

Monthly Report

A Report by the
New York Independent System Operator

January 2021

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January 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 February 8, 2021.

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January 2021 Operations Performance Highlights

- Peak load of 22,500 MW occurred on 01/29/2021 HB 18
- All-time winter capability period peak load of 25,738 MW occurred on 1/7/2014 HB 18
- 0 hours of Thunder Storm Alerts were declared
- 0 hours of NERC TLR level 3 curtailment
- 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.

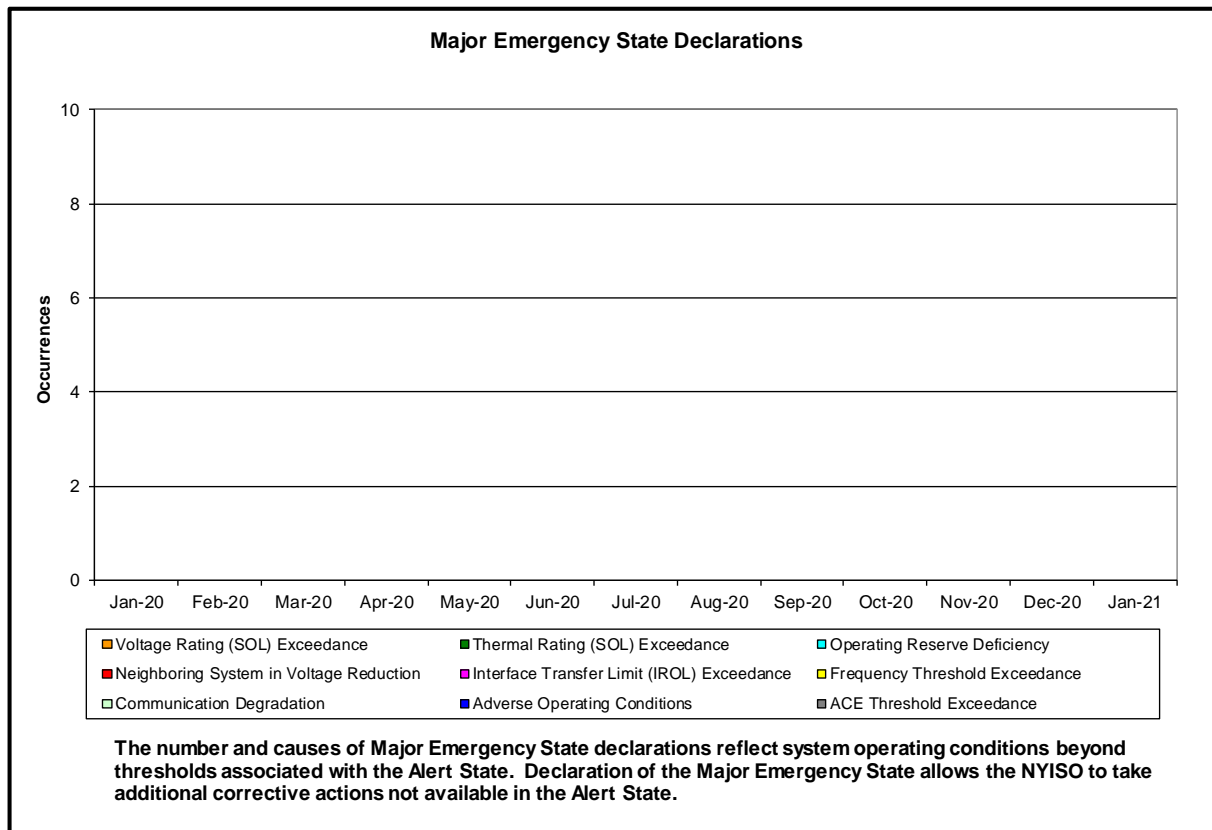
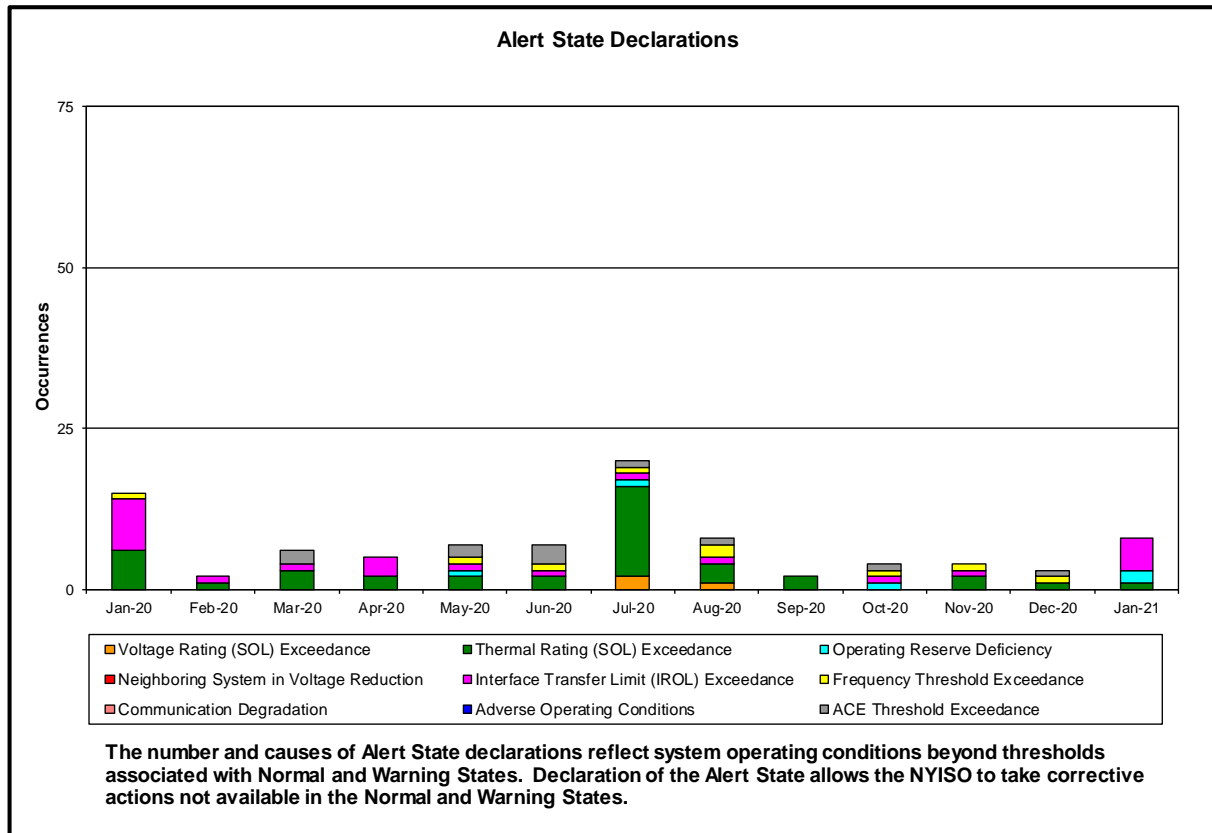
	Current Month Value (\$M)	Year-to-Date Value (\$M)
NY Savings from PJM-NY Congestion Coordination	\$1.18	\$1.18
NY Savings from PJM-NY Coordinated Transaction Scheduling	\$0.28	\$0.28
NY Savings from NE-NY Coordinated Transaction Scheduling	\$1.11	\$1.11
Total NY Savings	\$2.57	\$2.57
Regional Savings from PJM-NY Coordinated Transaction Scheduling	\$0.45	\$0.45
Regional Savings from NE-NY Coordinated Transaction Scheduling	\$0.14	\$0.14
Total Regional Savings	\$0.59	\$0.59

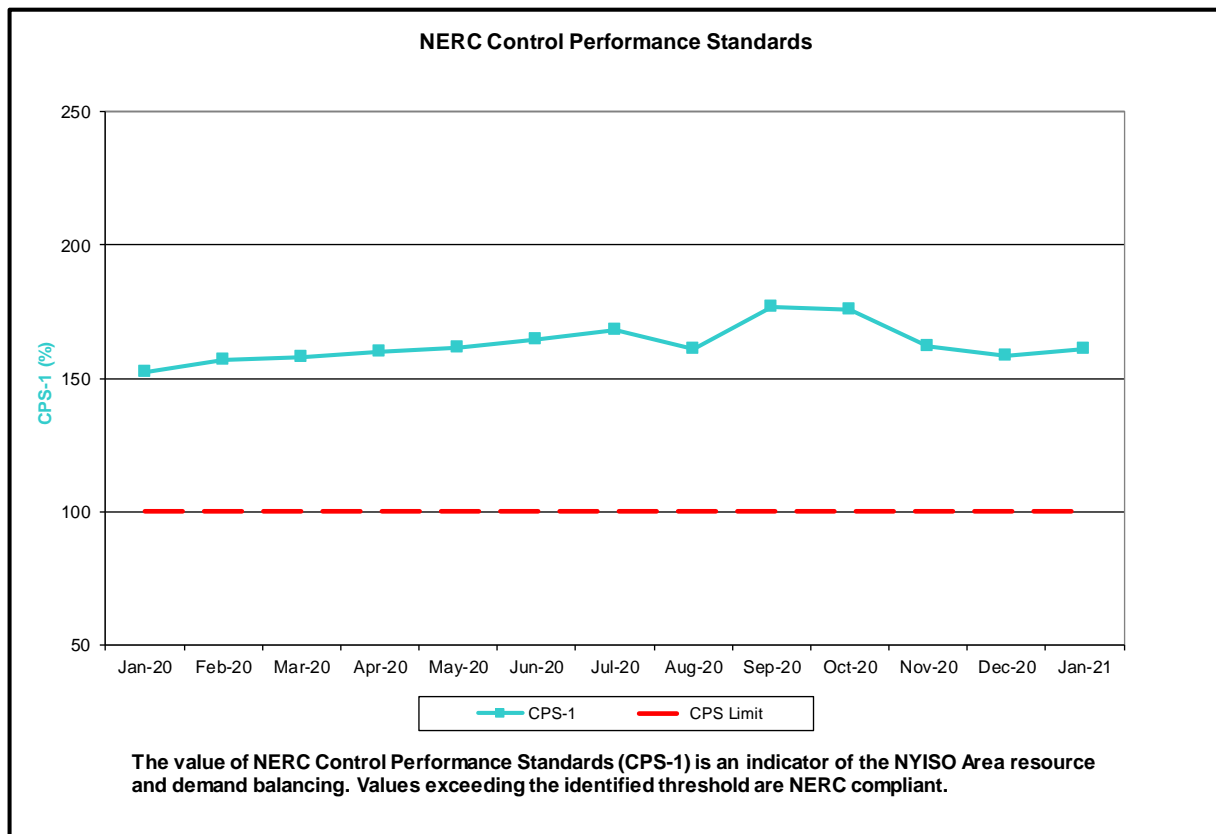
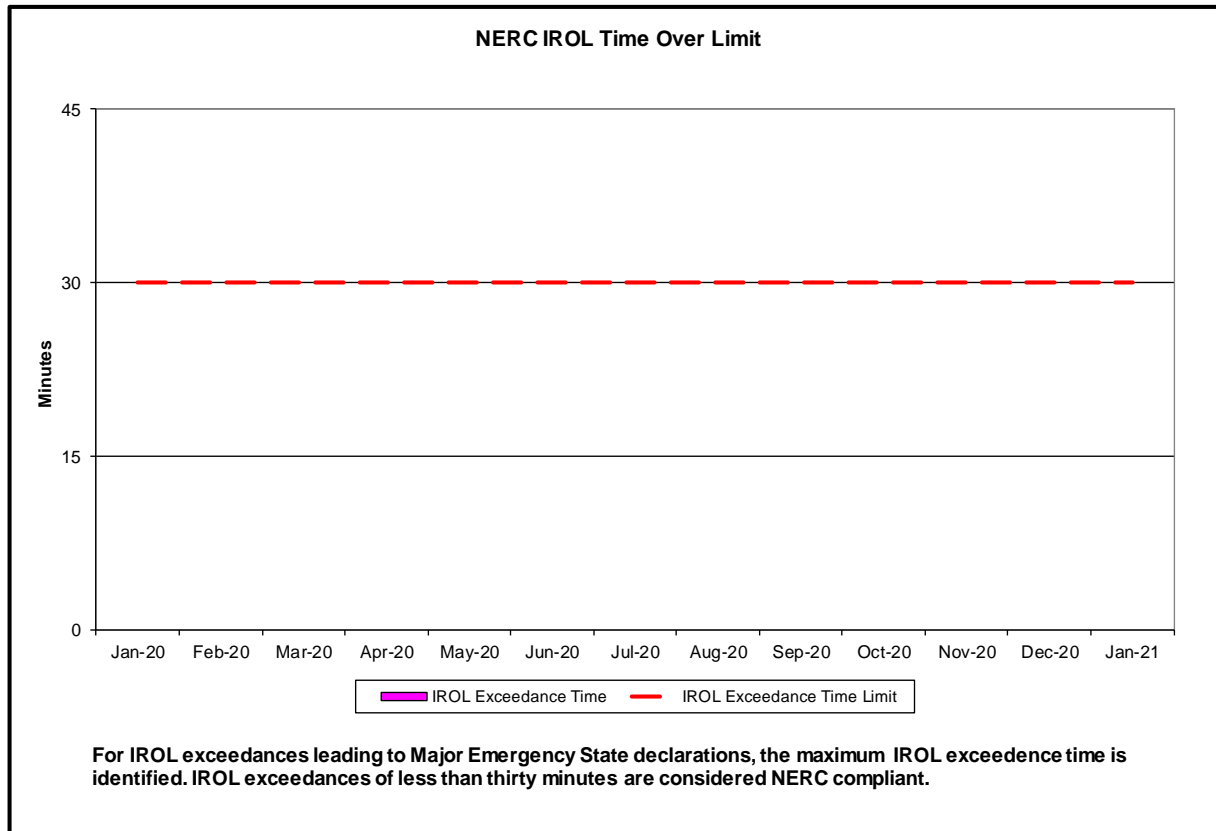
- Statewide uplift cost monthly average was (\$0.40)/MWh.
- The following table identifies the Monthly ICAP spot market prices and the price delta.

Spot Auction Price Results	NYCA	Lower Hudson Valley Zones	New York City Zone	Long Island Zone
February 2021 Spot Price	\$0.89	\$0.89	\$8.76	\$0.89
January 2021 Spot Price	\$0.06	\$0.06	\$8.56	\$0.06
Delta	\$0.83	\$0.83	\$0.20	\$0.83

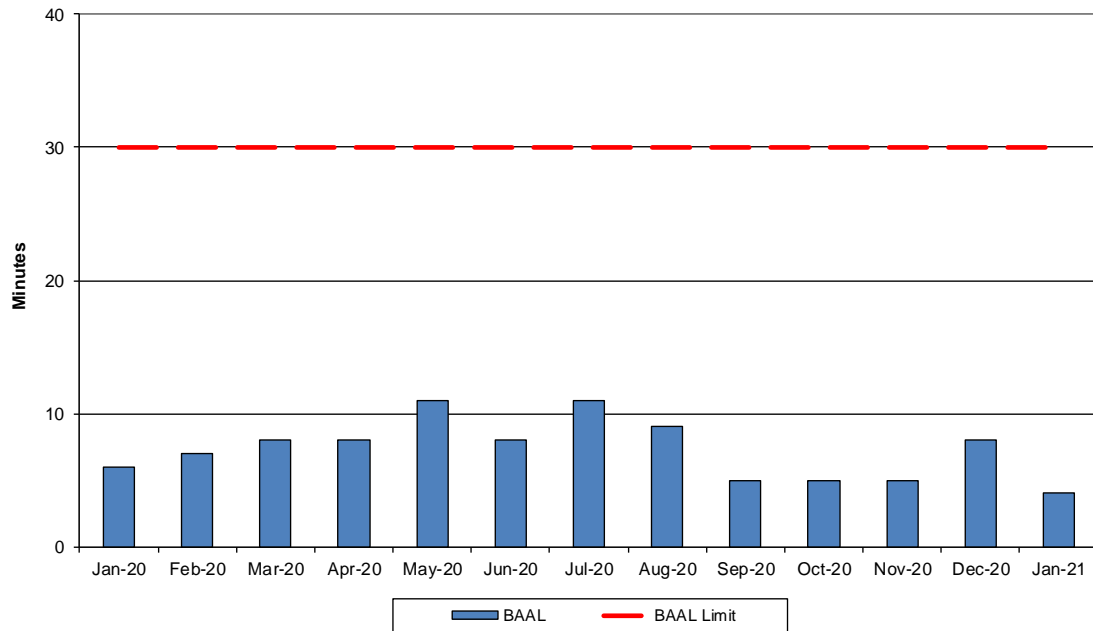
- NYCA – Price increased by \$0.83 due to an increase in Unsold MW from NYCA Resources and a decrease in net Imports.
- Lower Hudson Valley – Price was set by NYCA price.
- Long Island – Price was set by NYCA price.

Reliability Performance Metrics



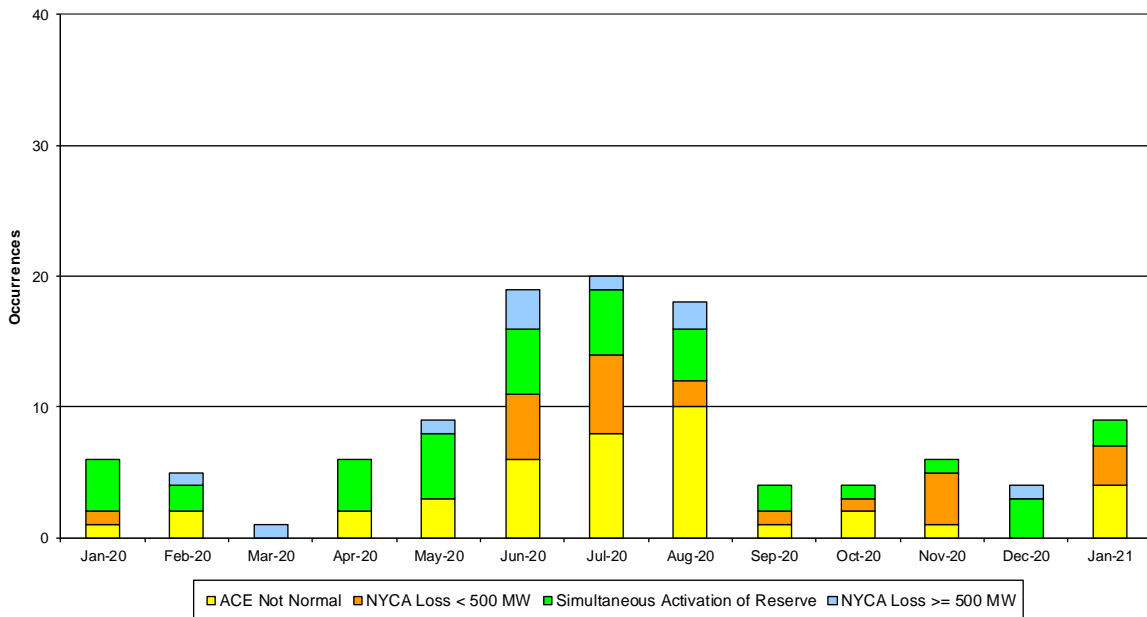


NERC Balancing Authority ACE Limit Standard



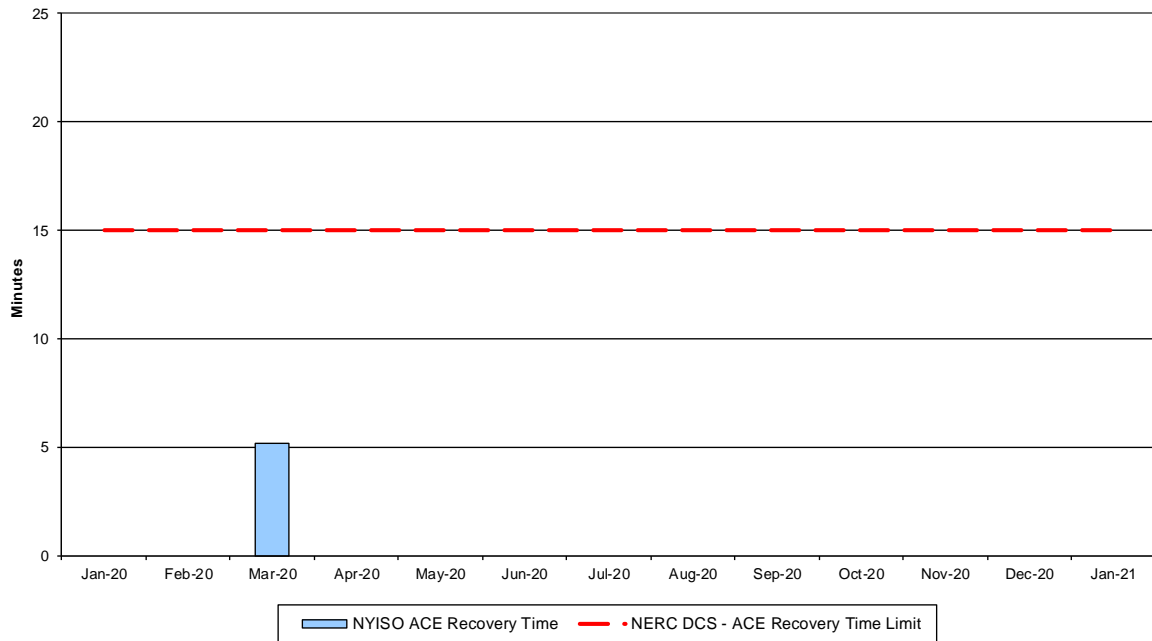
The amount of time the clock-minute average ACE exceeds the clock-minute Balancing Authority ACE Limit (BAAL) is an indicator of the NYISO Area resource and demand balancing. The maximum BAAL exceedance time is identified. BAAL exceedances of less than 30 consecutive clock-minutes are NERC compliant.

Reserve Activations



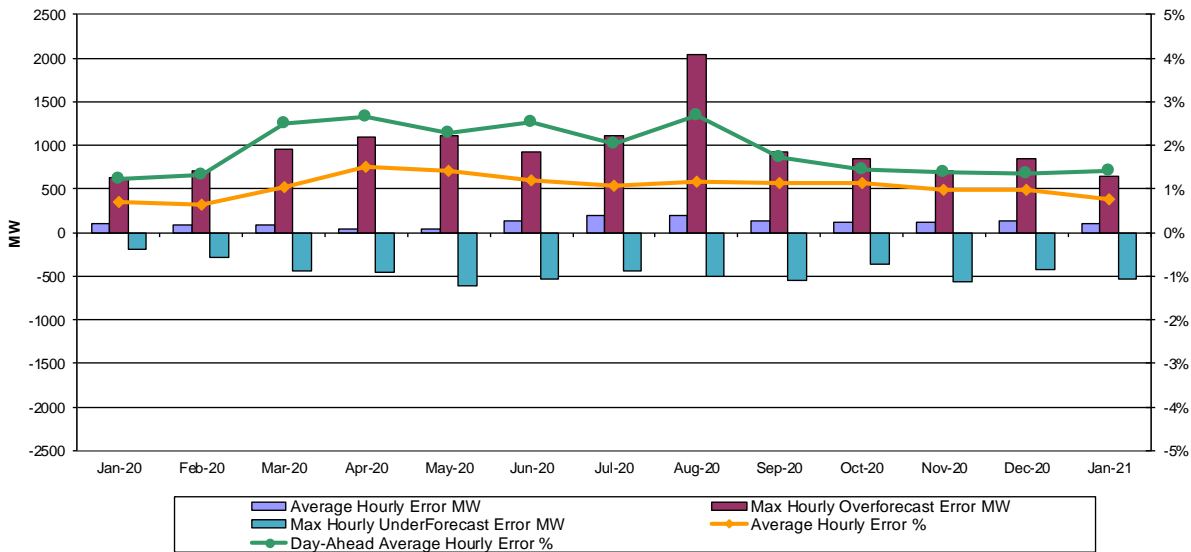
NYISO Reserve Activations are indicators of the need to respond to unexpected operational conditions within the NYISO Area or to assist a neighboring Area (Simultaneous Activation of Reserves) by activating an immediate resource and demand balancing operation.

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

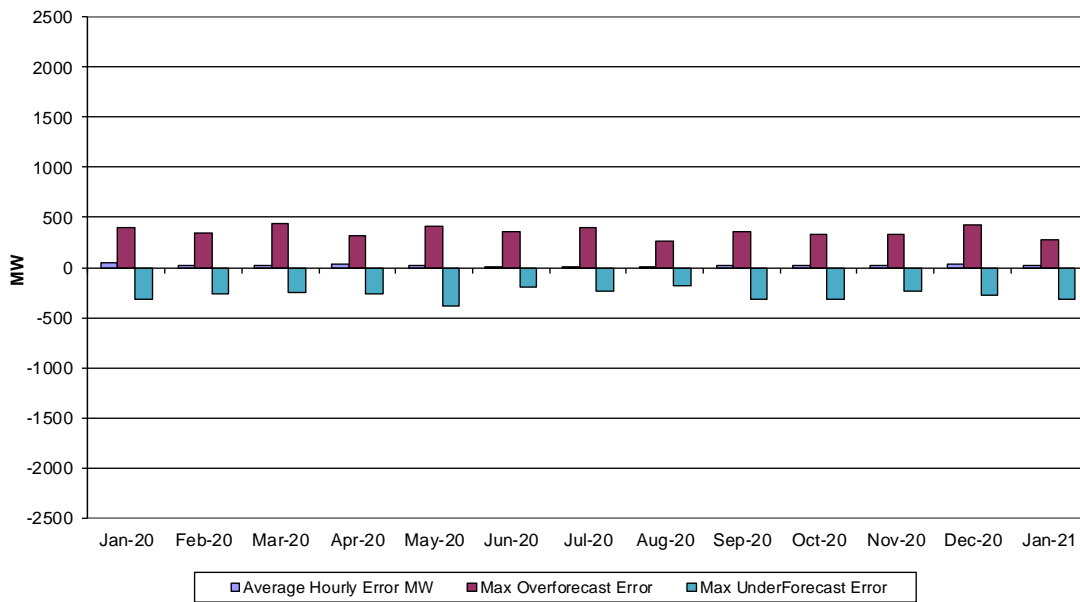


Hourly Error MW - Value of the difference between the hourly average actual load demand and the average hour ahead forecast load demand.

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

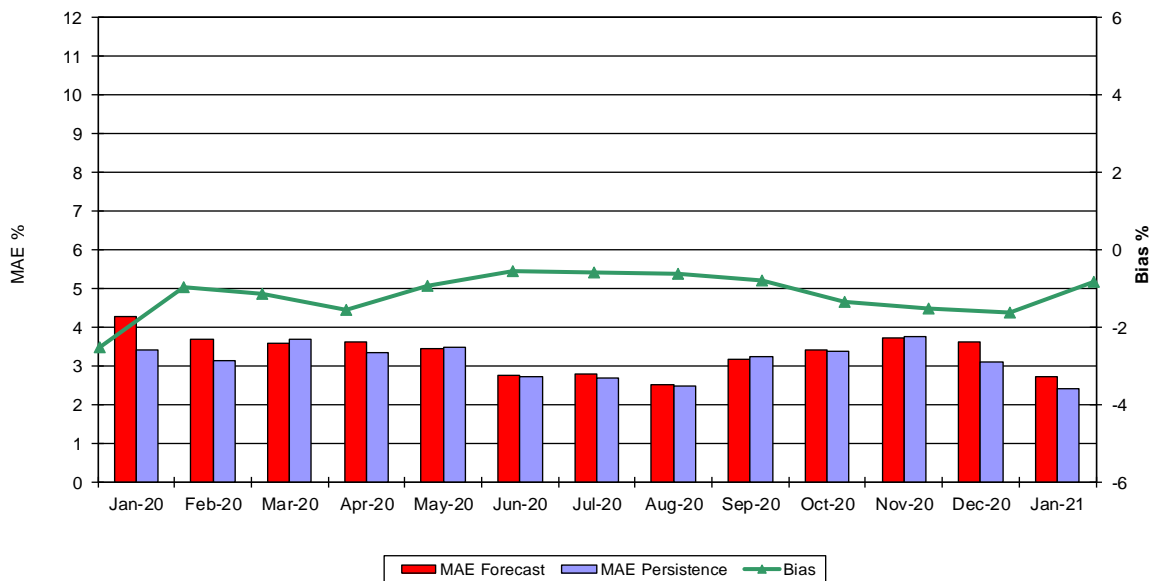
Day-Ahead Average Hourly Error % - Average across all hours of the month of the absolute value of the difference between actual load demand and the Day-Ahead forecast load demand, divided by the actual load demand.

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.

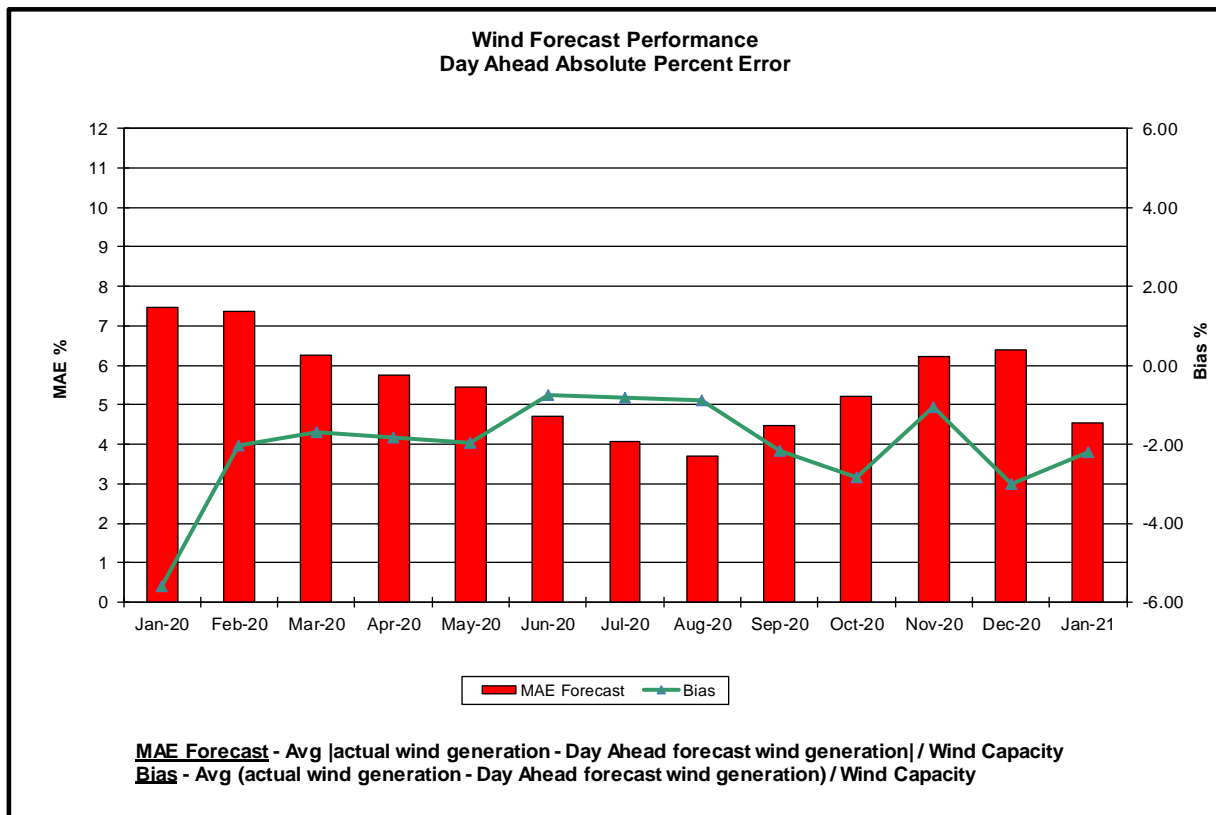
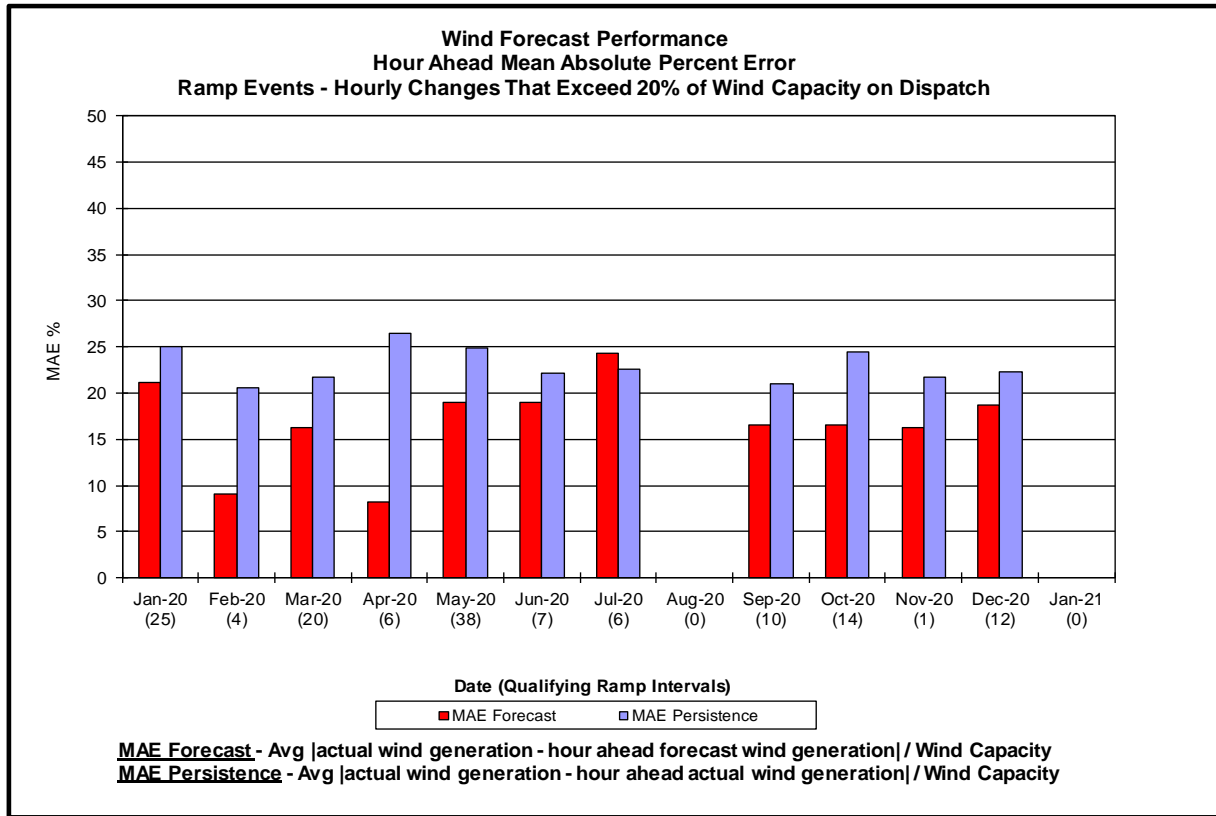
Wind Forecast Performance Hour Ahead Percent Error

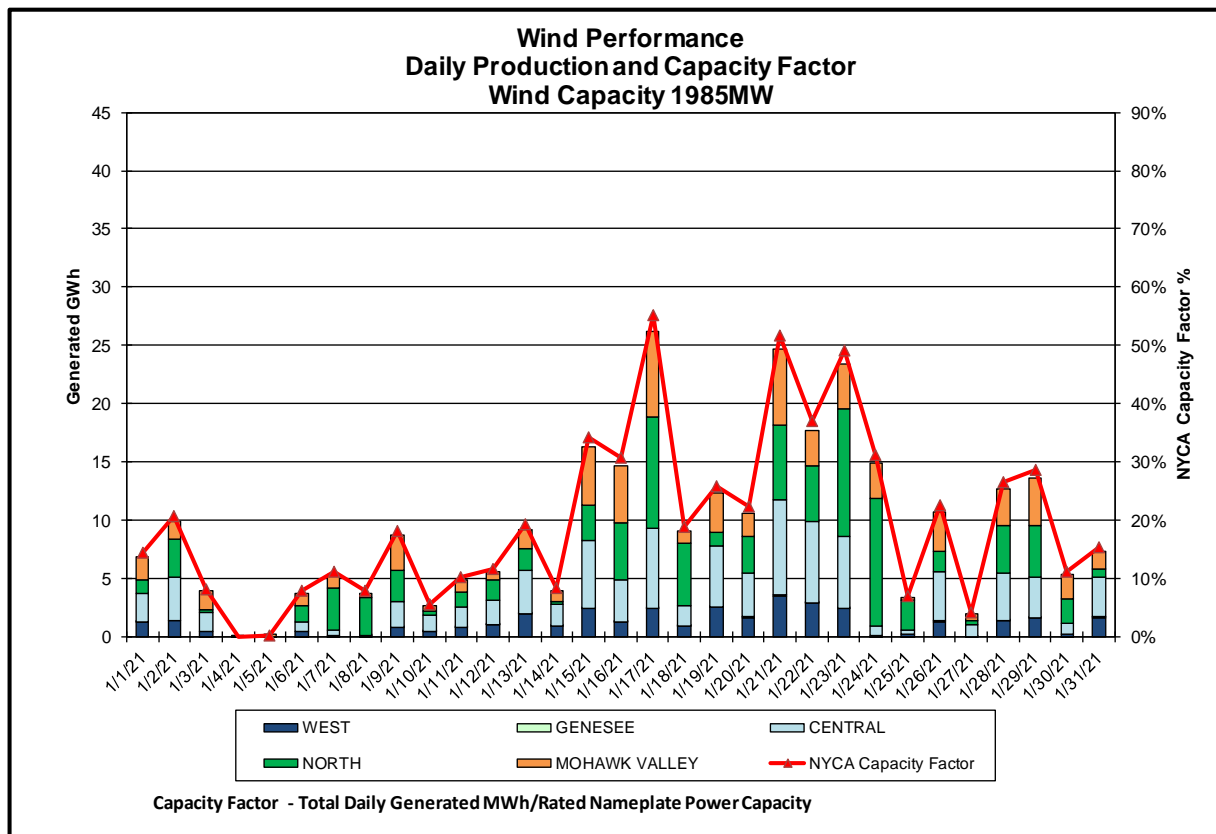
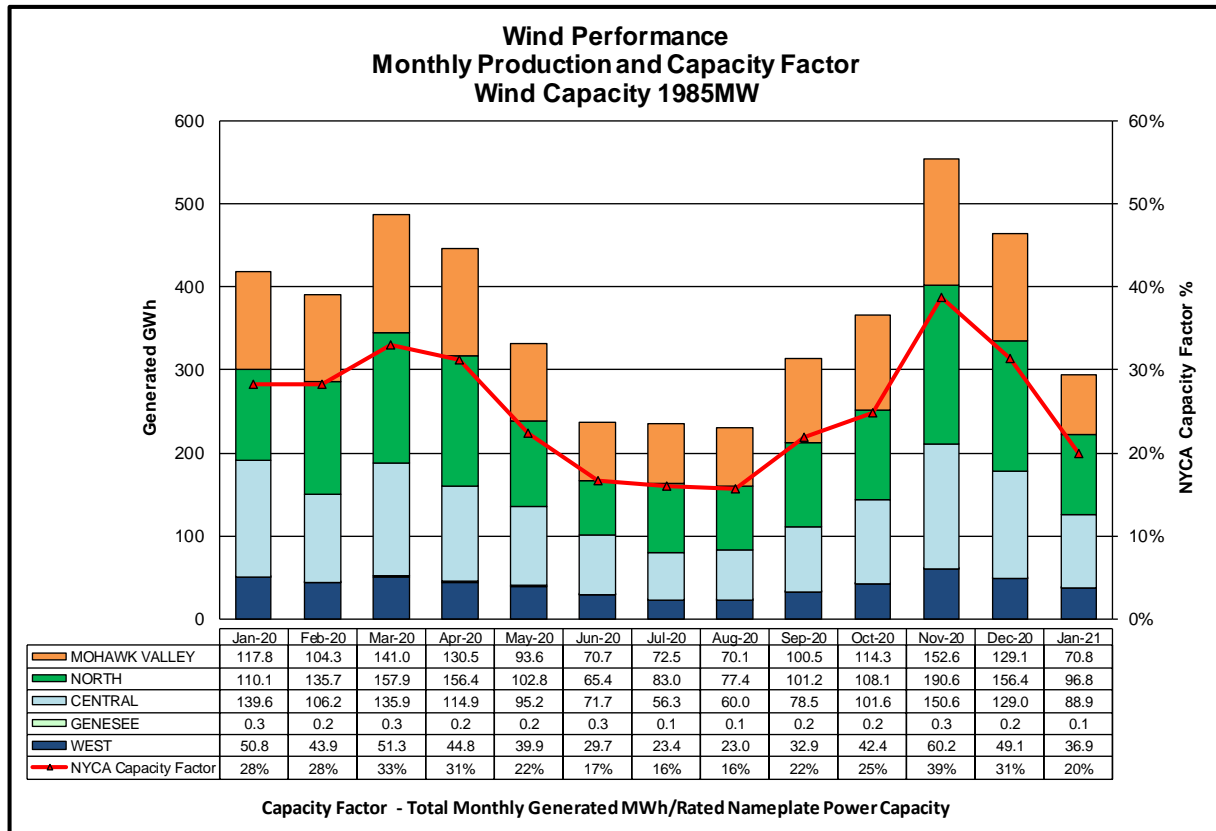


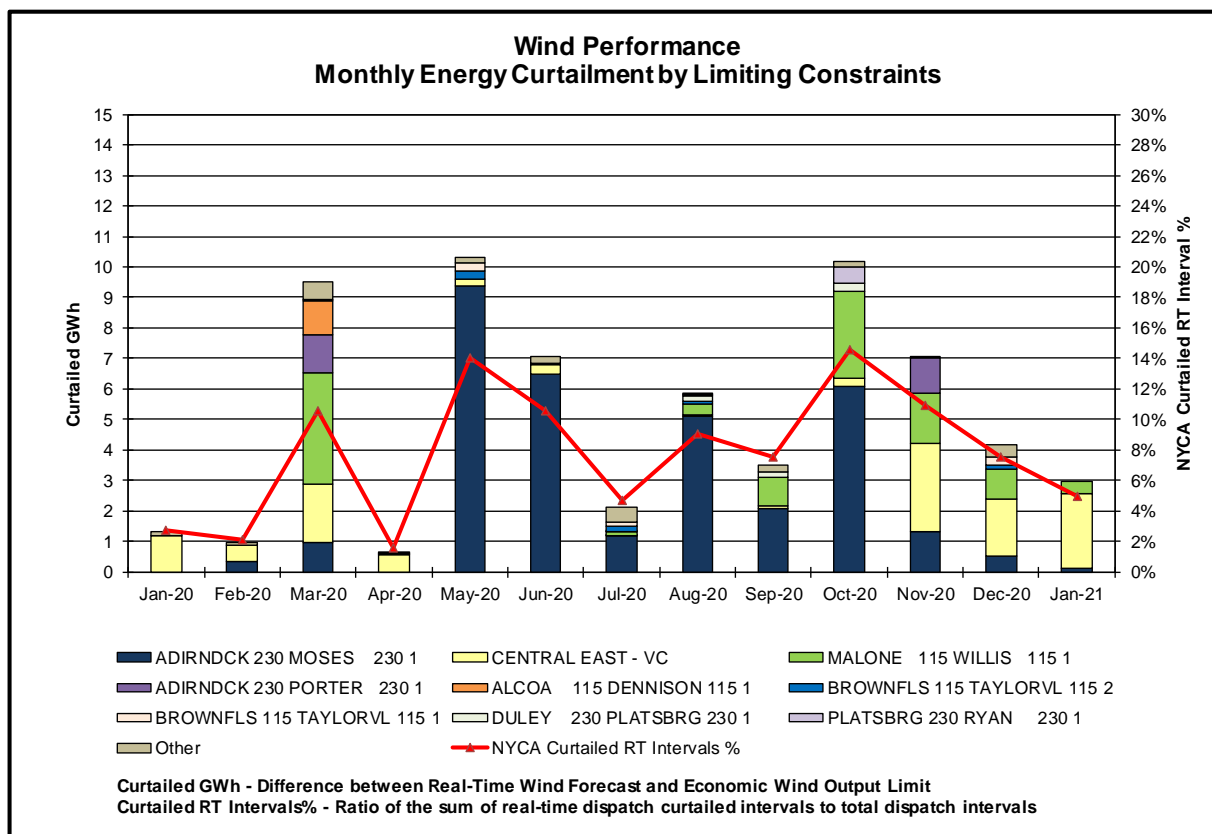
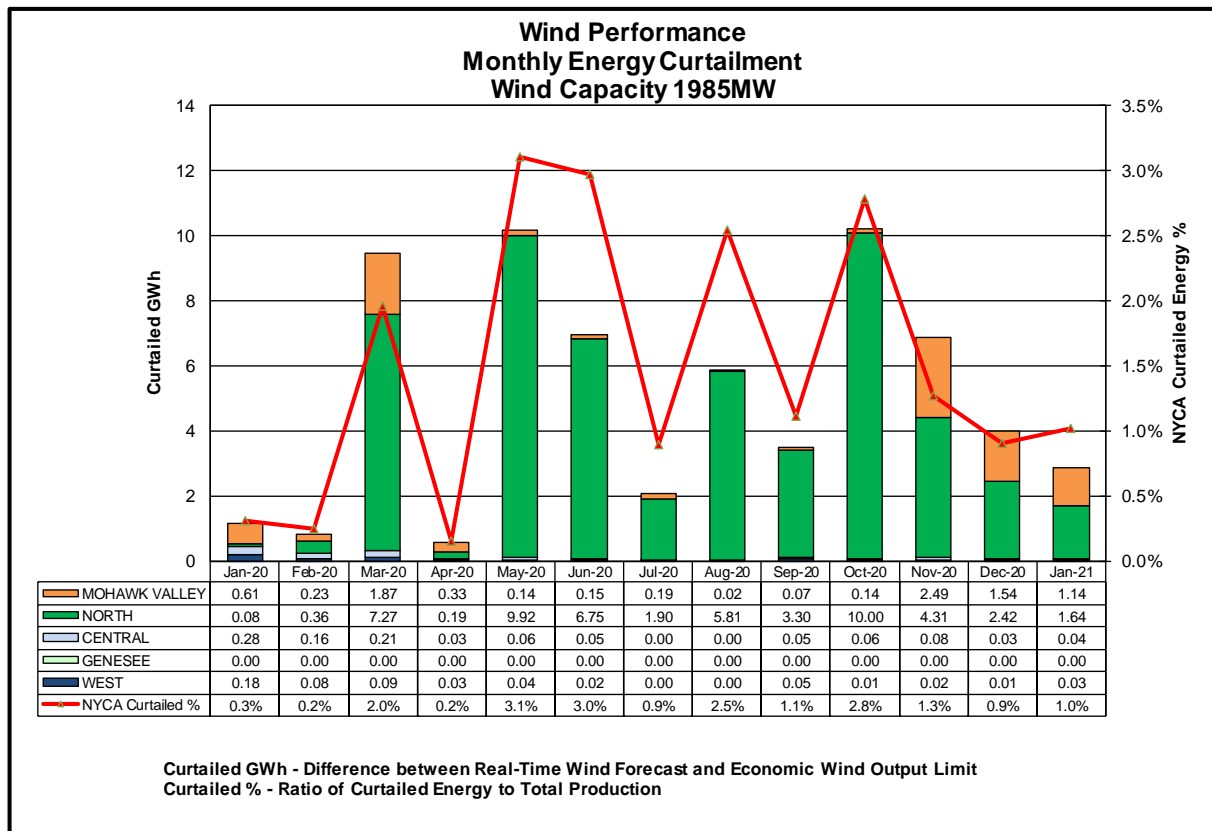
MAE Forecast - Avg |actual wind generation - hour ahead forecast wind generation| / Wind Capacity

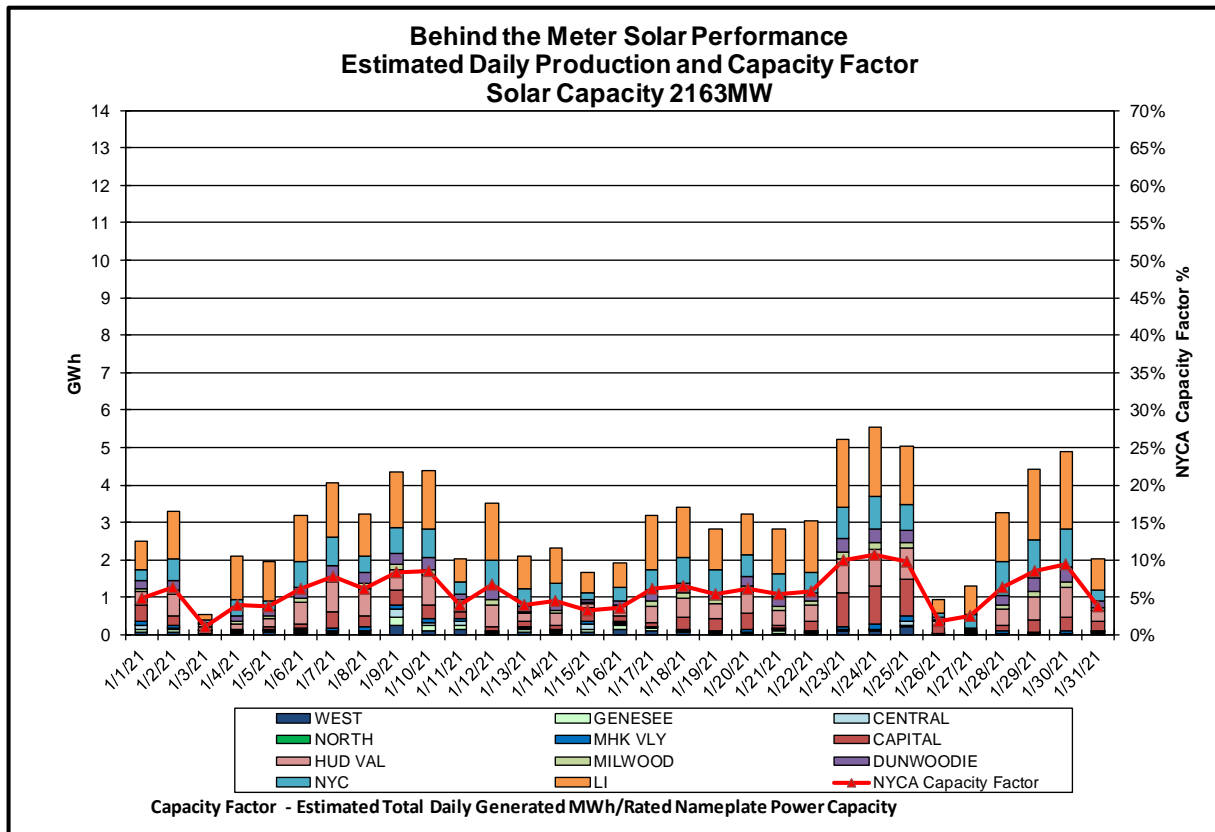
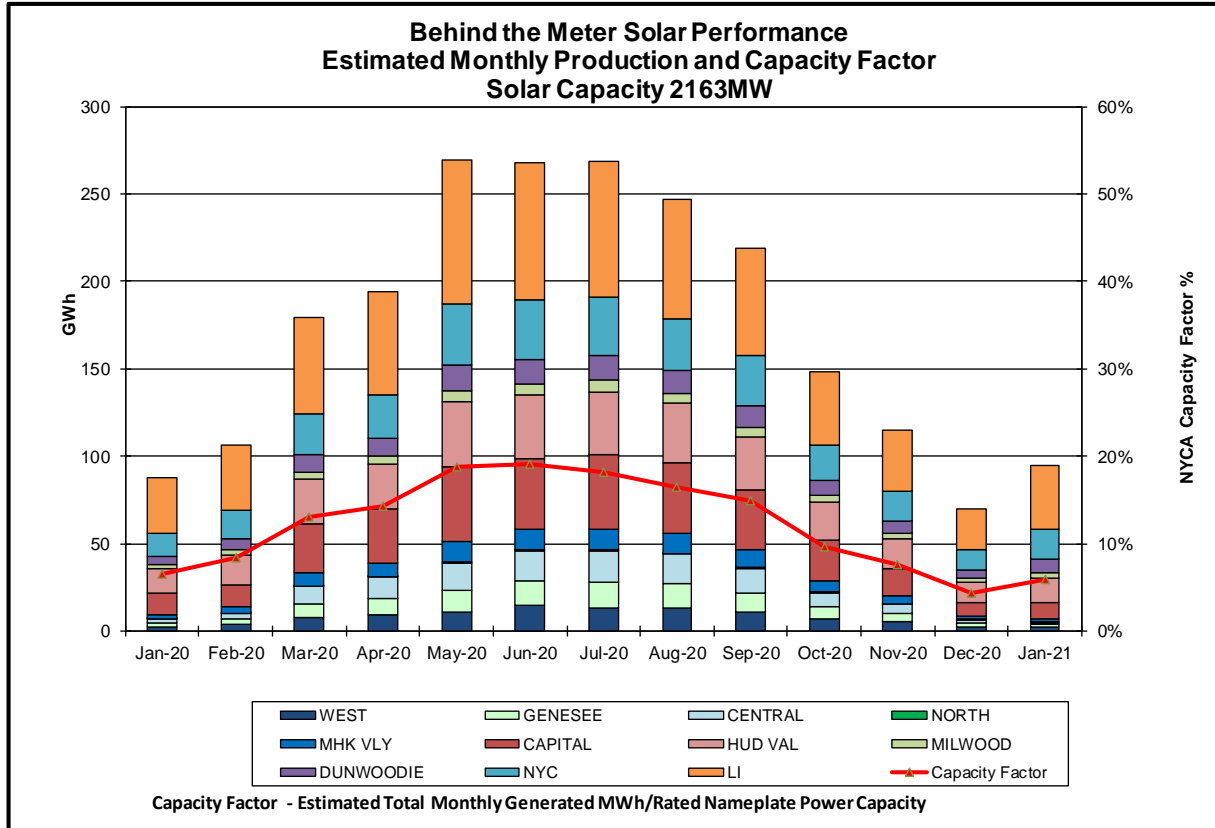
MAE Persistence - Avg |actual wind generation - hour ahead actual wind generation| / Wind Capacity

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

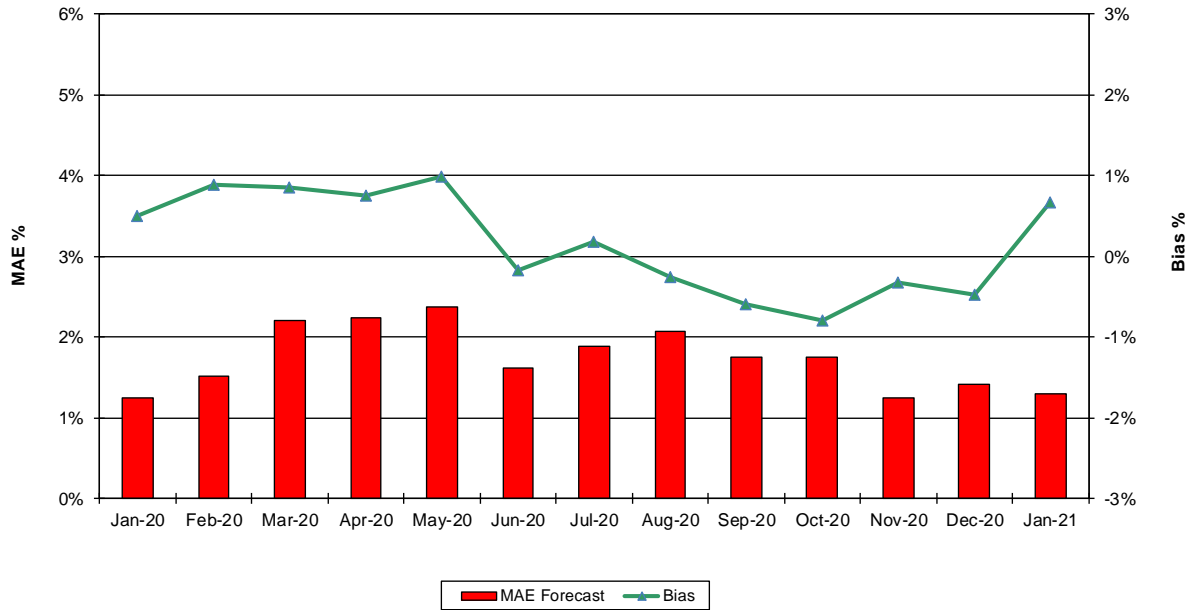






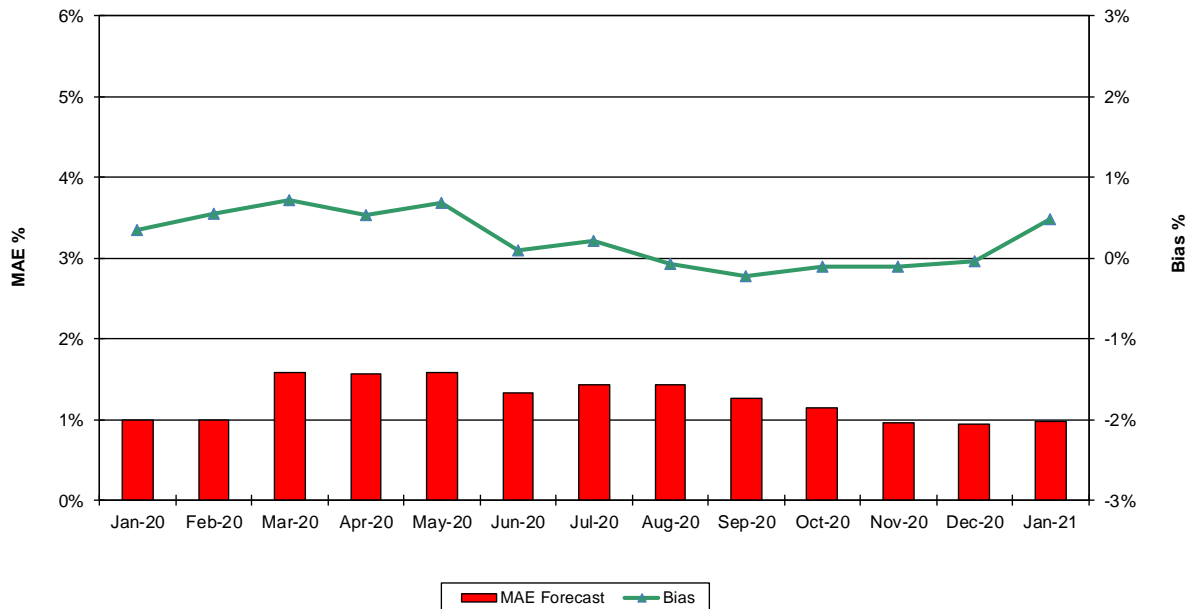


Behind the Meter Solar Forecast Performance Day Ahead Percent Error

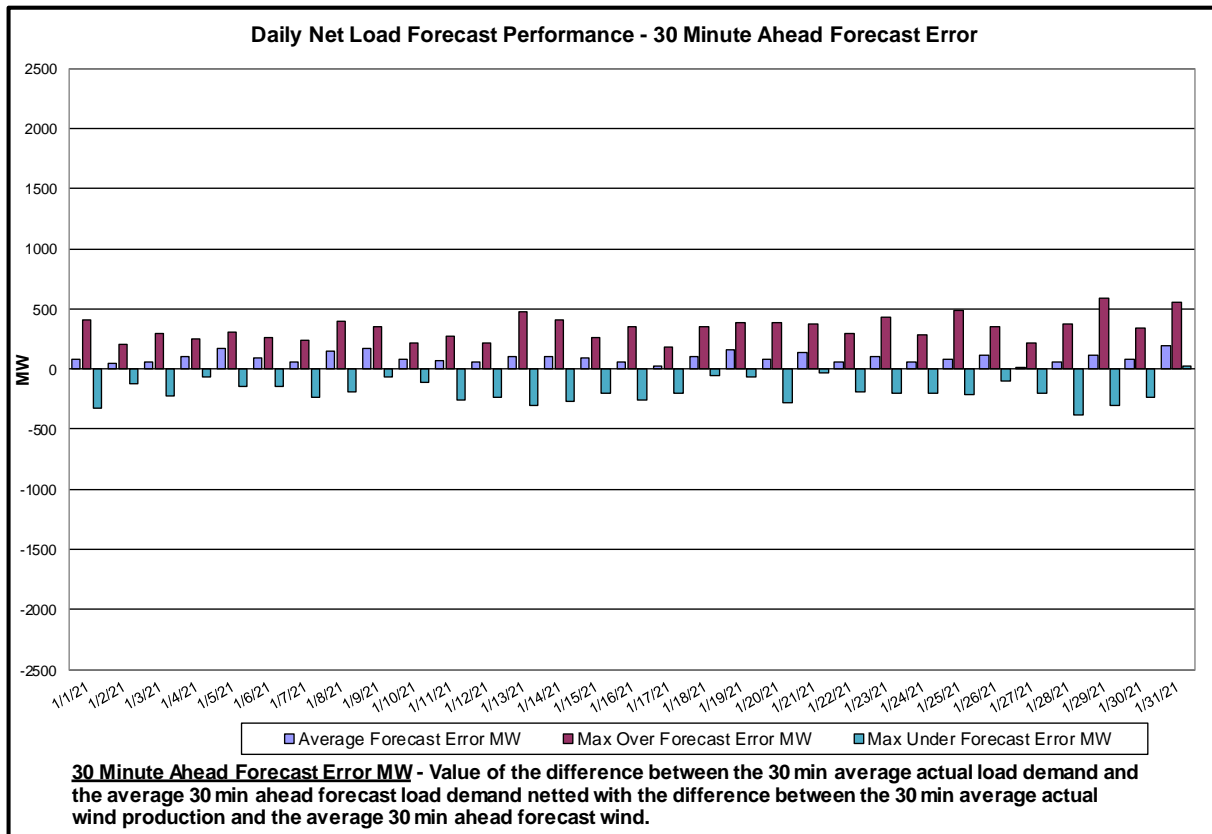
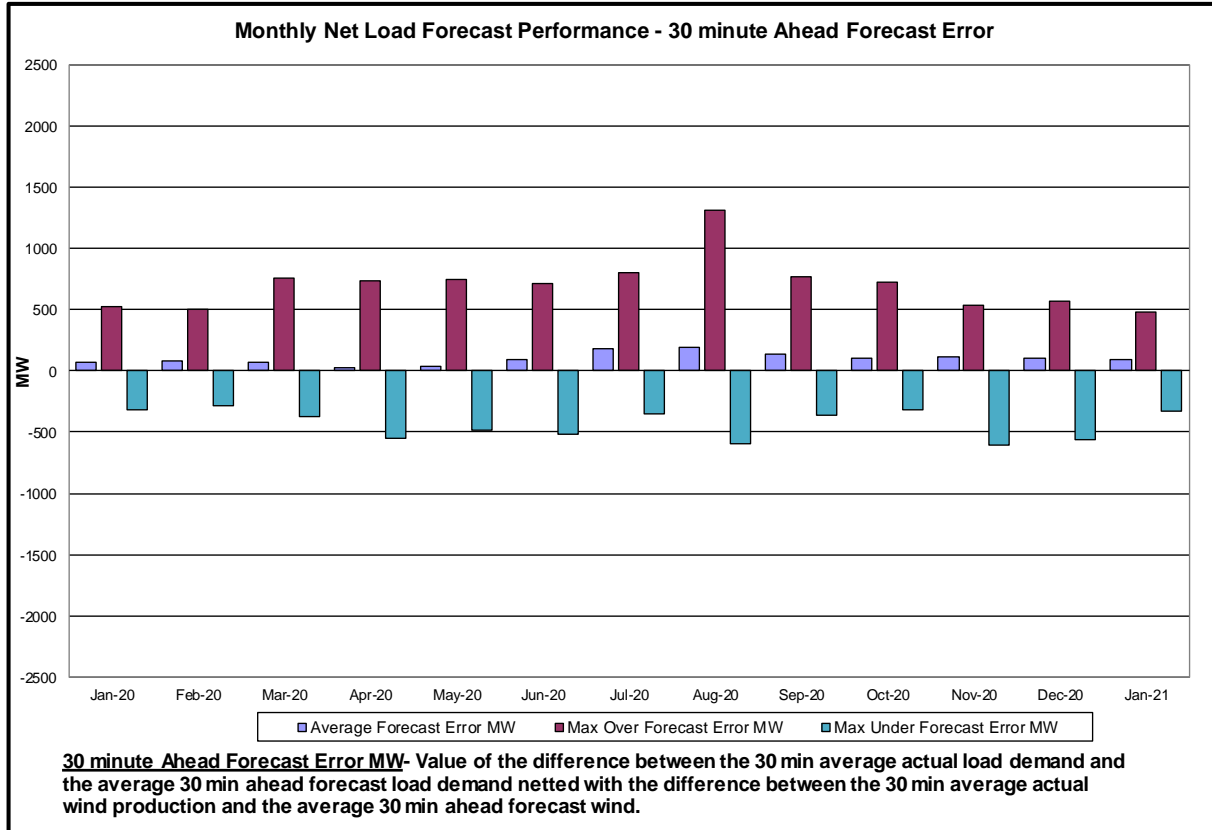


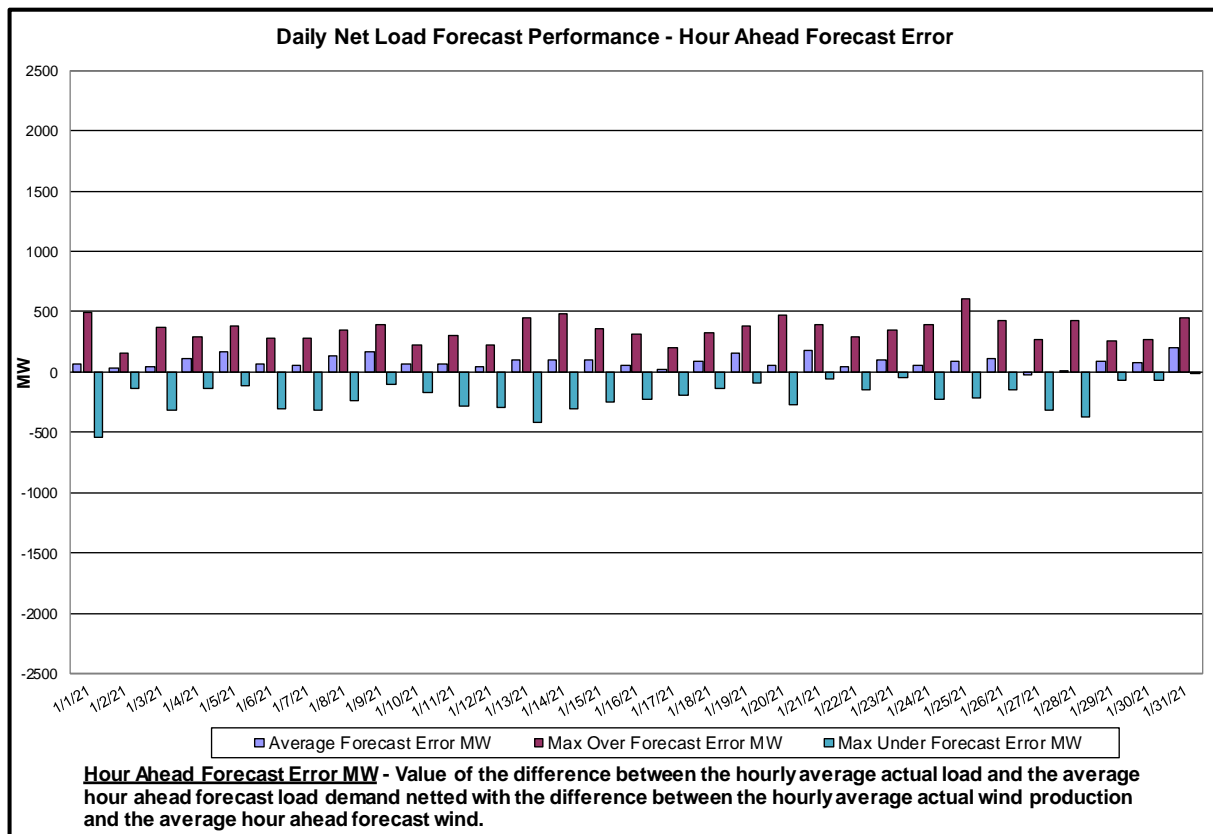
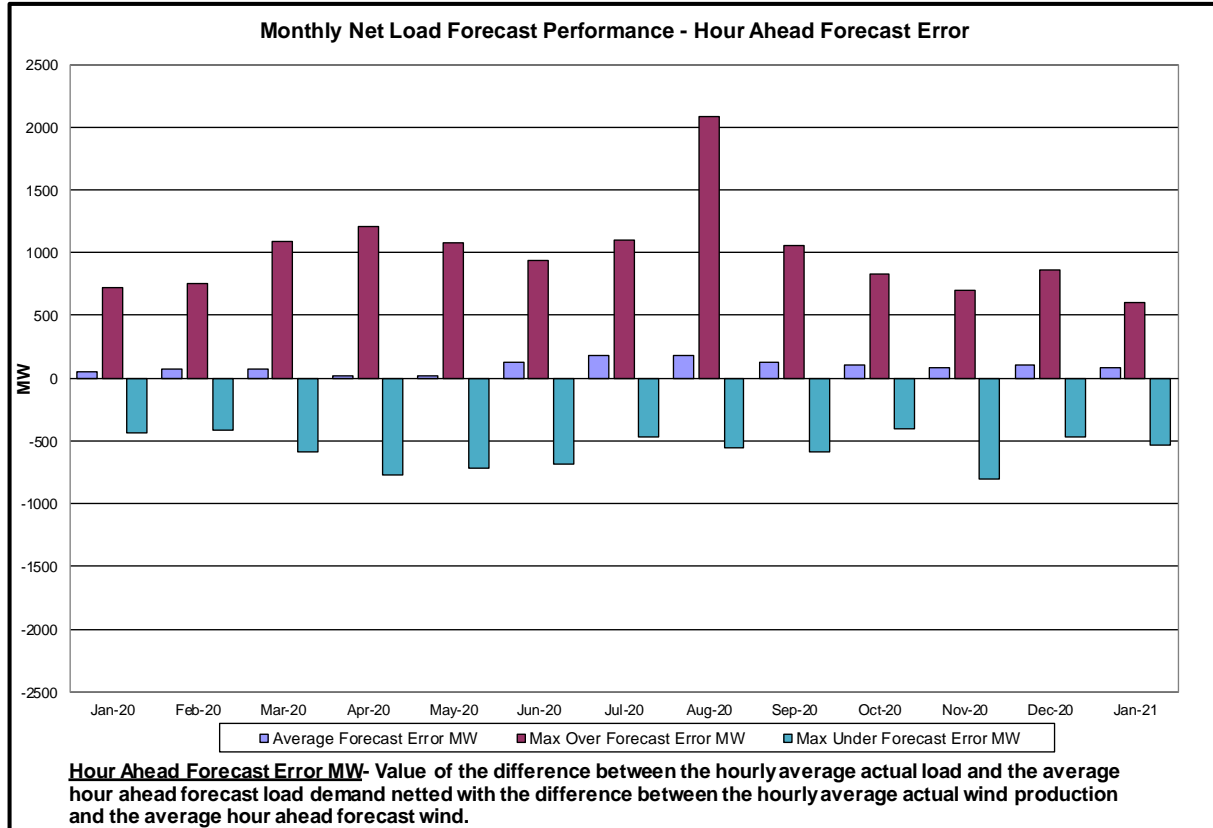
MAE Forecast - Avg |est. actual solar generation - Day Ahead forecast solar generation| / Solar Capacity
Bias - Avg (est. actual solar generation - Day Ahead forecast solar generation) / Solar Capacity

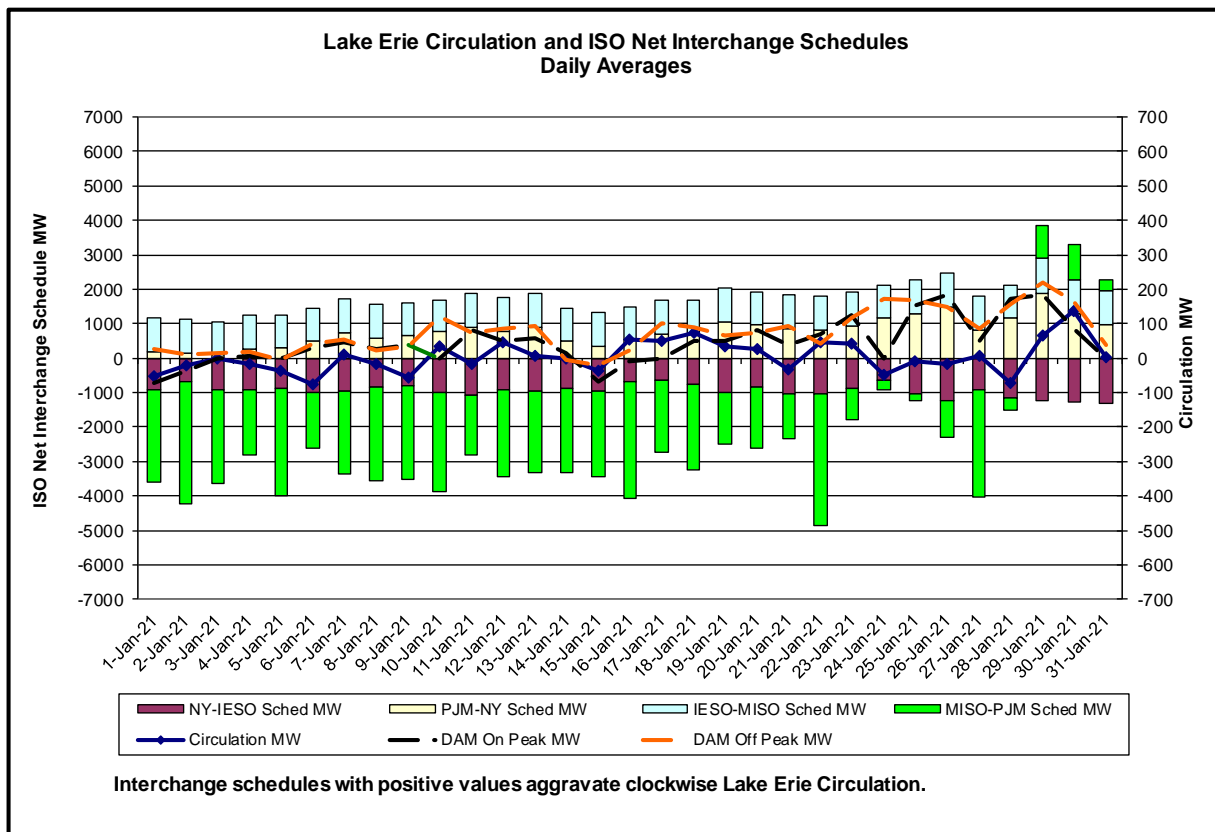
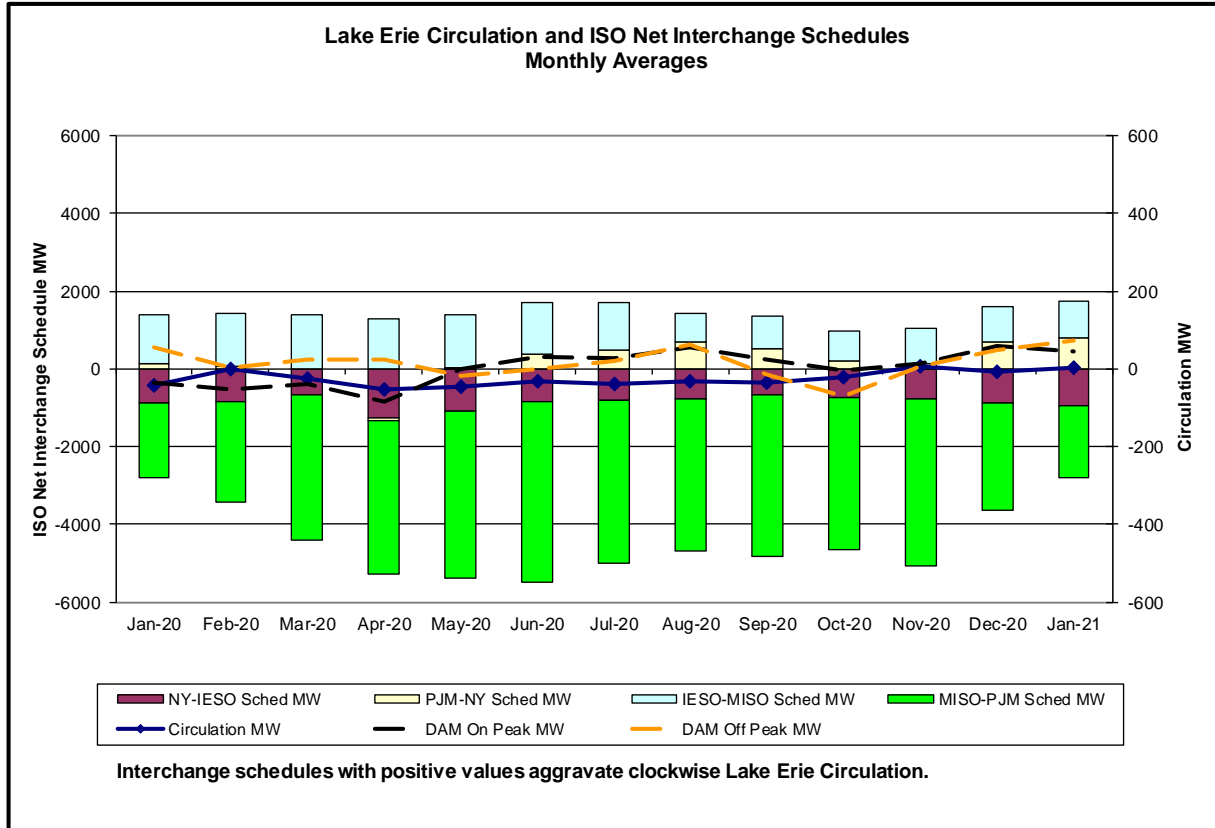
Behind the Meter Solar Forecast Performance Hour Ahead Percent Error



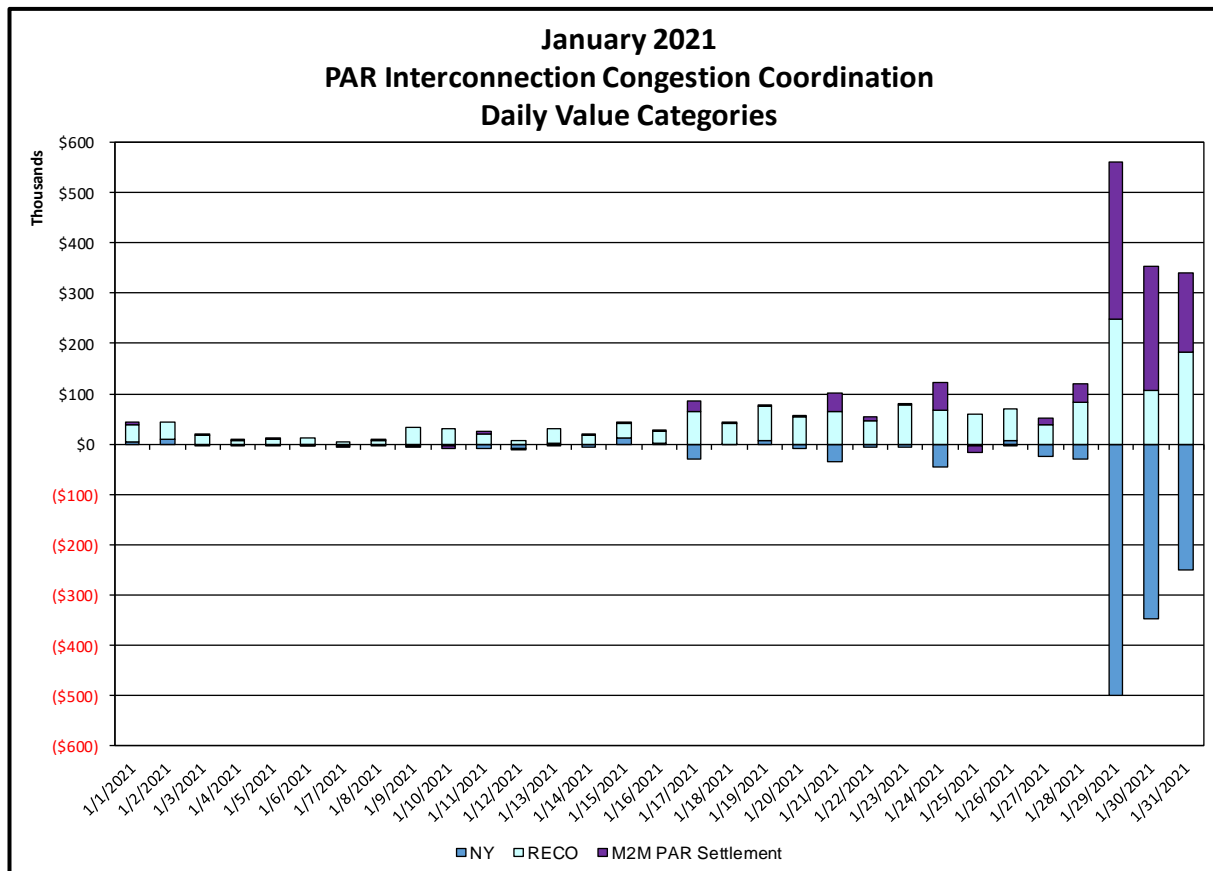
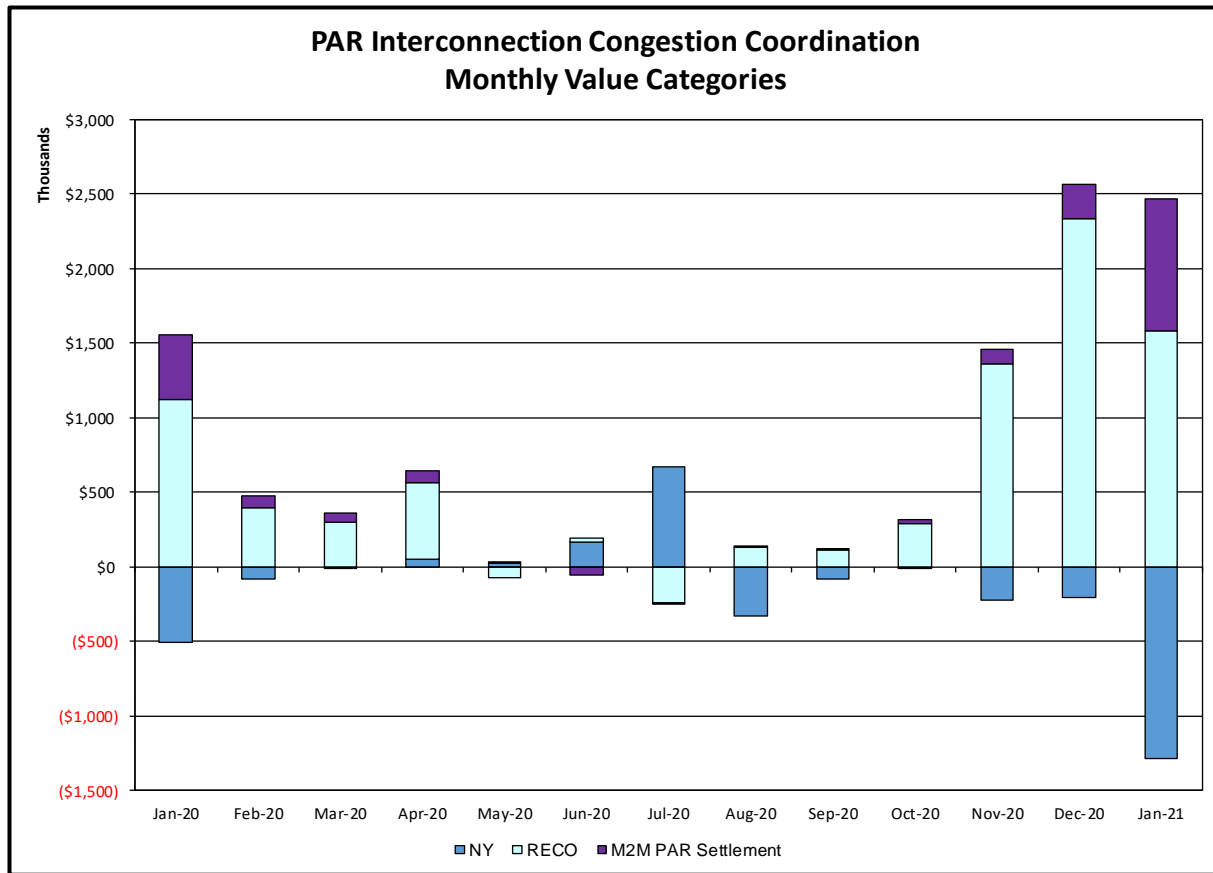
MAE Forecast - Avg |est. actual solar generation - Day Ahead forecast solar generation| / Solar Capacity
Bias - Avg (est. actual solar generation - Day Ahead forecast solar generation) / Solar Capacity





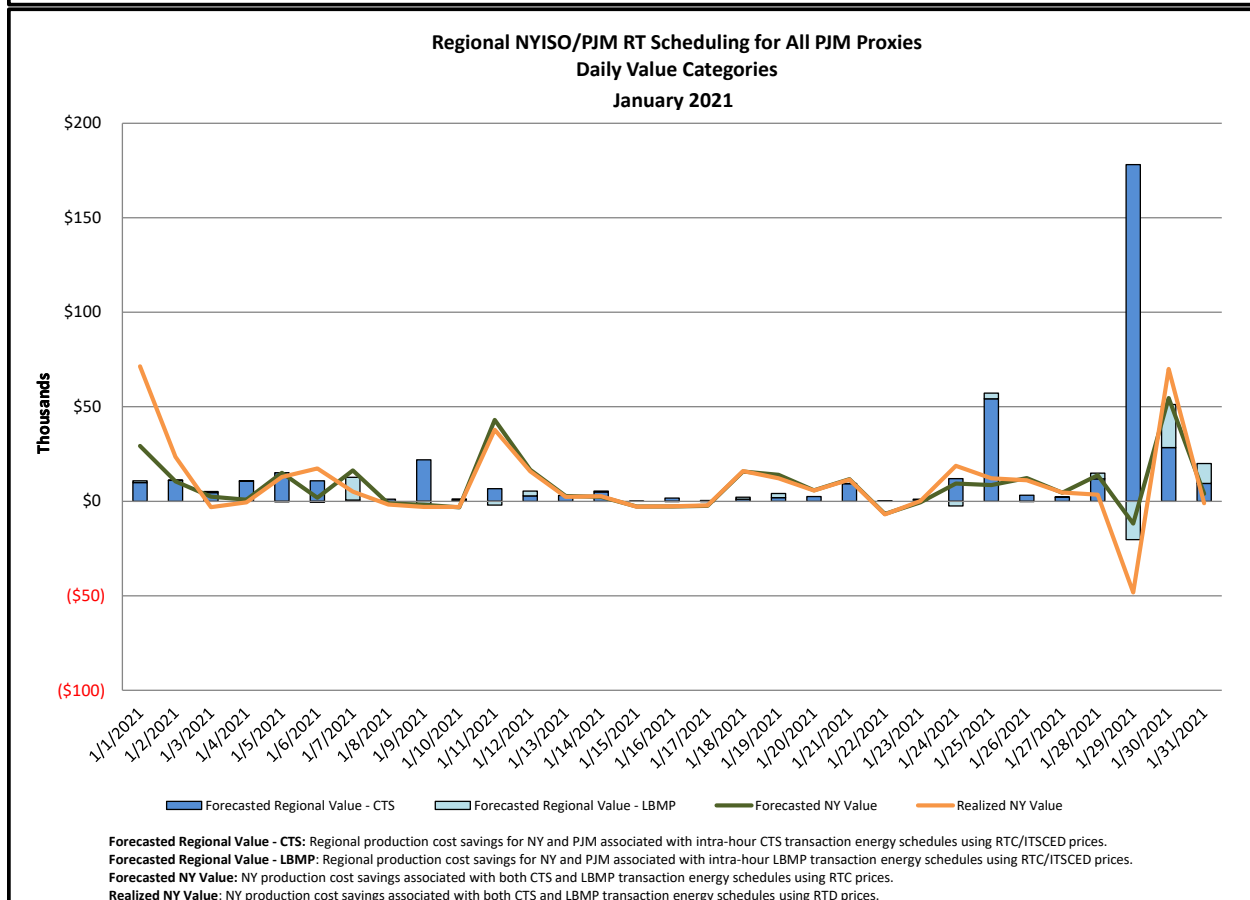
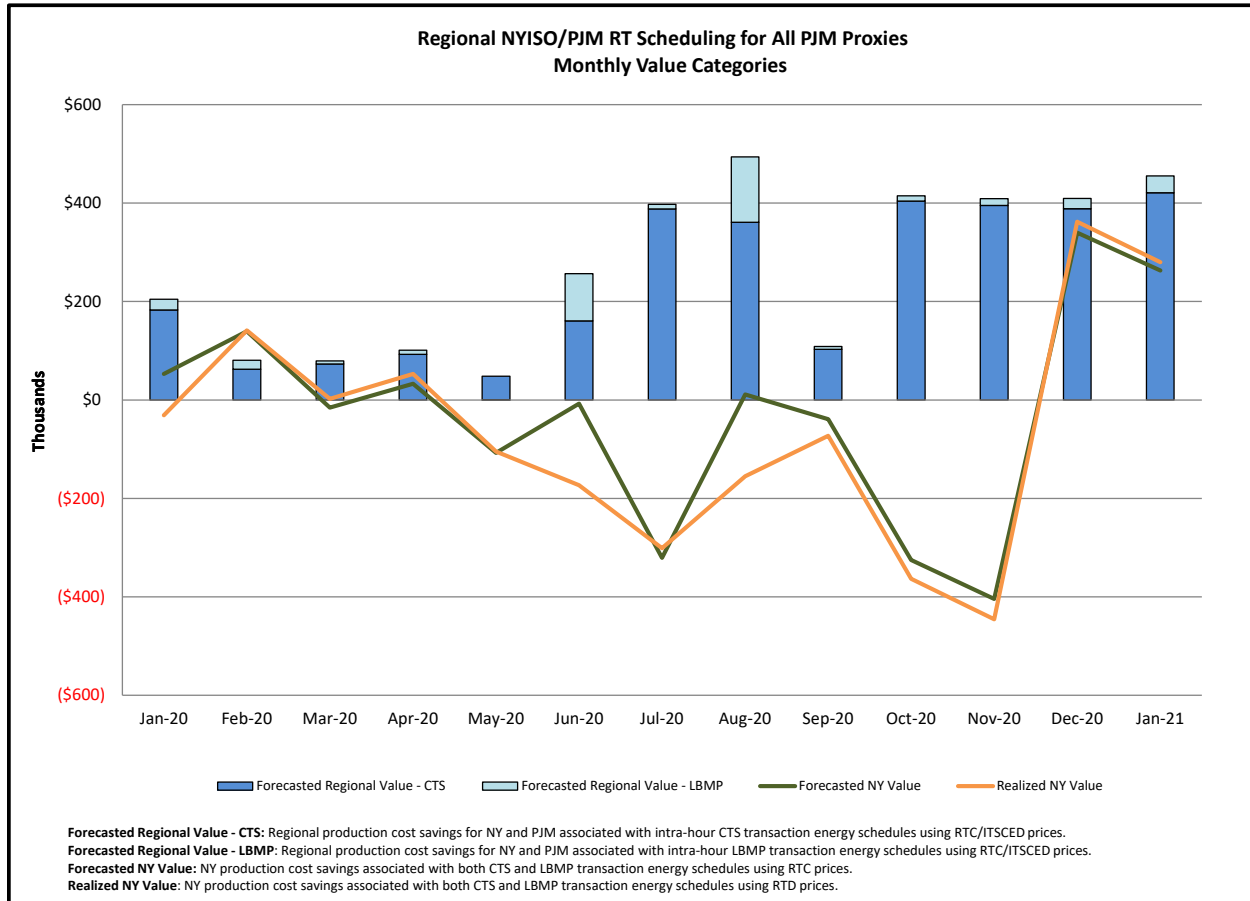


Broader Regional Market Performance Metrics

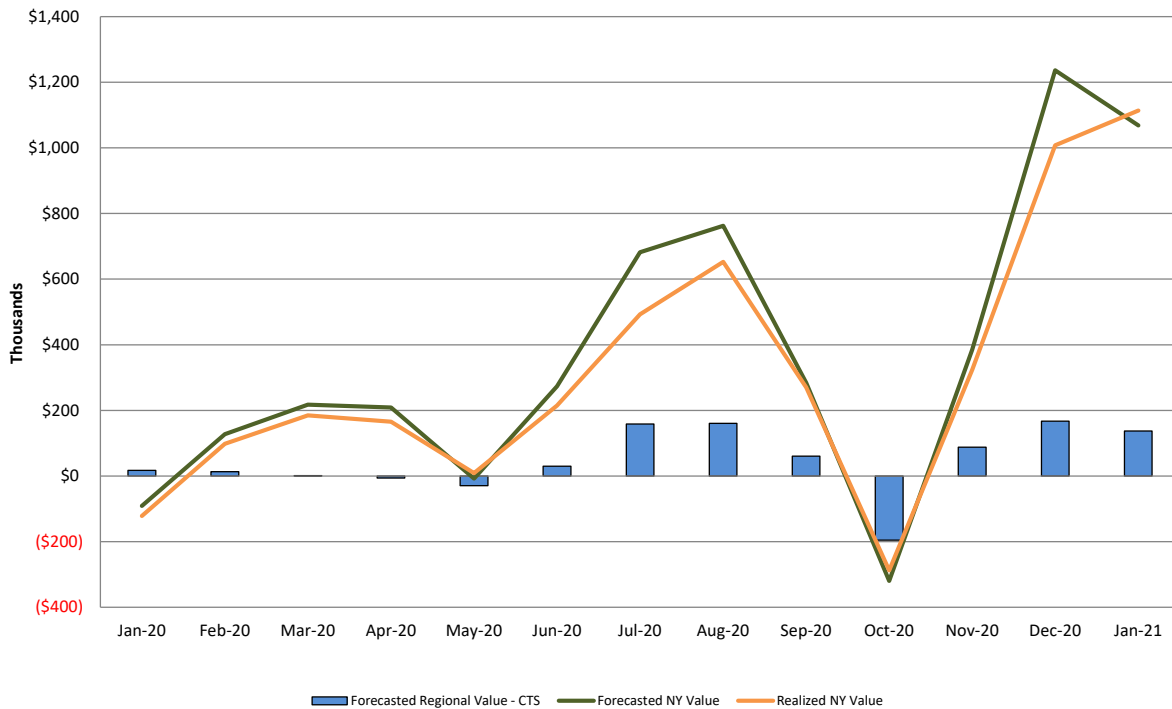


PAR Interconnection Congestion Coordination

<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.

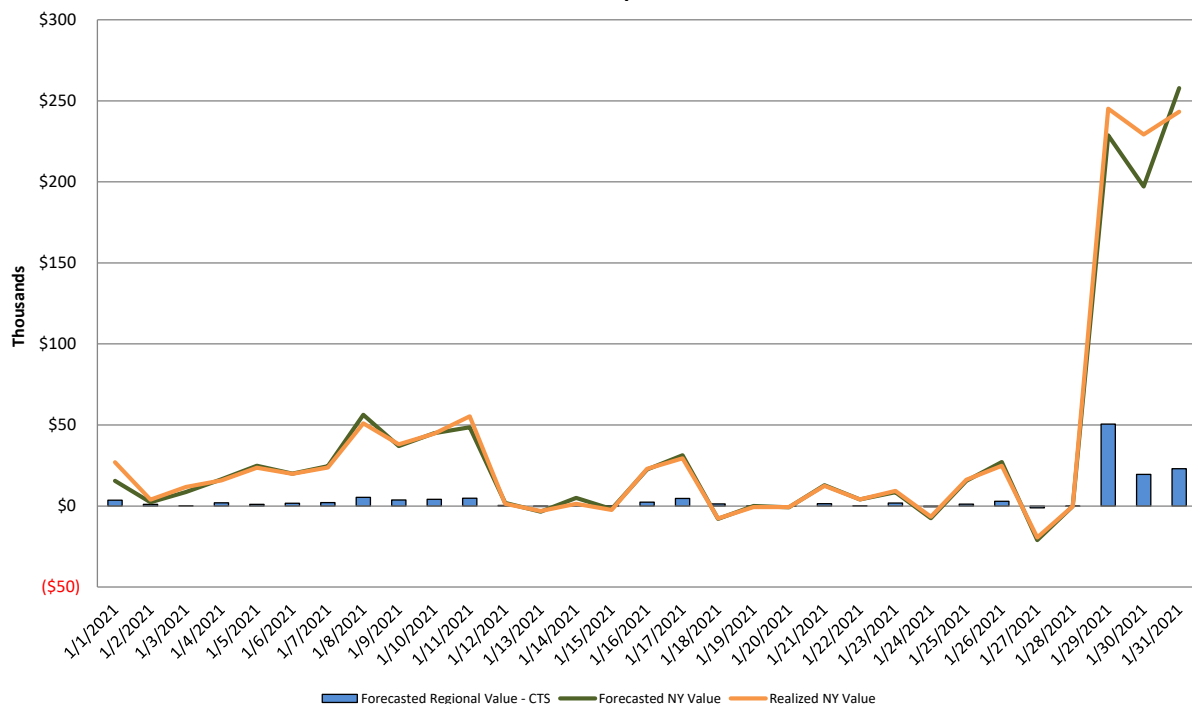


Regional NYISO/NE RT Scheduling for ISO-NE AC Monthly Value Categories



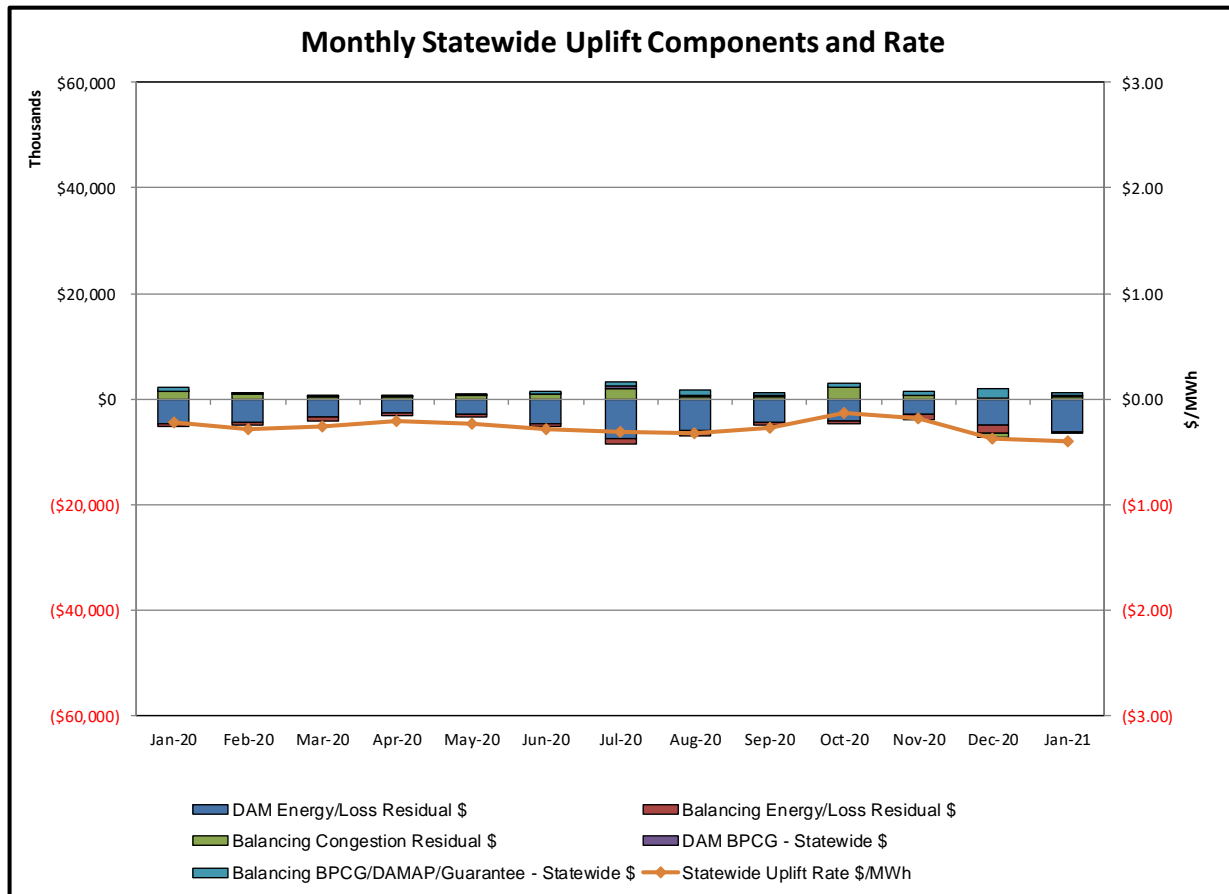
Forecasted Regional Value - CTS: Regional production cost savings for NY and NE associated with intra-hour CTS transaction energy schedules using RTC prices and NE forecasted prices.
Forecasted NY Value: NY production cost savings associated with CTS transaction energy schedules using RTC prices.
Realized NY Value: NY production cost savings associated with CTS transaction energy schedules using RTD prices.

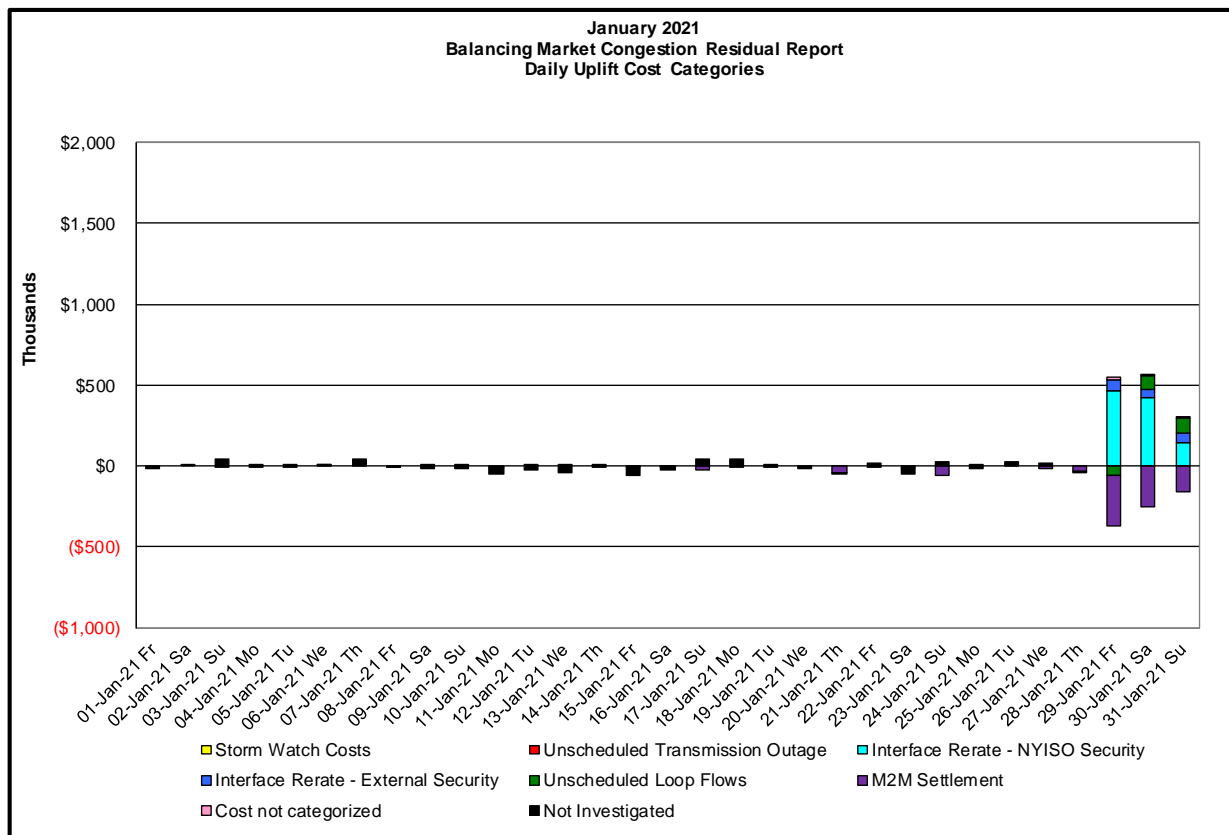
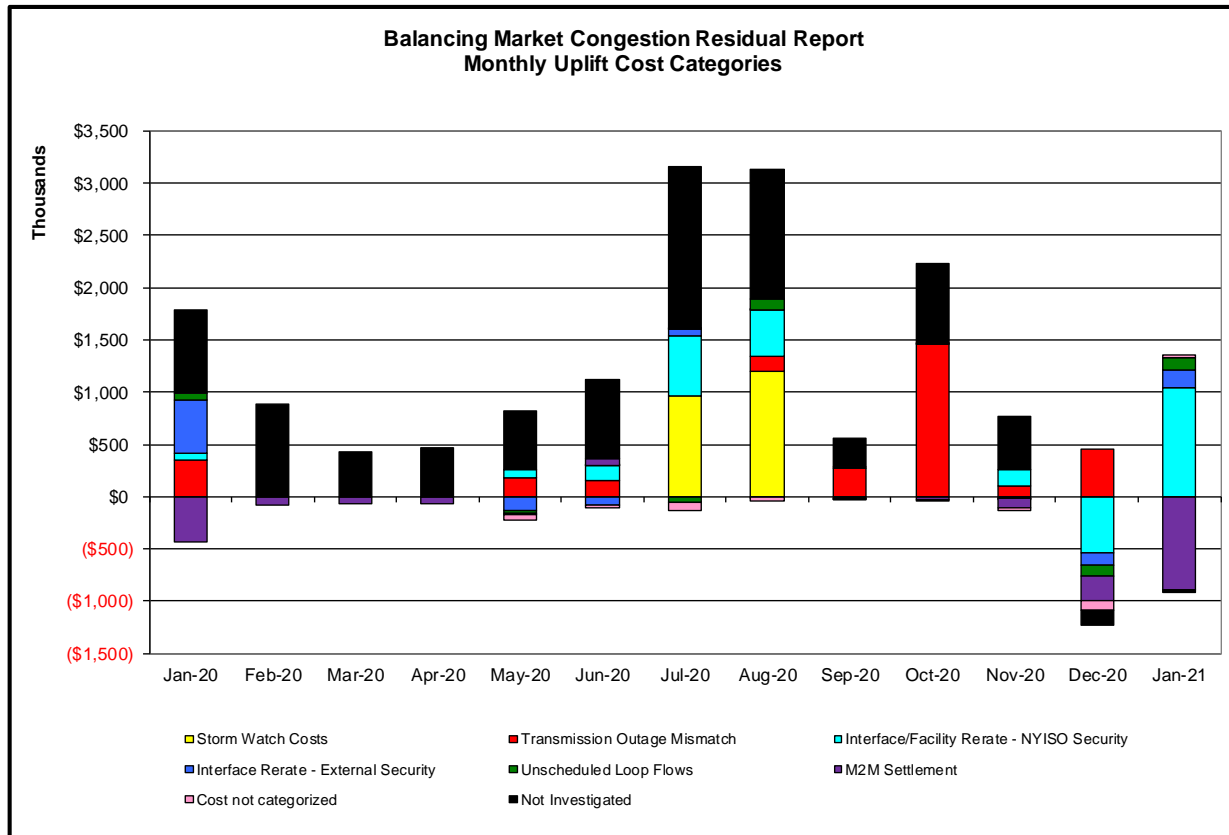
Regional NYISO/NE RT Scheduling for ISO-NE AC Daily Value Categories January 2021



Forecasted Regional Value - CTS: Regional production cost savings for NY and NE associated with intra-hour CTS transaction energy schedules using RTC prices and NE forecasted prices.
Forecasted NY Value: NY production cost savings associated with CTS transaction energy schedules using RTC prices.
Realized NY Value: NY production cost savings associated with CTS transaction energy schedules using RTD prices.

Market Performance Metrics

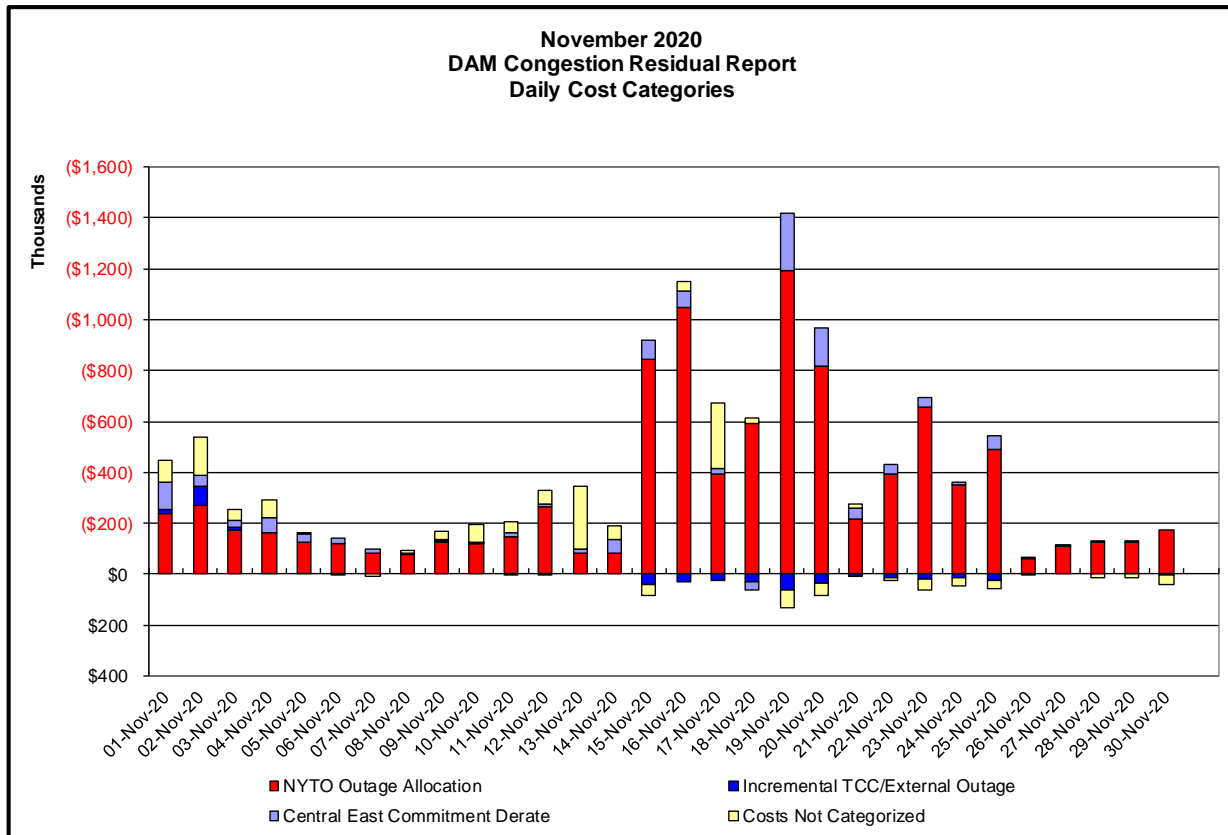
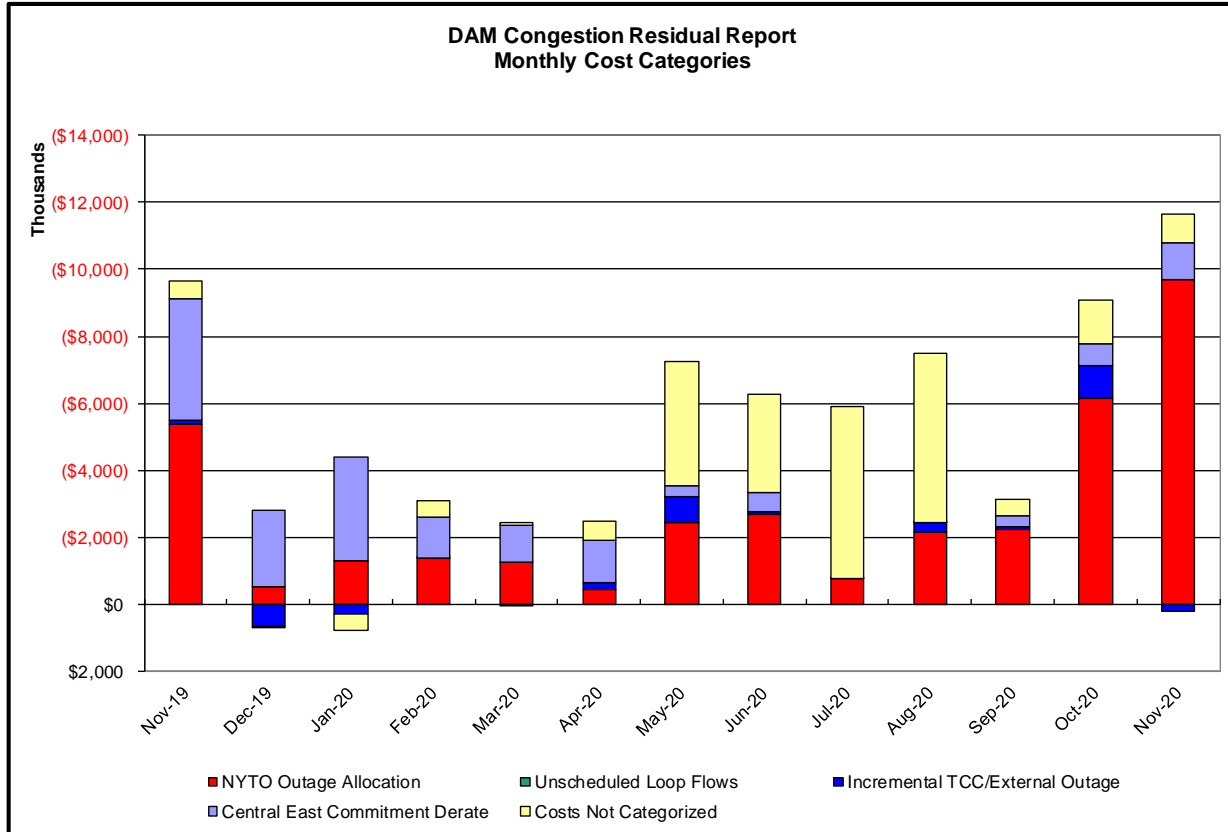




Day's investigated in January:29,30,31			
Event	Date (yyyymmdd)	Hours	Description
	1/29/2021	0-6,10,13-16,18-22	Derate Central East
	1/29/2021	13-16,18-22	Derate MottHaven-Rainey 345kV #Q11
	1/29/2021	11,12	Uprate FreshKills-WillowBrook 138kV #29211
	1/30/2021	5,19	NYCA DNI Ramp Limit
	1/30/2021	15	Derate Buchanan-Millwood 345kV (#Y93) for I/o SIN:BUCHANAN Y94 & TA5
	1/30/2021	0-11,15-17,19	Derate Central East
	1/31/2021	12,14,23	NYCA DNI Ramp Limit
	1/31/2021	8-14	Derate Central East
	1/31/2021	5,19-21,23	Uprate Central East
	1/29/2021	16,21,22	NE_AC DNI Ramp Limit
	1/29/2021	10	PJM_AC-NY Scheduling Limit
	1/30/2021	0,15,16,19,22	NE_AC DNI Ramp Limit
	1/31/2021	10,11,13,19	NE_AC DNI Ramp Limit
	1/29/2021	9	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West
	1/29/2021	9,11,12	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	1/30/2021	1,3,19,23	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	1/30/2021	19	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West
	1/31/2021	0,10-13,19-21	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	1/31/2021	19,20	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West

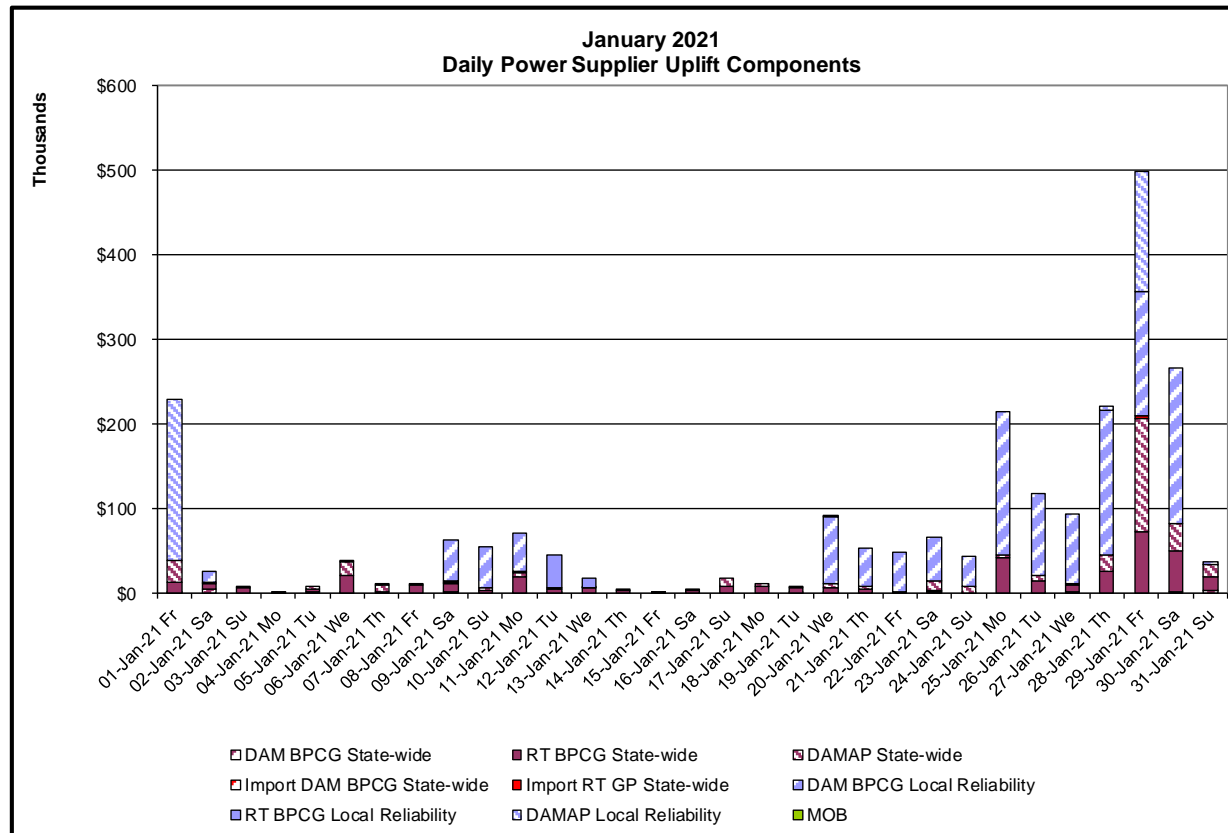
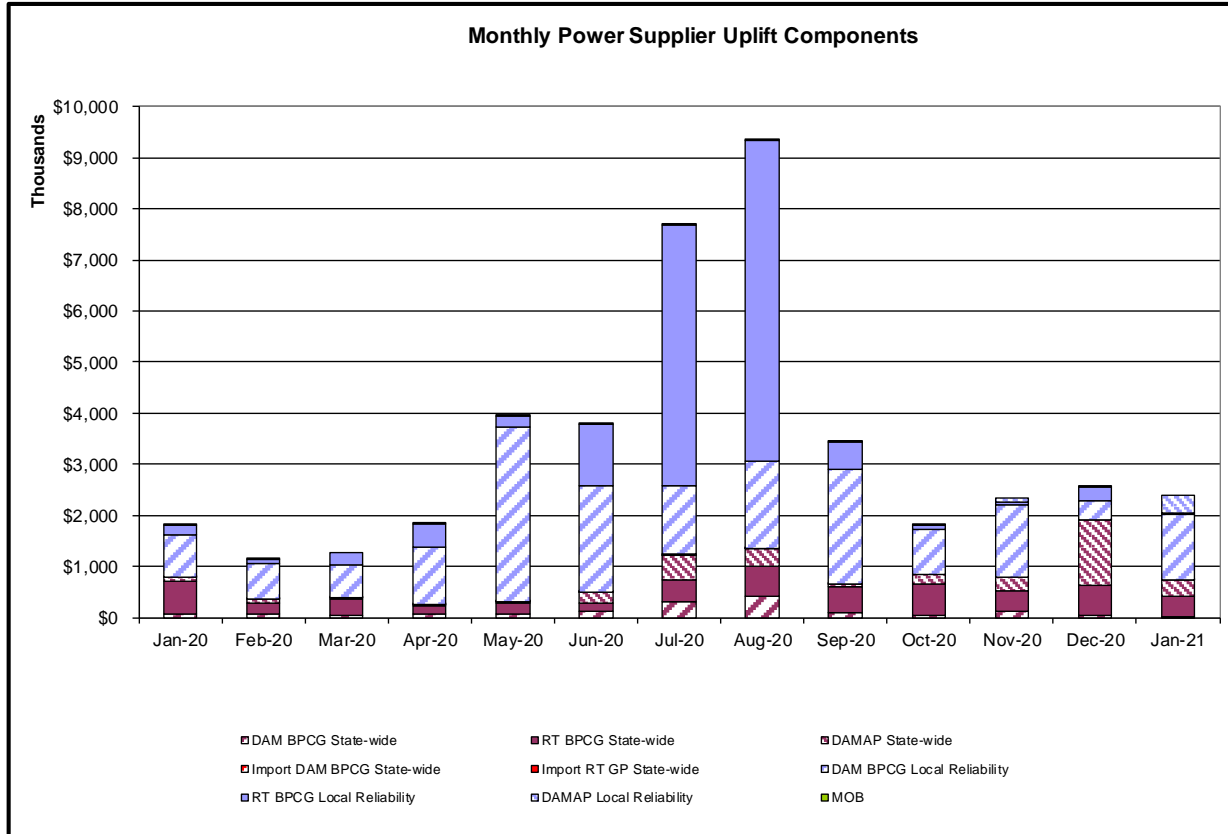
Real-Time Balancing Market Congestion Residual (Uplift Cost) Categories

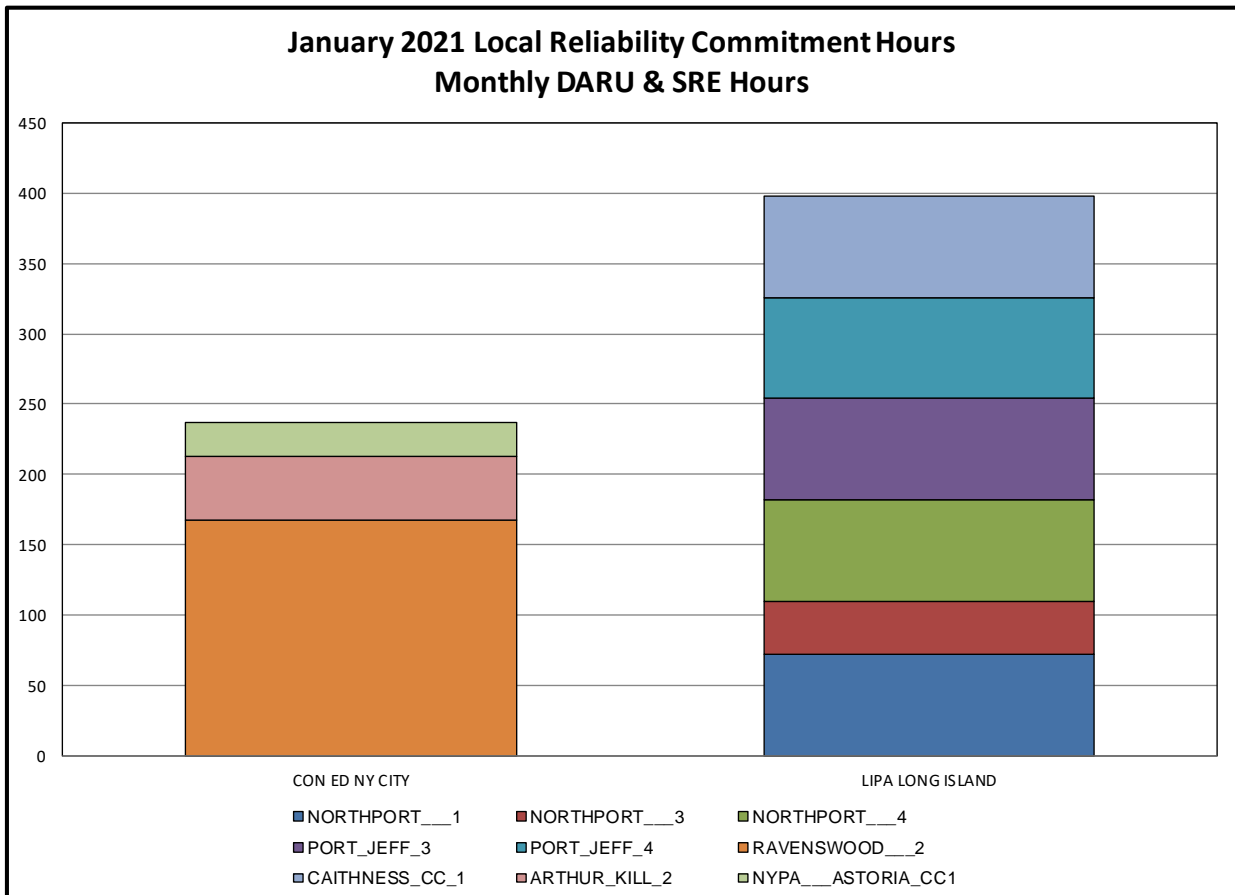
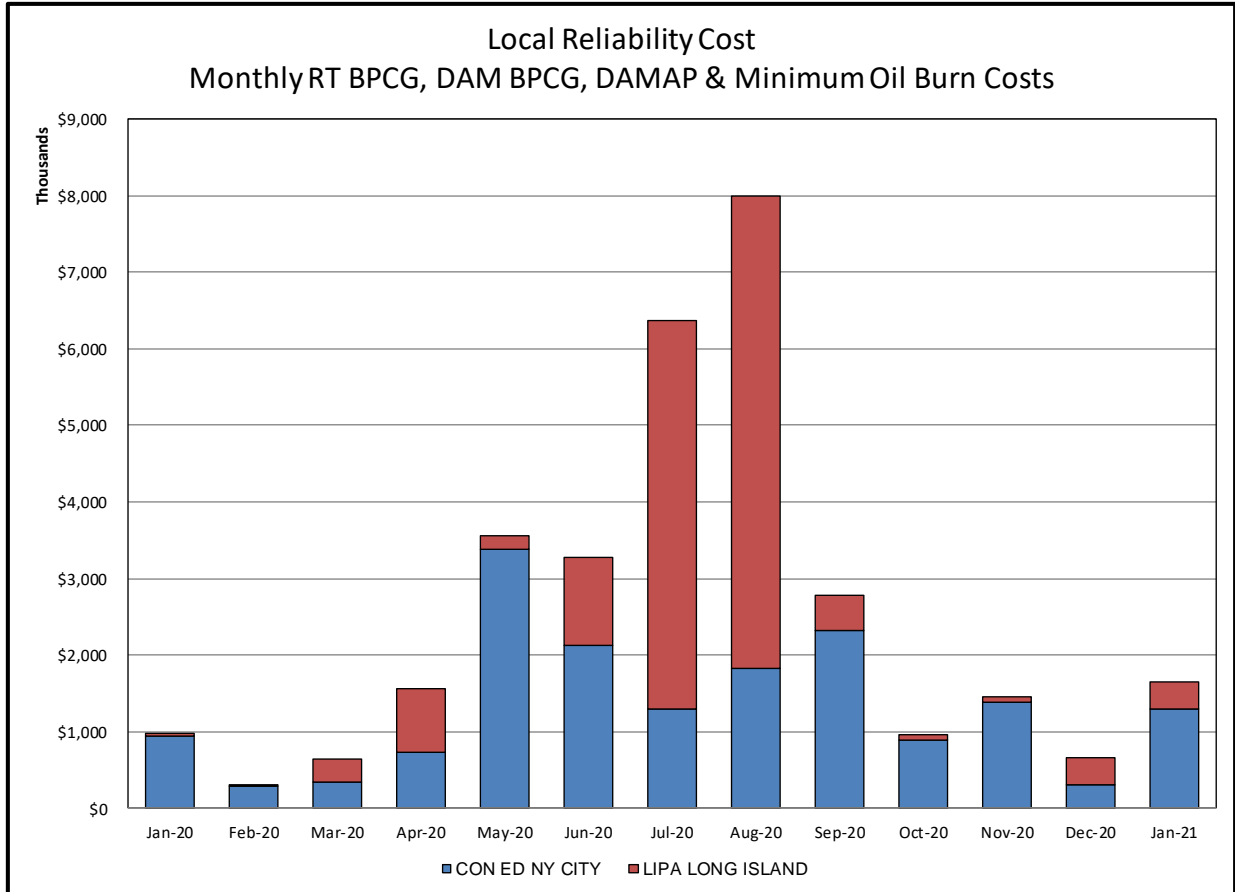
<u>Category</u>	<u>Cost Assignment</u>	<u>Events Types</u>	<u>Event Examples</u>
Storm Watch	Zone J	Thunderstorm Alert (TSA)	TSA Activations
Transmission Outage Mismatch	Market-wide	Changes in DAM to RTM transfers related to transmission outage mismatch	Forced Line Outage, Unit AVR Outages Early Line 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	
<u>Monthly Balancing Market Congestion Report Assumptions/Notes</u>			
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			

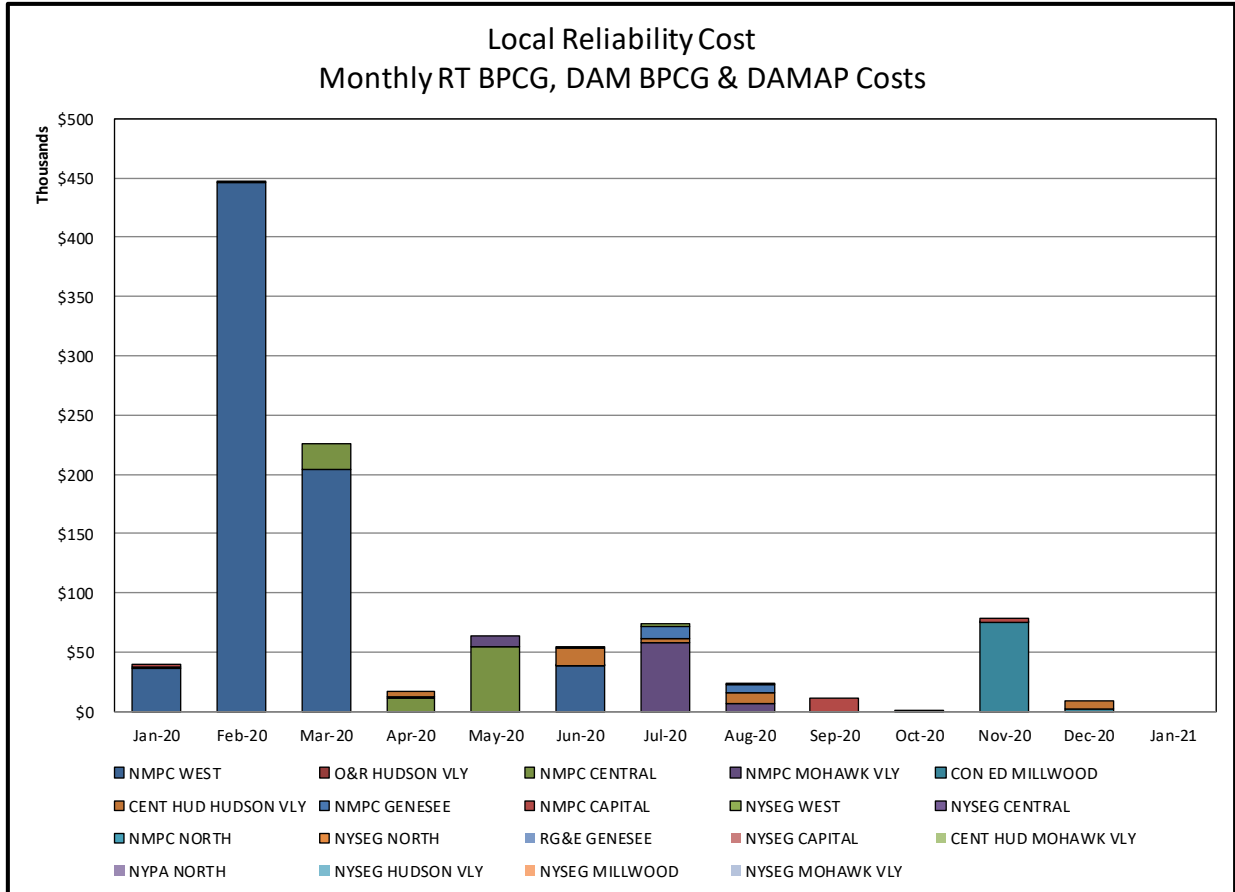


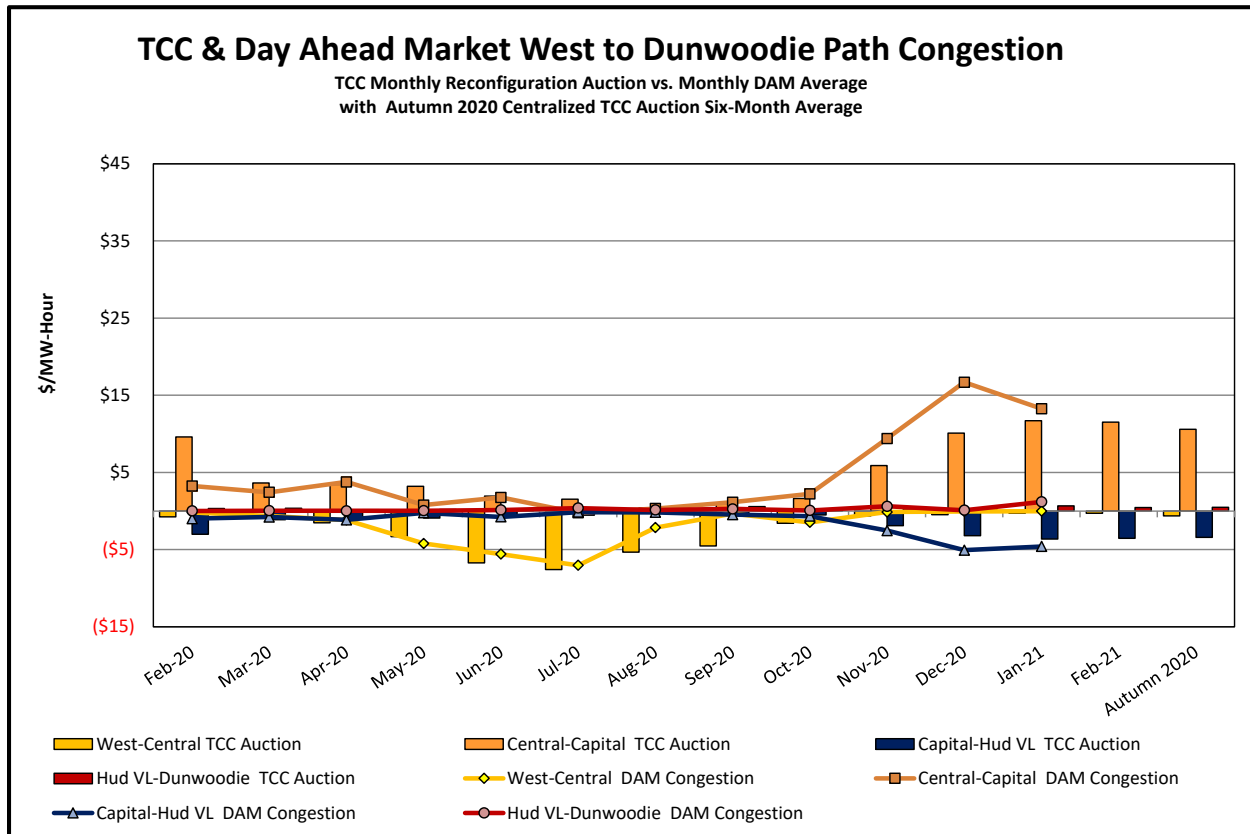
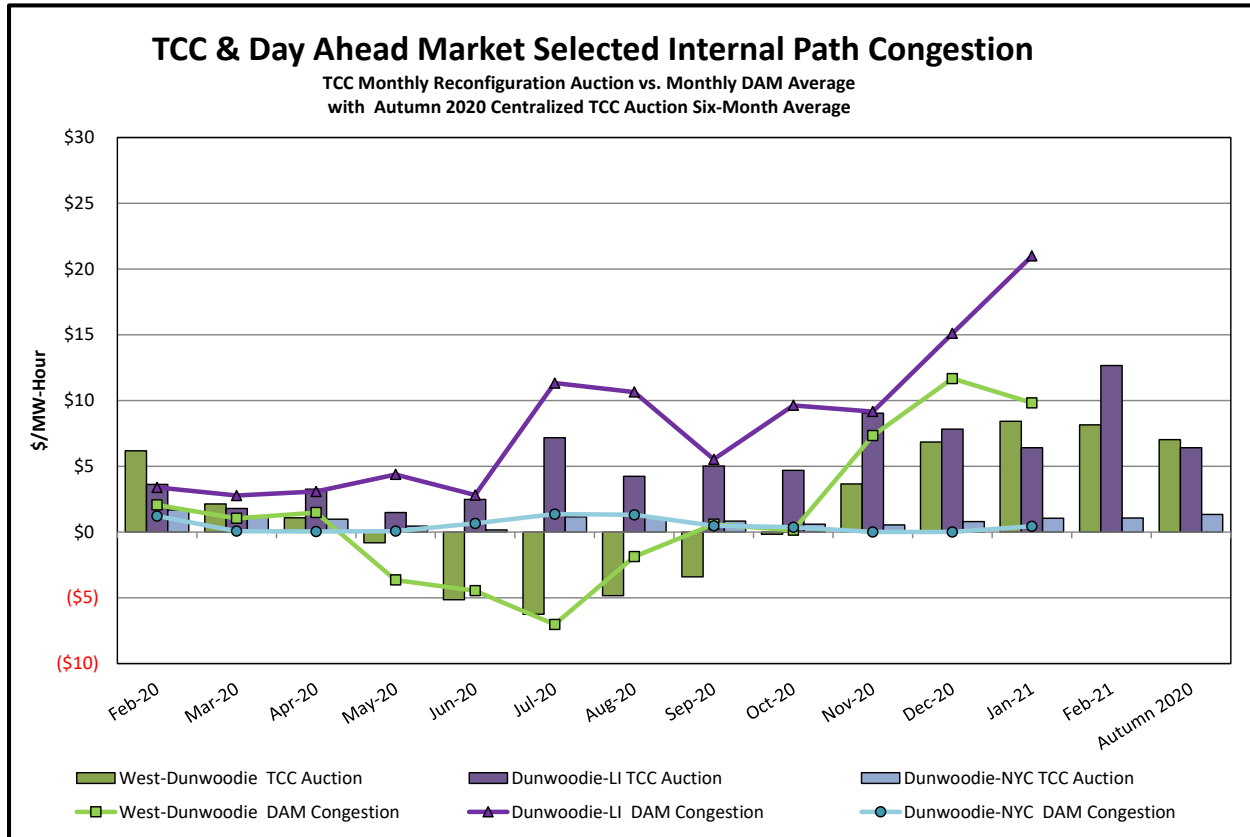
Day-Ahead Market Congestion Residual Categories

<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.	



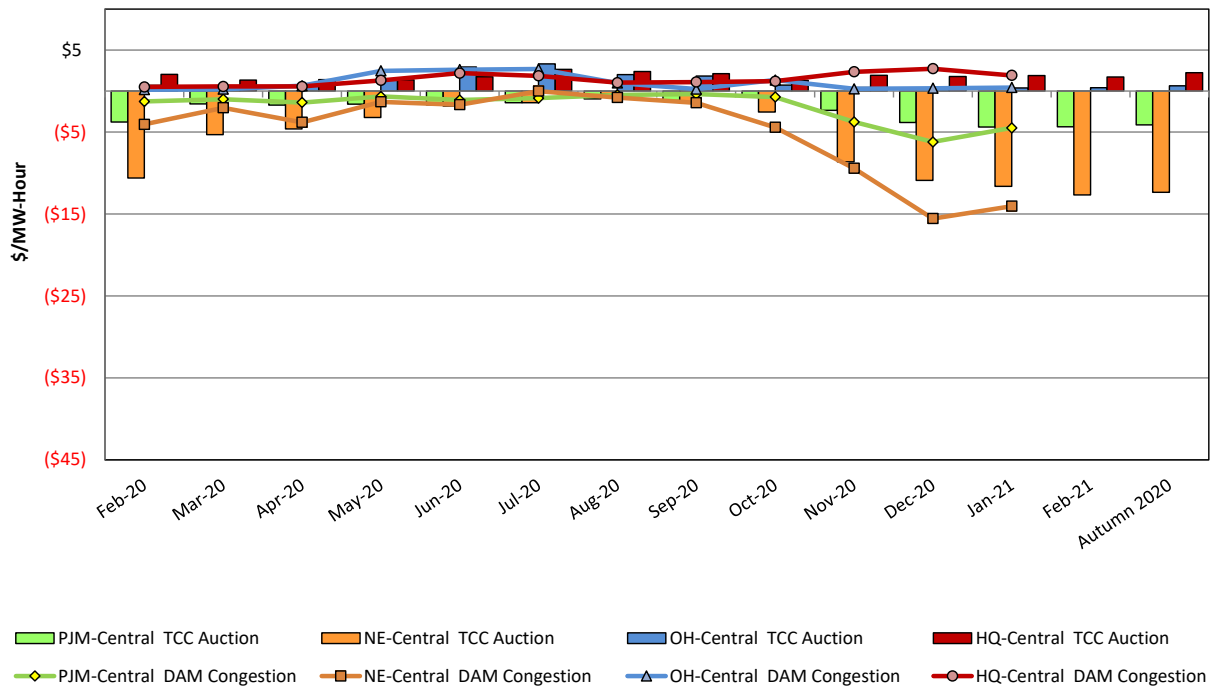


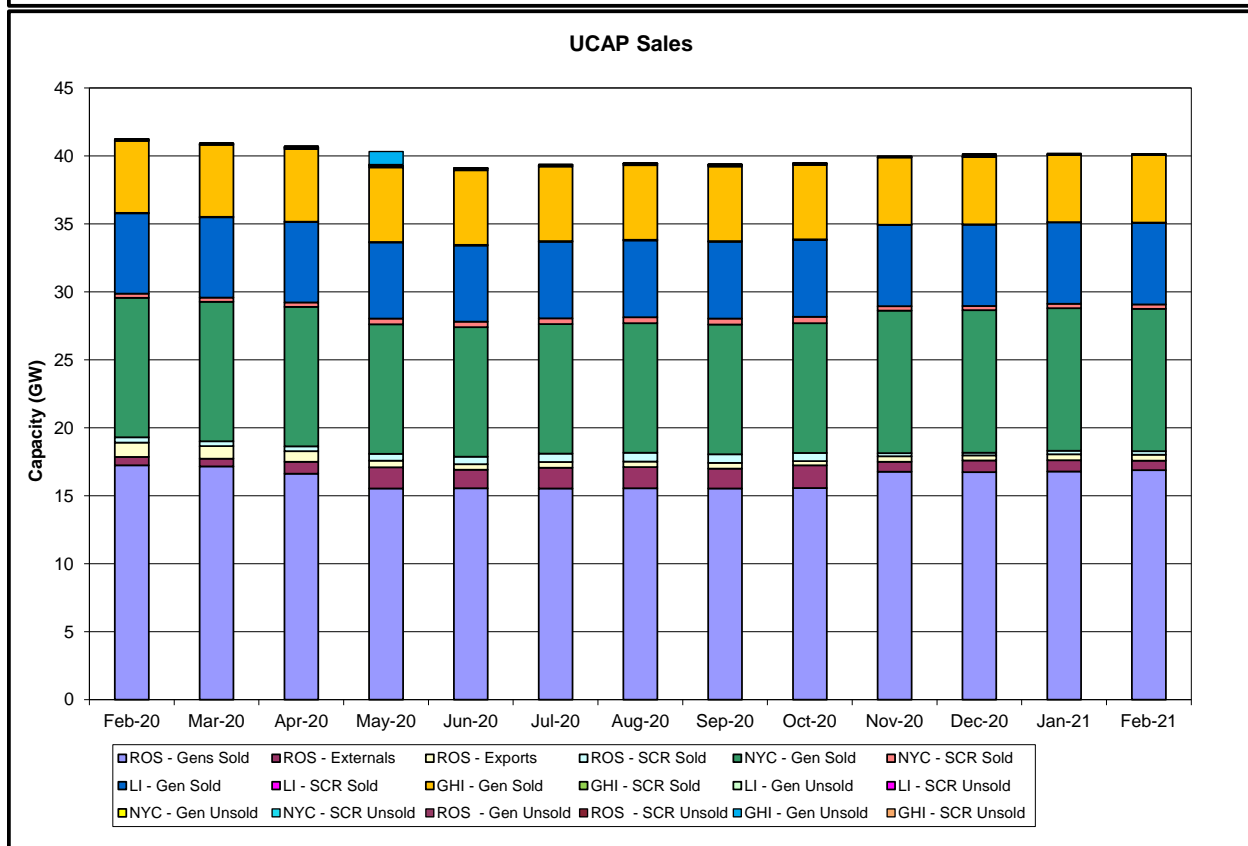
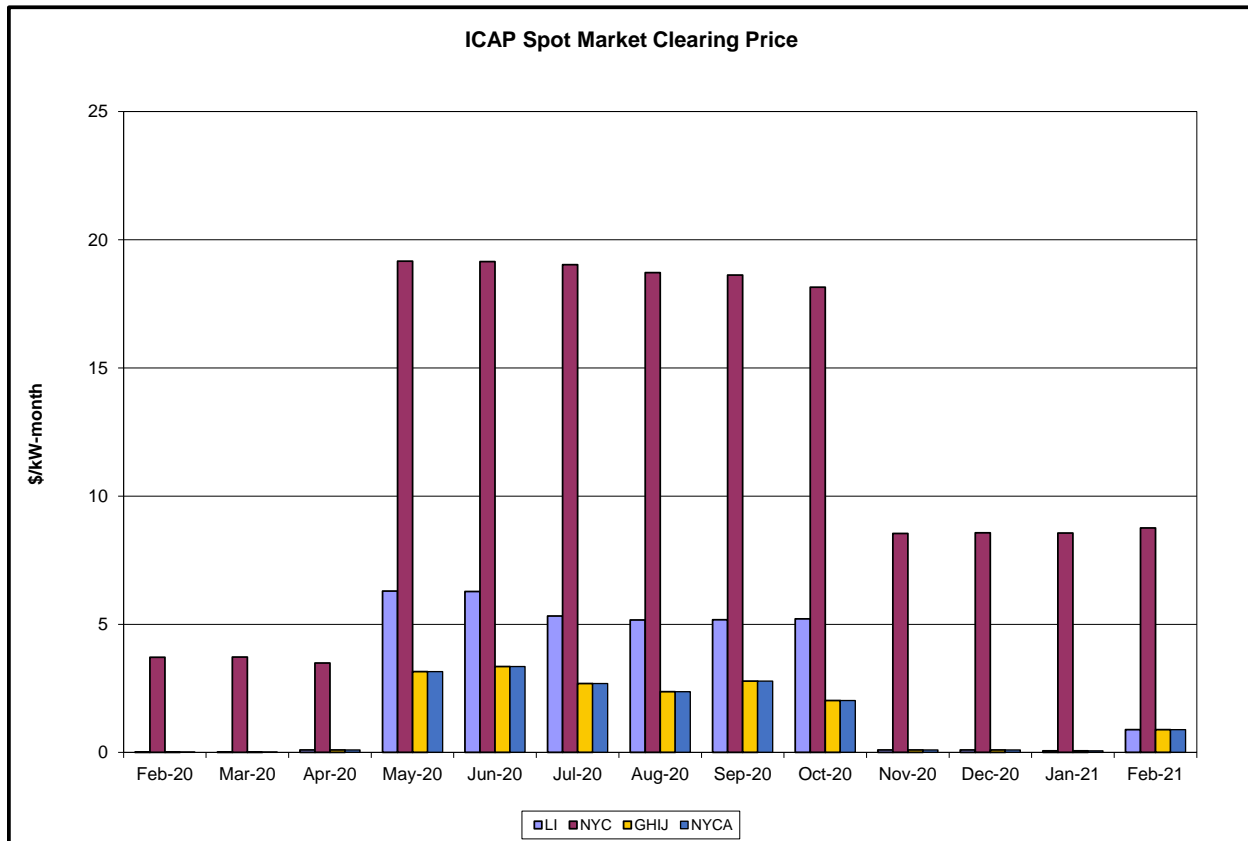




TCC & Day Ahead Market Selected External Path Congestion

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



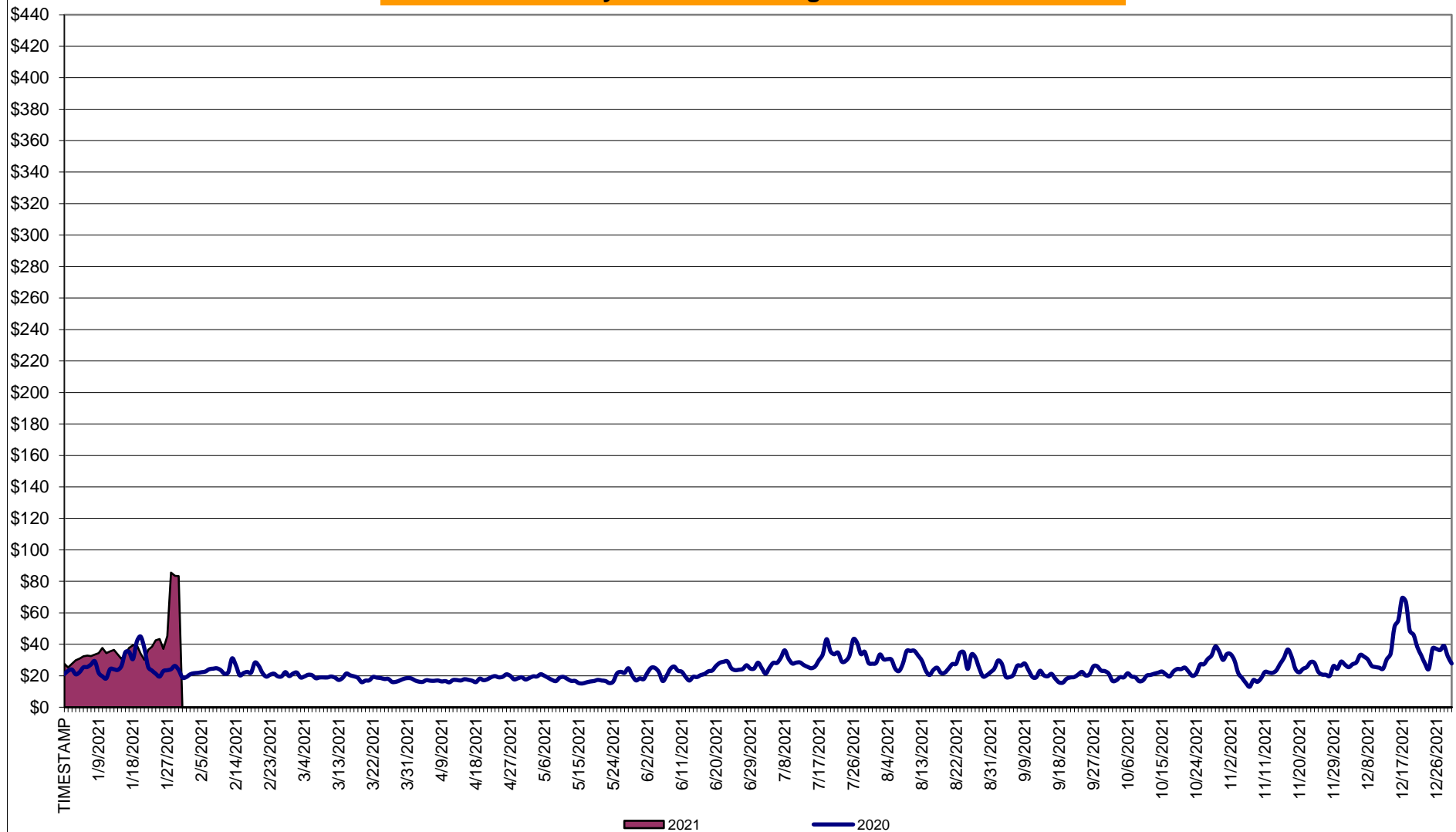


Market Performance Highlights

January 2021

- LBMP for January is \$37.83/MWh; higher than \$33.70/MWh in December 2020 and \$24.77/MWh in January 2020.
 - Day Ahead Load Weighted LBMPs and Real Time Load Weighted LBMPs are higher compared to December.
- January 2021 average year-to-date monthly cost of \$40.61/MWh is a 49% increase from \$27.29/MWh in January 2020.
- Average daily sendout is 427 GWh/day in January; higher than 417 GWh/day in December 2020 and 423 GWh/day in January 2020.
- Natural gas prices and distillate prices are higher compared to the previous month.
 - Natural Gas (Transco Z6 NY) was \$2.94/MMBtu, up from \$2.78/MMBtu in December.
 - Natural gas prices are up 34.1% year-over-year.
 - Jet Kerosene Gulf Coast was \$10.45/MMBtu, up from \$9.81/MMBtu in December.
 - Ultra Low Sulfur No.2 Diesel NY Harbor was \$11.17/MMBtu, up from \$10.33/MMBtu in December.
 - Distillate prices are down 18.6% year-over-year.
- Uplift per MWh is higher compared to the previous month.
 - Uplift (not including NYISO cost of operations) is (\$0.31)/MWh; higher than (\$0.33)/MWh in December.
 - Local Reliability Share is \$0.09/MWh, higher than \$0.05/MWh in December.
 - Statewide Share is (\$0.40)/MWh, lower than (\$0.38)/MWh in December.
 - TSA \$ per NYC MWh is \$0.00/MWh.
 - Total uplift costs (Schedule 1 components including NYISO Cost of Operations) are higher than December.

Daily NYISO Average Cost/MWh (Energy & Ancillary Services)*
2020 Annual Average \$25.62/MWh
January 2020 YTD Average \$27.29/MWh
January 2021 YTD Average \$40.69/MWh



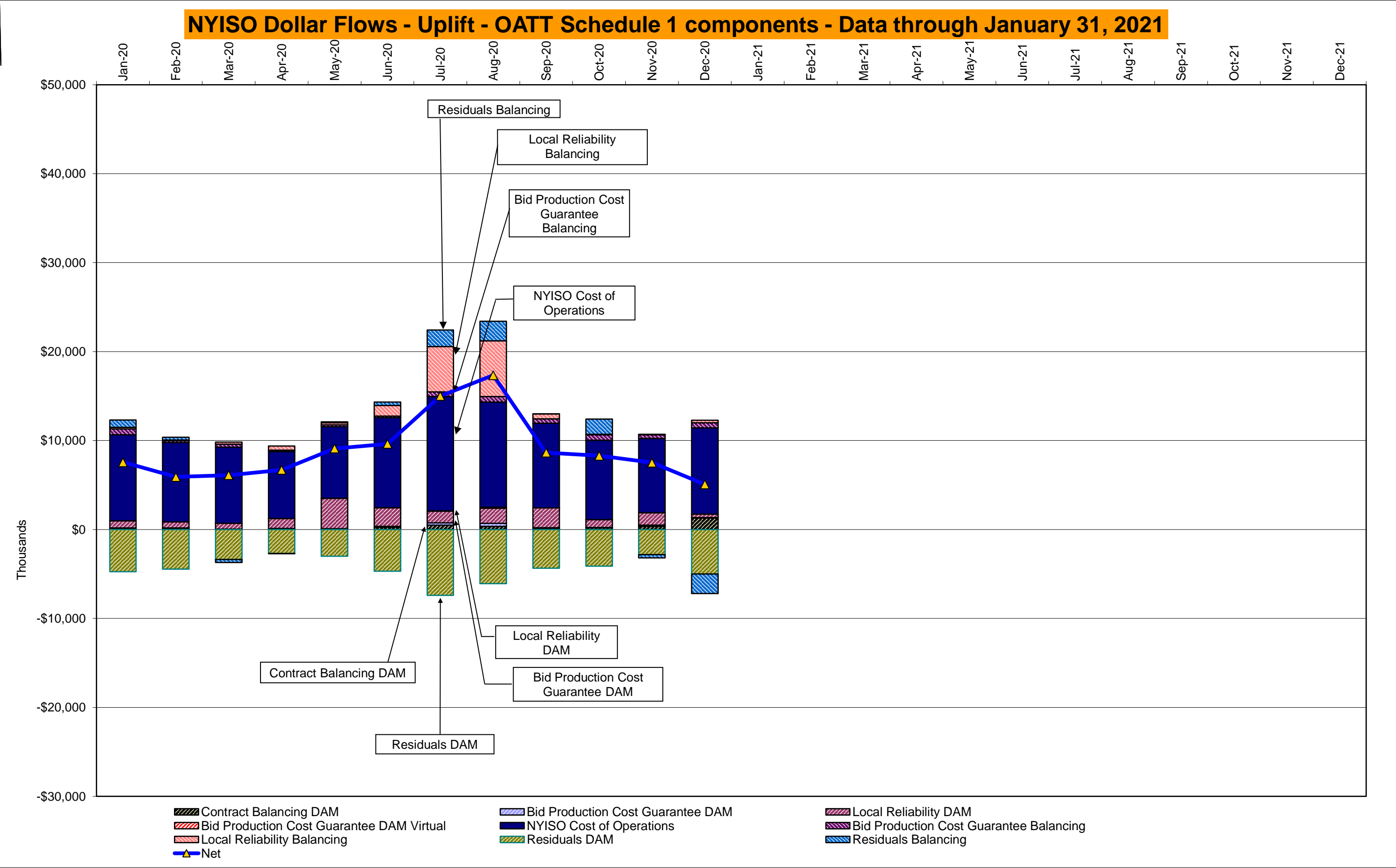
* Excludes ICAP payments.

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											
NTAC	1.35											
Reserve	0.49											
Regulation	0.07											
NYISO Cost of Operations	0.74											
FERC Fee Recovery	0.08											
Uplift	(0.31)											
Uplift: Local Reliability Share	0.09											
Uplift: Statewide Share	(0.40)											
Voltage Support and Black Start	0.43											
Avg Monthly Cost	40.61											
 Avg YTD Cost	40.61											
 TSA \$ per NYC MWh	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: 2/9/2021 4:37 PM

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



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											
DAM LSE Internal LBMP Energy Sales	60%											
DAM External TC LBMP Energy Sales	5%											
DAM Bilateral - Internal Bilaterals	31%											
DAM Bilateral - Import/Non-LBMP Market Bilaterals	1%											
DAM Bilateral - Export/Non-LBMP Market Bilaterals	2%											
DAM Bilateral - Wheel Through Bilaterals	2%											
<u>Balancing Energy Market MWh</u>	29,179											
Balancing Energy LSE Internal LBMP Energy Sales	-215%											
Balancing Energy External TC LBMP Energy Sales	374%											
Balancing Energy Bilateral - Internal Bilaterals	49%											
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	0%											
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	50%											
Balancing Energy Bilateral - Wheel Through Bilaterals	-158%											
<u>Transactions Summary</u>												
LBMP	65%											
Internal Bilaterals	31%											
Import Bilaterals	1%											
Export Bilaterals	2%											
Wheels Through	2%											
<u>Market Share of Total Load</u>												
Day Ahead Market	99.8%											
Balancing Energy +	0.2%											
Total MWH	14,138,027											
Average Daily Energy Sendout/Month GWh	427											

<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											
Standard Deviation	\$14.58											
Load Weighted Price **	\$35.31											
<u>RTC LBMP</u>												
Price *	\$34.32											
Standard Deviation	\$20.93											
Load Weighted Price **	\$35.40											
<u>REAL TIME LBMP</u>												
Price *	\$34.59											
Standard Deviation	\$29.47											
Load Weighted Price **	\$35.89											
Average Daily Energy Sendout/Month GWh	427											

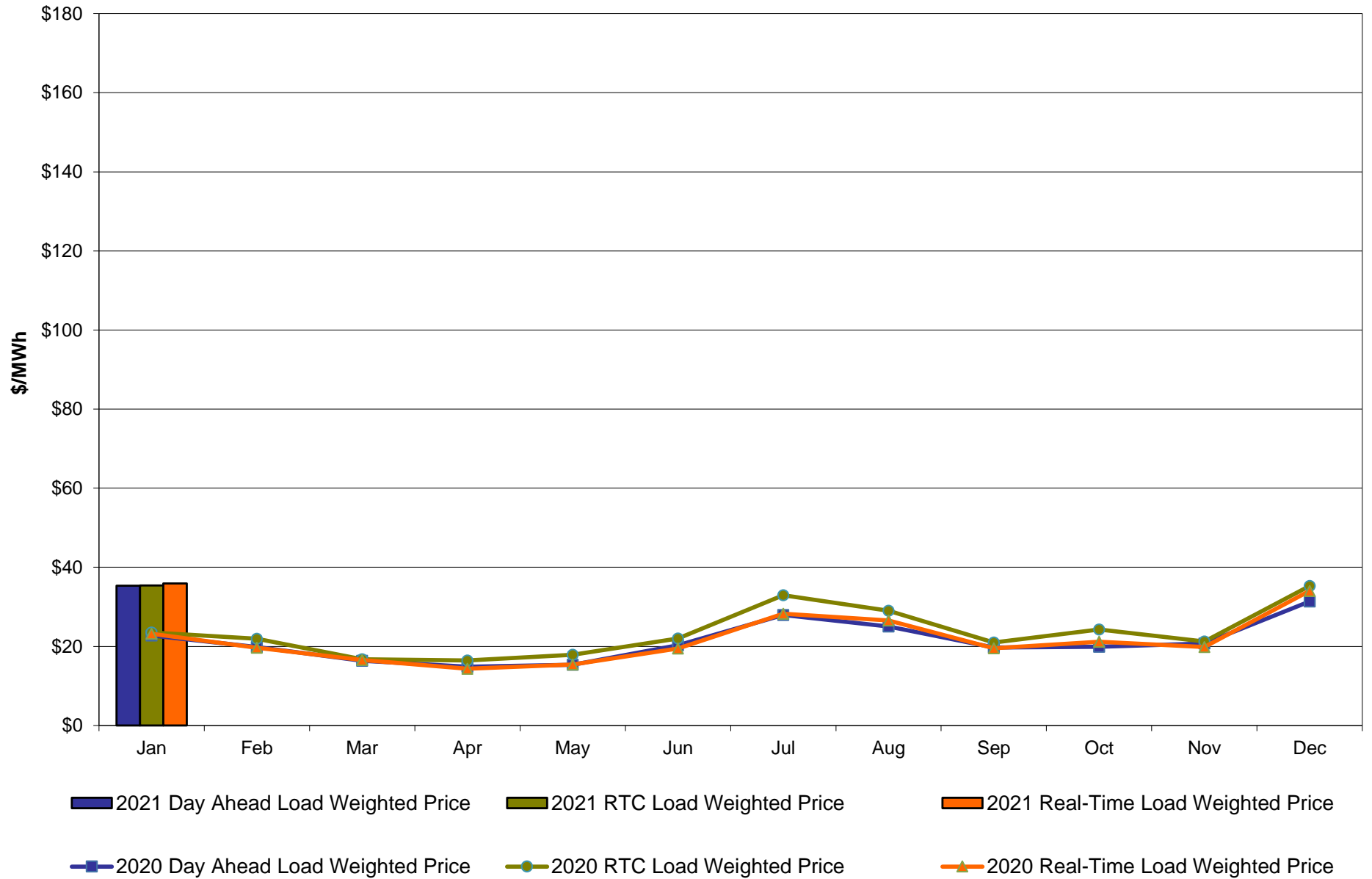
NYISO Markets 2020 Energy Statistics

	<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

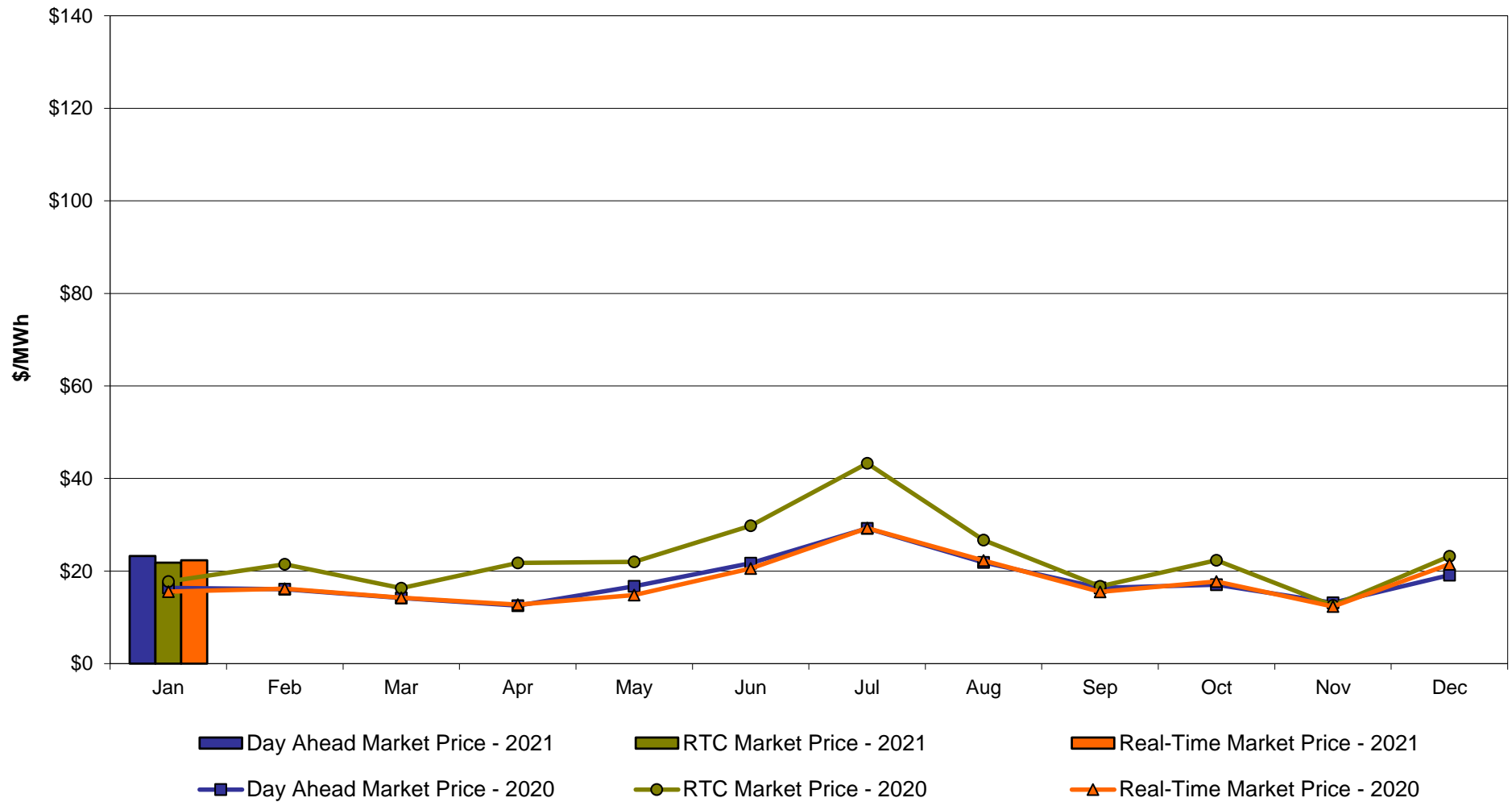


January 2021 Zonal LBMP Statistics for NYISO (\$/MWh)

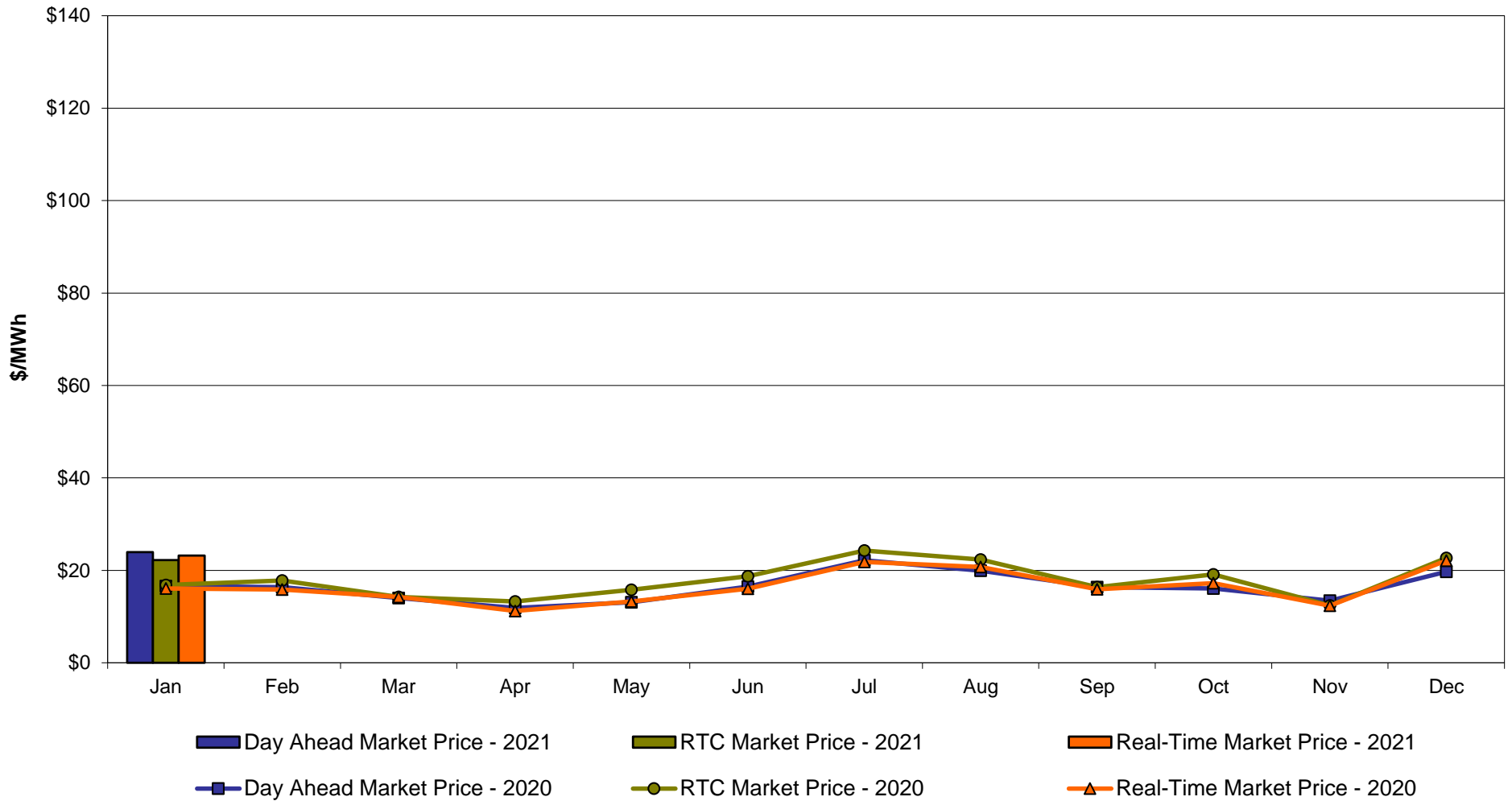
	<u>WEST</u> <u>Zone A</u>	<u>GENESEE</u> <u>Zone B</u>	<u>NORTH</u> <u>Zone D</u>	<u>CENTRAL</u> <u>Zone C</u>	<u>MOHAWK</u> <u>VALLEY</u> <u>Zone E</u>	<u>CAPITAL</u> <u>Zone F</u>	<u>HUDSON</u> <u>VALLEY</u> <u>Zone G</u>	<u>MILLWOOD</u> <u>Zone H</u>	<u>DUNWOODIE</u> <u>Zone I</u>	<u>NEW YORK</u> <u>CITY</u> <u>Zone J</u>	<u>LONG</u> <u>ISLAND</u> <u>Zone K</u>
<u>DAY AHEAD LBMP</u>											
Unweighted Price *	23.23	22.90	21.31	23.96	24.67	38.70	34.33	35.59	35.77	36.35	57.10
Standard Deviation	7.83	7.98	8.16	8.40	8.73	19.47	14.10	16.99	17.63	18.60	24.45
<u>RTC LBMP</u>											
Unweighted Price *	21.82	21.19	19.39	22.25	23.24	40.04	34.92	35.53	35.45	36.60	59.25
Standard Deviation	12.69	13.18	16.71	12.74	16.78	28.67	21.13	21.80	21.67	25.09	61.91
<u>REAL TIME LBMP</u>											
Unweighted Price *	22.36	22.12	20.40	23.22	24.24	41.38	36.22	36.91	36.85	38.20	54.19
Standard Deviation	21.85	23.13	24.43	23.74	25.17	37.46	31.20	31.91	31.89	35.95	44.64
	<u>ONTARIO</u> <u>IESO</u> <u>Zone O</u>	<u>HYDRO</u> <u>QUEBEC</u> <u>(Wheel)</u> <u>Zone M</u>	<u>HYDRO</u> <u>QUEBEC</u> <u>(Import/Export)</u> <u>Zone M</u>	<u>PJM</u> <u>Zone P</u>	<u>NEW</u> <u>ENGLAND</u> <u>Zone N</u>	<u>CROSS</u> <u>SOUND</u> <u>CABLE</u> <u>Controllable</u> <u>Line</u>	<u>NORTHPORT-</u> <u>NORWALK</u> <u>Controllable</u> <u>Line</u>	<u>NEPTUNE</u> <u>Controllable</u> <u>Line</u>	<u>LINDEN VFT</u> <u>Controllable</u> <u>Line</u>	<u>HUDSON</u> <u>Controllable</u> <u>Line</u>	<u>Dennison</u> <u>Controllable</u> <u>Line</u>
<u>DAY AHEAD LBMP</u>											
Unweighted Price *	22.02	21.22	21.22	22.02	39.51	28.95	57.02	46.24	20.83	35.79	56.90
Standard Deviation	6.98	7.99	7.99	6.98	17.67	9.91	24.49	19.05	8.00	17.72	24.43
<u>RTC LBMP</u>											
Unweighted Price *	19.71	18.10	18.10	19.71	41.84	28.75	59.01	57.04	20.67	35.74	59.11
Standard Deviation	10.06	12.80	12.80	10.06	25.50	14.64	61.82	61.15	42.76	23.56	61.87
<u>REAL TIME LBMP</u>											
Unweighted Price *	21.23	19.39	19.39	21.23	41.42	29.82	53.99	49.42	20.81	37.26	54.05
Standard Deviation	21.20	23.98	23.98	21.20	33.87	25.36	44.31	41.01	30.14	34.43	44.58

* Straight LBMP averages

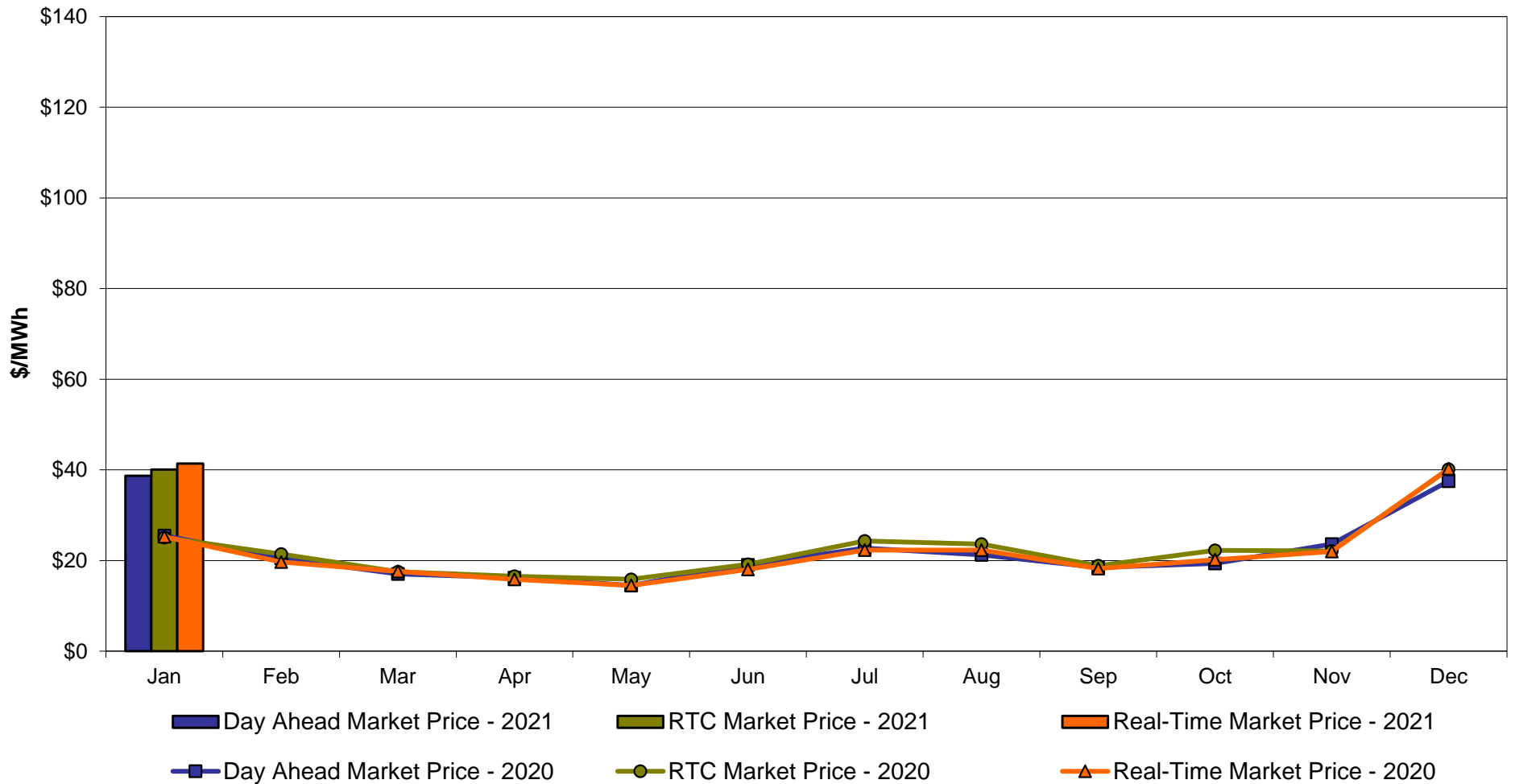
West Zone A
Monthly Average LBMP Prices 2020 - 2021



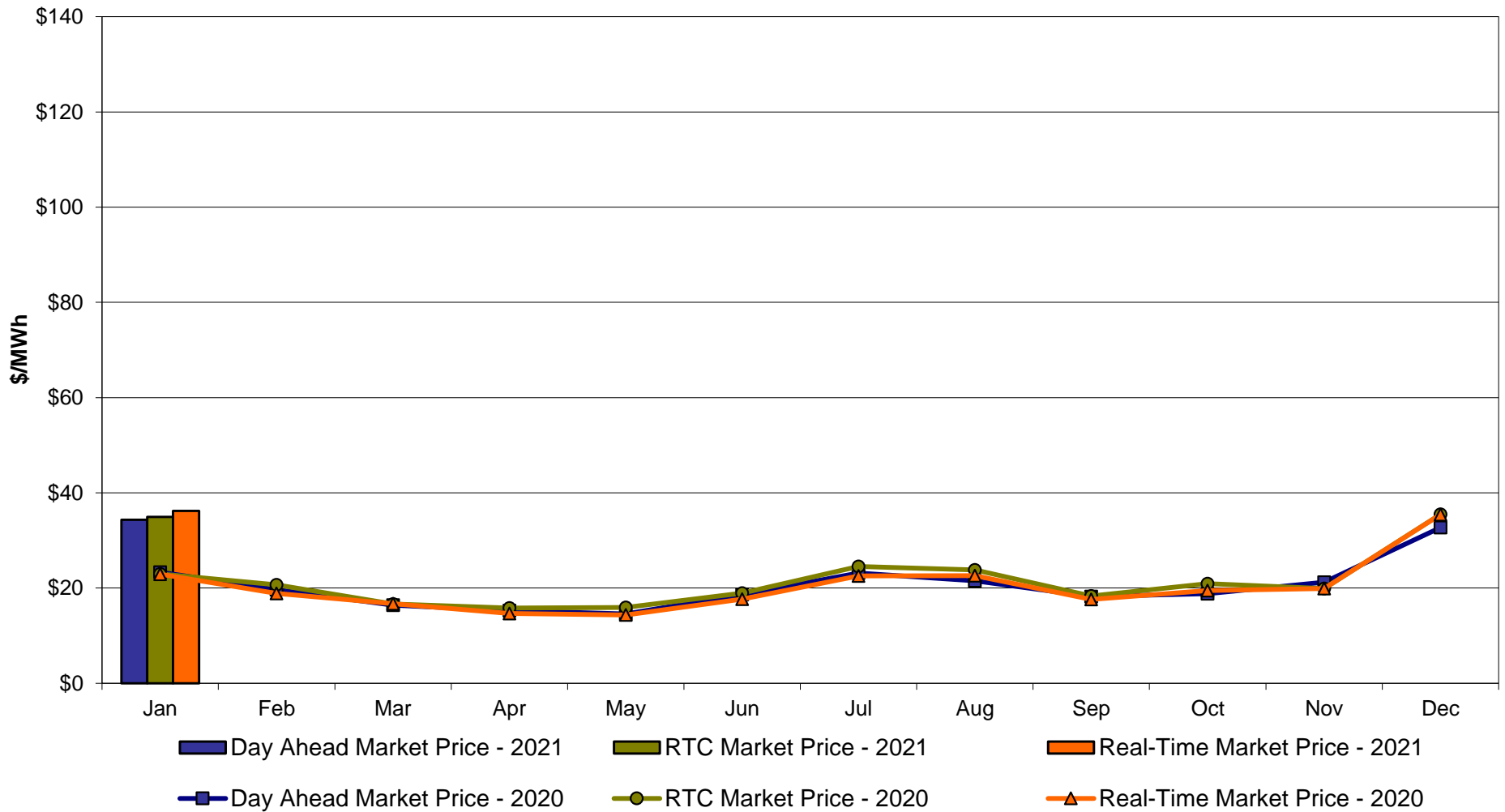
Central Zone C Monthly Average LBMP Prices 2019 - 2020



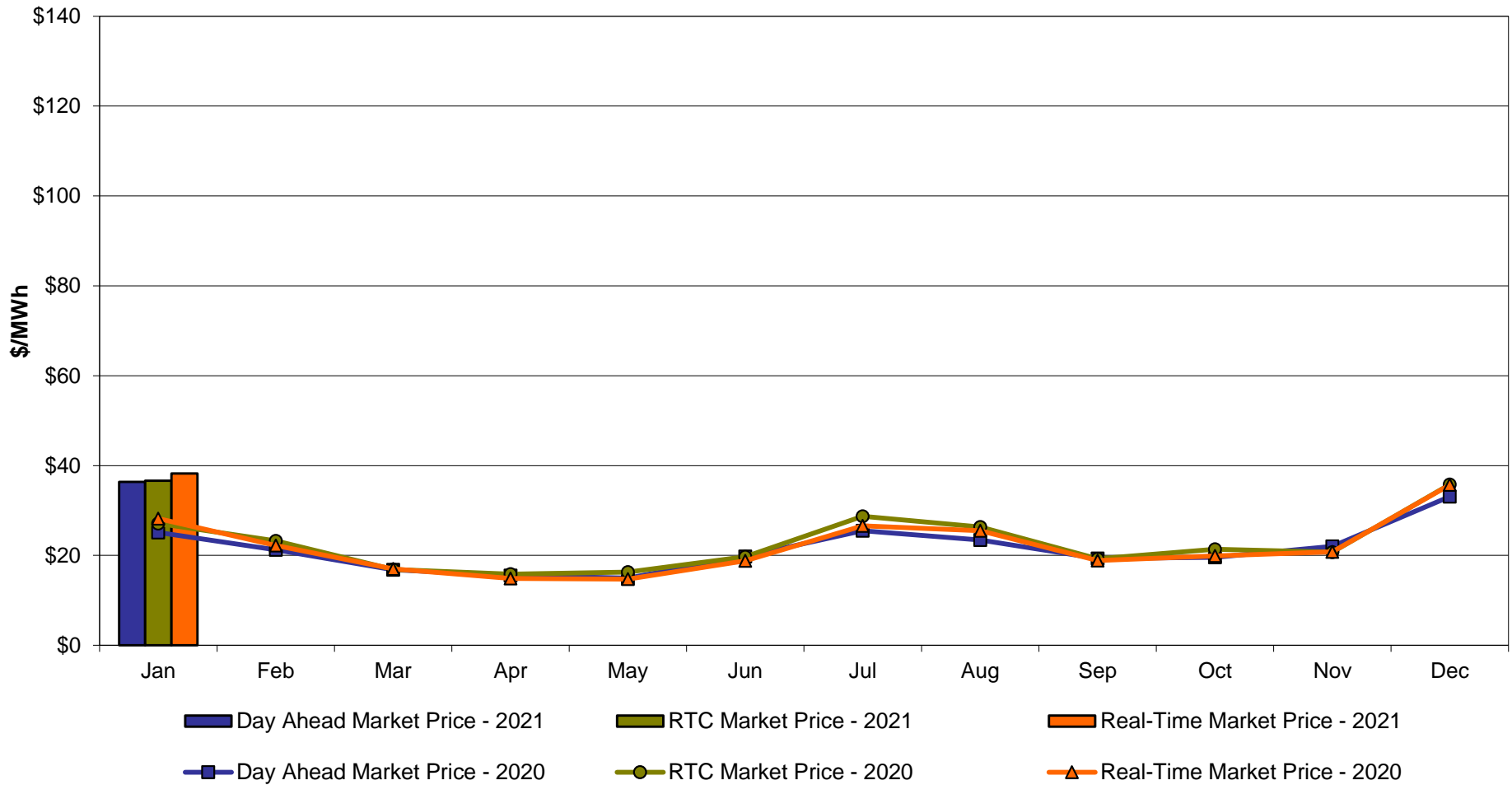
Capital Zone F **Monthly Average LBMP Prices 2020 - 2021**



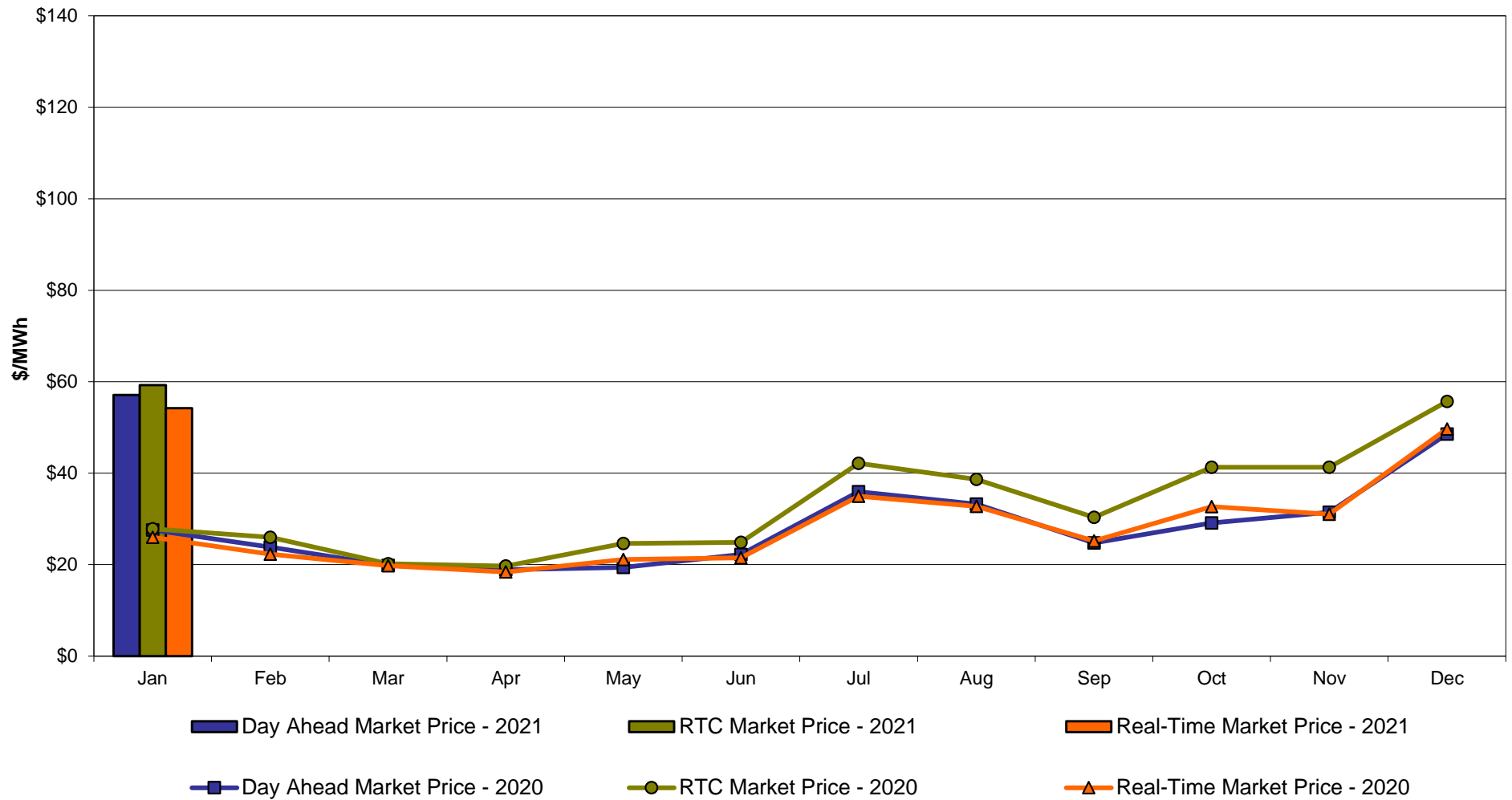
Hudson Valley Zone G **Monthly Average LBMP Prices 2019 - 2020**



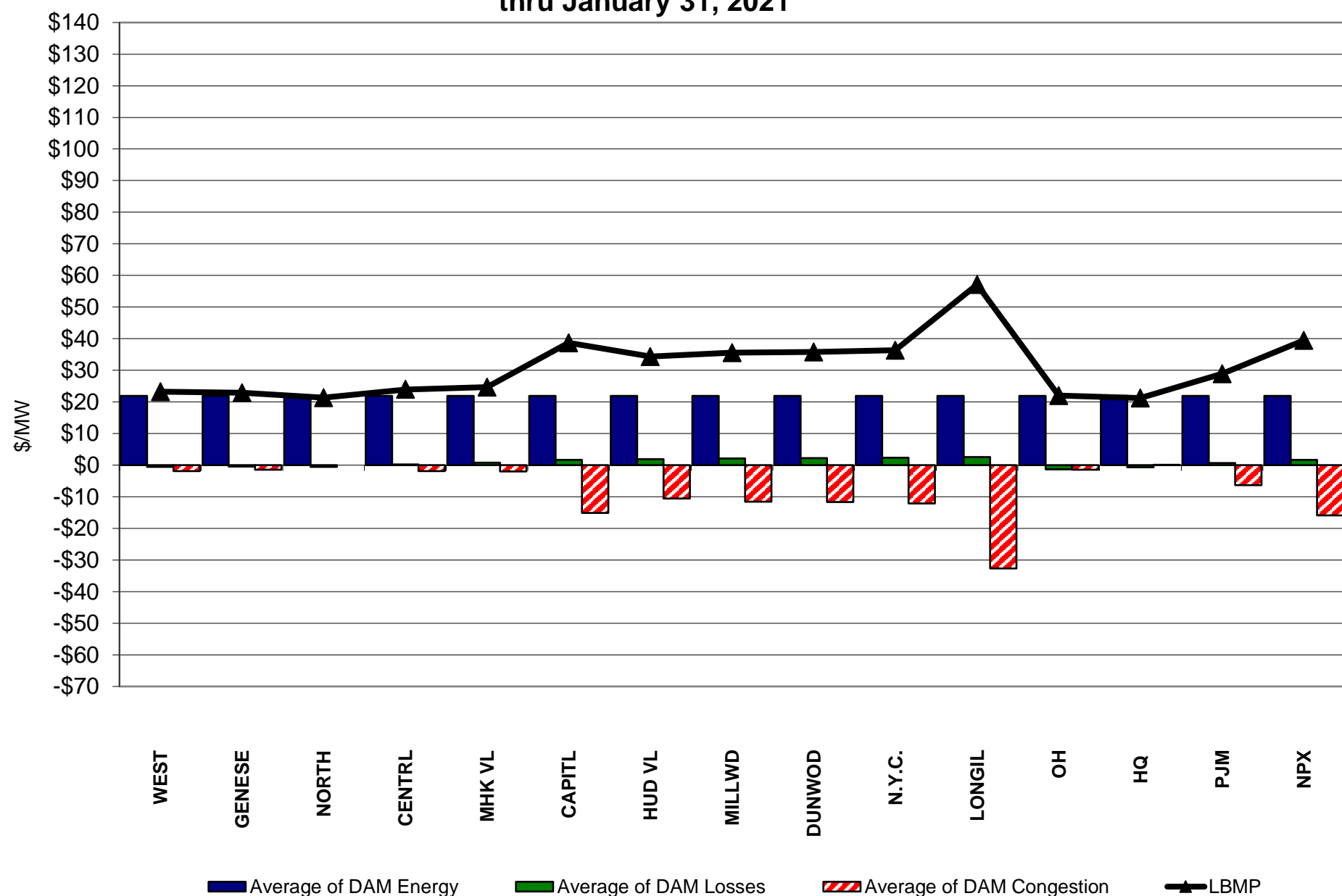
NYC Zone J Monthly Average LBMP Prices 2020 - 2021



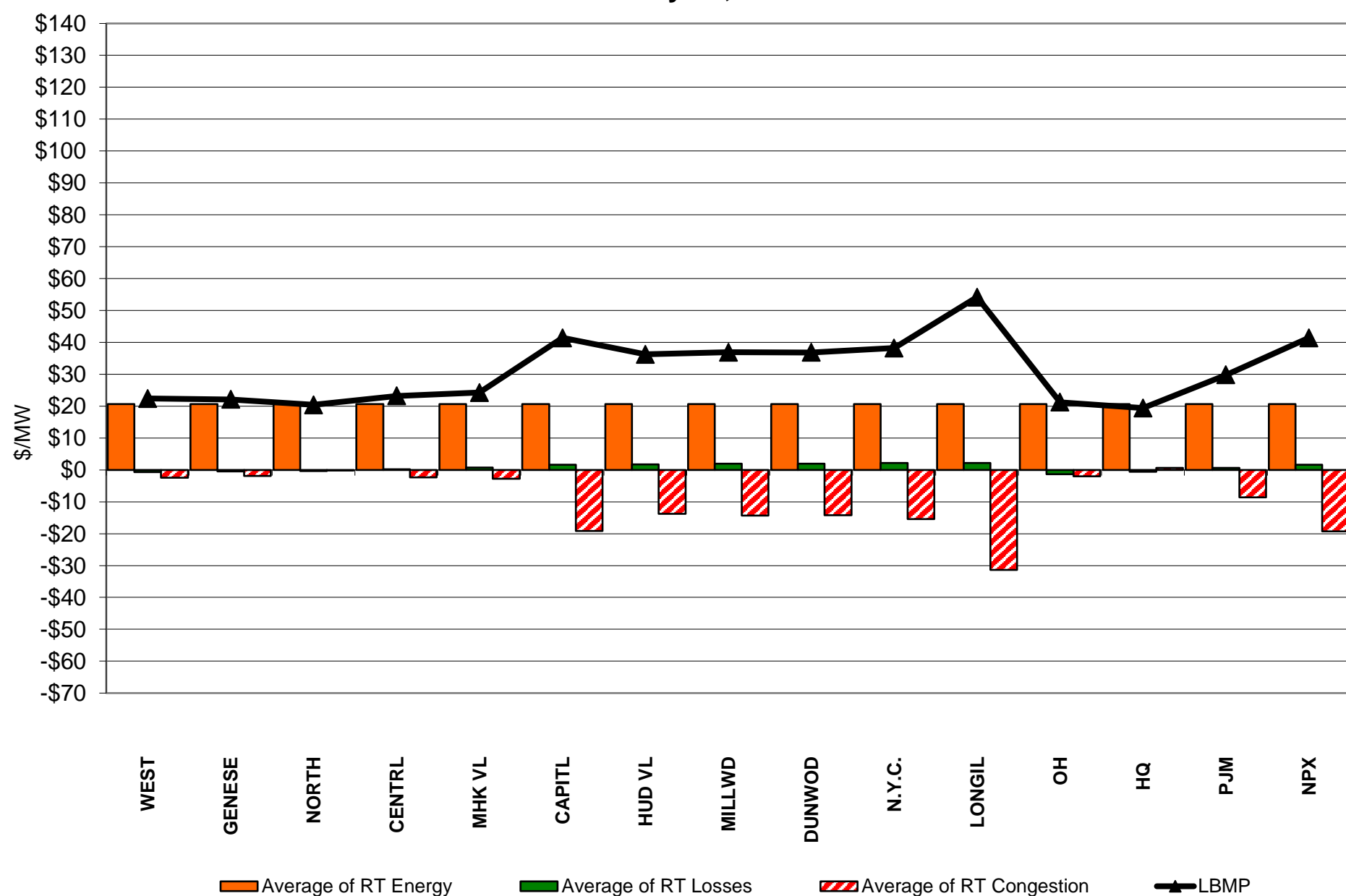
Long Island Zone K Monthly Average LBMP Prices 2019 - 2020



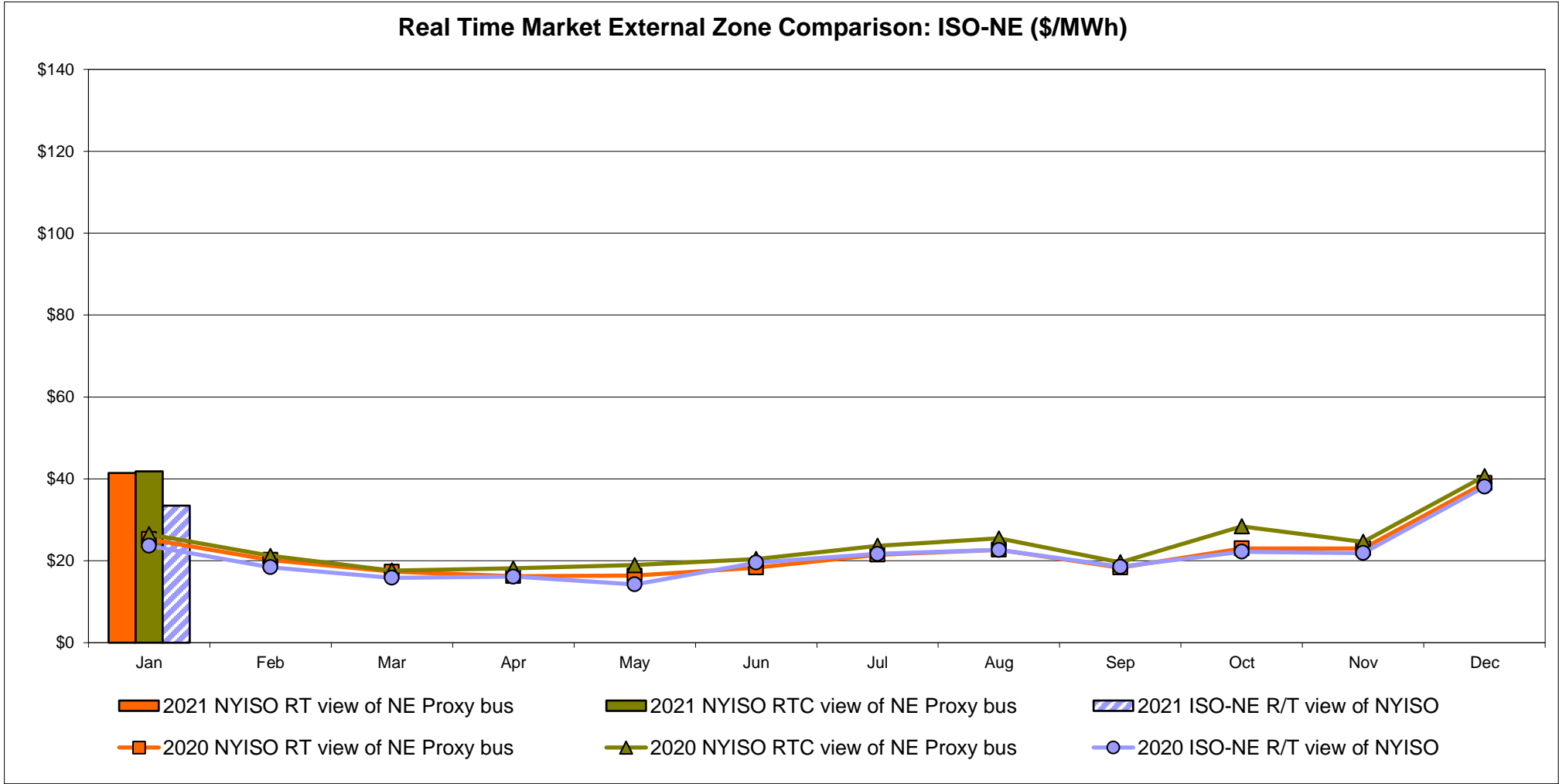
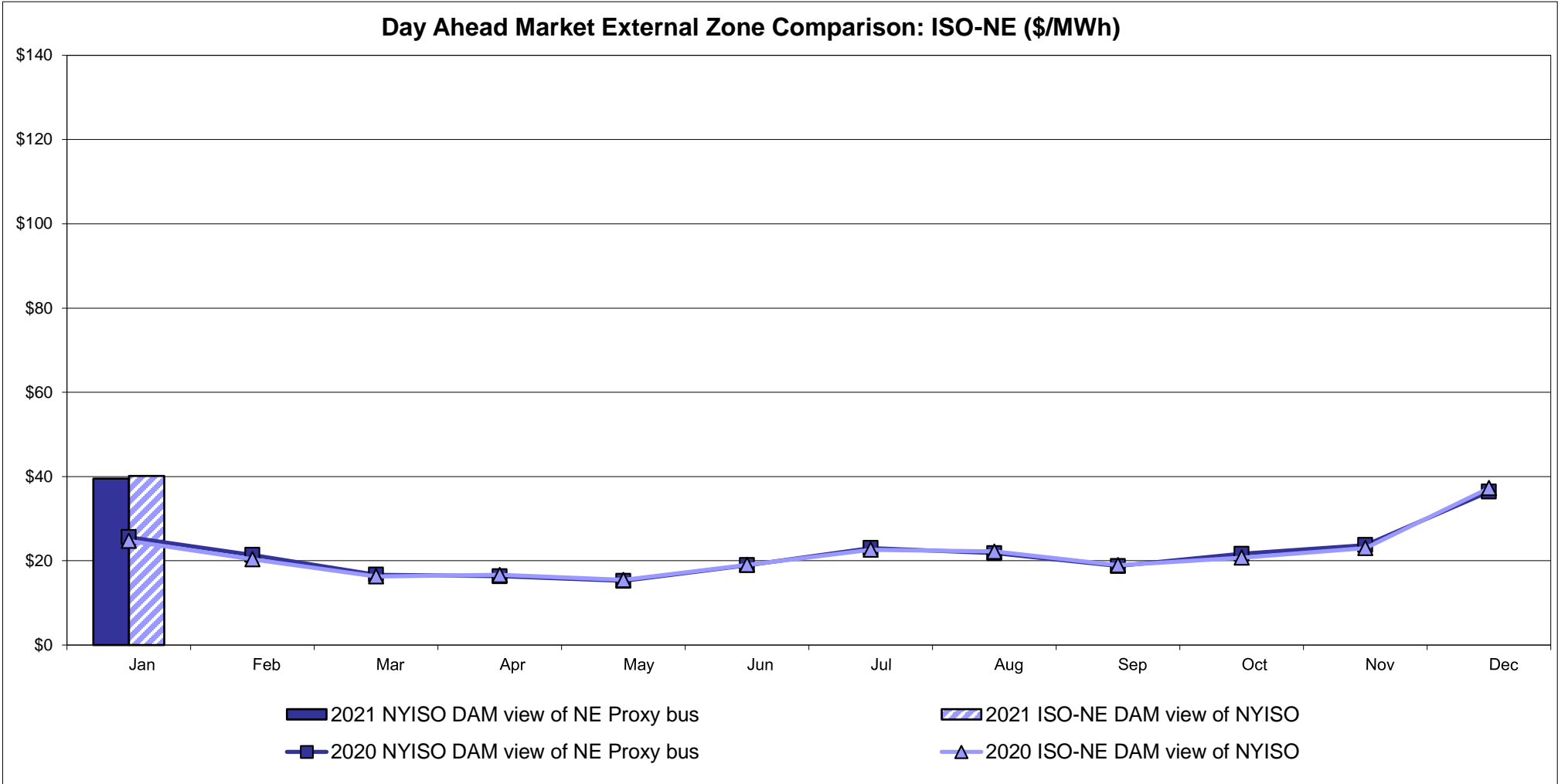
**DAM Zonal Unweighted Monthly Average LBMP Components
thru January 31, 2021**



**RT Zonal Unweighted Monthly Average LBMP Components
thru January 31, 2021**

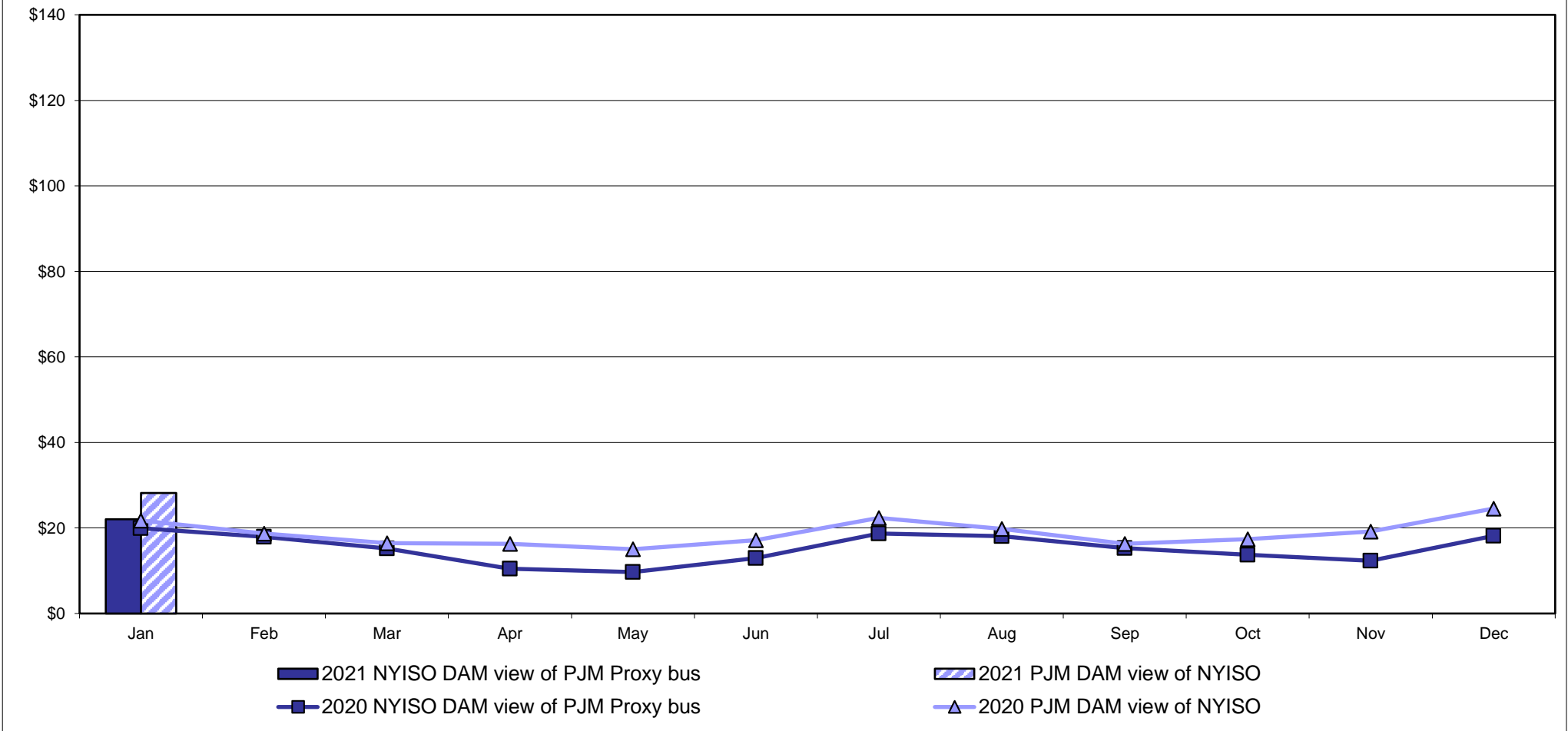


External Comparison ISO-New England

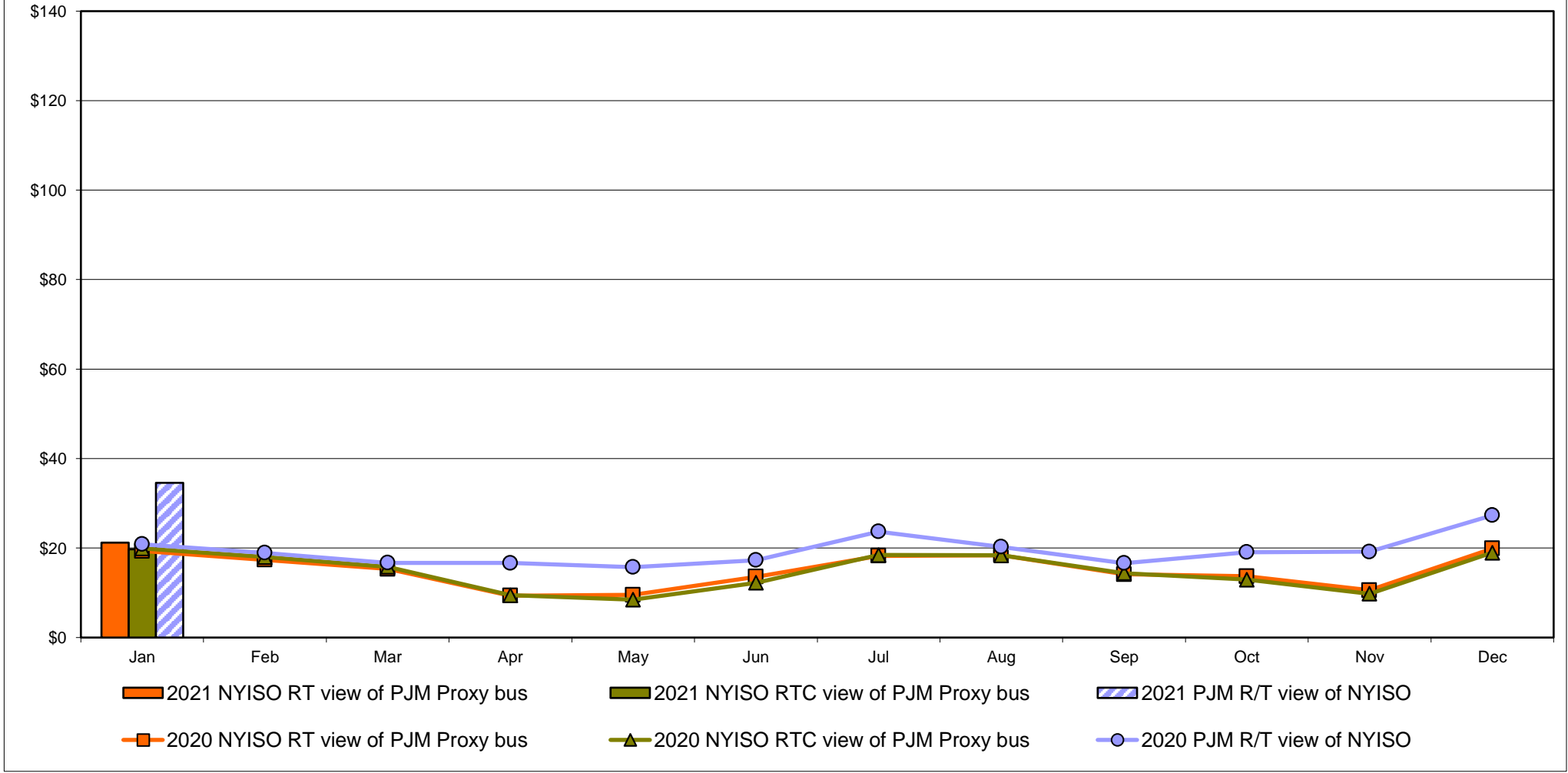


External Comparison PJM

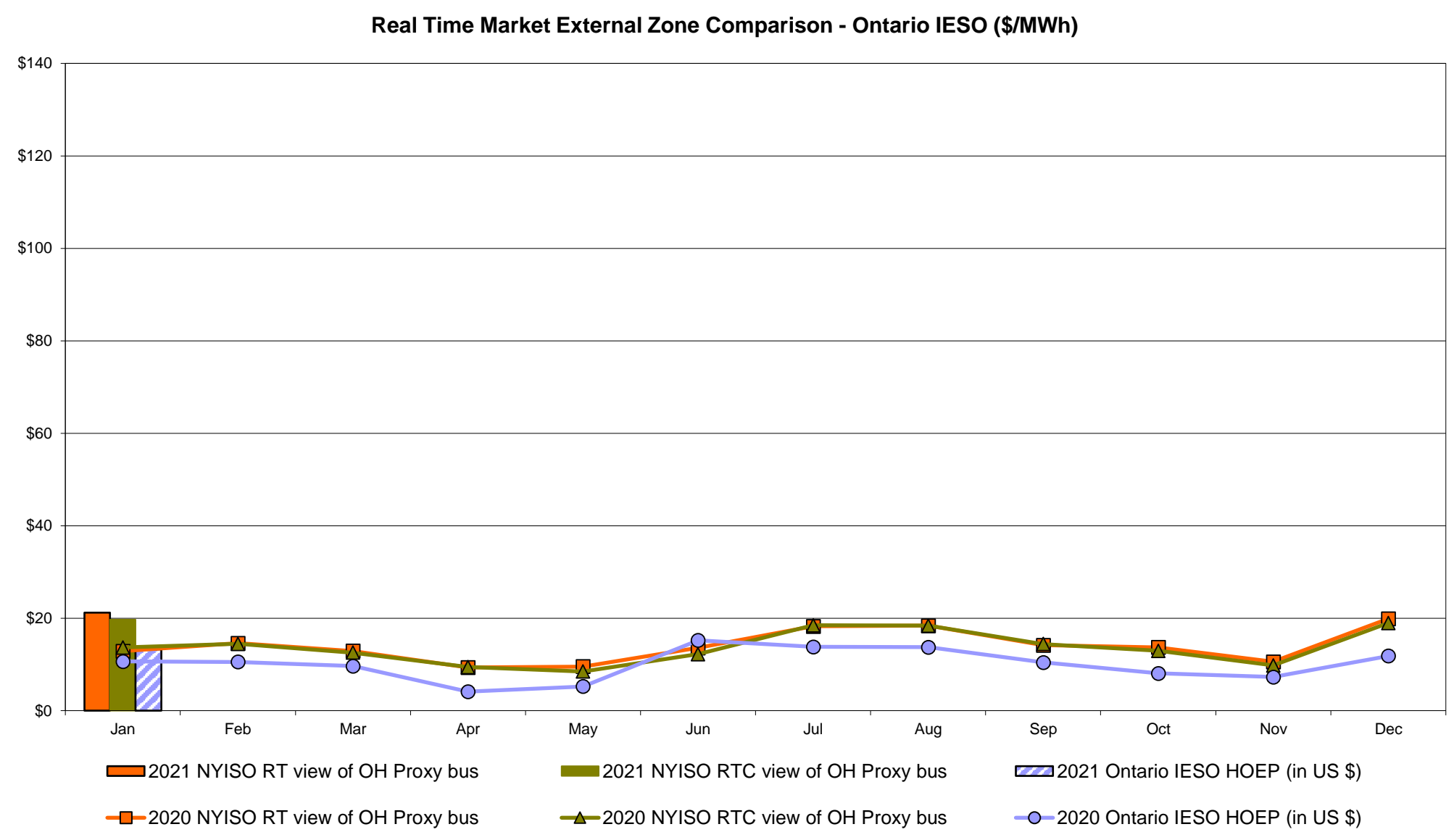
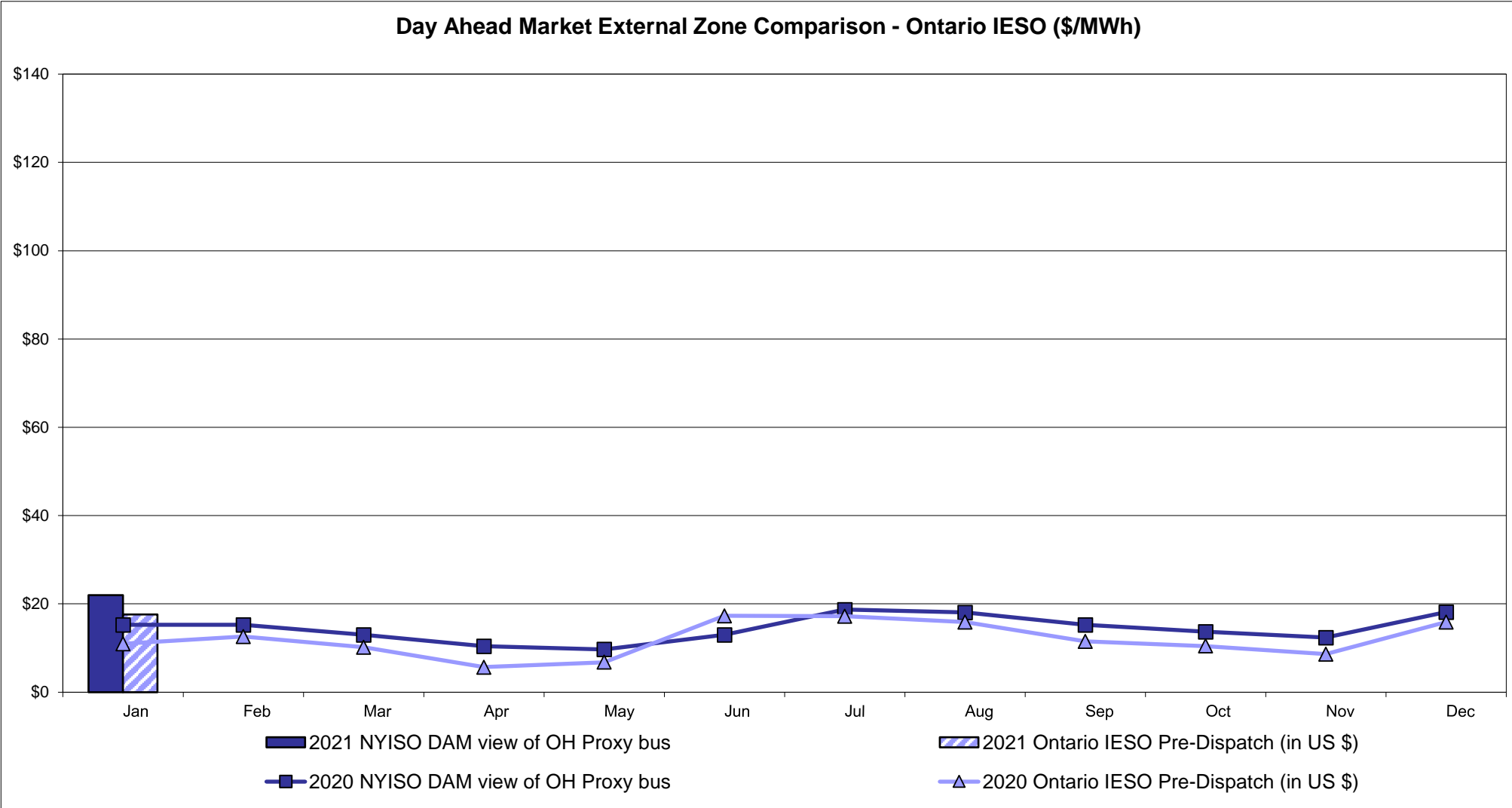
Day Ahead Market External Zone Comparison - PJM (\$/MWh)



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

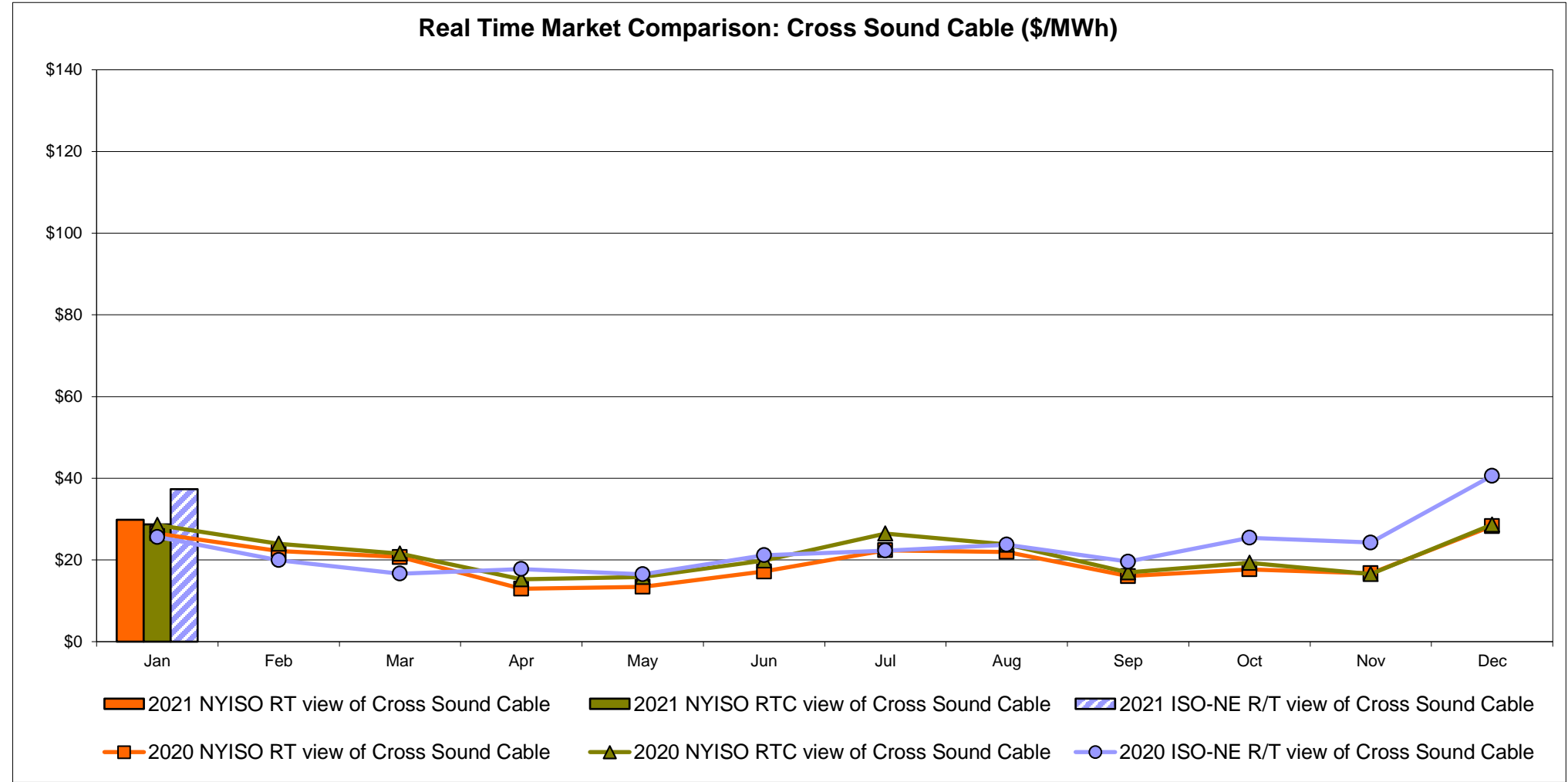
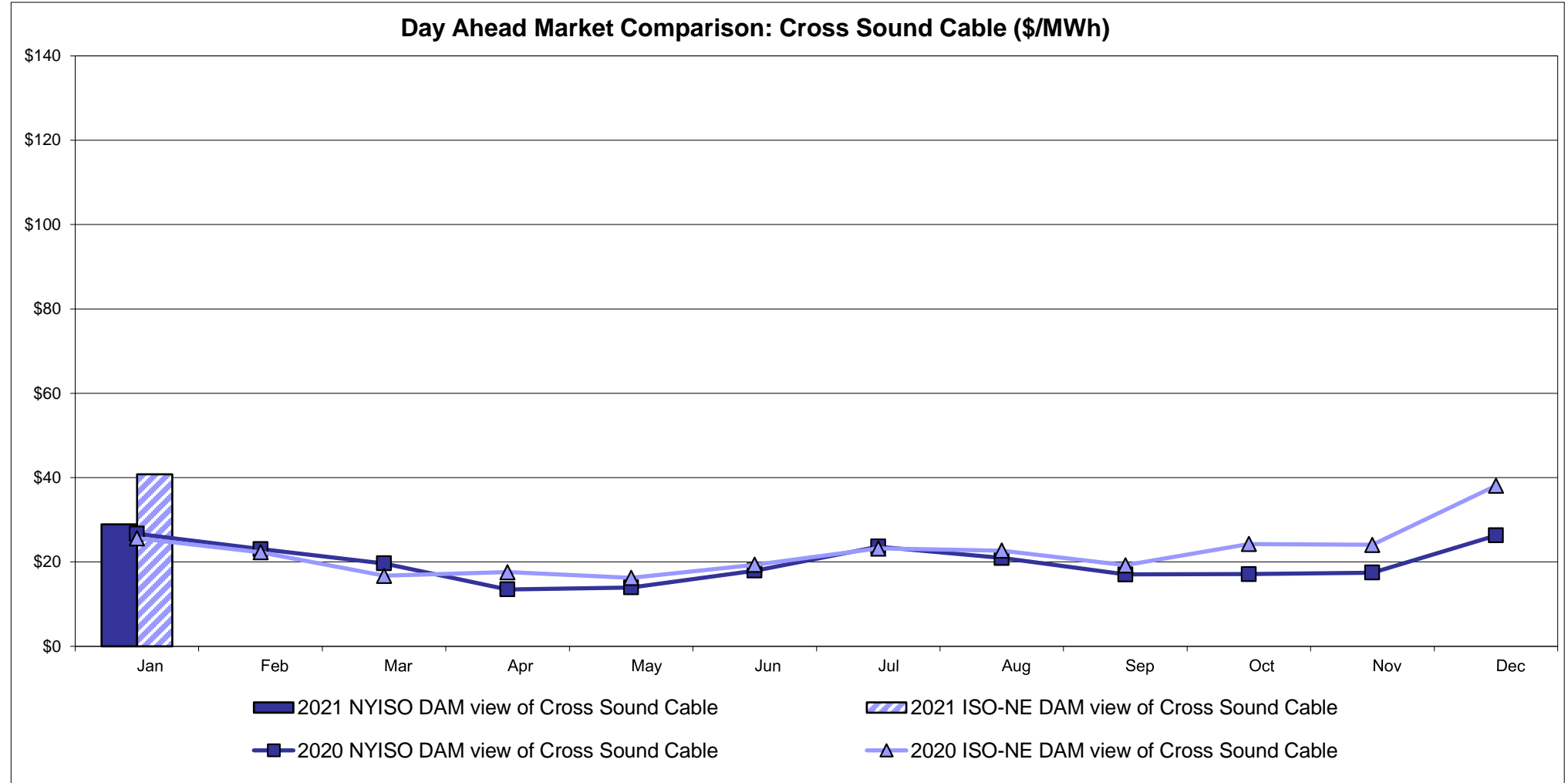


External Comparison Ontario IESO



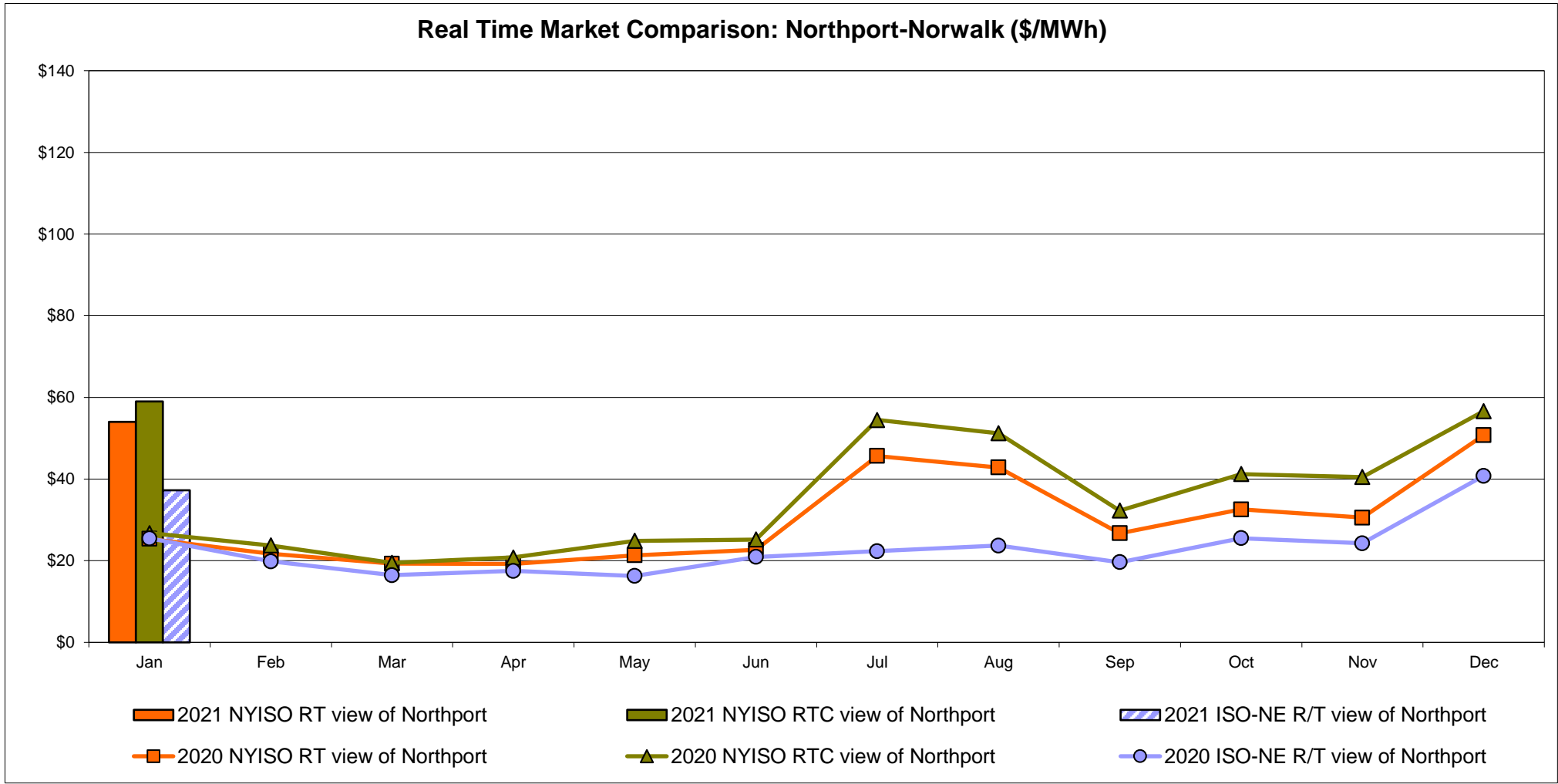
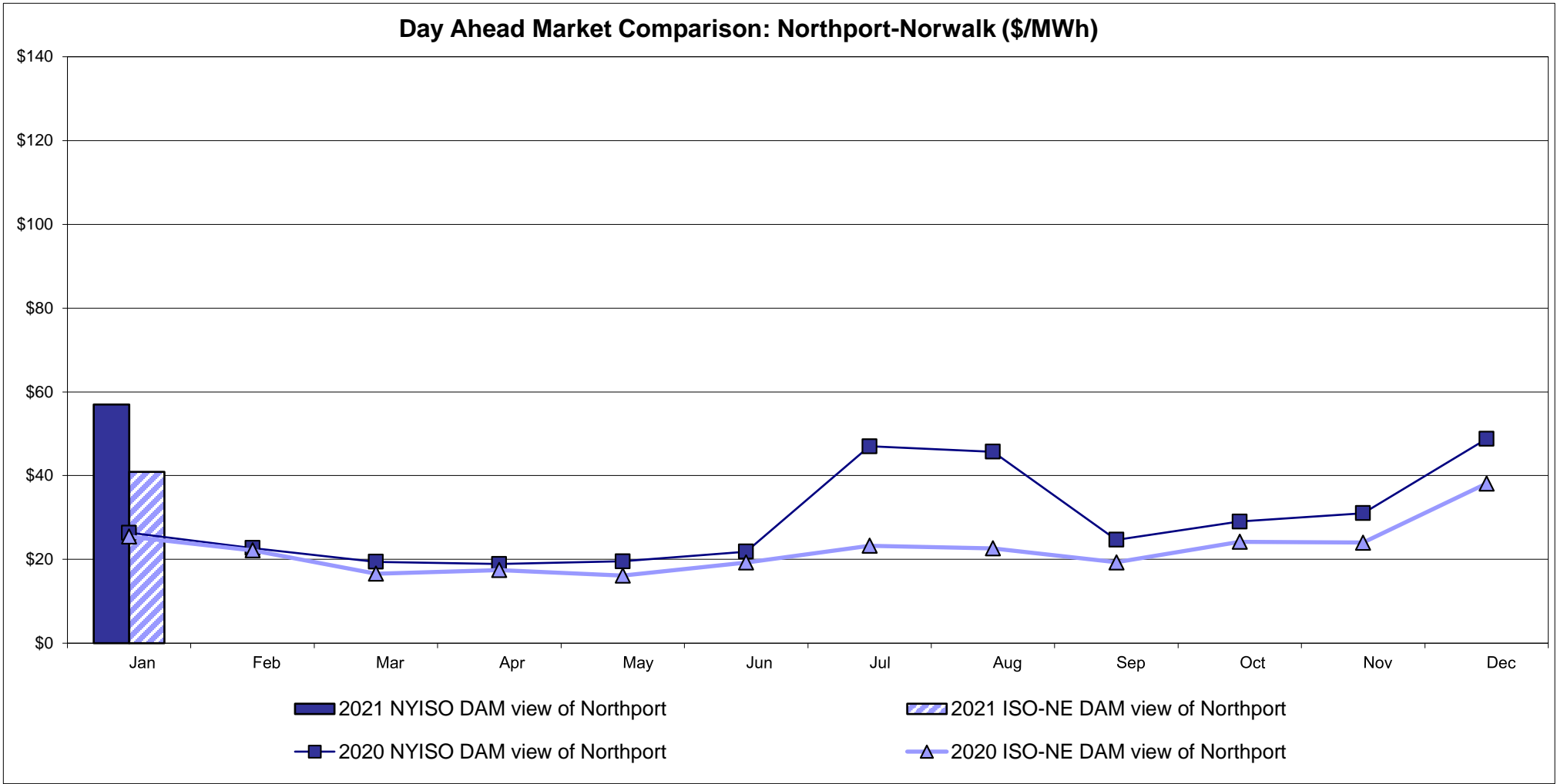
Notes: Exchange factor used for January 2021 was 0.785854616895874 to US
HOEP: Hourly Ontario Energy Price
Pre-Dispatch: Projected Energy Price

External Controllable Line: Cross Sound Cable (New England)



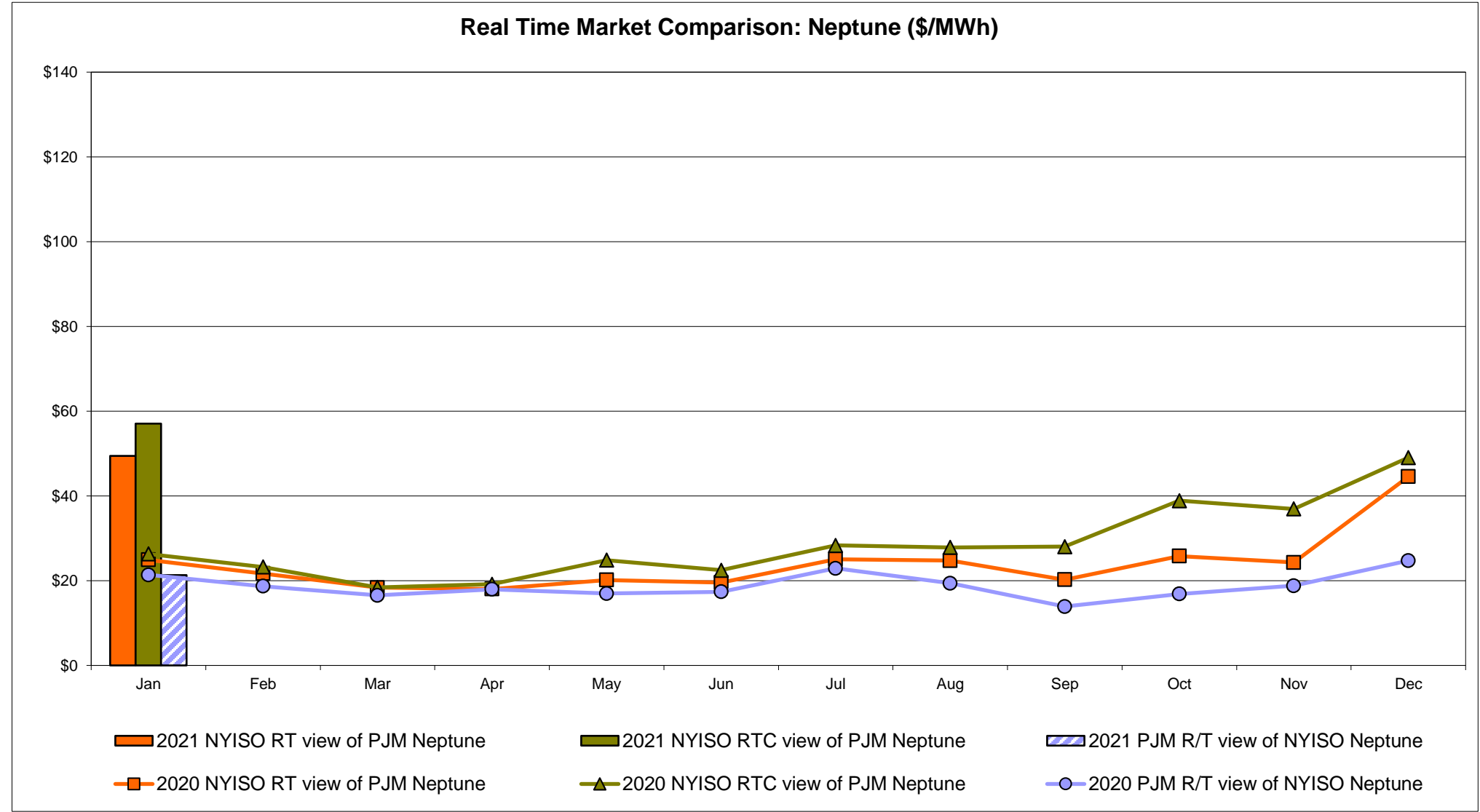
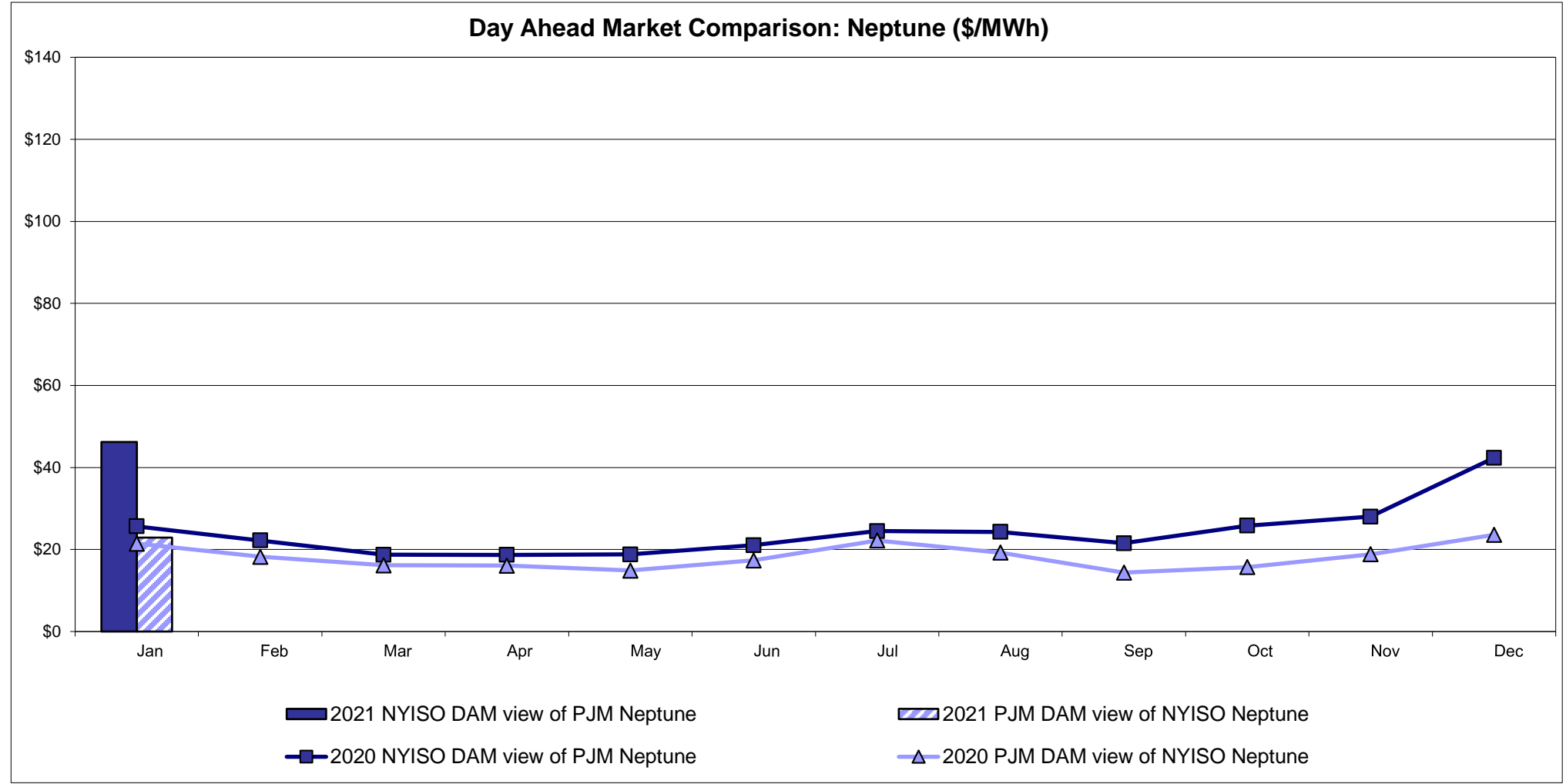
Note:
ISO-NE Forecast is an advisory posting @ 18:00 day before.
The DAM and R/T prices at the Shorham 13899 interface are used for ISO-NE.
The DAM and R/T prices at the CSC interface are used for NYISO.

External Controllable Line: Northport - Norwalk (New England)

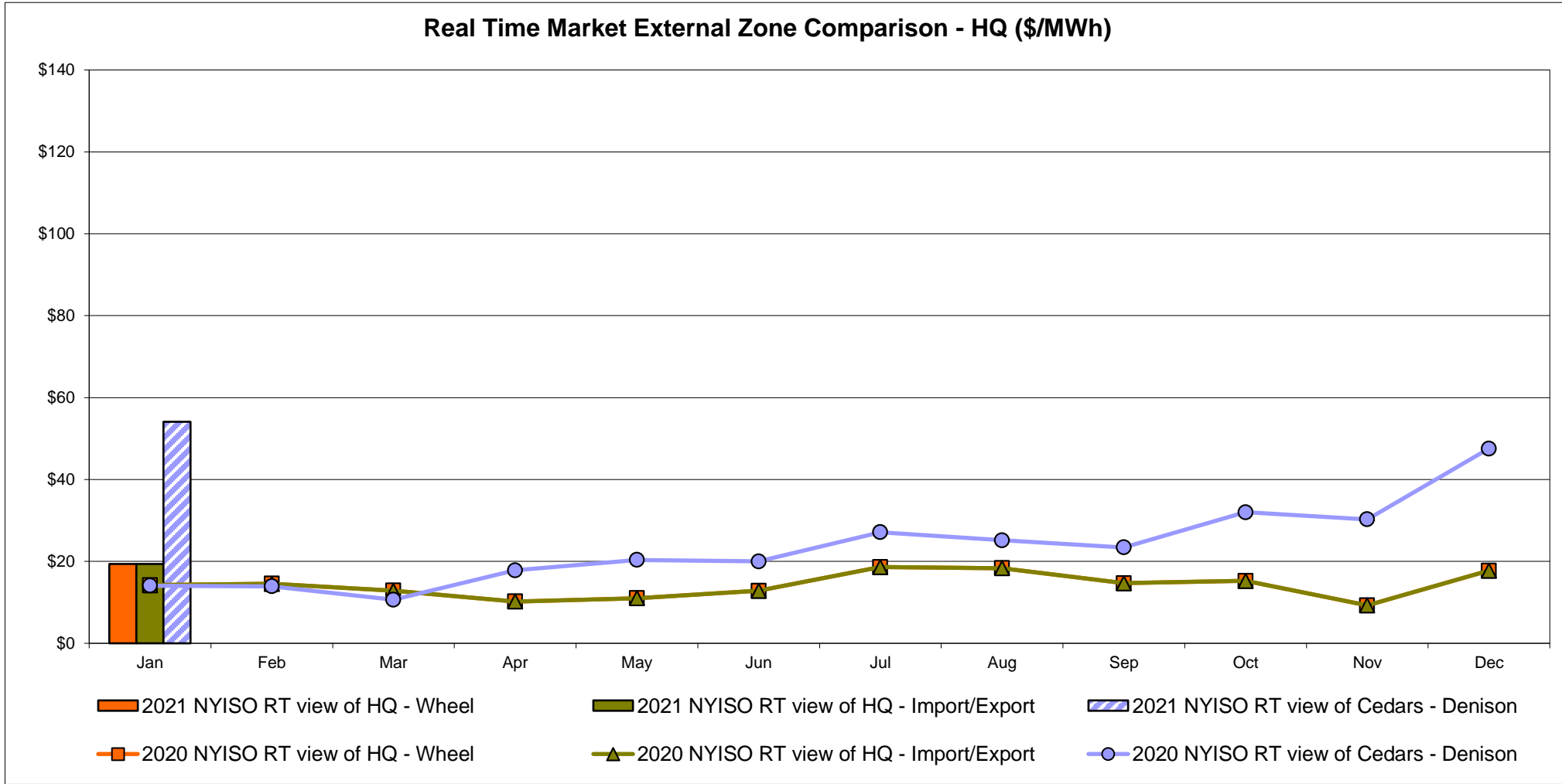
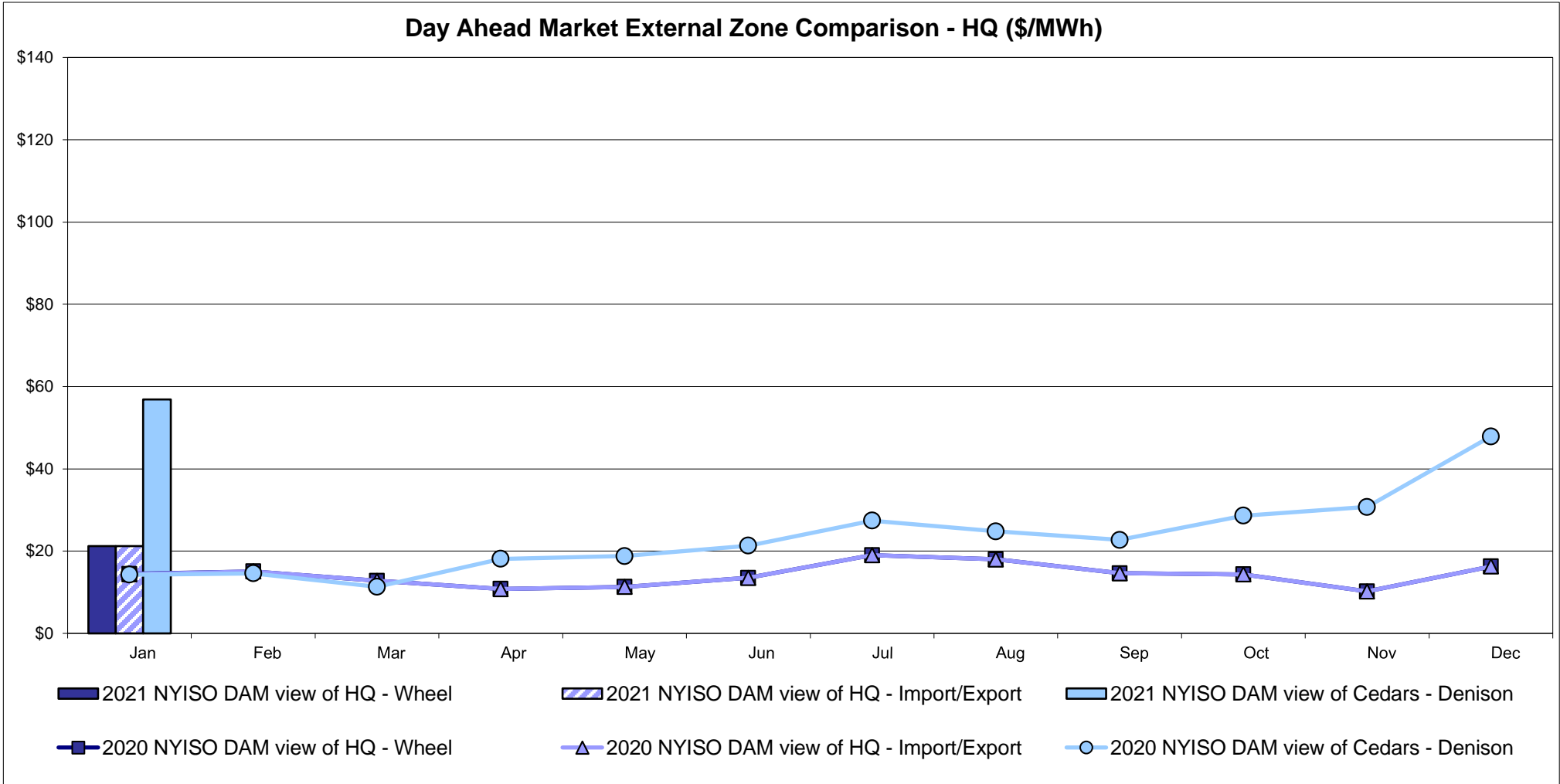


Note:
ISO-NE Forecast is an advisory posting @ 18:00 day before.
The DAM and R/T prices at the Northport 138 interface are used for ISO-NE.
The DAM and R/T prices at the 1385 interface are used for NYISO.

External Controllable Line: Neptune (PJM)

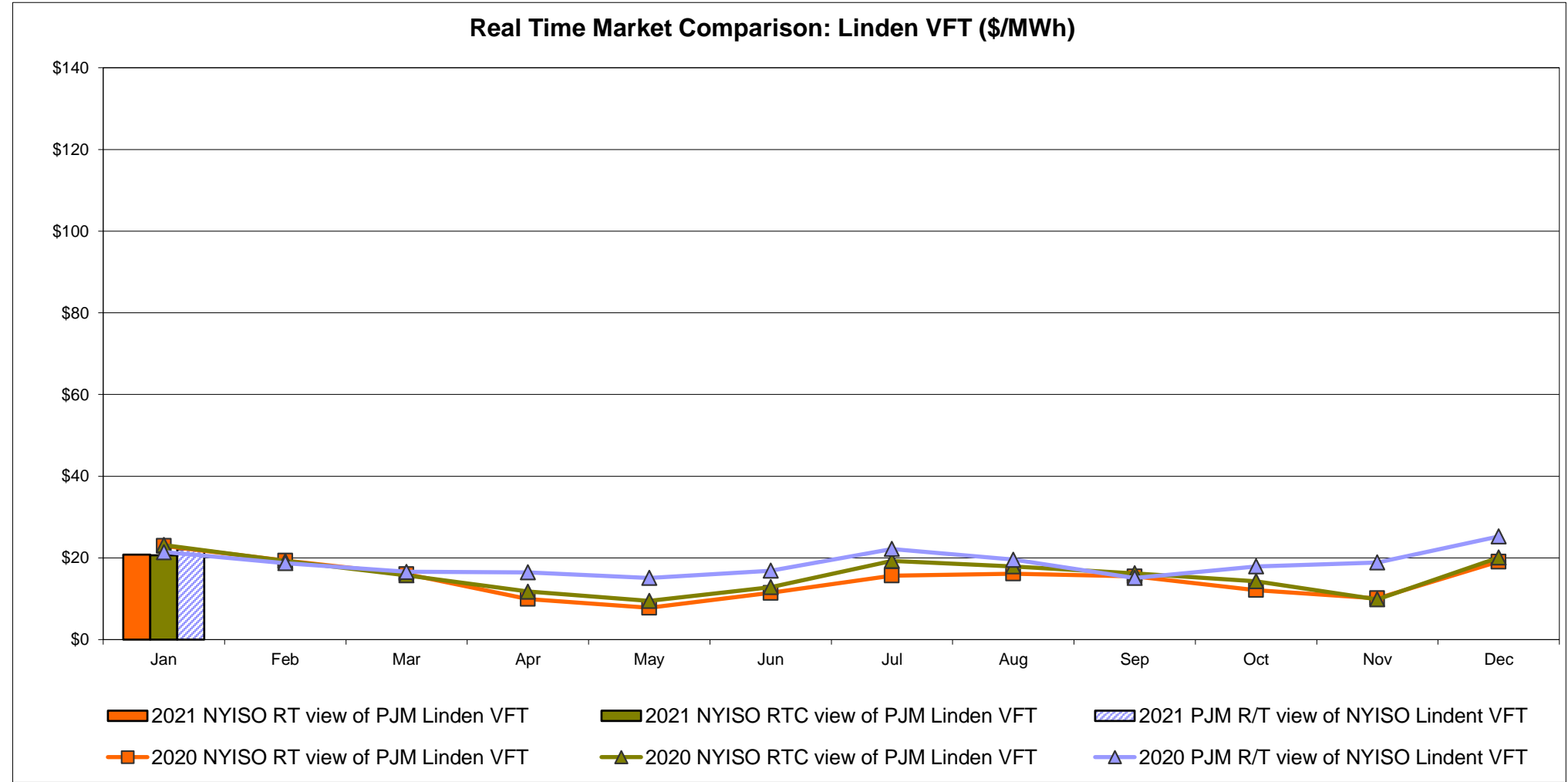
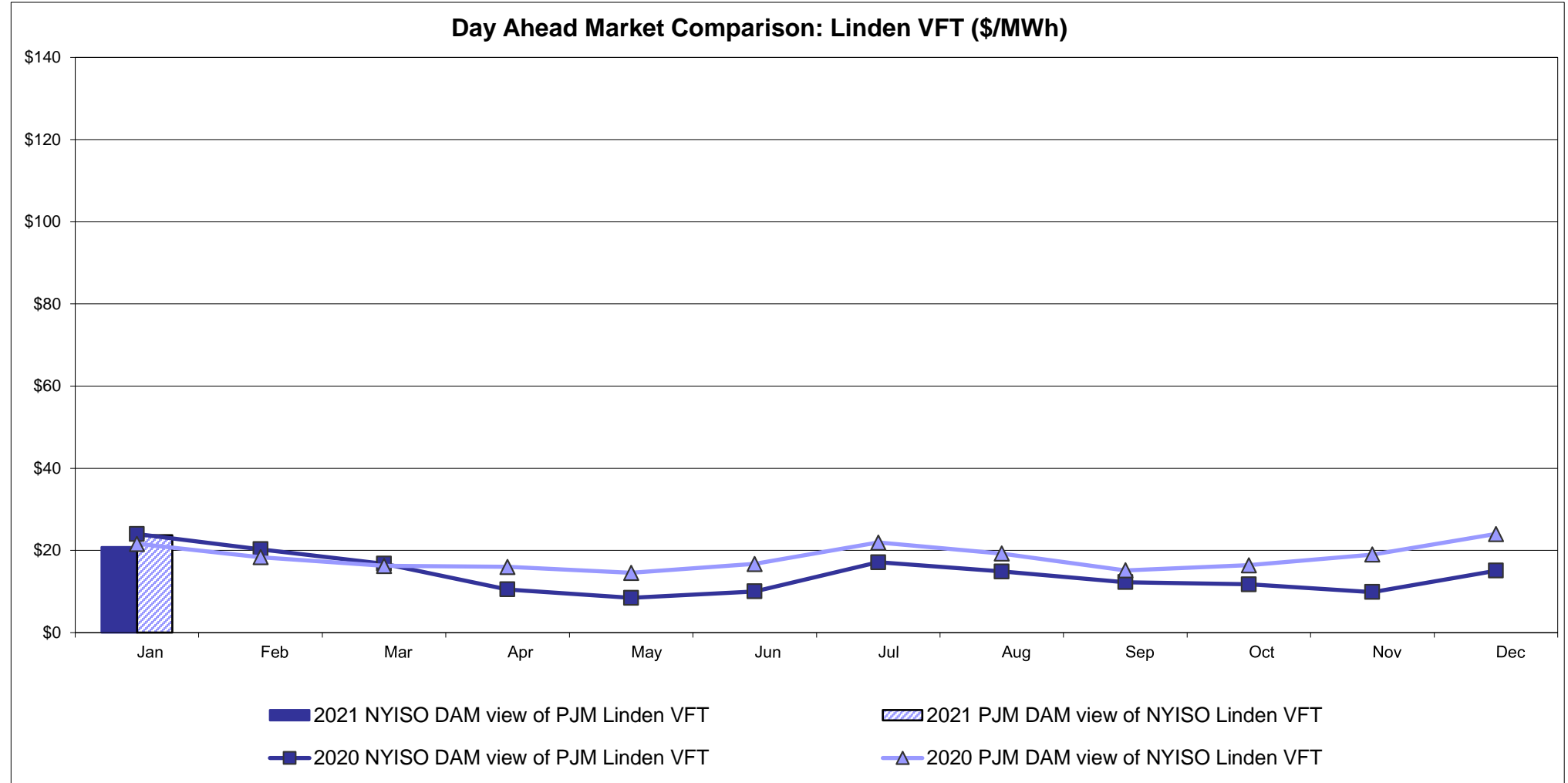


External Comparison Hydro-Quebec

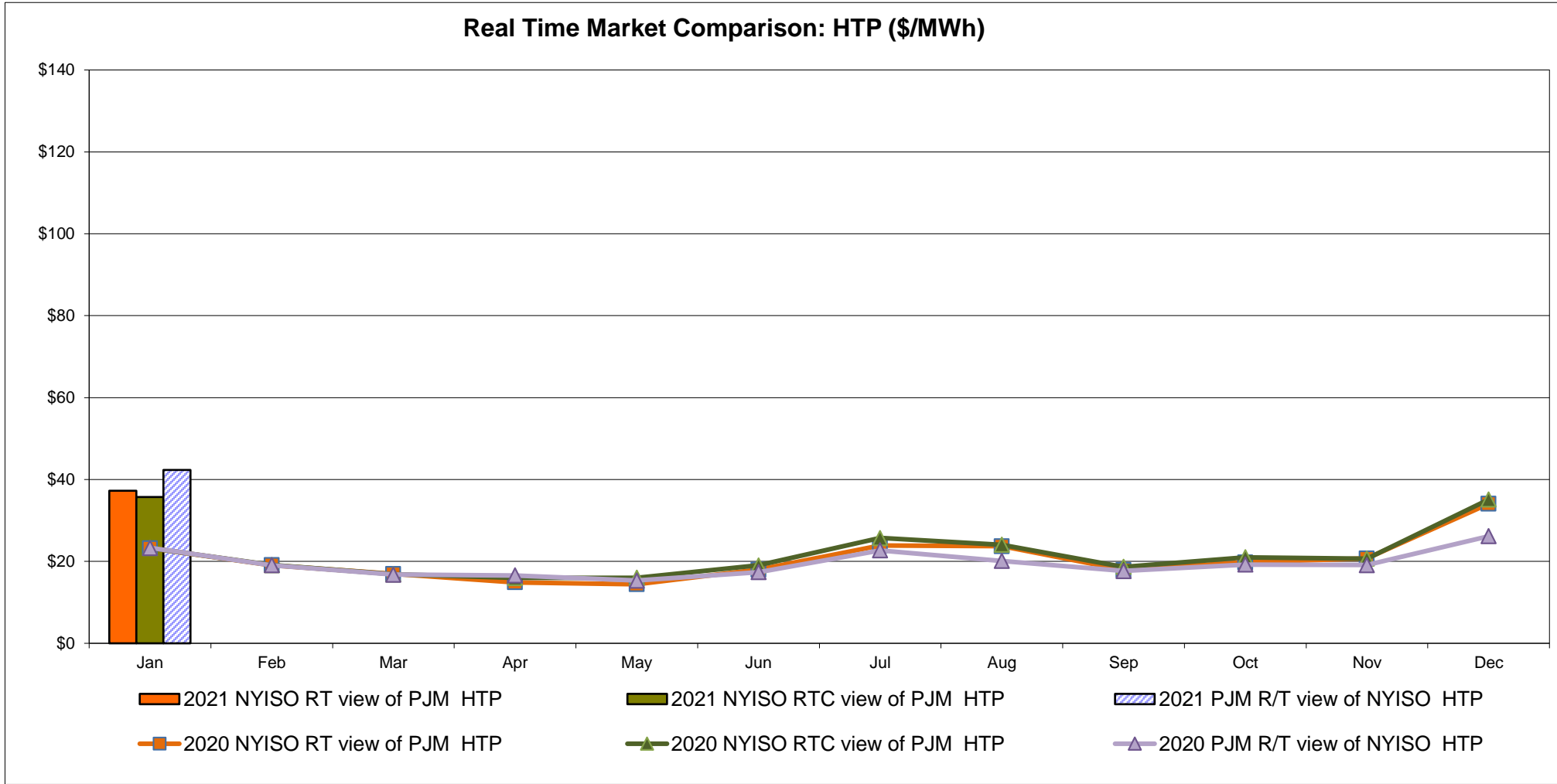
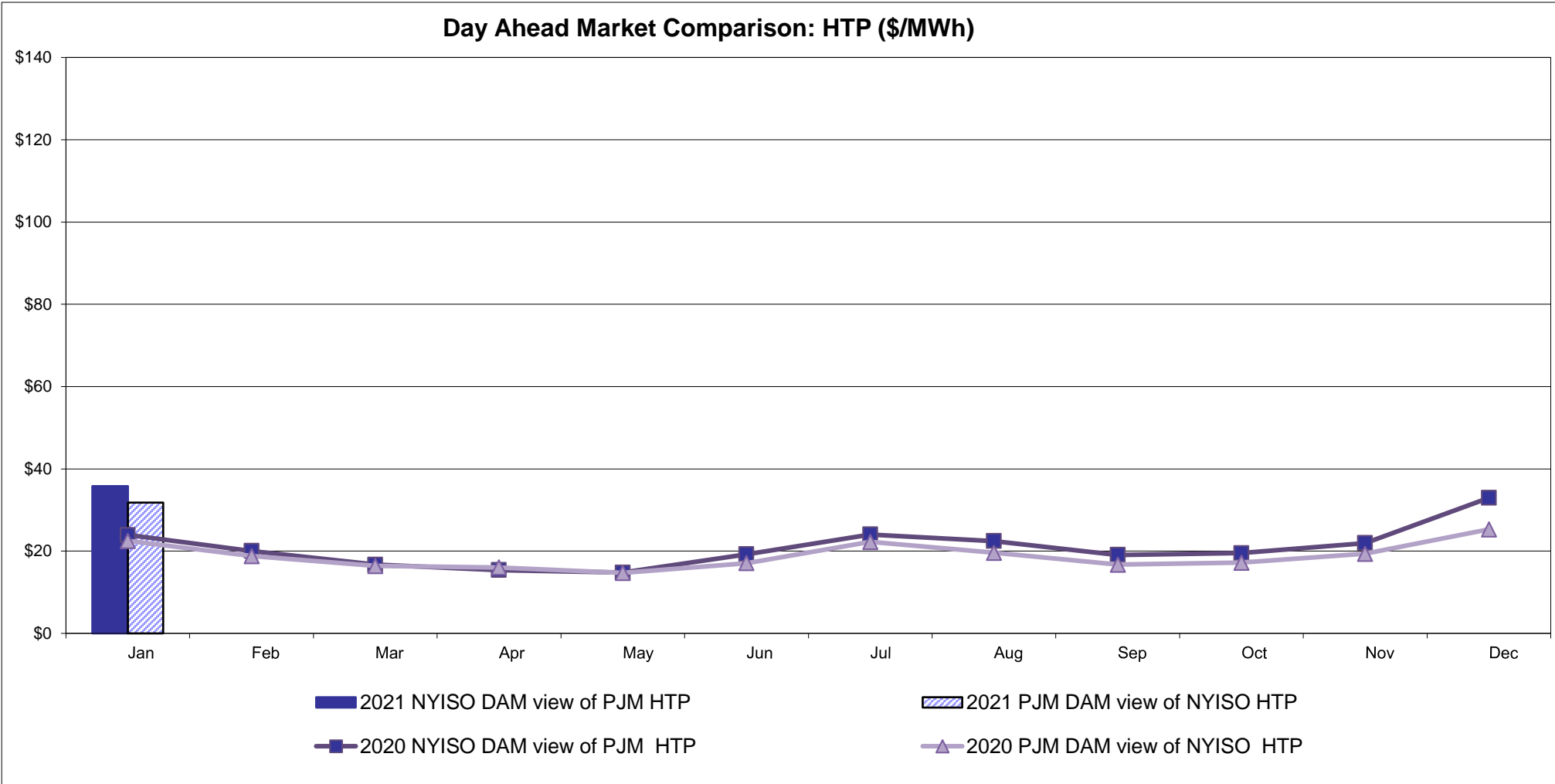


Note:
Hydro-Quebec Prices are unavailable.

External Controllable Line: Linden VFT (PJM)



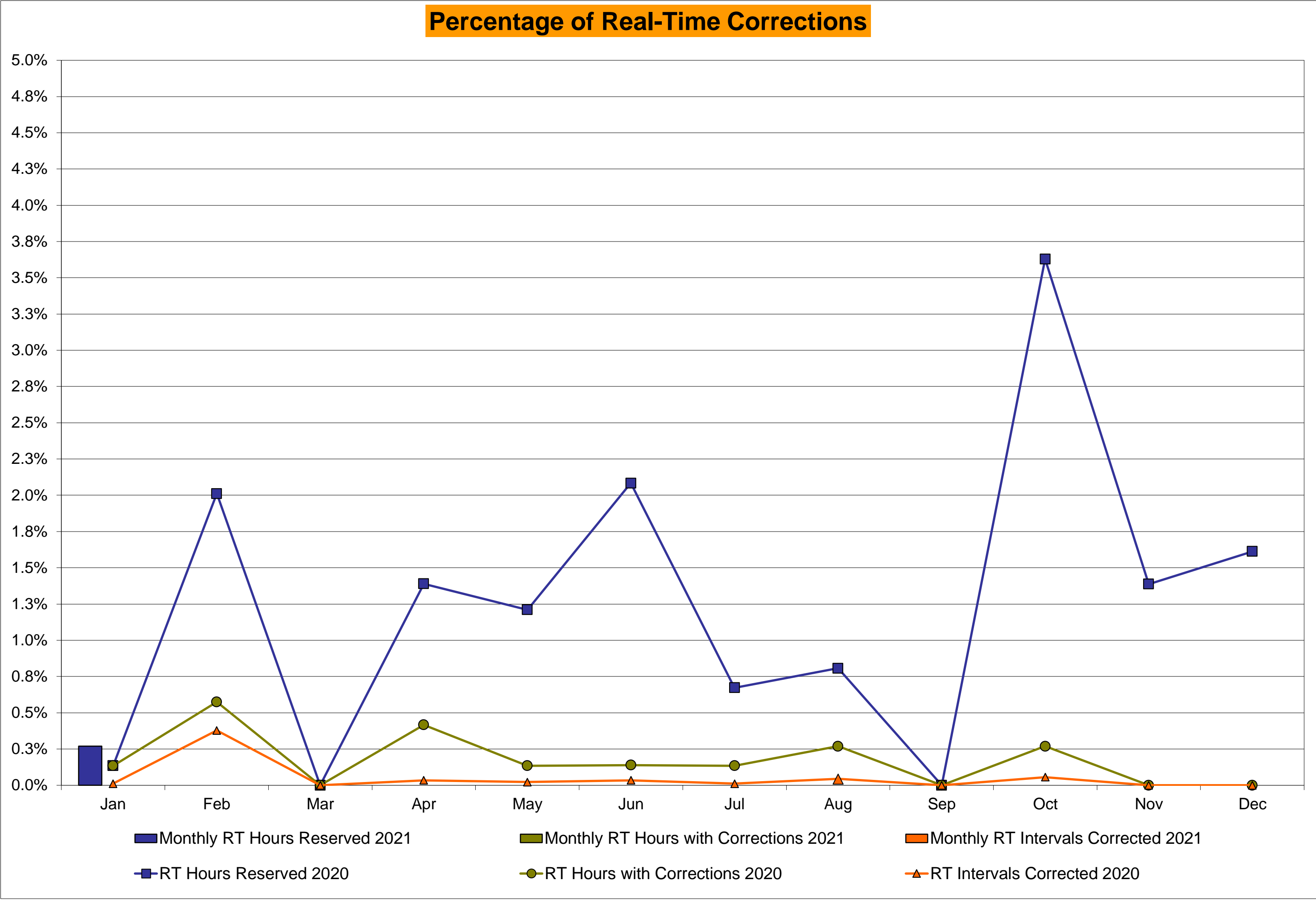
External Controllable Line: Hudson (PJM)



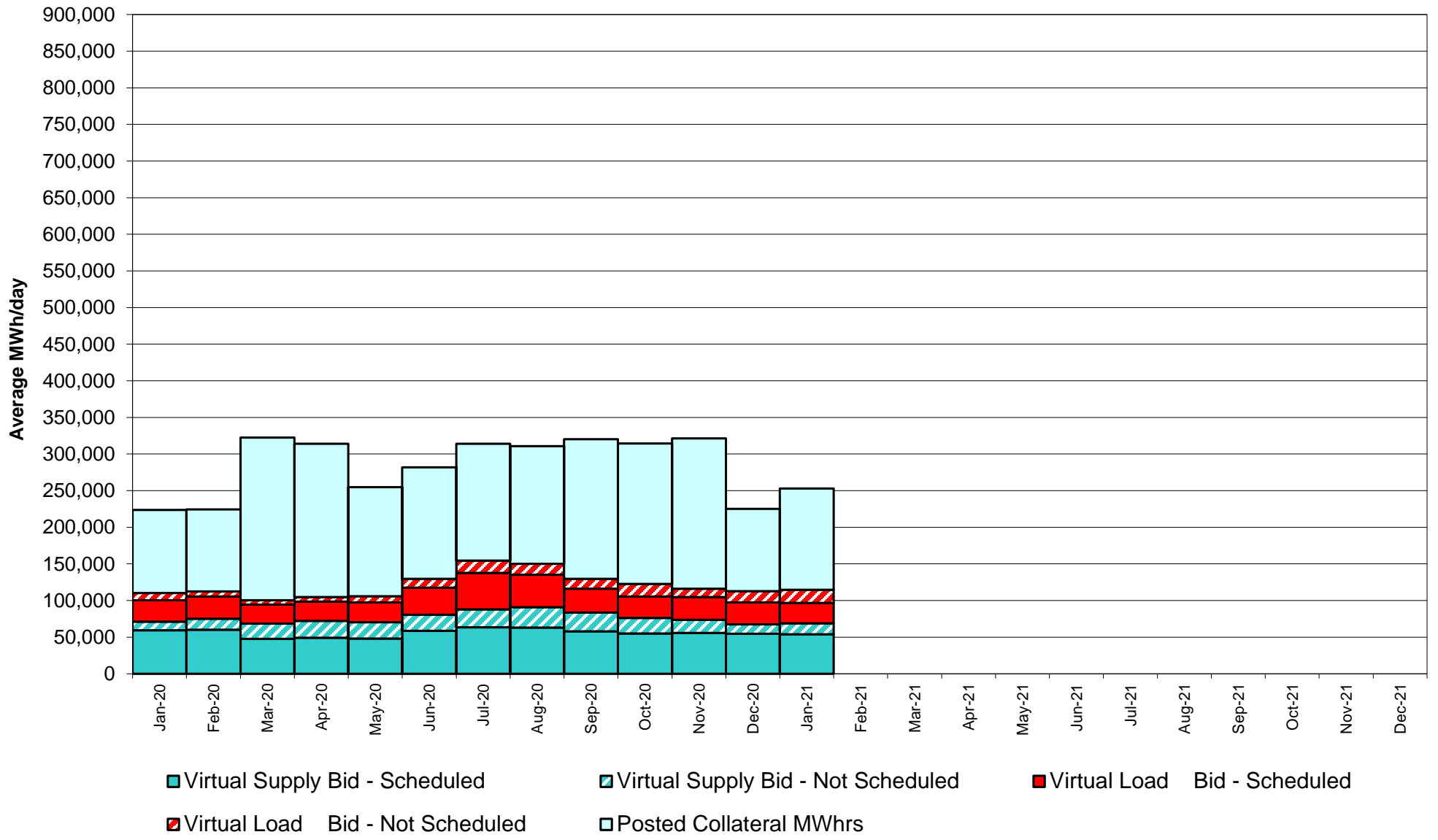
NYISO Real Time Price Correction Statistics

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											
Number of hours	in the month	744											
% of hours with corrections	in the month	0.00%											
% of hours with corrections	year-to-date	0.00%											
<u>Interval Corrections</u>													
Number of intervals corrected	in the month	0											
Number of intervals	in the month	9,095											
% of intervals corrected	in the month	0.00%											
% of intervals corrected	year-to-date	0.00%											
<u>Hours Reserved</u>													
Number of hours reserved	in the month	2											
Number of hours	in the month	744											
% of hours reserved	in the month	0.27%											
% of hours reserved	year-to-date	0.27%											
<u>Days to Correction</u> *													
Avg. number of days to correction	in the month	0.00											
Avg. number of days to correction	year-to-date	0.00											
<u>Days Without Corrections</u>													
Days without corrections	in the month	31											
Days without corrections	year-to-date	31											
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

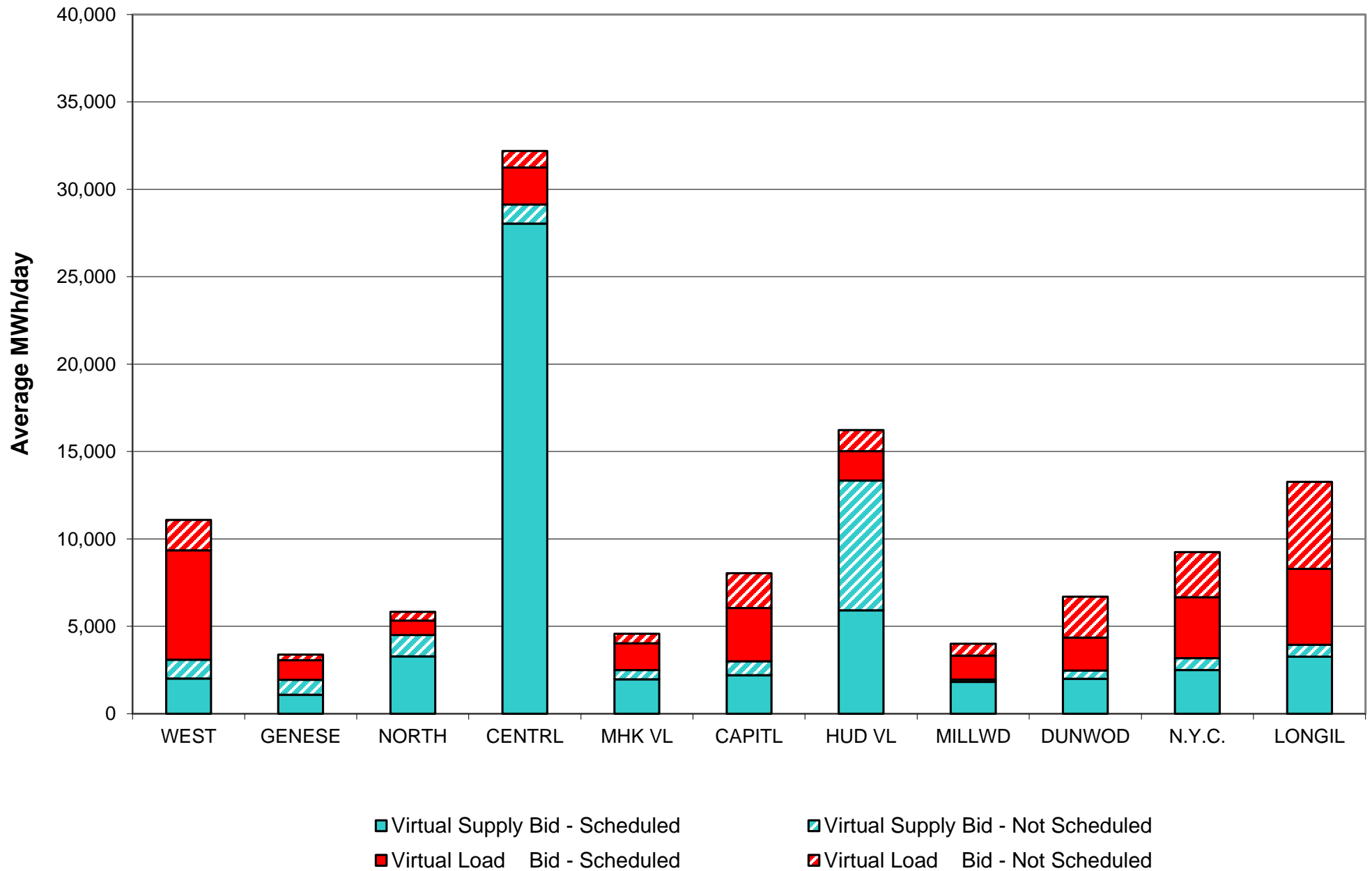
*Calendar days from reservation date; for June 2018 forward, business days from market date



NYISO Virtual Trading Average MWh per day



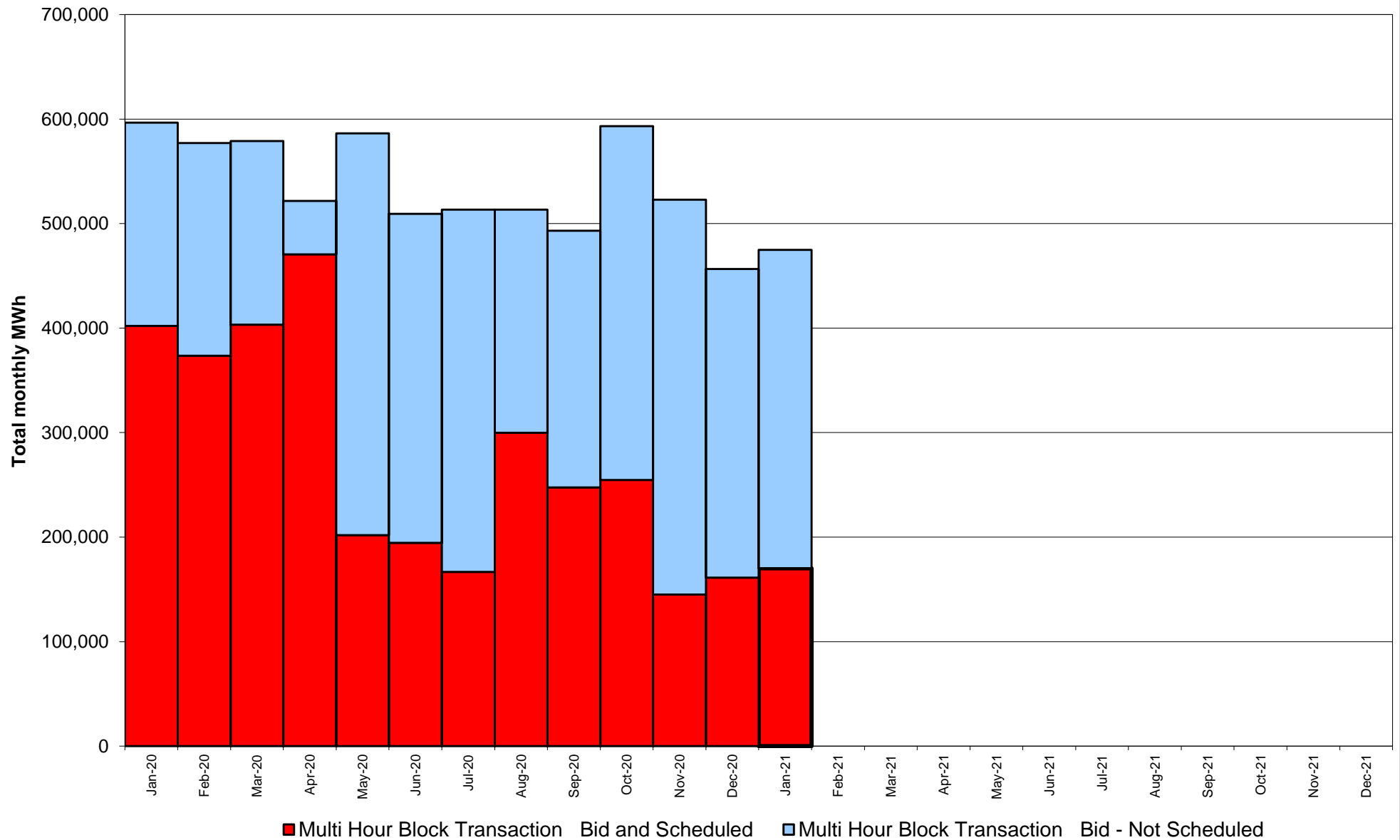
Virtual Load and Supply Zonal Statistics through January 31, 2021



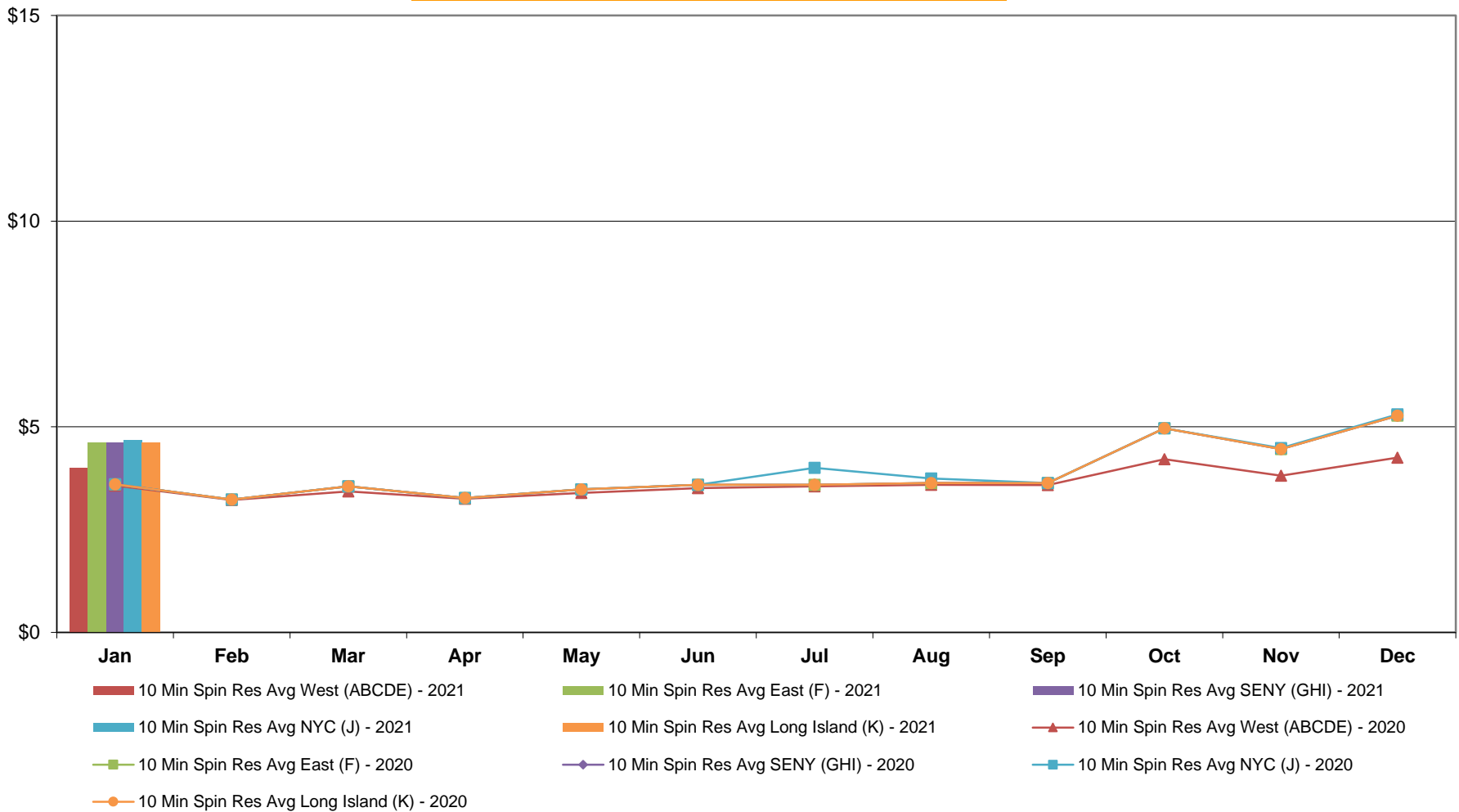
Virtual Load and Supply Zonal Statistics (Average MWh/day) - 2021

		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
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
	Feb-21							Feb-21							Feb-21		
	Mar-21							Mar-21							Mar-21		
	Apr-21							Apr-21							Apr-21		
	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
	Feb-21							Feb-21							Feb-21		
	Mar-21							Mar-21							Mar-21		
	Apr-21							Apr-21							Apr-21		
	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
	Feb-21							Feb-21							Feb-21		
	Mar-21							Mar-21							Mar-21		
	Apr-21							Apr-21							Apr-21		
	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
	Feb-21							Feb-21							Feb-21		
	Mar-21							Mar-21							Mar-21		
	Apr-21							Apr-21							Apr-21		
	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		

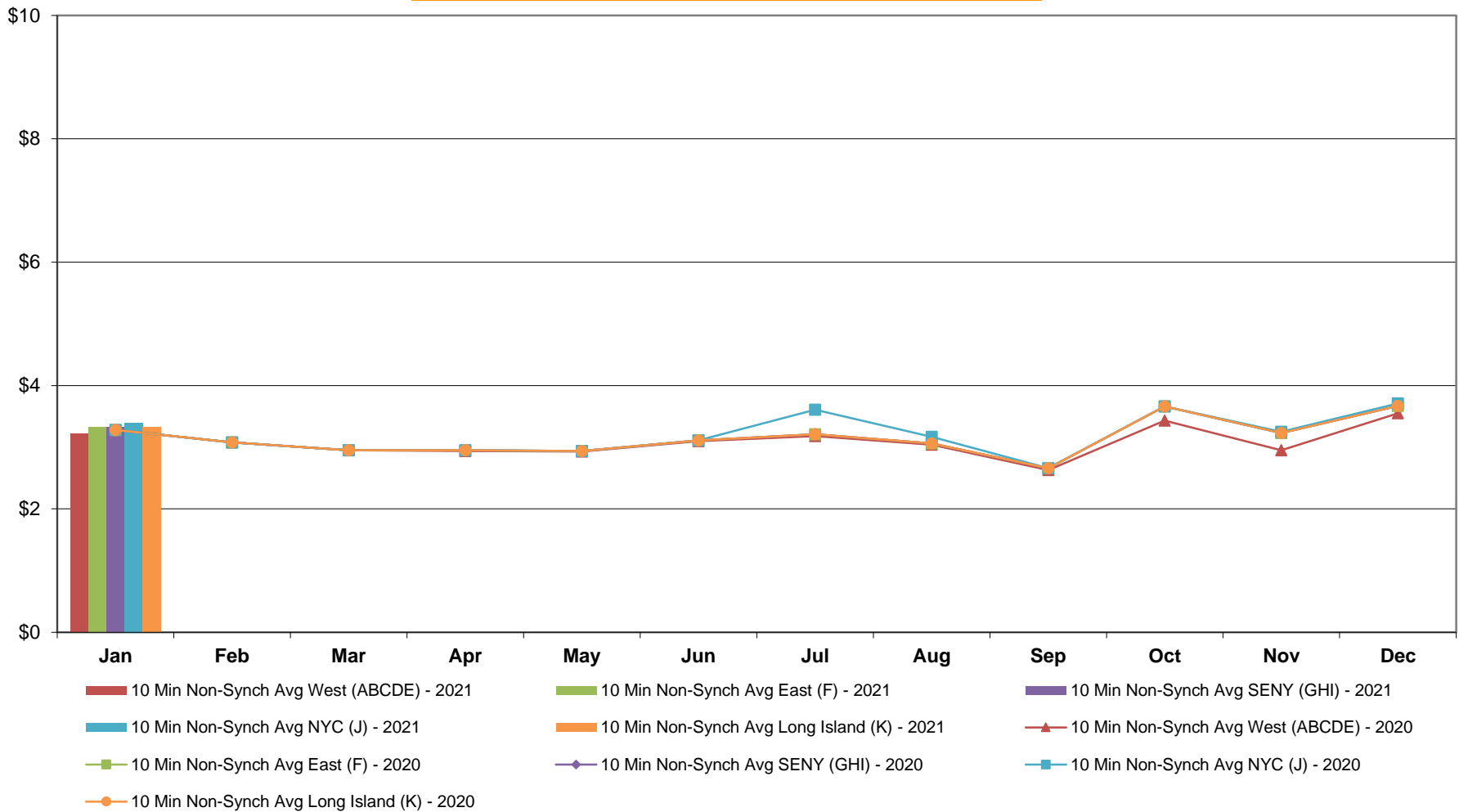
NYISO Multi Hour Block Transactions Monthly Total MWh



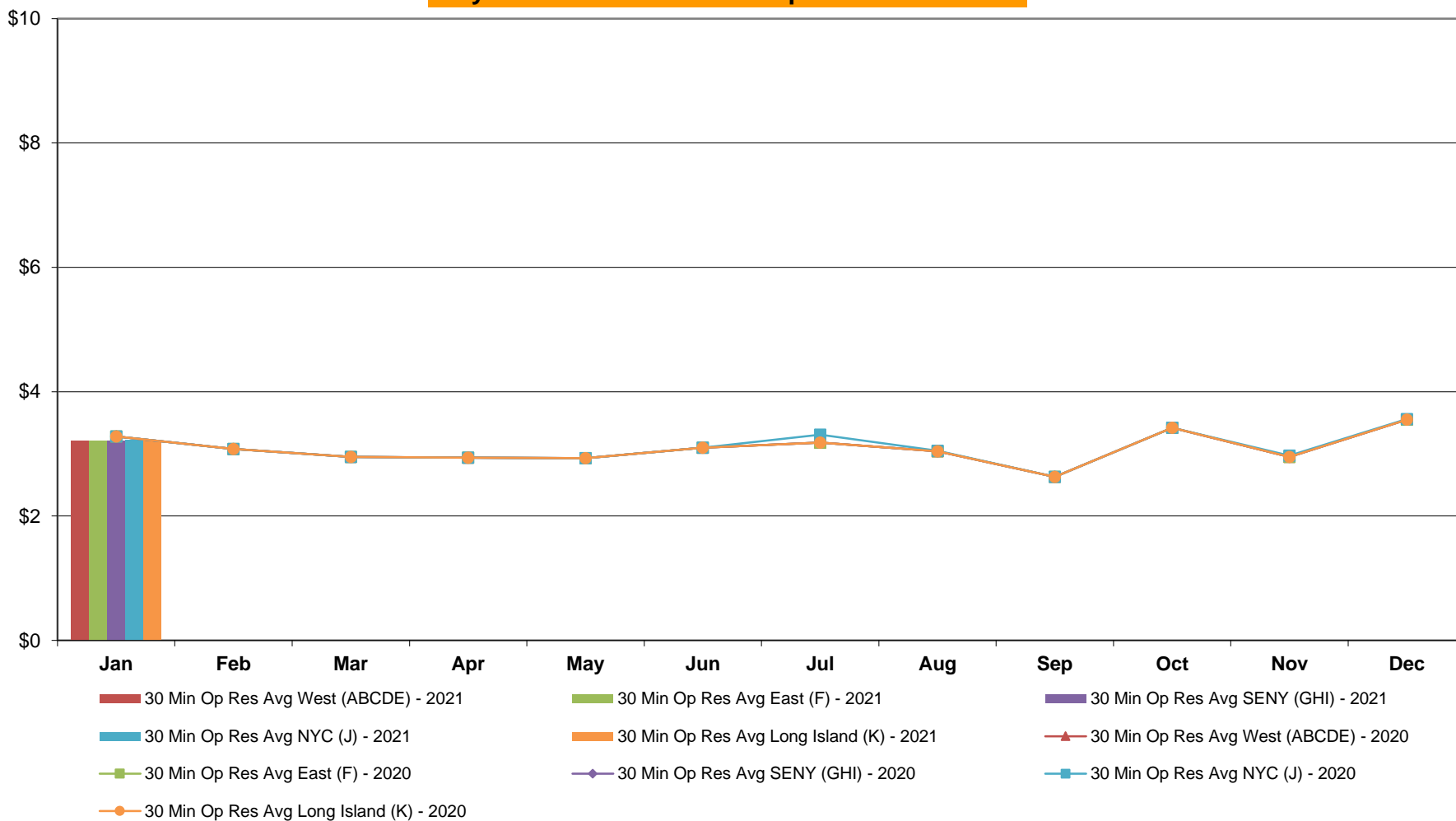
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - 10 Min Spin 2020 - 2021**



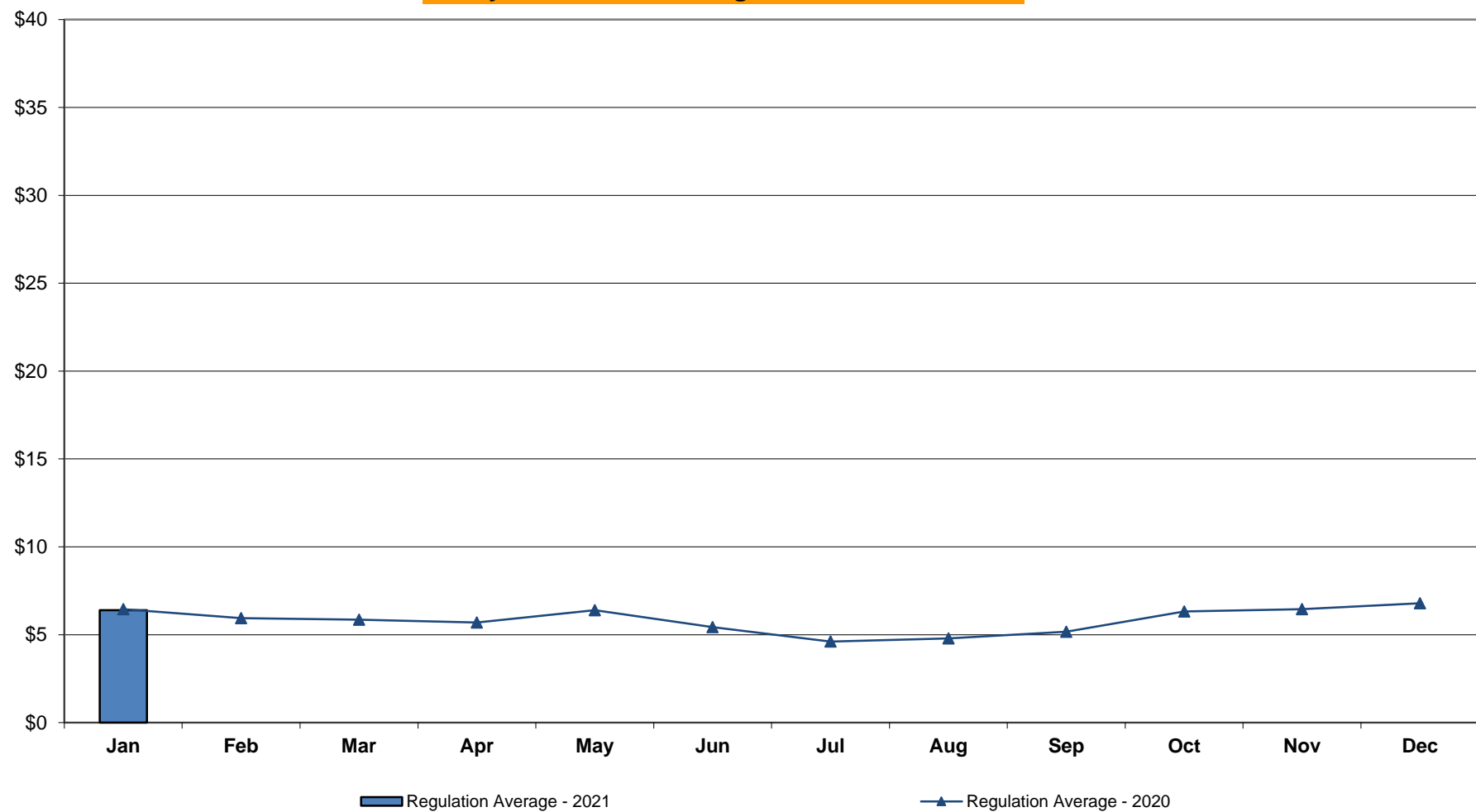
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - 10 Min Non-Synch 2020 - 2021**



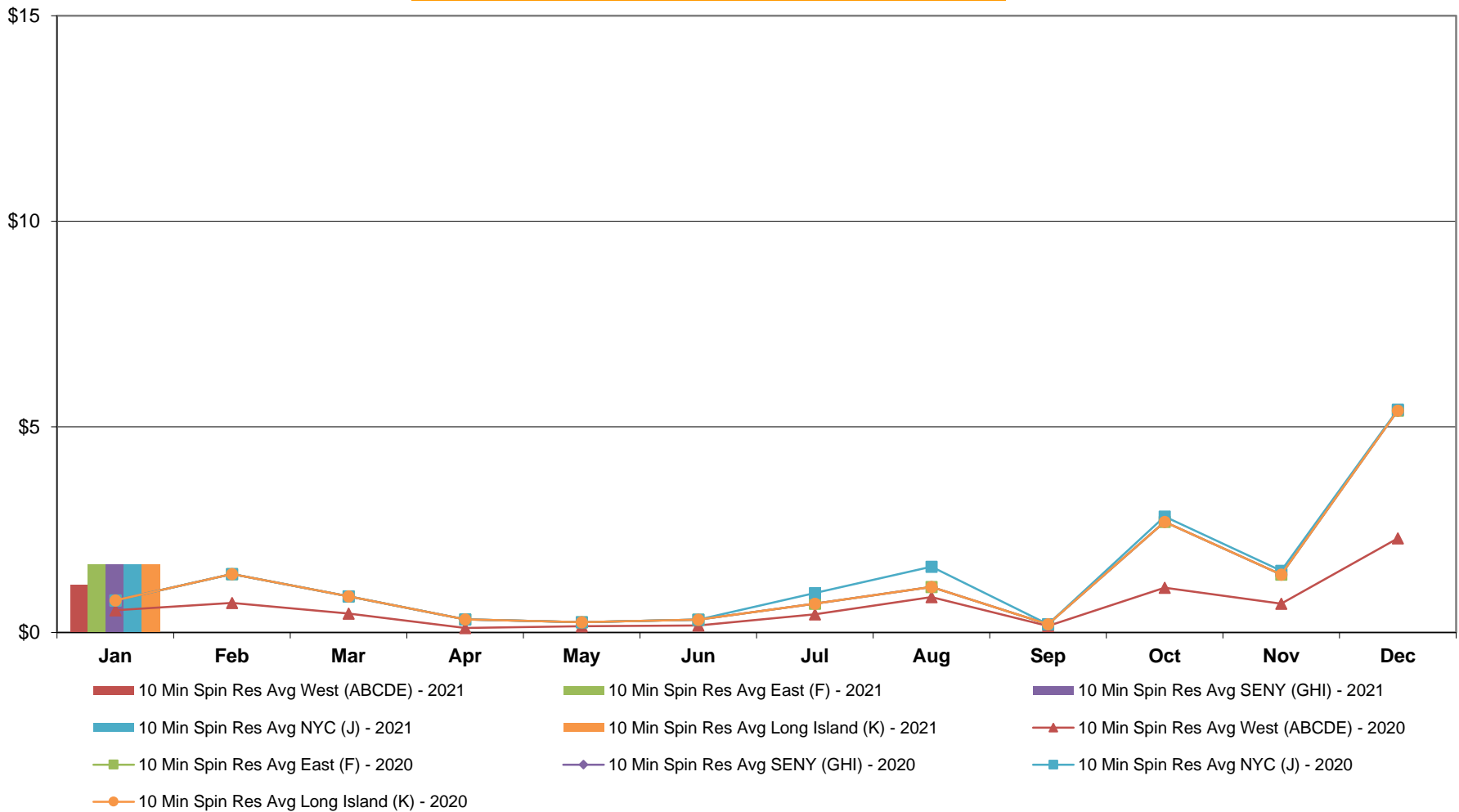
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - 30 Min Op Res 2020 - 2021**



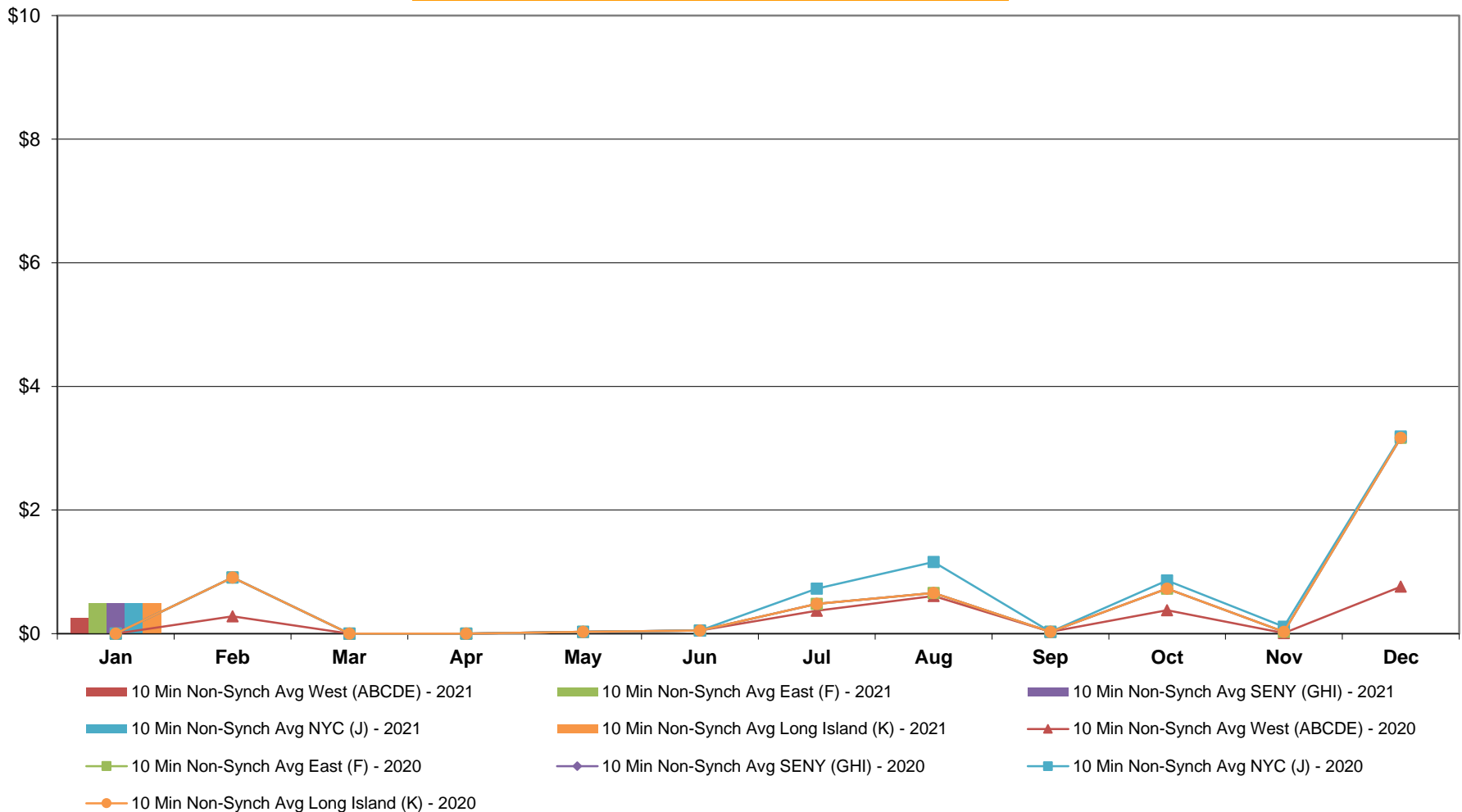
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - Regulation 2020 - 2021**



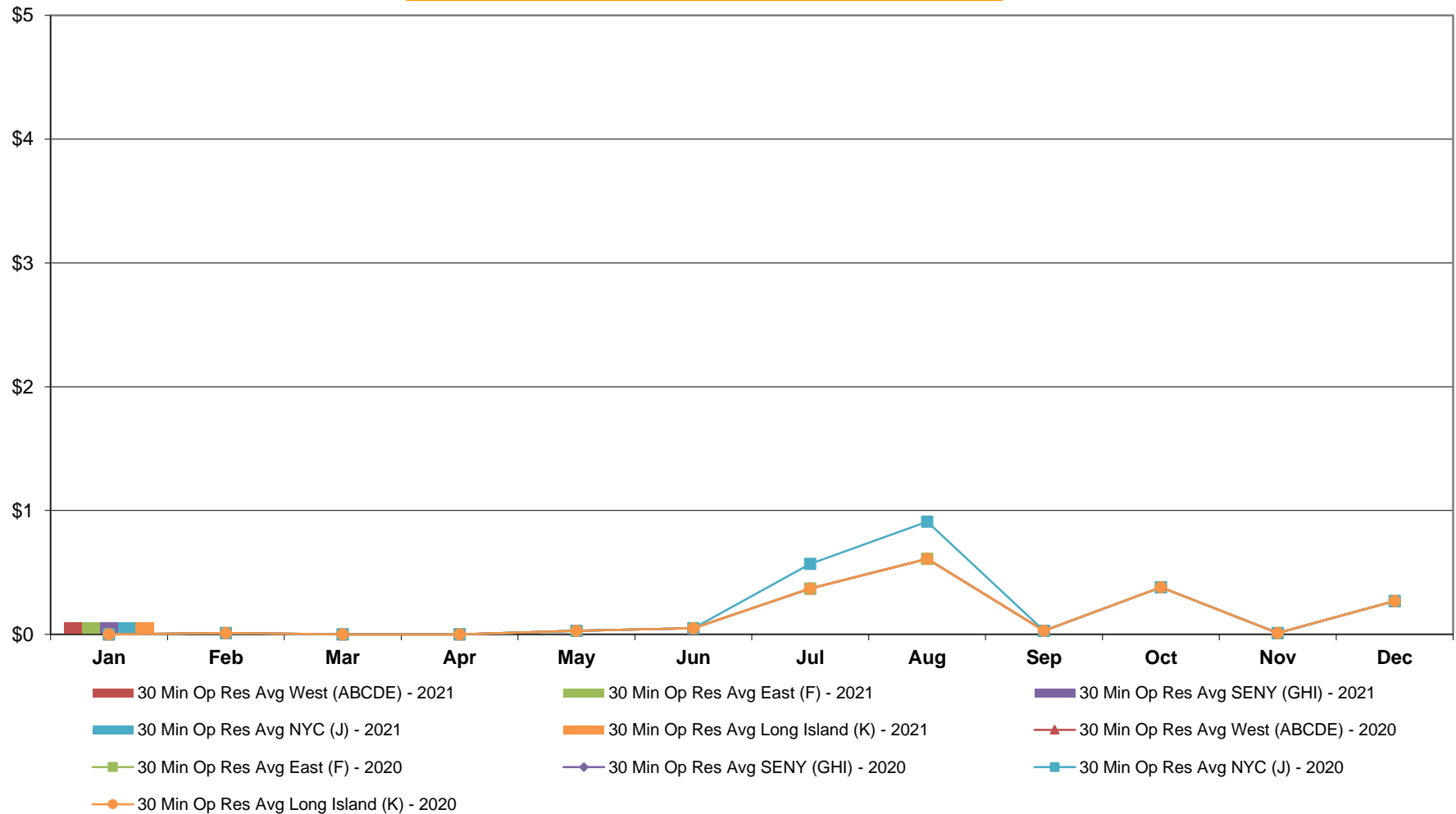
NYISO Monthly Average Ancillary Service Prices RTC Market - 10 Min Spin 2020 - 2021



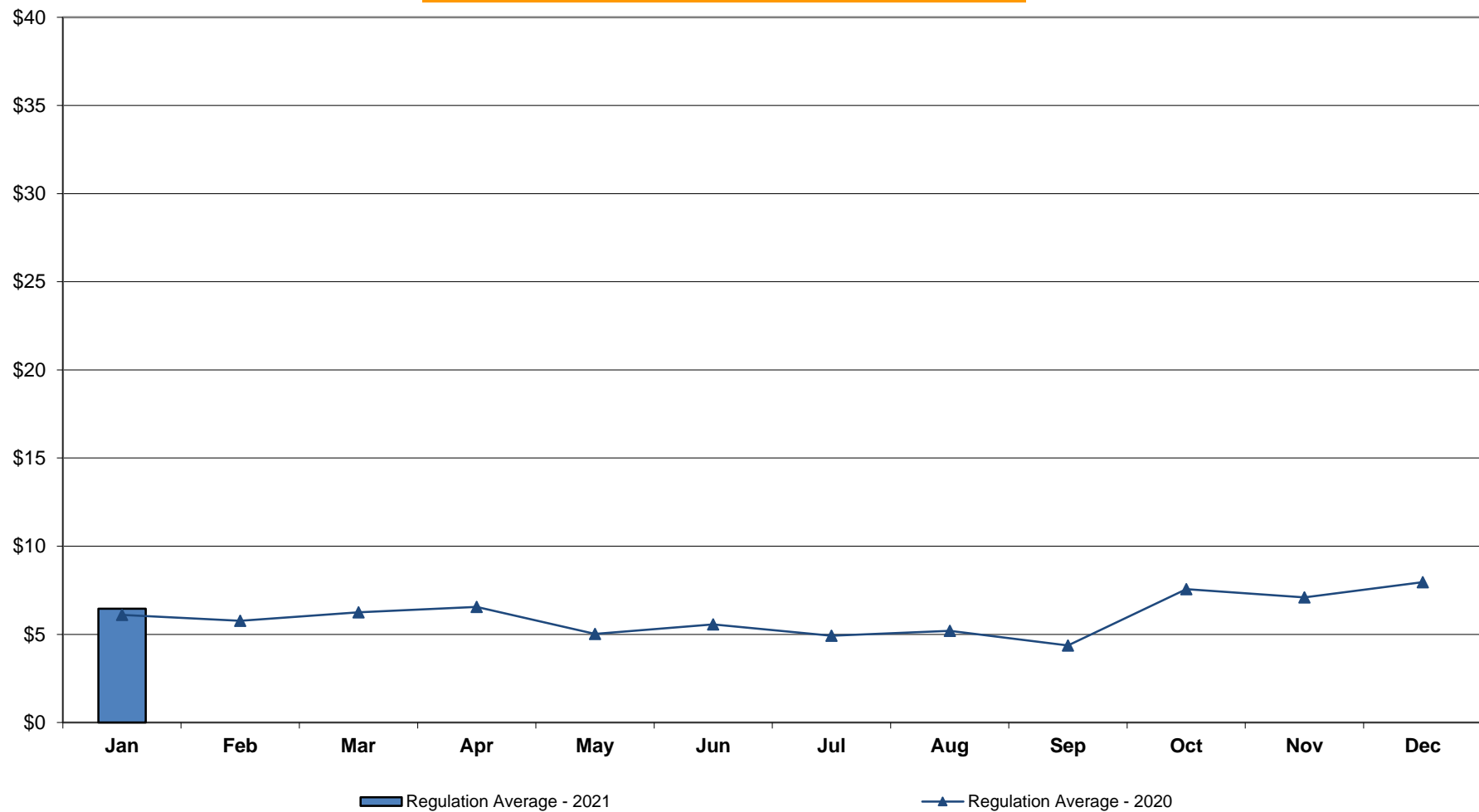
NYISO Monthly Average Ancillary Service Prices RTC Market - 10 Min Non-Synch 2020 - 2021



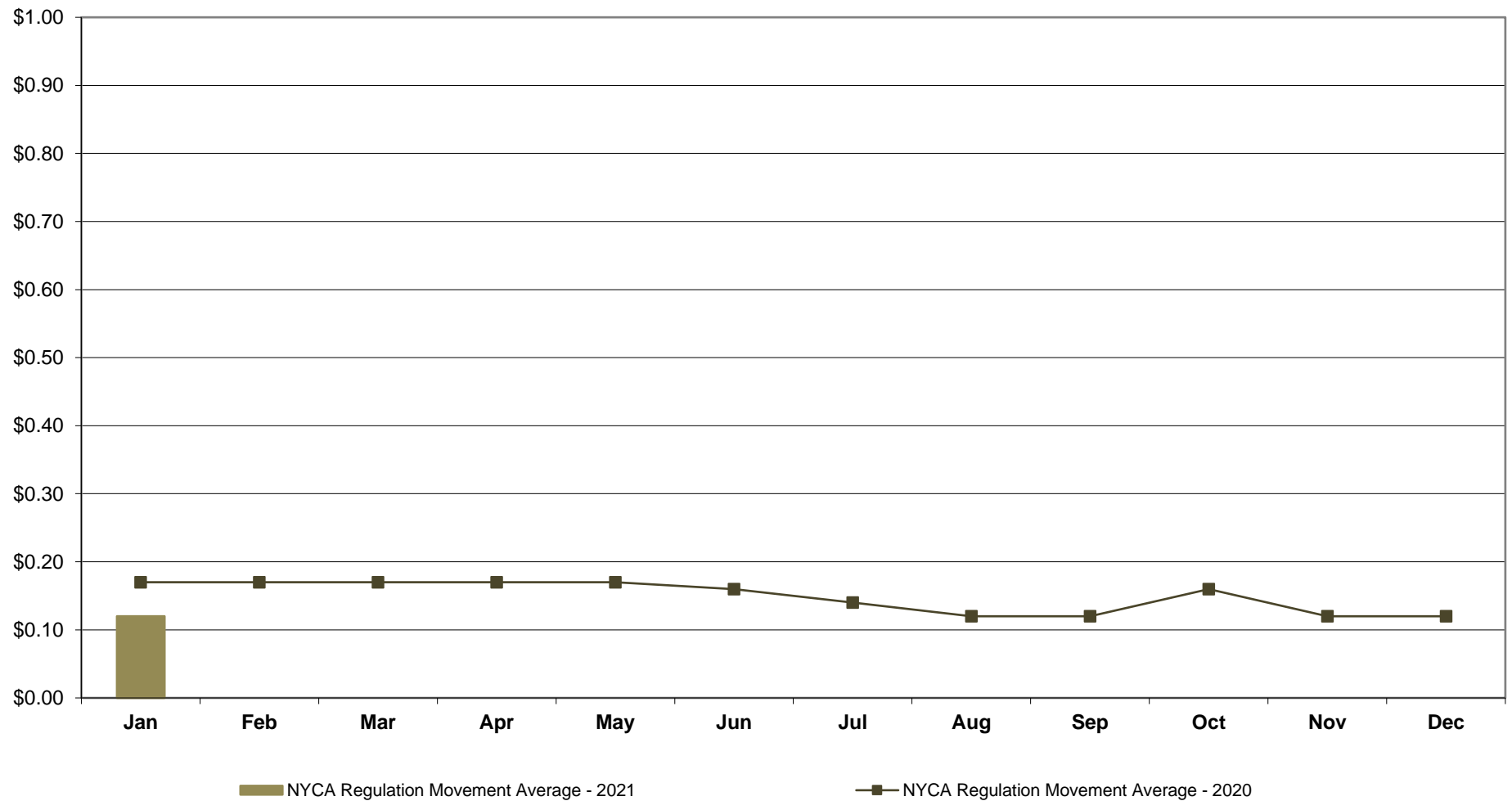
NYISO Monthly Average Ancillary Service Prices RTC Market - 30 Min Op Res 2020 - 2021



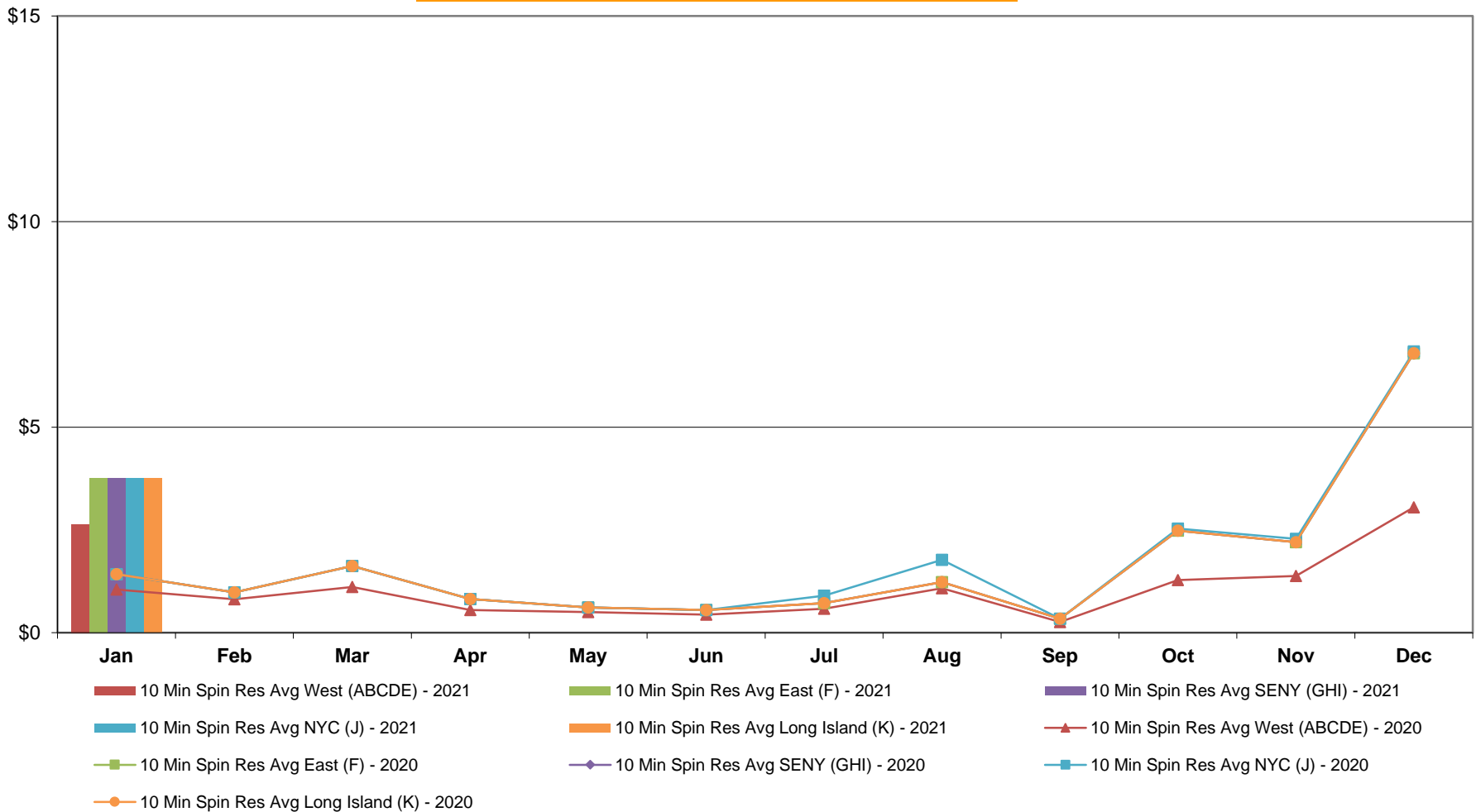
**NYISO Monthly Average Ancillary Service Prices
RTC Market - Regulation 2020 - 2021**



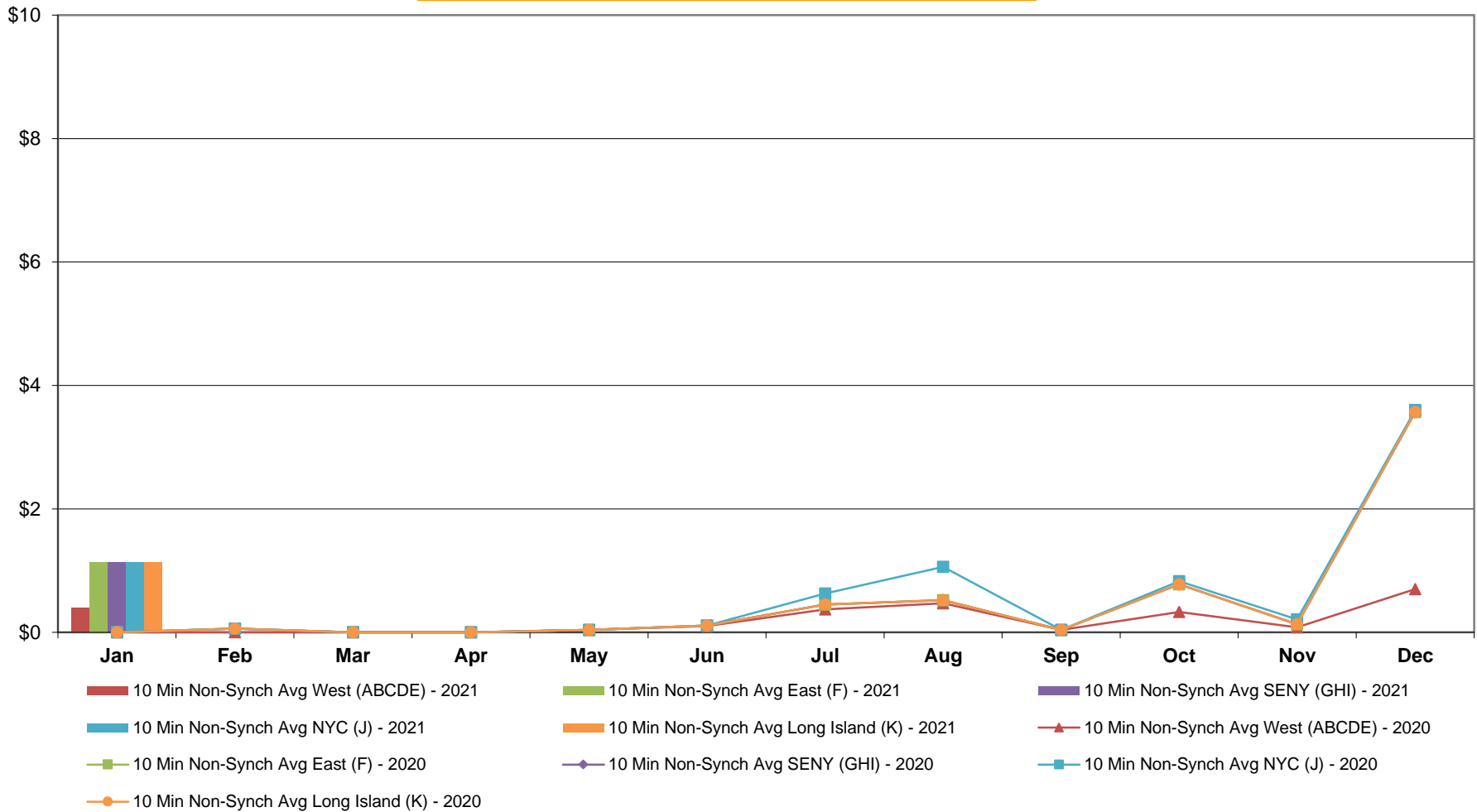
NYISO Monthly Average Ancillary Service Prices RTC Market - Regulation Movement 2020 - 2021



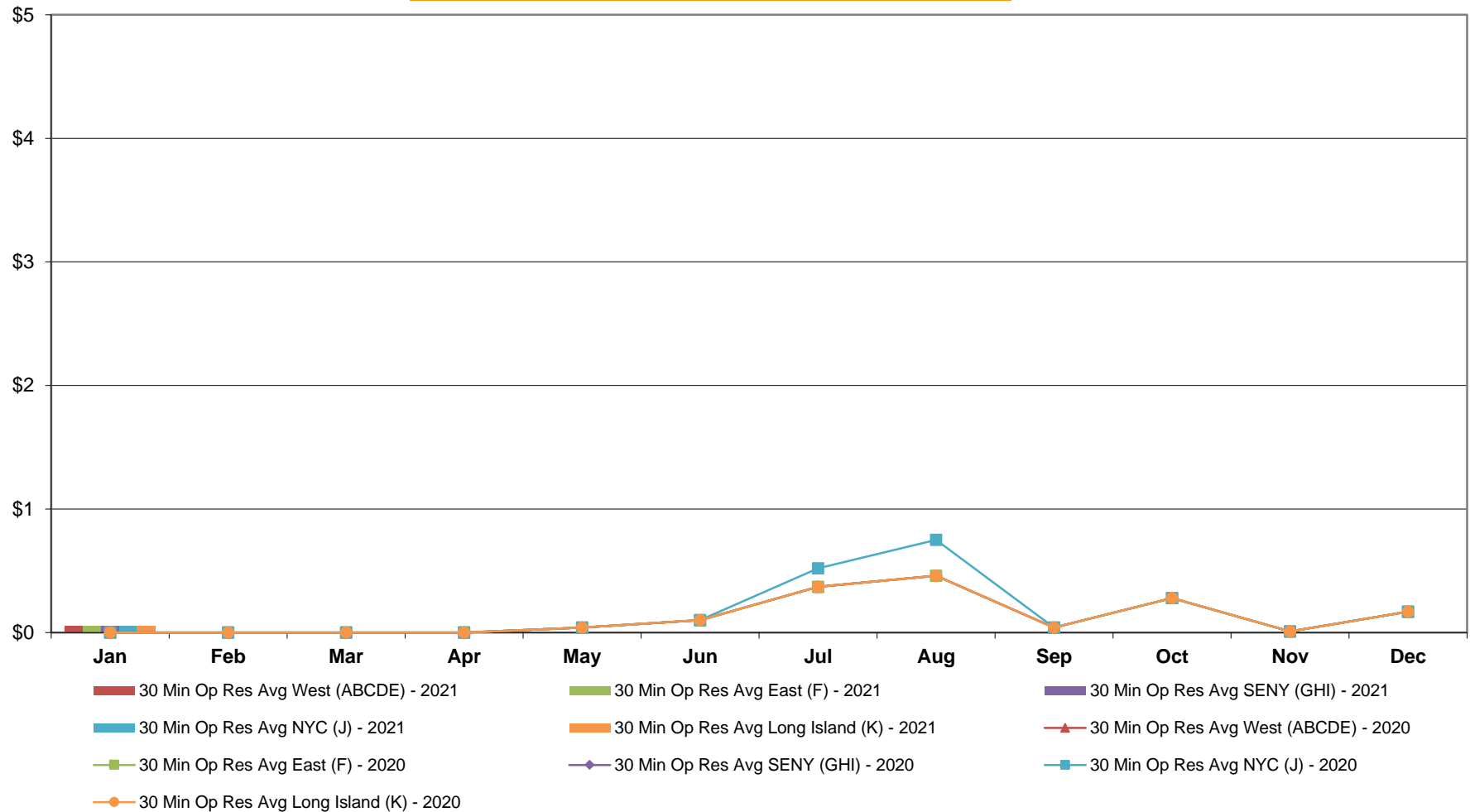
**NYISO Monthly Average Ancillary Service Prices
Real Time Market - 10 Min Spin 2020 - 2021**



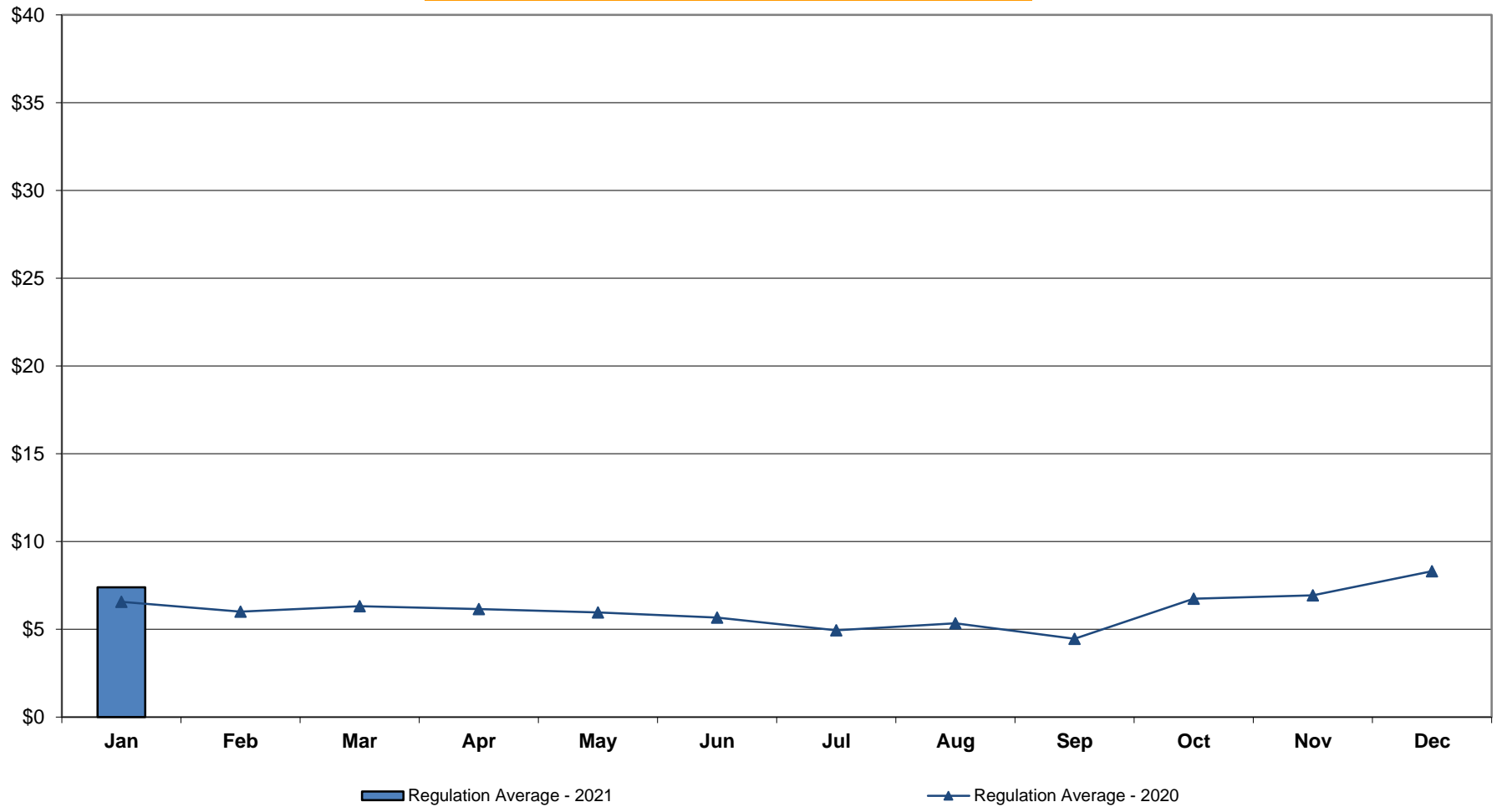
NYISO Monthly Average Ancillary Service Prices Real Time Market - 10 Min Non-Synch 2020 - 2021



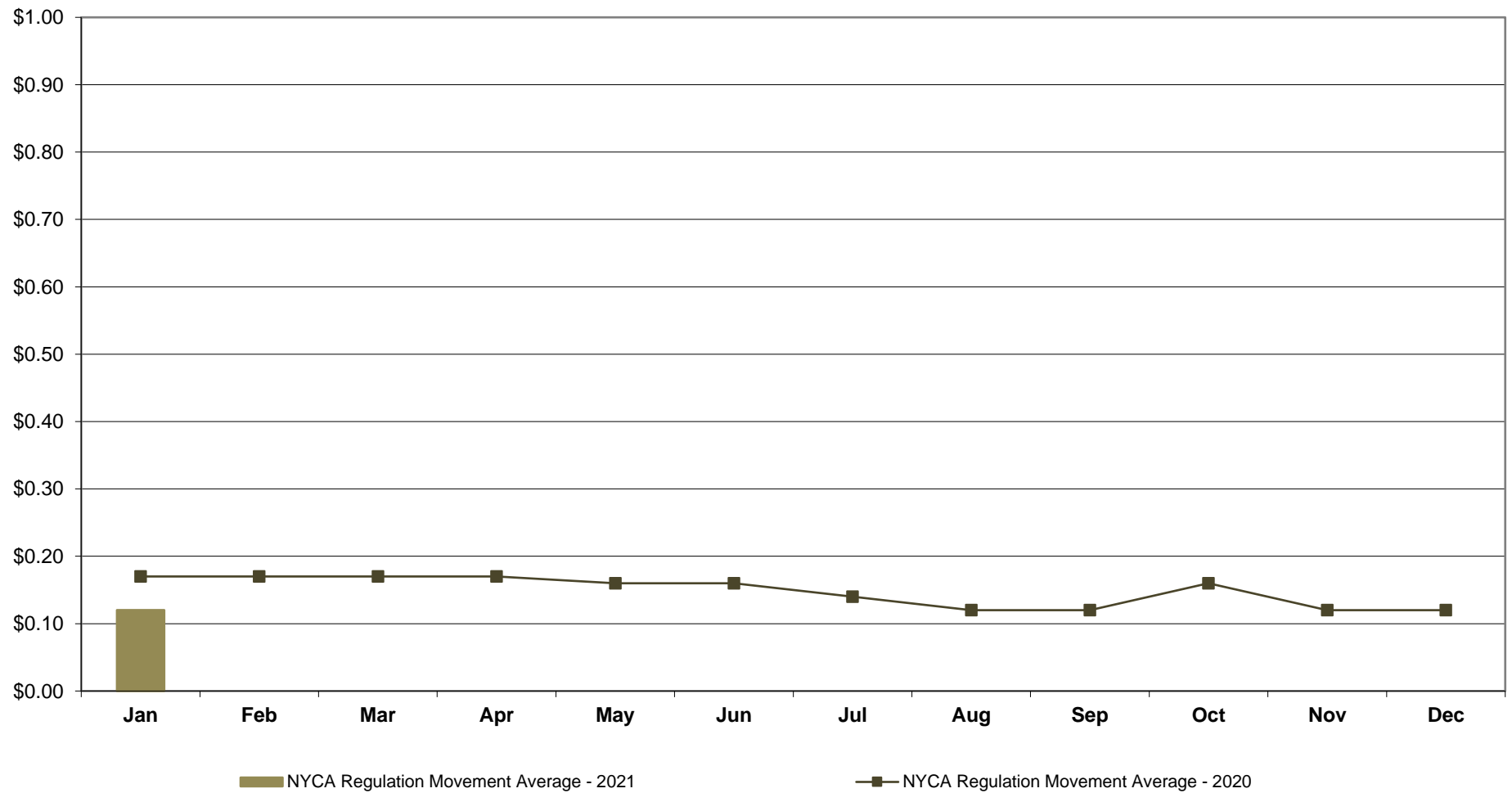
**NYISO Monthly Average Ancillary Service Prices
Real Time Market - 30 Min Op Res 2020 - 2021**



**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											
10 Min Spin NYC (J)	4.68											
10 Min Spin SENY (GHI)	4.61											
10 Min Spin East (F)	4.61											
10 Min Spin West (ABCDE)	4.01											
10 Min Non Synch Long Island (K)	3.32											
10 Min Non Synch NYC (J)	3.40											
10 Min Non Synch SENY (GHI)	3.32											
10 Min Non Synch East (F)	3.32											
10 Min Non Synch West (ABCDE)	3.22											
30 Min Long Island (K)	3.22											
30 Min NYC (J)	3.23											
30 Min SENY (GHI)	3.22											
30 Min East (F)	3.22											
30 Min West (ABCDE)	3.22											
Regulation	6.40											
<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

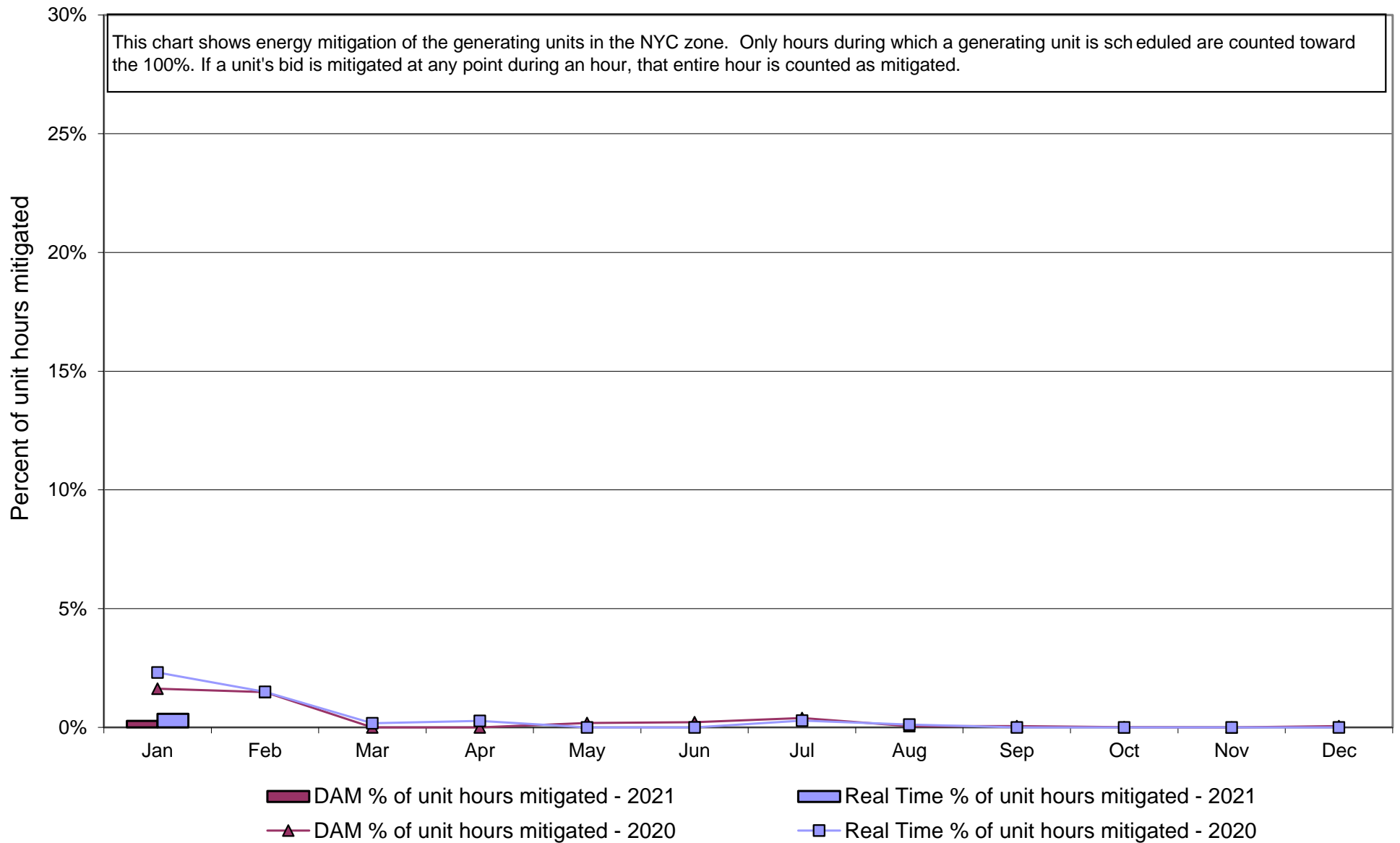
<u>2021</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
<u>RTC Market</u>												
10 Min Spin Long Island (K)	1.65											
10 Min Spin NYC (J)	1.65											
10 Min Spin SENY (GHI)	1.65											
10 Min Spin East (F)	1.65											
10 Min Spin West (ABCDE)	1.16											
10 Min Non Synch Long Island (K)	0.49											
10 Min Non Synch NYC (J)	0.49											
10 Min Non Synch SENY (GHI)	0.49											
10 Min Non Synch East (F)	0.49											
10 Min Non Synch West (ABCDE)	0.26											
30 Min Long Island (K)	0.10											
30 Min NYC (J)	0.10											
30 Min SENY (GHI)	0.10											
30 Min East (F)	0.10											
30 Min West (ABCDE)	0.10											
Regulation	6.46											
NYCA Regulation Movement	0.12											
<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

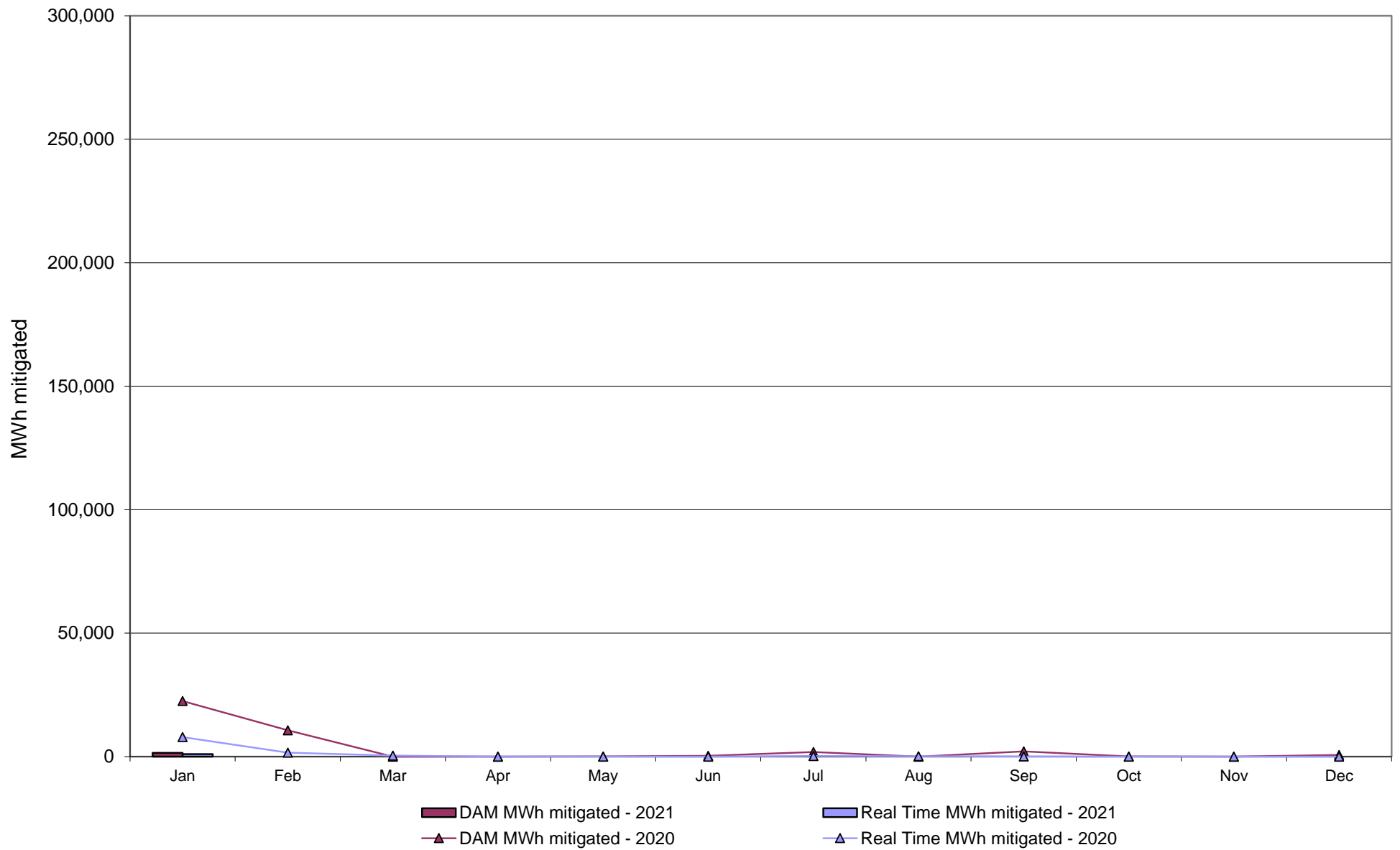
<u>2021</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
<u>Real Time Market</u>												
10 Min Spin Long Island (K)	3.75											
10 Min Spin NYC (J)	3.75											
10 Min Spin SENY (GHI)	3.75											
10 Min Spin East (F)	3.75											
10 Min Spin West (ABCDE)	2.64											
10 Min Non Synch Long Island (K)	1.13											
10 Min Non Synch NYC (J)	1.13											
10 Min Non Synch SENY (GHI)	1.13											
10 Min Non Synch East (F)	1.13											
10 Min Non Synch West (ABCDE)	0.40											
30 Min Long Island (K)	0.05											
30 Min NYC (J)	0.05											
30 Min SENY (GHI)	0.05											
30 Min East (F)	0.05											
30 Min West (ABCDE)	0.05											
Regulation	7.39											
NYCA Regulation Movement	0.12											
<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

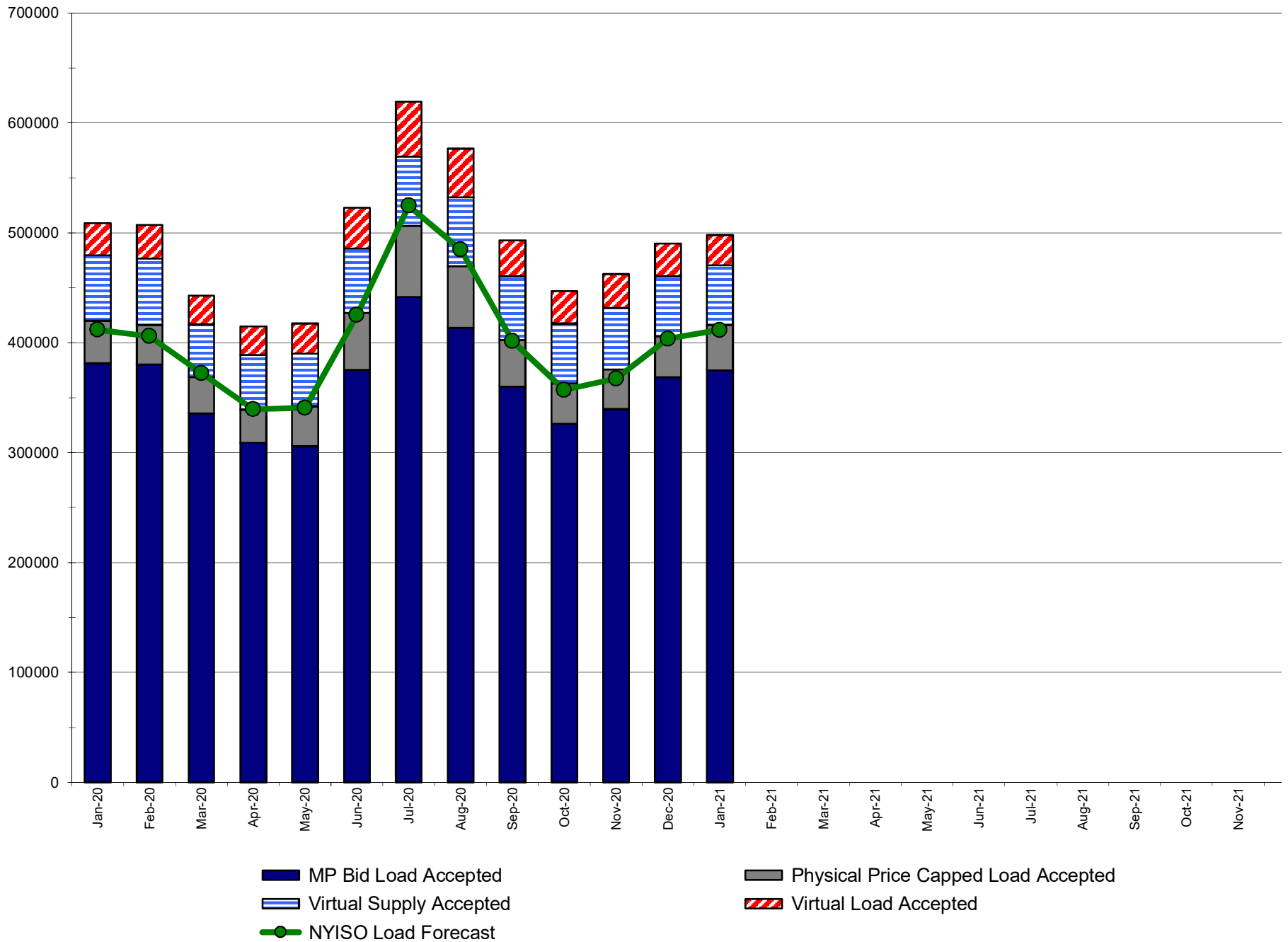
Percentage of committed unit-hours mitigated



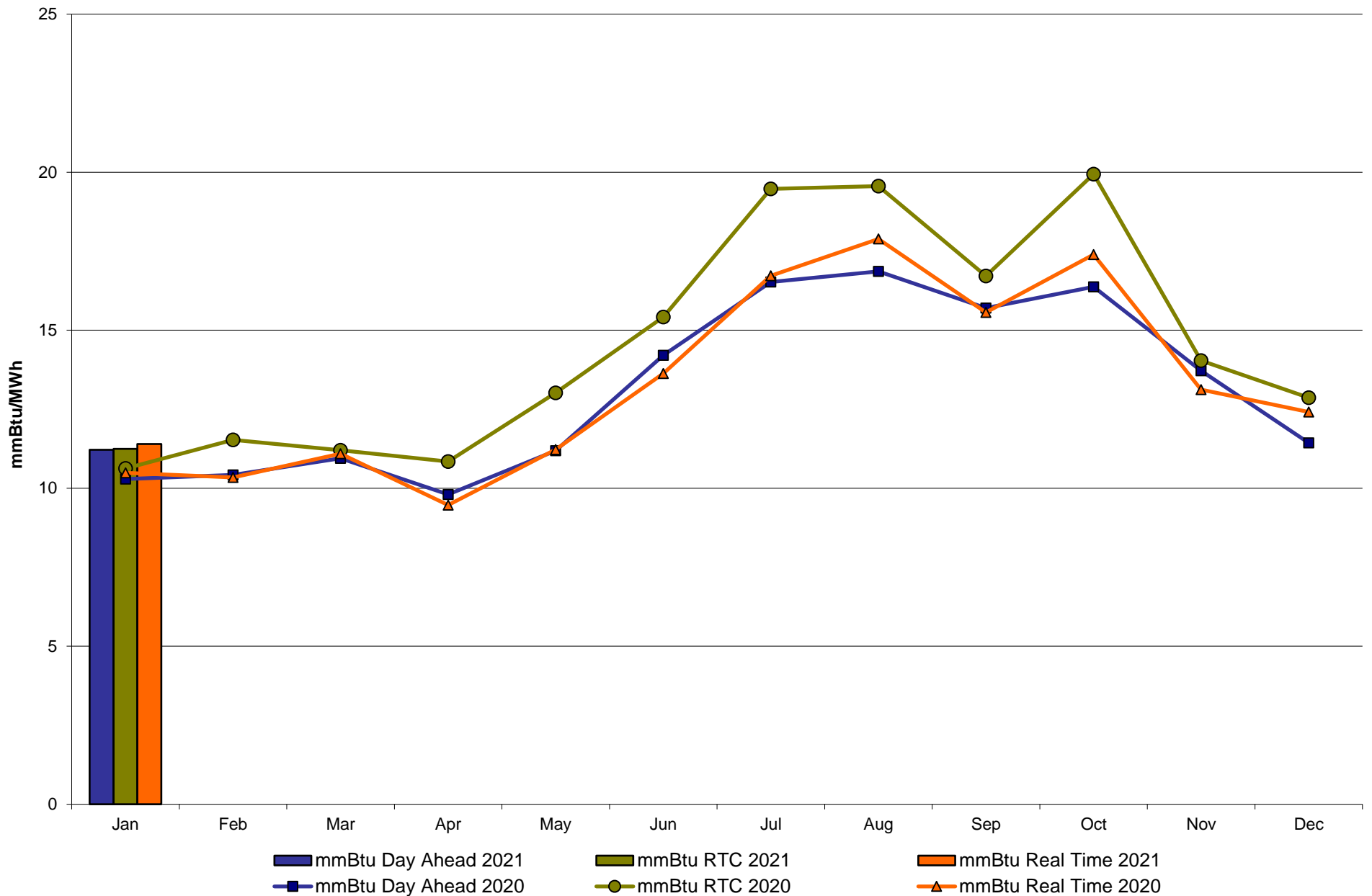
NYISO In City Energy Mitigation (NYC Zone) 2020 - 2021
Monthly megawatt hours mitigated



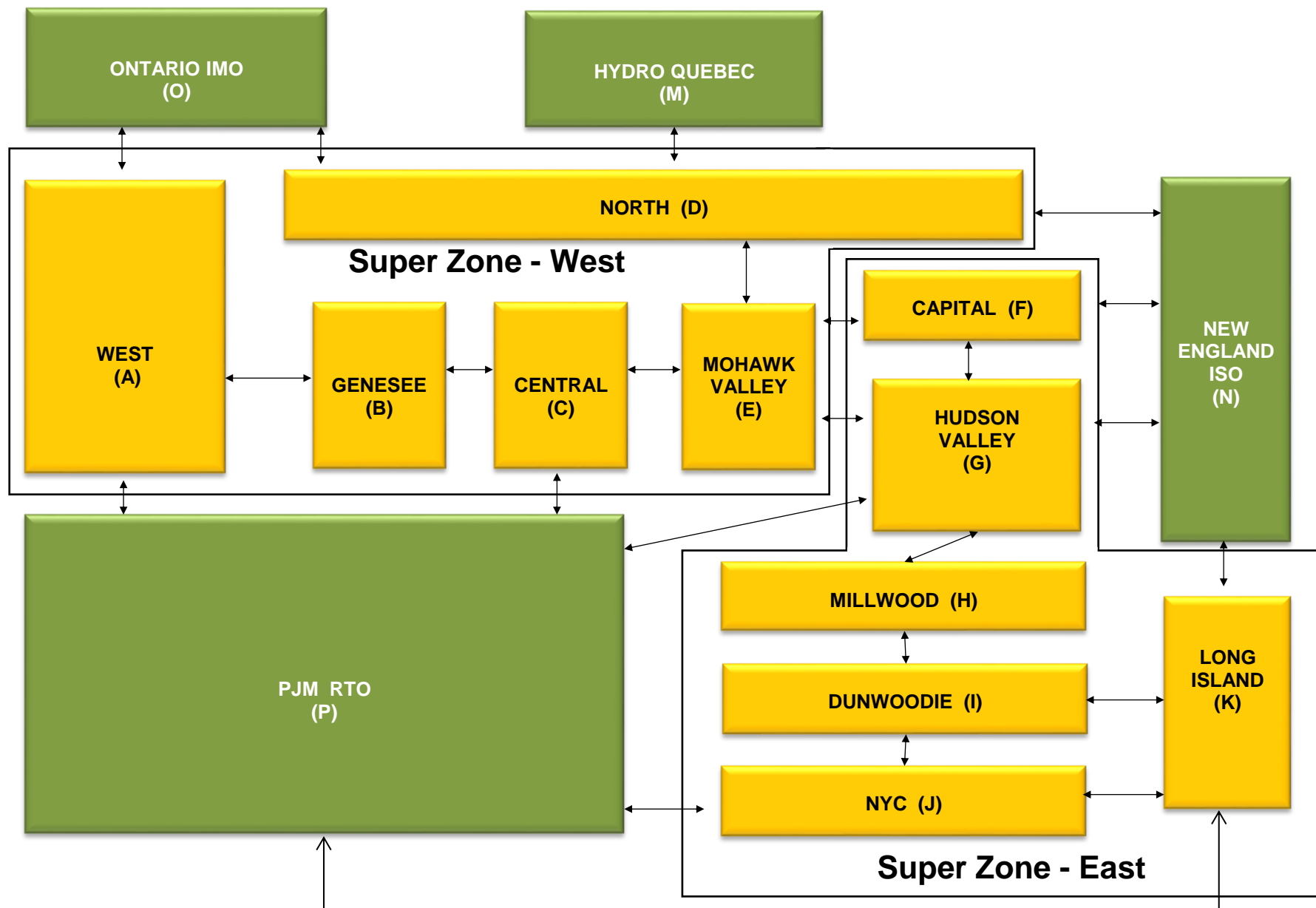
NYISO Average Daily DAM Load Bid Summary



Monthly Implied Heat Rate 2020-2021



NYISO LBMP ZONES



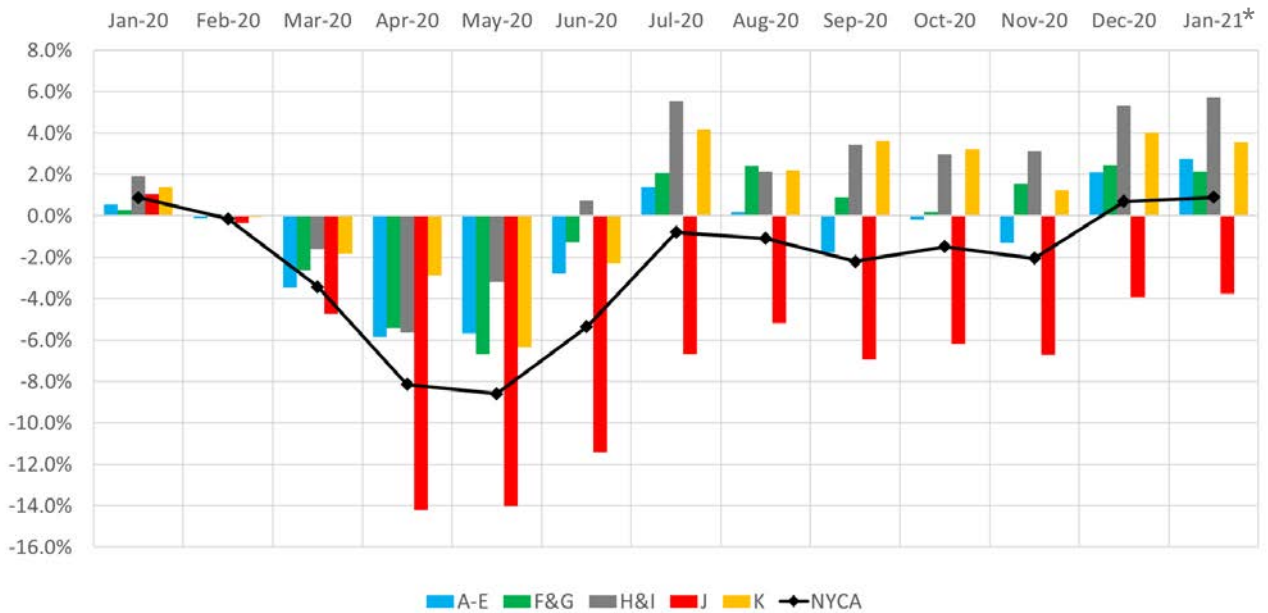
Billing Codes for Chart C

<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

COVID-19: Estimated Load Impacts

Regional Energy Impacts

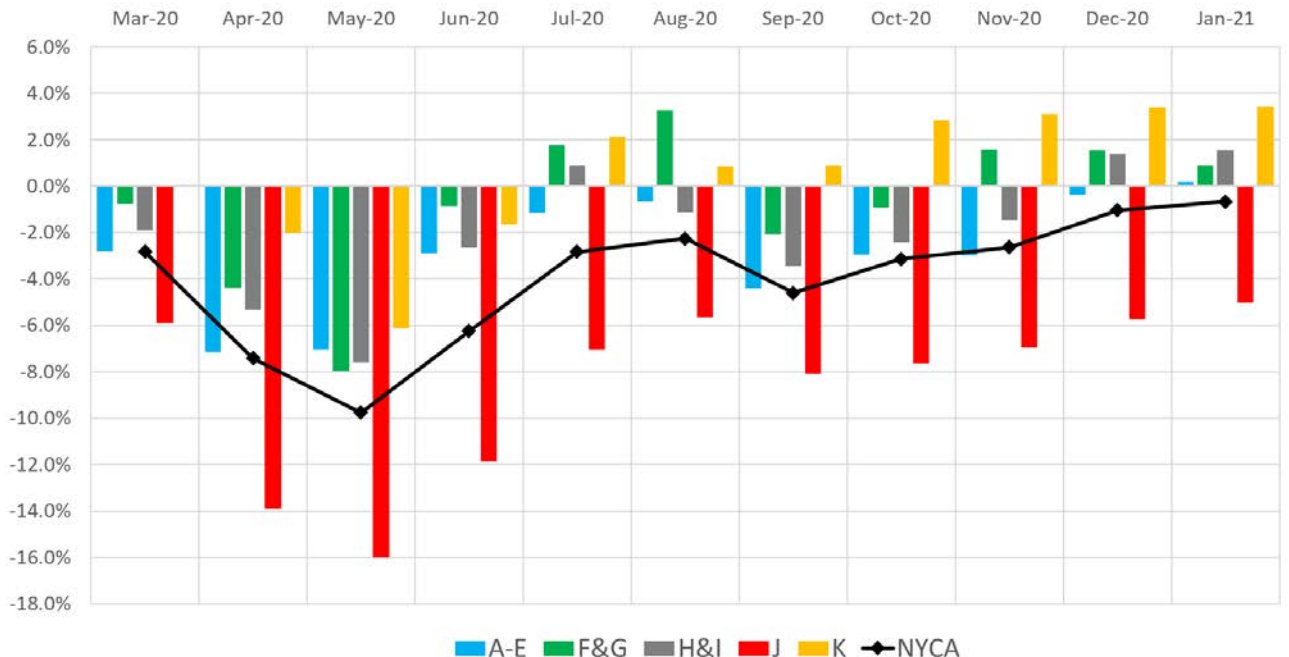
Weather Normalized and Backcast Monthly Energy Use - % Versus Expected (Areas)



* Provisional results for January 2021
Final Estimates will be updated on 2/17

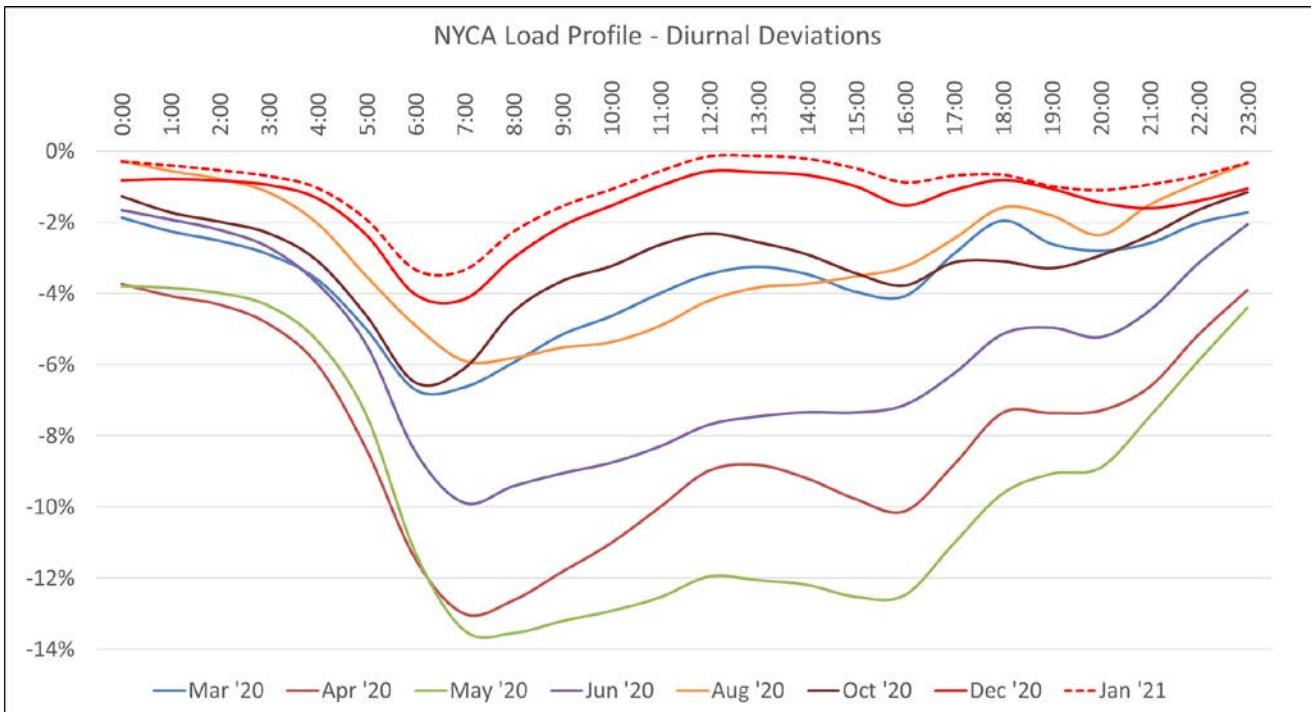
Regional Peak Impacts

Monthly Peak Demand - % Versus Expected (Areas)



COVID-19: Estimated Load Impacts

NYCA Hourly Impacts versus Expected*

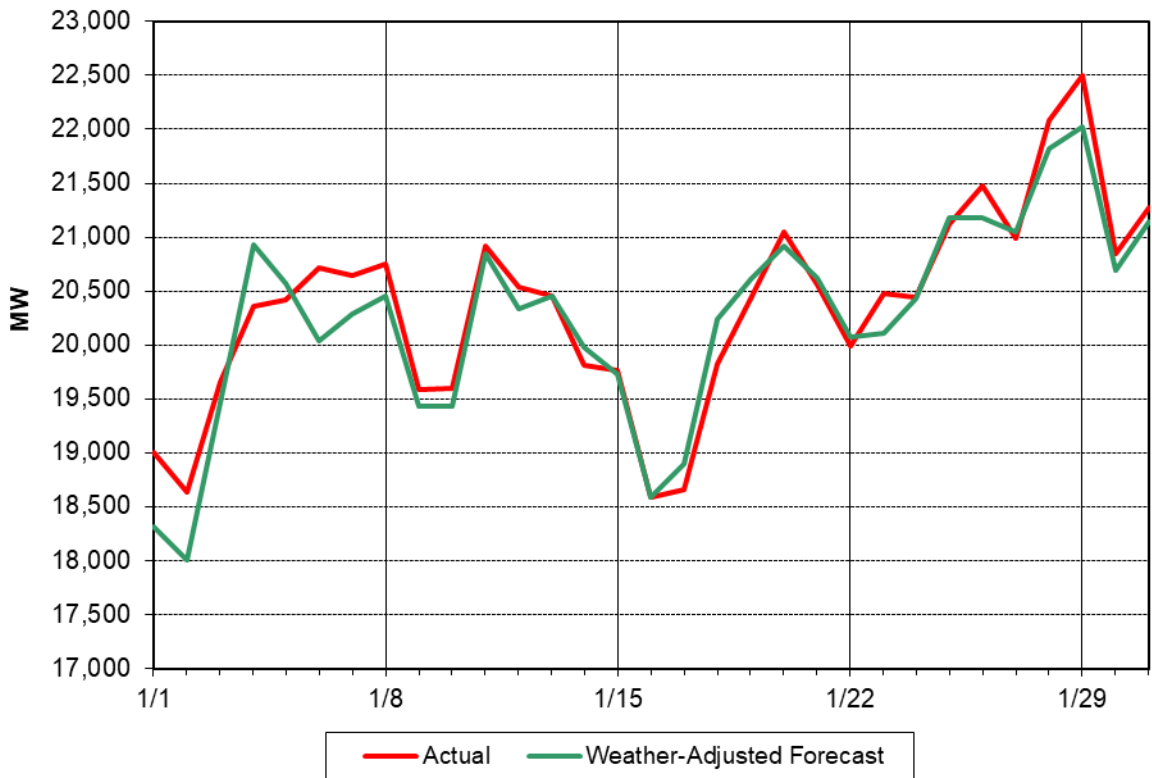


Percent Deviations

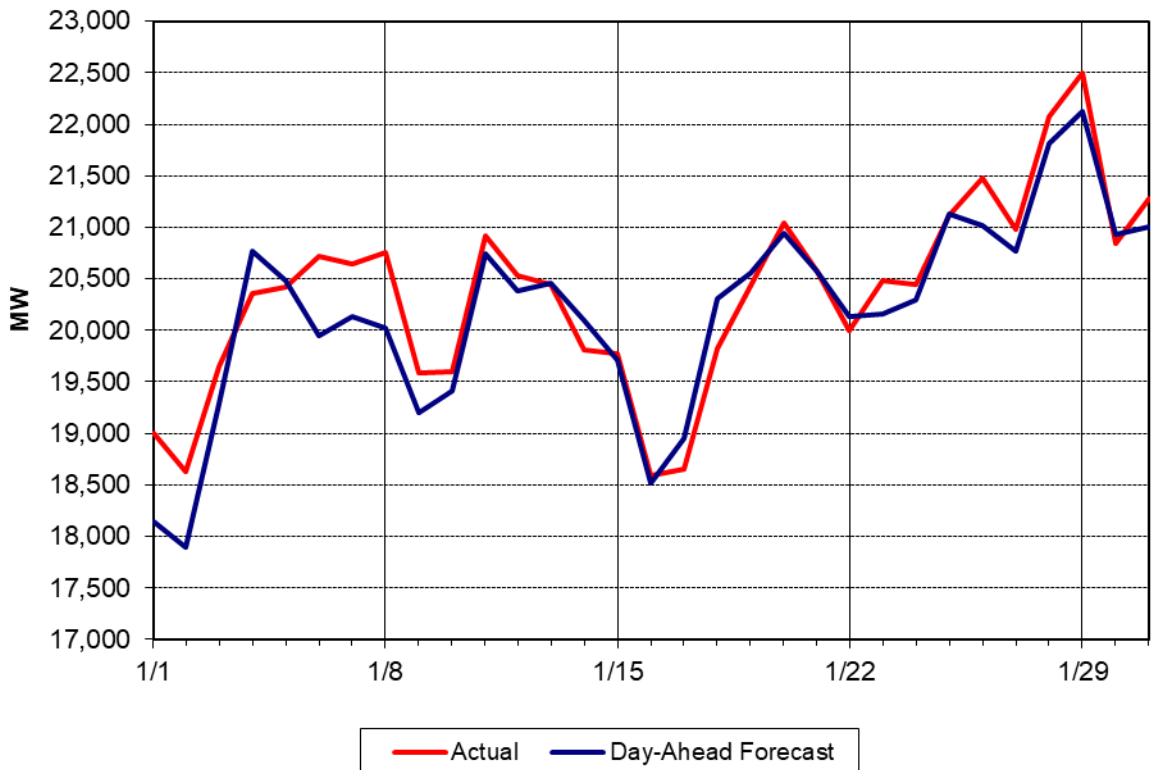
Hour	Mar '20	Apr '20	May '20	Jun '20	Jul '20	Aug '20	Sep '20	Oct '20	Nov '20	Dec '20	Jan '21
0:00	-2%	-4%	-4%	-2%	-1%	0%	-1%	-1%	-2%	-1%	0%
1:00	-2%	-4%	-4%	-2%	-1%	-1%	-1%	-2%	-2%	-1%	0%
2:00	-3%	-4%	-4%	-2%	-1%	-1%	-2%	-2%	-2%	-1%	-1%
3:00	-3%	-5%	-4%	-3%	-1%	-1%	-2%	-2%	-2%	-1%	-1%
4:00	-4%	-6%	-5%	-4%	-2%	-2%	-3%	-3%	-3%	-1%	-1%
5:00	-5%	-8%	-7%	-5%	-4%	-4%	-5%	-5%	-4%	-2%	-2%
6:00	-7%	-11%	-11%	-8%	-5%	-5%	-7%	-6%	-5%	-4%	-3%
7:00	-7%	-13%	-13%	-10%	-6%	-6%	-7%	-6%	-5%	-4%	-3%
8:00	-6%	-13%	-14%	-9%	-6%	-6%	-6%	-5%	-4%	-3%	-2%
9:00	-5%	-12%	-13%	-9%	-6%	-6%	-6%	-4%	-3%	-2%	-2%
10:00	-5%	-11%	-13%	-9%	-6%	-5%	-5%	-3%	-2%	-2%	-1%
11:00	-4%	-10%	-13%	-8%	-5%	-5%	-5%	-3%	-2%	-1%	-1%
12:00	-3%	-9%	-12%	-8%	-4%	-4%	-4%	-2%	-2%	-1%	0%
13:00	-3%	-9%	-12%	-7%	-4%	-4%	-4%	-3%	-2%	-1%	0%
14:00	-3%	-9%	-12%	-7%	-4%	-4%	-4%	-3%	-2%	-1%	0%
15:00	-4%	-10%	-13%	-7%	-4%	-4%	-5%	-3%	-2%	-1%	0%
16:00	-4%	-10%	-12%	-7%	-4%	-3%	-5%	-4%	-3%	-2%	-1%
17:00	-3%	-9%	-11%	-6%	-3%	-2%	-4%	-3%	-3%	-1%	-1%
18:00	-2%	-7%	-10%	-5%	-2%	-2%	-4%	-3%	-2%	-1%	-1%
19:00	-3%	-7%	-9%	-5%	-2%	-2%	-5%	-3%	-2%	-1%	-1%
20:00	-3%	-7%	-9%	-5%	-2%	-2%	-4%	-3%	-3%	-1%	-1%
21:00	-3%	-7%	-7%	-4%	-2%	-2%	-3%	-2%	-3%	-2%	-1%
22:00	-2%	-5%	-6%	-3%	-1%	-1%	-1%	-2%	-2%	-1%	-1%
23:00	-2%	-4%	-4%	-2%	-1%	0%	-1%	-1%	-2%	-1%	0%

Peak Hour

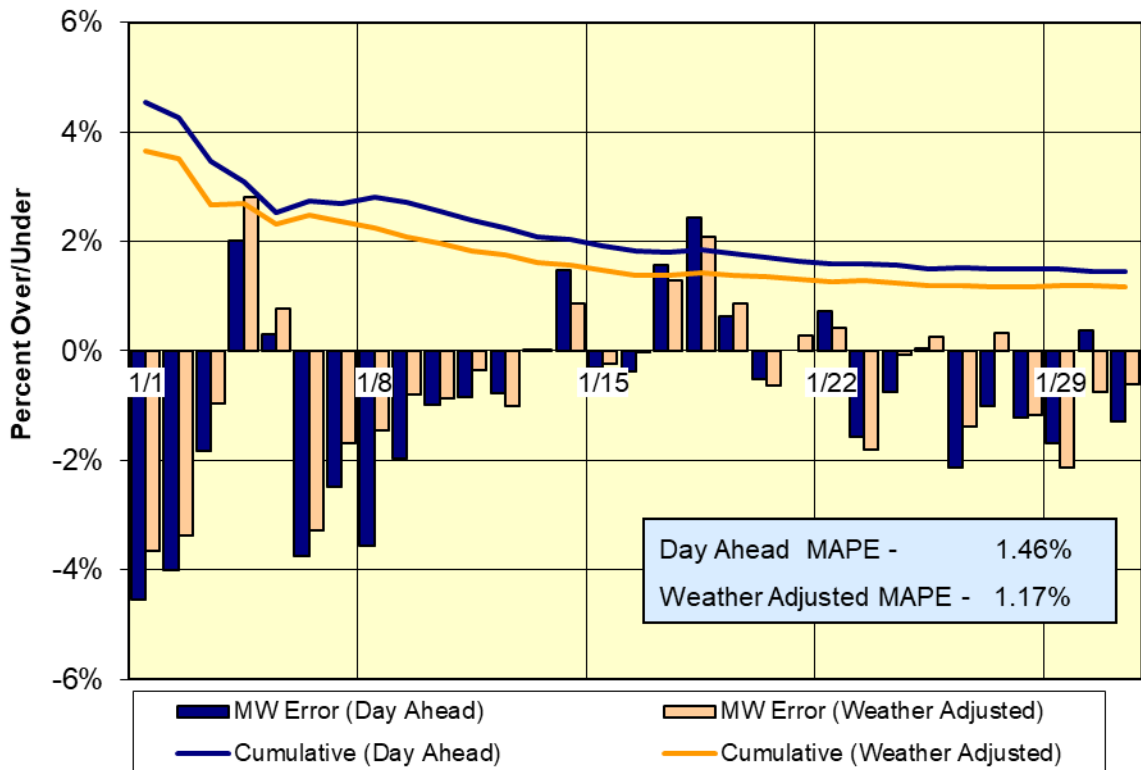
NYISO Daily Peak Load - January 2021
Actual vs. Weather-Adjusted Forecast



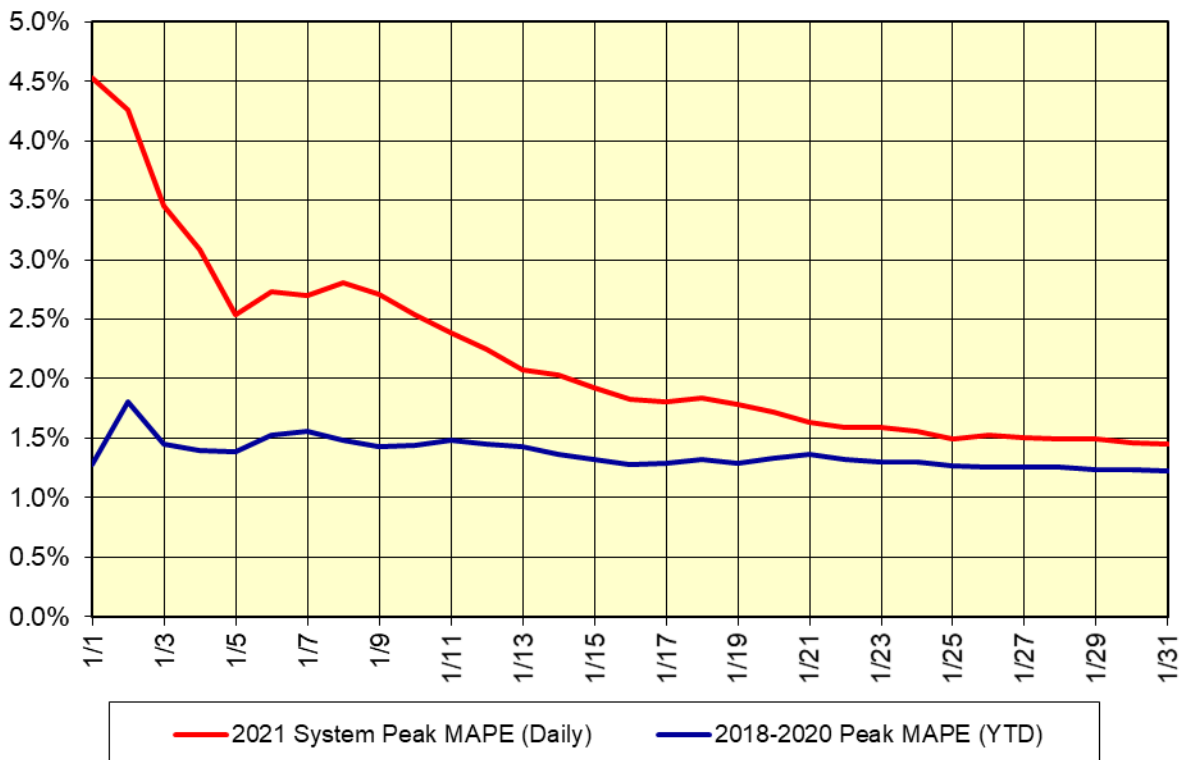
NYISO Daily Peak Load - January 2021
Actual vs. Forecast



Day Ahead Peak Forecast - January 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 – January 2021**

Filing Date	Filing Summary	Docket	Order Date	Order Summary
11/02/2020	NYISO and Niagara Mohawk Power Corporation (National Grid) Joint 205 filing of SGIA (SA 2573) among NYISO, National Grid and Grissom Solar, LLC	ER21-451-000	01/12/2021	Order accepted agreement effective 11/12/2020, as requested
11/10/2020	NYISO and New York State Electric & Gas Corporation ("NYSEG") joint 205 filing of an Amended and Restated LGIA (SA 1894) between NYISO, NYSEG, and Stony Creek Energy LLC	ER21-361-000	01/07/2021	Order accepted LGIA effective 10/28/2020, as requested
11/23/2020	NYISO and Niagara Mohawk Power Corporation (National Grid) Joint 205 filing of SGIA (SA 2574) among NYISO, National Grid and Grissom Solar, LLC	ER21-452-000	01/13/2021	Order accepted SGIA effective 11/9/2020, as requested
11/24/2020	NYISO and Niagara Mohawk Power Corporation ("National Grid") joint filing of a SGIA (SA 2572) among NYISO, National Grid, and Bakerstand Solar, LLC	ER21-465-000	01/14/2021	Order accepted SGIA effective 11/16/2020, as requested
11/24/2020	NYISO and Niagara Mohawk Power Corporation ("National Grid") joint 205 filing of a SGIA (SA 2576) among the NYISO, National Grid and Sky High Solar	ER21-474-000	01/19/2021	Order accepted SGIA effective 11/16/2020, as requested
11/24/2020	NYISO and Niagara Mohawk Power Corporation ("National Grid") joint 205 filing of a SGIA (SA 2571) among the NYISO, National Grid and Martin Rd Solar	ER21-464-000	01/14/2021	Order accepted SGIA effective 11/16/2020, as requested
11/25/2020	NYISO 205 filing of proposed revisions to the Transmission Congestion Contract ("TCC") credit requirements	ER21-486-000	01/12/2021	Order accepted tariff revisions directed NYISO to file two weeks effective date notice
11/30/2020	NYISO 205 filing of the ICAP Demand Curves for the 2021/2022 Capability Year and the methodologies and inputs for use in conducting annual updates to determine the demand curves for the 2022/2023, 2023/2024, and 2024/2025 Capability Years	ER21-502-000		On January 29, 2021, FERC issued a deficiency notice requesting additional information

Filing Date	Filing Summary	Docket	Order Date	Order Summary
12/01/2020	NYISO compliance filing establishing a December 15, 2020 effective date for the pricing of Fast-Start Resources	ER20-659-001	01/29/2021	Letter order accepted the effective date notice for Fast-Start Resourced tariff revisions, effective 12/15/2020 as requested
12/7/2020	NYISO 205 filing of proposed tariff revisions to modifying market participant eligibility to utilize Meter Services Entities (MSEs) by permitting Demand Response Providers and Demand Side Ancillary Services Program providers to become MSEs	ER21-595-000	01/22/2021	Letter Order accepting the revisions effective 2/8/2021, as requested
12/07/2020	NYISO 205 filing to specify how Fast-Start Resources' start-up costs will be incorporated into enhanced Fast-Start Resource pricing	ER21-594-000	01/29/2021	Letter Order accepted the Fast Start revisions, effective 12/15/2020, as requested
12/11/2020	NYISO 205 filing of proposed tariff revisions to implementation of Southeastern New York (SENY) Reserve enhancements	ER21-625-000	01/28/2021	Letter order accepted NY SENY reserve tariff revisions subject to further compliance of two weeks effective date notice
01/05/2021	NYISO answer to comments and protests filed in response to its proposal for establishing ICAP Demand Curves for the 2021/2022 Capability Year	ER21-502-000		
01/08/2021	NYISO filing of an 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 (the BSM Rules)	ER16-1404-007		
01/11/2021	NYISO 205 filing of proposed tariff revisions to remove the notarization requirement from the officer's certificate of compliance with minimum participation requirements established by the NYISO.	ER21-863-000		
01/15/2021	NYISO 205 filing of proposed clarifications to tailored availability metric (TAM) tariff provisions	ER21-890-000		
01/15/2021	NYISO 205 filing of proposed tariff amendments to extend the market rules that apply to wind resources to include solar resources	ER21-892-000		
01/15/2021	NYISO 205 filing on behalf of NEET New York, of revisions to the OATT to incorporate the approved formula rate template and implementation protocols	ER21-907-000		

01/29/2021	NYISO 205 filing of proposed tariff revisions to implement enhancements to Energy Storage Resource market rules for Co-located Storage Resources	ER21-1001-000		
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