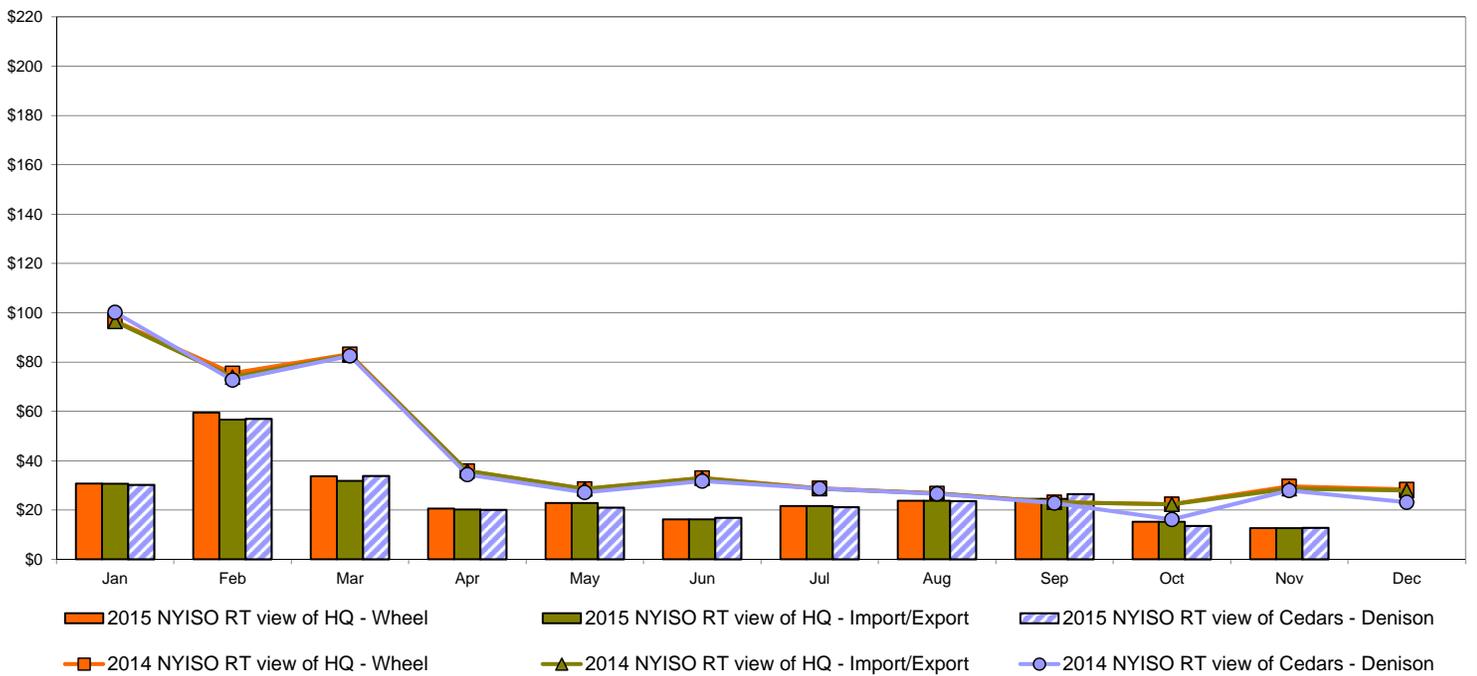


External Comparison Hydro-Quebec

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

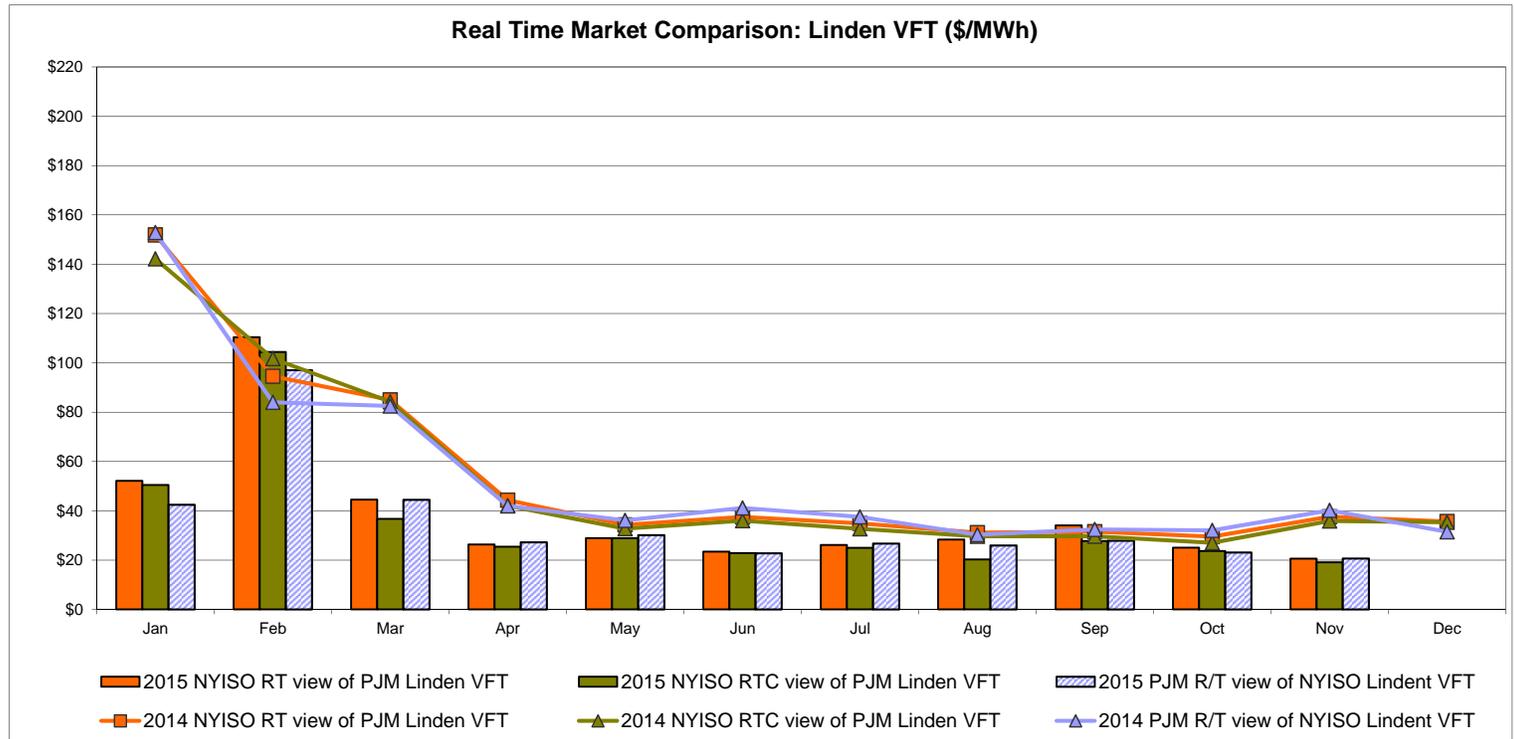
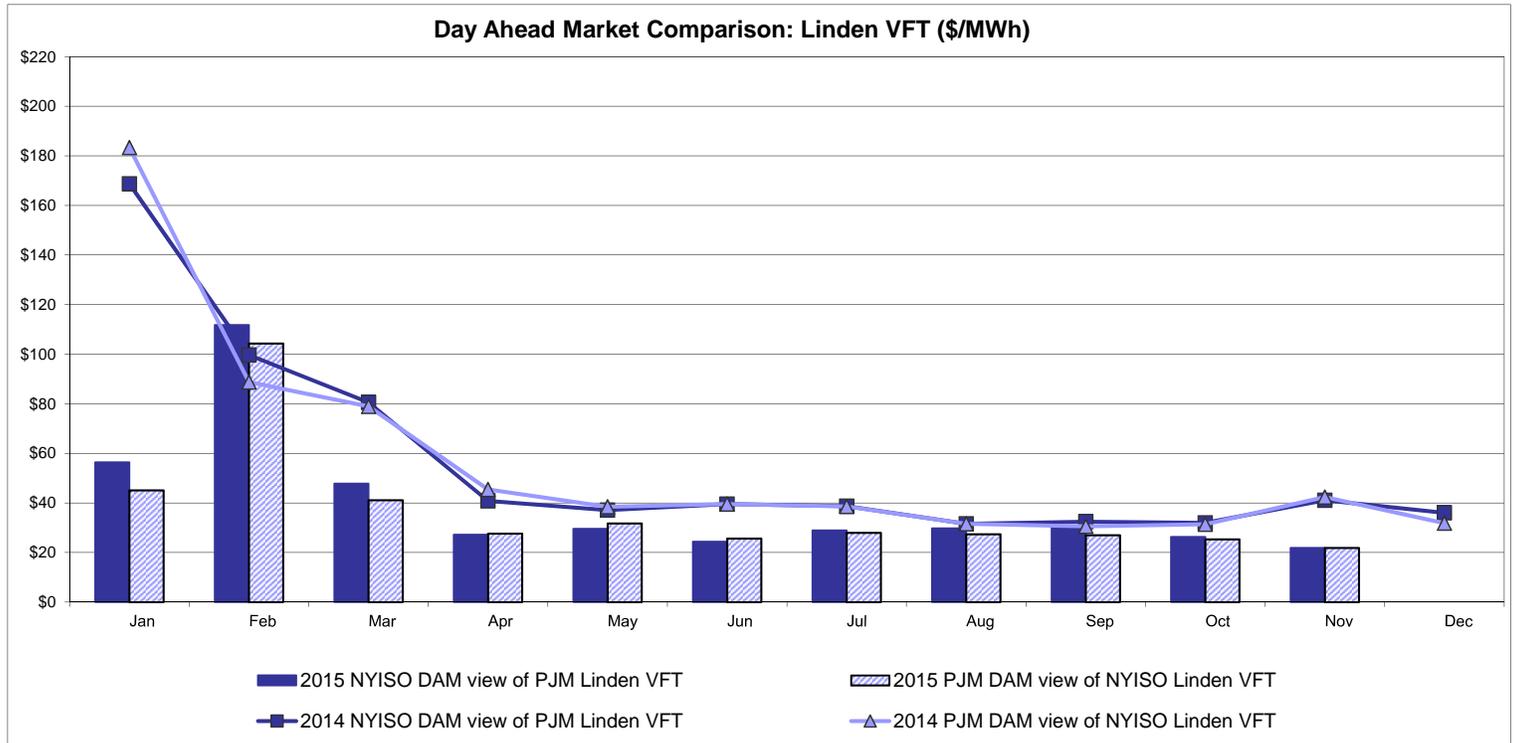


Real Time Market External Zone Comparison - HQ (\$/MWh)

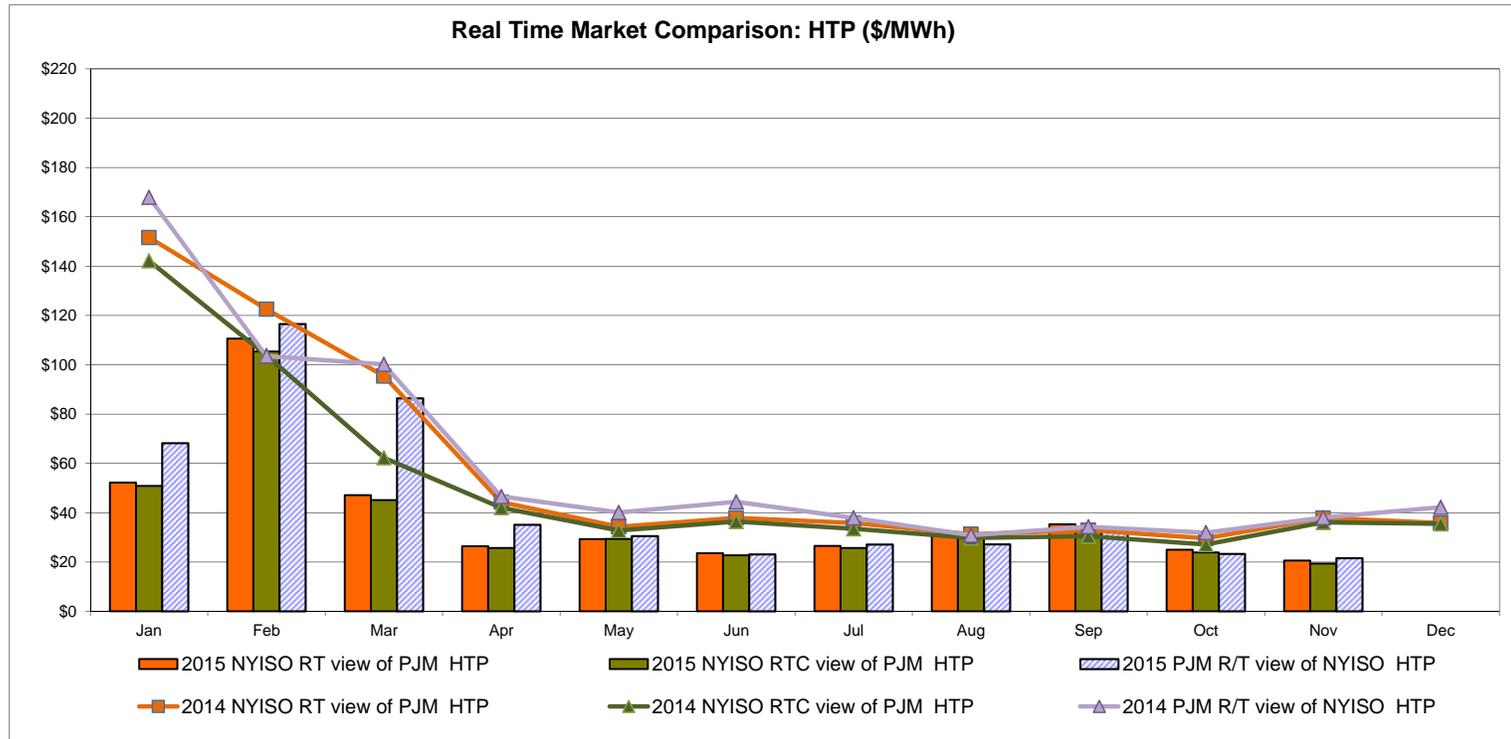
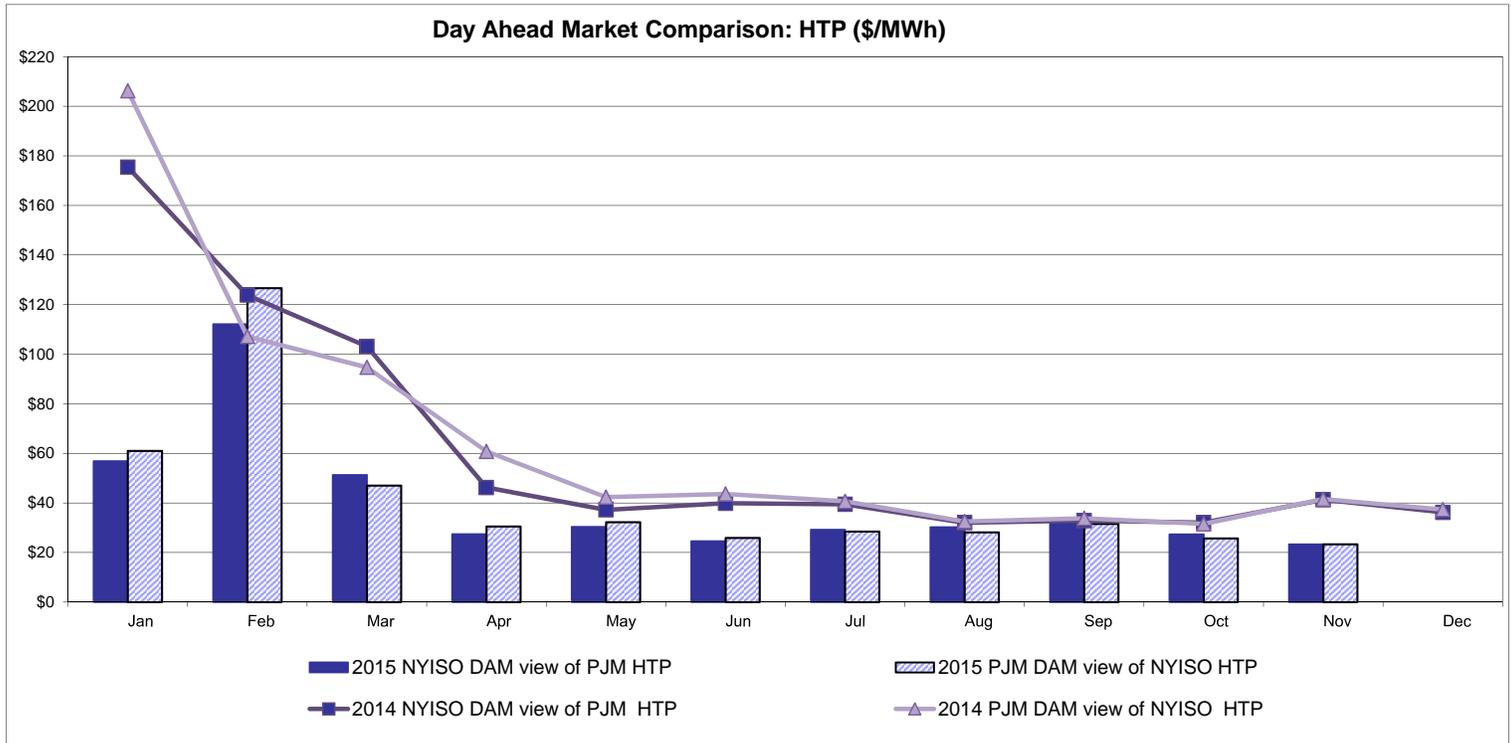


Note:
Hydro-Quebec Prices are unavailable.

External Controllable Line: Linden VFT (PJM)



External Controllable Line: Hudson (PJM)

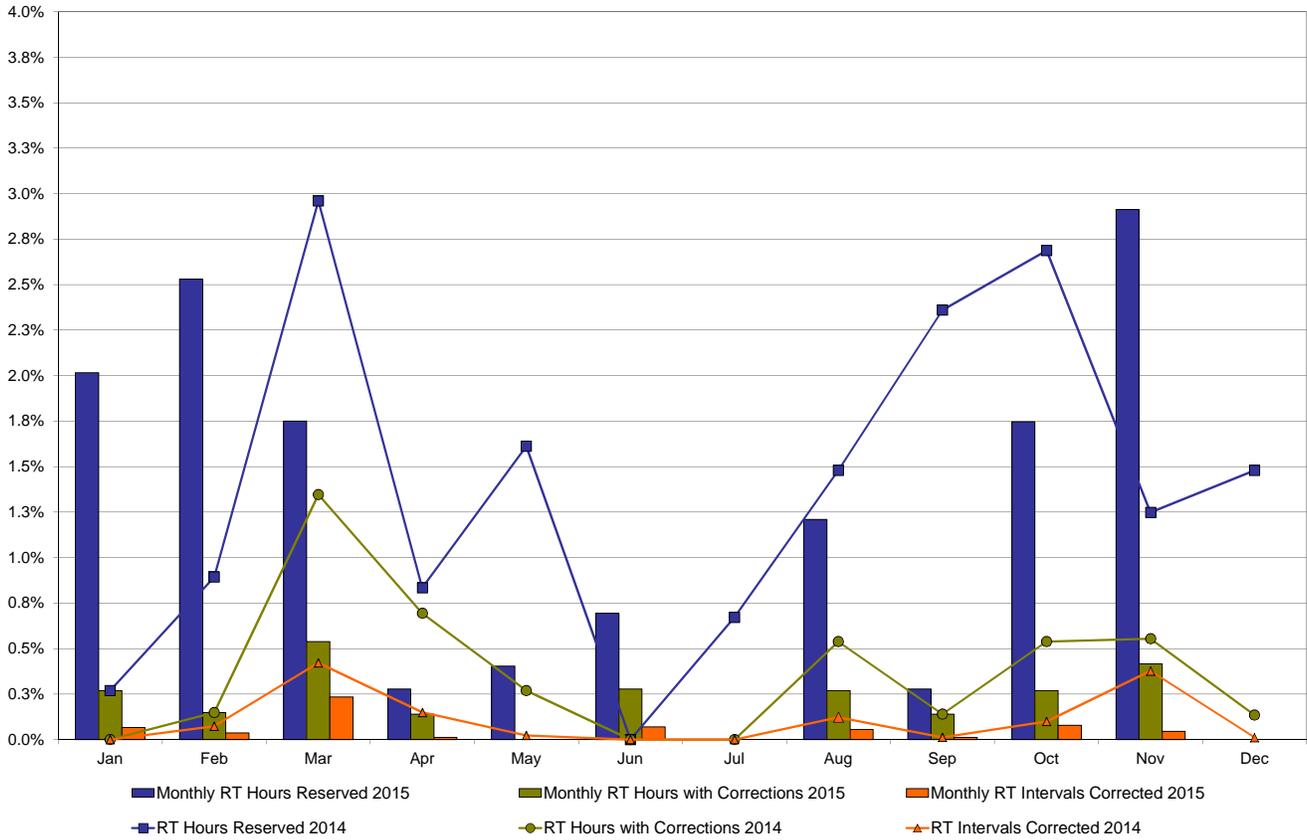


NYISO Real Time Price Correction Statistics

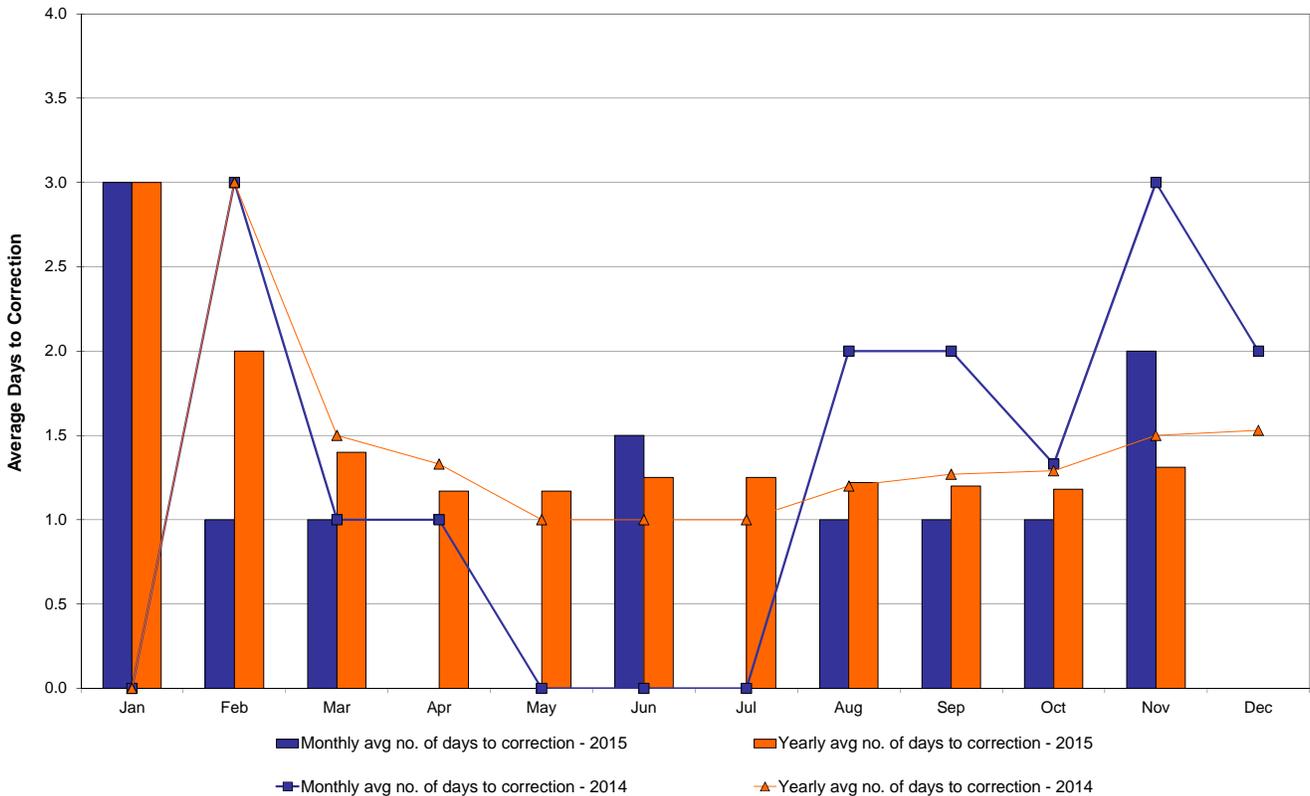
2015		<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
Hour Corrections													
Number of hours with corrections	in the month	2	1	4	1	0	2	0	2	1	2	3	
Number of hours	in the month	744	672	743	720	744	720	744	744	720	744	721	
% 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%	0.27%	0.42%	
% 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%	0.21%	0.22%	
Interval Corrections													
Number of intervals corrected	in the month	6	3	21	1	0	6	0	5	1	7	4	
Number of intervals	in the month	9,066	8,231	9,005	8,696	9,032	8,731	9,025	8,987	8,728	9,008	8,743	
% of intervals corrected	in the month	0.07%	0.04%	0.23%	0.01%	0.00%	0.07%	0.00%	0.06%	0.01%	0.08%	0.05%	
% of intervals corrected	year-to-date	0.07%	0.05%	0.11%	0.09%	0.07%	0.07%	0.06%	0.06%	0.05%	0.06%	0.06%	
Hours Reserved													
Number of hours reserved	in the month	15	17	13	2	3	5	0	9	2	13	21	
Number of hours	in the month	744	672	743	720	744	720	744	744	720	744	721	
% of hours reserved	in the month	2.02%	2.53%	1.75%	0.28%	0.40%	0.69%	0.00%	1.21%	0.28%	1.75%	2.91%	
% of hours reserved	year-to-date	2.02%	2.26%	2.08%	1.63%	1.38%	1.27%	1.08%	1.10%	1.01%	1.08%	1.25%	
Days to Correction *													
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	1.00	2.00	
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	1.18	1.31	
Days Without Corrections													
Days without corrections	in the month	30	27	28	29	31	28	31	30	29	30	28	
Days without corrections	year-to-date	30	57	85	114	145	173	204	234	263	293	321	
2014		<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>
Hour Corrections													
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%
Interval Corrections													
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%
Hours Reserved													
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%
Days to Correction *													
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
Days Without Corrections													
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

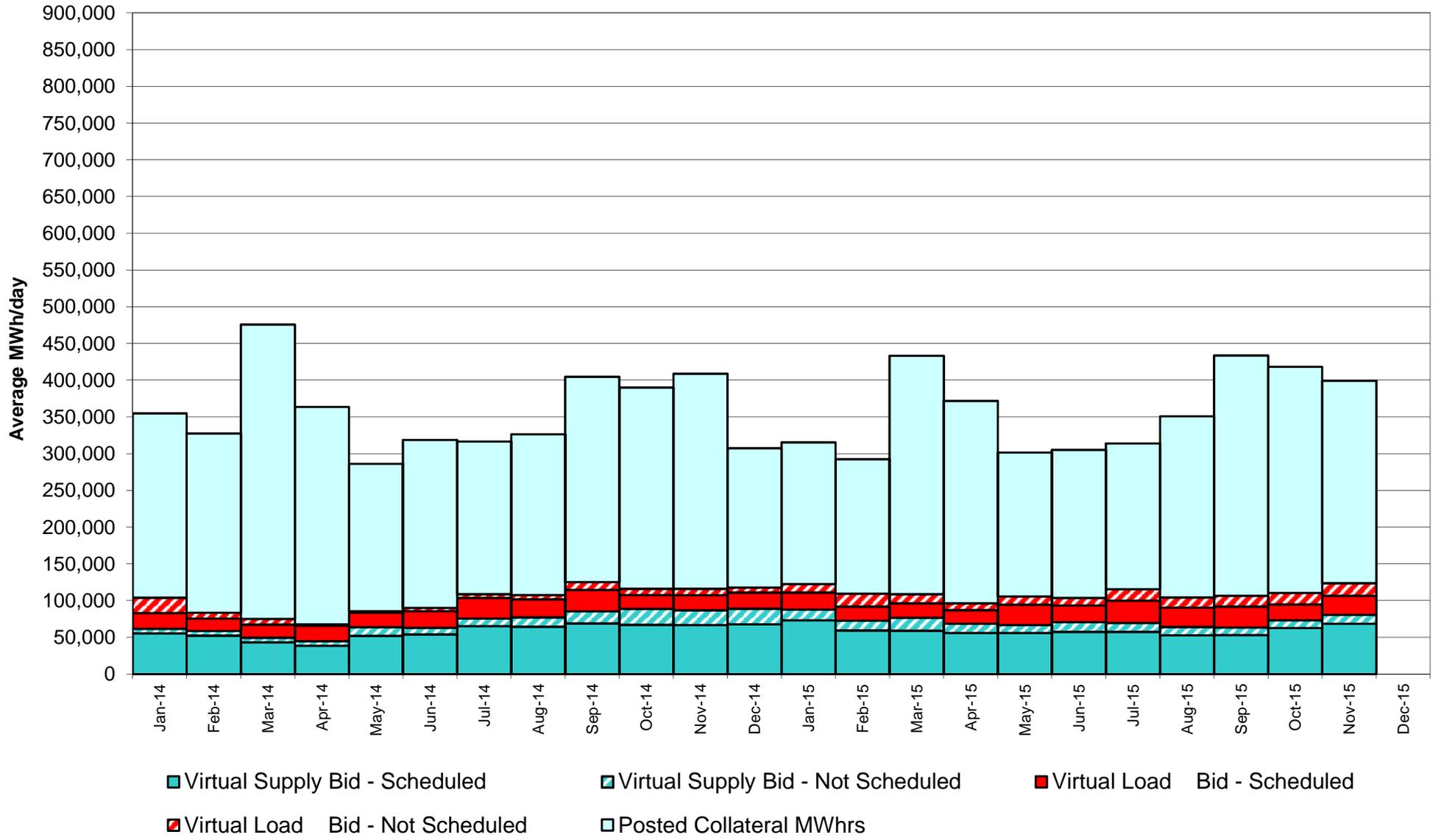


Annual average time period for making Price Corrections (from reservation date) *

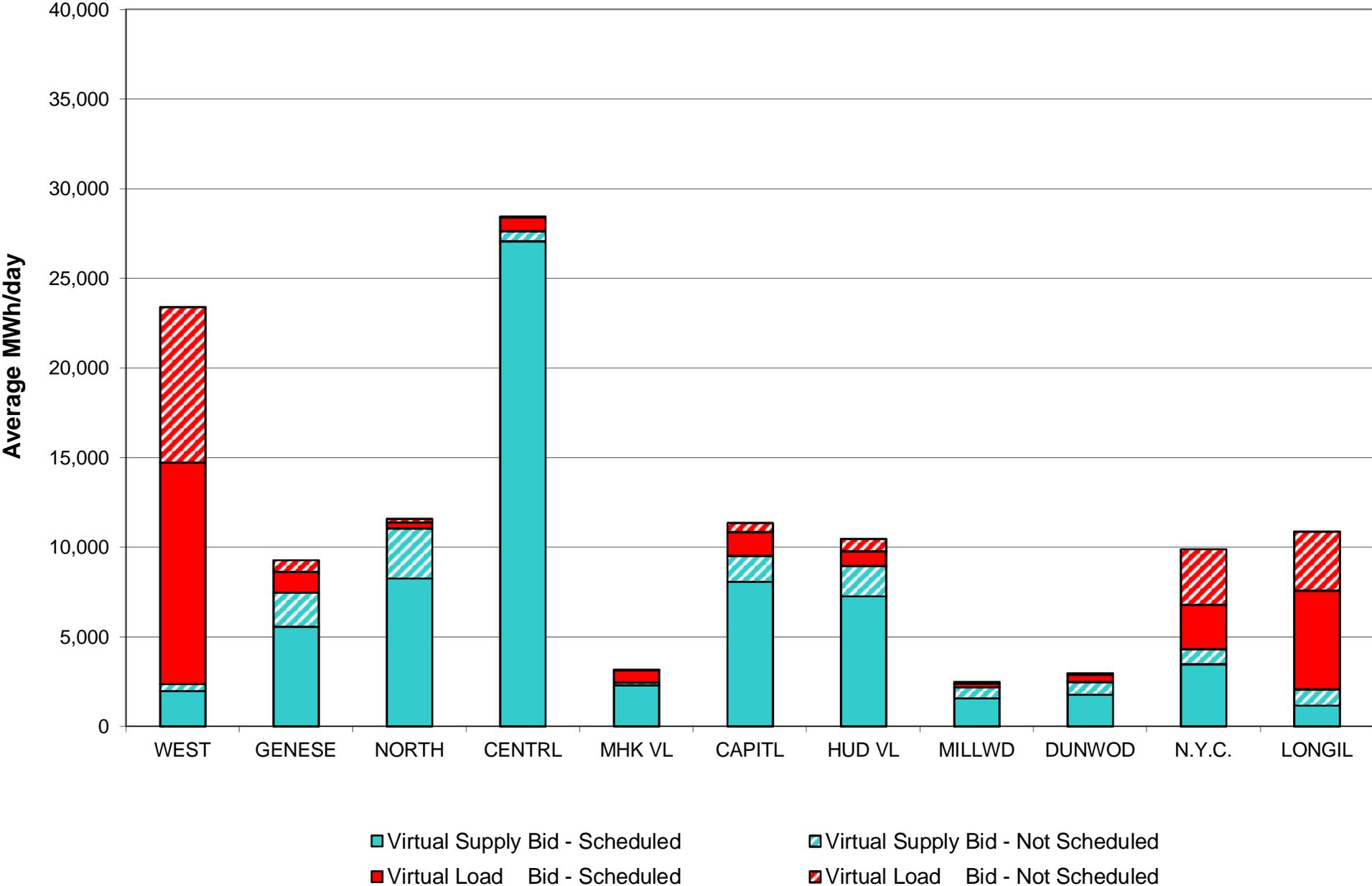


* Calendar days from reservation date.

NYISO Virtual Trading Average MWh per day



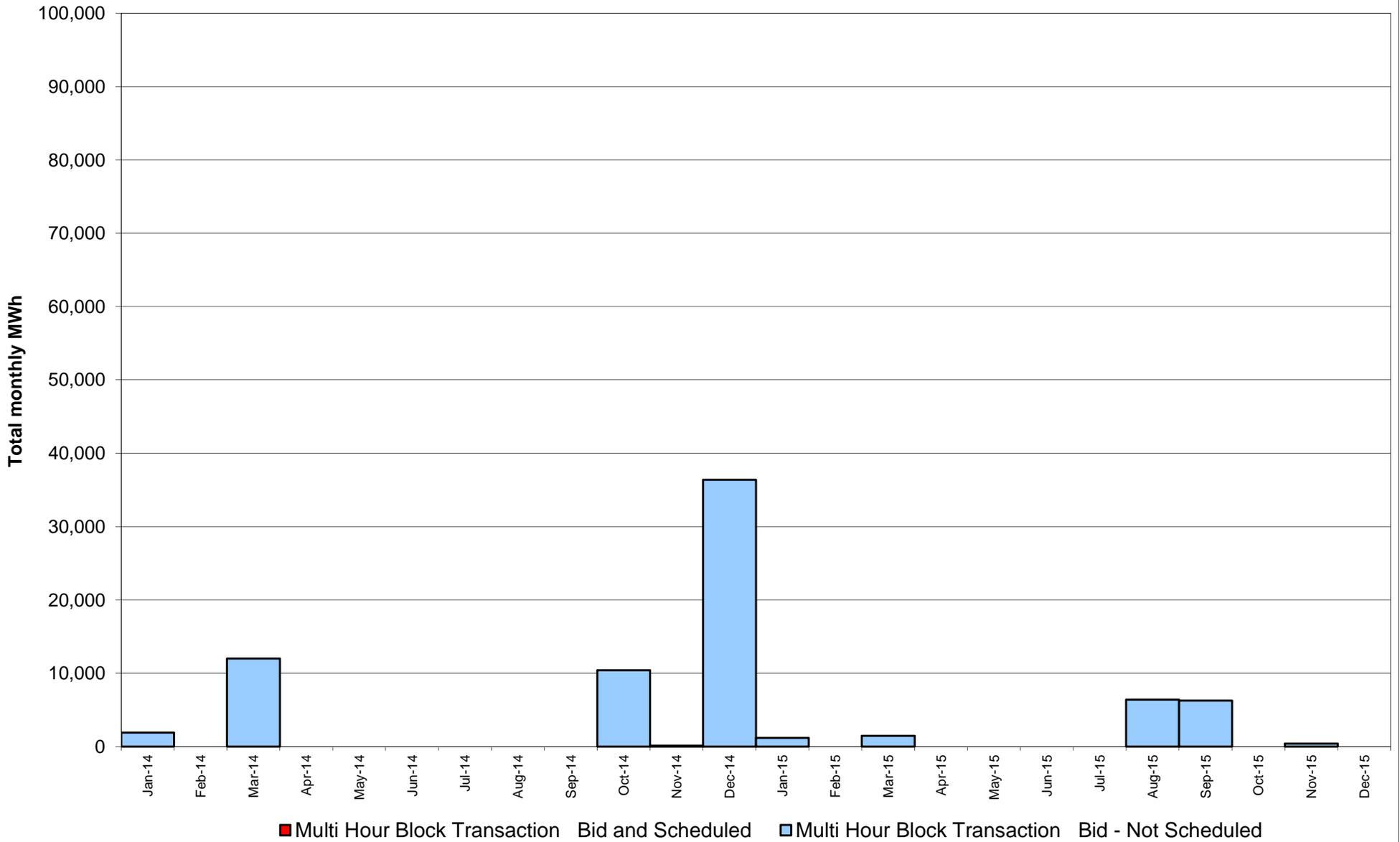
Virtual Load and Supply Zonal Statistics through November 30, 2015



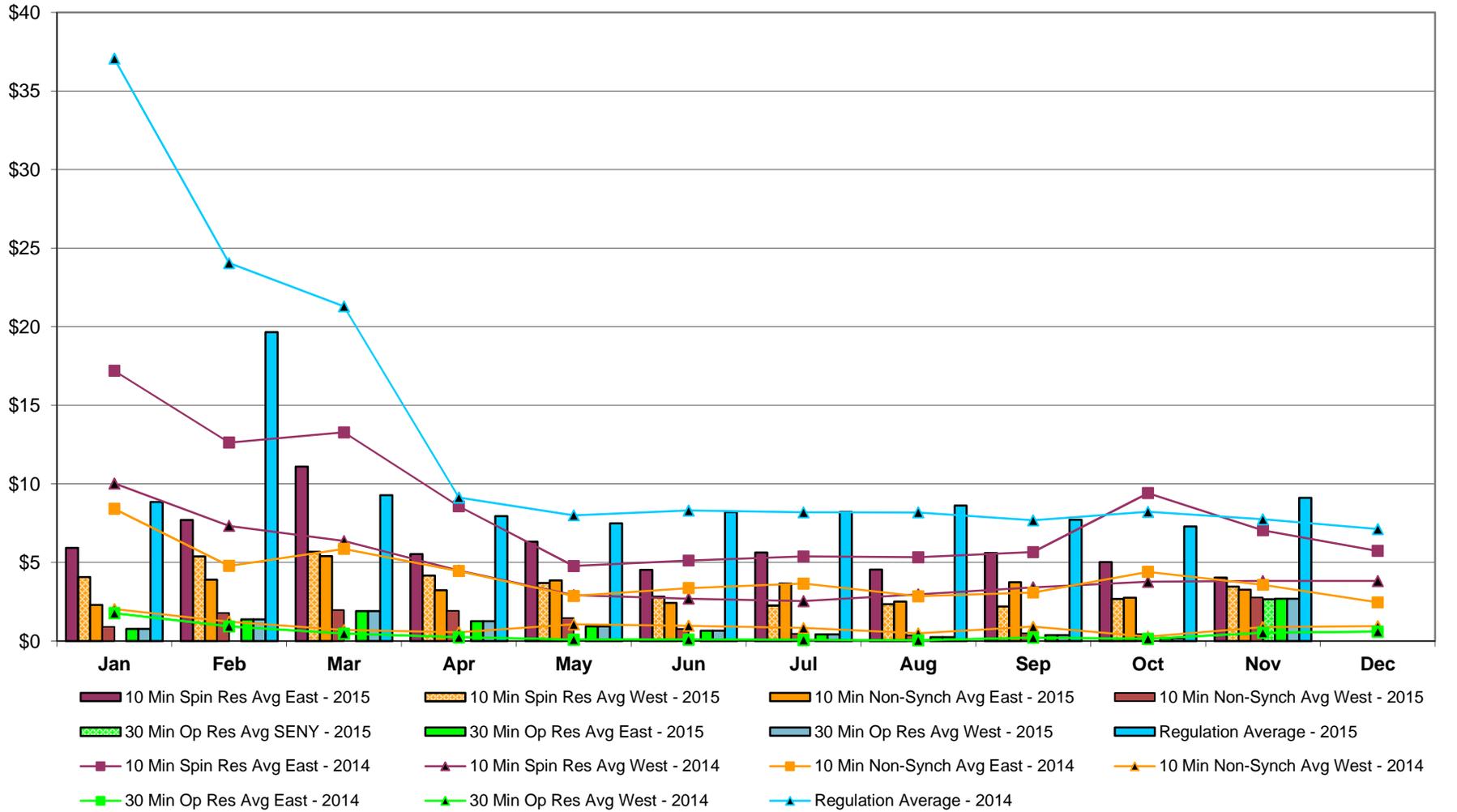
Virtual Load and Supply Zonal Statistics (Average MWh/day) - 2015

		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
WEST	Jan-15	6,244	977	3,837	688	MHK VL	Jan-15	534	185	1,757	1,021	DUNWOD	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	8,340	5,231	1,587	248		Oct-15	200	59	2,878	154		Oct-15	344	78	1,977	724
	Nov-15	12,366	8,647	1,983	385		Nov-15	691	7	2,292	153		Nov-15	397	100	1,791	690
	Dec-15						Dec-15						Dec-15				
GENESE	Jan-15	444	147	9,467	1,422	CAPITL	Jan-15	1,816	1,292	9,400	1,563	N.Y.C.	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	426	638	5,073	1,008		Oct-15	1,153	197	6,748	1,299		Oct-15	3,793	3,093	1,991	880
	Nov-15	1,161	658	5,576	1,889		Nov-15	1,327	496	8,068	1,442		Nov-15	2,474	3,116	3,471	840
	Dec-15						Dec-15						Dec-15				
NORTH	Jan-15	537	300	7,590	2,868	HUD VL	Jan-15	1,006	1,747	4,703	2,133	LONGIL	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	590	475	6,355	2,830		Oct-15	736	1,241	6,738	1,726		Oct-15	4,874	4,563	1,234	795
	Nov-15	314	212	8,250	2,803		Nov-15	819	701	7,267	1,698		Nov-15	5,518	3,280	1,165	908
	Dec-15						Dec-15						Dec-15				
CENTRL	Jan-15	2,414	939	33,426	776	MILLWD	Jan-15	418	244	716	192	NYISO	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	1,006	129	26,899	155		Oct-15	251	14	1,271	673		Oct-15	21,713	15,719	62,752	10,491
	Nov-15	751	52	27,075	561		Nov-15	183	88	1,573	625		Nov-15	26,000	17,355	68,511	11,995
	Dec-15						Dec-15						Dec-15				

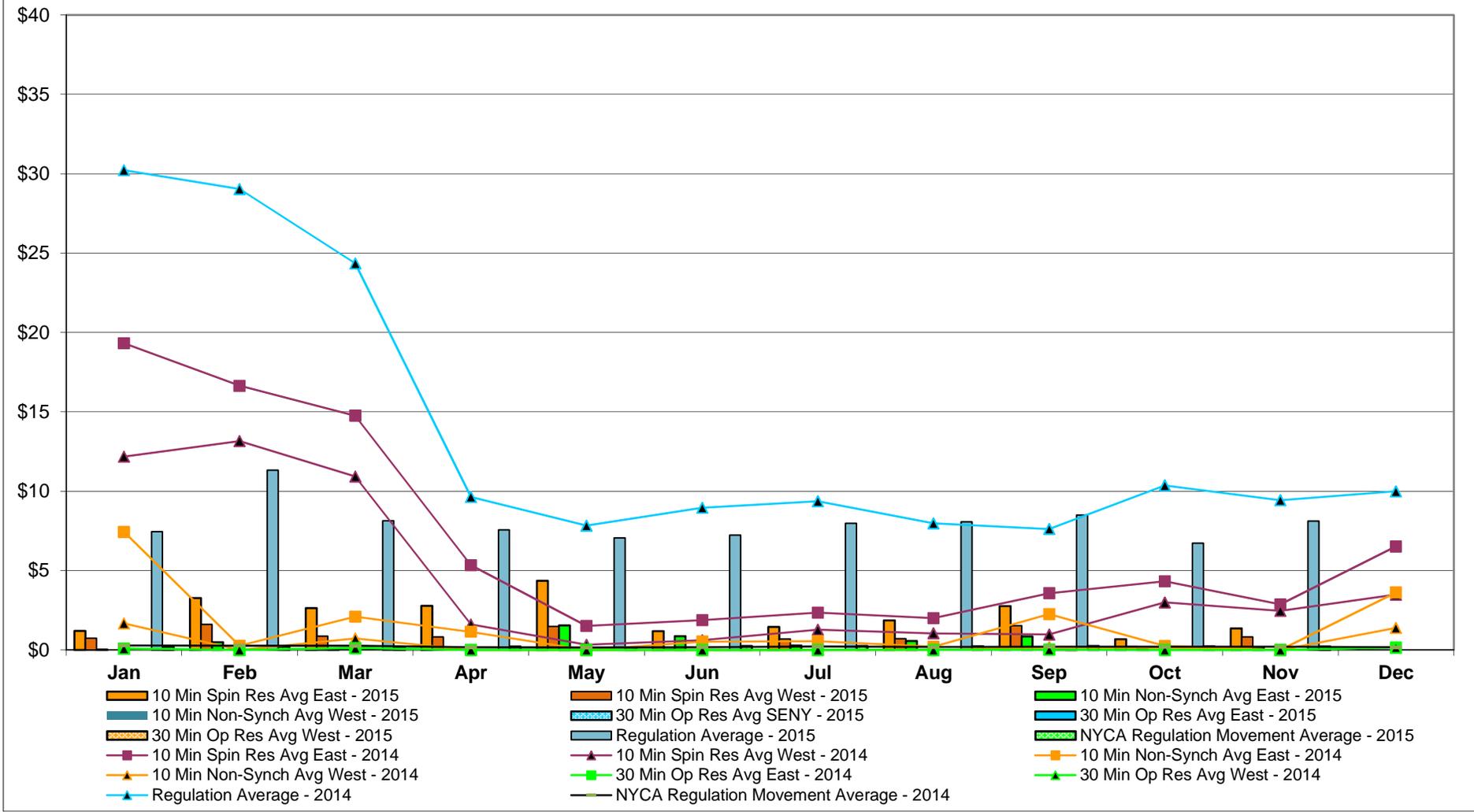
NYISO Multi Hour Block Transactions Monthly Total MWh



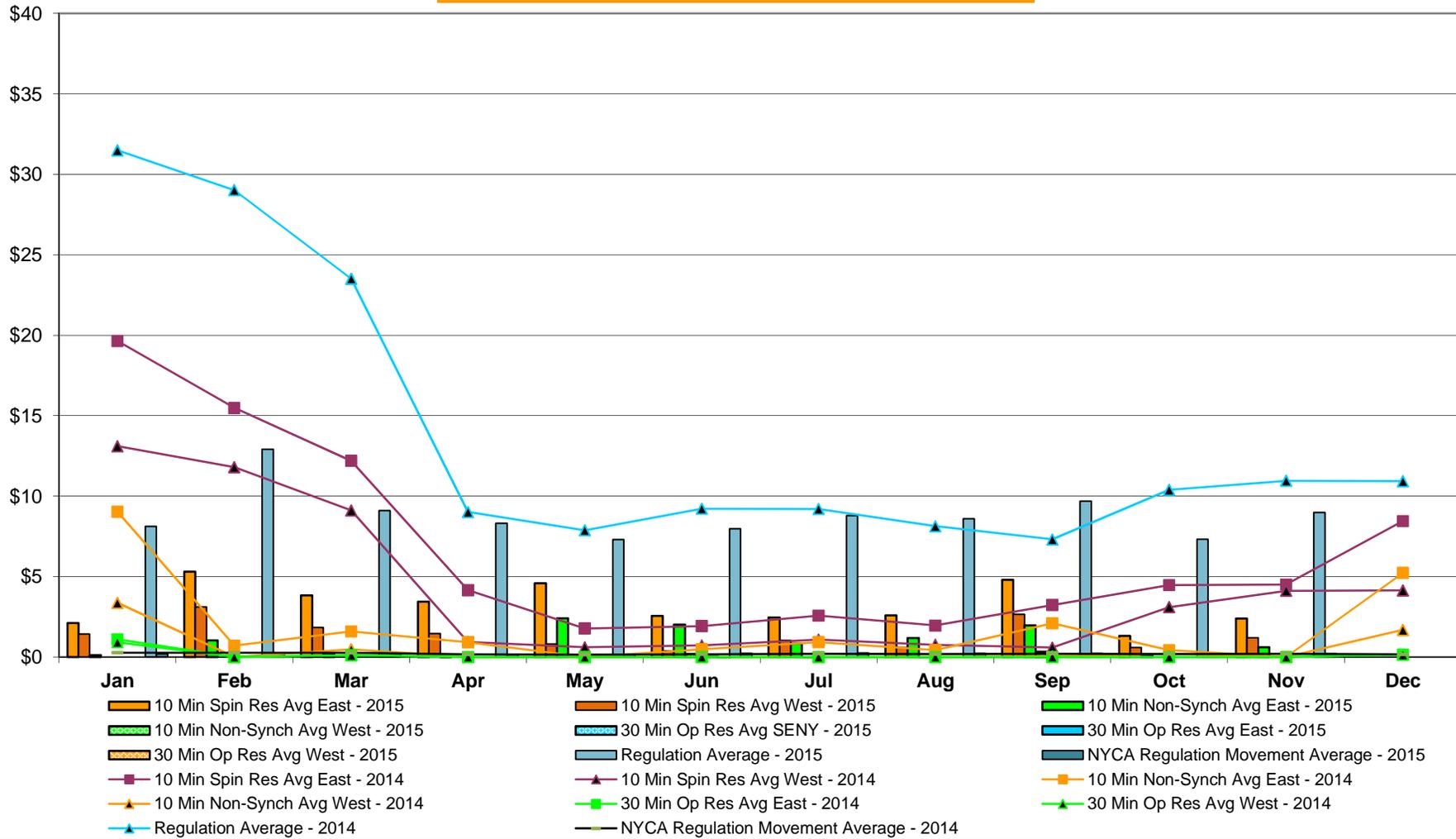
NYISO Monthly Average Ancillary Service Prices Day Ahead Market 2014 - 2015



NYISO Monthly Average Ancillary Service Prices RTC Market 2014 - 2015



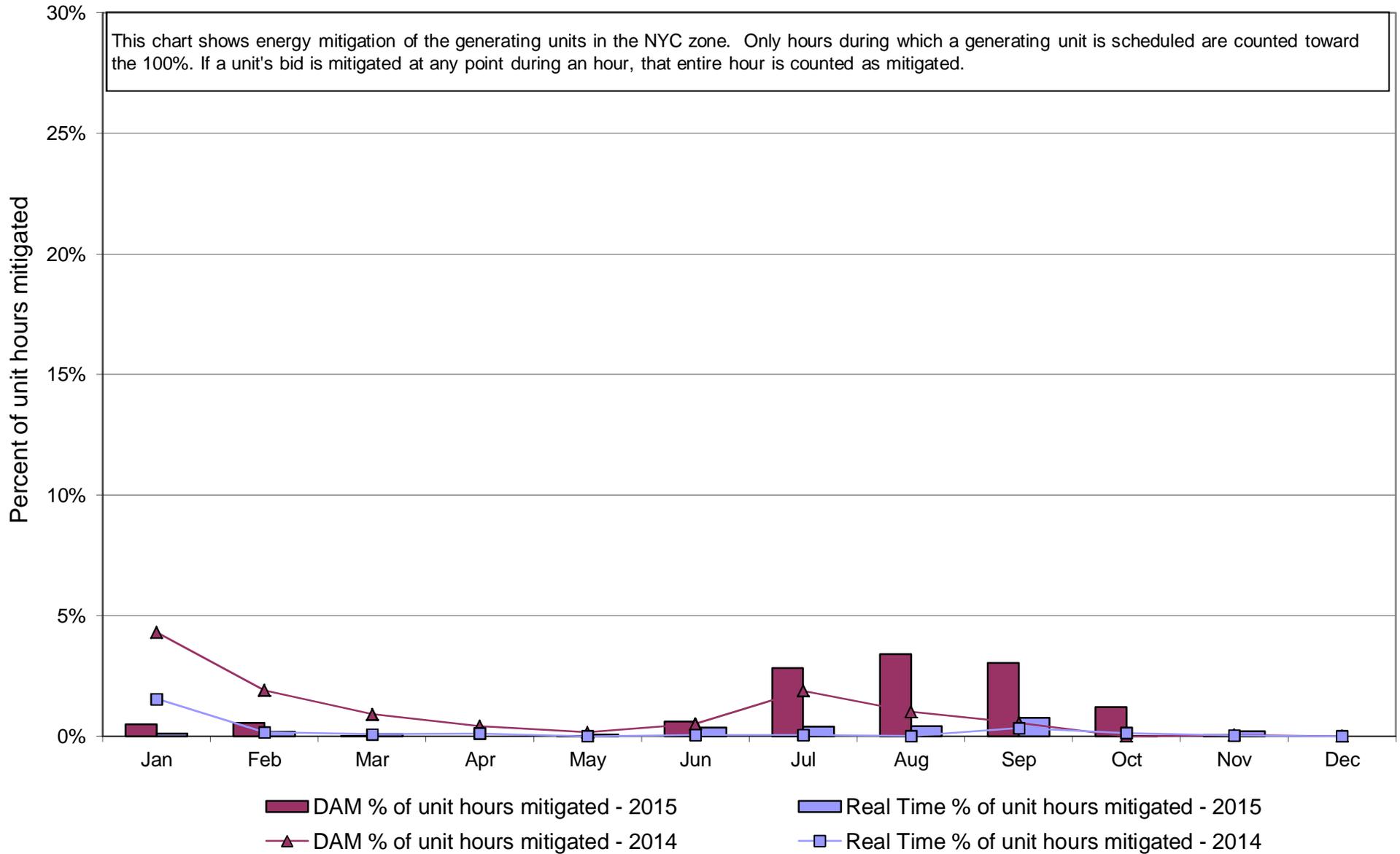
NYISO Monthly Average Ancillary Service Prices Real Time Market 2014 - 2015



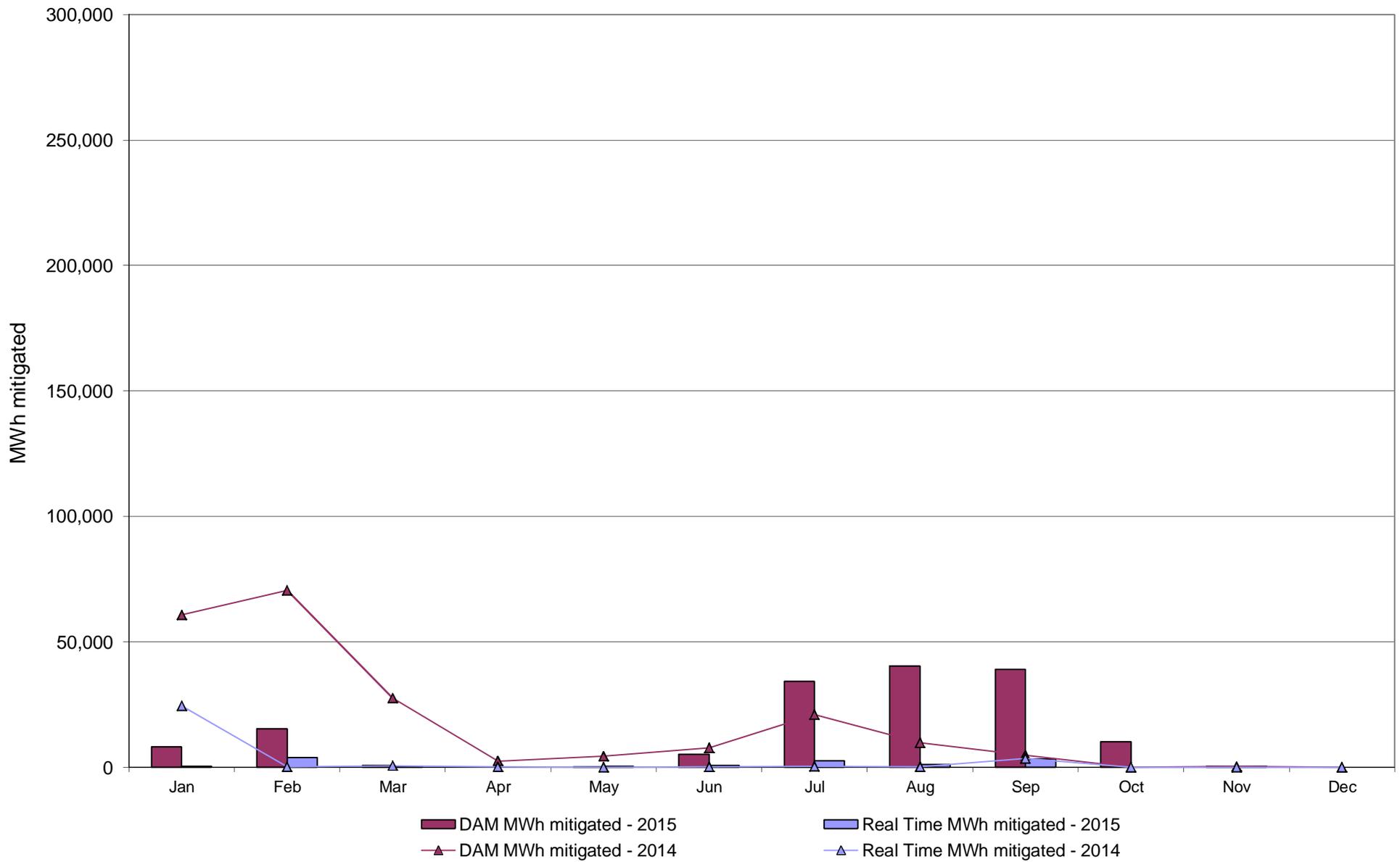
NYISO Markets Ancillary Services Statistics - Unweighted Price (\$/MWH)

2015	<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>
Day Ahead Market												
10 Min Spin East	5.92	7.69	11.09	5.53	6.31	4.53	5.62	4.54	5.60	5.02	4.03	
10 Min Spin West	4.07	5.40	5.68	4.16	3.69	2.84	2.26	2.36	2.20	2.68	3.47	
10 Min Non Synch East	2.30	3.89	5.40	3.22	3.84	2.42	3.66	2.51	3.74	2.75	3.27	
10 Min Non Synch West	0.90	1.79	1.97	1.91	1.45	0.77	0.45	0.36	0.49	0.45	2.77	
30 Min SENY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.65	
30 Min East	0.77	1.38	1.91	1.26	0.93	0.64	0.43	0.24	0.37	0.18	2.69	
30 Min West	0.77	1.38	1.91	1.26	0.93	0.64	0.43	0.24	0.37	0.18	2.69	
Regulation	8.84	19.65	9.27	7.94	7.48	8.20	8.20	8.61	7.71	7.29	9.10	
RTC Market												
10 Min Spin East	1.20	3.27	2.64	2.77	4.36	1.18	1.44	1.86	2.76	0.67	1.35	
10 Min Spin West	0.74	1.61	0.86	0.81	1.48	0.04	0.69	0.70	1.53	0.20	0.81	
10 Min Non Synch East	0.01	0.48	0.01	0.00	1.54	0.87	0.28	0.57	0.84	0.01	0.16	
10 Min Non Synch West	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	
30 Min SENY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
30 Min East	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	
30 Min West	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	
Regulation	7.45	11.32	8.13	7.56	7.06	7.24	7.97	8.07	8.49	6.73	8.12	
NYCA Regulation Movement	0.21	0.21	0.16	0.22	0.16	0.24	0.25	0.23	0.24	0.23	0.22	
Real Time Market												
10 Min Spin East	2.12	5.31	3.84	3.44	4.59	2.56	2.47	2.59	4.79	1.32	2.40	
10 Min Spin West	1.44	3.11	1.83	1.46	0.81	0.38	1.04	0.59	2.65	0.59	1.20	
10 Min Non Synch East	0.12	1.03	0.17	0.01	2.41	2.01	0.83	1.19	1.97	0.09	0.61	
10 Min Non Synch West	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.02	0.33	0.00	0.00	
30 Min SENY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
30 Min East	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	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	0.00	0.00	
Regulation	8.12	12.91	9.11	8.32	7.30	7.97	8.80	8.60	9.69	7.32	8.98	
NYCA Regulation Movement	0.20	0.21	0.17	0.15	0.16	0.24	0.24	0.24	0.24	0.23	0.22	
2014												
Day Ahead Market												
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
RTC Market												
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
Real Time Market												
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

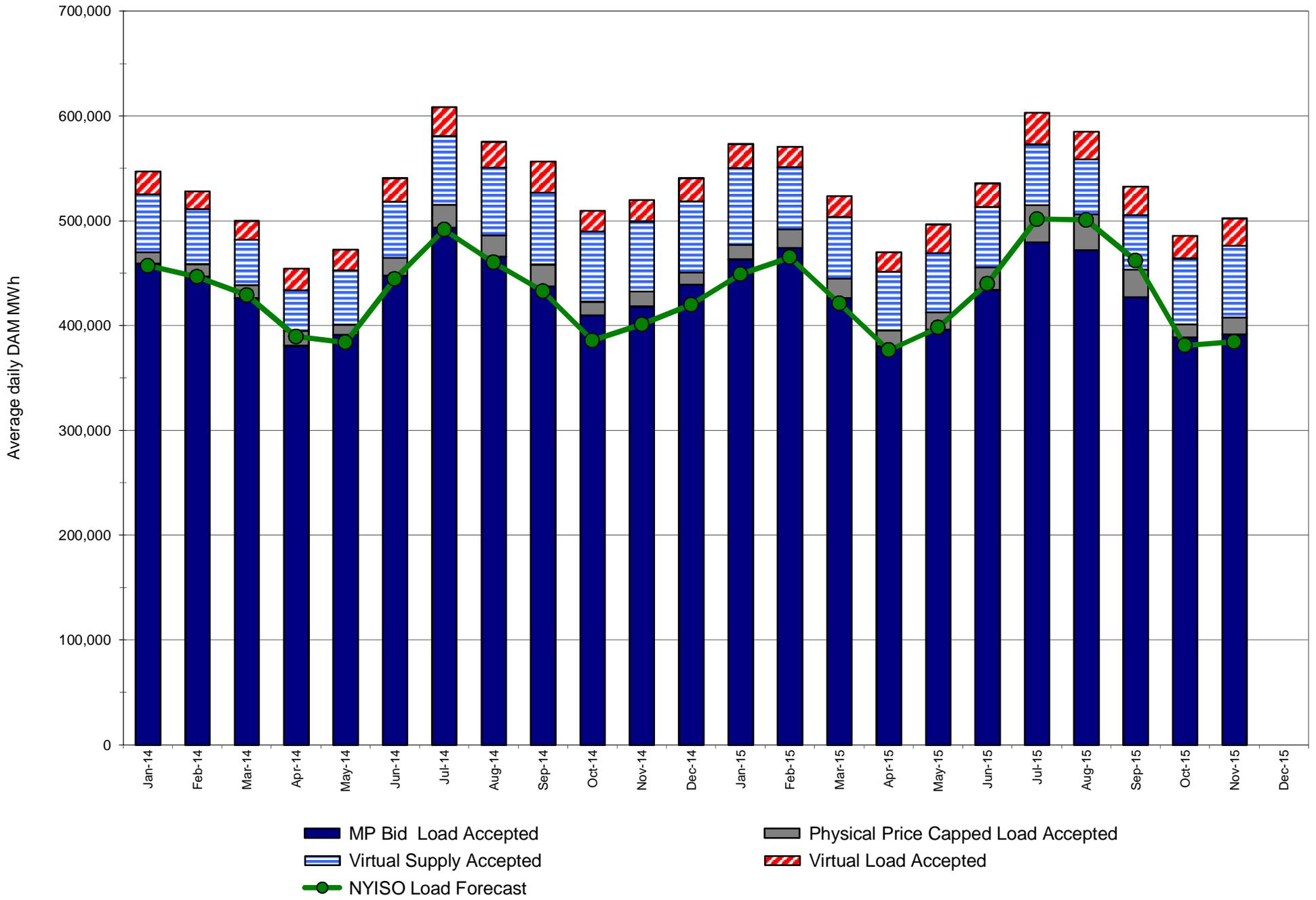
NYISO In City Energy Mitigation - AMP (NYC Zone) 2014 - 2015 Percentage of committed unit-hours mitigated



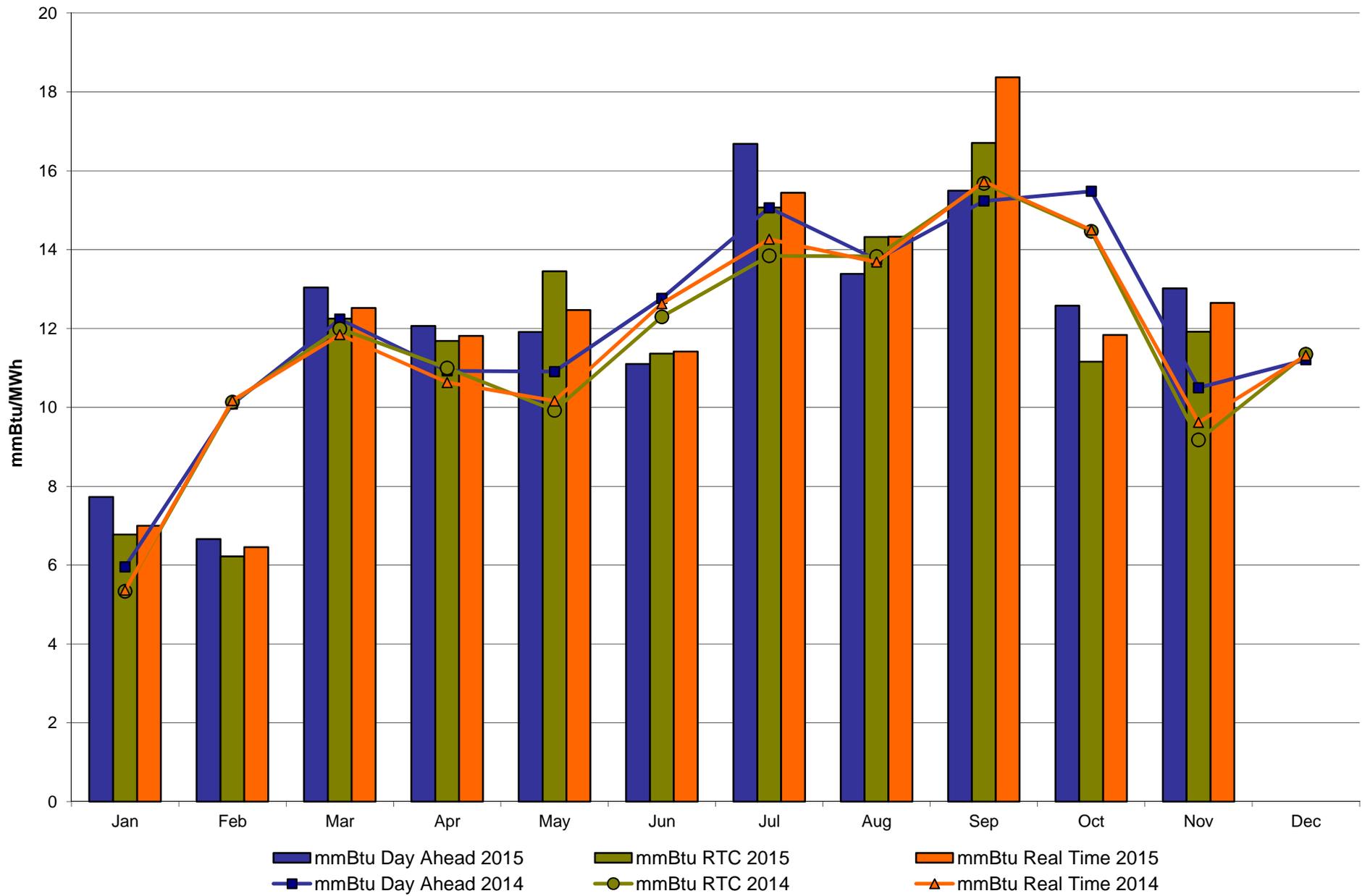
NYISO In City Energy Mitigation (NYC Zone) 2014 - 2015
Monthly megawatt hours mitigated



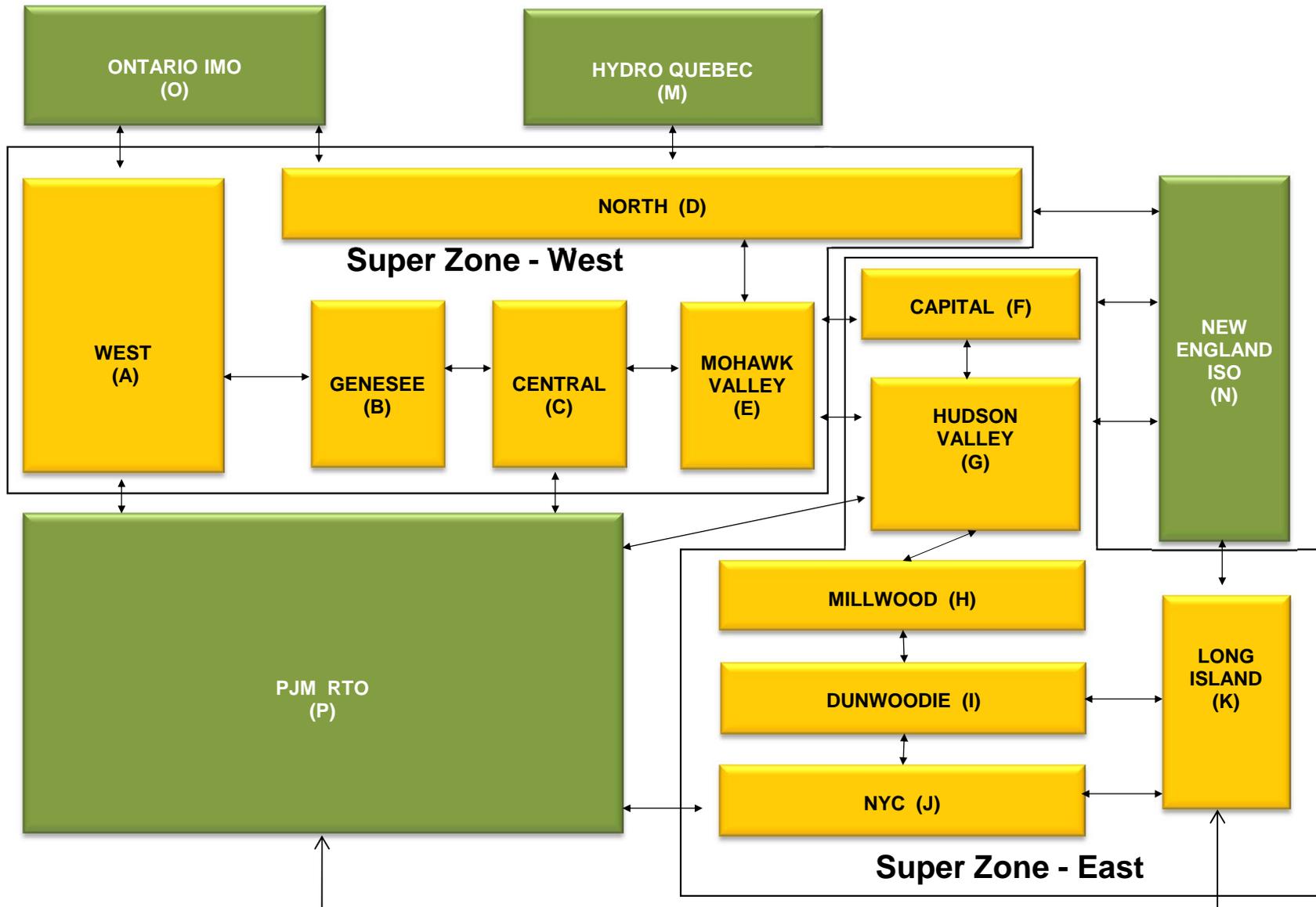
NYISO Average Daily DAM Load Bid Summary



Monthly Implied Heat Rate 2014-2015



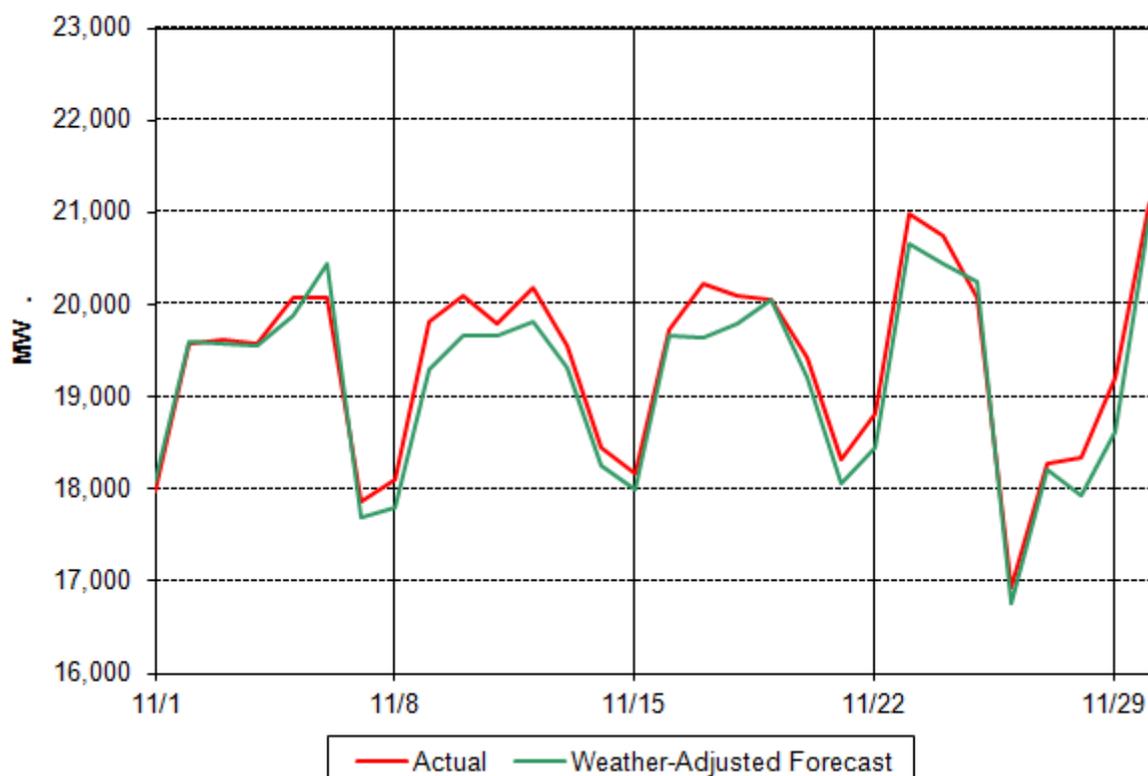
NYISO LBMP ZONES



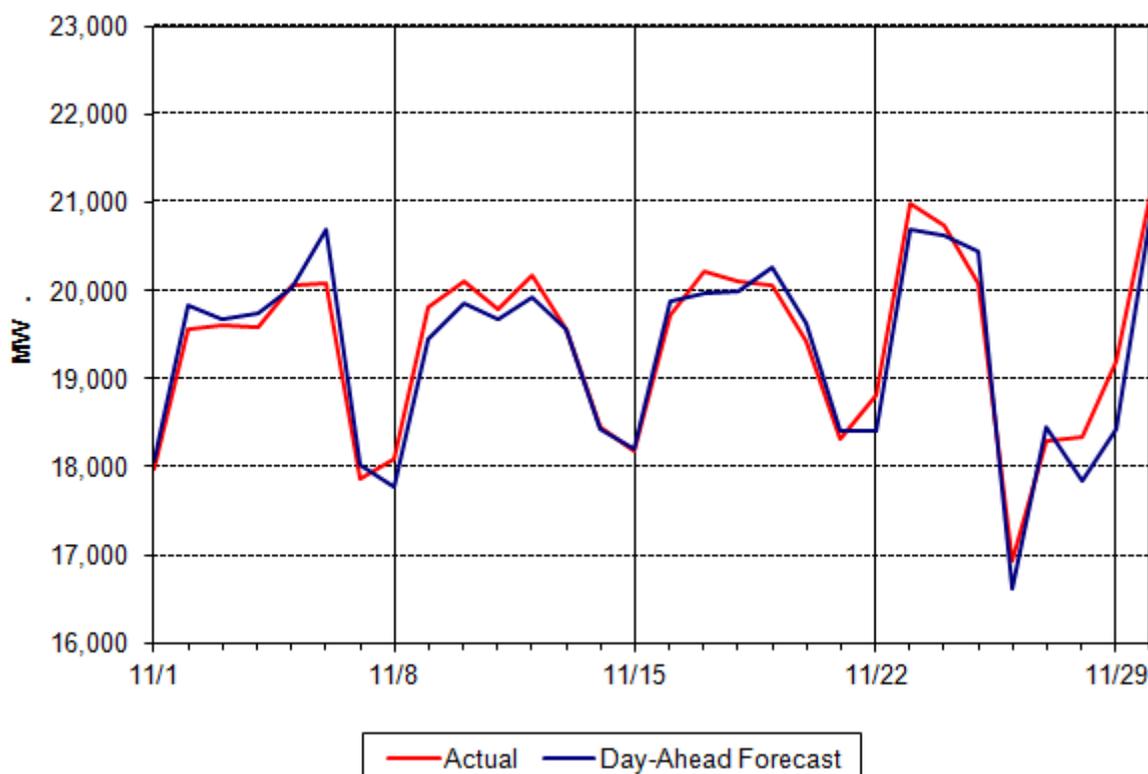
Billing Codes for Chart 4-C

Chart - 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

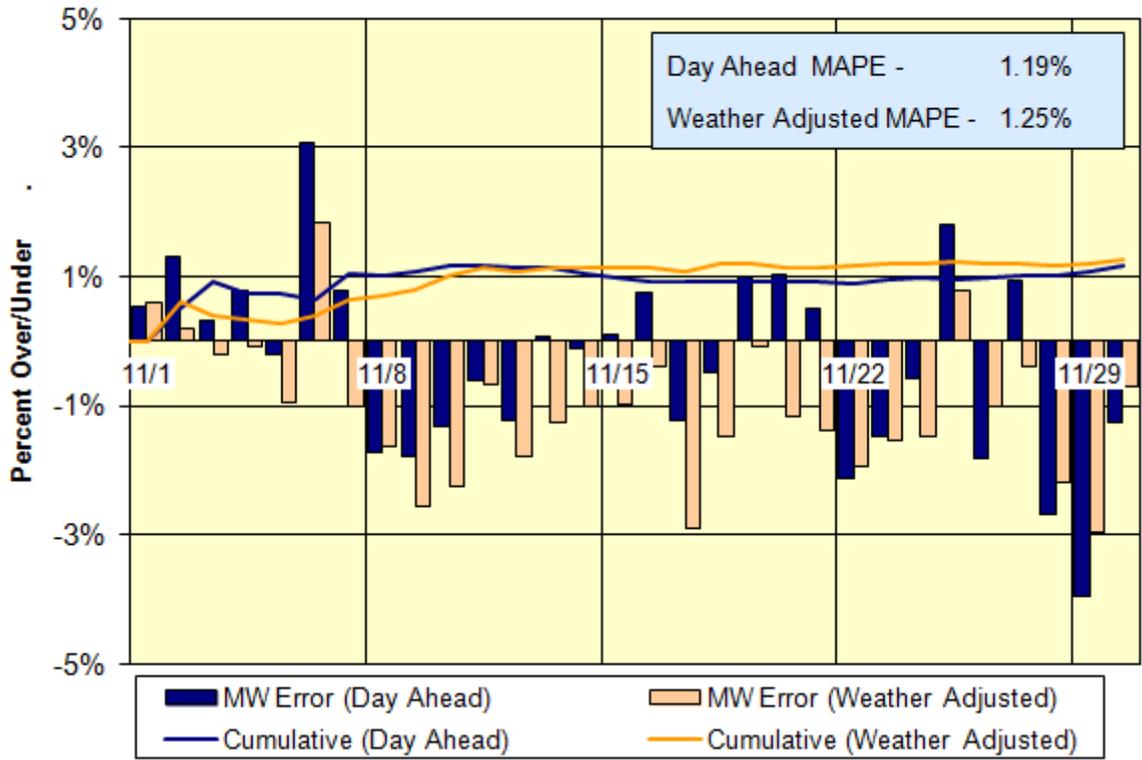
NYISO Daily Peak Load - November 2015
Actual vs. Weather-Adjusted Forecast



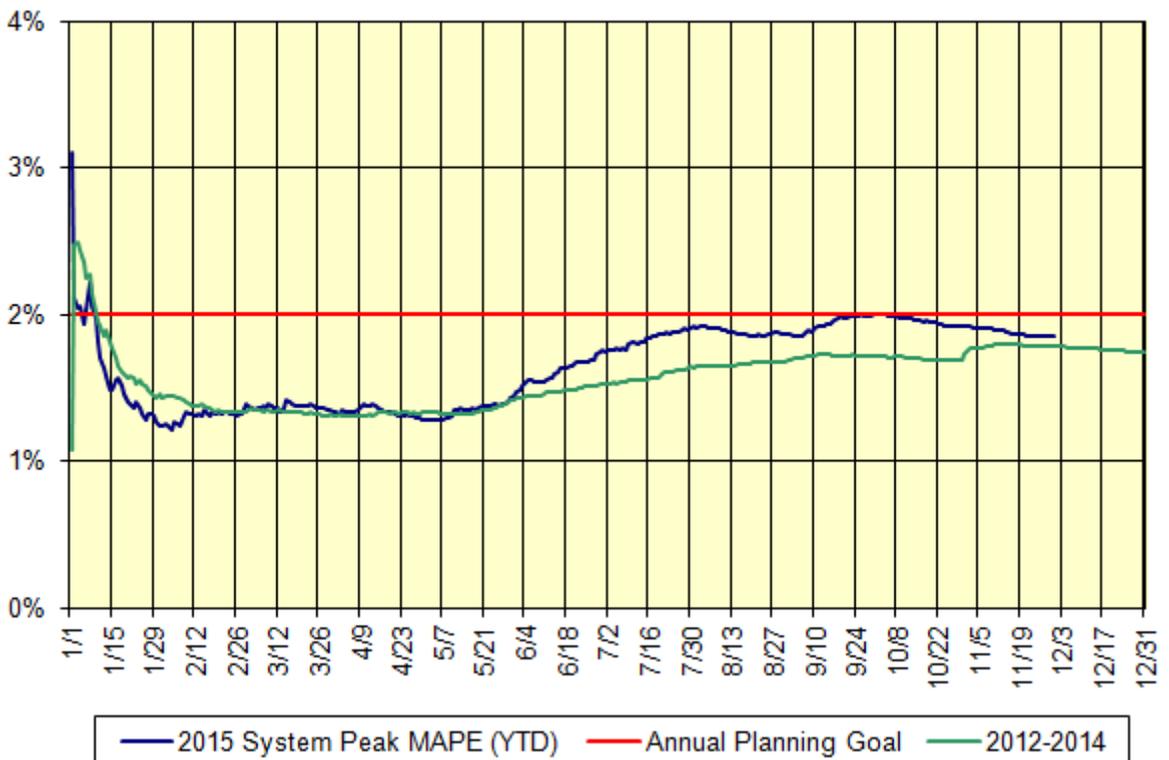
NYISO Daily Peak Load - November 2015
Actual vs. Forecast



Day Ahead Peak Forecast - November 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 – November 2015

Filing Date	Filing Summary	Docket	Order Date	Order Summary
02/21/2014	NYISO compliance filing re: an explanation of the specific scaling factor and its calculation used in the HTP project and tariff revisions of the methodology to be used in order to project the likely Energy and Ancillary Services revenues for merchant transmission lines in the future	EL12-98-001 EL12-98-002	11/19/2015	FERC order granted the HTP clarification request; denied the HTP rehearing request; accepted NYISO's compliance filing and directed NYISO to file, within 90 days (i.e., 02/17/2016), a further compliance filing to provide the conceptual basis and framework for a scaling factor that is broad enough to allow for the kinds of variations that exist with respect to UDR projects
08/26/2014	NYISO compliance filing re: demonstrating that the uniform regulation movement multiplier allows the market to provide appropriate incentives and supplier cost recovery and that current regulation service market mitigation measures are supportable and sufficiently robust to be considered permanent measures in this market	ER12-1653-005	11/19/2015	FERC order accepted the 08/26/2014 compliance filing
06/17/2015	NYISO compliance report re: analyses of the applicability of the buyer side mitigation rules to the rest of state and projects developed under repowering agreements	EL13-62-002	11/16/2015	FERC letter requesting additional information to be filed within 30 days (i.e., 12/16/2015) regarding certain aspects of the report
07/13/2015	NYISO and NYTOs joint compliance filing re: Order No. 1000 interregional transmission coordination and cost allocation requirements	ER13-1942-001 ER13-1946-001 ER13-1957-001	11/19/2015	FERC letter order accepted the compliance filing effective 01/01/2014, as requested
07/23/2015	NYISO compliance filing re: explanation of how the NYISO's Day-Ahead scheduling practices satisfy the timing requirements of Order 809 regarding the coordination of scheduling processes of interstate natural gas pipelines and public utilities	EL14-26-000	11/19/2015	FERC order accepted the compliance filing
09/10/2015	NYISO 205 filing re: tariff revisions to implement external coordinated transaction scheduling with ISO New England	ER15-2640-000	11/09/2015	FERC order accepted tariff revisions subject to a compliance filing at least 2 weeks prior to the proposed effective date specifying the date on which CTS will take effect
09/22/2015	Joint NYISO and National Grid filing of an amendment to the SGIA No. 2219 between NYISO, National Grid and Monroe County	ER15-2285-001	11/12/2015	FERC letter order accepted the 07/27/2015 filing, as amended on 09/22/2015, effective 07/13/2015, as requested

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	11/18/2015	FERC letter order accepted the compliance filing effective 02/26/2015, as requested
10/20/2015	NYISO compliance/errata filing re: notification of tariff section effective date and ministerial errata concerning comprehensive shortage pricing	ER15-1061-001	11/18/2015	FERC letter order accepted the errata filing and the notice of effective date (i.e., 11/04/2015), as requested
11/06/2015	NYISO filing of comments re: response to PSC report entitled "Comparative Evaluation of Alternating Current Transmission Upgrade Alternatives" and staff motion for PSC to declare a public policy need	PSC Case No. 12-T-0503, <i>et. al.</i>		
11/10/2015	NYISO filing re: document-less motion to intervene in the Huntley cost-of-service agreement proceeding	ER16-81-000		
11/10/2015	NYISO filing to the NYPSC re: petition for authority to incur indebtedness for a term in excess of 12 months	PSC Case No. 15-E-0655		
11/12/2015	NYISO confidential filing to the NYPSC re: three-month Reliability Commitment Data Report for the period ending 10/31/2015	PSC Matter No. 10-02007		
11/18/2015	NYISO 205 filing re: enhancements to the process for verifying Market Participant risk management policies	ER16-346-000		
11/25/2015	NYISO 205 filing re: revisions to authorize the NYISO to provide certain market participant information for the New York Generation Attribute Tracking System ("NYGATS") to NYSERDA	ER16-398-000		
11/30/2015	ISO/RTO Council filing of NOPR comments re: settlement intervals and shortage pricing in markets operated by RTOs/ISOs	RM15-24-000		
11/30/2015	NYISO filing of NOPR comments re: settlement intervals and shortage pricing in markets operated by RTOs/ISOs	RM15-24-000		
11/30/2015	NYISO 205 filing re: tariff amendments to implement improved scarcity pricing logic in the Real-Time Market	ER16-425-000		
11/30/2015	NYISO confidential filing to the NYPSC re: internal project tracking report dated October 2015	PSC Matter No. 10-02007		