

Monthly Report

A Report by the
New York Independent System Operator

June 2023

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June 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 July 11, 2023.

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June 2023 Operations Performance Highlights

Monthly Peak Load	Monthly Minimum Load	Summer 2023 Peak	All-time Summer Peak
06/02/2023 HB 16 22,867 MW	06/04/2023 HB 05 11,999 MW	06/02/2023 HB 16 22,867 MW	07/19/2013 HB 16 33,956 MW

- 22.9 hours of Thunderstorm Alerts were declared
- 0.0 hours of NERC TLR level 3 curtailment
- VanWagner-Pleasant Valley 345kV (#Y58) and VanWagner-Pleasant Valley 345kV (#Y59) transmission facilities associated with AC Transmission Public Policy Segment B were placed in-service on 06/06/2023 and 06/22/2023 respectively.
- Effective 06/01/2023, the NYISO implemented updated regulation requirements and updated the web posting detailing the [regulation requirements](#).

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)
2,521 MW	4,695 MW	154 MW	40 MW

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

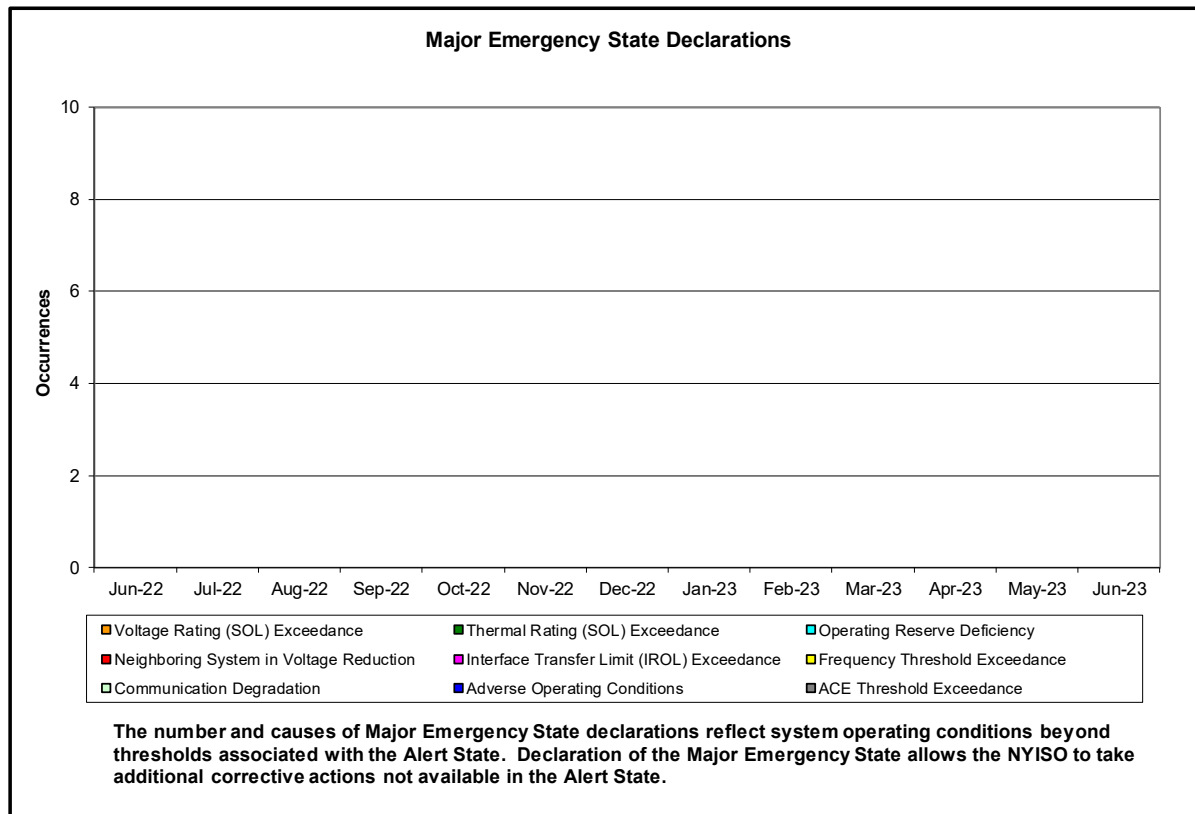
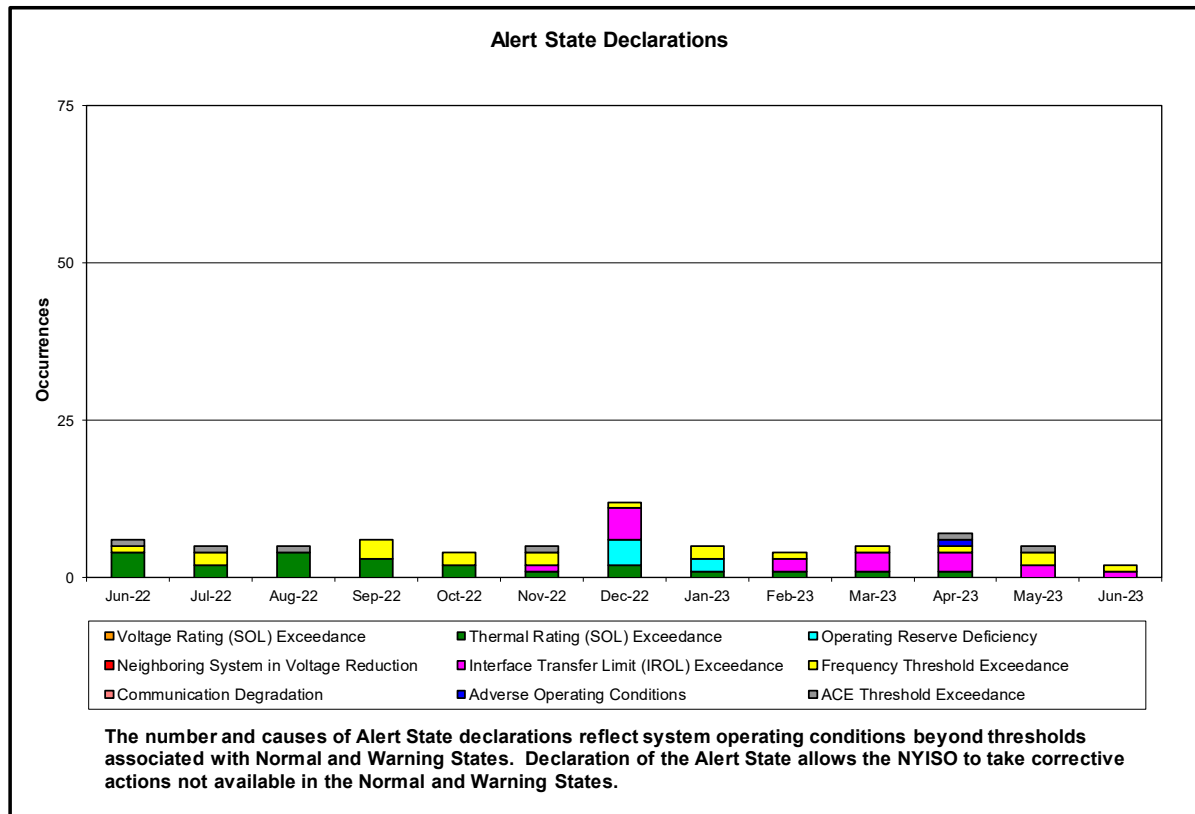
	Current Month Value (\$M)	Year-to-Date Value (\$M)
NY Savings from PJM-NY Congestion Coordination	(\$0.66)	\$12.99
NY Savings from PJM-NY Coordinated Transaction Scheduling	(\$0.30)	(\$0.43)
NY Savings from NE-NY Coordinated Transaction Scheduling	(\$0.18)	(\$1.29)
Total NY Savings	(\$1.14)	\$11.28
Regional Savings from PJM-NY Coordinated Transaction Scheduling	\$0.74	\$3.07
Regional Savings from NE-NY Coordinated Transaction Scheduling	\$0.04	\$0.46
Total Regional Savings	\$0.78	\$3.53

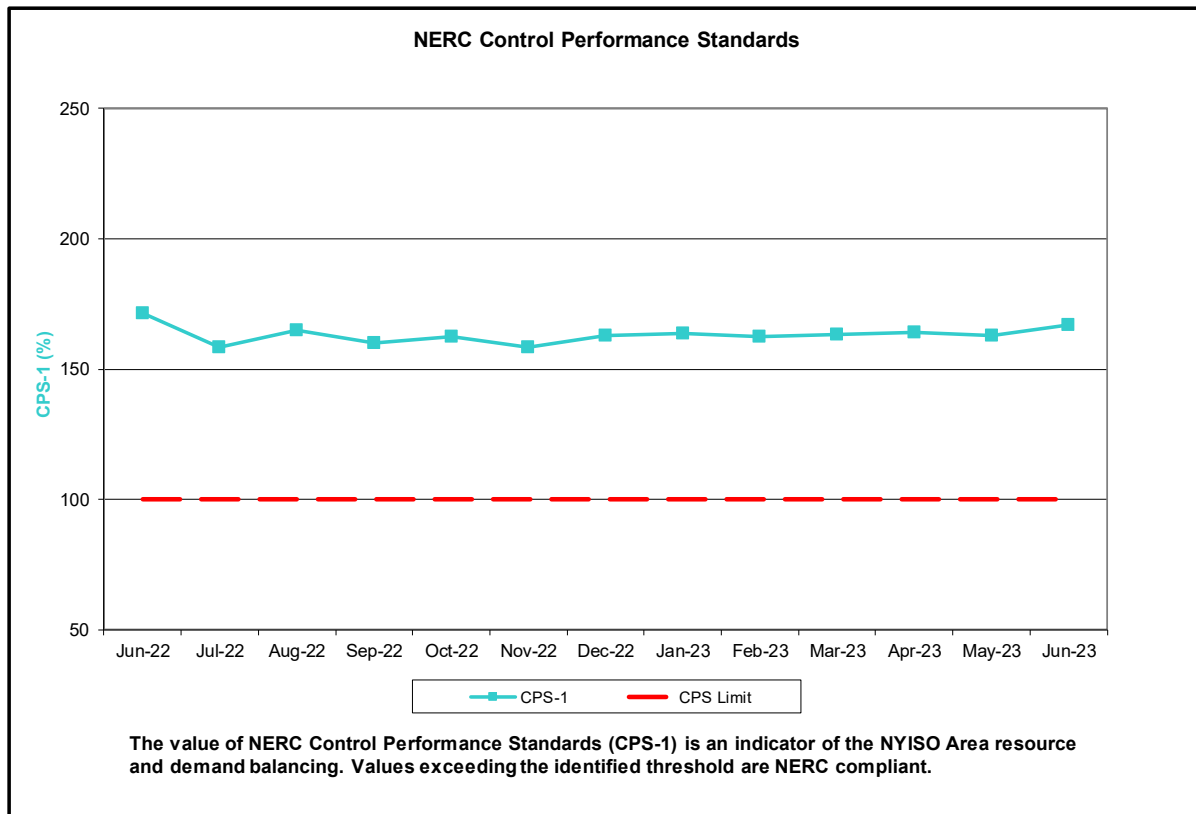
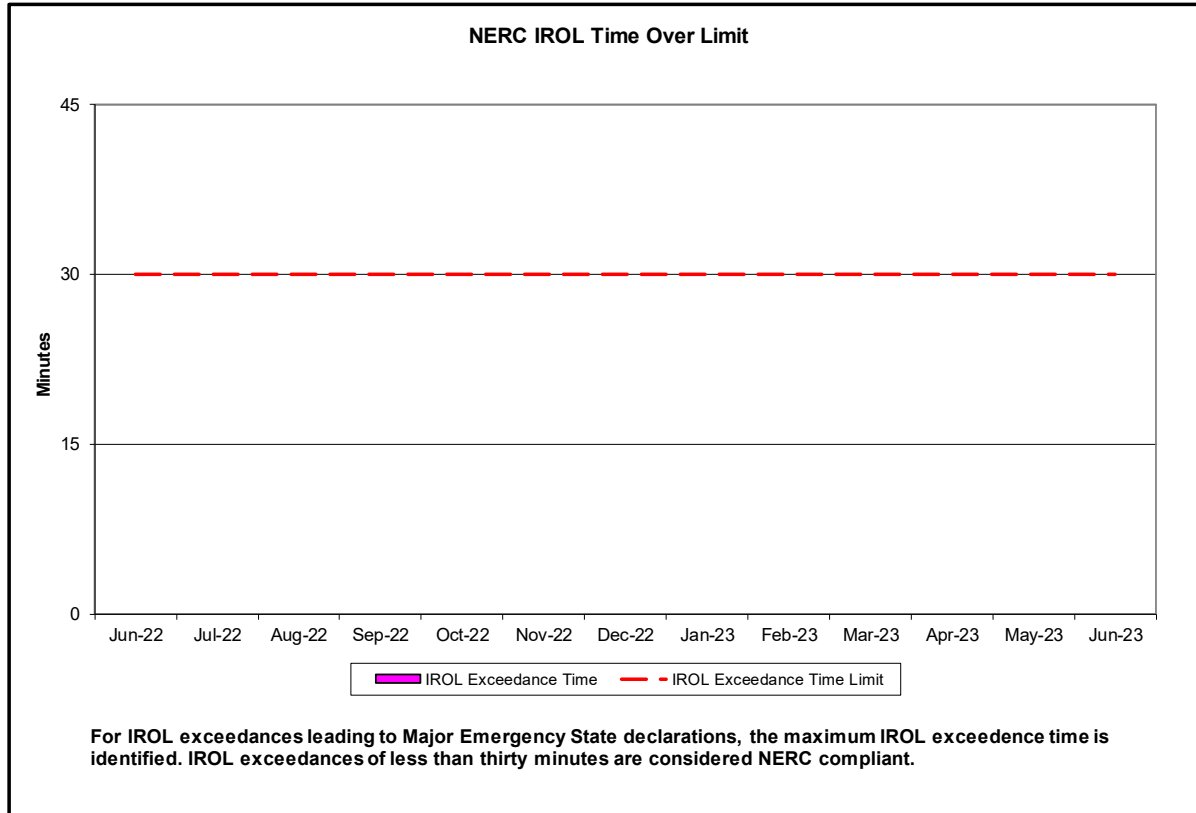
- Statewide uplift cost monthly average was (\$0.26)/MWh.
- The following table identifies the Monthly ICAP spot market prices and the price delta.

Spot Auction Price Results	NYCA	Lower Hudson Valley Zones	New York City Zone	Long Island Zone
July 2023 Spot Price	\$6.16	\$6.16	\$19.47	\$6.16
June 2023 Spot Price	\$5.70	\$5.70	\$18.58	\$5.70
Delta	\$0.46	\$0.46	\$0.89	\$0.46

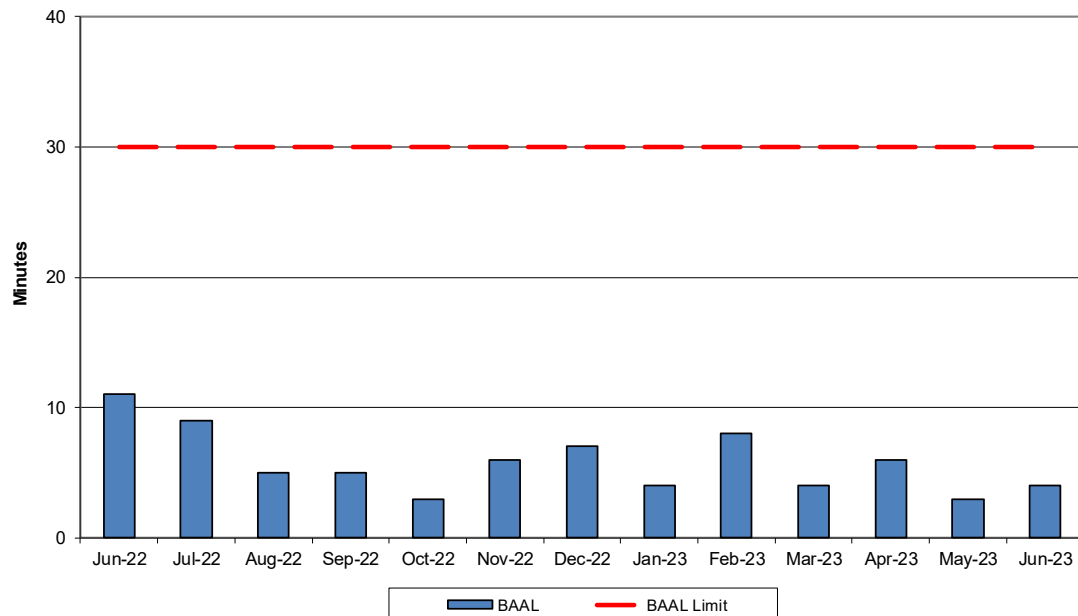
- The Market Clearing Prices in all zones increased as a result of the new demand curve reference points utilized effective July 2023.

Reliability Performance Metrics



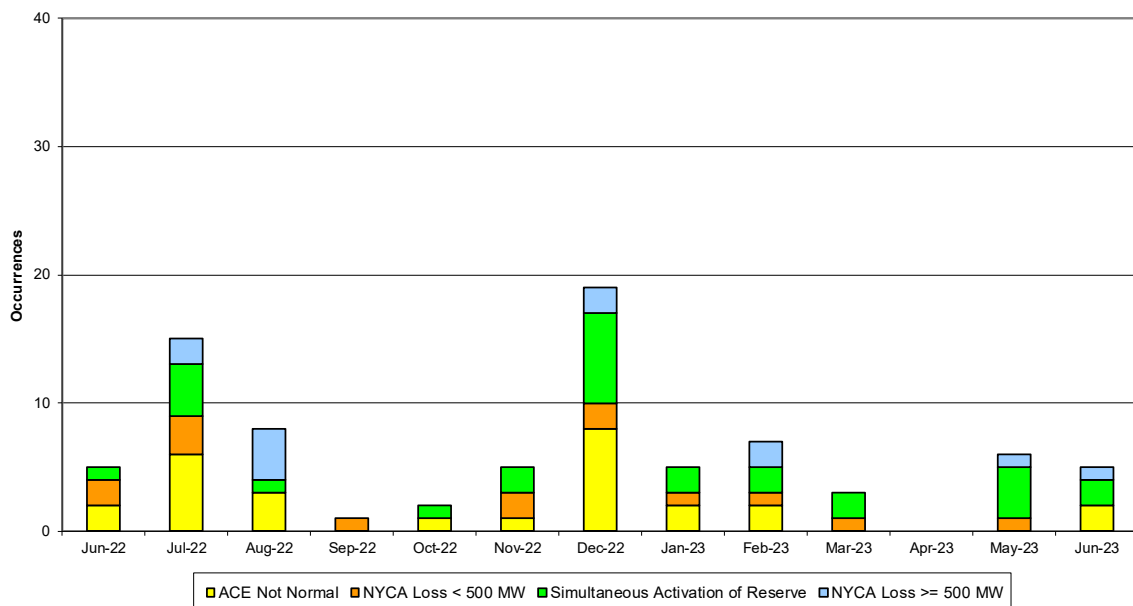


NERC Balancing Authority ACE Limit Standard



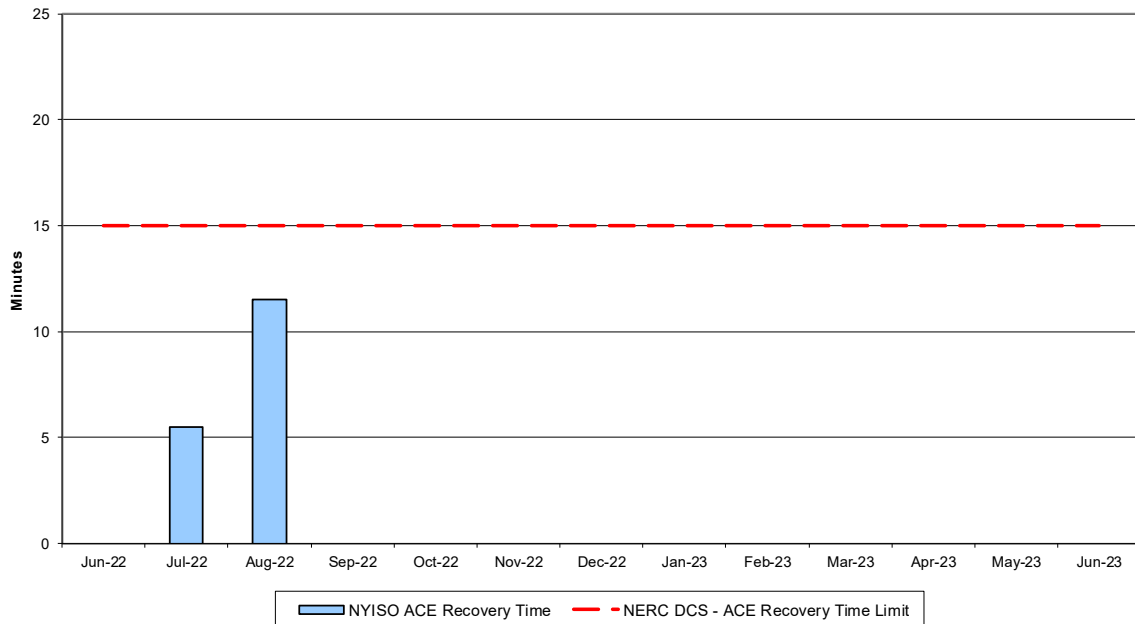
The amount of time the clock-minute average ACE exceeds the clock-minute Balancing Authority ACE Limit (BAAL) is an indicator of the NYISO Area resource and demand balancing. The maximum BAAL exceedance time is identified. BAAL exceedances of less than 30 consecutive clock-minutes are NERC compliant.

Reserve Activations



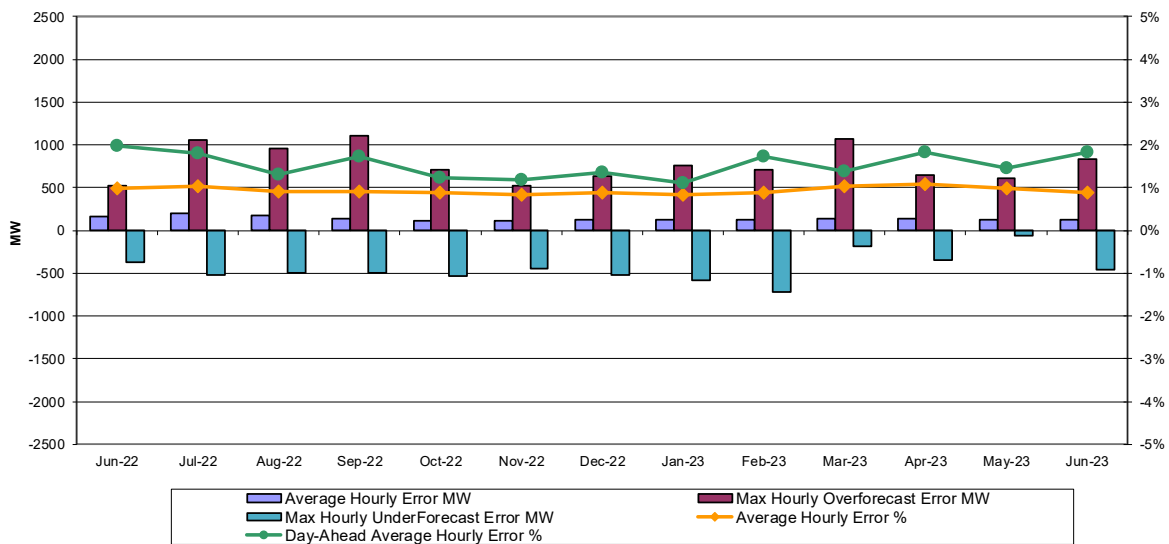
NYISO Reserve Activations are indicators of the need to respond to unexpected operational conditions within the NYISO Area or to assist a neighboring Area (Simultaneous Activation of Reserves) by activating an immediate resource and demand balancing operation.

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.

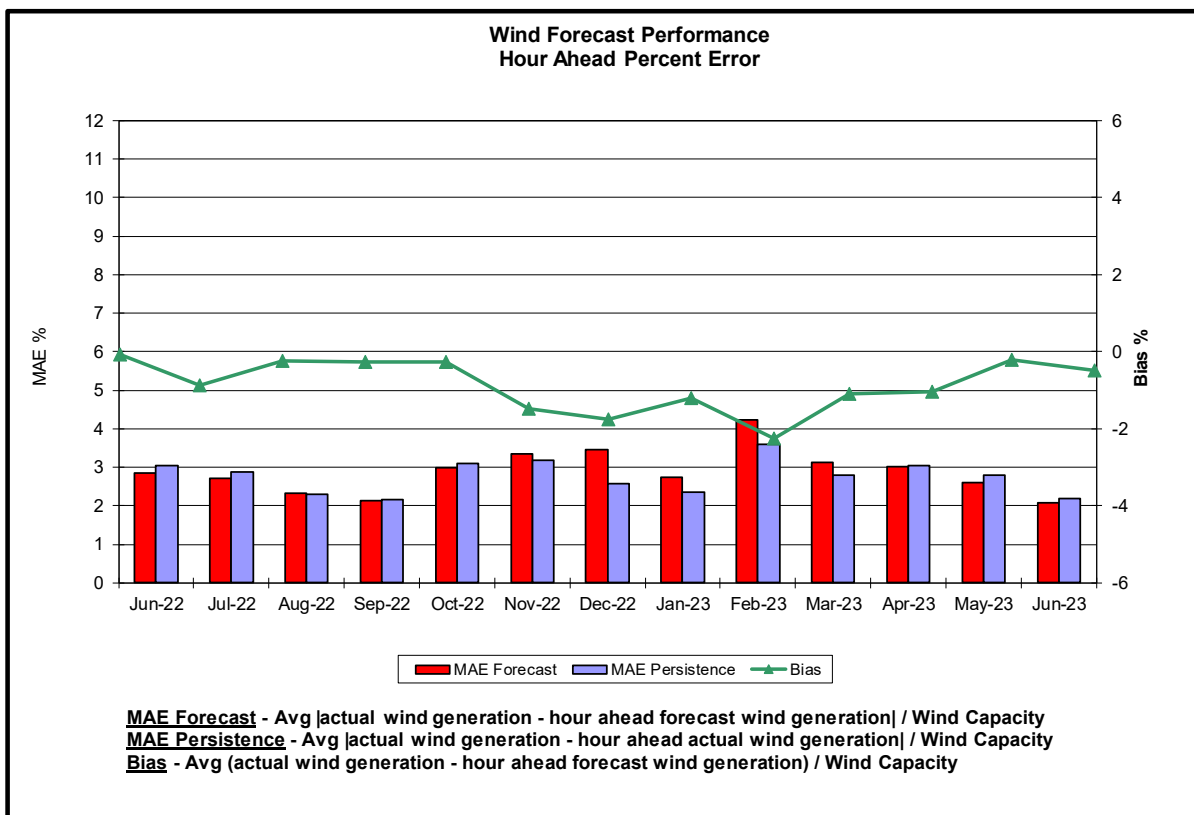
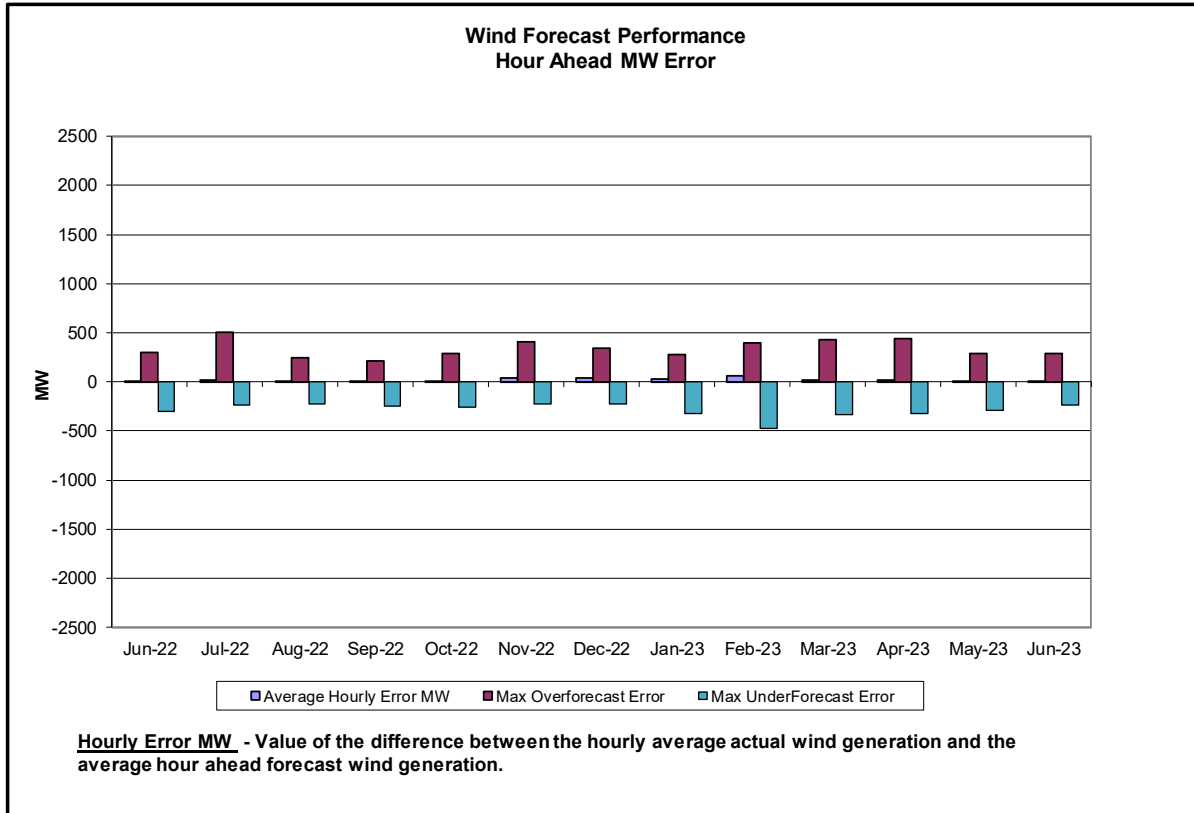
Load Forecast Performance

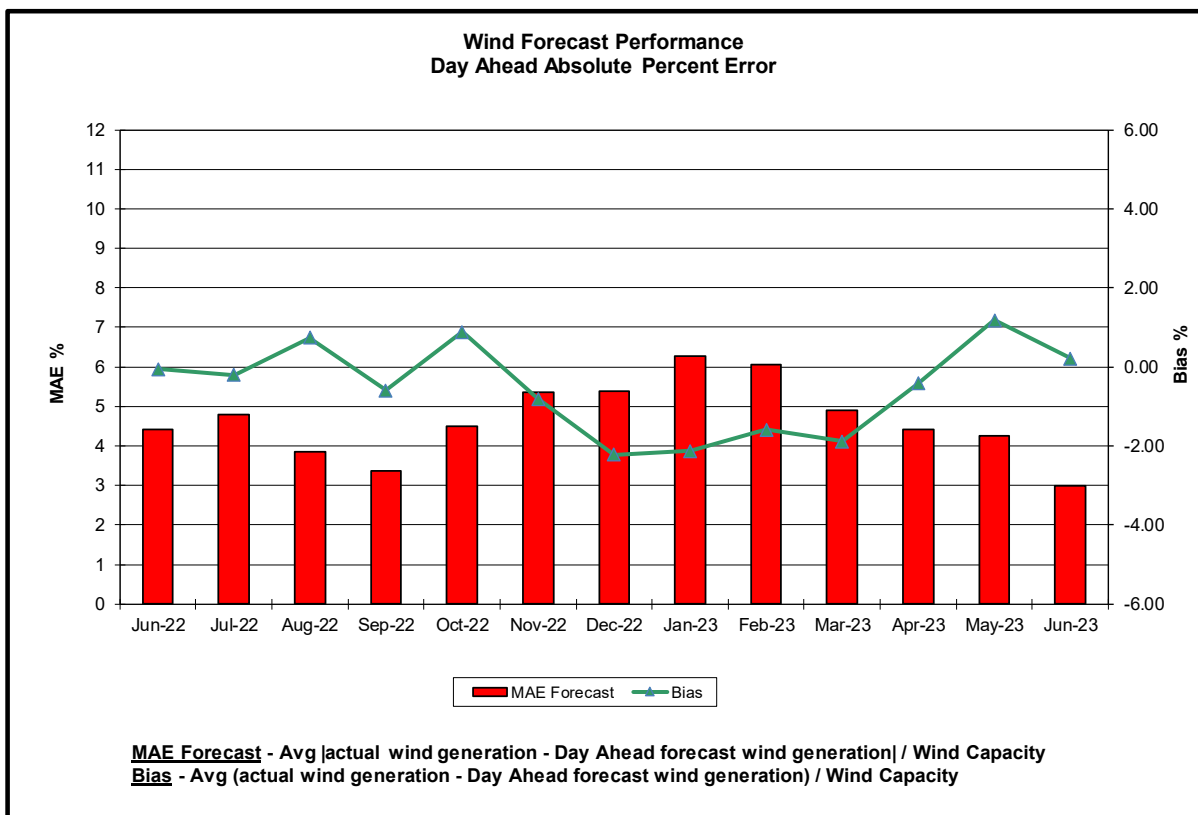
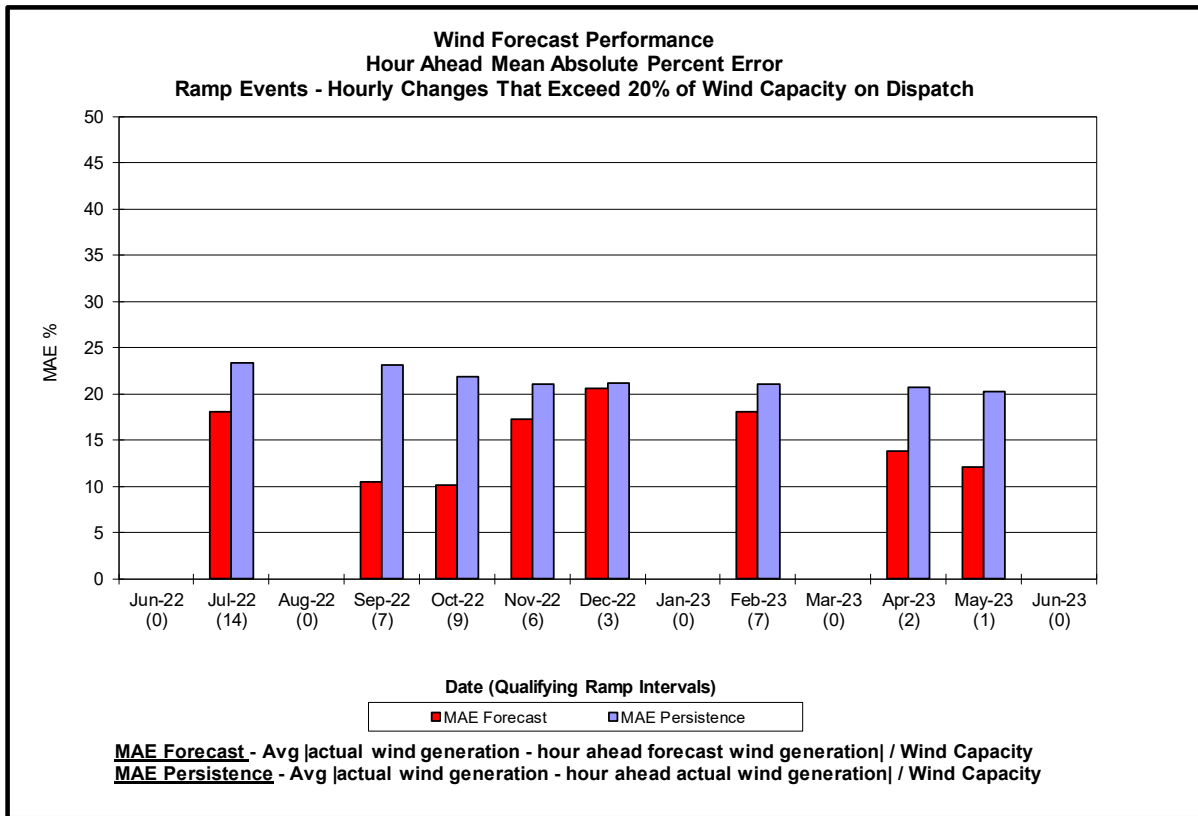


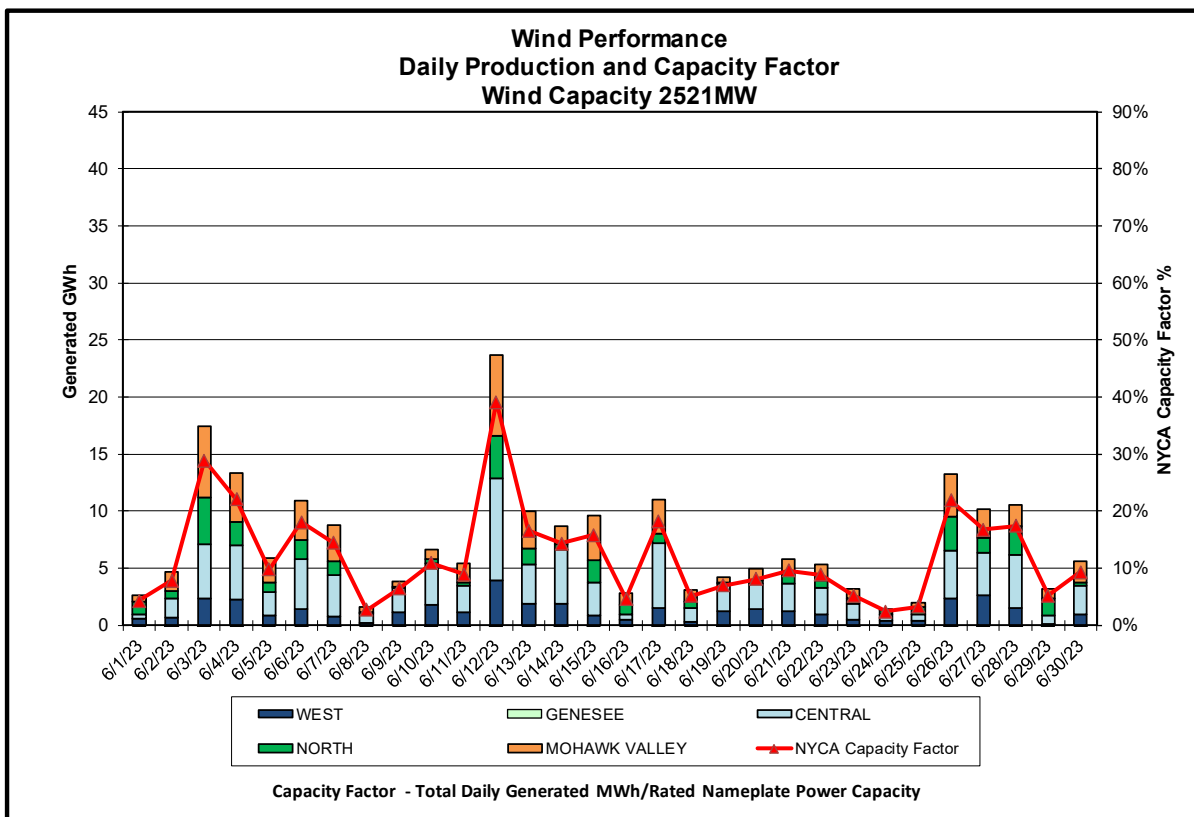
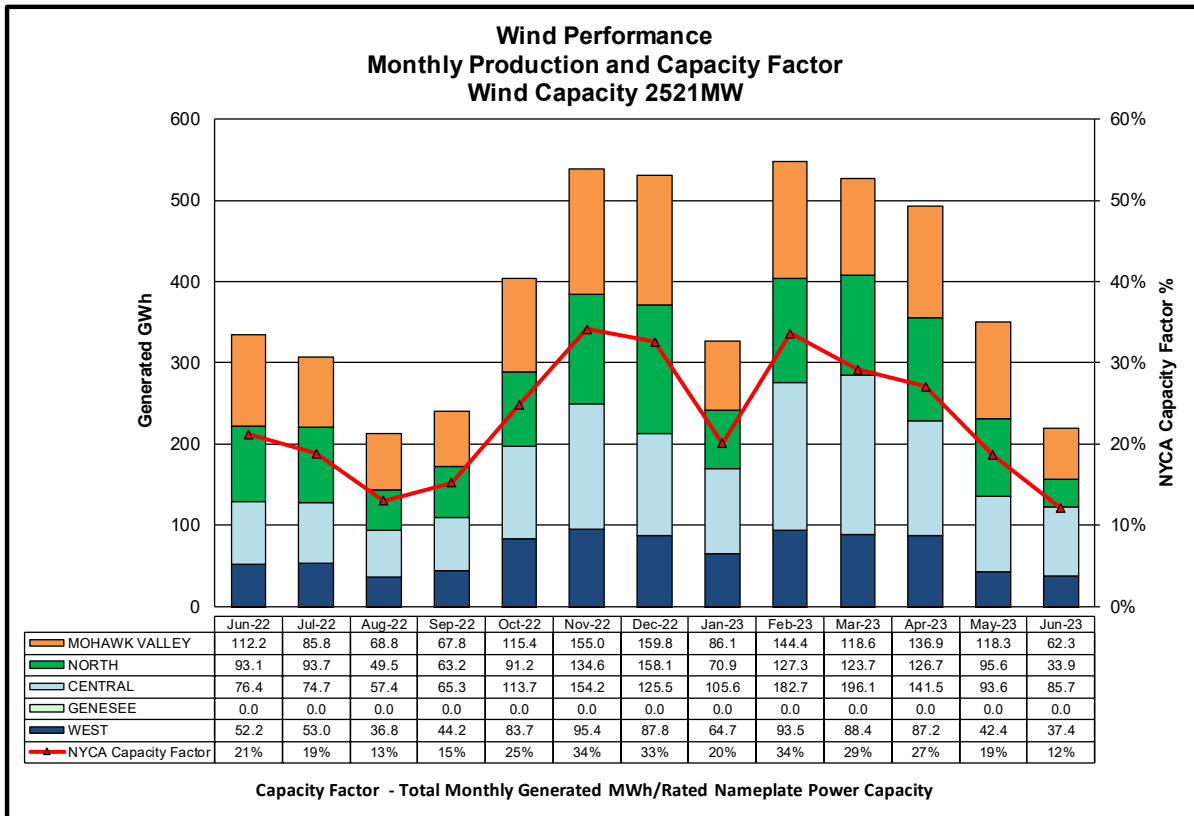
Hourly Error MW - Value of the difference between the hourly average actual load demand and the average hour ahead forecast load demand.

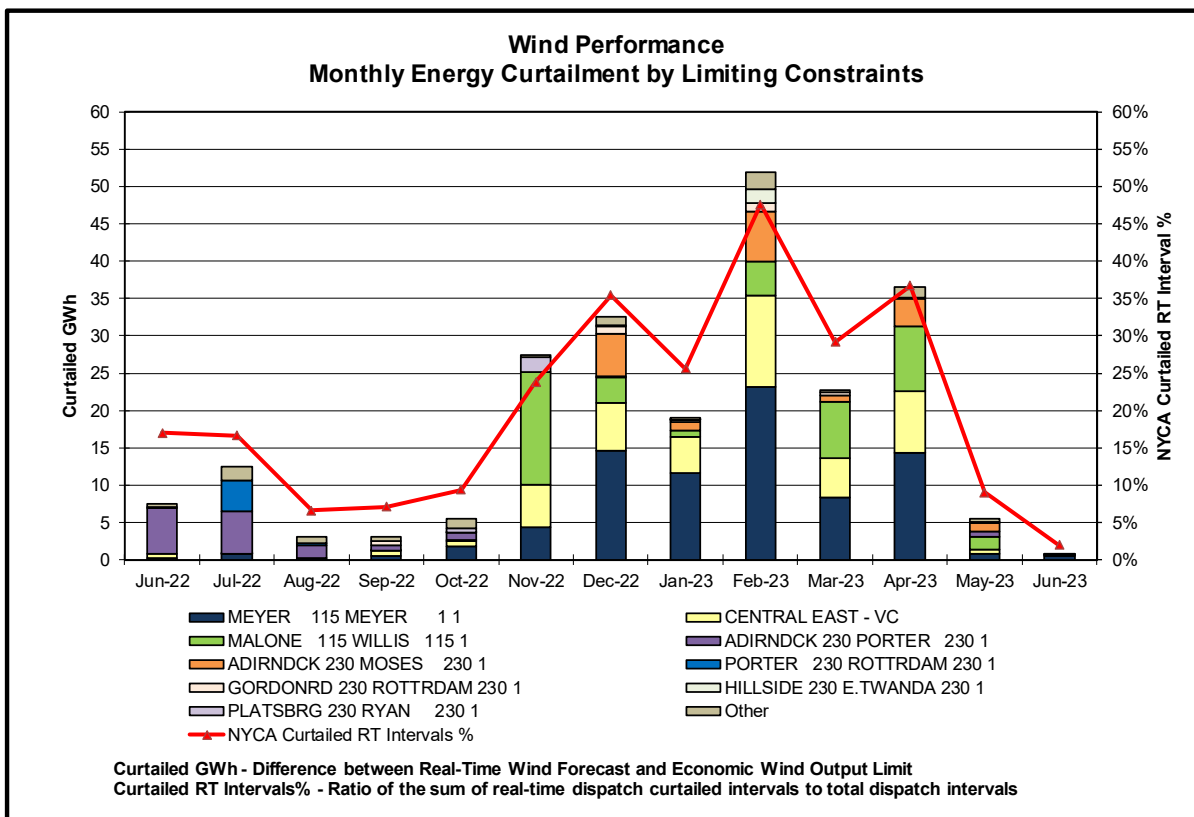
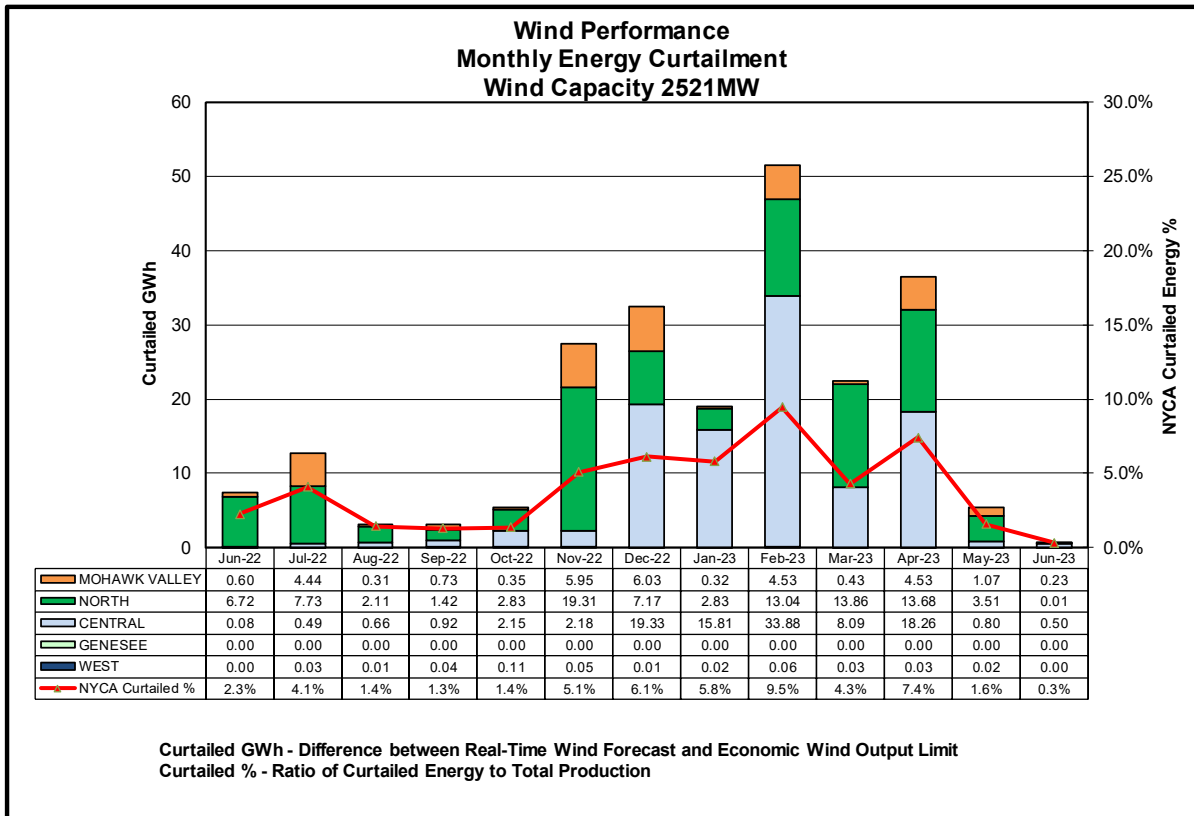
Average Hourly Error % - Average value of the ratio of hourly average error magnitude to hourly average actual load demand.

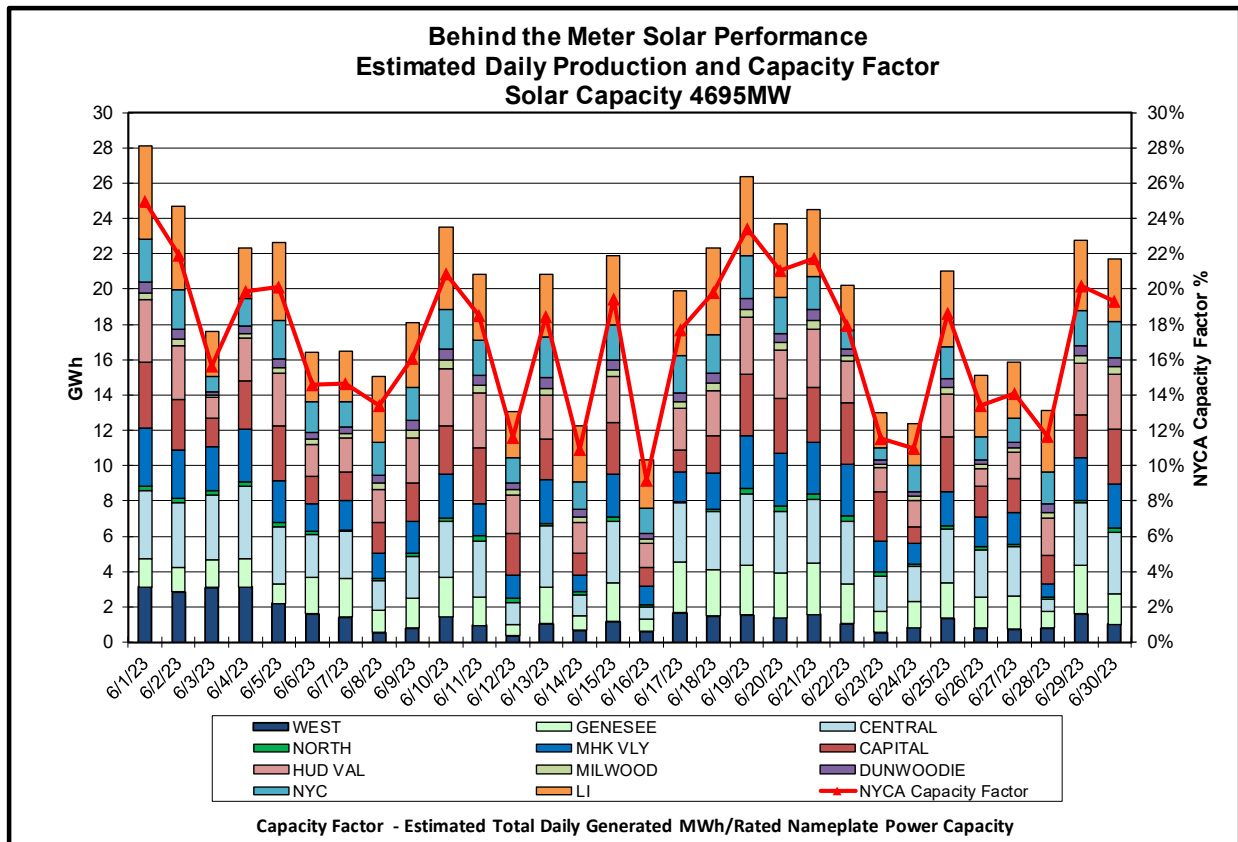
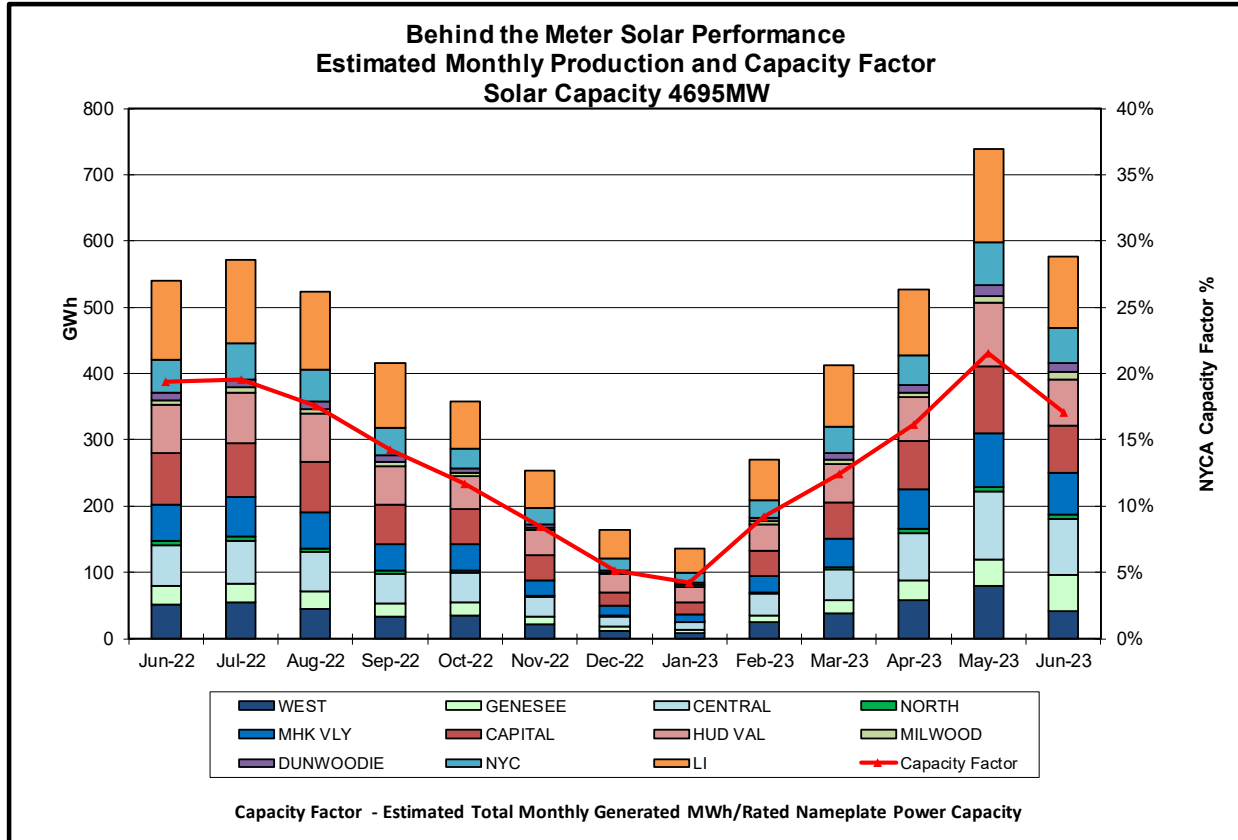
Day-Ahead Average Hourly Error % - Average across all hours of the month of the absolute value of the difference between actual load demand and the Day-Ahead forecast load demand, divided by the actual load demand.

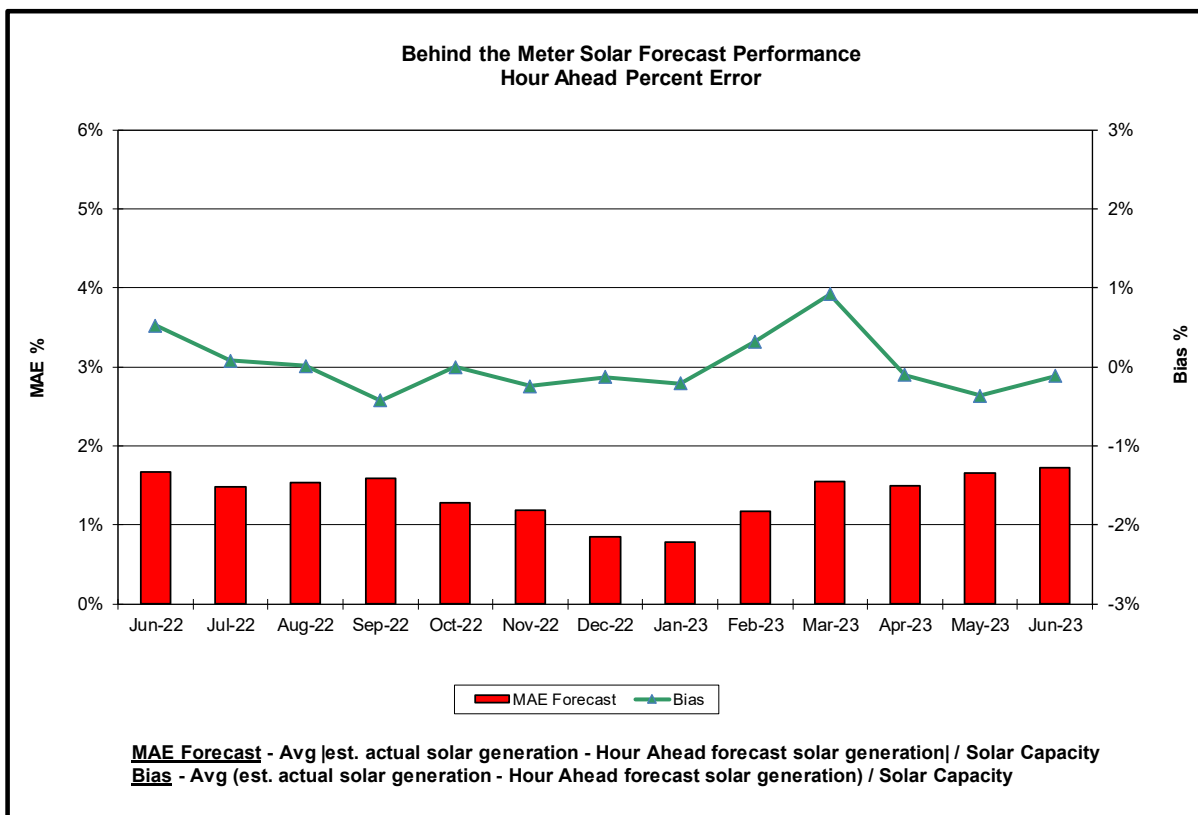
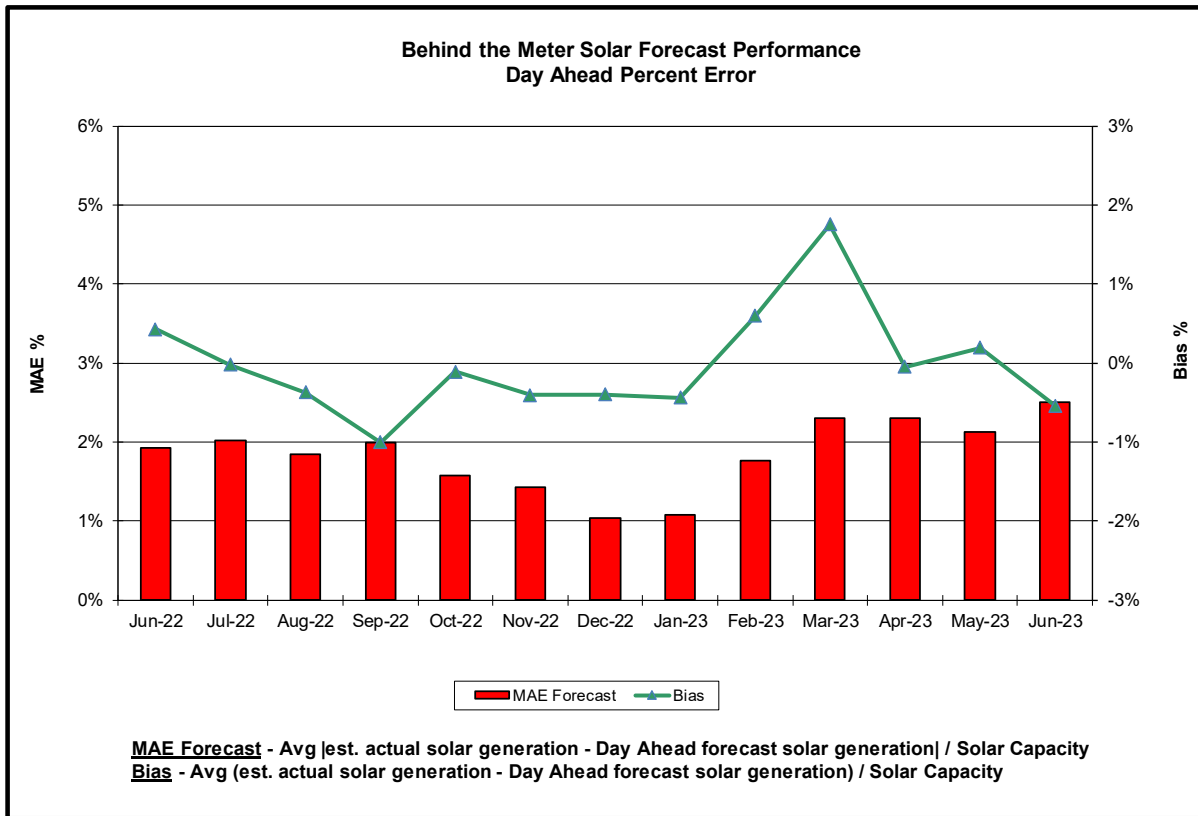


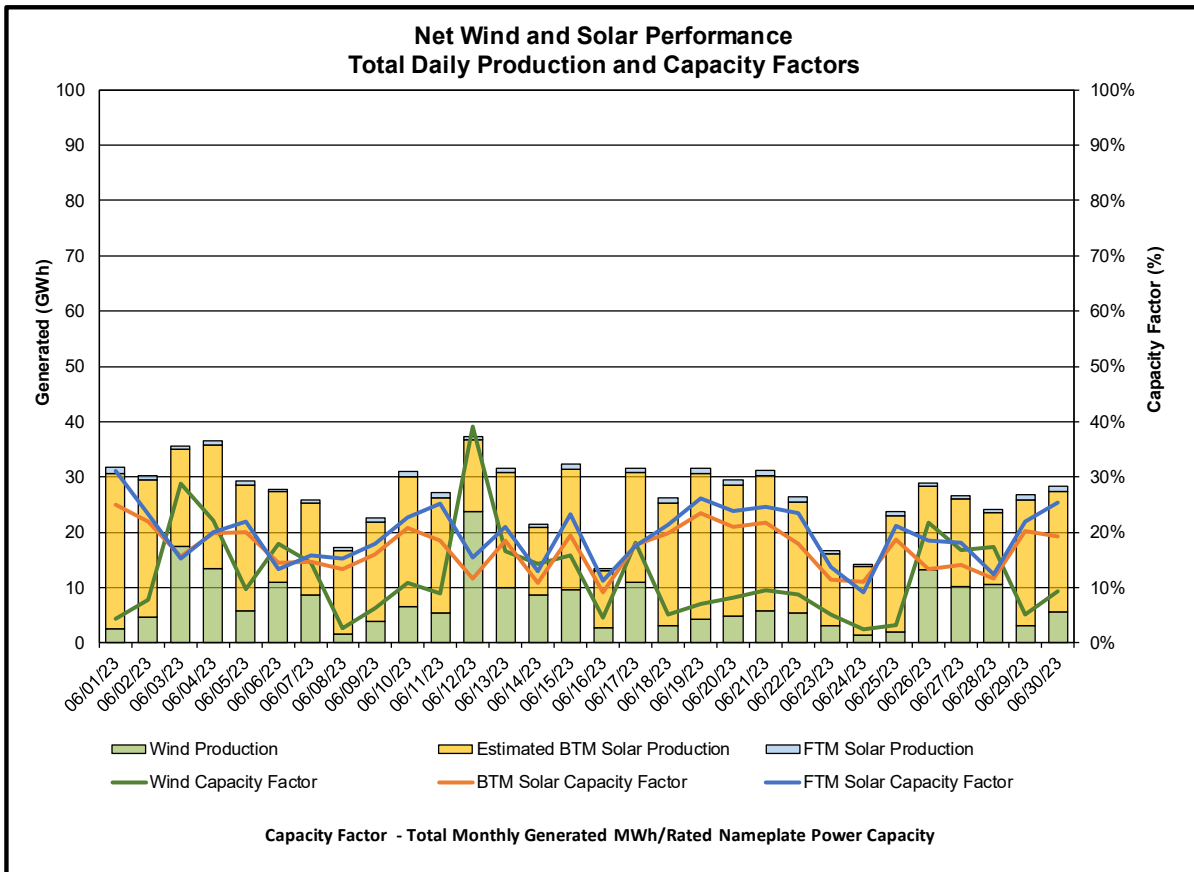
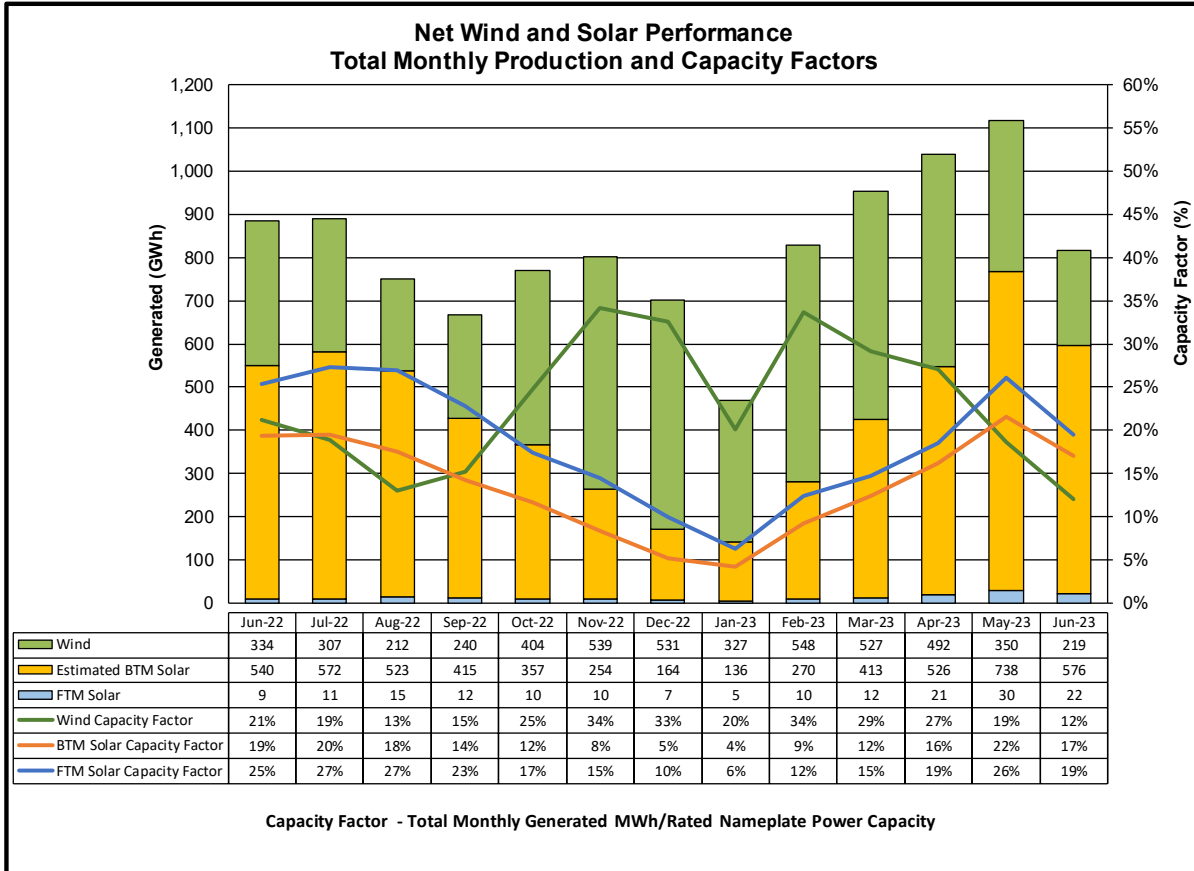


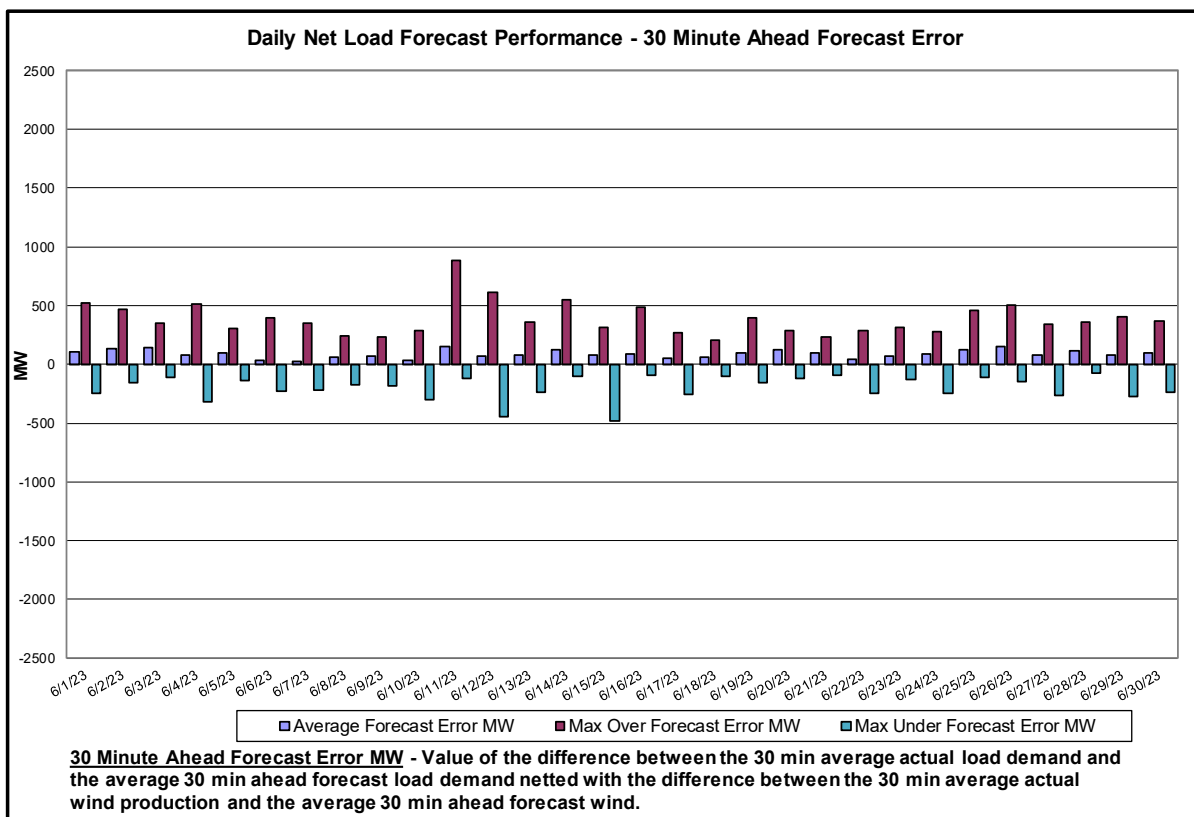
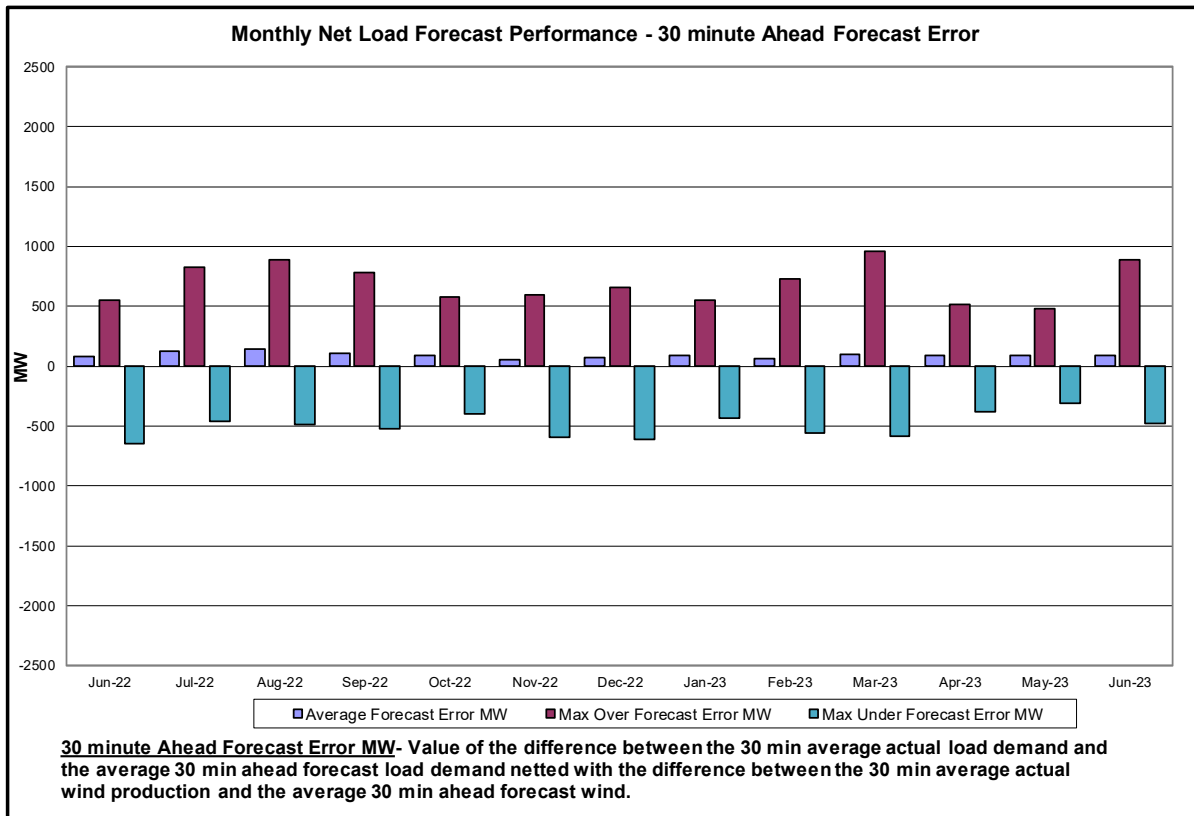


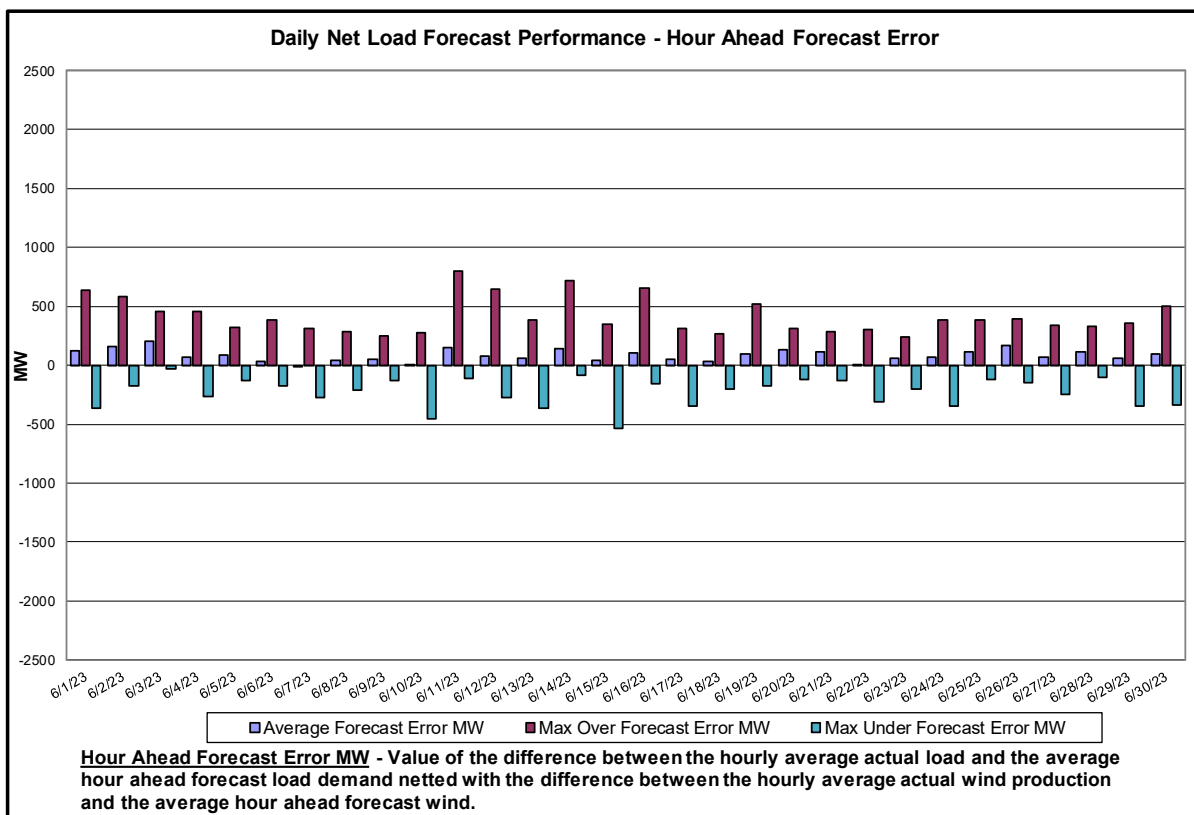
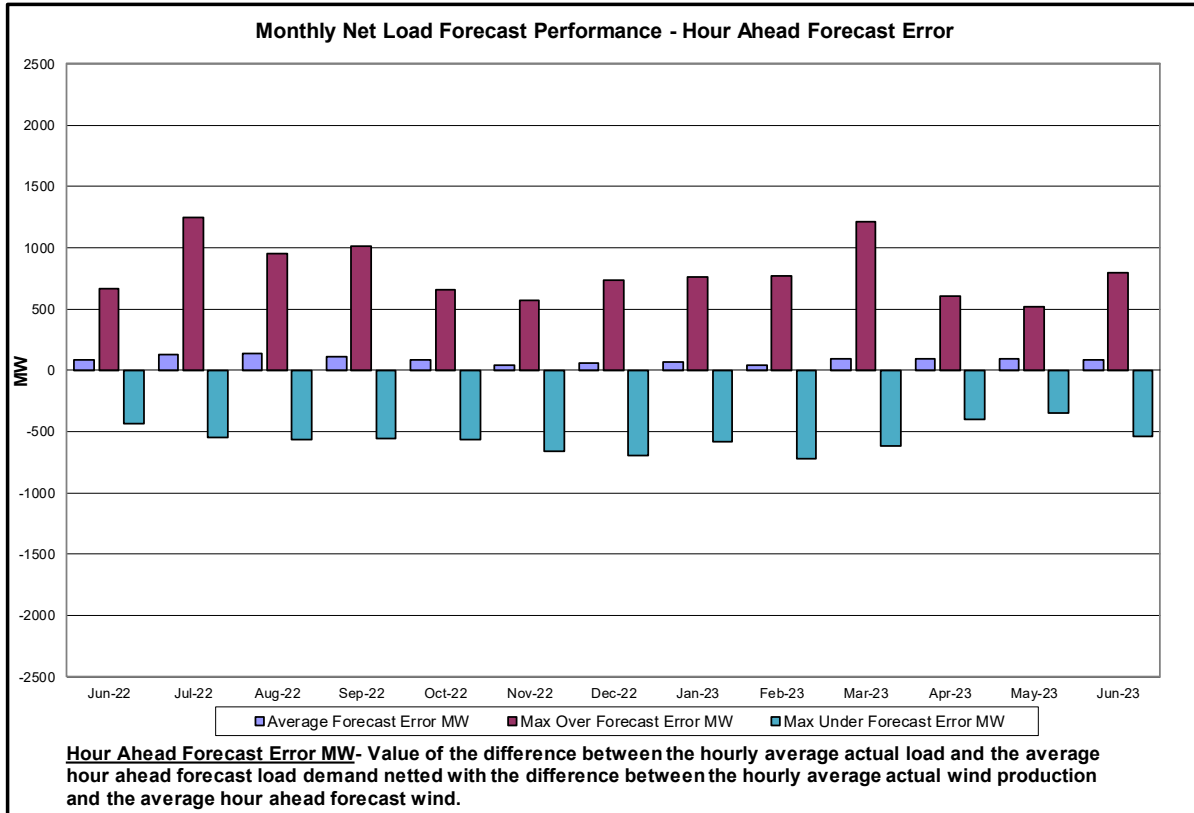


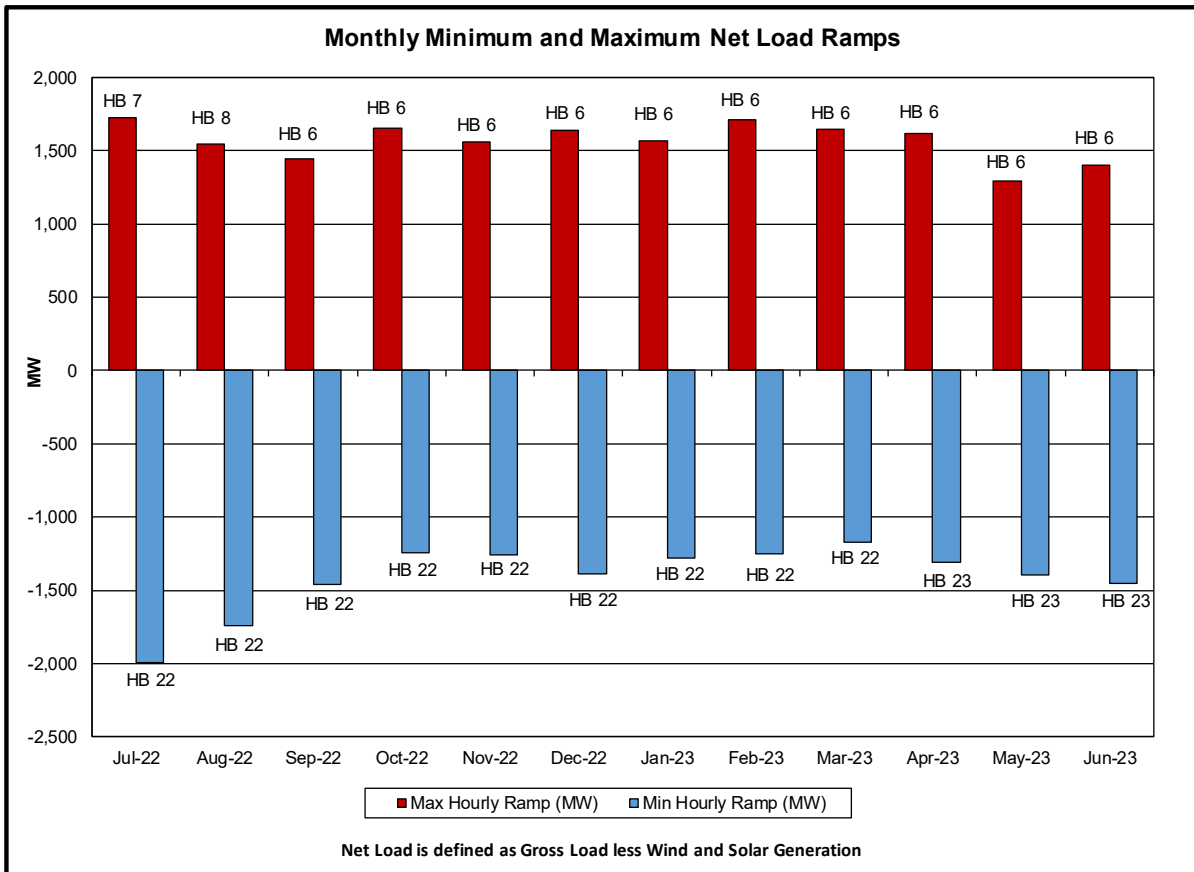
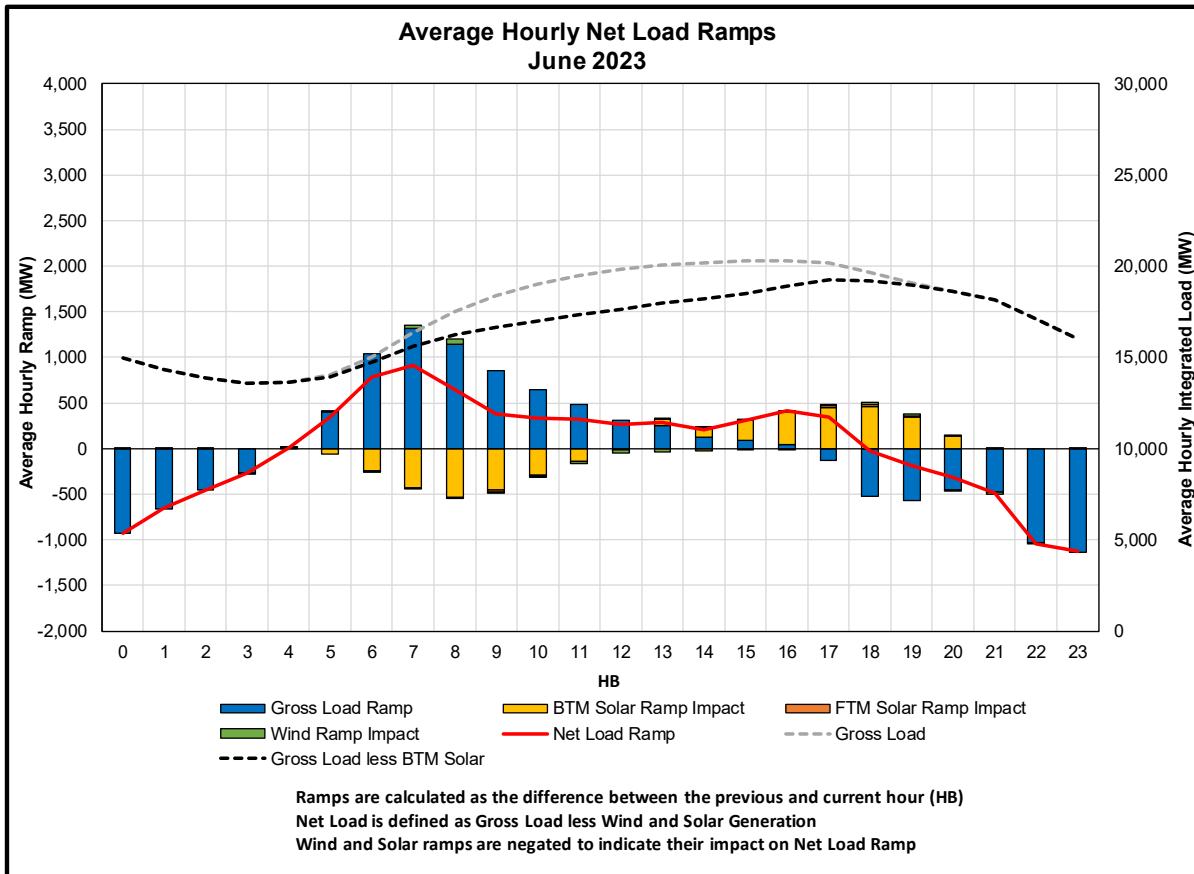




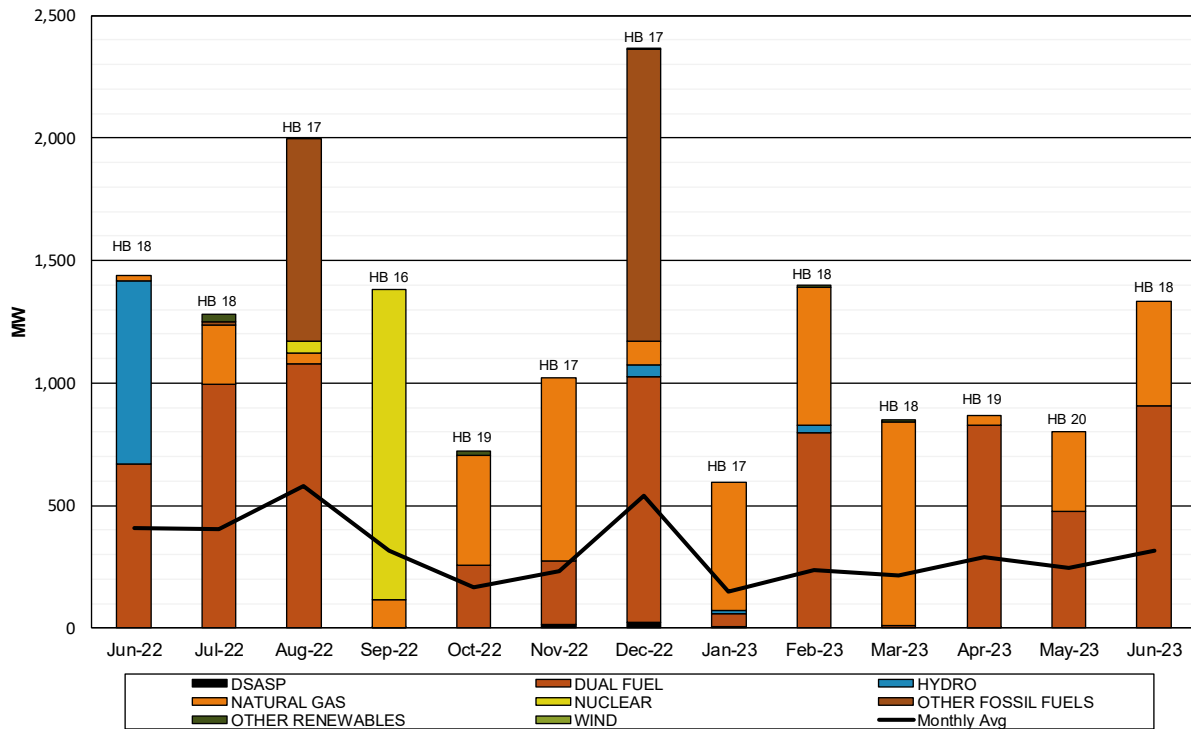








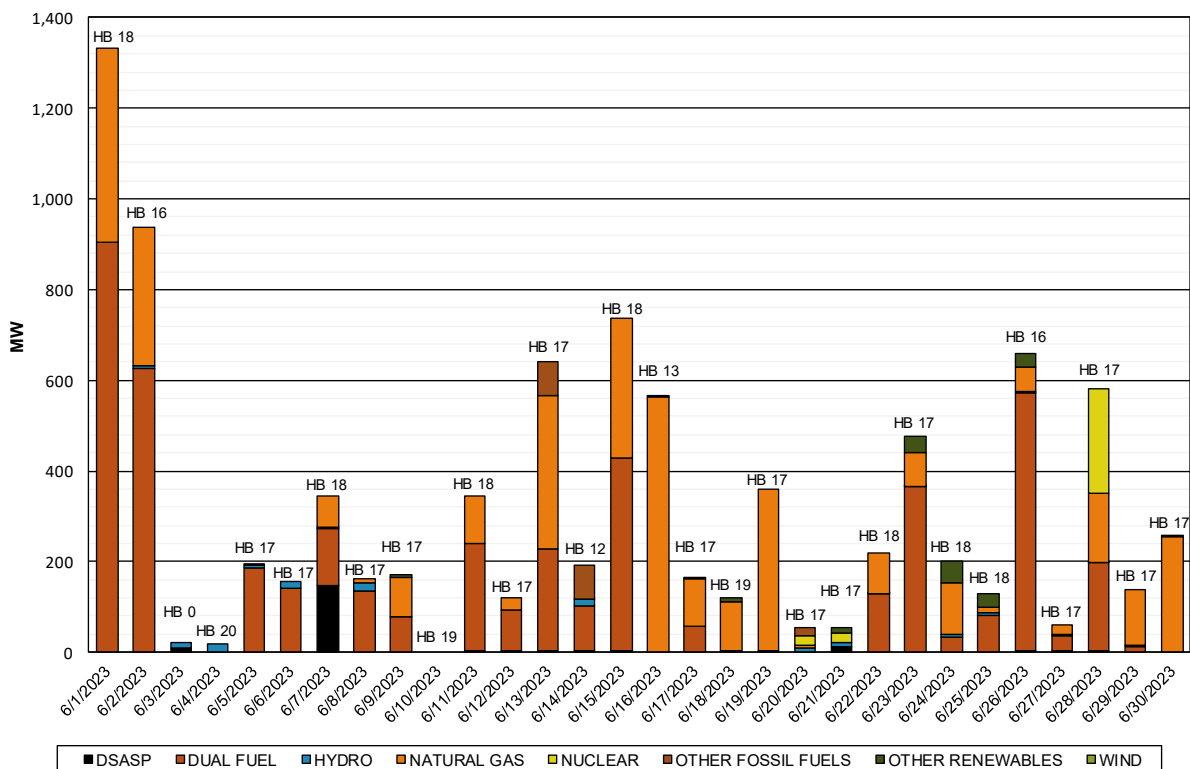
Monthly Maximum Day-Ahead Market Capacity Unavailable In Real Time



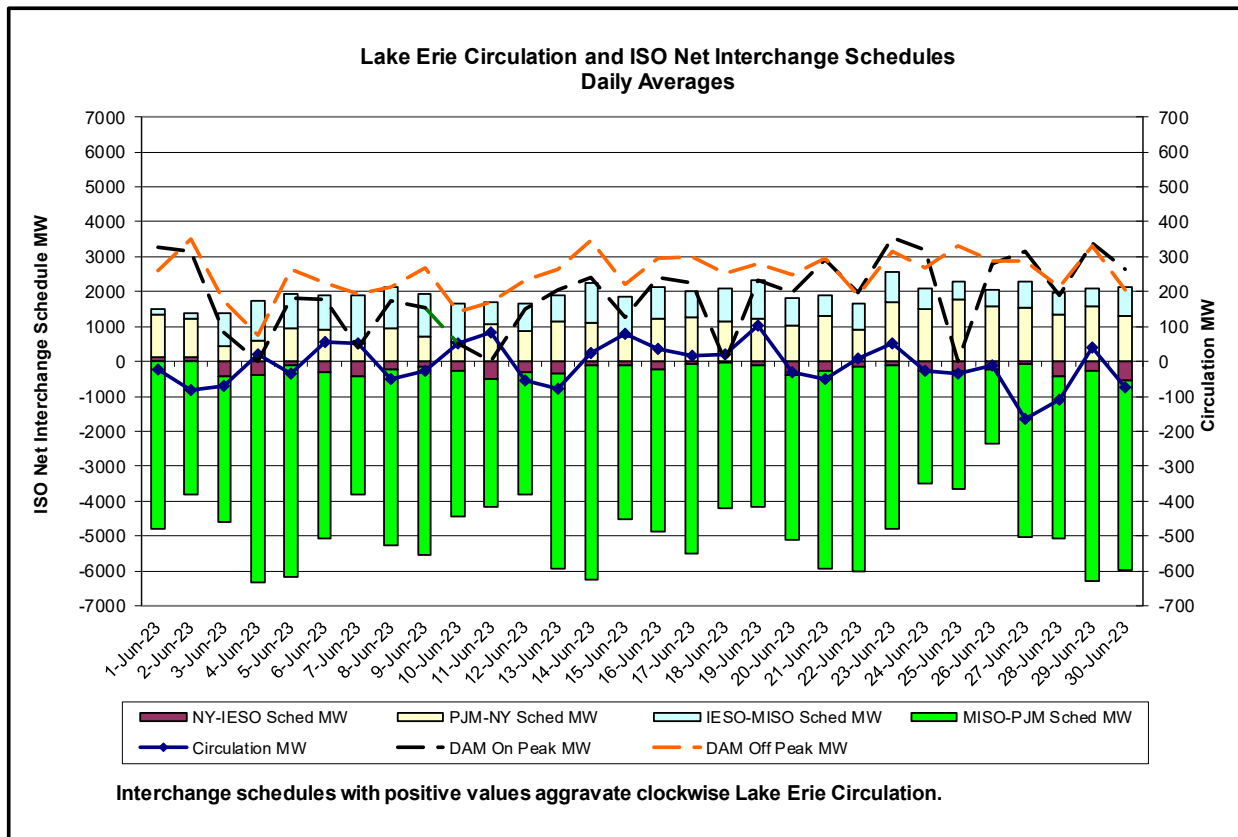
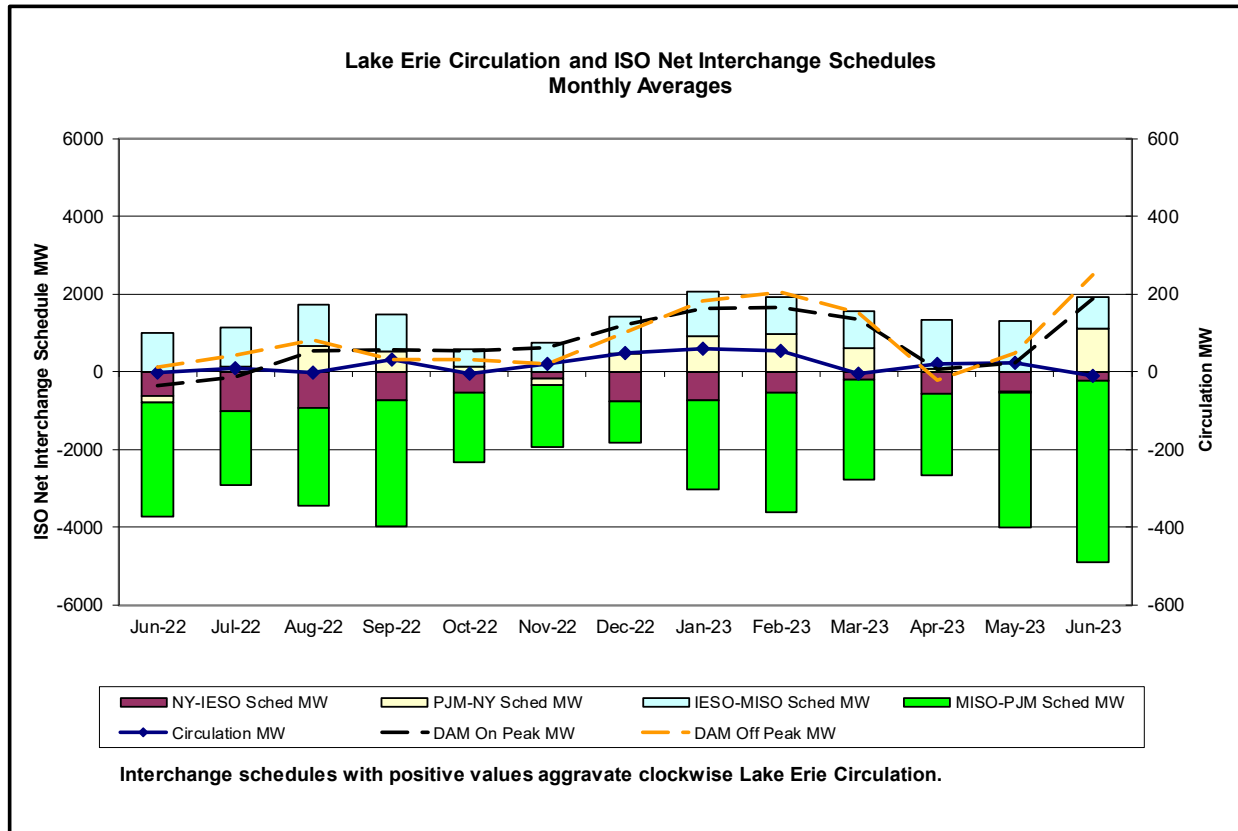
Unavailable Capacity is calculated as the difference of Day-Ahead Market (DAM) capacity relative to Real-Time (RT) capacity during RT peak load hour.

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

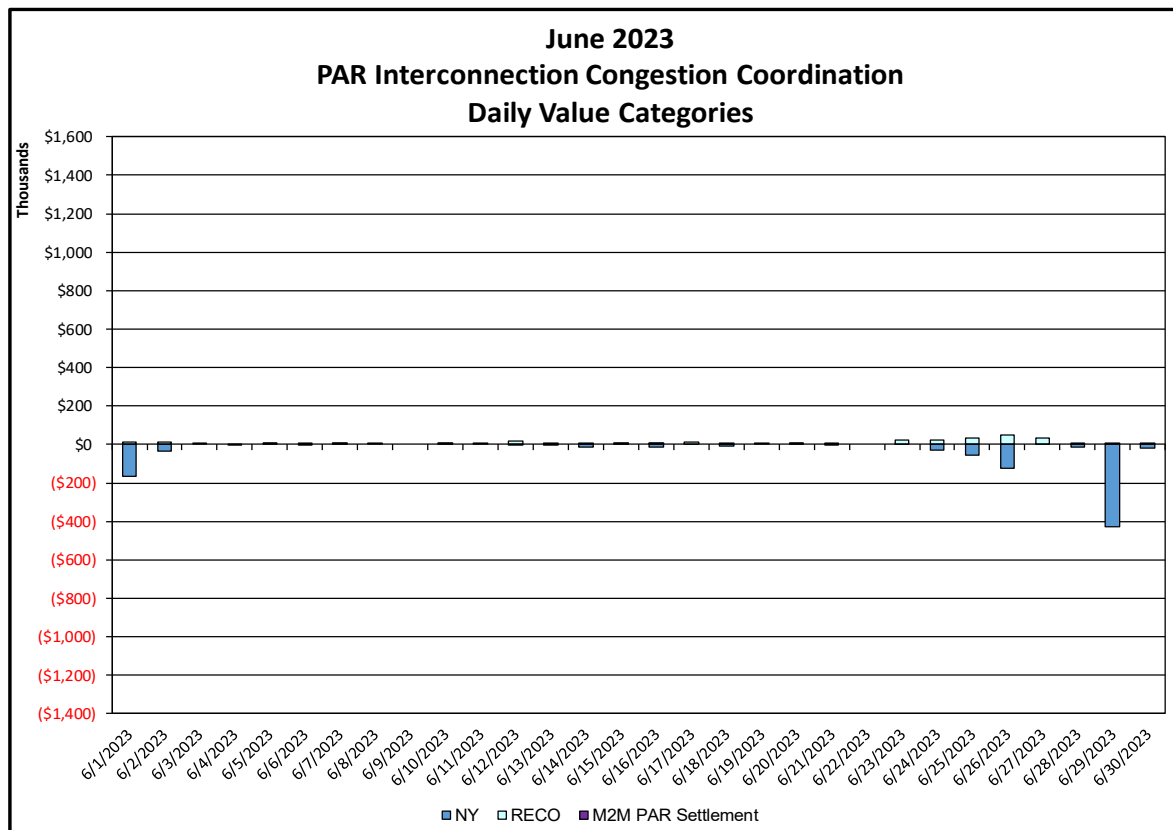
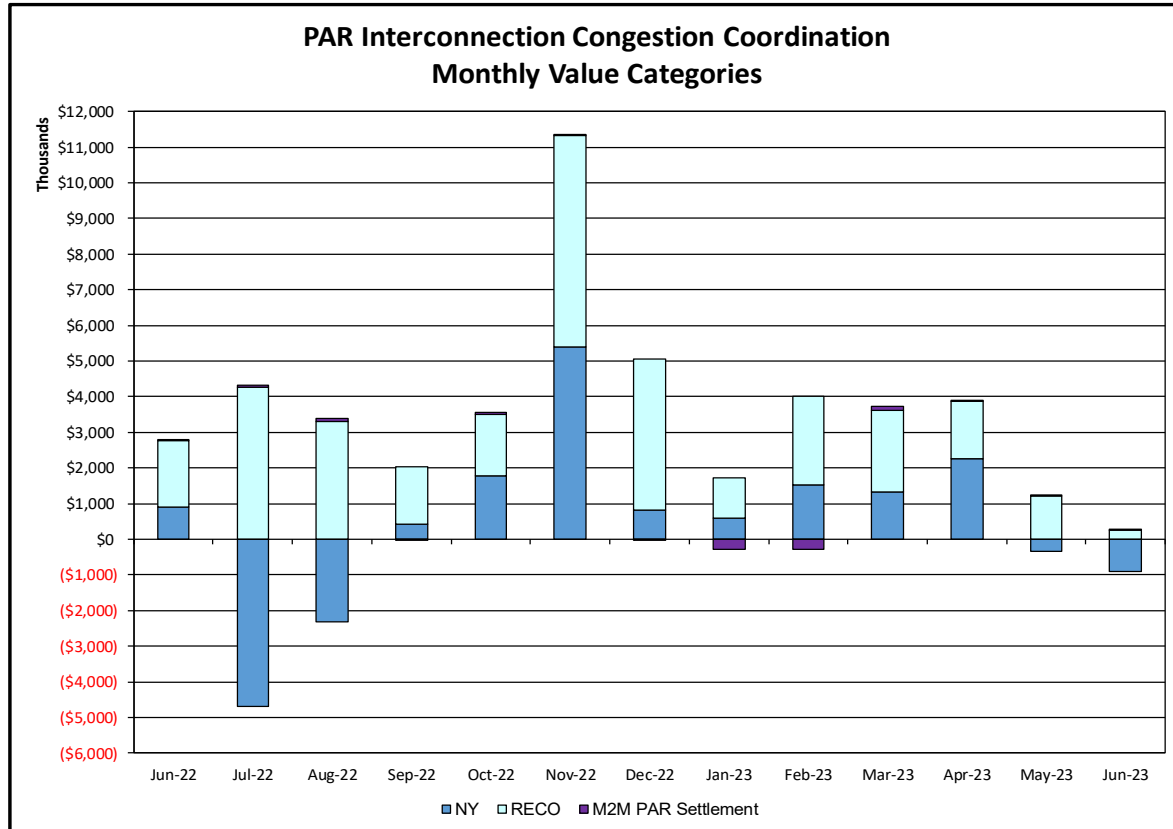
Daily Day-Ahead Market Capacity Unavailable In Real Time



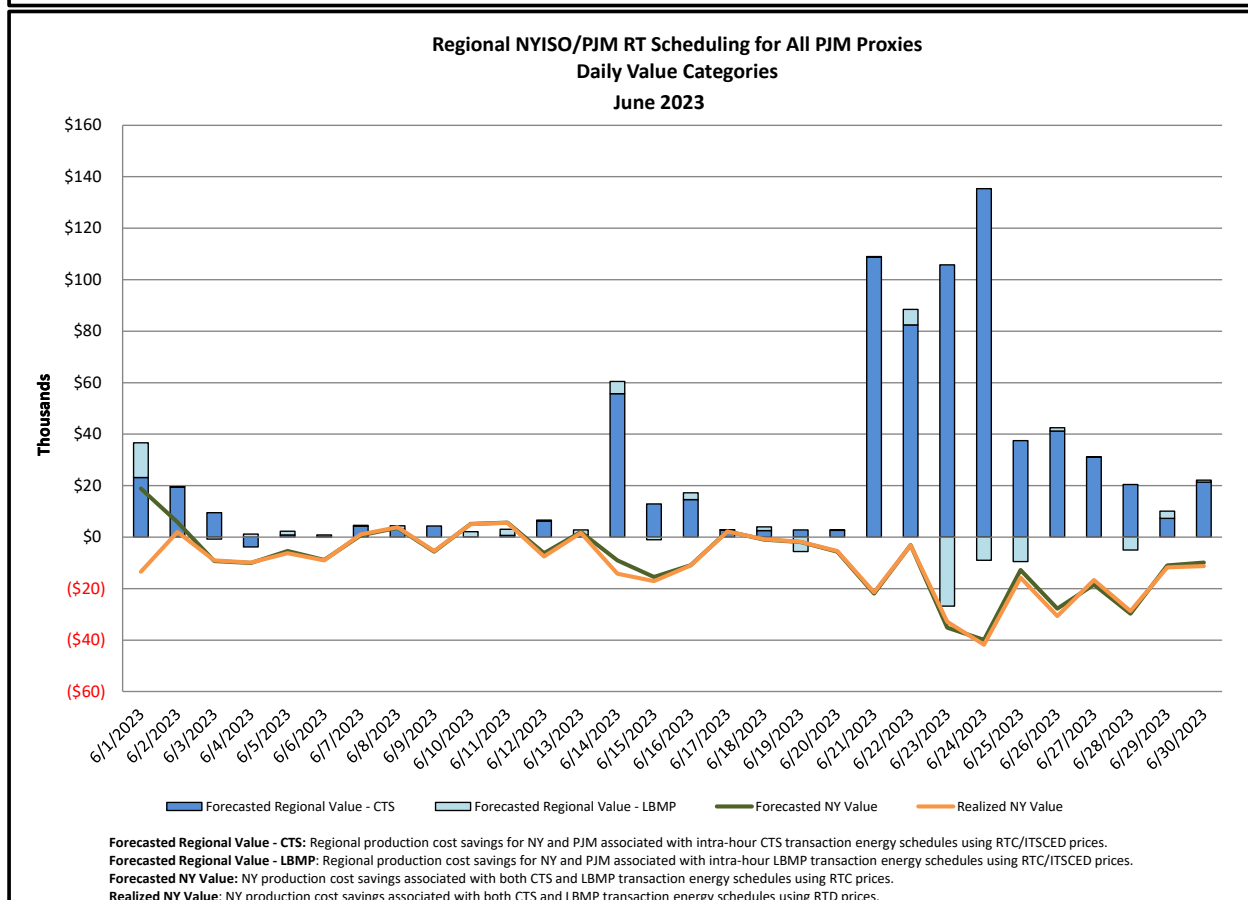
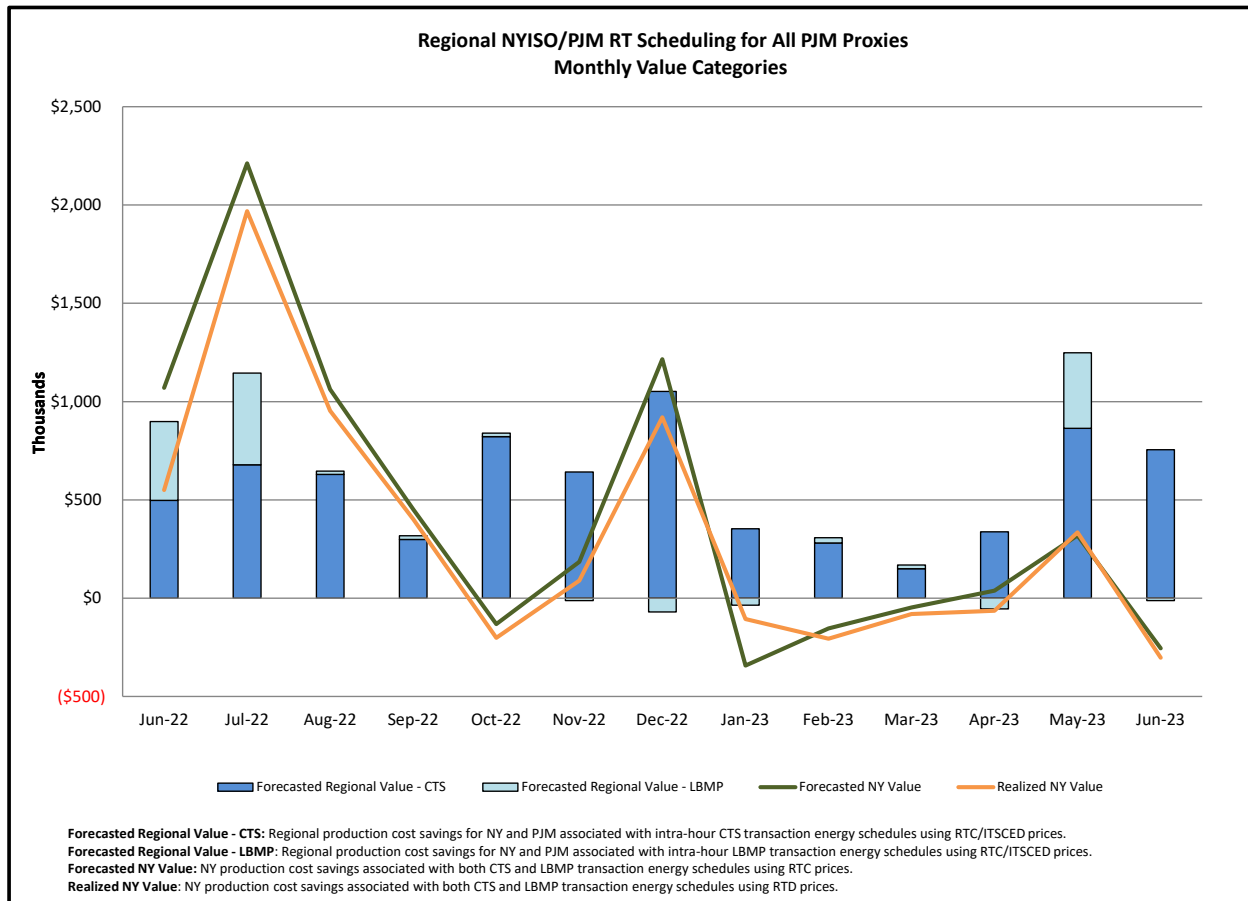
Unavailable Capacity is calculated as the difference of Day-Ahead Market (DAM) capacity relative to Real-Time (RT) capacity during RT peak load hour.



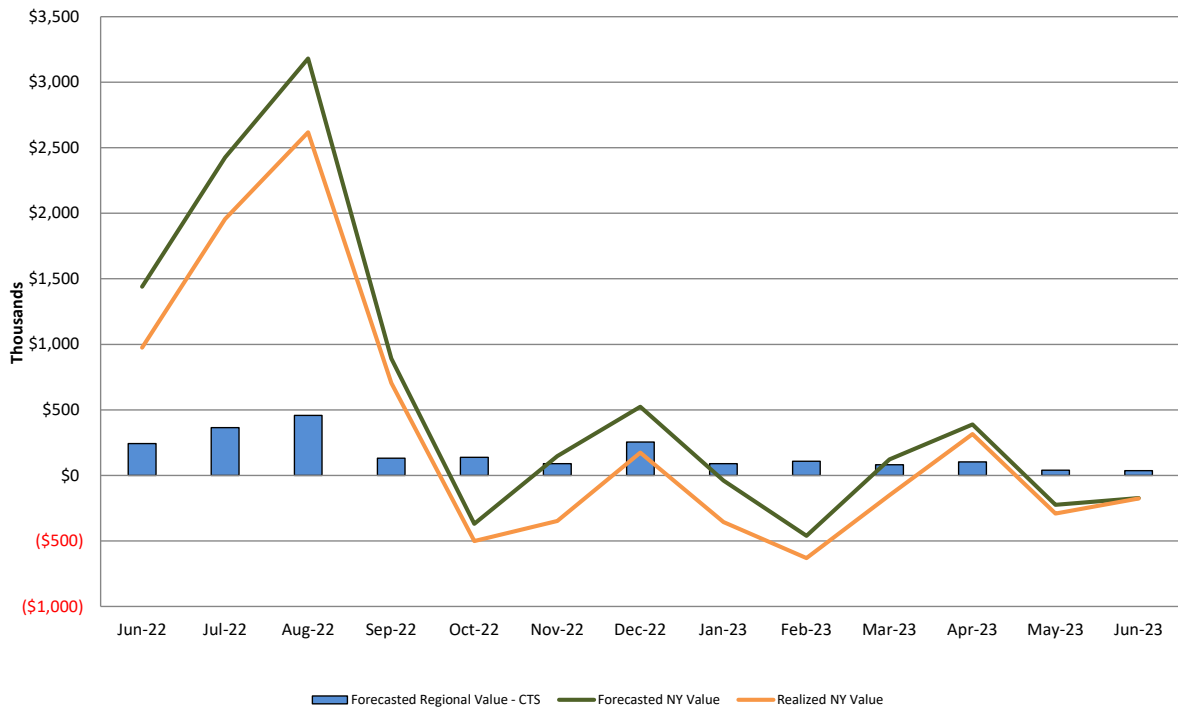
Broader Regional Market Performance Metrics



<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.

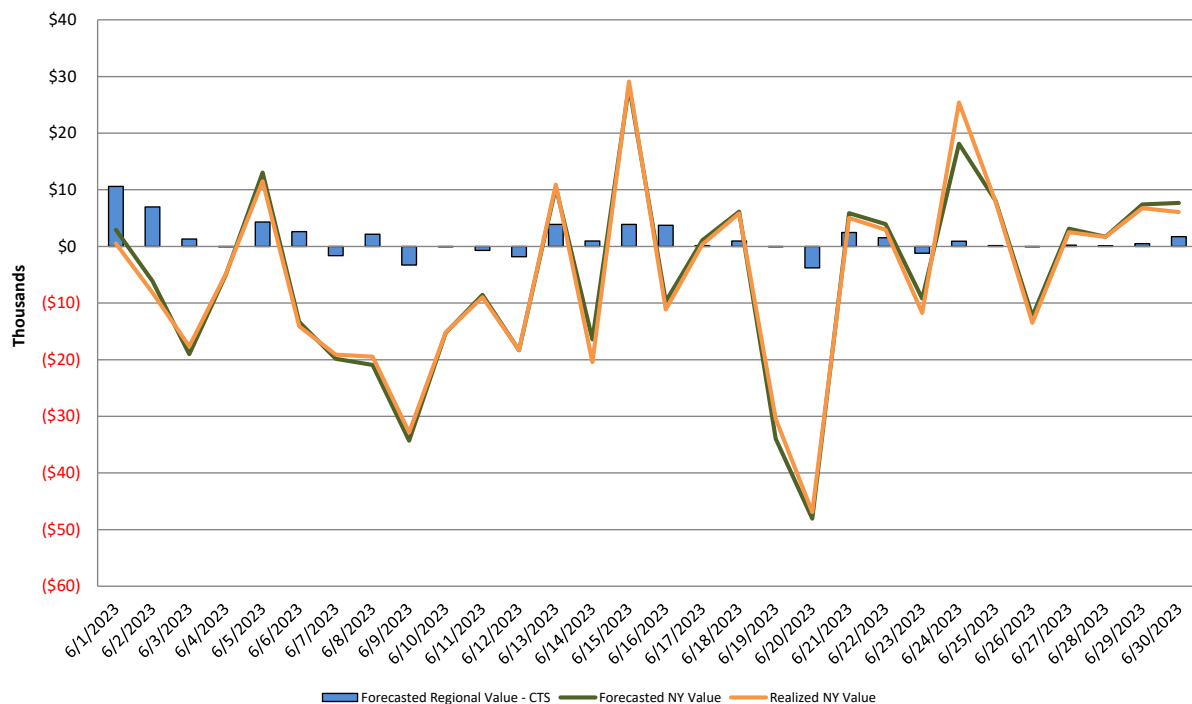


Regional NYISO/NE RT Scheduling for ISO-NE AC Monthly Value Categories



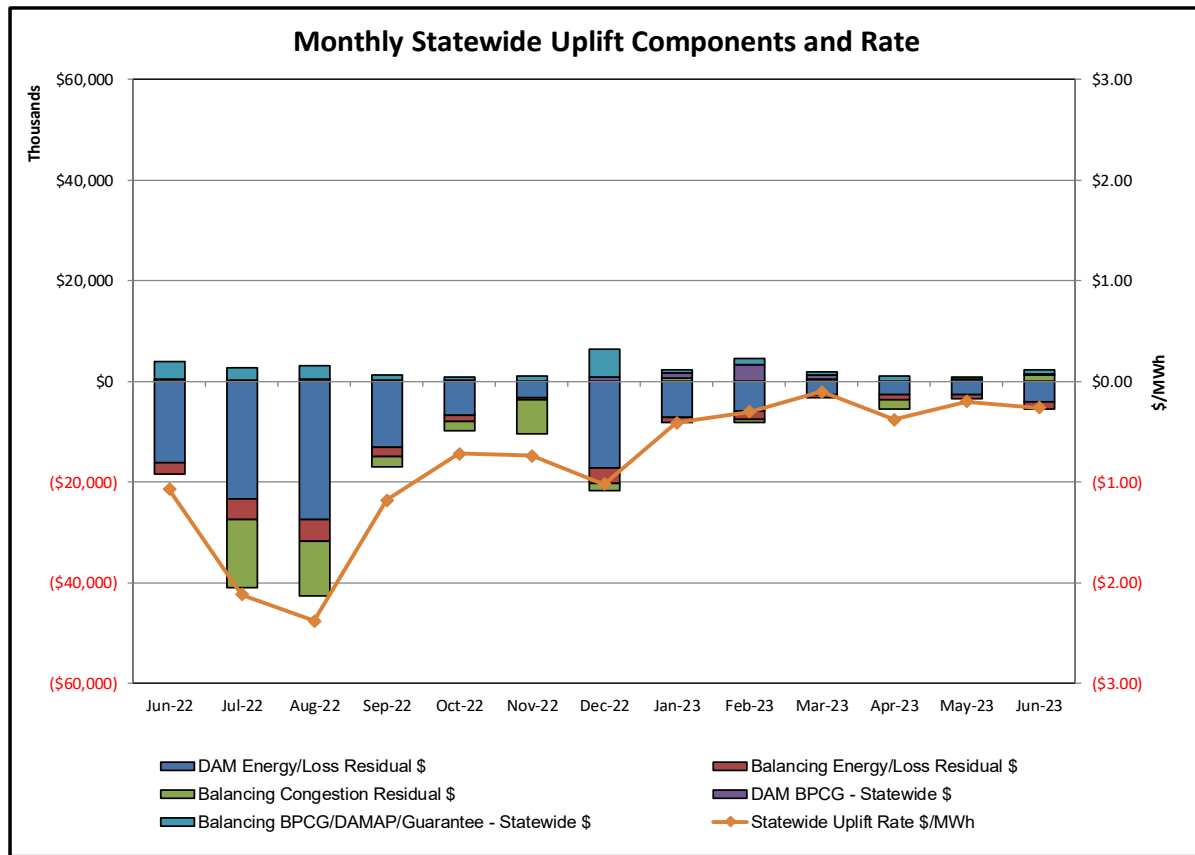
Forecasted Regional Value - CTS: Regional production cost savings for NY and NE associated with intra-hour CTS transaction energy schedules using RTC prices and NE forecasted prices.
Forecasted NY Value: NY production cost savings associated with CTS transaction energy schedules using RTC prices.
Realized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

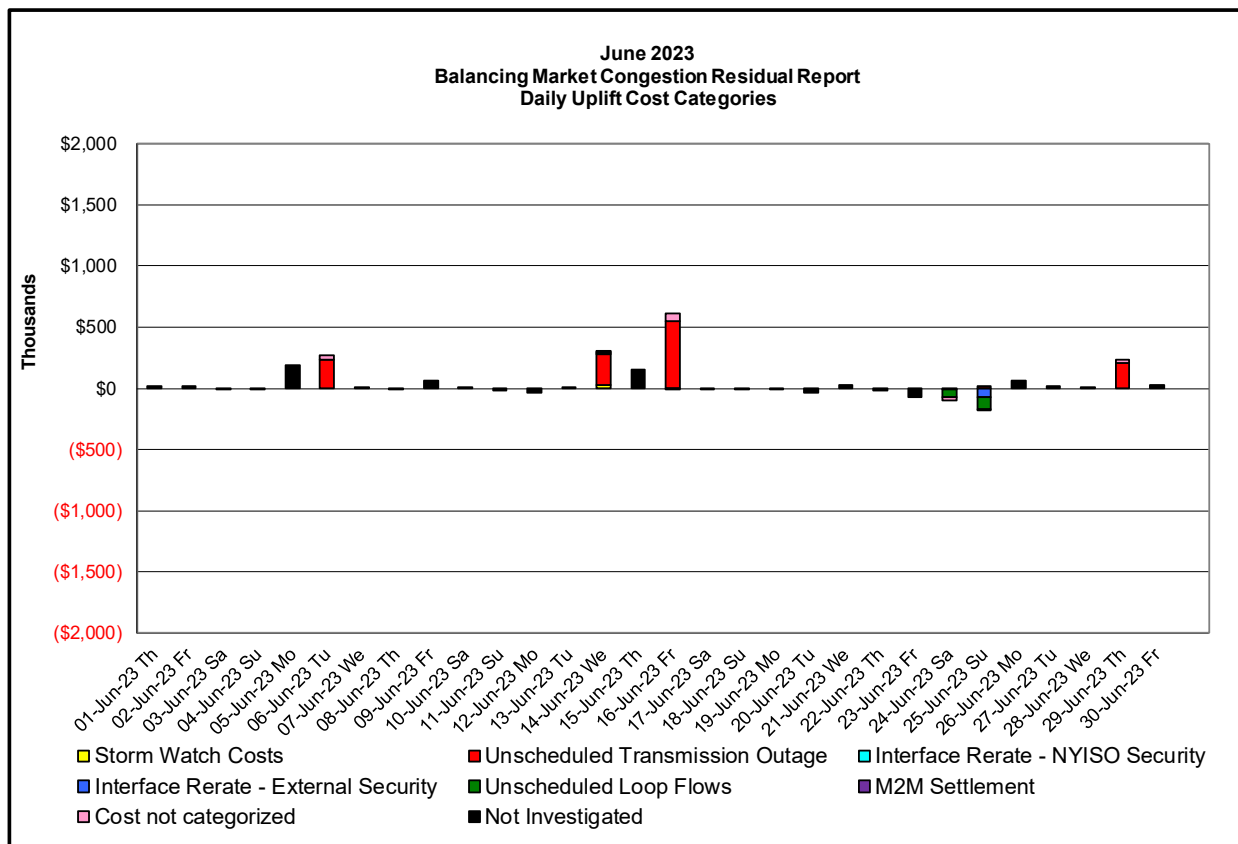
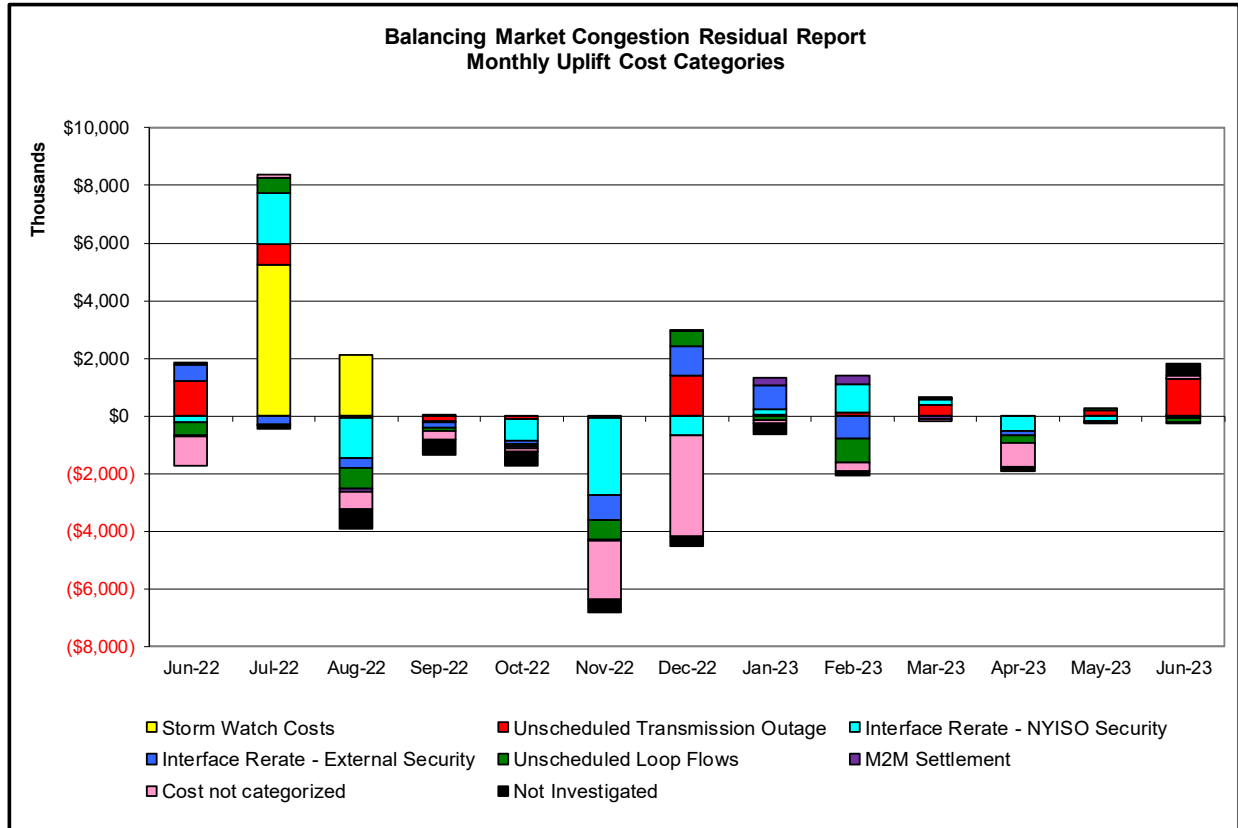
Regional NYISO/NE RT Scheduling for ISO-NE AC Daily Value Categories June 2023



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





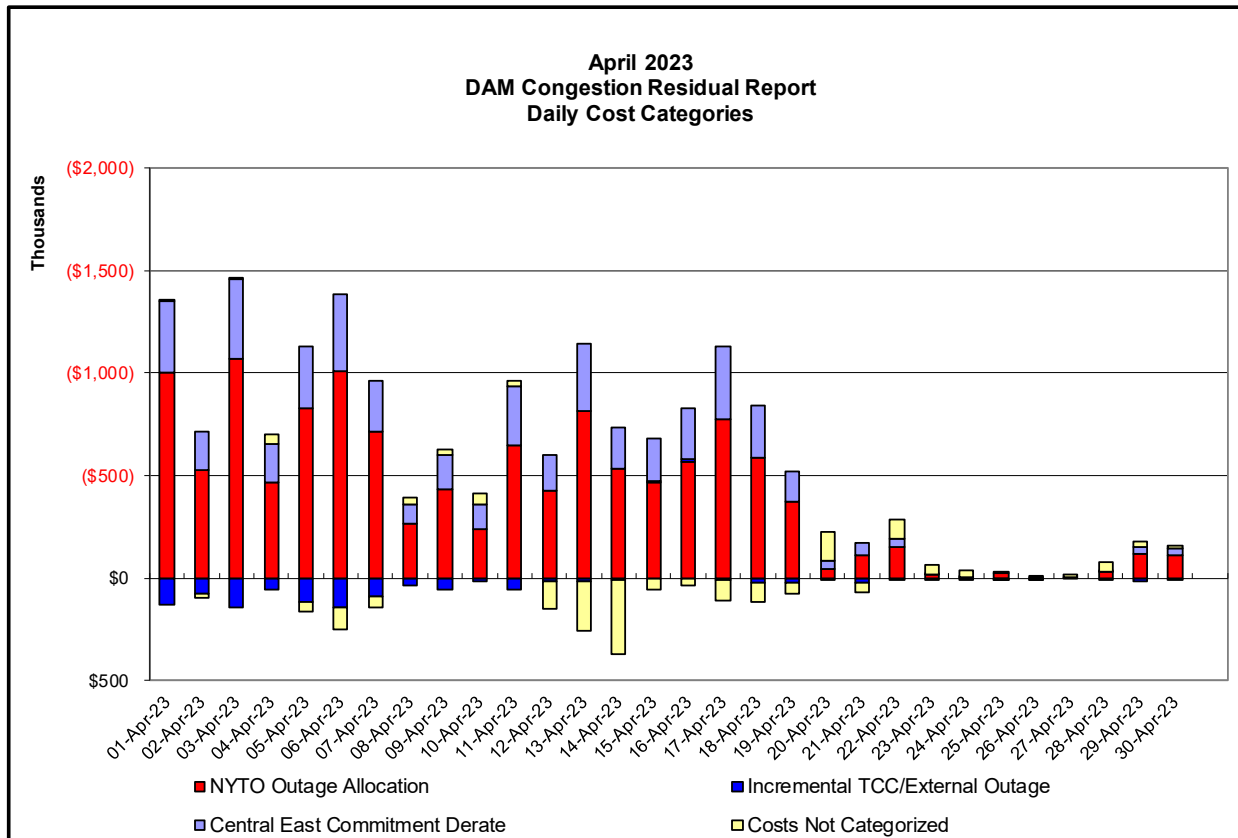
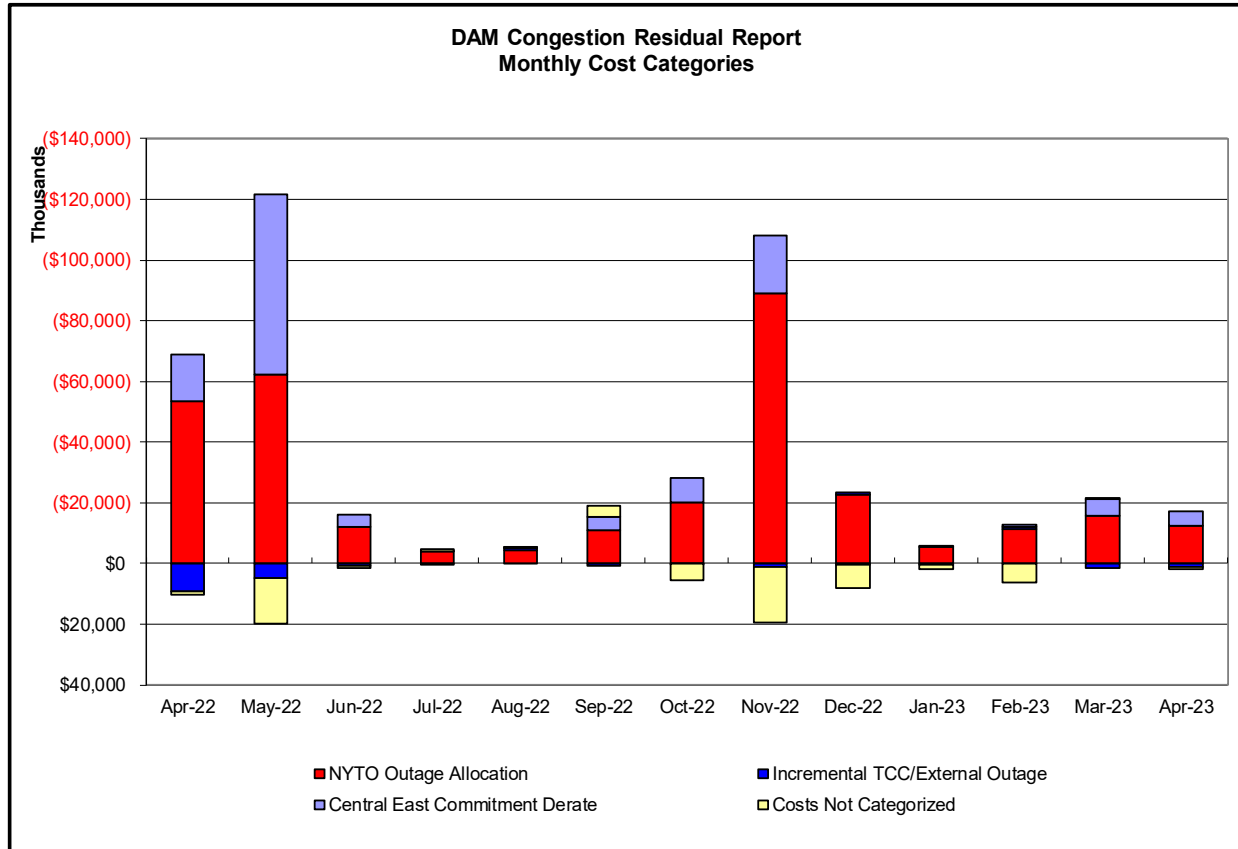
Day's investigated in June: 6,14,16,24,25,29			
Event	Date (yyyymmdd)	Hours	Description
	6/6/2023	15	Forced Outage of Canandaigua-Stony Ridge 230kV (#68)
	6/6/2023	0,7,9,10,15,18,21	Forced Outage of Sprainbook-East Garden City 345kV (#Y49)
	6/14/2023	15	Thunder Storm Alert, Chestor-Shoemaker 138kV (#27)
	6/14/2023	14,15	Thunder Storm Alert, Linden-Goethals 230kV (#A2253)
	6/14/2023	10-16,18	Forced Outage of Sprainbook-East Garden City 345kV (#Y49)
	6/14/2023	16	NYCA DNI Ramp Limit
	6/14/2023	16	NE AC ACTIVE DNI Ramp Limit
	6/14/2023	16	NE AC Scheduling Limit
	6/14/2023	16	PJM AC ACTIVE DNI Ramp Limit
	6/16/2023	0,7-15	Forced Outage of Sprainbook-East Garden City 345kV (#Y49)
	6/24/2023	18	NE AC ACTIVE DNI Ramp Limit
	6/24/2023	15	NE AC Scheduling Limit
	6/24/2023	15,19,20	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	6/25/2023	22	Extended Outage of Freshkills-Goethals 345kV (#22)
	6/25/2023	15,16,18-21	NE AC Scheduling Limit
	6/25/2023	18	PJM AC - NY Scheduling Limit
	6/25/2023	15-21	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	6/29/2023	0-11,18	Forced Outage East Garden City 345/138kV (#AT2)

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

<u>Category</u>	<u>Cost Assignment</u>	<u>Events Types</u>	<u>Event Examples</u>
Storm Watch	Zone J	Thunderstorm Alert (TSA)	TSA Activations
Transmission Outage Mismatch	Market-wide	Changes in DAM to RTM transfers related to transmission outage mismatch	Forced Line Outage, Unit AVR Outages Early Line Return from Outage
Interface/Facility Rerate - NYISO Security	Market-wide	Changes in DAM to RTM transfers not related to transmission outage	Interface/Facility Rerates due to RTM voltages
Interface Rerate - External Security	Market-wide	Changes in DAM to RTM transfers related to External Control Area Security Events	TLR Events, External Transaction Curtailments
Unscheduled Loop Flows	Market-wide	Changes in DAM to RTM unscheduled loop flows impacting NYISO Interface transmission constraints	DAM to RTM Lake Erie Loop Flows exceeding +/- 125 MW
M2M Settlement	Market-wide	Settlement result inclusive of coordinated redispatch and Ramapo flowgates	

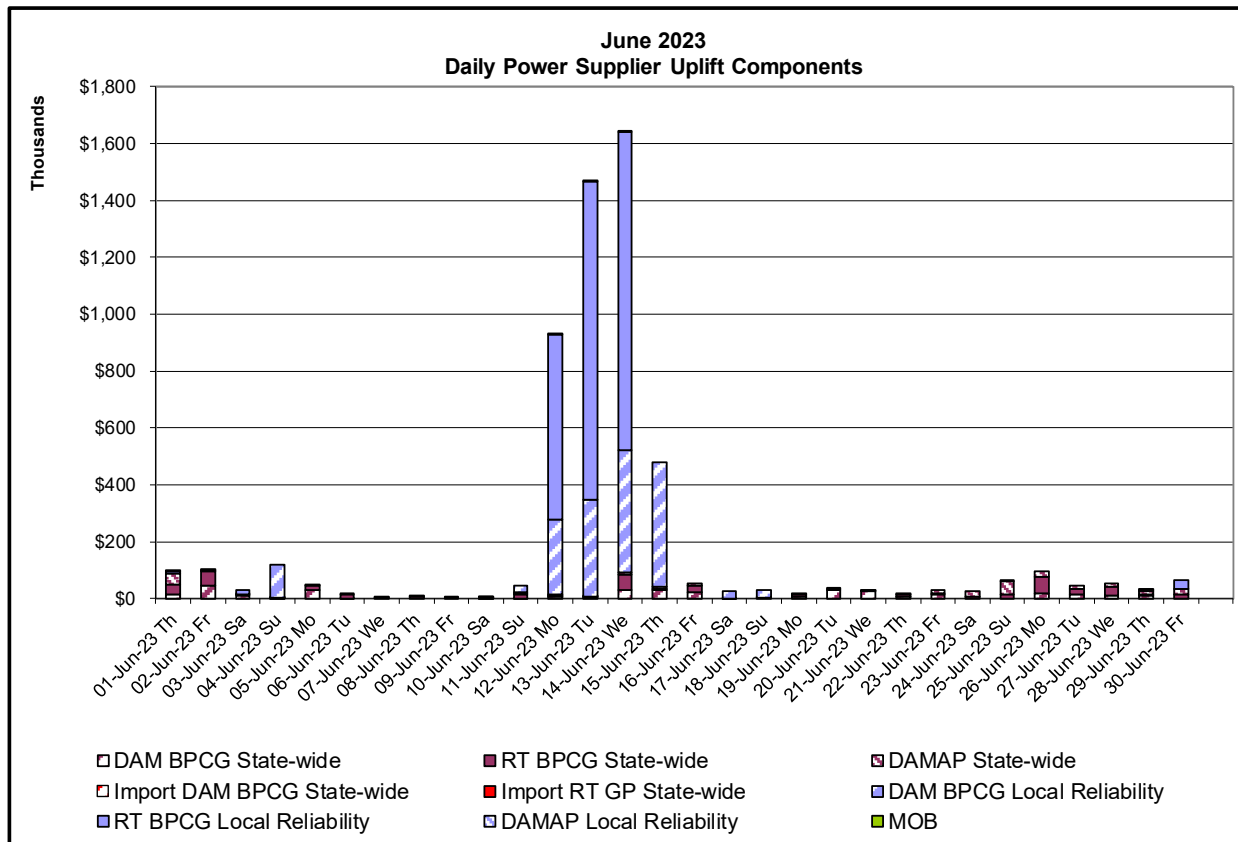
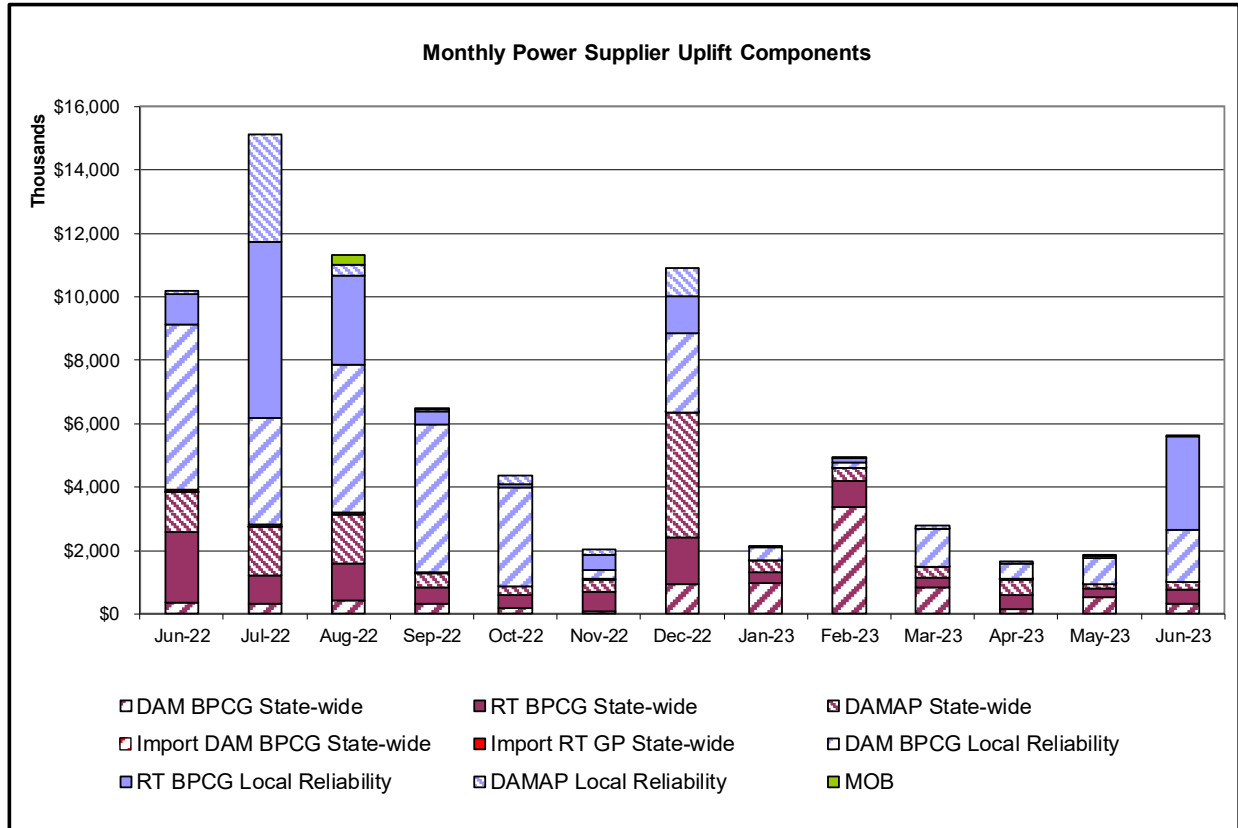
Monthly Balancing Market Congestion Report Assumptions/Notes

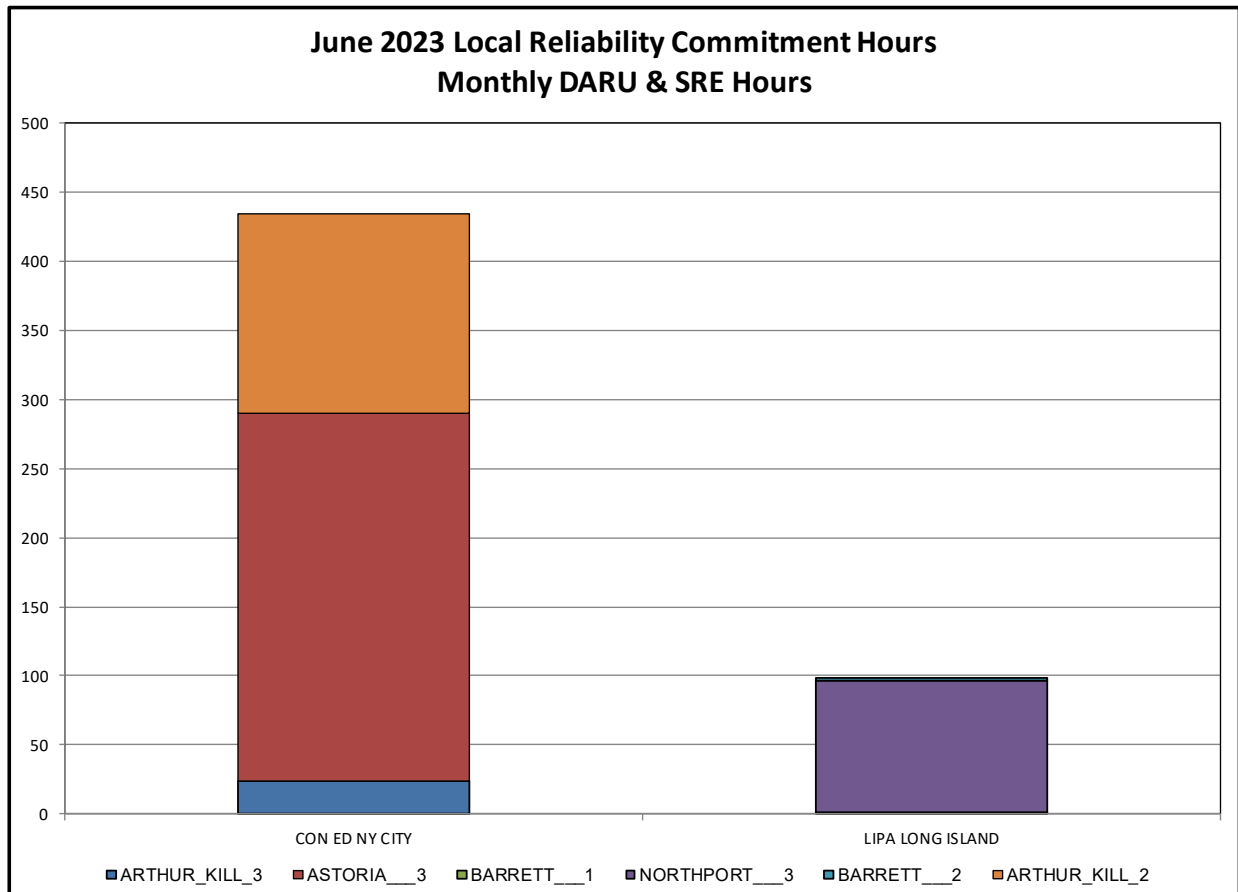
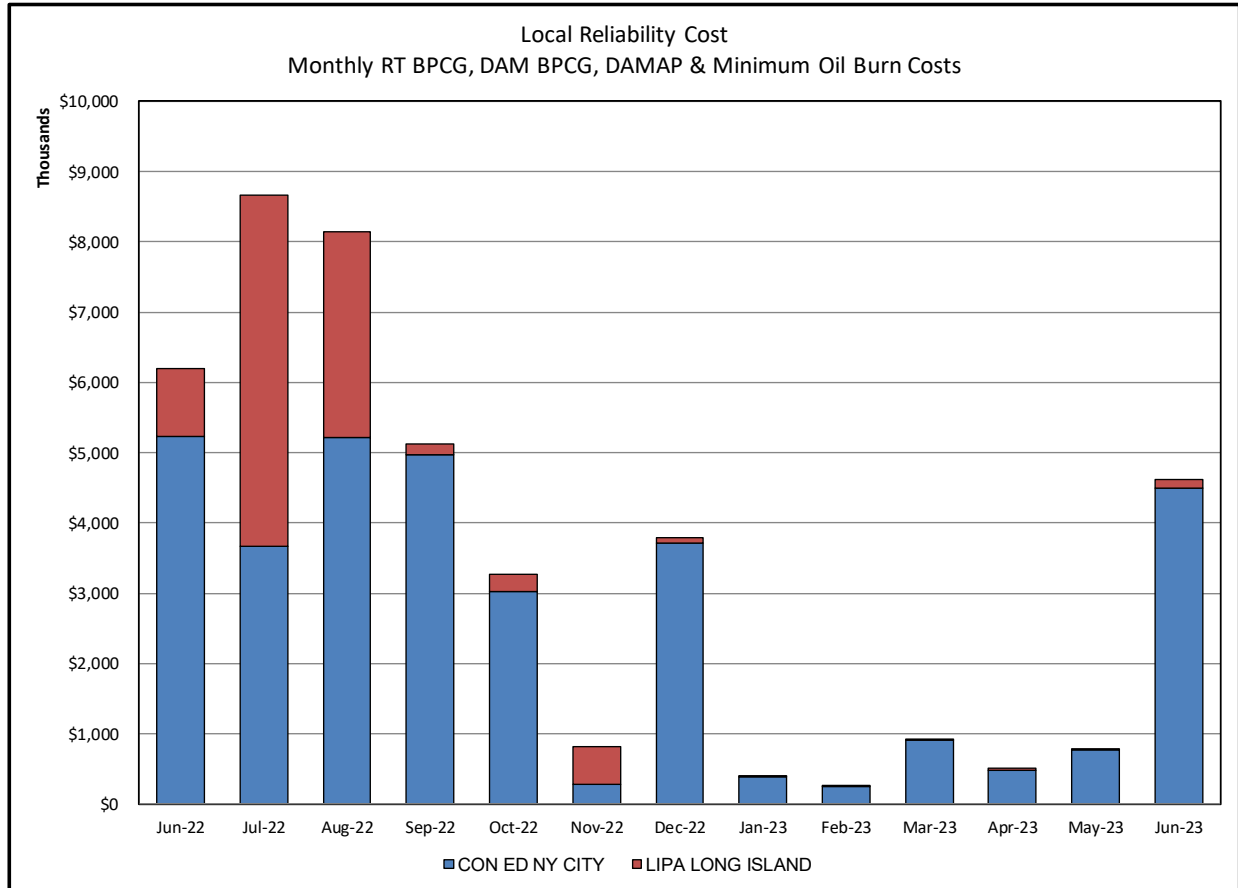
- 1) Storm Watch Costs are identified as daily total uplift costs
- 2) Days with a value of BMCR less M2M Settlement of \$100K/HR, shortfall of \$200K/Day or more, or surplus of \$100K/Day or more are investigated.
- 3) Uplift costs associated with multiple event types are apportioned equally by hour

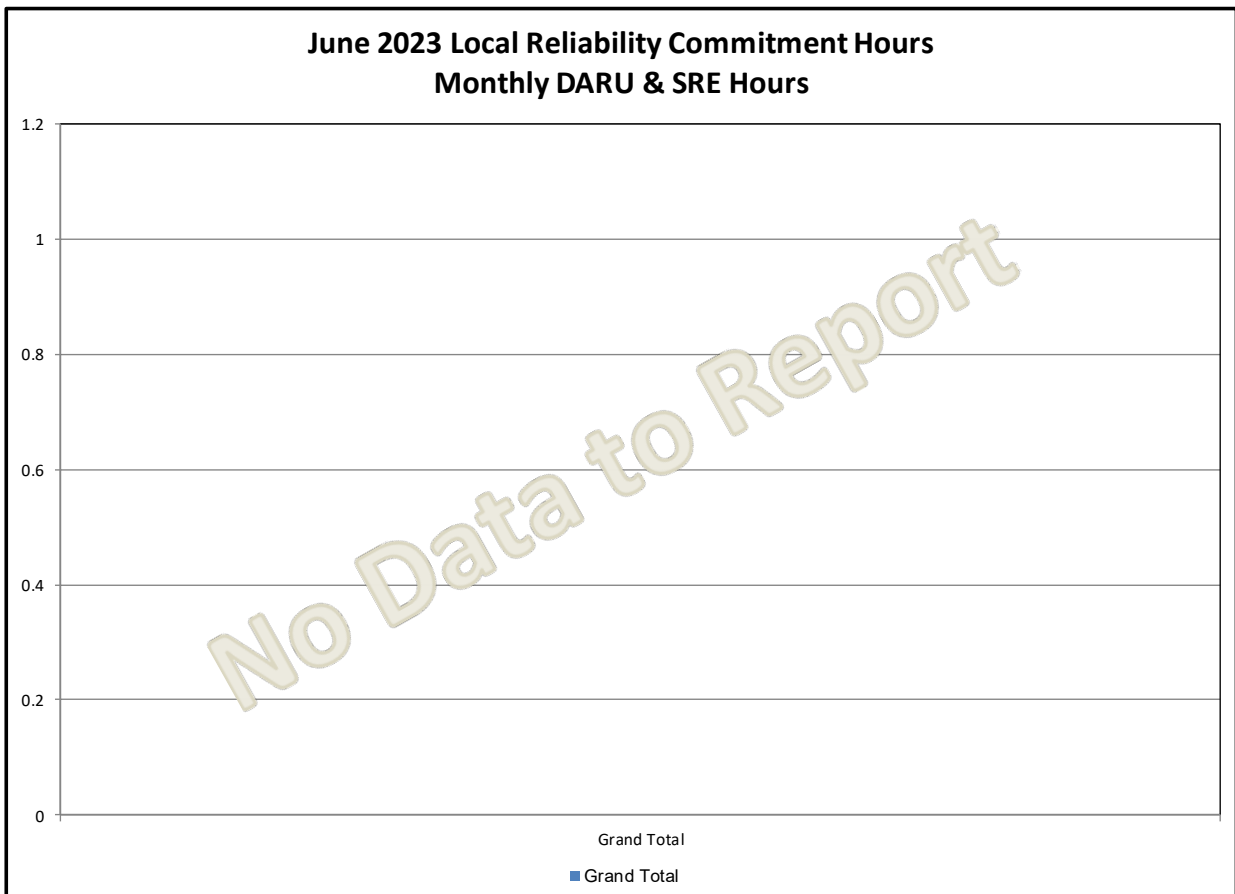
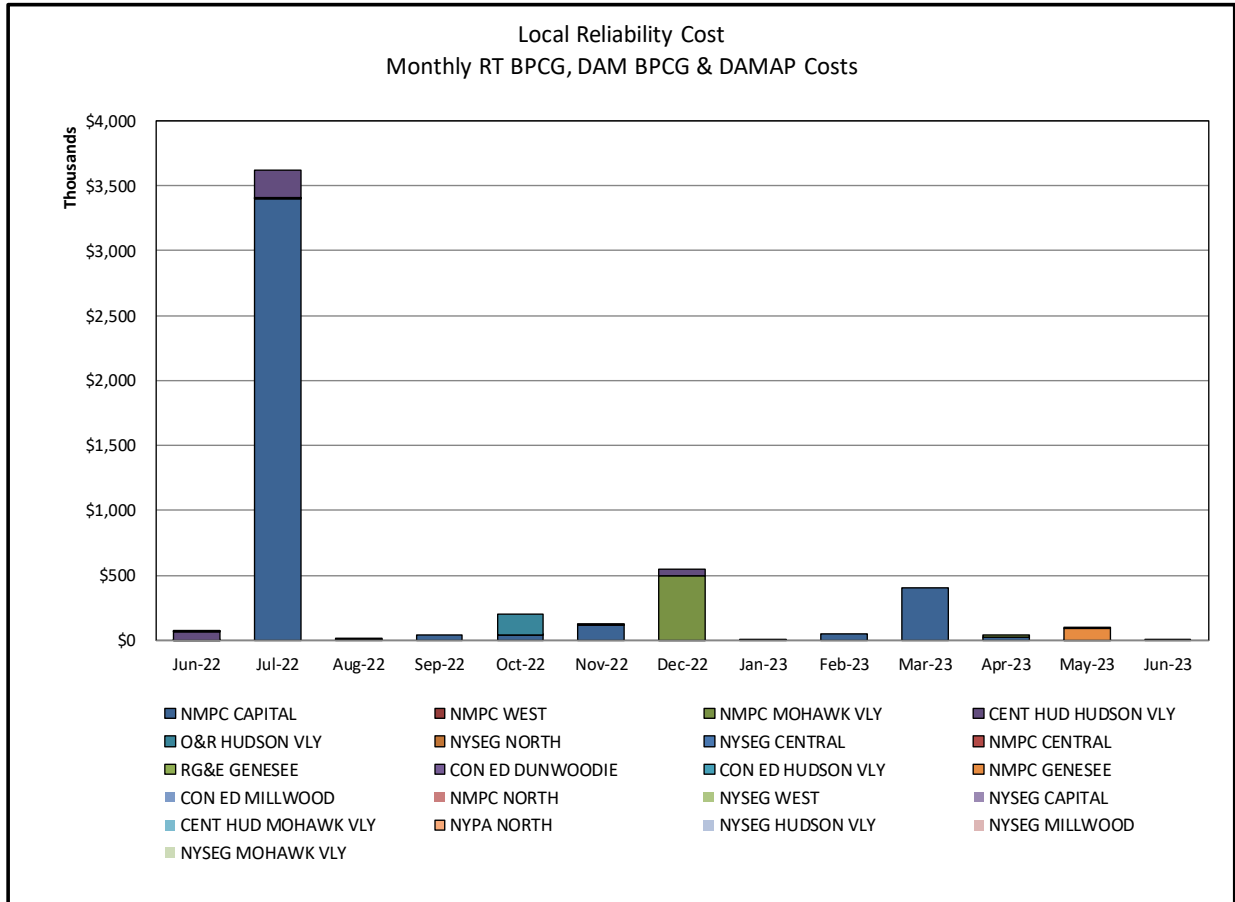


Day-Ahead Market Congestion Residual Categories

<u>Category</u>	<u>Cost Assignment</u>	<u>Events Types</u>	<u>Event Examples</u>
NYTO Outage Allocation	Responsible TO	Direct allocation to NYTO's responsible for transmission equipment status change.	DAM scheduled outage for equipment modeled in-service for the TCC Auction.
Incremental TCC/External Outage Impacts	All TO by Monthly Allocation Factor	Allocation associated with transmission equipment status change caused by change in status of external equipment or change in status of equipment associated with Incremental TCC.	Tie line required out-of-service by TO of neighboring control area.
Central East Commitment Derate	All TO by Monthly Allocation Factor	Reductions in the DAM Central East_VC limit as compared to the TCC Auction limit, which are not associated with transmission line outages.	

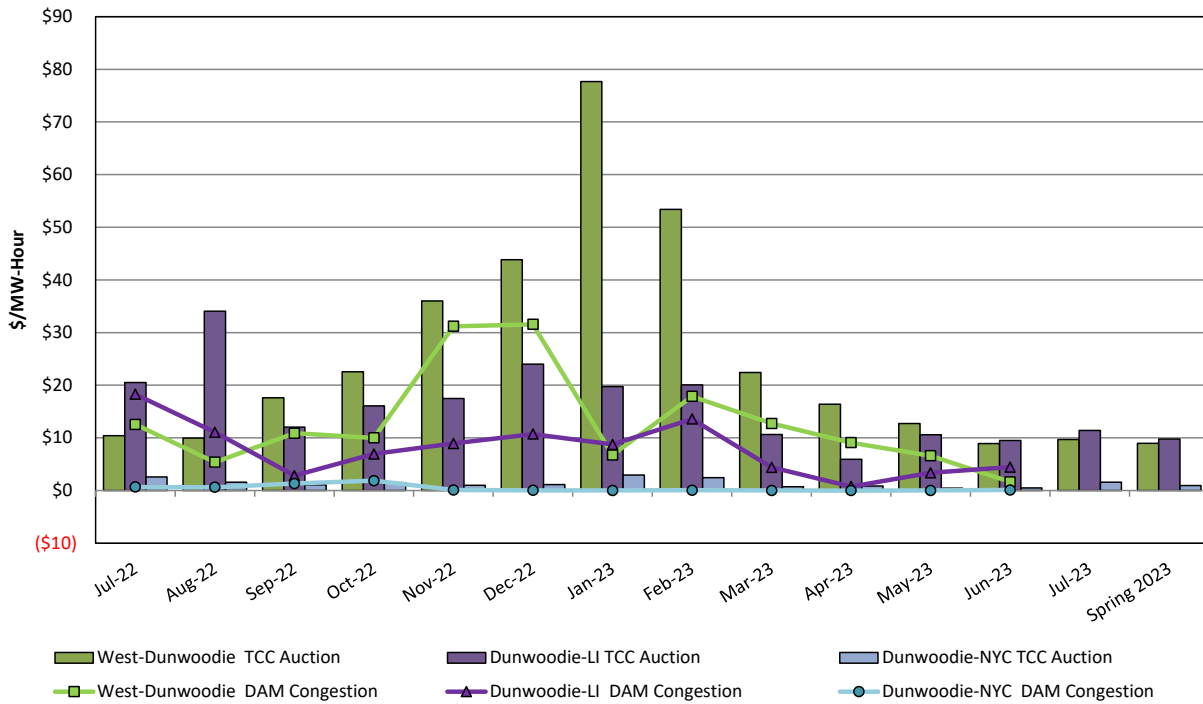






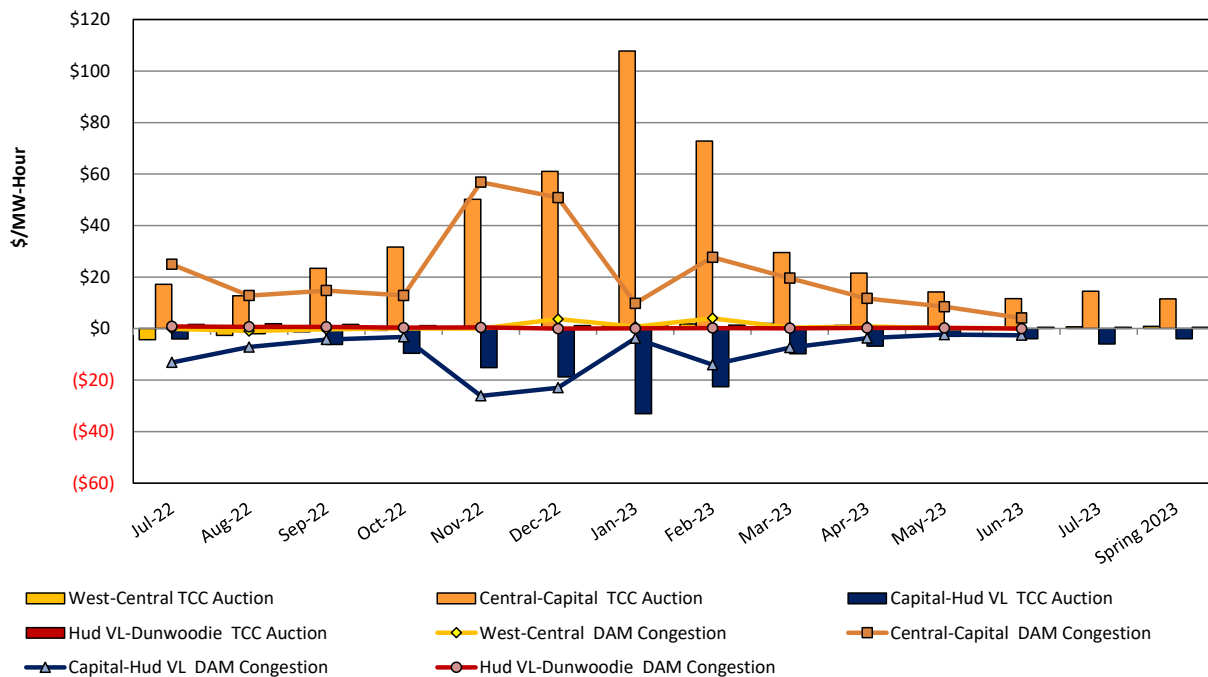
TCC & Day Ahead Market Selected Internal Path Congestion

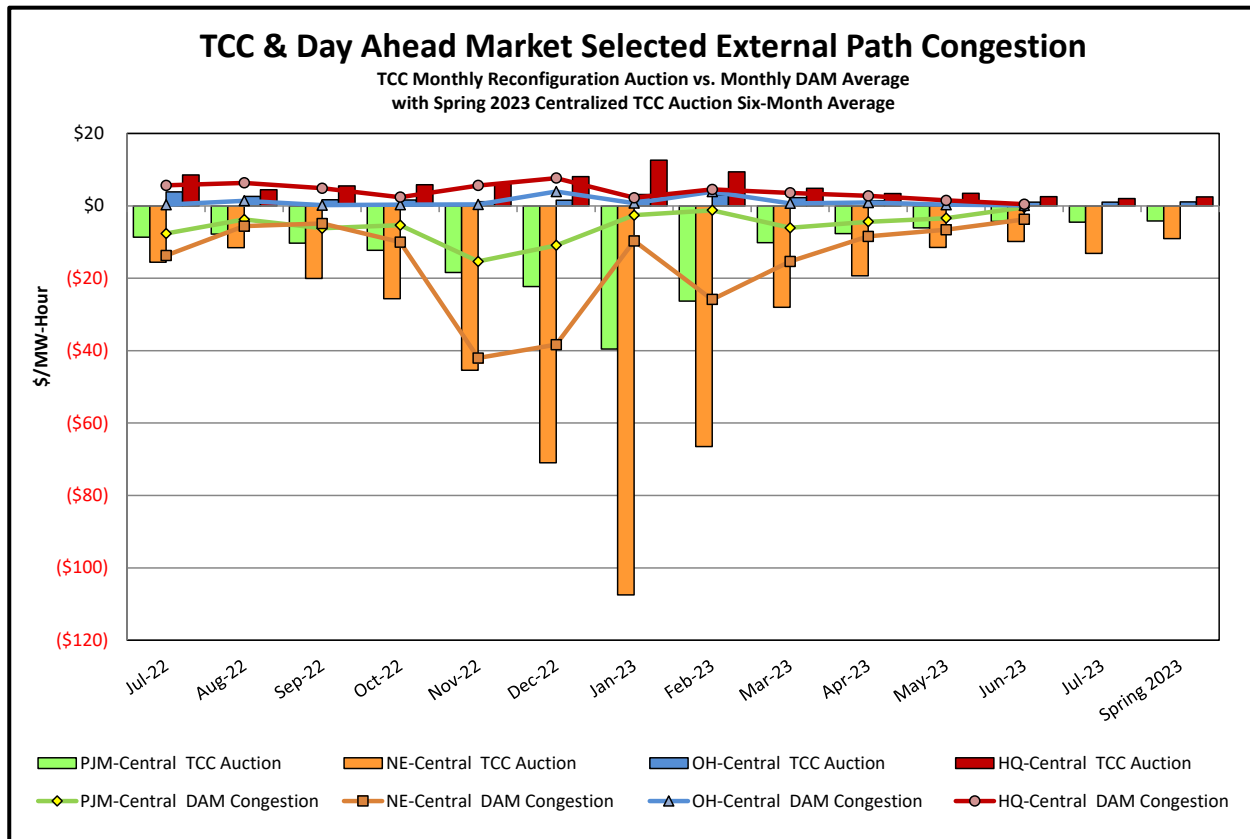
TCC Monthly Reconfiguration Auction vs. Monthly DAM Average
with Spring 2023 Centralized TCC Auction Six-Month Average



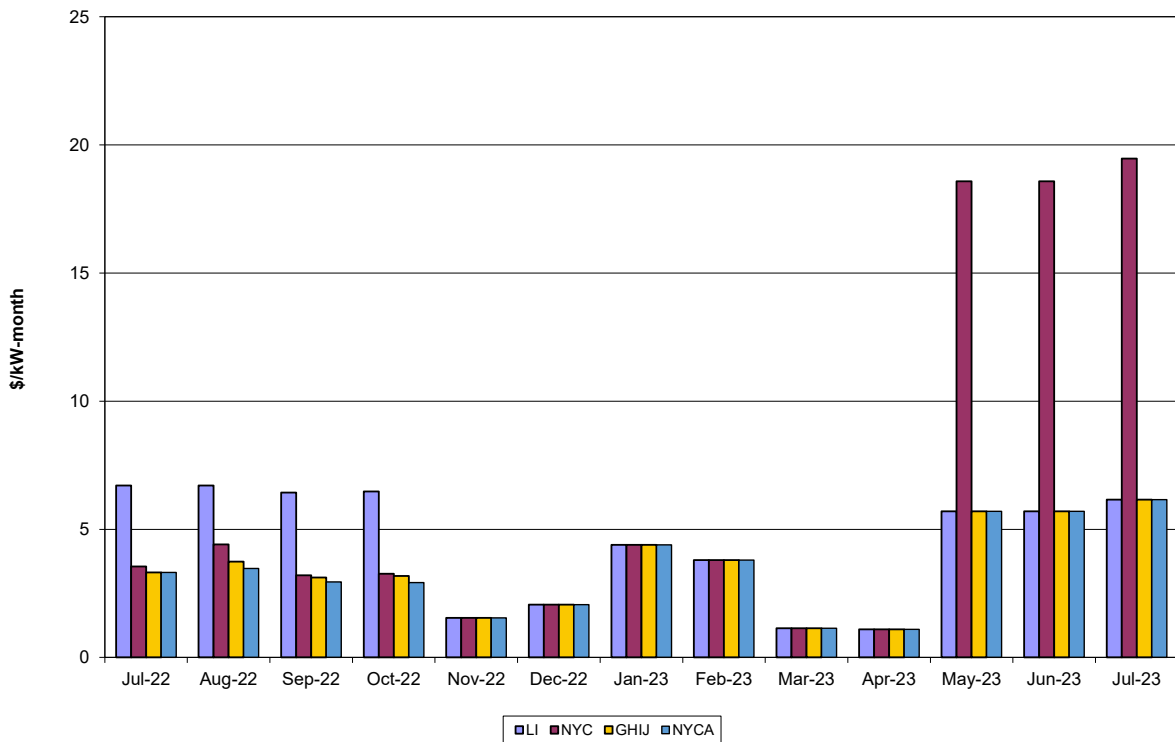
TCC & Day Ahead Market West to Dunwoodie Path Congestion

TCC Monthly Reconfiguration Auction vs. Monthly DAM Average
with Spring 2023 Centralized TCC Auction Six-Month Average

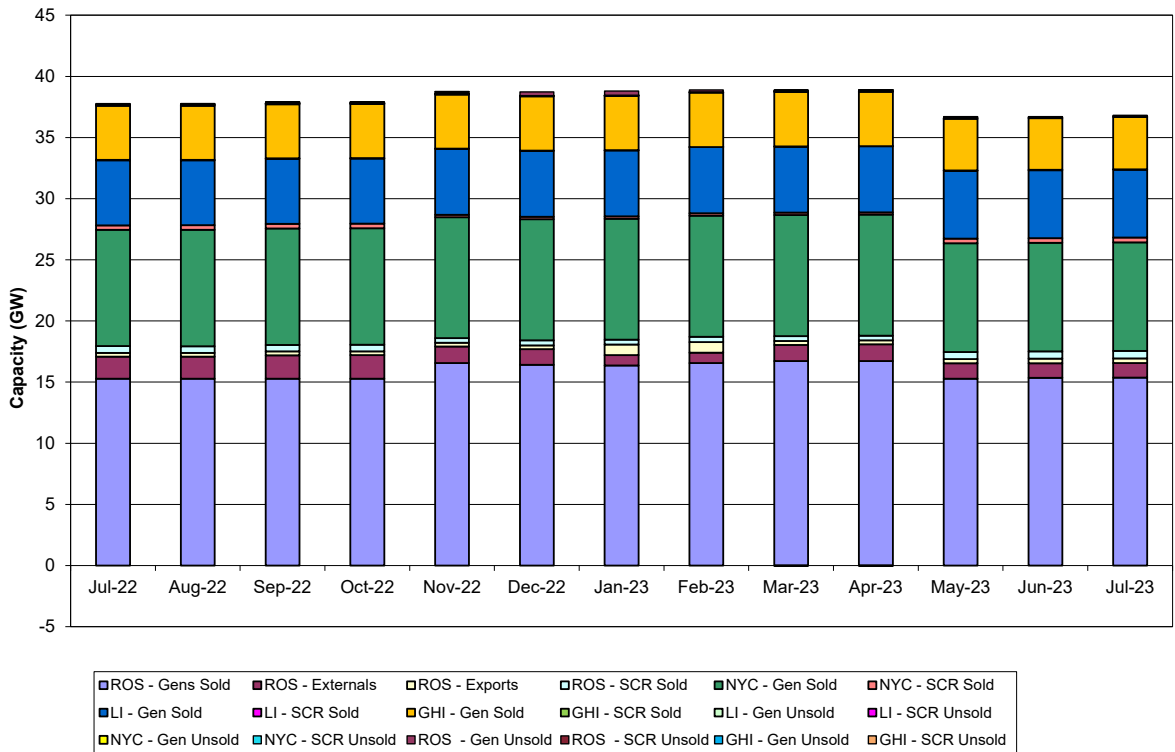




ICAP Spot Market Clearing Price



UCAP Sales

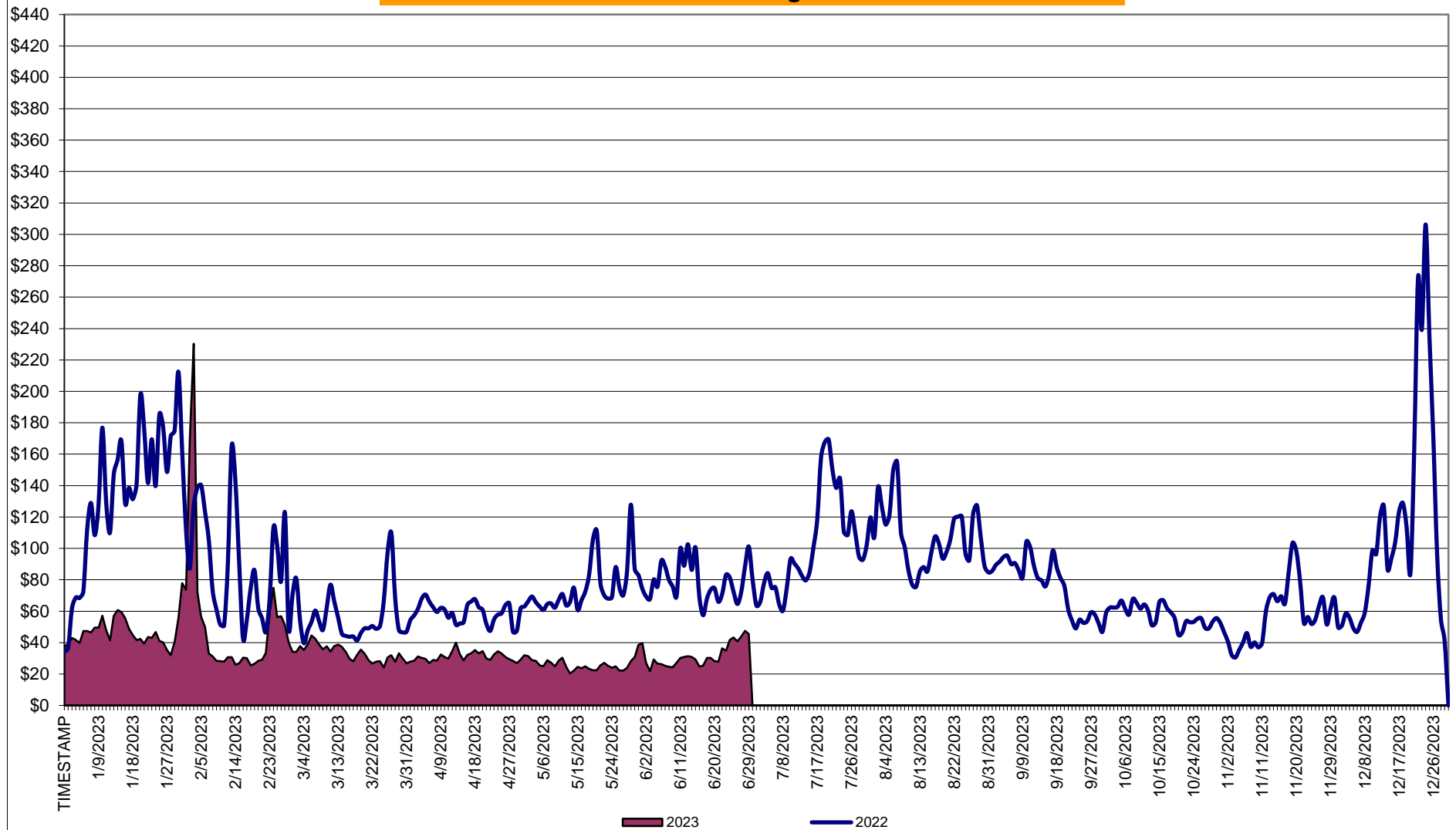


Market Performance Highlights

June 2023

- LBMP for June is \$29.85/MWh; higher than \$ 23.13/MWh in May 2023 and lower than \$76.72/MWh in June 2022.
 - Day Ahead Load Weighted LBMPs and Real Time Load Weighted LBMPs are higher compared to May.
- June 2023 average year-to-date monthly cost of \$39.27/MWh is a 55% decrease from \$87.37/MWh in June 2022.
- Average daily sendout is 401 GWh/day in June; higher than 350 GWh/day in May 2023 and lower than 422 GWh/day in June 2022.
- Natural gas prices and distillate prices are mixed compared to the previous month.
 - Natural Gas (Transco Z6 NY) was \$1.39/MMBtu, down from \$ 1.43/MMBtu in May.
 - Natural gas prices (Transco Z6 NY) are down 79.9% year-over-year.
 - Jet Kerosene Gulf Coast was \$16.68/MMBtu, up from \$ 16.11/MMBtu in May.
 - Ultra Low Sulfur No.2 Diesel NY Harbor was \$17.36/MMBtu, up from \$16.78/MMBtu in May.
 - Distillate prices are down 44.5% year-over-year
- Uplift per MWh is mixed compared to the previous month.
 - Uplift (not including NYISO cost of operations) is 0.09/MWh; higher than (\$0.13)/MWh in May.
 - Local Reliability Share is \$0.35/MWh, higher than \$0.07/MWh in May.
 - Statewide Share is (\$0.26)/MWh, lower than (\$0.20)/MWh in May.
 - TSA \$ per NYC MWh is \$0.08/MWh.
 - Total uplift costs (Schedule 1 components including NYISO Cost of Operations) are higher than May.

Daily NYISO Average Cost/MWh (Energy & Ancillary Services)*
2022 Annual Average \$89.23/MWh
June 2022 YTD Average \$87.37/MWh
June 2023 YTD Average \$39.27/MWh

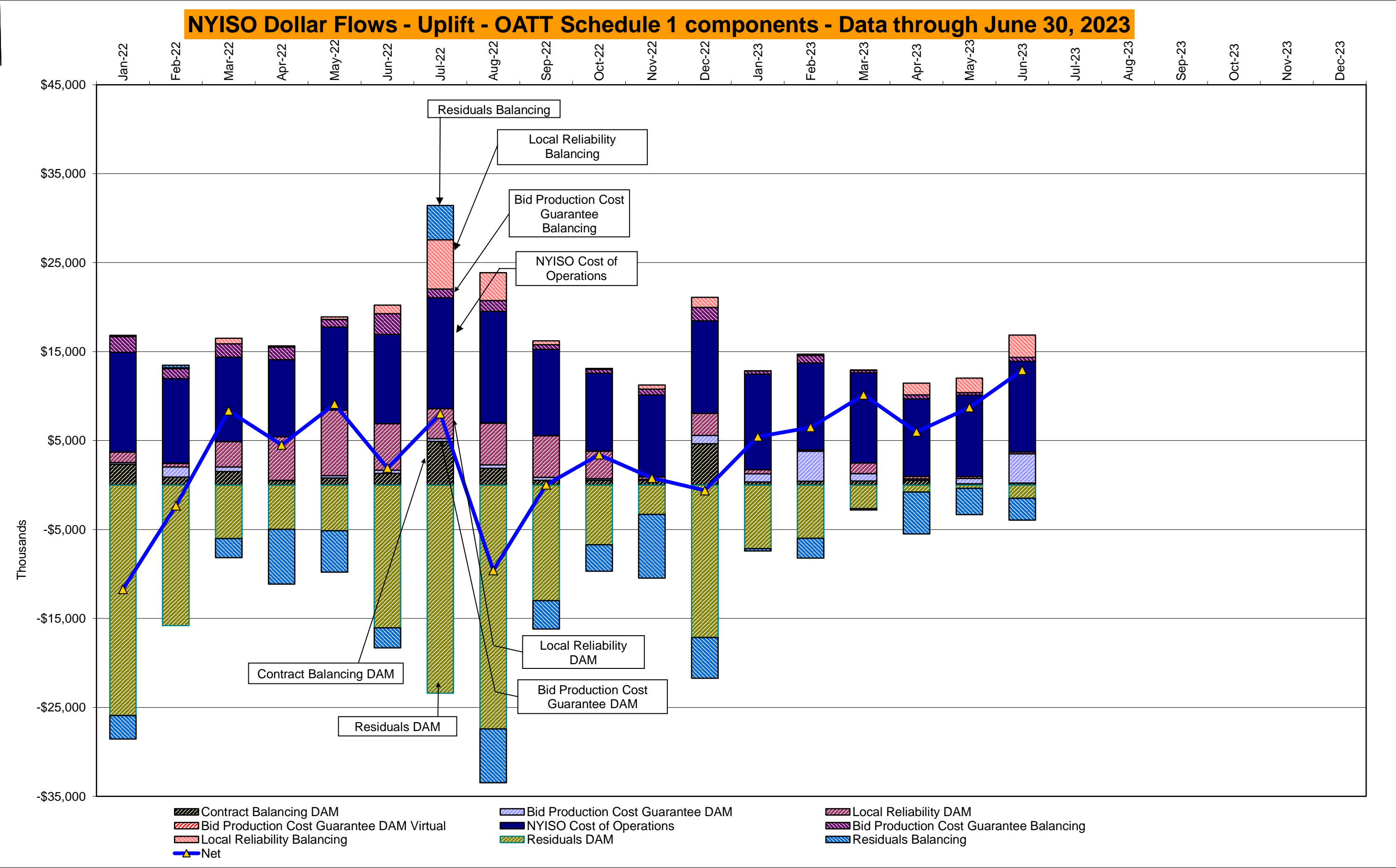


* Excludes ICAP payments.

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	55.47	31.11	28.07	23.13	29.85						
NTAC	2.82	1.15	1.39	1.72	1.38	1.62						
Reserve	0.72	0.90	0.73	0.85	0.81	0.69						
Regulation	0.09	0.13	0.13	0.15	0.12	0.10						
NYISO Cost of Operations	0.77	0.77	0.77	0.78	0.78	0.78						
FERC Fee Recovery	0.08	0.09	0.09	0.10	0.10	0.09						
Uplift	(0.38)	(0.27)	(0.00)	(0.34)	(0.13)	0.09						
Uplift: Local Reliability Share	0.03	0.03	0.09	0.04	0.07	0.35						
Uplift: Statewide Share	(0.41)	(0.30)	(0.10)	(0.38)	(0.20)	(0.26)						
Voltage Support and Black Start	0.42	0.42	0.43	0.43	0.43	0.43						
Avg Monthly Cost	46.56	58.58	34.58	31.67	26.55	33.60						
 Avg YTD Cost	46.64	52.36	46.65	43.45	40.45	39.27						
 TSA \$ per NYC MWh	0.00	0.00	0.00	0.00	0.00	0.08						
 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: 7/10/2023 3:15 PM



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	12,355,489	12,651,083	11,058,870	11,601,426	12,934,709						
DAM LSE Internal LBMP Energy Sales	55%	55%	56%	55%	55%	57%						
DAM External TC LBMP Energy Sales	7%	7%	4%	4%	4%	6%						
DAM Bilateral - Internal Bilaterals	28%	29%	30%	30%	31%	29%						
DAM Bilateral - Import/Non-LBMP Market Bilaterals	5%	5%	6%	6%	6%	6%						
DAM Bilateral - Export/Non-LBMP Market Bilaterals	2%	2%	2%	2%	2%	2%						
DAM Bilateral - Wheel Through Bilaterals	3%	2%	2%	2%	2%	2%						
<u>Balancing Energy Market MWh</u>	328,840	397,488	420,170	303,381	-77,279	-40,037						
Balancing Energy LSE Internal LBMP Energy Sales	65%	38%	53%	43%	-157%	37%						
Balancing Energy External TC LBMP Energy Sales	68%	68%	58%	69%	223%	143%						
Balancing Energy Bilateral - Internal Bilaterals	2%	1%	2%	-1%	-5%	28%						
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	0%	0%	0%	0%	7%	0%						
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	7%	6%	6%	5%	10%	18%						
Balancing Energy Bilateral - Wheel Through Bilaterals	-43%	-13%	-18%	-16%	-178%	-326%						
<u>Transactions Summary</u>												
LBMP	63%	63%	62%	61%	60%	63%						
Internal Bilaterals	28%	28%	29%	29%	31%	29%						
Import Bilaterals	5%	5%	6%	6%	6%	6%						
Export Bilaterals	2%	2%	2%	3%	2%	2%						
Wheels Through	2%	1%	1%	2%	1%	0%						
<u>Market Share of Total Load</u>												
Day Ahead Market	97.6%	96.9%	96.8%	97.3%	100.7%	100.3%						
Balancing Energy +	2.4%	3.1%	3.2%	2.7%	-0.7%	-0.3%						
Total MWH	13,990,977	12,752,977	13,071,253	11,362,252	11,524,147	12,894,671						
Average Daily Energy Sendout/Month GWh	410	408	387	349	350	401						

<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 2023 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	\$47.82	\$29.84	\$26.91	\$22.41	\$27.67						
Standard Deviation	\$10.32	\$47.20	\$7.42	\$6.50	\$6.46	\$9.25						
Load Weighted Price **	\$41.37	\$50.55	\$30.37	\$27.38	\$23.02	\$28.99						
<u>RTC LBMP</u>												
Price *	\$38.28	\$42.67	\$28.02	\$26.93	\$21.13	\$27.94						
Standard Deviation	\$31.37	\$39.75	\$11.53	\$9.23	\$7.61	\$12.06						
Load Weighted Price **	\$39.04	\$44.80	\$28.49	\$27.39	\$21.62	\$29.24						
<u>REAL TIME LBMP</u>												
Price *	\$38.76	\$43.99	\$28.15	\$27.41	\$20.76	\$27.44						
Standard Deviation	\$45.06	\$43.54	\$15.02	\$13.08	\$9.13	\$12.38						
Load Weighted Price **	\$39.68	\$46.75	\$28.72	\$27.97	\$21.27	\$28.66						
Average Daily Energy Sendout/Month GWh	410	408	387	349	350	401						

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	\$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

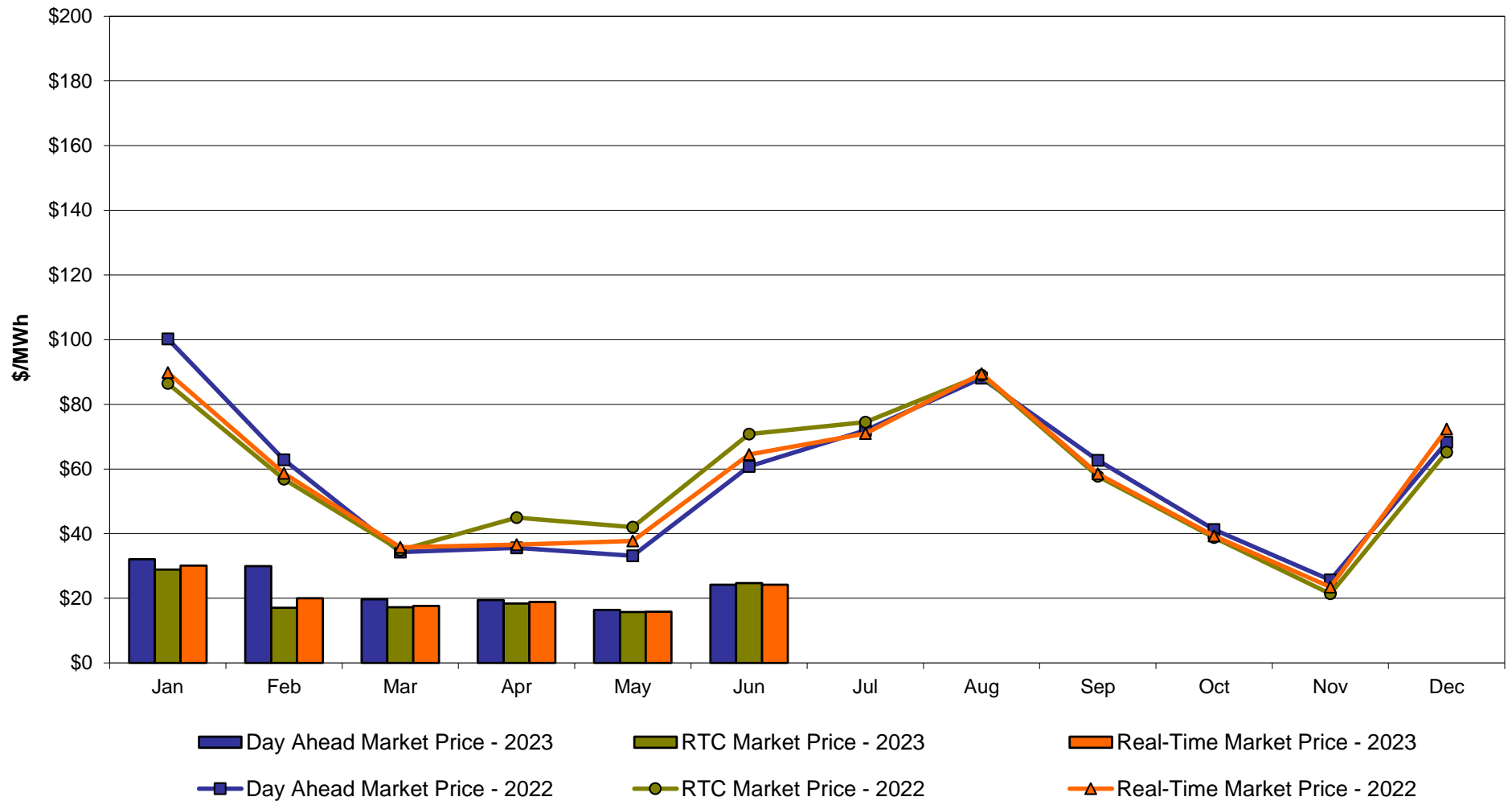


June 2023 Zonal LBMP Statistics for NYISO (\$/MWh)

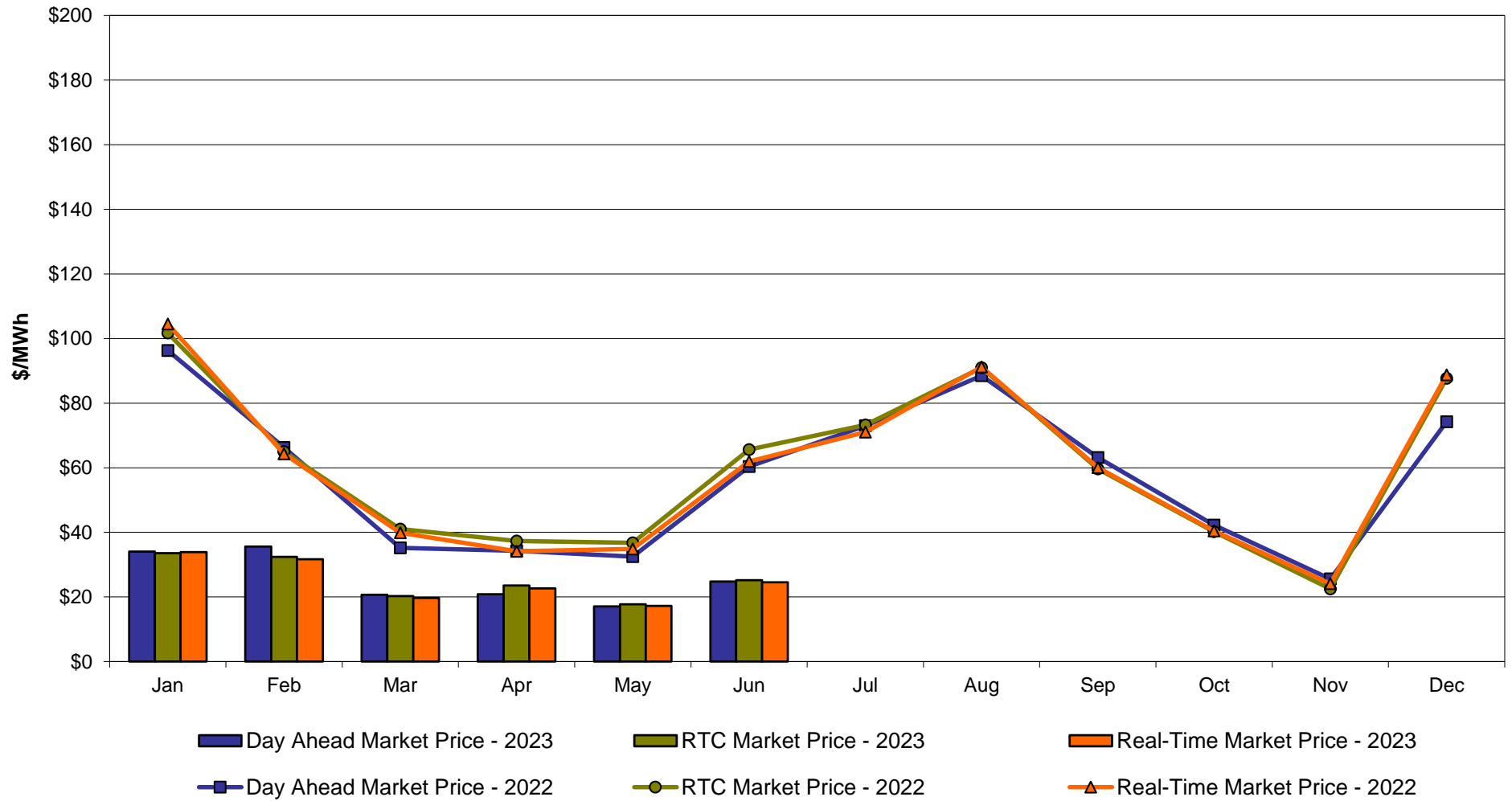
	<u>WEST</u> <u>Zone A</u>	<u>GENESEE</u> <u>Zone B</u>	<u>NORTH</u> <u>Zone D</u>	<u>CENTRAL</u> <u>Zone C</u>	<u>MOHAWK</u> <u>VALLEY</u> <u>Zone E</u>	<u>CAPITAL</u> <u>Zone F</u>	<u>HUDSON</u> <u>VALLEY</u> <u>Zone G</u>	<u>MILLWOOD</u> <u>Zone H</u>	<u>DUNWOODIE</u> <u>Zone I</u>	<u>NEW YORK</u> <u>CITY</u> <u>Zone J</u>	<u>LONG</u> <u>ISLAND</u> <u>Zone K</u>
<u>DAY AHEAD LBMP</u>											
Unweighted Price *	24.23	24.22	23.87	24.74	25.49	30.00	27.52	27.67	27.79	27.98	32.76
Standard Deviation	7.04	7.03	6.84	7.30	7.58	14.62	9.32	9.37	9.37	9.45	12.78
<u>RTC LBMP</u>											
Unweighted Price *	24.67	24.67	24.86	25.22	25.86	27.36	26.73	27.07	27.10	27.24	37.12
Standard Deviation	9.21	9.21	9.24	9.26	9.39	12.93	10.13	10.43	10.25	10.24	42.54
<u>REAL TIME LBMP</u>											
Unweighted Price *	24.17	24.13	24.15	24.57	25.26	27.81	26.27	27.04	27.09	27.19	35.09
Standard Deviation	9.78	9.70	9.86	9.98	10.11	19.02	11.88	12.81	12.59	12.54	31.70
	<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 *	23.80	23.77	23.77	25.50	29.48	33.08	31.88	30.79	27.47	27.79	23.67
Standard Deviation	7.01	6.70	6.70	7.86	11.55	14.33	11.72	11.69	9.07	9.30	6.70
<u>RTC LBMP</u>											
Unweighted Price *	24.09	24.64	24.64	25.02	32.27	37.29	36.37	33.64	26.70	26.99	24.64
Standard Deviation	8.56	8.35	8.35	8.27	25.12	43.96	41.85	37.83	9.50	9.76	8.66
<u>REAL TIME LBMP</u>											
Unweighted Price *	24.20	23.94	23.94	24.09	29.55	35.26	34.39	31.90	26.12	26.97	23.94
Standard Deviation	10.22	8.65	8.65	10.72	18.13	33.77	30.84	26.16	12.68	11.90	9.95

* Straight LBMP averages

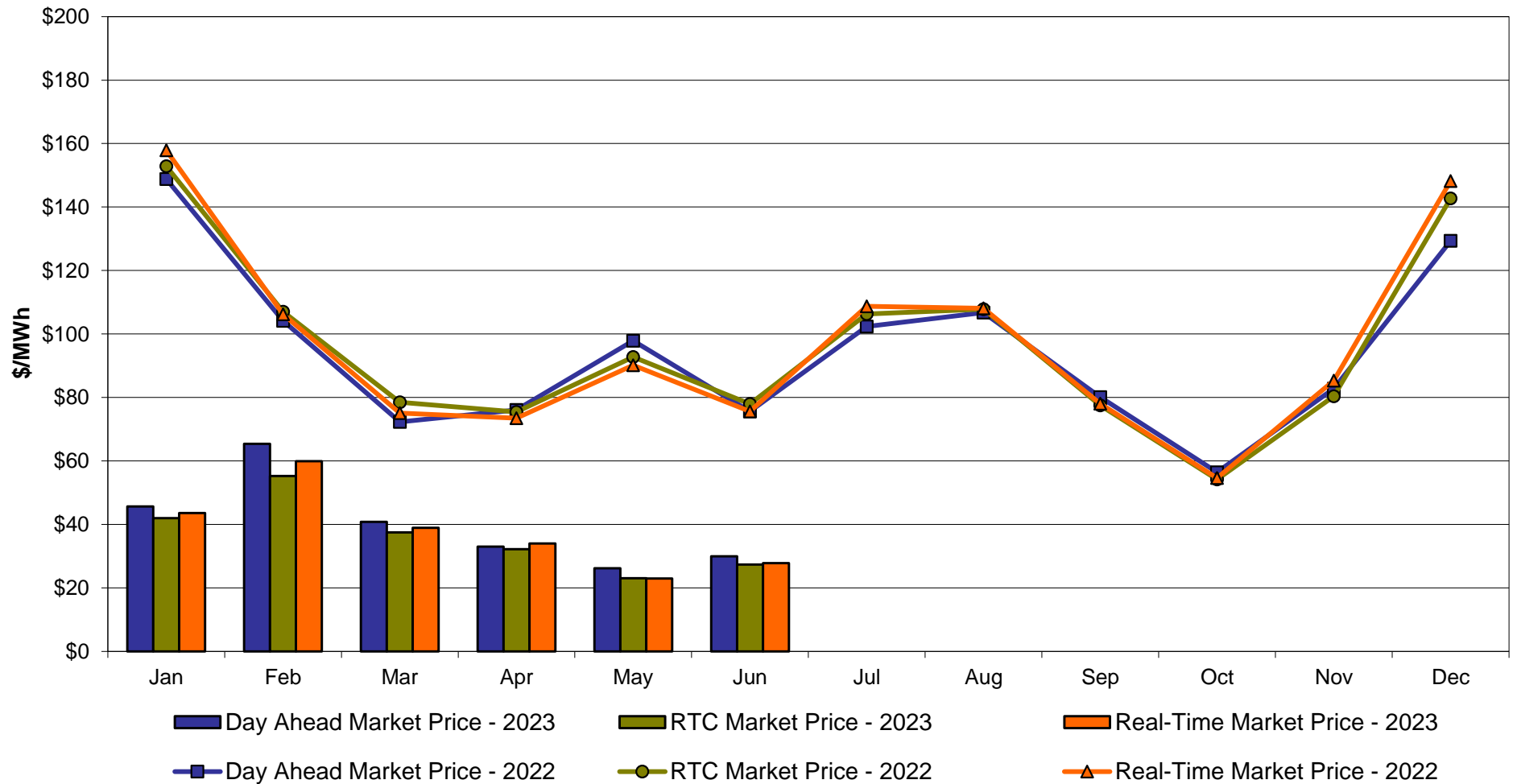
West Zone A **Monthly Average LBMP Prices 2022 - 2023**



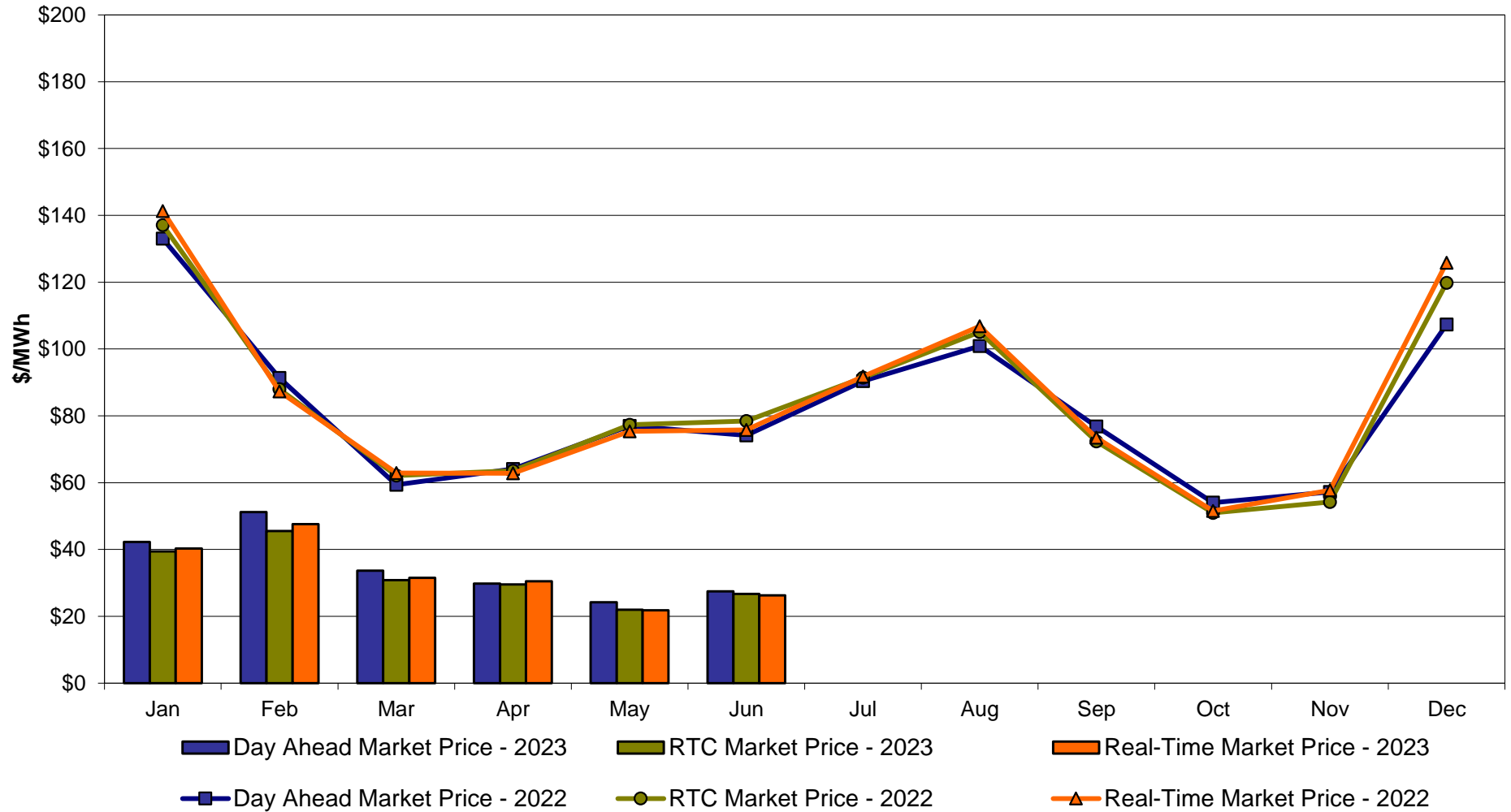
Central Zone C Monthly Average LBMP Prices 2022 - 2023



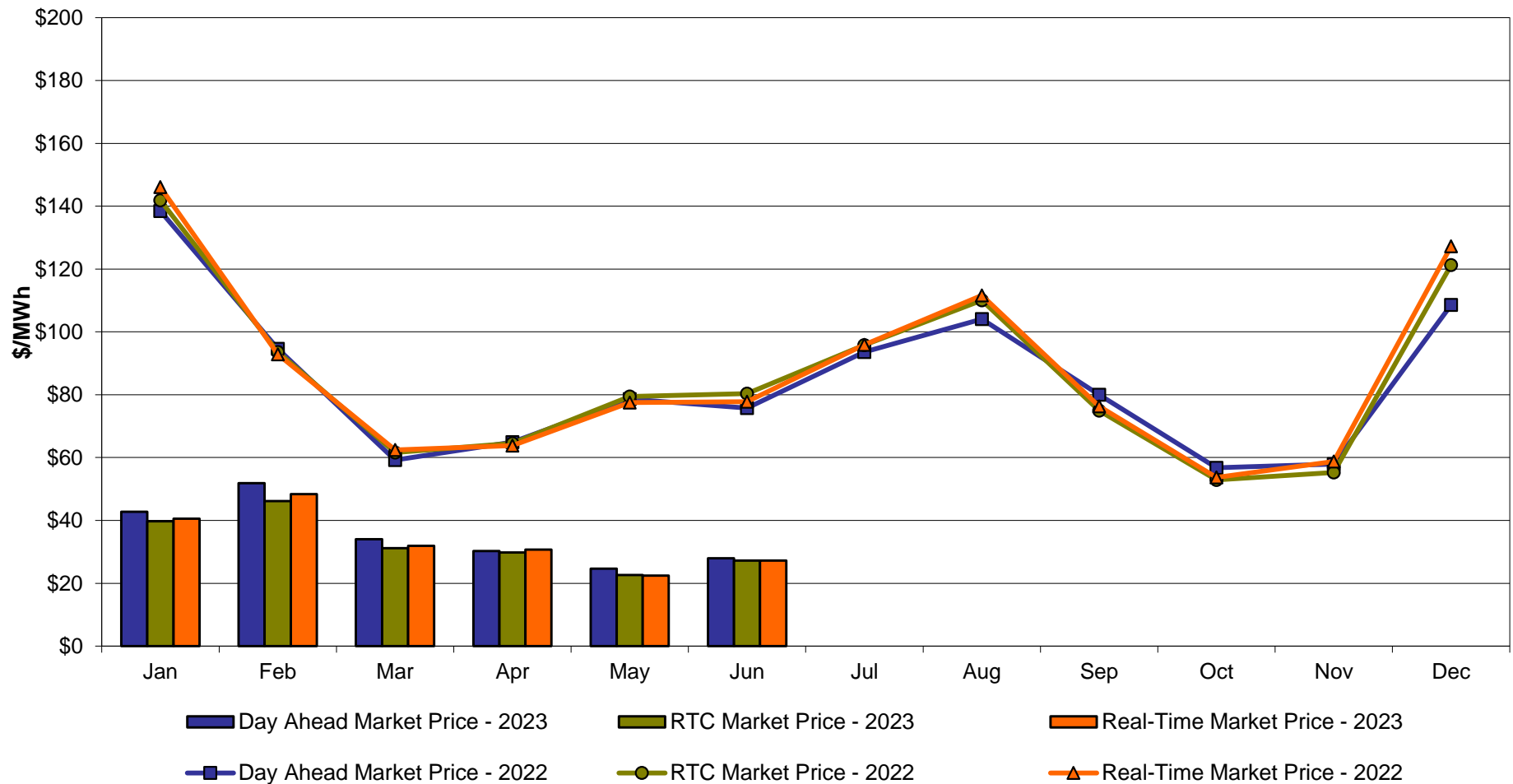
Capital Zone F **Monthly Average LBMP Prices 2022 - 2023**



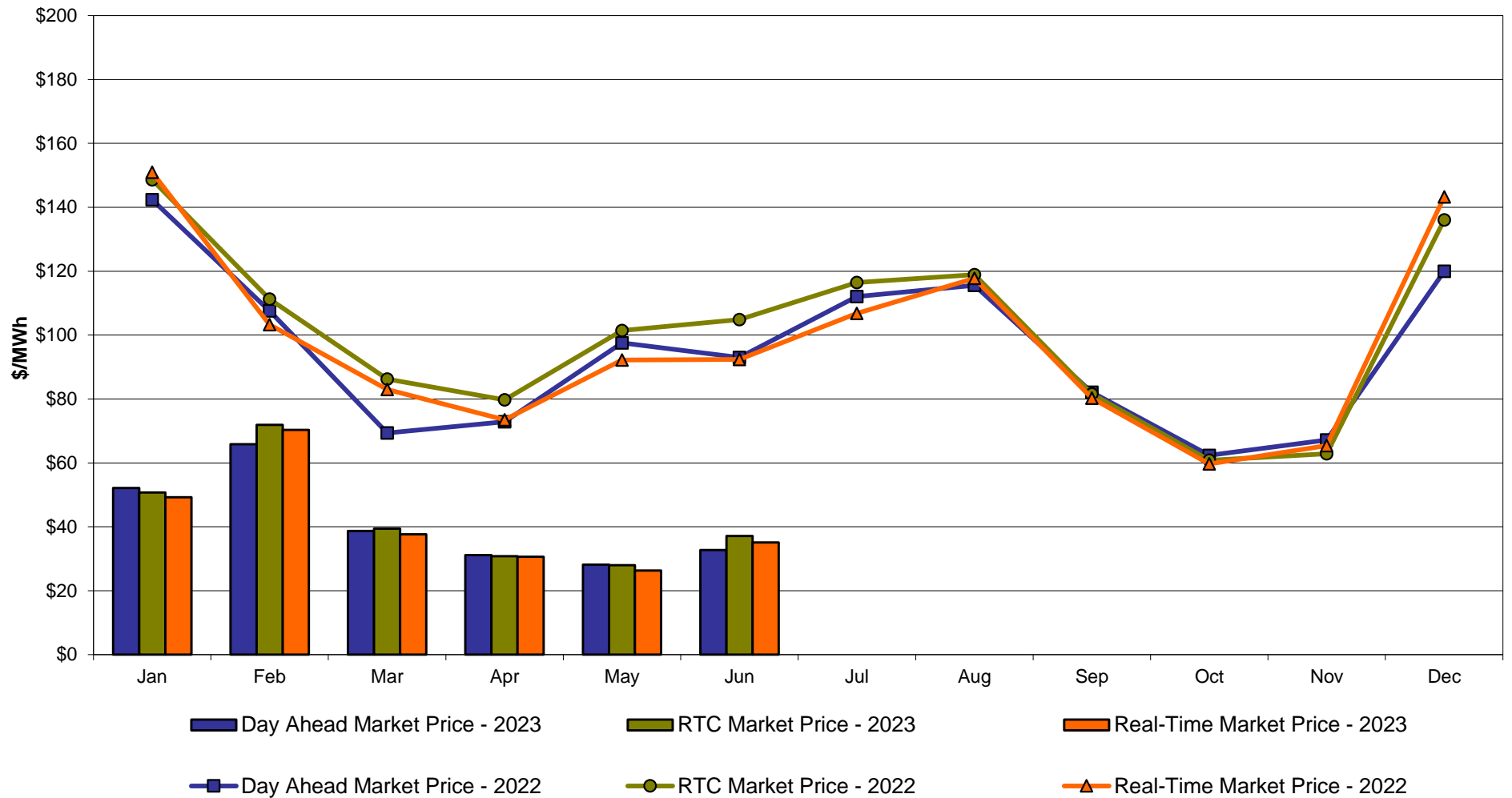
Hudson Valley Zone G Monthly Average LBMP Prices 2022 - 2023

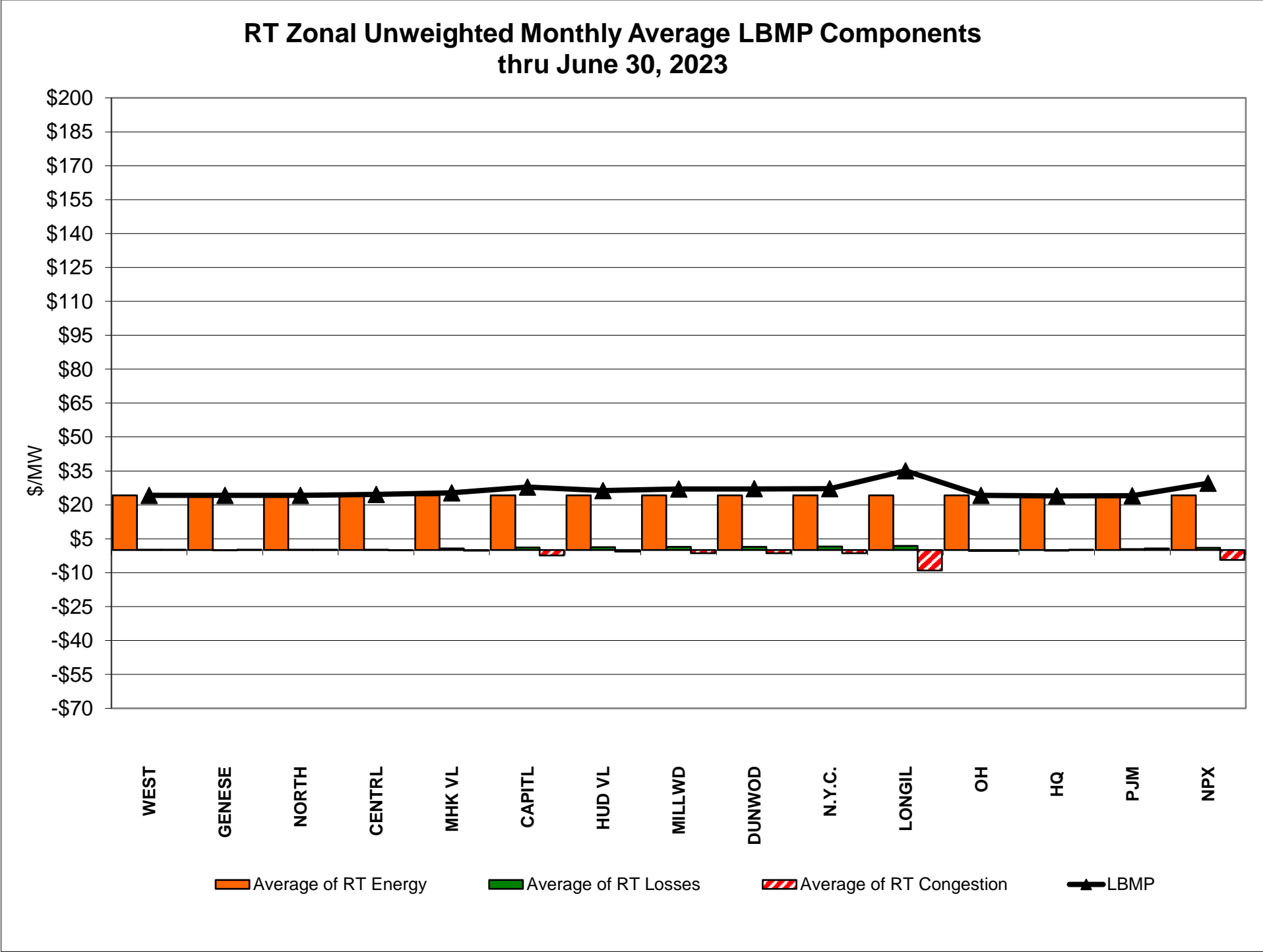
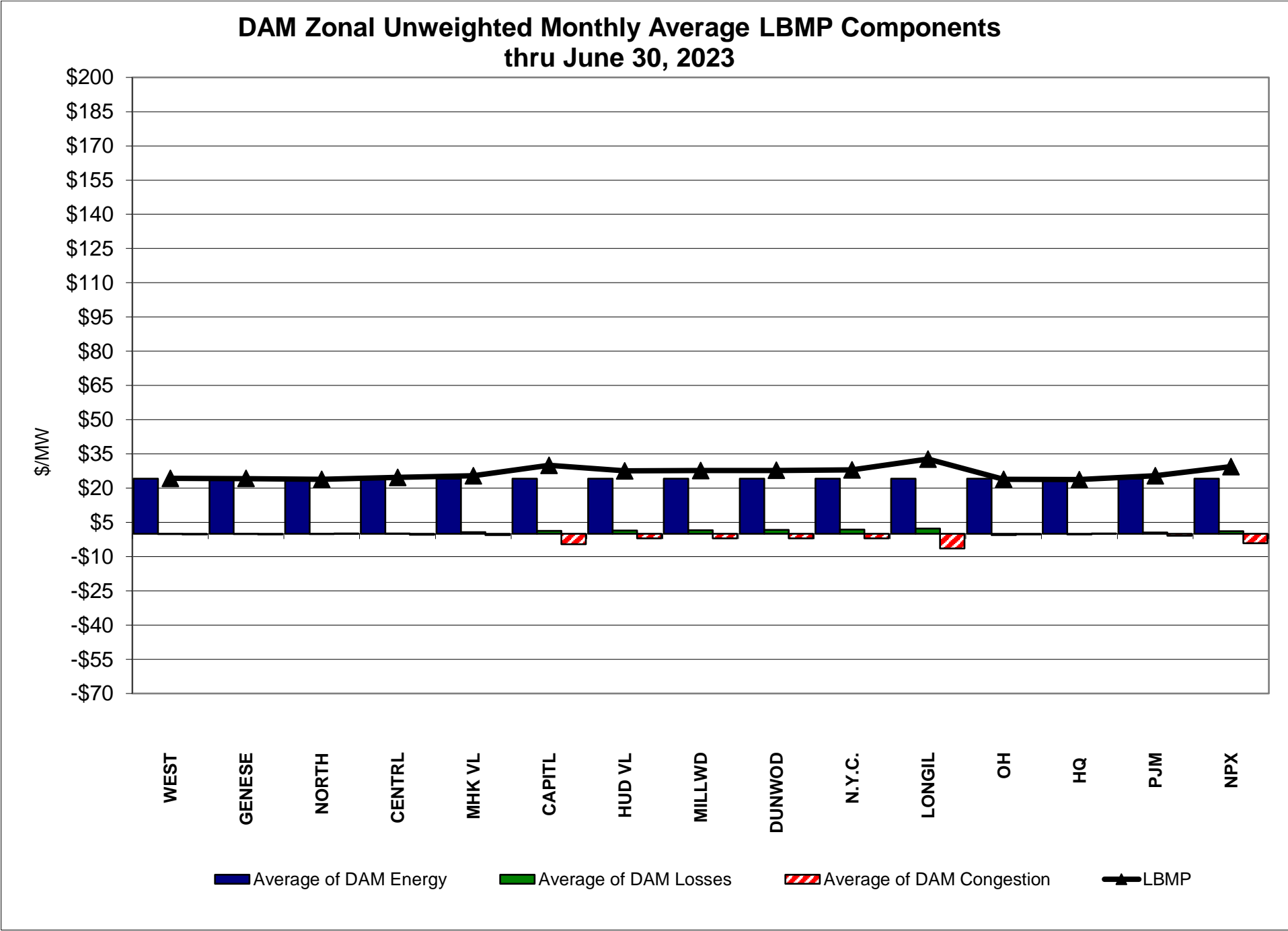


NYC Zone J Monthly Average LBMP Prices 2022 - 2023

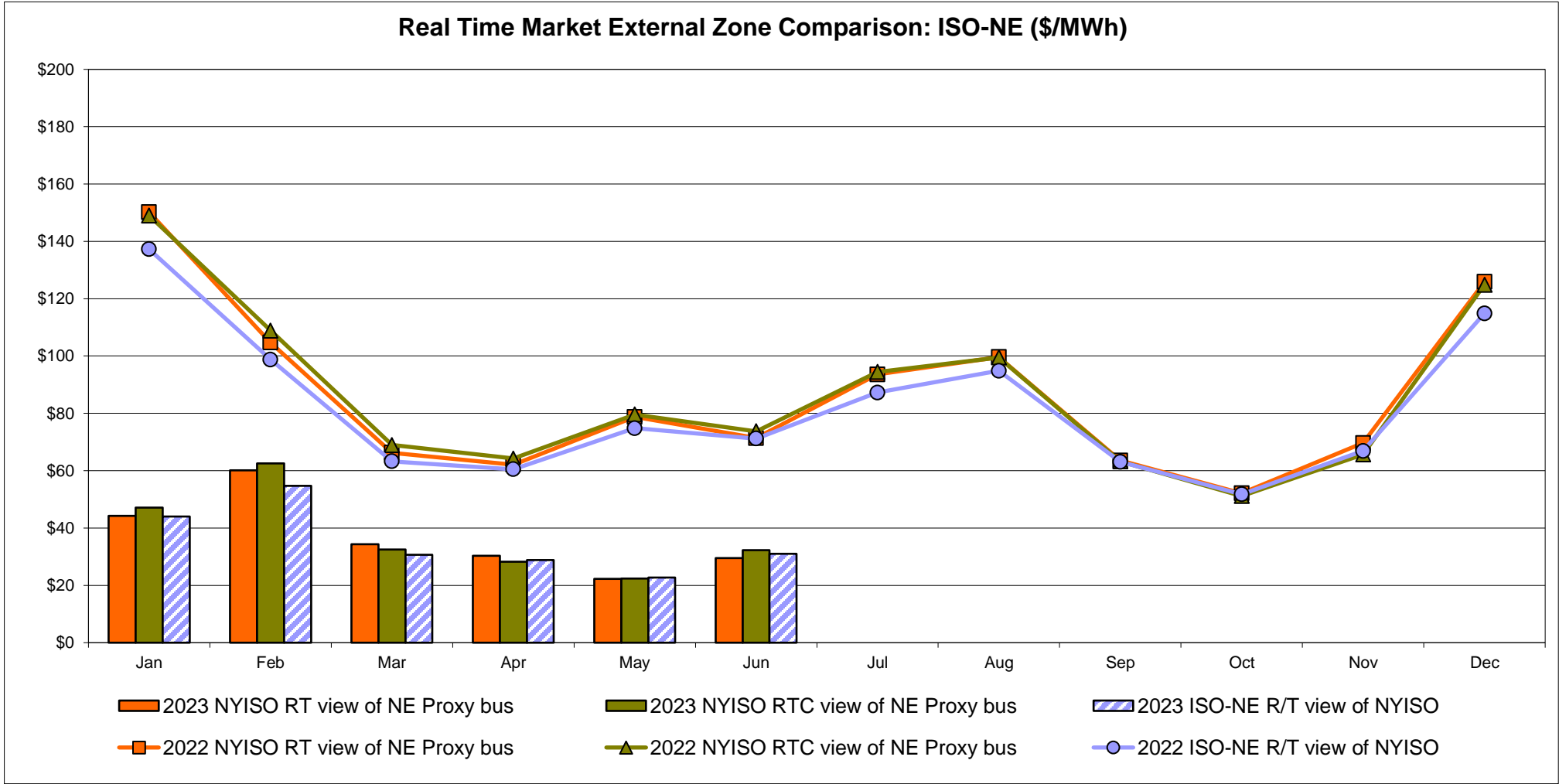
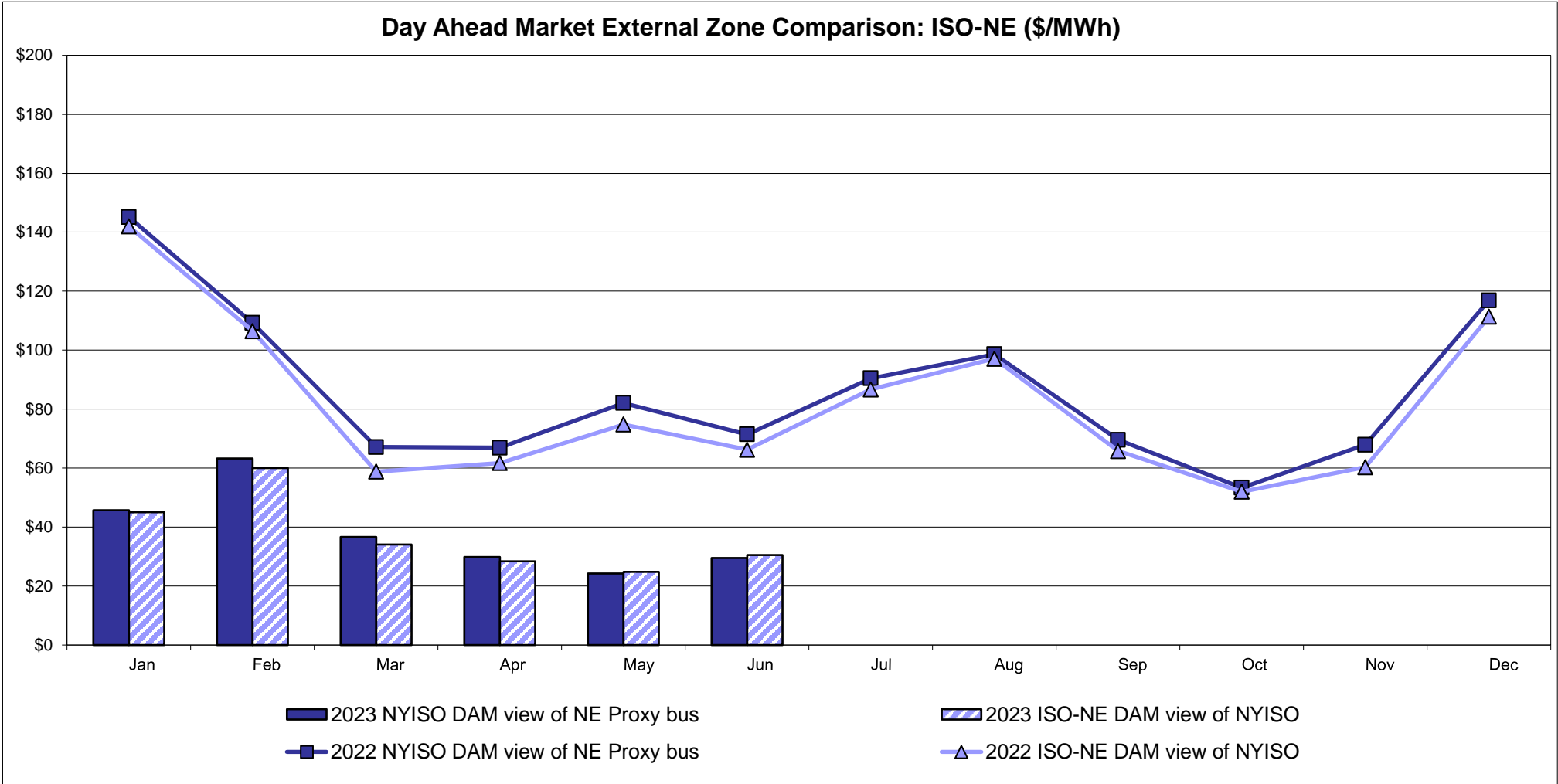


Long Island Zone K Monthly Average LBMP Prices 2022 - 2023



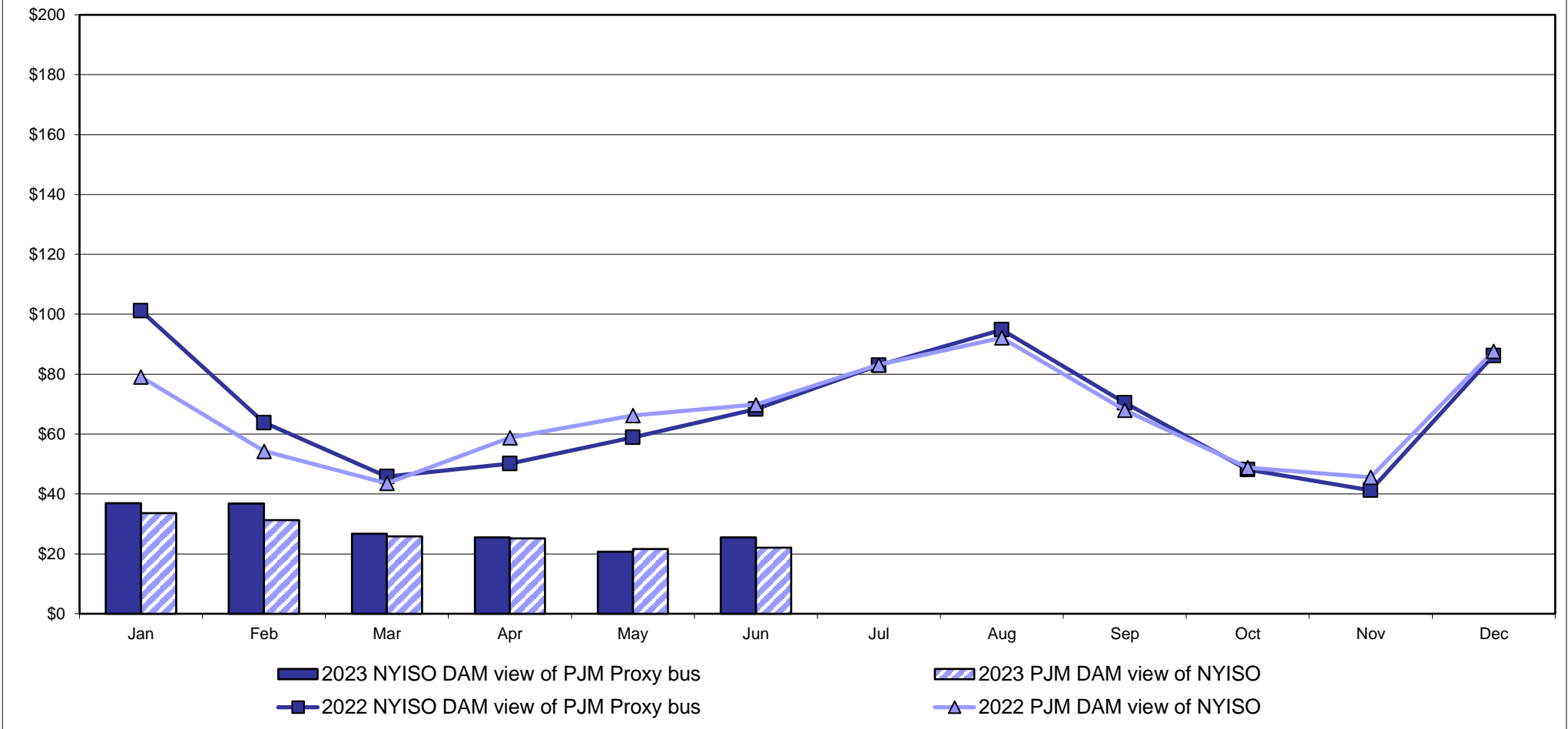


External Comparison ISO-New England

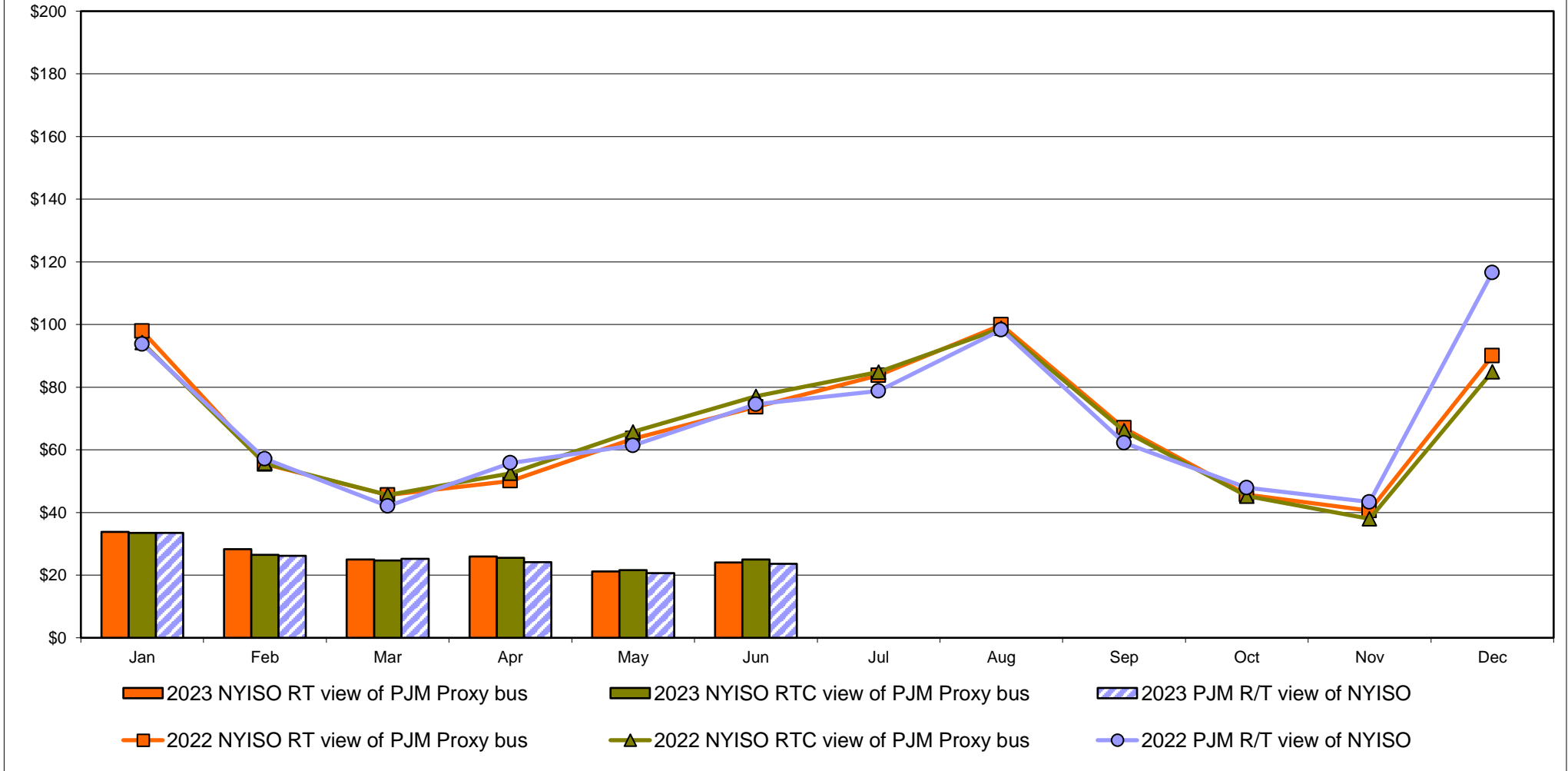


External Comparison PJM

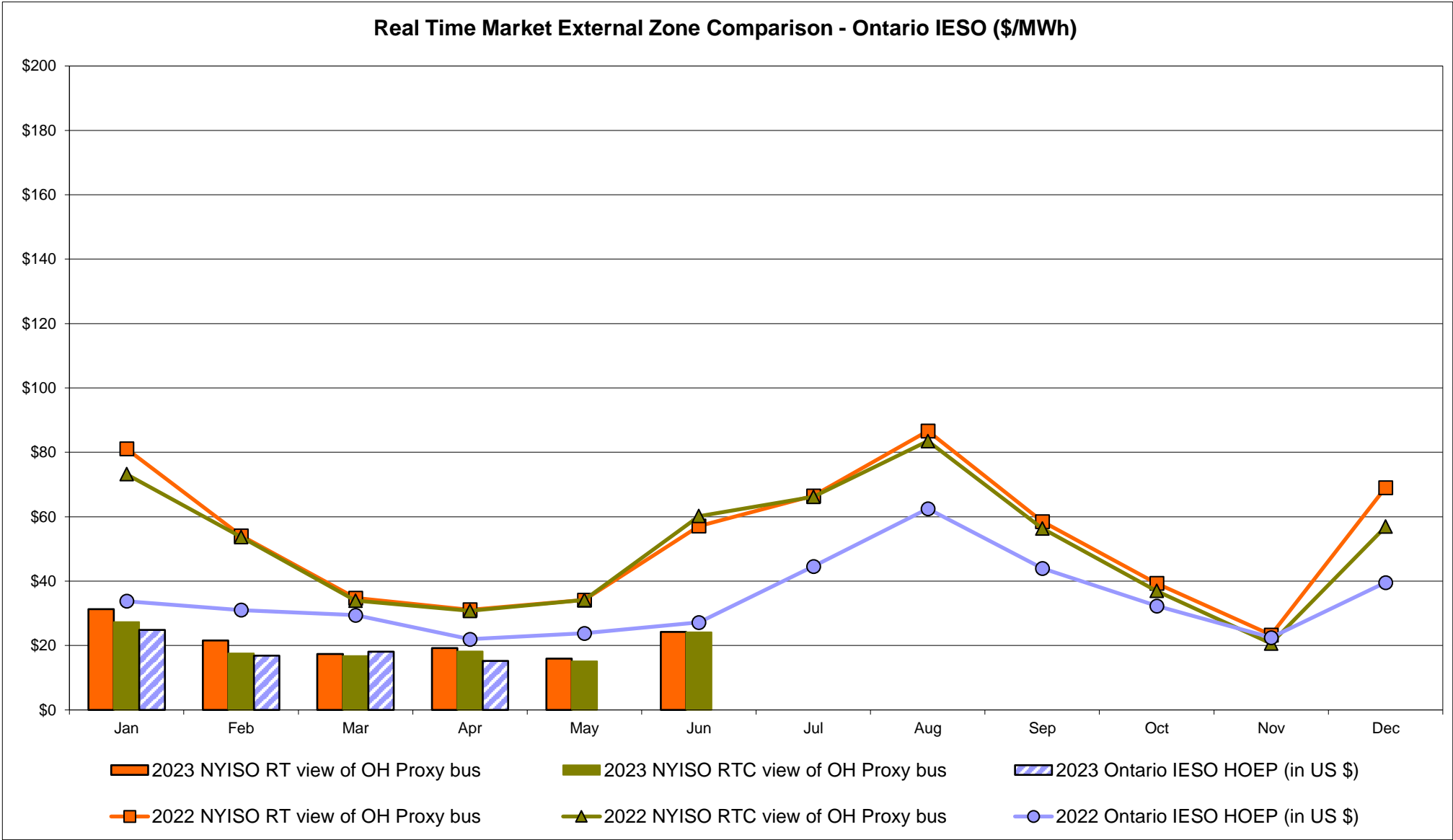
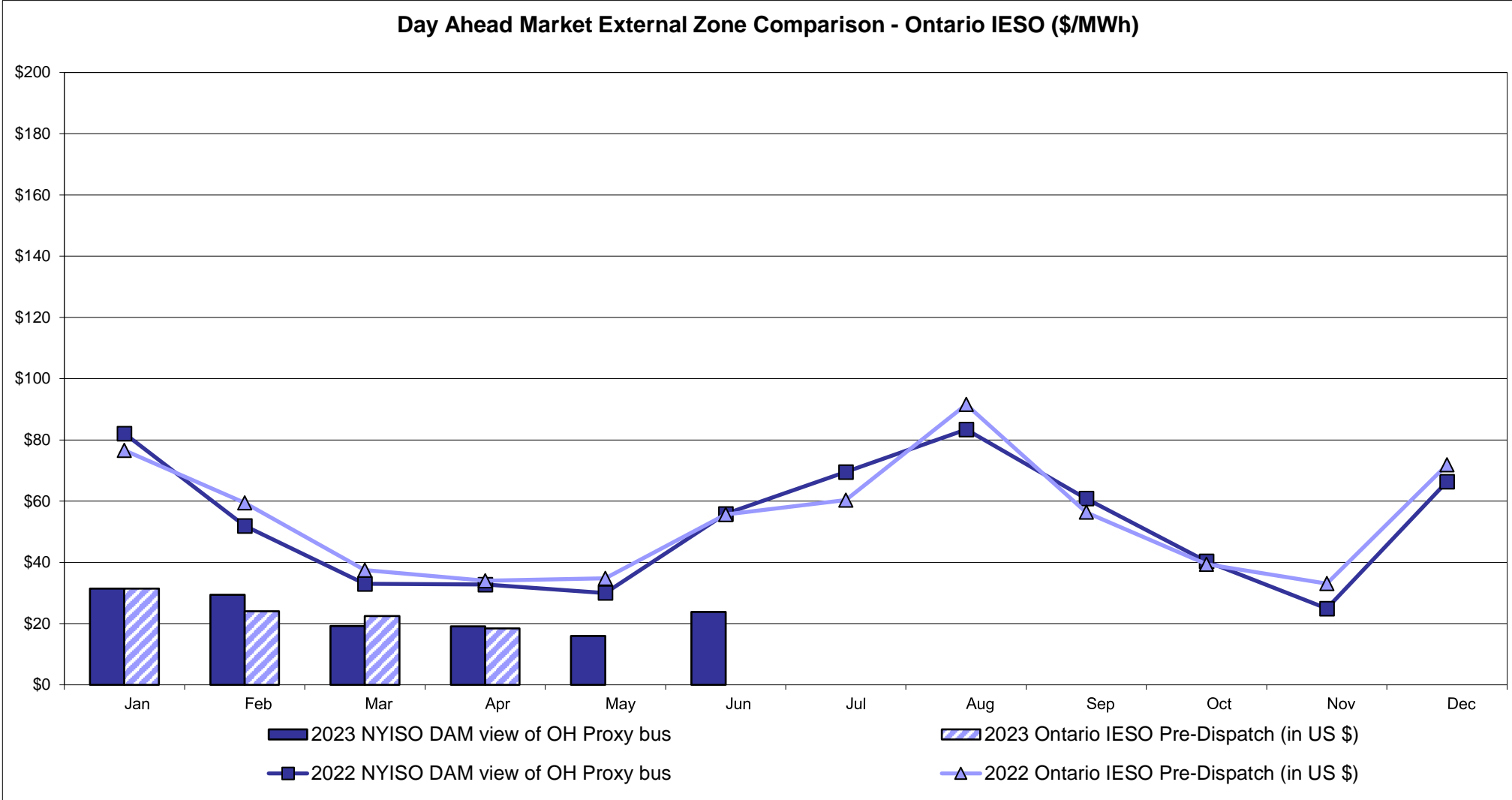
Day Ahead Market External Zone Comparison - PJM (\$/MWh)



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

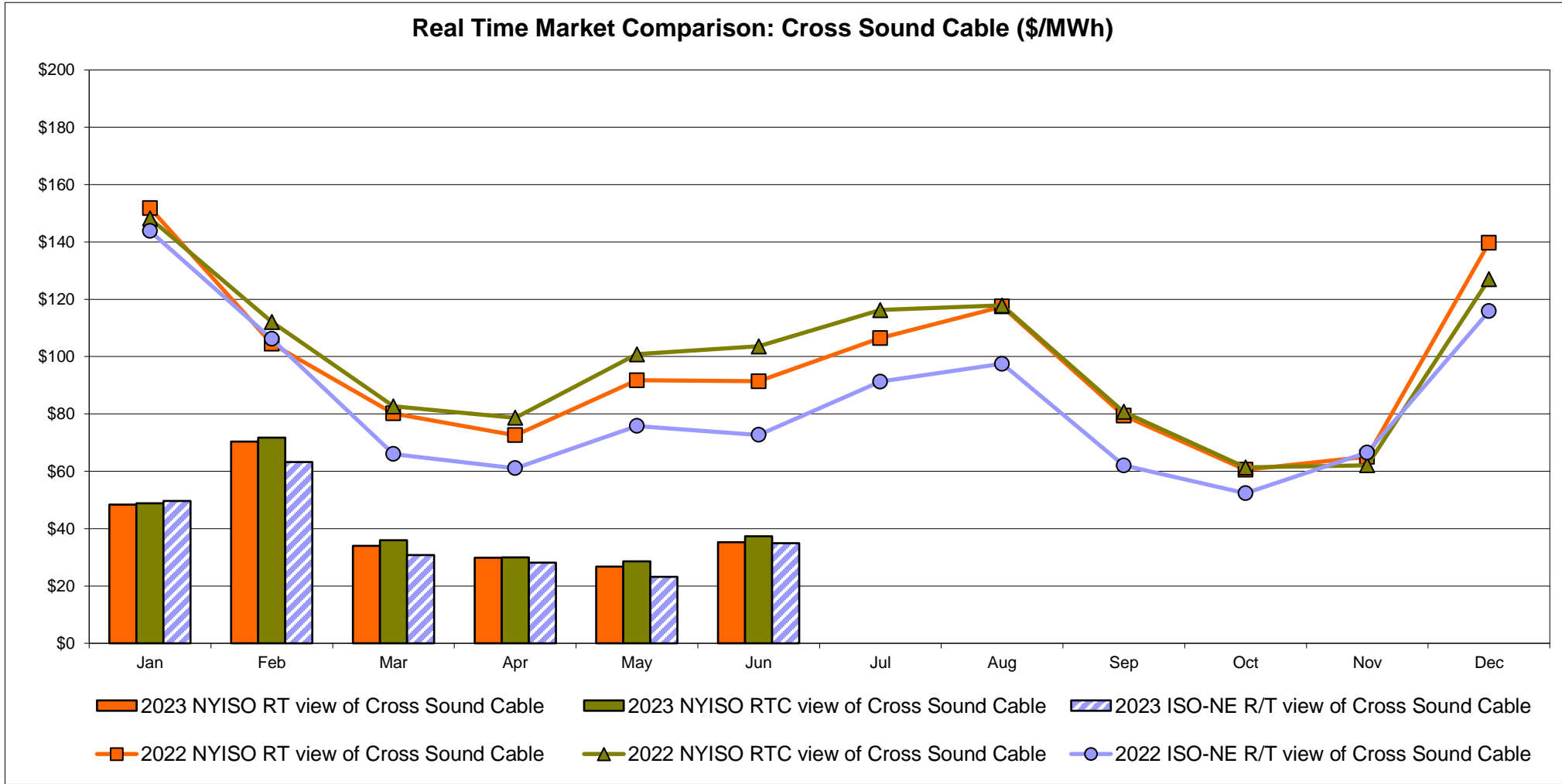
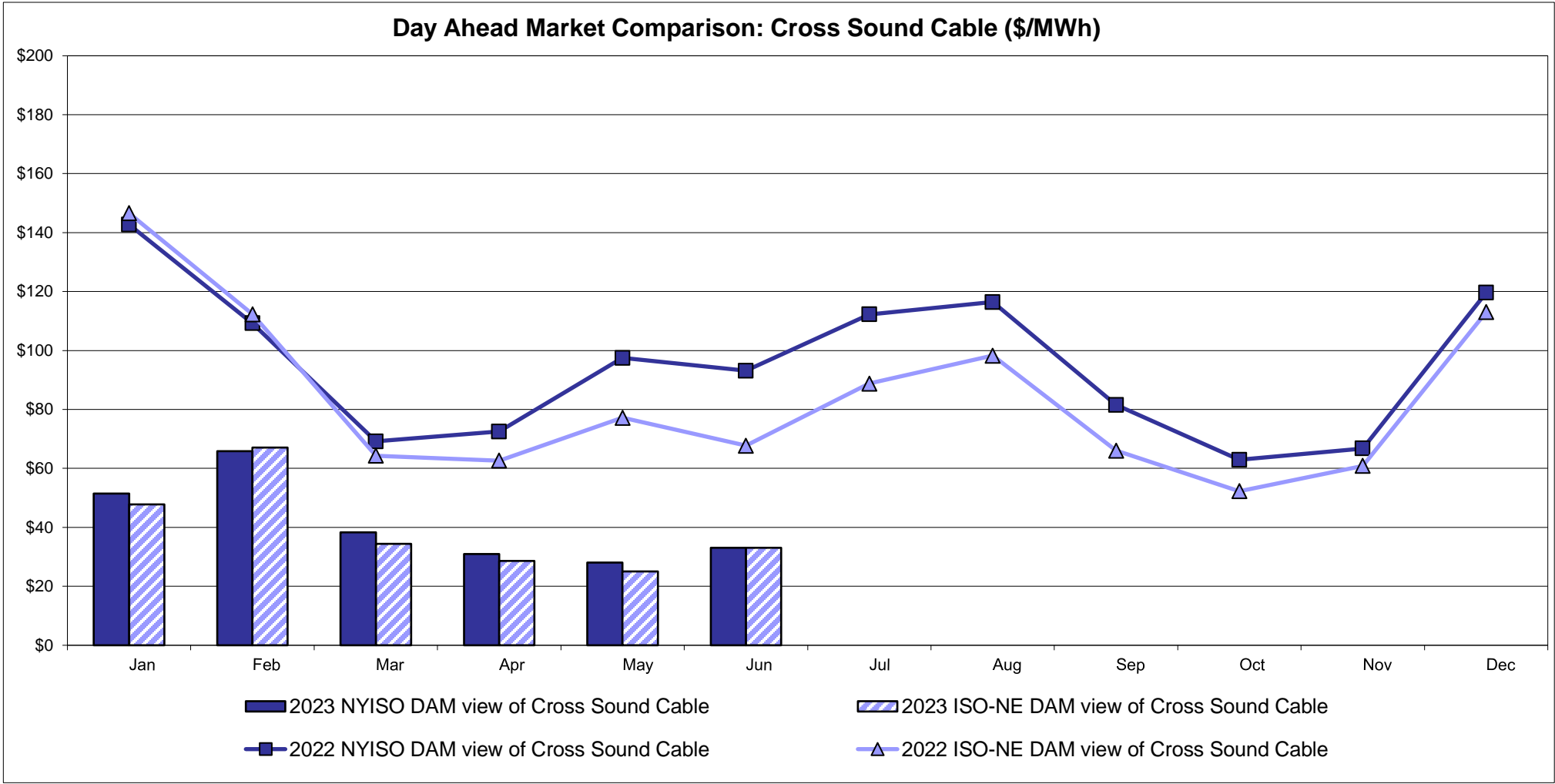


External Comparison Ontario IESO



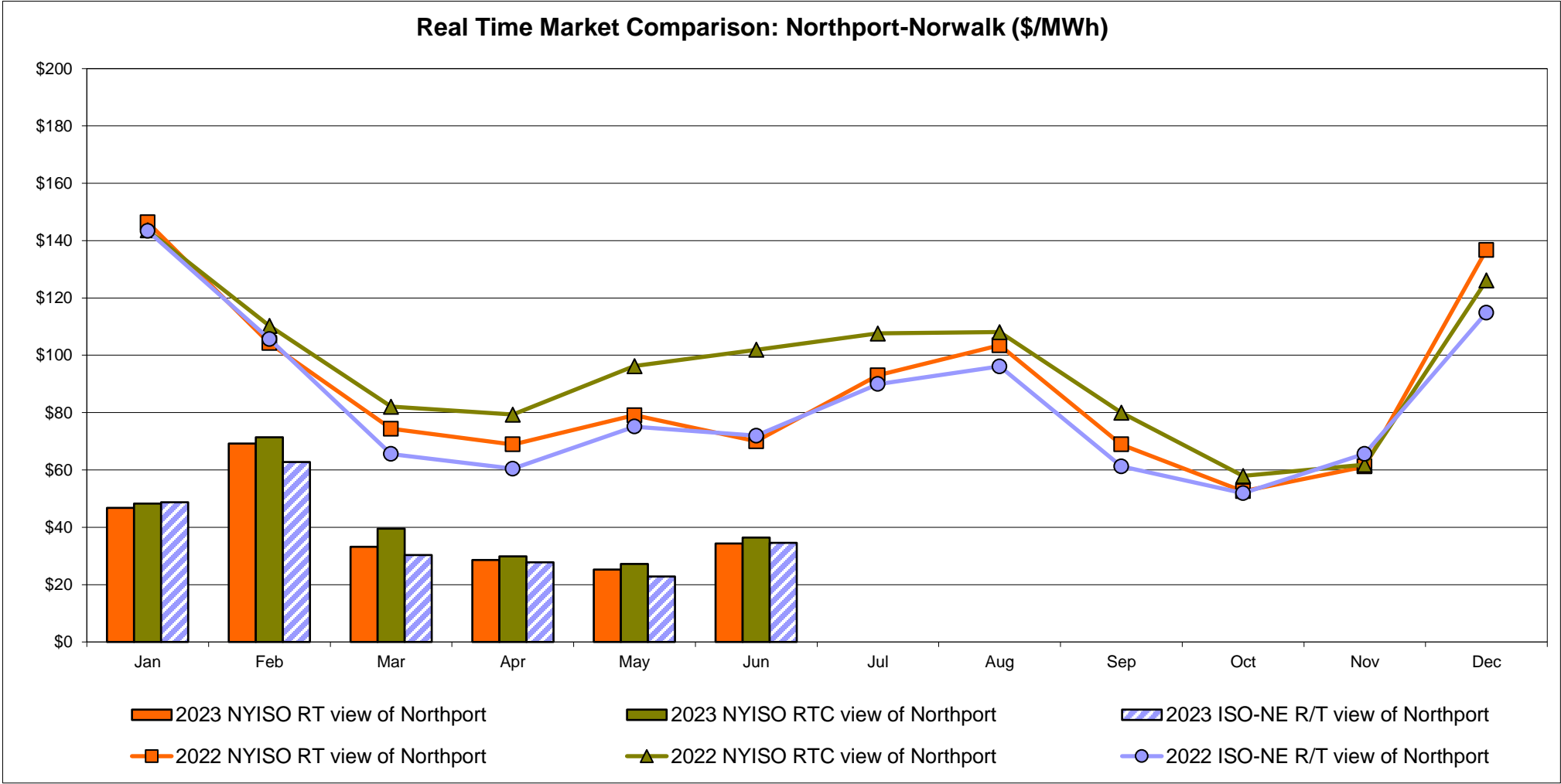
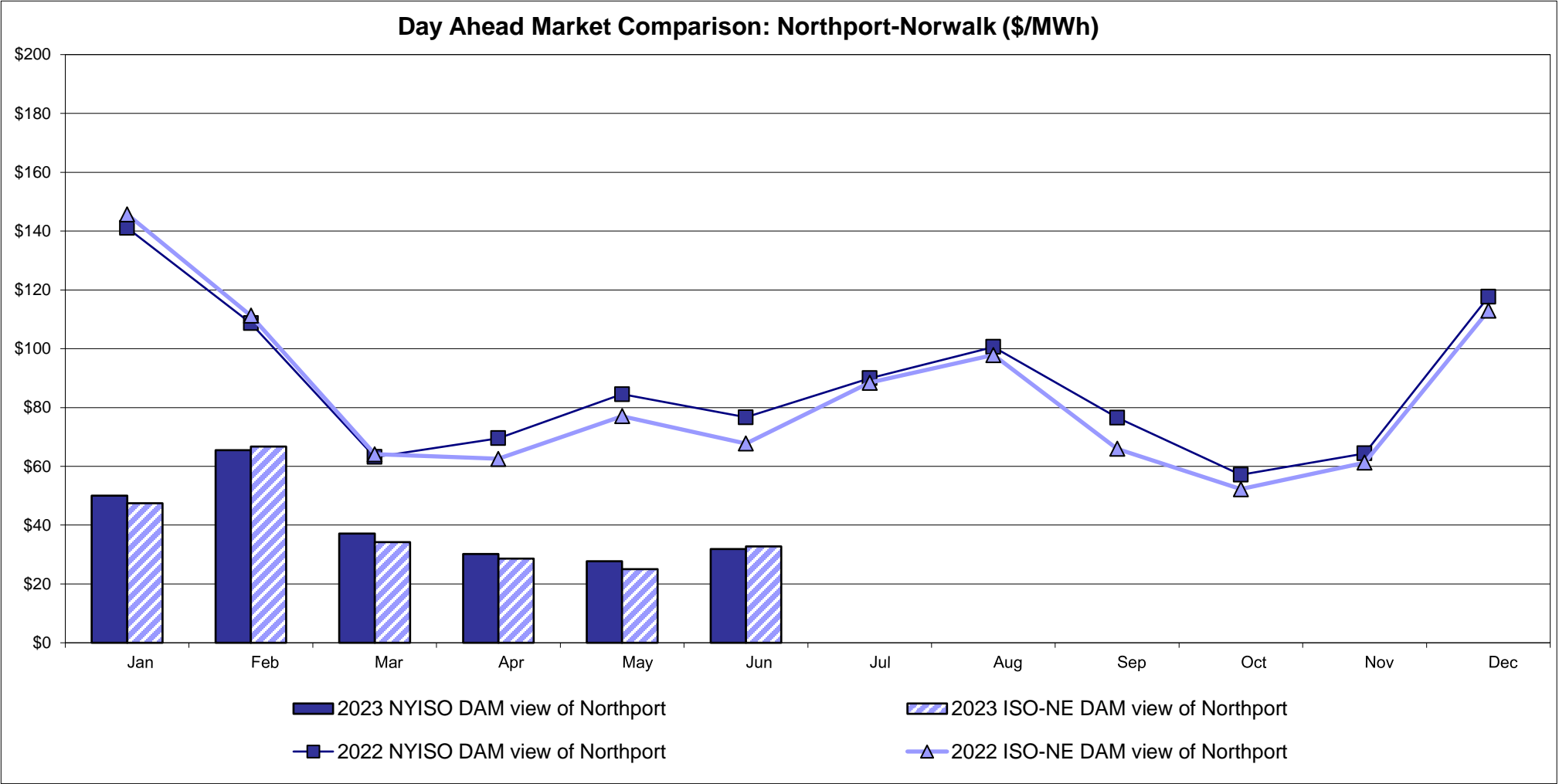
Notes: Exchange factor used for June 2023 was to US
HOEP: Hourly Ontario Energy Price
Pre-Dispatch: Projected Energy Price

External Controllable Line: Cross Sound Cable (New England)



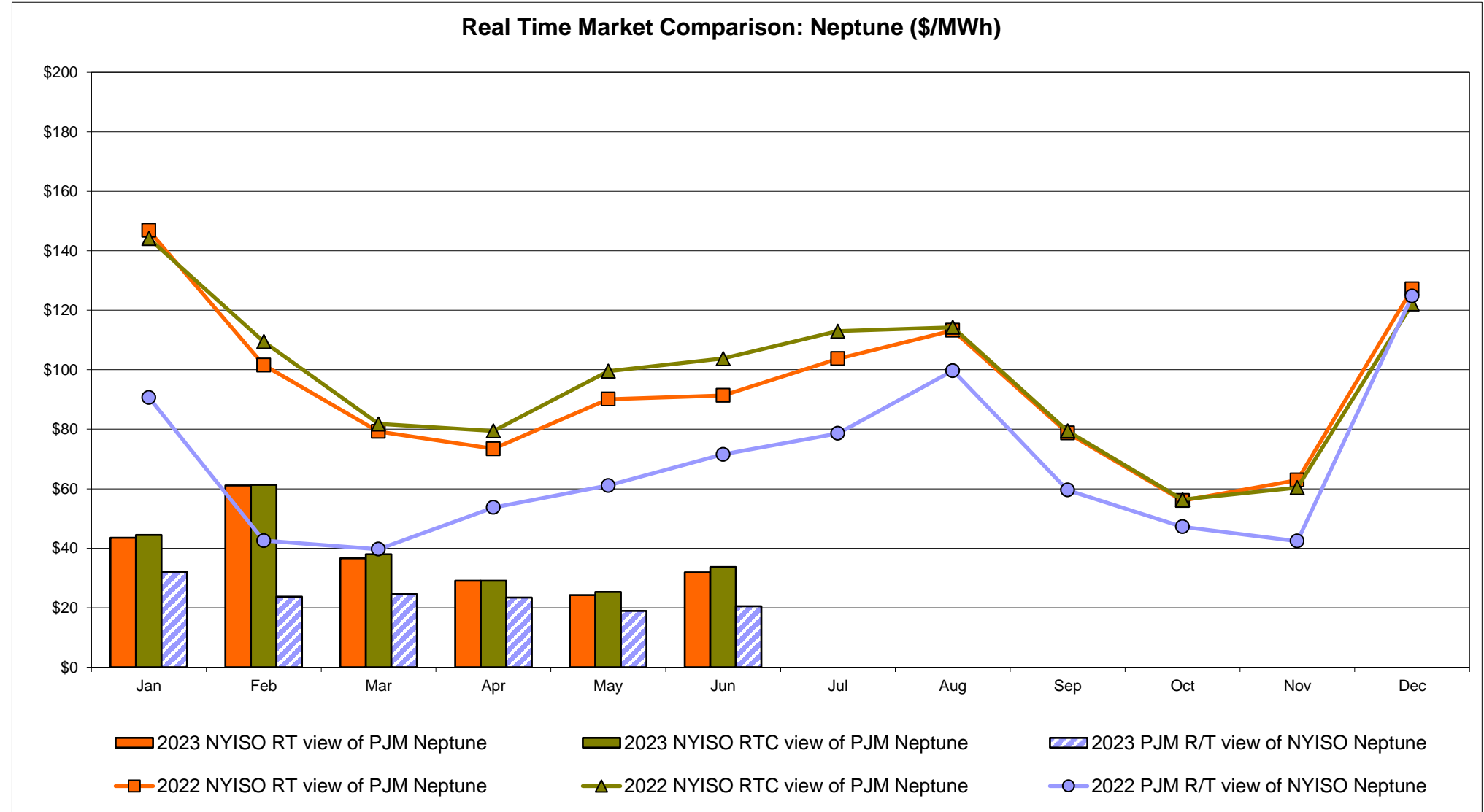
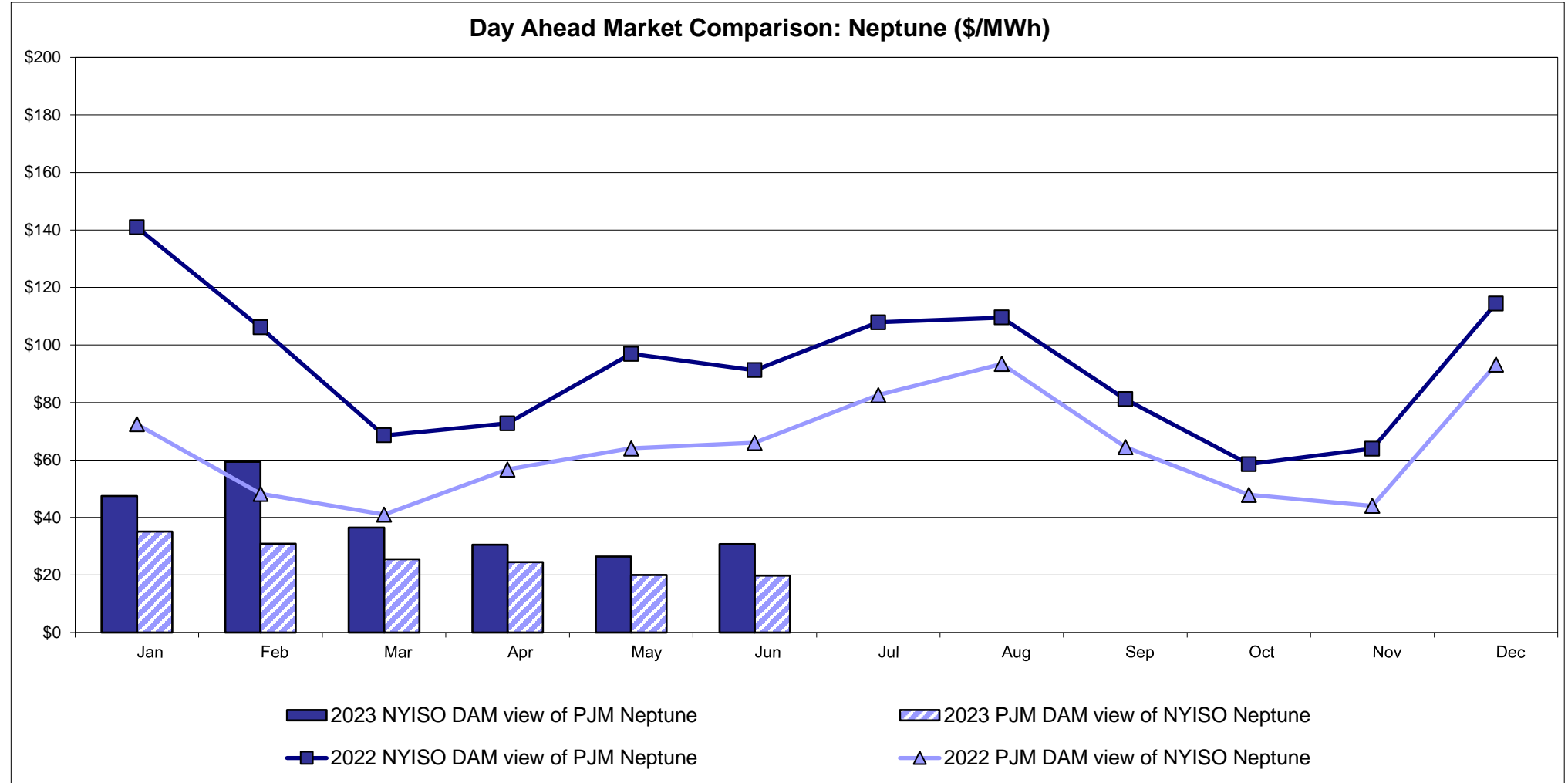
Note:
ISO-NE Forecast is an advisory posting @ 18:00 day before.
The DAM and R/T prices at the Shorham 13899 interface are used for ISO-NE.
The DAM and R/T prices at the CSC interface are used for NYISO.

External Controllable Line: Northport - Norwalk (New England)

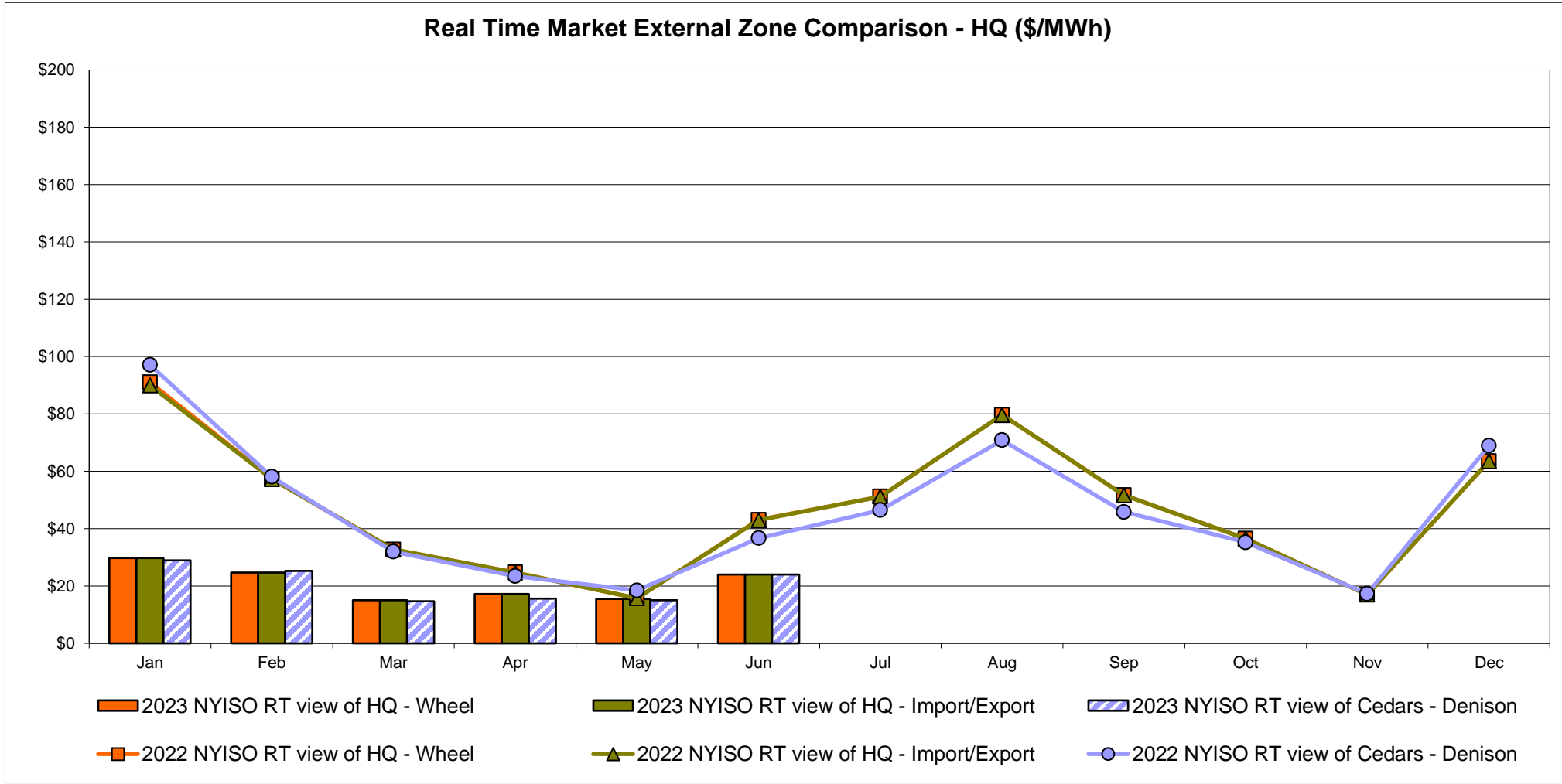
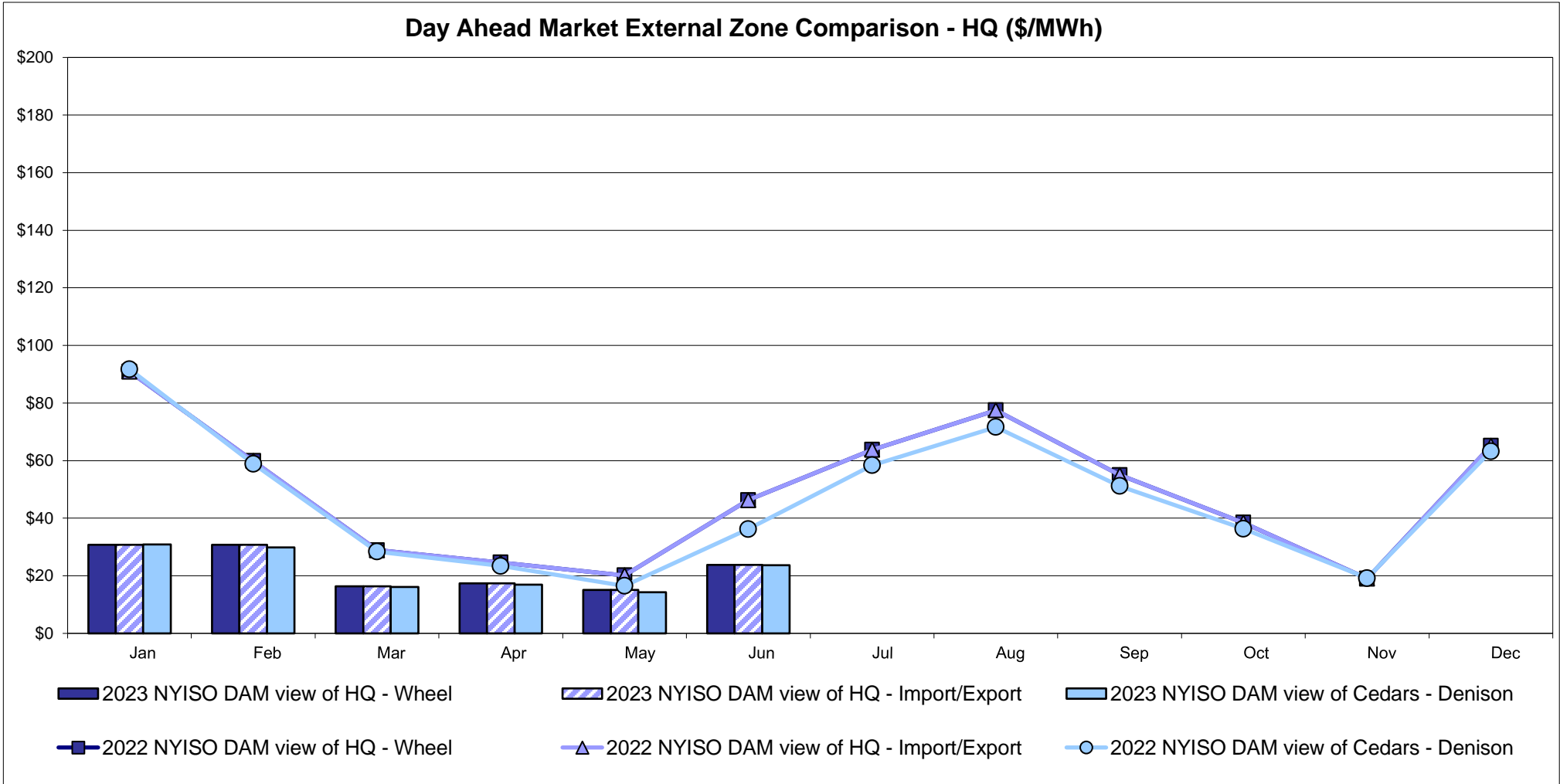


Note:
ISO-NE Forecast is an advisory posting @ 18:00 day before.
The DAM and R/T prices at the Northport 138 interface are used for ISO-NE.
The DAM and R/T prices at the 1385 interface are used for NYISO.

External Controllable Line: Neptune (PJM)

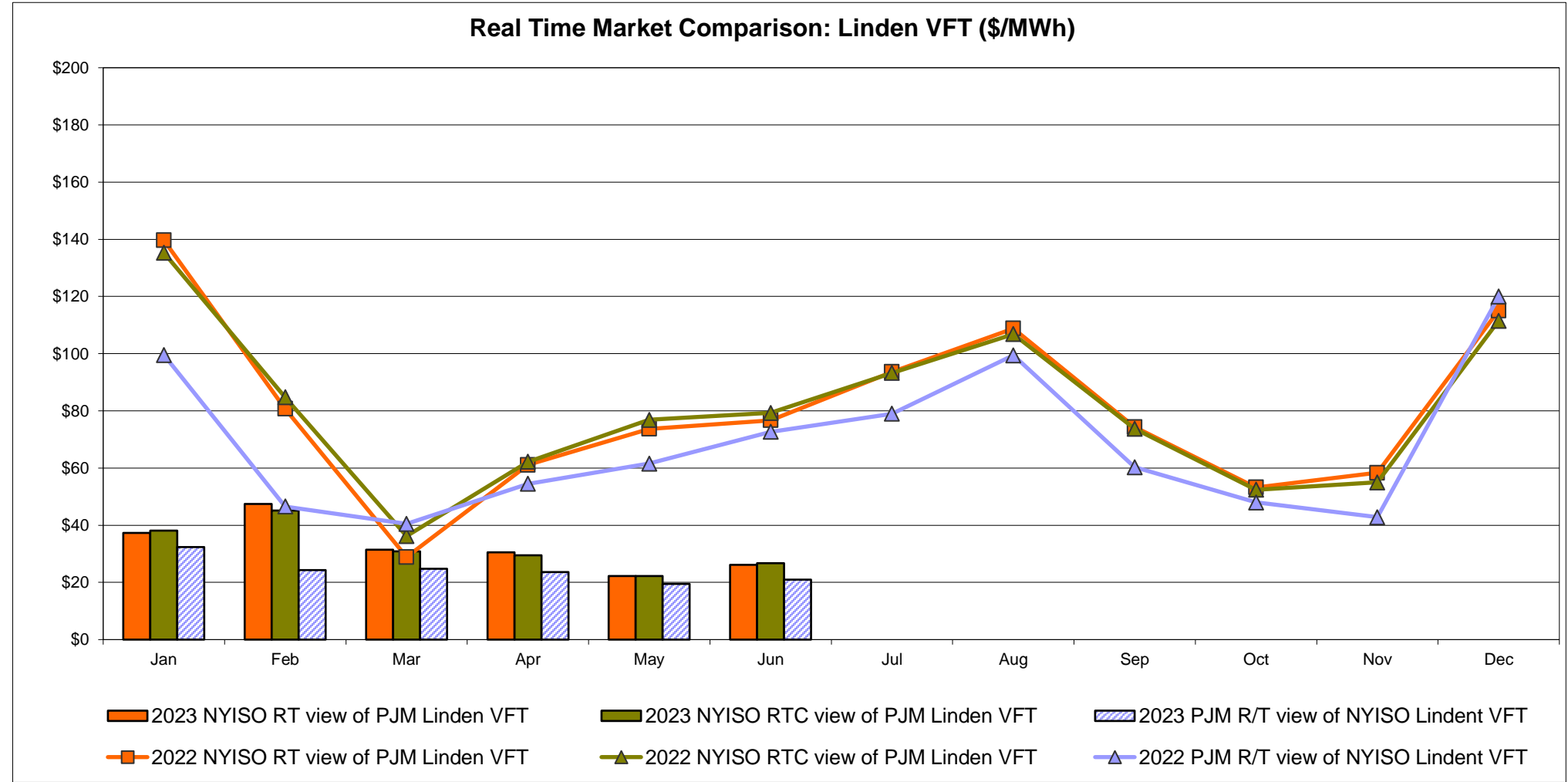
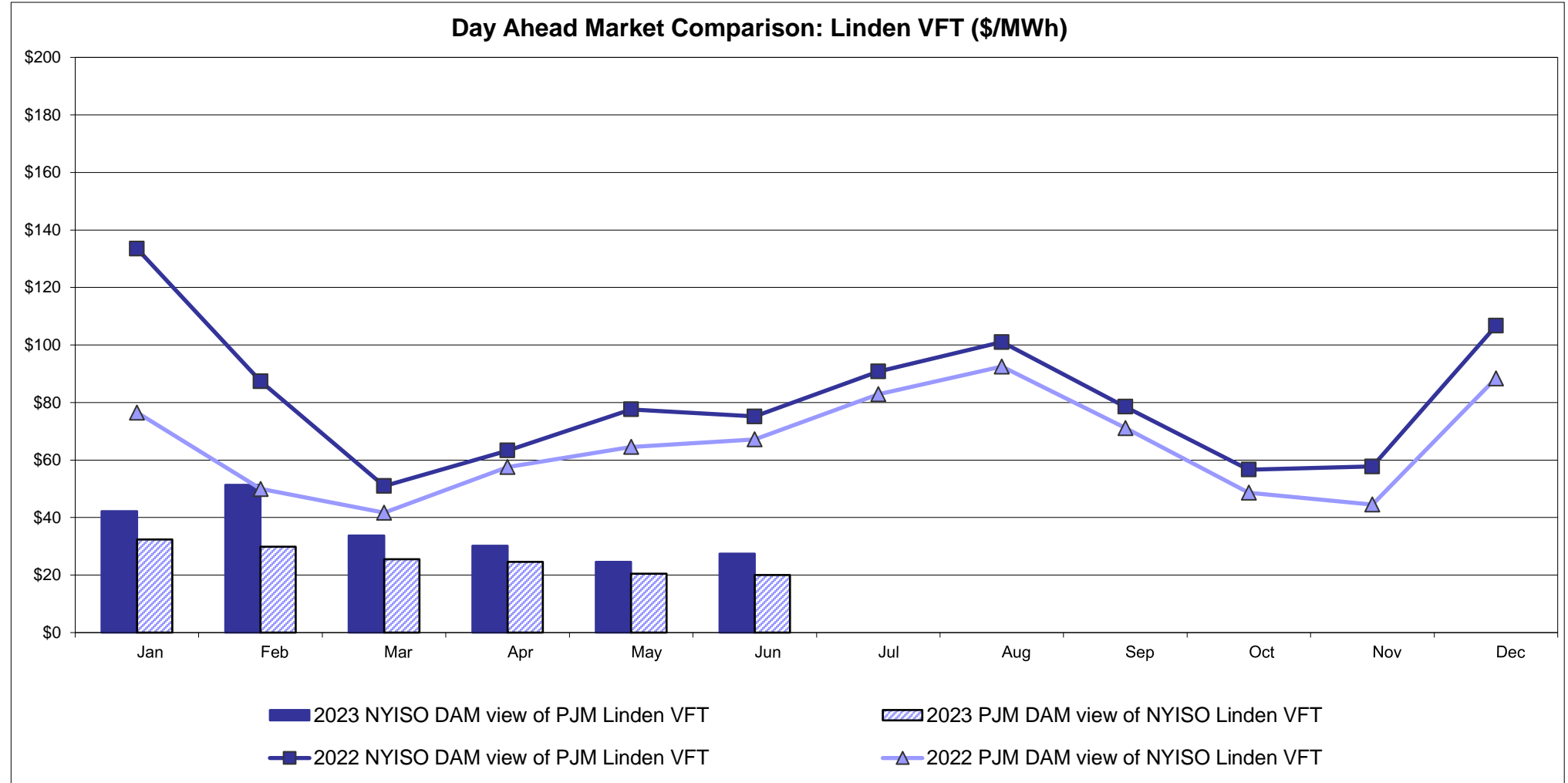


External Comparison Hydro-Quebec

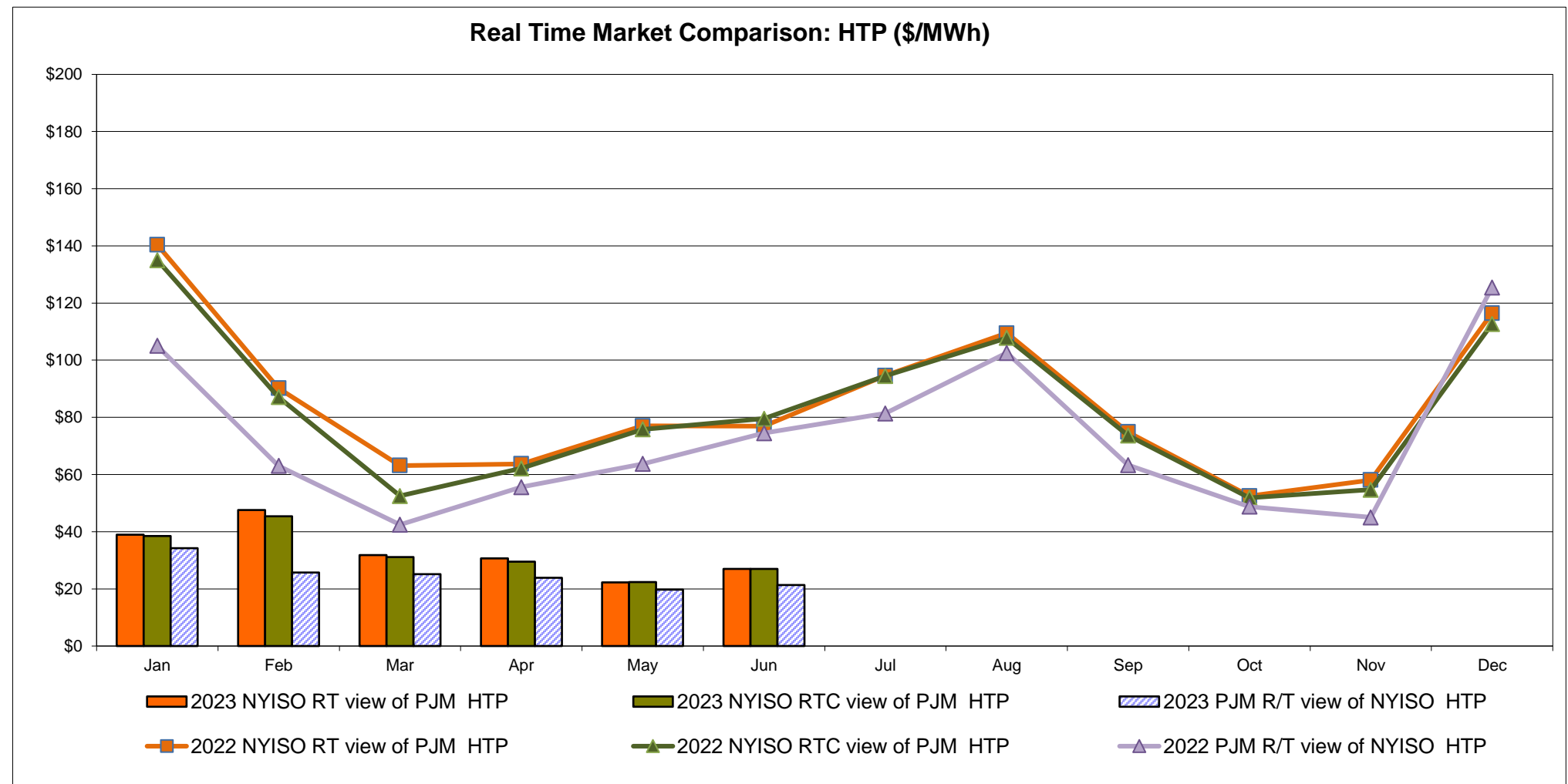
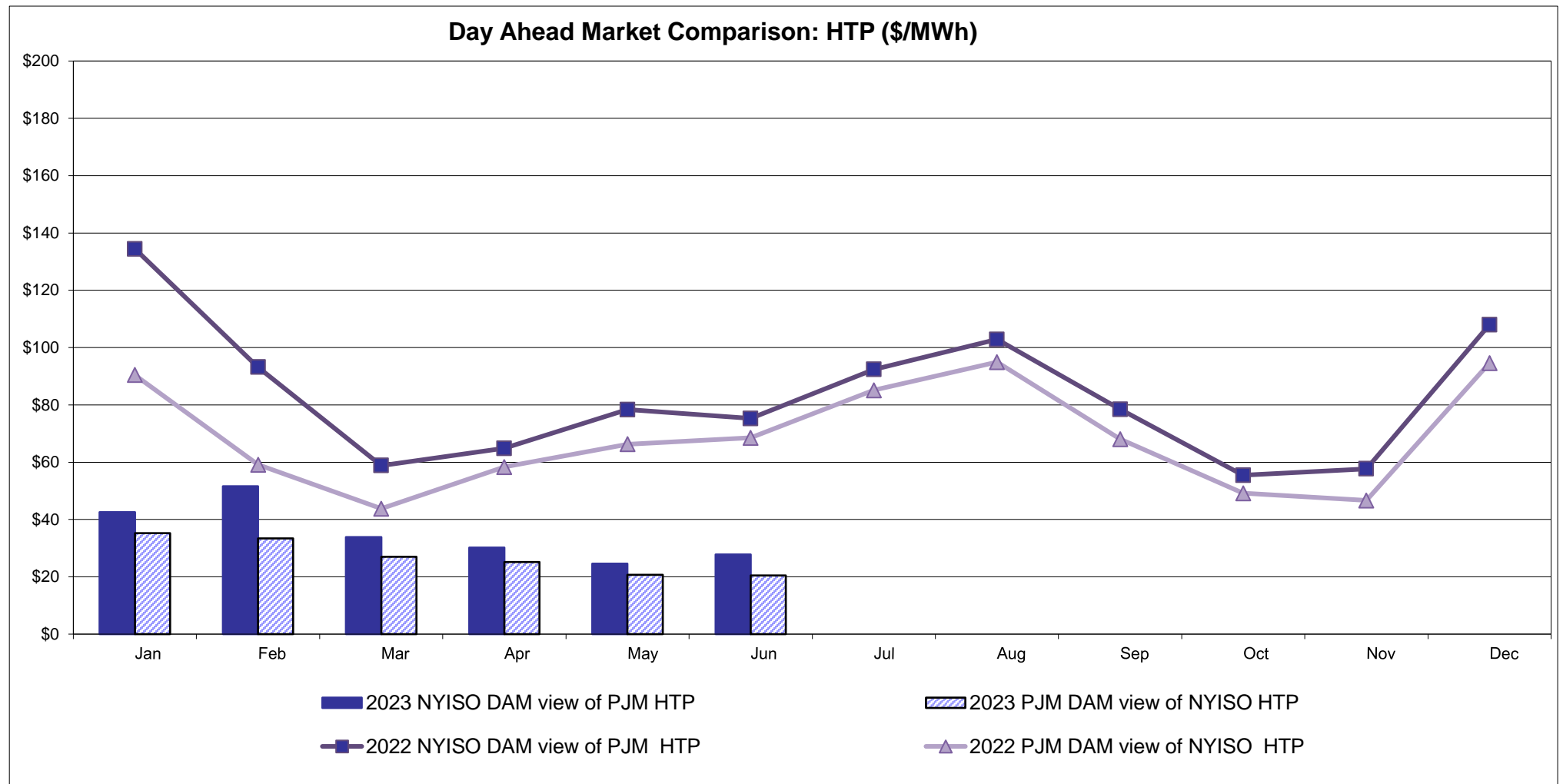


Note:
Hydro-Quebec Prices are unavailable.

External Controllable Line: Linden VFT (PJM)



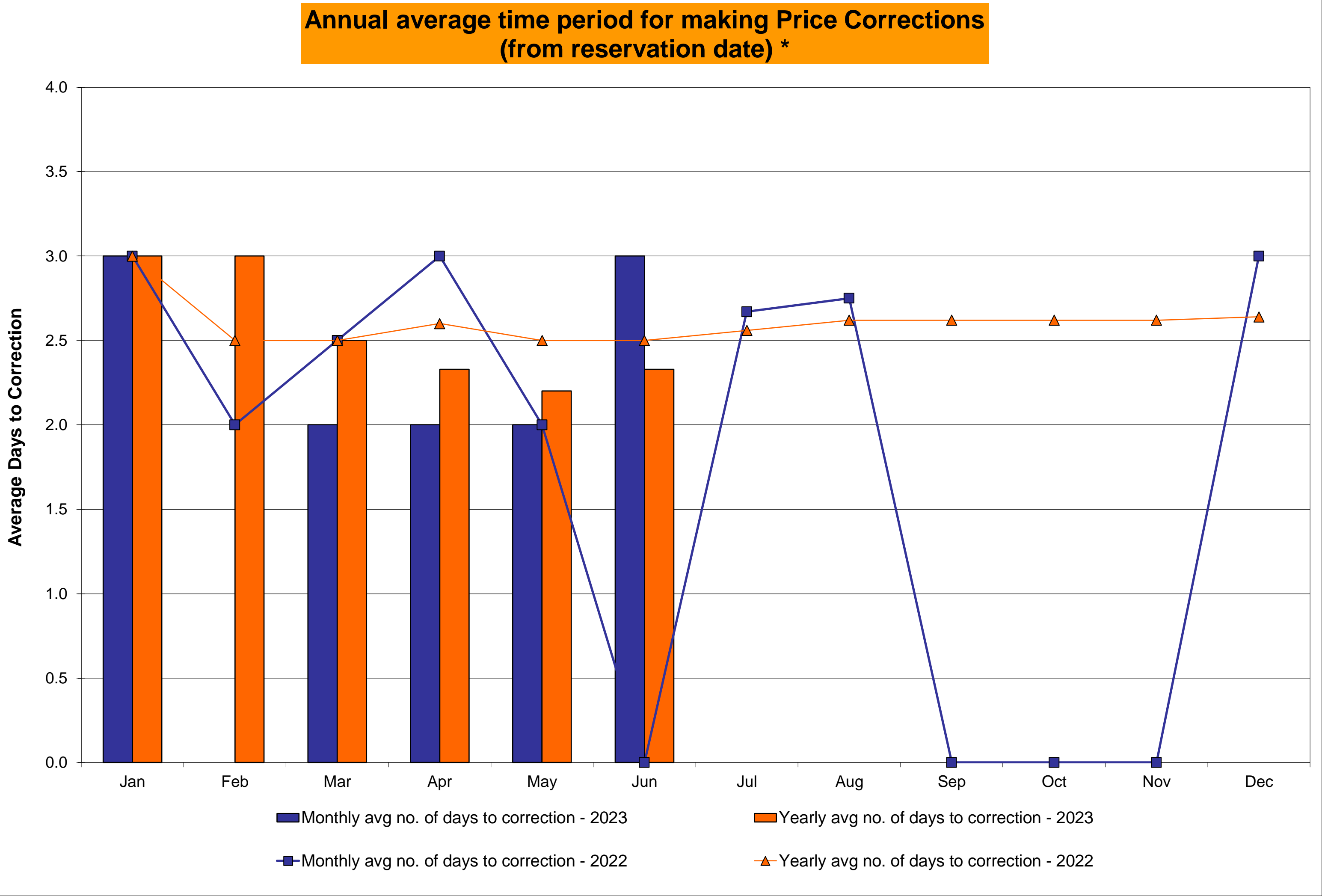
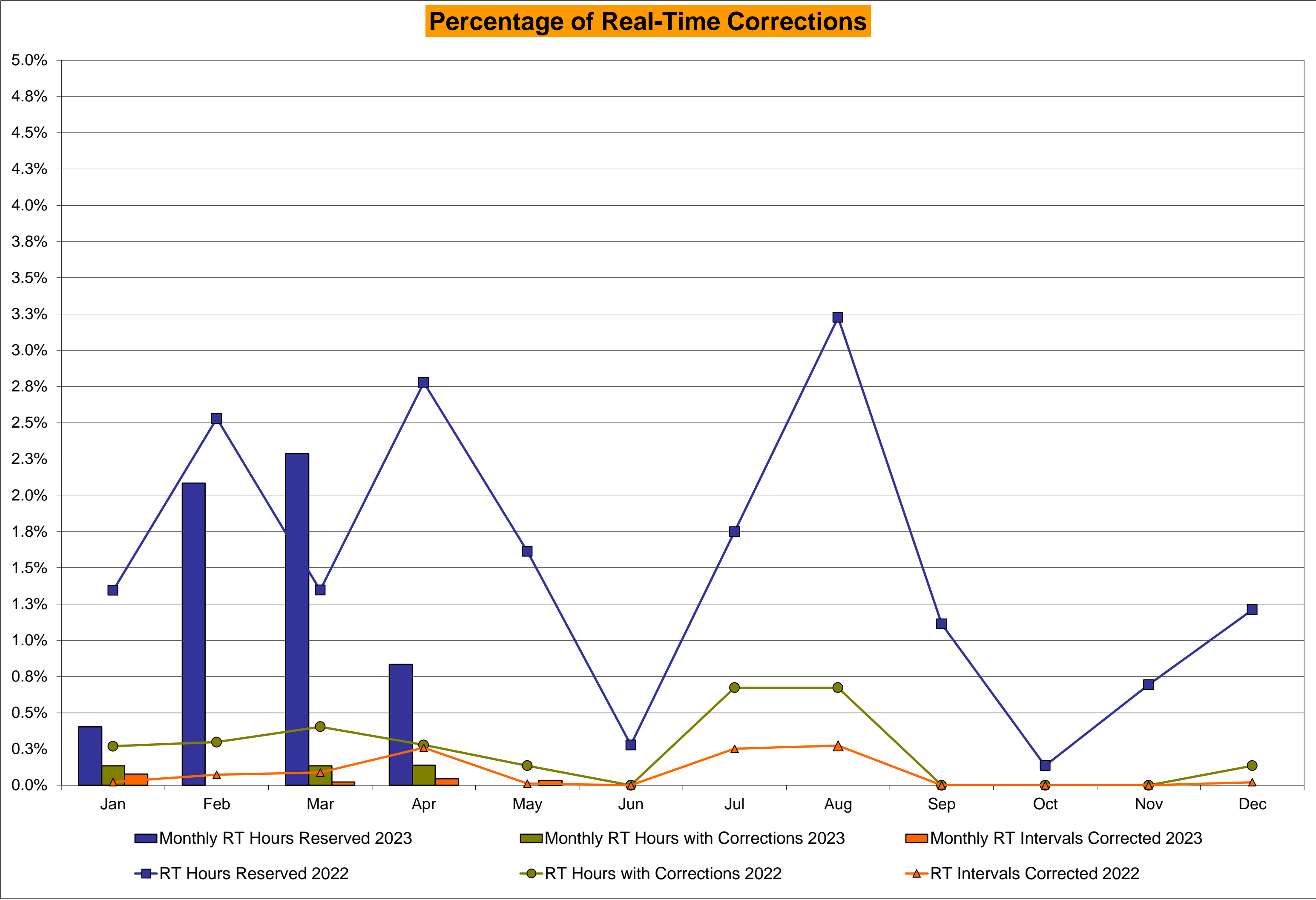
External Controllable Line: Hudson (PJM)



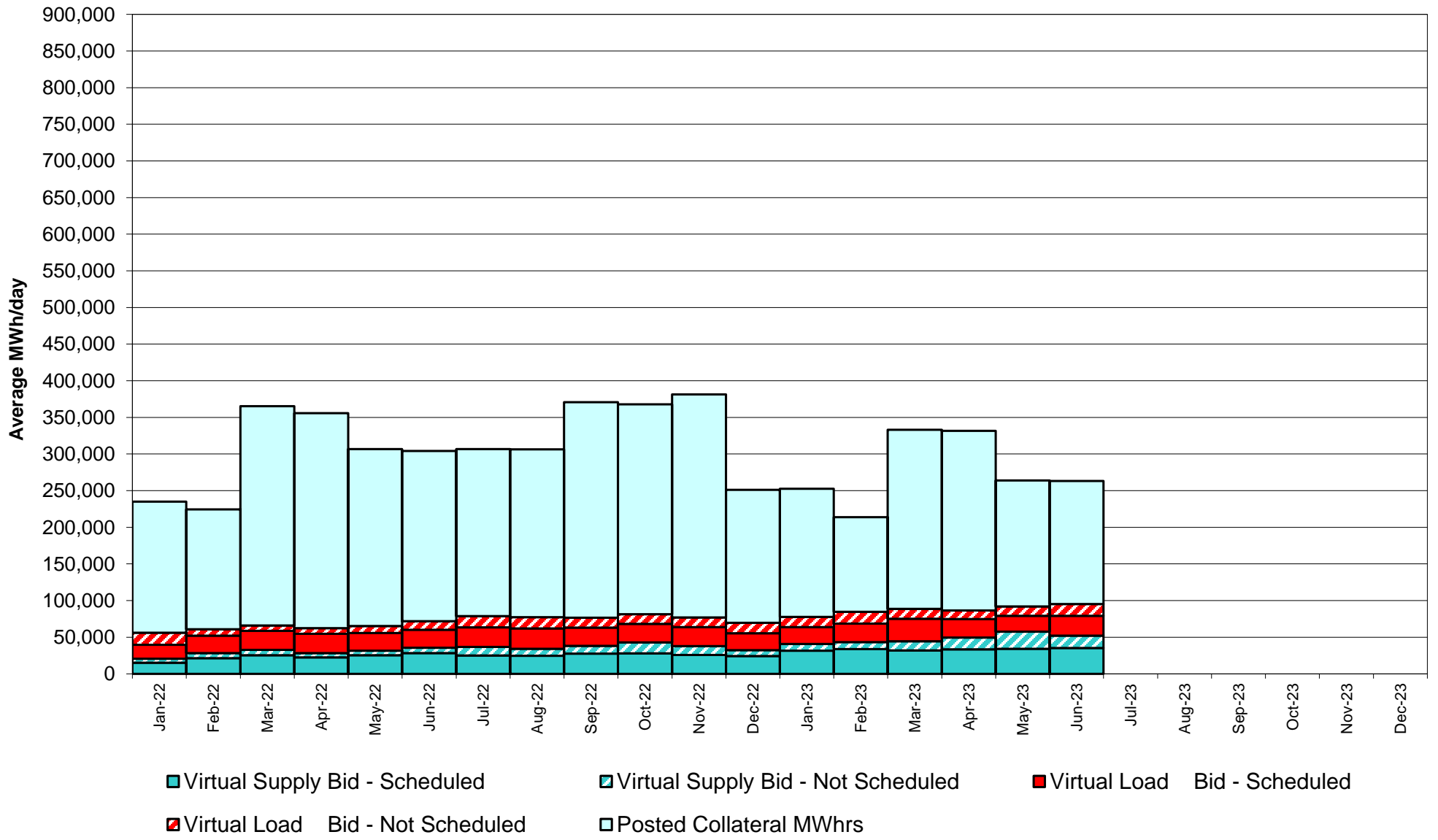
NYISO Real Time Price Correction Statistics

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>
<u>Hour Corrections</u>													
Number of hours with corrections	in the month	1	0	1	1	#N/A	#N/A						
Number of hours	in the month	744	672	743	720	744	720						
% of hours with corrections	in the month	0.13%	0.00%	0.13%	0.14%	#N/A	#N/A						
% of hours with corrections	year-to-date	0.13%	0.07%	0.09%	0.10%	#N/A	#N/A						
<u>Interval Corrections</u>													
Number of intervals corrected	in the month	7	0	2	4	3	0						
Number of intervals	in the month	9,082	8,373	9,171	8,890	9,160	0						
% of intervals corrected	in the month	0.08%	0.00%	0.02%	0.04%	0.03%	#DIV/0!						
% of intervals corrected	year-to-date	0.08%	0.04%	0.03%	0.04%	0.04%	0.04%						
<u>Hours Reserved</u>													
Number of hours reserved	in the month	3	14	17	6	#N/A	#N/A						
Number of hours	in the month	744	672	743	720	744	720						
% of hours reserved	in the month	0.40%	2.08%	2.29%	0.83%	#N/A	#N/A						
% of hours reserved	year-to-date	0.40%	1.20%	1.57%	1.39%	#N/A	#N/A						
<u>Days to Correction</u> *													
Avg. number of days to correction	in the month	3.00	0.00	2.00	2.00	2.00	3.00						
Avg. number of days to correction	year-to-date	3.00	3.00	2.50	2.33	2.20	2.33						
<u>Days Without Corrections</u>													
Days without corrections	in the month	30	28	30	29	29	0						
Days without corrections	year-to-date	30	58	88	117	146	146						
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	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%
<u>Interval Corrections</u>													
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%
<u>Hours Reserved</u>													
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%
<u>Days to Correction</u> *													
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
<u>Days Without Corrections</u>													
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

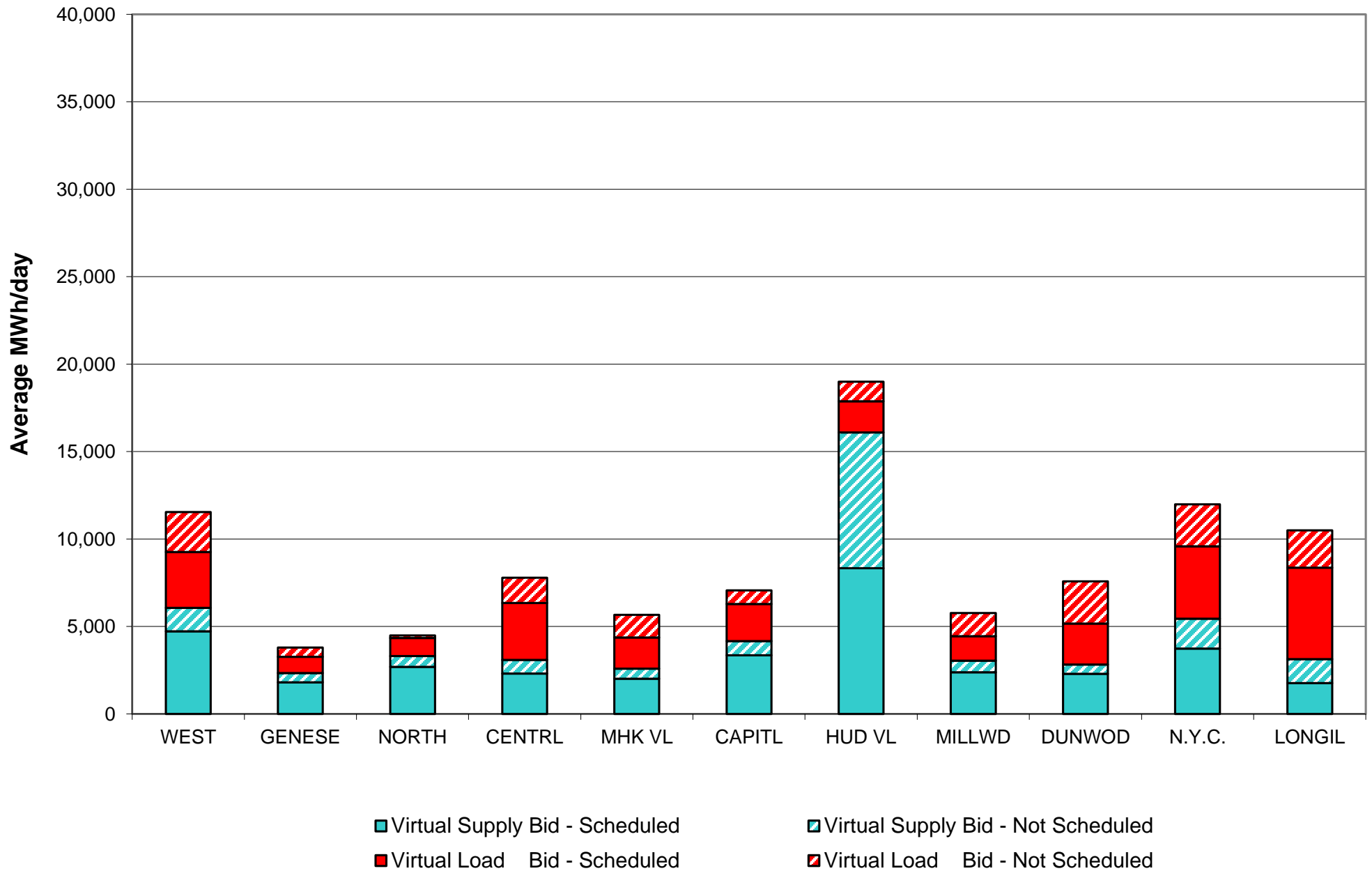
*Calendar days from reservation date; for June 2018 forward, business days from market date



NYISO Virtual Trading Average MWh per day



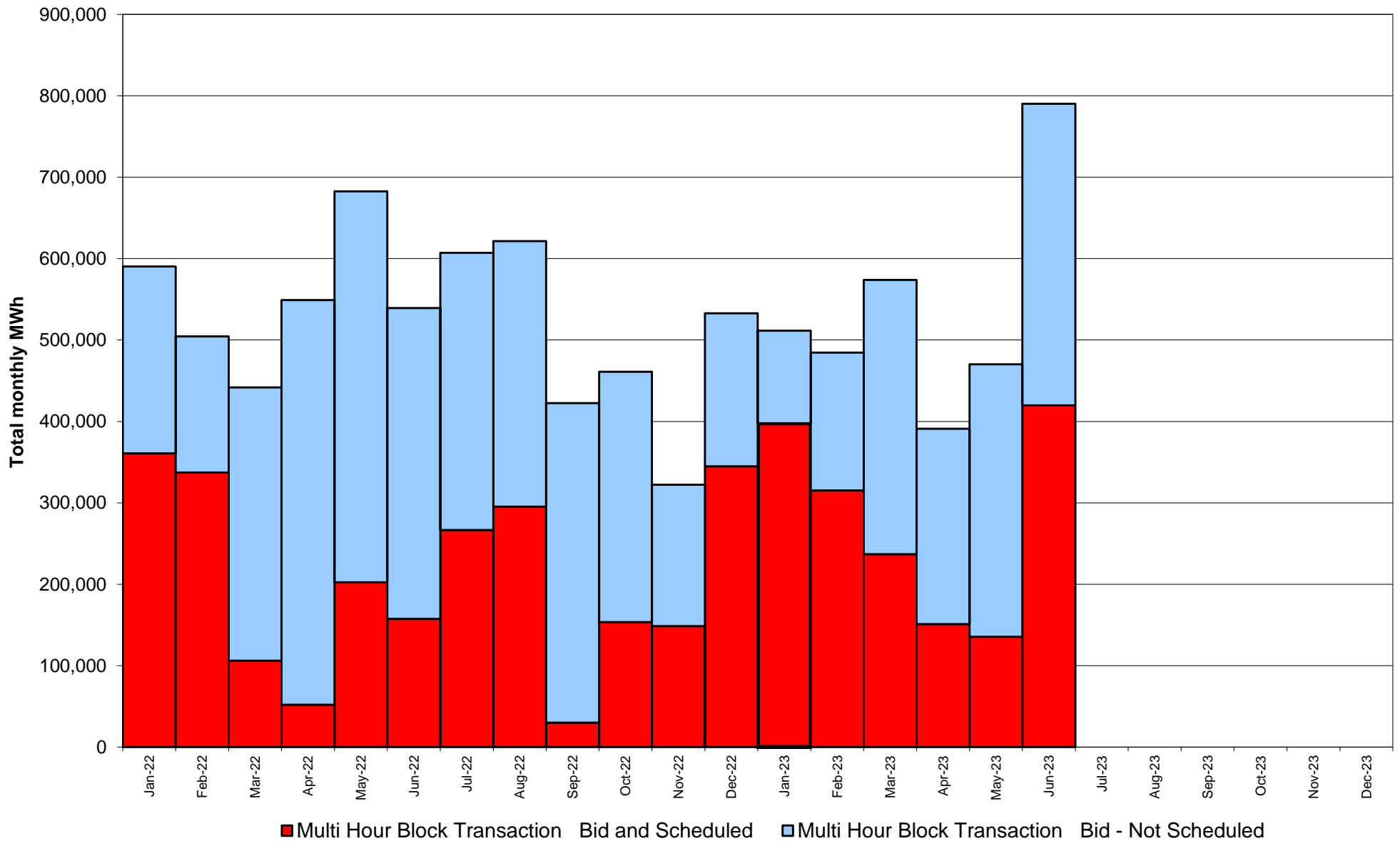
Virtual Load and Supply Zonal Statistics through June 30, 2023



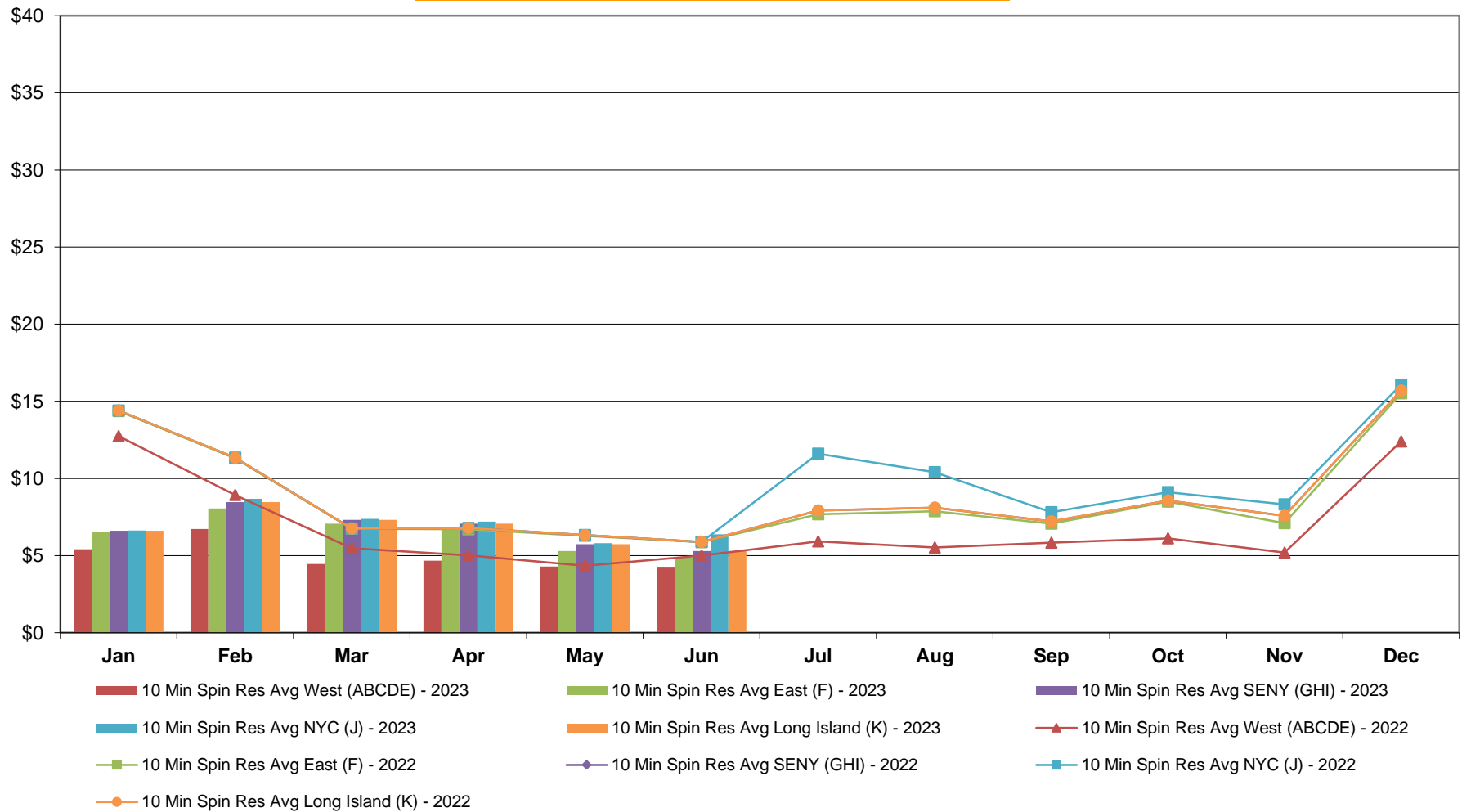
Virtual Load and Supply Zonal Statistics (Average MWh/day) - 2023

		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
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
	Feb-23	2,266	1,863	6,652	1,270			Feb-23	1,146	1,395	2,484	436			Feb-23	1,366	1,793
	Mar-23	3,318	1,373	5,353	2,062			Mar-23	1,815	829	1,488	1,135			Mar-23	2,505	1,556
	Apr-23	2,407	1,561	5,939	1,245			Apr-23	1,182	841	1,556	450			Apr-23	1,941	1,615
	May-23	2,572	1,636	3,868	1,941			May-23	1,165	1,312	2,365	567			May-23	1,434	1,391
	Jun-23	3,187	2,289	4,717	1,351			Jun-23	1,774	1,301	2,009	585			Jun-23	2,342	2,422
	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
	Feb-23	1,136	523	1,480	586			Feb-23	1,902	1,166	2,655	729			Feb-23	2,663	2,398
	Mar-23	835	495	1,562	905			Mar-23	3,256	1,595	2,454	594			Mar-23	2,230	2,393
	Apr-23	982	746	1,817	584			Apr-23	2,509	960	2,303	695			Apr-23	2,032	1,683
	May-23	721	408	1,807	568			May-23	1,691	681	2,810	736			May-23	2,063	2,034
	Jun-23	933	520	1,811	529			Jun-23	2,121	783	3,359	808			Jun-23	4,139	2,409
	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
	Feb-23	1,111	302	2,854	1,432			Feb-23	1,335	1,484	5,382	1,297			Feb-23	4,408	2,440
	Mar-23	789	383	3,605	1,395			Mar-23	2,224	1,049	5,815	1,357			Mar-23	5,725	1,753
	Apr-23	615	332	3,338	854			Apr-23	896	846	8,301	7,864			Apr-23	4,436	1,401
	May-23	938	184	2,274	964			May-23	1,119	937	7,383	13,585			May-23	3,608	1,817
	Jun-23	1,032	148	2,685	629			Jun-23	1,784	1,120	8,337	7,759			Jun-23	5,238	2,124
	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
	Feb-23	6,851	1,526	2,219	703			Feb-23	888	1,228	2,021	434			Feb-23	25,071	16,118
	Mar-23	6,340	843	1,355	1,520			Mar-23	1,616	992	1,938	736			Mar-23	30,654	13,262
	Apr-23	6,824	914	1,546	855			Apr-23	1,564	853	1,566	831			Apr-23	25,387	11,752
	May-23	5,246	1,357	1,858	830			May-23	995	1,119	2,250	784			May-23	21,553	12,874
	Jun-23	3,257	1,442	2,305	784			Jun-23	1,392	1,329	2,385	667			Jun-23	27,199	15,886
	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		

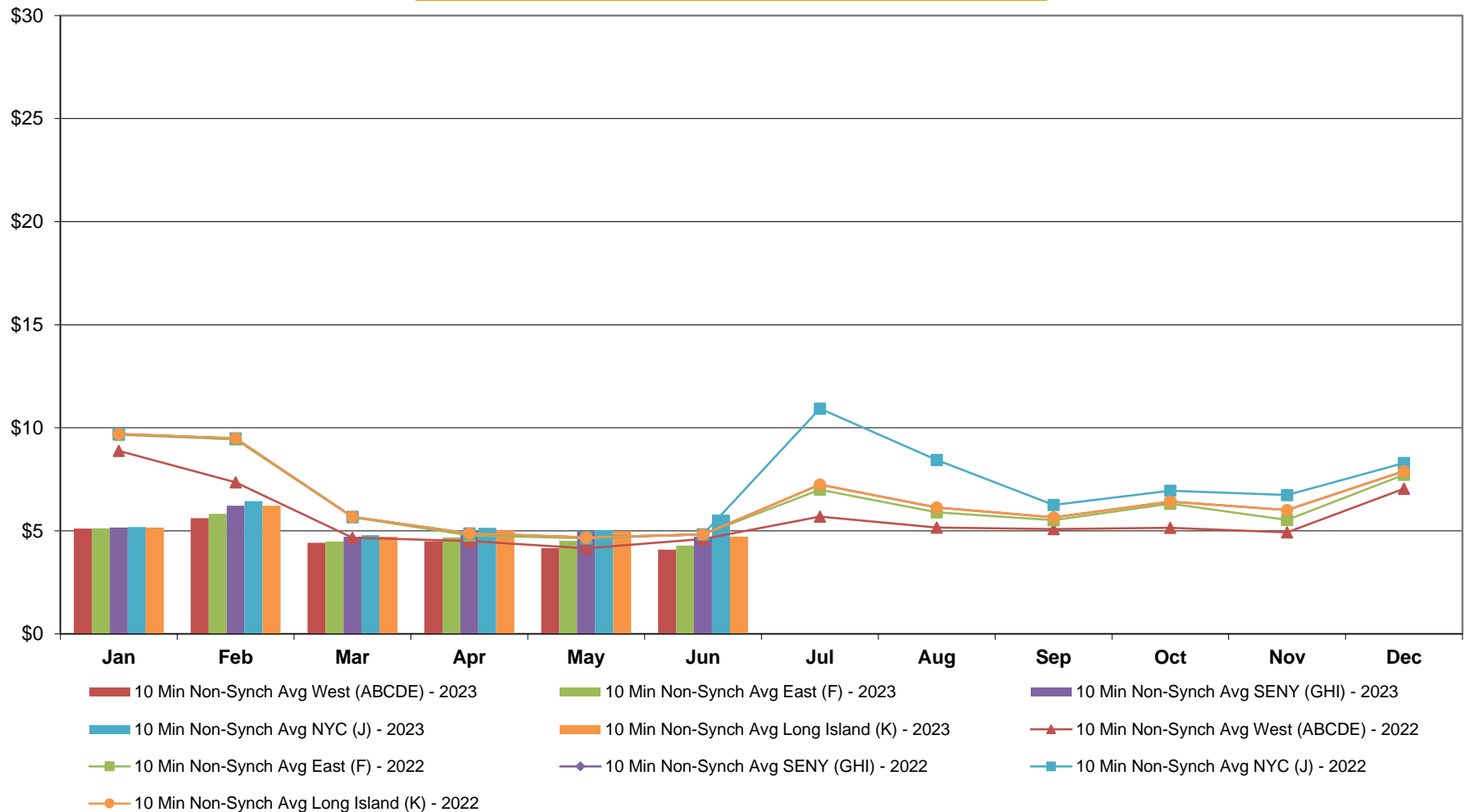
NYISO Multi Hour Block Transactions Monthly Total MWh



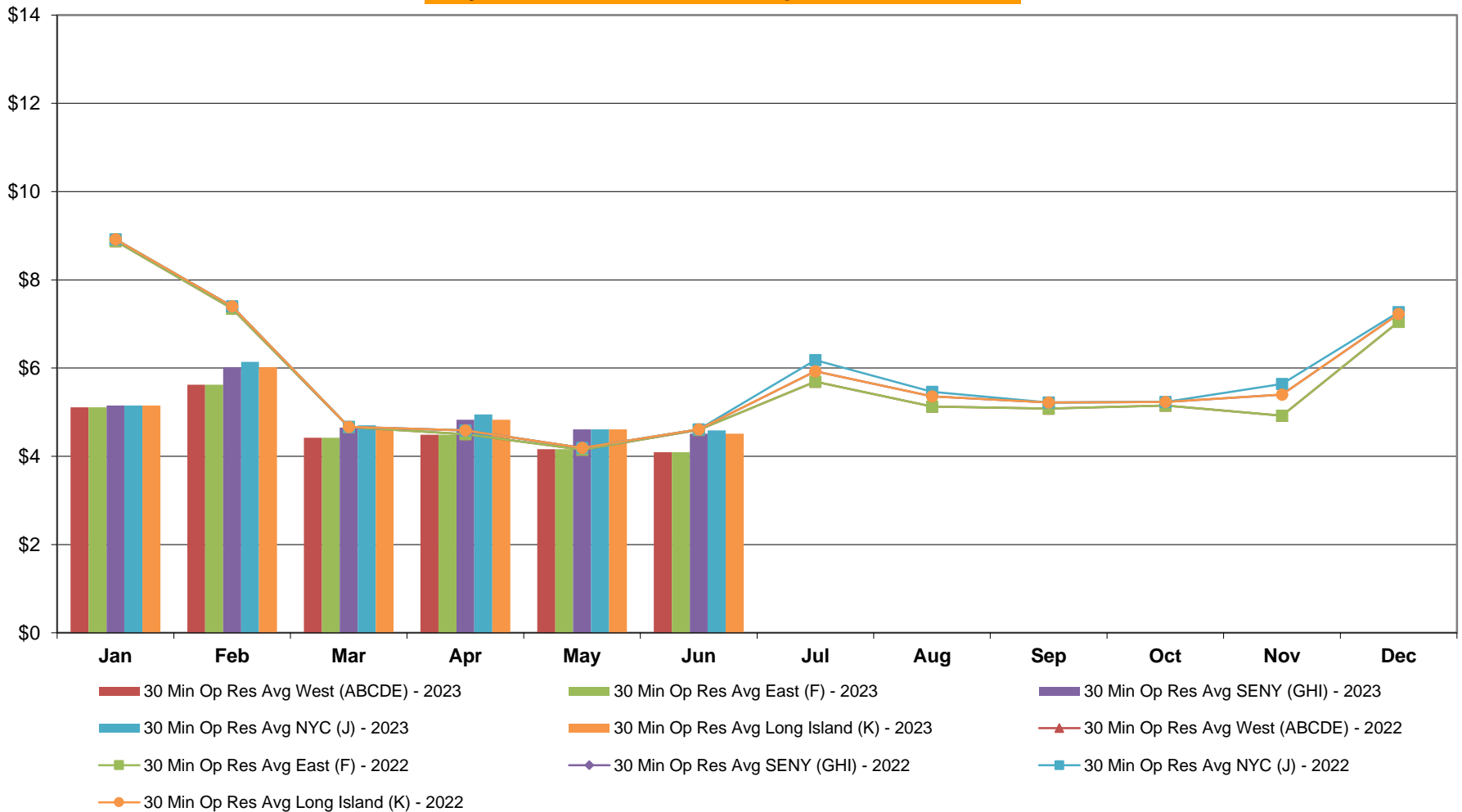
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - 10 Min Spin 2022 - 2023**



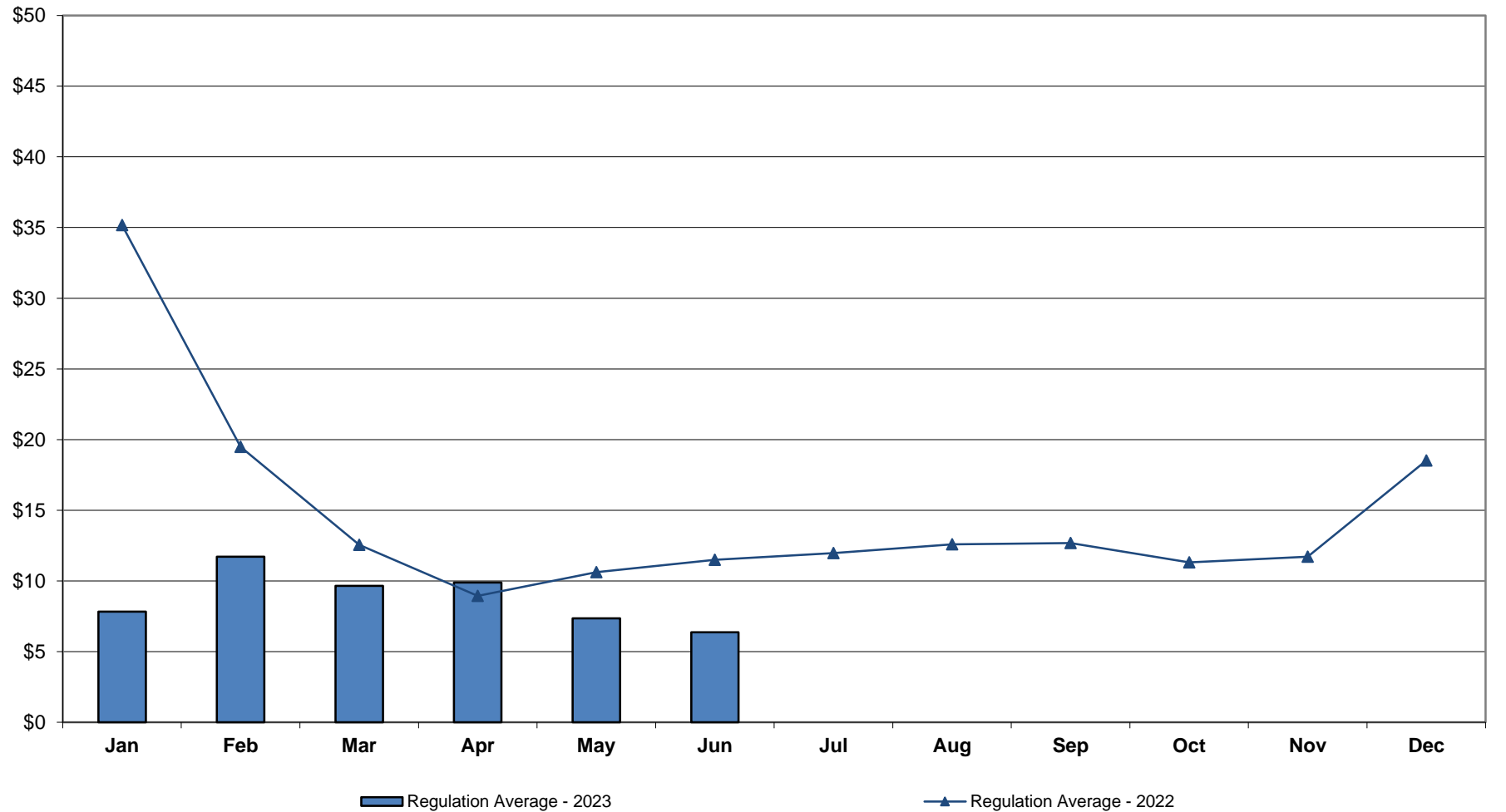
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - 10 Min Non-Synch 2022 - 2023**



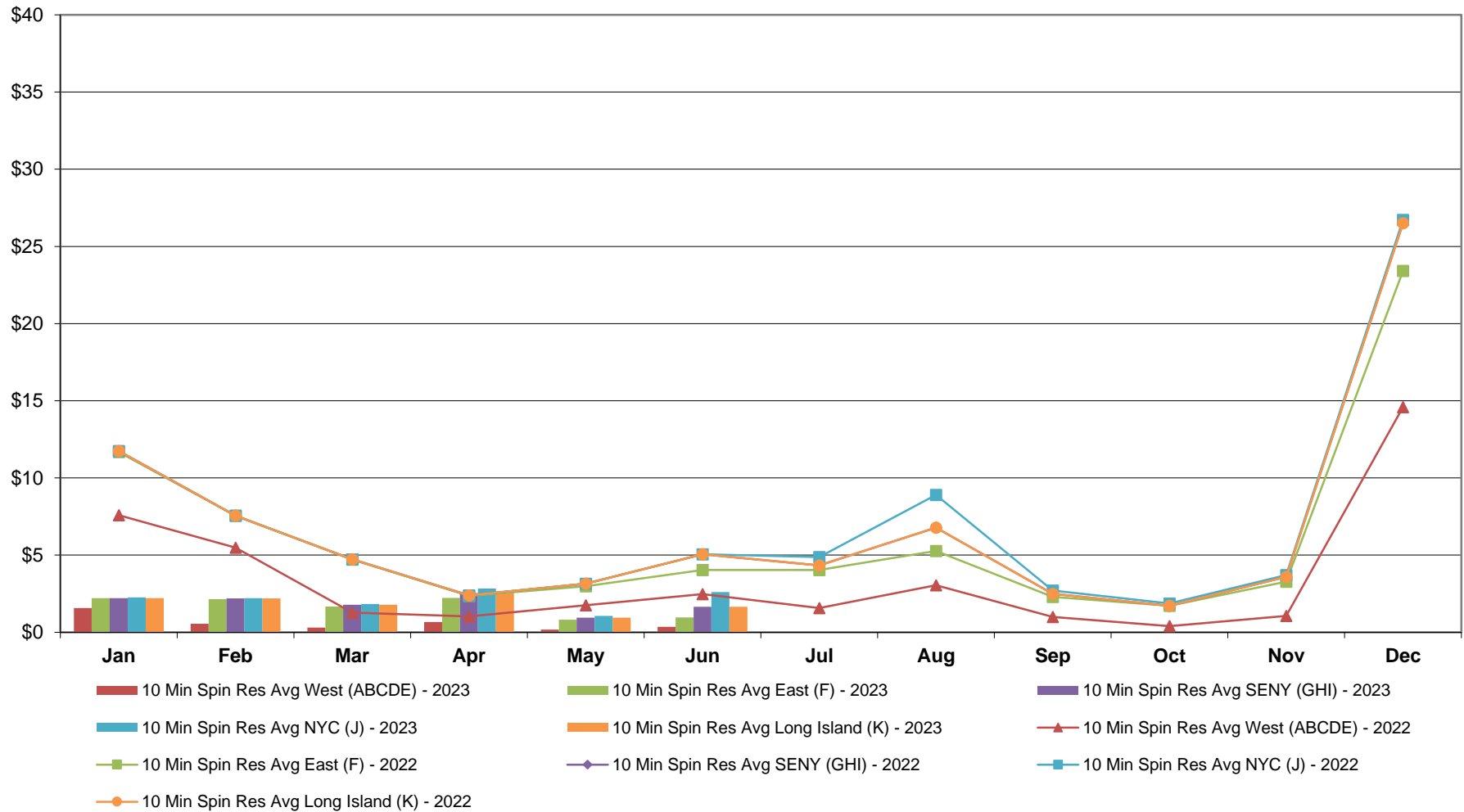
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - 30 Min Op Res 2022 - 2023**



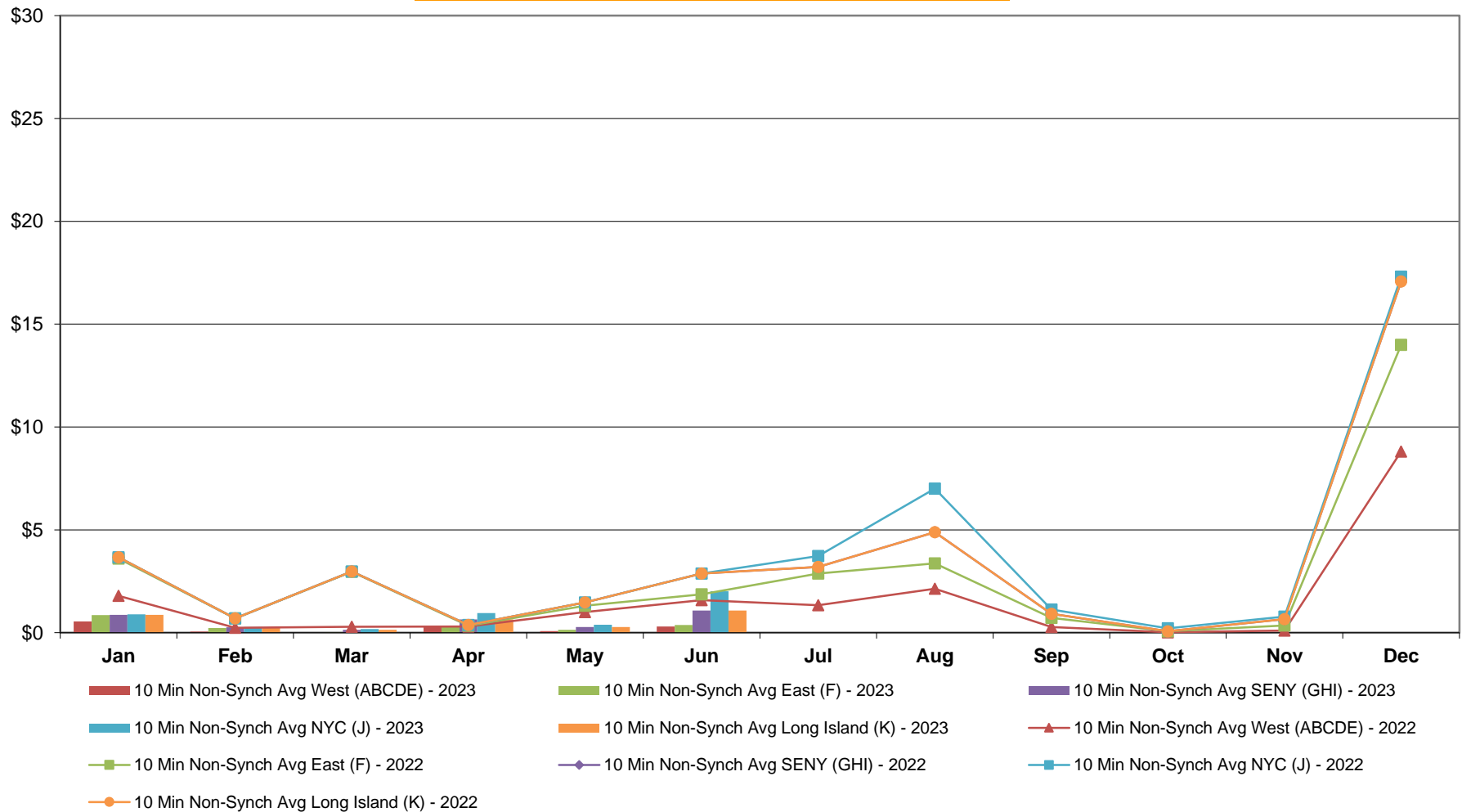
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - Regulation 2022 - 2023**



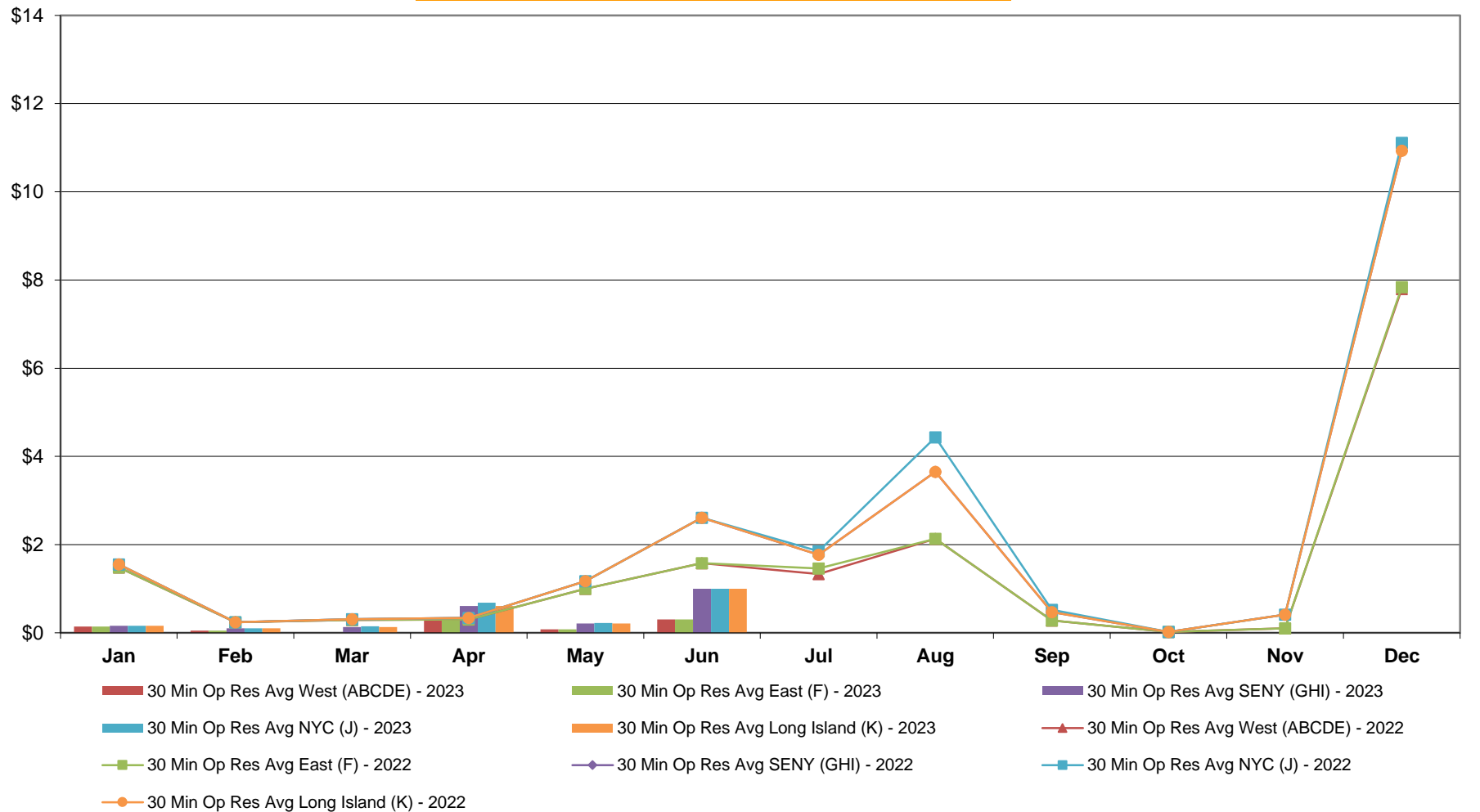
NYISO Monthly Average Ancillary Service Prices RTC Market - 10 Min Spin 2022 - 2023



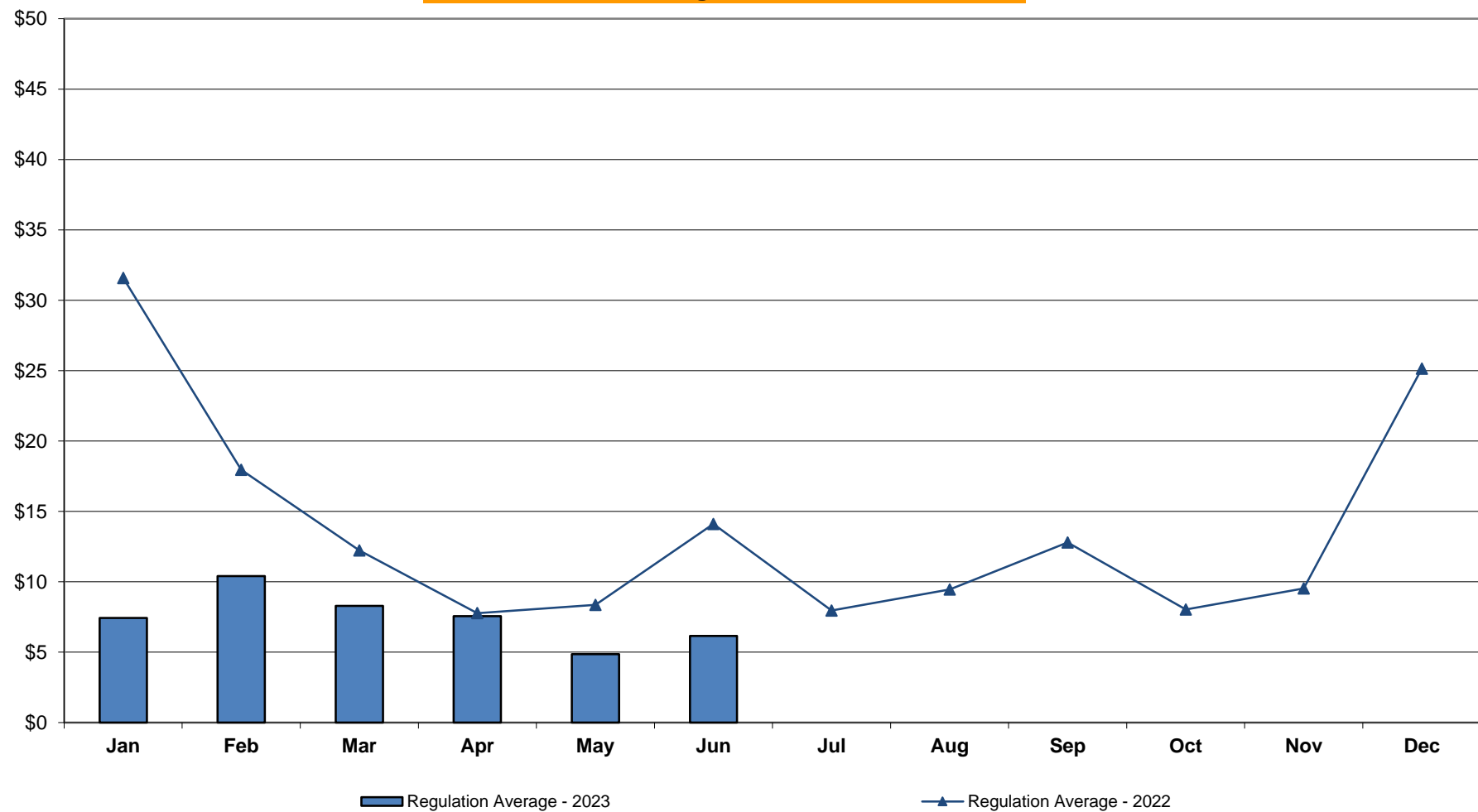
NYISO Monthly Average Ancillary Service Prices RTC Market - 10 Min Non-Synch 2022 - 2023



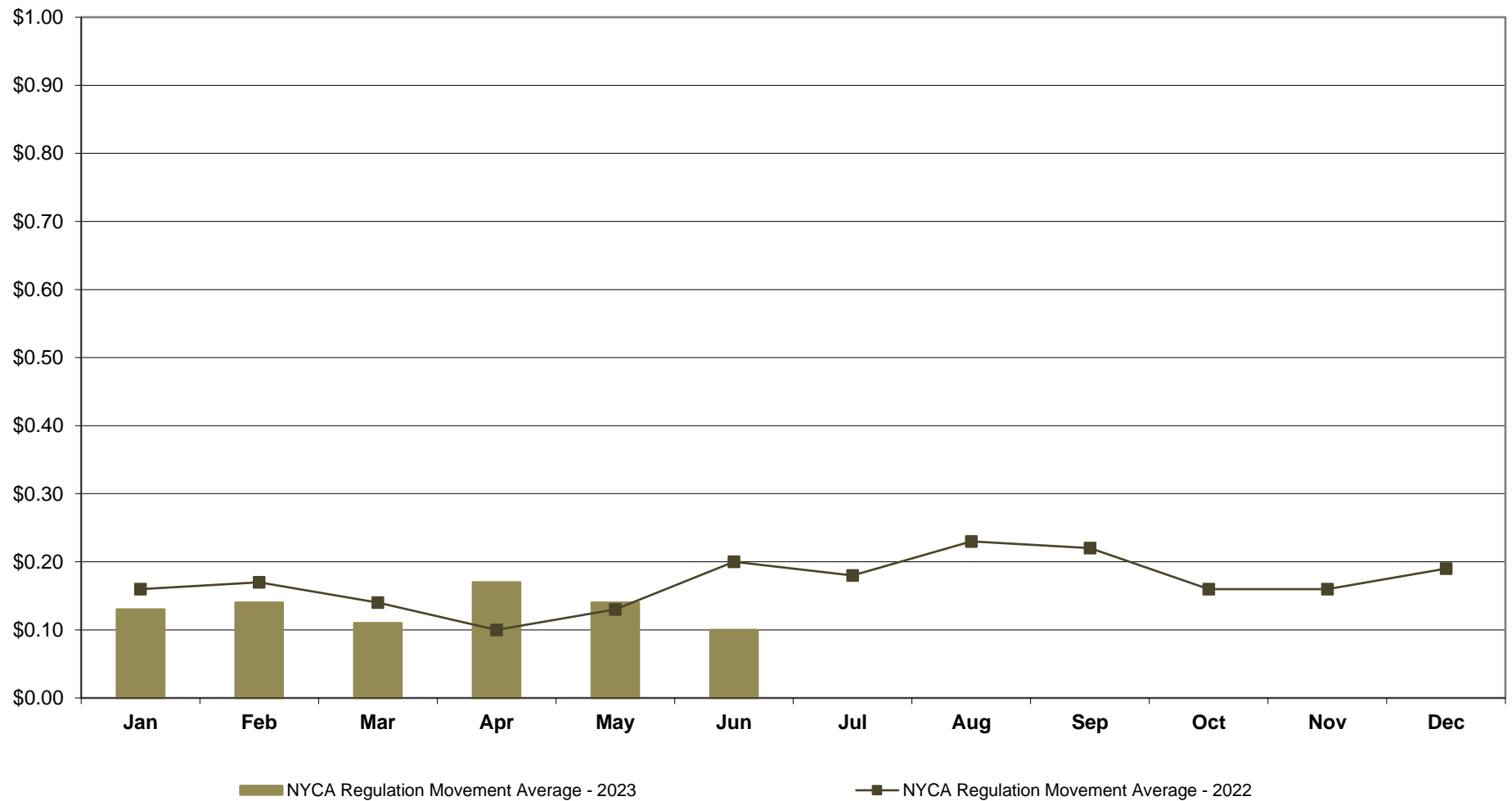
NYISO Monthly Average Ancillary Service Prices RTC Market - 30 Min Op Res 2022 - 2023



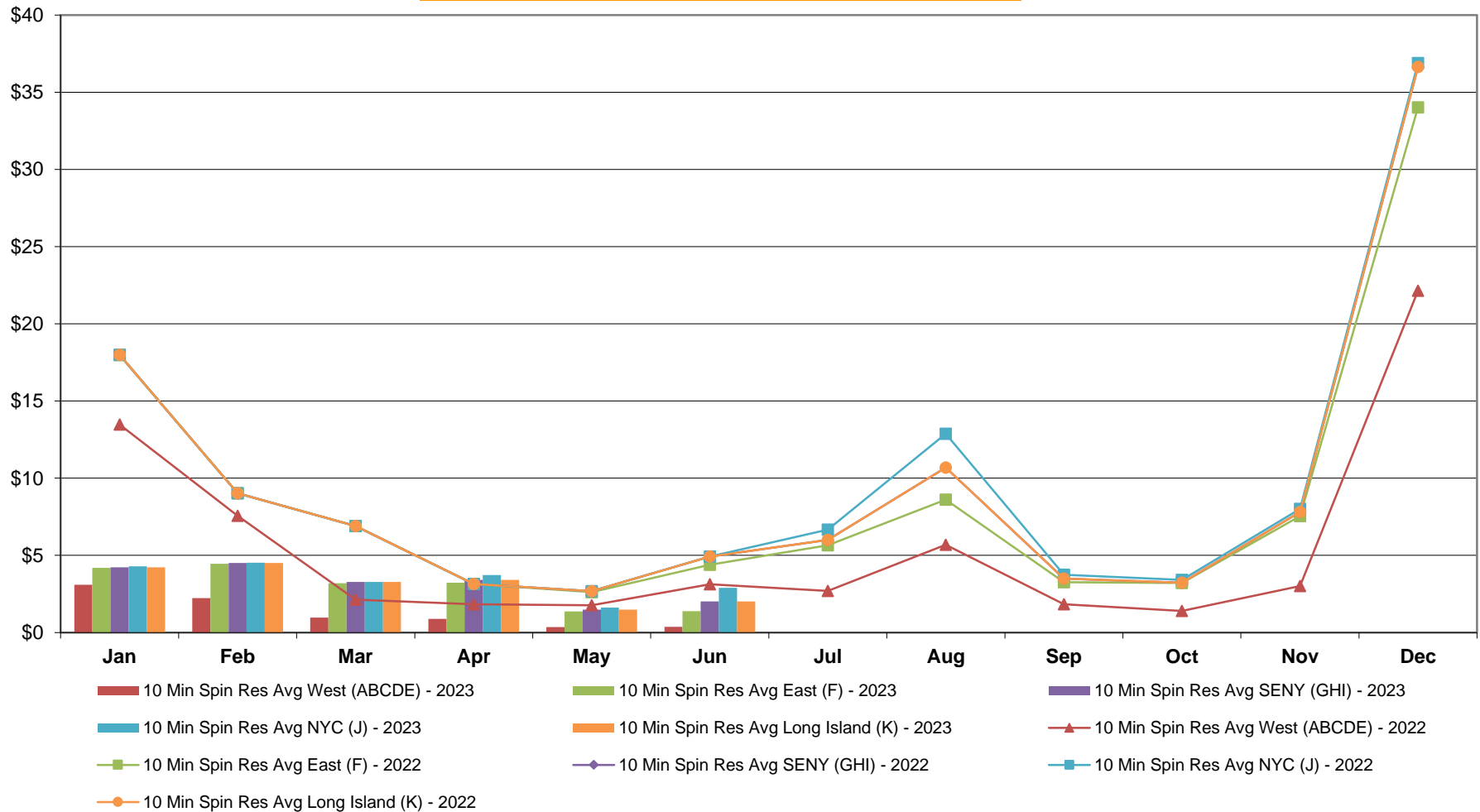
**NYISO Monthly Average Ancillary Service Prices
RTC Market - Regulation 2022 - 2023**



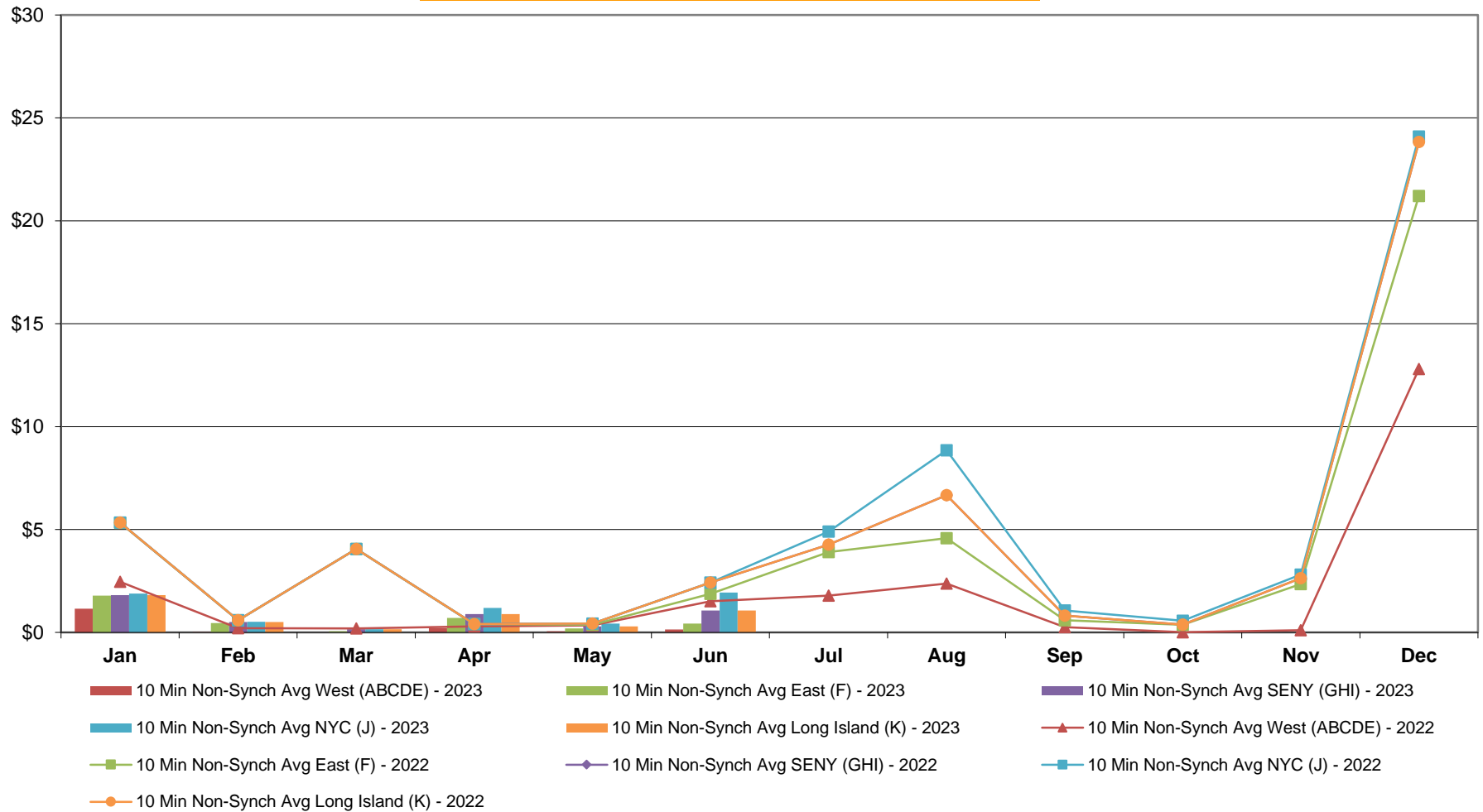
NYISO Monthly Average Ancillary Service Prices RTC Market - Regulation Movement 2022 - 2023



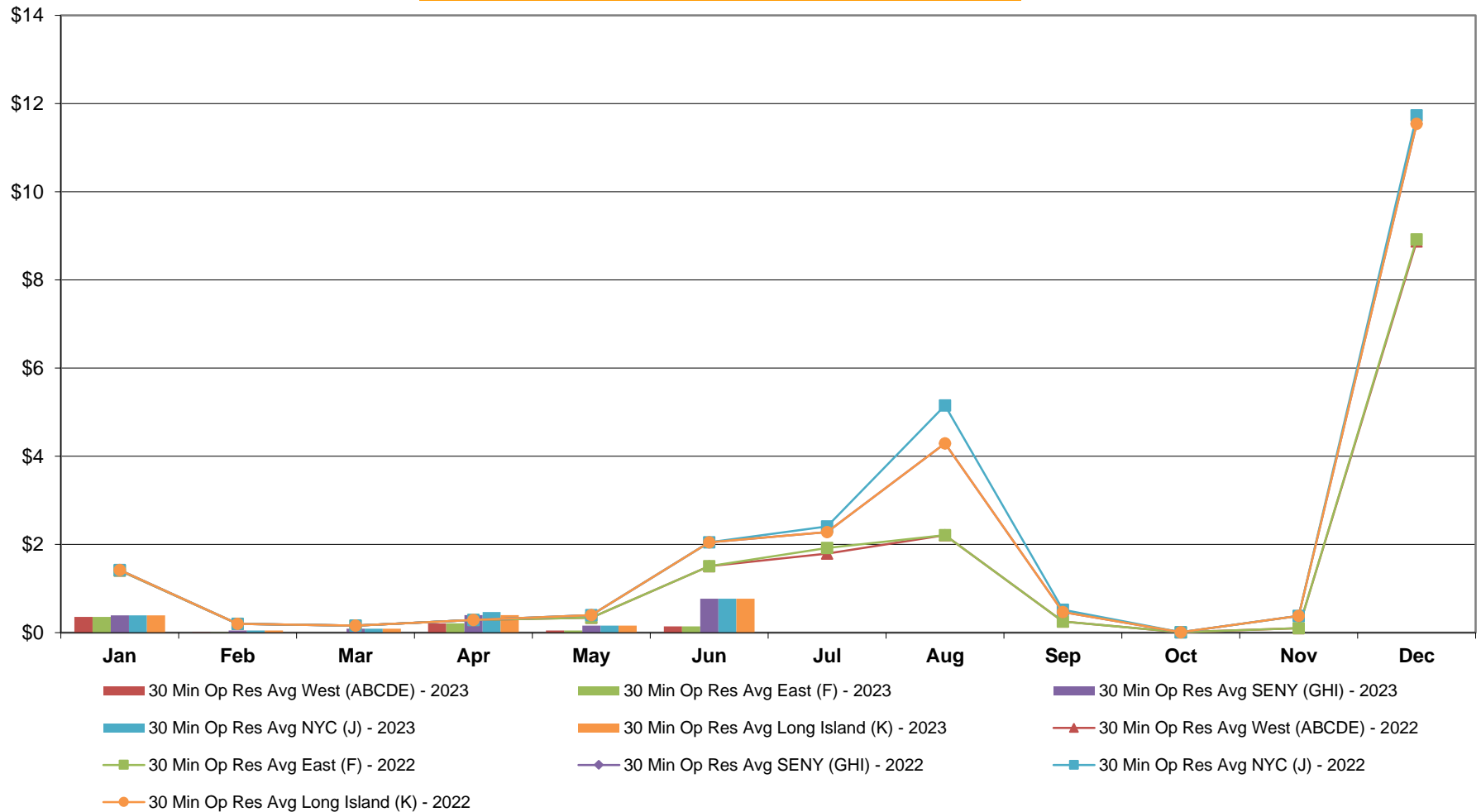
NYISO Monthly Average Ancillary Service Prices Real Time Market - 10 Min Spin 2022 - 2023



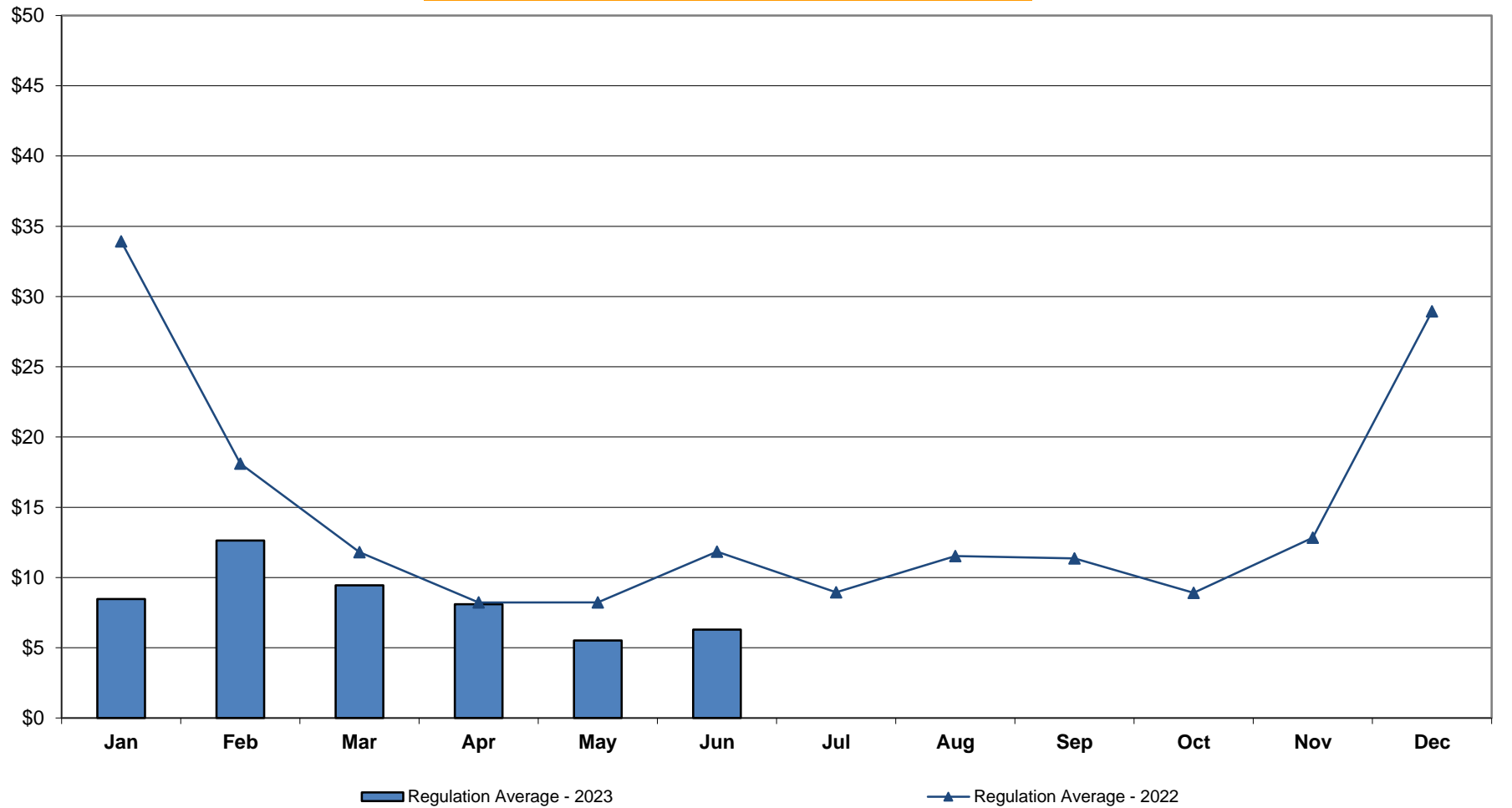
**NYISO Monthly Average Ancillary Service Prices
Real Time Market - 10 Min Non-Synch 2022 - 2023**



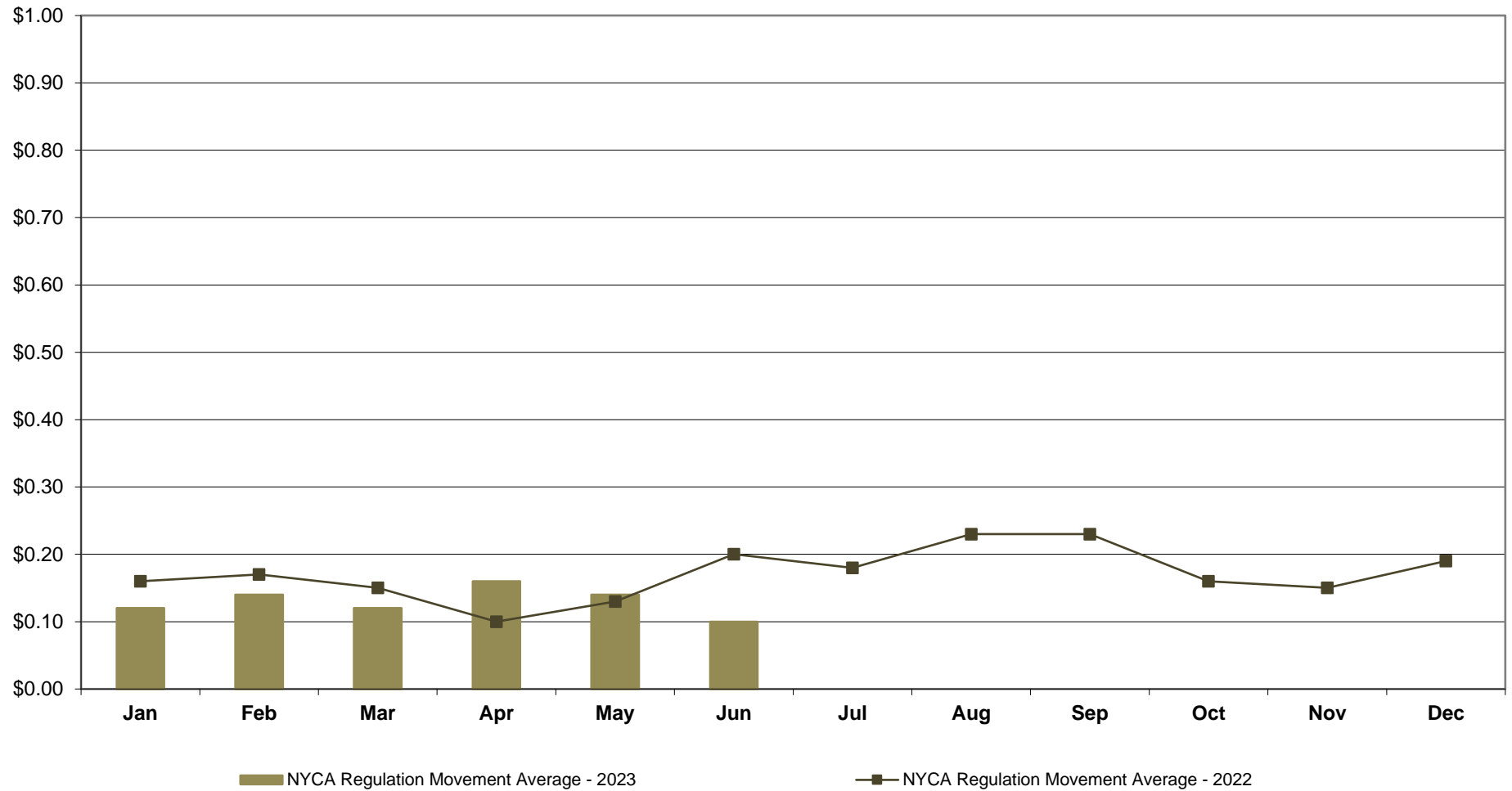
NYISO Monthly Average Ancillary Service Prices Real Time Market - 30 Min Op Res 2022 - 2023



**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	8.46	7.31	7.07	5.74	5.29						
10 Min Spin NYC (J)	6.63	8.68	7.38	7.20	5.81	6.37						
10 Min Spin SENY (GHI)	6.60	8.46	7.31	7.07	5.74	5.29						
10 Min Spin East (F)	6.56	8.06	7.07	6.73	5.30	4.87						
10 Min Spin West (ABCDE)	5.41	6.73	4.45	4.67	4.29	4.27						
10 Min Non Synch Long Island (K)	5.16	6.22	4.72	5.02	4.97	4.71						
10 Min Non Synch NYC (J)	5.18	6.44	4.79	5.15	5.04	5.79						
10 Min Non Synch SENY (GHI)	5.16	6.22	4.72	5.02	4.97	4.71						
10 Min Non Synch East (F)	5.12	5.82	4.48	4.68	4.52	4.28						
10 Min Non Synch West (ABCDE)	5.11	5.62	4.42	4.49	4.16	4.09						
30 Min Long Island (K)	5.15	6.02	4.65	4.83	4.61	4.51						
30 Min NYC (J)	5.15	6.14	4.70	4.95	4.61	4.59						
30 Min SENY (GHI)	5.15	6.02	4.65	4.83	4.61	4.51						
30 Min East (F)	5.11	5.62	4.42	4.49	4.16	4.09						
30 Min West (ABCDE)	5.11	5.62	4.42	4.49	4.16	4.09						
Regulation	7.82	11.71	9.65	9.88	7.36	6.37						
<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

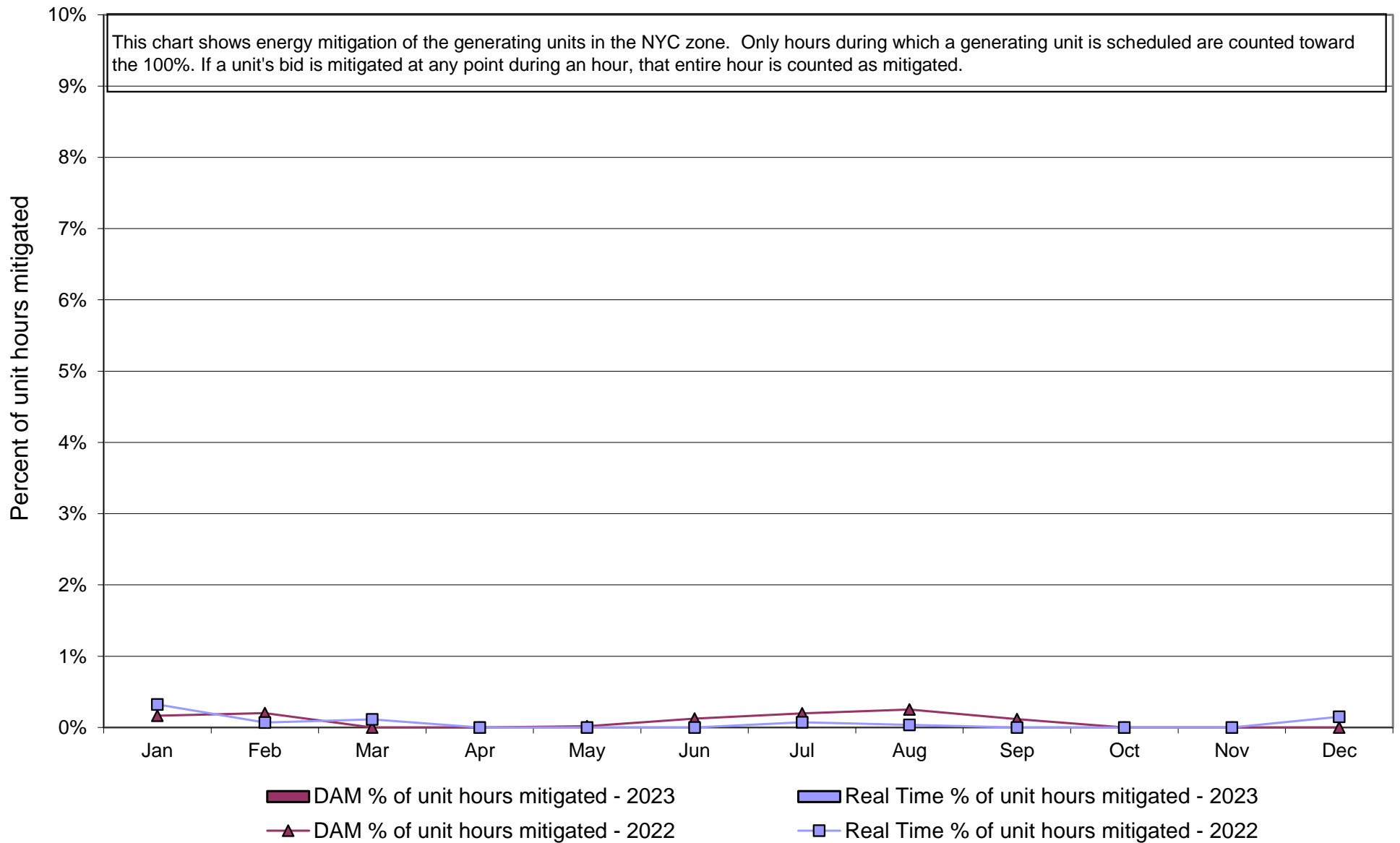
<u>2023</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
<u>RTC Market</u>												
10 Min Spin Long Island (K)	2.22	2.19	1.79	2.55	0.95	1.66						
10 Min Spin NYC (J)	2.26	2.21	1.83	2.84	1.07	2.60						
10 Min Spin SENY (GHI)	2.22	2.19	1.79	2.55	0.95	1.66						
10 Min Spin East (F)	2.21	2.15	1.67	2.23	0.82	0.96						
10 Min Spin West (ABCDE)	1.57	0.56	0.30	0.67	0.17	0.36						
10 Min Non Synch Long Island (K)	0.86	0.26	0.14	0.65	0.27	1.07						
10 Min Non Synch NYC (J)	0.89	0.27	0.18	0.95	0.39	2.01						
10 Min Non Synch SENY (GHI)	0.86	0.26	0.14	0.65	0.27	1.07						
10 Min Non Synch East (F)	0.85	0.22	0.02	0.34	0.14	0.37						
10 Min Non Synch West (ABCDE)	0.54	0.05	0.00	0.29	0.08	0.30						
30 Min Long Island (K)	0.16	0.10	0.13	0.61	0.21	1.00						
30 Min NYC (J)	0.16	0.10	0.15	0.68	0.22	1.00						
30 Min SENY (GHI)	0.16	0.10	0.13	0.61	0.21	1.00						
30 Min East (F)	0.14	0.05	0.00	0.29	0.08	0.30						
30 Min West (ABCDE)	0.14	0.05	0.00	0.29	0.08	0.30						
Regulation	7.44	10.40	8.29	7.55	4.86	6.16						
NYCA Regulation Movement	0.13	0.14	0.11	0.17	0.14	0.10						
<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

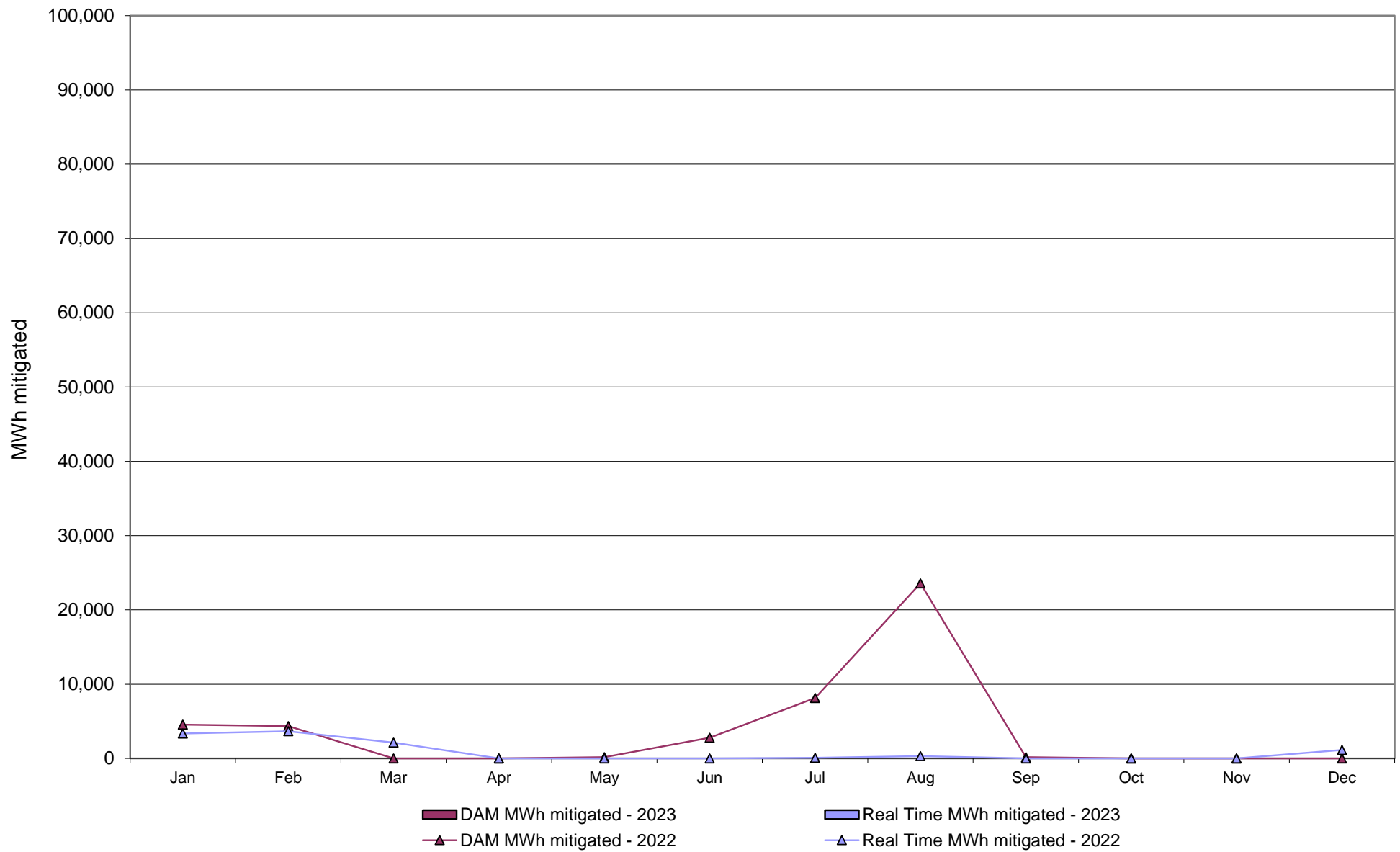
<u>2023</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
<u>Real Time Market</u>												
10 Min Spin Long Island (K)	4.22	4.51	3.28	3.42	1.48	2.02						
10 Min Spin NYC (J)	4.30	4.53	3.28	3.72	1.61	2.89						
10 Min Spin SENY (GHI)	4.22	4.51	3.28	3.42	1.48	2.02						
10 Min Spin East (F)	4.20	4.46	3.19	3.23	1.37	1.38						
10 Min Spin West (ABCDE)	3.10	2.24	0.97	0.89	0.36	0.38						
10 Min Non Synch Long Island (K)	1.81	0.50	0.15	0.89	0.29	1.07						
10 Min Non Synch NYC (J)	1.89	0.52	0.15	1.19	0.43	1.94						
10 Min Non Synch SENY (GHI)	1.81	0.50	0.15	0.89	0.29	1.07						
10 Min Non Synch East (F)	1.79	0.45	0.05	0.70	0.19	0.43						
10 Min Non Synch West (ABCDE)	1.15	0.01	0.00	0.21	0.05	0.14						
30 Min Long Island (K)	0.39	0.05	0.09	0.40	0.16	0.77						
30 Min NYC (J)	0.39	0.05	0.09	0.47	0.16	0.77						
30 Min SENY (GHI)	0.39	0.05	0.09	0.40	0.16	0.77						
30 Min East (F)	0.36	0.01	0.00	0.21	0.05	0.14						
30 Min West (ABCDE)	0.36	0.01	0.00	0.21	0.05	0.14						
Regulation	8.46	12.64	9.44	8.10	5.52	6.30						
NYCA Regulation Movement	0.12	0.14	0.12	0.16	0.14	0.10						
<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

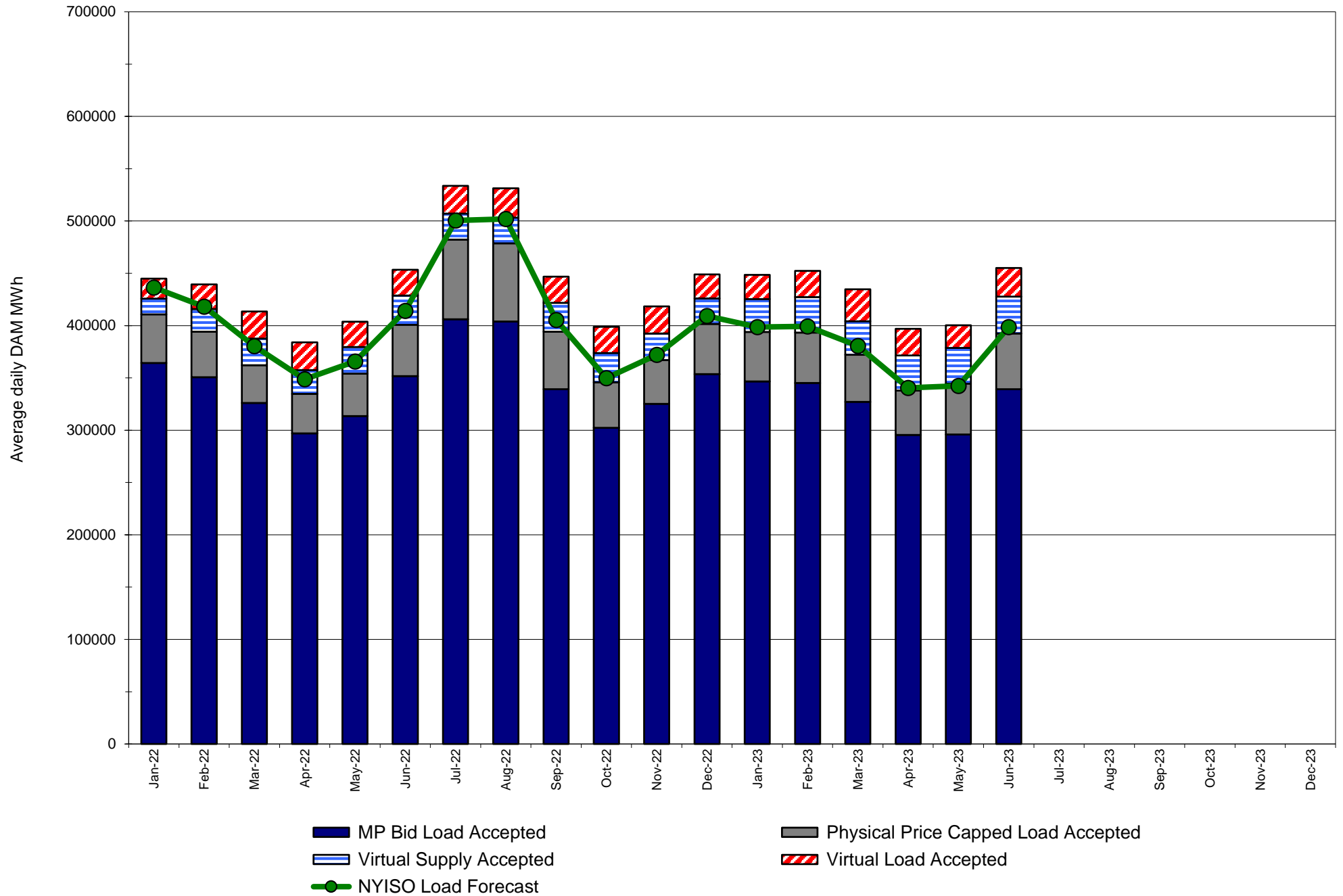
Percentage of committed unit-hours mitigated



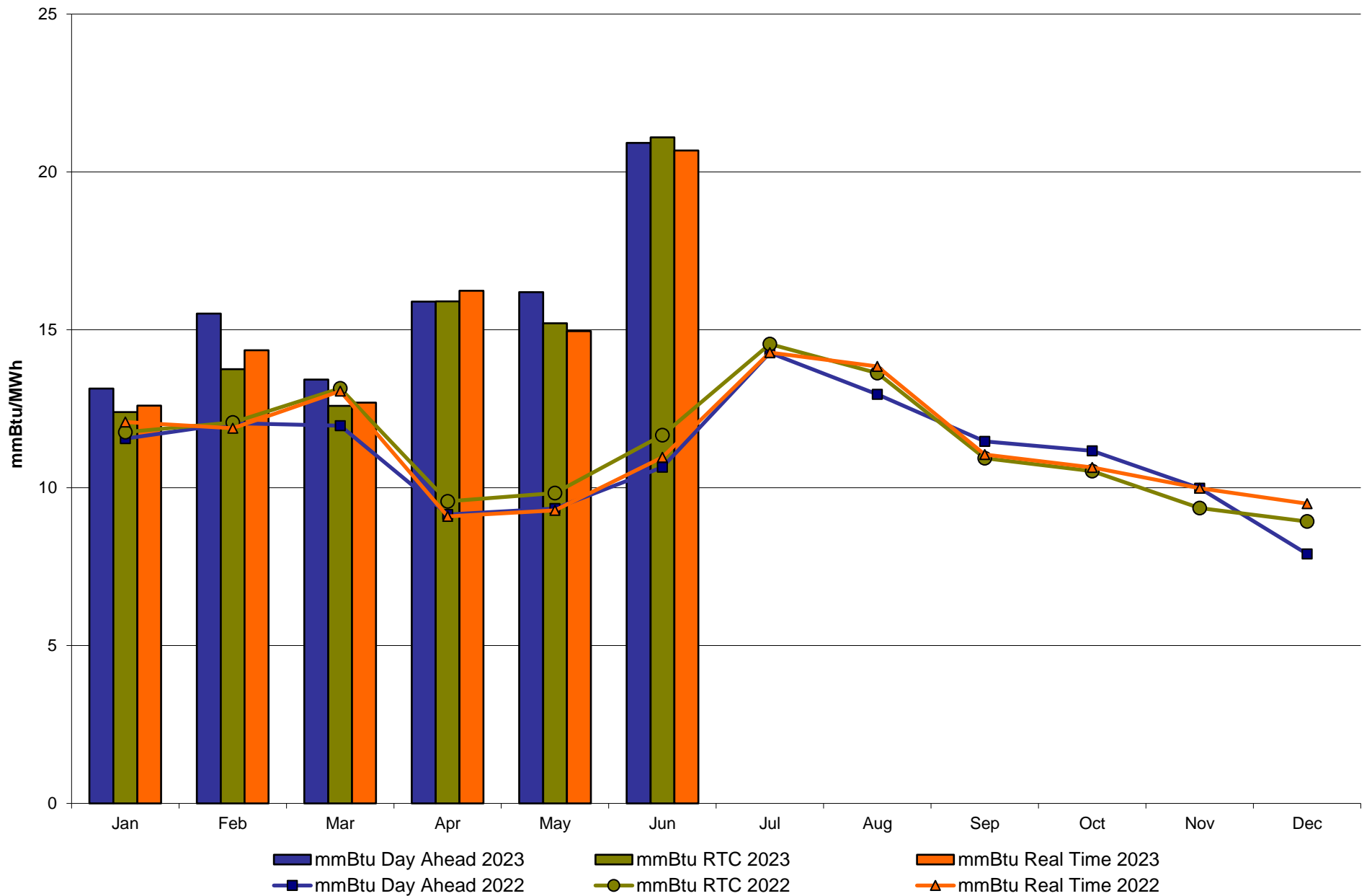
NYISO In City Energy Mitigation (NYC Zone) 2022 - 2023
Monthly megawatt hours mitigated



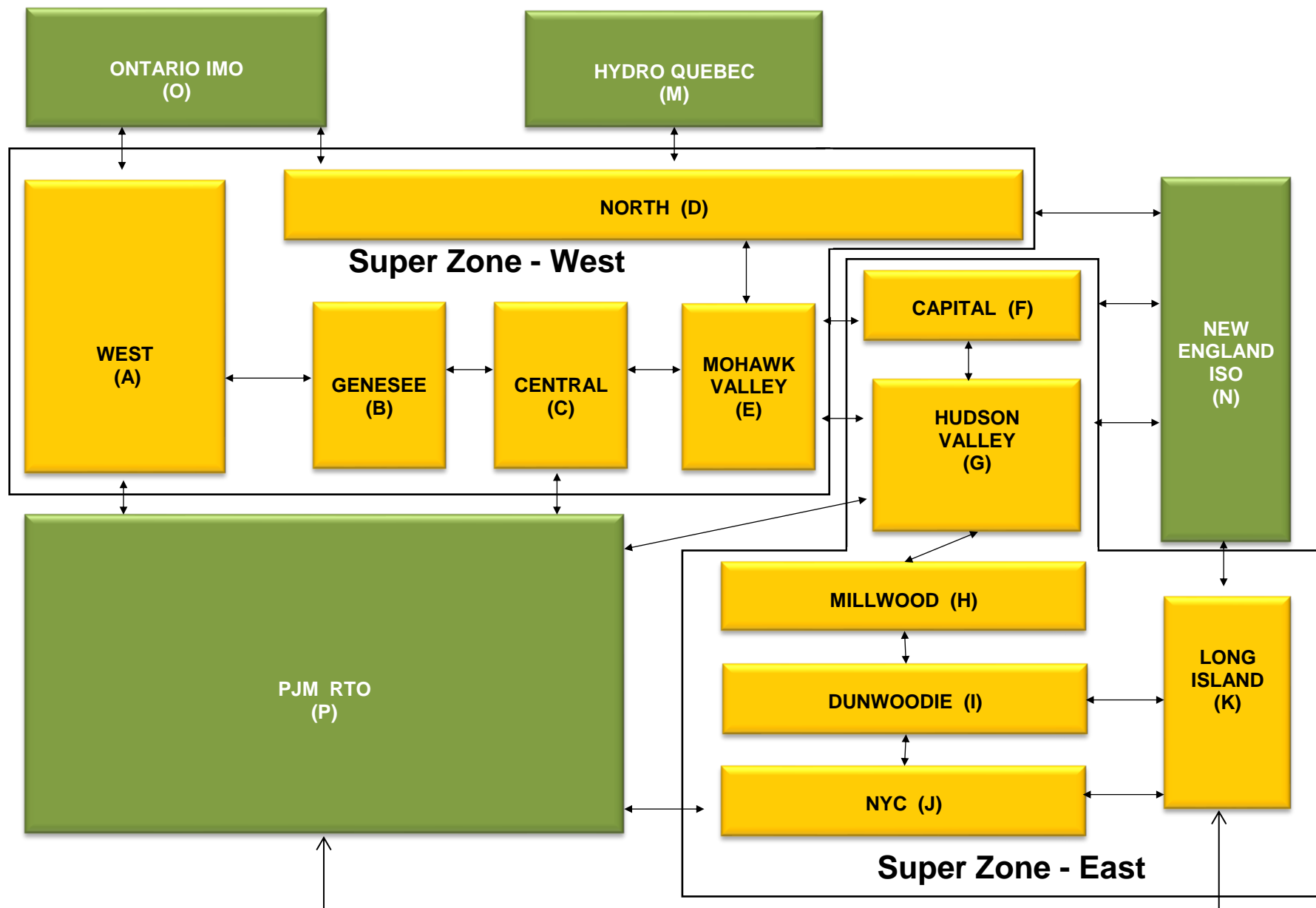
NYISO Average Daily DAM Load Bid Summary



Monthly Implied Heat Rate 2022-2023



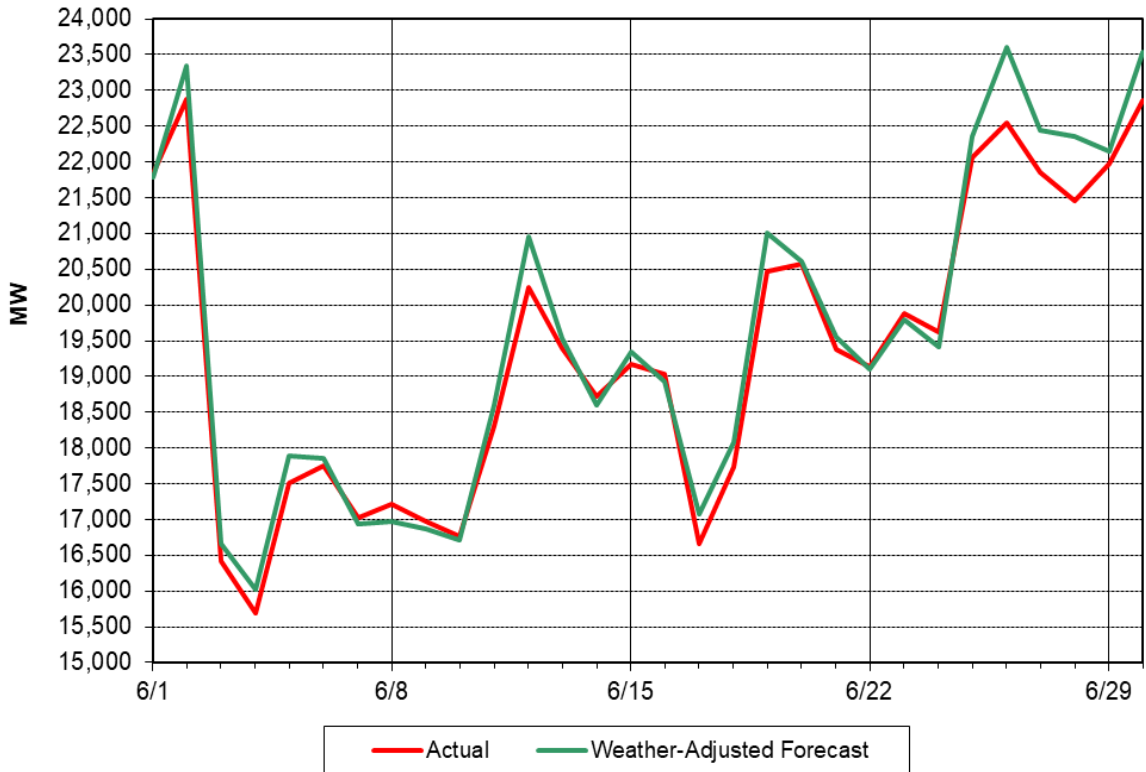
NYISO LBMP ZONES



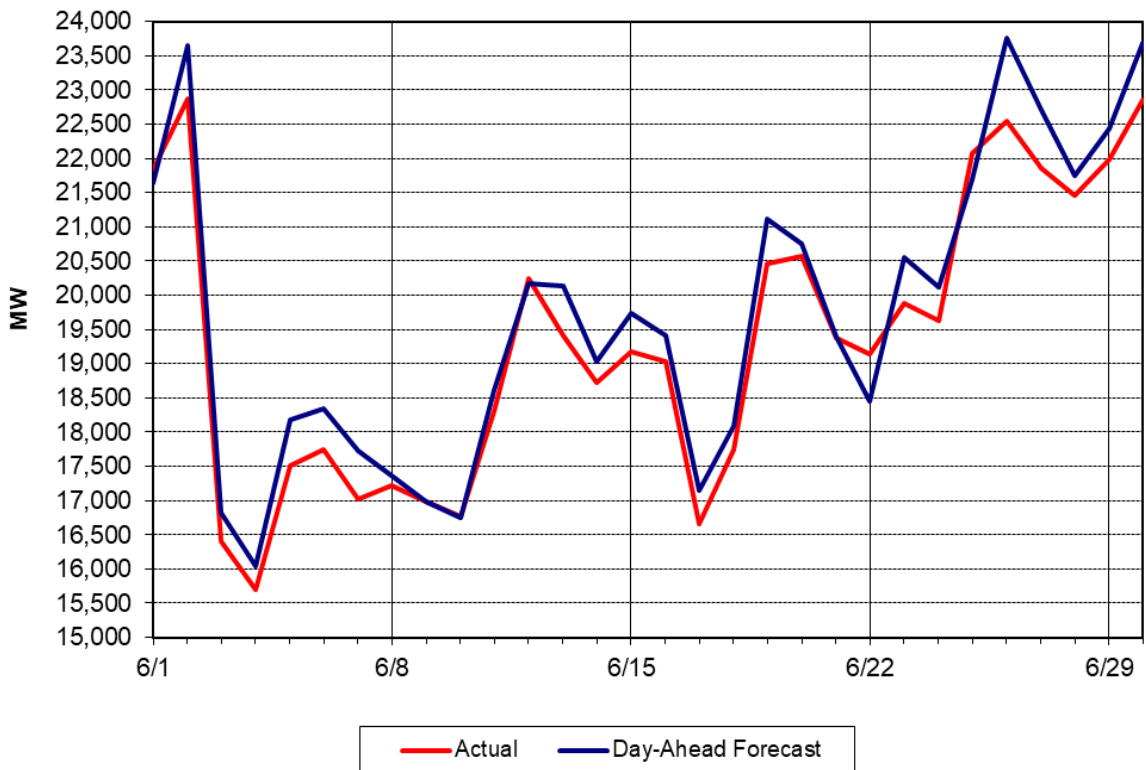
Billing Codes for Chart C

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

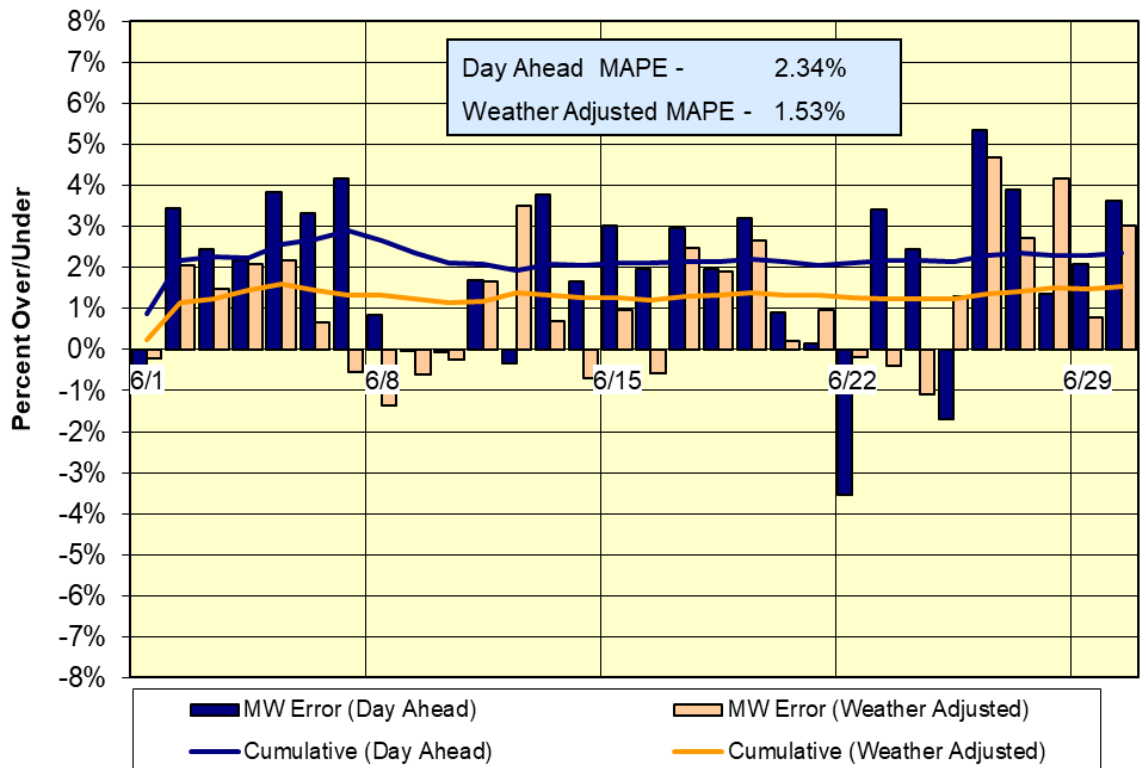
NYISO Daily Peak Load - June 2023
Actual vs. Weather-Adjusted Forecast



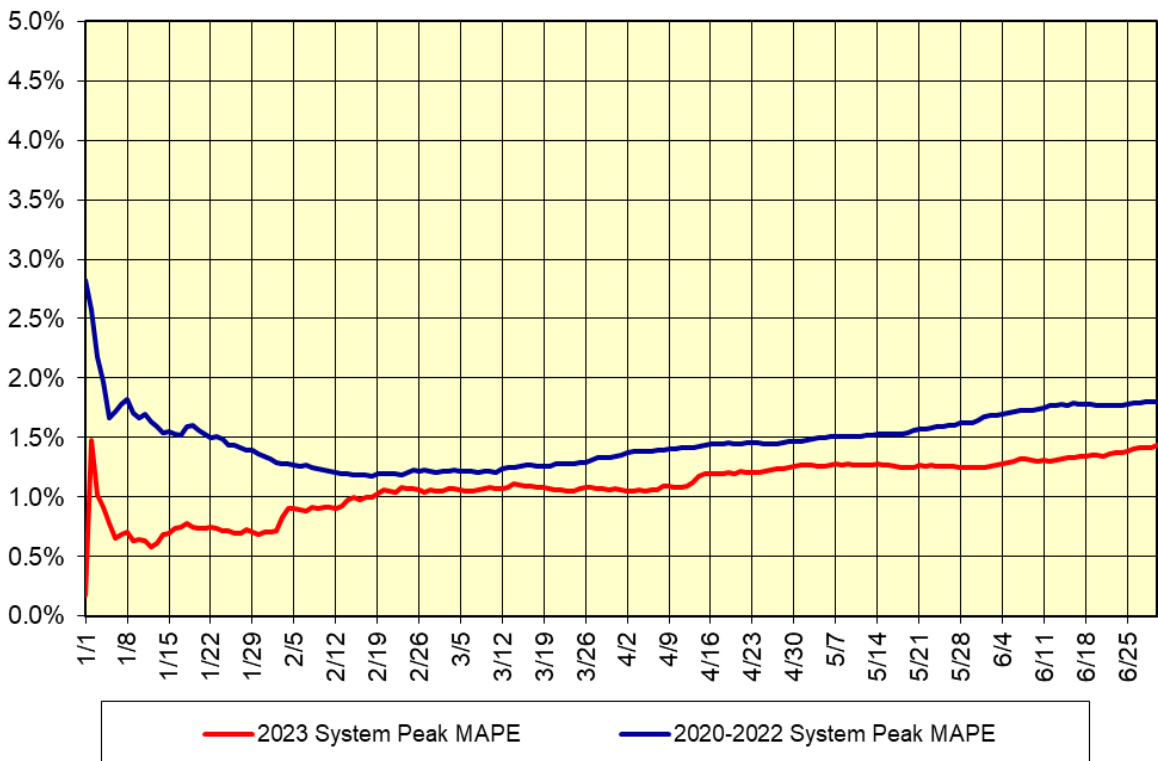
NYISO Daily Peak Load - June 2023
Actual vs. Forecast



Day Ahead Peak Forecast - June 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 – June 2023

Filing Date	Filing Summary	Docket	Order Summary	Order Date
04/05/2023	NYISO-NYSEG joint 205 filing of an unexecuted Engineering, Procurement, and Construction Agreement ("EPCA") among NYISO, NYSEG, ELP Ticonderoga Solar, and National Grid (SA No. 2764) in connection with the Ticonderoga Solar project (NYISO Queue No. 734).	ER23-1573-000	FERC letter order accepted the unexecuted Engineering, Procurement, and Construction (EPC) Agreement, effective April 6, 2023, as requested.	06/02/2023
11/7/2022	NYISO filed, with the NY PSC, 17 proposals for transmission needs driven by Public Policy Requirements provided to the NYISO in response to its August 31, 2022 letter inviting the proposals.	PSC Case No. 22-E-0633	NYPSC issued an order stating that the CLCPA constitutes a Public Policy Requirement driving the need for additional transmission facilities to deliver the output of offshore wind generating resources to NYC interconnection points, and referred this PPTN to the NYISO.	06/22/2023
04/28/2023	NYISO-National Grid Joint 205 filing of an amended and restated Small Generator Interconnection Agreement among NYISO, National Grid, and SunEast Hilltop Solar LLC for the Hilltop Solar Project (SA 2638).	ER23-1758-000	FERC issued a letter order accepting the amended agreement effective April 14, 2023, as requested.	06/23/2023
06/01/2023	NYISO petition to incur indebtedness in excess of 12 months, to obtain PSC approval of its 2024-2028 revolving line of credit and 2024-2028 budget facility.	PSC Case No. 23-E-0293		
06/01/2023	NYISO Section 205 filing of proposed tariff revisions to clarify and complement the market rules proposed in the NYISO's June 27, 2019 Distributed Energy Resources (DER) and Aggregation filing, regarding the participation of DER and Aggregations.	ER23-2040-000		
06/02/2023	NYISO compliance filing to address the directives of FERC's May 19, 2023 order, which set aside FERC's order on remand that affirmed the Commission's prior determination to require use of a 20-year amortization period and directs the NYISO to implement its proposed 17-year amortization period.	ER21-502-006		

Filing Date	Filing Summary	Docket	Order Summary	Order Date
06/05/2023	NYISO response to FERC's May 5, 2023 deficiency letter regarding proposed tariff revisions to better align the credit requirements for Virtual and External Transactions with the risk associated with the transactions	ER23-1307-001		
06/20/2023	NYISO compliance filing regarding NYISO's Order No. 881 compliance to modify the definition of Seasonal Facility Ratings and clarify the NYISO's responsibility to respond to requests for line ratings information, consistent with FERC's April 20, 2023 Order on Compliance.	ER22-2350-001		
06/27/2023	NYISO submitted a letter of support to the Department of Energy in response to a request from Northeastern state officials, including NYSERDA's Doreen Harris, to DOE's Grid Deployment Office requesting assistance in forming a "Northeast States Collaborative on Interregional Transmission."	DOE		
6/30/2023	NYISO submission of comments to NYS DEC and NYSERDA regarding the regulations being developed under the New York Cap and Invest program.	DEC-NYSERDA		