



Monthly Report

April 2017

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Operations Performance Metrics Monthly Report



April 2017 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 May 8, 2017.

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April 2017 Operations Performance Highlights

- Peak load of 19,192 MW occurred on 04/06/2017 HB 11
- All-time winter capability period peak load of 25,738 MW occurred on 1/7/2014 HB 18
- 3 hours of Thunder Storm Alerts were declared
- 0 hours of NERC TLR level 3 curtailment
- A Major Emergency was declared on 04/04/2017 in HB20 for the loss of 1,250MW of generation in ISONE causing the Central East interface flow to exceed its voltage collapse limit.
- High levels of wind curtailment in the North Country this month were coincident with the scheduled outage of the Moses-Adirondack 230kV (#MA1) transmission line.
- The following table identifies the estimated production cost savings associated with the Broader Regional Market initiatives.

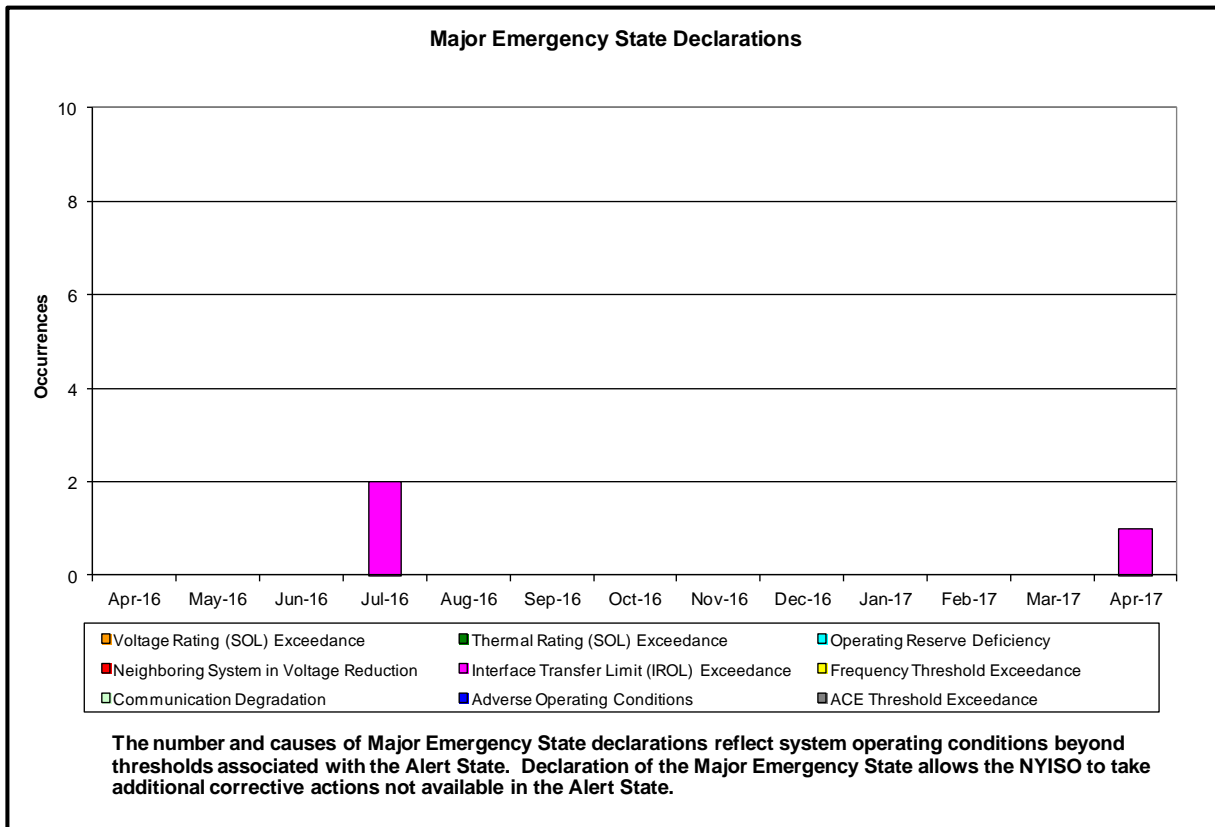
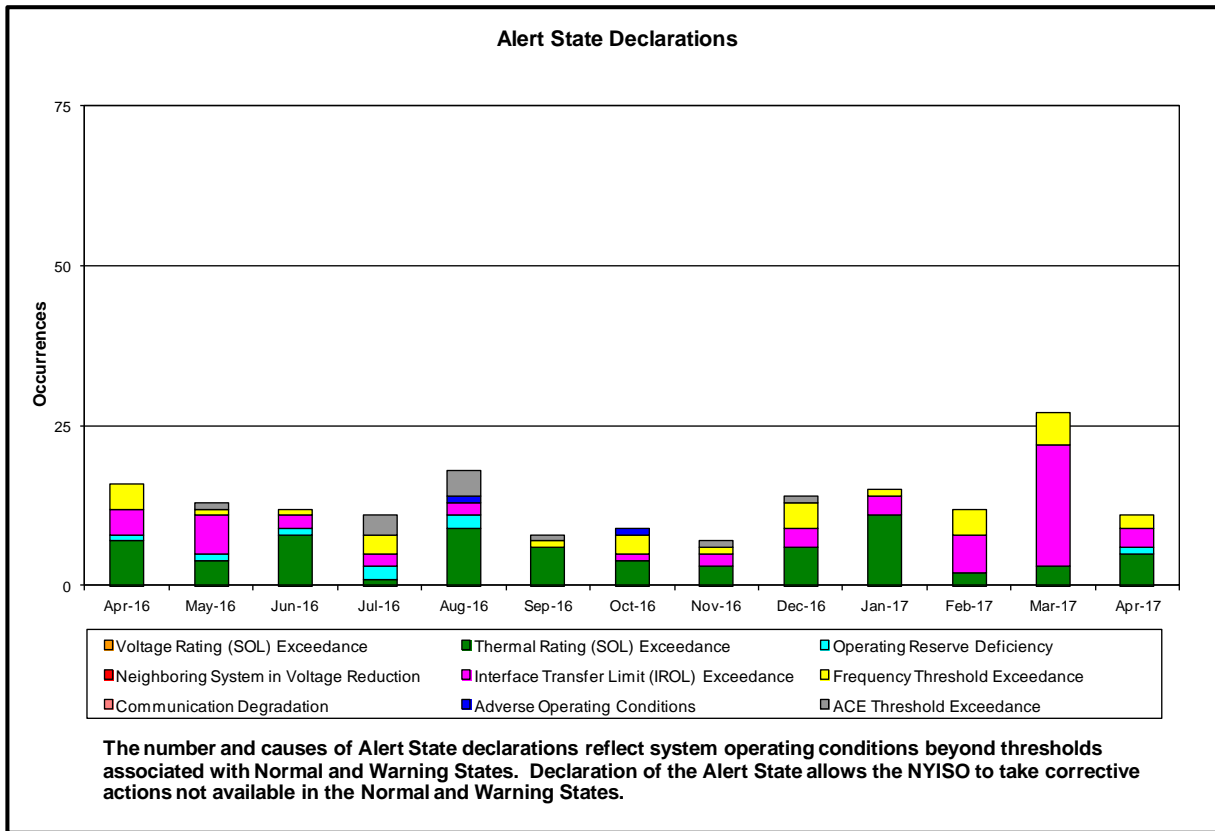
	Current Month Value (\$M)	Year-to-Date Value (\$M)
NY Savings from PJM-NY Congestion Coordination	\$1.29	\$6.76
NY Savings from PJM-NY Coordinated Transaction Scheduling	(\$0.20)	(\$0.27)
NY Savings from NE-NY Coordinated Transaction Scheduling	\$0.33	(\$0.23)
Total NY Savings	\$1.42	\$6.26
Regional Savings from PJM-NY Coordinated Transaction Scheduling	\$0.26	\$0.72
Regional Savings from NE-NY Coordinated Transaction Scheduling	\$0.10	\$0.38
Total Regional Savings	\$0.36	\$1.10

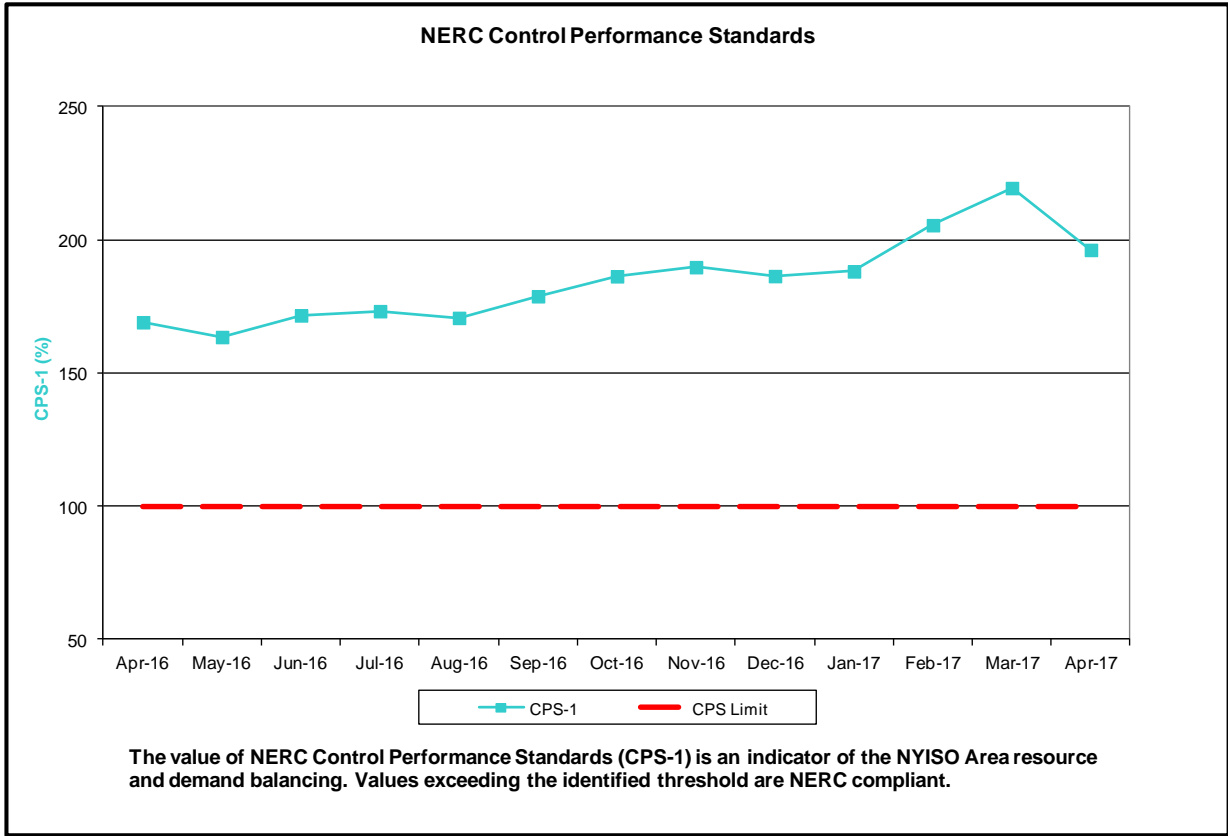
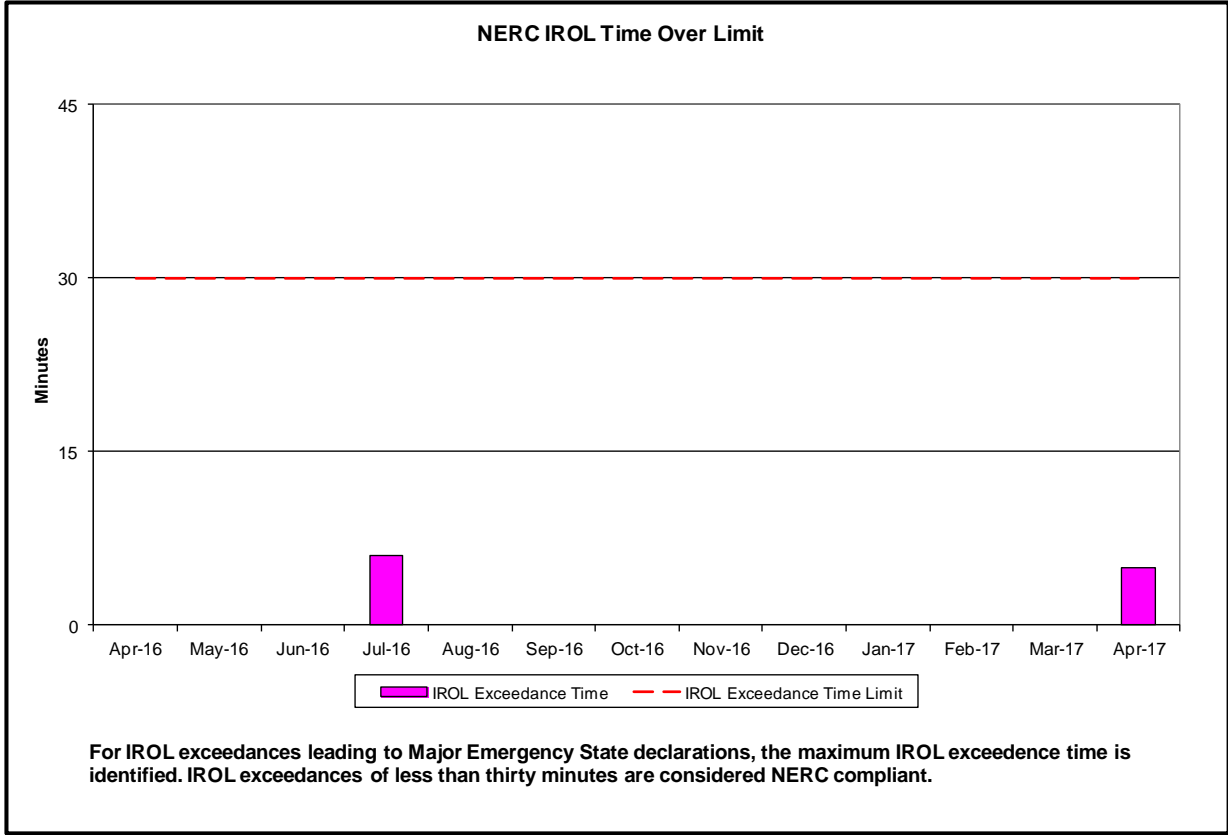
- Statewide uplift cost monthly average was (\$0.08)/MWh
- The following table identifies the Monthly ICAP spot market prices by locality and changes from the end of the prior Summer Capability period.

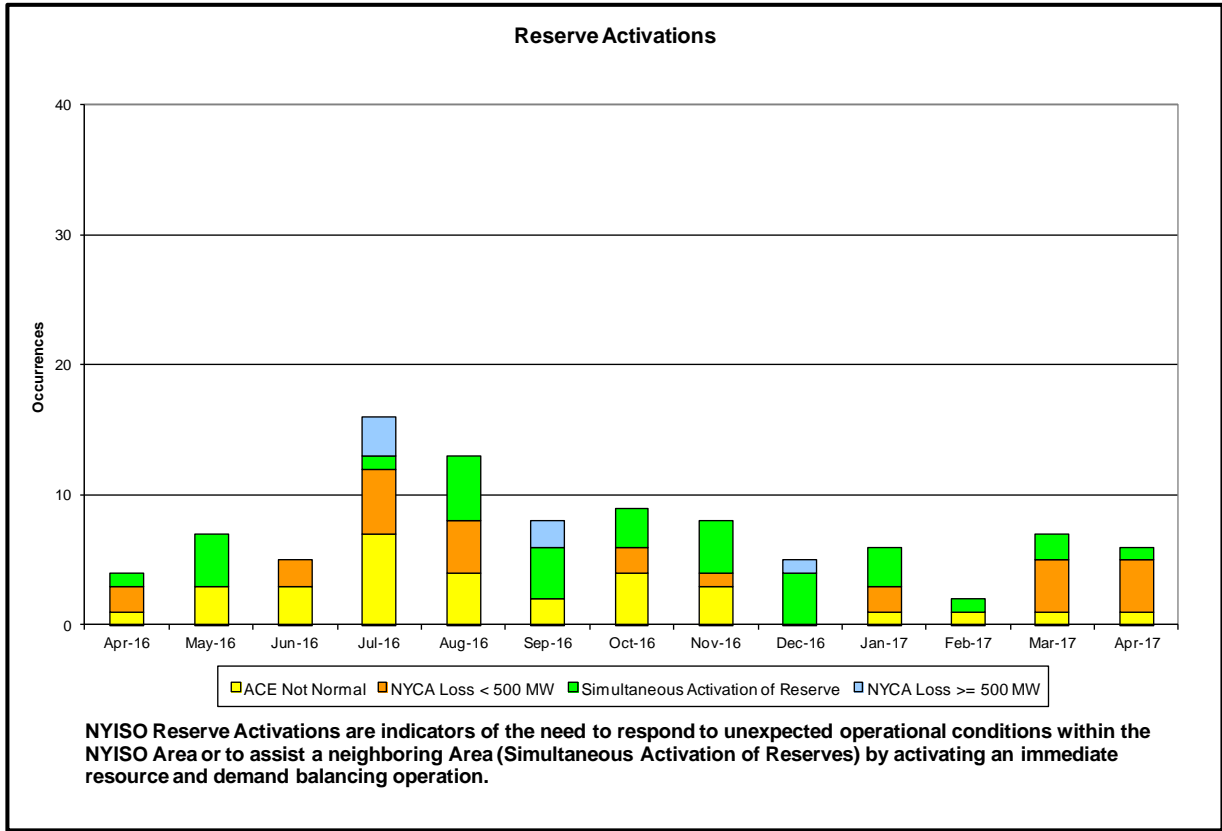
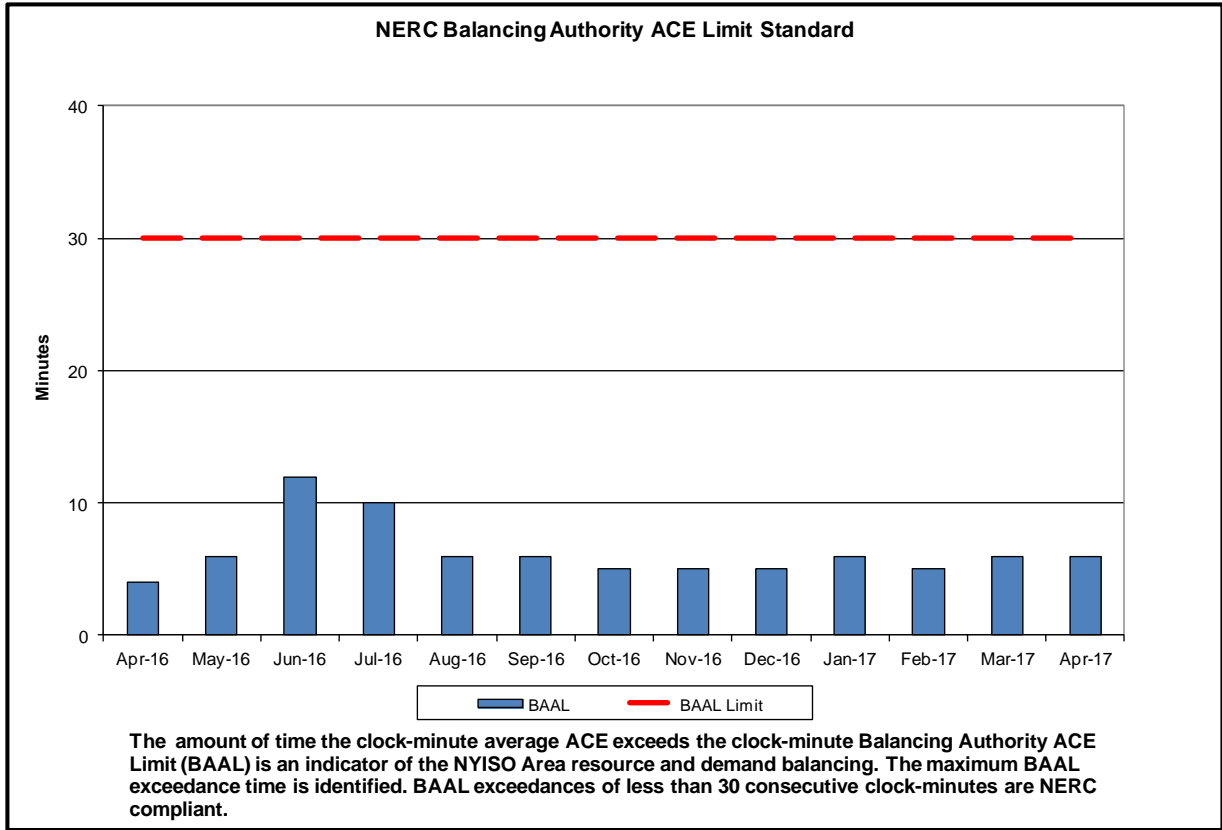
Spot Auction Price Results	NYCA	Lower Hudson Valley Zones	New York City Zone	Long Island Zone
May 2017 Spot Price	\$1.72	\$10.28	\$10.57	\$6.71
October 2016 Spot Price	\$3.12	\$9.16	\$12.14	\$4.34
Delta	(\$1.40)	\$1.12	(\$1.57)	\$2.37

- Price changes from October 2016 to May 2017 are driven by changes in supply as well as Capability Year inputs such as demand curve parameters, Locational Capacity Requirements, the Installed Reserve Margin and the load forecast.

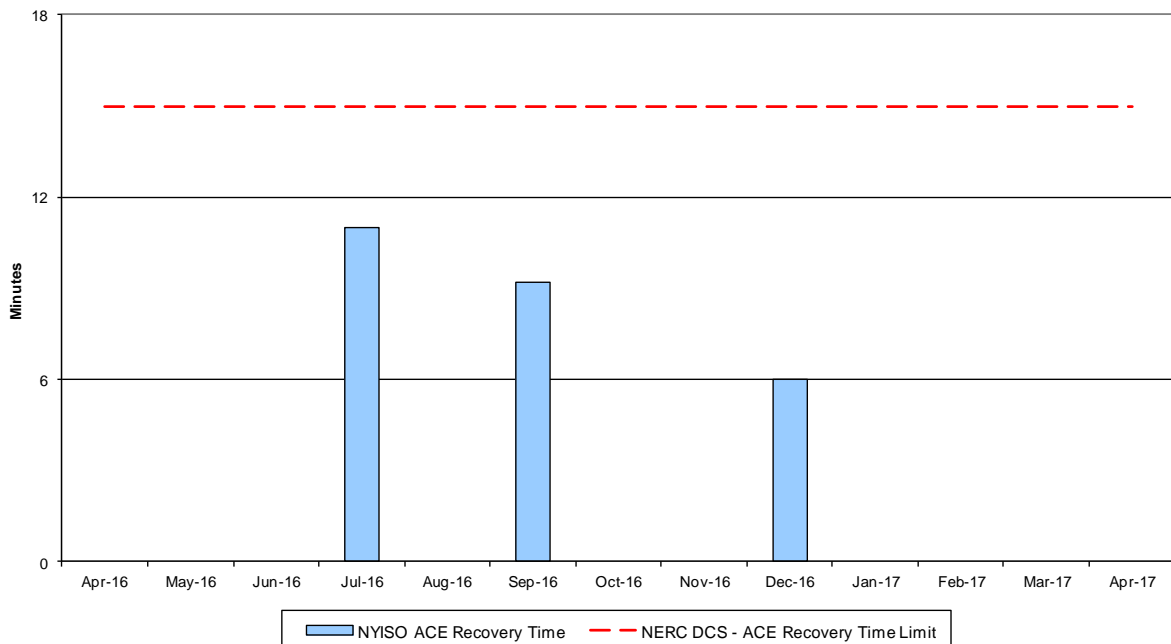
Reliability Performance Metrics





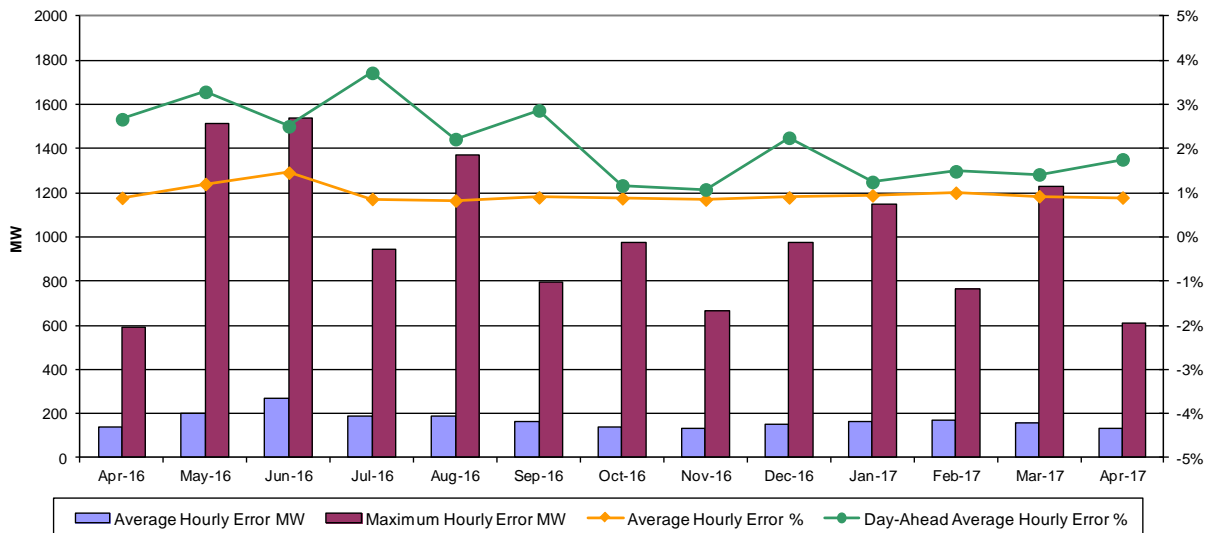


DCS Event Time to ACE Recovery

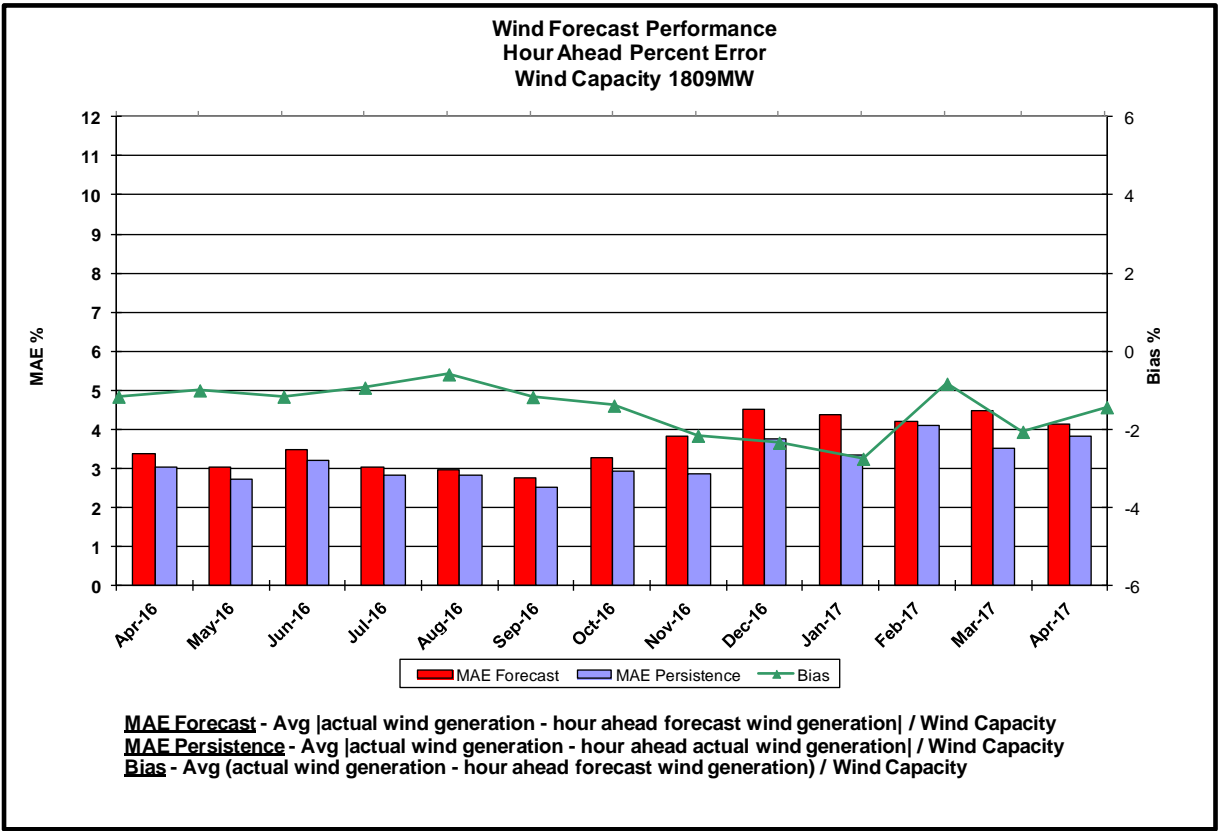
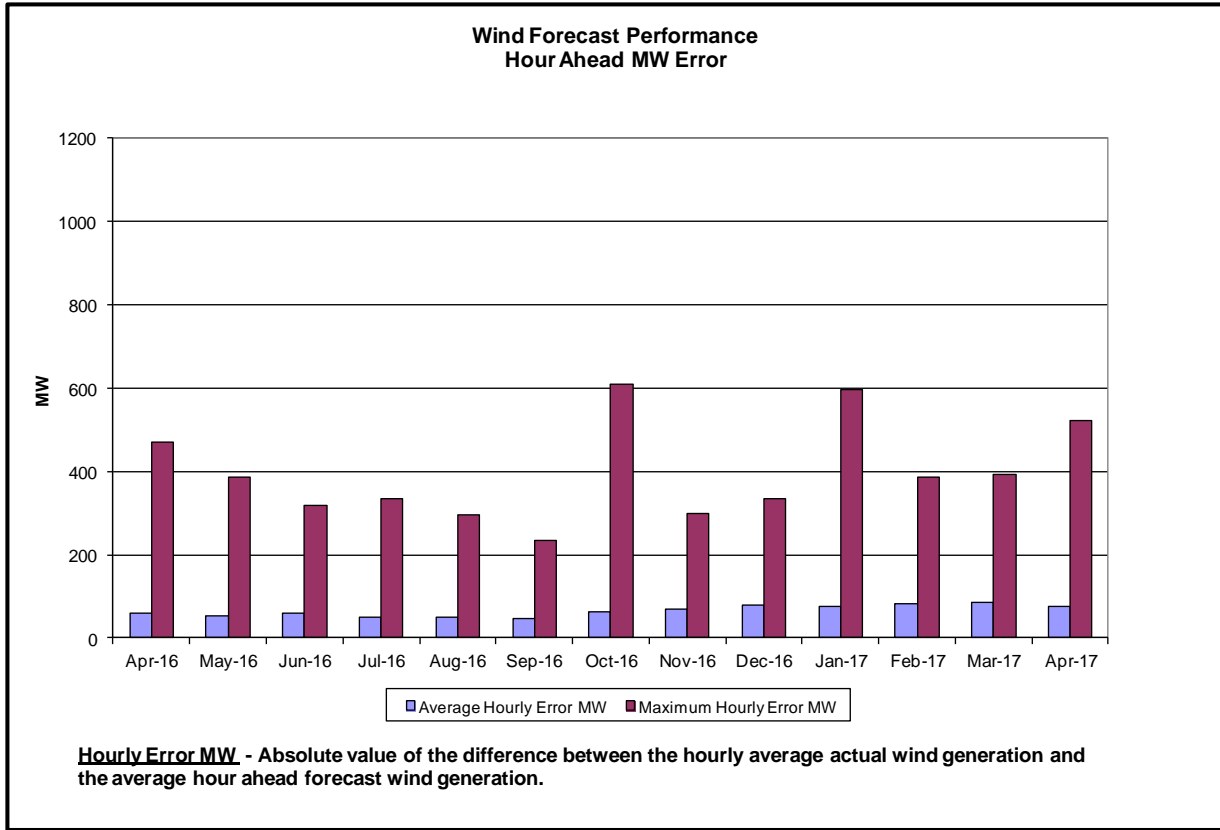


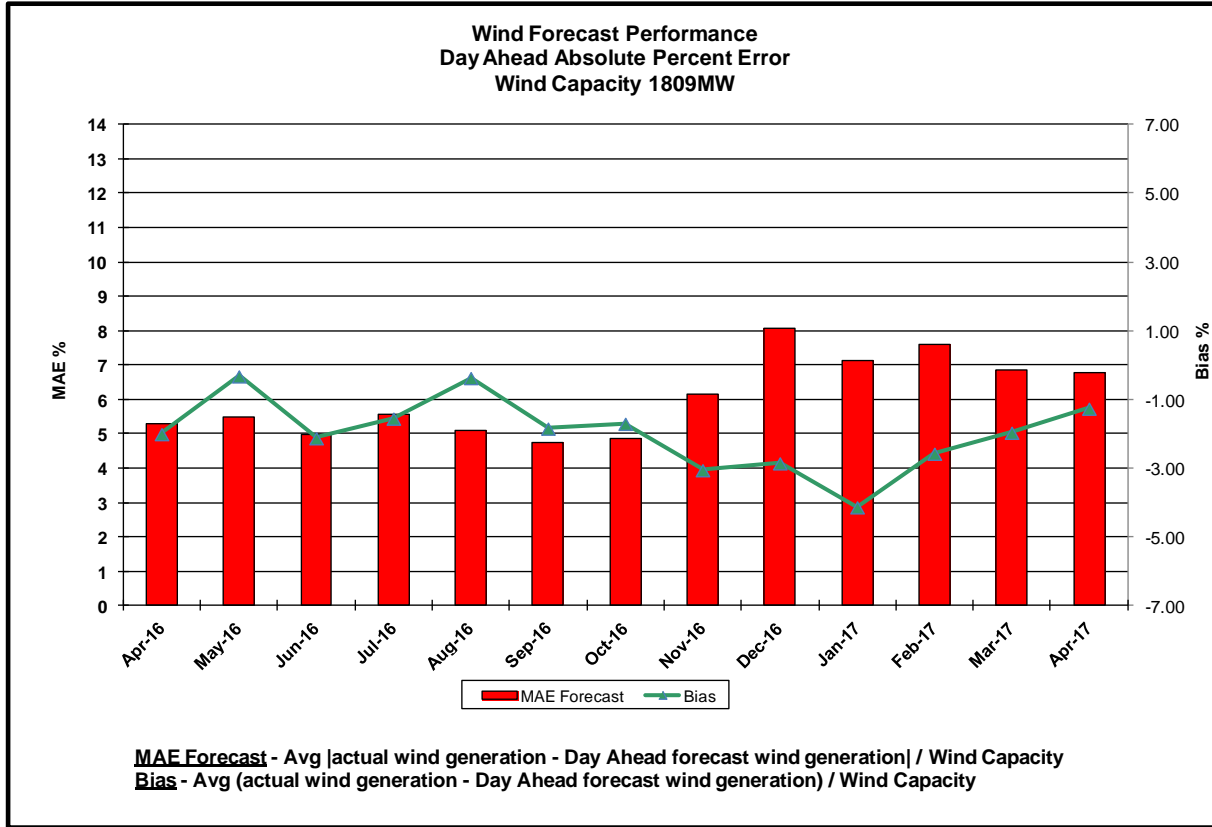
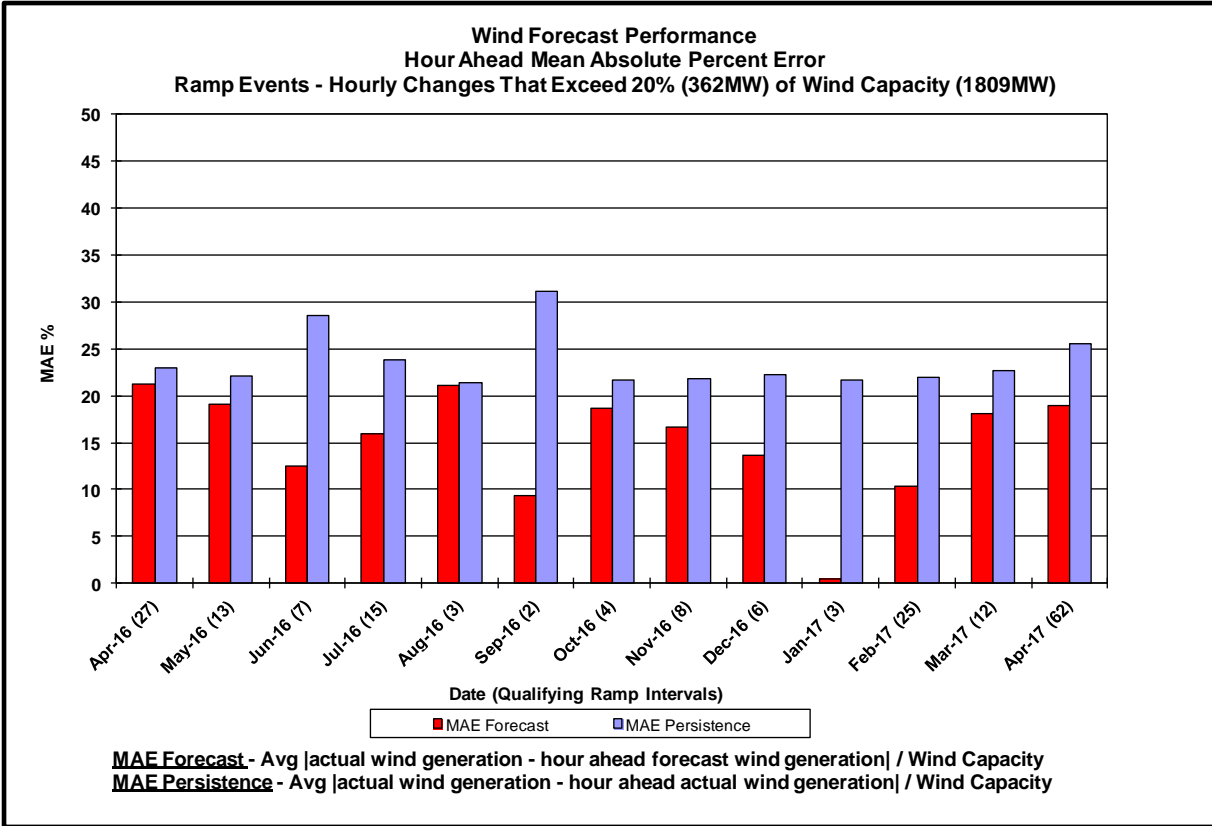
For NYISO initiated Reportable Disturbances, the maximum ACE recovery time is identified. Recovery times of less than 15 minutes are considered NERC compliant.

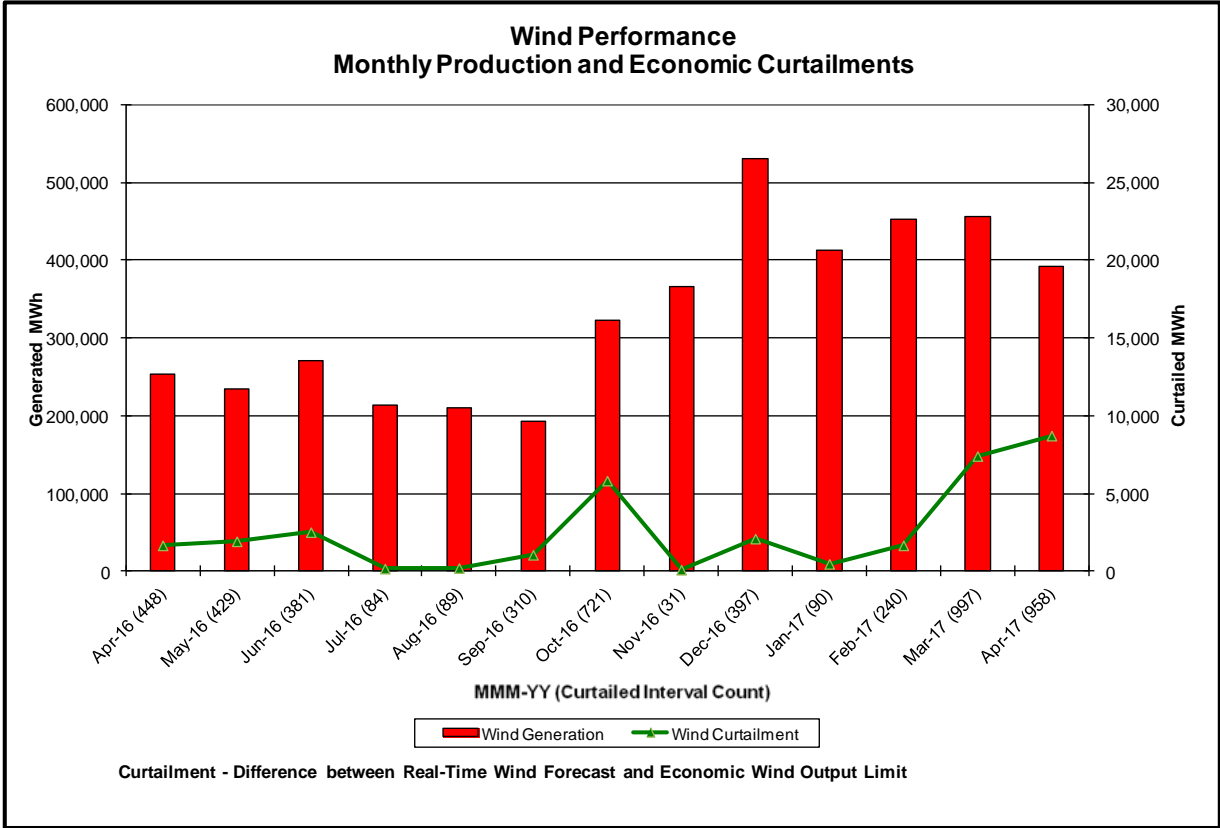
Load Forecast Performance

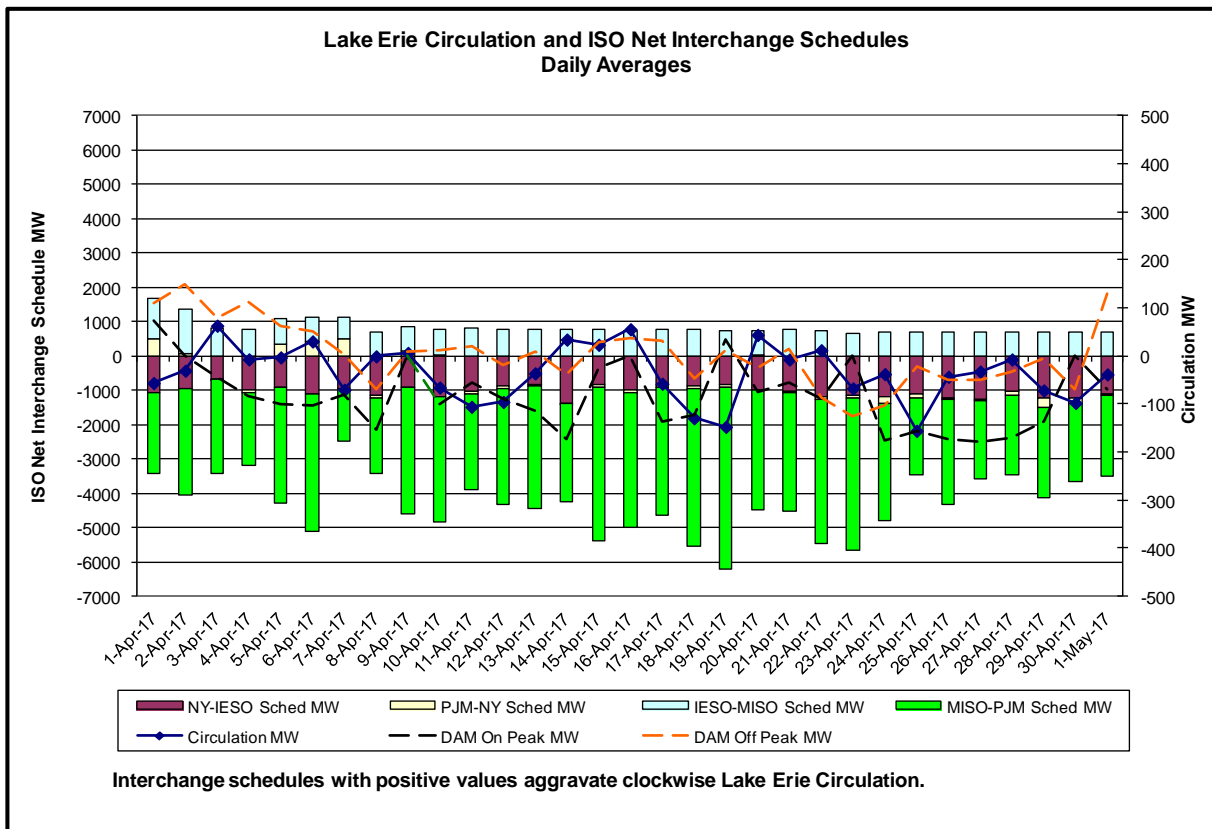
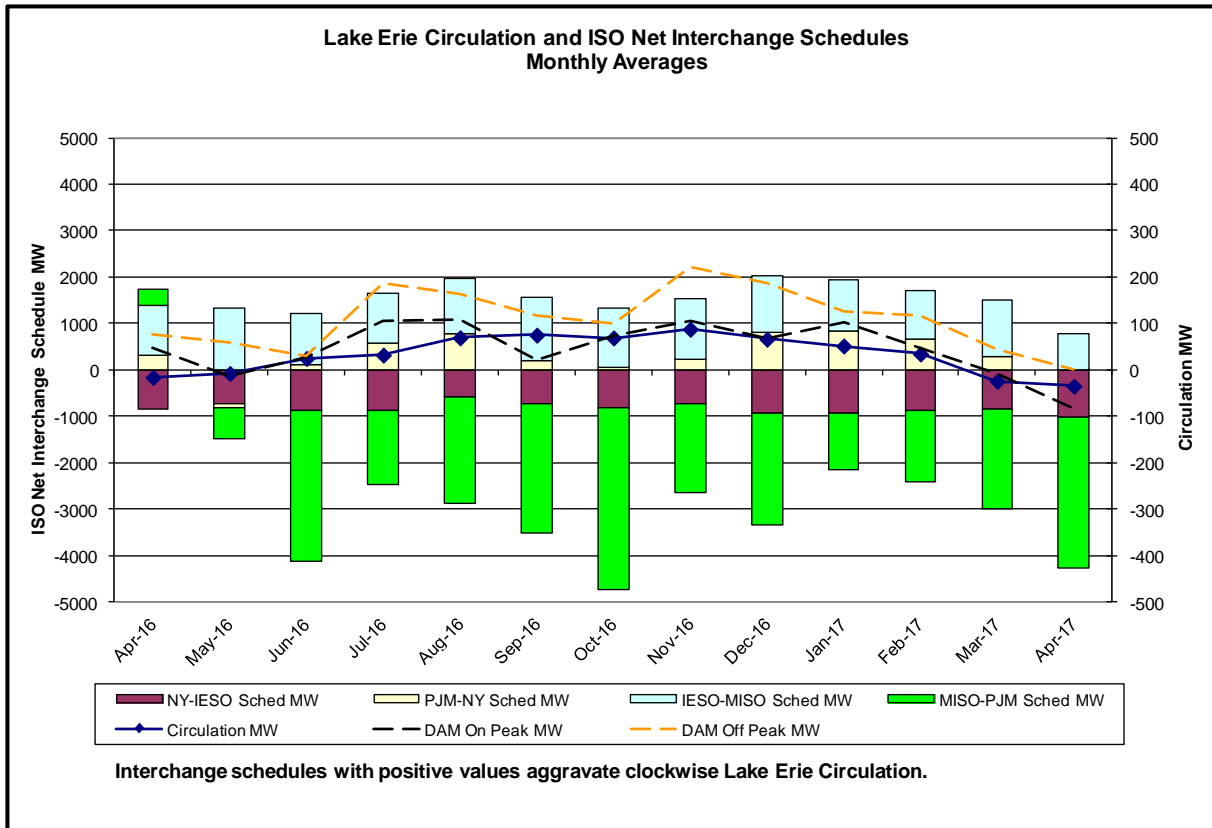


Hourly Error MW - Absolute value of the difference between the hourly average actual load demand and the average hour ahead forecast load demand.
Average Hourly Error % - Average value of the ratio of hourly average error magnitude to hourly average actual load demand.
Day-Ahead Average Hourly Error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

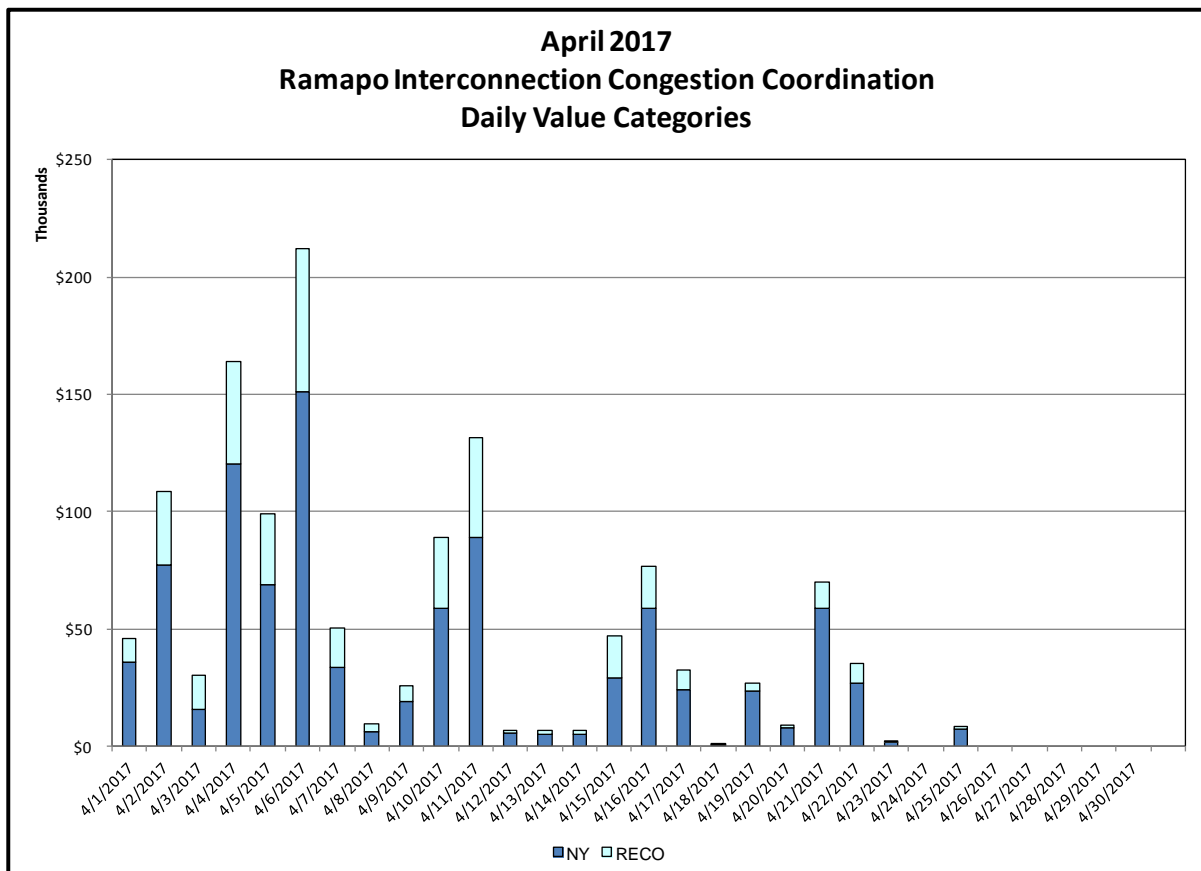
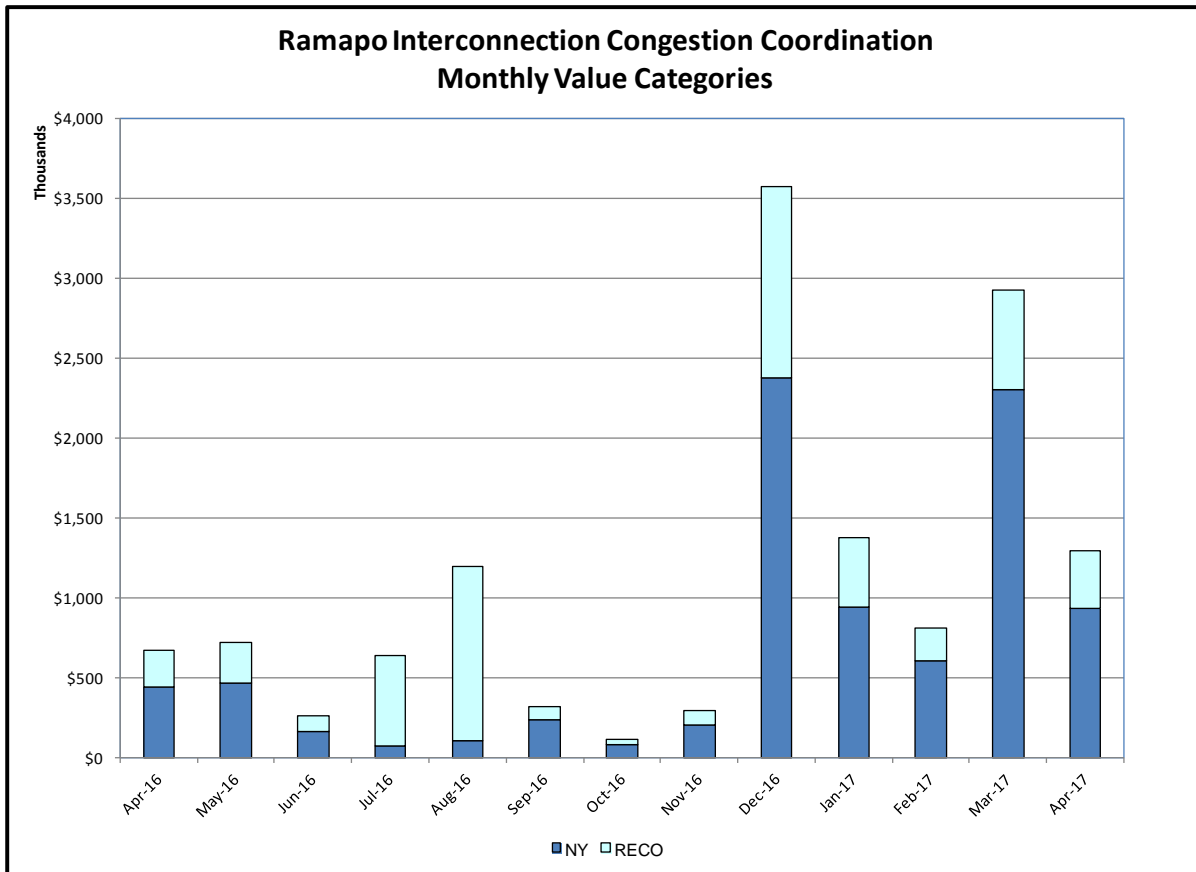






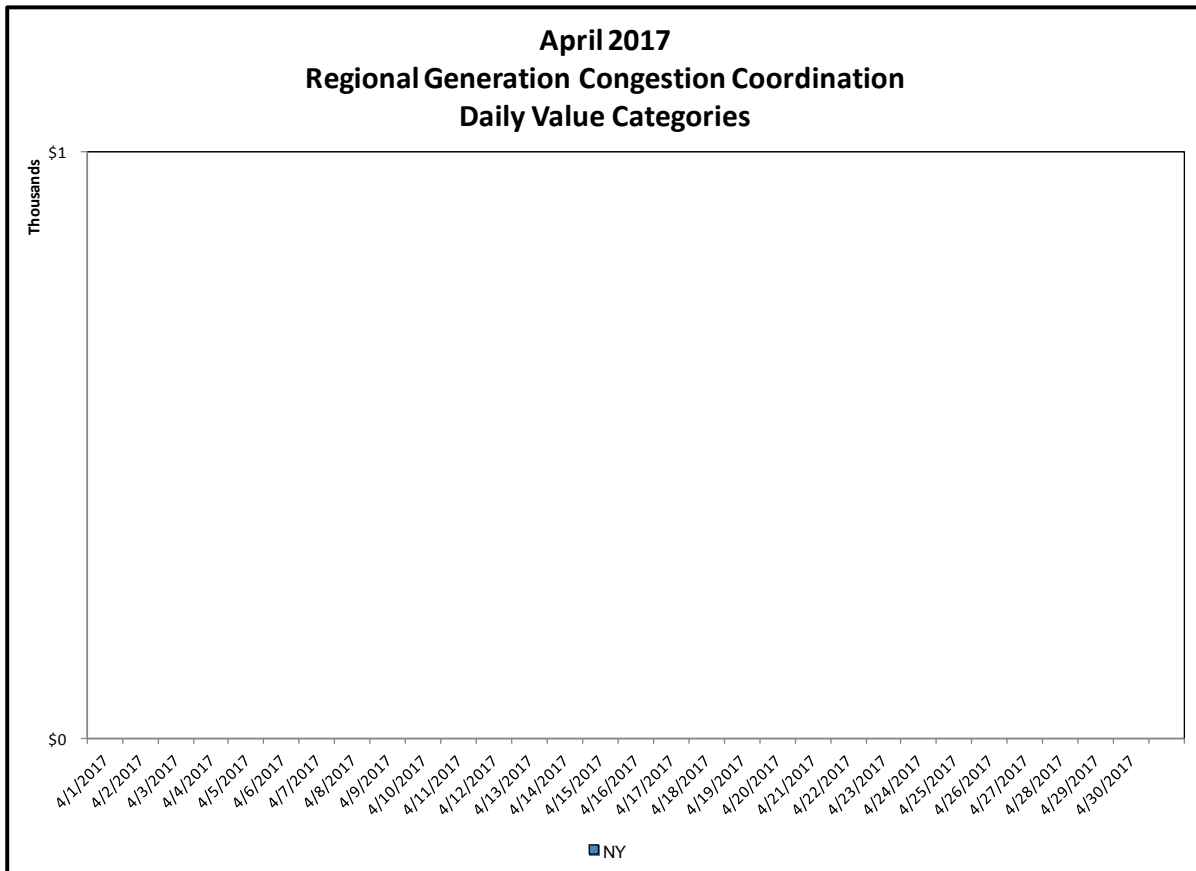
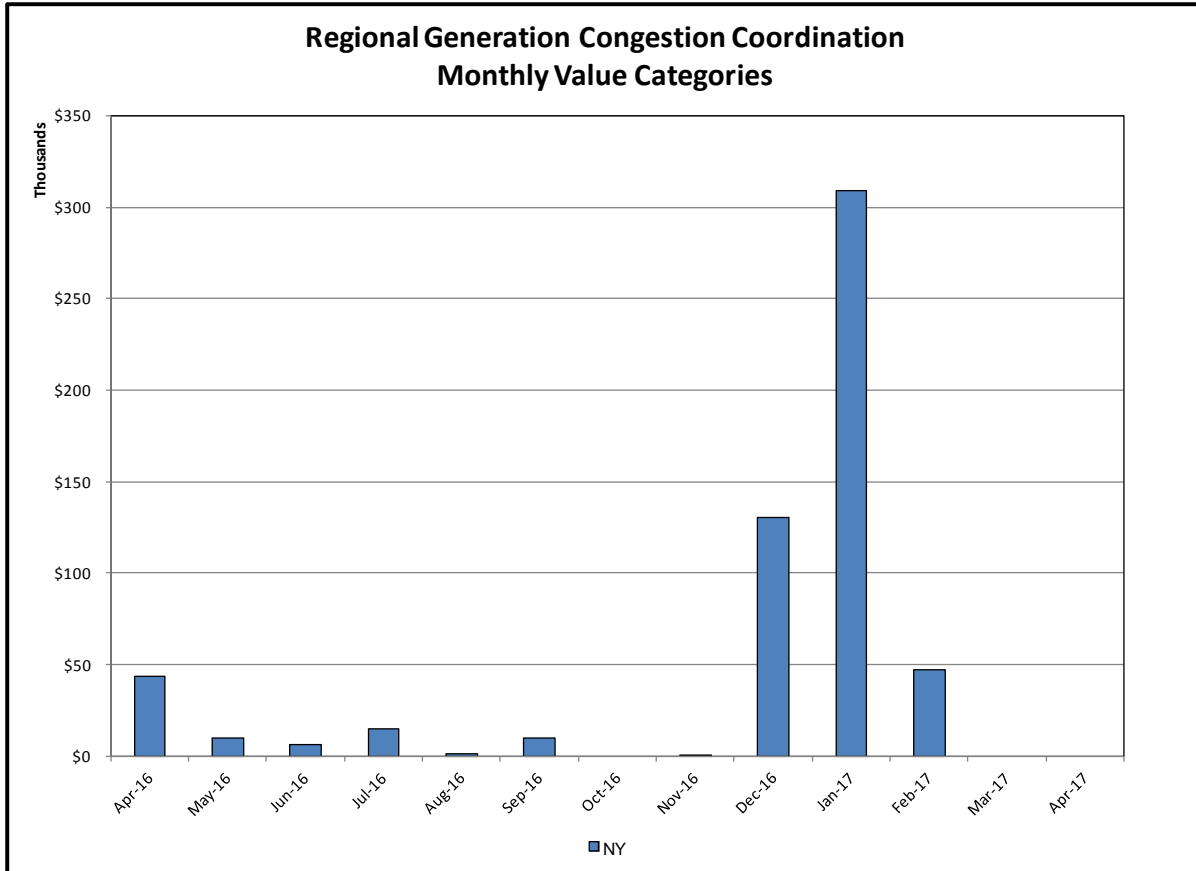


Broader Regional Market Performance Metrics



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.



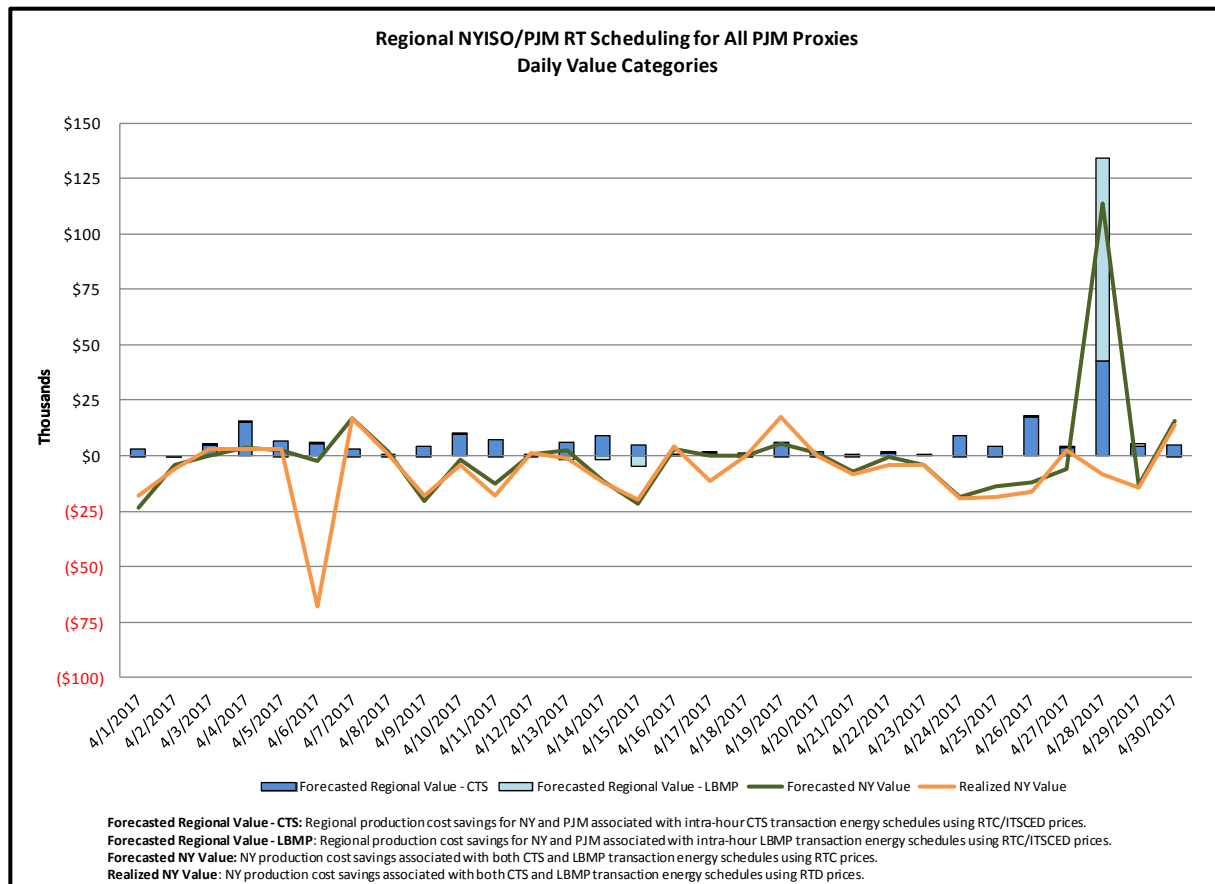
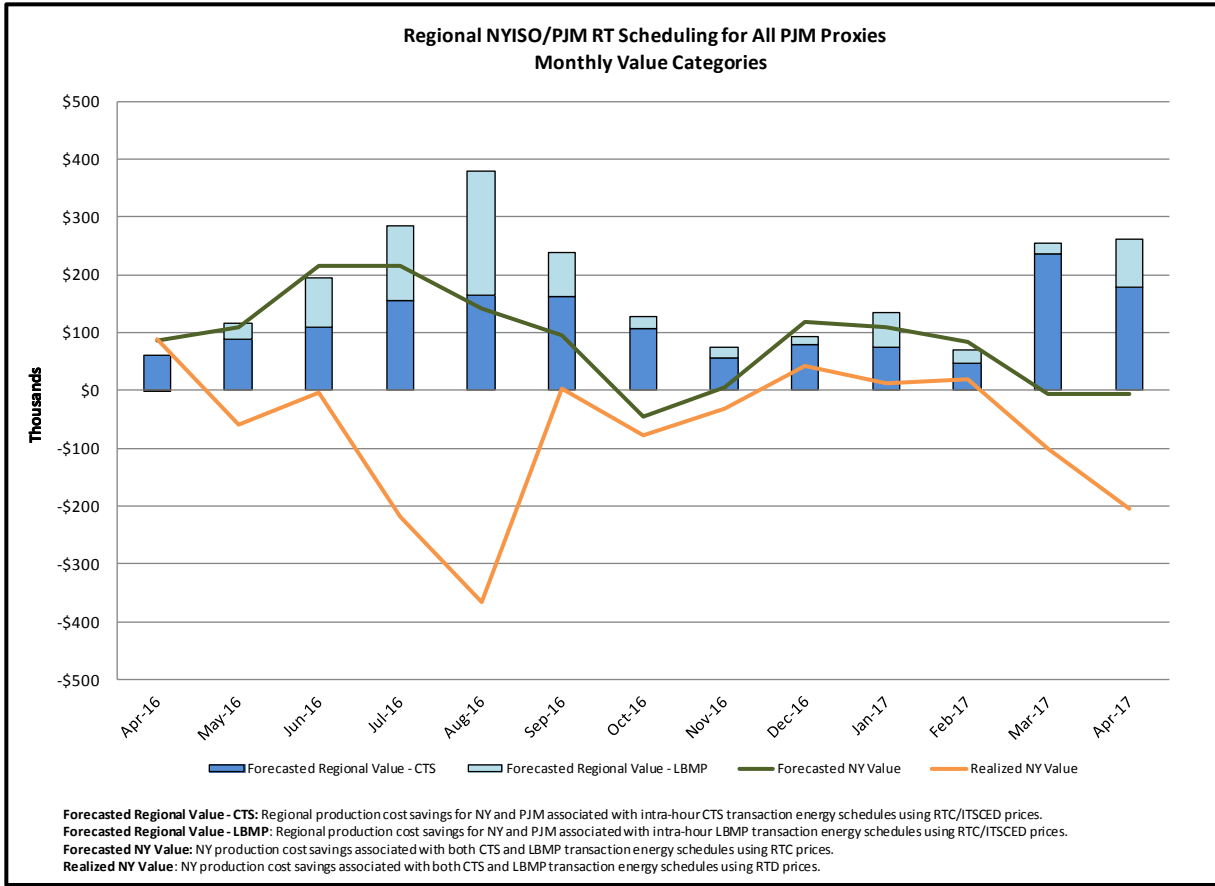
Regional Generation Congestion Coordination

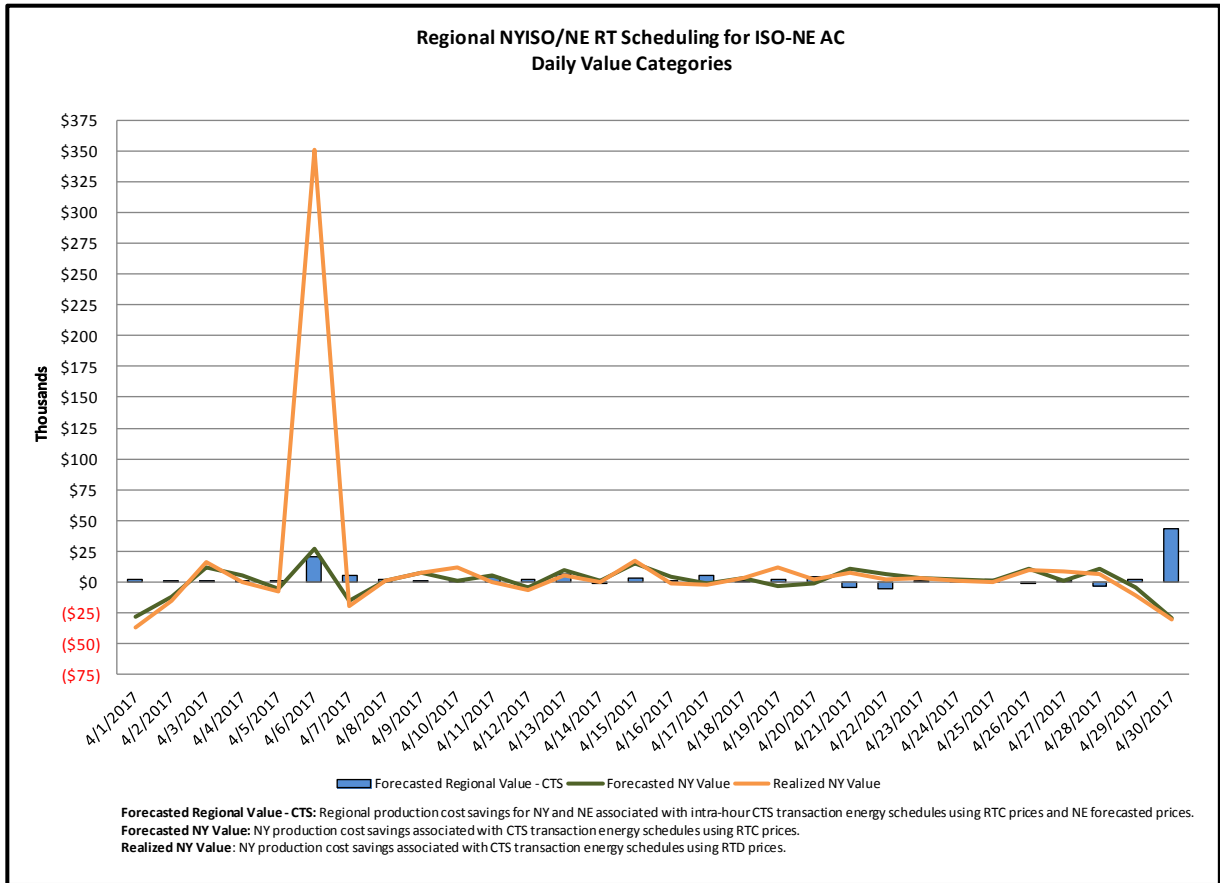
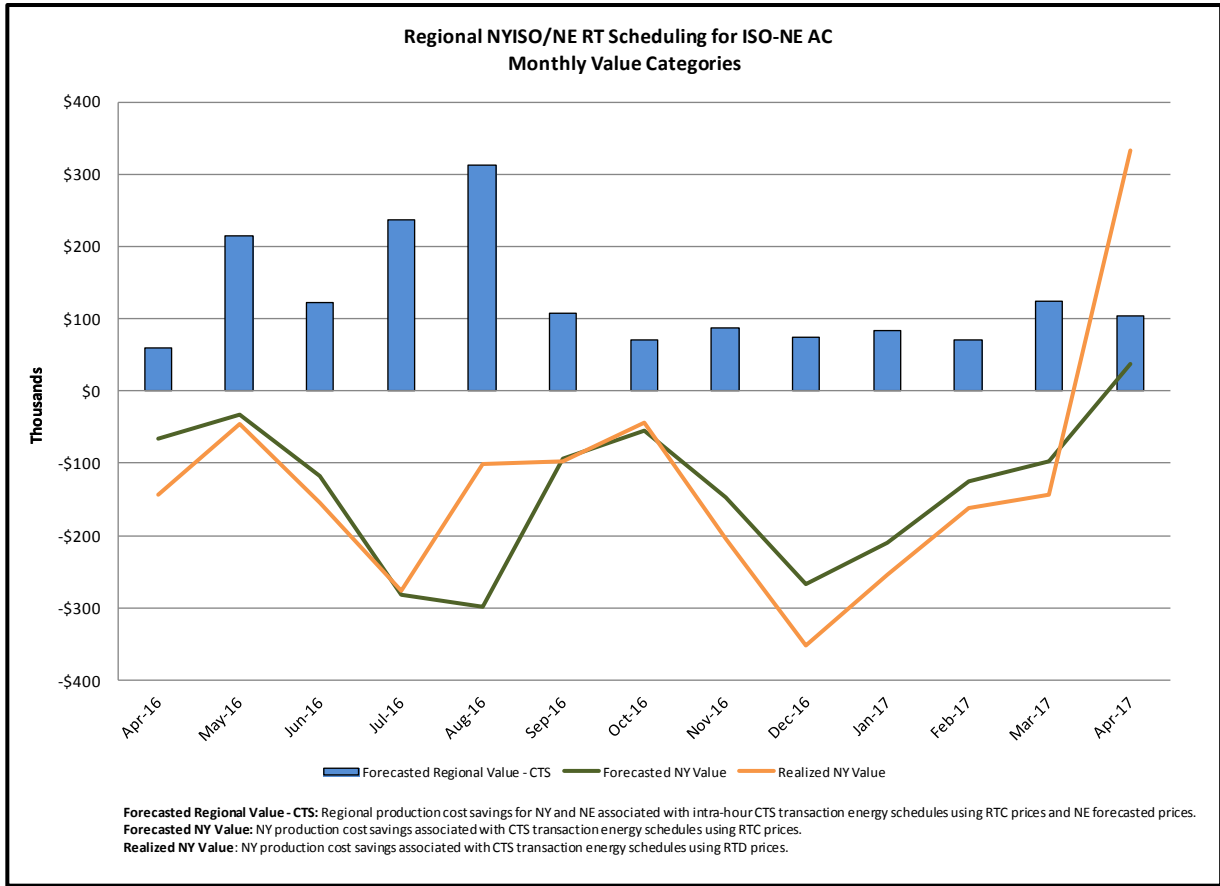
Category

NY

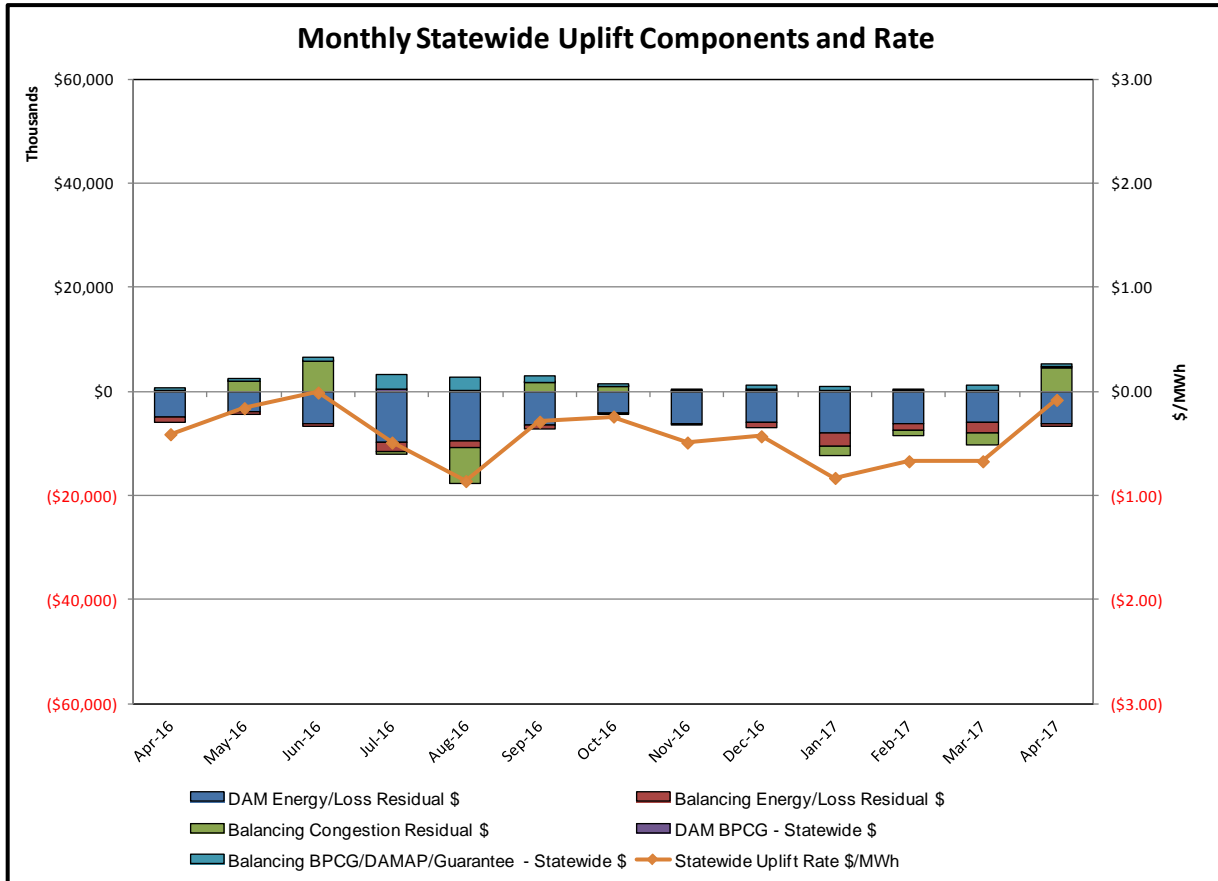
Description

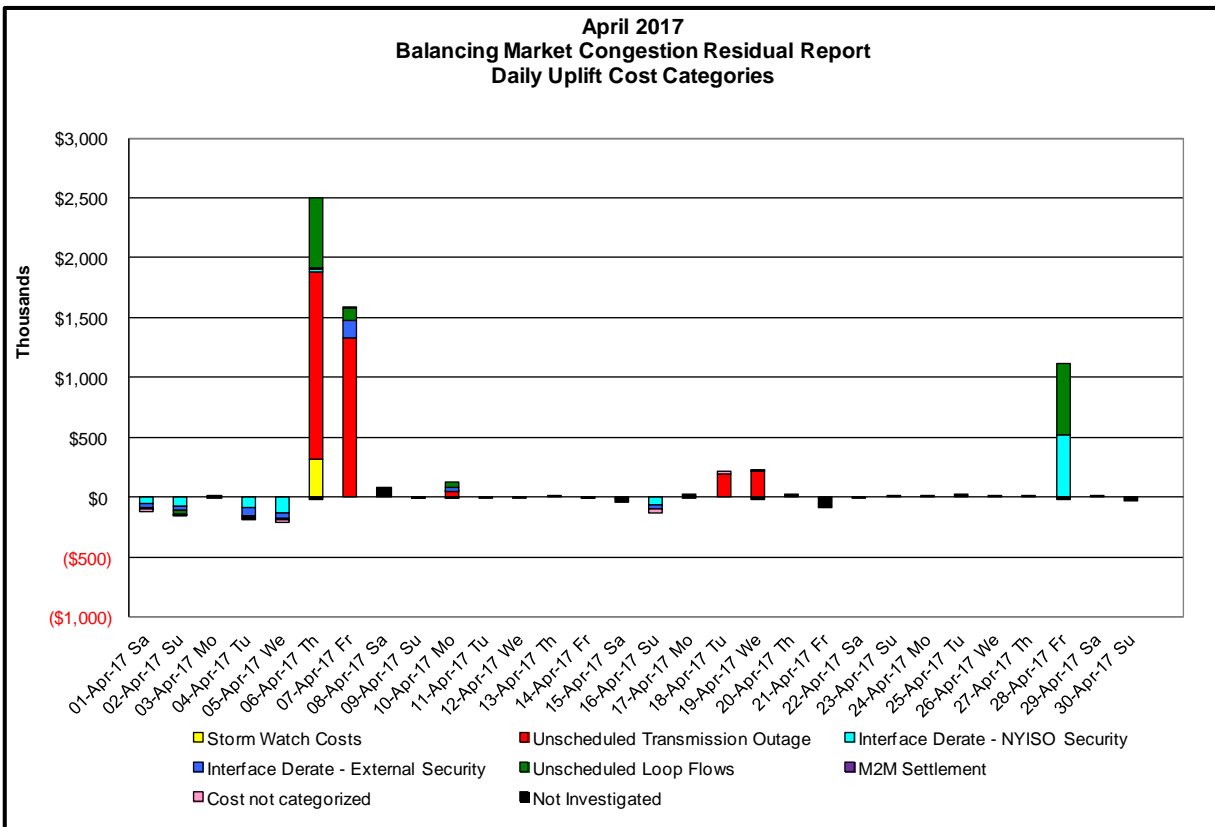
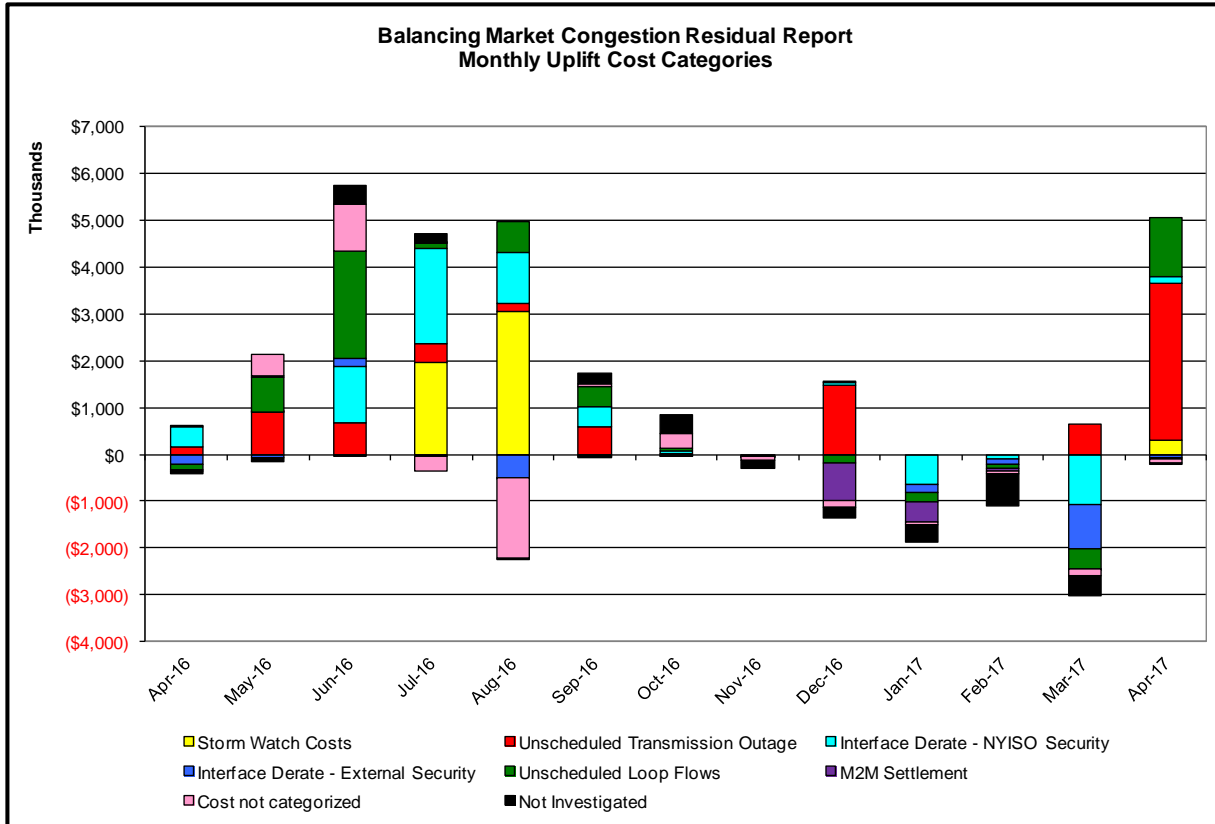
NYISO savings that result from PJM payments to NYISO when PJM's transmission use (PJM's market flow) is greater than PJM's entitlement of the NY transmission system and NYISO is incurring Western or Central NY congestion. Additionally, NYISO savings may result from the more efficient regional utilization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





Market Performance Metrics





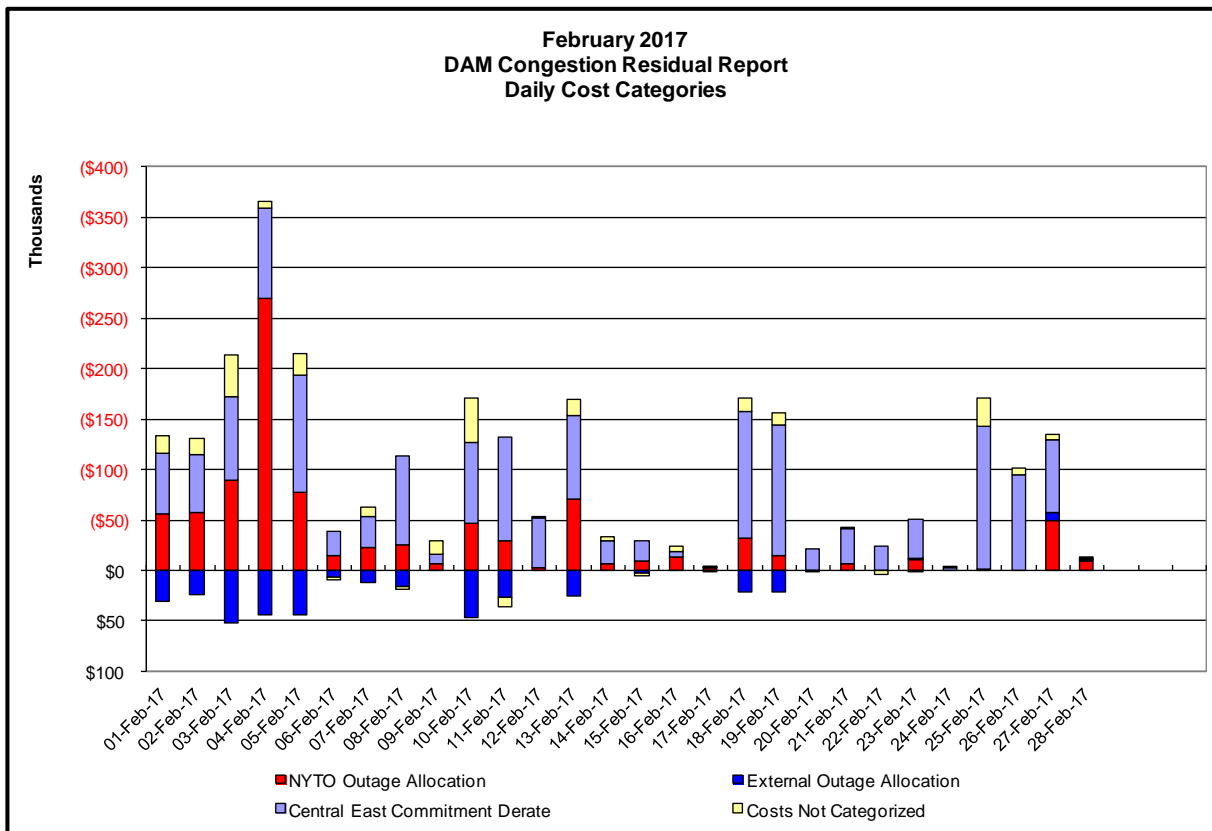
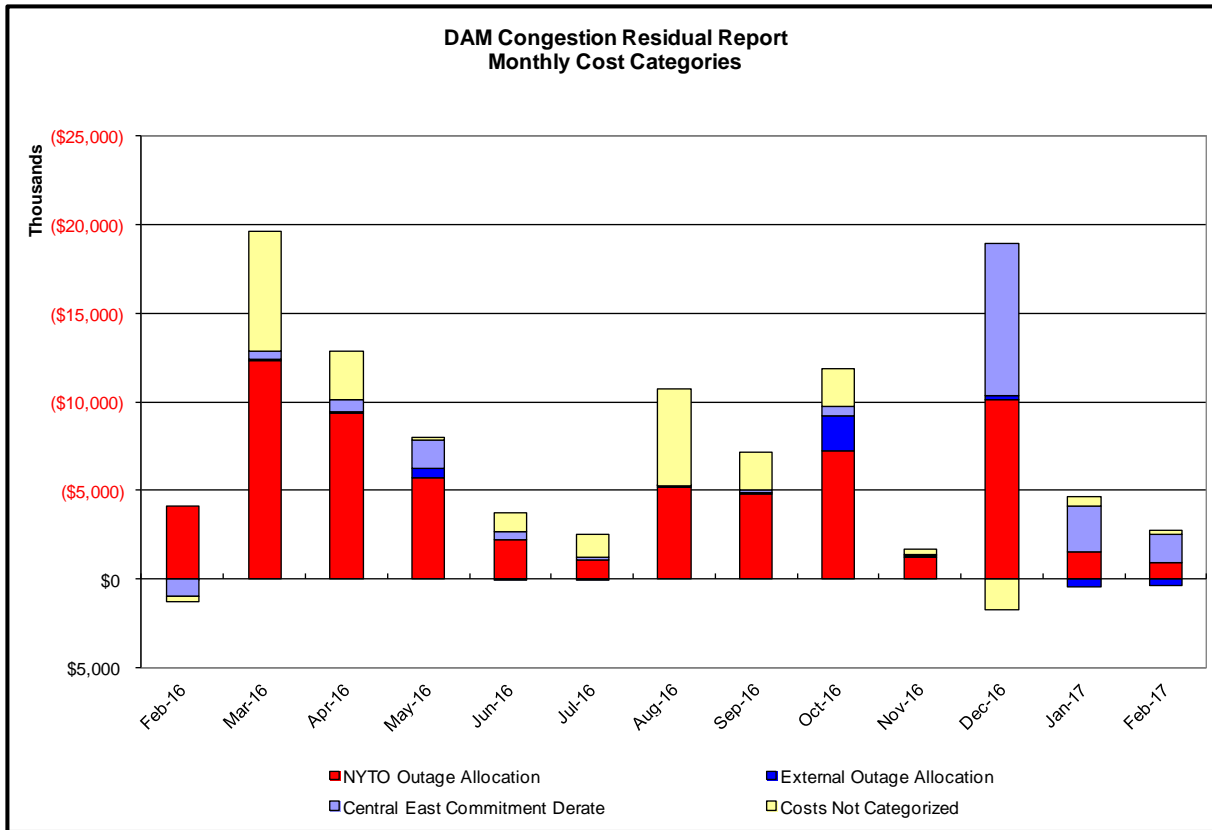
Day's investigated in April: 1,2,4,5,6,7,10,16,18,19,28			
Event	Date (yyyymmdd)	Hours	Description
	4/1/2017	10-12,20	NYCA DNI Ramp Limit
	4/1/2017	12-14,17,18,22,23	Uprate Central East
	4/1/2017	20	HQ_CHAT-NY Scheduling Limit
	4/1/2017	10-14,17,22,23	NE_AC-NY Scheduling Limit
	4/1/2017	22,23	NE_AC DNI Ramp Limit
	4/1/2017	13	NE_NNC1385-NY Scheduling Limit
	4/1/2017	20	PJM_AC DNI Ramp Limit
	4/1/2017	12,13	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	4/2/2017	0-5,7,12-17,22,23	Uprate Central East
	4/2/2017	0,22	NE_AC DNI Ramp Limit
	4/2/2017	7,12-15,17	PJM_AC-NY Scheduling Limit
	4/2/2017	1-3,5,7,12-15	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	4/4/2017	5,6,9,11-17,22,23	Uprate Central East
	4/4/2017	6,11	HQ_CHAT-NY Scheduling Limit
	4/4/2017	11-14,16,17,22,23	NE_AC-NY Scheduling Limit
	4/4/2017	23	NE_AC DNI Ramp Limit
	4/4/2017	5,6,9	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	4/5/2017	0-7,16,17	Uprate Central East
	4/5/2017	9	NYCA DNI Ramp Limit
	4/5/2017	0-2,16,17	NE_AC-NY Scheduling Limit
	4/5/2017	1,2	NE_AC DNI Ramp Limit
	4/5/2017	9	PJM_AC DNI Ramp Limit
	4/5/2017	16,17	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	4/6/2017	14-18	Thunder Storm Alert
	4/6/2017	13-23	Forced outage Chateaugay-Massena 765kV (#7040)/Massena-Marcy 765kV (#MSU1)
	4/6/2017	3,4,9	Uprate Central East
	4/6/2017	10,11	Derate Leeds-New Scotland 345kV (#94) for I/o BUS:N.SCTLD #99&18&1&94&BK1&C2
	4/6/2017	1	NE_AC DNI Ramp Limit
	4/6/2017	13-15	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	4/7/2017	0-4,7-14	Forced outage Chateaugay-Massena 765kV (#7040)/Massena-Marcy 765kV (#MSU1)
	4/7/2017	1,2,4	NE_AC DNI Ramp Limit
	4/7/2017	8	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	4/10/2017	15,16	Extended outage Leeds-New Scotland 345kV (#93)
	4/10/2017	16	Derate Central East
	4/10/2017	15	NE_AC DNI Ramp Limit
	4/10/2017	15	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Leeds-New Scotland
	4/16/2017	0-2,11-19	Uprate Central East
	4/16/2017	15	NYCA ACTIVE DNI
	4/16/2017	0-2,11,12,17,18,19	NE_AC DNI Ramp Limit
	4/16/2017	1,11,12,19	PJM_AC-NY Scheduling Limit
	4/18/2017	8-17	Forced outage Dunwoodie-Mott Haven 345kV (#71)
	4/19/2017	8-17,19,21,23	Forced outage Dunwoodie-Mott Haven 345kV (#71)
	4/19/2017	21,23	NYCA DNI Ramp Limit
	4/19/2017	4	Uprate Central East
	4/19/2017	21	NE_AC DNI Ramp Limit
	4/19/2017	4	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	4/28/2017	17	Extended outage Niagara-Rochester 345kV (#NR2)
	4/28/2017	2,5	Uprate Central East
	4/28/2017	15	Uprate Dysinger East
	4/28/2017	9,15	Uprate East 179th Street-HellGate West 138kV (#15055)
	4/28/2017	10,11	Derate MottHaven-Dunwoodie 345kV (#72)
	4/28/2017	2,4	NE_AC-NY Scheduling Limit
	4/28/2017	10,11	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Niagara-Packard, Niagara Robinson Road

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 Lake Erie Loop Flows exceeding +/- 125 MW
M2M Settlement	Market-wide	Settlement result inclusive of coordinated redispatch and Ramapo flowgates	

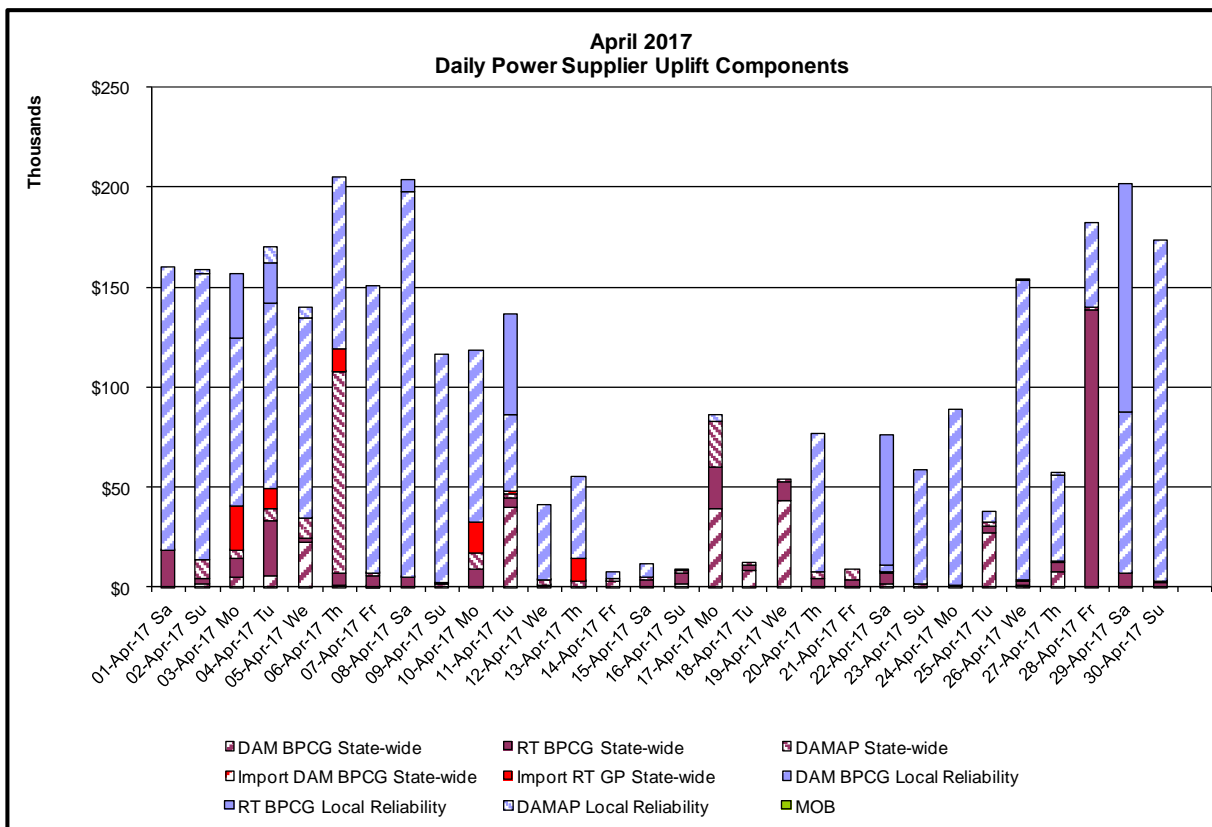
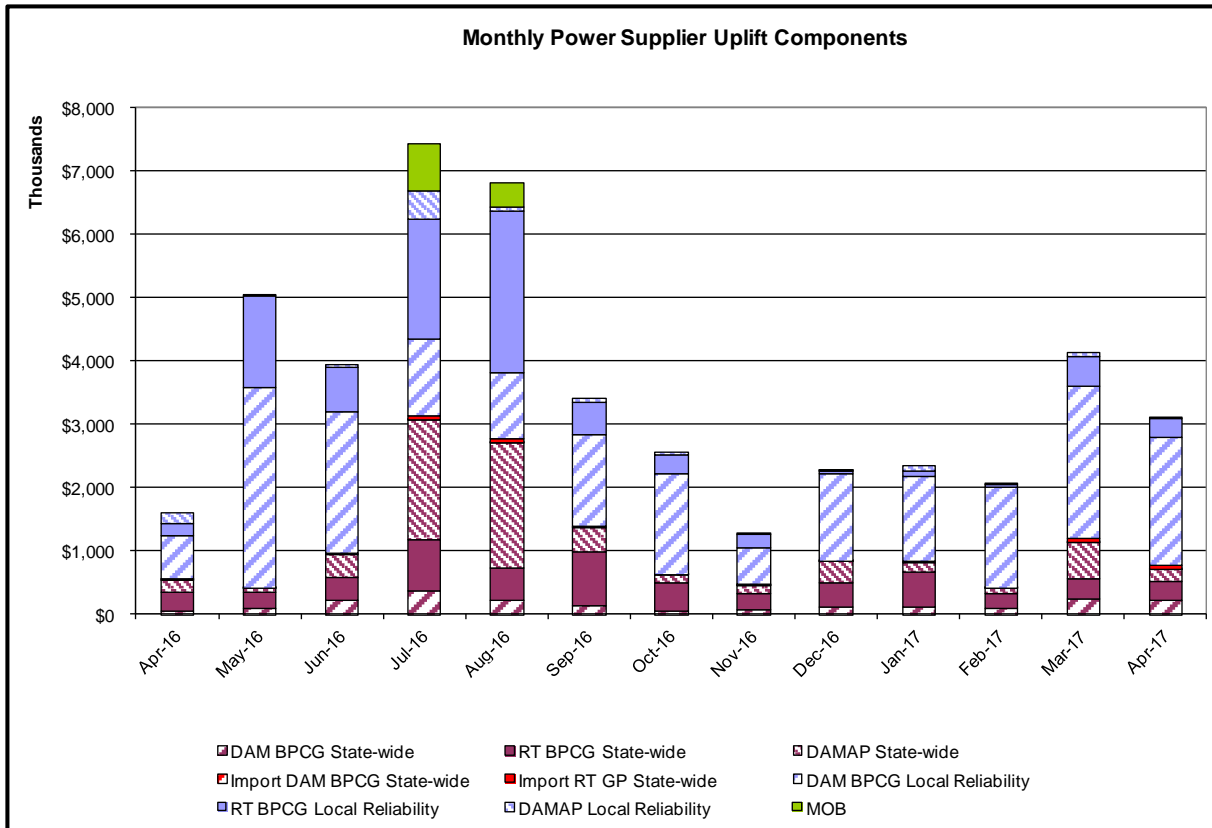
Monthly Balancing Market Congestion Report Assumptions/Notes

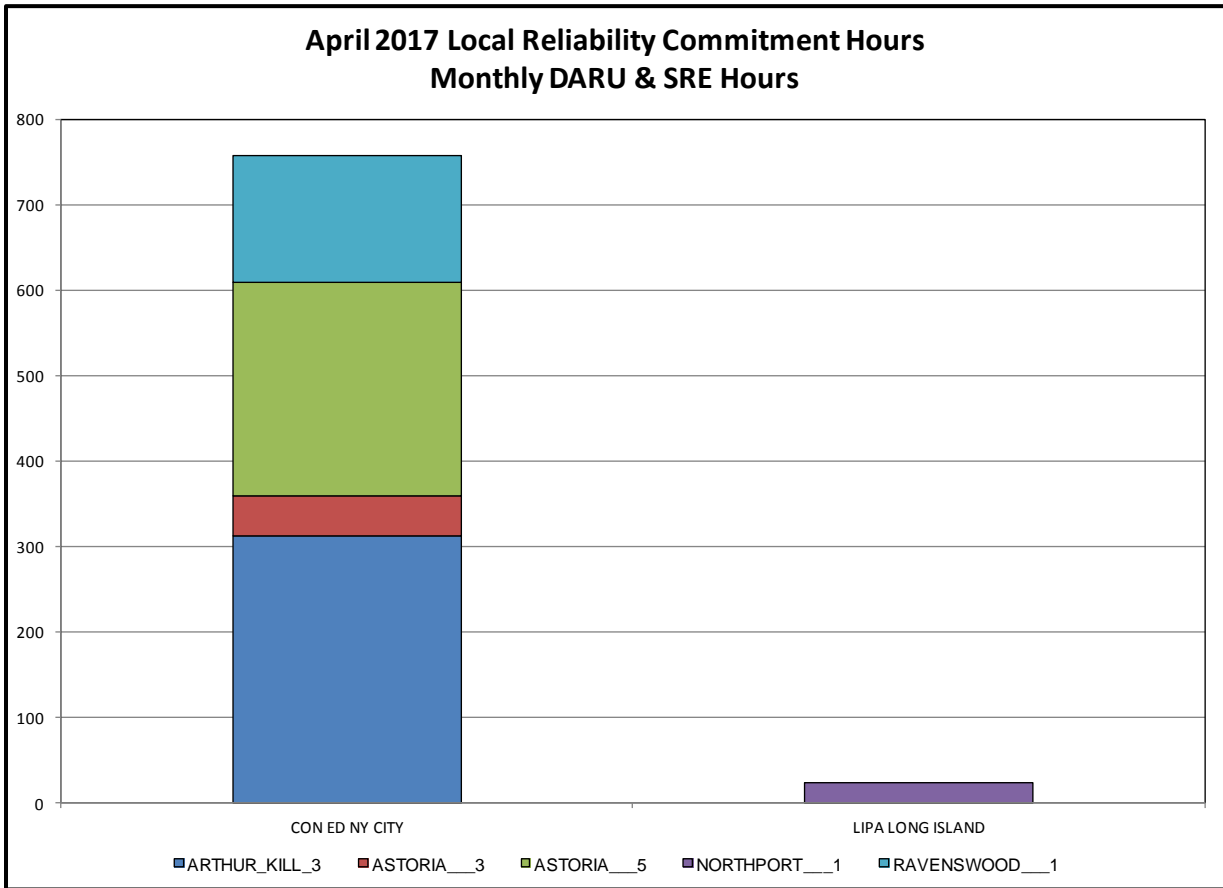
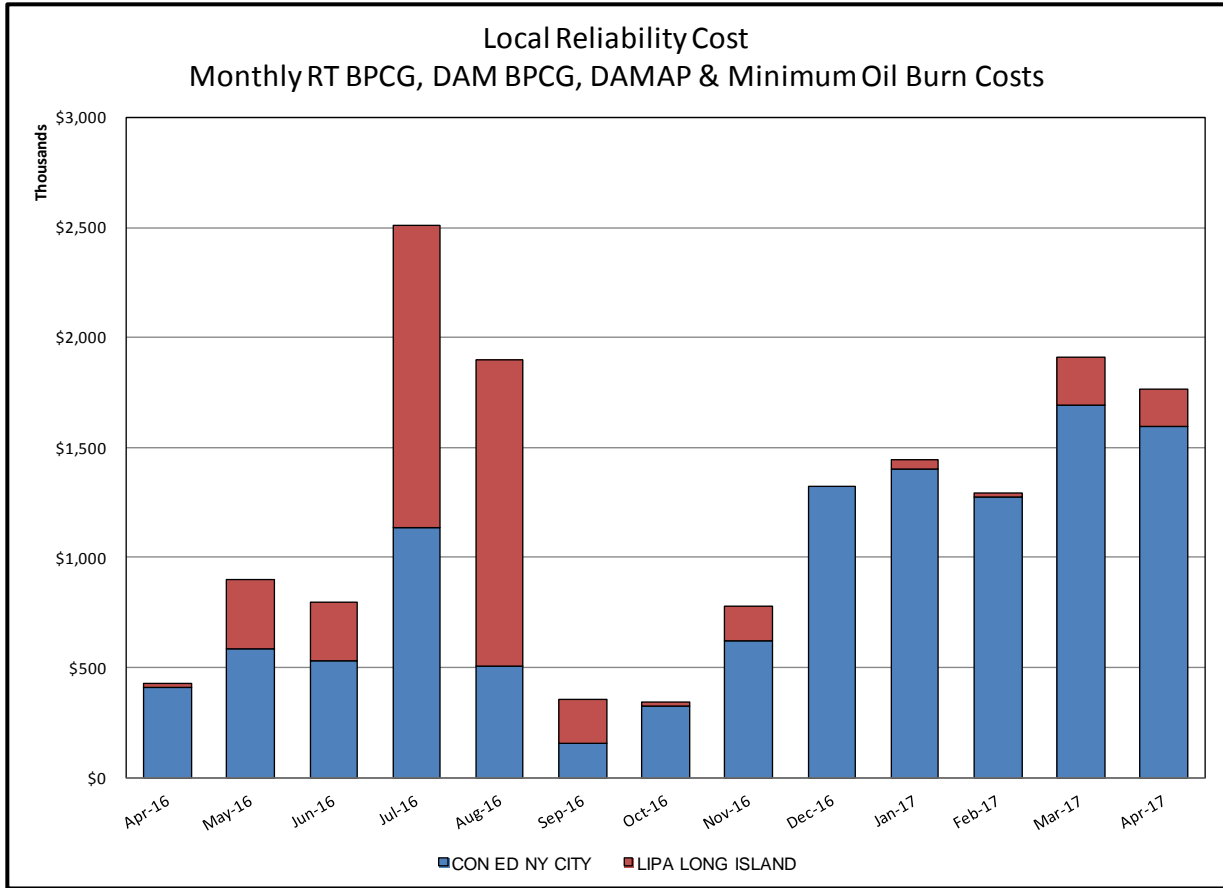
- 1) Storm Watch Costs are identified as daily total uplift costs
- 2) Days with a value of BMCR less M2M Settlement of \$100K/HR, shortfall of \$200K/Day or more, or surplus of \$100K/Day or more are investigated.
- 3) Uplift costs associated with multiple event types are apportioned equally by hour

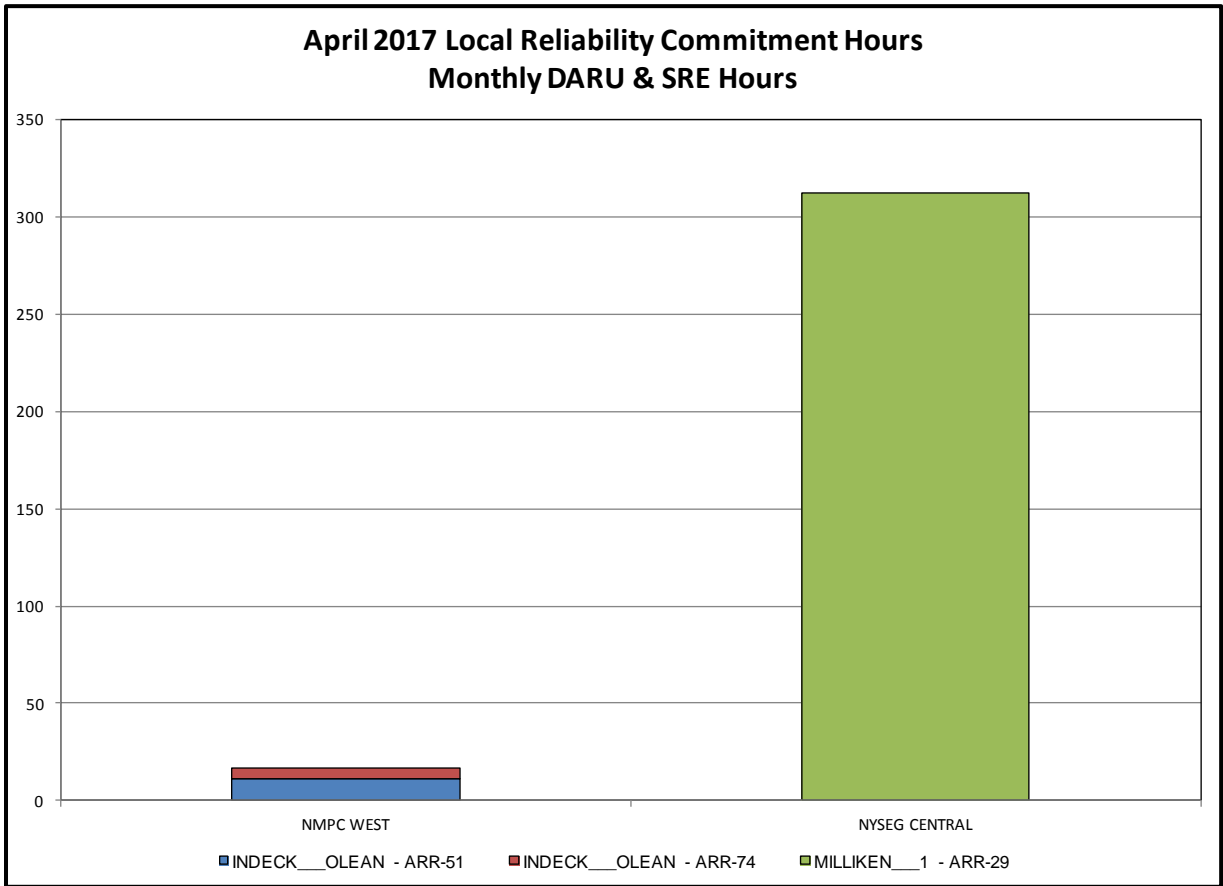
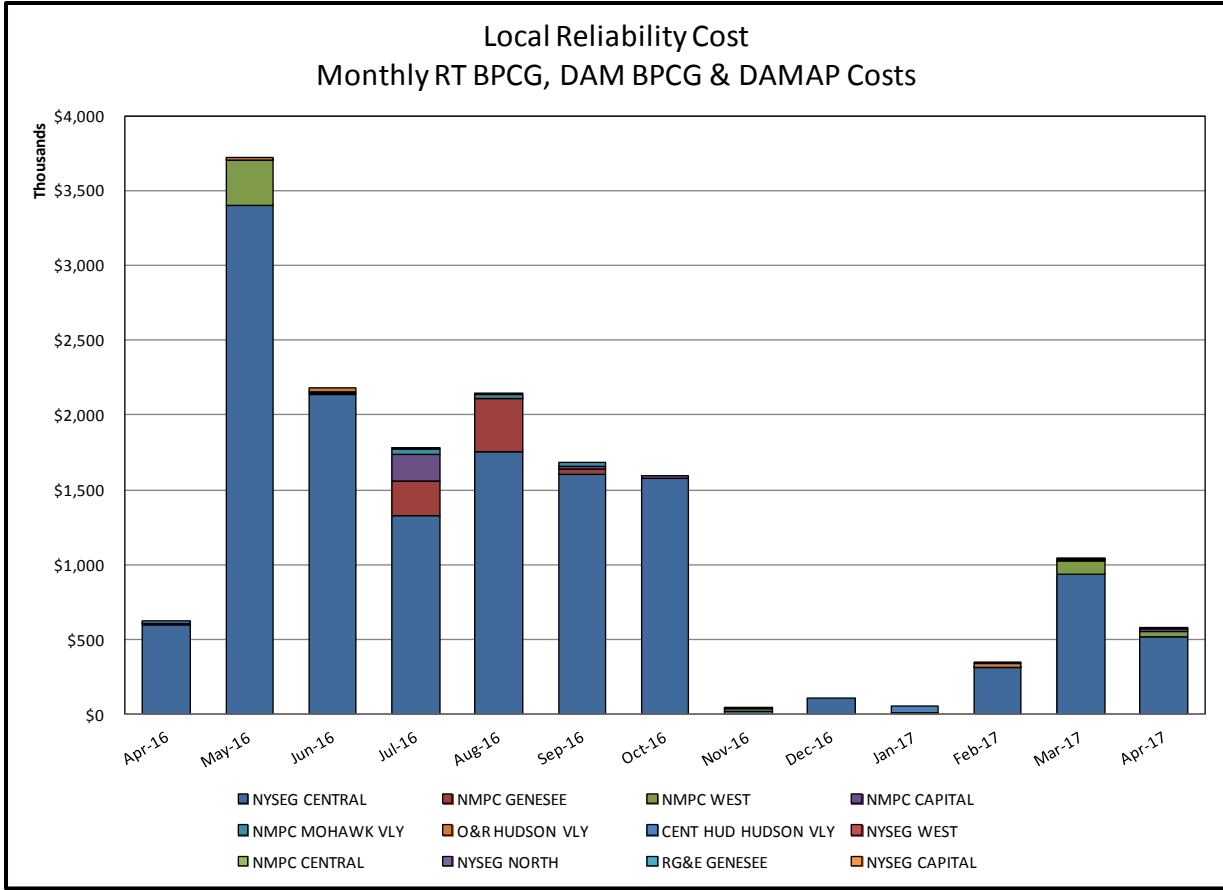


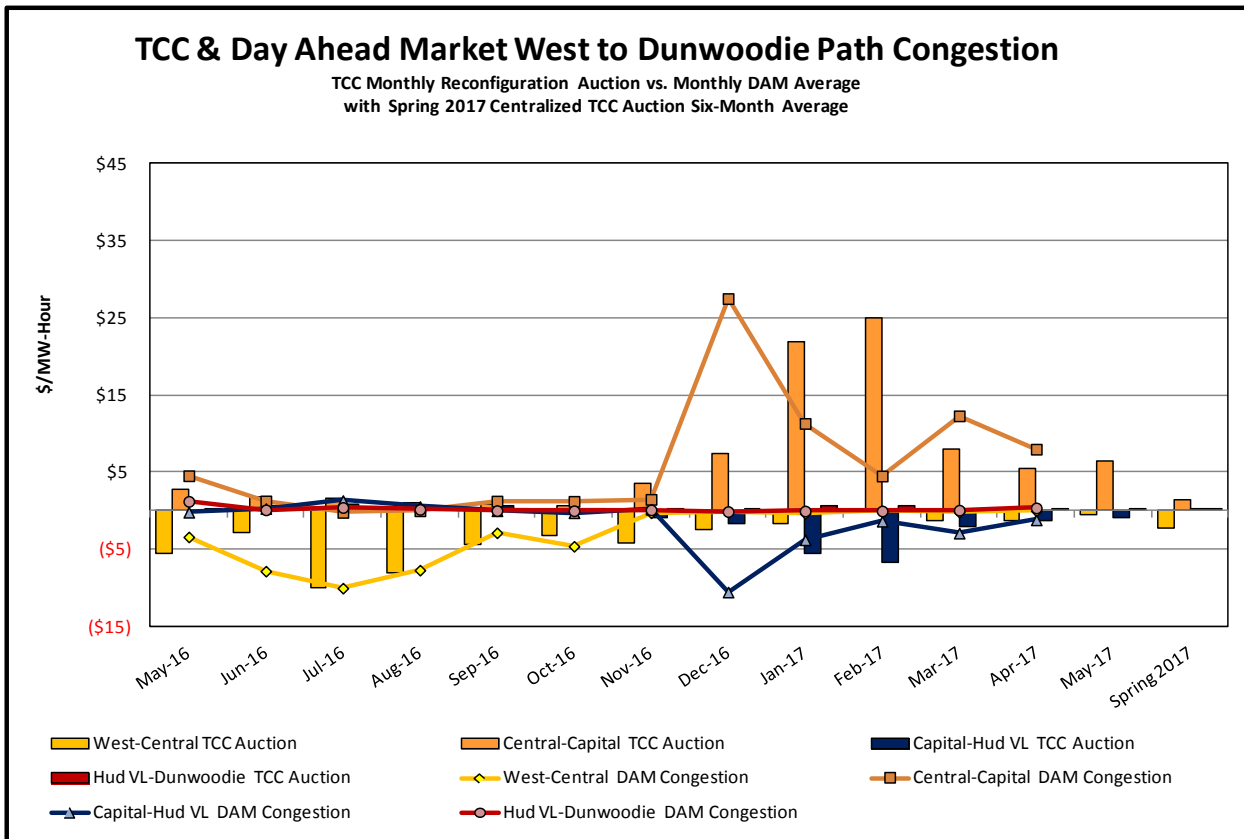
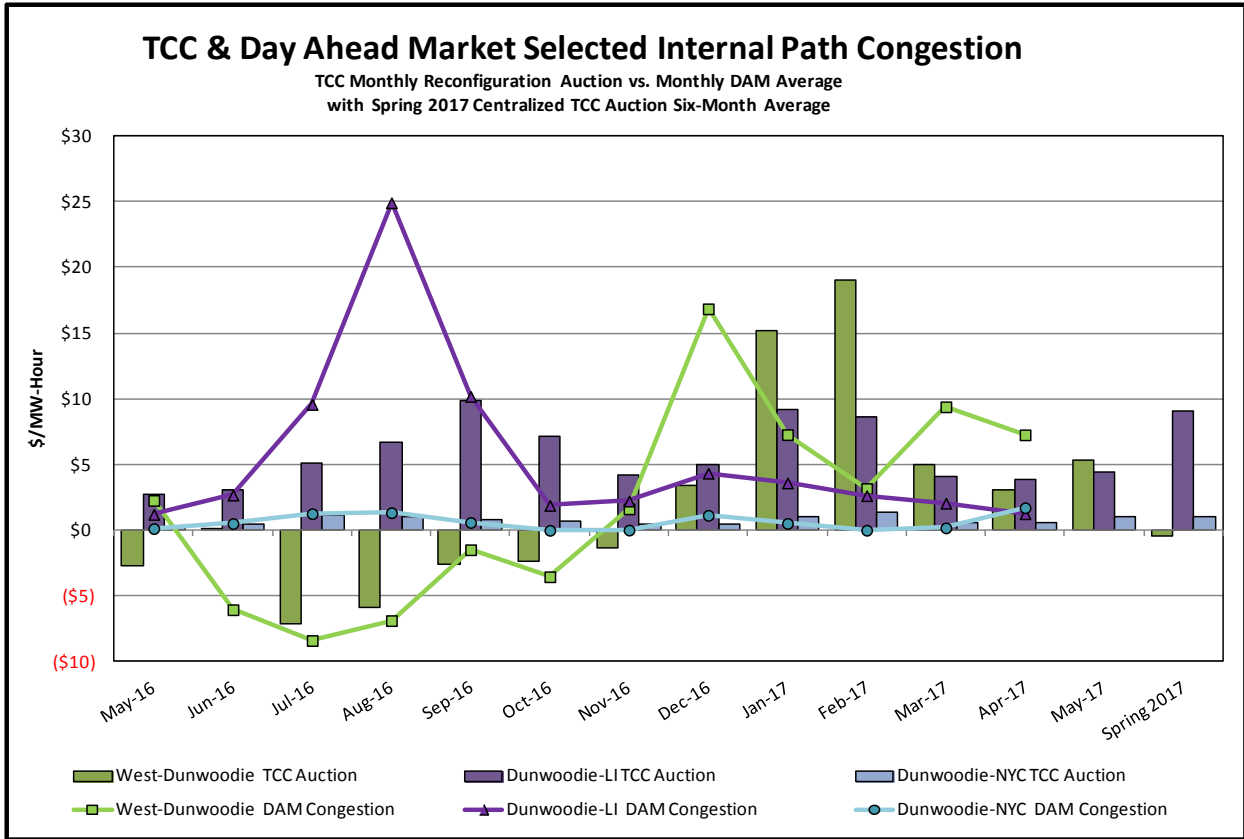
Day-Ahead Market Congestion Residual Categories

<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.	



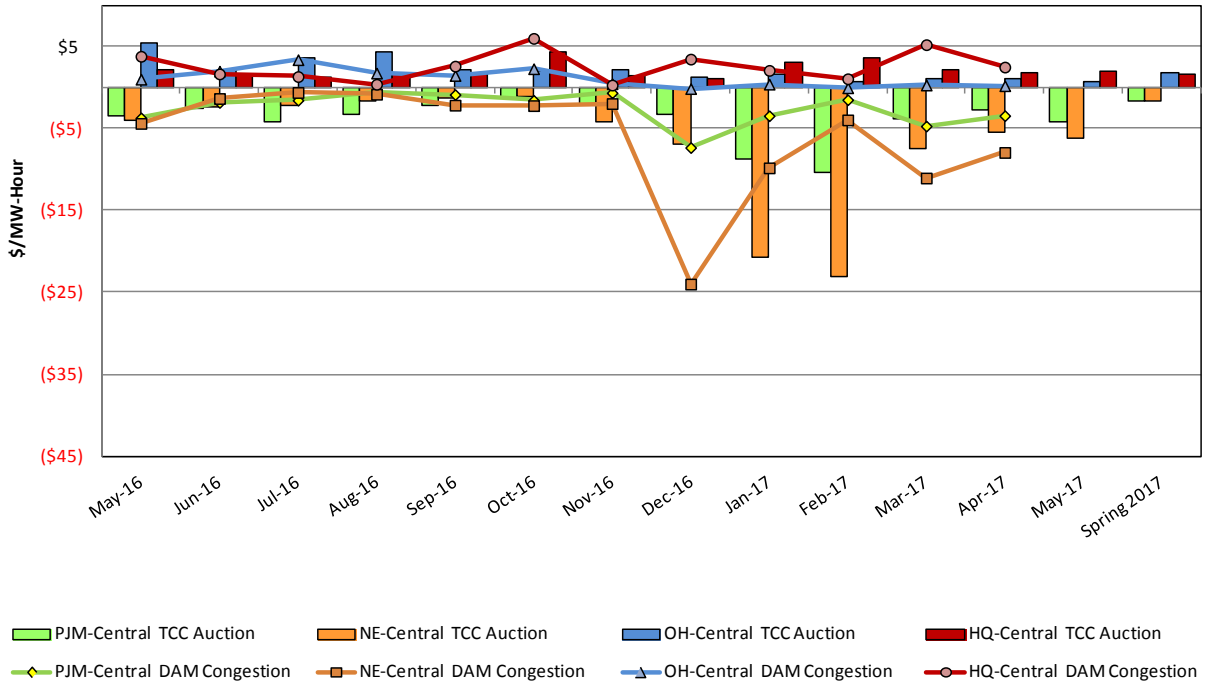


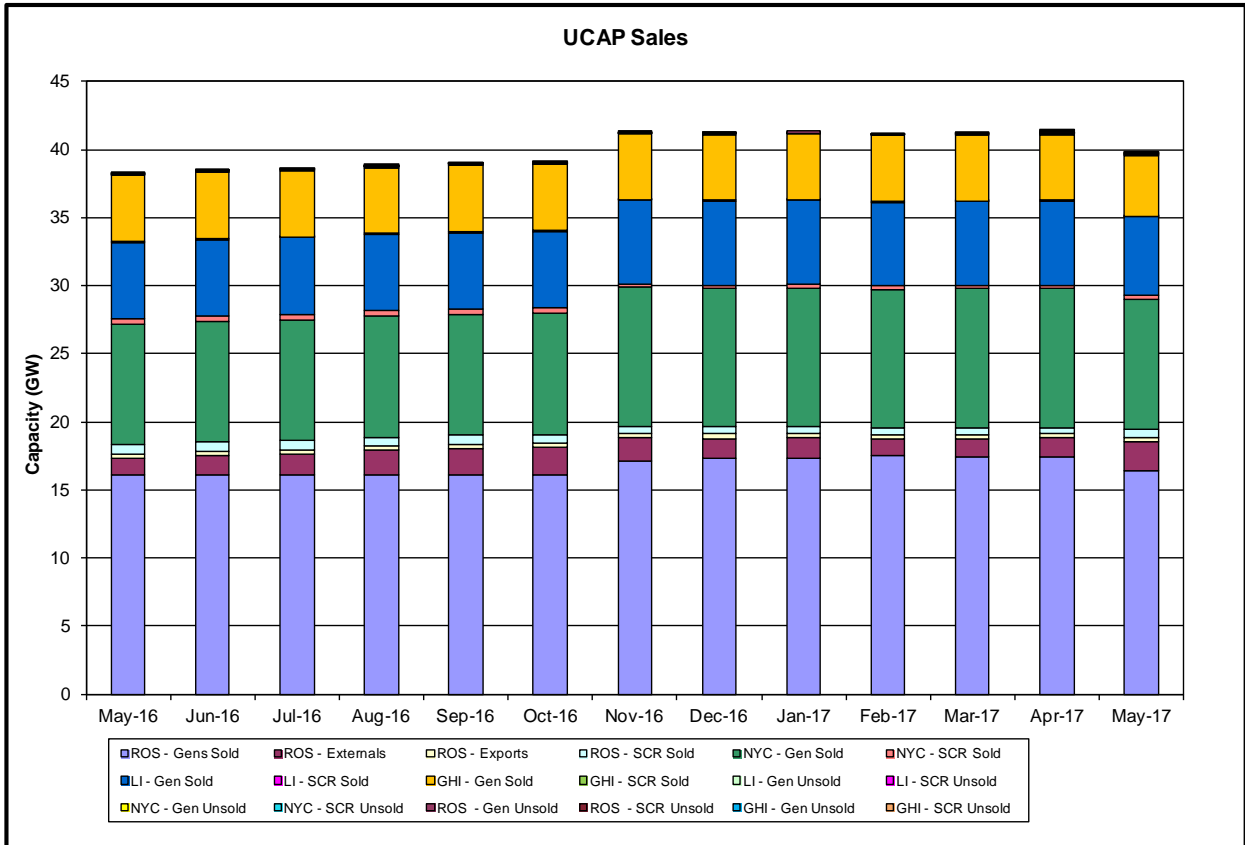
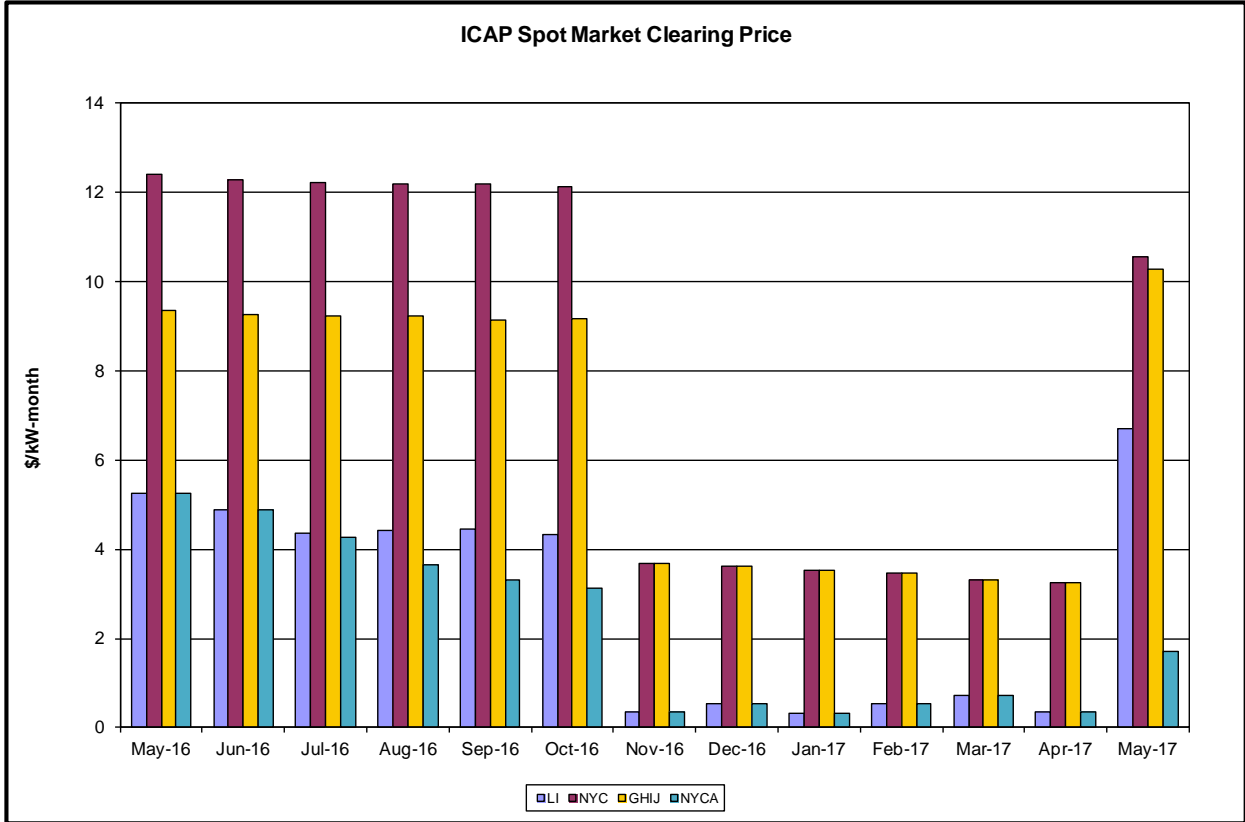




TCC & Day Ahead Market Selected External Path Congestion

TCC Monthly Reconfiguration Auction vs. Monthly DAM Average
with Spring 2017 Centralized TCC Auction Six-Month Average



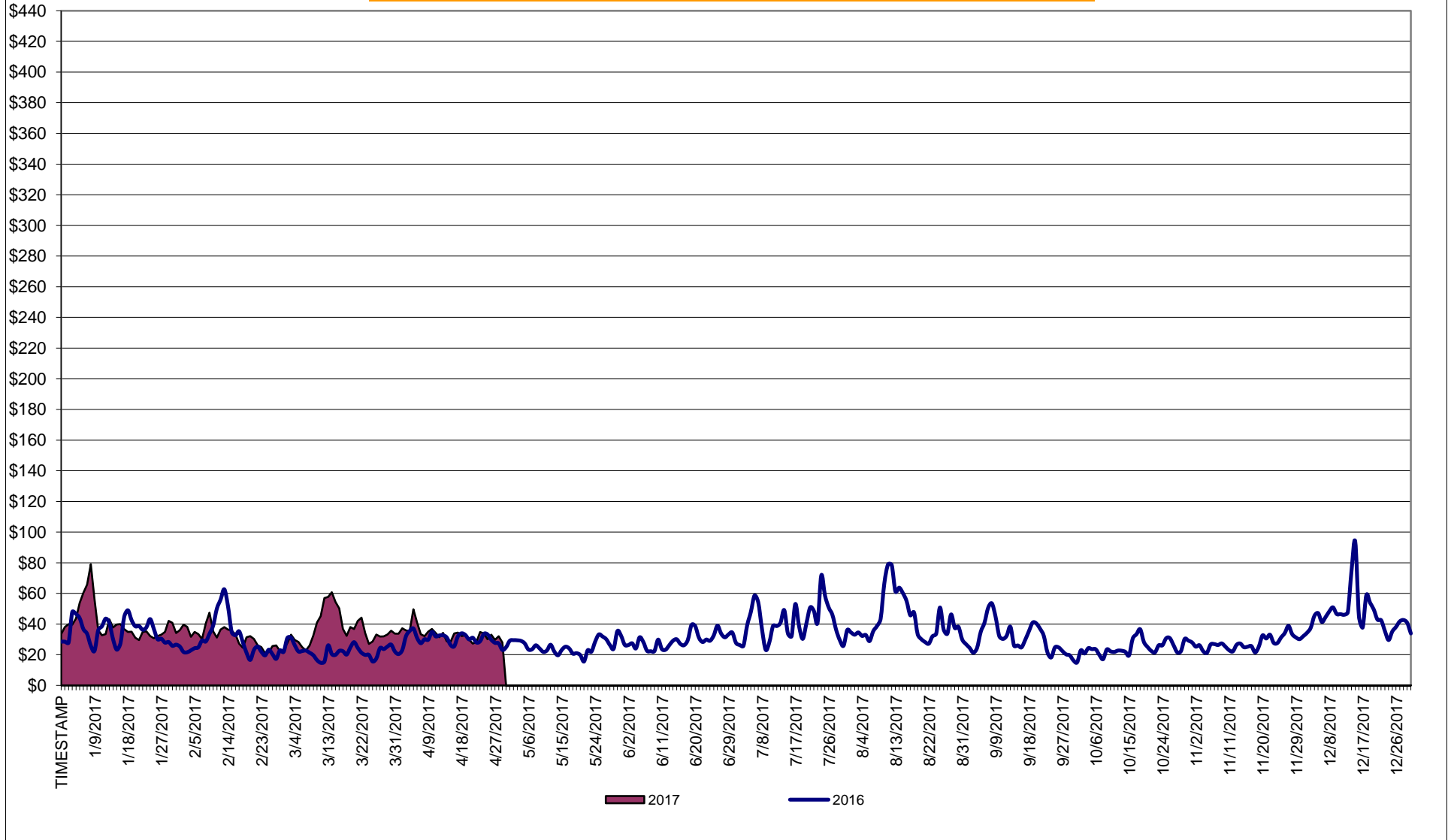


Market Performance Highlights

April 2017

- LBMP for April is \$31.06/MWh; lower than \$34.97/MWh in March 2017 and higher than \$27.96/MWh in April 2016.
 - Day Ahead and Real Time Load Weighted LBMPs are lower compared to March.
- April 2017 average year-to-date monthly cost of \$37.05/MWh is a 21% increase from \$30.71/MWh in April 2016.
- Average daily sendout is 377 GWh/day in April; lower than 419 GWh/day in March 2017 and 385 GWh/day in April 2016.
- Natural gas prices were lower and distillate prices were higher compared to the previous month.
 - Natural Gas (Transco Z6 NY) was \$2.81/MMBtu, down from \$3.49/MMBtu in March.
 - Natural gas prices are up 73.3% year-over-year.
 - Jet Kerosene Gulf Coast was \$11.15/MMBtu, up from \$10.69/MMBtu in March.
 - Ultra Low Sulfur No.2 Diesel NY Harbor was \$11.31/MMBtu, up from \$10.90/MMBtu in March.
 - Distillate prices are up 29.5% year-over-year.
- Uplift per MWh is higher compared to the previous month.
 - Uplift (not including NYISO cost of operations) is \$0.12/MWh; higher than (\$0.46)/MWh in March.
 - Local Reliability Share is \$0.20/MWh, lower than \$0.21/MWh in March.
 - Statewide Share is (\$0.08)/MWh, higher than (\$0.67)/MWh in March.
 - TSA \$ per NYC MWh is \$0.08/MWh.
- Total uplift costs (Schedule 1 components including NYISO Cost of Operations) are higher than March.

Daily NYISO Average Cost/MWh (Energy & Ancillary Services)*
2016 Annual Average \$34.28/MWh
April 2016 YTD Average \$30.71/MWh
April 2017 YTD Average \$37.05/MWh



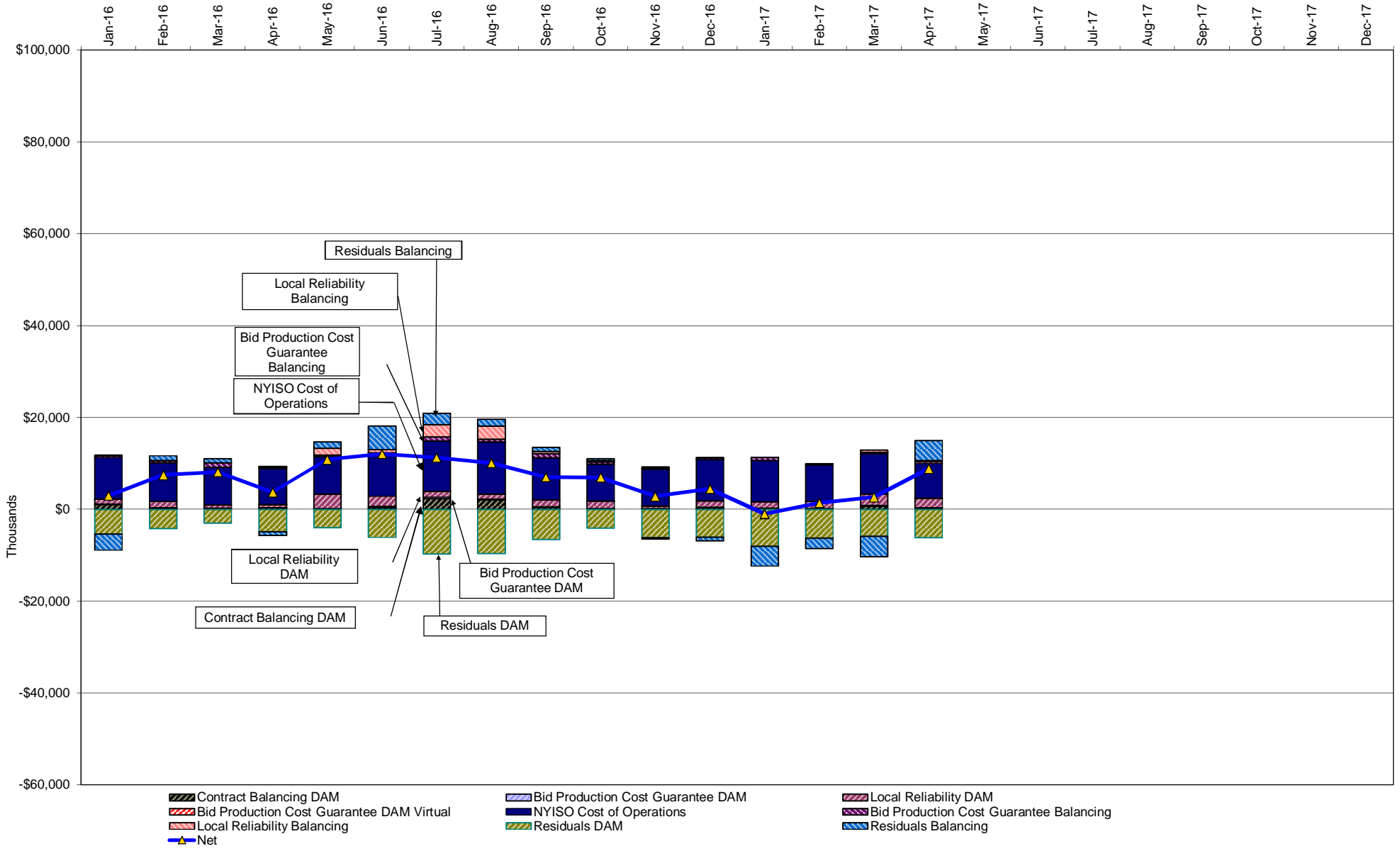
* Excludes ICAP payments.

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

2017	<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	40.07	30.95	34.97	31.06								
NTAC	0.66	1.11	0.86	1.05								
Reserve	0.70	0.67	0.74	0.70								
Regulation	0.14	0.12	0.13	0.17								
NYISO Cost of Operations	0.65	0.65	0.65	0.65								
FERC Fee Recovery	0.09	0.10	0.10	0.12								
Uplift	(0.73)	(0.54)	(0.46)	0.12								
Uplift: Local Reliability Share	0.10	0.13	0.21	0.20								
Uplift: Statewide Share	(0.83)	(0.67)	(0.67)	(0.08)								
Voltage Support and Black Start	0.37	0.37	0.38	0.38								
Avg Monthly Cost	41.96	33.44	37.38	34.26								
Avg YTD Cost	41.96	38.02	37.81	37.05								
TSA \$ per NYC MWh	0.00	0.00	0.00	0.08								
2016	<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	34.29	28.71	20.66	27.96	23.31	27.35	40.01	42.99	30.89	22.33	26.31	43.90
NTAC	0.59	0.78	0.62	1.14	1.10	0.93	0.78	0.54	0.55	0.86	0.79	0.97
Reserve	0.77	0.73	0.73	0.87	0.71	0.59	0.67	0.68	0.69	0.77	0.68	0.63
Regulation	0.12	0.12	0.12	0.12	0.11	0.12	0.10	0.10	0.10	0.15	0.13	0.17
NYISO Cost of Operations	0.64	0.65	0.65	0.64	0.65	0.66	0.65	0.65	0.64	0.64	0.64	0.64
FERC Fee Recovery	0.09	0.10	0.11	0.10	0.09	0.09	0.07	0.06	0.08	0.10	0.10	0.08
Uplift	(0.43)	(0.07)	(0.03)	(0.34)	0.19	0.20	(0.26)	(0.63)	(0.15)	(0.09)	(0.42)	(0.33)
Uplift: Local Reliability Share	0.09	0.11	0.06	0.07	0.35	0.21	0.23	0.22	0.14	0.15	0.07	0.10
Uplift: Statewide Share	(0.52)	(0.18)	(0.09)	(0.41)	(0.16)	(0.01)	(0.49)	(0.86)	(0.29)	(0.24)	(0.49)	(0.43)
Voltage Support and Black Start	0.35	0.36	0.36	0.35	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.35
Avg Monthly Cost	36.42	31.37	23.23	30.84	26.52	30.29	42.40	44.75	33.16	25.12	28.61	46.42
Avg YTD Cost	36.42	34.02	30.68	30.71	29.85	29.93	32.32	34.43	34.31	33.54	33.16	34.28
TSA \$ per NYC MWh	0.00	0.00	0.05	0.00	0.00	0.02	0.84	1.64	0.00	0.00	0.00	0.00
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	34.40	30.05	24.83	20.91
NTAC	0.32	0.35	0.41	0.64	0.56	0.80	0.54	0.60	0.63	0.53	0.68	1.05
Reserve	0.27	0.37	0.56	0.36	0.38	0.24	0.27	0.20	0.28	0.28	0.47	0.60
Regulation	0.10	0.18	0.11	0.12	0.10	0.13	0.12	0.12	0.10	0.12	0.13	0.13
NYISO Cost of Operations	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.69	0.70	0.69
Uplift	(0.48)	(1.08)	(0.68)	(0.15)	0.26	0.33	0.04	0.03	(0.15)	0.10	0.44	(0.07)
Uplift: Local Reliability Share	0.25	0.33	0.13	0.27	0.30	0.37	0.35	0.36	0.22	0.33	0.20	0.12
Uplift: Statewide Share	(0.73)	(1.41)	(0.81)	(0.42)	(0.05)	(0.04)	(0.30)	(0.33)	(0.37)	(0.23)	0.25	(0.18)
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	0.38
Avg Monthly Cost	60.91	115.27	53.58	30.41	35.37	30.79	36.84	35.14	36.35	32.18	27.64	23.71
Avg YTD Cost	60.91	87.74	76.64	66.82	60.96	56.02	52.77	50.20	48.59	47.17	45.66	44.10
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	0.00

* Excludes ICAP payments.
Market Mitigation and Analysis
Prepared: 5/5/2017 10:50 AM

NYISO Dollar Flows - Uplift - OATT Schedule 1 components - Data through April 30, 2017



NYISO Markets Transactions

2017	<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	14,135,019	12,565,206	13,983,865	12,061,475								
DAM LSE Internal LBMP Energy Sales	57%	57%	55%	54%								
DAM External TC LBMP Energy Sales	2%	2%	1%	1%								
DAM Bilateral - Internal Bilaterals	32%	32%	34%	35%								
DAM Bilateral - Import/Non-LBMP Market Bilaterals	5%	5%	5%	6%								
DAM Bilateral - Export/Non-LBMP Market Bilaterals	2%	2%	2%	2%								
DAM Bilateral - Wheel Through Bilaterals	2%	2%	2%	2%								
Balancing Energy Market MWh	-256,448	-407,284	-509,053	-466,426								
Balancing Energy LSE Internal LBMP Energy Sales	-157%	-132%	-148%	-115%								
Balancing Energy External TC LBMP Energy Sales	64%	39%	44%	22%								
Balancing Energy Bilateral - Internal Bilaterals	15%	8%	12%	5%								
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	0%	4%	0%	0%								
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	10%	7%	5%	4%								
Balancing Energy Bilateral - Wheel Through Bilaterals	-32%	-26%	-13%	-15%								
Transactions Summary												
LBMP	58%	57%	55%	54%								
Internal Bilaterals	33%	34%	36%	37%								
Import Bilaterals	5%	5%	5%	6%								
Export Bilaterals	2%	2%	2%	2%								
Wheels Through	2%	2%	2%	2%								
Market Share of Total Load												
Day Ahead Market	101.8%	103.3%	103.8%	104.0%								
Balancing Energy +	-1.8%	-3.3%	-3.8%	-4.0%								
Total MWh	13,878,571	12,157,922	13,474,812	11,595,049								
Average Daily Energy Sendout/Month GWh	431	418	419	377								

2016	<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	14,760,915	13,614,754	13,413,781	12,496,141	12,959,886	14,095,904	16,950,819	17,413,898	14,563,318	13,014,354	12,770,775	14,245,185
DAM LSE Internal LBMP Energy Sales	54%	55%	55%	57%	58%	60%	64%	63%	60%	56%	56%	58%
DAM External TC LBMP Energy Sales	4%	2%	1%	5%	2%	1%	1%	3%	3%	2%	2%	3%
DAM Bilateral - Internal Bilaterals	34%	34%	35%	28%	31%	30%	28%	27%	30%	33%	32%	31%
DAM Bilateral - Import/Non-LBMP Market Bilaterals	5%	5%	5%	6%	5%	5%	4%	4%	5%	5%	5%	5%
DAM Bilateral - Export/Non-LBMP Market Bilaterals	2%	1%	2%	2%	2%	2%	1%	1%	1%	2%	2%	2%
DAM Bilateral - Wheel Through Bilaterals	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%
Balancing Energy Market MWh	-522,919	-580,900	-741,701	-303,313	-180,848	-143,015	-86,025	224,316	-250,802	-477,109	-394,575	-127,836
Balancing Energy LSE Internal LBMP Energy Sales	-125%	-114%	-118%	-76%	-147%	-203%	-347%	42%	-139%	-111%	-102%	-269%
Balancing Energy External TC LBMP Energy Sales	12%	13%	19%	-13%	55%	77%	204%	56%	49%	21%	28%	138%
Balancing Energy Bilateral - Internal Bilaterals	19%	9%	4%	8%	27%	47%	62%	28%	18%	6%	9%	65%
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4%
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	6%	5%	3%	5%	7%	10%	15%	5%	5%	4%	6%	27%
Balancing Energy Bilateral - Wheel Through Bilaterals	-12%	-12%	-8%	-24%	-42%	-32%	-34%	-31%	-32%	-21%	-40%	-66%
Transactions Summary												
LBMP	56%	56%	54%	62%	59%	61%	65%	66%	62%	57%	57%	60%
Internal Bilaterals	36%	36%	37%	29%	32%	31%	28%	27%	30%	35%	34%	32%
Import Bilaterals	5%	5%	6%	6%	5%	5%	4%	4%	5%	5%	6%	5%
Export Bilaterals	2%	2%	2%	2%	2%	2%	1%	1%	1%	2%	2%	2%
Wheels Through	1%	1%	1%	1%	2%	2%	1%	1%	2%	1%	2%	2%
Market Share of Total Load												
Day Ahead Market	103.7%	104.5%	105.9%	102.5%	101.4%	101.0%	100.5%	98.7%	101.8%	103.8%	103.2%	100.9%
Balancing Energy +	-3.7%	-4.5%	-5.9%	-2.5%	-1.4%	-1.0%	-0.5%	1.3%	-1.8%	-3.8%	-3.2%	-0.9%
Total MWh	14,237,996	13,033,853	12,672,080	12,192,828	12,779,038	13,952,889	16,864,794	17,638,213	14,312,516	12,537,245	12,376,200	14,117,349
Average Daily Energy Sendout/Month GWh	439	436	397	385	397	456	532	548	458	391	398	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 2017 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 *	\$37.22	\$28.84	\$32.04	\$27.70								
Standard Deviation	\$13.20	\$7.97	\$11.95	\$7.66								
Load Weighted Price **	\$38.42	\$29.66	\$32.96	\$28.56								
<u>RTC LBMP</u>												
Price *	\$32.87	\$24.09	\$28.86	\$26.19								
Standard Deviation	\$14.57	\$9.52	\$13.70	\$10.36								
Load Weighted Price **	\$33.96	\$24.81	\$29.67	\$26.98								
<u>REAL TIME LBMP</u>												
Price *	\$34.61	\$25.14	\$31.21	\$29.61								
Standard Deviation	\$18.20	\$14.21	\$25.02	\$39.82								
Load Weighted Price **	\$35.80	\$25.84	\$32.21	\$30.81								
Average Daily Energy Sendout/Month GWh	431	418	419	377								

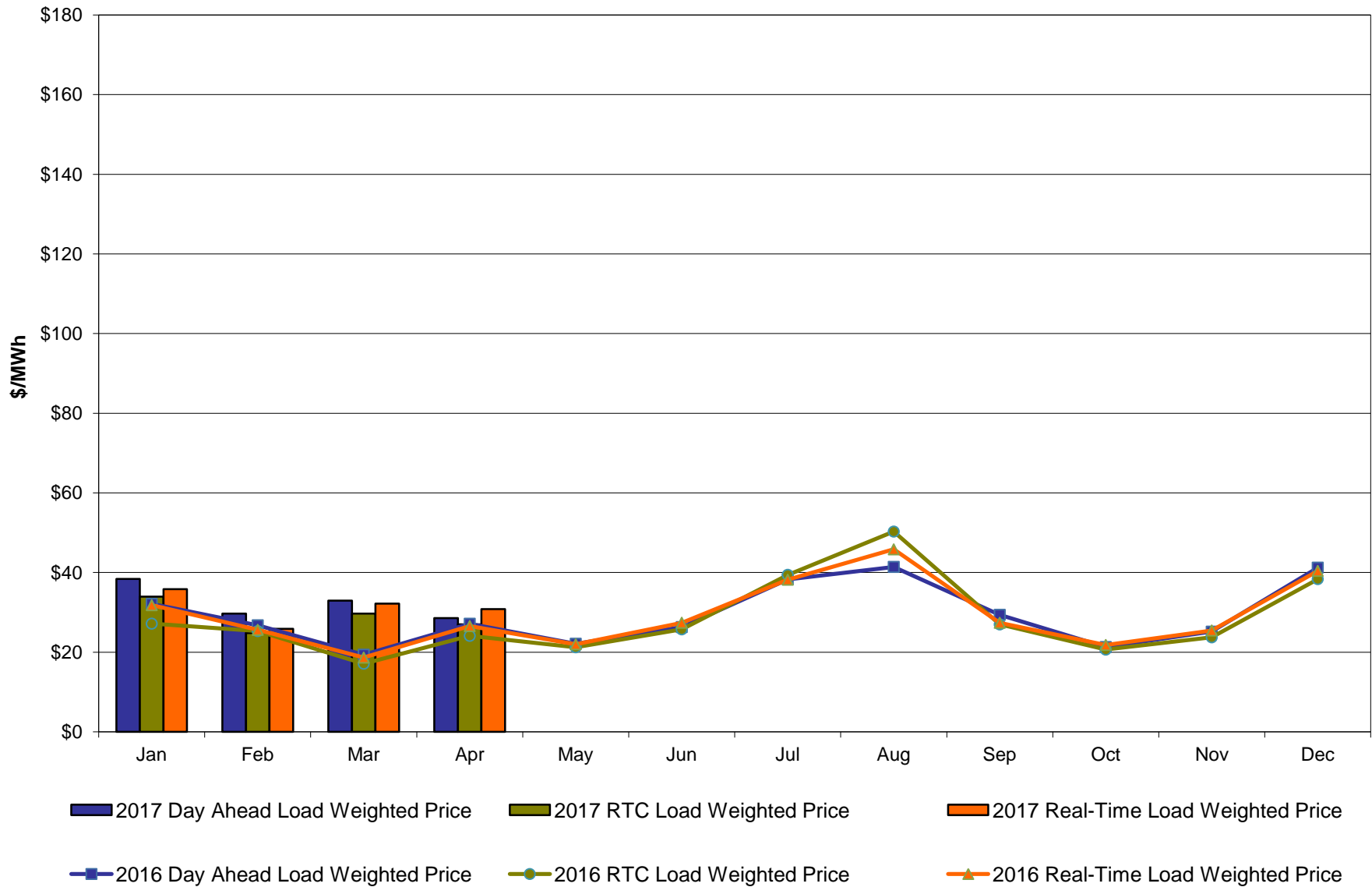
NYISO Markets 2016 Energy Statistics

	<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 *	\$31.01	\$25.76	\$18.63	\$26.39	\$21.07	\$24.83	\$35.24	\$38.25	\$27.15	\$20.37	\$24.35	\$39.83
Standard Deviation	\$10.86	\$12.46	\$6.99	\$6.95	\$7.04	\$9.21	\$18.37	\$20.59	\$13.55	\$7.48	\$7.32	\$15.08
Load Weighted Price **	\$32.13	\$26.75	\$19.37	\$27.14	\$22.12	\$26.30	\$38.29	\$41.41	\$29.38	\$21.29	\$25.15	\$41.22
<u>RTC LBMP</u>												
Price *	\$26.12	\$24.10	\$16.41	\$23.41	\$19.96	\$24.29	\$36.22	\$45.03	\$24.70	\$19.76	\$23.02	\$37.08
Standard Deviation	\$16.06	\$17.89	\$11.32	\$9.09	\$11.44	\$16.58	\$38.04	\$70.57	\$17.46	\$8.96	\$9.49	\$16.72
Load Weighted Price **	\$27.16	\$25.29	\$17.11	\$24.10	\$21.23	\$25.73	\$39.42	\$50.28	\$26.97	\$20.64	\$23.73	\$38.35
<u>REAL TIME LBMP</u>												
Price *	\$30.15	\$24.28	\$17.84	\$25.71	\$20.67	\$25.87	\$34.40	\$40.87	\$24.90	\$20.91	\$24.72	\$39.00
Standard Deviation	\$60.09	\$18.19	\$15.06	\$16.59	\$12.84	\$19.27	\$38.56	\$52.85	\$20.70	\$12.15	\$12.71	\$20.92
Load Weighted Price **	\$31.80	\$25.61	\$18.64	\$26.57	\$21.99	\$27.39	\$38.20	\$45.82	\$27.38	\$21.81	\$25.45	\$40.42
Average Daily Energy Sendout/Month GWh	439	436	397	385	397	456	532	548	458	391	398	433

* Average zonal load weighted prices.

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

NYISO Monthly Average Internal LBMPs 2016- 2017

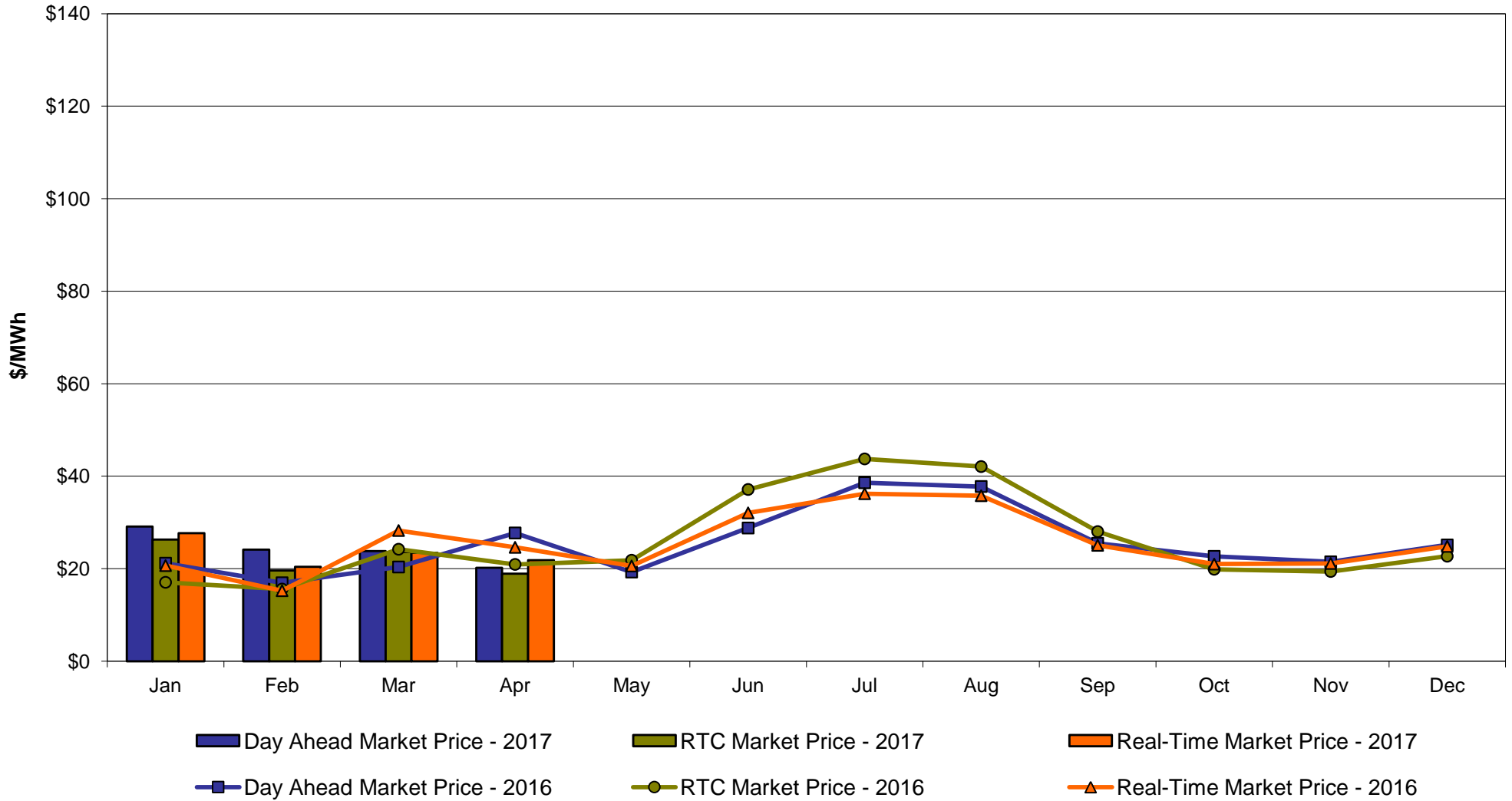


April 2017 Zonal LBMP Statistics for NYISO (\$/MWh)

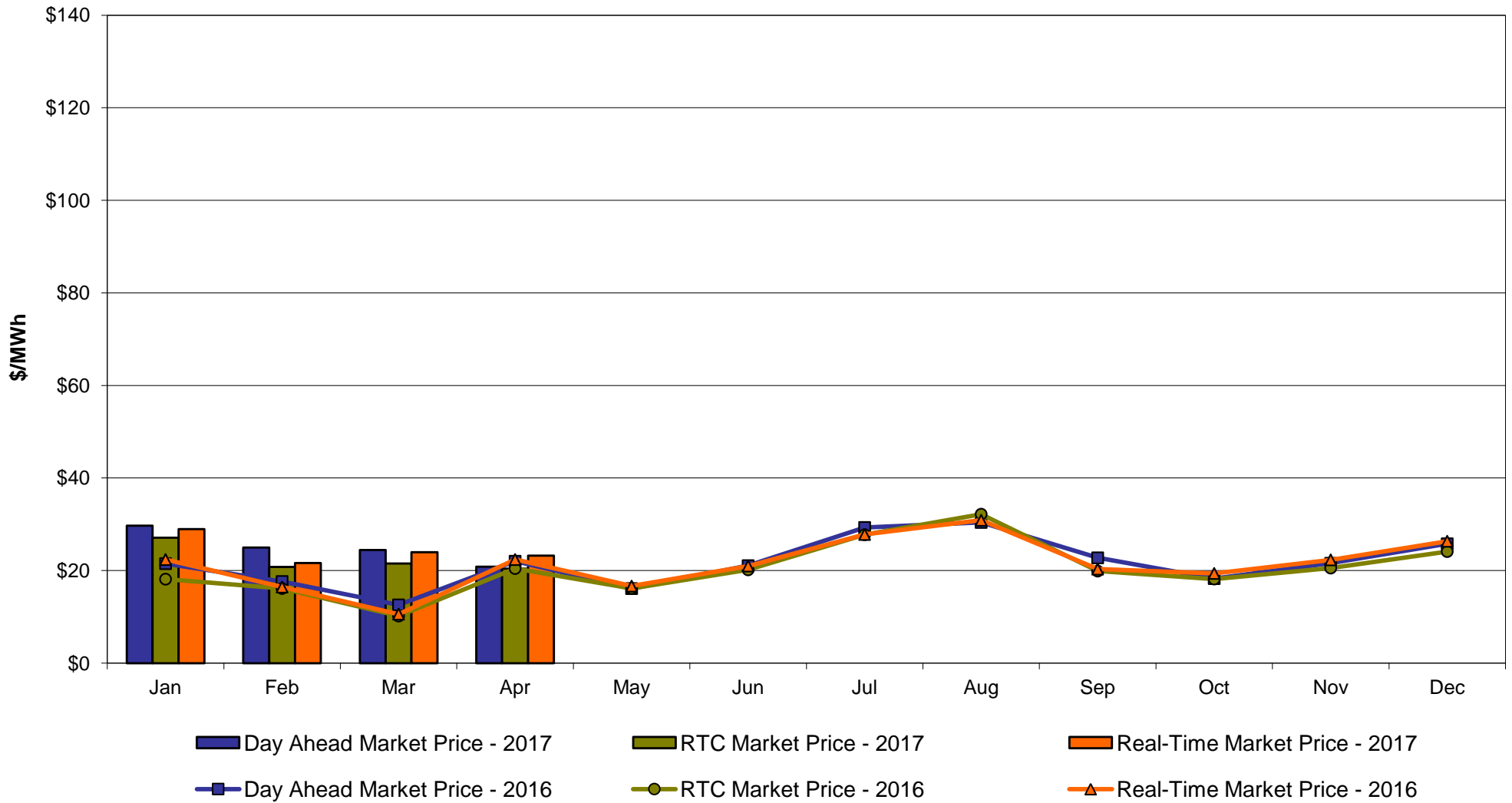
	<u>WEST Zone A</u>	<u>GENESEE Zone B</u>	<u>NORTH Zone D</u>	<u>CENTRAL Zone C</u>	<u>MOHAWK VALLEY Zone E</u>	<u>CAPITAL Zone F</u>	<u>HUDSON VALLEY Zone G</u>	<u>MILLWOOD Zone H</u>	<u>DUNWOODIE Zone I</u>	<u>NEW YORK CITY Zone J</u>	<u>LONG ISLAND Zone K</u>
DAY AHEAD LBMP											
Unweighted Price *	20.18	20.12	15.57	20.86	21.09	29.74	29.69	30.35	30.36	32.27	32.32
Standard Deviation	7.80	8.03	7.43	8.18	8.04	6.82	7.83	8.26	8.33	8.85	8.15
RTC LBMP											
Unweighted Price *	18.95	19.66	13.74	20.41	20.56	28.14	27.74	28.33	28.51	30.41	30.29
Standard Deviation	20.20	11.99	15.94	11.06	10.88	12.20	11.45	11.79	12.05	12.06	12.69
REAL TIME LBMP											
Unweighted Price *	21.86	22.34	14.78	23.23	23.30	31.75	31.40	32.07	32.28	34.54	34.23
Standard Deviation	38.45	37.87	19.85	38.98	36.33	42.50	43.01	43.38	43.37	42.64	43.98
	<u>ONTARIO IESO Zone O</u>	<u>HYDRO QUEBEC (Wheel) Zone M</u>	<u>HYDRO QUEBEC (Import/Export) Zone M</u>	<u>PJM Zone P</u>	<u>NEW ENGLAND Zone N</u>	<u>CROSS SOUND CABLE Controllable Line</u>	<u>NORTHPORT- NORWALK Controllable Line</u>	<u>NEPTUNE Controllable Line</u>	<u>LINDEN VFT Controllable Line</u>	<u>HUDSON Controllable Line</u>	<u>Dennison Controllable Line</u>
DAY AHEAD LBMP											
Unweighted Price *	19.51	17.38	17.38	24.75	30.38	32.00	31.33	31.44	32.28	31.36	15.14
Standard Deviation	7.42	7.16	7.16	7.60	7.40	8.05	7.77	7.94	8.84	8.62	6.91
RTC LBMP											
Unweighted Price *	17.42	14.79	14.77	25.07	29.95	30.18	29.96	29.70	29.87	29.54	13.23
Standard Deviation	32.77	14.93	14.92	13.75	16.28	12.57	12.56	12.32	10.82	11.92	15.38
REAL TIME LBMP											
Unweighted Price *	20.69	16.18	16.13	28.62	32.77	34.13	33.86	33.72	33.10	33.43	13.69
Standard Deviation	38.25	18.57	18.63	39.14	42.34	43.38	43.79	43.31	19.26	43.24	18.91

* Straight LBMP averages

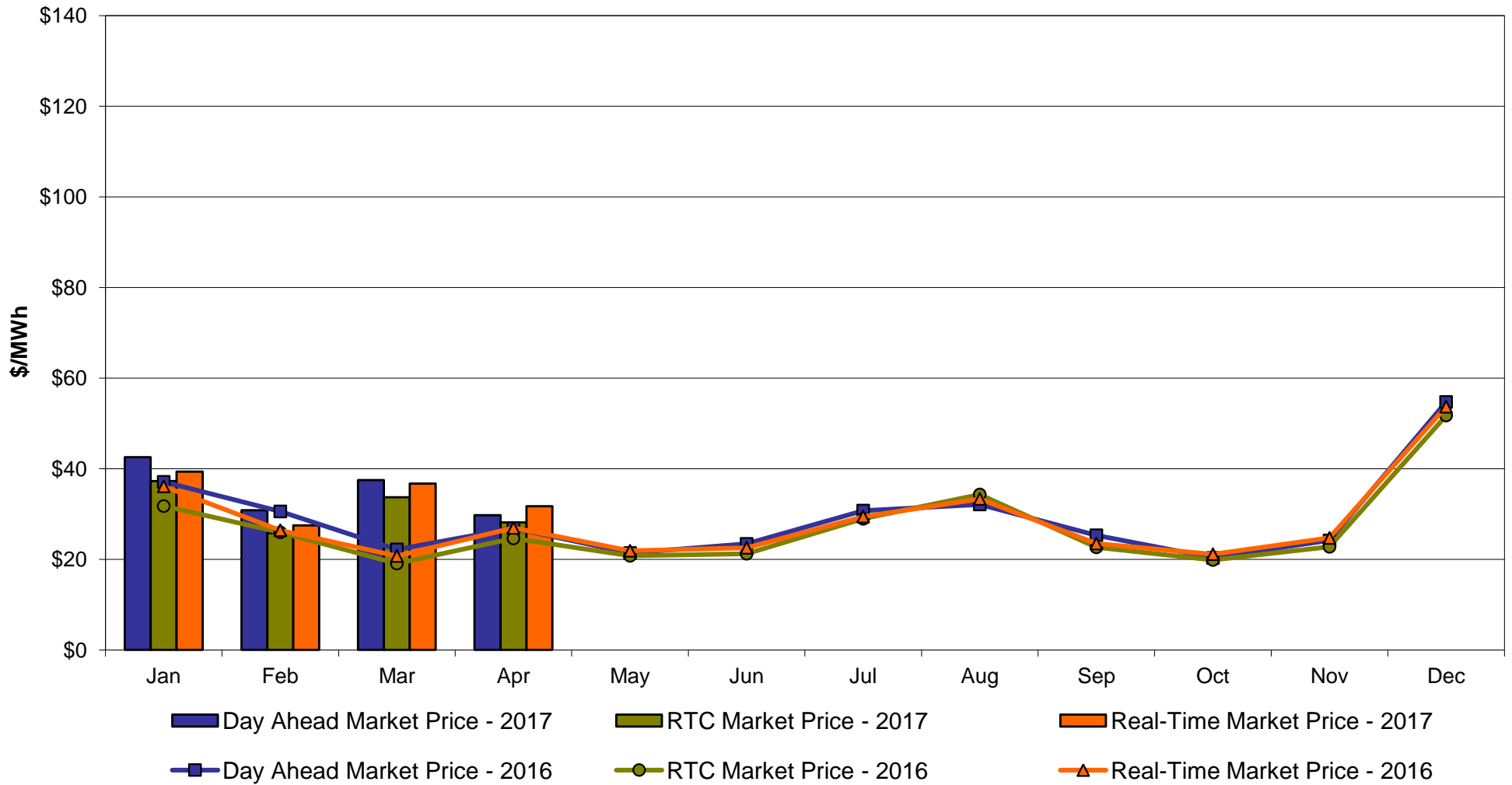
West Zone A Monthly Average LBMP Prices 2016 - 2017



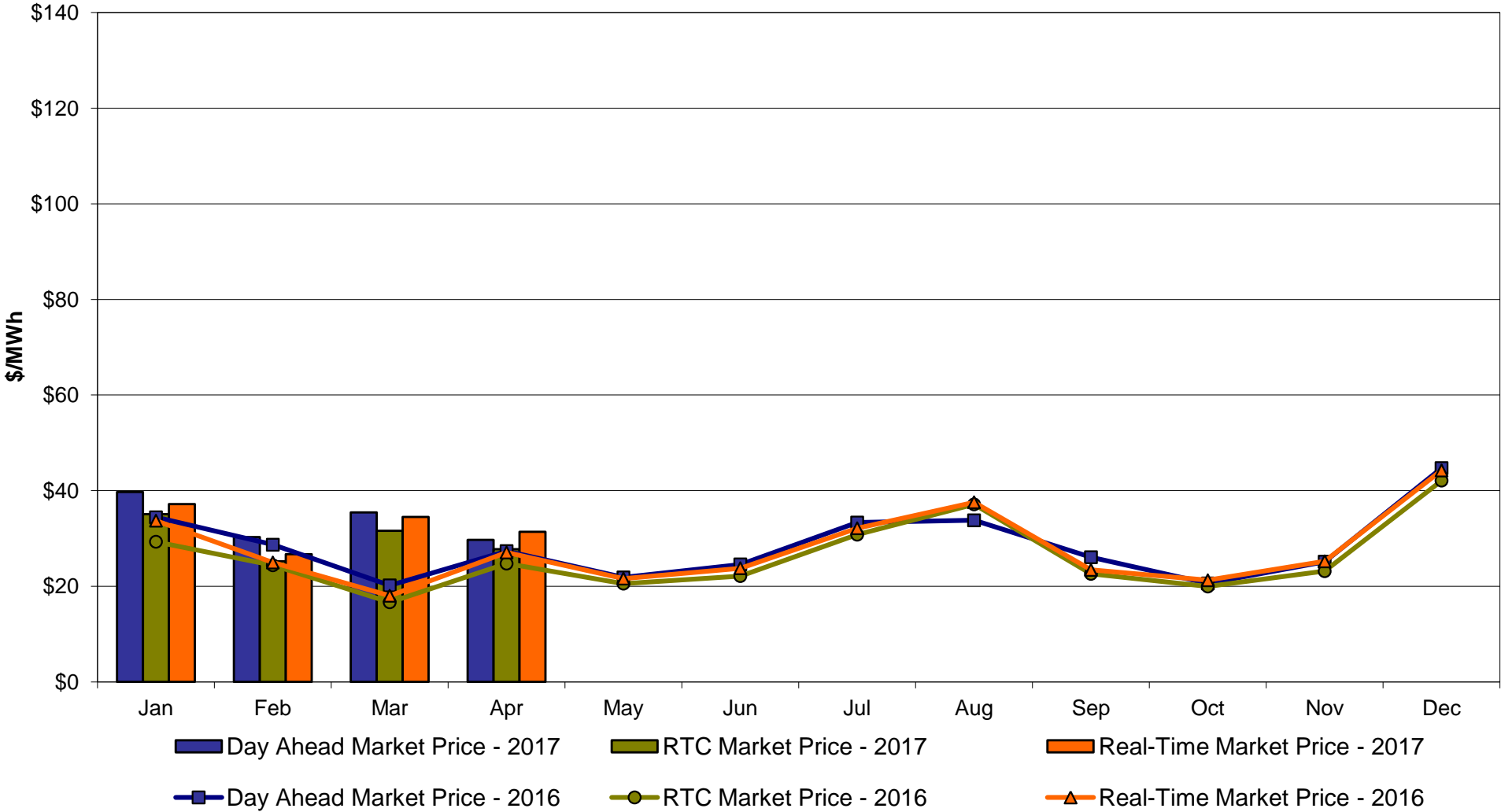
**Central Zone C
Monthly Average LBMP Prices 2016 - 2017**



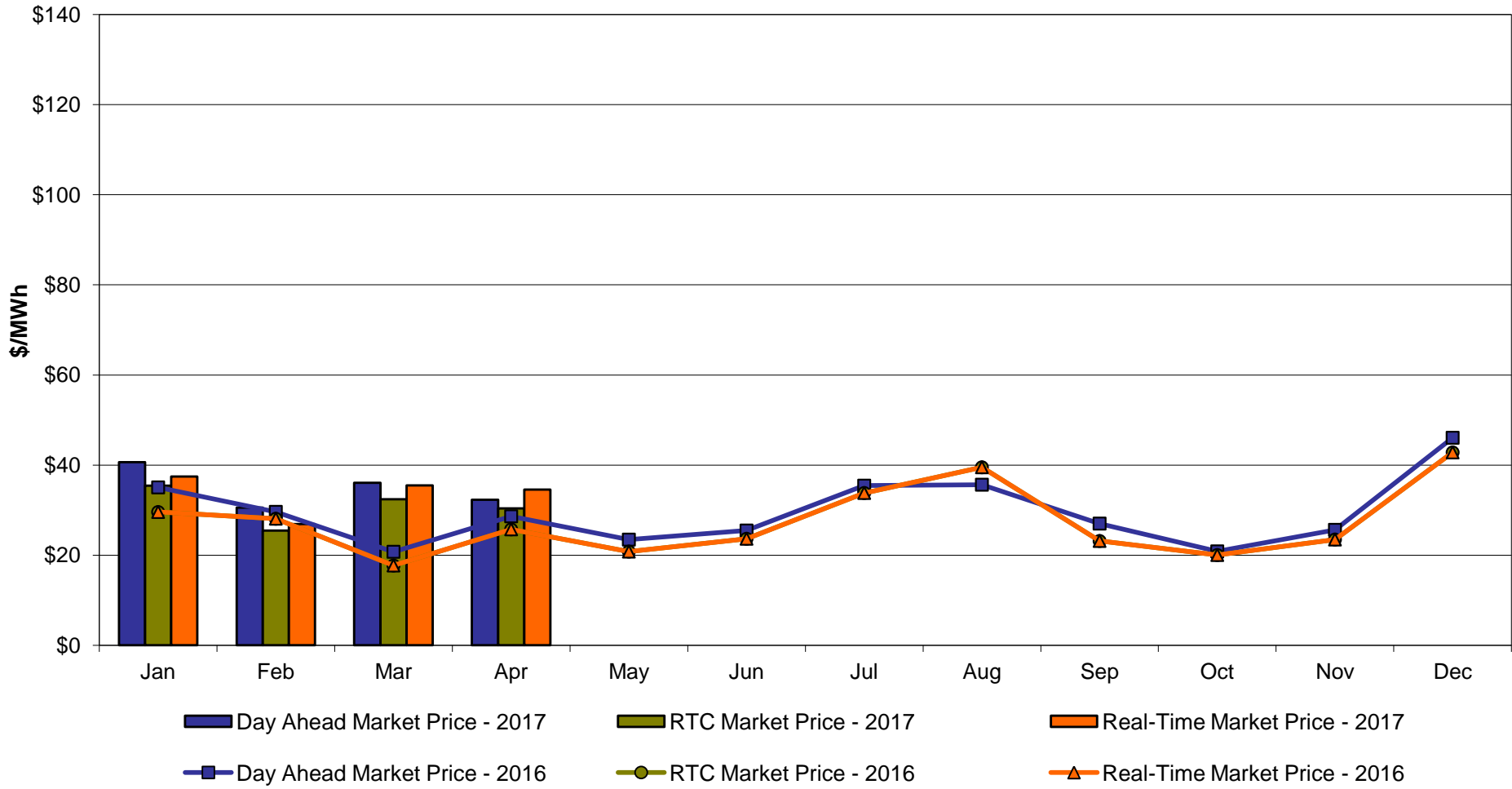
Capital Zone F Monthly Average LBMP Prices 2016 - 2017



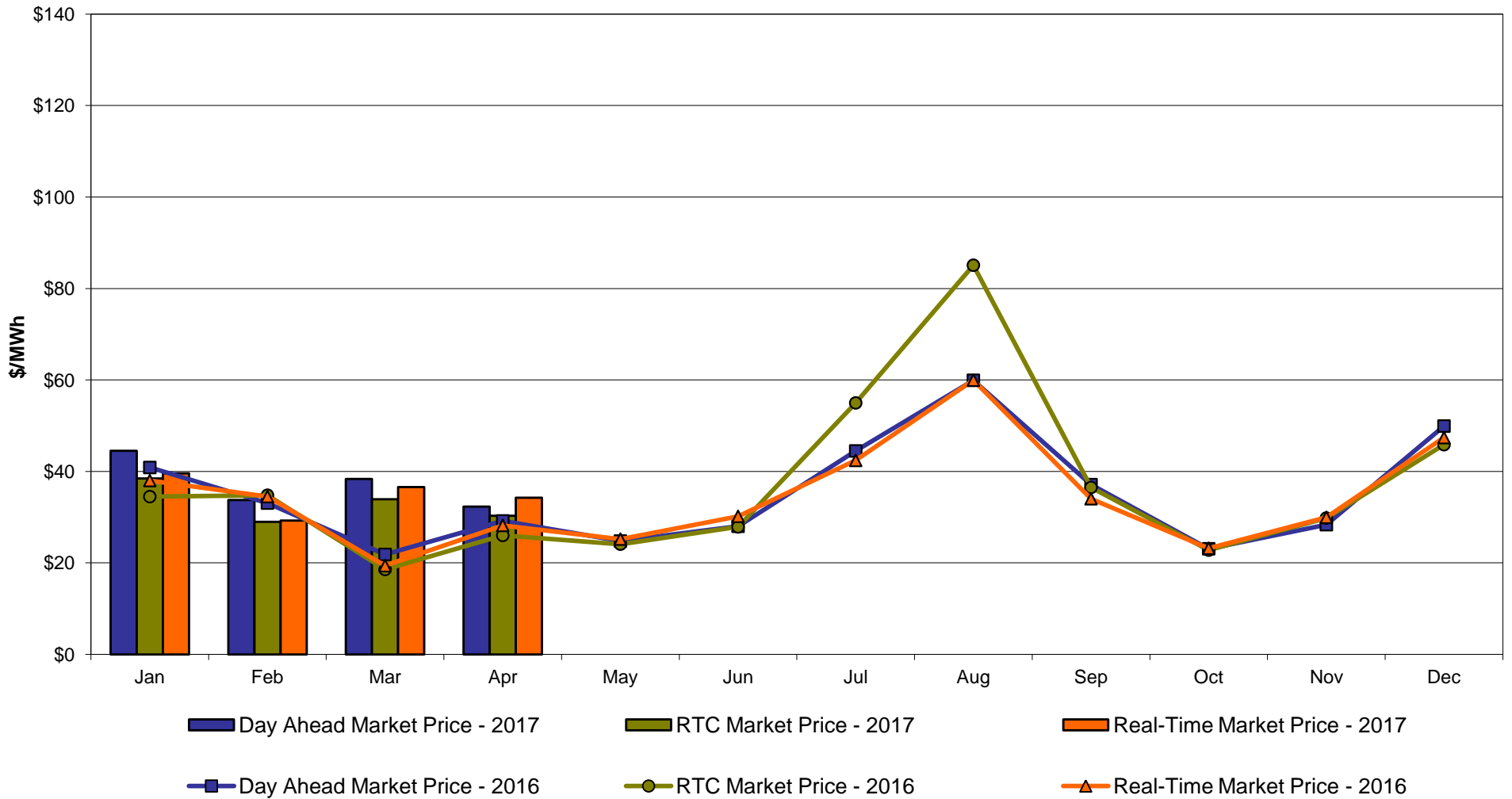
Hudson Valley Zone G Monthly Average LBMP Prices 2016 - 2017



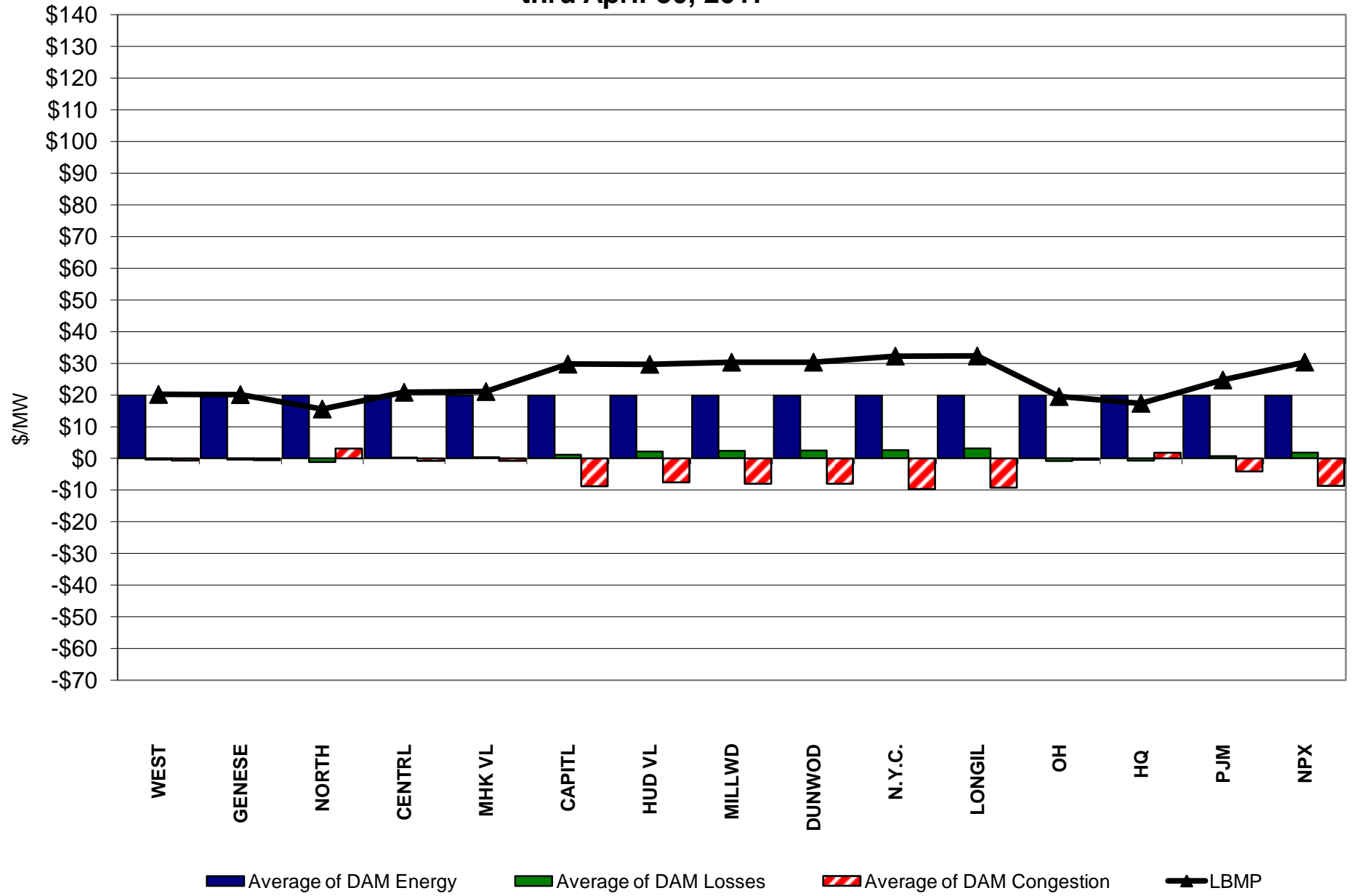
NYC Zone J Monthly Average LBMP Prices 2016 - 2017



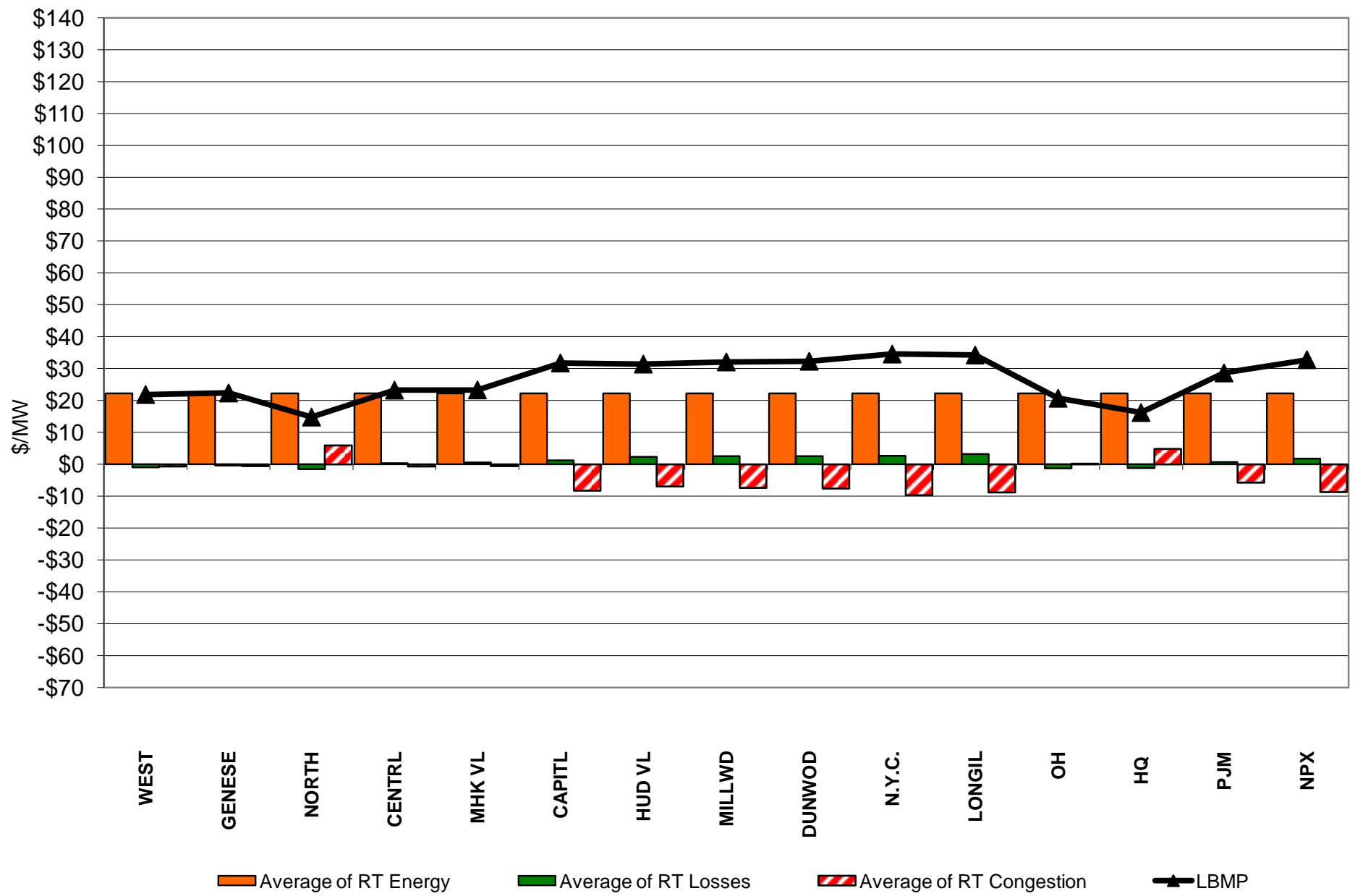
Long Island Zone K Monthly Average LBMP Prices 2016 - 2017



**DAM Zonal Unweighted Monthly Average LBMP Components
thru April 30, 2017**

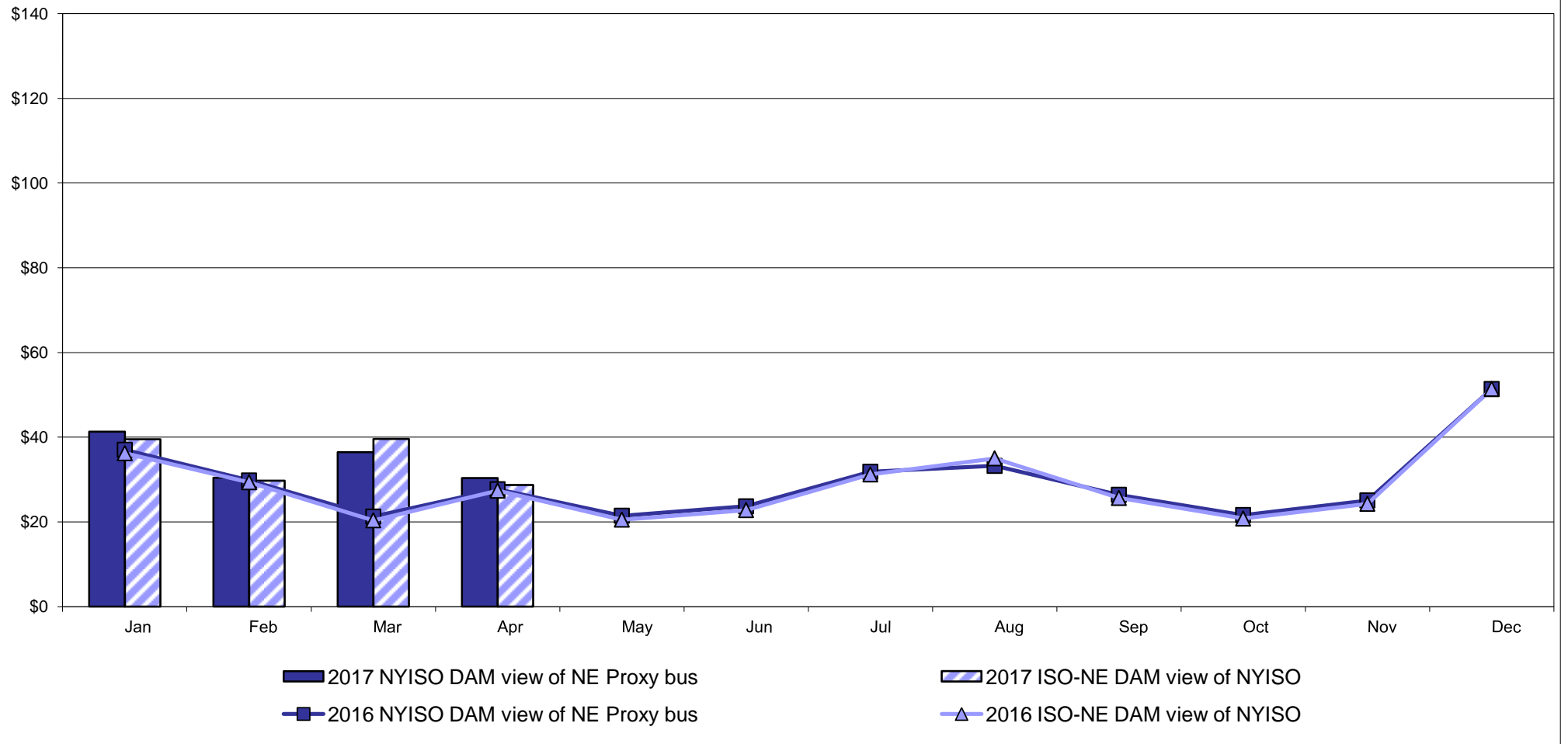


**RT Zonal Unweighted Monthly Average LBMP Components
thru April 30, 2017**

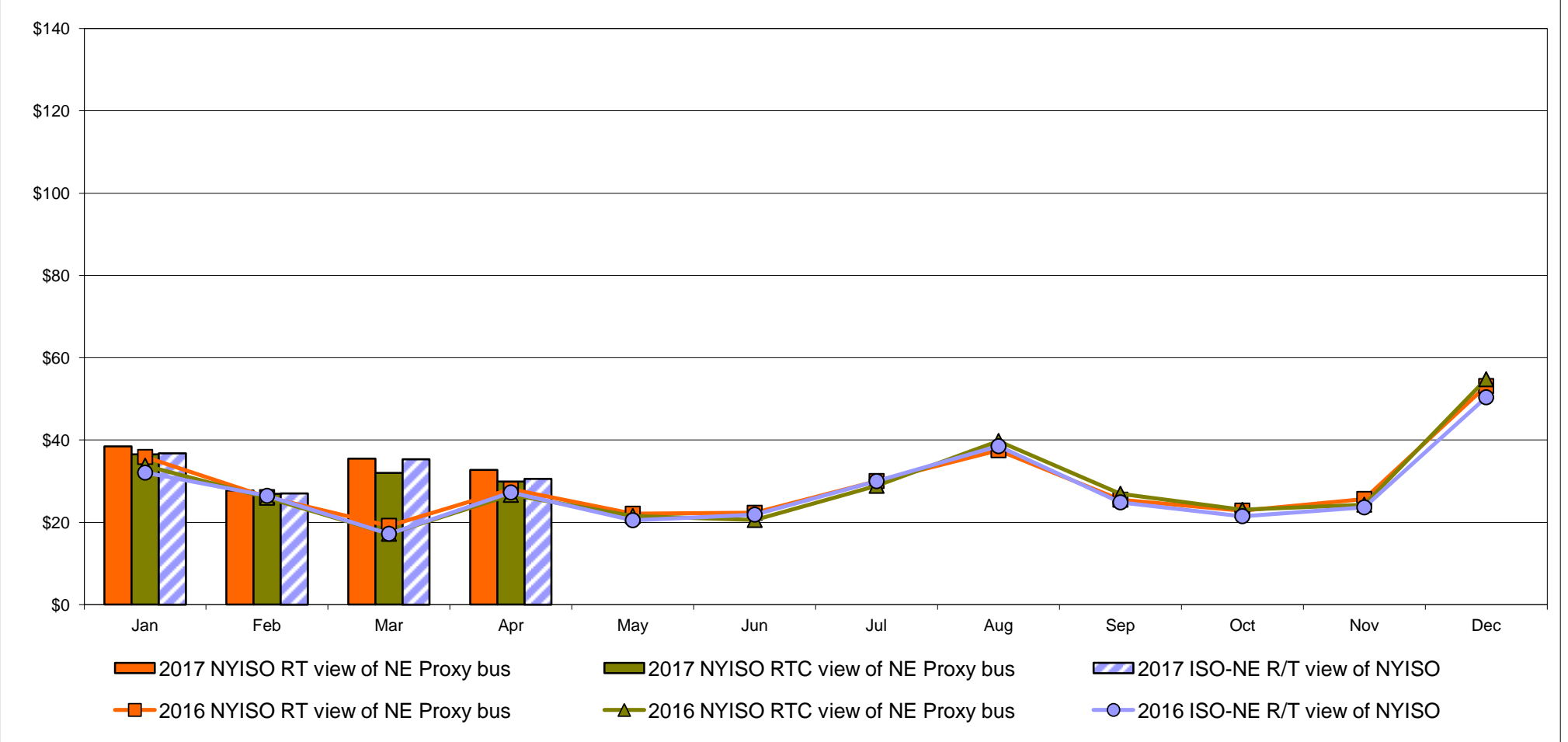


External Comparison ISO-New England

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

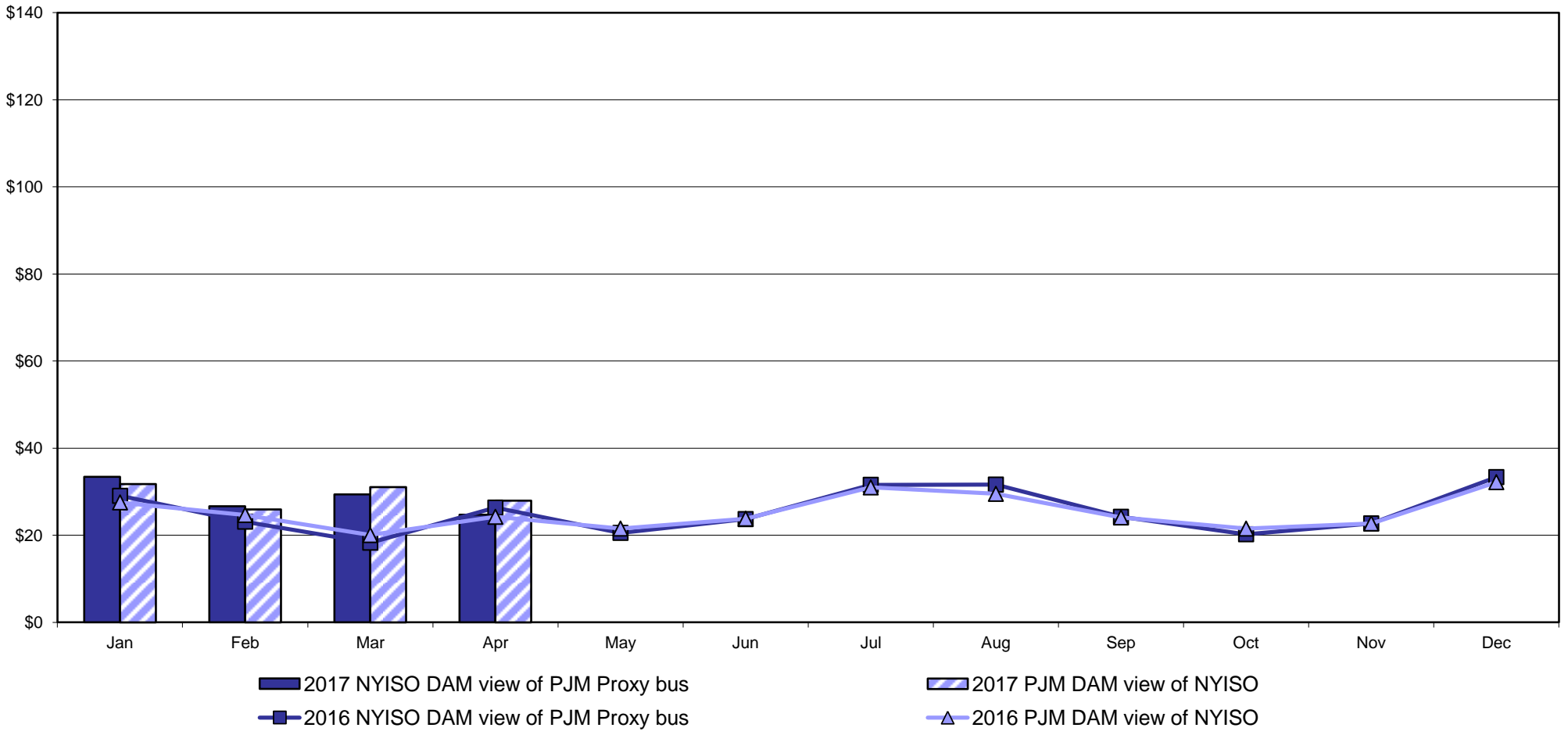


Real Time Market External Zone Comparison: ISO-NE (\$/MWh)

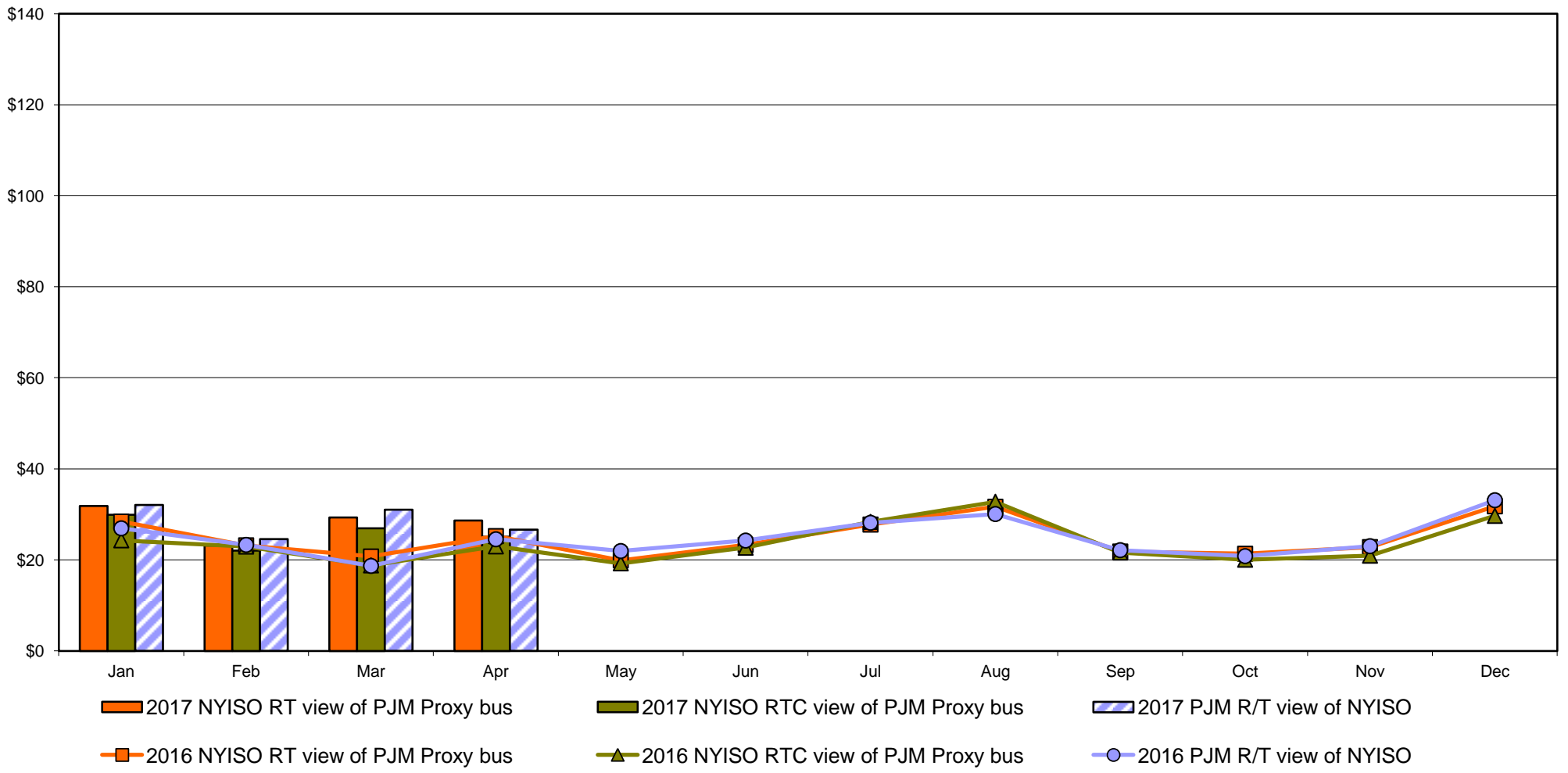


External Comparison PJM

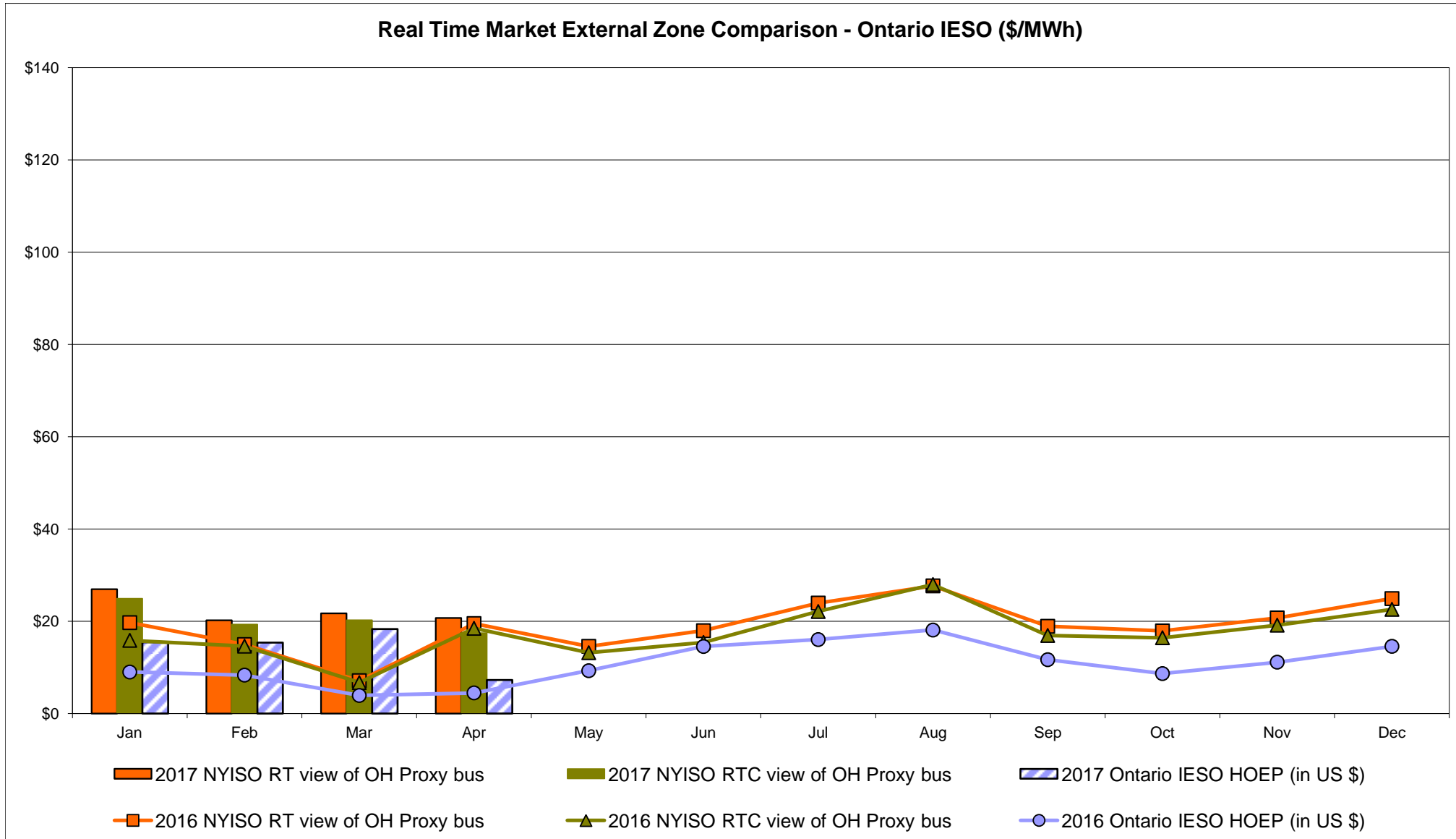
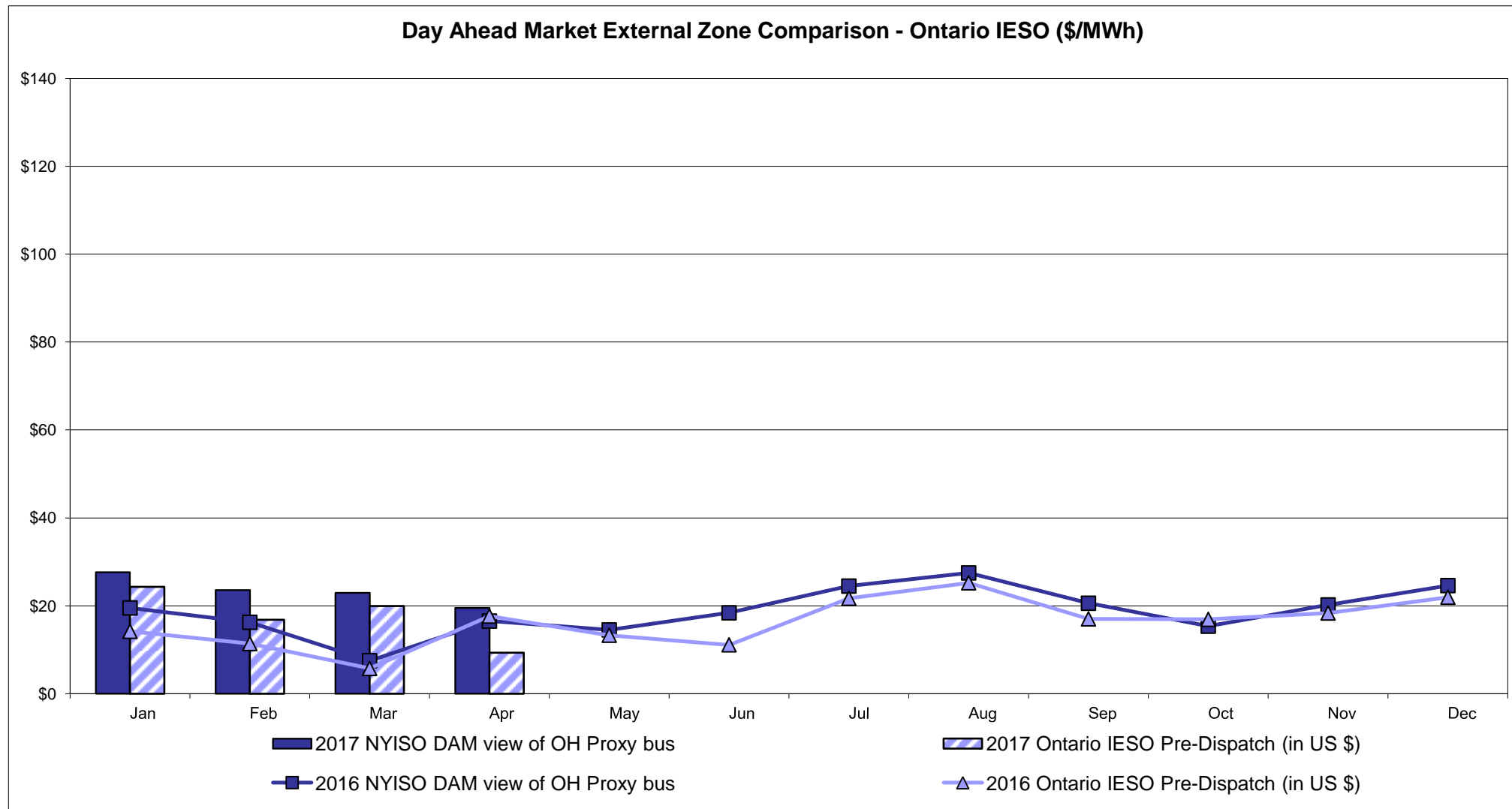
Day Ahead Market External Zone Comparison - PJM (\$/MWh)



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

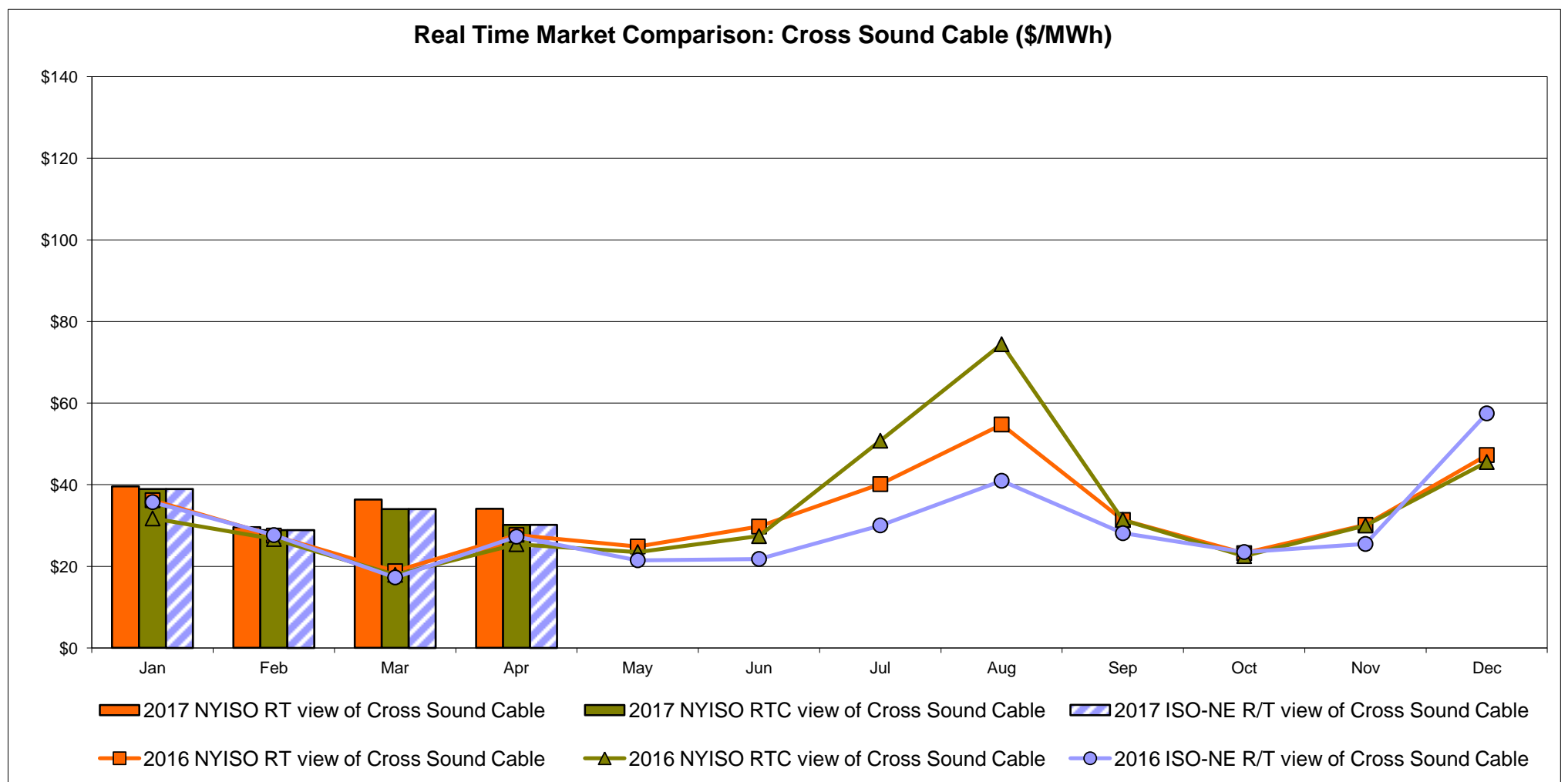
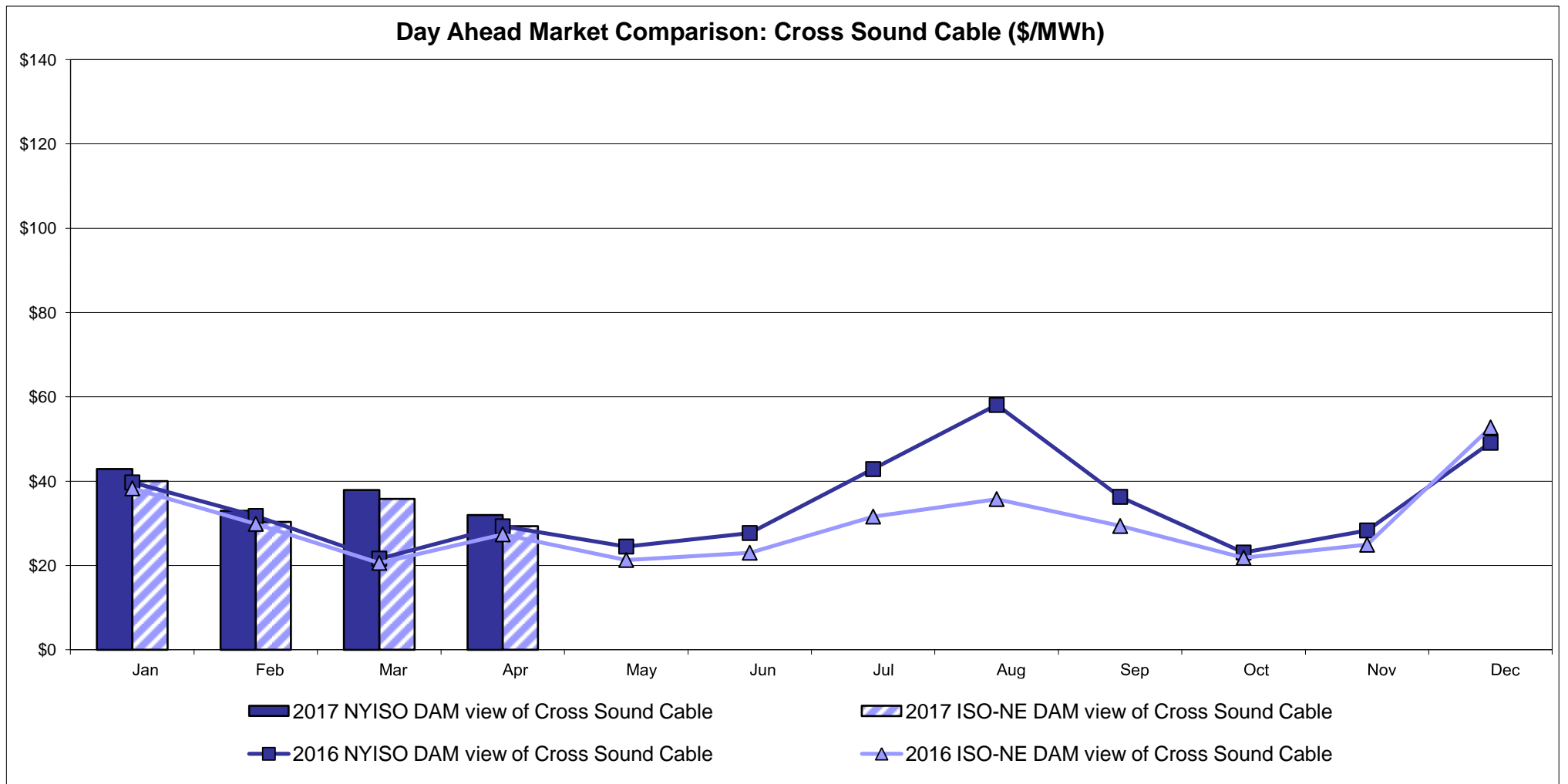


External Comparison Ontario IESO



Notes: Exchange factor used for April 2017 was 0.747440018 to US
 HOEP: Hourly Ontario Energy Price
 Pre-Dispatch: Projected Energy Price

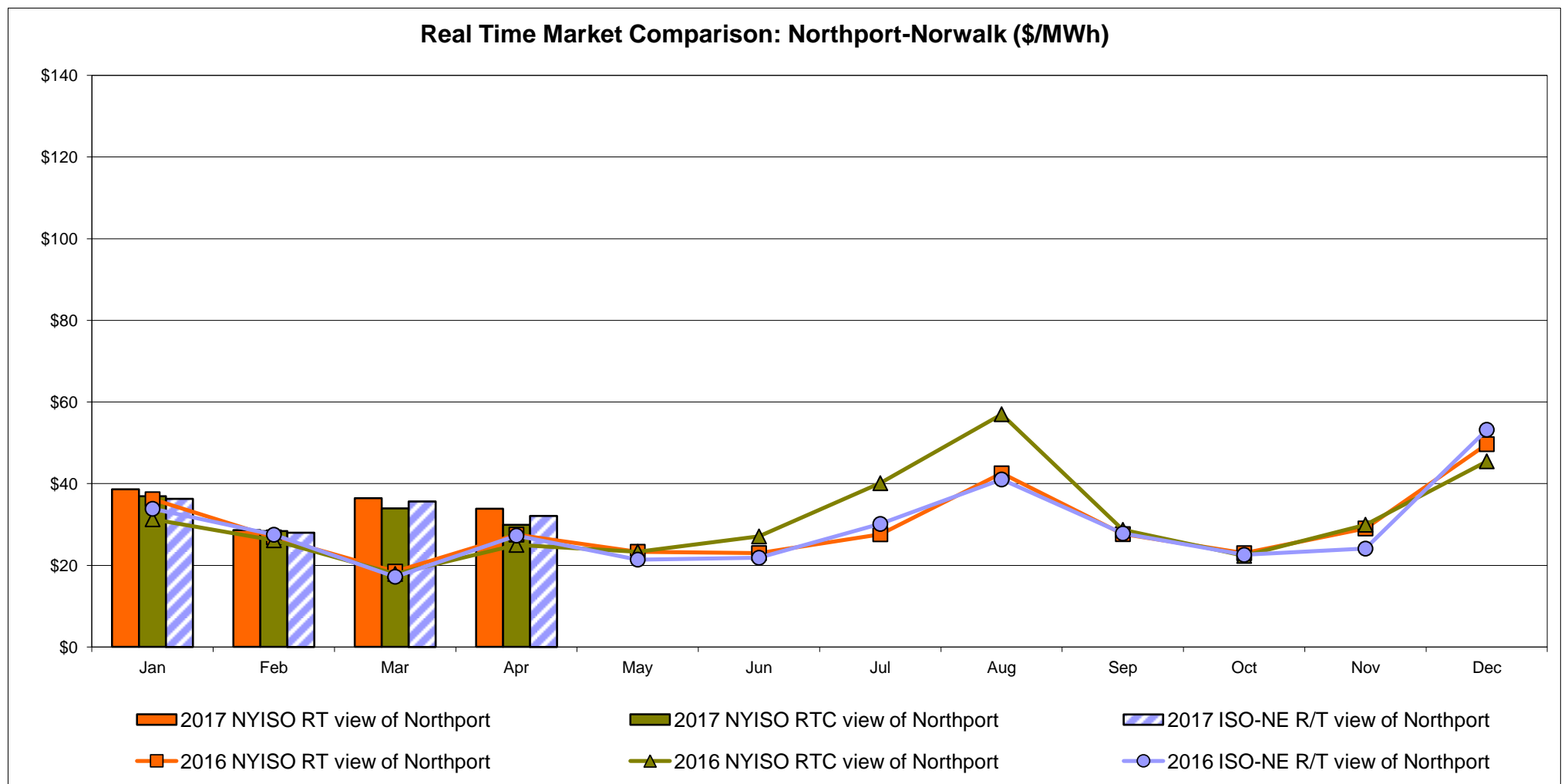
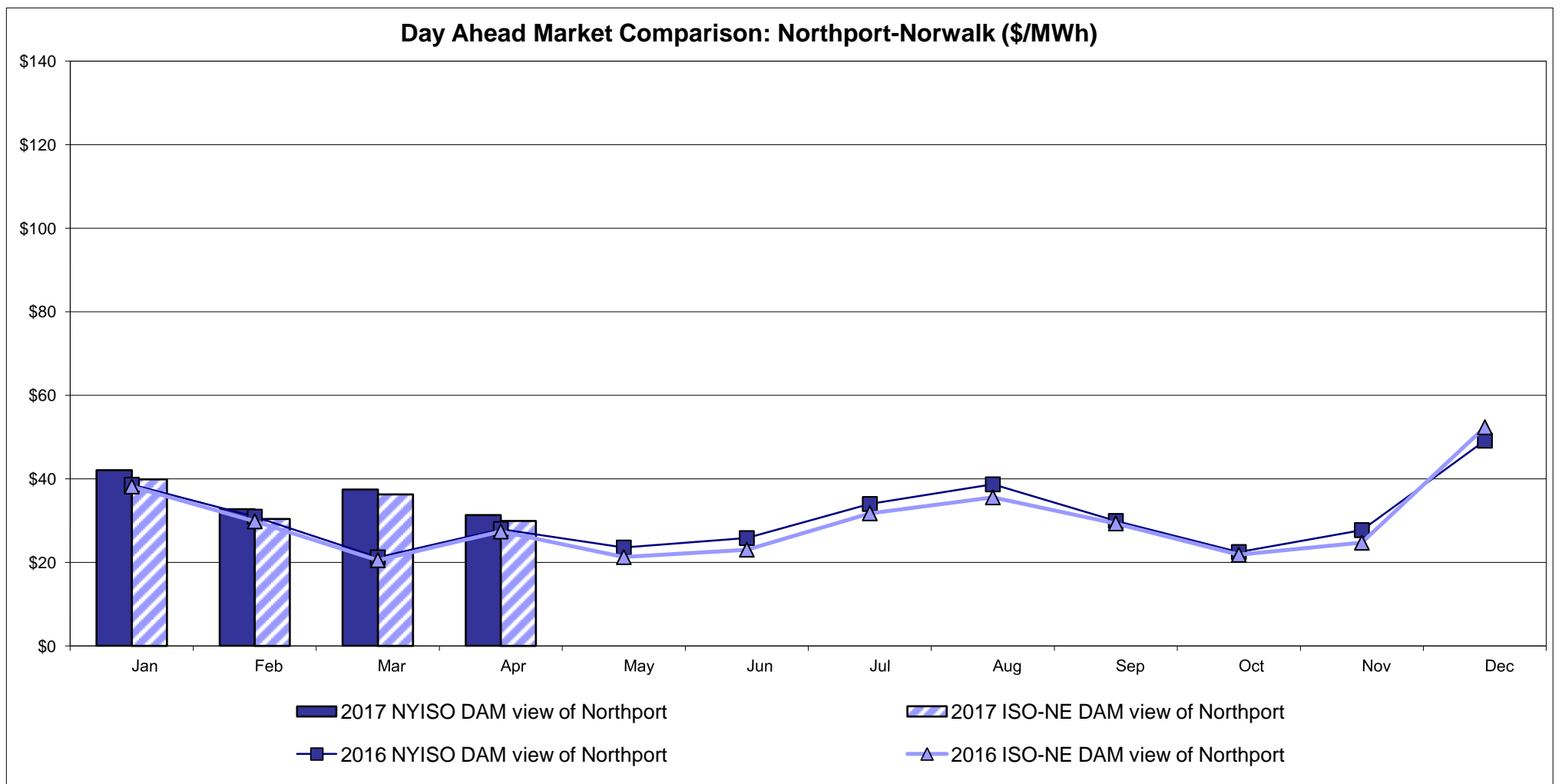
External Controllable Line: Cross Sound Cable (New England)



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.

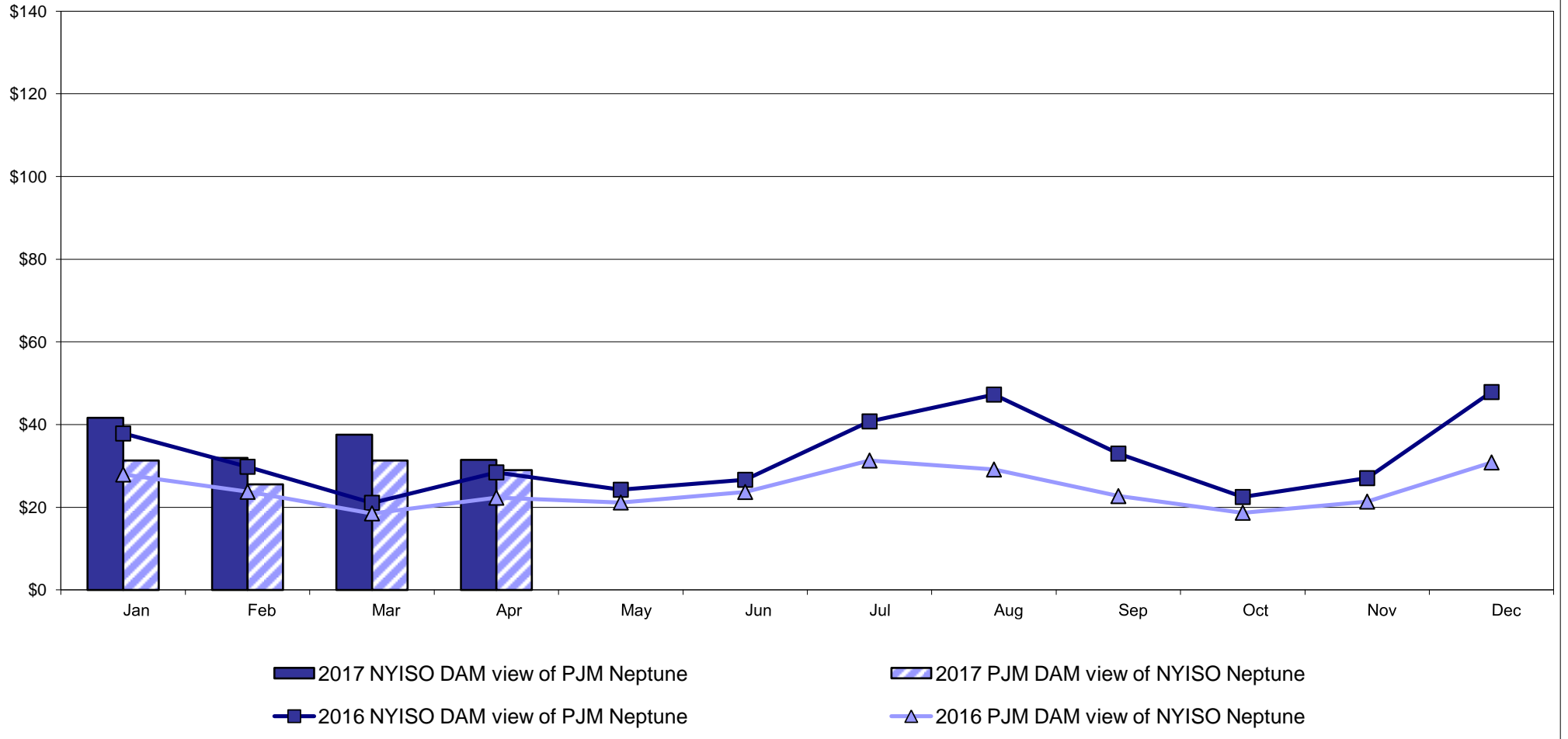
External Controllable Line: Northport - Norwalk (New England)



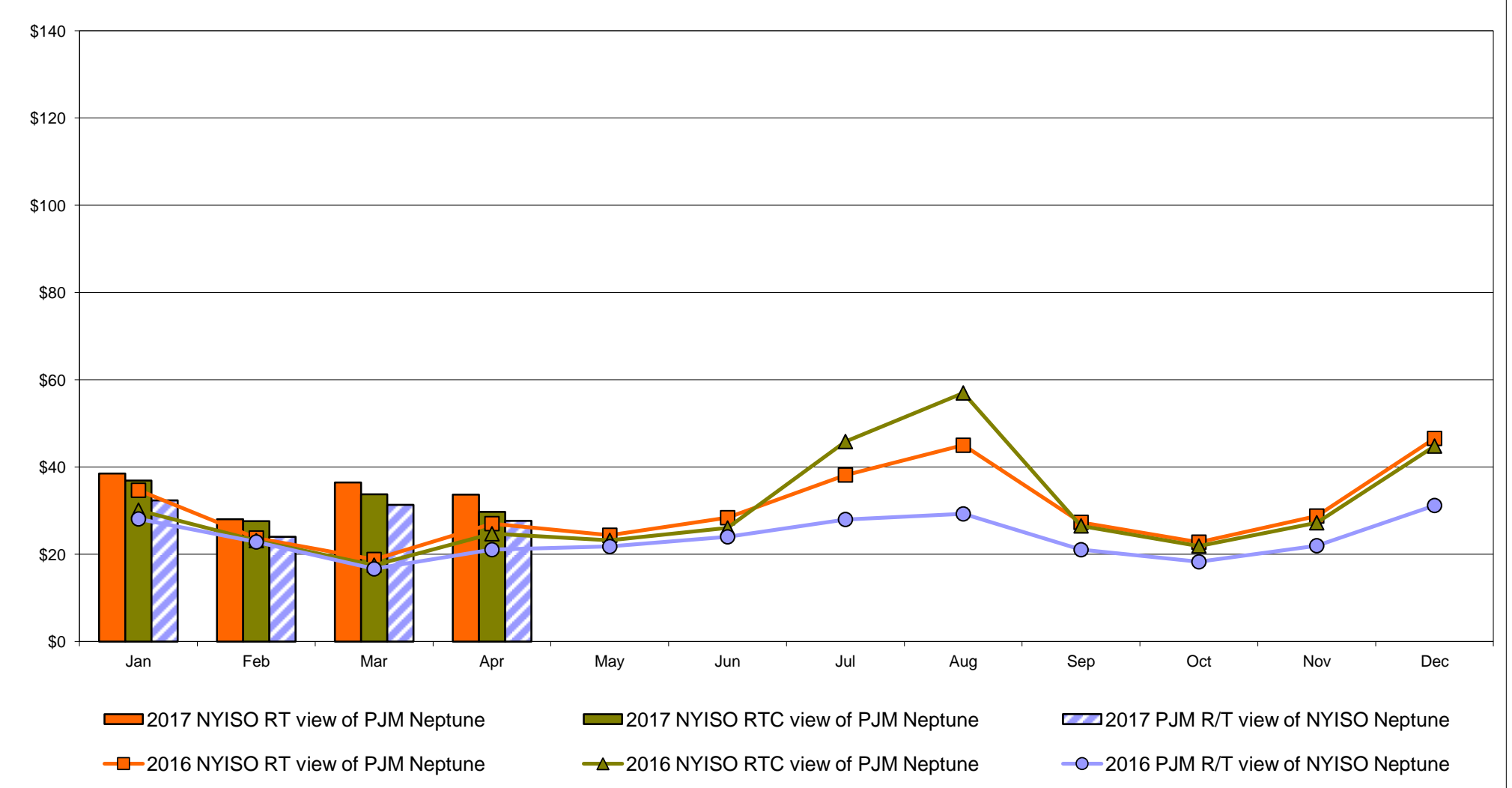
Note:
 ISO-NE Forecast is an advisory posting @ 18:00 day before.
 The DAM and R/T prices at the Northport 138 interface are used for ISO-NE.
 The DAM and R/T prices at the 1385 interface are used for NYISO.

External Controllable Line: Neptune (PJM)

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

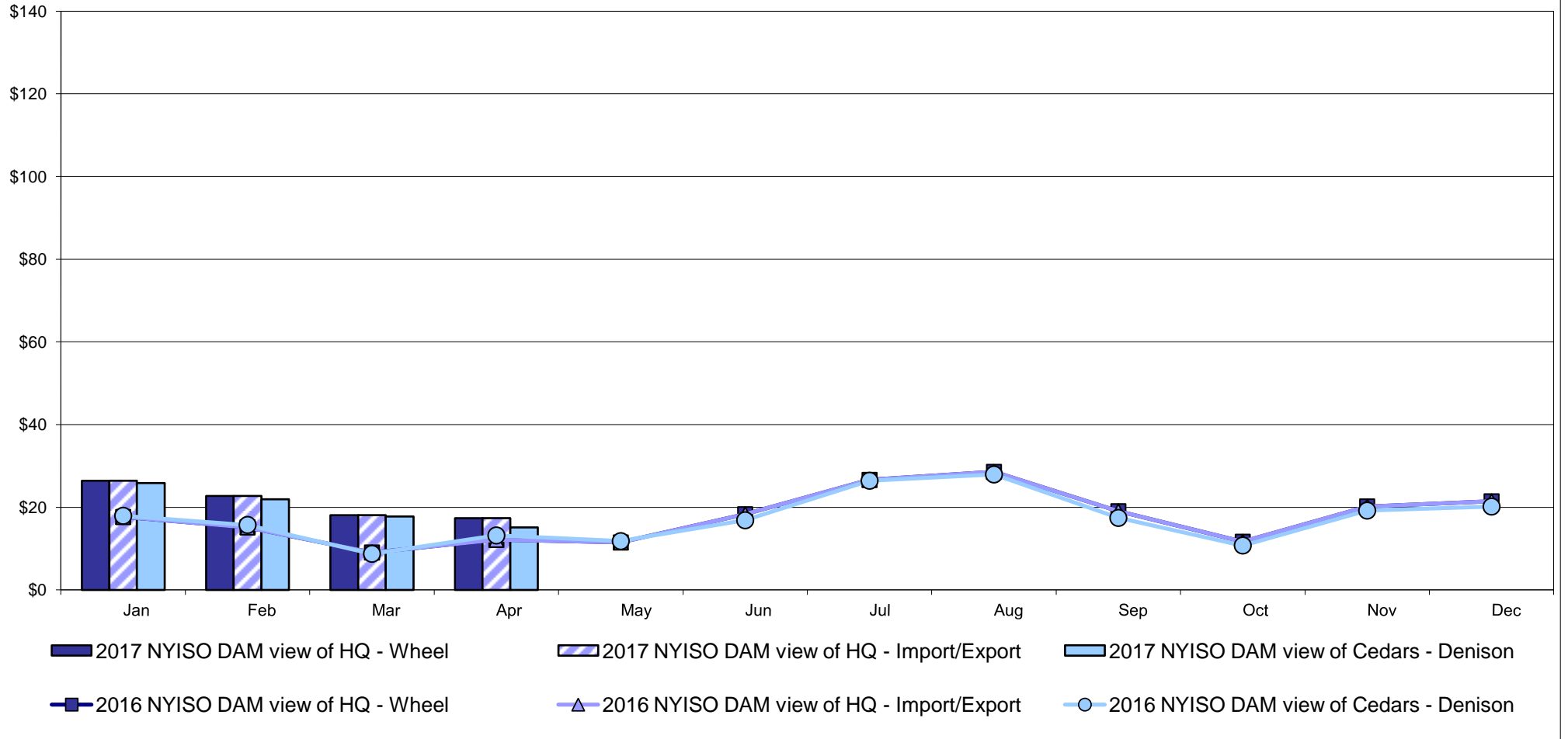


Real Time Market Comparison: Neptune (\$/MWh)

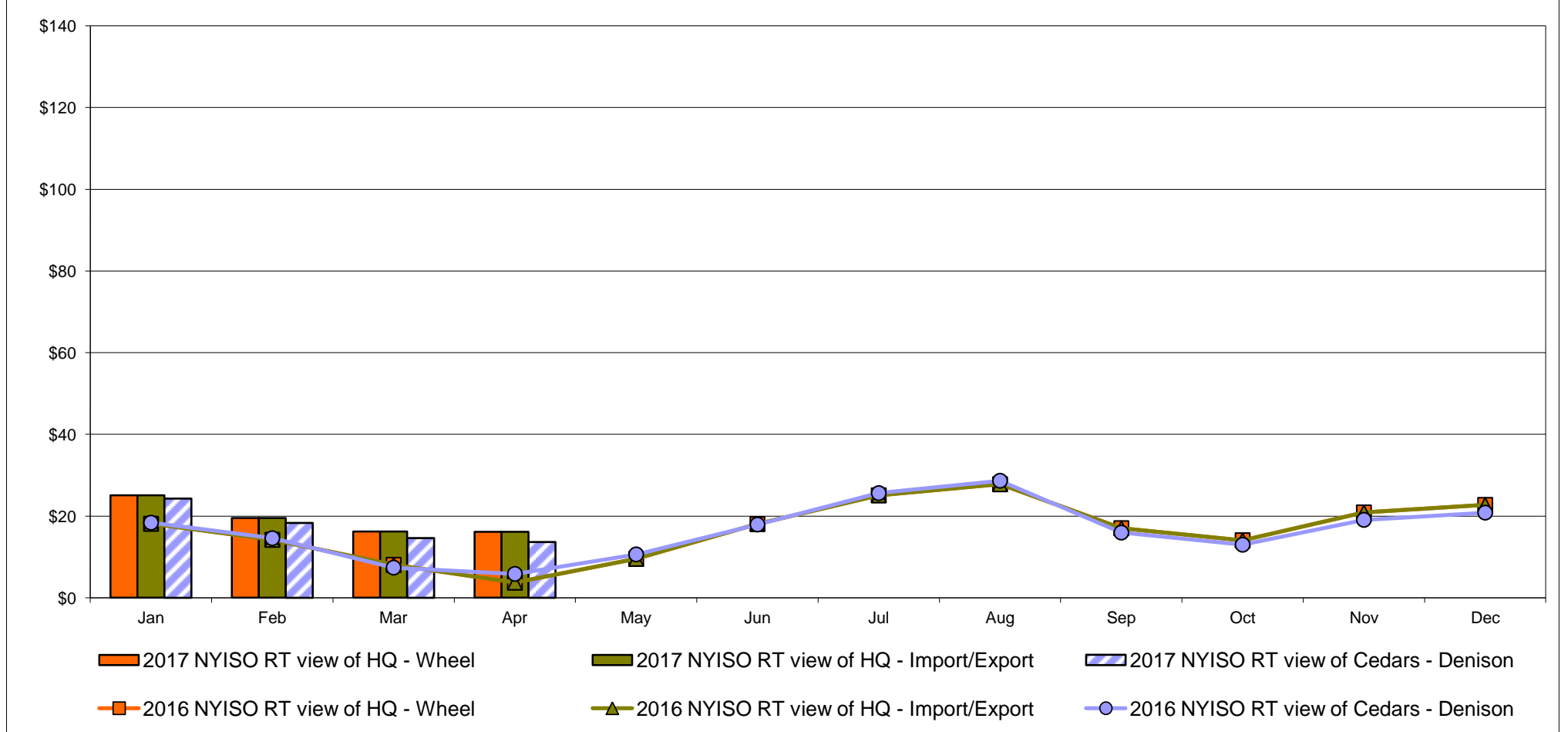


External Comparison Hydro-Quebec

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

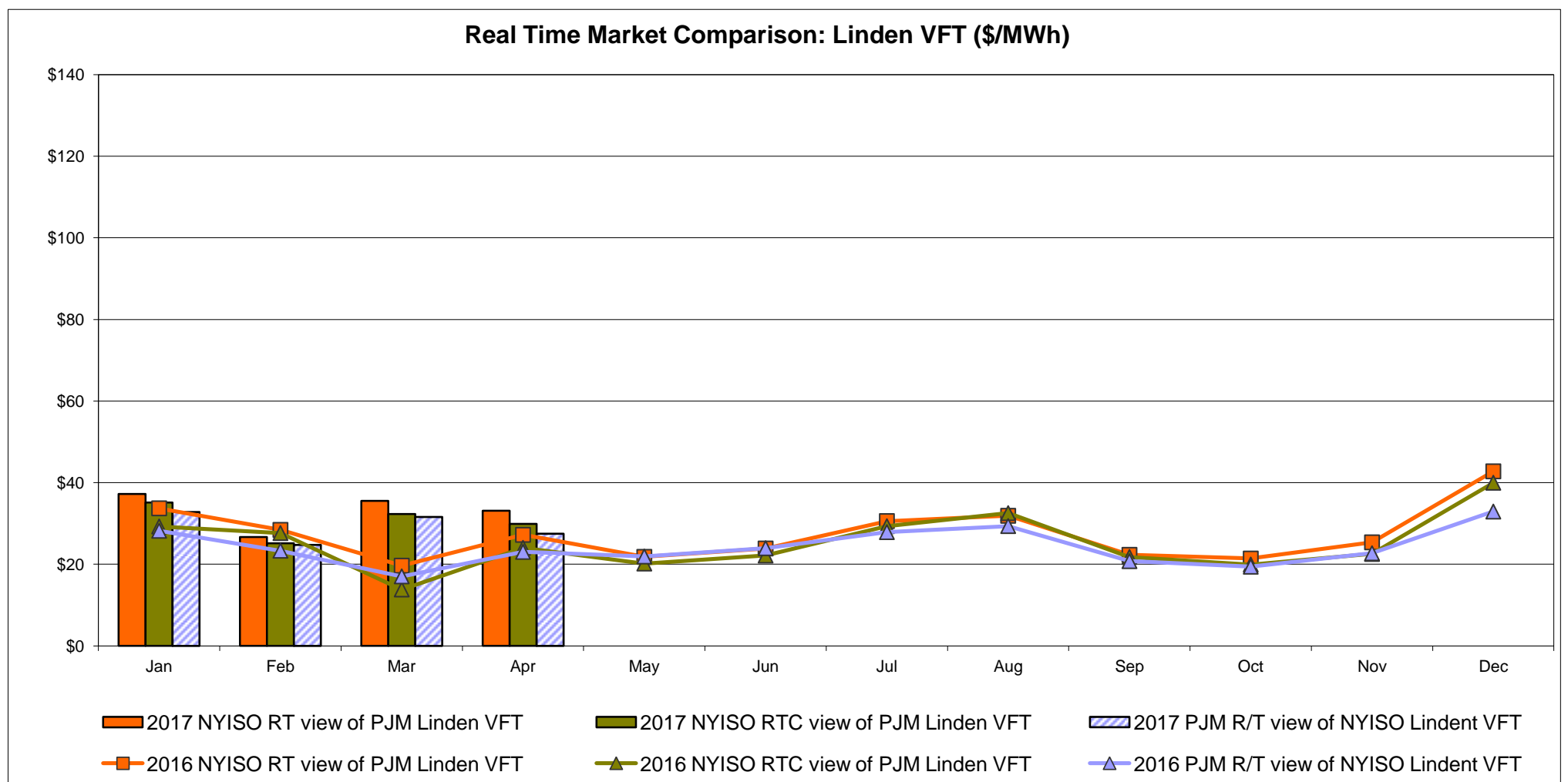
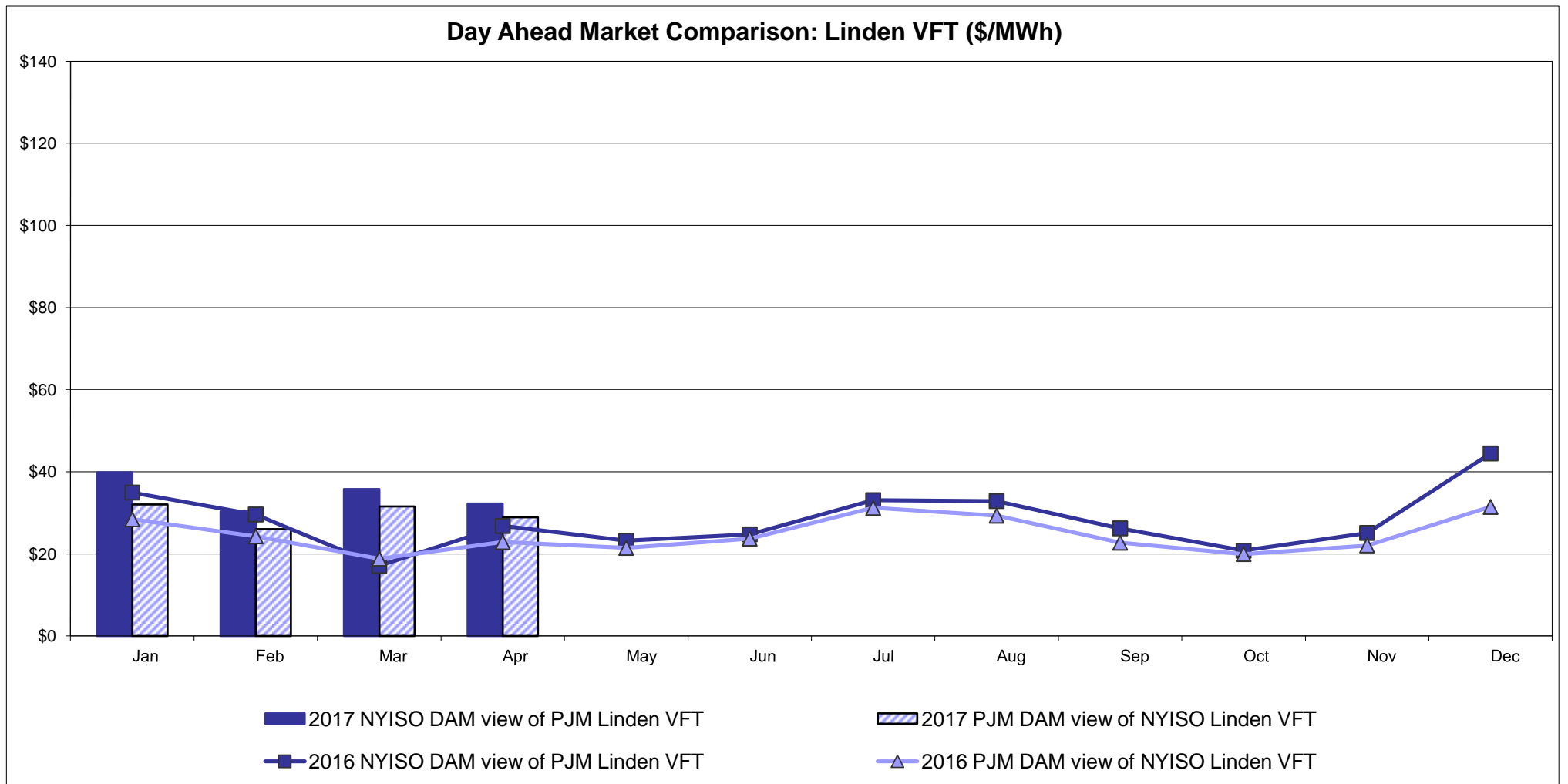


Real Time Market External Zone Comparison - HQ (\$/MWh)

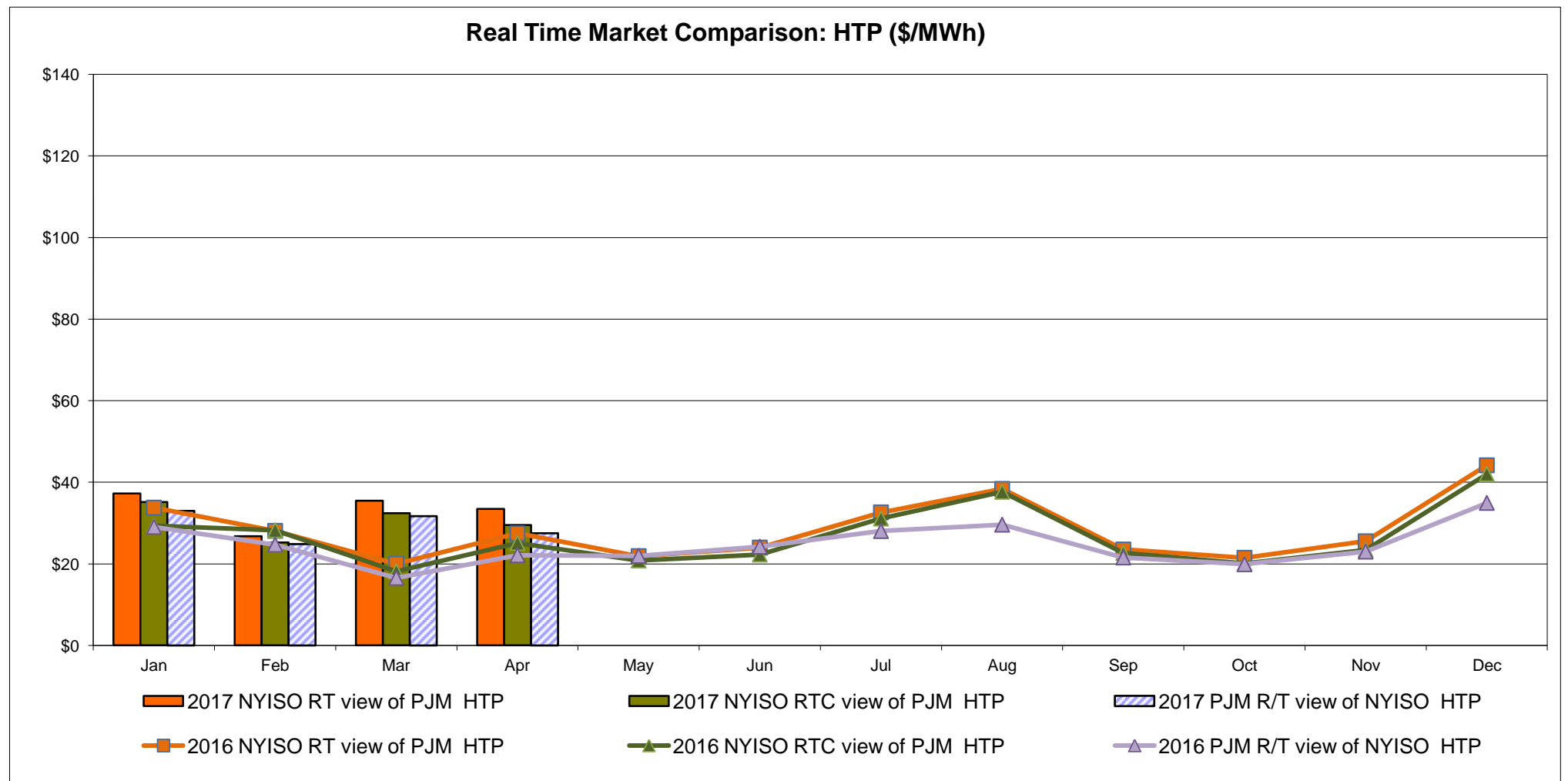
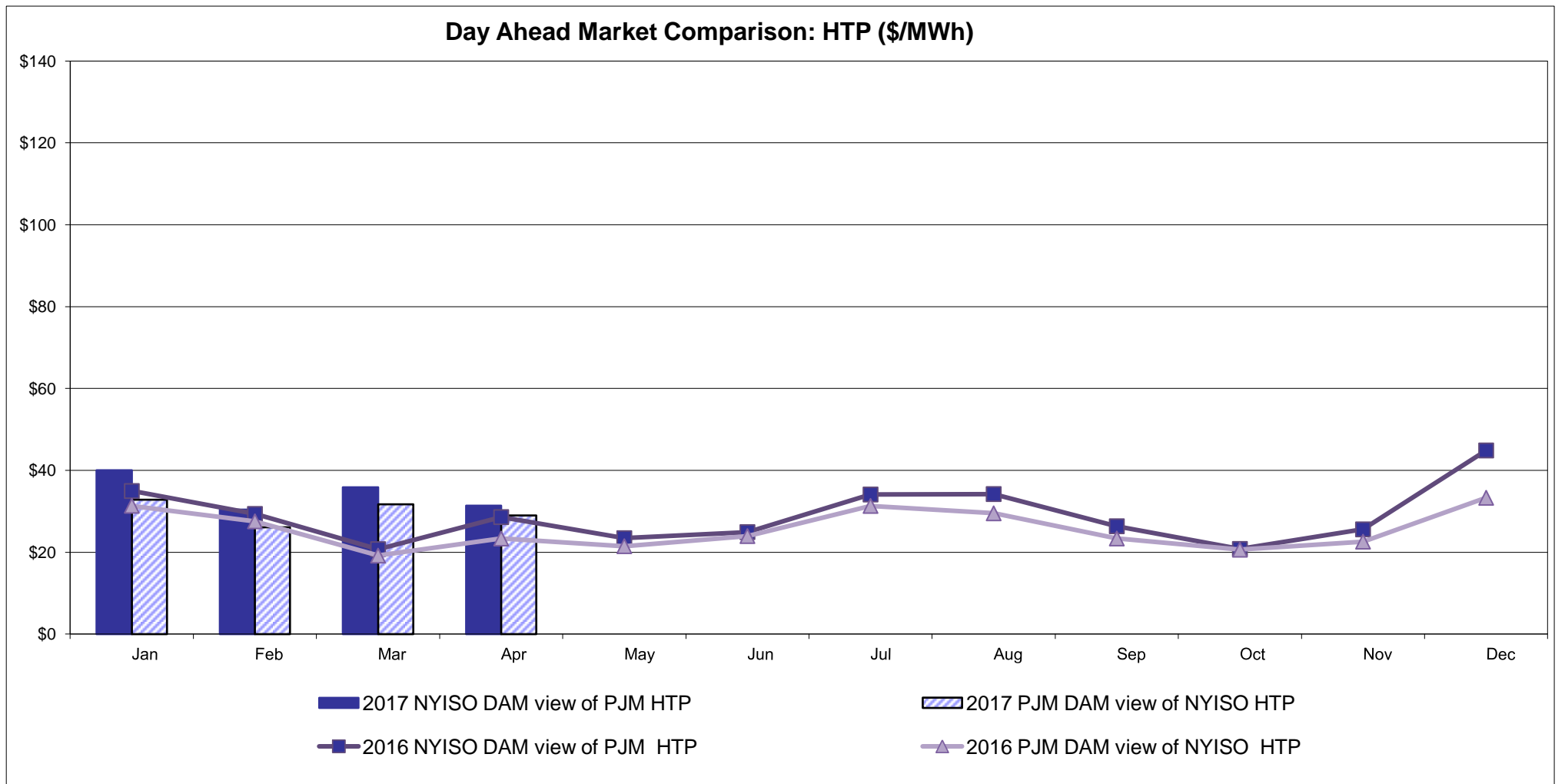


Note:
Hydro-Quebec Prices are unavailable.

External Controllable Line: Linden VFT (PJM)



External Controllable Line: Hudson (PJM)

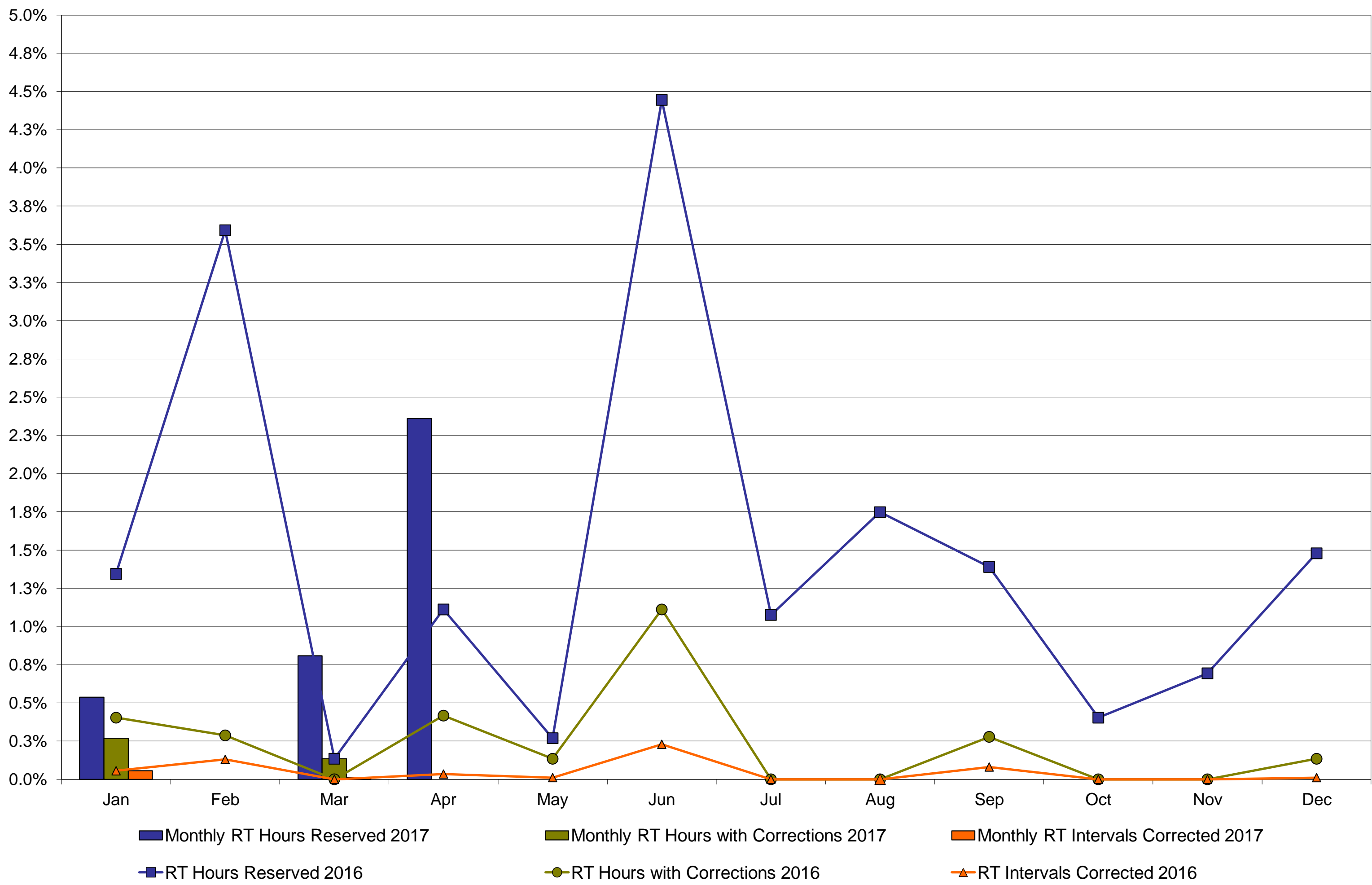


NYISO Real Time Price Correction Statistics

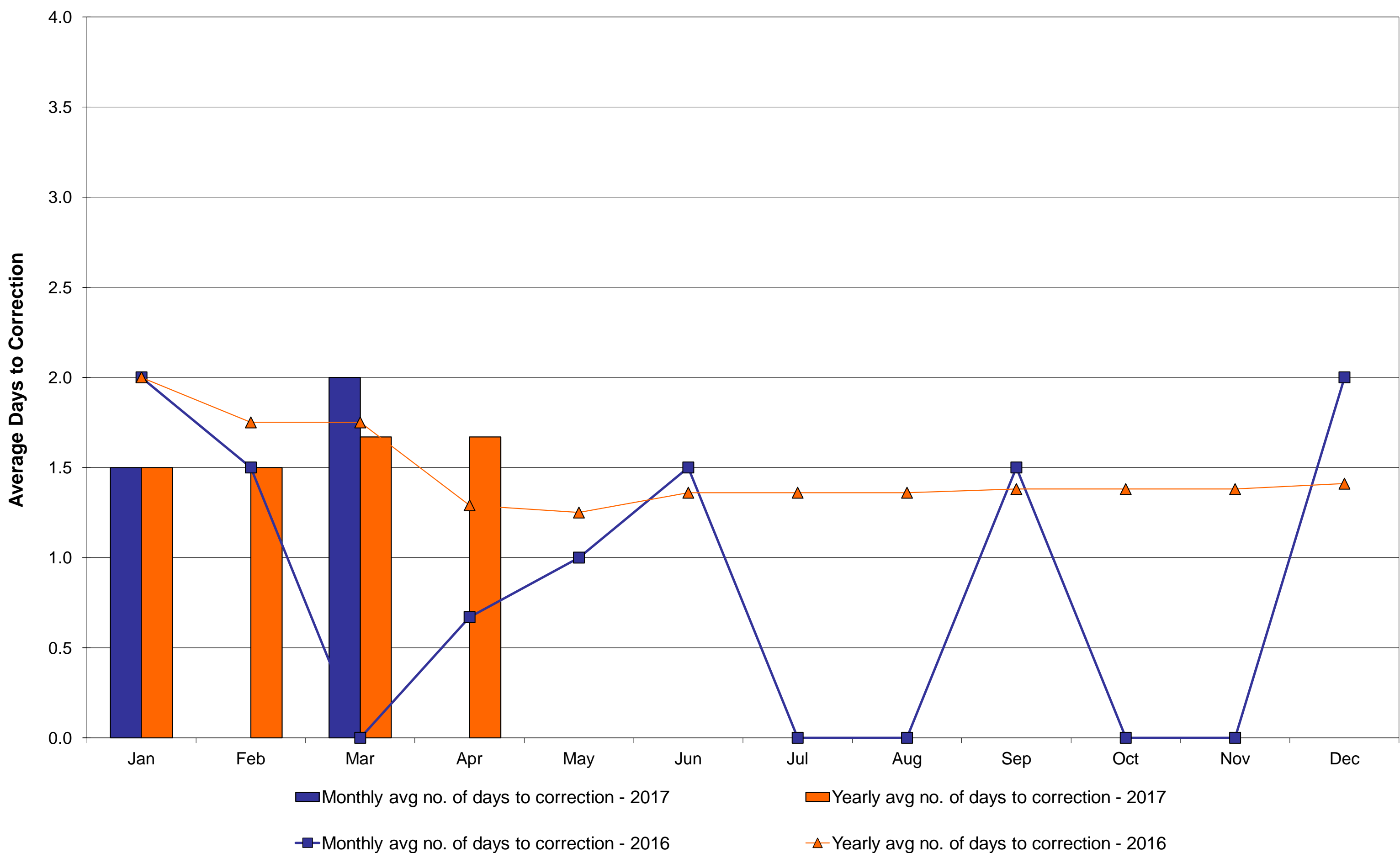
2017		<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
Hour Corrections													
Number of hours with corrections	in the month	2	0	1	0								
Number of hours	in the month	744	672	743	720								
% of hours with corrections	in the month	0.27%	0.00%	0.13%	0.00%								
% of hours with corrections	year-to-date	0.27%	0.14%	0.14%	0.10%								
Interval Corrections													
Number of intervals corrected	in the month	5	0	1	0								
Number of intervals	in the month	8,983	8,101	9,026	8,745								
% of intervals corrected	in the month	0.06%	0.00%	0.01%	0.00%								
% of intervals corrected	year-to-date	0.06%	0.03%	0.02%	0.02%								
Hours Reserved													
Number of hours reserved	in the month	4	0	6	17								
Number of hours	in the month	744	672	743	720								
% of hours reserved	in the month	0.54%	0.00%	0.81%	2.36%								
% of hours reserved	year-to-date	0.54%	0.28%	0.46%	0.94%								
Days to Correction *													
Avg. number of days to correction	in the month	1.50	0.00	2.00	0.00								
Avg. number of days to correction	year-to-date	1.50	1.50	1.67	1.67								
Days Without Corrections													
Days without corrections	in the month	29	28	30	30								
Days without corrections	year-to-date	29	57	87	117								
2016		<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	3	2	0	3	1	8	0	0	2	0	0	1
Number of hours	in the month	744	696	743	720	744	720	744	744	720	744	721	744
% of hours with corrections	in the month	0.40%	0.29%	0.00%	0.42%	0.13%	1.11%	0.00%	0.00%	0.28%	0.00%	0.00%	0.13%
% of hours with corrections	year-to-date	0.40%	0.35%	0.23%	0.28%	0.25%	0.39%	0.33%	0.29%	0.29%	0.26%	0.24%	0.23%
Interval Corrections													
Number of intervals corrected	in the month	5	11	0	3	1	20	0	0	7	0	0	1
Number of intervals	in the month	9,000	8,440	8,995	8,724	8,987	8,725	9,038	9,048	8,713	8,960	8,724	9,034
% of intervals corrected	in the month	0.06%	0.13%	0.00%	0.03%	0.01%	0.23%	0.00%	0.00%	0.08%	0.00%	0.00%	0.01%
% of intervals corrected	year-to-date	0.06%	0.09%	0.06%	0.05%	0.05%	0.08%	0.06%	0.06%	0.06%	0.05%	0.05%	0.05%
Hours Reserved													
Number of hours reserved	in the month	10	25	1	8	2	32	8	13	10	3	5	11
Number of hours	in the month	744	696	743	720	744	720	744	744	720	744	721	744
% of hours reserved	in the month	1.34%	3.59%	0.13%	1.11%	0.27%	4.44%	1.08%	1.75%	1.39%	0.40%	0.69%	1.48%
% of hours reserved	year-to-date	1.34%	2.43%	1.65%	1.52%	1.26%	1.79%	1.68%	1.69%	1.66%	1.53%	1.46%	1.46%
Days to Correction *													
Avg. number of days to correction	in the month	2.00	1.50	0.00	0.67	1.00	1.50	0.00	0.00	1.50	0.00	0.00	2.00
Avg. number of days to correction	year-to-date	2.00	1.75	1.75	1.29	1.25	1.36	1.36	1.36	1.38	1.38	1.38	1.41
Days Without Corrections													
Days without corrections	in the month	29	27	31	27	30	24	31	31	28	31	30	30
Days without corrections	year-to-date	29	56	87	114	144	168	199	230	258	289	319	349

* Calendar days from reservation date.

Percentage of Real-Time Corrections

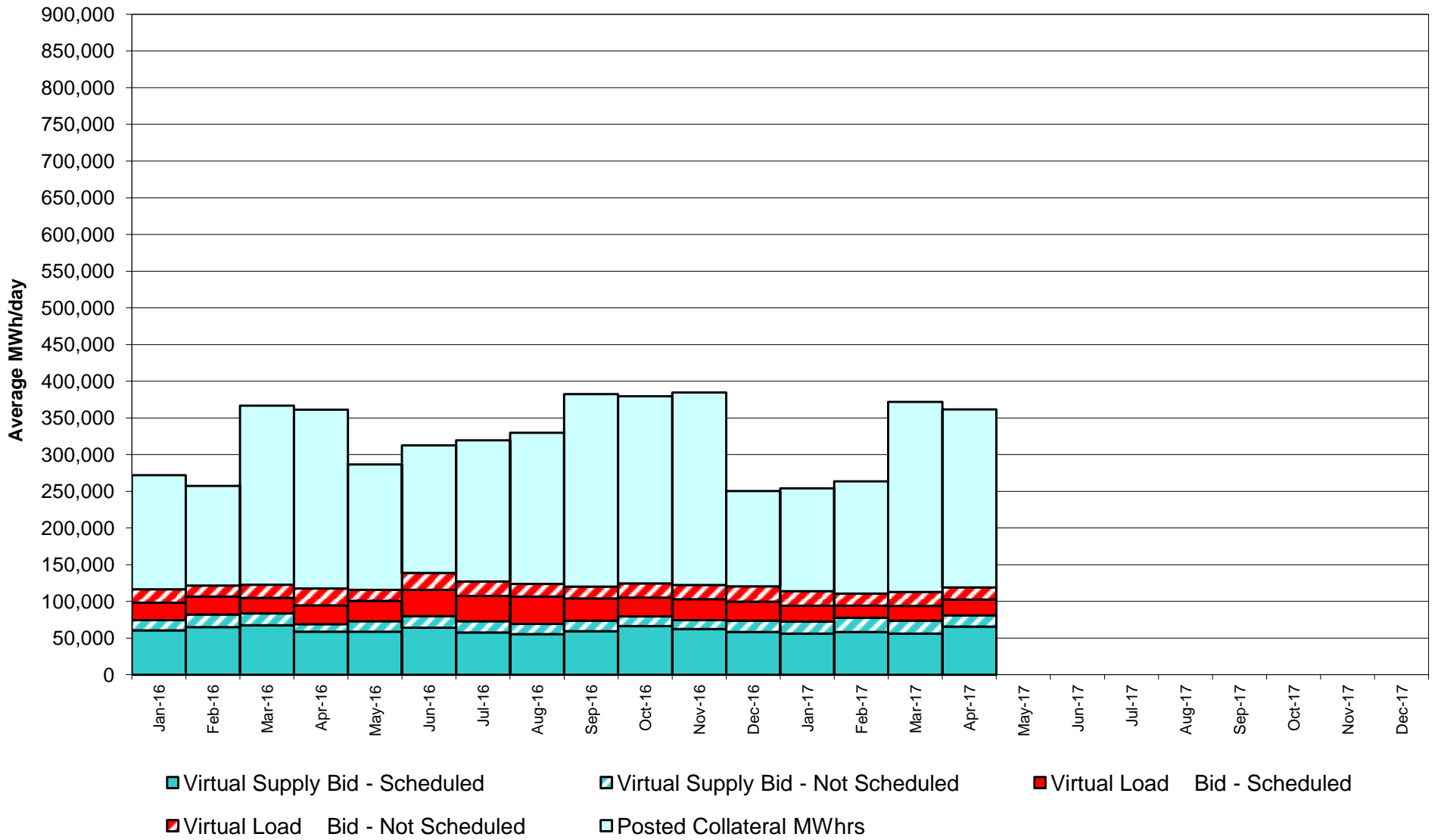


Annual average time period for making Price Corrections (from reservation date) *

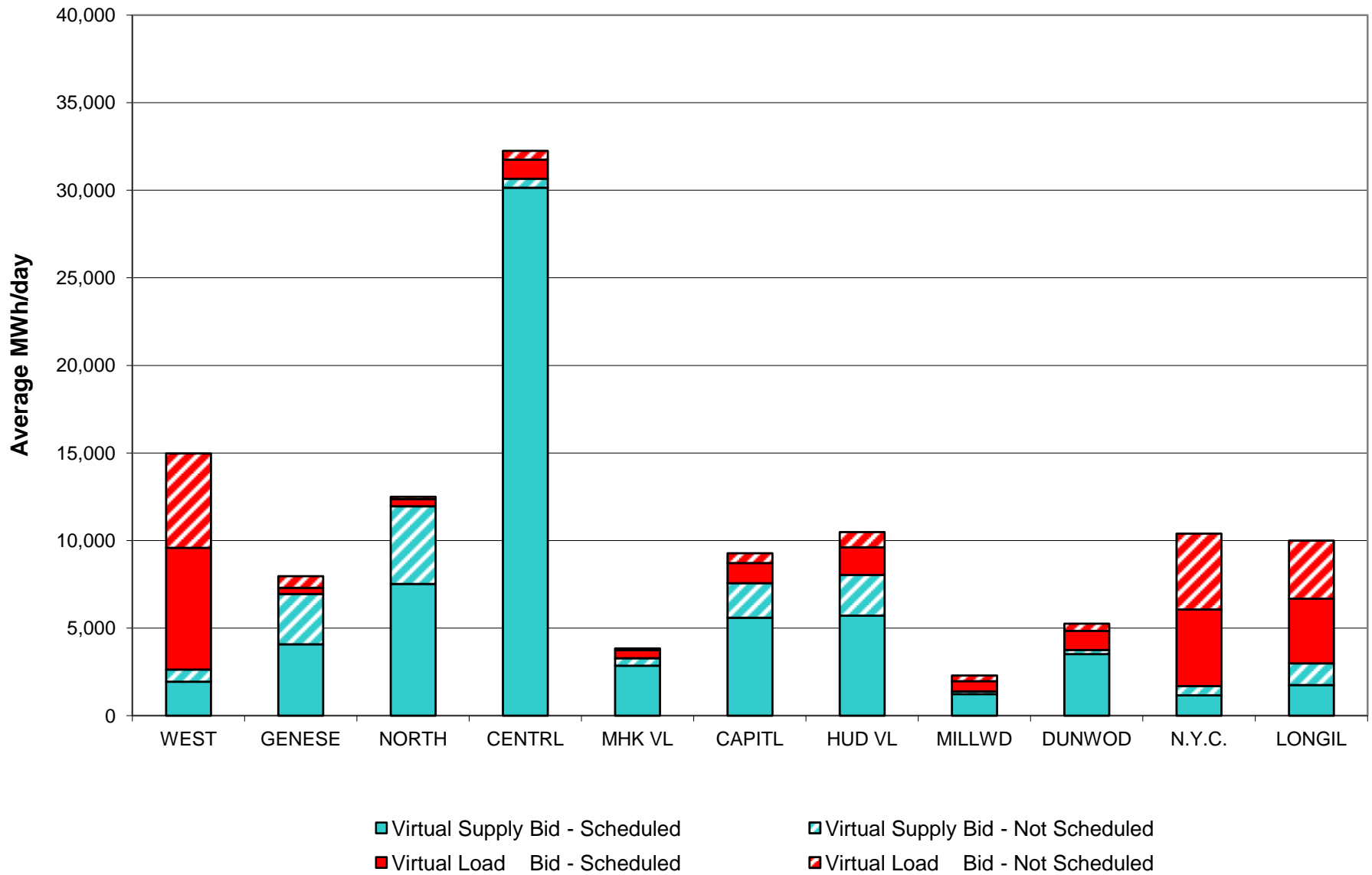


* Calendar days from reservation date.

NYISO Virtual Trading Average MWh per day



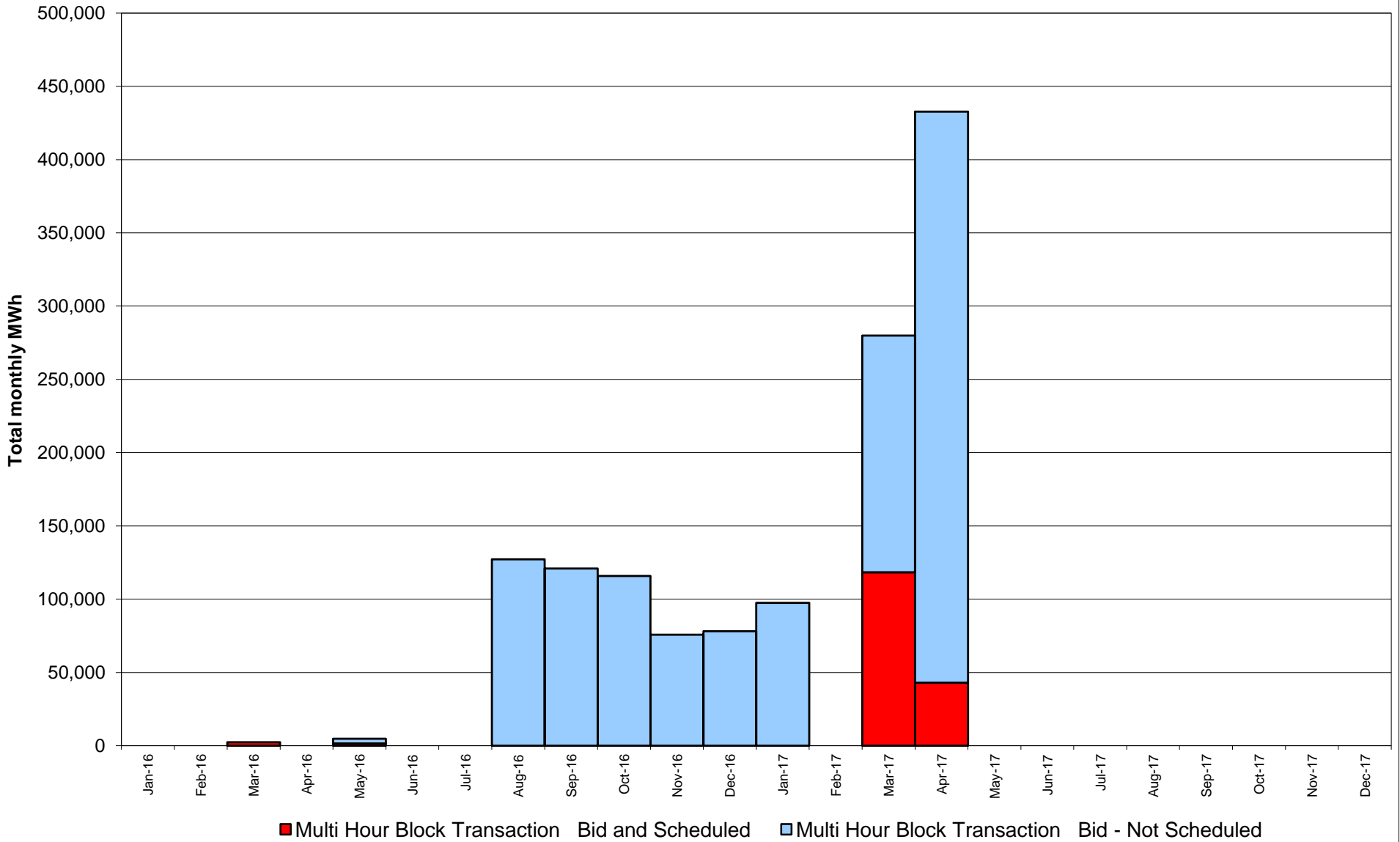
**Virtual Load and Supply Zonal Statistics
through April 30, 2017**



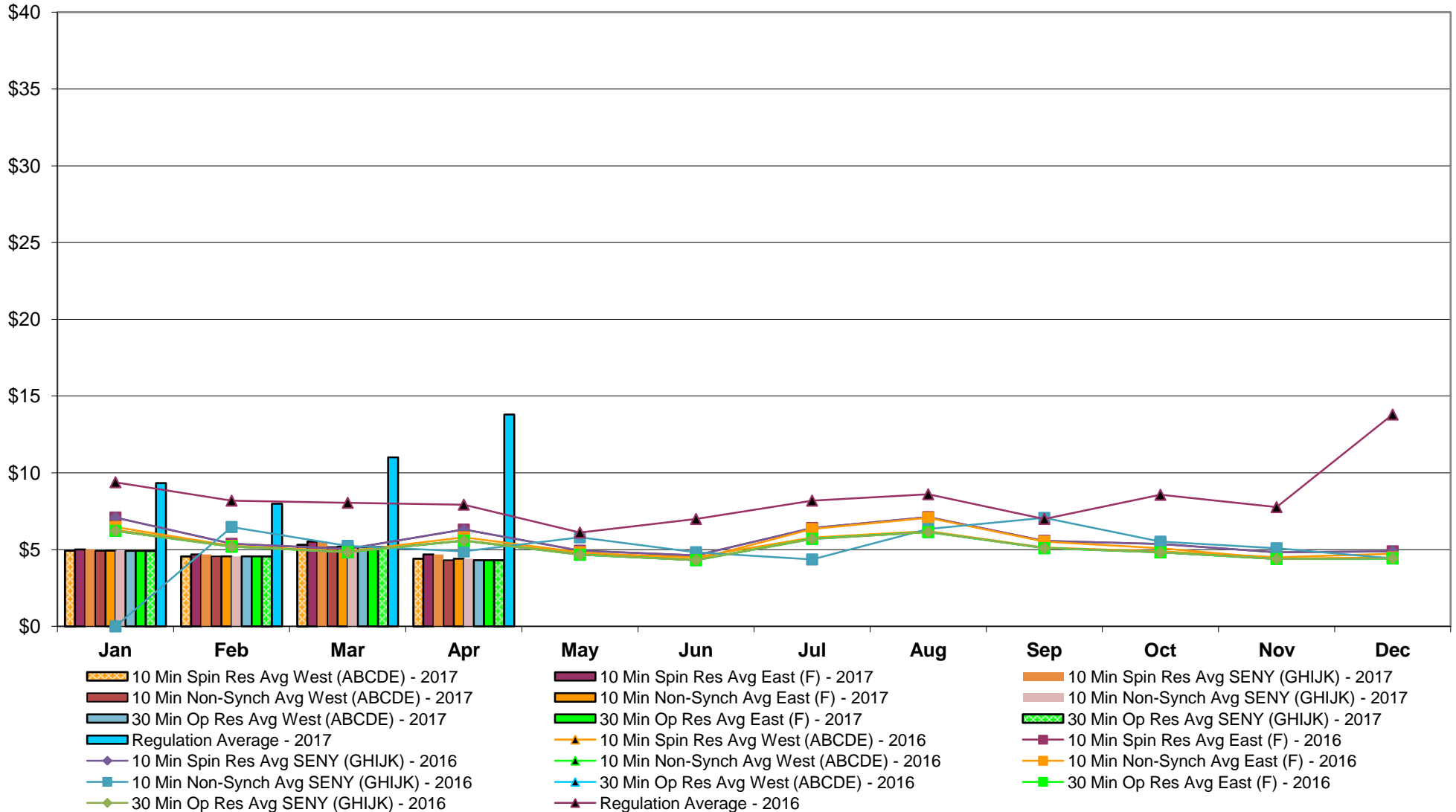
Virtual Load and Supply Zonal Statistics (Average MWh/day) - 2017

		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-17	6,094	5,795	2,019	337	MHK VL	Jan-17	566	202	2,022	131	DUNWOD	Jan-17	304	832	5,708	389
	Feb-17	3,771	4,772	3,346	567		Feb-17	422	100	2,459	293		Feb-17	193	585	5,966	424
	Mar-17	6,522	4,960	2,386	616		Mar-17	407	186	3,594	378		Mar-17	436	763	4,871	439
	Apr-17	6,956	5,390	1,934	699		Apr-17	457	102	2,856	430		Apr-17	1,097	406	3,517	232
	May-17						May-17						May-17				
	Jun-17						Jun-17						Jun-17				
	Jul-17						Jul-17						Jul-17				
	Aug-17						Aug-17						Aug-17				
	Sep-17						Sep-17						Sep-17				
	Oct-17						Oct-17						Oct-17				
	Nov-17						Nov-17						Nov-17				
	Dec-17						Dec-17						Dec-17				
GENESE	Jan-17	654	1,282	3,652	2,482	CAPITL	Jan-17	1,291	666	3,990	3,861	N.Y.C.	Jan-17	5,761	5,474	1,543	1,008
	Feb-17	276	600	3,782	3,206		Feb-17	1,115	409	3,432	3,798		Feb-17	4,622	5,309	1,712	1,219
	Mar-17	480	838	3,806	3,419		Mar-17	1,409	528	5,186	2,484		Mar-17	4,052	5,826	1,561	1,058
	Apr-17	353	656	4,074	2,880		Apr-17	1,160	549	5,589	1,973		Apr-17	4,374	4,331	1,161	529
	May-17						May-17						May-17				
	Jun-17						Jun-17						Jun-17				
	Jul-17						Jul-17						Jul-17				
	Aug-17						Aug-17						Aug-17				
	Sep-17						Sep-17						Sep-17				
	Oct-17						Oct-17						Oct-17				
	Nov-17						Nov-17						Nov-17				
	Dec-17						Dec-17						Dec-17				
NORTH	Jan-17	655	316	6,415	3,473	HUD VL	Jan-17	911	817	5,317	3,064	LONGIL	Jan-17	3,559	3,788	1,354	1,367
	Feb-17	465	338	7,504	4,006		Feb-17	1,292	915	6,266	3,873		Feb-17	3,341	3,127	1,653	1,667
	Mar-17	426	311	7,227	4,576		Mar-17	659	1,048	5,427	2,652		Mar-17	4,133	3,779	1,958	1,463
	Apr-17	414	138	7,520	4,435		Apr-17	1,575	871	5,708	2,333		Apr-17	3,706	3,309	1,748	1,232
	May-17						May-17						May-17				
	Jun-17						Jun-17						Jun-17				
	Jul-17						Jul-17						Jul-17				
	Aug-17						Aug-17						Aug-17				
	Sep-17						Sep-17						Sep-17				
	Oct-17						Oct-17						Oct-17				
	Nov-17						Nov-17						Nov-17				
	Dec-17						Dec-17						Dec-17				
CENTRL	Jan-17	1,482	455	22,561	196	MILLWD	Jan-17	435	91	1,422	128	NYISO	Jan-17	21,713	19,719	56,001	16,436
	Feb-17	707	177	20,639	320		Feb-17	202	74	1,555	164		Feb-17	16,405	16,406	58,312	19,537
	Mar-17	979	605	18,610	518		Mar-17	454	157	1,452	158		Mar-17	19,956	19,002	56,078	17,759
	Apr-17	1,079	505	30,148	519		Apr-17	595	328	1,228	149		Apr-17	21,767	16,586	65,484	15,411
	May-17						May-17						May-17				
	Jun-17						Jun-17						Jun-17				
	Jul-17						Jul-17						Jul-17				
	Aug-17						Aug-17						Aug-17				
	Sep-17						Sep-17						Sep-17				
	Oct-17						Oct-17						Oct-17				
	Nov-17						Nov-17						Nov-17				
	Dec-17						Dec-17						Dec-17				

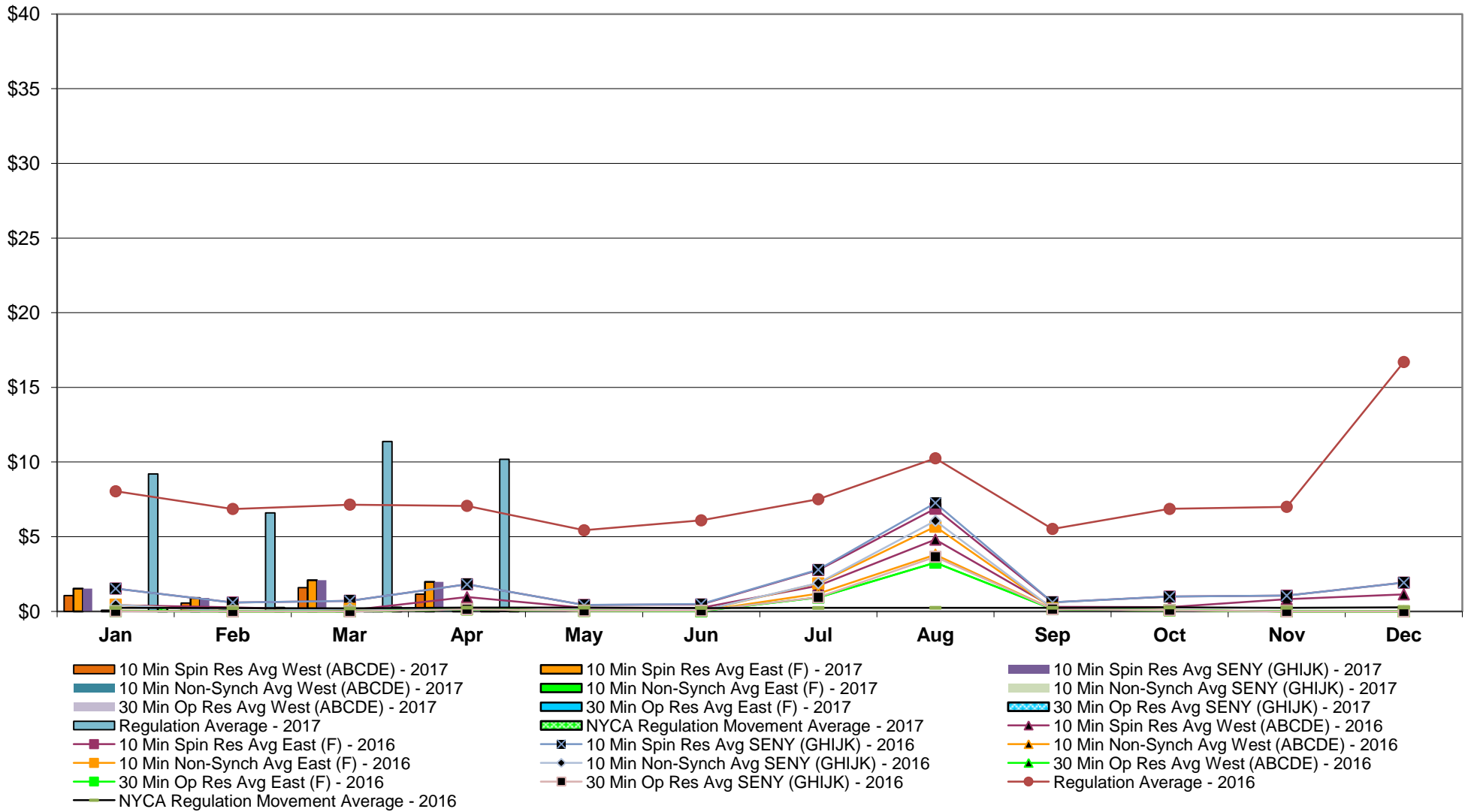
NYISO Multi Hour Block Transactions Monthly Total MWh



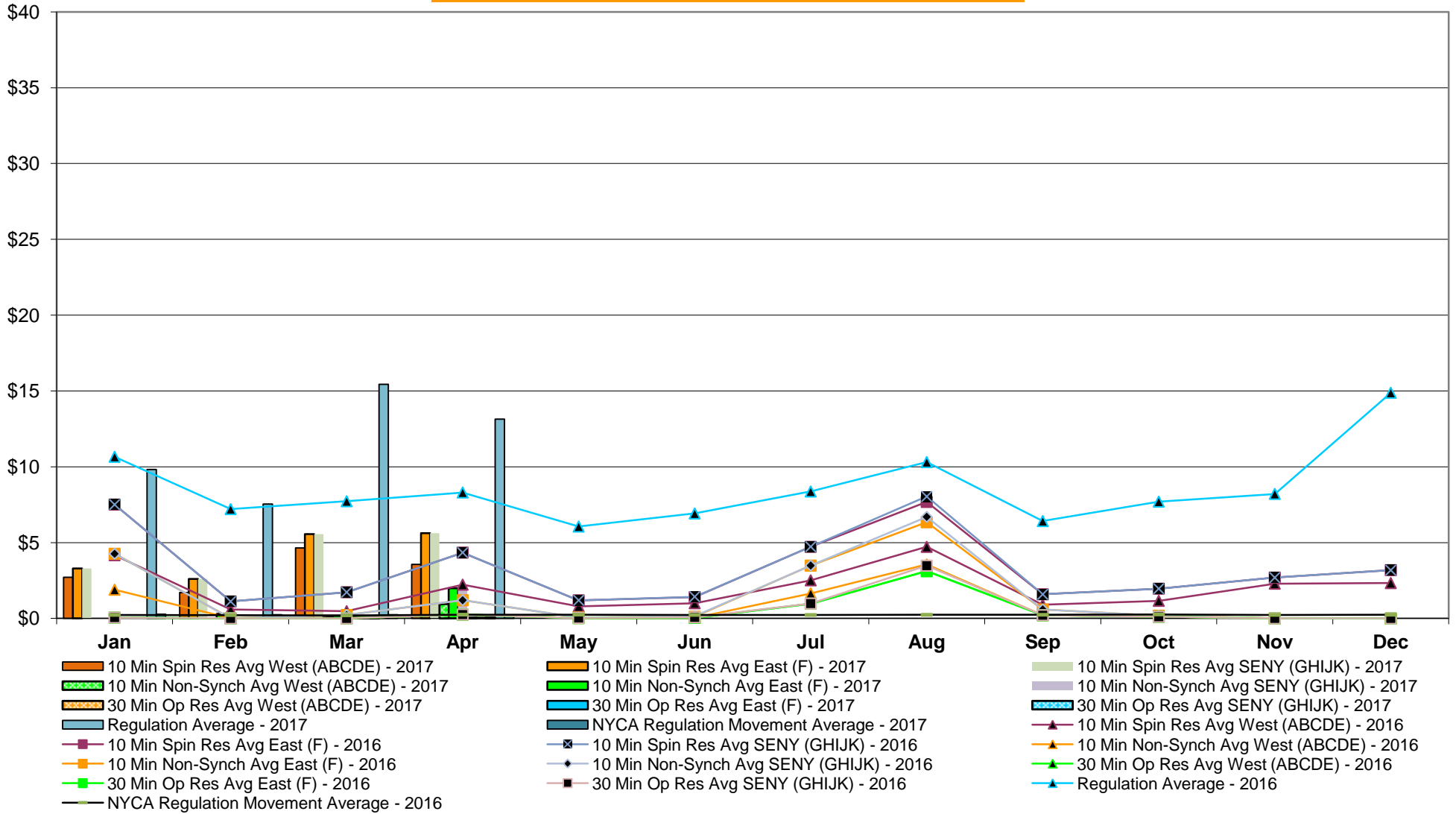
NYISO Monthly Average Ancillary Service Prices Day Ahead Market 2016 - 2017



NYISO Monthly Average Ancillary Service Prices RTC Market 2016 - 2017



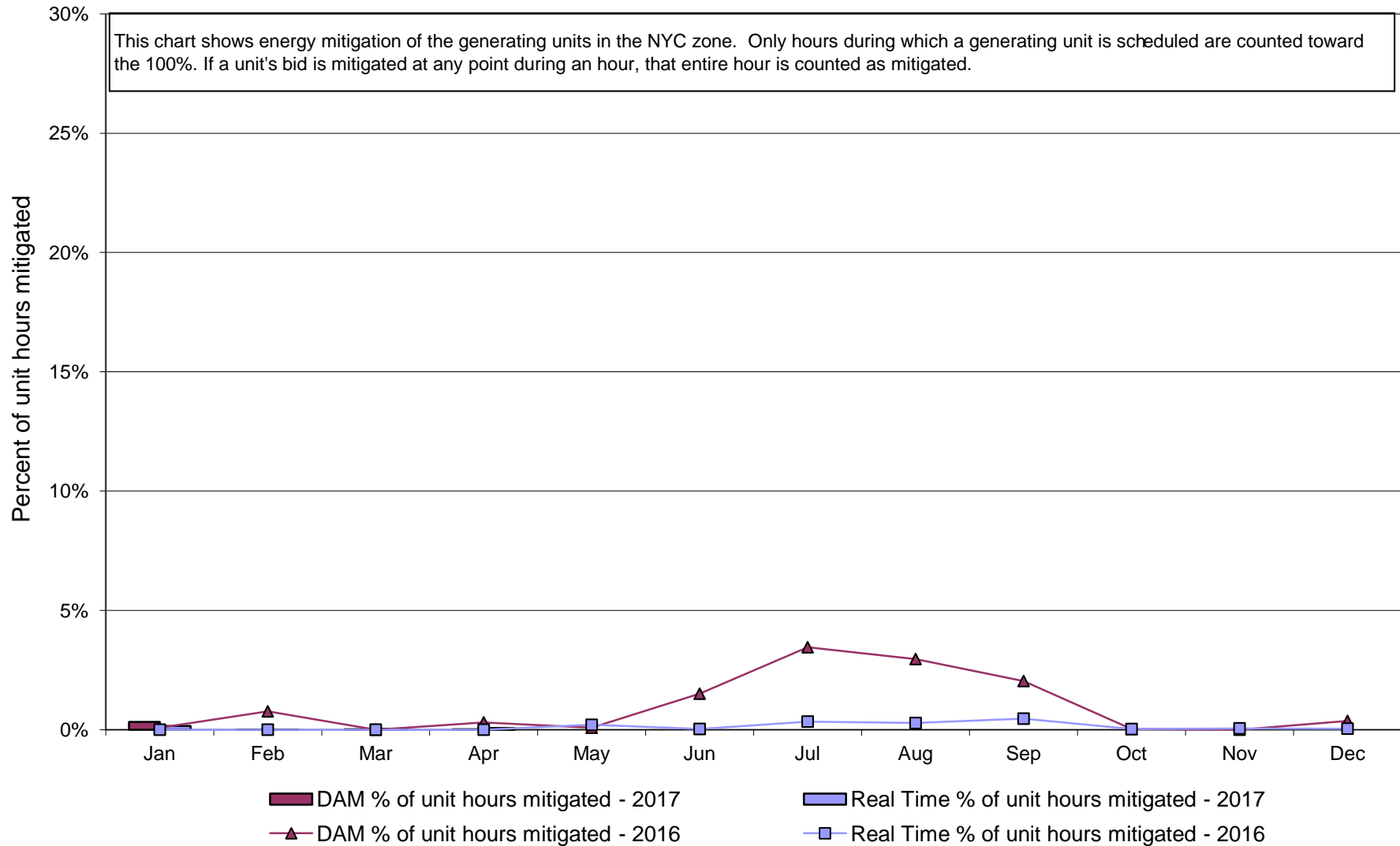
NYISO Monthly Average Ancillary Service Prices Real Time Market 2016 - 2017



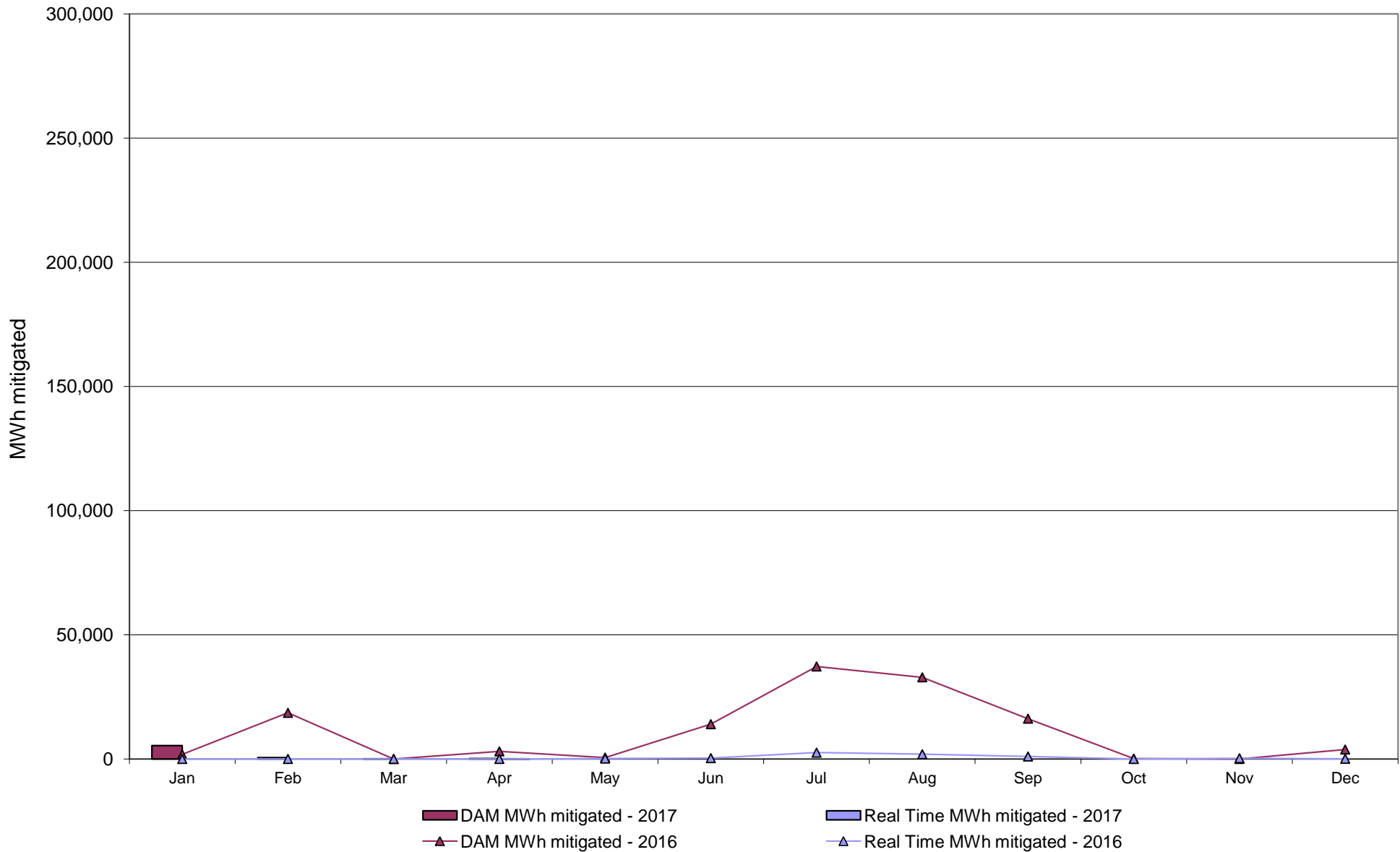
NYISO Markets Ancillary Services Statistics - Unweighted Price (\$/MWH)

2017	January	February	March	April	May	June	July	August	September	October	November	December
Day Ahead Market												
10 Min Spin SENY (GHIJK)	5.01	4.68	5.53	4.68								
10 Min Spin East (F)	5.01	4.68	5.53	4.68								
10 Min Spin West (ABCDE)	4.94	4.56	5.31	4.41								
10 Min Non Synch SENY (GHIJK)	4.94	4.57	5.20	4.41								
10 Min Non Synch East (F)	4.94	4.57	5.20	4.41								
10 Min Non Synch West (ABCDE)	4.92	4.56	5.17	4.31								
30 Min SENY (GHIJK)	4.92	4.56	5.17	4.31								
30 Min East (F)	4.92	4.56	5.17	4.31								
30 Min West (ABCDE)	4.92	4.56	5.17	4.31								
Regulation	9.34	7.99	11.01	13.80								
RTC Market												
10 Min Spin SENY (GHIJK)	1.53	0.89	2.08	1.97								
10 Min Spin East (F)	1.53	0.89	2.08	1.97								
10 Min Spin West (ABCDE)	1.06	0.55	1.58	1.16								
10 Min Non Synch SENY (GHIJK)	0.06	0.06	0.10	0.14								
10 Min Non Synch East (F)	0.06	0.06	0.10	0.14								
10 Min Non Synch West (ABCDE)	0.00	0.00	0.10	0.07								
30 Min SENY (GHIJK)	0.00	0.00	0.10	0.03								
30 Min East (F)	0.00	0.00	0.10	0.03								
30 Min West (ABCDE)	0.00	0.00	0.10	0.03								
Regulation	9.21	6.59	11.37	10.18								
NYCA Regulation Movement	0.27	0.24	0.25	0.22								
Real Time Market												
10 Min Spin SENY (GHIJK)	3.29	2.61	5.56	5.62								
10 Min Spin East (F)	3.29	2.61	5.56	5.62								
10 Min Spin West (ABCDE)	2.71	1.71	4.65	3.56								
10 Min Non Synch SENY (GHIJK)	0.00	0.31	0.17	1.99								
10 Min Non Synch East (F)	0.00	0.31	0.17	1.99								
10 Min Non Synch West (ABCDE)	0.00	0.00	0.13	0.95								
30 Min SENY (GHIJK)	0.00	0.00	0.12	0.06								
30 Min East (F)	0.00	0.00	0.12	0.06								
30 Min West (ABCDE)	0.00	0.00	0.12	0.06								
Regulation	9.83	7.54	15.44	13.15								
NYCA Regulation Movement	0.27	0.24	0.25	0.20								
2016												
Day Ahead Market												
10 Min Spin SENY (GHIJK)	7.09	5.38	5.04	6.31	4.93	4.62	6.41	7.12	5.57	5.37	4.83	4.89
10 Min Spin East (F)	7.09	5.38	5.04	6.31	4.93	4.62	6.41	7.12	5.57	5.37	4.83	4.89
10 Min Spin West (ABCDE)	6.28	5.25	4.84	5.60	4.77	4.52	5.78	6.20	5.14	4.89	4.50	4.73
10 Min Non Synch SENY (GHIJK)	6.47	5.25	4.88	5.80	4.83	4.36	6.34	7.07	5.52	5.09	4.43	4.49
10 Min Non Synch East (F)	6.47	5.25	4.88	5.80	4.83	4.36	6.34	7.07	5.52	5.09	4.43	4.49
10 Min Non Synch West (ABCDE)	6.23	5.20	4.84	5.58	4.68	4.32	5.72	6.15	5.10	4.82	4.39	4.43
30 Min SENY (GHIJK)	6.23	5.20	4.84	5.58	4.67	4.32	5.70	6.15	5.10	4.82	4.39	4.43
30 Min East (F)	6.23	5.20	4.84	5.58	4.67	4.32	5.70	6.15	5.10	4.82	4.39	4.43
30 Min West (ABCDE)	6.23	5.20	4.84	5.58	4.67	4.32	5.70	6.15	5.10	4.82	4.39	4.43
Regulation	9.39	8.19	8.05	7.93	6.11	7.00	8.19	8.61	7.00	8.57	7.77	13.80
RTC Market												
10 Min Spin SENY (GHIJK)	1.53	0.59	0.71	1.81	0.43	0.49	2.79	7.26	0.61	0.99	1.05	1.92
10 Min Spin East (F)	1.53	0.59	0.71	1.81	0.43	0.46	2.77	6.88	0.61	0.99	1.05	1.92
10 Min Spin West (ABCDE)	0.42	0.26	0.08	0.95	0.23	0.24	1.72	4.80	0.30	0.29	0.82	1.14
10 Min Non Synch SENY (GHIJK)	0.45	0.00	0.17	0.14	0.05	0.05	1.89	6.06	0.21	0.09	0.00	0.00
10 Min Non Synch East (F)	0.45	0.00	0.17	0.14	0.05	0.02	1.87	5.67	0.21	0.09	0.00	0.00
10 Min Non Synch West (ABCDE)	0.04	0.00	0.00	0.14	0.04	0.02	1.18	3.80	0.16	0.08	0.00	0.00
30 Min SENY (GHIJK)	0.01	0.00	0.00	0.14	0.04	0.04	0.94	3.65	0.15	0.08	0.00	0.00
30 Min East (F)	0.01	0.00	0.00	0.14	0.04	0.02	0.93	3.27	0.15	0.08	0.00	0.00
30 Min West (ABCDE)	0.01	0.00	0.00	0.14	0.04	0.02	0.93	3.27	0.15	0.08	0.00	0.00
Regulation	8.04	6.86	7.15	7.07	5.43	6.09	7.51	10.25	5.52	6.86	7.00	16.70
NYCA Regulation Movement	0.23	0.21	0.20	0.25	0.25	0.23	0.23	0.24	0.24	0.26	0.24	0.26
Real Time Market												
10 Min Spin SENY (GHIJK)	7.51	1.12	1.73	4.34	1.19	1.43	4.73	8.04	1.59	1.96	2.69	3.18
10 Min Spin East (F)	7.51	1.12	1.73	4.34	1.19	1.40	4.72	7.68	1.59	1.96	2.69	3.18
10 Min Spin West (ABCDE)	4.17	0.58	0.48	2.23	0.79	1.00	2.51	4.72	0.90	1.16	2.29	2.33
10 Min Non Synch SENY (GHIJK)	4.26	0.00	0.22	1.20	0.06	0.15	3.49	6.70	0.59	0.18	0.00	0.00
10 Min Non Synch East (F)	4.26	0.00	0.22	1.20	0.06	0.11	3.48	6.34	0.59	0.18	0.00	0.00
10 Min Non Synch West (ABCDE)	1.89	0.00	0.00	0.26	0.03	0.04	1.65	3.56	0.21	0.11	0.00	0.00
30 Min SENY (GHIJK)	0.06	0.00	0.00	0.25	0.03	0.07	0.98	3.48	0.21	0.11	0.00	0.00
30 Min East (F)	0.06	0.00	0.00	0.25	0.03	0.04	0.97	3.12	0.21	0.11	0.00	0.00
30 Min West (ABCDE)	0.06	0.00	0.00	0.25	0.03	0.04	0.97	3.12	0.21	0.11	0.00	0.00
Regulation	10.66	7.21	7.73	8.30	6.06	6.92	8.37	10.31	6.42	7.70	8.21	14.88
NYCA Regulation Movement	0.23	0.22	0.20	0.25	0.25	0.23	0.23	0.24	0.24	0.26	0.23	0.24

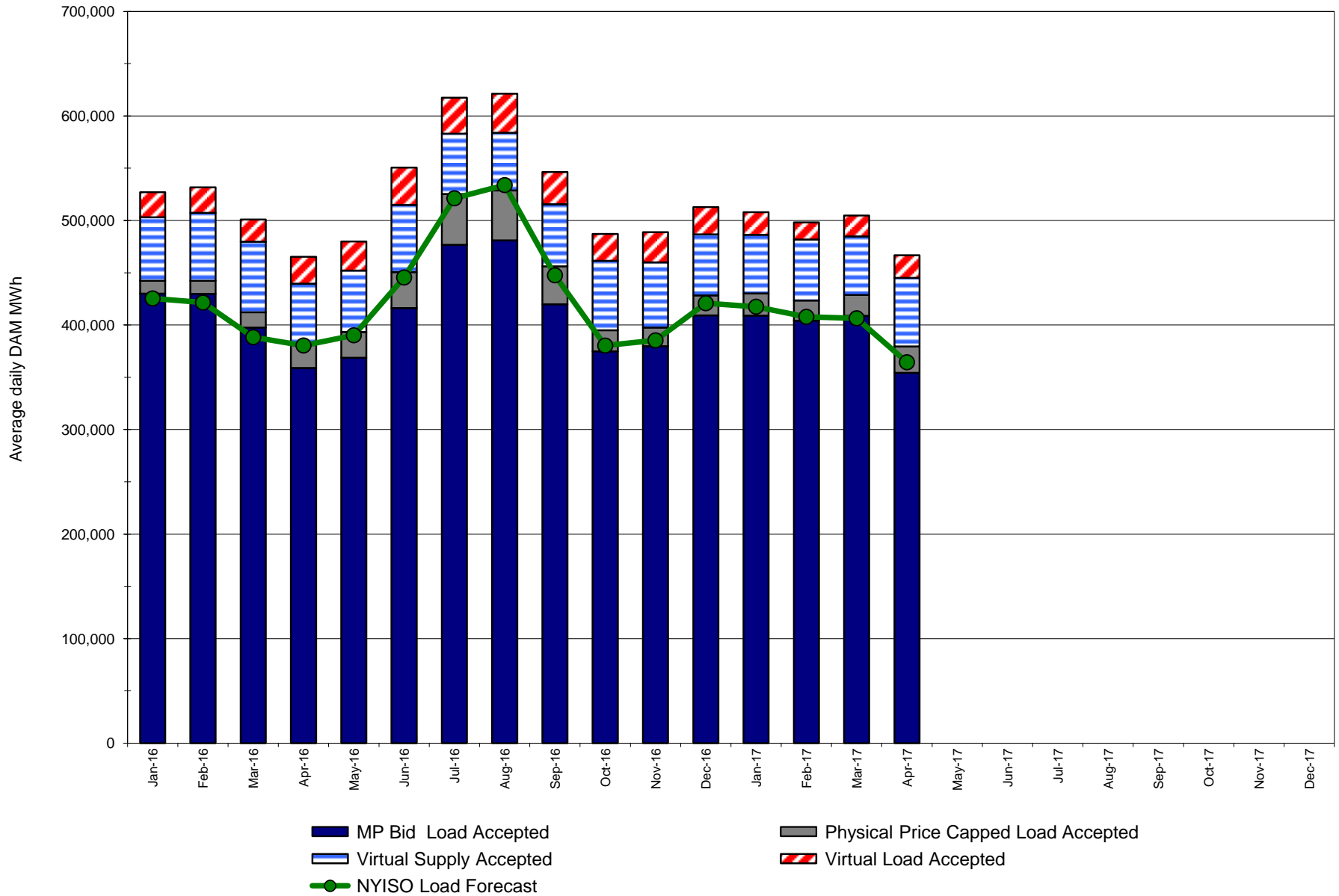
NYISO In City Energy Mitigation - AMP (NYC Zone) 2016 - 2017 Percentage of committed unit-hours mitigated



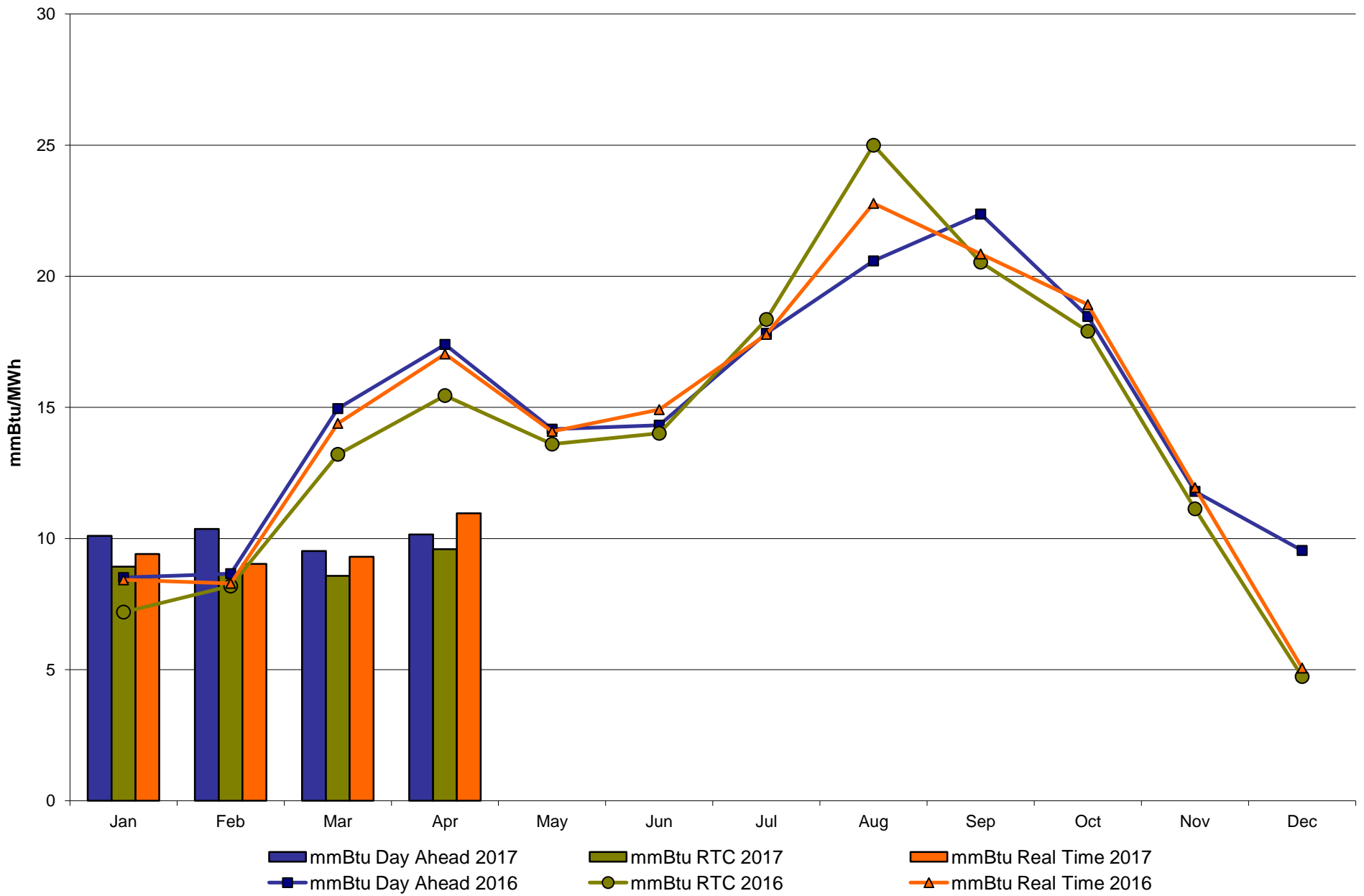
NYISO In City Energy Mitigation (NYC Zone) 2016 - 2017
Monthly megawatt hours mitigated



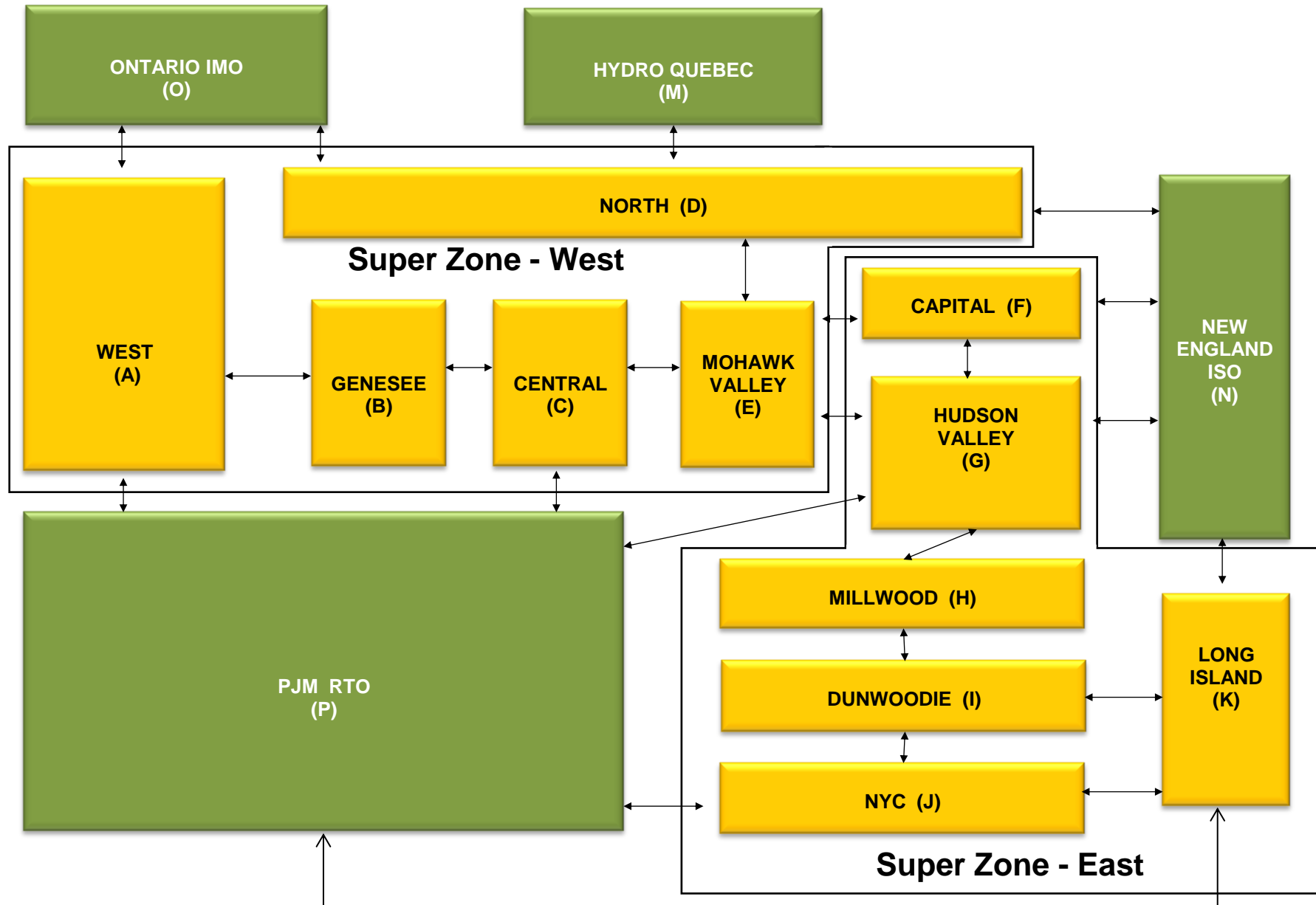
NYISO Average Daily DAM Load Bid Summary



Monthly Implied Heat Rate 2016-2017



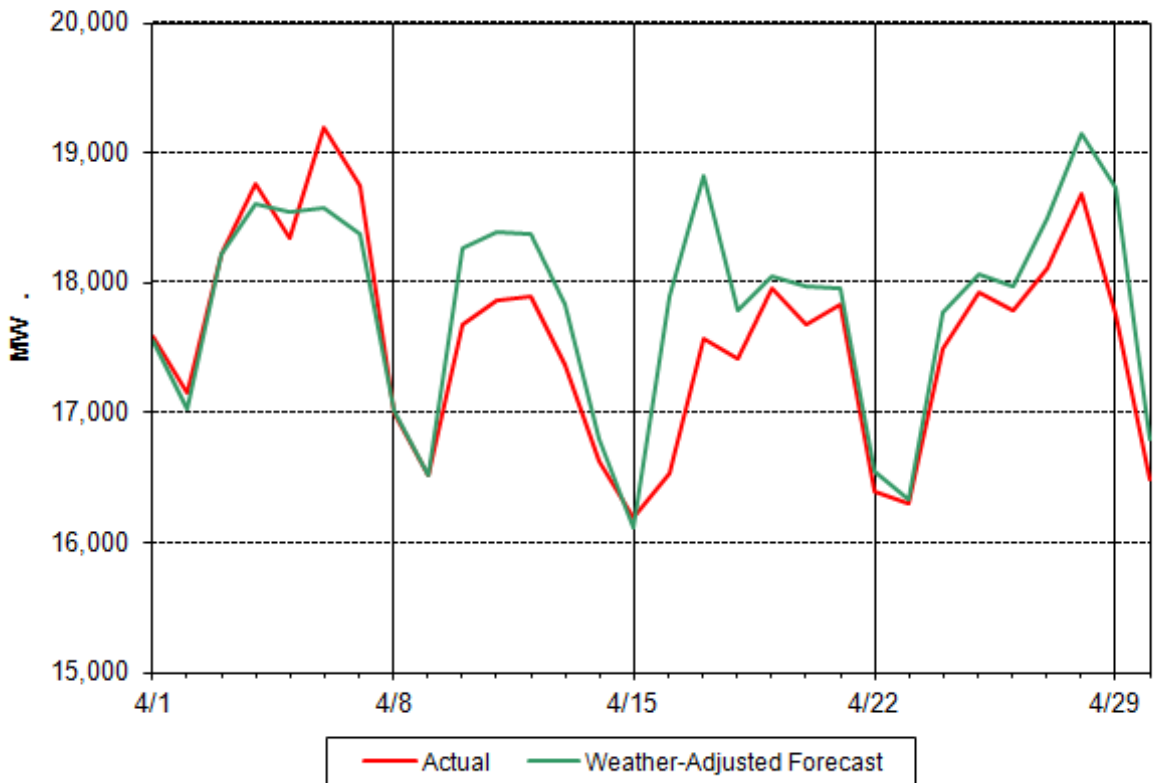
NYISO LBMP ZONES



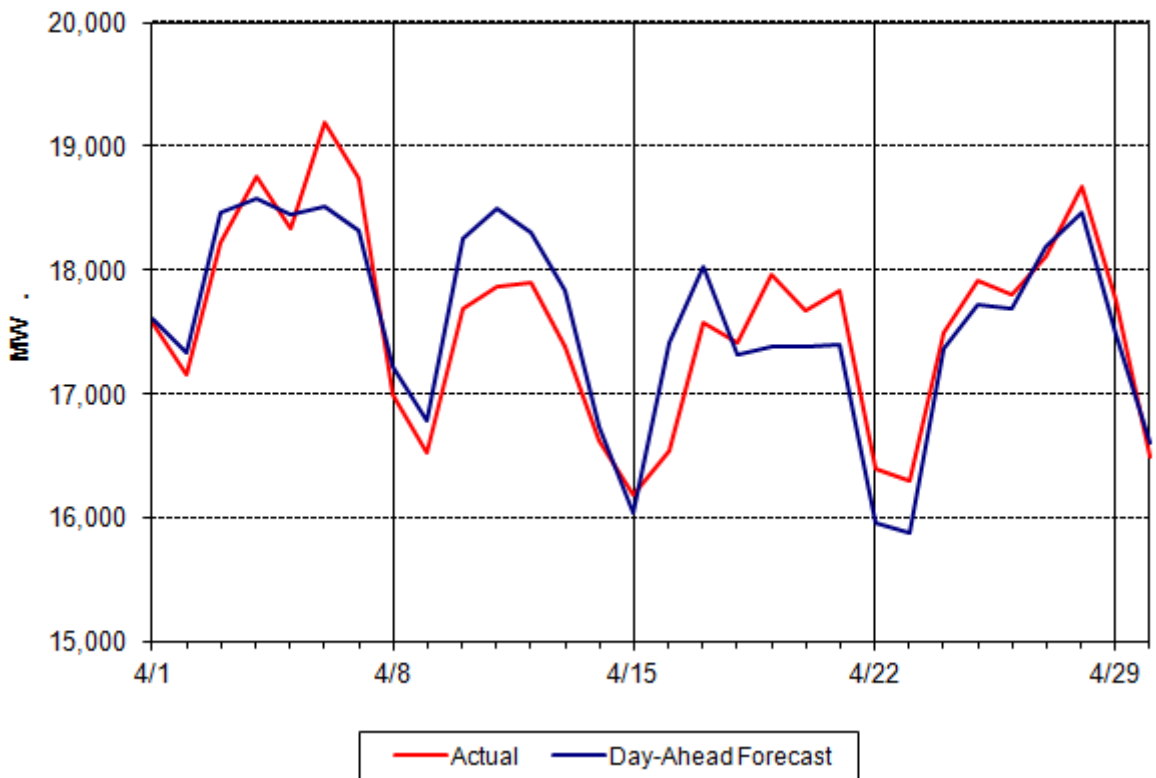
Billing Codes for Chart C

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

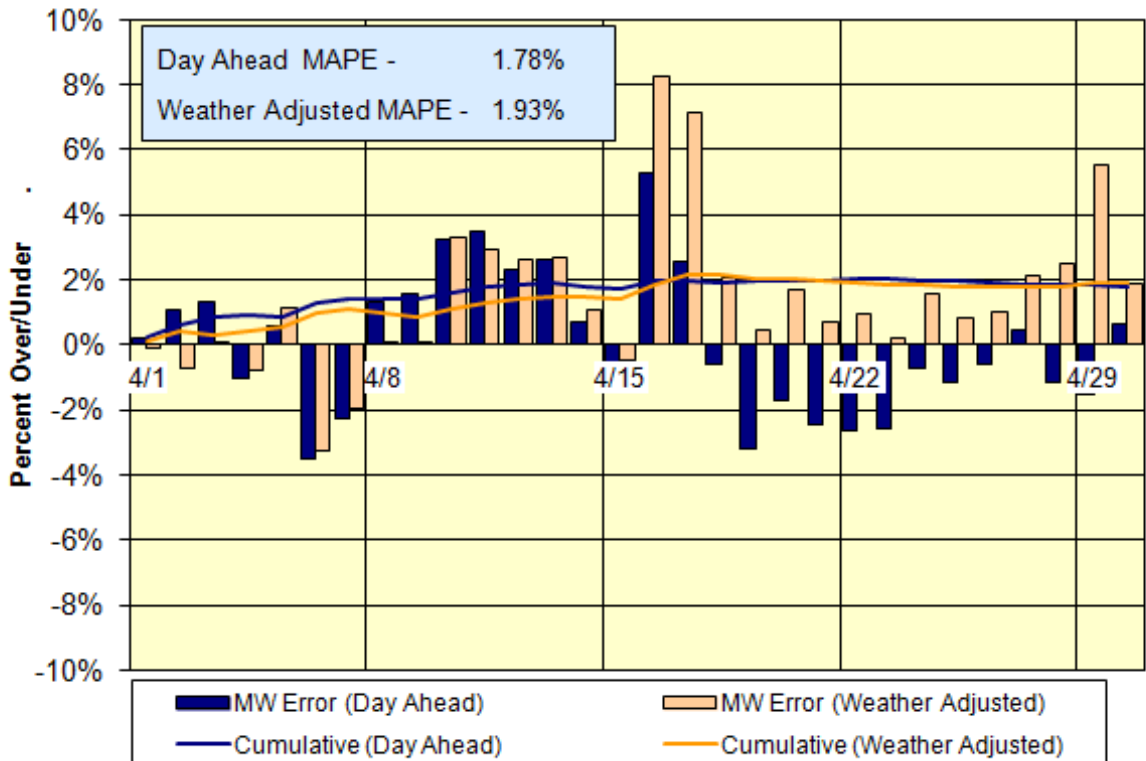
**NYISO Daily Peak Load - April 2017
Actual vs. Weather-Adjusted Forecast**



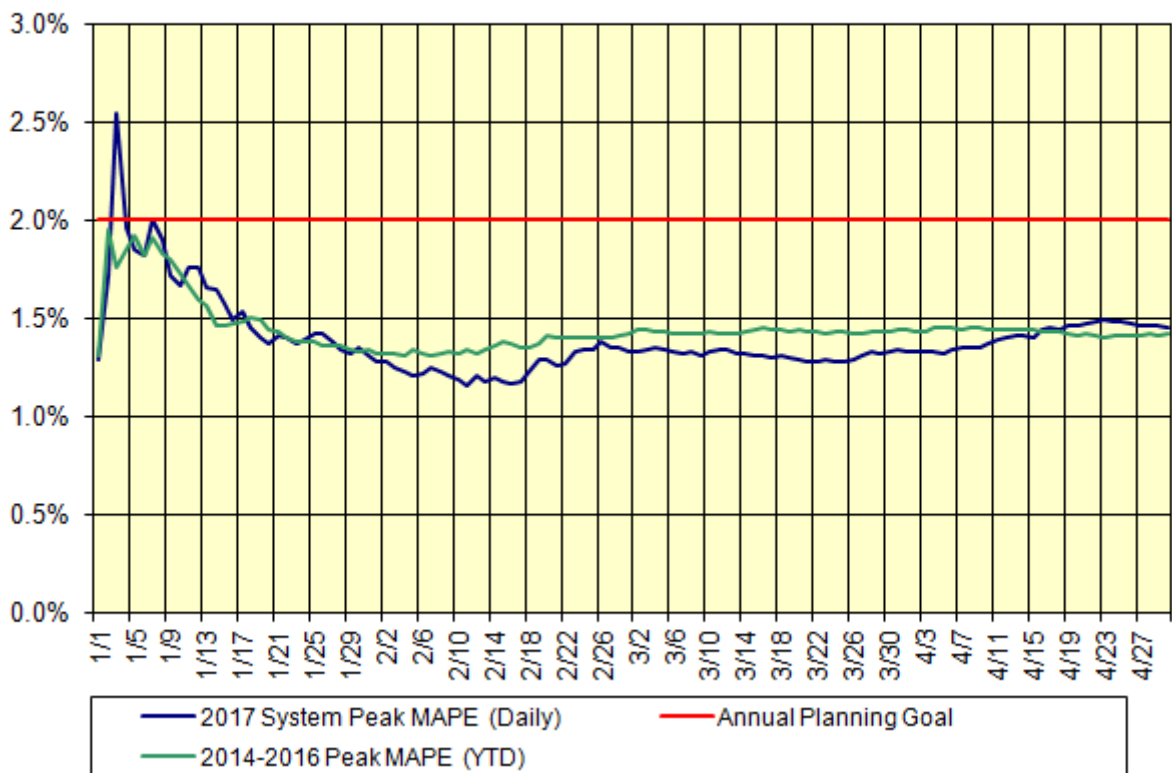
**NYISO Daily Peak Load - April 2017
Actual vs. Forecast**



Day Ahead Peak Forecast - April 2017 Percent Error - Actual & Weather Adjusted



Day-Ahead Forecast Accuracy - Cumulative Performance 2017 Year-to-Date



Summary Description of Regulatory Filings, Investigations, Rulemakings and Related Orders in NYISO Matters – April 2017

Filing Date	Filing Summary	Docket	Order Date	Order Summary
02/02/2017	NYISO compliance filing on behalf of NYPA re: tariff revisions reflecting the approved settlement of NYPA's formula rate template and formula rate implementation protocols as set forth in Attachment H of the NYISO OATT	ER16-835-001	04/07/2017	FERC order accepted revisions effective 04/01/2016, as requested
02/15/2017	Niagara Mohawk Power Corporation 205 filing re: revisions to its Transmission Service Charge formula rate as set forth in Attachment H of the NYISO OATT	ER17-884-001	04/07/2017	FERC order accepted revisions effective 04/01/2017, as requested
03/13/2017	NYISO 205 filing re: OATT and Services Tariff revisions to implement (i) a monthly balance-of-period Transmission Congestion Contract ("TCC") auction structure; and (ii) enhancements to the credit requirements for TCCs	ER17-1167-000	04/14/2017	FERC order accepted filing subject to compliance filings to specify effective dates
04/05/2017	NYISO filing re: notification of emergency state condition in the NYCA on 04/04/2017	EY17-1-000		
04/06/2017	NYISO filing to the EPA re: comments on the 2015 Ozone National Ambient Air Quality Standard Preliminary Transport Data	EPA-HQ-OAR-2016-0751		
04/10/2017	NYISO filing re :comments in response to the NOPR on Uplift Cost Allocation and Transparency in Markets Operated by RTOs and ISOs	RM17-2-000		
04/10/2017	Joint NYISO, ISO-NE, IESO and ERCOT comments re: NOPR - Reliability Standard PRC-012-2 – Remedial Action Schemes	RM16-20-000		
04/12/2017	NYISO filing re: FERC Form No. 1: annual report of major electric utilities, licensees and others and supplemental Form 3-Q: quarterly financial report	No Docket No.		
04/13/2017	NYISO filing re: comments in response to the NOPR on reform of generator interconnection procedures and agreements	RM17-8-000		
04/14/2017	NYISO confidential filing to the NYPSC re: three-month Reliability Commitment Data Report for the period ending 03/31/2017	PSC Matter No. 10-02007		

04/21/2017	NYISO 205 filing re: OATT and Services Tariff revisions to clarify and enhance the operation of its transmission constraint pricing logic	ER17-1453-000		
04/24/2017	NYISO filing re: first quarter 2017 EQR report	ER02-2001-000		
04/28/2017	NYISO compliance filing on behalf of Niagara Mohawk Power Corporation re: amendment to the appendices in Service Agreement No. 316 between NMPC and WPS Syracuse Generation, LLC	ER11-2402-001		
04/28/2017	NYISO 205 filing re: revisions to MST Sections 4.4 and 25 concerning submission of start-up bids in the real-time market	ER17-1501-000		
04/28/2017	NYISO filing re: FERC reporting requirement No. 582 for calendar year 2016 – total megawatt-hours of transmission service in interstate commerce	No Docket No.		
04/28/2017	Pre-technical conference comments of Bradley C. Jones re: state policies and wholesale markets operated by ISO-NE, NYISO and PJM	AD17-11-000		