



Monthly Report

June 2018

Table of Contents

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

Operations Performance Metrics Monthly Report



June 2018 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 July 10, 2018.

Table of Contents

- ◆ **Highlights**
 - *Operations Performance*

- ◆ **Reliability Performance Metrics**
 - *Alert State Declarations*
 - *Major Emergency State Declarations*
 - *IROL Exceedance Times*
 - *Balancing Area Control Performance*
 - *Reserve Activations*
 - *Disturbance Recovery Times*
 - *Load Forecasting Performance*
 - *Wind Forecasting Performance*
 - *Wind Performance and Curtailments*
 - *Lake Erie Circulation and ISO Schedules*

- ◆ **Broader Regional Market Performance Metrics**
 - *PAR Interconnection Congestion Coordination Monthly Value*
 - *PAR Interconnection Congestion Coordination Daily Value*
 - *Regional Generation Congestion Coordination Monthly Value*
 - *Regional Generation Congestion Coordination Daily Value*
 - *Regional RT Scheduling - PJM Monthly Value*
 - *Regional RT Scheduling - PJM Daily Value*

- ◆ **Market Performance Metrics**
 - *Monthly Statewide Uplift Components and Rate*
 - *RTM Congestion Residuals Monthly Trend*
 - *RTM Congestion Residuals Daily Costs*
 - *RTM Congestion Residuals Event Summary*
 - *RTM Congestion Residuals Cost Categories*
 - *DAM Congestion Residuals Monthly Trend*
 - *DAM Congestion Residuals Daily Costs*
 - *DAM Congestion Residuals Cost Categories*
 - *NYCA Unit Uplift Components Monthly Trend*
 - *NYCA Unit Uplift Components Daily Costs*
 - *Local Reliability Costs Monthly Trend & Commitment Hours*
 - *TCC Monthly Clearing Price with DAM Congestion*
 - *ICAP Spot Market Clearing Price*
 - *UCAP Awards*

June 2018 Operations Performance Highlights

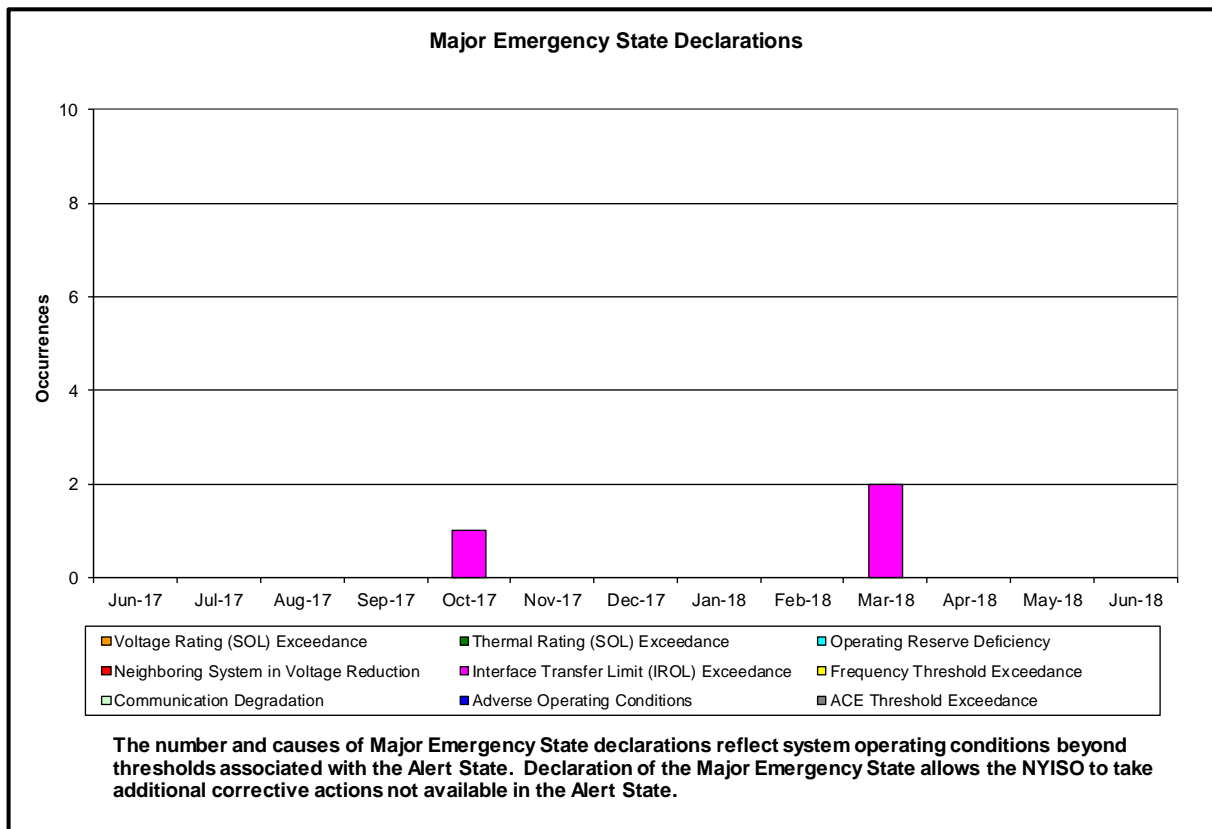
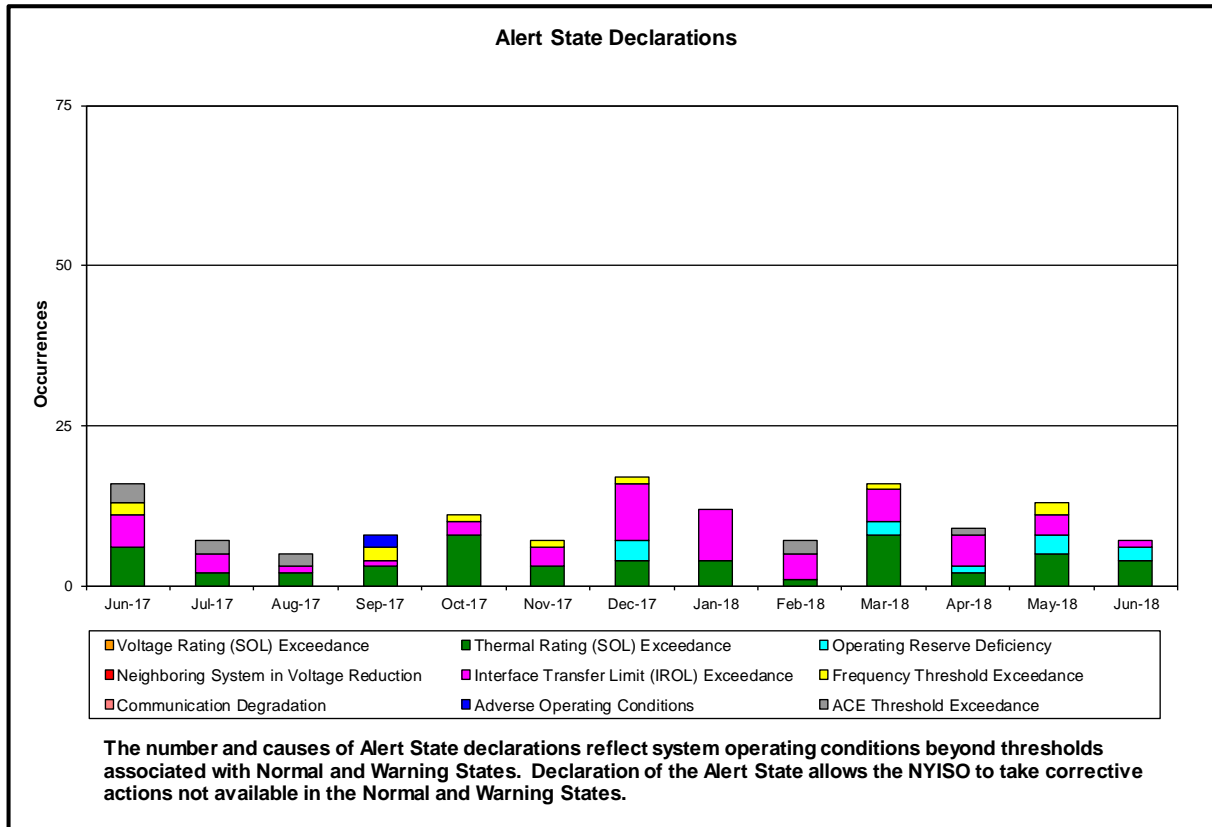
- Peak load of 28,166 MW occurred on 06/18/2018 HB 15
- All-time summer capability period peak load of 33,956 MW occurred on 7/19/2013 HB 16
- 12.5 hours of Thunder Storm Alerts were declared
- 0 hours of NERC TLR level 3 curtailment
- High levels of wind curtailment in the North Country this month were coincident with the scheduled outages of the Browns Falls-Taylorville 115kV (#3/4), and the forced outage of the Marcy-Coopers Corners 345kV (UCC2-41).
- The high BMCR settlement in early June was due to forced outages of 345kV lines that are detailed in this report.
- The following table identifies the estimated production cost savings associated with the Broader Regional Market initiatives.

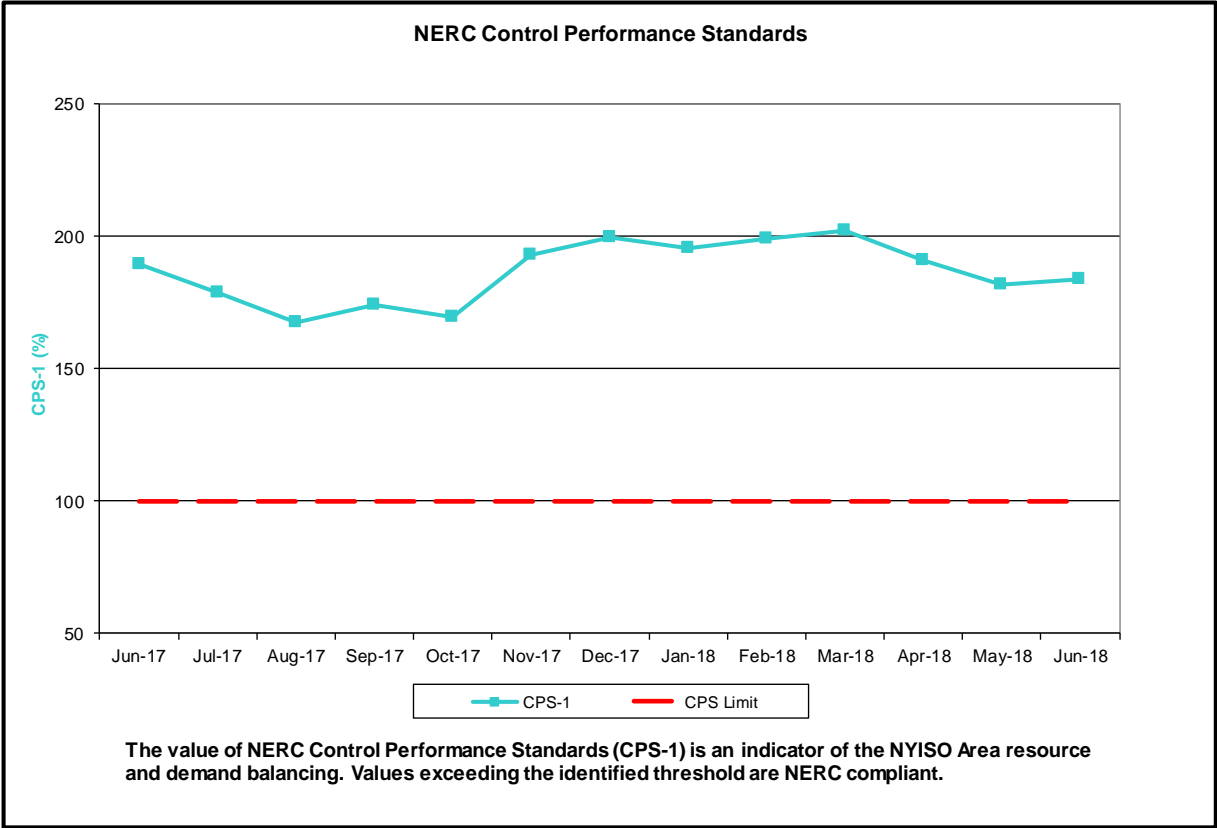
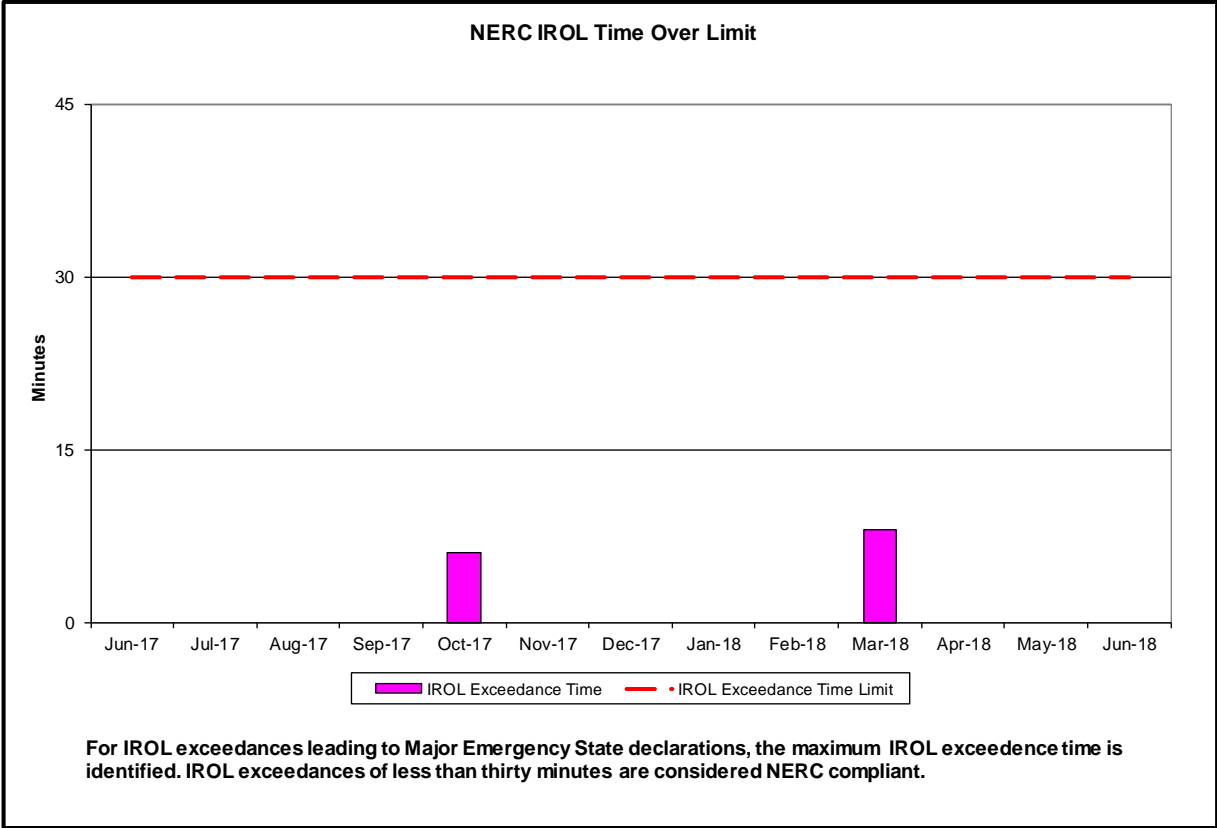
	Current Month Value (\$M)	Year-to-Date Value (\$M)
NY Savings from PJM-NY Congestion Coordination	\$0.10	\$8.89
NY Savings from PJM-NY Coordinated Transaction Scheduling	\$0.14	\$0.75
NY Savings from NE-NY Coordinated Transaction Scheduling	(\$0.01)	(\$0.69)
Total NY Savings	\$0.23	\$8.95
Regional Savings from PJM-NY Coordinated Transaction Scheduling	\$0.19	\$1.46
Regional Savings from NE-NY Coordinated Transaction Scheduling	\$0.08	\$0.36
Total Regional Savings	\$0.27	\$1.82

- Statewide uplift cost monthly average was \$0.12/MWh
- The following table identifies the Monthly ICAP Spot Market prices and the price delta.

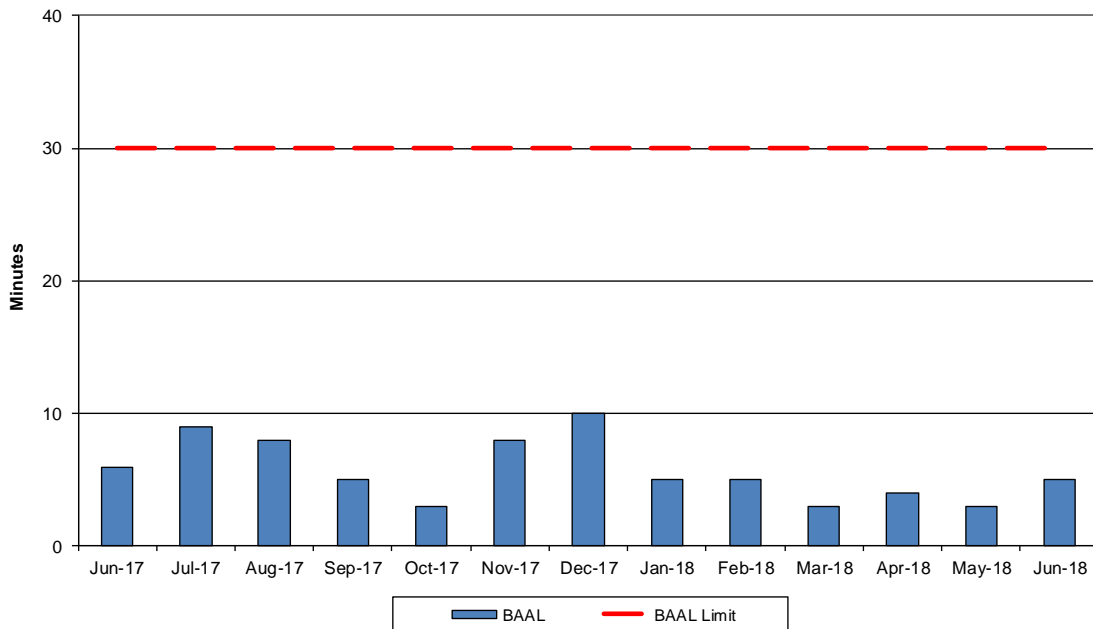
Spot Auction Price Results	NYCA	Lower Hudson Valley Zones	New York City Zone	Long Island Zone
July 2018 Spot Price	\$4.22	\$10.16	\$10.16	\$6.68
June 2018 Spot Price	\$4.33	\$10.24	\$10.24	\$6.80
Delta	(\$0.11)	(\$0.08)	(\$0.08)	(\$0.12)

Reliability Performance Metrics



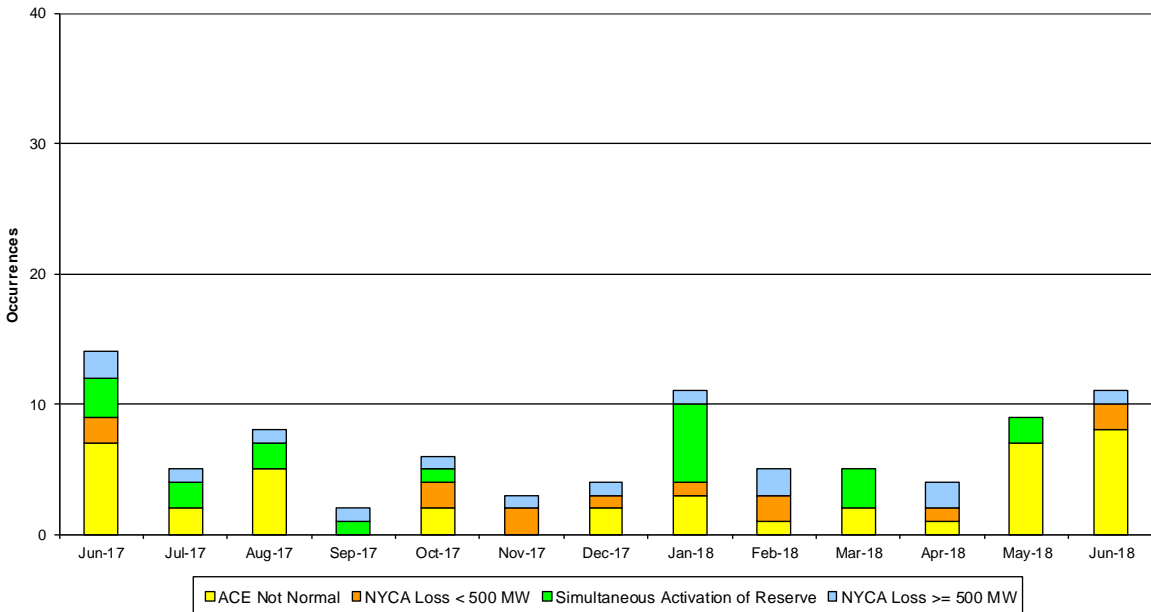


NERC Balancing Authority ACE Limit Standard

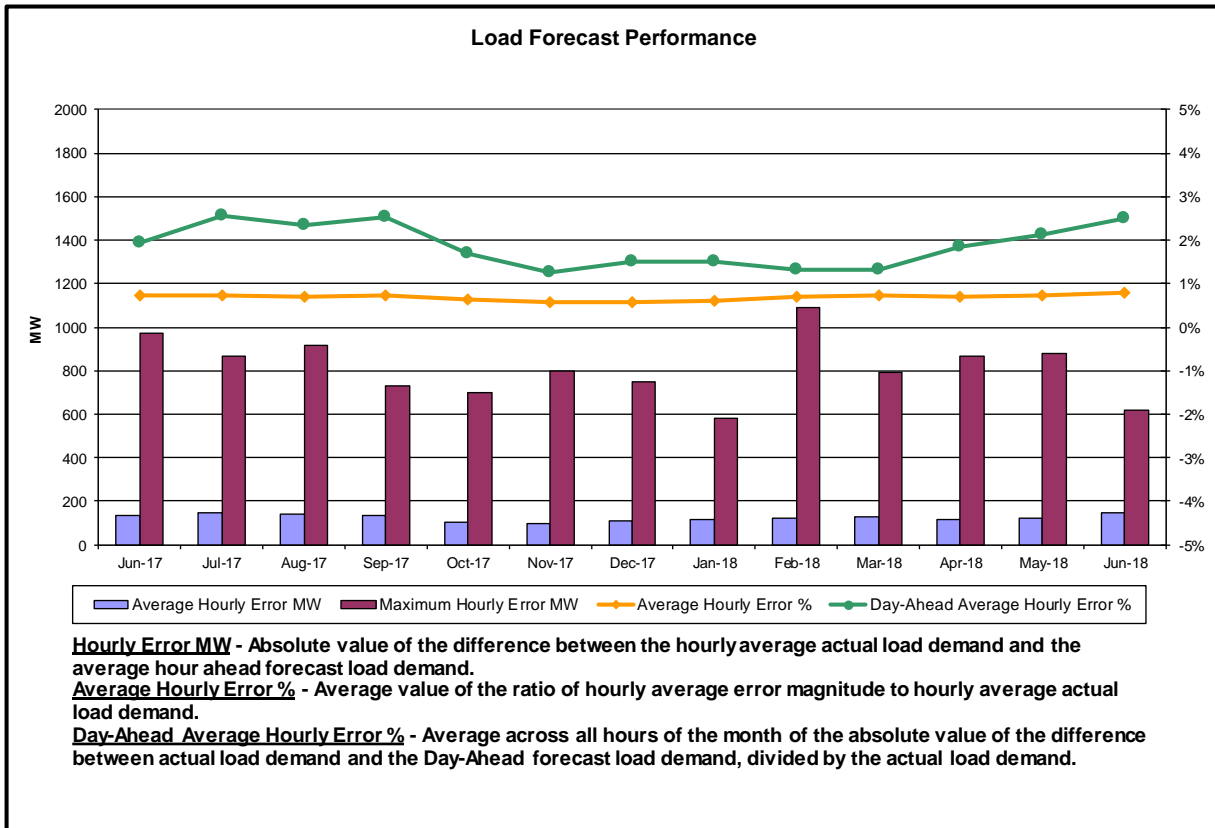
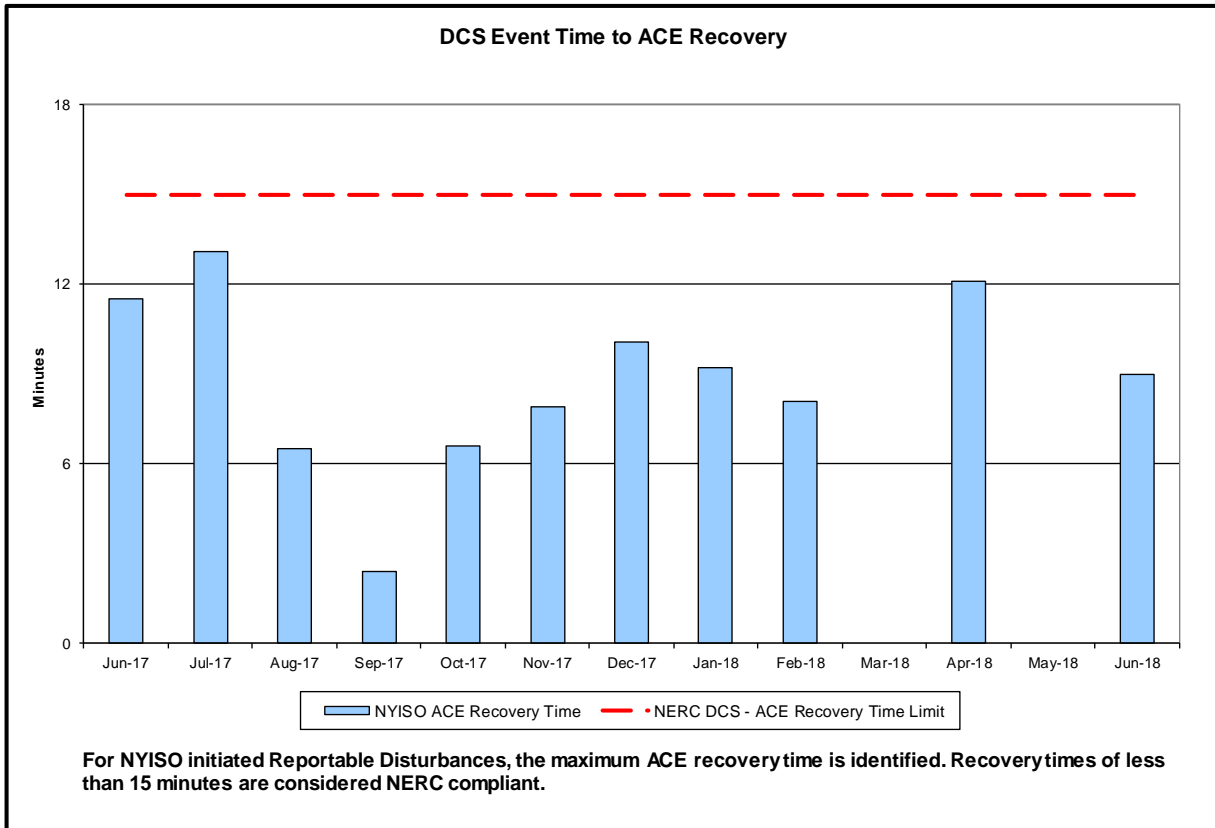


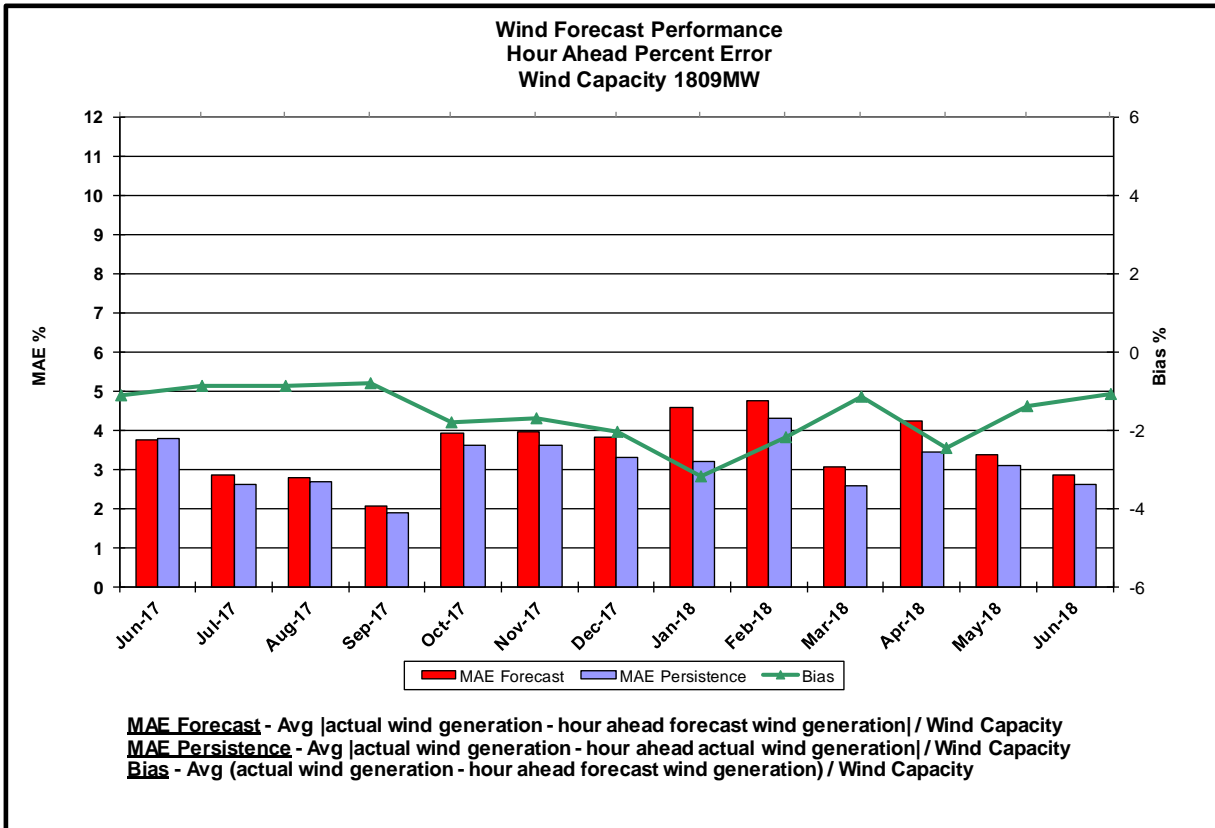
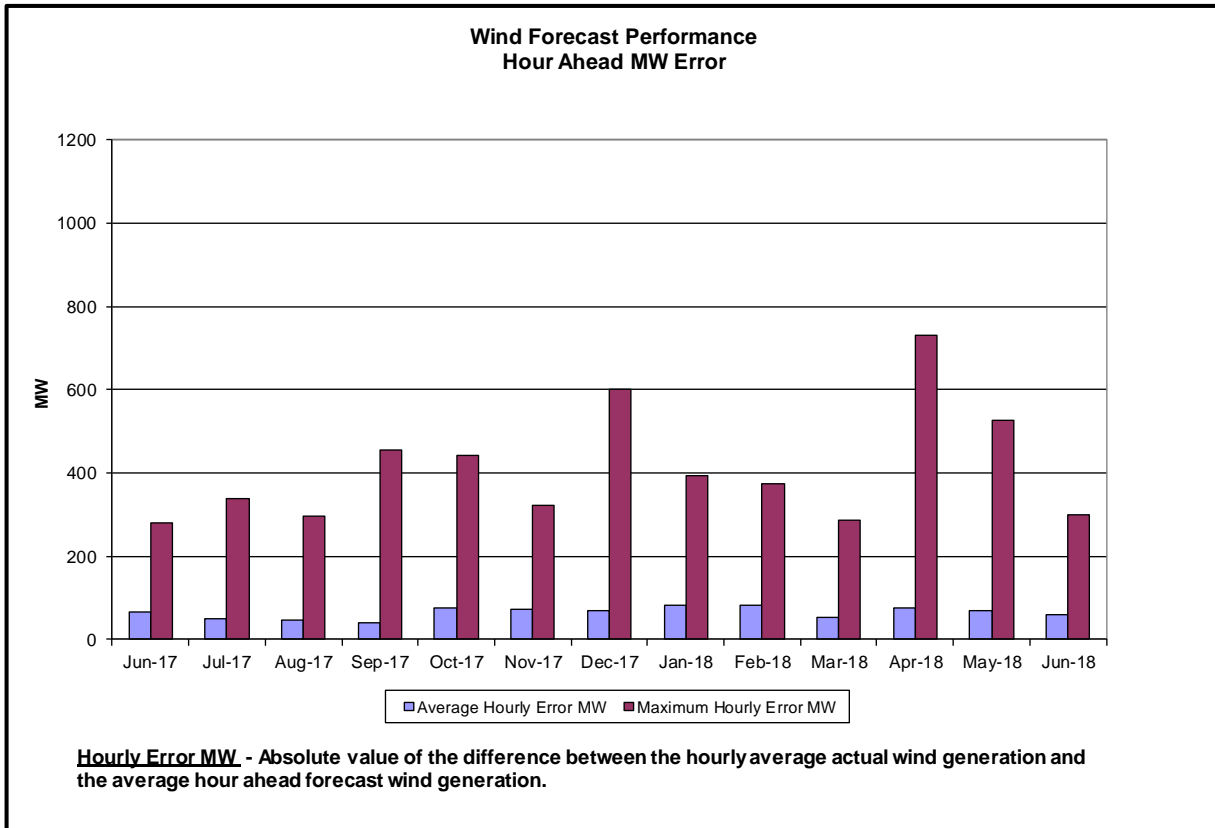
The amount of time the clock-minute average ACE exceeds the clock-minute Balancing Authority ACE Limit (BAAL) is an indicator of the NYISO Area resource and demand balancing. The maximum BAAL exceedance time is identified. BAAL exceedances of less than 30 consecutive clock-minutes are NERC compliant.

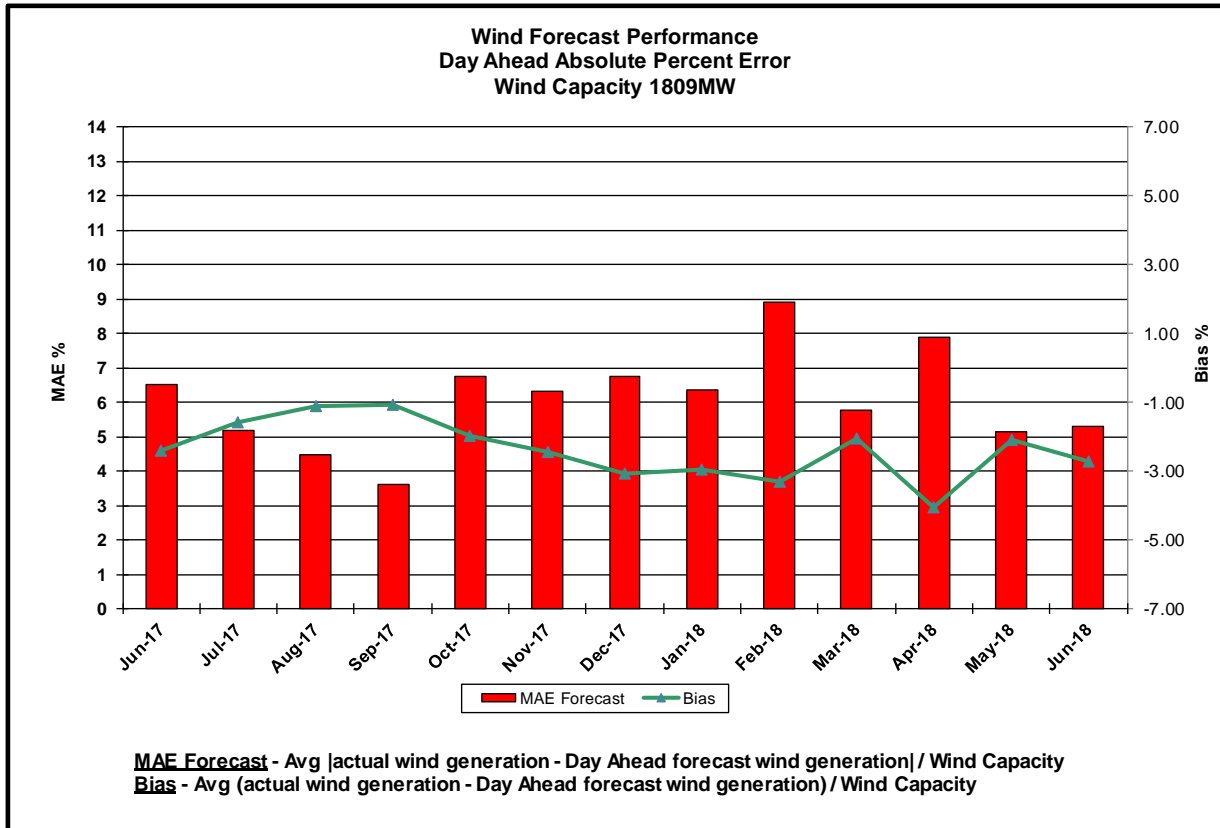
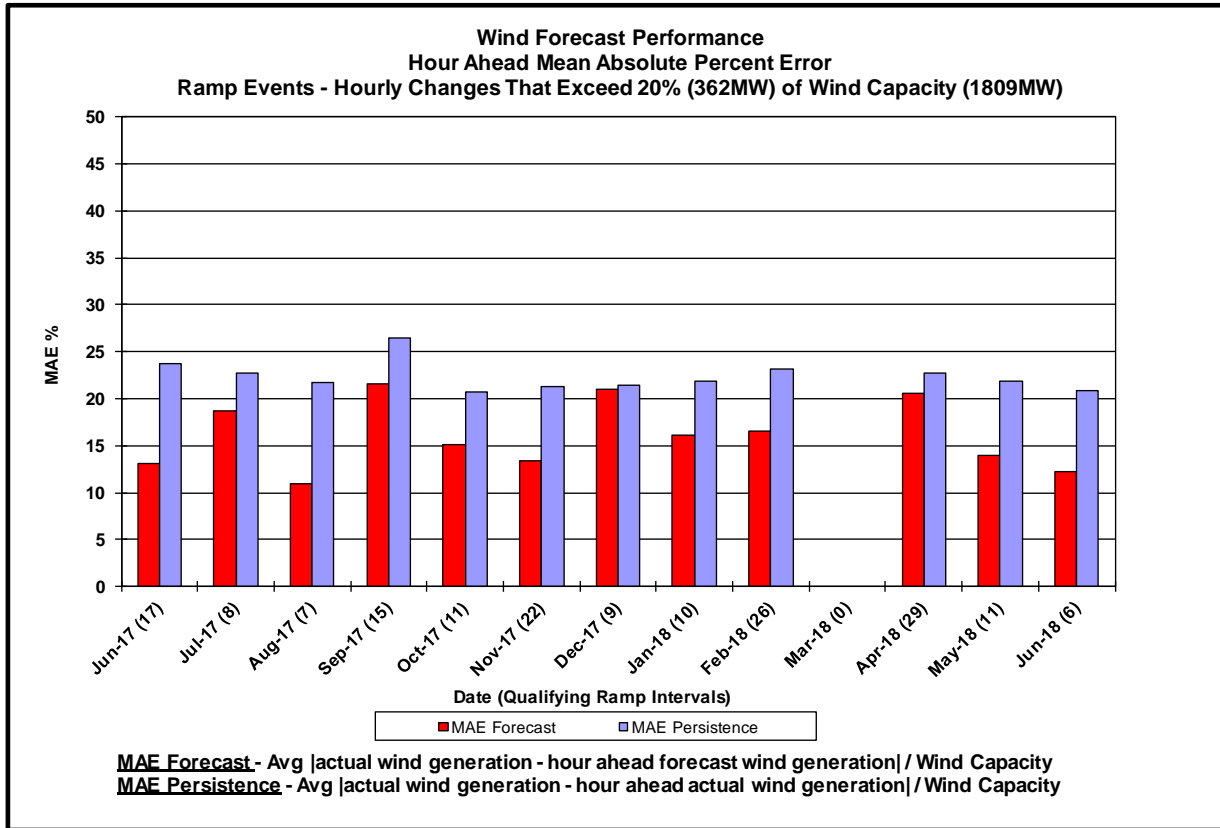
Reserve Activations

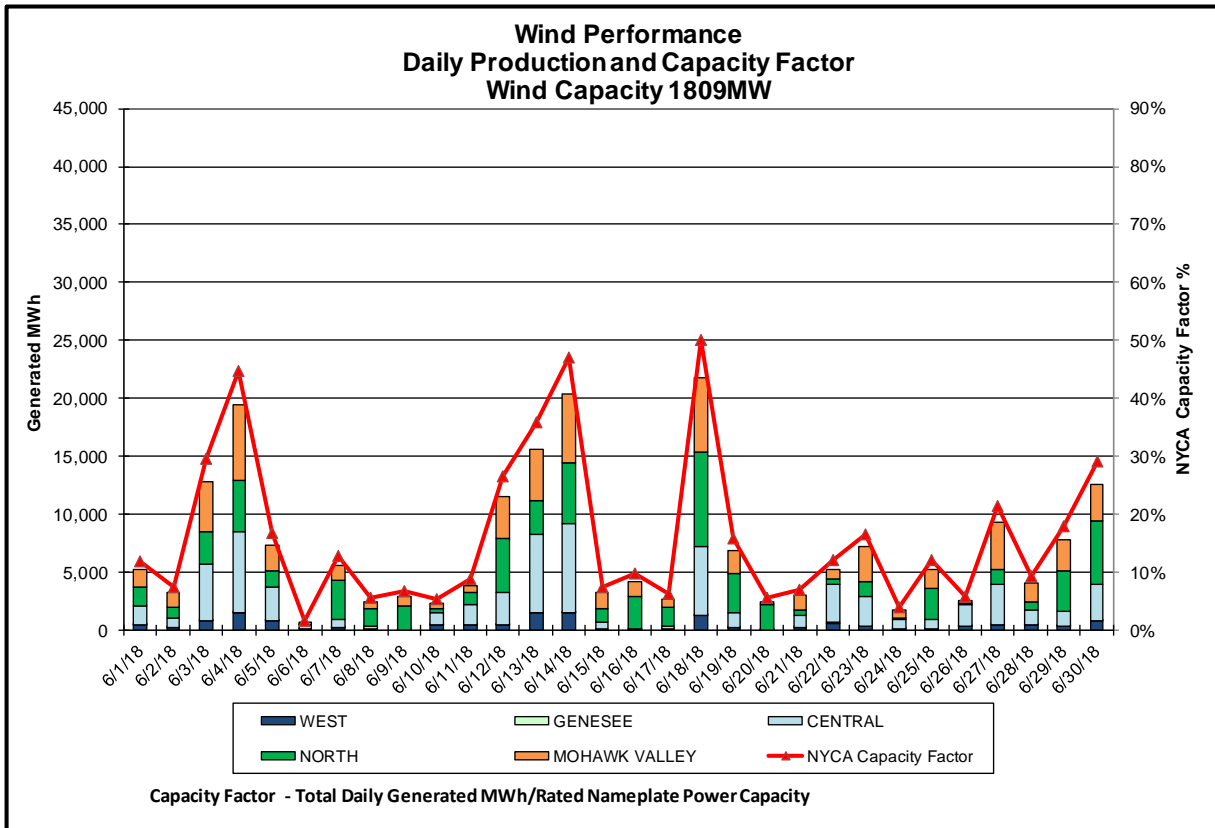
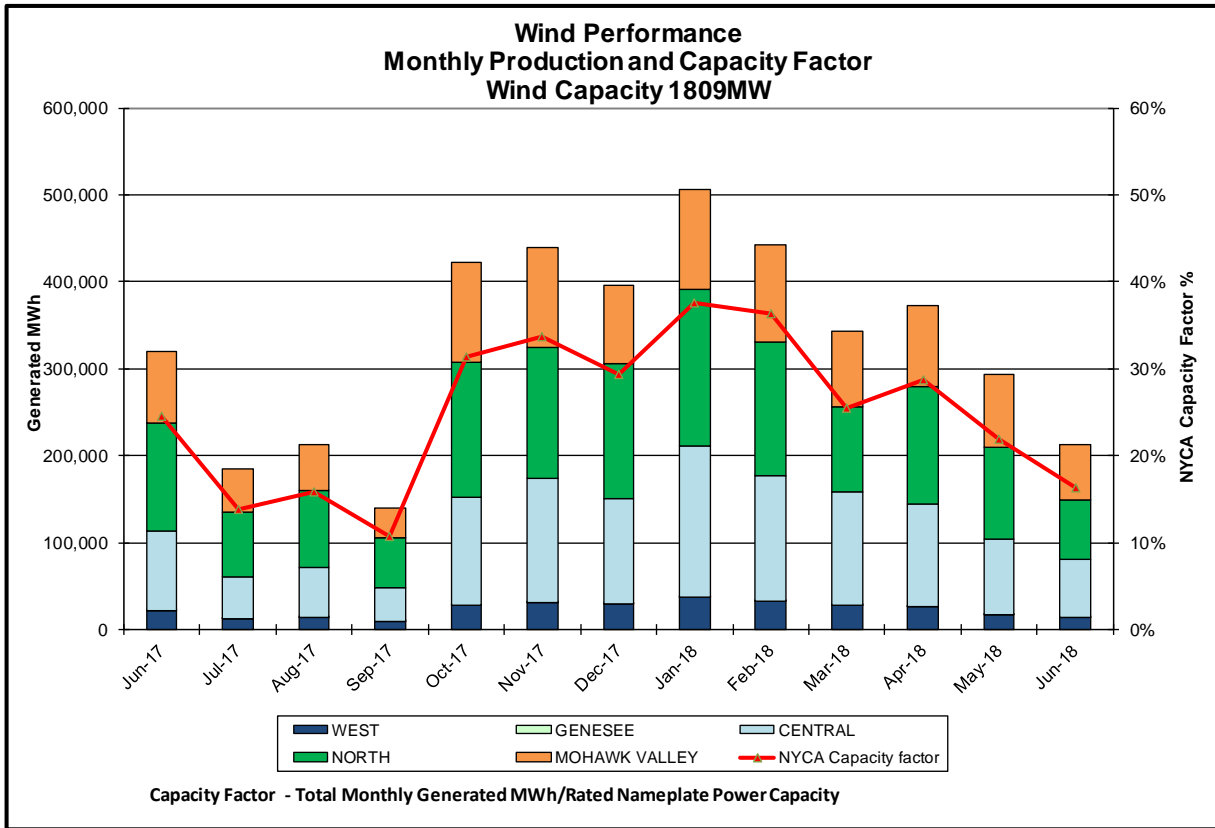


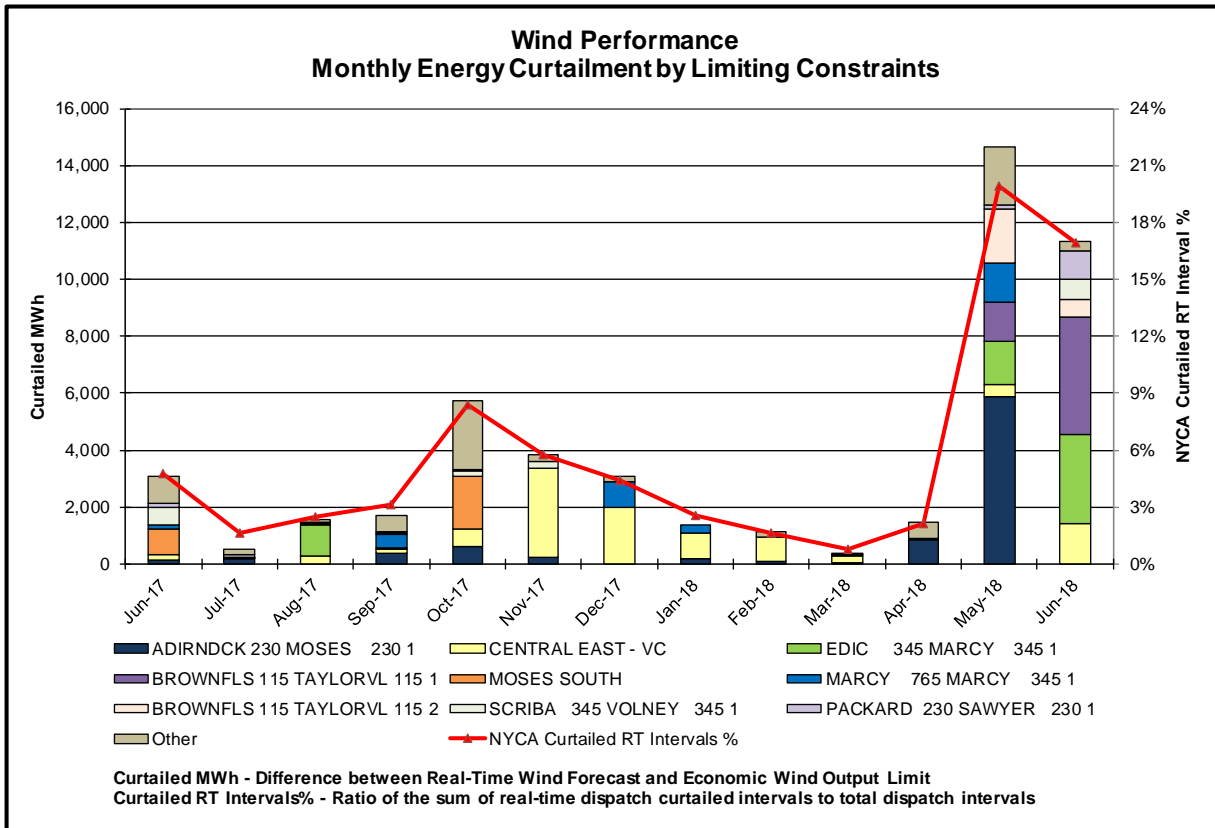
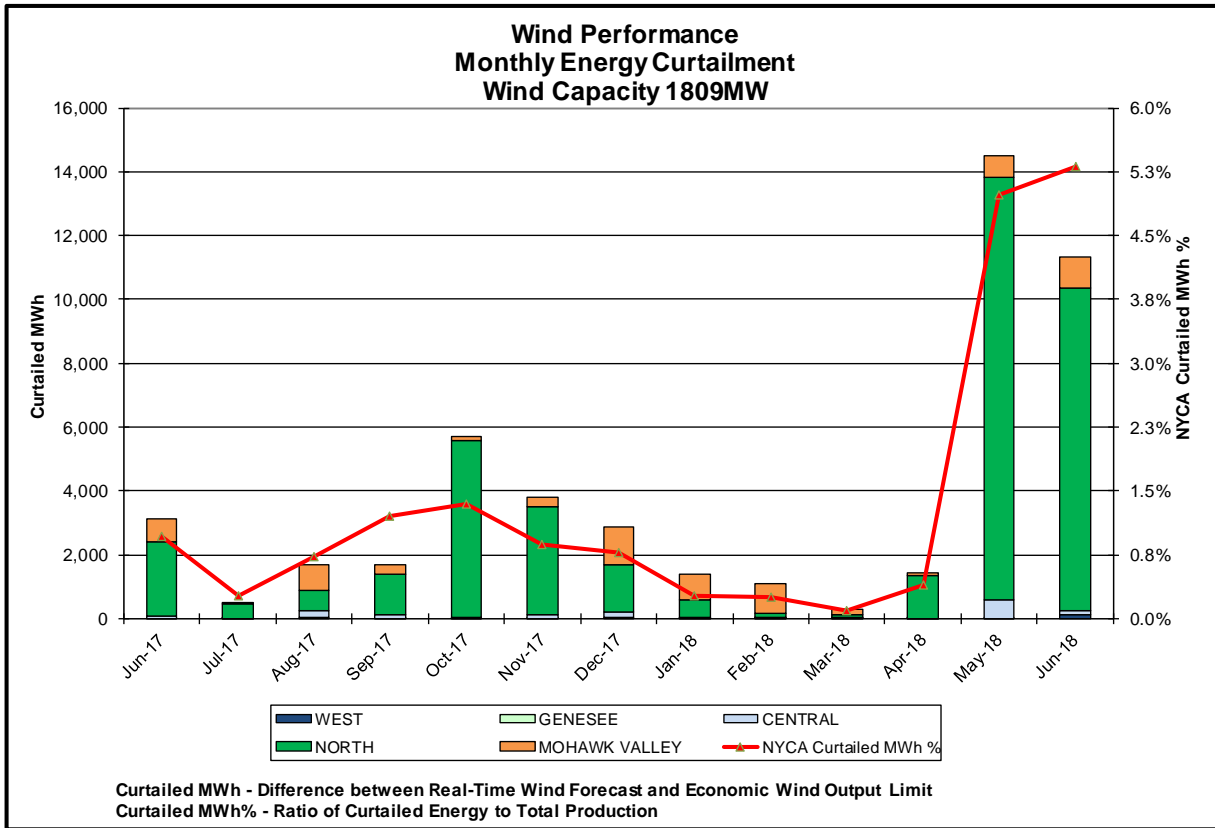
NYISO Reserve Activations are indicators of the need to respond to unexpected operational conditions within the NYISO Area or to assist a neighboring Area (Simultaneous Activation of Reserves) by activating an immediate resource and demand balancing operation.

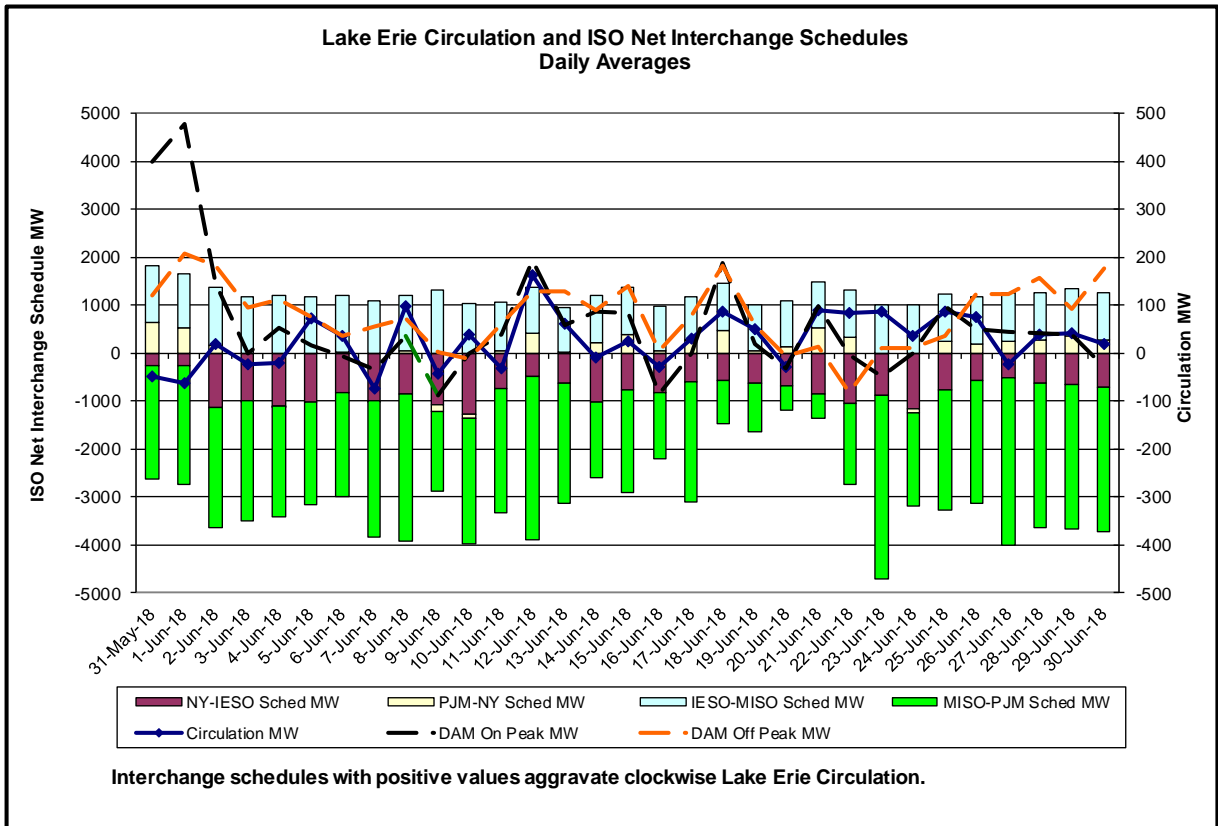
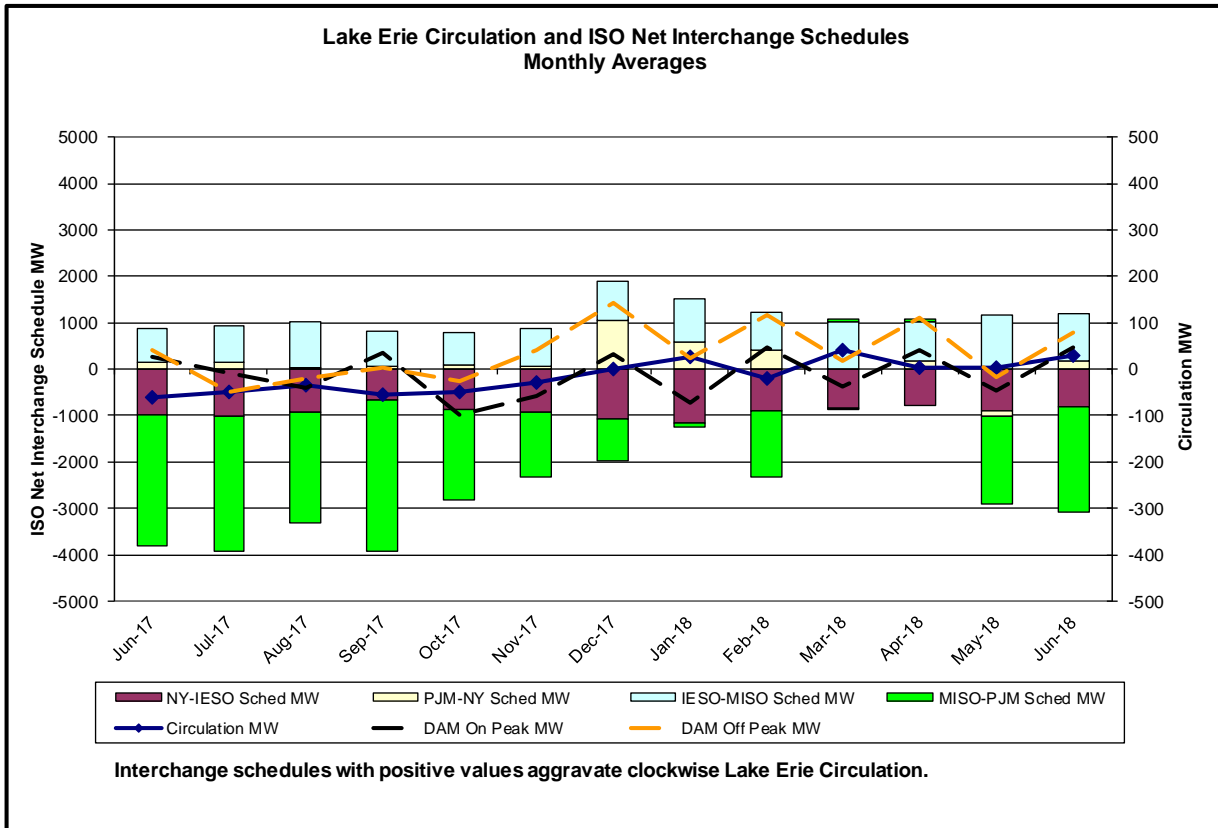




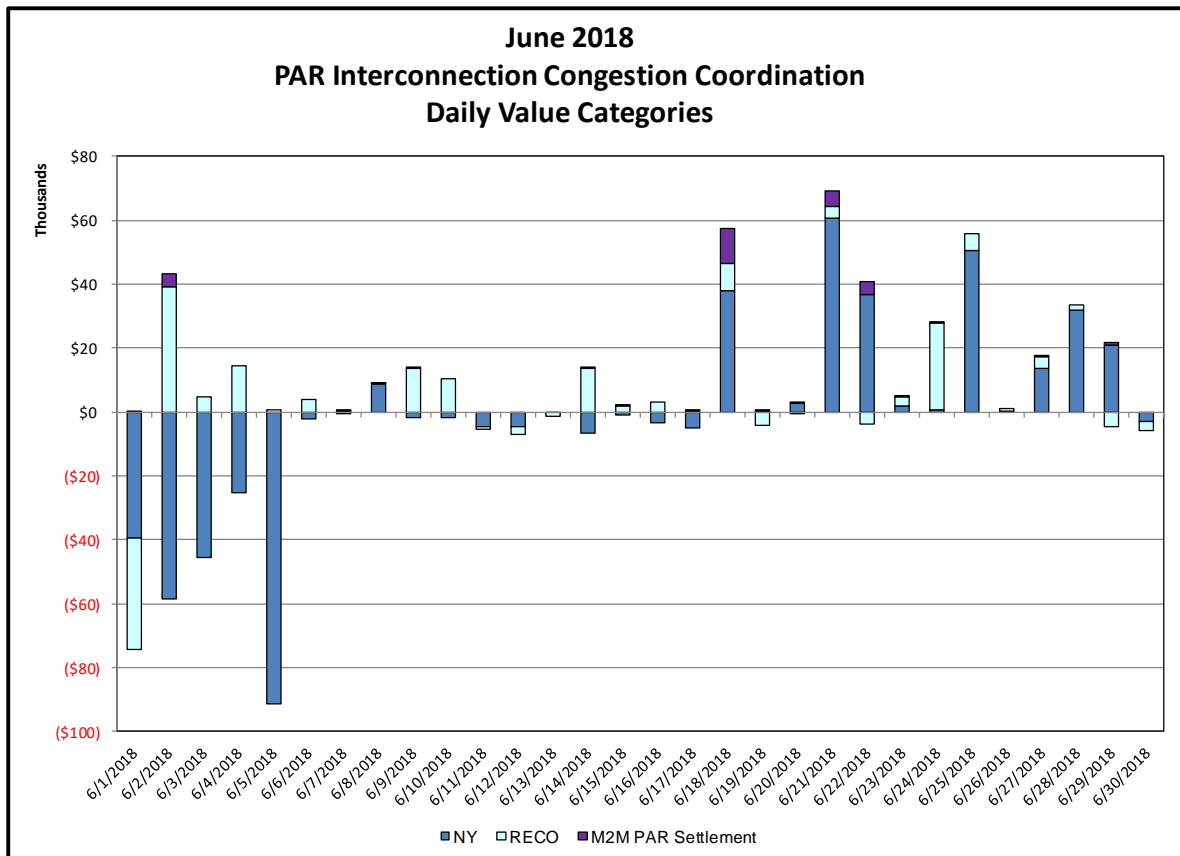
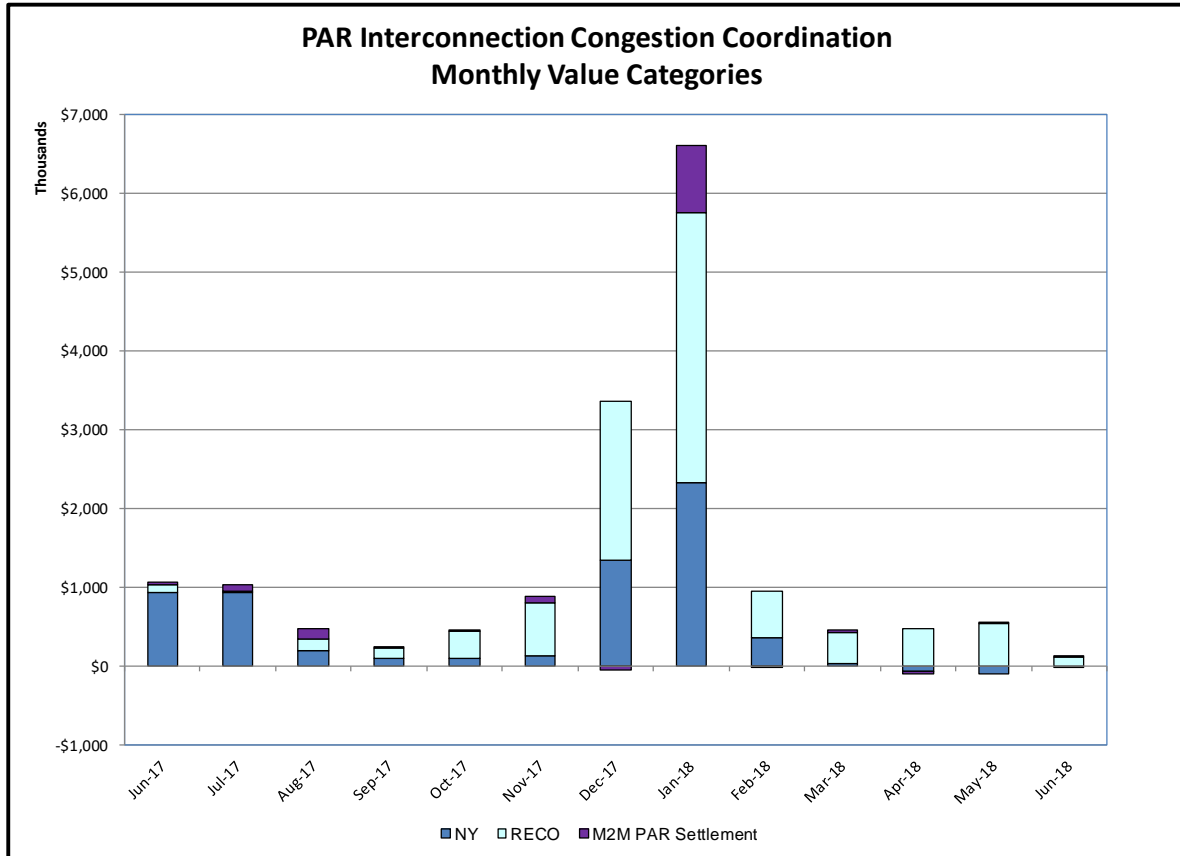






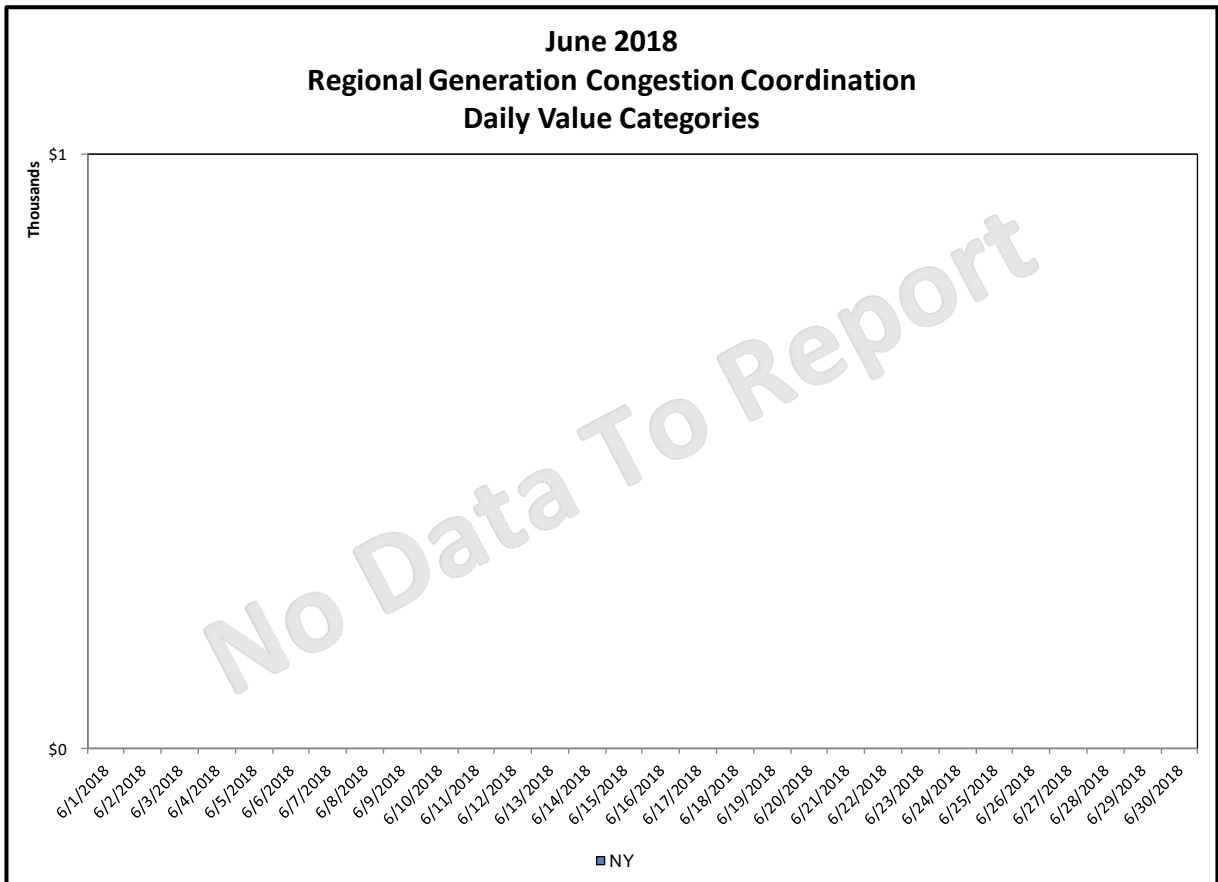
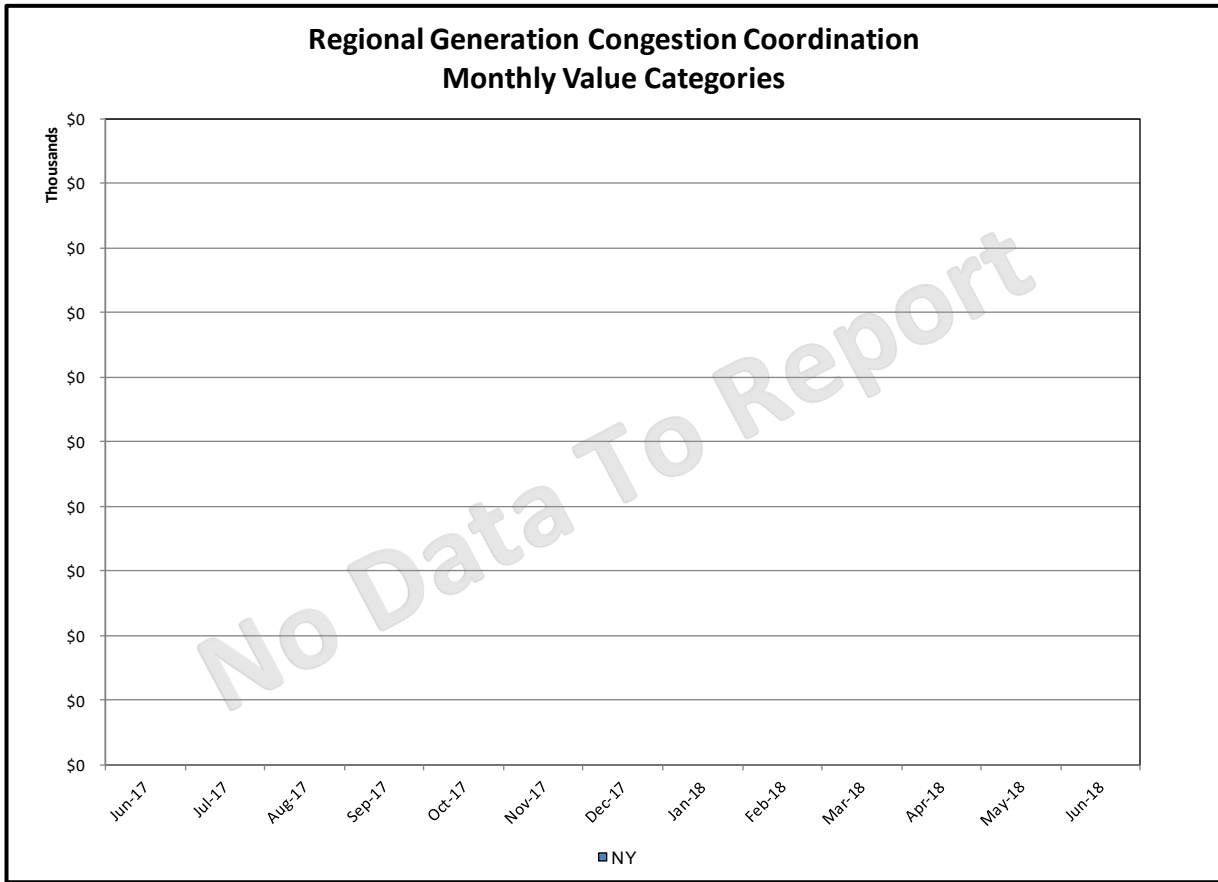


Broader Regional Market Performance Metrics



PAR Interconnection Congestion Coordination

<u>Category</u>	<u>Description</u>
NY	Represents the value NY realizes from Market-to-Market PAR Coordination when experiencing congestion. This is the estimated savings to NY for additional deliveries into NY
RECO	Represents the value of PJM's obligation to deliver 80% of service to RECO load over Ramapo 5018. This is the estimated reduction in NYCA congestion due to the PJM delivery of RECO over Ramapo 5018.
M2M PAR Settlement	Market-to-Market PAR Coordination settlement on coordinated flowgates. Through April 2017 this value was included in the NY and RECO categories. The positive sign convention indicates settlement to NY while the negative indicates settlement to PJM.



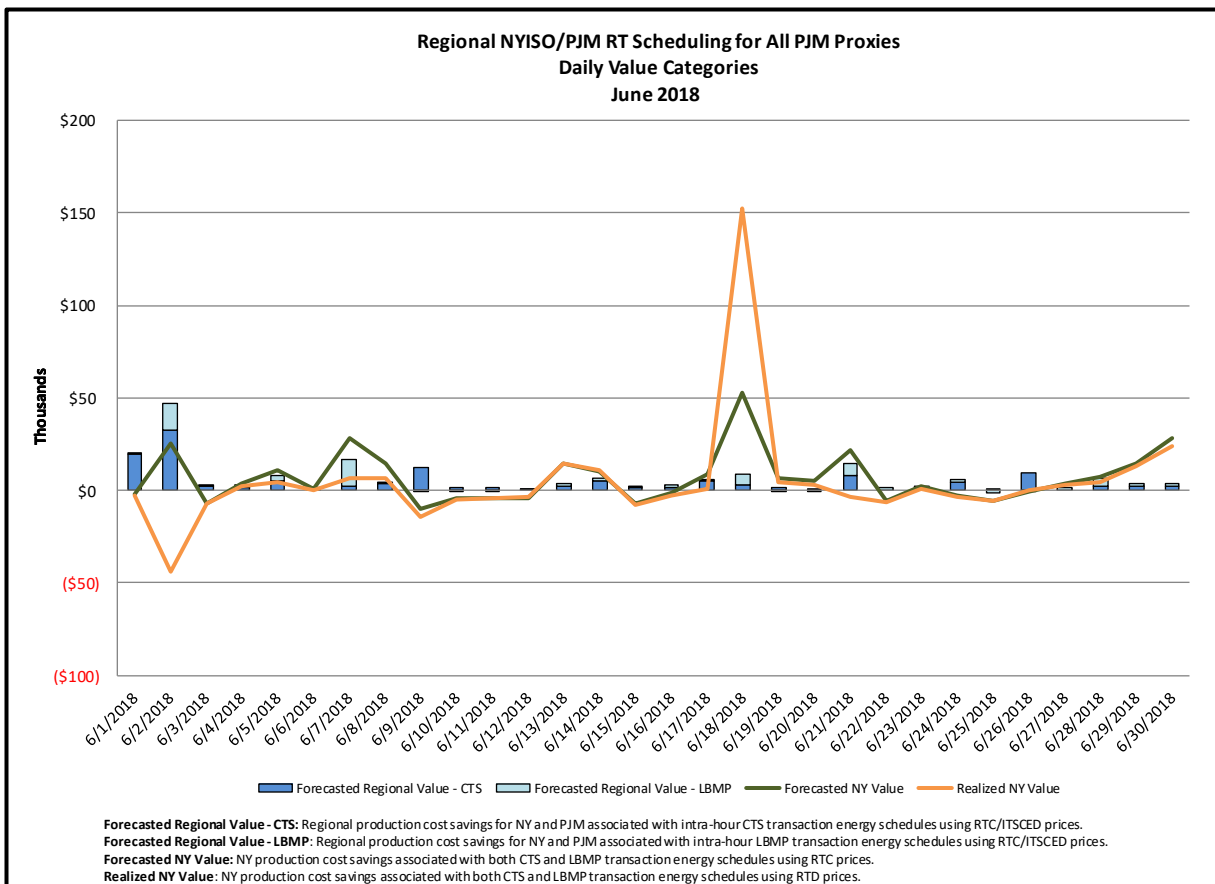
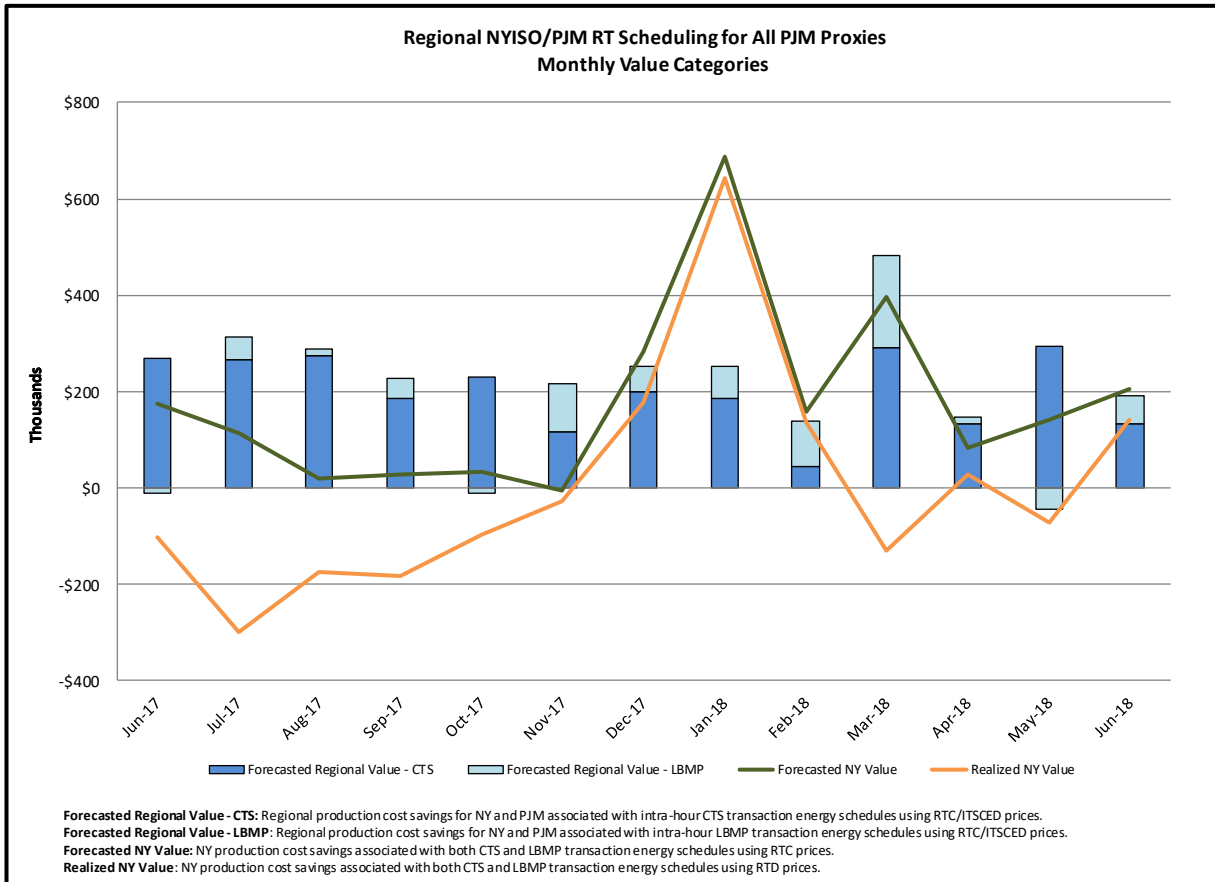
Regional Generation Congestion Coordination

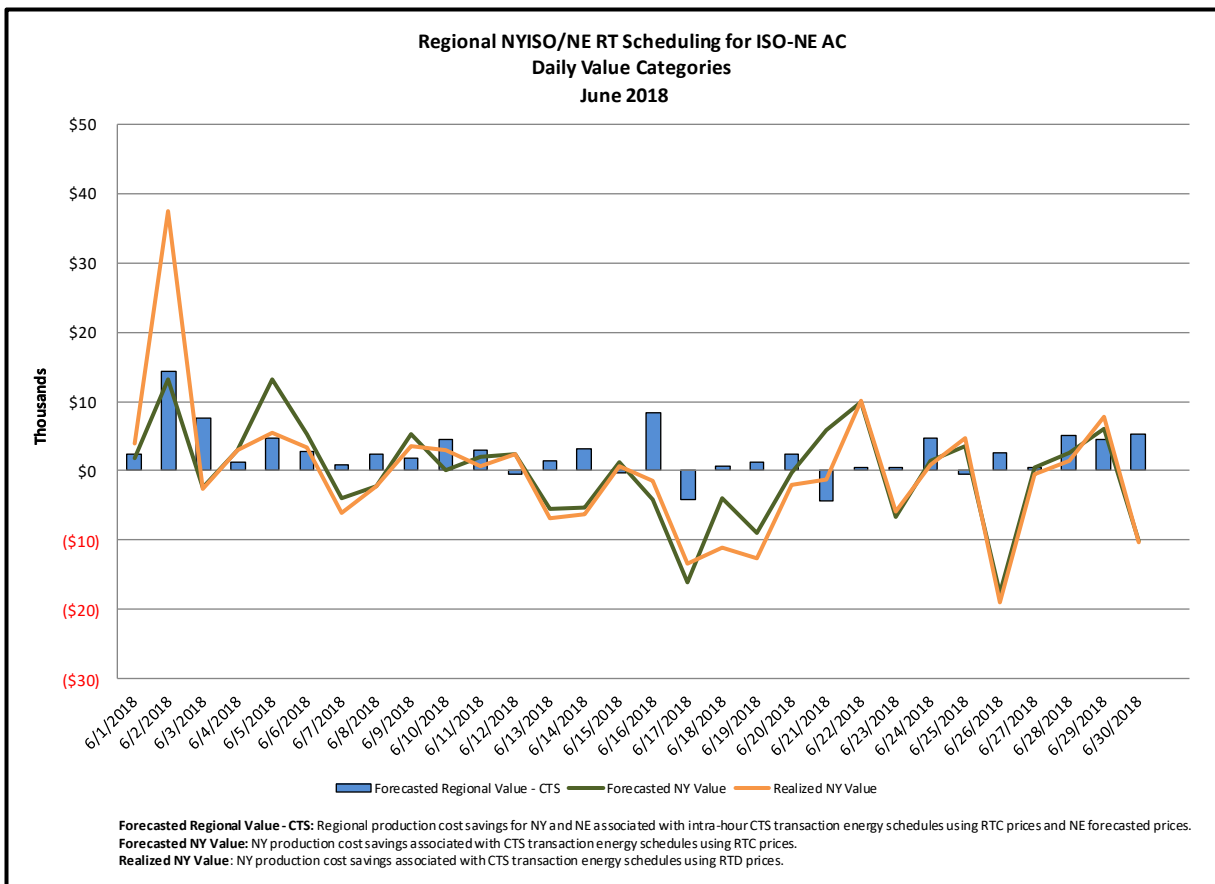
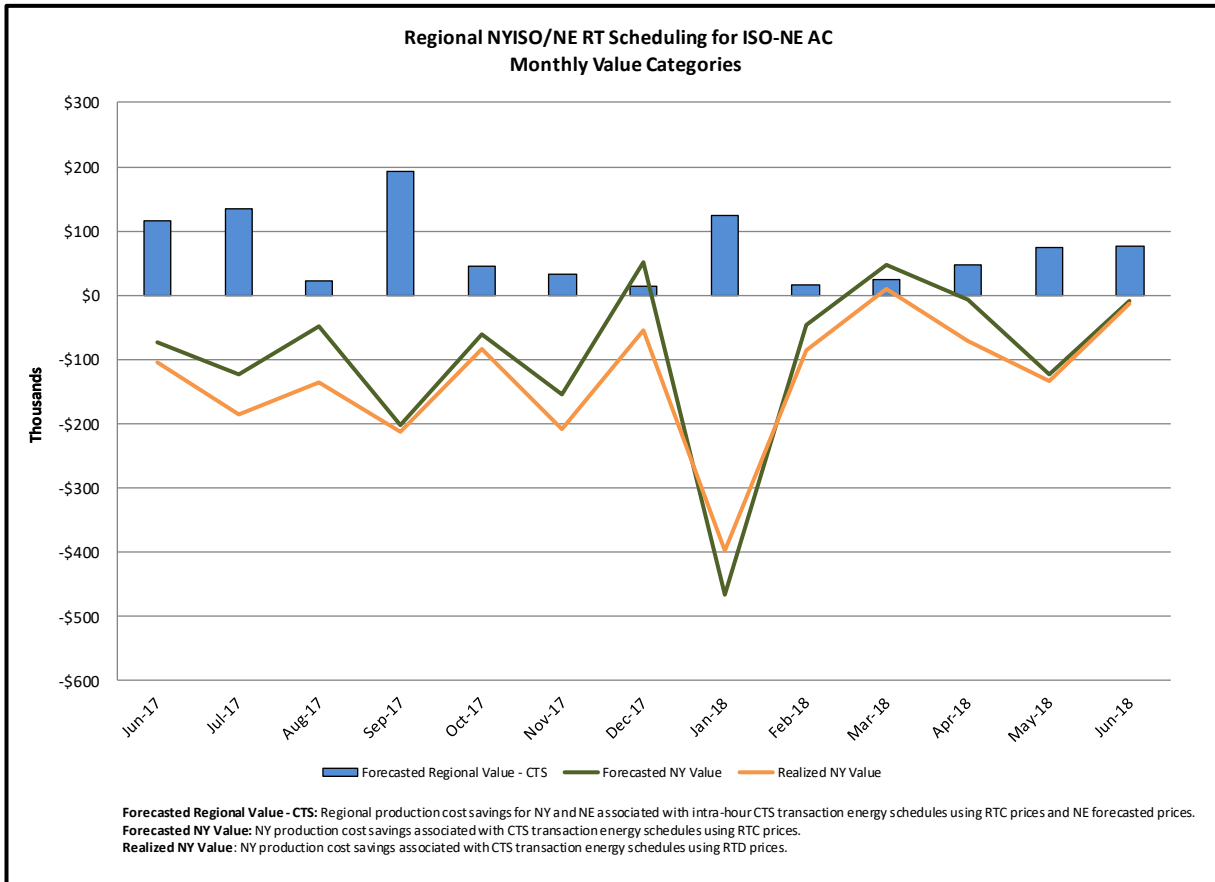
Category

NY

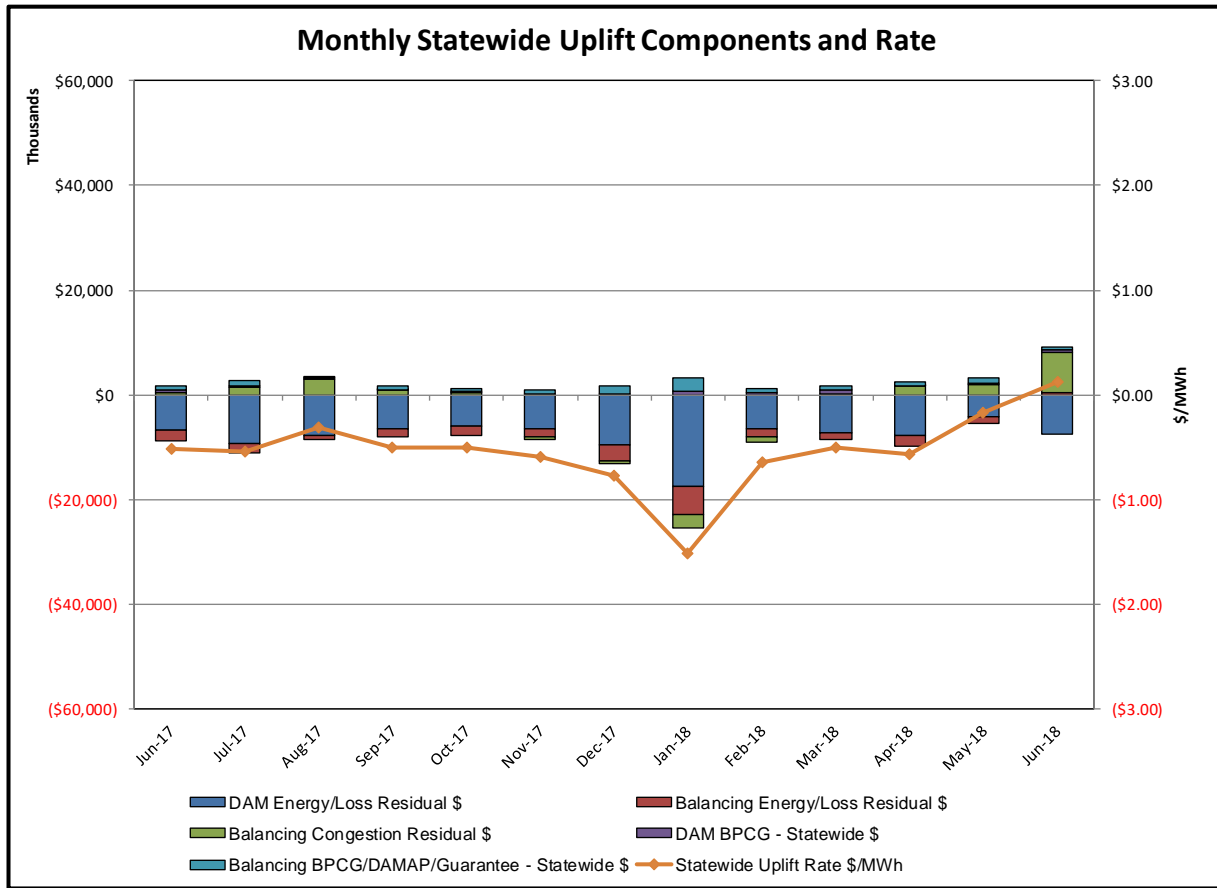
Description

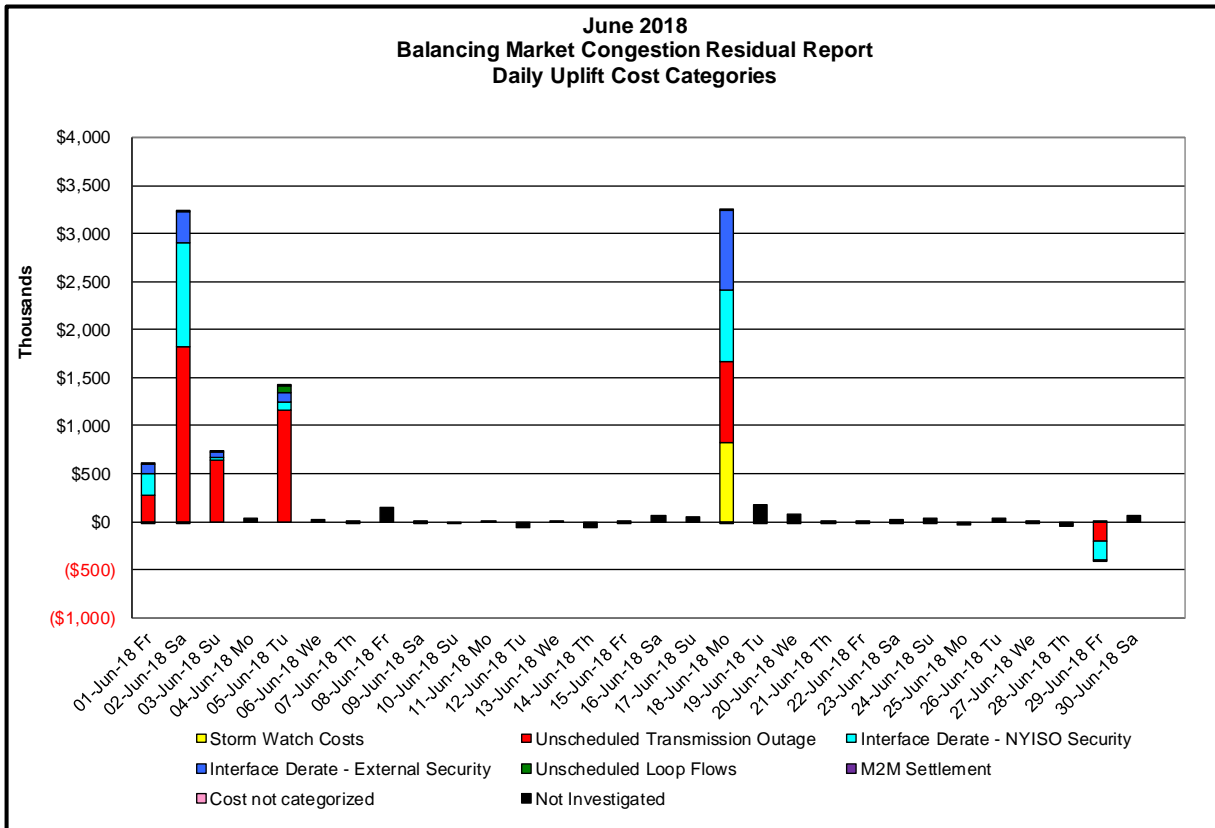
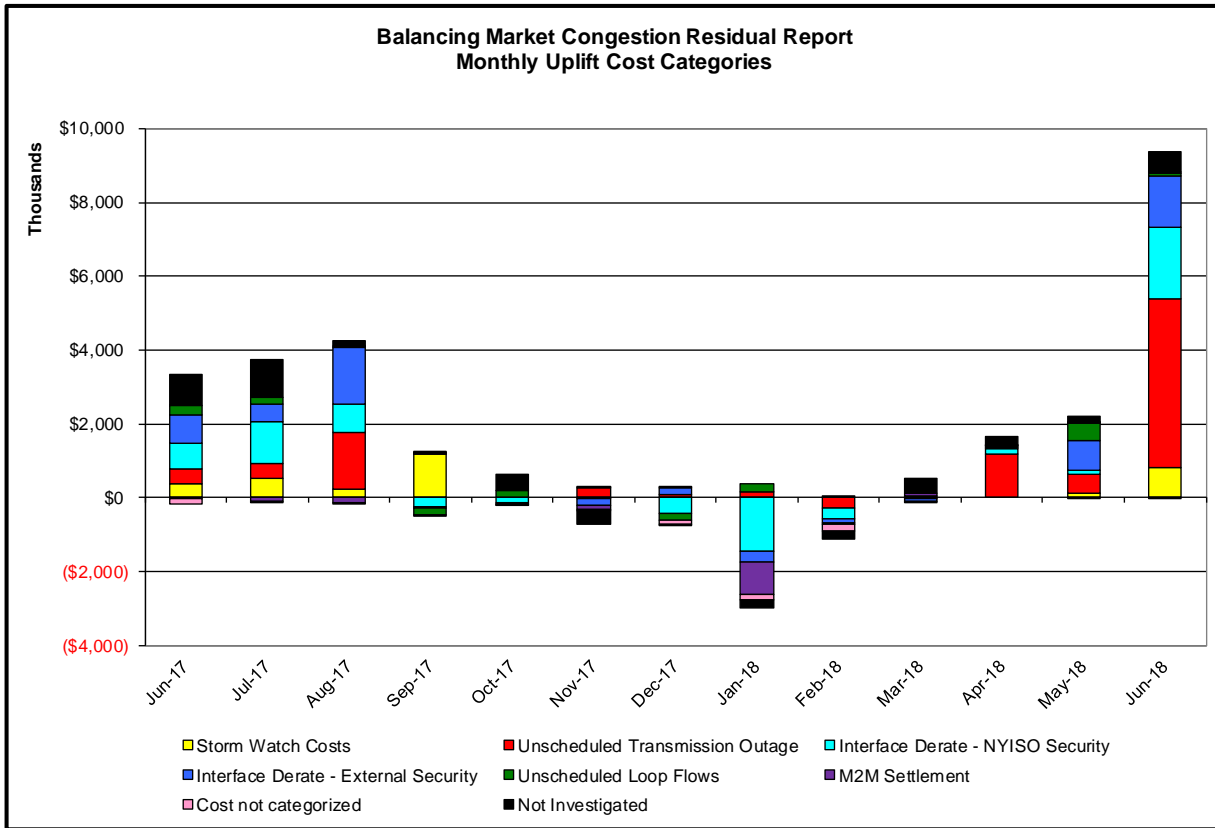
NYISO savings that result from PJM payments to NYISO when PJM's transmission use (PJM's market flow) is greater than PJM's entitlement of the NY transmission system and NYISO is incurring Western or Central NY congestion. Additionally, NYISO savings may result from the more efficient regional utilization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





Market Performance Metrics





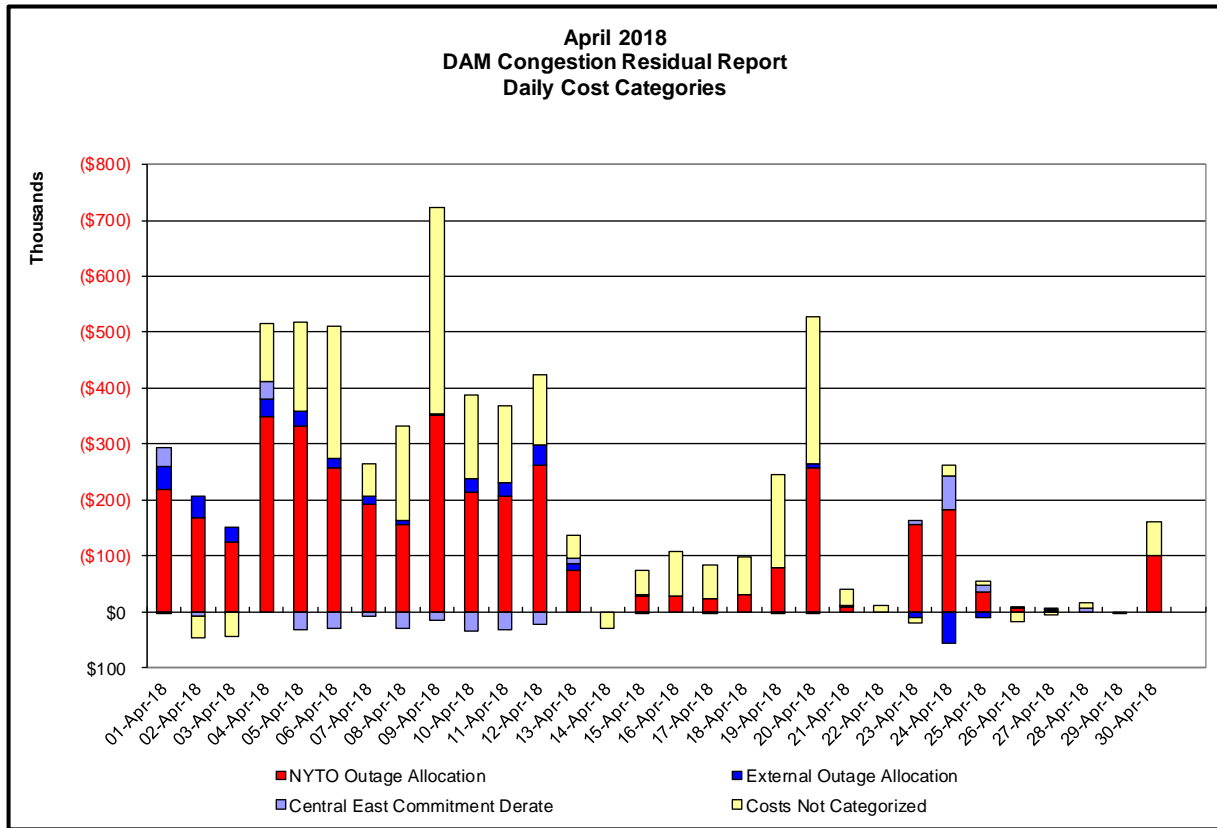
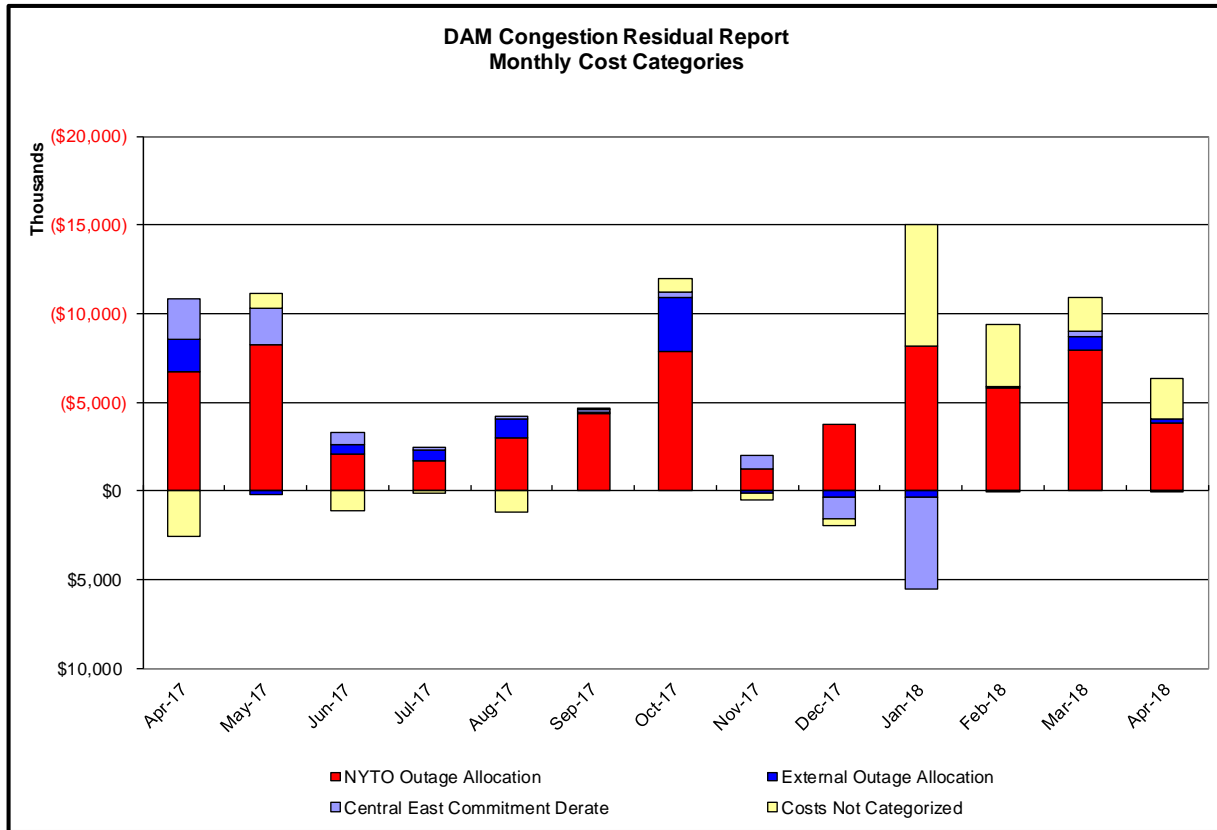
Day's investigated in June:1,2,3,5,18,29			
Event	Date (yyyymmdd)	Hours	Description
	6/1/2018	18-20,23	Extended outage Marcy-Fraser Annex-Coopers Corners345kV (#UCC2-41)
	6/1/2018	23	NYCA DNI Ramp Limit
	6/1/2018	20	Derate MottHaven-Dunwoodie 345kV (#72) for I/o MottHaven-Dunwoodie 345kV (#71)
	6/1/2018	20	Derate MottHaven-Dunwoodie 345kV (#71) for I/o MottHaven-Dunwoodie 345kV (#72)
	6/1/2018	23	Derate Edic-Marcy 345kV (#UE1-7) for I/o TWR:12& UNS-18
	6/1/2018	20	PJM AC DNI Ramp Limit
	6/1/2018	18,20	NE AC DNI Ramp Limit
	6/2/2018	0,1,4-6,13-18,20-22	Extended outage Marcy-Fraser Annex-Coopers Corners345kV (#UCC2-41)
	6/2/2018	4,11,21	NYCA DNI Ramp Limit
	6/2/2018	0	Derate MottHaven-Dunwoodie 345kV (#72) for I/o MottHaven-Dunwoodie 345kV (#71)
	6/2/2018	0	Derate MottHaven-Dunwoodie 345kV (#71) for I/o MottHaven-Dunwoodie 345kV (#72)
	6/2/2018	6,8,9,12	Derate West 49th Street-Sprainbrook 345kV (#M51) for I/o SCB SPRAIN RS4 WITH RNS3 O/S
	6/2/2018	8-12,14	HQ_CHAT-NY Scheduling Limit
	6/2/2018	0,1	NE AC DNI Ramp Limit
	6/3/2018	0-6,8-13,16,19-22	Extended outage Marcy-Fraser Annex-Coopers Corners345kV (#UCC2-41)
	6/3/2018	7	Derate Dunwoodie-Shore Rd 345kV (#Y50)
	6/3/2018	0-2	Derate East Garden City-Valley Stream 138kV (#262) I/o SCB:NEWBRDG 1380 461&BK6+4
	6/3/2018	1,6-8,13,14,16-18	HQ_CHAT-NY Scheduling Limit
	6/3/2018	9	NE AC DNI Ramp Limit
	6/5/2018	0,1,3-13	Extended outage Marcy-Fraser Annex-Coopers Corners345kV (#UCC2-41)
	6/5/2018	23	Forced outage West 49th St-Sprainbrook 345kV (#M51)
	6/5/2018	1,4-6,8	NYCA DNI Ramp Limit
	6/5/2018	23	Derate East Garden City-Valley Stream 138kV (#262) I/o SCB:NEWBRDG 1380 461&BK6+4
	6/5/2018	23	Derate Freeport-Newbridge 138kV (#461)
	6/5/2018	3-5,8,10	NE AC DNI Ramp Limit
	6/5/2018	16	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Niagara-Packard 230kV, Packard-Sawyer 230kV, Niagara-Robinson Rd 230kV
	6/18/2018	14-23	Thunder Storm Alert
	6/18/2018	12-23	Forced outage Leeds-Pleasant Valley 345kV (#92)
	6/18/2018	15,16,21	Derate East Garden City-Newbridge 138kV (#462)
	6/18/2018	15,16	Derate East Garden City-Newbridge 138kV (#462) for I/o SCB:NEWBRDG 1310 467&BK7+9
	6/18/2018	21-23	Derate East Garden City-Valley Stream 138kV (#262) for I/o SCB:NEWBRDG 1380 461&BK6+4
	6/18/2018	11-13,22	Derate Greenwood-Foxhills 138kV (#29231)
	6/18/2018	12-13,22,23	Derate Greenwood-Foxhills 138kV (#29232)
	6/18/2018	22,23	Derate Freeport-Newbridge 138kV (#461)
	6/18/2018	16	Derate Rainey-Vernon 138kV (#36312)
	6/18/2018	22,23	Derate Scriba-Volney 345kV (#20) for I/o Scriba-Volney 345kV (#21)
	6/18/2018	12,15-19,22	NYCA DNI Ramp Limit
	6/18/2018	12-23	NE AC DNI Ramp Limit
	6/18/2018	23	PJM AC DNI Ramp Limit
	6/18/2018	17	NE_NNC1385-NY Scheduling Limit
	6/18/2018	9,10	HQ_CHAT-NY Scheduling Limit
	6/29/2018	15,16	Forced outage Jamaica-Lake Success 138kV (#903)
	6/29/2018	15,16	Uprate Packard-Sawyer 345kV (#77) for I/o BUS:PACKARD BK3 & 61 & 78
	6/29/2018	15	Uprate Packard-Sawyer 345kV (#78) for I/o Packard-Sawyer 345kV (#77)

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	

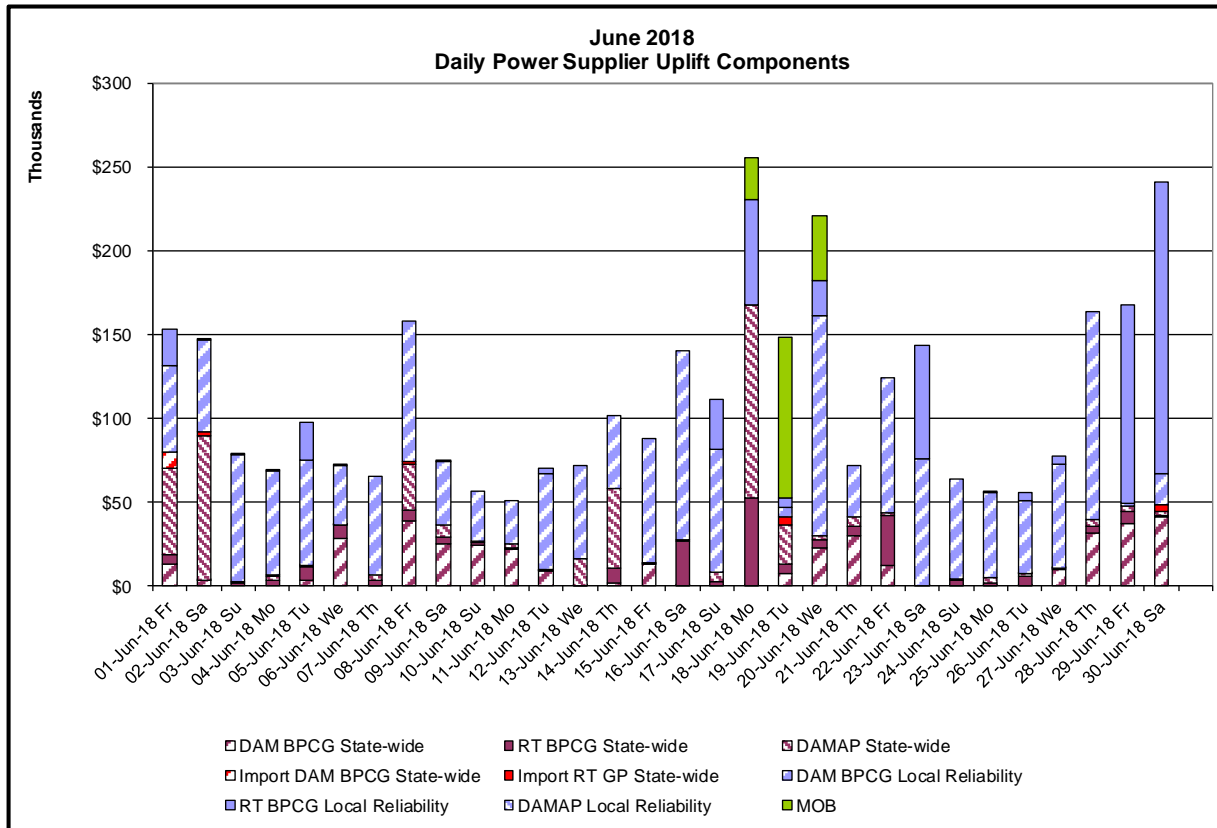
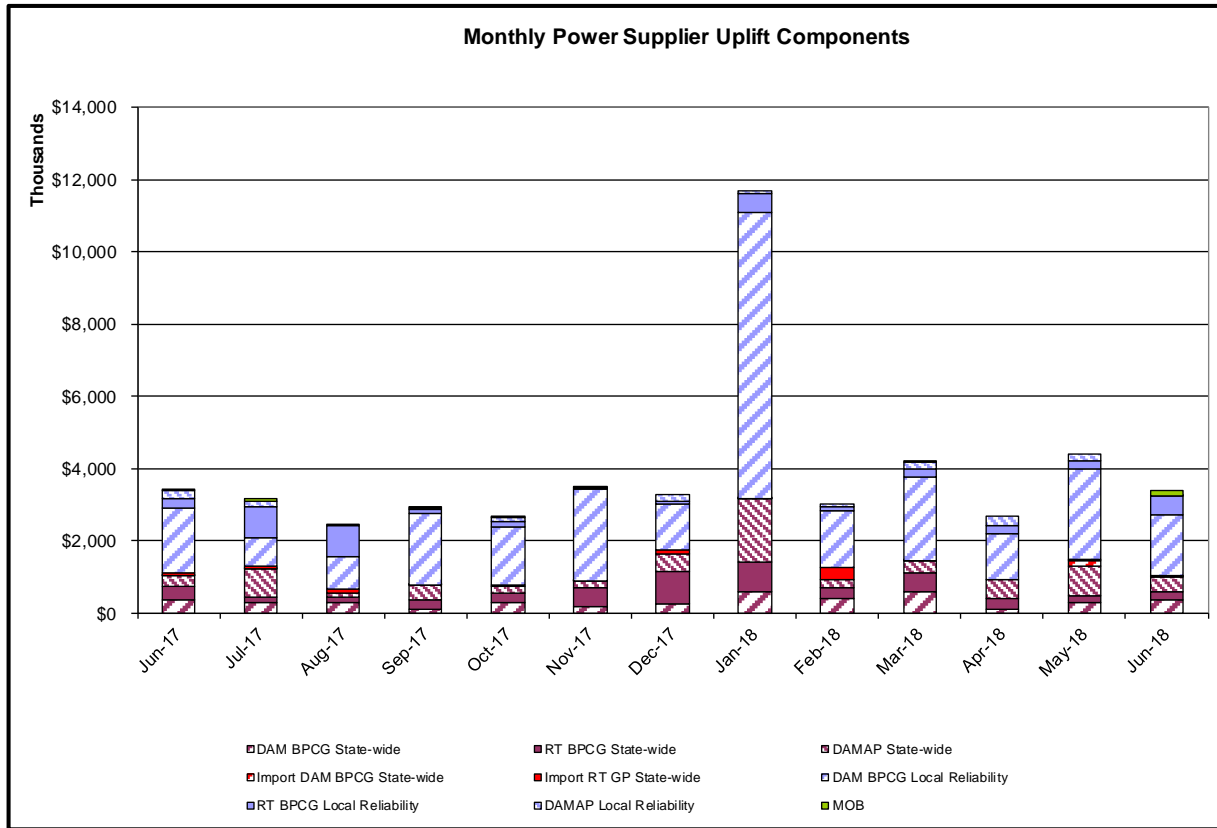
Monthly Balancing Market Congestion Report Assumptions/Notes

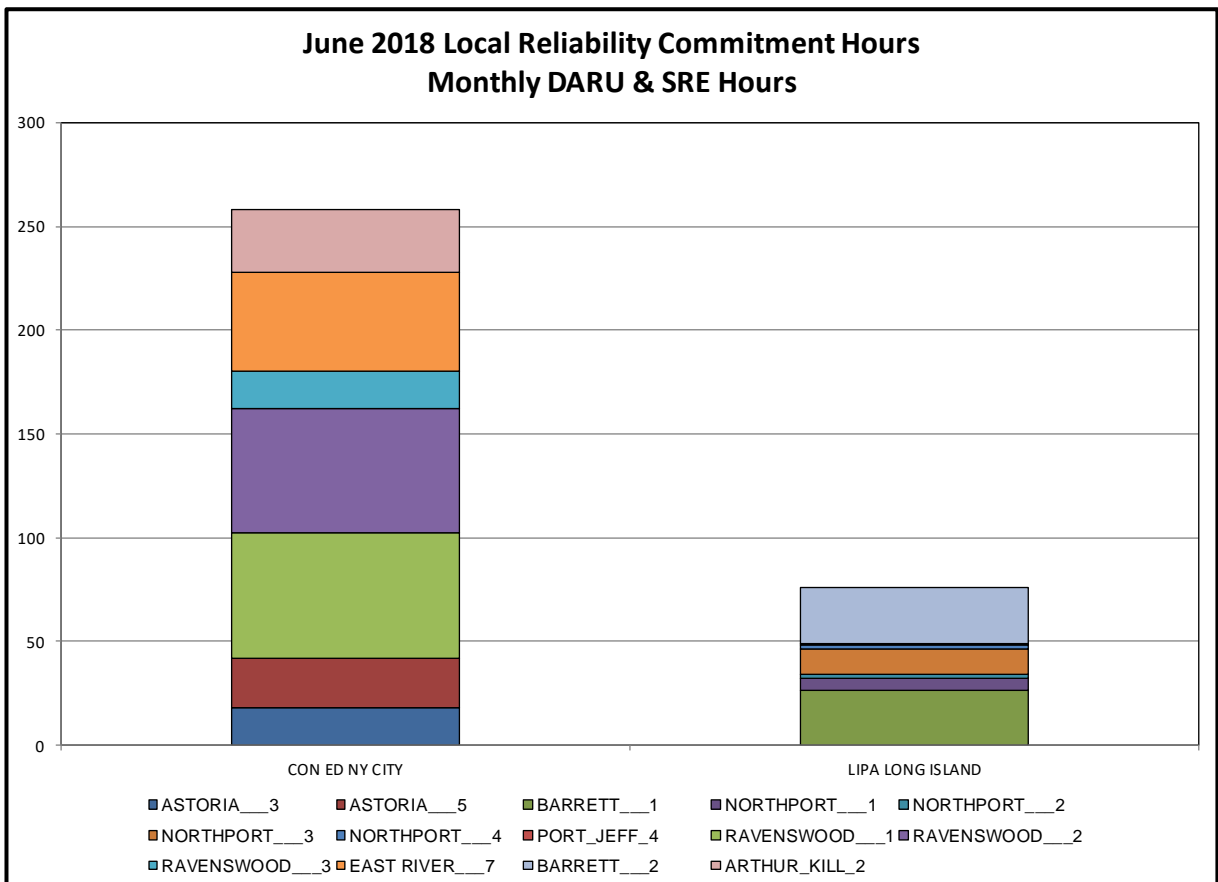
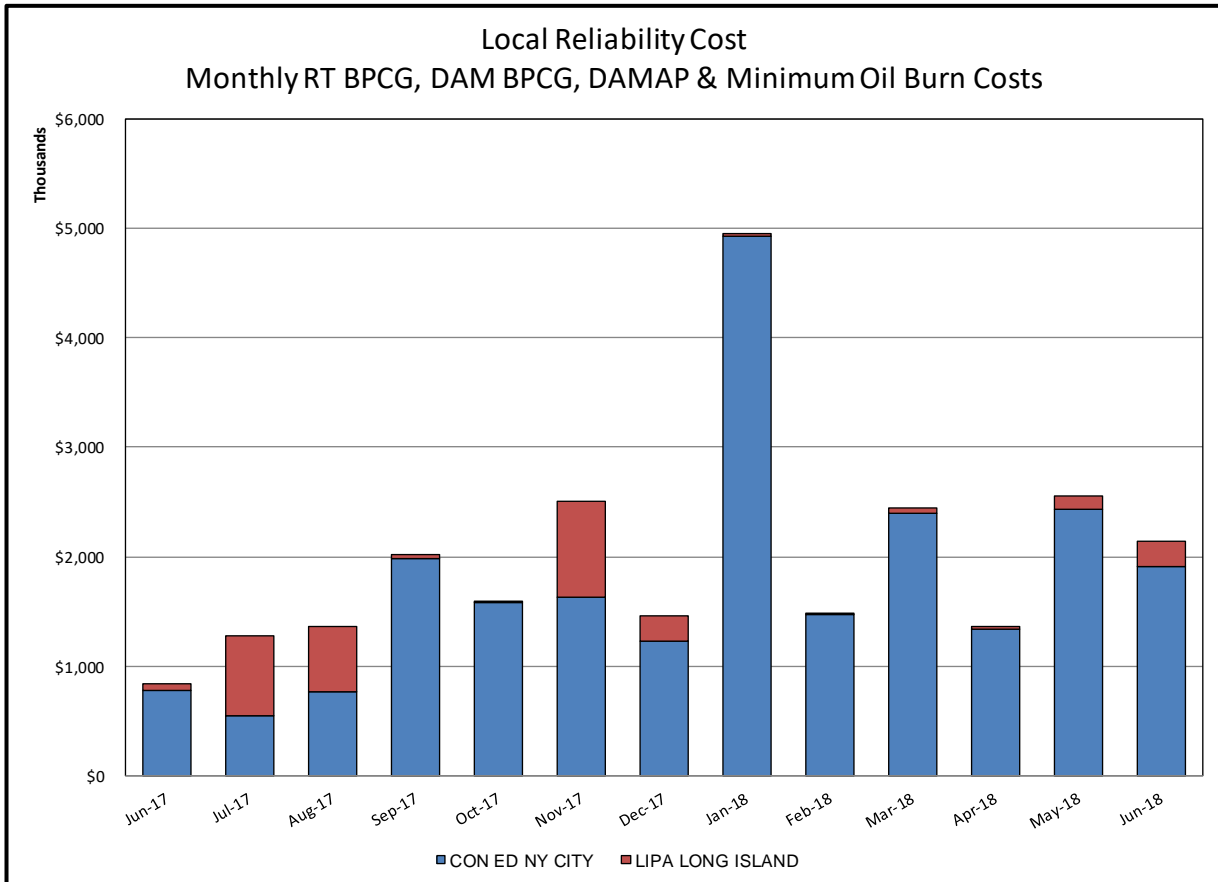
- 1) Storm Watch Costs are identified as daily total uplift costs
- 2) Days with a value of BMCR less M2M Settlement of \$100K/HR, shortfall of \$200K/Day or more, or surplus of \$100K/Day or more are investigated.
- 3) Uplift costs associated with multiple event types are apportioned equally by hour

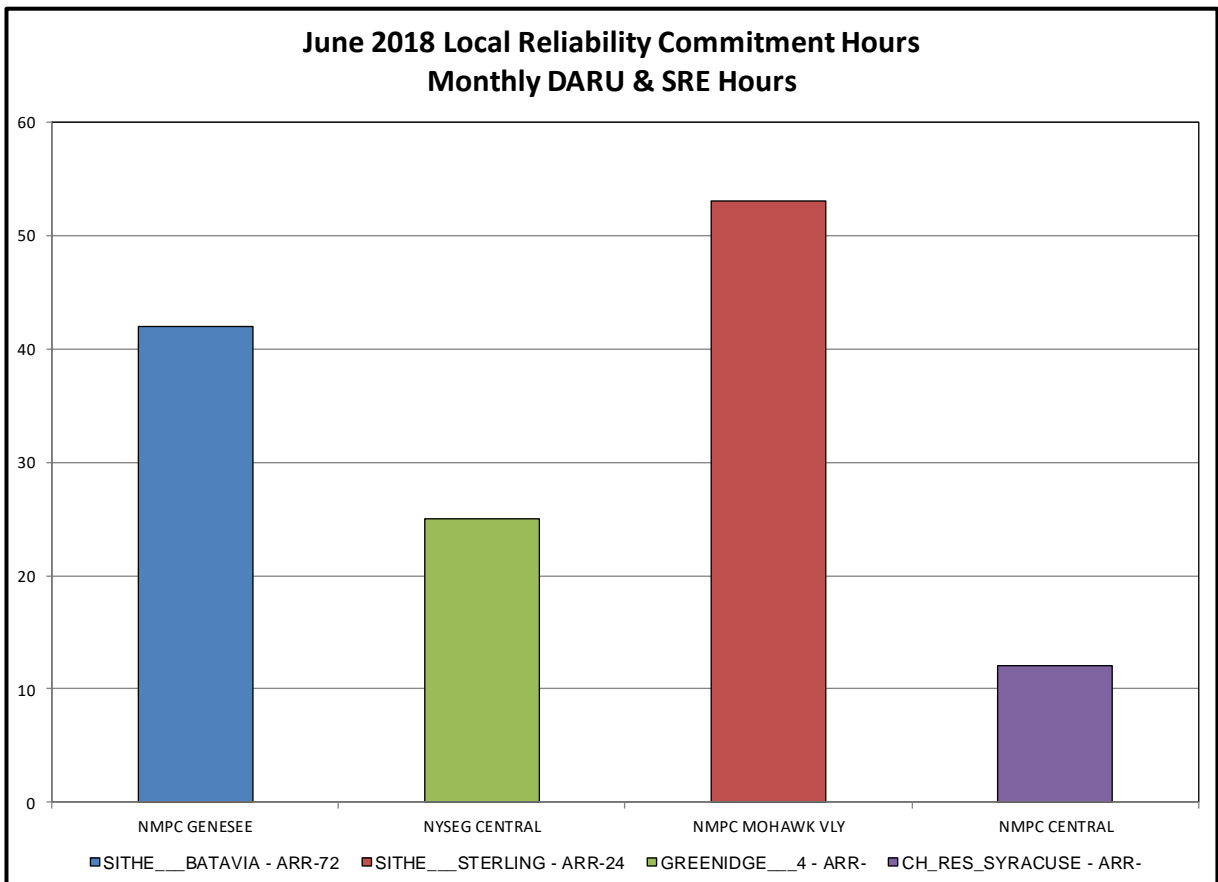
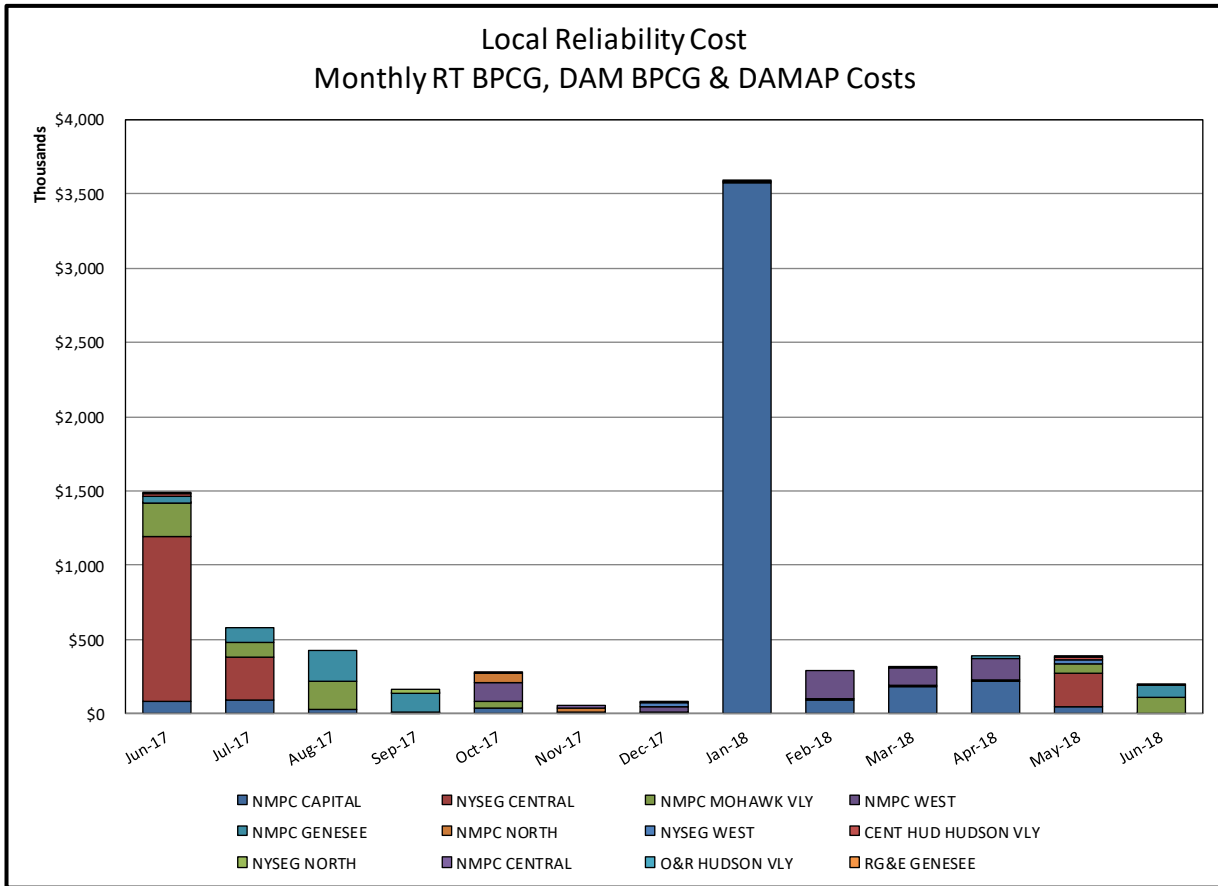


Day-Ahead Market Congestion Residual Categories

<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.	

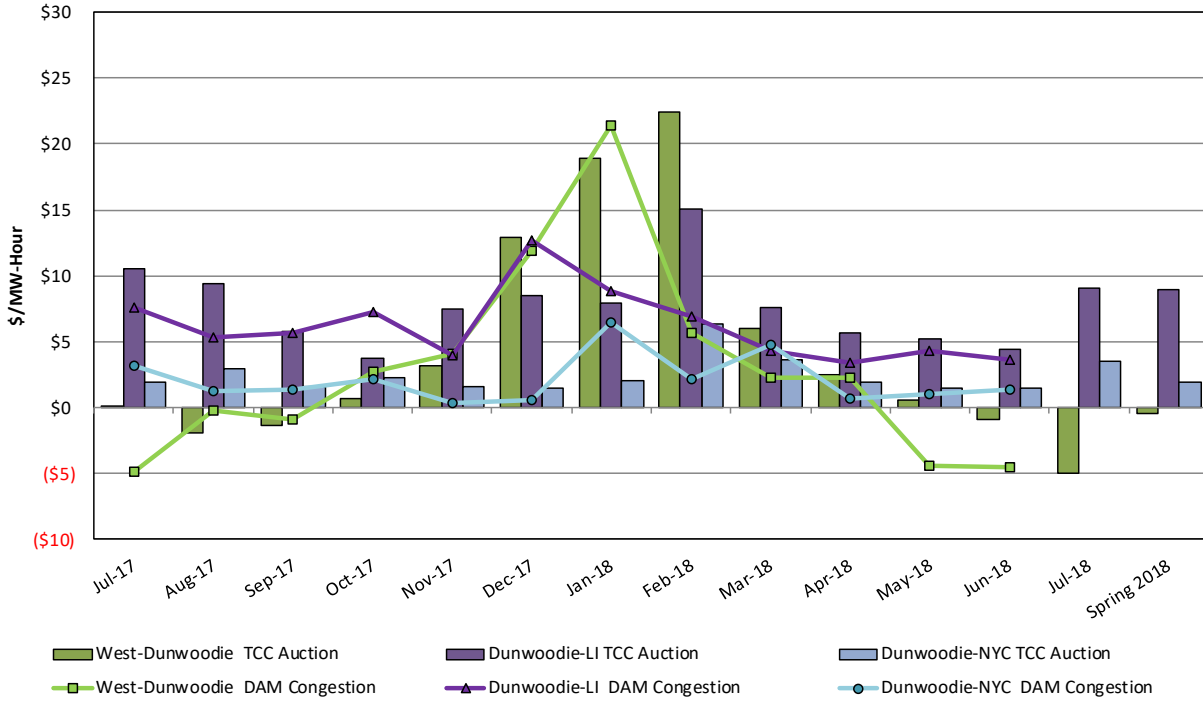






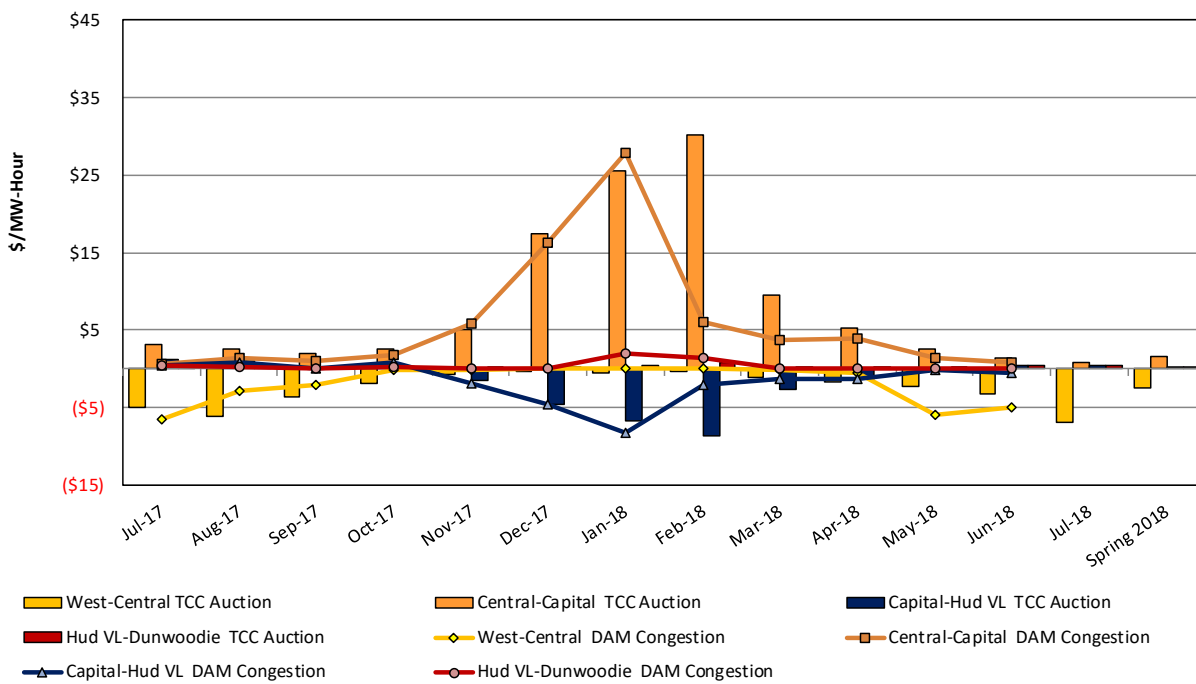
TCC & Day Ahead Market Selected Internal Path Congestion

TCC Monthly Reconfiguration Auction vs. Monthly DAM Average with Spring 2018 Centralized TCC Auction Six-Month Average



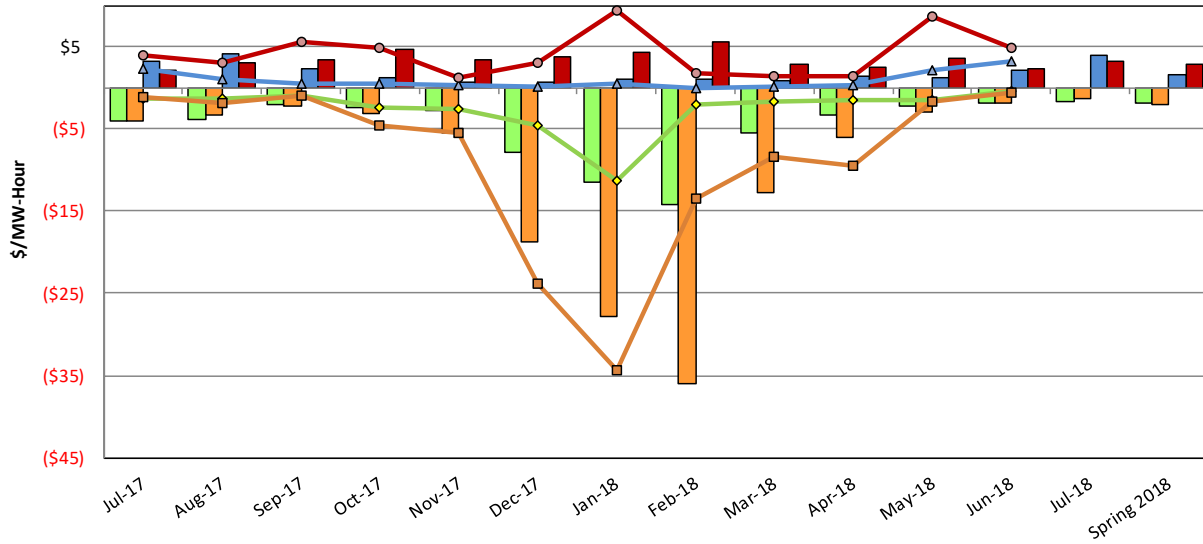
TCC & Day Ahead Market West to Dunwoodie Path Congestion

TCC Monthly Reconfiguration Auction vs. Monthly DAM Average with Spring 2018 Centralized TCC Auction Six-Month Average

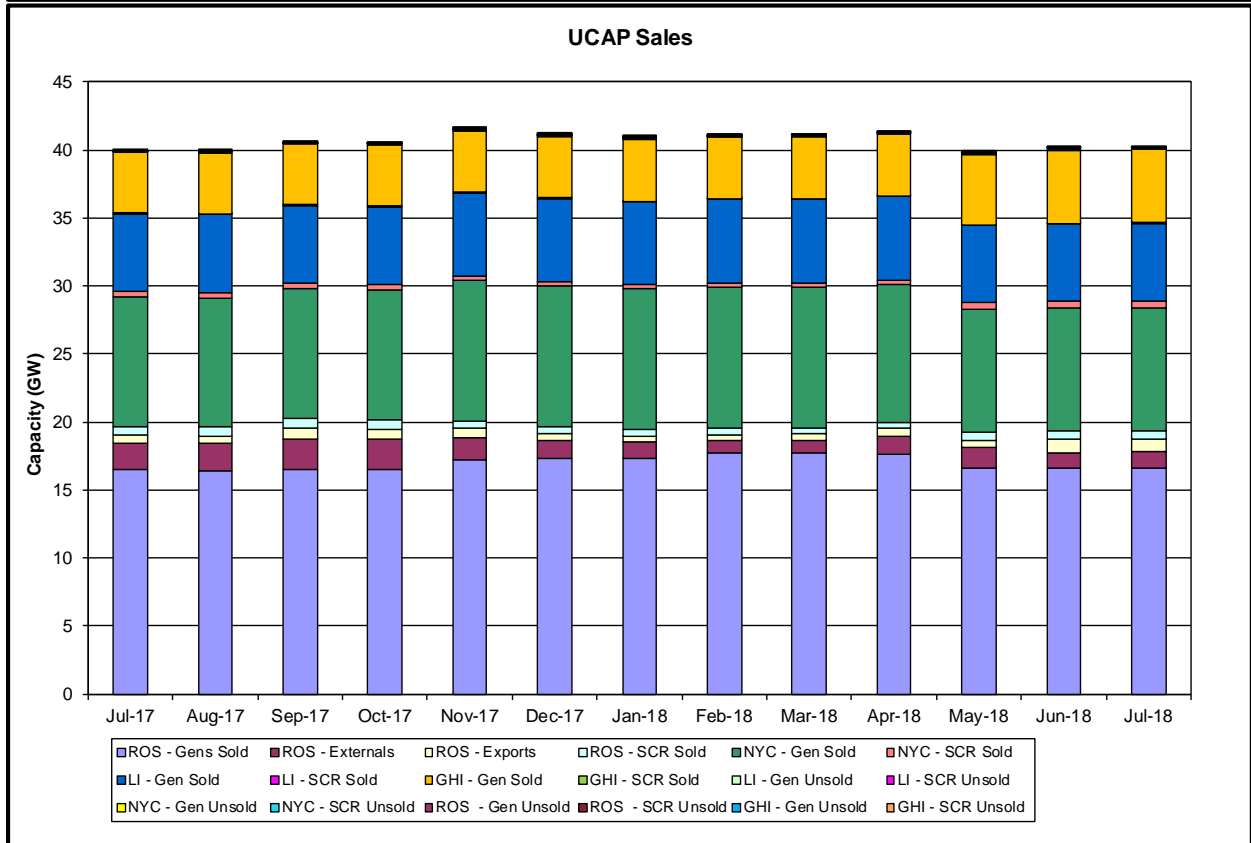
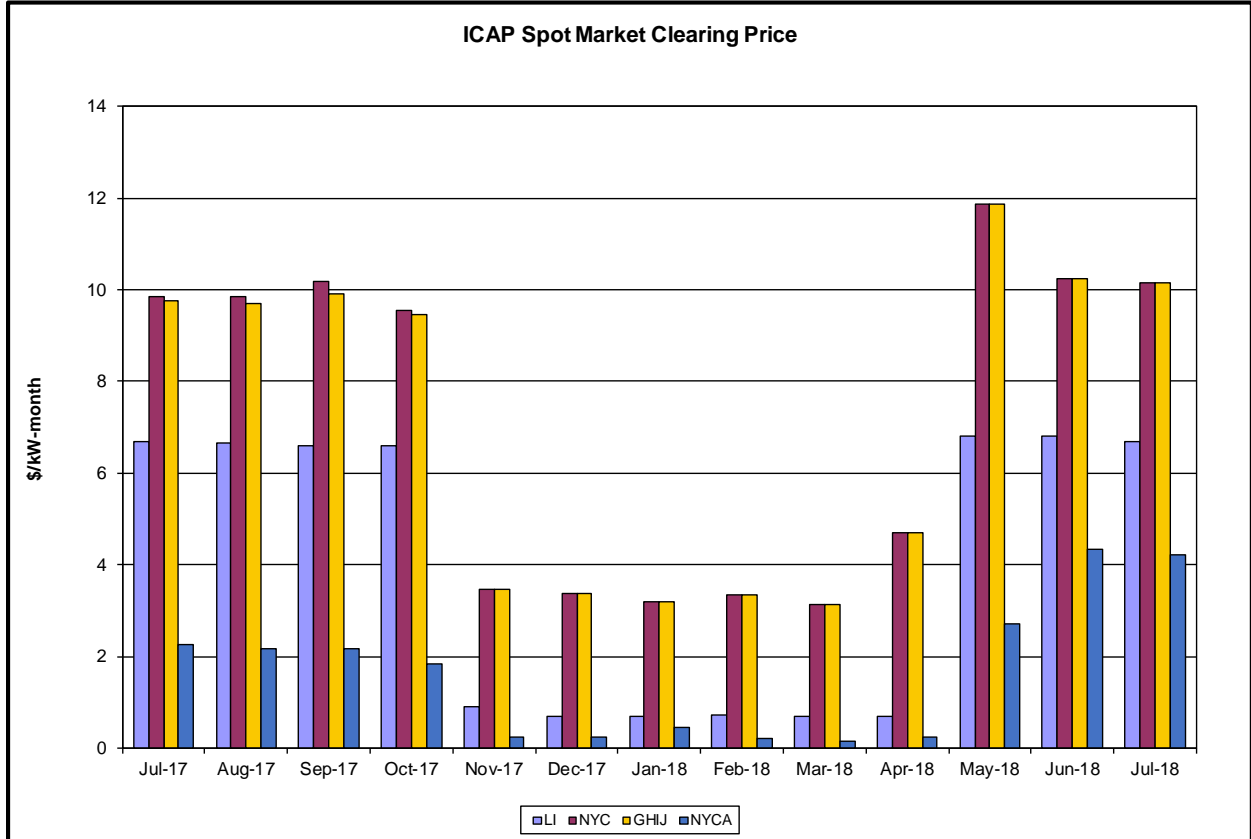


TCC & Day Ahead Market Selected External Path Congestion

TCC Monthly Reconfiguration Auction vs. Monthly DAM Average
with Spring 2018 Centralized TCC Auction Six-Month Average



■ PJM-Central TCC Auction
 ■ NE-Central TCC Auction
 ■ OH-Central TCC Auction
 ■ HQ-Central TCC Auction
◆ PJM-Central DAM Congestion
 ■ NE-Central DAM Congestion
 ▲ OH-Central DAM Congestion
 ● HQ-Central DAM Congestion

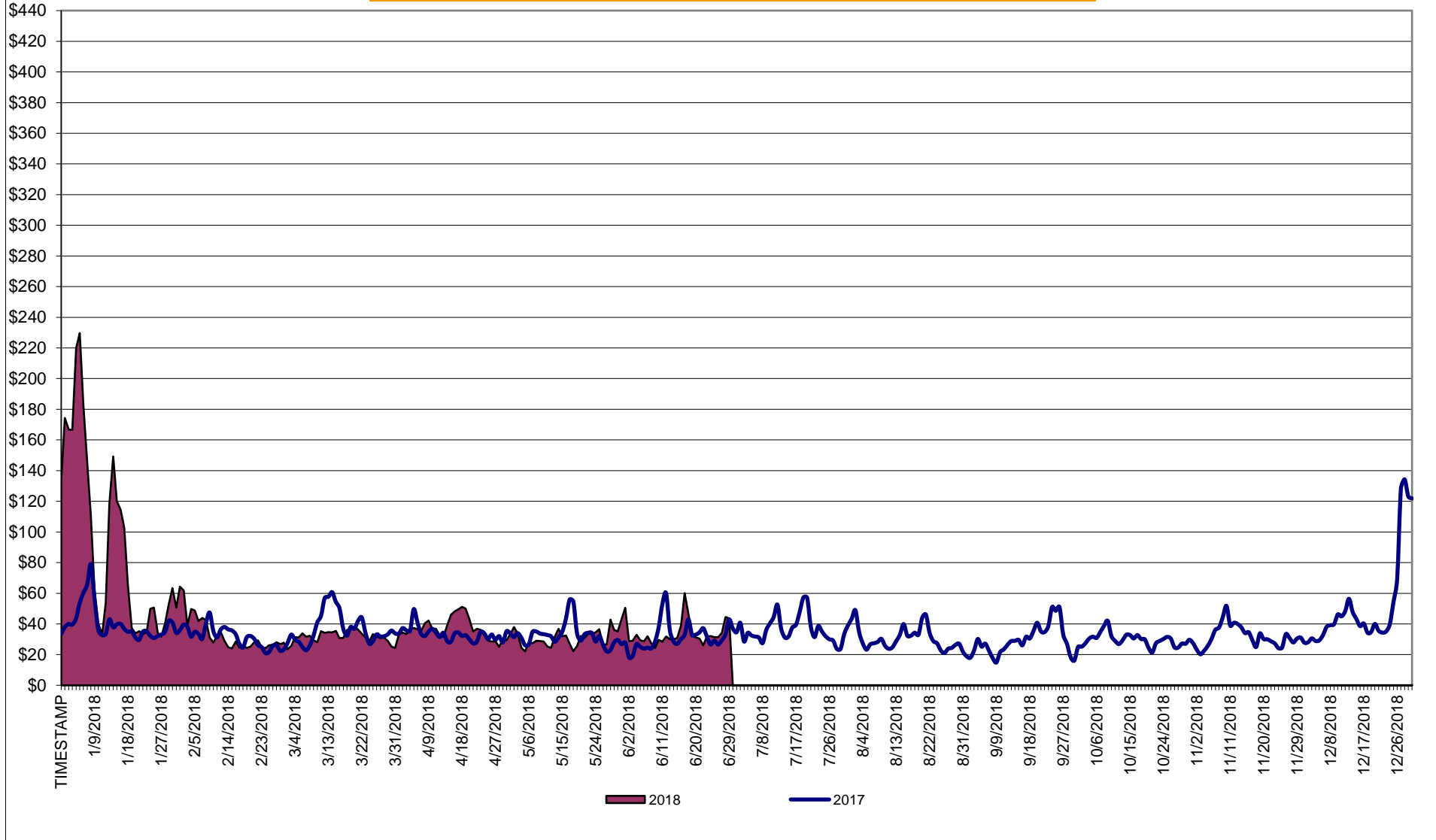


Market Performance Highlights

June 2018

- LBMP for June is \$32.53/MWh; higher than \$28.78/MWh in May 2018 and \$31.76/MWh in June 2017.
 - Day Ahead and Real Time Load Weighted LBMPs are higher compared to May.
- June 2018 average year-to-date monthly cost of \$47.70/MWh is a 32% increase from \$36.01/MWh in June 2017.
- Average daily sendout is 445 GWh/day in June; higher than 397 GWh/day in May 2018 and lower than 454 GWh/day in June 2017.
- Natural gas and distillate prices were lower compared to the previous month.
 - Natural Gas (Transco Z6 NY) was \$2.45/MMBtu, down from \$2.55/MMBtu in May.
 - Natural gas prices are up 4.5% year-over-year.
 - Jet Kerosene Gulf Coast was \$15.47/MMBtu, down from \$15.96/MMBtu in May.
 - Ultra Low Sulfur No.2 Diesel NY Harbor was \$15.32/MMBtu, down from \$15.92/MMBtu in May.
 - Distillate prices are up 56.3% year-over-year.
- Uplift per MWh is higher compared to the previous month.
 - Uplift (not including NYISO cost of operations) is \$0.30/MWh; higher than \$0.05/MWh in May.
 - Local Reliability Share is \$0.18/MWh, lower than \$0.22/MWh in May.
 - Statewide Share is \$0.12/MWh, higher than (\$0.17)/MWh in May.
 - TSA \$ per NYC MWh is \$0.39/MWh.
 - Total uplift costs (Schedule 1 components including NYISO Cost of Operations) are higher than May.

Daily NYISO Average Cost/MWh (Energy & Ancillary Services)*
2017 Annual Average \$36.56/MWh
June 2017 YTD Average \$36.27/MWh
June 2018 YTD Average \$47.70/MWh



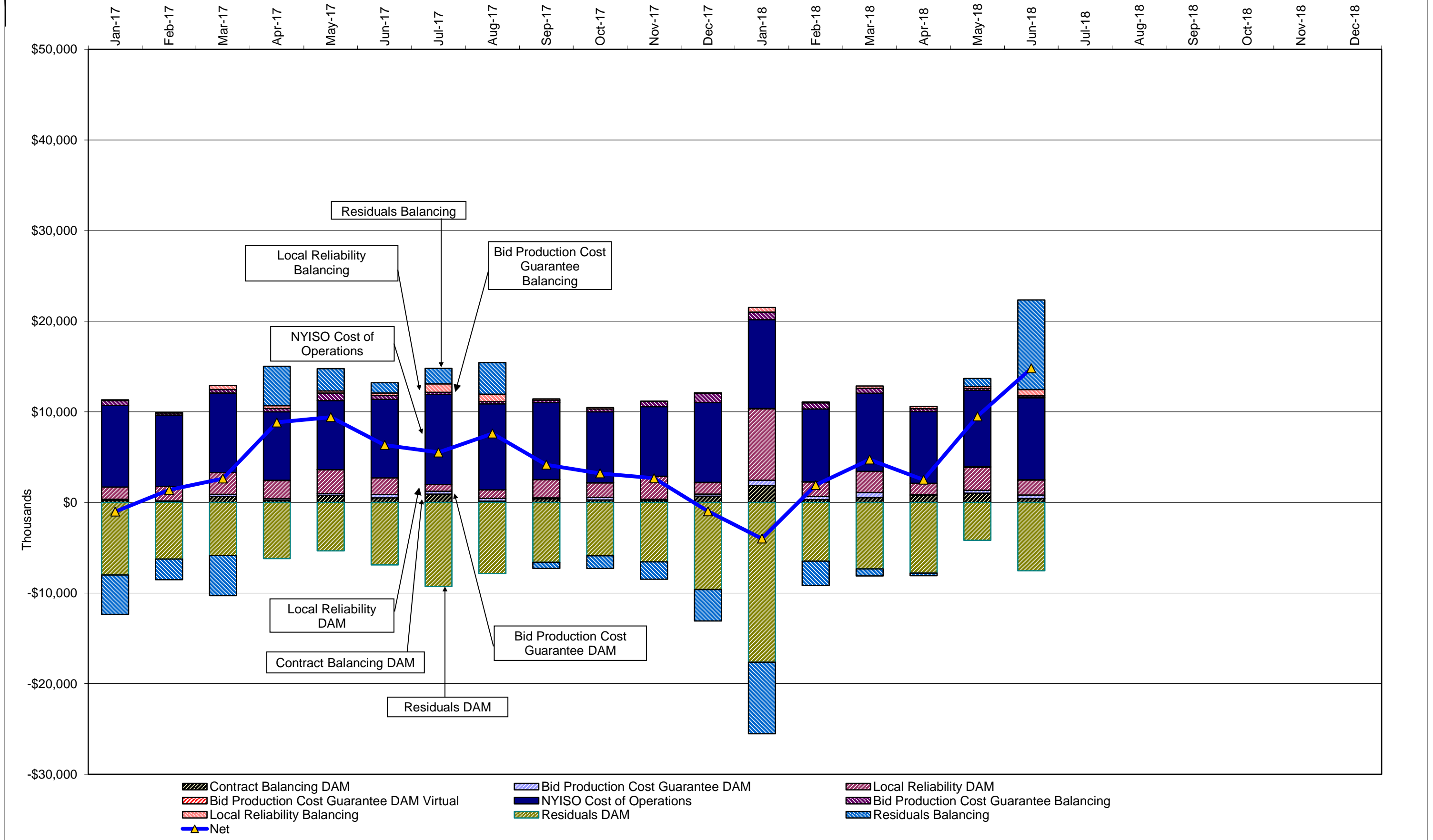
* Excludes ICAP payments.

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

2018	<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	99.55	33.83	29.91	35.00	28.78	32.53						
NTAC	0.71	0.58	0.88	1.09	0.88	1.00						
Reserve	0.92	0.65	0.64	0.81	0.68	0.57						
Regulation	0.15	0.15	0.16	0.12	0.14	0.16						
NYISO Cost of Operations	0.65	0.65	0.66	0.65	0.66	0.67						
FERC Fee Recovery	0.08	0.10	0.09	0.10	0.09	0.09						
Uplift	(0.92)	(0.50)	(0.31)	(0.45)	0.05	0.30						
Uplift: Local Reliability Share	0.59	0.14	0.19	0.12	0.22	0.18						
Uplift: Statewide Share	(1.52)	(0.64)	(0.51)	(0.57)	(0.17)	0.12						
Voltage Support and Black Start	0.40	0.41	0.42	0.41	0.42	0.42						
Avg Monthly Cost	101.54	35.87	32.45	37.74	31.70	35.73						
Avg YTD Cost	101.54	72.85	60.06	54.82	50.20	47.70						
TSA \$ per NYC MWh	0.00	0.00	0.04	0.00	0.08	0.39						
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	31.74	31.76	35.84	30.57	29.57	28.35	30.60	52.63
NTAC	0.66	1.11	0.86	1.05	0.79	0.62	0.87	0.59	0.62	0.50	0.75	0.81
Reserve	0.70	0.67	0.74	0.70	0.61	0.55	0.48	0.44	0.47	0.59	0.55	0.71
Regulation	0.14	0.12	0.13	0.17	0.16	0.13	0.10	0.10	0.11	0.13	0.20	0.15
NYISO Cost of Operations	0.65	0.65	0.65	0.65	0.62	0.63	0.63	0.63	0.63	0.62	0.61	0.60
FERC Fee Recovery	0.09	0.10	0.10	0.12	0.10	0.09	0.07	0.08	0.09	0.10	0.10	0.08
Uplift	(0.73)	(0.54)	(0.46)	0.12	0.10	(0.37)	(0.43)	(0.19)	(0.34)	(0.36)	(0.40)	(0.68)
Uplift: Local Reliability Share	0.10	0.13	0.21	0.20	0.24	0.15	0.11	0.12	0.16	0.14	0.20	0.09
Uplift: Statewide Share	(0.83)	(0.67)	(0.67)	(0.08)	(0.13)	(0.52)	(0.54)	(0.31)	(0.50)	(0.50)	(0.60)	(0.78)
Voltage Support and Black Start	0.37	0.37	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.37	0.37
Avg Monthly Cost	41.96	33.44	37.38	34.26	34.52	33.80	37.94	32.60	31.54	30.31	32.79	54.67
Avg YTD Cost	41.96	38.02	37.81	37.05	36.54	36.01	36.35	35.80	35.34	34.89	34.72	36.56
TSA \$ per NYC MWh	0.00	0.00	0.00	0.08	0.12	0.56	0.42	0.23	0.00	0.00	0.00	0.00

* Excludes ICAP payments.
Market Mitigation and Analysis
Prepared: 7/10/2018 9:43 AM

NYISO Dollar Flows - Uplift - OATT Schedule 1 components - Data through June 30, 2018



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

2018	<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	15,153,751	12,643,854	13,521,386	12,158,686	12,721,073	13,983,384						
DAM LSE Internal LBMP Energy Sales	59%	57%	58%	60%	61%	61%						
DAM External TC LBMP Energy Sales	4%	3%	2%	2%	2%	1%						
DAM Bilateral - Internal Bilaterals	29%	31%	32%	30%	29%	30%						
DAM Bilateral - Import/Non-LBMP Market Bilaterals	5%	5%	5%	5%	5%	5%						
DAM Bilateral - Export/Non-LBMP Market Bilaterals	2%	2%	2%	2%	2%	1%						
DAM Bilateral - Wheel Through Bilaterals	1%	2%	2%	2%	2%	2%						
Balancing Energy Market MWh	-149,619	-299,377	-386,811	-72,862	-29,539	-354,112						
Balancing Energy LSE Internal LBMP Energy Sales	-147%	-101%	-128%	-208%	-458%	-113%						
Balancing Energy External TC LBMP Energy Sales	74%	24%	37%	189%	564%	29%						
Balancing Energy Bilateral - Internal Bilaterals	9%	5%	0%	-11%	29%	5%						
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	0%	0%	0%	0%	0%	0%						
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	22%	9%	6%	34%	51%	3%						
Balancing Energy Bilateral - Wheel Through Bilaterals	-58%	-36%	-15%	-103%	-287%	-23%						
Transactions Summary												
LBMP	63%	59%	59%	62%	63%	61%						
Internal Bilaterals	30%	32%	33%	30%	29%	31%						
Import Bilaterals	5%	5%	6%	5%	5%	5%						
Export Bilaterals	2%	2%	2%	2%	2%	1%						
Wheels Through	1%	1%	1%	1%	1%	2%						
Market Share of Total Load												
Day Ahead Market	101.0%	102.4%	102.9%	100.6%	100.2%	102.6%						
Balancing Energy +	-1.0%	-2.4%	-2.9%	-0.6%	-0.2%	-2.6%						
Total MWh	15,004,132	12,344,477	13,134,575	12,085,824	12,691,534	13,629,272						
Average Daily Energy Sendout/Month GWh	463	426	413	390	397	445						

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	12,966,981	14,406,180	16,505,801	15,948,927	14,100,695	13,252,368	13,042,826	14,829,403
DAM LSE Internal LBMP Energy Sales	57%	57%	55%	54%	58%	60%	62%	61%	57%	55%	53%	55%
DAM External TC LBMP Energy Sales	2%	2%	1%	1%	1%	1%	1%	1%	1%	2%	3%	5%
DAM Bilateral - Internal Bilaterals	32%	32%	34%	35%	33%	31%	29%	29%	32%	34%	34%	32%
DAM Bilateral - Import/Non-LBMP Market Bilaterals	5%	5%	5%	6%	4%	5%	4%	5%	5%	5%	5%	5%
DAM Bilateral - Export/Non-LBMP Market Bilaterals	2%	2%	2%	2%	2%	2%	1%	2%	2%	2%	2%	2%
DAM Bilateral - Wheel Through Bilaterals	2%	2%	2%	2%	2%	2%	3%	3%	4%	2%	3%	2%
Balancing Energy Market MWh	-256,448	-407,284	-509,053	-466,426	-666,048	-564,312	-747,473	-853,898	-633,990	-510,721	-410,072	-254,003
Balancing Energy LSE Internal LBMP Energy Sales	-157%	-132%	-148%	-115%	-120%	-114%	-100%	-87%	-76%	-102%	-108%	-99%
Balancing Energy External TC LBMP Energy Sales	64%	39%	44%	22%	28%	23%	18%	13%	12%	26%	45%	25%
Balancing Energy Bilateral - Internal Bilaterals	15%	8%	12%	5%	1%	4%	3%	2%	3%	5%	5%	-1%
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	0%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	10%	7%	5%	4%	3%	3%	1%	1%	1%	4%	7%	9%
Balancing Energy Bilateral - Wheel Through Bilaterals	-32%	-26%	-13%	-15%	-12%	-16%	-22%	-29%	-40%	-33%	-49%	-34%
Transactions Summary												
LBMP	58%	57%	55%	54%	58%	60%	62%	61%	58%	56%	56%	60%
Internal Bilaterals	33%	34%	36%	37%	34%	32%	30%	31%	33%	36%	36%	32%
Import Bilaterals	5%	5%	5%	6%	4%	5%	5%	5%	5%	5%	5%	5%
Export Bilaterals	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Wheels Through	2%	2%	2%	2%	2%	1%	2%	2%	2%	1%	1%	1%
Market Share of Total Load												
Day Ahead Market	101.8%	103.3%	103.8%	104.0%	105.4%	104.1%	104.7%	105.7%	104.7%	104.0%	103.2%	101.7%
Balancing Energy +	-1.8%	-3.3%	-3.8%	-4.0%	-5.4%	-4.1%	-4.7%	-5.7%	-4.7%	-4.0%	-3.2%	-1.7%
Total MWh	13,878,571	12,157,922	13,474,812	11,595,049	12,300,933	13,841,868	15,758,328	15,095,029	13,466,705	12,741,647	12,632,754	14,575,400
Average Daily Energy Sendout/Month GWh	431	418	419	377	383	454	498	477	437	398	403	444

+ 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 2018 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 *	\$83.53	\$30.37	\$27.37	\$32.40	\$25.97	\$28.41						
Standard Deviation	\$58.94	\$12.38	\$6.34	\$9.06	\$9.22	\$11.42						
Load Weighted Price **	\$88.42	\$31.44	\$27.95	\$33.14	\$27.26	\$30.27						
<u>RTC LBMP</u>												
Price *	\$81.65	\$27.73	\$25.99	\$30.80	\$25.40	\$26.06						
Standard Deviation	\$60.83	\$11.96	\$8.99	\$14.30	\$20.37	\$12.78						
Load Weighted Price **	\$85.85	\$28.54	\$26.46	\$31.47	\$27.08	\$27.35						
<u>REAL TIME LBMP</u>												
Price *	\$87.94	\$28.50	\$26.49	\$34.53	\$25.57	\$26.31						
Standard Deviation	\$87.41	\$17.36	\$12.25	\$26.57	\$23.49	\$24.34						
Load Weighted Price **	\$93.59	\$29.49	\$27.09	\$35.72	\$27.47	\$28.38						
Average Daily Energy Sendout/Month GWh	463	426	413	390	397	445						

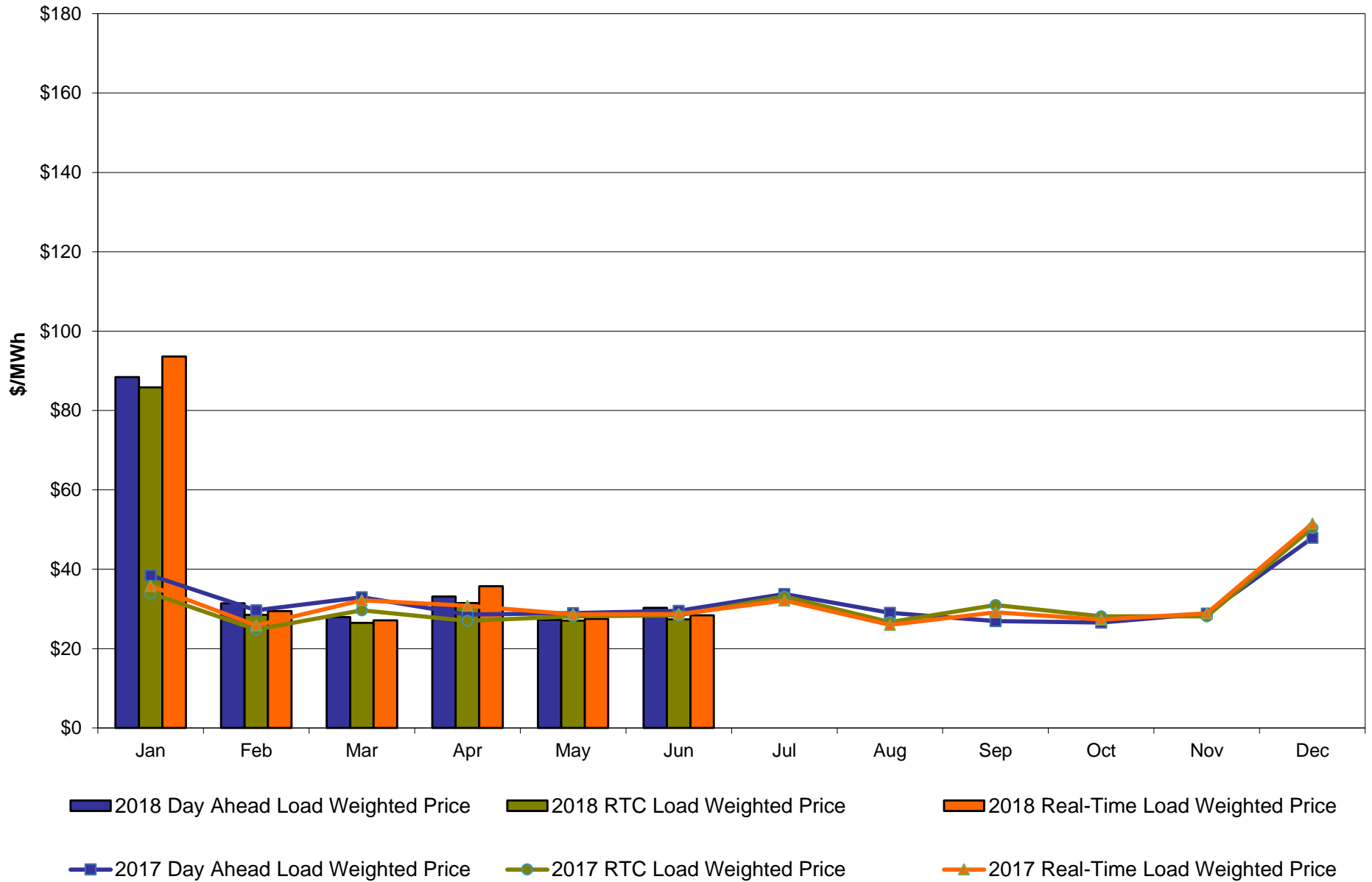
NYISO Markets 2017 Energy Statistics

	<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	\$27.66	\$27.37	\$31.64	\$27.28	\$25.05	\$25.49	\$27.88	\$45.46
Standard Deviation	\$13.20	\$7.97	\$11.95	\$7.66	\$9.47	\$12.37	\$13.51	\$10.60	\$12.09	\$8.53	\$9.87	\$31.56
Load Weighted Price **	\$38.42	\$29.66	\$32.96	\$28.56	\$28.95	\$29.52	\$33.78	\$29.00	\$26.95	\$26.57	\$28.83	\$47.90
<u>RTC LBMP</u>												
Price *	\$32.87	\$24.09	\$28.86	\$26.19	\$26.19	\$26.40	\$30.84	\$25.26	\$27.97	\$26.91	\$27.35	\$47.75
Standard Deviation	\$14.57	\$9.52	\$13.70	\$10.36	\$21.29	\$14.76	\$18.14	\$13.08	\$27.14	\$13.40	\$10.54	\$37.33
Load Weighted Price **	\$33.96	\$24.81	\$29.67	\$26.98	\$28.10	\$28.39	\$33.13	\$26.65	\$30.98	\$28.13	\$28.15	\$50.39
<u>REAL TIME LBMP</u>												
Price *	\$34.61	\$25.14	\$31.21	\$29.61	\$26.56	\$26.16	\$29.47	\$24.36	\$26.08	\$25.95	\$27.91	\$48.42
Standard Deviation	\$18.20	\$14.21	\$25.02	\$39.82	\$26.11	\$19.00	\$20.25	\$14.03	\$25.72	\$14.49	\$15.86	\$42.66
Load Weighted Price **	\$35.80	\$25.84	\$32.21	\$30.81	\$28.64	\$28.67	\$32.11	\$25.95	\$29.13	\$27.33	\$28.90	\$51.49
Average Daily Energy Sendout/Month GWh	431	418	419	377	383	454	498	477	437	398	403	444

* Average zonal load weighted prices.

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

NYISO Monthly Average Internal LBMPs 2017- 2018

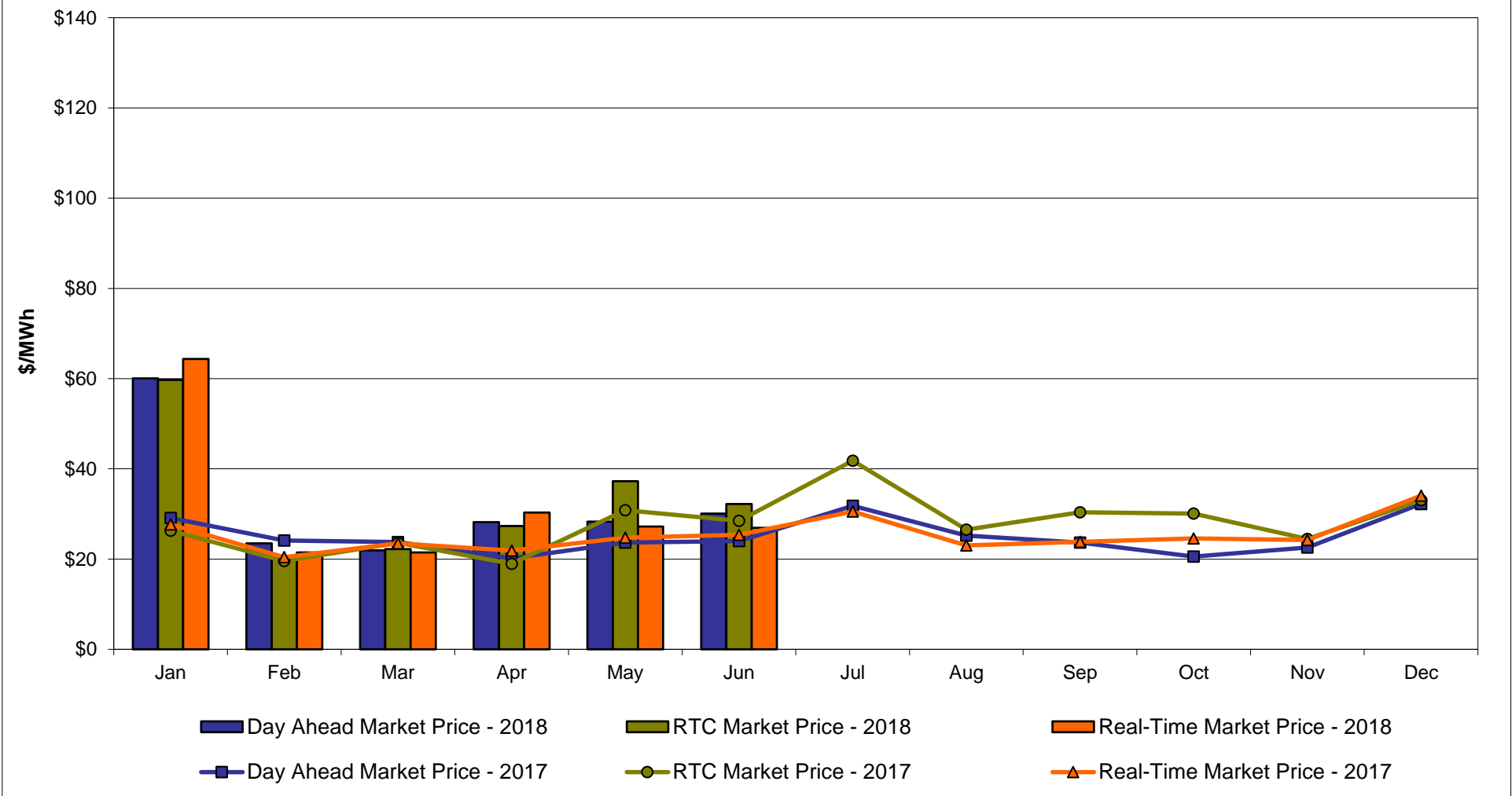


June 2018 Zonal LBMP Statistics for NYISO (\$/MWh)

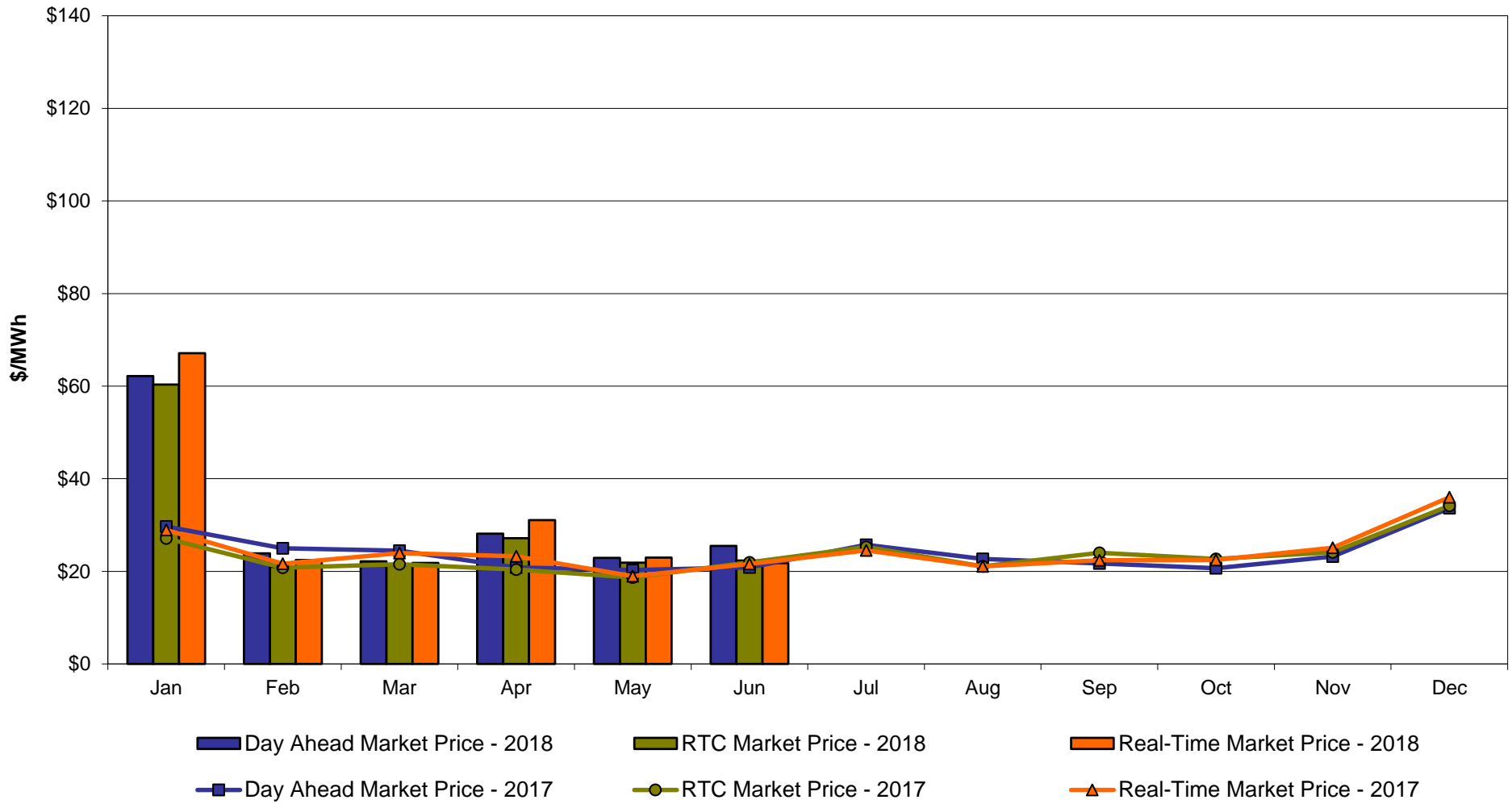
	<u>WEST Zone A</u>	<u>GENESEE Zone B</u>	<u>NORTH Zone D</u>	<u>CENTRAL Zone C</u>	<u>MOHAWK VALLEY Zone E</u>	<u>CAPITAL Zone F</u>	<u>HUDSON VALLEY Zone G</u>	<u>MILLWOOD Zone H</u>	<u>DUNWOODIE Zone I</u>	<u>NEW YORK CITY Zone J</u>	<u>LONG ISLAND Zone K</u>
<u>DAY AHEAD LBMP</u>											
Unweighted Price *	30.10	23.94	11.39	25.51	24.55	27.56	27.91	28.05	28.11	29.79	32.58
Standard Deviation	21.80	9.69	10.82	10.54	10.12	8.84	10.02	10.13	10.14	11.13	13.86
<u>RTC LBMP</u>											
Unweighted Price *	32.24	21.20	4.34	22.34	20.55	25.73	25.52	25.82	25.84	27.63	28.64
Standard Deviation	55.69	11.14	93.83	14.95	20.86	12.38	11.38	12.59	12.78	12.74	17.43
<u>REAL TIME LBMP</u>											
Unweighted Price *	26.95	20.98	4.24	21.76	20.42	26.07	26.39	27.05	27.12	29.36	28.96
Standard Deviation	31.37	13.39	94.92	16.26	22.09	25.45	26.62	32.62	33.49	33.40	32.19
	<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>
<u>DAY AHEAD LBMP</u>											
Unweighted Price *	21.35	19.40	19.40	26.71	27.54	31.94	30.57	30.97	29.02	28.91	9.58
Standard Deviation	7.67	9.05	9.05	10.72	9.23	13.79	11.48	13.65	10.48	10.49	11.33
<u>RTC LBMP</u>											
Unweighted Price *	17.22	3.98	3.98	24.32	25.22	27.18	26.86	26.76	25.76	26.67	4.52
Standard Deviation	16.13	109.07	109.07	11.13	12.34	14.47	14.32	13.85	12.64	11.89	89.60
<u>REAL TIME LBMP</u>											
Unweighted Price *	18.45	4.11	4.11	24.43	26.16	27.61	27.26	27.15	25.31	28.01	4.55
Standard Deviation	13.47	110.03	110.03	20.23	25.85	29.81	29.73	29.02	33.22	32.87	90.92

* Straight LBMP averages

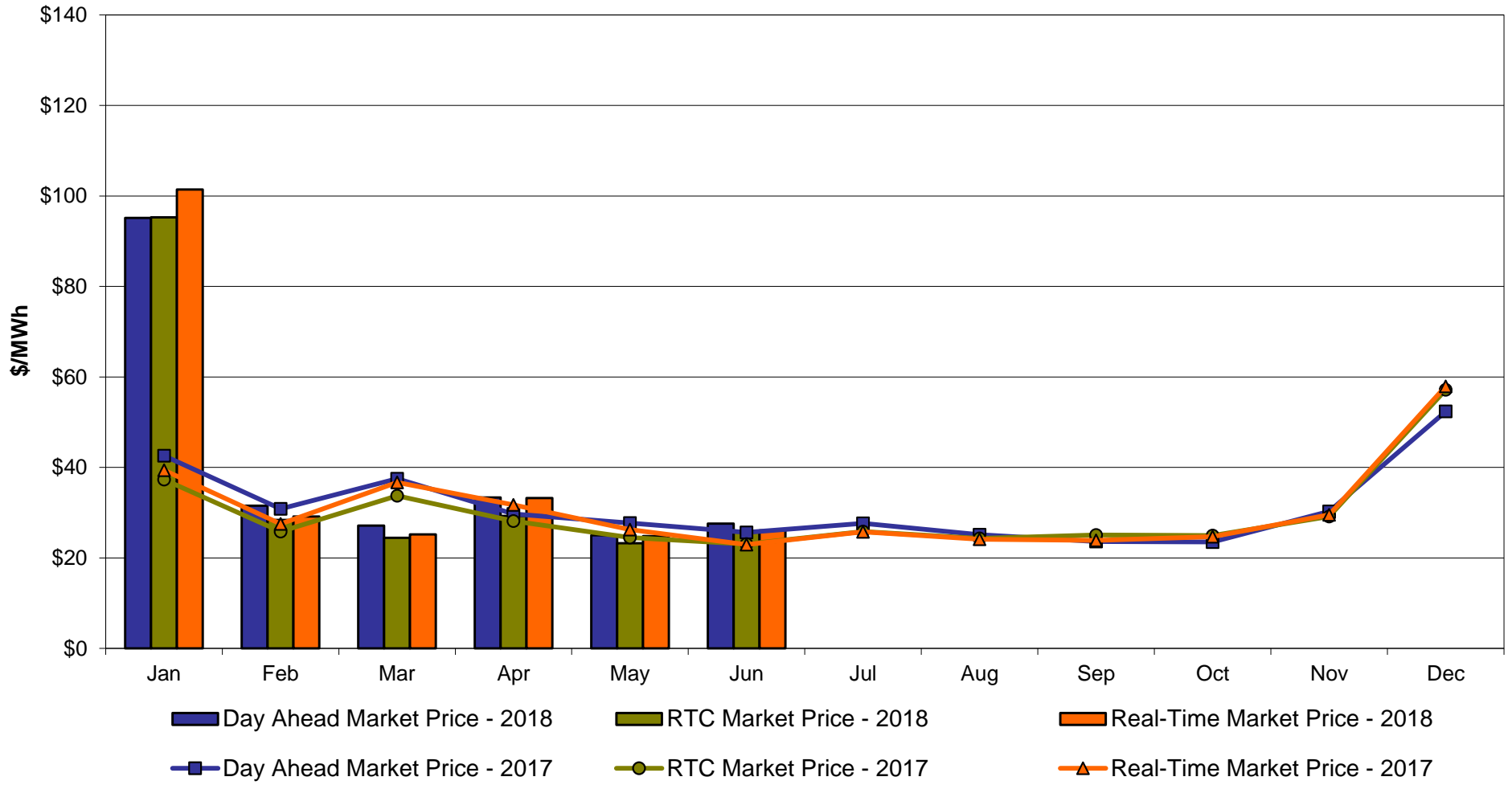
**West Zone A
Monthly Average LBMP Prices 2017 - 2018**



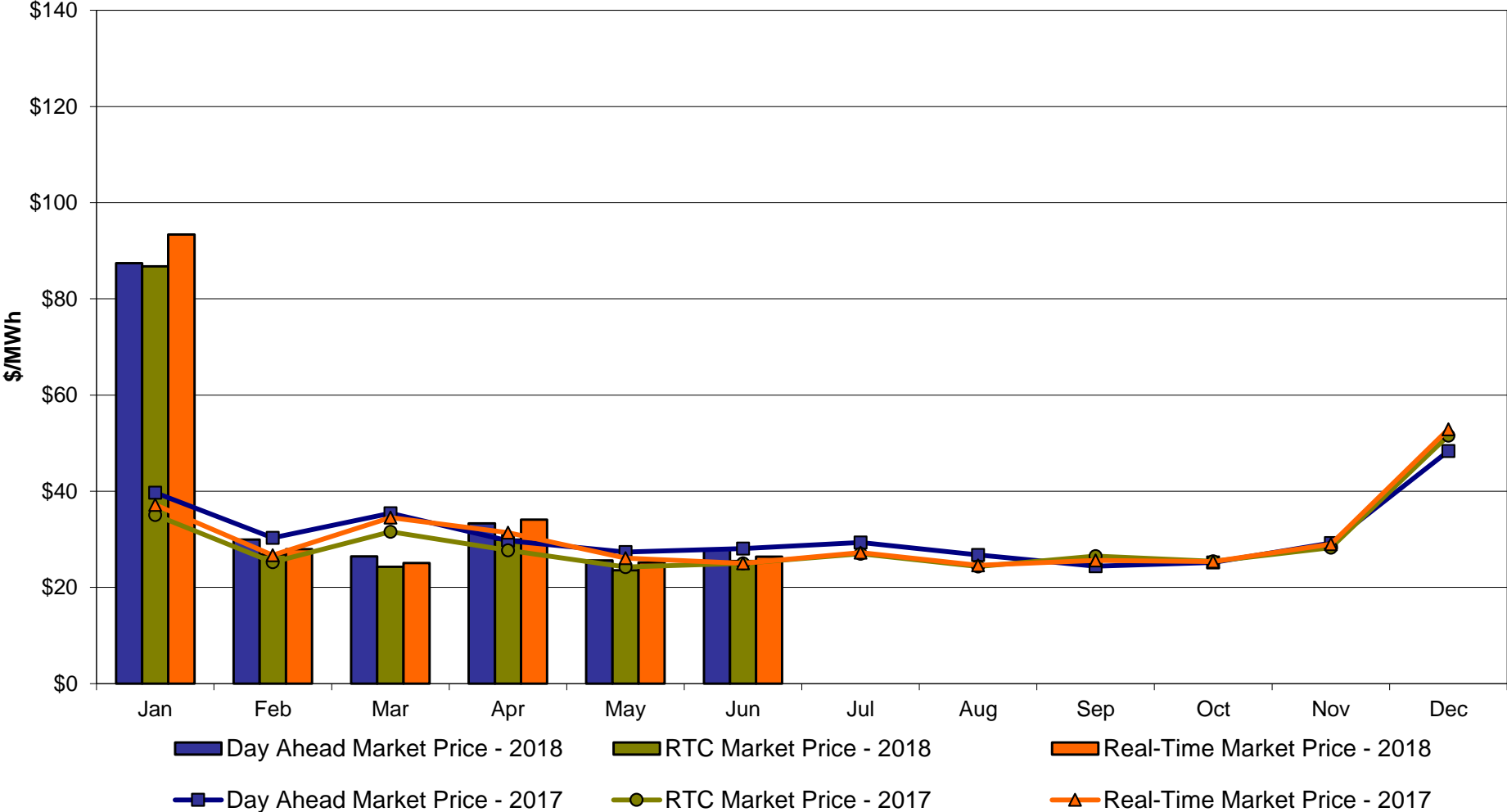
**Central Zone C
Monthly Average LBMP Prices 2017 - 2018**



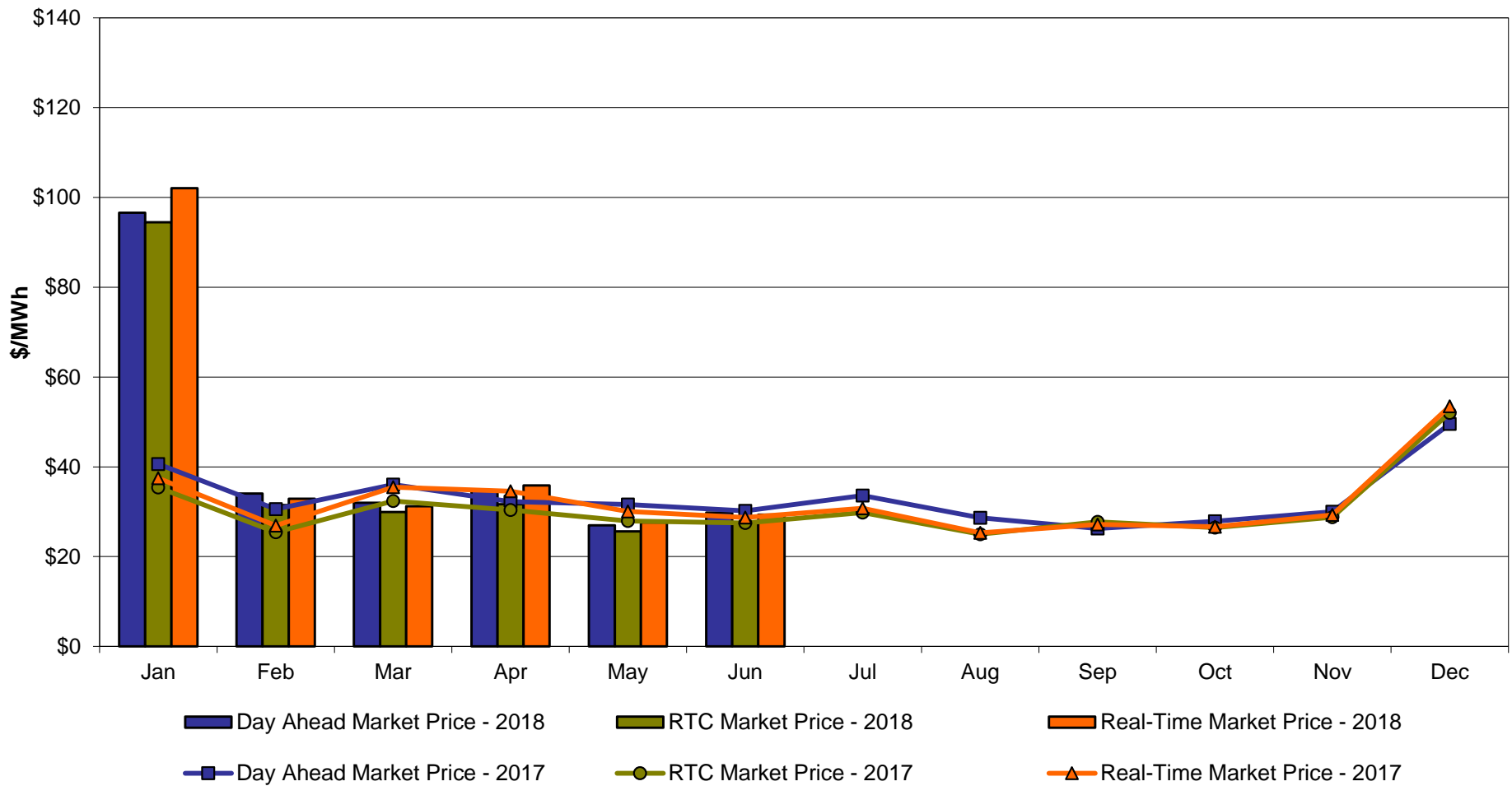
Capital Zone F Monthly Average LBMP Prices 2017 - 2018



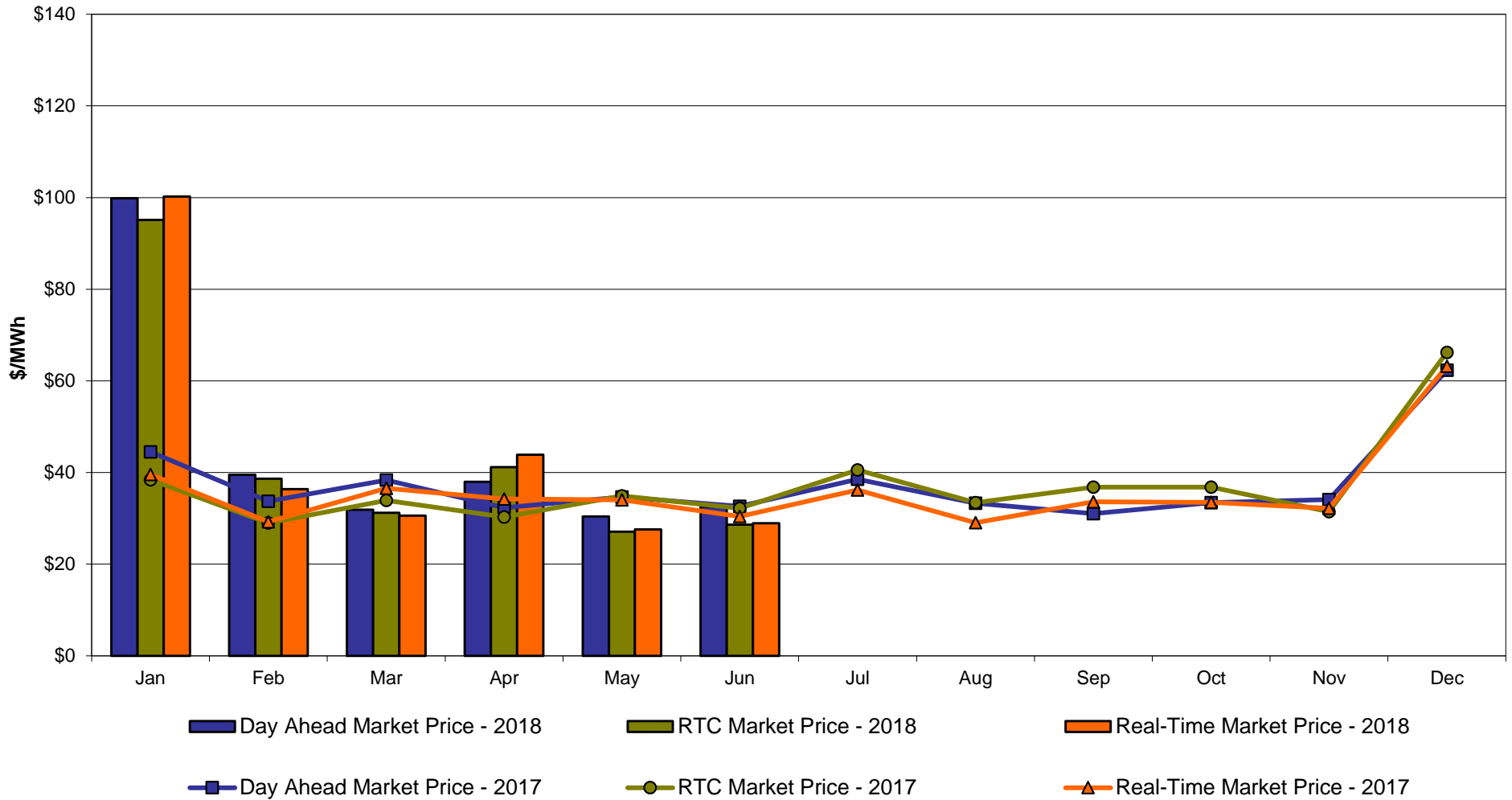
Hudson Valley Zone G Monthly Average LBMP Prices 2017 - 2018



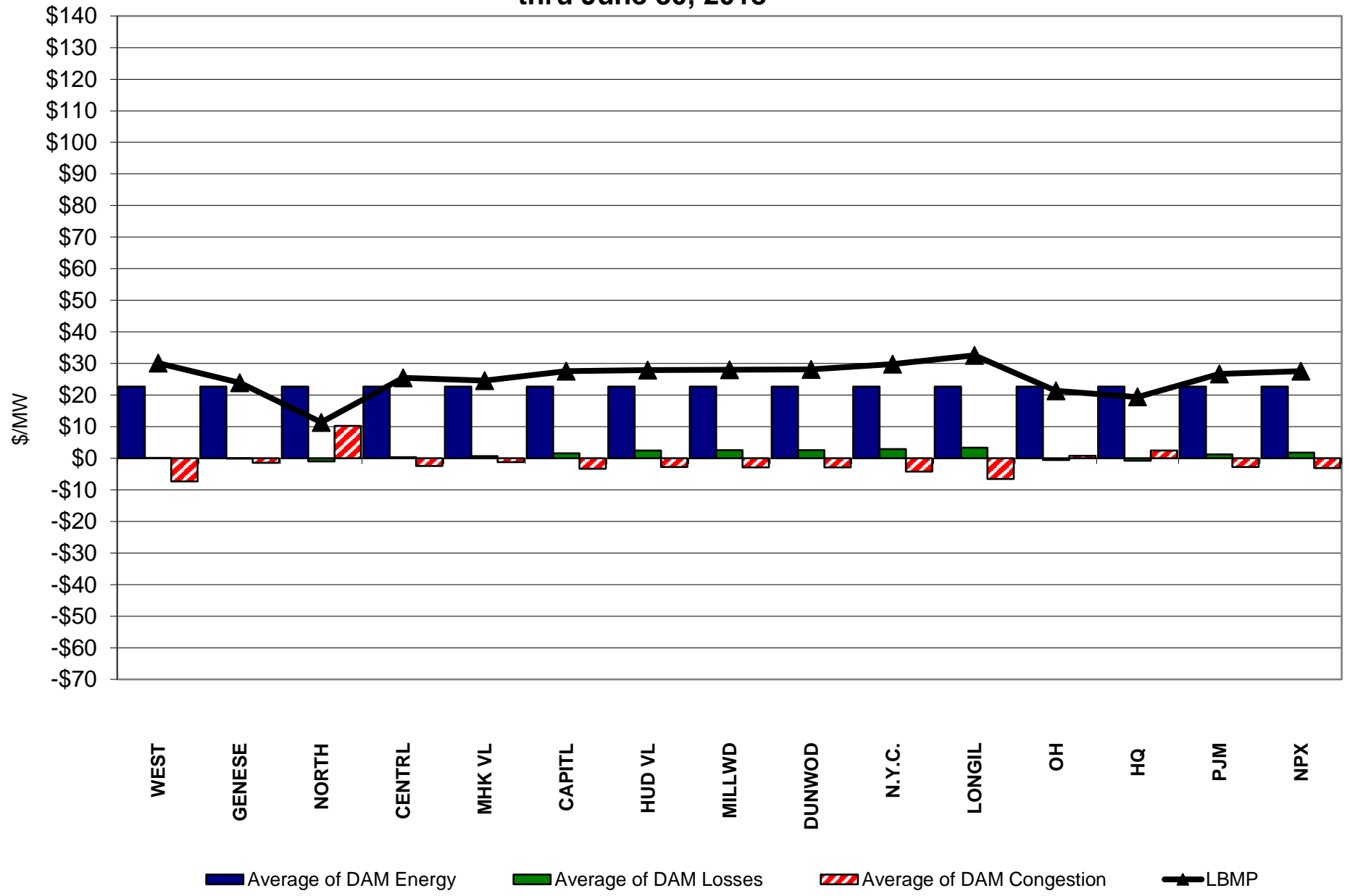
NYC Zone J Monthly Average LBMP Prices 2017 - 2018



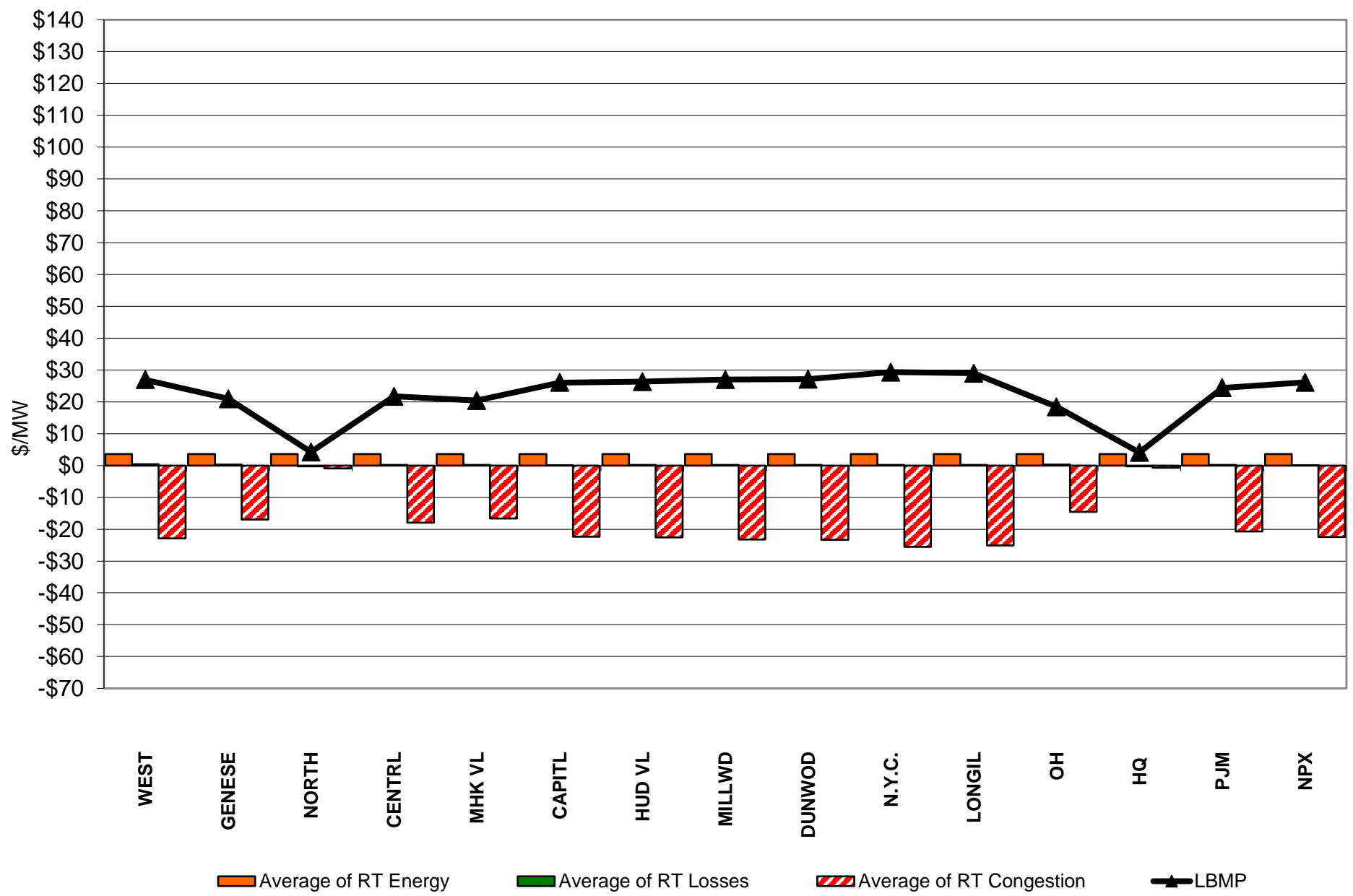
Long Island Zone K Monthly Average LBMP Prices 2017 - 2018



**DAM Zonal Unweighted Monthly Average LBMP Components
thru June 30, 2018**

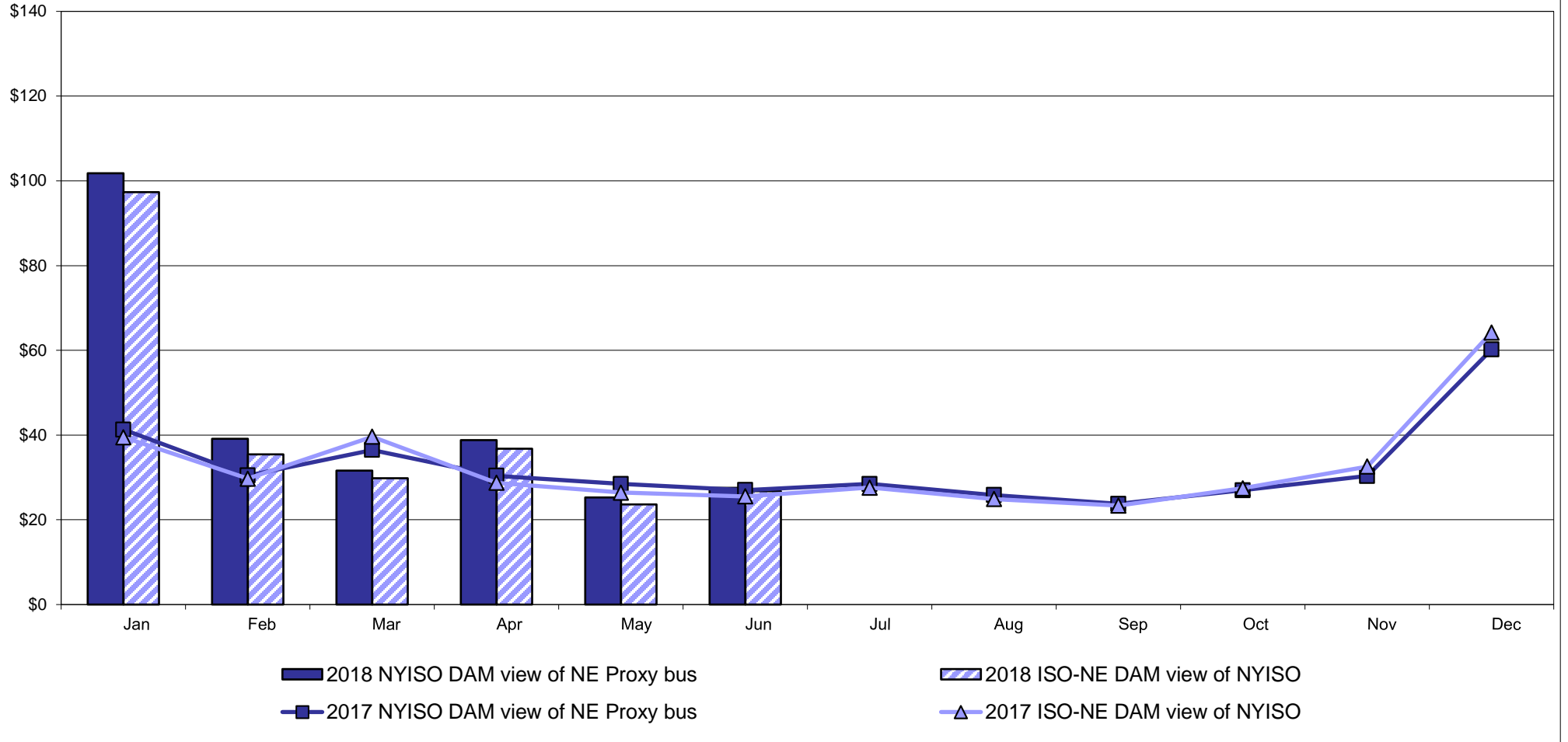


**RT Zonal Unweighted Monthly Average LBMP Components
thru June 30, 2018**

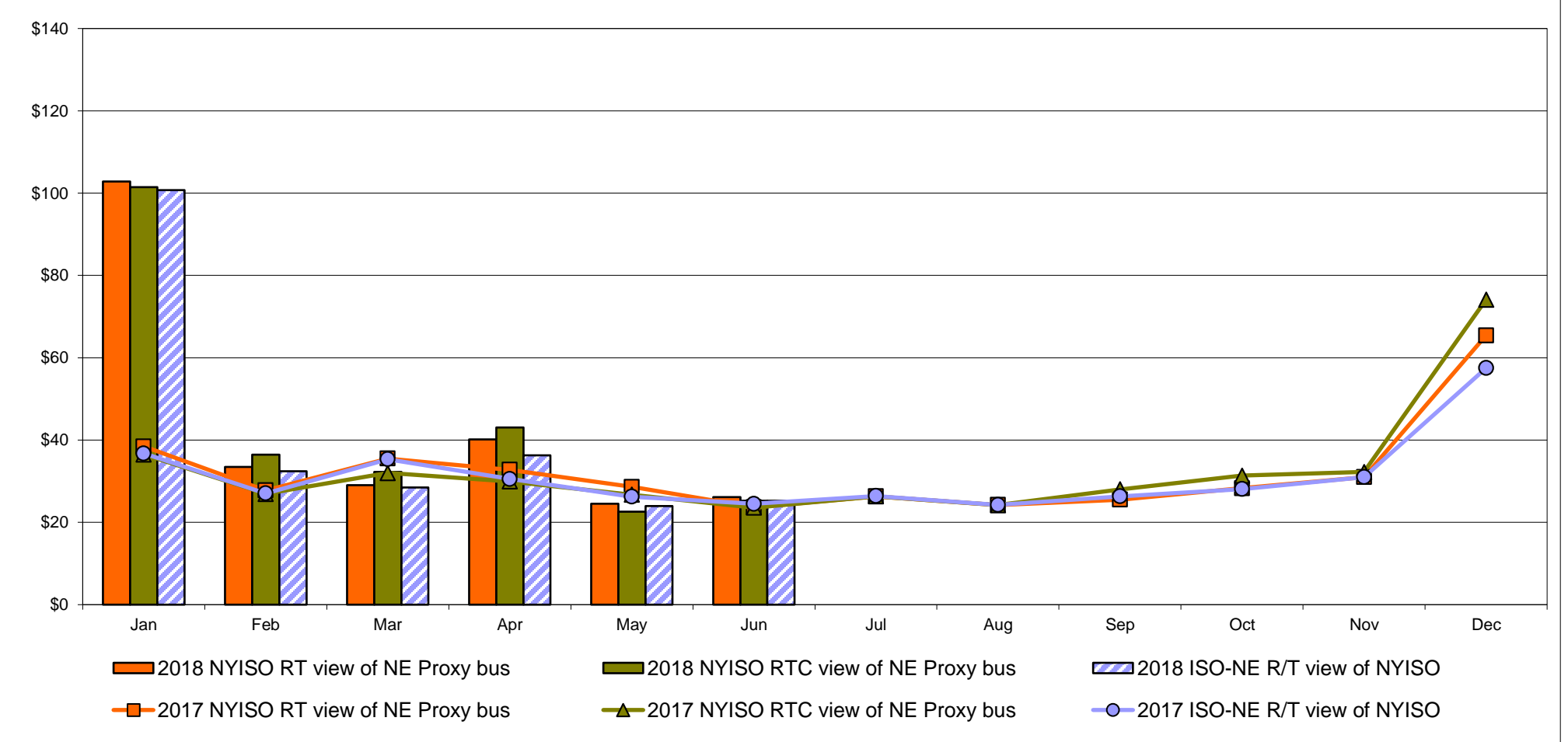


External Comparison ISO-New England

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

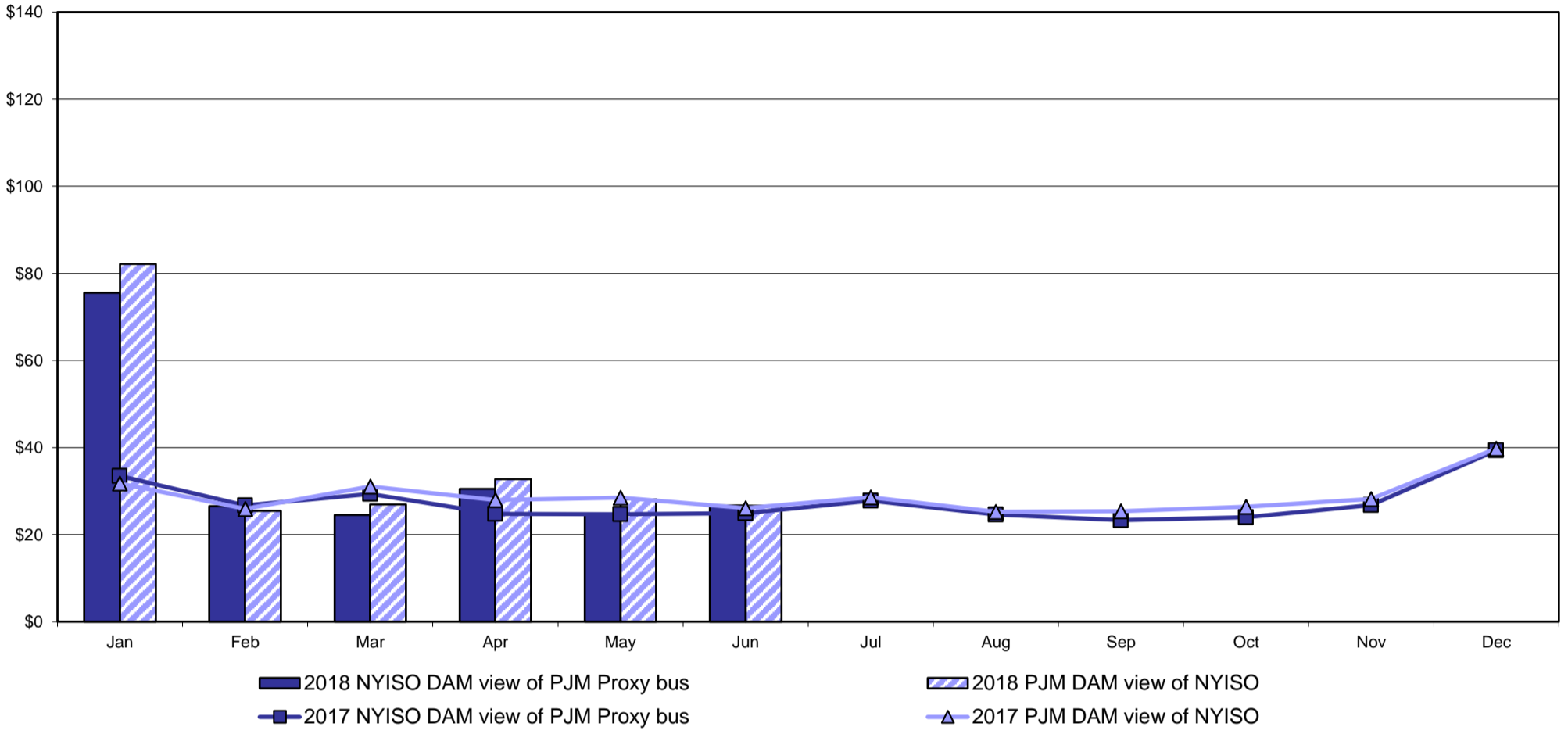


Real Time Market External Zone Comparison: ISO-NE (\$/MWh)

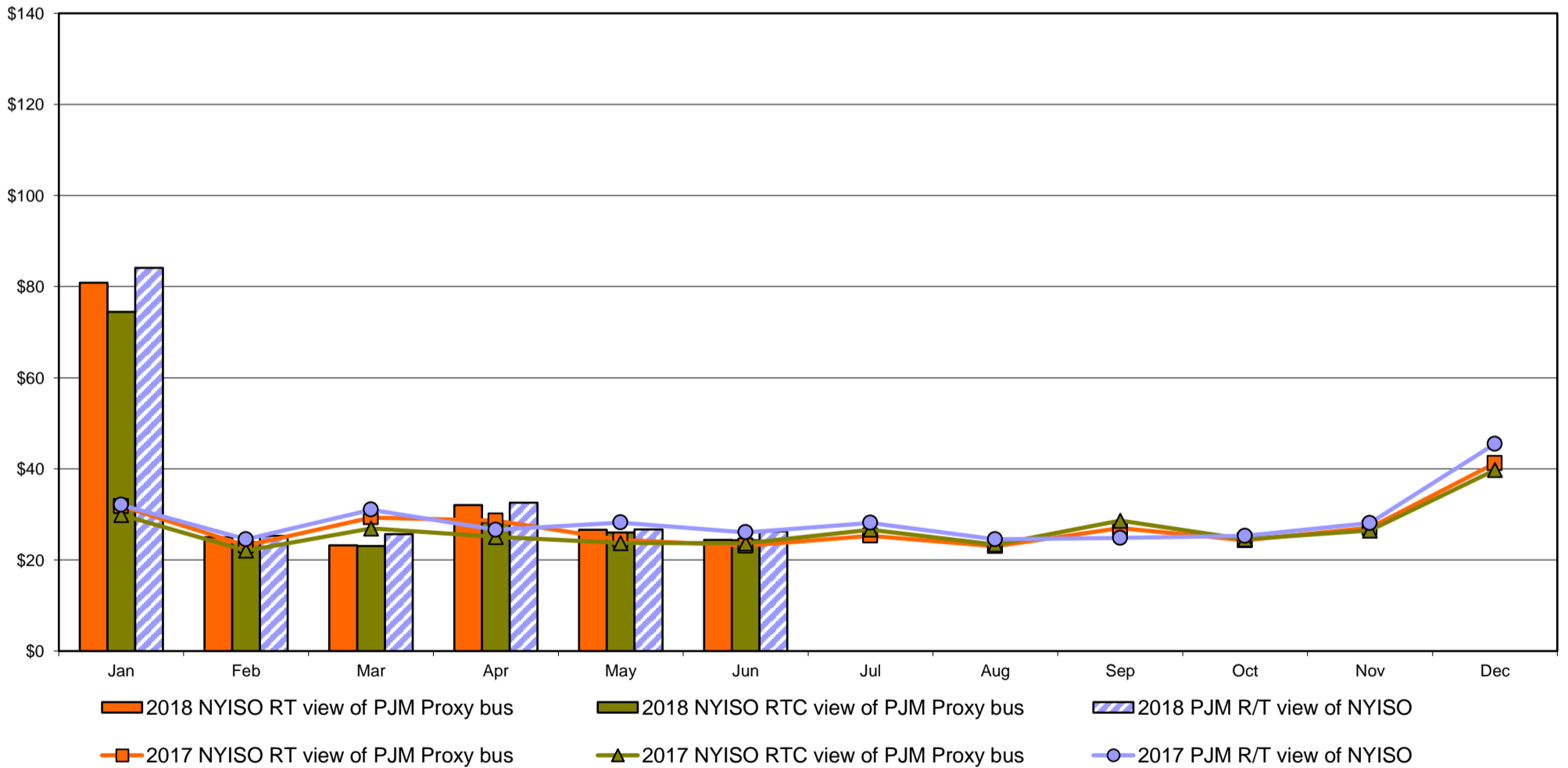


External Comparison PJM

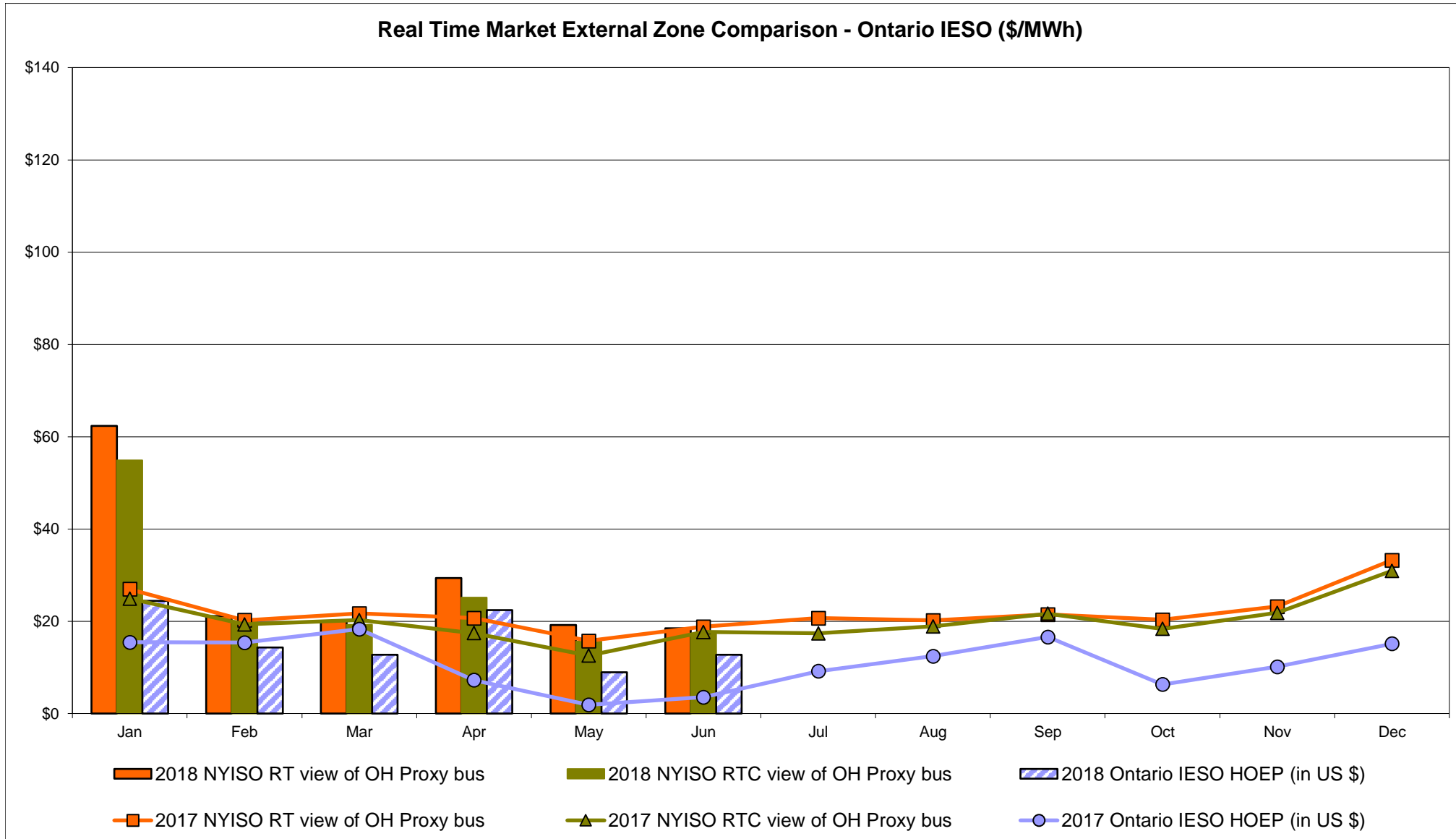
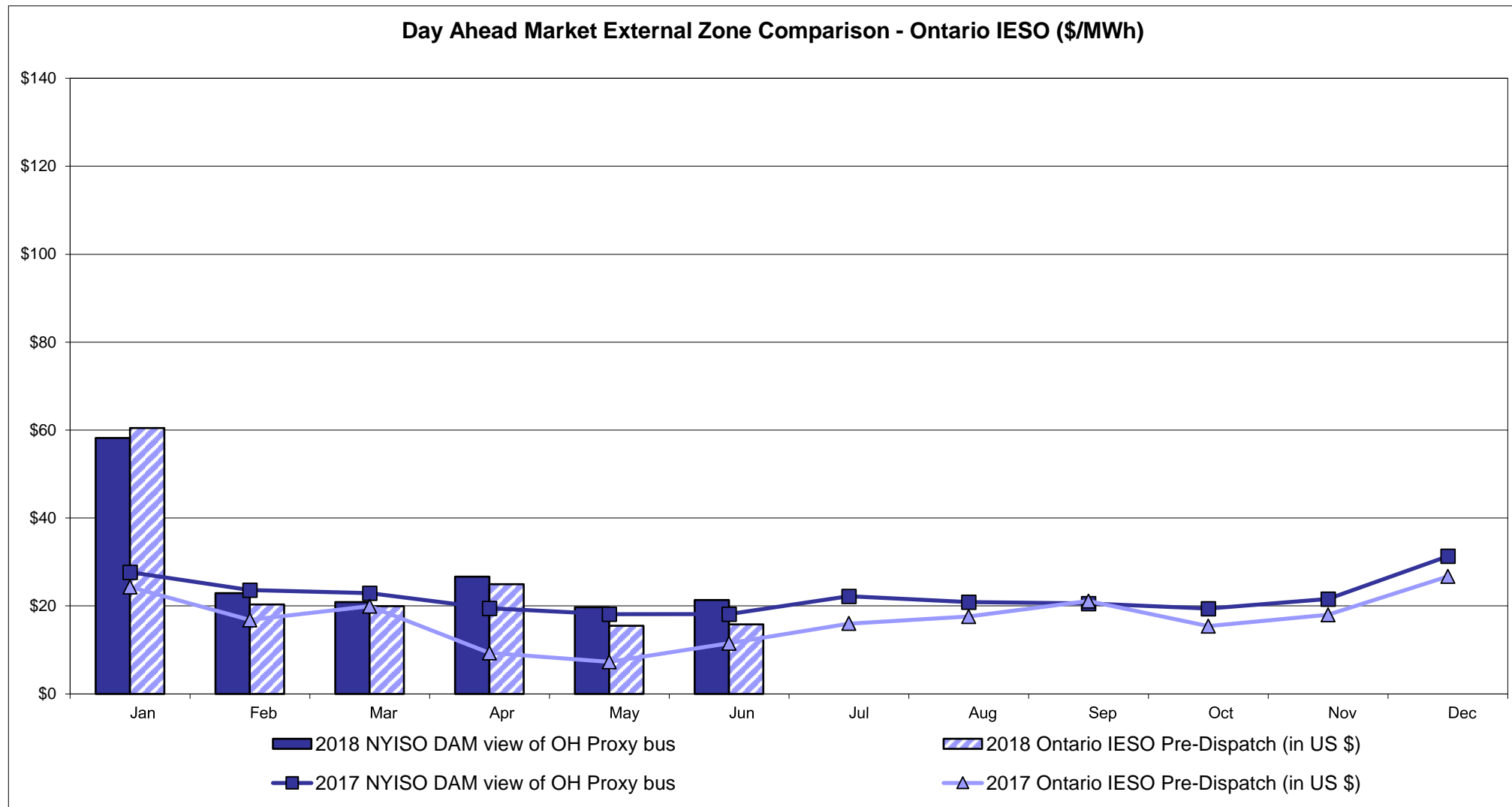
Day Ahead Market External Zone Comparison - PJM (\$/MWh)



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

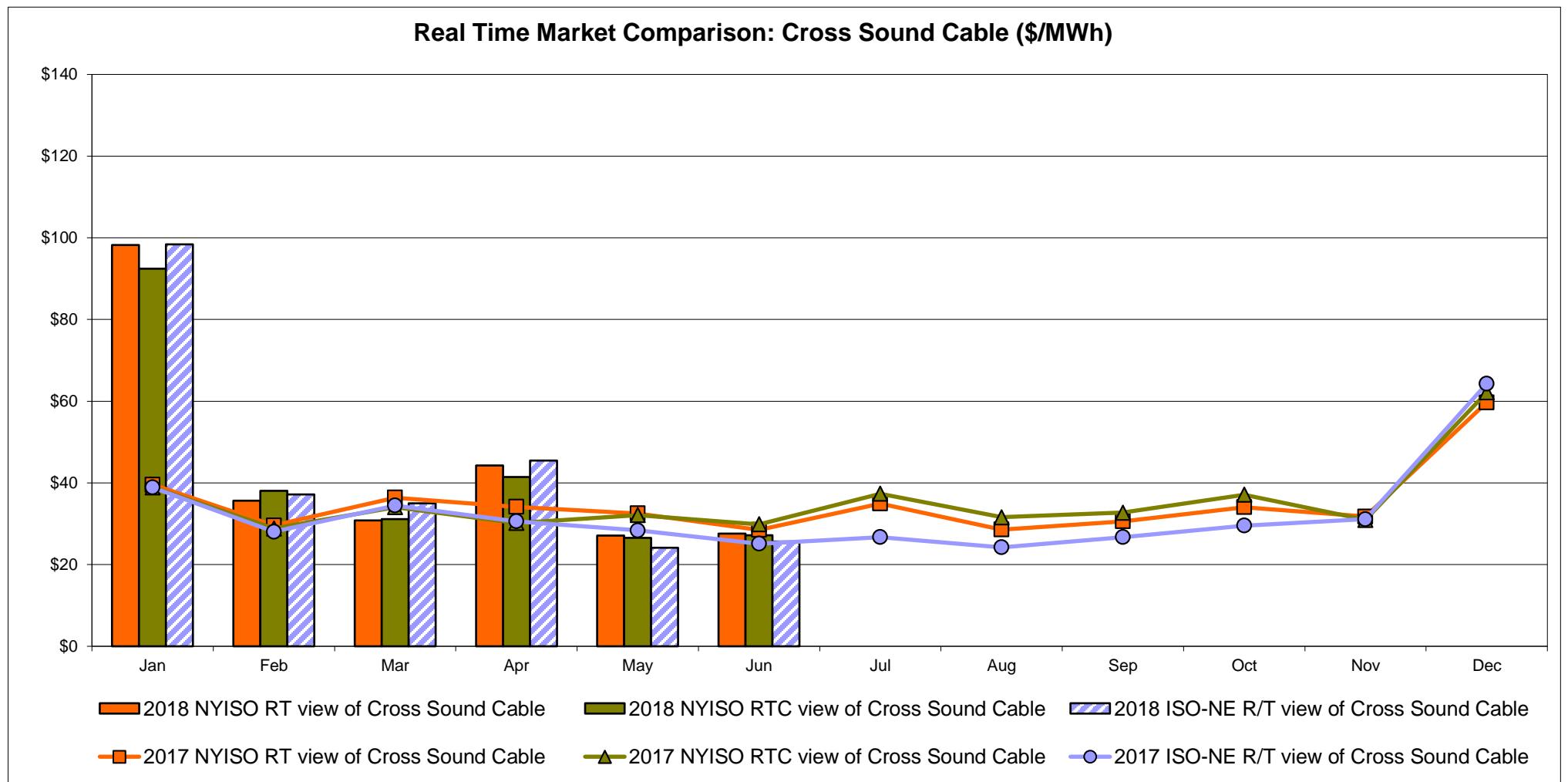
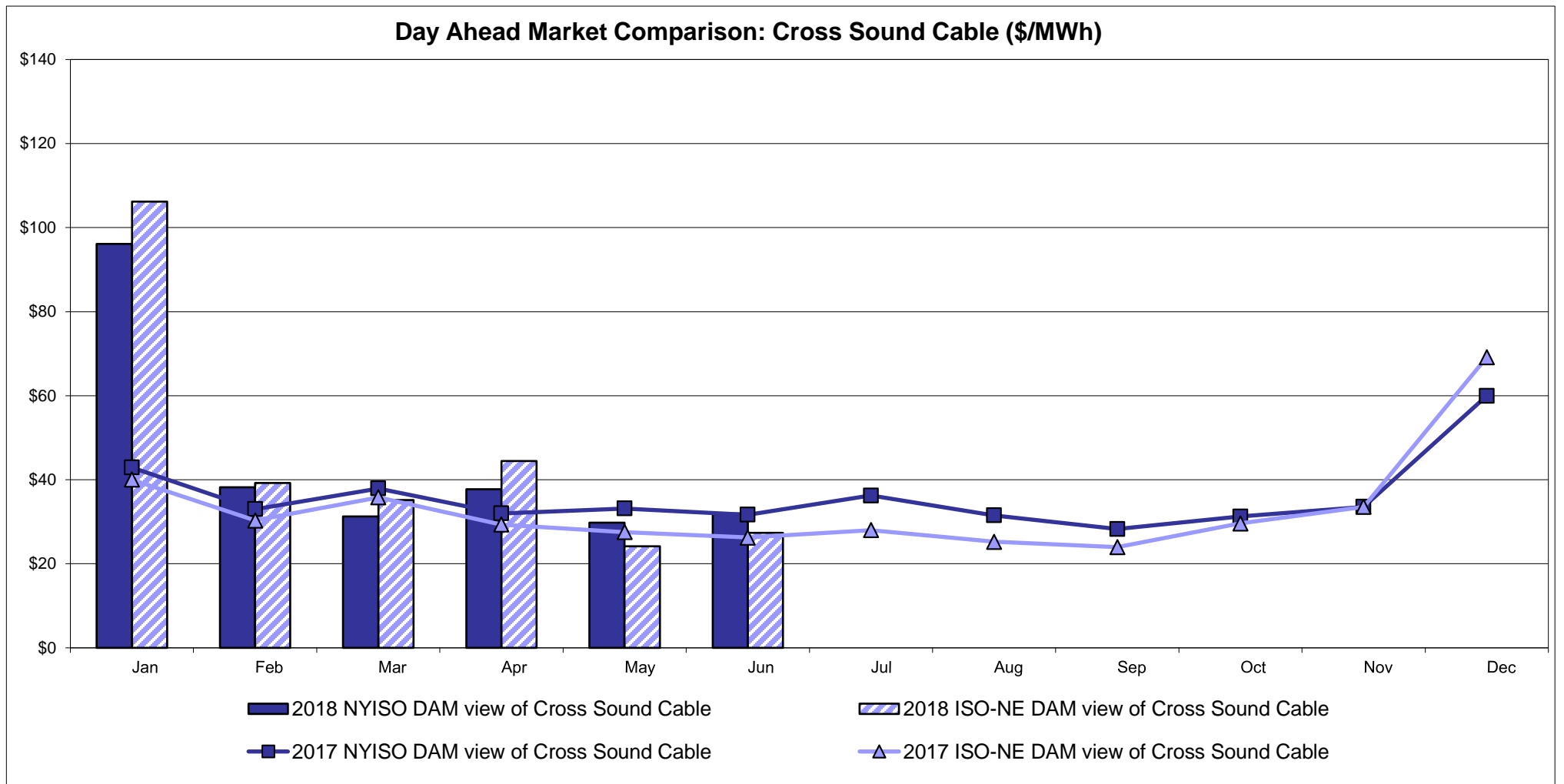


External Comparison Ontario IESO



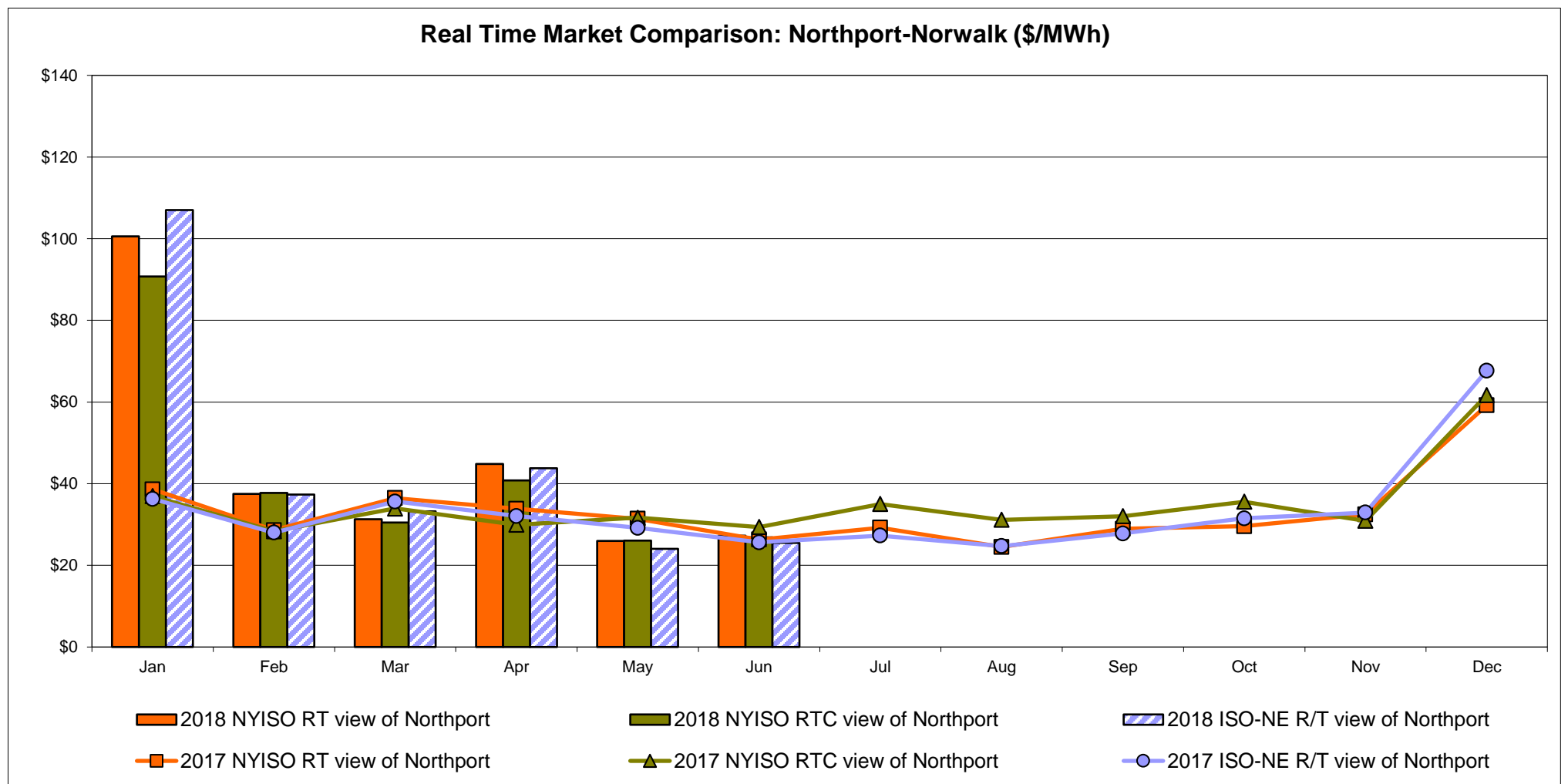
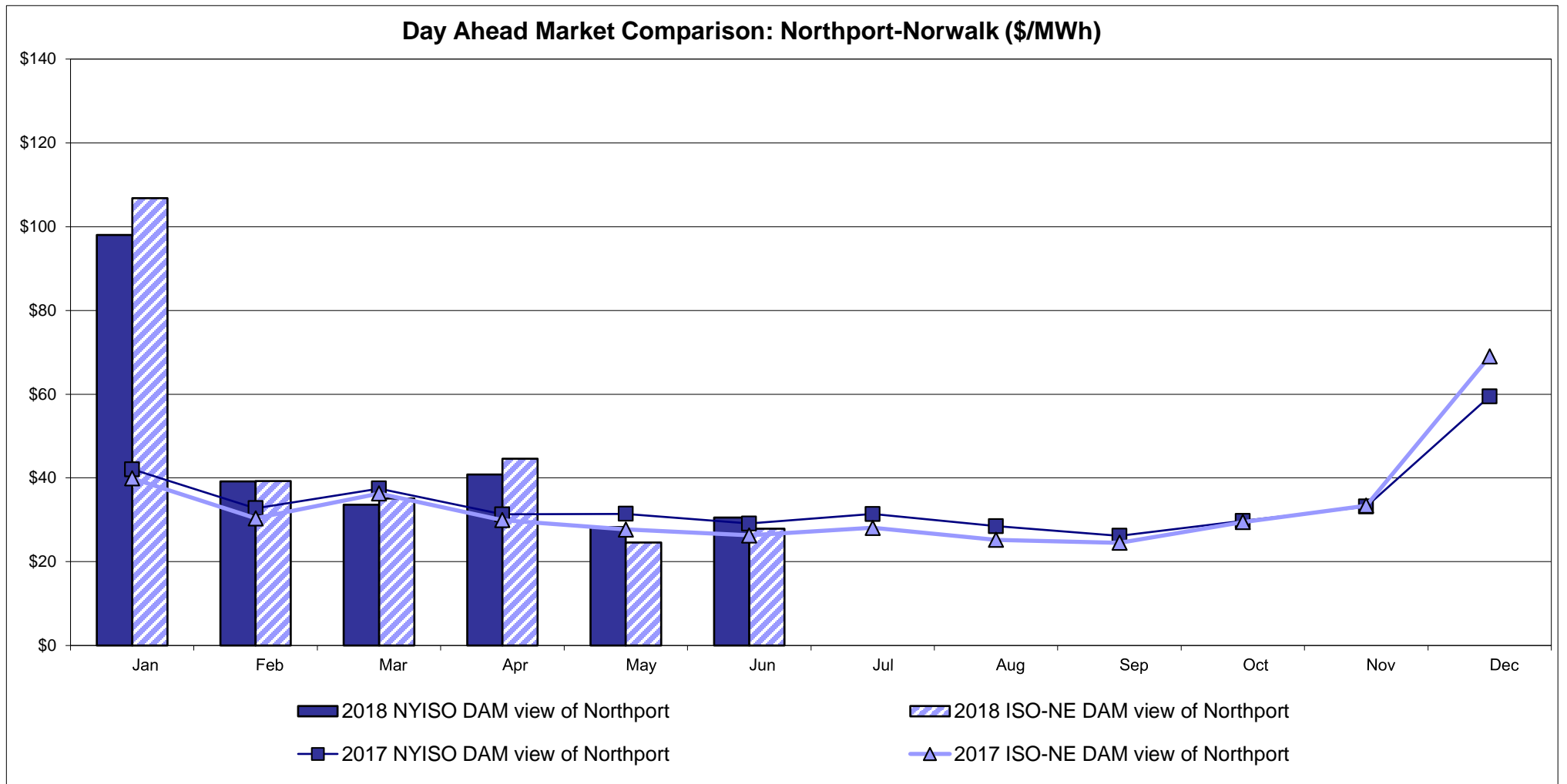
Notes: Exchange factor used for June 2018 was 0.761904761904762 to US
 HOEP: Hourly Ontario Energy Price
 Pre-Dispatch: Projected Energy Price

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.

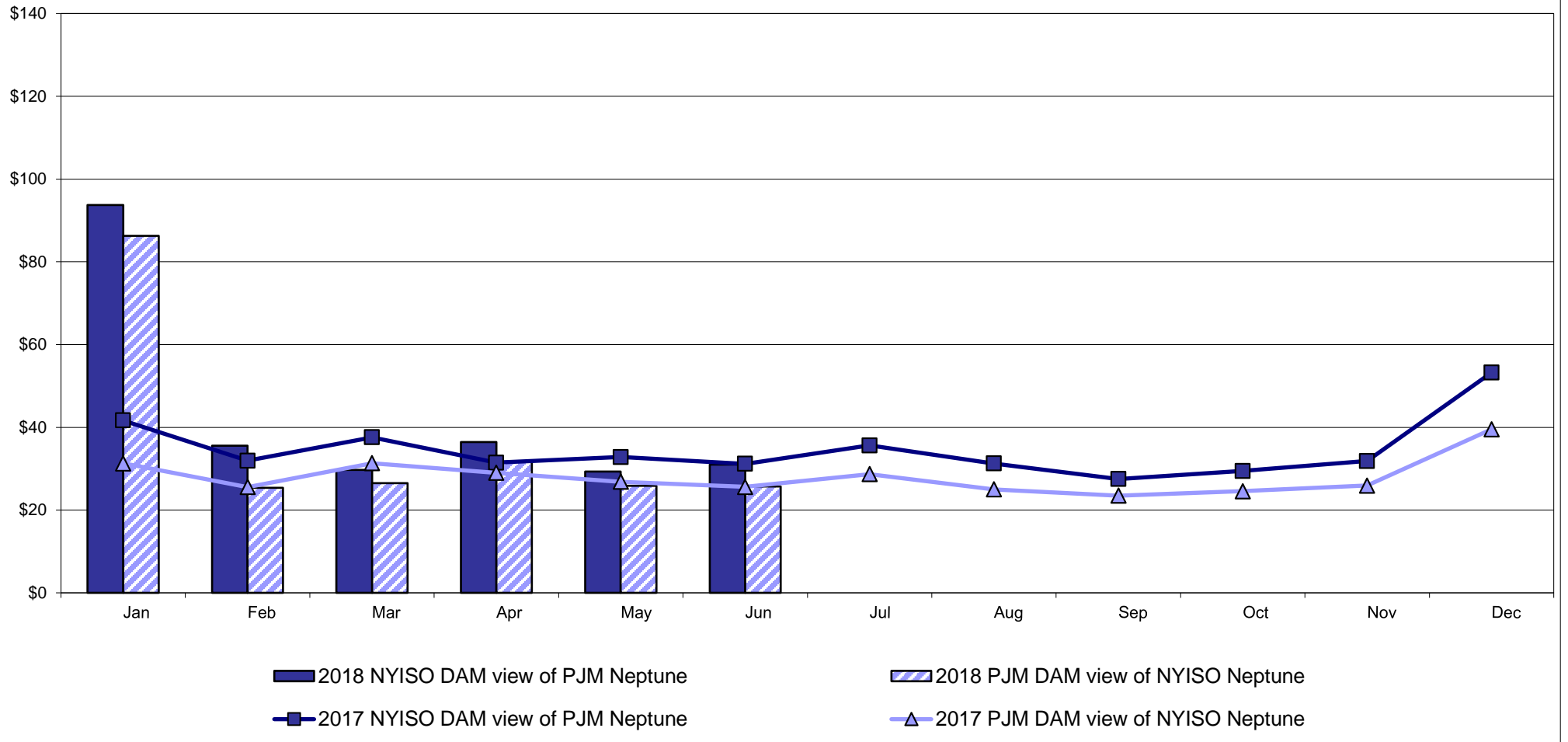
External Controllable Line: Northport - Norwalk (New England)



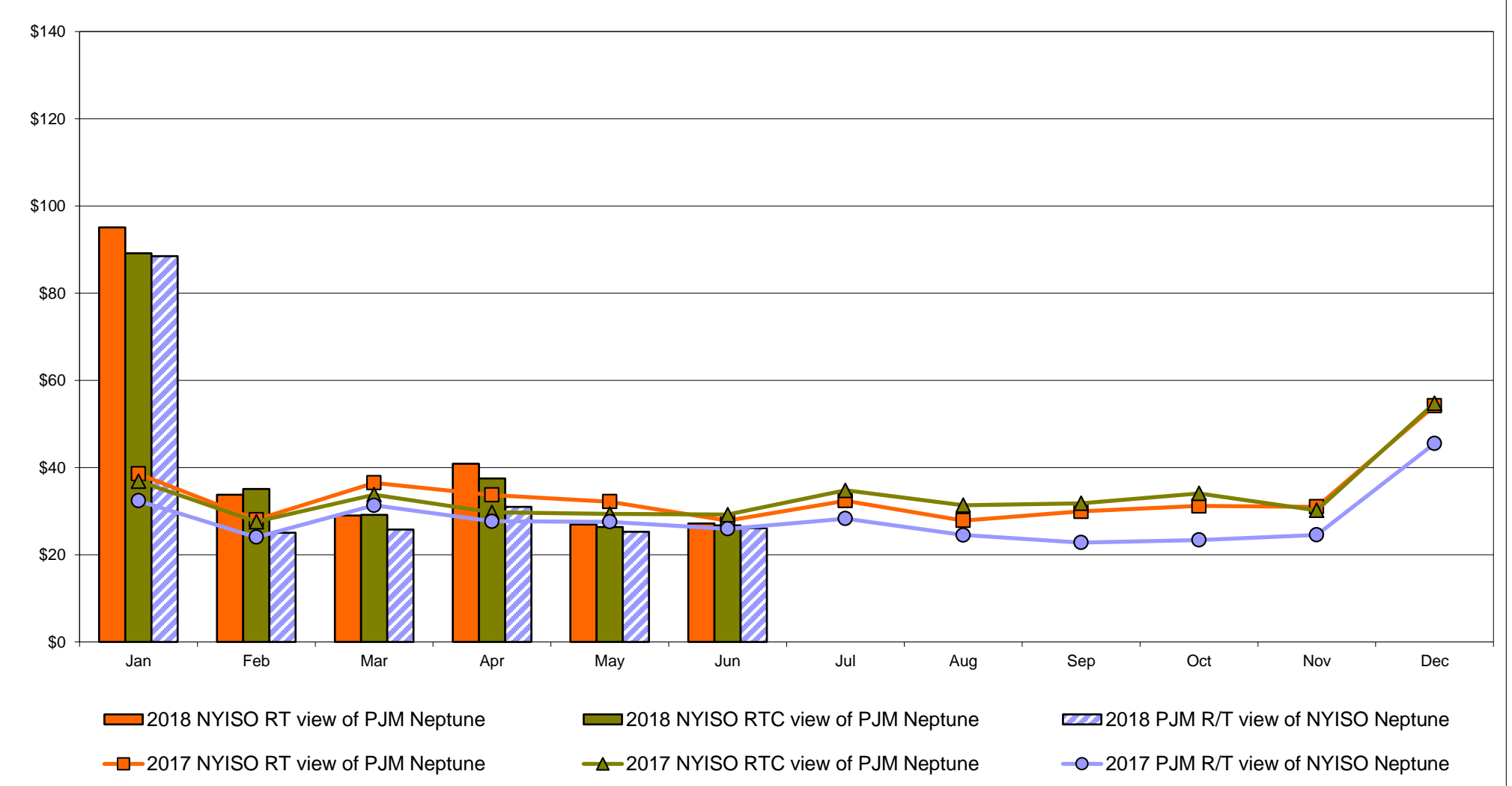
Note:
 ISO-NE Forecast is an advisory posting @ 18:00 day before.
 The DAM and R/T prices at the Northport 138 interface are used for ISO-NE.
 The DAM and R/T prices at the 1385 interface are used for NYISO.

External Controllable Line: Neptune (PJM)

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

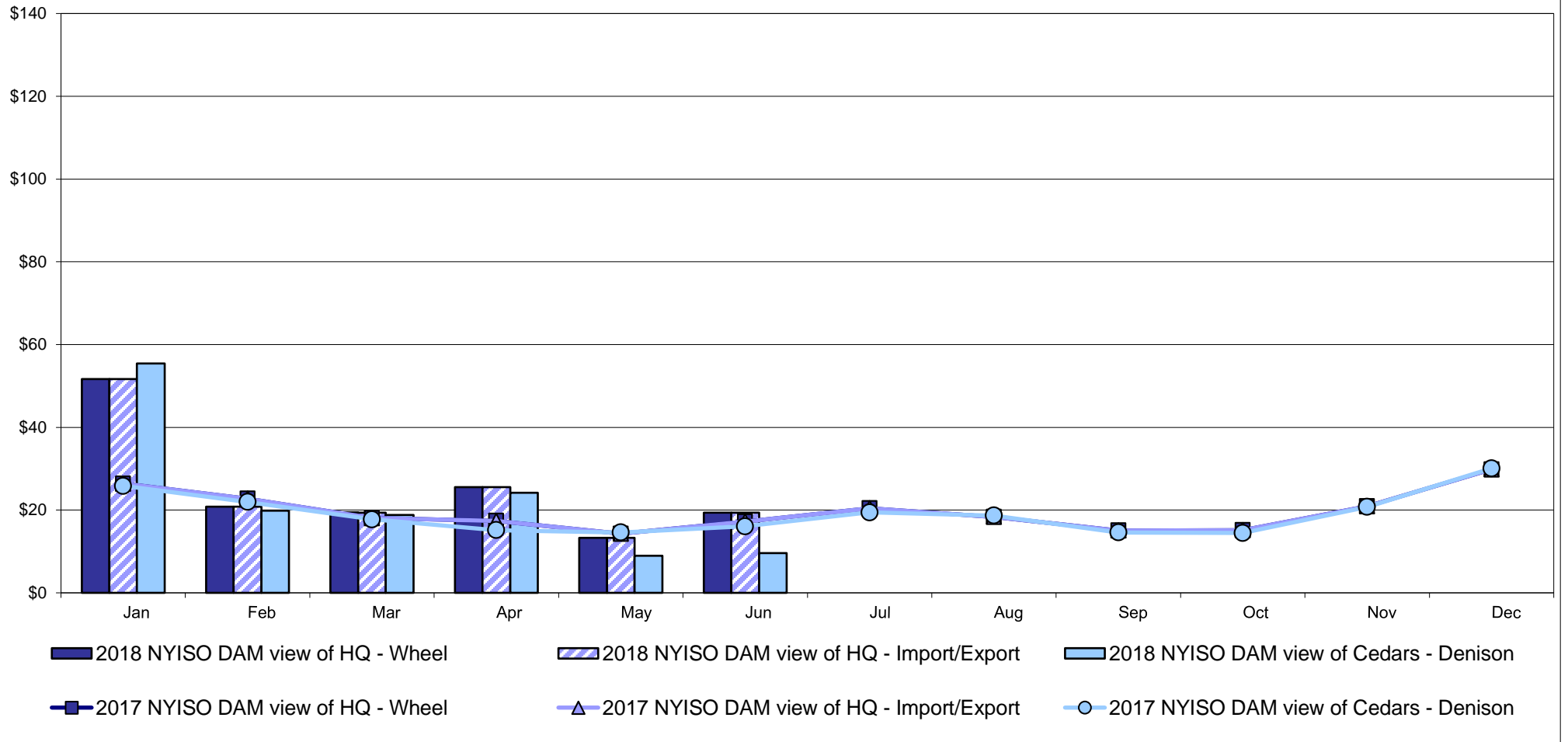


Real Time Market Comparison: Neptune (\$/MWh)

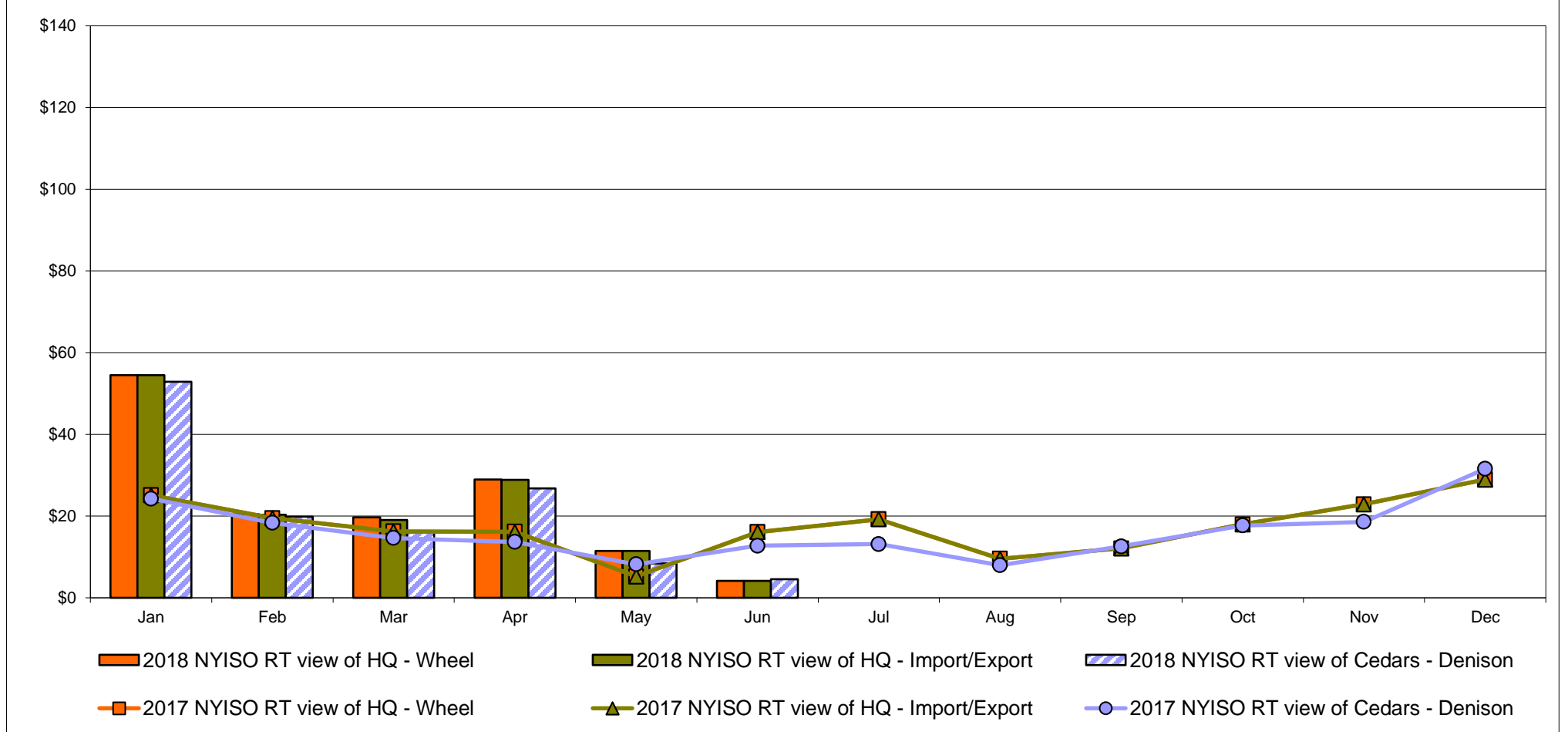


External Comparison Hydro-Quebec

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

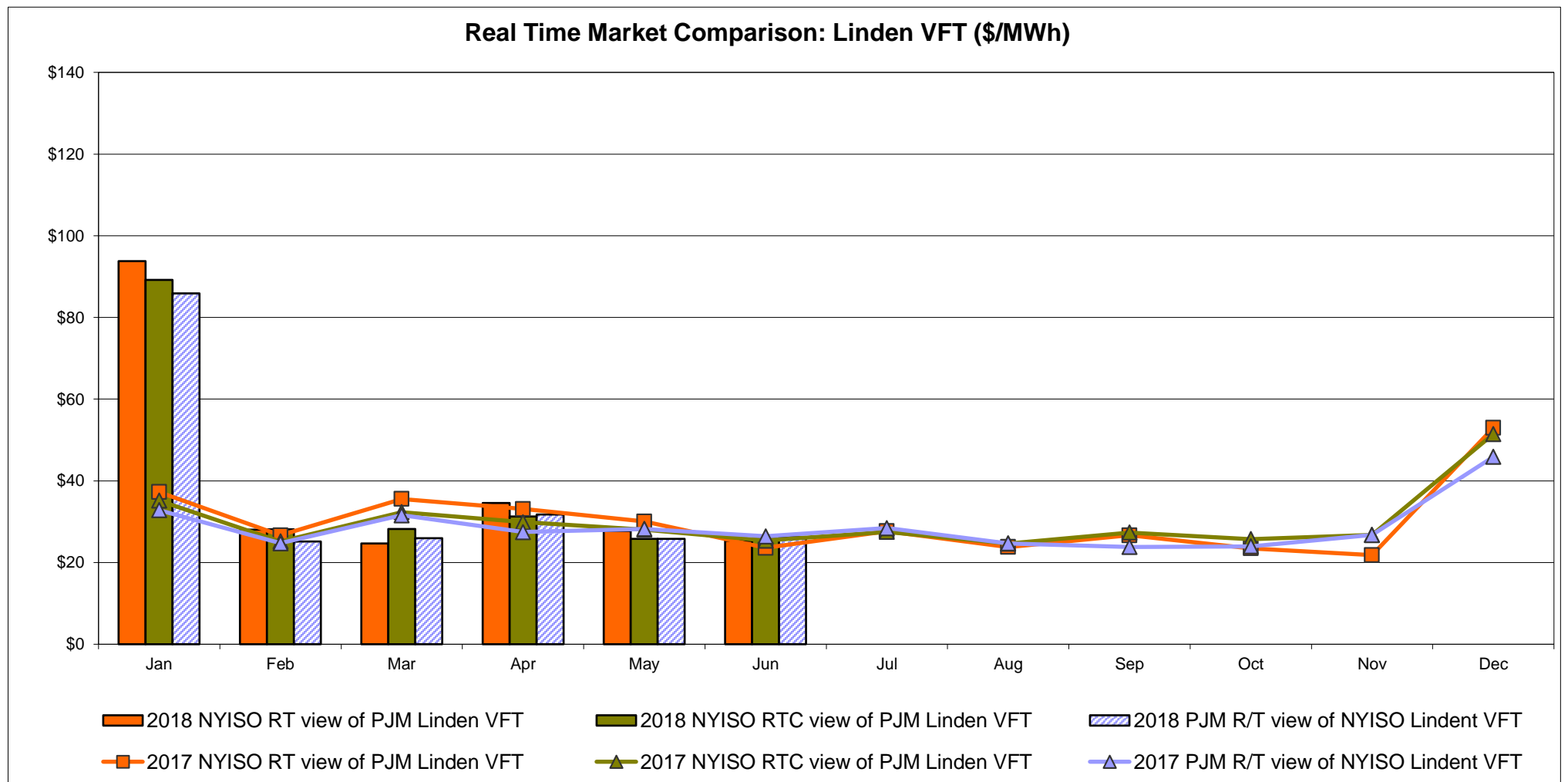
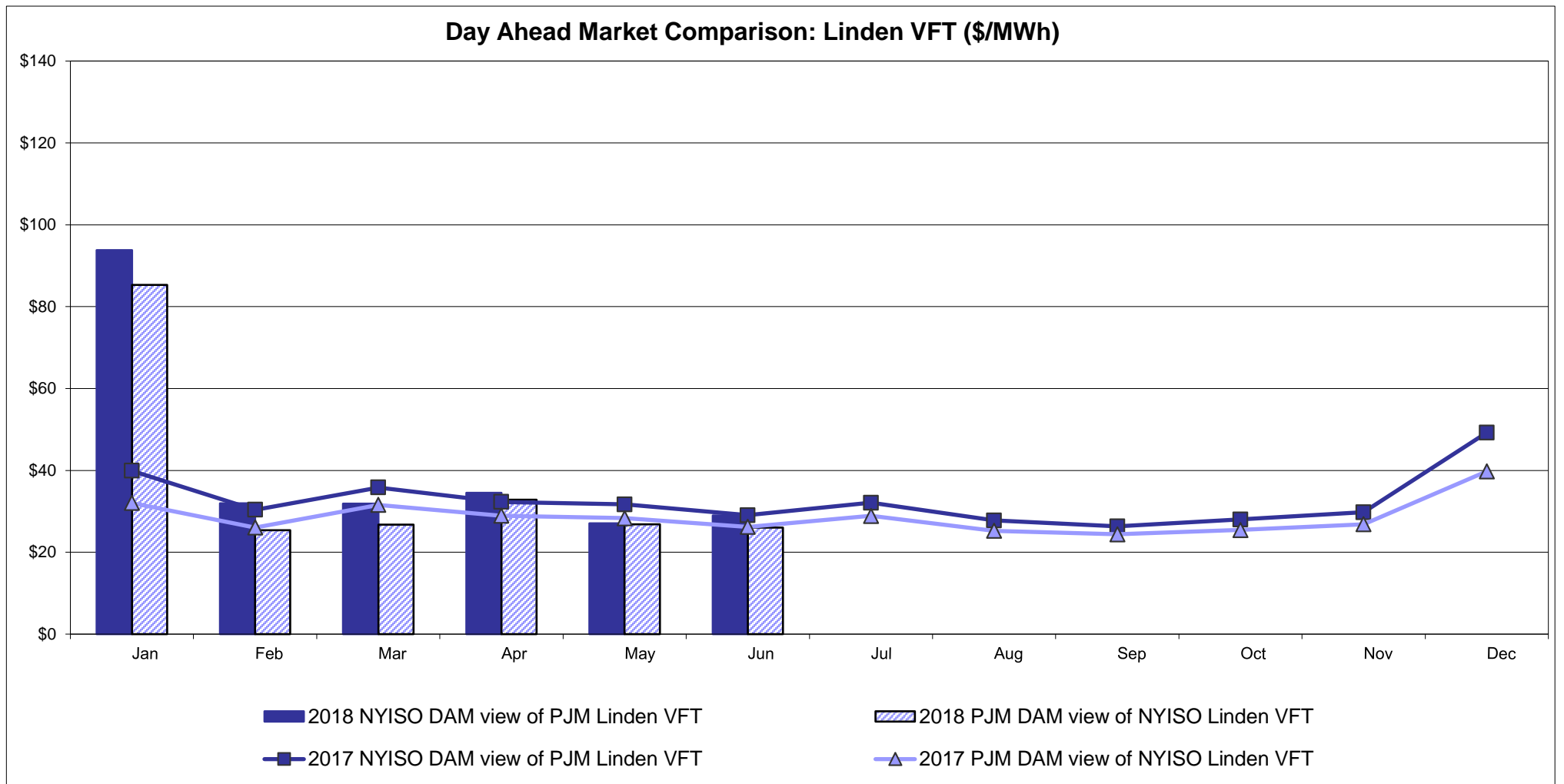


Real Time Market External Zone Comparison - HQ (\$/MWh)

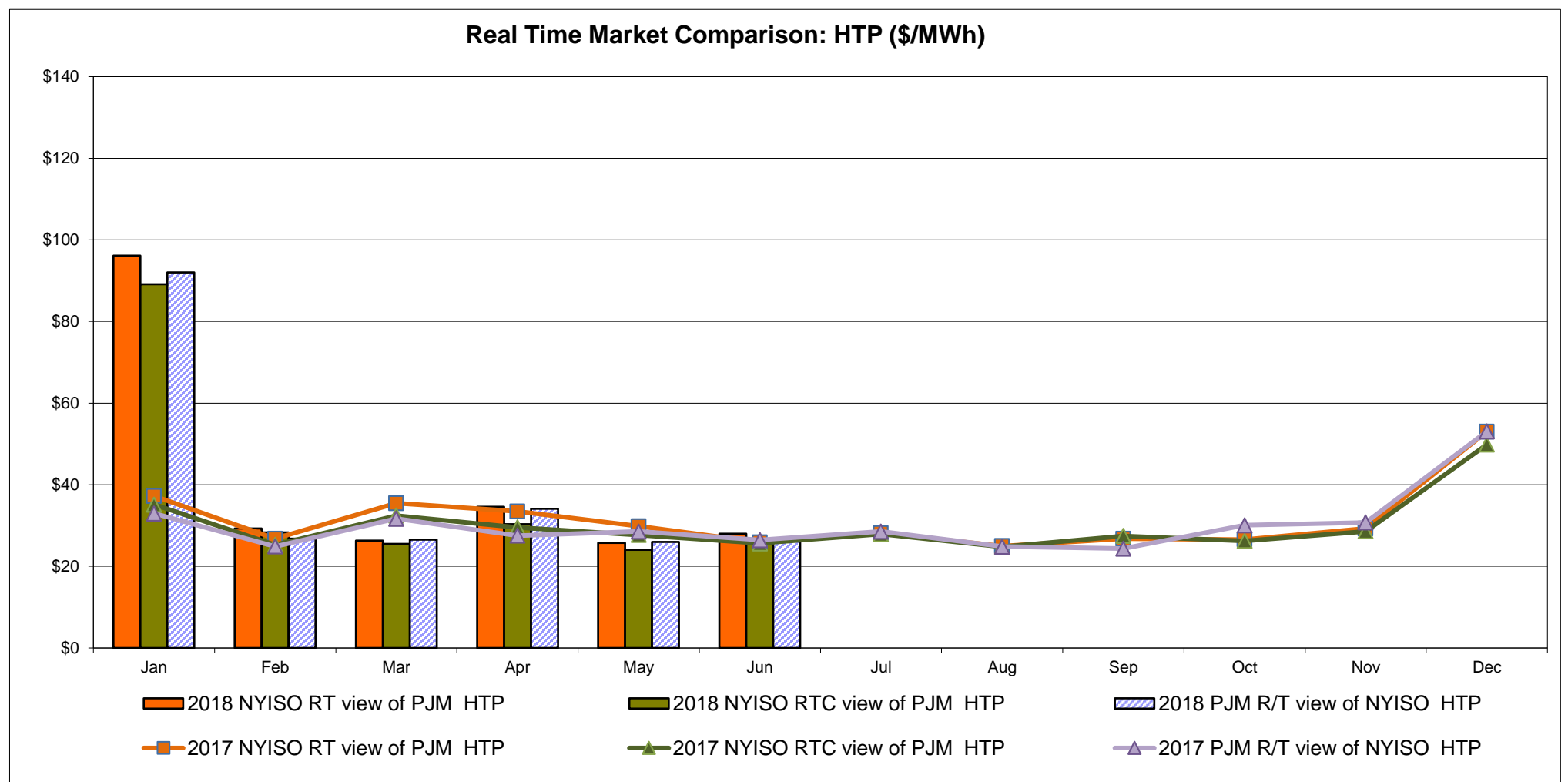
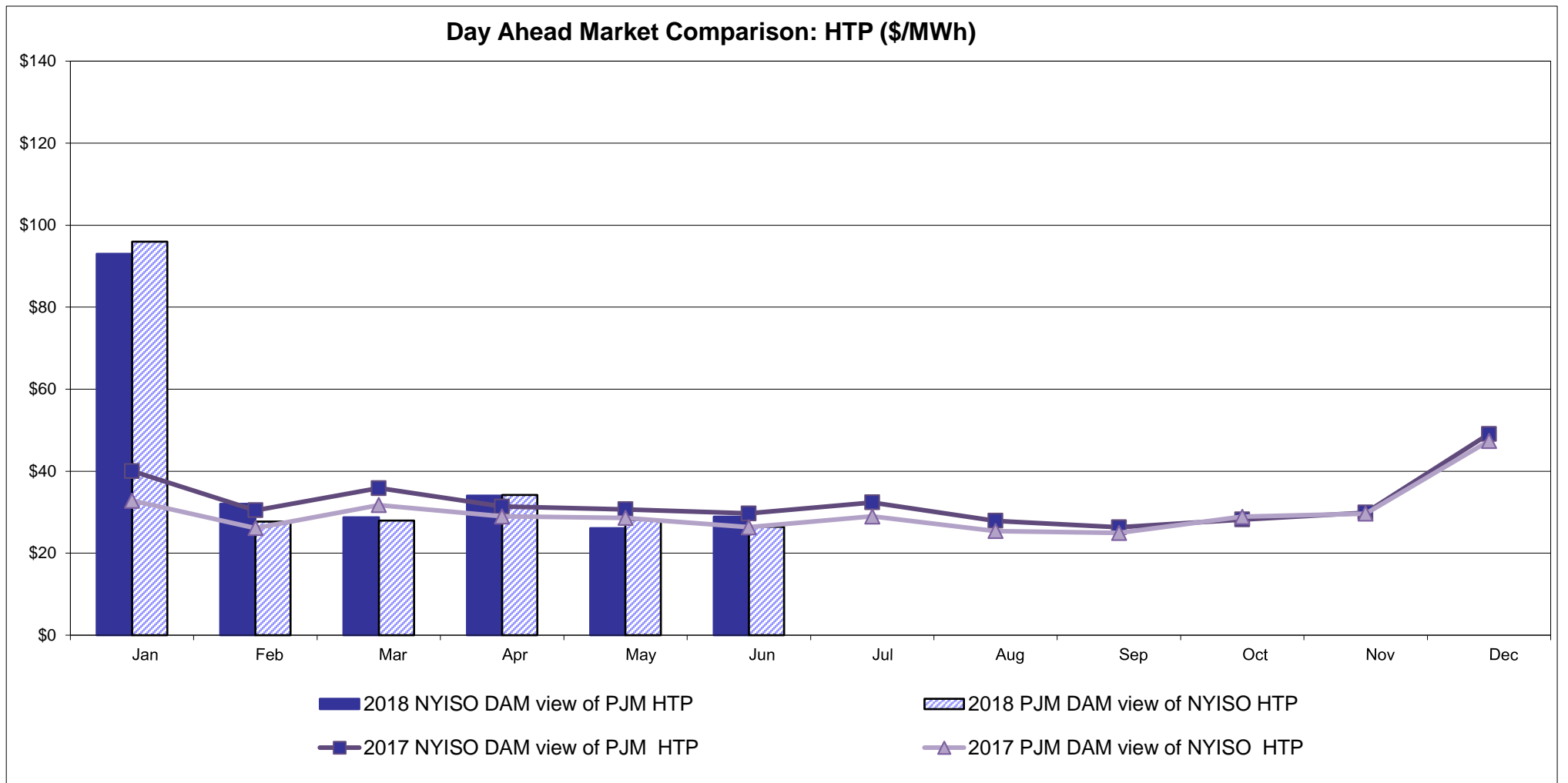


Note:
Hydro-Quebec Prices are unavailable.

External Controllable Line: Linden VFT (PJM)



External Controllable Line: Hudson (PJM)

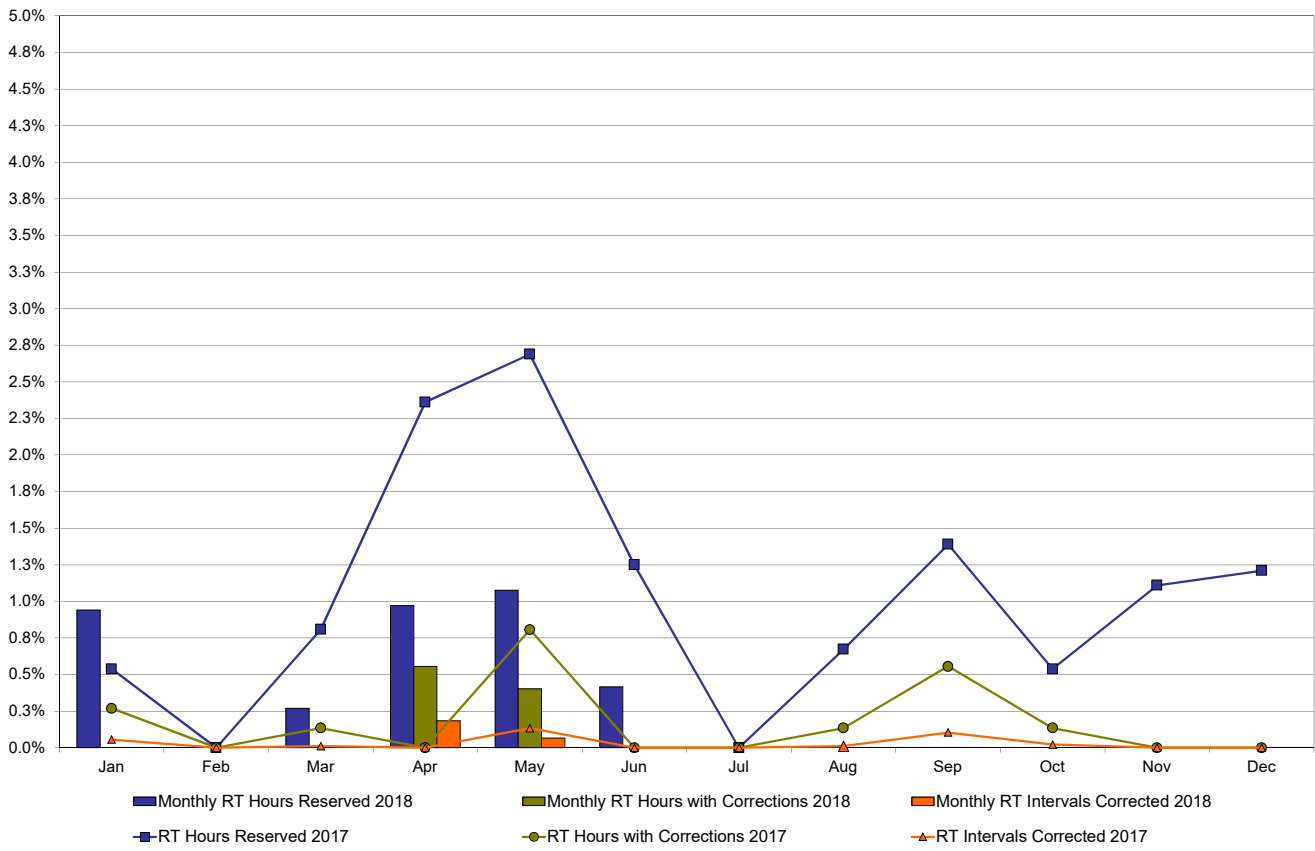


NYISO Real Time Price Correction Statistics

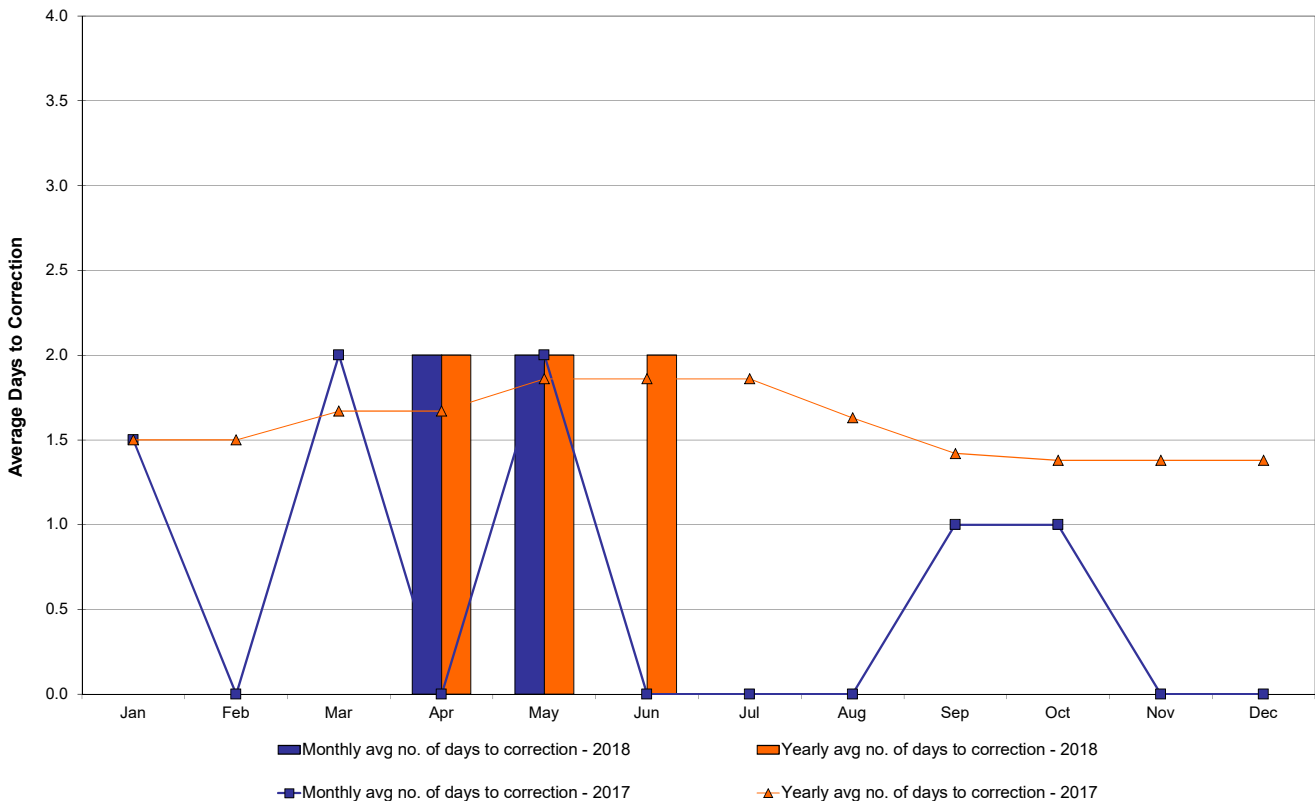
2018		<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
Hour Corrections													
Number of hours with corrections	in the month	0	0	0	4	3	0						
Number of hours	in the month	744	672	743	720	744	720						
% of hours with corrections	in the month	0.00%	0.00%	0.00%	0.56%	0.40%	0.00%						
% of hours with corrections	year-to-date	0.00%	0.00%	0.00%	0.14%	0.19%	0.16%						
Interval Corrections													
Number of intervals corrected	in the month	0	0	0	16	6	0						
Number of intervals	in the month	9,021	8,112	9,002	8,717	9,033	8,723						
% of intervals corrected	in the month	0.00%	0.00%	0.00%	0.18%	0.07%	0.00%						
% of intervals corrected	year-to-date	0.00%	0.00%	0.00%	0.05%	0.05%	0.04%						
Hours Reserved													
Number of hours reserved	in the month	7	0	2	7	8	3						
Number of hours	in the month	744	672	743	720	744	720						
% of hours reserved	in the month	0.94%	0.00%	0.27%	0.97%	1.08%	0.42%						
% of hours reserved	year-to-date	0.94%	0.49%	0.42%	0.56%	0.66%	0.62%						
Days to Correction *													
Avg. number of days to correction	in the month	0.00	0.00	0.00	2.00	2.00	0.00						
Avg. number of days to correction	year-to-date	0.00	0.00	0.00	2.00	2.00	2.00						
Days Without Corrections													
Days without corrections	in the month	31	28	31	28	28	30						
Days without corrections	year-to-date	31	59	90	118	146	176						
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	6	0	0	1	4	1	0	0
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	0.27%	0.00%	0.13%	0.00%	0.81%	0.00%	0.00%	0.13%	0.56%	0.13%	0.00%	0.00%
% of hours with corrections	year-to-date	0.27%	0.14%	0.14%	0.10%	0.25%	0.21%	0.18%	0.17%	0.21%	0.21%	0.19%	0.17%
Interval Corrections													
Number of intervals corrected	in the month	5	0	1	0	12	0	0	1	9	2	0	0
Number of intervals	in the month	8,983	8,101	9,026	8,745	9,004	8,712	8,968	8,980	8,701	9,006	8,712	9,063
% of intervals corrected	in the month	0.06%	0.00%	0.01%	0.00%	0.13%	0.00%	0.00%	0.01%	0.10%	0.02%	0.00%	0.00%
% of intervals corrected	year-to-date	0.06%	0.03%	0.02%	0.02%	0.04%	0.03%	0.03%	0.03%	0.04%	0.03%	0.03%	0.03%
Hours Reserved													
Number of hours reserved	in the month	4	0	6	17	20	9	0	5	10	4	8	9
Number of hours	in the month	744	672	743	720	744	720	744	744	720	744	721	744
% of hours reserved	in the month	0.54%	0.00%	0.81%	2.36%	2.69%	1.25%	0.00%	0.67%	1.39%	0.54%	1.11%	1.21%
% of hours reserved	year-to-date	0.54%	0.28%	0.46%	0.94%	1.30%	1.29%	1.10%	1.05%	1.08%	1.03%	1.04%	1.05%
Days to Correction *													
Avg. number of days to correction	in the month	1.50	0.00	2.00	0.00	2.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00
Avg. number of days to correction	year-to-date	1.50	1.50	1.67	1.67	1.86	1.86	1.86	1.63	1.42	1.38	1.38	1.38
Days Without Corrections													
Days without corrections	in the month	29	28	30	30	27	30	31	30	26	30	30	31
Days without corrections	year-to-date	29	57	87	117	144	174	205	235	261	291	321	352

*Calendar days from reservation date; for June 2018 forward, business days from market date

Percentage of Real-Time Corrections

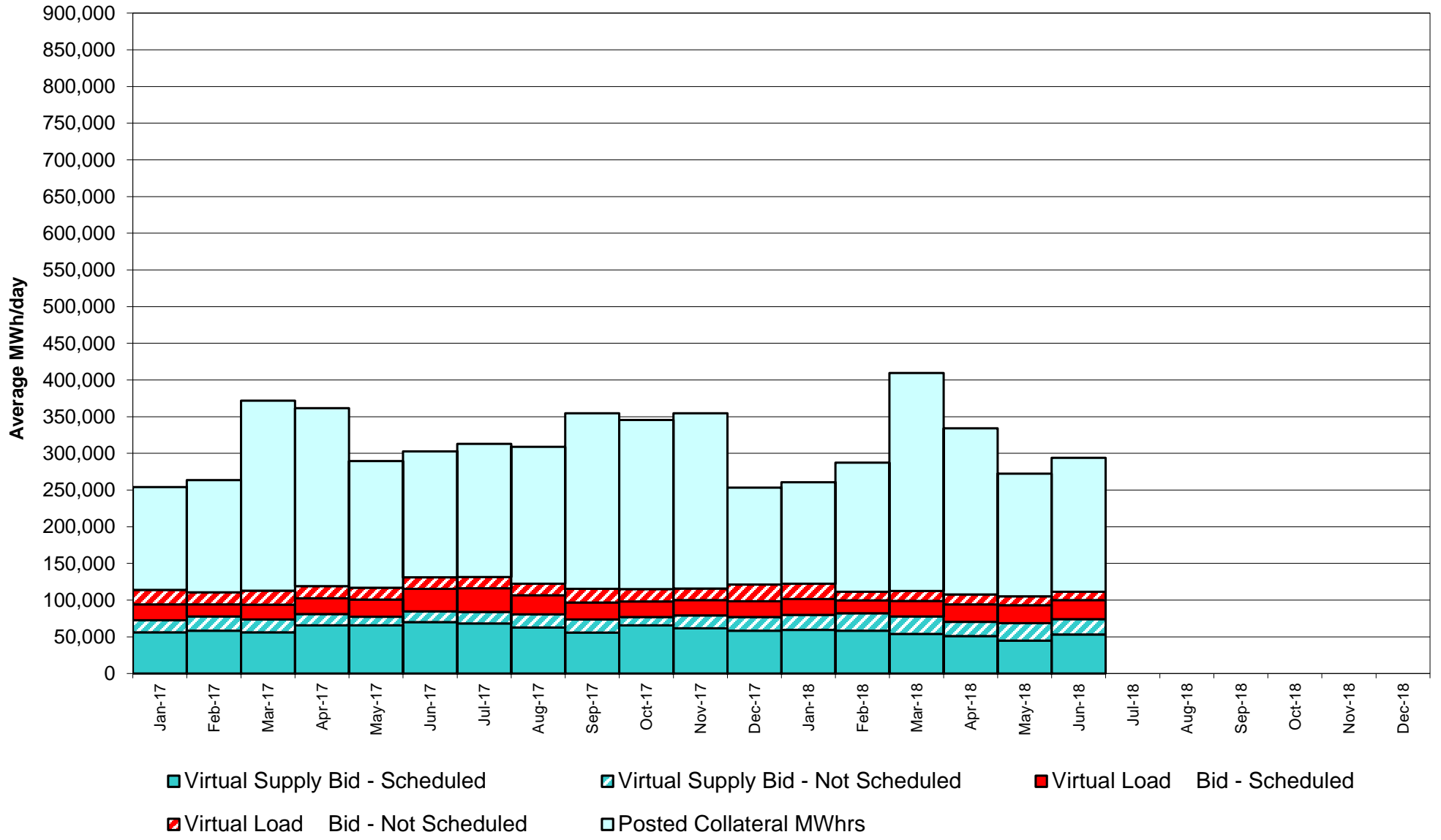


Annual average time period for making Price Corrections*

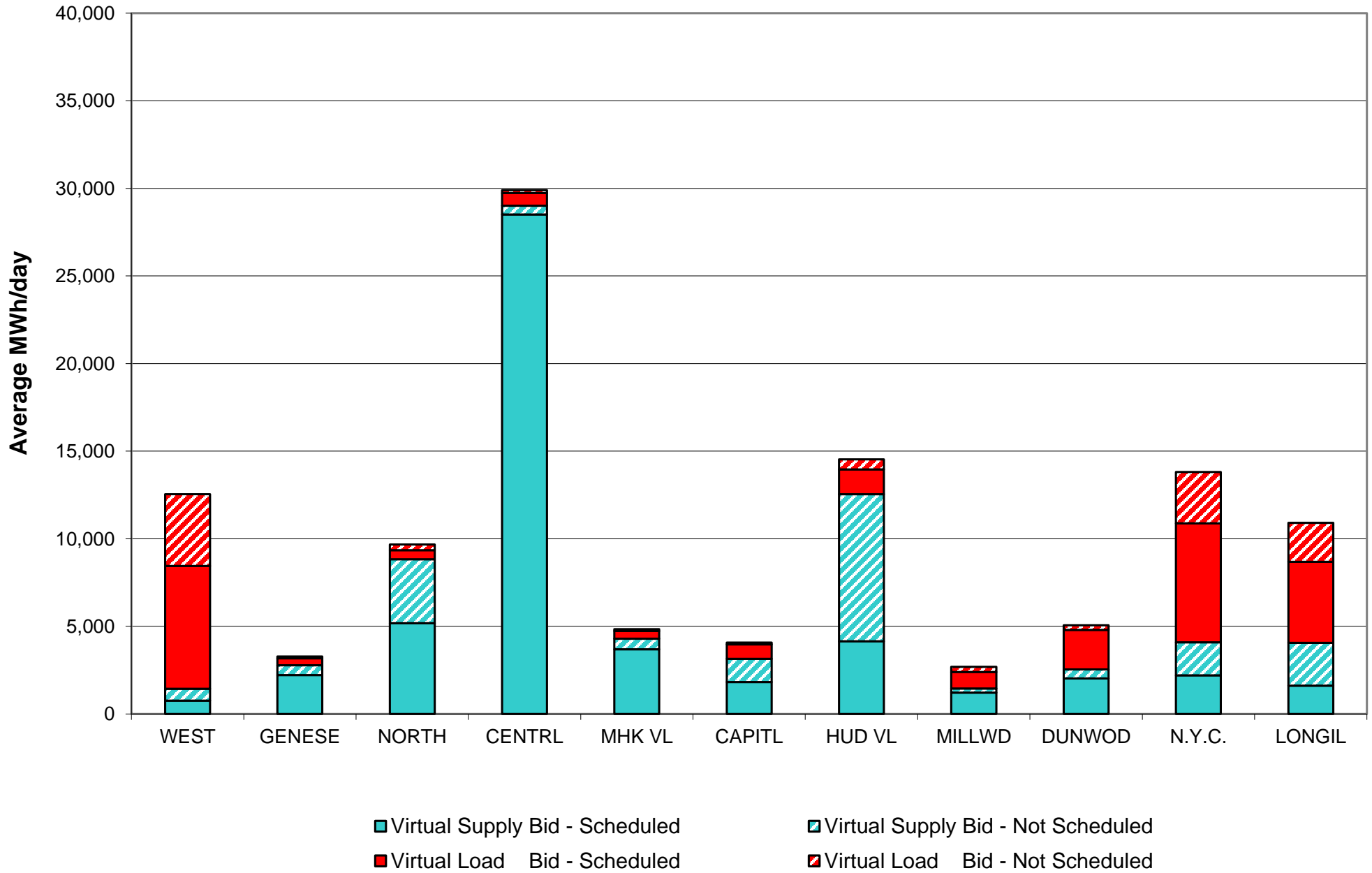


*Calendar days from reservation date, for June 2018 forward, business days from market date

NYISO Virtual Trading Average MWh per day



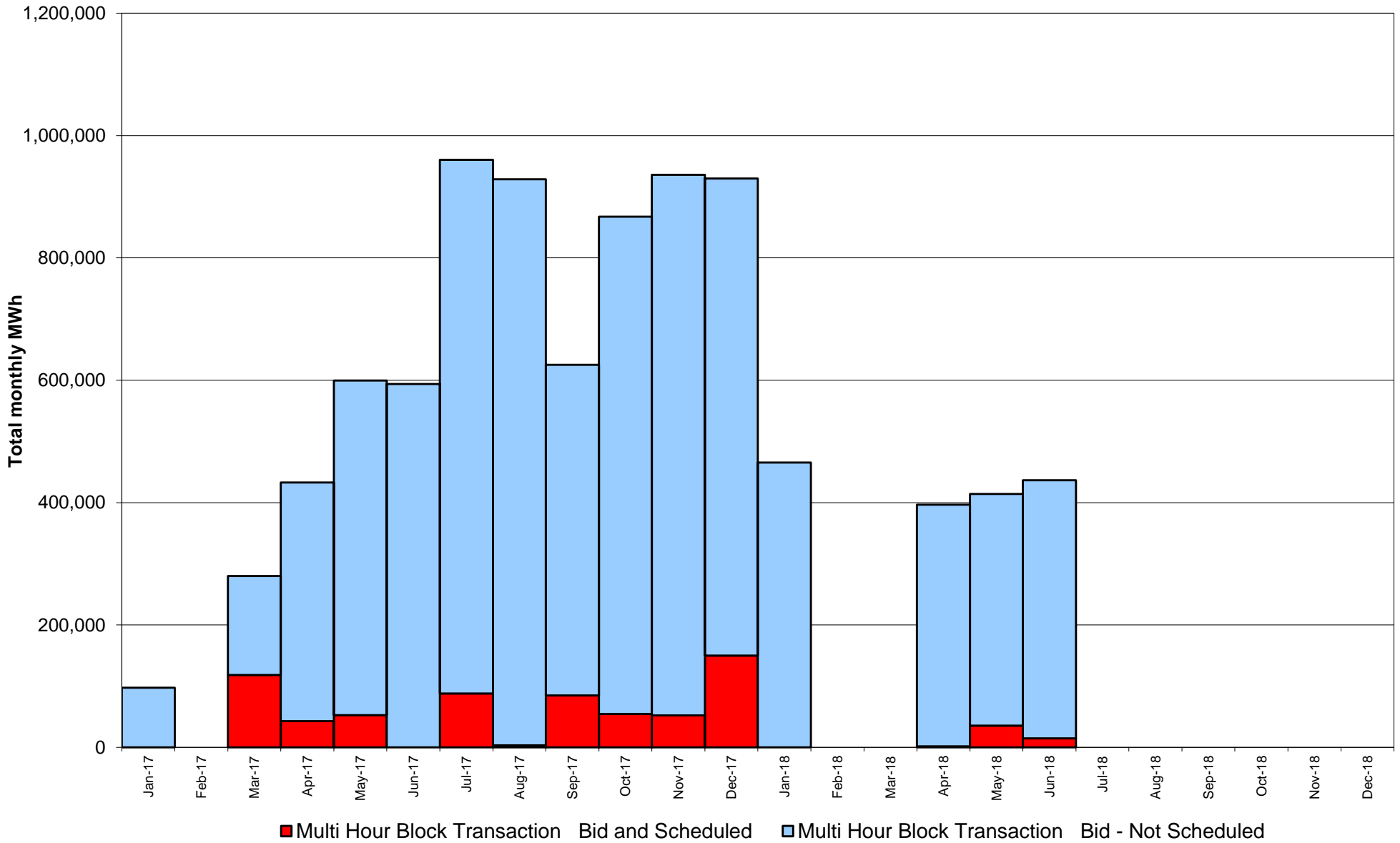
Virtual Load and Supply Zonal Statistics through June 30, 2018



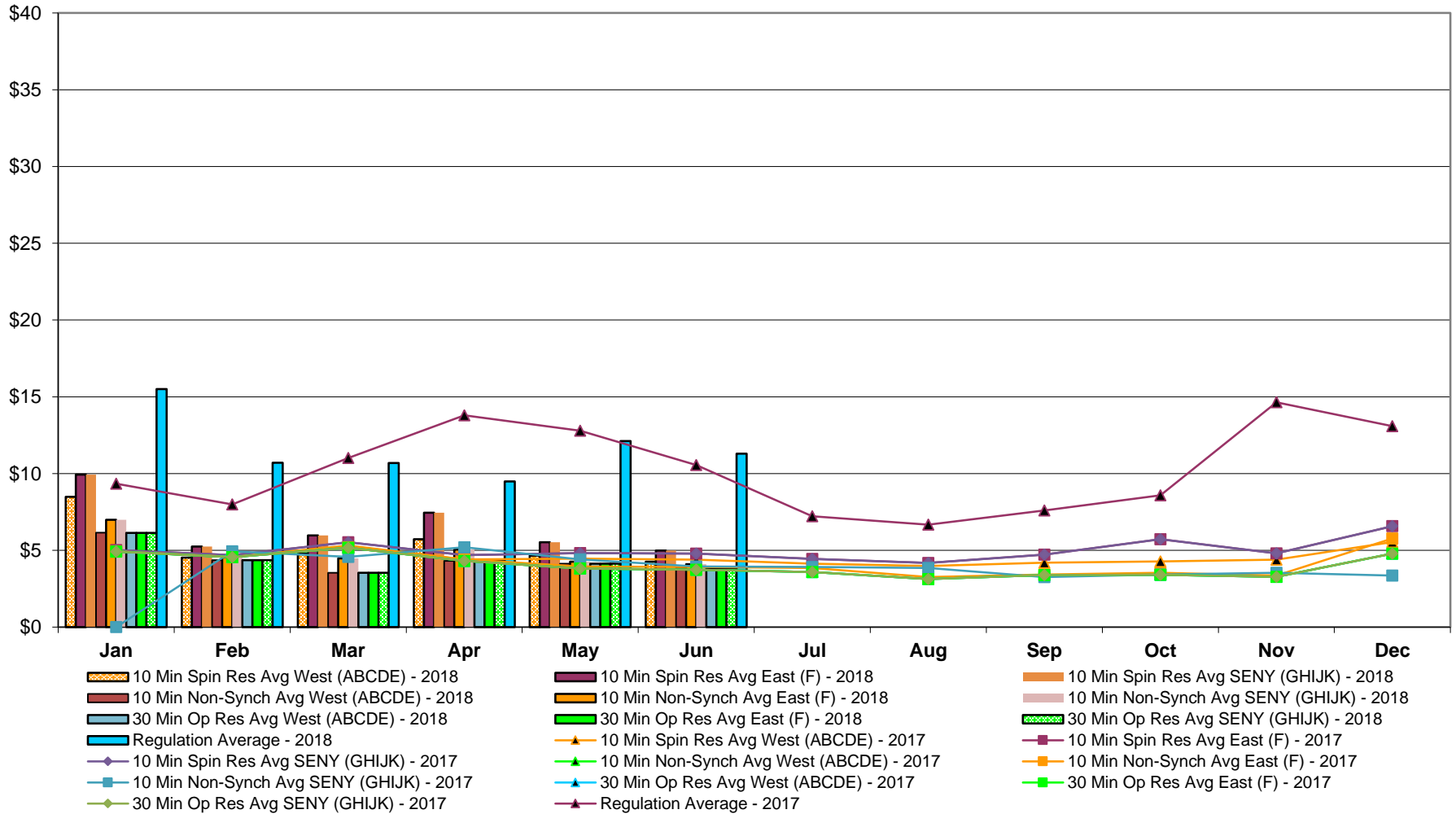
Virtual Load and Supply Zonal Statistics (Average MWh/day) - 2018

		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-18	4,761	4,241	1,938	427	MHK VL	Jan-18	763	456	2,040	266	DUNWOD	Jan-18	1,795	1,509	2,215	620
	Feb-18	3,058	1,941	1,478	603		Feb-18	512	130	1,910	269		Feb-18	742	658	5,891	824
	Mar-18	7,263	2,535	860	659		Mar-18	569	139	1,896	309		Mar-18	1,367	755	3,530	487
	Apr-18	8,154	3,433	926	393		Apr-18	670	173	1,986	470		Apr-18	1,781	1,047	2,395	333
	May-18	7,658	4,266	516	478		May-18	413	95	3,242	758		May-18	1,933	183	2,052	440
	Jun-18	7,003	4,102	760	681		Jun-18	440	100	3,697	603		Jun-18	2,261	258	2,023	515
	Jul-18						Jul-18						Jul-18				
	Aug-18						Aug-18						Aug-18				
	Sep-18						Sep-18						Sep-18				
	Oct-18						Oct-18						Oct-18				
	Nov-18						Nov-18						Nov-18				
	Dec-18						Dec-18						Dec-18				
GENESE	Jan-18	554	310	3,772	2,739	CAPITL	Jan-18	2,291	1,751	1,887	2,212	N.Y.C.	Jan-18	4,302	5,885	1,359	704
	Feb-18	525	172	1,723	2,671		Feb-18	1,822	269	1,331	2,799		Feb-18	5,644	4,187	1,181	1,086
	Mar-18	537	143	1,381	2,488		Mar-18	1,731	156	1,330	2,851		Mar-18	2,346	4,931	1,727	1,285
	Apr-18	587	234	1,818	1,047		Apr-18	1,743	263	2,032	1,826		Apr-18	3,190	2,460	2,212	1,376
	May-18	405	123	2,353	649		May-18	911	95	1,430	1,303		May-18	5,464	3,912	1,152	1,476
	Jun-18	389	100	2,222	563		Jun-18	812	112	1,818	1,336		Jun-18	6,786	2,924	2,210	1,888
	Jul-18						Jul-18						Jul-18				
	Aug-18						Aug-18						Aug-18				
	Sep-18						Sep-18						Sep-18				
	Oct-18						Oct-18						Oct-18				
	Nov-18						Nov-18						Nov-18				
	Dec-18						Dec-18						Dec-18				
NORTH	Jan-18	274	282	8,259	3,265	HUD VL	Jan-18	1,562	1,285	5,029	7,218	LONGIL	Jan-18	3,335	3,714	1,932	1,622
	Feb-18	352	369	7,449	2,777		Feb-18	888	740	4,703	8,761		Feb-18	2,800	2,591	3,061	2,605
	Mar-18	249	367	6,995	2,136		Mar-18	845	1,098	5,169	10,837		Mar-18	3,613	3,021	3,308	1,768
	Apr-18	189	269	7,479	1,848		Apr-18	639	973	5,990	9,863		Apr-18	4,649	3,620	2,505	1,620
	May-18	215	79	6,001	4,717		May-18	773	539	3,727	11,304		May-18	5,128	2,420	1,436	2,031
	Jun-18	514	317	5,178	3,657		Jun-18	1,408	573	4,144	8,407		Jun-18	4,621	2,235	1,618	2,440
	Jul-18						Jul-18						Jul-18				
	Aug-18						Aug-18						Aug-18				
	Sep-18						Sep-18						Sep-18				
	Oct-18						Oct-18						Oct-18				
	Nov-18						Nov-18						Nov-18				
	Dec-18						Dec-18						Dec-18				
CENTRL	Jan-18	983	434	28,975	647	MILLWD	Jan-18	923	988	2,033	757	NYISO	Jan-18	21,542	20,854	59,437	20,478
	Feb-18	595	215	28,161	483		Feb-18	486	337	1,284	1,197		Feb-18	17,423	11,608	58,172	24,075
	Mar-18	1,977	208	26,643	614		Mar-18	720	141	1,144	421		Mar-18	21,217	13,494	53,984	23,855
	Apr-18	1,753	334	22,490	677		Apr-18	466	526	1,031	163		Apr-18	23,821	13,330	50,864	19,613
	May-18	1,033	221	21,769	470		May-18	790	140	1,050	188		May-18	24,723	12,074	44,726	23,814
	Jun-18	730	164	28,504	501		Jun-18	938	302	1,223	234		Jun-18	25,903	11,189	53,397	20,825
	Jul-18						Jul-18						Jul-18				
	Aug-18						Aug-18						Aug-18				
	Sep-18						Sep-18						Sep-18				
	Oct-18						Oct-18						Oct-18				
	Nov-18						Nov-18						Nov-18				
	Dec-18						Dec-18						Dec-18				

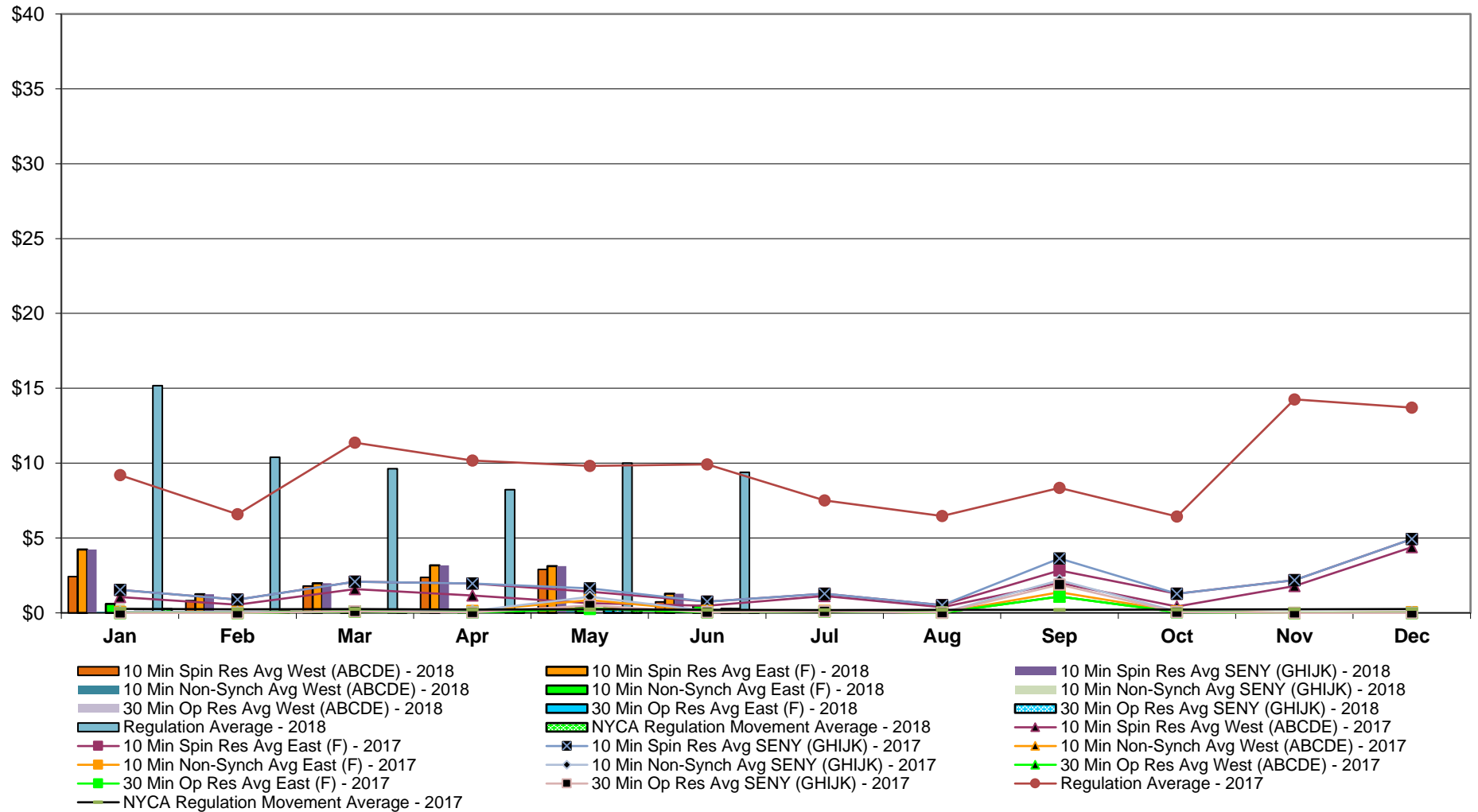
NYISO Multi Hour Block Transactions Monthly Total MWh



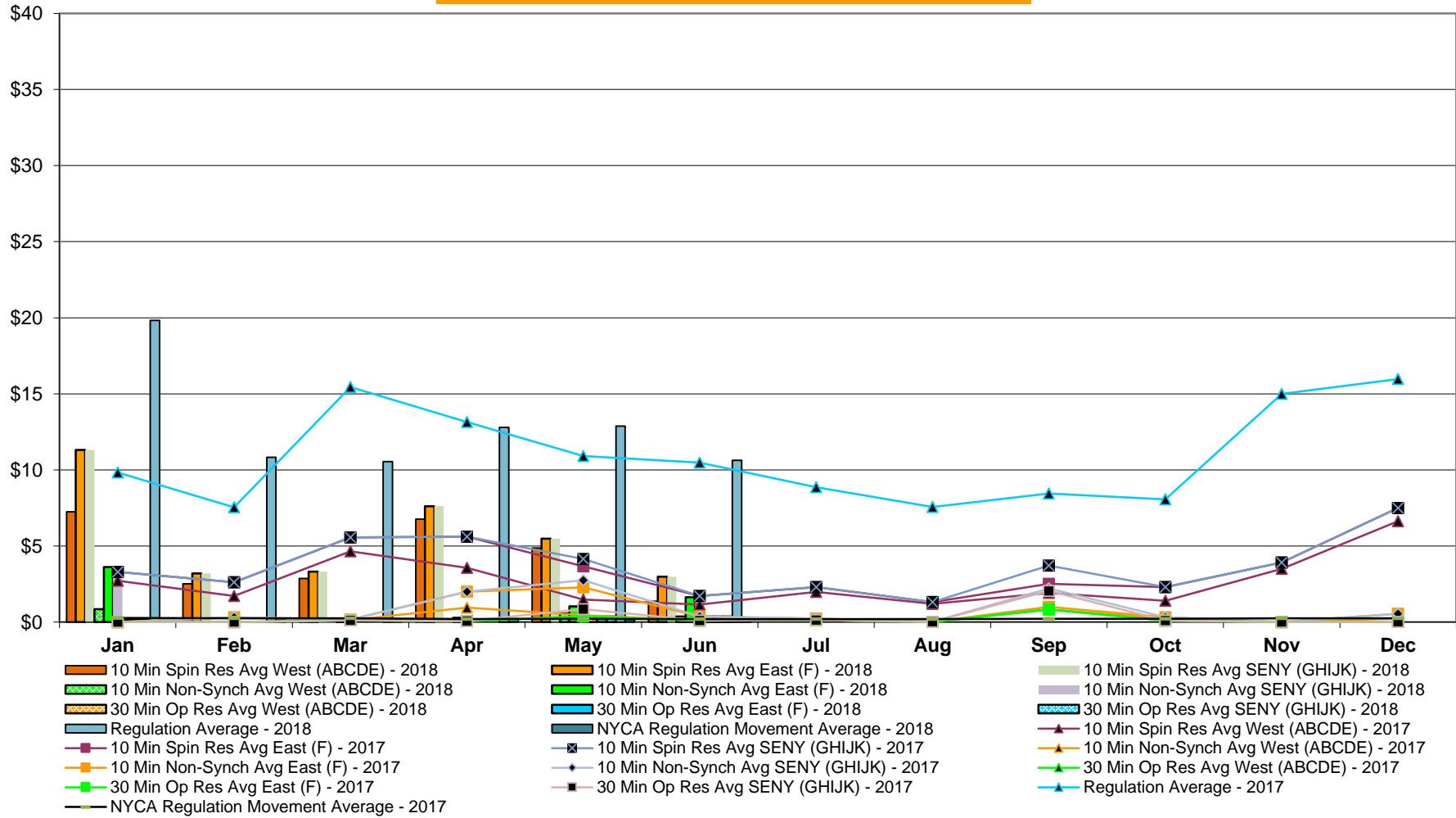
NYISO Monthly Average Ancillary Service Prices Day Ahead Market 2017 - 2018



NYISO Monthly Average Ancillary Service Prices RTC Market 2017 - 2018



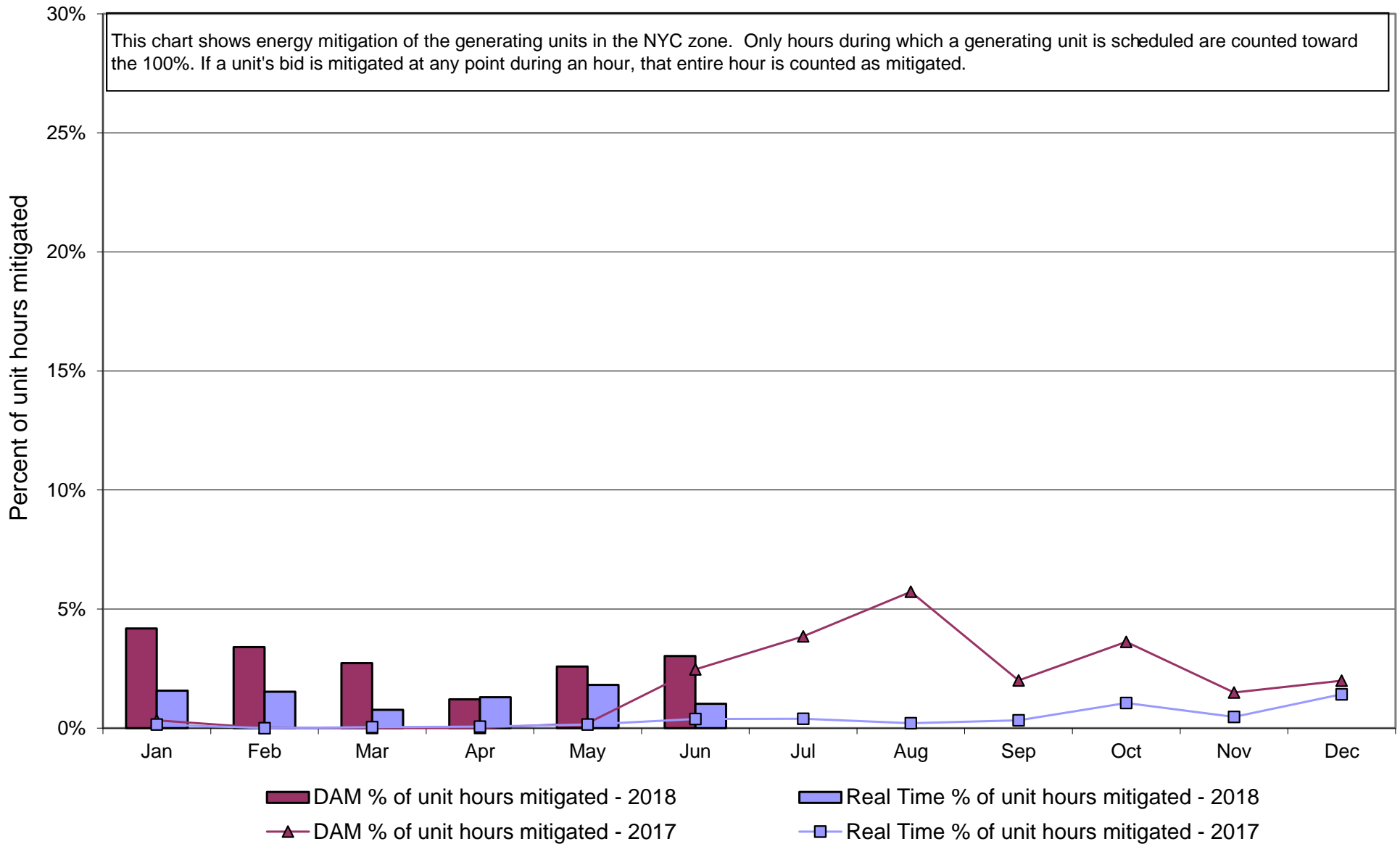
NYISO Monthly Average Ancillary Service Prices Real Time Market 2017 - 2018



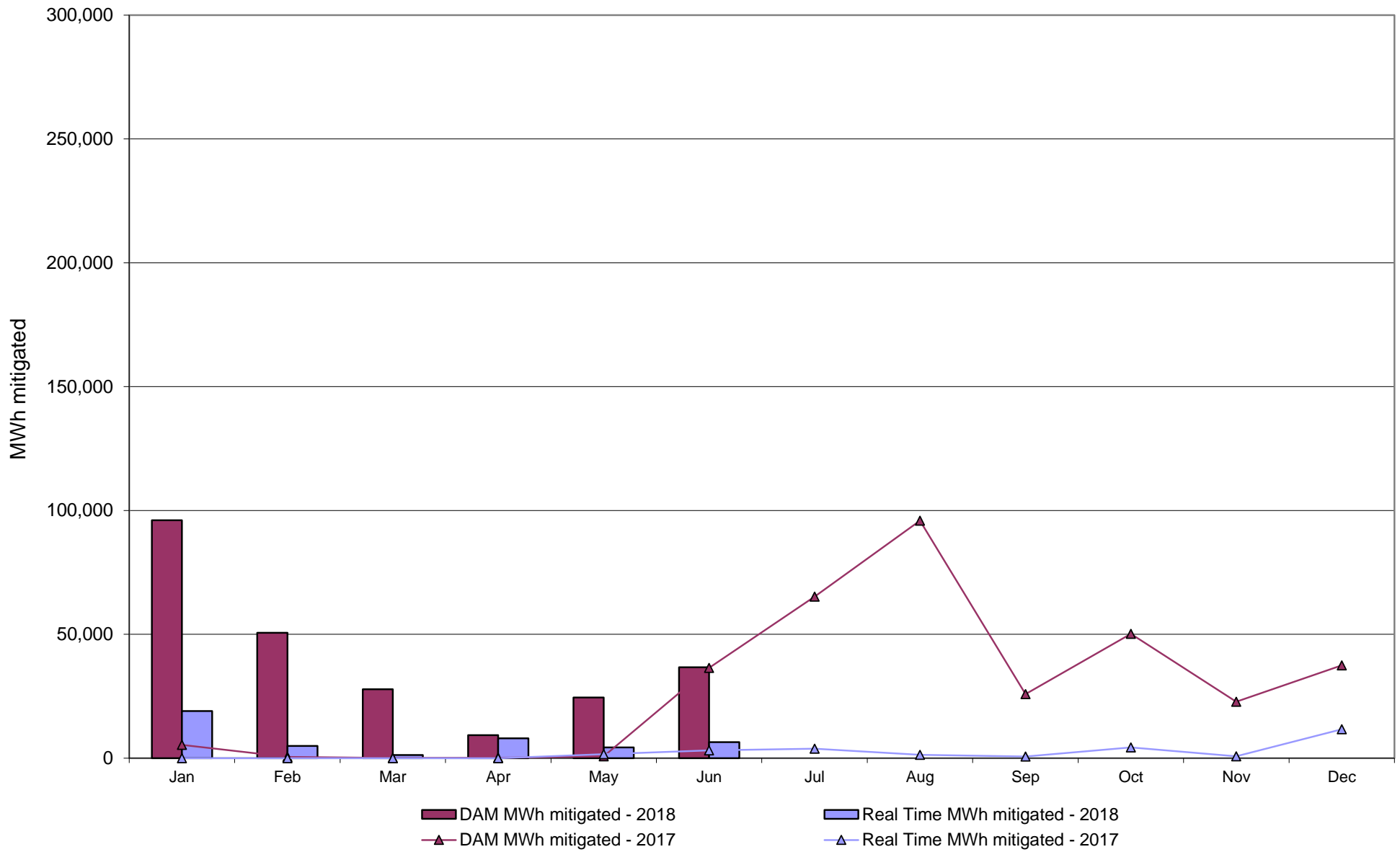
NYISO Markets Ancillary Services Statistics - Unweighted Price (\$/MWH)

2018	January	February	March	April	May	June	July	August	September	October	November	December
Day Ahead Market												
10 Min Spin SENY (GHIJK)	9.93	5.24	5.97	7.45	5.52	4.98						
10 Min Spin East (F)	9.93	5.24	5.97	7.45	5.52	4.98						
10 Min Spin West (ABCDE)	8.49	4.53	4.78	5.73	4.65	4.26						
10 Min Non Synch SENY (GHIJK)	6.99	4.54	4.48	5.05	4.26	4.09						
10 Min Non Synch East (F)	6.99	4.54	4.48	5.05	4.26	4.09						
10 Min Non Synch West (ABCDE)	6.15	4.36	3.54	4.31	4.13	3.85						
30 Min SENY (GHIJK)	6.14	4.36	3.54	4.31	4.13	3.85						
30 Min East (F)	6.14	4.36	3.54	4.31	4.13	3.85						
30 Min West (ABCDE)	6.14	4.36	3.54	4.31	4.13	3.85						
Regulation	15.51	10.70	10.68	9.49	12.11	11.30						
RTC Market												
10 Min Spin SENY (GHIJK)	4.23	1.24	1.98	3.17	3.13	1.28						
10 Min Spin East (F)	4.23	1.24	1.98	3.17	3.13	1.28						
10 Min Spin West (ABCDE)	2.43	0.82	1.79	2.38	2.91	0.74						
10 Min Non Synch SENY (GHIJK)	0.59	0.03	0.01	0.22	0.42	0.49						
10 Min Non Synch East (F)	0.59	0.03	0.01	0.22	0.42	0.49						
10 Min Non Synch West (ABCDE)	0.08	0.02	0.00	0.00	0.33	0.27						
30 Min SENY (GHIJK)	0.08	0.02	0.00	0.00	0.32	0.27						
30 Min East (F)	0.08	0.02	0.00	0.00	0.32	0.27						
30 Min West (ABCDE)	0.08	0.02	0.00	0.00	0.32	0.27						
Regulation	15.17	10.40	9.63	8.22	10.01	9.39						
NYCA Regulation Movement	0.26	0.21	0.20	0.22	0.19	0.16						
Real Time Market												
10 Min Spin SENY (GHIJK)	11.31	3.19	3.31	7.62	5.48	2.98						
10 Min Spin East (F)	11.31	3.19	3.31	7.62	5.48	2.98						
10 Min Spin West (ABCDE)	7.24	2.52	2.86	6.77	4.86	1.37						
10 Min Non Synch SENY (GHIJK)	3.61	0.01	0.19	0.28	1.03	1.63						
10 Min Non Synch East (F)	3.61	0.01	0.19	0.28	1.03	1.63						
10 Min Non Synch West (ABCDE)	0.85	0.00	0.00	0.00	0.57	0.37						
30 Min SENY (GHIJK)	0.13	0.00	0.00	0.00	0.37	0.37						
30 Min East (F)	0.13	0.00	0.00	0.00	0.37	0.37						
30 Min West (ABCDE)	0.13	0.00	0.00	0.00	0.37	0.37						
Regulation	19.82	10.82	10.54	12.80	12.88	10.62						
NYCA Regulation Movement	0.24	0.21	0.20	0.21	0.17	0.15						
2017												
Day Ahead Market												
10 Min Spin SENY (GHIJK)	5.01	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)	5.01	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)	4.94	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)	4.94	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)	4.94	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)	4.92	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)	4.92	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)	4.92	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)	4.92	5.20	4.84	5.58	4.67	4.32	5.70	6.15	5.10	4.82	4.39	4.43
Regulation	9.34	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)	1.06	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)	0.06	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)	0.06	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)	0.00	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)	0.00	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)	0.00	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)	0.00	0.00	0.00	0.14	0.04	0.02	0.93	3.27	0.15	0.08	0.00	0.00
Regulation	9.21	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	0.27	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)	3.29	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)	3.29	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)	2.71	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)	0.00	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)	0.00	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)	0.00	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)	0.00	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)	0.00	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)	0.00	0.00	0.00	0.25	0.03	0.04	0.97	3.12	0.21	0.11	0.00	0.00
Regulation	9.83	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	0.27	0.22	0.20	0.25	0.25	0.23	0.23	0.24	0.24	0.26	0.23	0.24

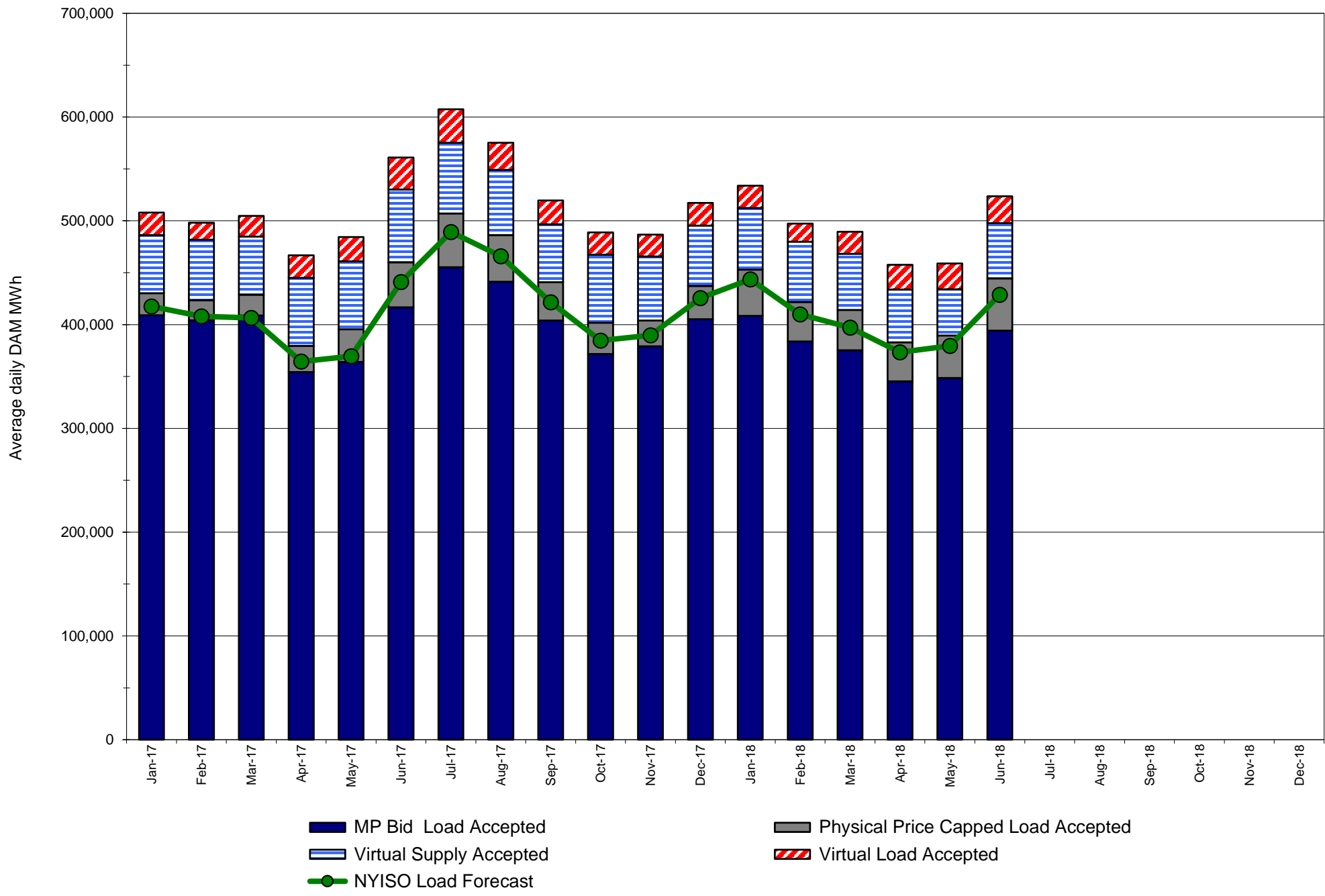
NYISO In City Energy Mitigation - AMP (NYC Zone) 2017 - 2018 Percentage of committed unit-hours mitigated



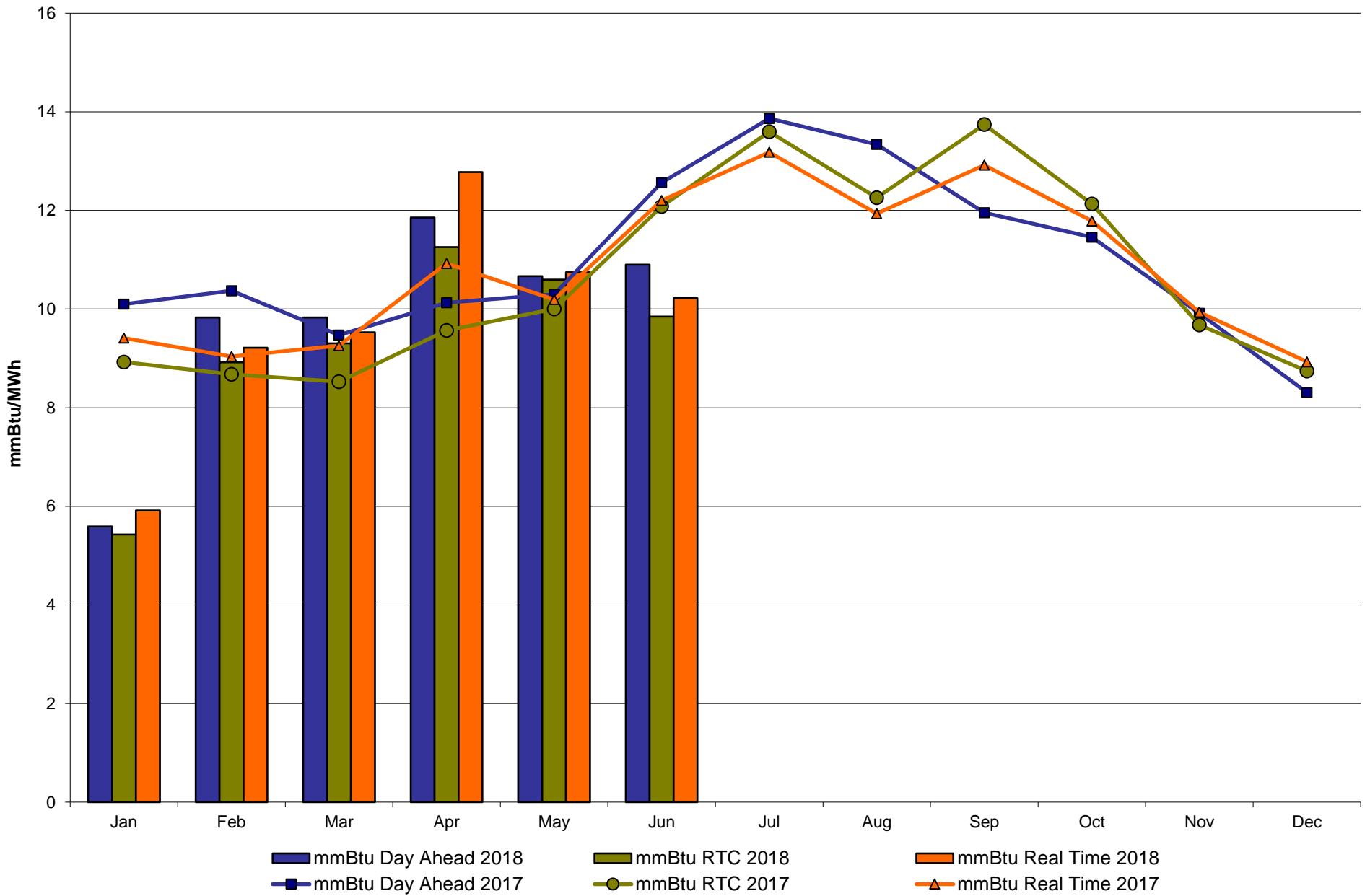
NYISO In City Energy Mitigation (NYC Zone) 2017 - 2018
Monthly megawatt hours mitigated



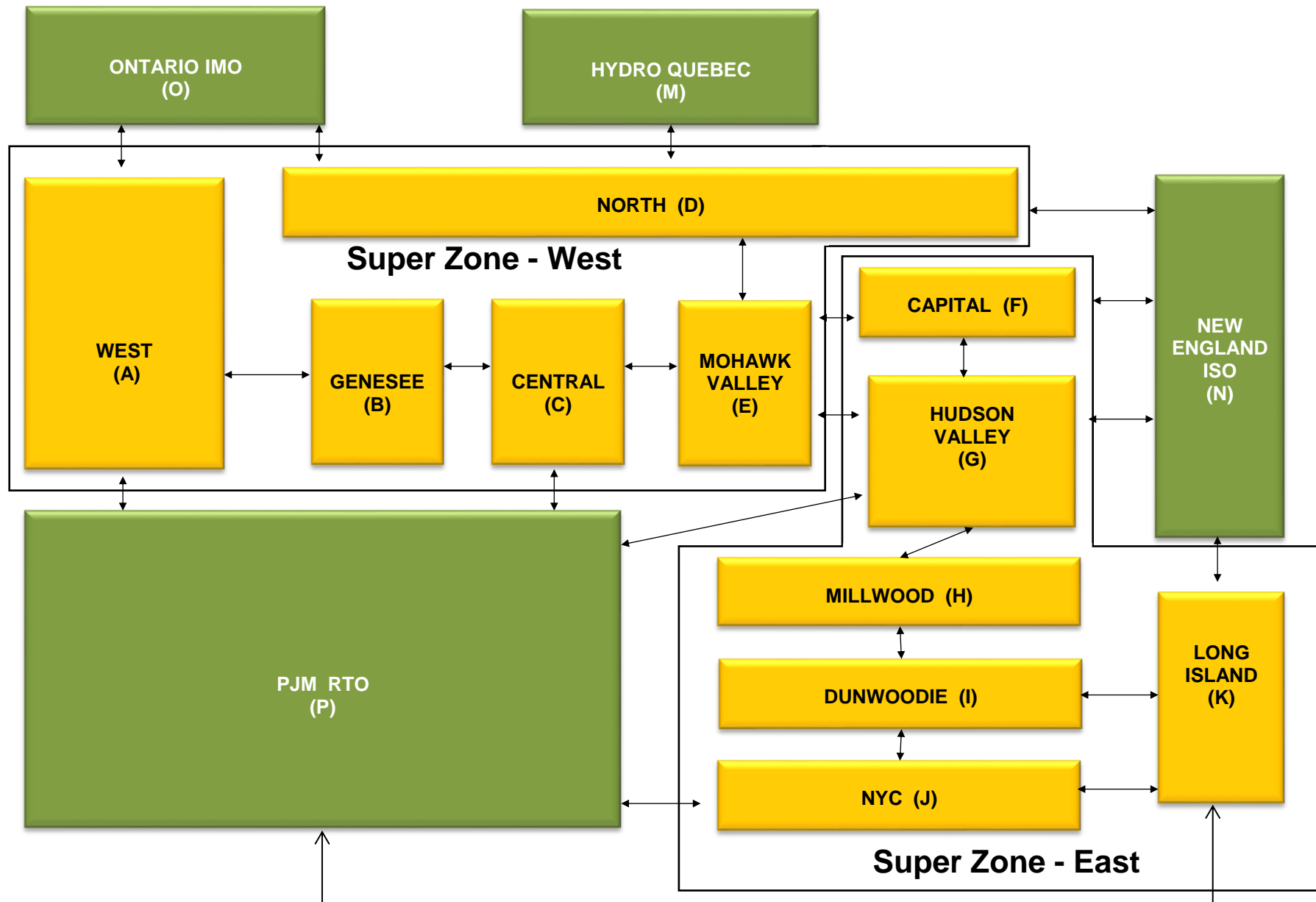
NYISO Average Daily DAM Load Bid Summary



Monthly Implied Heat Rate 2017-2018



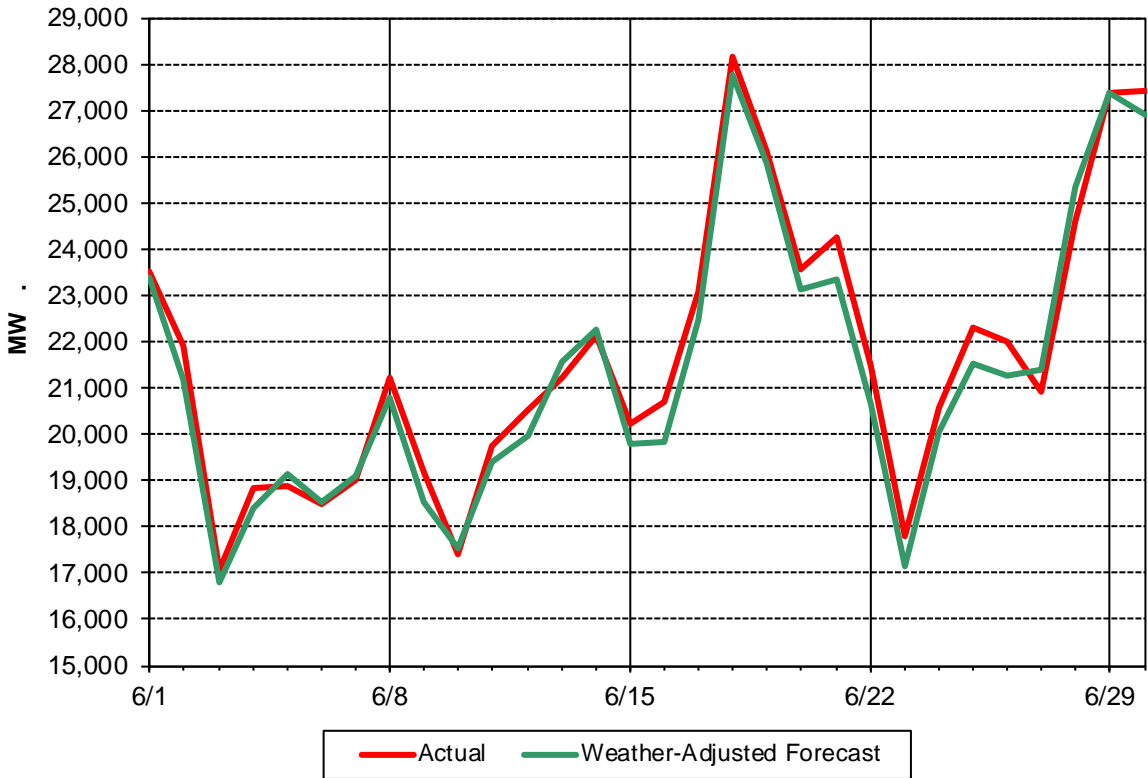
NYISO LBMP ZONES



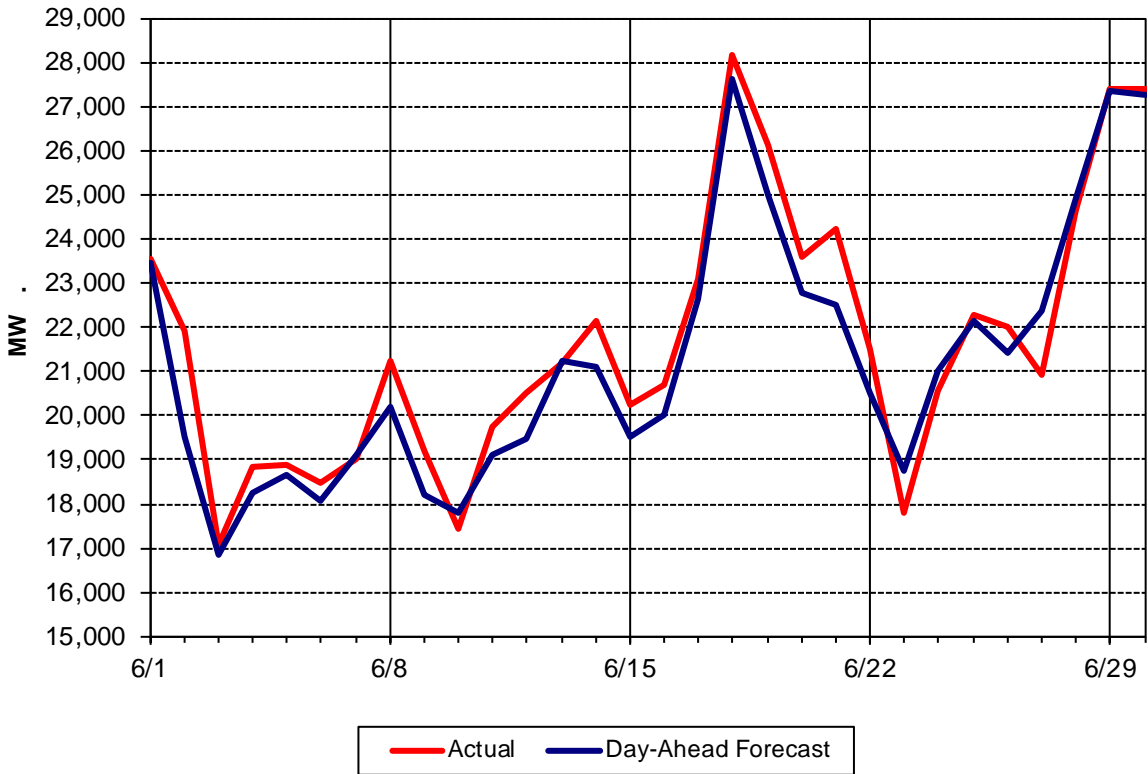
Billing Codes for Chart C

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

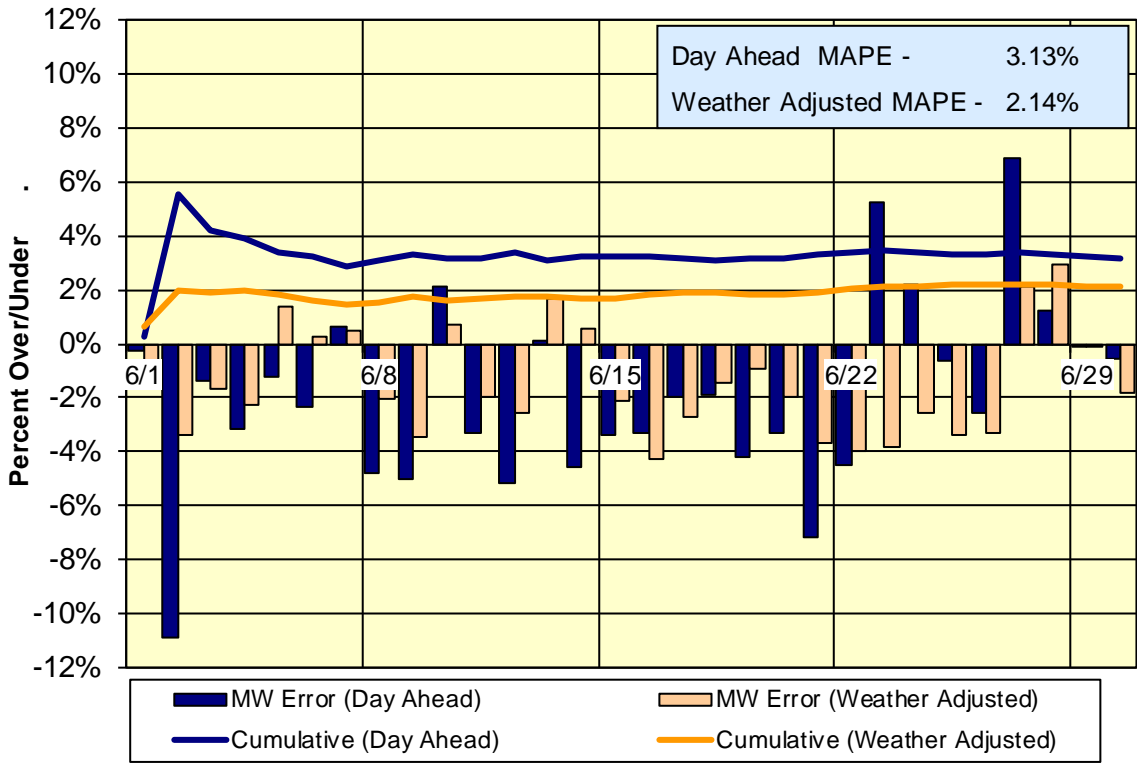
**NYISO Daily Peak Load - June 2018
Actual vs. Weather-Adjusted Forecast**



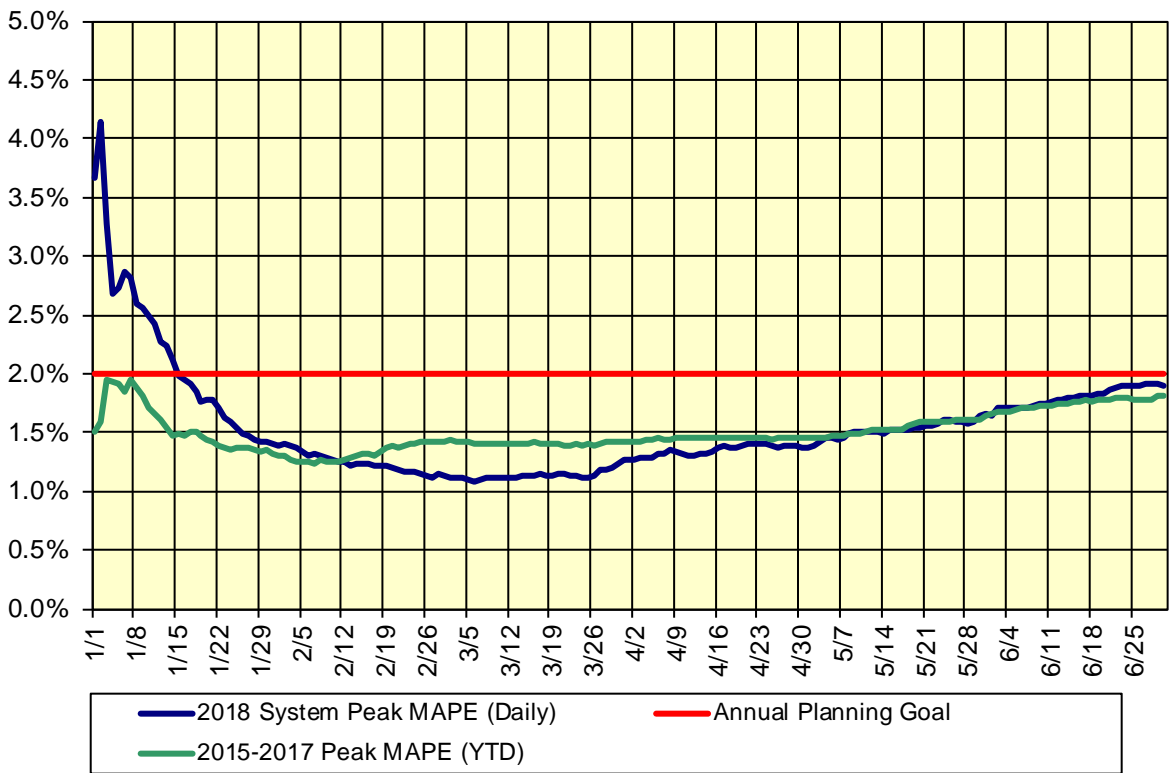
**NYISO Daily Peak Load - June 2018
Actual vs. Forecast**



Day Ahead Peak Forecast - June 2018 Percent Error - Actual & Weather Adjusted



Day-Ahead Forecast Accuracy - Cumulative Performance 2018 Year-to-Date



**Summary Description of Regulatory Filings, Investigations,
Rulemakings and Related Orders in NYISO Matters – June 2018**

Filing Date	Filing Summary	Docket	Order Date	Order Summary
03/19/2018 04/06/2018 05/02/2018	NYISO compliance filing and 2 ministerial error filings re: Order No. 1000 regional transmission planning requirements	ER13-102-012 ER13-102-013 ER13-102-014	06/05/2018	FERC order accepted filings effective 04/01/2016 and 03/20/2018, as requested
04/20/2018	NYISO 205 filing re: Solar Resources - Forecasting Data and Service Costs	ER18-1408-000	06/13/2018	FERC order accepted filing effective 06/20/2018, as requested
04/27/2018	NYISO filing on behalf of Niagara Mohawk Power Corporation ("NMPC") re: Interconnection Agreement between NMPC and the Village of Ilion (SA No. 2416)	ER18-1451-000	06/14/2018	FERC order accepted filing effective 03/28/2018, as requested
05/10/2018	NYISO filing on behalf of Niagara Mohawk Power Corporation ("NMPC") re: notice of cancellation of a cost reimbursement agreement (SA 2264) between NMPC and the Oneida Indian Nation	ER18-1564-000	06/15/2018	FERC order accepted filing effective 03/30/2017, as requested
05/31/2018	NYISO filing re: Form 714 annual electric balancing authority area and planning report for the year ending 12/31/2017	No Docket No.		No order to be issued
06/01/2018	NYISO compliance filing re: semi-annual reports on new generation projects and demand response programs	ER03-647-000 ER01-3001-000		No order to be issued
06/04/2018	NYISO filing re: comments in support of continuing the ongoing delivery of data to FERC in accordance with Order No. 760 and FERC-921	IC18-10-000		
06/04/2018	NYISO filing with the NYPSC re: comments in the matter of offshore wind energy	PSC Case No. 18-E-0071		
06/05/2018	NYISO 205 filing re: revisions to rules by which the locational minimum installed capacity requirement for each locality will be determined	ER18-1743-000		
06/06/2018	NYISO motion to intervene and protest re: complaint filed by PSE&G v. Consolidated Edison concerning removal of the B and C lines	EL18-143-000		
06/14/2018	NYISO confidential filing to the NYPSC re: three-month Reliability Commitment Data Report for the period ending 05/31/2018	PSC Matter No. 10-02007		

06/18/2018	NYISO errata re: refiling of OATT Section 20.2 to correct the record in its 09/13/2016 Order 1000 compliance filing	ER13-102-015		
06/22/2018	NYISO confidential CEII filing re: Consolidated Edison system restoration plan	ER12-2568-000		
06/26/2018	NYISO post technical conference comments re: participation of distributed energy resource aggregations in markets operated by RTOs and ISOs	RM18-9-000		
06/27/2018	NYISO answer to IPPNY protest re: NYISO's 05/23/2018 generator deactivation process compliance filing	ER16-120-007		
06/29/2018	NYISO filing on behalf of Niagara Mohawk Power Corporation ("NMPC") re: cancellation of an interconnection agreement (SA 125) between NMPC and Tug Hill Energy, Inc.	ER18-1888-000		
06/29/2018	NYISO tariff waiver request re: requirement that the NYISO must make all transmission capacity not used to serve existing and valid TCCs and certain grandfathered transmission agreements available for sale in NYISO-administered TCC auctions	ER18-1889-000		