



Monthly Report

A Report by the
New York Independent System Operator

June 2020

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June 2020 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 9, 2020.

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June 2020 Operations Performance Highlights

- Peak load of 26,980 MW occurred on 06/22/2020 HB 16
- All-time summer capability period peak load of 33,956 MW occurred on 7/19/2013 HB 16
- 6 hours of Thunder Storm Alerts were declared
- 0 hours of NERC TLR level 3 curtailment
- Warmer than normal temperatures offset the COVID-19 load impacts in June
- To reduce risks from COVID-19, the NYISO continues to take several actions to maintain critical business operations and protect the health and well-being of our employees and stakeholders.
- The following table identifies the estimated production cost savings associated with the Broader Regional Market initiatives.

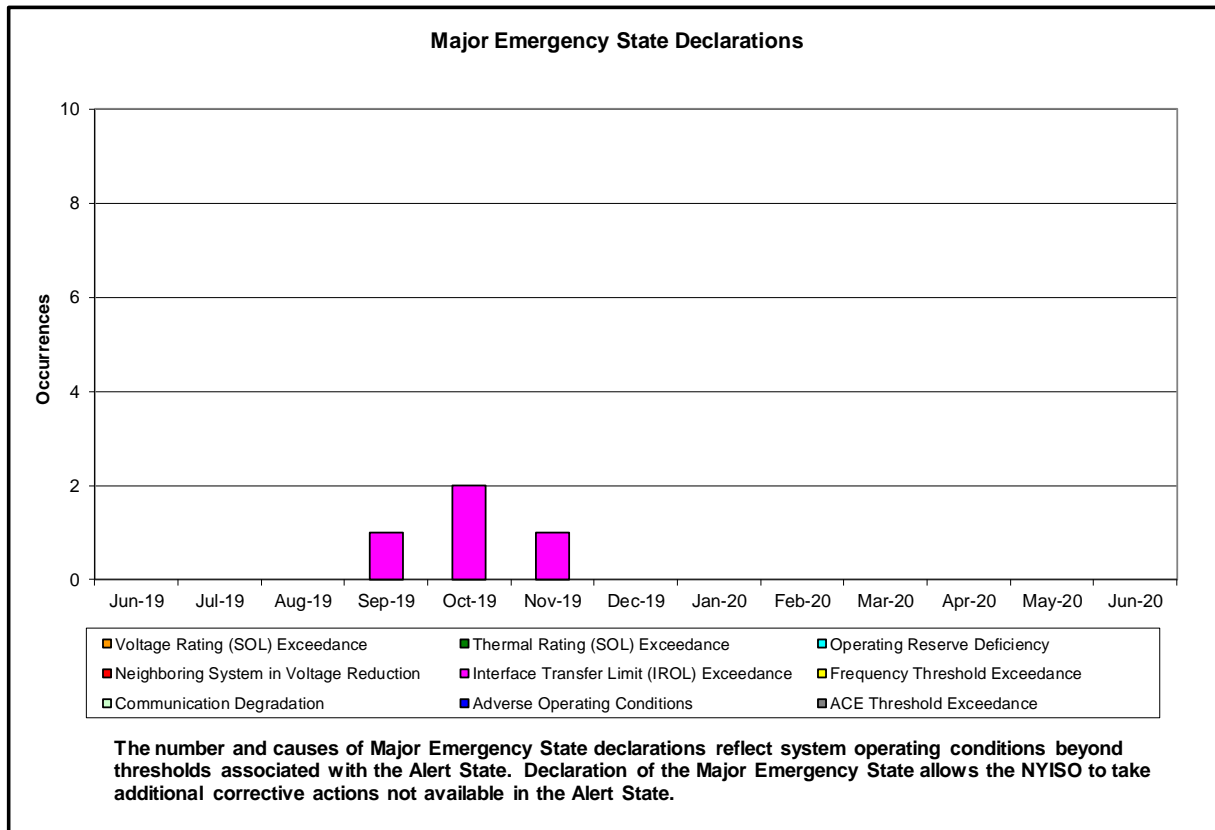
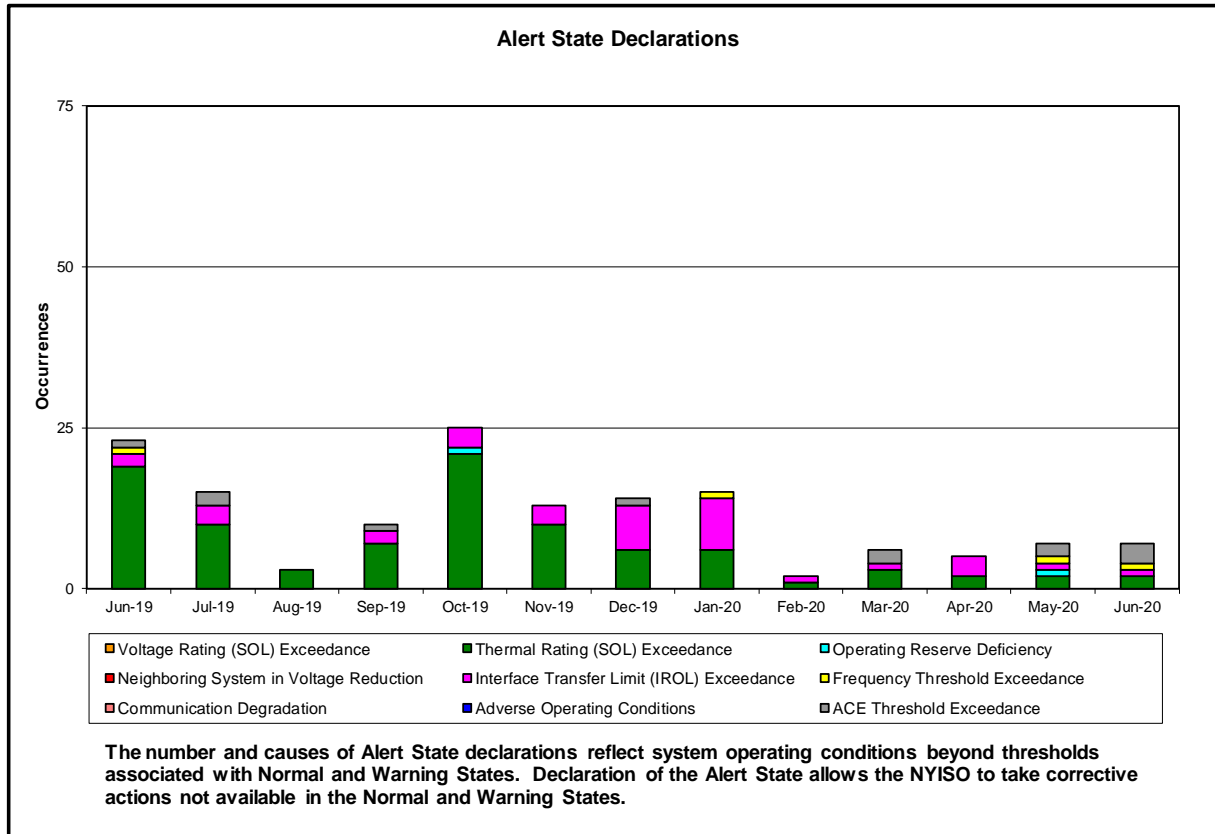
	Current Month Value (\$M)	Year-to-Date Value (\$M)
NY Savings from PJM-NY Congestion Coordination	\$0.13	\$2.52
NY Savings from PJM-NY Coordinated Transaction Scheduling	(\$0.17)	(\$0.11)
NY Savings from NE-NY Coordinated Transaction Scheduling	\$0.21	\$0.55
Total NY Savings	\$0.17	\$2.96
Regional Savings from PJM-NY Coordinated Transaction Scheduling	\$0.26	\$0.77
Regional Savings from NE-NY Coordinated Transaction Scheduling	\$0.03	\$0.03
Total Regional Savings	\$0.29	\$0.80

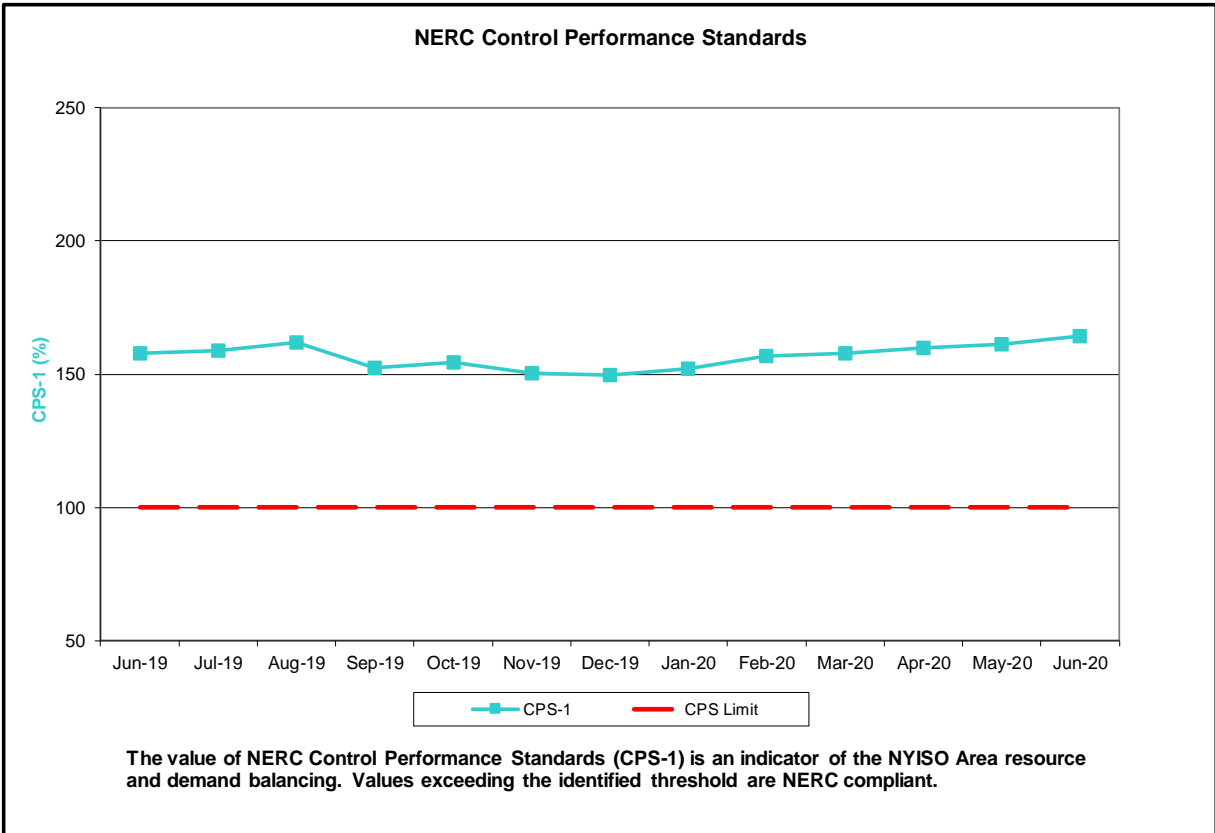
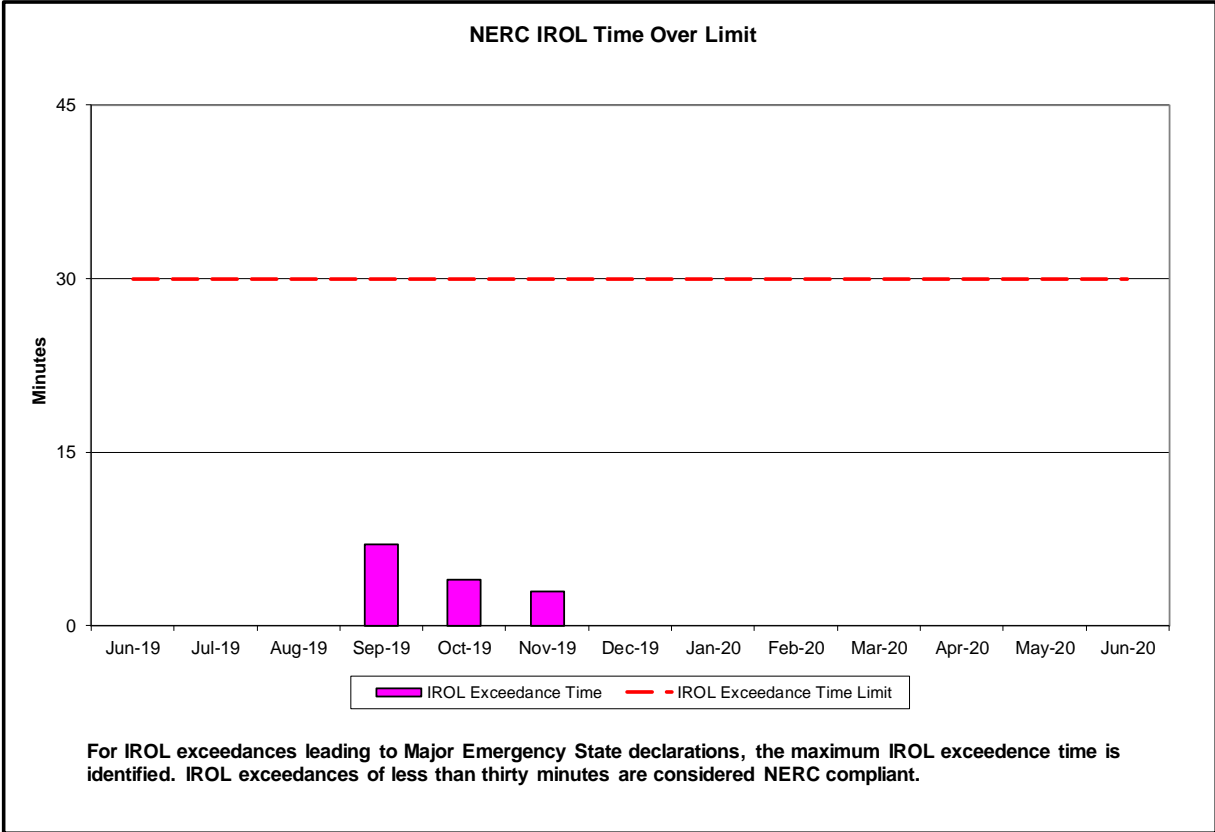
- Statewide uplift cost monthly average was (\$0.29)/MWh
- The following table identifies the Monthly ICAP spot market prices and the price delta.

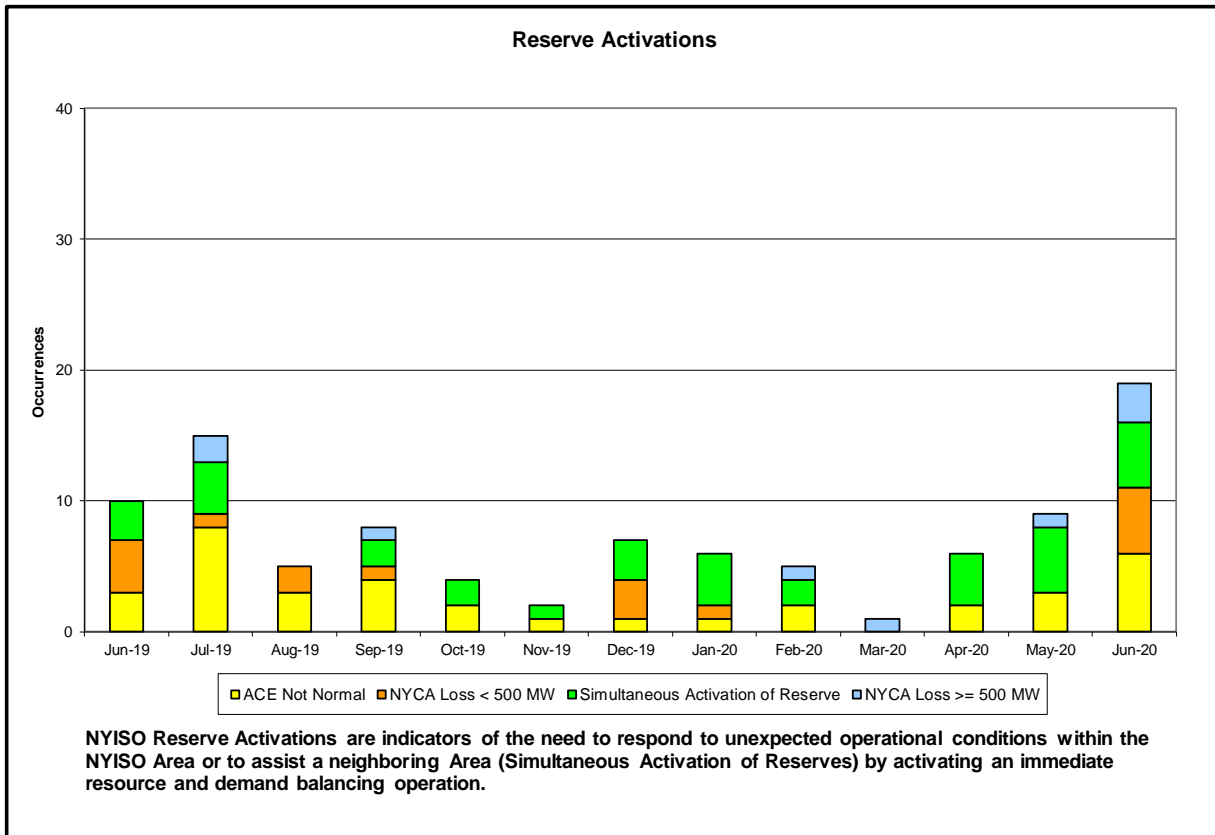
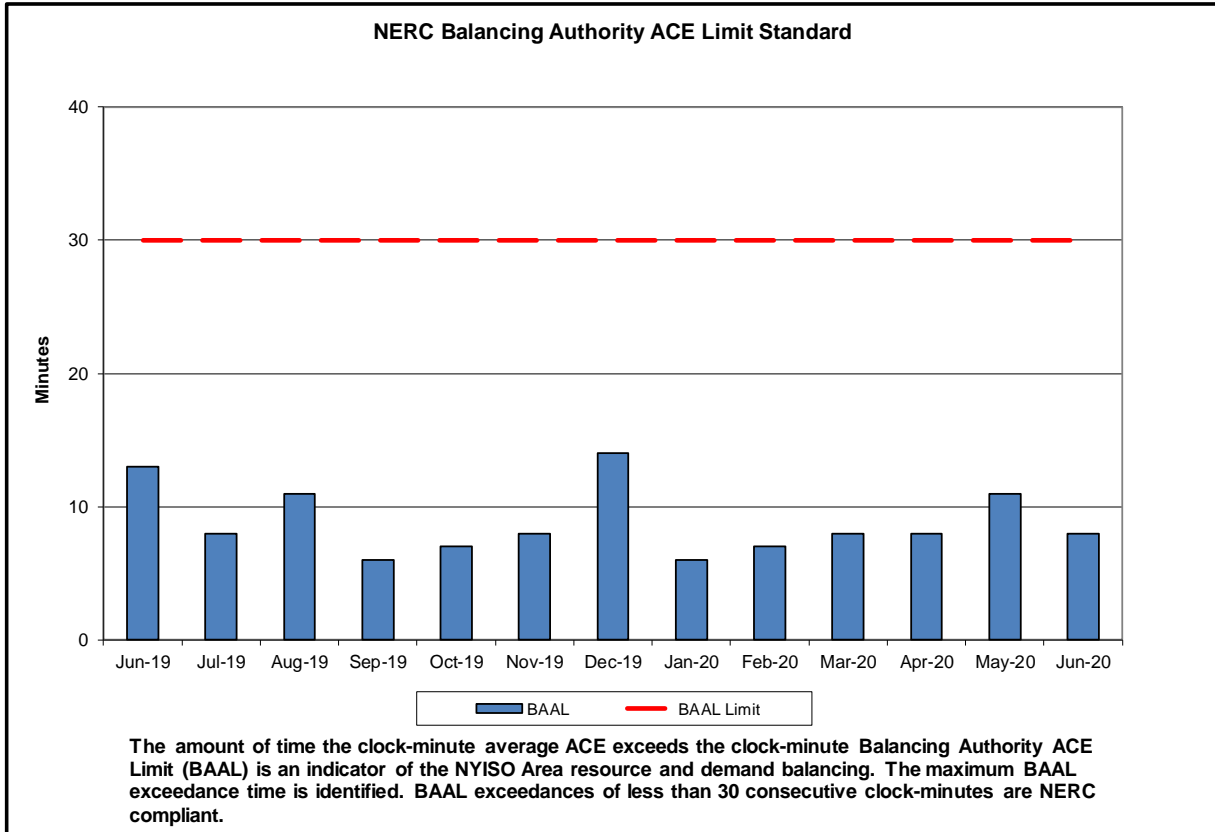
Spot Auction Price Results	NYCA	Lower Hudson Valley Zones	New York City Zone	Long Island Zone
July 2020 Spot Price	\$2.69	\$2.69	\$19.03	\$5.32
June 2020 Spot Price	\$3.35	\$3.35	\$19.15	\$6.28
Delta	(\$0.66)	(\$0.66)	(\$0.12)	(\$0.96)

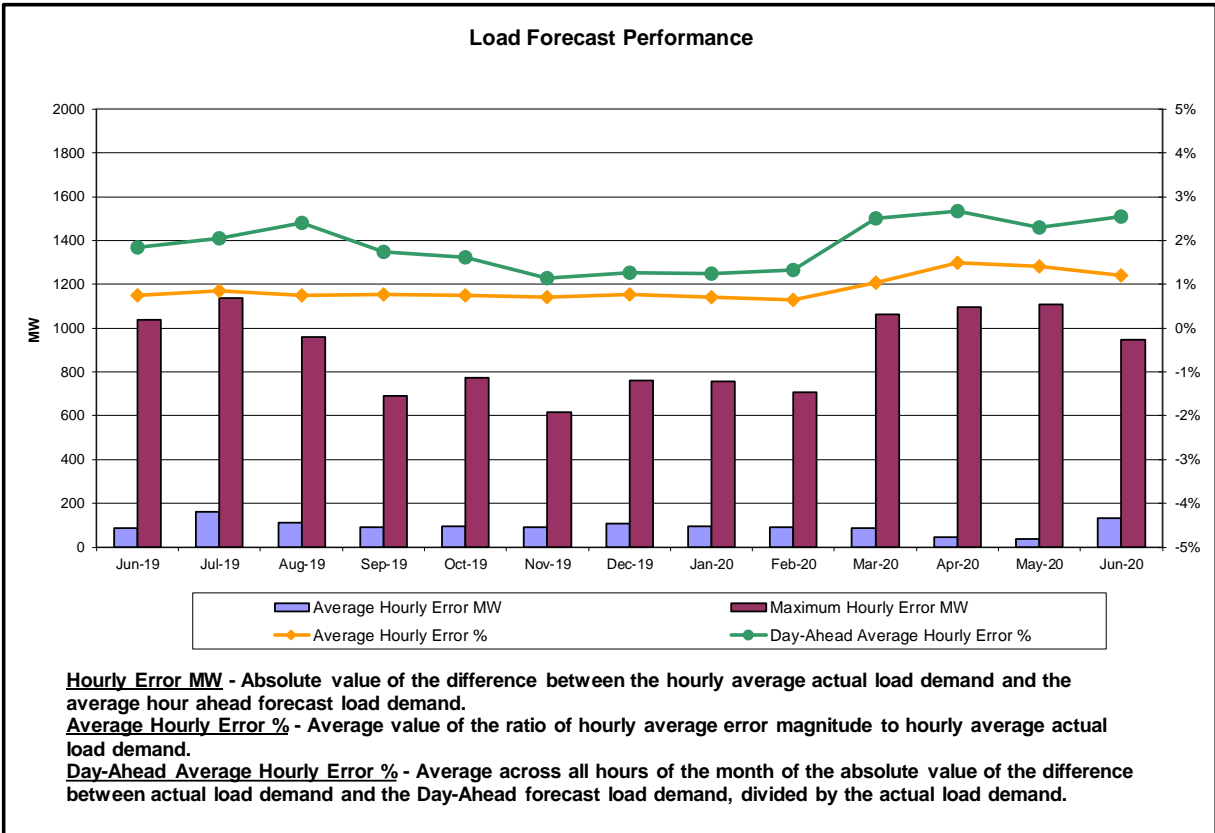
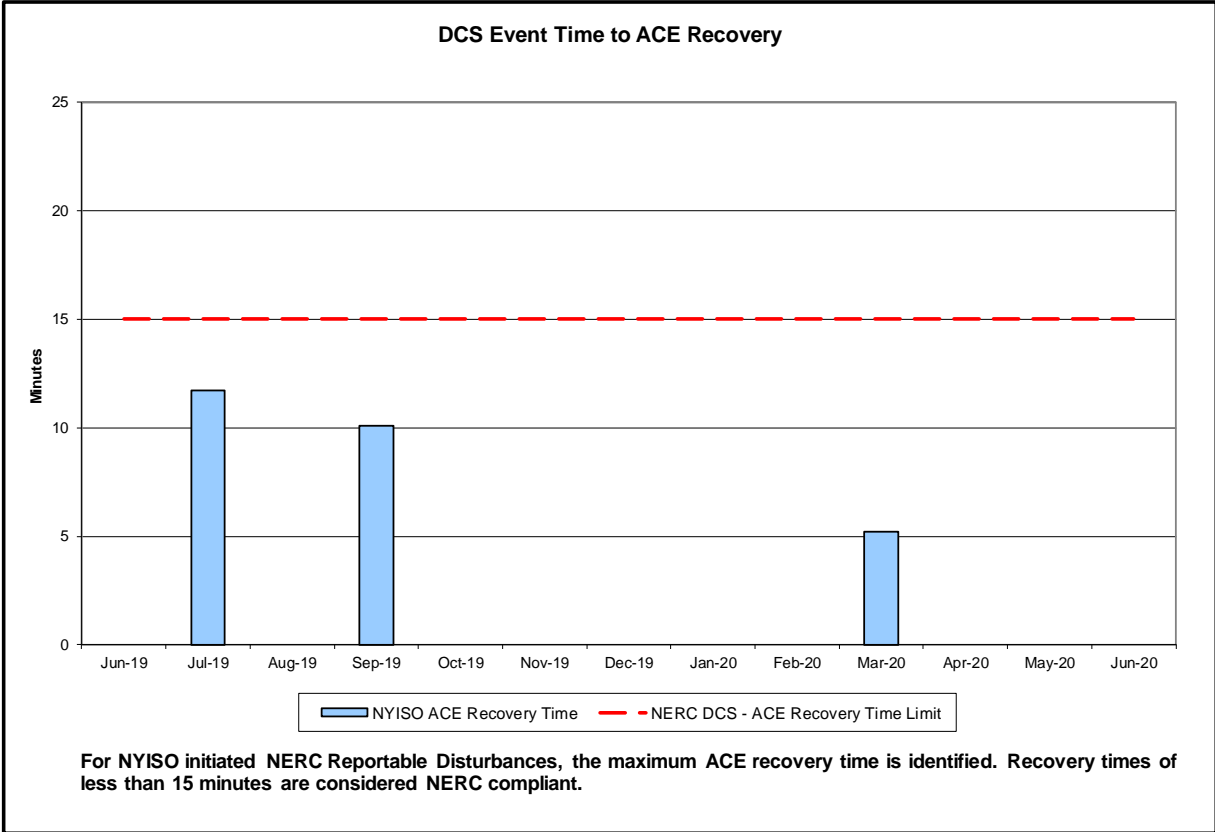
- Long Island – Price decreased by \$0.96 due to a decrease in unoffered MWs.
- NYCA – Price decreased by \$0.66 due to an increase in SCR UCAP available and an increase in net imports.
- Lower Hudson Valley – Price decreased by \$0.66 due to an increase in SCR UCAP available and an increase in net imports.

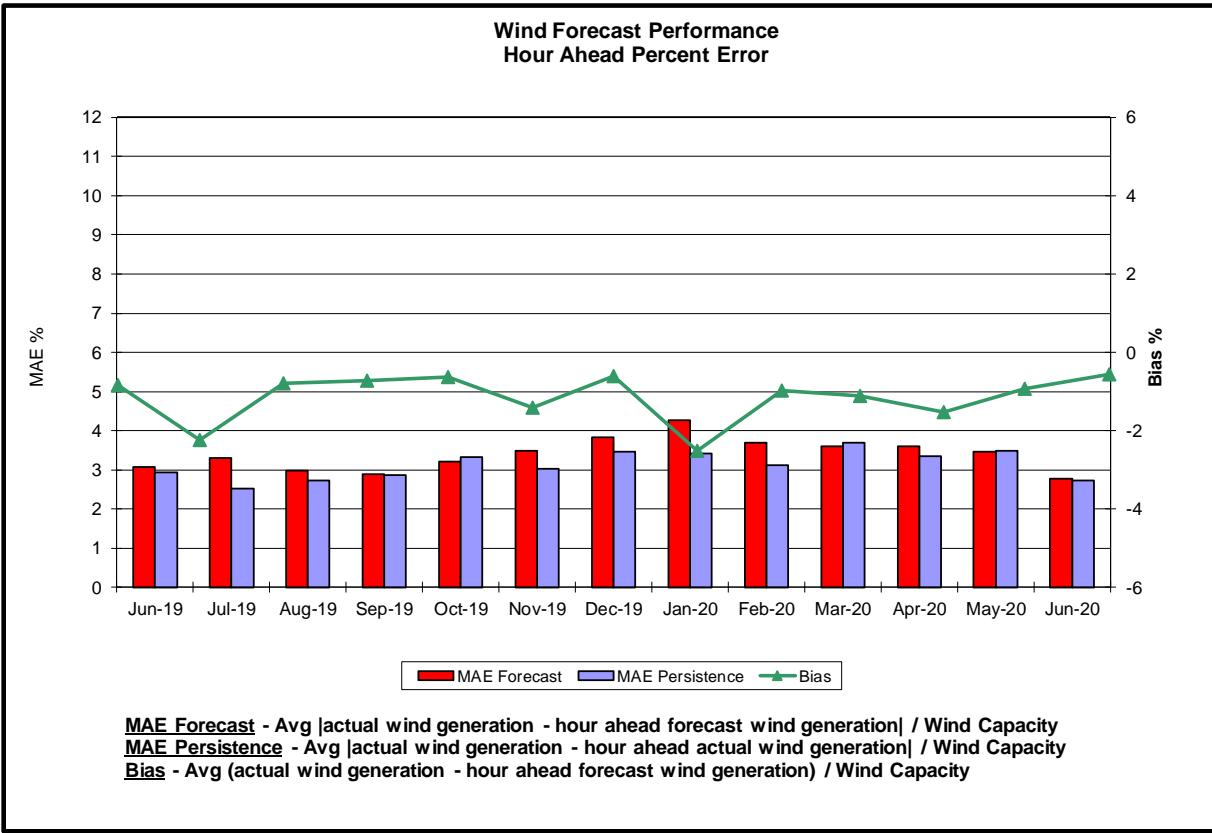
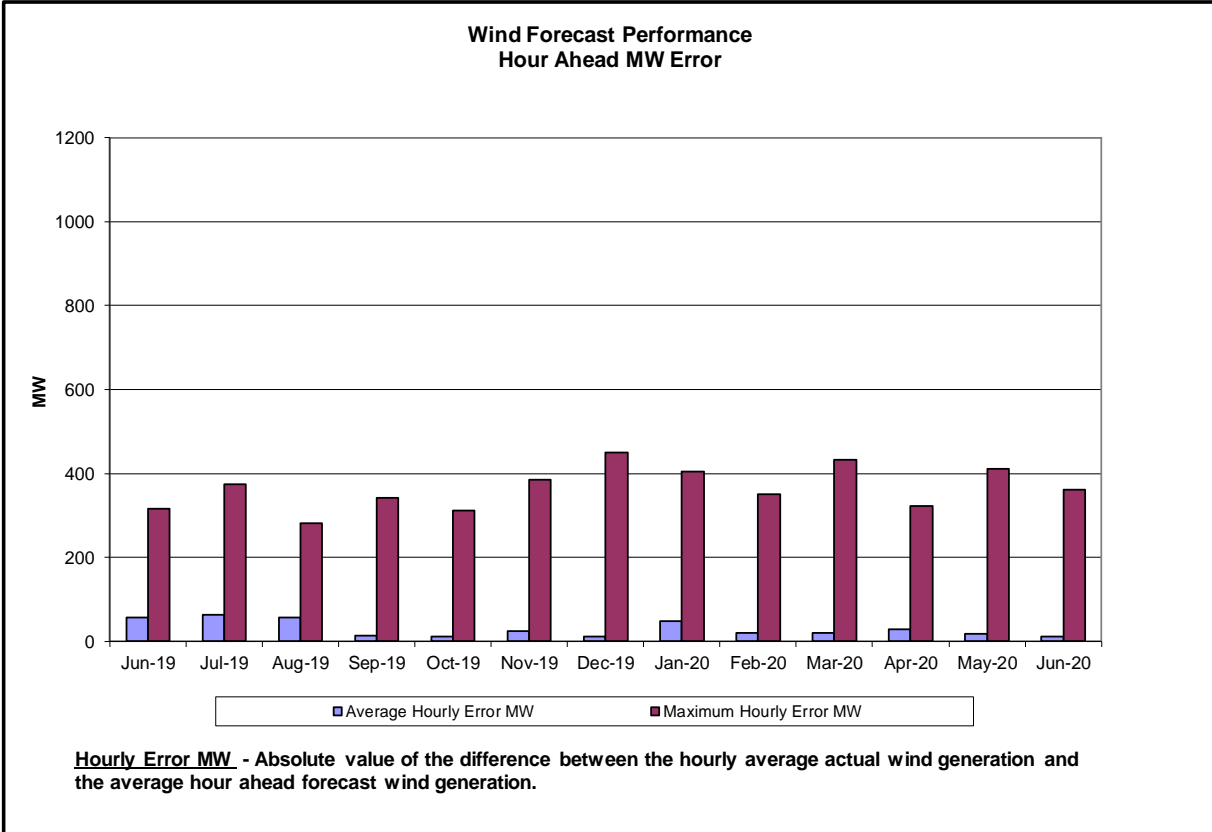
Reliability Performance Metrics

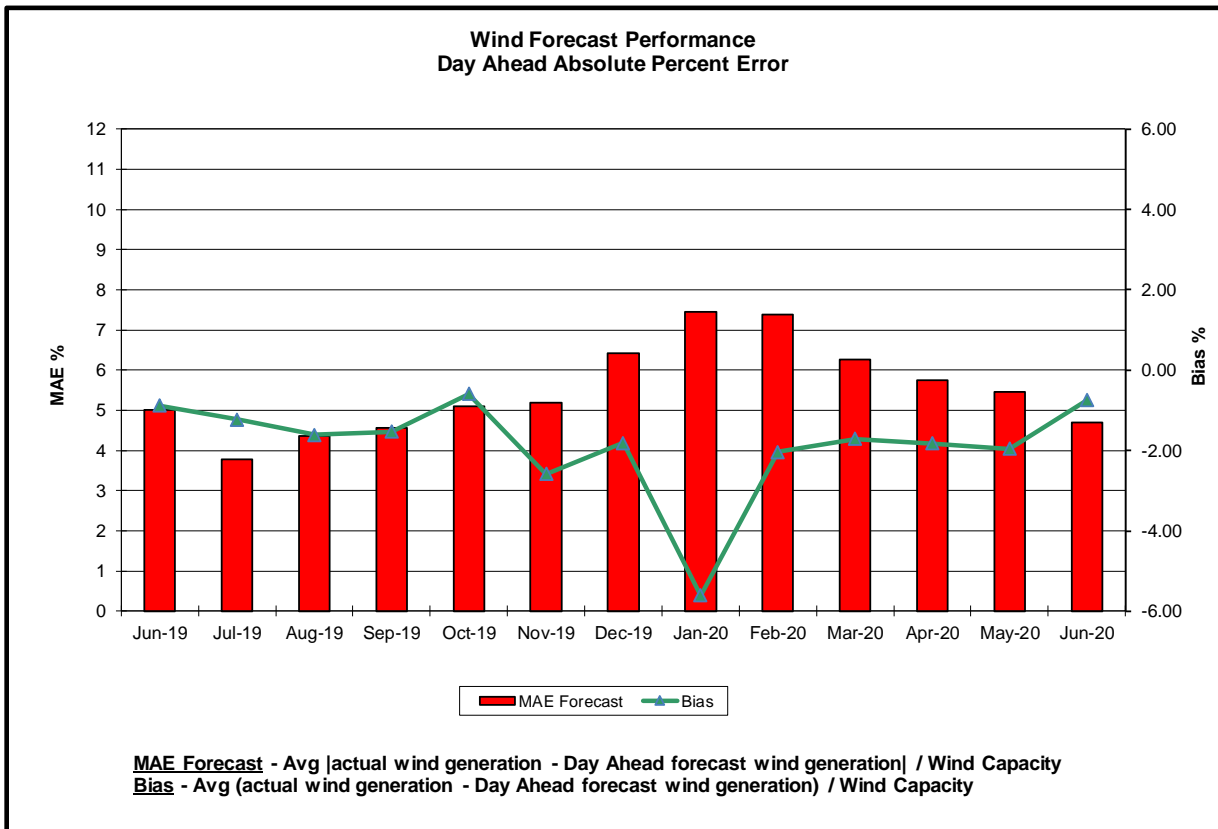
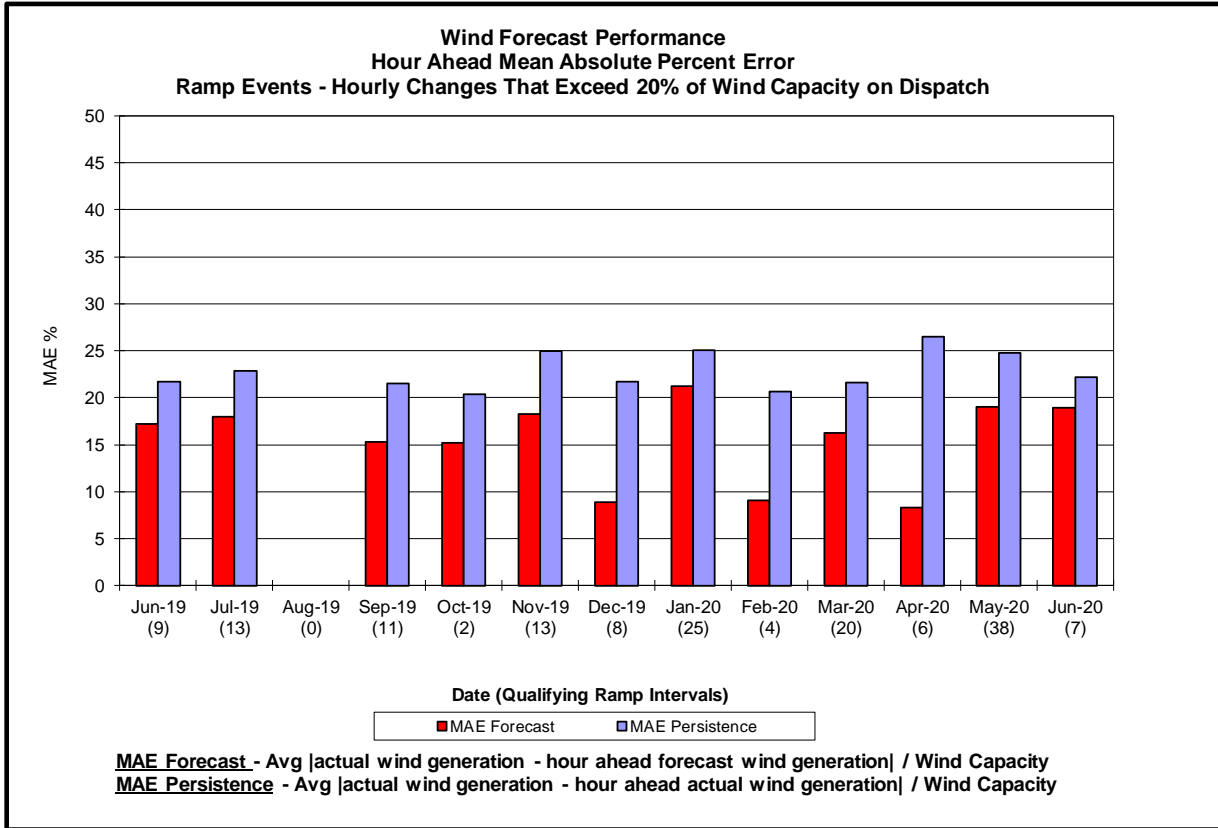


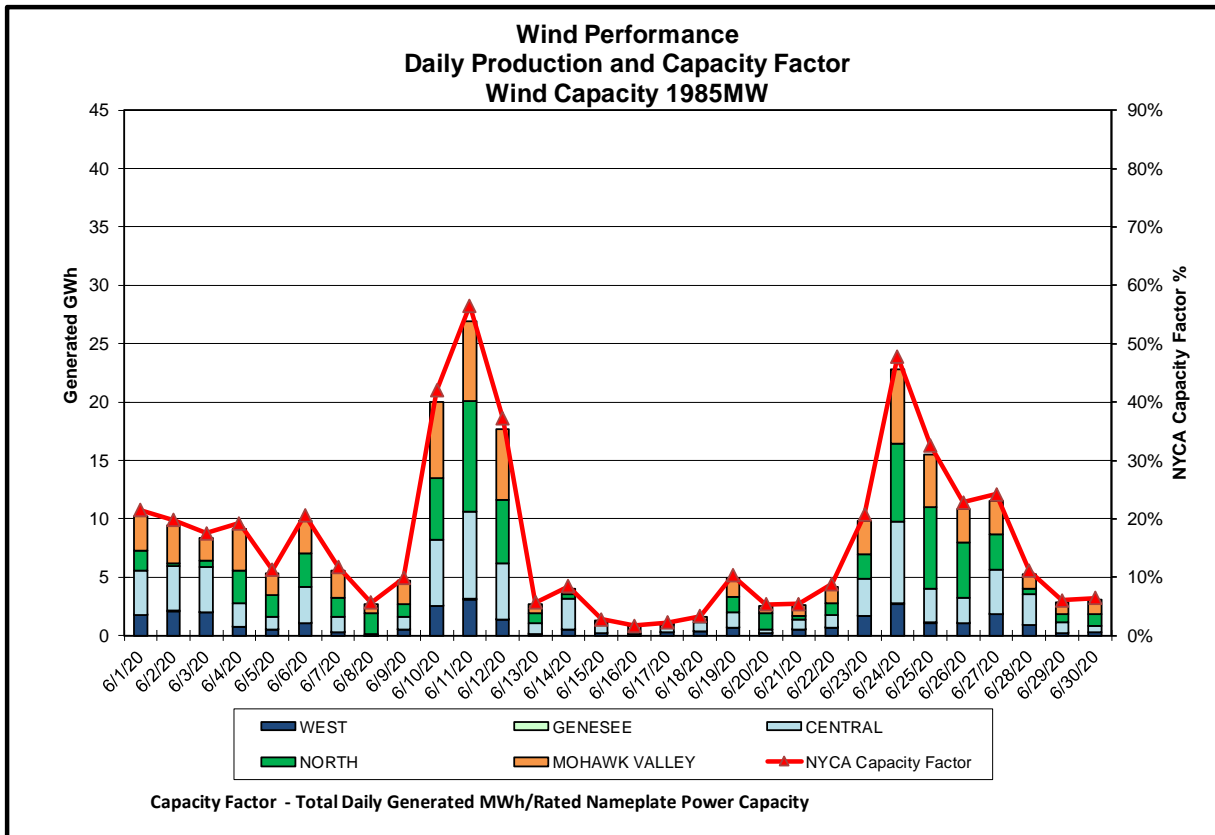
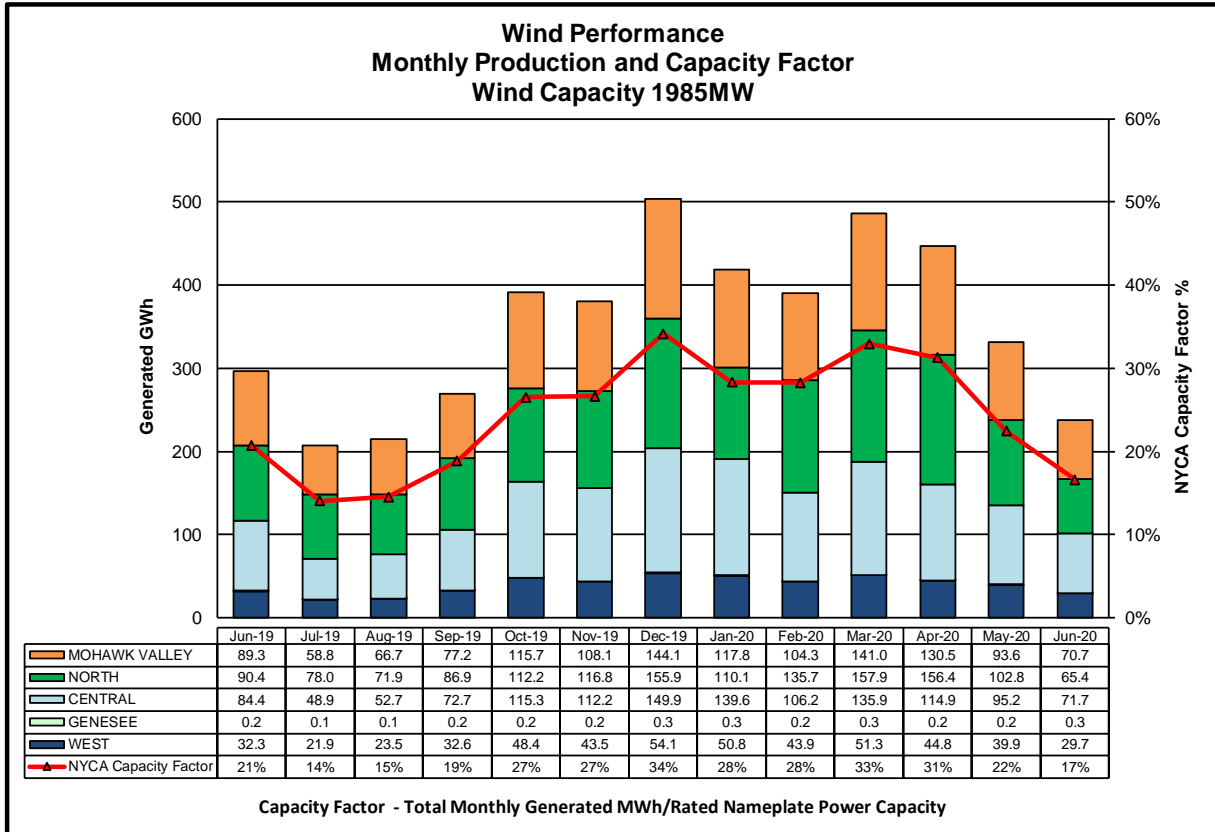


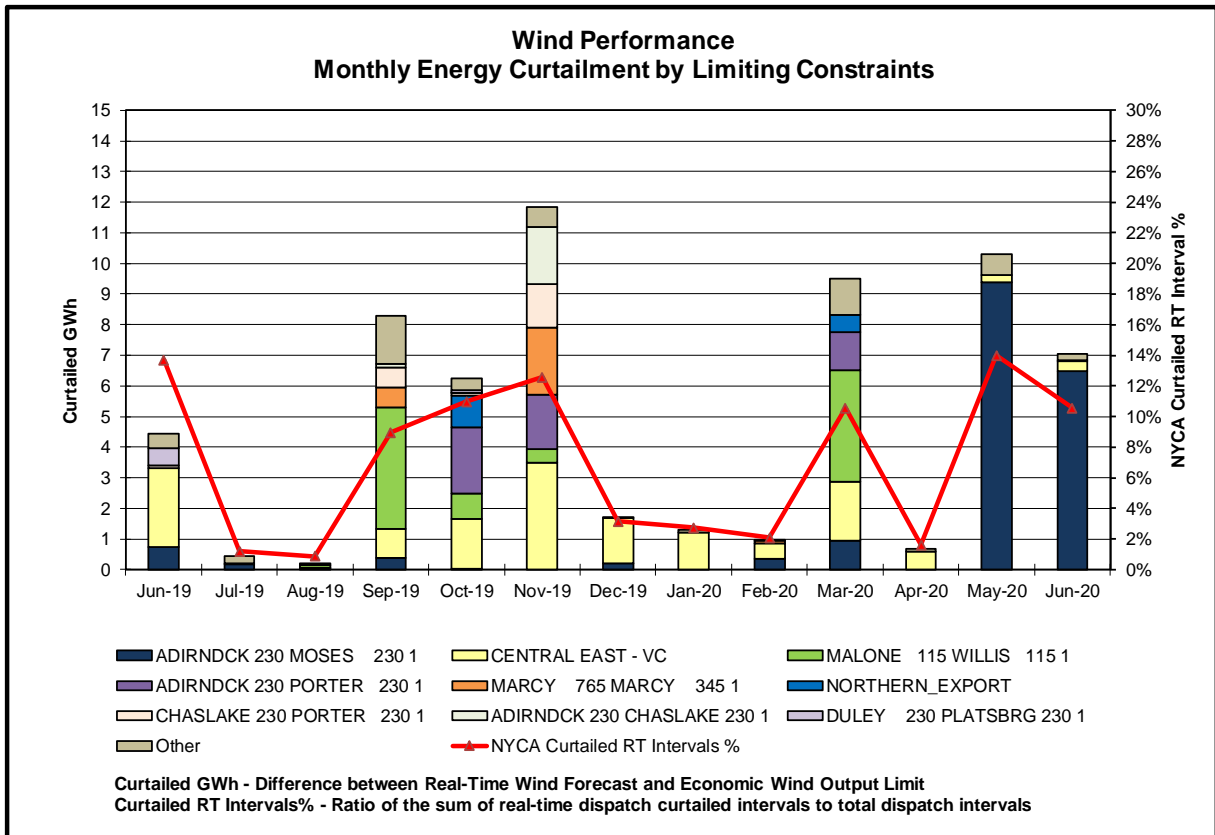
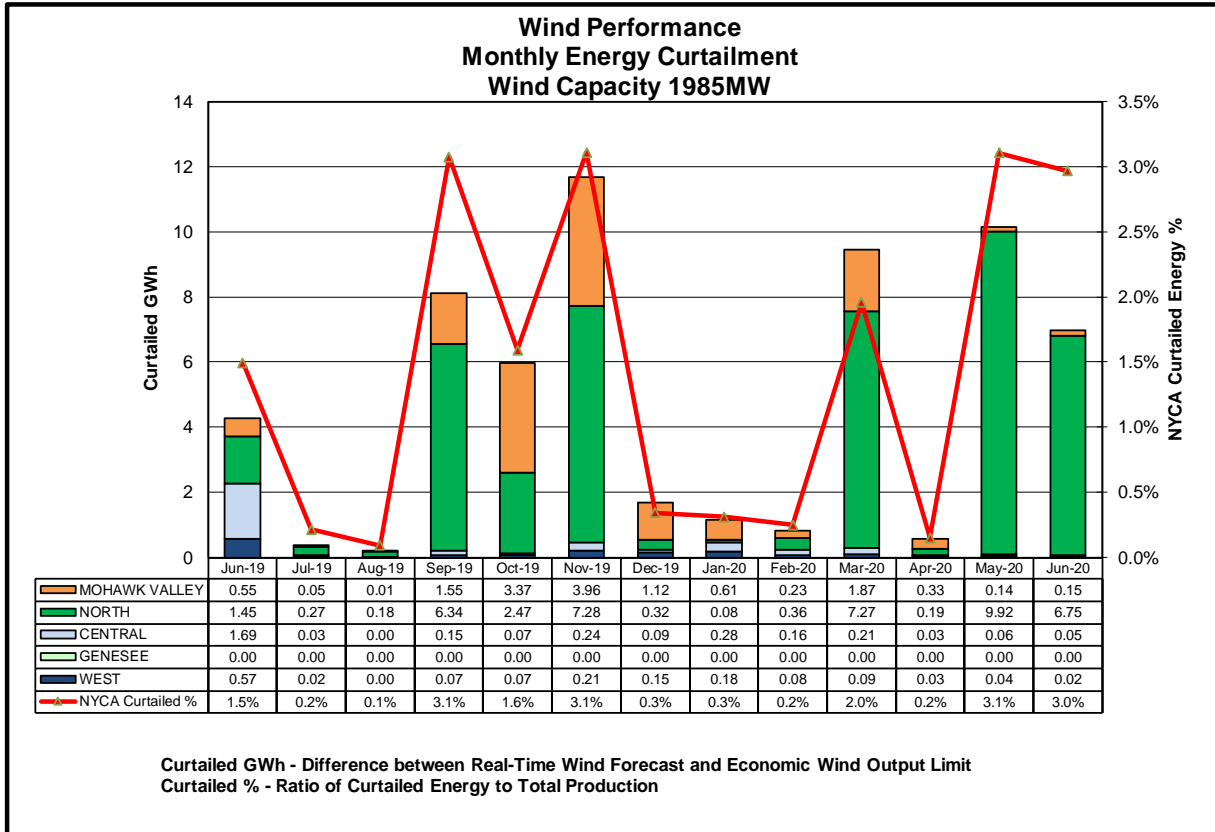


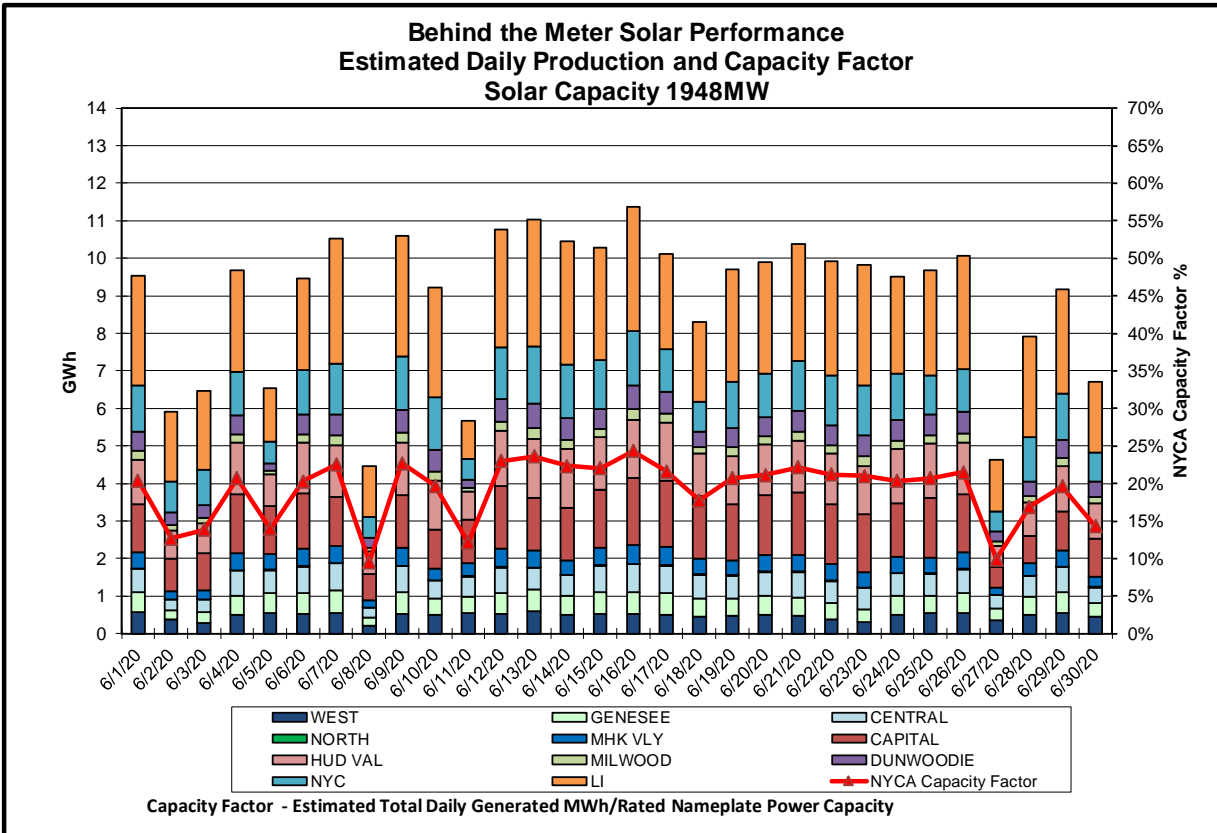
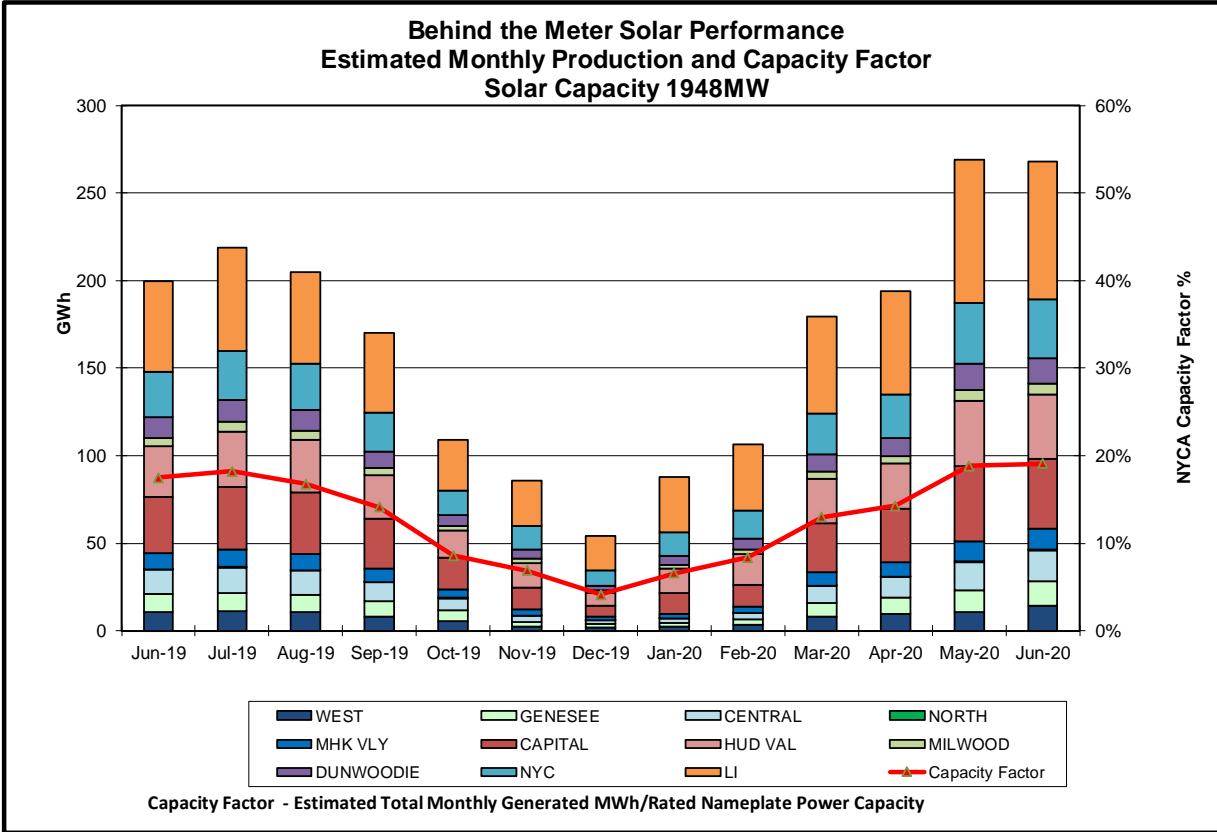


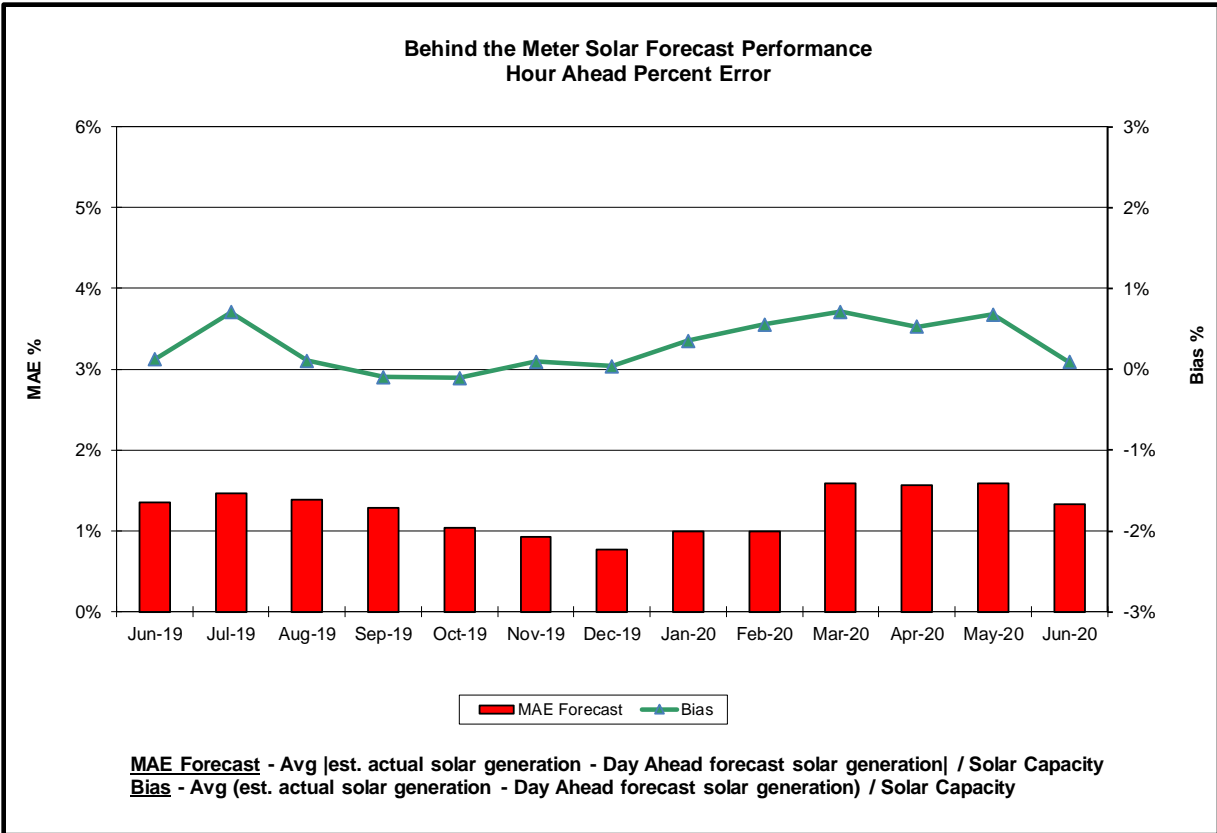
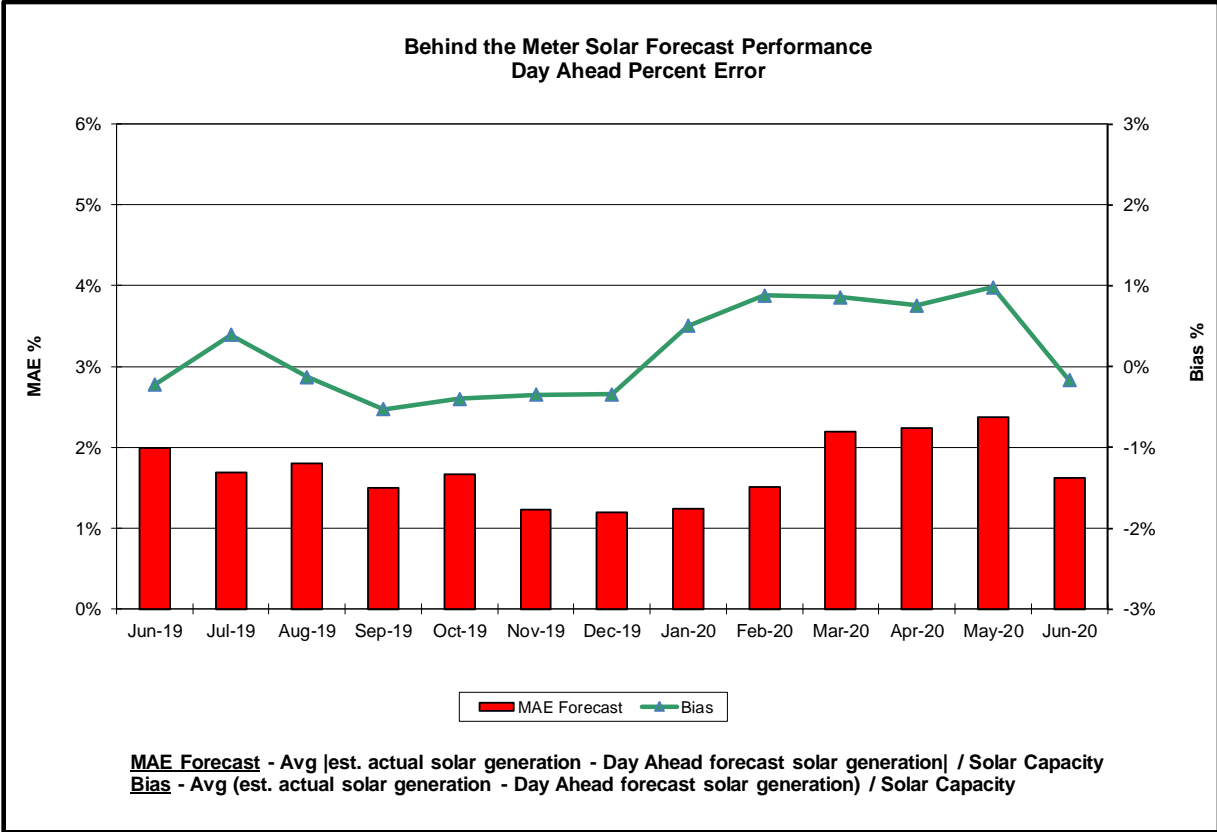


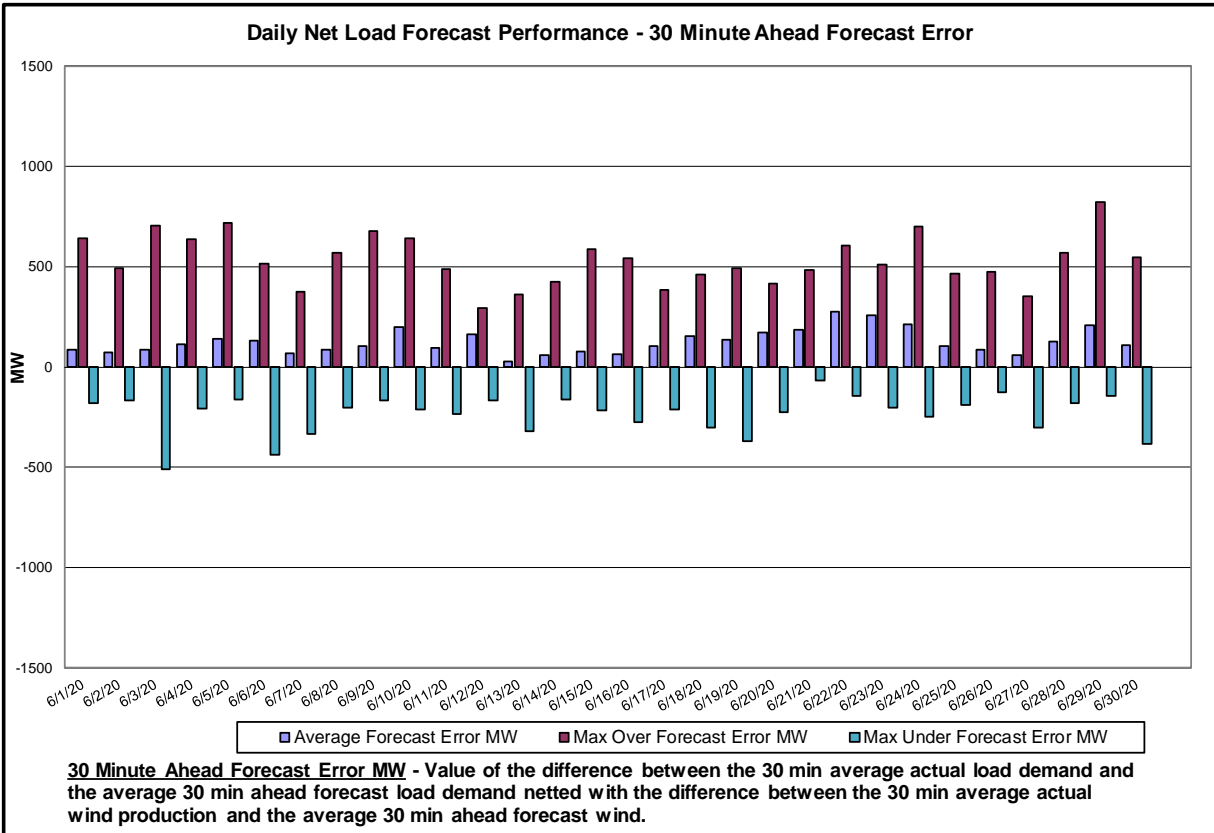
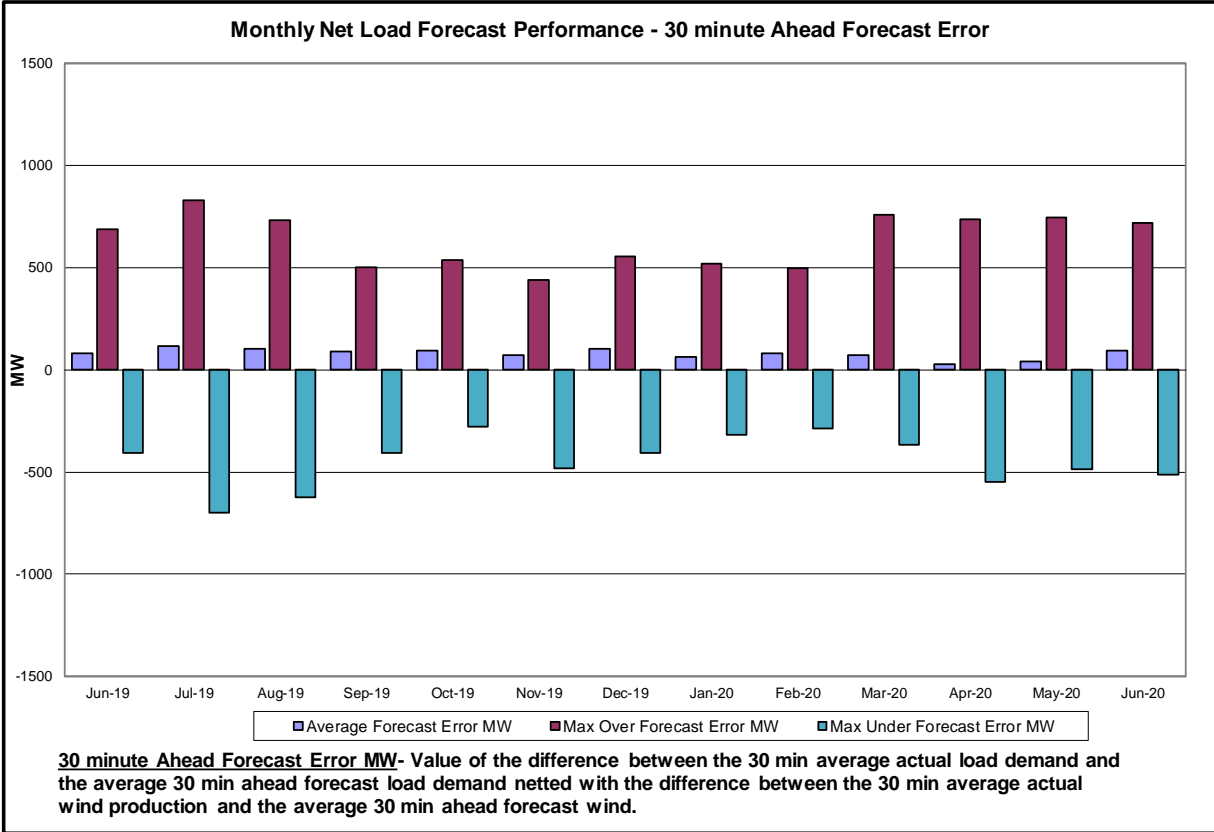


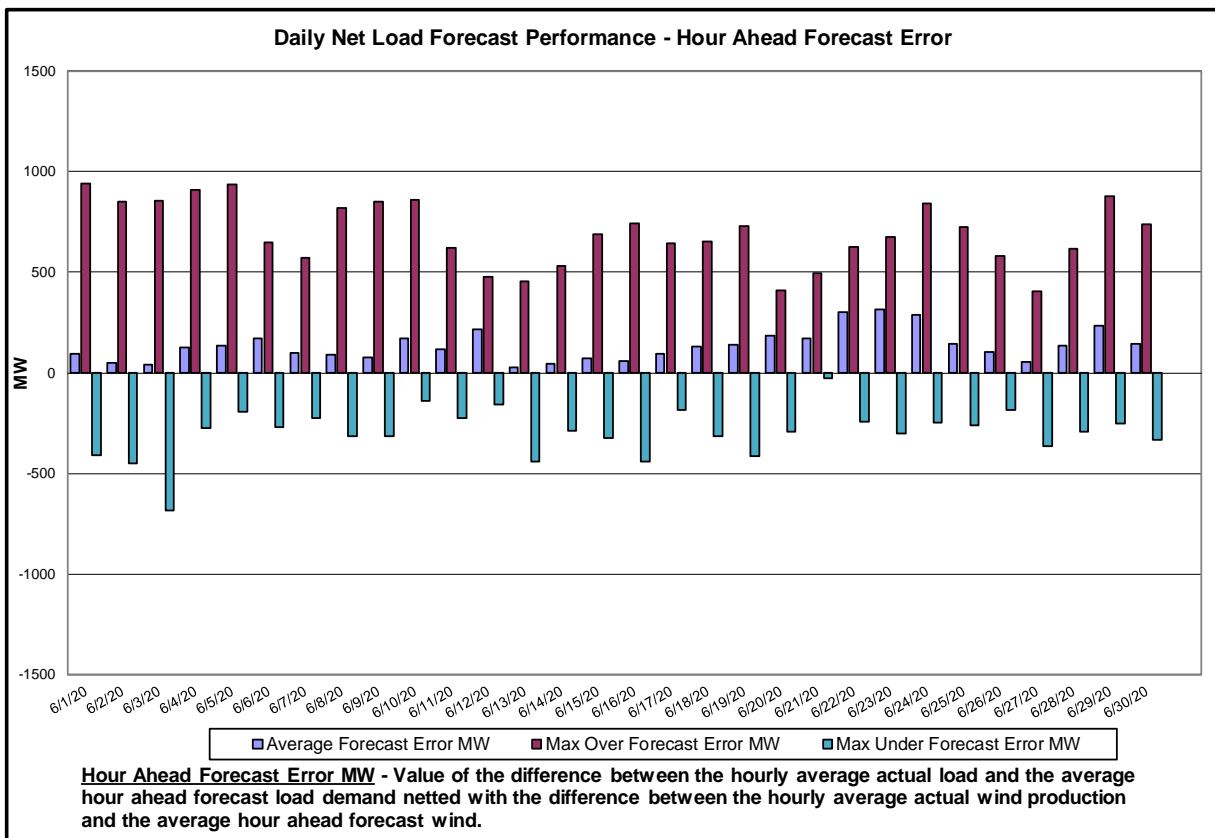
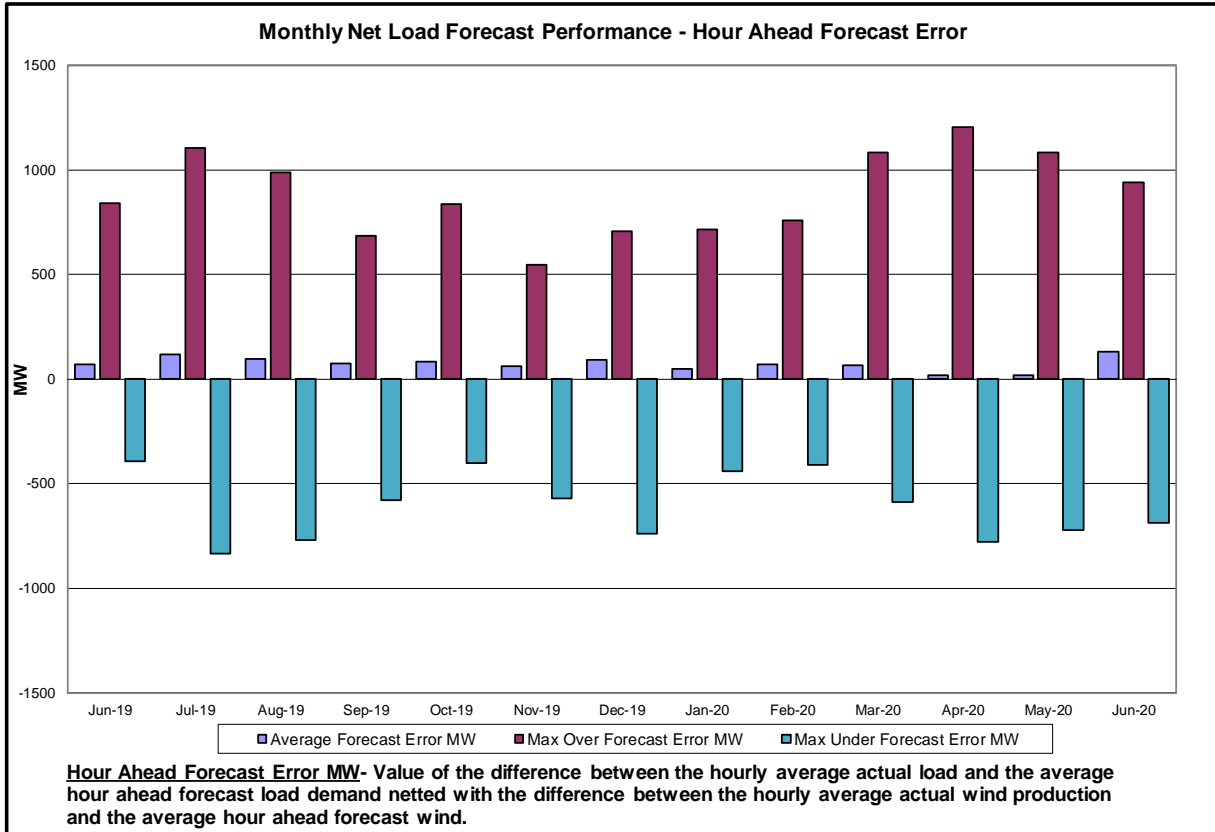


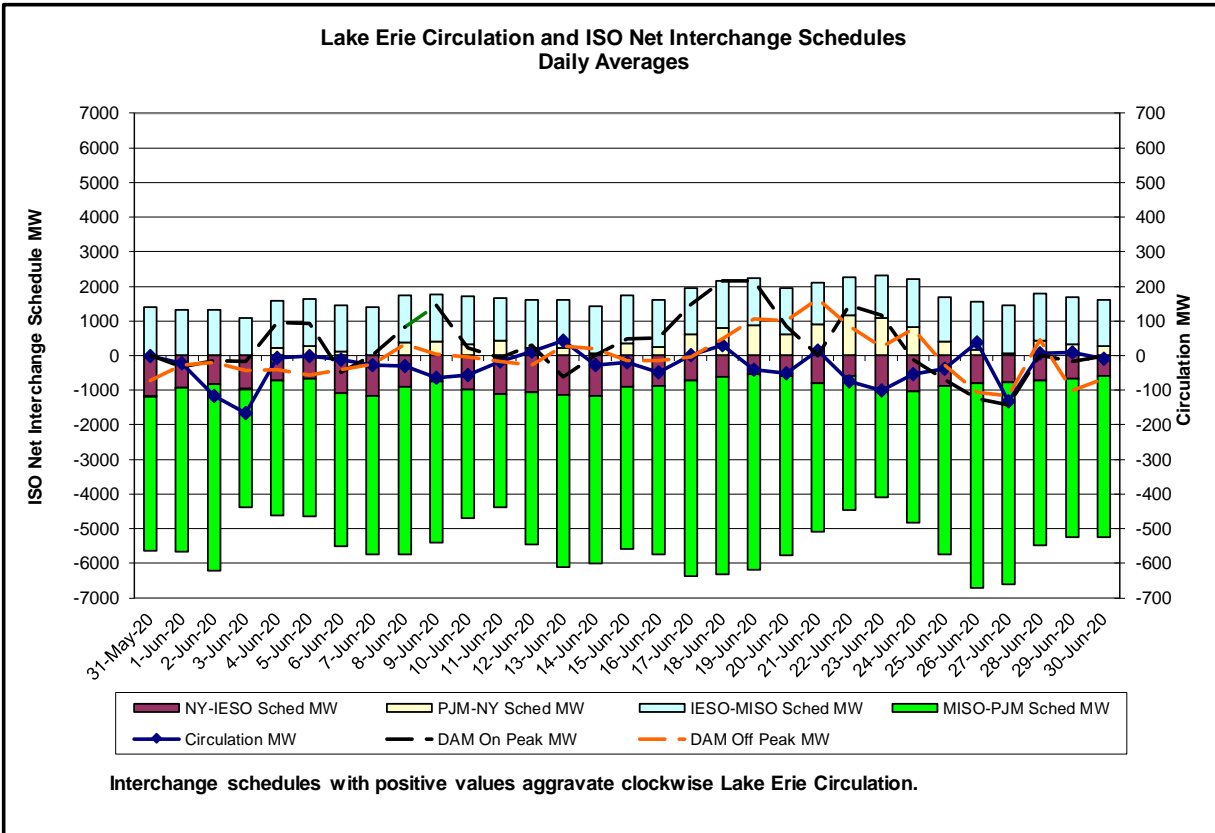
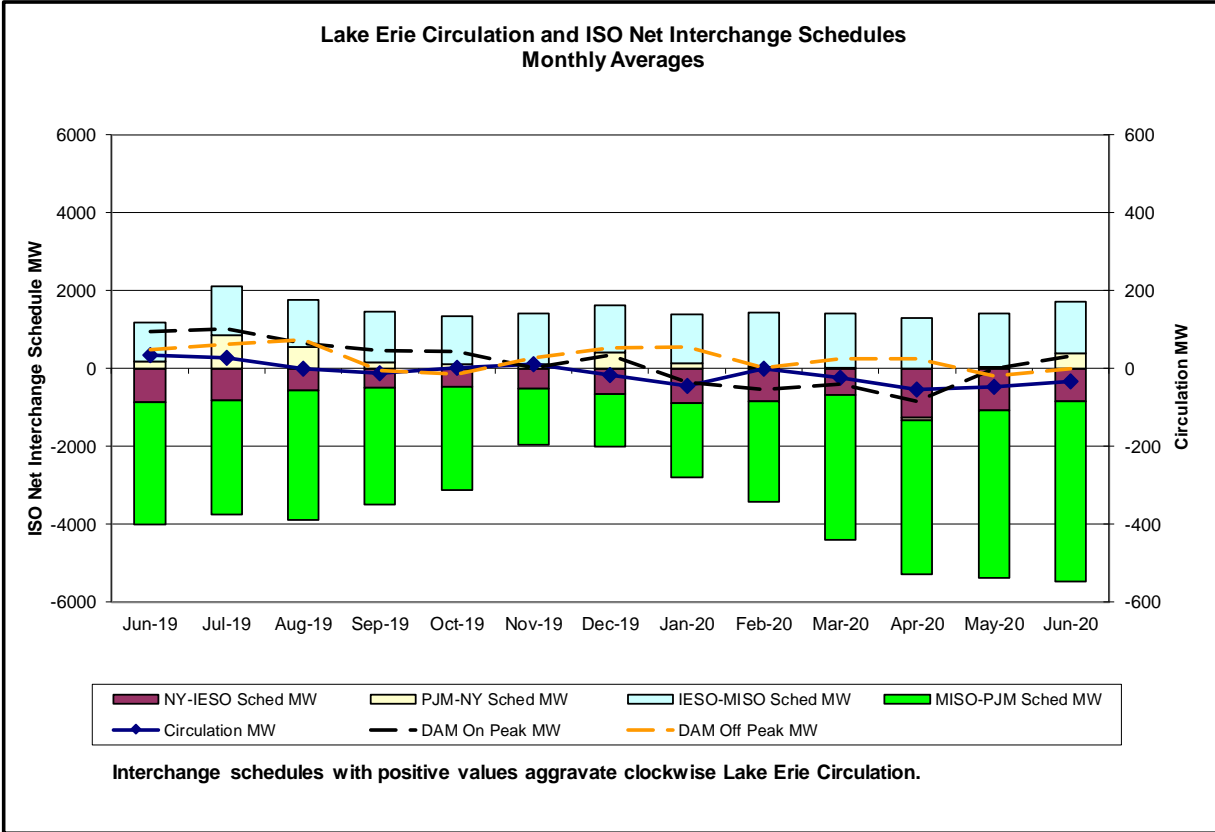




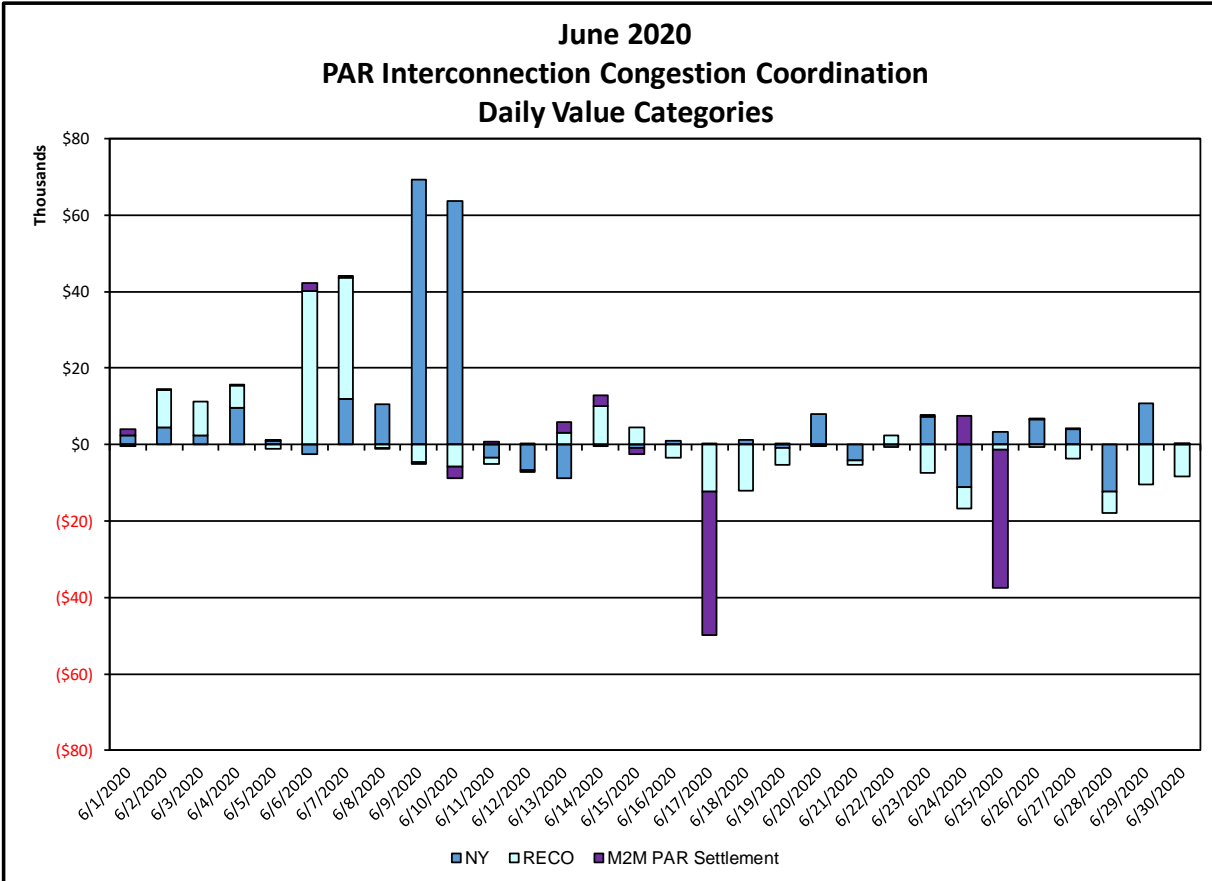
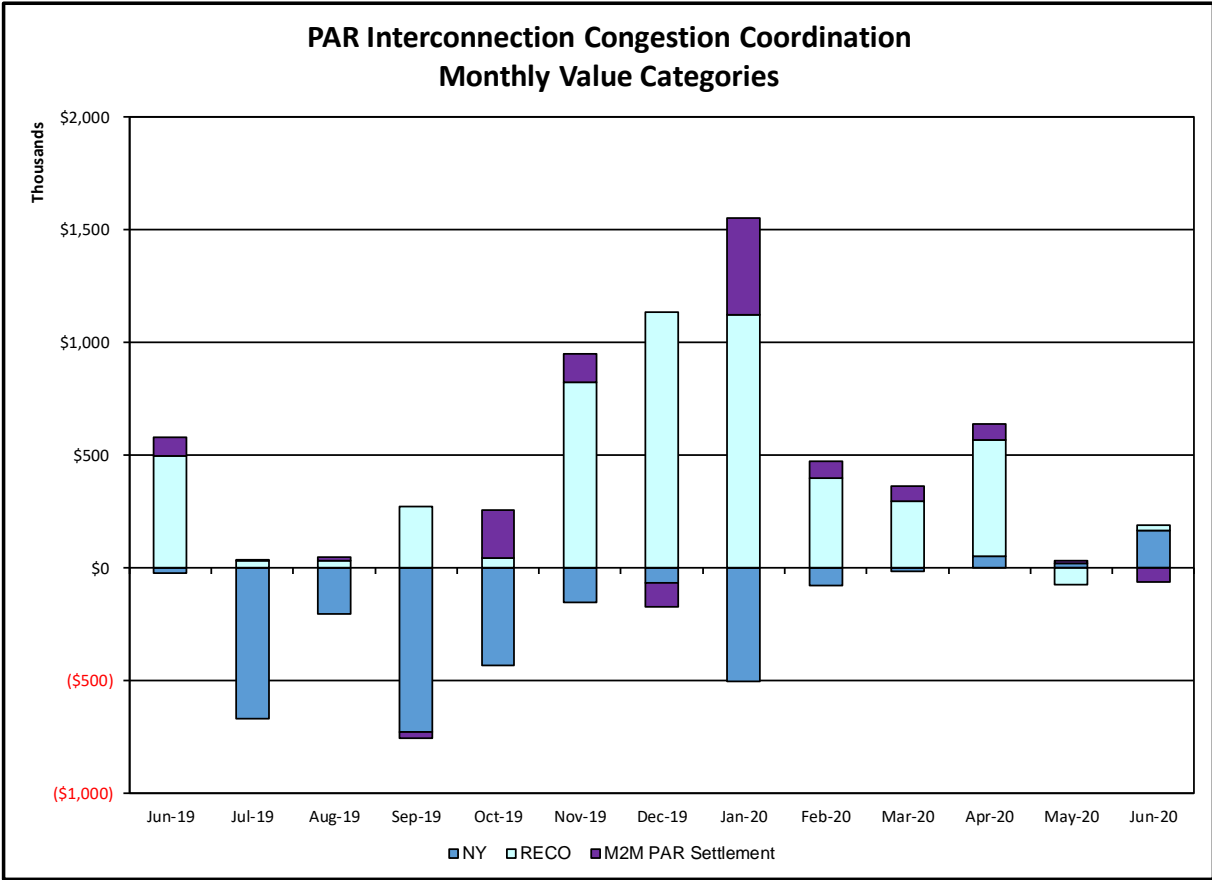






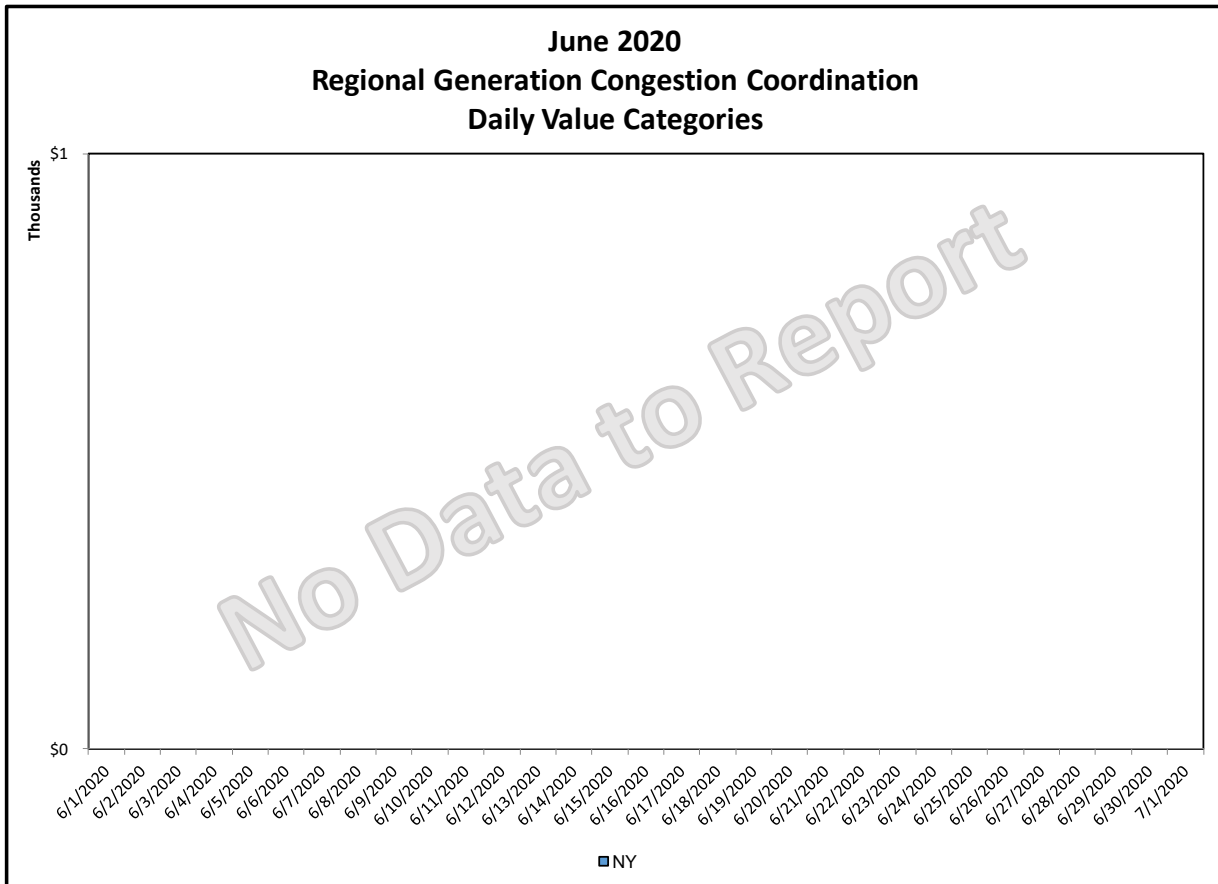
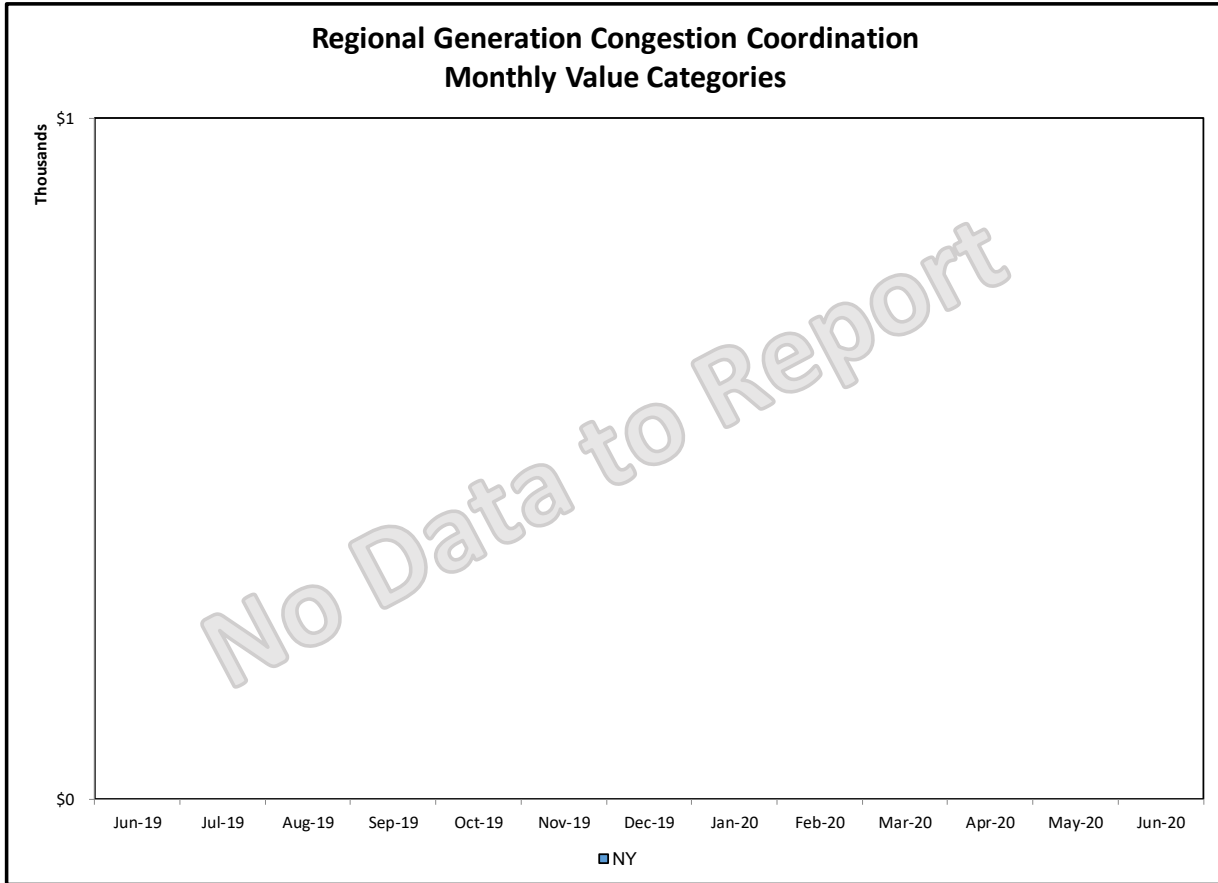


Broader Regional Market Performance Metrics



PAR Interconnection Congestion Coordination

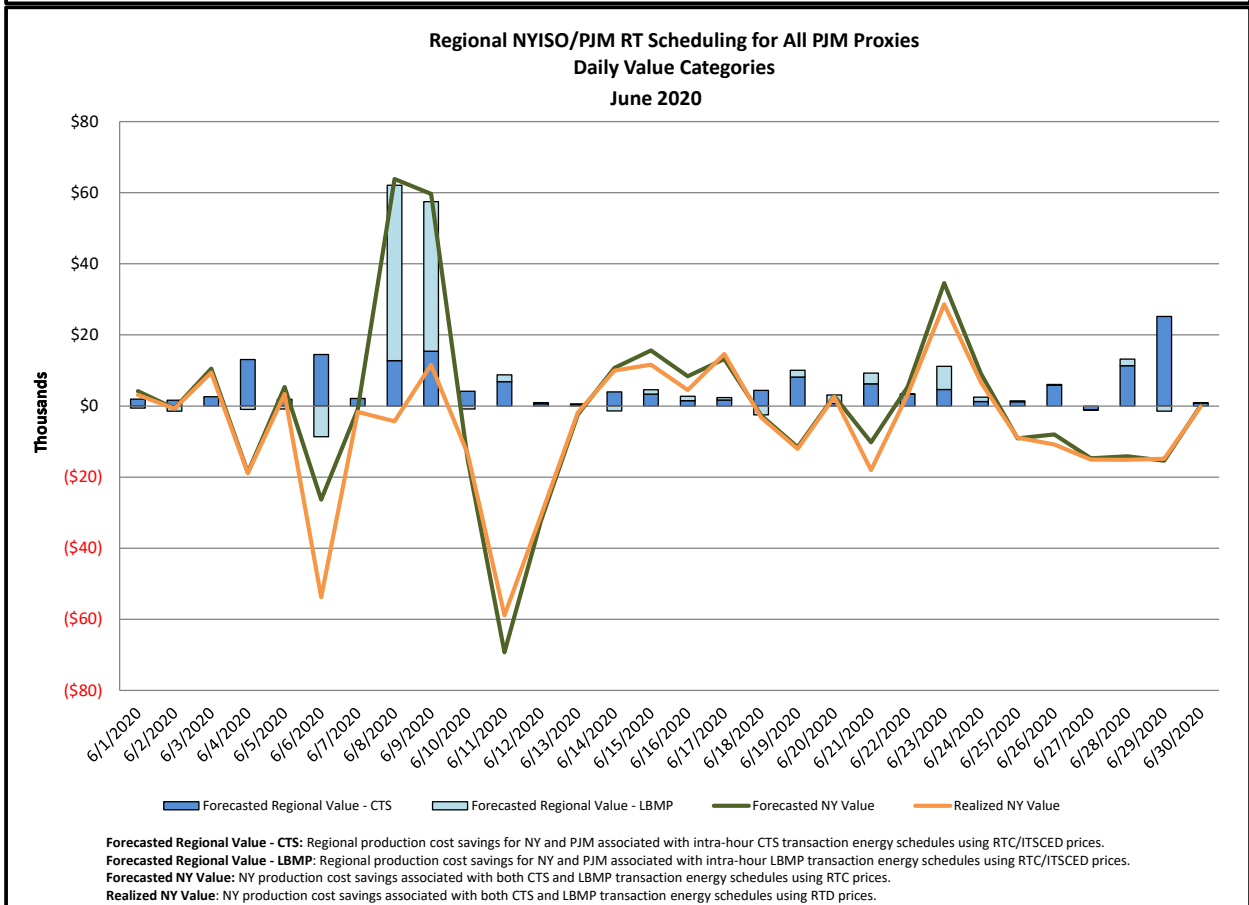
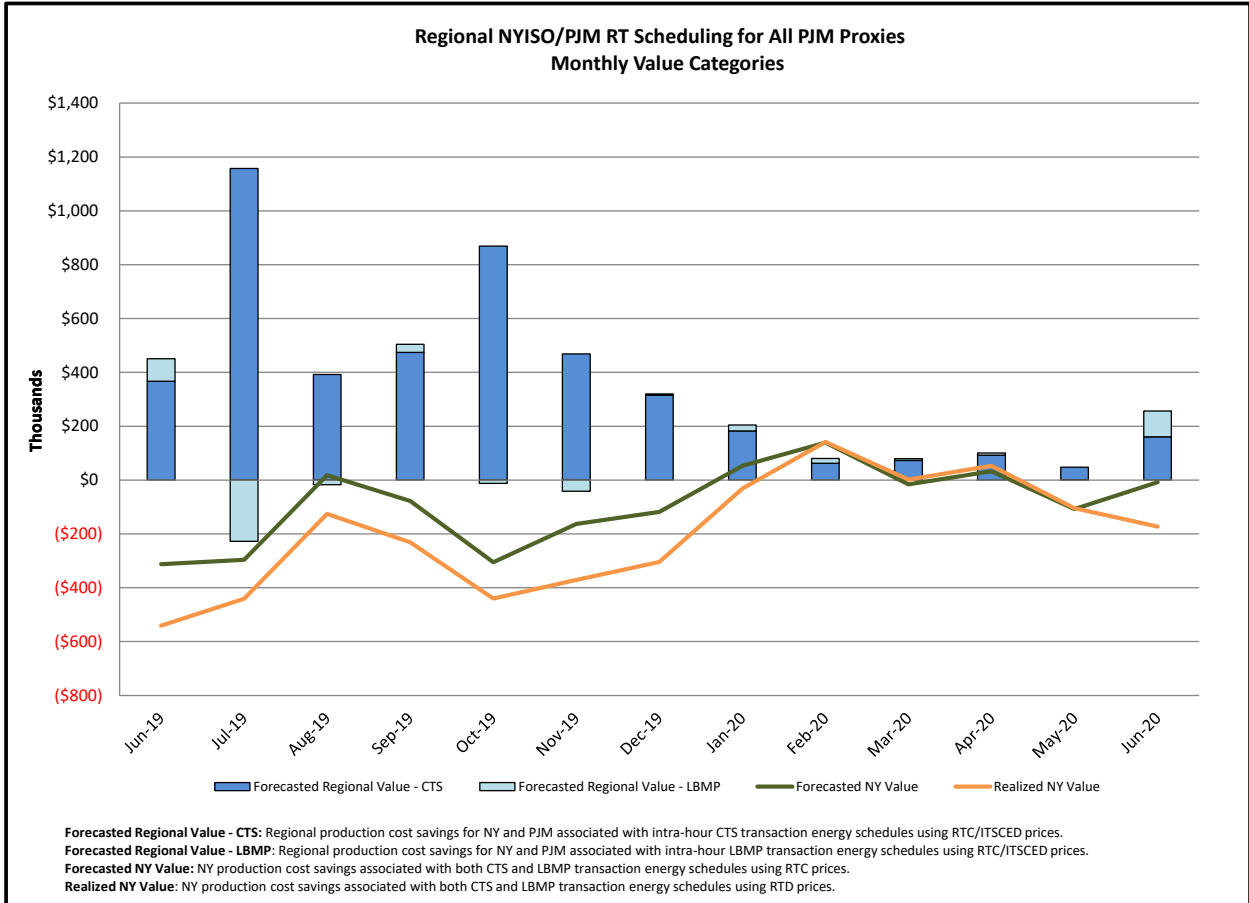
<u>Category</u>	<u>Description</u>
NY	Represents the value NY realizes from Market-to-Market PAR Coordination when experiencing congestion. This is the estimated savings to NY for additional deliveries into NY
RECO	Represents the value of PJM's obligation to deliver 80% of service to RECO load over Ramapo 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.

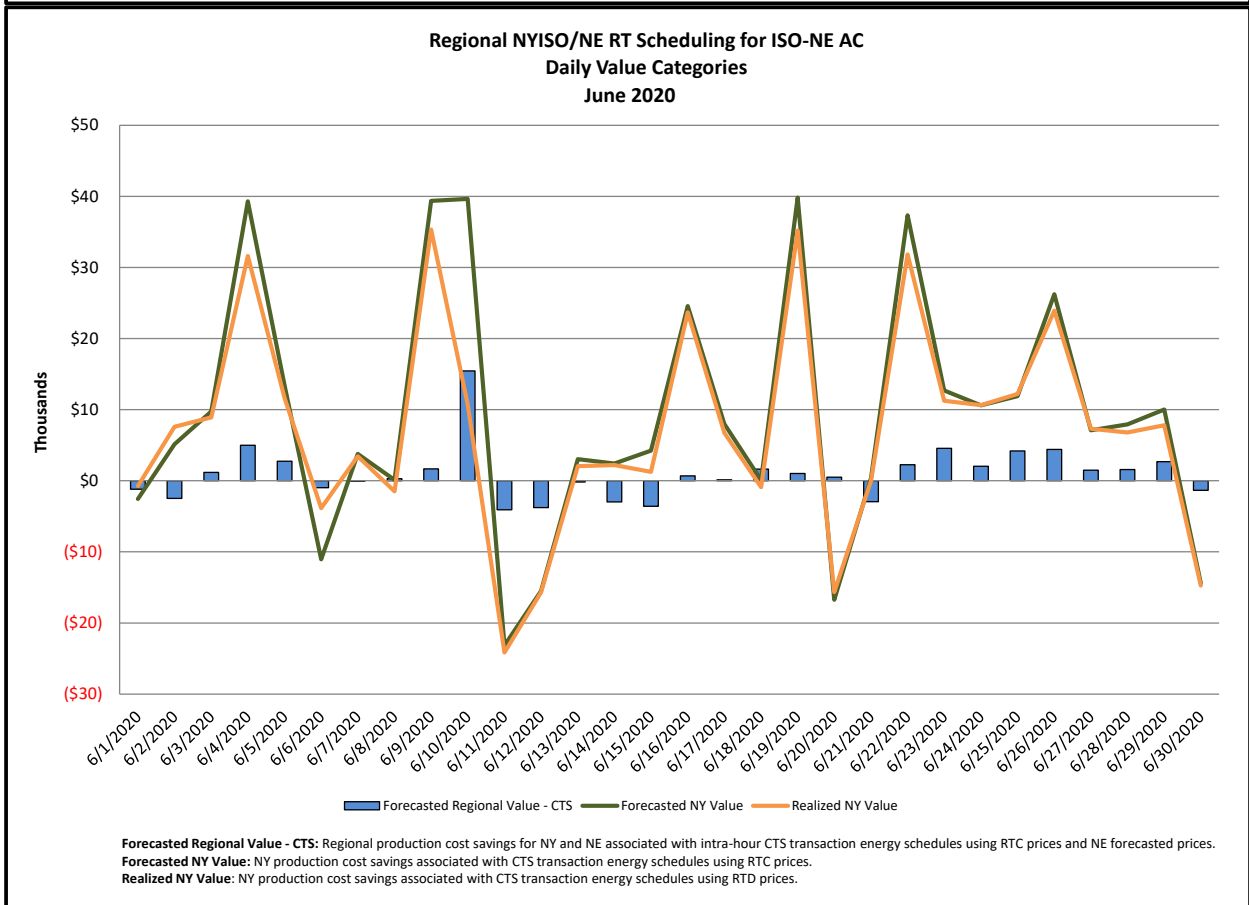
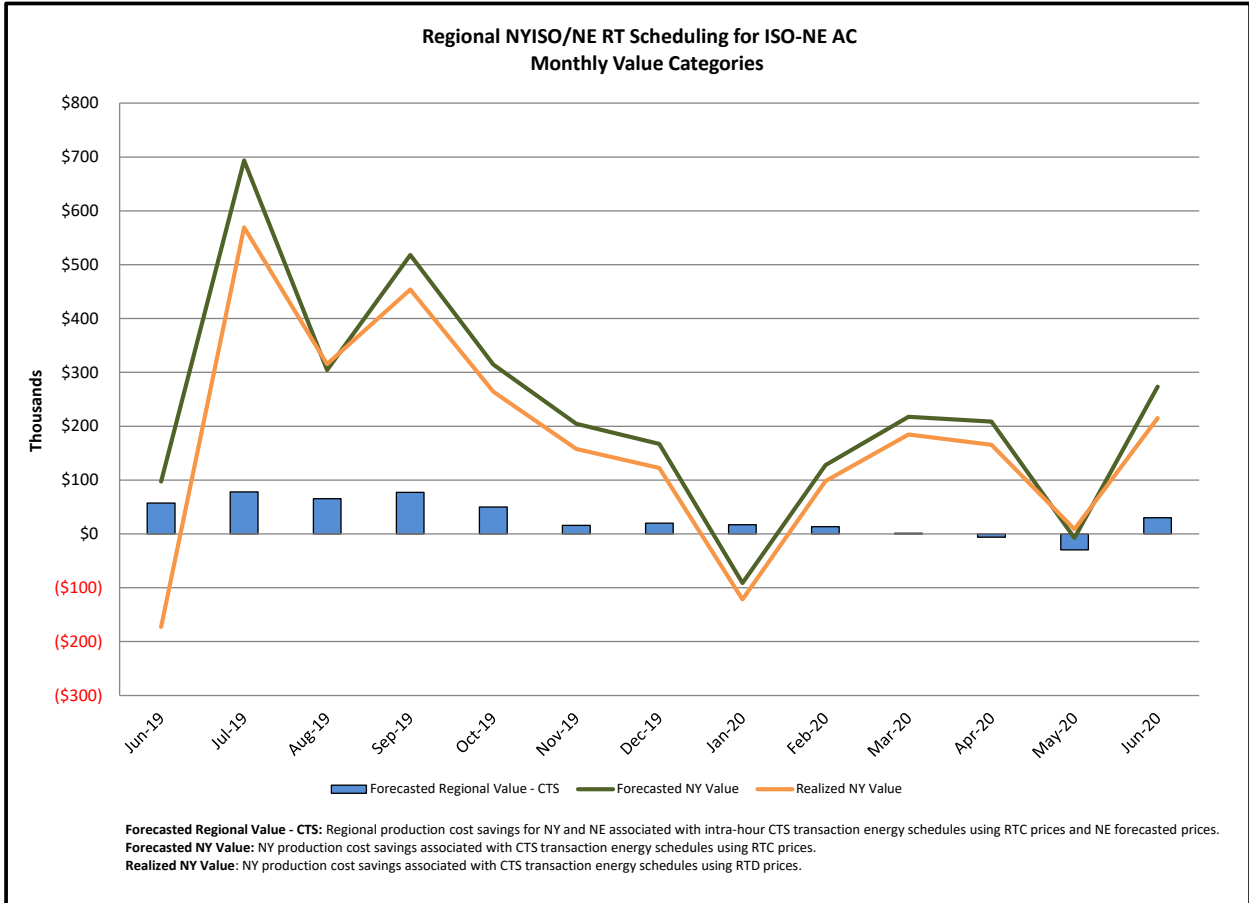


Regional Generation Congestion Coordination

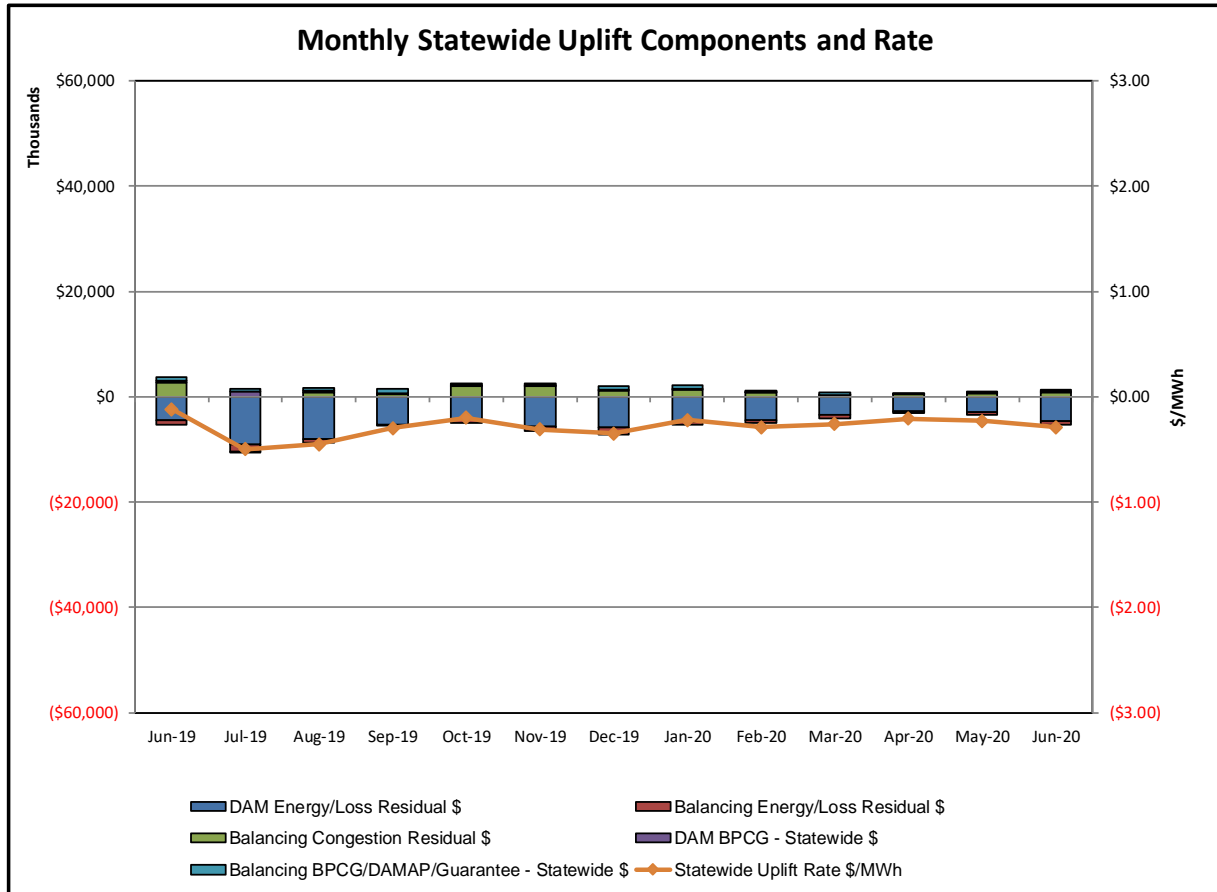
Category
NY

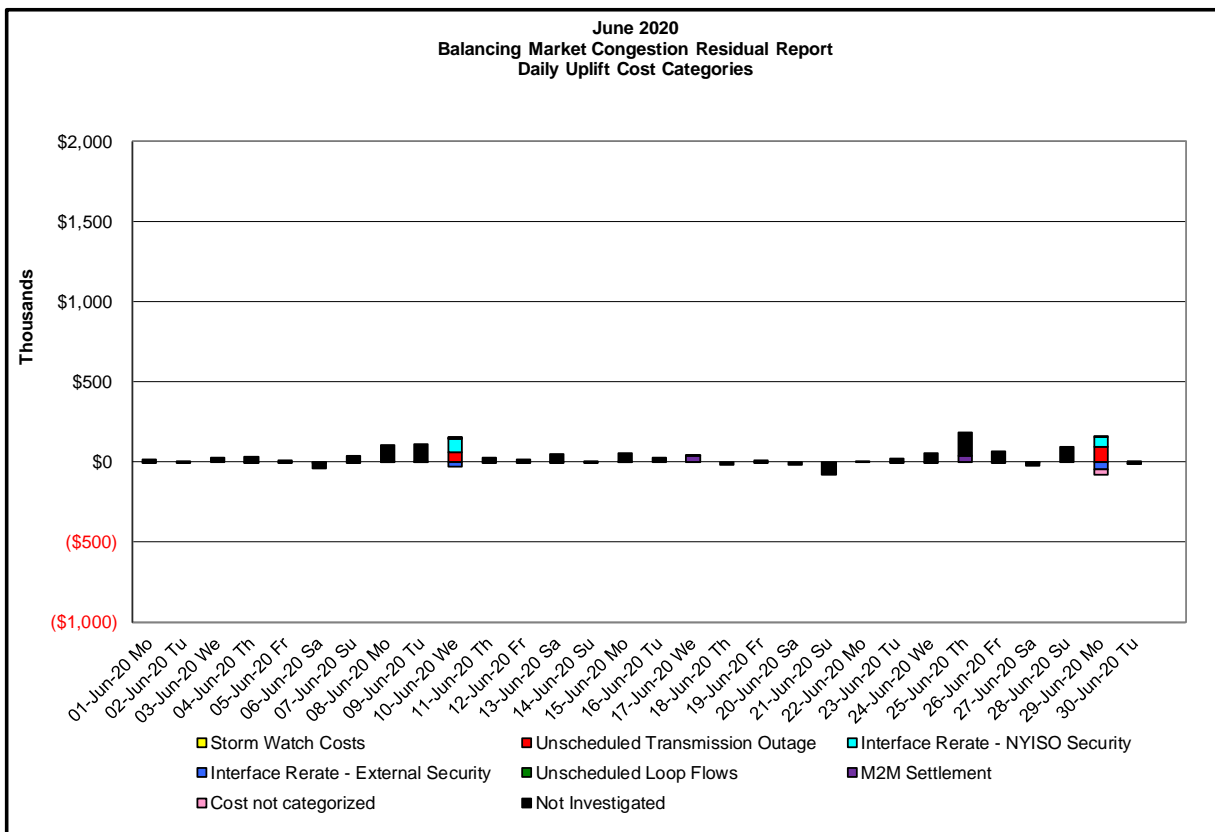
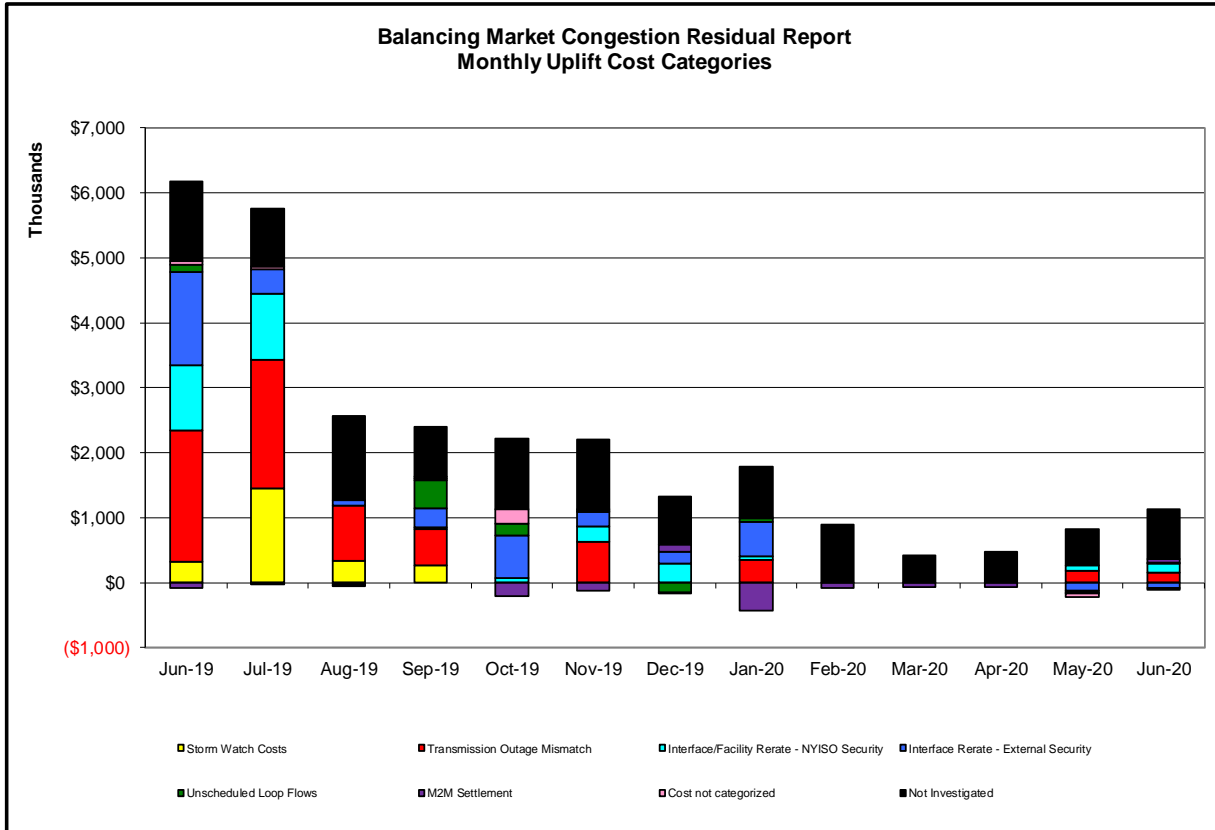
Description
NYISO savings that result from PJM payments to NYISO when PJM's transmission use (PJM's market flow) is greater than PJM's entitlement of the NY transmission system and NYISO is incurring Western or Central NY congestion. Additionally, NYISO savings may result from the more efficient regional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





Market Performance Metrics





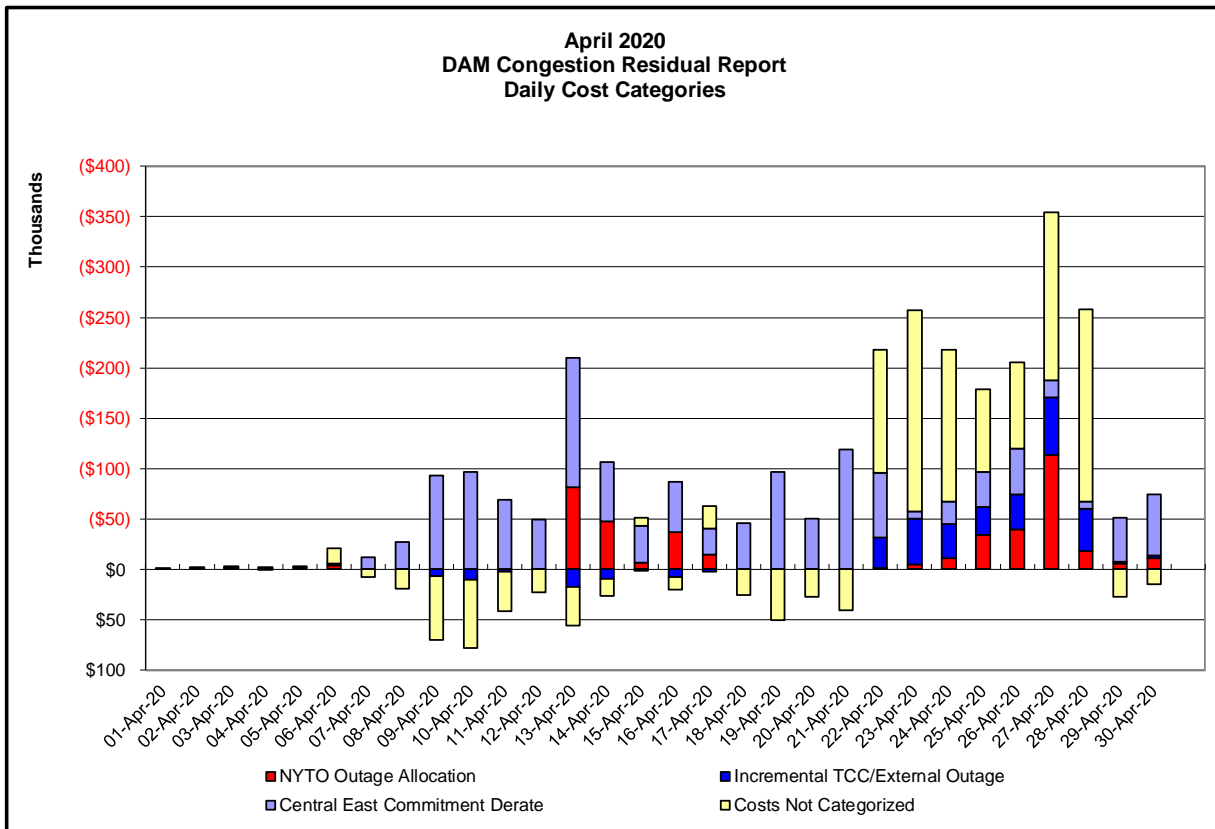
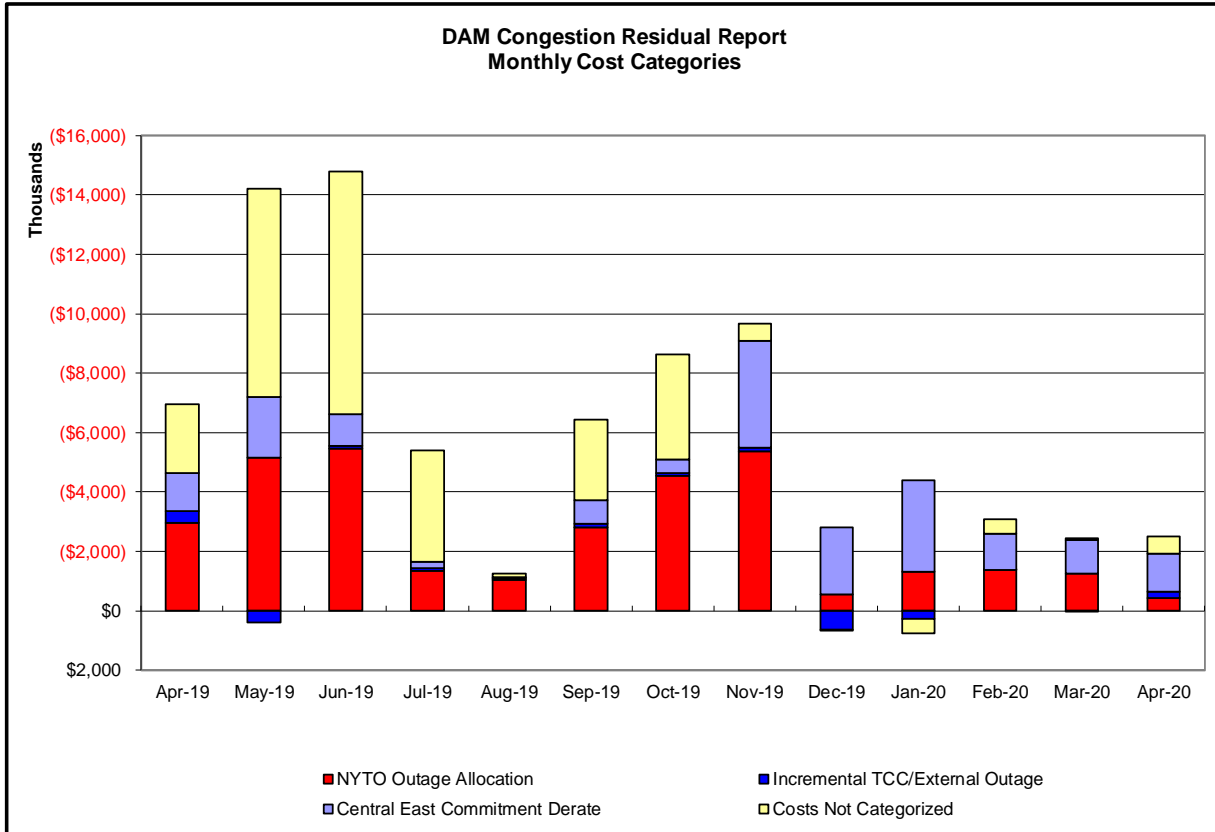
Day's investigated in June:10,29			
Event	Date (yyyymmdd)	Hours	Description
	6/10/2020	9,11	Extended outage of Astoria Annex-East 13th Street 345kV (#Q35L)
	6/10/2020	0	Derate of Niagara-Packard 230 kV (#61) for I/o TWR:PACKARD 62 & BP76
	6/10/2020	0	Derate of Adirondack-Moses 230 kV (#MA1) for I/o SIN:MSU1&7040& HQ GN&LD PROXY
	6/10/2020	0, 9,11	Derate of Cricket Valley-Pleasant Valley 345 kV (#F83) for I/o Cricket Valley-Pleasant Valley 345 kV (#F84)
	6/10/2020	9,11	Derate of MottHaven-Dunwoodie 345 kV (#71)
	6/10/2020	11	Derate of East 179th Street-HellGate 138 kV (#15055)
	6/10/2020	19	Derate of Scriba-Volney 345kV (#20) for I/o Scriba-Volney 345kV (#21)
	6/10/2020	16	NE_AC DNI Ramp Limit
	6/10/2020	17	PJM_AC DNI Ramp Limit
	6/10/2020	16	HQ_CHAT - NY Scheduling Limit
	6/10/2020	10	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West
	6/29/2020	13,14	Forced outage of Northport-Elwood 138kV (#681)
	6/29/2020	15	NYCA DNI Ramp Limit
	6/29/2020	9	Derate of Niagara-Packard 230 kV (#61) for TWR:PACKARD 62 & BP76
	6/29/2020	17	Derate of Vernon -Greenwood 138 kV (#31231)
	6/29/2020	9,13,14	Derate of Scriba-Volney 345 kV (#20) for I/o Scriba-Volney 345kV (#21)
	6/29/2020	15	PJM_AC DNI Ramp Limit
	6/29/2020	17	NE_AC DNI Ramp Limit
	6/29/2020	17	NE_NNC1385 - NY Scheduling Limit
	6/29/2020	9	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West

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
Transmission Outage Mismatch	Market-wide	Changes in DAM to RTM transfers related to transmission outage mismatch	Forced Line Outage, Unit AVR Outages Early Line Return from Outage
Interface/Facility Rerate - NYISO Security	Market-wide	Changes in DAM to RTM transfers not related to transmission outage	Interface/Facility Rerates due to RTM voltages
Interface Rerate - External Security	Market-wide	Changes 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	

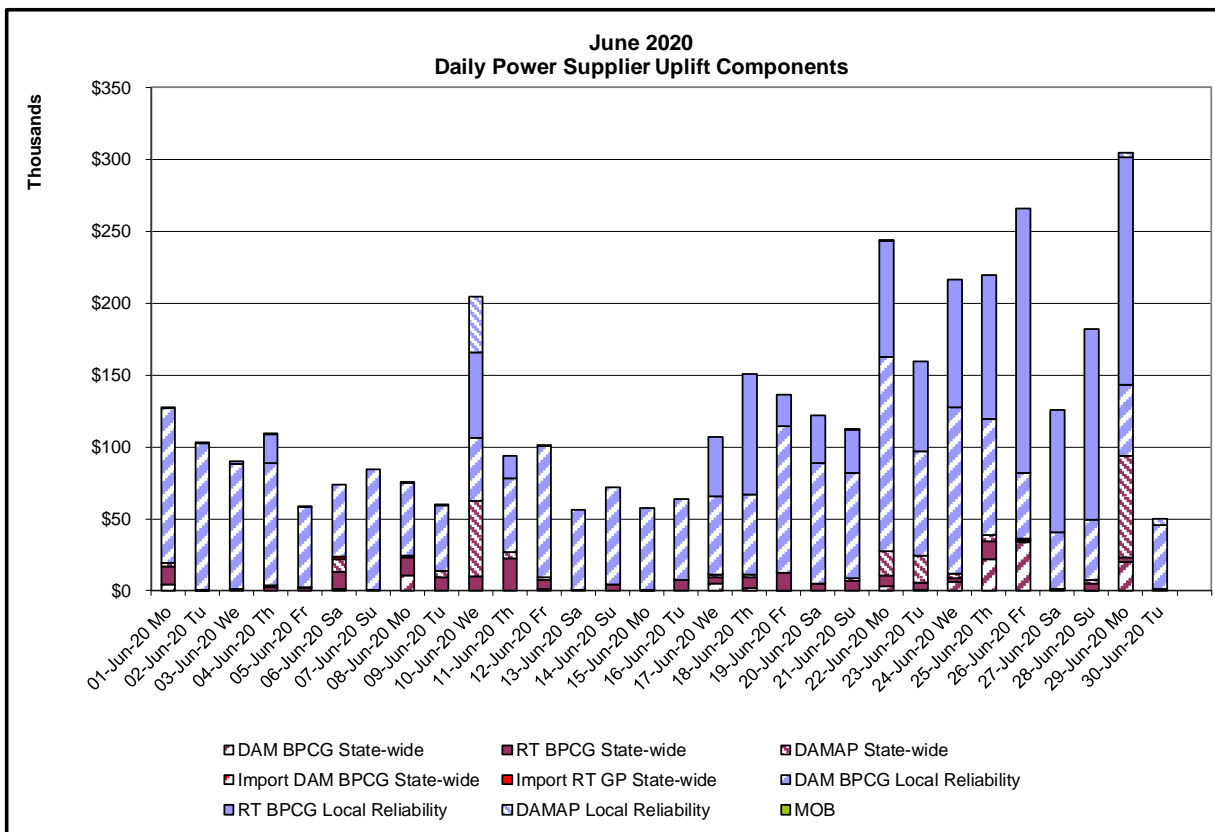
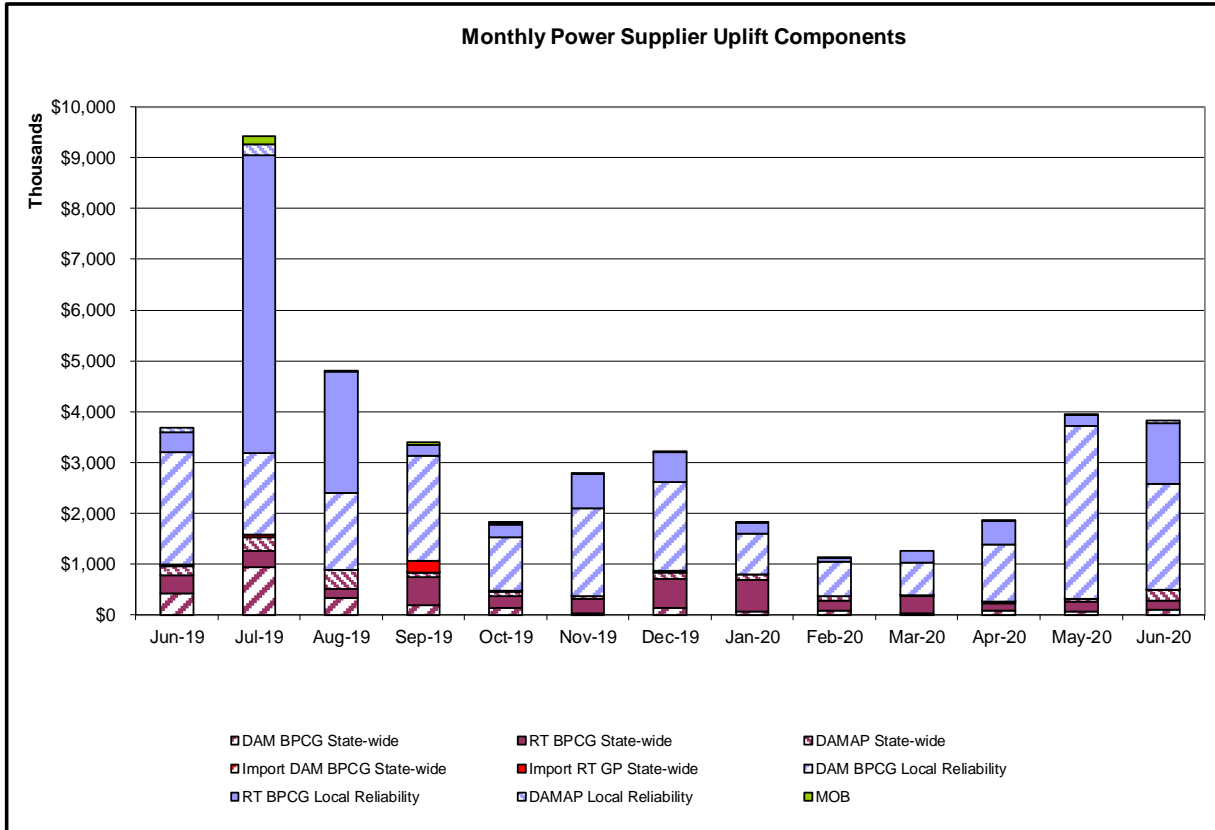
Monthly Balancing Market Congestion Report Assumptions/Notes

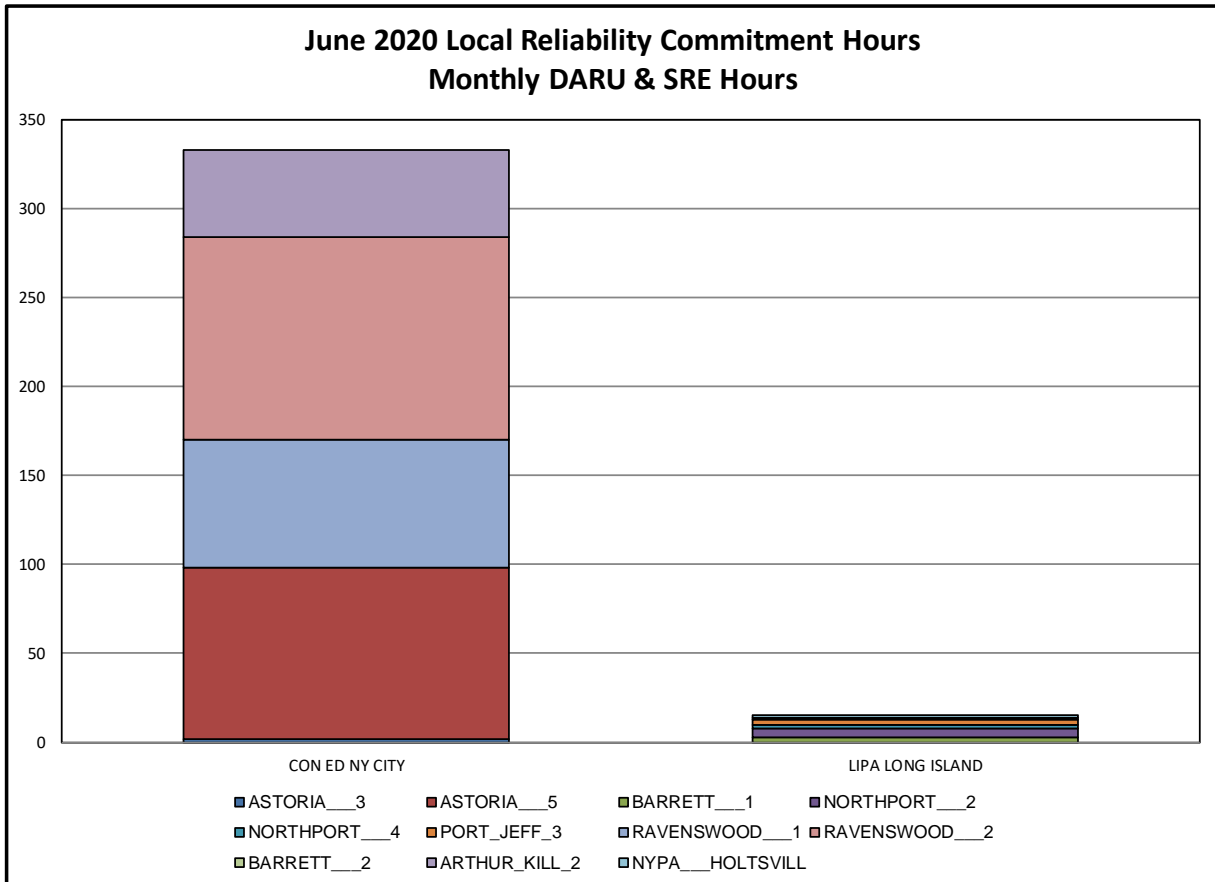
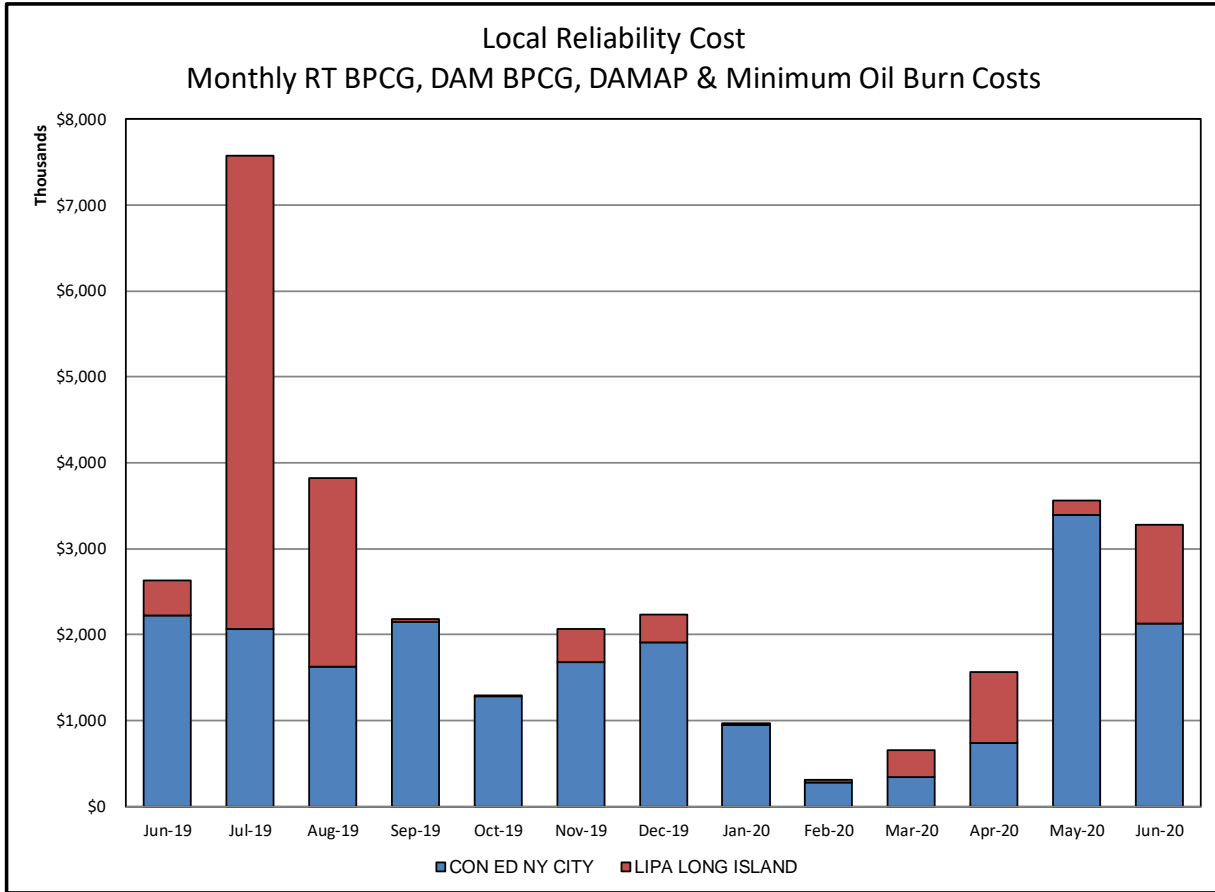
1) Storm Watch Costs are identified as daily total uplift costs
 2) Days with a value of BMCR less M2M Settlement of \$100K/HR, shortfall of \$200K/Day or more, or surplus of \$100K/Day or more are investigated.
 3) Uplift costs associated with multiple event types are apportioned equally by hour

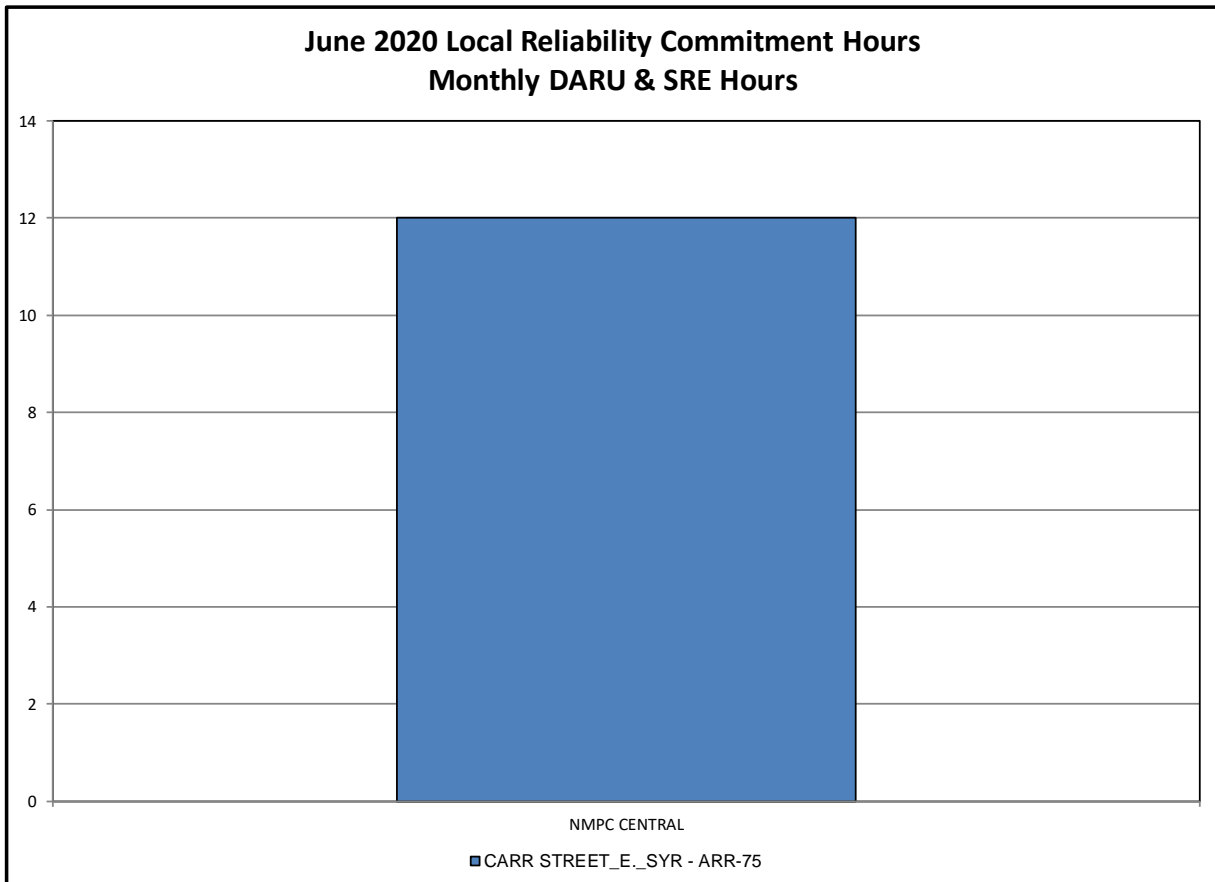
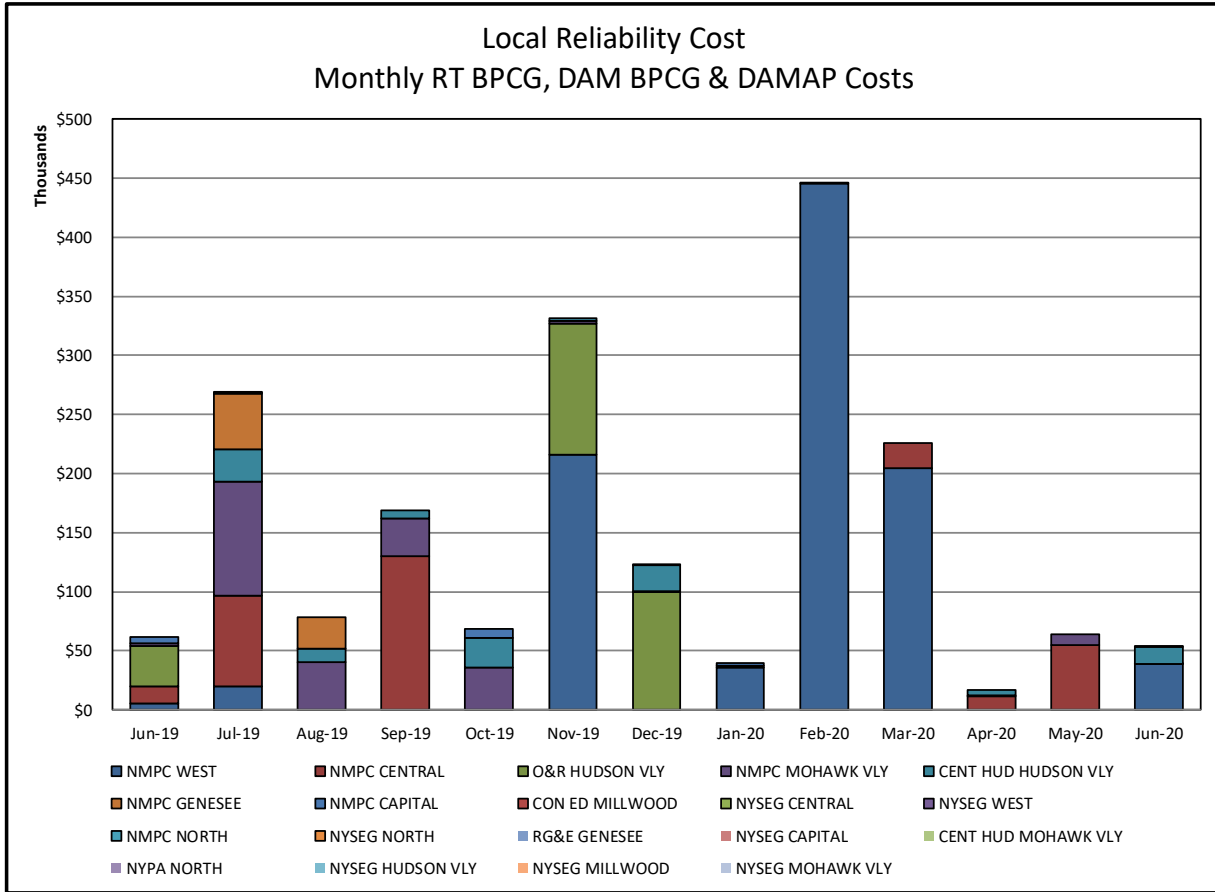


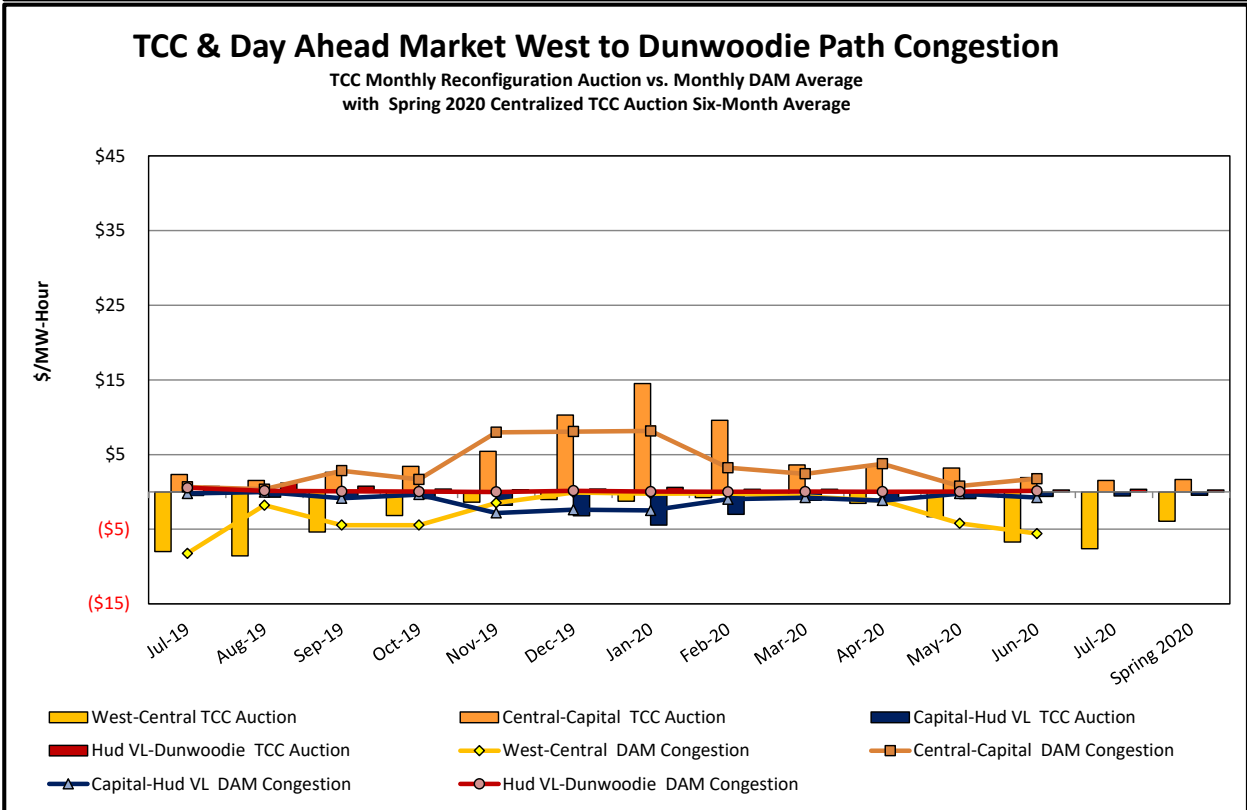
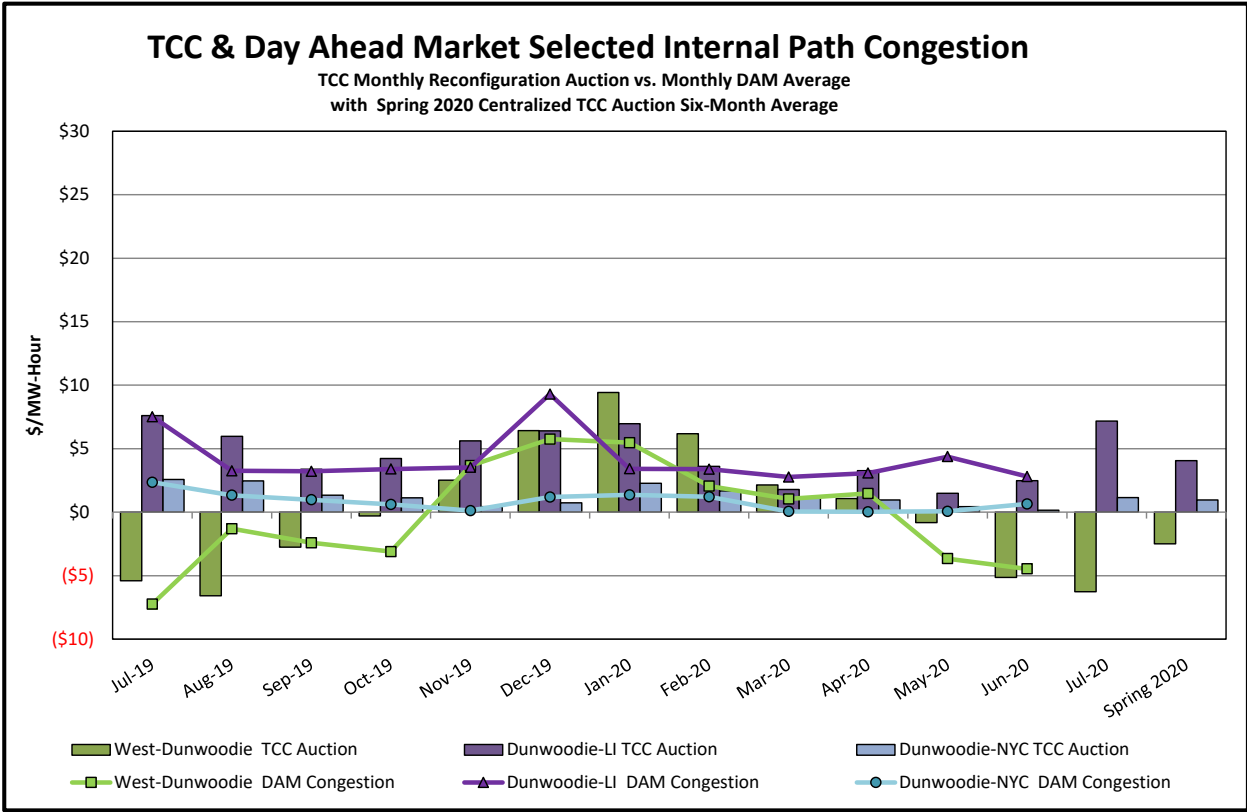
Day-Ahead Market Congestion Residual Categories

<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.
Incremental TCC/External Outage Impacts	All TO by Monthly Allocation Factor	Allocation associated with transmission equipment status change caused by change in status of external equipment or change in status of equipment associated with Incremental TCC.	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.	



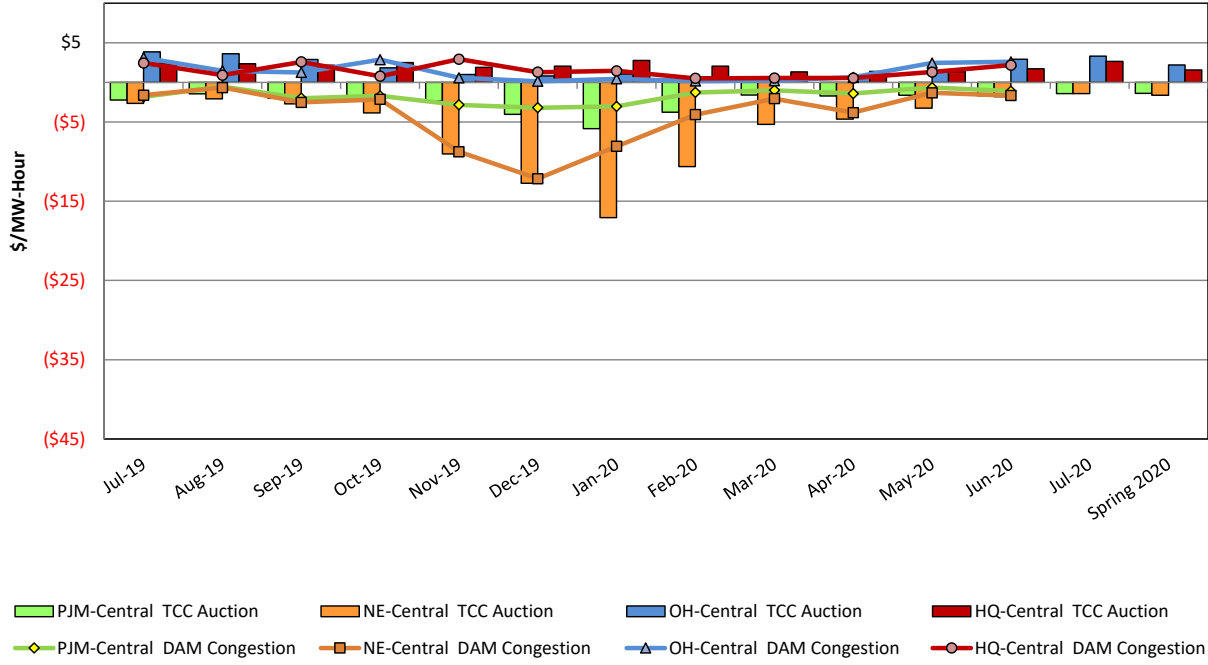


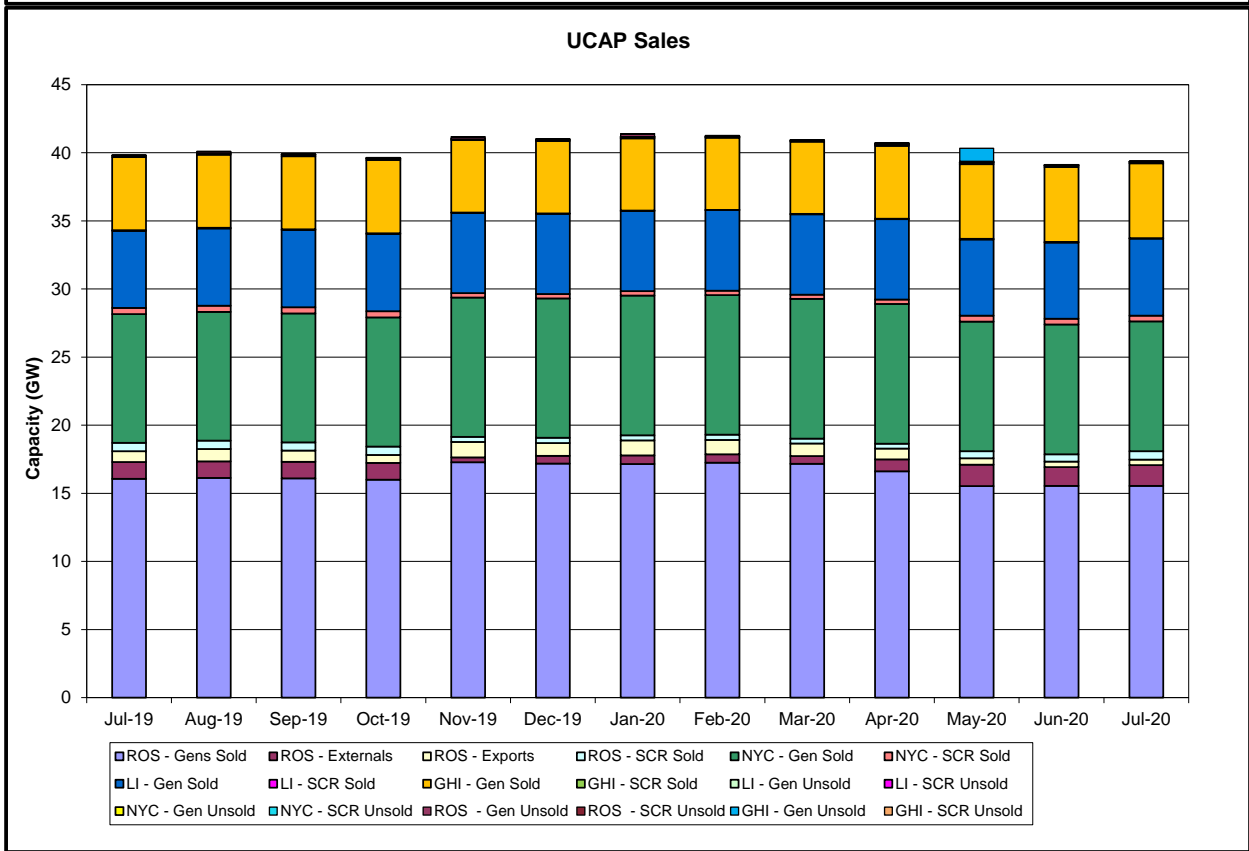
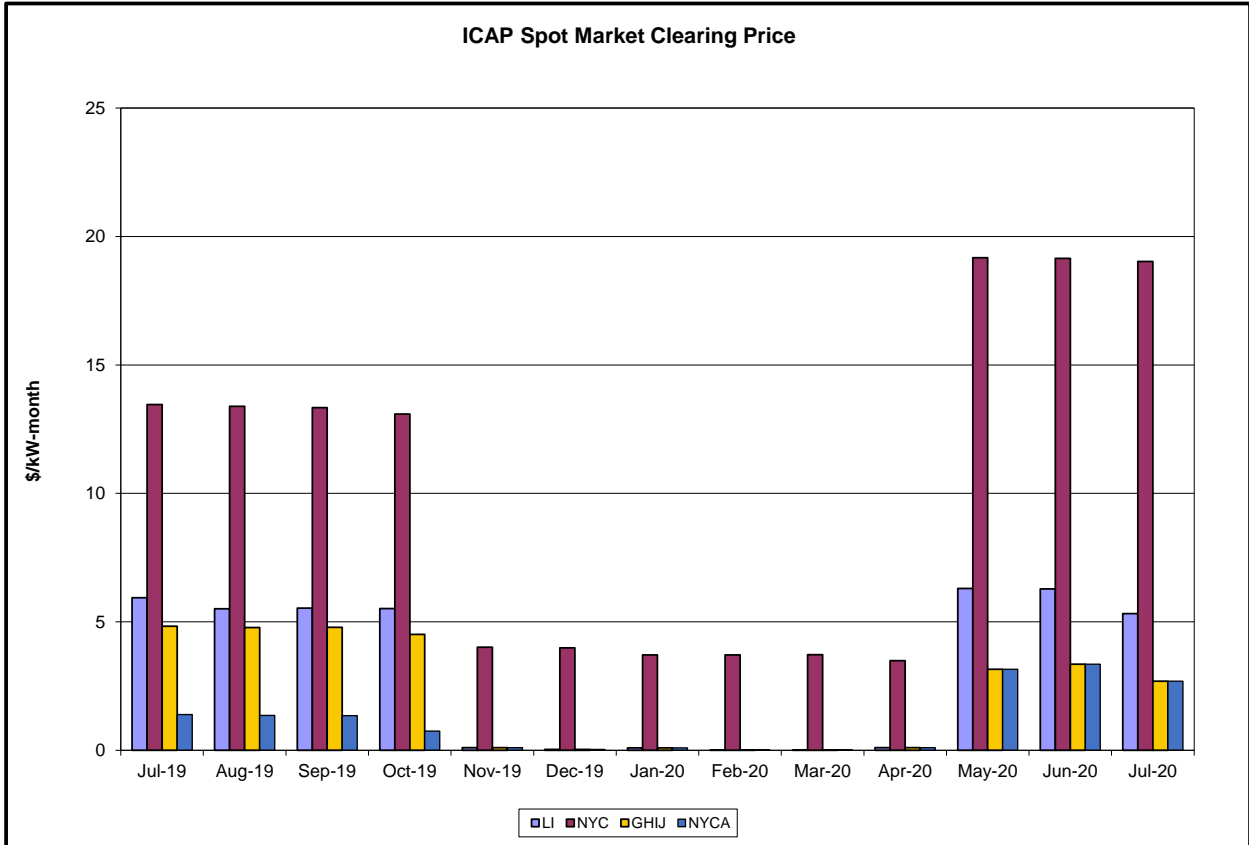




TCC & Day Ahead Market Selected External Path Congestion

TCC Monthly Reconfiguration Auction vs. Monthly DAM Average
with Spring 2020 Centralized TCC Auction Six-Month Average



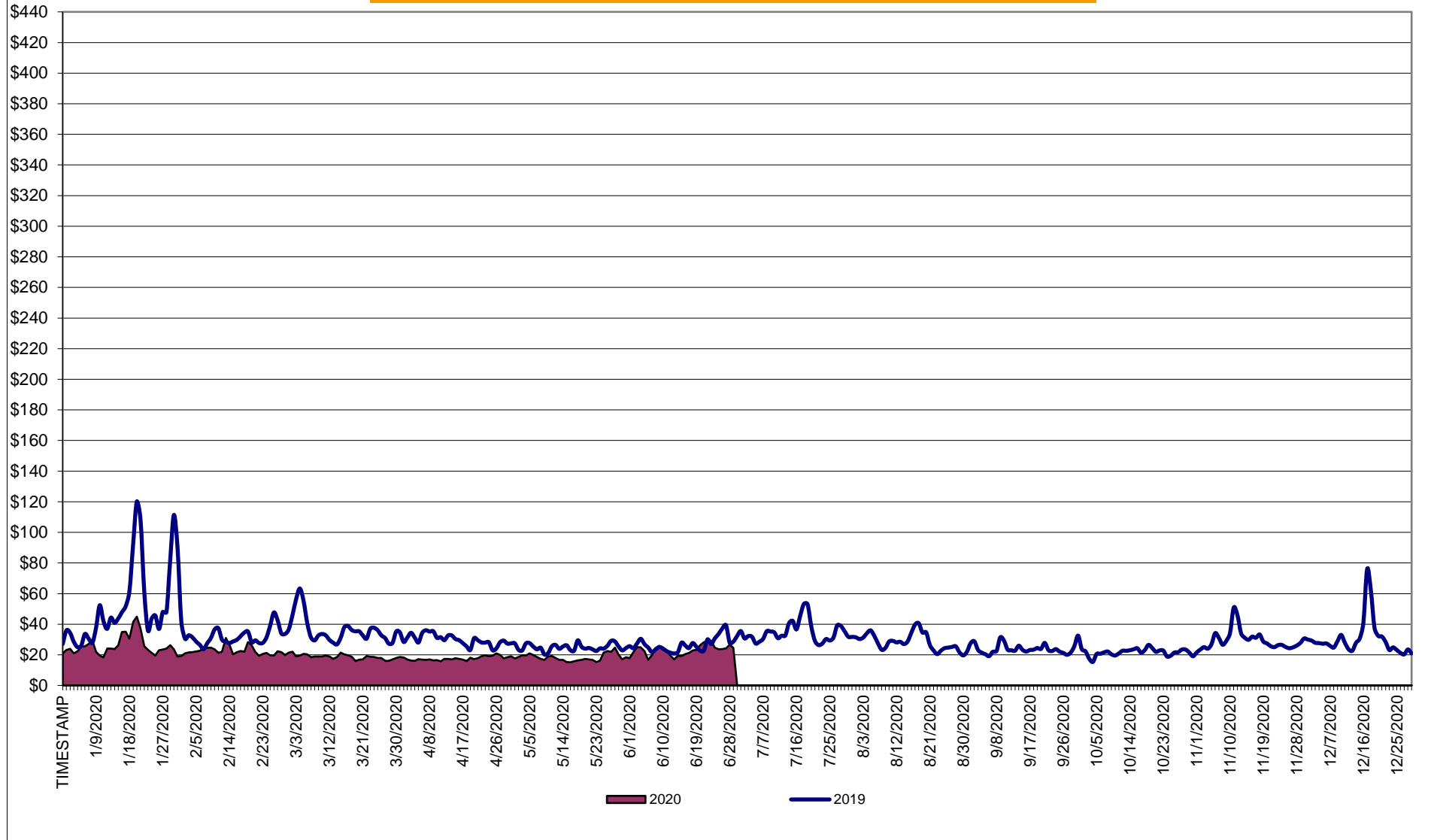


Market Performance Highlights

June 2020

- LBMP for June is \$21.36/MWh; higher than \$16.14/MWh in May 2020 and lower than \$24.43/MWh in June 2019.
 - Day Ahead and Real Time Load Weighted LBMPs are higher compared to May.
- June 2020 average year-to-date monthly cost of \$22.21/MWh is a 38% decrease from \$37.76/MWh in June 2019.
- Average daily sendout is 430 GWh/day in June; higher than 345 GWh/day in May 2020 and 429 GWh/day in June 2019.
- Natural gas prices and distillate prices are higher compared to the previous month.
 - Natural Gas (Transco Z6 NY) was \$1.44 /MMBtu, up from \$1.33/MMBtu in May.
 - Natural gas prices are down 31.5% year-over-year.
 - Jet Kerosene Gulf Coast was \$7.30/MMBtu, up from \$5.12/MMBtu in May.
 - Ultra Low Sulfur No.2 Diesel NY Harbor was \$8.05/MMBtu, up from \$6.36/MMBtu in May.
 - Distillate prices are down 42.5% year-over-year.
- Uplift per MWh is lower compared to the previous month.
 - Uplift (not including NYISO cost of operations) is (\$0.05)/MWh; lower than \$0.09/MWh in May.
 - Local Reliability Share is \$0.24/MWh, lower than \$0.32/MWh in May.
 - Statewide Share is (\$0.29)/MWh, lower than (\$0.23)/MWh in May.
 - TSA \$ per NYC MWh is \$0.04/MWh.
 - Total uplift costs (Schedule 1 components including NYISO Cost of Operations) are higher than May.

Daily NYISO Average Cost/MWh (Energy & Ancillary Services)*
2019 Annual Average \$32.59/MWh
June 2019 YTD Average \$35.76/MWh
June 2020 YTD Average \$22.05/MWh



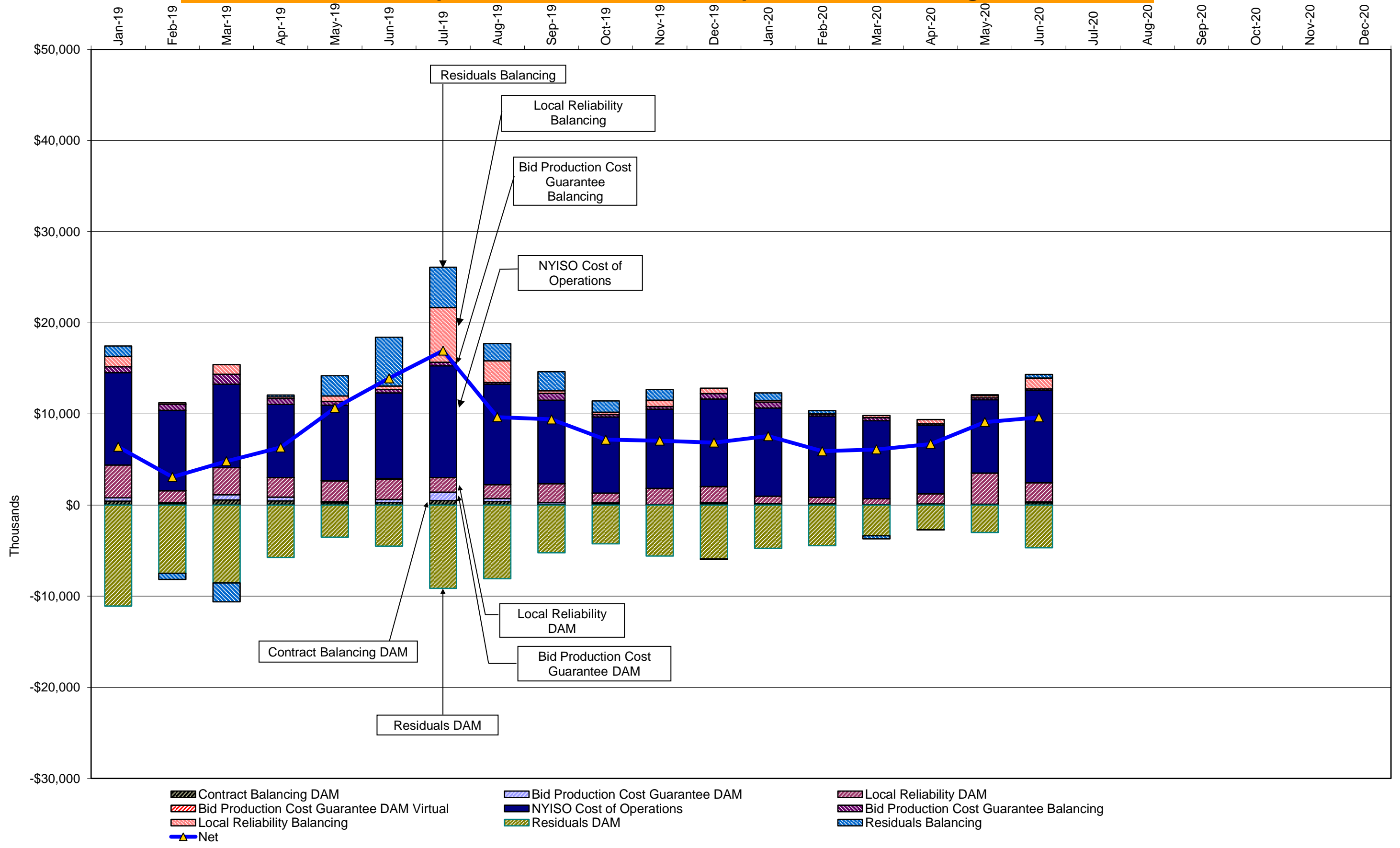
* Excludes ICAP payments.

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

2020	<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	24.77	21.11	17.11	15.77	16.14	21.36						
NTAC	0.91	0.70	0.86	0.91	1.05	0.95						
Reserve	0.46	0.43	0.47	0.50	0.53	0.45						
Regulation	0.09	0.08	0.09	0.08	0.10	0.08						
NYISO Cost of Operations	0.68	0.69	0.68	0.66	0.71	0.74						
FERC Fee Recovery	0.08	0.09	0.09	0.10	0.11	0.09						
Uplift	(0.15)	(0.23)	(0.19)	(0.08)	0.09	(0.05)						
Uplift: Local Reliability Share	0.07	0.06	0.07	0.14	0.32	0.24						
Uplift: Statewide Share	(0.22)	(0.29)	(0.26)	(0.21)	(0.23)	(0.29)						
Voltage Support and Black Start	0.44	0.44	0.44	0.43	0.45	0.45						
Avg Monthly Cost	27.29	23.32	19.55	18.38	19.16	24.09						
Avg YTD Cost	27.29	25.40	23.48	22.38	21.82	22.21						
TSA \$ per NYC MWh	0.00	0.00	0.00	0.00	0.00	0.04						
2019	<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	50.93	33.51	34.91	28.01	23.10	24.43	33.18	27.83	22.22	20.84	27.39	29.52
NTAC	0.51	0.69	0.98	1.16	0.72	1.08	1.01	0.98	0.48	0.57	0.88	0.77
Reserve	0.54	0.51	0.55	0.63	0.63	0.50	0.44	0.49	0.50	0.62	0.50	0.44
Regulation	0.13	0.11	0.10	0.33	0.13	0.09	0.07	0.09	0.09	0.13	0.11	0.10
NYISO Cost of Operations	0.68	0.68	0.69	0.69	0.68	0.69	0.70	0.70	0.69	0.67	0.67	0.67
FERC Fee Recovery	0.08	0.09	0.09	0.10	0.10	0.08	0.06	0.07	0.09	0.09	0.09	0.08
Uplift	(0.25)	(0.44)	(0.33)	(0.15)	0.13	0.07	(0.06)	(0.20)	(0.13)	(0.09)	(0.13)	(0.19)
Uplift: Local Reliability Share	0.32	0.11	0.31	0.20	0.23	0.19	0.44	0.25	0.17	0.11	0.19	0.17
Uplift: Statewide Share	(0.57)	(0.55)	(0.64)	(0.35)	(0.11)	(0.12)	(0.50)	(0.45)	(0.30)	(0.20)	(0.31)	(0.35)
Voltage Support and Black Start	0.37	0.37	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.37	0.37	0.36
Avg Monthly Cost	52.99	35.51	37.38	31.16	25.88	27.32	35.78	30.33	24.32	23.21	29.89	31.76
Avg YTD Cost	52.99	44.93	42.54	40.12	37.57	35.76	35.75	34.96	33.88	32.94	32.69	32.59
TSA \$ per NYC MWh	0.00	0.00	0.01	0.01	0.19	0.77	1.00	0.33	0.43	0.00	0.00	0.00

* Excludes ICAP payments.
Market Mitigation and Analysis
Prepared: 7/10/2020 10:28 AM

NYISO Dollar Flows - Uplift - OATT Schedule 1 components - Data through June 30, 2020



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

<u>2020</u>	<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	14,194,609	13,172,669	12,495,999	11,372,390	11,462,320	13,825,178						
DAM LSE Internal LBMP Energy Sales	56%	56%	59%	54%	55%	58%						
DAM External TC LBMP Energy Sales	6%	5%	5%	7%	4%	3%						
DAM Bilateral - Internal Bilaterals	30%	30%	27%	30%	31%	29%						
DAM Bilateral - Import/Non-LBMP Market Bilaterals	5%	5%	6%	6%	6%	5%						
DAM Bilateral - Export/Non-LBMP Market Bilaterals	2%	2%	2%	2%	2%	2%						
DAM Bilateral - Wheel Through Bilaterals	1%	1%	1%	1%	1%	2%						
Balancing Energy Market MWh	-26,753	-142,168	144,076	22,599	-137,565	-180,149						
Balancing Energy LSE Internal LBMP Energy Sales	-1080%	-221%	-85%	-884%	-187%	-134%						
Balancing Energy External TC LBMP Energy Sales	1156%	181%	240%	1233%	137%	99%						
Balancing Energy Bilateral - Internal Bilaterals	62%	5%	12%	55%	12%	7%						
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	0%	0%	0%	0%	0%	0%						
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	127%	16%	18%	92%	12%	5%						
Balancing Energy Bilateral - Wheel Through Bilaterals	-365%	-81%	-85%	-396%	-74%	-77%						
Transactions Summary												
LBMP	62%	62%	65%	61%	59%	62%						
Internal Bilaterals	31%	31%	27%	30%	32%	30%						
Import Bilaterals	5%	5%	6%	6%	6%	5%						
Export Bilaterals	2%	2%	2%	2%	2%	2%						
Wheels Through	0%	1%	0%	0%	0%	1%						
Market Share of Total Load												
Day Ahead Market	100.2%	101.1%	98.9%	99.8%	101.2%	101.3%						
Balancing Energy +	-0.2%	-1.1%	1.1%	0.2%	-1.2%	-1.3%						
Total MWh	14,167,856	13,030,501	12,640,075	11,394,989	11,324,755	13,645,029						
Average Daily Energy Sendout/Month GWh	423	417	375	344	345	430						

<u>2019</u>	<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	15,299,458	13,391,383	13,527,834	11,811,029	12,521,583	13,723,372	17,416,589	16,379,968	13,588,715	12,567,821	13,036,152	14,345,711
DAM LSE Internal LBMP Energy Sales	57%	57%	59%	59%	57%	58%	64%	63%	58%	57%	54%	56%
DAM External TC LBMP Energy Sales	6%	5%	3%	1%	3%	3%	3%	3%	3%	4%	6%	6%
DAM Bilateral - Internal Bilaterals	29%	30%	30%	31%	32%	29%	26%	26%	30%	32%	32%	30%
DAM Bilateral - Import/Non-LBMP Market Bilaterals	5%	5%	5%	5%	6%	5%	4%	4%	5%	5%	5%	5%
DAM Bilateral - Export/Non-LBMP Market Bilaterals	1%	1%	2%	2%	2%	2%	1%	1%	2%	2%	2%	2%
DAM Bilateral - Wheel Through Bilaterals	2%	2%	2%	2%	1%	2%	2%	2%	2%	1%	1%	1%
Balancing Energy Market MWh	-322,442	-323,188	-261,217	-218,482	-392,699	-102,044	103,628	-514,102	-247,267	-112,057	-17,421	46,828
Balancing Energy LSE Internal LBMP Energy Sales	-120%	-126%	-138%	-178%	-150%	-264%	-2%	-119%	-163%	-346%	-1332%	-480%
Balancing Energy External TC LBMP Energy Sales	65%	67%	82%	113%	68%	233%	199%	41%	93%	266%	1435%	699%
Balancing Energy Bilateral - Internal Bilaterals	-4%	-1%	-3%	2%	1%	0%	5%	0%	-4%	6%	103%	39%
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	0%	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%	0%
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	3%	7%	6%	7%	2%	8%	8%	1%	6%	25%	170%	70%
Balancing Energy Bilateral - Wheel Through Bilaterals	-45%	-47%	-47%	-44%	-21%	-77%	-125%	-23%	-31%	-52%	-476%	-229%
Transactions Summary												
LBMP	63%	62%	61%	60%	59%	62%	68%	65%	61%	61%	60%	63%
Internal Bilaterals	29%	30%	30%	31%	33%	30%	25%	27%	30%	32%	32%	30%
Import Bilaterals	5%	5%	6%	6%	6%	5%	4%	5%	5%	5%	5%	5%
Export Bilaterals	1%	2%	2%	2%	2%	2%	1%	1%	2%	2%	2%	2%
Wheels Through	1%	1%	1%	1%	0%	1%	1%	1%	2%	0%	0%	0%
Market Share of Total Load												
Day Ahead Market	102.2%	102.5%	102.0%	101.9%	103.2%	100.7%	99.4%	103.2%	101.9%	100.9%	100.1%	99.7%
Balancing Energy +	-2.2%	-2.5%	-2.0%	-1.9%	-3.2%	-0.7%	0.6%	-3.2%	-1.9%	-0.9%	-0.1%	0.3%
Total MWh	14,977,016	13,068,195	13,266,617	11,592,547	12,128,884	13,621,328	17,520,217	15,865,866	13,341,448	12,455,764	13,018,731	14,392,539
Average Daily Energy Sendout/Month GWh	449	436	411	371	373	429	539	487	419	377	401	427

+ 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 2020 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 *	\$22.11	\$19.48	\$16.07	\$14.67	\$14.97	\$19.15						
Standard Deviation	\$7.43	\$4.45	\$3.21	\$2.71	\$3.55	\$6.40						
Load Weighted Price **	\$22.77	\$19.84	\$16.36	\$14.86	\$15.37	\$20.28						
<u>RTC LBMP</u>												
Price *	\$22.86	\$21.48	\$16.48	\$16.23	\$17.46	\$20.84						
Standard Deviation	\$9.33	\$53.30	\$4.84	\$5.17	\$8.61	\$11.26						
Load Weighted Price **	\$23.50	\$21.94	\$16.74	\$16.44	\$17.89	\$22.01						
<u>REAL TIME LBMP</u>												
Price *	\$22.53	\$19.29	\$16.24	\$14.14	\$14.90	\$18.35						
Standard Deviation	\$11.90	\$8.68	\$7.48	\$6.98	\$8.35	\$9.33						
Load Weighted Price **	\$23.20	\$19.68	\$16.58	\$14.35	\$15.42	\$19.46						
Average Daily Energy Sendout/Month GWh	423	417	375	344	345	430						

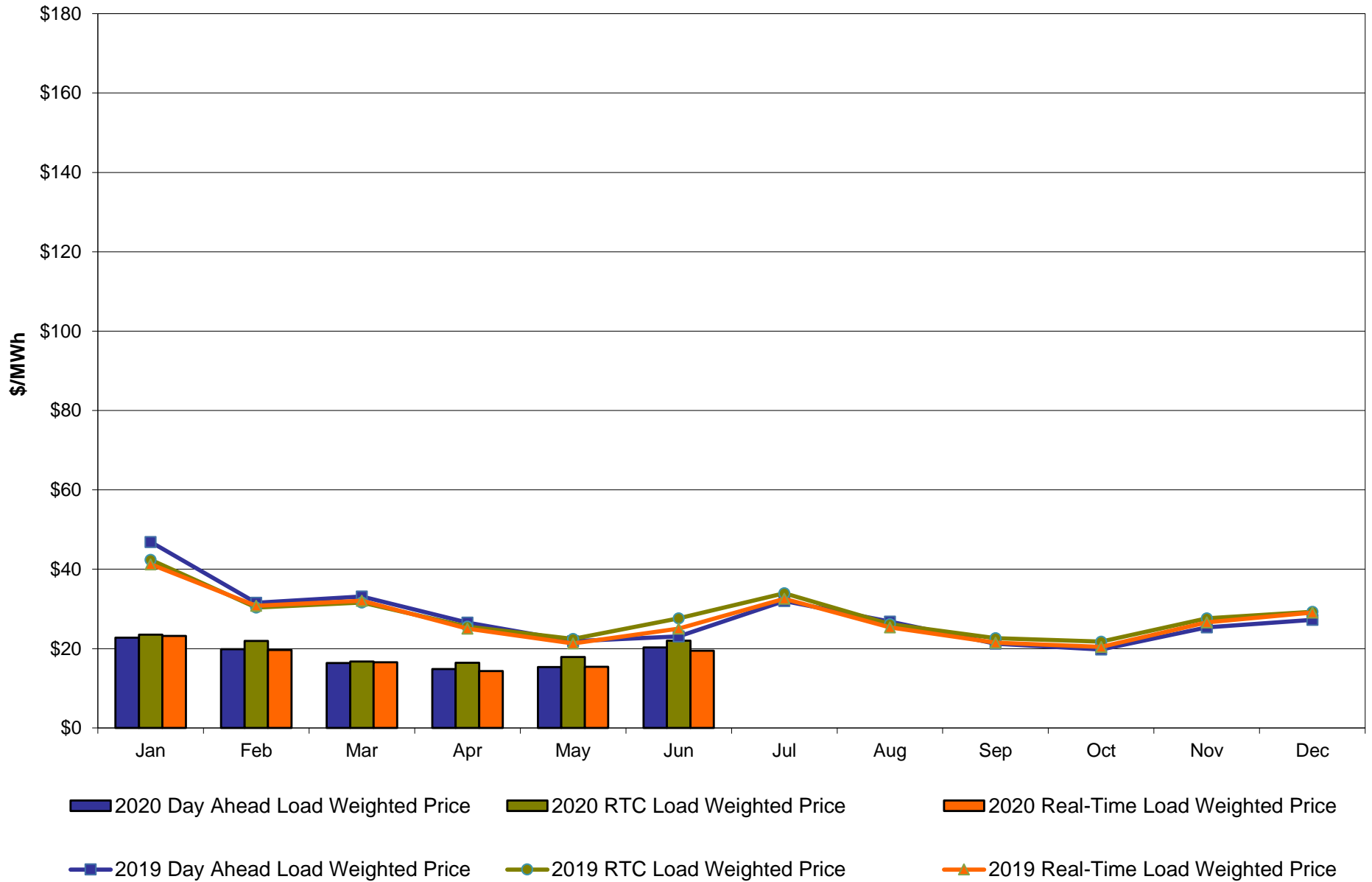
NYISO Markets 2019 Energy Statistics

	<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 *	\$45.01	\$30.66	\$32.34	\$25.97	\$21.16	\$21.79	\$30.16	\$25.35	\$20.45	\$19.18	\$24.65	\$26.29
Standard Deviation	\$25.67	\$12.86	\$9.30	\$6.32	\$5.89	\$7.28	\$12.06	\$8.73	\$5.57	\$5.09	\$7.73	\$11.81
Load Weighted Price **	\$46.88	\$31.53	\$33.14	\$26.57	\$21.89	\$23.04	\$31.98	\$26.83	\$21.23	\$19.77	\$25.36	\$27.22
<u>RTC LBMP</u>												
Price *	\$40.86	\$29.74	\$31.04	\$25.07	\$21.88	\$25.67	\$32.23	\$24.92	\$21.70	\$20.92	\$26.82	\$28.17
Standard Deviation	\$23.02	\$10.79	\$8.48	\$7.53	\$8.01	\$23.45	\$21.96	\$14.96	\$9.22	\$13.95	\$10.37	\$16.26
Load Weighted Price **	\$42.39	\$30.32	\$31.62	\$25.54	\$22.44	\$27.64	\$33.92	\$26.14	\$22.60	\$21.76	\$27.64	\$29.24
<u>REAL TIME LBMP</u>												
Price *	\$39.54	\$30.13	\$31.46	\$24.47	\$20.56	\$23.30	\$30.77	\$24.01	\$20.49	\$19.53	\$25.82	\$27.81
Standard Deviation	\$26.03	\$13.77	\$12.54	\$17.27	\$10.35	\$17.49	\$20.63	\$12.36	\$9.62	\$12.02	\$11.60	\$19.64
Load Weighted Price **	\$41.24	\$30.80	\$32.06	\$25.06	\$21.28	\$25.05	\$32.53	\$25.34	\$21.50	\$20.43	\$26.64	\$29.05
Average Daily Energy Sendout/Month GWh	449	436	411	371	373	429	539	487	419	377	401	427

* Average zonal load weighted prices.

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

NYISO Monthly Average Internal LBMPs 2019- 2020

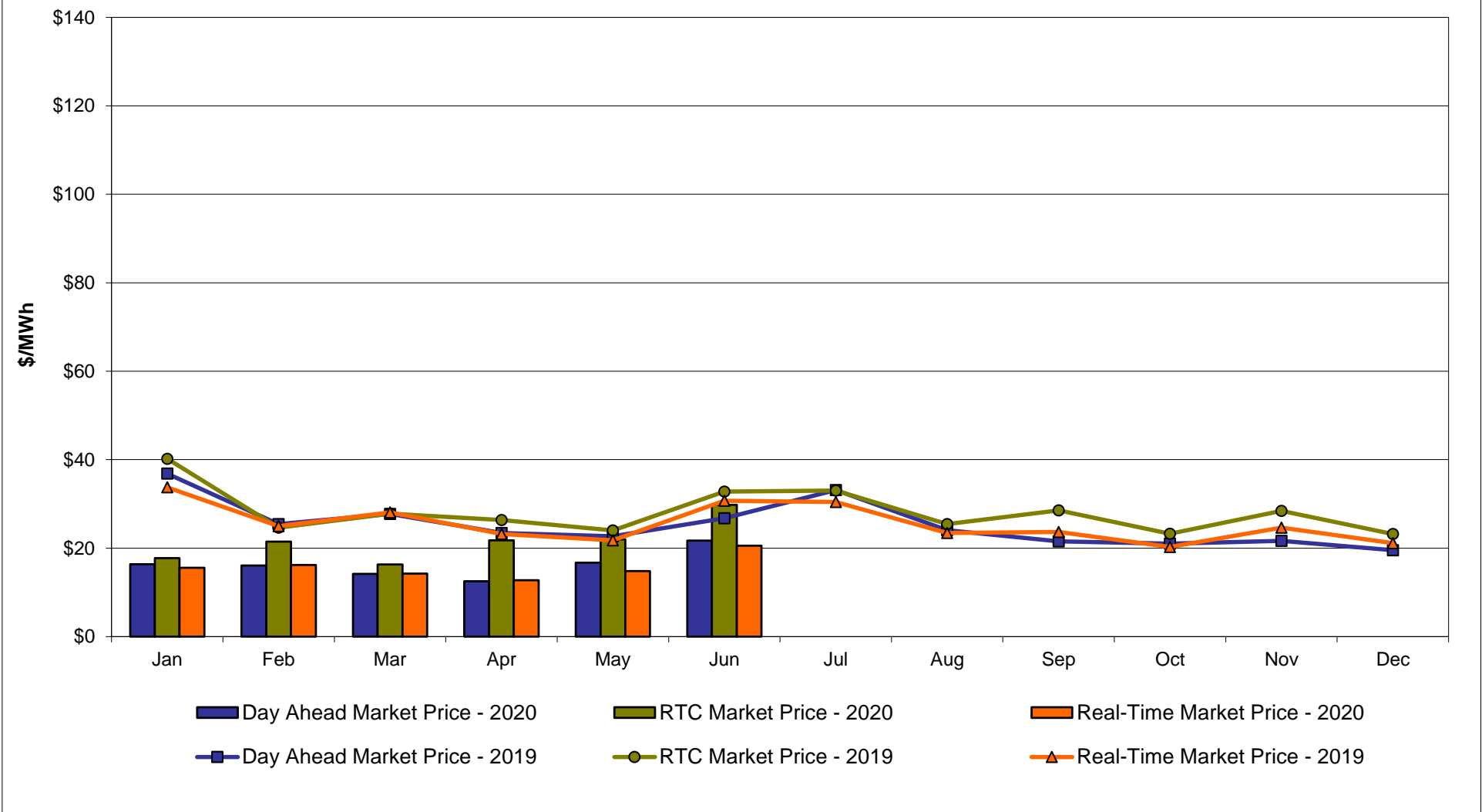


June 2020 Zonal LBMP Statistics for NYISO (\$/MWh)

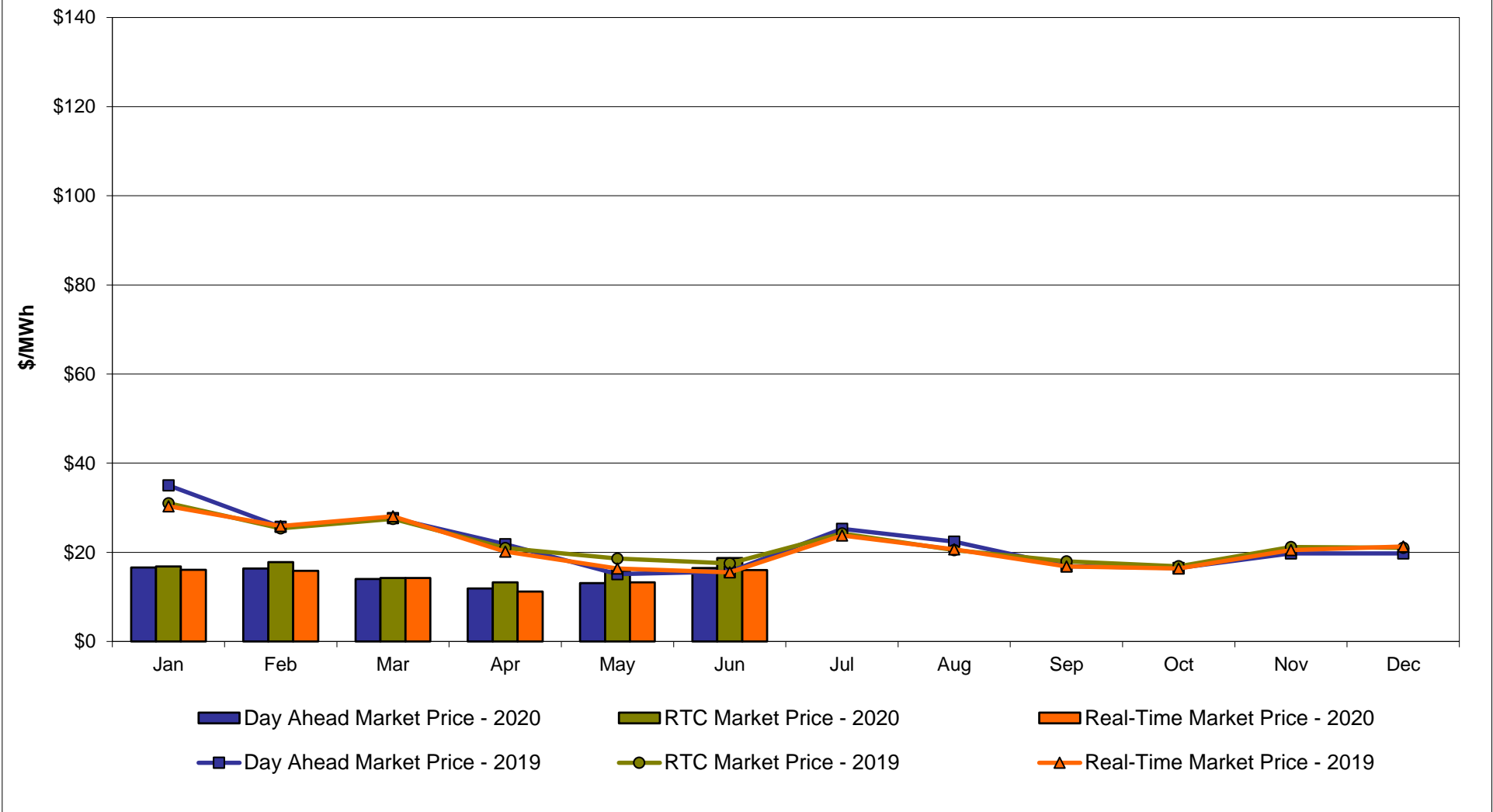
	<u>WEST Zone A</u>	<u>GENESEE Zone B</u>	<u>NORTH Zone D</u>	<u>CENTRAL Zone C</u>	<u>MOHAWK VALLEY Zone E</u>	<u>CAPITAL Zone F</u>	<u>HUDSON VALLEY Zone G</u>	<u>MILLWOOD Zone H</u>	<u>DUNWOODIE Zone I</u>	<u>NEW YORK CITY Zone J</u>	<u>LONG ISLAND Zone K</u>
<u>DAY AHEAD LBMP</u>											
Unweighted Price *	21.69	15.72	10.08	16.46	16.05	19.02	18.61	18.89	18.99	19.78	22.27
Standard Deviation	12.20	6.13	5.67	6.21	5.93	5.30	5.39	5.65	5.72	6.33	7.26
<u>RTC LBMP</u>											
Unweighted Price *	29.81	18.21	12.87	18.70	17.38	19.19	18.95	19.12	19.17	19.71	24.86
Standard Deviation	39.20	25.90	9.99	16.05	9.30	6.73	6.91	6.96	6.97	7.61	25.83
<u>REAL TIME LBMP</u>											
Unweighted Price *	20.55	15.65	11.35	16.03	15.57	18.03	17.68	17.90	17.93	18.78	21.49
Standard Deviation	22.02	13.56	11.92	9.08	8.15	8.18	8.02	8.14	8.12	9.25	14.49
	<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 *	12.99	13.52	13.52	12.99	18.97	17.95	21.84	21.03	10.04	19.23	21.30
Standard Deviation	4.73	4.95	4.95	4.73	5.23	6.08	7.20	6.22	5.49	5.76	7.00
<u>RTC LBMP</u>											
Unweighted Price *	12.25	13.80	13.80	12.25	20.45	19.87	25.19	22.46	12.86	19.04	22.30
Standard Deviation	9.87	7.97	7.97	9.87	9.08	11.75	28.89	23.49	9.99	6.42	23.50
<u>REAL TIME LBMP</u>											
Unweighted Price *	13.58	12.83	12.83	13.58	18.33	17.19	22.67	19.58	11.46	17.97	20.00
Standard Deviation	26.26	8.26	8.26	26.26	10.22	9.06	21.12	13.78	12.80	7.79	13.24

* Straight LBMP averages

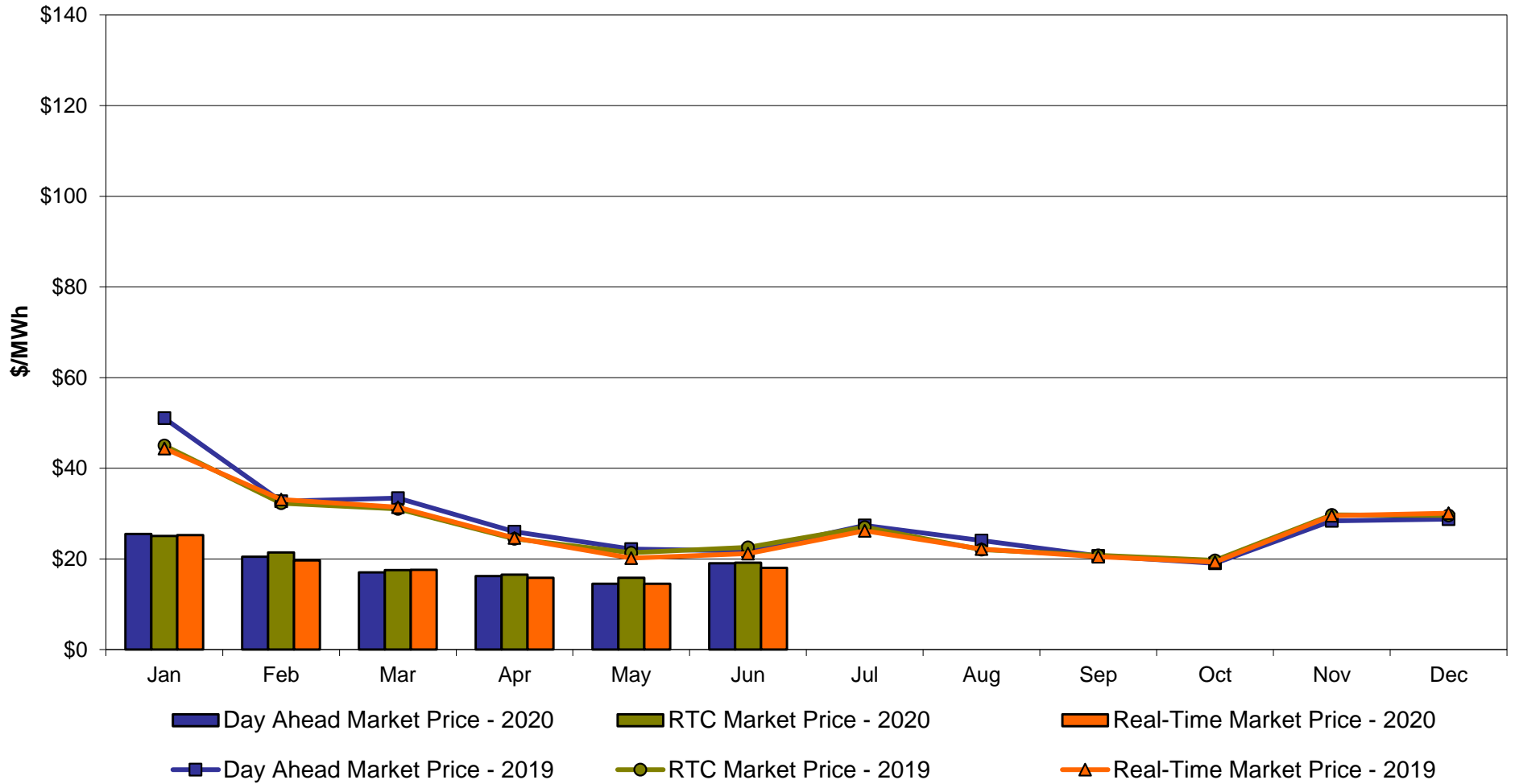
West Zone A
Monthly Average LBMP Prices 2019 - 2020



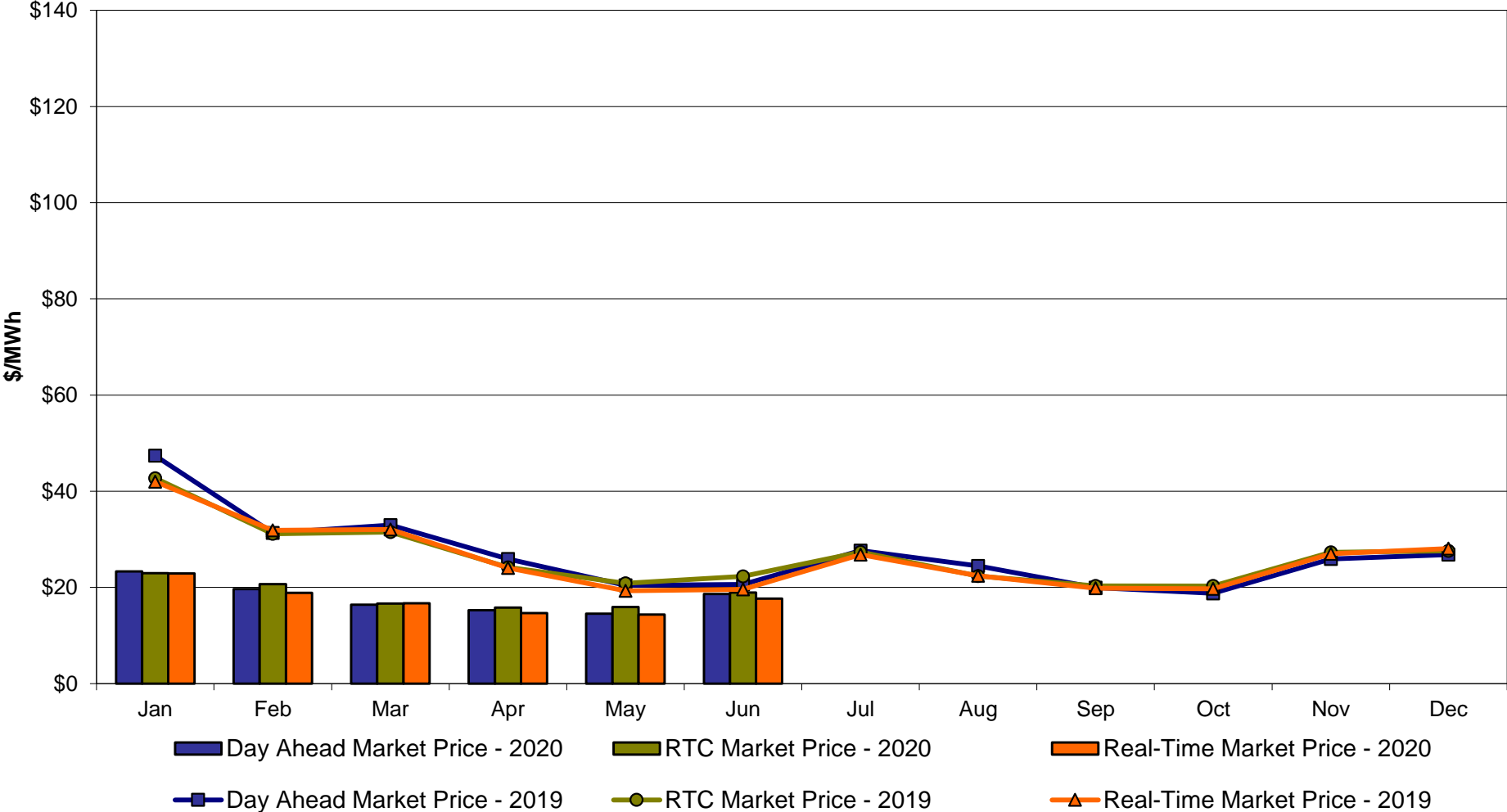
**Central Zone C
Monthly Average LBMP Prices 2019 - 2020**



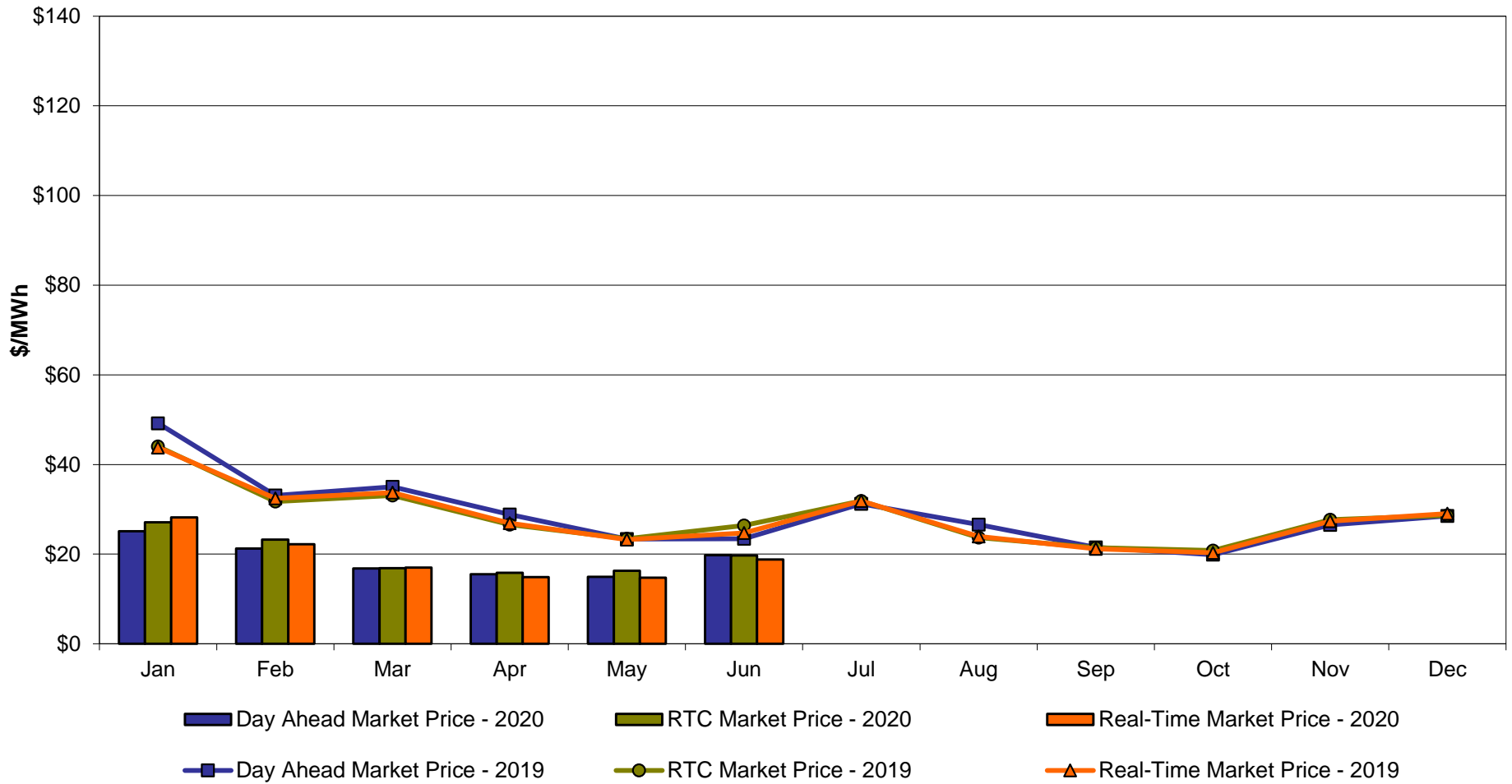
Capital Zone F Monthly Average LBMP Prices 2019 - 2020



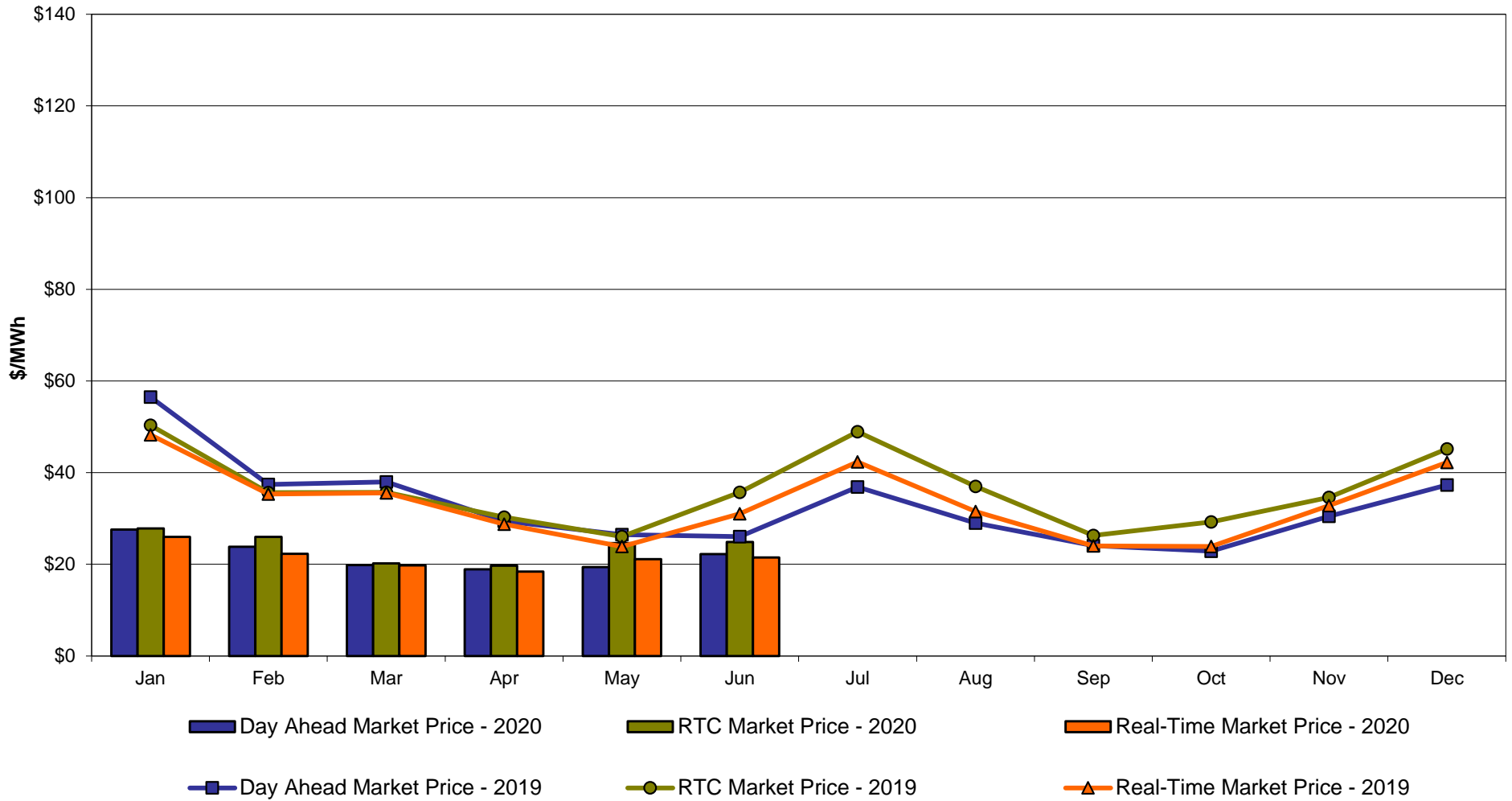
Hudson Valley Zone G Monthly Average LBMP Prices 2019 - 2020



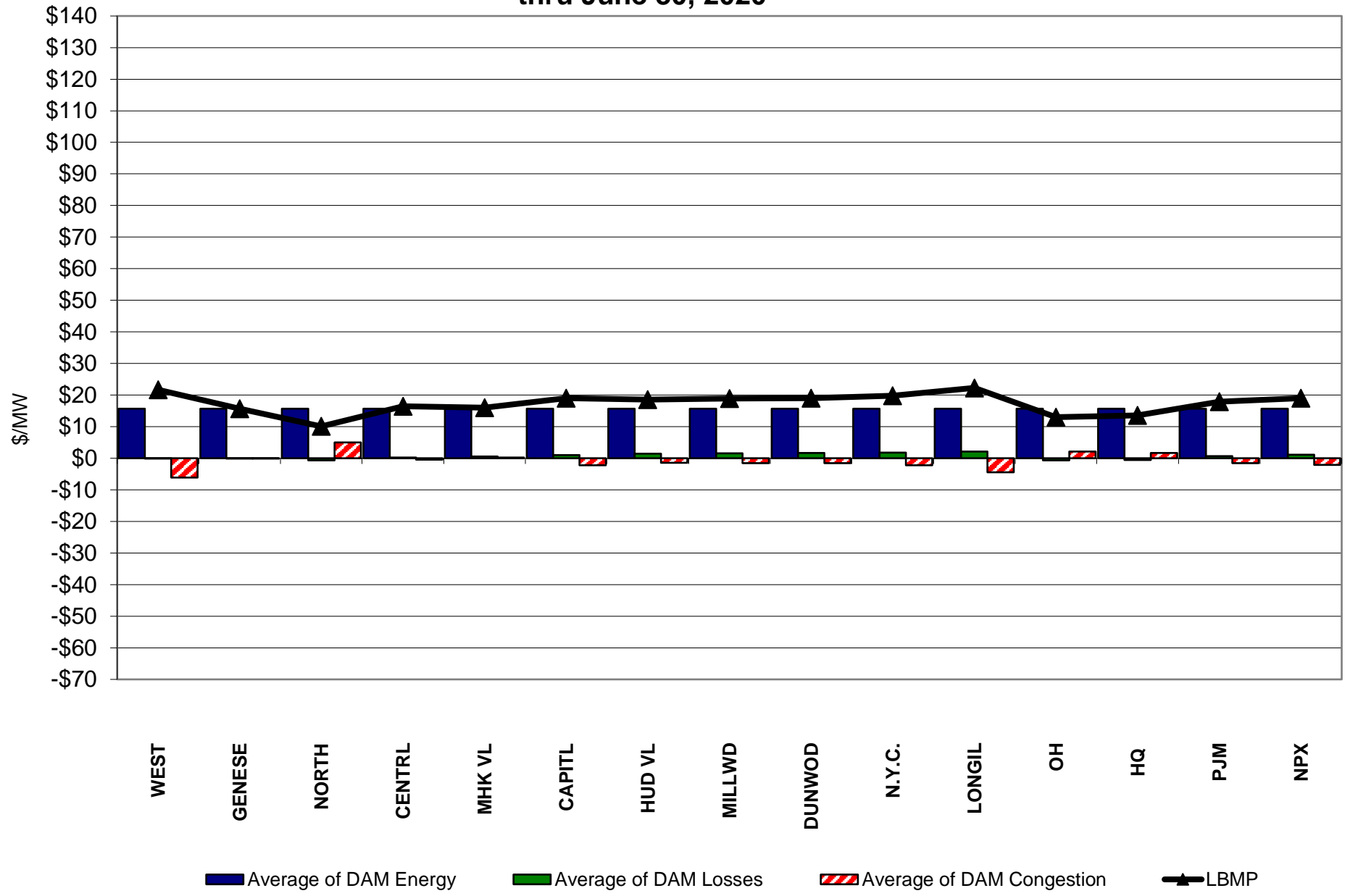
NYC Zone J Monthly Average LBMP Prices 2019 - 2020



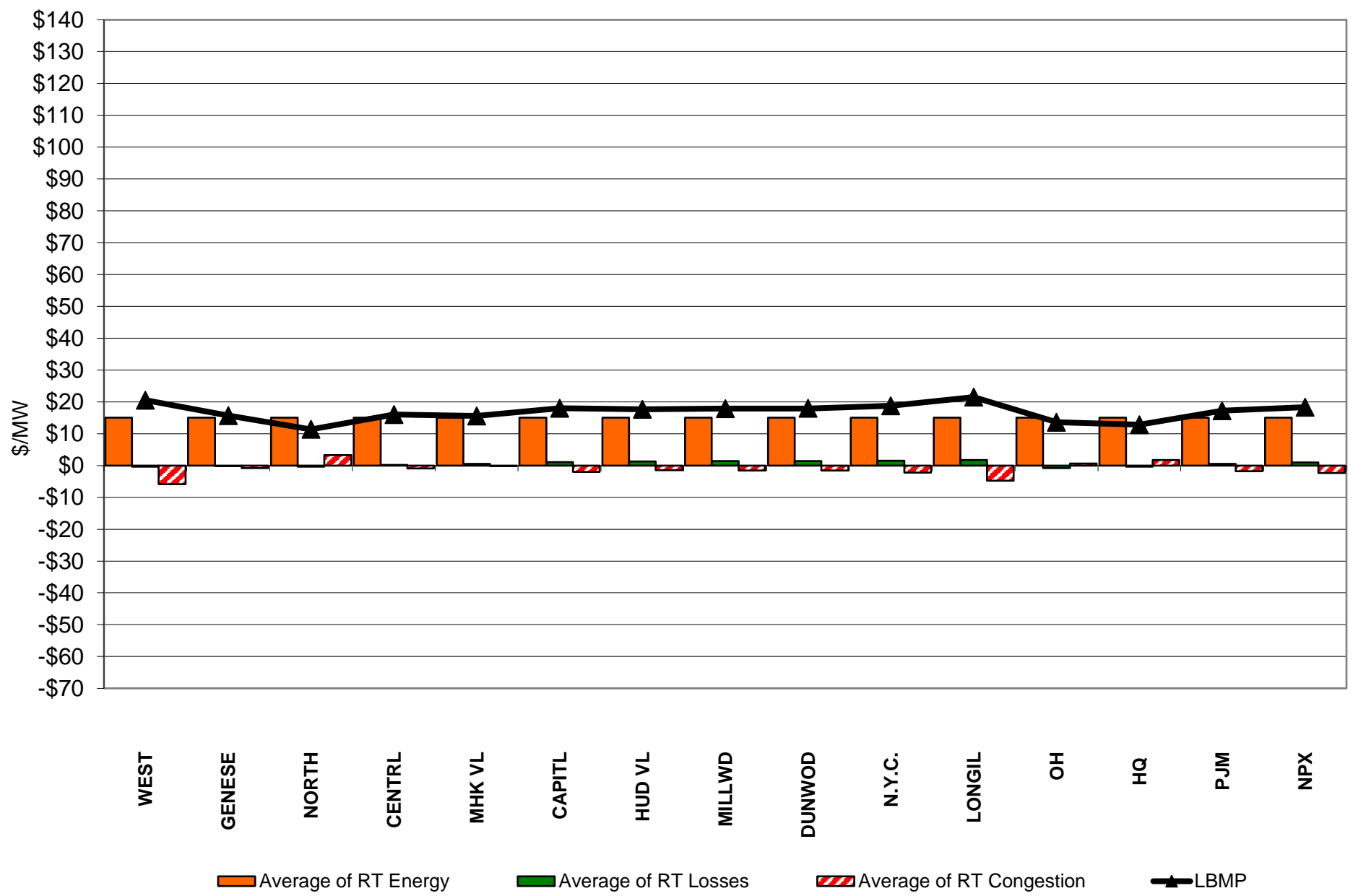
Long Island Zone K Monthly Average LBMP Prices 2019 - 2020



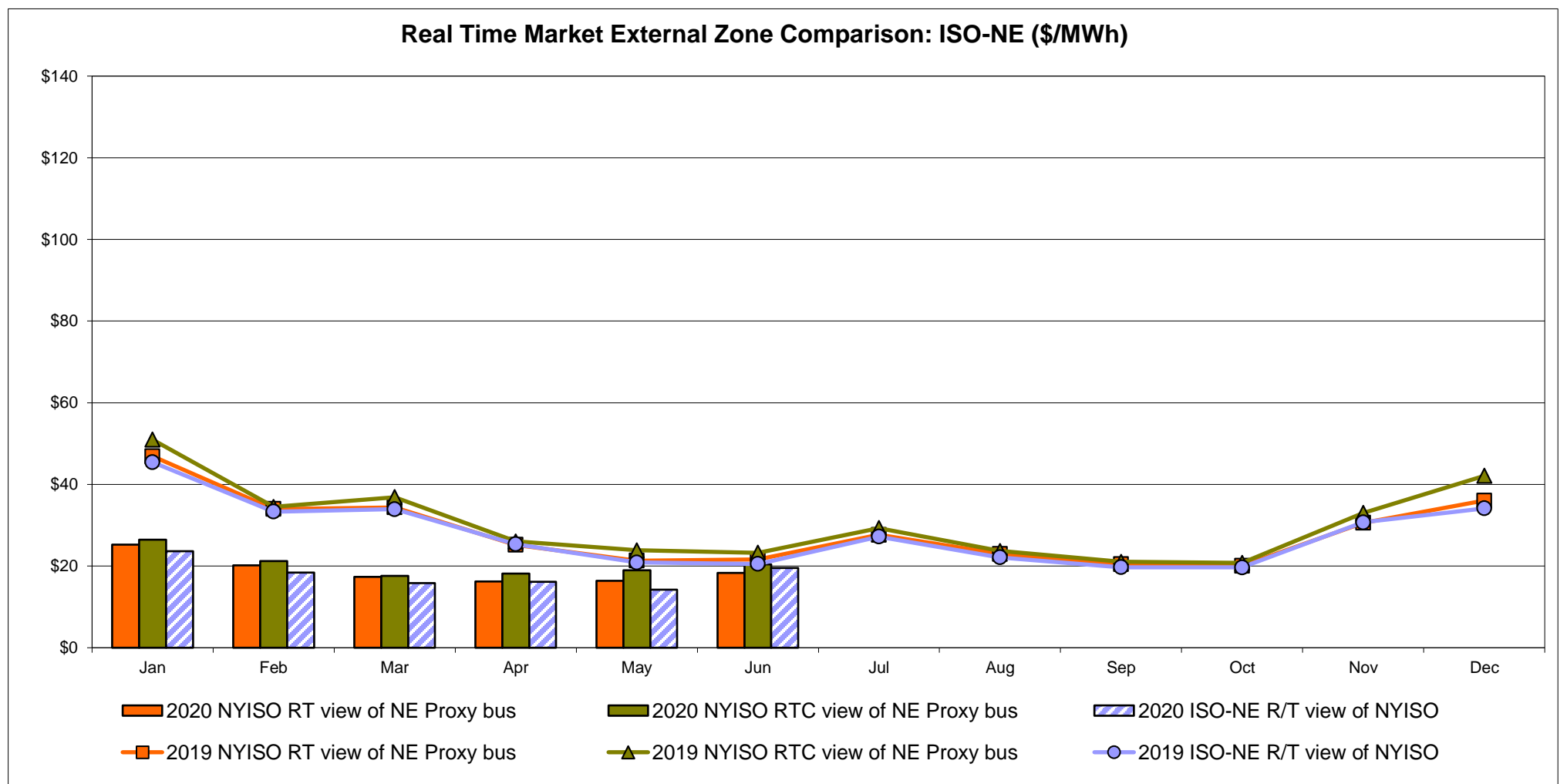
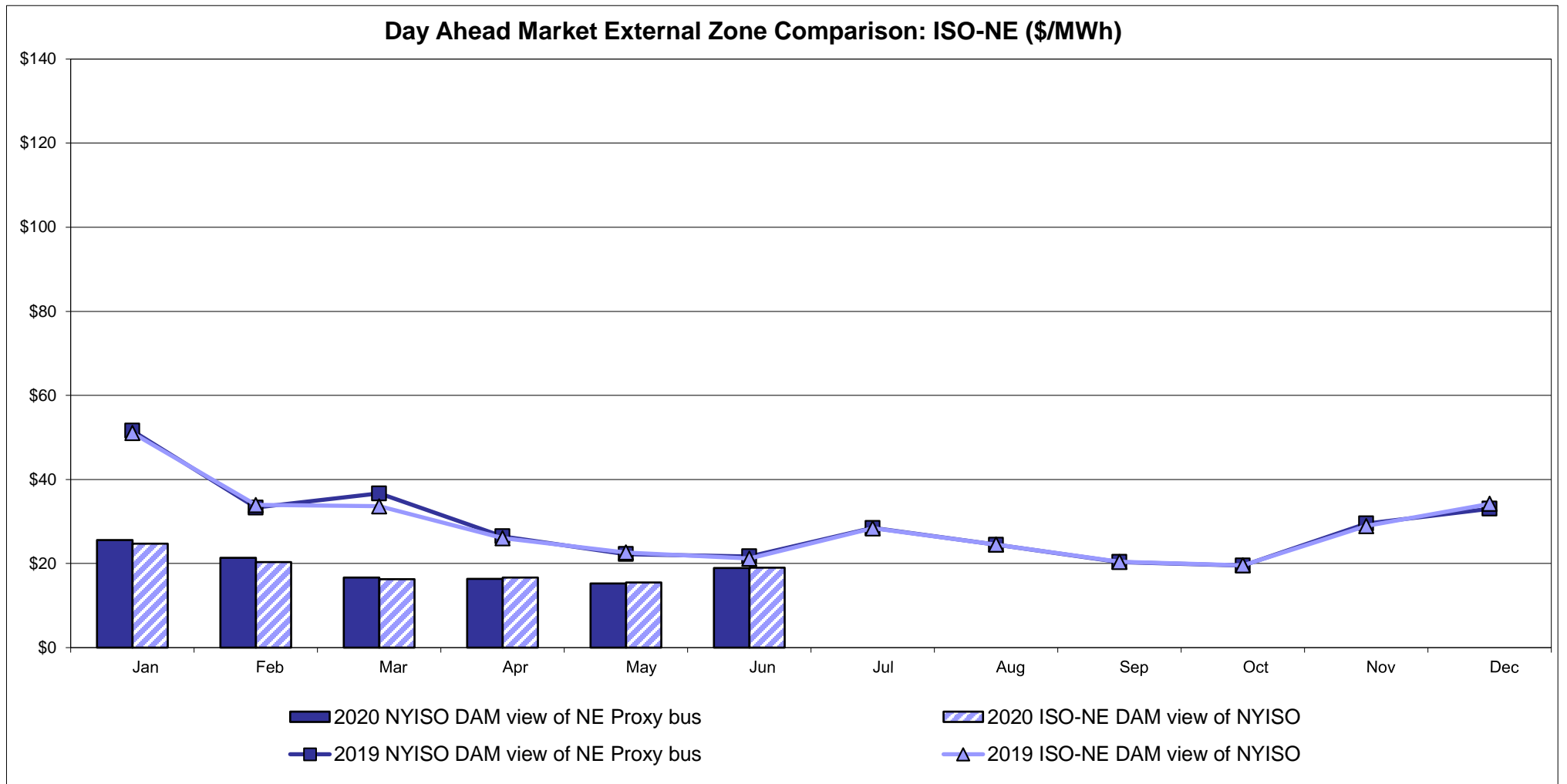
**DAM Zonal Unweighted Monthly Average LBMP Components
thru June 30, 2020**



**RT Zonal Unweighted Monthly Average LBMP Components
thru June 30, 2020**

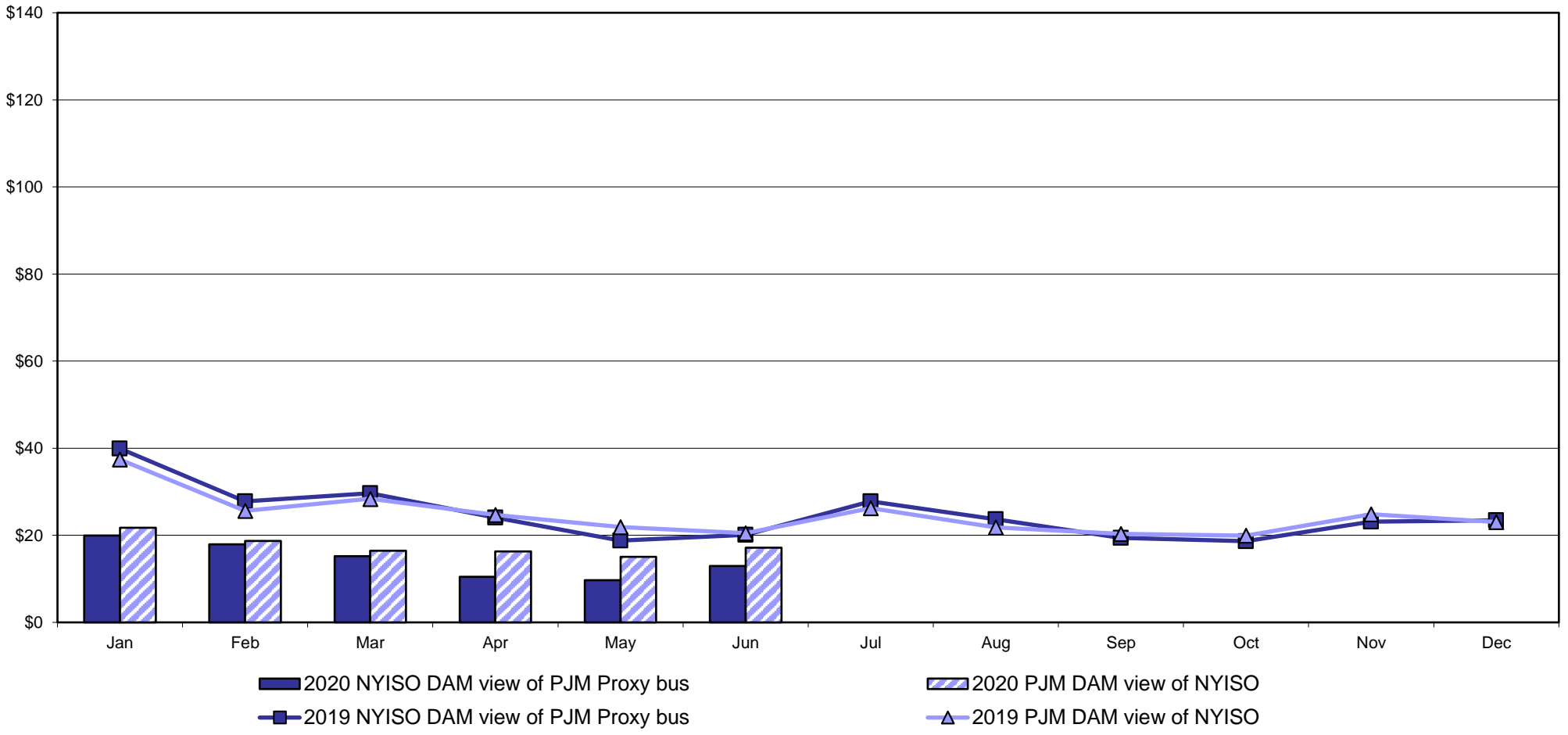


External Comparison ISO-New England

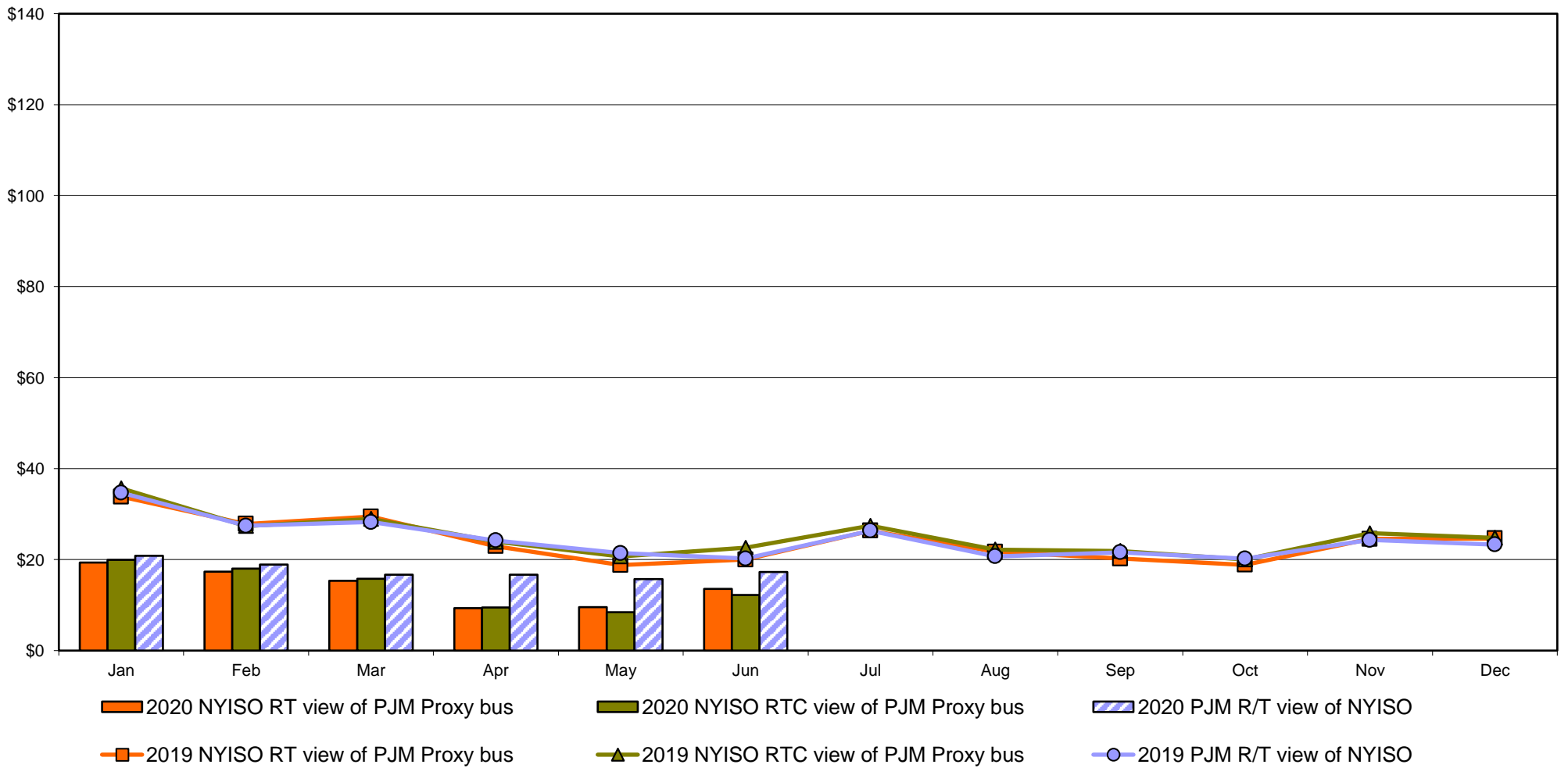


External Comparison PJM

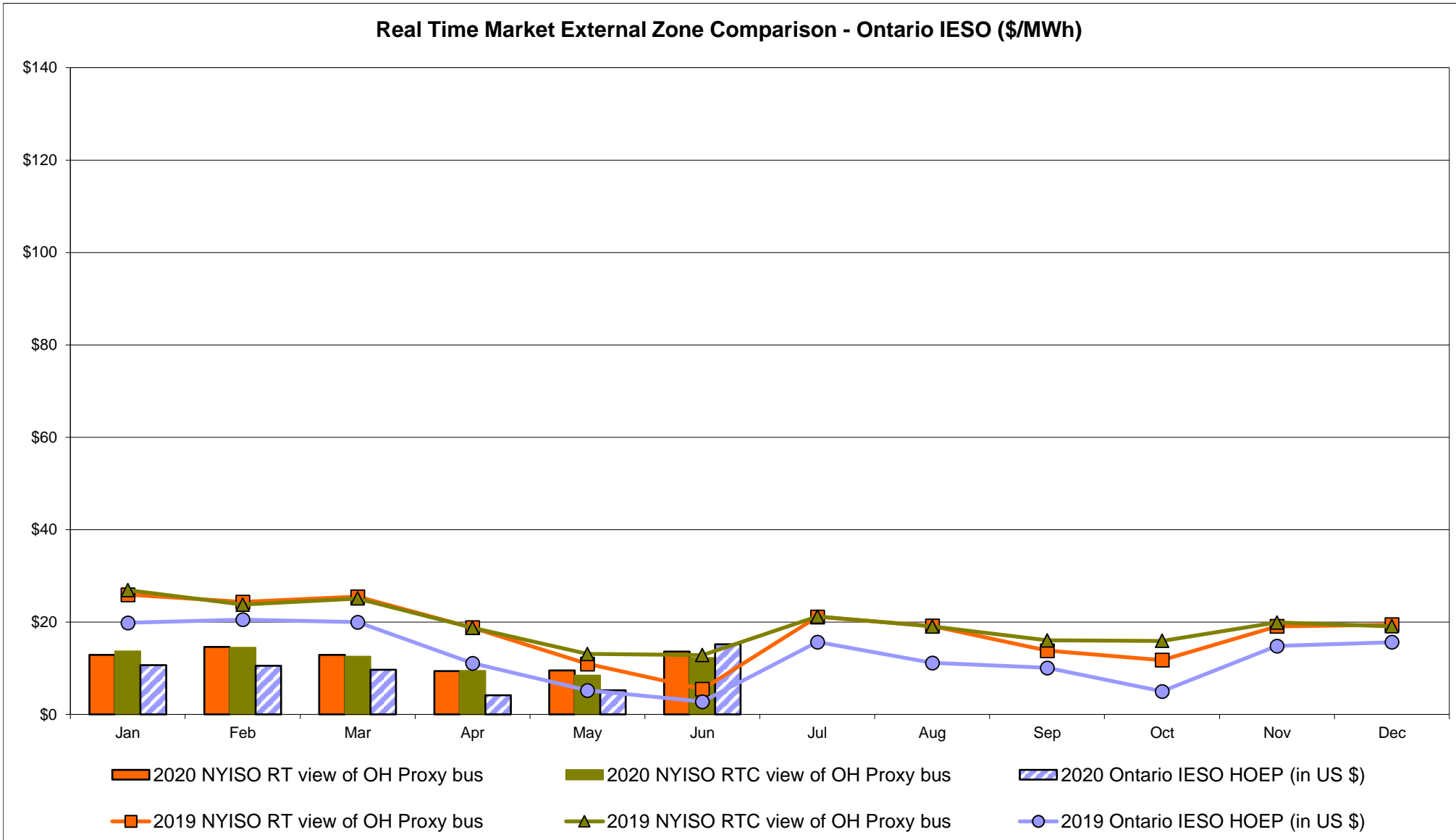
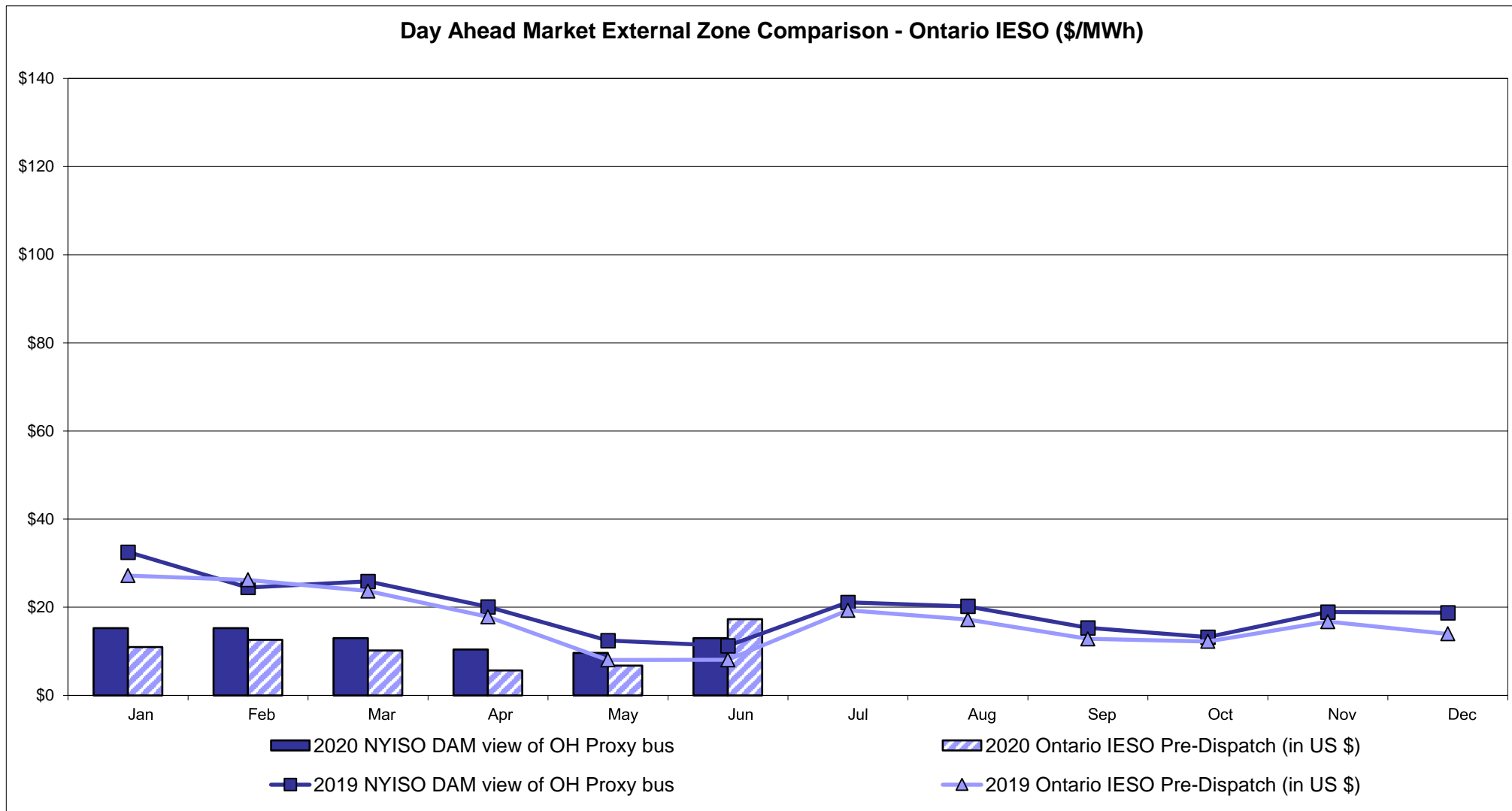
Day Ahead Market External Zone Comparison - PJM (\$/MWh)



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

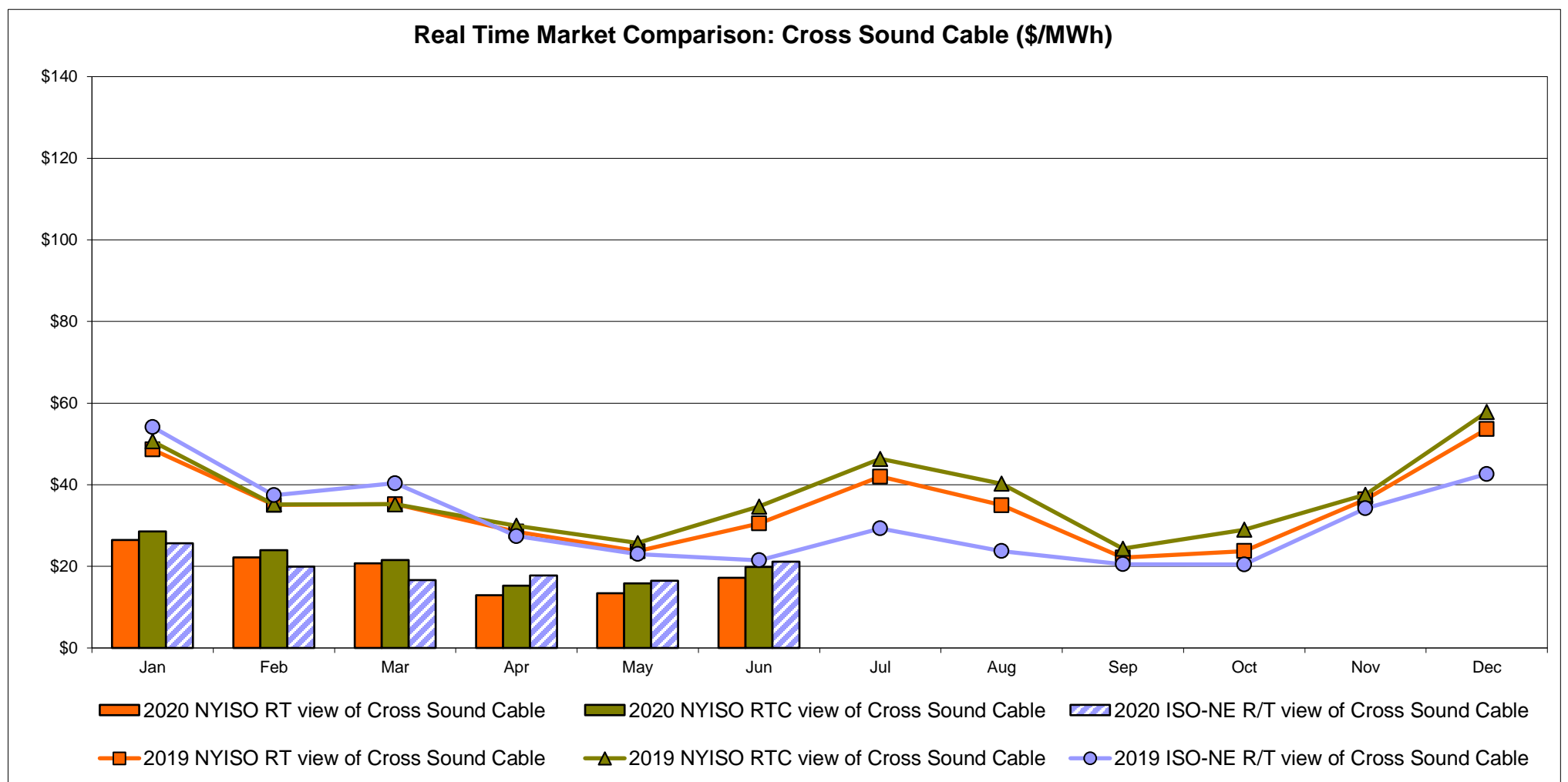
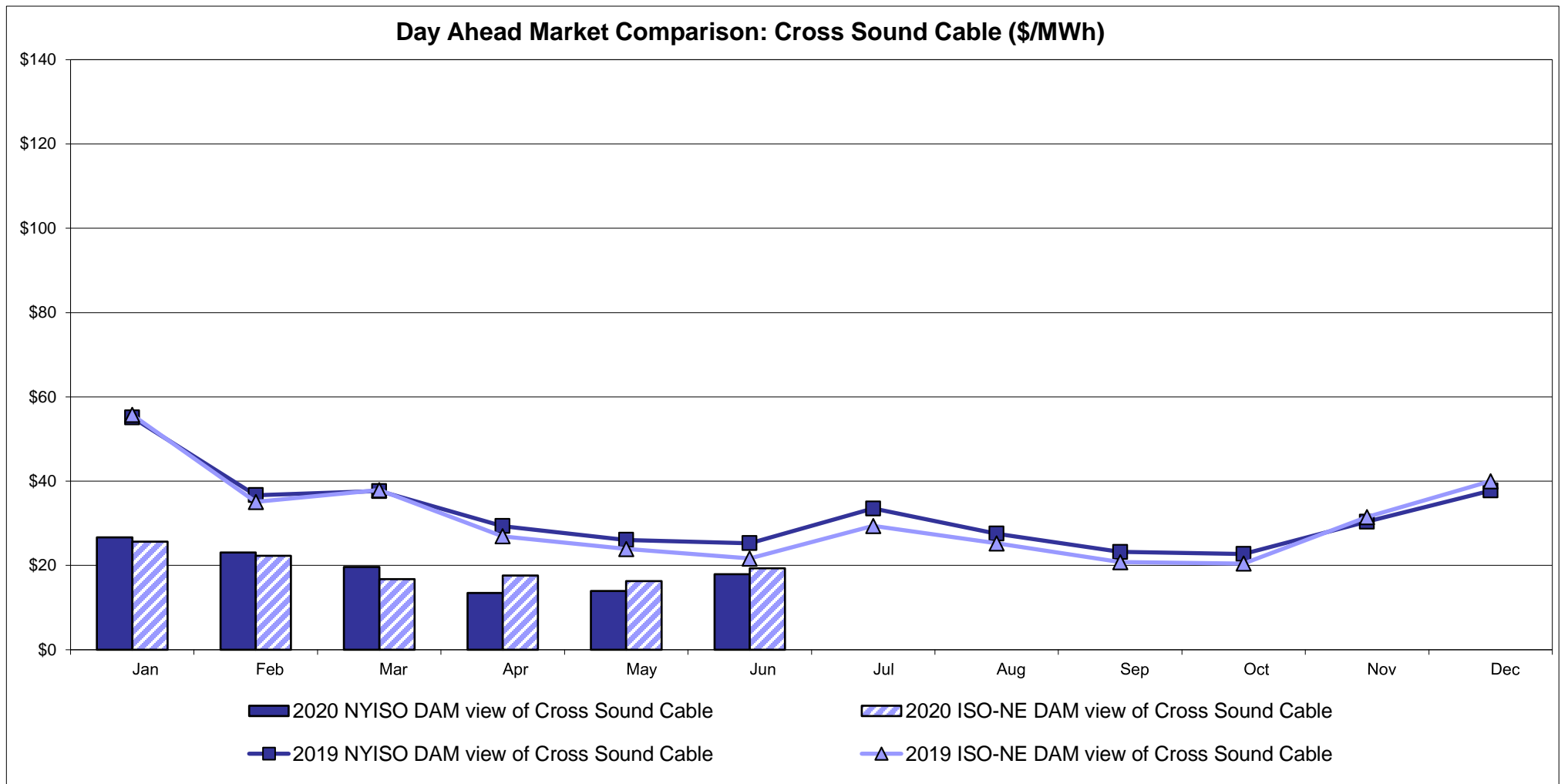


External Comparison Ontario IESO



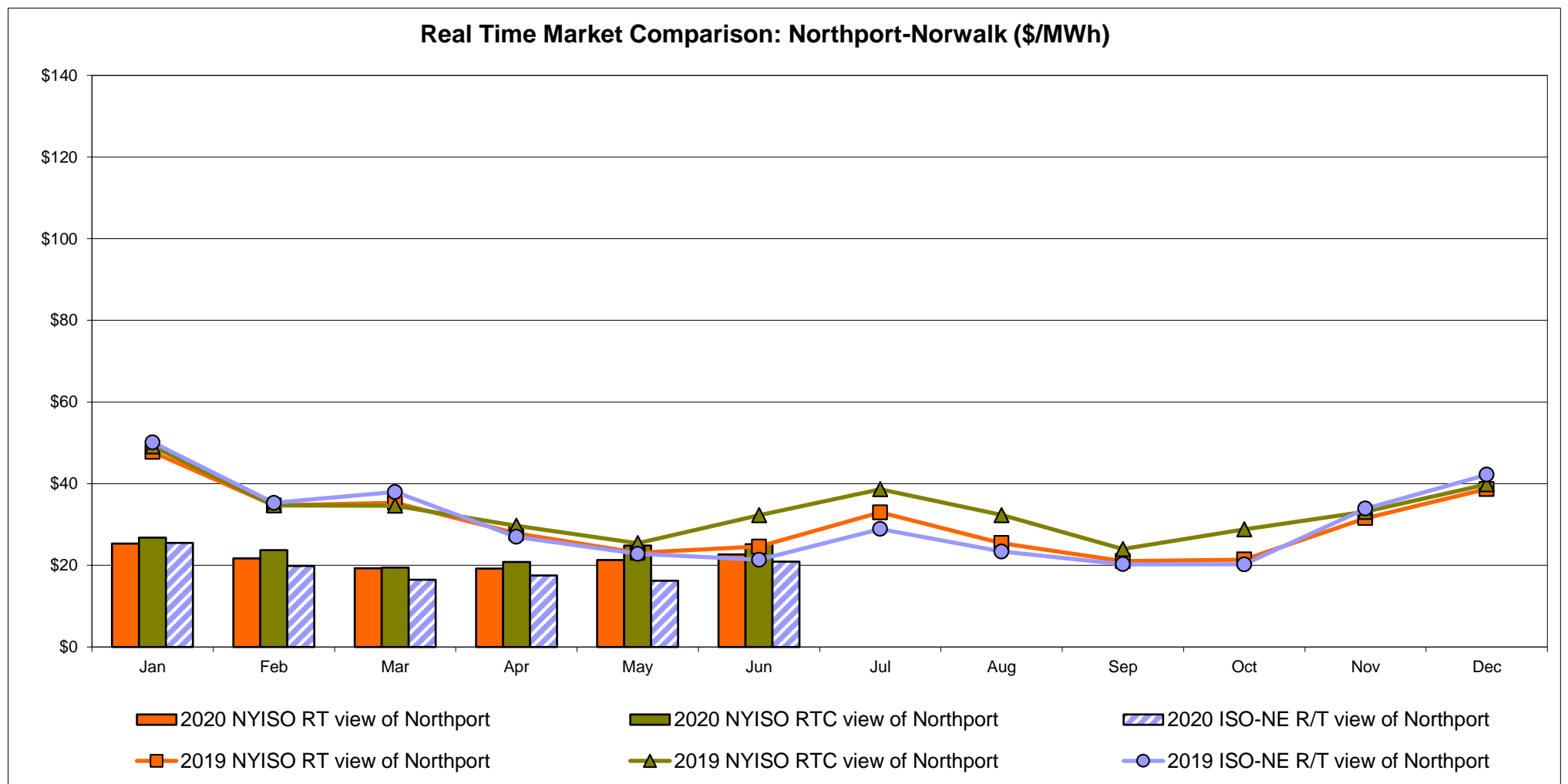
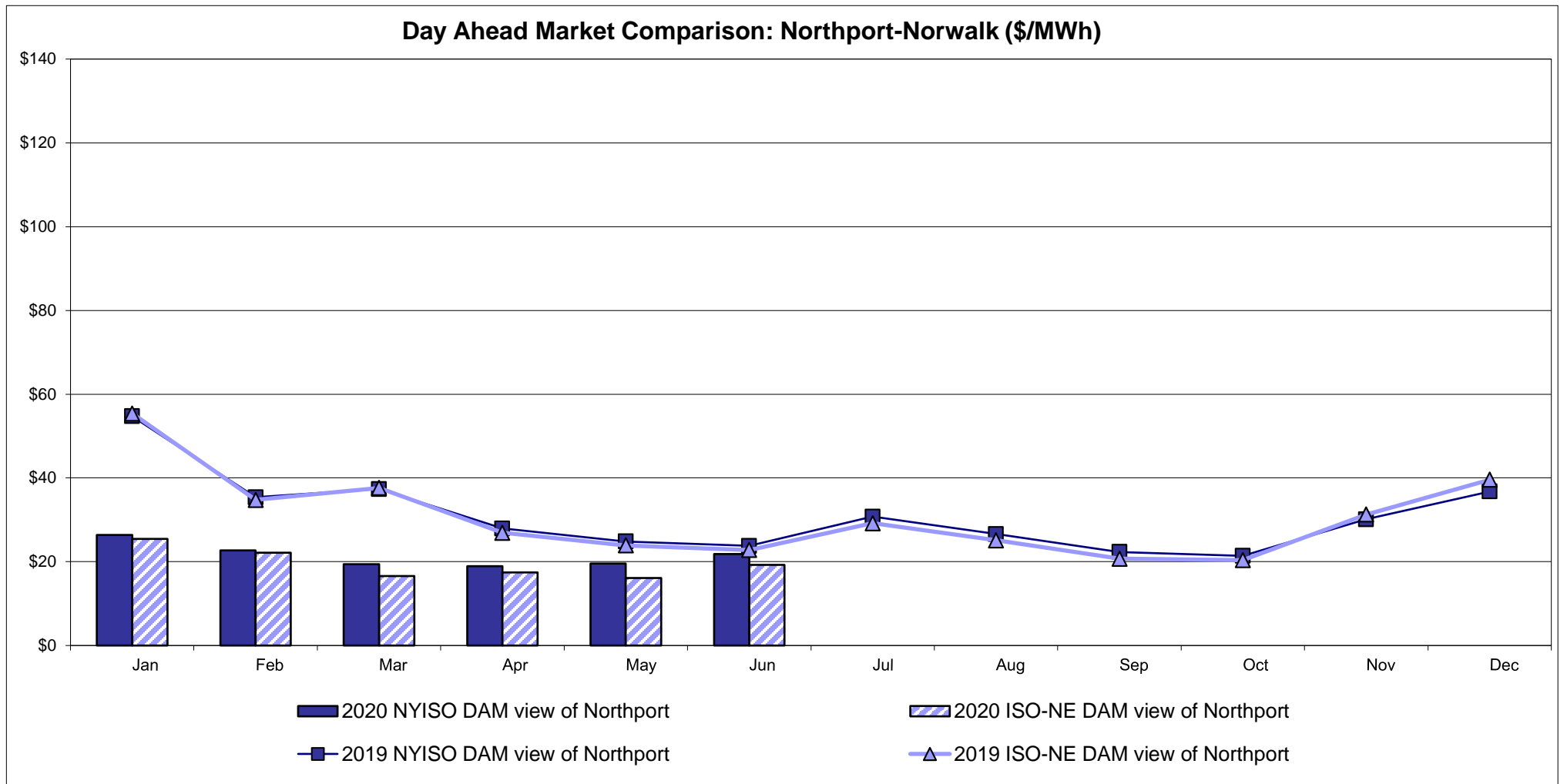
Notes: Exchange factor used for June 2020 was 1.3552 to US
 HOEP: Hourly Ontario Energy Price
 Pre-Dispatch: Projected Energy Price

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.

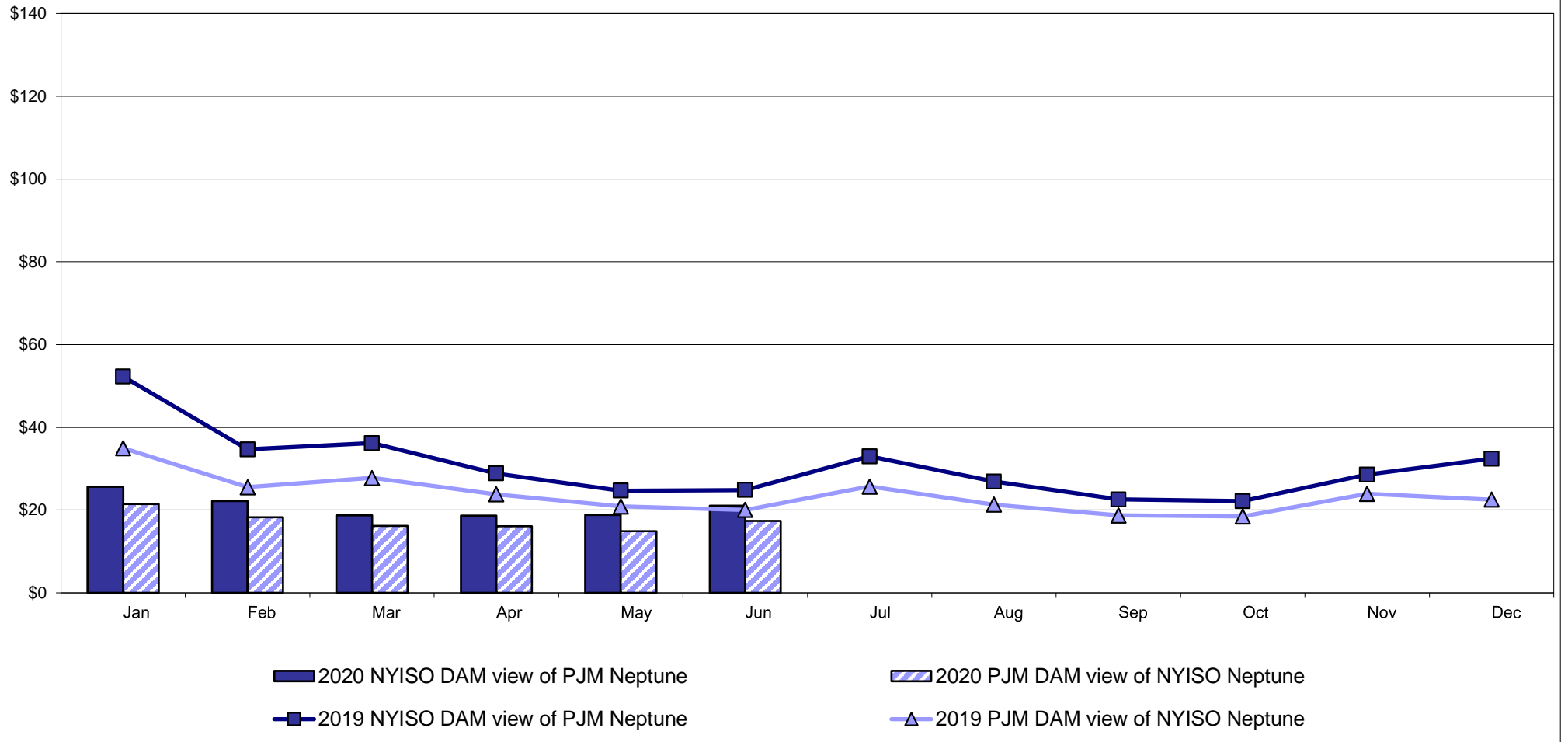
External Controllable Line: Northport - Norwalk (New England)



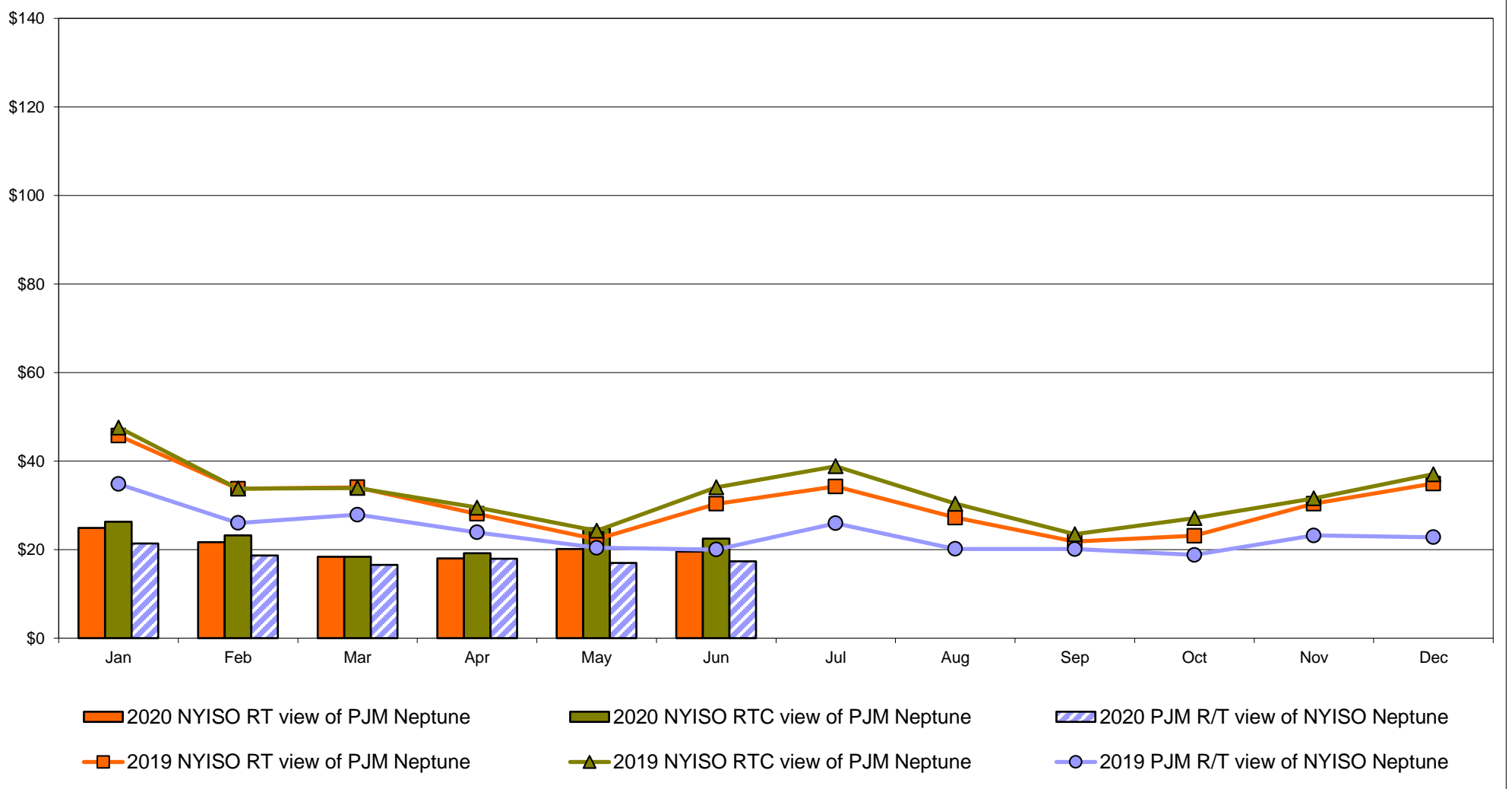
Note:
 ISO-NE Forecast is an advisory posting @ 18:00 day before.
 The DAM and R/T prices at the Northport 138 interface are used for ISO-NE.
 The DAM and R/T prices at the 1385 interface are used for NYISO.

External Controllable Line: Neptune (PJM)

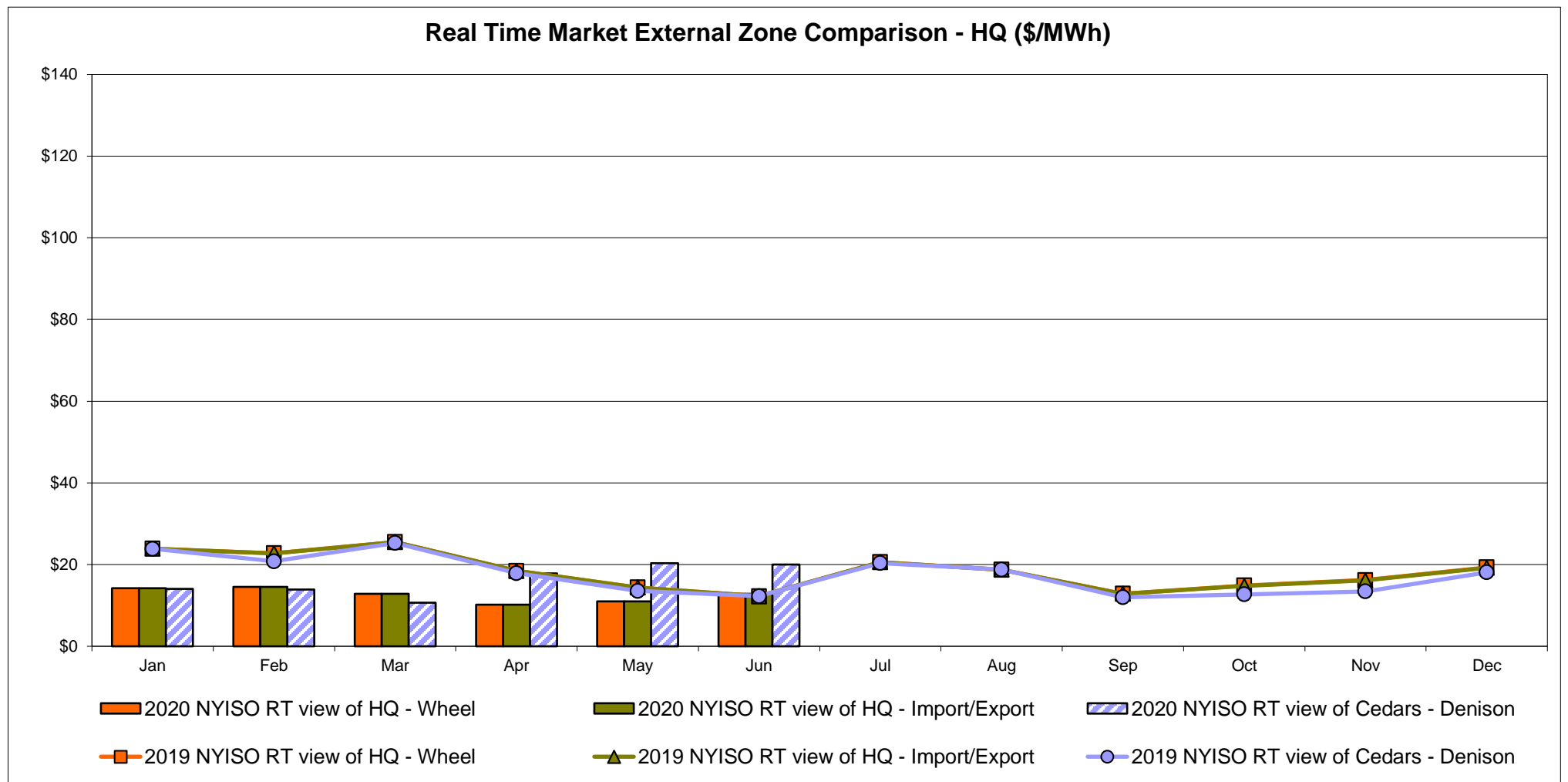
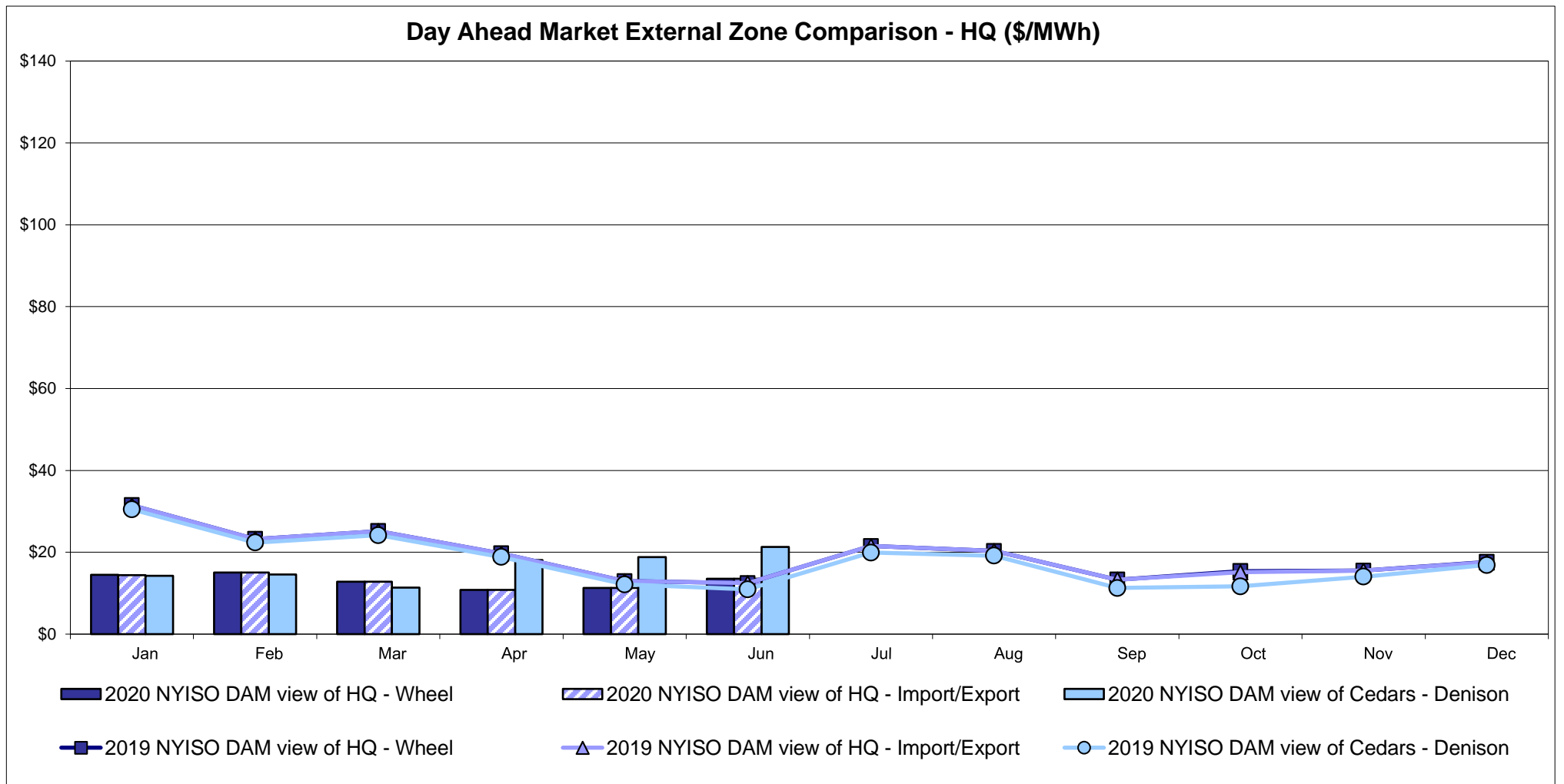
Day Ahead Market Comparison: Neptune (\$/MWh)



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

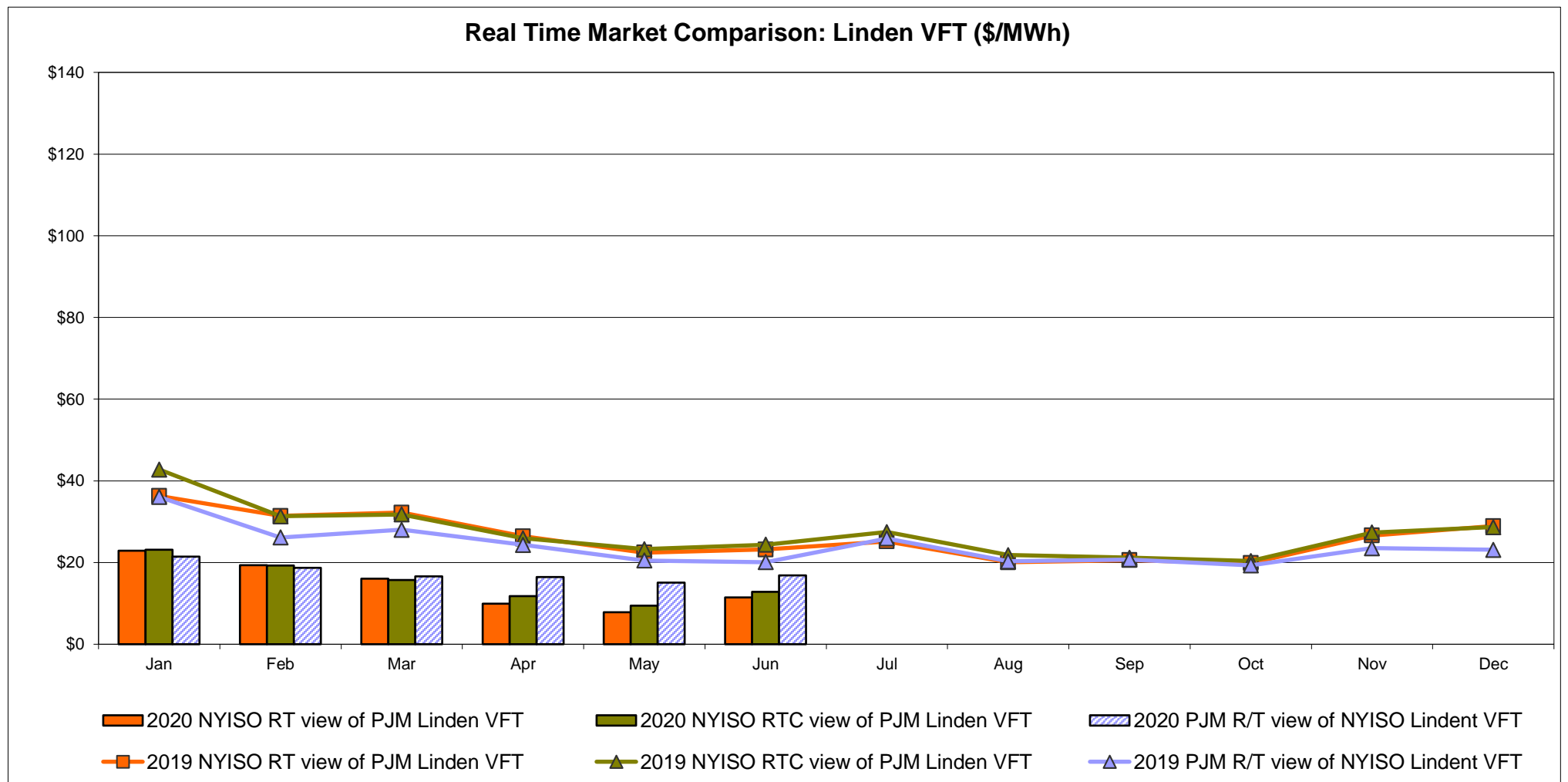
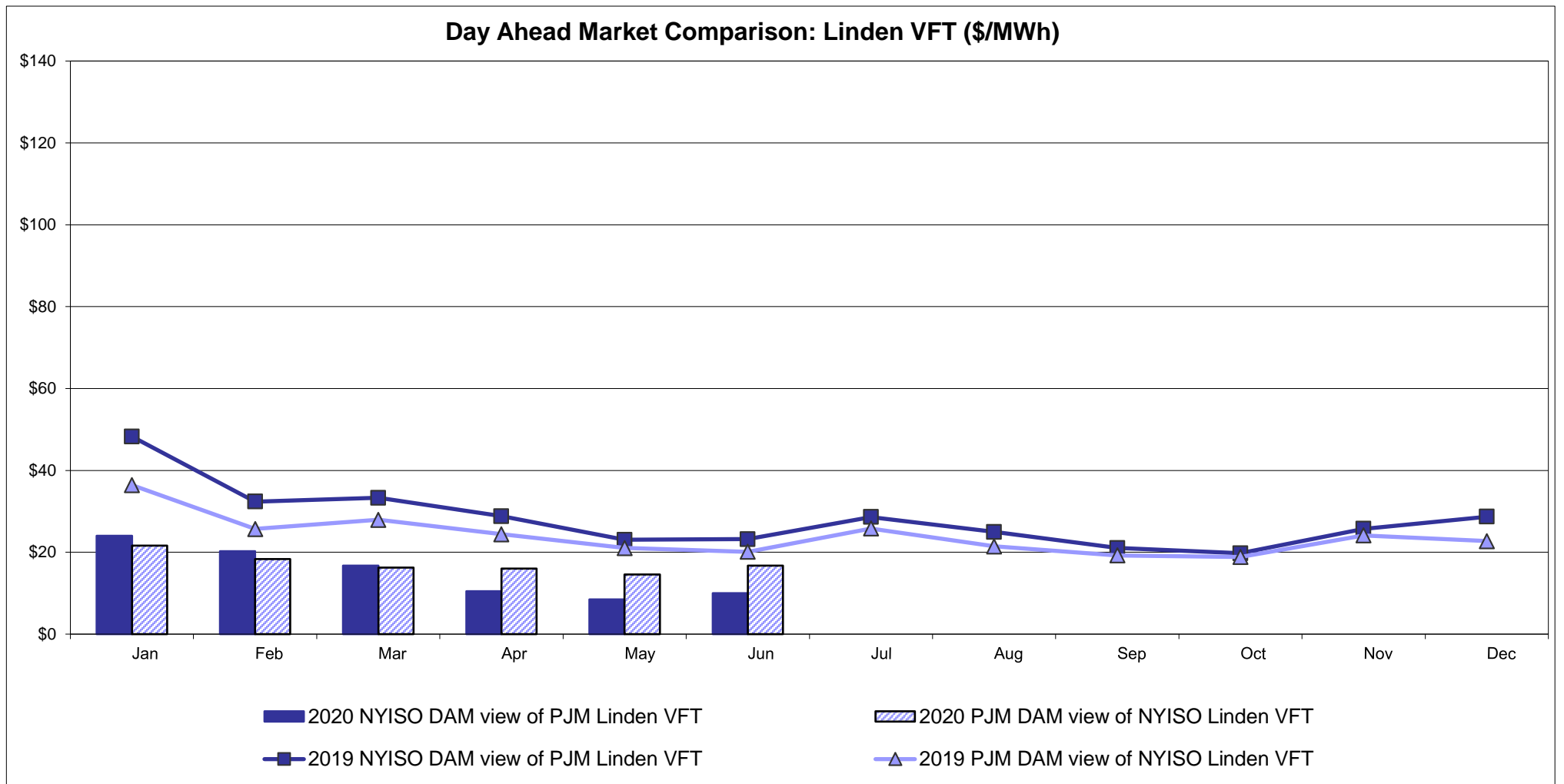


External Comparison Hydro-Quebec

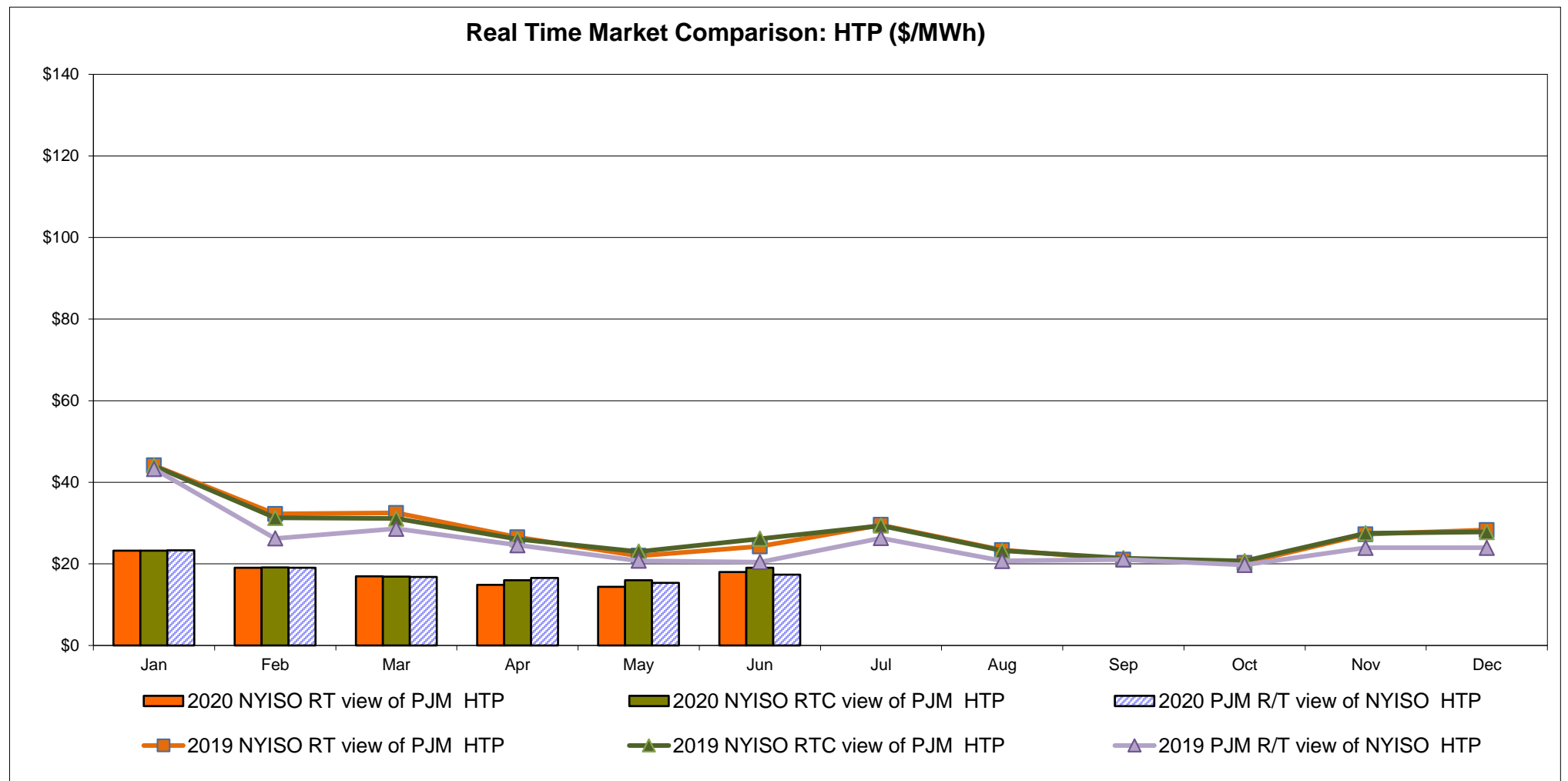
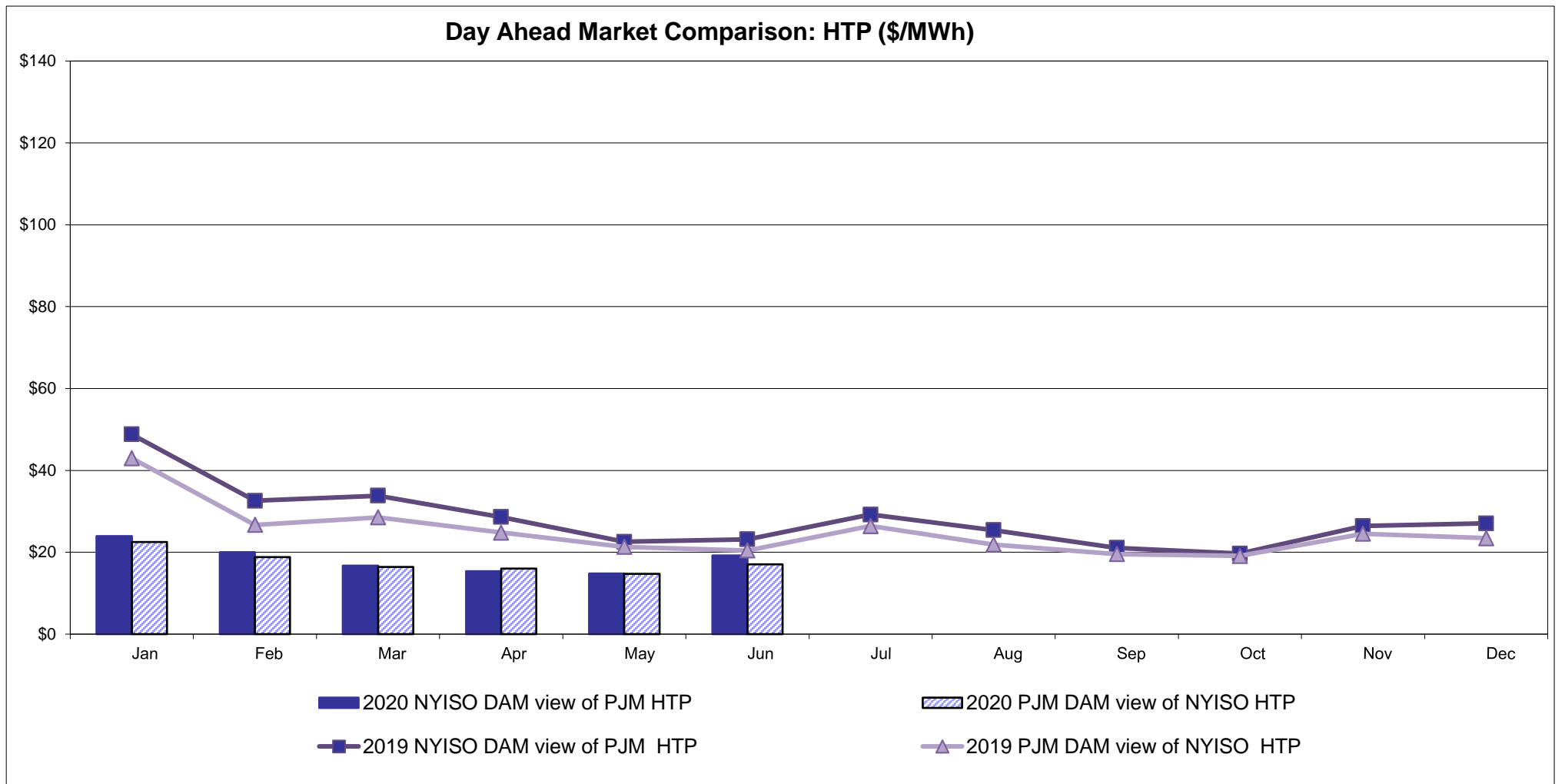


Note:
Hydro-Quebec Prices are unavailable.

External Controllable Line: Linden VFT (PJM)



External Controllable Line: Hudson (PJM)

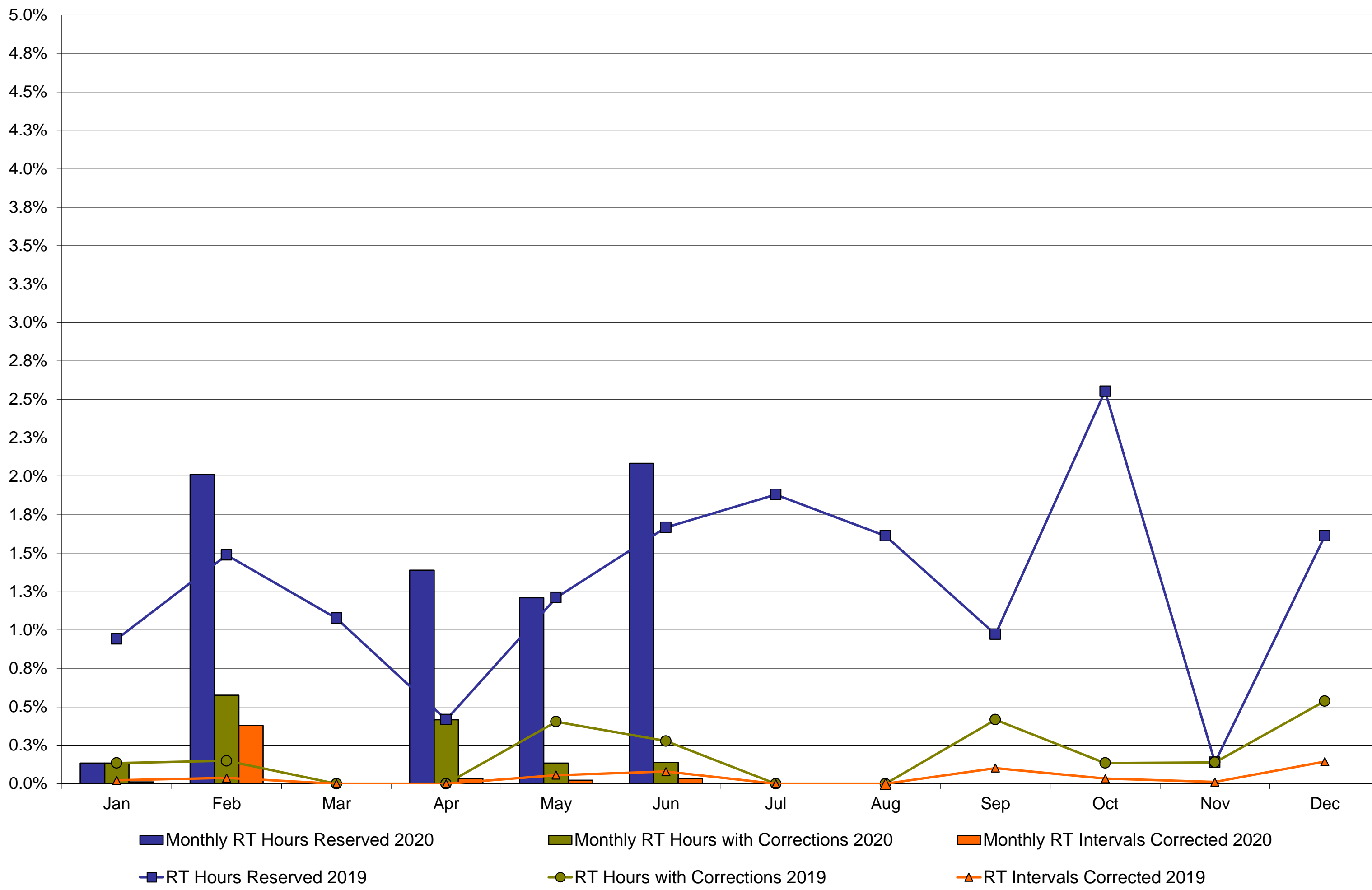


NYISO Real Time Price Correction Statistics

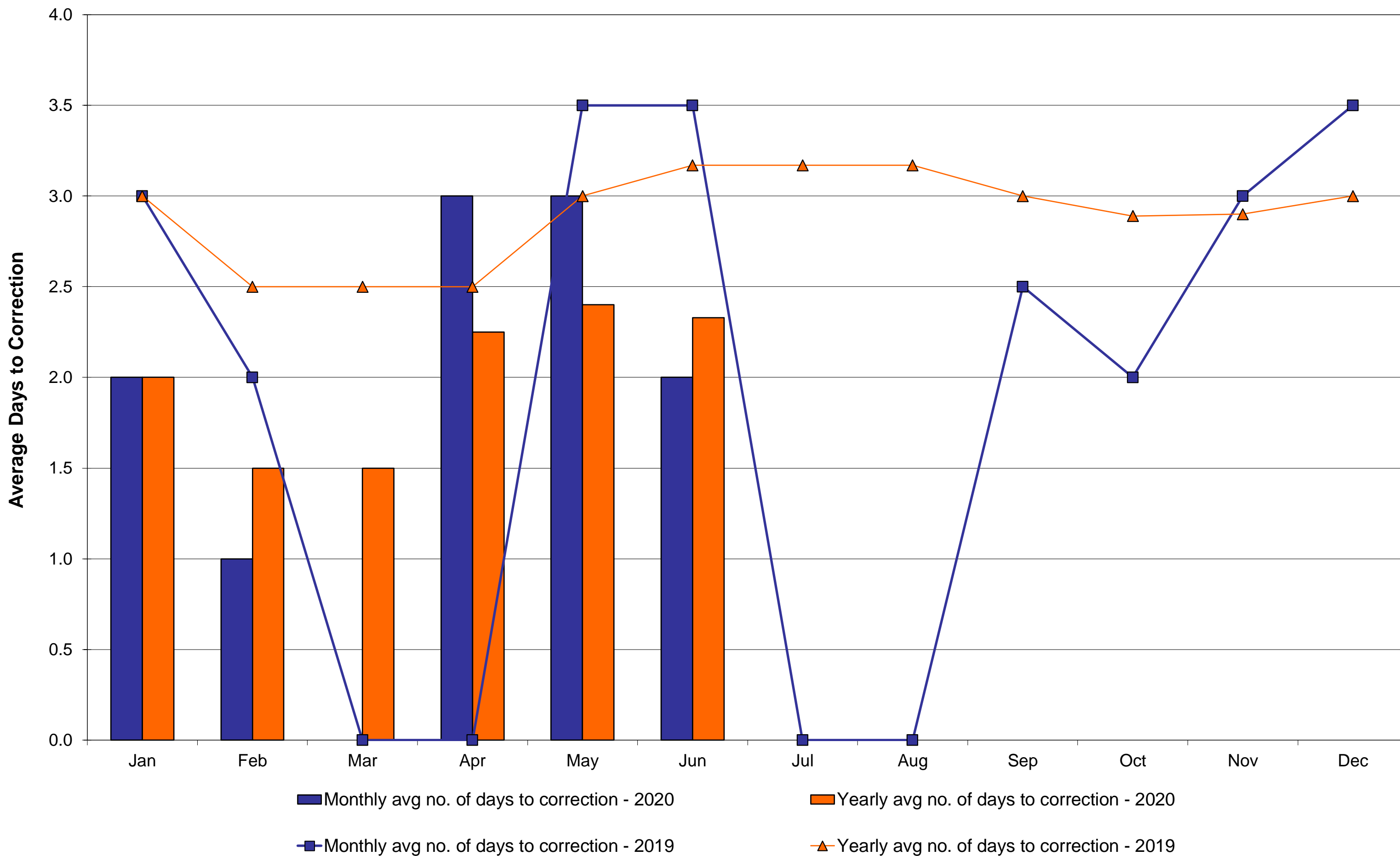
2020		<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
Hour Corrections													
Number of hours with corrections	in the month	1	4	0	3	1	1						
Number of hours	in the month	744	696	743	720	744	720						
% of hours with corrections	in the month	0.13%	0.57%	0.00%	0.42%	0.13%	0.14%						
% of hours with corrections	year-to-date	0.13%	0.35%	0.23%	0.28%	0.25%	0.23%						
Interval Corrections													
Number of intervals corrected	in the month	1	32	0	3	2	3						
Number of intervals	in the month	9,088	8,460	9,011	8,776	9,030	8,826						
% of intervals corrected	in the month	0.01%	0.38%	0.00%	0.03%	0.02%	0.03%						
% of intervals corrected	year-to-date	0.01%	0.19%	0.12%	0.10%	0.09%	0.08%						
Hours Reserved													
Number of hours reserved	in the month	1	14	0	10	9	15						
Number of hours	in the month	744	696	743	720	744	720						
% of hours reserved	in the month	0.13%	2.01%	0.00%	1.39%	1.21%	2.08%						
% of hours reserved	year-to-date	0.13%	1.04%	0.69%	0.86%	0.93%	1.12%						
Days to Correction *													
Avg. number of days to correction	in the month	2.00	1.00	0.00	3.00	3.00	2.00						
Avg. number of days to correction	year-to-date	2.00	1.50	1.50	2.25	2.40	2.33						
Days Without Corrections													
Days without corrections	in the month	30	28	31	28	30	29						
Days without corrections	year-to-date	30	58	89	117	147	176						
2019		<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	1	1	0	0	3	2	0	0	3	1	1	4
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	0.13%	0.15%	0.00%	0.00%	0.40%	0.28%	0.00%	0.00%	0.42%	0.13%	0.14%	0.54%
% of hours with corrections	year-to-date	0.13%	0.14%	0.09%	0.07%	0.14%	0.16%	0.14%	0.12%	0.15%	0.15%	0.15%	0.18%
Interval Corrections													
Number of intervals corrected	in the month	2	3	0	0	5	7	0	0	9	3	1	13
Number of intervals	in the month	9,071	8,131	9,008	8,750	9,033	8,863	9,243	9,048	8,820	9,087	8,788	9,021
% of intervals corrected	in the month	0.02%	0.04%	0.00%	0.00%	0.06%	0.08%	0.00%	0.00%	0.10%	0.03%	0.01%	0.14%
% of intervals corrected	year-to-date	0.02%	0.03%	0.02%	0.01%	0.02%	0.03%	0.03%	0.02%	0.03%	0.03%	0.03%	0.04%
Hours Reserved													
Number of hours reserved	in the month	7	10	8	3	9	12	14	12	7	19	1	12
Number of hours	in the month	744	672	743	720	744	720	744	744	720	744	721	744
% of hours reserved	in the month	0.94%	1.49%	1.08%	0.42%	1.21%	1.67%	1.88%	1.61%	0.97%	2.55%	0.14%	1.61%
% of hours reserved	year-to-date	0.94%	1.20%	1.16%	0.97%	1.02%	1.13%	1.24%	1.29%	1.25%	1.38%	1.27%	1.30%
Days to Correction *													
Avg. number of days to correction	in the month	3.00	2.00	0.00	0.00	3.50	3.50	0.00	0.00	2.50	2.00	3.00	3.50
Avg. number of days to correction	year-to-date	3.00	2.50	2.50	2.50	3.00	3.17	3.17	3.17	3.00	2.89	2.90	3.00
Days Without Corrections													
Days without corrections	in the month	30	27	31	30	29	28	31	31	28	30	29	29
Days without corrections	year-to-date	30	57	88	118	147	175	206	237	265	295	324	353

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

Percentage of Real-Time Corrections

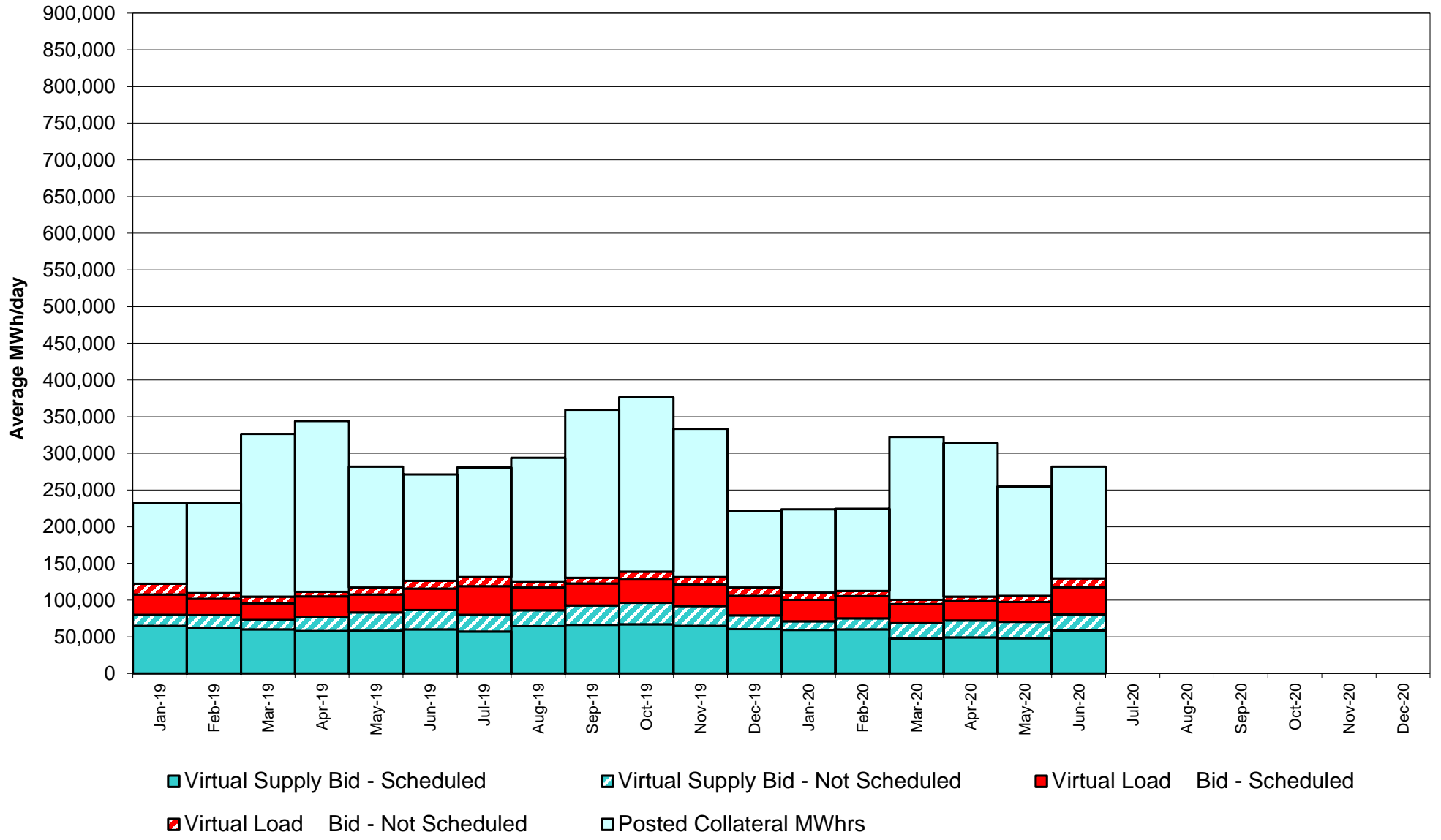


Annual average time period for making Price Corrections (from reservation date) *

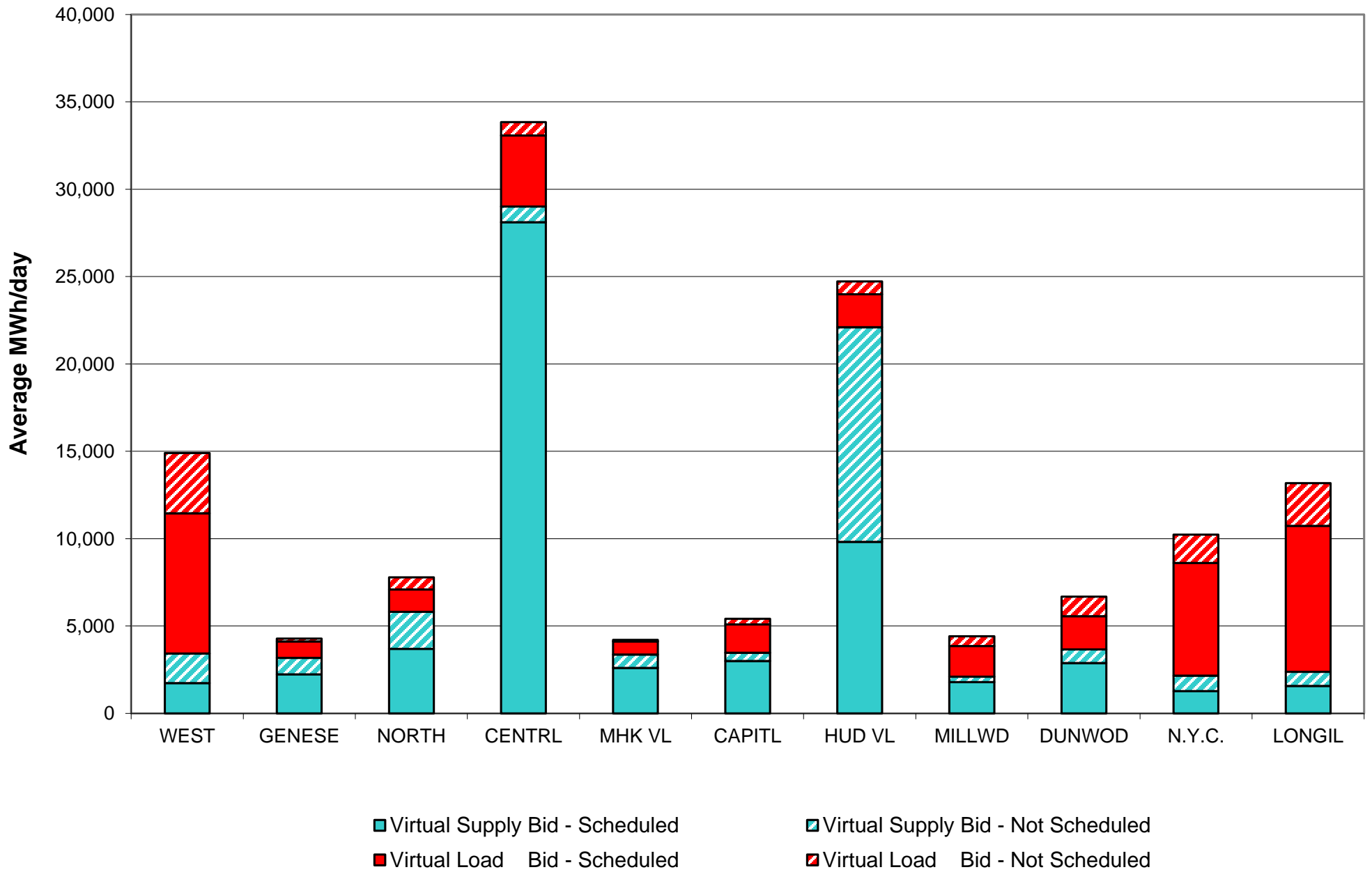


*Calendar days from reservation date; for June 2018 forward, business days from market date

NYISO Virtual Trading Average MWh per day



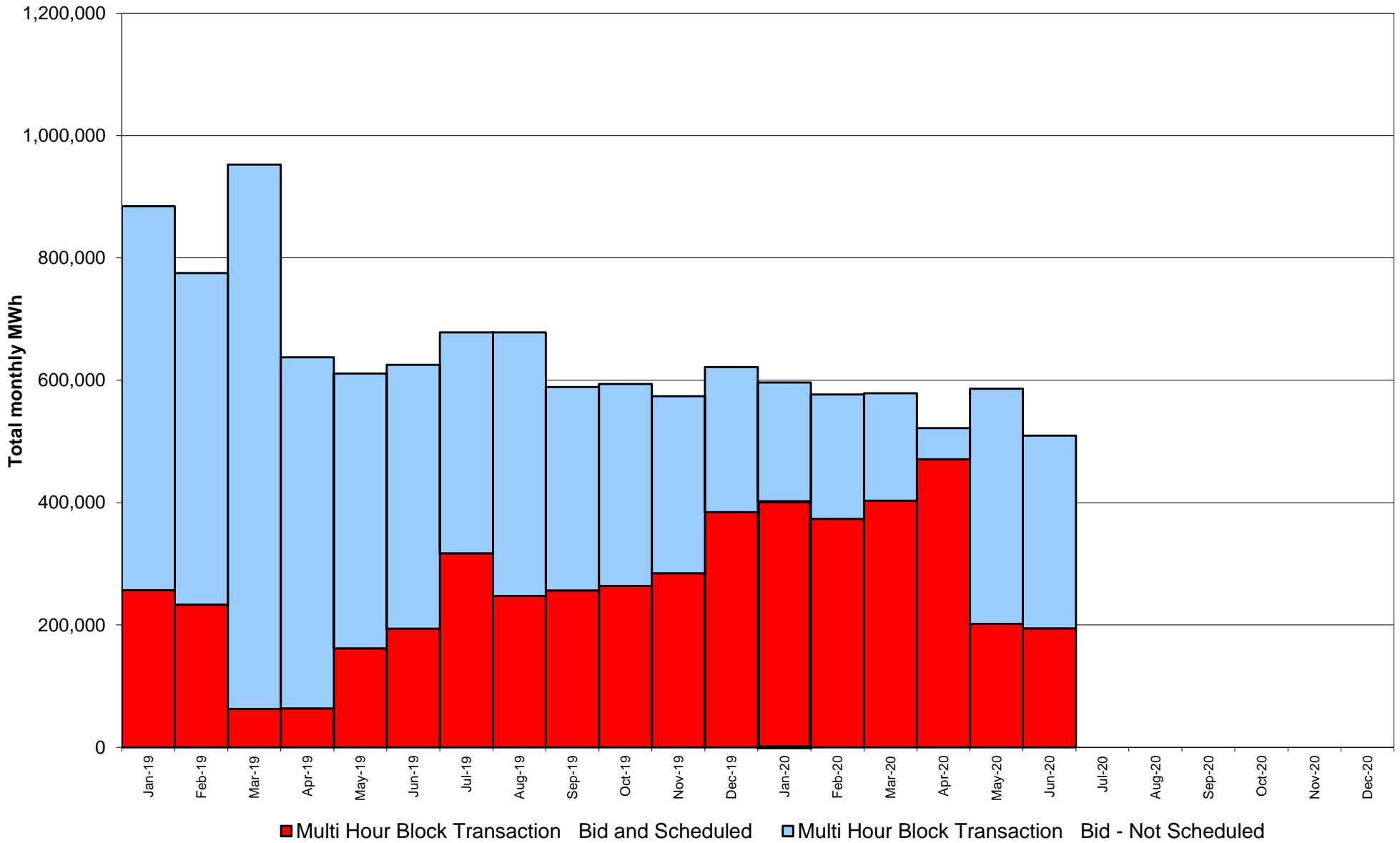
Virtual Load and Supply Zonal Statistics through June 30, 2020



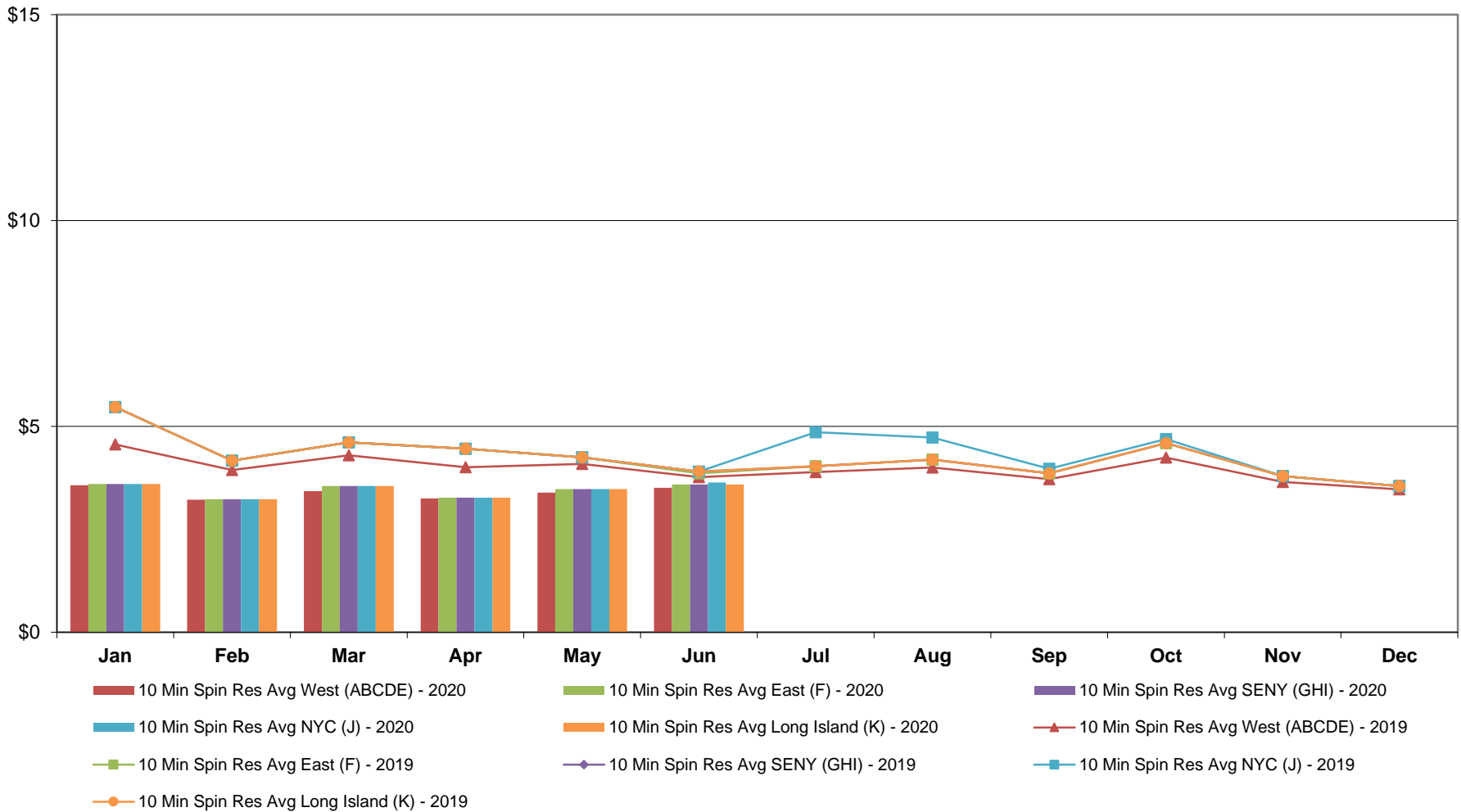
Virtual Load and Supply Zonal Statistics (Average MWh/day) - 2020

		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-20	7,809	1,328	1,765	984	MHK VL	Jan-20	747	77	2,155	793	DUNWOD	Jan-20	1,120	241	3,191	370
	Feb-20	8,213	1,248	2,597	947		Feb-20	724	88	2,339	504		Feb-20	536	298	3,782	368
	Mar-20	9,155	1,778	1,637	1,236		Mar-20	481	97	2,455	542		Mar-20	766	109	3,143	282
	Apr-20	10,056	2,032	1,542	1,018		Apr-20	577	86	2,599	888		Apr-20	1,185	423	2,336	504
	May-20	7,943	3,322	2,105	3,397		May-20	586	70	1,878	287		May-20	1,114	196	2,373	323
	Jun-20	8,014	3,448	1,729	1,706		Jun-20	746	100	2,597	770		Jun-20	1,893	1,124	2,881	789
	Jul-20						Jul-20						Jul-20				
	Aug-20						Aug-20						Aug-20				
	Sep-20						Sep-20						Sep-20				
	Oct-20						Oct-20						Oct-20				
	Nov-20						Nov-20						Nov-20				
	Dec-20						Dec-20						Dec-20				
GENESE	Jan-20	553	131	1,749	995	CAPITL	Jan-20	1,772	539	3,324	1,235	N.Y.C.	Jan-20	6,699	2,678	2,148	1,639
	Feb-20	534	79	2,082	640		Feb-20	2,046	418	3,149	673		Feb-20	9,452	1,841	1,316	1,894
	Mar-20	397	46	2,294	550		Mar-20	1,446	443	3,181	837		Mar-20	4,317	1,126	1,676	2,571
	Apr-20	422	42	2,940	622		Apr-20	2,367	825	3,335	928		Apr-20	2,089	546	1,864	2,269
	May-20	356	47	2,051	618		May-20	1,982	151	2,597	541		May-20	2,759	548	1,692	1,049
	Jun-20	949	163	2,238	939		Jun-20	1,622	328	2,994	472		Jun-20	6,448	1,621	1,273	889
	Jul-20						Jul-20						Jul-20				
	Aug-20						Aug-20						Aug-20				
	Sep-20						Sep-20						Sep-20				
	Oct-20						Oct-20						Oct-20				
	Nov-20						Nov-20						Nov-20				
	Dec-20						Dec-20						Dec-20				
NORTH	Jan-20	811	206	5,038	1,765	HUD VL	Jan-20	891	1,274	7,573	2,206	LONGIL	Jan-20	5,640	2,824	2,246	1,109
	Feb-20	402	276	5,144	2,014		Feb-20	886	722	8,517	5,838		Feb-20	4,795	1,683	1,678	1,217
	Mar-20	335	293	5,075	2,315		Mar-20	944	634	6,811	10,029		Mar-20	5,402	1,429	1,602	1,683
	Apr-20	321	210	5,153	2,057		Apr-20	1,001	813	5,955	12,414		Apr-20	5,033	1,036	1,620	1,672
	May-20	2,305	381	3,547	1,757		May-20	1,088	806	5,998	12,839		May-20	5,948	2,125	1,844	1,045
	Jun-20	1,277	696	3,692	2,128		Jun-20	1,877	745	9,825	12,284		Jun-20	8,361	2,434	1,568	809
	Jul-20						Jul-20						Jul-20				
	Aug-20						Aug-20						Aug-20				
	Sep-20						Sep-20						Sep-20				
	Oct-20						Oct-20						Oct-20				
	Nov-20						Nov-20						Nov-20				
	Dec-20						Dec-20						Dec-20				
CENTRL	Jan-20	3,050	214	28,503	541	MILLWD	Jan-20	270	68	1,646	213	NYISO	Jan-20	29,361	9,580	59,340	11,849
	Feb-20	2,567	118	27,919	487		Feb-20	281	68	1,811	229		Feb-20	30,434	6,838	60,334	14,811
	Mar-20	2,340	113	17,986	481		Mar-20	494	19	1,844	174		Mar-20	26,077	6,087	47,704	20,700
	Apr-20	2,568	131	20,490	491		Apr-20	563	55	1,510	90		Apr-20	26,181	6,200	49,344	22,953
	May-20	2,736	296	22,414	414		May-20	502	198	1,442	76		May-20	27,319	8,140	47,941	22,346
	Jun-20	4,053	770	28,114	903		Jun-20	1,756	558	1,789	312		Jun-20	36,995	11,988	58,701	22,003
	Jul-20						Jul-20						Jul-20				
	Aug-20						Aug-20						Aug-20				
	Sep-20						Sep-20						Sep-20				
	Oct-20						Oct-20						Oct-20				
	Nov-20						Nov-20						Nov-20				
	Dec-20						Dec-20						Dec-20				

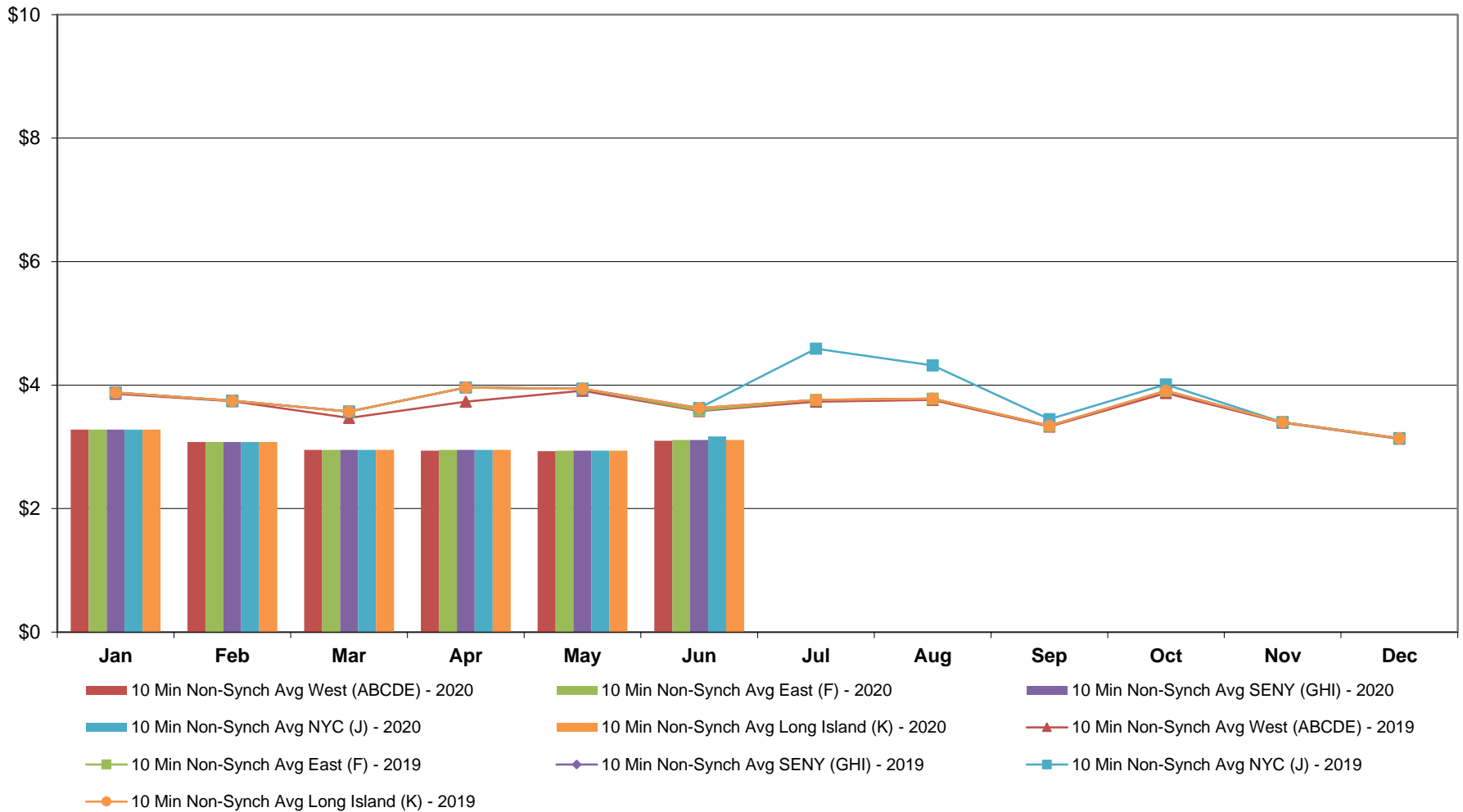
NYISO Multi Hour Block Transactions Monthly Total MWh



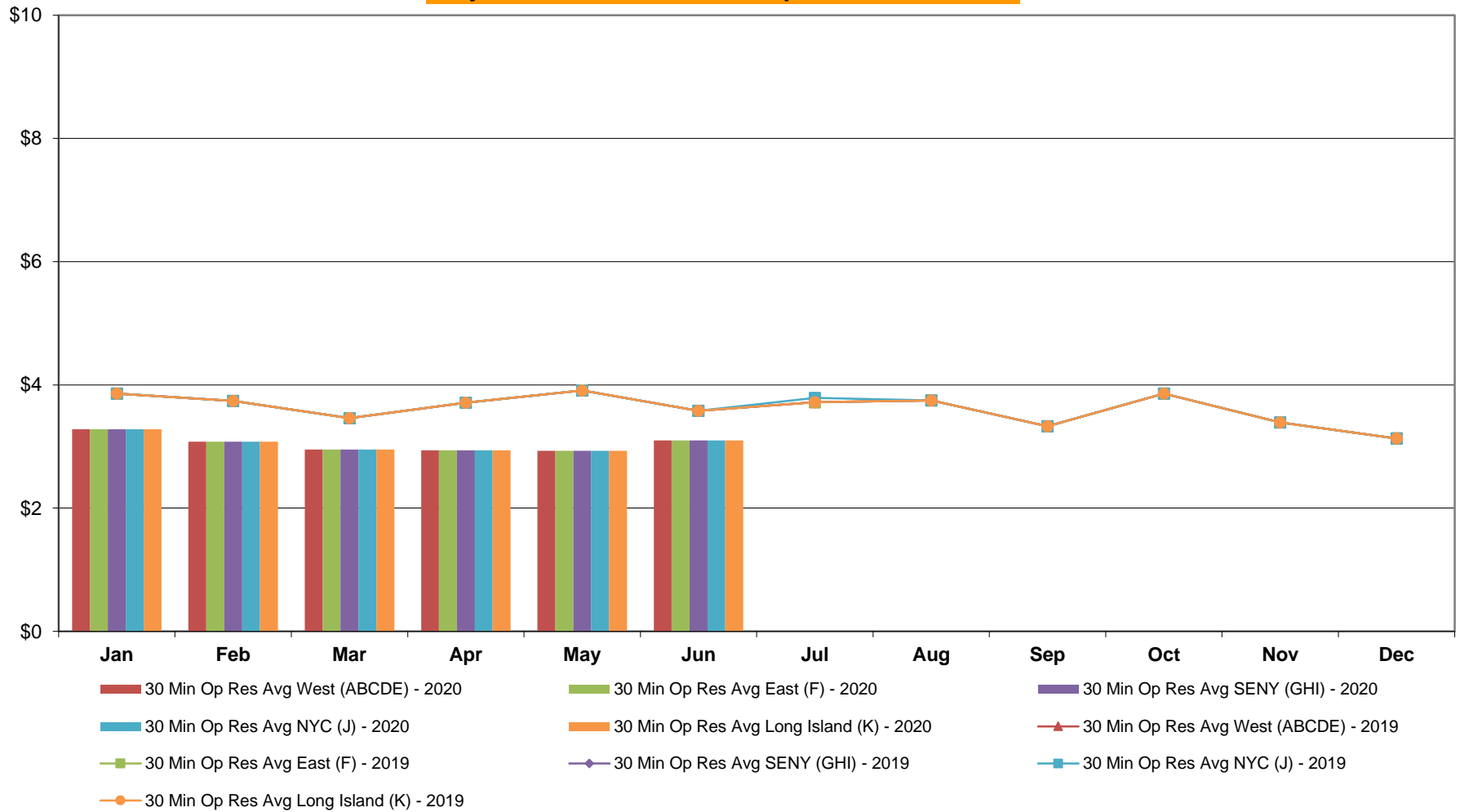
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - 10 Min Spin 2019 - 2020**



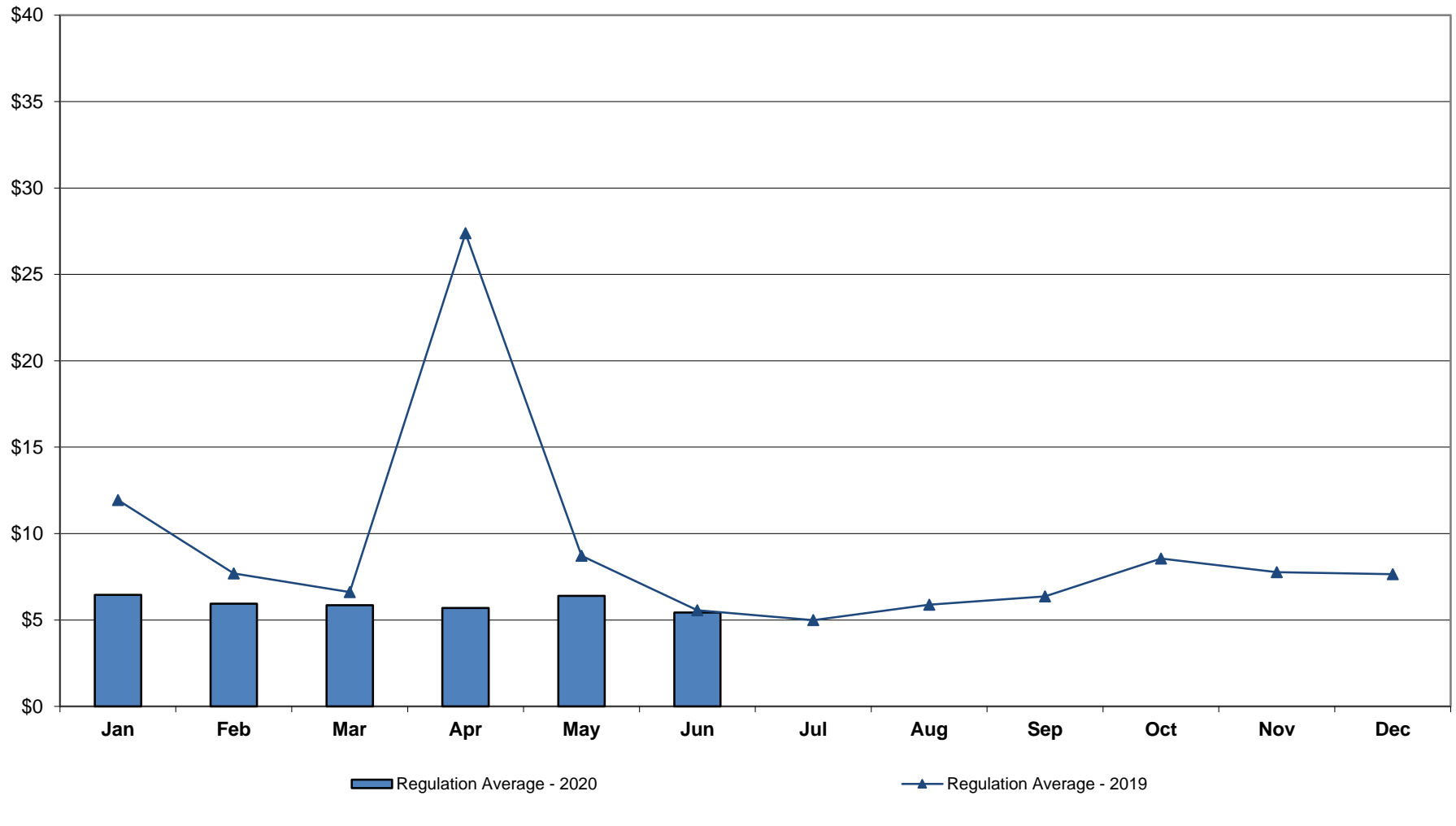
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - 10 Min Non-Synch 2019 - 2020**



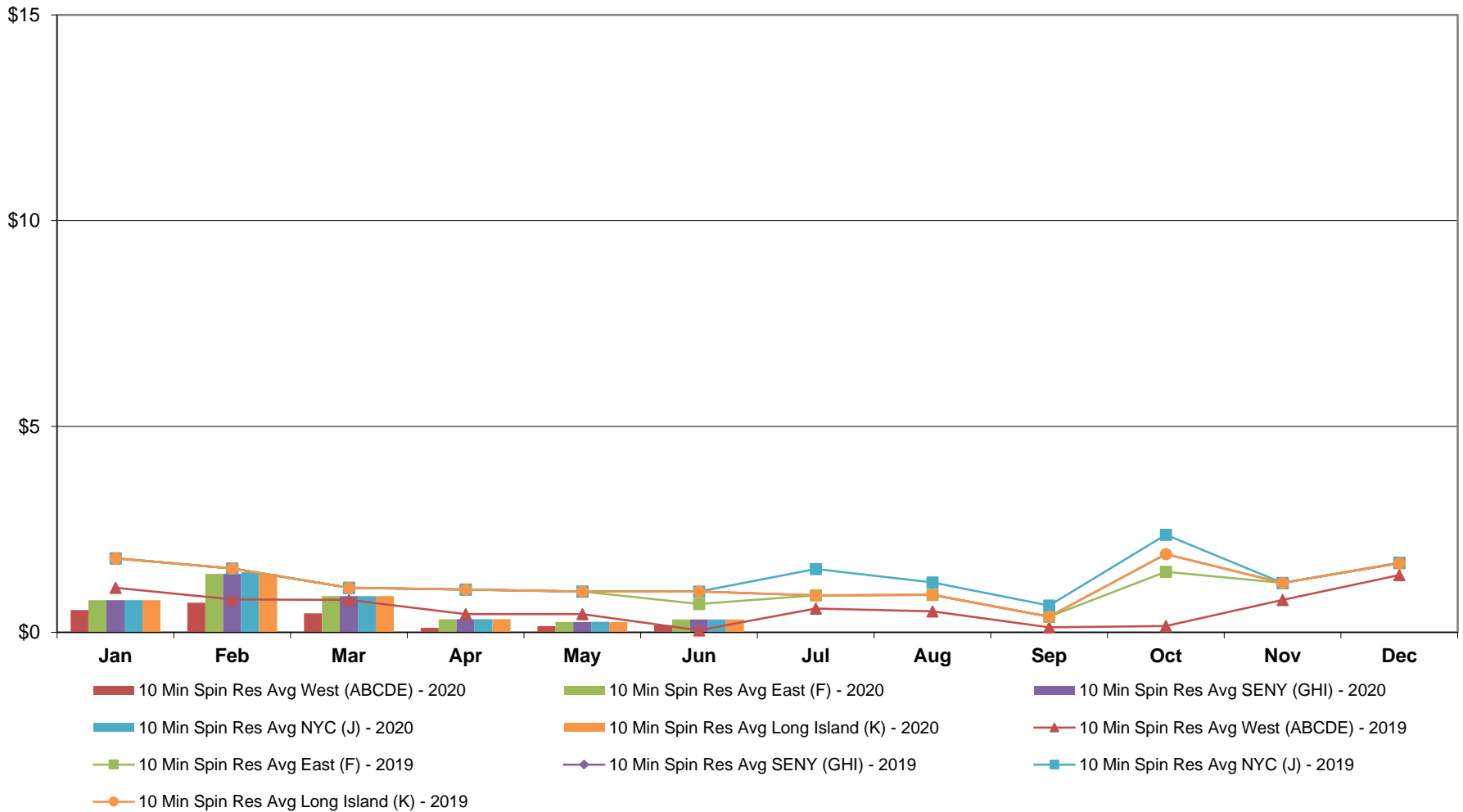
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - 30 Min Op Res 2019 - 2020**



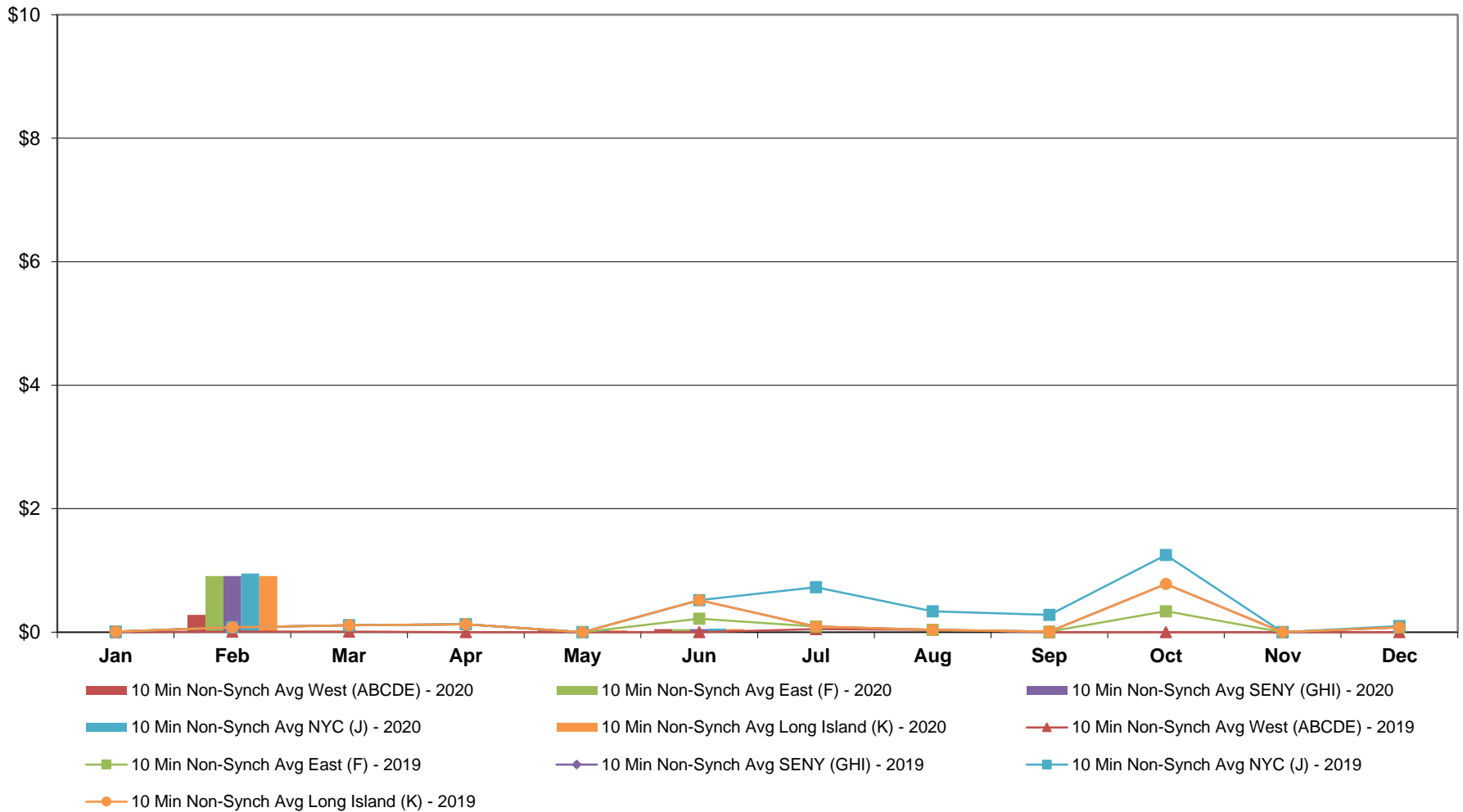
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - Regulation 2019 - 2020**



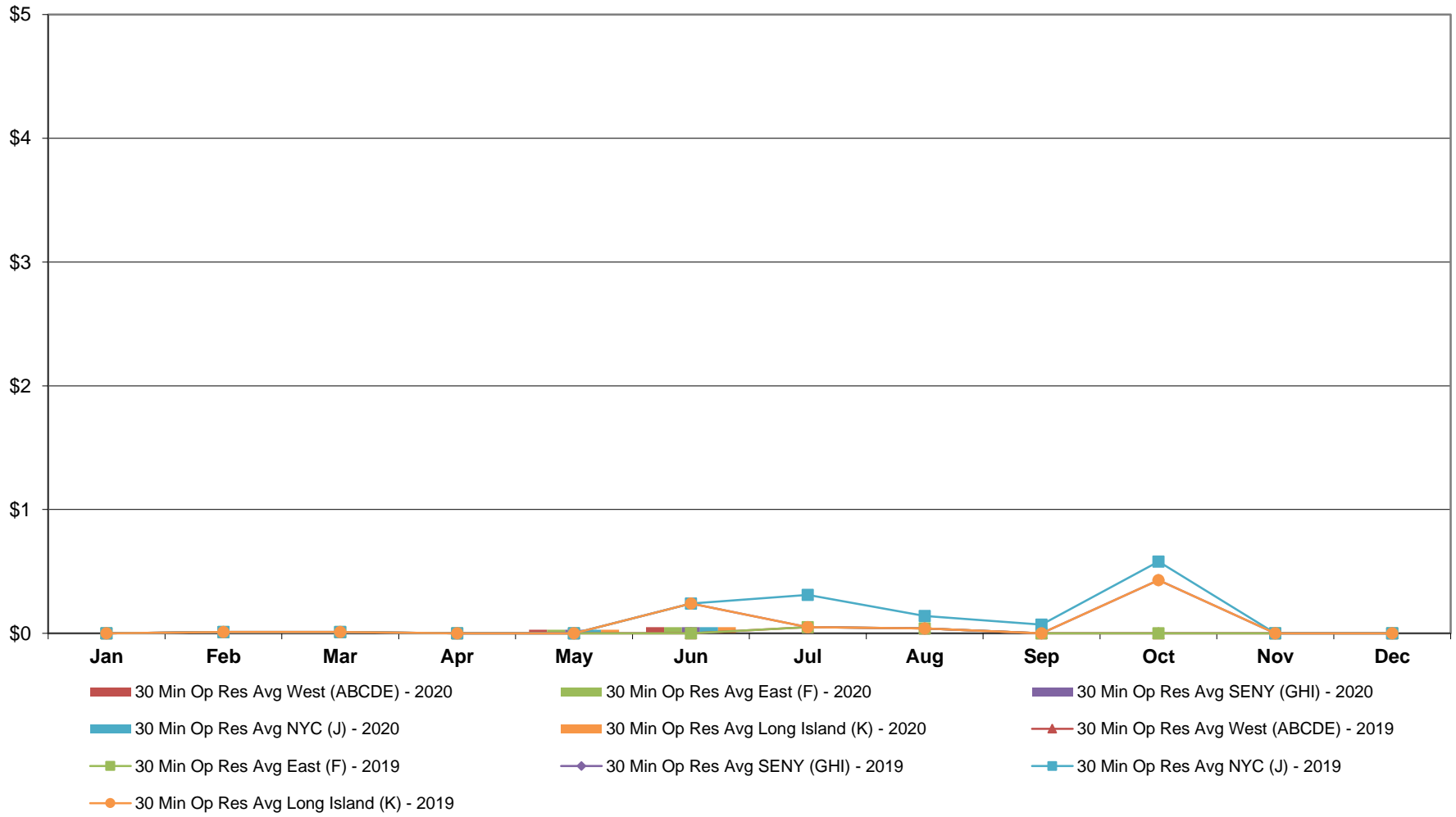
NYISO Monthly Average Ancillary Service Prices RTC Market - 10 Min Spin 2019 - 2020



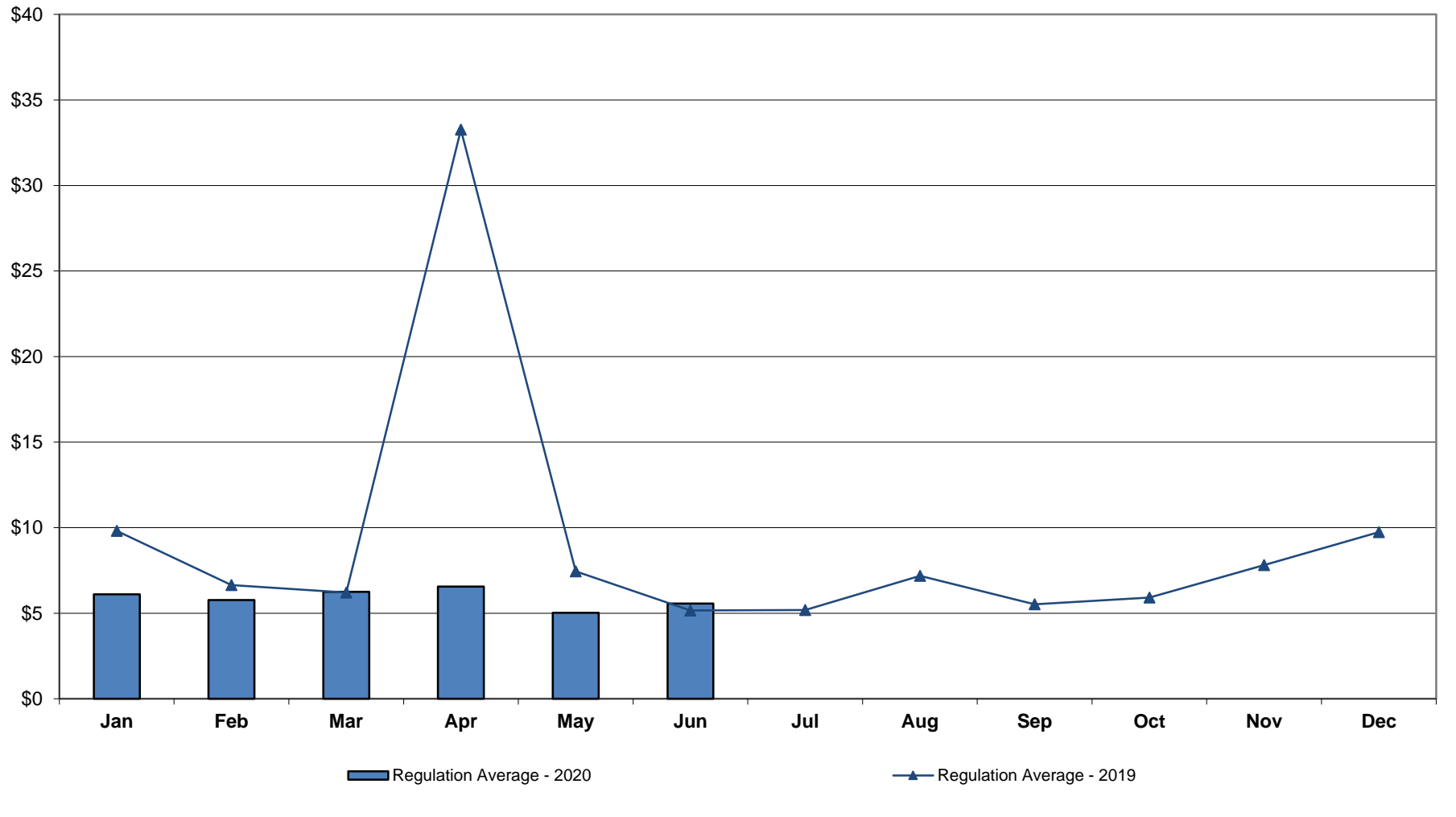
**NYISO Monthly Average Ancillary Service Prices
RTC Market - 10 Min Non-Synch 2019 - 2020**



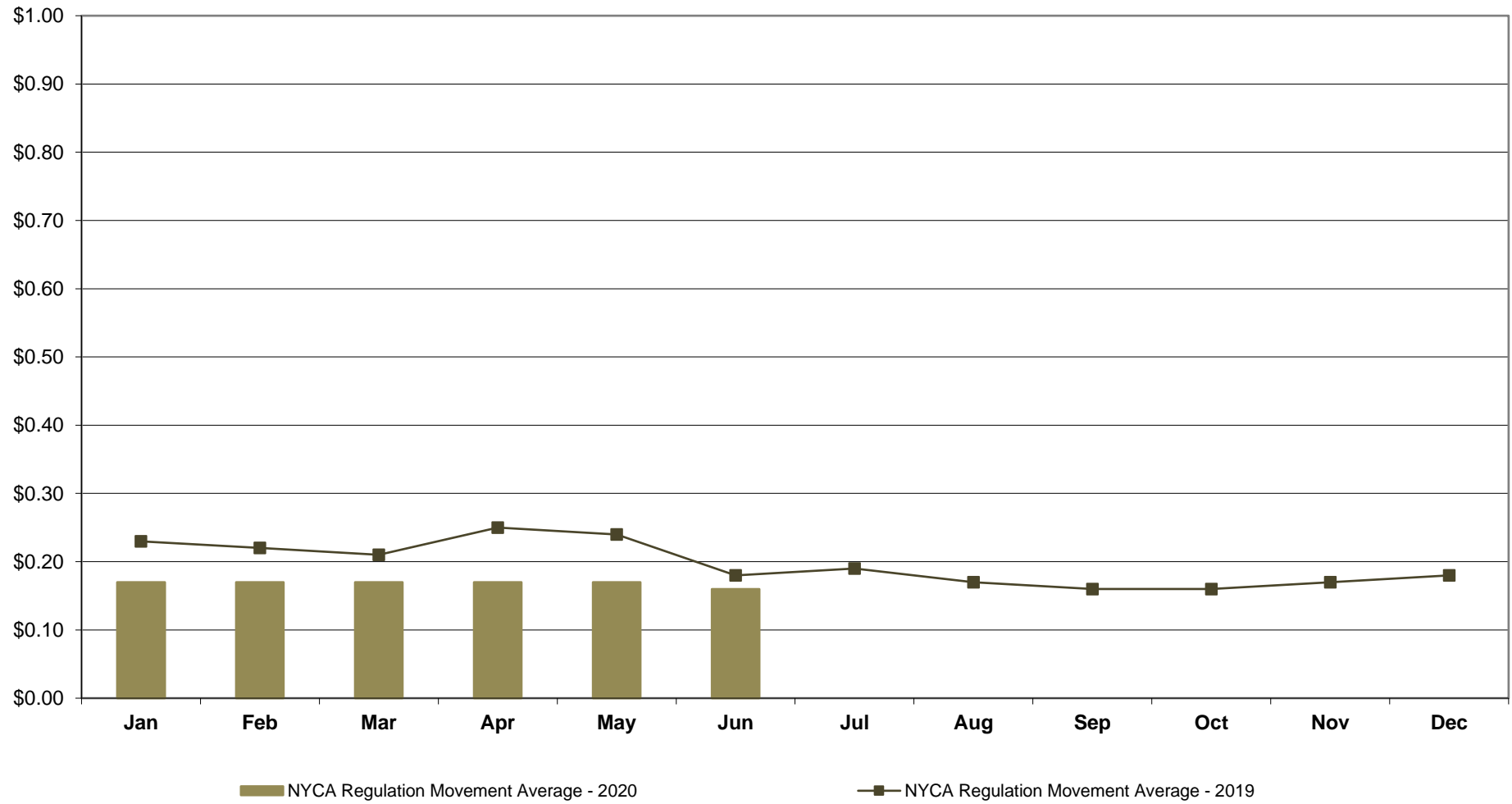
**NYISO Monthly Average Ancillary Service Prices
RTC Market - 30 Min Op Res 2019 - 2020**



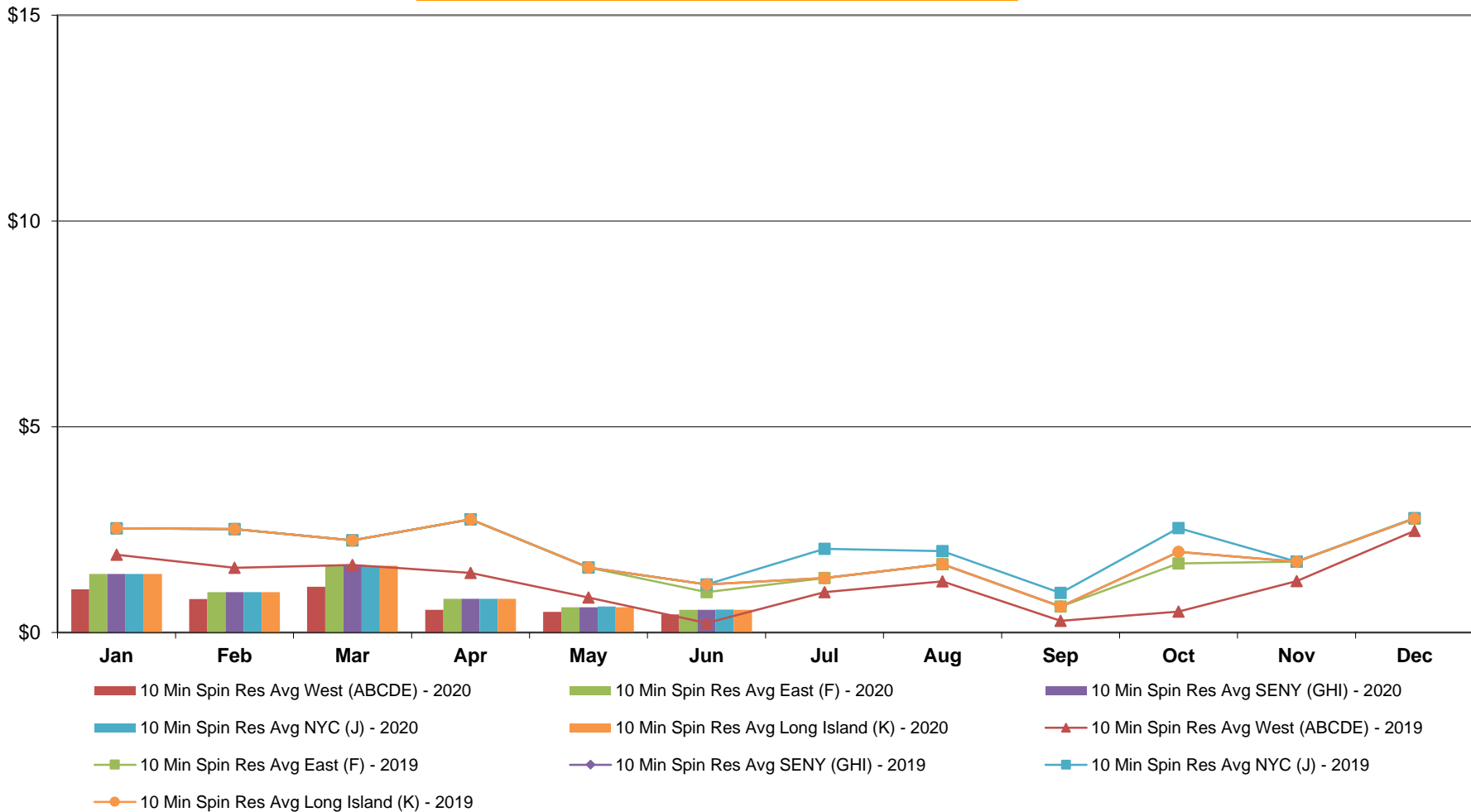
**NYISO Monthly Average Ancillary Service Prices
RTC Market - Regulation 2019 - 2020**



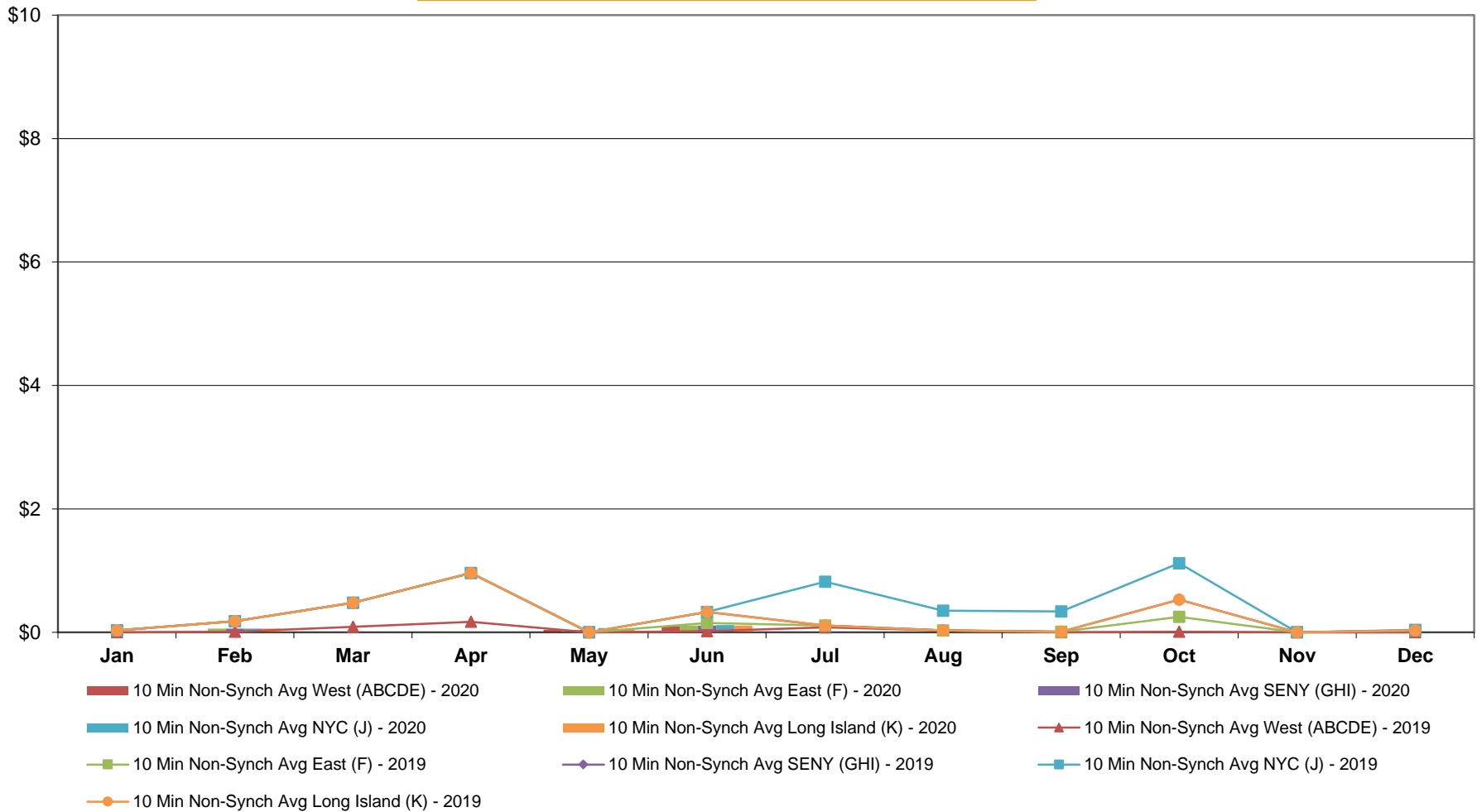
**NYISO Monthly Average Ancillary Service Prices
RTC Market - Regulation Movement 2019 - 2020**



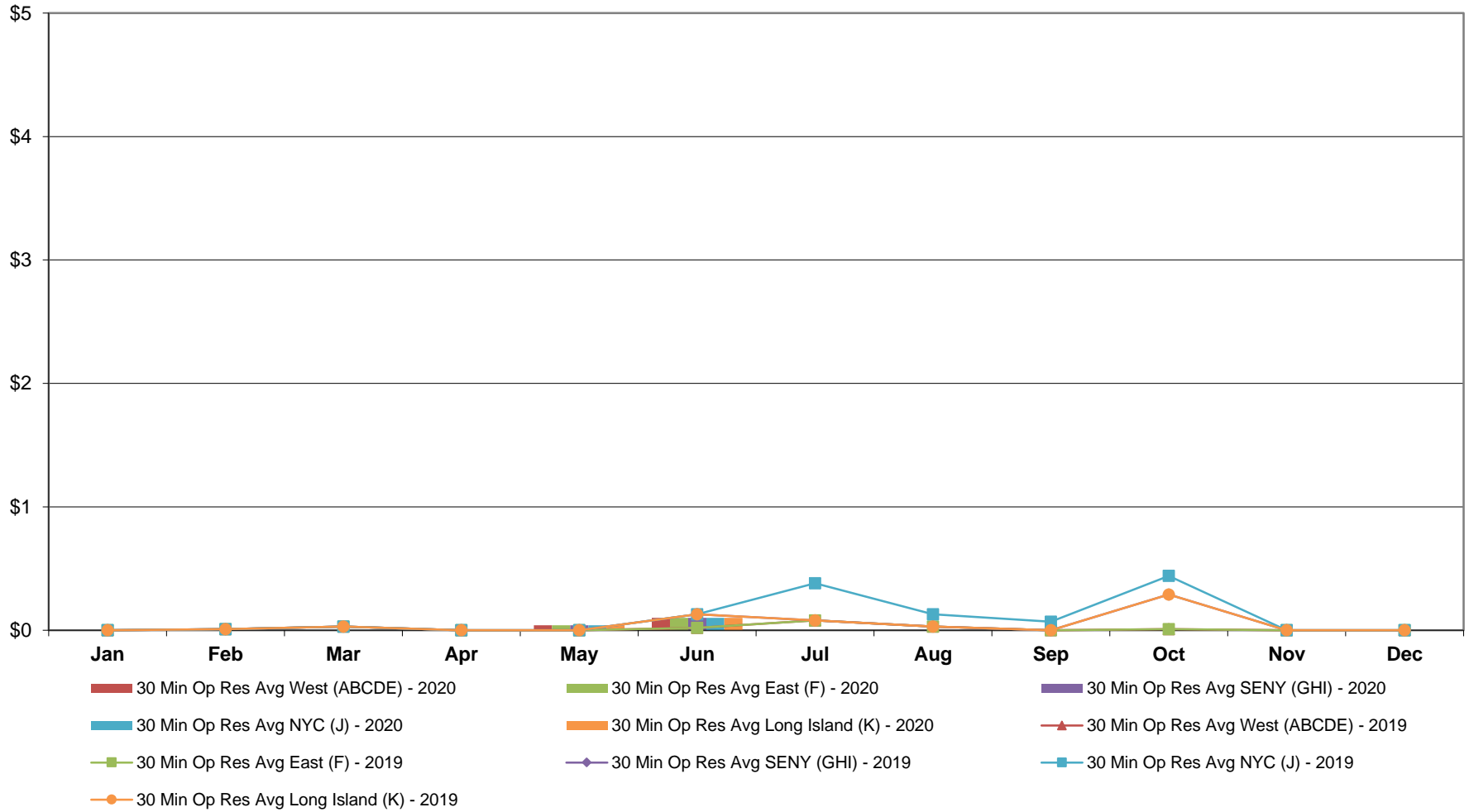
**NYISO Monthly Average Ancillary Service Prices
Real Time Market - 10 Min Spin 2019 - 2020**



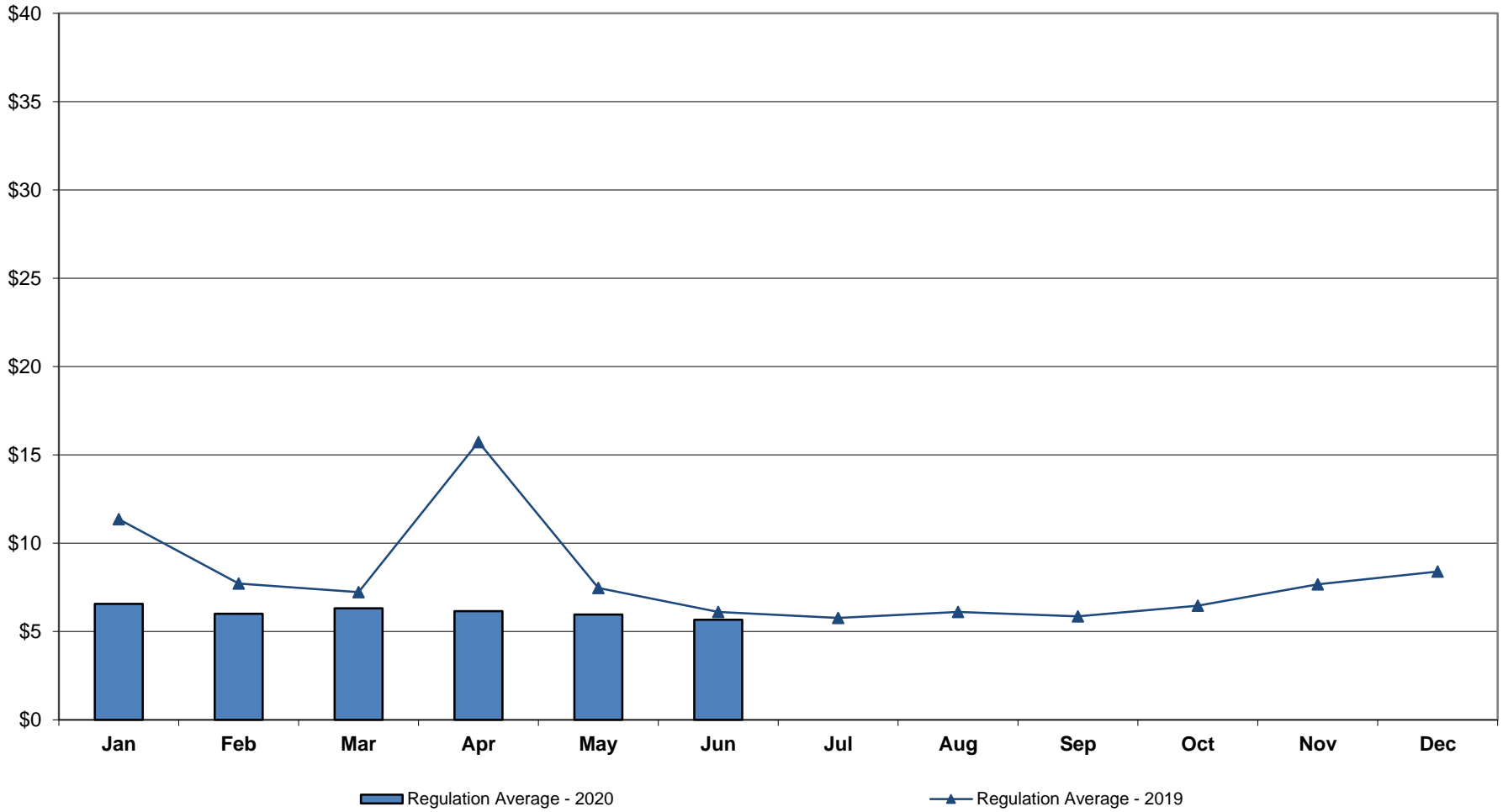
**NYISO Monthly Average Ancillary Service Prices
Real Time Market - 10 Min Non-Synch 2019 - 2020**



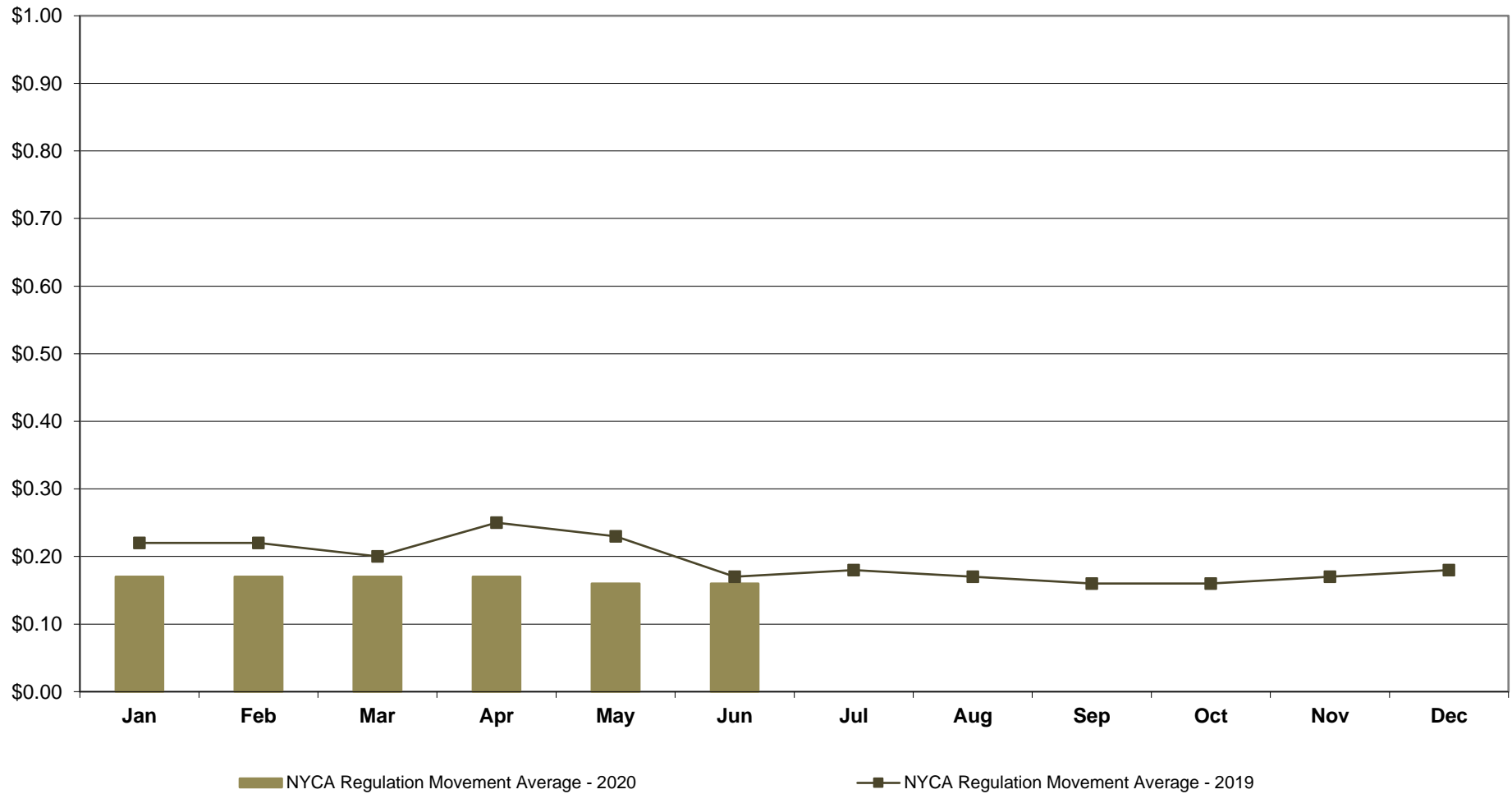
**NYISO Monthly Average Ancillary Service Prices
Real Time Market - 30 Min Op Res 2019 - 2020**



**NYISO Monthly Average Ancillary Service Prices
Real Time Market - Regulation 2019 - 2020**



**NYISO Monthly Average Ancillary Service Prices
Real Time Market - Regulation Movement 2019 - 2020**



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

2020	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
Day Ahead Market												
10 Min Spin Long Island (K)	3.60	3.23	3.55	3.27	3.48	3.59						
10 Min Spin NYC (J)	3.60	3.23	3.55	3.27	3.48	3.64						
10 Min Spin SENY (GHI)	3.60	3.23	3.55	3.27	3.48	3.59						
10 Min Spin East (F)	3.60	3.23	3.55	3.27	3.48	3.59						
10 Min Spin West (ABCDE)	3.57	3.22	3.43	3.25	3.39	3.51						
10 Min Non Synch Long Island (K)	3.28	3.08	2.95	2.95	2.94	3.11						
10 Min Non Synch NYC (J)	3.28	3.08	2.95	2.95	2.94	3.17						
10 Min Non Synch SENY (GHI)	3.28	3.08	2.95	2.95	2.94	3.11						
10 Min Non Synch East (F)	3.28	3.08	2.95	2.95	2.94	3.11						
10 Min Non Synch West (ABCDE)	3.28	3.08	2.95	2.94	2.93	3.10						
30 Min Long Island (K)	3.28	3.08	2.95	2.94	2.93	3.10						
30 Min NYC (J)	3.28	3.08	2.95	2.94	2.93	3.10						
30 Min SENY (GHI)	3.28	3.08	2.95	2.94	2.93	3.10						
30 Min East (F)	3.28	3.08	2.95	2.94	2.93	3.10						
30 Min West (ABCDE)	3.28	3.08	2.95	2.94	2.93	3.10						
Regulation	6.46	5.94	5.86	5.70	6.40	5.44						
2019	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
Day Ahead Market												
10 Min Spin Long Island (K)	5.47	5.47	4.61	4.46	4.25	4.25	4.03	4.19	3.86	4.59	3.79	3.55
10 Min Spin NYC (J)	5.47	5.47	4.61	4.46	4.25	4.25	4.86	4.73	3.97	4.69	3.79	3.55
10 Min Spin SENY (GHI)	5.47	4.17	4.61	4.46	4.25	3.90	4.03	4.19	3.86	4.59	3.79	3.55
10 Min Spin East (F)	5.47	4.17	4.61	4.46	4.25	3.86	4.03	4.19	3.86	4.59	3.79	3.55
10 Min Spin West (ABCDE)	4.56	3.94	4.30	4.01	4.09	3.77	3.89	4.00	3.72	4.24	3.65	3.47
10 Min Non Synch Long Island (K)	3.88	3.88	3.57	3.96	3.94	3.94	3.76	3.78	3.34	3.91	3.40	3.14
10 Min Non Synch NYC (J)	3.88	3.88	3.57	3.96	3.94	3.94	4.59	4.32	3.45	4.01	3.40	3.14
10 Min Non Synch SENY (GHI)	3.88	3.75	3.57	3.96	3.94	3.63	3.76	3.78	3.34	3.91	3.40	3.14
10 Min Non Synch East (F)	3.88	3.75	3.57	3.96	3.94	3.59	3.76	3.78	3.34	3.91	3.40	3.14
10 Min Non Synch West (ABCDE)	3.86	3.74	3.47	3.73	3.91	3.58	3.73	3.76	3.33	3.87	3.39	3.13
30 Min Long Island (K)	3.86	3.86	3.46	3.71	3.91	3.91	3.72	3.75	3.33	3.86	3.39	3.13
30 Min NYC (J)	3.86	3.86	3.46	3.71	3.91	3.91	3.79	3.75	3.33	3.86	3.39	3.13
30 Min SENY (GHI)	3.86	3.74	3.46	3.71	3.91	3.58	3.72	3.75	3.33	3.86	3.39	3.13
30 Min East (F)	3.86	3.74	3.46	3.71	3.91	3.58	3.72	3.75	3.33	3.86	3.39	3.13
30 Min West (ABCDE)	3.86	3.74	3.46	3.71	3.91	3.58	3.72	3.75	3.33	3.86	3.39	3.13
Regulation	11.94	7.69	6.62	27.38	8.71	5.57	4.99	5.89	6.36	8.55	7.77	7.65

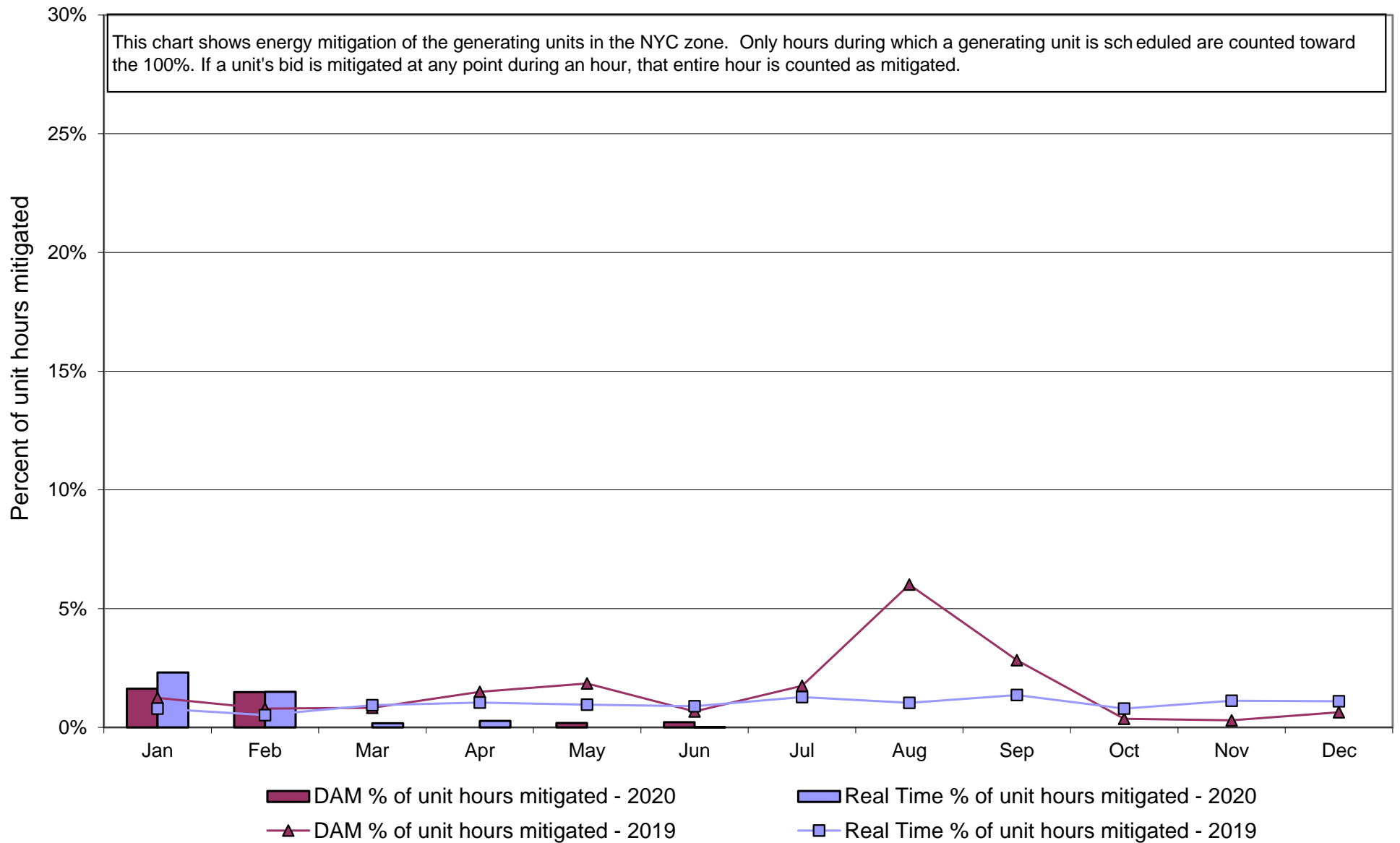
NYISO Markets Ancillary Services Statistics - Unweighted Price (\$/MWH) - RTC

<u>2020</u>	<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>
RTC Market												
10 Min Spin Long Island (K)	0.78	1.42	0.88	0.32	0.25	0.31						
10 Min Spin NYC (J)	0.78	1.46	0.88	0.32	0.26	0.31						
10 Min Spin SENY (GHI)	0.78	1.42	0.88	0.32	0.25	0.31						
10 Min Spin East (F)	0.78	1.42	0.88	0.32	0.25	0.31						
10 Min Spin West (ABCDE)	0.54	0.72	0.46	0.11	0.15	0.17						
10 Min Non Synch Long Island (K)	0.00	0.91	0.00	0.00	0.03	0.05						
10 Min Non Synch NYC (J)	0.00	0.95	0.00	0.00	0.04	0.06						
10 Min Non Synch SENY (GHI)	0.00	0.91	0.00	0.00	0.03	0.05						
10 Min Non Synch East (F)	0.00	0.91	0.00	0.00	0.03	0.05						
10 Min Non Synch West (ABCDE)	0.00	0.28	0.00	0.00	0.03	0.05						
30 Min Long Island (K)	0.00	0.01	0.00	0.00	0.03	0.05						
30 Min NYC (J)	0.00	0.01	0.00	0.00	0.03	0.05						
30 Min SENY (GHI)	0.00	0.01	0.00	0.00	0.03	0.05						
30 Min East (F)	0.00	0.01	0.00	0.00	0.03	0.05						
30 Min West (ABCDE)	0.00	0.01	0.00	0.00	0.03	0.05						
Regulation	6.11	5.77	6.25	6.56	5.02	5.56						
NYCA Regulation Movement	0.17	0.17	0.17	0.17	0.17	0.16						
2019	<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>
RTC Market												
10 Min Spin Long Island (K)	1.80	1.80	1.08	1.04	0.99	0.99	0.90	0.91	0.38	1.90	1.20	1.68
10 Min Spin NYC (J)	1.80	1.80	1.08	1.04	0.99	0.99	1.54	1.21	0.65	2.37	1.20	1.69
10 Min Spin SENY (GHI)	1.80	1.55	1.08	1.04	0.99	0.99	0.90	0.91	0.38	1.90	1.20	1.68
10 Min Spin East (F)	1.80	1.55	1.08	1.04	0.99	0.69	0.90	0.91	0.38	1.47	1.20	1.68
10 Min Spin West (ABCDE)	1.08	0.80	0.79	0.44	0.44	0.05	0.58	0.51	0.12	0.15	0.79	1.39
10 Min Non Synch Long Island (K)	0.01	0.01	0.11	0.13	0.00	0.00	0.09	0.04	0.01	0.78	0.00	0.08
10 Min Non Synch NYC (J)	0.01	0.01	0.11	0.13	0.00	0.00	0.73	0.34	0.28	1.25	0.00	0.10
10 Min Non Synch SENY (GHI)	0.01	0.08	0.11	0.13	0.00	0.52	0.09	0.04	0.01	0.78	0.00	0.08
10 Min Non Synch East (F)	0.01	0.08	0.11	0.13	0.00	0.22	0.09	0.04	0.01	0.34	0.00	0.08
10 Min Non Synch West (ABCDE)	0.00	0.01	0.01	0.00	0.00	0.00	0.05	0.04	0.00	0.00	0.00	0.00
30 Min Long Island (K)	0.00	0.00	0.01	0.00	0.00	0.00	0.05	0.04	0.00	0.43	0.00	0.00
30 Min NYC (J)	0.00	0.00	0.01	0.00	0.00	0.00	0.31	0.14	0.07	0.58	0.00	0.00
30 Min SENY (GHI)	0.00	0.01	0.01	0.00	0.00	0.24	0.05	0.04	0.00	0.43	0.00	0.00
30 Min East (F)	0.00	0.01	0.01	0.00	0.00	0.00	0.05	0.04	0.00	0.00	0.00	0.00
30 Min West (ABCDE)	0.00	0.01	0.01	0.00	0.00	0.00	0.05	0.04	0.00	0.00	0.00	0.00
Regulation	9.81	6.64	6.21	33.26	7.45	5.16	5.19	7.19	5.52	5.91	7.81	9.74
NYCA Regulation Movement	0.23	0.22	0.21	0.25	0.24	0.18	0.19	0.17	0.16	0.16	0.17	0.18

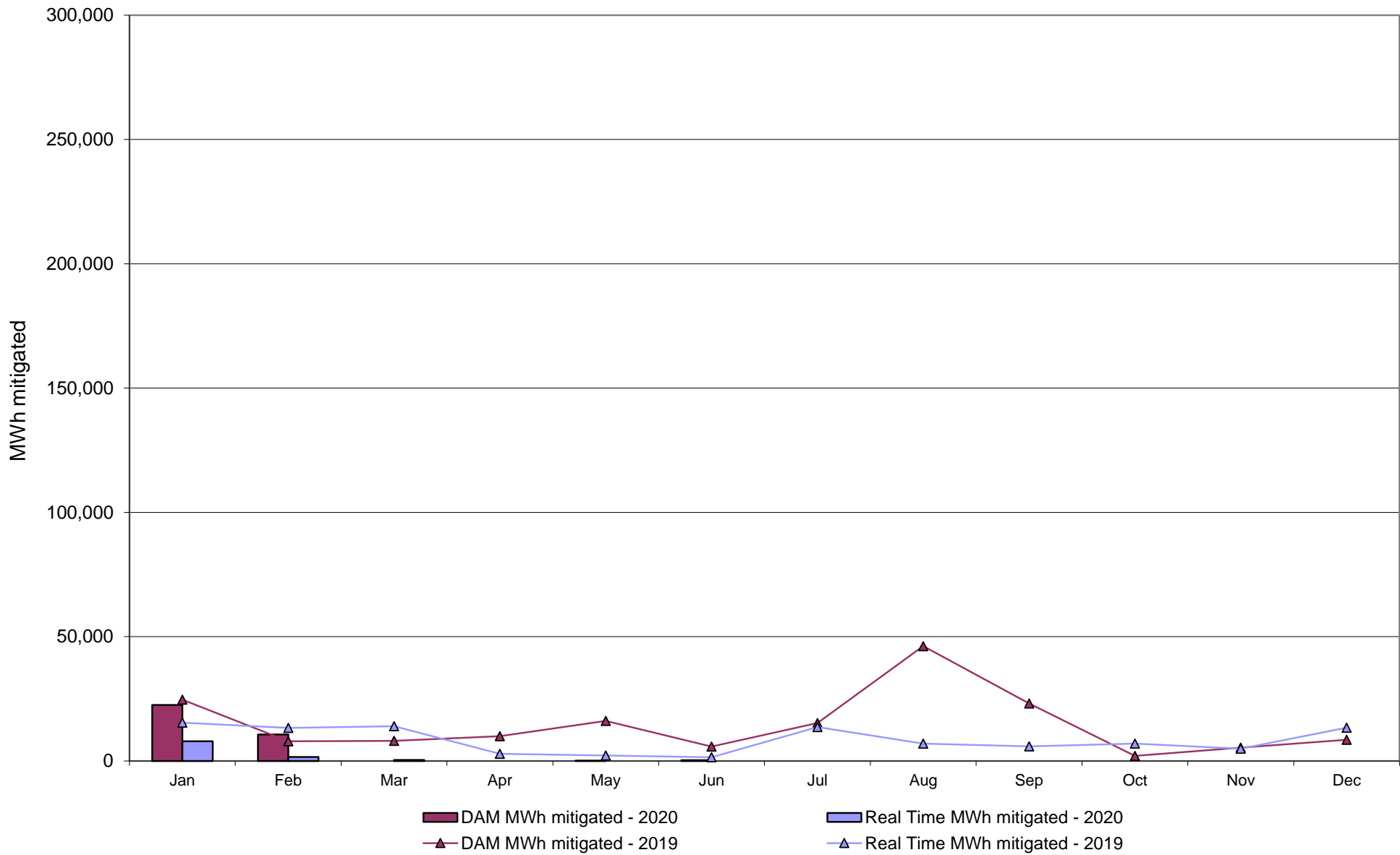
NYISO Markets Ancillary Services Statistics - Unweighted Price (\$/MWH) - RT

<u>2020</u>	<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>
Real Time Market												
10 Min Spin Long Island (K)	1.42	0.98	1.62	0.82	0.61	0.55						
10 Min Spin NYC (J)	1.42	0.98	1.62	0.82	0.63	0.56						
10 Min Spin SENY (GHI)	1.42	0.98	1.62	0.82	0.61	0.55						
10 Min Spin East (F)	1.42	0.98	1.62	0.82	0.61	0.55						
10 Min Spin West (ABCDE)	1.05	0.81	1.11	0.55	0.50	0.44						
10 Min Non Synch Long Island (K)	0.00	0.06	0.00	0.00	0.04	0.11						
10 Min Non Synch NYC (J)	0.00	0.06	0.00	0.00	0.07	0.12						
10 Min Non Synch SENY (GHI)	0.00	0.06	0.00	0.00	0.04	0.11						
10 Min Non Synch East (F)	0.00	0.06	0.00	0.00	0.04	0.11						
10 Min Non Synch West (ABCDE)	0.00	0.00	0.00	0.00	0.04	0.10						
30 Min Long Island (K)	0.00	0.00	0.00	0.00	0.04	0.10						
30 Min NYC (J)	0.00	0.00	0.00	0.00	0.04	0.10						
30 Min SENY (GHI)	0.00	0.00	0.00	0.00	0.04	0.10						
30 Min East (F)	0.00	0.00	0.00	0.00	0.04	0.10						
30 Min West (ABCDE)	0.00	0.00	0.00	0.00	0.04	0.10						
Regulation	6.57	6.00	6.32	6.16	5.96	5.67						
NYCA Regulation Movement	0.17	0.17	0.17	0.17	0.16	0.16						
2019	<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>
Real Time Market												
10 Min Spin Long Island (K)	2.53	2.53	2.24	2.75	1.58	1.58	1.32	1.66	0.63	1.96	1.72	2.77
10 Min Spin NYC (J)	2.53	2.53	2.24	2.75	1.58	1.58	2.03	1.98	0.96	2.54	1.72	2.78
10 Min Spin SENY (GHI)	2.53	2.51	2.24	2.75	1.58	1.17	1.32	1.66	0.63	1.96	1.72	2.77
10 Min Spin East (F)	2.53	2.51	2.24	2.75	1.58	0.98	1.32	1.66	0.63	1.68	1.72	2.77
10 Min Spin West (ABCDE)	1.89	1.57	1.64	1.45	0.85	0.23	0.98	1.24	0.28	0.51	1.25	2.47
10 Min Non Synch Long Island (K)	0.03	0.03	0.48	0.96	0.00	0.00	0.11	0.03	0.01	0.53	0.00	0.03
10 Min Non Synch NYC (J)	0.03	0.03	0.48	0.96	0.00	0.00	0.82	0.35	0.34	1.12	0.00	0.04
10 Min Non Synch SENY (GHI)	0.03	0.18	0.48	0.96	0.00	0.33	0.11	0.03	0.01	0.53	0.00	0.03
10 Min Non Synch East (F)	0.03	0.18	0.48	0.96	0.00	0.15	0.11	0.03	0.01	0.25	0.00	0.03
10 Min Non Synch West (ABCDE)	0.00	0.01	0.09	0.17	0.00	0.02	0.08	0.03	0.00	0.01	0.00	0.00
30 Min Long Island (K)	0.00	0.00	0.03	0.00	0.00	0.00	0.08	0.03	0.00	0.29	0.00	0.00
30 Min NYC (J)	0.00	0.00	0.03	0.00	0.00	0.00	0.38	0.13	0.07	0.44	0.00	0.00
30 Min SENY (GHI)	0.00	0.01	0.03	0.00	0.00	0.13	0.08	0.03	0.00	0.29	0.00	0.00
30 Min East (F)	0.00	0.01	0.03	0.00	0.00	0.02	0.08	0.03	0.00	0.01	0.00	0.00
30 Min West (ABCDE)	0.00	0.01	0.03	0.00	0.00	0.02	0.08	0.03	0.00	0.01	0.00	0.00
Regulation	11.36	7.72	7.23	15.73	7.47	6.11	5.77	6.11	5.86	6.47	7.67	8.40
NYCA Regulation Movement	0.22	0.22	0.20	0.25	0.23	0.17	0.18	0.17	0.16	0.16	0.17	0.18

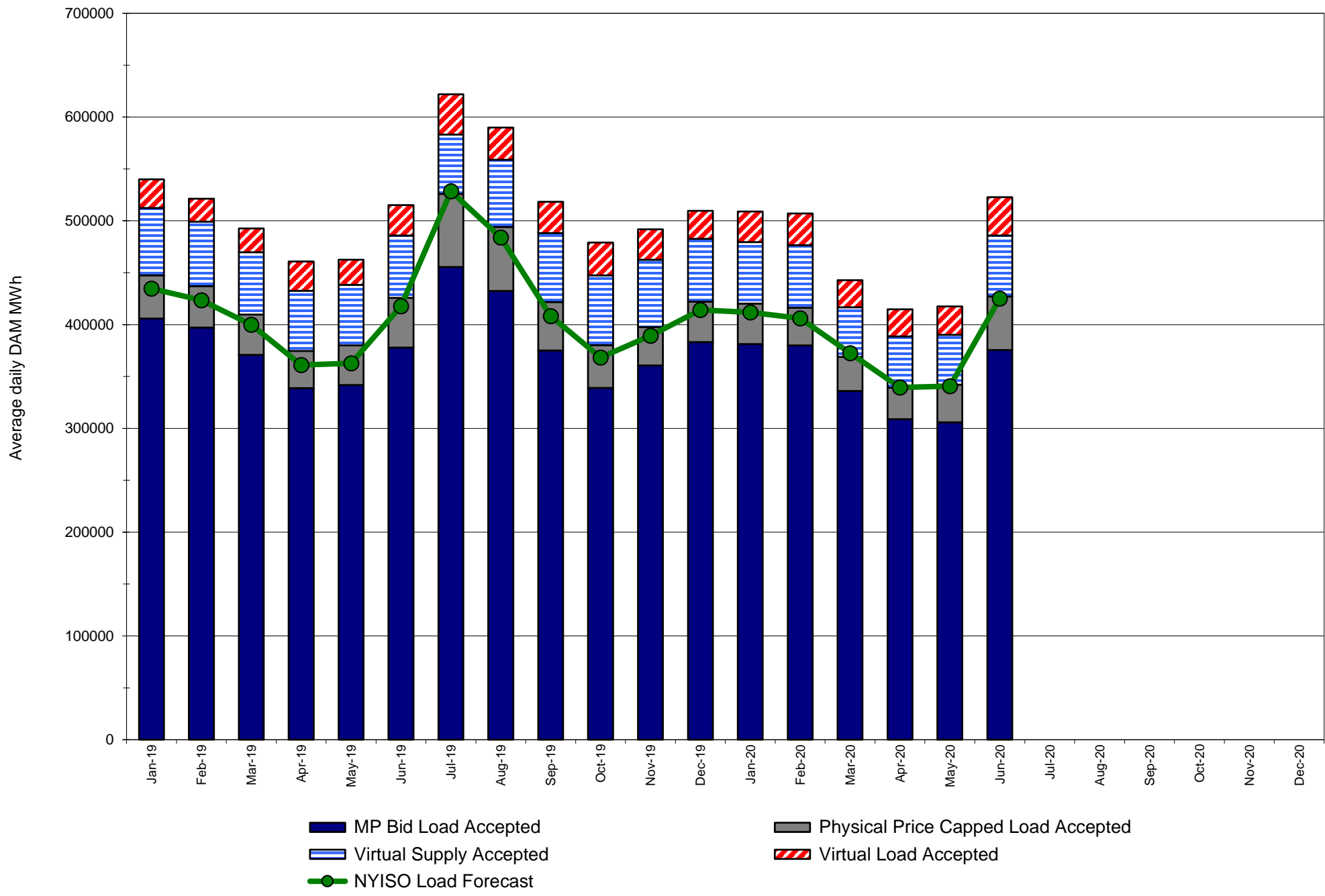
NYISO In City Energy Mitigation - AMP (NYC Zone) 2019 - 2020 Percentage of committed unit-hours mitigated



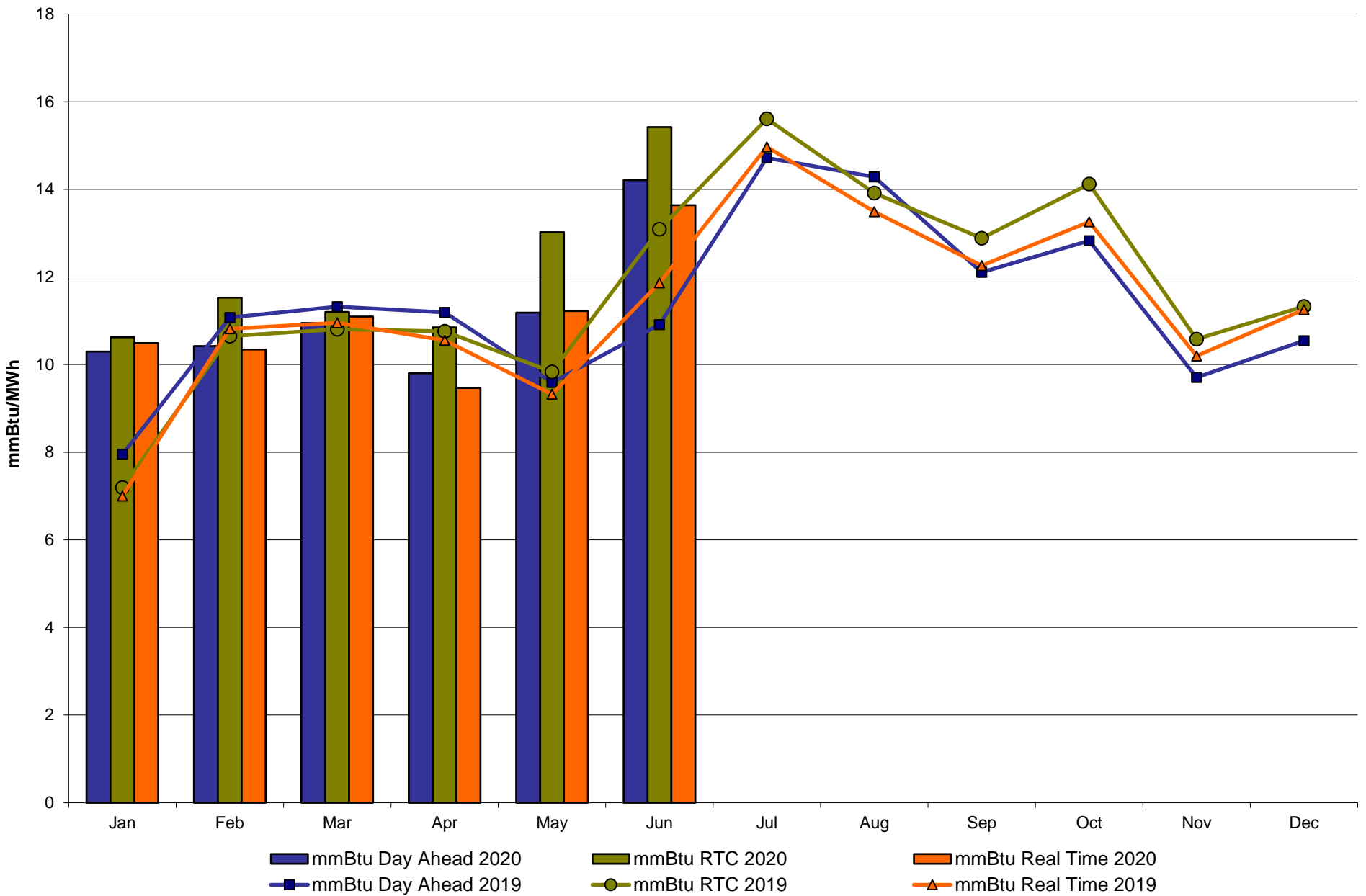
NYISO In City Energy Mitigation (NYC Zone) 2019 - 2020
Monthly megawatt hours mitigated



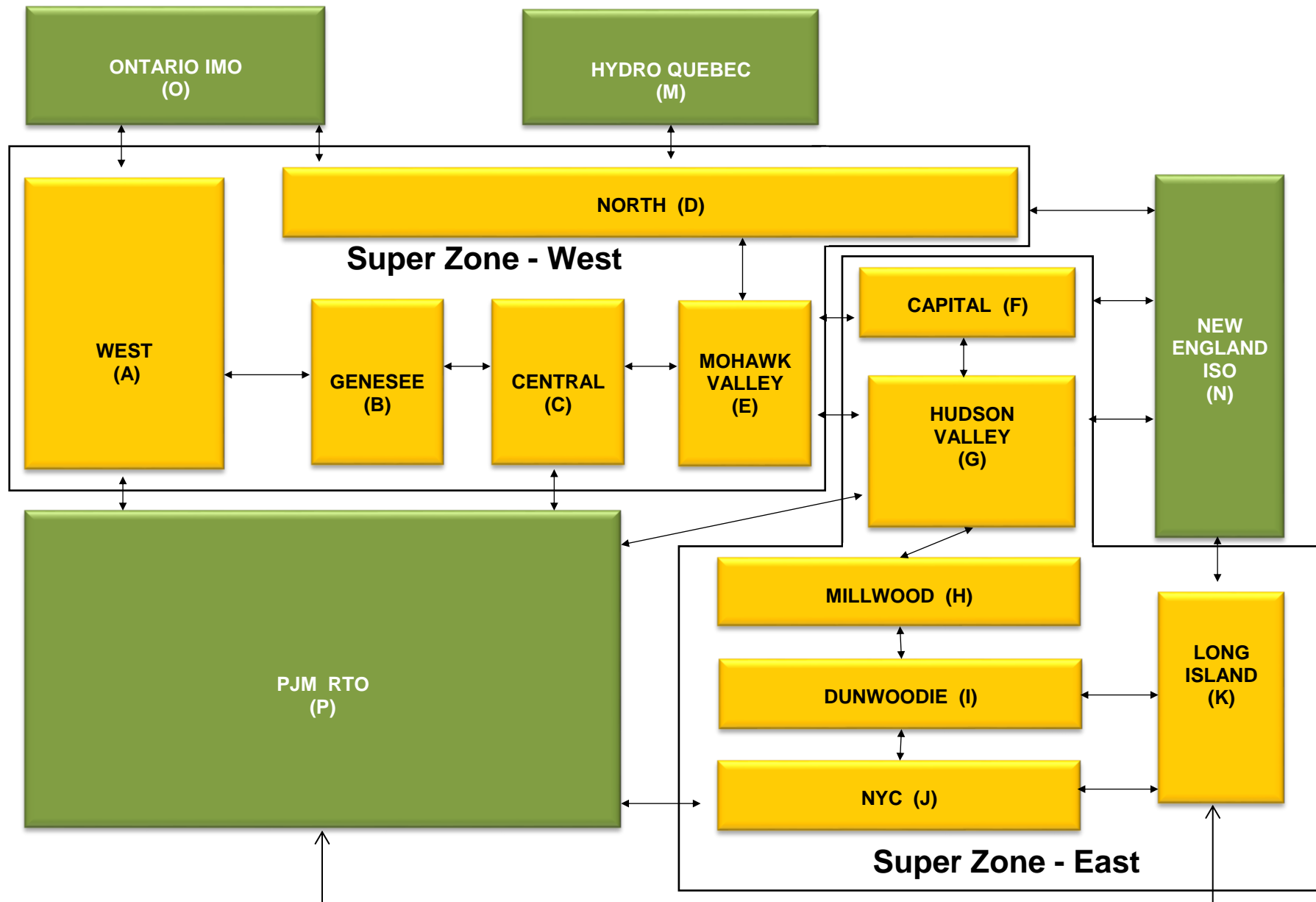
NYISO Average Daily DAM Load Bid Summary



Monthly Implied Heat Rate 2019-2020



NYISO LBMP ZONES

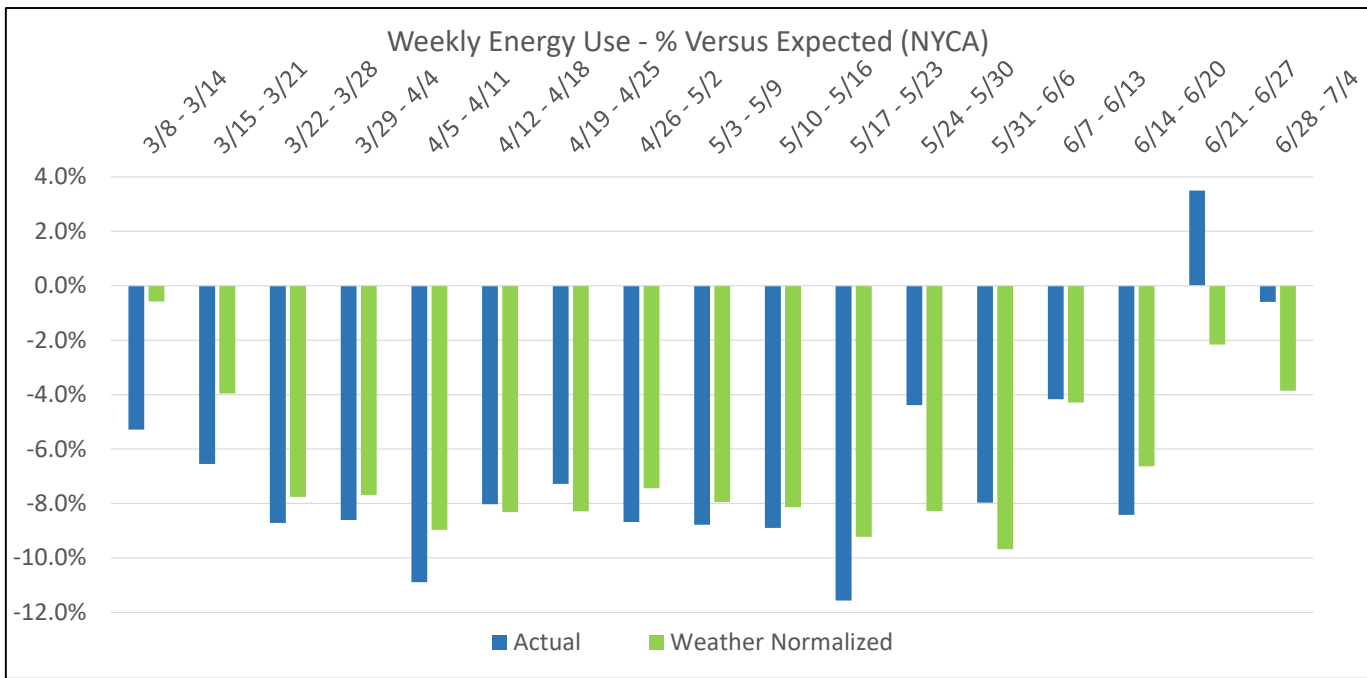


Billing Codes for Chart C

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

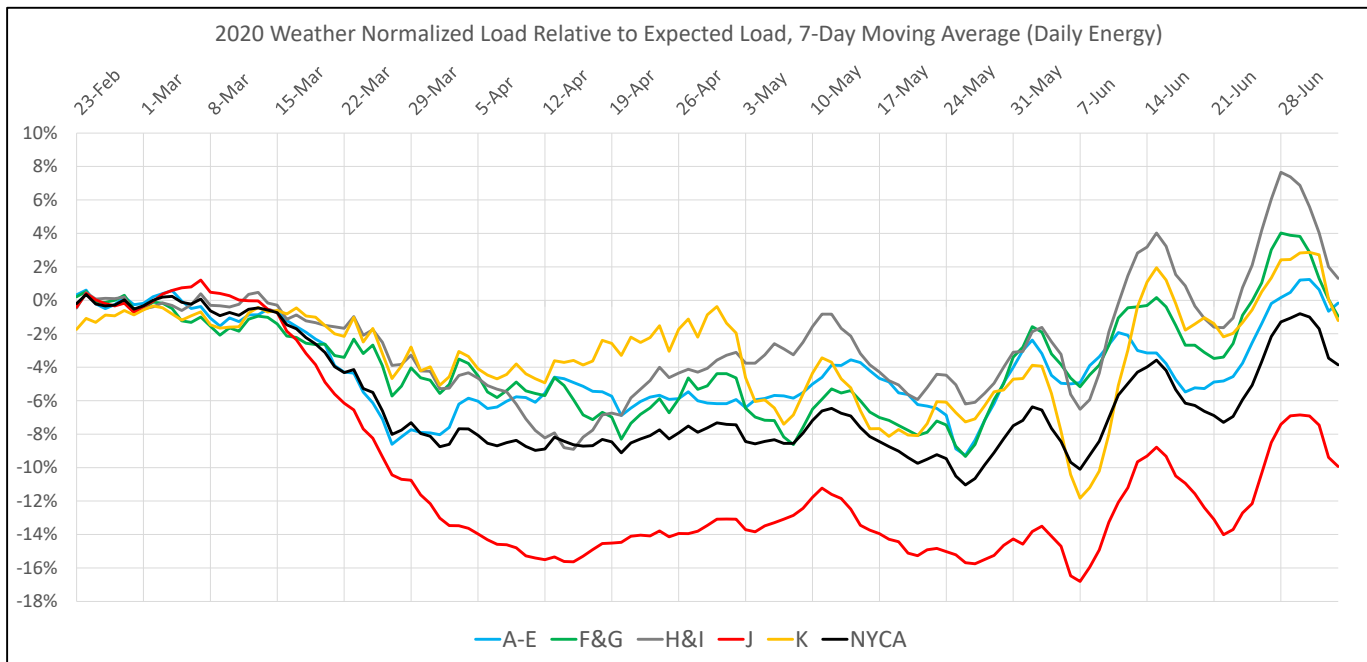
COVID-19: Estimated Load Impacts

NYCA Weekly Energy Impacts versus Expected*



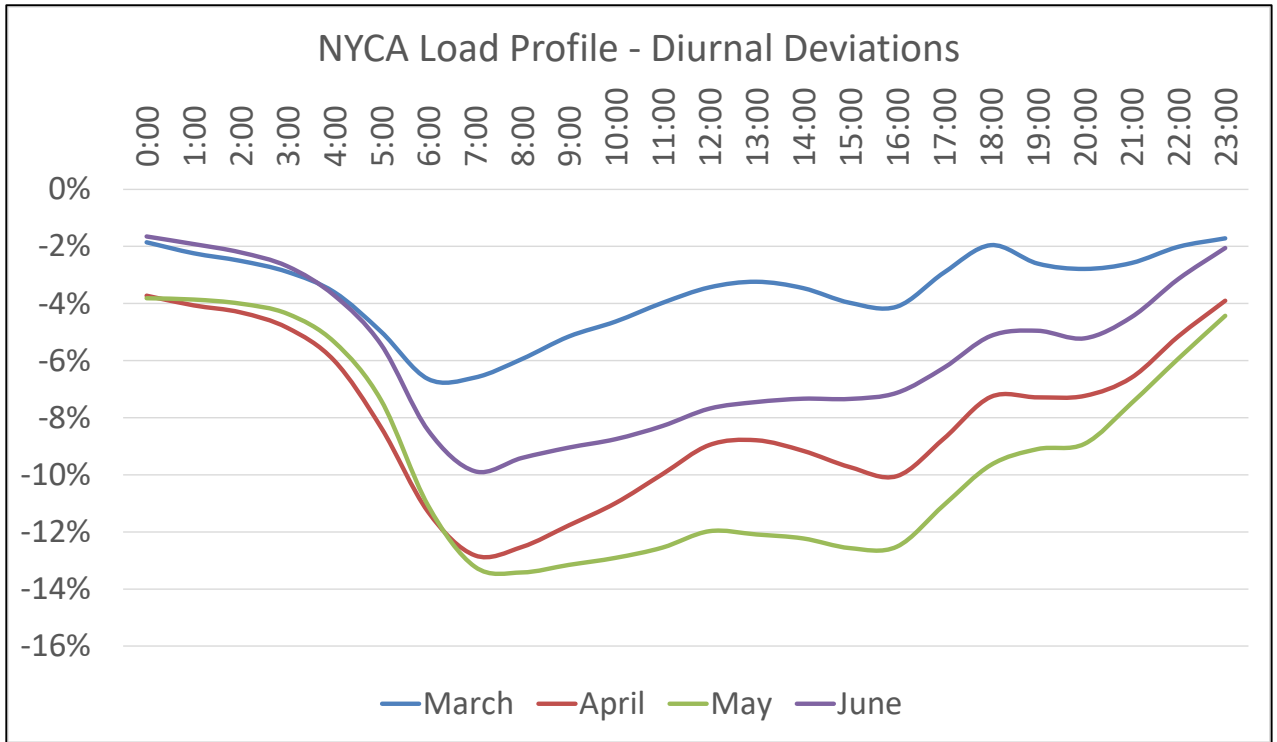
* Green bars indicate COVID-19 impact

Regional Energy Impacts



COVID-19: Estimated Load Impacts

NYCA Hourly Impacts versus Expected*



* Includes Weekdays and Weekends

Hour	March	April	May	June
0:00	-2%	-4%	-4%	-2%
1:00	-2%	-4%	-4%	-2%
2:00	-3%	-4%	-4%	-2%
3:00	-3%	-5%	-4%	-3%
4:00	-4%	-6%	-5%	-4%
5:00	-5%	-8%	-7%	-5%
6:00	-7%	-11%	-11%	-8%
7:00	-7%	-13%	-13%	-10%
8:00	-6%	-13%	-13%	-9%
9:00	-5%	-12%	-13%	-9%
10:00	-5%	-11%	-13%	-9%
11:00	-4%	-10%	-13%	-8%
12:00	-3%	-9%	-12%	-8%
13:00	-3%	-9%	-12%	-7%
14:00	-3%	-9%	-12%	-7%
15:00	-4%	-10%	-13%	-7%
16:00	-4%	-10%	-13%	-7%
17:00	-3%	-9%	-11%	-6%
18:00	-2%	-7%	-10%	-5%
19:00	-3%	-7%	-9%	-5%
20:00	-3%	-7%	-9%	-5%
21:00	-3%	-7%	-7%	-4%
22:00	-2%	-5%	-6%	-3%
23:00	-2%	-4%	-4%	-2%

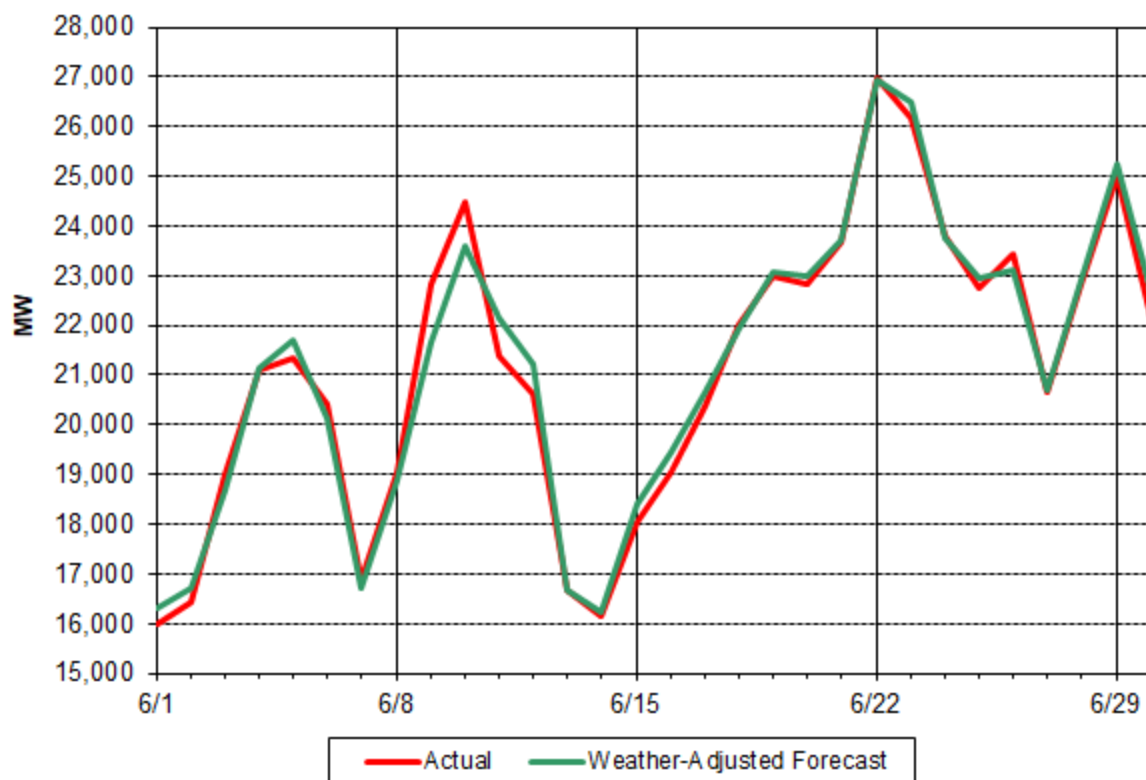
Percent Deviations

Hour	March	April	May	June
0:00	-261	-502	-513	-380
1:00	-306	-530	-498	-403
2:00	-336	-551	-503	-427
3:00	-386	-617	-541	-481
4:00	-487	-775	-669	-615
5:00	-712	-1140	-970	-903
6:00	-1042	-1686	-1588	-1407
7:00	-1093	-2027	-2038	-1709
8:00	-1002	-2029	-2137	-1724
9:00	-871	-1916	-2129	-1669
10:00	-781	-1785	-2111	-1614
11:00	-667	-1610	-2069	-1522
12:00	-571	-1432	-1982	-1411
13:00	-533	-1397	-2011	-1397
14:00	-562	-1448	-2039	-1419
15:00	-644	-1540	-2107	-1478
16:00	-672	-1612	-2125	-1494
17:00	-485	-1424	-1898	-1294
18:00	-332	-1192	-1652	-1069
19:00	-454	-1211	-1545	-1055
20:00	-485	-1217	-1518	-1060
21:00	-431	-1068	-1237	-899
22:00	-317	-781	-914	-645
23:00	-253	-552	-633	-447

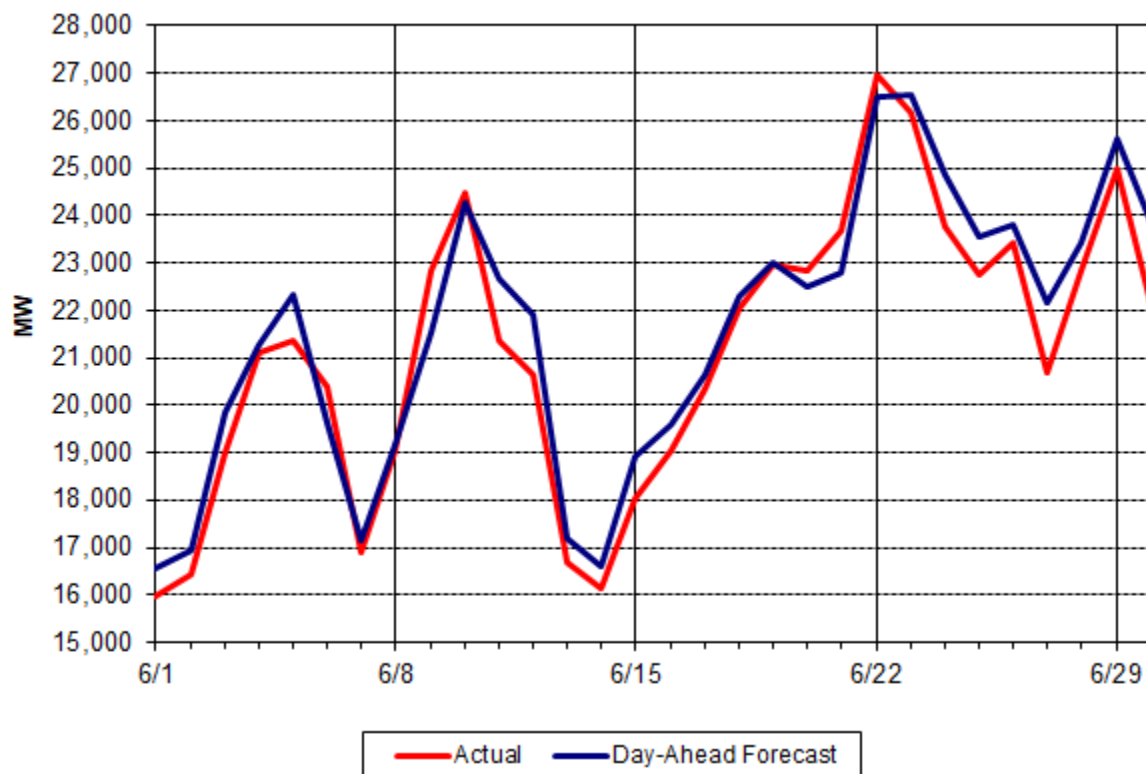
MW Deviations

Peak Hour

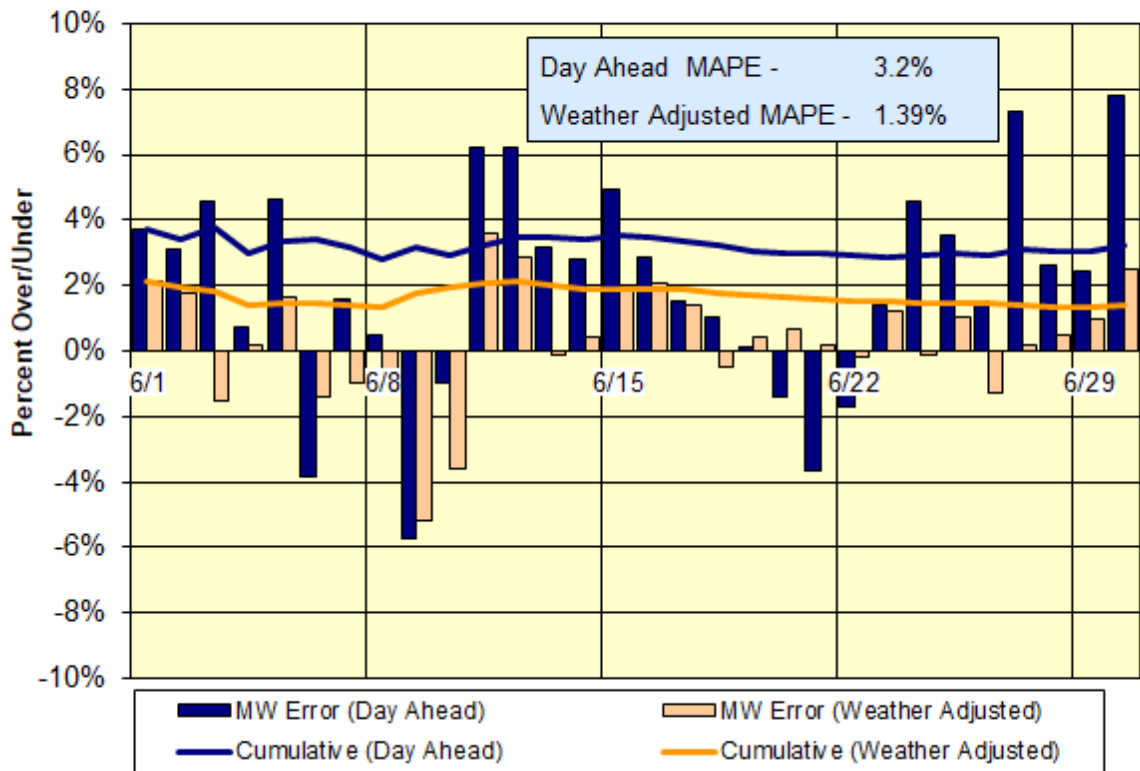
**NYISO Daily Peak Load - June 2020
Actual vs. Weather-Adjusted Forecast**



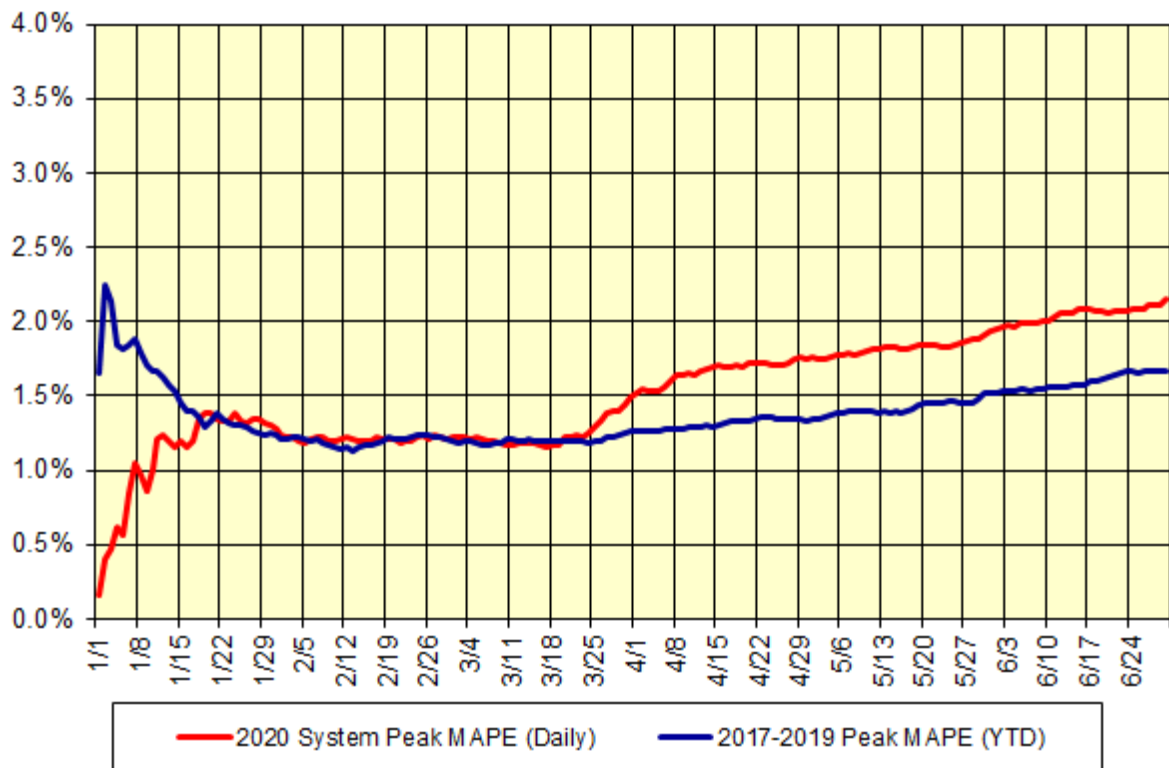
**NYISO Daily Peak Load - June 2020
Actual vs. Forecast**



Day Ahead Peak Forecast - June 2020 Percent Error - Actual & Weather-Adjusted



Day-Ahead Forecast Accuracy - Cumulative Performance 2020 Year-to-Date



**Summary Description of Regulatory Filings, Investigations,
Rulemakings and Related Orders in NYISO Matters – June 2020**

Filing Date	Filing Summary	Docket	Order Date	Order Summary
04/01/2020	NYISO filing re: request for tariff waiver of MST Section 4.4.1.2.1 concerning minimum generation bids	ER20-1470-000	06/01/2020	Order granted waiver for a period of eight months, not to extend beyond December 31, 2020
04/09/2020	Joint 205 NYISO and Consolidated Edison re: large generator interconnection agreement (SA 2520) between NYISO and Con Edison regarding the East River 1 generating station	ER20-1524-000	06/05/2020	Order accepted agreement effective 03/26/2020, as requested
04/09/2020	Joint 205 NYISO and Consolidated Edison re: large generator interconnection agreement (SA 2521) between NYISO and Con Edison regarding the East River 2 generating station	ER20-1526-000	06/05/2020	Order accepted agreement effective 03/26/2020, as requested
04/17/2020	NYISO 205 filing on behalf of Niagara Mohawk Power Corporation re: Engineering and Procurement Agreement (SA 2531) between Niagara Mohawk and New York Transco, LLC	ER20-1584-000	06/15/2020	Order accepted agreement effective 03/18/2020, as requested
04/20/2020	Joint NYISO and NYSEG 205 filing re: small generator interconnection agreement (SA 2526) among the NYISO, NYSEG, and Duke Energy Renewables Solar, LLC concerning the Niagara Solar facility	ER20-1602-000	06/18/2020	Order accepted agreement effective 04/06/2020, as requested
04/20/2020	Joint NYISO and NYSEG 205 filing re: small generator interconnection agreement (SA 2527) among the NYISO, NYSEG, and Duke Energy Renewables Solar, LLC concerning the Scipio Solar facility	ER20-1603-000	06/18/2020	Order accepted agreement effective 04/06/2020, as requested
04/28/2020	NYISO compliance filing re: revisions directed by Order Nos. 845 and 845-A which amended the pro forma Large Generator Interconnection Agreement and Large Generator Interconnection Procedures	ER19-1949-001	06/04/2020	Order accepted compliance revisions effective 04/20/20, as requested
04/29/2020	NYISO 205 filing on behalf of the New York Power Authority (“NYPA”) re: a new Section 6.10.8 to Rate Schedule 10 of the NYISO OATT for the establishment of a Regulated Transmission Facility Charge to permit NYPA’s recovery of its revenue requirement associated with the “AC Projects”	ER20-1688-000	06/17/2020	Order accepted revisions effective 07/01/2020, as requested
04/30/2020	NYISO 205 filing re: enhancements to the Energy Storage Resource participation model	ER20-1696-000	06/17/2020	Order accepted revisions subject to a two-week advance notice compliance filing notifying FERC of the actual effective date

06/05/2020	NYISO filing re: answer to third party comments filed in response to NYISO's filing of <i>Proposed Enhancements to the "Part A Exemption Test" Under the "Buyer-Side" Capacity Market Power Mitigation Measures</i>	ER20-1718-000		
06/10/2020	NYISO filing re: questions to the New York Department of Public Service ("NYDPS") regarding The Brattle Group Analysis results filed by the NYDPS staff for the 06/19/2020 technical conference on the Motion of the Commission to Consider Resource Adequacy	PSC Case No. 19-E-0530		
06/15/2020	NYISO filing on behalf of Niagara Mohawk Power Corporation re: compliance revisions to its transmission service charge under NYISO OATT Sections 14.1 and 14.2	ER20-2051-000		
06/18/2020	NYISO and Consolidated Edison Company of New York joint 205 filing re: large generator interconnection agreement (SA 2535) between NYISO, Con Edison and NRG Berrians East Development	ER20-2090-000		
06/18/2020	IRC comments re: response to FERC's Proposed Policy Statement concerning Waiver of Tariff Requirements	PL20-7-000		
06/19/2020	NYISO 205 filing re: sustainability of operating reserves and energy storage resource schedules during reserve pickups	ER20-2113-000		
06/22/2020	NYISO filings to the NYPSC re: a confidential filing concerning an amendment to the agreement associated with the five-year revolving credit facility authorized by the 11/16/2008 Order, which was filed in this proceeding on 03/08/2020 and a public filing of a verified report regarding the costs and expenses associated with the credit facility authorized by the 11/16/2008 Order	PSC Case No. 18-E-0439		
06/26/2020	NYISO compliance filing on behalf of New York Transco, LLC re: clarifying revisions to the NYISO OATT to avoid any potential confusion as to the proper cost allocation mechanism for the NY Transco transmission facilities	ER15-572-008		
06/26/2020	NYISO confidential filing re: a copy of the Consolidated Edison System Restoration Plan dated 06/01/2020	ER12-2568-000		
06/30/2020	NYISO compliance filing on behalf of New York Transco, LLC. re: Order No. 864 – Accumulated Deferred Income Tax	ER20-2259-000		