

Monthly Report

A Report by the
New York Independent System Operator

January 2022

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January 2022 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, 2022.

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January 2022 Operations Performance Highlights

- Peak load of 23,237 MW occurred on 1/11/2022 HB 17
- All-time winter capability period peak load of 25,738 MW occurred on 01/07/2014 HB 18
- 0 hours of Thunderstorm Alerts were declared
- 297.08 hours of NERC TLR level 3 curtailment called in response to high levels of clockwise loop flow impacting NY congestion.
- High levels of BMCR on 1/11 due to extended outage of Dysinger-Station 255 345kV (#DH1) and on 1/16 due to IESO initiated TLR curtailments that impacted NY interchange.
- To reduce risks from COVID-19, the NYISO continues to take several actions to maintain critical business operations and protect the health and well-being of our employees and stakeholders.

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

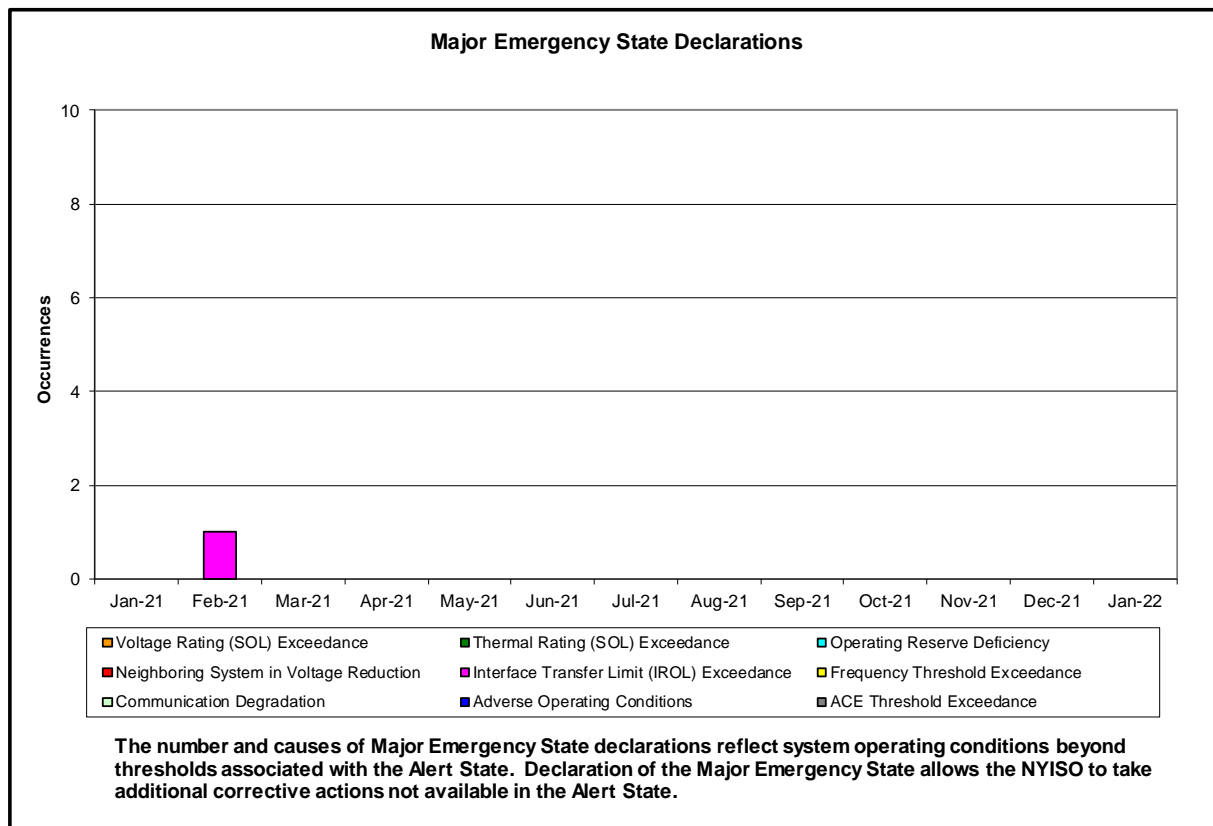
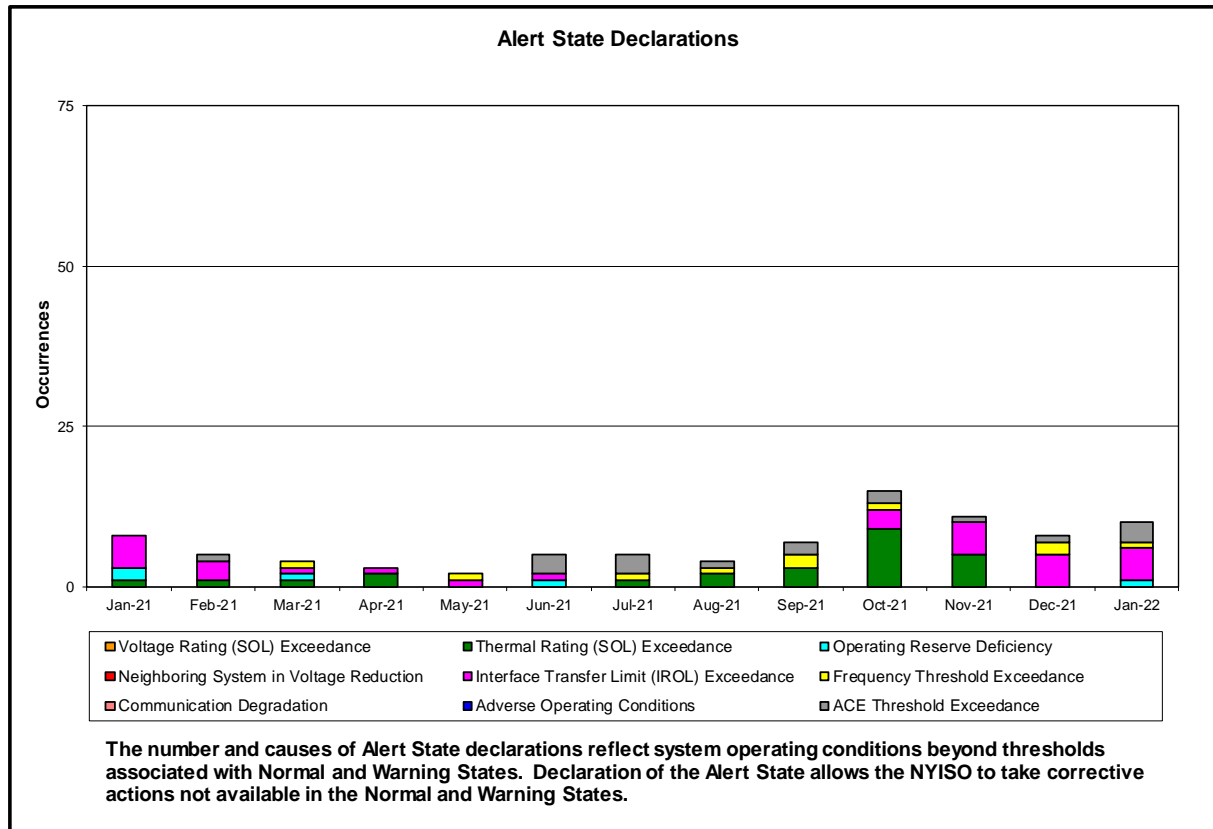
	Current Month Value (\$M)	Year-to-Date Value (\$M)
NY Savings from PJM-NY Congestion Coordination	(\$0.14)	(\$0.14)
NY Savings from PJM-NY Coordinated Transaction Scheduling	(\$0.38)	(\$0.38)
NY Savings from NE-NY Coordinated Transaction Scheduling	\$2.12	\$2.12
Total NY Savings	\$1.60	\$1.60
Regional Savings from PJM-NY Coordinated Transaction Scheduling	\$0.91	\$0.91
Regional Savings from NE-NY Coordinated Transaction Scheduling	\$1.35	\$1.35
Total Regional Savings	\$2.26	\$2.26

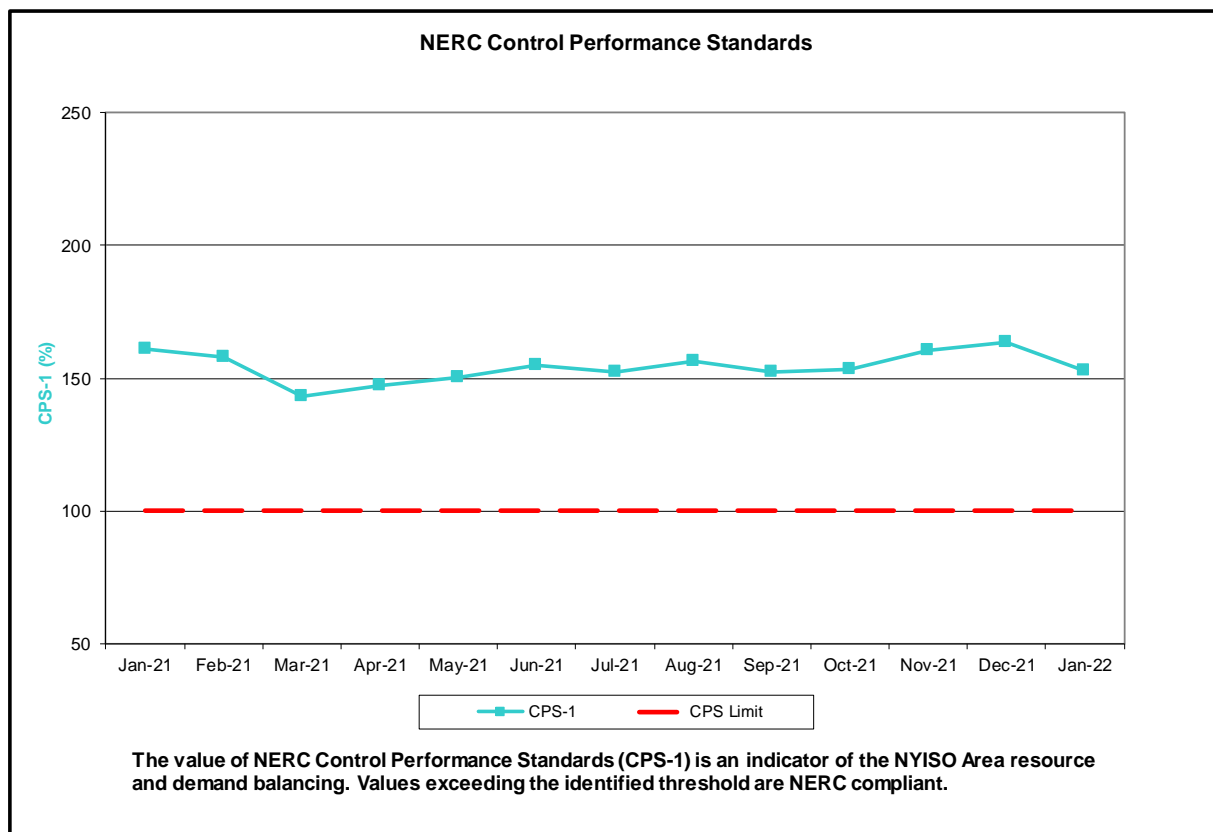
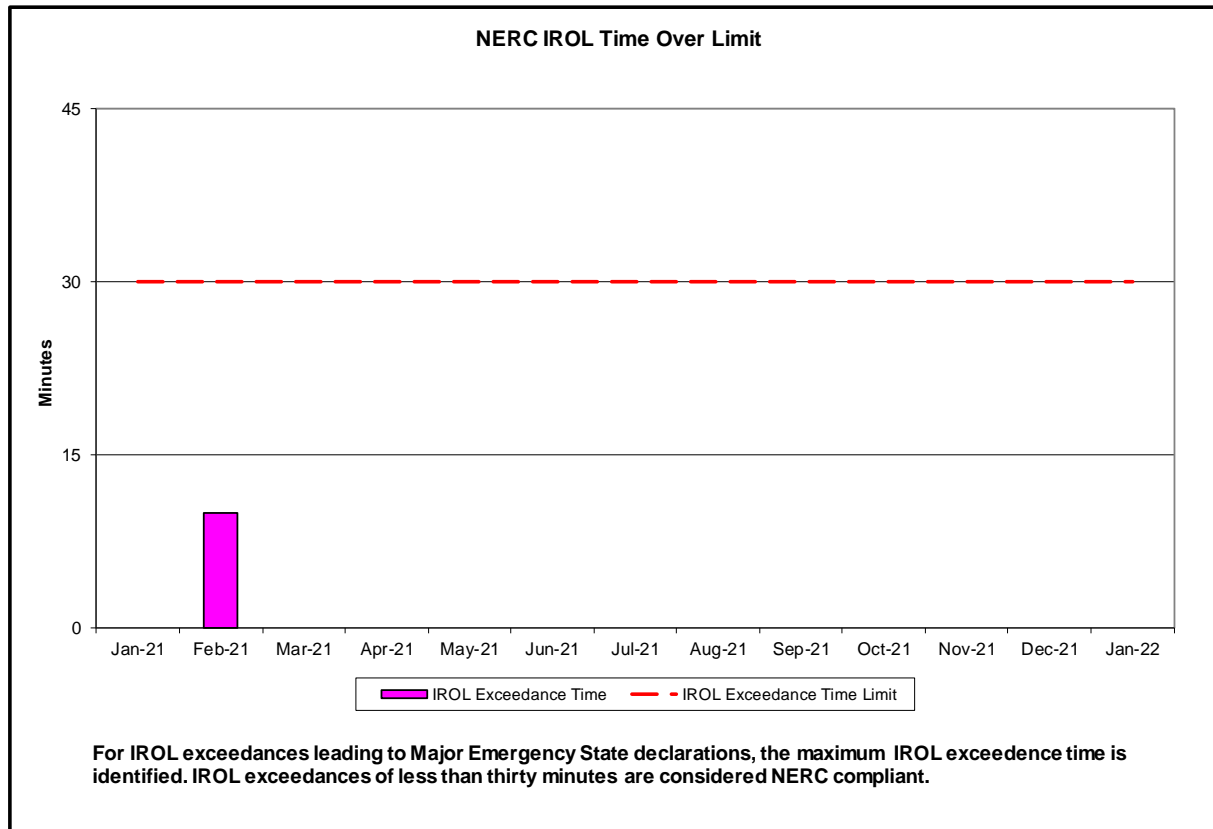
- Statewide uplift cost monthly average was (\$1.59)/MWh.
- The following table identifies the Monthly ICAP spot market prices and the price delta.

Spot Auction Price Results	NYCA	Lower Hudson Valley Zones	New York City Zone	Long Island Zone
February 2022 Spot Price	\$2.95	\$2.95	\$2.95	\$2.95
January 2022 Spot Price	\$3.82	\$3.82	\$3.82	\$3.82
Delta	(\$0.87)	(\$0.87)	(\$0.87)	(\$0.87)

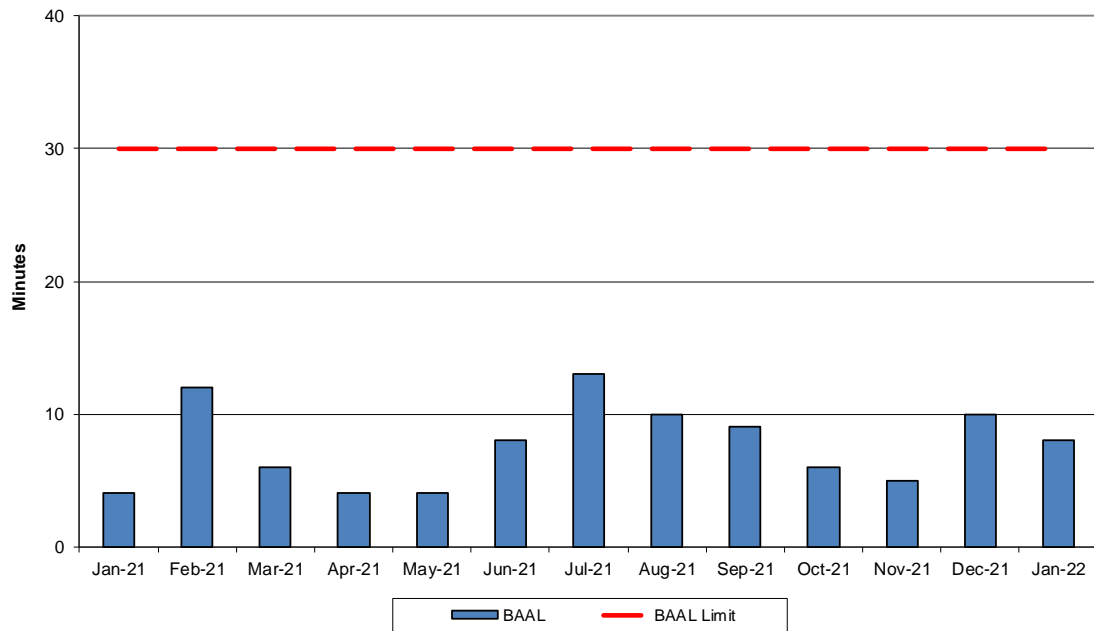
- NYCA experienced \$0.87 clearing price decline due to an increase in net Imports. The clearing price for Lower Hudson Valley, New York City, and Long Island zones were set by NYCA.

Reliability Performance Metrics



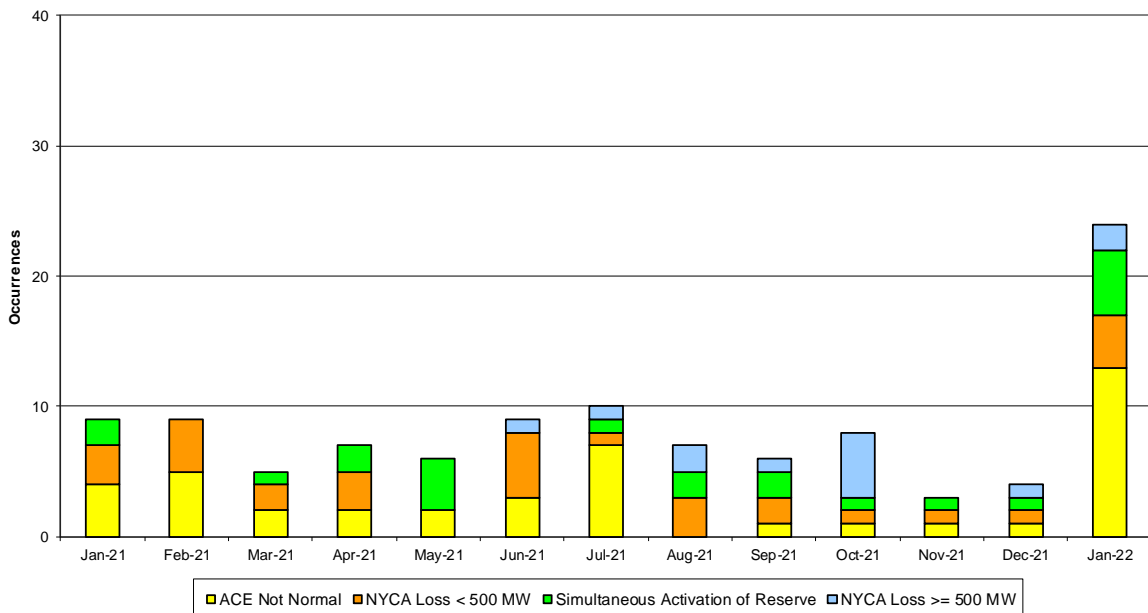


NERC Balancing Authority ACE Limit Standard



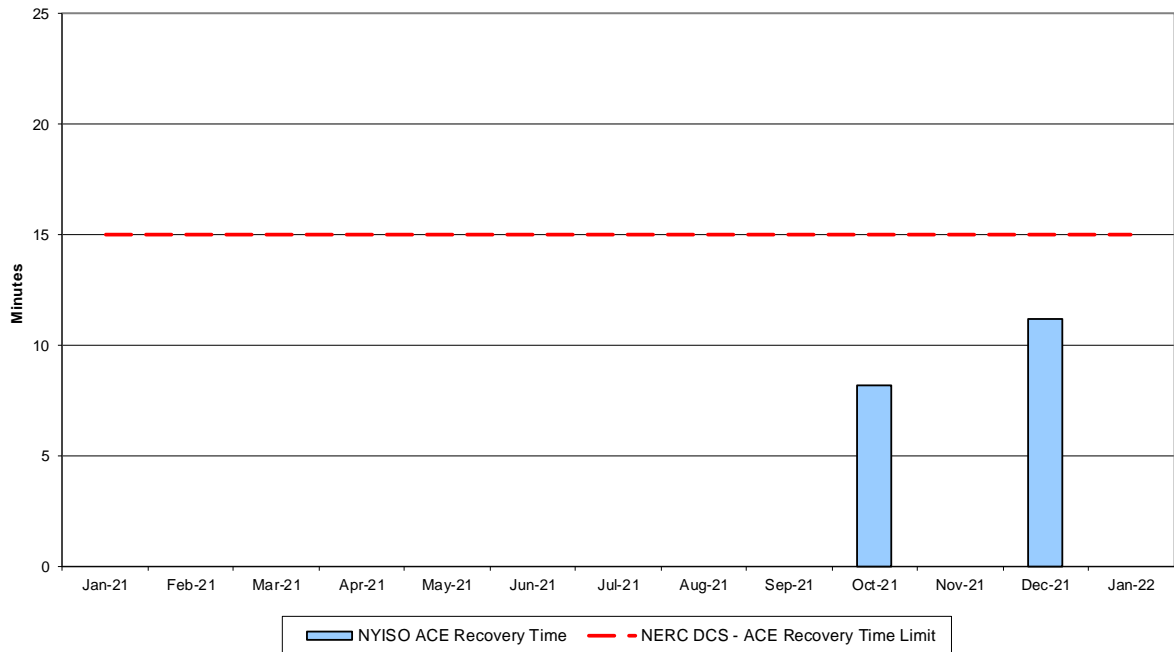
The amount of time the clock-minute average ACE exceeds the clock-minute Balancing Authority ACE Limit (BAAL) is an indicator of the NYISO Area resource and demand balancing. The maximum BAAL exceedance time is identified. BAAL exceedances of less than 30 consecutive clock-minutes are NERC compliant.

Reserve Activations



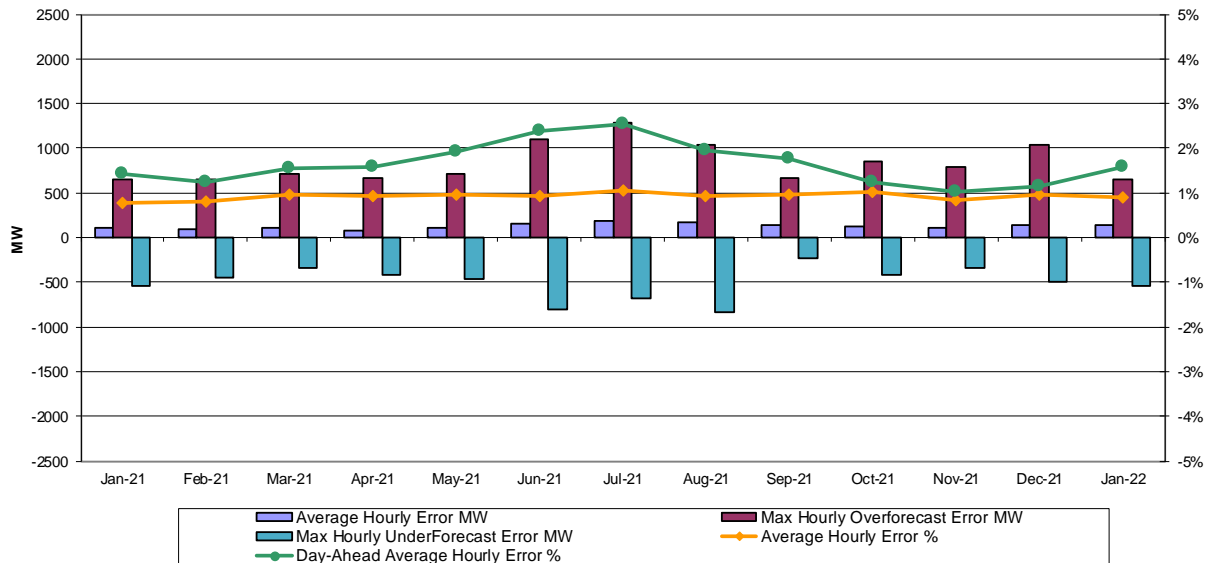
NYISO Reserve Activations are indicators of the need to respond to unexpected operational conditions within the NYISO Area or to assist a neighboring Area (Simultaneous Activation of Reserves) by activating an immediate resource and demand balancing operation.

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

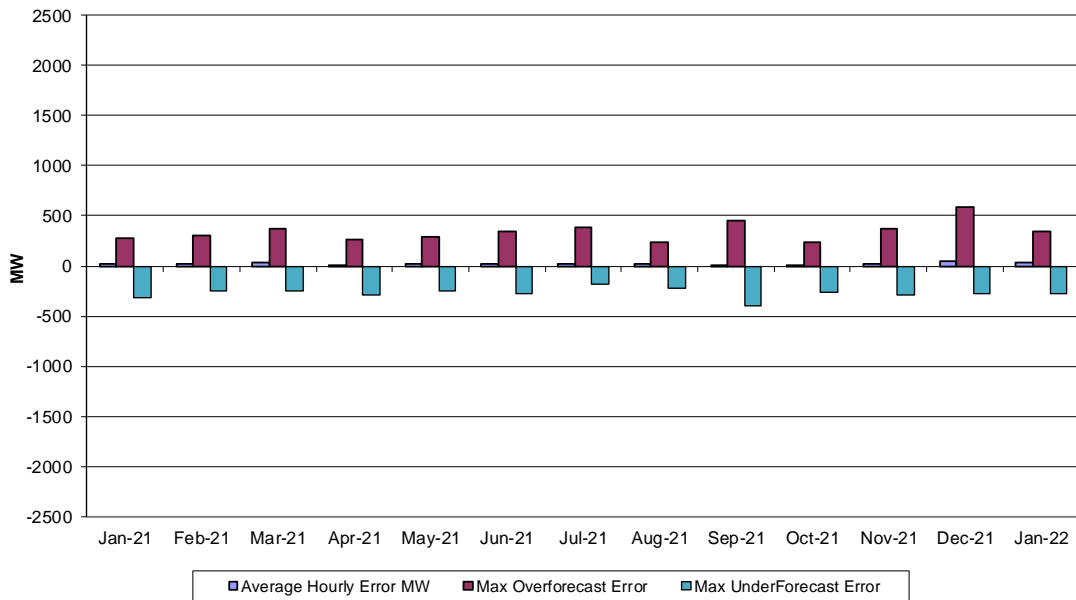


Hourly Error MW - Value of the difference between the hourly average actual load demand and the average hour ahead forecast load demand.

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

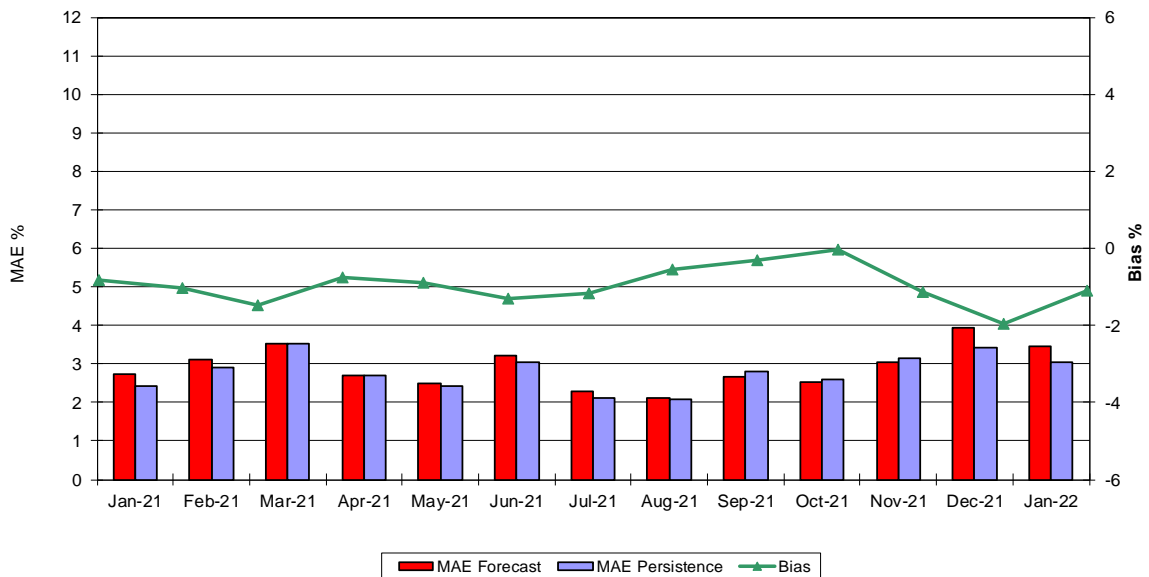
Day-Ahead Average Hourly Error % - Average across all hours of the month of the absolute value of the difference between actual load demand and the Day-Ahead forecast load demand, divided by the actual load demand.

Wind Forecast Performance Hour Ahead MW Error

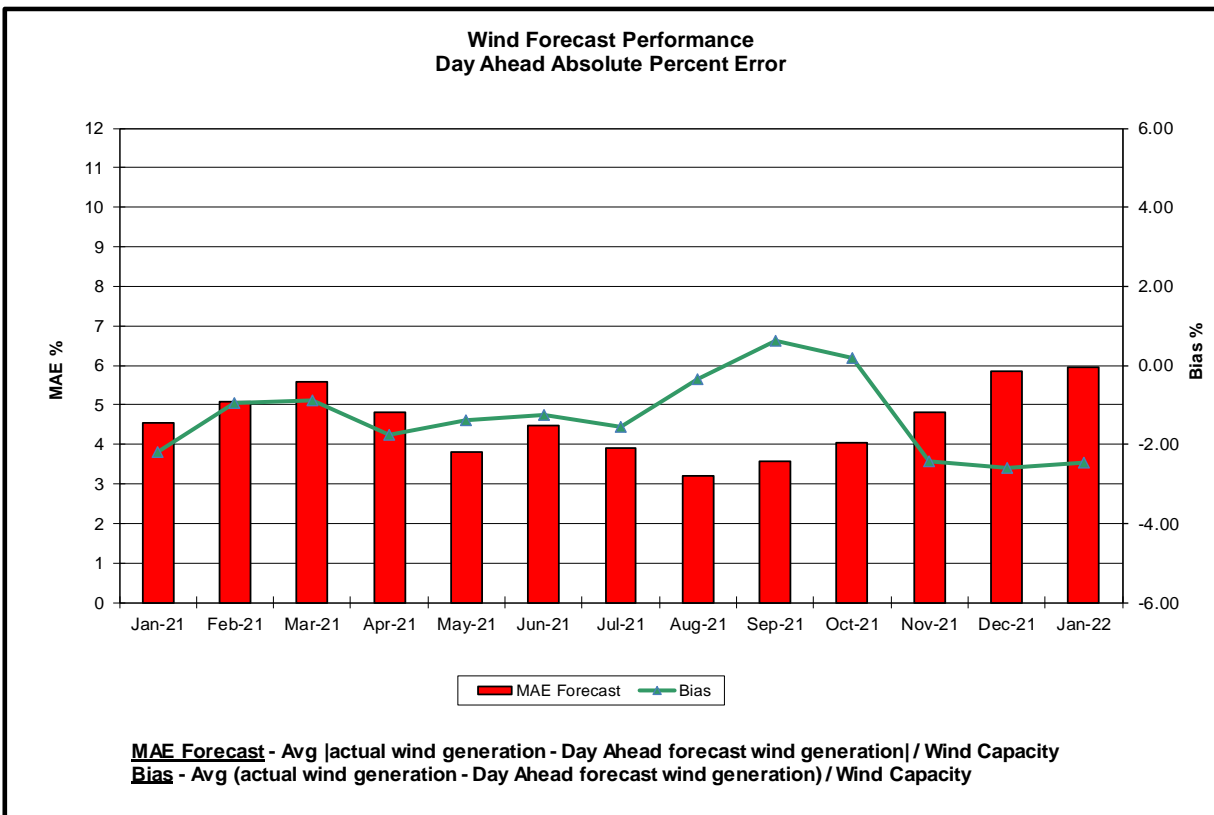
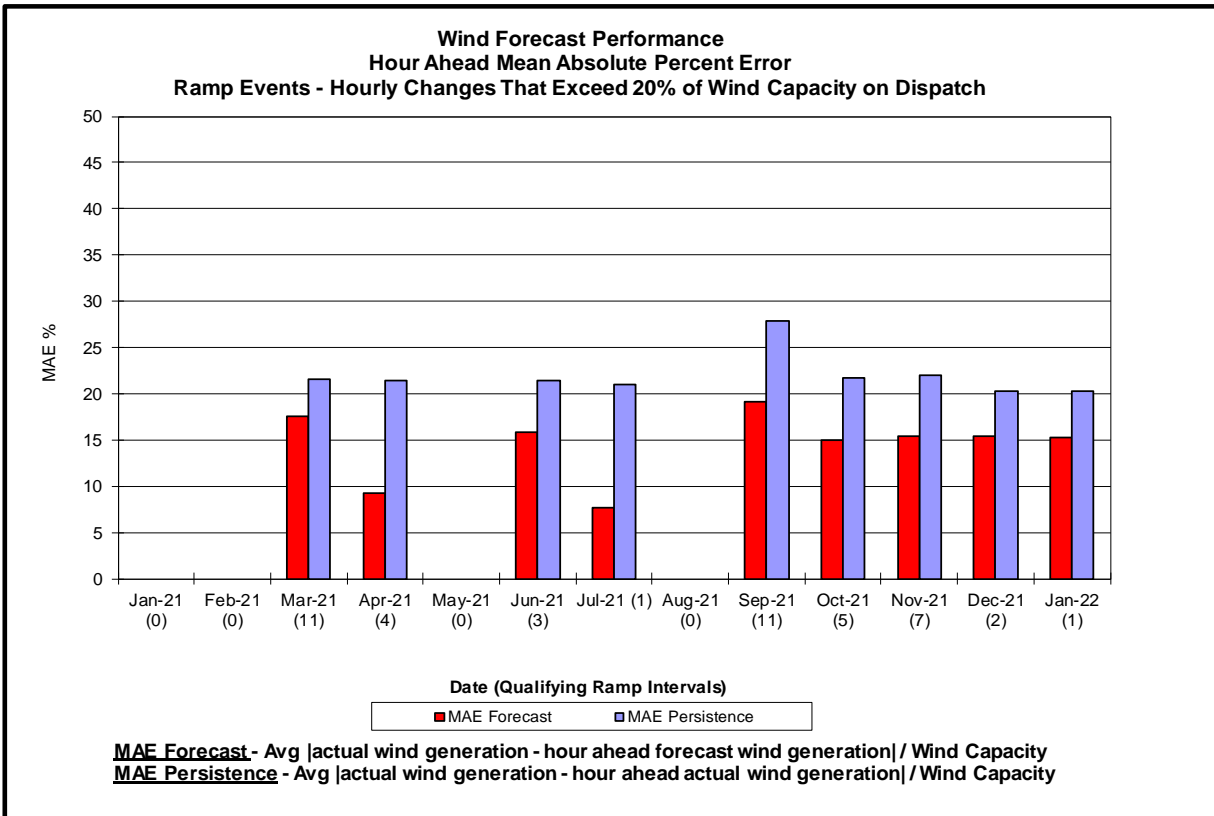


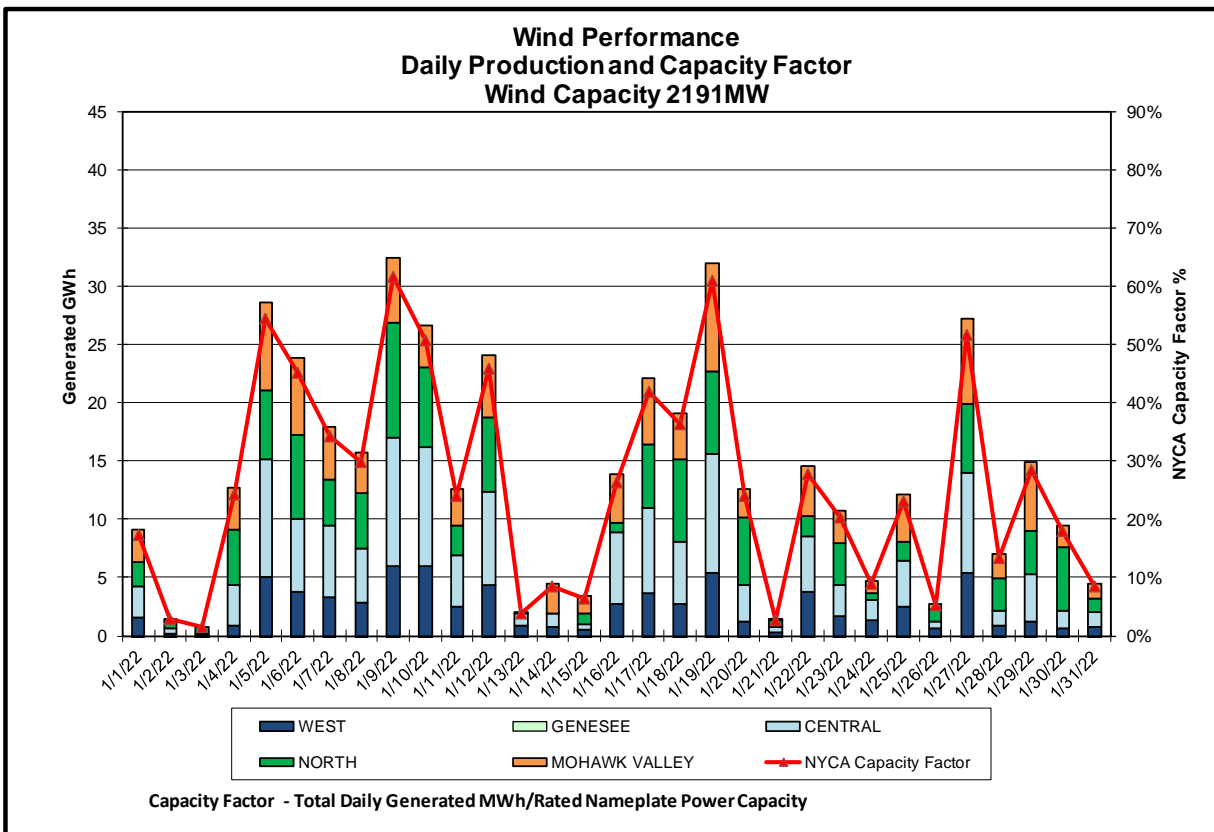
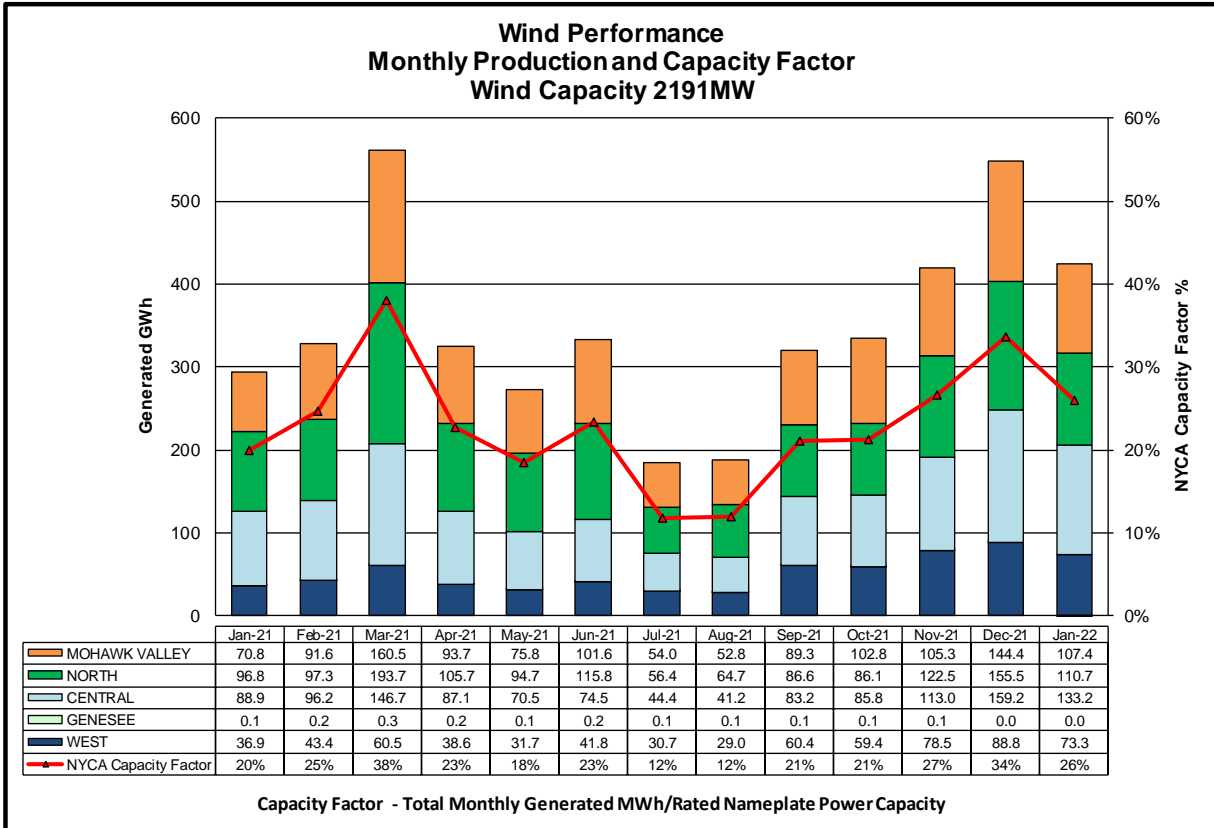
Hourly Error MW - Value of the difference between the hourly average actual wind generation and the average hour ahead forecast wind generation.

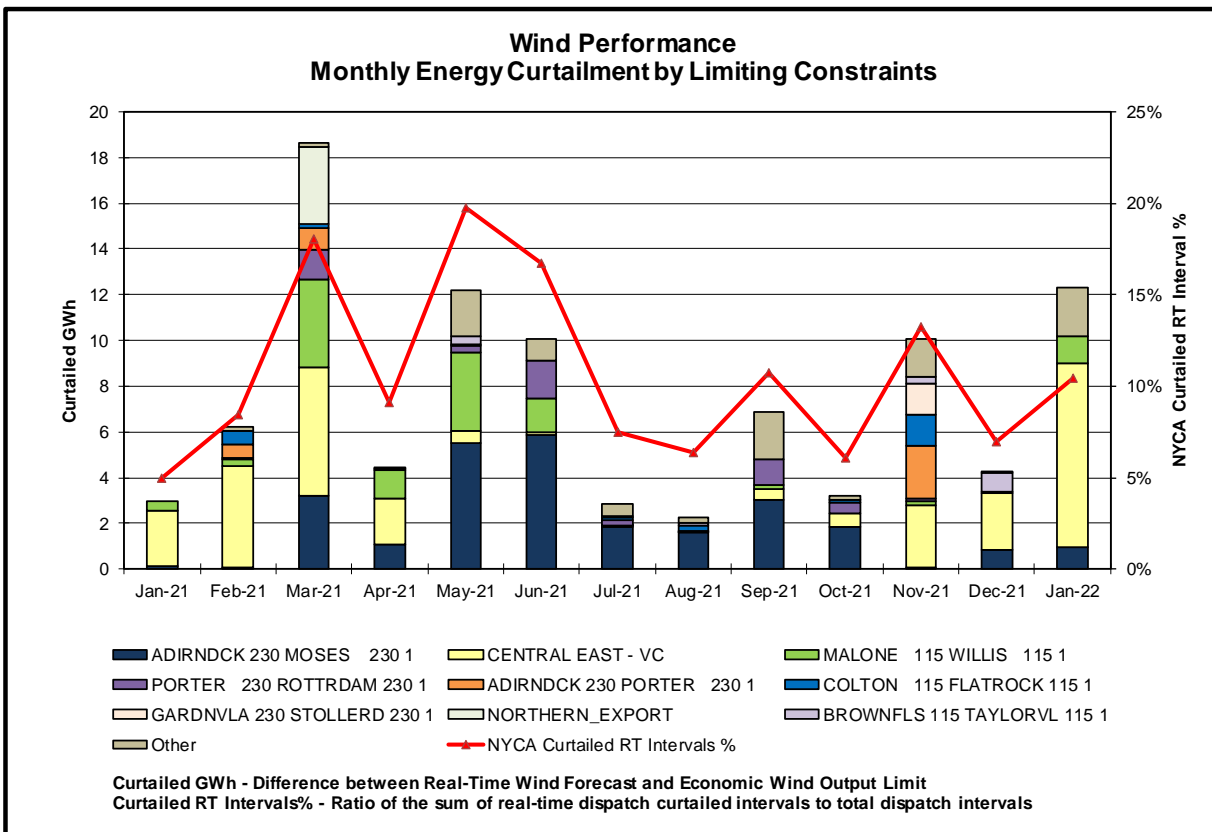
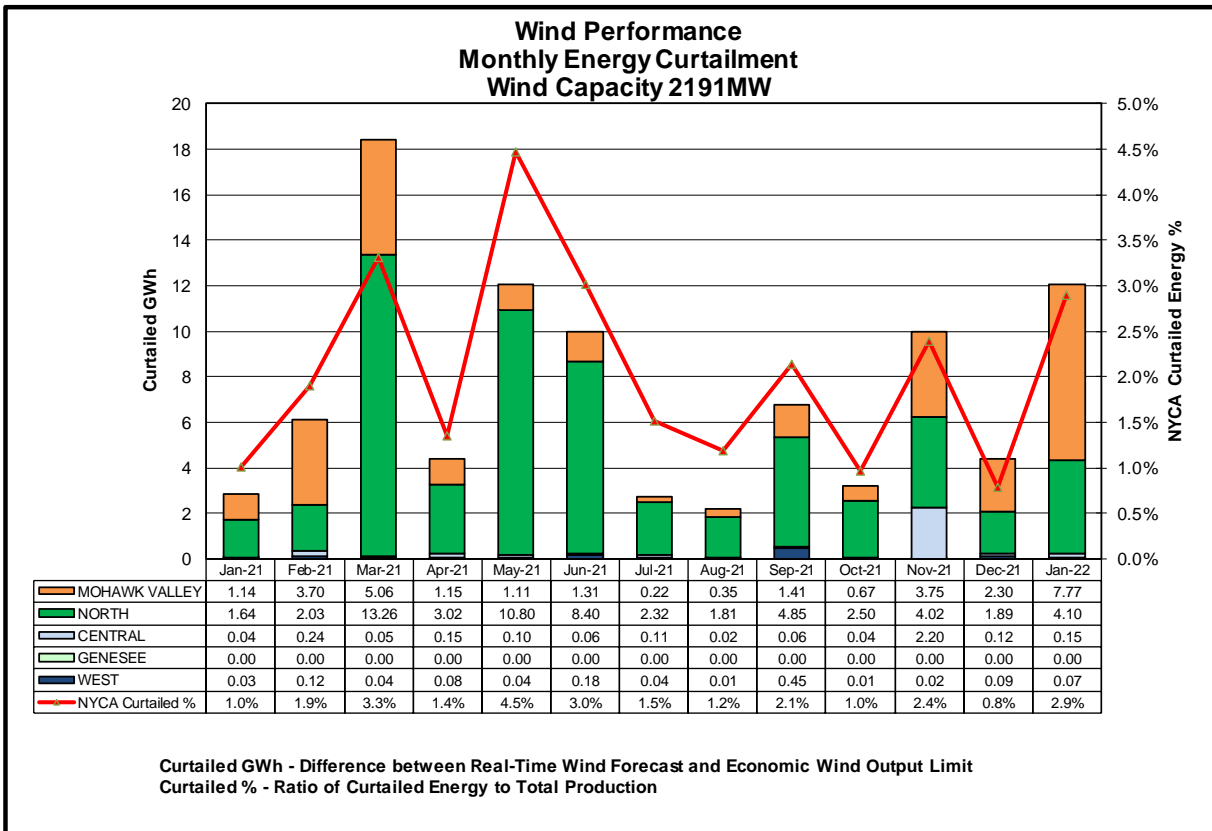
Wind Forecast Performance Hour Ahead Percent Error

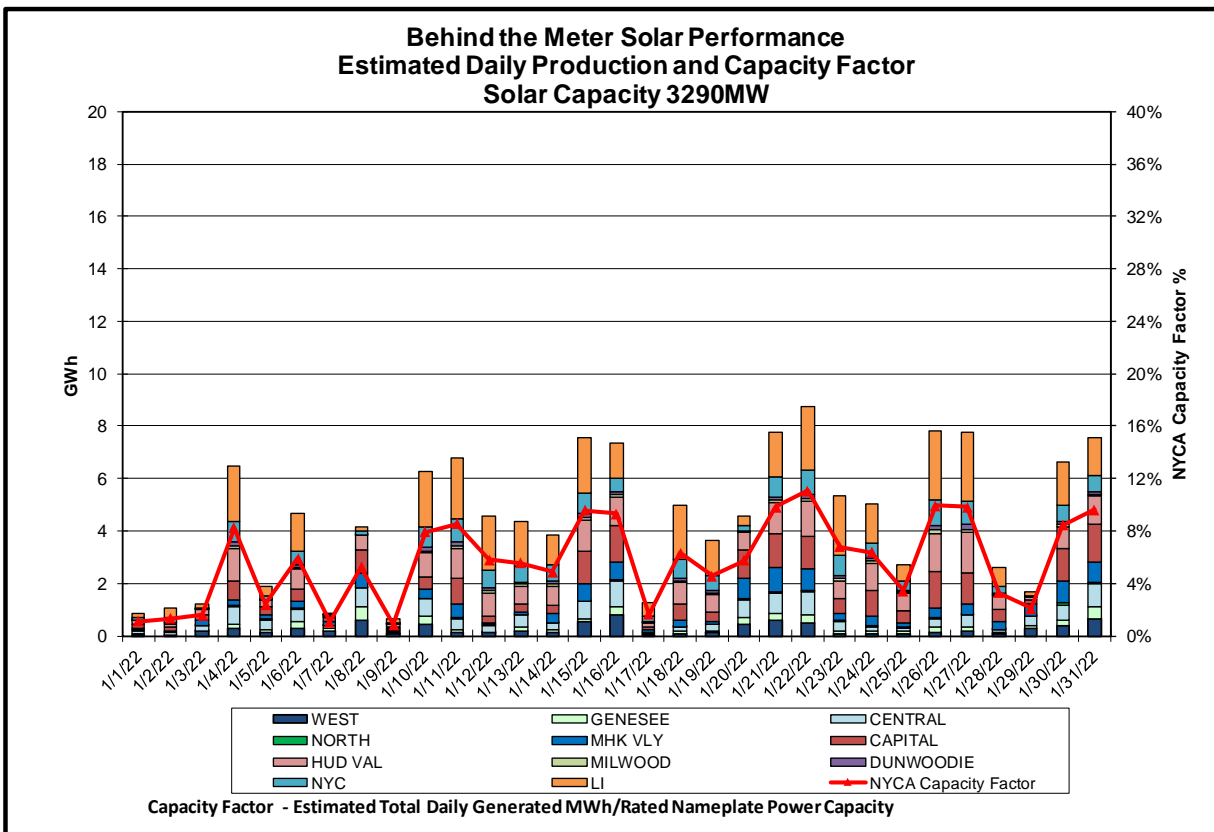
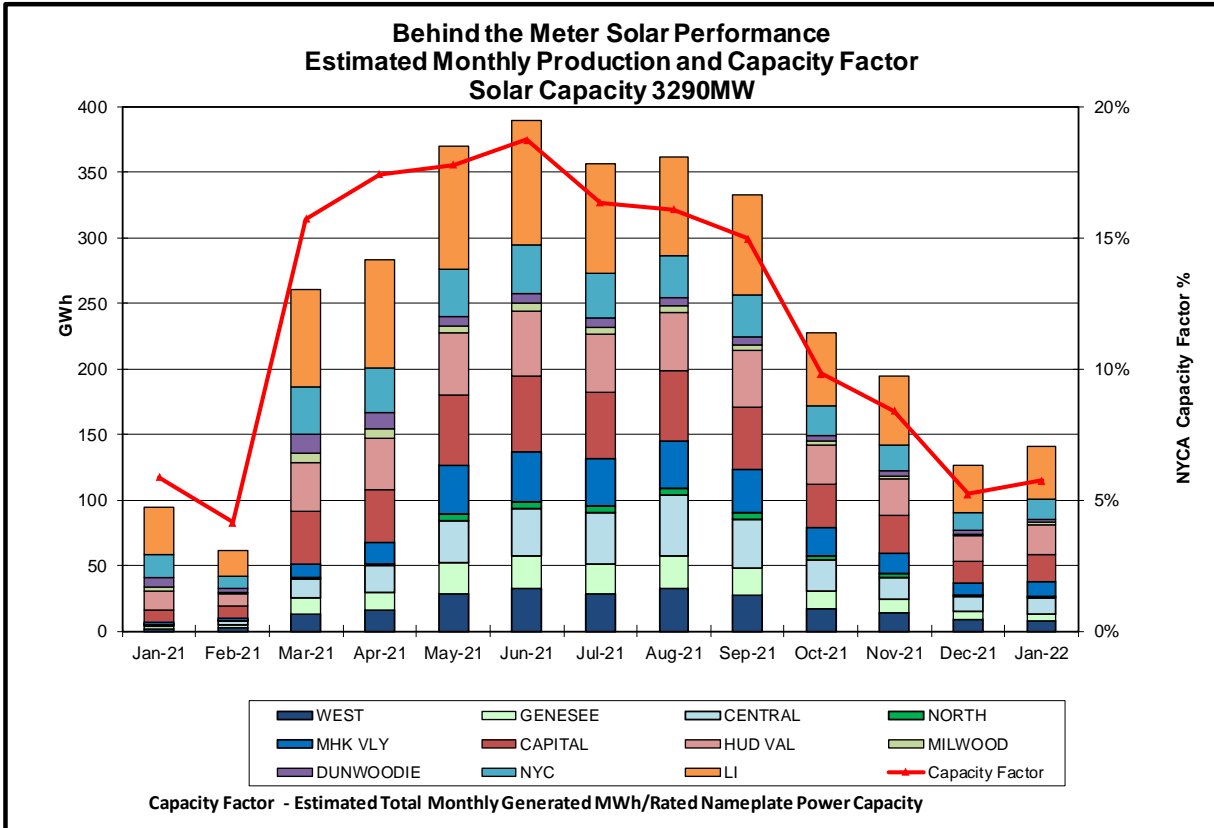


MAE Forecast - Avg |actual wind generation - hour ahead forecast wind generation| / Wind Capacity
MAE Persistence - Avg |actual wind generation - hour ahead actual wind generation| / Wind Capacity
Bias - Avg (actual wind generation - hour ahead forecast wind generation) / Wind Capacity

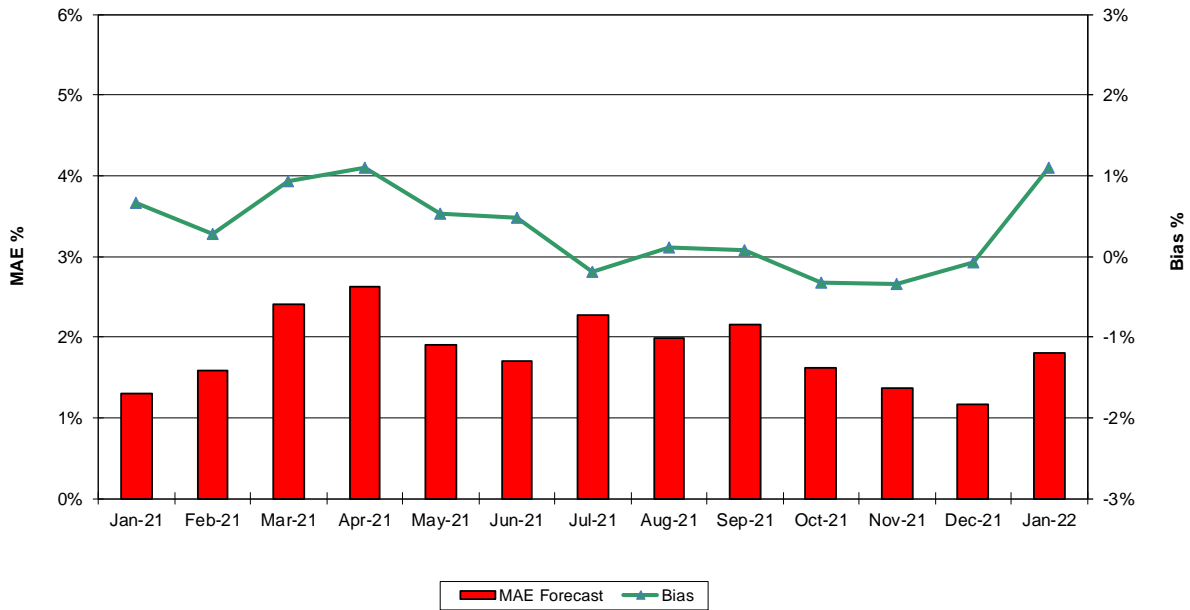






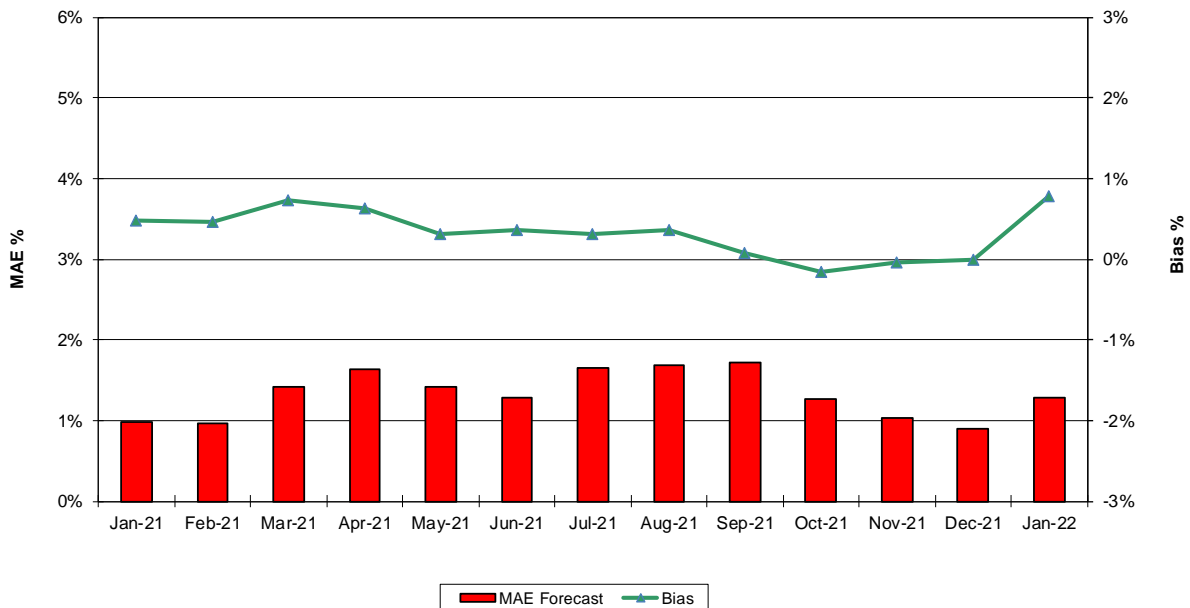


Behind the Meter Solar Forecast Performance Day Ahead Percent Error

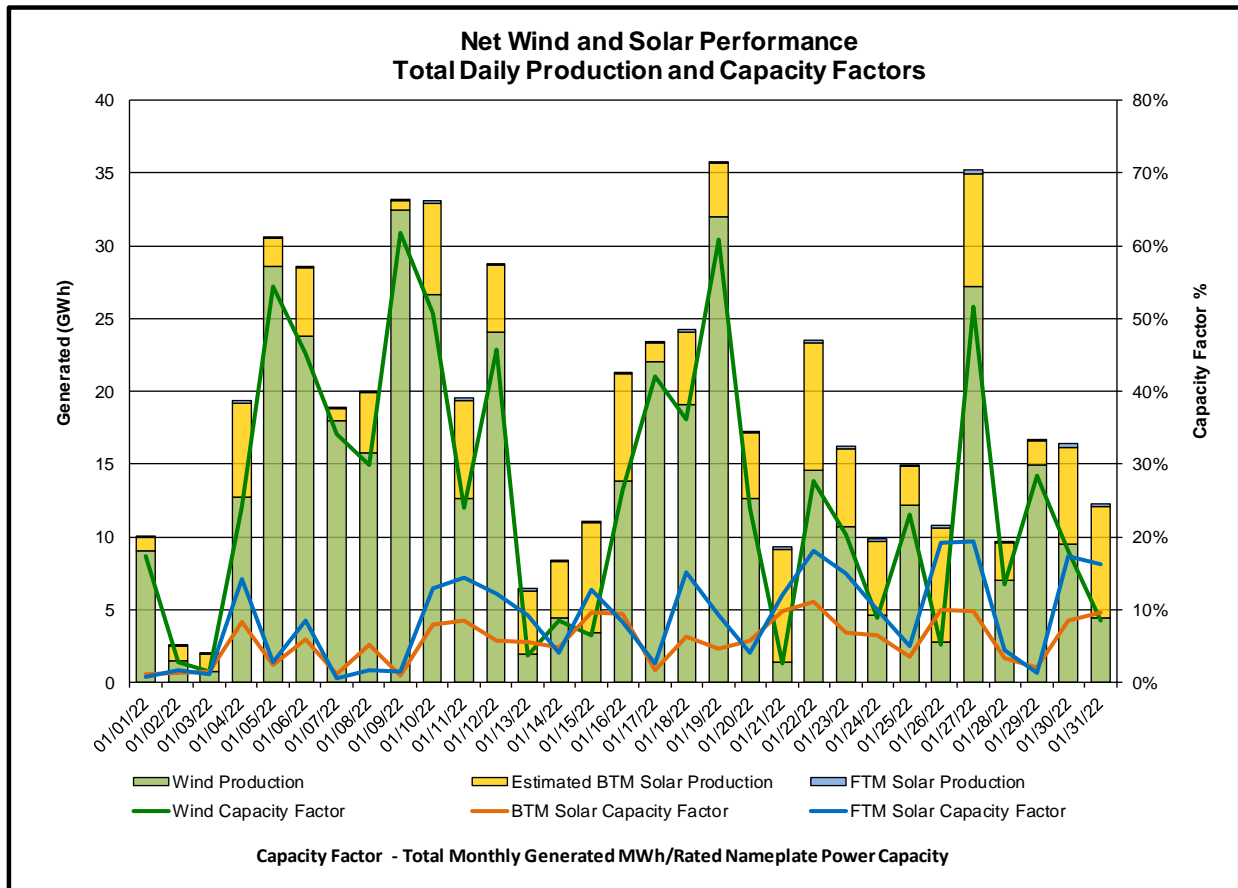
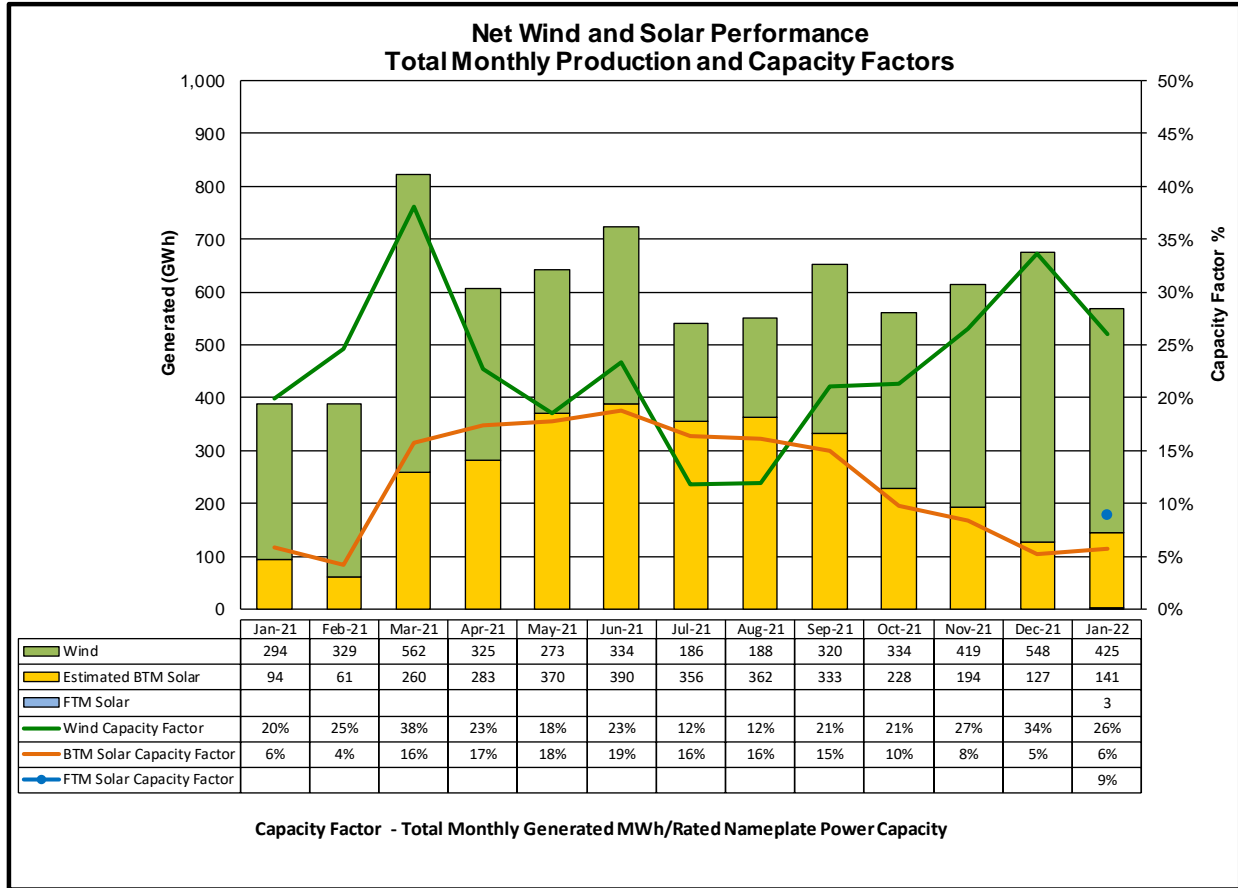


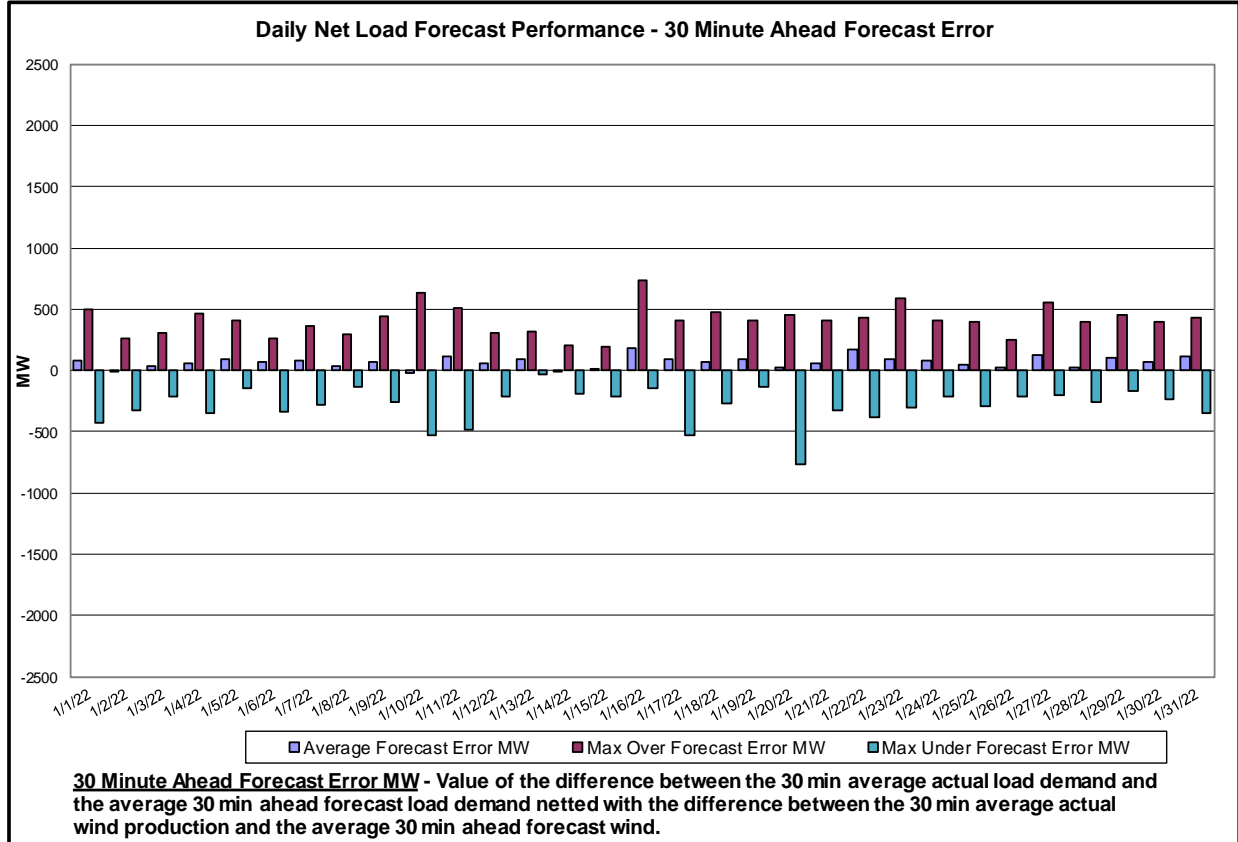
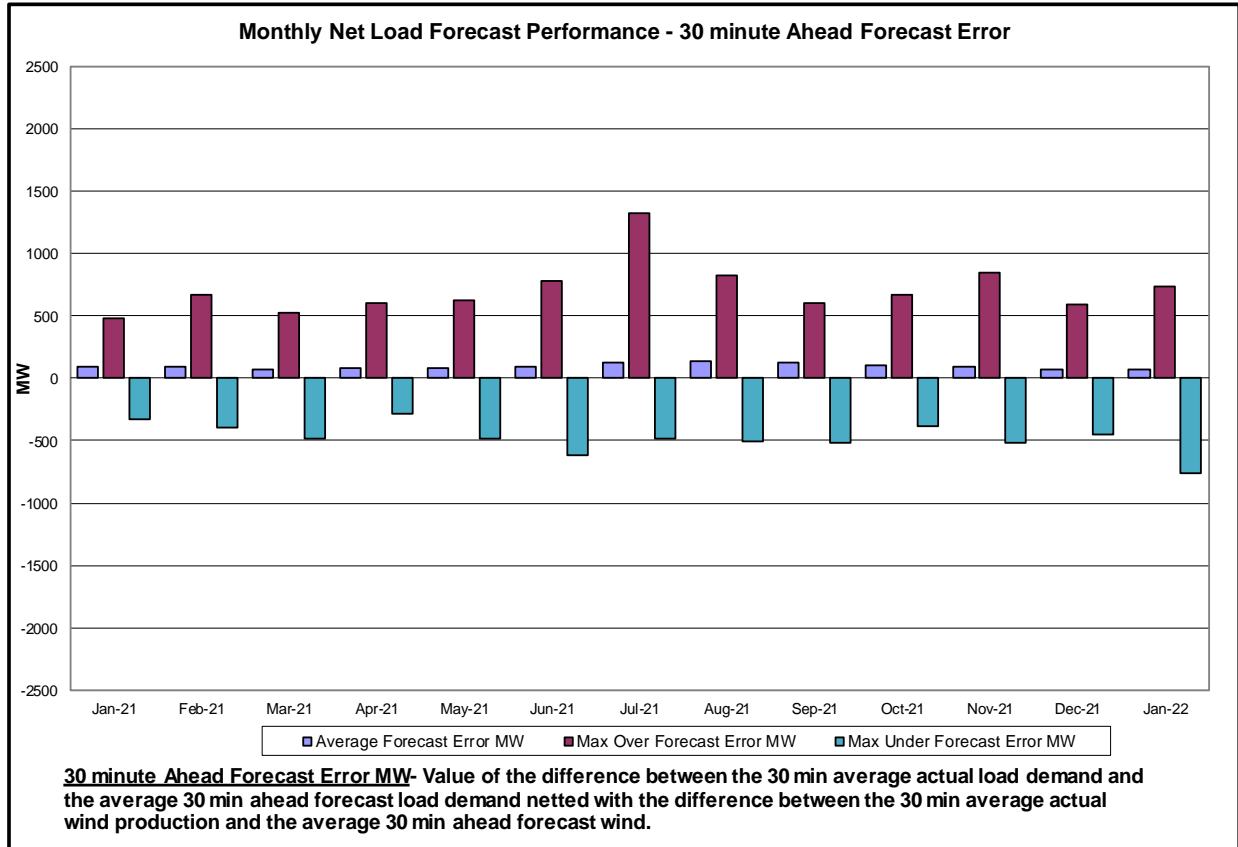
MAE Forecast - Avg |est. actual solar generation - Day Ahead forecast solar generation| / Solar Capacity
Bias - Avg (est. actual solar generation - Day Ahead forecast solar generation) / Solar Capacity

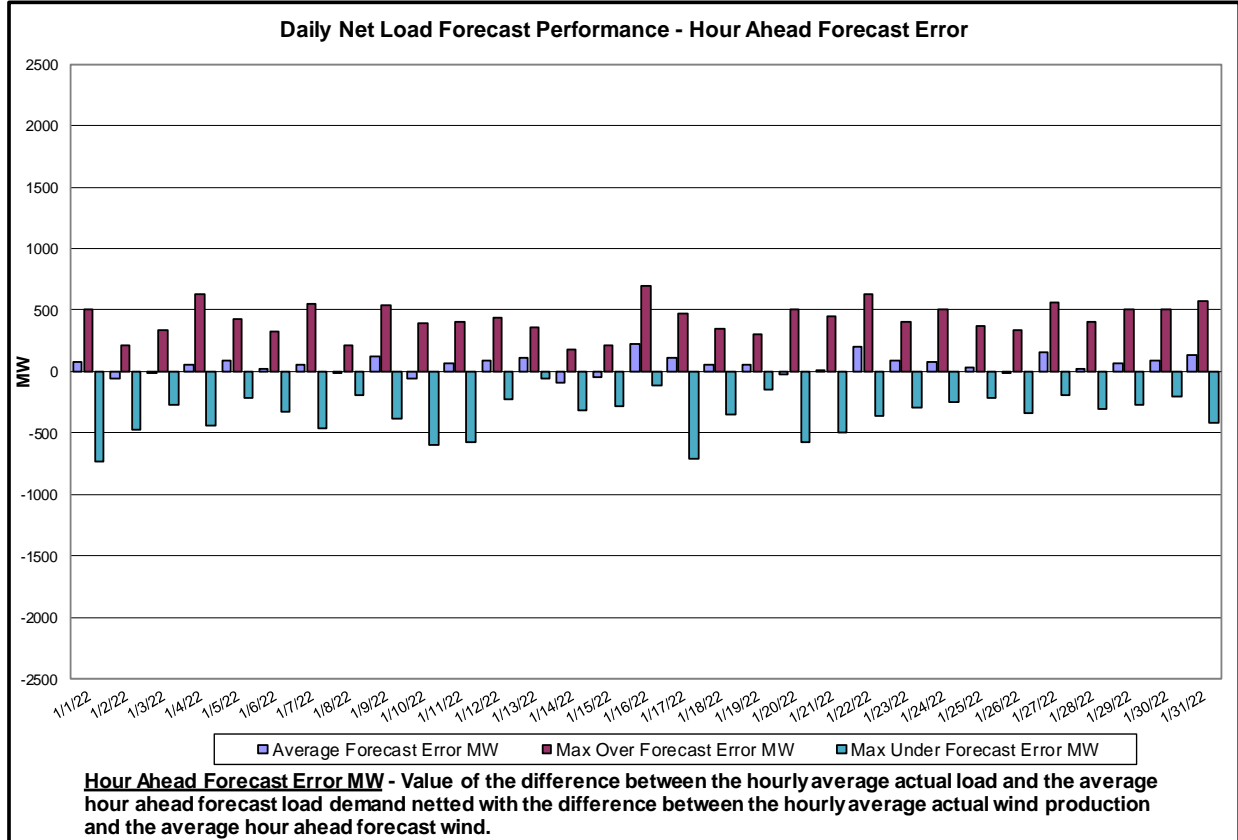
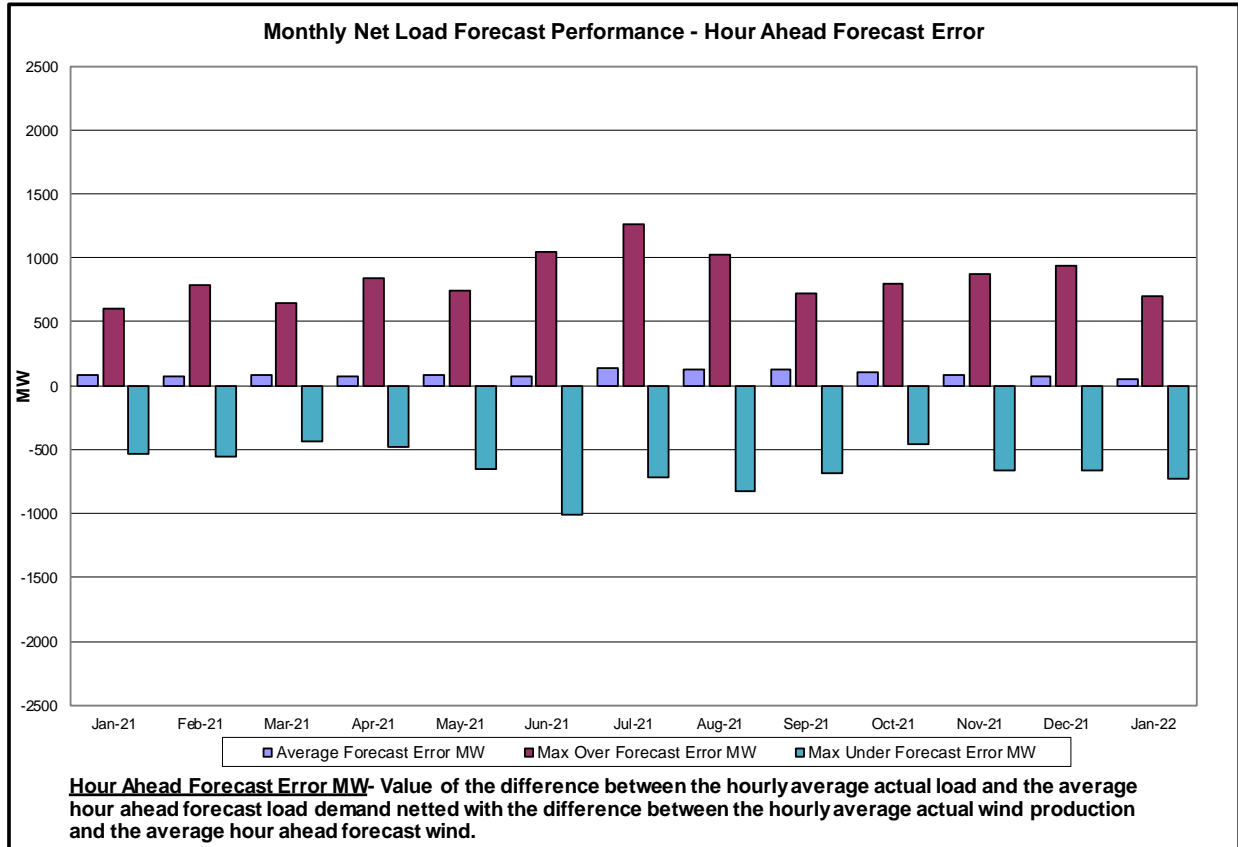
Behind the Meter Solar Forecast Performance Hour Ahead Percent Error

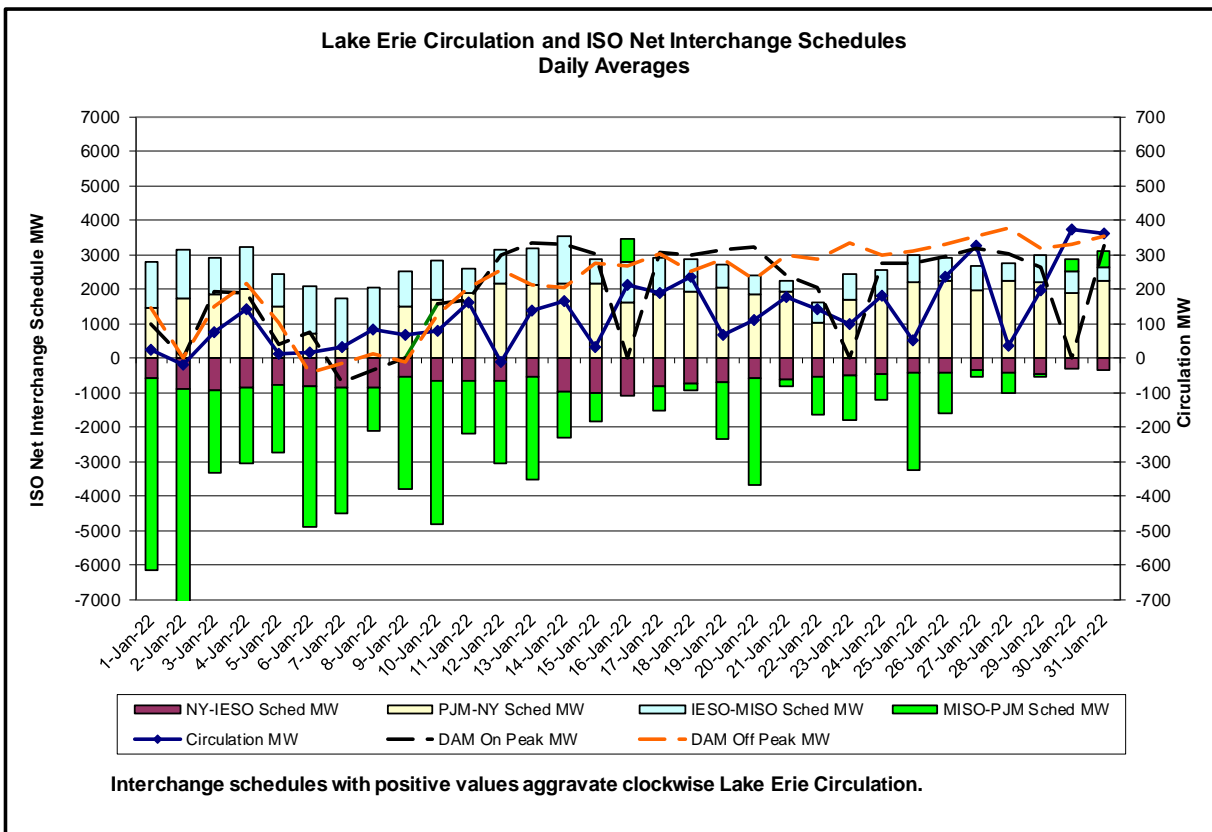
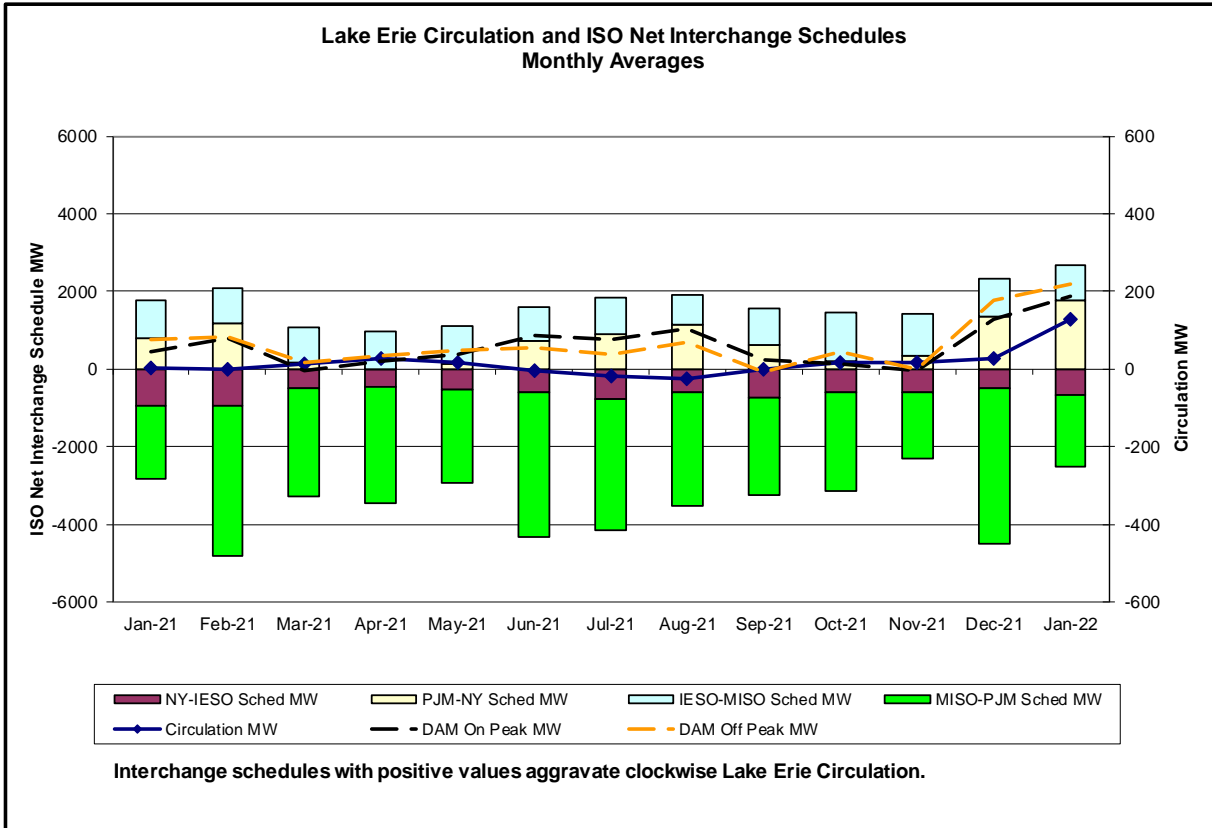


MAE Forecast - Avg |est. actual solar generation - Hour Ahead forecast solar generation| / Solar Capacity
Bias - Avg (est. actual solar generation - Hour Ahead forecast solar generation) / Solar Capacity

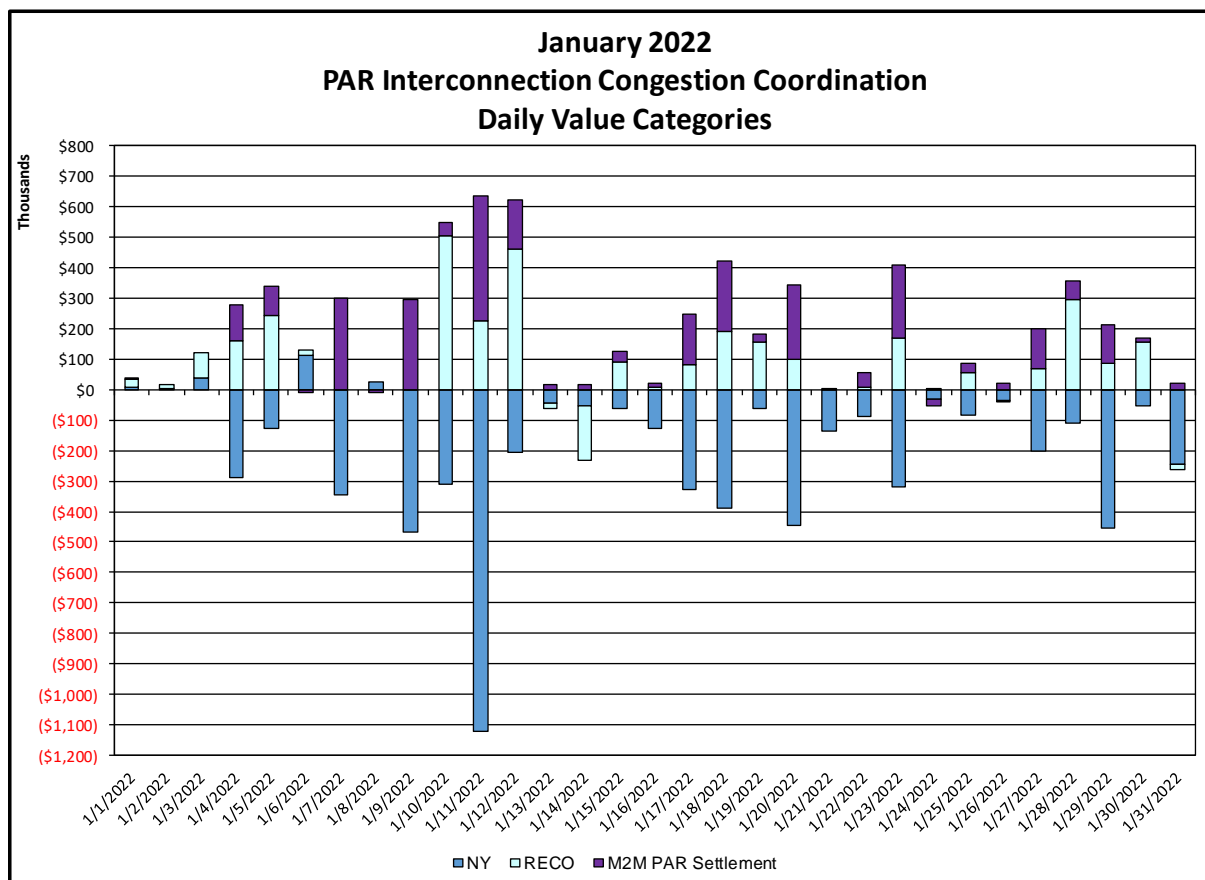
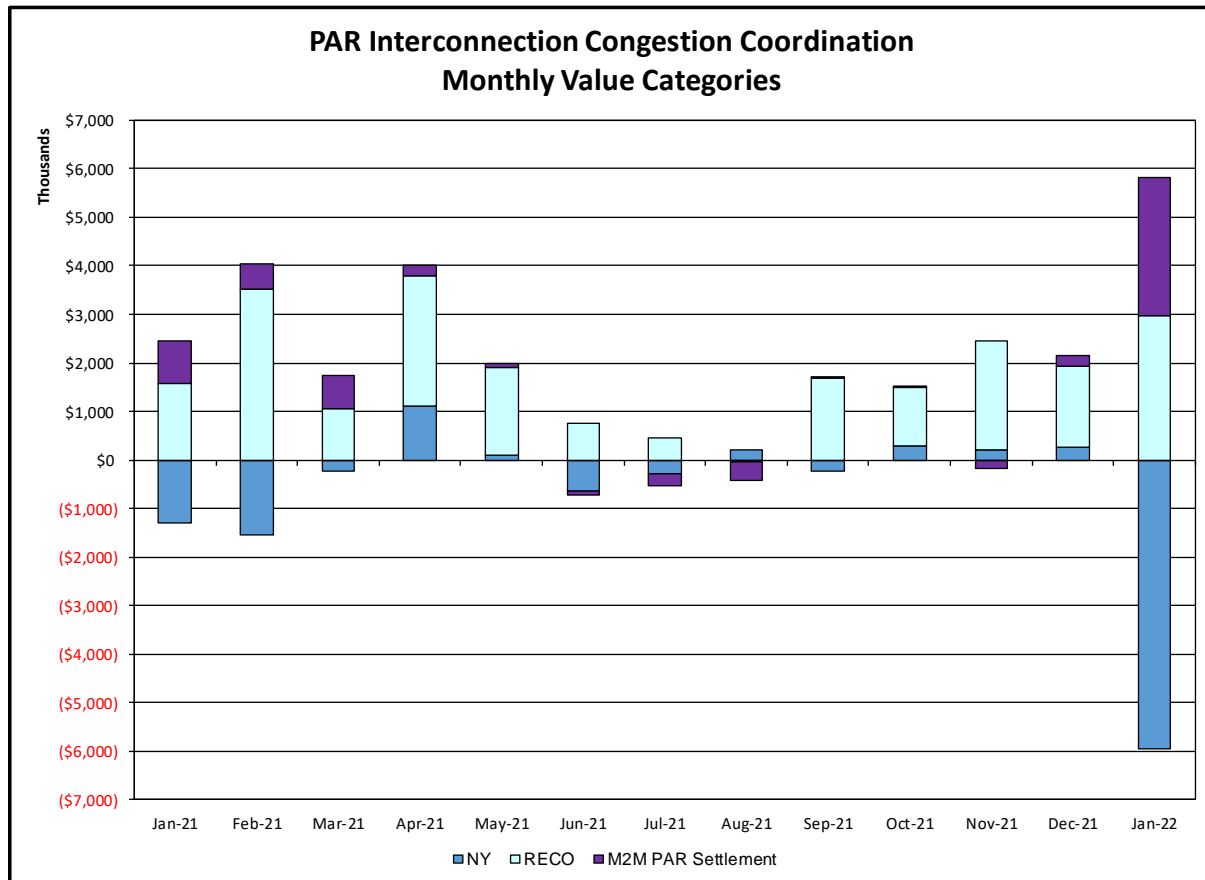






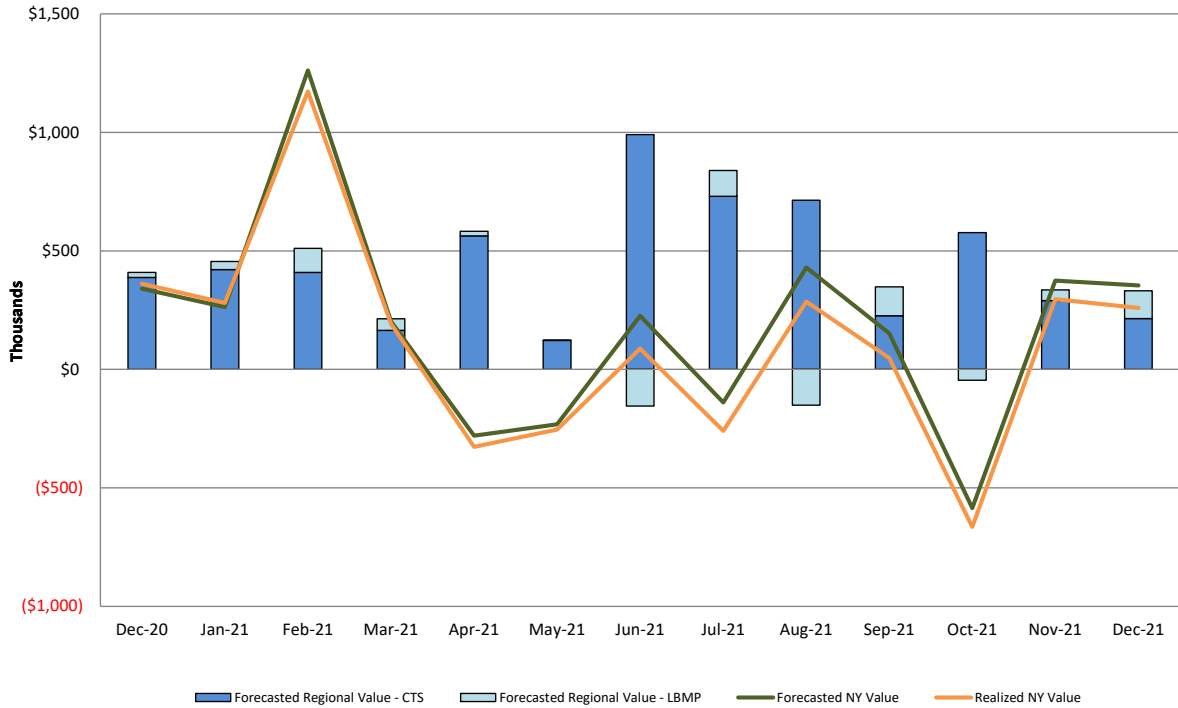


Broader Regional Market Performance Metrics



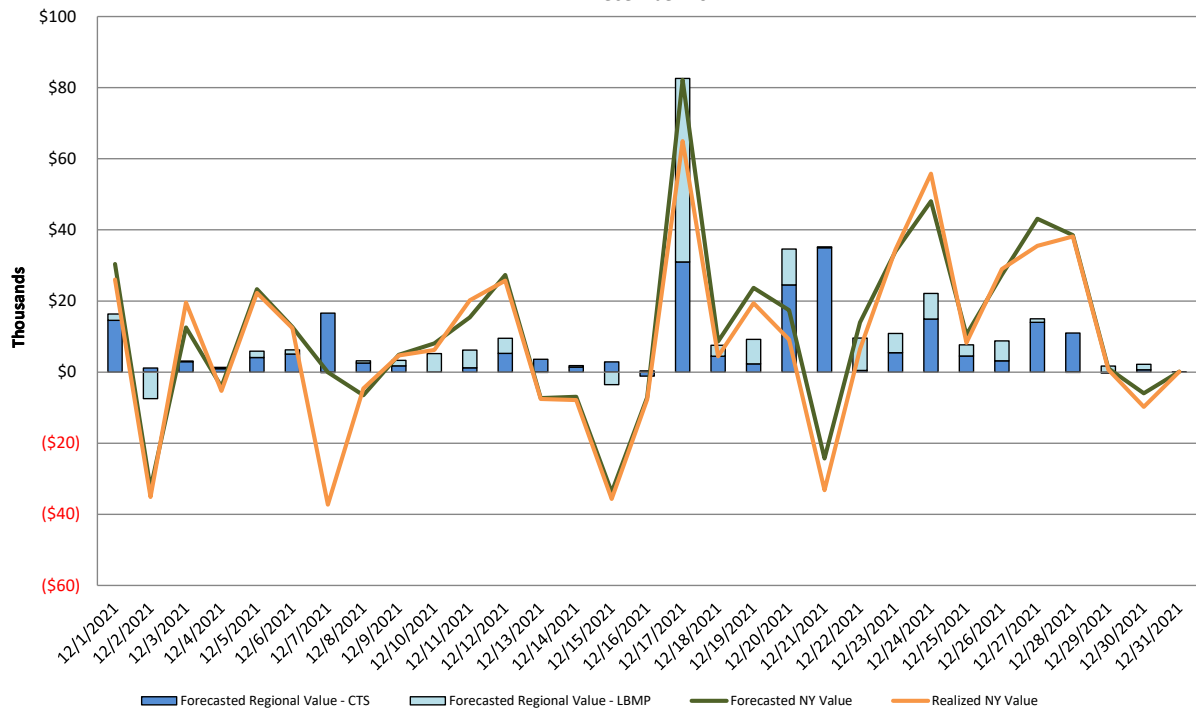
<u>PAR Interconnection Congestion Coordination</u>	
<u>Category</u>	<u>Description</u>
NY	Represents the value NY realizes from Market-to-Market PAR Coordination when experiencing congestion. This is the estimated savings to NY for additional deliveries into NY
RECO	Represents the value of PJM's obligation 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/PJM RT Scheduling for All PJM Proxies Monthly Value Categories



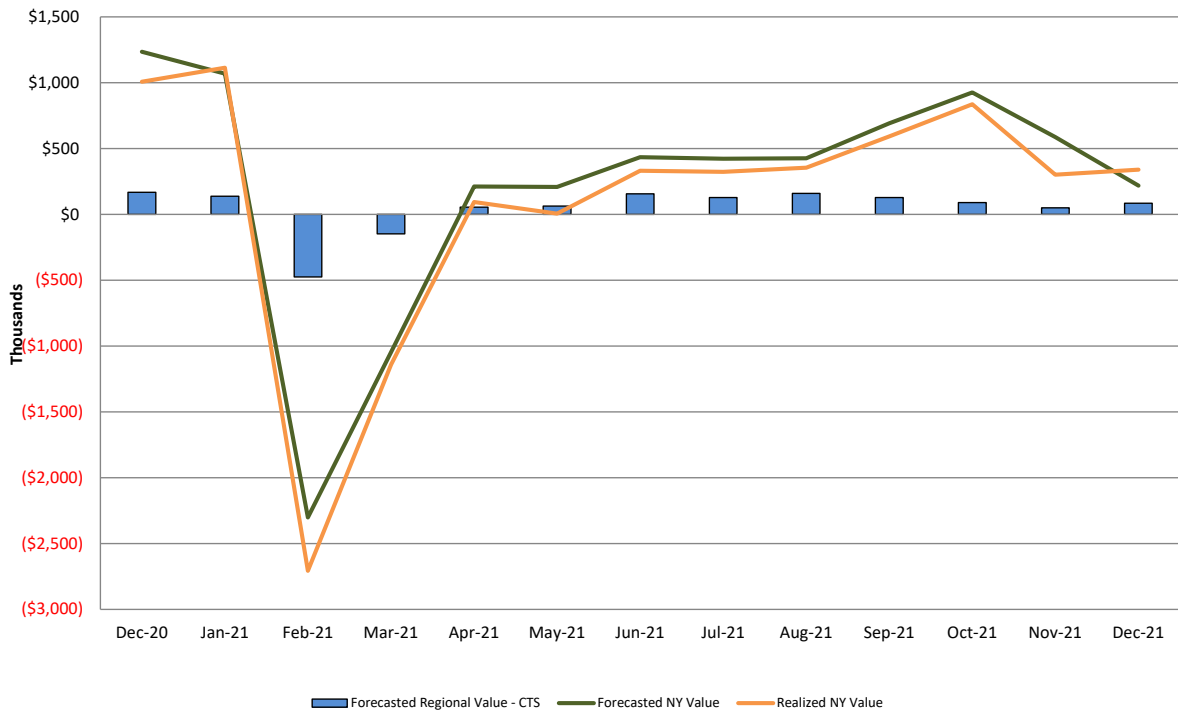
Forecasted Regional Value - CTS: Regional production cost savings for NY and PJM associated with intra-hour CTS transaction energy schedules using RTC/ITSCEd prices.
Forecasted Regional Value - LBMP: Regional production cost savings for NY and PJM associated with intra-hour LBMP transaction energy schedules using RTC/ITSCEd prices.
Forecasted NY Value: NY production cost savings associated with both CTS and LBMP transaction energy schedules using RTC prices.
Realized NY Value: NY production cost savings associated with both CTS and LBMP transaction energy schedules using RTD prices.

Regional NYISO/PJM RT Scheduling for All PJM Proxies Daily Value Categories December 2021



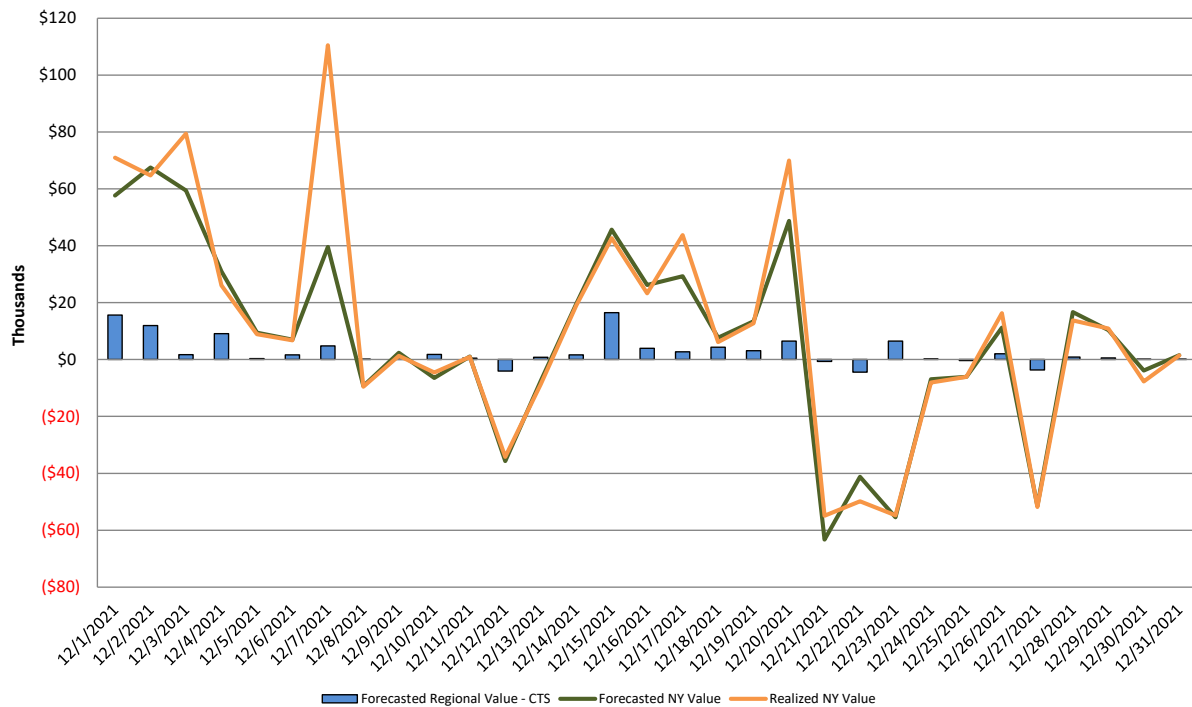
Forecasted Regional Value - CTS: Regional production cost savings for NY and PJM associated with intra-hour CTS transaction energy schedules using RTC/ITSCEd prices.
Forecasted Regional Value - LBMP: Regional production cost savings for NY and PJM associated with intra-hour LBMP transaction energy schedules using RTC/ITSCEd prices.
Forecasted NY Value: NY production cost savings associated with both CTS and LBMP transaction energy schedules using RTC prices.
Realized NY Value: NY production cost savings associated with both CTS and LBMP transaction energy schedules using RTD prices.

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



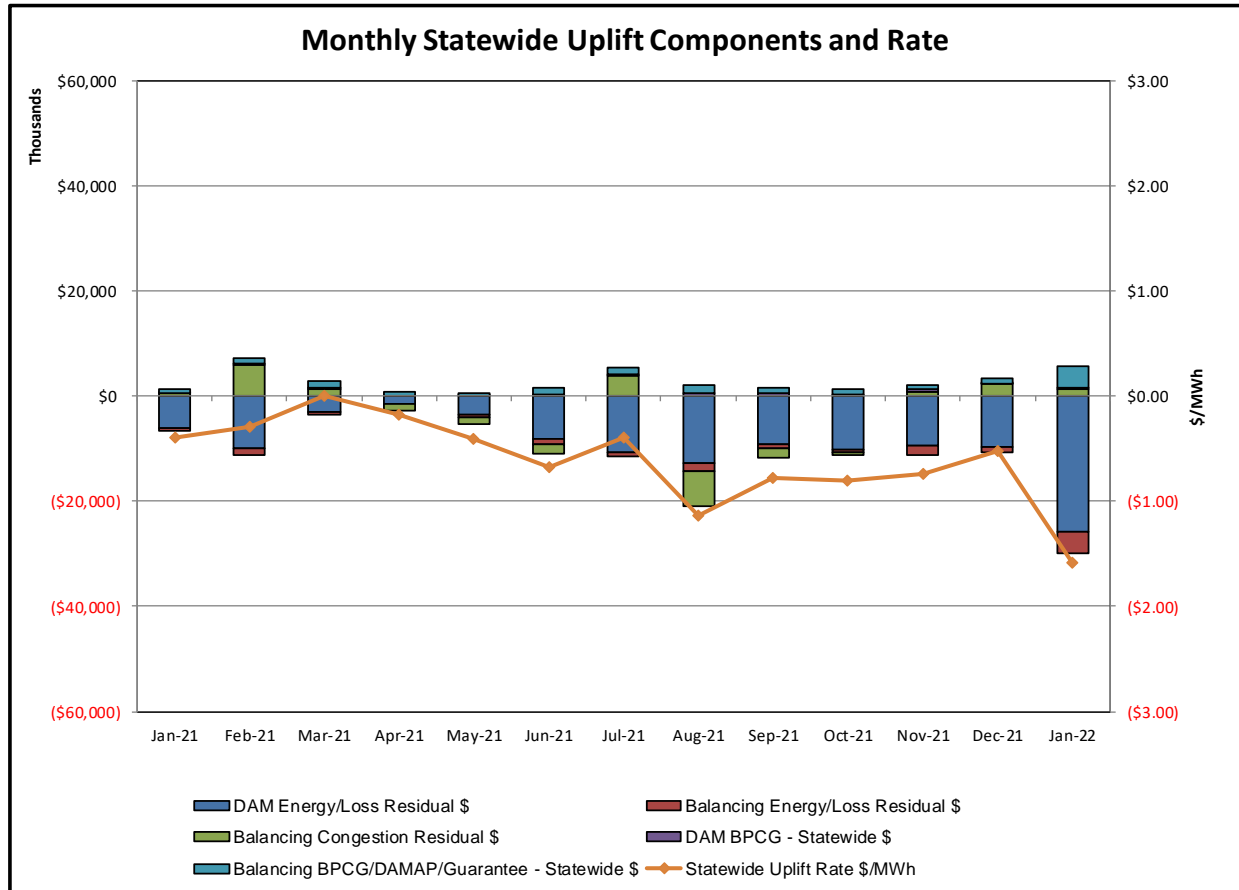
Forecasted Regional Value - CTS: Regional production cost savings for NY and NE associated with intra-hour CTS transaction energy schedules using RTC prices and NE forecasted prices.
Forecasted NY Value: NY production cost savings associated with CTS transaction energy schedules using RTC prices.
Realized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

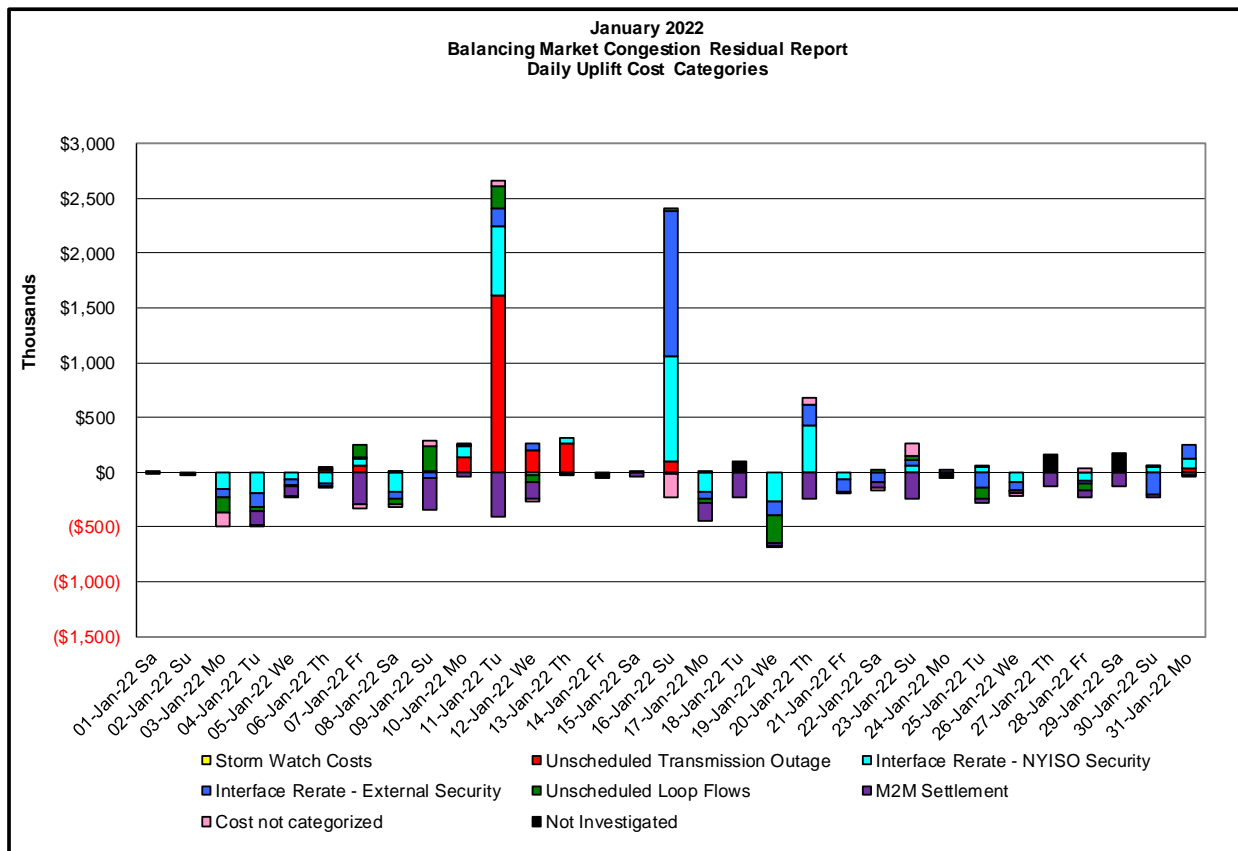
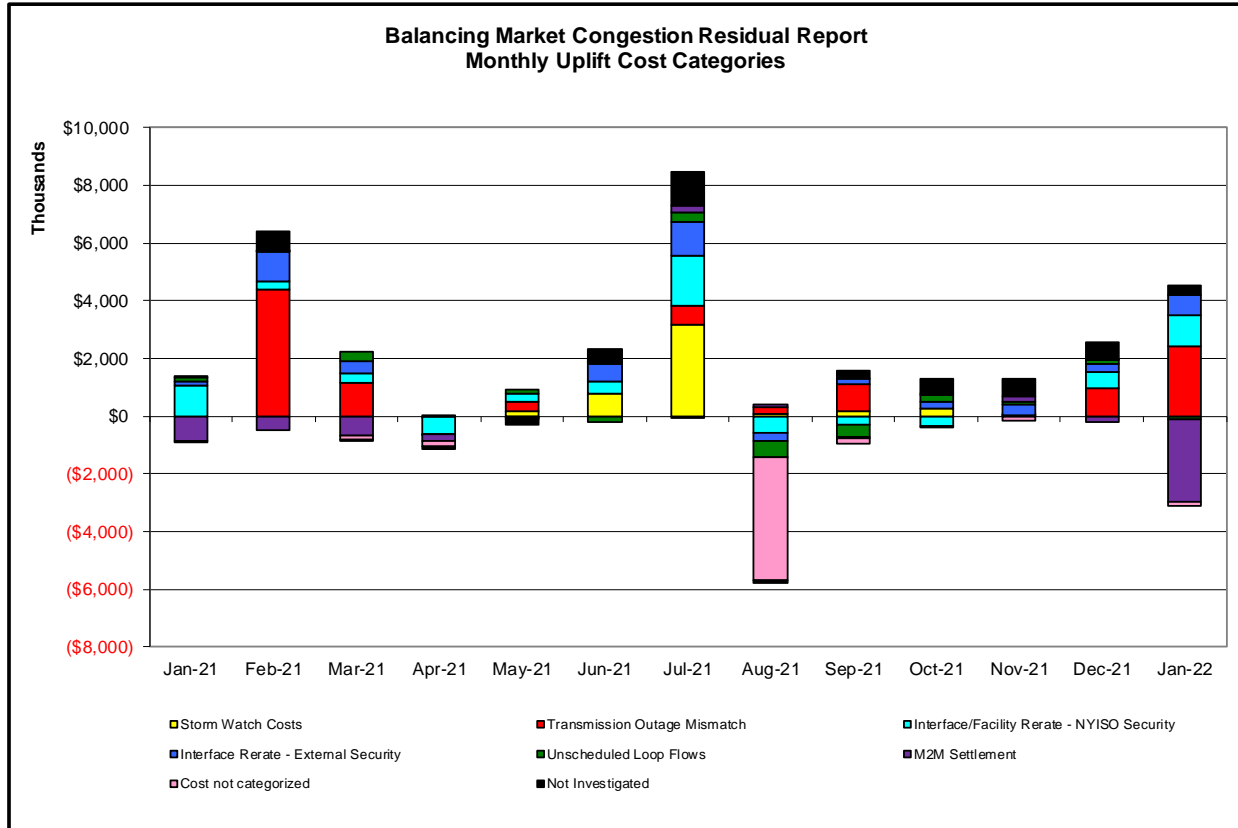
Regional NYISO/NE RT Scheduling for ISO-NE AC Daily Value Categories December 2021



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





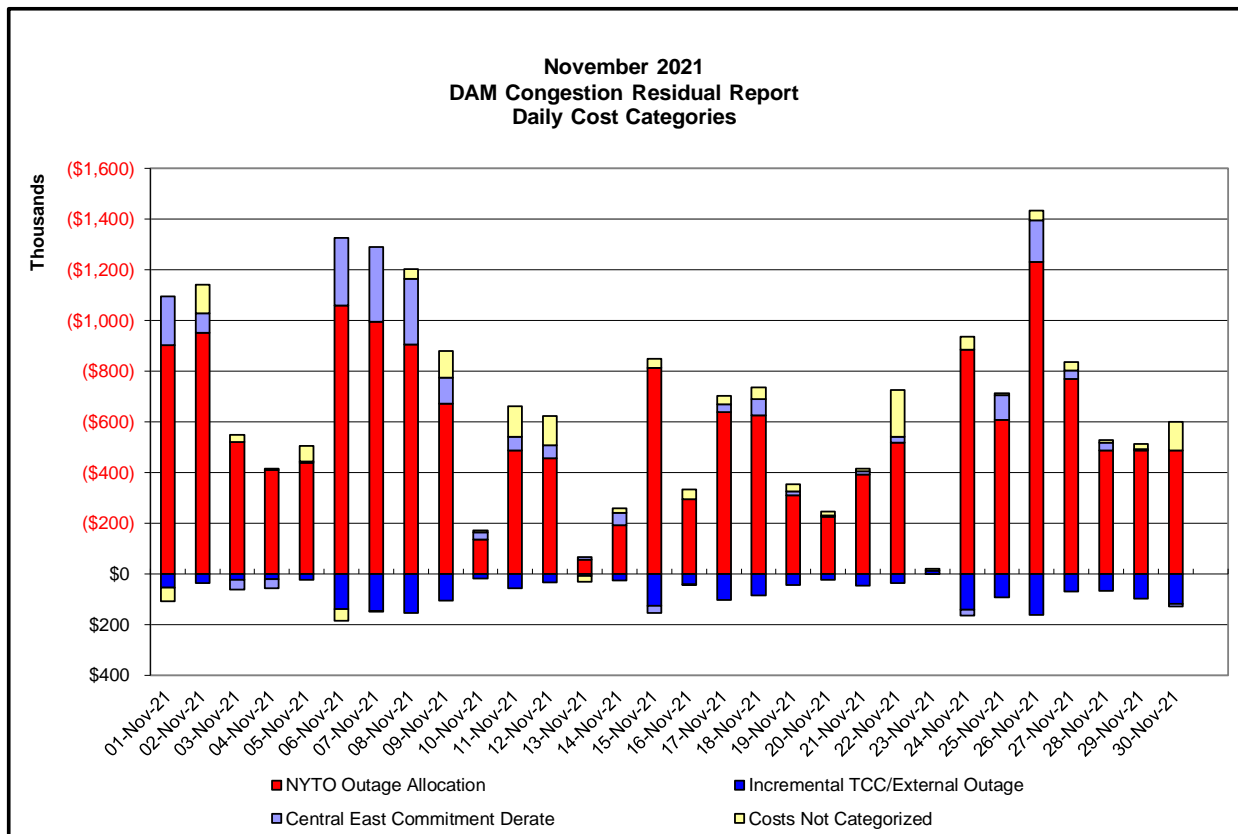
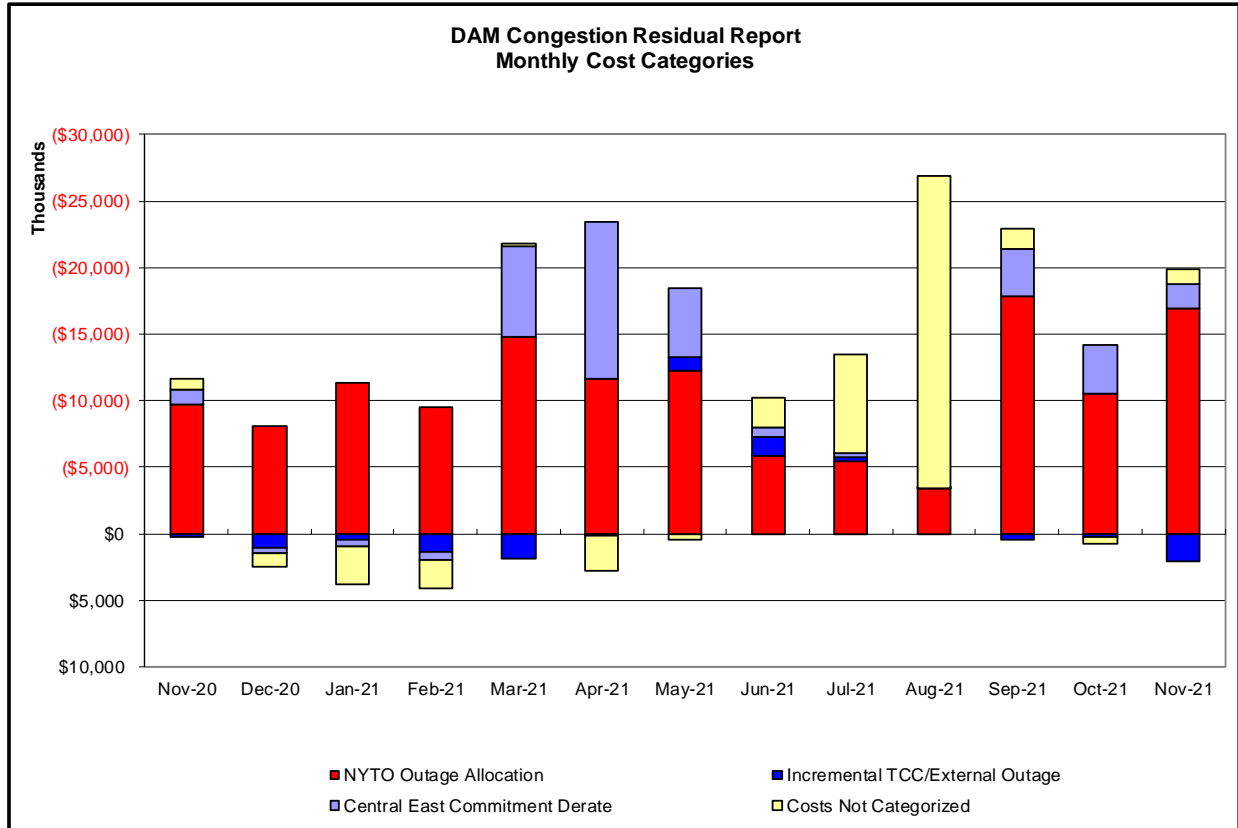
Day's investigated in January: 3,4,5,6,7,8,9,10,11,12,13,16,17,19,20,21,22,23,25,26,28,30,31		
Event	Description	January Dates
	Derate Adirondack-Moses 230kV (#MA1) I/o SIN:MSU1&7040& HQ GN&LD PROXY	6
	Derate Central East	13,16,20,22,23,25,31
	Derate Dunwoodie-Shore Road 345kV (#Y50) for I/o SCB:SPBK(RNS2):Y49&M29&Y49_ST	9,20
	Derate Dysinger East	8
	Derate Greenbush-Regeneron 115kV (#9) I/o N.SctInd-Alps 345kV (#2)	19
	Derate Harsnrad-Hinman 115kV (#908) I/o SCB:Dysinger(1B3201) ND2&NH2&DH2	31
	Derate Mortimer-Sweden 115kV (#113) I/o Niagara-STA 255 345kV (#NH2)	4-7,9-11,30,31
	Derate N.Troy-Sycayway 115kV (#16) I/o Berkshire-Alps 345kV (#393)	31
	Derate Niagara 230/115kV (#AT1)	4,5
	Derate NiagaraBlvd-Packard 115kV (#181-922) I/o TWR:PACKARD 77 & 78	6
	Derate Packard 230/115kV (#BK3) I/o TWR:PACKARD 77 & 78	6
	Derate Rocktaern-Ramapo 345kV (#311) I/o TWR:Y88&Y94&TA5	19
	Extended Outage Dysinger-STA255 345kV (#DH1)	10,11
	Extended Outage of Northport-Pilgrim 138kV (#679)	10-12
	Extended Outage Sandbar-Plattsburg 115kV (#PV20)	7
	Forced Outage Buchanan-Eastview 345kV (#W93)	12
	Forced Outage Dunwoodie-ShoreRd 345kV (#Y50)	12,13,16
	Forced Outage Dysinger-Kintigh 345kV (#38)	10
	Forced Outage East Garden City 345kV Bank (#Bk2)	8
	Forced Outage Niagara-Dysinger 345kV (#ND1)	10
	Forced Outage Niagara-Robinson Road 230kV (#64)	6
	Forced Outage Pannel-STA56 115kV (#25)	31
	Forced Outage Ramapo-Buchanon 345kV (#Y94)	12
	Forced Outage SUNY Buffalo-Gardenville 230kV (#79)	13
	HQ_CEDARS - NY Scheduling Limit	6,20,23,25,28,30,31
	HQ_CHAT DNI Ramp Limit	19,22,26
	HQ_CHAT-NY Scheduling Limit	5,6,8,23,25,28,30,31
	IESO_AC-NY Scheduling Limit	11,20,30,31
	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East	3-12,16,17,19,22,23,25,26,30,31
	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West	3-11,16,21,28,31
	NE_AC Active DNI Ramp Limit	3-7,10-12,16,20-23,26,28,30,31
	NE_AC-NY Scheduling Limit	4,7,8-10,12,16,17,19,28,31
	NE_NNC1385 Scheduling Limit	30,31
	NYCA DNI Ramp Limit	3-8,10-13,16,19-23,25,26,28
	PJM_AC DNI Ramp Limit	7,16,17,19,21,22,25,30
	PJM_AC-NY Scheduling Limit	3-6,12,20-23,25,26,28,30,31
	Uprate Central East	3-12,16,17,19,25,26,28,30
	Uprate East 179th Street-Hellgate 138kV (#15055)	28
	Uprate Mortimer-Sweden 115kV (#113) I/o Niagara-STA 255 345kV (#NH2)	4,8-10,28

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	

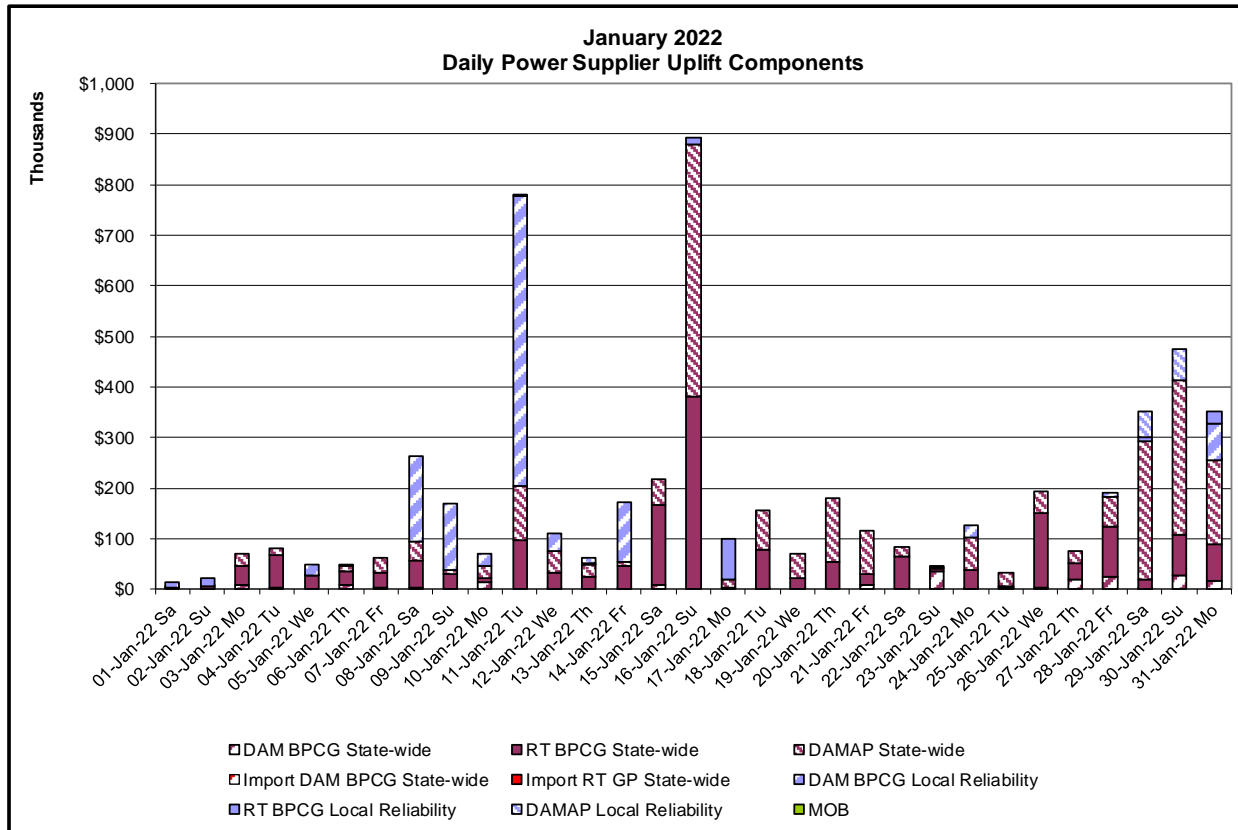
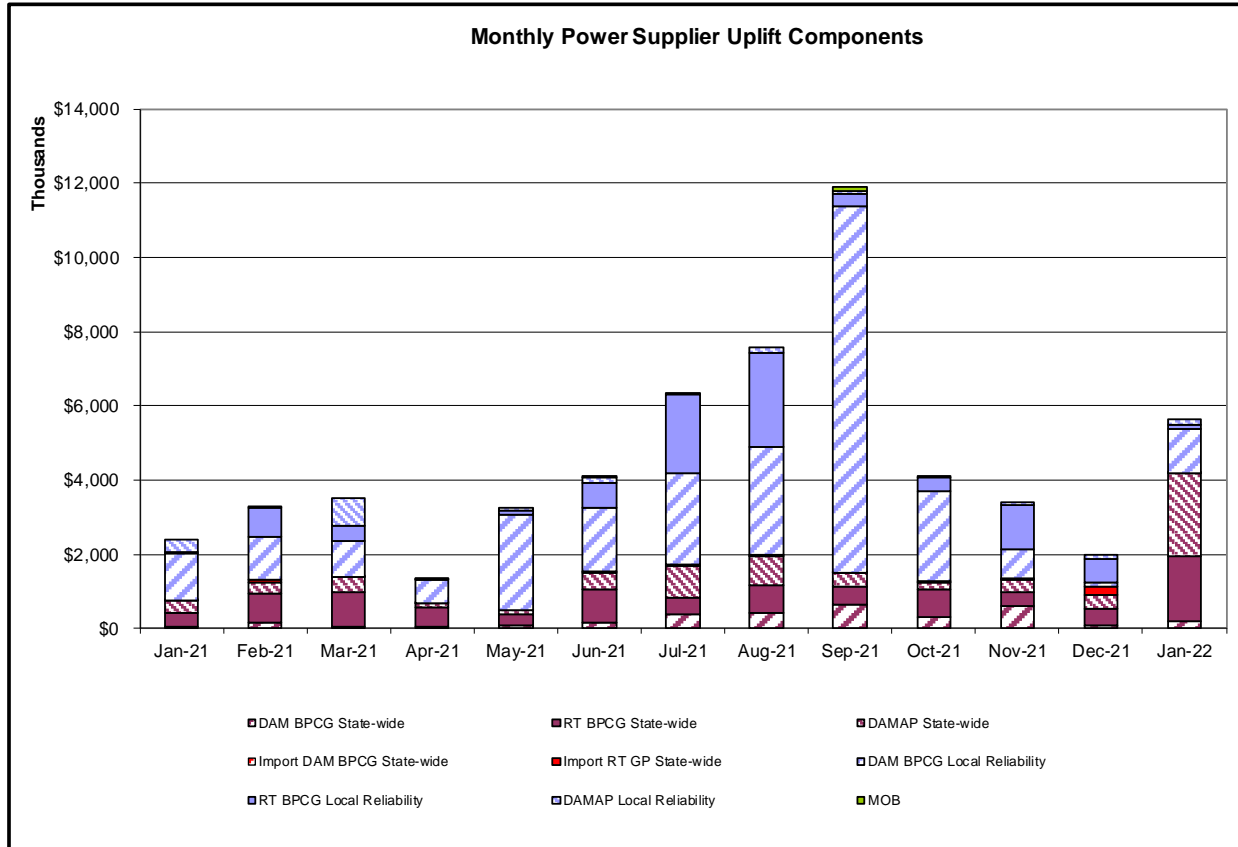
Monthly Balancing Market Congestion Report Assumptions/Notes

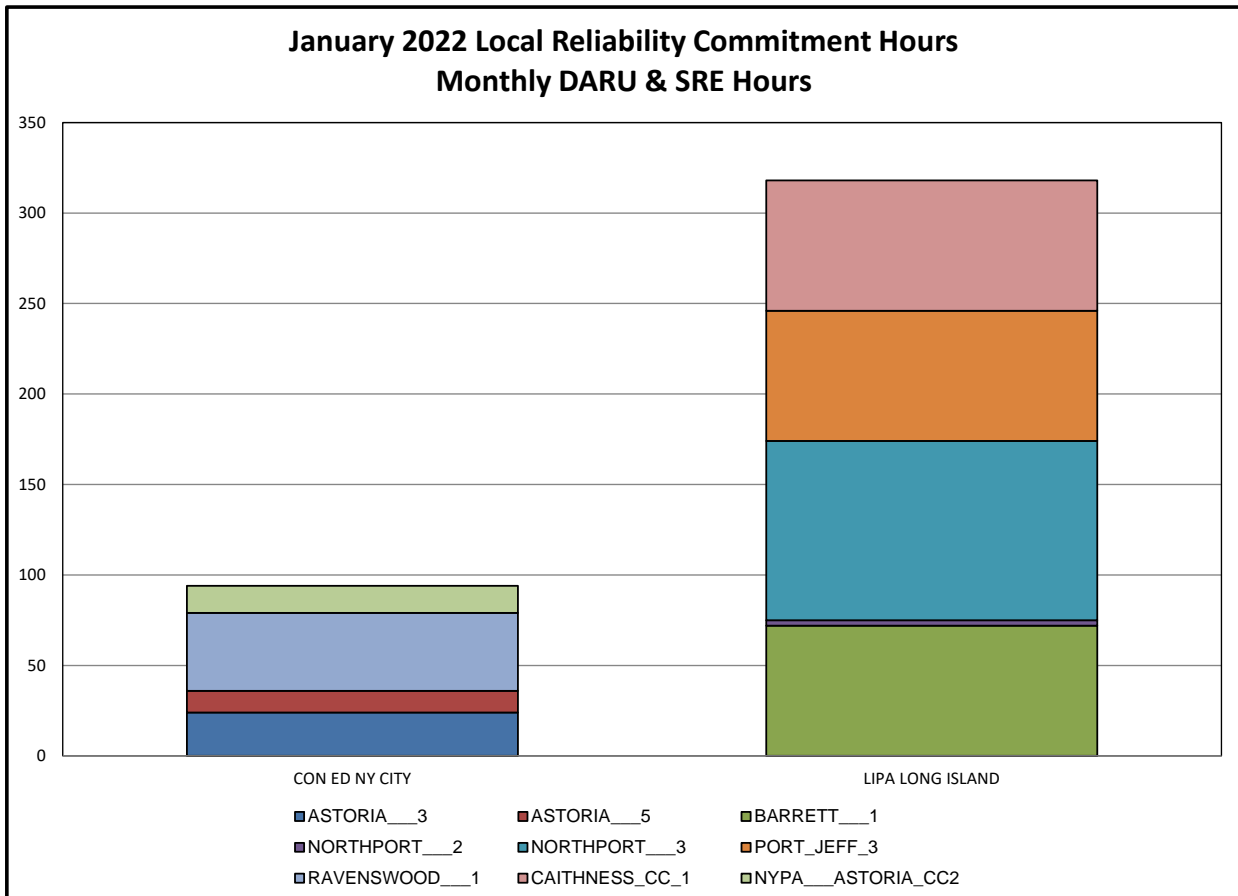
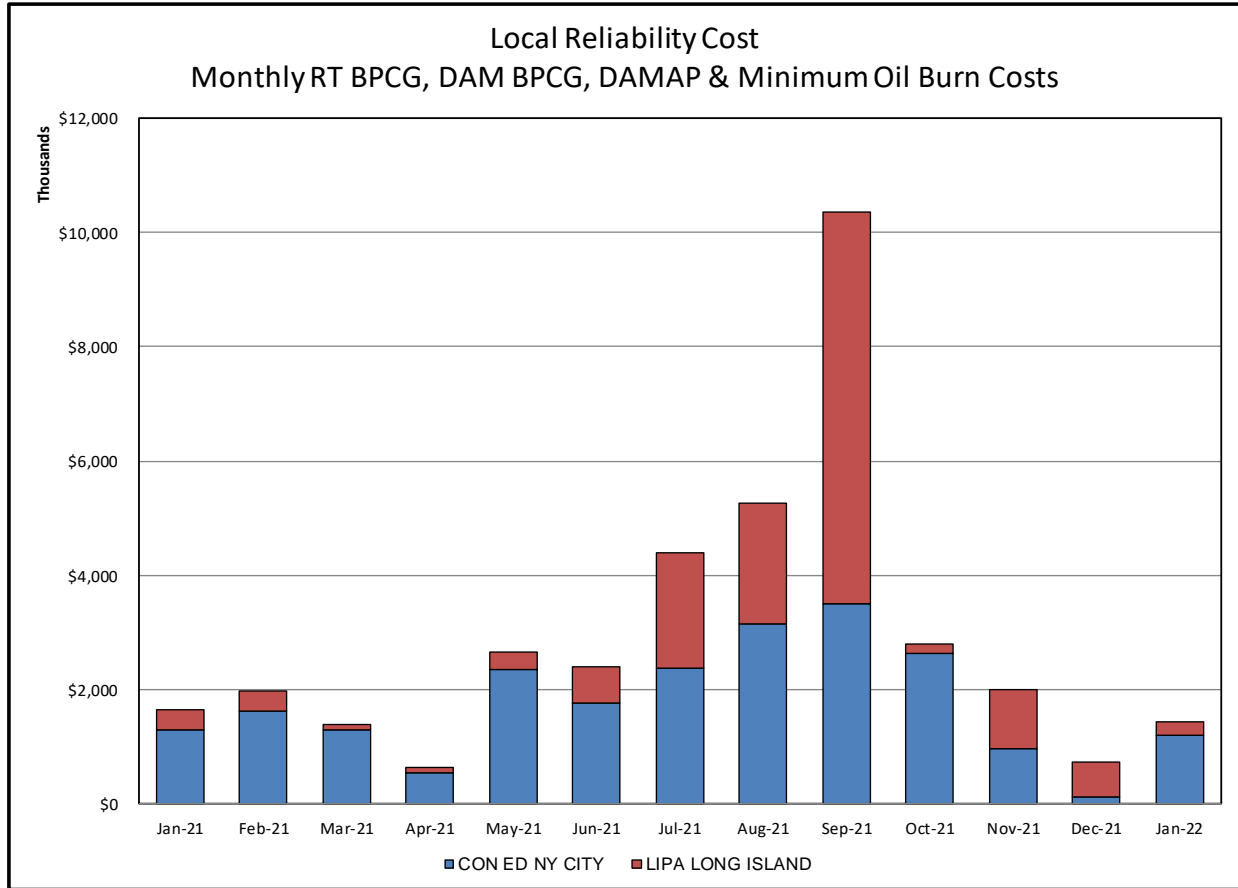
- 1) Storm Watch Costs are identified as daily total uplift costs
- 2) Days with a value of BMCR less M2M Settlement of \$100K/HR, shortfall of \$200K/Day or more, or surplus of \$100K/Day or more are investigated.
- 3) Uplift costs associated with multiple event types are apportioned equally by hour

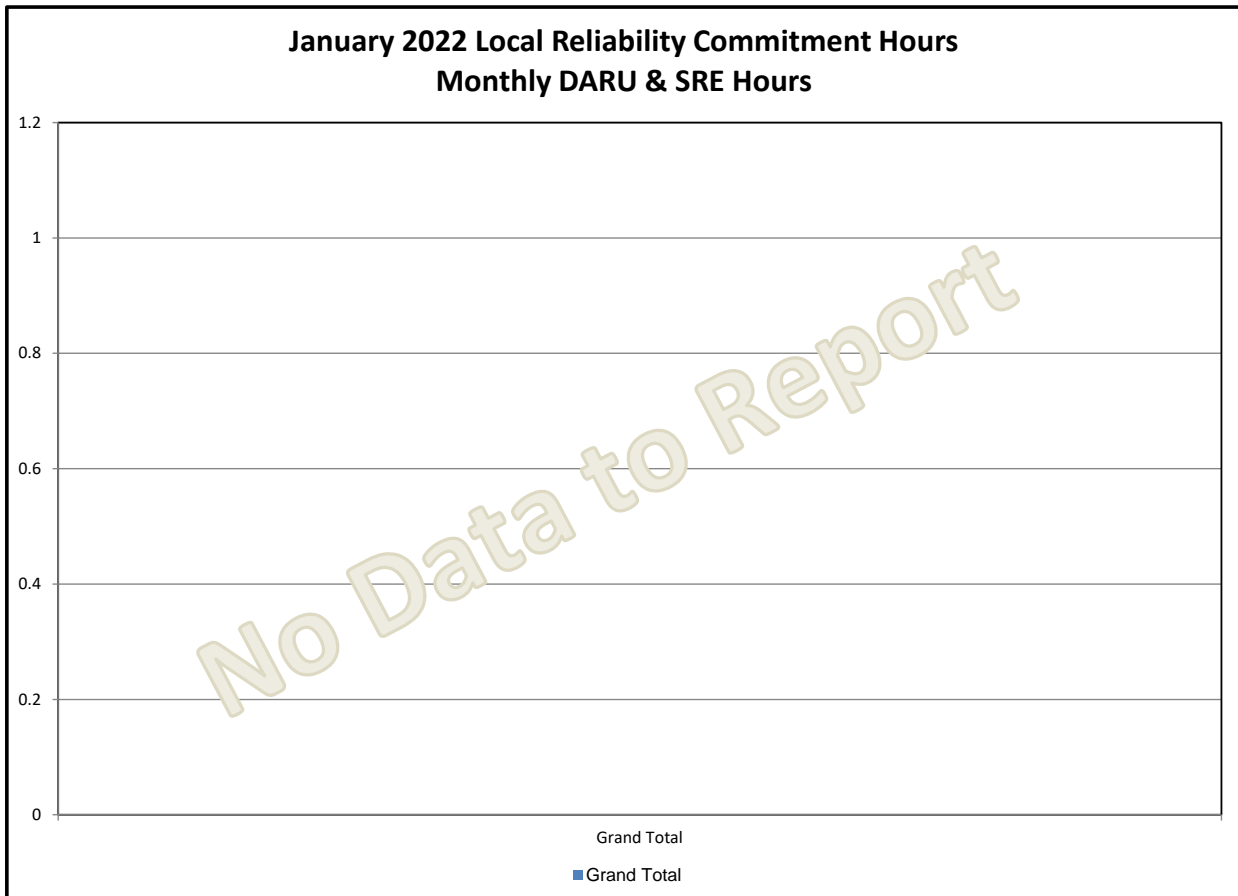
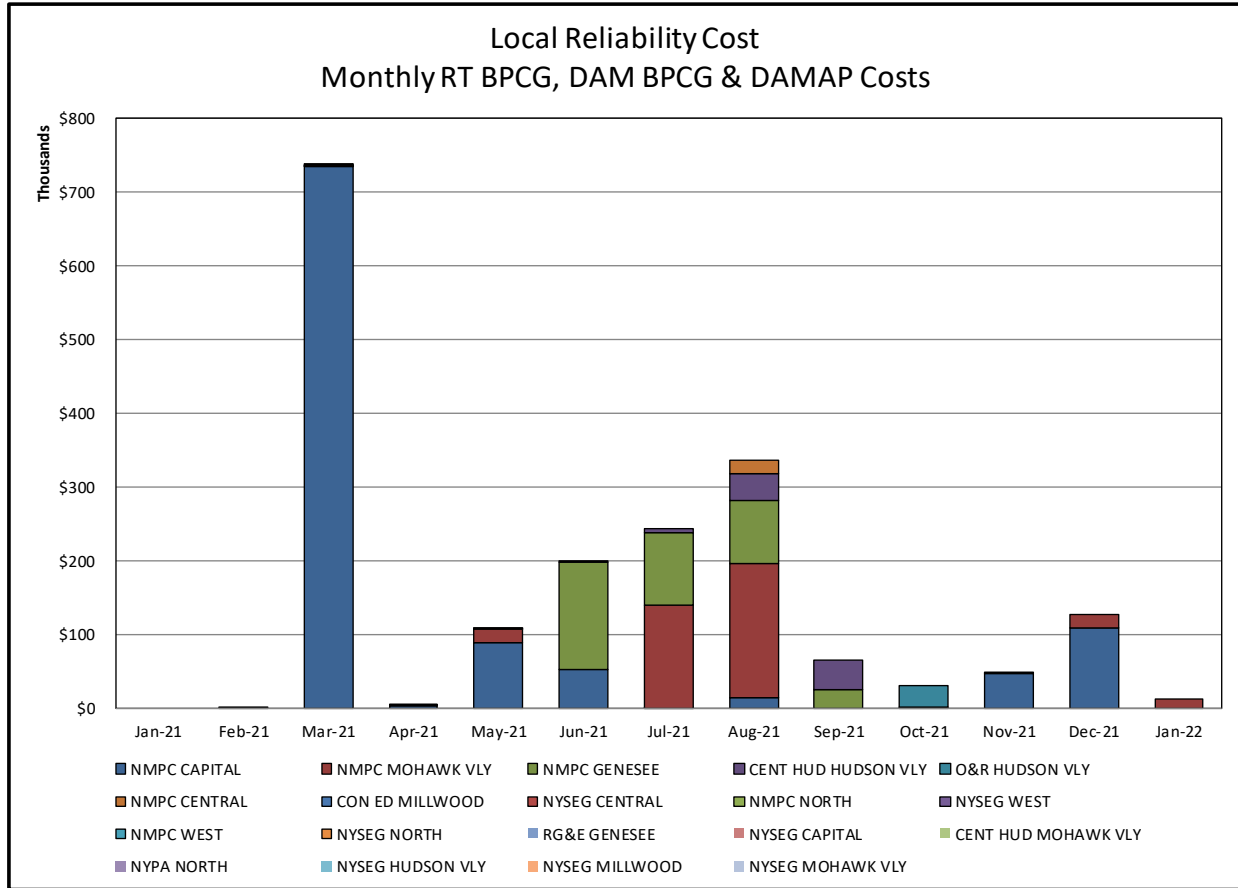


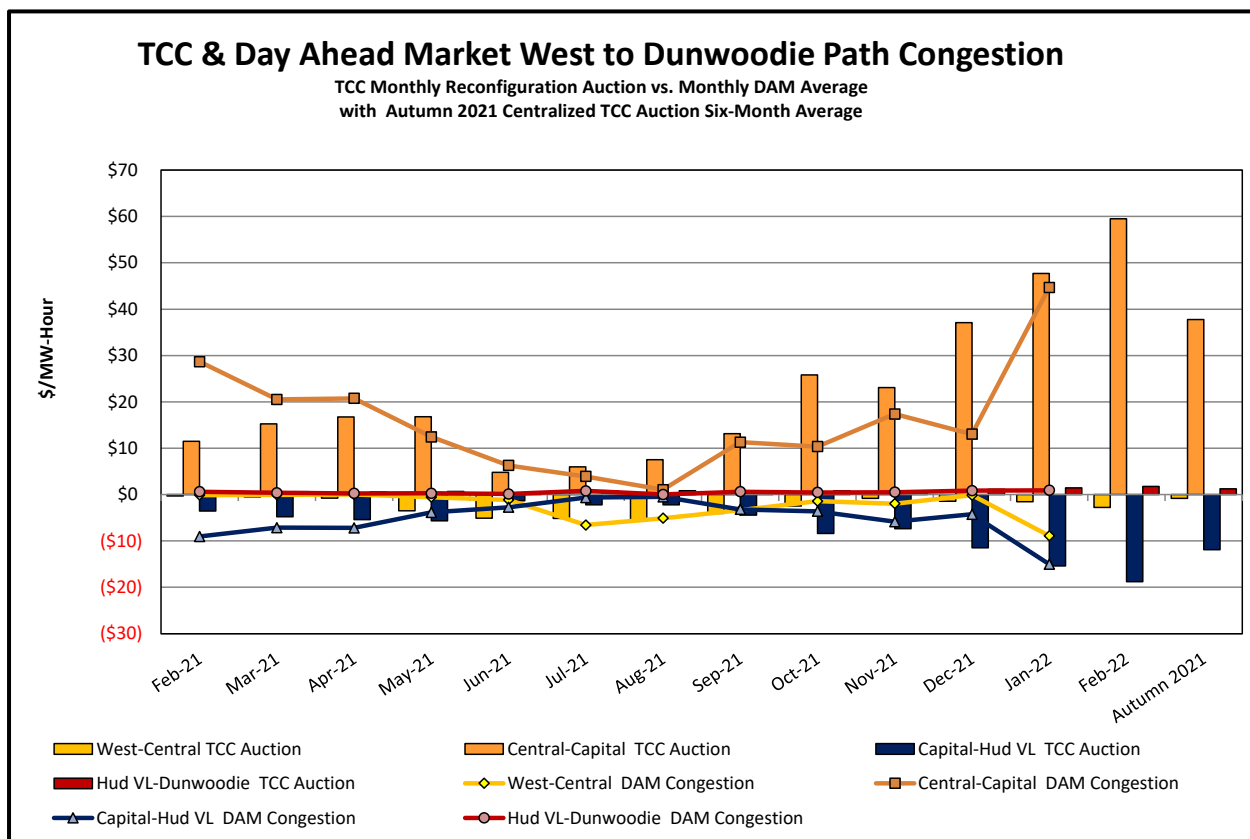
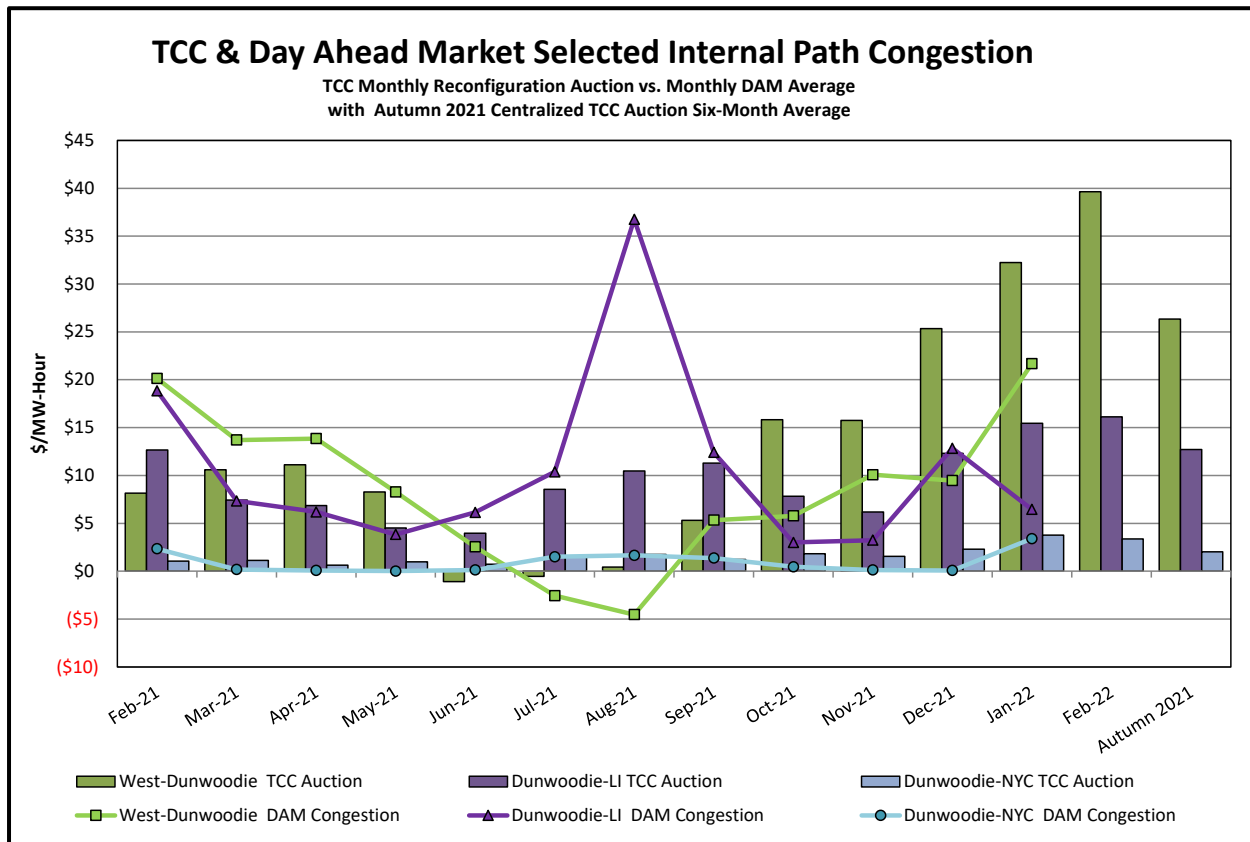
Day-Ahead Market Congestion Residual Categories

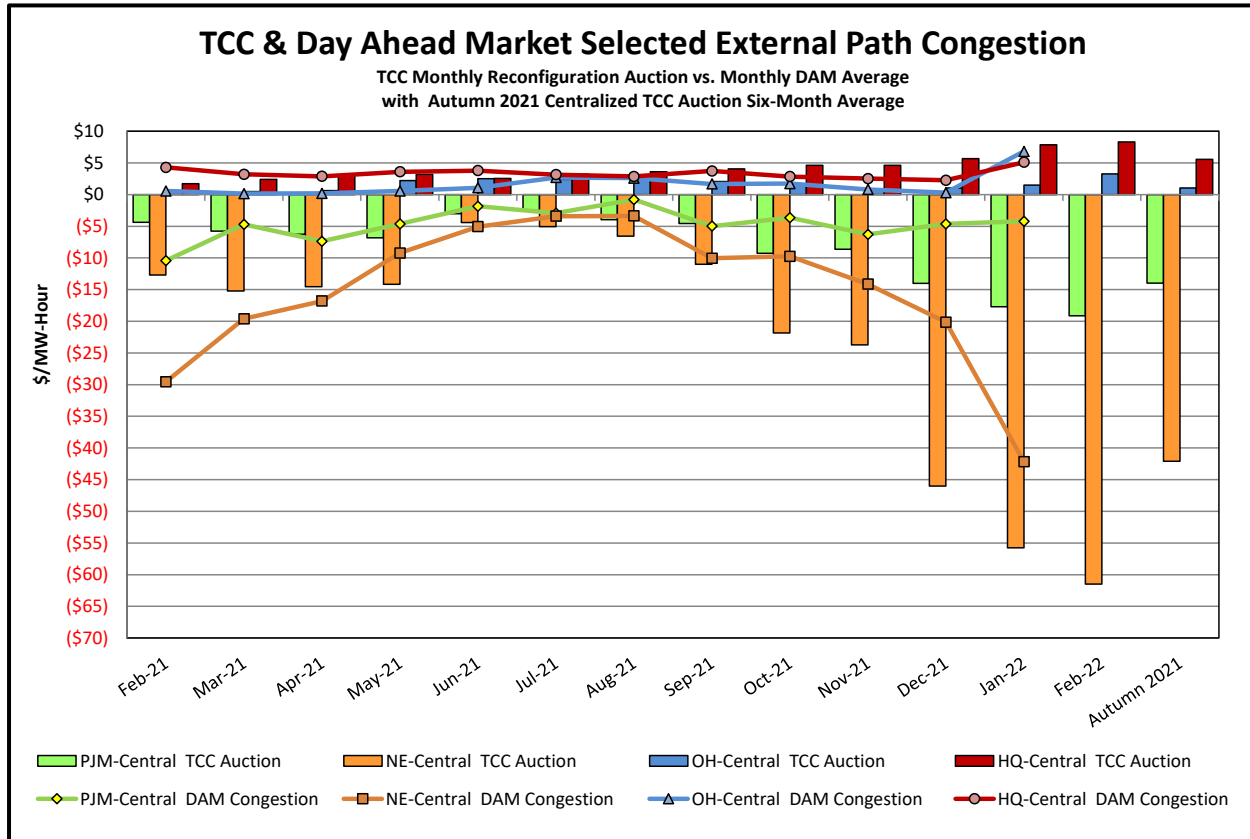
<u>Category</u>	<u>Cost Assignment</u>	<u>Events Types</u>	<u>Event Examples</u>
NYTO Outage Allocation	Responsible TO	Direct allocation to NYTO's responsible for transmission equipment status change.	DAM scheduled outage for equipment modeled in-service for the TCC Auction.
Incremental TCC/External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



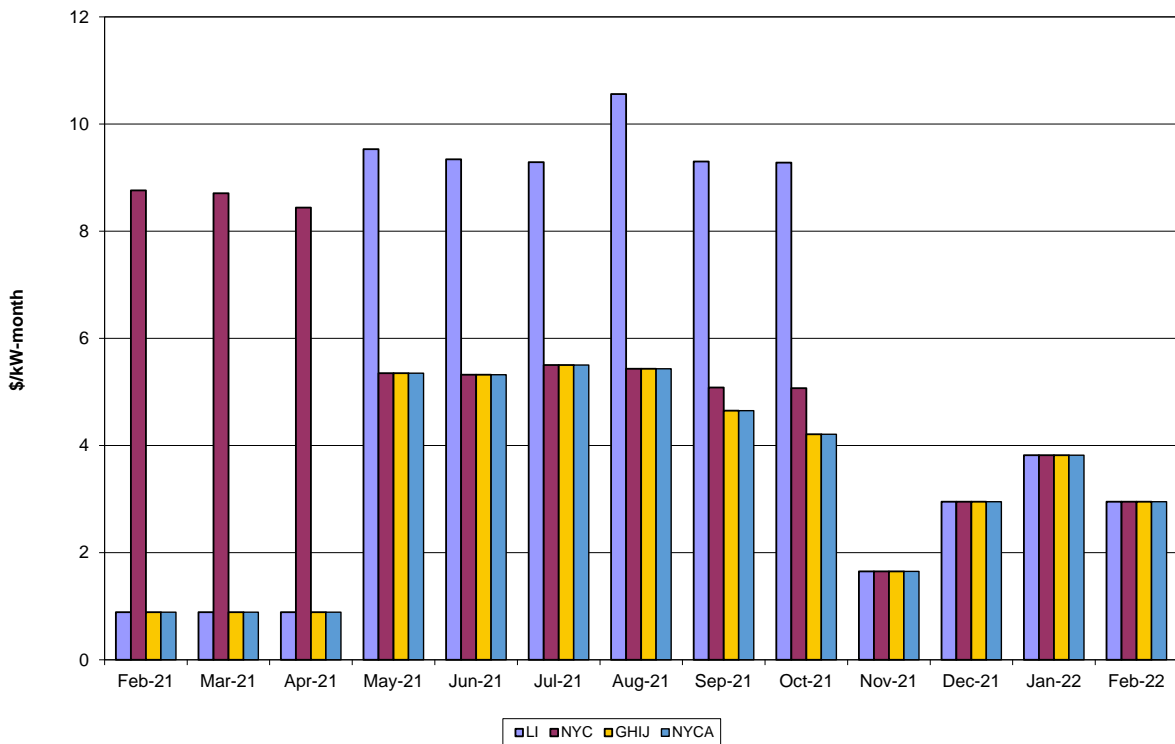




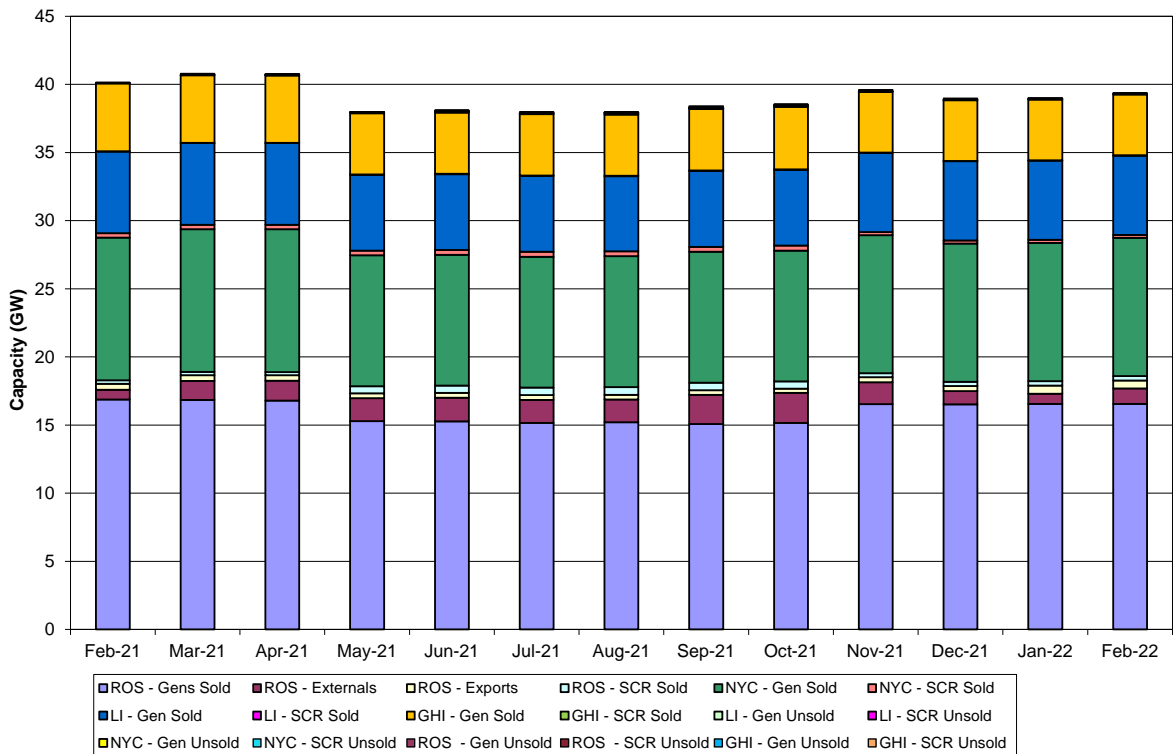




ICAP Spot Market Clearing Price



UCAP Sales

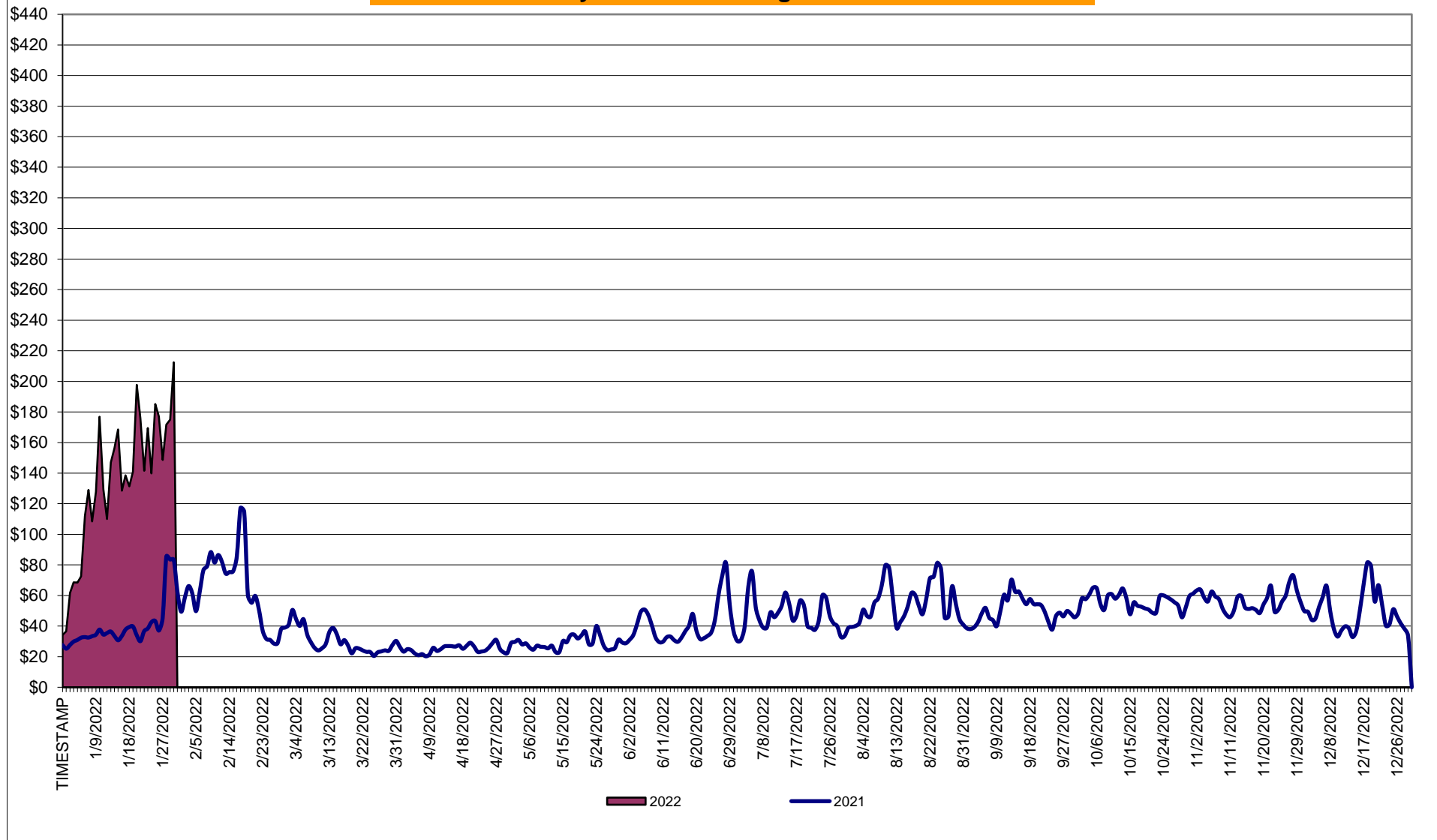


Market Performance Highlights

January 2022

- LBMP for January is \$134.79/MWh; higher than \$47.99/MWh in December 2021 and \$37.83/MWh in January 2021.
 - Day Ahead Load Weighted LBMPs and Real Time Load Weighted LBMPs are higher compared to December.
- January 2022 average year-to-date monthly cost of \$137.49/MWh is a 238% increase from \$40.69/MWh in January 2021.
- Average daily sendout is 451 GWh/day in January; higher than 408 GWh/day in December 2021 and 427 GWh/day in January 2021.
- Natural gas prices and distillate prices are higher compared to the previous month.
 - Natural Gas (Transco Z6 NY) was \$11.15/MMBtu, up from \$3.47/MMBtu in December.
 - Natural gas prices are up 278.6% year-over-year.
 - Natural gas prices for delivery points outside of NYC (Iroquois Z2, Algonquin, Tennessee Z6, and Iroquois Waddington) are up ~325-350% year-over-year.
 - Jet Kerosene Gulf Coast was \$17.96/MMBtu, up from \$15.44/MMBtu in December.
 - Ultra Low Sulfur No.2 Diesel NY Harbor was \$18.53/MMBtu, up from \$15.99/MMBtu in December.
 - Distillate prices are up 71.8% year-over-year.
- Uplift per MWh is lower compared to the previous month.
 - Uplift (not including NYISO cost of operations) is (\$1.50)/MWh; lower than (\$0.48)/MWh in December.
 - Local Reliability Share is \$0.09/MWh, higher than \$0.05/MWh in December.
 - Statewide Share is (\$1.59)/MWh, lower than (\$0.53)/MWh in December.
 - TSA \$ per NYC MWh is \$0.00/MWh.
- Total uplift costs (Schedule 1 components including NYISO Cost of Operations) are lower than December.

Daily NYISO Average Cost/MWh (Energy & Ancillary Services)*
2021 Annual Average \$47.59/MWh
January 2021 YTD Average \$40.69/MWh
January 2022 YTD Average \$137.49/MWh



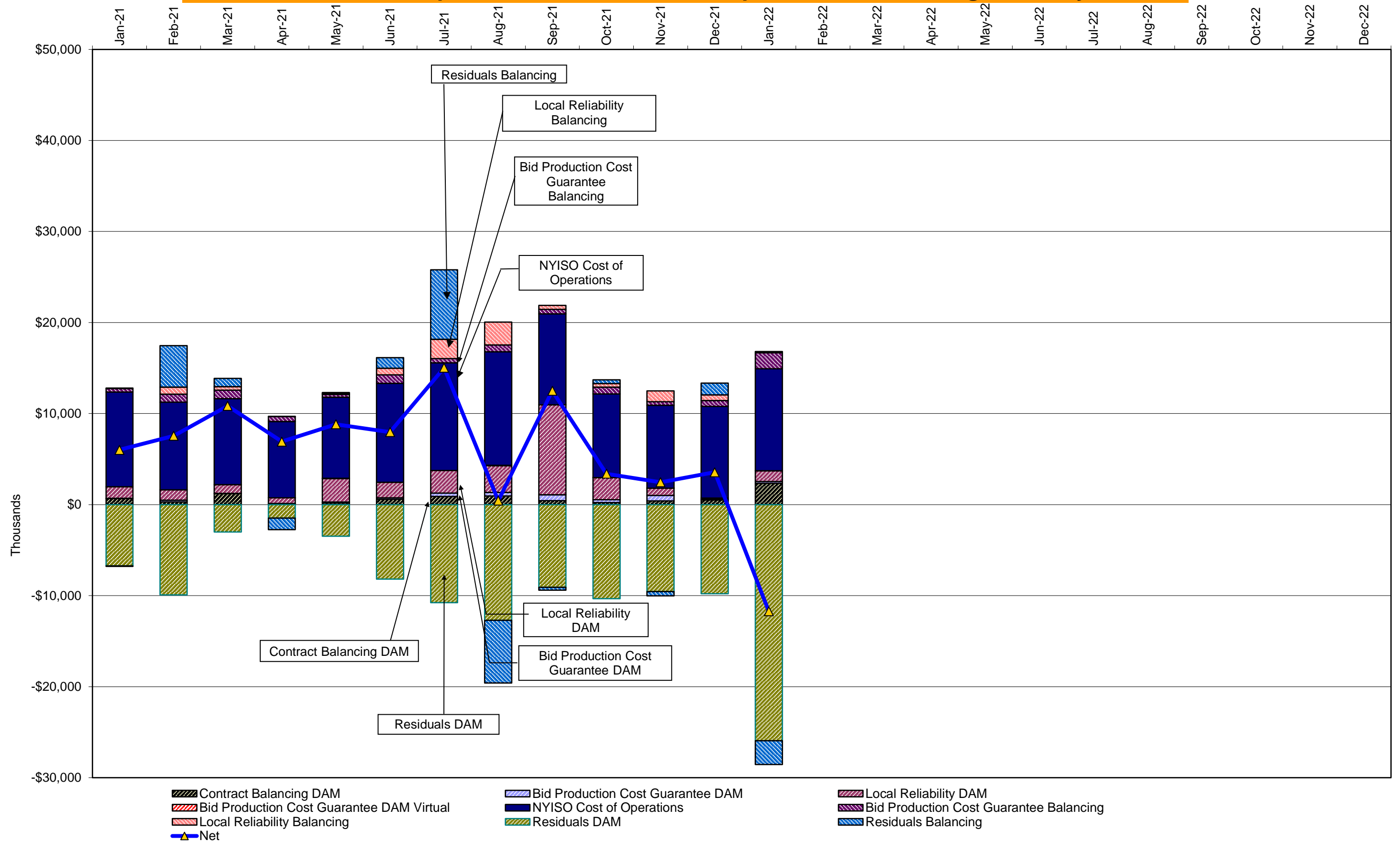
* Excludes ICAP payments.

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

2022	<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	134.79											
NTAC	1.43											
Reserve	1.26											
Regulation	0.27											
NYISO Cost of Operations	0.73											
FERC Fee Recovery	0.07											
Uplift	(1.50)											
Uplift: Local Reliability Share	0.09											
Uplift: Statewide Share	(1.59)											
Voltage Support and Black Start	0.42											
Avg Monthly Cost	137.41											
 Avg YTD Cost	 137.49											
 TSA \$ per NYC MWh	 0.00											
 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	25.72	39.37	45.16	55.48	47.68	52.97	53.92	47.99
NTAC	1.35	1.20	1.26	1.54	2.09	2.05	2.01	1.37	1.23	1.67	2.03	1.40
Reserve	0.49	0.81	0.57	0.56	0.54	0.45	0.44	0.44	0.50	0.75	0.70	0.57
Regulation	0.07	0.13	0.09	0.10	0.08	0.07	0.06	0.05	0.09	0.13	0.15	0.11
NYISO Cost of Operations	0.74	0.74	0.74	0.74	0.76	0.76	0.76	0.76	0.75	0.74	0.75	0.73
FERC Fee Recovery	0.08	0.09	0.09	0.11	0.10	0.08	0.07	0.06	0.08	0.09	0.09	0.08
Uplift	(0.31)	(0.15)	0.11	(0.12)	(0.19)	(0.50)	(0.09)	(0.81)	0.00	(0.59)	(0.58)	(0.48)
Uplift: Local Reliability Share	0.09	0.15	0.11	0.06	0.22	0.17	0.30	0.33	0.78	0.23	0.16	0.05
Uplift: Statewide Share	(0.40)	(0.30)	0.00	(0.18)	(0.41)	(0.68)	(0.39)	(1.14)	(0.78)	(0.81)	(0.74)	(0.53)
Voltage Support and Black Start	0.43	0.43	0.43	0.44	0.44	0.44	0.44	0.44	0.44	0.43	0.44	0.42
Avg Monthly Cost	40.61	66.87	31.81	26.06	29.45	42.65	48.79	57.73	50.70	56.11	57.43	50.76
 Avg YTD Cost	 40.69	 52.99	 46.57	 42.41	 40.10	 40.59	 42.05	 44.63	 45.34	 46.35	 47.29	 47.59
 TSA \$ per NYC MWh	 0.00	 0.00	 0.00	 0.00	 0.52	 0.90	 0.93	 0.24	 0.56	 0.39	 0.10	 0.00

* Excludes ICAP payments.
Market Mitigation and Analysis
Prepared: 2/8/2022 6:43 PM

NYISO Dollar Flows - Uplift - OATT Schedule 1 components - Data through January 31, 2022



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>2022</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>	14,327,101											
DAM LSE Internal LBMP Energy Sales	57%											
DAM External TC LBMP Energy Sales	7%											
DAM Bilateral - Internal Bilaterals	28%											
DAM Bilateral - Import/Non-LBMP Market Bilaterals	4%											
DAM Bilateral - Export/Non-LBMP Market Bilaterals	2%											
DAM Bilateral - Wheel Through Bilaterals	2%											
<u>Balancing Energy Market MWh</u>	942,823											
Balancing Energy LSE Internal LBMP Energy Sales	88%											
Balancing Energy External TC LBMP Energy Sales	16%											
Balancing Energy Bilateral - Internal Bilaterals	1%											
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	0%											
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	4%											
Balancing Energy Bilateral - Wheel Through Bilaterals	-9%											
<u>Transactions Summary</u>												
LBMP	67%											
Internal Bilaterals	26%											
Import Bilaterals	3%											
Export Bilaterals	2%											
Wheels Through	1%											
<u>Market Share of Total Load</u>												
Day Ahead Market	93.8%											
Balancing Energy +	6.2%											
Total MWH	15,269,924											
Average Daily Energy Sendout/Month GWh	451											

<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	11,854,214	14,120,662	15,843,724	16,032,238	12,759,550	11,852,213	11,496,431	13,068,538
DAM LSE Internal LBMP Energy Sales	60%	59%	56%	55%	56%	61%	65%	64%	61%	59%	60%	57%
DAM External TC LBMP Energy Sales	5%	4%	3%	2%	2%	3%	2%	4%	3%	4%	3%	6%
DAM Bilateral - Internal Bilaterals	31%	30%	32%	35%	35%	29%	27%	26%	29%	30%	32%	30%
DAM Bilateral - Import/Non-LBMP Market Bilaterals	1%	4%	4%	5%	4%	4%	3%	3%	4%	4%	3%	3%
DAM Bilateral - Export/Non-LBMP Market Bilaterals	2%	2%	2%	2%	2%	1%	1%	1%	2%	2%	2%	2%
DAM Bilateral - Wheel Through Bilaterals	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%	1%	2%
<u>Balancing Energy Market MWh</u>	29,179	-308,157	-70,279	30,603	-36,350	247,874	-367,232	454,982	543,392	511,553	639,571	675,223
Balancing Energy LSE Internal LBMP Energy Sales	-215%	-151%	-367%	-456%	-398%	53%	-135%	82%	65%	63%	74%	87%
Balancing Energy External TC LBMP Energy Sales	374%	59%	365%	578%	440%	60%	41%	34%	40%	39%	26%	18%
Balancing Energy Bilateral - Internal Bilaterals	49%	4%	27%	34%	0%	-1%	3%	3%	1%	2%	2%	2%
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	50%	5%	32%	34%	21%	5%	3%	2%	4%	5%	7%	8%
Balancing Energy Bilateral - Wheel Through Bilaterals	-158%	-17%	-158%	-90%	-163%	-17%	-11%	-21%	-9%	-10%	-8%	-15%
<u>Transactions Summary</u>												
LBMP	65%	62%	59%	57%	58%	65%	66%	69%	66%	64%	65%	65%
Internal Bilaterals	31%	31%	33%	35%	35%	29%	28%	25%	27%	28%	30%	28%
Import Bilaterals	1%	4%	4%	5%	4%	3%	3%	3%	4%	4%	3%	3%
Export Bilaterals	2%	2%	2%	2%	2%	2%	1%	1%	2%	2%	2%	2%
Wheels Through	2%	2%	2%	2%	2%	1%	1%	1%	2%	2%	0%	1%
<u>Market Share of Total Load</u>												
Day Ahead Market	99.8%	102.4%	100.6%	99.7%	100.3%	98.3%	102.4%	97.2%	95.9%	95.9%	94.7%	95.1%
Balancing Energy +	0.2%	-2.4%	-0.6%	0.3%	-0.3%	1.7%	-2.4%	2.8%	4.1%	4.1%	5.3%	4.9%
Total MWH	14,138,027	13,017,172	12,772,999	11,234,865	11,817,864	14,368,536	15,476,492	16,487,220	13,302,943	12,363,765	12,136,001	13,743,761
Average Daily Energy Sendout/Month GWh	427	434	381	354	365	458	483	504	420	373	387	408

+ 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 2022 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 *	\$124.39											
Standard Deviation	\$51.94											
Load Weighted Price **	\$128.16											
<u>RTC LBMP</u>												
Price *	\$127.16											
Standard Deviation	\$77.62											
Load Weighted Price **	\$130.45											
<u>REAL TIME LBMP</u>												
Price *	\$130.43											
Standard Deviation	\$93.35											
Load Weighted Price **	\$133.98											
Average Daily Energy Sendout/Month GWh	451											

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	\$22.95	\$33.36	\$40.38	\$50.30	\$45.48	\$50.66	\$51.90	\$44.24
Standard Deviation	\$14.58	\$24.48	\$8.23	\$4.58	\$6.28	\$15.88	\$15.56	\$22.37	\$12.42	\$11.04	\$11.83	\$13.72
Load Weighted Price **	\$35.31	\$58.67	\$28.12	\$20.81	\$23.75	\$36.28	\$42.84	\$53.93	\$47.08	\$51.92	\$52.98	\$45.33
<u>RTC LBMP</u>												
Price *	\$34.32	\$49.25	\$25.59	\$21.30	\$25.36	\$39.69	\$42.25	\$58.87	\$50.07	\$51.41	\$52.37	\$44.16
Standard Deviation	\$20.93	\$23.34	\$12.67	\$7.91	\$11.17	\$34.08	\$47.97	\$47.79	\$22.24	\$13.96	\$16.97	\$17.49
Load Weighted Price **	\$35.40	\$50.48	\$26.37	\$21.67	\$26.50	\$44.41	\$45.27	\$64.66	\$52.21	\$52.71	\$53.44	\$45.12
<u>REAL TIME LBMP</u>												
Price *	\$34.59	\$48.22	\$28.06	\$21.10	\$24.62	\$36.58	\$39.61	\$51.46	\$46.37	\$50.41	\$52.52	\$45.13
Standard Deviation	\$29.47	\$26.46	\$26.13	\$10.07	\$10.91	\$25.43	\$26.73	\$37.53	\$18.08	\$14.93	\$20.97	\$23.65
Load Weighted Price **	\$35.89	\$49.57	\$29.33	\$21.55	\$25.78	\$40.76	\$42.20	\$56.04	\$48.21	\$51.66	\$53.68	\$46.29
Average Daily Energy Sendout/Month GWh	427	434	381	354	365	458	483	504	420	373	387	408

* Average zonal load weighted prices.

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

NYISO Monthly Average Internal LBMPs 2021 - 2022

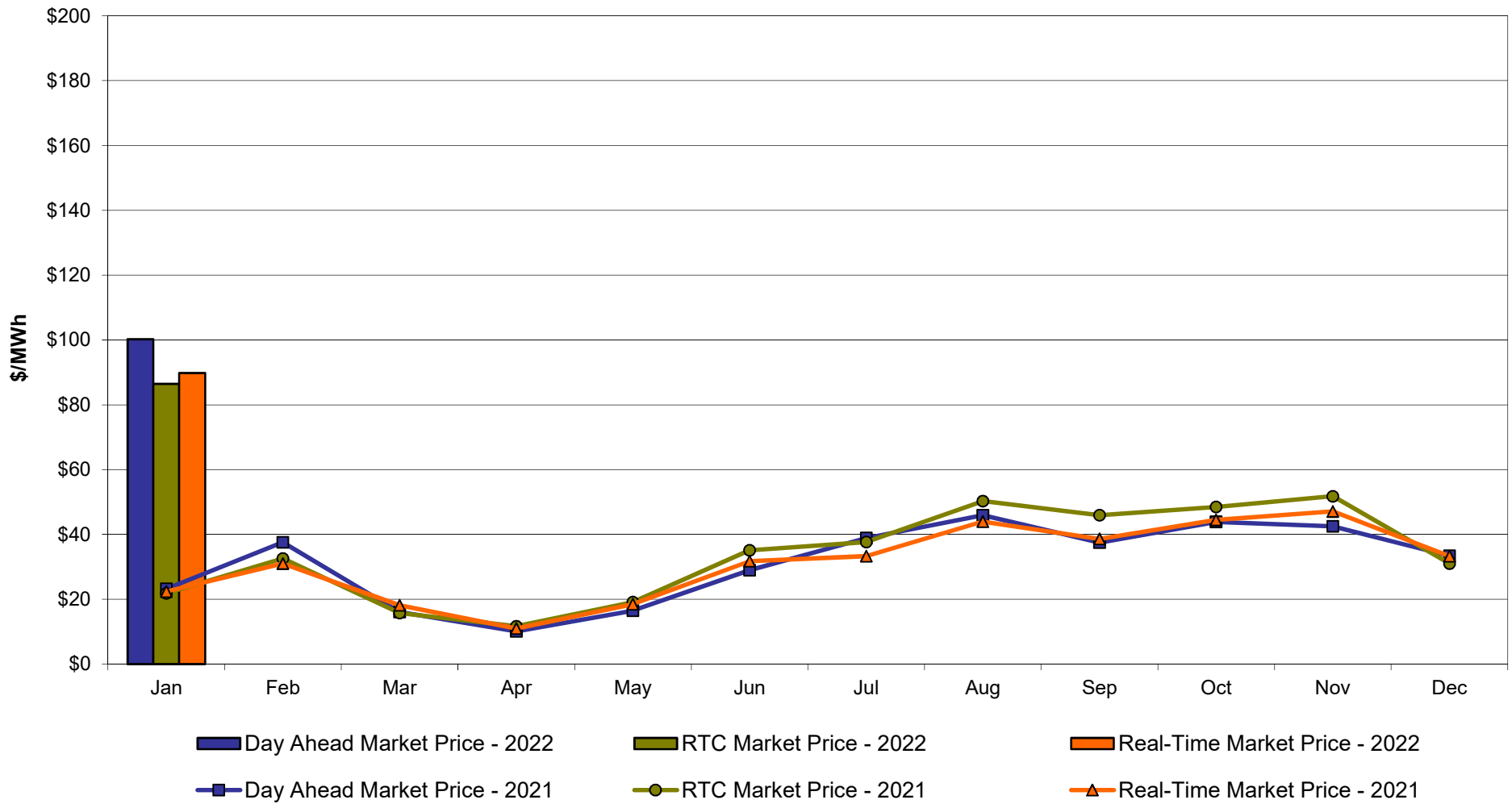


January 2022 Zonal LBMP Statistics for NYISO (\$/MWh)

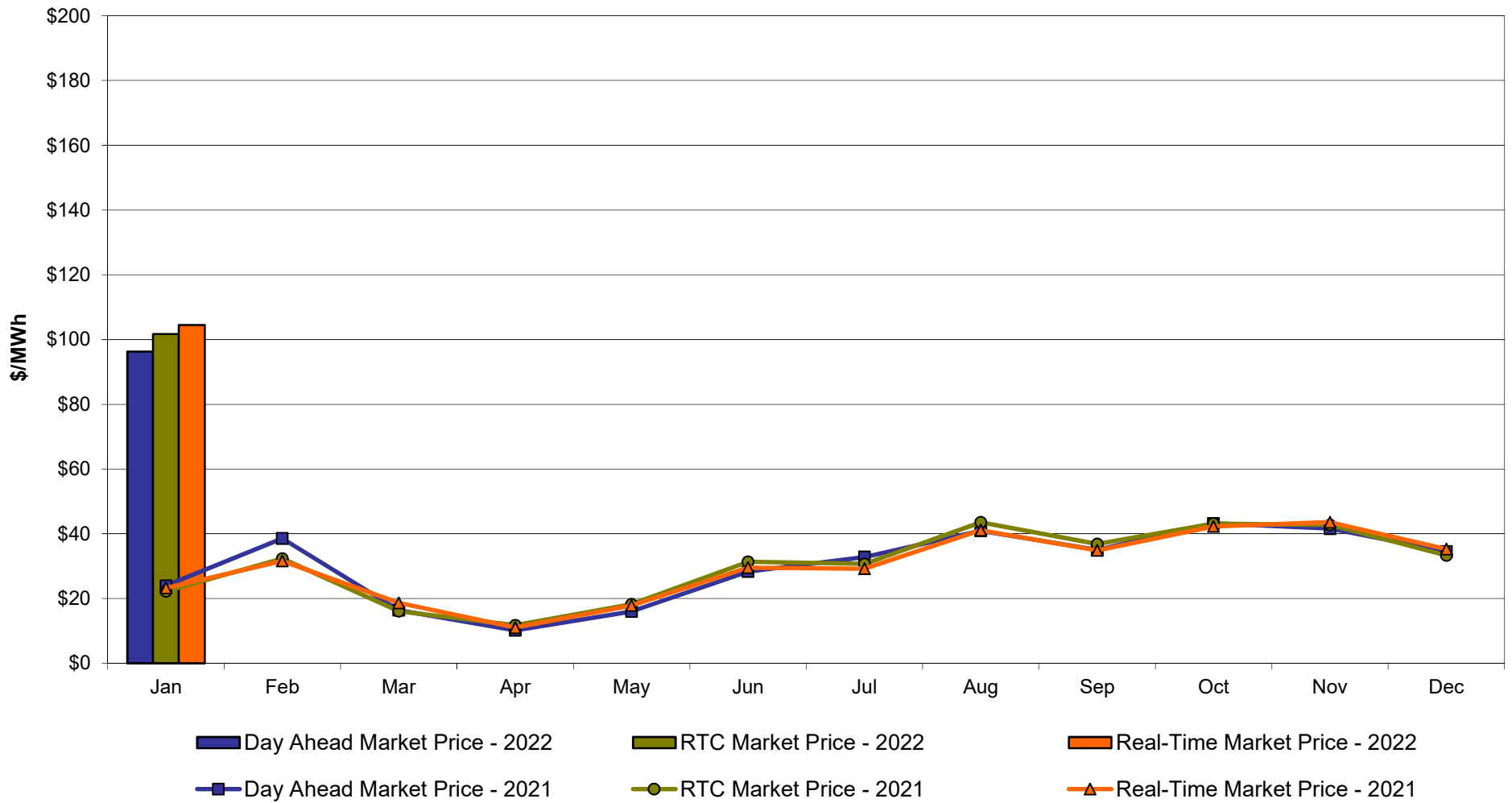
	<u>WEST</u> <u>Zone A</u>	<u>GENESEE</u> <u>Zone B</u>	<u>NORTH</u> <u>Zone D</u>	<u>CENTRAL</u> <u>Zone C</u>	<u>MOHAWK</u> <u>VALLEY</u> <u>Zone E</u>	<u>CAPITAL</u> <u>Zone F</u>	<u>HUDSON</u> <u>VALLEY</u> <u>Zone G</u>	<u>MILLWOOD</u> <u>Zone H</u>	<u>DUNWOODIE</u> <u>Zone I</u>	<u>NEW YORK</u> <u>CITY</u> <u>Zone J</u>	<u>LONG</u> <u>ISLAND</u> <u>Zone K</u>
<u>DAY AHEAD LBMP</u>											
Unweighted Price *	100.24	91.55	92.92	96.30	102.87	148.85	133.01	134.85	134.76	138.44	142.37
Standard Deviation	73.28	54.57	63.45	55.95	59.29	53.50	50.53	51.21	51.23	55.07	49.73
<u>RTC LBMP</u>											
Unweighted Price *	86.43	96.39	98.32	101.69	108.62	152.89	137.07	138.87	138.78	141.87	148.65
Standard Deviation	80.98	80.80	90.65	83.36	88.02	80.51	78.83	78.83	78.76	80.59	78.01
<u>REAL TIME LBMP</u>											
Unweighted Price *	89.80	99.78	101.58	104.52	111.58	157.90	141.32	143.31	143.17	146.04	150.96
Standard Deviation	93.72	97.17	109.36	99.43	104.56	96.80	94.53	94.54	94.47	95.70	93.56
	<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 *	82.08	90.91	90.91	101.16	145.18	142.72	141.08	140.87	133.50	134.45	91.77
Standard Deviation	50.15	61.23	61.23	44.90	50.39	49.75	48.01	49.38	50.78	51.12	64.45
<u>RTC LBMP</u>											
Unweighted Price *	73.23	87.98	86.89	94.21	149.00	148.22	143.64	144.18	135.30	135.03	97.57
Standard Deviation	67.70	80.25	80.01	64.47	76.08	71.17	67.39	68.71	69.30	71.06	84.86
<u>REAL TIME LBMP</u>											
Unweighted Price *	81.11	91.02	89.98	97.85	150.14	151.81	146.36	146.82	139.65	140.39	97.11
Standard Deviation	89.68	96.67	96.48	81.55	85.55	94.17	90.68	84.14	85.09	85.44	107.56

* Straight LBMP averages

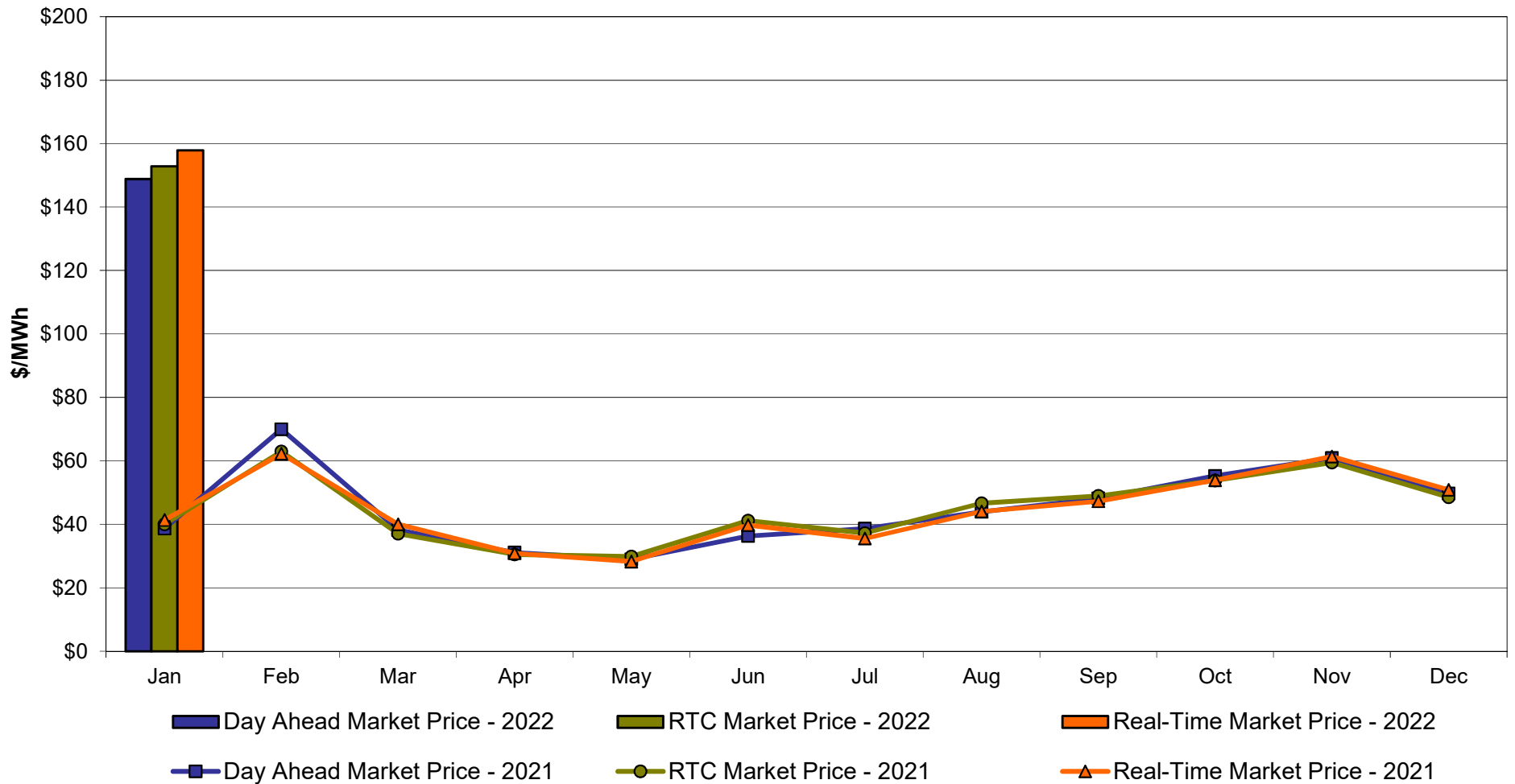
West Zone A **Monthly Average LBMP Prices 2021 - 2022**



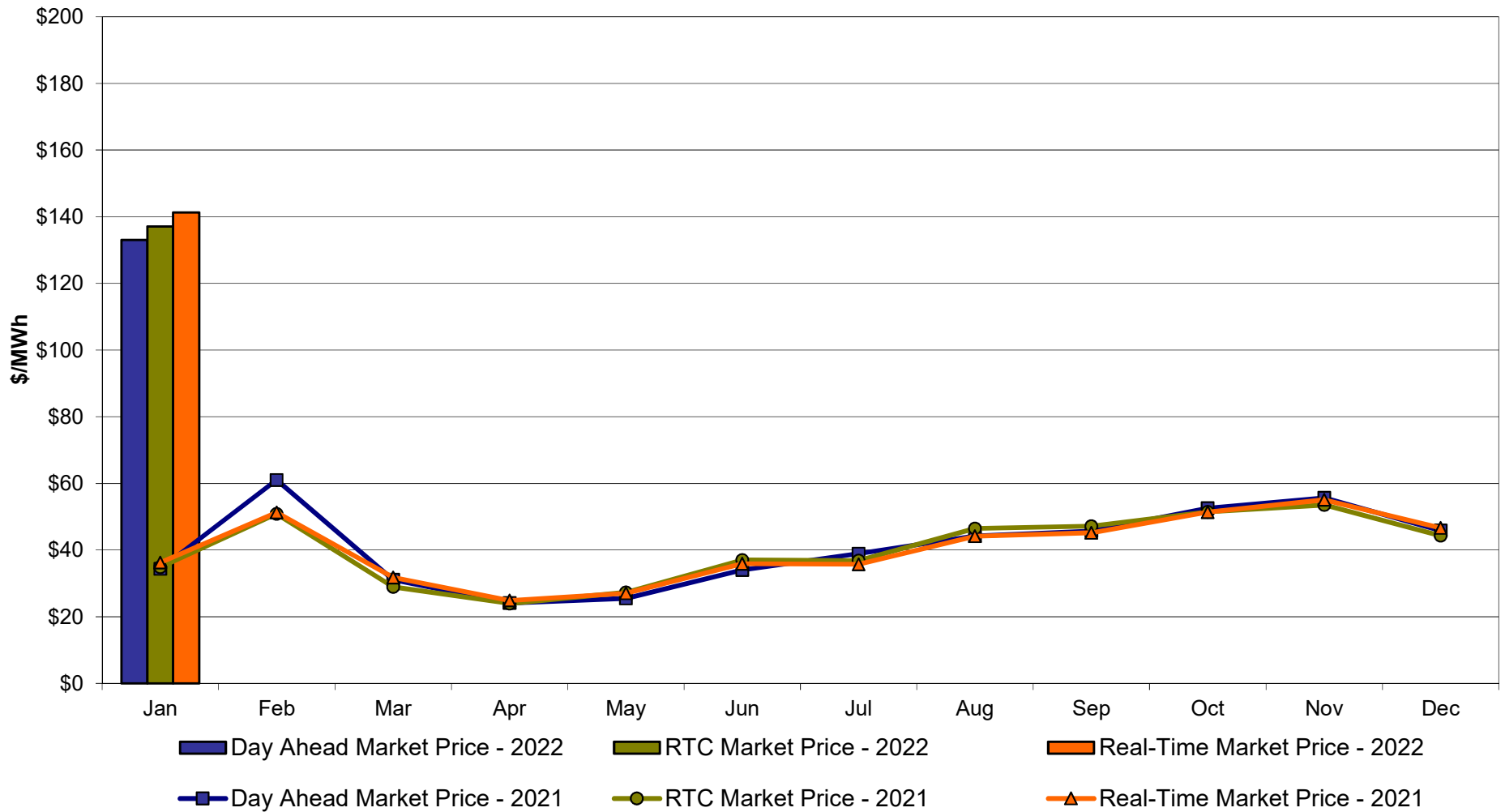
Central Zone C Monthly Average LBMP Prices 2020 - 2021



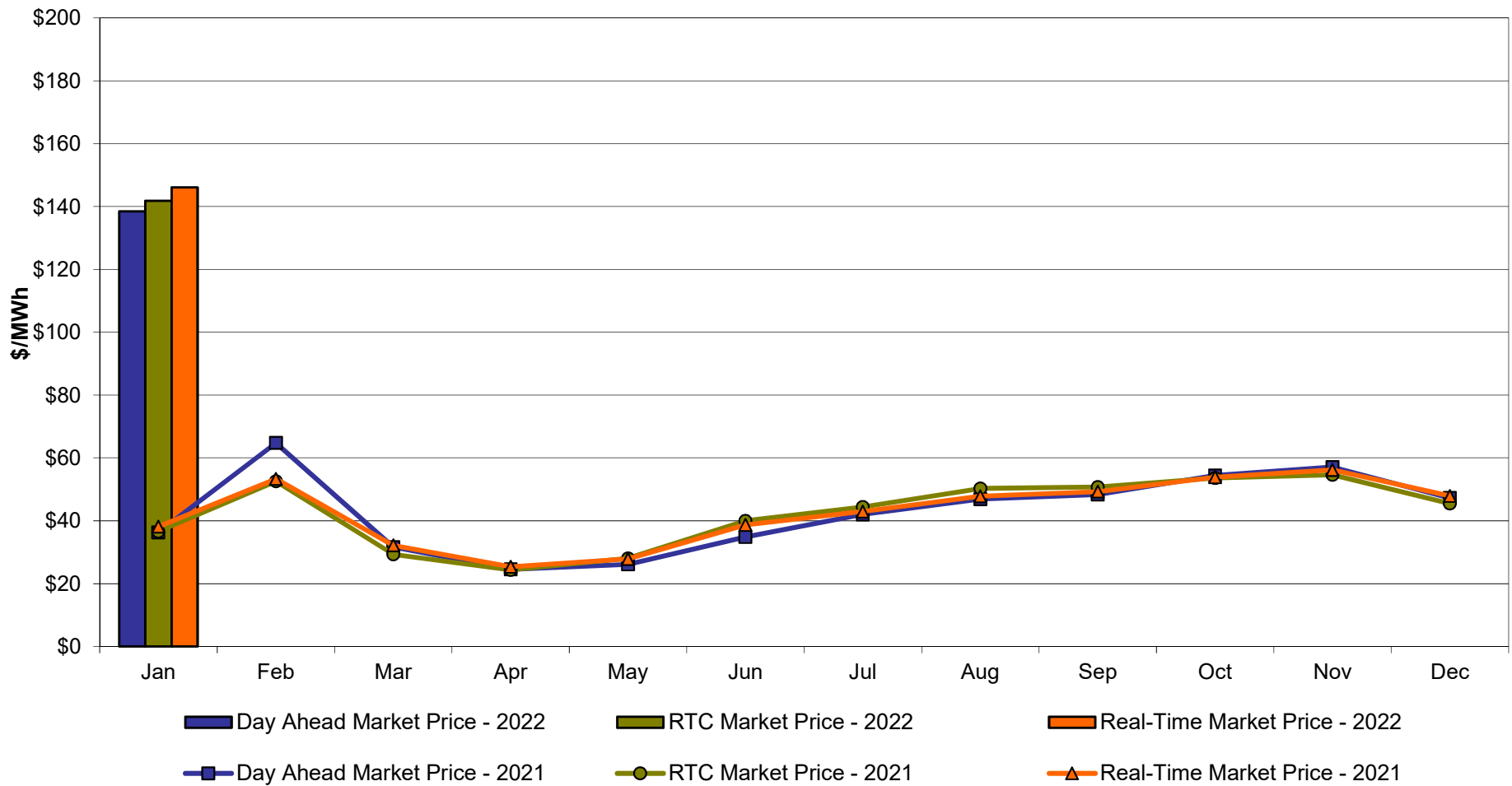
Capital Zone F **Monthly Average LBMP Prices 2021 - 2022**



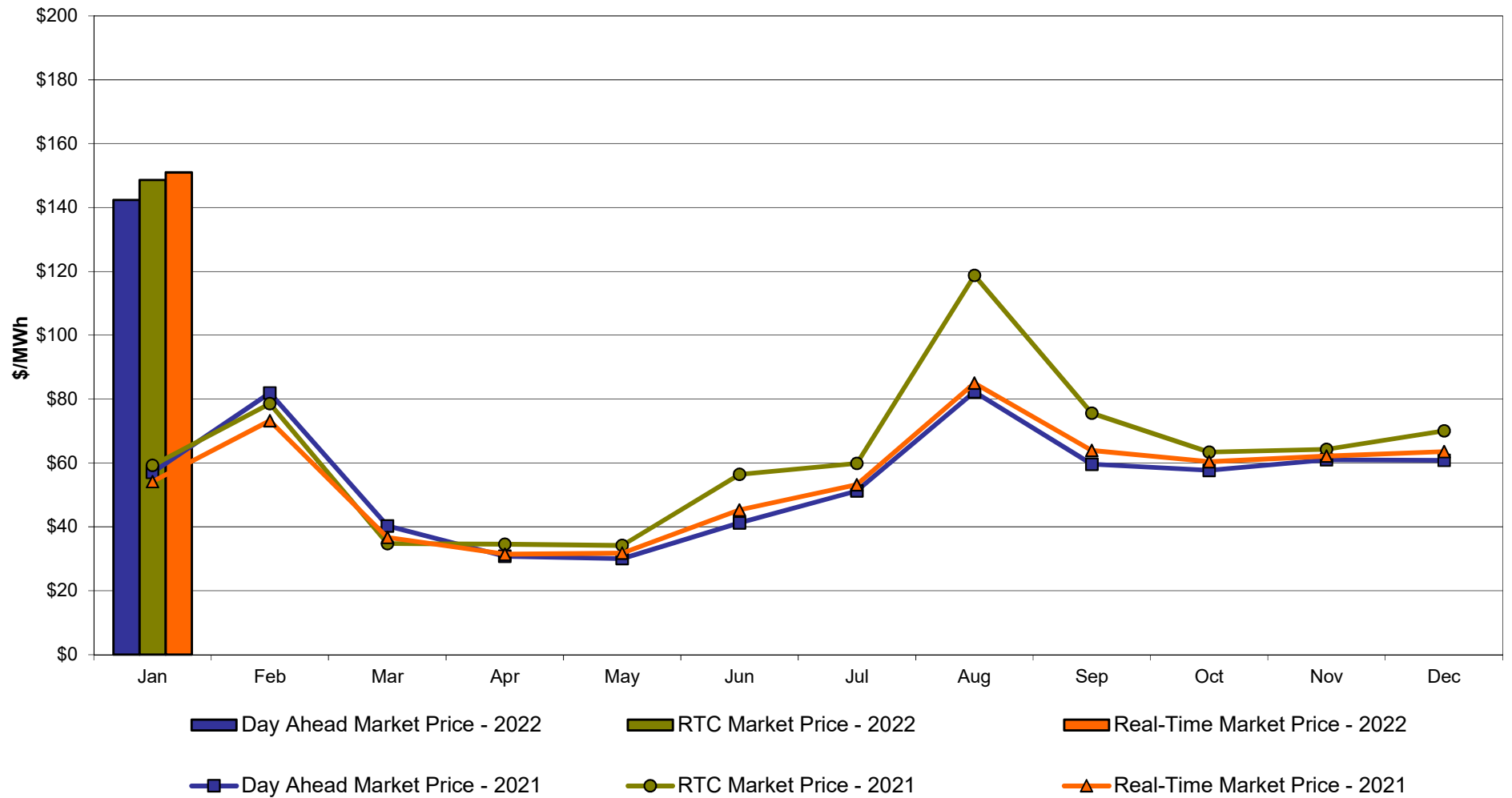
Hudson Valley Zone G Monthly Average LBMP Prices 2020 - 2021



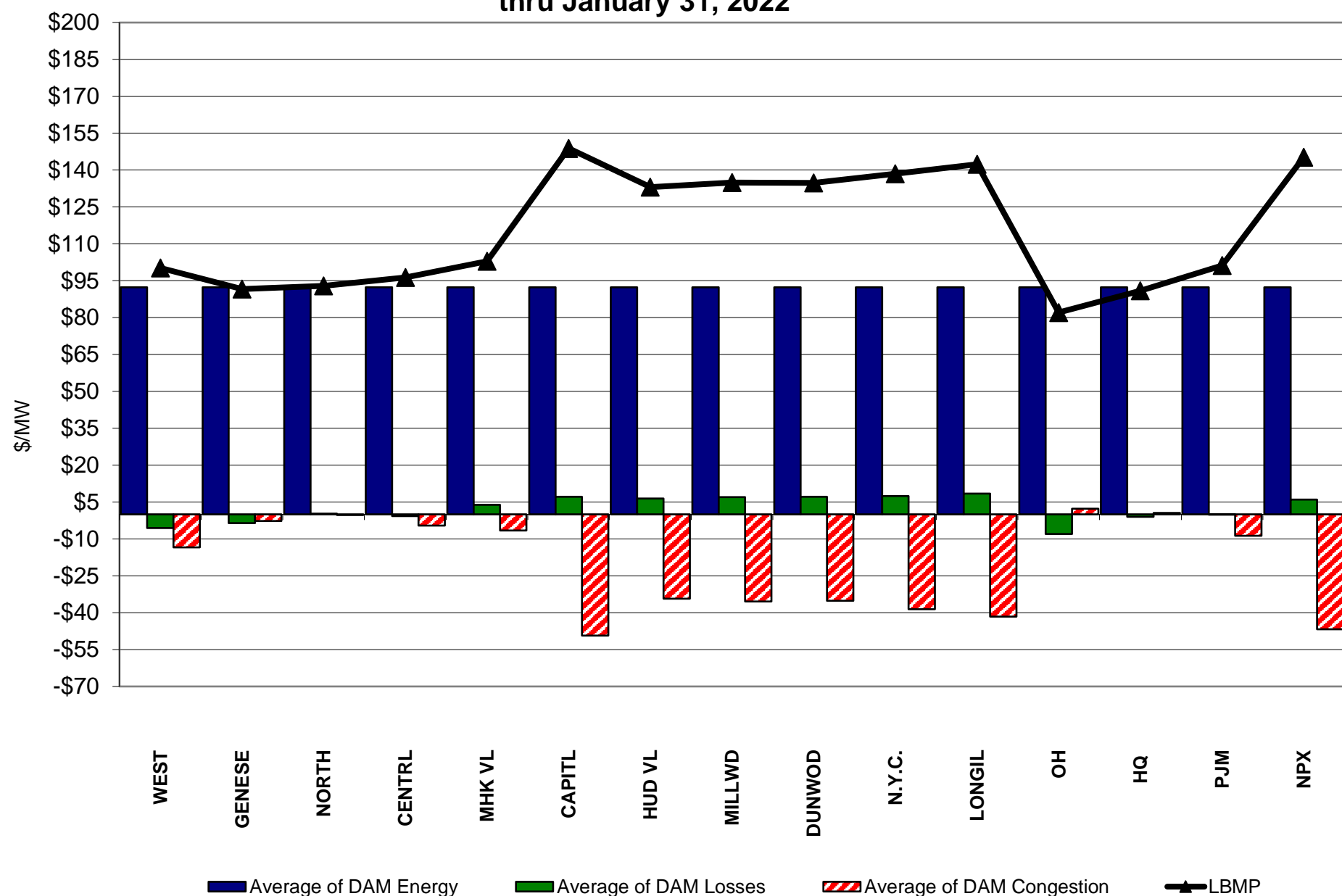
NYC Zone J **Monthly Average LBMP Prices 2021 - 2022**



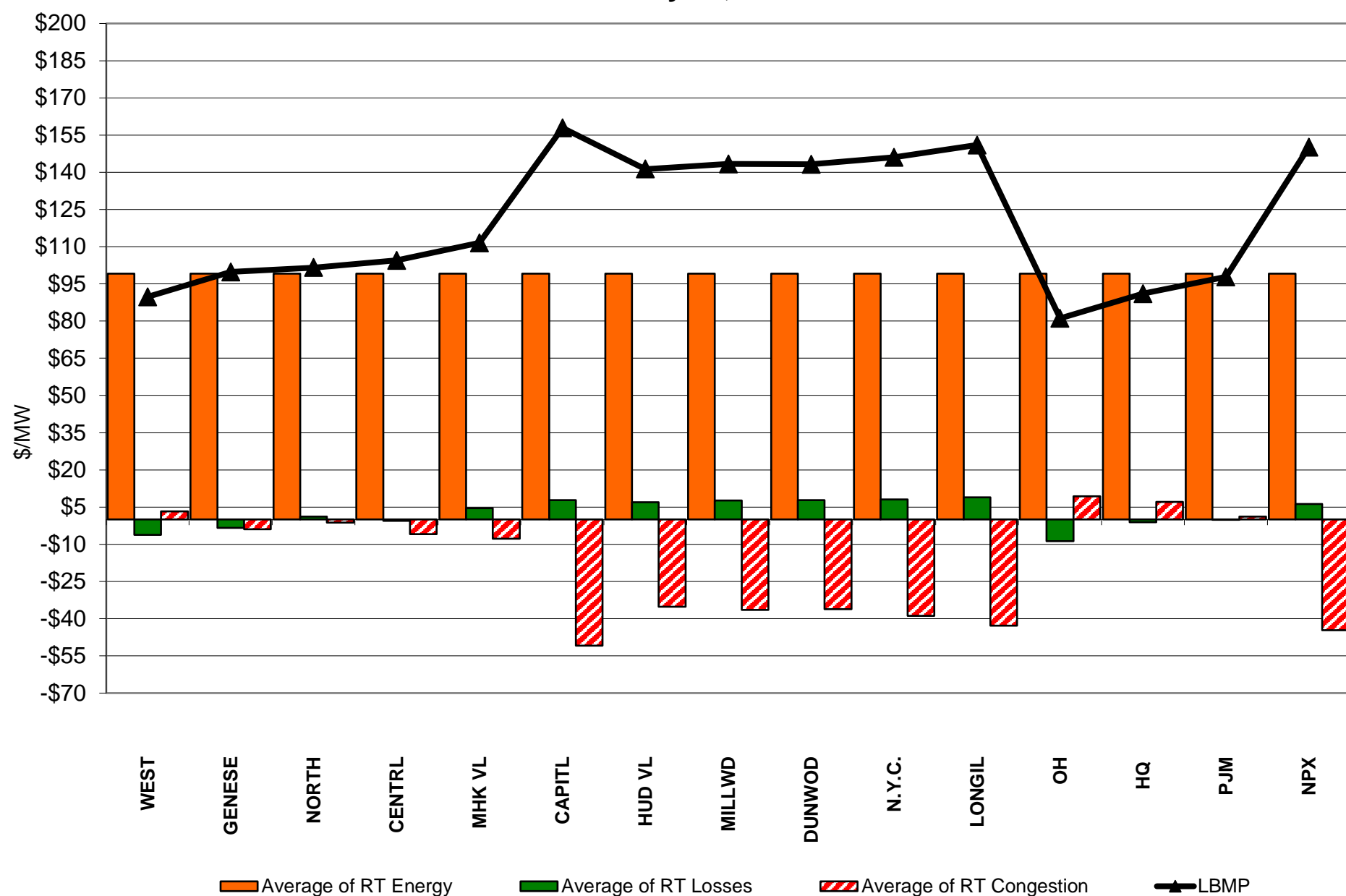
Long Island Zone K Monthly Average LBMP Prices 2020 - 2021



**DAM Zonal Unweighted Monthly Average LBMP Components
thru January 31, 2022**

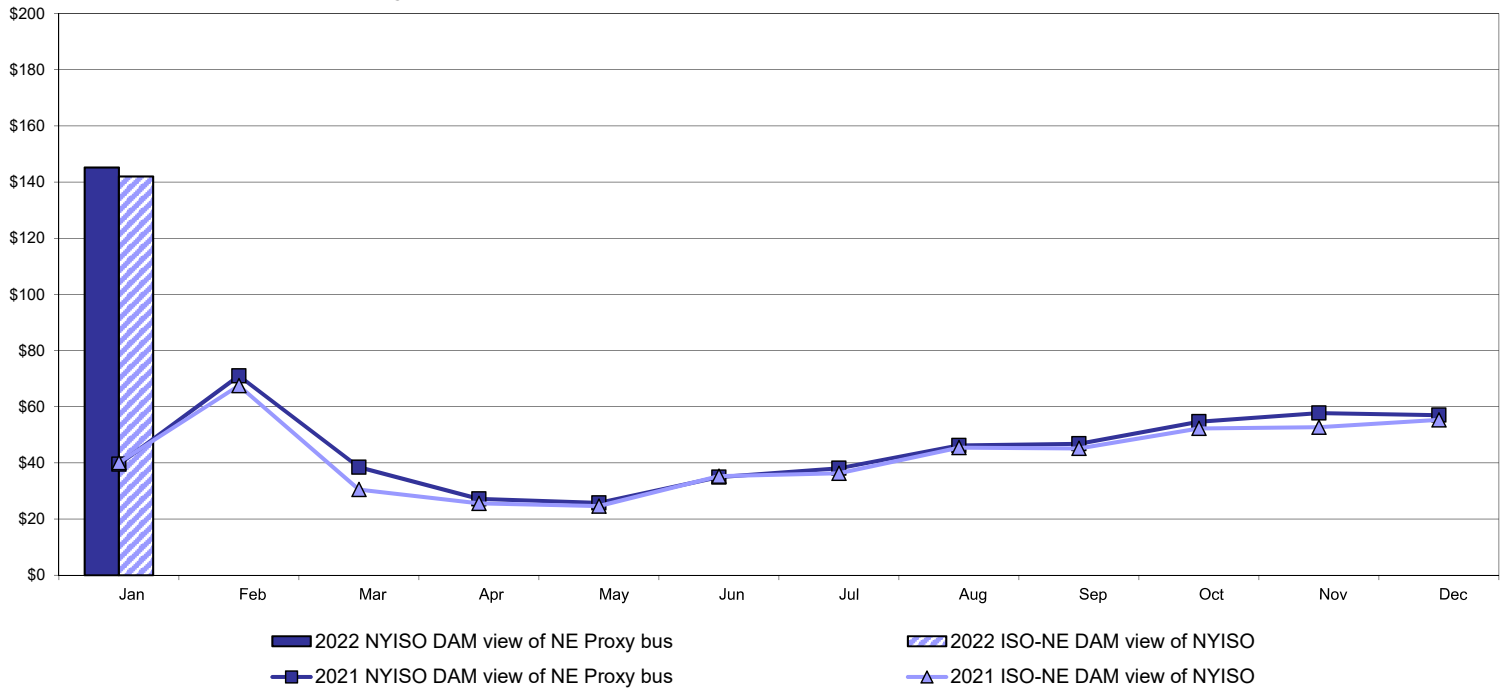


**RT Zonal Unweighted Monthly Average LBMP Components
thru January 31, 2022**

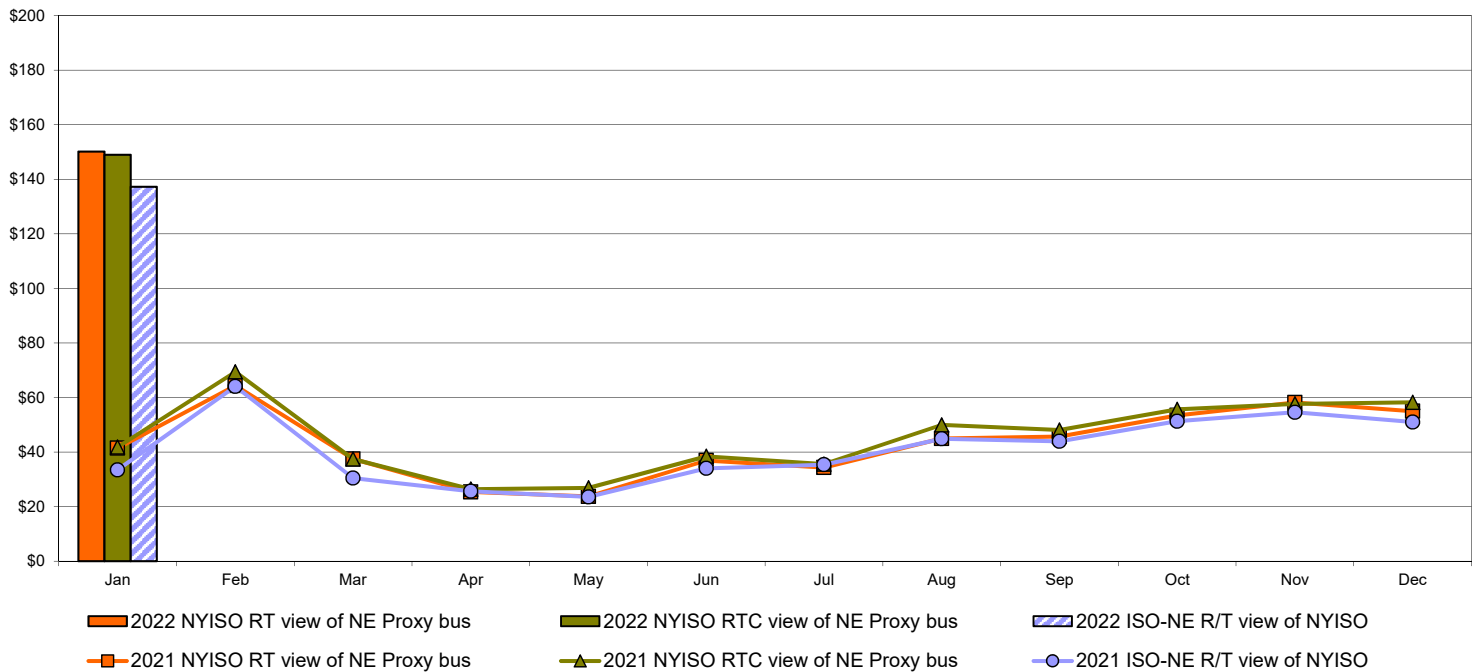


External Comparison ISO-New England

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

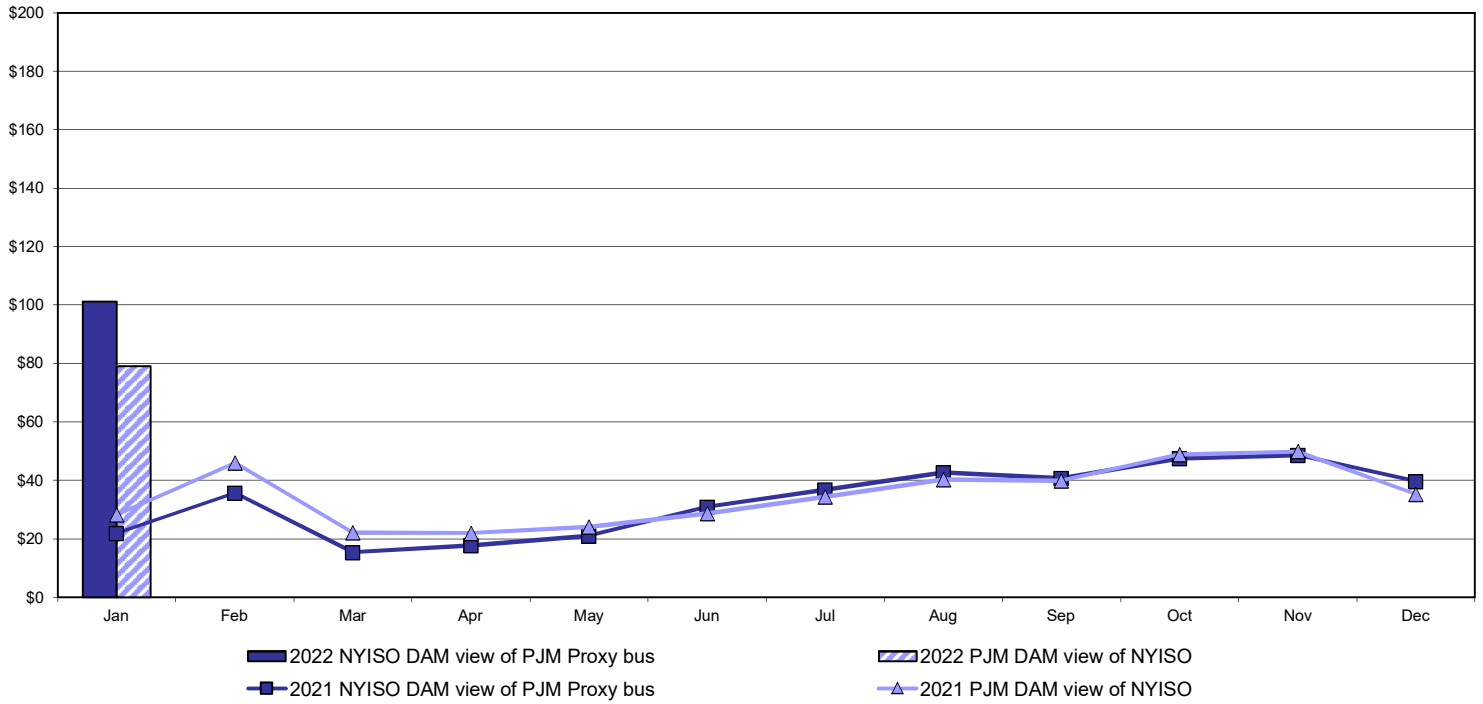


Real Time Market External Zone Comparison: ISO-NE (\$/MWh)

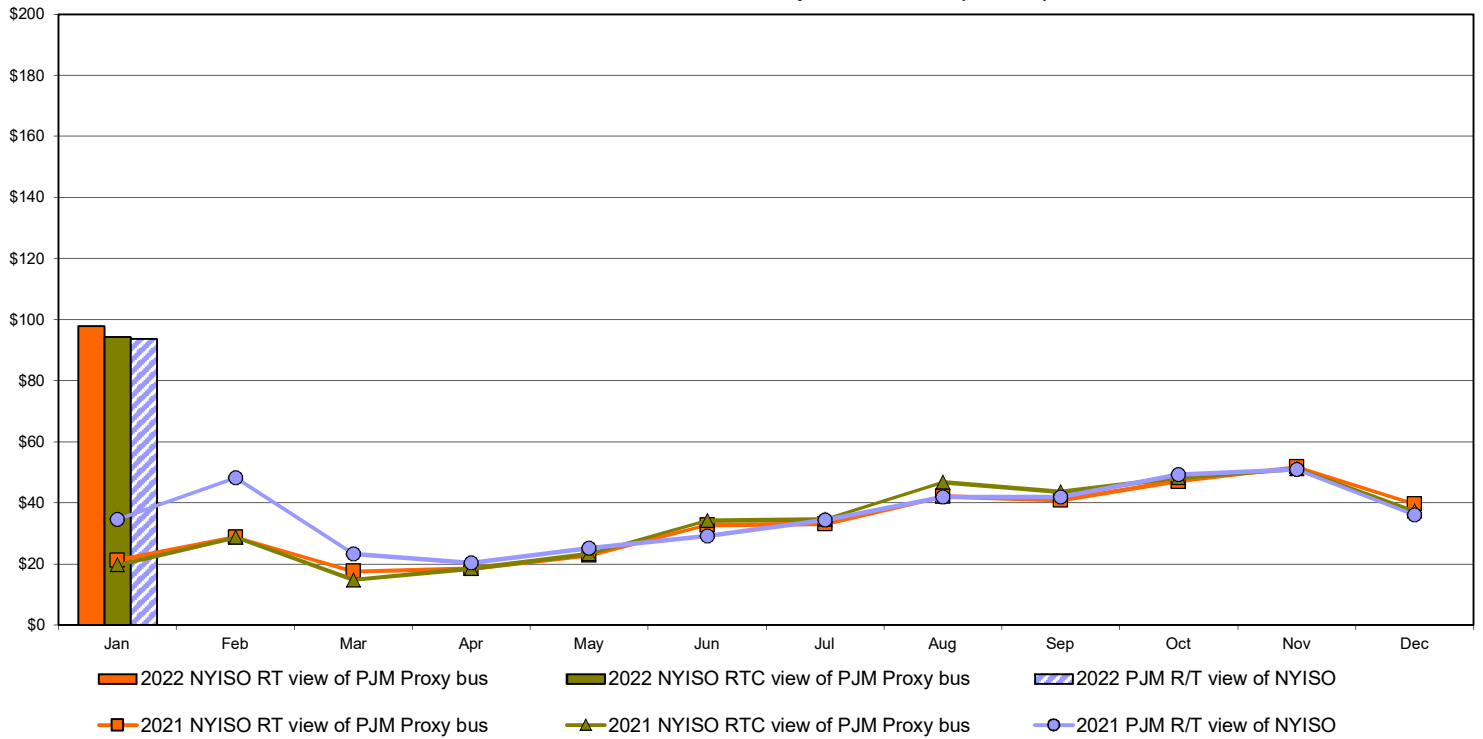


External Comparison PJM

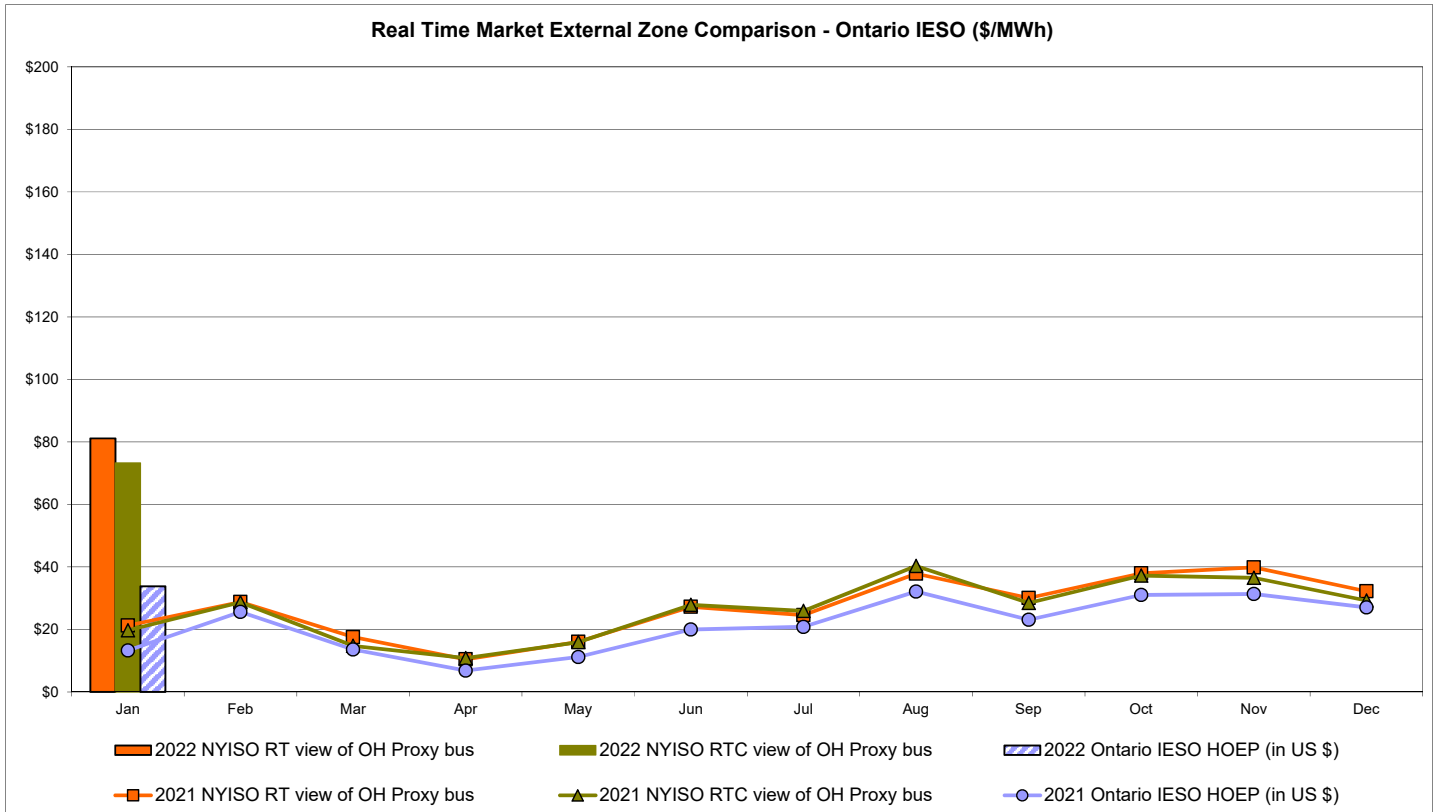
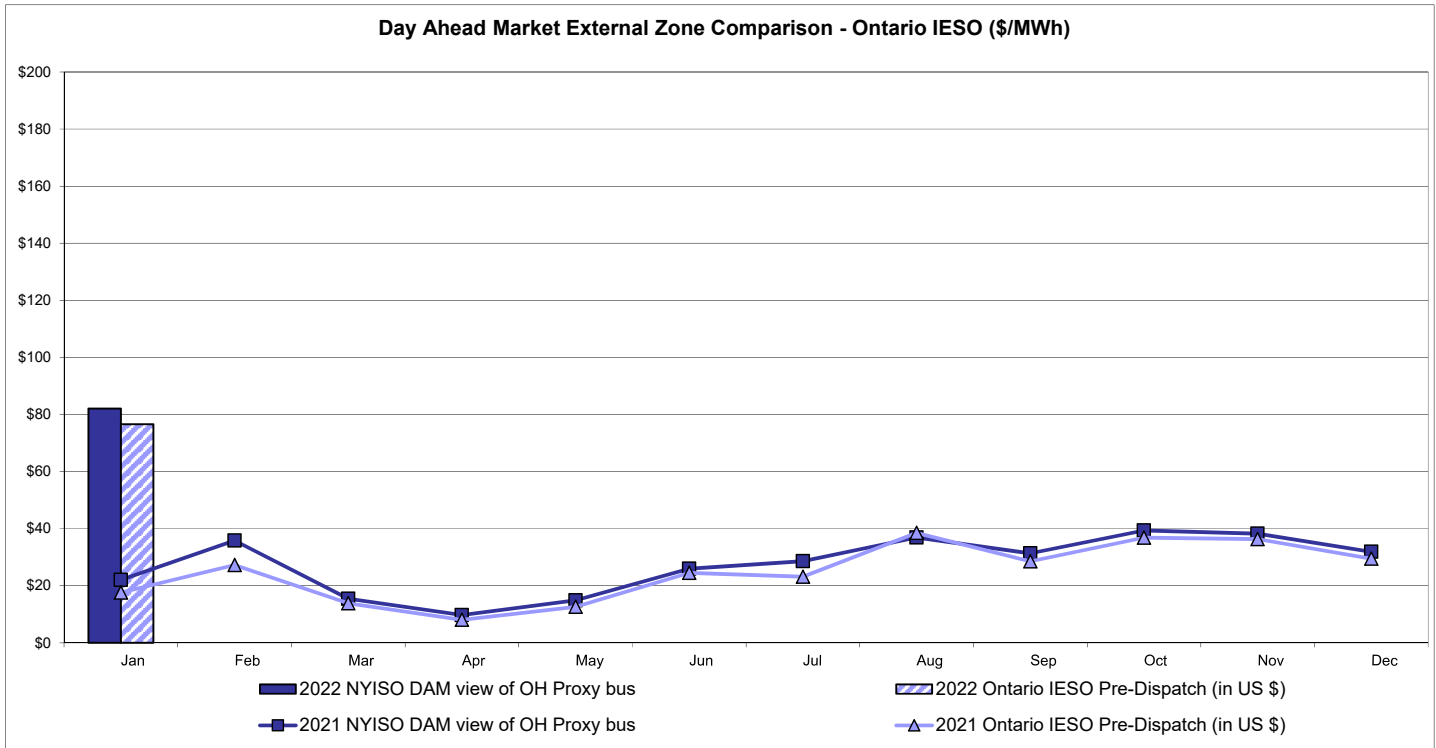
Day Ahead Market External Zone Comparison - PJM (\$/MWh)



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

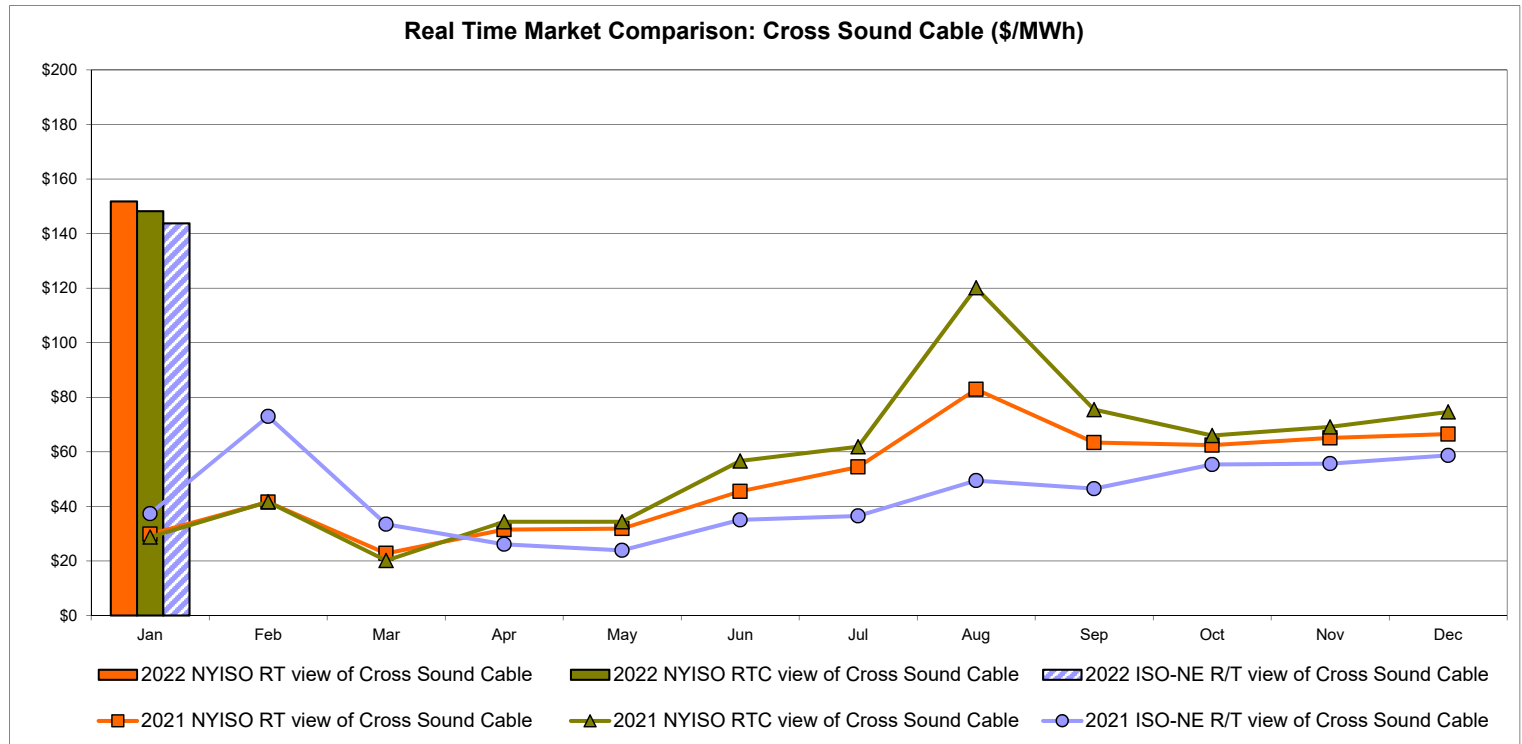
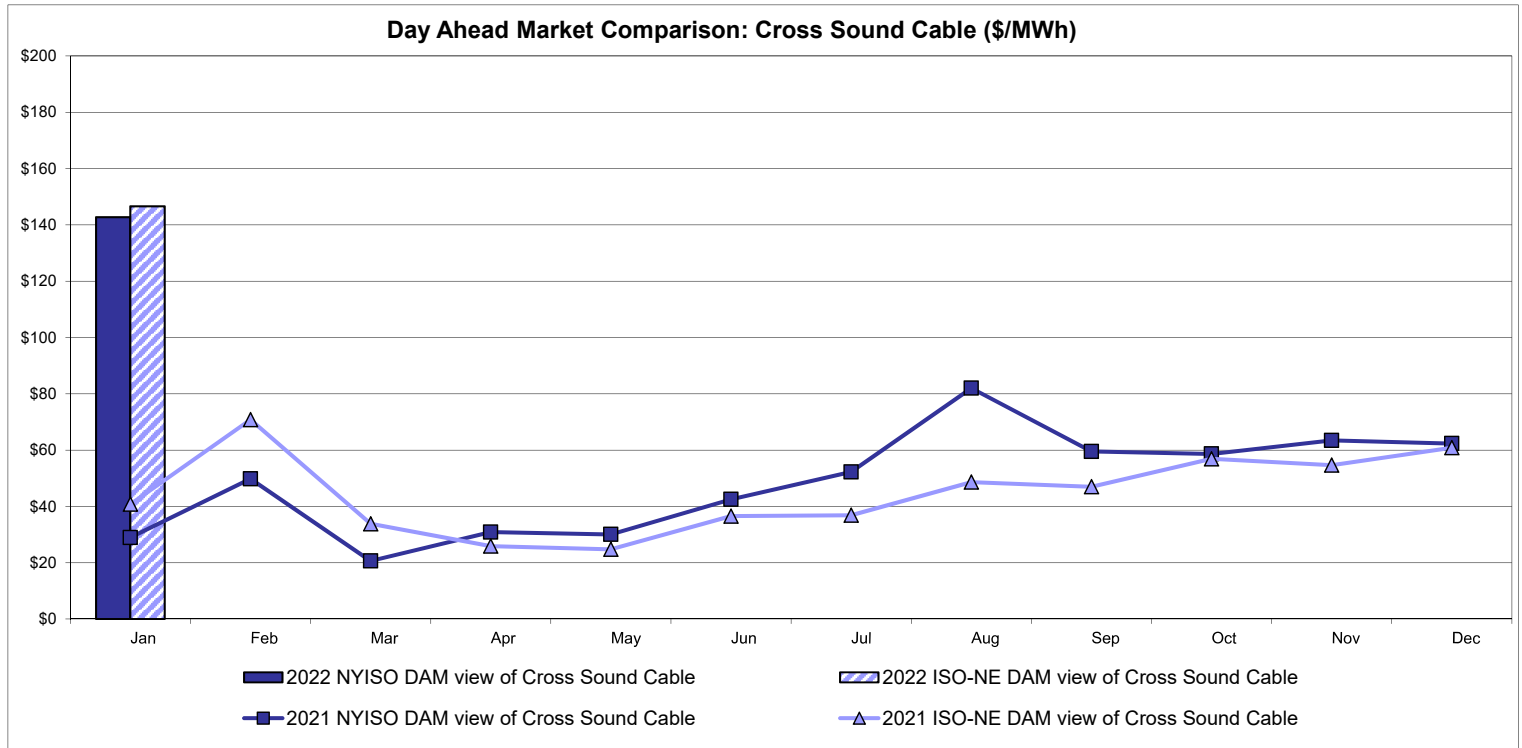


External Comparison Ontario IESO



Notes: Exchange factor used for January 2022 was 0.792267469497702 to US
 HOEP: Hourly Ontario Energy Price
 Pre-Dispatch: Projected Energy Price

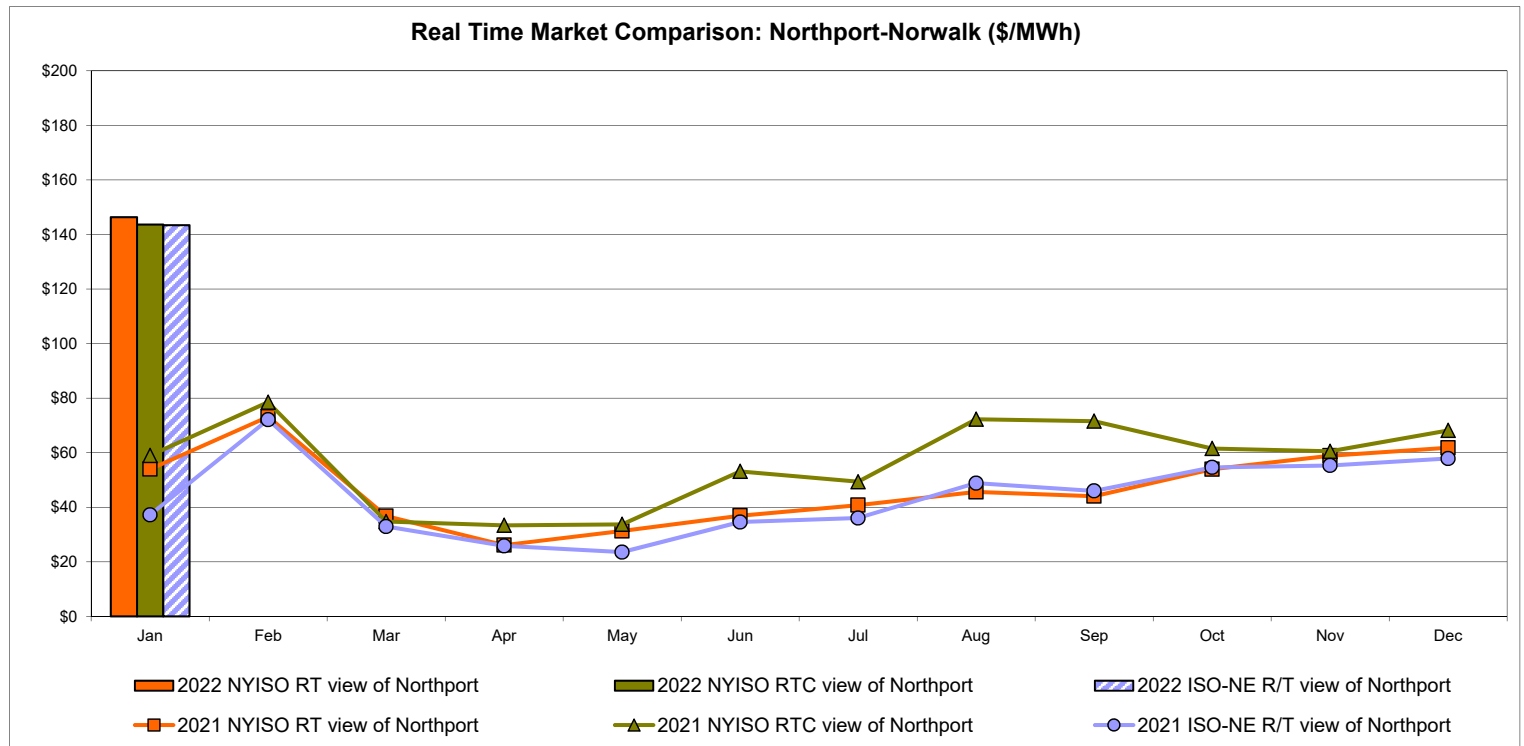
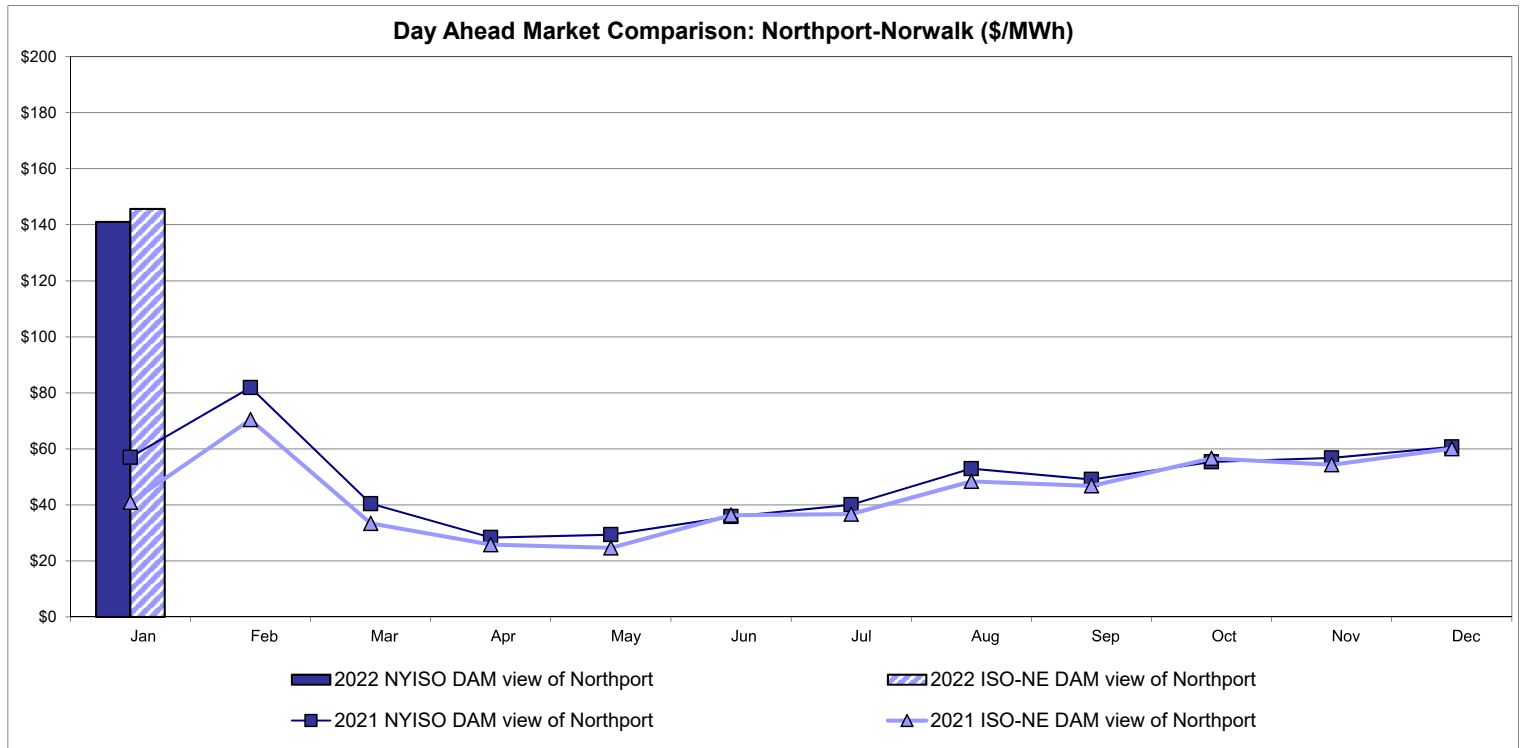
External Controllable Line: Cross Sound Cable (New England)



Note:

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

External Controllable Line: Northport - Norwalk (New England)

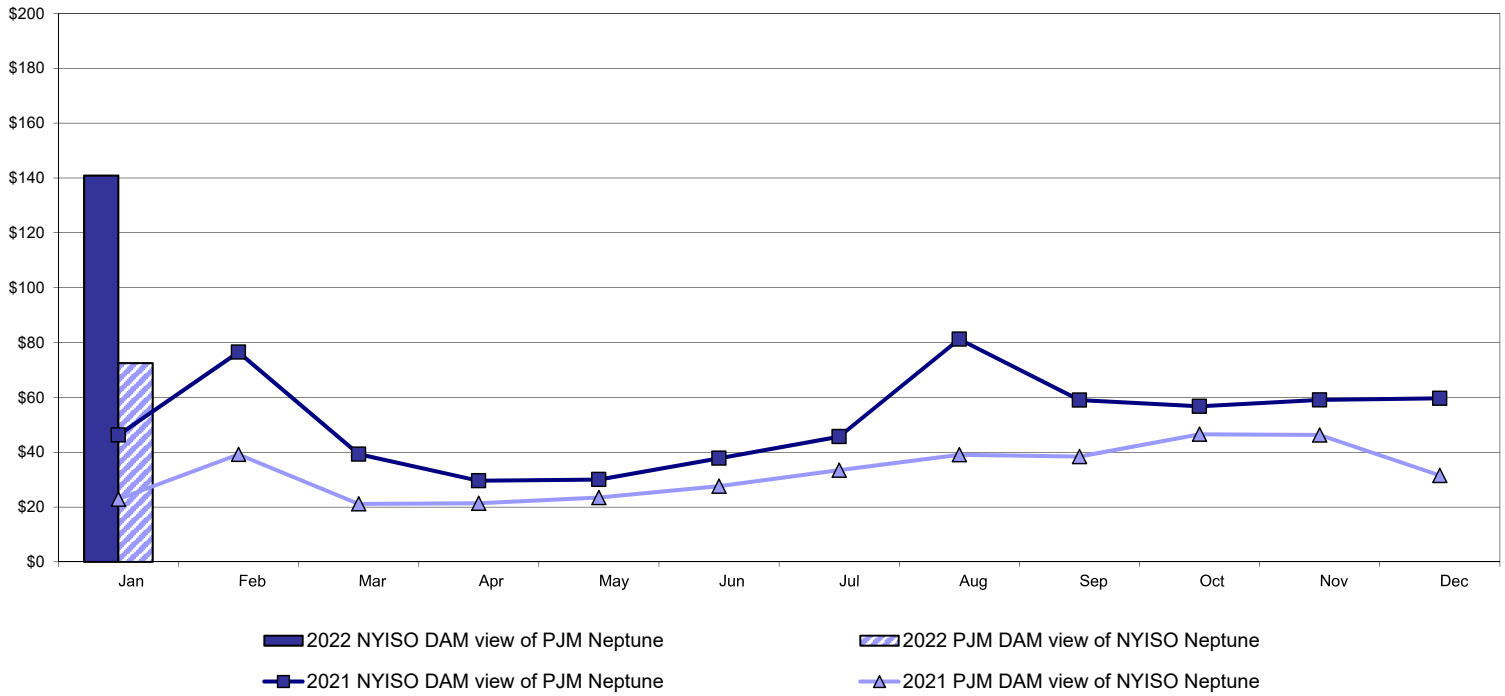


Note:

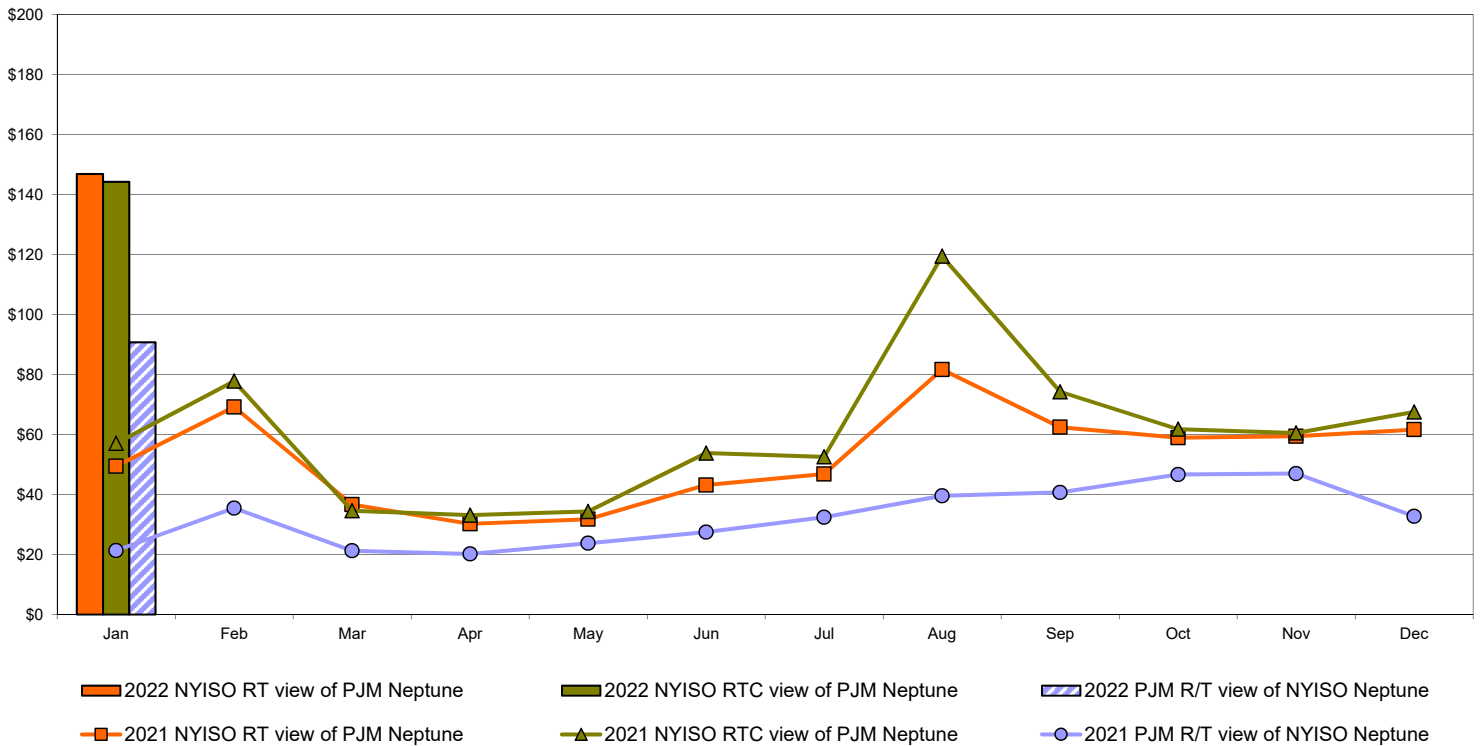
ISO-NE Forecast is an advisory posting @ 18:00 day before.
 The DAM and R/T prices at the Northport 138 interface are used for ISO-NE.
 The DAM and R/T prices at the 1385 interface are used for NYISO.

External Controllable Line: Neptune (PJM)

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

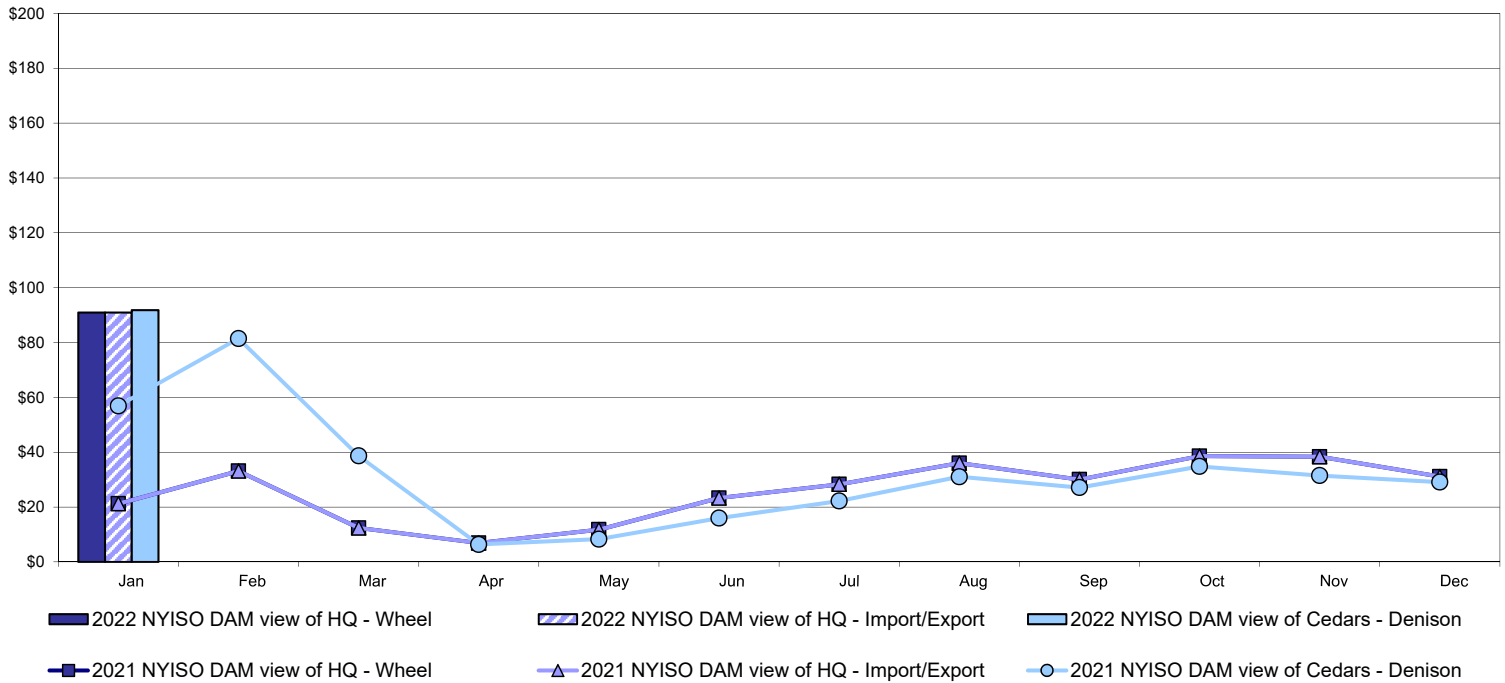


Real Time Market Comparison: Neptune (\$/MWh)

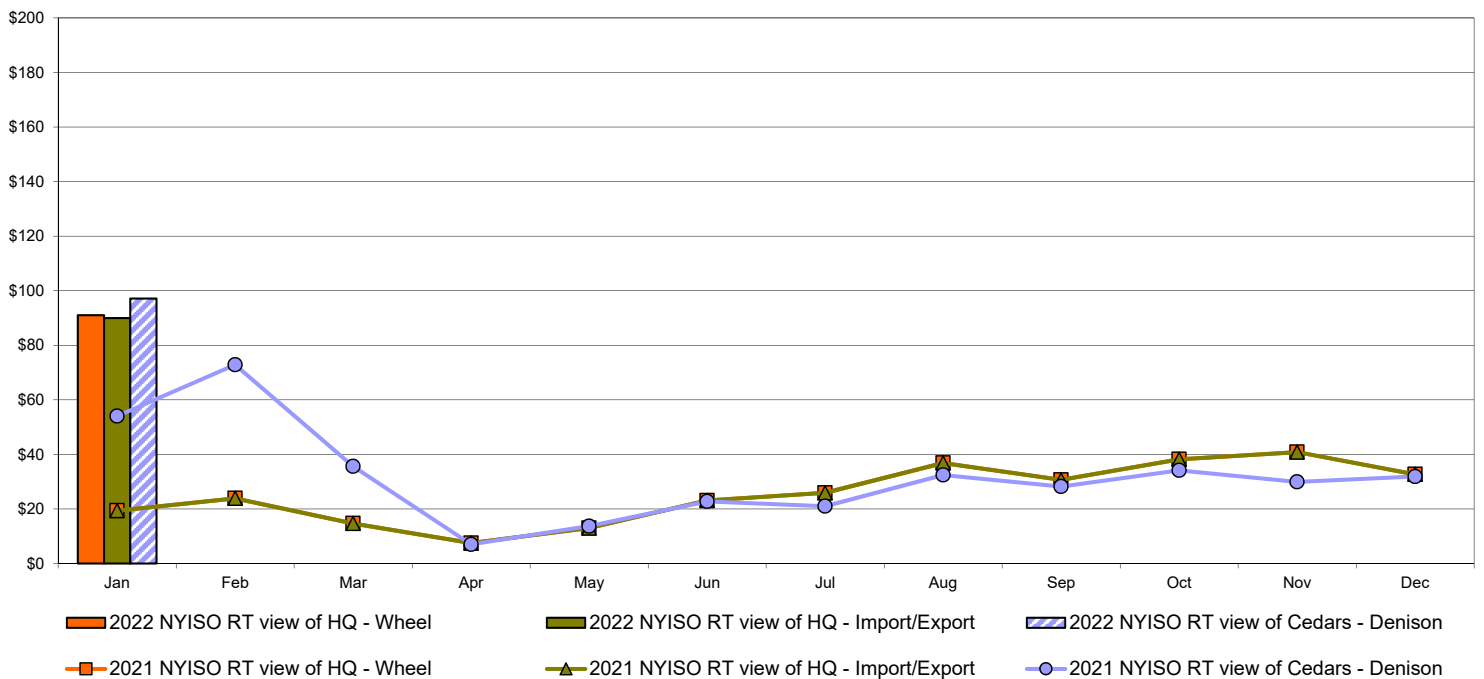


External Comparison Hydro-Quebec

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

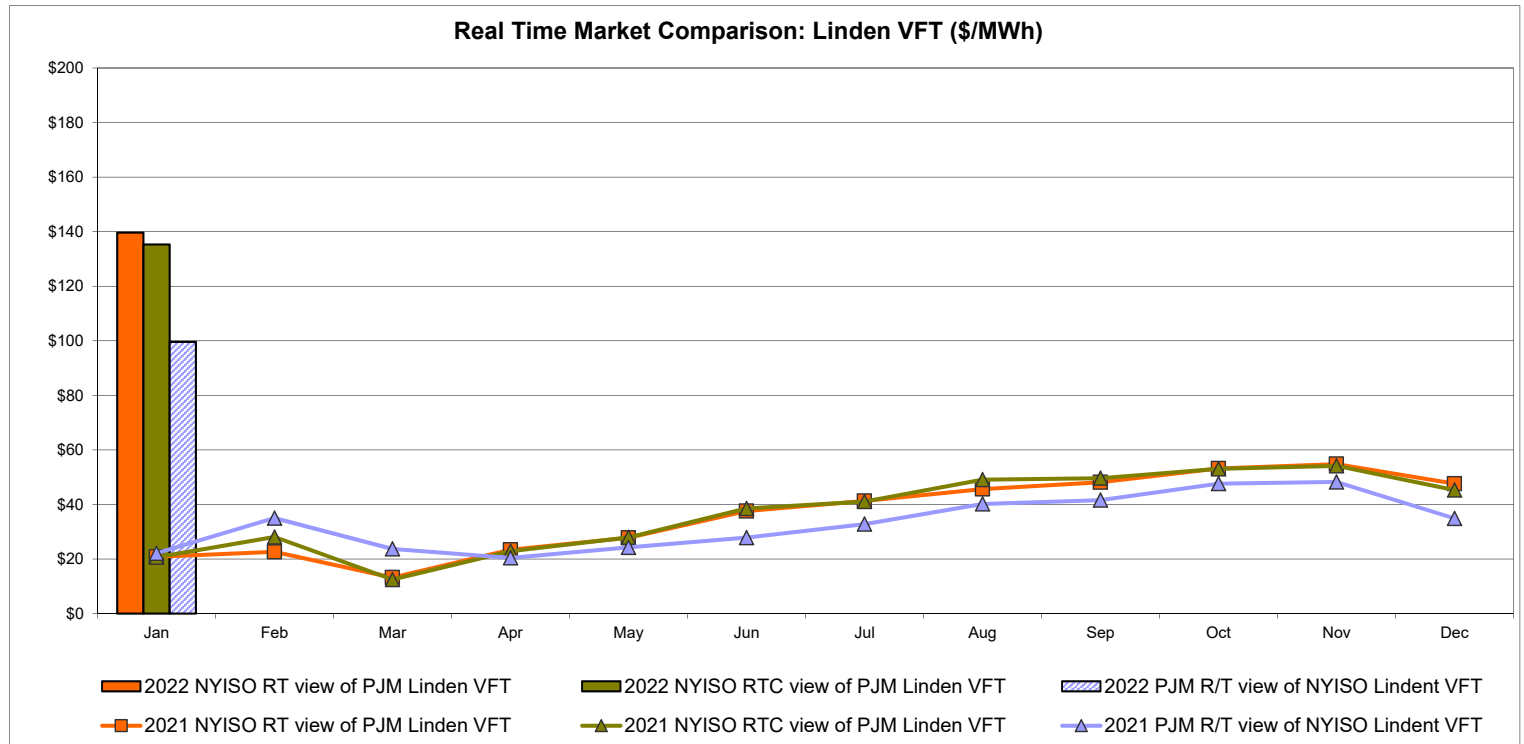
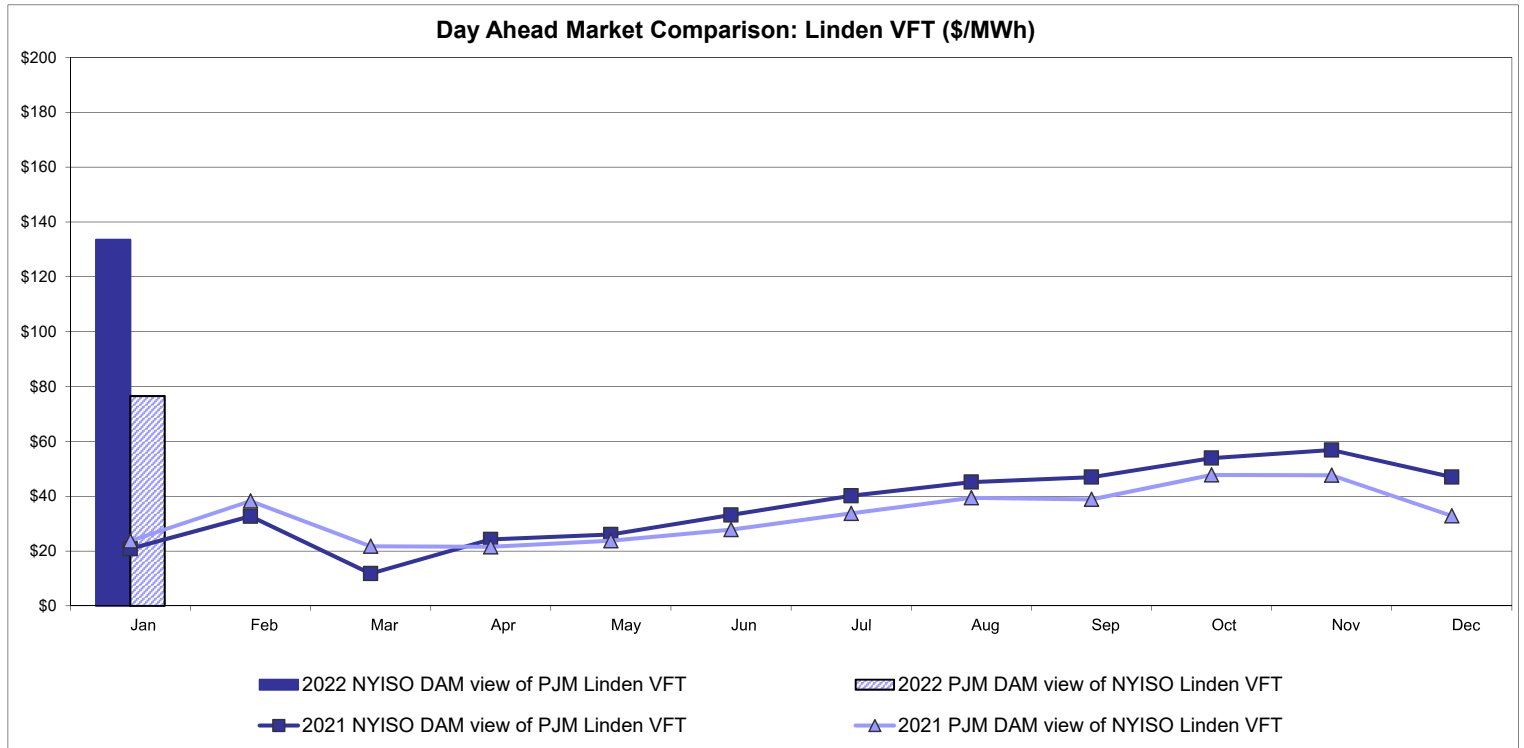


Real Time Market External Zone Comparison - HQ (\$/MWh)

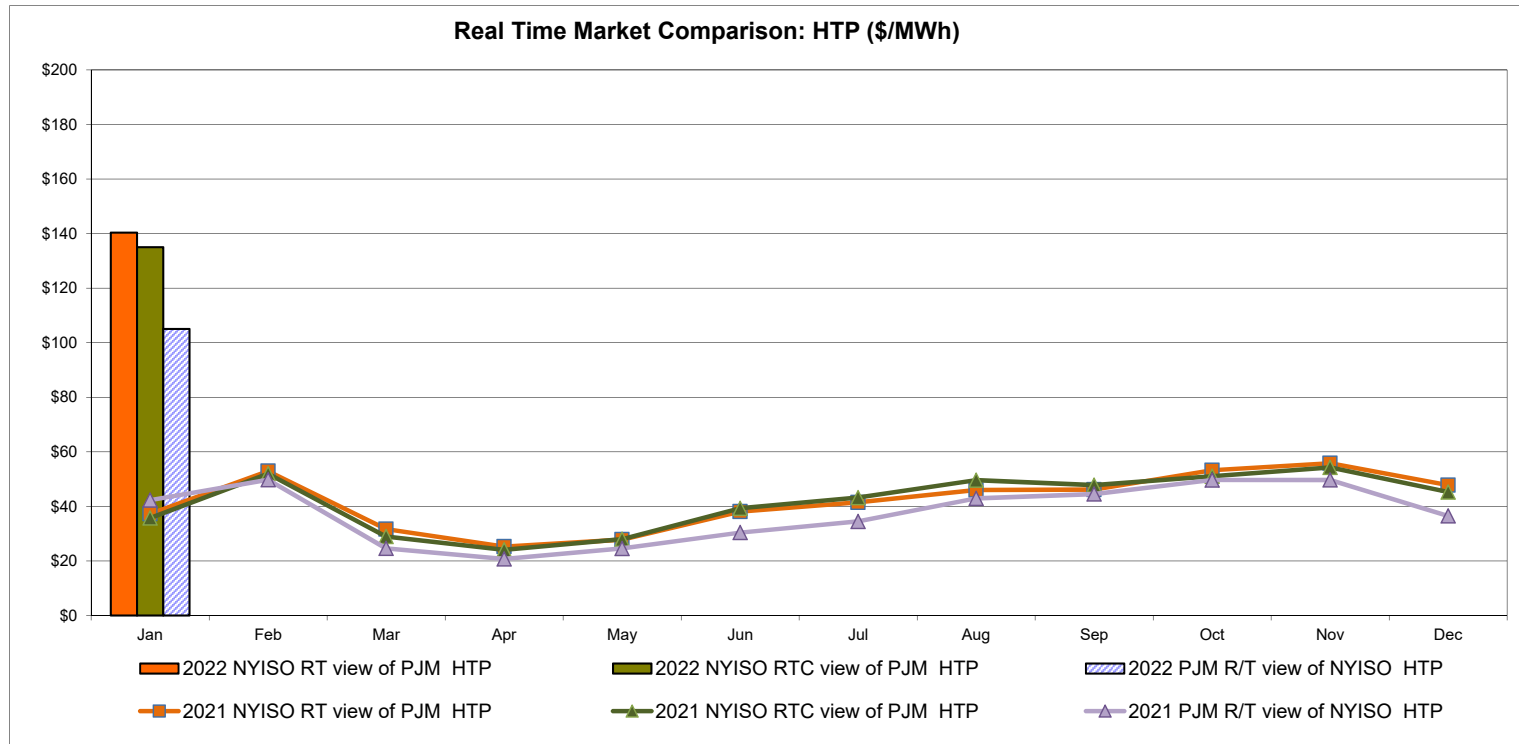
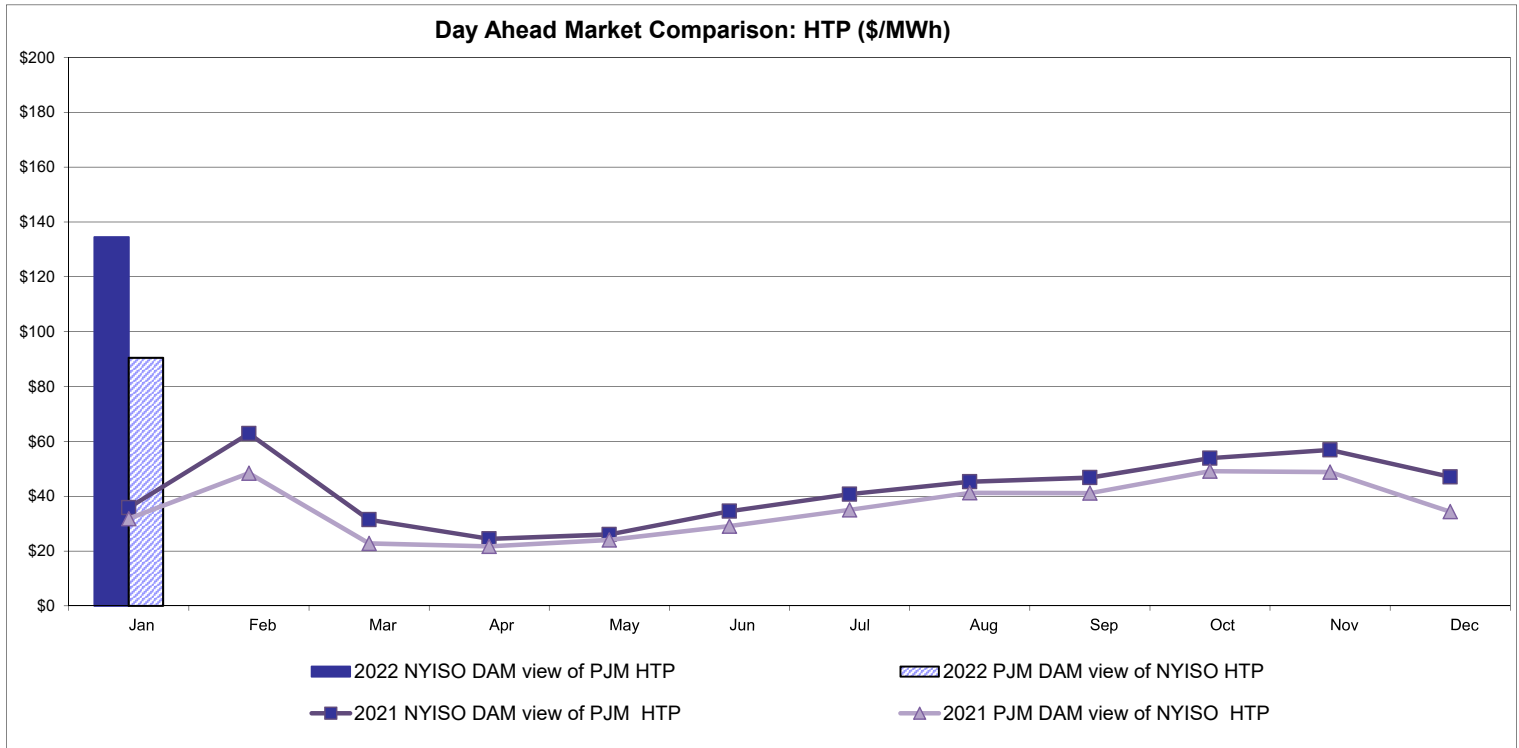


Note:
Hydro-Quebec Prices are unavailable.

External Controllable Line: Linden VFT (PJM)



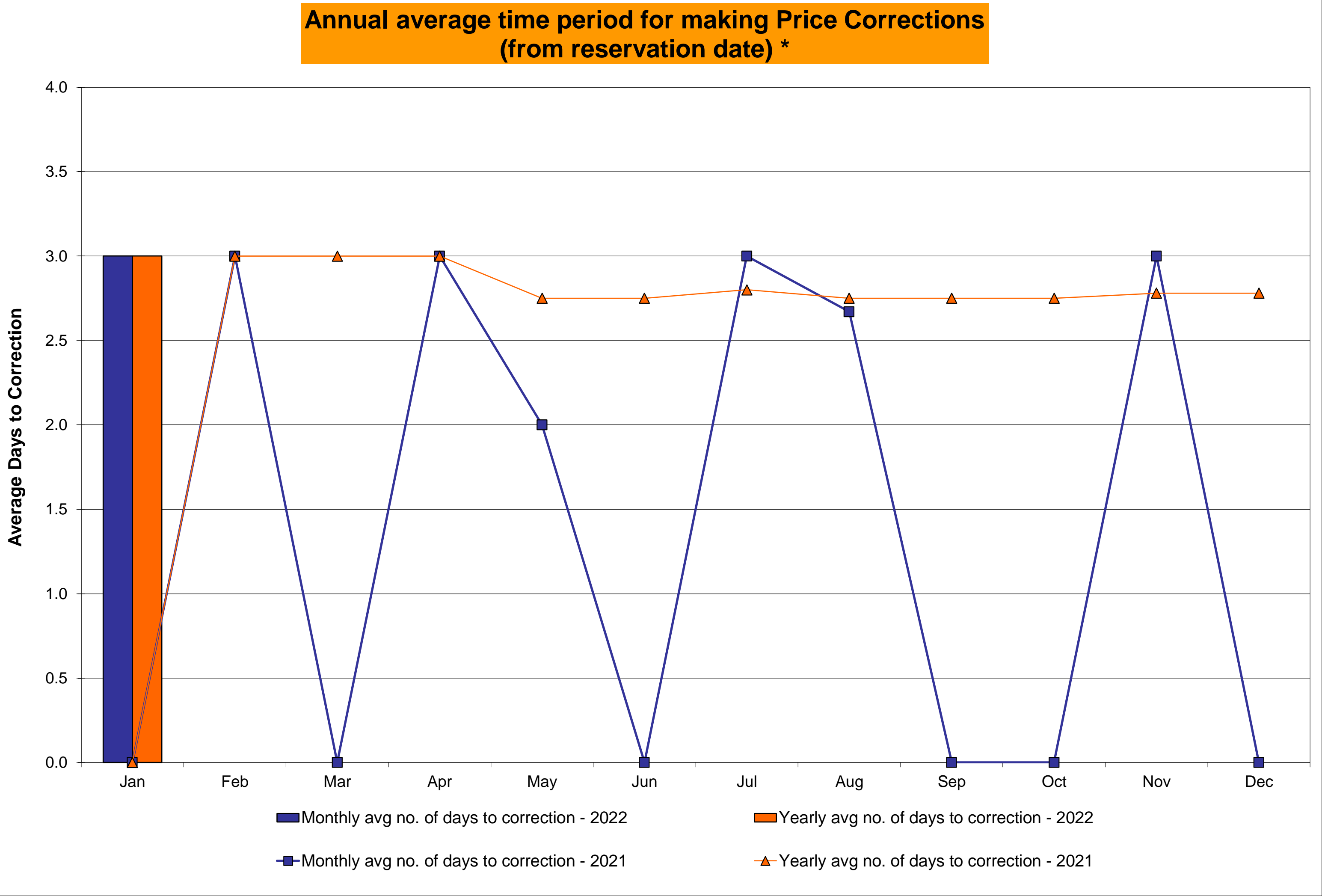
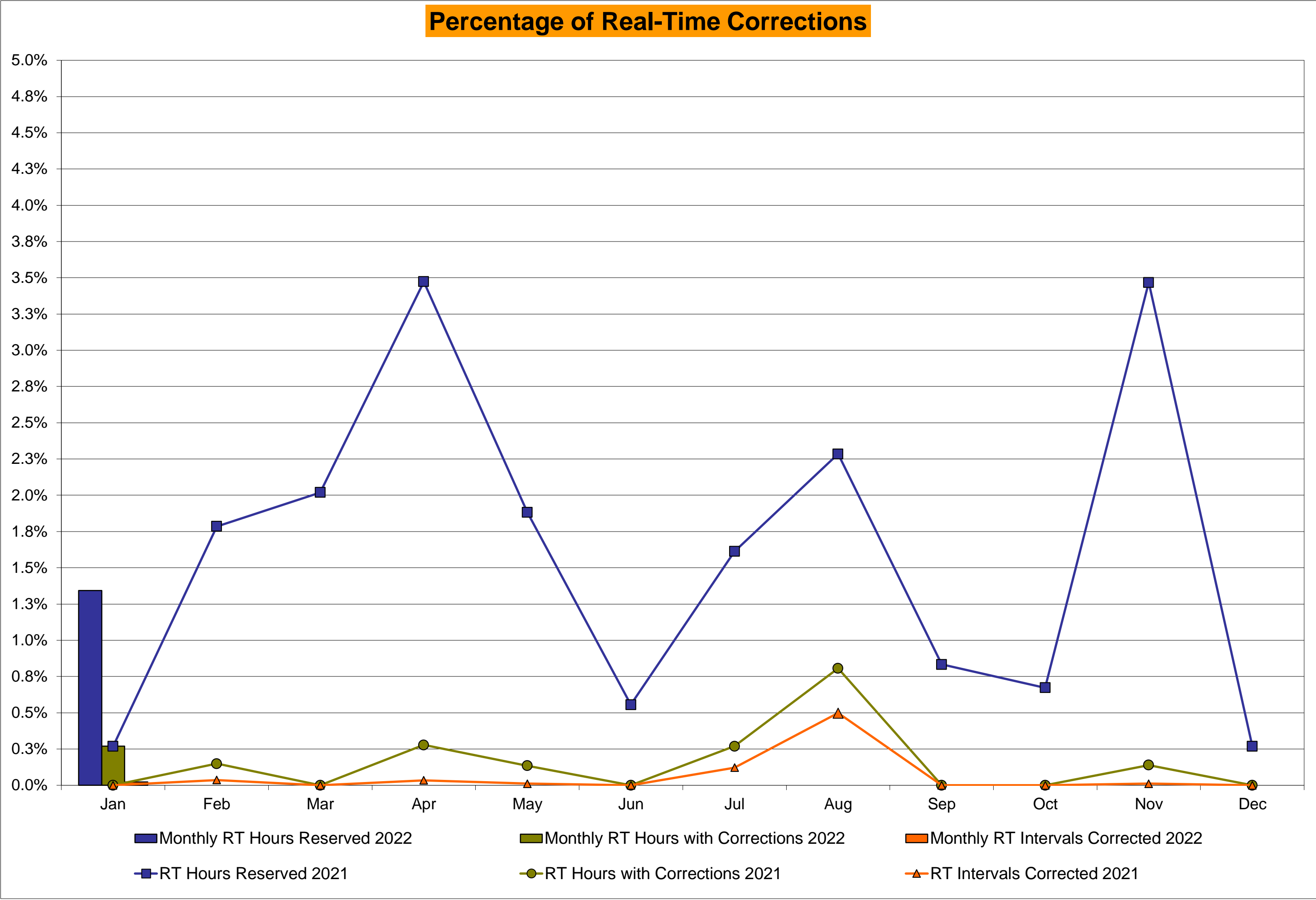
External Controllable Line: Hudson (PJM)



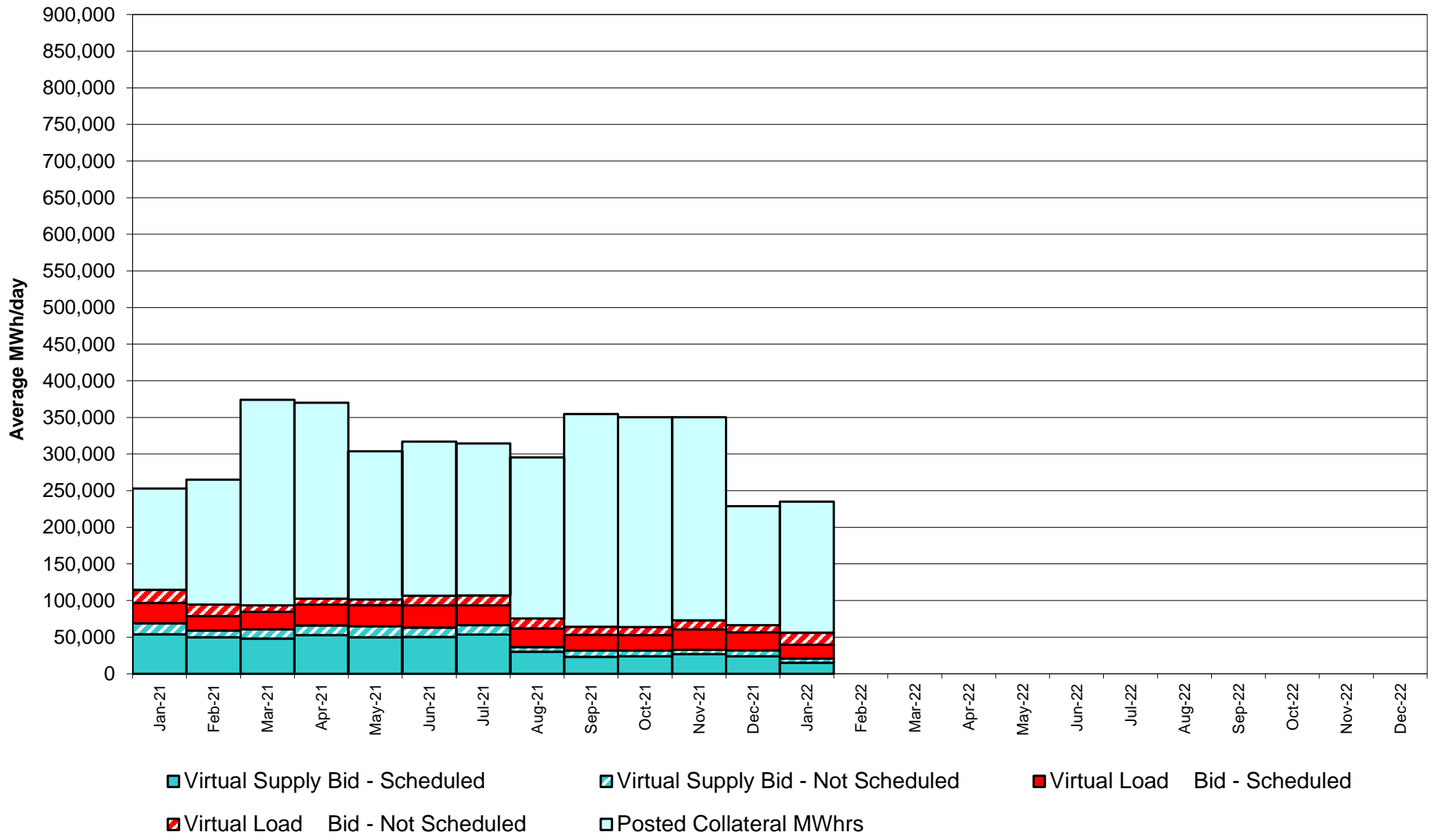
NYISO Real Time Price Correction Statistics

2022		<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	2											
Number of hours	in the month	744											
% of hours with corrections	in the month	0.27%											
% of hours with corrections	year-to-date	0.27%											
<u>Interval Corrections</u>													
Number of intervals corrected	in the month	2											
Number of intervals	in the month	9,258											
% of intervals corrected	in the month	0.02%											
% of intervals corrected	year-to-date	0.02%											
<u>Hours Reserved</u>													
Number of hours reserved	in the month	10											
Number of hours	in the month	744											
% of hours reserved	in the month	1.34%											
% of hours reserved	year-to-date	1.34%											
<u>Days to Correction</u> *													
Avg. number of days to correction	in the month	3.00											
Avg. number of days to correction	year-to-date	3.00											
<u>Days Without Corrections</u>													
Days without corrections	in the month	30											
Days without corrections	year-to-date	30											
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	1	0	2	6	0	0	1	0
Number of hours	in the month	744	672	743	720	744	720	744	744	720	744	721	744
% of hours with corrections	in the month	0.00%	0.15%	0.00%	0.28%	0.13%	0.00%	0.27%	0.81%	0.00%	0.00%	0.14%	0.00%
% of hours with corrections	year-to-date	0.00%	0.07%	0.05%	0.10%	0.11%	0.09%	0.12%	0.21%	0.18%	0.16%	0.16%	0.15%
<u>Interval Corrections</u>													
Number of intervals corrected	in the month	0	3	0	3	1	0	11	45	0	0	1	0
Number of intervals	in the month	9,095	8,236	9,100	8,827	9,157	8,813	9,084	9,024	8,783	9,133	8,802	9,063
% of intervals corrected	in the month	0.00%	0.04%	0.00%	0.03%	0.01%	0.00%	0.12%	0.50%	0.00%	0.00%	0.01%	0.00%
% of intervals corrected	year-to-date	0.00%	0.02%	0.01%	0.02%	0.02%	0.01%	0.03%	0.09%	0.08%	0.07%	0.07%	0.06%
<u>Hours Reserved</u>													
Number of hours reserved	in the month	2	12	15	25	14	4	12	17	6	5	25	2
Number of hours	in the month	744	672	743	720	744	720	744	744	720	744	721	744
% of hours reserved	in the month	0.27%	1.79%	2.02%	3.47%	1.88%	0.56%	1.61%	2.28%	0.83%	0.67%	3.47%	0.27%
% of hours reserved	year-to-date	0.27%	0.99%	1.34%	1.88%	1.88%	1.66%	1.65%	1.73%	1.63%	1.54%	1.71%	1.59%
<u>Days to Correction</u> *													
Avg. number of days to correction	in the month	0.00	3.00	0.00	3.00	2.00	0.00	3.00	2.67	0.00	0.00	3.00	0.00
Avg. number of days to correction	year-to-date	0.00	3.00	3.00	3.00	2.75	2.75	2.80	2.75	2.75	2.75	2.78	2.78
<u>Days Without Corrections</u>													
Days without corrections	in the month	31	27	31	28	30	30	30	28	30	31	29	31
Days without corrections	year-to-date	31	58	89	117	147	177	207	235	265	296	325	356

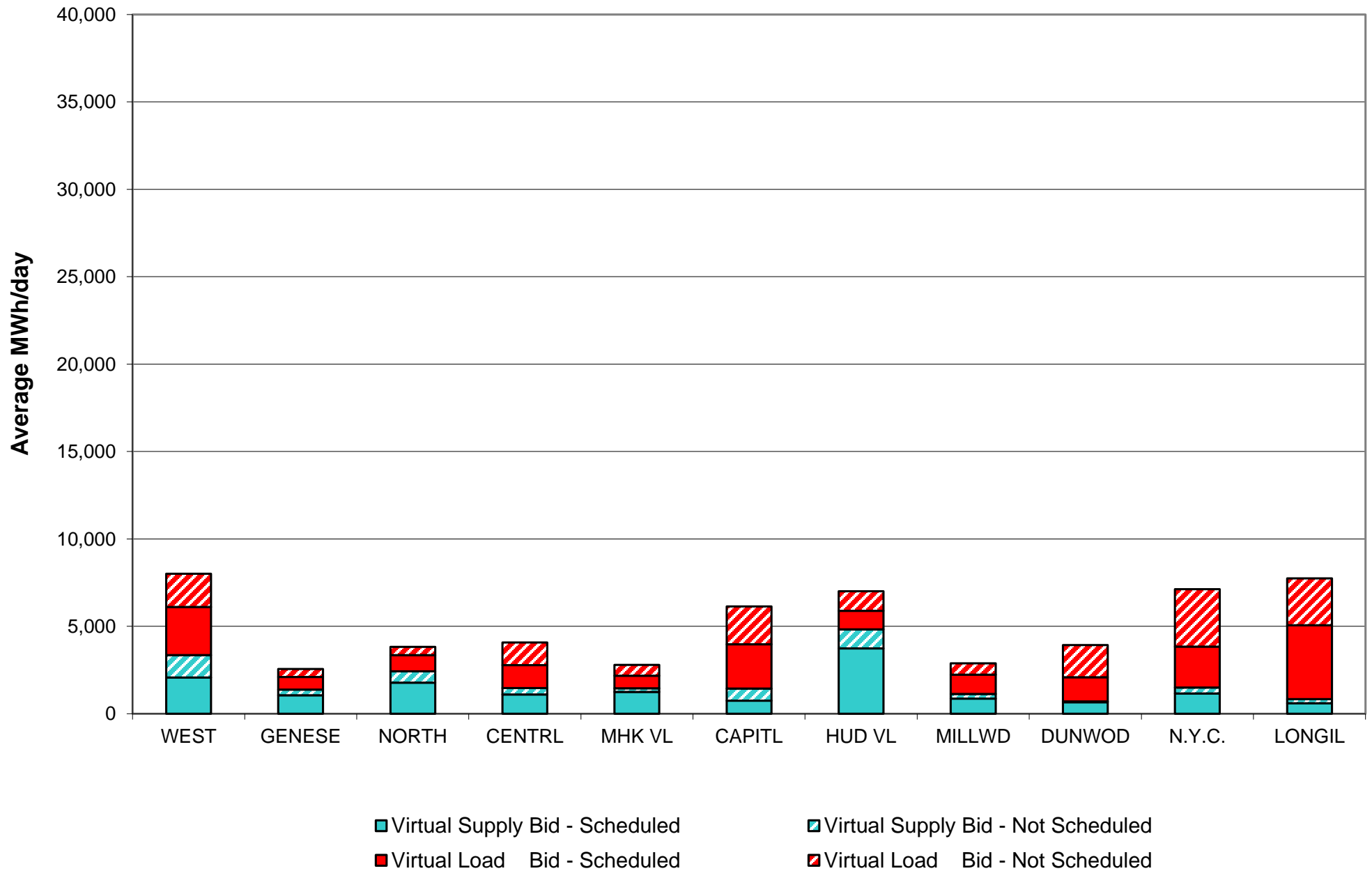
*Calendar days from reservation date; for June 2018 forward, business days from market date



NYISO Virtual Trading Average MWh per day



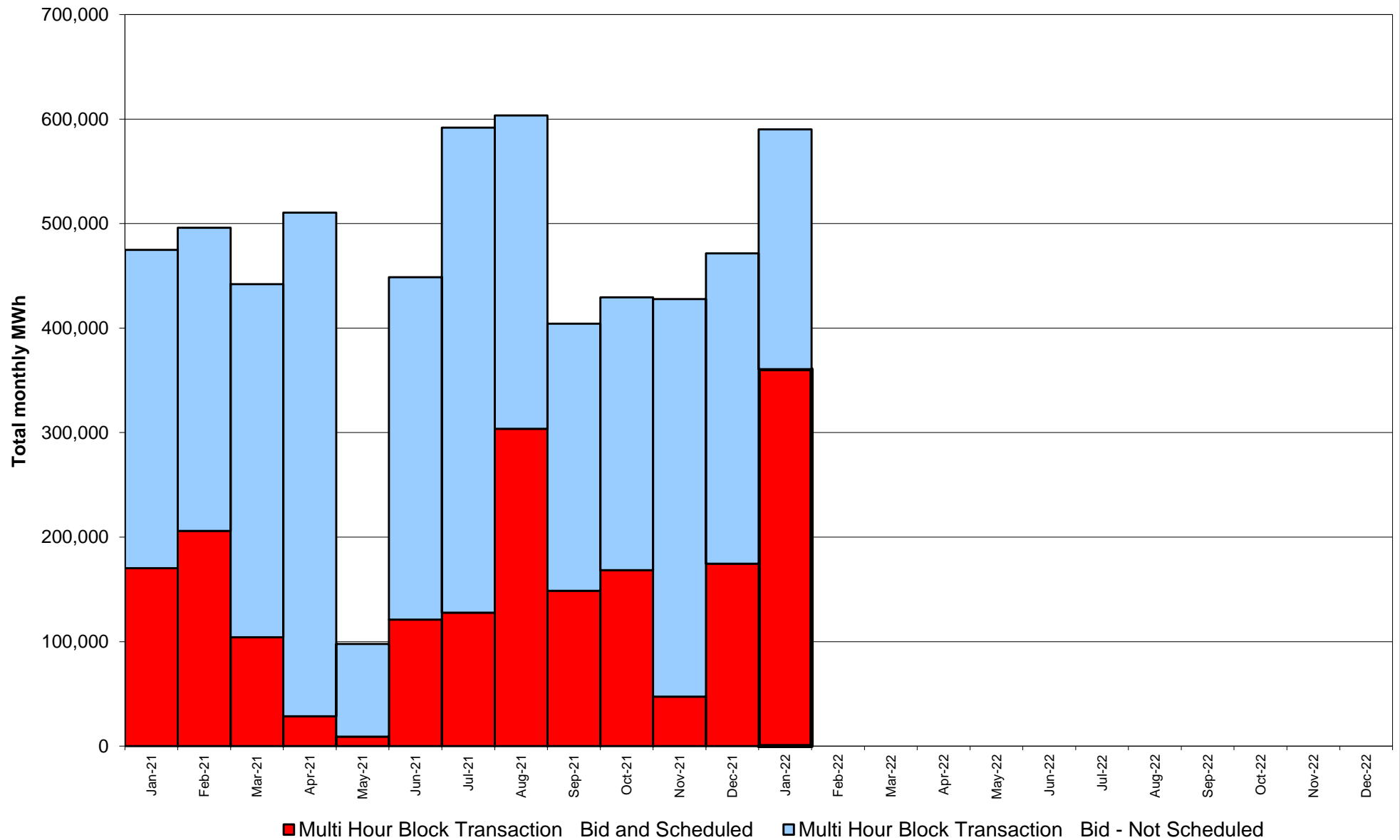
Virtual Load and Supply Zonal Statistics through January 31, 2022



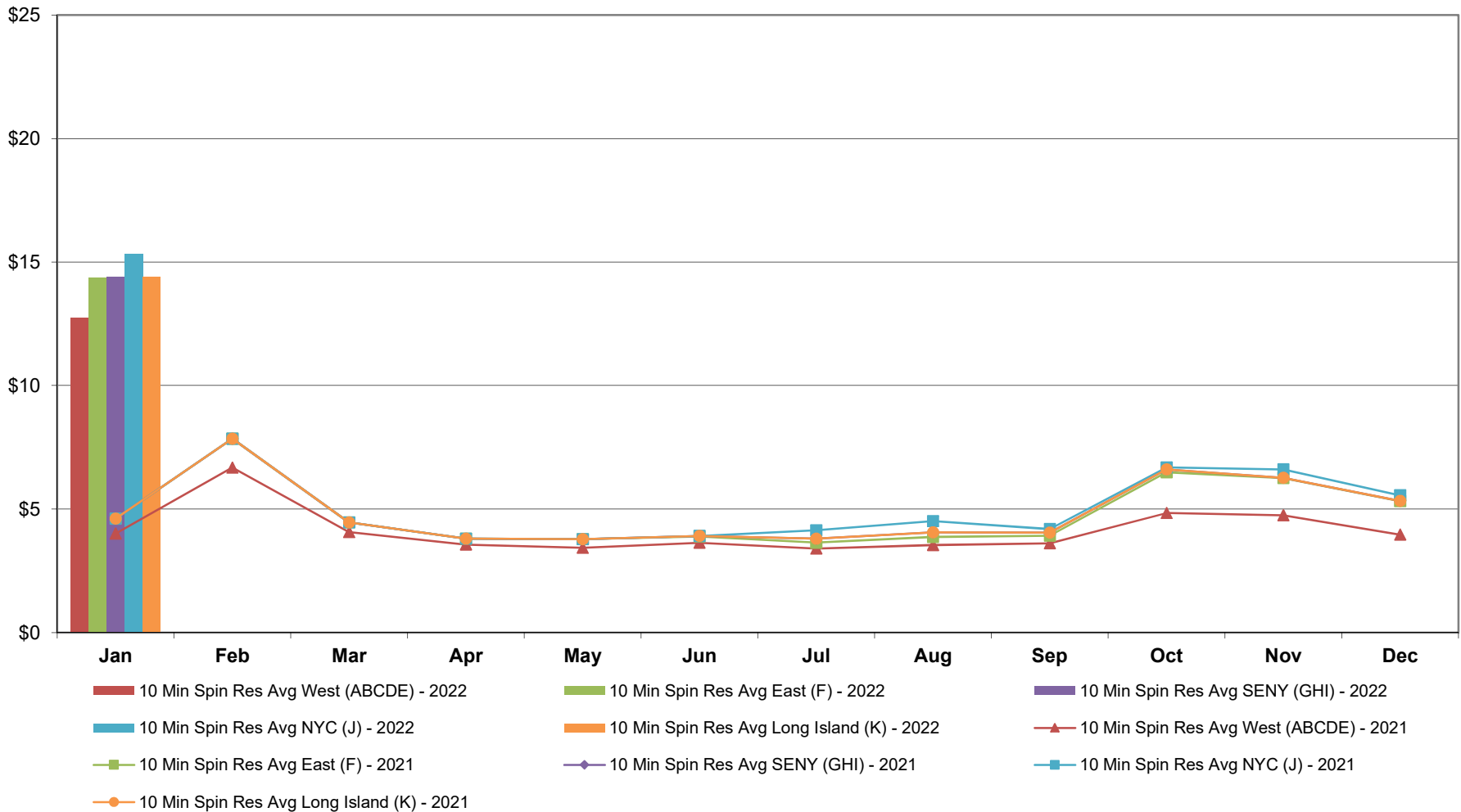
Virtual Load and Supply Zonal Statistics (Average MWh/day) - 2022

		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-22	2,754	1,900	2,076	1,276		MHK VL	Jan-22	722	621	1,245	204		DUNWOD	Jan-22	1,376	1,851
	Feb-22							Feb-22							Feb-22		
	Mar-22							Mar-22							Mar-22		
	Apr-22							Apr-22							Apr-22		
	May-22							May-22							May-22		
	Jun-22							Jun-22							Jun-22		
	Jul-22							Jul-22							Jul-22		
	Aug-22							Aug-22							Aug-22		
	Sep-22							Sep-22							Sep-22		
	Oct-22							Oct-22							Oct-22		
	Nov-22							Nov-22							Nov-22		
	Dec-22							Dec-22							Dec-22		
GENESE	Jan-22	722	464	1,058	319		CAPITL	Jan-22	2,536	2,157	749	695		N.Y.C.	Jan-22	2,341	3,279
	Feb-22							Feb-22							Feb-22		
	Mar-22							Mar-22							Mar-22		
	Apr-22							Apr-22							Apr-22		
	May-22							May-22							May-22		
	Jun-22							Jun-22							Jun-22		
	Jul-22							Jul-22							Jul-22		
	Aug-22							Aug-22							Aug-22		
	Sep-22							Sep-22							Sep-22		
	Oct-22							Oct-22							Oct-22		
	Nov-22							Nov-22							Nov-22		
	Dec-22							Dec-22							Dec-22		
NORTH	Jan-22	938	469	1,778	643		HUD VL	Jan-22	1,062	1,130	3,738	1,083		LONGIL	Jan-22	4,217	2,685
	Feb-22							Feb-22							Feb-22		
	Mar-22							Mar-22							Mar-22		
	Apr-22							Apr-22							Apr-22		
	May-22							May-22							May-22		
	Jun-22							Jun-22							Jun-22		
	Jul-22							Jul-22							Jul-22		
	Aug-22							Aug-22							Aug-22		
	Sep-22							Sep-22							Sep-22		
	Oct-22							Oct-22							Oct-22		
	Nov-22							Nov-22							Nov-22		
	Dec-22							Dec-22							Dec-22		
CENTRL	Jan-22	1,317	1,284	1,104	364		MILLWD	Jan-22	1,104	654	867	262		NYISO	Jan-22	19,089	16,494
	Feb-22							Feb-22							Feb-22		
	Mar-22							Mar-22							Mar-22		
	Apr-22							Apr-22							Apr-22		
	May-22							May-22							May-22		
	Jun-22							Jun-22							Jun-22		
	Jul-22							Jul-22							Jul-22		
	Aug-22							Aug-22							Aug-22		
	Sep-22							Sep-22							Sep-22		
	Oct-22							Oct-22							Oct-22		
	Nov-22							Nov-22							Nov-22		
	Dec-22							Dec-22							Dec-22		

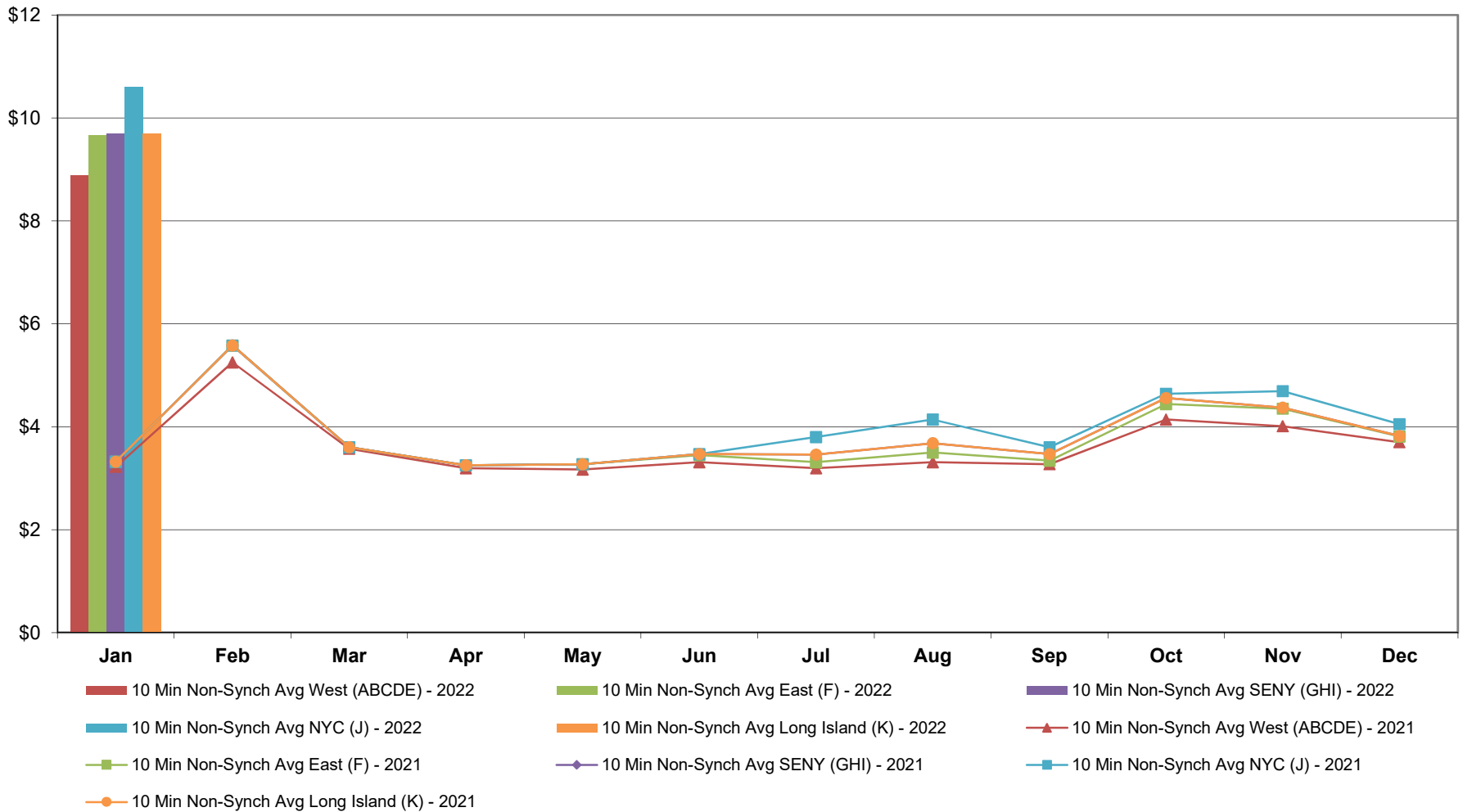
NYISO Multi Hour Block Transactions Monthly Total MWh



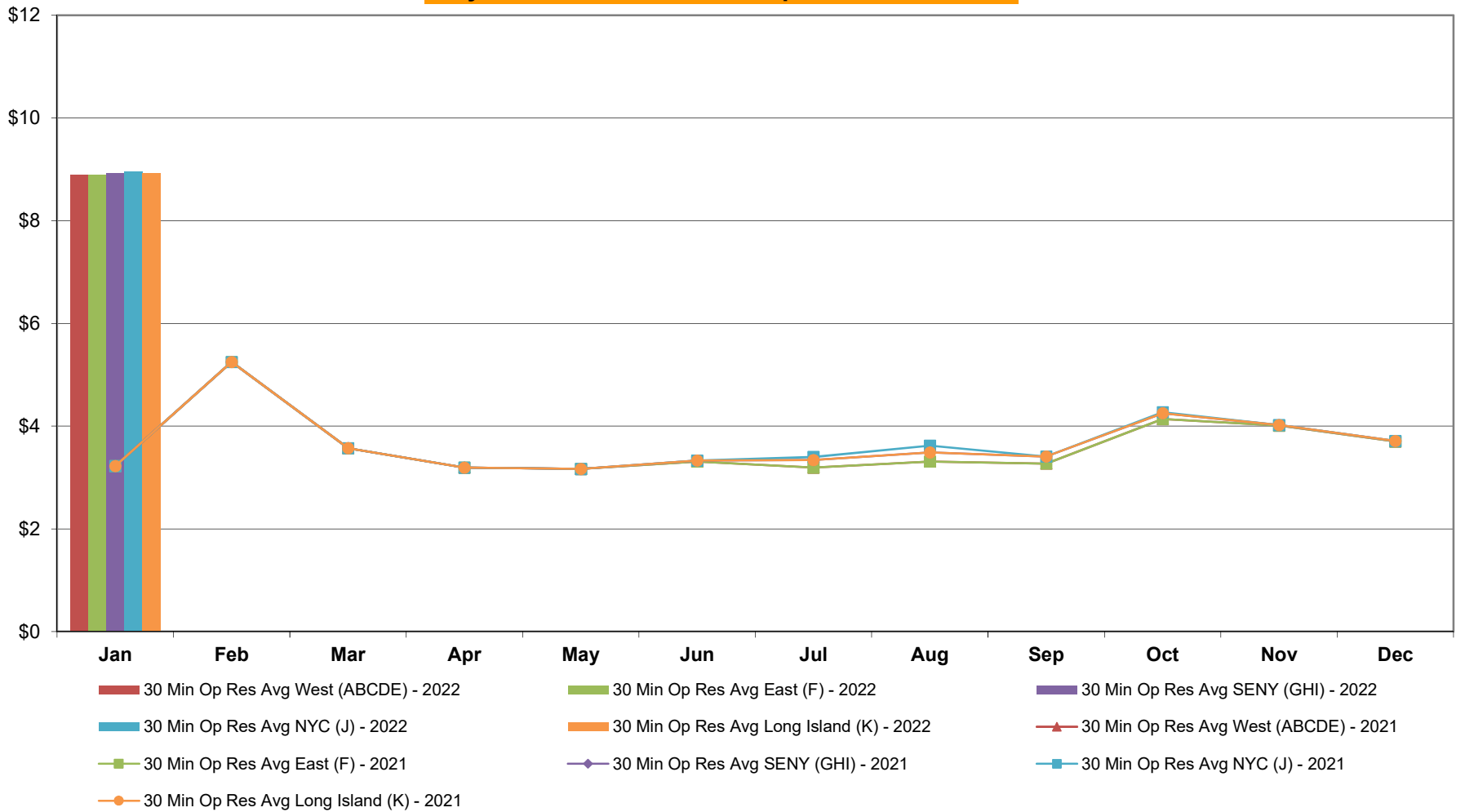
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - 10 Min Spin 2021 - 2022**



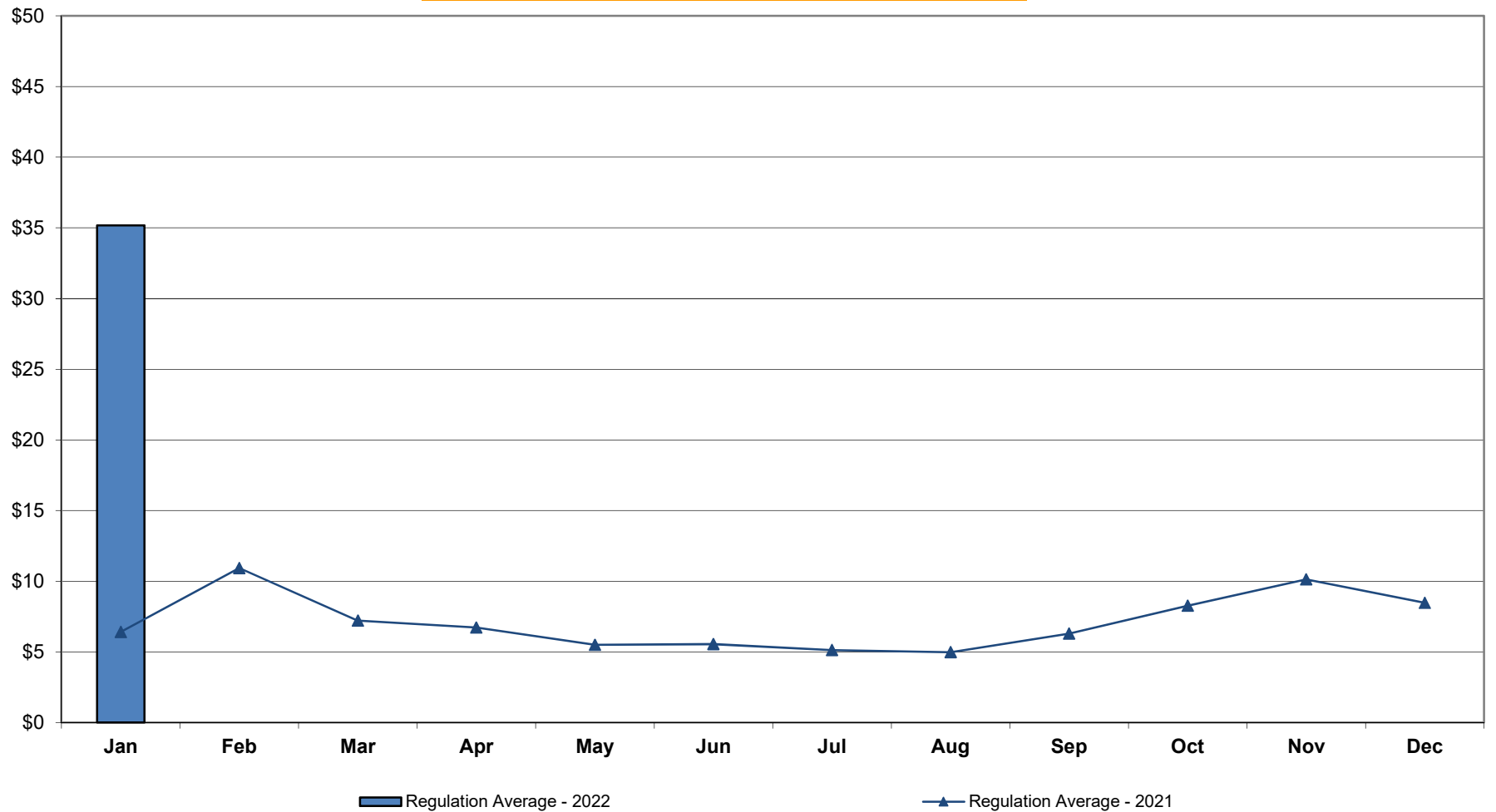
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - 10 Min Non-Synch 2021 - 2022**



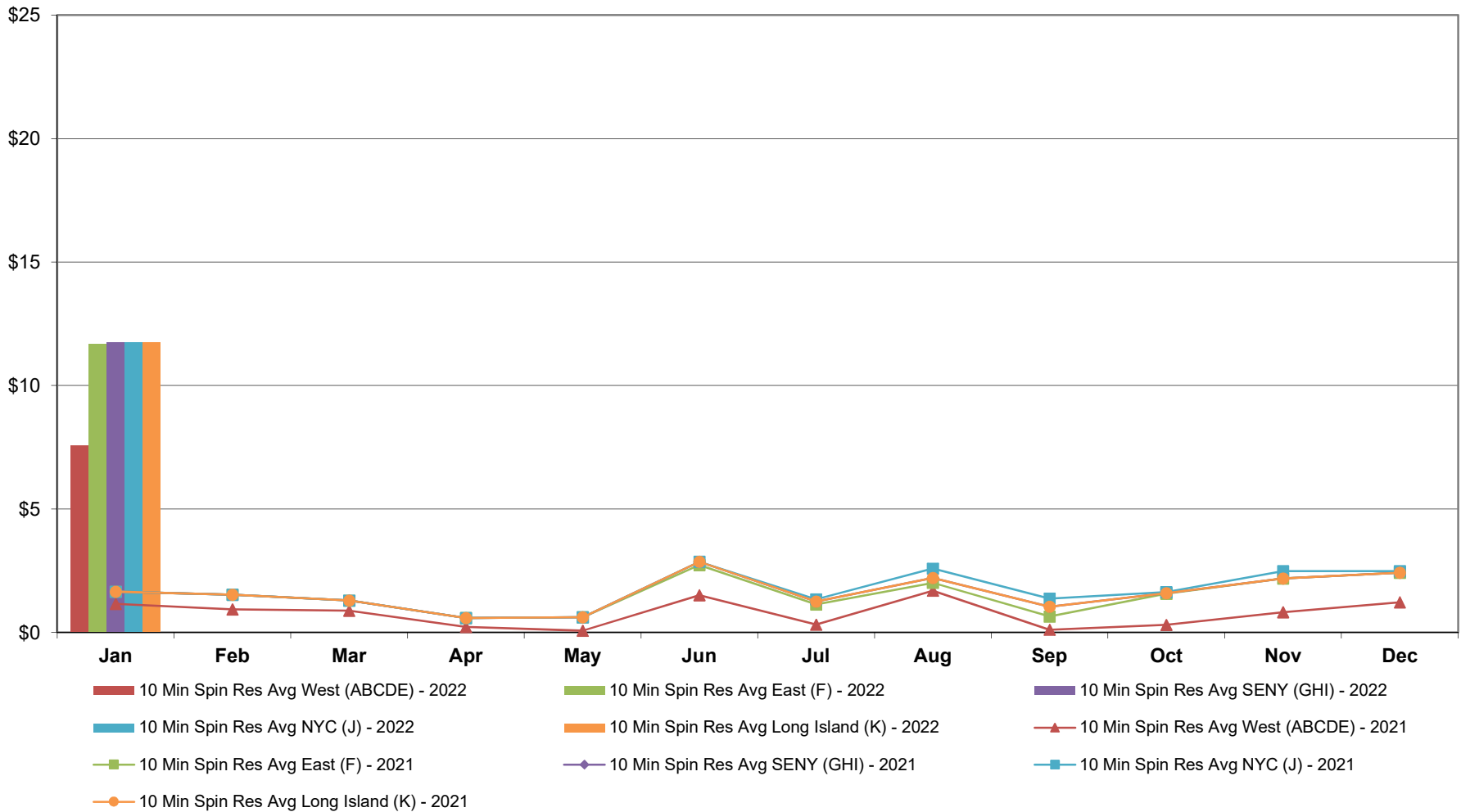
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - 30 Min Op Res 2021 - 2022**



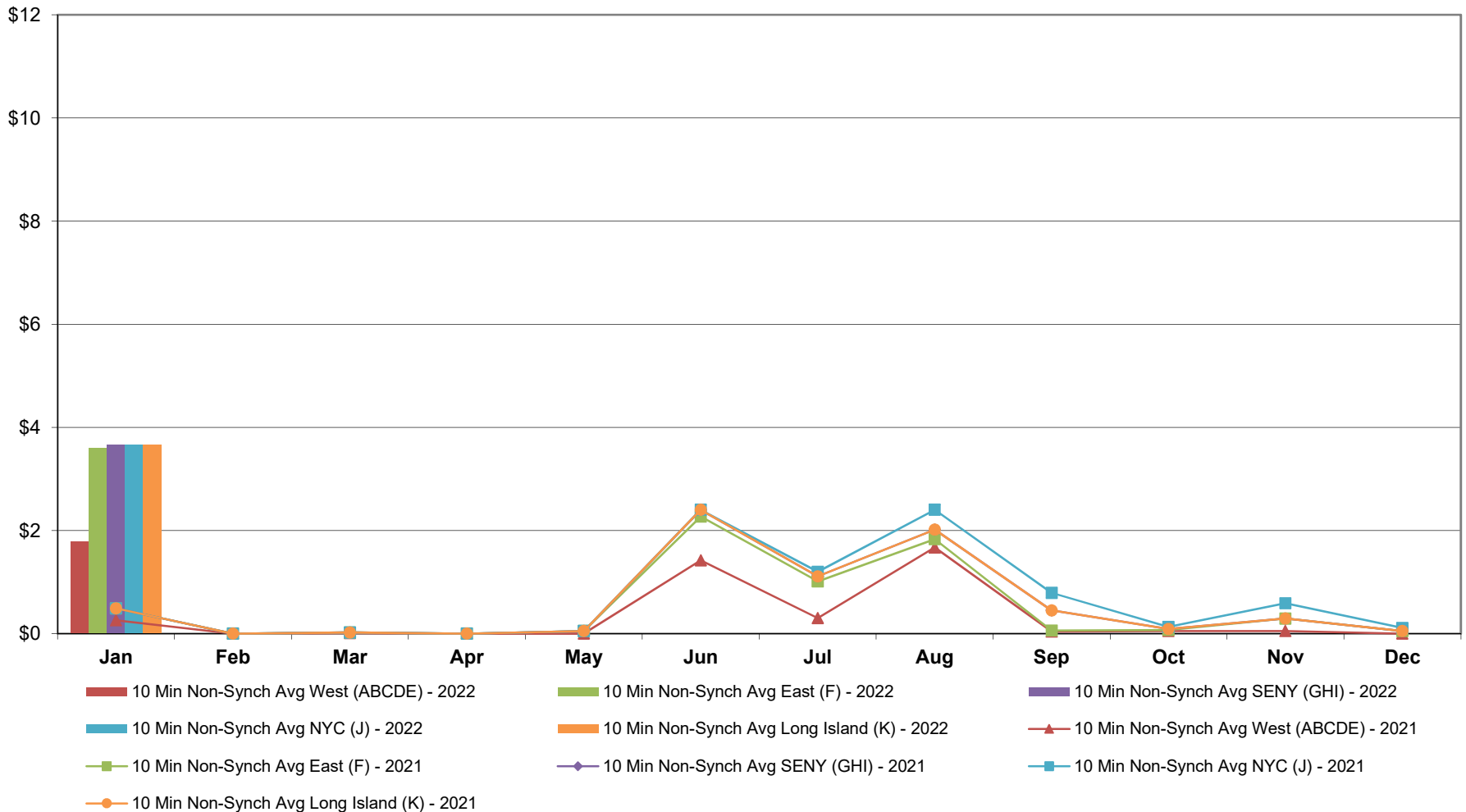
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - Regulation 2021 - 2022**



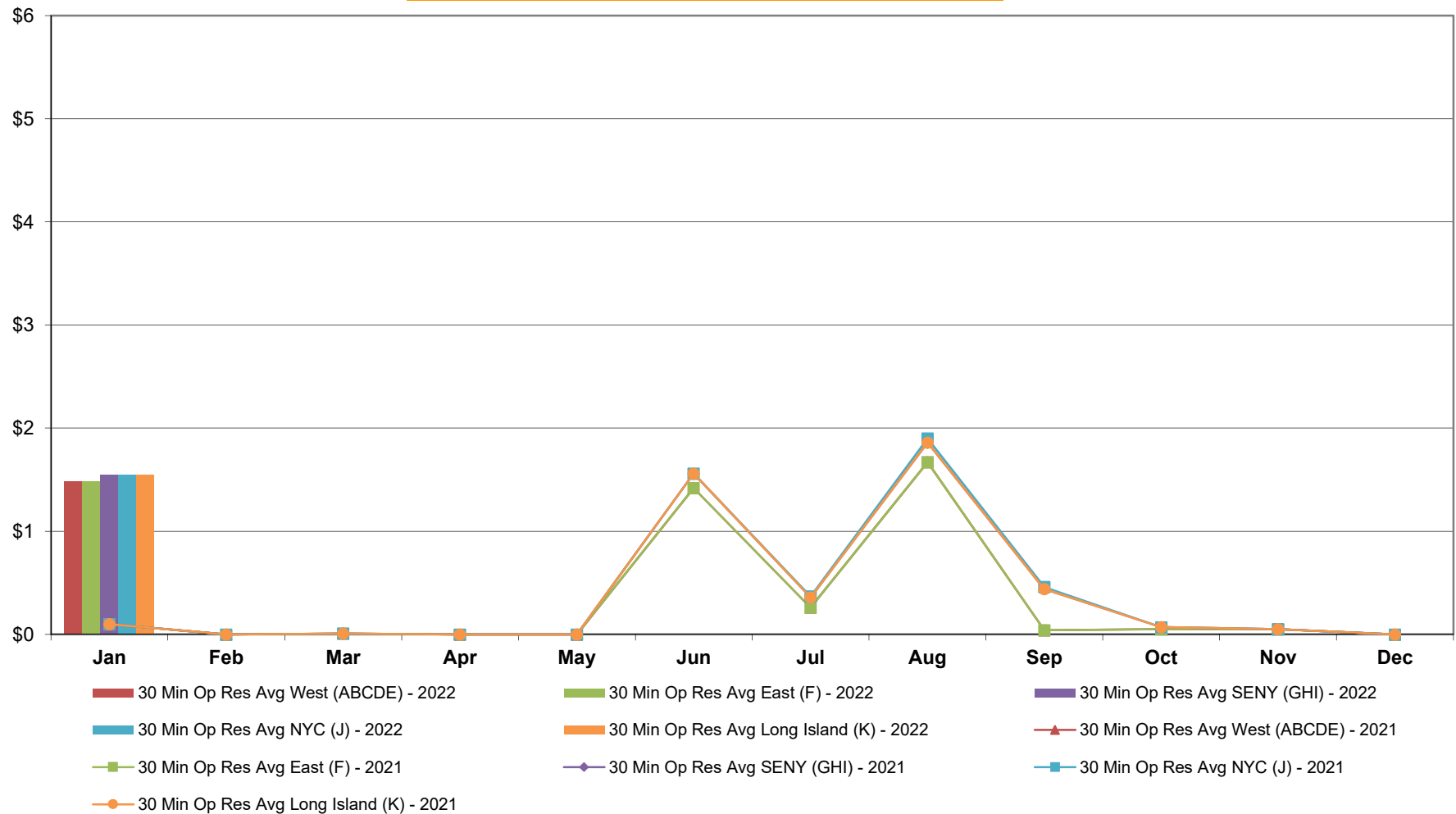
NYISO Monthly Average Ancillary Service Prices RTC Market - 10 Min Spin 2021 - 2022



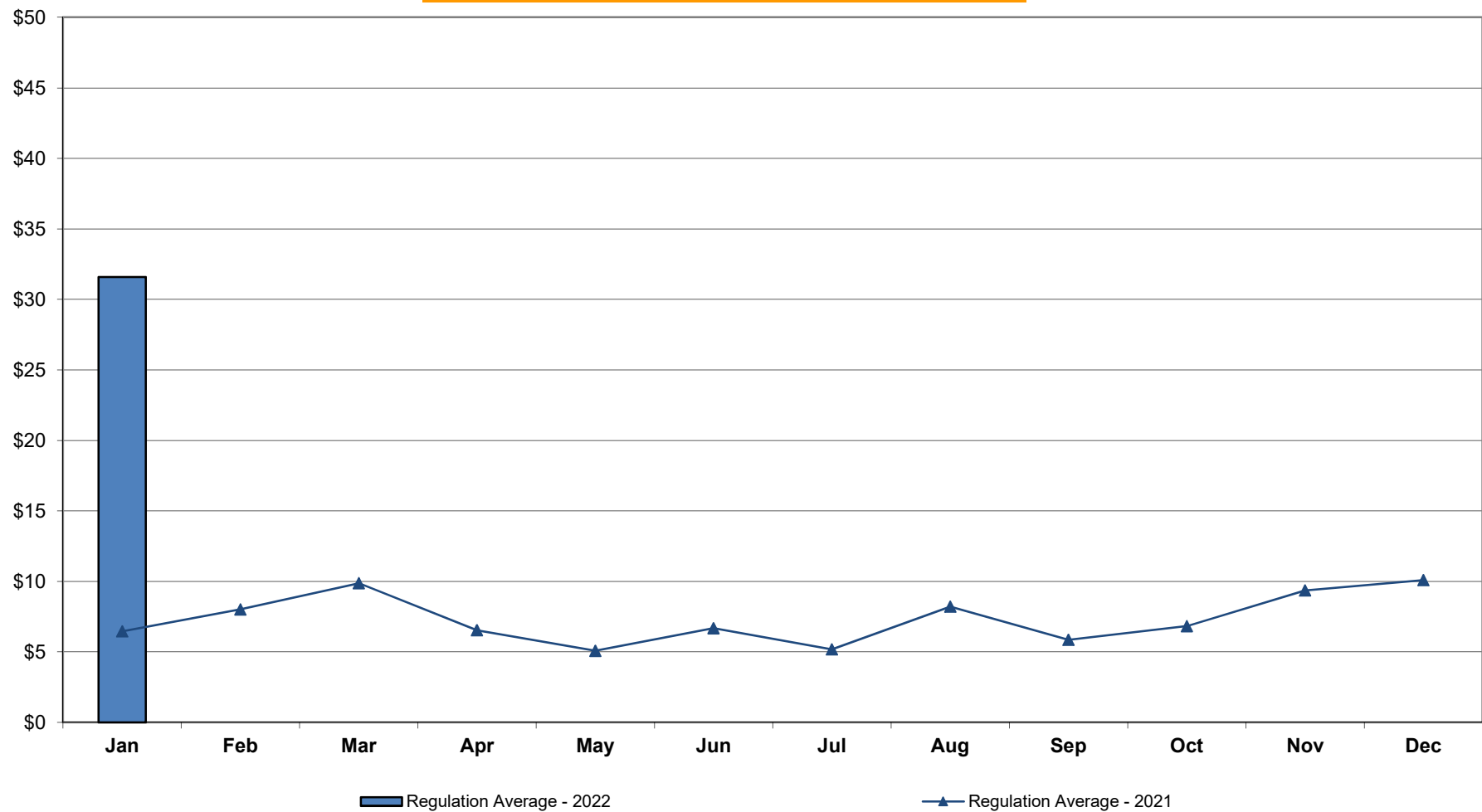
NYISO Monthly Average Ancillary Service Prices RTC Market - 10 Min Non-Synch 2021 - 2022



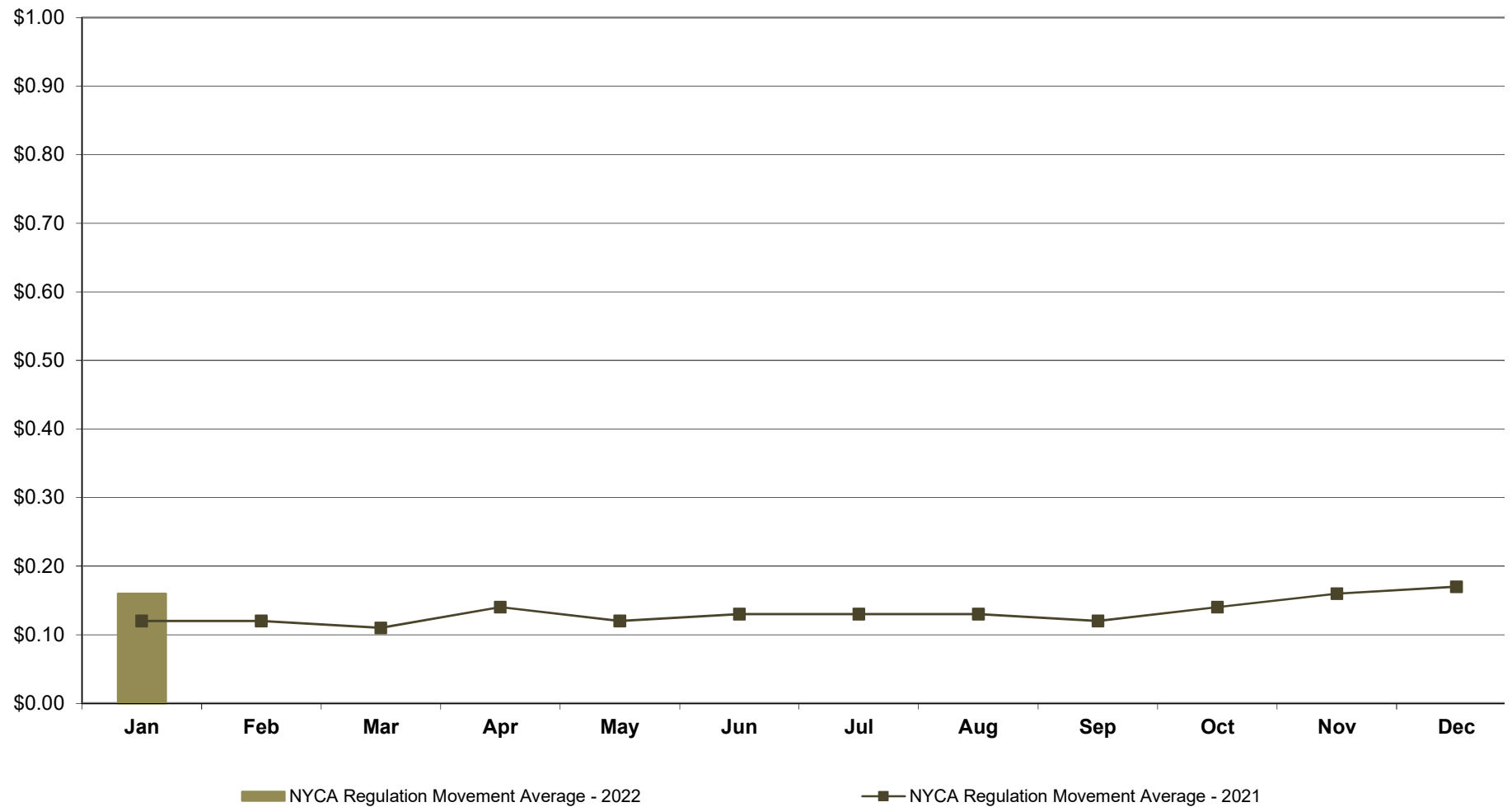
NYISO Monthly Average Ancillary Service Prices RTC Market - 30 Min Op Res 2021 - 2022



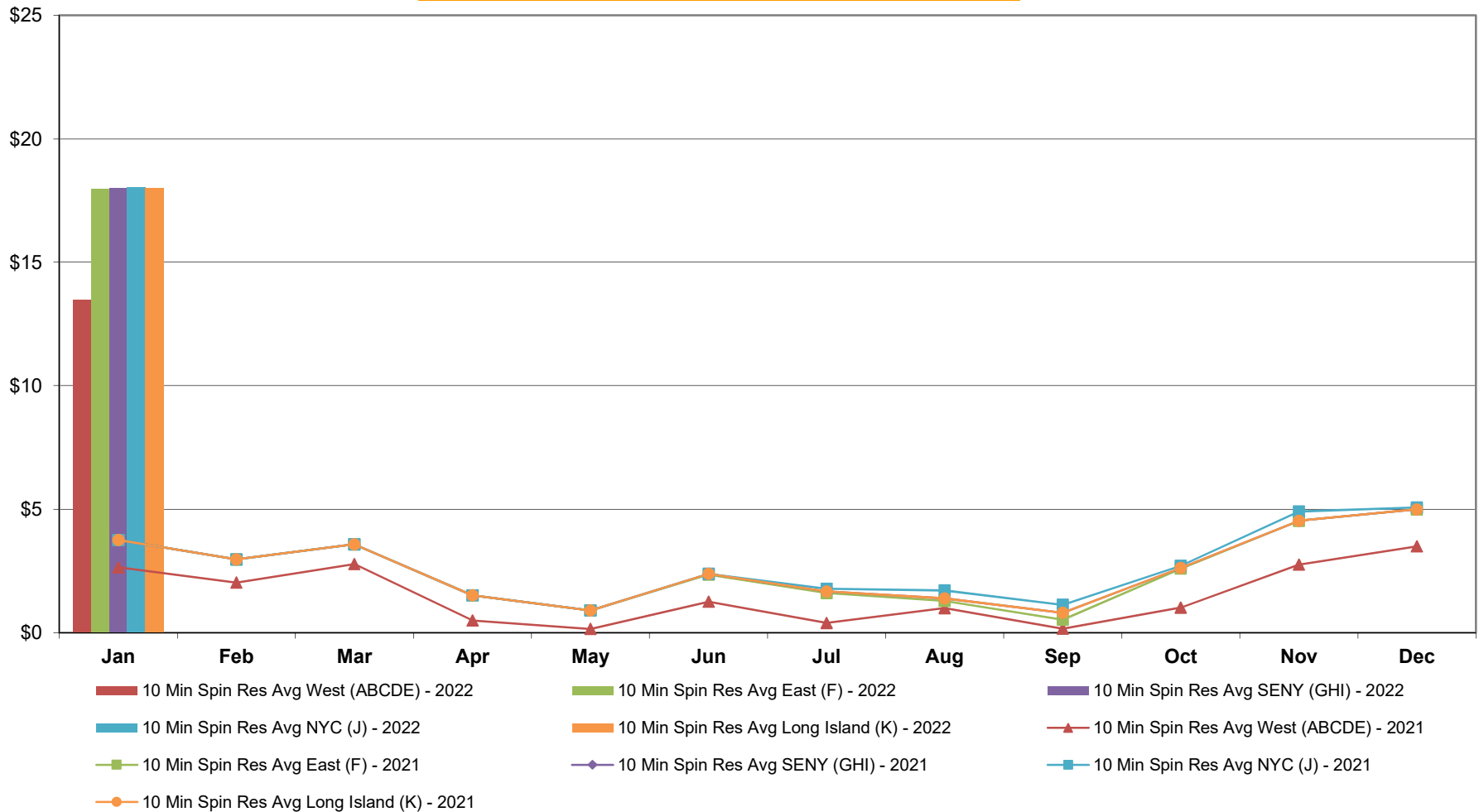
**NYISO Monthly Average Ancillary Service Prices
RTC Market - Regulation 2021 - 2022**



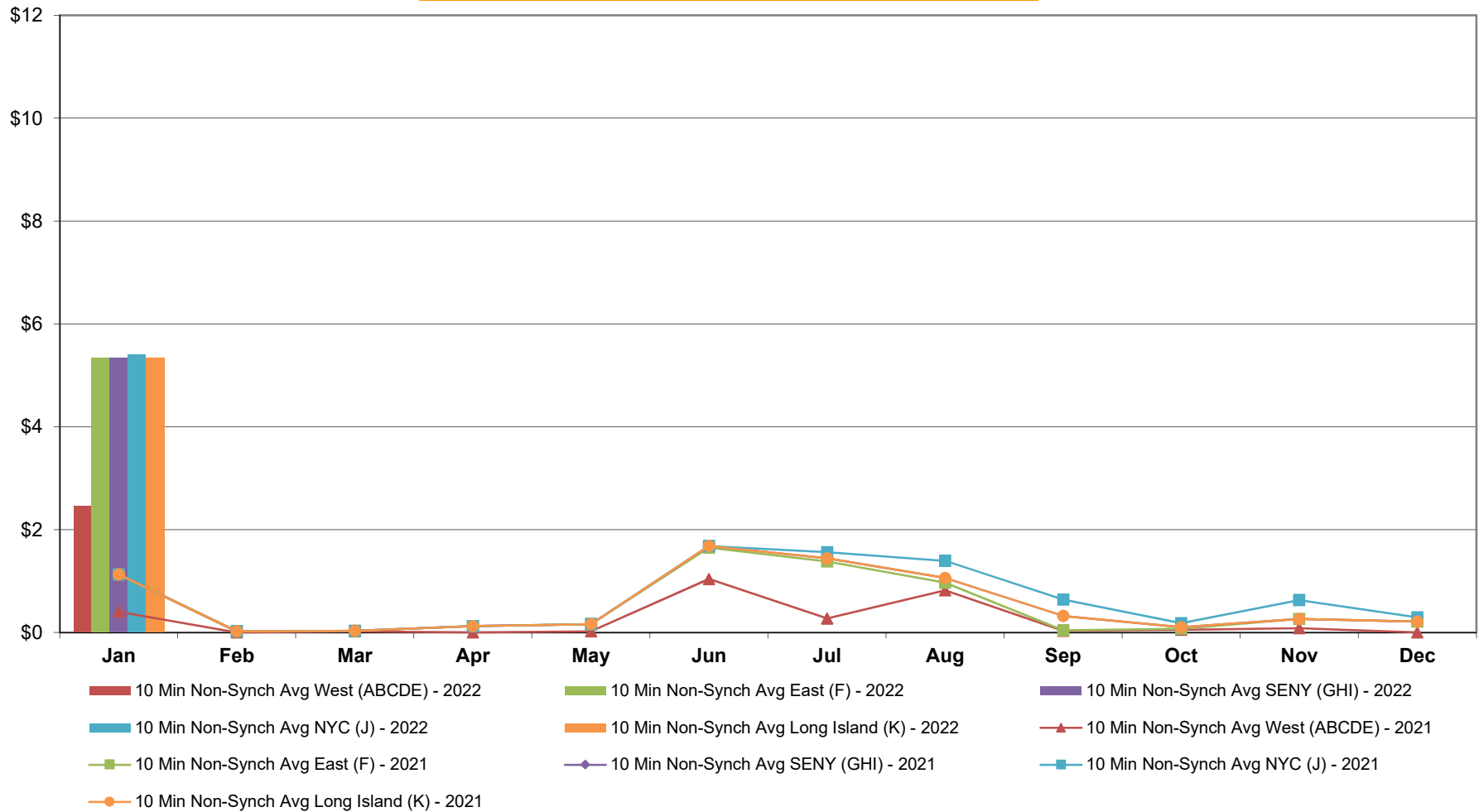
**NYISO Monthly Average Ancillary Service Prices
RTC Market - Regulation Movement 2021 - 2022**



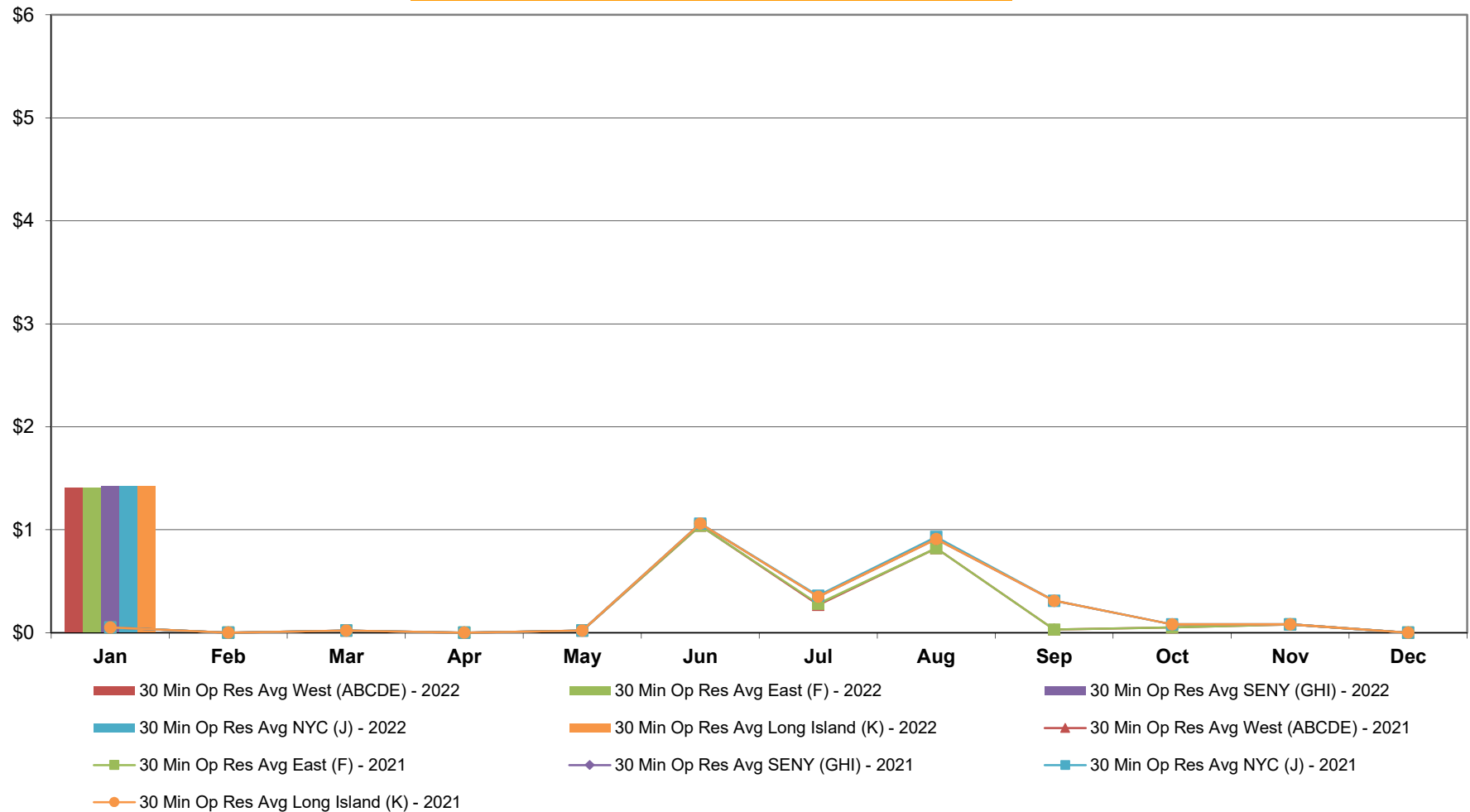
**NYISO Monthly Average Ancillary Service Prices
Real Time Market - 10 Min Spin 2021 - 2022**



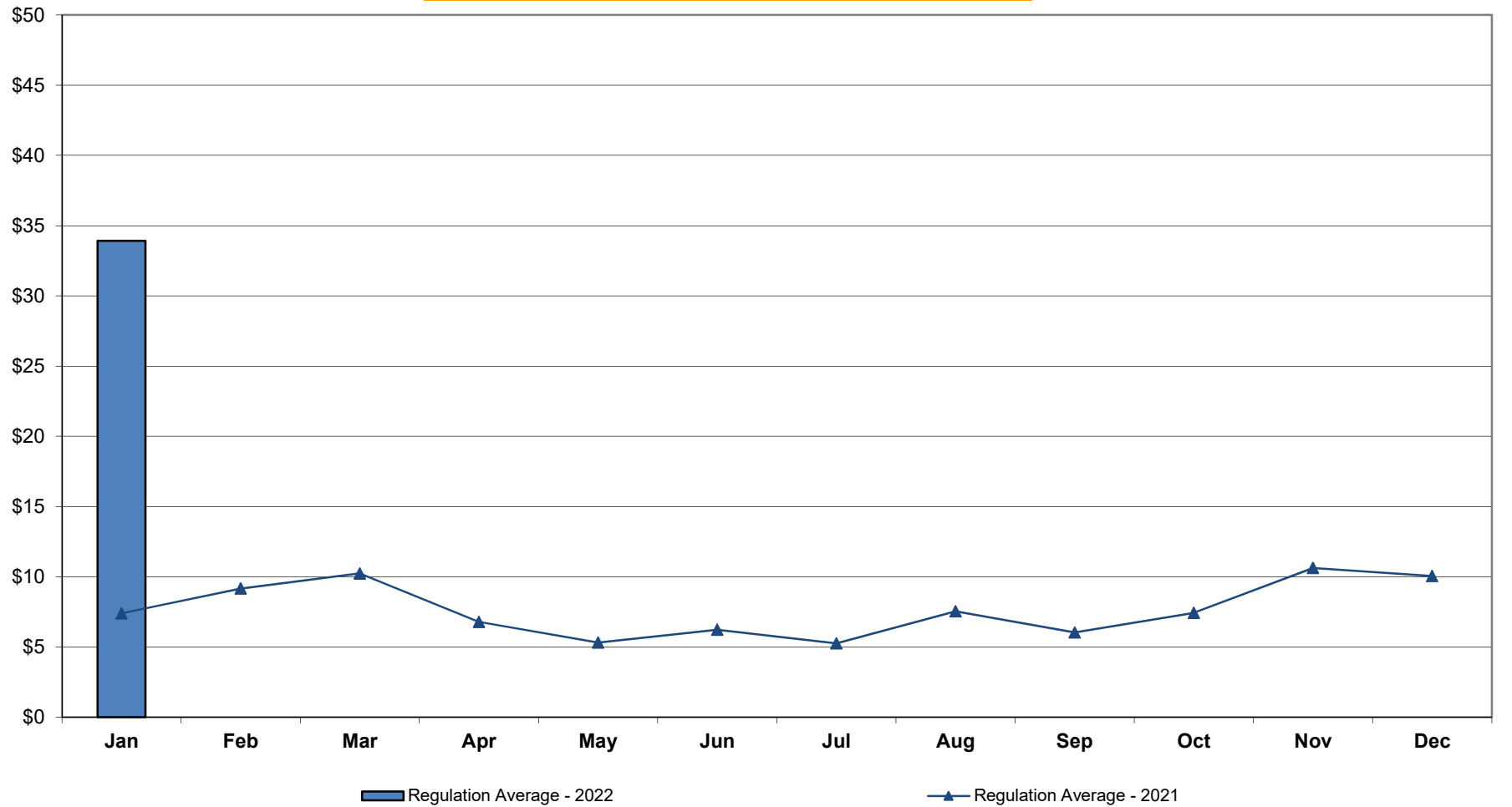
NYISO Monthly Average Ancillary Service Prices Real Time Market - 10 Min Non-Synch 2021 - 2022



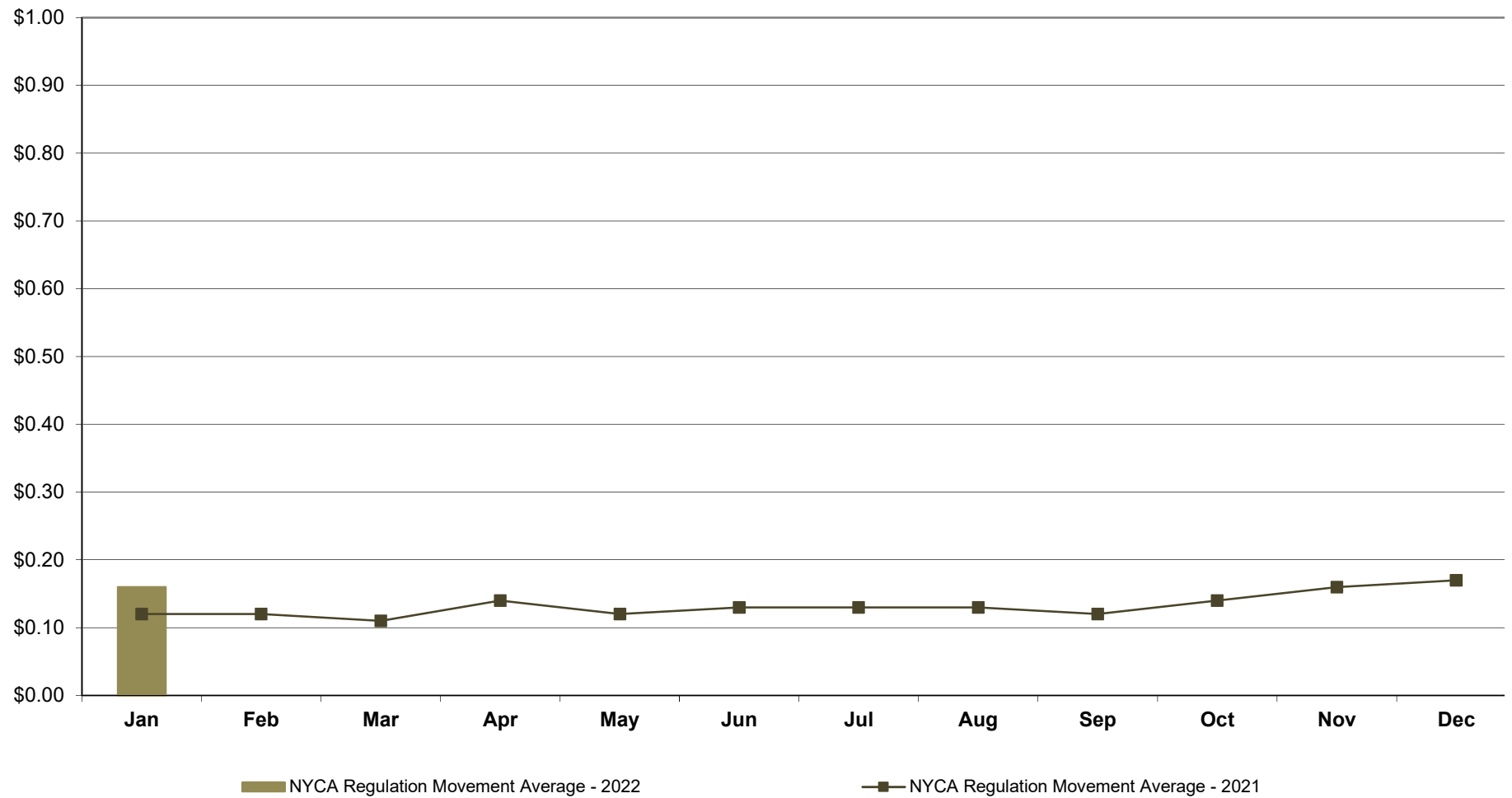
**NYISO Monthly Average Ancillary Service Prices
Real Time Market - 30 Min Op Res 2021 - 2022**



**NYISO Monthly Average Ancillary Service Prices
Real Time Market - Regulation 2021 - 2022**



NYISO Monthly Average Ancillary Service Prices Real Time Market - Regulation Movement 2021 - 2022



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

<u>2022</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)	14.40											
10 Min Spin NYC (J)	15.32											
10 Min Spin SENY (GHI)	14.40											
10 Min Spin East (F)	14.37											
10 Min Spin West (ABCDE)	12.74											
10 Min Non Synch Long Island (K)	9.70											
10 Min Non Synch NYC (J)	10.61											
10 Min Non Synch SENY (GHI)	9.70											
10 Min Non Synch East (F)	9.66											
10 Min Non Synch West (ABCDE)	8.88											
30 Min Long Island (K)	8.92											
30 Min NYC (J)	8.95											
30 Min SENY (GHI)	8.92											
30 Min East (F)	8.88											
30 Min West (ABCDE)	8.88											
Regulation	35.17											
<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	3.78	3.91	3.80	4.06	4.05	6.61	6.27	5.33
10 Min Spin NYC (J)	4.68	8.01	4.46	3.81	3.80	4.38	4.14	4.51	4.19	6.69	6.60	5.56
10 Min Spin SENY (GHI)	4.61	7.85	4.46	3.80	3.78	3.91	3.80	4.06	4.05	6.61	6.27	5.33
10 Min Spin East (F)	4.61	7.85	4.46	3.80	3.78	3.89	3.64	3.87	3.92	6.49	6.26	5.32
10 Min Spin West (ABCDE)	4.01	6.68	4.07	3.56	3.43	3.64	3.40	3.54	3.62	4.84	4.75	3.97
10 Min Non Synch Long Island (K)	3.32	5.58	3.60	3.25	3.27	3.47	3.46	3.68	3.47	4.56	4.37	3.82
10 Min Non Synch NYC (J)	3.40	5.74	3.60	3.26	3.30	3.93	3.80	4.14	3.60	4.64	4.69	4.05
10 Min Non Synch SENY (GHI)	3.32	5.58	3.60	3.25	3.27	3.47	3.46	3.68	3.47	4.56	4.37	3.82
10 Min Non Synch East (F)	3.32	5.58	3.60	3.25	3.27	3.45	3.31	3.50	3.34	4.44	4.35	3.81
10 Min Non Synch West (ABCDE)	3.22	5.25	3.57	3.19	3.17	3.31	3.19	3.31	3.27	4.14	4.01	3.70
30 Min Long Island (K)	3.22	5.25	3.57	3.19	3.17	3.33	3.34	3.49	3.41	4.25	4.02	3.71
30 Min NYC (J)	3.23	5.25	3.57	3.19	3.18	3.53	3.40	3.62	3.41	4.27	4.02	3.71
30 Min SENY (GHI)	3.22	5.25	3.57	3.19	3.17	3.33	3.34	3.49	3.41	4.25	4.02	3.71
30 Min East (F)	3.22	5.25	3.57	3.19	3.17	3.31	3.19	3.31	3.27	4.14	4.01	3.70
30 Min West (ABCDE)	3.22	5.25	3.57	3.19	3.17	3.31	3.19	3.31	3.27	4.14	4.01	3.70
Regulation	6.40	10.93	7.21	6.72	5.50	5.55	5.13	4.98	6.29	8.27	10.13	8.47

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

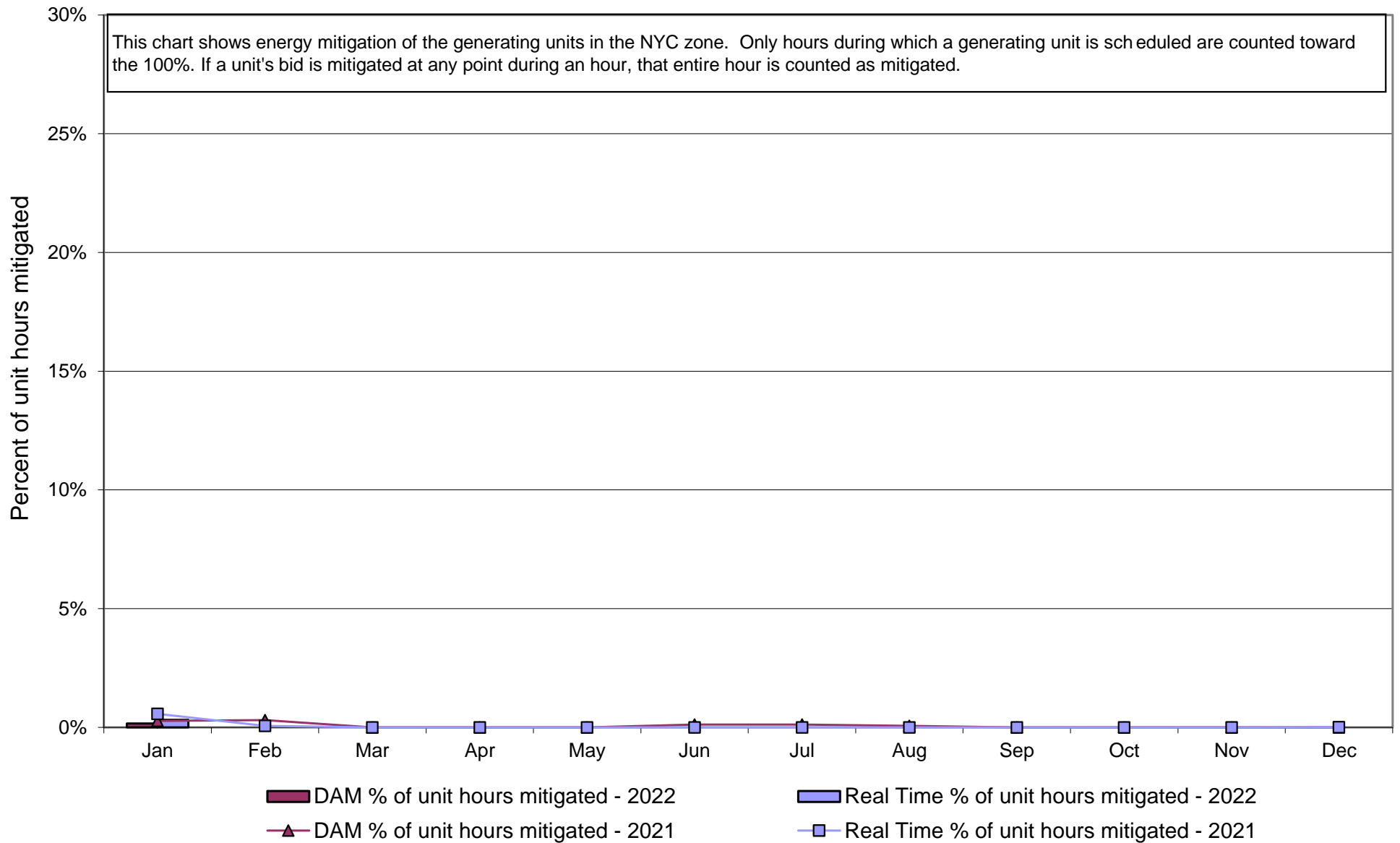
<u>2022</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
<u>RTC Market</u>												
10 Min Spin Long Island (K)	11.75											
10 Min Spin NYC (J)	11.75											
10 Min Spin SENY (GHI)	11.75											
10 Min Spin East (F)	11.68											
10 Min Spin West (ABCDE)	7.59											
10 Min Non Synch Long Island (K)	3.67											
10 Min Non Synch NYC (J)	3.67											
10 Min Non Synch SENY (GHI)	3.67											
10 Min Non Synch East (F)	3.60											
10 Min Non Synch West (ABCDE)	1.79											
30 Min Long Island (K)	1.55											
30 Min NYC (J)	1.55											
30 Min SENY (GHI)	1.55											
30 Min East (F)	1.48											
30 Min West (ABCDE)	1.48											
Regulation	31.59											
NYCA Regulation Movement	0.16											
<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	0.61	2.86	1.25	2.21	1.04	1.59	2.18	2.42
10 Min Spin NYC (J)	1.65	1.53	1.29	0.58	0.91	4.26	1.34	2.59	1.37	1.63	2.48	2.48
10 Min Spin SENY (GHI)	1.65	1.53	1.29	0.58	0.61	2.86	1.25	2.21	1.04	1.59	2.18	2.42
10 Min Spin East (F)	1.65	1.53	1.29	0.58	0.61	2.73	1.14	2.01	0.64	1.57	2.18	2.42
10 Min Spin West (ABCDE)	1.16	0.93	0.88	0.22	0.07	1.51	0.32	1.69	0.11	0.30	0.82	1.22
10 Min Non Synch Long Island (K)	0.49	0.00	0.02	0.00	0.05	2.40	1.11	2.02	0.45	0.09	0.29	0.05
10 Min Non Synch NYC (J)	0.49	0.00	0.02	0.00	0.35	3.80	1.20	2.40	0.79	0.13	0.59	0.11
10 Min Non Synch SENY (GHI)	0.49	0.00	0.02	0.00	0.05	2.40	1.11	2.02	0.45	0.09	0.29	0.05
10 Min Non Synch East (F)	0.49	0.00	0.02	0.00	0.05	2.27	1.01	1.83	0.06	0.07	0.29	0.05
10 Min Non Synch West (ABCDE)	0.26	0.00	0.01	0.00	0.00	1.42	0.30	1.67	0.04	0.05	0.05	0.00
30 Min Long Island (K)	0.10	0.00	0.01	0.00	0.00	1.56	0.36	1.86	0.44	0.07	0.05	0.00
30 Min NYC (J)	0.10	0.00	0.01	0.00	0.12	2.34	0.37	1.90	0.46	0.07	0.05	0.00
30 Min SENY (GHI)	0.10	0.00	0.01	0.00	0.00	1.56	0.36	1.86	0.44	0.07	0.05	0.00
30 Min East (F)	0.10	0.00	0.01	0.00	0.00	1.42	0.26	1.67	0.04	0.05	0.05	0.00
30 Min West (ABCDE)	0.10	0.00	0.01	0.00	0.00	1.42	0.26	1.67	0.04	0.05	0.05	0.00
Regulation	6.46	8.02	9.88	6.54	5.08	6.69	5.18	8.22	5.86	6.83	9.37	10.10
NYCA Regulation Movement	0.12	0.12	0.11	0.14	0.12	0.13	0.13	0.13	0.12	0.14	0.16	0.17

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

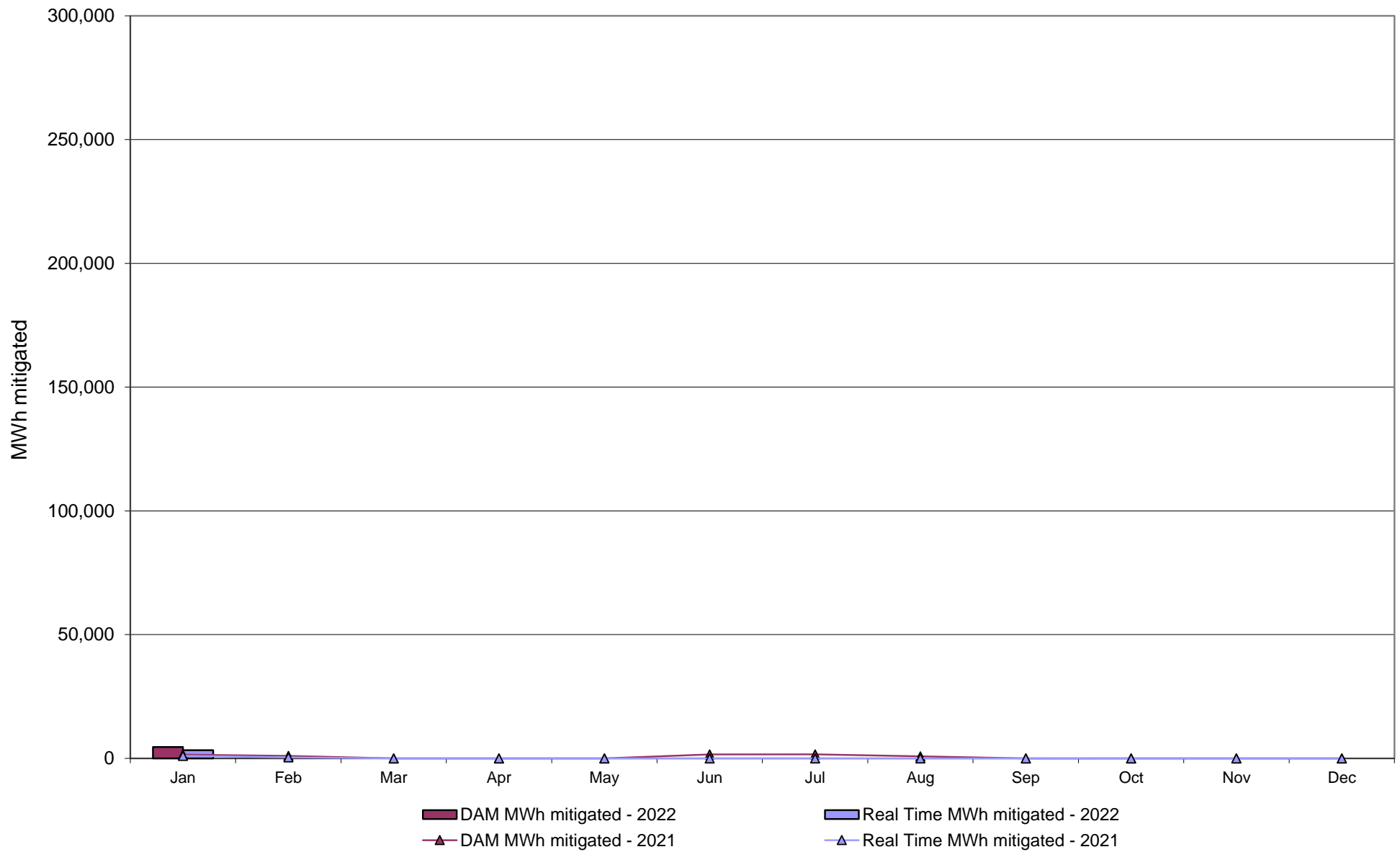
<u>2022</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
<u>Real Time Market</u>												
10 Min Spin Long Island (K)	17.99											
10 Min Spin NYC (J)	18.04											
10 Min Spin SENY (GHI)	17.99											
10 Min Spin East (F)	17.97											
10 Min Spin West (ABCDE)	13.47											
10 Min Non Synch Long Island (K)	5.34											
10 Min Non Synch NYC (J)	5.40											
10 Min Non Synch SENY (GHI)	5.34											
10 Min Non Synch East (F)	5.33											
10 Min Non Synch West (ABCDE)	2.46											
30 Min Long Island (K)	1.42											
30 Min NYC (J)	1.42											
30 Min SENY (GHI)	1.42											
30 Min East (F)	1.41											
30 Min West (ABCDE)	1.41											
Regulation	33.92											
NYCA Regulation Movement	0.16											
<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	0.90	2.38	1.67	1.38	0.80	2.62	4.53	4.99
10 Min Spin NYC (J)	3.75	2.96	3.57	1.51	1.16	3.77	1.78	1.71	1.13	2.70	4.90	5.07
10 Min Spin SENY (GHI)	3.75	2.96	3.57	1.51	0.90	2.38	1.67	1.38	0.80	2.62	4.53	4.99
10 Min Spin East (F)	3.75	2.96	3.57	1.51	0.90	2.35	1.60	1.28	0.52	2.59	4.53	4.99
10 Min Spin West (ABCDE)	2.64	2.03	2.78	0.49	0.15	1.25	0.39	0.99	0.16	1.01	2.75	3.49
10 Min Non Synch Long Island (K)	1.13	0.02	0.03	0.12	0.16	1.68	1.44	1.06	0.32	0.10	0.26	0.21
10 Min Non Synch NYC (J)	1.13	0.02	0.03	0.12	0.42	3.07	1.56	1.39	0.64	0.18	0.63	0.29
10 Min Non Synch SENY (GHI)	1.13	0.02	0.03	0.12	0.16	1.68	1.44	1.06	0.32	0.10	0.26	0.21
10 Min Non Synch East (F)	1.13	0.02	0.03	0.12	0.16	1.65	1.38	0.97	0.04	0.07	0.26	0.21
10 Min Non Synch West (ABCDE)	0.40	0.00	0.02	0.00	0.02	1.04	0.27	0.82	0.03	0.05	0.08	0.00
30 Min Long Island (K)	0.05	0.00	0.02	0.00	0.02	1.06	0.35	0.91	0.31	0.08	0.08	0.00
30 Min NYC (J)	0.05	0.00	0.02	0.00	0.12	1.84	0.36	0.93	0.31	0.08	0.08	0.00
30 Min SENY (GHI)	0.05	0.00	0.02	0.00	0.02	1.06	0.35	0.91	0.31	0.08	0.08	0.00
30 Min East (F)	0.05	0.00	0.02	0.00	0.02	1.04	0.28	0.82	0.03	0.05	0.08	0.00
30 Min West (ABCDE)	0.05	0.00	0.02	0.00	0.02	1.04	0.27	0.82	0.03	0.05	0.08	0.00
Regulation	7.39	9.17	10.23	6.78	5.31	6.24	5.25	7.54	6.03	7.43	10.62	10.05
NYCA Regulation Movement	0.12	0.12	0.11	0.14	0.12	0.13	0.13	0.13	0.12	0.14	0.16	0.17

NYISO In City Energy Mitigation - AMP (NYC Zone) 2021 - 2022

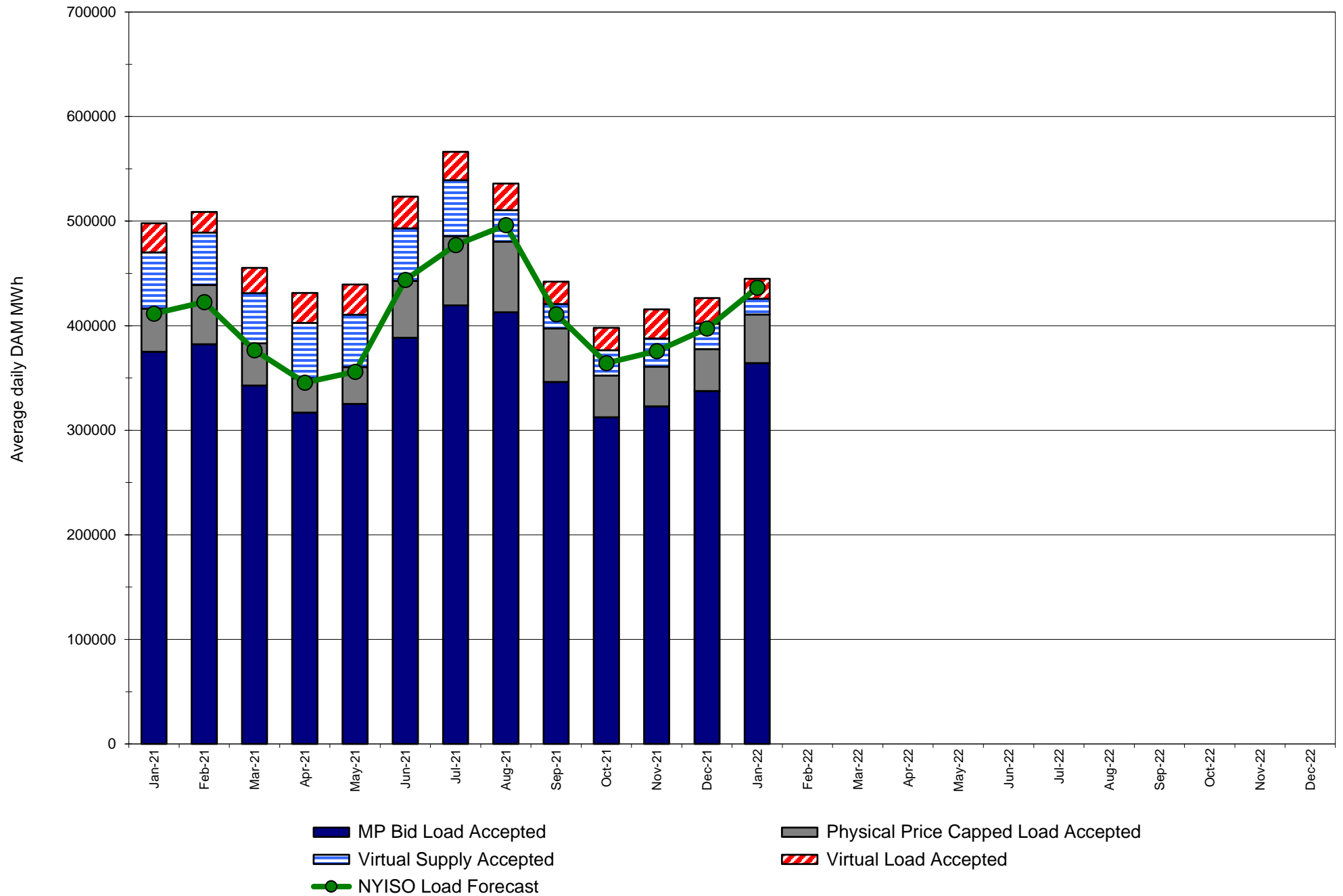
Percentage of committed unit-hours mitigated



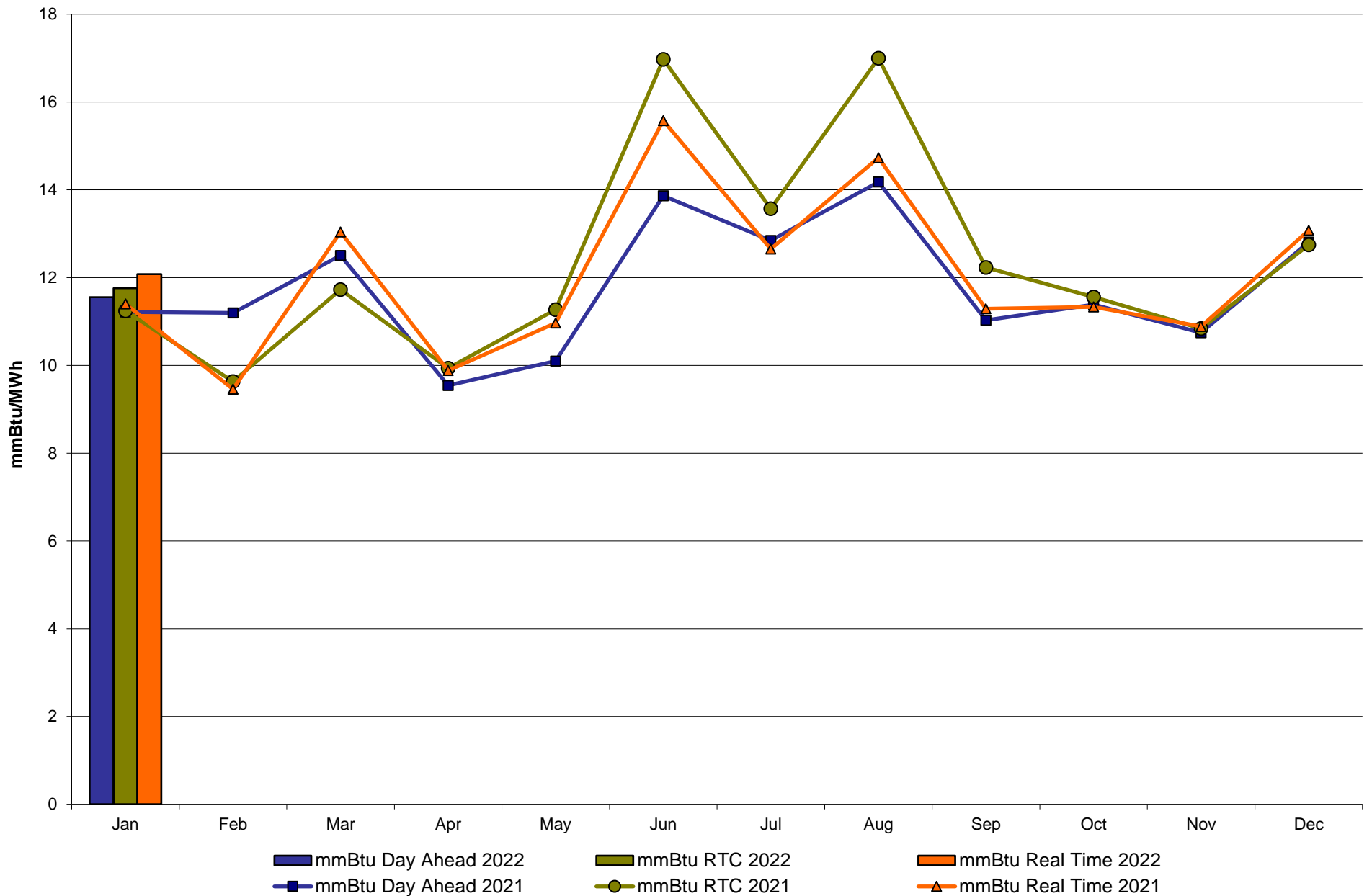
NYISO In City Energy Mitigation (NYC Zone) 2021 - 2022
Monthly megawatt hours mitigated



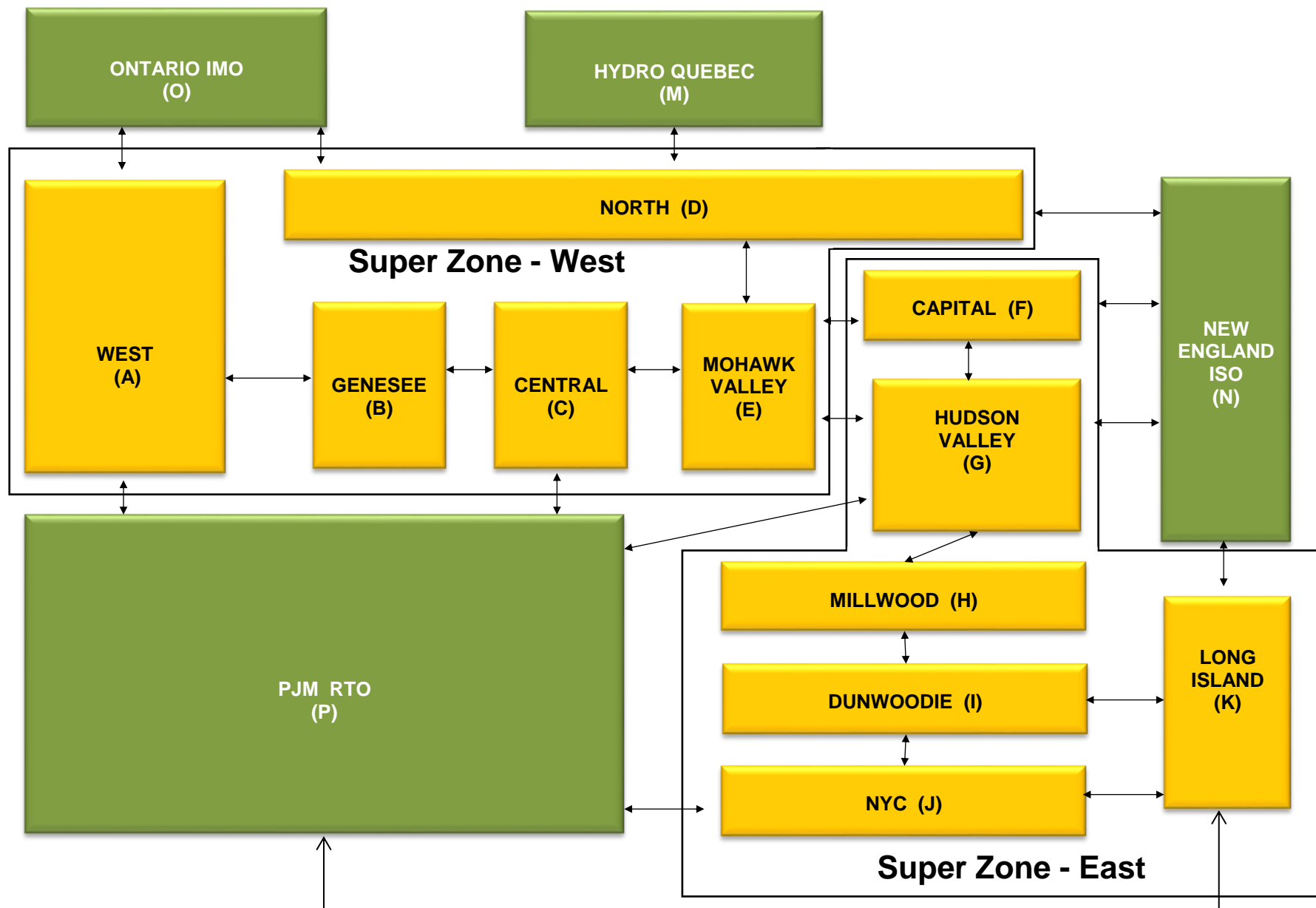
NYISO Average Daily DAM Load Bid Summary



Monthly Implied Heat Rate 2021-2022



NYISO LBMP ZONES



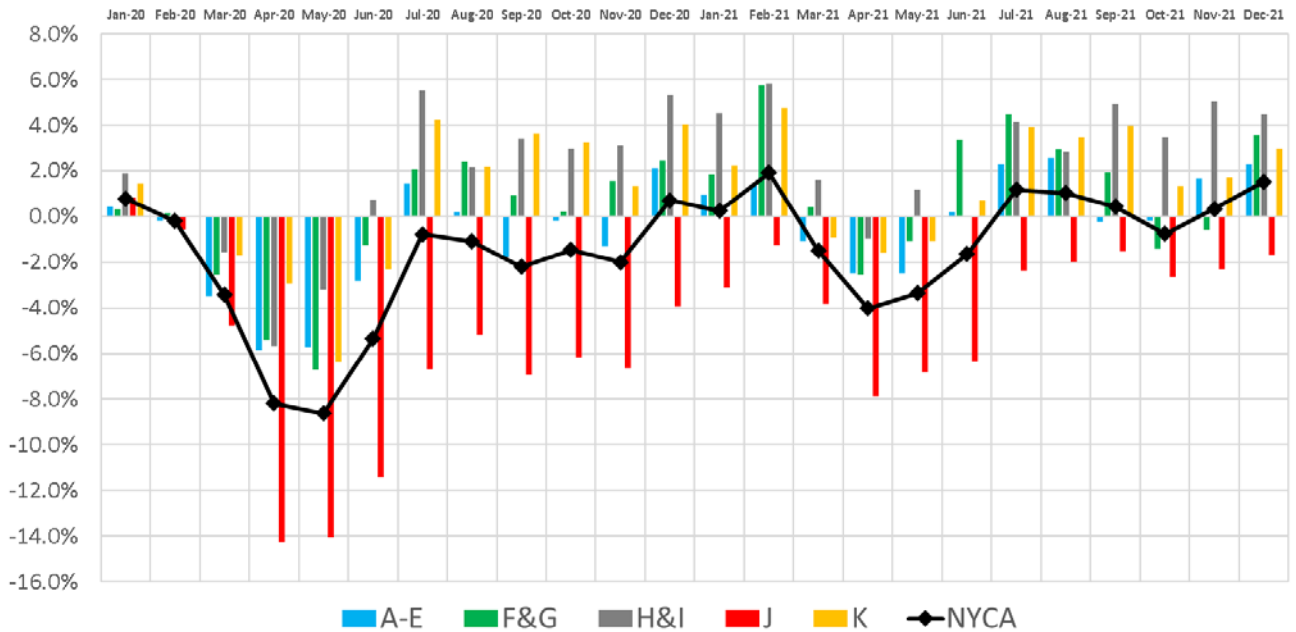
Billing Codes for Chart C

<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

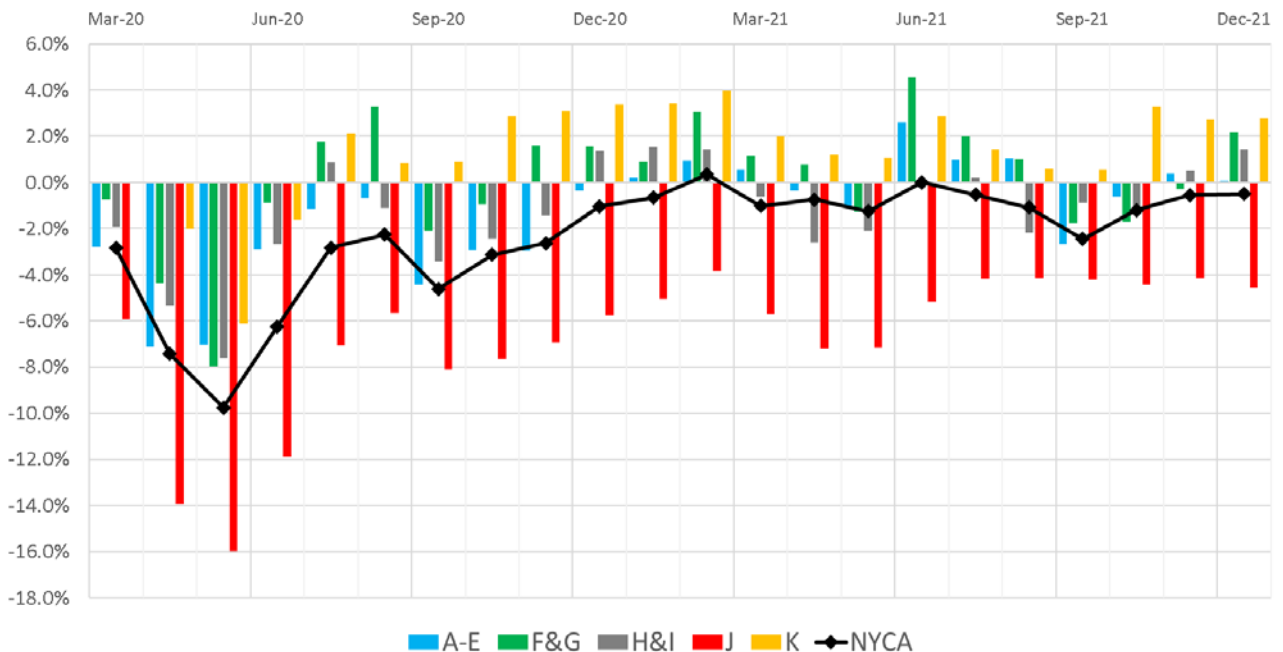
Regional Energy Impacts

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

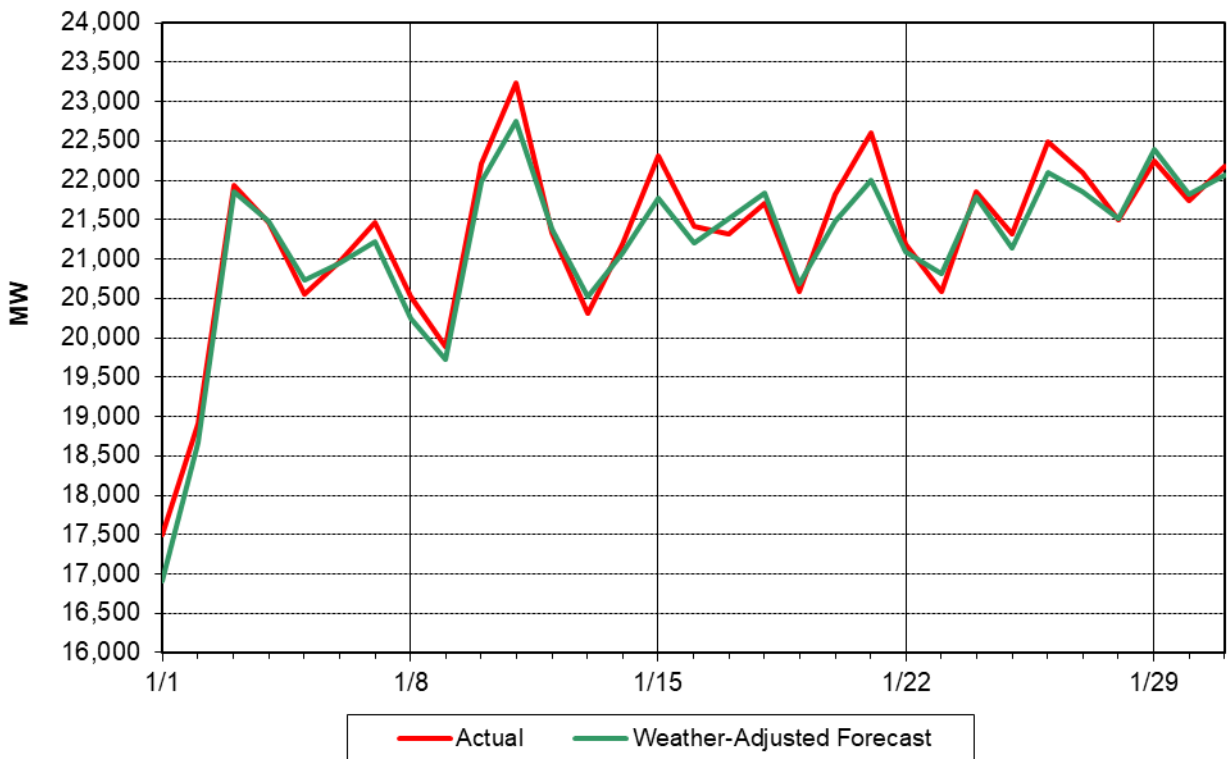


Regional Peak Impacts

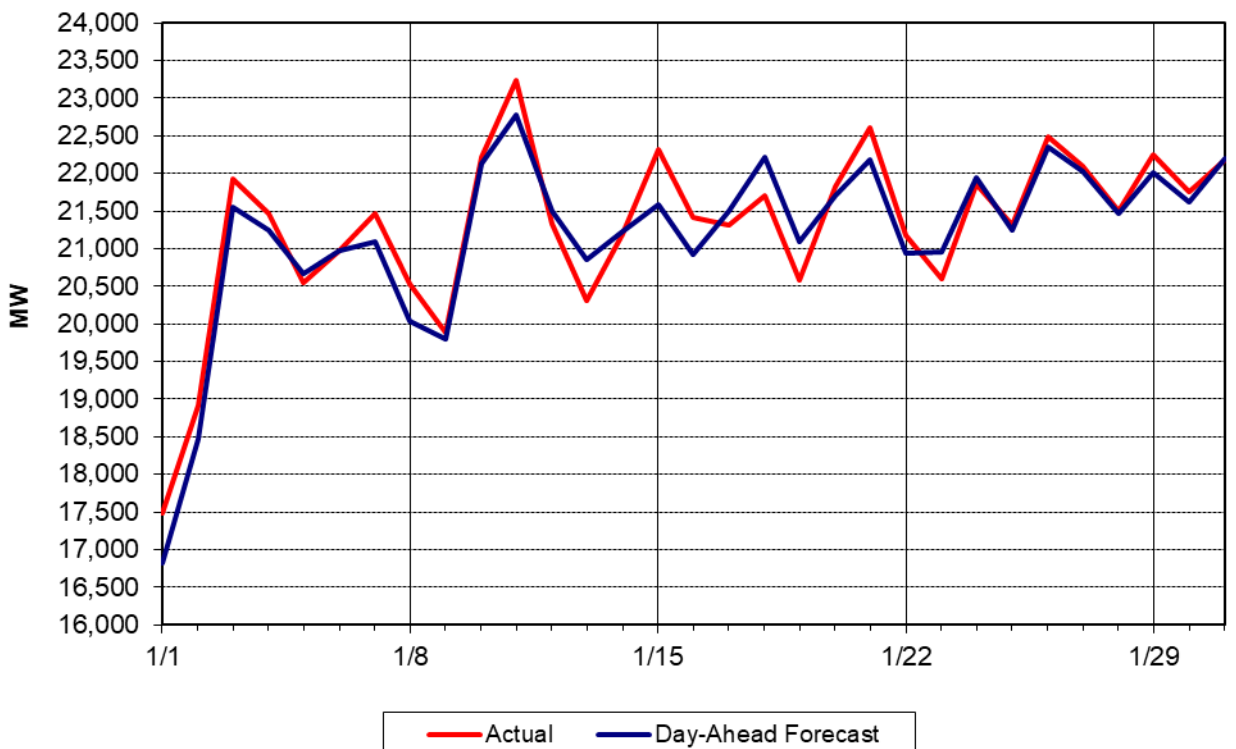
Monthly Peak Demand - % Versus Expected (Areas)



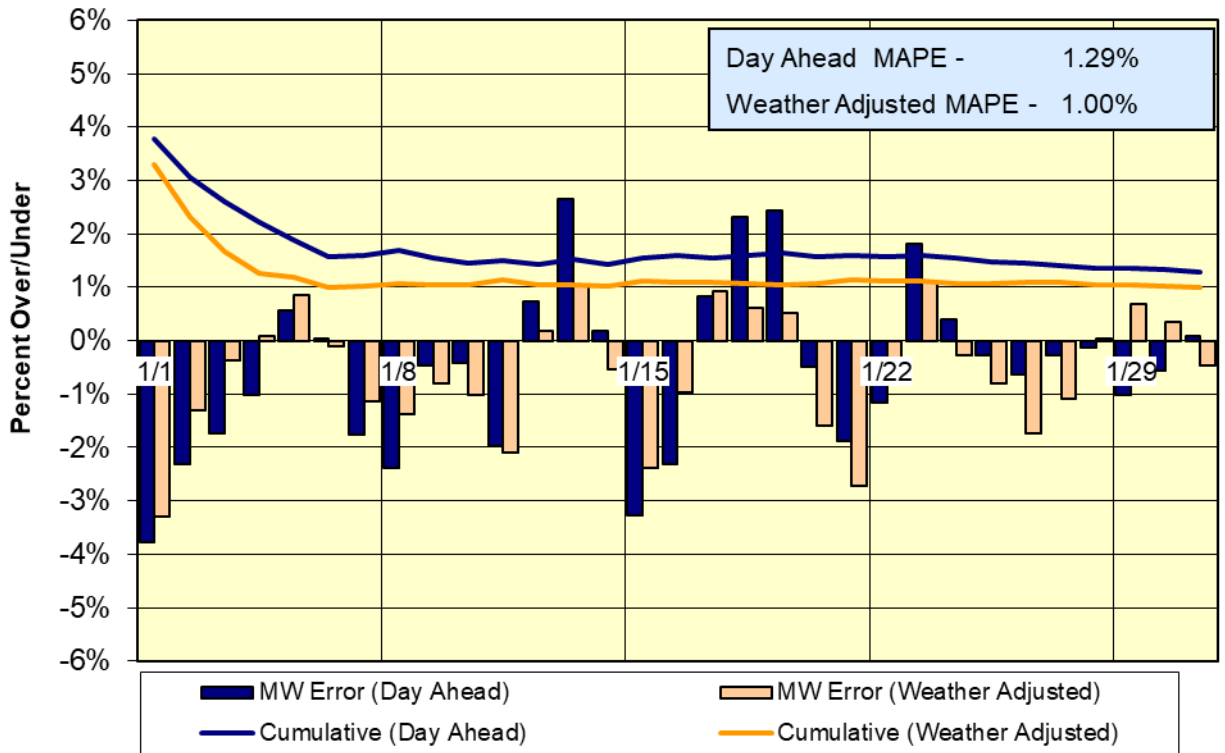
NYISO Daily Peak Load - January 2022
Actual vs. Weather-Adjusted Forecast



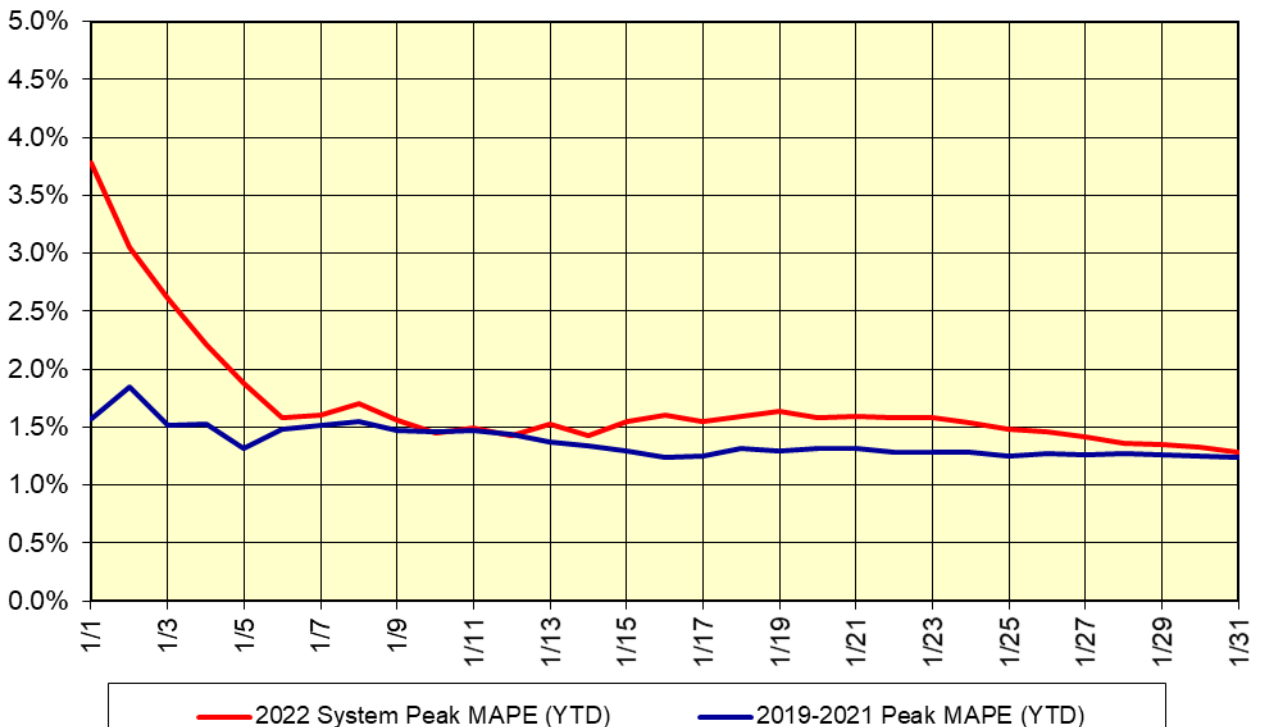
NYISO Daily Peak Load - January 2022
Actual vs. Forecast



Day Ahead Peak Forecast - January 2022 Percent Error - Actual & Weather-Adjusted



Day-Ahead Forecast Accuracy - Cumulative Performance 2022 Year-to-Date



Summary Description of Regulatory Filings, Investigations, Rulemakings and Related Orders in NYISO Matters – January 2022

Filing Date	Filing Summary	Docket	Order Summary	Order Date
11/30/2021	NYISO compliance notice to FERC of a December 15, 2021 effective date for revisions to its tariffs to implement Co-located Storage Resources in its Energy, Ancillary Services and Installed Capacity Markets	ER21-1001-001	A letter order accepted the submission, effective December 15, 2021, as requested	01/13/2022
11/30/2021	NYISO compliance notice to FERC of a December 15, 2021 effective date for enhancements to revisions to its tariffs to implement Co-located Storage Resources in its Energy, Ancillary Services and Installed Capacity Markets	ER22-418-001	A letter order accepted the submission, effective December 15, 2021, as requested	01/13/2022
11/22, 2021	NYISO filing to FERC of motion to intervene and comments on Brookfield Renewable Trading and Marketing one-time waiver request for NYISO OATT Section 25.7.11	ER22-359-000	Order denied the Brookfield's waiver request	01/31/2022
01/05/2022	NYISO Section 205 filing to FERC proposed tariff revisions to enhance the currently effective BSM Rules, improve the NYISO's valuation of resources capacity contributions, and enhance the procedures for defining ICAP Demand Curves to better reflect a rapidly changing resource mix	ER22-772-000		
01/06/2022	NYISO filing to FERC of a motion to intervene and comment on NYSRC's 2022-23 Capability Year Installed Revenue Margin	ER22-675-000		
01/07/2022	NYISO filing in the DC Circuit Court of Appeals of a Motion to Intervene regarding the NY TOs' petition for rehearing of a FERC order denying NYTOs' complaint	DC Circuit Case No. 21-1256		
01/07/2022	NYISO filing to in the DC Circuit Court of Appeals case of a Motion to Intervene regarding the NYTOs' petition for rehearing of a FERC order rejecting NYTO's proposed System Upgrade funding methodology	DC Circuit Case No. 21-1257		
01/10/2022	NYISO Informational filing to FERC identifying transmission solutions selected by the NYISO in 2021 to be built in response to Near-Term Reliability Needs for which the NYISO designated solely the Responsible Transmission Owner to propose a regulated solution	ER16-120-000		

01/10/2022	NYISO filing to NYPSC of Confidential Information related to Long Island Offshore Wind Export Public Policy Transmission Need Proposed Projects	Case 00-E-1380		
01/10/2022	NYISO-Niagara Mohawk joint Section 205 filing to FERC of a Small Generator Interconnection Agreement among the NYISO, Niagara Mohawk, and Bakerstand Solar for the Bakerstand Solar Project	ER22-795-000		
01/11/2022	NYISO-Niagara Mohawk joint Section 205 to FERC a Small Generator Interconnection Agreement among NYISO, NMPC and Martin Rd Solar for the Martin Rd Solar Project	ER22-803-000		
01/12/2022	NYISO-LIPA joint Section 205 filing of a Large Generator Interconnection Agreement among the NYISO, LIPA, and Peconic River Energy Storage LLC	ER22-813-000		
01/20/2022	NYISO filing to NYPSC of comments in support of the Installed Reserve Margin adopted by the NYSRC for the 2022-2023 Capability Year	Case 07-E-0088		
01/21/2022	NYISO Section 205 filing on behalf of NMPC to FERC of a Cost Reimbursement Agreement between Niagara Mohawk and Rochester Gas & Electric Corporation for expansion of Station 56	ER22-858-000		
01/27/2021	NYISO filing to FERC of an Electric Quarterly Report (EQR) re: data on electric power contracts and wholesale power sales during the most recent calendar quarter	ER02-2001-000		
01/28/2022	NYISO filing on behalf of NYSEG to FERC of a Section 205 of an Executed Engineering and Procurement Agreement by and between NYSEG and Trelina Solar Energy Center	ER22-918-000		