



Monthly Report

A Report by the
New York Independent System Operator

April 2021

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April 2021 Report

Operations & Reliability Department New York Independent System Operator

Prepared by NYISO Operations Analysis and Services, based on settlements initial invoice data collected on or before May 8, 2021.

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April 2021 Operations Performance Highlights

- Peak load of 17,623 MW occurred on 04/22/2021 HB 20
- All-time winter capability period peak load of 25,738 MW occurred on 1/7/2014 HB 18
- 1.28 hours of Thunder Storm Alerts were declared
- 0 hours of NERC TLR level 3 curtailment
- 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.
- NYISO began securing Brentwood-Pilgrim 69kV (#768) & Elwood-Pulaski 69kV (#670) facilities on LI in the Real-Time Market on 04/13/2021 and in the Day-Ahead Market execution occurring on 04/14/2021 for the 04/15/2021 market day.
- Unit 3 at the Indian Point Energy Center (IP-3), a nuclear generating facility, was deactivated on 04/30/2021 HB23.

The following table identifies the estimated production cost savings associated with the Broader Regional Market initiatives.

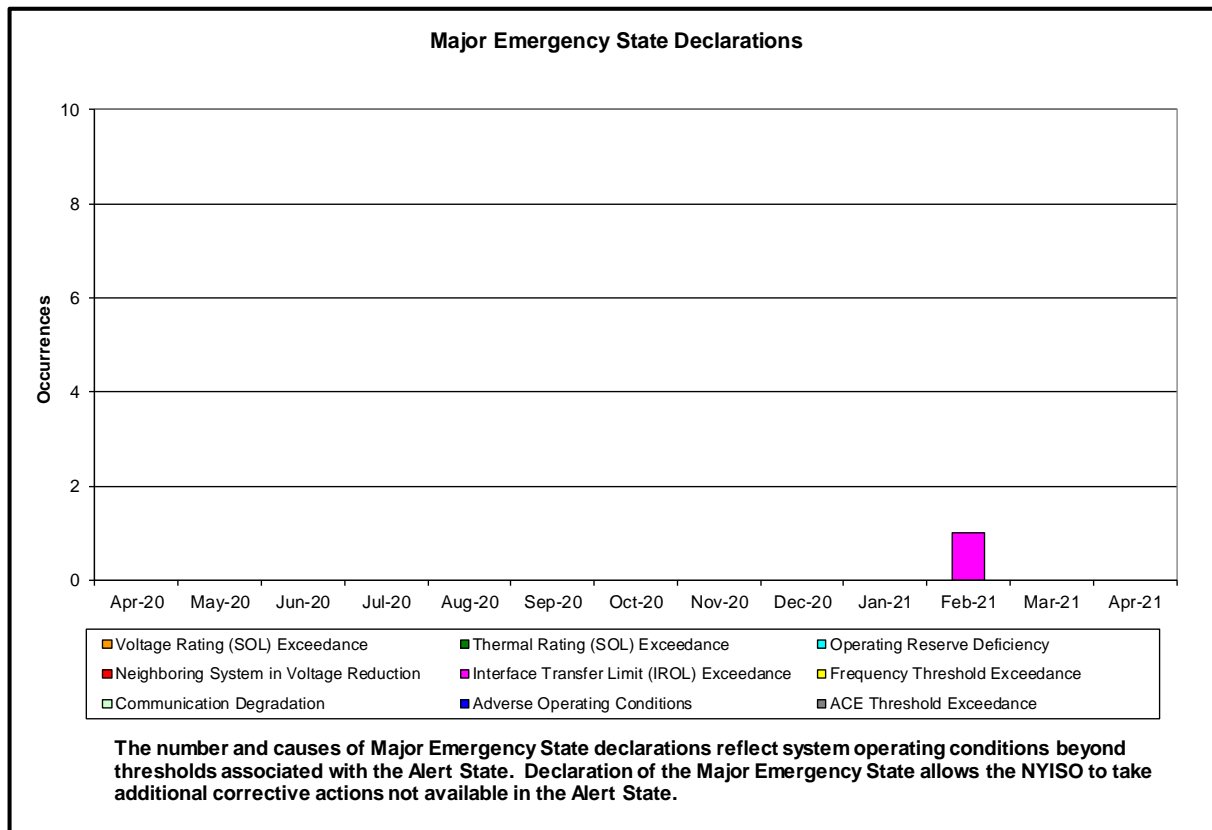
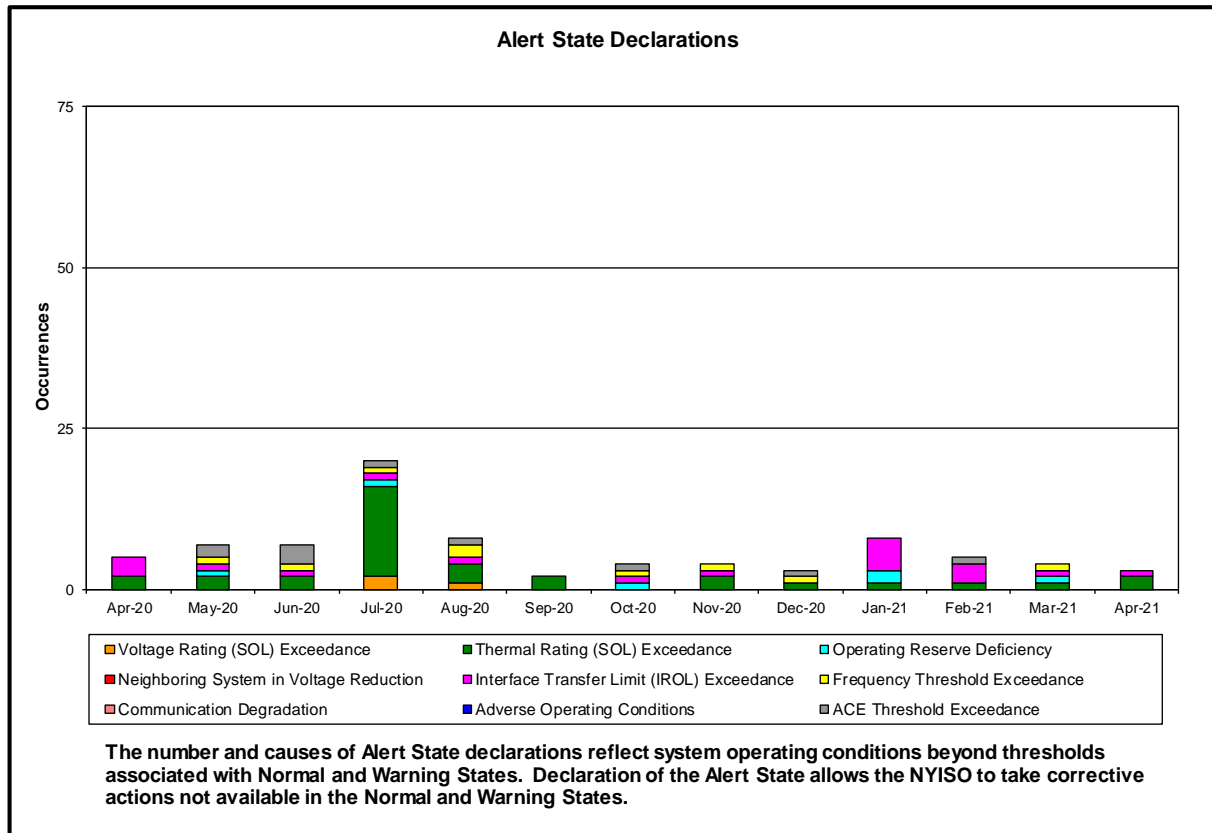
	Current Month Value (\$M)	Year-to-Date Value (\$M)
NY Savings from PJM-NY Congestion Coordination	\$4.01	\$9.19
NY Savings from PJM-NY Coordinated Transaction Scheduling	(\$0.33)	\$1.32
NY Savings from NE-NY Coordinated Transaction Scheduling	\$0.09	(\$2.64)
Total NY Savings	\$3.78	\$7.87
Regional Savings from PJM-NY Coordinated Transaction Scheduling	\$0.58	\$1.76
Regional Savings from NE-NY Coordinated Transaction Scheduling	\$0.05	(\$0.43)
Total Regional Savings	\$0.64	\$1.33

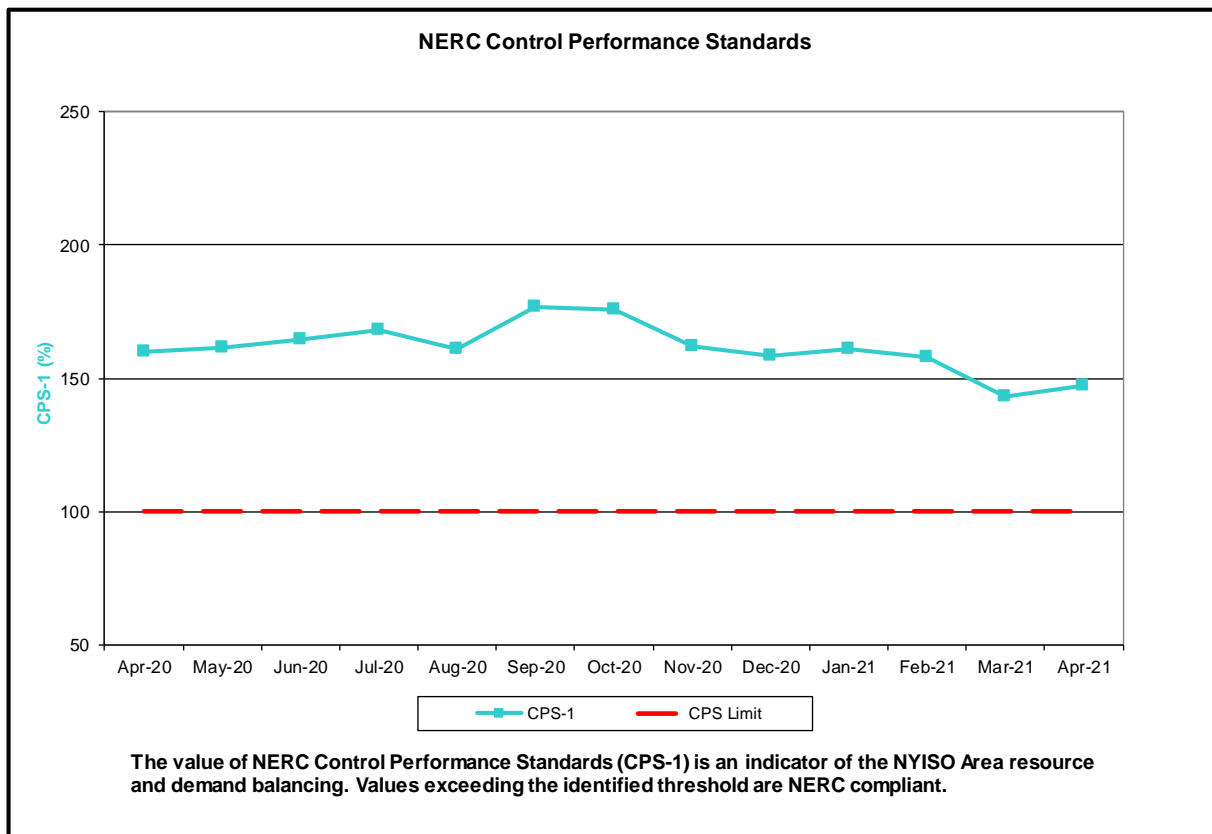
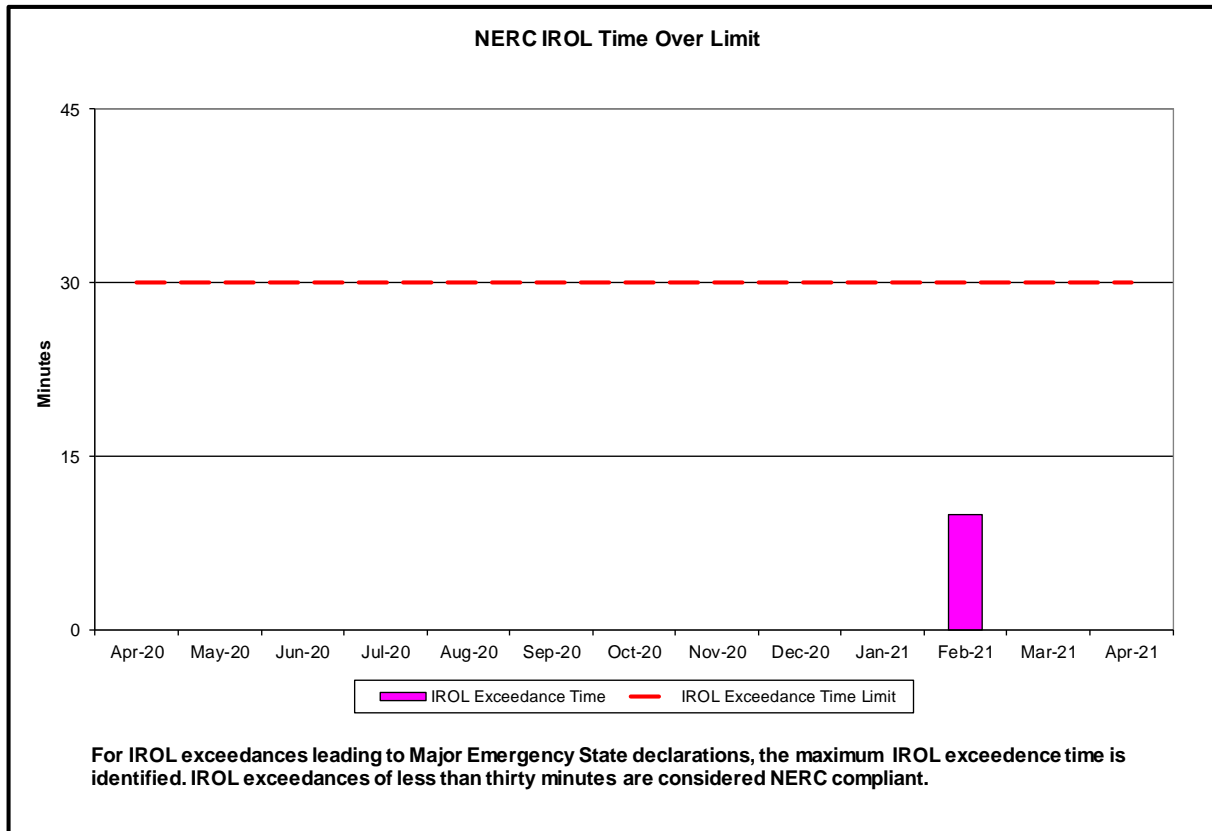
- Statewide uplift cost monthly average was (\$0.18)/MWh.
- The following table identifies the Monthly ICAP spot market prices and the price delta.

Spot Auction Price Results	NYCA	Lower Hudson Valley Zones	New York City Zone	Long Island Zone
May 2021 Spot Price	\$5.35	\$5.35	\$5.35	\$9.53
October 2020 Spot Price	\$2.03	\$2.03	\$18.15	\$5.21
Delta	\$3.32	\$3.32	(\$12.80)	\$4.32

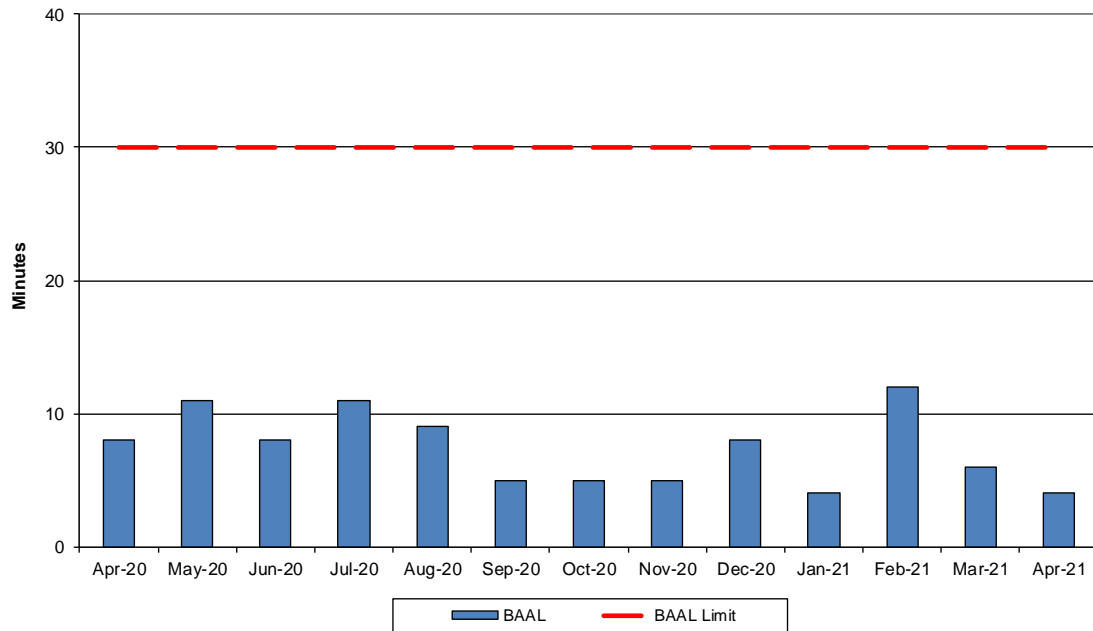
- Price changes from October 2020 to May 2021 are driven by changes in supply as well as Capability Year inputs such as demand curve parameters, Locational Capacity Requirements, the Installed Reserve Margin and the load forecast.

Reliability Performance Metrics



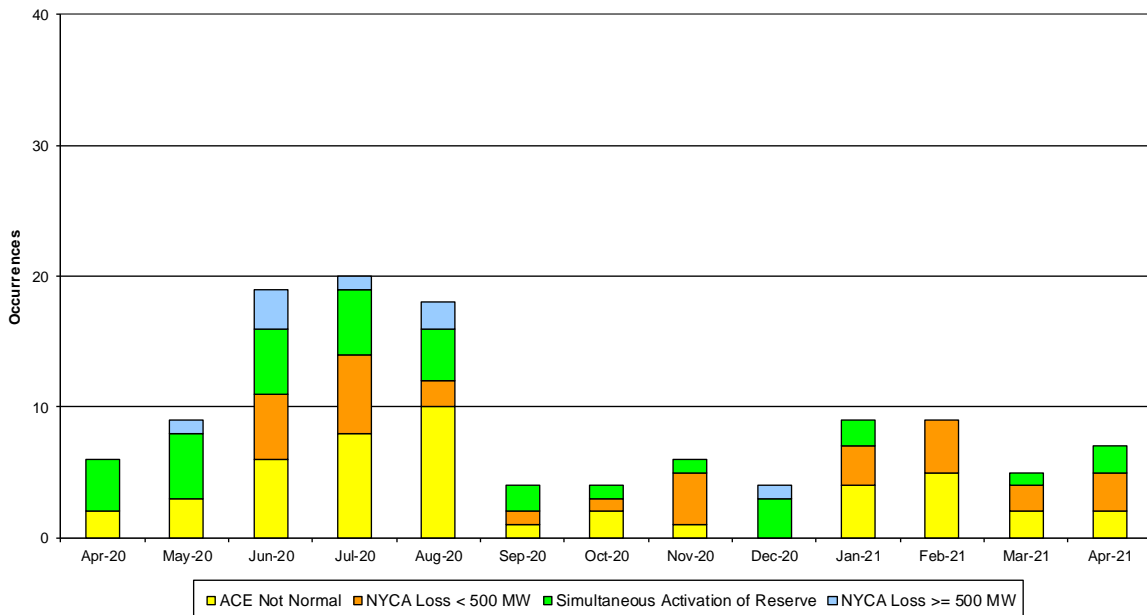


NERC Balancing Authority ACE Limit Standard



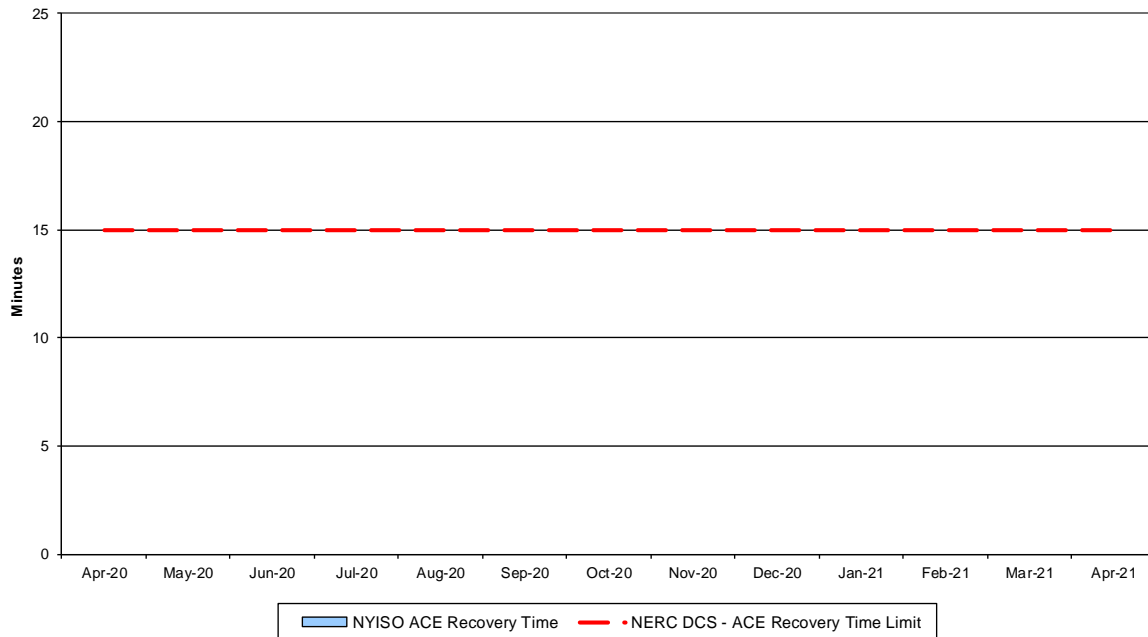
The amount of time the clock-minute average ACE exceeds the clock-minute Balancing Authority ACE Limit (BAAL) is an indicator of the NYISO Area resource and demand balancing. The maximum BAAL exceedance time is identified. BAAL exceedances of less than 30 consecutive clock-minutes are NERC compliant.

Reserve Activations



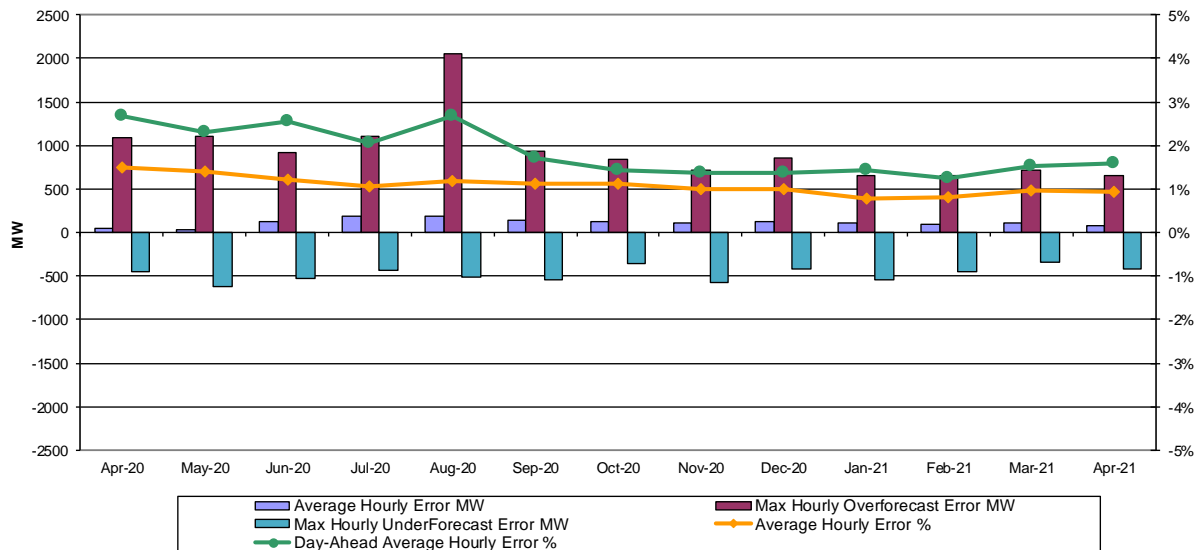
NYISO Reserve Activations are indicators of the need to respond to unexpected operational conditions within the NYISO Area or to assist a neighboring Area (Simultaneous Activation of Reserves) by activating an immediate resource and demand balancing operation.

DCS Event Time to ACE Recovery



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

Load Forecast Performance

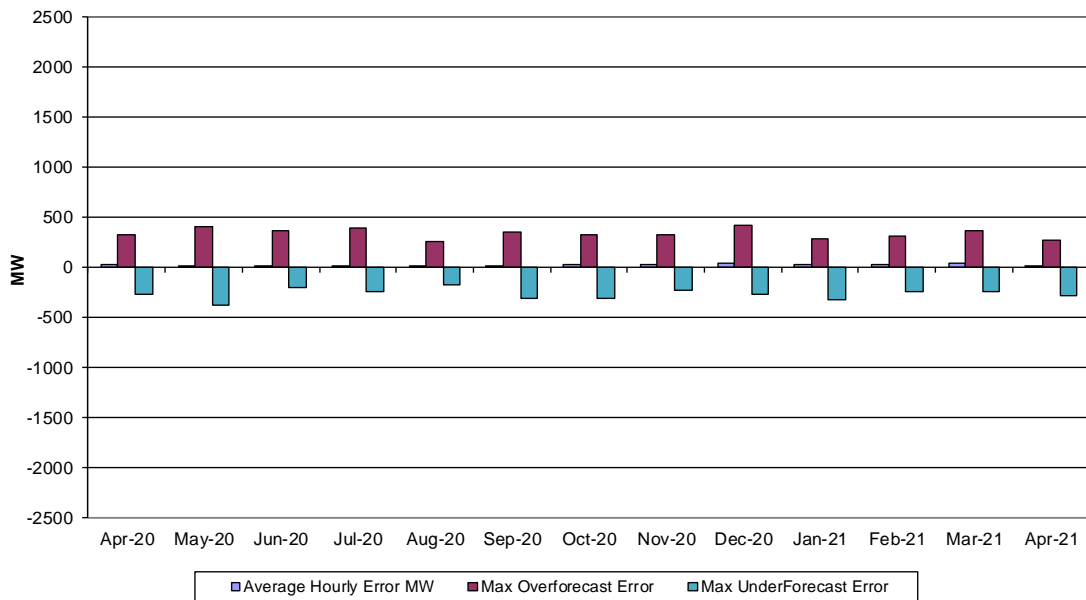


Hourly Error MW - Value of the difference between the hourly average actual load demand and the average hour ahead forecast load demand.

Average Hourly Error % - Average value of the ratio of hourly average error magnitude to hourly average actual load demand.

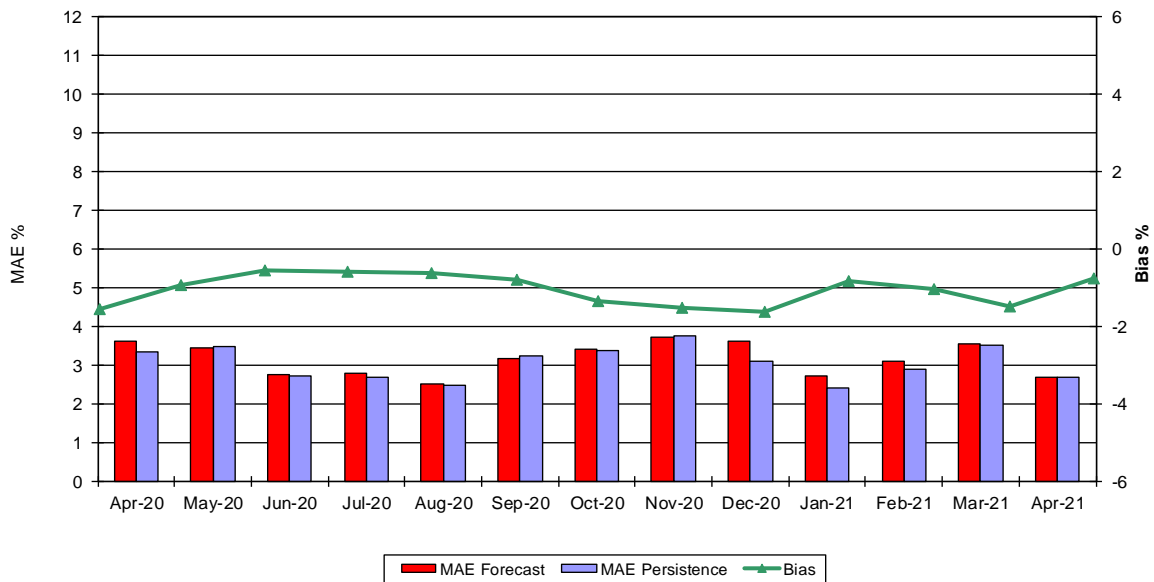
Day-Ahead Average Hourly Error % - Average across all hours of the month of the absolute value of the difference between actual load demand and the Day-Ahead forecast load demand, divided by the actual load demand.

Wind Forecast Performance Hour Ahead MW Error



Hourly Error MW - Value of the difference between the hourly average actual wind generation and the average hour ahead forecast wind generation.

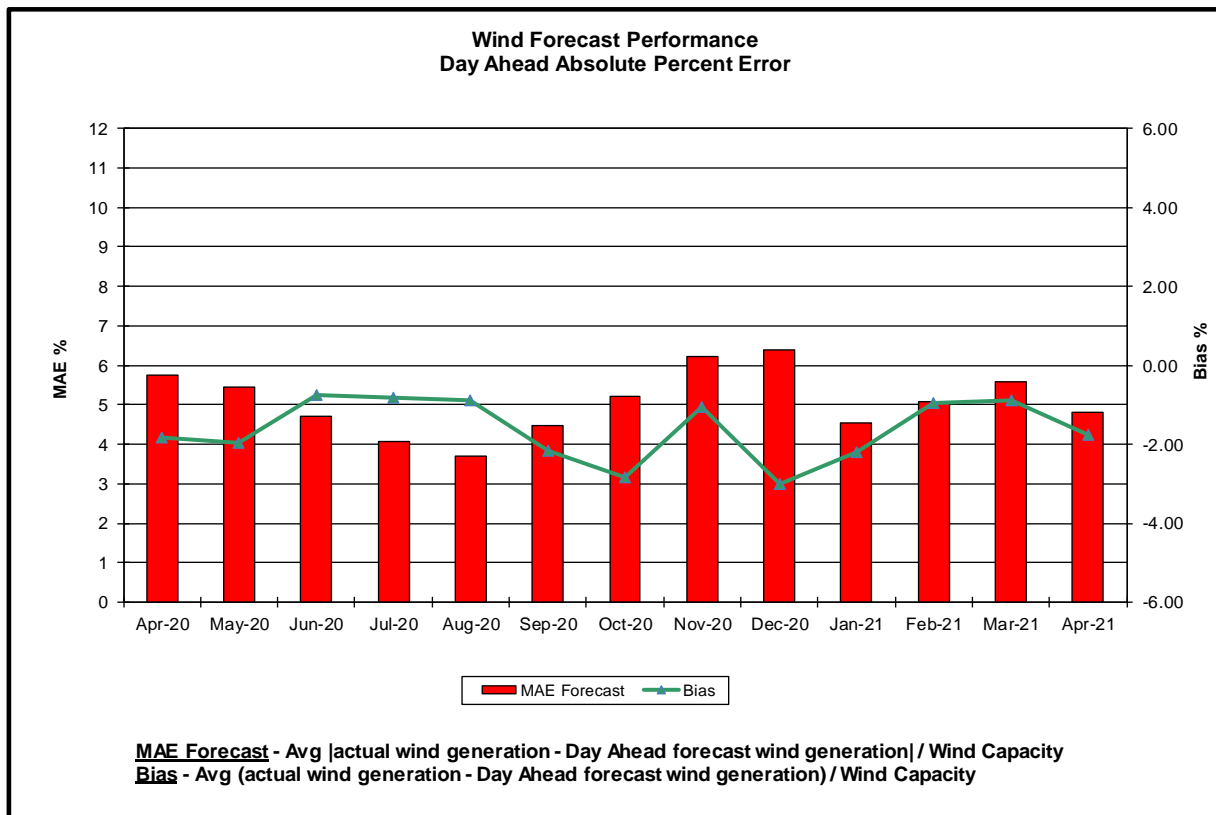
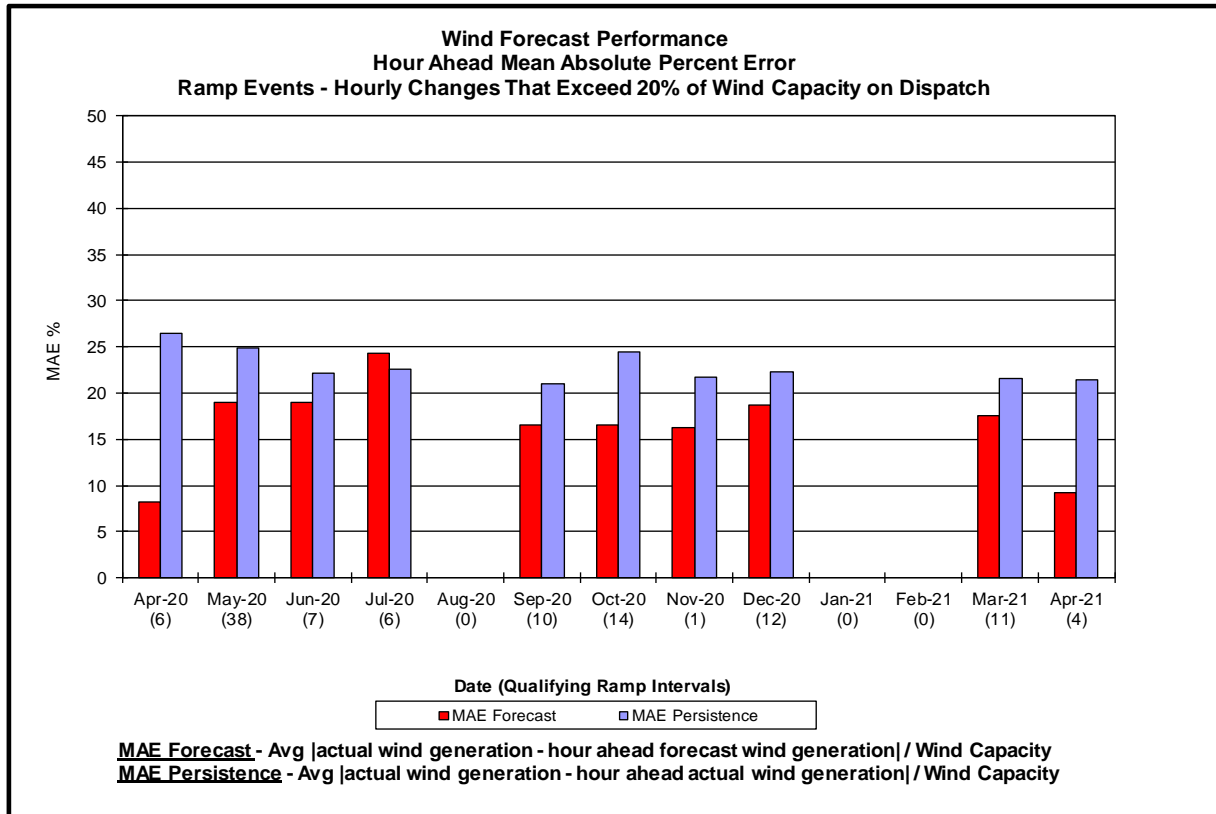
Wind Forecast Performance Hour Ahead Percent Error

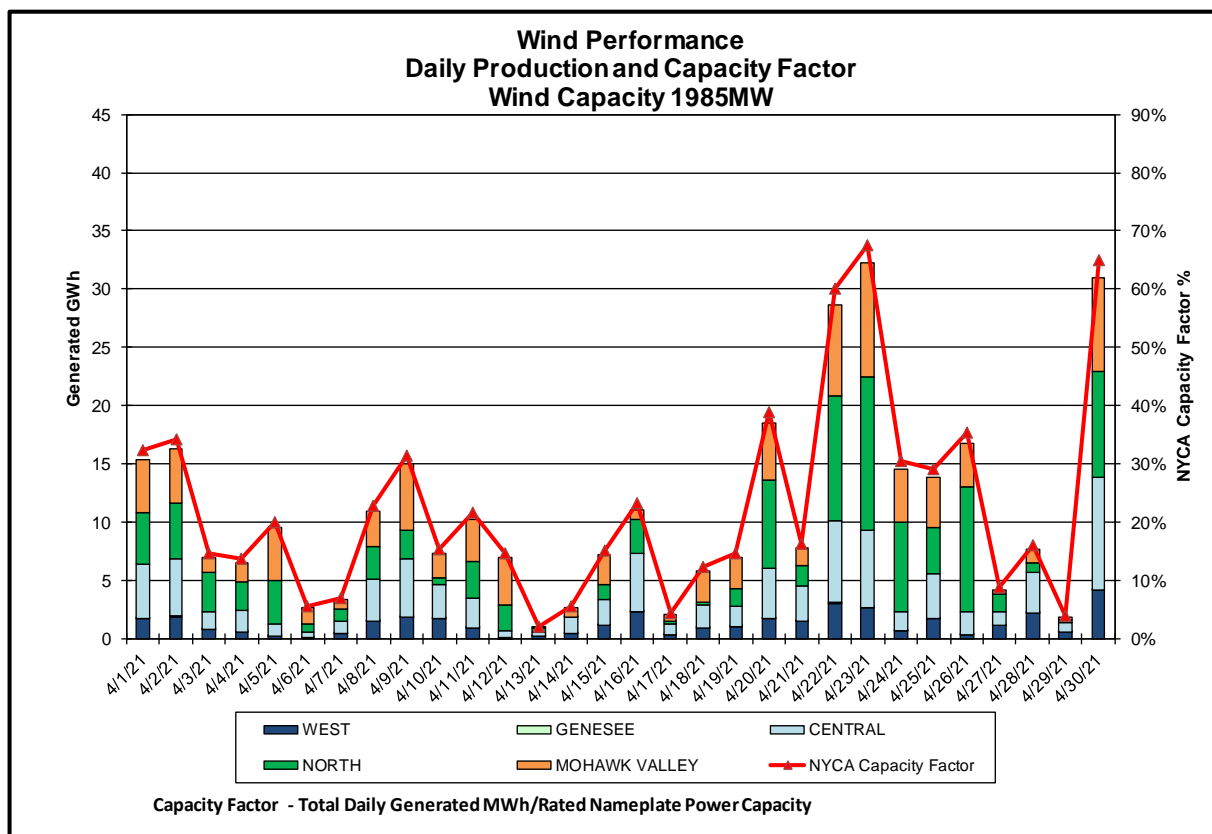
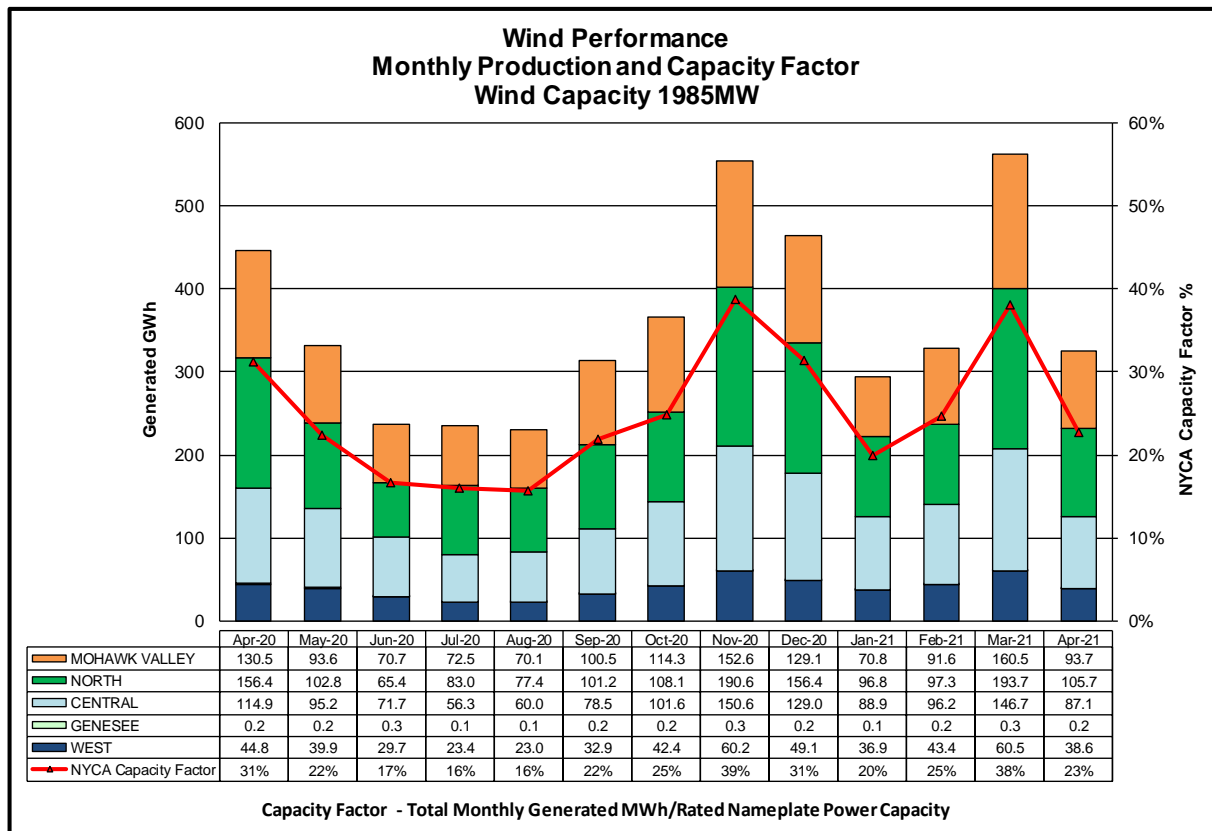


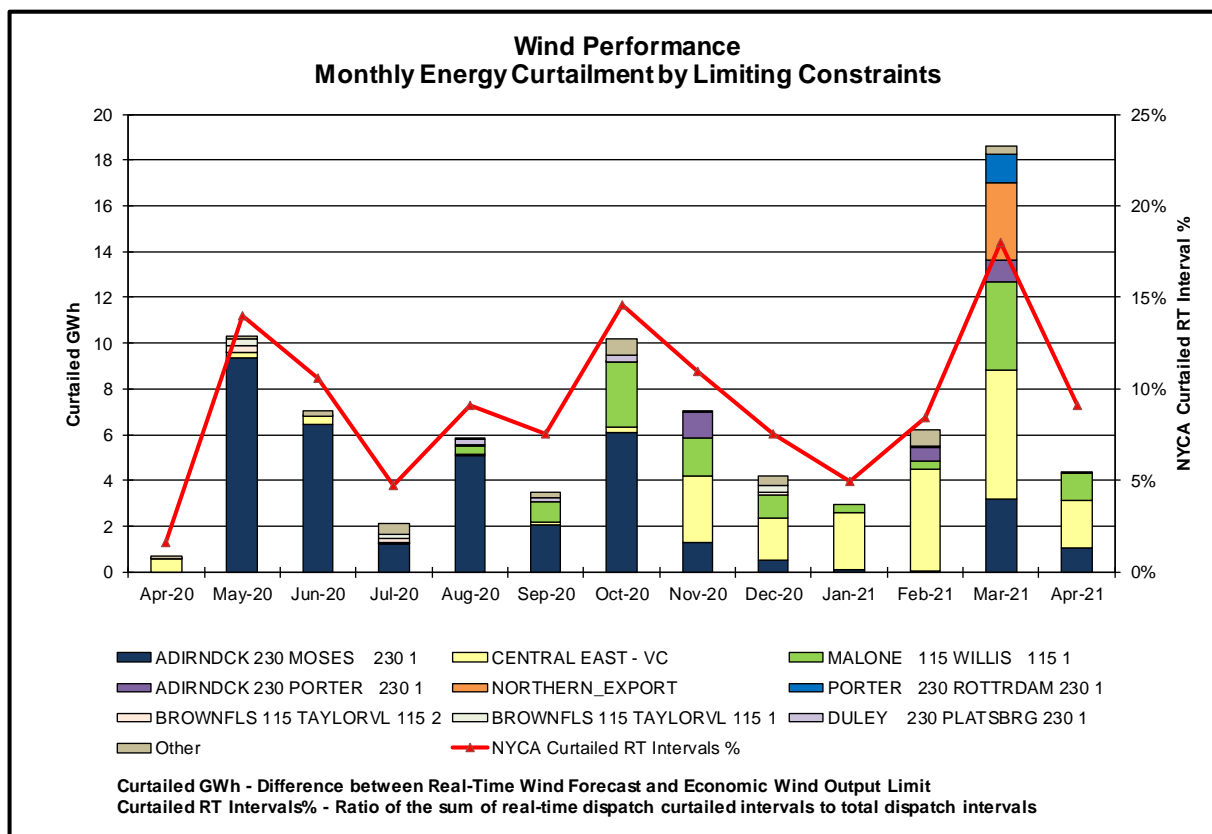
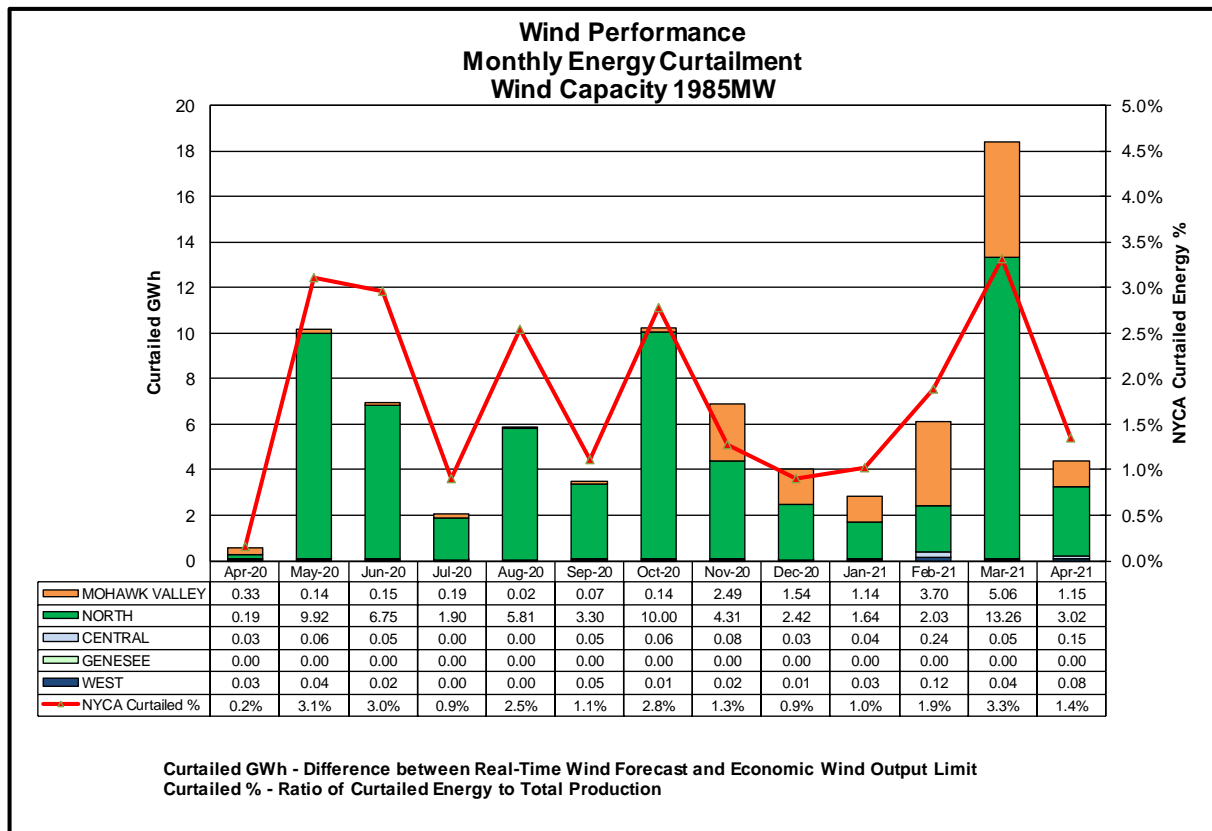
MAE Forecast - Avg [actual wind generation - hour ahead forecast wind generation] / Wind Capacity

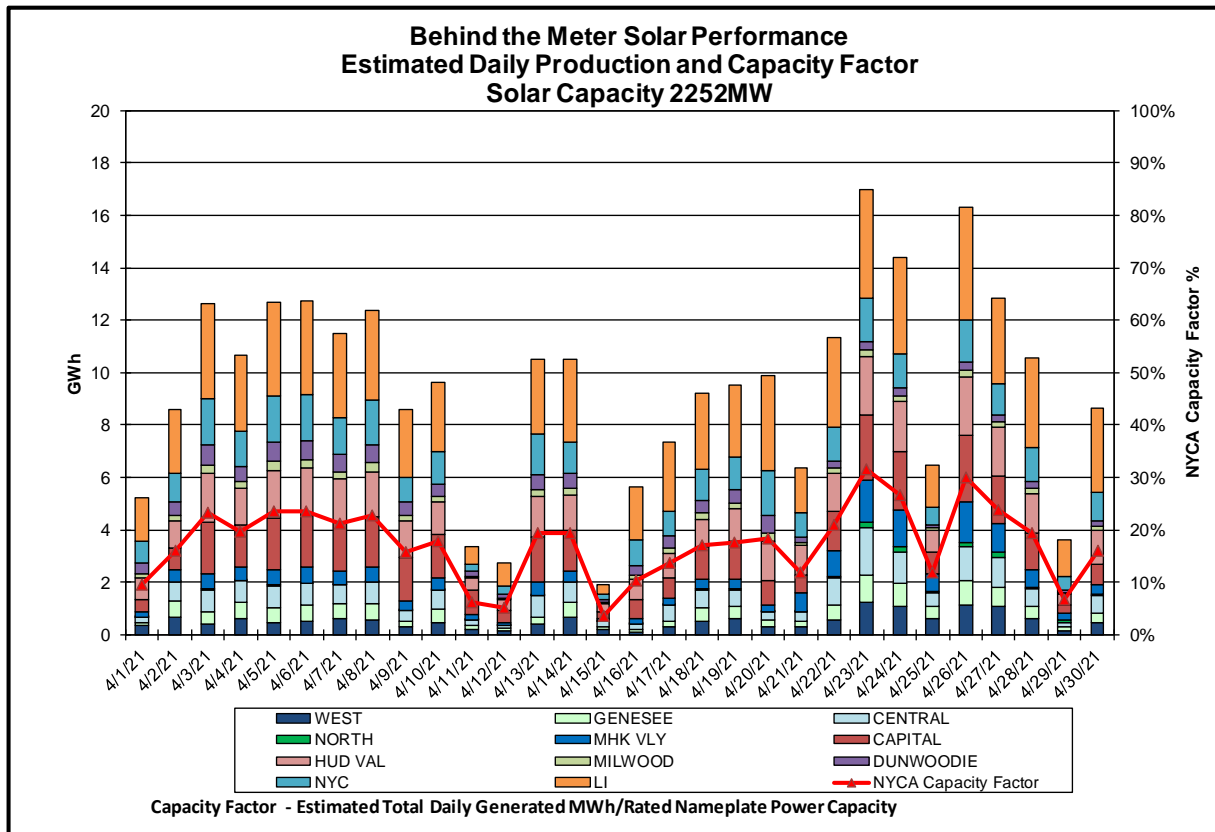
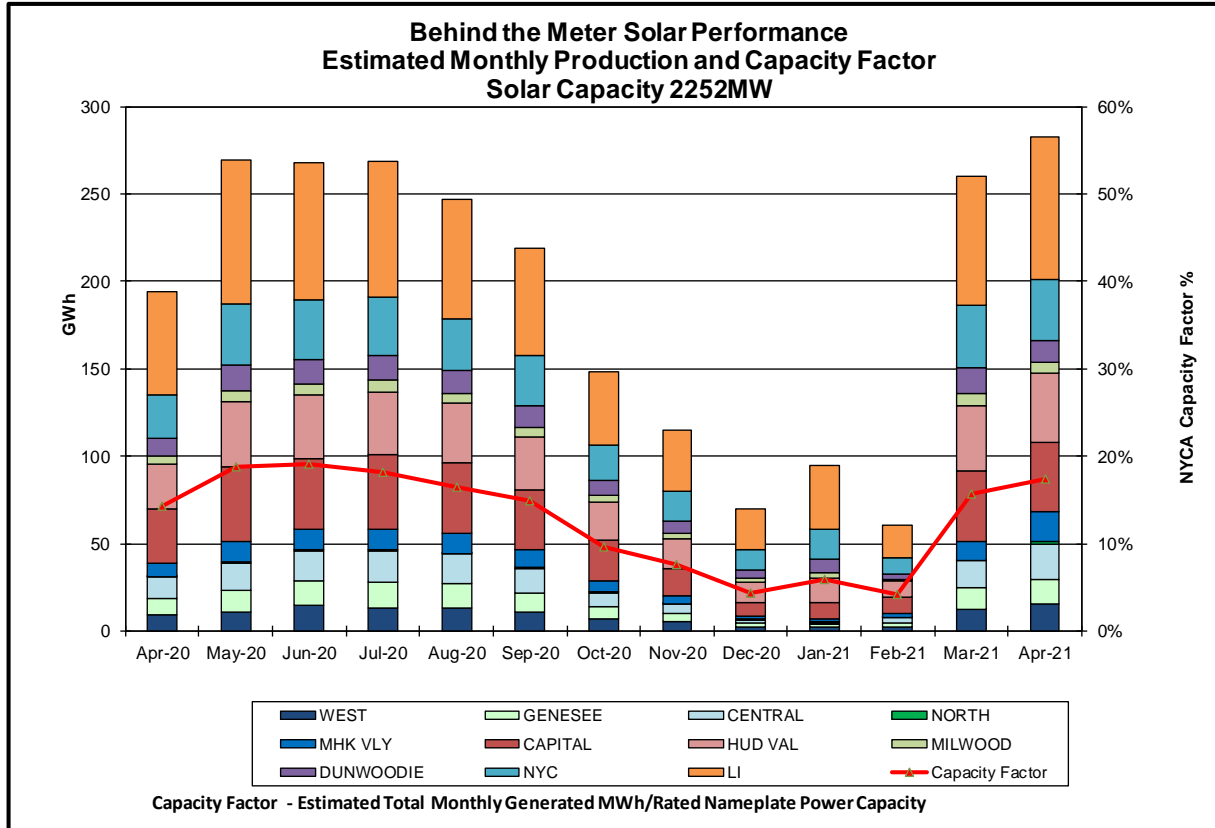
MAE Persistence - Avg [actual wind generation - hour ahead actual wind generation] / Wind Capacity

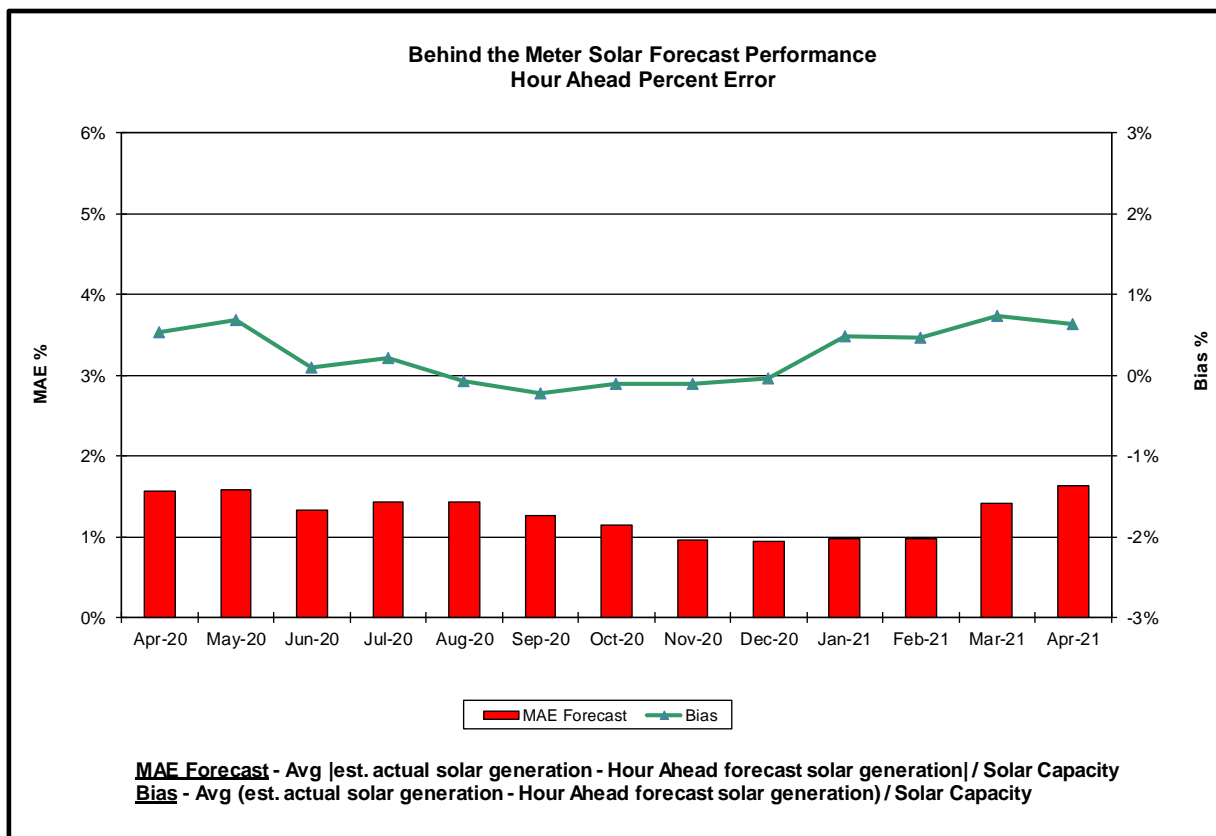
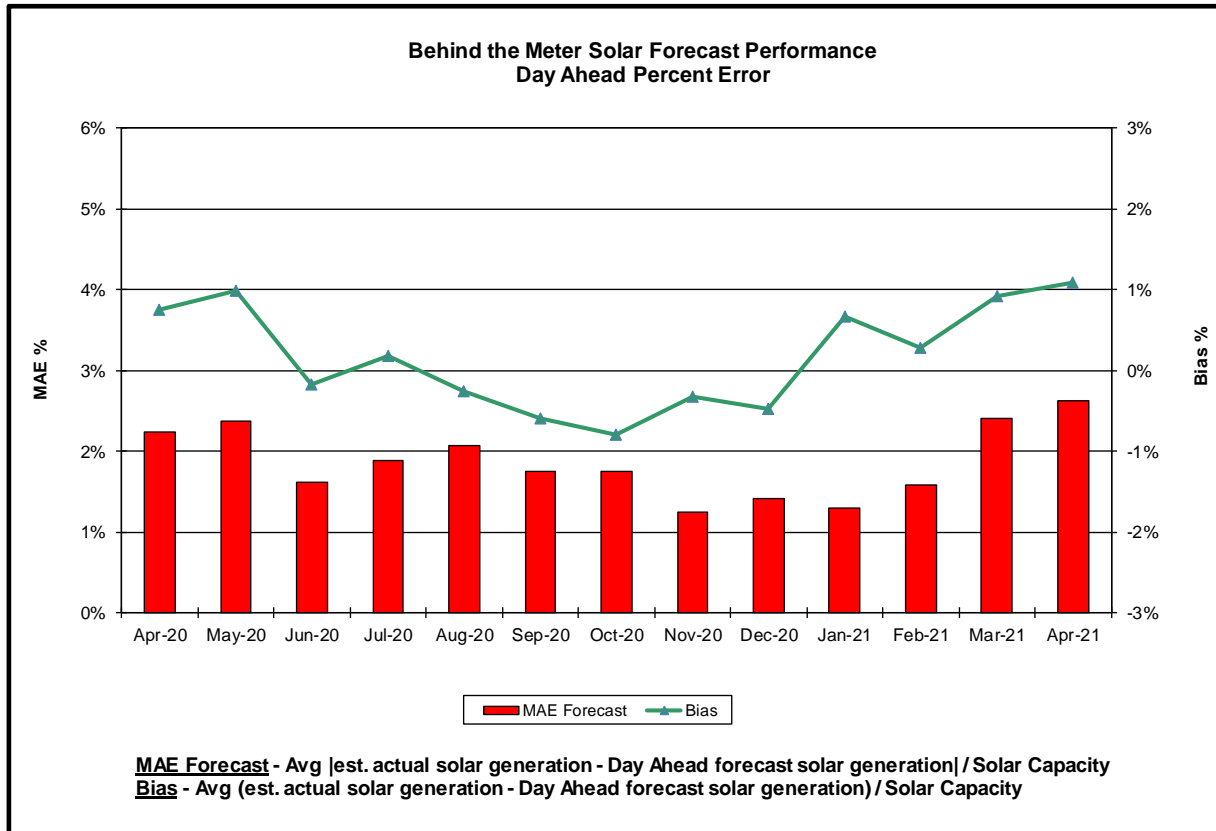
Bias - Avg (actual wind generation - hour ahead forecast wind generation) / Wind Capacity

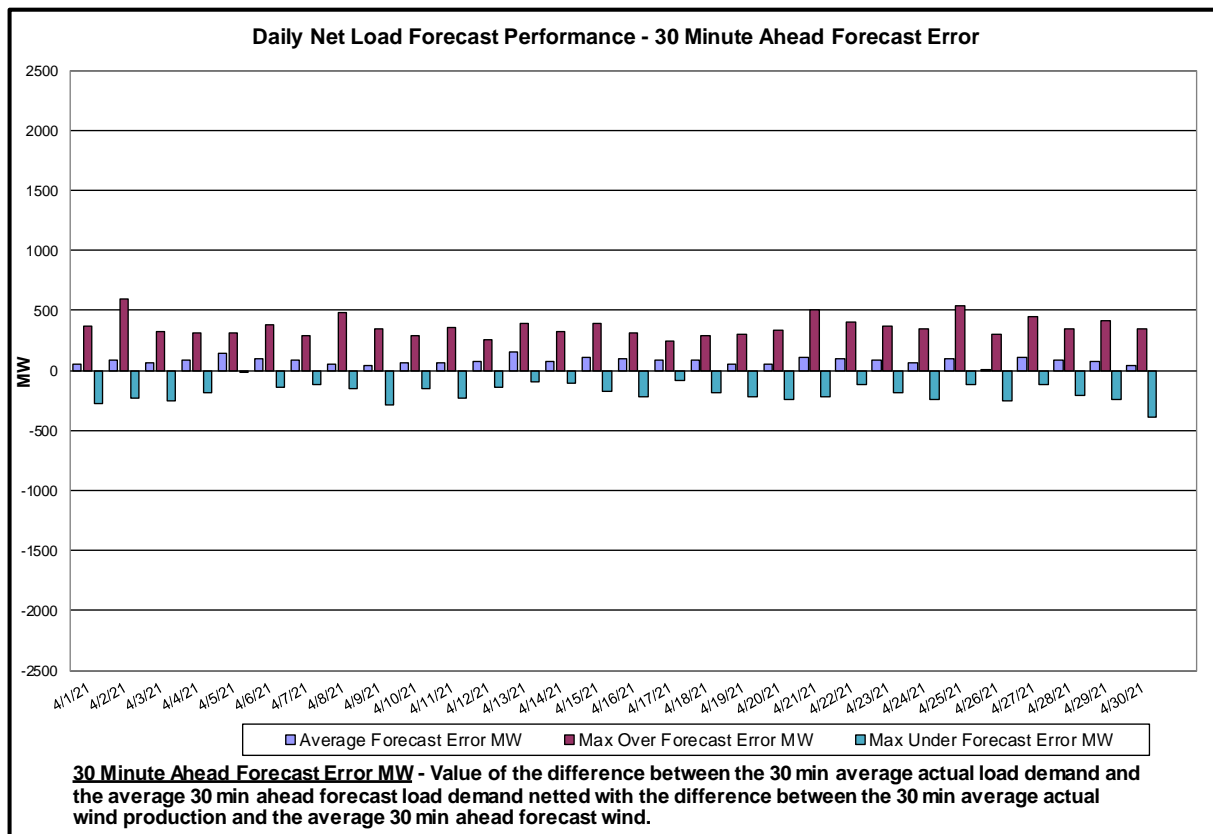
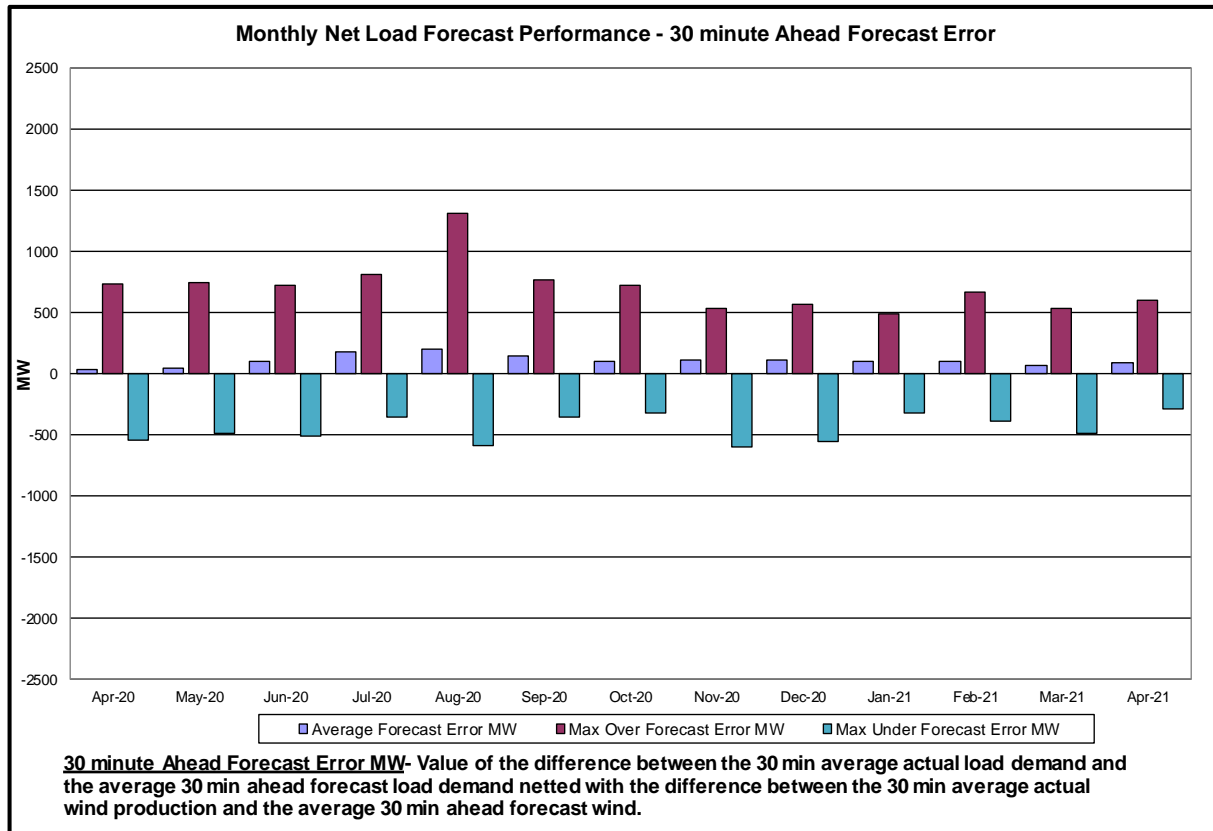


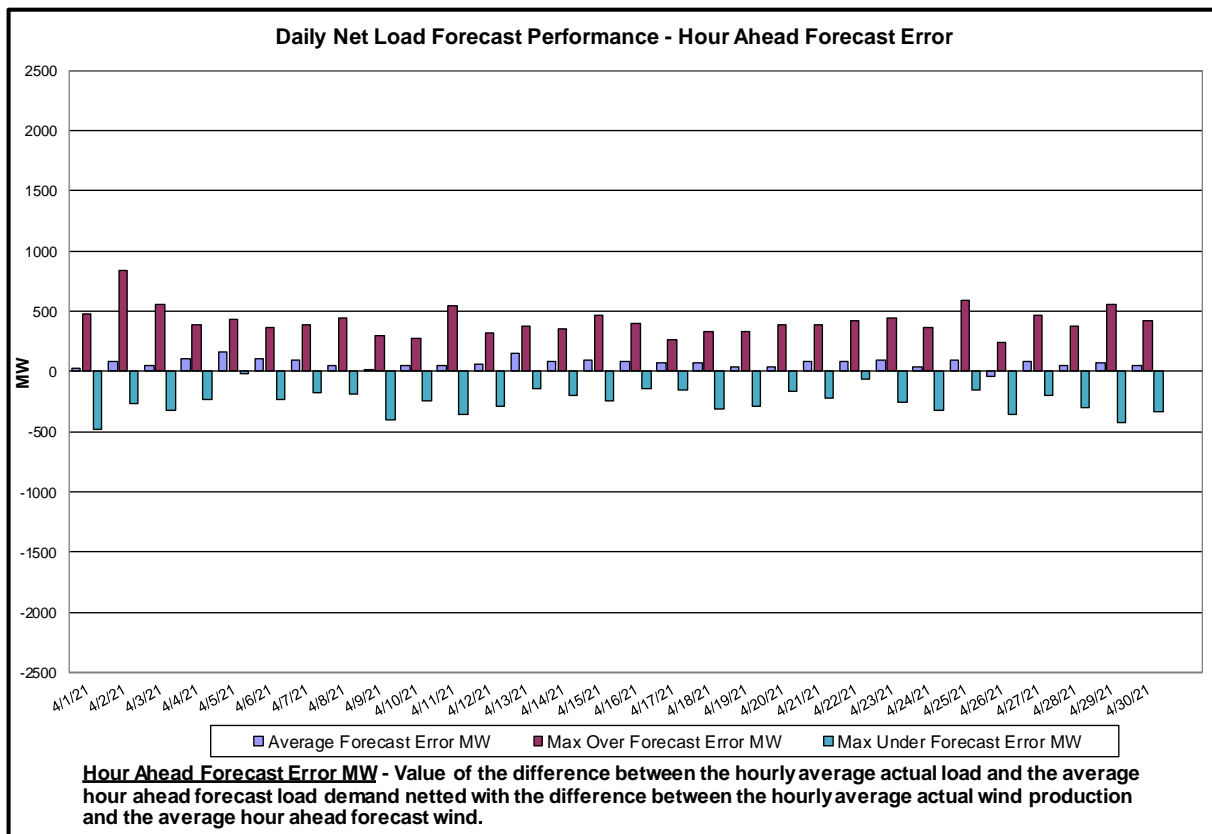
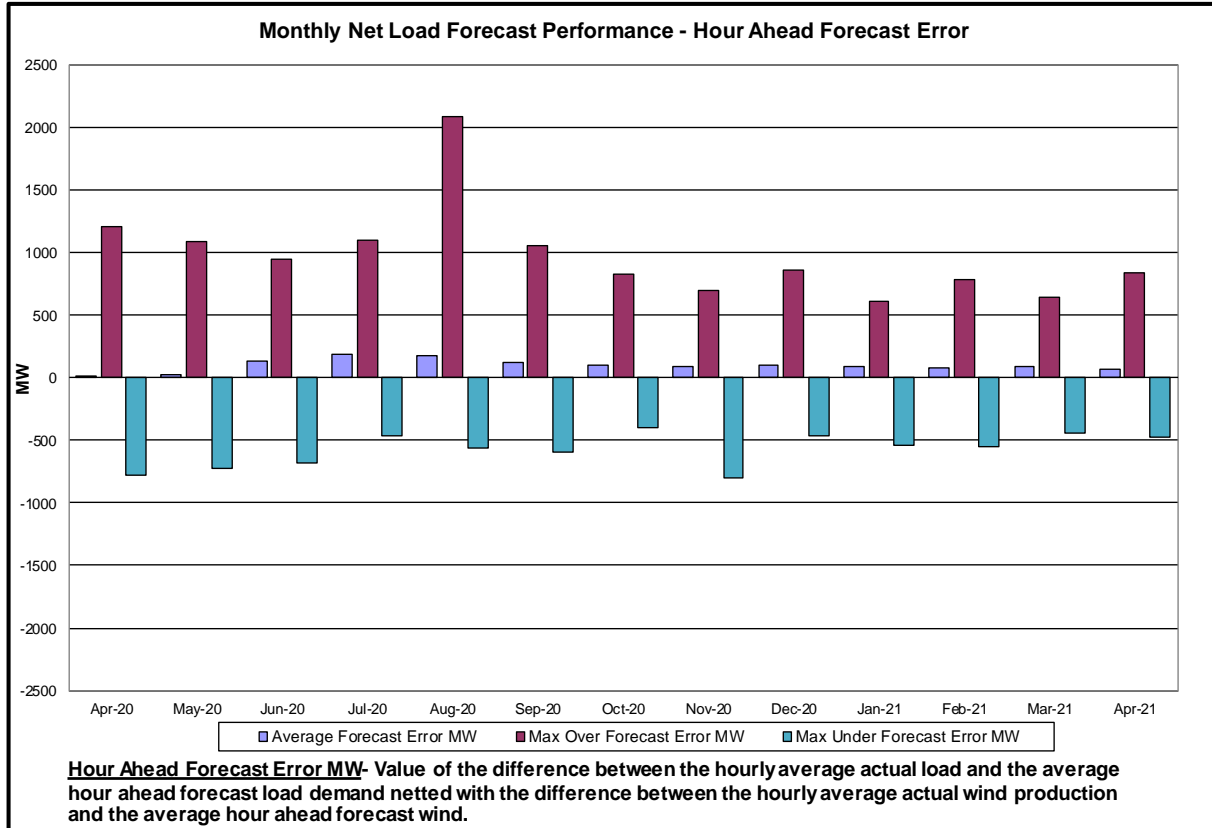


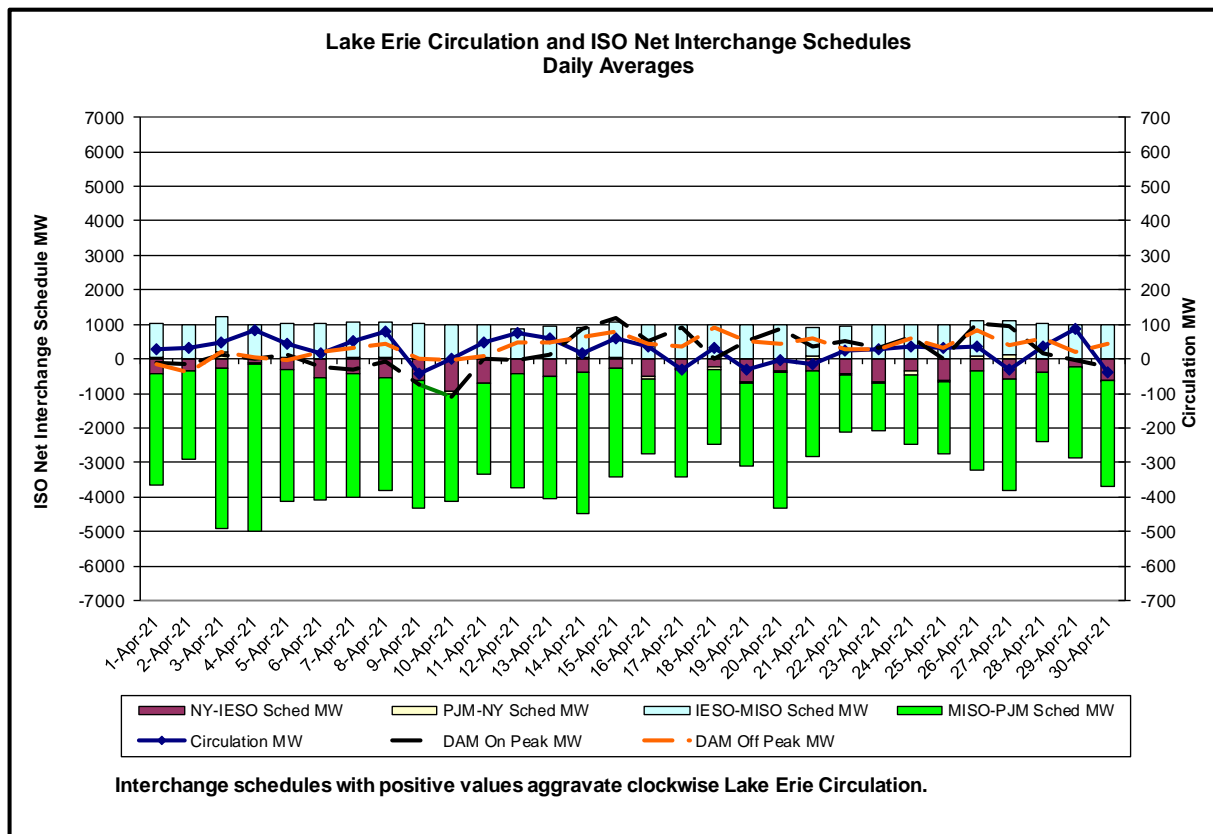
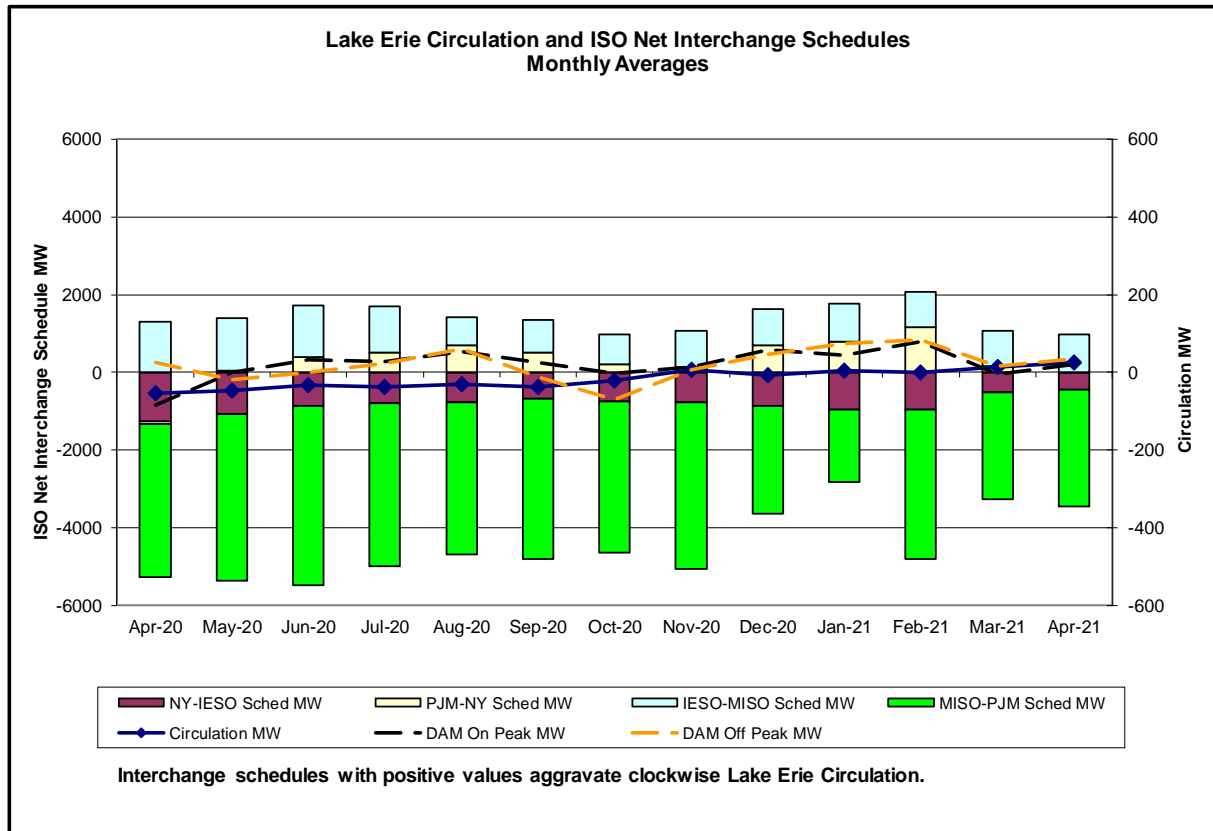




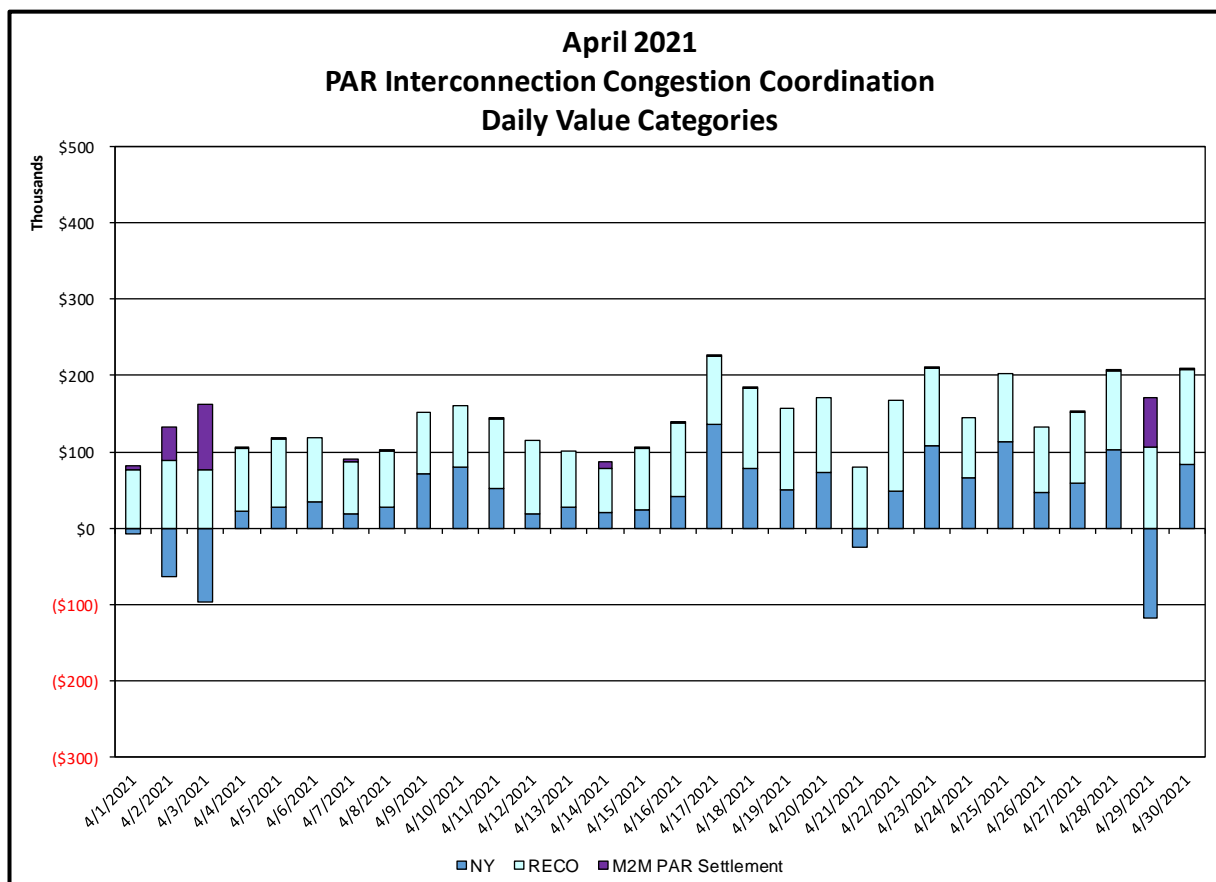
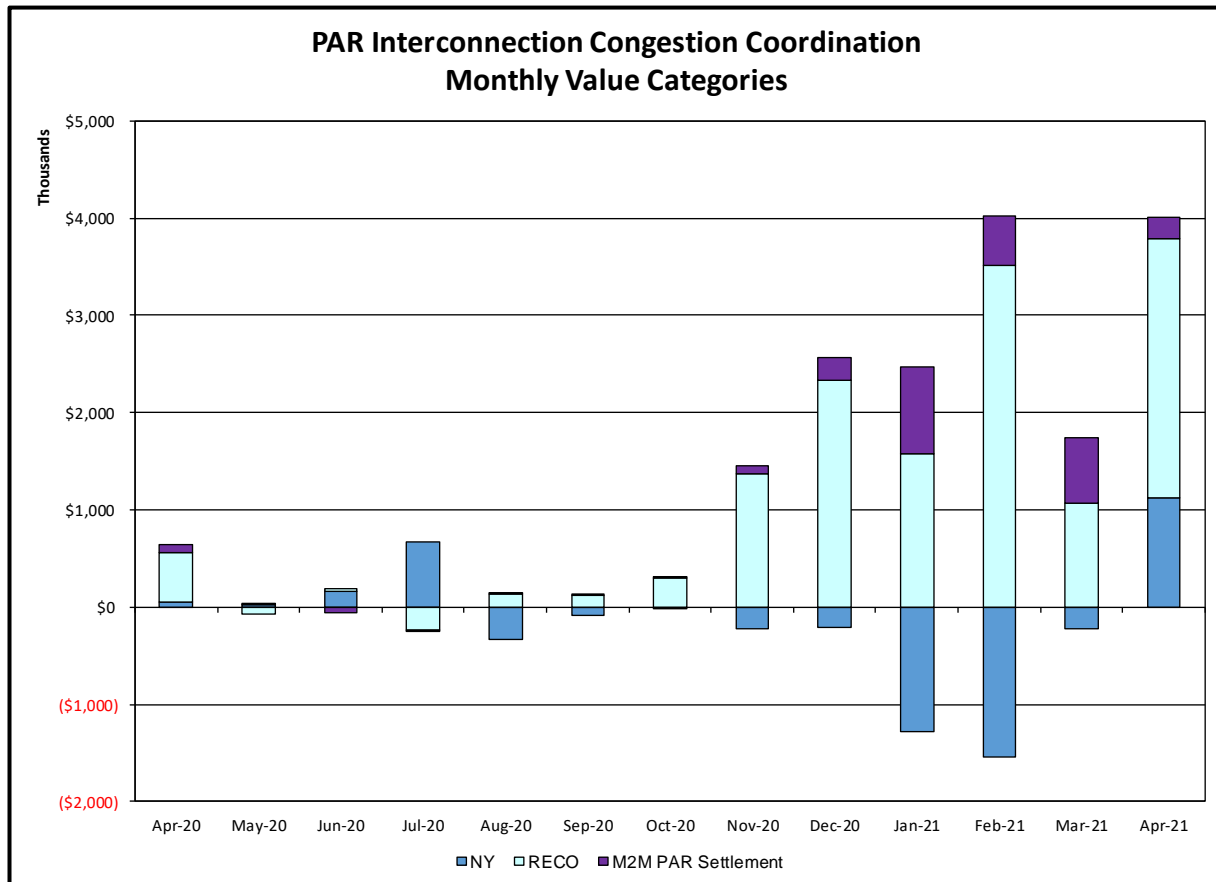






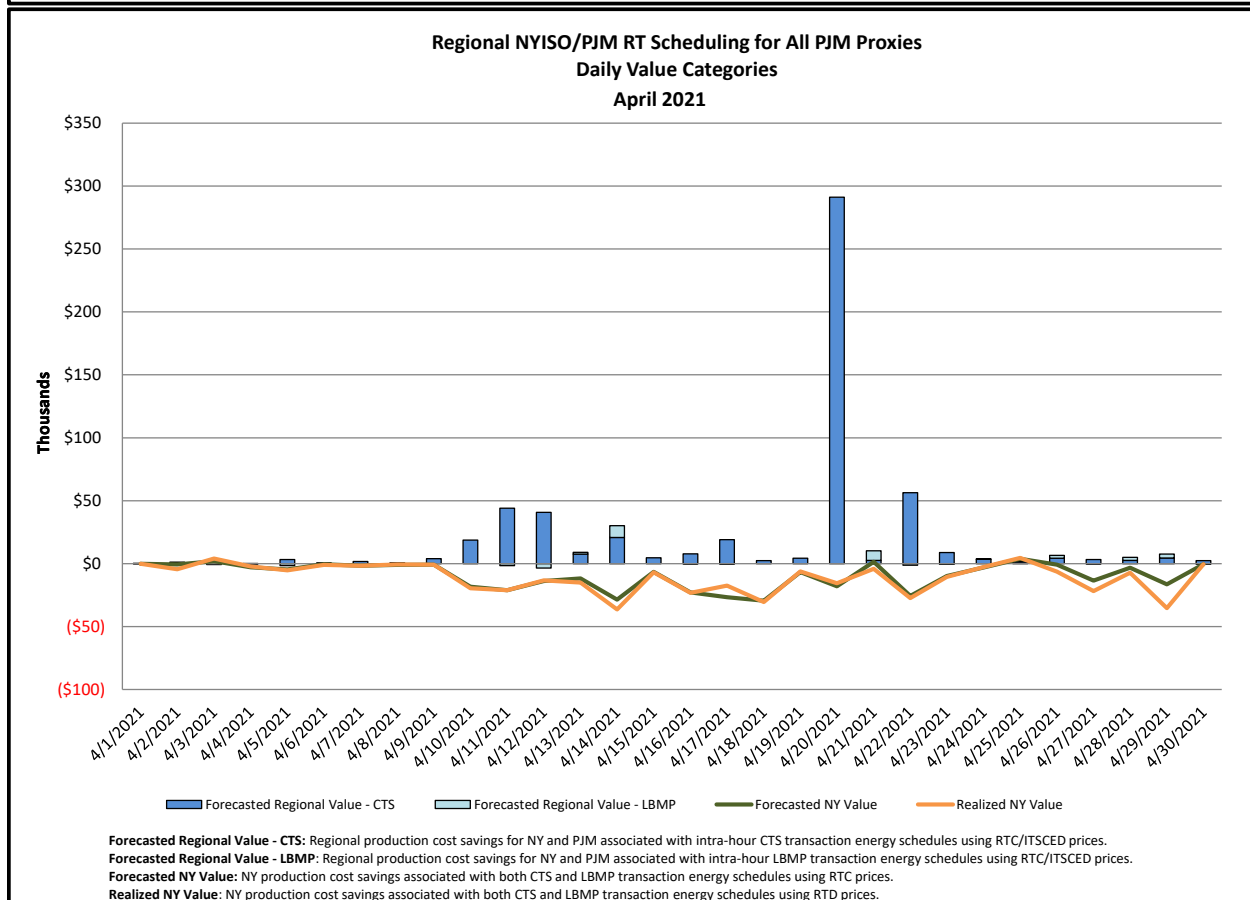
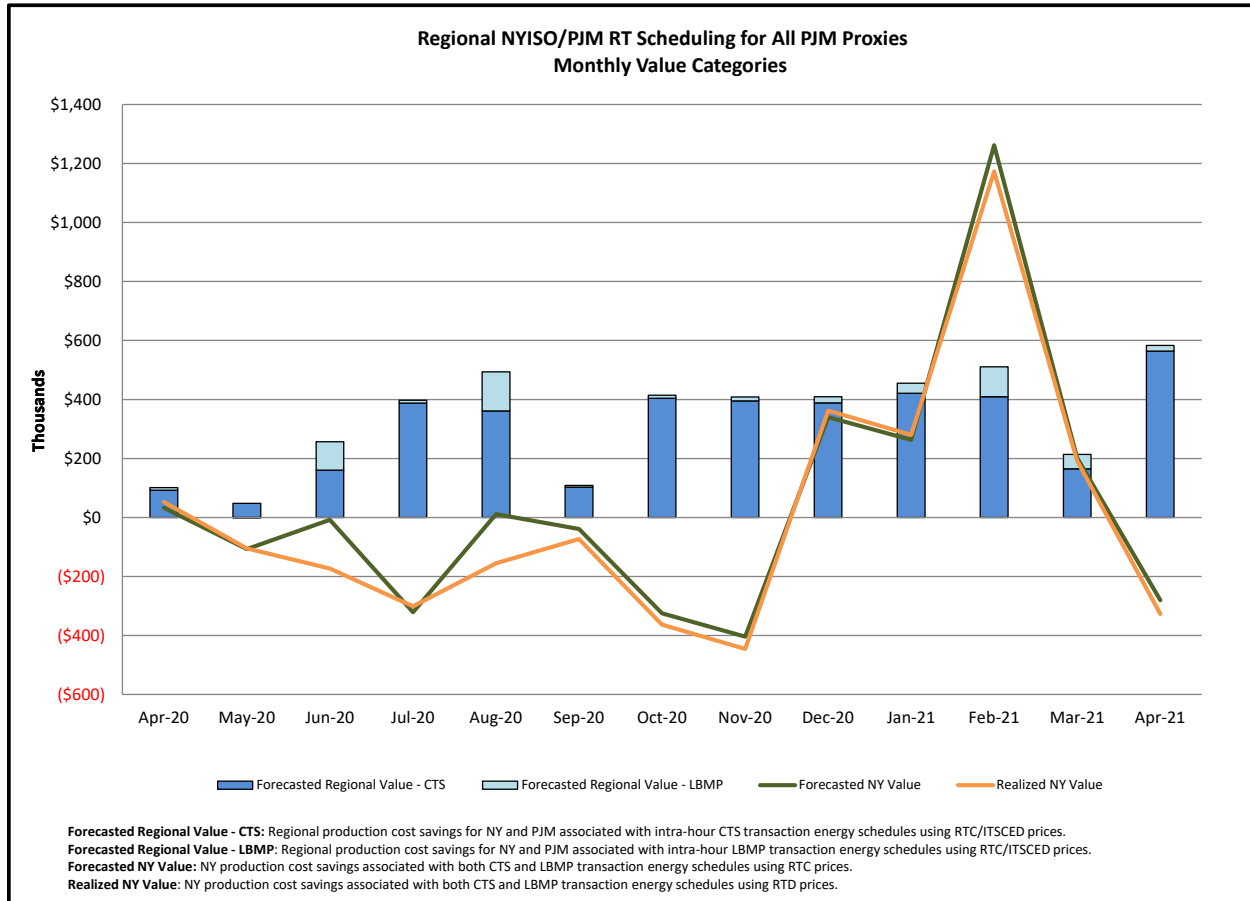


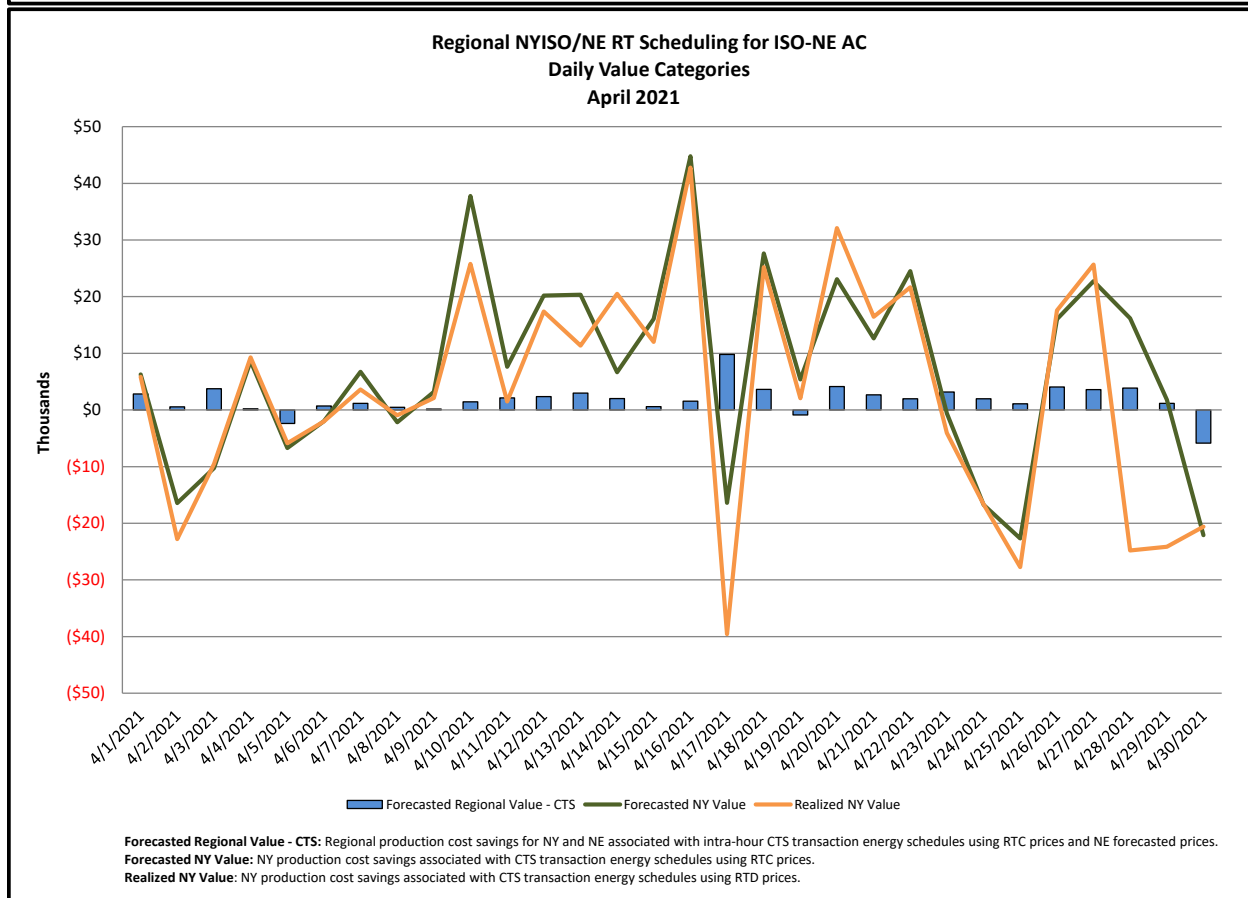
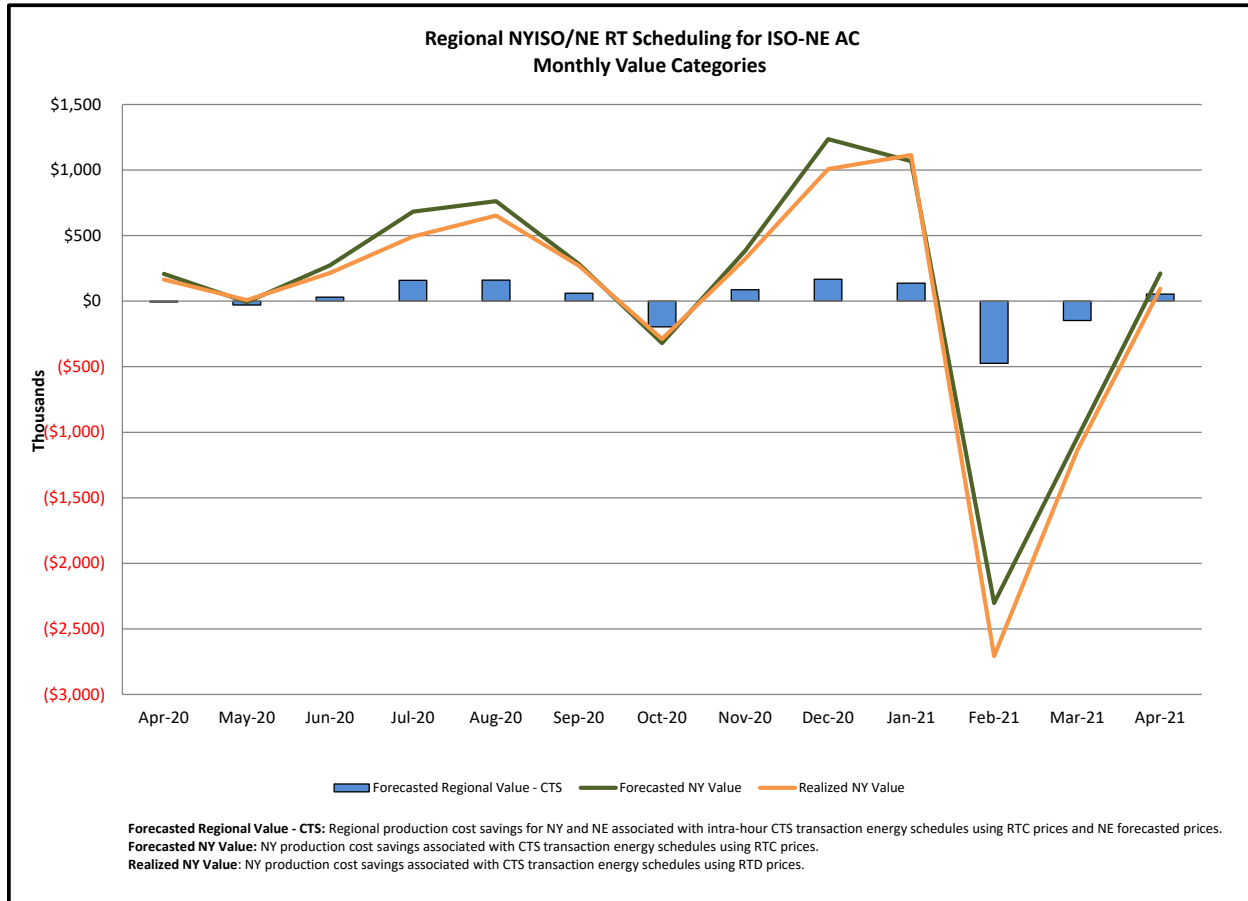
Broader Regional Market Performance Metrics



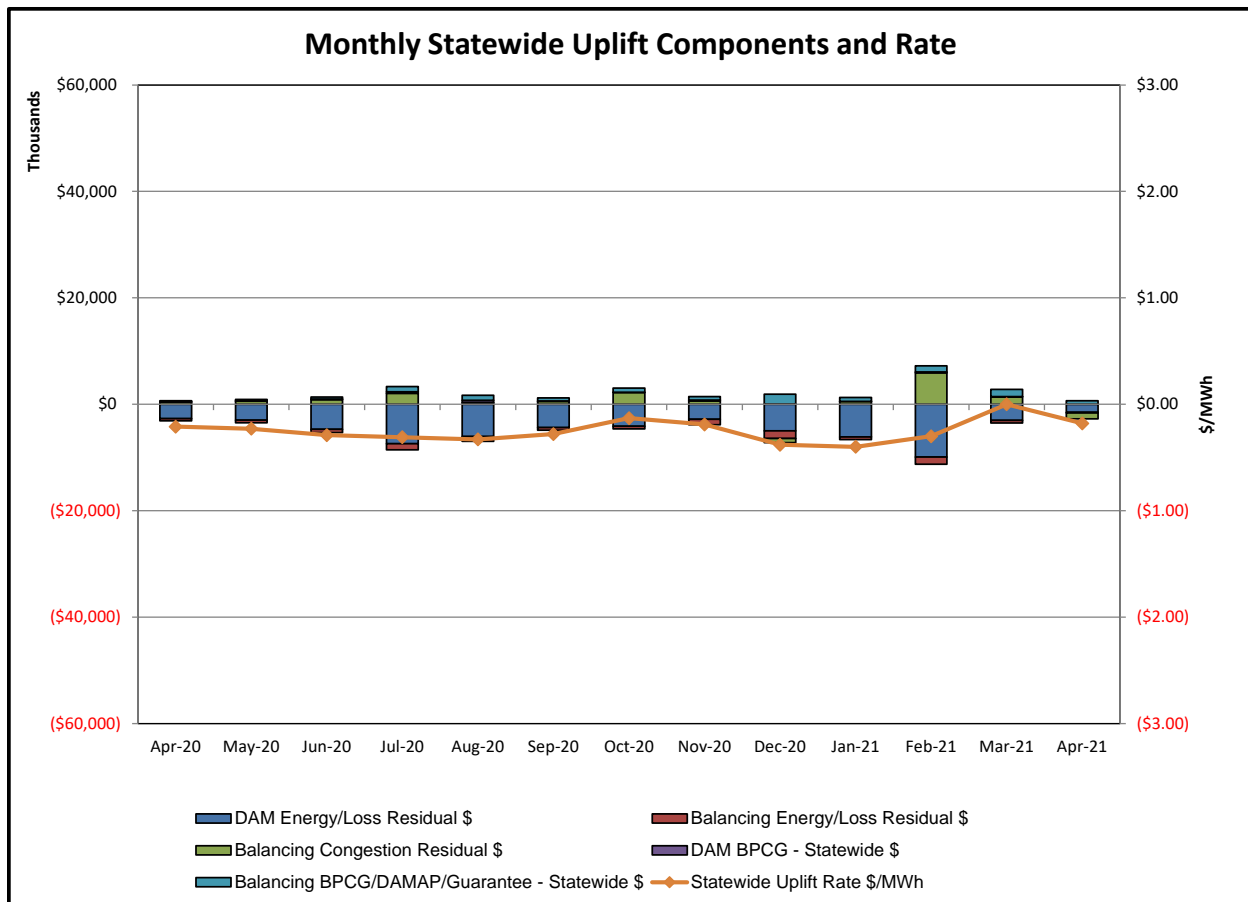
PAR Interconnection Congestion Coordination

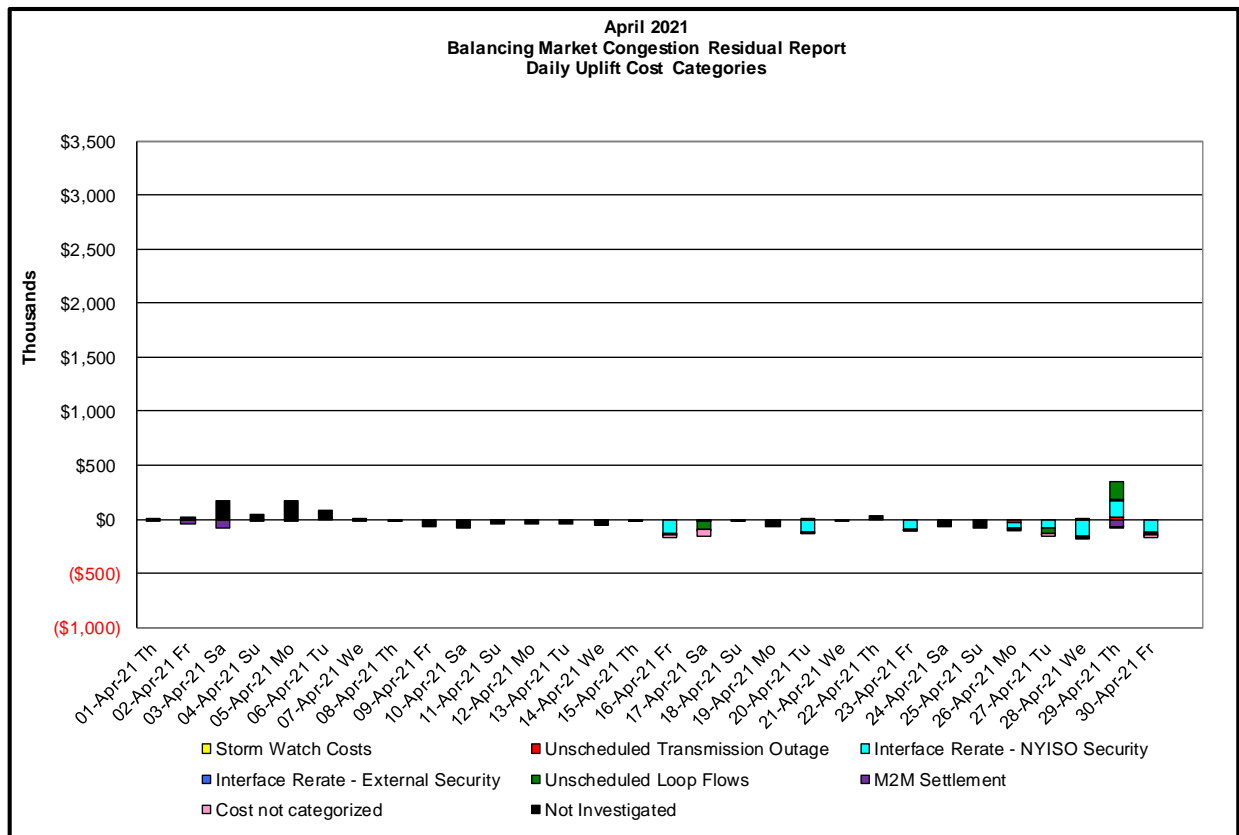
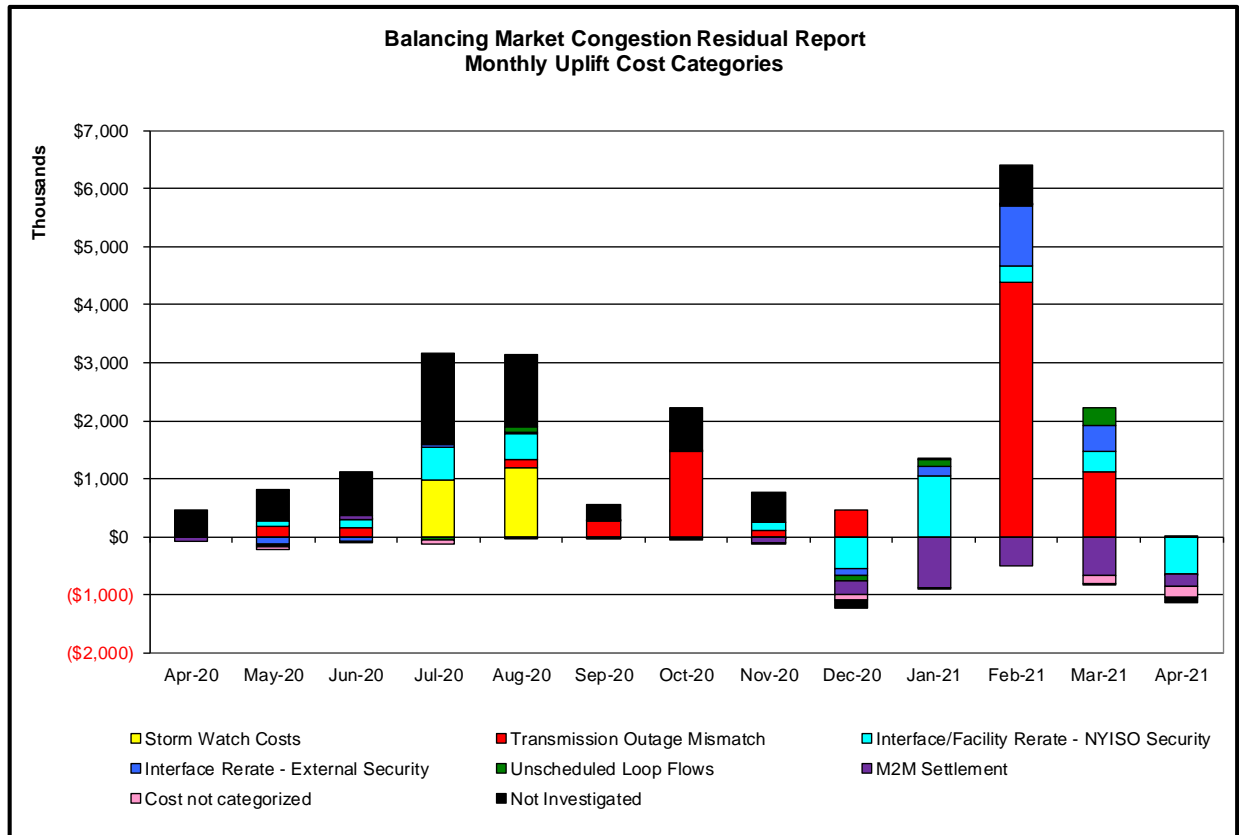
<u>Category</u>	<u>Description</u>
NY	Represents the value NY realizes from Market-to-Market PAR Coordination when experiencing congestion. This is the estimated savings to NY for additional deliveries into NY
RECO	Represents the value of PJM's obligation to deliver 80% of service to RECO load over Ramapo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





Market Performance Metrics





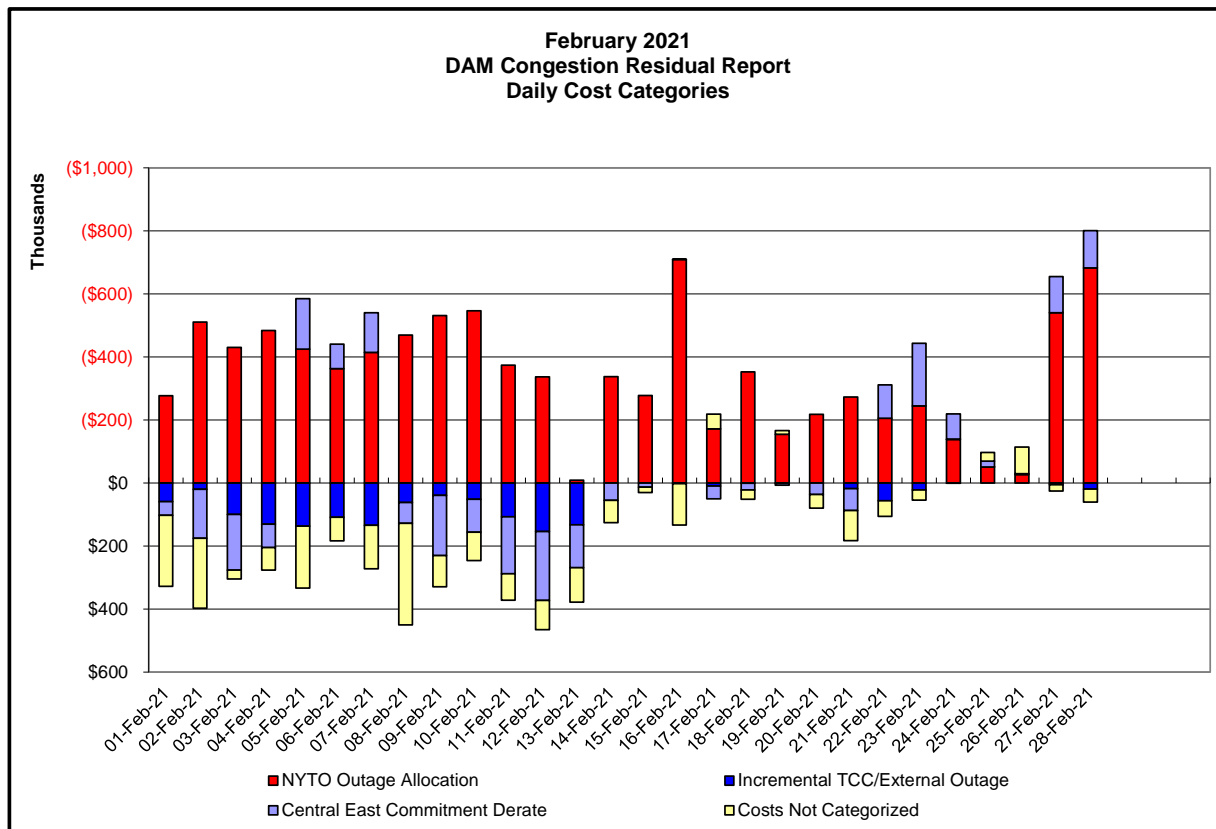
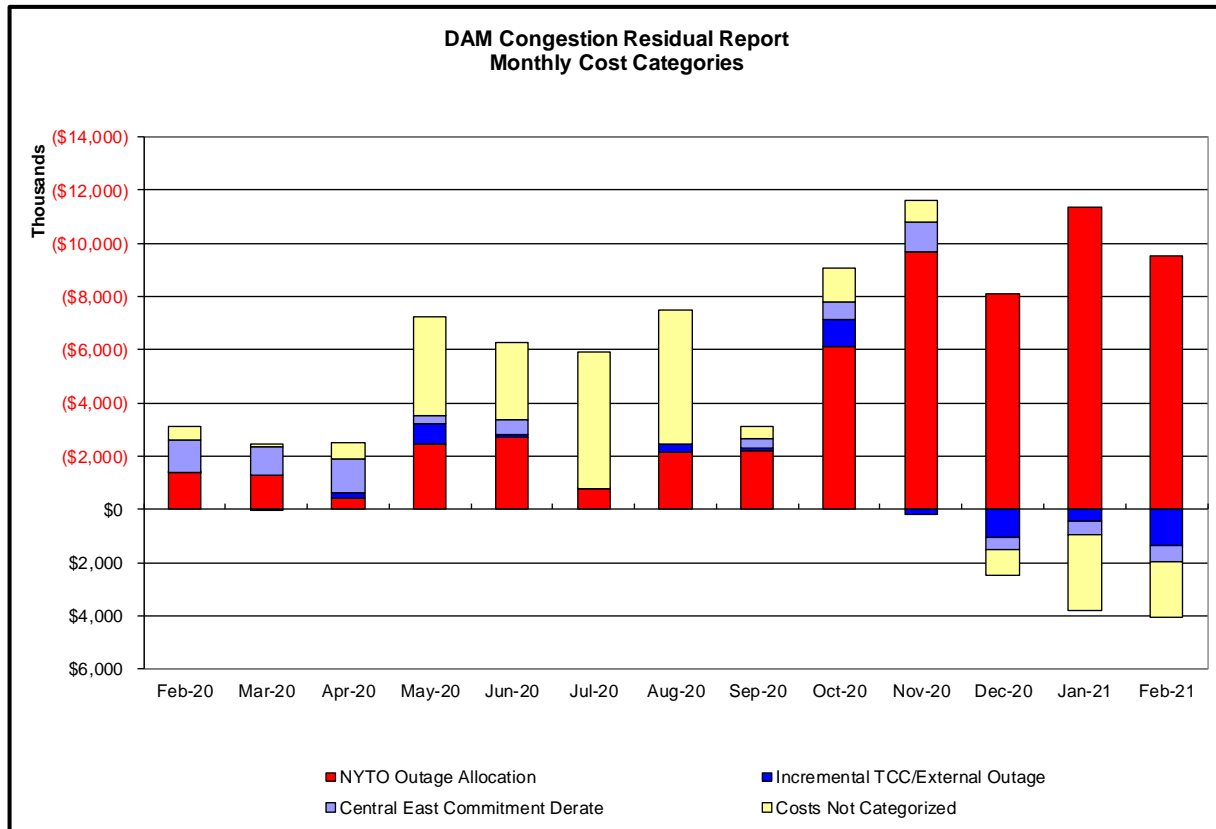
Day's investigated in April: 16,17,20,23,26,27,28,29,30			
Event	Date (yyyymmdd)	Hours	Description
	4/16/2021	11-15,17-21	Uprate Central East
	4/16/2021	13	NE_AC DNI Ramp Limit
	4/16/2021	13,20	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	4/17/2021	5	NYCA DNI Ramp Limit
	4/17/2021	5,21	NE_AC DNI Ramp Limit
	4/17/2021	2,3,5,11-13,22,23	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	4/20/2021	7,10,13-16,18	Uprate Central East
	4/20/2021	0,10,13,14	Uprate Lake Success - Shore Rd 138kV (#368)
	4/20/2021	14	Uprate Northport-Pilgrim 138kV (#672) I/o SCB:CRICKVLY(1) 398&CC3
	4/20/2021	14	Uprate Northport-Pilgrim 138kV (#672) I/o SCB:CRICKVLY(2) 398&CC2
	4/20/2021	3	Derate Central East
	4/20/2021	3	Derate Elwood-Pulaski 69kV (#670) I/o TWR:HOLTSVILLE 881& 882& 880
	4/20/2021	10	NE_NNC1385 - NY Scheduling Limit
	4/20/2021	0,1,10	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	4/23/2021	5,7	NYCA DNI Ramp Limit
	4/23/2021	0,2,9-17,21-23	Uprate Central East
	4/23/2021	0,2,10,11,13-15	Uprate EastGardenCity -ValleyStream 138kV (#262) Base Case
	4/23/2021	11	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	4/26/2021	18-21	Early return to service of North Port-Pilgrim 138kV (#672)
	4/26/2021	0,4,6,9,13,18-21	Uprate Central East
	4/26/2021	13,20,21	Uprate EastGardenCity -ValleyStream 138kV (#262) Base Case
	4/26/2021	0,13,19-21	Uprate Lake Success - Shore Rd 138kV (#368)
	4/26/2021	9	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	4/27/2021	0,6,7,9-12,16,17	Uprate Central East
	4/27/2021	10,11	Uprate EastGardenCity -ValleyStream 138kV (#262) Base Case
	4/27/2021	10	Uprate Lake Success - Shore Rd 138kV (#368)
	4/27/2021	18-20	Uprate Northport-Pilgrim 138kV (#672) I/o Northport-Pilgrim 138kV (#679)
	4/27/2021	7,9-11,19,20	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	4/28/2021	7-11,13,15-18,21-23	Uprate Central East
	4/28/2021	15-18	Uprate Northport-Pilgrim 138kV (#672) I/o Northport-Pilgrim 138kV (#679)
	4/28/2021	12,14	Derate Cricket Valley-Pleasant Valley 345kV (#F83) I/o Cricket Valley-Pleasant Valley 345kV
	4/28/2021	14	NE_NNC1385 - NY Scheduling Limit
	4/28/2021	12,22,23	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	4/29/2021	16	Forced outage of Edic-Fraser 345kV (#EF24-40)
	4/29/2021	9-13,15,16,19-21	Derate Cricket Valley-Pleasant Valley 345kV (#F83) I/o Cricket Valley-Pleasant Valley 345kV
	4/29/2021	7,23	Uprate Central East
	4/29/2021	15	NE_NNC1385 - NY Scheduling Limit
	4/29/2021	9-13,20,21	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	4/30/2021	6-11,16-23	Uprate Central East
	4/30/2021	16	NE_AC DNI Ramp Limit
	4/30/2021	1,2,6,7	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East

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	

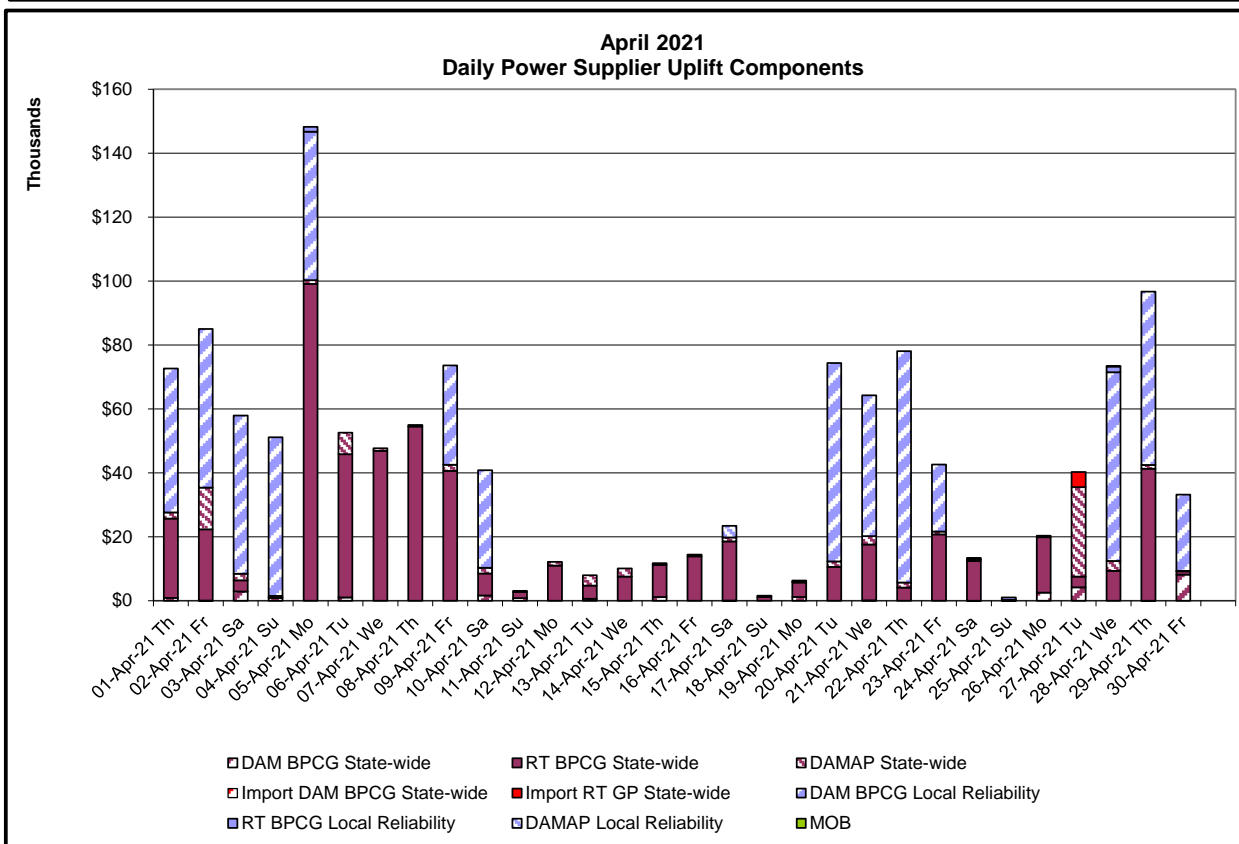
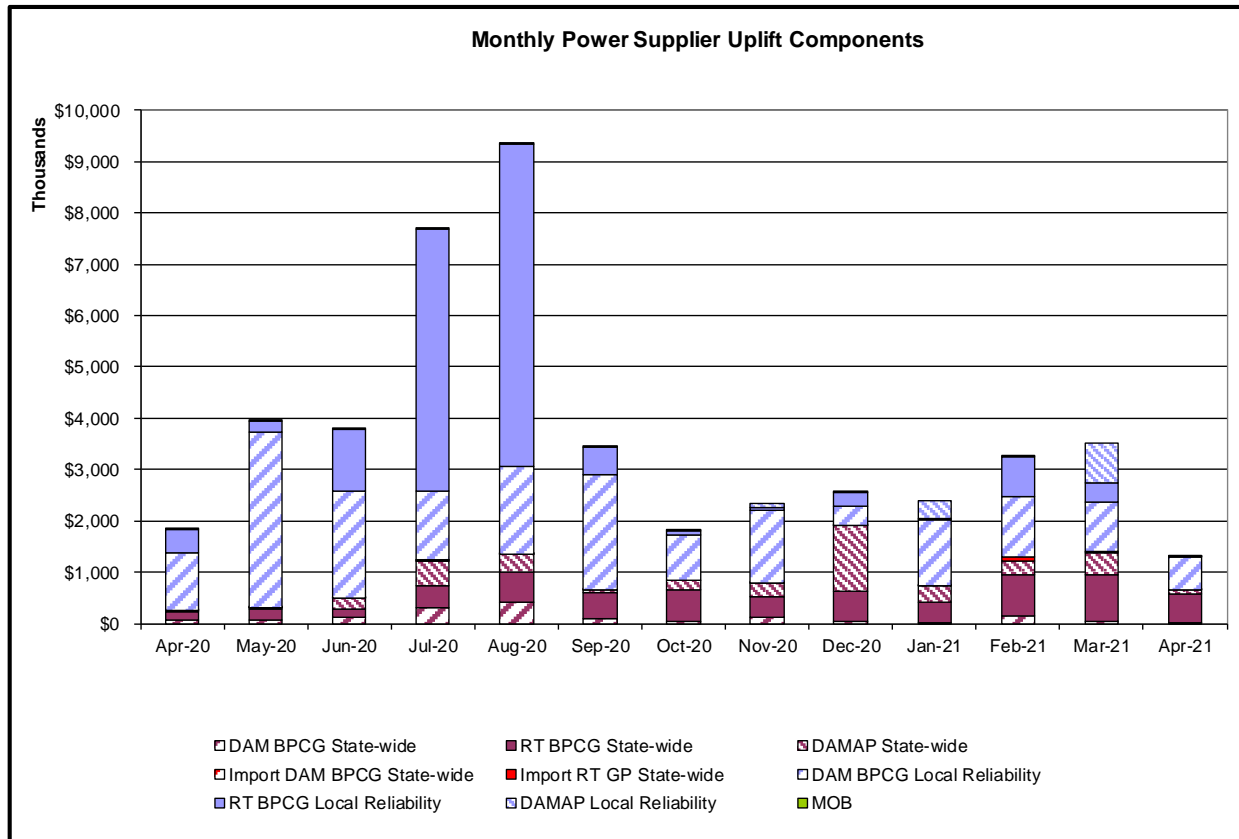
Monthly Balancing Market Congestion Report Assumptions/Notes

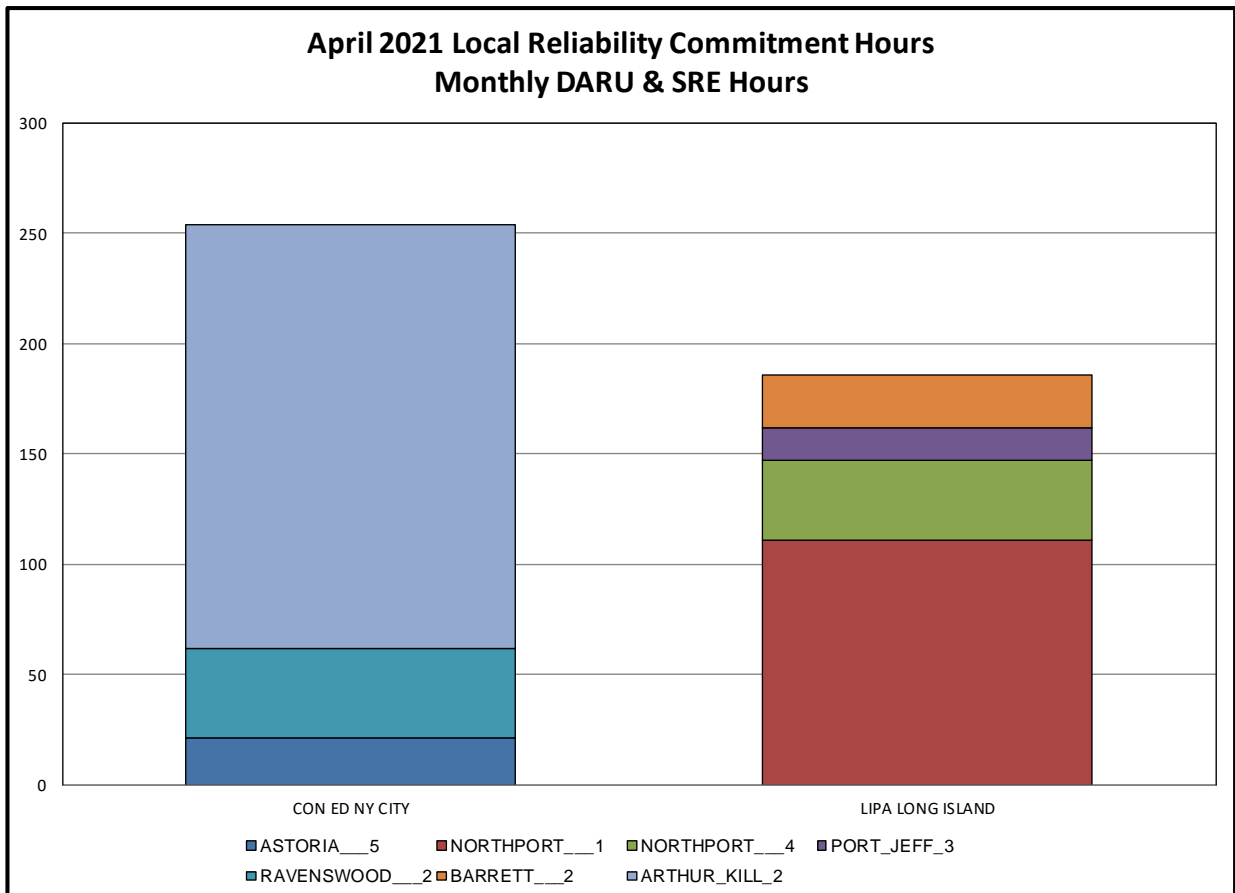
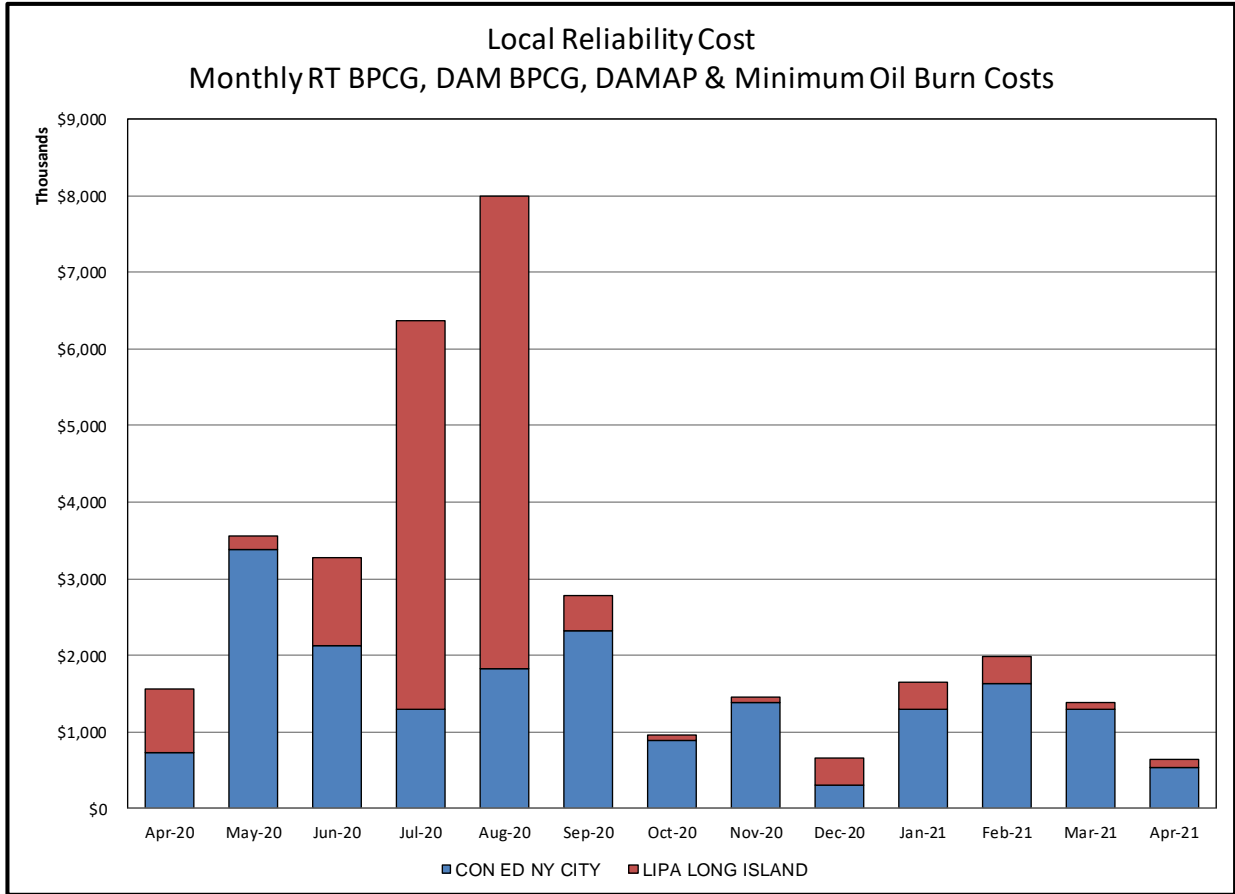
- 1) Storm Watch Costs are identified as daily total uplift costs
- 2) Days with a value of BMCR less M2M Settlement of \$100K/HR, shortfall of \$200K/Day or more, or surplus of \$100K/Day or more are investigated.
- 3) Uplift costs associated with multiple event types are apportioned equally by hour

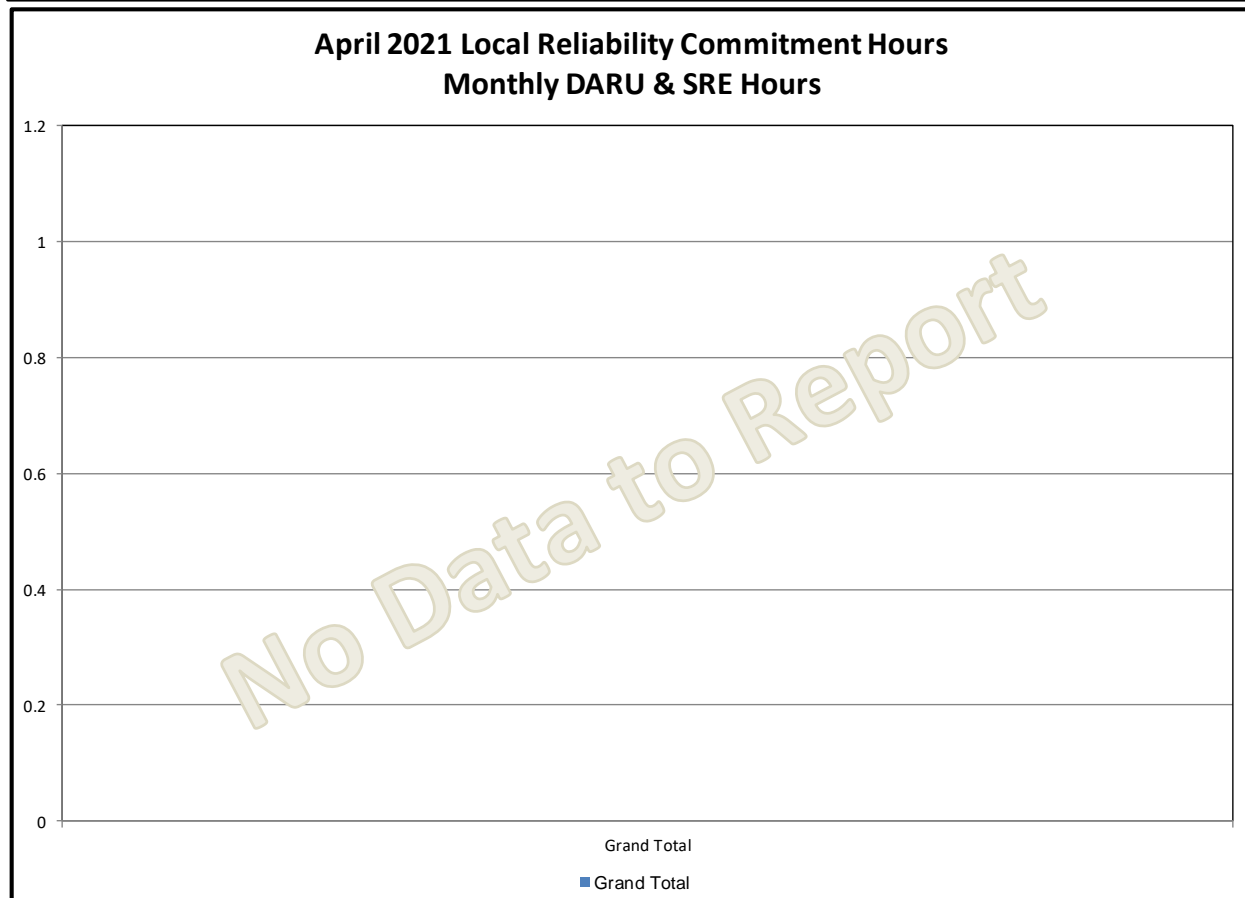
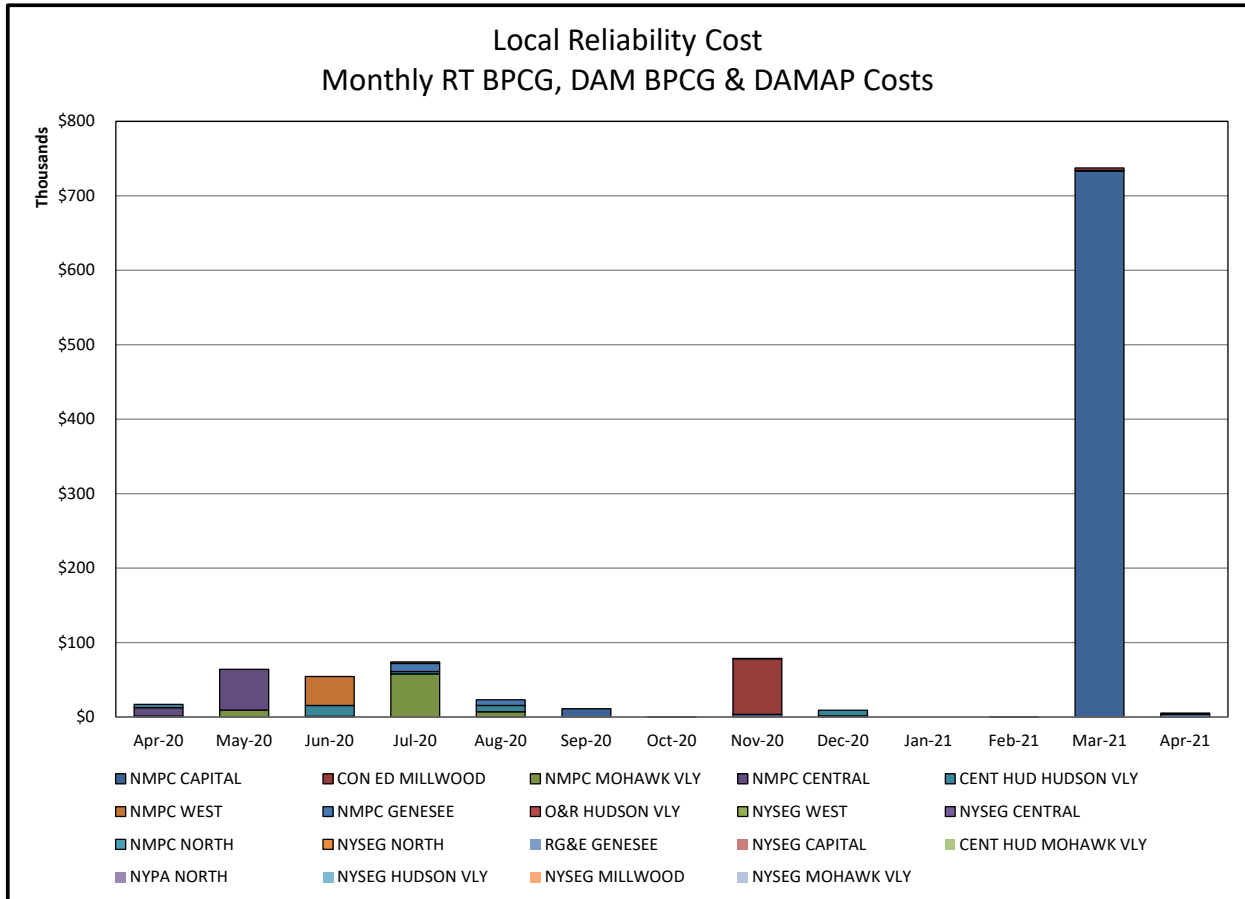


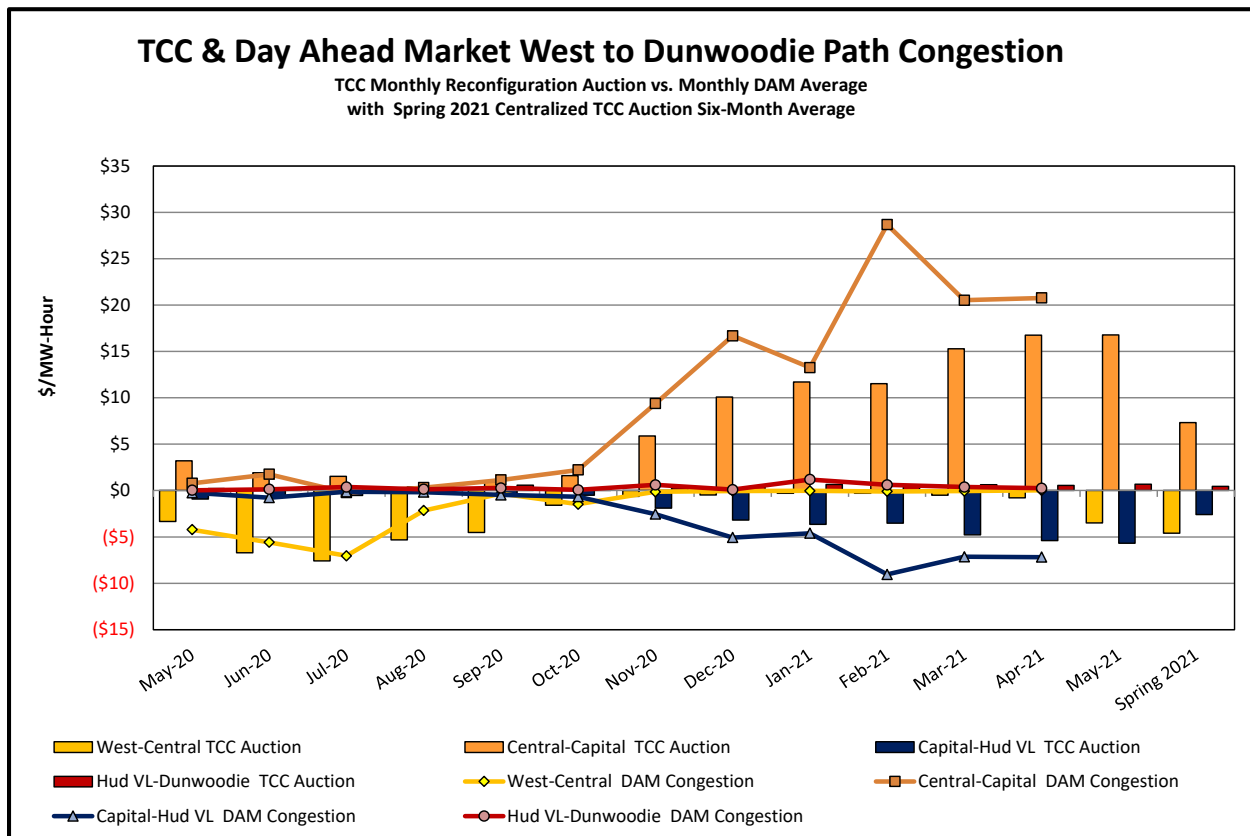
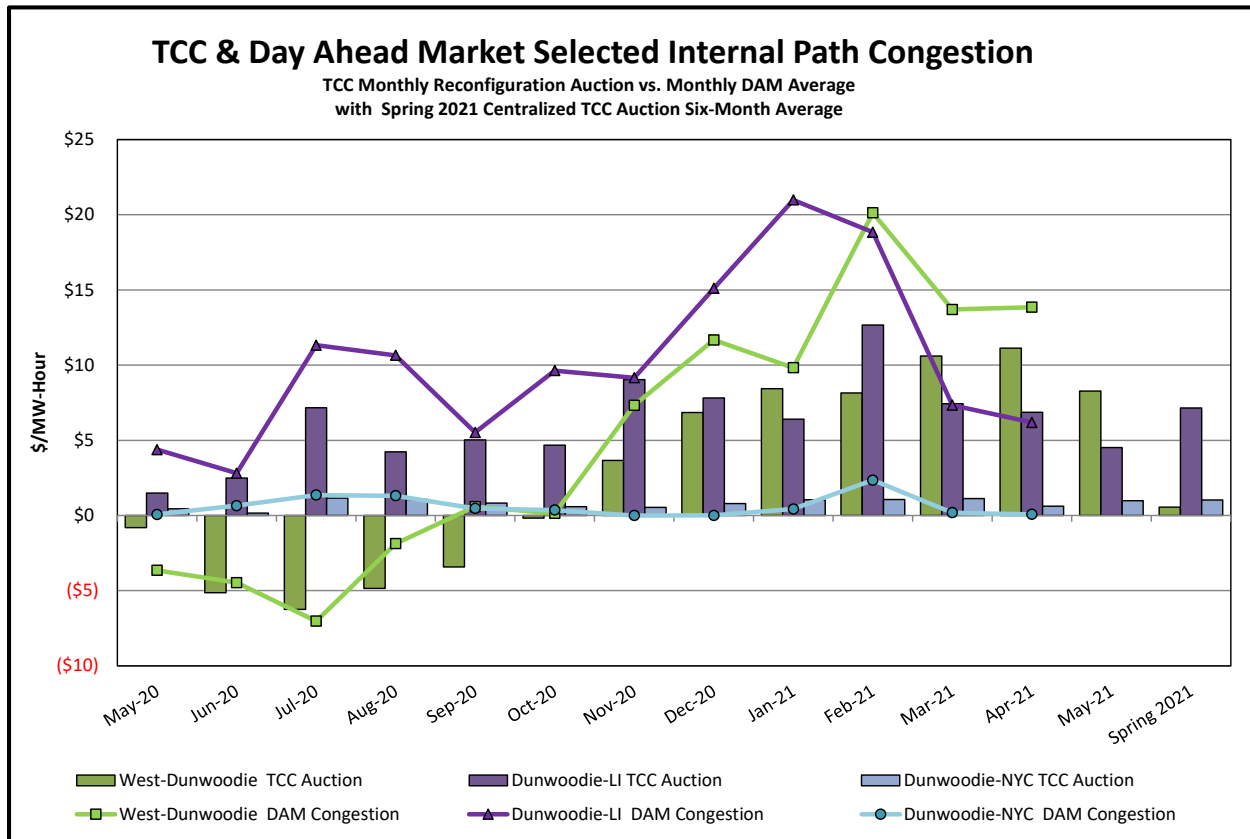
Day-Ahead Market Congestion Residual Categories

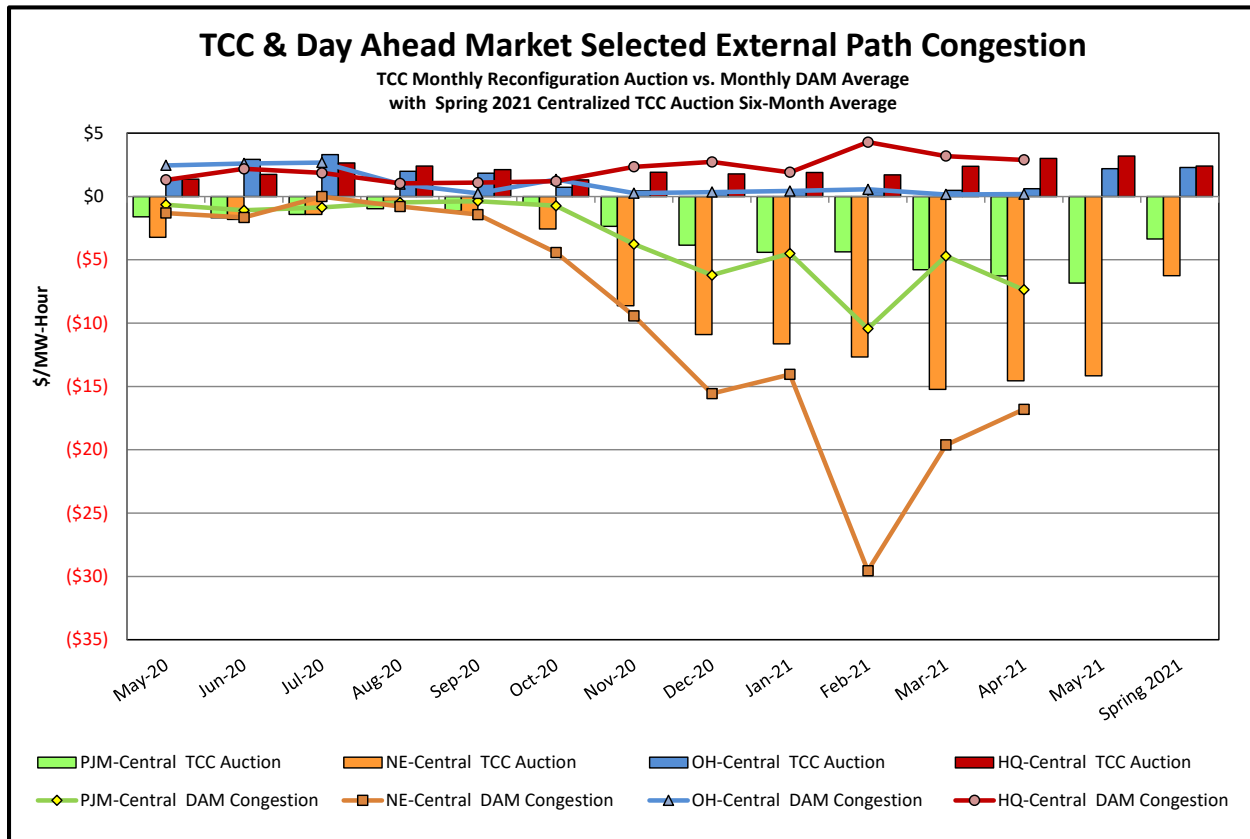
<u>Category</u>	<u>Cost Assignment</u>	<u>Events Types</u>	<u>Event Examples</u>
NYTO Outage Allocation	Responsible TO	Direct allocation to NYTO's responsible for transmission equipment status change.	DAM scheduled outage for equipment modeled in-service for the TCC Auction.
Incremental TCC/External 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.	

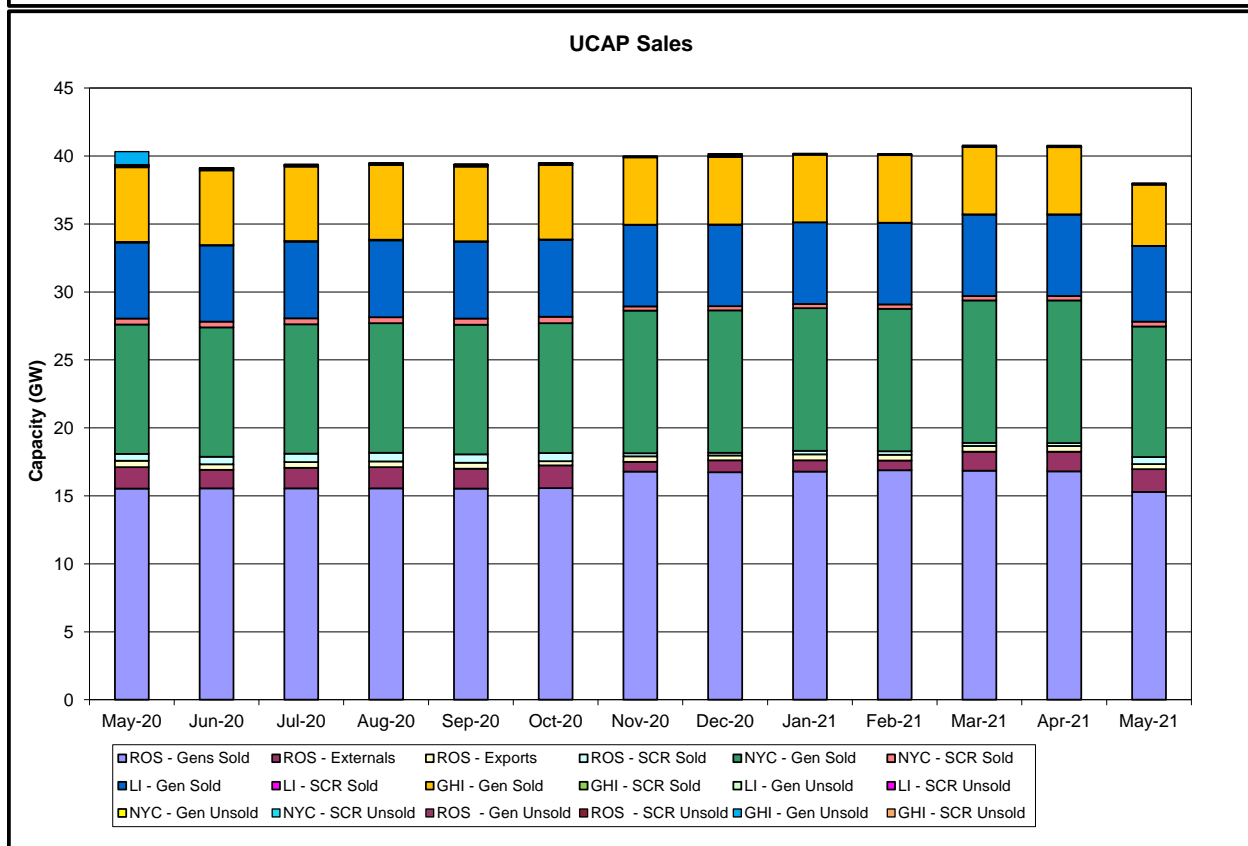
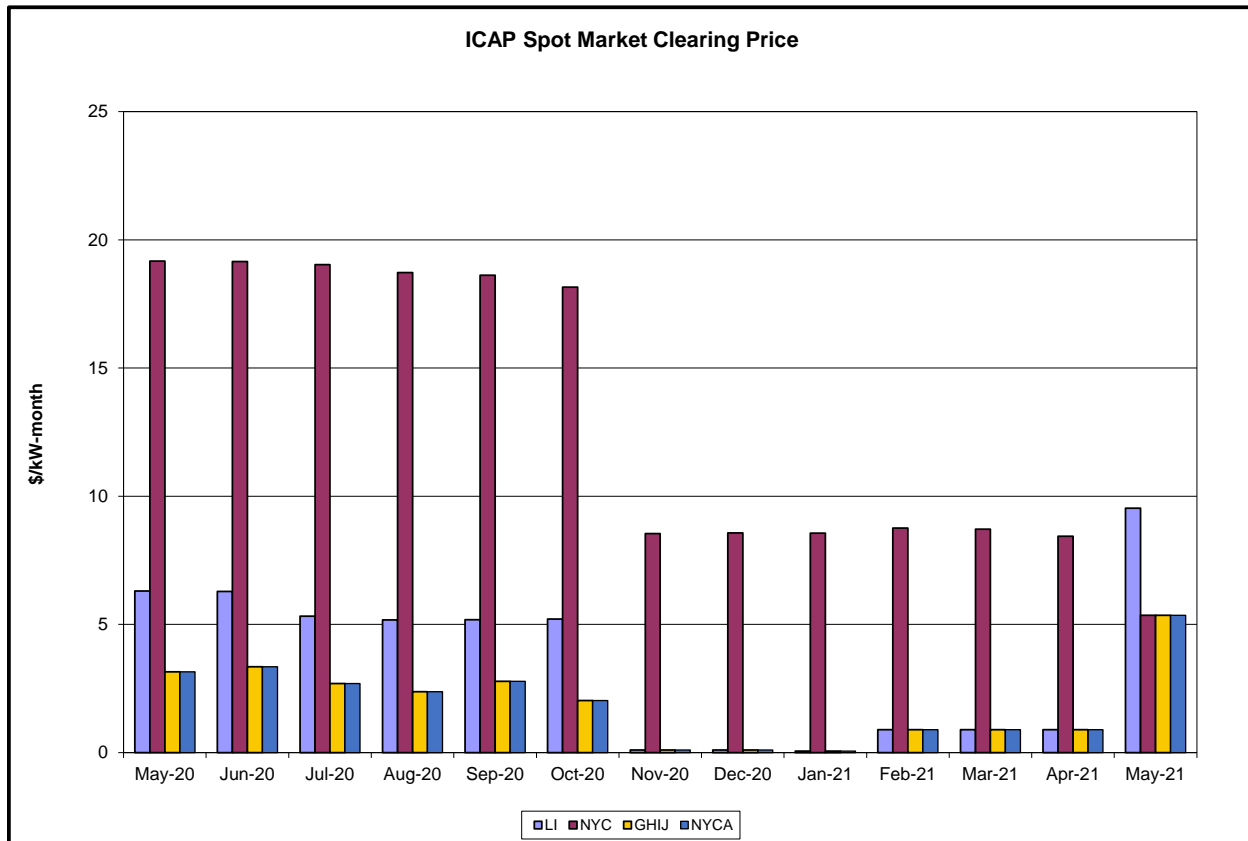










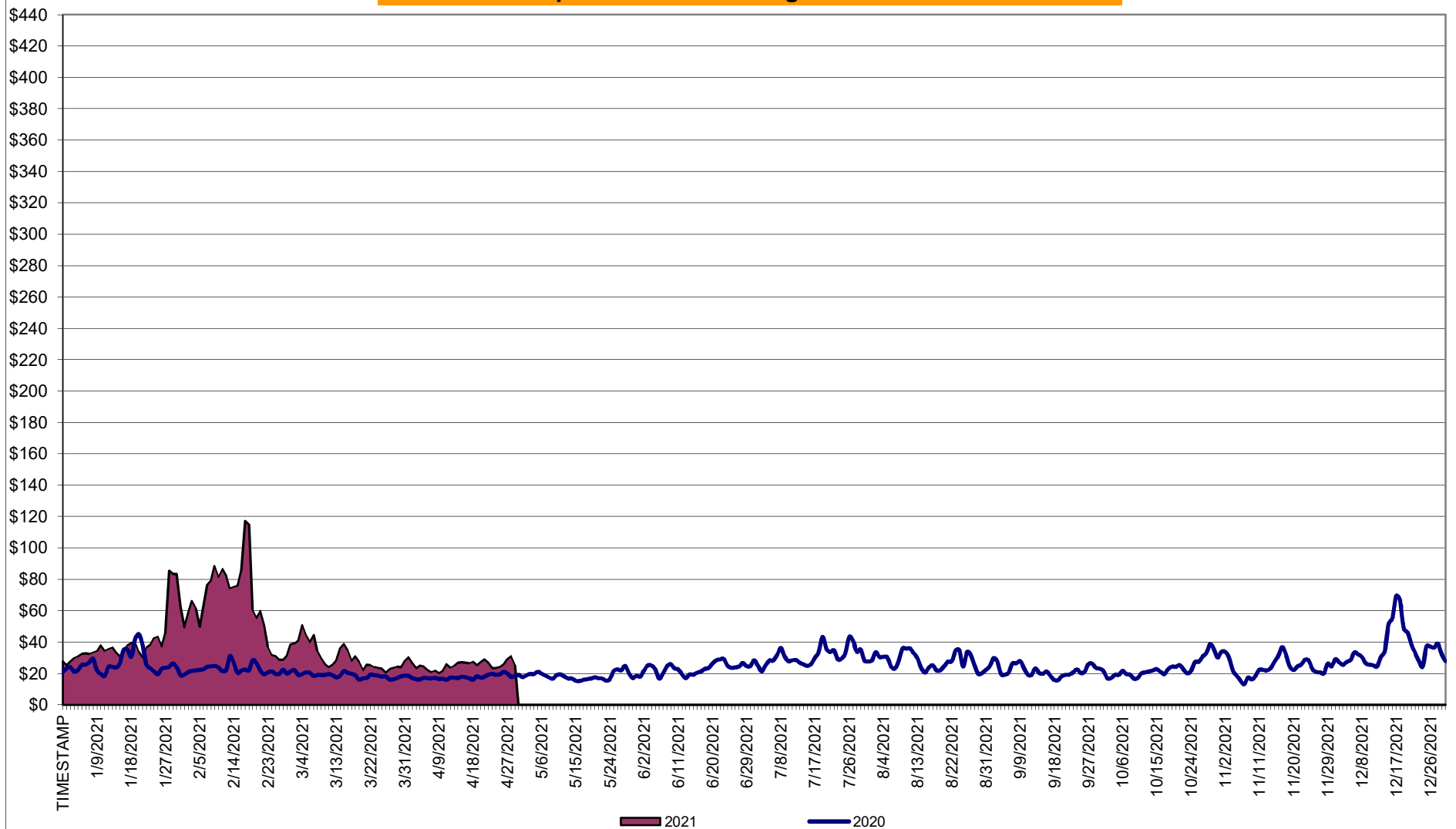


Market Performance Highlights

April 2021

- LBMP for April is \$22.79/MWh; lower than \$28.59/MWh in March 2021 and higher than \$15.77/MWh in April 2020.
 - Day Ahead Load Weighted LBMPs and Real Time Load Weighted LBMPs are lower compared to March.
- April 2021 average year-to-date monthly cost of 42.30/MWh is an 89% increase from \$22.38/MWh in April 2020.
- Average daily sendout is 354 GWh/day in April; lower than 381 GWh/day in March 2021 and higher than 344 GWh/day in April 2020.
- Natural gas prices are lower and distillate prices are mixed compared to the previous month.
 - Natural Gas (Transco Z6 NY) was \$2.13/MMBtu, down from \$2.24/MMBtu in March.
 - Natural gas prices are up 41% year-over-year.
 - Jet Kerosene Gulf Coast was \$12.38/MMBtu, same as \$12.38/MMBtu in March.
 - Ultra Low Sulfur No.2 Diesel NY Harbor was \$13.23/MMBtu, down from \$13.31/MMBtu in March.
 - Distillate prices are up 137.6% year-over-year.
- Uplift per MWh is lower compared to the previous month.
 - Uplift (not including NYISO cost of operations) is (\$0.12)/MWh; lower than \$0.11/MWh in March.
 - Local Reliability Share is \$0.06/MWh, lower than \$0.11/MWh in March.
 - Statewide Share is (\$0.18)/MWh, lower than \$0.00/MWh in March.
 - TSA \$ per NYC MWh is \$0.00/MWh.
 - Total uplift costs (Schedule 1 components including NYISO Cost of Operations) are lower than March.

Daily NYISO Average Cost/MWh (Energy & Ancillary Services)*
2020 Annual Average \$25.70/MWh
April 2020 YTD Average \$22.38/MWh
April 2021 YTD Average \$42.30/MWh



* Excludes ICAP payments.

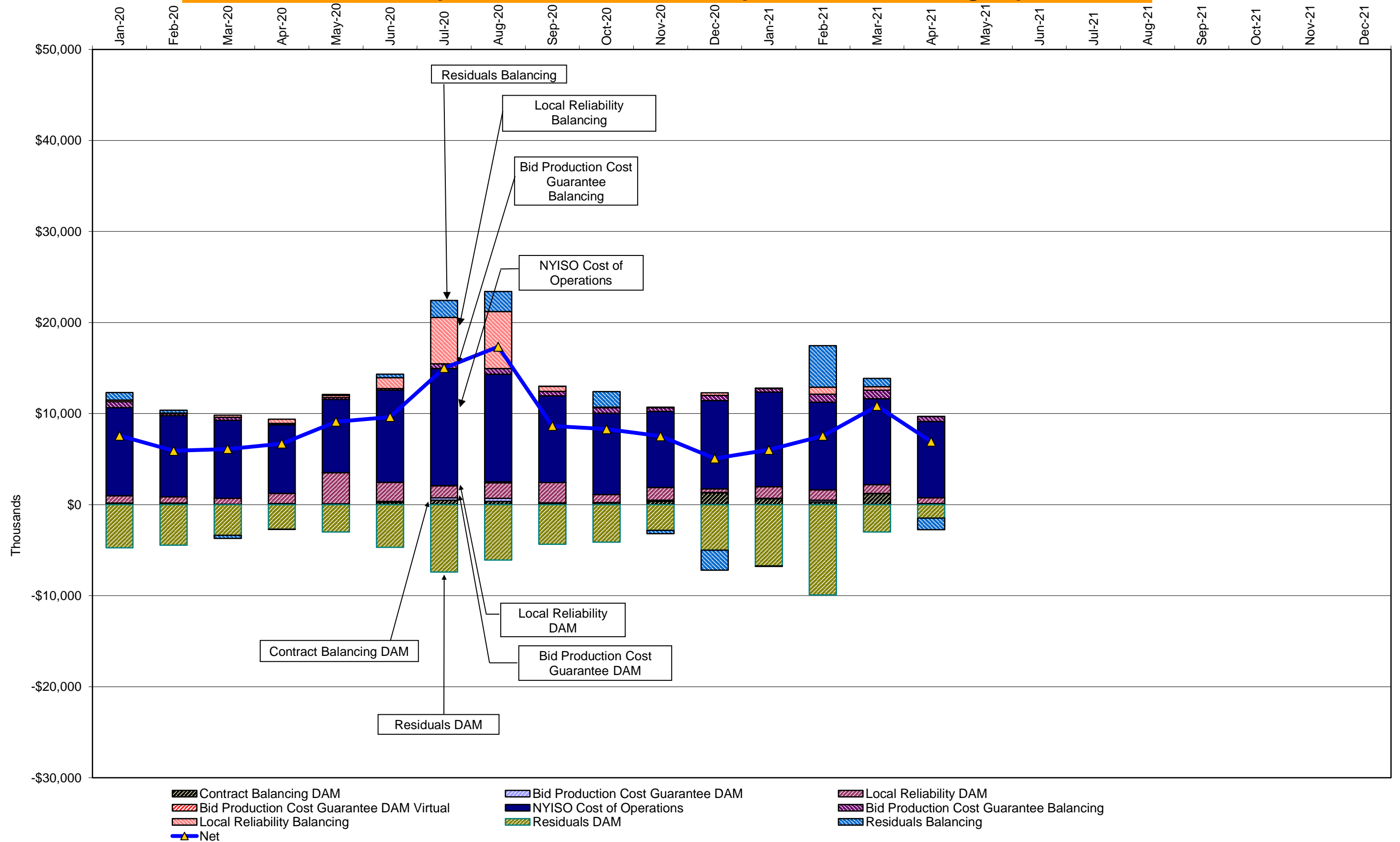
NYISO Average Cost/MWh (Energy and Ancillary Services) *
from the LBMP Customer point of view

2021	<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	37.83	63.70	28.59	22.79								
NTAC	1.35	1.20	1.26	1.54								
Reserve	0.49	0.81	0.57	0.56								
Regulation	0.07	0.13	0.09	0.10								
NYISO Cost of Operations	0.74	0.74	0.74	0.74								
FERC Fee Recovery	0.08	0.09	0.09	0.11								
Uplift	(0.31)	(0.15)	0.11	(0.12)								
Uplift: Local Reliability Share	0.09	0.15	0.11	0.06								
Uplift: Statewide Share	(0.40)	(0.30)	0.00	(0.18)								
Voltage Support and Black Start	0.43	0.43	0.43	0.44								
Avg Monthly Cost	40.61	66.87	31.81	26.06								
 Avg YTD Cost	40.61	52.90	46.47	42.30								
 TSA \$ per NYC MWh	0.00	0.00	0.00	0.00								
 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	28.86	26.13	20.52	20.90	22.57	33.70
NTAC	0.91	0.70	0.86	0.91	1.05	0.95	1.24	1.03	0.78	0.84	1.05	1.35
Reserve	0.46	0.43	0.47	0.50	0.53	0.45	0.39	0.39	0.42	0.61	0.51	0.49
Regulation	0.09	0.08	0.09	0.08	0.10	0.08	0.06	0.07	0.09	0.11	0.09	0.08
NYISO Cost of Operations	0.68	0.69	0.68	0.66	0.71	0.74	0.76	0.75	0.74	0.73	0.69	0.70
FERC Fee Recovery	0.08	0.09	0.09	0.10	0.11	0.09	0.06	0.07	0.09	0.10	0.10	0.08
Uplift	(0.15)	(0.23)	(0.19)	(0.08)	0.09	(0.05)	0.07	0.17	(0.07)	(0.05)	(0.07)	(0.33)
Uplift: Local Reliability Share	0.07	0.06	0.07	0.14	0.32	0.24	0.38	0.50	0.22	0.08	0.12	0.05
Uplift: Statewide Share	(0.22)	(0.29)	(0.26)	(0.21)	(0.23)	(0.29)	(0.31)	(0.33)	(0.28)	(0.13)	(0.19)	(0.38)
Voltage Support and Black Start	0.44	0.44	0.44	0.43	0.45	0.45	0.46	0.46	0.45	0.45	0.44	0.45
Avg Monthly Cost	27.29	23.32	19.55	18.38	19.16	24.09	31.91	29.07	23.03	23.70	25.40	36.52
 Avg YTD Cost	27.29	25.40	23.48	22.38	21.82	22.21	24.11	24.88	24.69	24.62	24.68	25.70
 TSA \$ per NYC MWh	0.00	0.00	0.00	0.00	0.00	0.04	0.18	0.54	0.00	0.00	0.00	0.00

* Excludes ICAP payments.
Market Mitigation and Analysis
Prepared: 5/19/2021 7:51 PM

As of Jan. 2016, the annual FERC fee is recovered separately from Cost of Ops.

NYISO Dollar Flows - Uplift - OATT Schedule 1 components - Data through April 30, 2021



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>2021</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>
<u>Day Ahead Market MWh</u>	14,108,848	13,325,329	12,843,278	11,204,262								
DAM LSE Internal LBMP Energy Sales	60%	59%	56%	55%								
DAM External TC LBMP Energy Sales	5%	4%	3%	2%								
DAM Bilateral - Internal Bilaterals	31%	30%	32%	35%								
DAM Bilateral - Import/Non-LBMP Market Bilaterals	1%	4%	4%	5%								
DAM Bilateral - Export/Non-LBMP Market Bilaterals	2%	2%	2%	2%								
DAM Bilateral - Wheel Through Bilaterals	2%	2%	3%	2%								
<u>Balancing Energy Market MWh</u>	29,179	-308,157	-70,279	30,603								
Balancing Energy LSE Internal LBMP Energy Sales	-215%	-151%	-367%	-456%								
Balancing Energy External TC LBMP Energy Sales	374%	59%	365%	578%								
Balancing Energy Bilateral - Internal Bilaterals	49%	4%	27%	34%								
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	0%	0%	0%	0%								
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	50%	5%	32%	34%								
Balancing Energy Bilateral - Wheel Through Bilaterals	-158%	-17%	-158%	-90%								
<u>Transactions Summary</u>												
LBMP	65%	62%	59%	57%								
Internal Bilaterals	31%	31%	33%	35%								
Import Bilaterals	1%	4%	4%	5%								
Export Bilaterals	2%	2%	2%	2%								
Wheels Through	2%	2%	2%	2%								
<u>Market Share of Total Load</u>												
Day Ahead Market	99.8%	102.4%	100.6%	99.7%								
Balancing Energy +	0.2%	-2.4%	-0.6%	0.3%								
Total MWH	14,138,027	13,017,172	12,772,999	11,234,865								
Average Daily Energy Sendout/Month GWh	427	434	381	354								

<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>
<u>Day Ahead Market MWh</u>	14,194,609	13,172,669	12,495,999	11,372,390	11,462,320	13,825,178	16,629,337	15,671,629	13,122,542	12,338,638	12,157,281	13,748,181
DAM LSE Internal LBMP Energy Sales	56%	56%	59%	54%	55%	58%	65%	63%	60%	56%	57%	59%
DAM External TC LBMP Energy Sales	6%	5%	5%	7%	4%	3%	2%	4%	4%	5%	5%	5%
DAM Bilateral - Internal Bilaterals	30%	30%	27%	30%	31%	29%	26%	27%	30%	32%	33%	31%
DAM Bilateral - Import/Non-LBMP Market Bilaterals	5%	5%	6%	6%	6%	5%	3%	3%	2%	3%	3%	2%
DAM Bilateral - Export/Non-LBMP Market Bilaterals	2%	2%	2%	2%	2%	2%	1%	2%	2%	2%	2%	2%
DAM Bilateral - Wheel Through Bilaterals	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%	0%	2%
<u>Balancing Energy Market MWh</u>	-26,753	-142,168	144,076	22,599	-137,565	-180,149	403,914	212,307	-173,115	-89,451	-54,598	156,891
Balancing Energy LSE Internal LBMP Energy Sales	-1080%	-221%	-85%	-884%	-187%	-134%	85%	99%	-95%	-220%	-459%	-12%
Balancing Energy External TC LBMP Energy Sales	1156%	181%	240%	1233%	137%	99%	35%	43%	104%	187%	382%	107%
Balancing Energy Bilateral - Internal Bilaterals	62%	5%	12%	55%	12%	7%	2%	1%	0%	4%	3%	7%
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	9%	6%
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	127%	16%	18%	92%	12%	5%	2%	4%	7%	17%	33%	11%
Balancing Energy Bilateral - Wheel Through Bilaterals	-365%	-81%	-85%	-396%	-74%	-77%	-24%	-46%	-116%	-107%	-69%	-19%
<u>Transactions Summary</u>												
LBMP	62%	62%	65%	61%	59%	62%	68%	67%	64%	61%	62%	64%
Internal Bilaterals	31%	31%	27%	30%	32%	30%	26%	27%	31%	32%	33%	31%
Import Bilaterals	5%	5%	6%	6%	6%	5%	3%	3%	2%	3%	3%	2%
Export Bilaterals	2%	2%	2%	2%	2%	2%	1%	2%	2%	2%	2%	2%
Wheels Through	0%	1%	0%	0%	0%	1%	1%	1%	1%	2%	0%	2%
<u>Market Share of Total Load</u>												
Day Ahead Market	100.2%	101.1%	98.9%	99.8%	101.2%	101.3%	97.6%	98.7%	101.3%	100.7%	100.5%	98.9%
Balancing Energy +	-0.2%	-1.1%	1.1%	0.2%	-1.2%	-1.3%	2.4%	1.3%	-1.3%	-0.7%	-0.5%	1.1%
Total MWH	14,167,856	13,030,501	12,640,075	11,394,989	11,324,755	13,645,029	17,033,251	15,883,935	12,949,426	12,249,187	12,102,682	13,905,071
Average Daily Energy Sendout/Month GWh	423	417	375	344	345	430	530	489	408	367	377	417

+ 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 2021 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 *	\$34.37	\$57.30	\$27.47	\$20.46								
Standard Deviation	\$14.58	\$24.48	\$8.23	\$4.58								
Load Weighted Price **	\$35.31	\$58.67	\$28.12	\$20.81								
<u>RTC LBMP</u>												
Price *	\$34.32	\$49.25	\$25.59	\$21.30								
Standard Deviation	\$20.93	\$23.34	\$12.67	\$7.91								
Load Weighted Price **	\$35.40	\$50.48	\$26.37	\$21.67								
<u>REAL TIME LBMP</u>												
Price *	\$34.59	\$48.22	\$28.06	\$21.10								
Standard Deviation	\$29.47	\$26.46	\$26.13	\$10.07								
Load Weighted Price **	\$35.89	\$49.57	\$29.33	\$21.55								
Average Daily Energy Sendout/Month GWh	427	434	381	354								

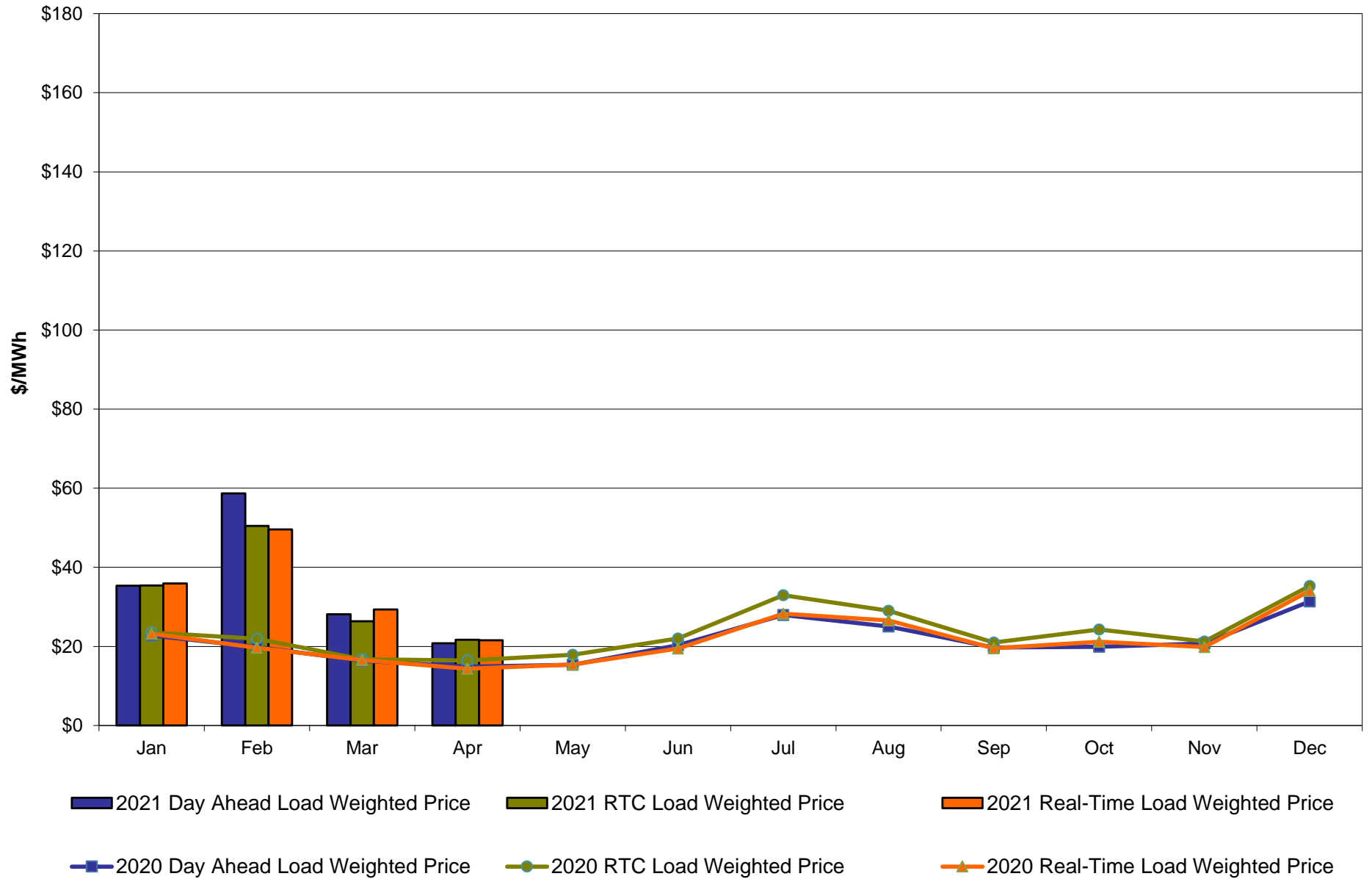
NYISO Markets 2020 Energy Statistics

	<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	\$26.30	\$23.61	\$18.88	\$19.40	\$20.07	\$30.45
Standard Deviation	\$7.43	\$4.45	\$3.21	\$2.71	\$3.55	\$6.40	\$10.45	\$8.56	\$5.41	\$6.36	\$7.15	\$12.35
Load Weighted Price **	\$22.77	\$19.84	\$16.36	\$14.86	\$15.37	\$20.28	\$27.94	\$25.01	\$19.72	\$19.91	\$20.75	\$31.36
<u>RTC LBMP</u>												
Price *	\$22.86	\$21.48	\$16.48	\$16.23	\$17.46	\$20.84	\$30.70	\$26.86	\$19.90	\$23.35	\$20.39	\$34.01
Standard Deviation	\$9.33	\$53.30	\$4.84	\$5.17	\$8.61	\$11.26	\$17.92	\$17.17	\$11.37	\$14.44	\$14.19	\$25.41
Load Weighted Price **	\$23.50	\$21.94	\$16.74	\$16.44	\$17.89	\$22.01	\$32.92	\$29.01	\$20.99	\$24.25	\$21.23	\$35.28
<u>REAL TIME LBMP</u>												
Price *	\$22.53	\$19.29	\$16.24	\$14.14	\$14.90	\$18.35	\$26.56	\$24.68	\$18.63	\$20.44	\$18.96	\$32.72
Standard Deviation	\$11.90	\$8.68	\$7.48	\$6.98	\$8.35	\$9.33	\$16.45	\$13.95	\$7.15	\$12.01	\$12.66	\$24.29
Load Weighted Price **	\$23.20	\$19.68	\$16.58	\$14.35	\$15.42	\$19.46	\$28.27	\$26.53	\$19.54	\$21.15	\$19.84	\$34.04
Average Daily Energy Sendout/Month GWh	423	417	375	344	345	430	530	489	408	367	377	417

* Average zonal load weighted prices.

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

NYISO Monthly Average Internal LBMPs 2020 - 2021

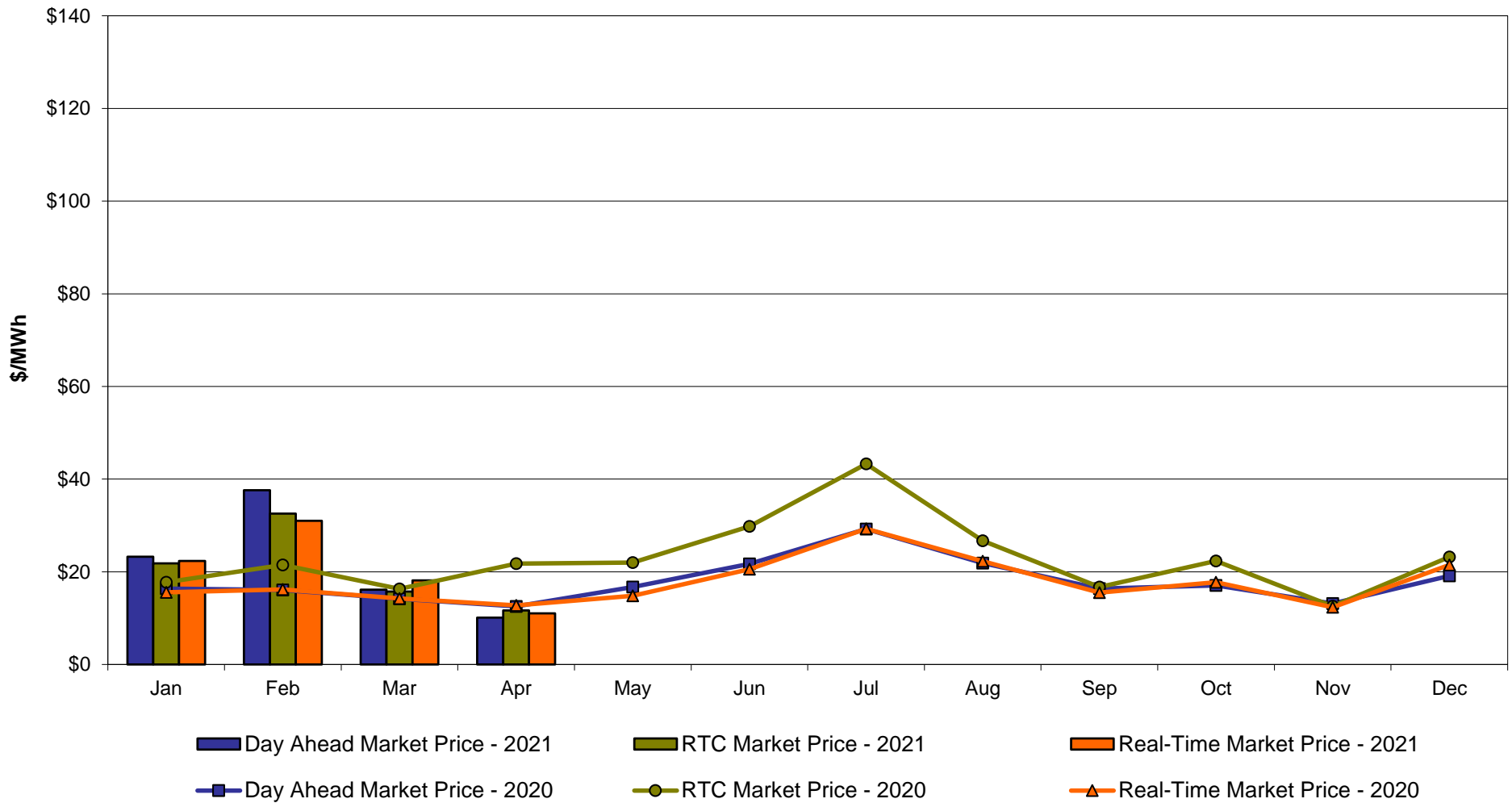


April 2021 Zonal LBMP Statistics for NYISO (\$/MWh)

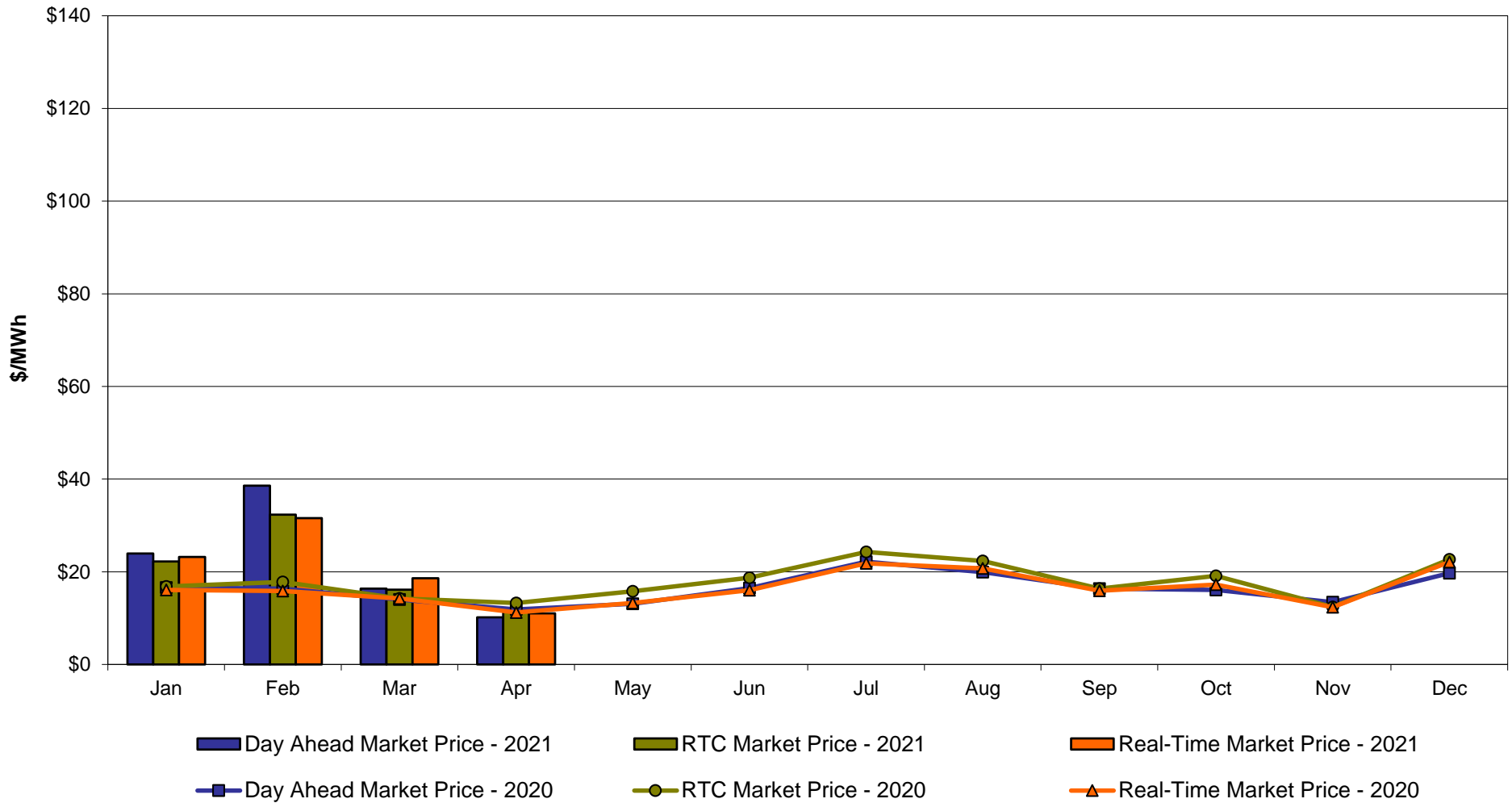
	<u>WEST</u> <u>Zone A</u>	<u>GENESEE</u> <u>Zone B</u>	<u>NORTH</u> <u>Zone D</u>	<u>CENTRAL</u> <u>Zone C</u>	<u>MOHAWK</u> <u>VALLEY</u> <u>Zone E</u>	<u>CAPITAL</u> <u>Zone F</u>	<u>HUDSON</u> <u>VALLEY</u> <u>Zone G</u>	<u>MILLWOOD</u> <u>Zone H</u>	<u>DUNWOODIE</u> <u>Zone I</u>	<u>NEW YORK</u> <u>CITY</u> <u>Zone J</u>	<u>LONG</u> <u>ISLAND</u> <u>Zone K</u>
<u>DAY AHEAD LBMP</u>											
Unweighted Price *	10.13	9.39	6.51	10.15	9.98	31.14	24.10	24.55	24.43	24.55	30.81
Standard Deviation	3.02	2.95	2.70	3.04	2.94	6.82	5.22	5.29	5.25	5.30	8.15
<u>RTC LBMP</u>											
Unweighted Price *	11.67	10.43	6.96	11.74	11.46	30.47	23.98	24.42	24.31	24.36	34.56
Standard Deviation	10.39	8.75	9.10	10.50	10.77	11.55	7.43	7.68	7.61	7.57	35.40
<u>REAL TIME LBMP</u>											
Unweighted Price *	11.00	10.15	7.04	11.03	10.75	30.91	24.87	25.41	25.30	25.40	31.46
Standard Deviation	13.54	13.87	15.39	13.66	13.85	18.96	12.34	12.85	12.73	12.66	21.66
	<u>ONTARIO</u> <u>IESO</u>	<u>HYDRO</u> <u>QUEBEC</u> <u>(Wheel)</u>	<u>HYDRO</u> <u>QUEBEC</u> <u>(Import/Export)</u>	<u>PJM</u>	<u>NEW</u> <u>ENGLAND</u>	<u>CROSS</u> <u>SOUND</u> <u>CABLE</u> <u>Controllable</u> <u>Line</u>	<u>NORTHPORT-</u> <u>NORWALK</u> <u>Controllable</u> <u>Line</u>	<u>NEPTUNE</u> <u>Controllable</u> <u>Line</u>	<u>LINDEN VFT</u> <u>Controllable</u> <u>Line</u>	<u>HUDSON</u> <u>Controllable</u> <u>Line</u>	<u>Dennison</u> <u>Controllable</u> <u>Line</u>
	<u>Zone O</u>	<u>Zone M</u>	<u>Zone M</u>	<u>Zone P</u>	<u>Zone N</u>						
<u>DAY AHEAD LBMP</u>											
Unweighted Price *	9.73	6.88	6.88	17.70	27.17	30.88	28.35	29.58	24.22	24.46	6.36
Standard Deviation	2.88	2.72	2.72	3.87	5.81	8.84	6.15	8.16	5.07	5.23	2.57
<u>RTC LBMP</u>											
Unweighted Price *	10.82	7.42	7.42	18.45	26.42	34.36	33.41	33.11	22.89	24.11	6.53
Standard Deviation	8.93	8.57	8.57	6.71	8.87	35.80	35.09	34.64	13.06	7.54	14.81
<u>REAL TIME LBMP</u>											
Unweighted Price *	10.44	7.50	7.50	18.55	25.40	31.49	26.14	30.22	23.39	25.26	7.04
Standard Deviation	13.09	15.36	15.36	9.61	24.53	23.09	40.58	20.56	18.56	12.77	15.01

* Straight LBMP averages

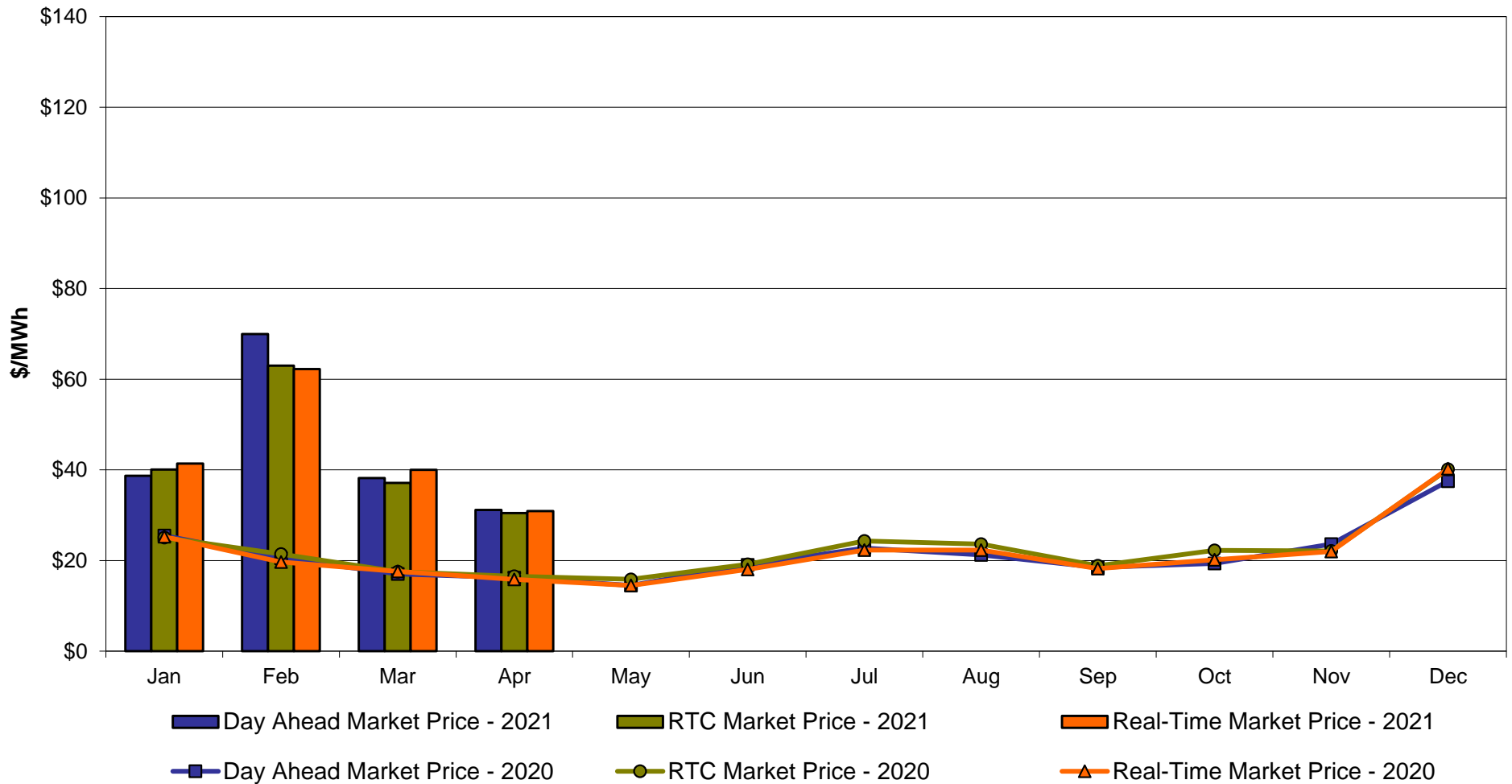
West Zone A **Monthly Average LBMP Prices 2020 - 2021**



Central Zone C Monthly Average LBMP Prices 2020 - 2021

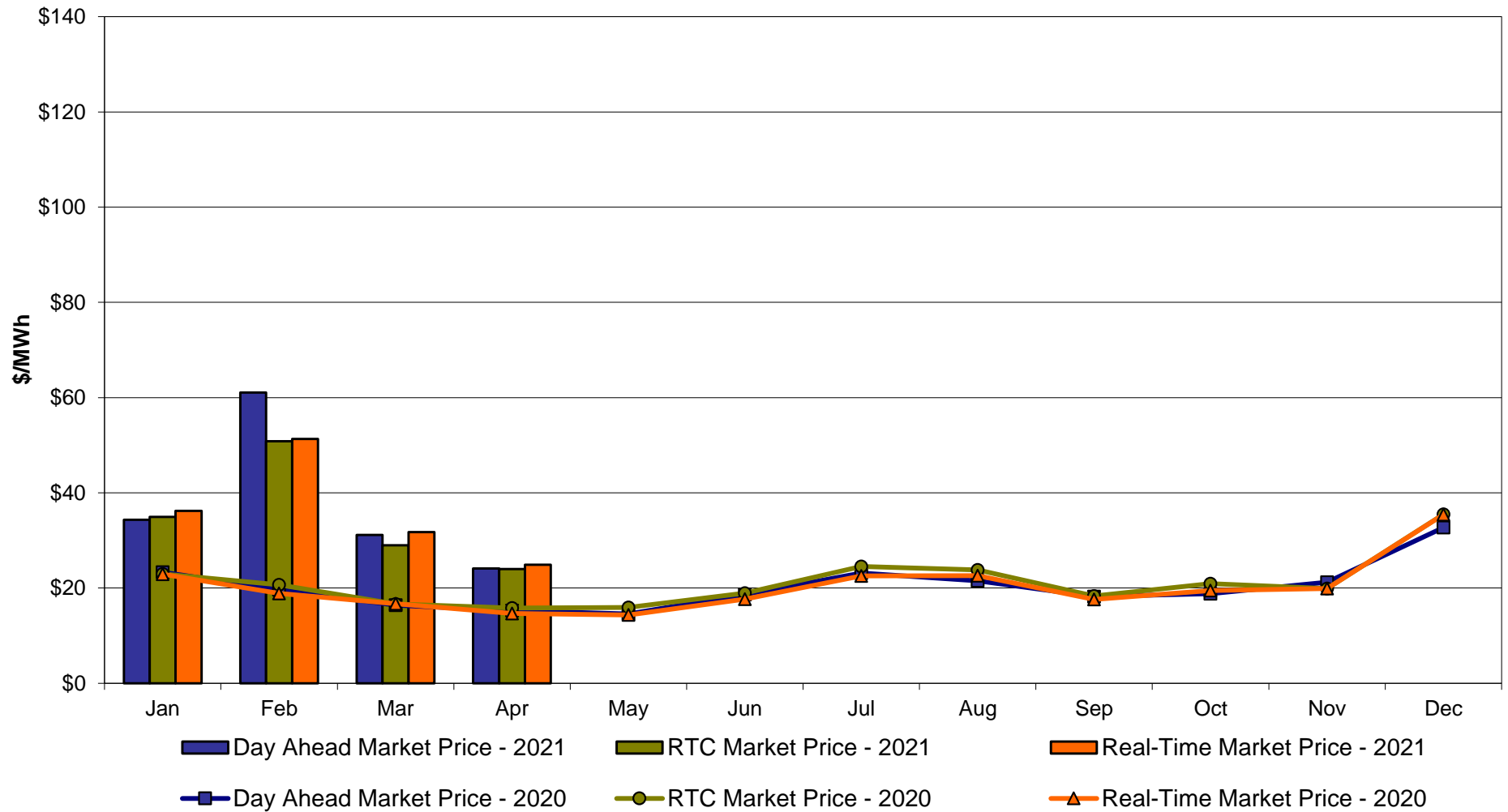


Capital Zone F **Monthly Average LBMP Prices 2020 - 2021**

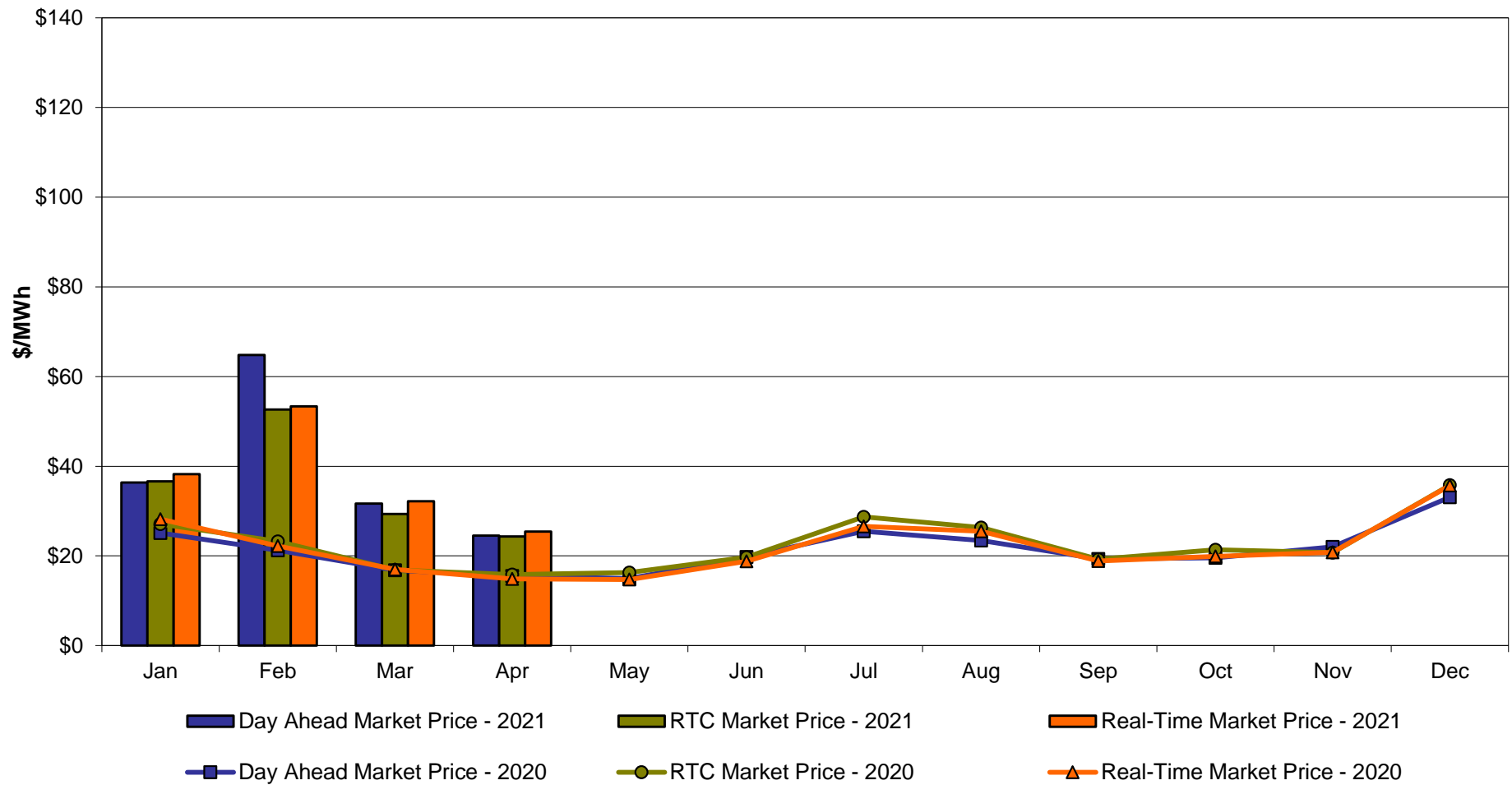


Hudson Valley Zone G

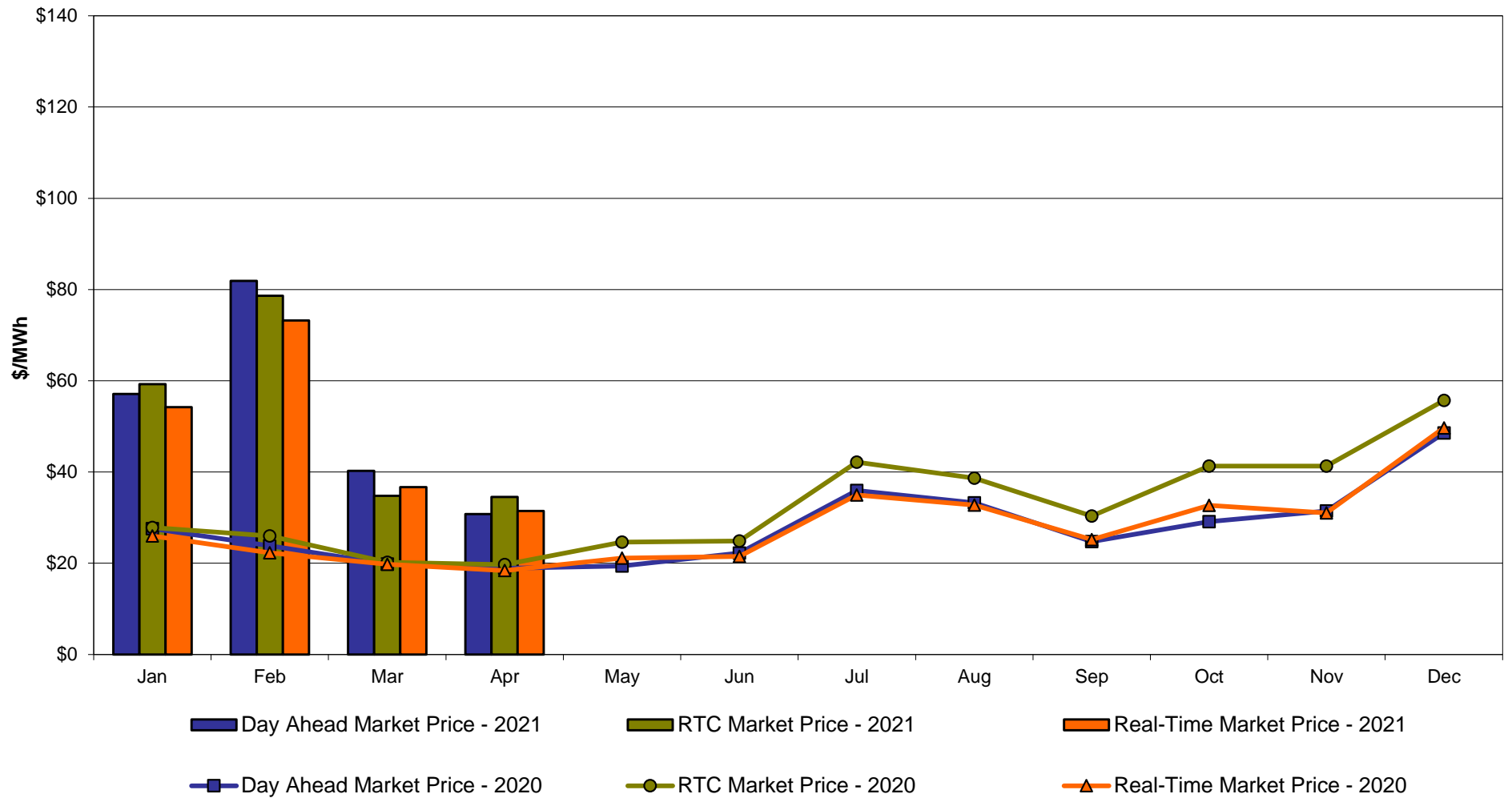
Monthly Average LBMP Prices 2020 - 2021



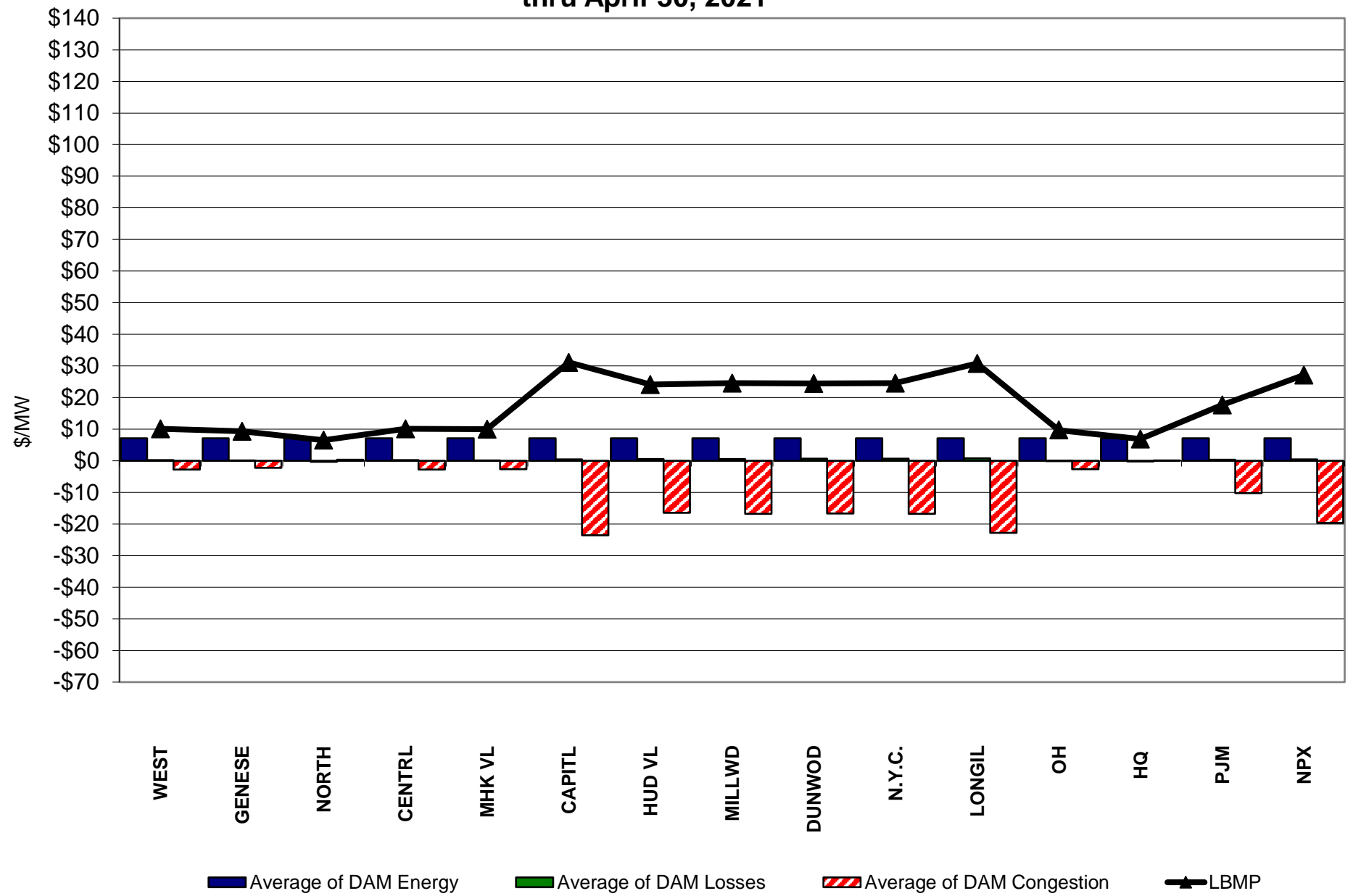
NYC Zone J Monthly Average LBMP Prices 2020 - 2021



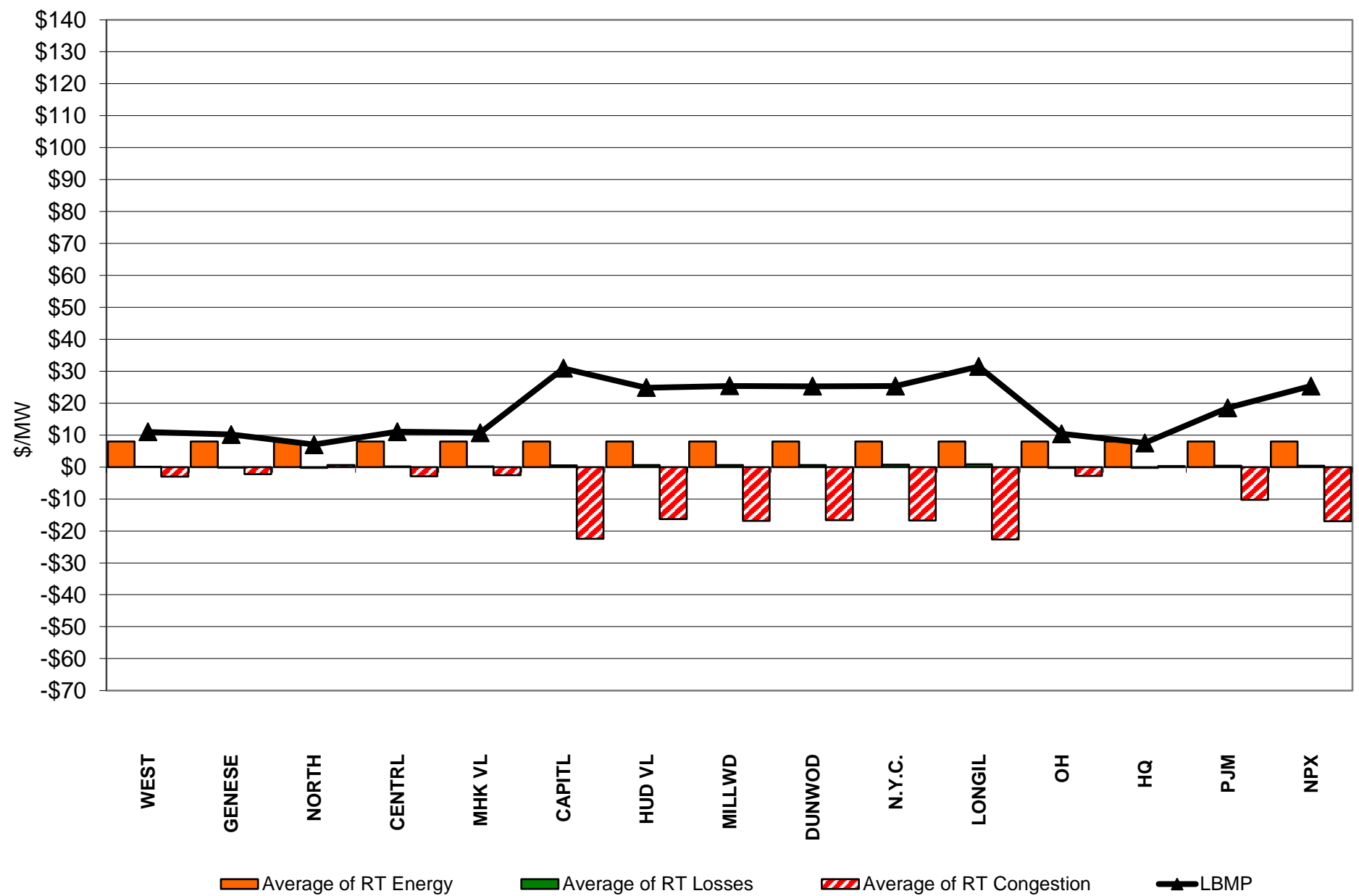
Long Island Zone K Monthly Average LBMP Prices 2020 - 2021



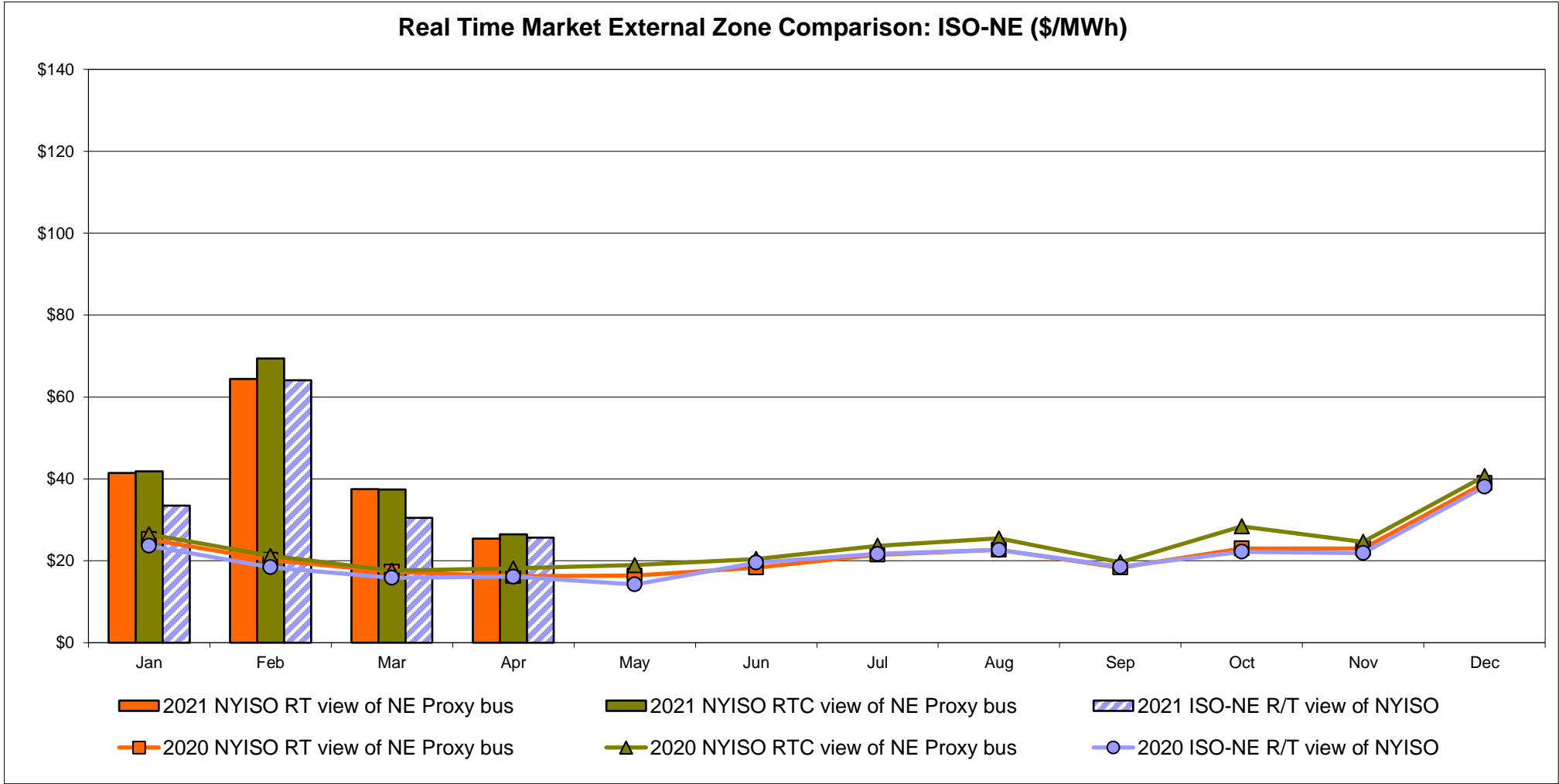
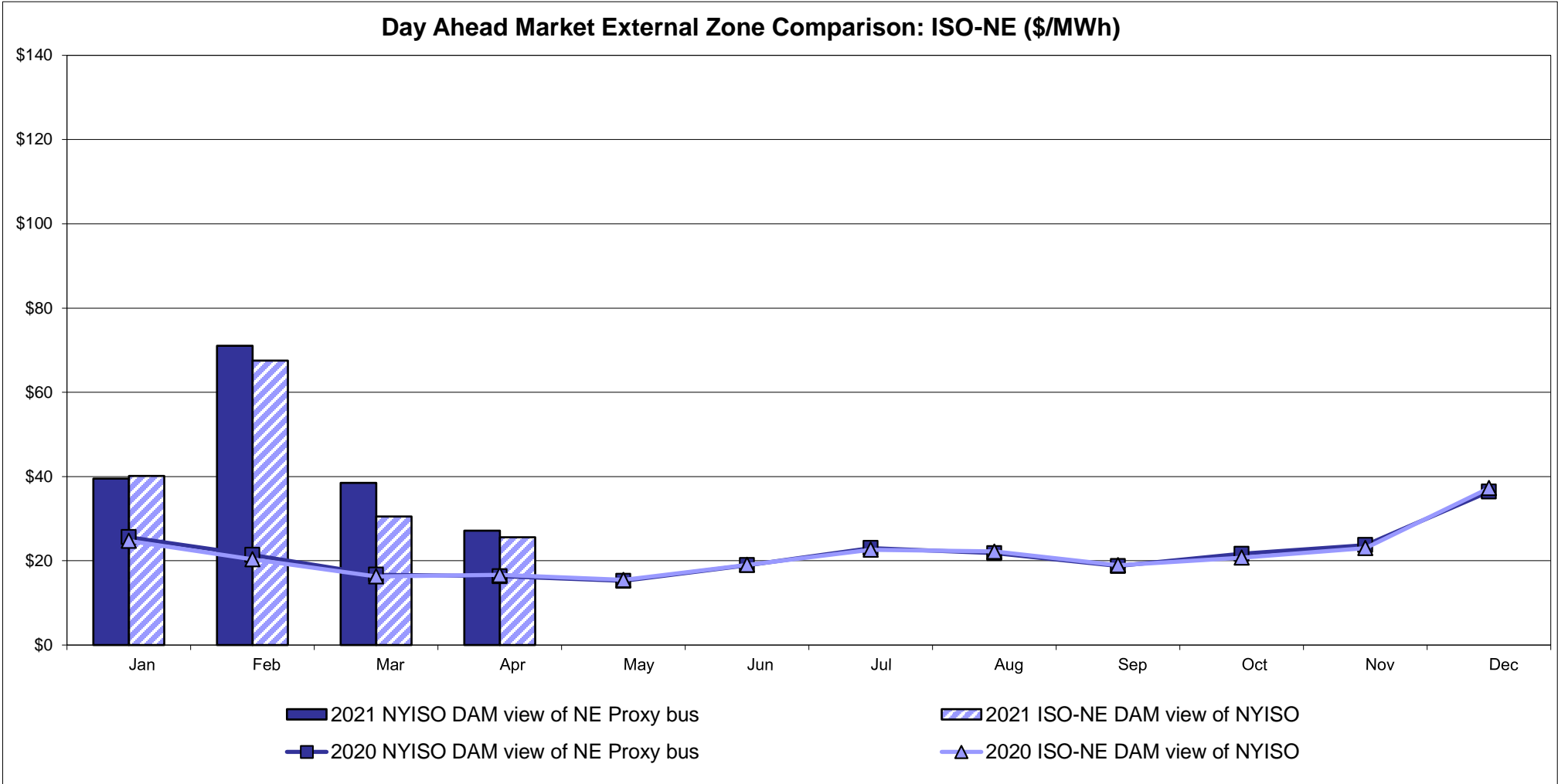
**DAM Zonal Unweighted Monthly Average LBMP Components
thru April 30, 2021**



**RT Zonal Unweighted Monthly Average LBMP Components
thru April 30, 2021**

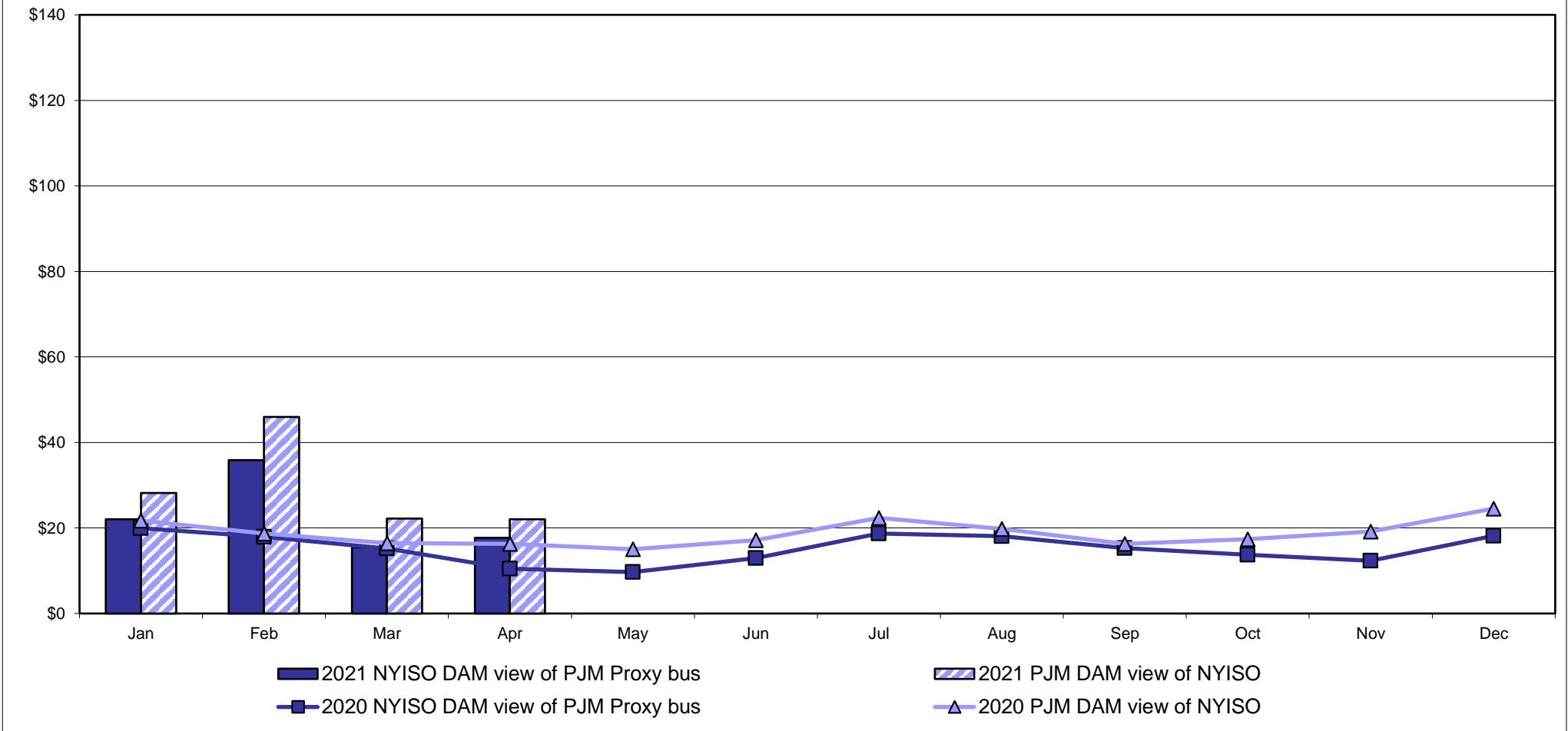


External Comparison ISO-New England

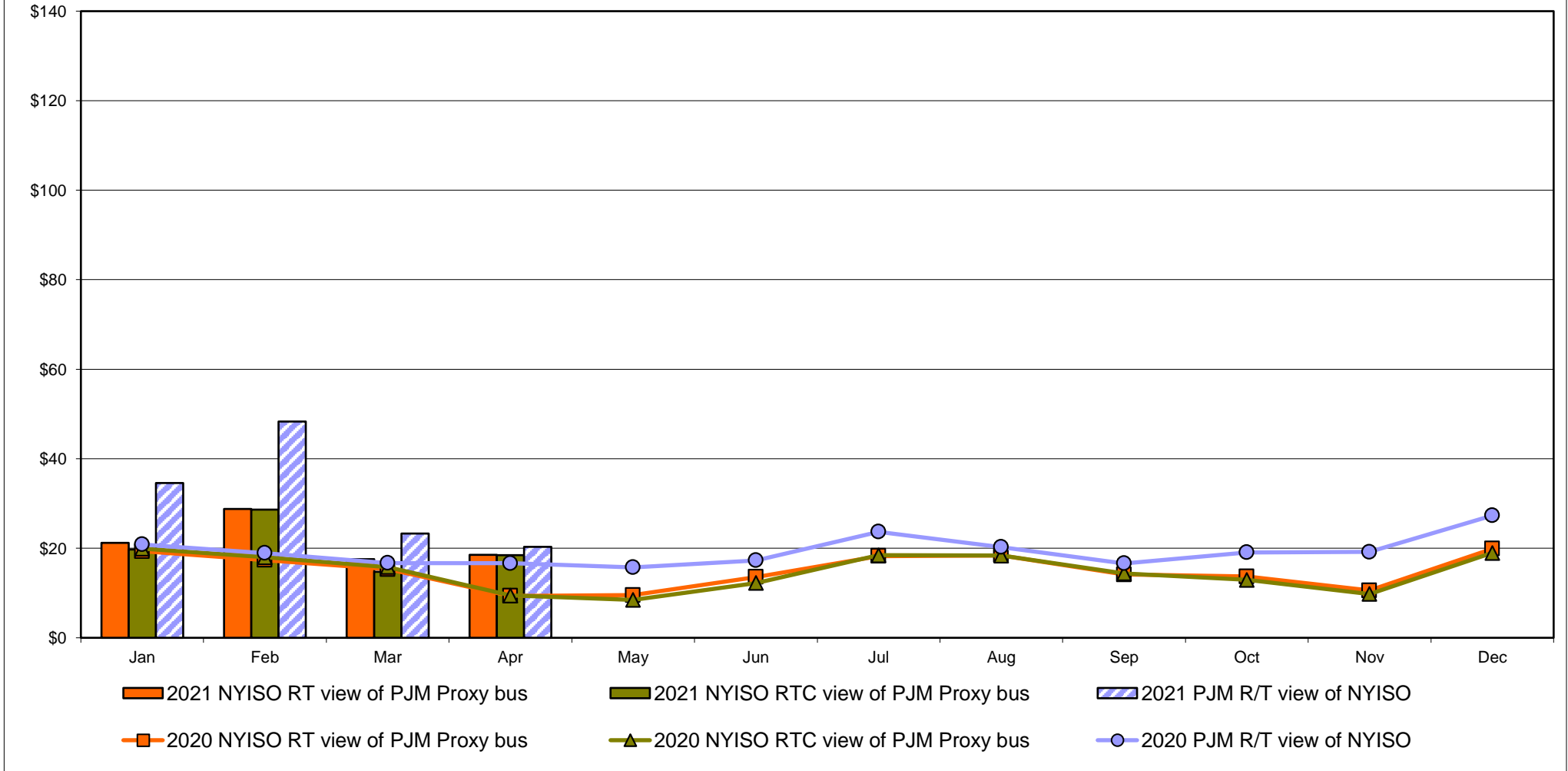


External Comparison PJM

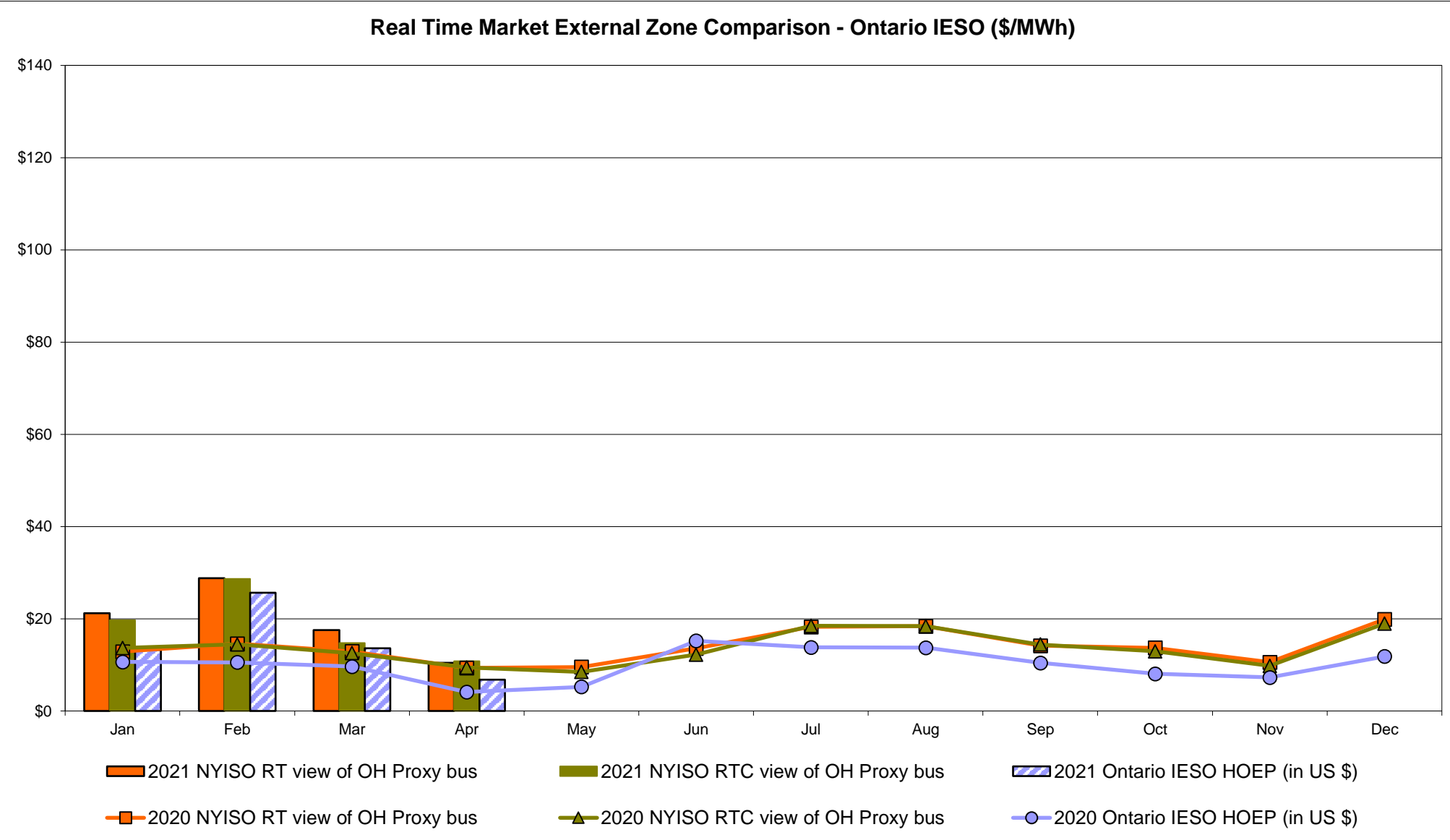
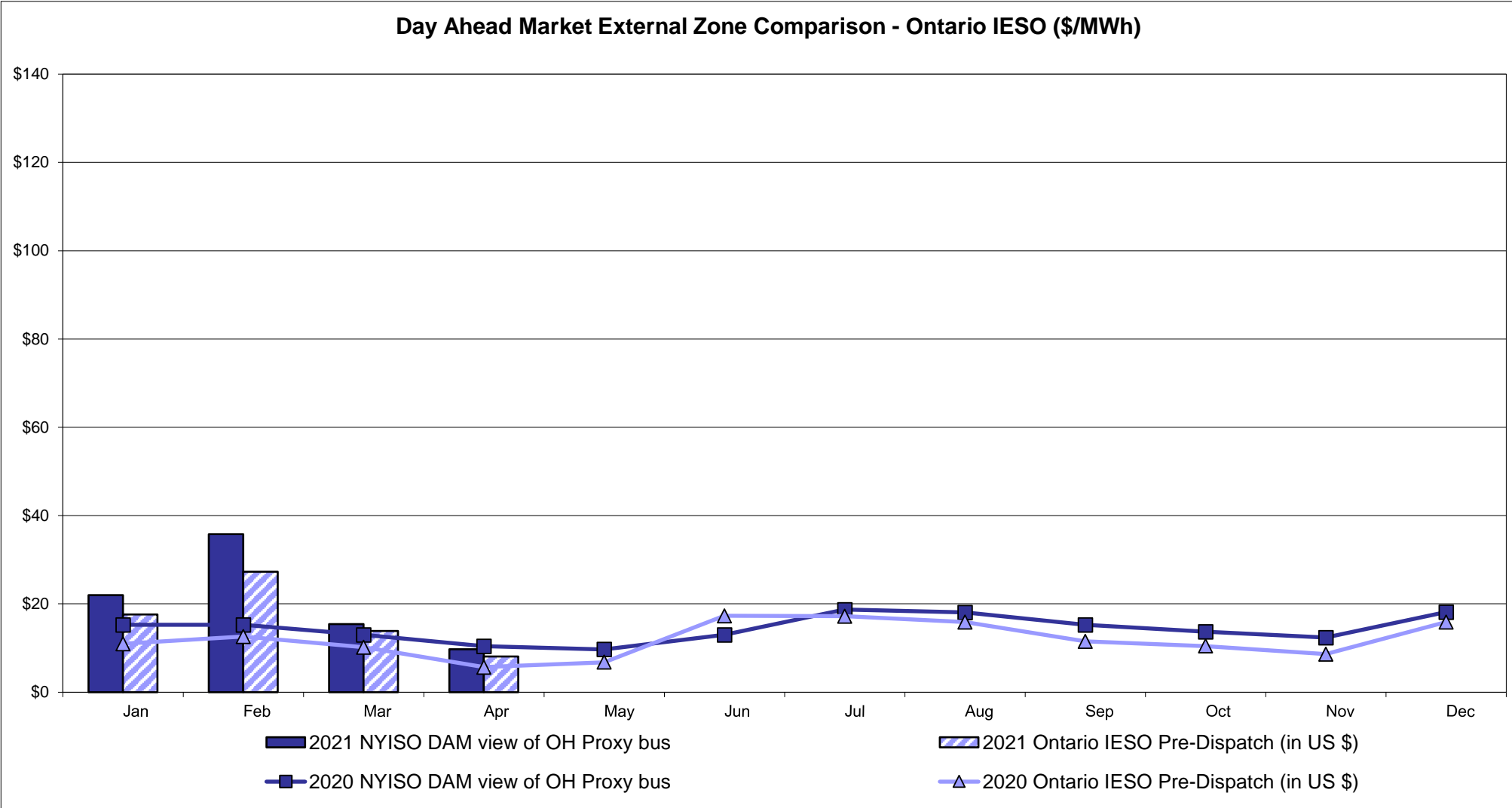
Day Ahead Market External Zone Comparison - PJM (\$/MWh)



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

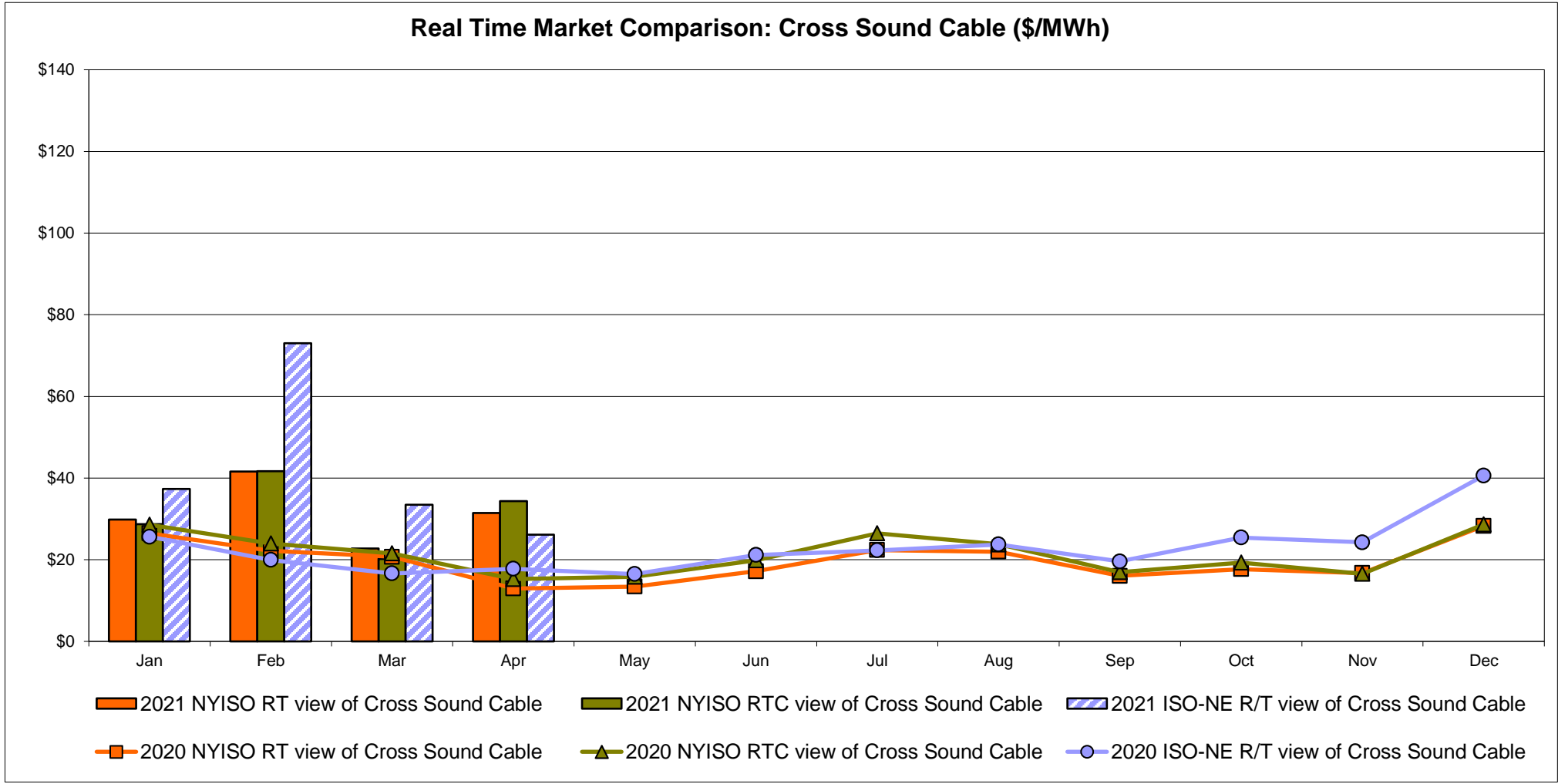
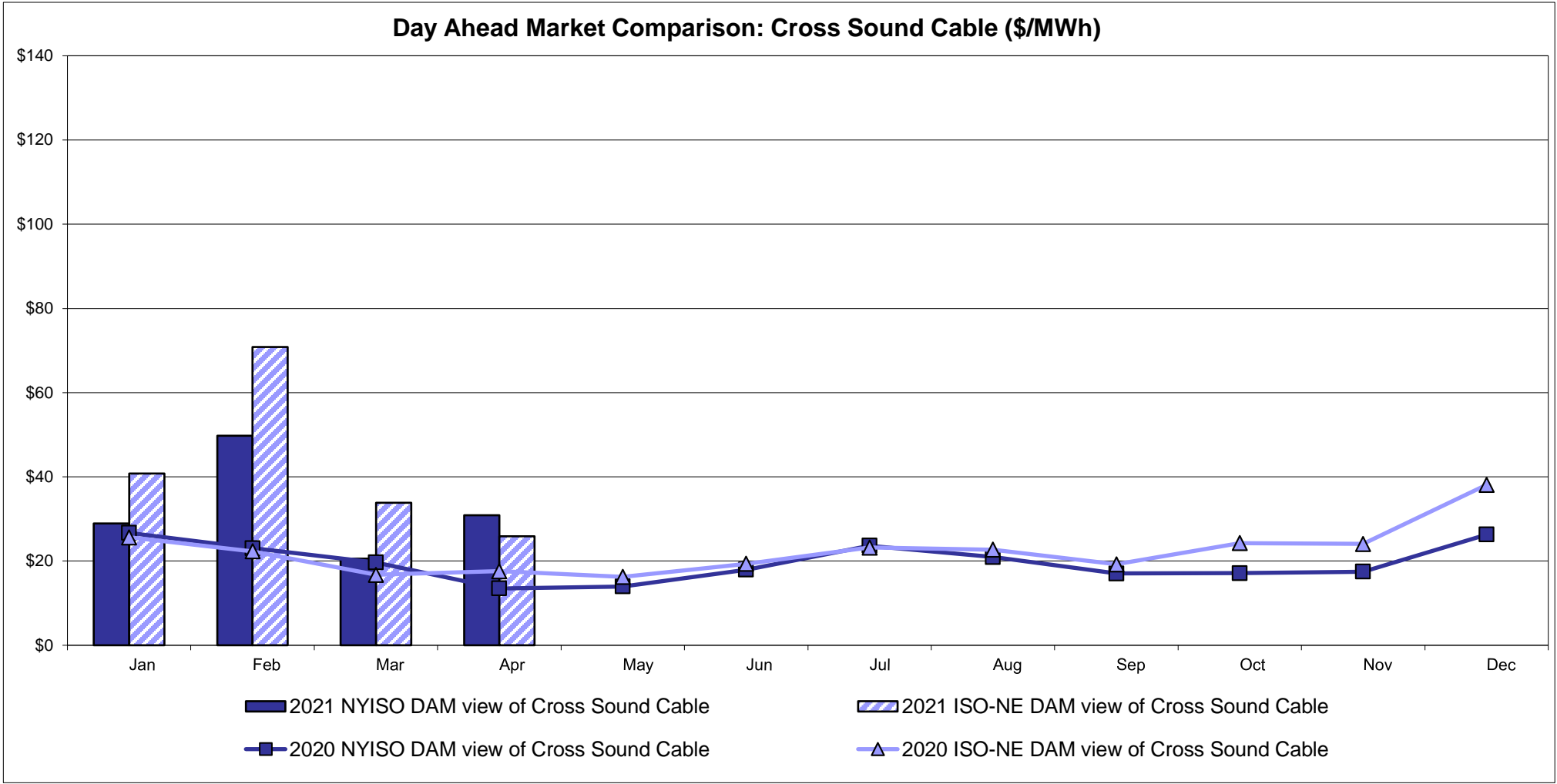


External Comparison Ontario IESO



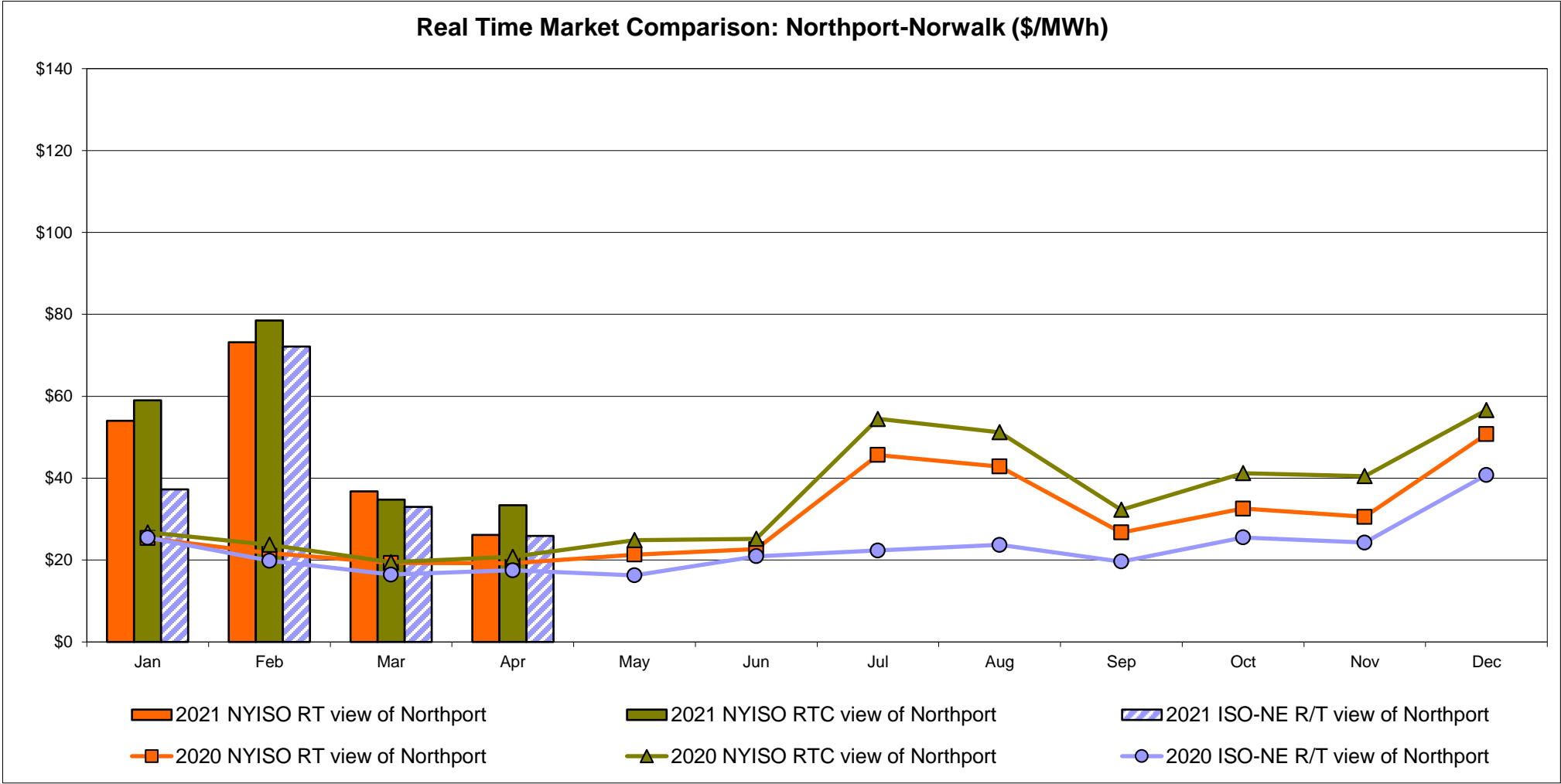
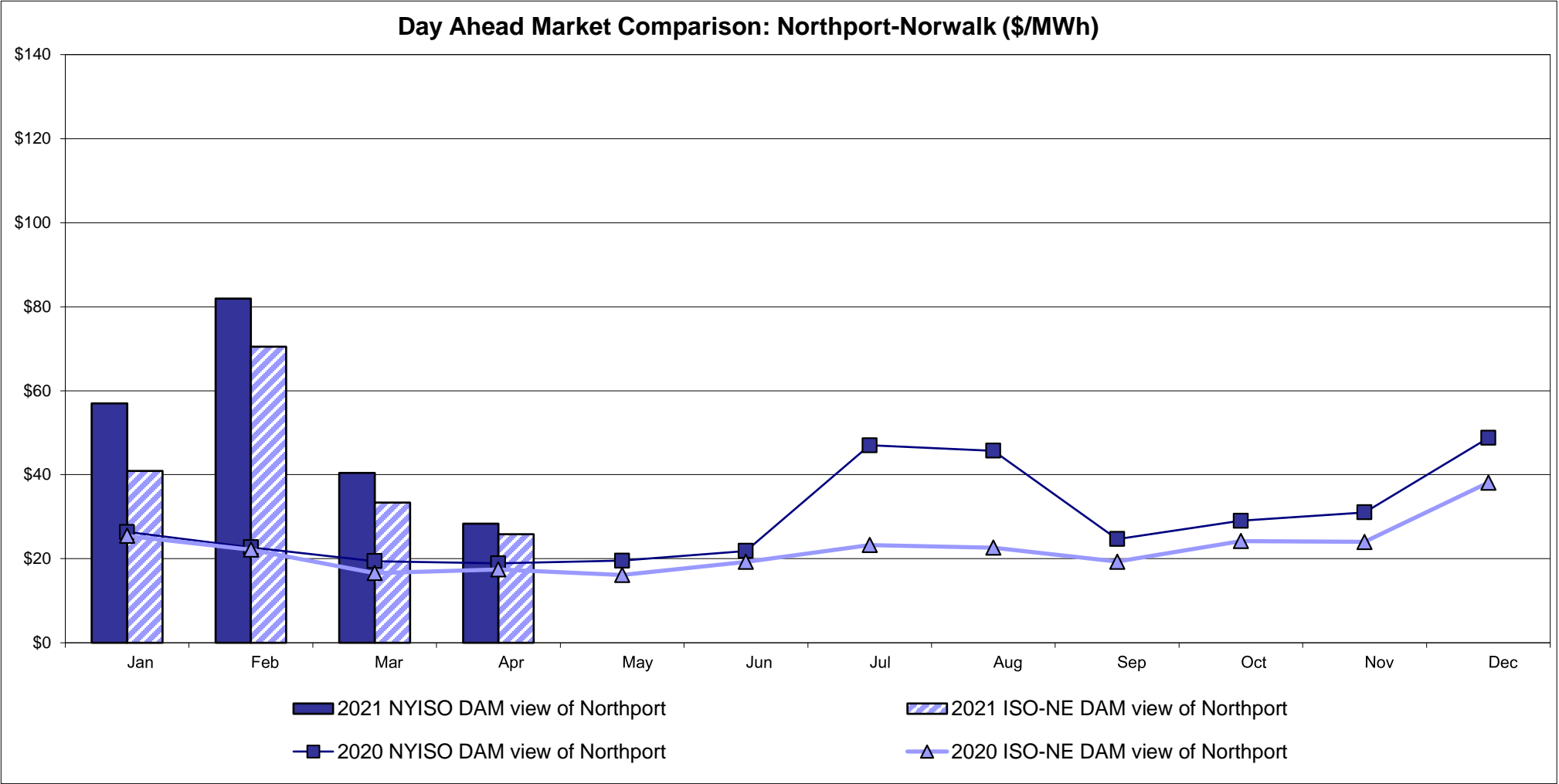
Notes: Exchange factor used for April 2021 was 0.800384184408516 to US
HOEP: Hourly Ontario Energy Price
Pre-Dispatch: Projected Energy Price

External Controllable Line: Cross Sound Cable (New England)



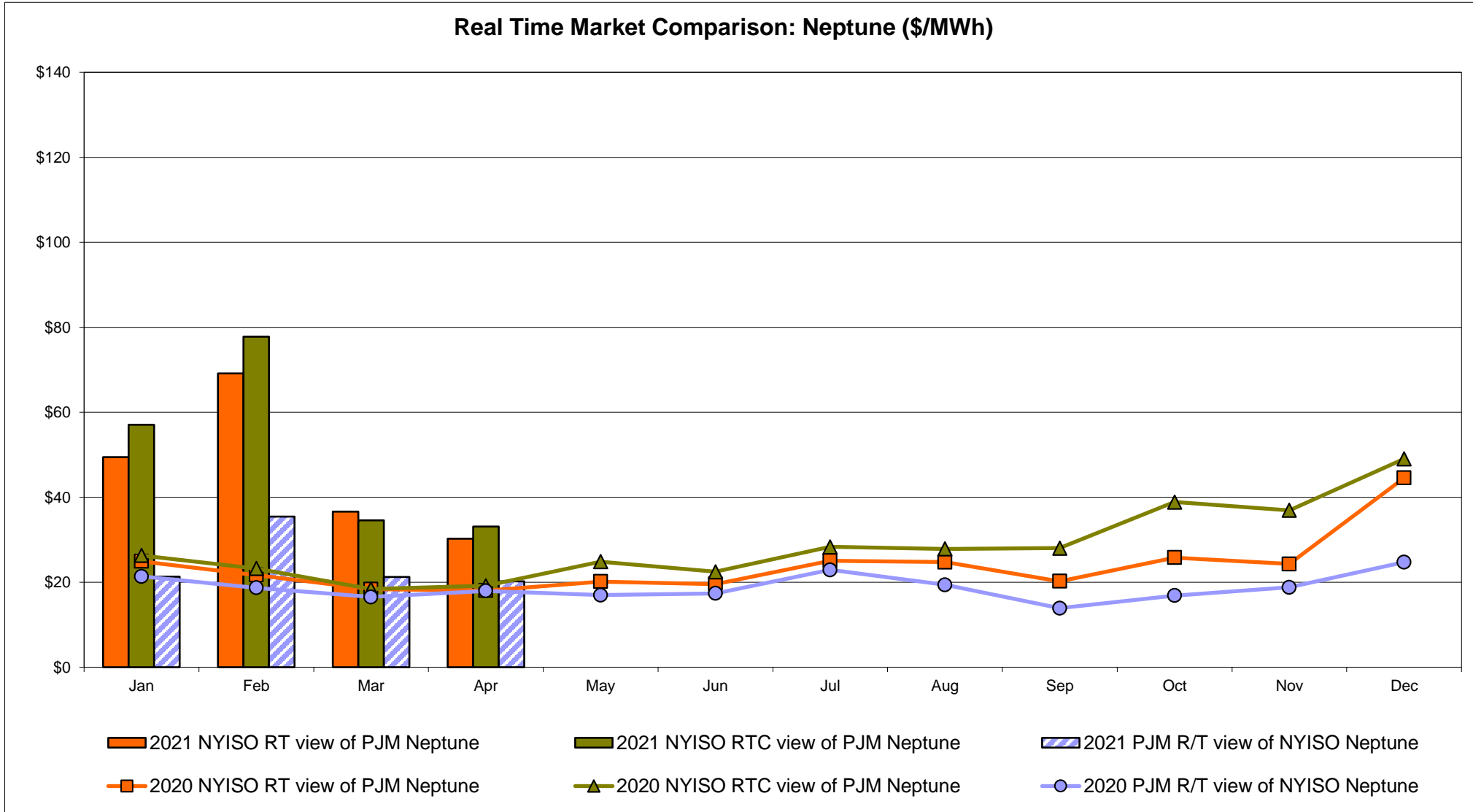
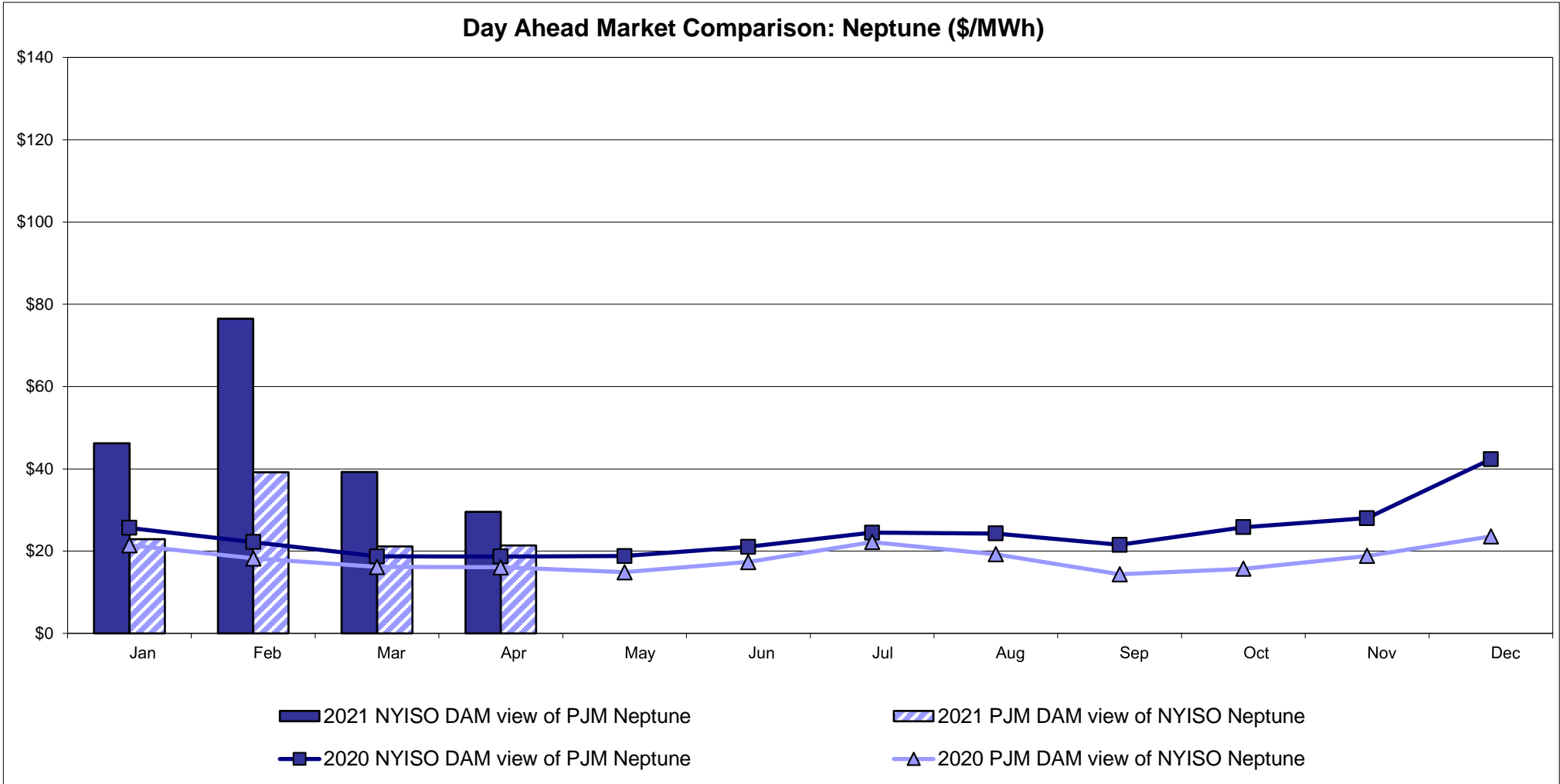
Note:
ISO-NE Forecast is an advisory posting @ 18:00 day before.
The DAM and R/T prices at the Shorham 13899 interface are used for ISO-NE.
The DAM and R/T prices at the CSC interface are used for NYISO.

External Controllable Line: Northport - Norwalk (New England)

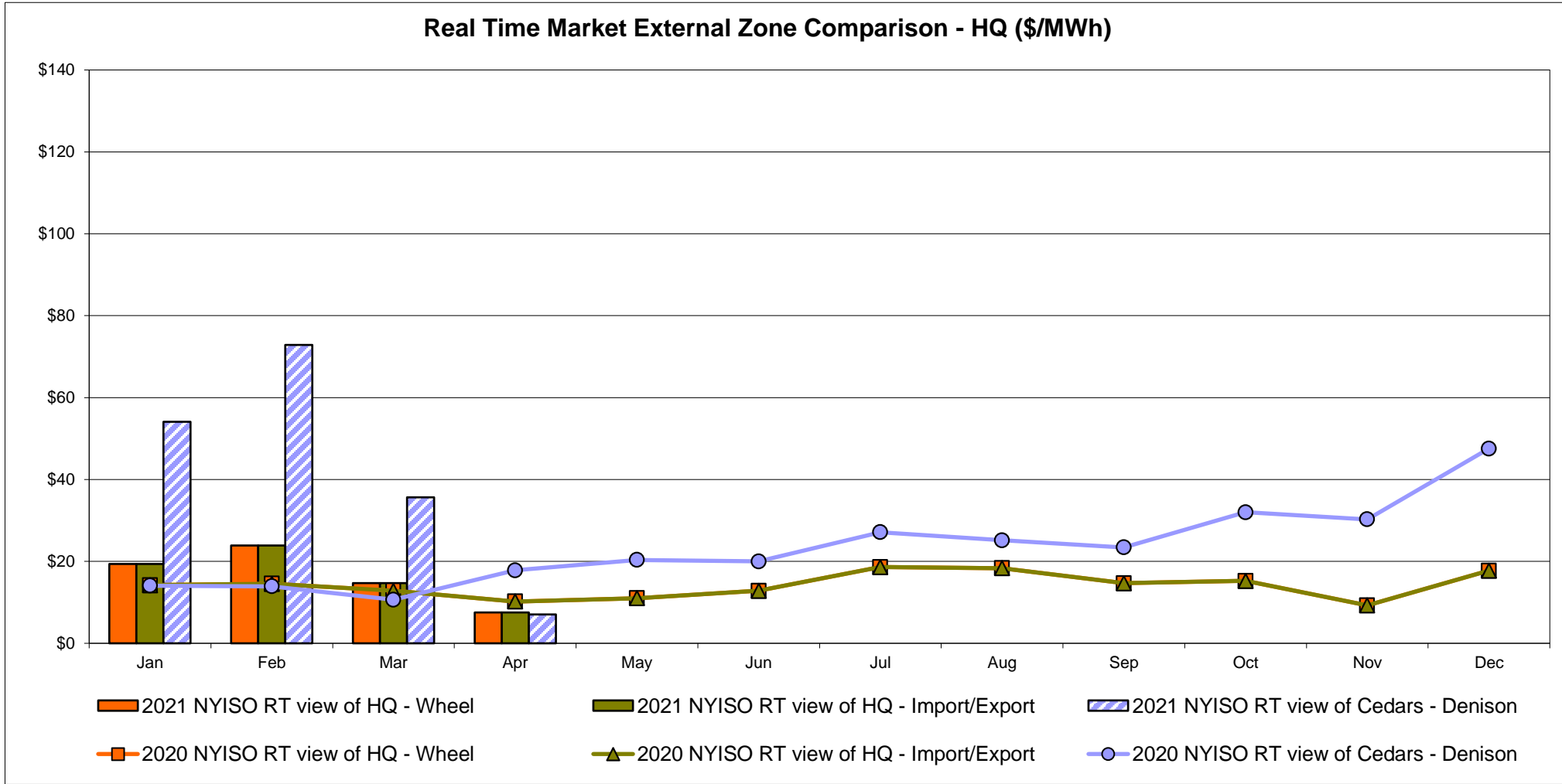
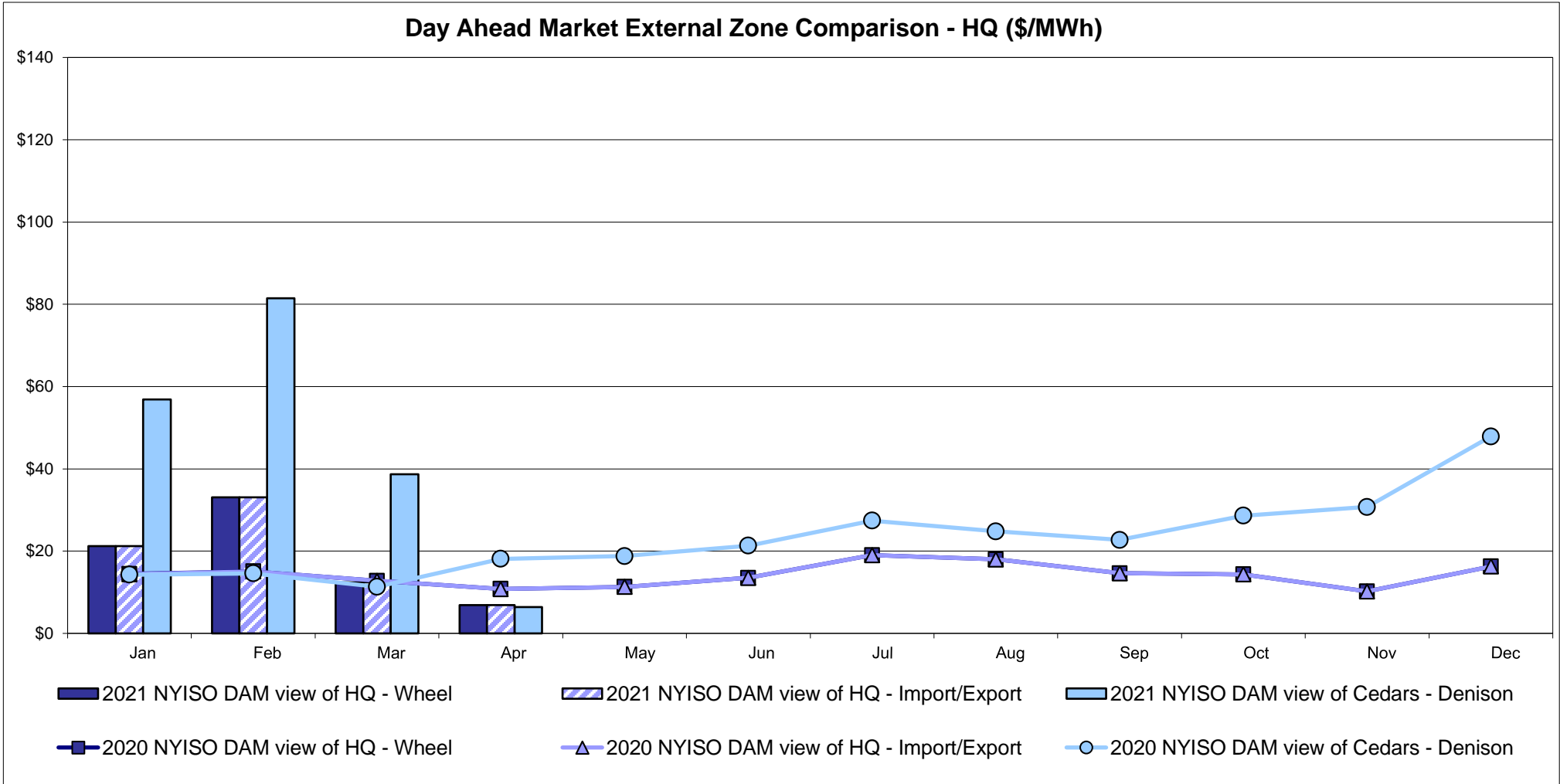


Note:
ISO-NE Forecast is an advisory posting @ 18:00 day before.
The DAM and R/T prices at the Northport 138 interface are used for ISO-NE.
The DAM and R/T prices at the 1385 interface are used for NYISO.

External Controllable Line: Neptune (PJM)

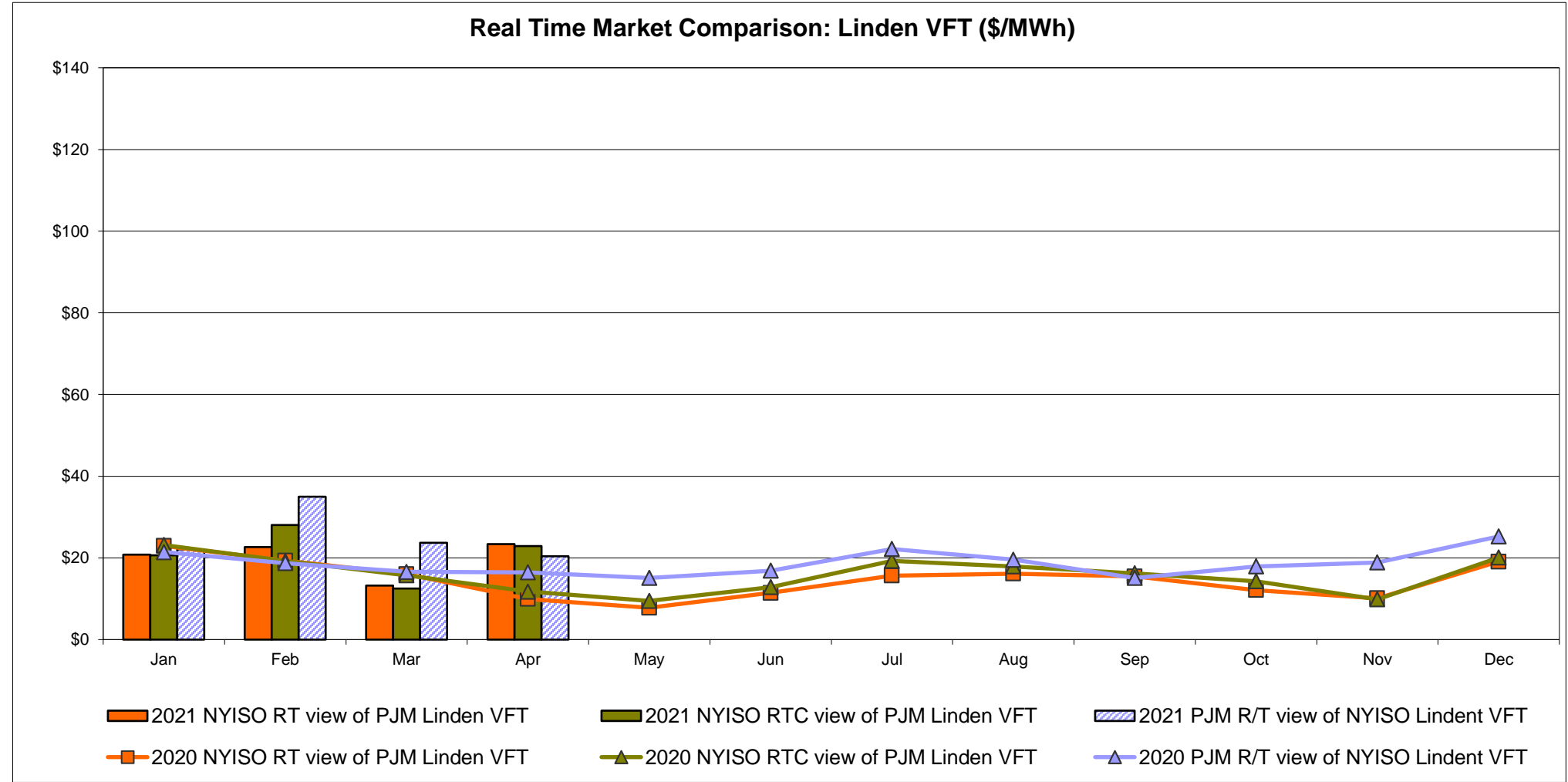
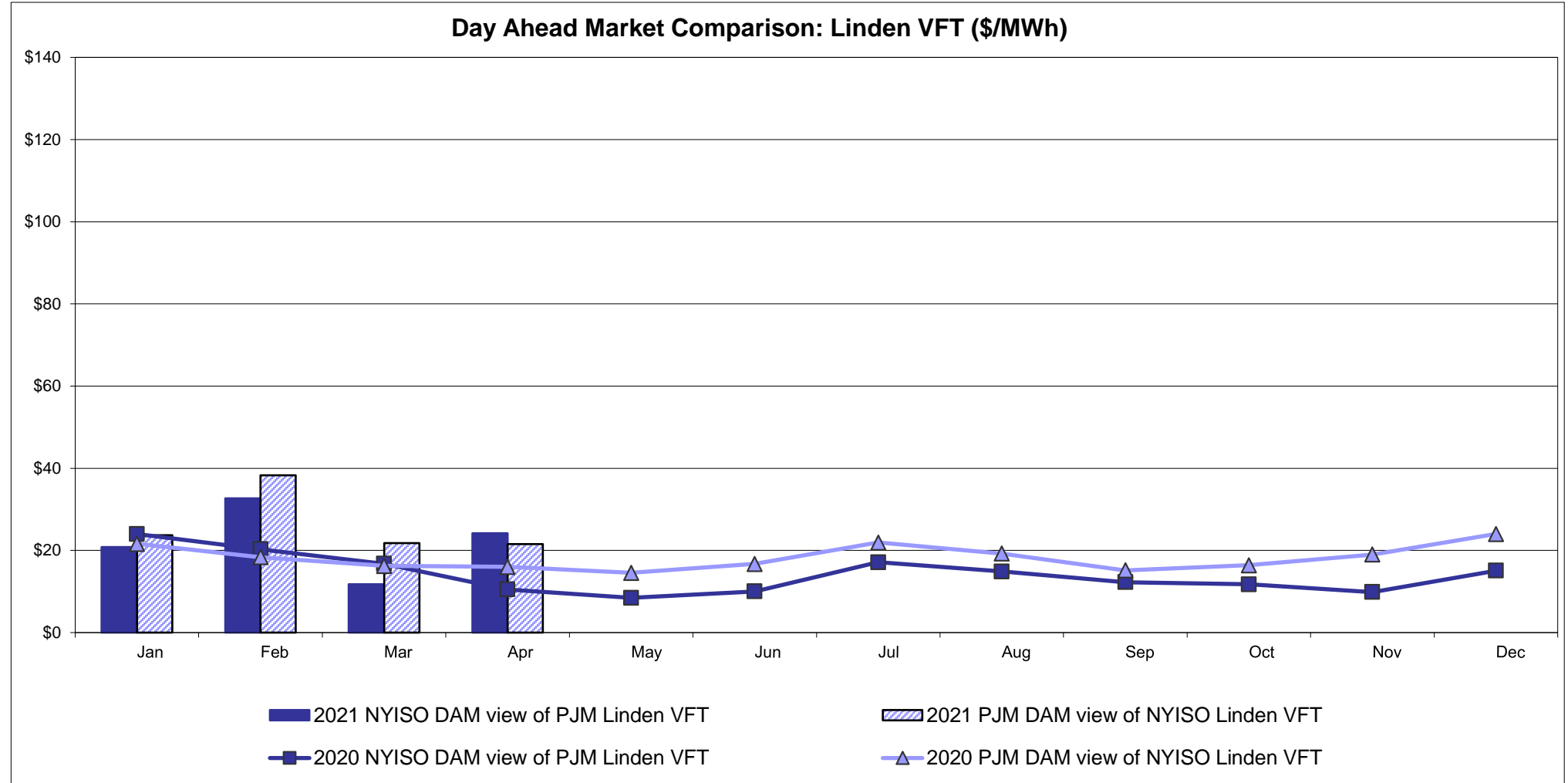


External Comparison Hydro-Quebec

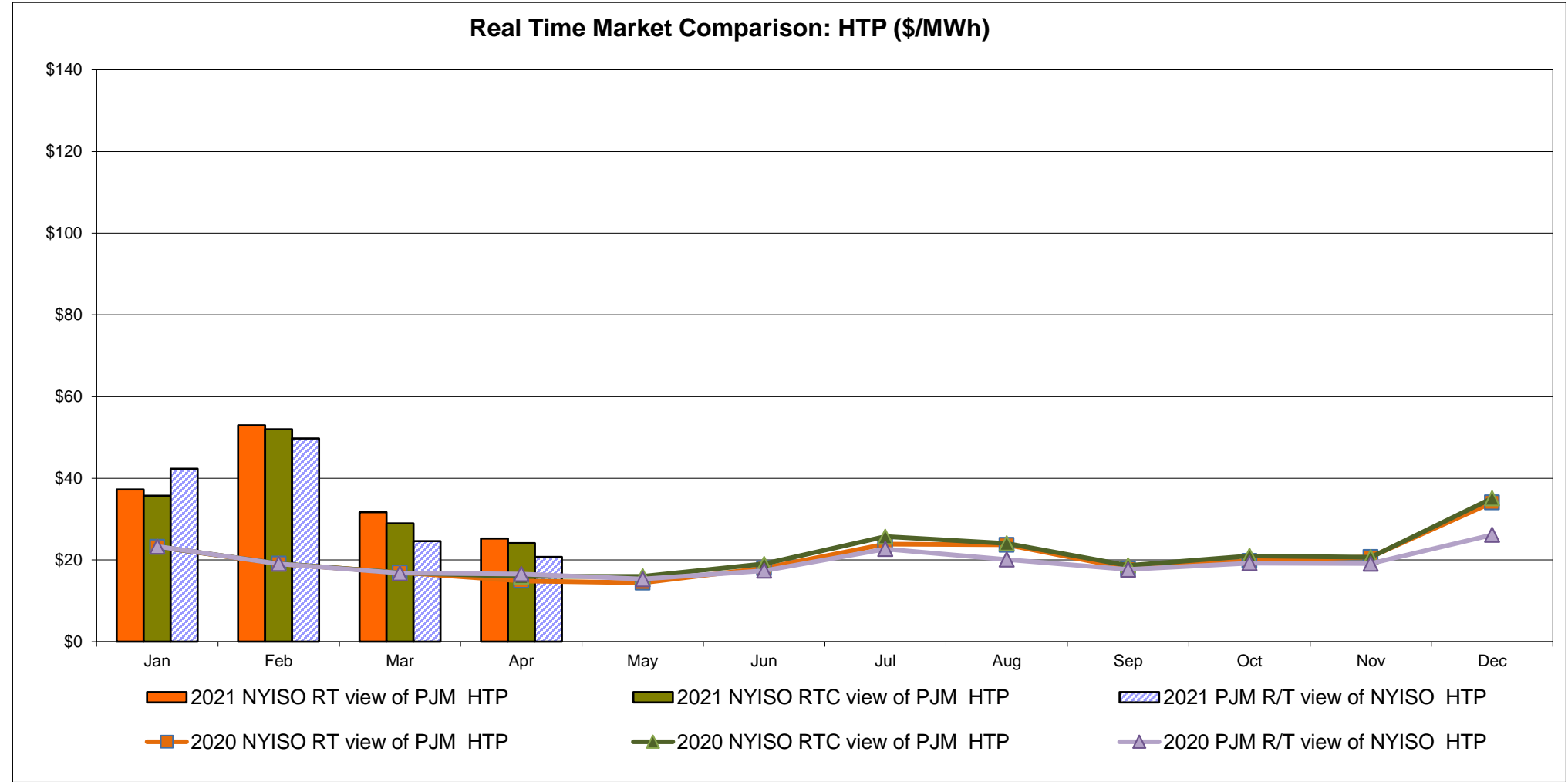
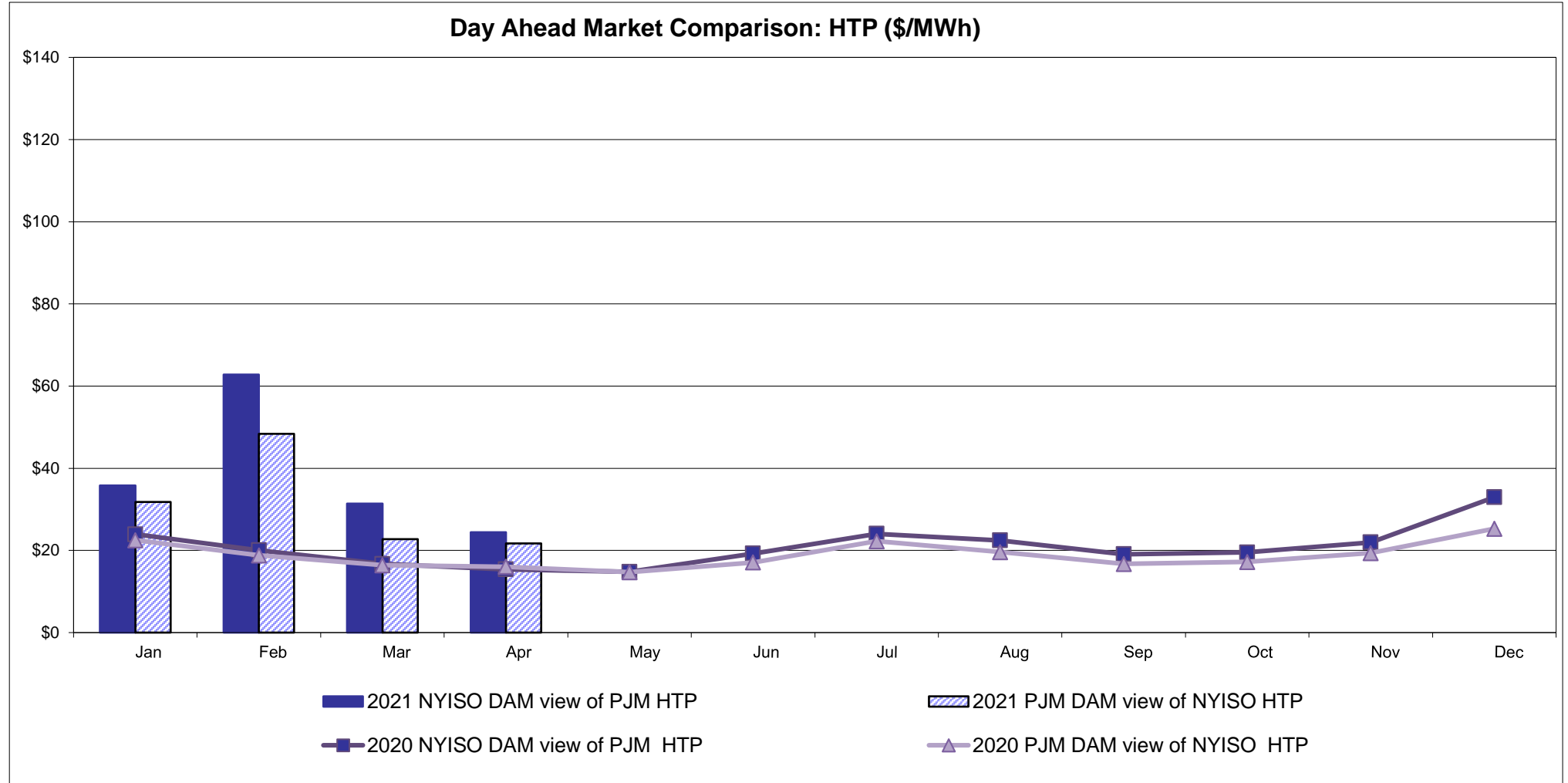


Note:
Hydro-Quebec Prices are unavailable.

External Controllable Line: Linden VFT (PJM)



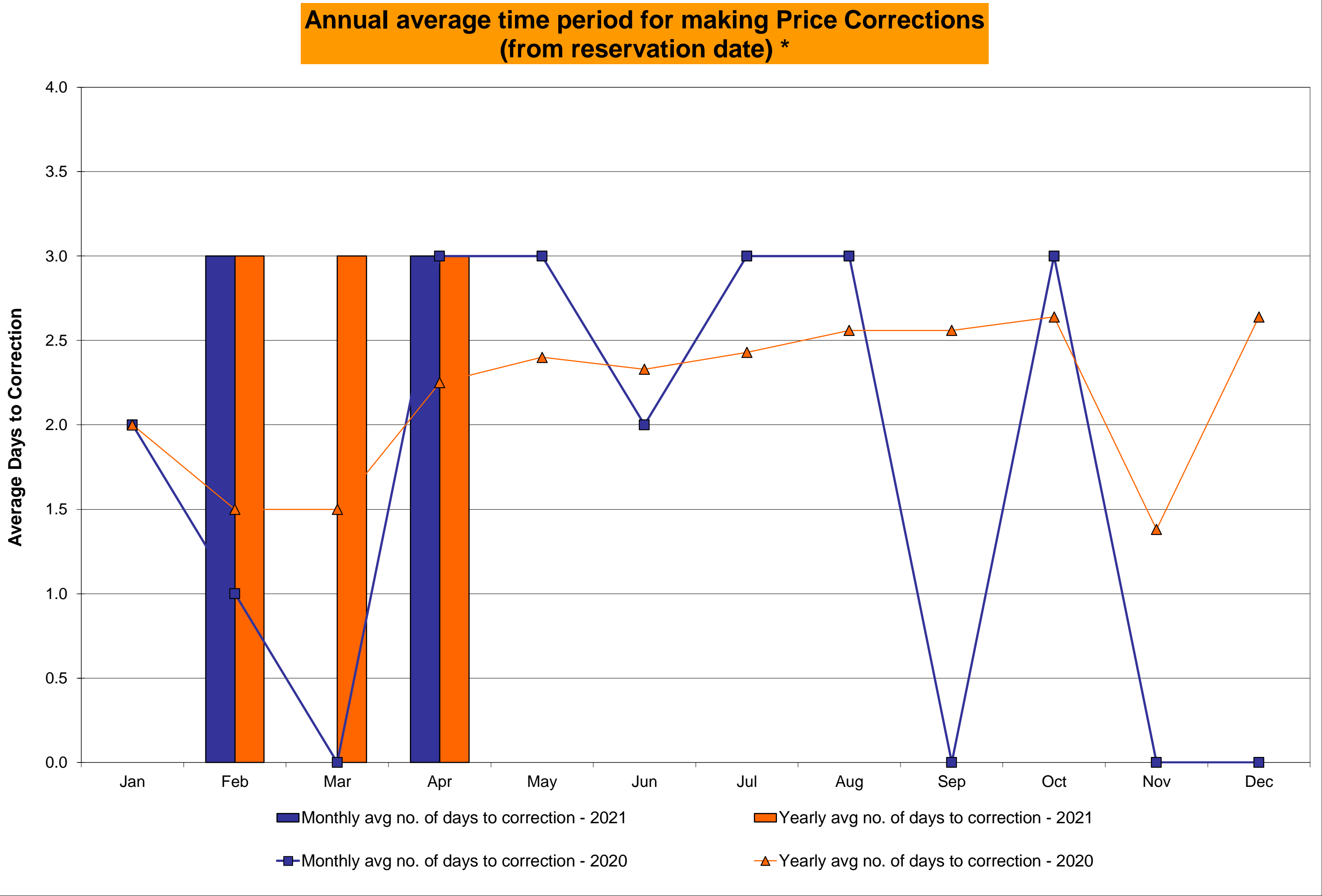
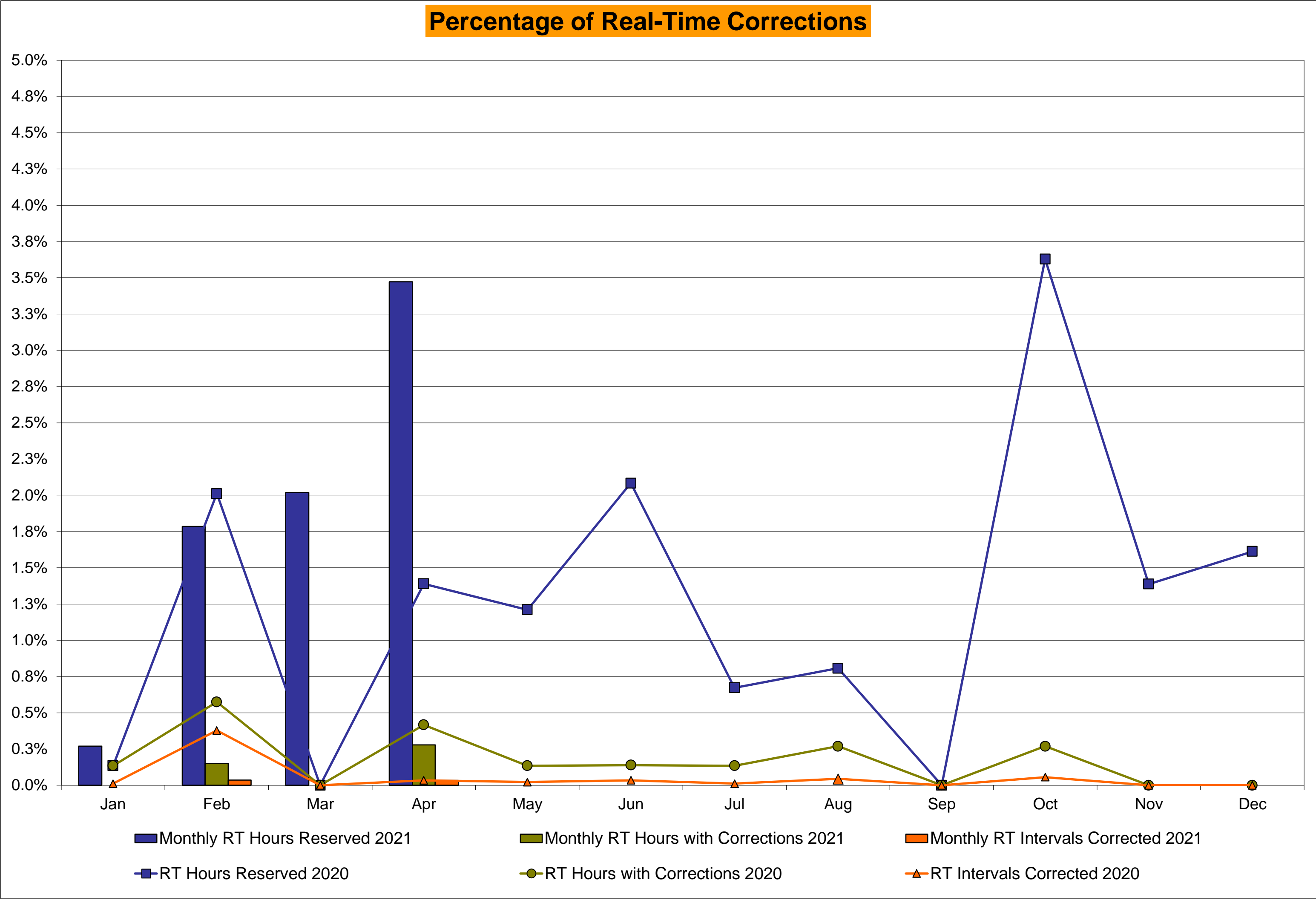
External Controllable Line: Hudson (PJM)



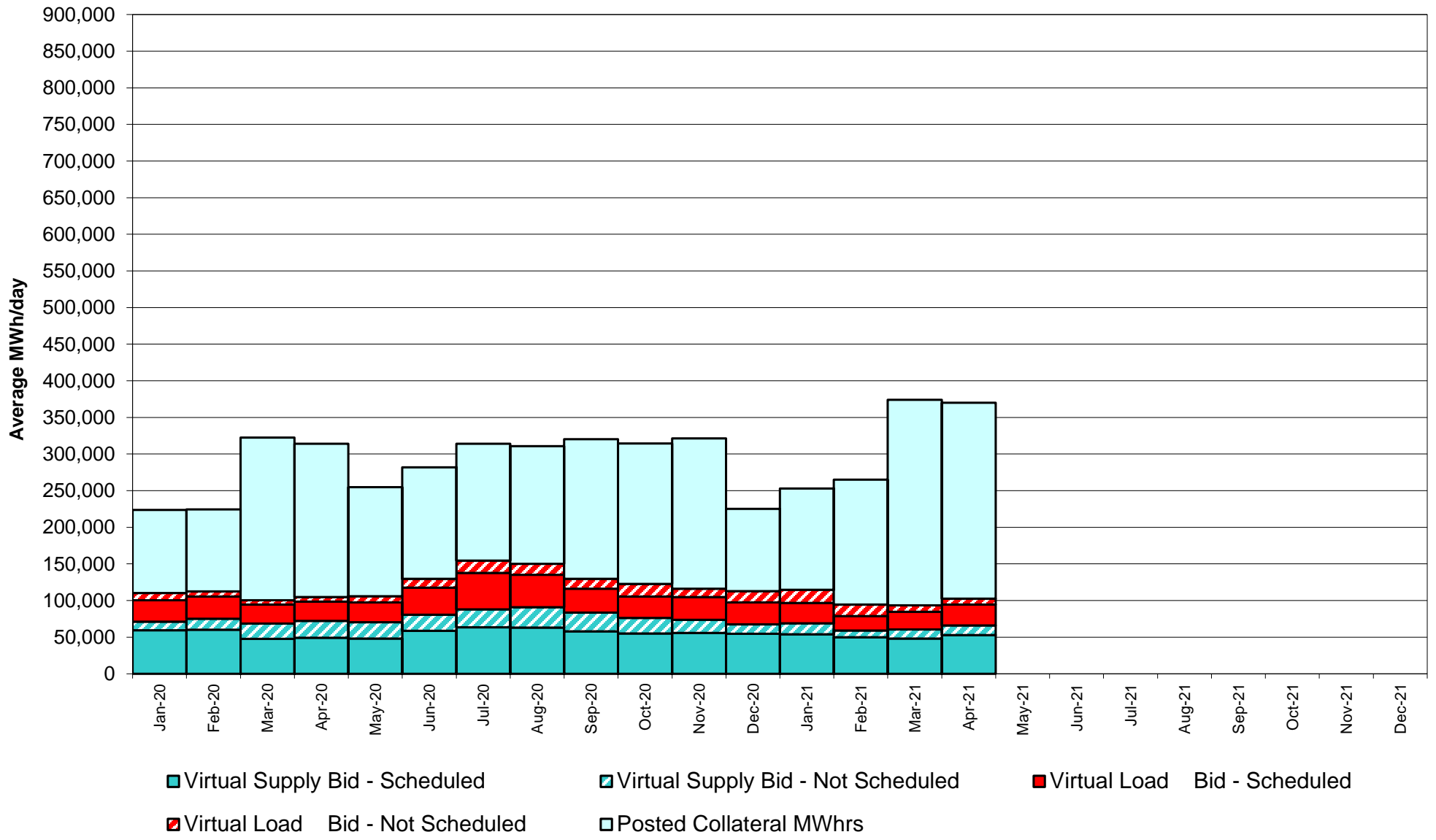
NYISO Real Time Price Correction Statistics

2021		<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>Hour Corrections</u>													
Number of hours with corrections	in the month	0	1	0	2								
Number of hours	in the month	744	672	743	720								
% of hours with corrections	in the month	0.00%	0.15%	0.00%	0.28%								
% of hours with corrections	year-to-date	0.00%	0.07%	0.05%	0.10%								
<u>Interval Corrections</u>													
Number of intervals corrected	in the month	0	3	0	3								
Number of intervals	in the month	9,095	8,236	9,100	8,827								
% of intervals corrected	in the month	0.00%	0.04%	0.00%	0.03%								
% of intervals corrected	year-to-date	0.00%	0.02%	0.01%	0.02%								
<u>Hours Reserved</u>													
Number of hours reserved	in the month	2	12	15	25								
Number of hours	in the month	744	672	743	720								
% of hours reserved	in the month	0.27%	1.79%	2.02%	3.47%								
% of hours reserved	year-to-date	0.27%	0.99%	1.34%	1.88%								
<u>Days to Correction</u> *													
Avg. number of days to correction	in the month	0.00	3.00	0.00	3.00								
Avg. number of days to correction	year-to-date	0.00	3.00	3.00	3.00								
<u>Days Without Corrections</u>													
Days without corrections	in the month	31	27	31	28								
Days without corrections	year-to-date	31	58	89	117								
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>
<u>Hour Corrections</u>													
Number of hours with corrections	in the month	1	4	0	3	1	1	1	2	0	2	0	0
Number of hours	in the month	744	696	743	720	744	720	744	744	720	744	721	744
% of hours with corrections	in the month	0.13%	0.57%	0.00%	0.42%	0.13%	0.14%	0.13%	0.27%	0.00%	0.27%	0.00%	0.00%
% of hours with corrections	year-to-date	0.13%	0.35%	0.23%	0.28%	0.25%	0.23%	0.22%	0.22%	0.20%	0.20%	0.19%	0.17%
<u>Interval Corrections</u>													
Number of intervals corrected	in the month	1	32	0	3	2	3	1	4	0	5	0	0
Number of intervals	in the month	9,088	8,460	9,011	8,776	9,030	8,826	9,128	9,156	8,810	9,048	8,790	9,083
% of intervals corrected	in the month	0.01%	0.38%	0.00%	0.03%	0.02%	0.03%	0.01%	0.04%	0.00%	0.06%	0.00%	0.00%
% of intervals corrected	year-to-date	0.01%	0.19%	0.12%	0.10%	0.09%	0.08%	0.07%	0.06%	0.06%	0.06%	0.05%	0.05%
<u>Hours Reserved</u>													
Number of hours reserved	in the month	1	14	0	10	9	15	5	6	0	27	10	12
Number of hours	in the month	744	696	743	720	744	720	744	744	720	744	721	744
% of hours reserved	in the month	0.13%	2.01%	0.00%	1.39%	1.21%	2.08%	0.67%	0.81%	0.00%	3.63%	1.39%	1.61%
% of hours reserved	year-to-date	0.13%	1.04%	0.69%	0.86%	0.93%	1.12%	1.06%	1.02%	0.91%	1.19%	1.21%	1.24%
<u>Days to Correction</u> *													
Avg. number of days to correction	in the month	2.00	1.00	0.00	3.00	3.00	2.00	3.00	3.00	0.00	3.00	0.00	0.00
Avg. number of days to correction	year-to-date	2.00	1.50	1.50	2.25	2.40	2.33	2.43	2.56	2.56	2.64	1.38	2.64
<u>Days Without Corrections</u>													
Days without corrections	in the month	30	28	31	28	30	29	30	29	30	29	30	31
Days without corrections	year-to-date	30	58	89	117	147	176	206	235	265	294	324	355

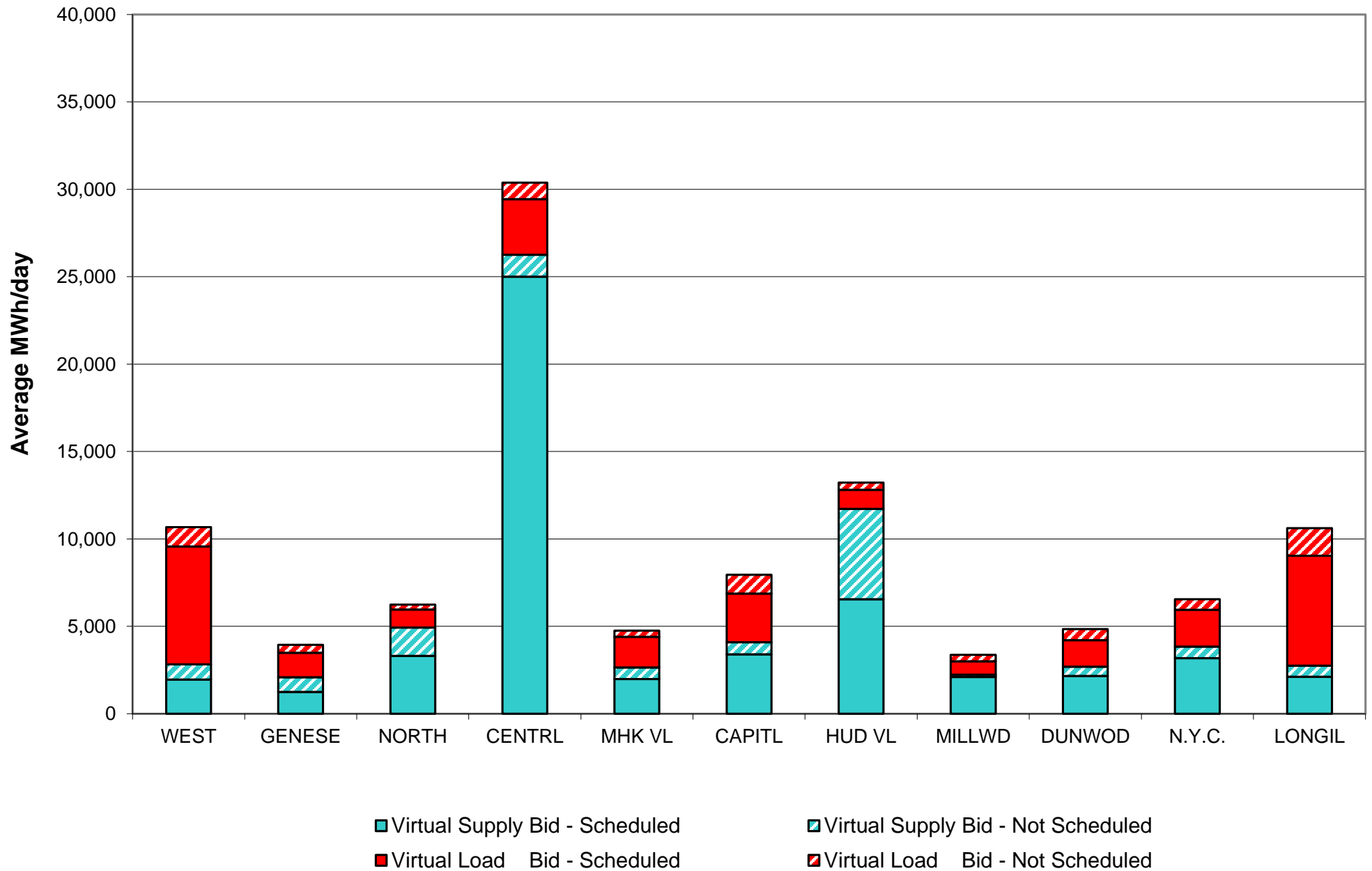
*Calendar days from reservation date; for June 2018 forward, business days from market date



NYISO Virtual Trading Average MWh per day



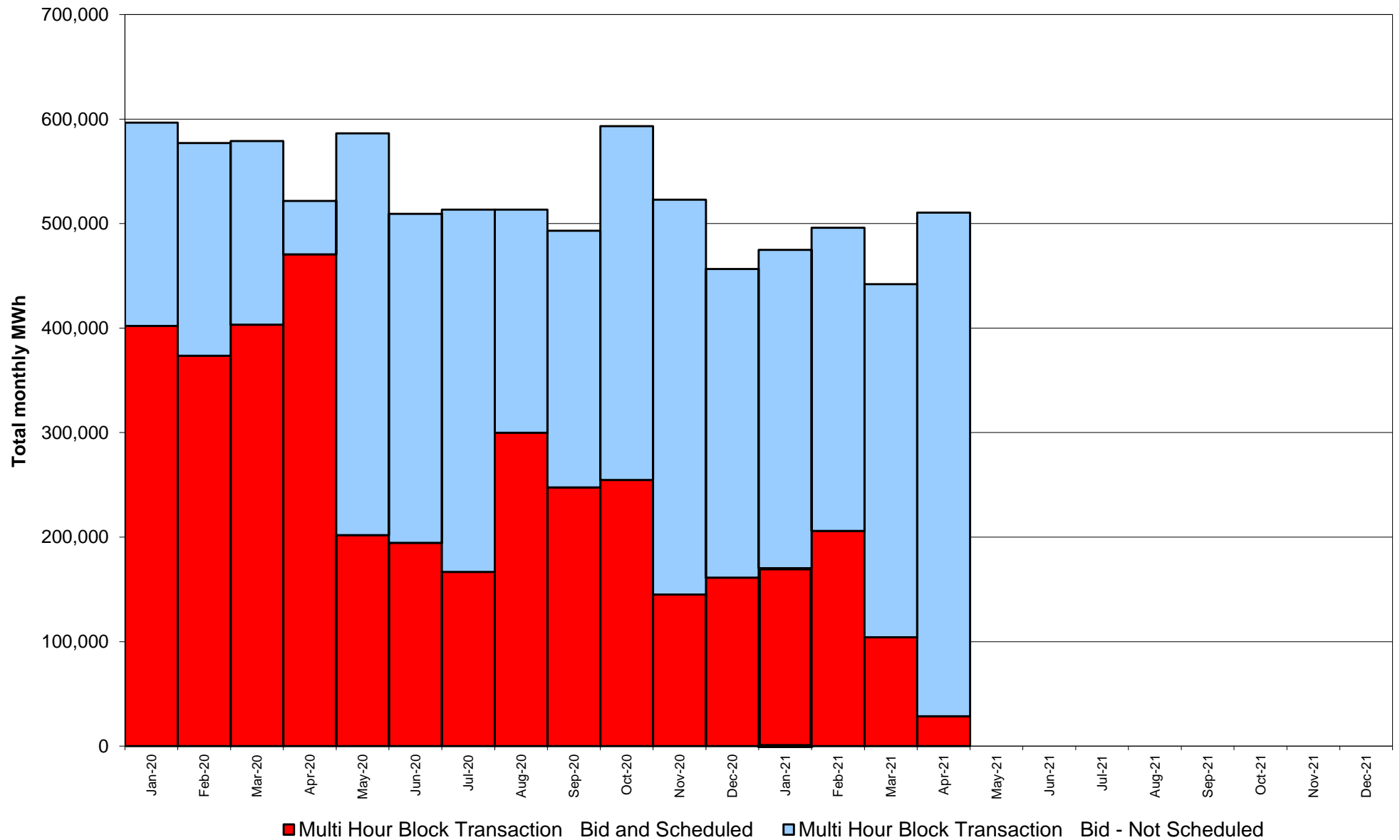
Virtual Load and Supply Zonal Statistics through April 30, 2021



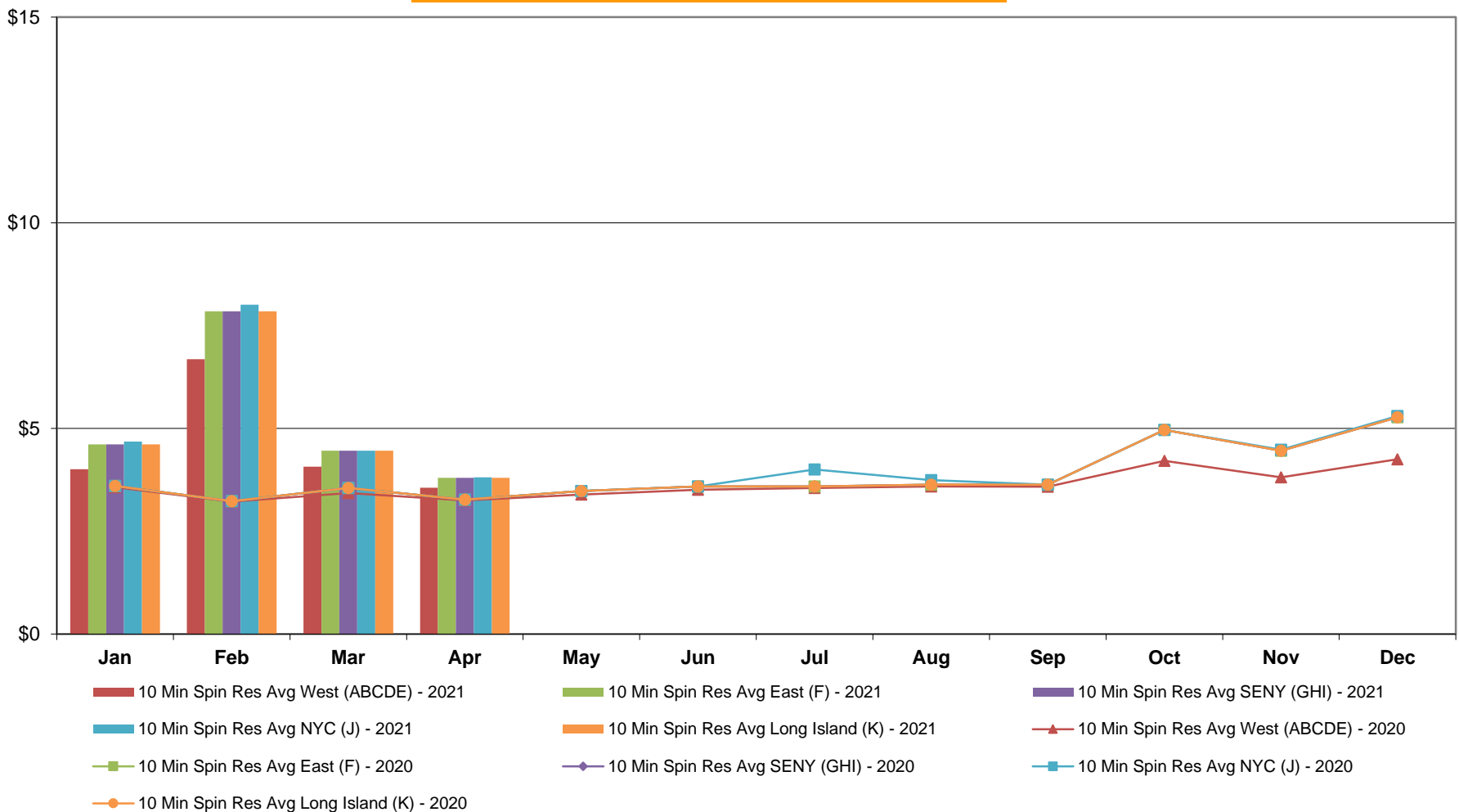
Virtual Load and Supply Zonal Statistics (Average MWh/day) - 2021

		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-21	6,262	1,726	2,018	1,076	MHK VL	Jan-21	1,537	548	1,967	531	DUNWOD	Jan-21	1,881	2,339	2,000	475
	Feb-21	4,588	1,544	1,842	959		Feb-21	1,031	584	2,081	392		Feb-21	912	1,806	2,015	568
	Mar-21	5,696	840	1,144	893		Mar-21	1,669	305	1,402	524		Mar-21	1,303	817	1,780	1,142
	Apr-21	6,747	1,100	1,948	873		Apr-21	1,741	366	1,982	670		Apr-21	1,519	638	2,166	524
	May-21						May-21						May-21				
	Jun-21						Jun-21						Jun-21				
	Jul-21						Jul-21						Jul-21				
	Aug-21						Aug-21						Aug-21				
	Sep-21						Sep-21						Sep-21				
	Oct-21						Oct-21						Oct-21				
	Nov-21						Nov-21						Nov-21				
	Dec-21						Dec-21						Dec-21				
GENESE	Jan-21	1,117	329	1,085	853	CAPITL	Jan-21	3,046	1,995	2,207	792	N.Y.C.	Jan-21	3,486	2,580	2,503	679
	Feb-21	857	390	1,310	617		Feb-21	2,483	1,967	2,065	535		Feb-21	1,983	2,475	2,275	678
	Mar-21	817	295	1,433	833		Mar-21	3,192	1,581	2,230	1,041		Mar-21	2,149	1,385	2,465	757
	Apr-21	1,396	466	1,251	834		Apr-21	2,770	1,075	3,404	694		Apr-21	2,116	602	3,175	662
	May-21						May-21						May-21				
	Jun-21						Jun-21						Jun-21				
	Jul-21						Jul-21						Jul-21				
	Aug-21						Aug-21						Aug-21				
	Sep-21						Sep-21						Sep-21				
	Oct-21						Oct-21						Oct-21				
	Nov-21						Nov-21						Nov-21				
	Dec-21						Dec-21						Dec-21				
NORTH	Jan-21	830	498	3,280	1,220	HUD VL	Jan-21	1,666	1,215	5,917	7,429	LONGIL	Jan-21	4,341	4,976	3,261	686
	Feb-21	405	410	2,654	1,258		Feb-21	1,685	1,148	4,967	2,247		Feb-21	3,899	3,560	1,758	862
	Mar-21	641	125	3,152	2,052		Mar-21	1,013	455	5,555	3,086		Mar-21	4,846	2,196	2,232	1,195
	Apr-21	1,031	278	3,310	1,622		Apr-21	1,096	411	6,547	5,166		Apr-21	6,288	1,581	2,121	631
	May-21						May-21						May-21				
	Jun-21						Jun-21						Jun-21				
	Jul-21						Jul-21						Jul-21				
	Aug-21						Aug-21						Aug-21				
	Sep-21						Sep-21						Sep-21				
	Oct-21						Oct-21						Oct-21				
	Nov-21						Nov-21						Nov-21				
	Dec-21						Dec-21						Dec-21				
CENTRL	Jan-21	2,124	938	28,034	1,094	MILLWD	Jan-21	1,368	672	1,820	139	NYISO	Jan-21	27,659	17,816	54,093	14,973
	Feb-21	1,357	1,102	27,531	954		Feb-21	530	541	1,463	115		Feb-21	19,732	15,526	49,963	9,186
	Mar-21	2,108	541	24,874	888		Mar-21	731	240	1,732	175		Mar-21	24,164	8,780	47,999	12,586
	Apr-21	3,179	941	25,006	1,249		Apr-21	775	359	2,106	126		Apr-21	28,658	7,818	53,015	13,052
	May-21						May-21						May-21				
	Jun-21						Jun-21						Jun-21				
	Jul-21						Jul-21						Jul-21				
	Aug-21						Aug-21						Aug-21				
	Sep-21						Sep-21						Sep-21				
	Oct-21						Oct-21						Oct-21				
	Nov-21						Nov-21						Nov-21				
	Dec-21						Dec-21						Dec-21				

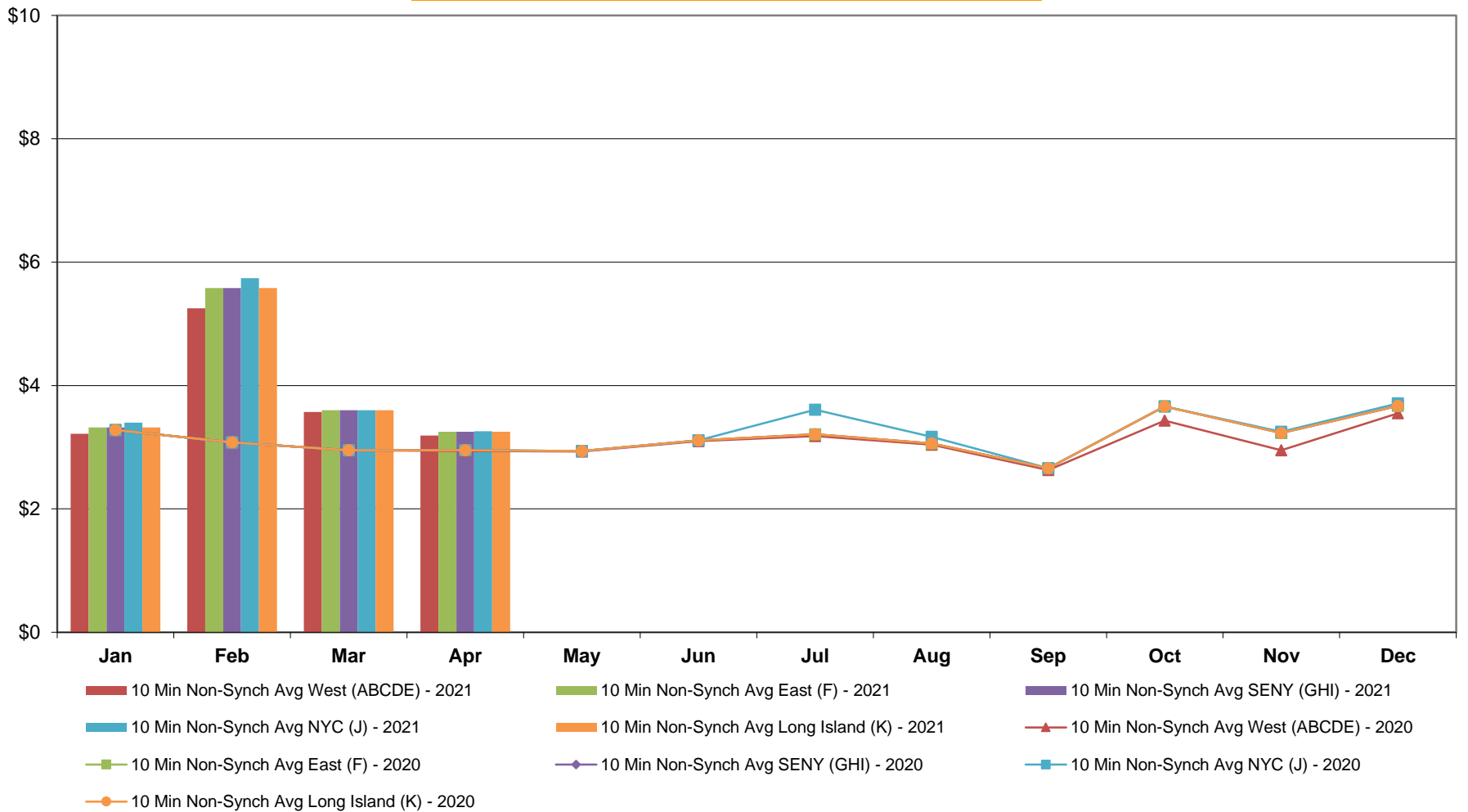
NYISO Multi Hour Block Transactions Monthly Total MWh



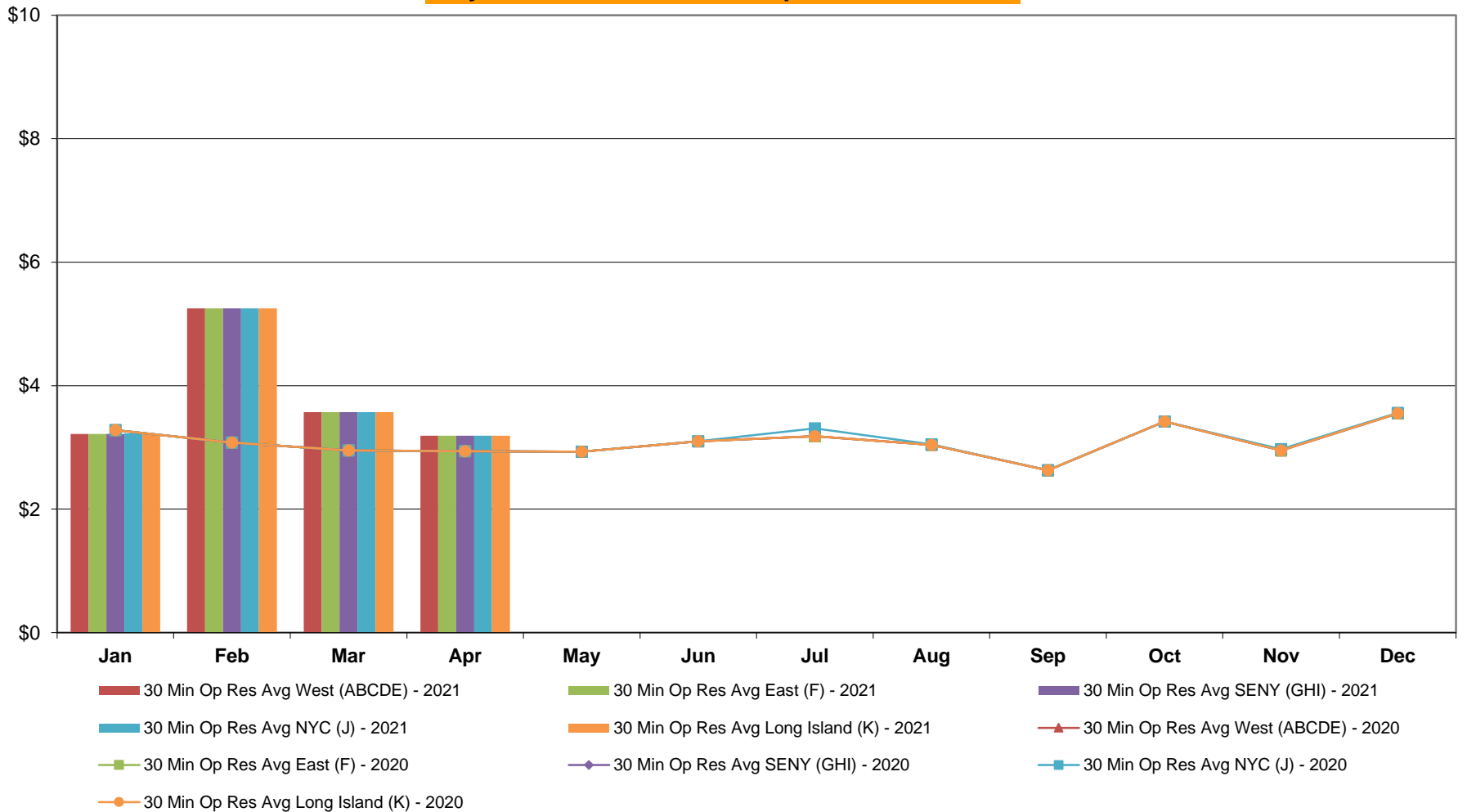
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - 10 Min Spin 2020 - 2021**



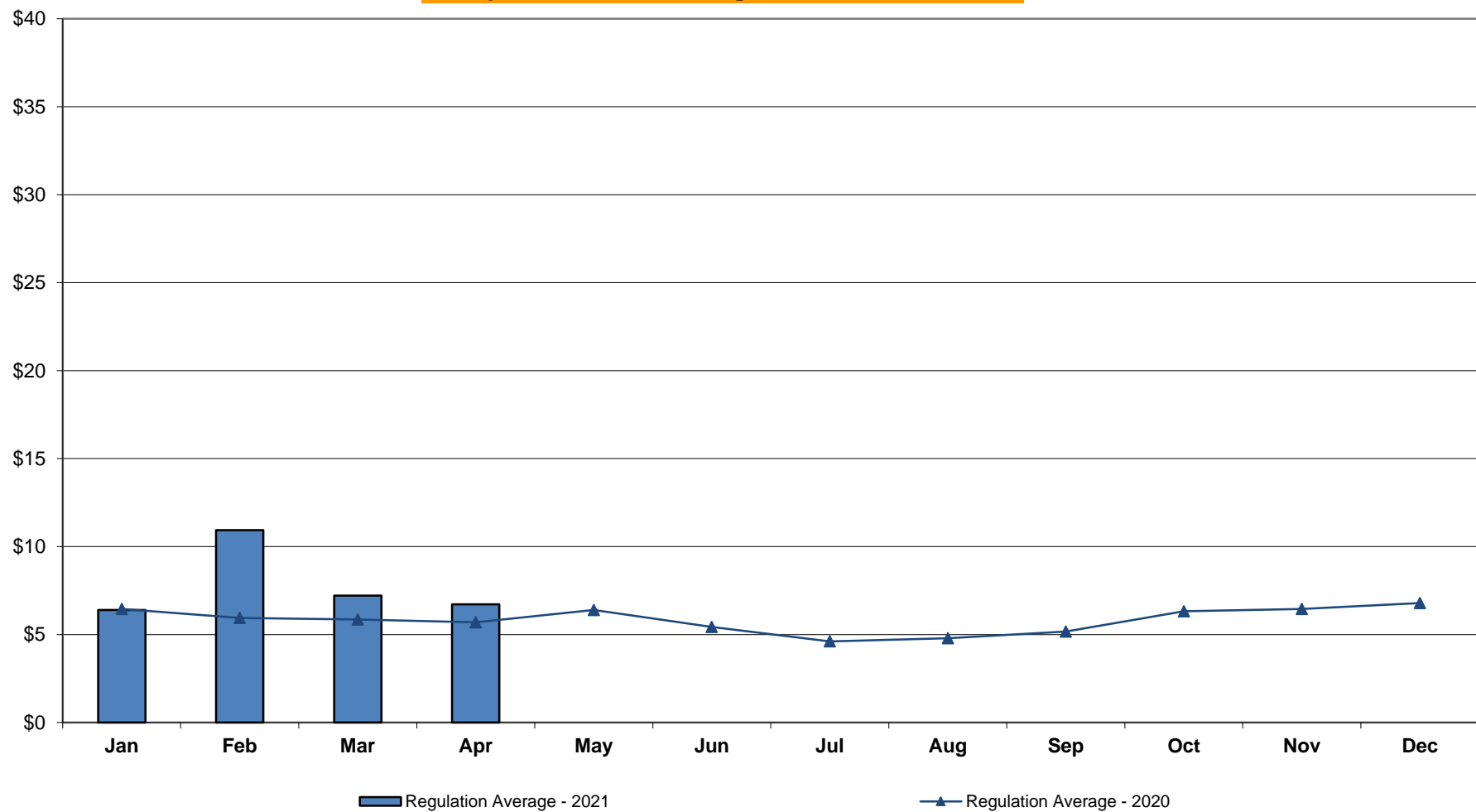
NYISO Monthly Average Ancillary Service Prices Day Ahead Market - 10 Min Non-Synch 2020 - 2021



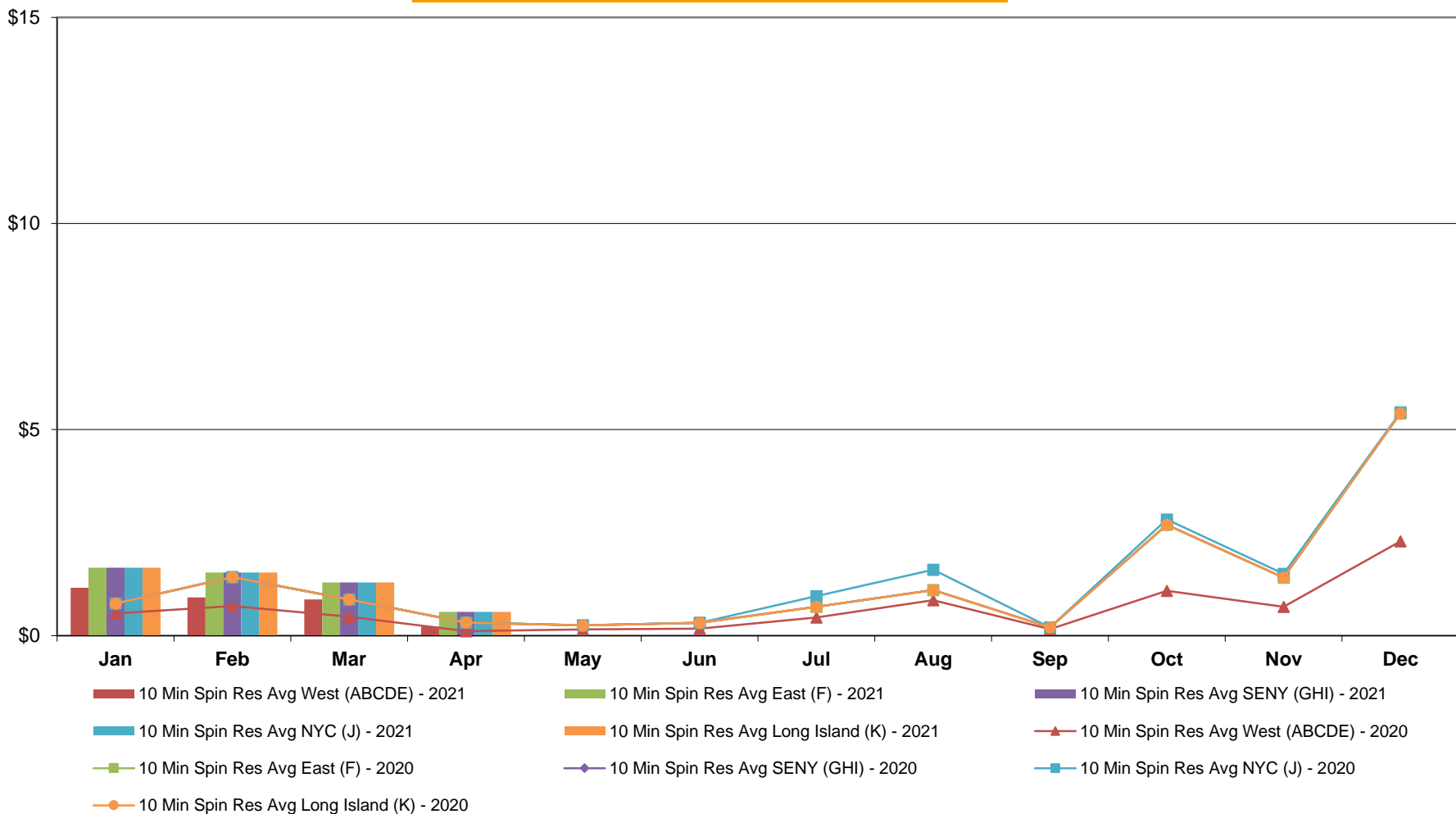
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - 30 Min Op Res 2020 - 2021**



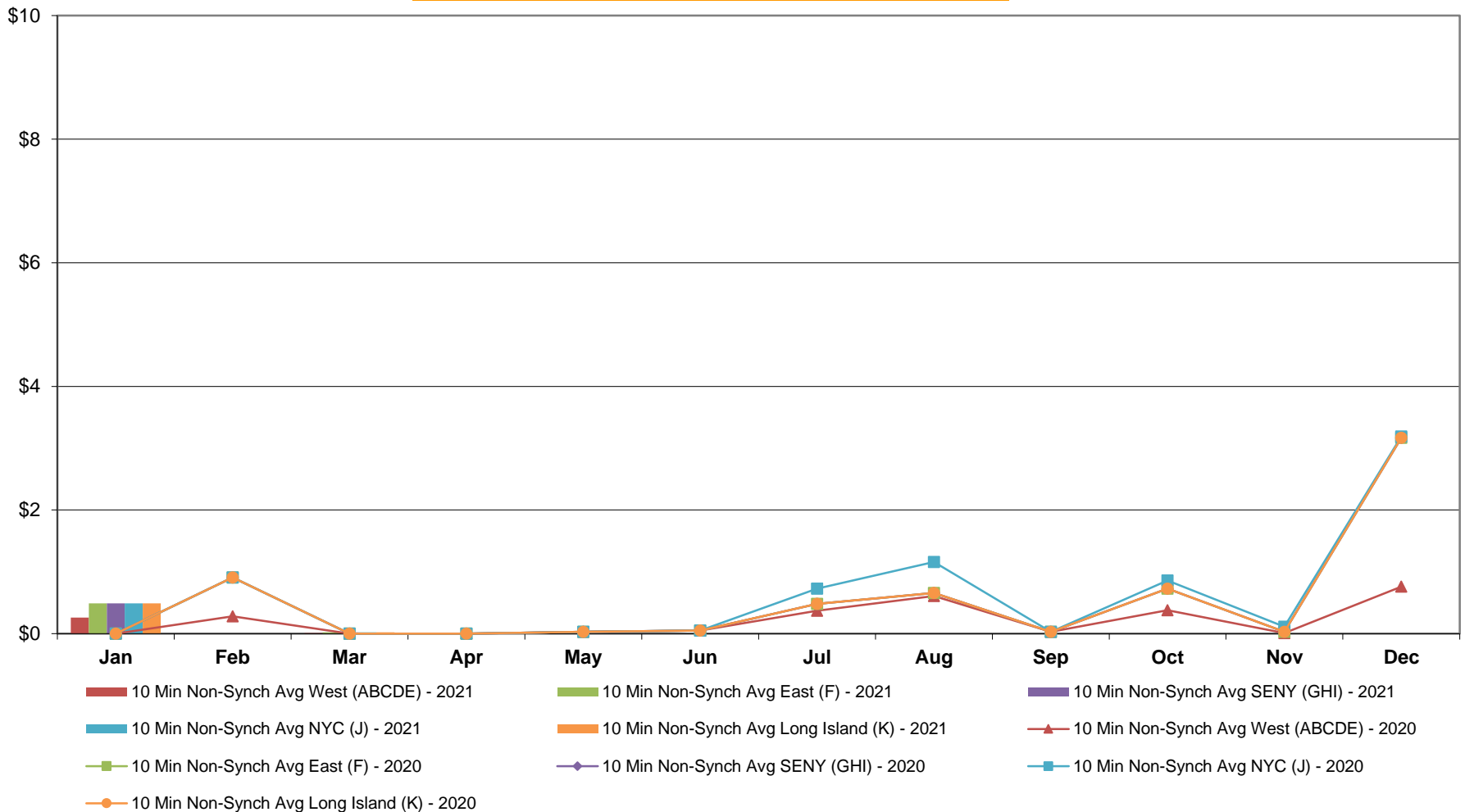
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - Regulation 2020 - 2021**



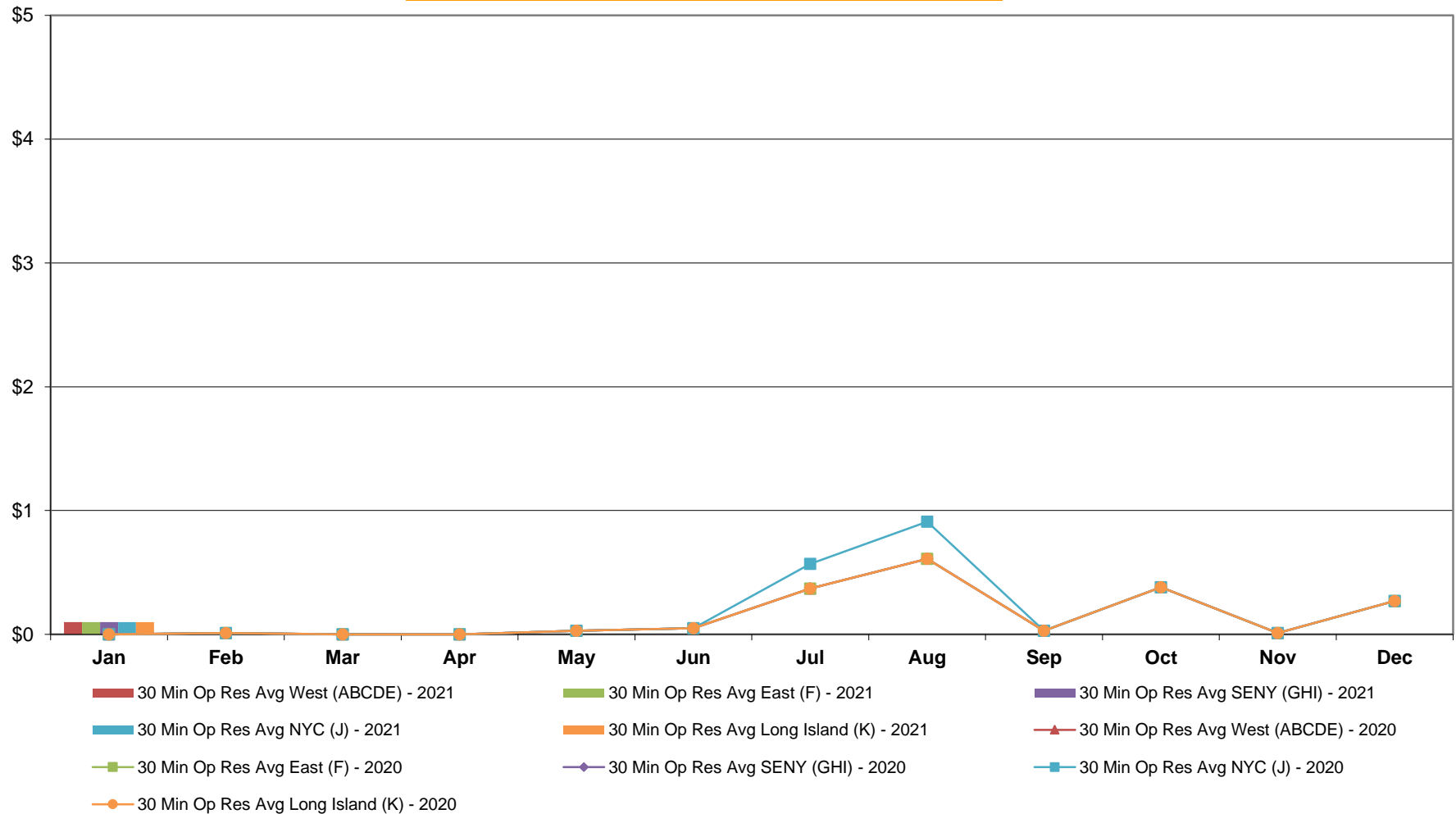
NYISO Monthly Average Ancillary Service Prices RTC Market - 10 Min Spin 2020 - 2021



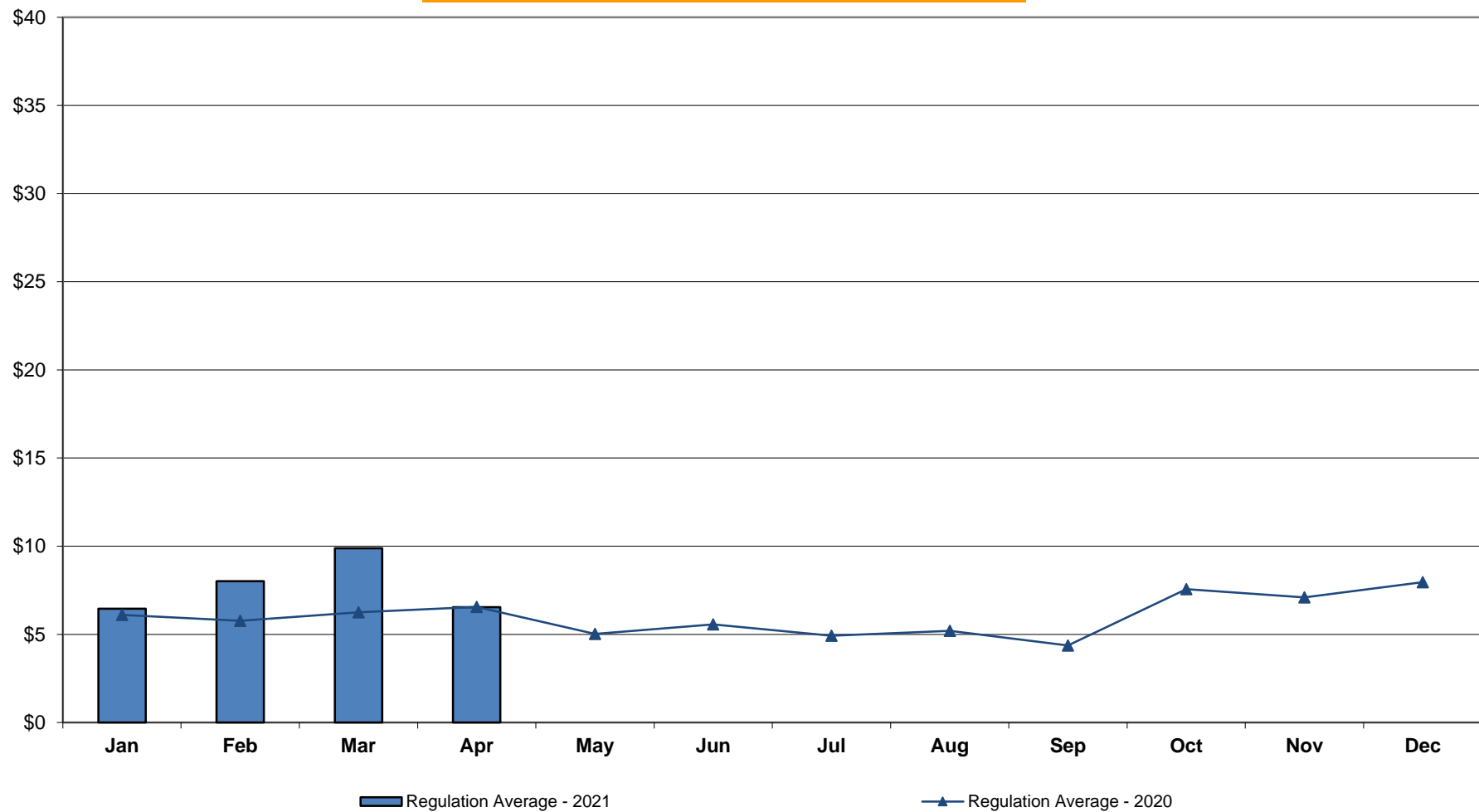
NYISO Monthly Average Ancillary Service Prices RTC Market - 10 Min Non-Synch 2020 - 2021



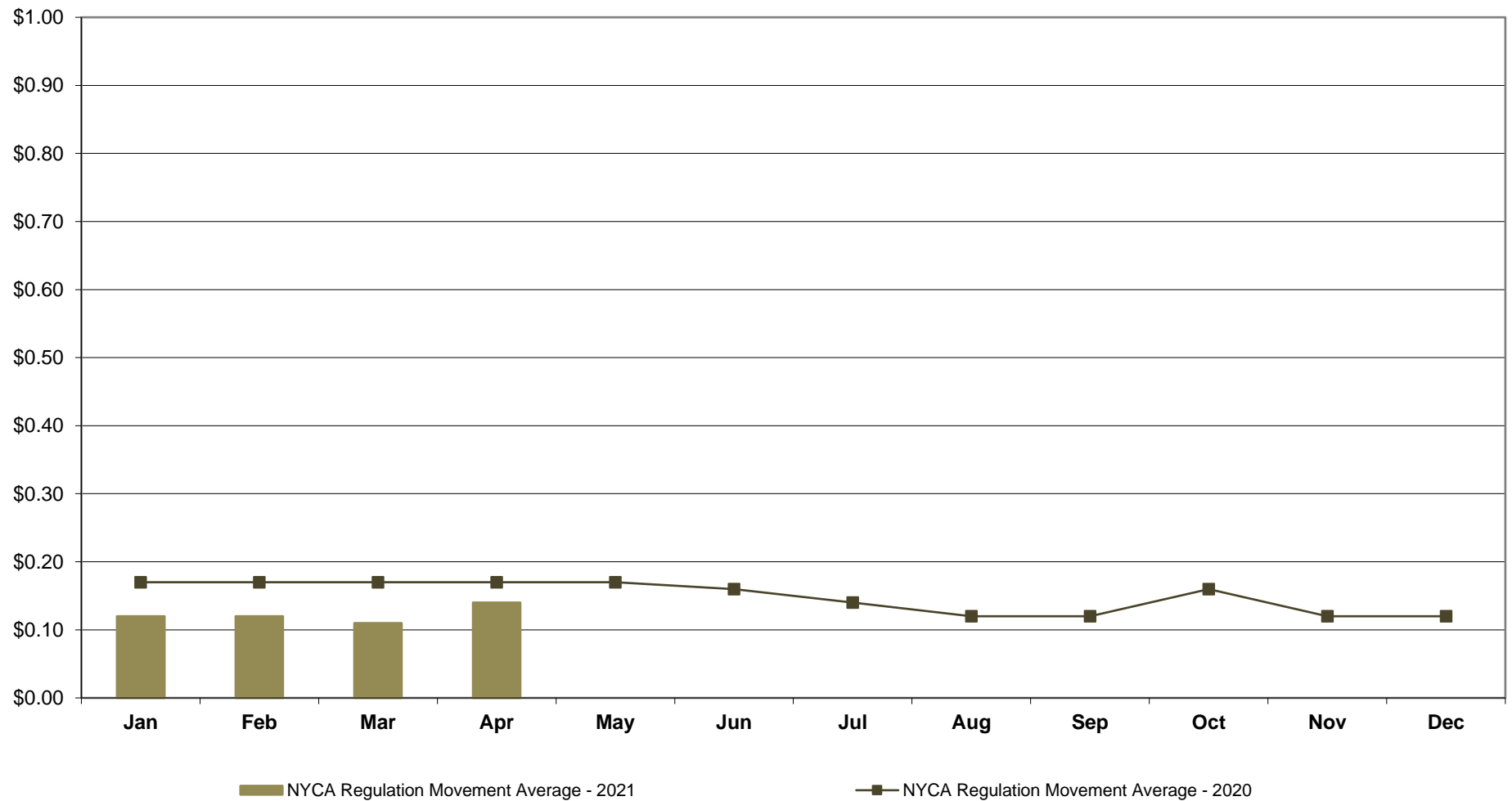
NYISO Monthly Average Ancillary Service Prices RTC Market - 30 Min Op Res 2020 - 2021



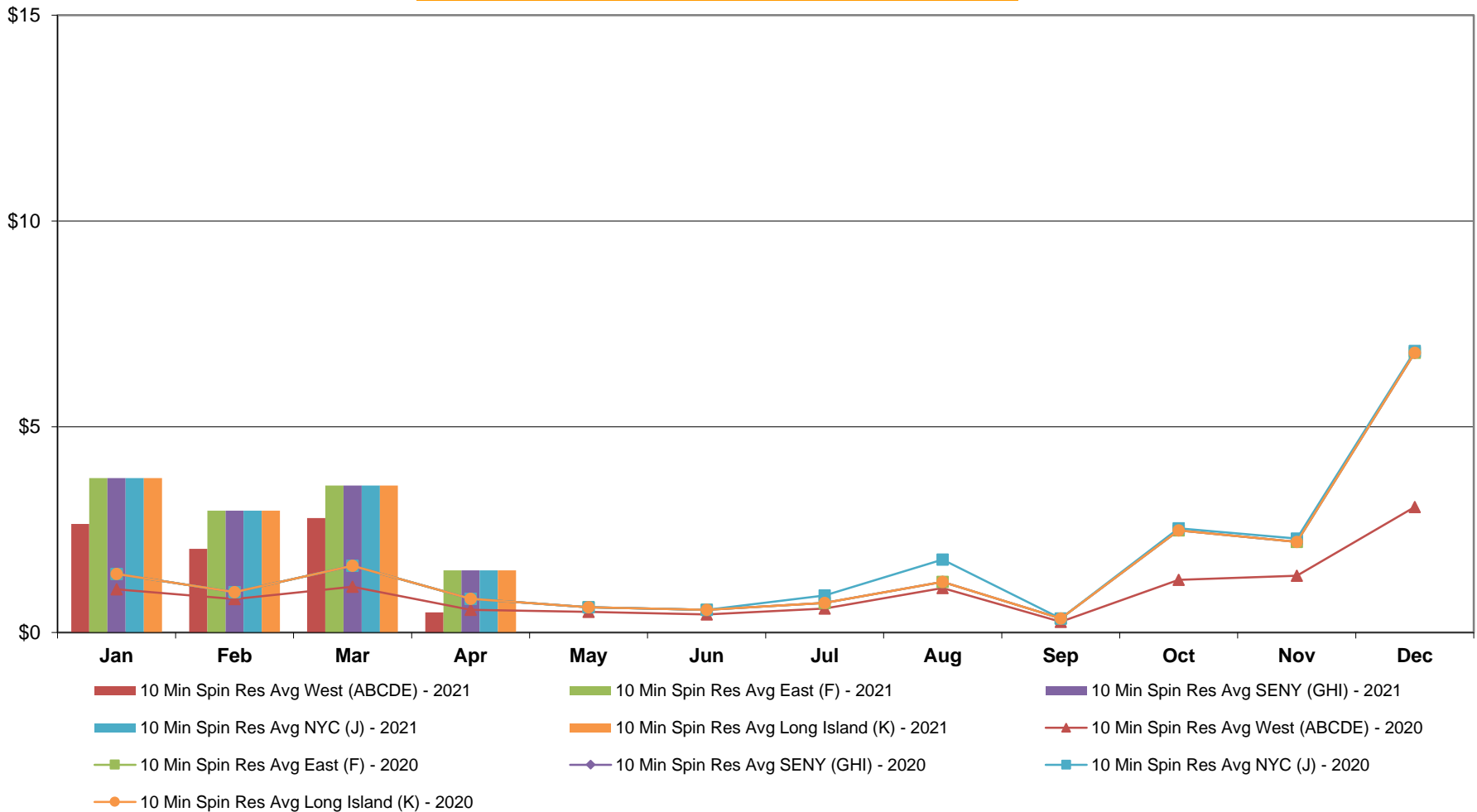
**NYISO Monthly Average Ancillary Service Prices
RTC Market - Regulation 2020 - 2021**



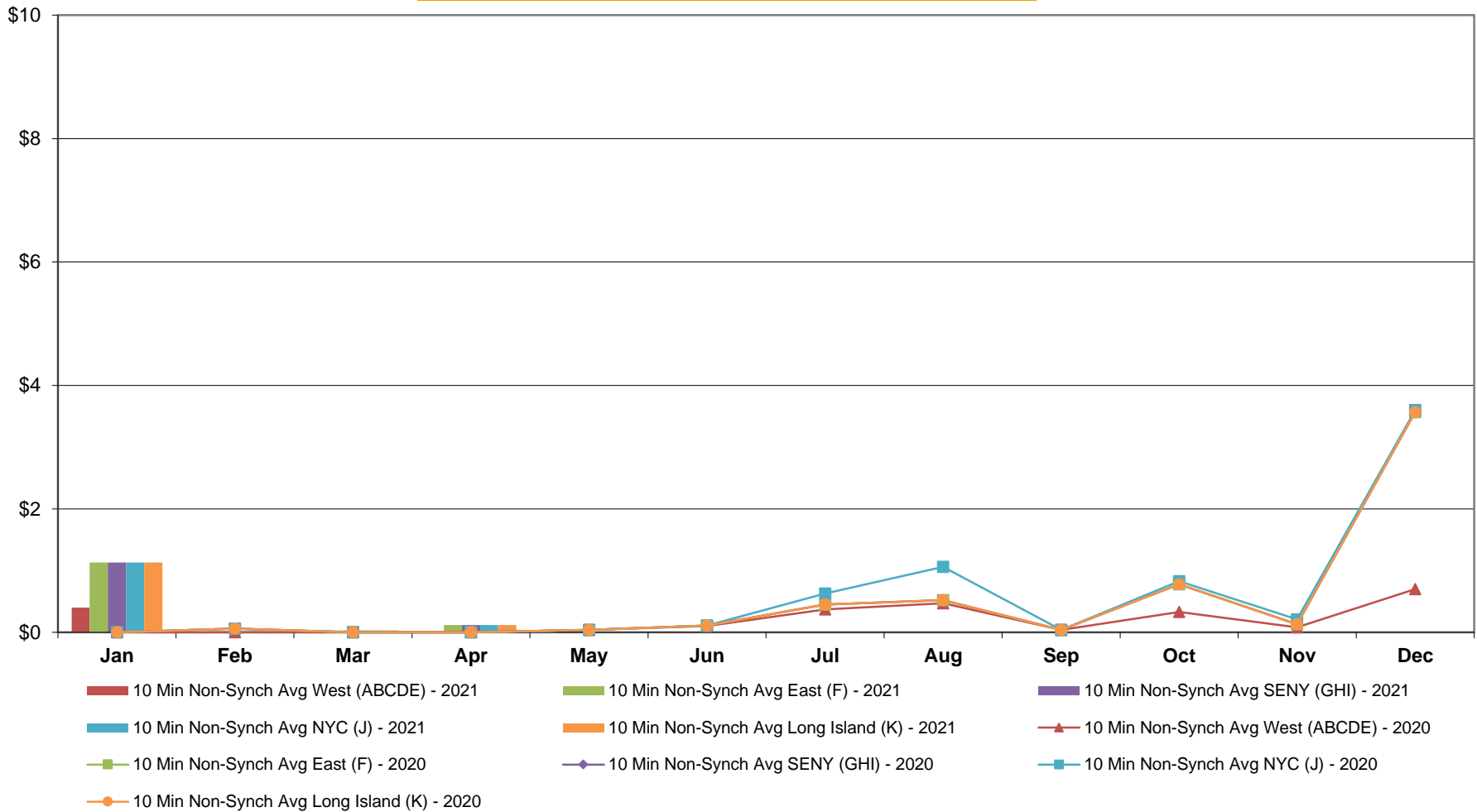
NYISO Monthly Average Ancillary Service Prices RTC Market - Regulation Movement 2020 - 2021



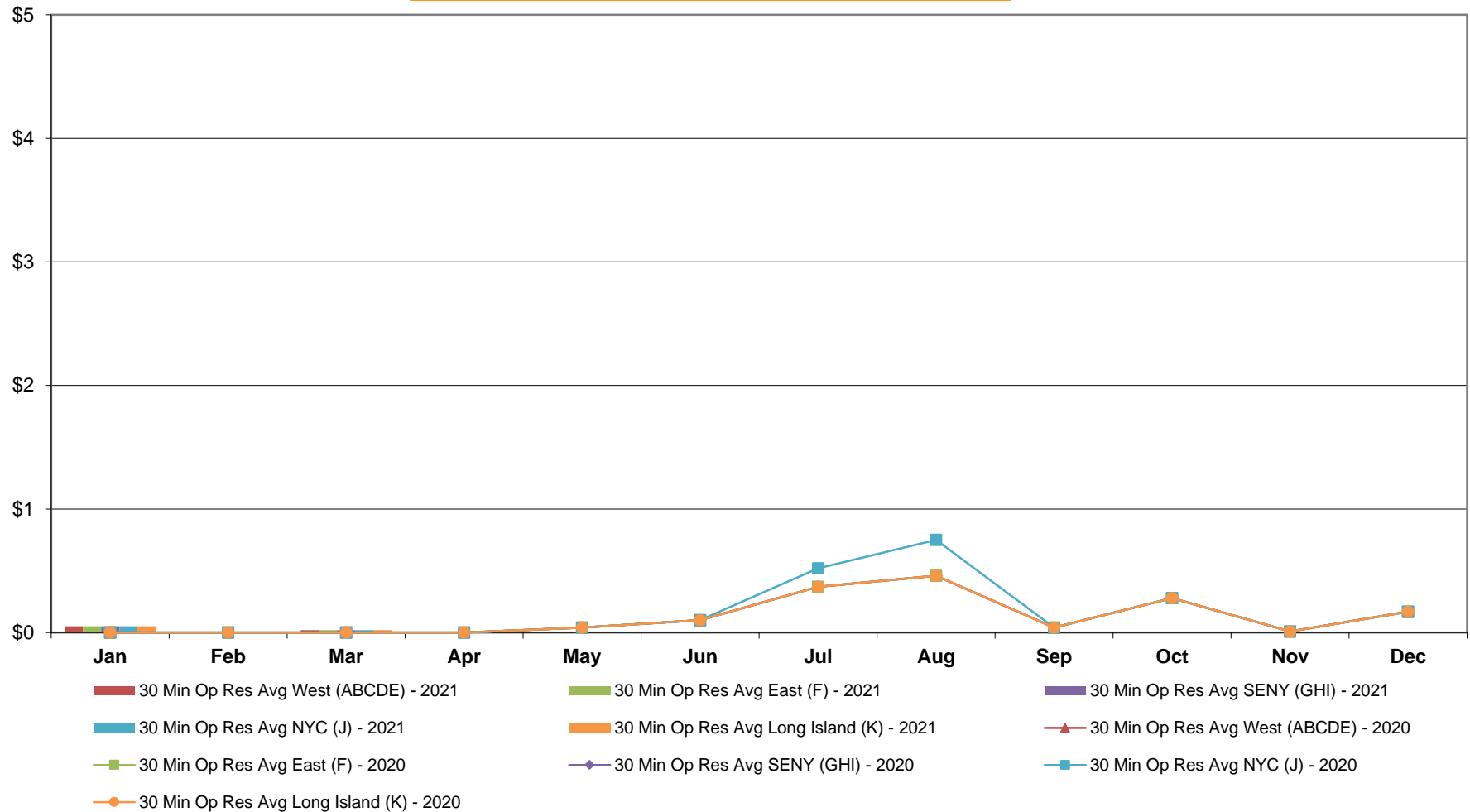
NYISO Monthly Average Ancillary Service Prices **Real Time Market - 10 Min Spin 2020 - 2021**



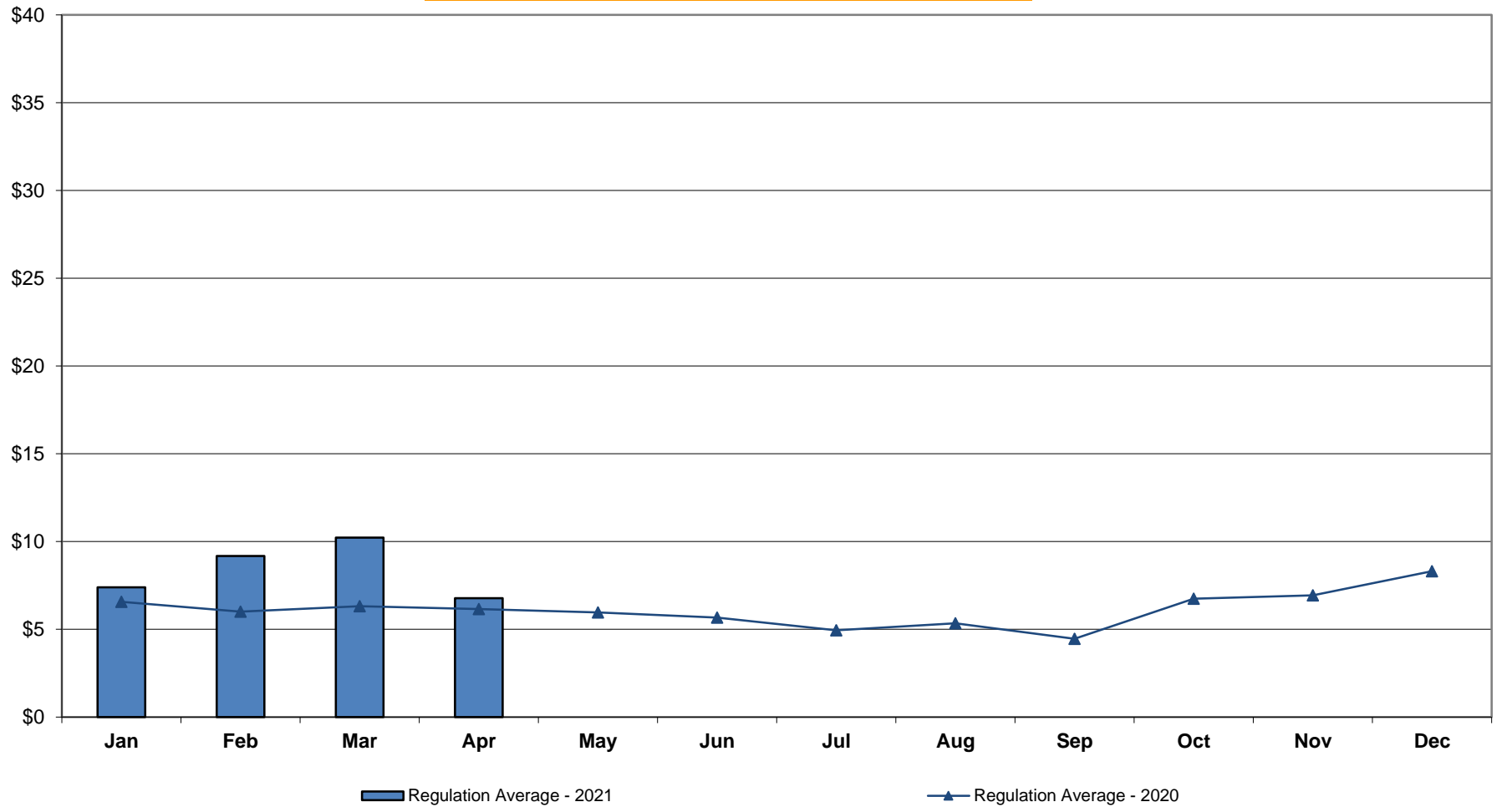
NYISO Monthly Average Ancillary Service Prices Real Time Market - 10 Min Non-Synch 2020 - 2021



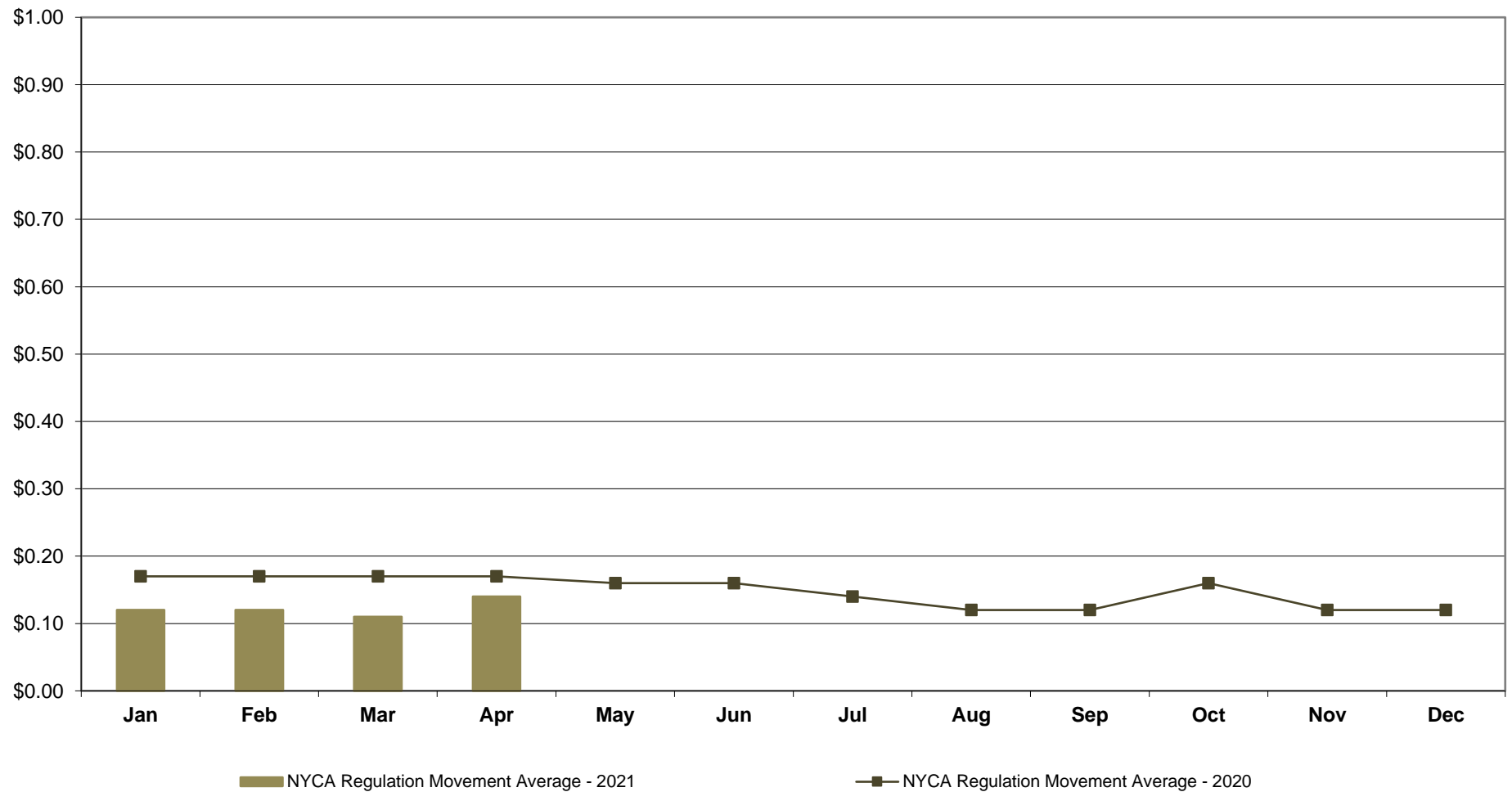
**NYISO Monthly Average Ancillary Service Prices
Real Time Market - 30 Min Op Res 2020 - 2021**



**NYISO Monthly Average Ancillary Service Prices
Real Time Market - Regulation 2020 - 2021**



NYISO Monthly Average Ancillary Service Prices Real Time Market - Regulation Movement 2020 - 2021



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

<u>2021</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>
<u>Day Ahead Market</u>												
10 Min Spin Long Island (K)	4.61	7.85	4.46	3.80								
10 Min Spin NYC (J)	4.68	8.01	4.46	3.81								
10 Min Spin SENY (GHI)	4.61	7.85	4.46	3.80								
10 Min Spin East (F)	4.61	7.85	4.46	3.80								
10 Min Spin West (ABCDE)	4.01	6.68	4.07	3.56								
10 Min Non Synch Long Island (K)	3.32	5.58	3.60	3.25								
10 Min Non Synch NYC (J)	3.40	5.74	3.60	3.26								
10 Min Non Synch SENY (GHI)	3.32	5.58	3.60	3.25								
10 Min Non Synch East (F)	3.32	5.58	3.60	3.25								
10 Min Non Synch West (ABCDE)	3.22	5.25	3.57	3.19								
30 Min Long Island (K)	3.22	5.25	3.57	3.19								
30 Min NYC (J)	3.23	5.25	3.57	3.19								
30 Min SENY (GHI)	3.22	5.25	3.57	3.19								
30 Min East (F)	3.22	5.25	3.57	3.19								
30 Min West (ABCDE)	3.22	5.25	3.57	3.19								
Regulation	6.40	10.93	7.21	6.72								
<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>
<u>Day Ahead Market</u>												
10 Min Spin Long Island (K)	3.60	3.23	3.55	3.27	3.48	3.59	3.59	3.63	3.63	4.96	4.46	5.27
10 Min Spin NYC (J)	3.60	3.23	3.55	3.27	3.48	3.64	4.00	3.74	3.63	4.96	4.48	5.30
10 Min Spin SENY (GHI)	3.60	3.23	3.55	3.27	3.48	3.59	3.59	3.63	3.63	4.96	4.46	5.27
10 Min Spin East (F)	3.60	3.23	3.55	3.27	3.48	3.59	3.59	3.63	3.63	4.96	4.46	5.27
10 Min Spin West (ABCDE)	3.57	3.22	3.43	3.25	3.39	3.51	3.55	3.59	3.58	4.21	3.81	4.25
10 Min Non Synch Long Island (K)	3.28	3.08	2.95	2.95	2.94	3.11	3.21	3.06	2.66	3.66	3.23	3.67
10 Min Non Synch NYC (J)	3.28	3.08	2.95	2.95	2.94	3.17	3.61	3.17	2.66	3.66	3.25	3.71
10 Min Non Synch SENY (GHI)	3.28	3.08	2.95	2.95	2.94	3.11	3.21	3.06	2.66	3.66	3.23	3.67
10 Min Non Synch East (F)	3.28	3.08	2.95	2.95	2.94	3.11	3.21	3.06	2.66	3.66	3.23	3.67
10 Min Non Synch West (ABCDE)	3.28	3.08	2.95	2.94	2.93	3.10	3.18	3.04	2.63	3.43	2.95	3.55
30 Min Long Island (K)	3.28	3.08	2.95	2.94	2.93	3.10	3.18	3.04	2.63	3.42	2.95	3.55
30 Min NYC (J)	3.28	3.08	2.95	2.94	2.93	3.10	3.31	3.05	2.63	3.42	2.97	3.56
30 Min SENY (GHI)	3.28	3.08	2.95	2.94	2.93	3.10	3.18	3.04	2.63	3.42	2.95	3.55
30 Min East (F)	3.28	3.08	2.95	2.94	2.93	3.10	3.18	3.04	2.63	3.42	2.95	3.55
30 Min West (ABCDE)	3.28	3.08	2.95	2.94	2.93	3.10	3.18	3.04	2.63	3.42	2.95	3.55
Regulation	6.46	5.94	5.86	5.70	6.40	5.44	4.61	4.79	5.17	6.32	6.45	6.79

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

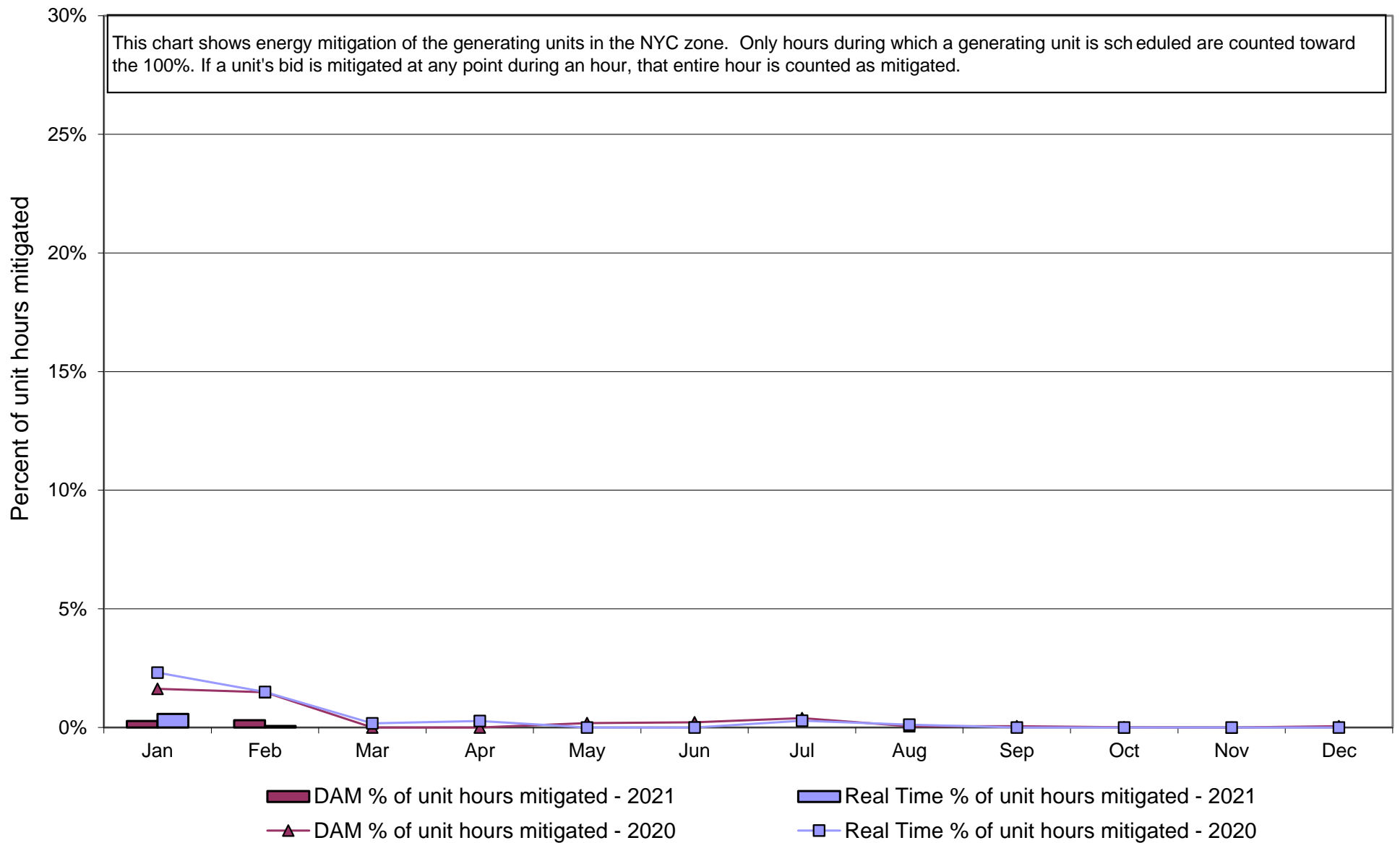
<u>2021</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
<u>RTC Market</u>												
10 Min Spin Long Island (K)	1.65	1.53	1.29	0.58								
10 Min Spin NYC (J)	1.65	1.53	1.29	0.58								
10 Min Spin SENY (GHI)	1.65	1.53	1.29	0.58								
10 Min Spin East (F)	1.65	1.53	1.29	0.58								
10 Min Spin West (ABCDE)	1.16	0.93	0.88	0.22								
10 Min Non Synch Long Island (K)	0.49	0.00	0.02	0.00								
10 Min Non Synch NYC (J)	0.49	0.00	0.02	0.00								
10 Min Non Synch SENY (GHI)	0.49	0.00	0.02	0.00								
10 Min Non Synch East (F)	0.49	0.00	0.02	0.00								
10 Min Non Synch West (ABCDE)	0.26	0.00	0.01	0.00								
30 Min Long Island (K)	0.10	0.00	0.01	0.00								
30 Min NYC (J)	0.10	0.00	0.01	0.00								
30 Min SENY (GHI)	0.10	0.00	0.01	0.00								
30 Min East (F)	0.10	0.00	0.01	0.00								
30 Min West (ABCDE)	0.10	0.00	0.01	0.00								
Regulation	6.46	8.02	9.88	6.54								
NYCA Regulation Movement	0.12	0.12	0.11	0.14								
<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>
<u>RTC Market</u>												
10 Min Spin Long Island (K)	0.78	1.42	0.88	0.32	0.25	0.31	0.70	1.11	0.20	2.69	1.41	5.40
10 Min Spin NYC (J)	0.78	1.46	0.88	0.32	0.26	0.31	0.96	1.60	0.20	2.82	1.50	5.42
10 Min Spin SENY (GHI)	0.78	1.42	0.88	0.32	0.25	0.31	0.70	1.11	0.20	2.69	1.41	5.40
10 Min Spin East (F)	0.78	1.42	0.88	0.32	0.25	0.31	0.70	1.11	0.20	2.69	1.41	5.40
10 Min Spin West (ABCDE)	0.54	0.72	0.46	0.11	0.15	0.17	0.44	0.86	0.16	1.09	0.70	2.29
10 Min Non Synch Long Island (K)	0.00	0.91	0.00	0.00	0.03	0.05	0.48	0.66	0.03	0.73	0.03	3.17
10 Min Non Synch NYC (J)	0.00	0.95	0.00	0.00	0.04	0.06	0.73	1.16	0.03	0.86	0.11	3.19
10 Min Non Synch SENY (GHI)	0.00	0.91	0.00	0.00	0.03	0.05	0.48	0.66	0.03	0.73	0.03	3.17
10 Min Non Synch East (F)	0.00	0.91	0.00	0.00	0.03	0.05	0.48	0.66	0.03	0.73	0.03	3.17
10 Min Non Synch West (ABCDE)	0.00	0.28	0.00	0.00	0.03	0.05	0.37	0.61	0.03	0.38	0.01	0.76
30 Min Long Island (K)	0.00	0.01	0.00	0.00	0.03	0.05	0.37	0.61	0.03	0.38	0.01	0.27
30 Min NYC (J)	0.00	0.01	0.00	0.00	0.03	0.05	0.57	0.91	0.03	0.38	0.01	0.27
30 Min SENY (GHI)	0.00	0.01	0.00	0.00	0.03	0.05	0.37	0.61	0.03	0.38	0.01	0.27
30 Min East (F)	0.00	0.01	0.00	0.00	0.03	0.05	0.37	0.61	0.03	0.38	0.01	0.27
30 Min West (ABCDE)	0.00	0.01	0.00	0.00	0.03	0.05	0.37	0.61	0.03	0.38	0.01	0.27
Regulation	6.11	5.77	6.25	6.56	5.02	5.56	4.92	5.20	4.37	7.57	7.09	7.96
NYCA Regulation Movement	0.17	0.17	0.17	0.17	0.17	0.16	0.14	0.12	0.12	0.16	0.12	0.12

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

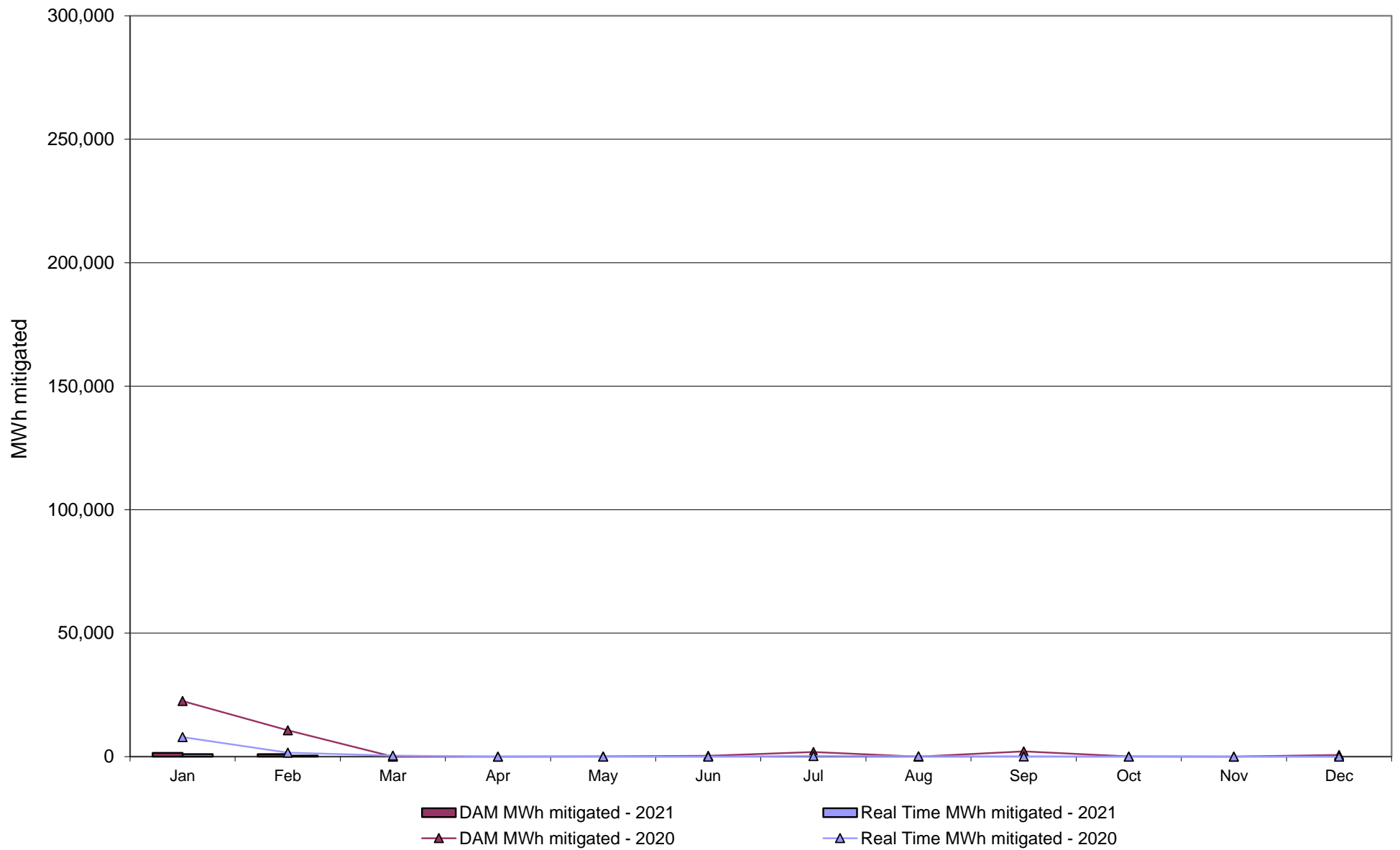
<u>2021</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
<u>Real Time Market</u>												
10 Min Spin Long Island (K)	3.75	2.96	3.57	1.51								
10 Min Spin NYC (J)	3.75	2.96	3.57	1.51								
10 Min Spin SENY (GHI)	3.75	2.96	3.57	1.51								
10 Min Spin East (F)	3.75	2.96	3.57	1.51								
10 Min Spin West (ABCDE)	2.64	2.03	2.78	0.49								
10 Min Non Synch Long Island (K)	1.13	0.02	0.03	0.12								
10 Min Non Synch NYC (J)	1.13	0.02	0.03	0.12								
10 Min Non Synch SENY (GHI)	1.13	0.02	0.03	0.12								
10 Min Non Synch East (F)	1.13	0.02	0.03	0.12								
10 Min Non Synch West (ABCDE)	0.40	0.00	0.02	0.00								
30 Min Long Island (K)	0.05	0.00	0.02	0.00								
30 Min NYC (J)	0.05	0.00	0.02	0.00								
30 Min SENY (GHI)	0.05	0.00	0.02	0.00								
30 Min East (F)	0.05	0.00	0.02	0.00								
30 Min West (ABCDE)	0.05	0.00	0.02	0.00								
Regulation	7.39	9.17	10.23	6.78								
NYCA Regulation Movement	0.12	0.12	0.11	0.14								
<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>
<u>Real Time Market</u>												
10 Min Spin Long Island (K)	1.42	0.98	1.62	0.82	0.61	0.55	0.72	1.23	0.34	2.48	2.20	6.80
10 Min Spin NYC (J)	1.42	0.98	1.62	0.82	0.63	0.56	0.90	1.77	0.34	2.53	2.28	6.84
10 Min Spin SENY (GHI)	1.42	0.98	1.62	0.82	0.61	0.55	0.72	1.23	0.34	2.48	2.20	6.80
10 Min Spin East (F)	1.42	0.98	1.62	0.82	0.61	0.55	0.72	1.23	0.34	2.48	2.20	6.80
10 Min Spin West (ABCDE)	1.05	0.81	1.11	0.55	0.50	0.44	0.58	1.08	0.26	1.28	1.38	3.05
10 Min Non Synch Long Island (K)	0.00	0.06	0.00	0.00	0.04	0.11	0.45	0.52	0.04	0.78	0.13	3.57
10 Min Non Synch NYC (J)	0.00	0.06	0.00	0.00	0.07	0.12	0.63	1.06	0.04	0.83	0.21	3.60
10 Min Non Synch SENY (GHI)	0.00	0.06	0.00	0.00	0.04	0.11	0.45	0.52	0.04	0.78	0.13	3.57
10 Min Non Synch East (F)	0.00	0.06	0.00	0.00	0.04	0.11	0.45	0.52	0.04	0.78	0.13	3.57
10 Min Non Synch West (ABCDE)	0.00	0.00	0.00	0.00	0.04	0.10	0.37	0.47	0.04	0.33	0.08	0.70
30 Min Long Island (K)	0.00	0.00	0.00	0.00	0.04	0.10	0.37	0.46	0.04	0.28	0.01	0.17
30 Min NYC (J)	0.00	0.00	0.00	0.00	0.04	0.10	0.52	0.75	0.04	0.28	0.01	0.17
30 Min SENY (GHI)	0.00	0.00	0.00	0.00	0.04	0.10	0.37	0.46	0.04	0.28	0.01	0.17
30 Min East (F)	0.00	0.00	0.00	0.00	0.04	0.10	0.37	0.46	0.04	0.28	0.01	0.17
30 Min West (ABCDE)	0.00	0.00	0.00	0.00	0.04	0.10	0.37	0.46	0.04	0.28	0.01	0.17
Regulation	6.57	6.00	6.32	6.16	5.96	5.67	4.94	5.34	4.46	6.75	6.93	8.31
NYCA Regulation Movement	0.17	0.17	0.17	0.17	0.16	0.16	0.14	0.12	0.12	0.16	0.12	0.12

NYISO In City Energy Mitigation - AMP (NYC Zone) 2020 - 2021

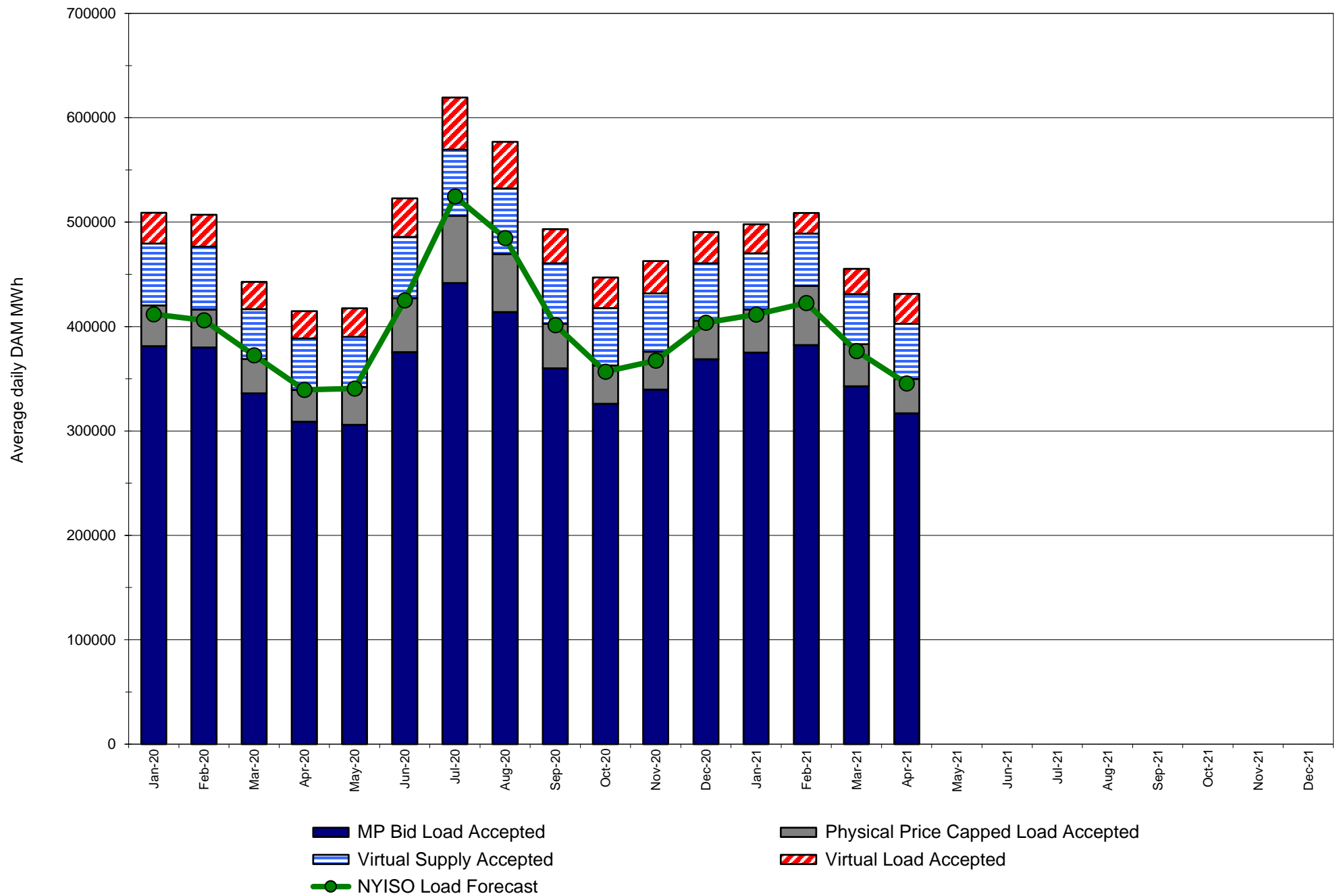
Percentage of committed unit-hours mitigated



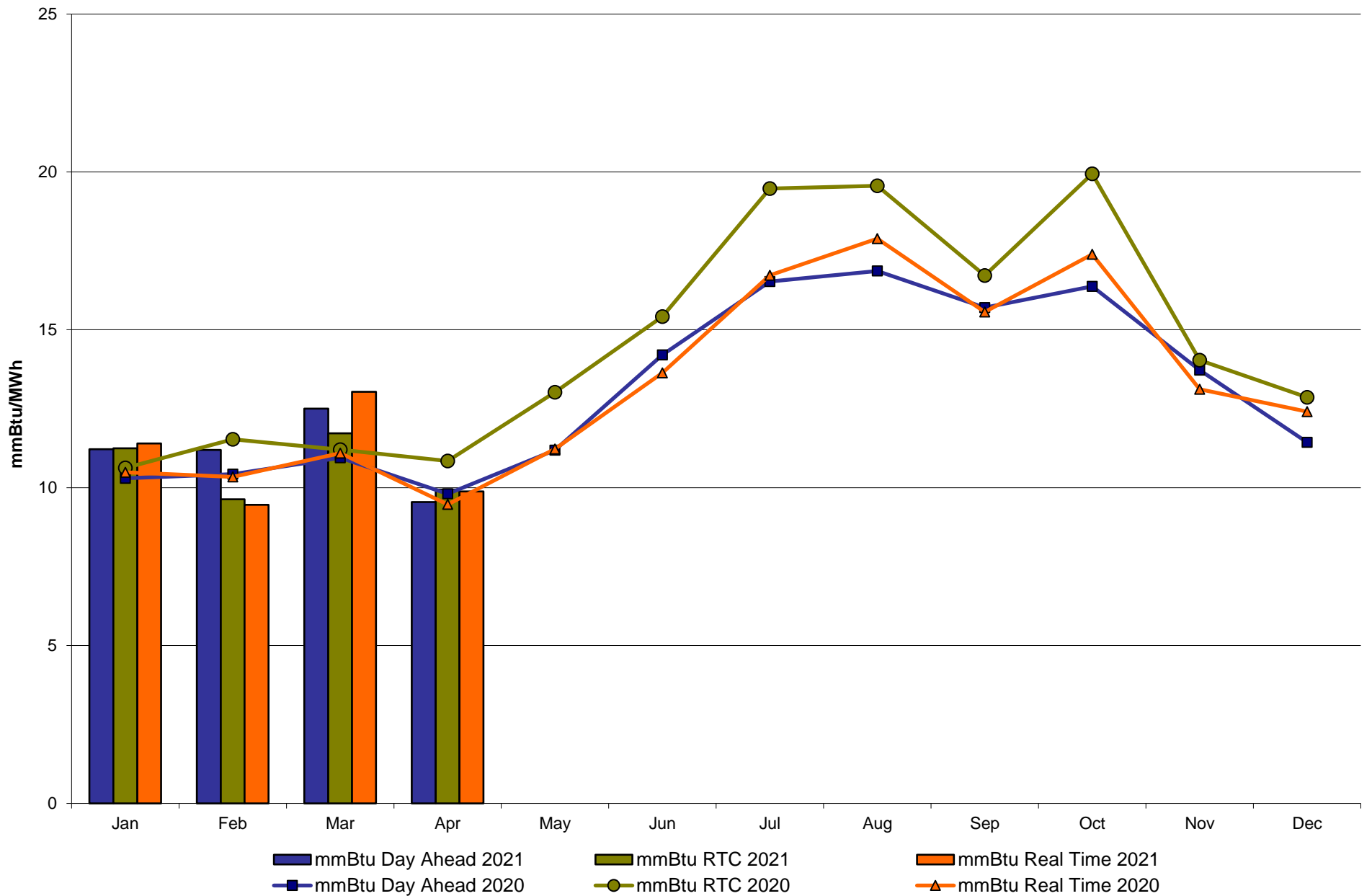
NYISO In City Energy Mitigation (NYC Zone) 2020 - 2021
Monthly megawatt hours mitigated



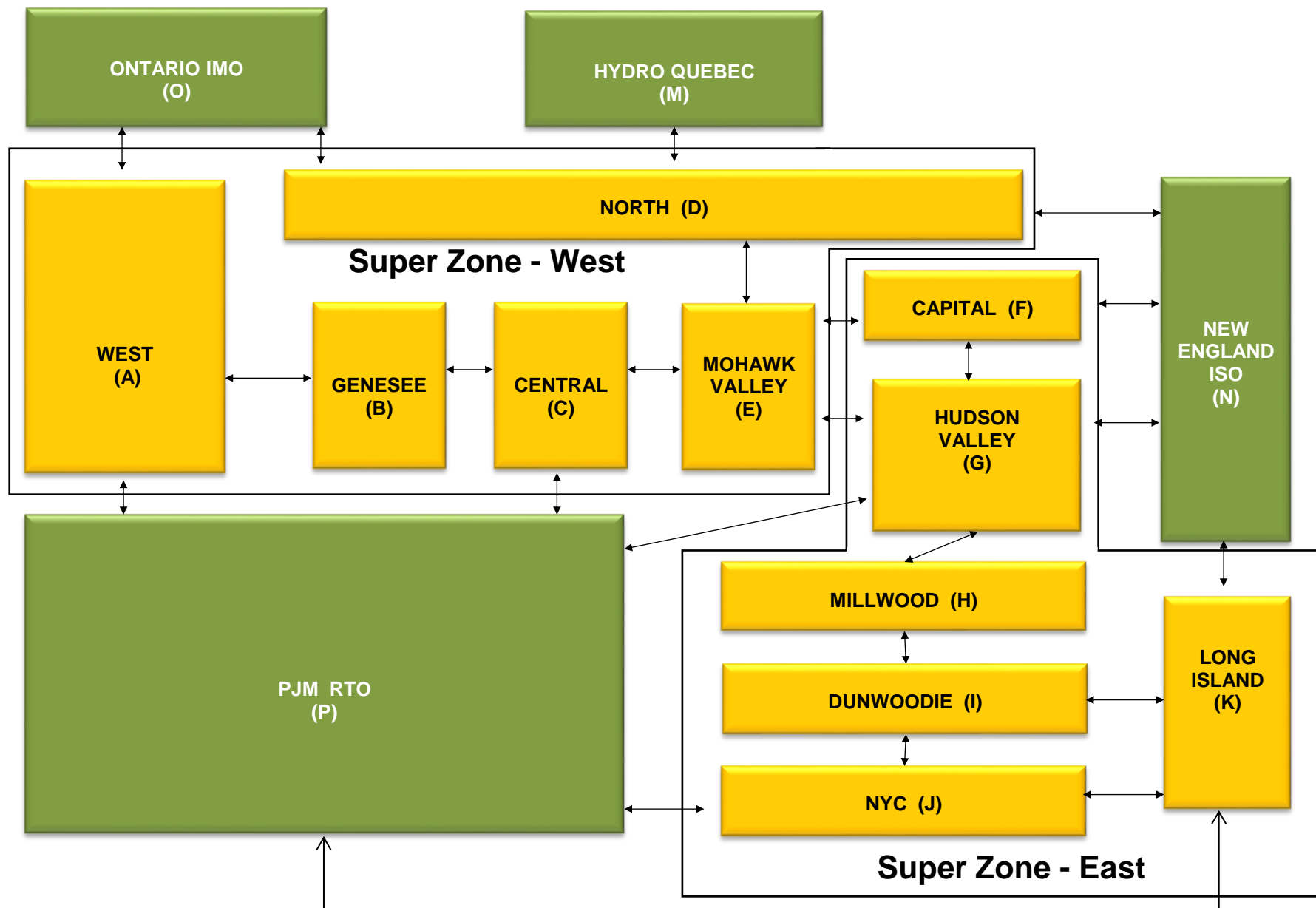
NYISO Average Daily DAM Load Bid Summary



Monthly Implied Heat Rate 2020-2021



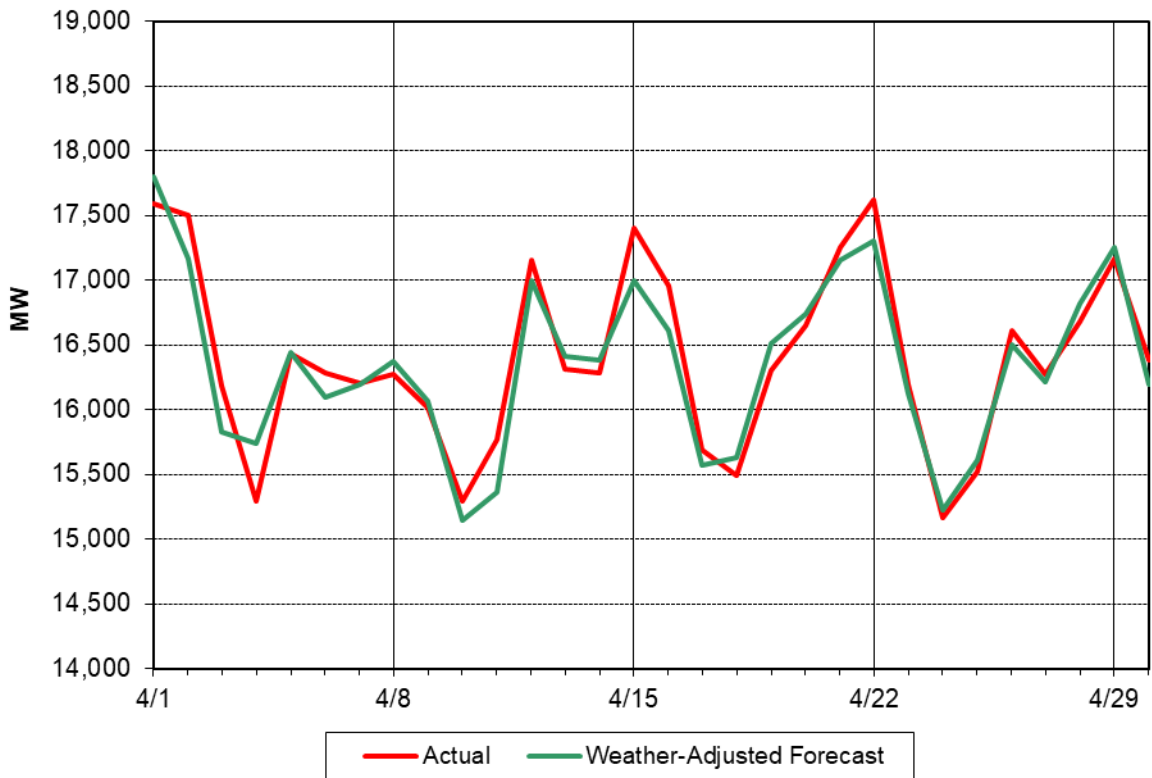
NYISO LBMP ZONES



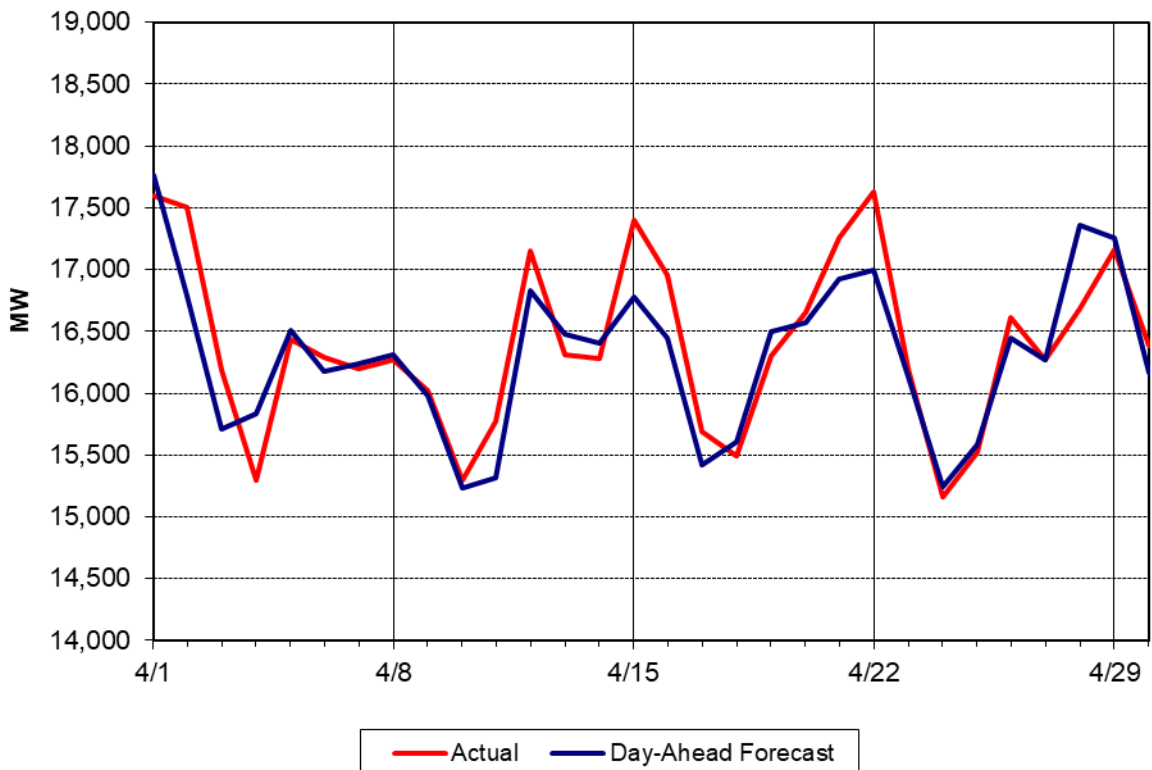
Billing Codes for Chart C

<u>Chart - C Category Name</u>	<u>Billing Code</u>	<u>Billing Category Name</u>
Bid Production Cost Guarantee Balancing	81203	Balancing NYISO Bid Production Cost Guarantee - Internal Units
Bid Production Cost Guarantee Balancing	81204	Balancing NYISO Bid Production Cost Guarantee - External Units
Bid Production Cost Guarantee Balancing	81205	Balancing NYISO Bid Production Cost Guarantee Expenditure due to Curtailed Imports
Bid Production Cost Guarantee Balancing	81208	Balancing NYISO Bid Production Cost Guarantee - Internal Units
Bid Production Cost Guarantee Balancing	81209	Balancing NYISO Bid Production Cost Guarantee - External Units
Bid Production Cost Guarantee Balancing	81213	Balancing NYISO Bid Production Cost Guarantee Expenditure due to Curtailed Imports
Bid Production Cost Guarantee DAM	81201	DAM NYISO Bid Production Cost Guarantee - Internal Units
Bid Production Cost Guarantee DAM	84001	EDRP/SCR Demand Response - Local
Bid Production Cost Guarantee DAM	84101	EDRP/SCR Demand Response - NYISO Wide
Bid Production Cost Guarantee DAM	81401	DAM Price Responsive Load Program
Bid Production Cost Guarantee DAM	81202	DAM NYISO Bid Production Cost Guarantee - External Units
Bid Production Cost Guarantee DAM	81206	DAM NYISO Bid Production Cost Guarantee - Internal Units
Bid Production Cost Guarantee DAM	81207	DAM NYISO Bid Production Cost Guarantee - External Units
Bid Production Cost Guarantee DAM Virtual	81501	DAM Virtual Bid Production Cost Guarantee
DAM Contract Balancing	81315	DAM Contract Balancing
DAM Contract Balancing	81317	DAM Contract Balancing
Local Reliability Balancing	81002	Balancing Local Reliability Bid Production Cost Guarantee
Local Reliability Balancing	83901	Margin Restoration (MOB) Revenue
Local Reliability DAM	81001	DAM Local Reliability Bid Production Cost Guarantee
NYISO Cost of Operations	80901	NYISO Cost Of Operations
NYISO Cost of Operations	80902	NYISO Cost Of Operations
NYISO Cost of Operations	83501	NYISO Cost Of Operations
NYISO Cost of Operations	83502	NYISO Cost Of Operations
Residuals Balancing	81302	Balancing Market Energy Residual
Residuals Balancing	81304	Balancing Market Loss Residual
Residuals Balancing	81305	Balancing Market Congestion Balancing
Residuals Balancing	81306	Emergency Energy Purchases
Residuals Balancing	81307	Emergency Energy Sales
Residuals Balancing	81309	Balancing Market Energy Residual
Residuals Balancing	81311	Balancing Market Loss Residual
Residuals Balancing	81312	Balancing Market Congestion Balancing
Residuals Balancing	81313	Emergency Energy Purchases
Residuals Balancing	81314	Emergency Energy Sales
Residuals DAM	81301	Day Ahead Market Energy Residual
Residuals DAM	81303	Day Ahead Market Loss Residual
Residuals DAM	81308	Day Ahead Market Energy Residual
Residuals DAM	81310	Day Ahead Market Loss Residual

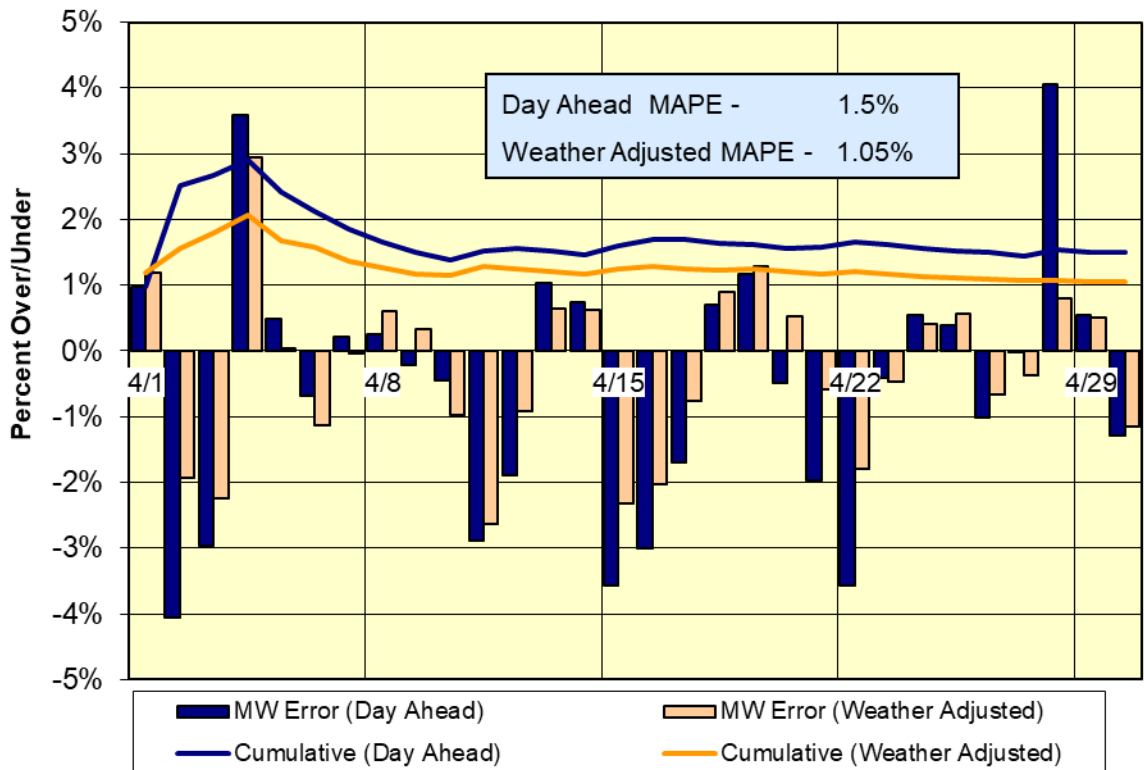
NYISO Daily Peak Load - April 2021
Actual vs. Weather-Adjusted Forecast



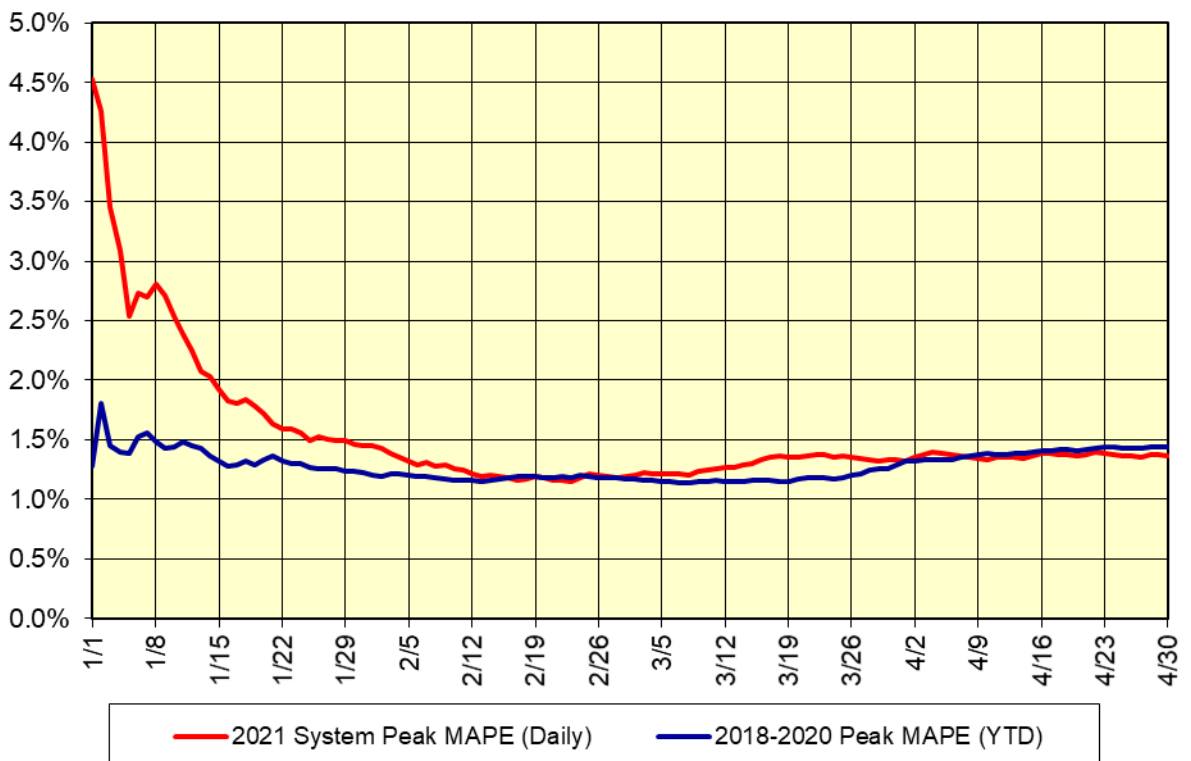
NYISO Daily Peak Load - April 2021
Actual vs. Forecast



Day Ahead Peak Forecast - April 2021 Percent Error - Actual & Weather-Adjusted



Day-Ahead Forecast Accuracy - Cumulative Performance 2021 Year-to-Date



Summary Description of Regulatory Filings, Investigations, Rulemakings and Related Orders in NYISO Matters – April 2021

Filing Date	Filing Summary	Docket	Order Date	Order Summary
12/22/2020	NYISO second compliance filing to modify the NYISO's Self Supply Exemption under the NYISO's buyer-side capacity market power mitigation rules in accordance with the directives of the 02/20/2020 Order	ER16-1404-005	04/29/2021	Order accepted filing subject to further compliance filing
12/22/2020	NYISO filing of an errata to Second Compliance Filing to modify the Self Supply Exemption under the BSM Rules	ER16-1404-006	04/29/2021	Order accepted filing subject to further compliance filing
01/08/2021	NYISO filing of second errata to the December 22, 2020 filing to modify the NYISO's Self Supply Exemption (SSE) under the NYISO's buyer-side capacity market power mitigation rules	ER16-1404-007	04/29/2021	Order accepted filing subject to further compliance filing
02/05/2021	NYISO-National Grid Joint section 205 filing of LGIA among NYISO, National Grid and PPM Roaring Brook, LLC	ER21-1061-000	04/05/2021	Letter order accepted submission effective 01/25/2021, as requested
02/10/2021	NYISO- National Grid joint section 205 filing of a SGIA among NYISO, NMPC and SunEast Watkins Road Solar	ER21-1088-000	04/07/2021	Letter order accepted submission effective 01/27/2021, as requested
03/12/2021	NYISO-Central Hudson joint section 205 filing of a Transmission Project Interconnection Agreement among the NYISO, Central Hudson, and New York Transco	ER21-1367-000	04/29/2021	Letter order accepted submission effective 02/26/2021, as requested
04/01/2021	NYISO filing of annual compliance report re: unreserved use penalties and late study penalties per order 890-A	OA08-109-000		
04/01/2021	NYISO filing to NYPSC a copy of FERC Form No. 715 Annual Transmission Planning and Evaluation Report to PSC RAO after submittal to FERC on 04/01/21	PSC copy of FERC Form No. 715		
04/16/2021	NYISO compliance filing of a revised assumed amortization period for the peaking plants used in determining the ICAP Demand Curves for the 2021-2025 reset period	ER21-502-000		
04/19/2021	NYISO filing, on behalf of NY Transco, of an Engineering, Procurement & Construction Agreement among NY Transco, Holcim (US) Inc. and NYISO	ER21-1710-000		

04/20/2021	NYISO filing of annual report of total MW-hours of transmission service interstate commerce for 2020 in compliance with FERC Reporting Requirement No. 582	FERC Form No. 582		
04/20/2021	NYISO filing of an answer to comments regarding an Amended and Restated Large Generator Interconnection Agreement among the NYISO, NYSEG, and Baron Winds	ER21-1312-000		
04/23/2021	NYISO filing of motion to intervene and comments to the request for limited waiver of Tariff submitted by TBE Montgomery, LLC (TBE) on April 9, 2021	ER21-1674-000		
04/23/2021	NYISO errata filing to its Motion filed on 4/23/21 in response to the TBE Montgomery Request for Limited Waiver of Tariff	ER21-1674-000		
04/23/2021	NYISO-Ravenswood Joint section 205 filing of an implementation agreement between NYISO and Helix Ravenswood regarding recovery of its costs to use fuel oil	ER21-1754-000		
04/28/2021	NYISO-National Grid joint Section 205 filing of a Small Generator Interconnection Agreement among NYISO, National Grid, and SunEast Skyline Solar	ER21-1784-000		