

Monthly Report

A Report by the
New York Independent System Operator

January 2023

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January 2023 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, 2023.

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January 2023 Operations Performance Highlights

- January 2023 peak load of 20,641 MW occurred on 01/31/2023 HB 18
- Winter 2022-2023 capability period peak load to date of 22,004MW occurred on 12/24/2022 HB 17
- All-time winter capability period peak load of 25,738 MW occurred on 01/07/2014 HB 18
- 0.0 hours of Thunderstorm Alerts were declared
- 76 hours of NERC TLR level 3 curtailment

Installed Wind, Solar and Energy Storage Resource Nameplate Values:

Land-Based Wind	Behind-the-Meter Solar	Front-of-the-Meter Solar	Energy Storage Resource (ESR)
2,191 MW	4,320 MW	114 MW	20 MW

Estimated production cost savings associated with the Broader Regional Market initiatives:

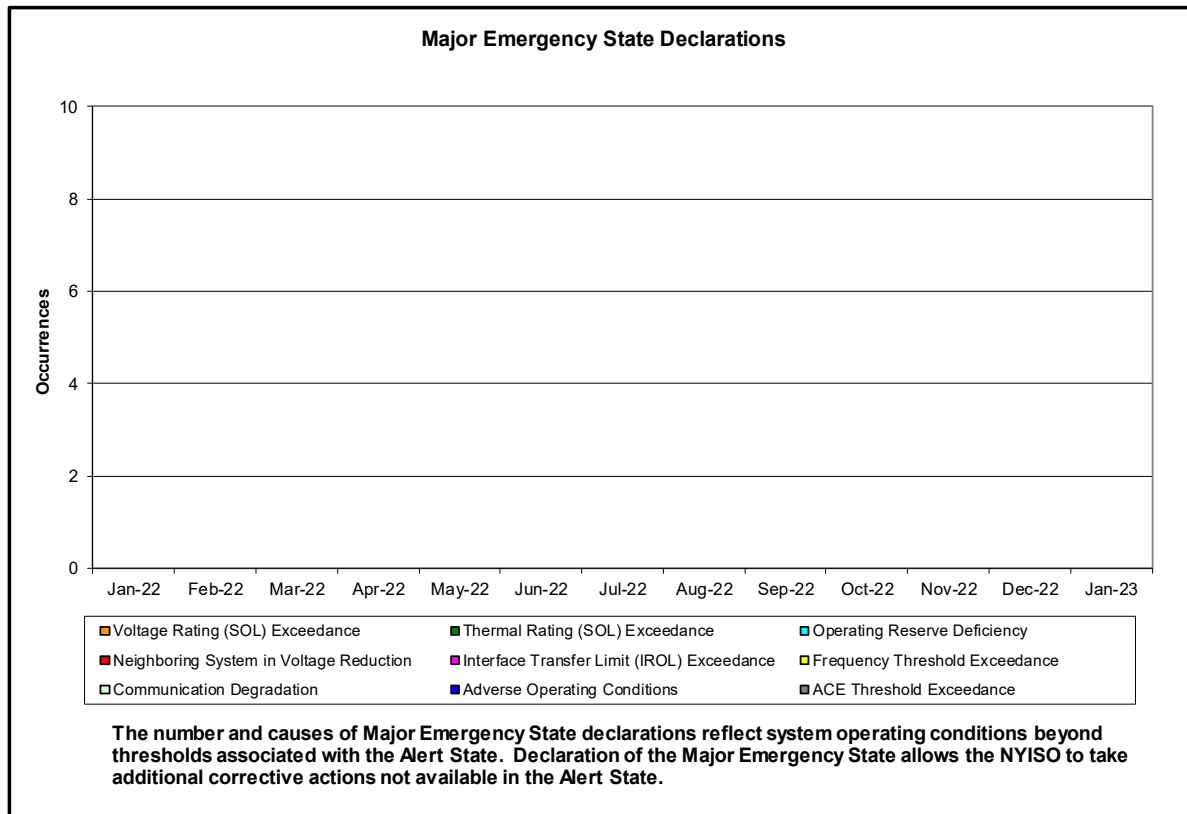
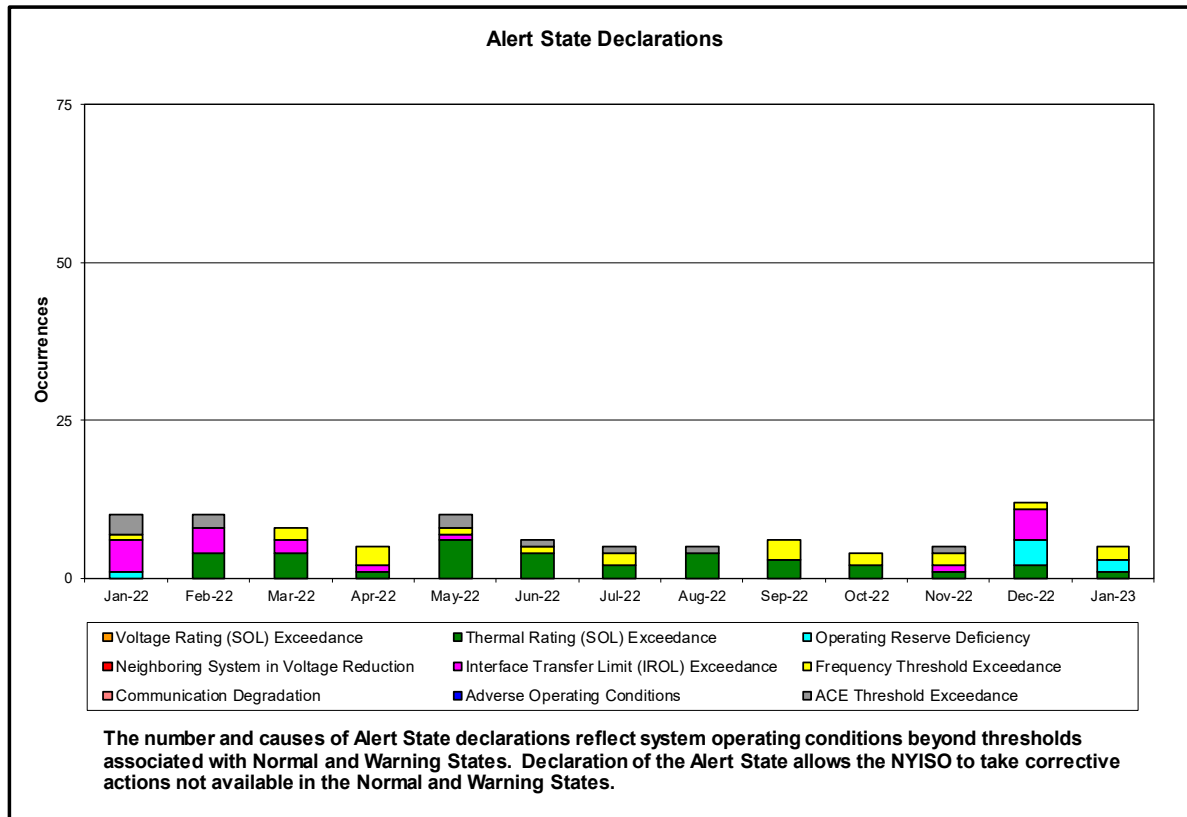
	Current Month Value (\$M)	Year-to-Date Value (\$M)
NY Savings from PJM-NY Congestion Coordination	\$1.44	\$1.44
NY Savings from PJM-NY Coordinated Transaction Scheduling	(\$0.11)	(\$0.11)
NY Savings from NE-NY Coordinated Transaction Scheduling	(\$0.36)	(\$0.36)
Total NY Savings	\$0.97	\$0.97
Regional Savings from PJM-NY Coordinated Transaction Scheduling	\$0.32	\$0.32
Regional Savings from NE-NY Coordinated Transaction Scheduling	\$0.09	\$0.09
Total Regional Savings	\$0.41	\$0.41

- Statewide uplift cost monthly average was (\$0.41)/MWh.
- The following table identifies the Monthly ICAP spot market prices and the price delta.

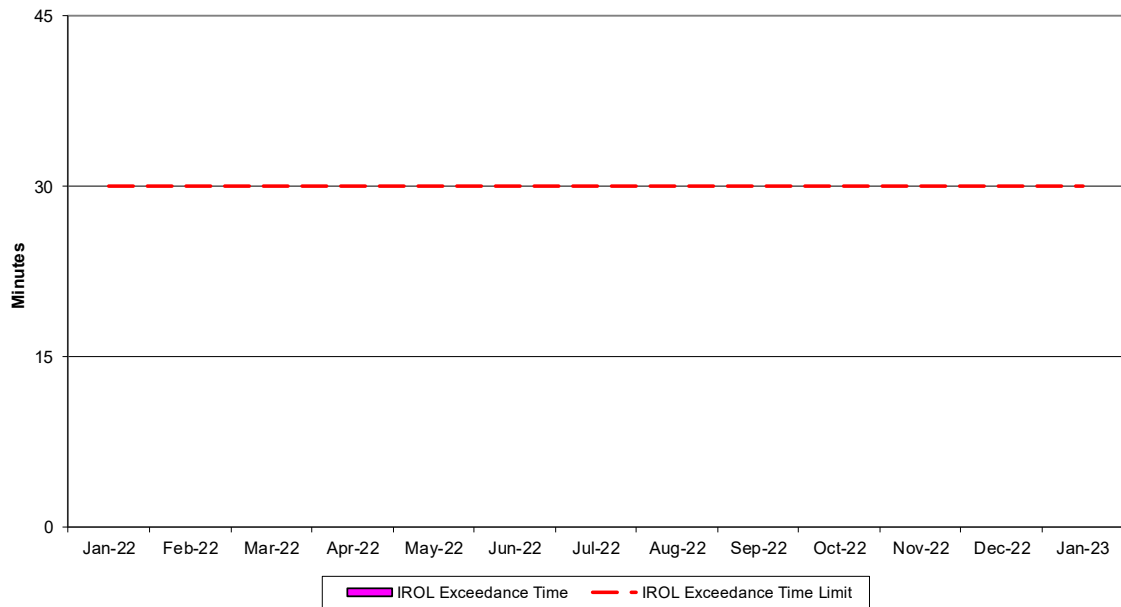
Spot Auction Price Results	NYCA	Lower Hudson Valley Zones	New York City Zone	Long Island Zone
February 2023 Spot Price	\$3.80	\$3.80	\$3.80	\$3.80
January 2023 Spot Price	\$4.39	\$4.39	\$4.39	\$4.39
Delta	(\$0.59)	(\$0.59)	(\$0.59)	(\$0.59)

- Price decline in all zones was driven by a decline in unoffered MW

Reliability Performance Metrics

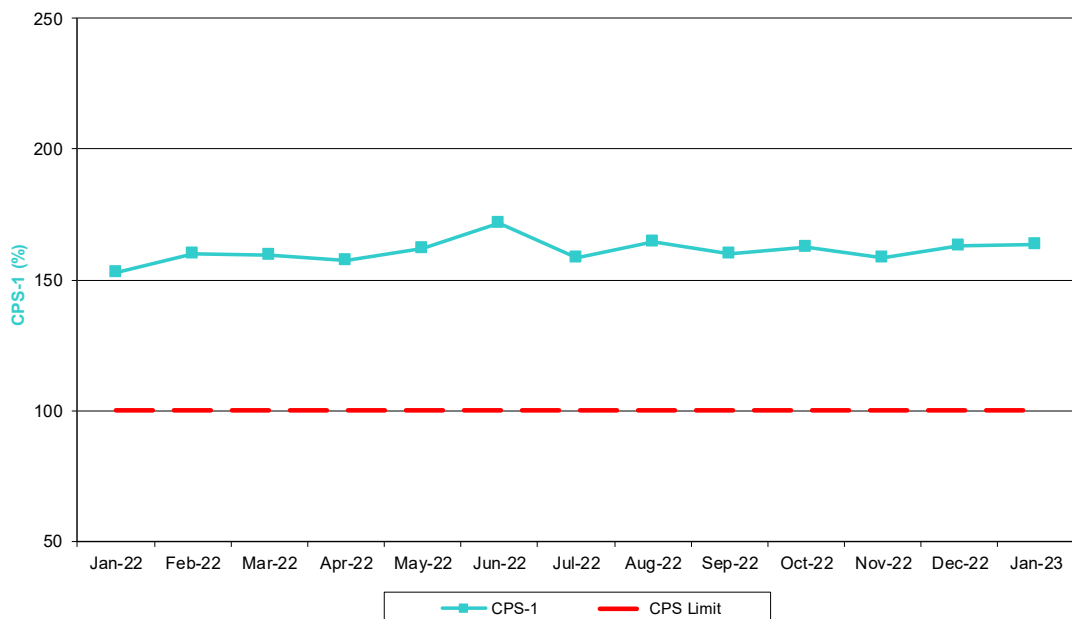


NERC IROL Time Over Limit



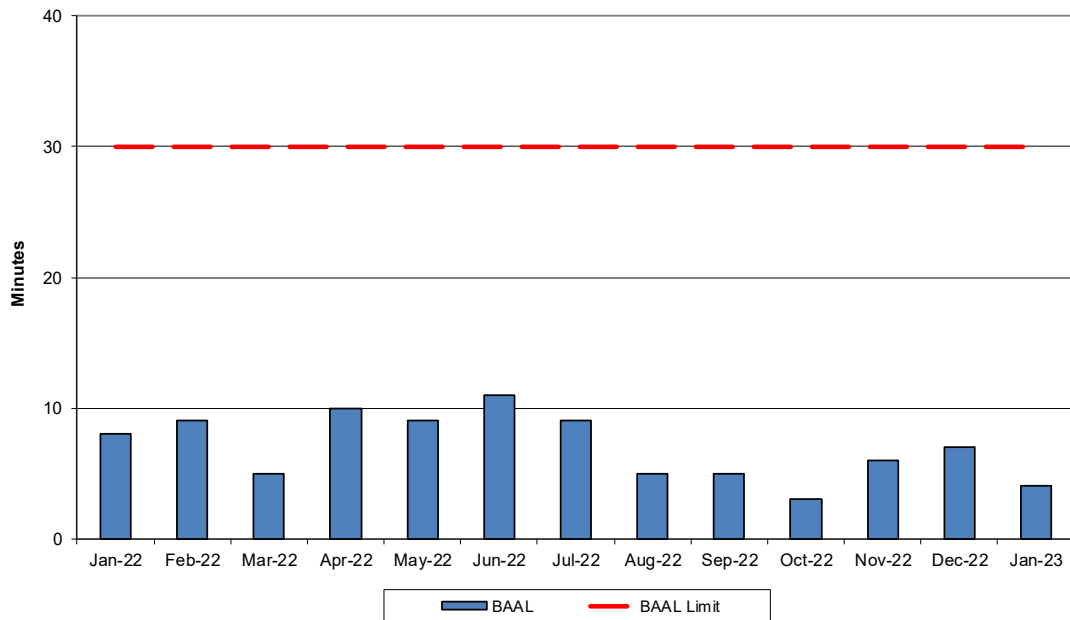
For IROL exceedances leading to Major Emergency State declarations, the maximum IROL exceedance time is identified. IROL exceedances of less than thirty minutes are considered NERC compliant.

NERC Control Performance Standards



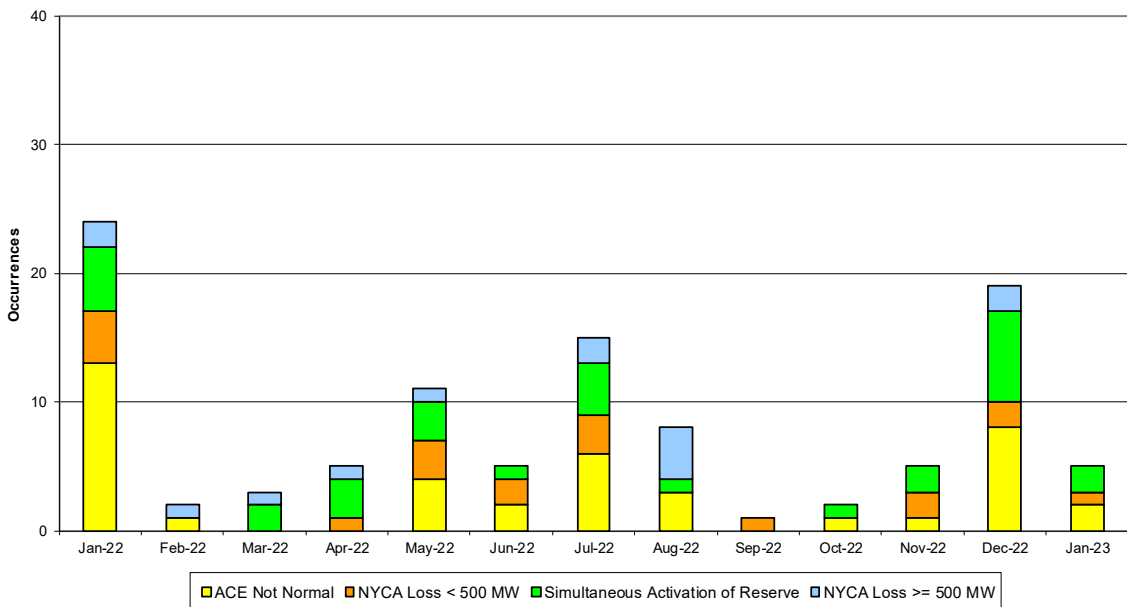
The value of NERC Control Performance Standards (CPS-1) is an indicator of the NYISO Area resource and demand balancing. Values exceeding the identified threshold are NERC compliant.

NERC Balancing Authority ACE Limit Standard



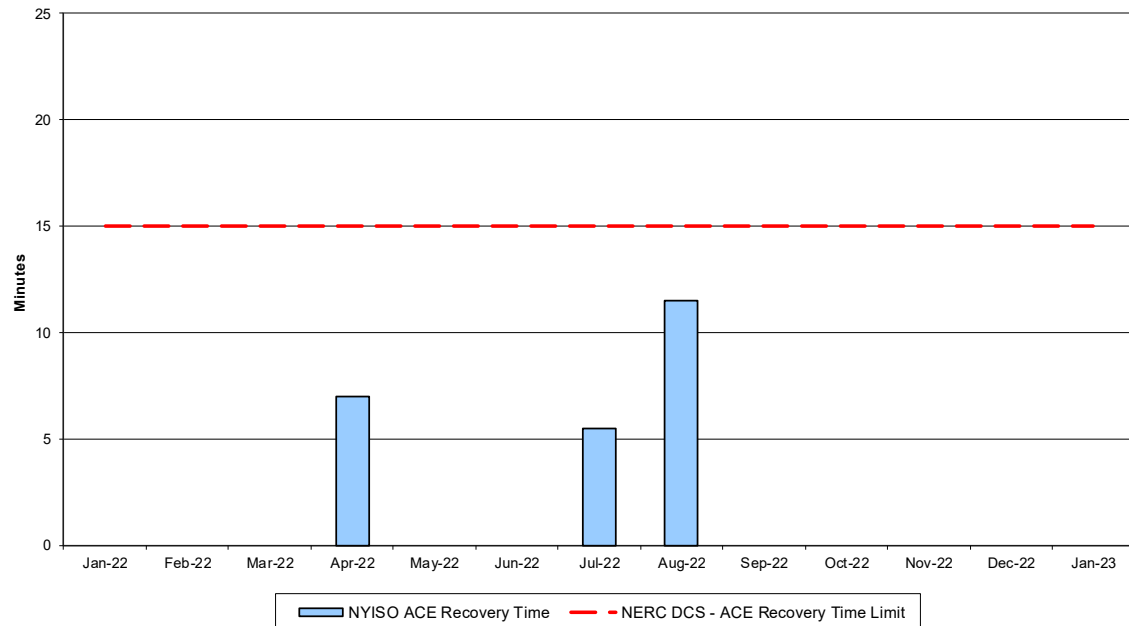
The amount of time the clock-minute average ACE exceeds the clock-minute Balancing Authority ACE Limit (BAAL) is an indicator of the NYISO Area resource and demand balancing. The maximum BAAL exceedance time is identified. BAAL exceedances of less than 30 consecutive clock-minutes are NERC compliant.

Reserve Activations



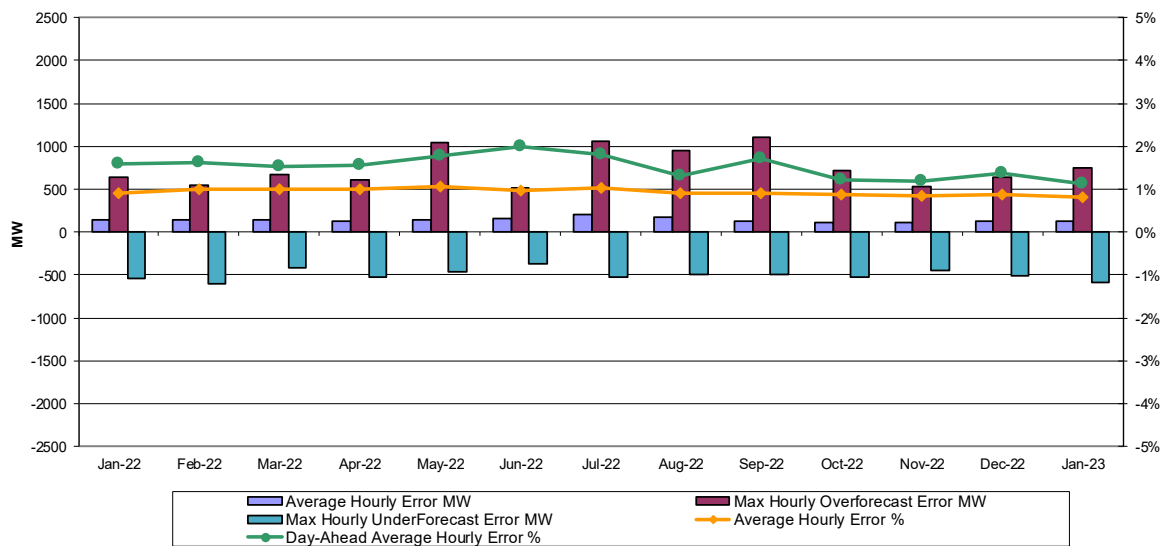
NYISO Reserve Activations are indicators of the need to respond to unexpected operational conditions within the NYISO Area or to assist a neighboring Area (Simultaneous Activation of Reserves) by activating an immediate resource and demand balancing operation.

DCS Event Time to ACE Recovery



For NYISO initiated NERC Reportable Disturbances, the maximum ACE recoverytime is identified. Recoverytimes of less than 15 minutes are considered NERC compliant.

Load Forecast Performance

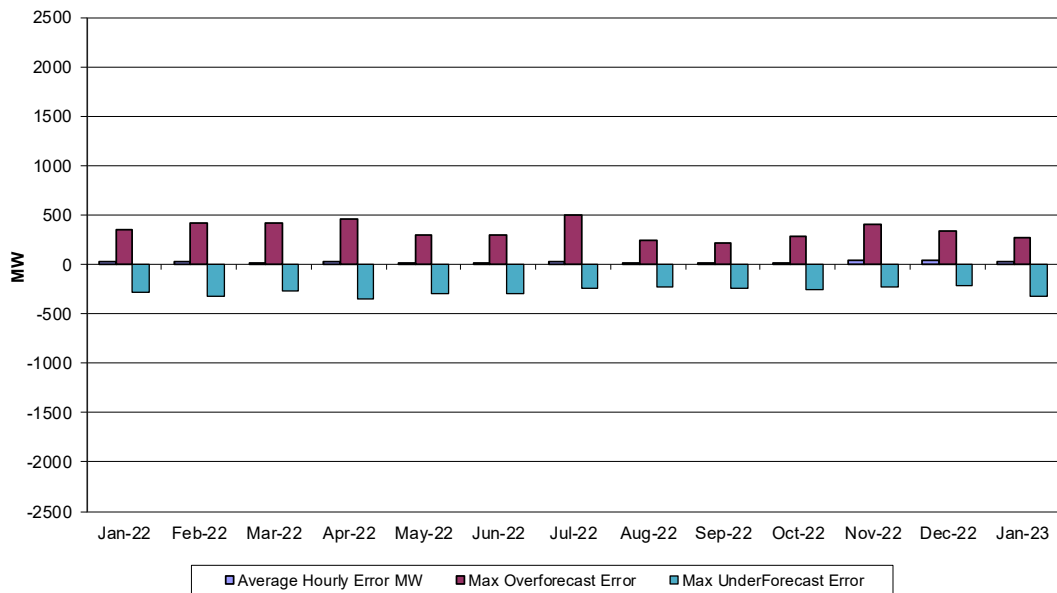


Hourly Error MW - Value of the difference between the hourly average actual load demand and the average hour ahead forecast load demand.

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

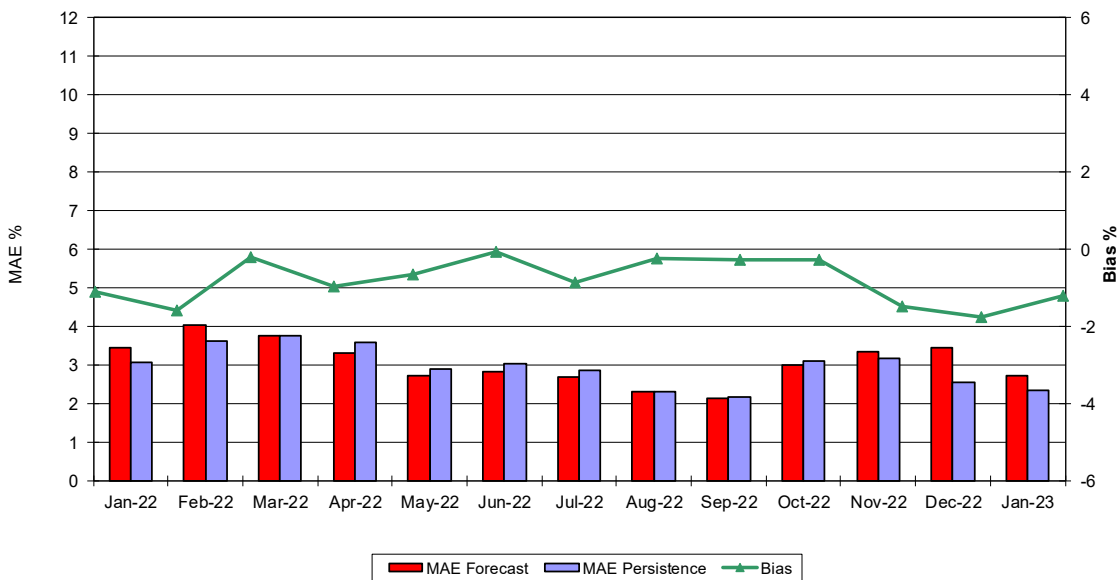
Day-Ahead Average Hourly Error % - Average across all hours of the month of the absolute value of the difference between actual load demand and the Day-Ahead forecast load demand, divided by the actual load demand.

Wind Forecast Performance Hour Ahead MW Error

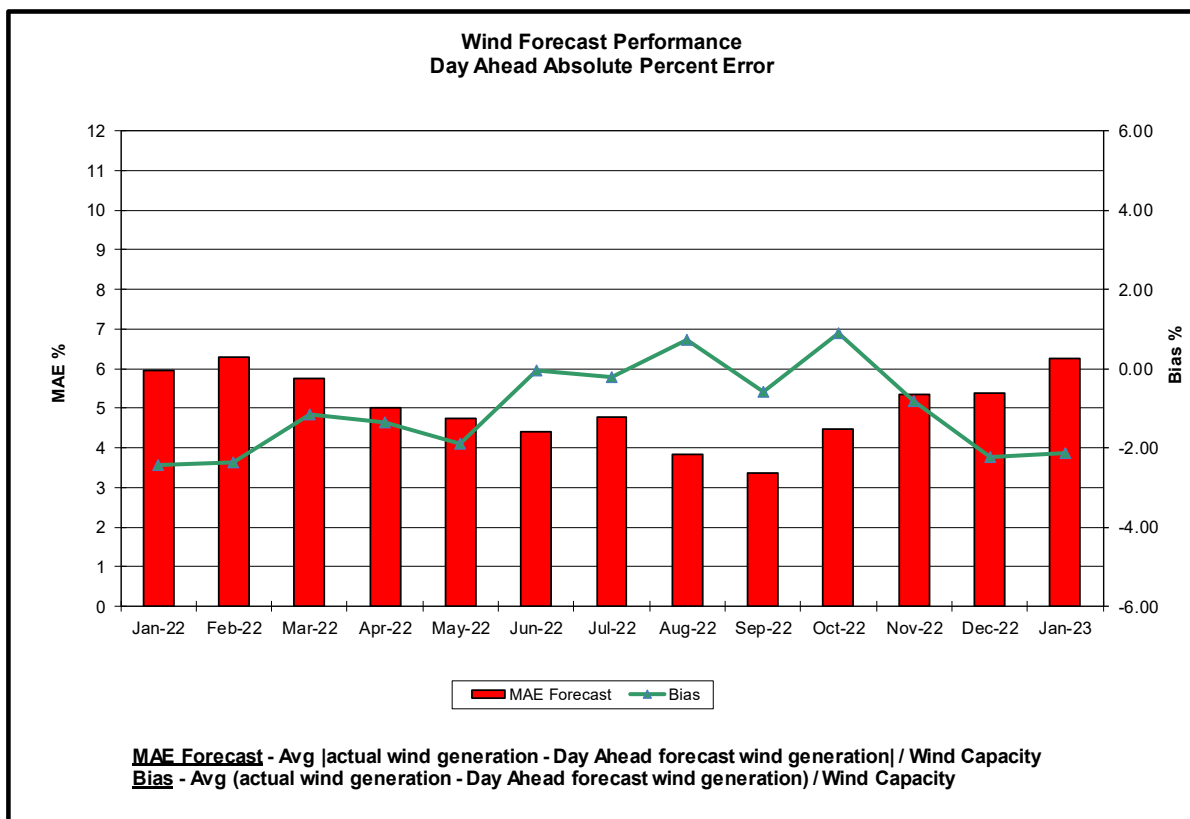
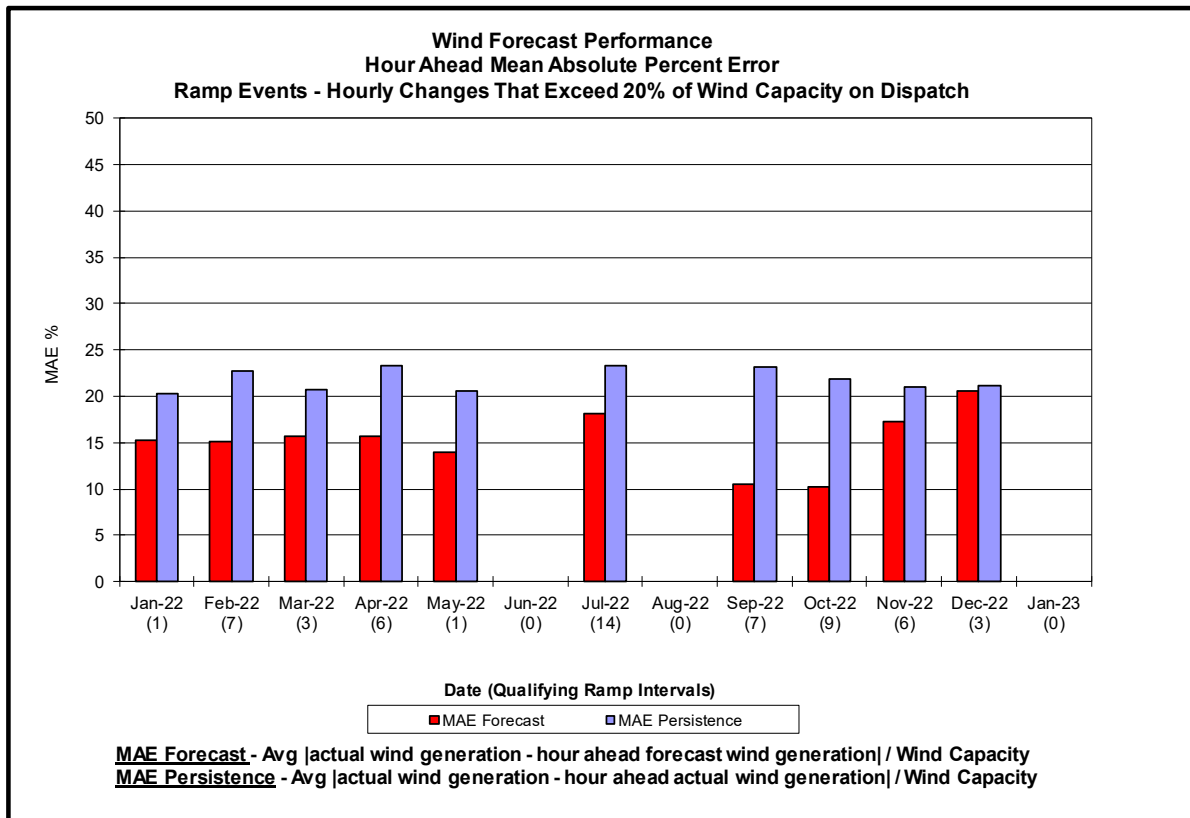


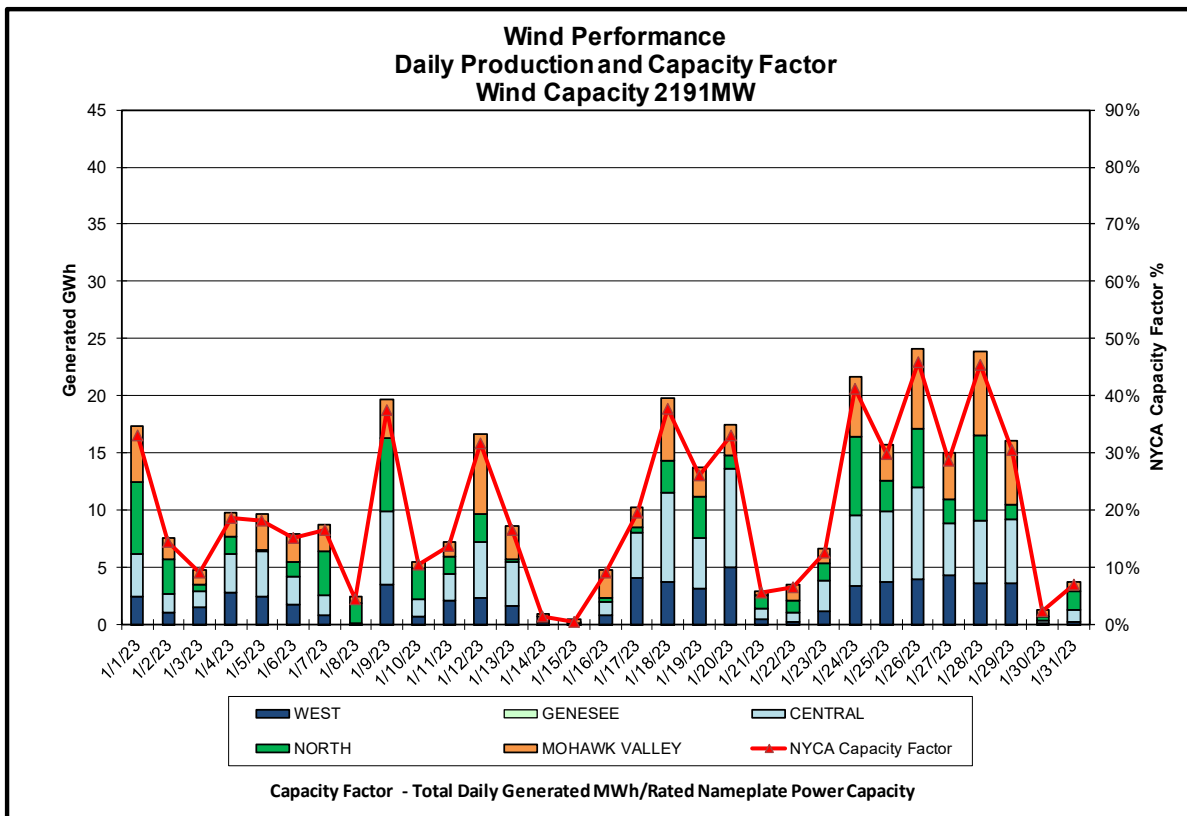
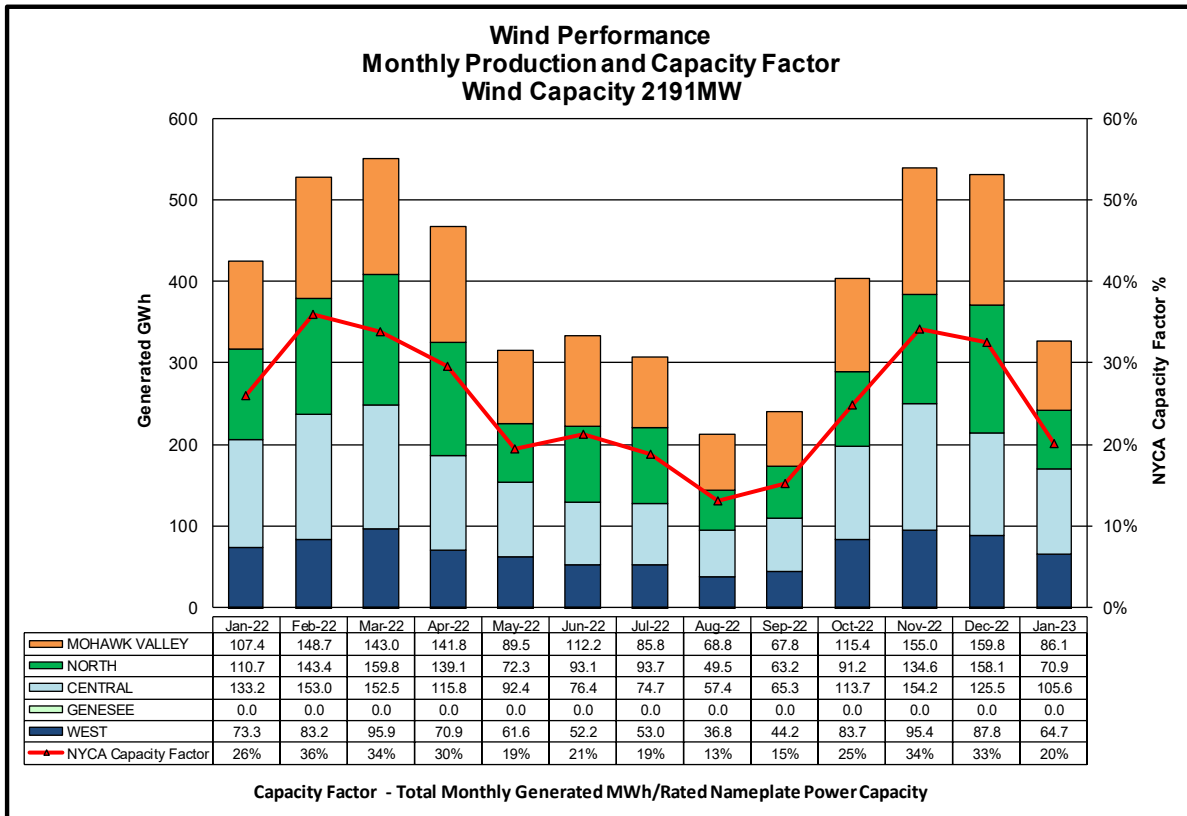
Hourly Error MW - Value of the difference between the hourly average actual wind generation and the average hour ahead forecast wind generation.

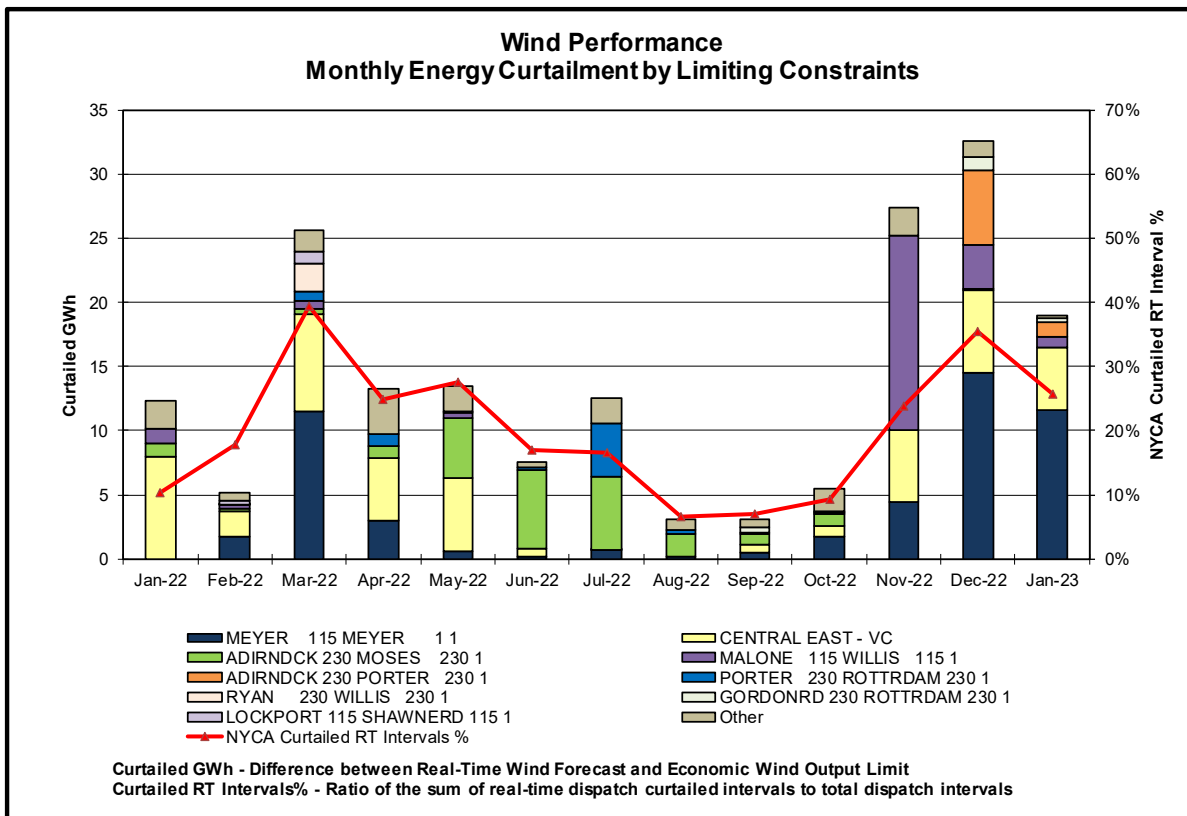
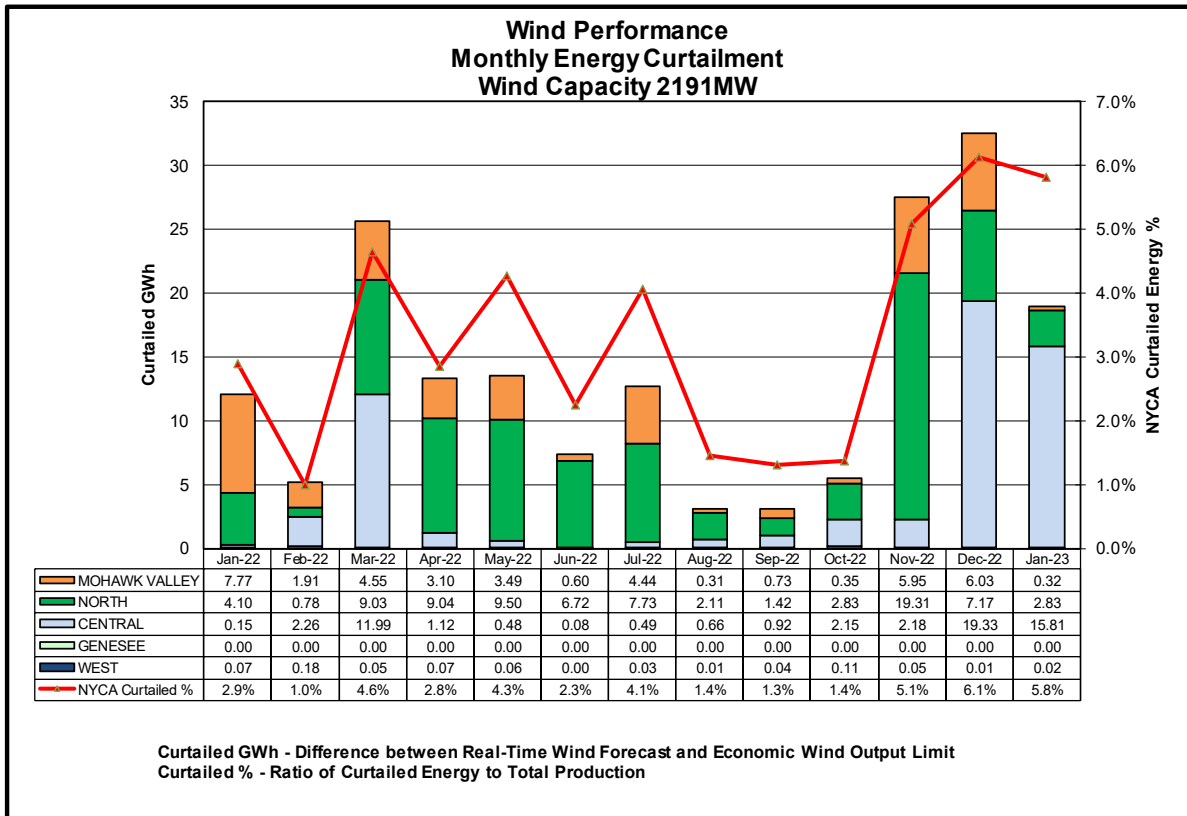
Wind Forecast Performance Hour Ahead Percent Error

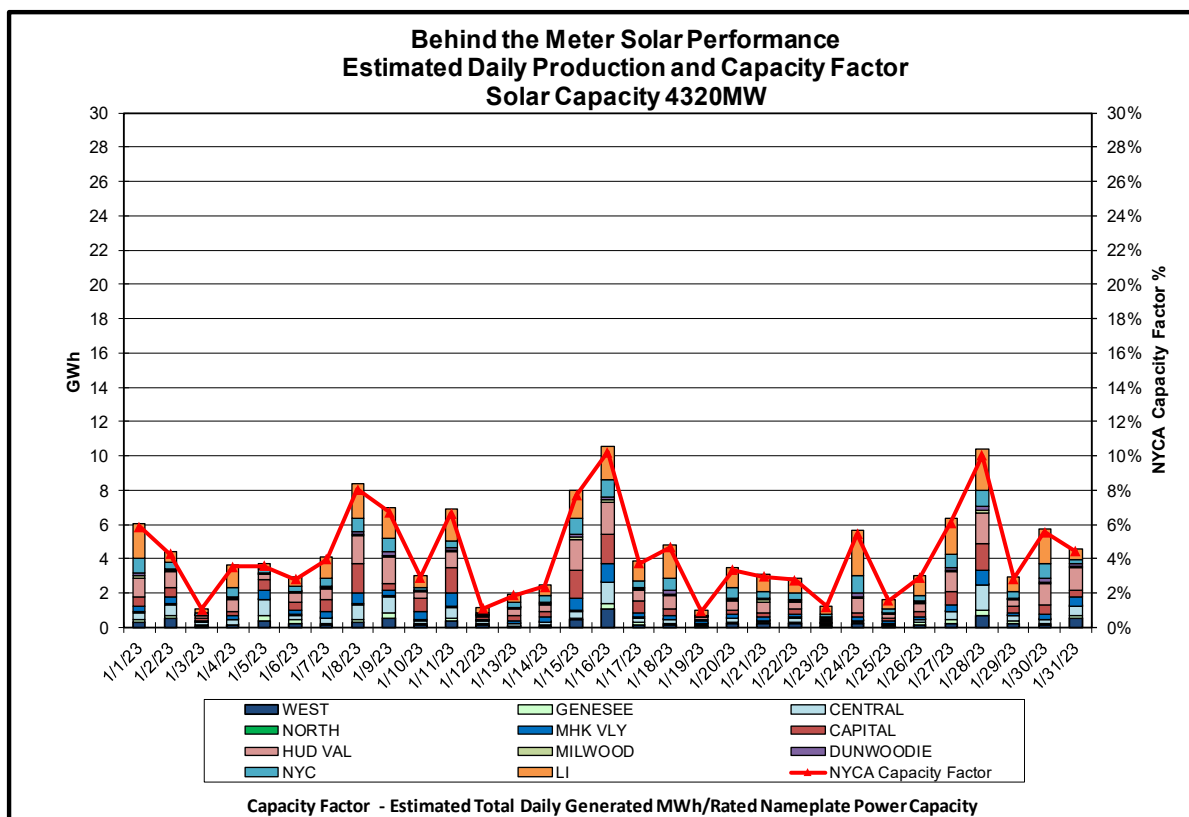
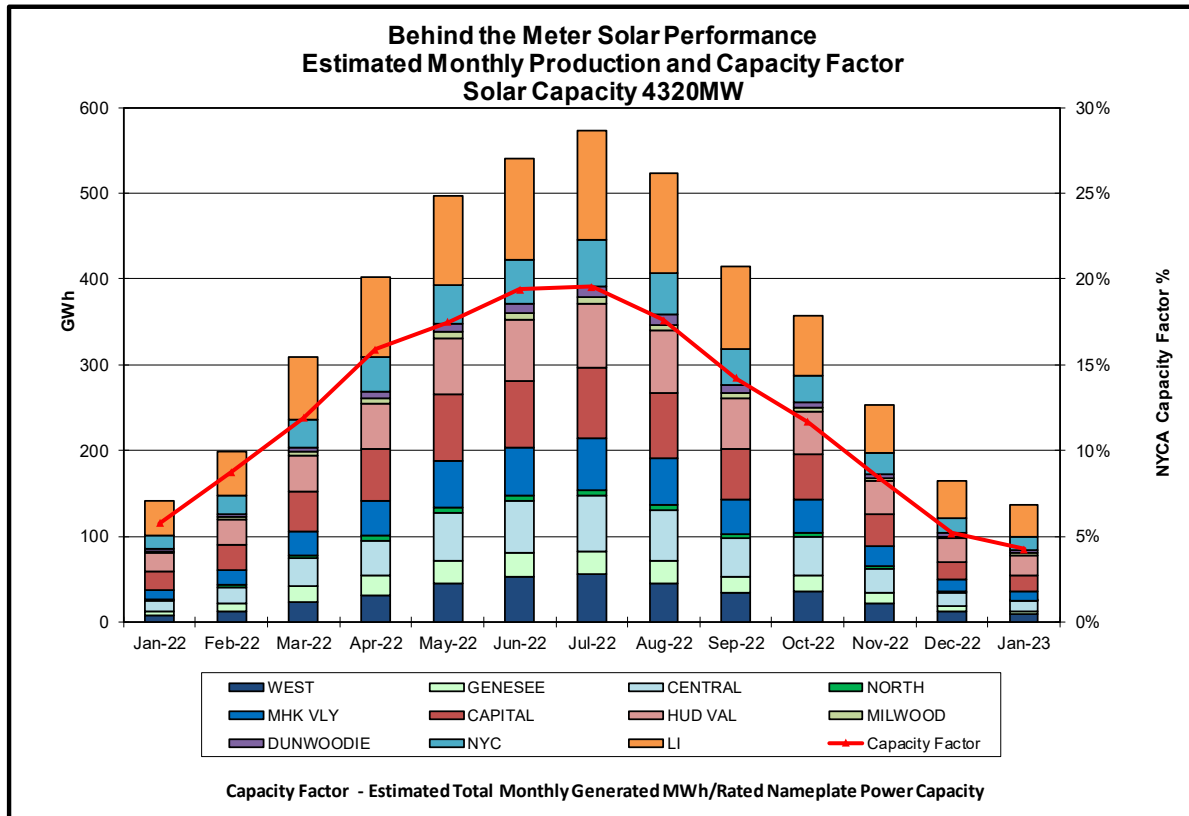


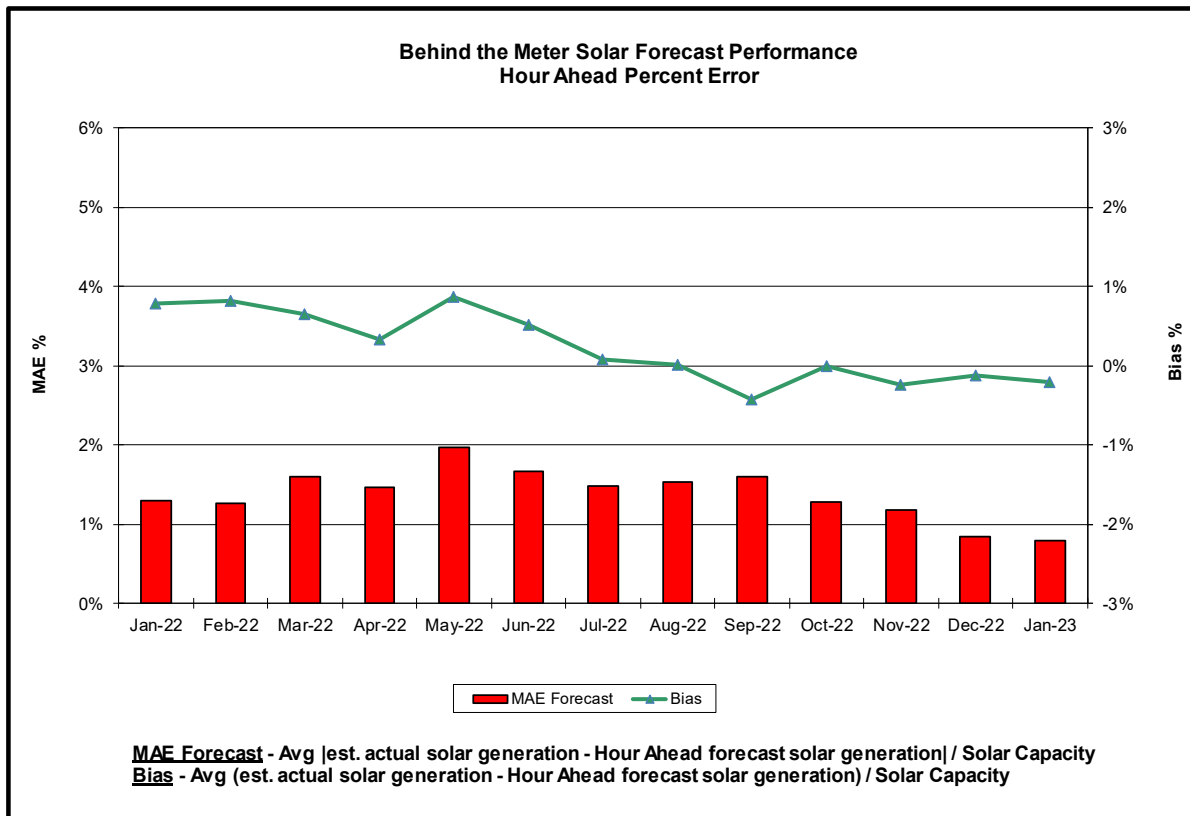
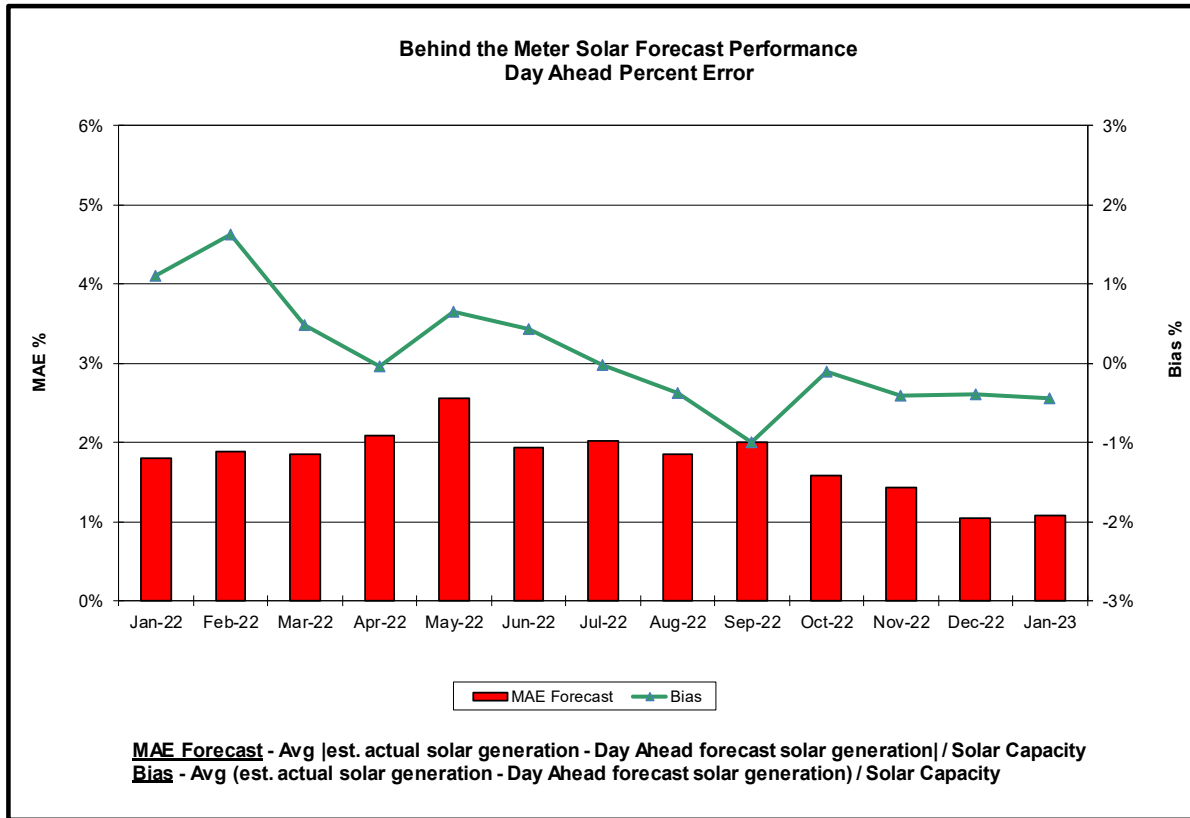
MAE Forecast - Avg |actual wind generation - hour ahead forecast wind generation| / Wind Capacity
MAE Persistence - Avg |actual wind generation - hour ahead actual wind generation| / Wind Capacity
Bias - Avg (actual wind generation - hour ahead forecast wind generation) / Wind Capacity

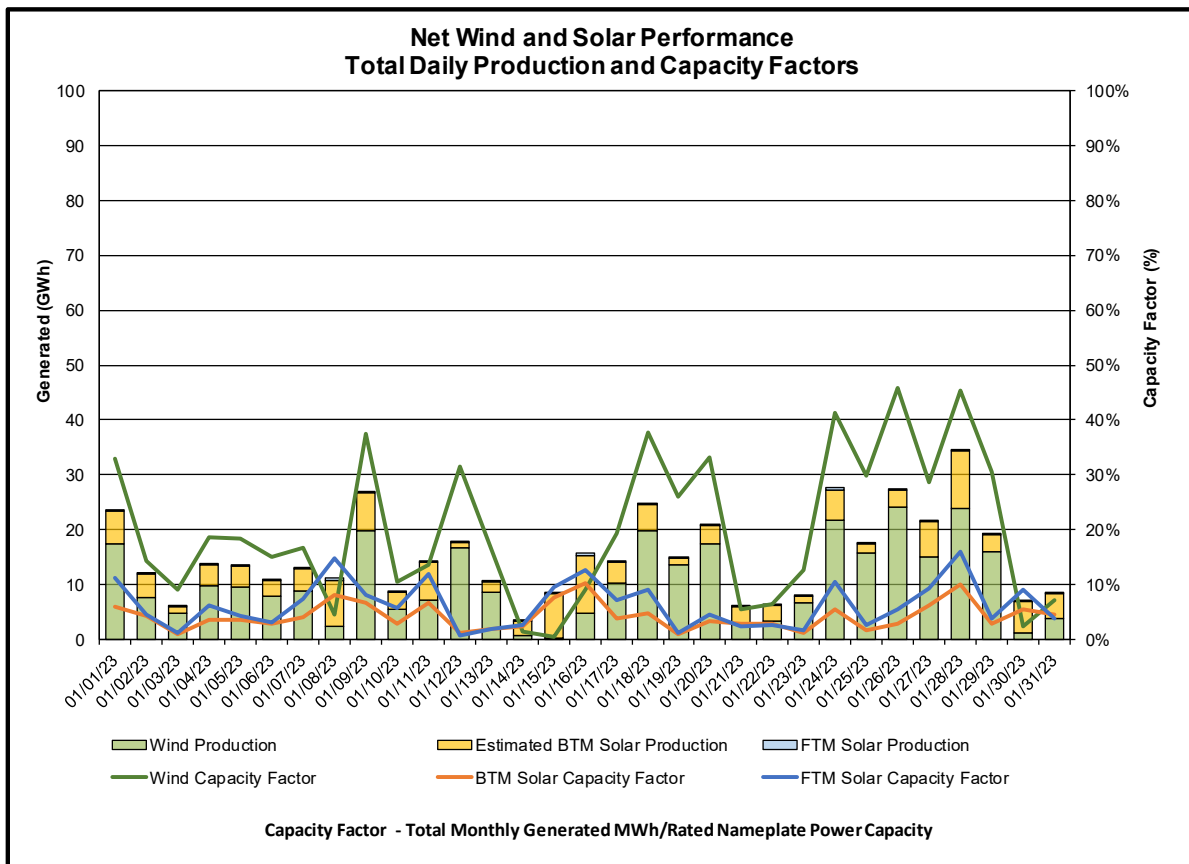
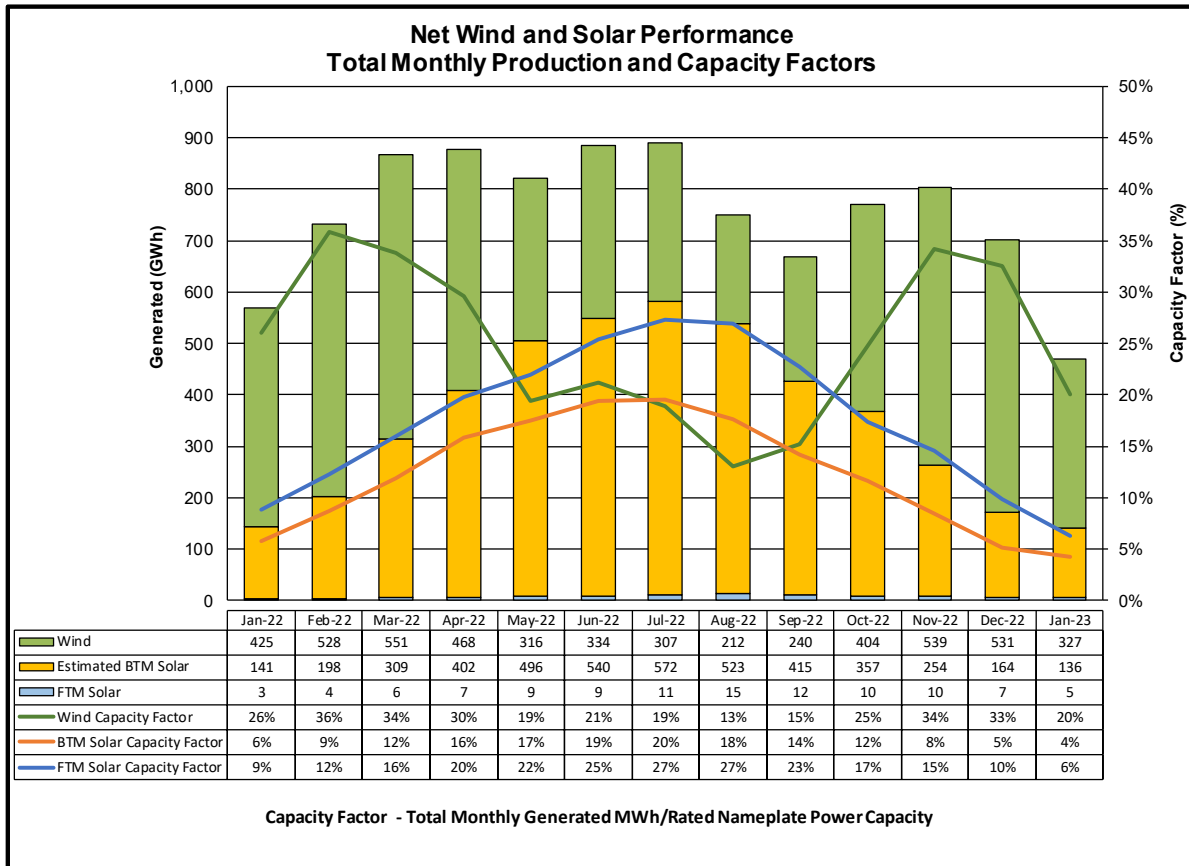


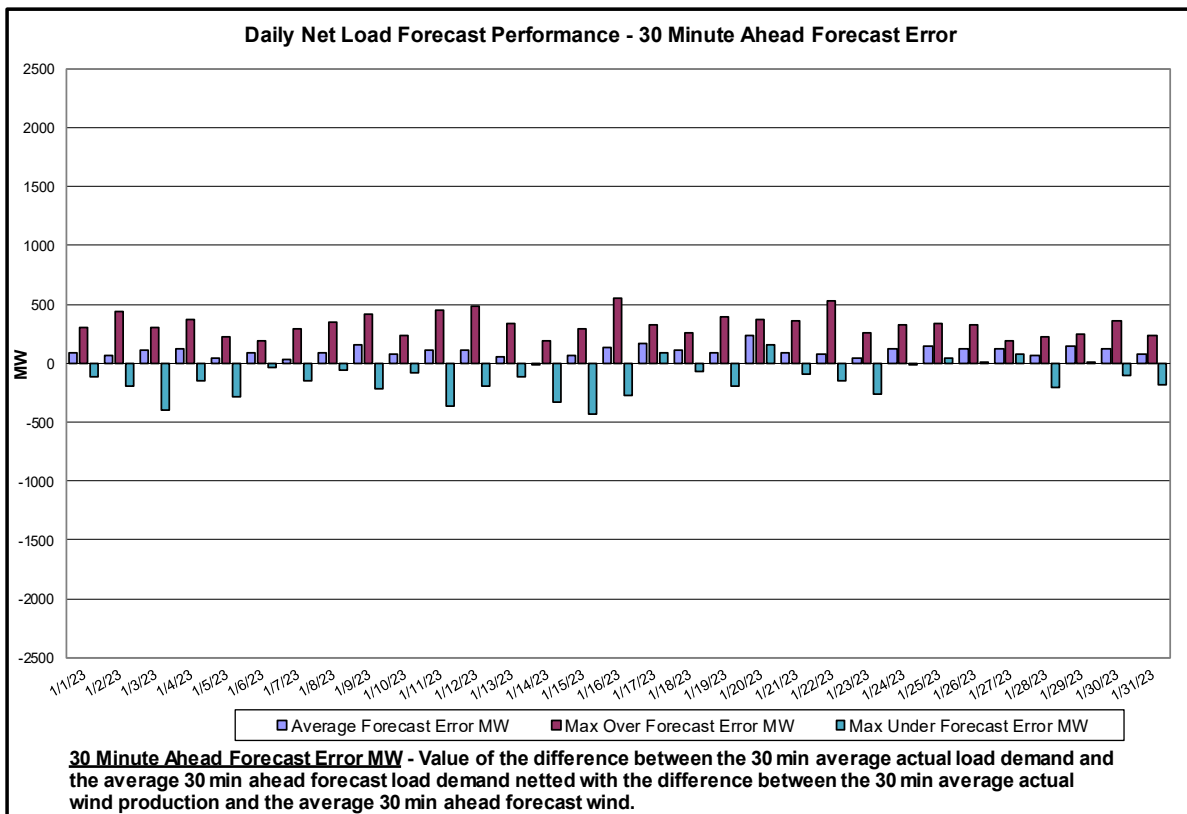
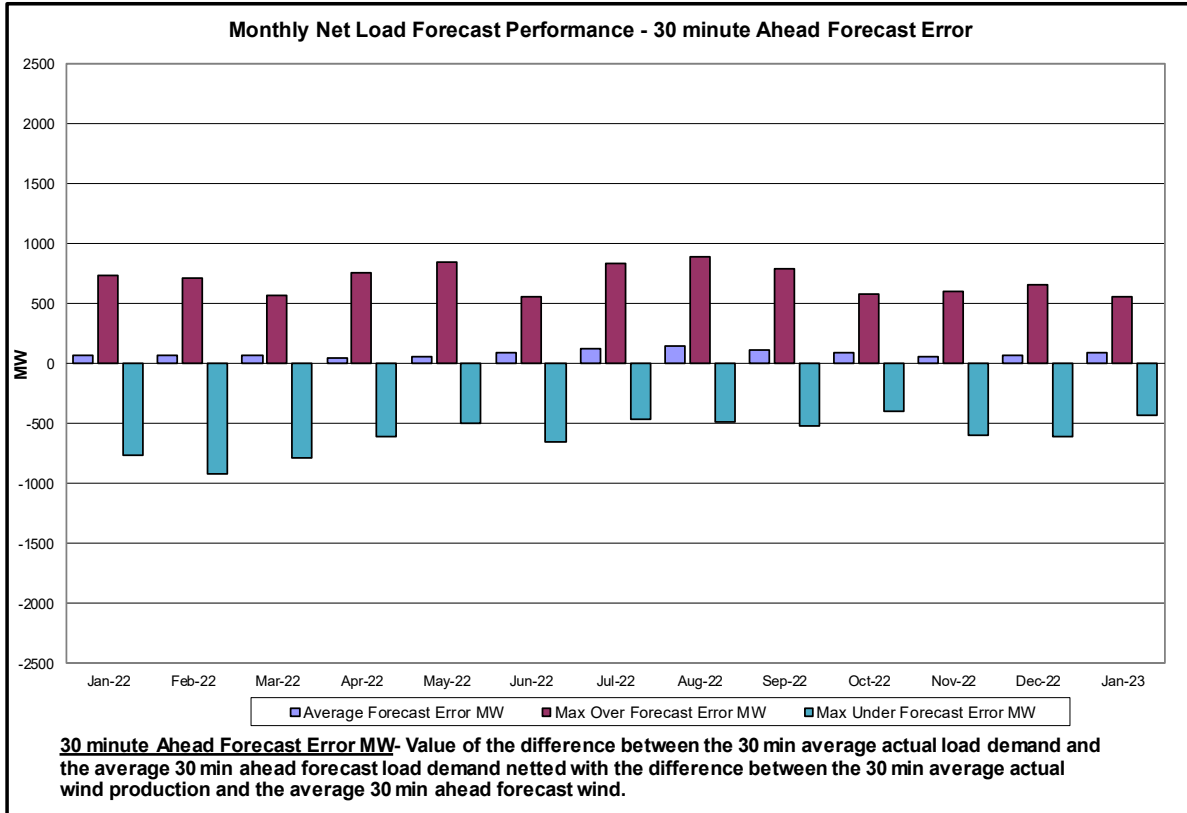


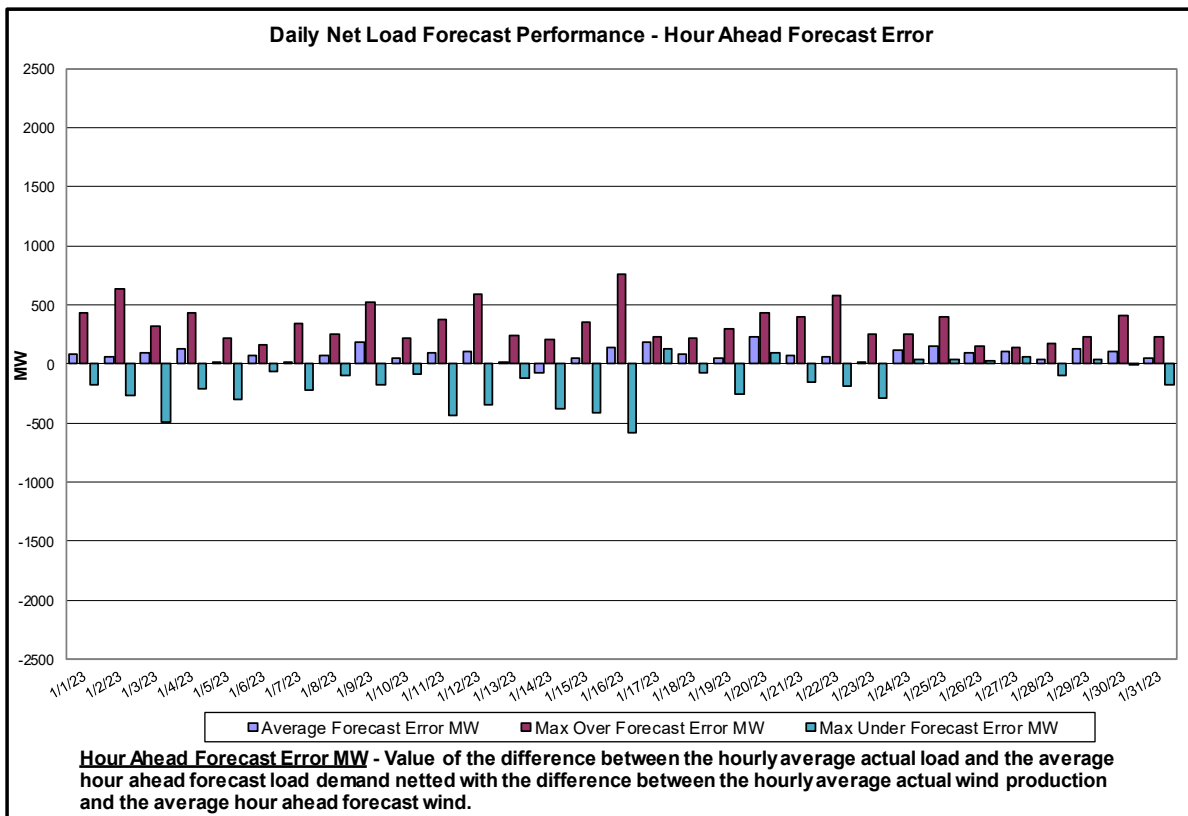
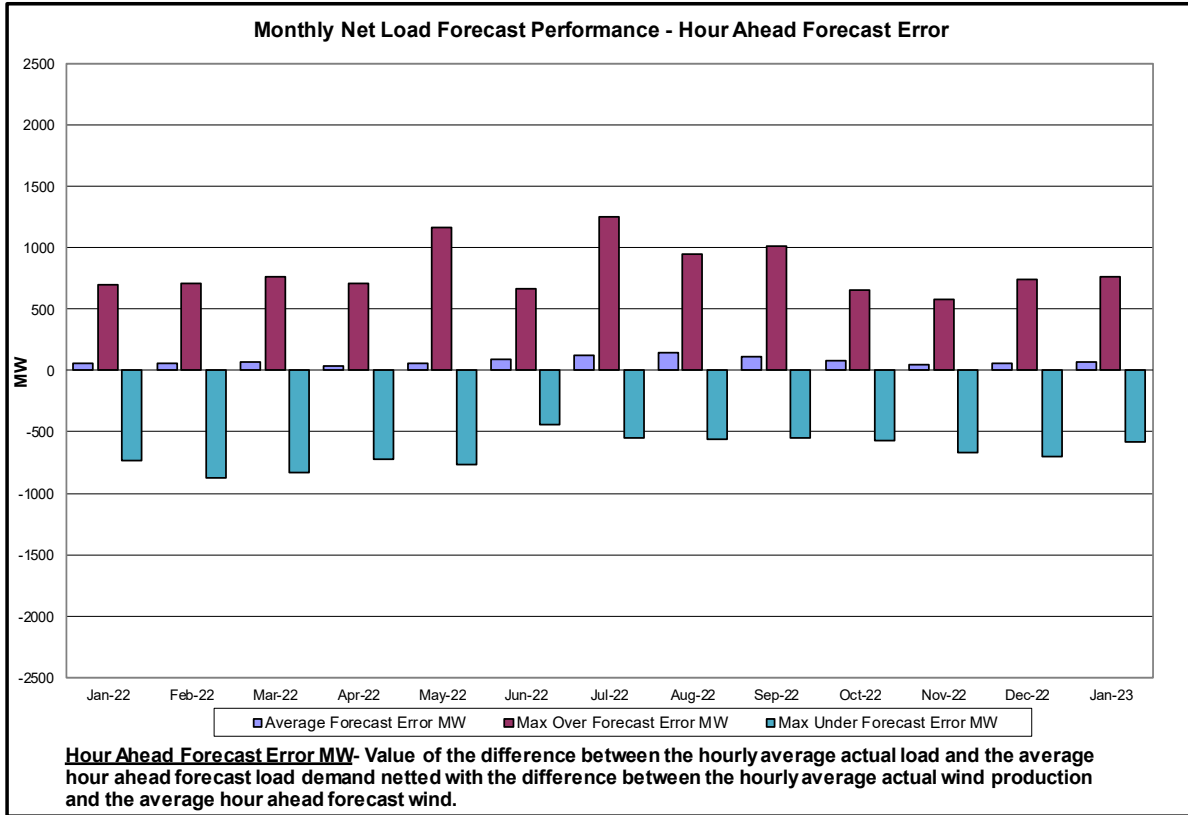


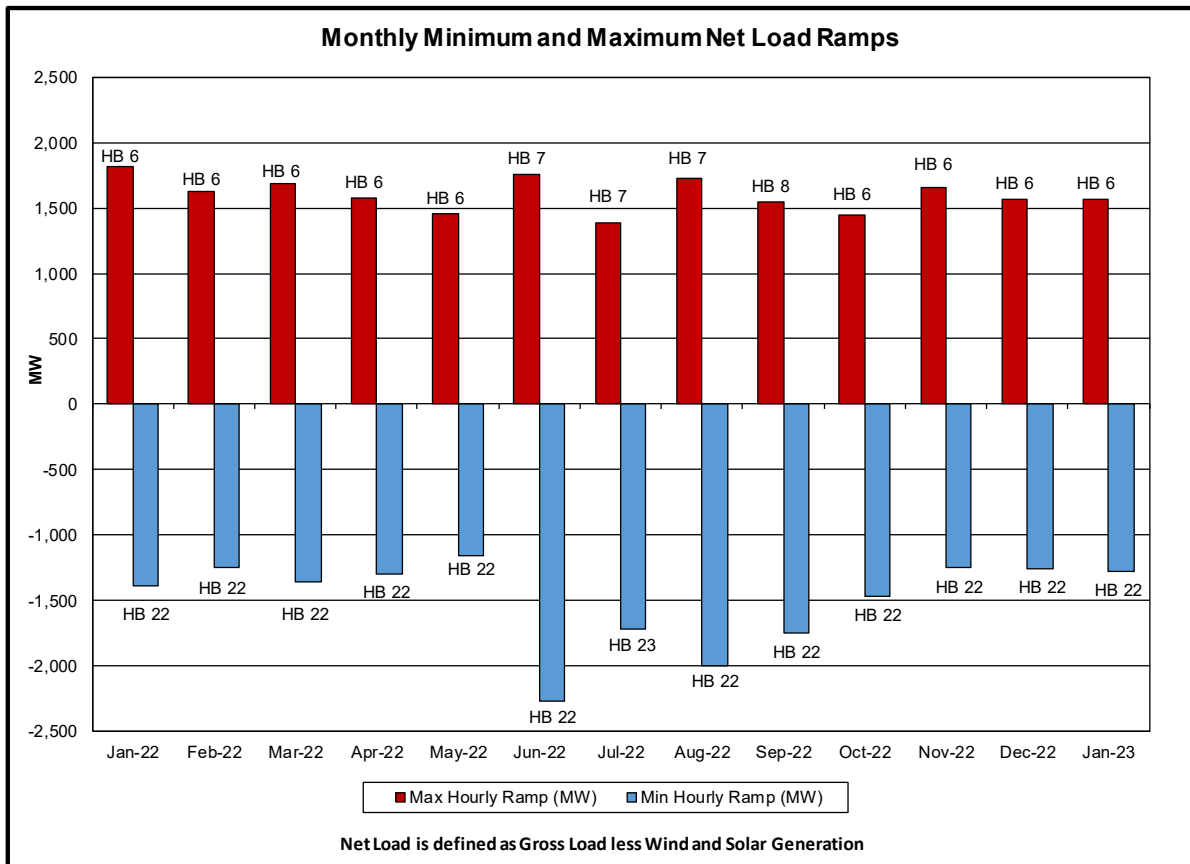
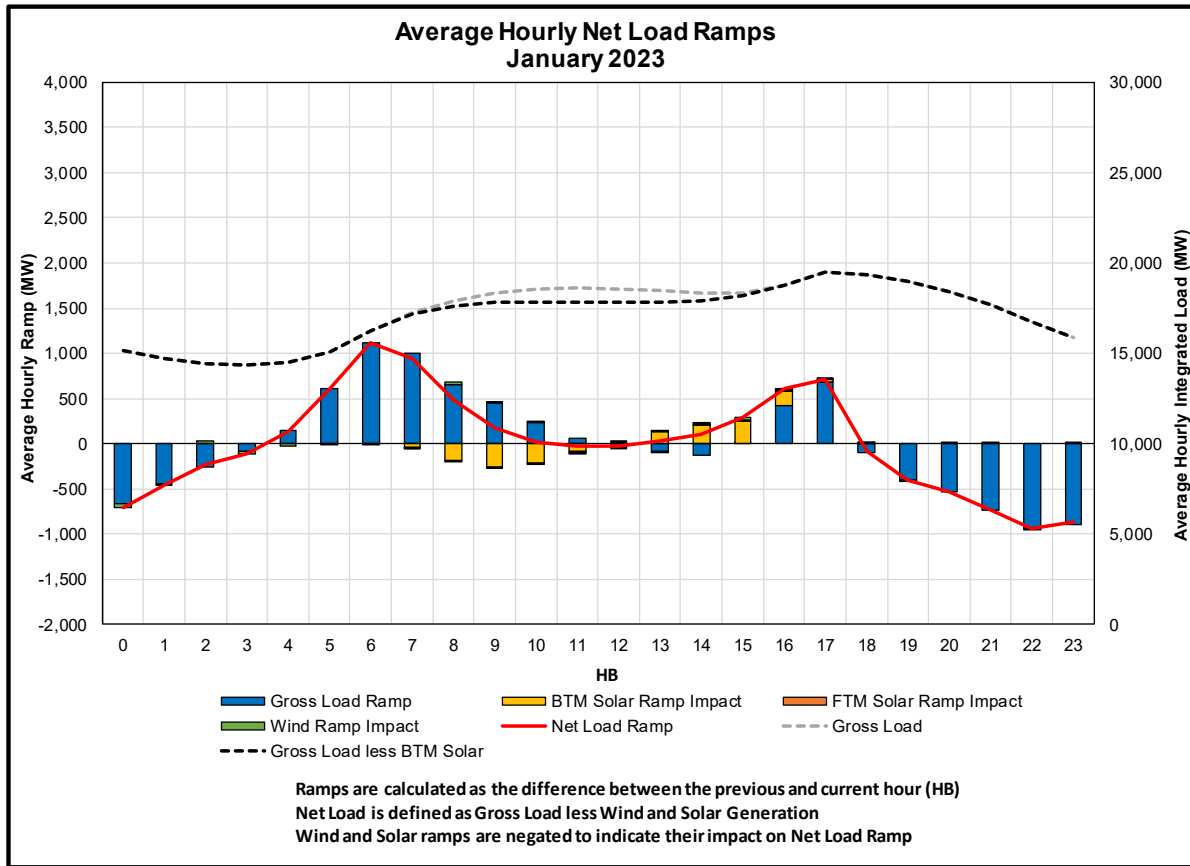




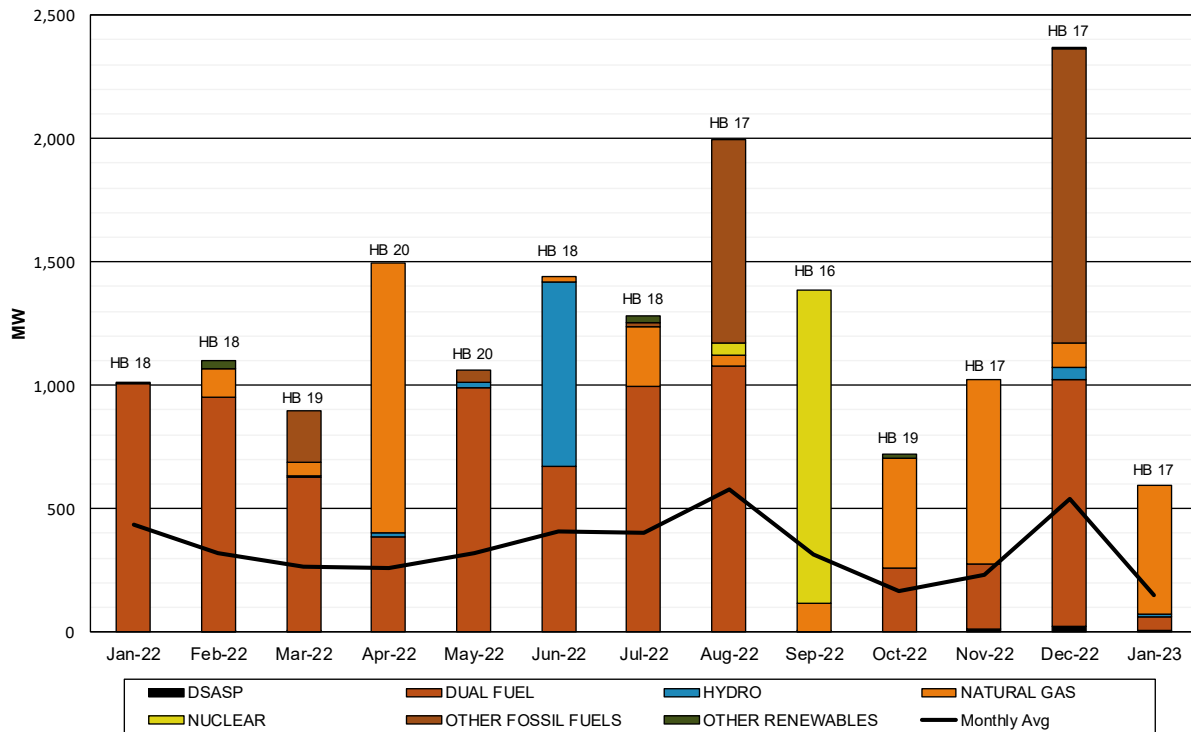








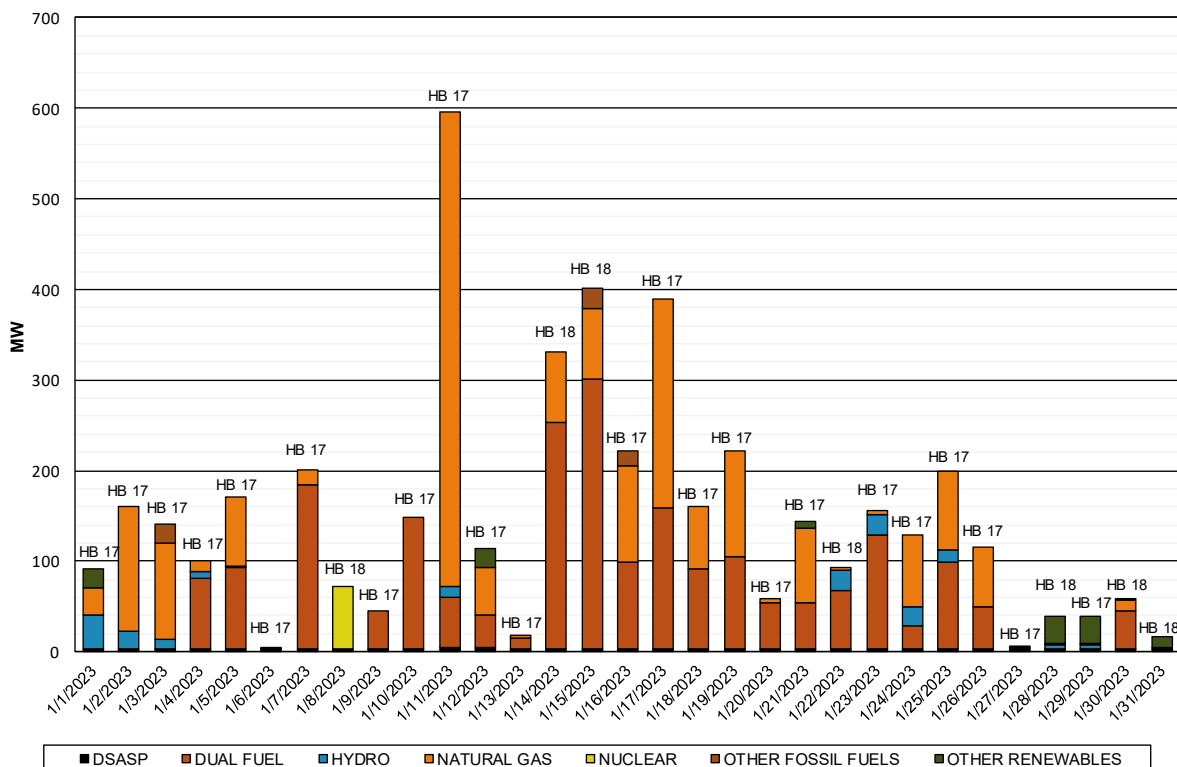
Monthly Maximum Day-Ahead Market Capacity Unavailable In Real Time



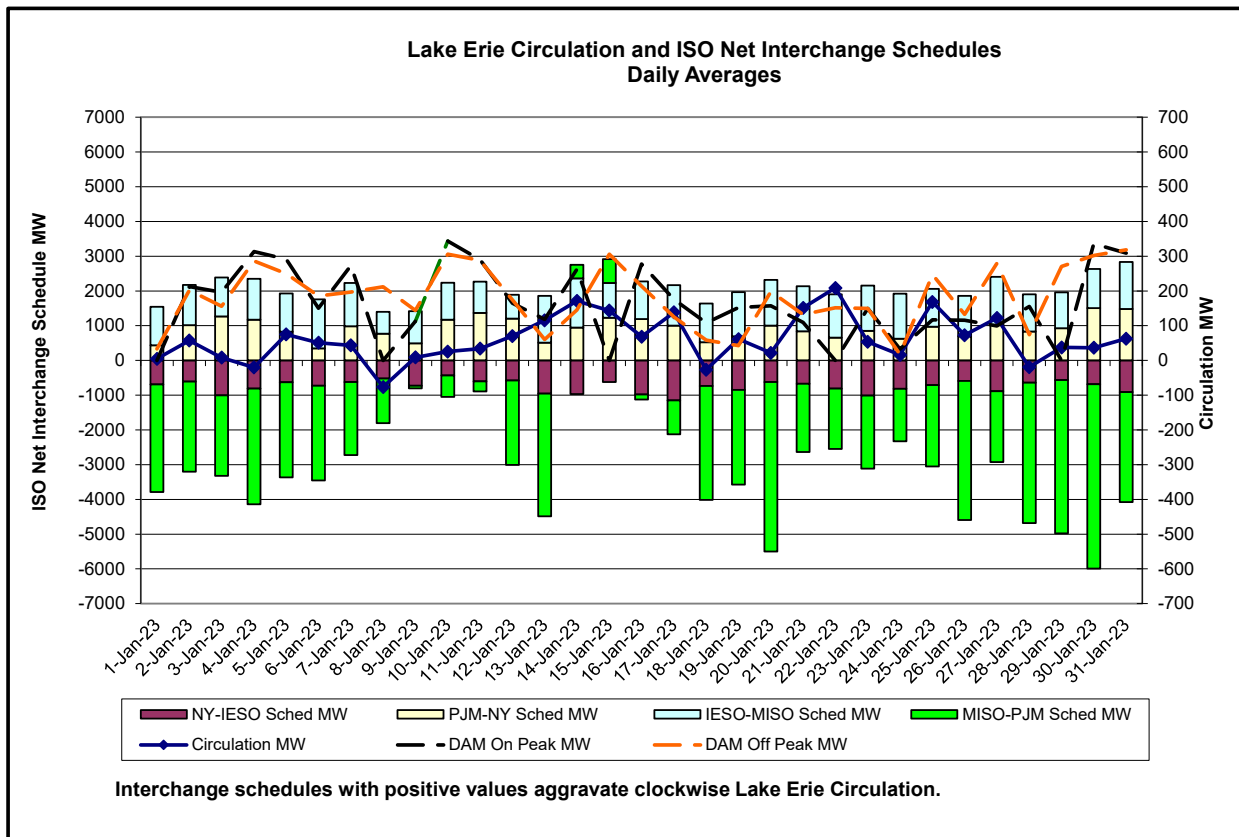
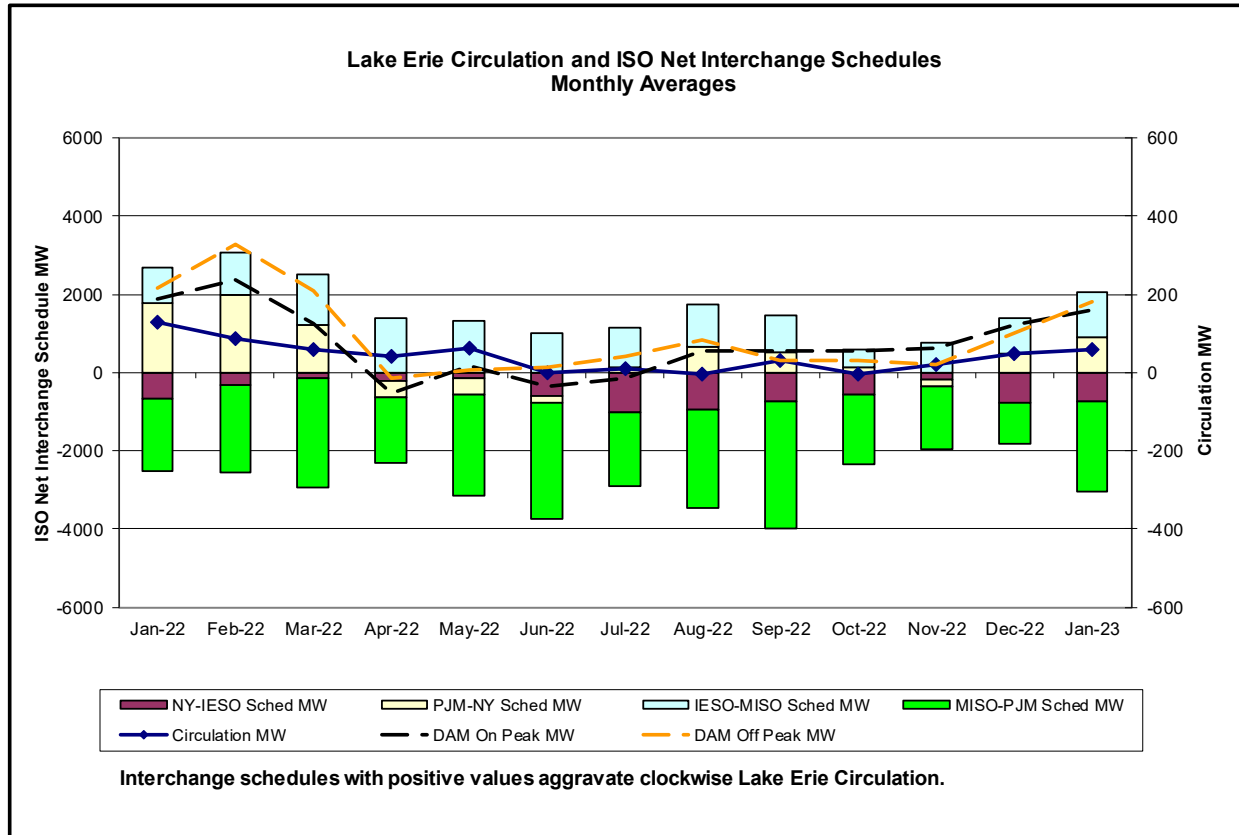
Unavailable Capacity is calculated as the difference of Day-Ahead Market (DAM) capacity relative to Real-Time (RT) capacity during RT peak load hour.

The Monthly Maximum is the day with the largest observed deficit during RT peak load hour.

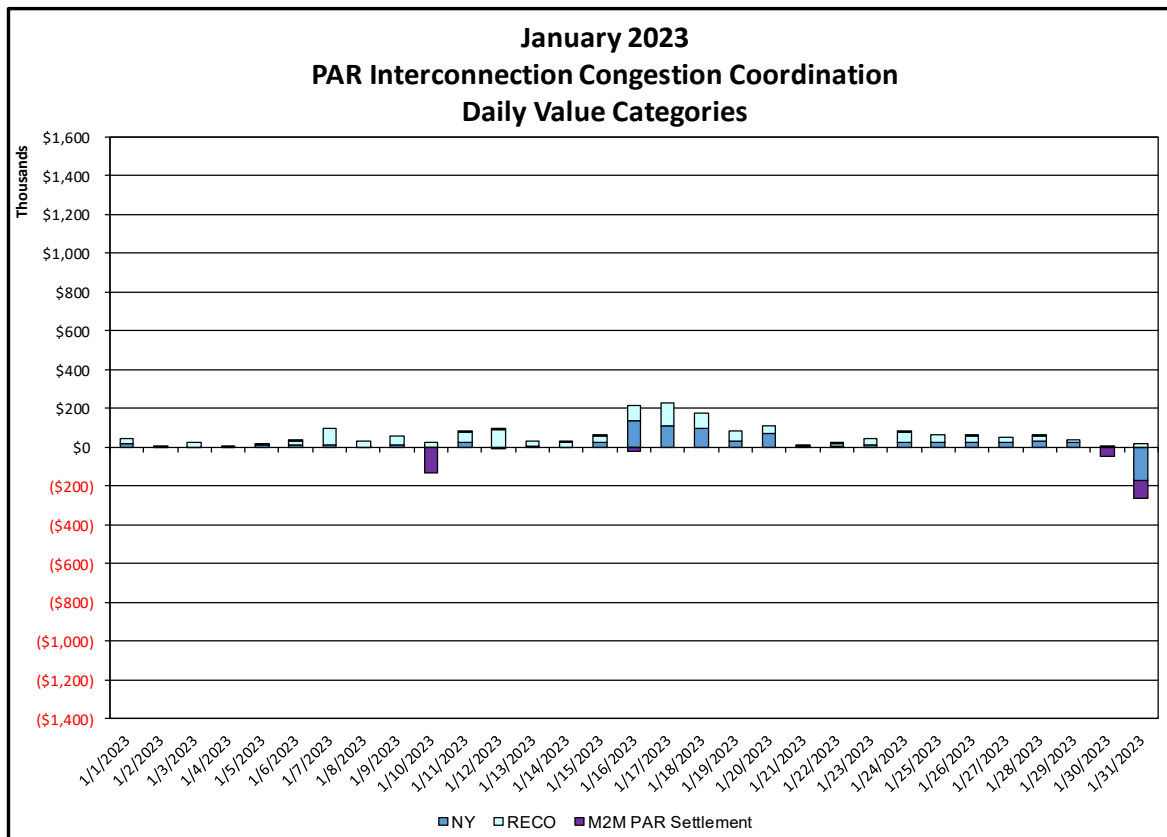
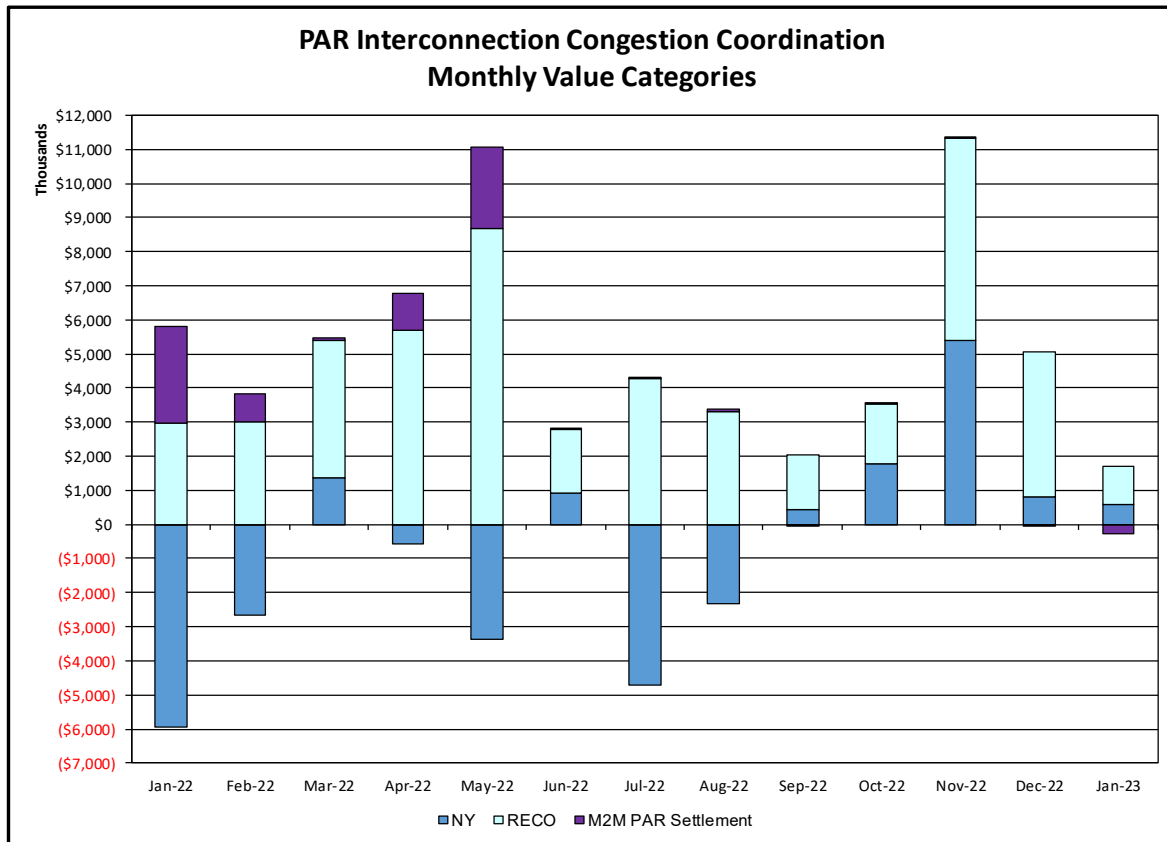
Daily Day-Ahead Market Capacity Unavailable In Real Time



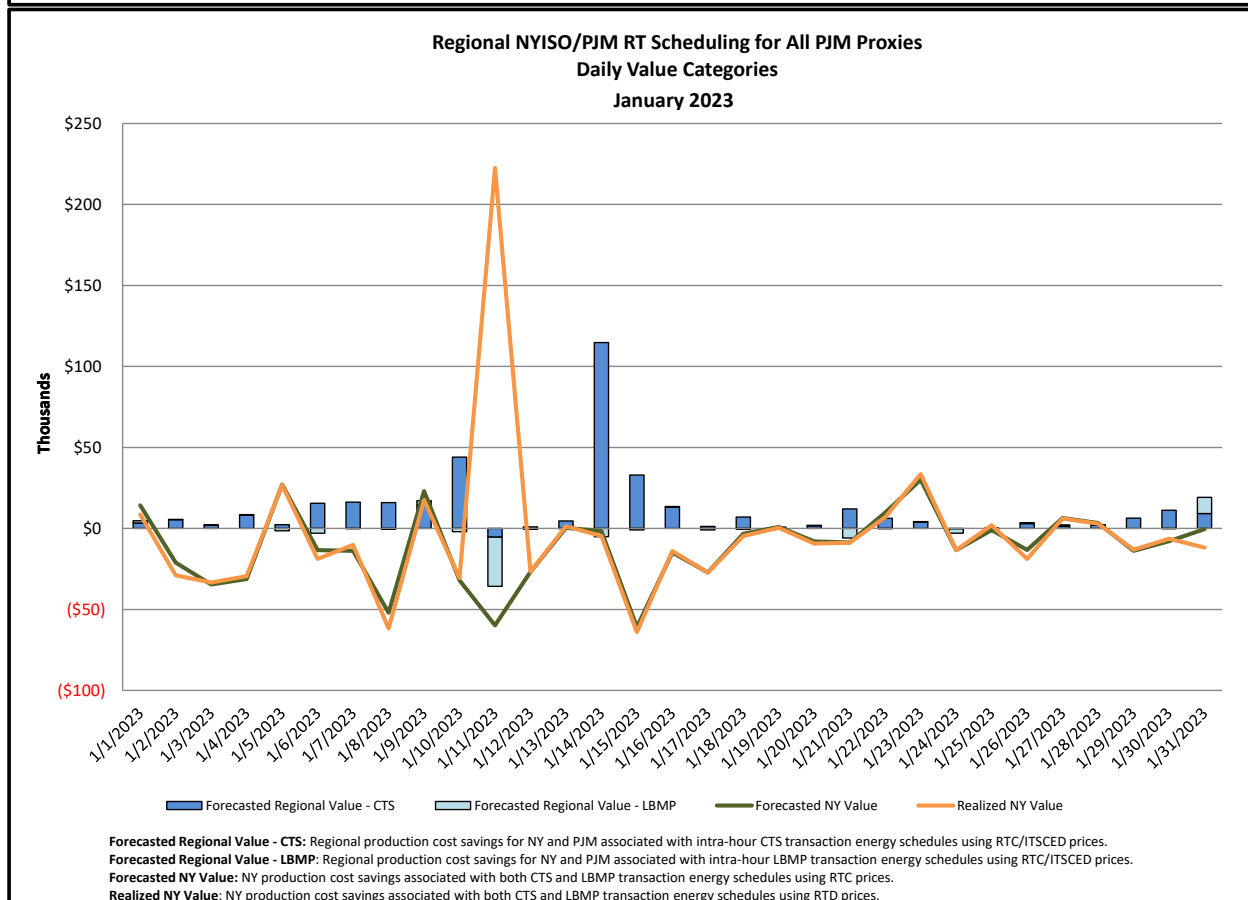
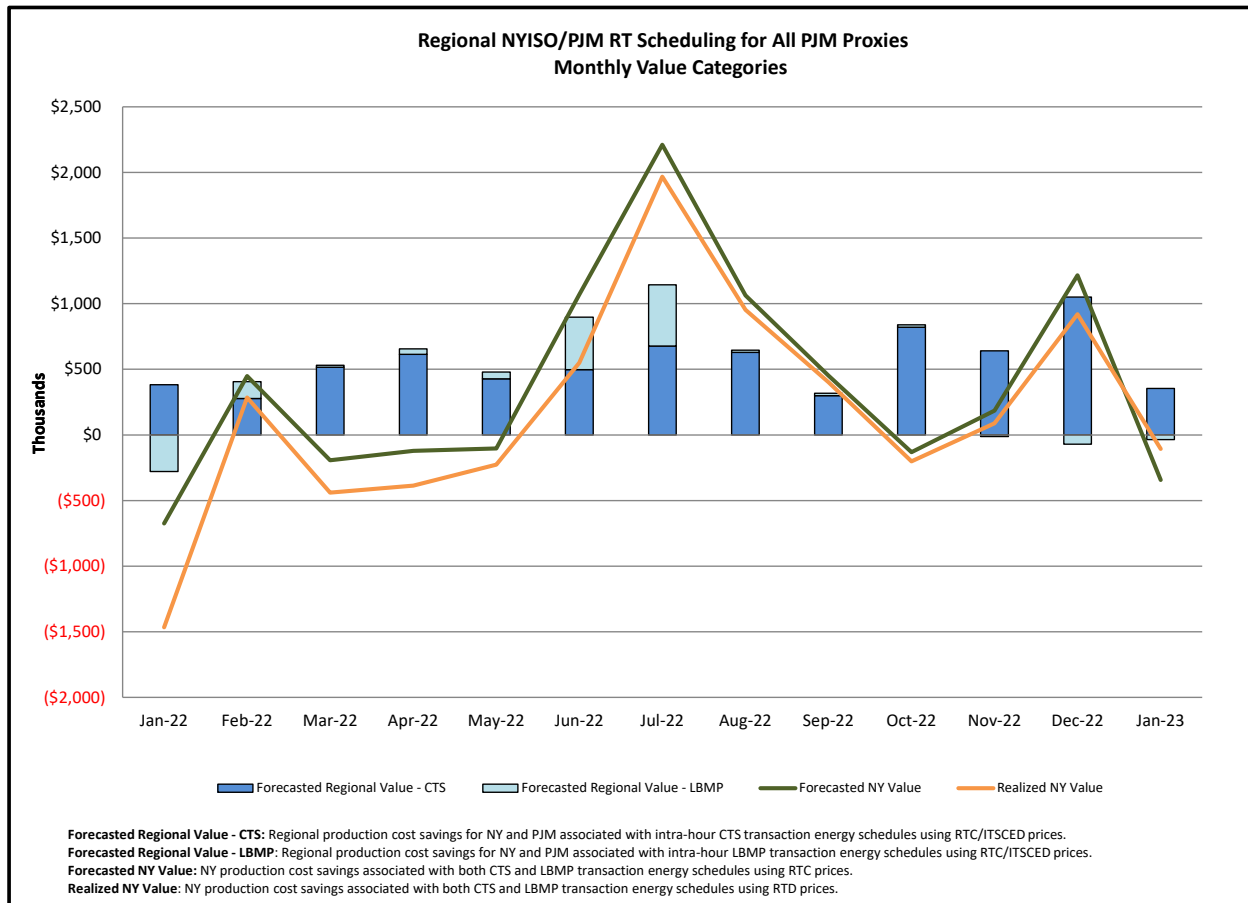
Unavailable Capacity is calculated as the difference of Day-Ahead Market (DAM) capacity relative to Real-Time (RT) capacity during RT peak load hour.

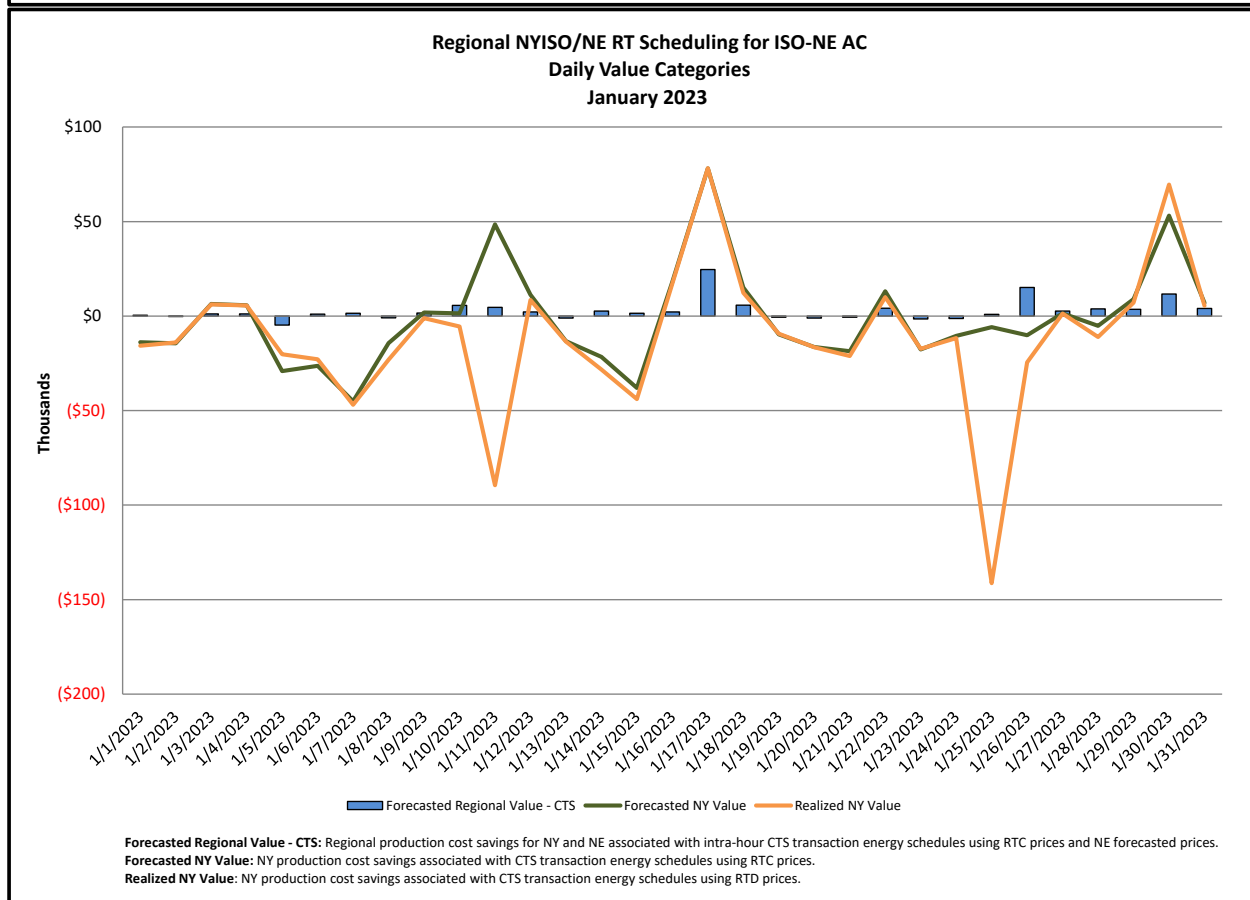
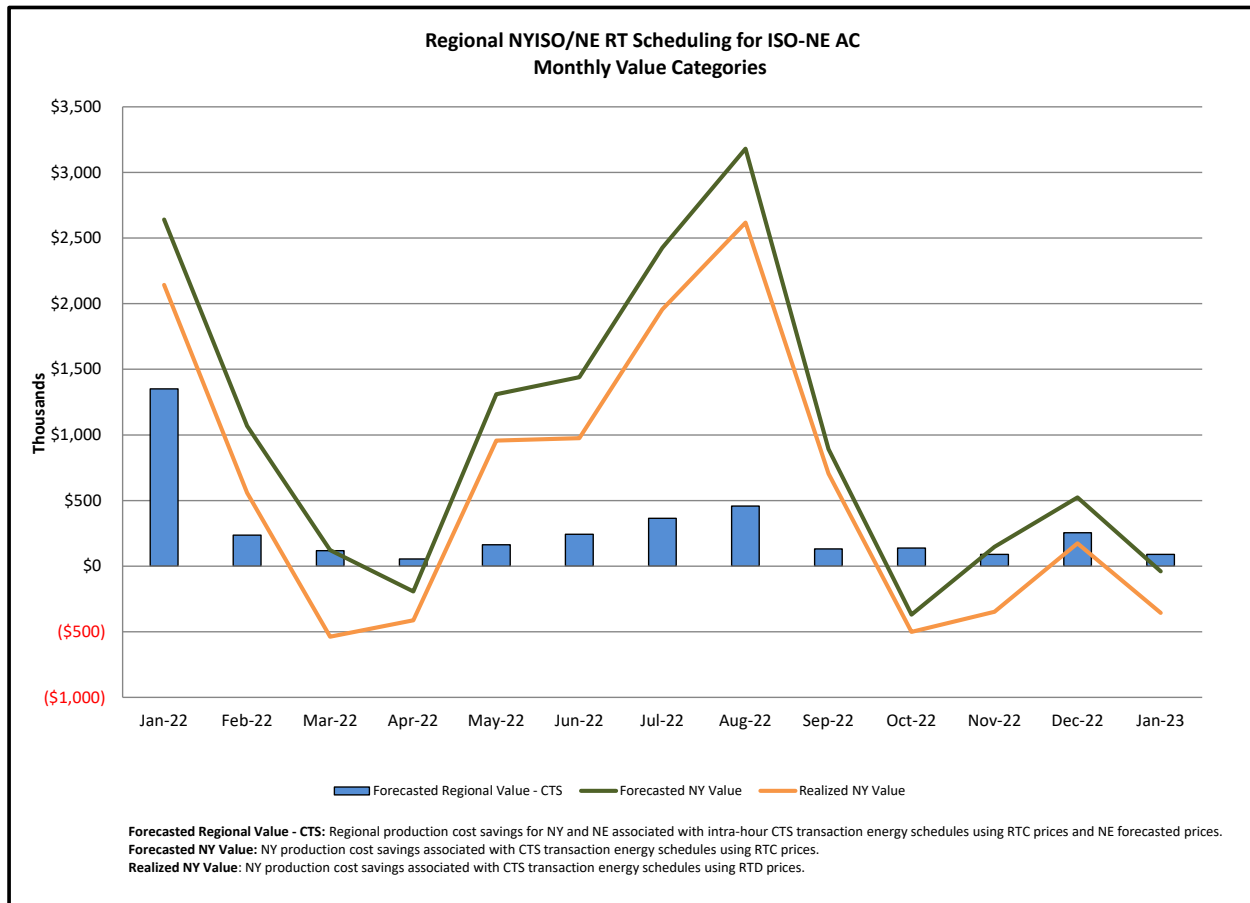


Broader Regional Market Performance Metrics

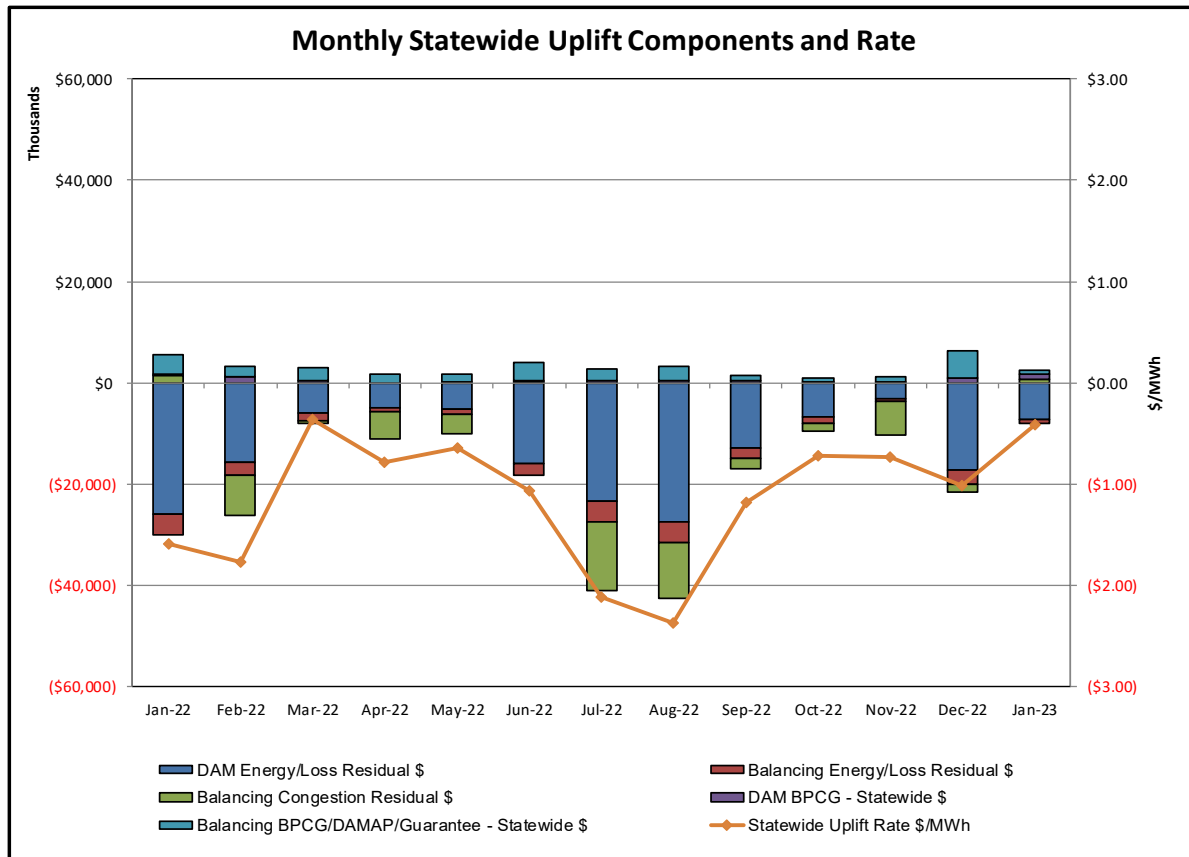


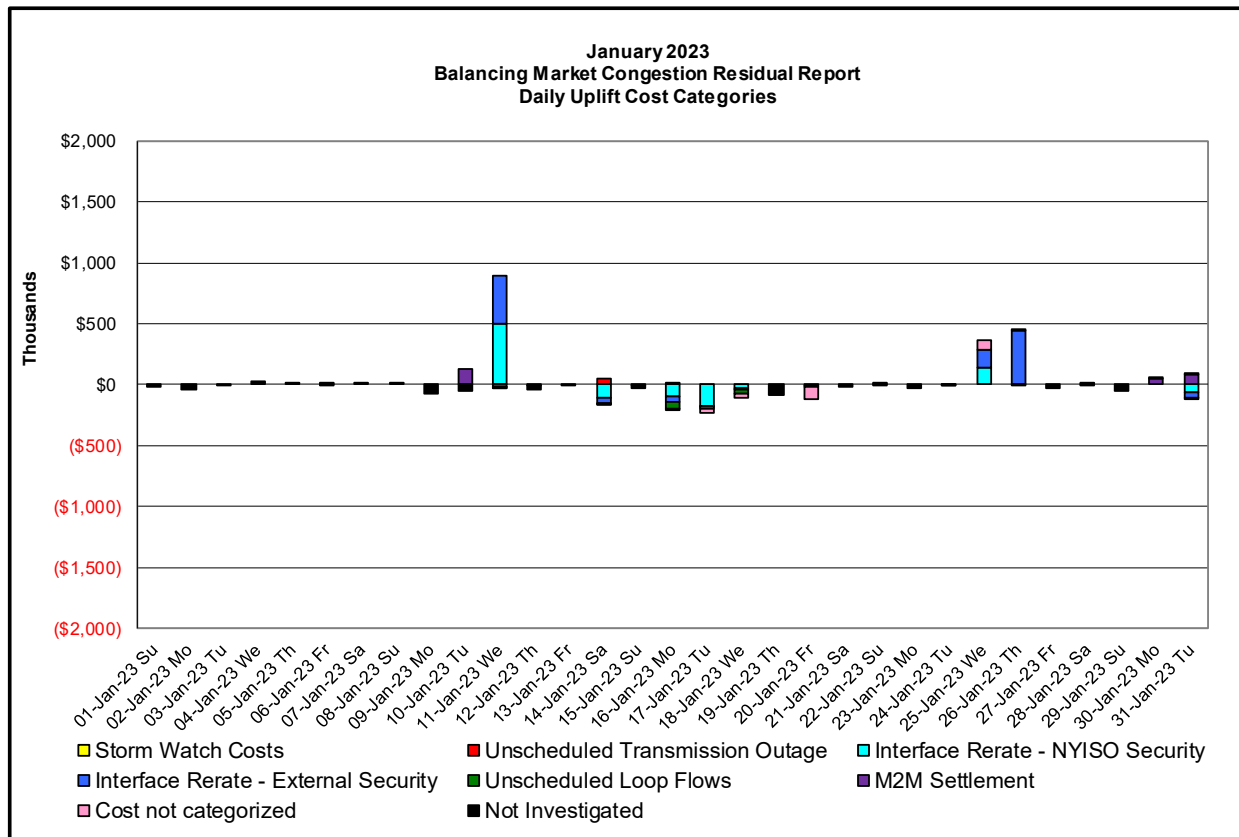
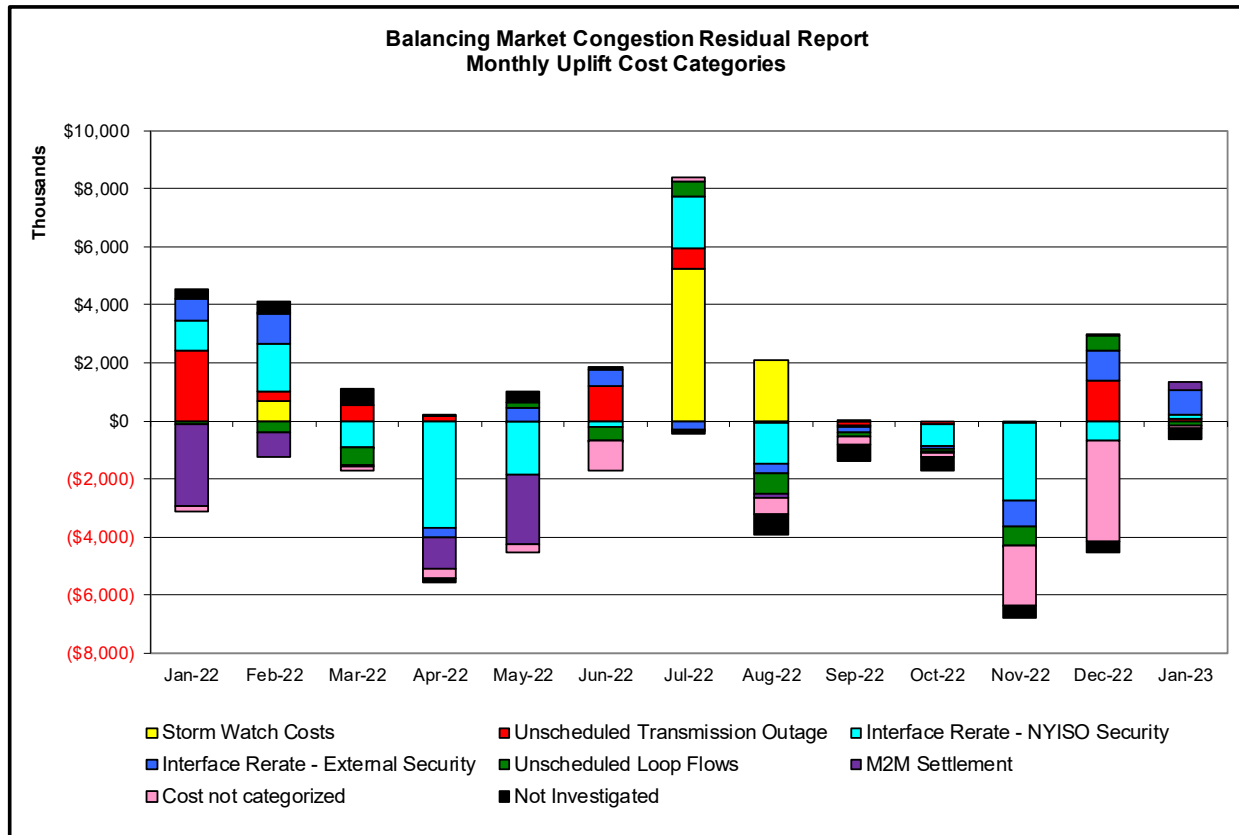
<u>PAR Interconnection Congestion Coordination</u>	
<u>Category</u>	<u>Description</u>
NY	Represents the value NY realizes from Market-to-Market PAR Coordination when experiencing congestion. This is the estimated savings to NY for additional deliveries into NY
RECO	Represents the value of PJM's obligation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





Market Performance Metrics

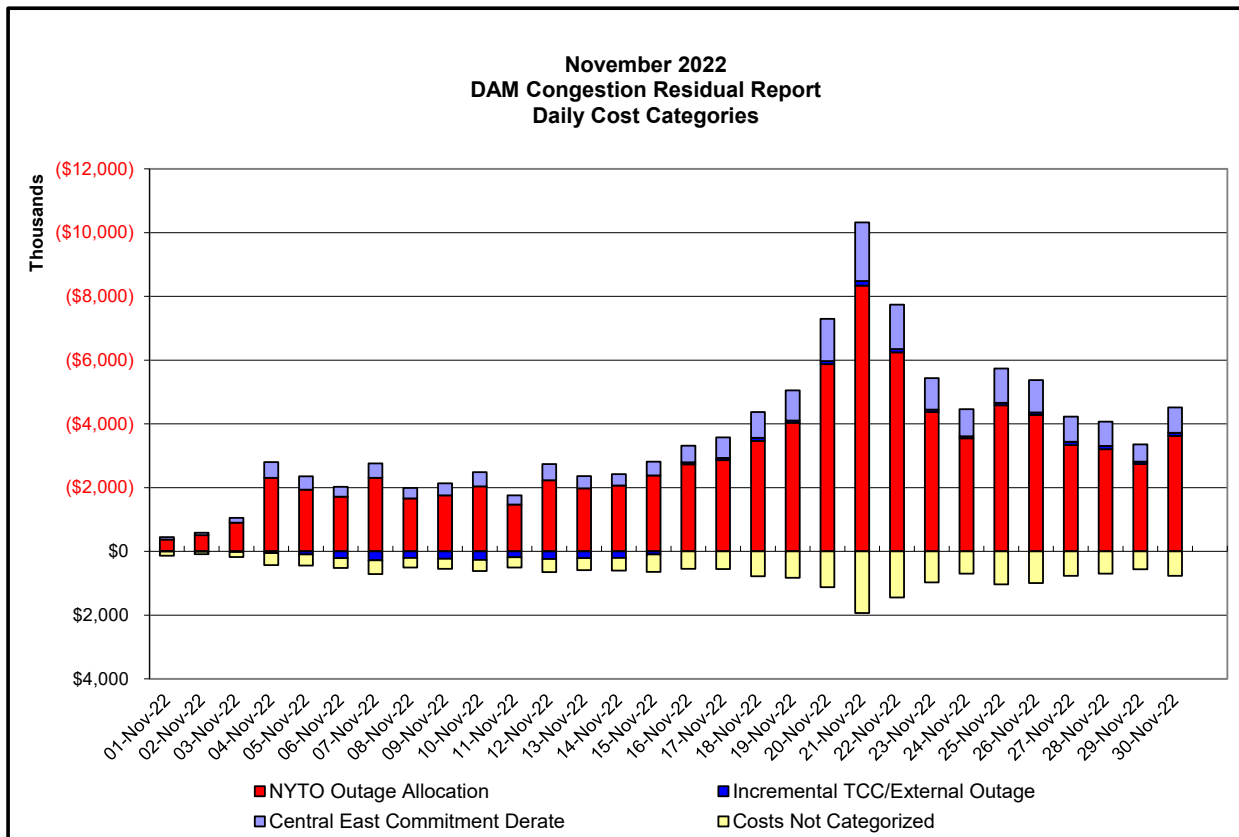
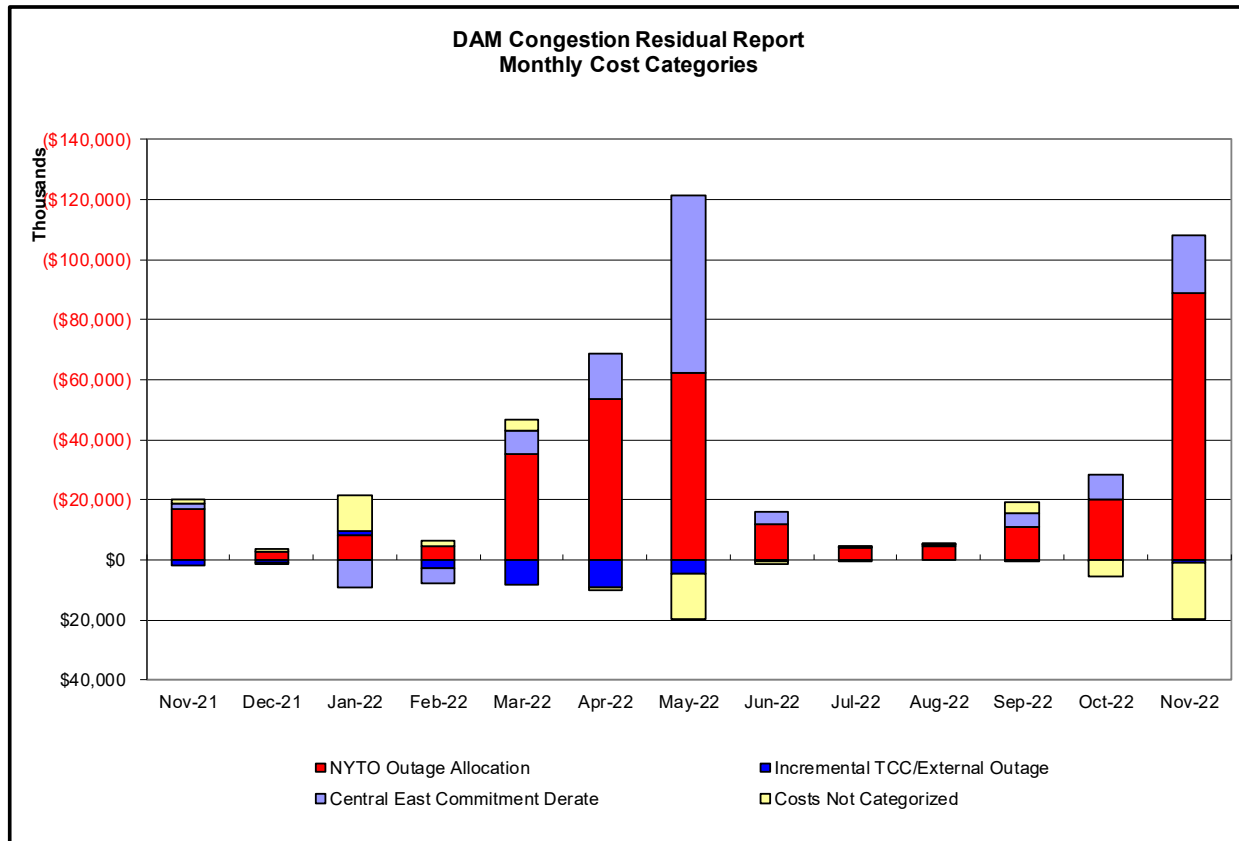




Day's investigated in January: 11,14,16,17,18,20,25,26,31		
Event	Description	January Dates
	Forced outage Fitzpatrick-Edic 345kV (#FE-1)	14
	NYCA DNI Ramp Limit	11,14,16,17,25,31
	Uprate Central East	11,14,16-18,31
	Uprate East Garden City-Valley Stream 138kV (#262)	11
	Uprate Goethals-Gowanus 345kV (#25)	17
	Uprate Goethals-Gowanus 345kV (#26)	17
	Uprate Goethals-Gowanus 345kV (#26) I/o SCB:GOETH(5):25&R25&A2253&BK1	11
	Uprate Northport-Pilgrim 138kV (#672) I/o BUS:NRTHPRT 677 & PS2 & G2	11
	IESO_AC ACTIVE DNI Ramp Limit	16,18,20,31
	NE_AC - NY Scheduling Limit	11,14,16,17,26,31
	NE_AC ACTIVE DNI Ramp Limit	11,17,25,26
	PJM_AC ACTIVE DNI Ramp Limit	11,14,18,31
	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East	11,16-18,20,31
	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West	11,16-18,20

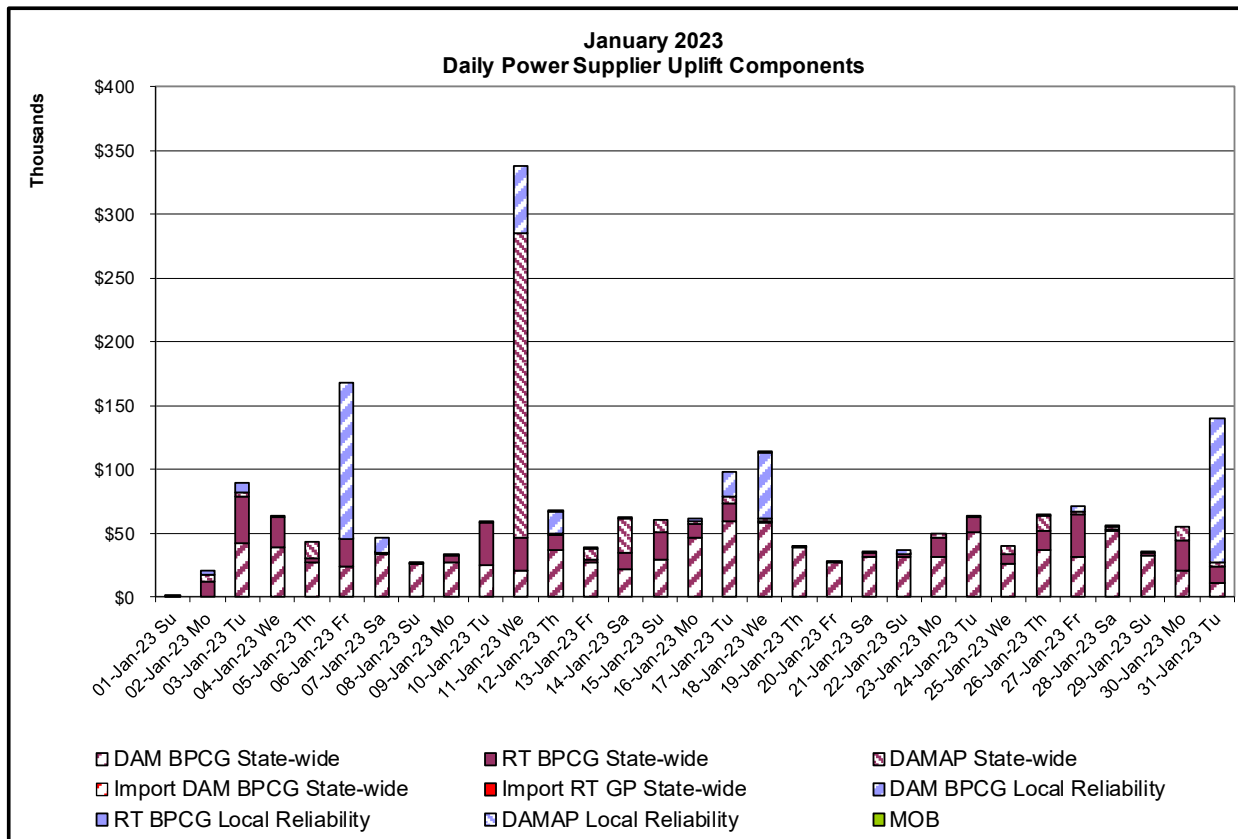
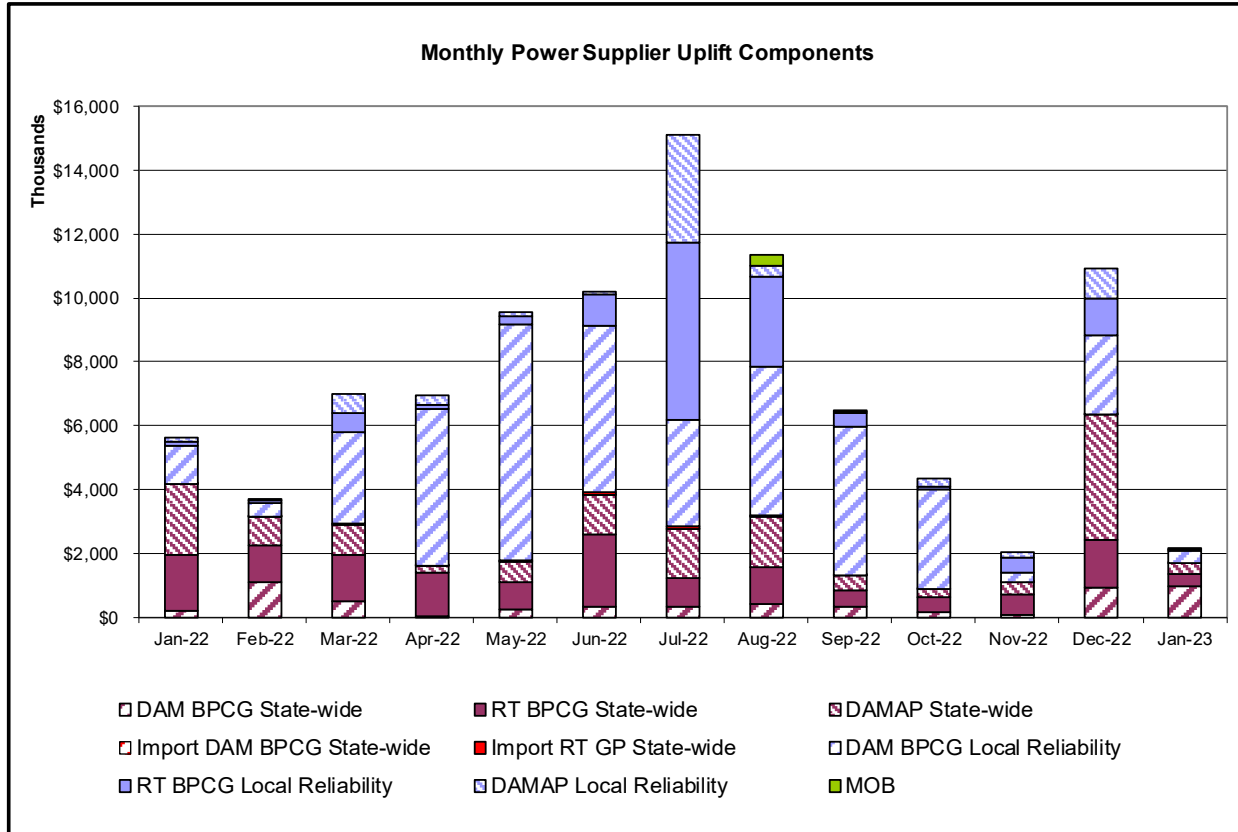
Real-Time Balancing Market Congestion Residual (Uplift Cost) Categories

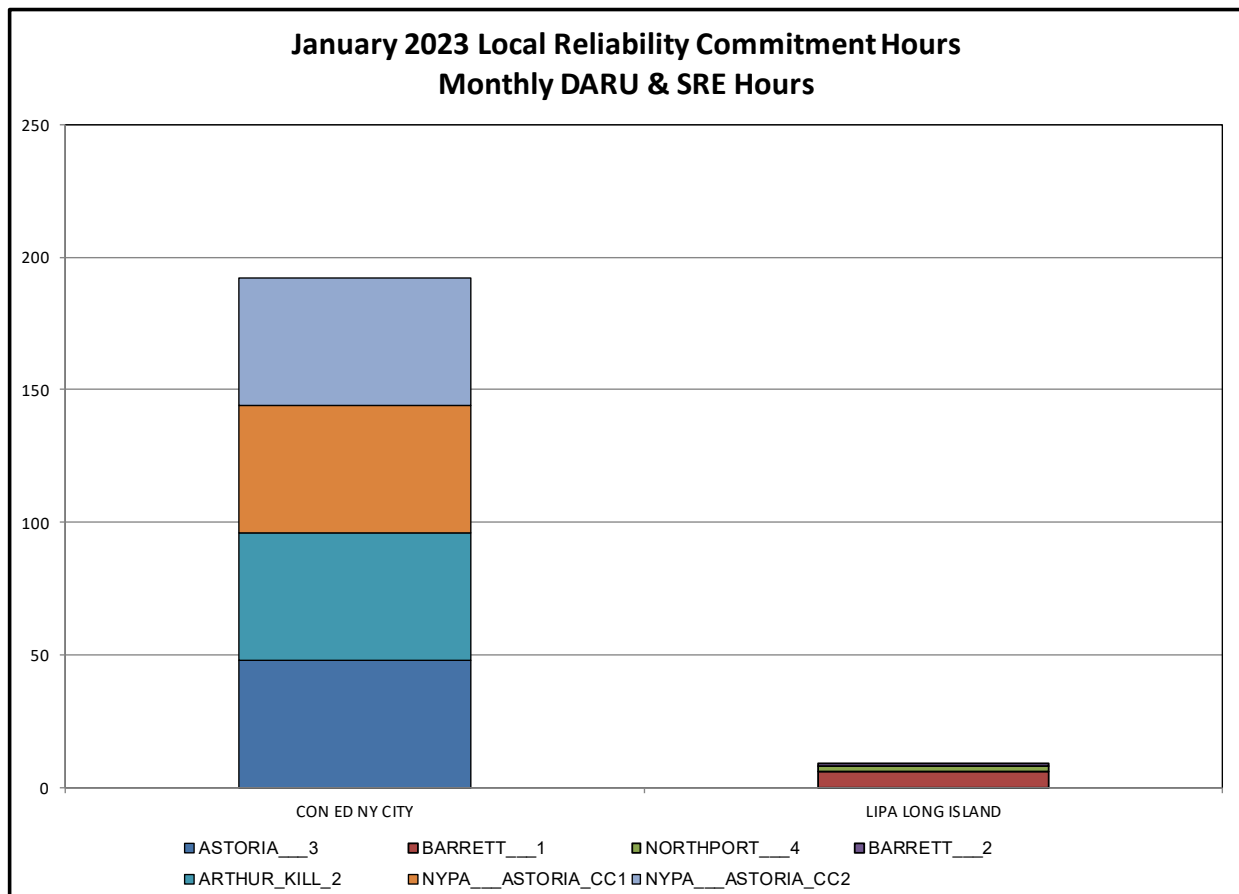
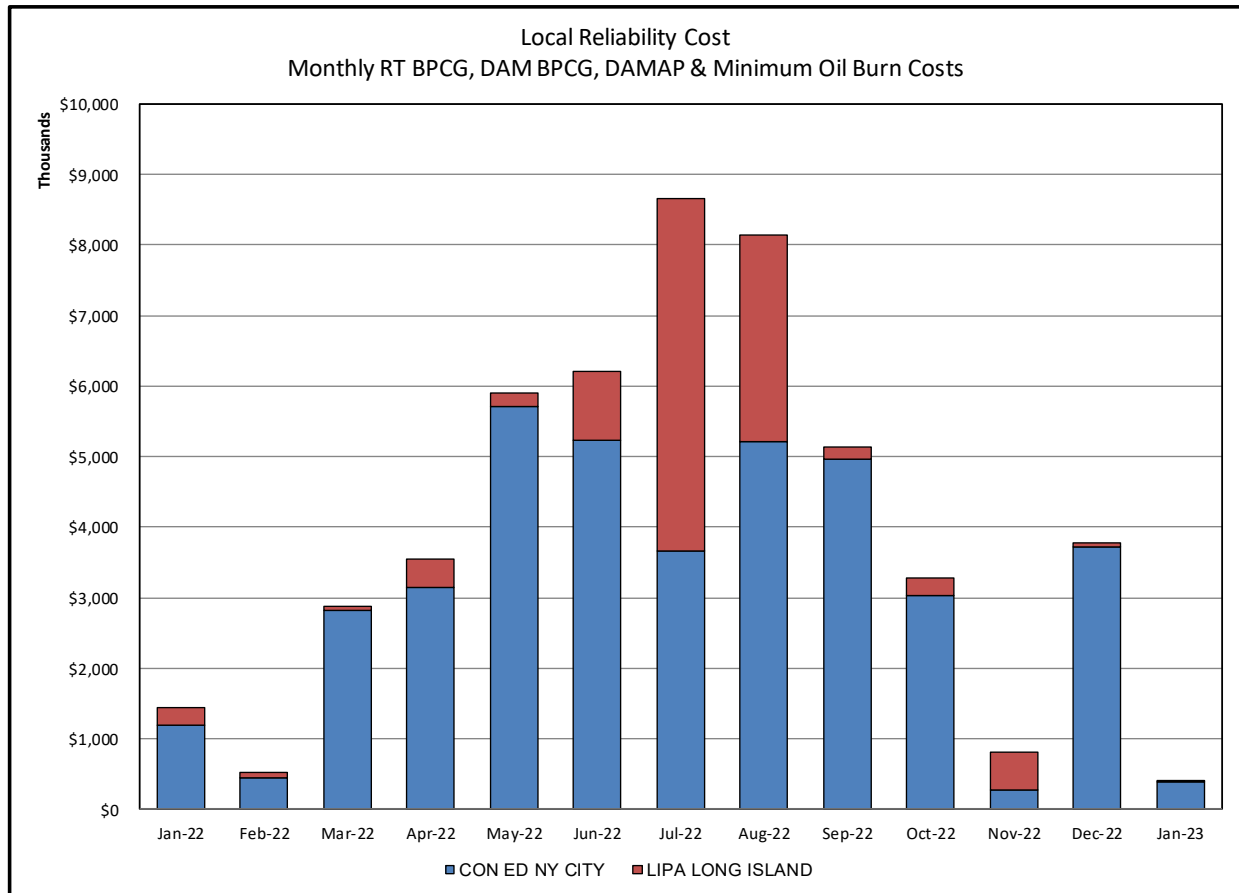
<u>Category</u>	<u>Cost Assignment</u>	<u>Events Types</u>	<u>Event Examples</u>
Storm Watch	Zone J	Thunderstorm Alert (TSA)	TSA Activations
Transmission Outage Mismatch	Market-wide	Changes in DAM to RTM transfers related to transmission outage mismatch	Forced Line Outage, Unit AVR Outages Early Line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

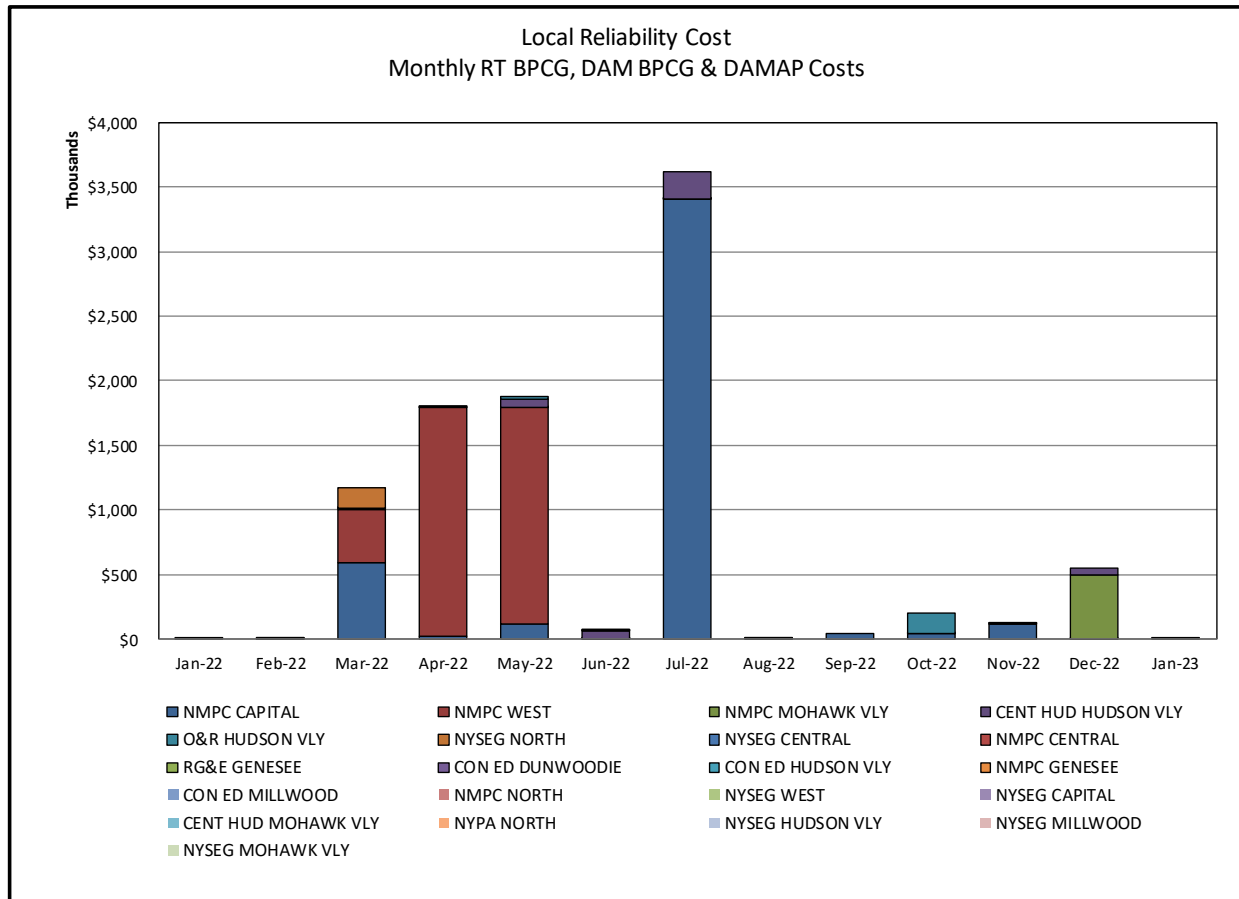


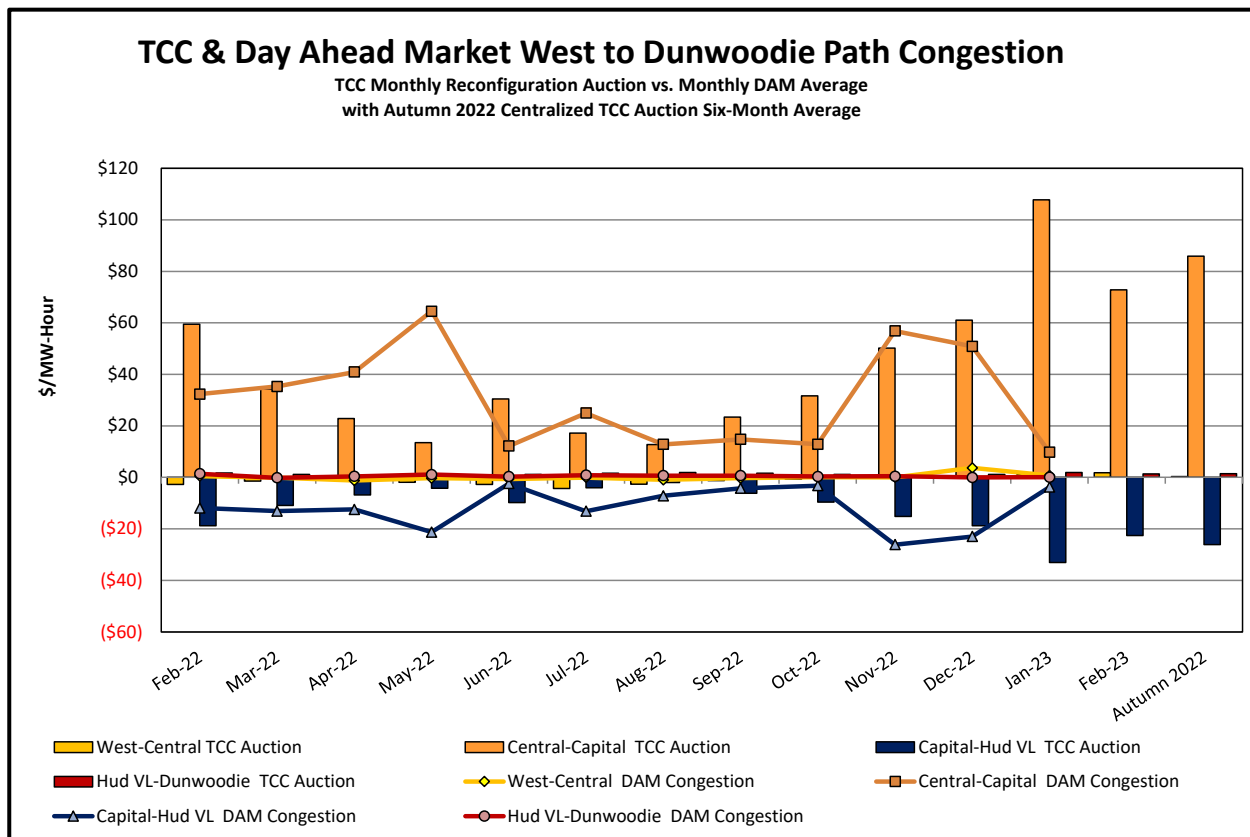
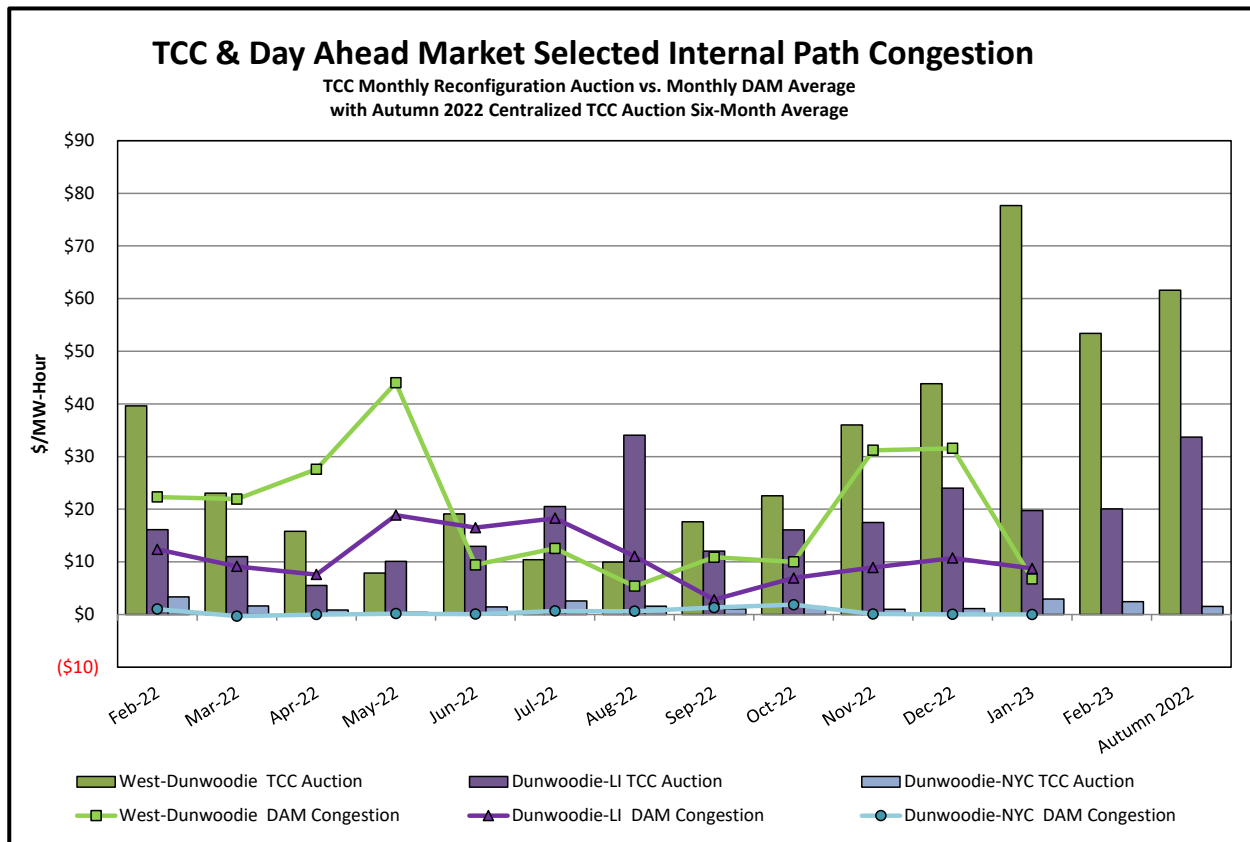
Day-Ahead Market Congestion Residual Categories

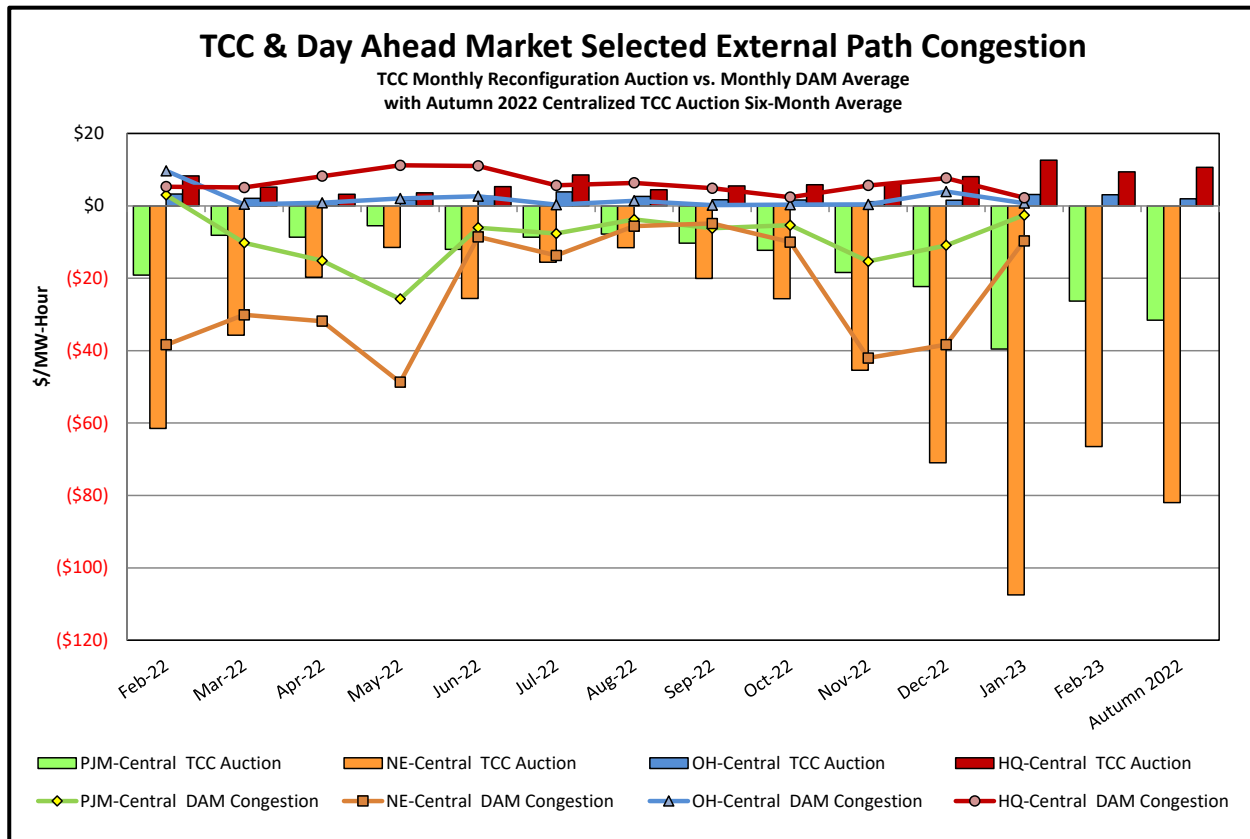
<u>Category</u>	<u>Cost Assignment</u>	<u>Events Types</u>	<u>Event Examples</u>
NYTO Outage Allocation	Responsible TO	Direct allocation to NYTO's responsible for transmission equipment status change.	DAM scheduled outage for equipment modeled in-service for the TCC Auction.
Incremental TCC/External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

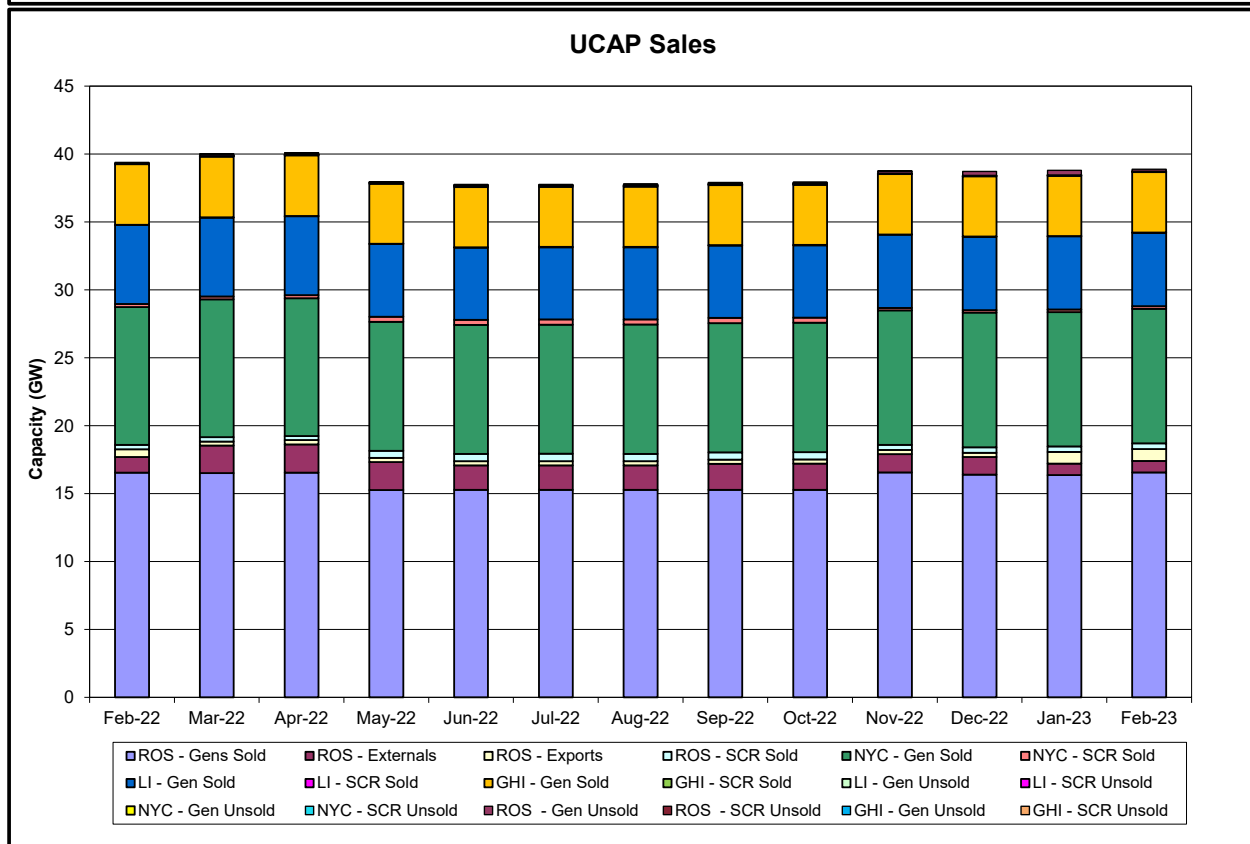
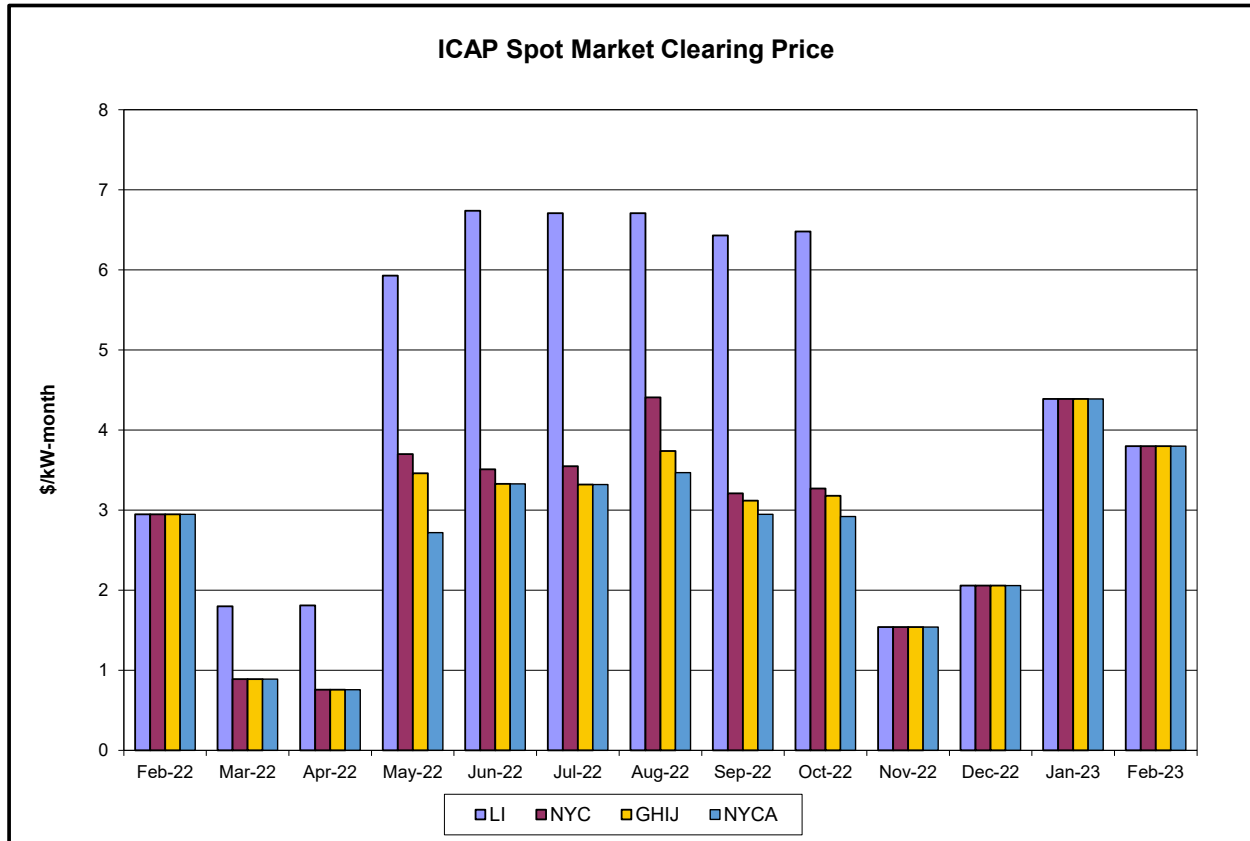










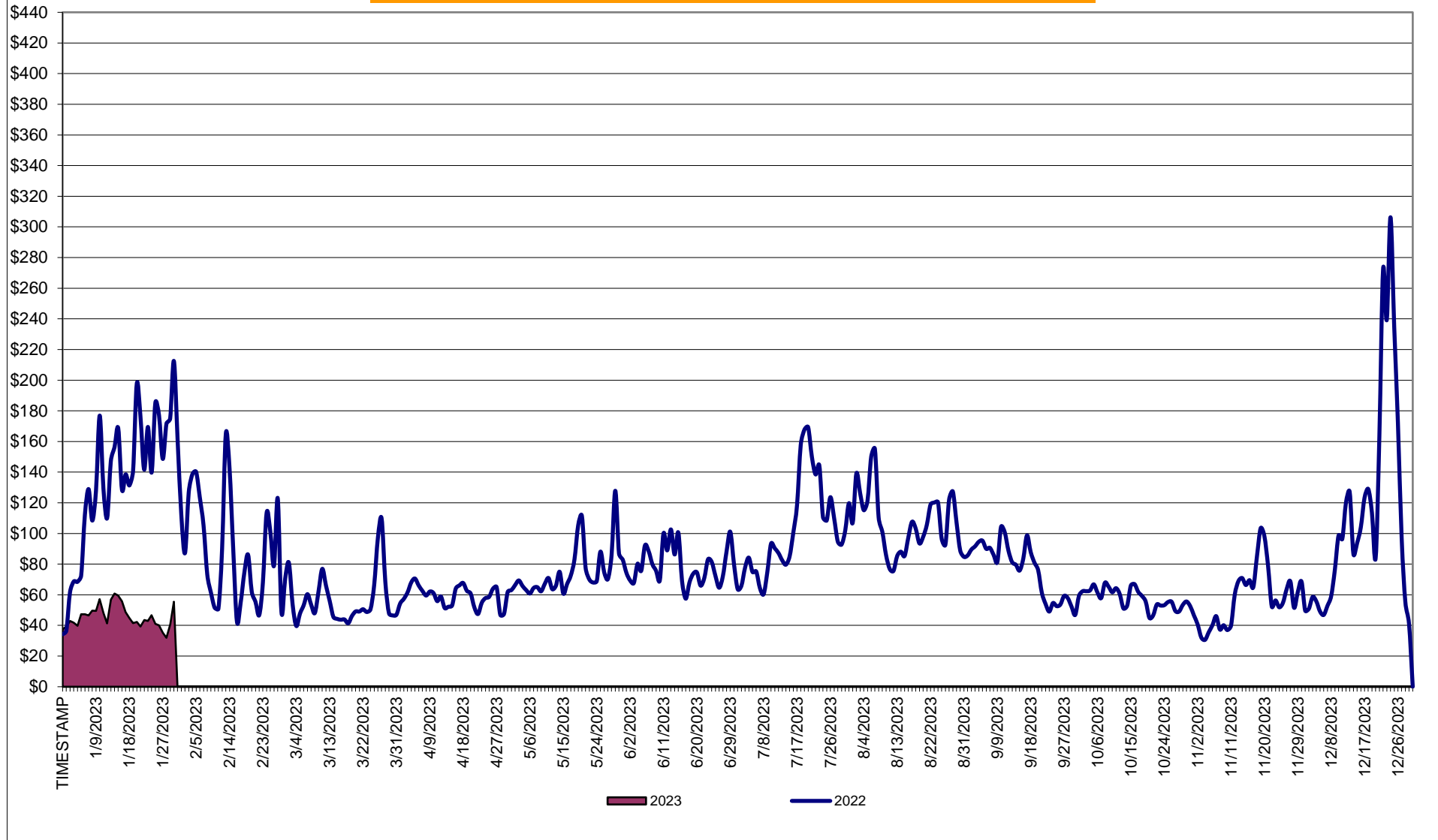


Market Performance Highlights

January 2023

- LBMP for January is \$42.10/MWh; lower than \$110.17/MWh in December 2022 and \$134.79/MWh in January 2022.
 - Day Ahead Load Weighted LBMPs and Real Time Load Weighted LBMPs are lower compared to December.
- January 2023 average year-to-date monthly cost of \$46.64/MWh is an 66% decrease from \$137.49/MWh in January 2022.
- Average daily sendout is 410 GWh/day in January; lower than 421 GWh/day in December 2022 and 451 GWh/day in January 2022.
- Natural gas prices are lower and distillate prices are higher compared to the previous month.
 - Natural Gas (Transco Z6 NY) was \$3.20/MMBtu, down from \$10.75/MMBtu in December.
 - Natural gas prices (Transco Z6 NY) are down 71.3% year-over-year.
 - Jet Kerosene Gulf Coast was \$26.44/MMBtu, up from \$21.38/MMBtu in December.
 - Ultra Low Sulfur No.2 Diesel NY Harbor was \$23.44/MMBtu, up from \$22.30/MMBtu in December.
 - Distillate prices are up 36.8% year-over-year.
- Uplift per MWh is higher compared to the previous month.
 - Uplift (not including NYISO cost of operations) is (\$0.38)/MWh; higher than (\$0.77)/MWh in December.
 - Local Reliability Share is \$0.03/MWh, lower than \$0.25/MWh in December.
 - Statewide Share is (\$0.41)/MWh, higher than (\$1.02)/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)*
2022 Annual Average \$89.23/MWh
January 2022 YTD Average \$137.49/MWh
January 2023 YTD Average \$46.64/MWh



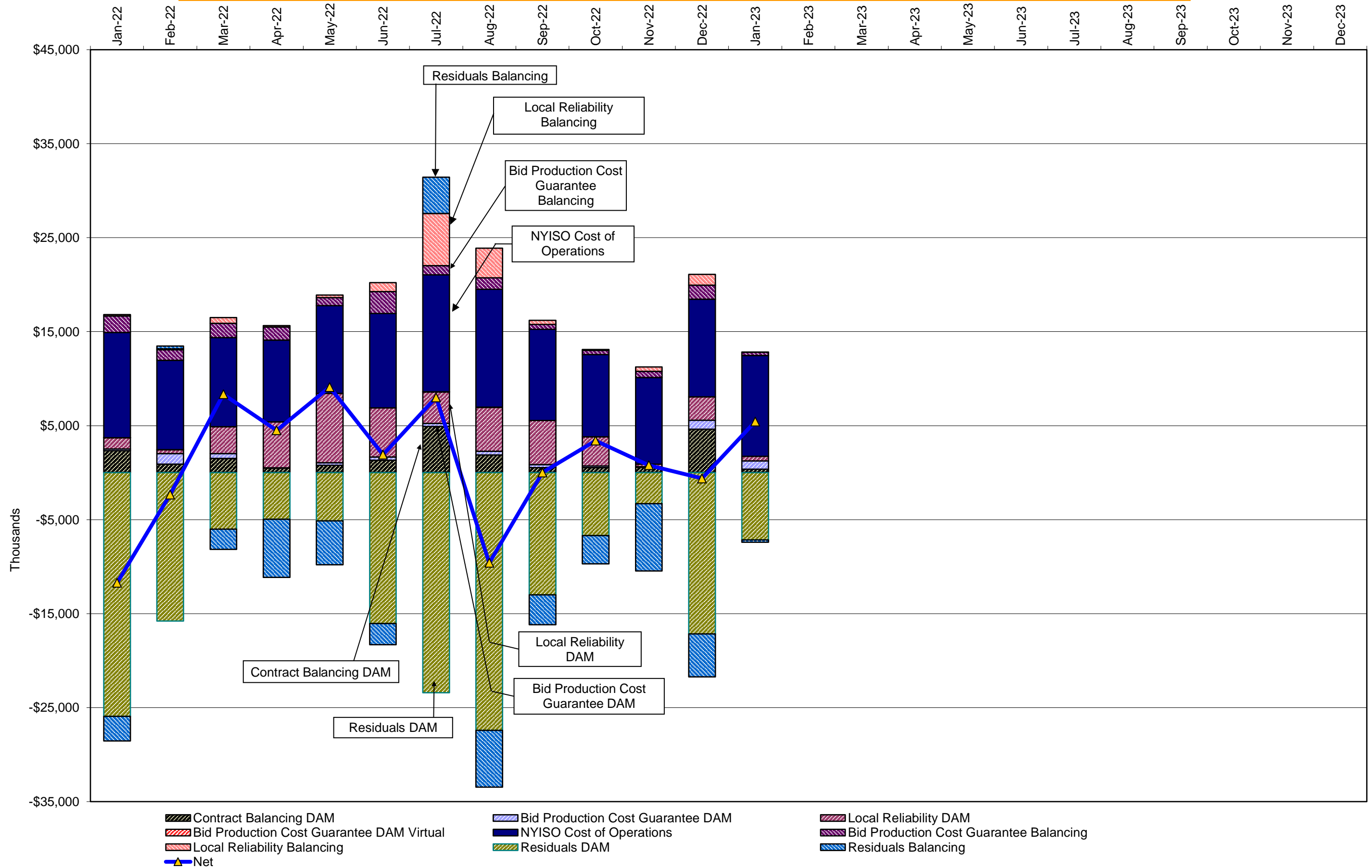
* Excludes ICAP payments.

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

2023	<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	42.10											
NTAC	2.82											
Reserve	0.72											
Regulation	0.09											
NYISO Cost of Operations	0.77											
FERC Fee Recovery	0.08											
Uplift	(0.38)											
Uplift: Local Reliability Share	0.03											
Uplift: Statewide Share	(0.41)											
Voltage Support and Black Start	0.42											
Avg Monthly Cost	46.56											
 Avg YTD Cost	 46.64											
 TSA \$ per NYC MWh	 0.00											
 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	94.06	56.78	56.46	70.60	76.72	99.47	108.85	78.91	53.11	52.47	110.17
NTAC	1.43	0.95	1.48	1.17	2.46	2.07	3.65	1.69	1.44	3.21	3.91	2.23
Reserve	1.26	1.21	0.83	0.81	0.74	0.66	0.87	0.65	0.86	1.02	0.89	0.49
Regulation	0.27	0.19	0.17	0.12	0.13	0.15	0.12	0.13	0.18	0.18	0.15	0.12
NYISO Cost of Operations	0.73	0.72	0.74	0.74	0.74	0.75	0.76	0.76	0.76	0.73	0.74	0.73
FERC Fee Recovery	0.07	0.08	0.09	0.10	0.09	0.08	0.06	0.06	0.09	0.10	0.09	0.08
Uplift	(1.50)	(1.73)	(0.09)	(0.36)	(0.05)	(0.61)	(1.58)	(1.91)	(0.78)	(0.45)	(0.68)	(0.77)
Uplift: Local Reliability Share	0.09	0.04	0.27	0.43	0.60	0.46	0.54	0.47	0.39	0.27	0.06	0.25
Uplift: Statewide Share	(1.59)	(1.77)	(0.36)	(0.79)	(0.65)	(1.07)	(2.12)	(2.38)	(1.18)	(0.72)	(0.74)	(1.02)
Voltage Support and Black Start	0.42	0.41	0.43	0.43	0.43	0.43	0.43	0.43	0.44	0.42	0.42	0.42
Avg Monthly Cost	137.41	95.82	60.34	59.38	75.07	80.17	103.73	110.61	81.81	58.26	57.91	113.40
 Avg YTD Cost	 137.49	 118.36	 100.65	 91.92	 88.82	 87.37	 90.31	 93.42	 92.27	 89.47	 86.97	 89.23
 TSA \$ per NYC MWh	 0.00	 2.98	 0.00	 0.00	 0.11	 0.00	 3.98	 1.70	 0.06	 0.00	 0.00	 0.01

* Excludes ICAP payments.
Market Mitigation and Analysis
Prepared: 2/9/2023 11:39 AM

NYISO Dollar Flows - Uplift - OATT Schedule 1 components - Data through January 31, 2023



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>2023</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>	13,662,137											
DAM LSE Internal LBMP Energy Sales	55%											
DAM External TC LBMP Energy Sales	7%											
DAM Bilateral - Internal Bilaterals	28%											
DAM Bilateral - Import/Non-LBMP Market Bilaterals	5%											
DAM Bilateral - Export/Non-LBMP Market Bilaterals	2%											
DAM Bilateral - Wheel Through Bilaterals	3%											
<u>Balancing Energy Market MWh</u>	328,840											
Balancing Energy LSE Internal LBMP Energy Sales	65%											
Balancing Energy External TC LBMP Energy Sales	68%											
Balancing Energy Bilateral - Internal Bilaterals	2%											
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	0%											
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	7%											
Balancing Energy Bilateral - Wheel Through Bilaterals	-43%											
<u>Transactions Summary</u>												
LBMP	63%											
Internal Bilaterals	28%											
Import Bilaterals	5%											
Export Bilaterals	2%											
Wheels Through	2%											
<u>Market Share of Total Load</u>												
Day Ahead Market	97.6%											
Balancing Energy +	2.4%											
Total MWH	13,990,977											
Average Daily Energy Sendout/Month GWh	410											

<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	12,477,485	12,137,757	10,992,578	12,176,102	12,945,740	15,905,937	15,770,210	12,467,212	11,527,745	11,952,855	13,768,799
DAM LSE Internal LBMP Energy Sales	57%	56%	59%	56%	55%	60%	64%	63%	62%	58%	56%	56%
DAM External TC LBMP Energy Sales	7%	8%	3%	5%	6%	3%	3%	3%	2%	3%	4%	6%
DAM Bilateral - Internal Bilaterals	28%	28%	29%	31%	31%	29%	26%	26%	27%	30%	31%	29%
DAM Bilateral - Import/Non-LBMP Market Bilaterals	4%	4%	4%	5%	4%	4%	4%	5%	6%	5%	5%	5%
DAM Bilateral - Export/Non-LBMP Market Bilaterals	2%	2%	2%	2%	2%	2%	1%	1%	2%	2%	2%	2%
DAM Bilateral - Wheel Through Bilaterals	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
<u>Balancing Energy Market MWh</u>	942,823	742,449	758,386	772,666	378,503	464,231	567,602	785,464	361,883	379,932	519,117	528,939
Balancing Energy LSE Internal LBMP Energy Sales	88%	83%	76%	60%	65%	66%	72%	86%	66%	45%	38%	45%
Balancing Energy External TC LBMP Energy Sales	16%	19%	24%	33%	32%	36%	23%	14%	34%	55%	58%	56%
Balancing Energy Bilateral - Internal Bilaterals	1%	2%	2%	0%	5%	2%	1%	0%	1%	0%	2%	2%
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	0%	0%	0%	0%	2%	2%	2%	0%	0%	0%	0%	0%
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	4%	9%	8%	7%	9%	8%	6%	3%	5%	7%	7%	5%
Balancing Energy Bilateral - Wheel Through Bilaterals	-9%	-13%	-10%	-1%	-12%	-14%	-4%	-3%	-5%	-7%	-5%	-8%
<u>Transactions Summary</u>												
LBMP	67%	66%	65%	62%	63%	64%	68%	68%	65%	62%	62%	64%
Internal Bilaterals	26%	27%	27%	29%	30%	28%	25%	25%	27%	29%	29%	28%
Import Bilaterals	3%	4%	4%	4%	4%	4%	3%	4%	6%	5%	5%	5%
Export Bilaterals	2%	2%	2%	2%	2%	2%	2%	1%	2%	2%	2%	2%
Wheels Through	1%	1%	2%	2%	2%	2%	1%	1%	2%	1%	2%	2%
<u>Market Share of Total Load</u>												
Day Ahead Market	93.8%	94.4%	94.1%	93.4%	97.0%	96.5%	96.6%	95.3%	97.2%	96.8%	95.8%	96.3%
Balancing Energy +	6.2%	5.6%	5.9%	6.6%	3.0%	3.5%	3.4%	4.7%	2.8%	3.2%	4.2%	3.7%
Total MWH	15,269,924	13,219,933	12,896,143	11,765,244	12,554,605	13,409,971	16,473,538	16,555,674	12,829,095	11,907,677	12,471,972	14,297,738
Average Daily Energy Sendout/Month GWh	451	429	390	359	372	422	509	514	411	359	382	421

+ 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 *	\$40.60											
Standard Deviation	\$10.32											
Load Weighted Price **	\$41.37											
<u>RTC LBMP</u>												
Price *	\$38.28											
Standard Deviation	\$31.37											
Load Weighted Price **	\$39.04											
<u>REAL TIME LBMP</u>												
Price *	\$38.76											
Standard Deviation	\$45.06											
Load Weighted Price **	\$39.68											
Average Daily Energy Sendout/Month GWh	410											

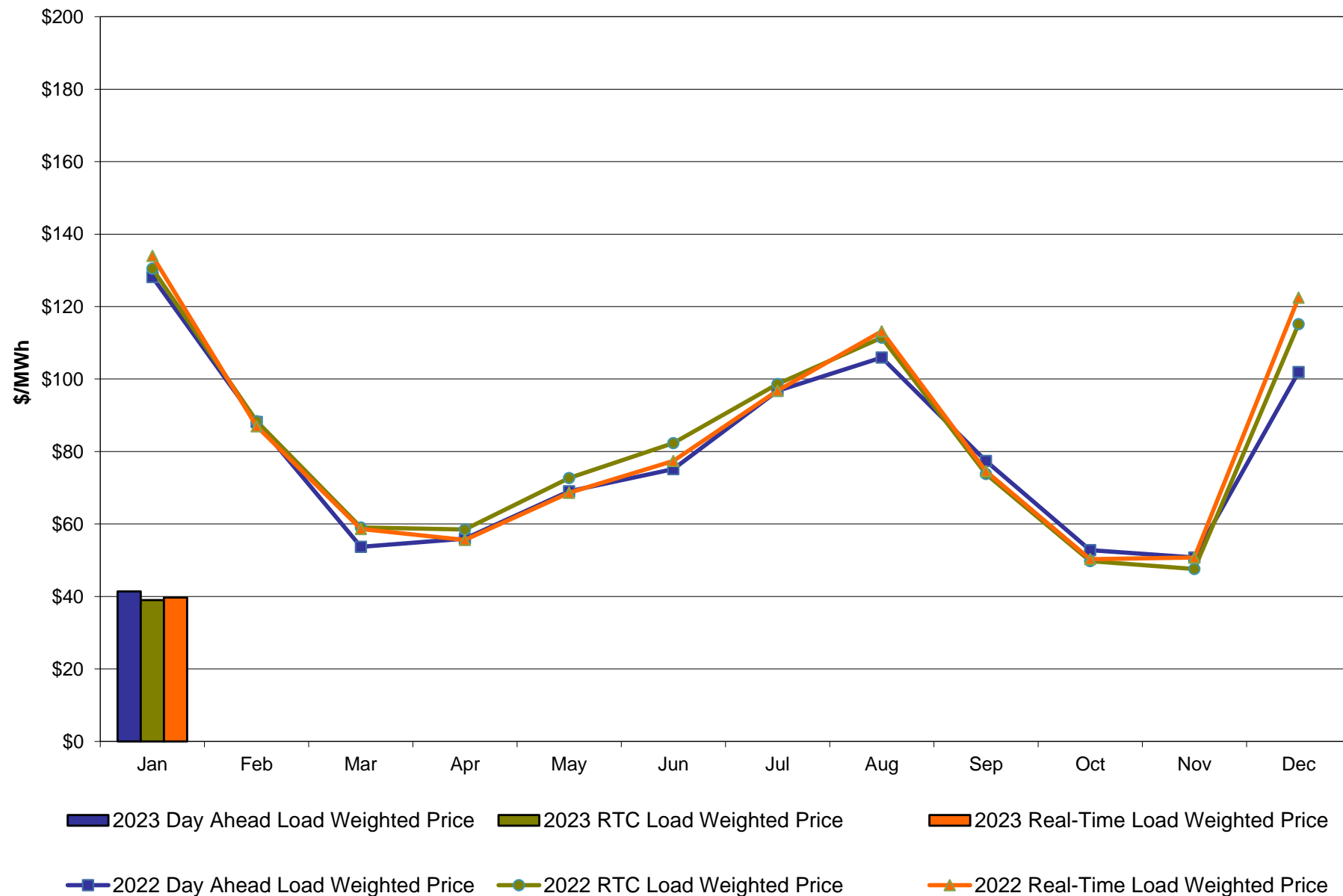
NYISO Markets 2021 Energy Statistics

	<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 *	\$124.39	\$85.98	\$52.41	\$55.23	\$66.11	\$72.43	\$90.42	\$100.71	\$74.23	\$51.77	\$49.08	\$98.20
Standard Deviation	\$51.94	\$39.56	\$18.64	\$11.05	\$21.60	\$19.84	\$40.00	\$33.52	\$22.13	\$11.85	\$20.31	\$64.21
Load Weighted Price **	\$128.16	\$88.17	\$53.69	\$55.96	\$69.05	\$75.15	\$96.74	\$105.93	\$77.41	\$52.79	\$50.77	\$101.90
<u>RTC LBMP</u>												
Price *	\$127.16	\$85.48	\$57.58	\$57.33	\$68.27	\$78.66	\$92.25	\$104.69	\$70.59	\$48.87	\$45.91	\$109.15
Standard Deviation	\$77.62	\$55.20	\$38.62	\$21.09	\$42.87	\$49.85	\$49.28	\$51.96	\$28.06	\$13.16	\$24.06	\$190.04
Load Weighted Price **	\$130.45	\$88.33	\$59.03	\$58.49	\$72.67	\$82.33	\$98.61	\$111.42	\$73.81	\$49.76	\$47.58	\$115.16
<u>REAL TIME LBMP</u>												
Price *	\$130.43	\$83.85	\$57.00	\$54.45	\$65.07	\$74.01	\$90.23	\$105.61	\$71.11	\$49.26	\$48.62	\$114.54
Standard Deviation	\$93.35	\$57.99	\$44.52	\$20.46	\$33.01	\$41.27	\$54.20	\$69.83	\$30.72	\$17.89	\$37.20	\$216.43
Load Weighted Price **	\$133.98	\$86.99	\$58.64	\$55.57	\$68.60	\$77.40	\$96.79	\$113.16	\$74.57	\$50.30	\$50.78	\$122.49
Average Daily Energy Sendout/Month GWh	451	429	390	359	372	422	509	514	411	359	382	421

* Average zonal load weighted prices.

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

NYISO Monthly Average Internal LBMPs 2022 - 2023

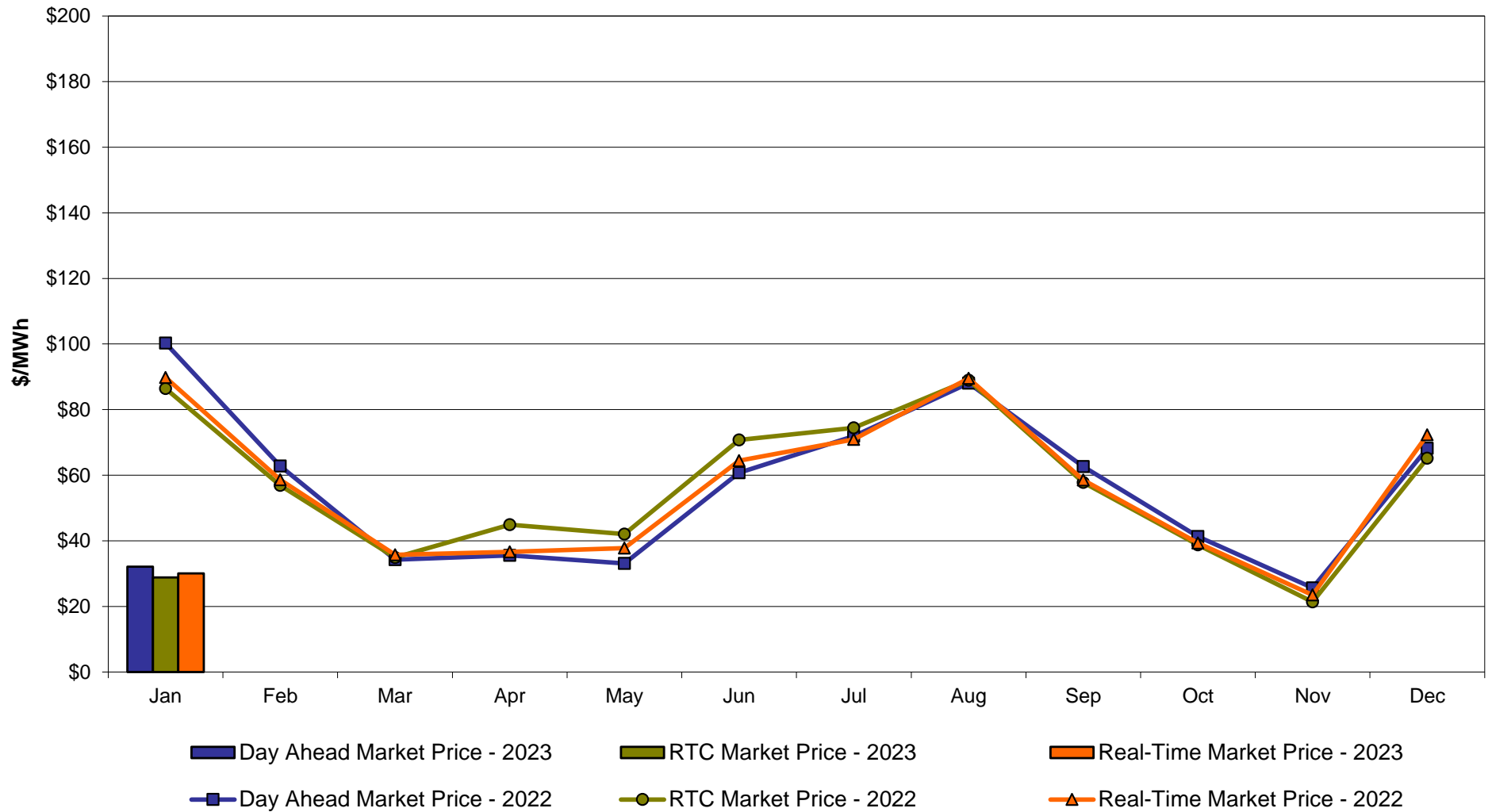


January 2023 Zonal LBMP Statistics for NYISO (\$/MWh)

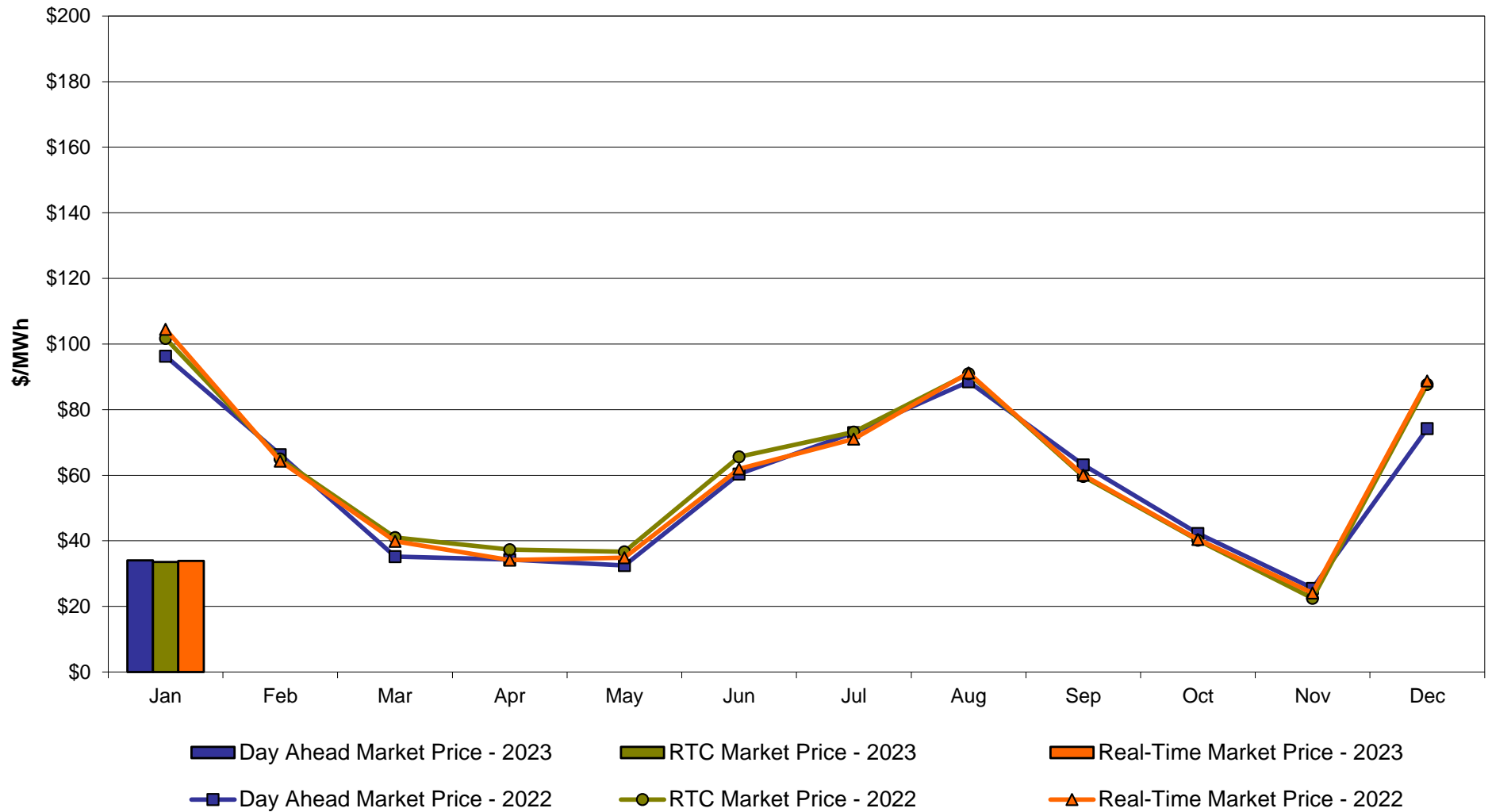
	<u>WEST Zone A</u>	<u>GENESEE Zone B</u>	<u>NORTH Zone D</u>	<u>CENTRAL Zone C</u>	<u>MOHAWK VALLEY Zone E</u>	<u>CAPITAL Zone F</u>	<u>HUDSON VALLEY Zone G</u>	<u>MILLWOOD Zone H</u>	<u>DUNWOODIE Zone I</u>	<u>NEW YORK CITY Zone J</u>	<u>LONG ISLAND Zone K</u>
<u>DAY AHEAD LBMP</u>											
Unweighted Price *	32.11	32.92	31.41	34.05	35.03	45.67	42.25	42.61	42.65	42.77	52.14
Standard Deviation	7.94	7.84	8.57	7.99	8.56	14.92	11.07	11.16	11.12	11.09	15.95
<u>RTC LBMP</u>											
Unweighted Price *	28.86	31.56	30.44	33.58	33.61	42.00	39.40	39.68	39.69	39.75	50.76
Standard Deviation	28.08	28.29	29.89	29.22	30.30	32.68	31.34	31.59	31.52	31.63	58.05
<u>REAL TIME LBMP</u>											
Unweighted Price *	30.11	32.19	30.93	33.89	34.22	43.63	40.27	40.54	40.55	40.56	49.29
Standard Deviation	41.64	42.11	43.92	43.13	44.80	50.86	45.82	46.13	46.01	46.17	57.86
	<u>ONTARIO IESO Zone O</u>	<u>HYDRO QUEBEC (Wheel) Zone M</u>	<u>HYDRO QUEBEC (Import/Export) Zone M</u>	<u>PJM Zone P</u>	<u>NEW ENGLAND Zone N</u>	<u>CROSS SOUND CABLE Controllable Line</u>	<u>NORTHPORT- NORWALK Controllable Line</u>	<u>NEPTUNE Controllable Line</u>	<u>LINDEN VFT Controllable Line</u>	<u>HUDSON Controllable Line</u>	<u>Dennison Controllable Line</u>
<u>DAY AHEAD LBMP</u>											
Unweighted Price *	31.47	30.81	30.81	36.97	45.67	51.50	50.06	47.52	42.25	42.57	30.83
Standard Deviation	7.66	7.17	7.17	8.56	12.93	15.85	14.67	13.22	10.46	11.05	8.22
<u>RTC LBMP</u>											
Unweighted Price *	27.26	29.64	29.64	33.45	47.11	48.85	48.25	44.43	38.07	38.50	28.92
Standard Deviation	9.67	10.25	10.25	9.81	26.06	48.12	47.98	32.17	11.85	12.33	11.06
<u>REAL TIME LBMP</u>											
Unweighted Price *	31.29	29.74	29.74	33.84	44.24	48.34	46.76	43.52	37.30	38.97	28.98
Standard Deviation	40.82	15.39	15.39	14.85	25.05	55.70	54.98	29.67	31.55	17.75	43.61

* Straight LBMP averages

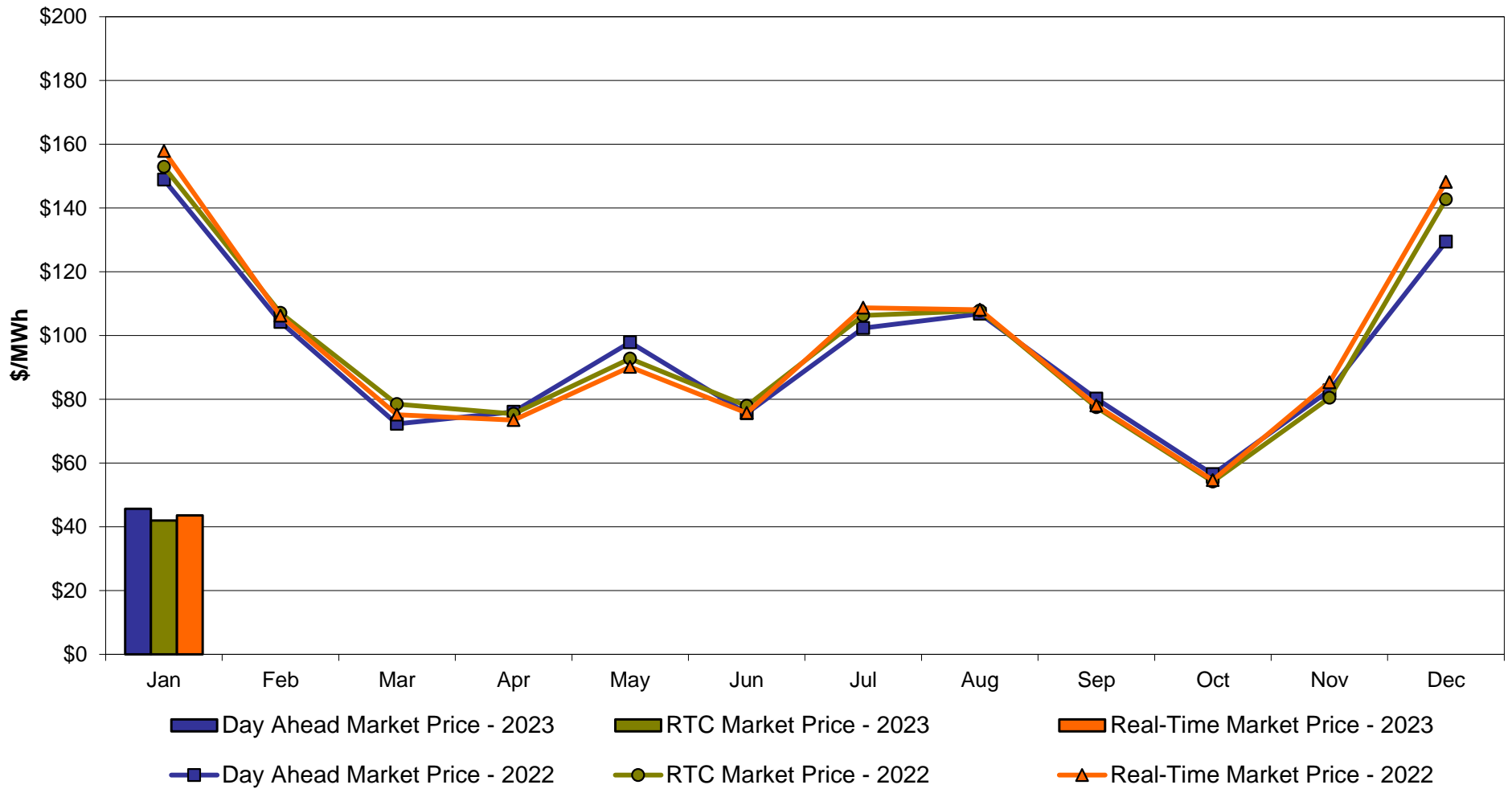
West Zone A Monthly Average LBMP Prices 2022 - 2023



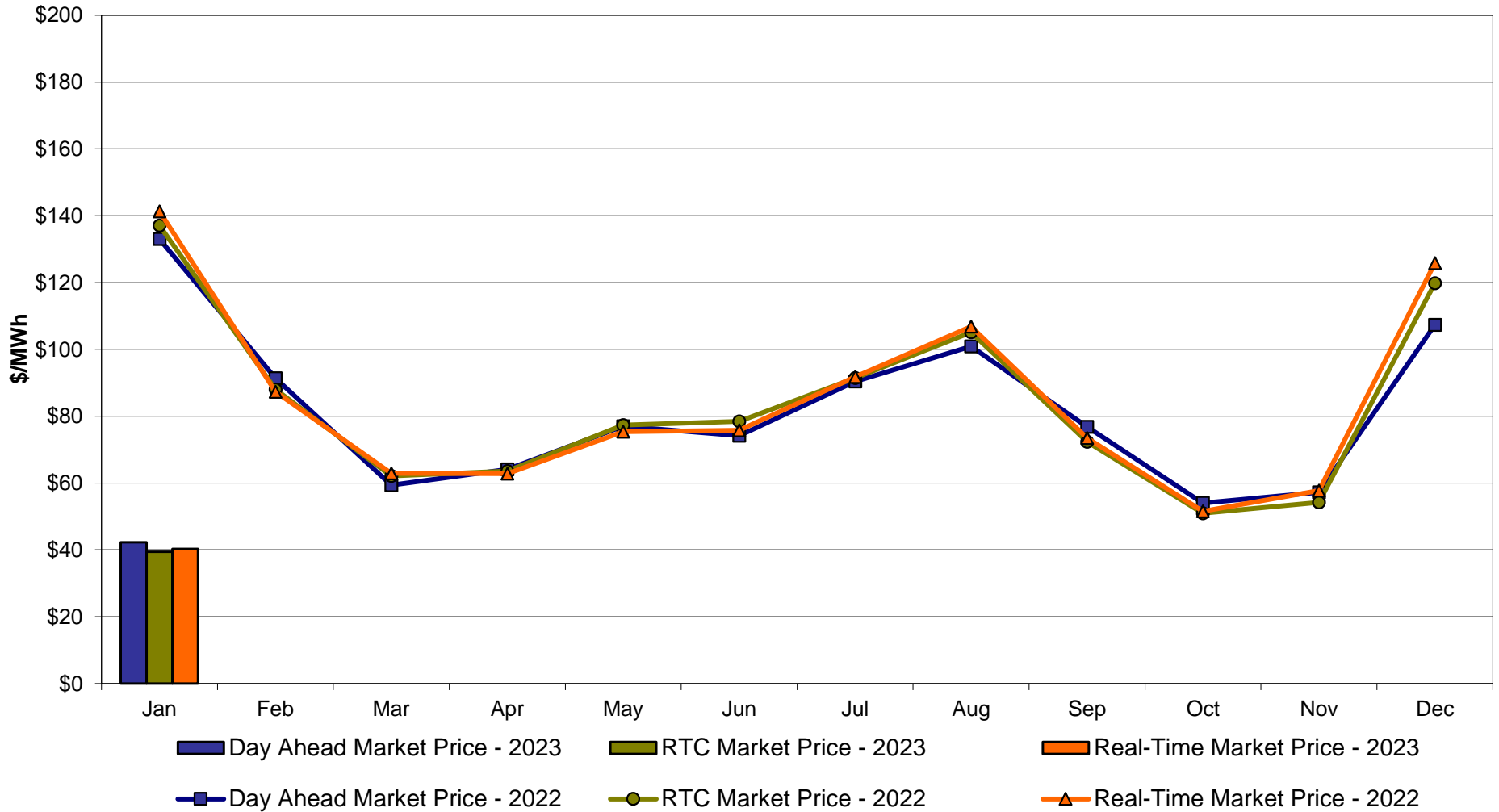
Central Zone C Monthly Average LBMP Prices 2022 - 2023



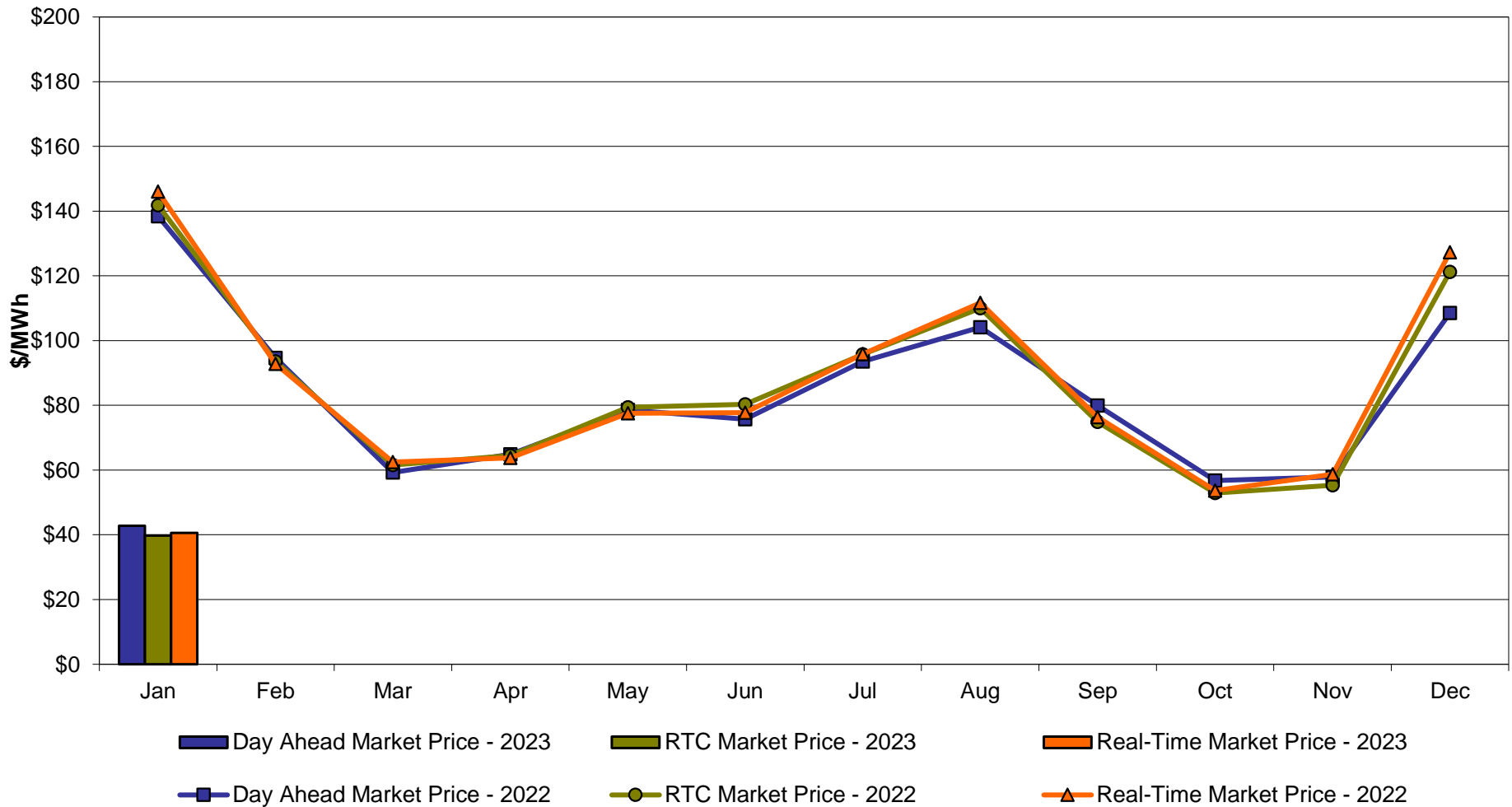
Capital Zone F **Monthly Average LBMP Prices 2022 - 2023**



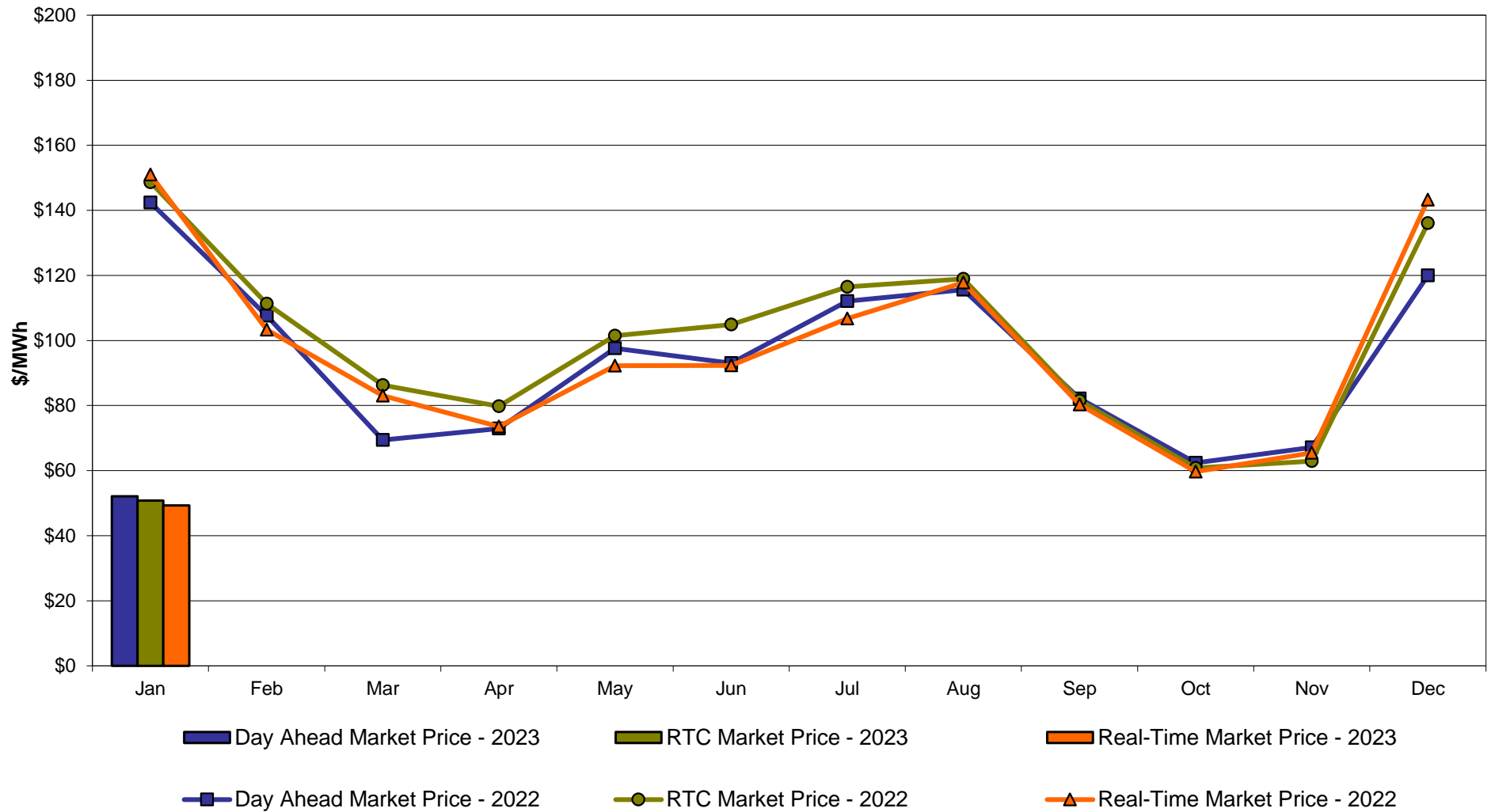
Hudson Valley Zone G Monthly Average LBMP Prices 2022 - 2023

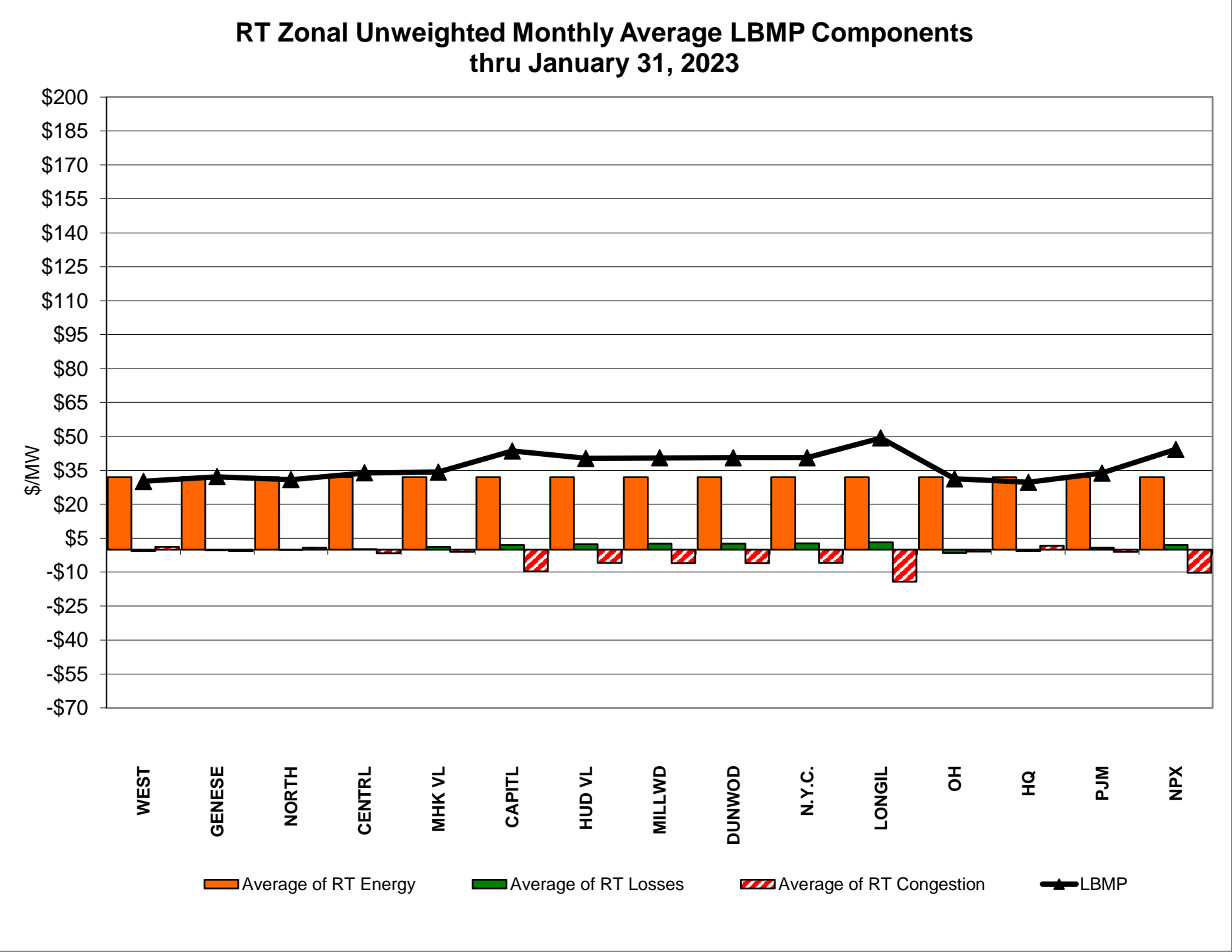
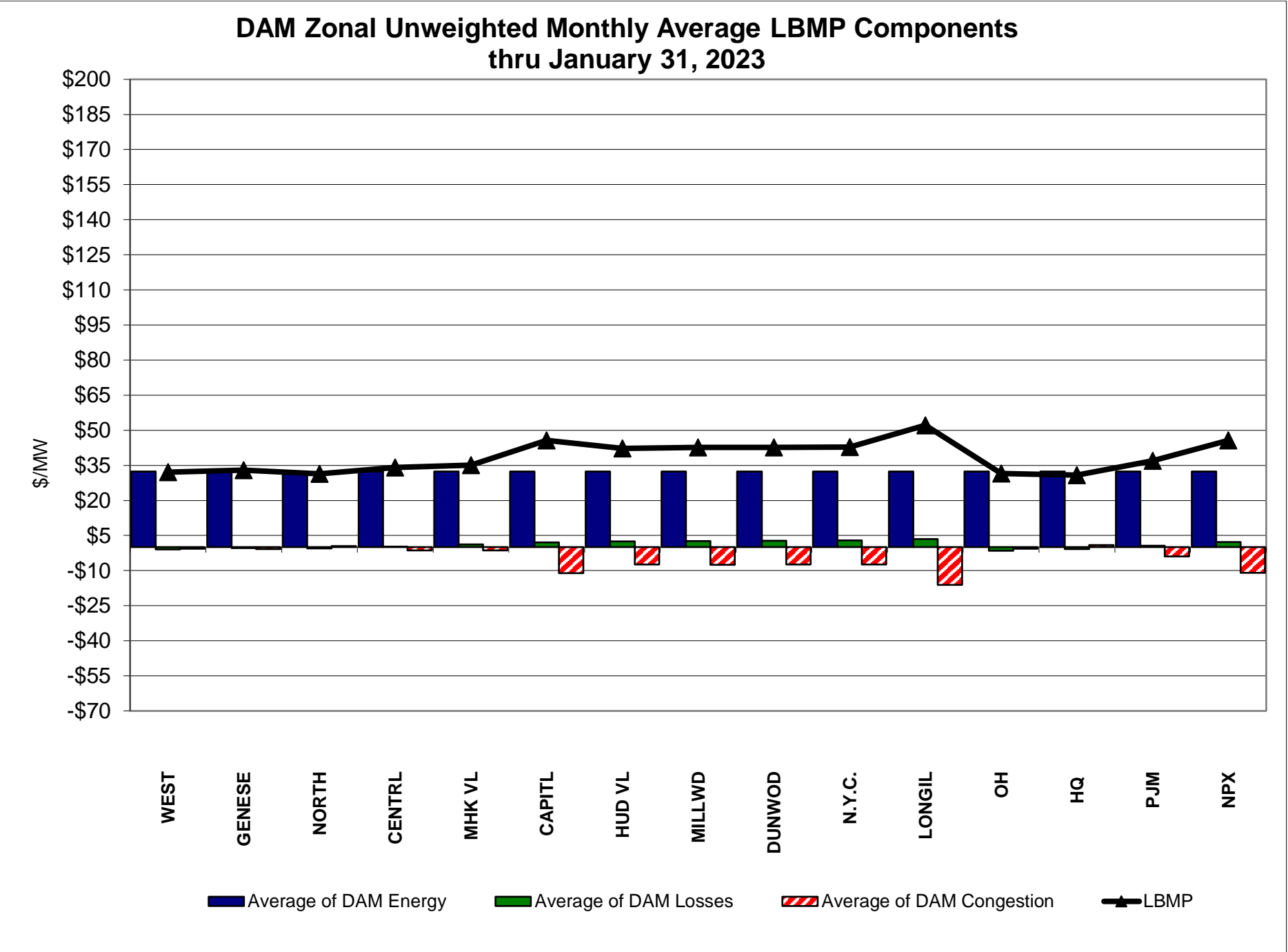


NYC Zone J Monthly Average LBMP Prices 2022 - 2023

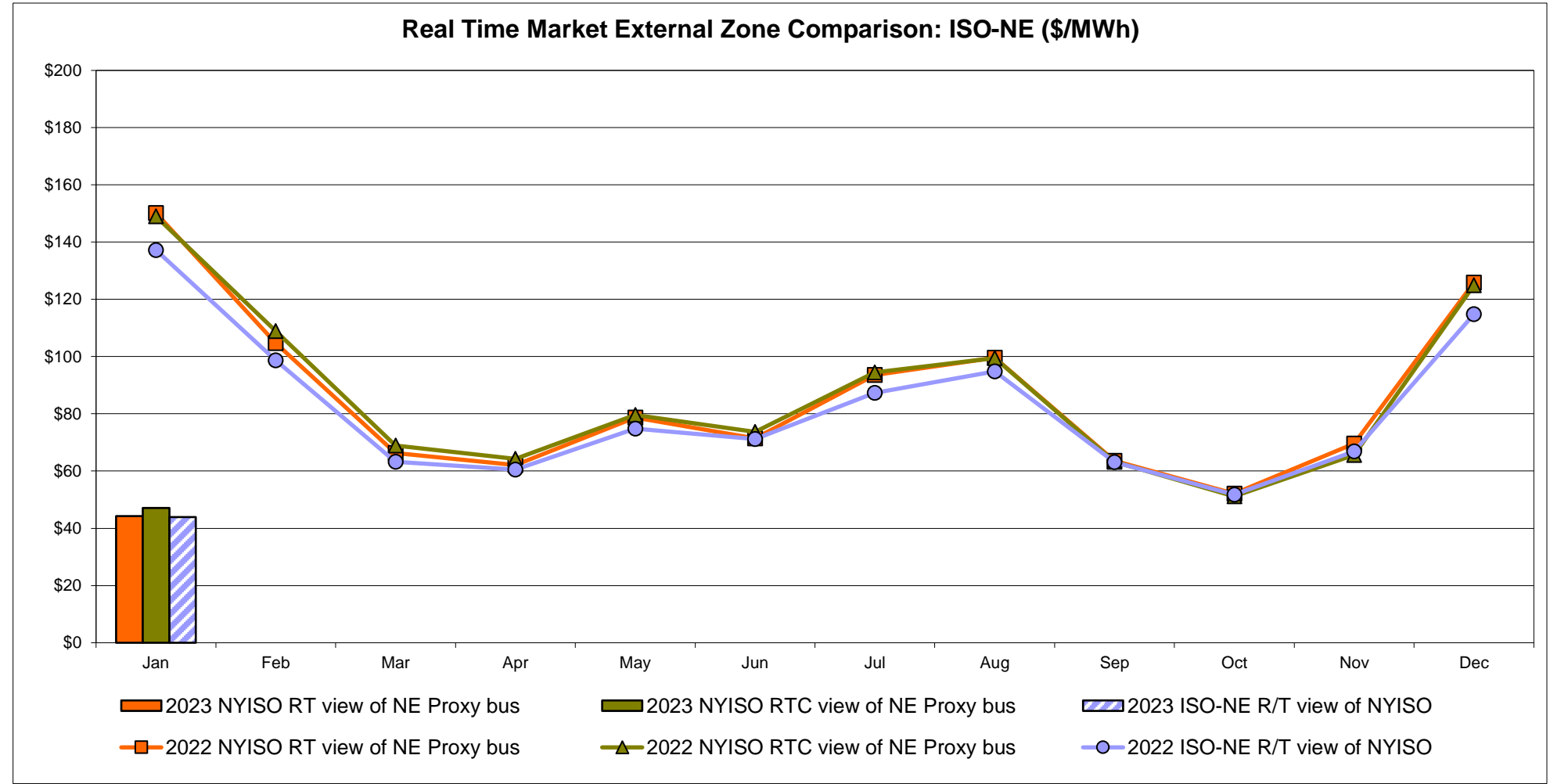
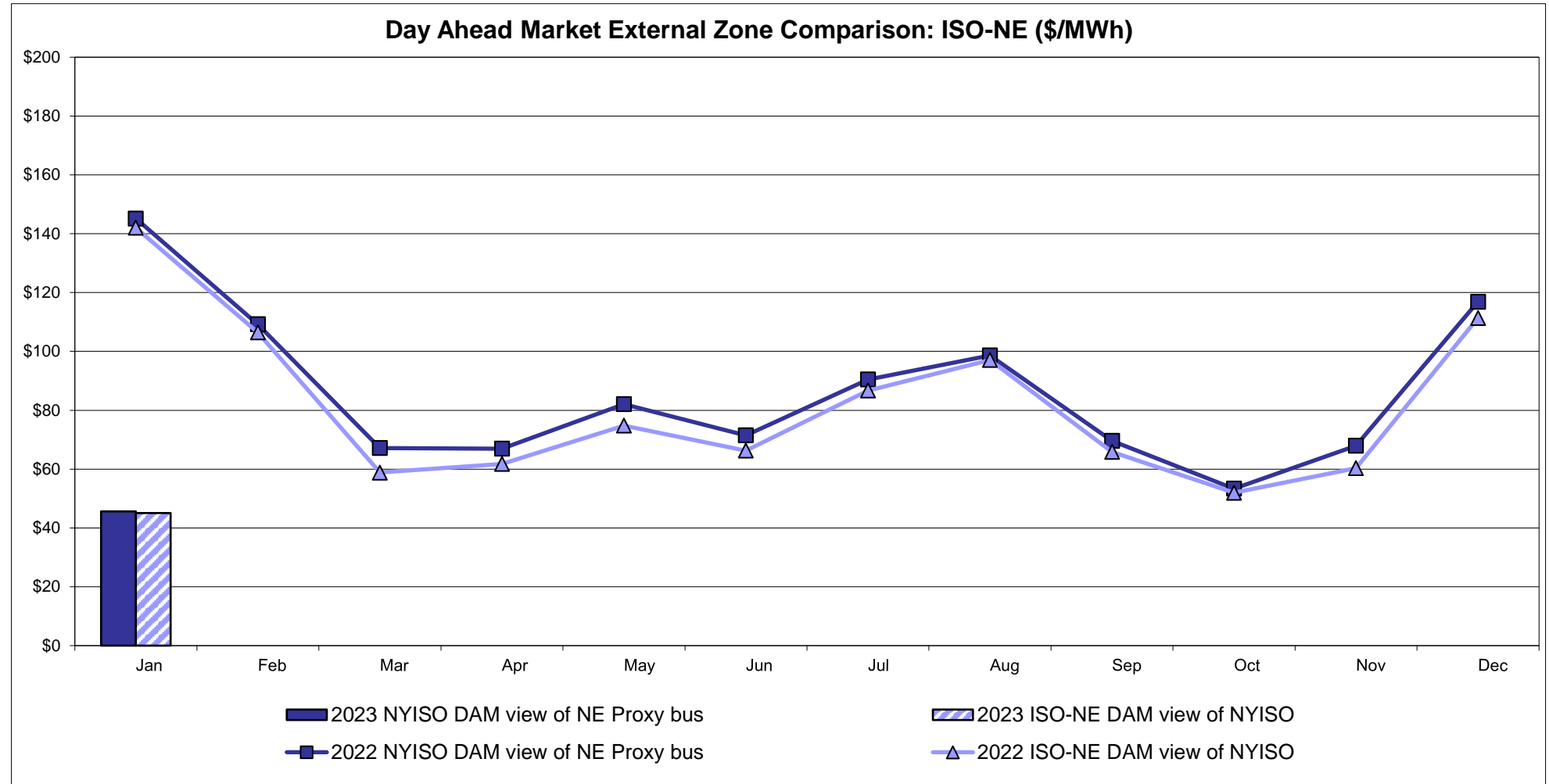


Long Island Zone K Monthly Average LBMP Prices 2022 - 2023



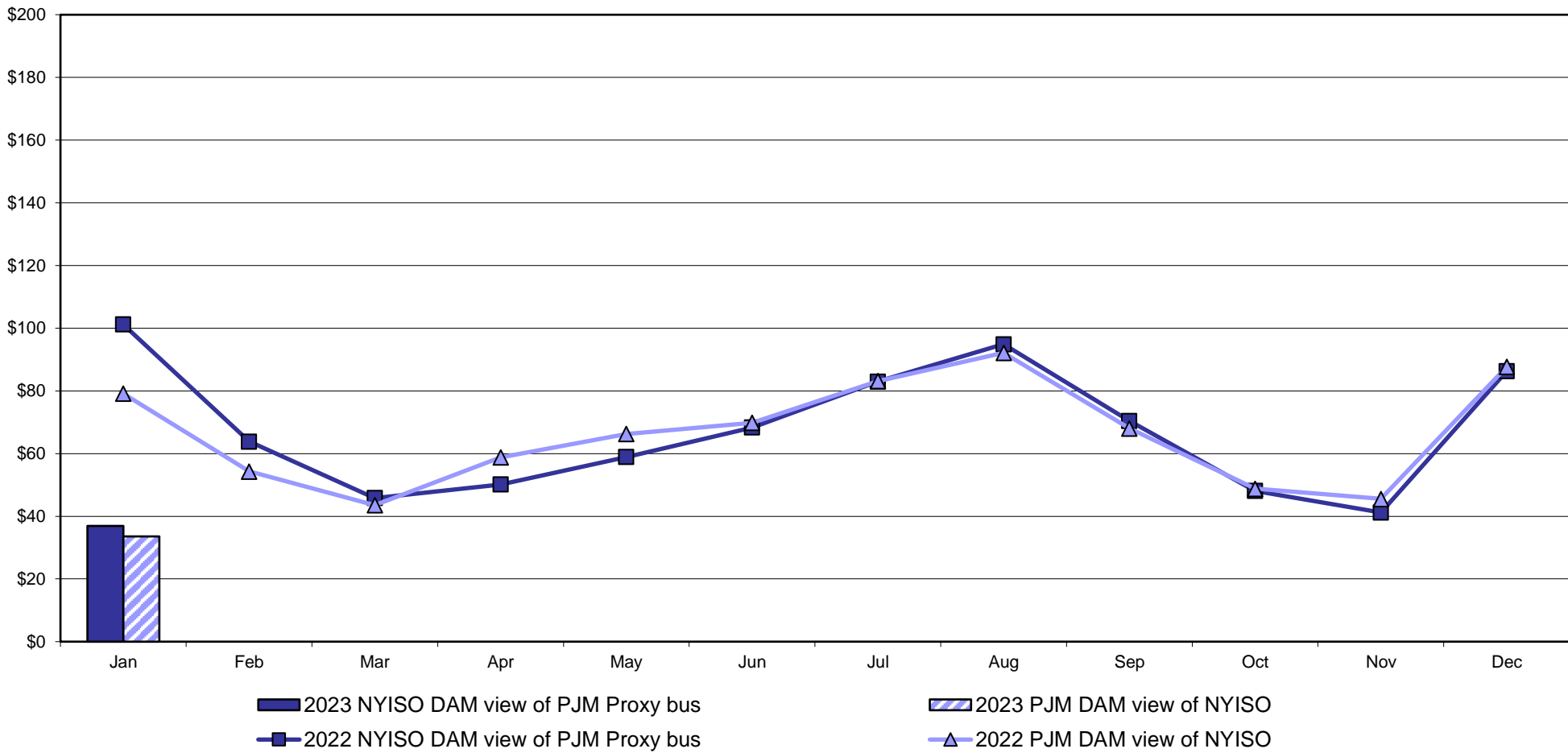


External Comparison ISO-New England

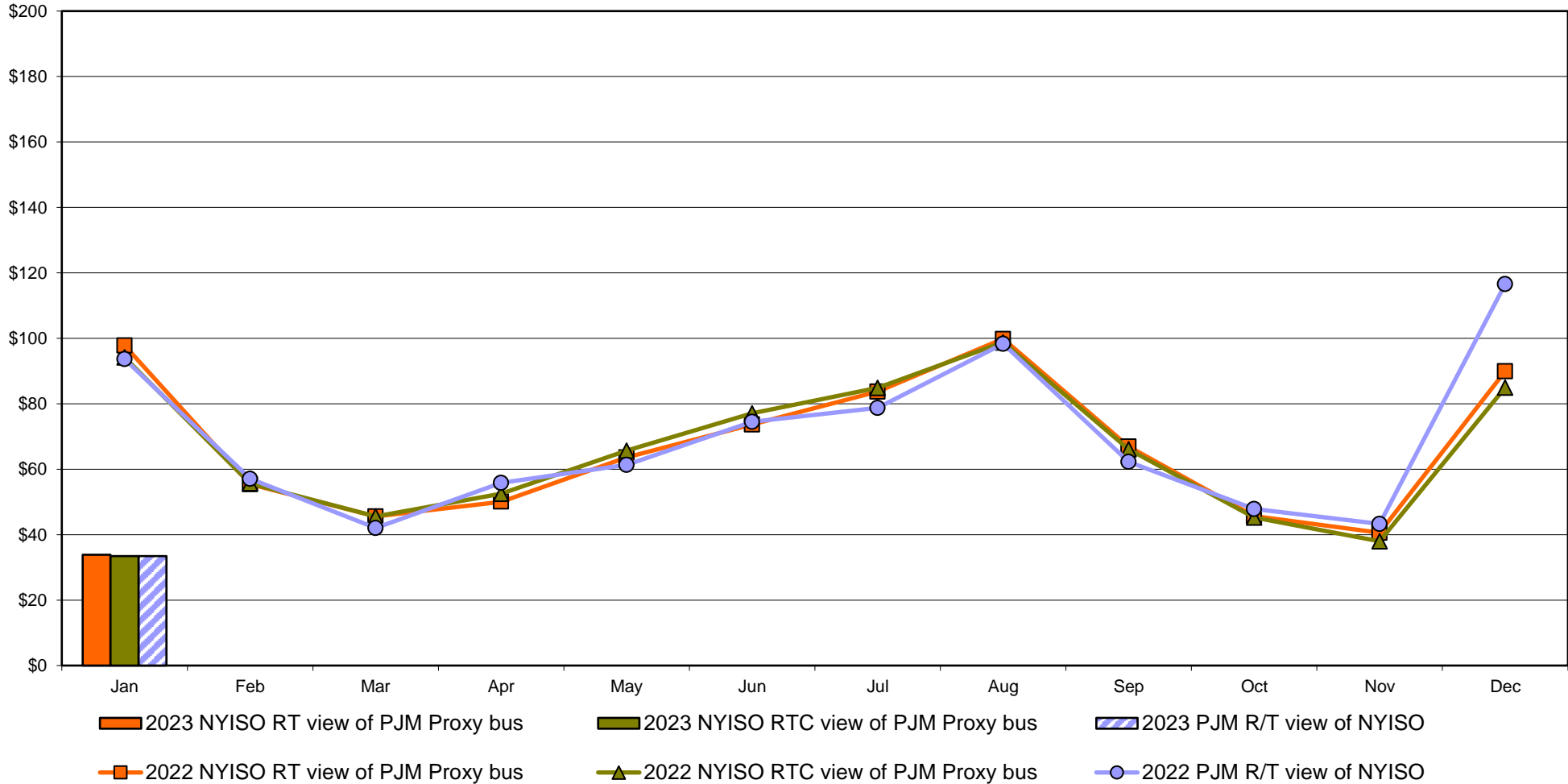


External Comparison PJM

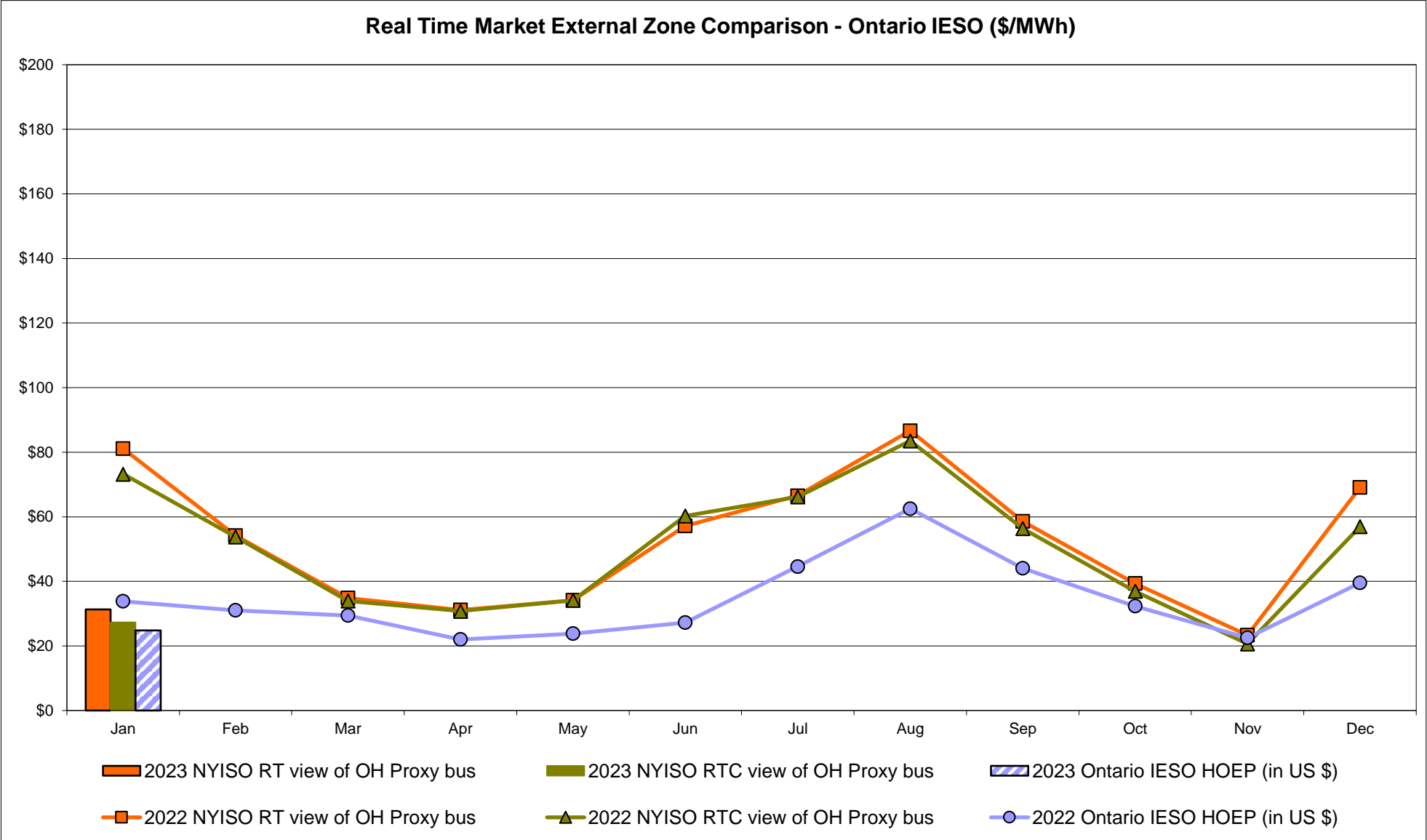
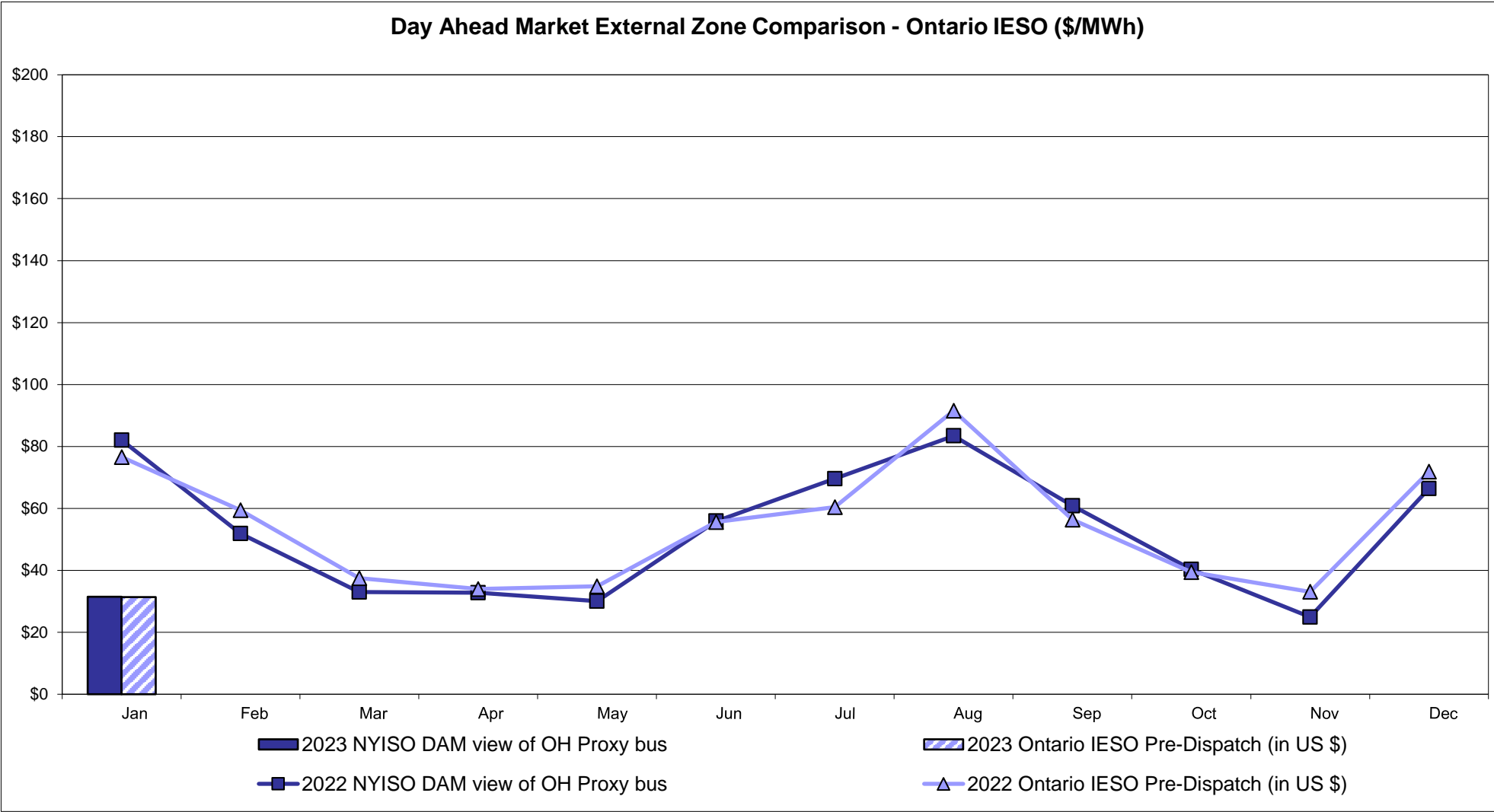
Day Ahead Market External Zone Comparison - PJM (\$/MWh)



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

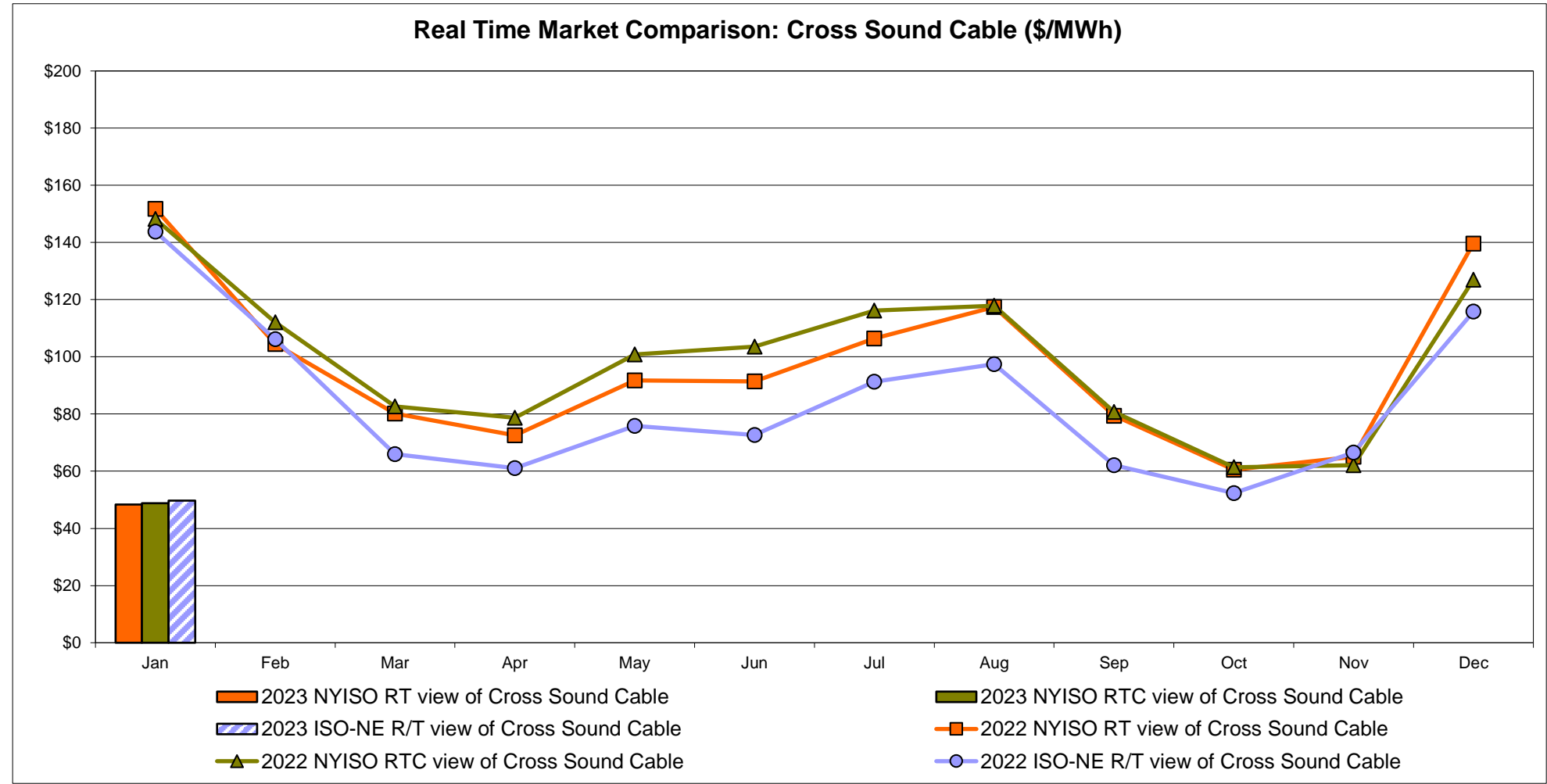
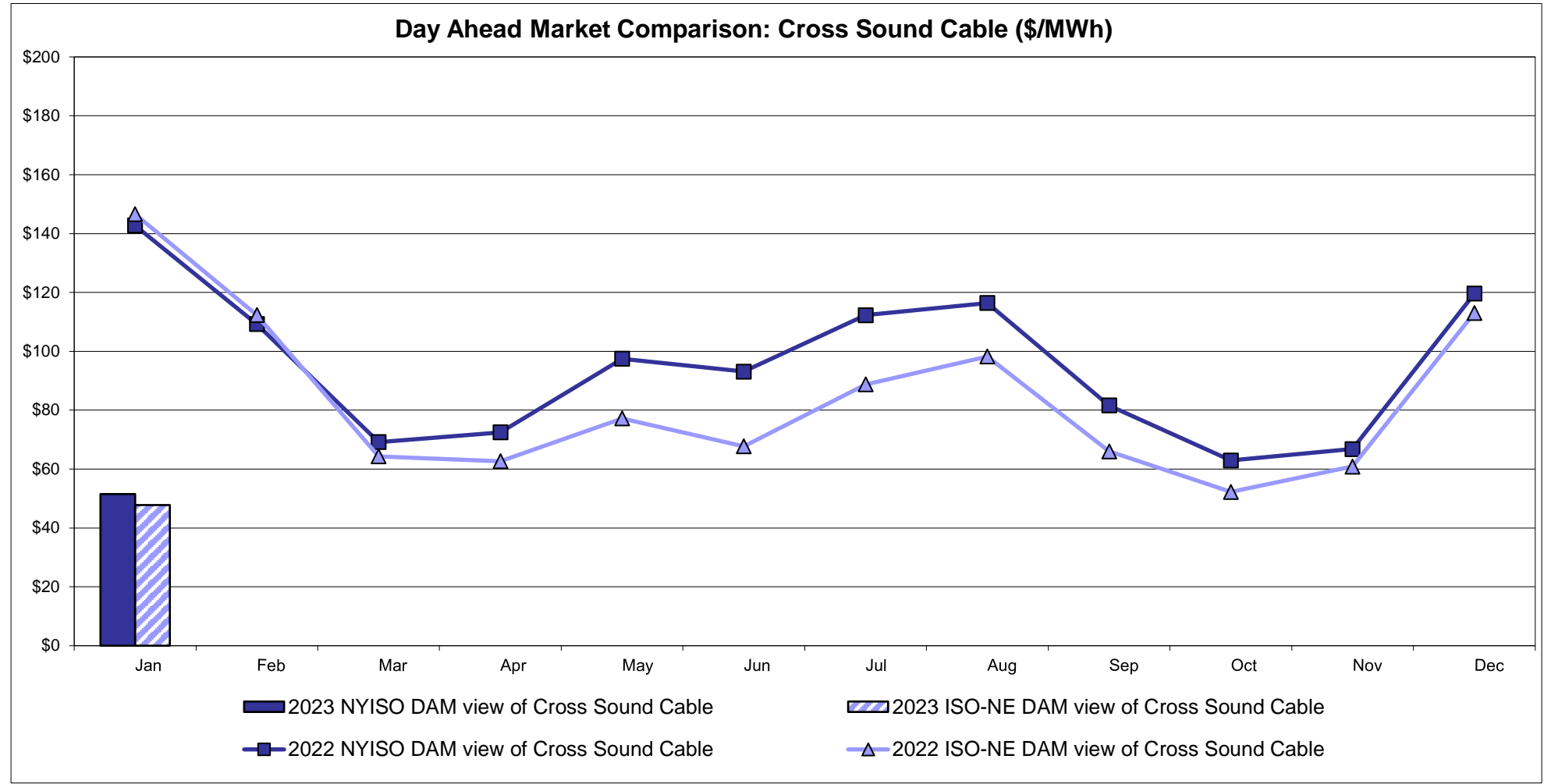


External Comparison Ontario IESO



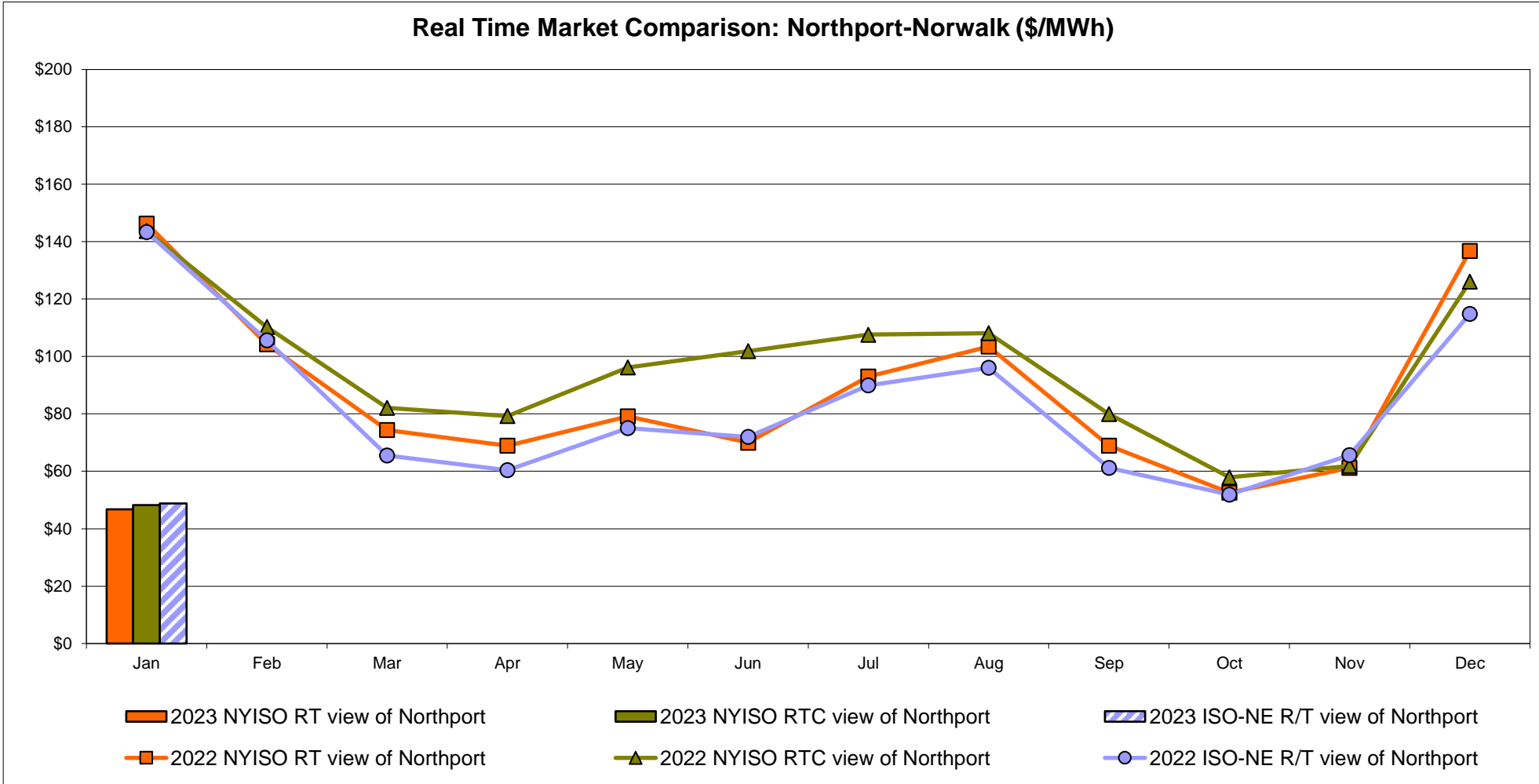
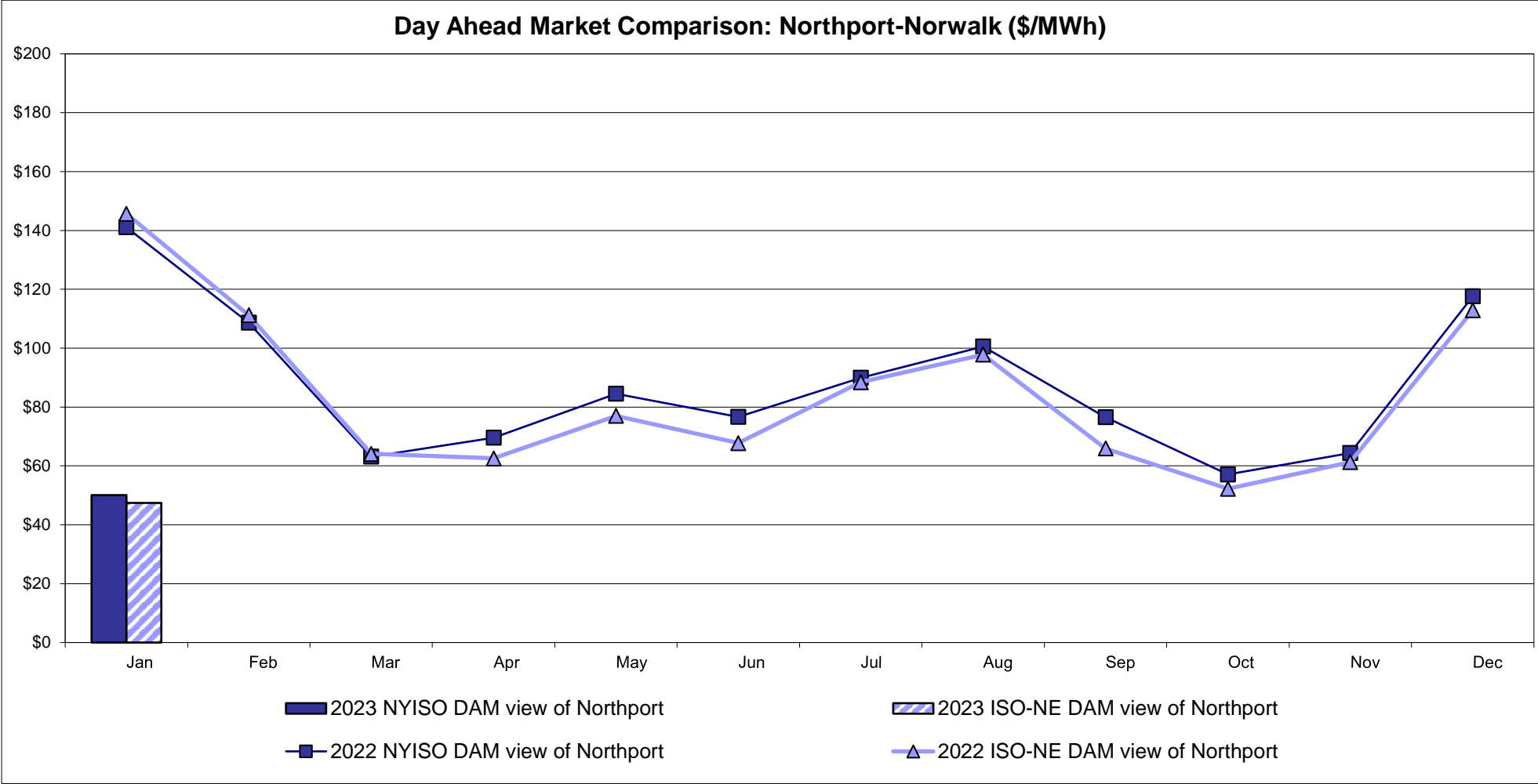
Notes: Exchange factor used for January 2023 was 0.745045447772314 to US
HOEP: Hourly Ontario Energy Price
Pre-Dispatch: Projected Energy Price

External Controllable Line: Cross Sound Cable (New England)



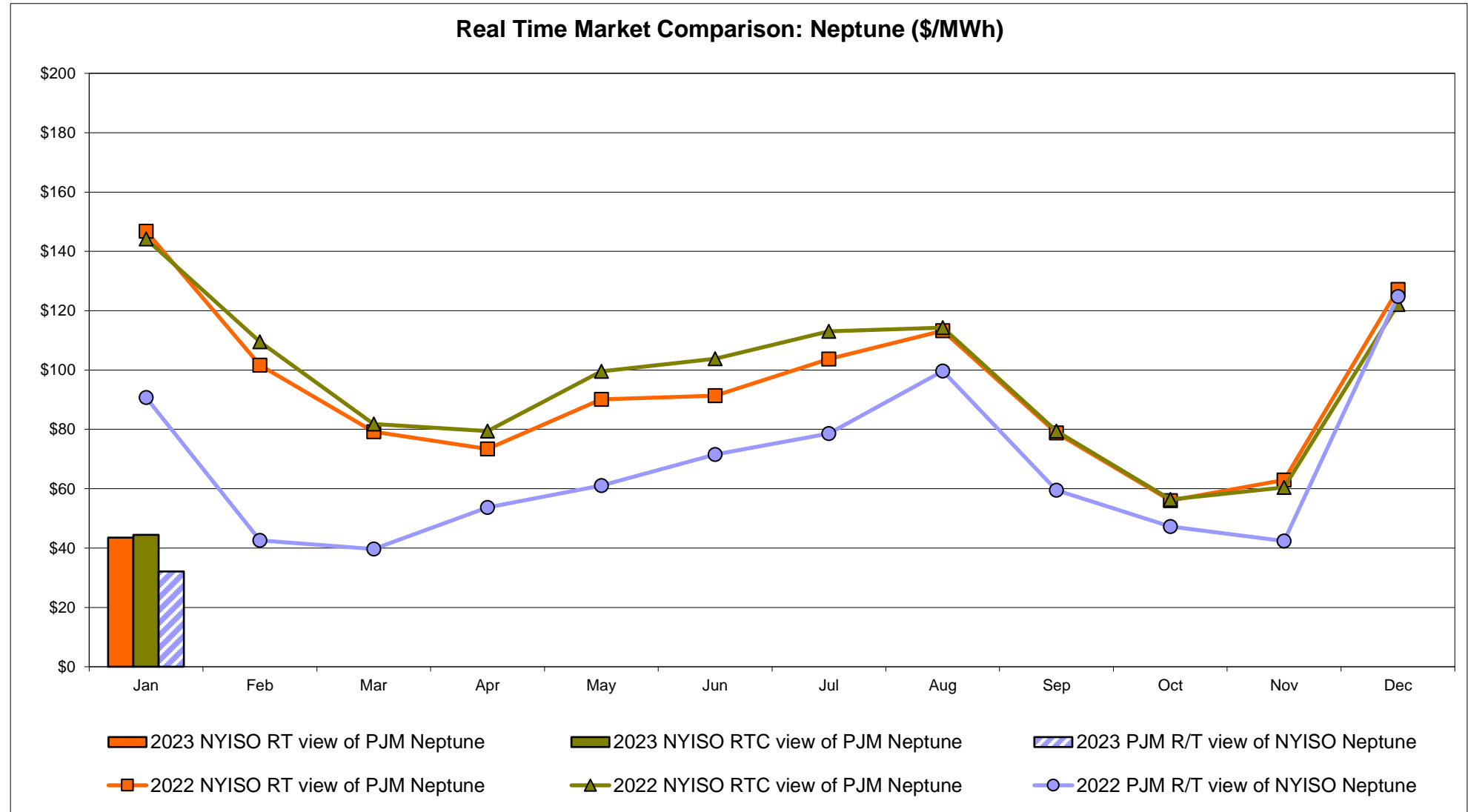
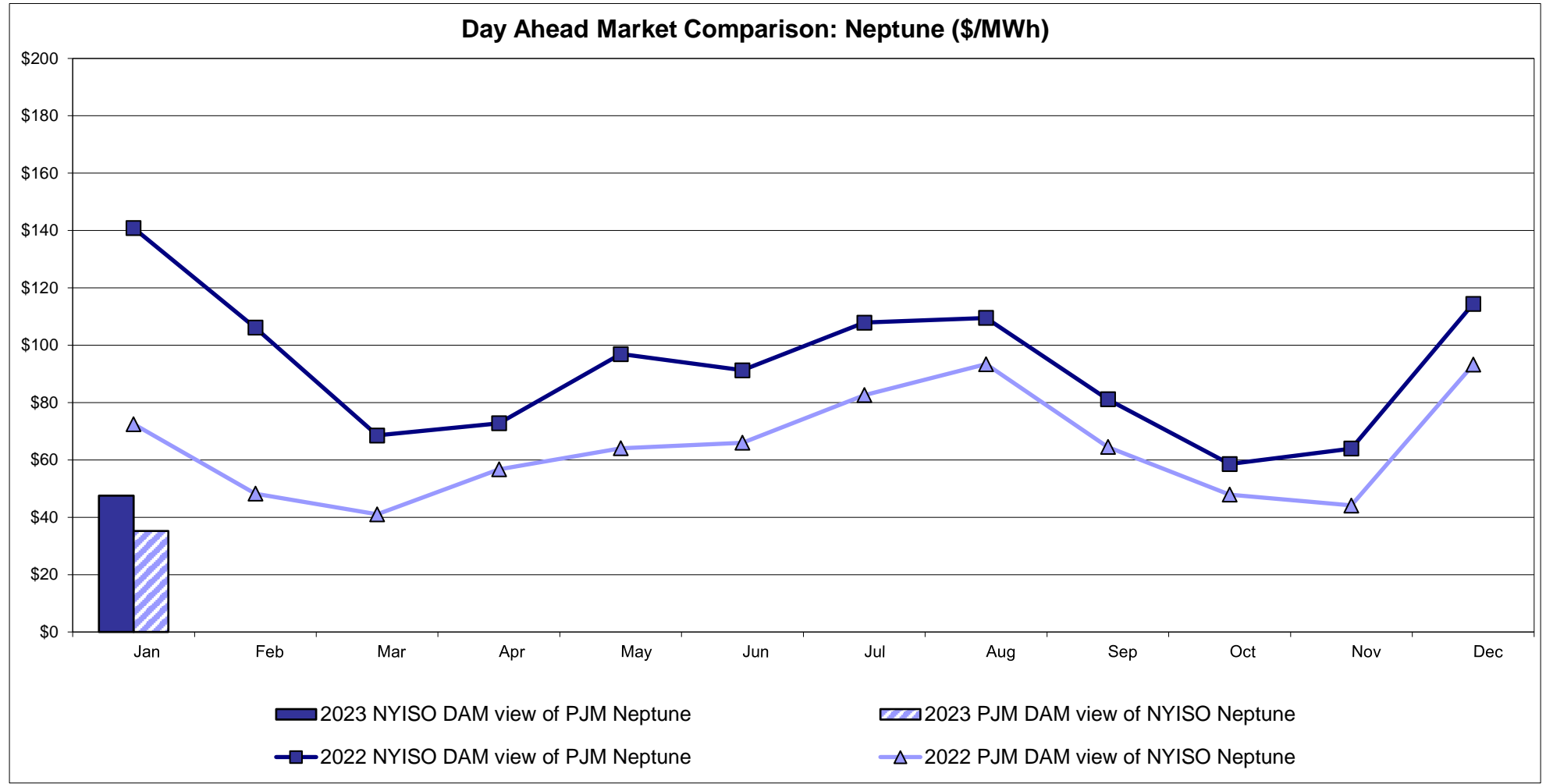
Note:
ISO-NE Forecast is an advisory posting @ 18:00 day before.
The DAM and R/T prices at the Shorham 13899 interface are used for ISO-NE.
The DAM and R/T prices at the CSC interface are used for NYISO.

External Controllable Line: Northport - Norwalk (New England)

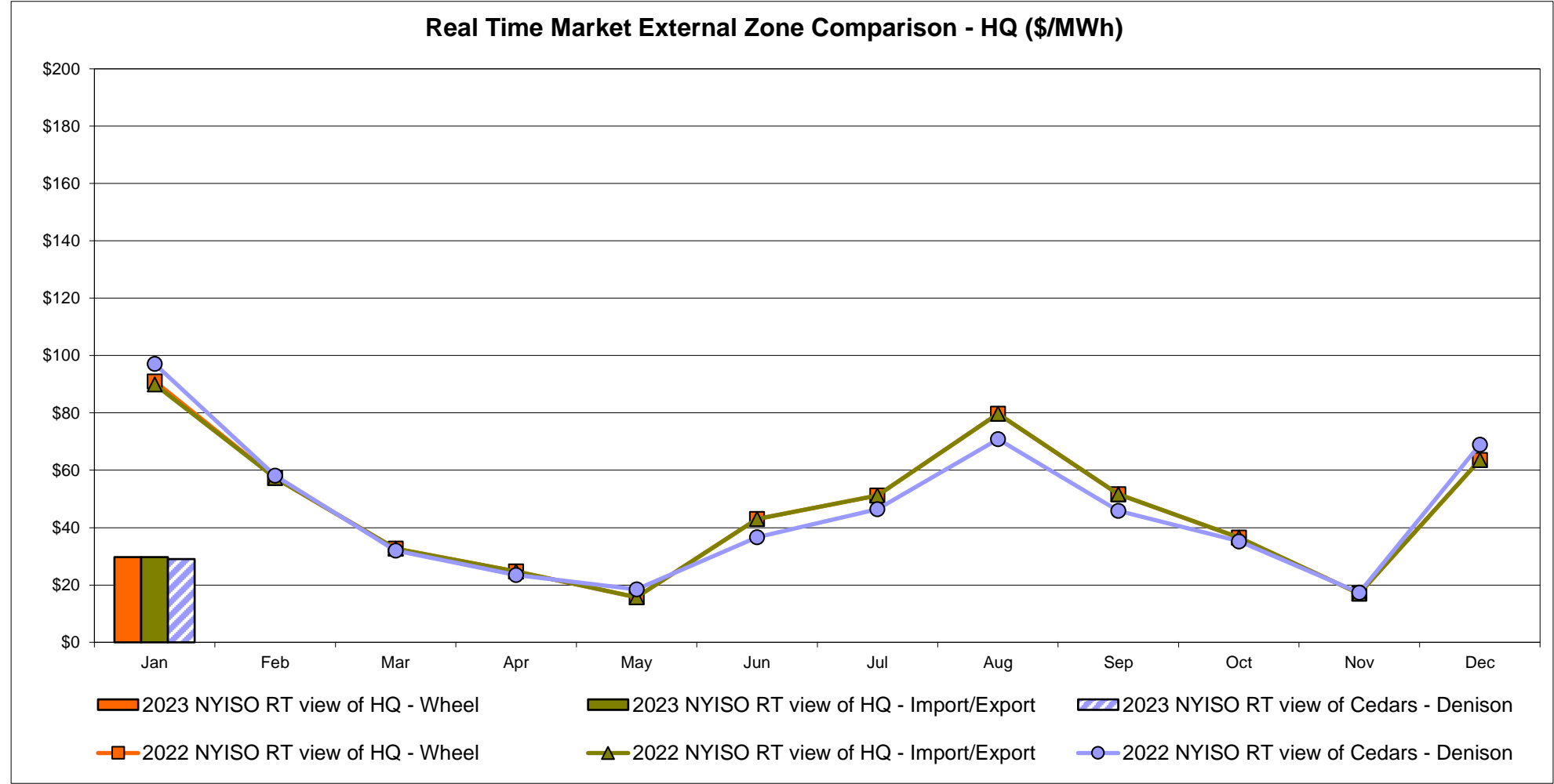
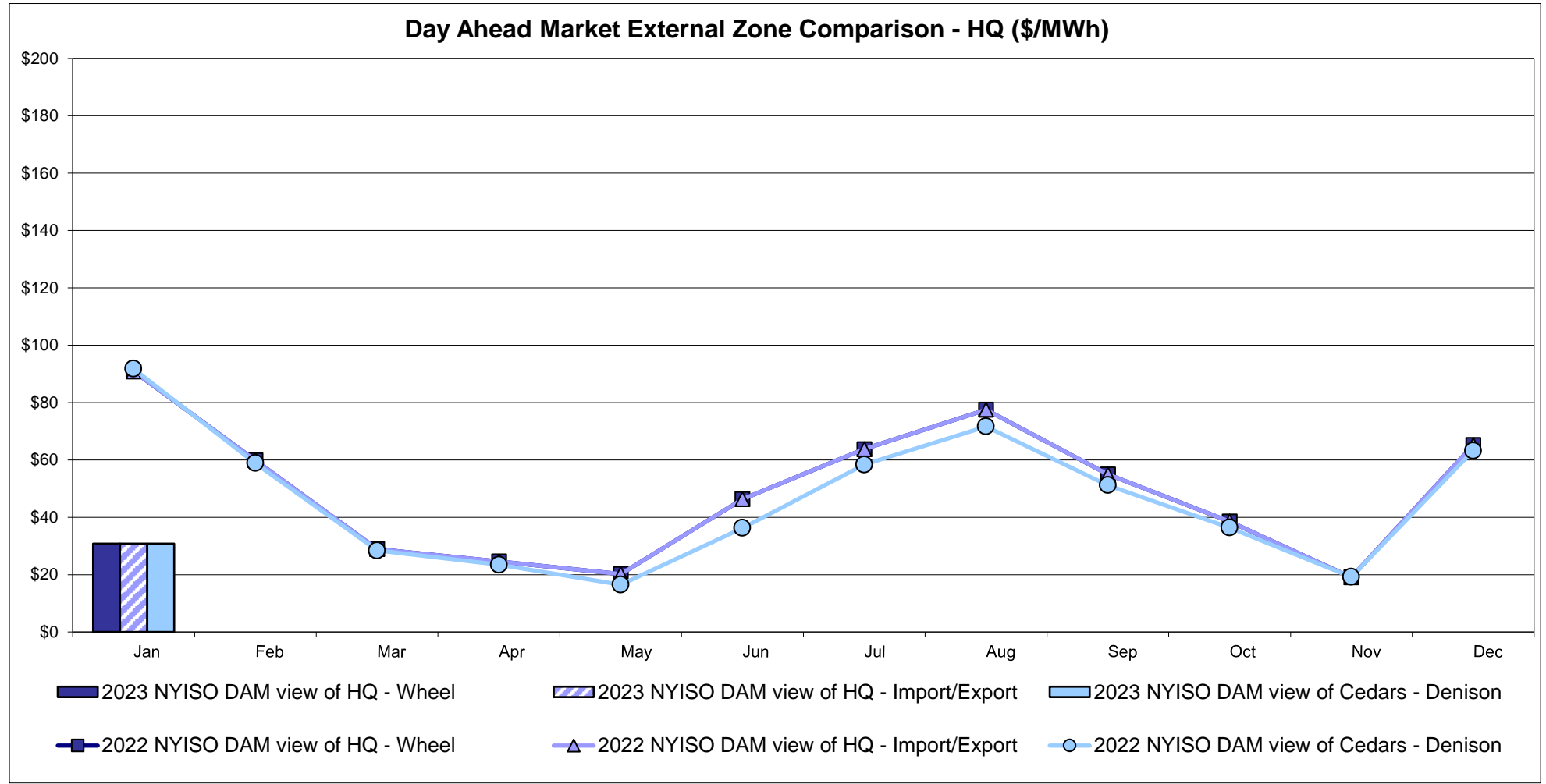


Note:
ISO-NE Forecast is an advisory posting @ 18:00 day before.
The DAM and R/T prices at the Northport 138 interface are used for ISO-NE.
The DAM and R/T prices at the 1385 interface are used for NYISO.

External Controllable Line: Neptune (PJM)

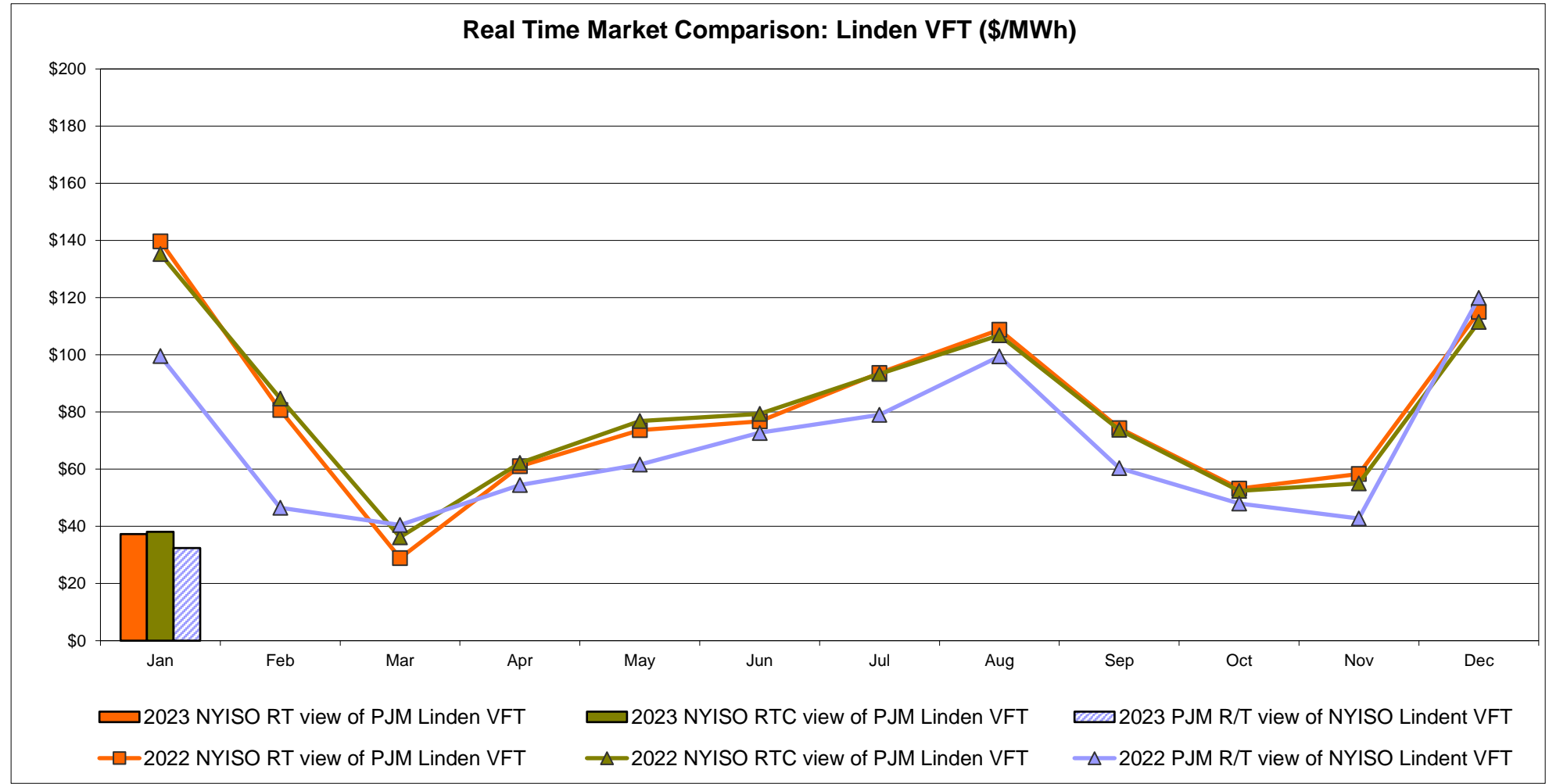
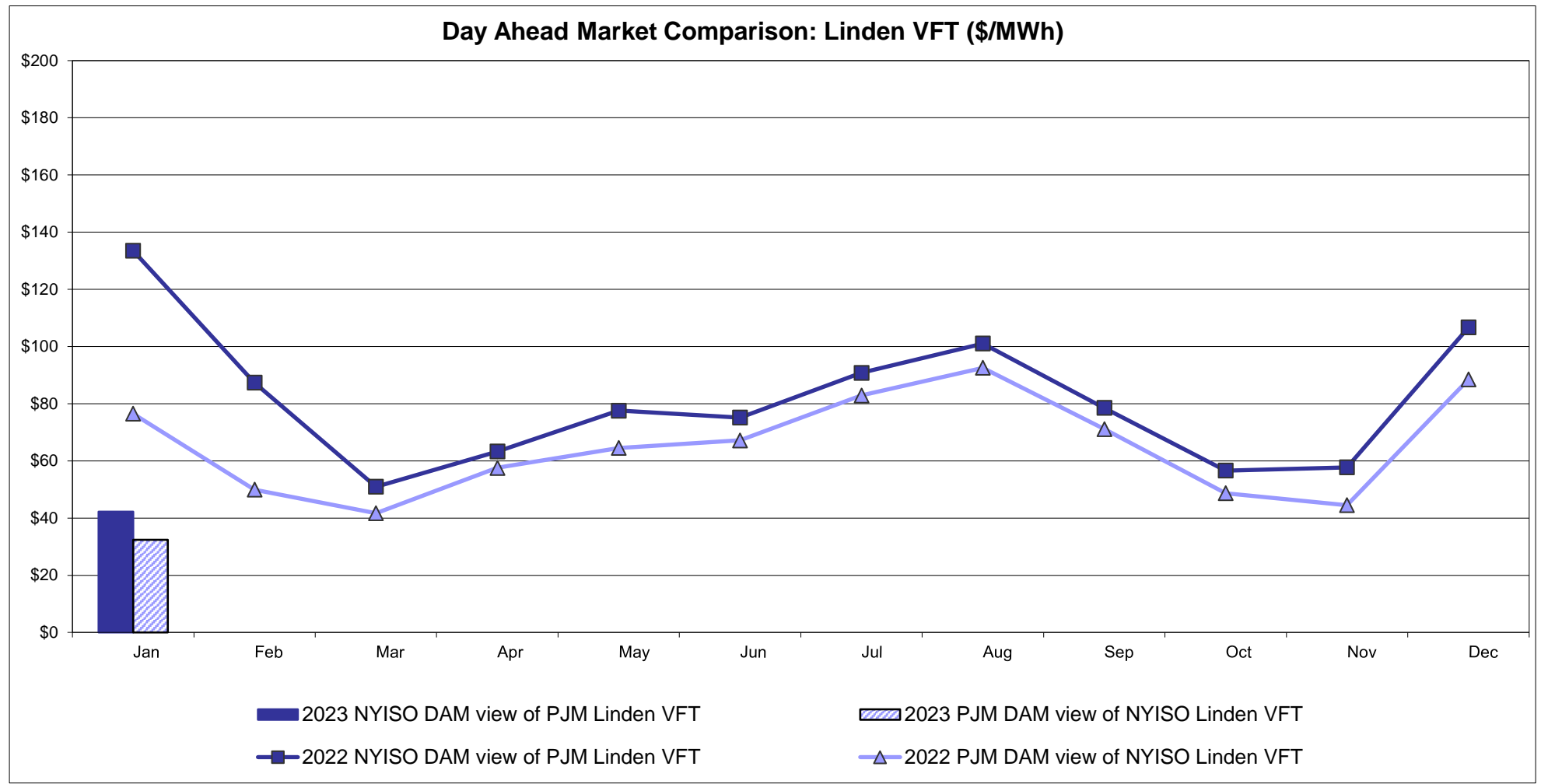


External Comparison Hydro-Quebec

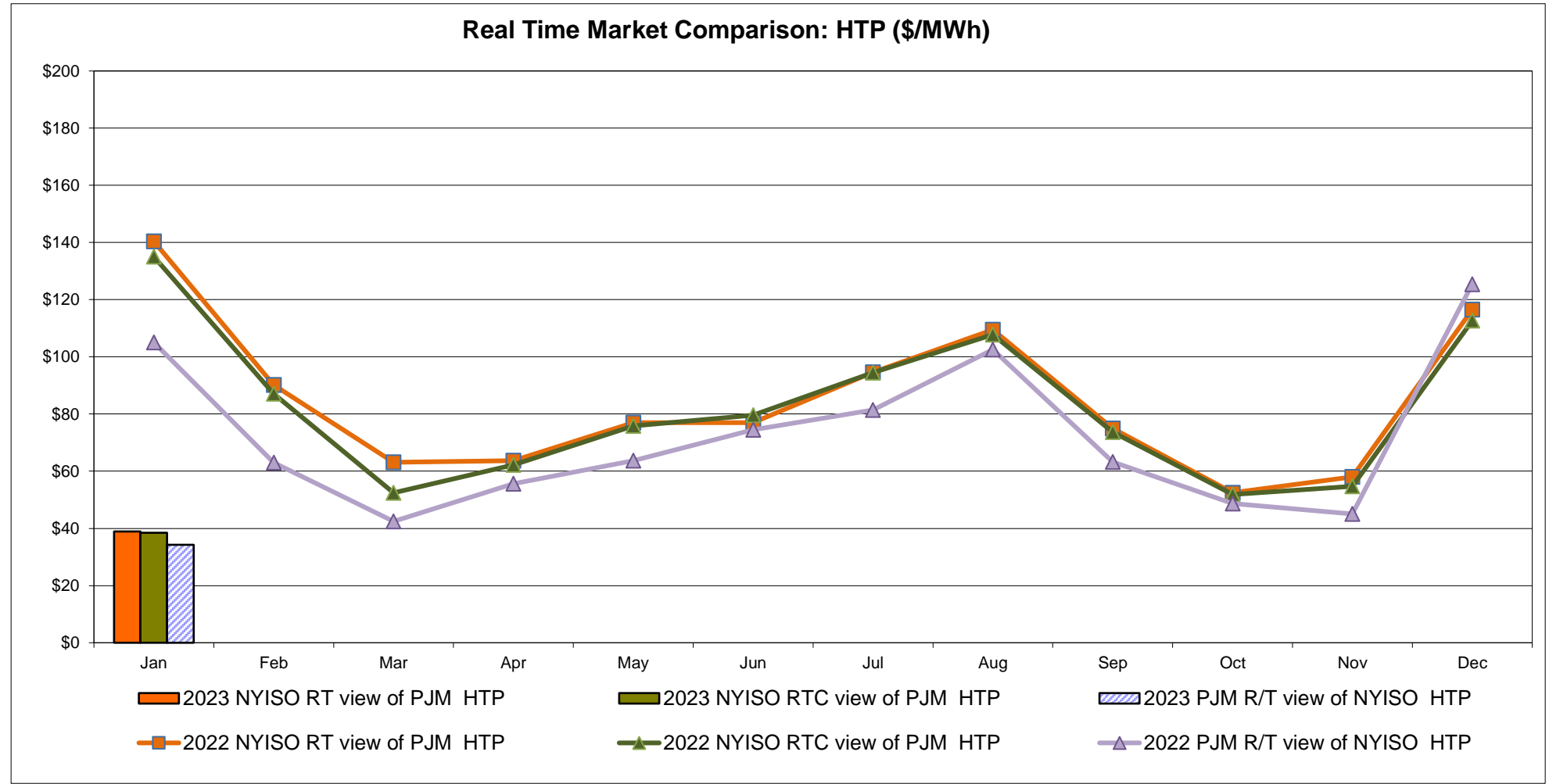
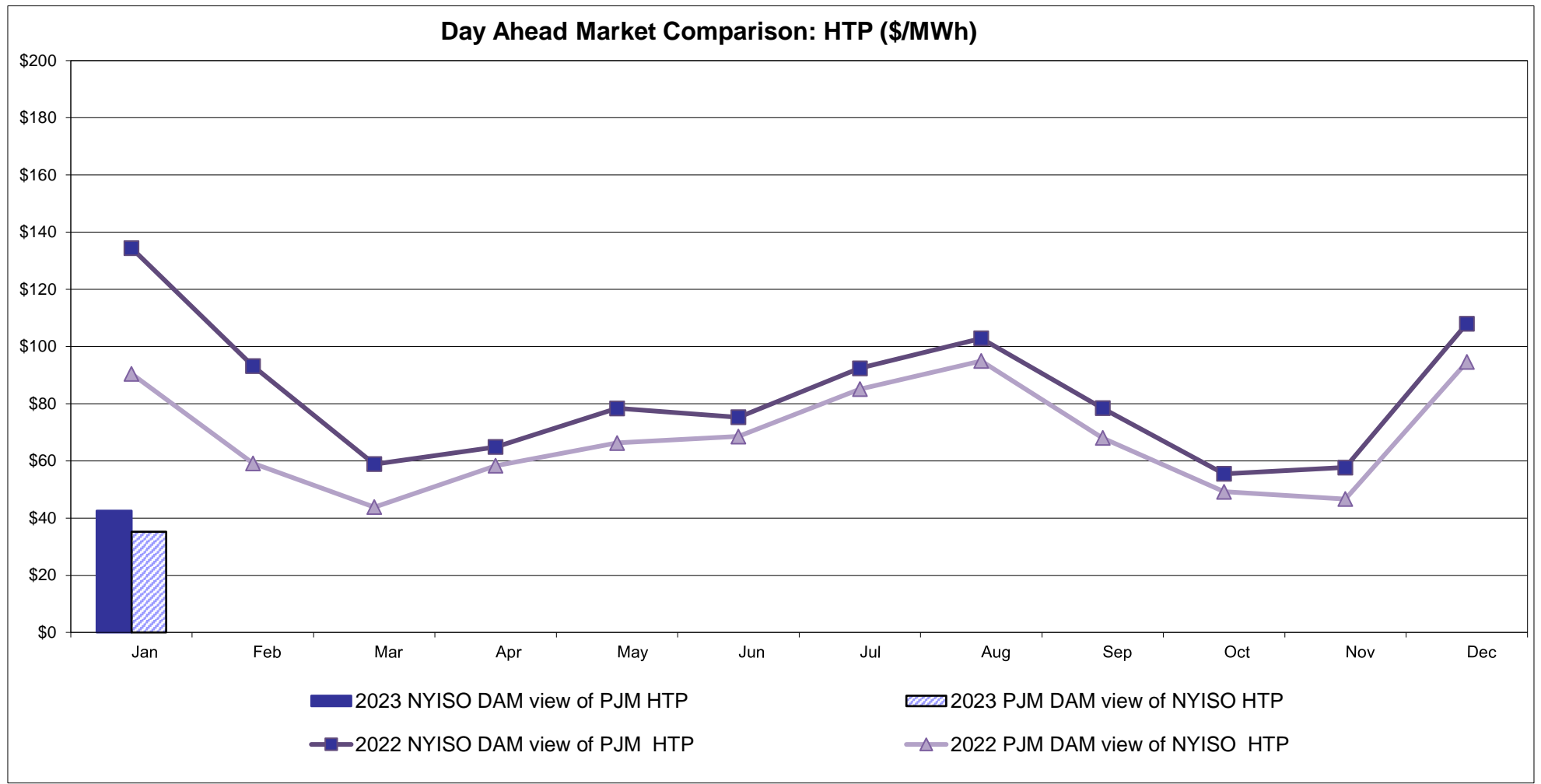


Note:
Hydro-Quebec Prices are unavailable.

External Controllable Line: Linden VFT (PJM)



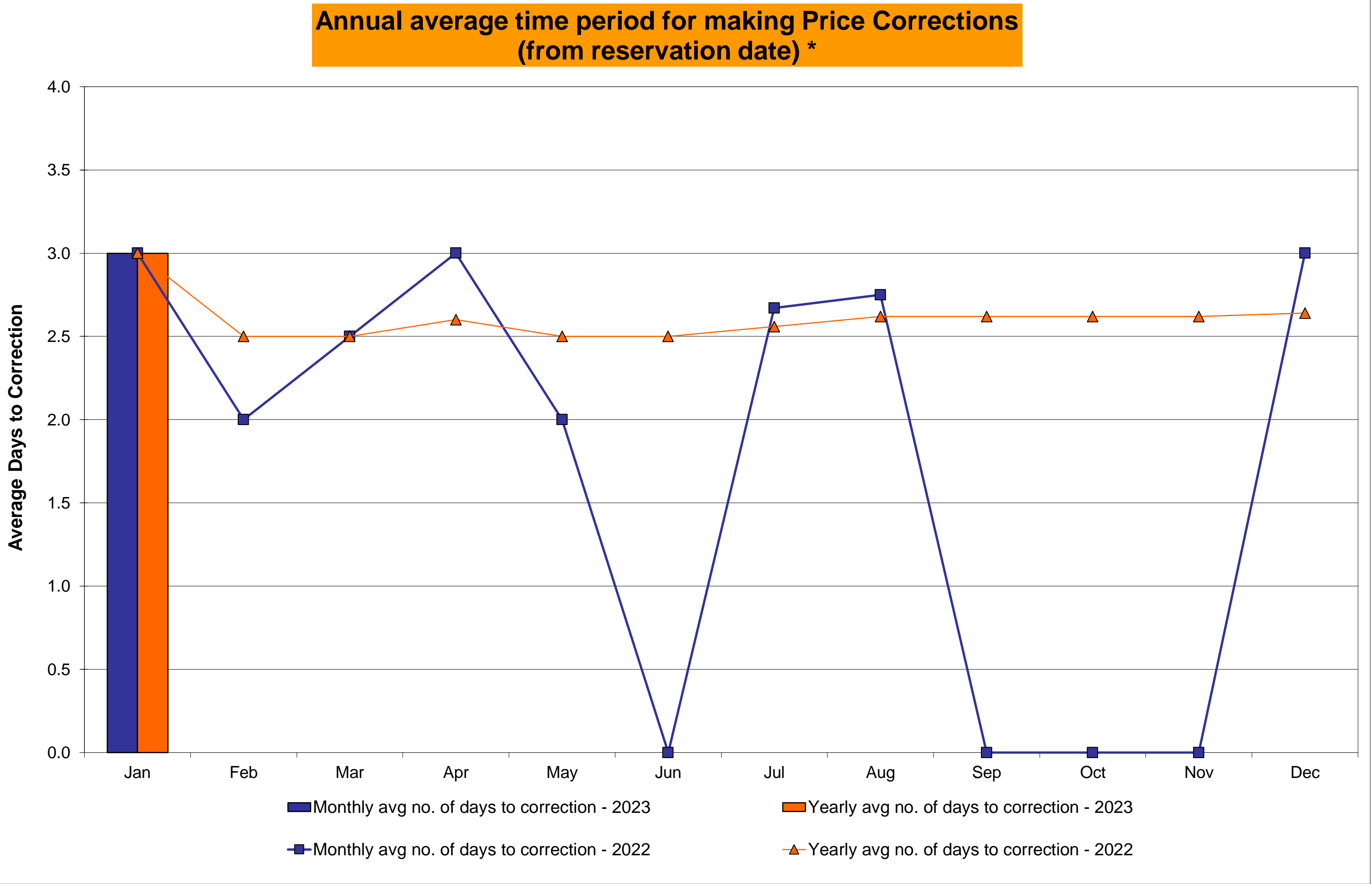
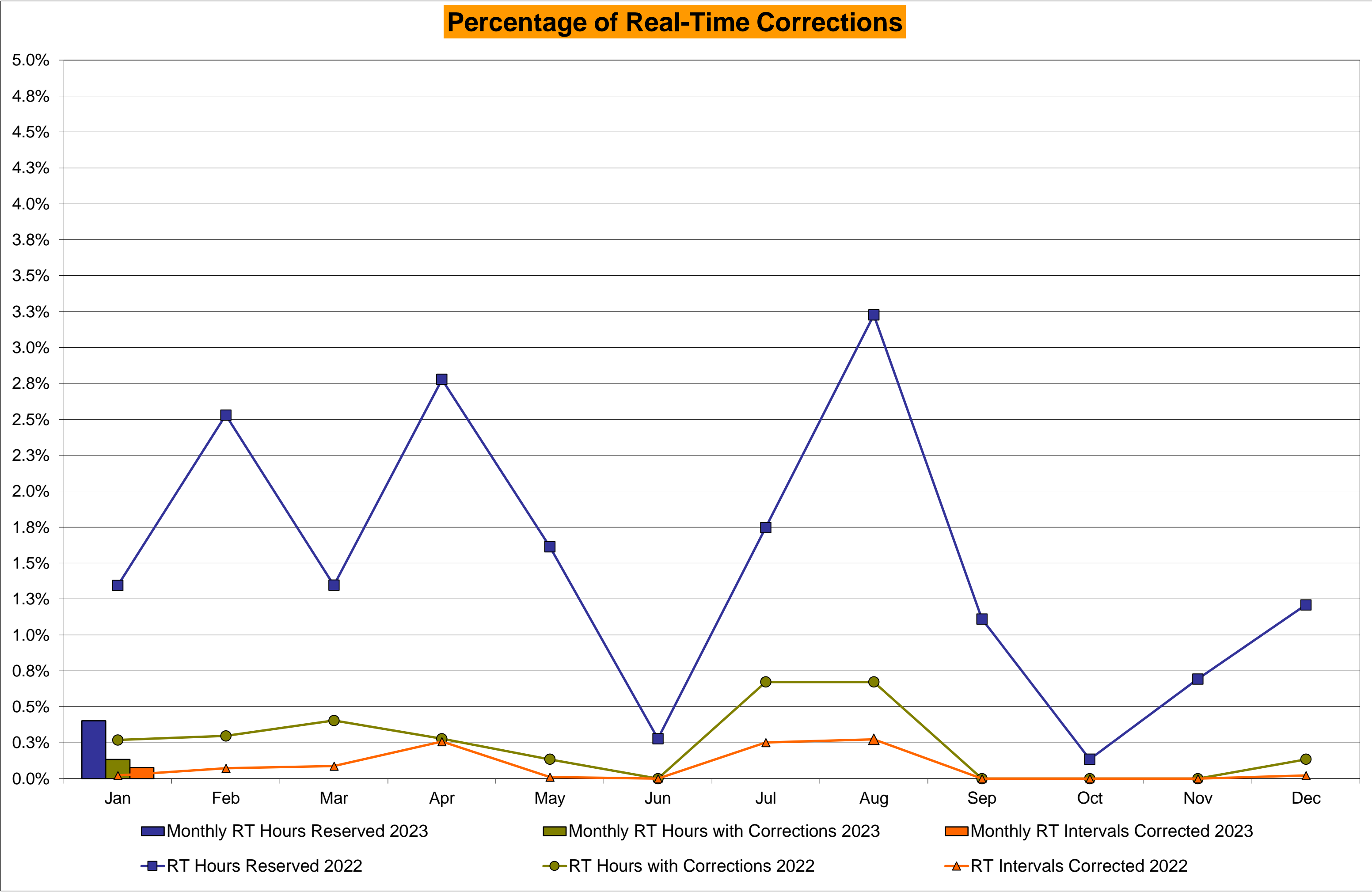
External Controllable Line: Hudson (PJM)



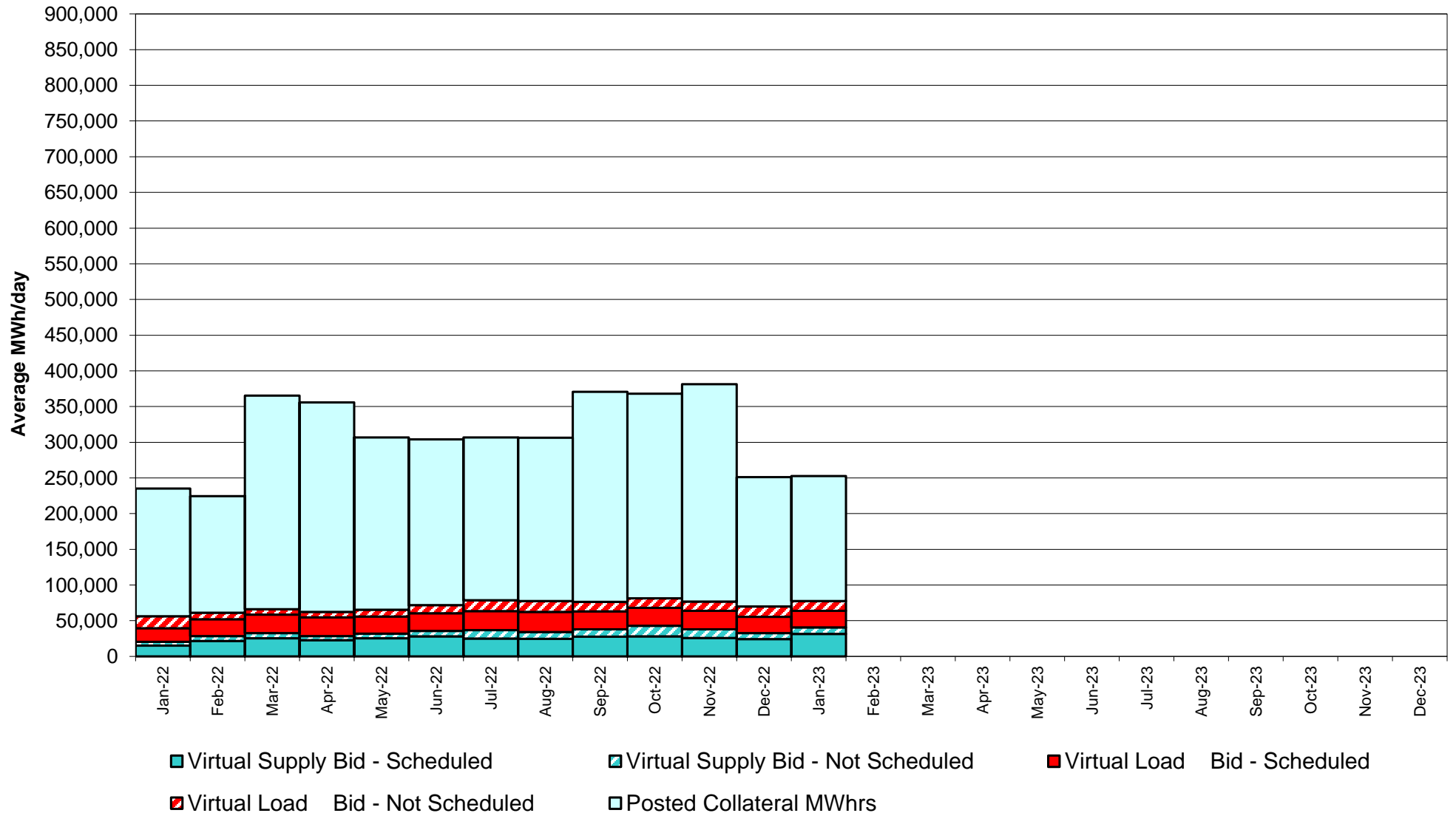
NYISO Real Time Price Correction Statistics

2023		<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
Hour Corrections													
Number of hours with corrections	in the month	1											
Number of hours	in the month	744											
% of hours with corrections	in the month	0.13%											
% of hours with corrections	year-to-date	0.13%											
Interval Corrections													
Number of intervals corrected	in the month	7											
Number of intervals	in the month	9,082											
% of intervals corrected	in the month	0.08%											
% of intervals corrected	year-to-date	0.08%											
Hours Reserved													
Number of hours reserved	in the month	3											
Number of hours	in the month	744											
% of hours reserved	in the month	0.40%											
% of hours reserved	year-to-date	0.40%											
Days to Correction *													
Avg. number of days to correction	in the month	3.00											
Avg. number of days to correction	year-to-date	3.00											
Days Without Corrections													
Days without corrections	in the month	30											
Days without corrections	year-to-date	30											
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>
Hour Corrections													
Number of hours with corrections	in the month	2	2	3	2	1	0	5	5	0	0	0	1
Number of hours	in the month	744	672	743	720	744	720	744	744	720	744	721	744
% of hours with corrections	in the month	0.27%	0.30%	0.40%	0.28%	0.13%	0.00%	0.67%	0.67%	0.00%	0.00%	0.00%	0.13%
% of hours with corrections	year-to-date	0.27%	0.28%	0.32%	0.31%	0.28%	0.23%	0.29%	0.34%	0.31%	0.27%	0.25%	0.24%
Interval Corrections													
Number of intervals corrected	in the month	2	6	8	23	1	0	23	25	0	0	0	2
Number of intervals	in the month	9,258	8,338	9,118	8,908	9,181	8,864	9,140	9,145	8,825	9,097	8,857	9,317
% of intervals corrected	in the month	0.02%	0.07%	0.09%	0.26%	0.01%	0.00%	0.25%	0.27%	0.00%	0.00%	0.00%	0.02%
% of intervals corrected	year-to-date	0.02%	0.05%	0.06%	0.11%	0.09%	0.07%	0.10%	0.12%	0.11%	0.10%	0.09%	0.08%
Hours Reserved													
Number of hours reserved	in the month	10	17	10	20	12	2	13	24	8	1	5	9
Number of hours	in the month	744	672	743	720	744	720	744	744	720	744	721	744
% of hours reserved	in the month	1.34%	2.53%	1.35%	2.78%	1.61%	0.28%	1.75%	3.23%	1.11%	0.13%	0.69%	1.21%
% of hours reserved	year-to-date	1.34%	1.91%	1.71%	1.98%	1.90%	1.63%	1.65%	1.85%	1.77%	1.60%	1.52%	1.50%
Days to Correction *													
Avg. number of days to correction	in the month	3.00	2.00	2.50	3.00	2.00	0.00	2.67	2.75	0.00	0.00	0.00	3.00
Avg. number of days to correction	year-to-date	3.00	2.50	2.50	2.60	2.50	2.50	2.56	2.62	2.62	2.62	2.62	2.64
Days Without Corrections													
Days without corrections	in the month	30	27	29	29	30	30	28	27	30	31	30	30
Days without corrections	year-to-date	30	57	86	115	145	175	203	230	260	291	321	351

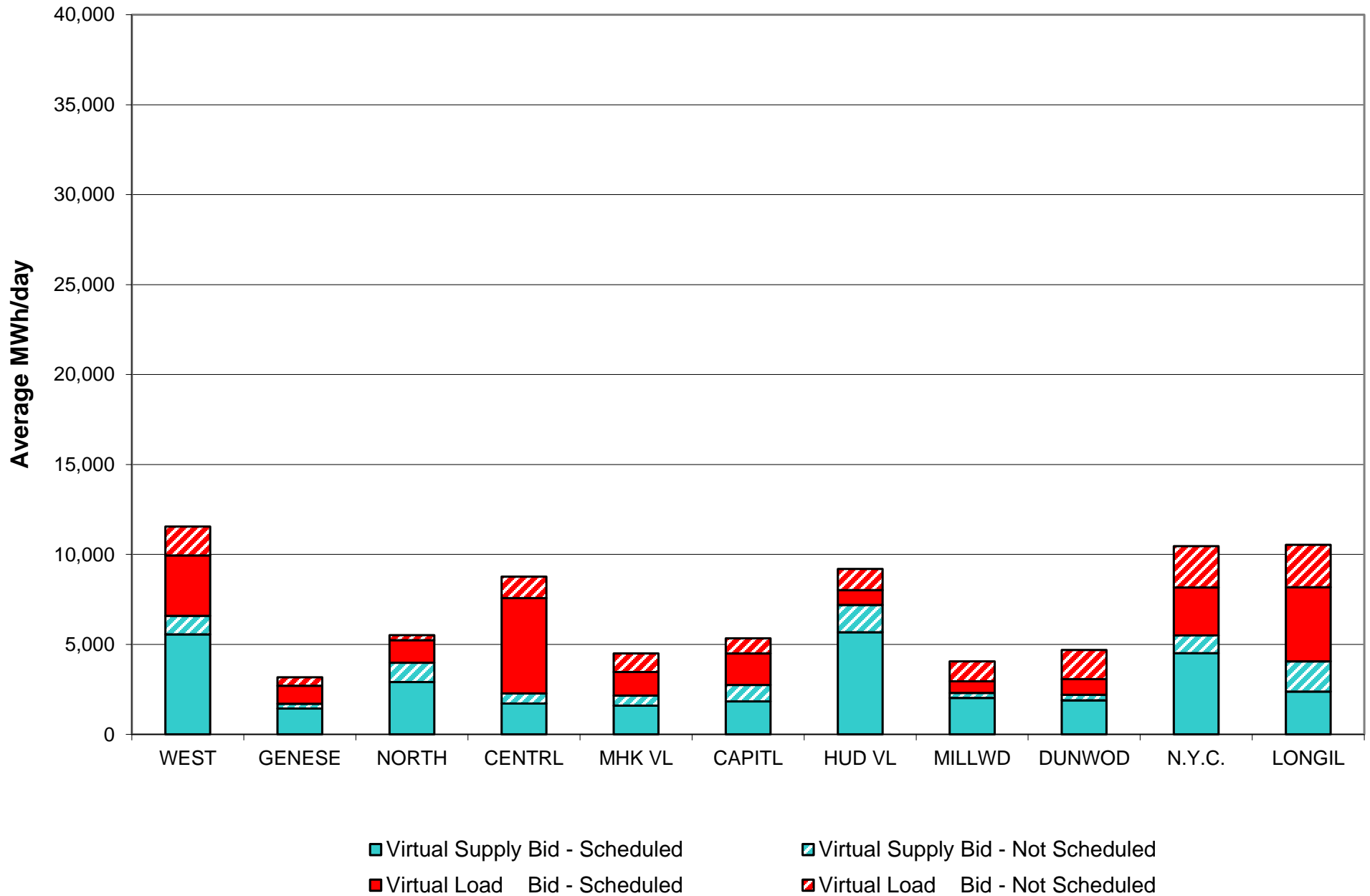
*Calendar days from reservation date; for June 2018 forward, business days from market date



NYISO Virtual Trading Average MWh per day



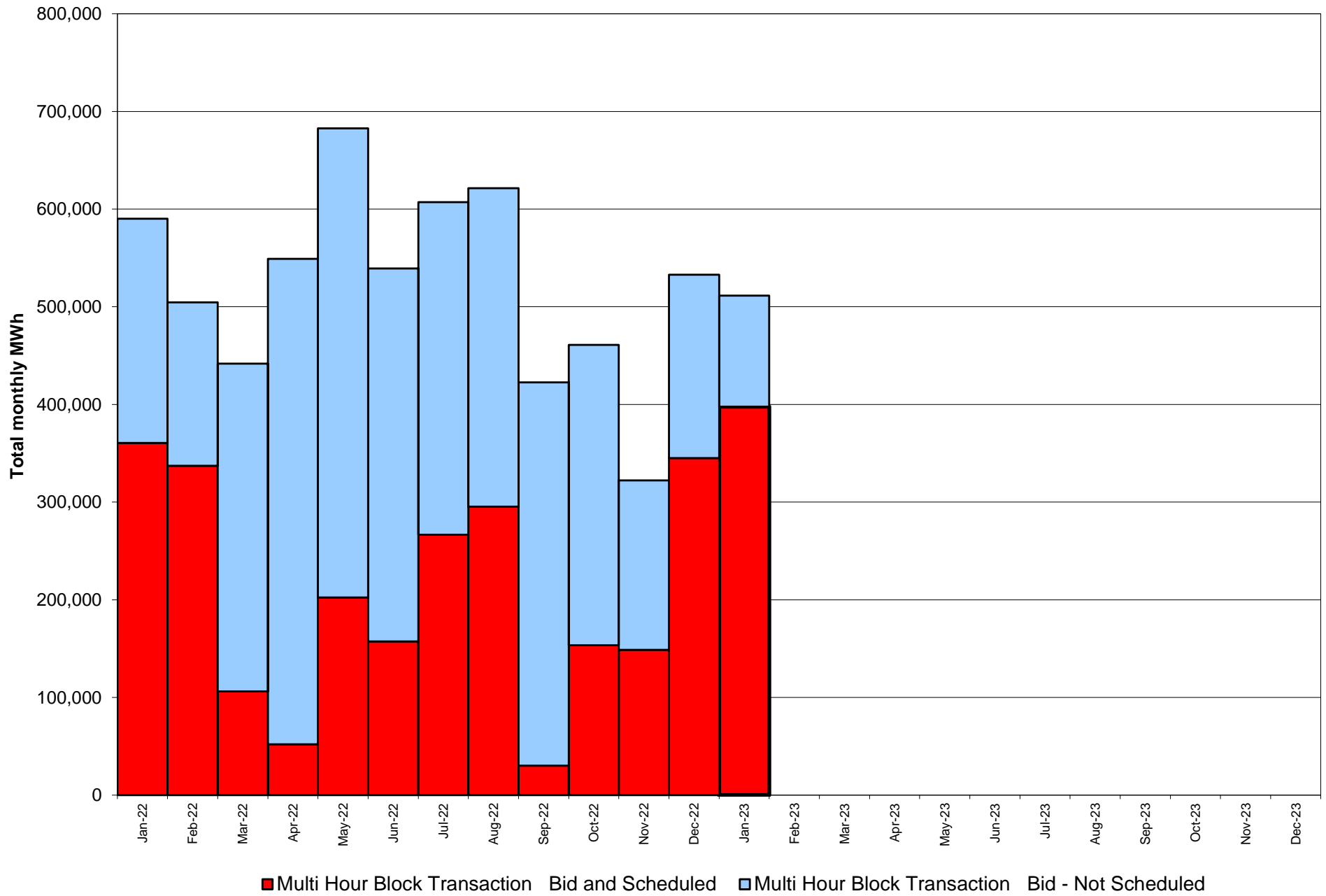
Virtual Load and Supply Zonal Statistics through January 31, 2023



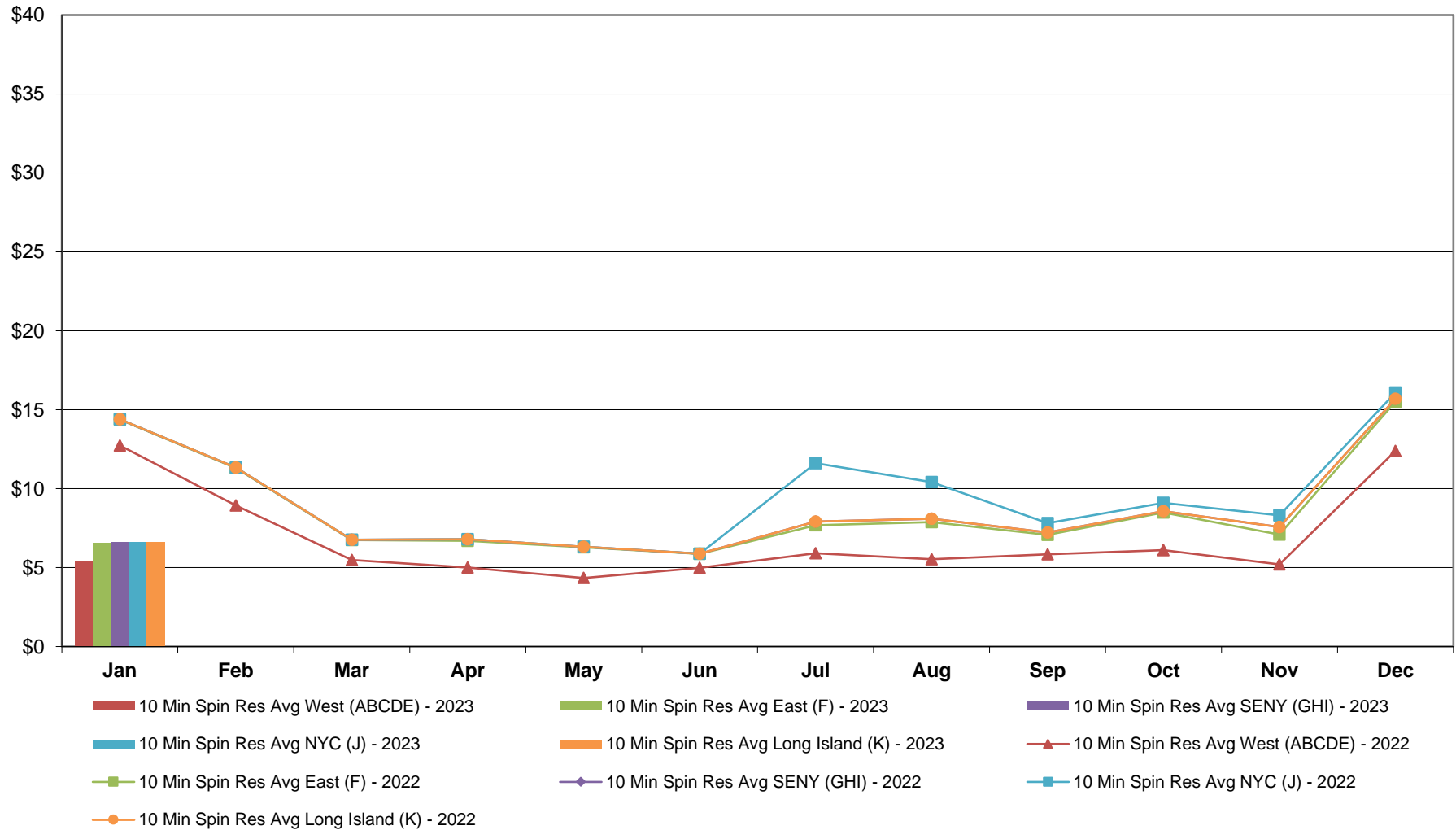
Virtual Load and Supply Zonal Statistics (Average MWh/day) - 2023

		Virtual Load Bid		Virtual Supply Bid				Virtual Load Bid		Virtual Supply Bid				Virtual Load Bid		Virtual Supply Bid	
Zone	Date	Scheduled	Not Scheduled	Scheduled	Not Scheduled	Zone	Date	Scheduled	Not Scheduled	Scheduled	Not Scheduled	Zone	Date	Scheduled	Not Scheduled	Scheduled	Not Scheduled
WEST	Jan-23	3,364	1,605	5,555	1,026	MHK VL	Jan-23	1,312	1,038	1,590	558	DUNWOD	Jan-23	862	1,623	1,884	319
	Feb-23						Feb-23						Feb-23				
	Mar-23						Mar-23						Mar-23				
	Apr-23						Apr-23						Apr-23				
	May-23						May-23						May-23				
	Jun-23						Jun-23						Jun-23				
	Jul-23						Jul-23						Jul-23				
	Aug-23						Aug-23						Aug-23				
	Sep-23						Sep-23						Sep-23				
	Oct-23						Oct-23						Oct-23				
	Nov-23						Nov-23						Nov-23				
	Dec-23						Dec-23						Dec-23				
GENESE	Jan-23	1,005	469	1,438	255	CAPITL	Jan-23	1,762	834	1,824	917	N.Y.C.	Jan-23	2,674	2,287	4,516	977
	Feb-23						Feb-23						Feb-23				
	Mar-23						Mar-23						Mar-23				
	Apr-23						Apr-23						Apr-23				
	May-23						May-23						May-23				
	Jun-23						Jun-23						Jun-23				
	Jul-23						Jul-23						Jul-23				
	Aug-23						Aug-23						Aug-23				
	Sep-23						Sep-23						Sep-23				
	Oct-23						Oct-23						Oct-23				
	Nov-23						Nov-23						Nov-23				
	Dec-23						Dec-23						Dec-23				
NORTH	Jan-23	1,246	284	2,910	1,072	HUD VL	Jan-23	835	1,168	5,672	1,513	LONGIL	Jan-23	4,119	2,358	2,370	1,687
	Feb-23						Feb-23						Feb-23				
	Mar-23						Mar-23						Mar-23				
	Apr-23						Apr-23						Apr-23				
	May-23						May-23						May-23				
	Jun-23						Jun-23						Jun-23				
	Jul-23						Jul-23						Jul-23				
	Aug-23						Aug-23						Aug-23				
	Sep-23						Sep-23						Sep-23				
	Oct-23						Oct-23						Oct-23				
	Nov-23						Nov-23						Nov-23				
	Dec-23						Dec-23						Dec-23				
CENTRL	Jan-23	5,294	1,193	1,715	563	MILLWD	Jan-23	649	1,103	2,019	278	NYISO	Jan-23	23,122	13,963	31,494	9,165
	Feb-23						Feb-23						Feb-23				
	Mar-23						Mar-23						Mar-23				
	Apr-23						Apr-23						Apr-23				
	May-23						May-23						May-23				
	Jun-23						Jun-23						Jun-23				
	Jul-23						Jul-23						Jul-23				
	Aug-23						Aug-23						Aug-23				
	Sep-23						Sep-23						Sep-23				
	Oct-23						Oct-23						Oct-23				
	Nov-23						Nov-23						Nov-23				
	Dec-23						Dec-23						Dec-23				

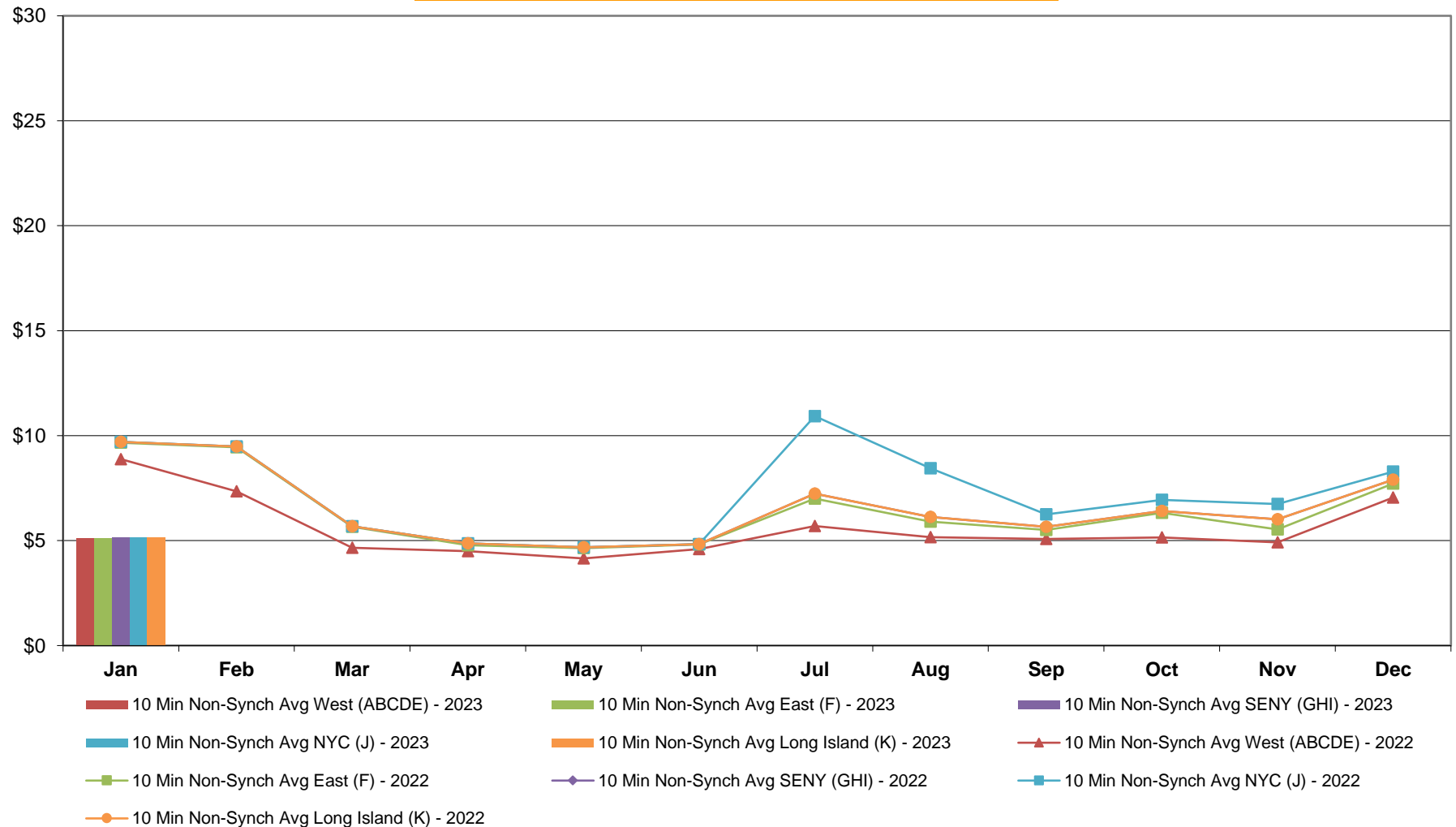
NYISO Multi Hour Block Transactions Monthly Total MWh



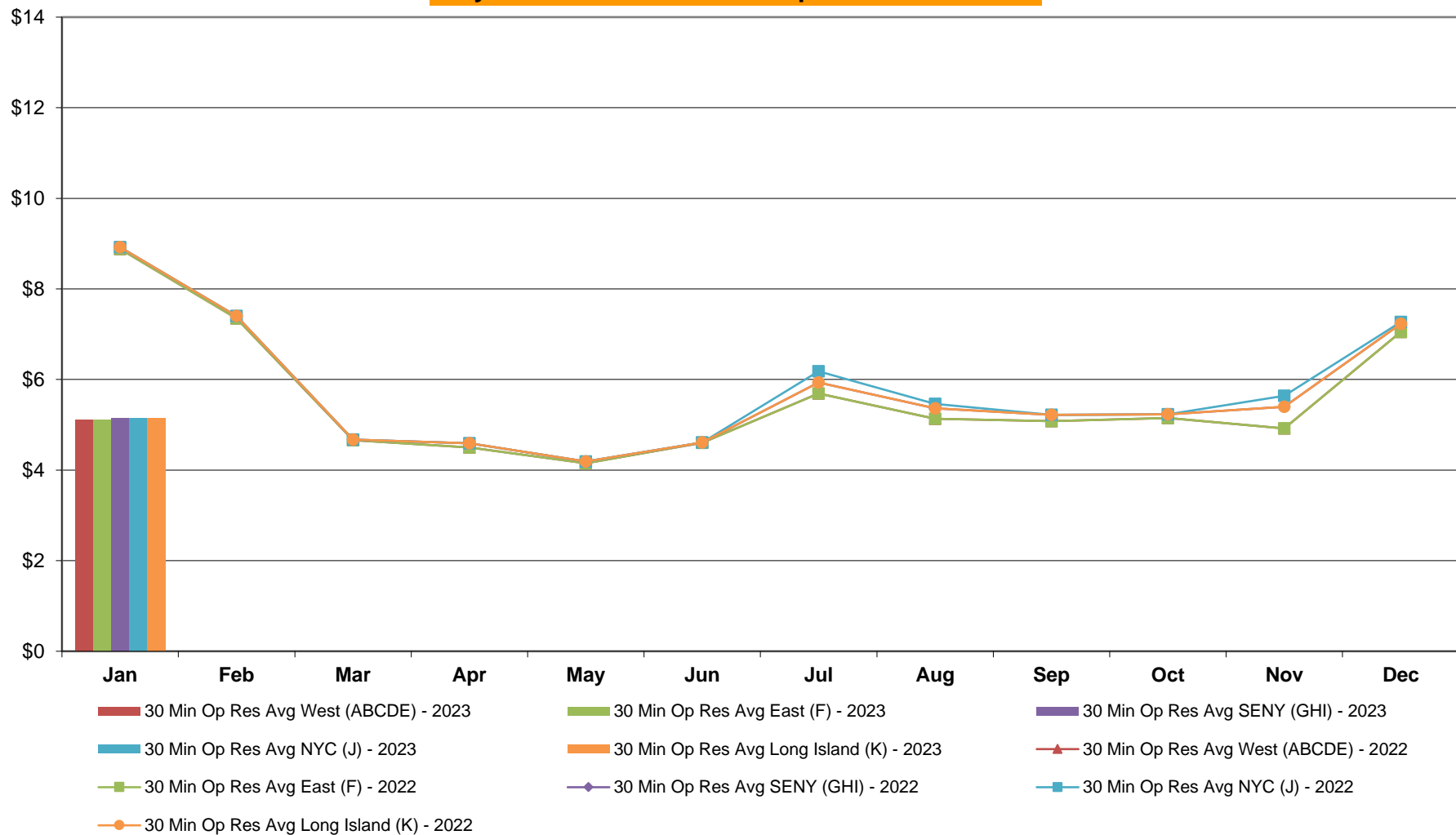
NYISO Monthly Average Ancillary Service Prices Day Ahead Market - 10 Min Spin 2022 - 2023



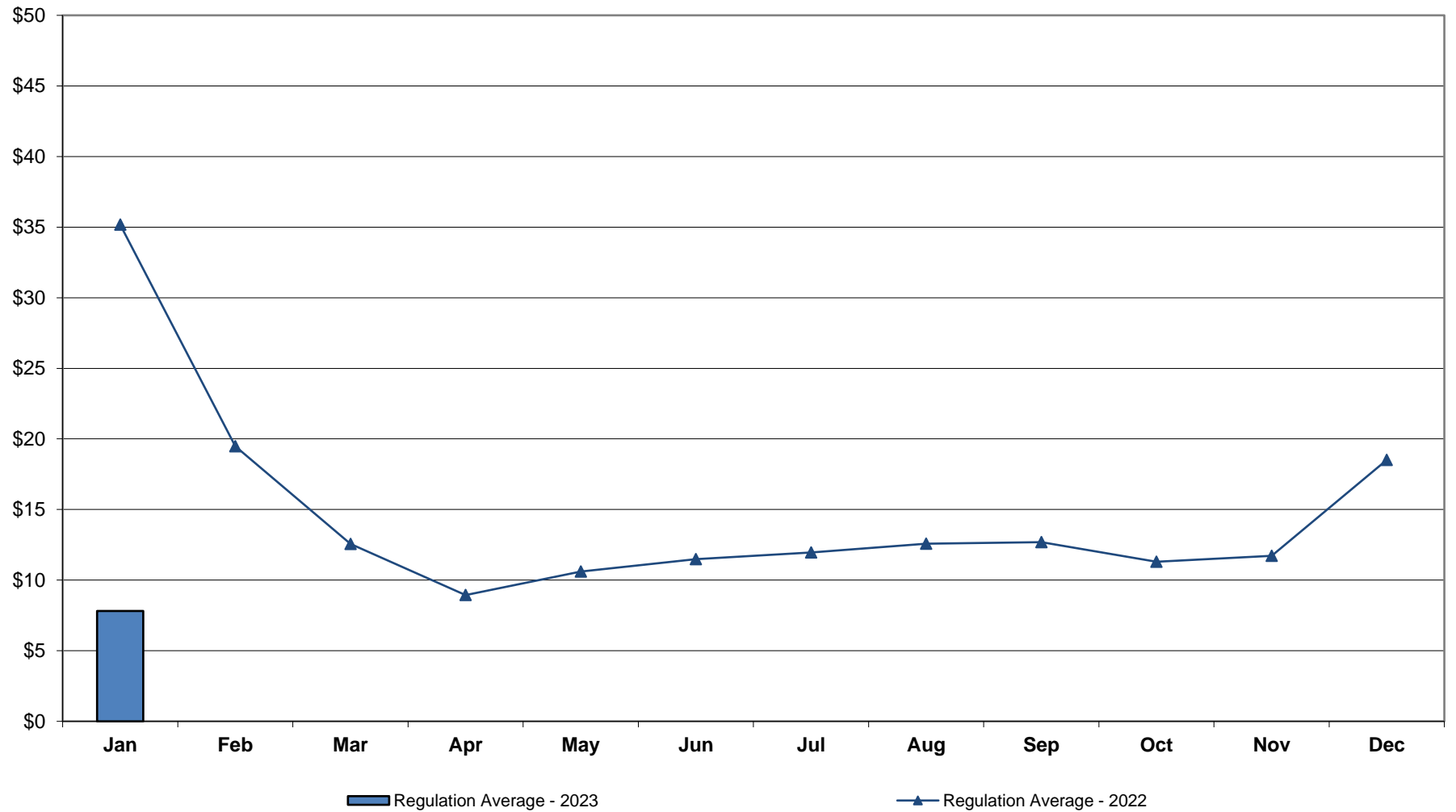
NYISO Monthly Average Ancillary Service Prices Day Ahead Market - 10 Min Non-Synch 2022 - 2023



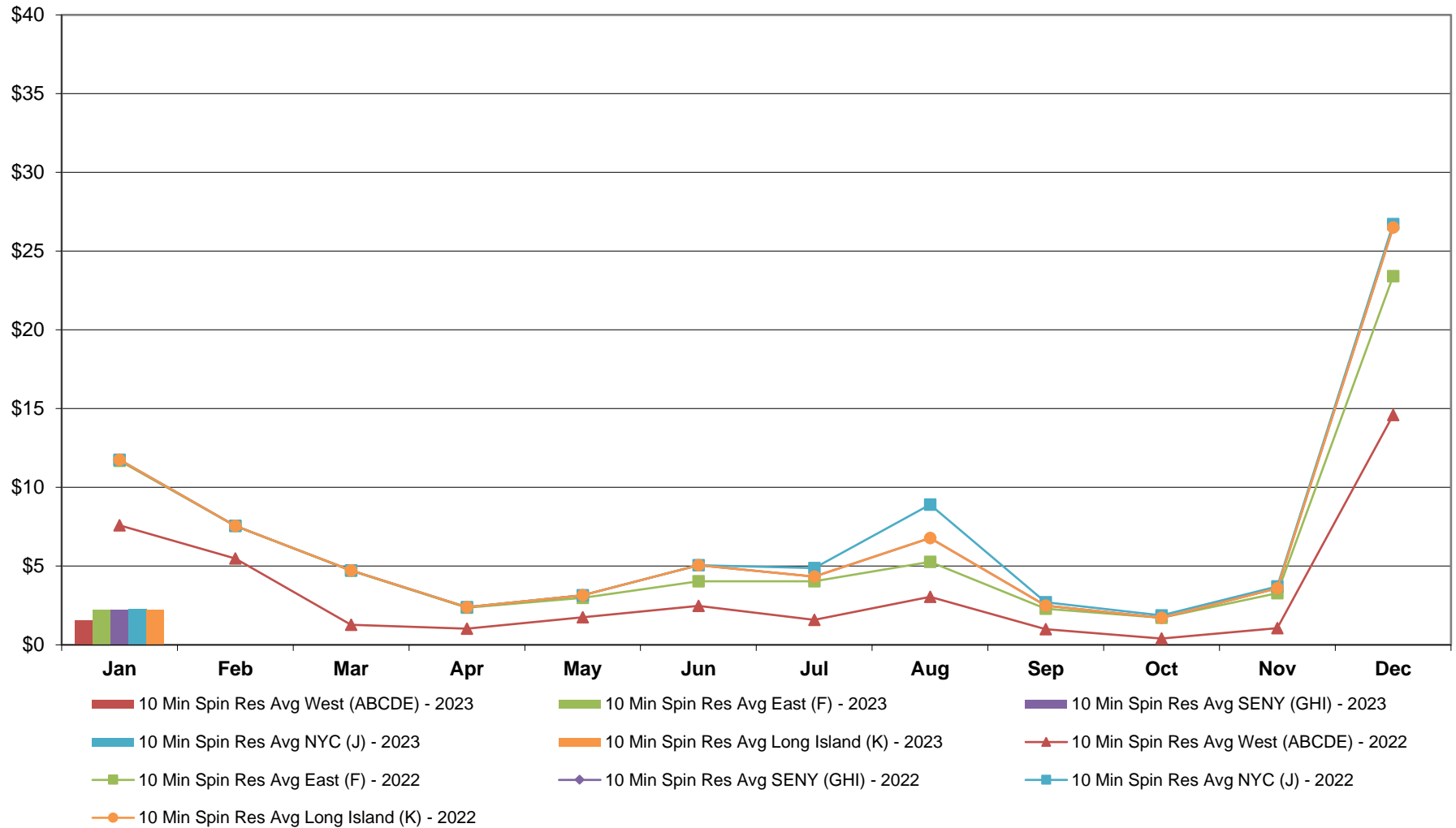
NYISO Monthly Average Ancillary Service Prices Day Ahead Market - 30 Min Op Res 2022 - 2023



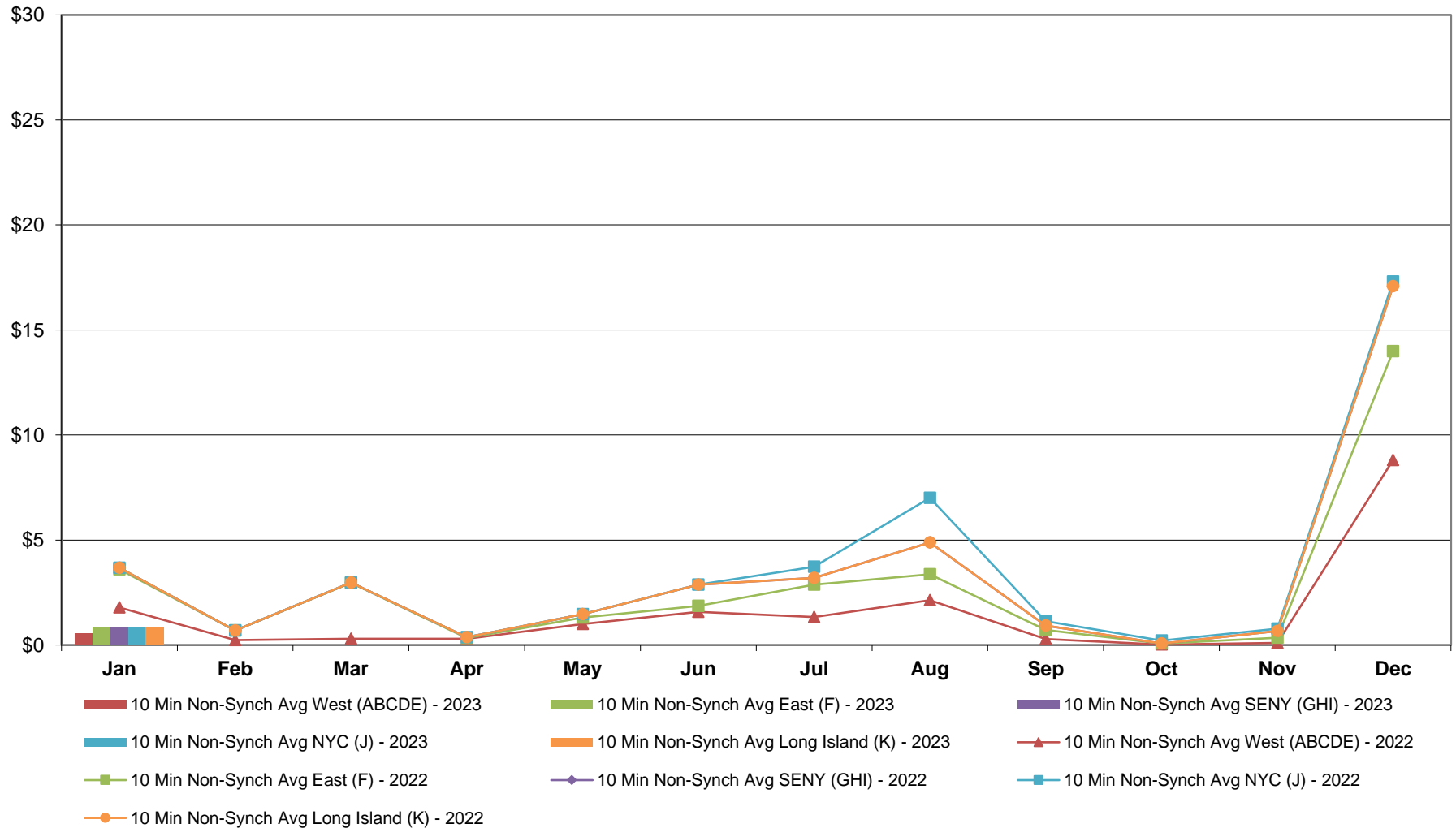
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - Regulation 2022 - 2023**



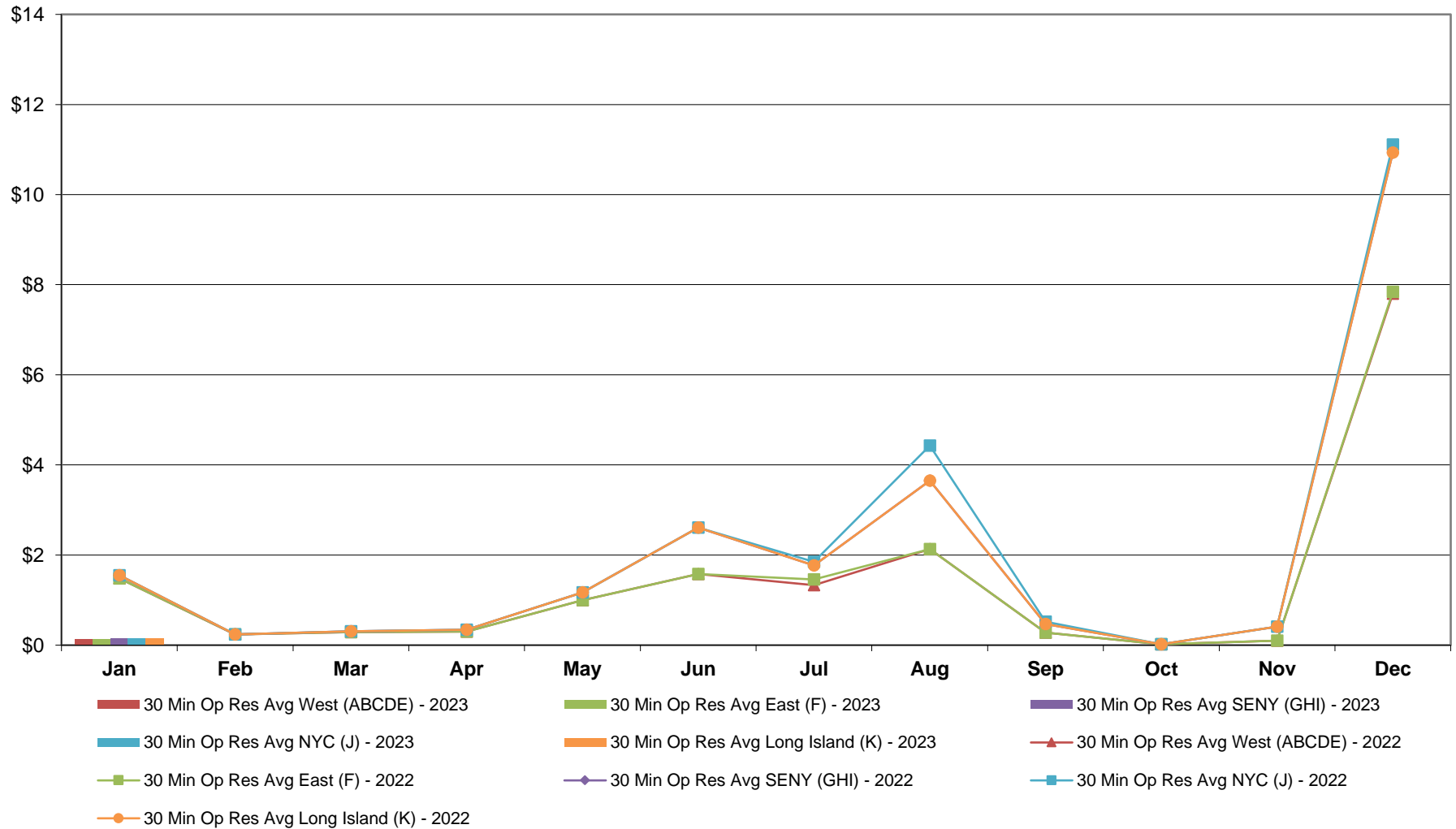
NYISO Monthly Average Ancillary Service Prices RTC Market - 10 Min Spin 2022 - 2023



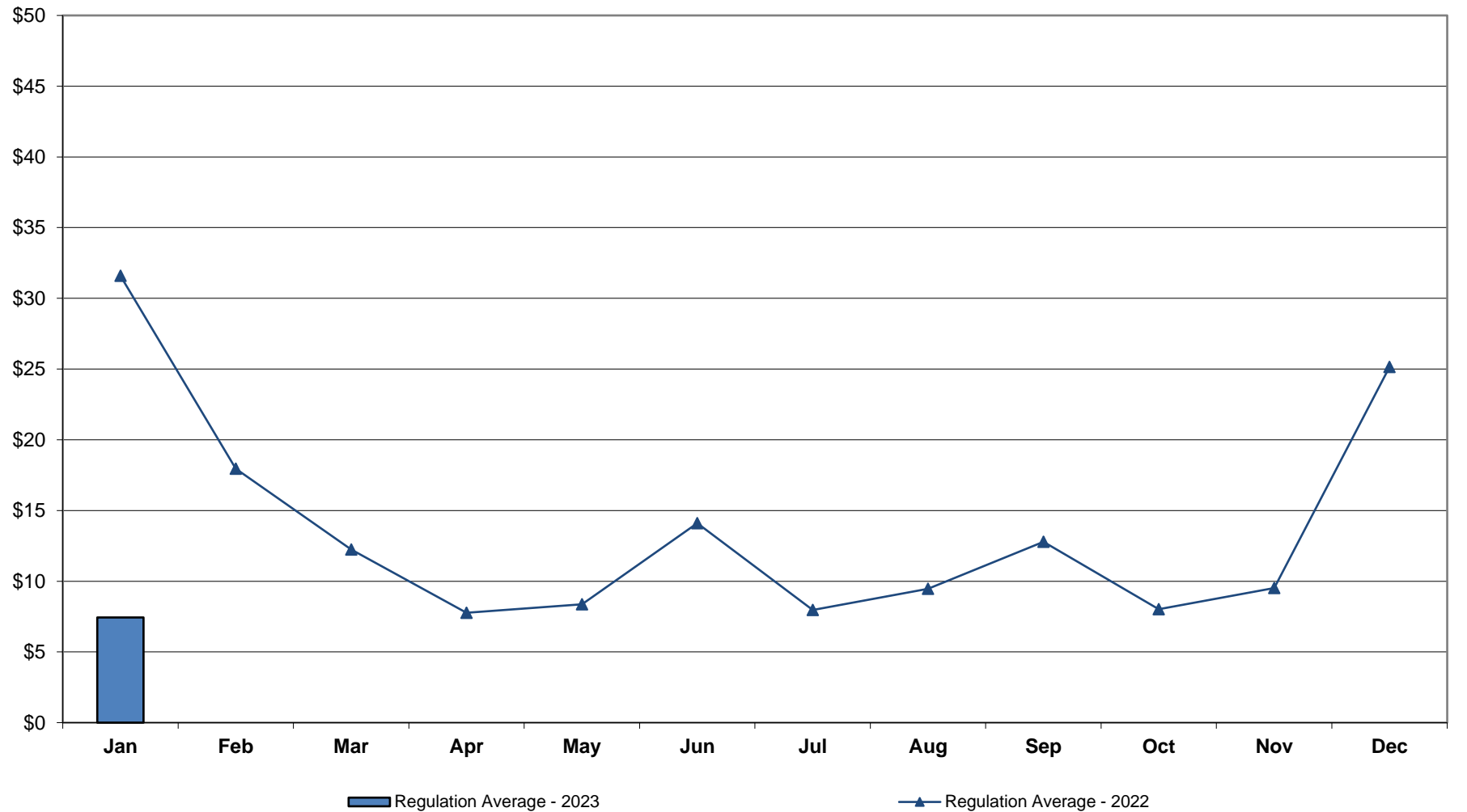
NYISO Monthly Average Ancillary Service Prices RTC Market - 10 Min Non-Synch 2022 - 2023



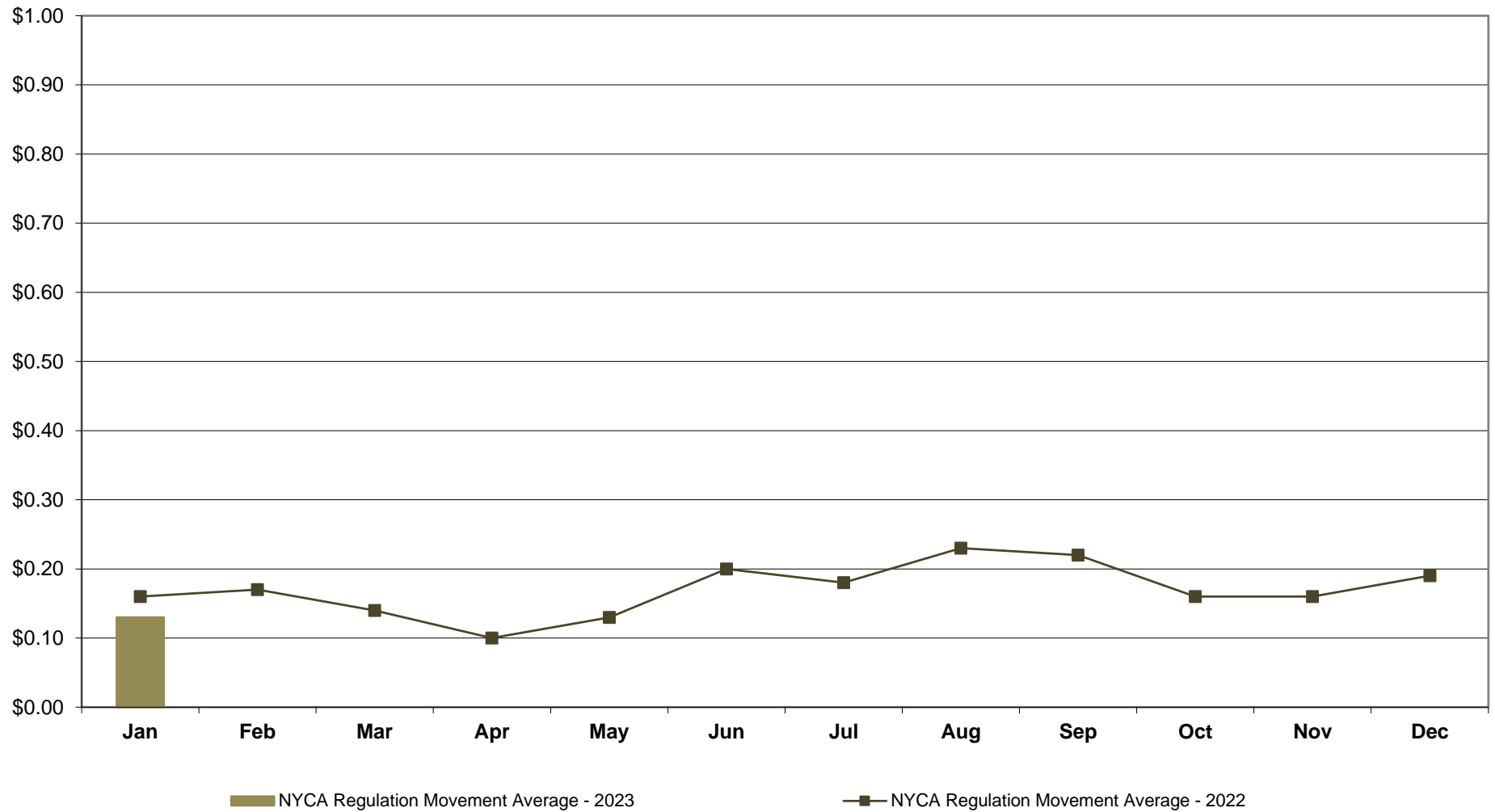
NYISO Monthly Average Ancillary Service Prices RTC Market - 30 Min Op Res 2022 - 2023



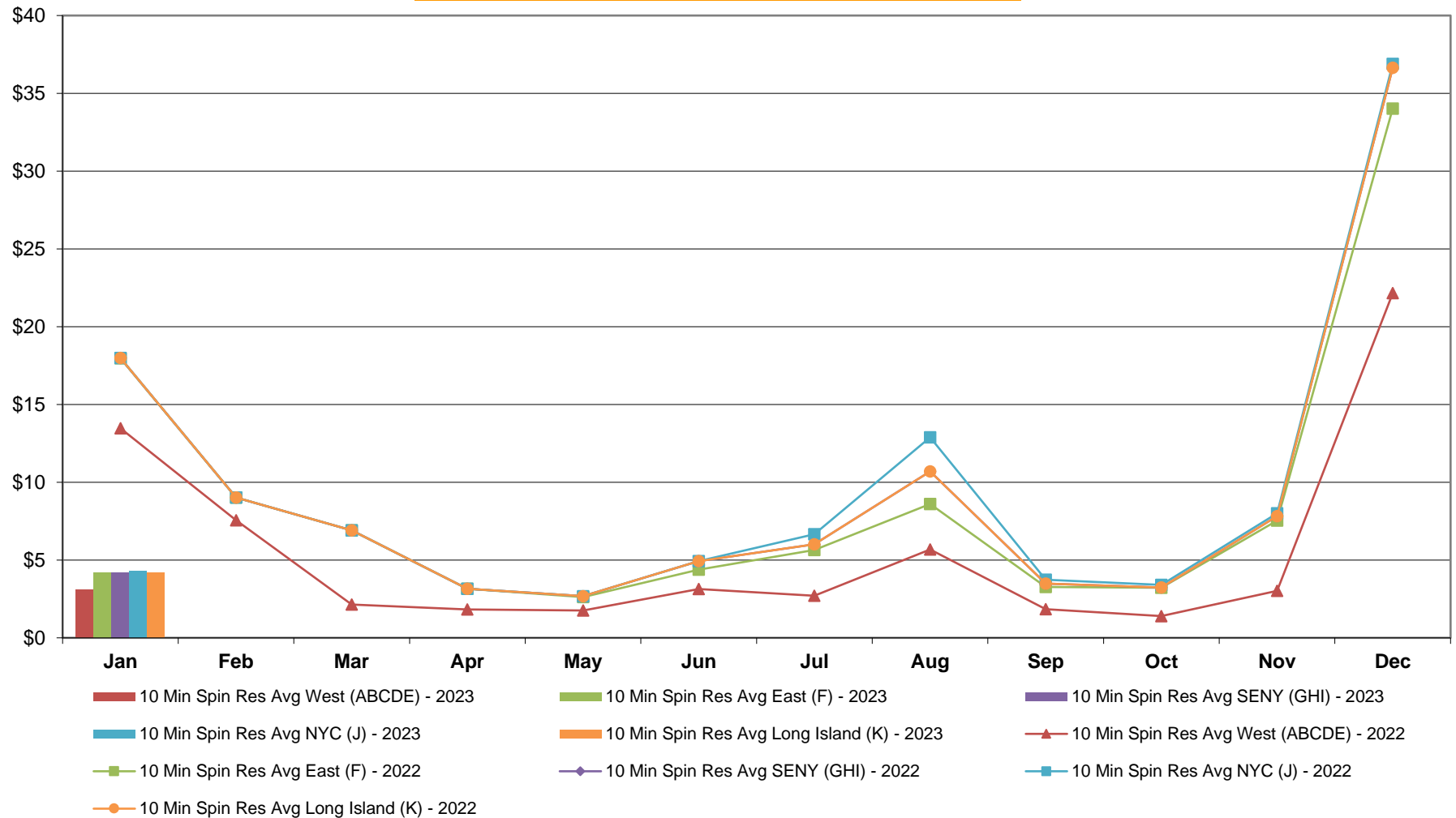
**NYISO Monthly Average Ancillary Service Prices
RTC Market - Regulation 2022 - 2023**



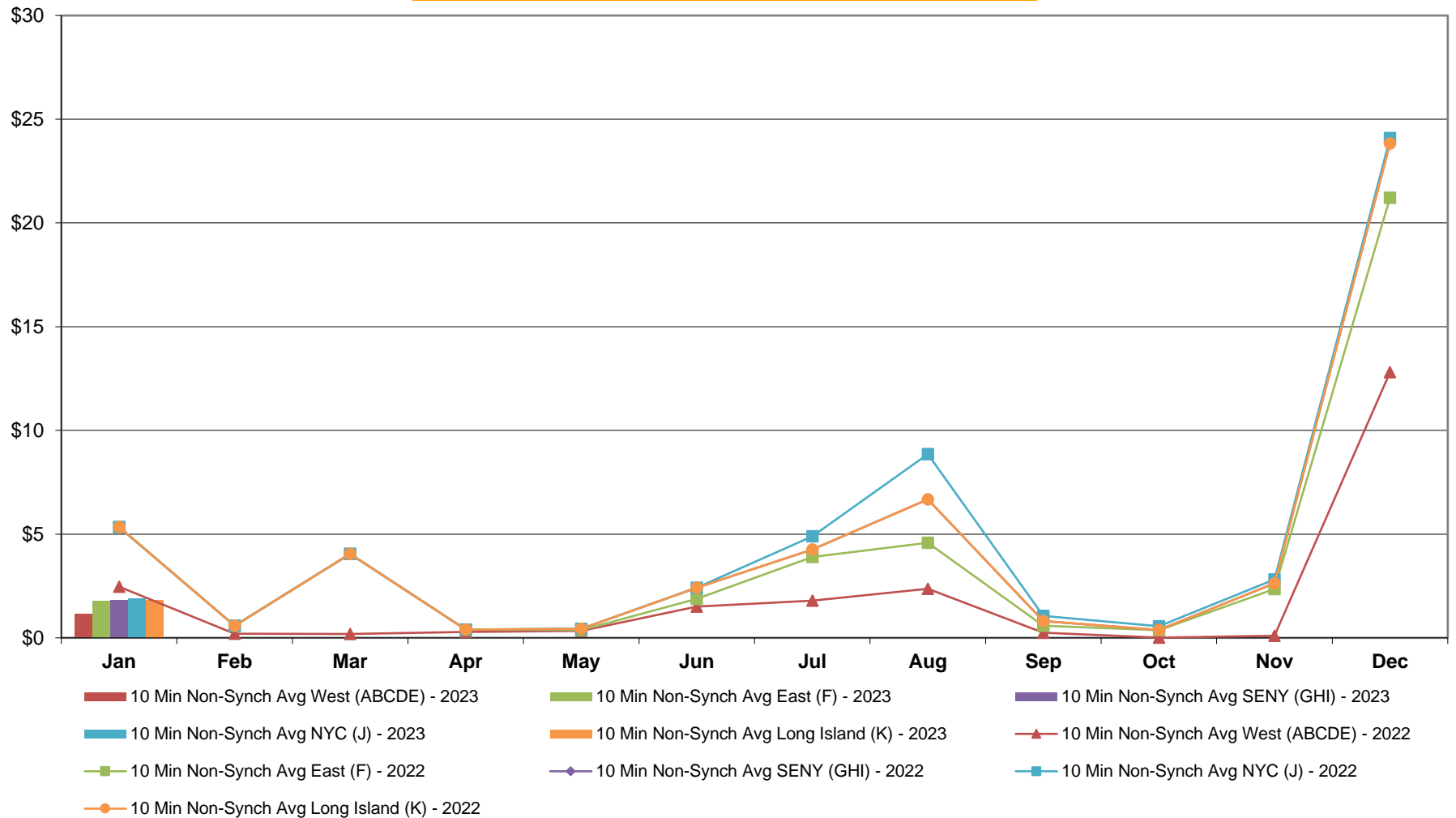
NYISO Monthly Average Ancillary Service Prices RTC Market - Regulation Movement 2022 - 2023



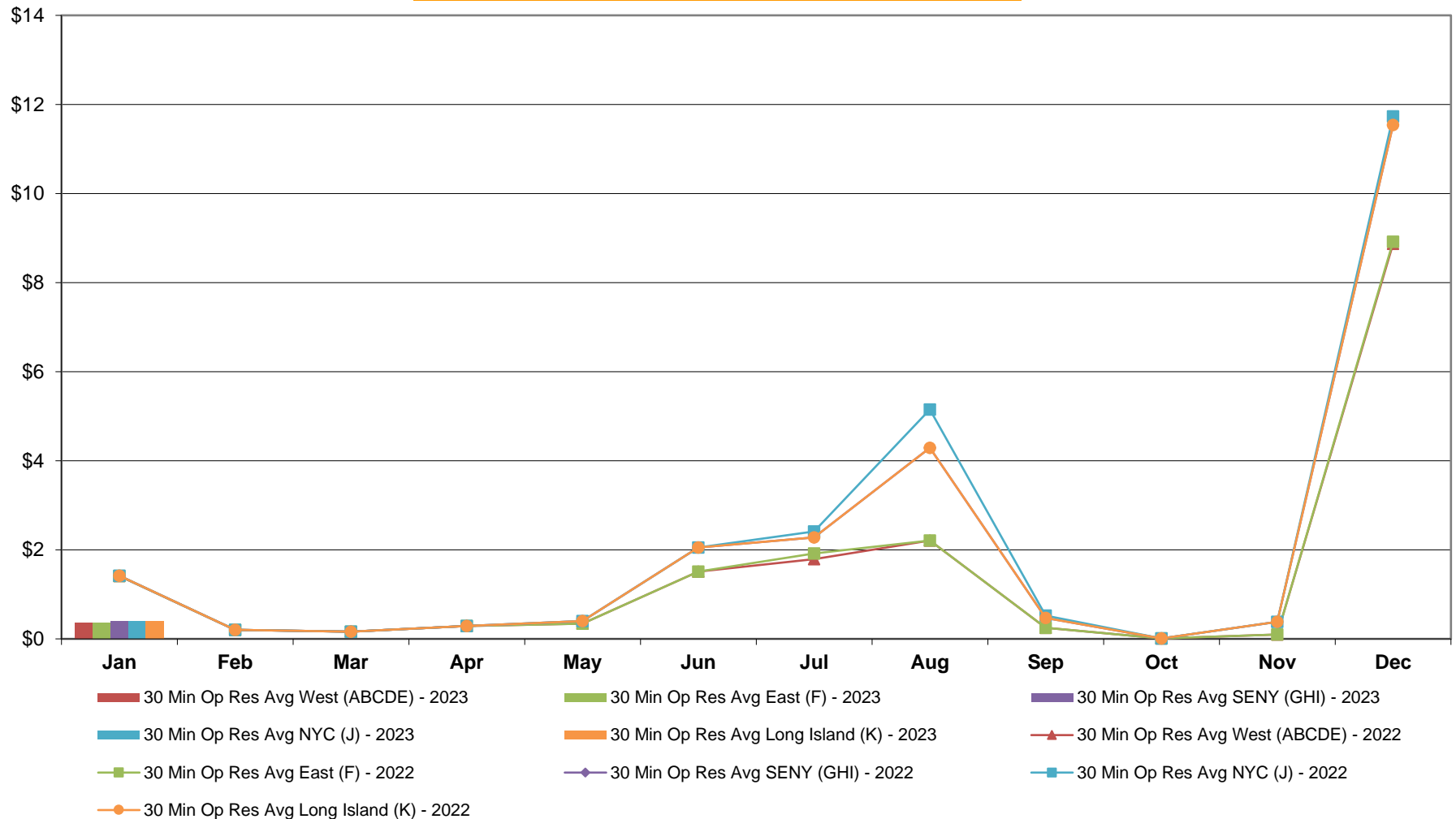
NYISO Monthly Average Ancillary Service Prices Real Time Market - 10 Min Spin 2022 - 2023



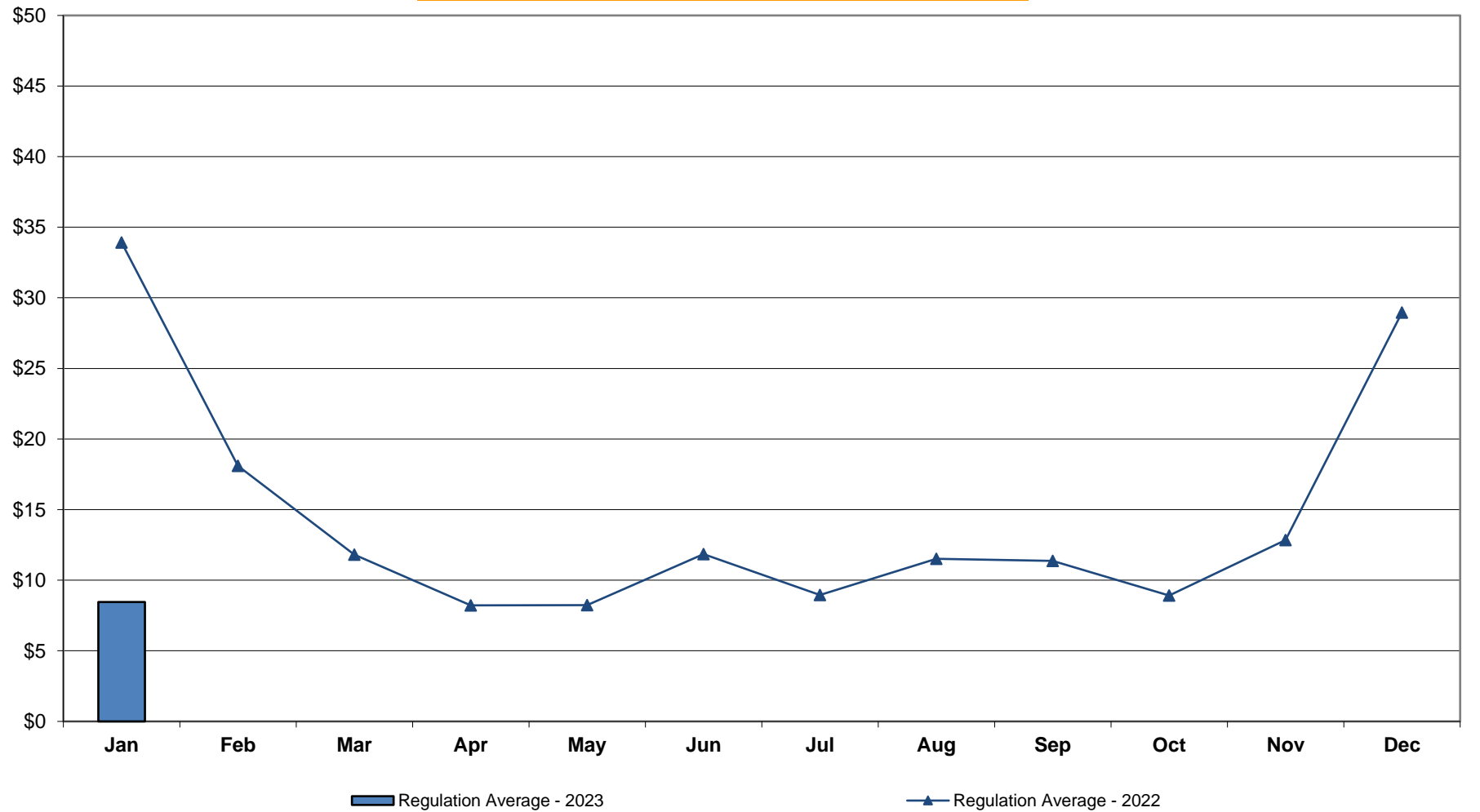
NYISO Monthly Average Ancillary Service Prices Real Time Market - 10 Min Non-Synch 2022 - 2023



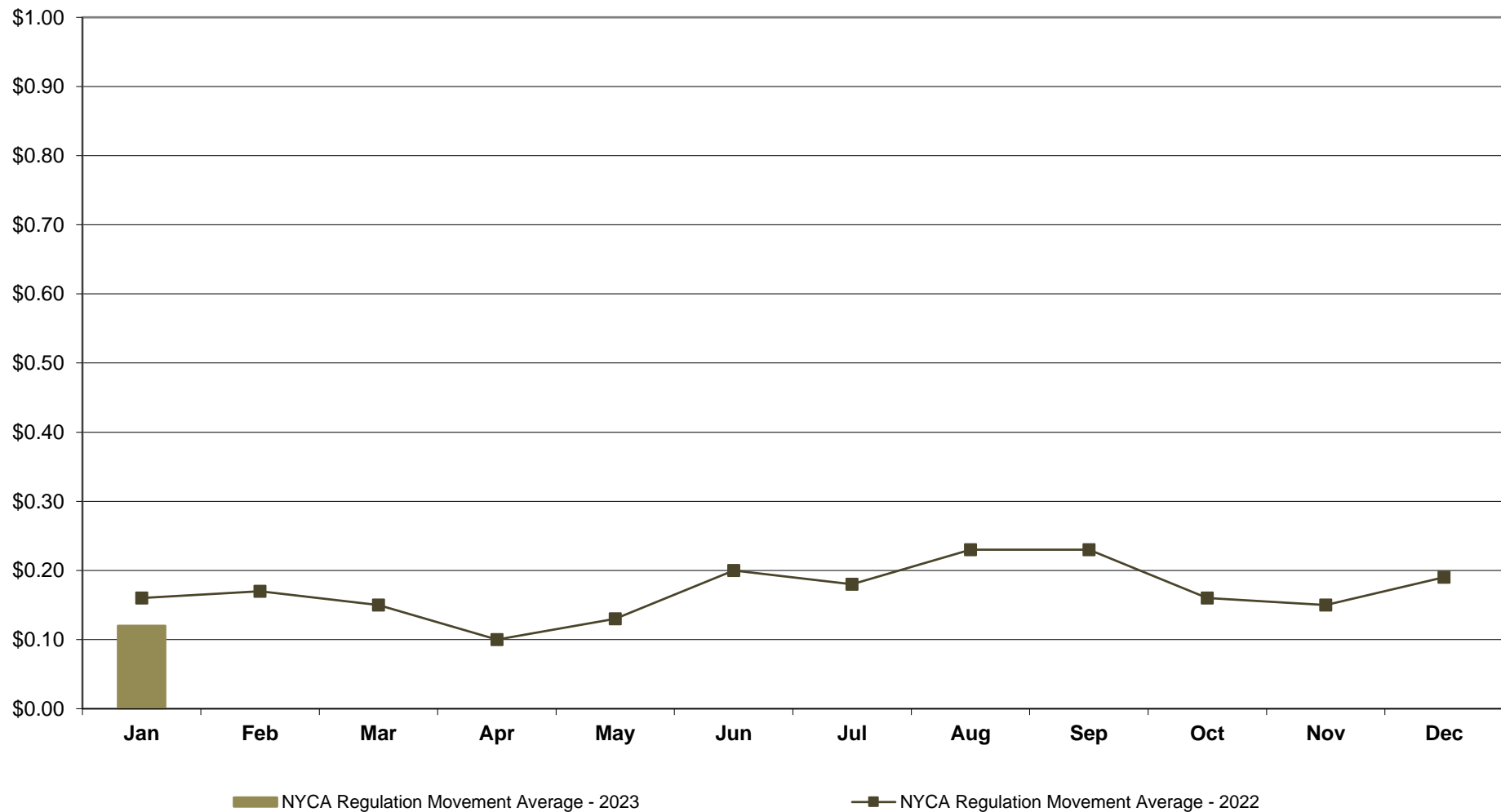
NYISO Monthly Average Ancillary Service Prices Real Time Market - 30 Min Op Res 2022 - 2023



**NYISO Monthly Average Ancillary Service Prices
Real Time Market - Regulation 2022 - 2023**



NYISO Monthly Average Ancillary Service Prices Real Time Market - Regulation Movement 2022 - 2023



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

<u>2023</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)	6.60											
10 Min Spin NYC (J)	6.63											
10 Min Spin SENY (GHI)	6.60											
10 Min Spin East (F)	6.56											
10 Min Spin West (ABCDE)	5.41											
10 Min Non Synch Long Island (K)	5.16											
10 Min Non Synch NYC (J)	5.18											
10 Min Non Synch SENY (GHI)	5.16											
10 Min Non Synch East (F)	5.12											
10 Min Non Synch West (ABCDE)	5.11											
30 Min Long Island (K)	5.15											
30 Min NYC (J)	5.15											
30 Min SENY (GHI)	5.15											
30 Min East (F)	5.11											
30 Min West (ABCDE)	5.11											
Regulation	7.82											
<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	11.34	6.76	6.79	6.32	5.88	7.92	8.10	7.22	8.57	7.57	15.69
10 Min Spin NYC (J)	15.32	12.52	7.29	6.80	7.01	6.12	11.61	10.41	7.81	9.10	8.31	16.08
10 Min Spin SENY (GHI)	14.40	11.34	6.76	6.79	6.32	5.88	7.92	8.10	7.22	8.57	7.57	15.69
10 Min Spin East (F)	14.37	11.30	6.74	6.70	6.28	5.87	7.68	7.88	7.07	8.49	7.10	15.51
10 Min Spin West (ABCDE)	12.74	8.93	5.48	5.01	4.34	4.99	5.91	5.53	5.84	6.11	5.20	12.39
10 Min Non Synch Long Island (K)	9.70	9.48	5.68	4.87	4.68	4.83	7.24	6.13	5.65	6.41	6.01	7.90
10 Min Non Synch NYC (J)	10.61	10.66	6.20	4.89	5.38	5.07	10.93	8.44	6.25	6.94	6.74	8.29
10 Min Non Synch SENY (GHI)	9.70	9.48	5.68	4.87	4.68	4.83	7.24	6.13	5.65	6.41	6.01	7.90
10 Min Non Synch East (F)	9.66	9.44	5.66	4.78	4.64	4.82	7.00	5.90	5.51	6.32	5.53	7.72
10 Min Non Synch West (ABCDE)	8.88	7.35	4.66	4.50	4.15	4.60	5.69	5.16	5.08	5.15	4.92	7.05
30 Min Long Island (K)	8.92	7.40	4.67	4.59	4.19	4.61	5.93	5.36	5.22	5.23	5.40	7.23
30 Min NYC (J)	8.95	7.42	4.67	4.59	4.21	4.61	6.18	5.46	5.22	5.23	5.64	7.27
30 Min SENY (GHI)	8.92	7.40	4.67	4.59	4.19	4.61	5.93	5.36	5.22	5.23	5.40	7.23
30 Min East (F)	8.88	7.35	4.66	4.50	4.15	4.60	5.69	5.13	5.08	5.15	4.92	7.05
30 Min West (ABCDE)	8.88	7.35	4.66	4.50	4.15	4.60	5.69	5.13	5.08	5.15	4.92	7.05
Regulation	35.17	19.48	12.56	8.94	10.61	11.49	11.96	12.58	12.68	11.31	11.72	18.51

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

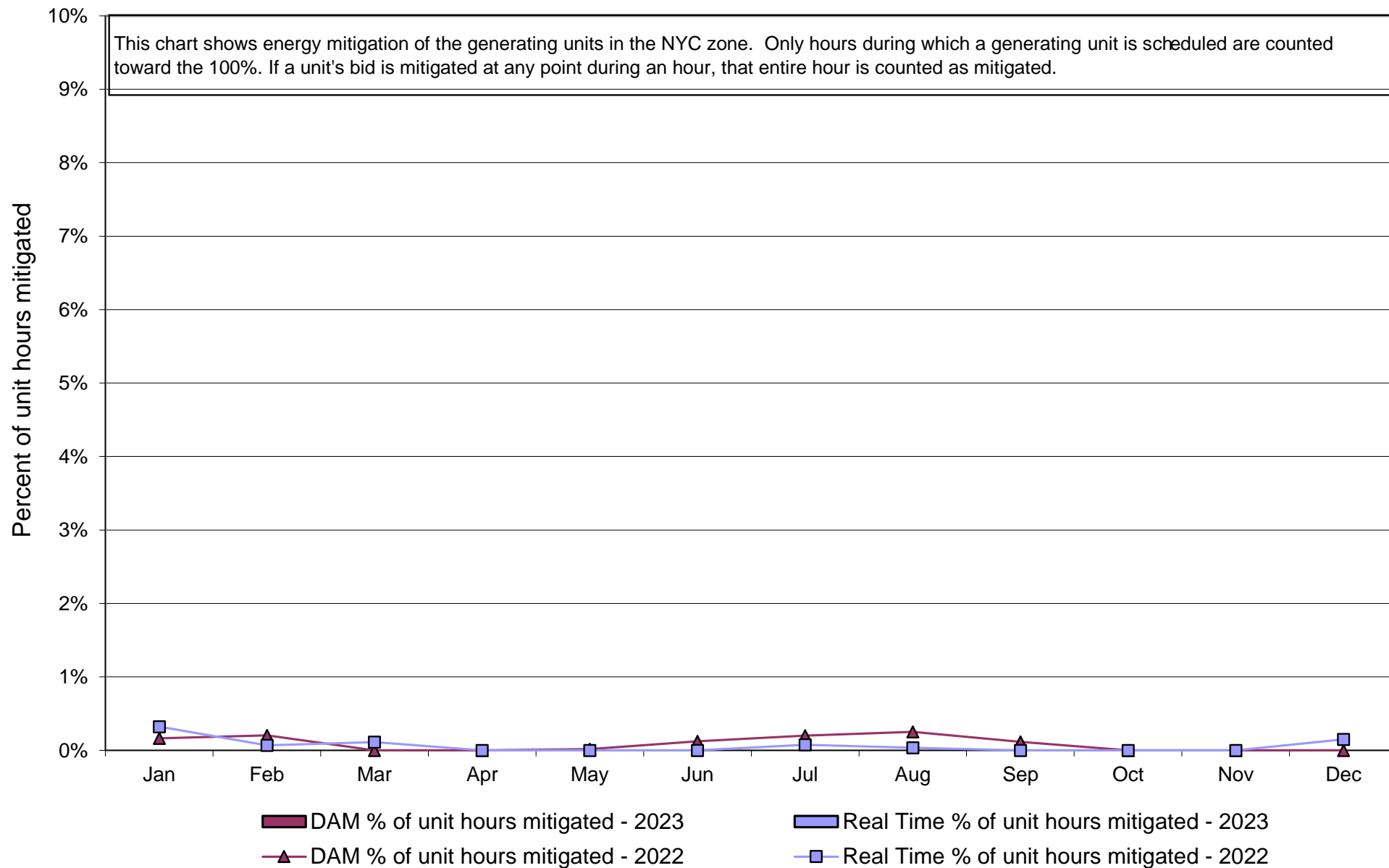
<u>2023</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
<u>RTC Market</u>												
10 Min Spin Long Island (K)	2.22											
10 Min Spin NYC (J)	2.26											
10 Min Spin SENY (GHI)	2.22											
10 Min Spin East (F)	2.21											
10 Min Spin West (ABCDE)	1.57											
10 Min Non Synch Long Island (K)	0.86											
10 Min Non Synch NYC (J)	0.89											
10 Min Non Synch SENY (GHI)	0.86											
10 Min Non Synch East (F)	0.85											
10 Min Non Synch West (ABCDE)	0.54											
30 Min Long Island (K)	0.16											
30 Min NYC (J)	0.16											
30 Min SENY (GHI)	0.16											
30 Min East (F)	0.14											
30 Min West (ABCDE)	0.14											
Regulation	7.44											
NYCA Regulation Movement	0.13											
<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	7.55	4.73	2.39	3.15	5.06	4.34	6.79	2.49	1.72	3.59	26.50
10 Min Spin NYC (J)	11.75	7.81	4.92	2.53	3.72	5.51	4.88	8.90	2.71	1.87	3.71	26.72
10 Min Spin SENY (GHI)	11.75	7.55	4.73	2.39	3.15	5.06	4.34	6.79	2.49	1.72	3.59	26.50
10 Min Spin East (F)	11.68	7.55	4.71	2.36	2.98	4.03	4.03	5.27	2.29	1.72	3.28	23.41
10 Min Spin West (ABCDE)	7.59	5.49	1.27	1.03	1.75	2.47	1.58	3.05	0.99	0.40	1.06	14.59
10 Min Non Synch Long Island (K)	3.67	0.69	2.97	0.37	1.47	2.88	3.19	4.89	0.92	0.07	0.66	17.08
10 Min Non Synch NYC (J)	3.67	0.95	3.16	0.51	2.04	3.34	3.73	7.00	1.13	0.21	0.78	17.31
10 Min Non Synch SENY (GHI)	3.67	0.69	2.97	0.37	1.47	2.88	3.19	4.89	0.92	0.07	0.66	17.08
10 Min Non Synch East (F)	3.60	0.69	2.96	0.33	1.31	1.86	2.88	3.37	0.72	0.07	0.35	13.99
10 Min Non Synch West (ABCDE)	1.79	0.24	0.29	0.30	1.00	1.58	1.33	2.13	0.28	0.02	0.10	8.81
30 Min Long Island (K)	1.55	0.24	0.31	0.34	1.17	2.61	1.77	3.65	0.47	0.02	0.41	10.93
30 Min NYC (J)	1.55	0.24	0.31	0.34	1.34	2.74	1.85	4.43	0.52	0.02	0.41	11.11
30 Min SENY (GHI)	1.55	0.24	0.31	0.34	1.17	2.61	1.77	3.65	0.47	0.02	0.41	10.93
30 Min East (F)	1.48	0.24	0.29	0.30	1.00	1.58	1.46	2.13	0.28	0.02	0.10	7.84
30 Min West (ABCDE)	1.48	0.24	0.29	0.30	1.00	1.58	1.33	2.13	0.28	0.02	0.10	7.80
Regulation	31.59	17.95	12.23	7.77	8.36	14.11	7.96	9.46	12.79	8.03	9.52	25.14
NYCA Regulation Movement	0.16	0.17	0.14	0.10	0.13	0.20	0.18	0.23	0.22	0.16	0.16	0.19

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

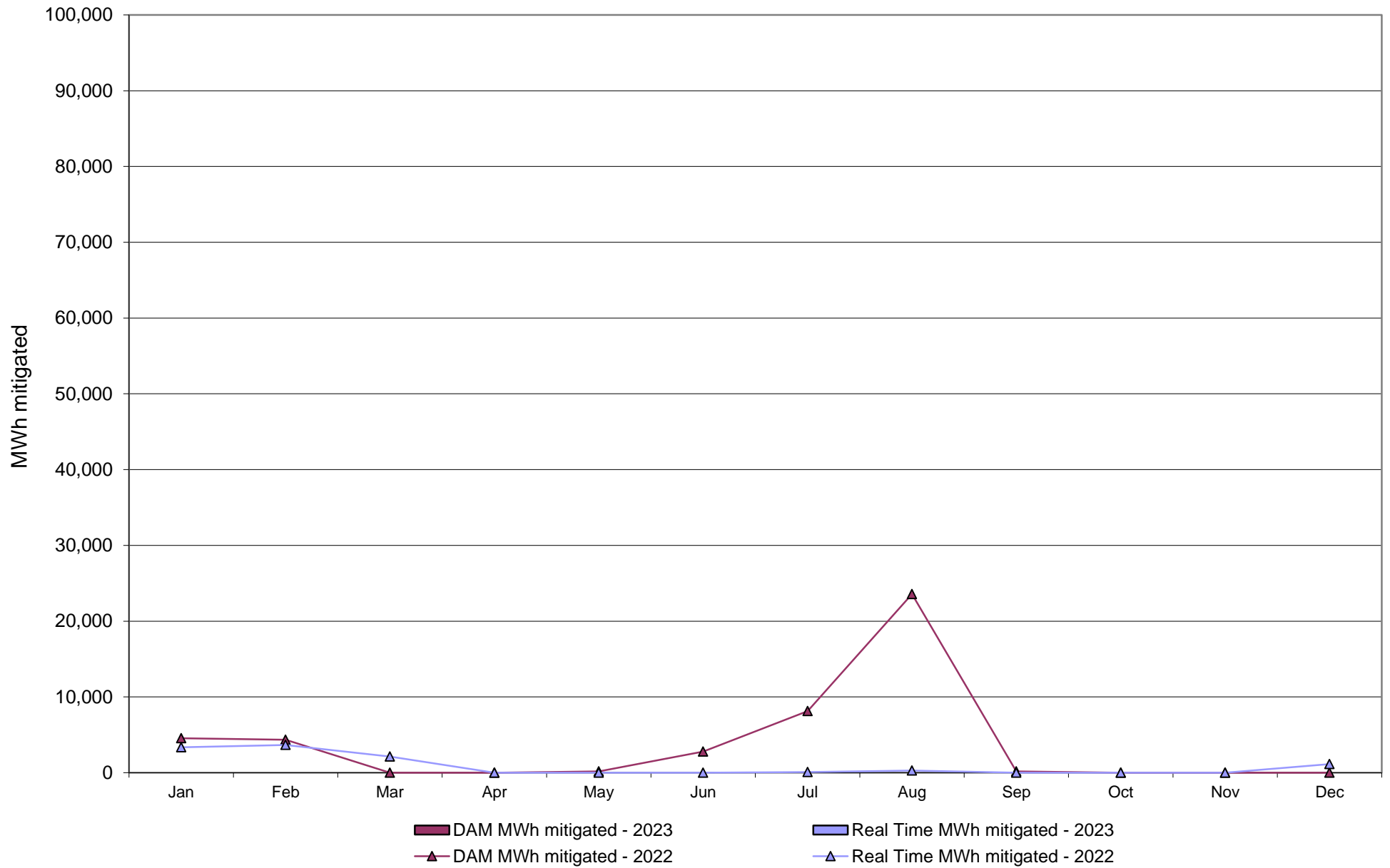
<u>2023</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
<u>Real Time Market</u>												
10 Min Spin Long Island (K)	4.22											
10 Min Spin NYC (J)	4.30											
10 Min Spin SENY (GHI)	4.22											
10 Min Spin East (F)	4.20											
10 Min Spin West (ABCDE)	3.10											
10 Min Non Synch Long Island (K)	1.81											
10 Min Non Synch NYC (J)	1.89											
10 Min Non Synch SENY (GHI)	1.81											
10 Min Non Synch East (F)	1.79											
10 Min Non Synch West (ABCDE)	1.15											
30 Min Long Island (K)	0.39											
30 Min NYC (J)	0.39											
30 Min SENY (GHI)	0.39											
30 Min East (F)	0.36											
30 Min West (ABCDE)	0.36											
Regulation	8.46											
NYCA Regulation Movement	0.12											
<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	9.02	6.90	3.15	2.68	4.93	6.01	10.69	3.49	3.23	7.82	36.64
10 Min Spin NYC (J)	18.04	9.27	7.04	3.27	3.17	5.46	6.66	12.88	3.74	3.41	8.01	36.89
10 Min Spin SENY (GHI)	17.99	9.02	6.90	3.15	2.68	4.93	6.01	10.69	3.49	3.23	7.82	36.64
10 Min Spin East (F)	17.97	9.02	6.90	3.15	2.62	4.39	5.65	8.61	3.27	3.22	7.54	34.02
10 Min Spin West (ABCDE)	13.47	7.56	2.14	1.83	1.76	3.13	2.70	5.68	1.84	1.40	3.02	22.15
10 Min Non Synch Long Island (K)	5.34	0.59	4.05	0.40	0.43	2.42	4.26	6.67	0.81	0.38	2.63	23.83
10 Min Non Synch NYC (J)	5.40	0.84	4.19	0.51	0.92	2.95	4.90	8.85	1.06	0.56	2.81	24.09
10 Min Non Synch SENY (GHI)	5.34	0.59	4.05	0.40	0.43	2.42	4.26	6.67	0.81	0.38	2.63	23.83
10 Min Non Synch East (F)	5.33	0.59	4.05	0.40	0.37	1.88	3.90	4.58	0.59	0.37	2.35	21.21
10 Min Non Synch West (ABCDE)	2.46	0.20	0.19	0.29	0.34	1.51	1.79	2.37	0.25	0.01	0.10	12.80
30 Min Long Island (K)	1.42	0.20	0.16	0.29	0.40	2.05	2.28	4.29	0.47	0.01	0.38	11.54
30 Min NYC (J)	1.42	0.20	0.16	0.29	0.56	2.20	2.41	5.15	0.52	0.01	0.38	11.73
30 Min SENY (GHI)	1.42	0.20	0.16	0.29	0.40	2.05	2.28	4.29	0.47	0.01	0.38	11.54
30 Min East (F)	1.41	0.20	0.16	0.29	0.34	1.51	1.92	2.21	0.25	0.01	0.10	8.92
30 Min West (ABCDE)	1.41	0.20	0.16	0.29	0.34	1.51	1.79	2.21	0.25	0.01	0.10	8.87
Regulation	33.92	18.10	11.81	8.22	8.23	11.84	8.95	11.52	11.36	8.91	12.84	28.95
NYCA Regulation Movement	0.16	0.17	0.15	0.10	0.13	0.20	0.18	0.23	0.23	0.16	0.15	0.19

NYISO In City Energy Mitigation - AMP (NYC Zone) 2022 - 2023

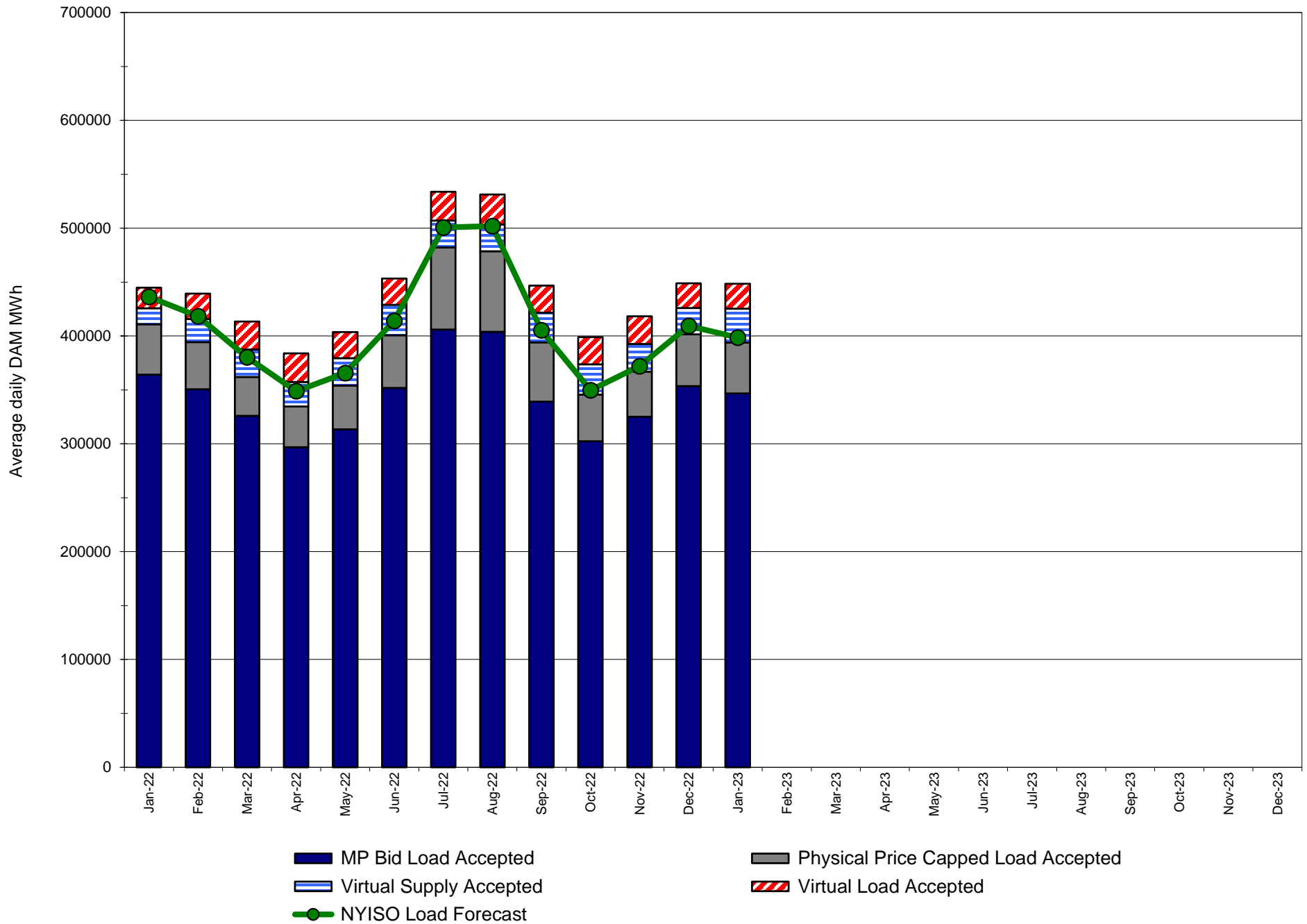
Percentage of committed unit-hours mitigated



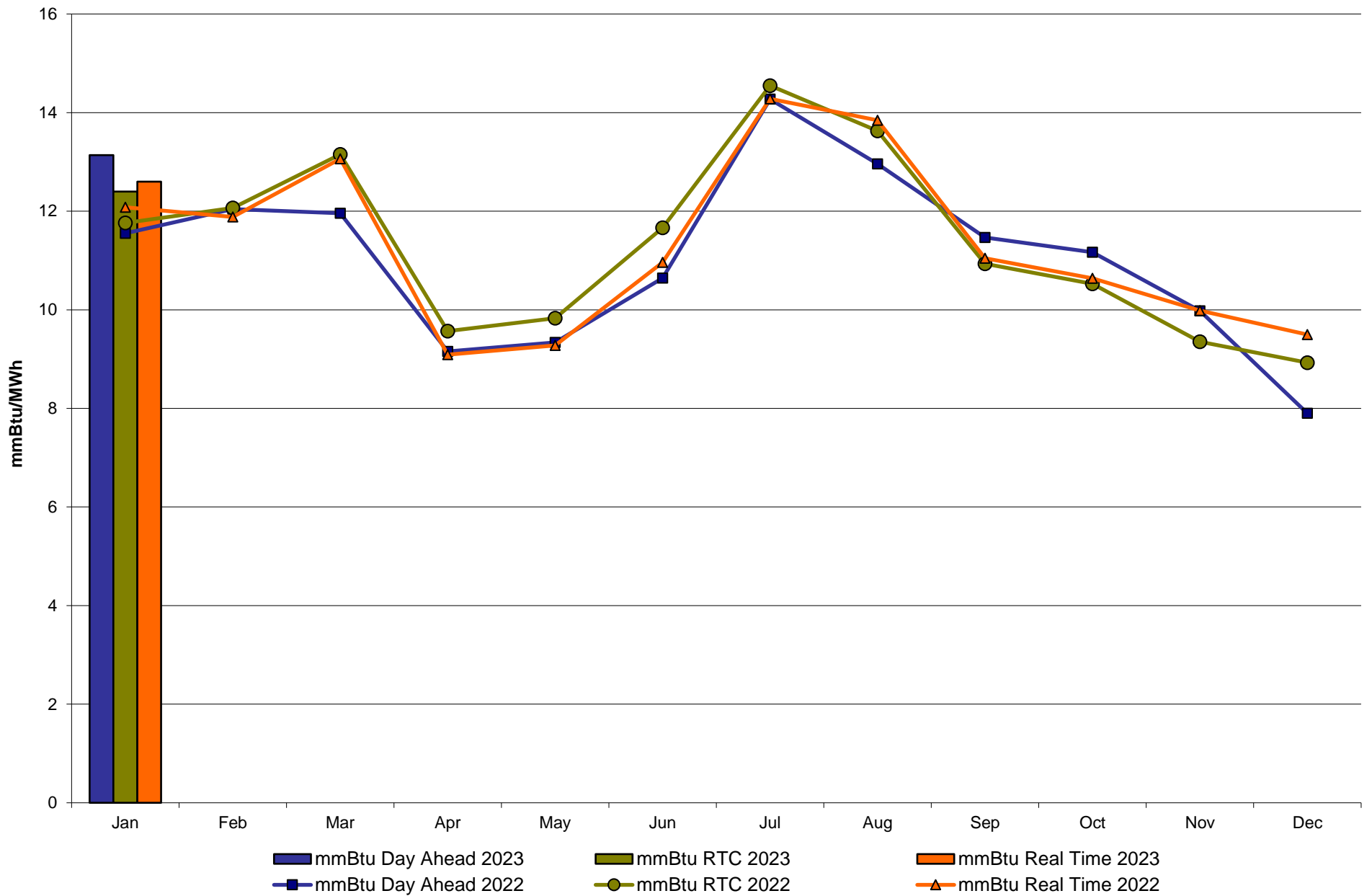
NYISO In City Energy Mitigation (NYC Zone) 2022 - 2023
Monthly megawatt hours mitigated



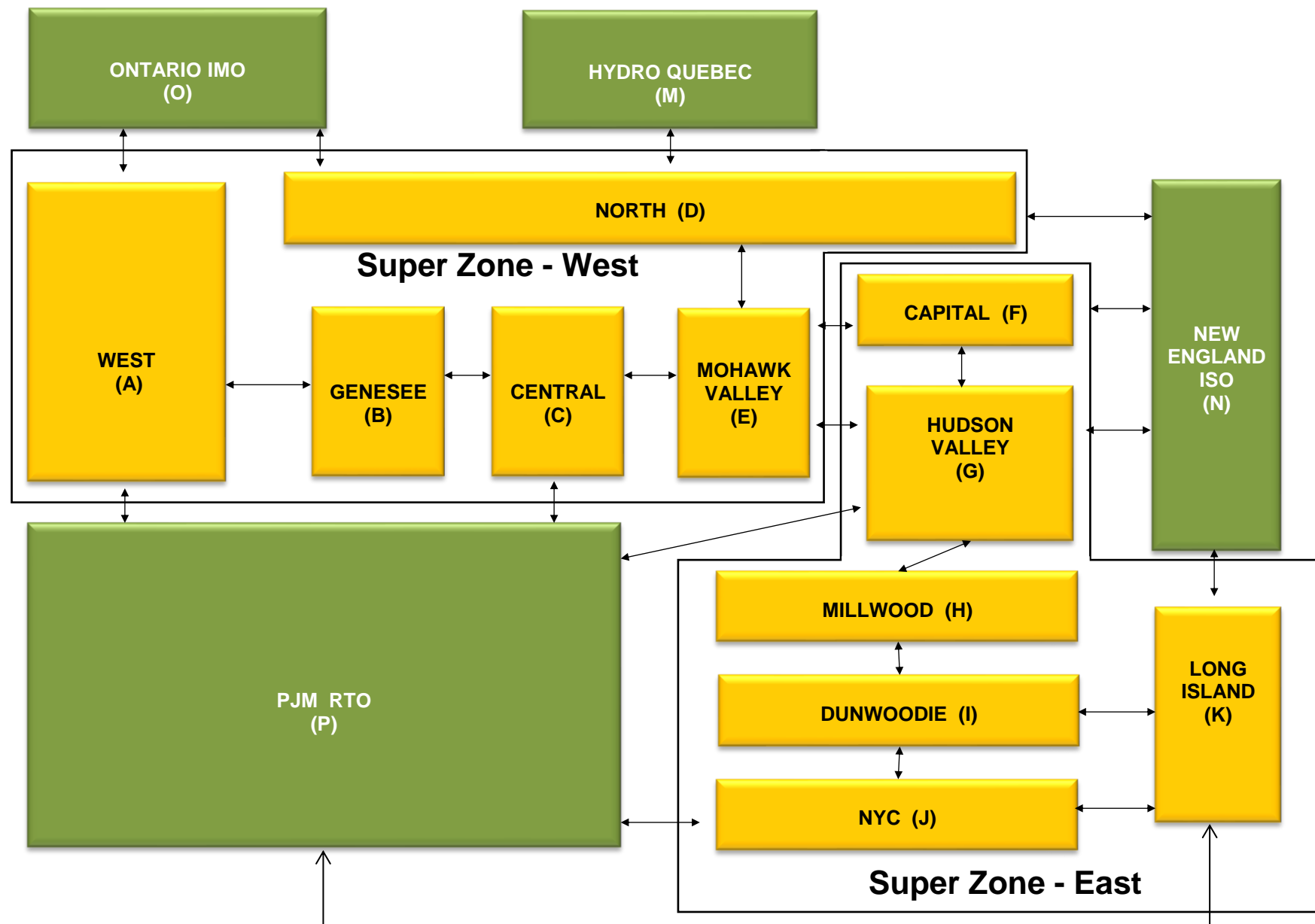
NYISO Average Daily DAM Load Bid Summary



Monthly Implied Heat Rate 2022-2023



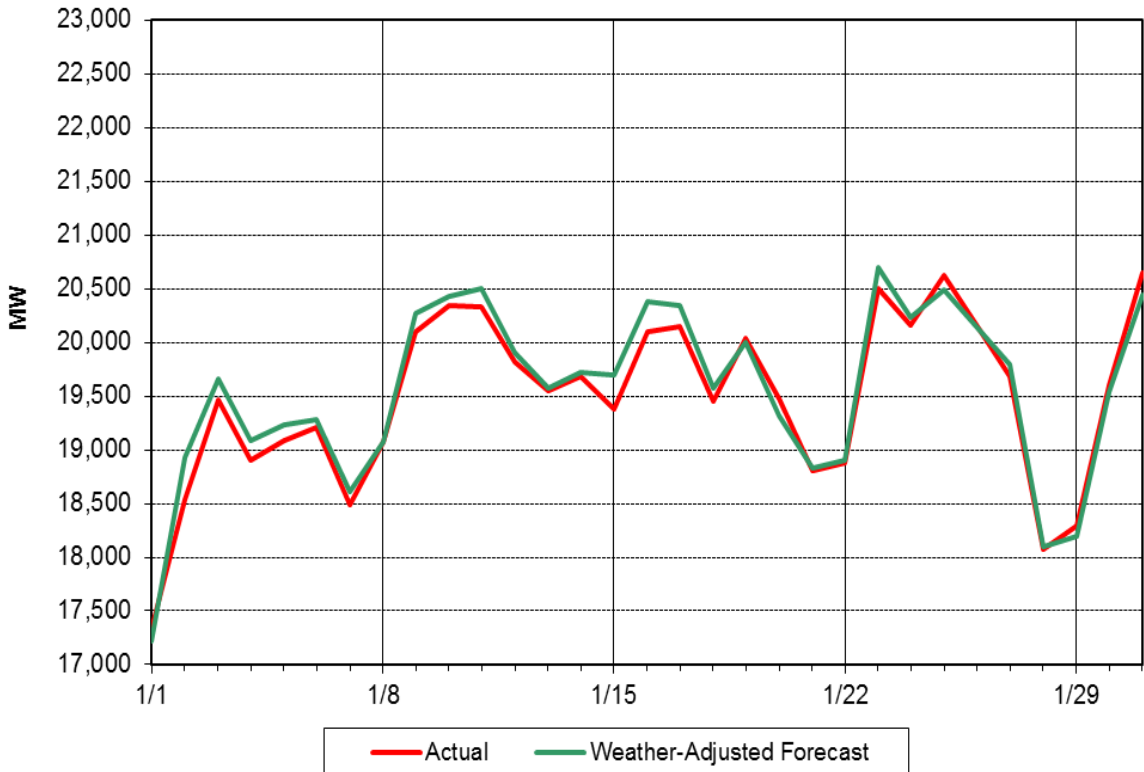
NYISO LBMP ZONES



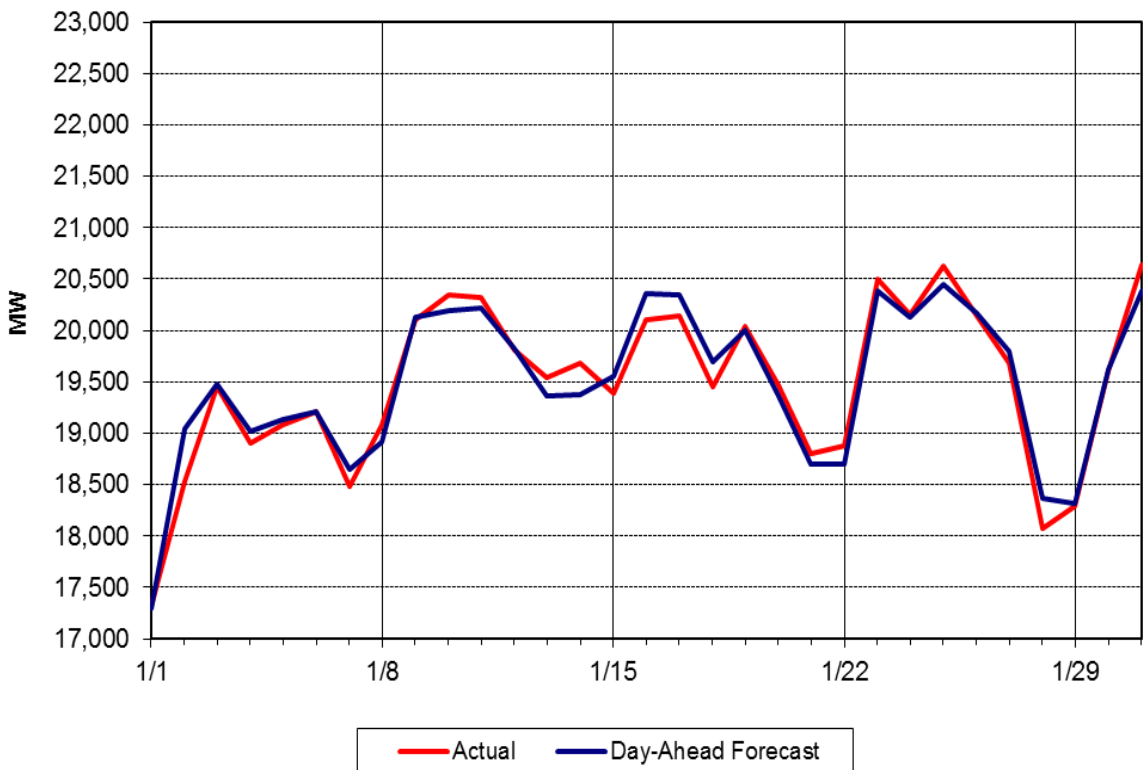
Billing Codes for Chart C

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

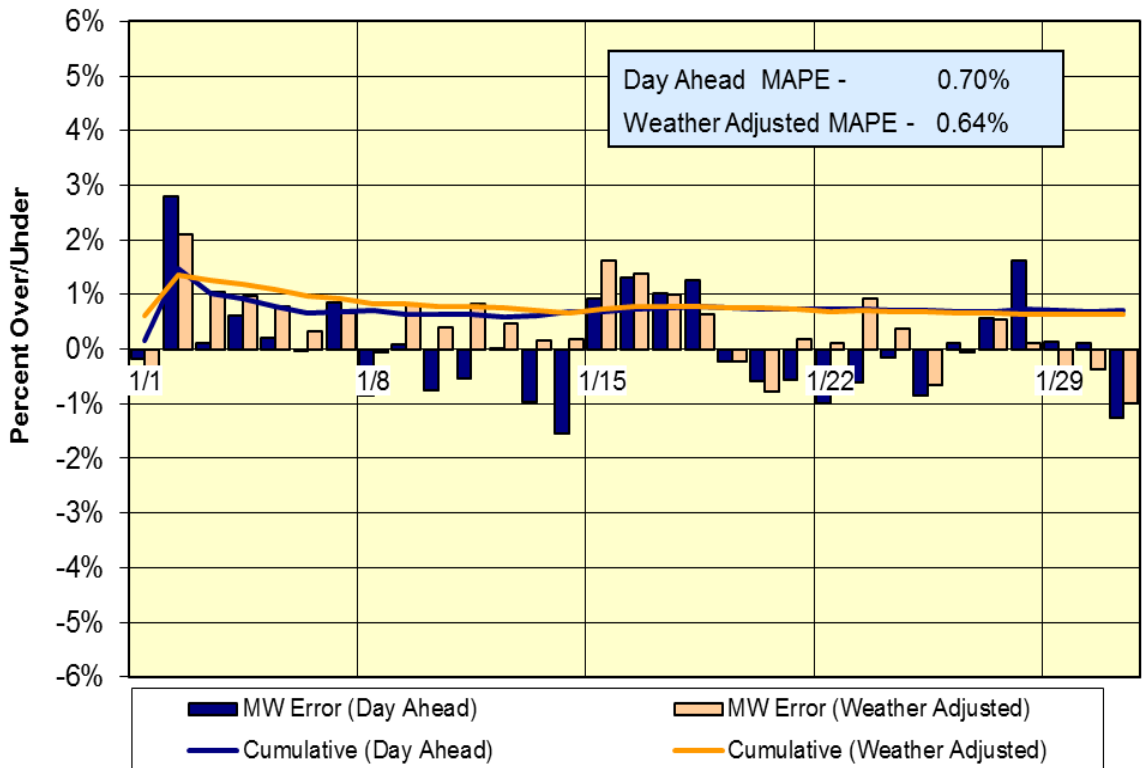
NYISO Daily Peak Load - January 2023
Actual vs. Weather-Adjusted Forecast



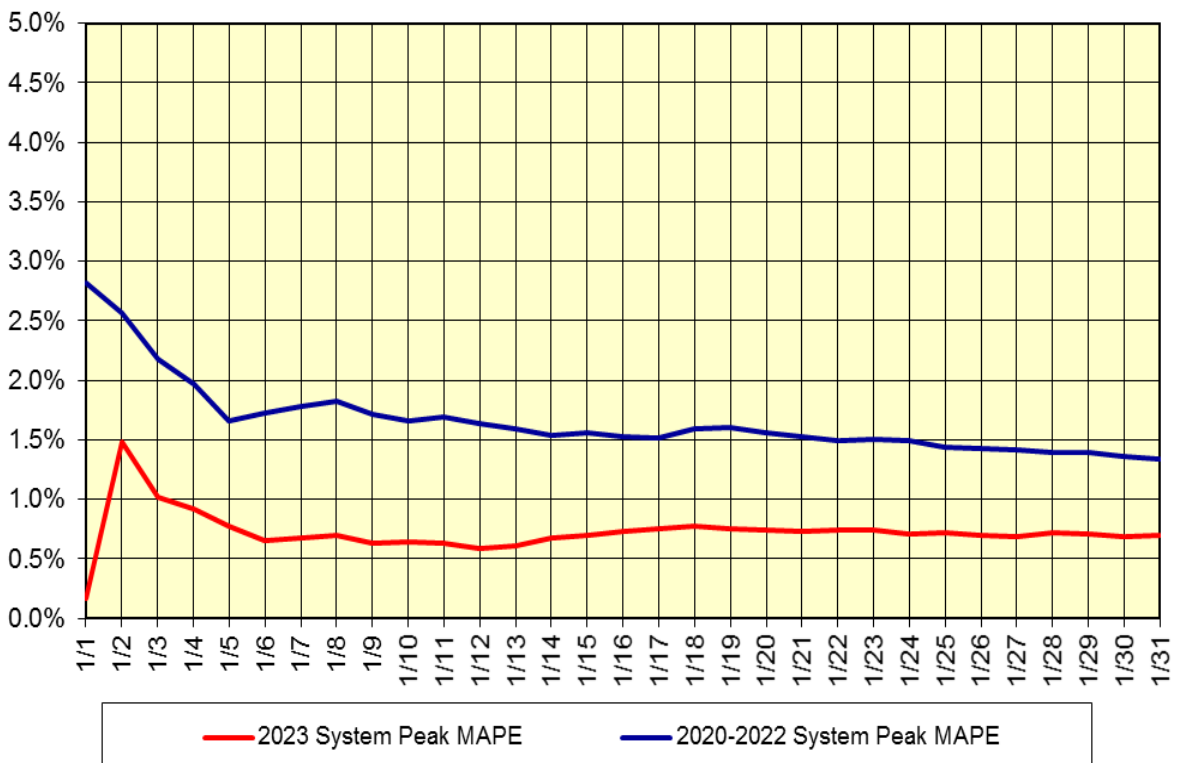
NYISO Daily Peak Load - January 2023
Actual vs. Forecast



Day Ahead Peak Forecast - January 2023 Percent Error - Actual & Weather-Adjusted



Day-Ahead Forecast Accuracy - Cumulative Performance 2023 Year-to-Date



**Summary Description of Regulatory Filings, Investigations,
Rulemakings and Related Orders in NYISO Matters – January 2023**

Filing Date	Filing Summary	Docket	Order Summary	Order Date
05/06/2022	Filed on behalf of the New York Power Authority (NYPA), NYPA's response to a April 7, 2022 deficiency letter from FERC regarding NYPA's February 10, 2022 request for incentive rate treatments and corresponding revisions to NYPA's formula rate. A July 7, 2022 FERC order conditionally accepted the filing and directed NYPA to submit a compliance filing.	ER22-1014-001	FERC's order accepted NYPA's compliance filing to comply with FERC's March 11 and July 5, 2022 orders.	01/19/2023
11/17/2022	Joint NYISO-NYPA Section 205 filing of an executed Large Generator Interconnection Agreement (LGIA) among NYISO, NYPA, and North Side Energy Center for the North Side Solar Project (SA No. 2739).	ER23-455-000	A FERC letter order accepted the executed agreement effective November 3, 2022, as requested.	01/04/2023
11/23/2022	Submittal of a Section 205 filing on behalf of New York Power Authority (NYPA) of a proposal to revise its Formula Rate Template and Formula Rate Protocols.	ER23-491-000	FERC order accepted the proposed Tariff revisions to the Formula Rate Template and suspended them for a nominal period to become effective January 24, 2023, subject to refund, and set them for hearing and settlement judge procedures. FERC conditionally accepted for filing the proposed Tariff revisions to the Formula Rate Protocols, effective January 24, 2023, subject to revision and a compliance filing.	01/23/2023
12/01/2022	Joint Section 205 filing of an Amended and Restated Small Generator Interconnection Agreement among NYISO, National Grid and Darby Solar for the Darby Solar Project (SA 2556).	ER23-538-000	A FERC letter order accepted the agreement effective November 16, 2022, as requested.	01/20/2023
12/01/2022	Joint Section 205 filing of an Amended Small Generator Interconnection Agreement among NYISO, National Grid, and Branscomb Solar for the Branscomb Solar Project (SA 2557).	ER23-541-000	A FERC letter order accepted the agreement effective November 16, 2022, as requested.	01/25/2023
12/02/2022	Joint NYISO-Con Edison Section 205 filing of an executed Transmission Project Interconnection Agreement (TPIA) among NYISO, Con Edison, and Transco for Dover PAR substation under the New York Energy Solution Project (SA2734).	ER23-549-000	A FERC letter order accepted the agreement effective November 17, 2022, as requested.	01/26/2023
12/13/2022	Filed on behalf of Niagara Mohawk, a notice of cancellation of a Cost Reimbursement Agreement (CRA) with the Village of Solvay (SA No. 1810)	ER23-614-000	A FERC order accepted the cancellation notice, effective February 13, 2023, as requested.	01/26/2023

Filing Date	Filing Summary	Docket	Order Summary	Order Date
01/10/2023	NYISO quarterly Transmission study report posting at NYISO website per FERC order 890.	Order 890		
01/12/2023	NYISO filing of motion to intervene and comments on NYSRC's 2023-24 Capability Year Installed Reserve Margin (IRM).	ER23-821-000		
1/12/2023	NYISO filing to NYPSC on NYSRC's 2023-24 Capability Year Installed Reserve Margin (IRM).	PSC Case No. 07-E-0088		
01/13/2023	NYISO motion to intervene and comments on Thousand Island Solar's January 5 request for waiver of Section 25.6.2.3.1 of the NYISO's OATT.	ER23-780-000		
01/13/2023	NYISO motion to intervene and comments on the January 3, 2023 request for waiver from Barrett Hempstead Battery Storage, Holtsville Brookhaven Battery Storage, Canal Southampton Battery Storage, and Edwards Calverton Battery Storage (the "Rhymland Companies") of Section 25.6.2.3.1 of the NYISO's OATT.	ER23-783-000		
01/13/2023	NYISO motion to intervene and comments on Microgrid Network's January 6, 2023 request for waiver of Section 25.6.2.3.1 of the NYISO's OATT.	ER23-785-000		
01/13/2023	NYISO motion to intervene and comments on ConnectGen Montgomery County's ("ConnectGen") January 6, 2023 request for waiver of Section 25.6.2.3.1 of the NYISO's OATT.	ER23-786-000		
01/13/2023	NYISO motion to intervene and comments on York Run Solar's ("York Run") January 6, 2023 request for waiver of Section 25.6.2.3.1 of the NYISO's OATT.	ER23-787-000		
01/17/2023	NYISO motion to intervene and comments on Boralex's January 9 request for waiver of Section 25.6.2.3.1 of the NYISO's OATT.	ER23-798-000		
01/19/2023	NYISO motion to intervene and comments on Gravel Road Solar's January 12, 2023 request for waiver of Section 25.6.2.3.1 of the NYISO's OATT.	ER23-830-000		
01/20/2023	NYISO motion to intervene and comments on the January 13, 2023 request for waiver from Innisfree Storage ("Innisfree") of Section 25.6.2.3.1 of the NYISO's OATT.	ER23-867-000		

Filing Date	Filing Summary	Docket	Order Summary	Order Date
01/20/2023	NYISO motion to intervene and comments on the January 13, 2023 request for waiver from North Country Wind ("North Country") of Section 25.6.2.3.1 of the NYISO's OATT.	ER23-860-000		
01/20/2023	NYISO motion to intervene and comments on the January 10, 2023 request for waiver from Invenergy Solar Project Development ("Invenergy") of Section 25.6.2.3.1 of the NYISO's OATT.	ER23-803-000		
01/20/2023	Filed on behalf of Niagara Mohawk, revisions to Niagara Mohawk's Transmission Service Charge (TSC) formula rate.	ER23-907-000		
01/23/2023	NYISO motion to intervene and comments on the January 13, 2023 request for waiver from Union Energy Center LLC ("UnionEC") of Section 25.6.2.3.1 of the NYISO's OATT.	ER23-859-000		
01/24/2023	Submission of the NYISO's Q4 2022 Electronic Quarterly Report (EQR).	ER02-2001-000		
01/25/2023	NYISO motion to intervene and comments on the January 18, 2023 request for waiver from North Seneca Solar Project LLC ("North Seneca") of Section 25.6.2.3.1 of the NYISO's OATT.	ER23-894-000		
01/25/2023	NYISO motion to intervene and comments on Crane Brook Solar Project's January 18 request for waiver of Section 25.6.2.3.1 of the NYISO's OATT.	ER23-893-000		
01/27/2023	Confidential NYISO data request response to RAO regarding hourly energy production			
01/27/2023	NYISO motion to intervene and protest on the January 20, 2023 request for waiver from Middletown Energy Storage ("Middletown") of Section 25.6.2.3.1 of the NYISO's OATT.	ER23-915-000		
01/27/2023	NYISO motion to intervene and protest on the January 20, 2023 request for waiver from Athens Energy Storage LLC ("Athens ES") of Section 25.6.2.3.1 of the NYISO's OATT.	ER23-916-000		
01/30/2023	NYISO filed on behalf of Niagara Mohawk Power Corporation (NMPC), proposed tariff revisions to allocate and recover costs related to the Smart Path Connect (SPC) Project, request to establish an incentive rate treatment for the SPC Project, and request to establish a regulatory asset for the Cost of Removal less Salvage.	ER23-973-000		