

Monthly Report

A Report by the
New York Independent System Operator

March 2023

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March 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 April 10, 2023.

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March 2023 Operations Performance Highlights

- March 2023 peak load of 19,881 MW occurred on 03/14/2023 HB 19
- Winter 2022-2023 capability period peak load to date of 23,369 MW occurred on 02/03/2023 HB 18
- All-time winter capability period peak load of 25,738 MW occurred on 01/07/2014 HB 18
- 20.2 hours of Thunderstorm Alerts were declared
- 0 hours of NERC TLR level 3 curtailment
- NYISO began securing Holtsville-West Yaphank 69kV (#69-853) facility in the Real-Time Market on 03/02/2023 and in the Day-Ahead Market execution occurring on 03/03/2023 for the 03/04/2023 market day.

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)
2,424 MW	4,467 MW	114 MW	20 MW

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

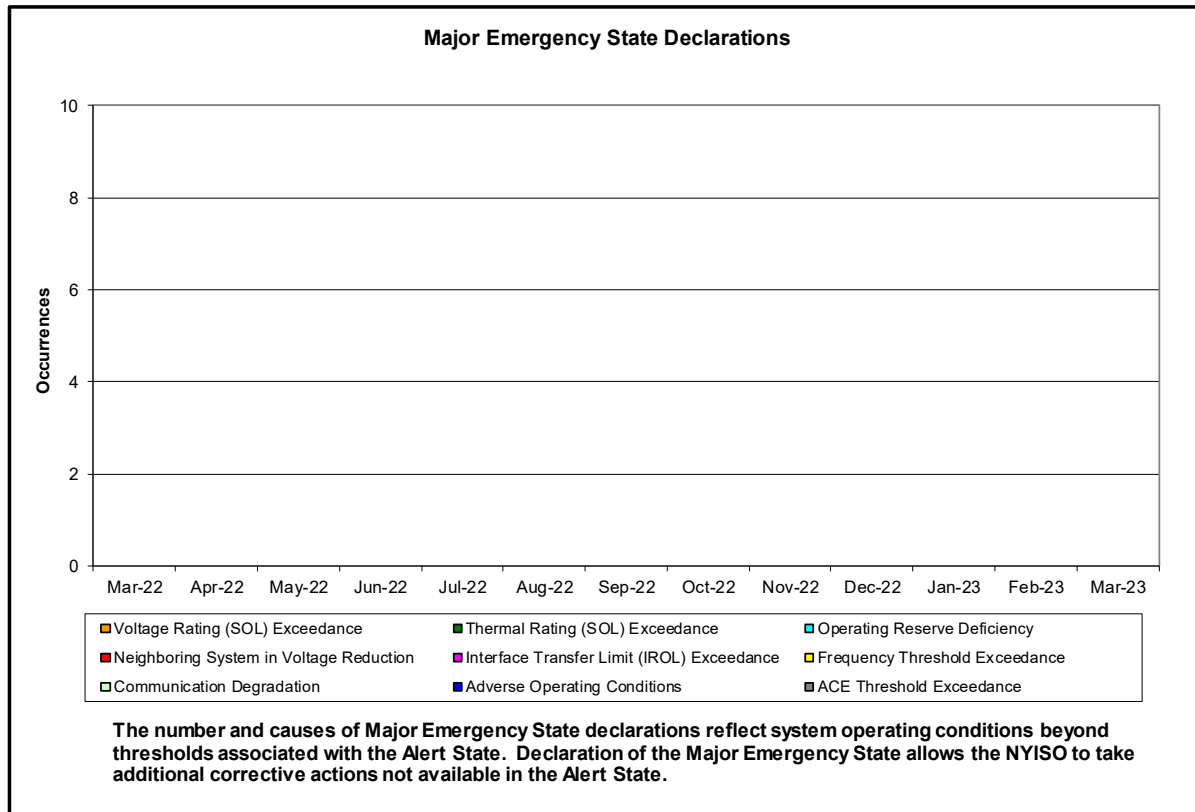
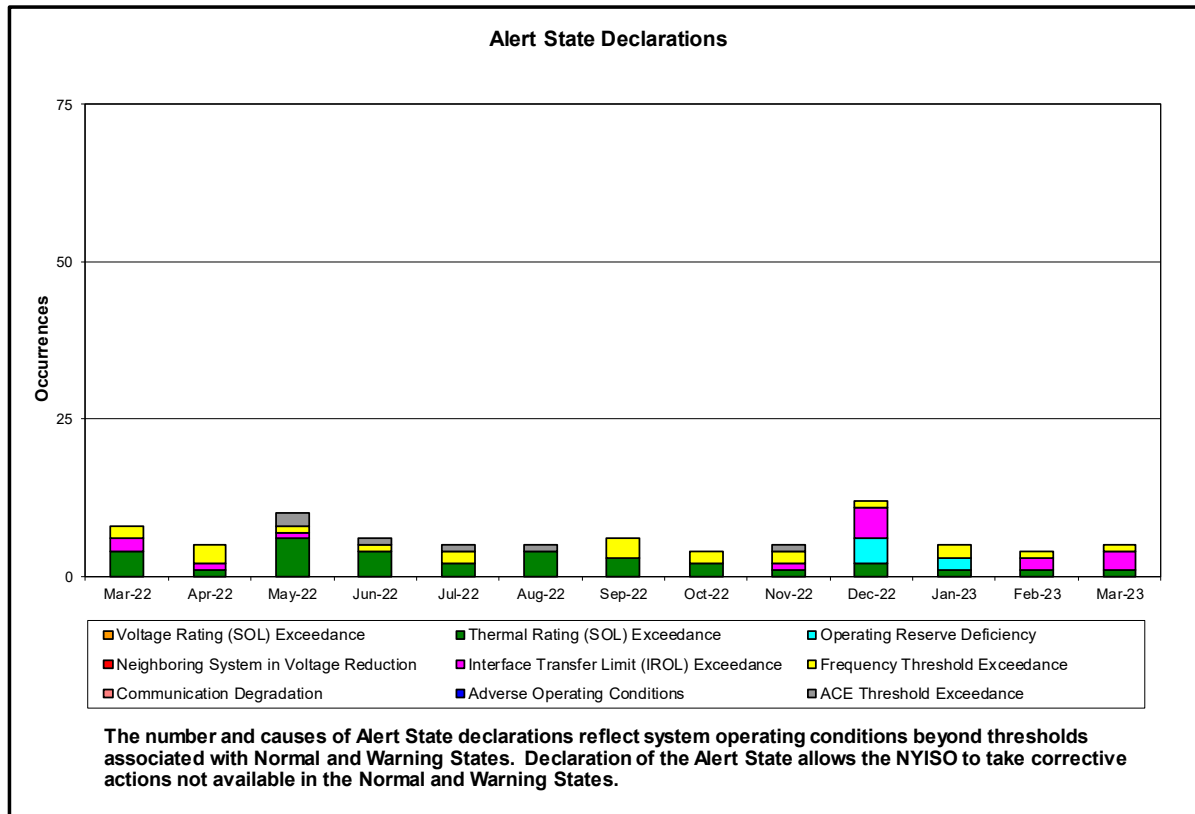
	Current Month Value (\$M)	Year-to-Date Value (\$M)
NY Savings from PJM-NY Congestion Coordination	\$3.73	\$7.45
NY Savings from PJM-NY Coordinated Transaction Scheduling	(\$0.08)	(\$0.39)
NY Savings from NE-NY Coordinated Transaction Scheduling	(\$0.15)	(\$1.14)
Total NY Savings	\$3.50	\$5.92
Regional Savings from PJM-NY Coordinated Transaction Scheduling	\$0.17	\$0.79
Regional Savings from NE-NY Coordinated Transaction Scheduling	\$0.08	\$0.28
Total Regional Savings	\$0.25	\$1.07

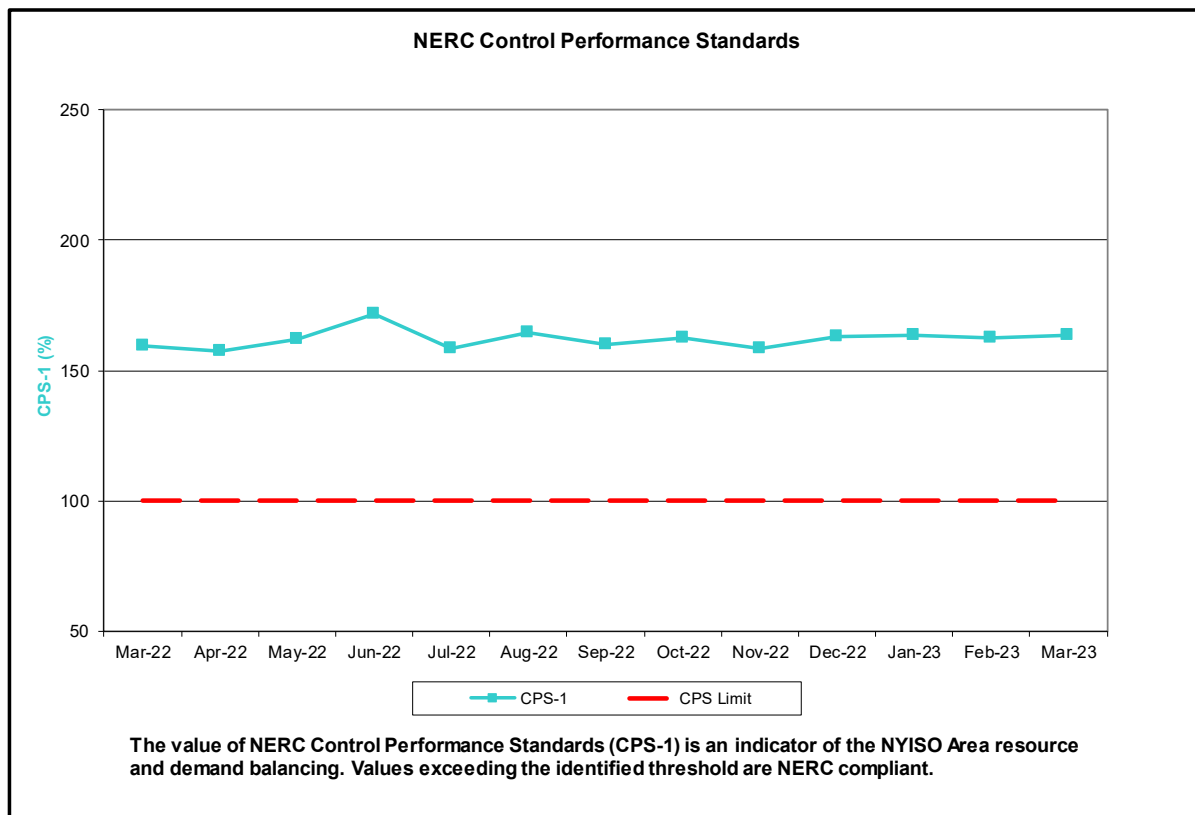
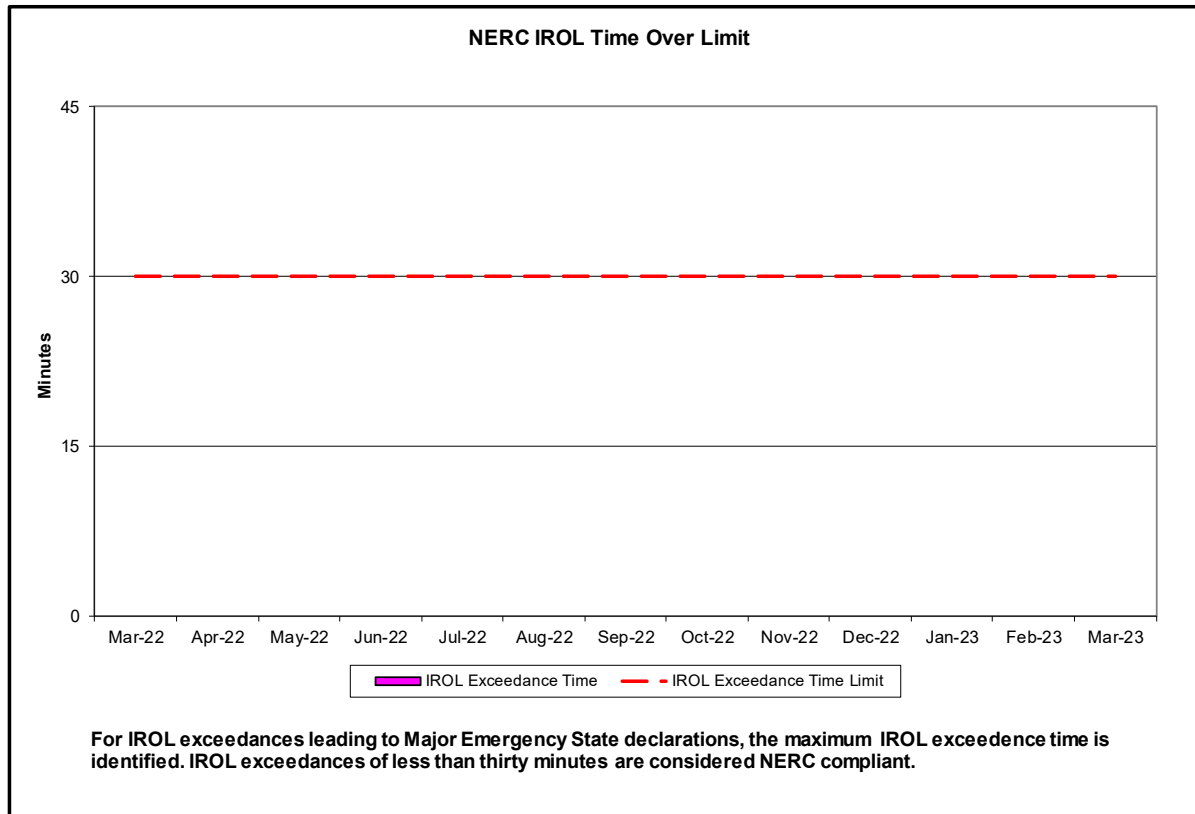
- Statewide uplift cost monthly average was (\$0.10)/MWh.
- The following table identifies the Monthly ICAP spot market prices and the price delta.

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)

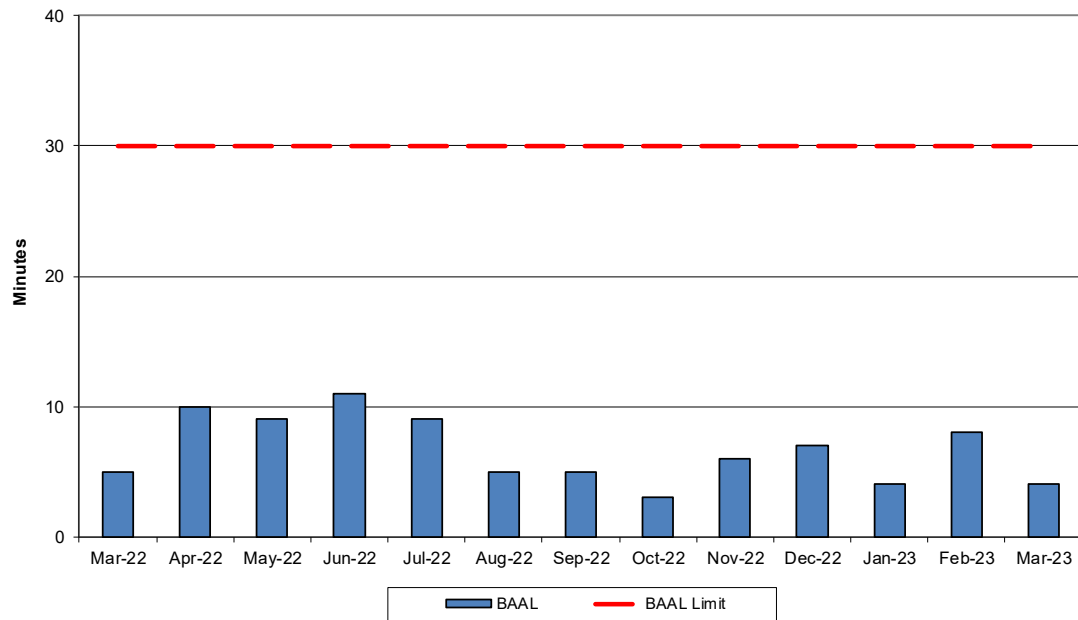
- Price decline in all zones was driven by a decline in unoffered MW

Reliability Performance Metrics



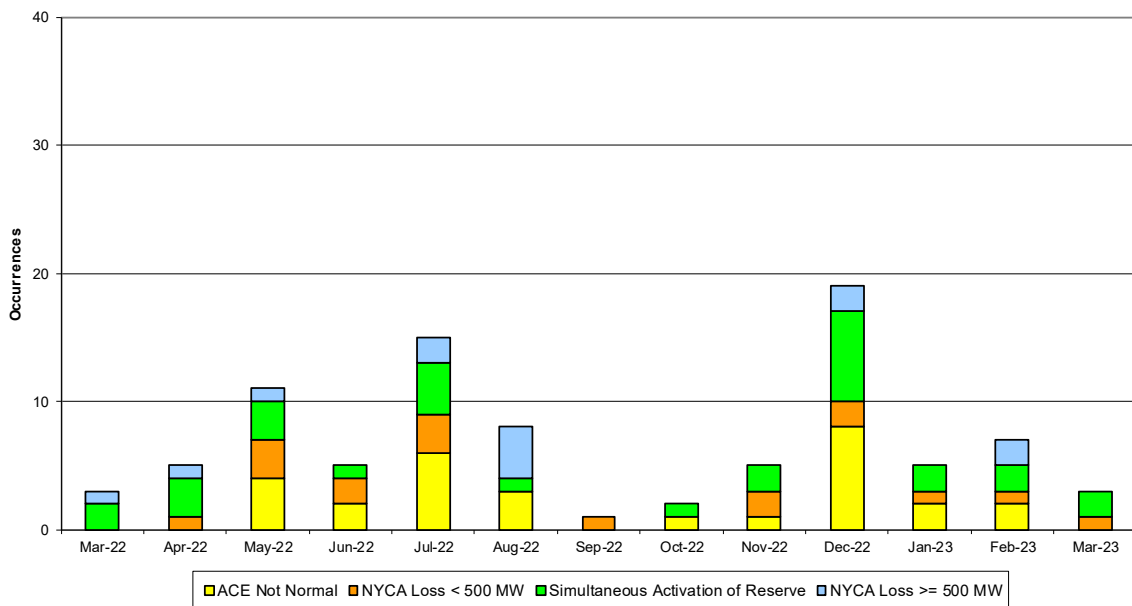


NERC Balancing Authority ACE Limit Standard

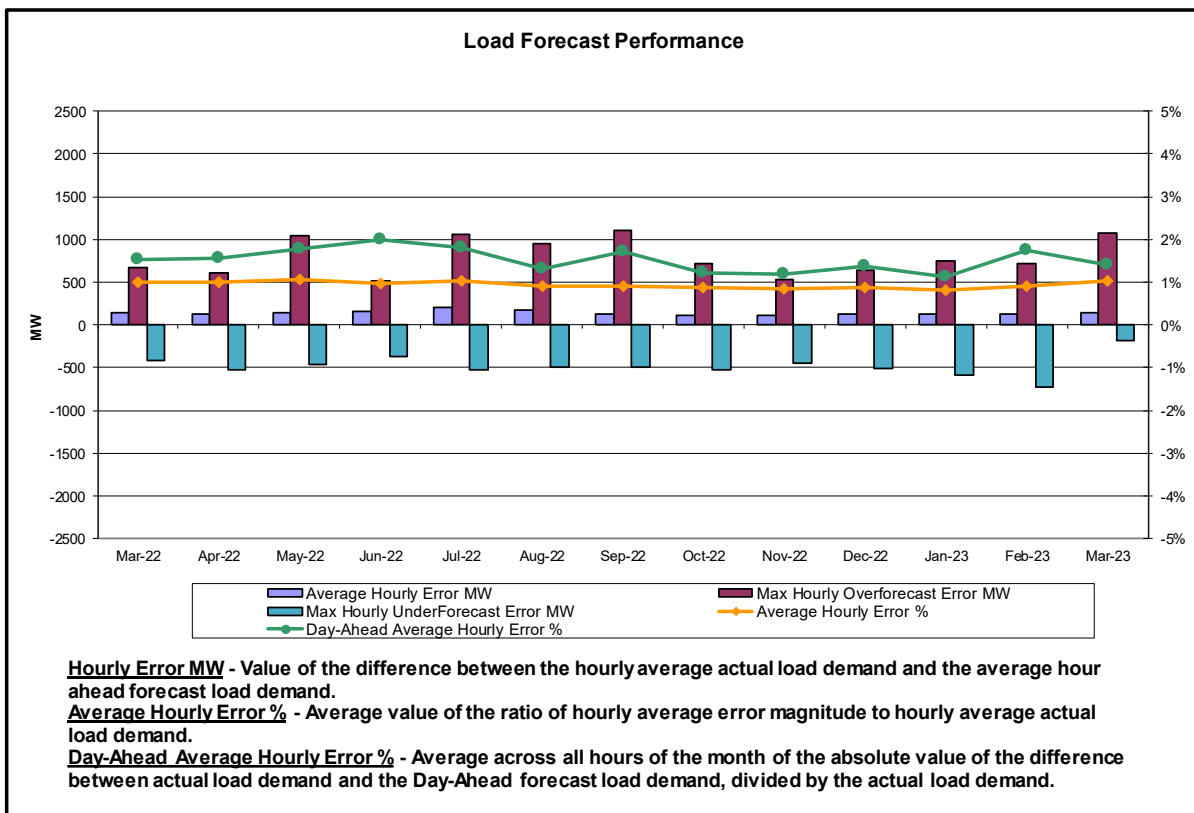
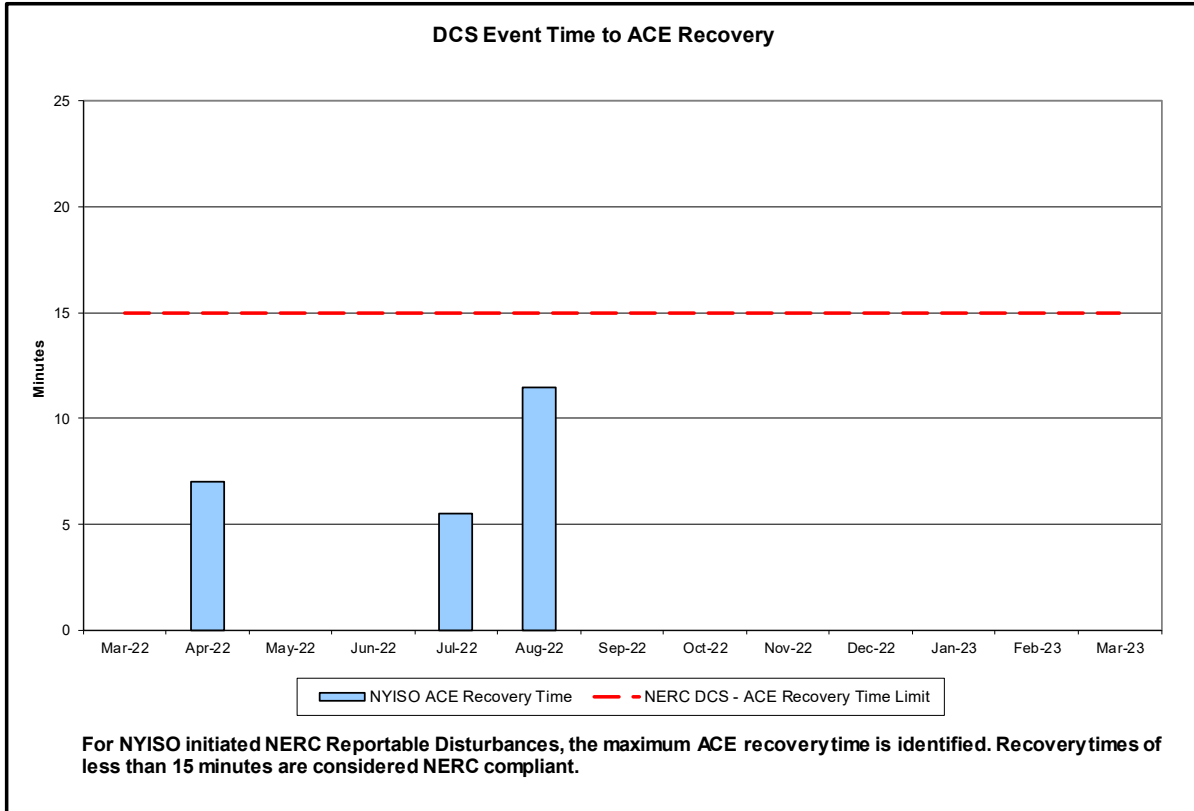


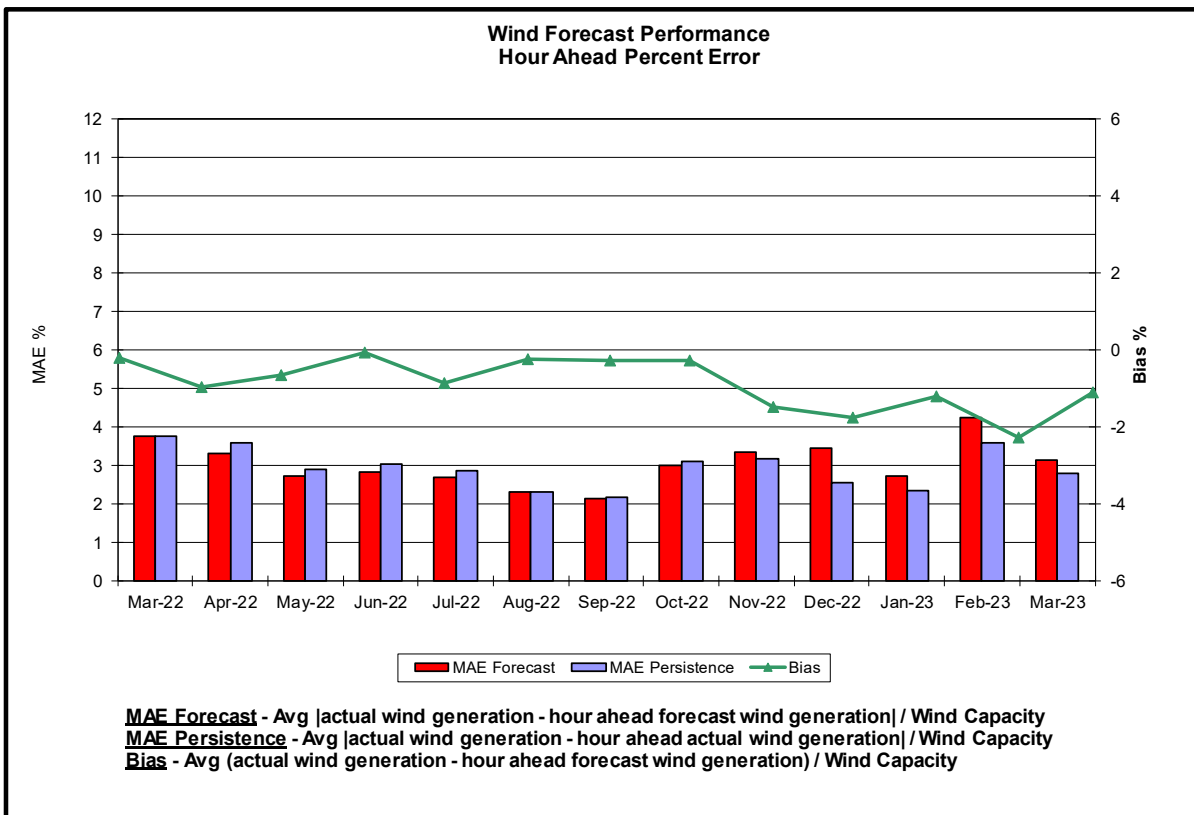
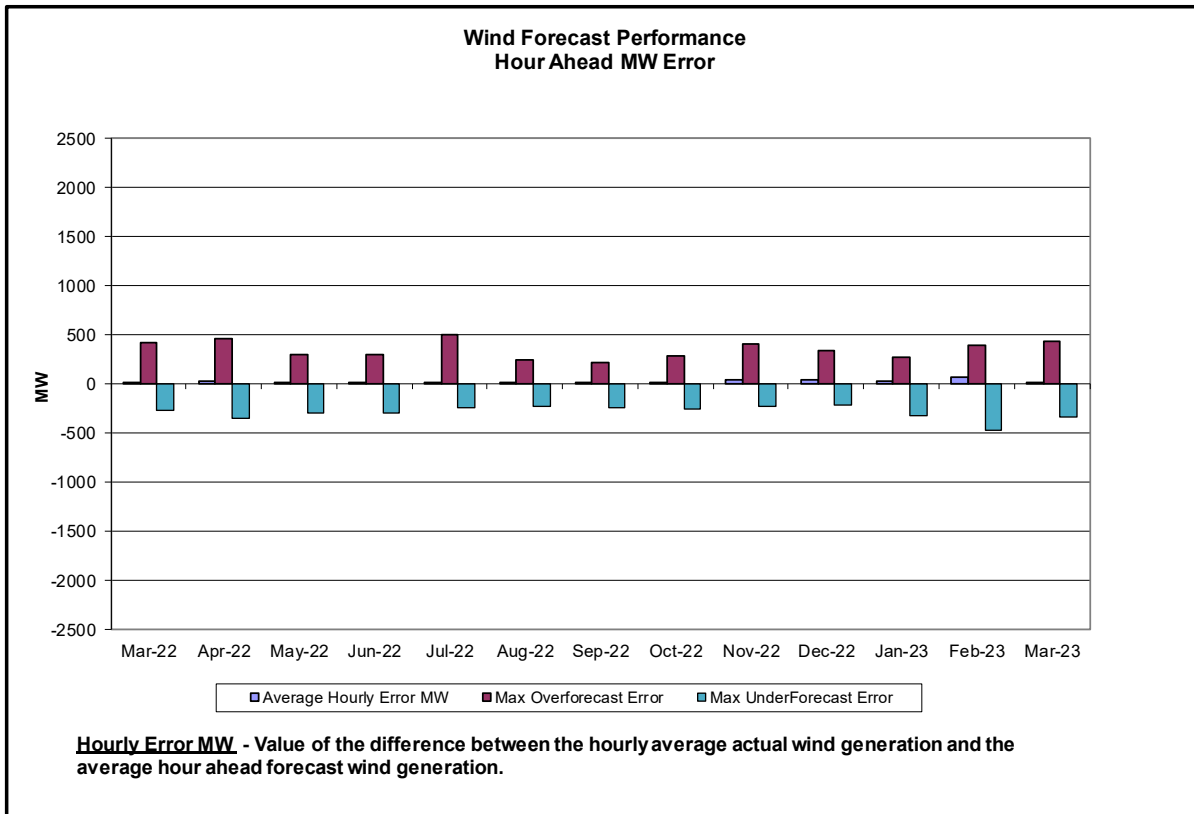
The amount of time the clock-minute average ACE exceeds the clock-minute Balancing Authority ACE Limit (BAAL) is an indicator of the NYISO Area resource and demand balancing. The maximum BAAL exceedance time is identified. BAAL exceedances of less than 30 consecutive clock-minutes are NERC compliant.

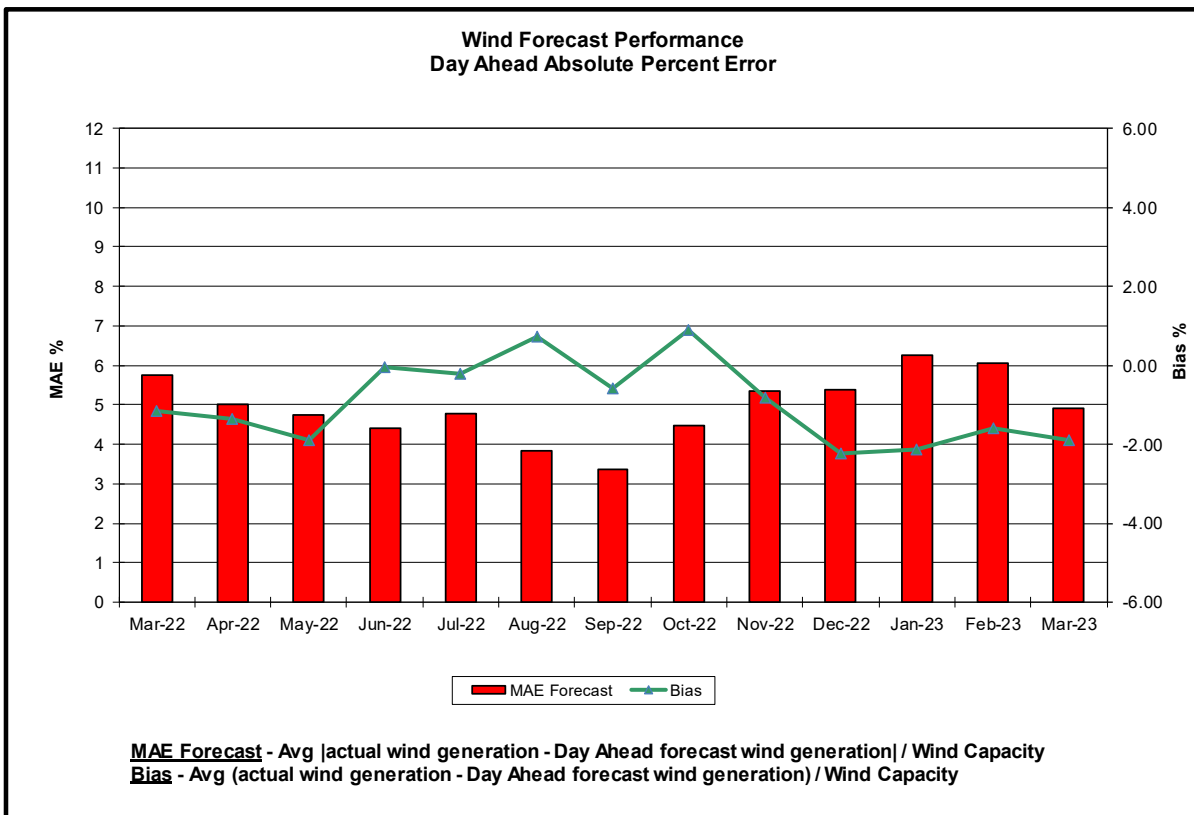
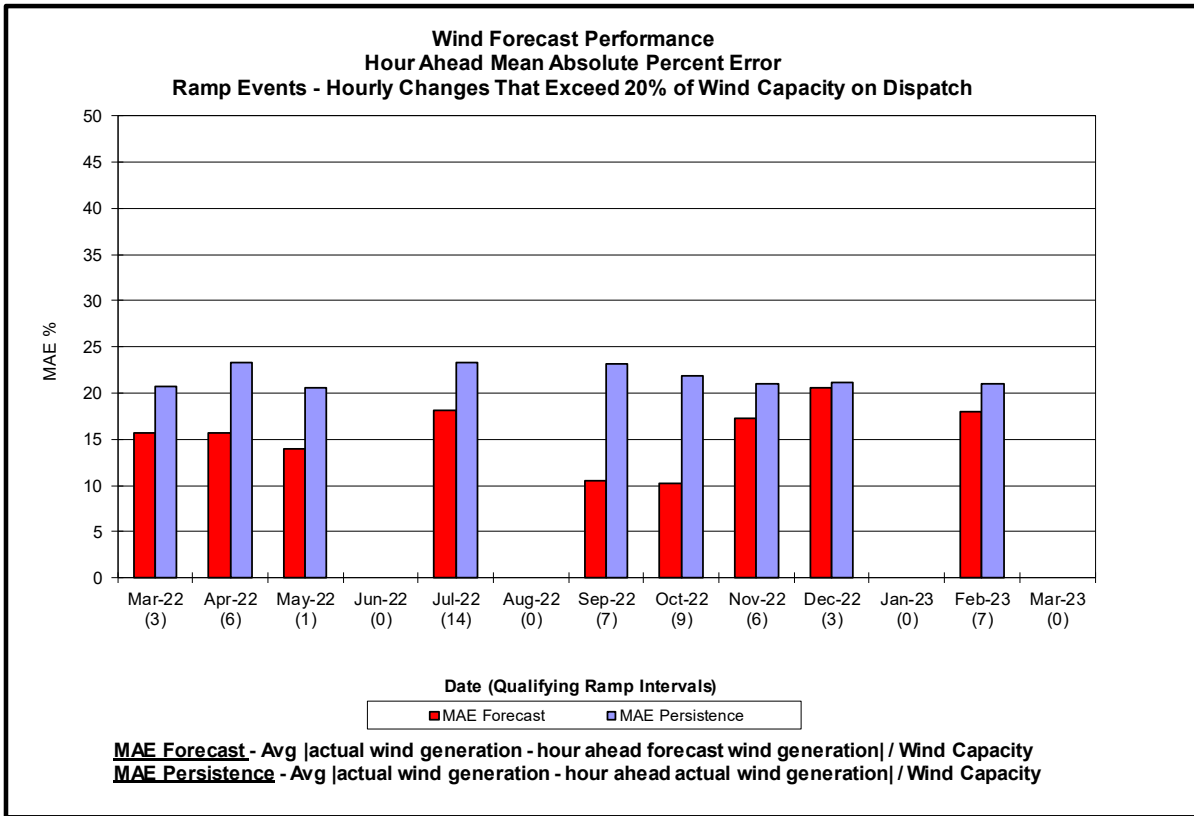
Reserve Activations

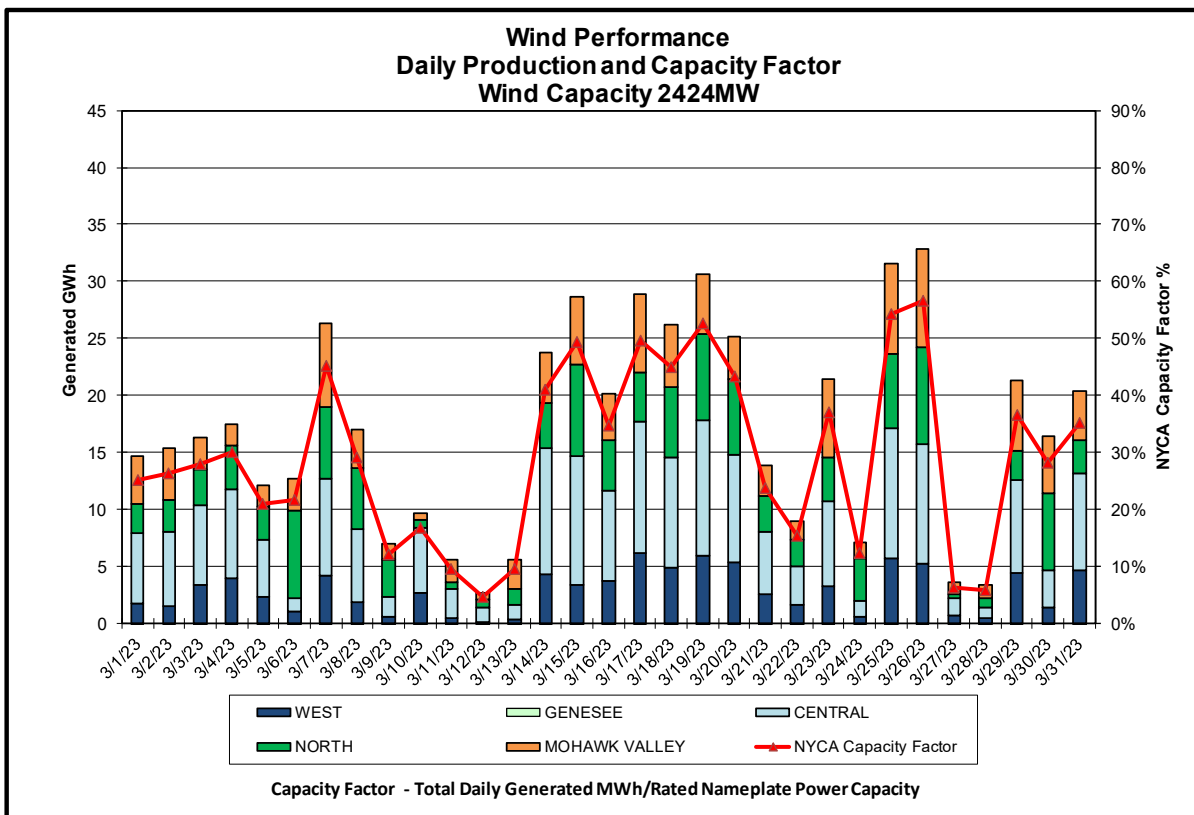
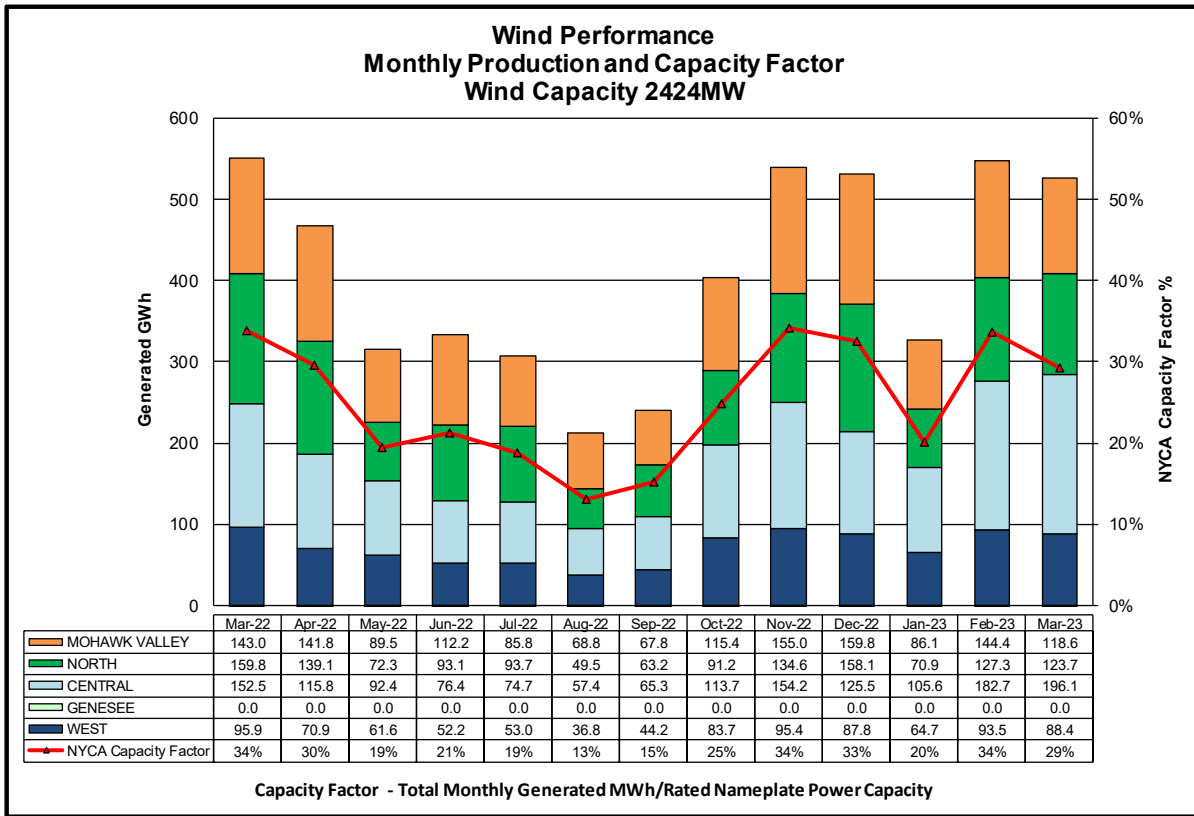


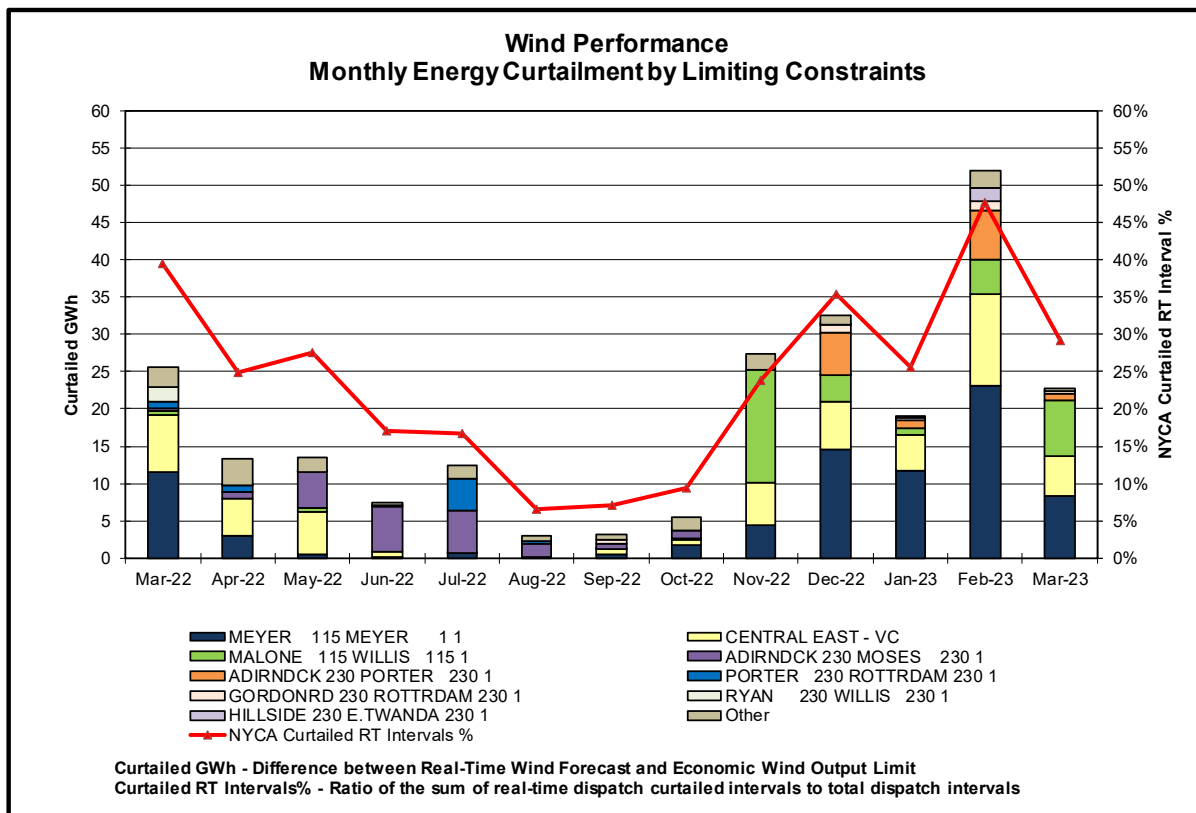
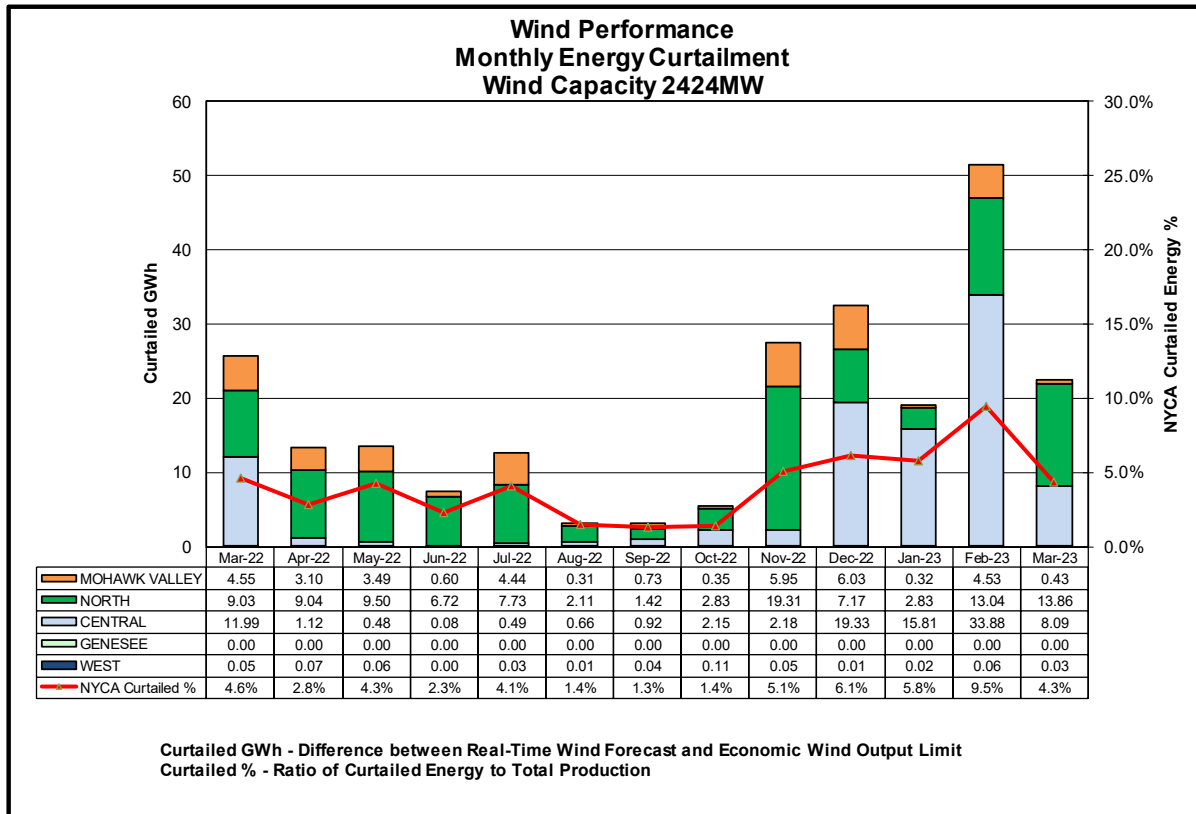
NYISO Reserve Activations are indicators of the need to respond to unexpected operational conditions within the NYISO Area or to assist a neighboring Area (Simultaneous Activation of Reserves) by activating an immediate resource and demand balancing operation.

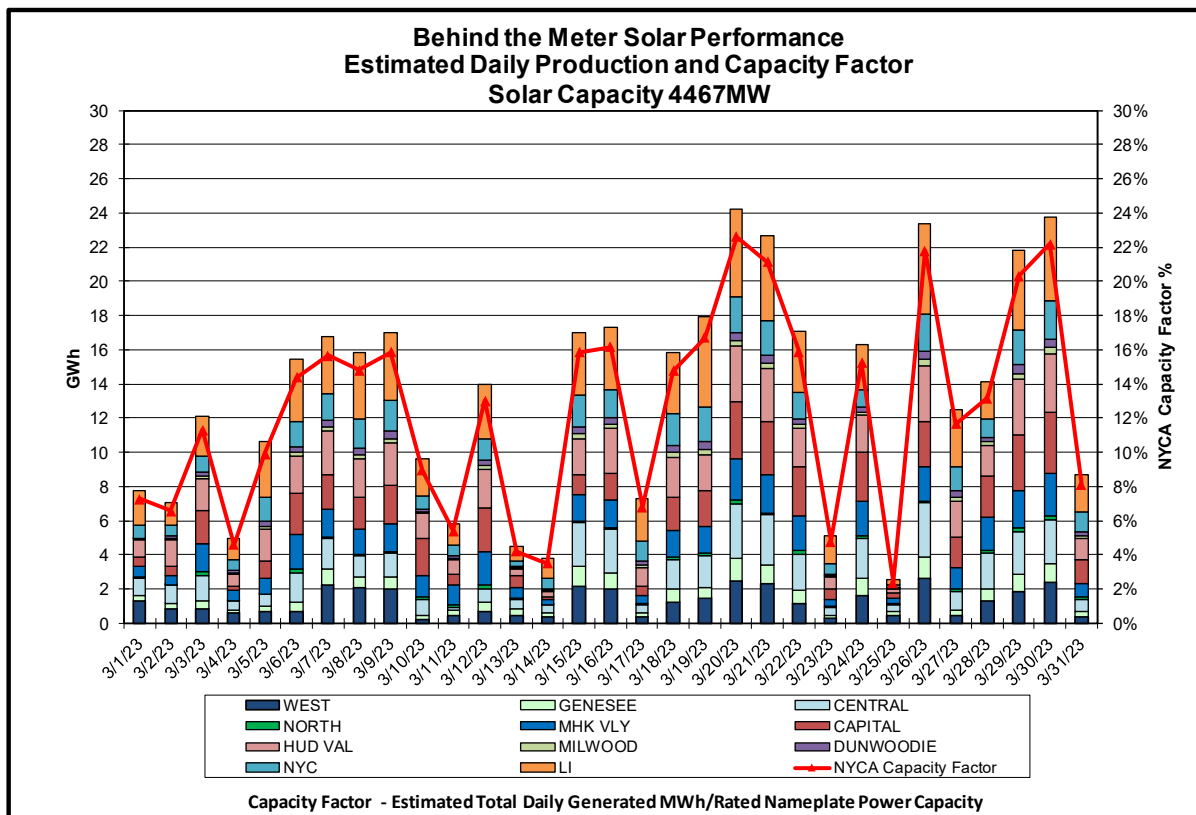
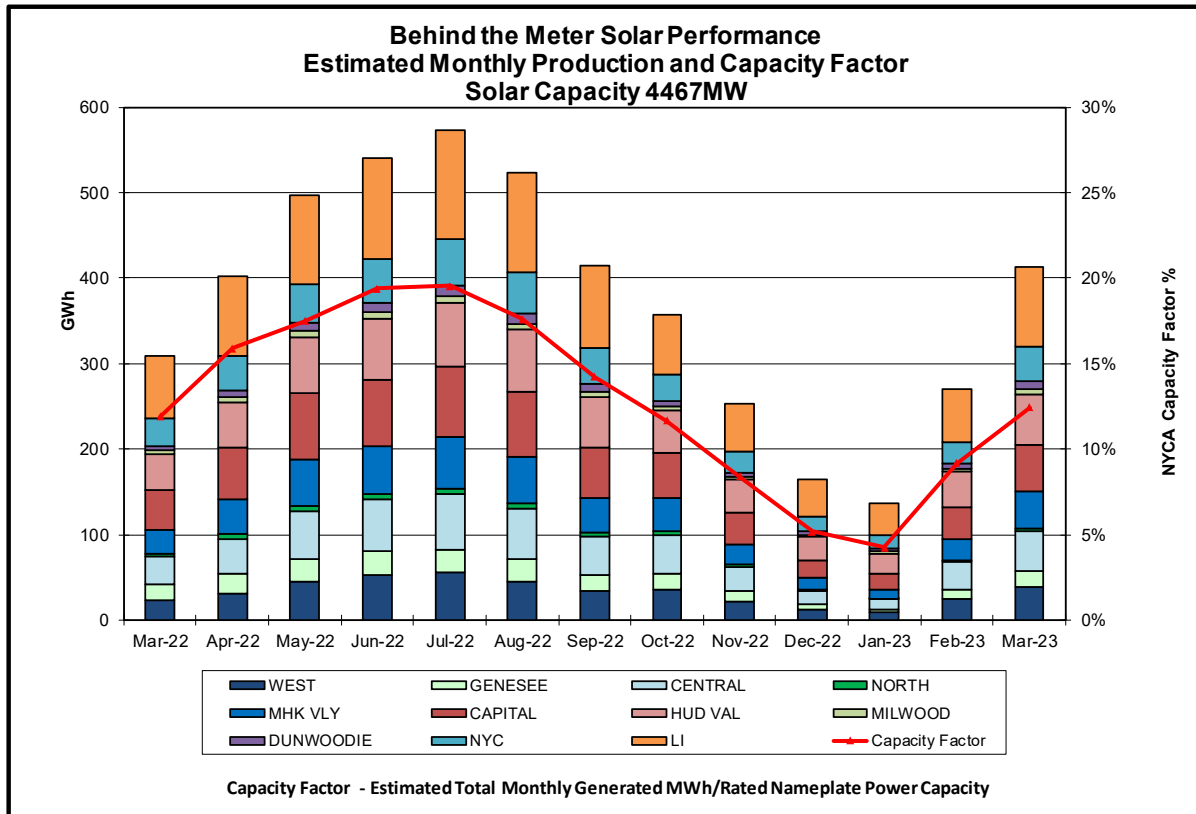


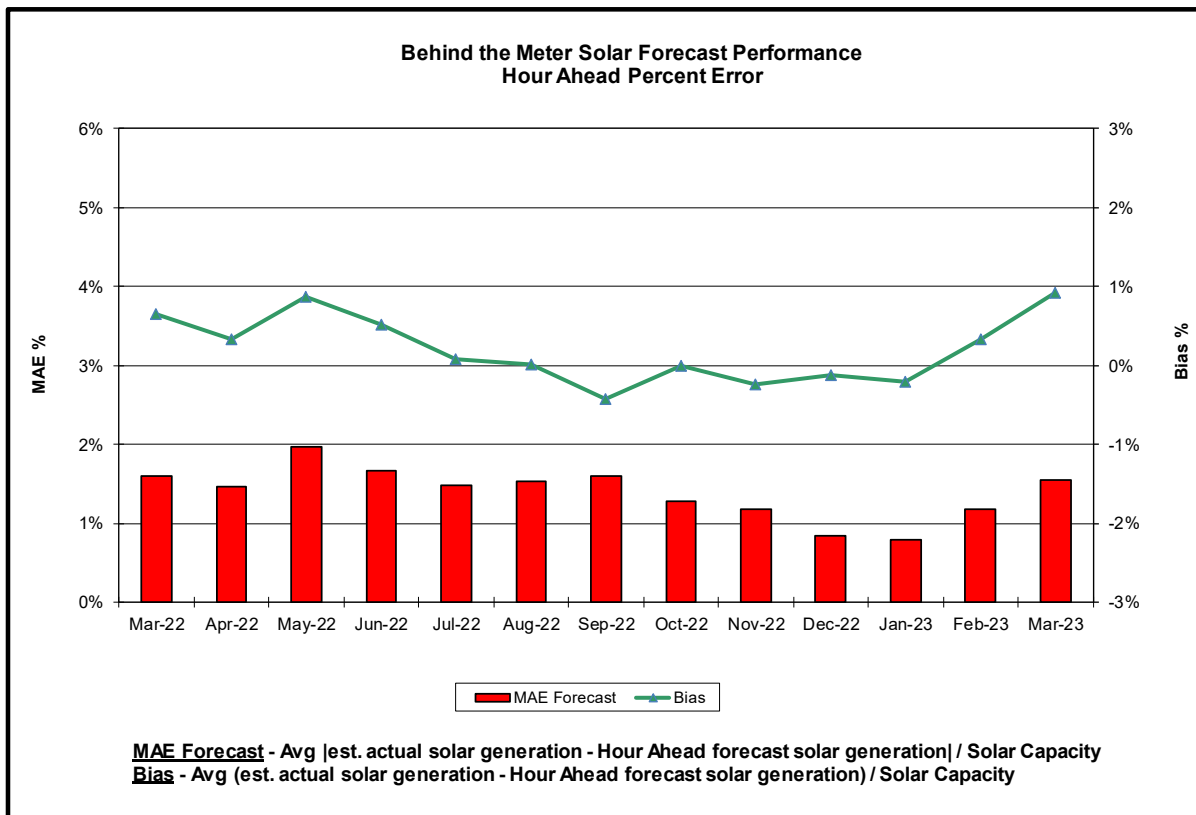
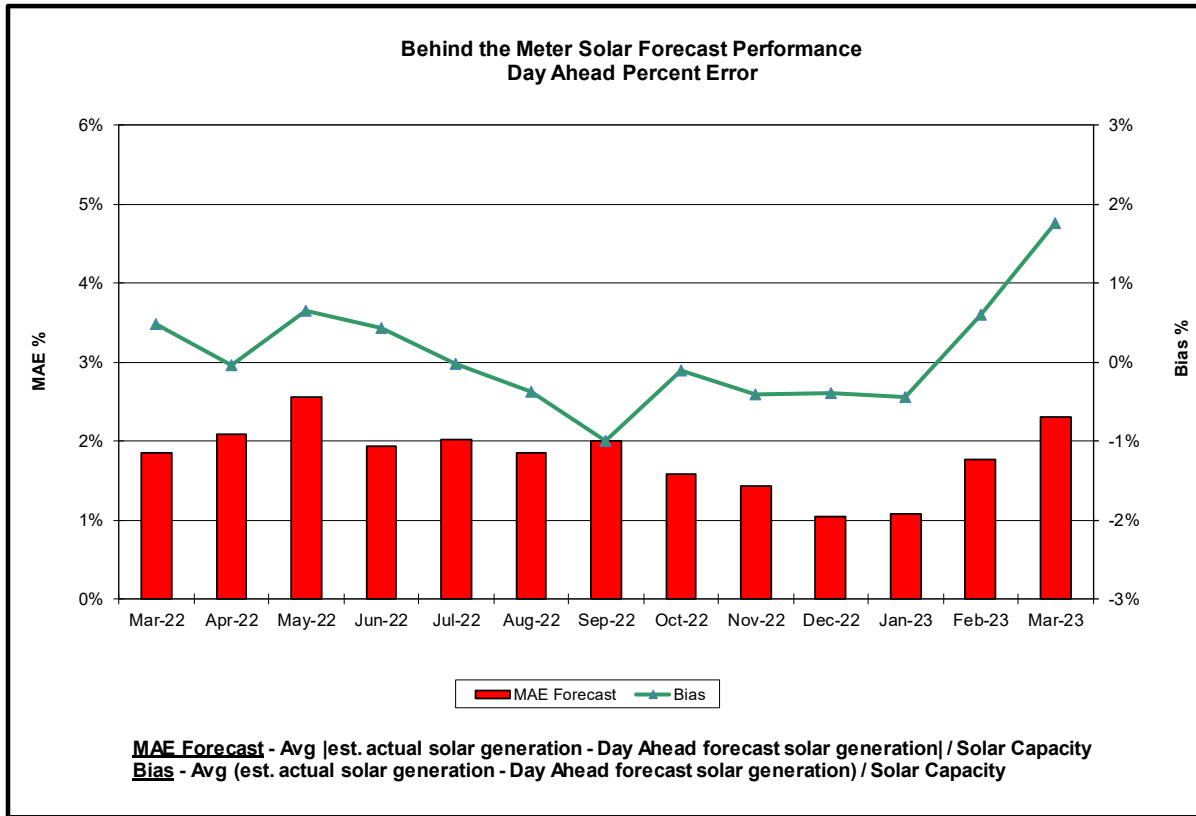


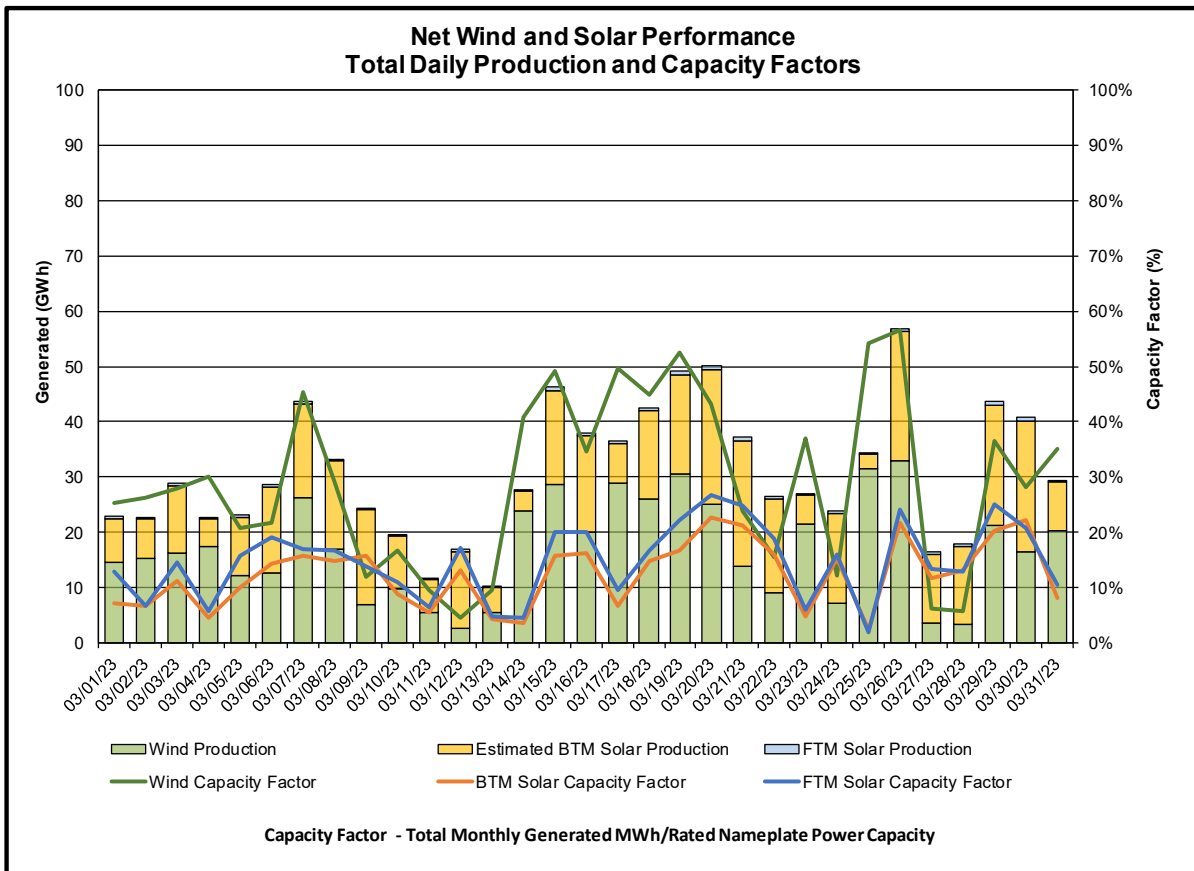
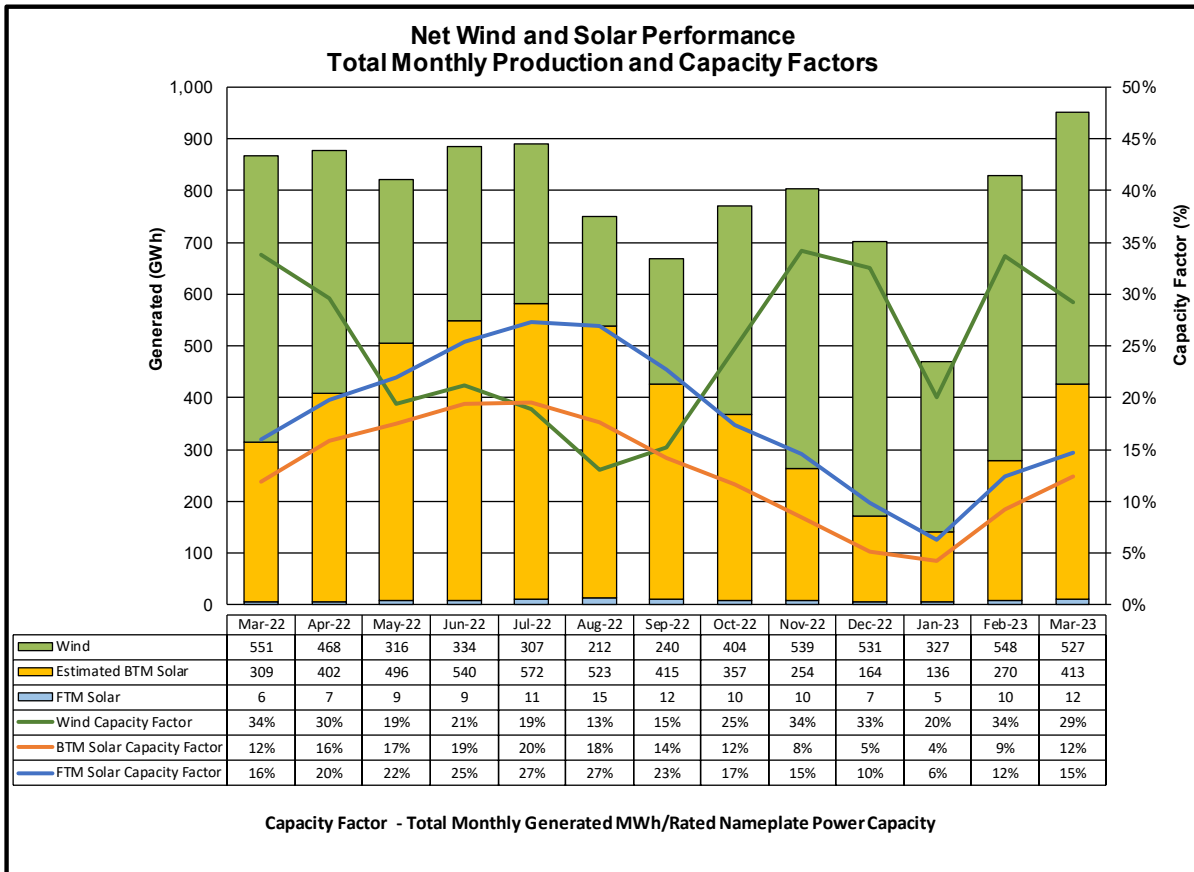


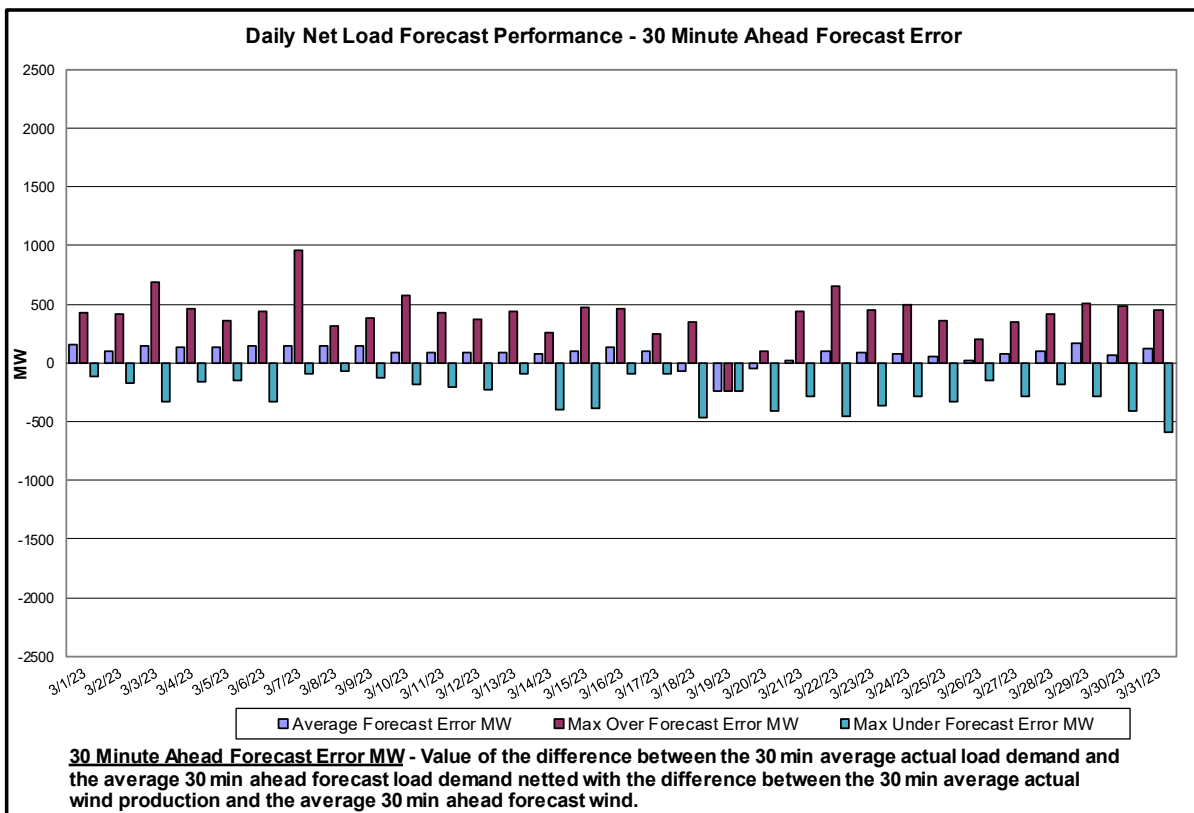
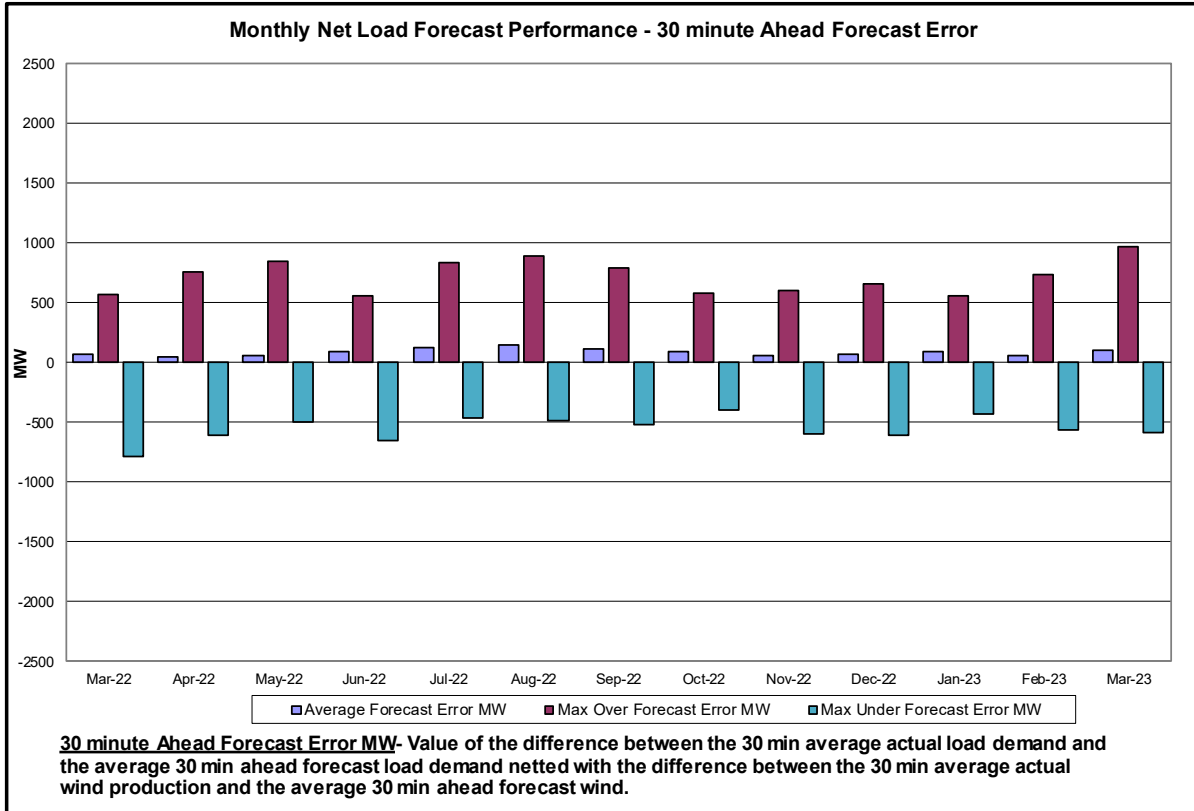


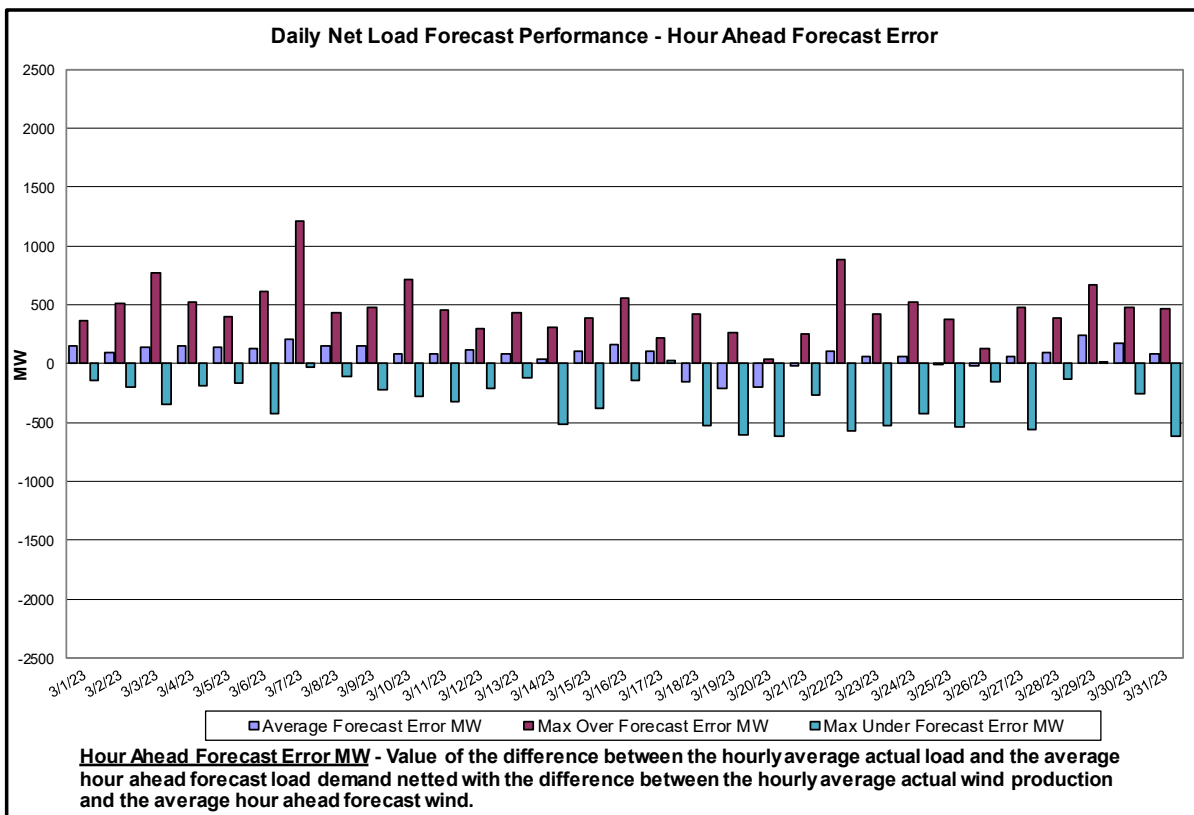
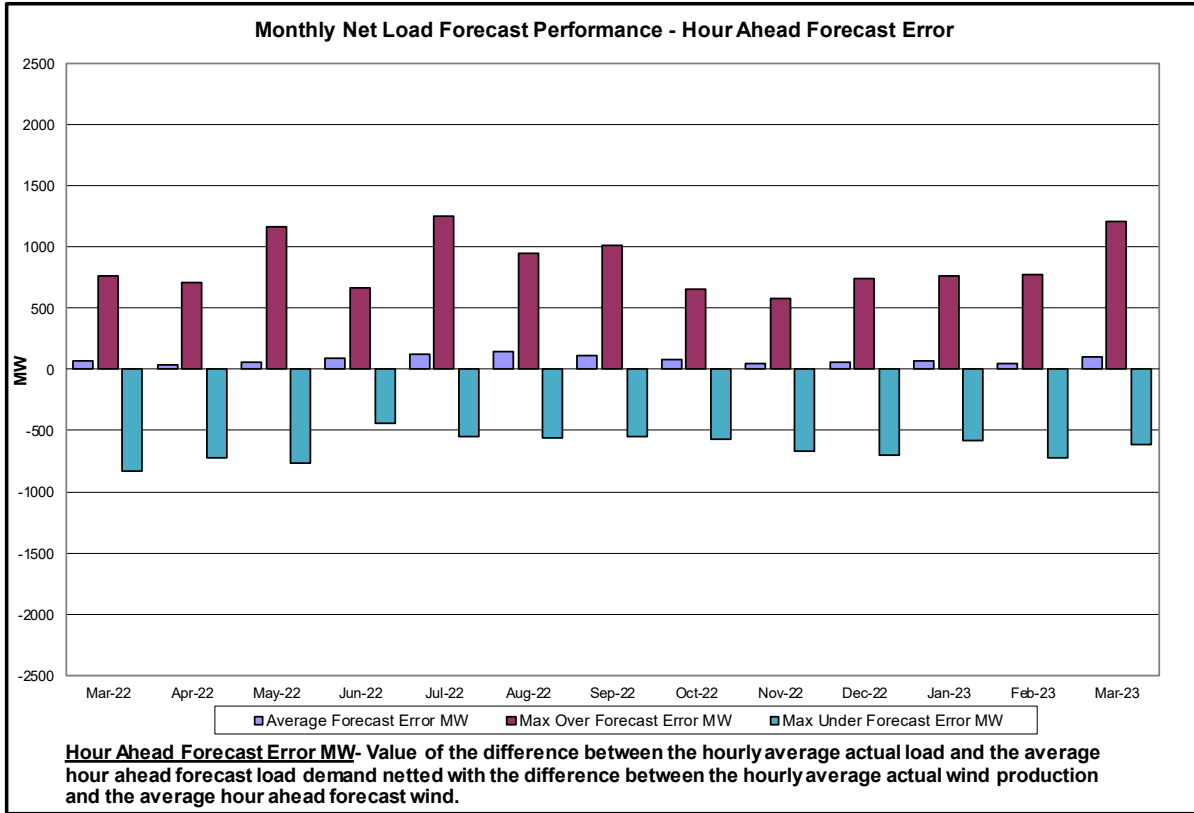


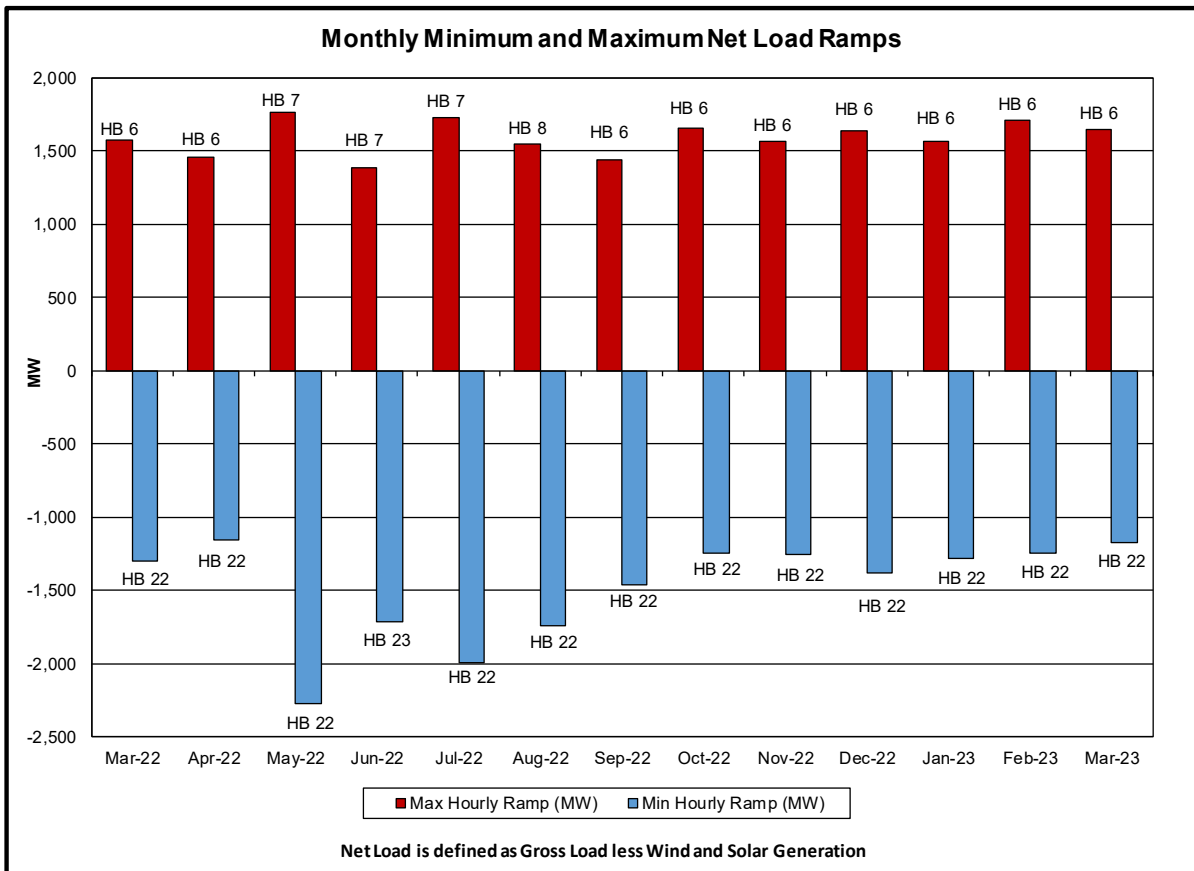
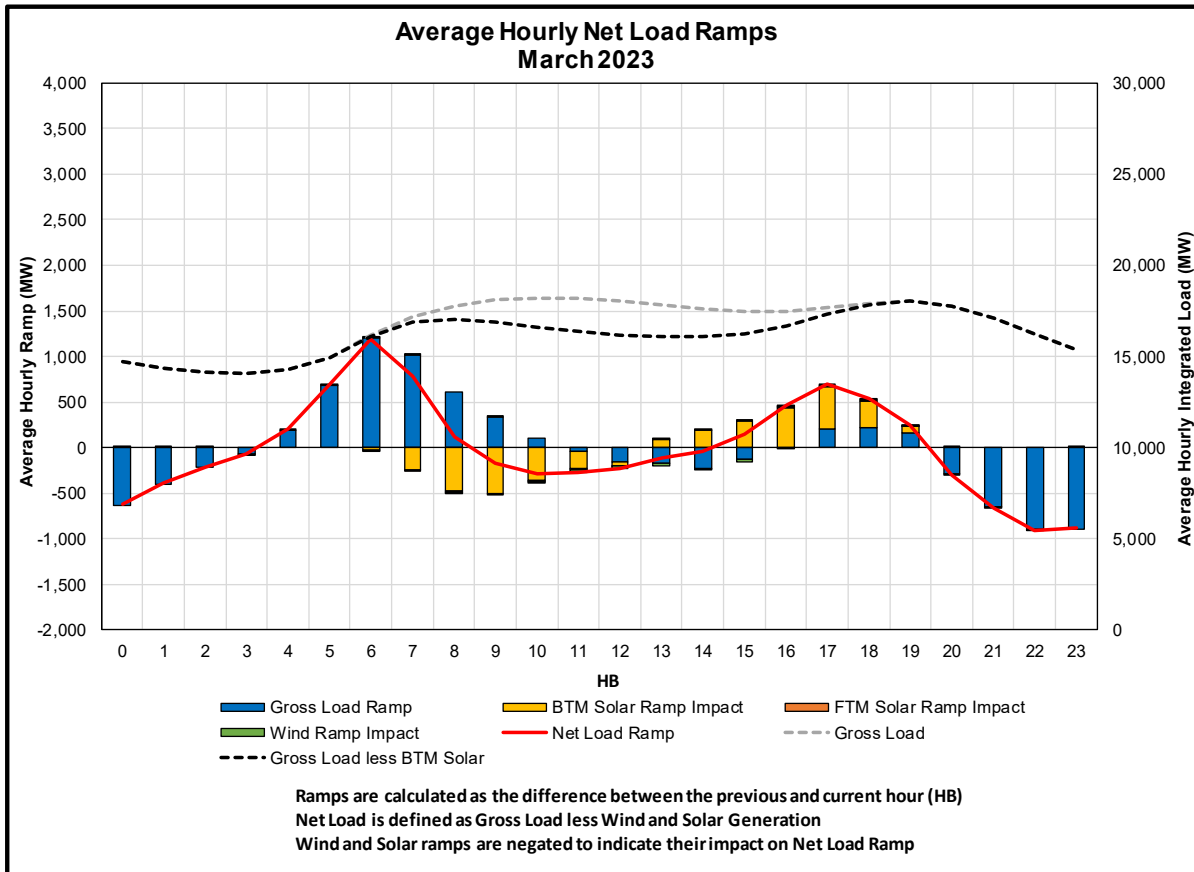




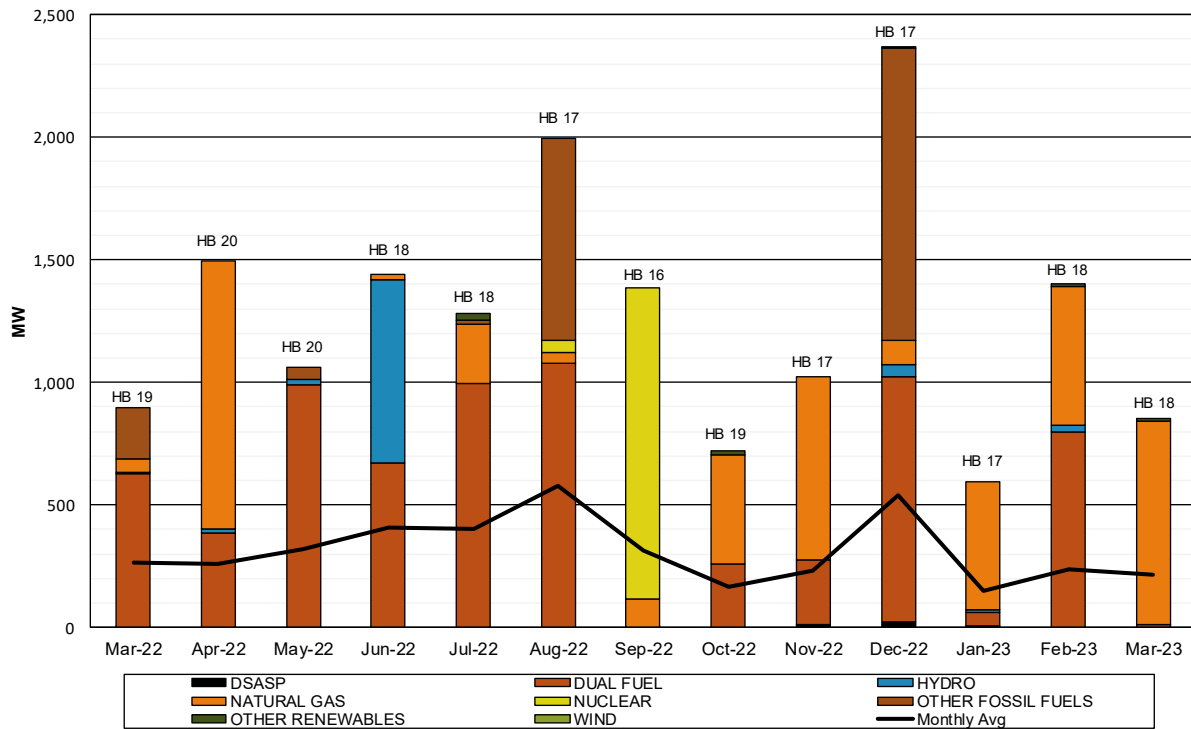








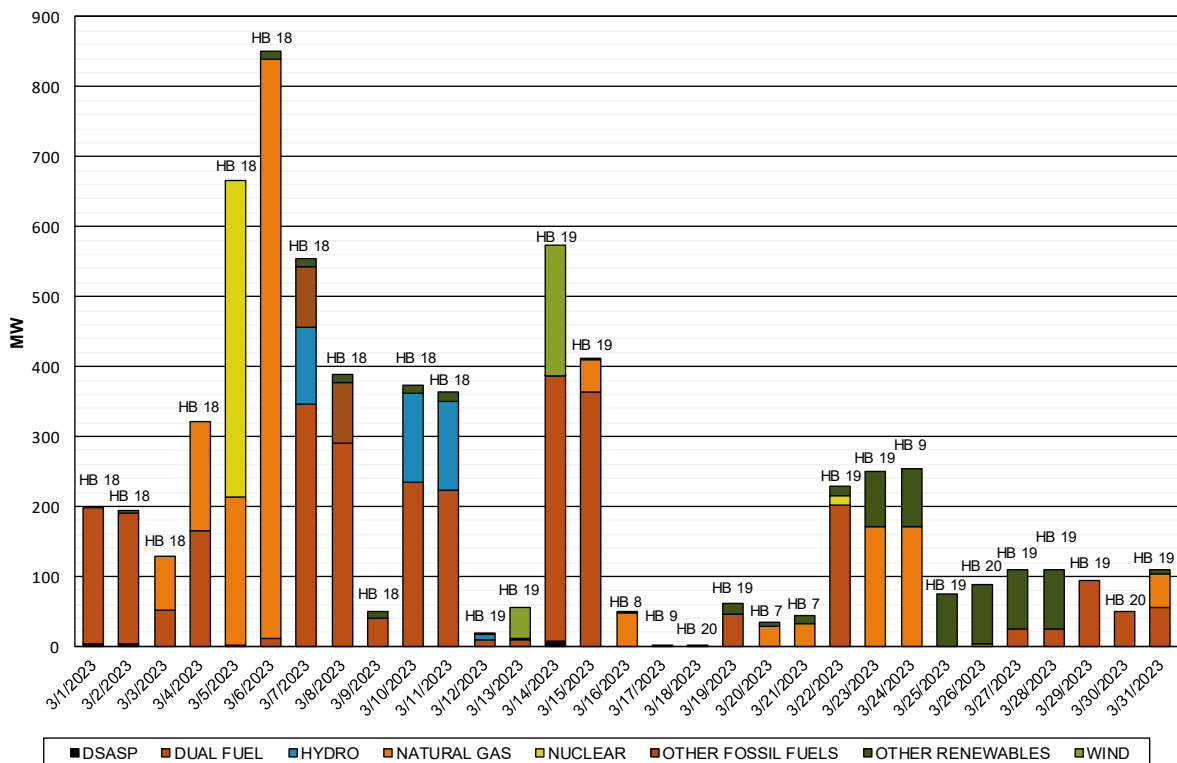
Monthly Maximum Day-Ahead Market Capacity Unavailable In Real Time



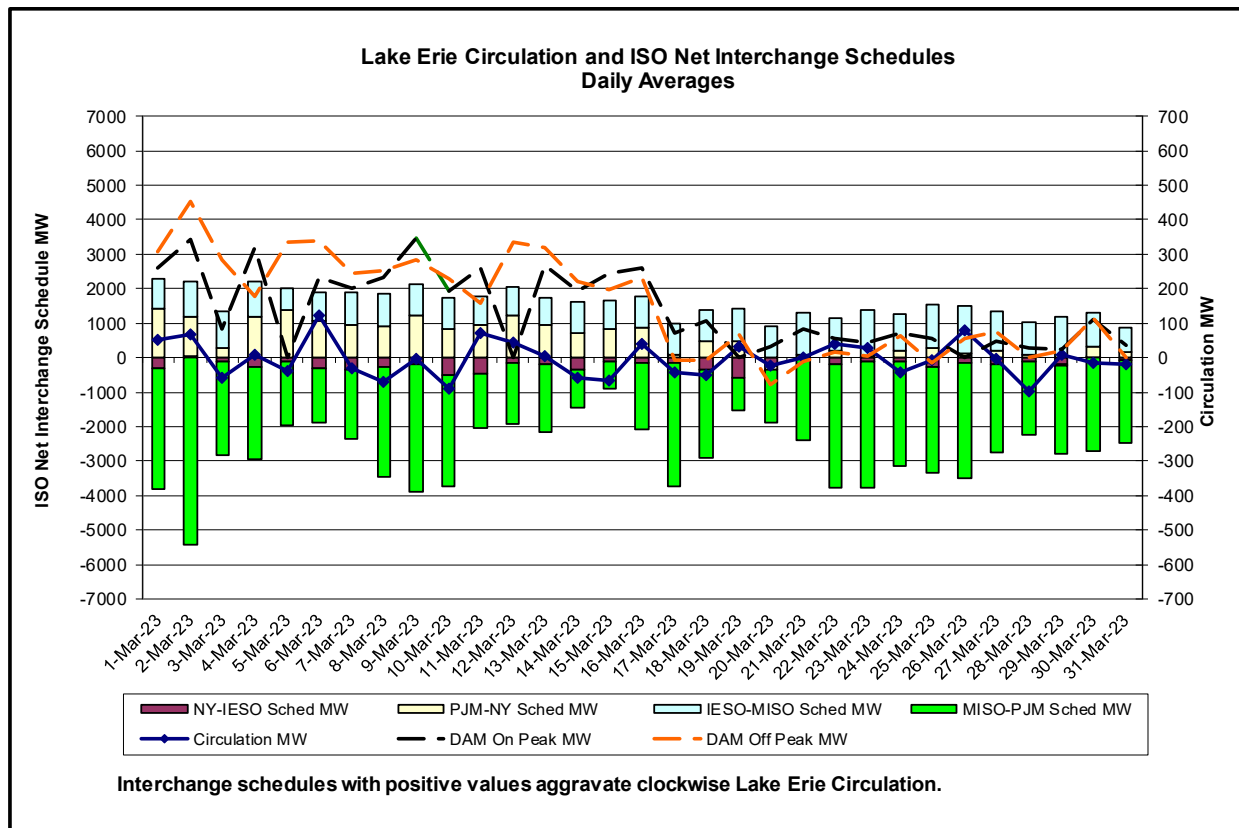
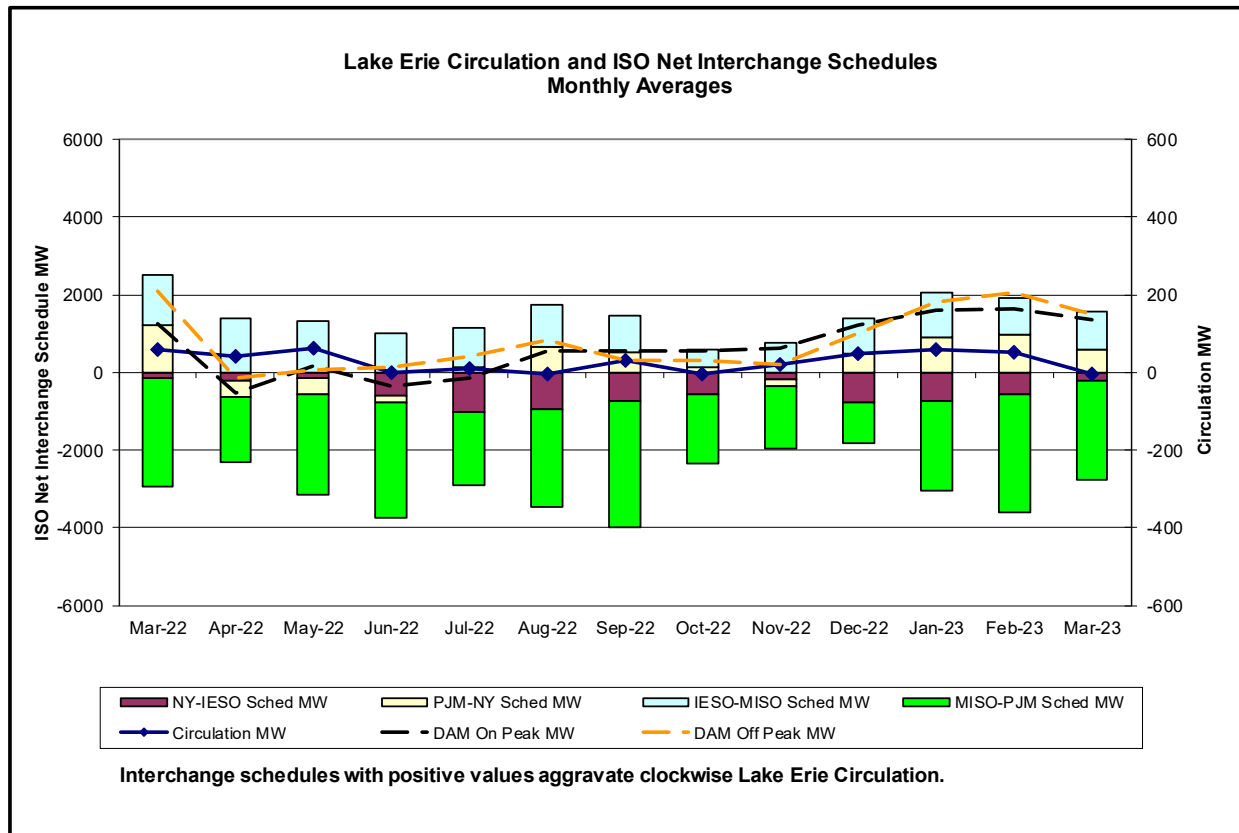
Unavailable Capacity is calculated as the difference of Day-Ahead Market (DAM) capacity relative to Real-Time (RT) capacity during RT peak load hour.

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

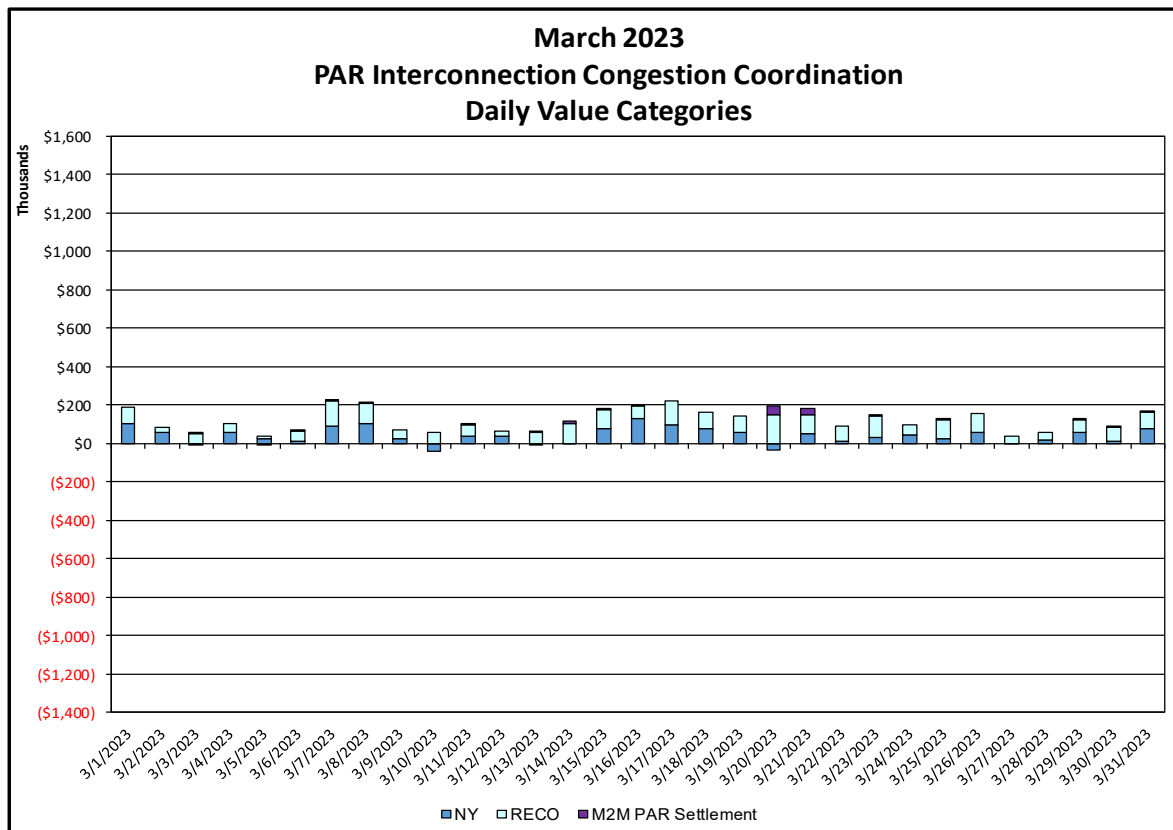
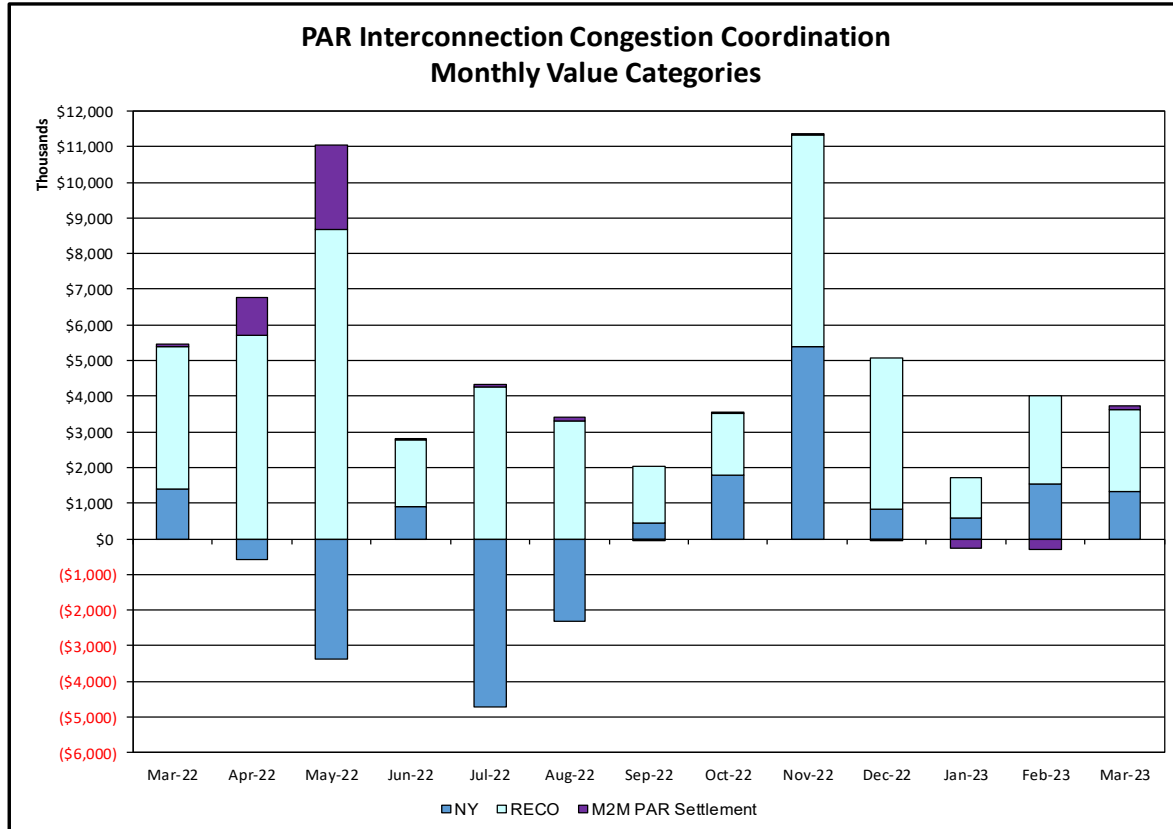
Daily Day-Ahead Market Capacity Unavailable In Real Time



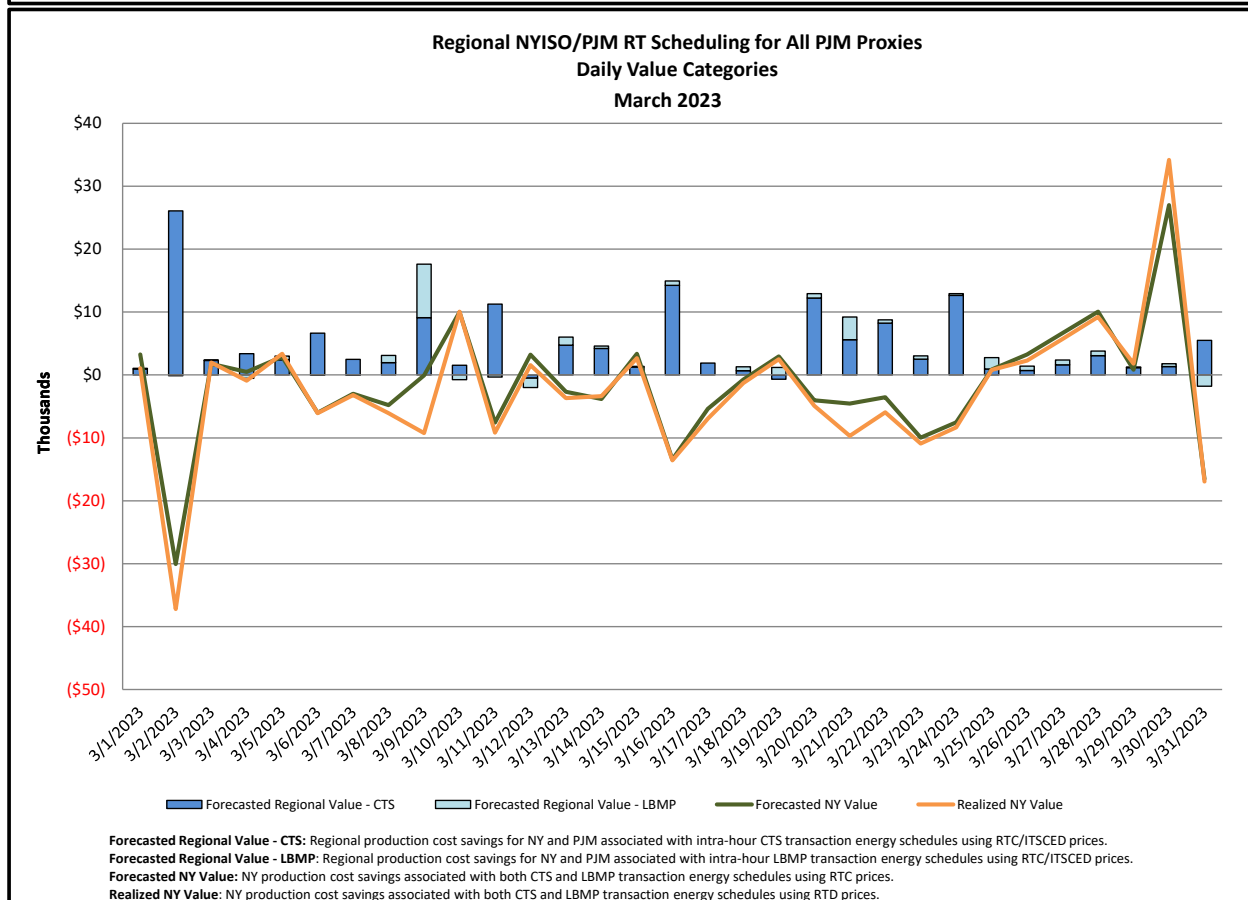
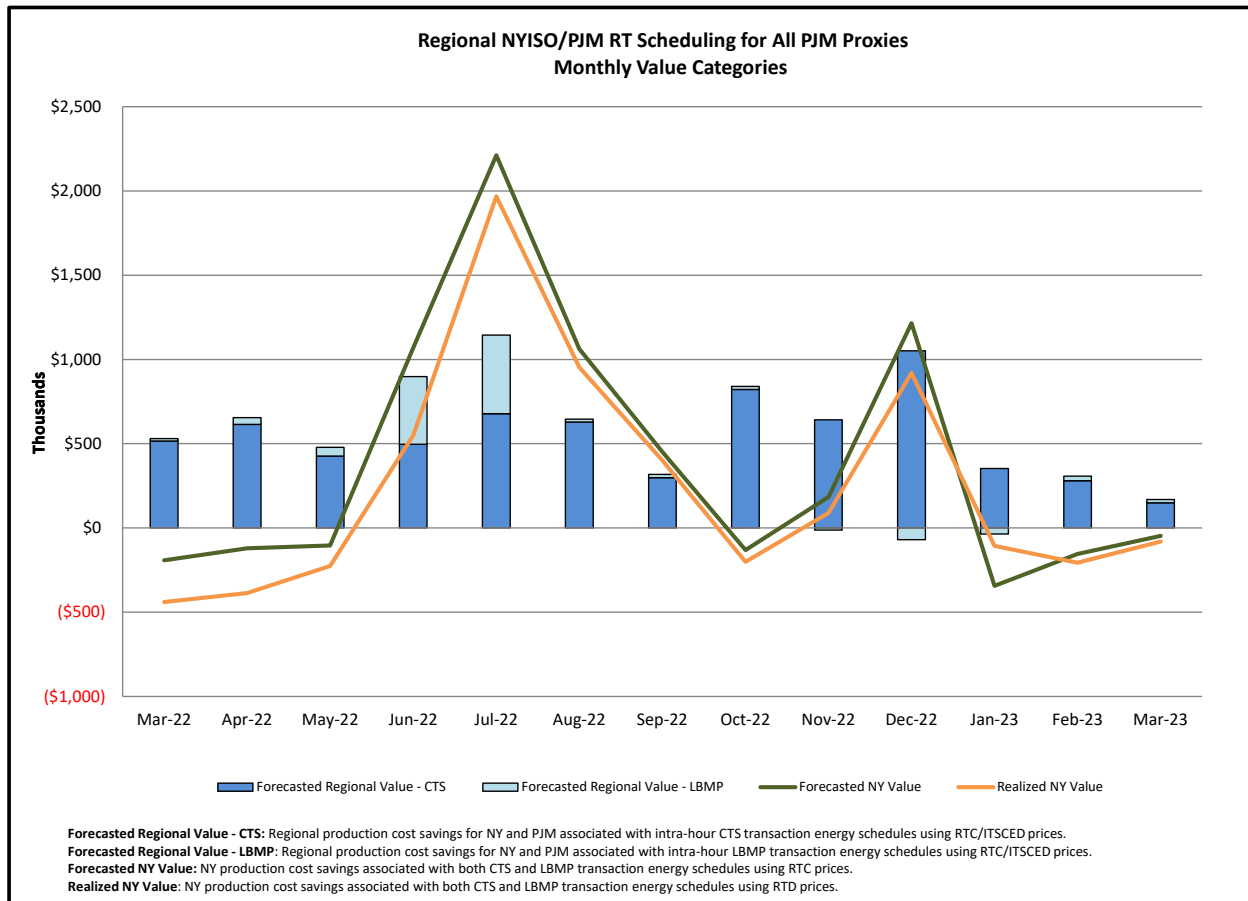
Unavailable Capacity is calculated as the difference of Day-Ahead Market (DAM) capacity relative to Real-Time (RT) capacity during RT peak load hour.

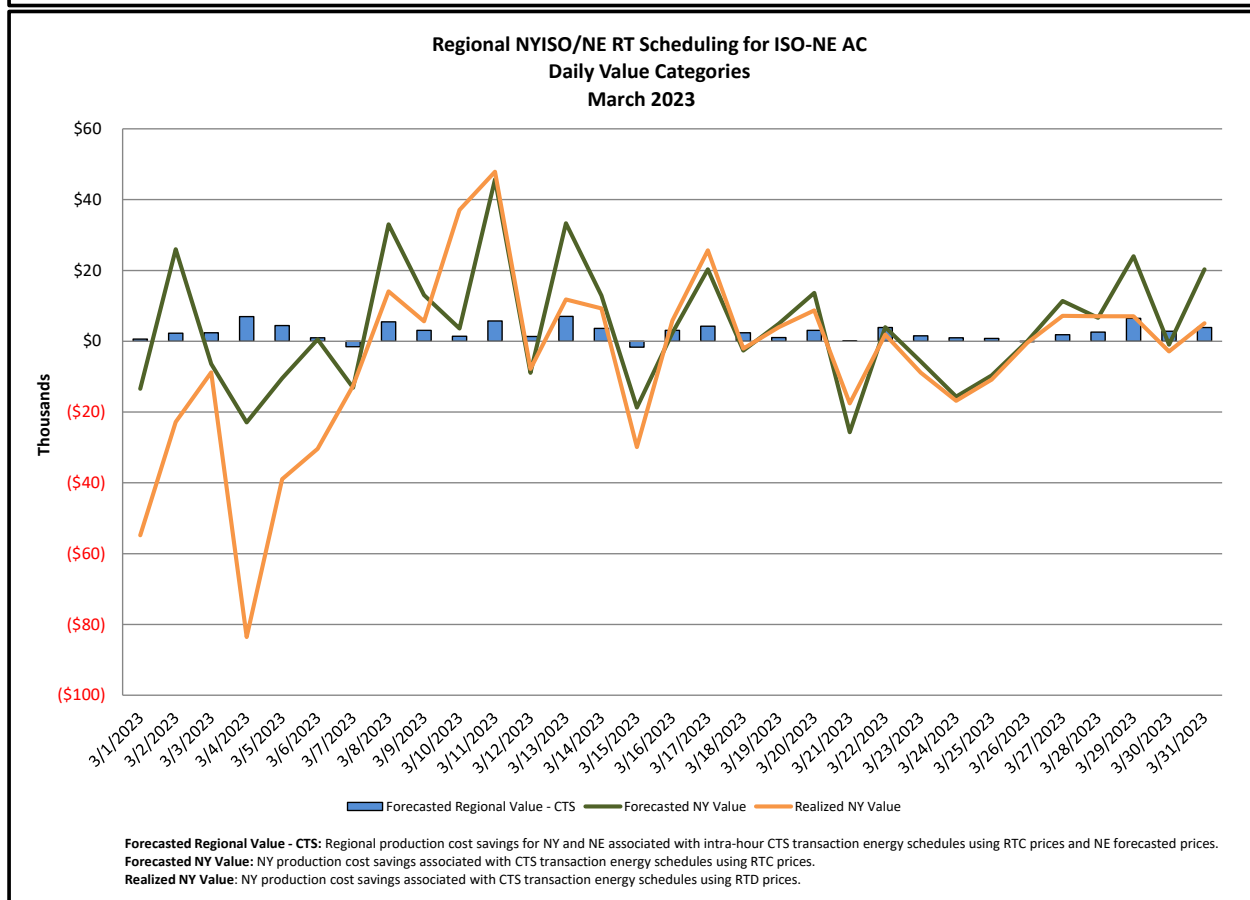
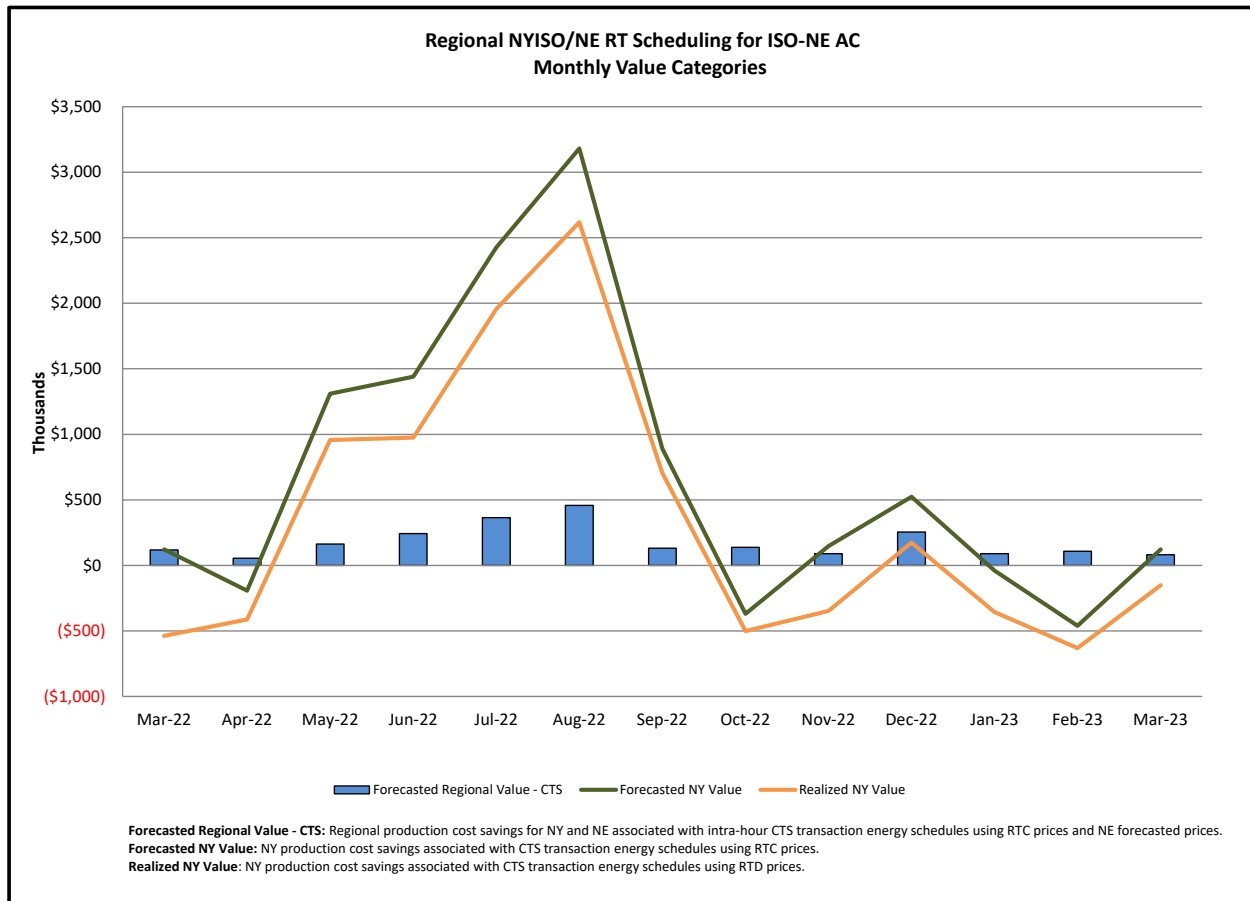


Broader Regional Market Performance Metrics

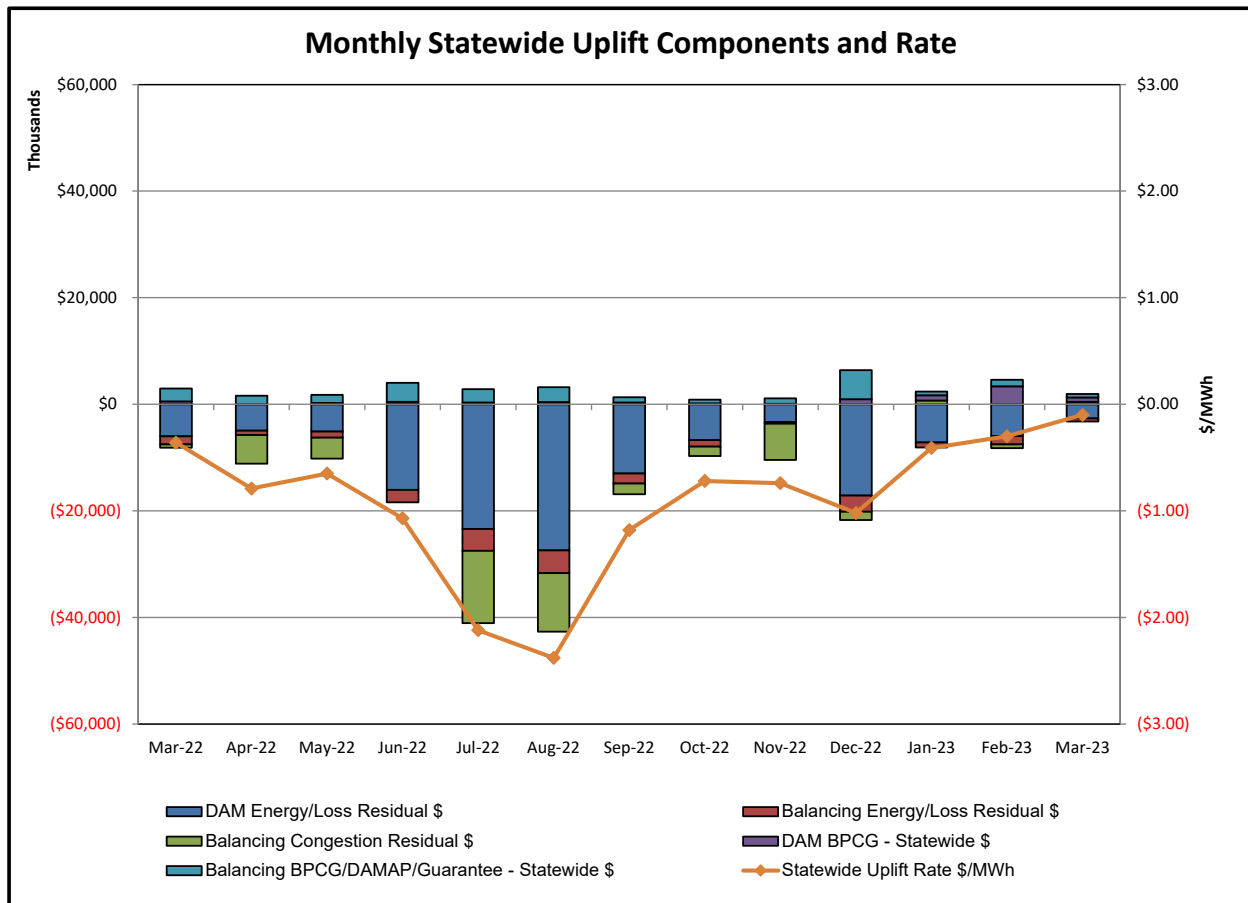


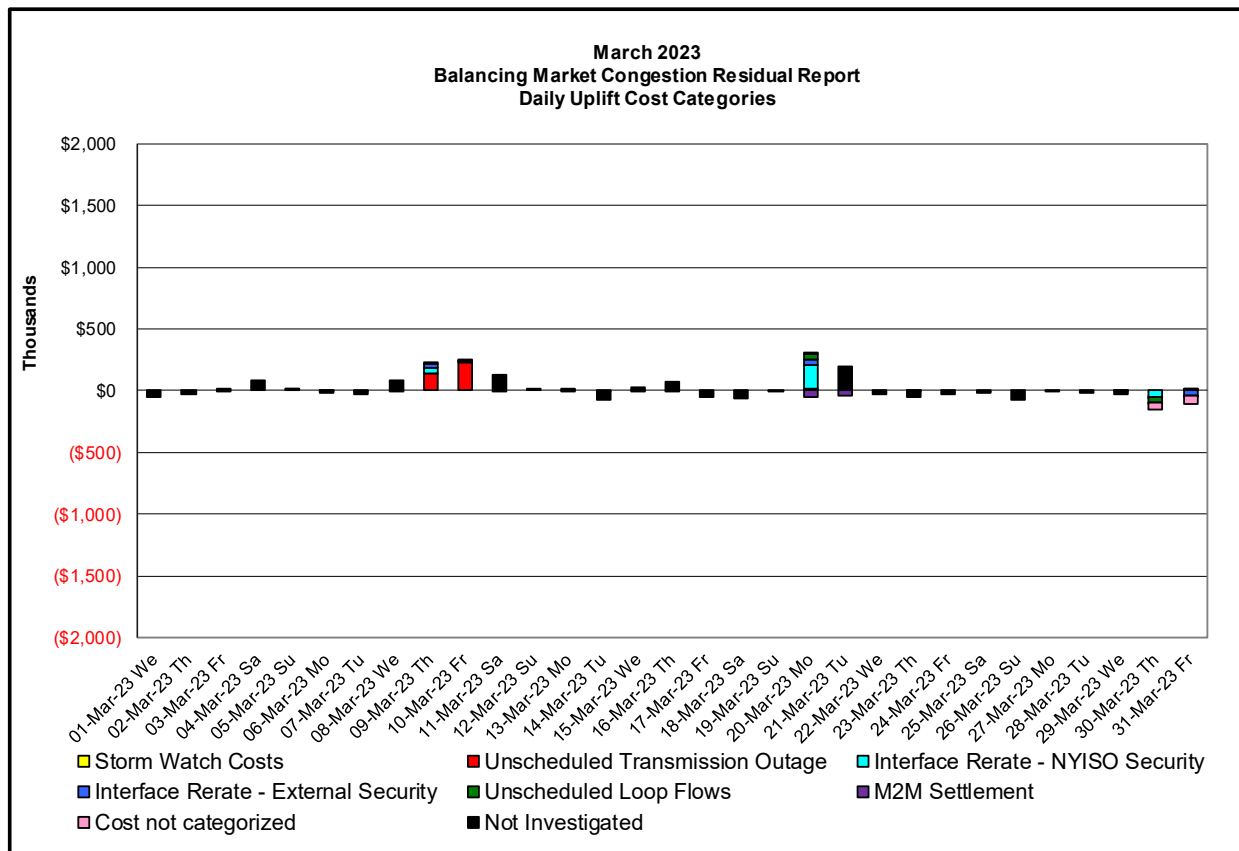
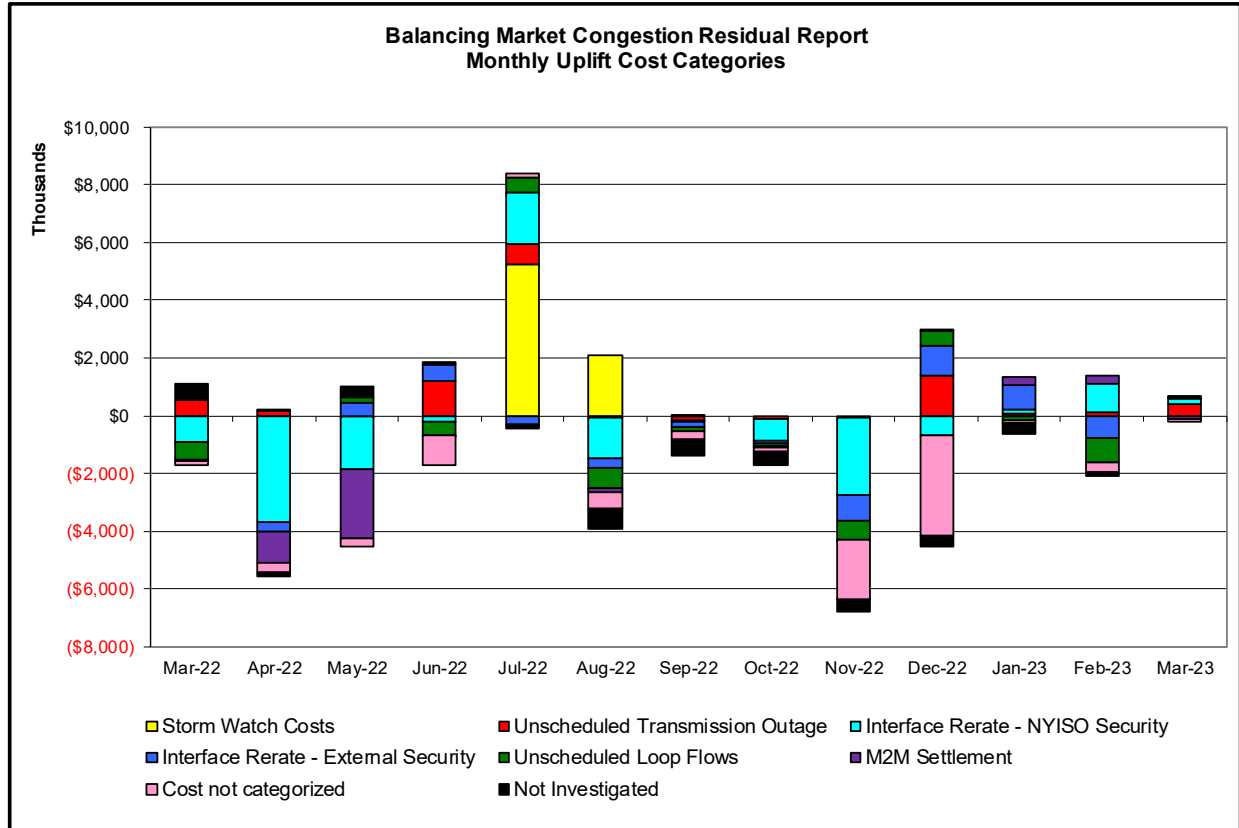
<u>PAR Interconnection Congestion Coordination</u>	
<u>Category</u>	<u>Description</u>
NY	Represents the value NY realizes from Market-to-Market PAR Coordination when experiencing congestion. This is the estimated savings to NY for additional deliveries into NY
RECO	Represents the value of PJM's obligation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

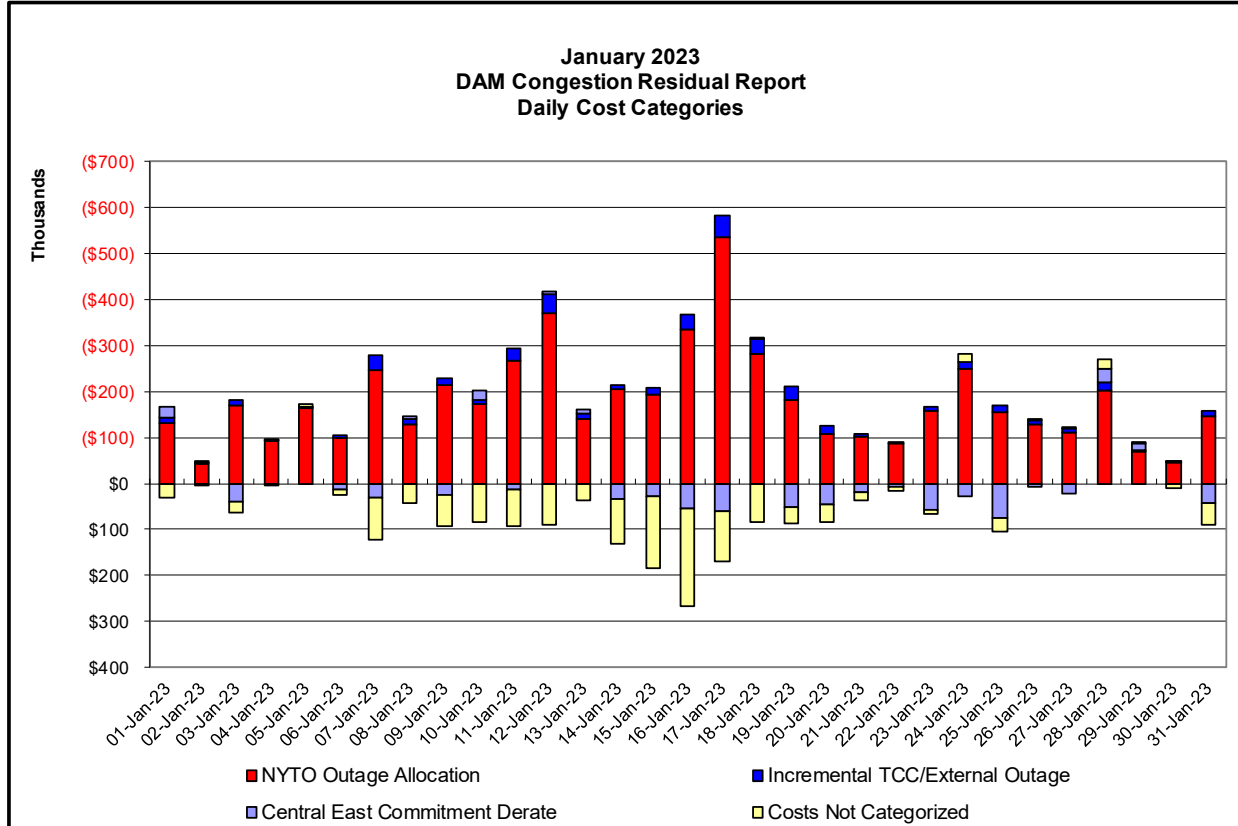
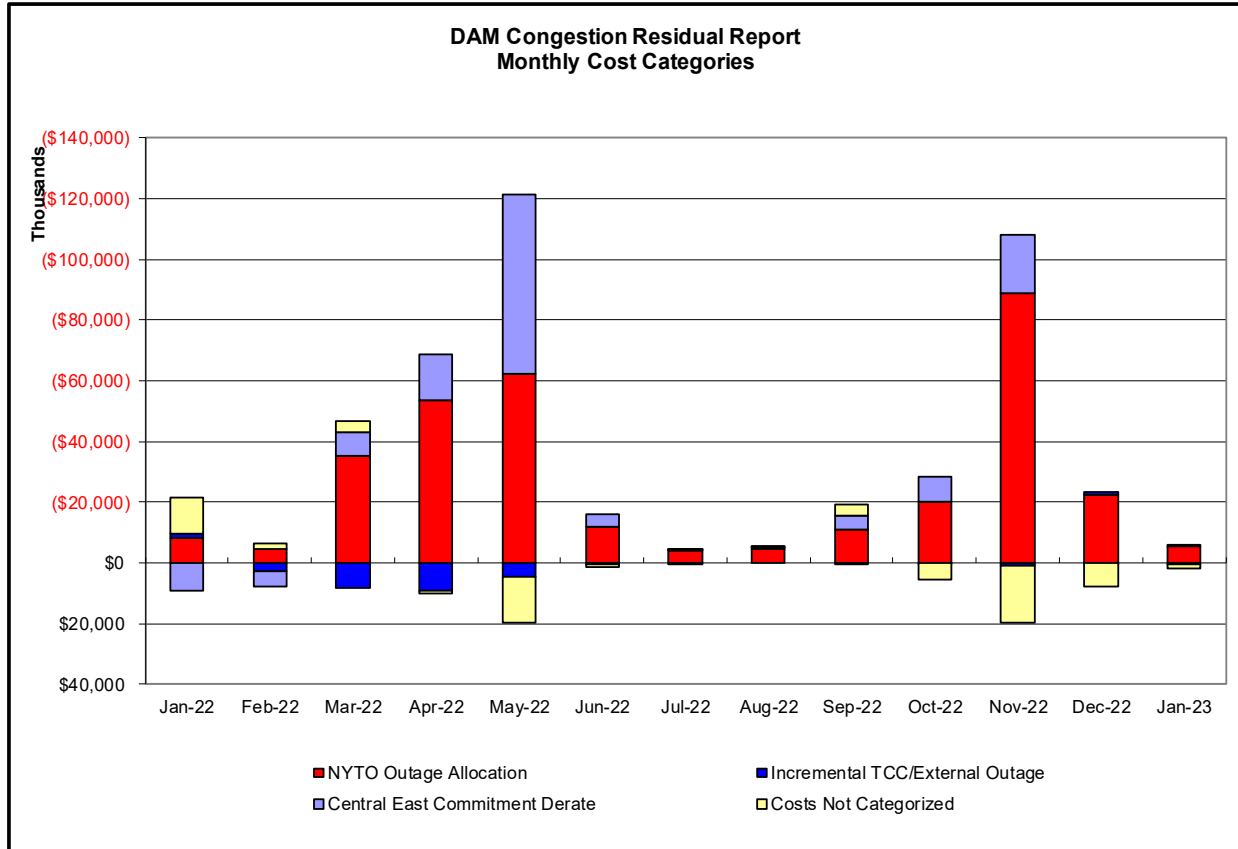




Day's investigated in March: 1,9,10,20,30,31		
Event	Description	March Dates
	Forced Outage Brownfalls-Taylorville 115kV (#4)	9
	Forced Outage Shore Road 345/138kV Bk 1	9,10
	Forced Outage Valley Stream-East Garden City 138kV (#261)	20
	Derate Adirondack-Porter 230kV (#12) I/o SIN:MSU1&7040& HQ GN&LD PROXY	1
	Derate Central East	1,9,20
	Derate Dunwoodie-ShoreRd 345kV (#Y50) I/o NEPTUNE HVDC TIE LINE	1,10
	Derate Foxhills-Greenwood 138kV (#29232) I/o SCB:GOETH(9):G23L&26&R26	9
	Derate Foxhills-Willowbrook 138kV (#29212)	9,20
	Derate Greenbush-Regeneron 115kV (#9) I/o Seabrook	1
	Derate Malone-Willis 115kV (#1-910) I/o TWR:MOSES MW2 & MAL4	20
	NYCA DNI Ramp Limit	1,9,30
	Uprate Central East	1,30,31
	HQ_CHAT DNI Ramp Limit	20
	IESO_AC ACTIVE DNI Ramp Limit	10
	NE_AC-NY DNI Ramp Limit	1,9
	NE_AC-NY Scheduling Limit	1,20,31
	NE_NNC1385-NY Scheduling Limit	1,9,10,20,30
	PJM_AC-NY DNI Ramp Limit	1,9
	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East	1,20,30,31
	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West	1,20

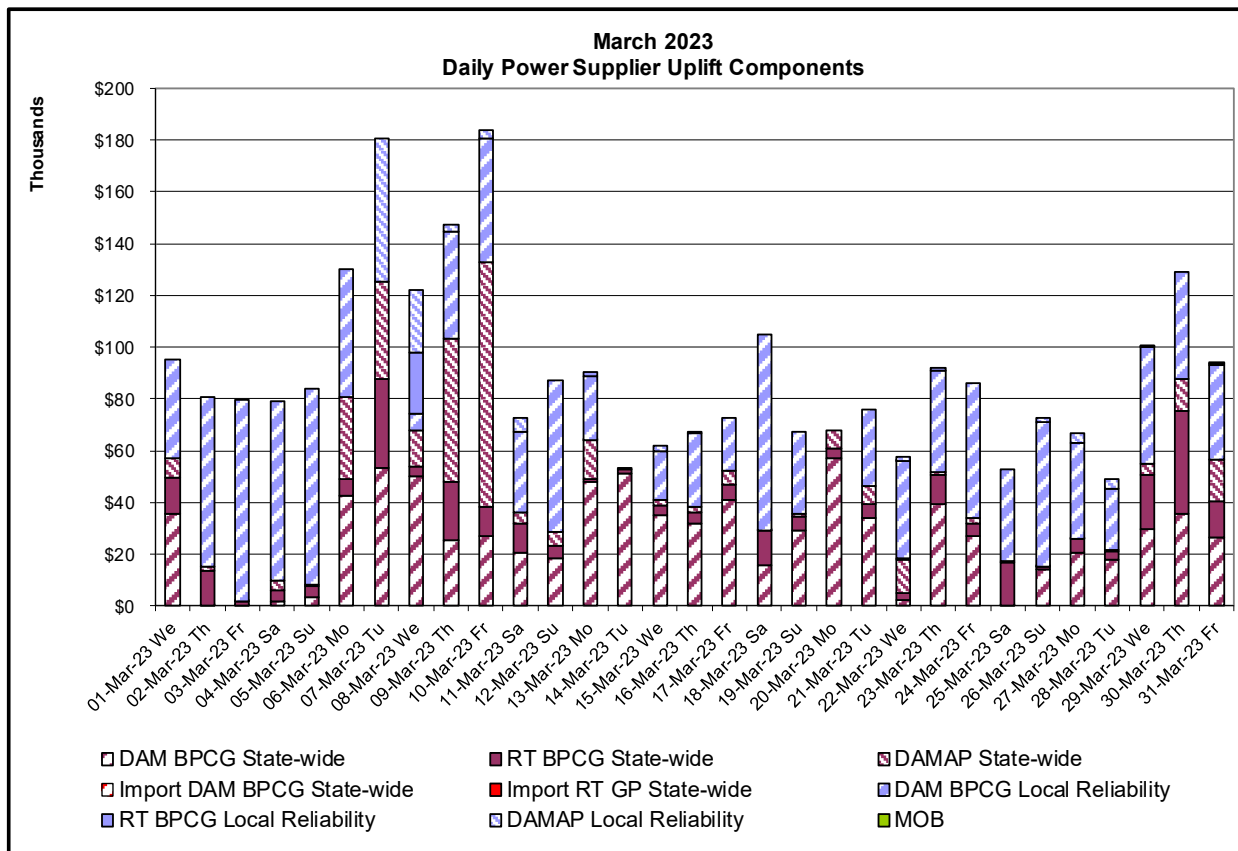
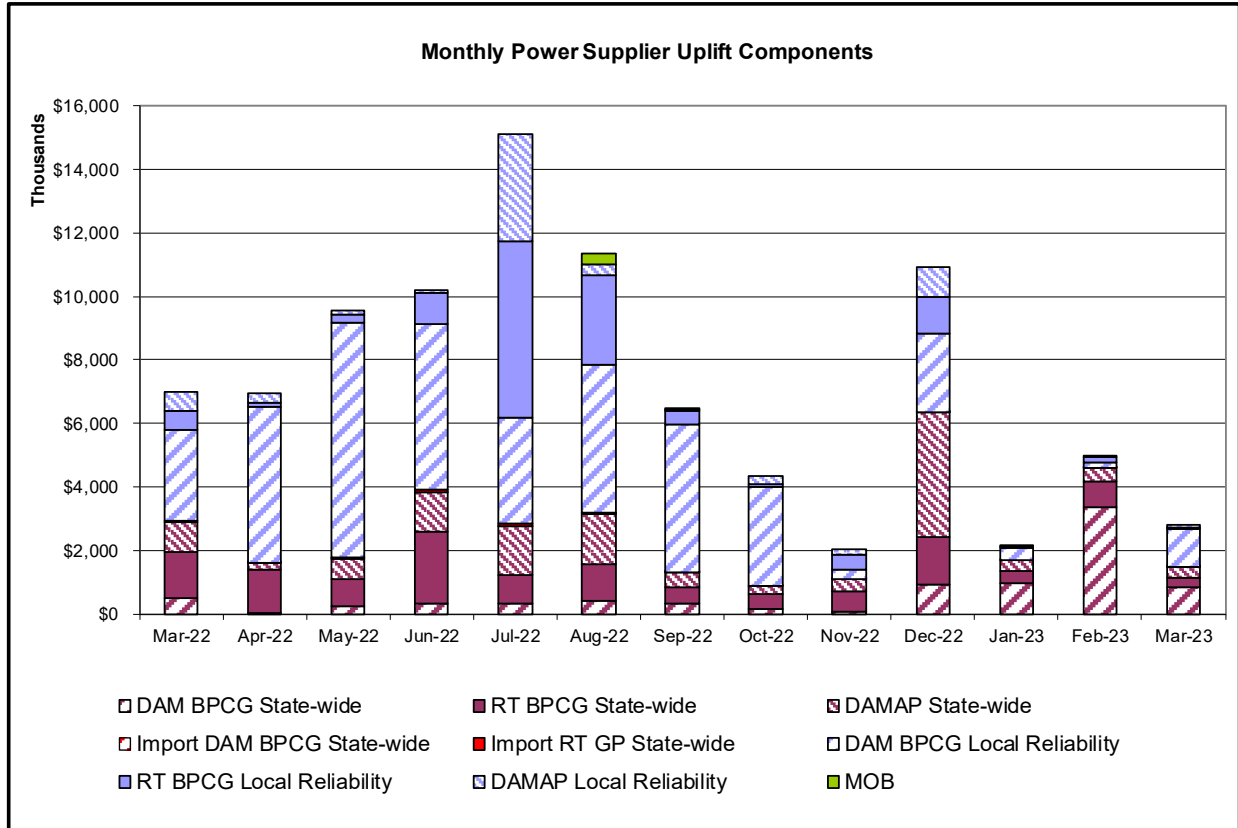
Real-Time Balancing Market Congestion Residual (Uplift Cost) Categories

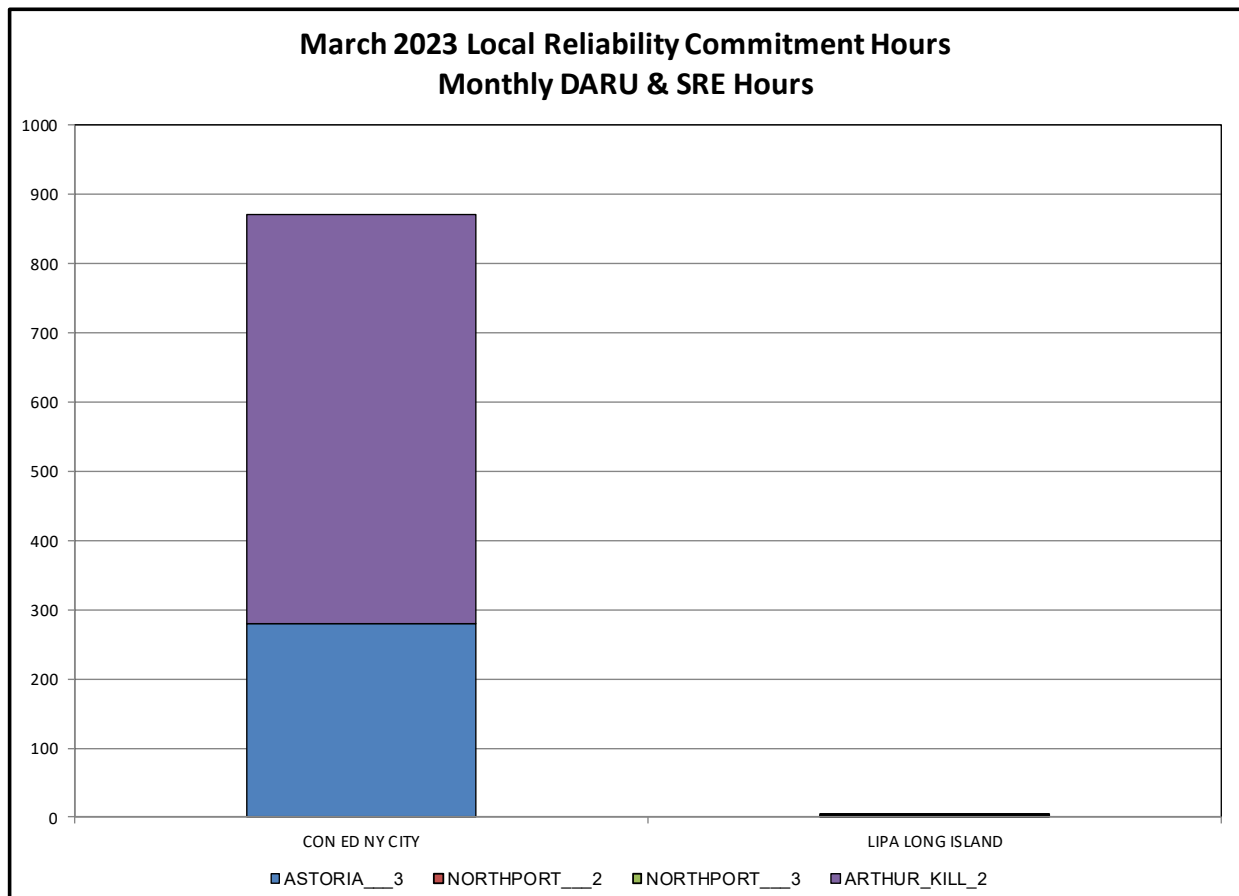
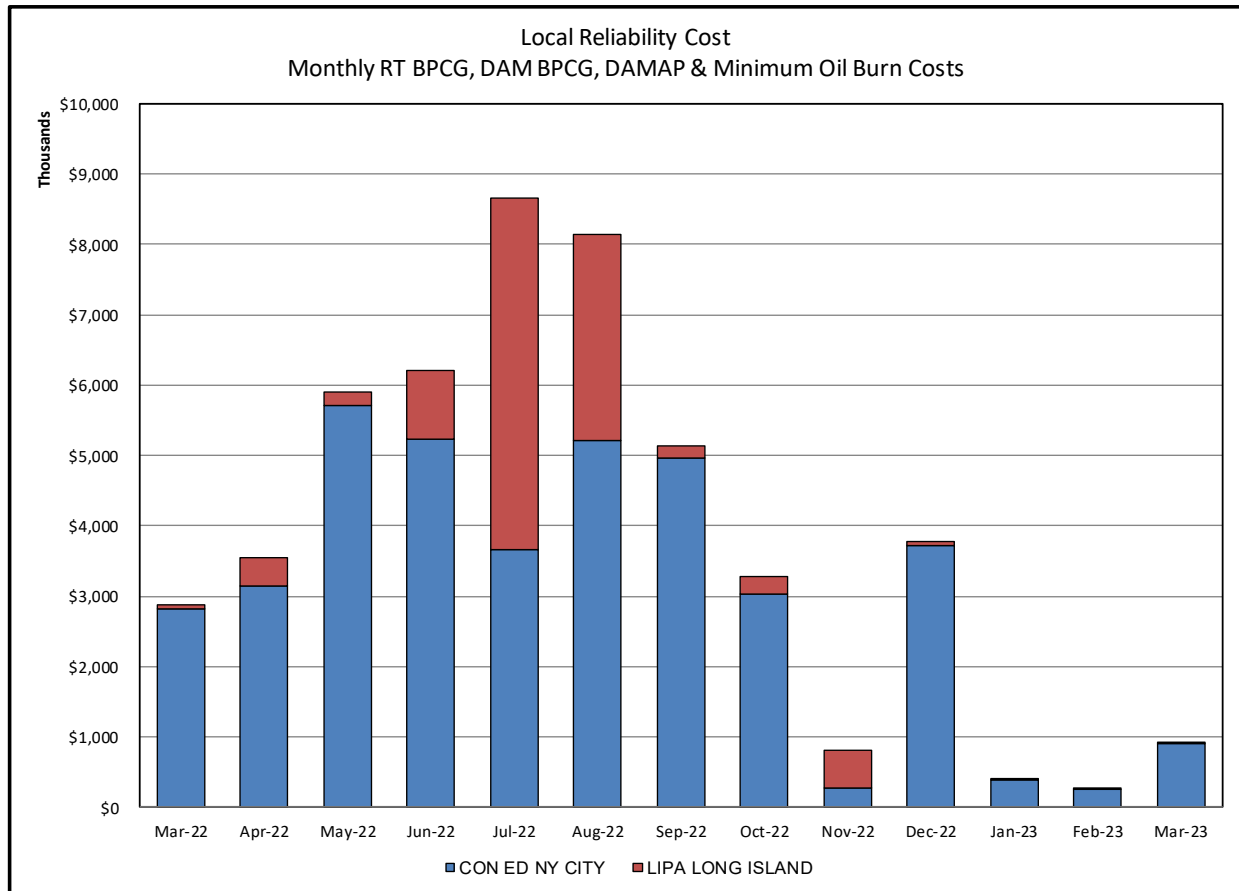
<u>Category</u>	<u>Cost Assignment</u>	<u>Events Types</u>	<u>Event Examples</u>
Storm Watch	Zone J	Thunderstorm Alert (TSA)	TSA Activations
Transmission Outage Mismatch	Market-wide	Changes in DAM to RTM transfers related to transmission outage mismatch	Forced Line Outage, Unit AVR Outages, Early Line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

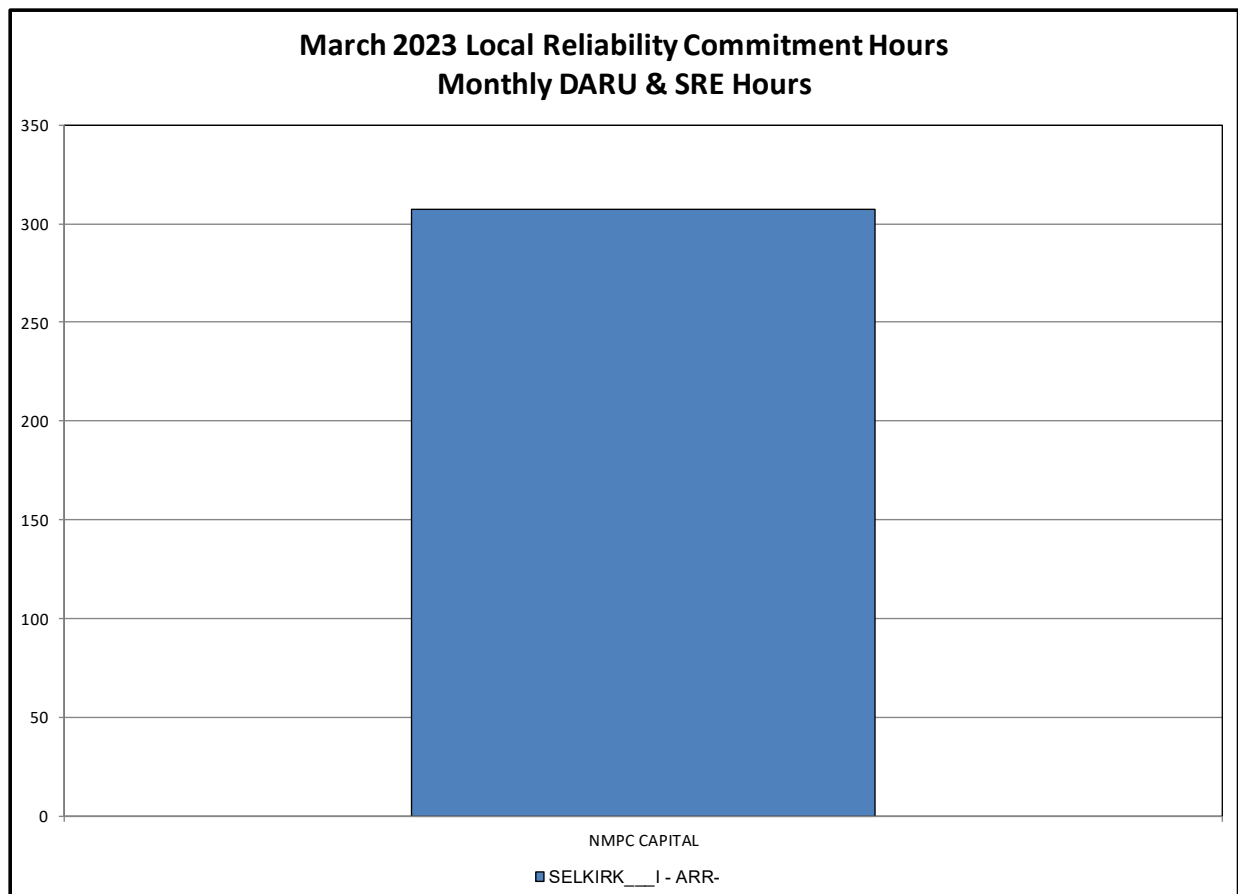
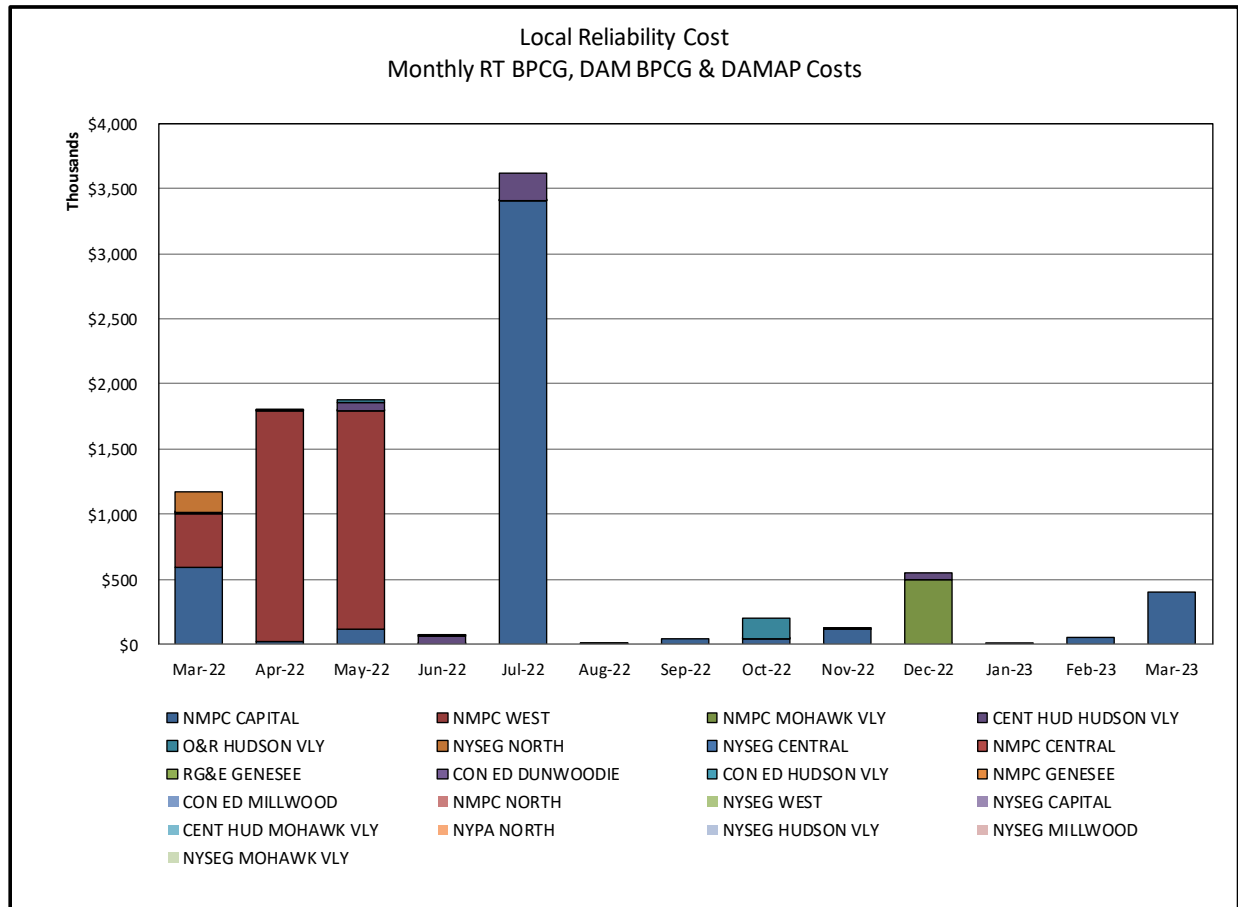


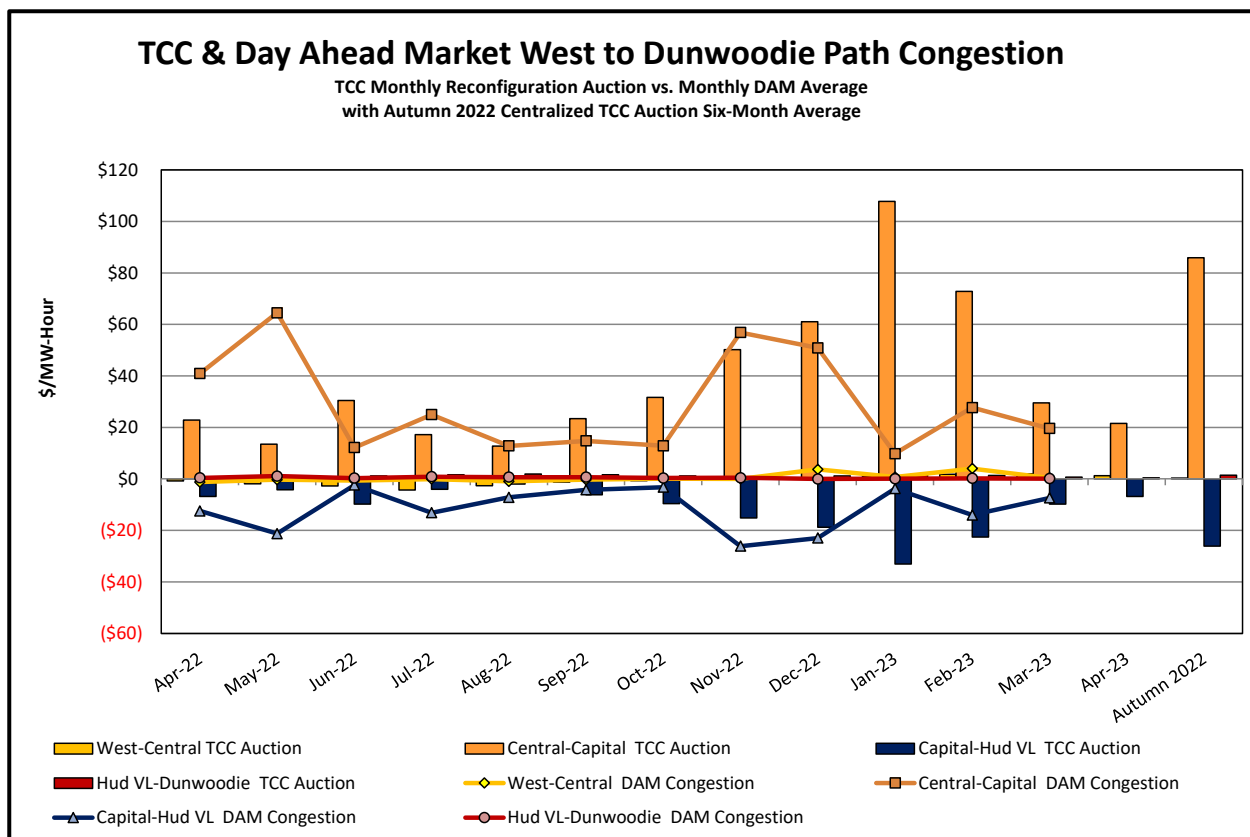
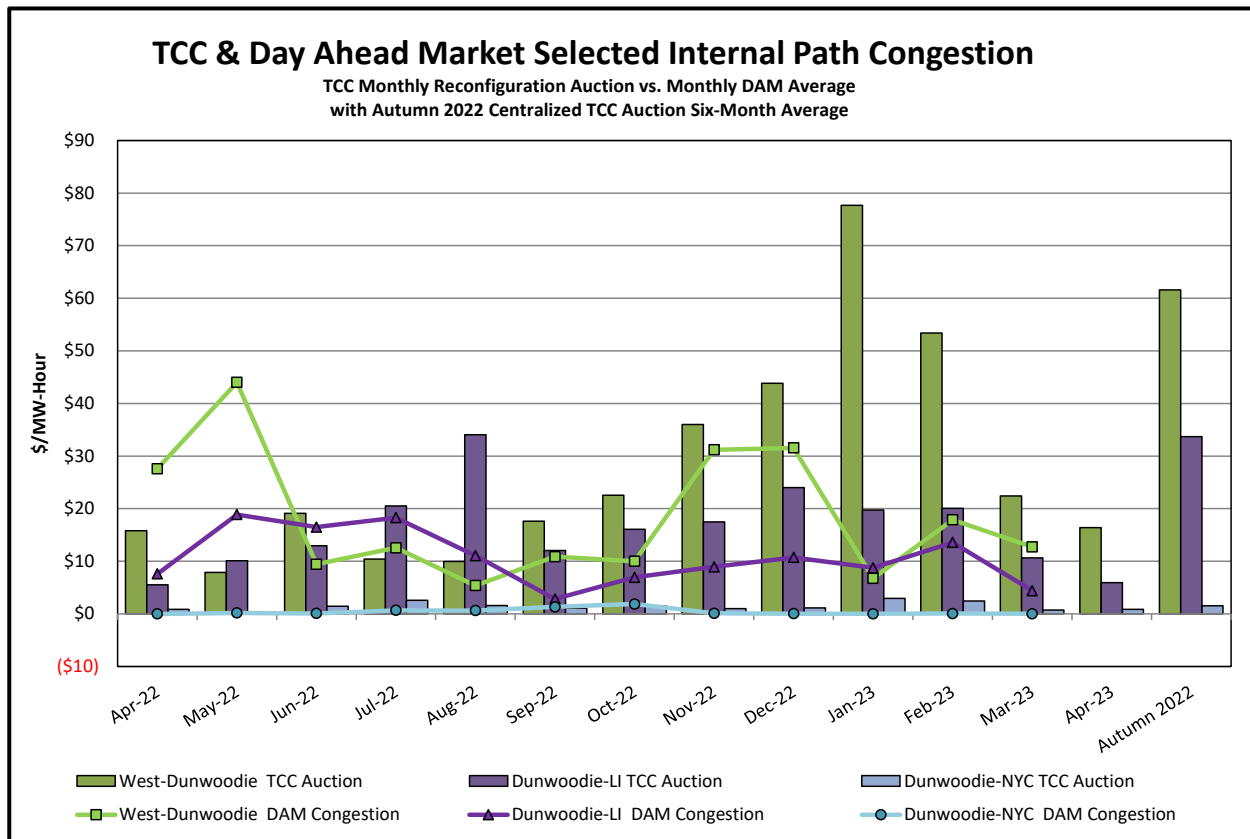
Day-Ahead Market Congestion Residual Categories

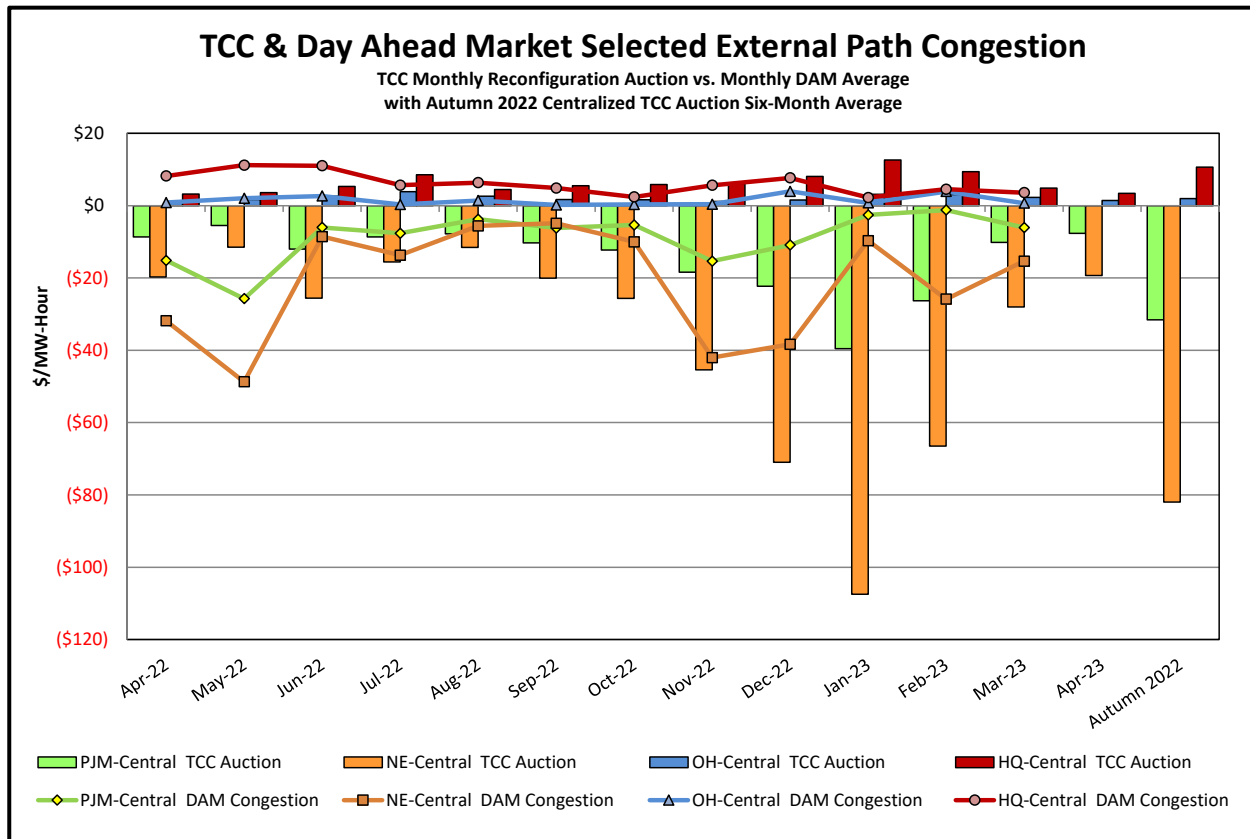
<u>Category</u>	<u>Cost Assignment</u>	<u>Events Types</u>	<u>Event Examples</u>
NYTO Outage Allocation	Responsible TO	Direct allocation to NYTO's responsible for transmission equipment status change.	DAM scheduled outage for equipment modeled in-service for the TCC Auction.
Incremental TCC/External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

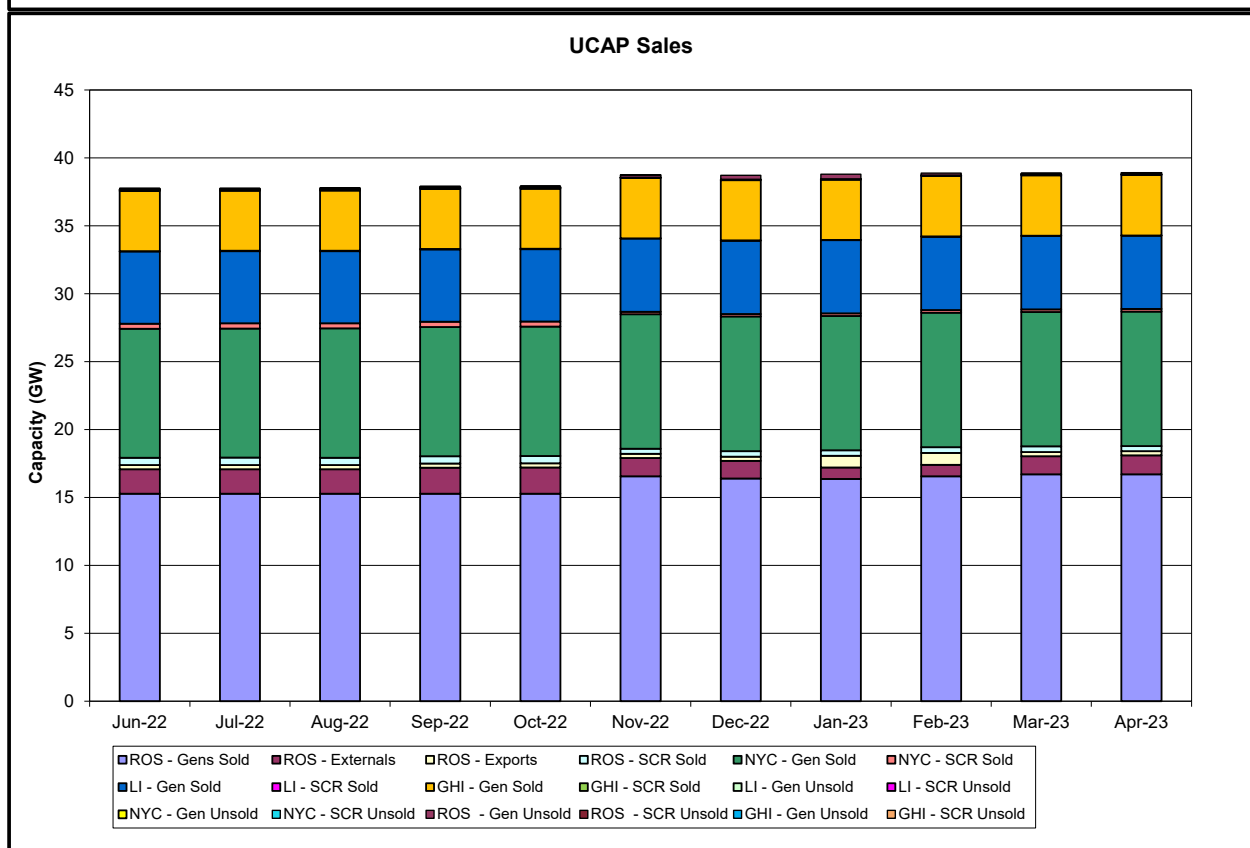
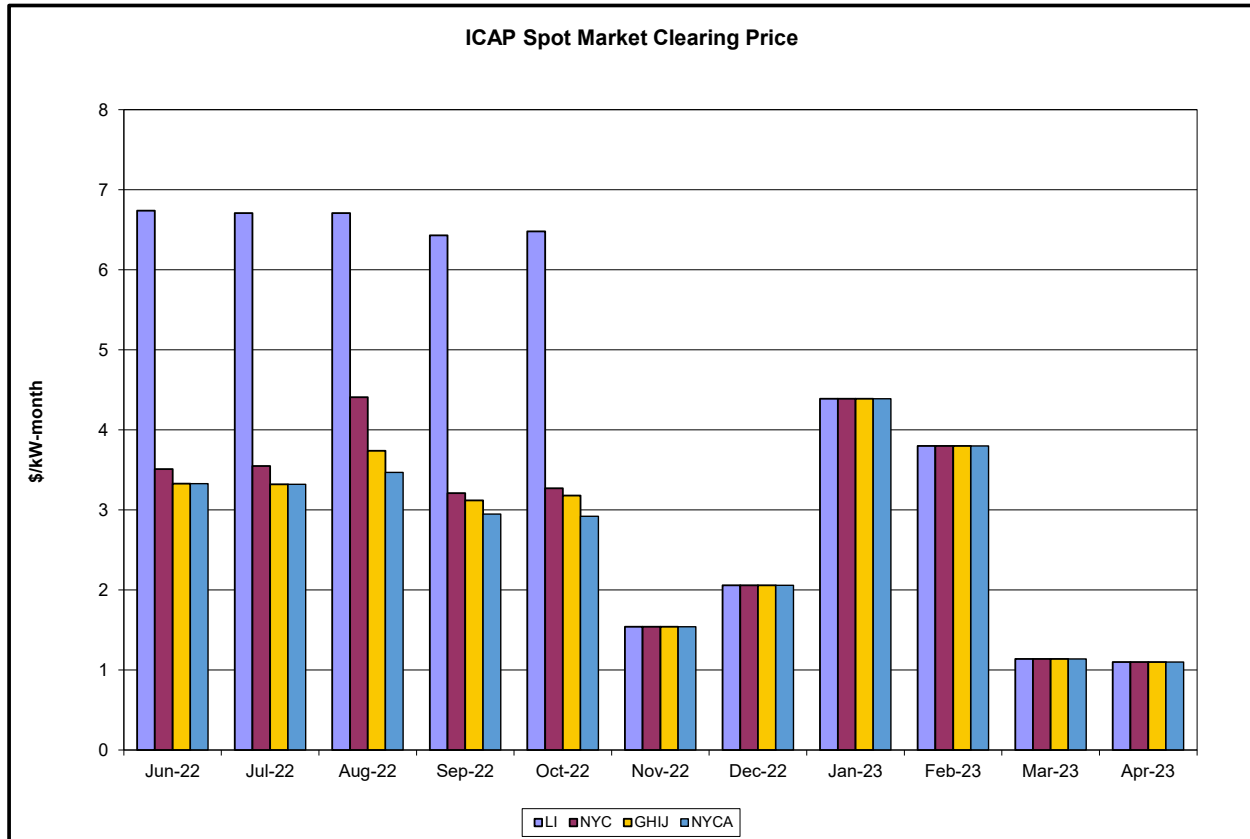










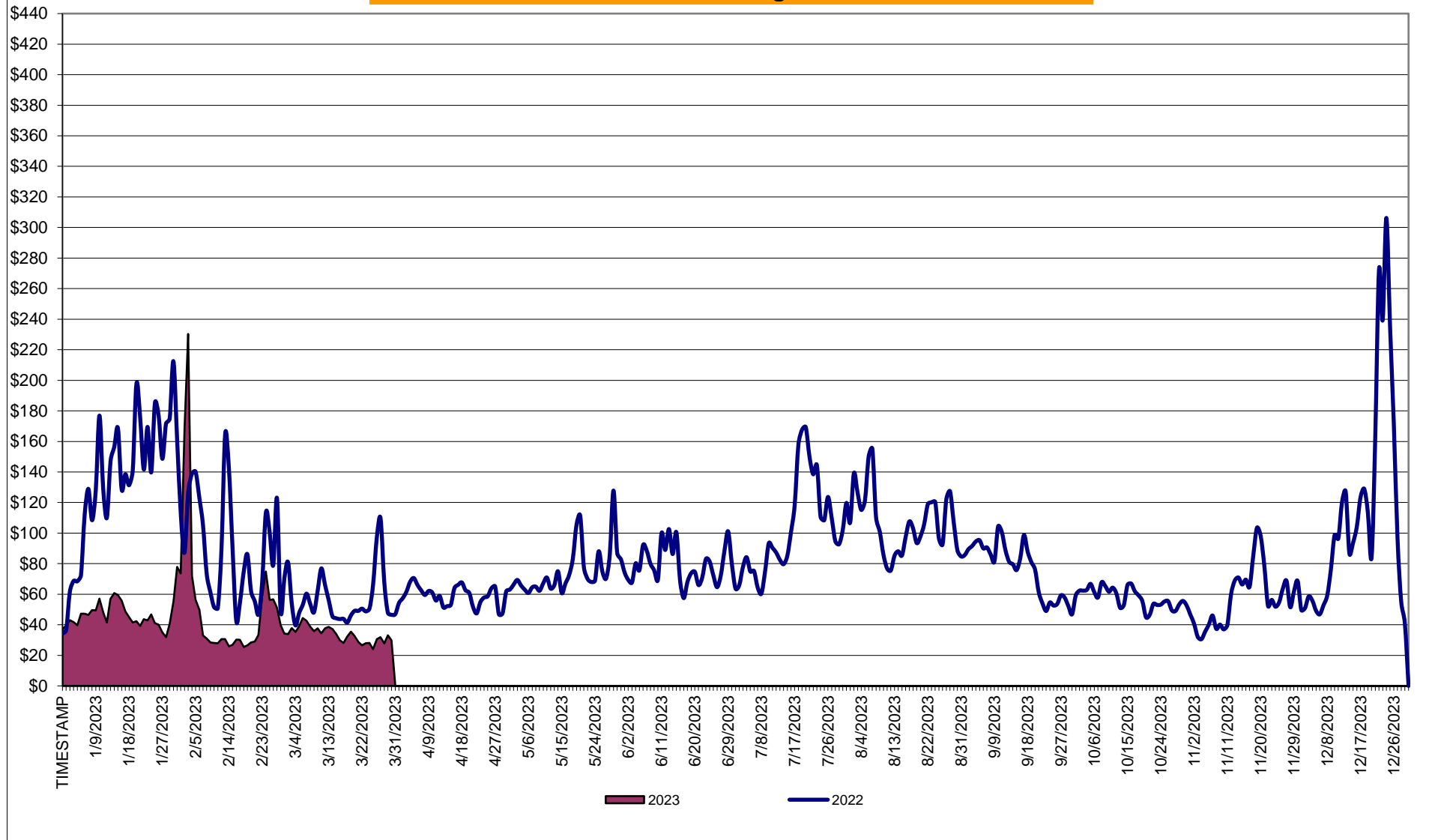


Market Performance Highlights

March 2023

- LBMP for March is \$31.11/MWh; lower than \$55.47/MWh in February 2023 and \$56.78/MWh in March 2022.
 - Day Ahead Load Weighted LBMPs and Real Time Load Weighted LBMPs are lower compared to February.
- March 2023 average year-to-date monthly cost of \$46.65/MWh is a 54% decrease from \$100.65/MWh in March 2022.
- Average daily sendout is 387 GWh/day in March; lower than 408 GWh/day in February 2023 and 390 GWh/day in March 2022.
- Natural gas prices and distillate prices are lower compared to the previous month.
 - Natural Gas (Transco Z6 NY) was \$2.26/MMBtu, down from \$3.43/MMBtu in February.
 - Natural gas prices (Transco Z6 NY) are down 49.6% year-over-year.
 - Jet Kerosene Gulf Coast was \$19.98/MMBtu, down from \$20.57/MMBtu in February.
 - Ultra Low Sulfur No.2 Diesel NY Harbor was \$19.27/MMBtu, down from \$20.23/MMBtu in February.
 - Distillate prices are down 24.6% year-over-year.
- Uplift per MWh is higher compared to the previous month.
 - Uplift (not including NYISO cost of operations) is (\$0.00)/MWh; higher than (\$0.27)/MWh in February.
 - Local Reliability Share is \$0.09/MWh, higher than \$0.03/MWh in February.
 - Statewide Share is (\$0.10)/MWh, higher than (\$0.30)/MWh in February.
 - TSA \$ per NYC MWh is \$0.00/MWh.
 - Total uplift costs (Schedule 1 components including NYISO Cost of Operations) are higher than February.

Daily NYISO Average Cost/MWh (Energy & Ancillary Services)*
2022 Annual Average \$89.23/MWh
March 2022 YTD Average \$100.65/MWh
March 2023 YTD Average \$46.65/MWh



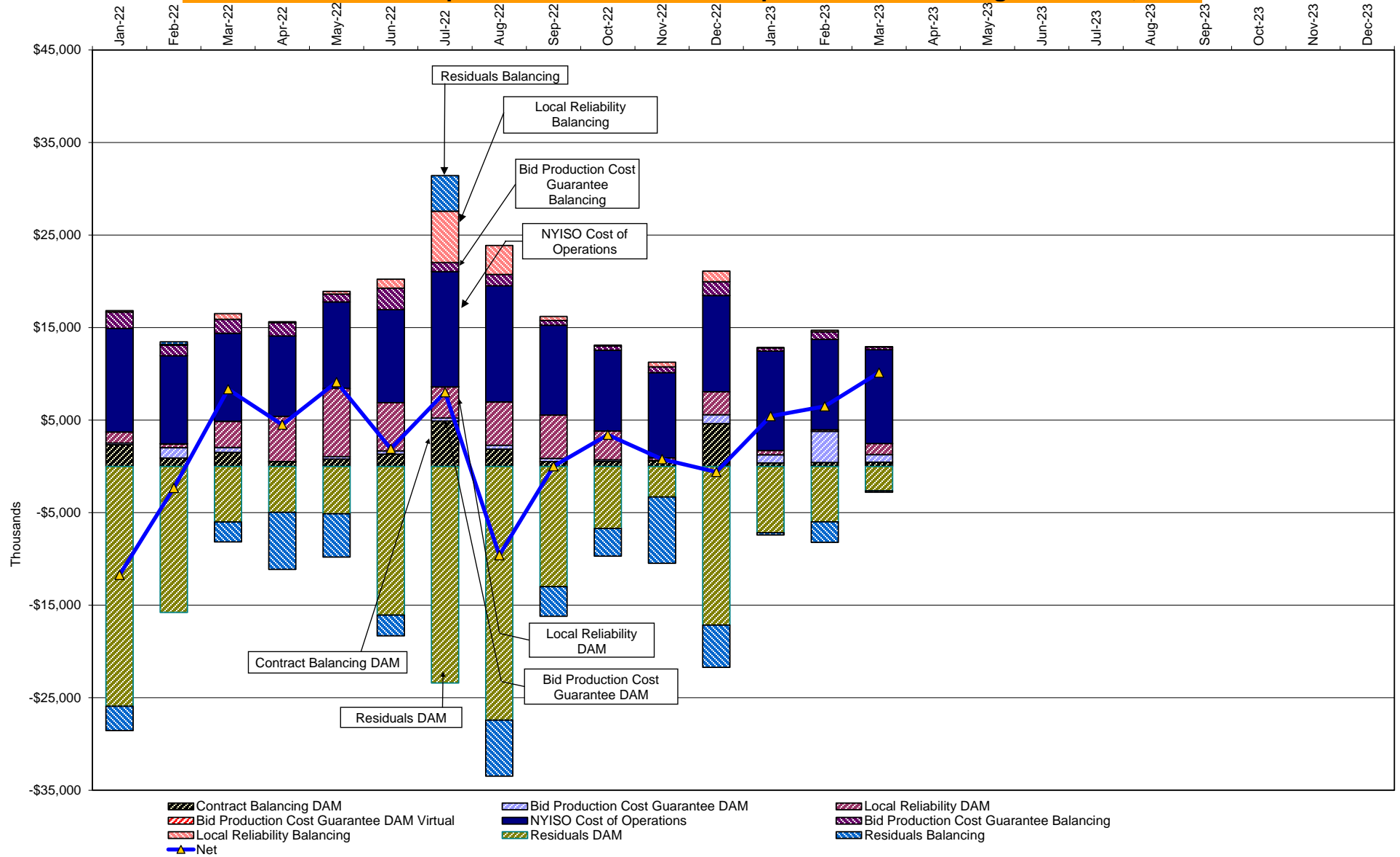
* Excludes ICAP payments.

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									
NTAC	2.82	1.15	1.39									
Reserve	0.72	0.90	0.73									
Regulation	0.09	0.13	0.13									
NYISO Cost of Operations	0.77	0.77	0.77									
FERC Fee Recovery	0.08	0.09	0.09									
Uplift	(0.38)	(0.27)	(0.00)									
Uplift: Local Reliability Share	0.03	0.03	0.09									
Uplift: Statewide Share	(0.41)	(0.30)	(0.10)									
Voltage Support and Black Start	0.42	0.42	0.43									
Avg Monthly Cost	46.56	58.58	34.58									
 Avg YTD Cost	46.64	52.36	46.65									
 TSA \$ per NYC MWh	0.00	0.00	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: 4/12/2023 10:58 AM

NYISO Dollar Flows - Uplift - OATT Schedule 1 components - Data through March 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	12,355,489	12,651,083									
DAM LSE Internal LBMP Energy Sales	55%	55%	56%									
DAM External TC LBMP Energy Sales	7%	7%	4%									
DAM Bilateral - Internal Bilaterals	28%	29%	30%									
DAM Bilateral - Import/Non-LBMP Market Bilaterals	5%	5%	6%									
DAM Bilateral - Export/Non-LBMP Market Bilaterals	2%	2%	2%									
DAM Bilateral - Wheel Through Bilaterals	3%	2%	2%									
<u>Balancing Energy Market MWh</u>	328,840	397,488	420,170									
Balancing Energy LSE Internal LBMP Energy Sales	65%	38%	53%									
Balancing Energy External TC LBMP Energy Sales	68%	68%	58%									
Balancing Energy Bilateral - Internal Bilaterals	2%	1%	2%									
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	0%	0%	0%									
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	7%	6%	6%									
Balancing Energy Bilateral - Wheel Through Bilaterals	-43%	-13%	-18%									
<u>Transactions Summary</u>												
LBMP	63%	63%	62%									
Internal Bilaterals	28%	28%	29%									
Import Bilaterals	5%	5%	6%									
Export Bilaterals	2%	2%	2%									
Wheels Through	2%	1%	1%									
<u>Market Share of Total Load</u>												
Day Ahead Market	97.6%	96.9%	96.8%									
Balancing Energy +	2.4%	3.1%	3.2%									
Total MWh	13,990,977	12,752,977	13,071,253									
Average Daily Energy Sendout/Month GWh	410	408	387									

<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	\$47.82	\$29.84									
Standard Deviation	\$10.32	\$47.20	\$7.42									
Load Weighted Price **	\$41.37	\$50.55	\$30.37									
<u>RTC LBMP</u>												
Price *	\$38.28	\$42.67	\$28.02									
Standard Deviation	\$31.37	\$39.75	\$11.53									
Load Weighted Price **	\$39.04	\$44.80	\$28.49									
<u>REAL TIME LBMP</u>												
Price *	\$38.76	\$43.99	\$28.15									
Standard Deviation	\$45.06	\$43.54	\$15.02									
Load Weighted Price **	\$39.68	\$46.75	\$28.72									
Average Daily Energy Sendout/Month GWh	410	408	387									

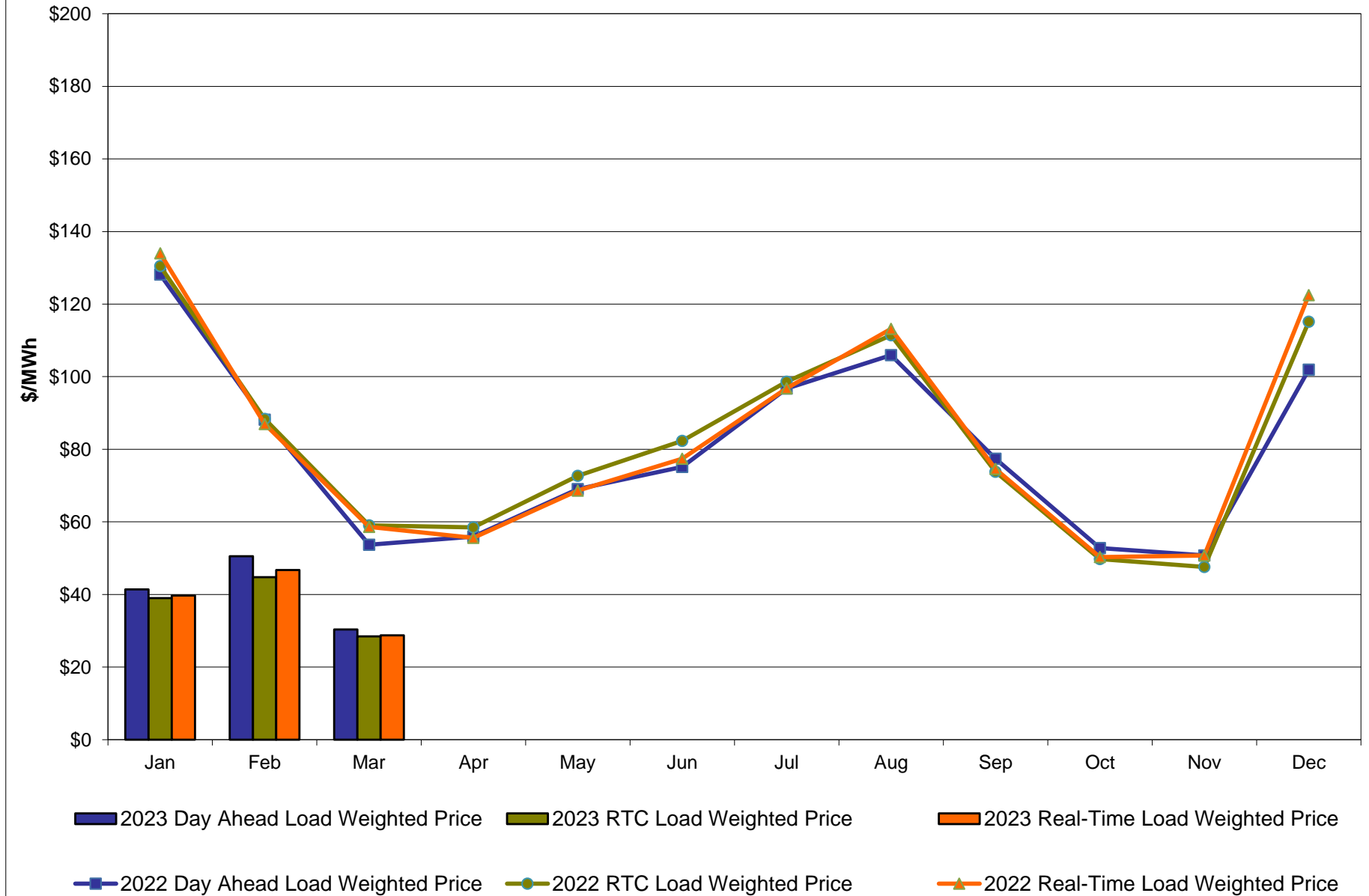
NYISO Markets 2021 Energy Statistics

	<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

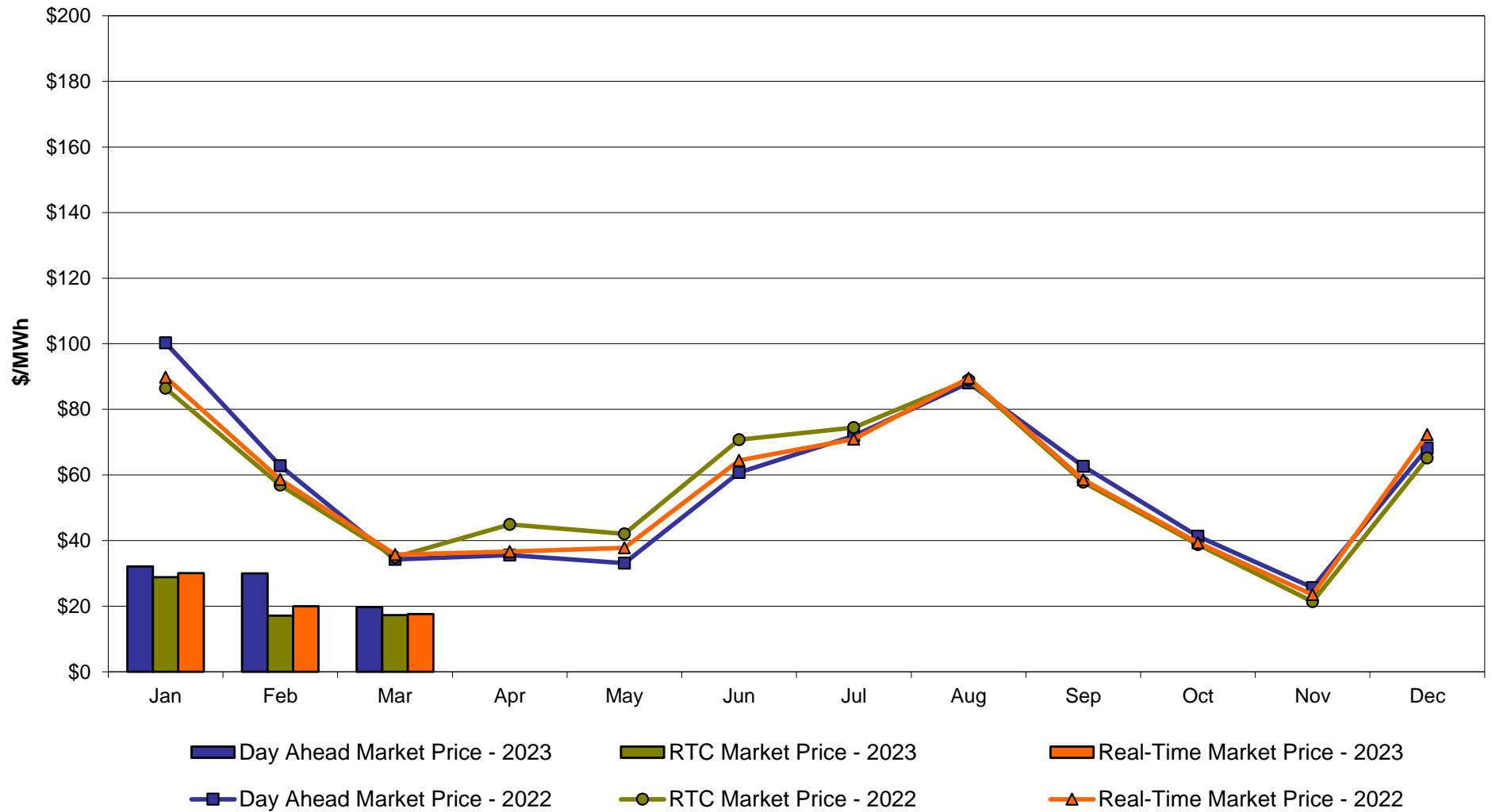


March 2023 Zonal LBMP Statistics for NYISO (\$/MWh)

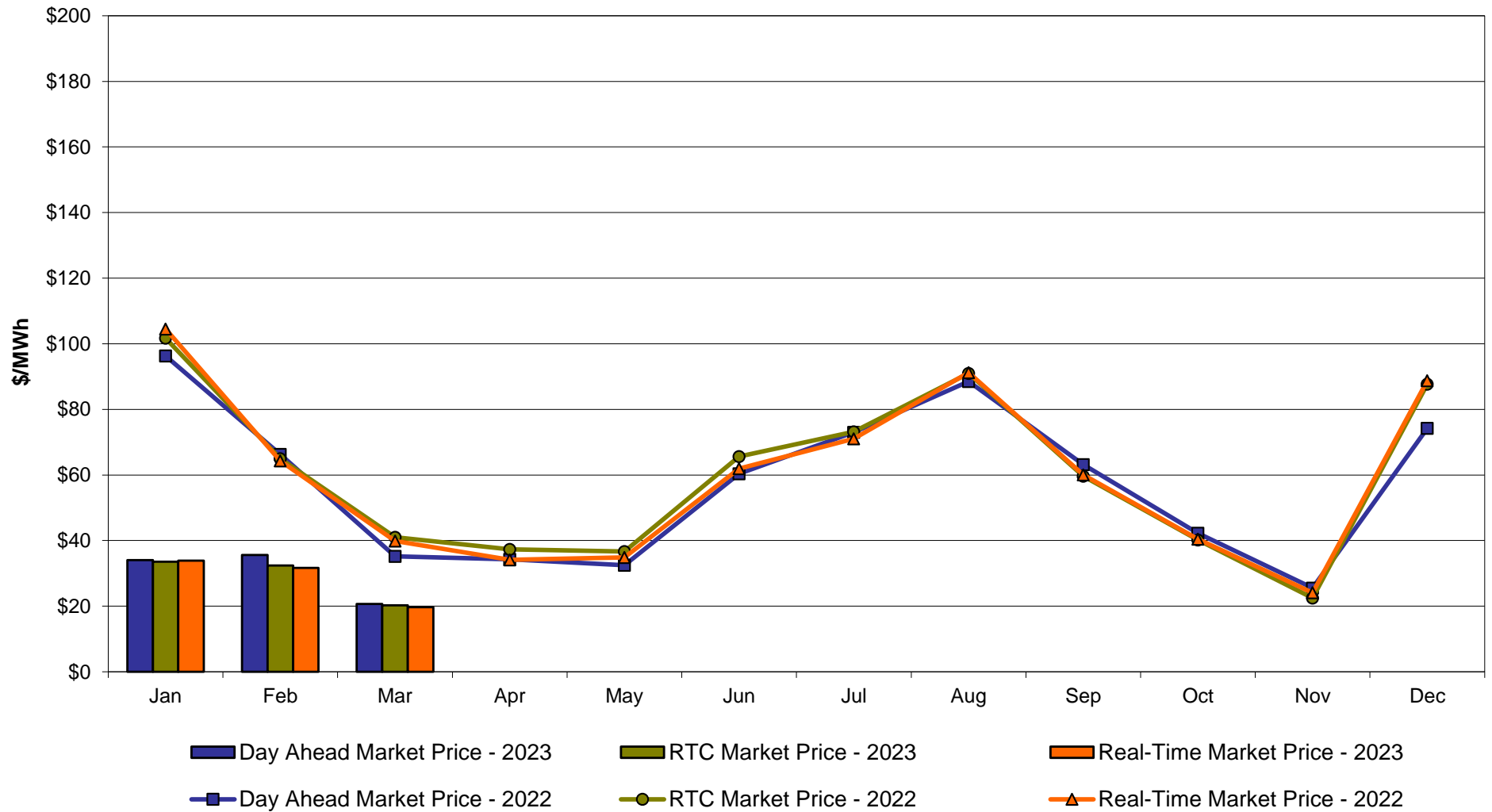
	<u>WEST Zone A</u>	<u>GENESEE Zone B</u>	<u>NORTH Zone D</u>	<u>CENTRAL Zone C</u>	<u>MOHAWK VALLEY Zone E</u>	<u>CAPITAL Zone F</u>	<u>HUDSON VALLEY Zone G</u>	<u>MILLWOOD Zone H</u>	<u>DUNWOODIE Zone I</u>	<u>NEW YORK CITY Zone J</u>	<u>LONG ISLAND Zone K</u>
<u>DAY AHEAD LBMP</u>											
Unweighted Price *	19.70	19.38	15.98	20.65	21.14	40.80	33.66	33.96	33.93	33.98	38.69
Standard Deviation	6.38	6.68	7.64	6.62	6.77	14.93	8.57	8.63	8.58	8.55	11.21
<u>RTC LBMP</u>											
Unweighted Price *	17.26	18.21	14.99	20.28	20.27	37.49	30.83	31.17	31.12	31.18	39.45
Standard Deviation	8.96	9.67	12.12	9.38	8.95	46.12	11.65	11.37	11.24	11.12	50.97
<u>REAL TIME LBMP</u>											
Unweighted Price *	17.64	17.98	14.40	19.67	20.05	38.98	31.55	31.93	31.87	31.93	37.68
Standard Deviation	13.97	14.42	16.21	14.25	14.21	28.28	15.80	16.05	15.96	15.91	38.15
	<u>ONTARIO IESO</u>	<u>HYDRO QUEBEC (Wheel)</u>	<u>HYDRO QUEBEC (Import/Export)</u>	<u>PJM</u>	<u>NEW ENGLAND</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 *	19.18	16.33	16.33	26.77	36.62	38.33	37.11	36.49	33.80	33.89	16.12
Standard Deviation	6.29	7.30	7.30	6.31	10.95	11.81	10.37	9.58	8.44	8.50	7.50
<u>RTC LBMP</u>											
Unweighted Price *	16.74	15.48	15.48	24.66	32.55	36.01	39.54	38.00	30.90	31.08	15.35
Standard Deviation	8.59	11.56	11.56	7.11	24.62	45.11	52.65	48.31	11.37	11.38	12.76
<u>REAL TIME LBMP</u>											
Unweighted Price *	17.40	14.97	14.97	24.98	34.31	34.01	33.17	36.63	31.47	31.83	14.68
Standard Deviation	14.04	15.76	15.76	12.89	22.76	31.72	42.43	36.63	17.47	15.89	16.20

* Straight LBMP averages

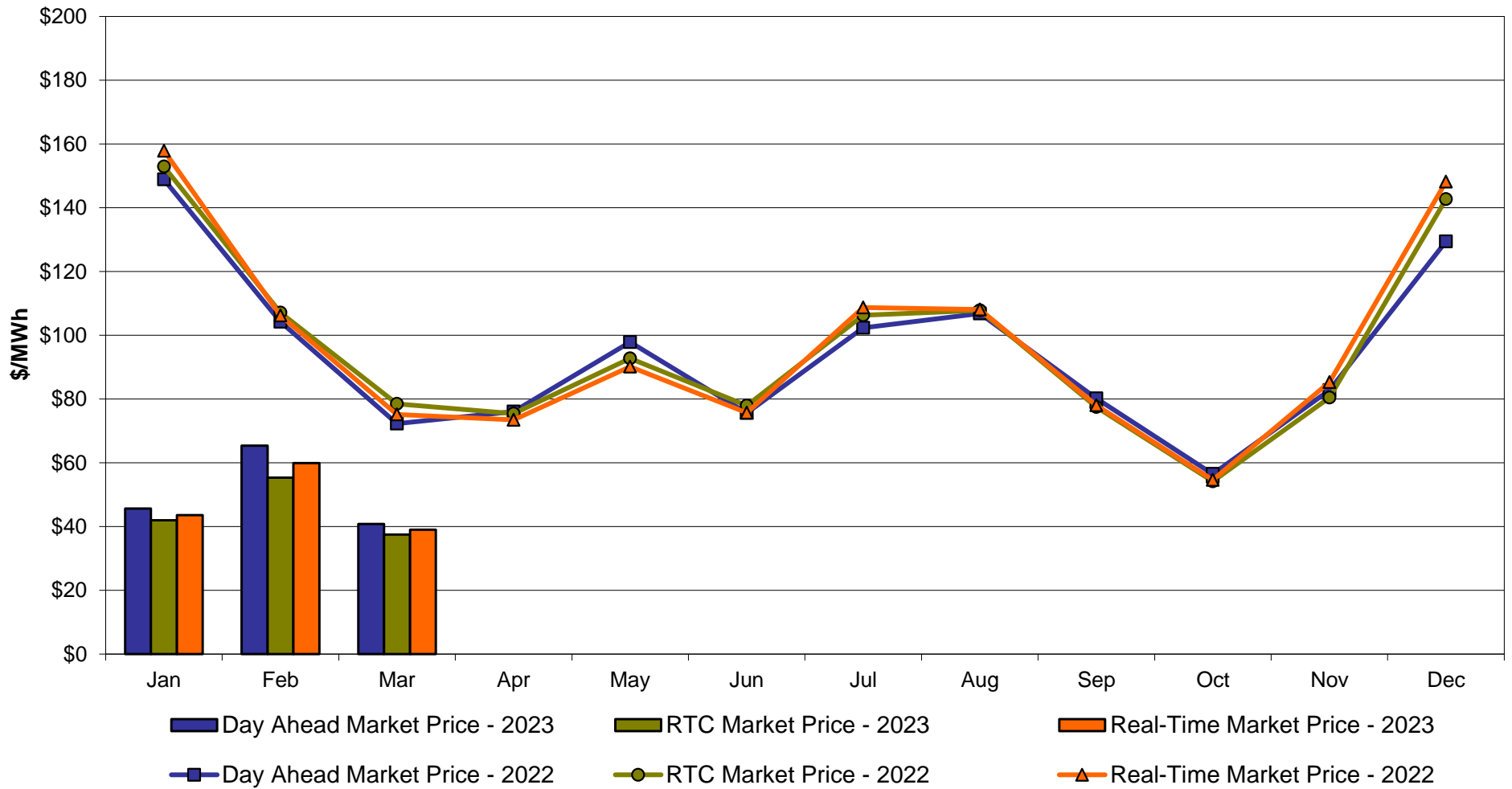
West Zone A Monthly Average LBMP Prices 2022 - 2023



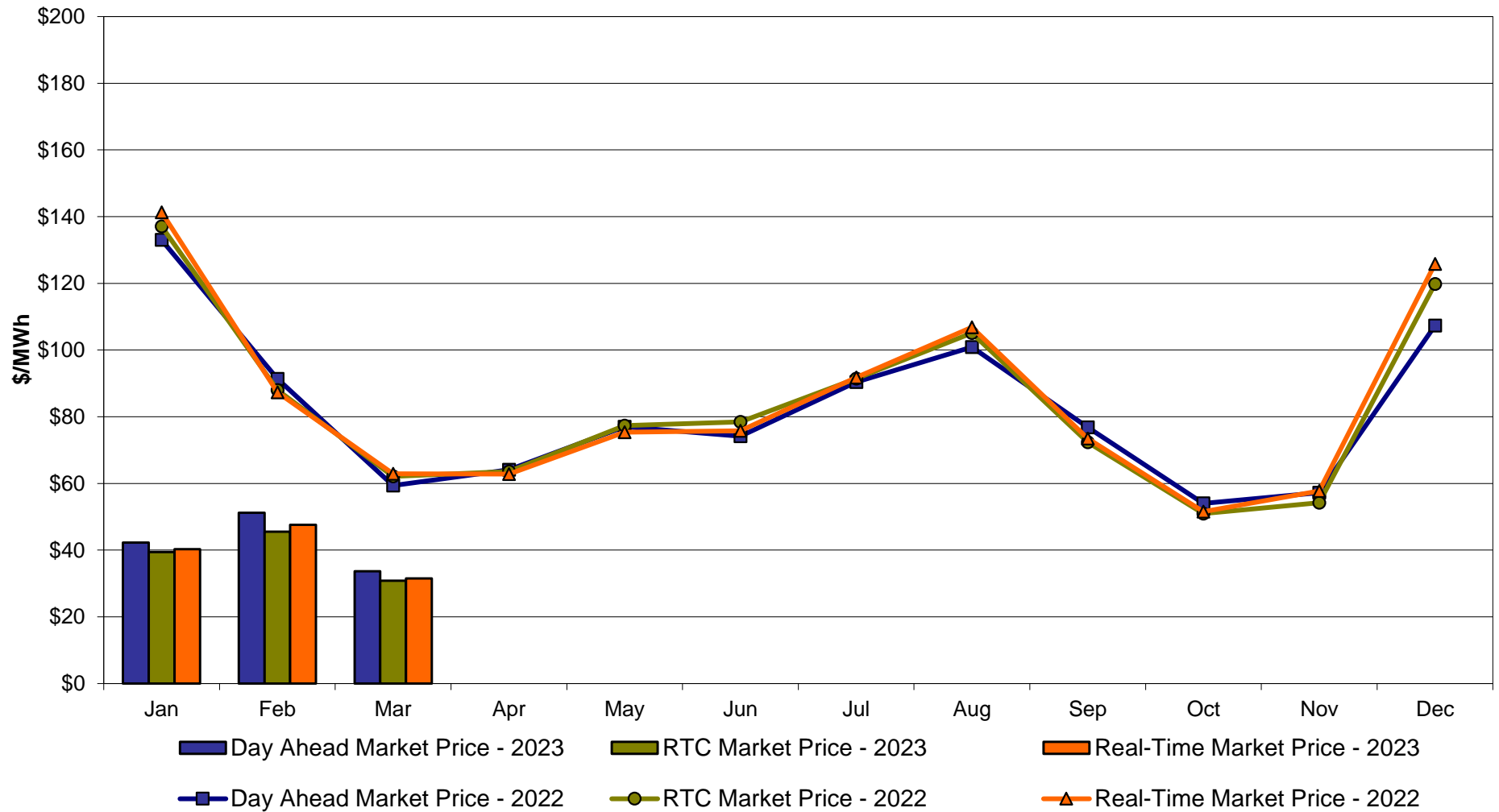
Central Zone C Monthly Average LBMP Prices 2022 - 2023



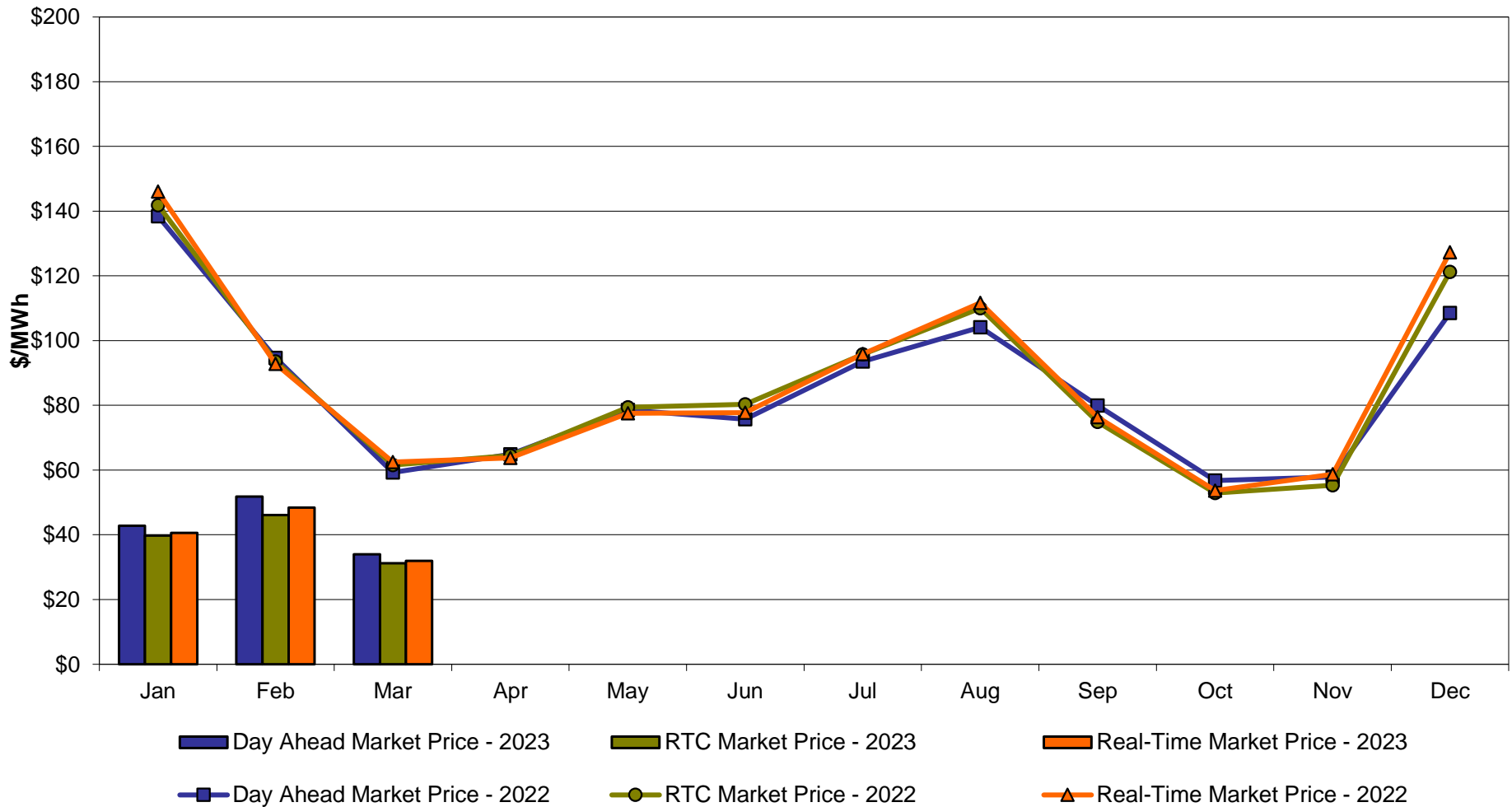
Capital Zone F **Monthly Average LBMP Prices 2022 - 2023**



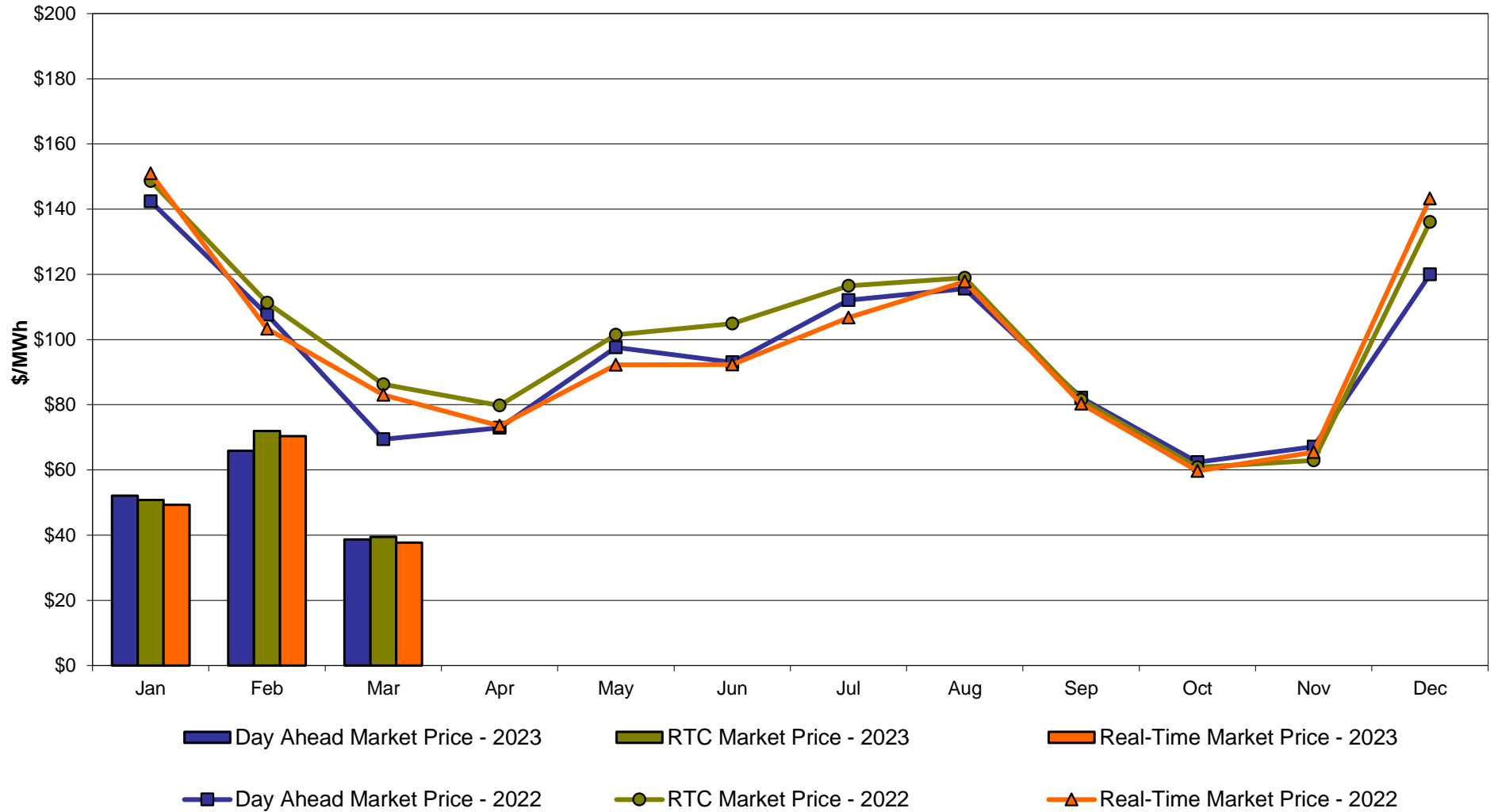
Hudson Valley Zone G Monthly Average LBMP Prices 2022 - 2023



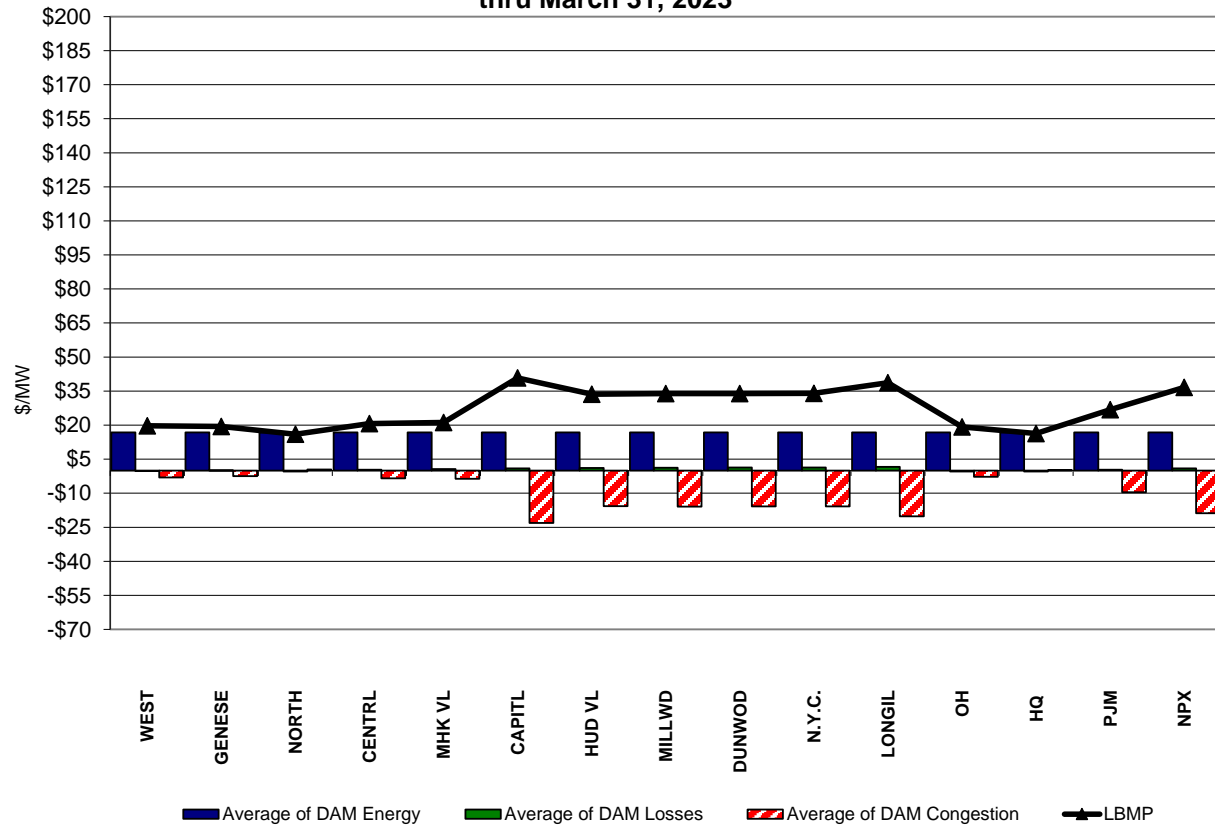
NYC Zone J Monthly Average LBMP Prices 2022 - 2023



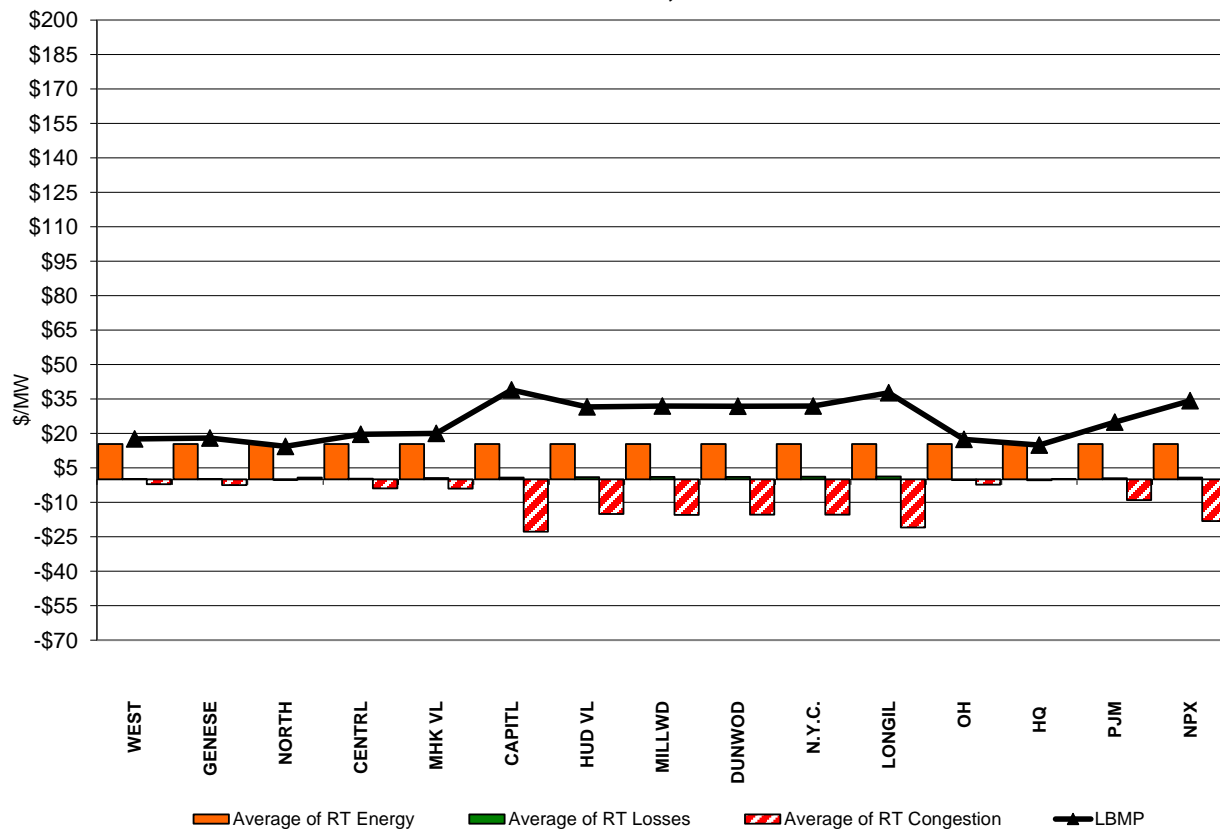
Long Island Zone K Monthly Average LBMP Prices 2022 - 2023



**DAM Zonal Unweighted Monthly Average LBMP Components
thru March 31, 2023**

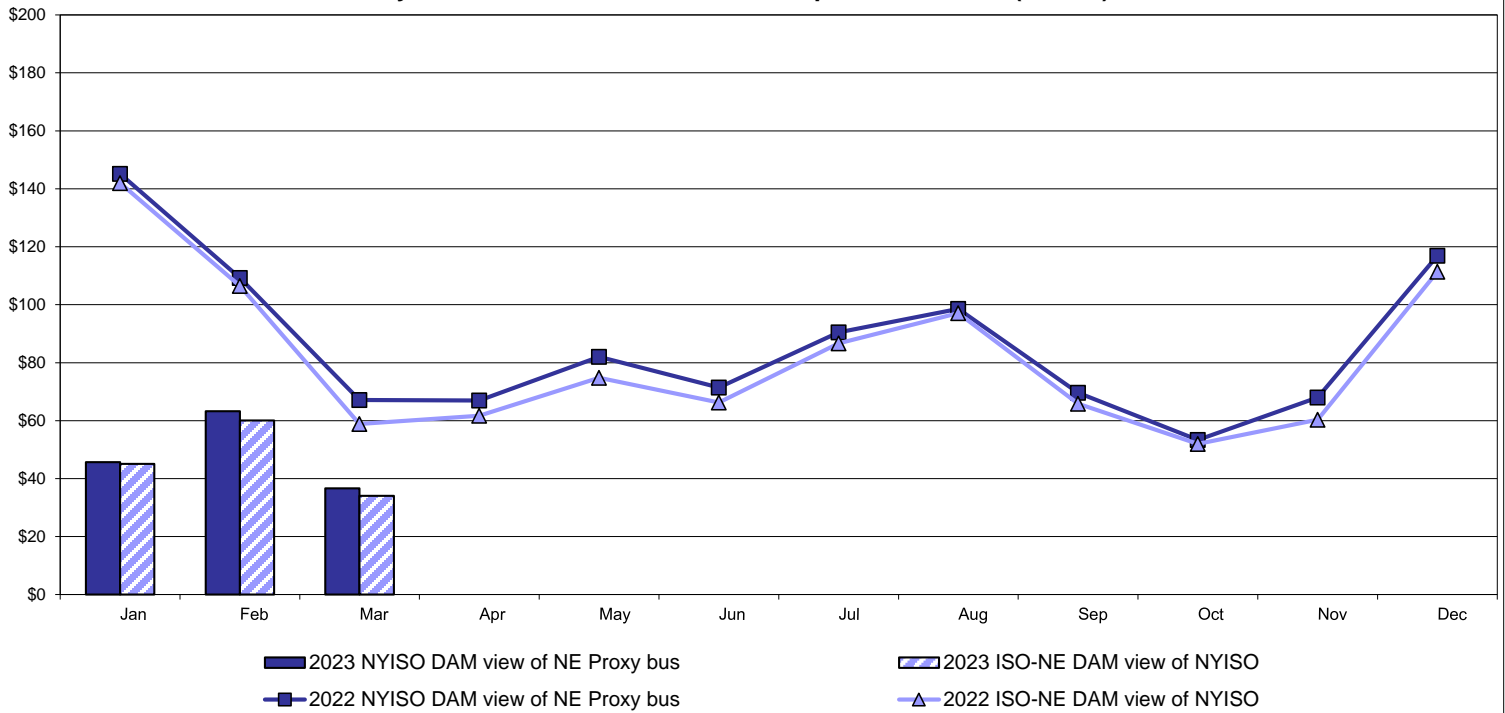


**RT Zonal Unweighted Monthly Average LBMP Components
thru March 31, 2023**

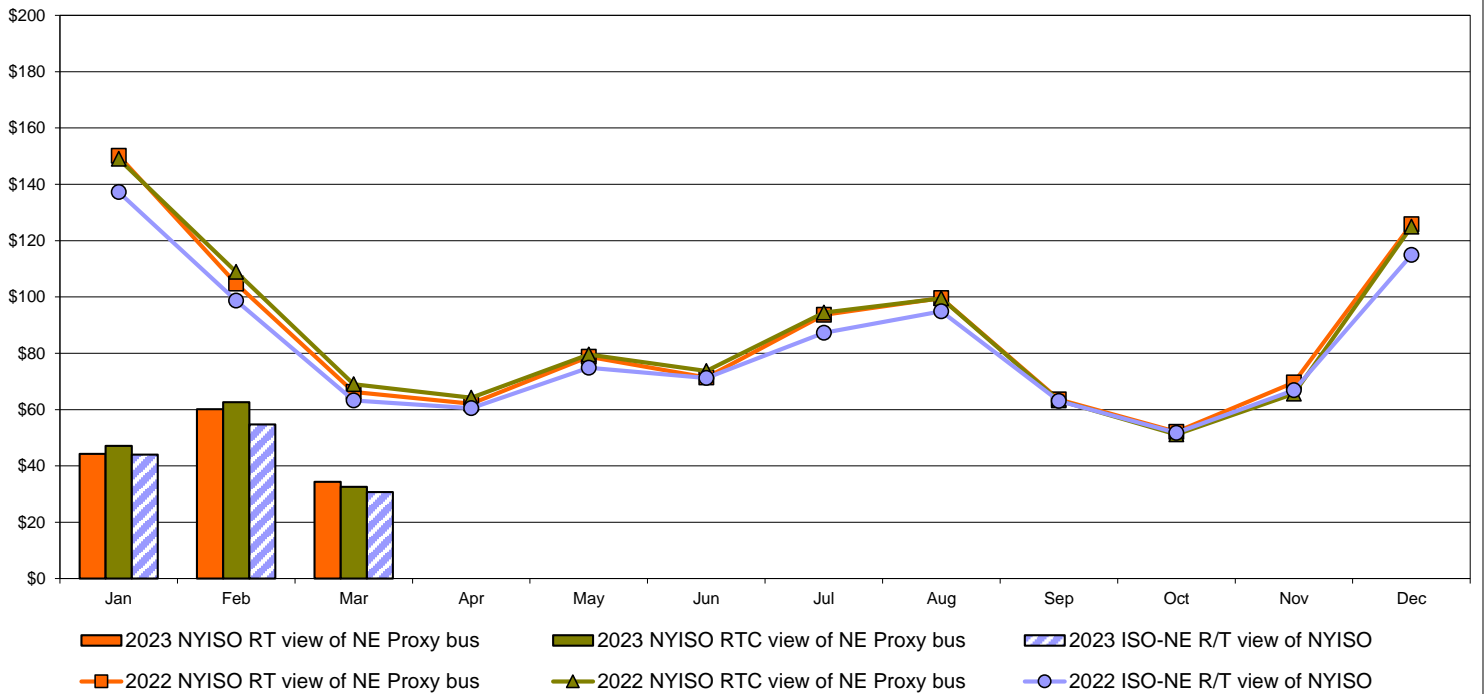


External Comparison ISO-New England

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

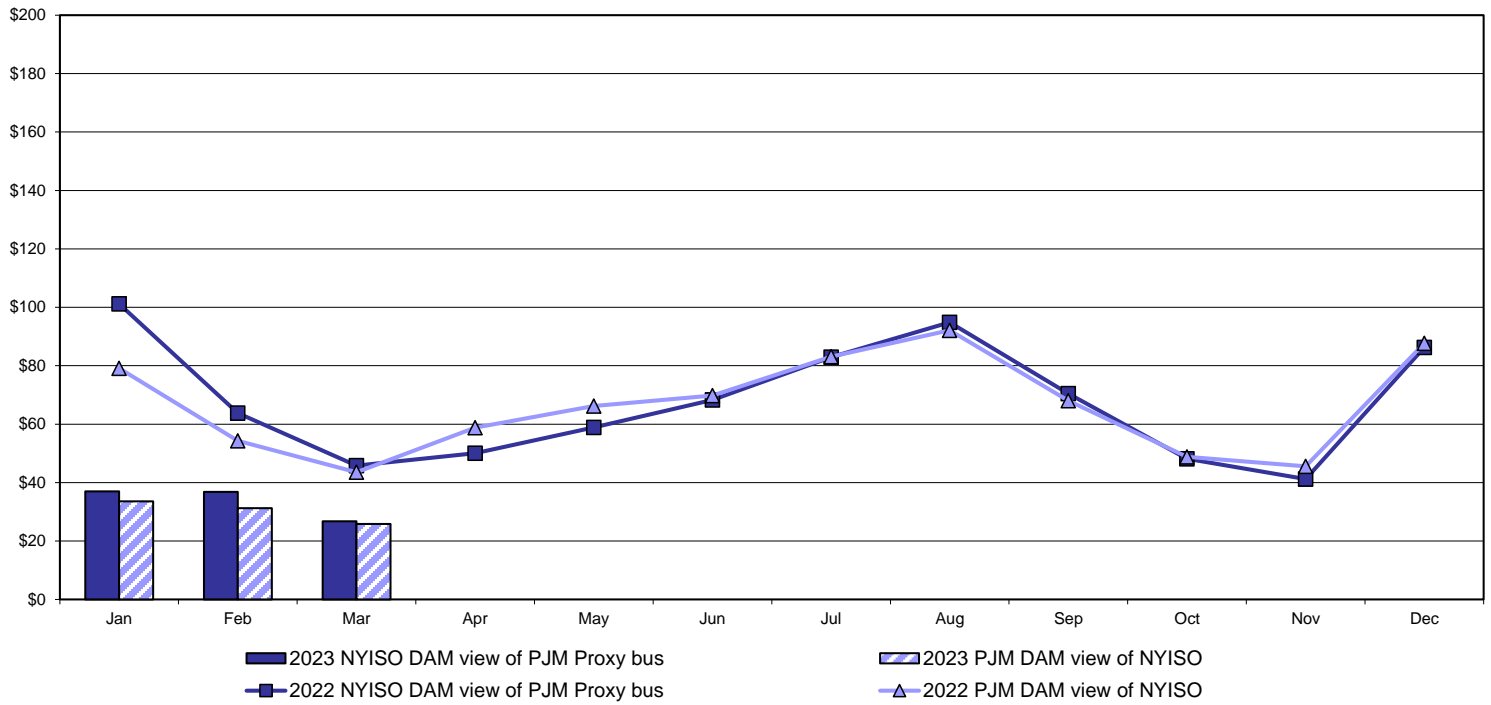


Real Time Market External Zone Comparison: ISO-NE (\$/MWh)

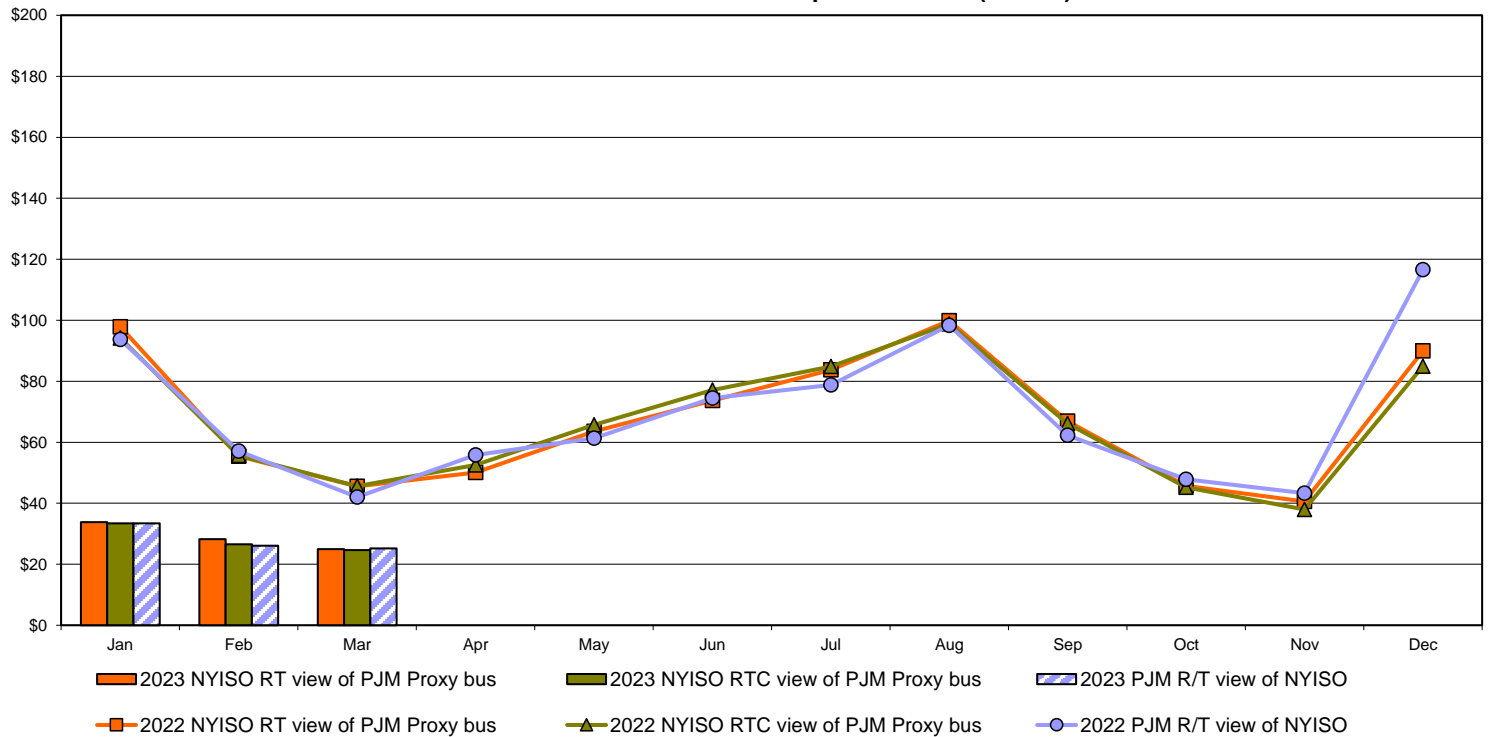


External Comparison PJM

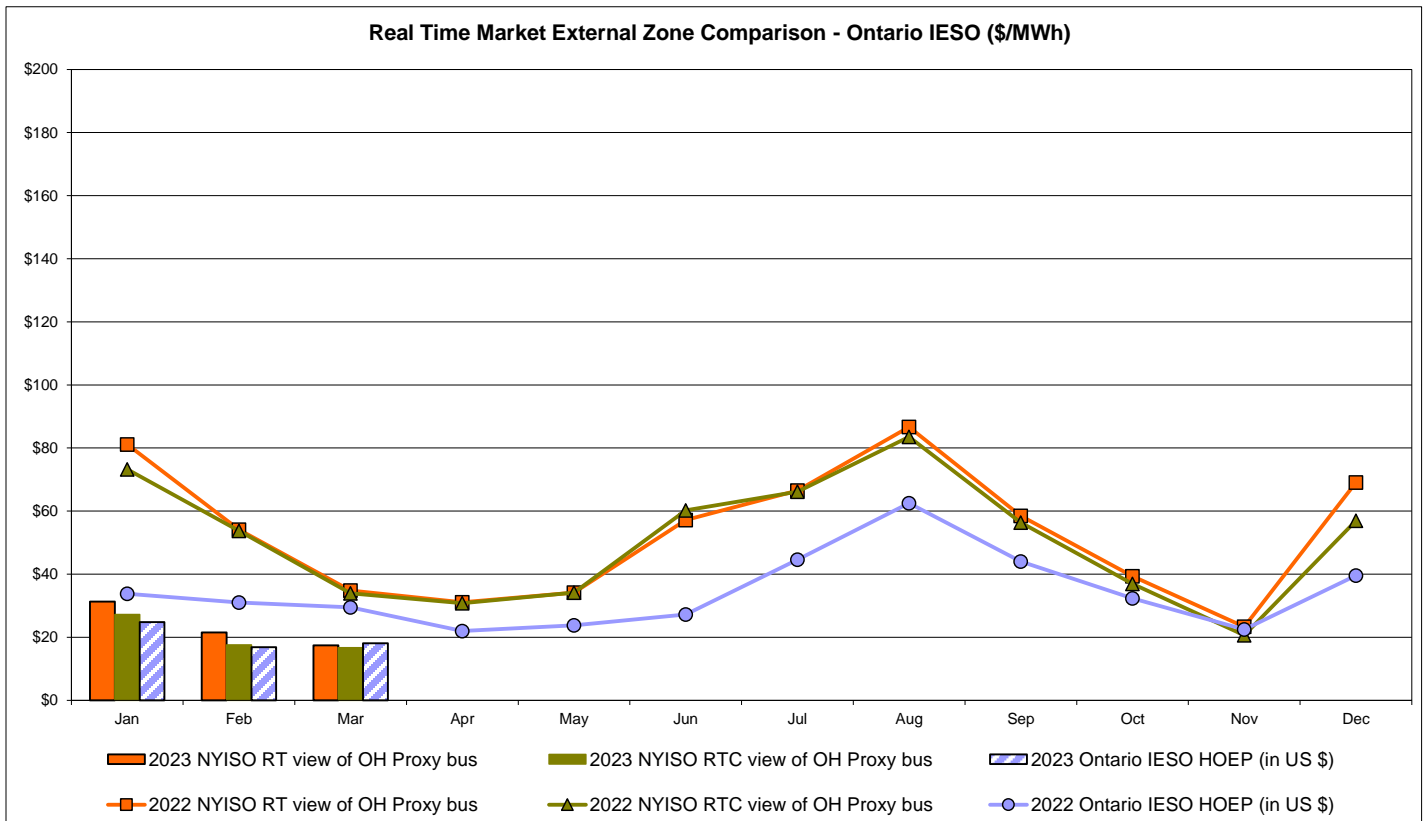
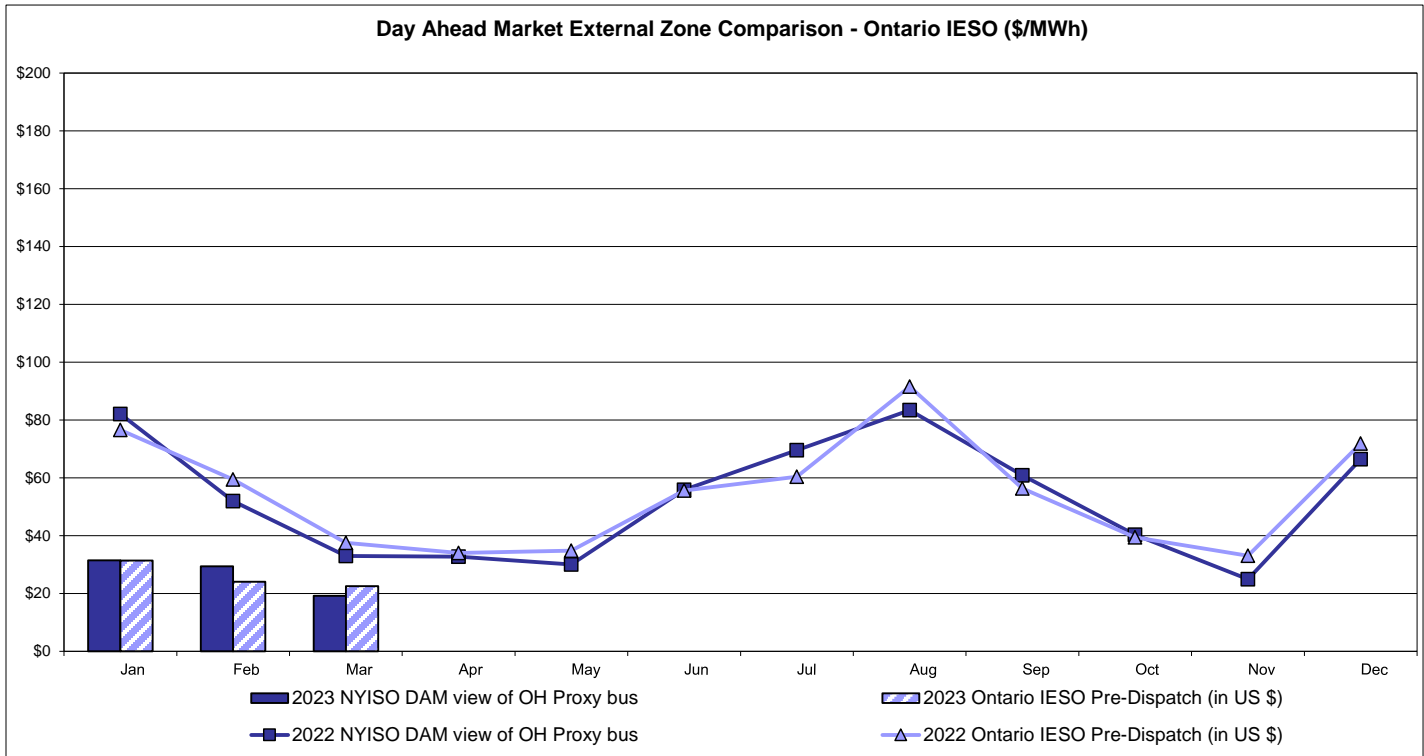
Day Ahead Market External Zone Comparison - PJM (\$/MWh)



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

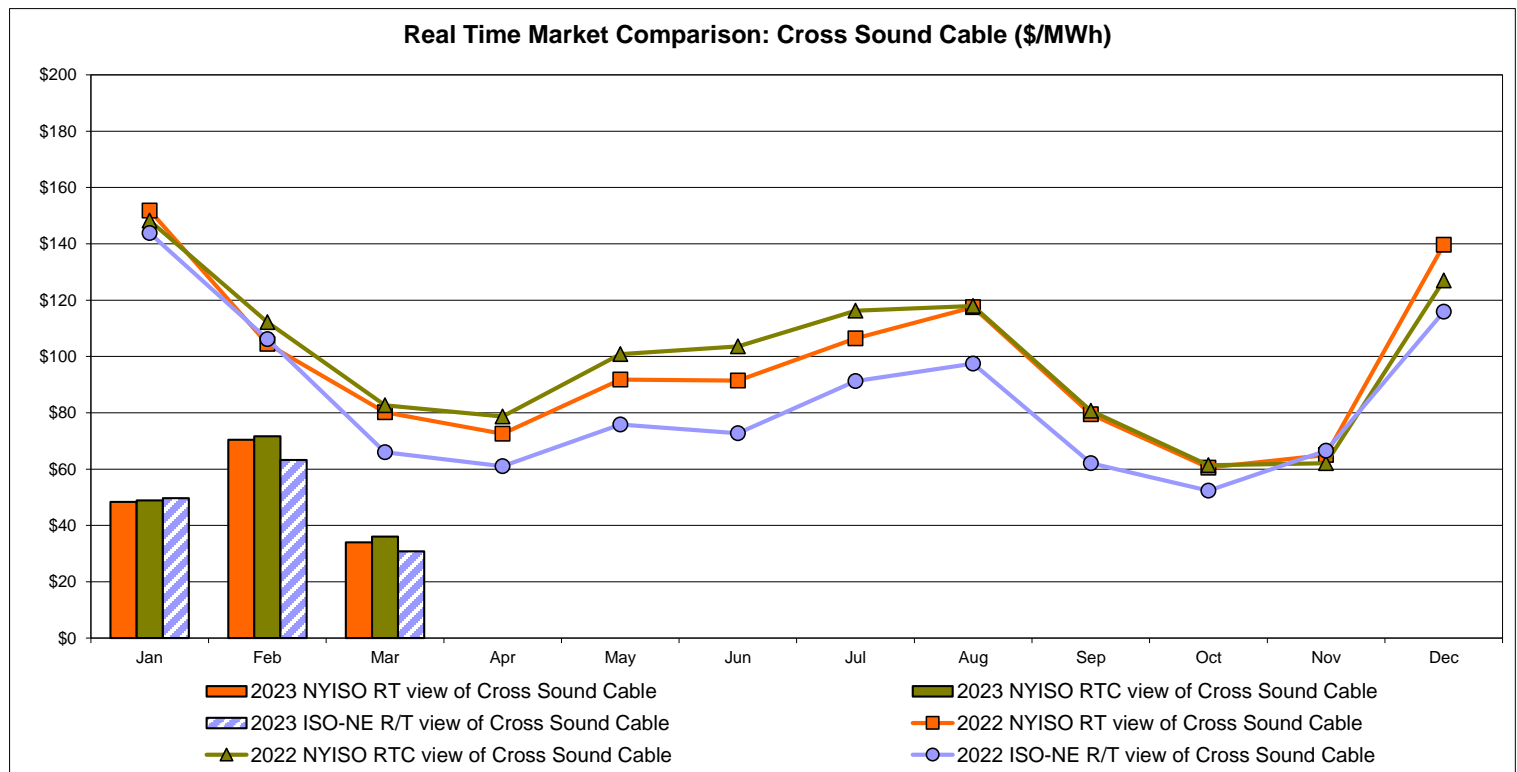
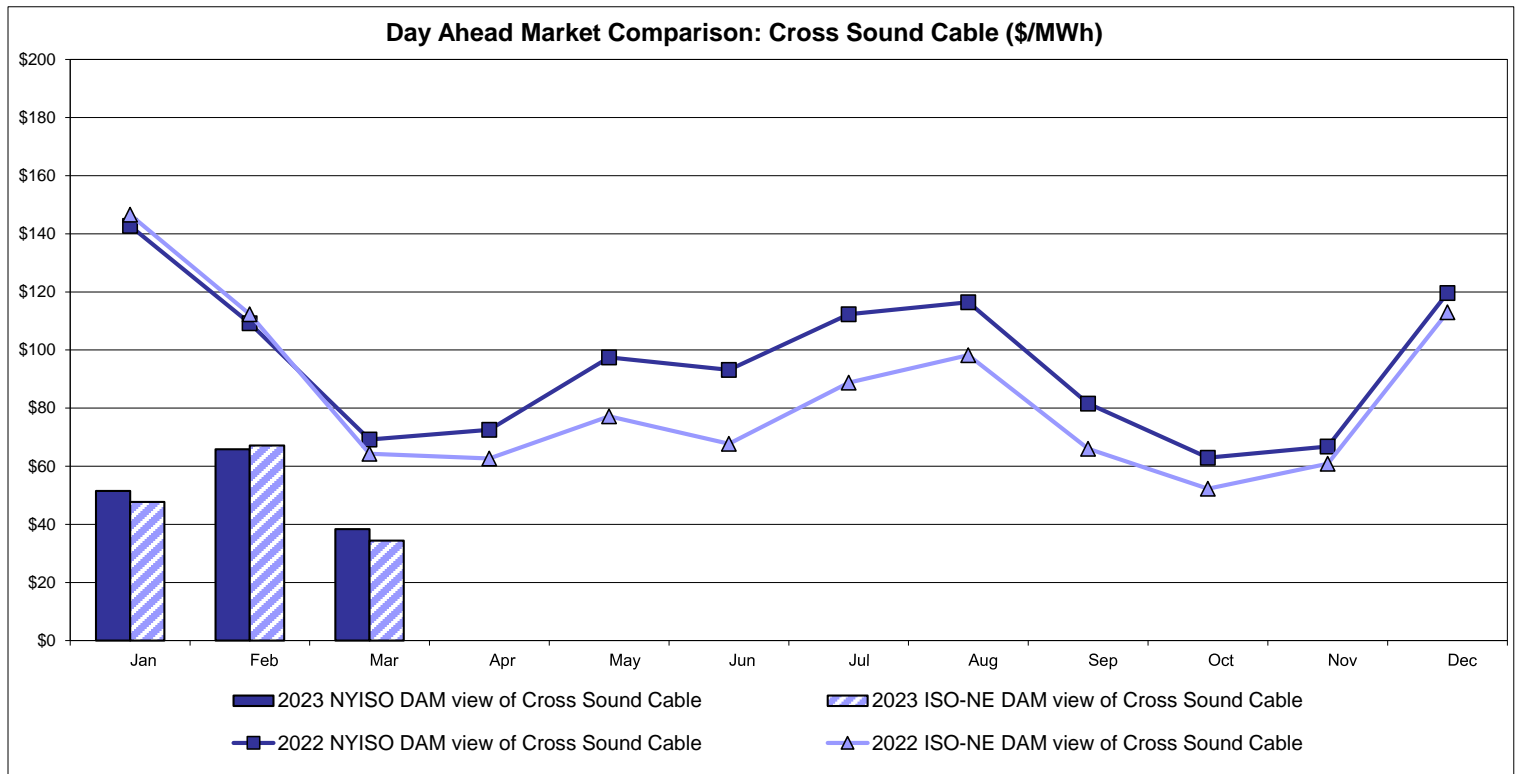


External Comparison Ontario IESO



Notes: Exchange factor used for March 2023 was 0.730833881458744 to US
 HOEP: Hourly Ontario Energy Price
 Pre-Dispatch: Projected Energy Price

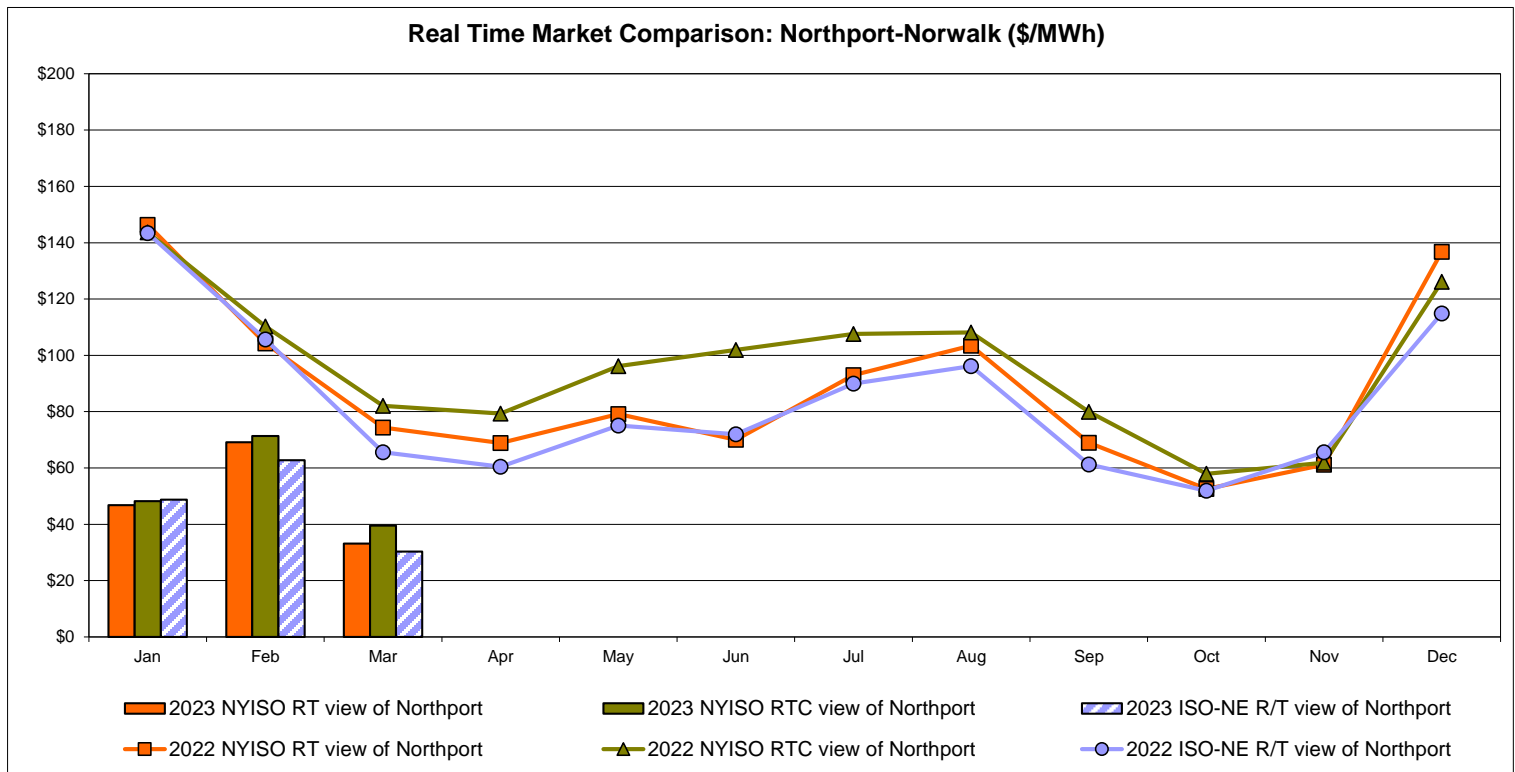
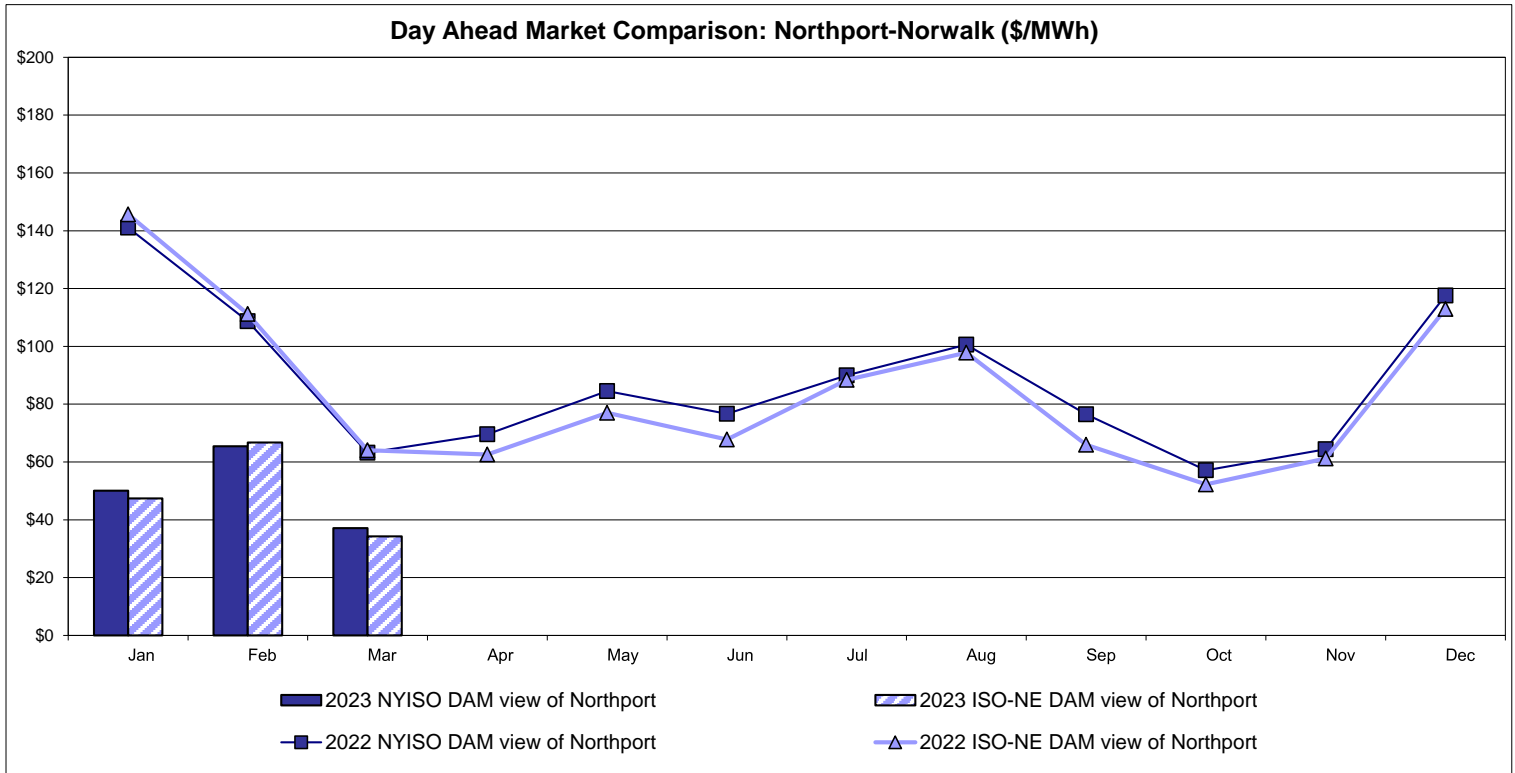
External Controllable Line: Cross Sound Cable (New England)



Note:

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

External Controllable Line: Northport - Norwalk (New England)

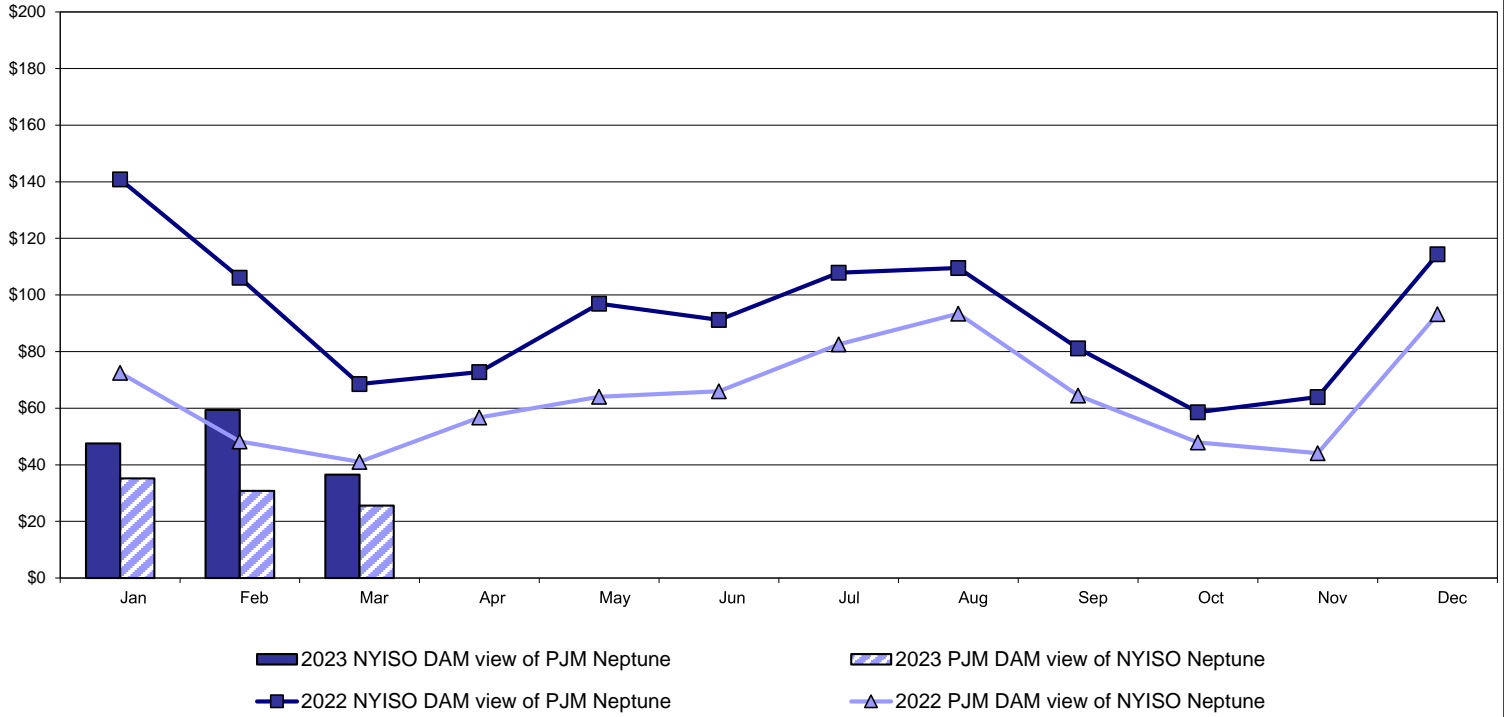


Note:

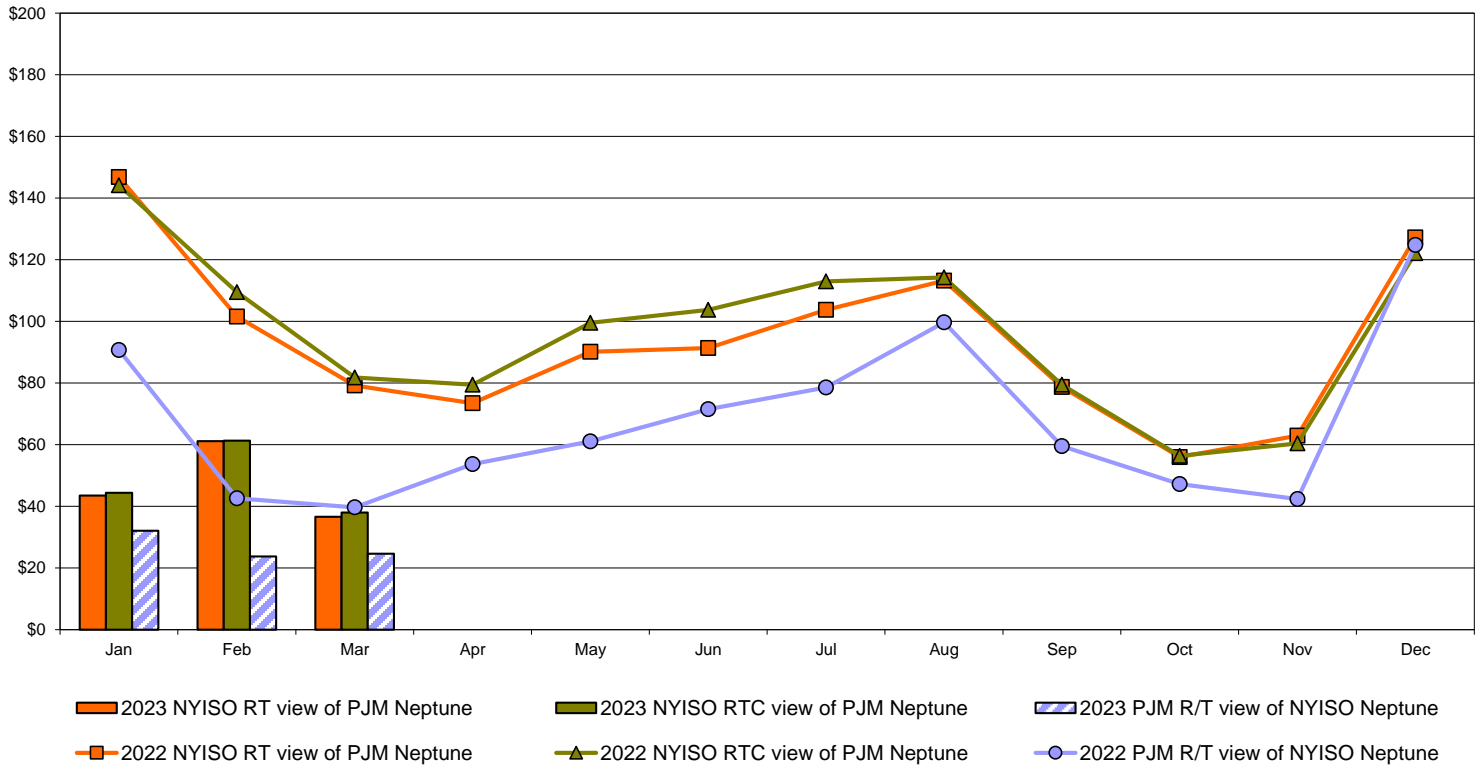
ISO-NE Forecast is an advisory posting @ 18:00 day before.
 The DAM and R/T prices at the Northport 138 interface are used for ISO-NE.
 The DAM and R/T prices at the 1385 interface are used for NYISO.

External Controllable Line: Neptune (PJM)

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

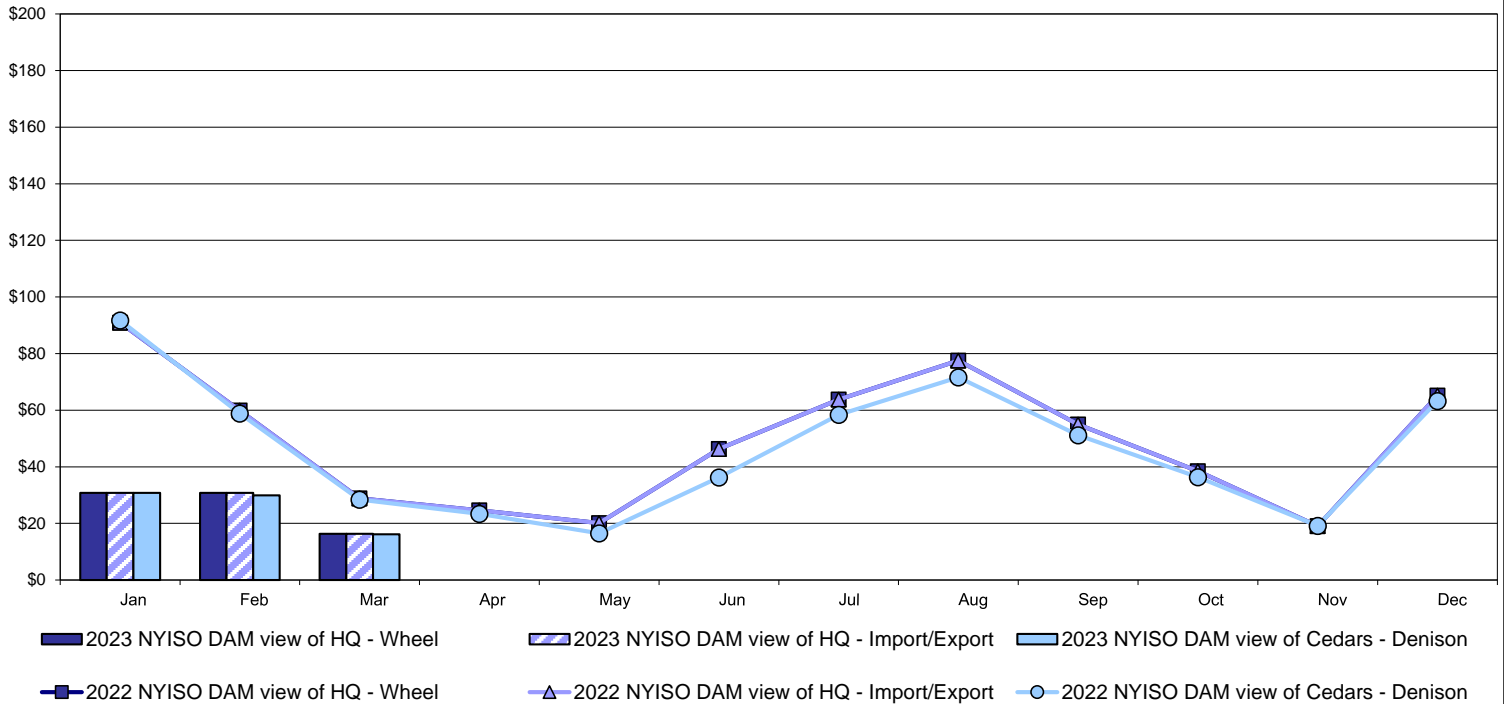


Real Time Market Comparison: Neptune (\$/MWh)

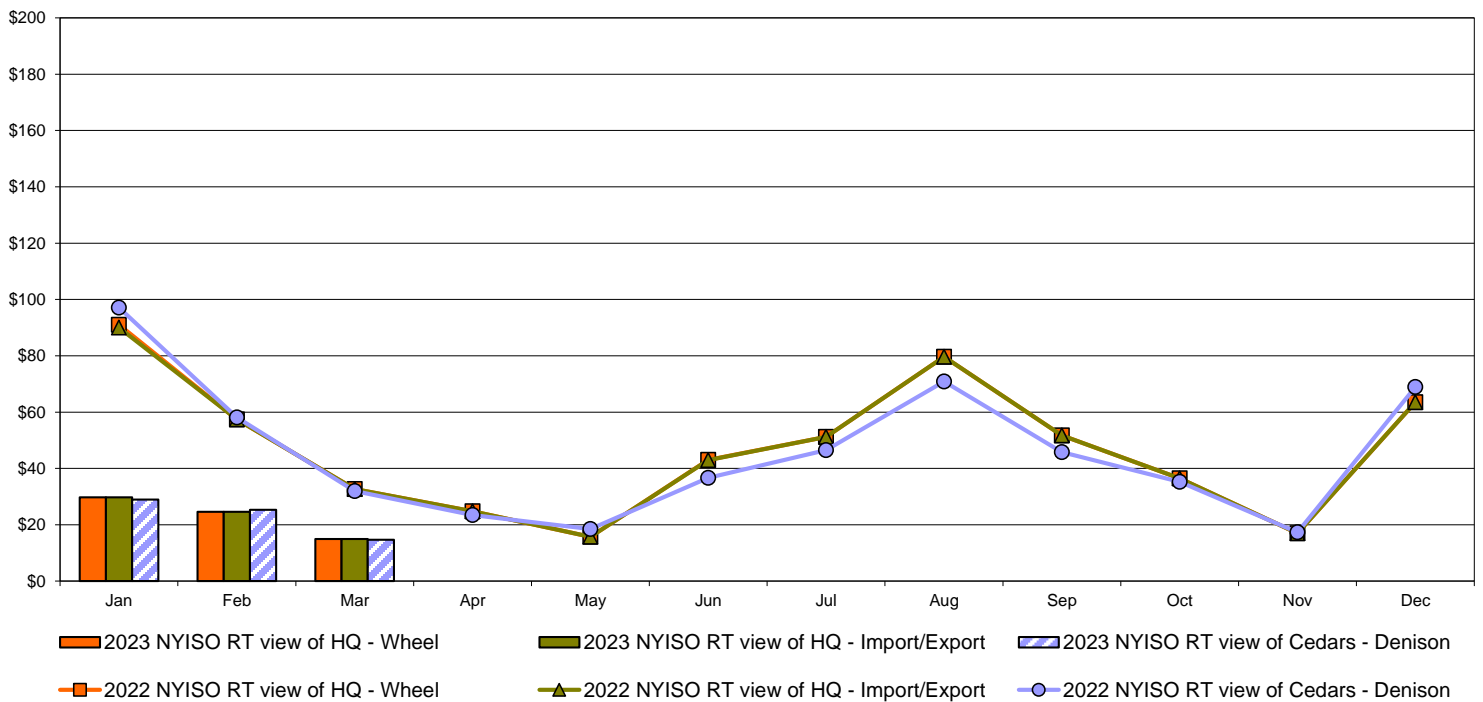


External Comparison Hydro-Quebec

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

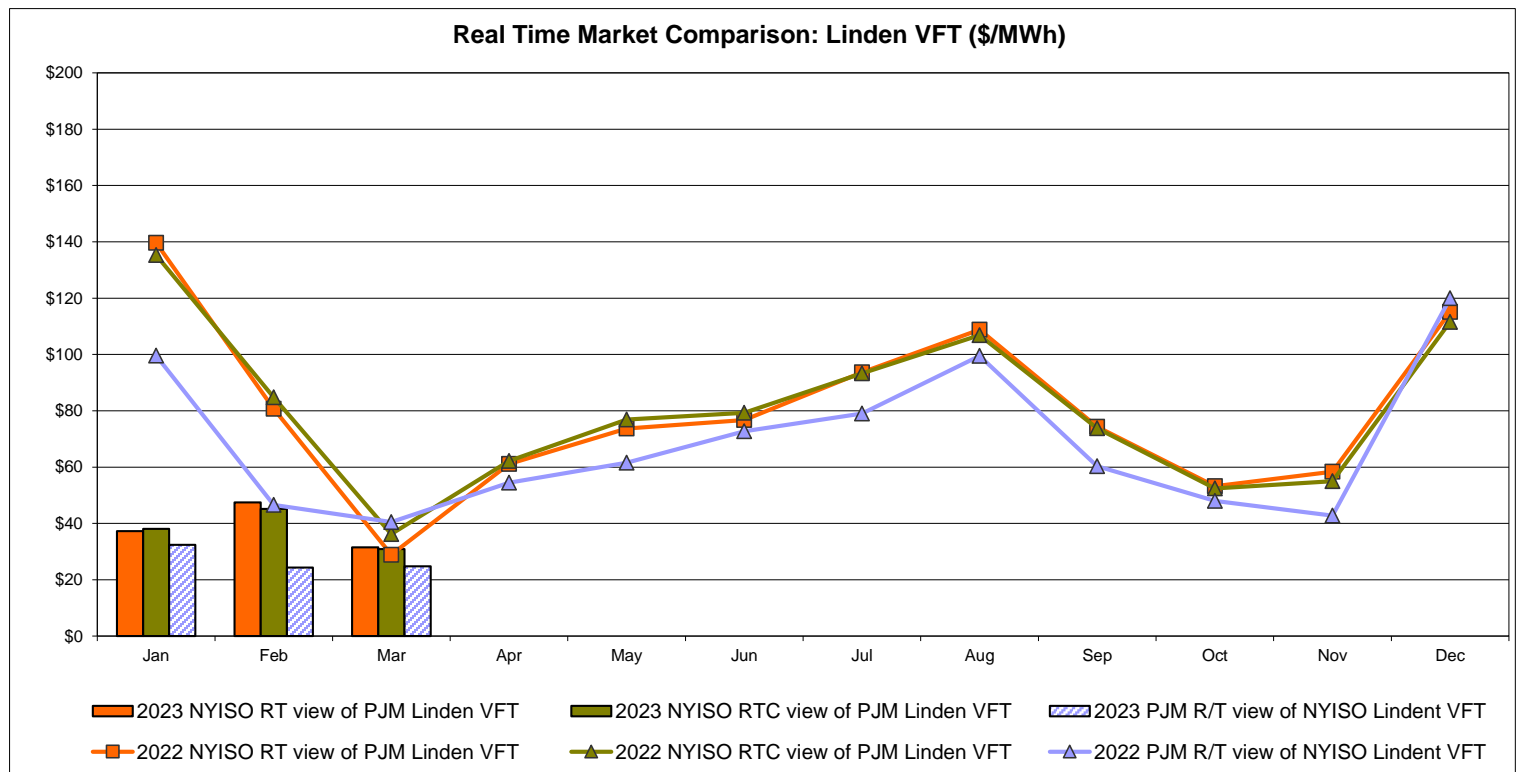
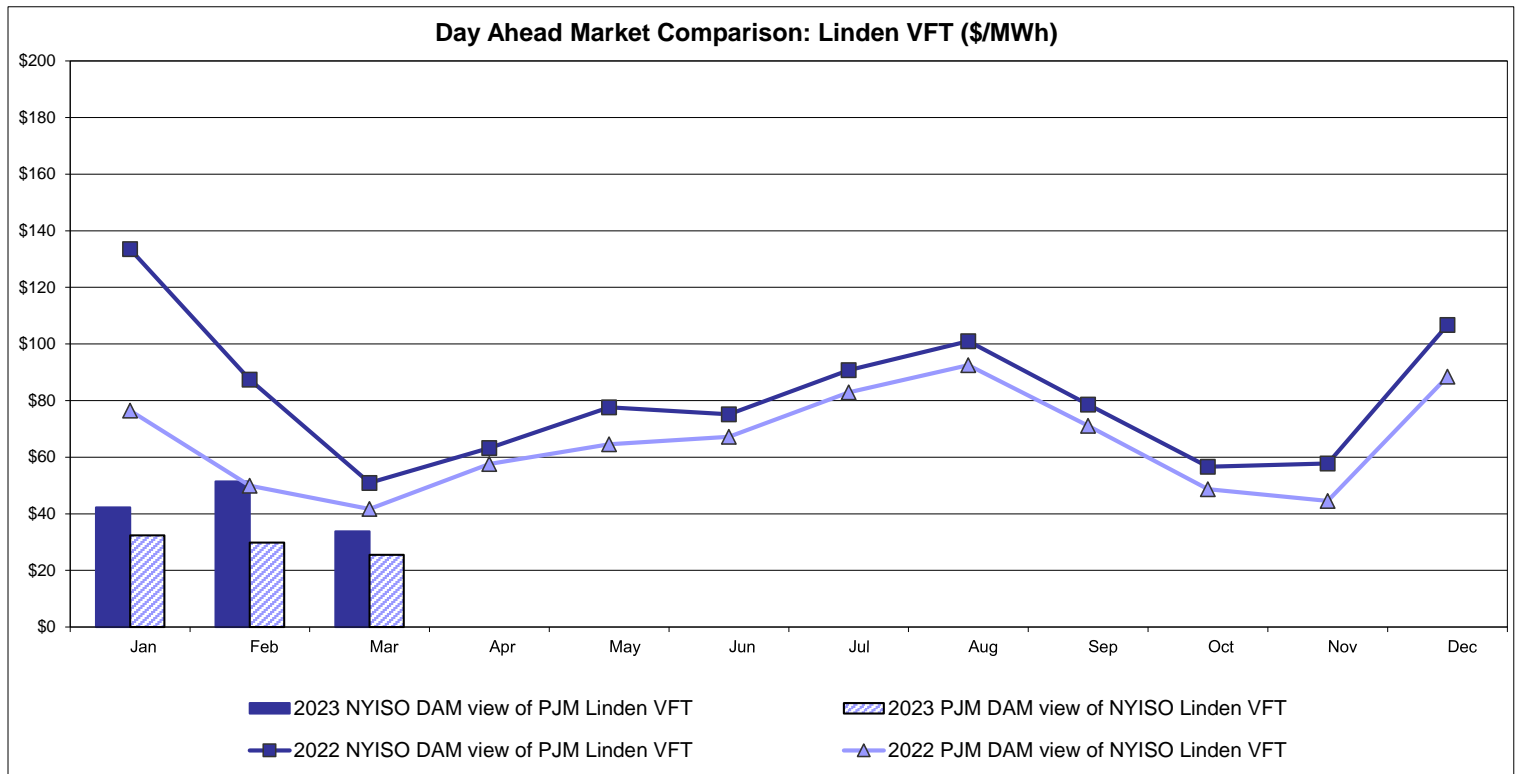


Real Time Market External Zone Comparison - HQ (\$/MWh)

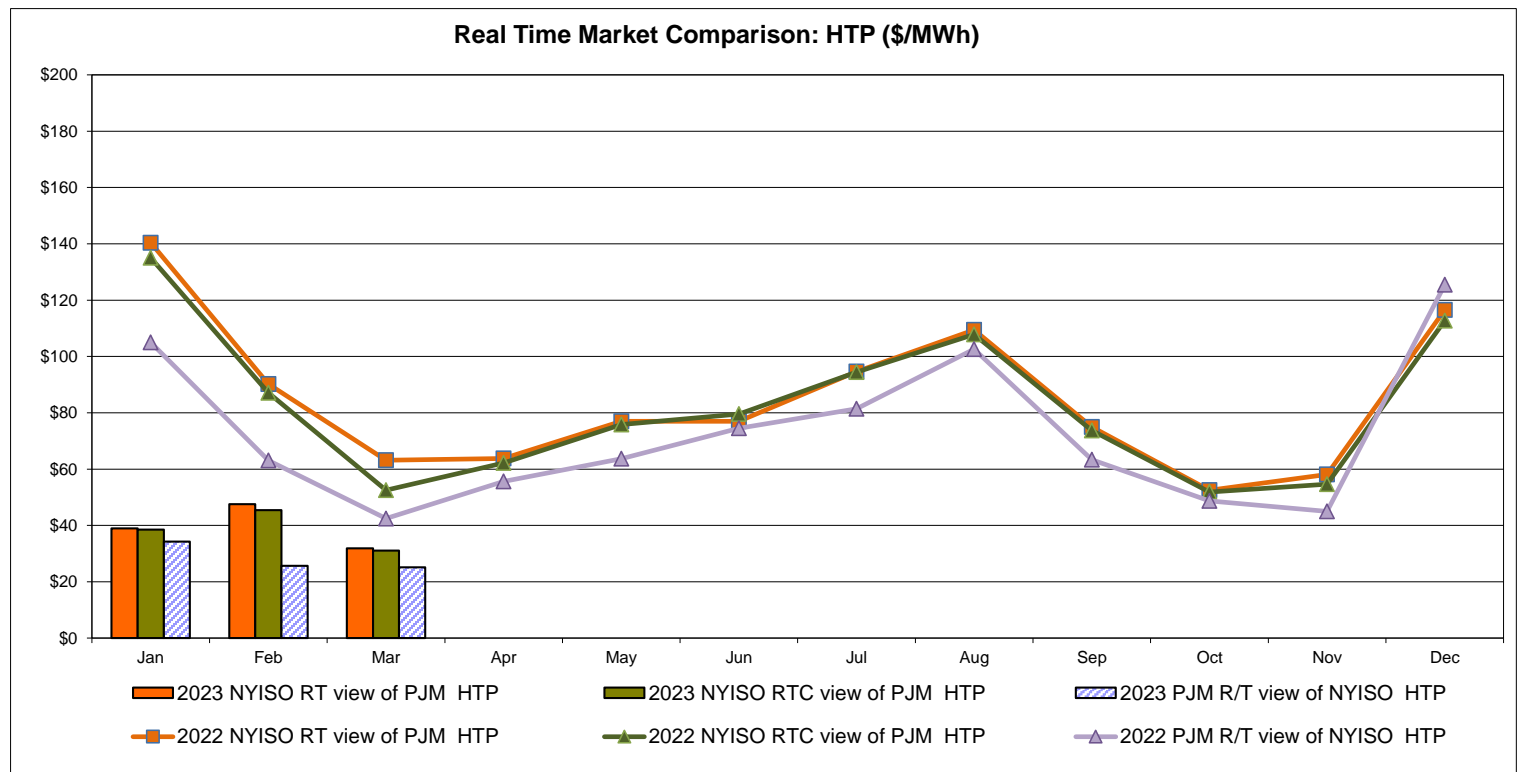
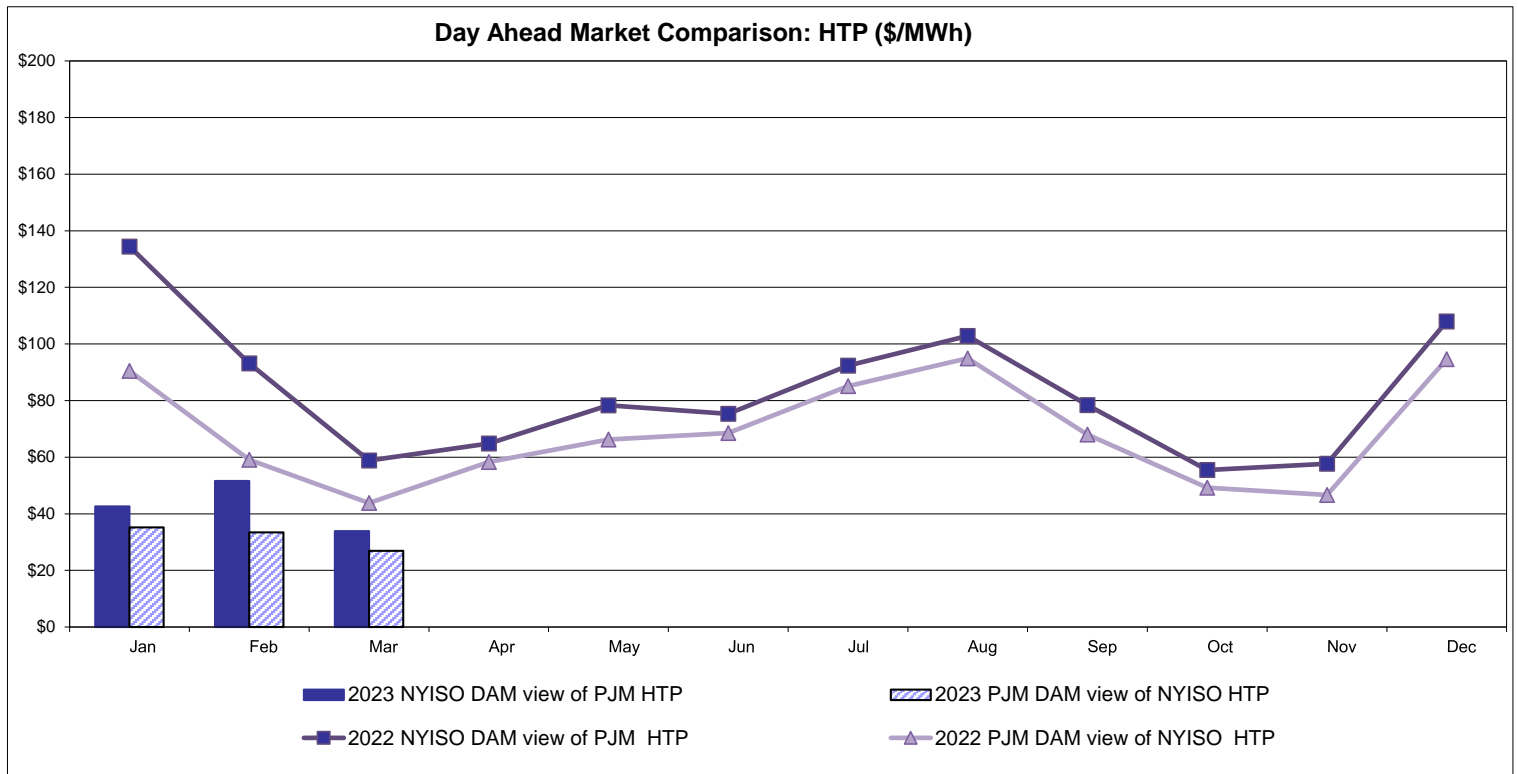


Note:
Hydro-Quebec Prices are unavailable.

External Controllable Line: Linden VFT (PJM)



External Controllable Line: Hudson (PJM)

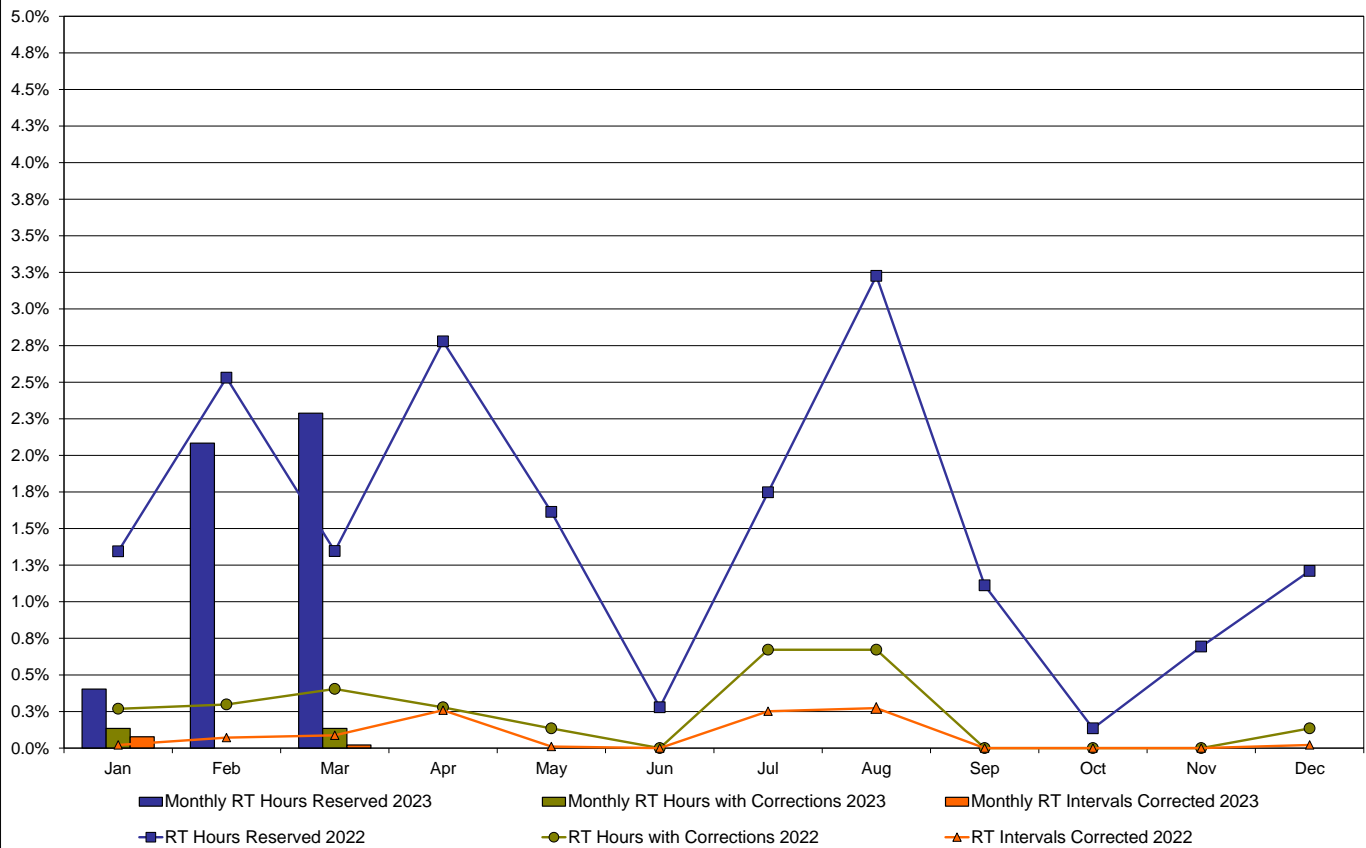


NYISO Real Time Price Correction Statistics

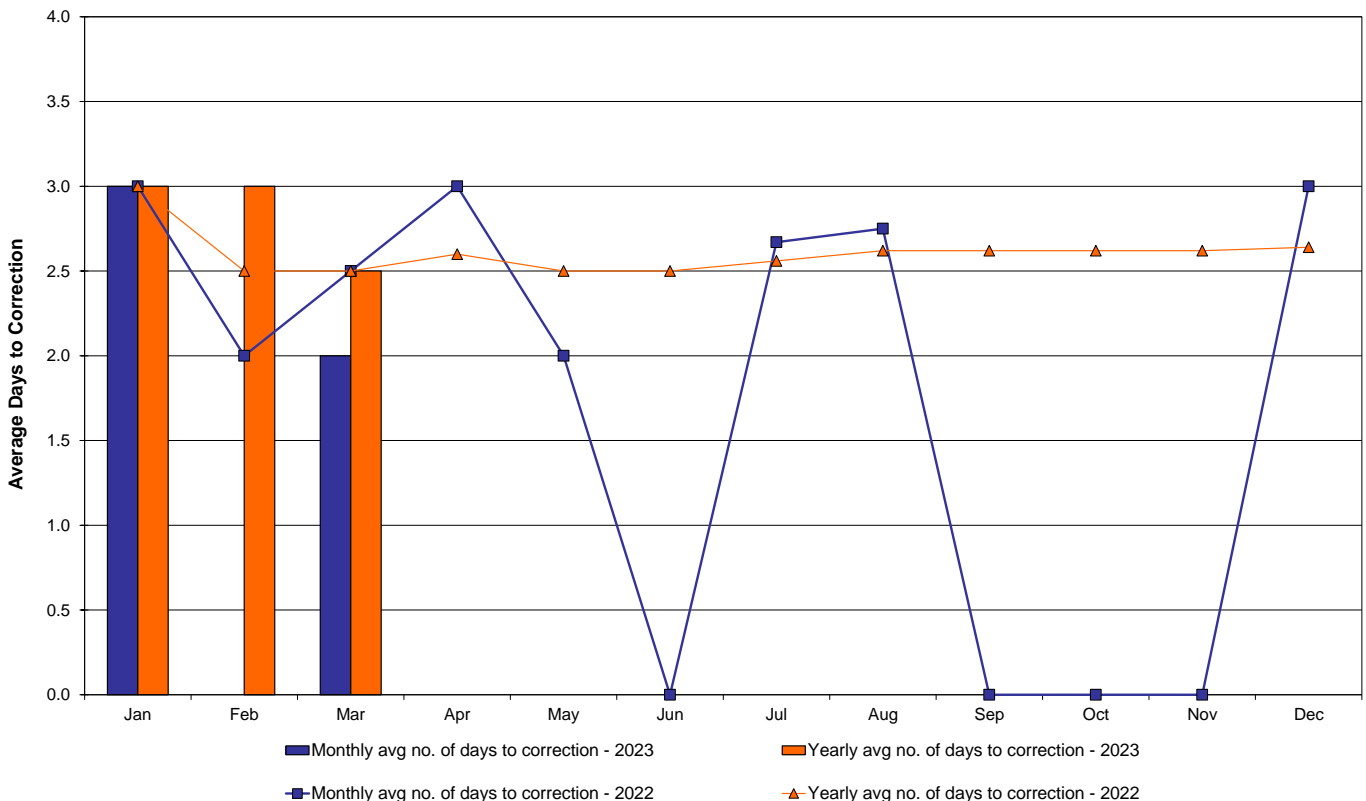
2023		<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
Hour Corrections													
Number of hours with corrections	in the month	1	0	1									
Number of hours	in the month	744	672	743									
% of hours with corrections	in the month	0.13%	0.00%	0.13%									
% of hours with corrections	year-to-date	0.13%	0.07%	0.09%									
Interval Corrections													
Number of intervals corrected	in the month	7	0	2									
Number of intervals	in the month	9,082	8,373	9,171									
% of intervals corrected	in the month	0.08%	0.00%	0.02%									
% of intervals corrected	year-to-date	0.08%	0.04%	0.03%									
Hours Reserved													
Number of hours reserved	in the month	3	14	17									
Number of hours	in the month	744	672	743									
% of hours reserved	in the month	0.40%	2.08%	2.29%									
% of hours reserved	year-to-date	0.40%	1.20%	1.57%									
Days to Correction *													
Avg. number of days to correction	in the month	3.00	0.00	2.00									
Avg. number of days to correction	year-to-date	3.00	3.00	2.50									
Days Without Corrections													
Days without corrections	in the month	30	28	30									
Days without corrections	year-to-date	30	58	88									
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

Percentage of Real-Time Corrections



Annual average time period for making Price Corrections (from reservation date) *



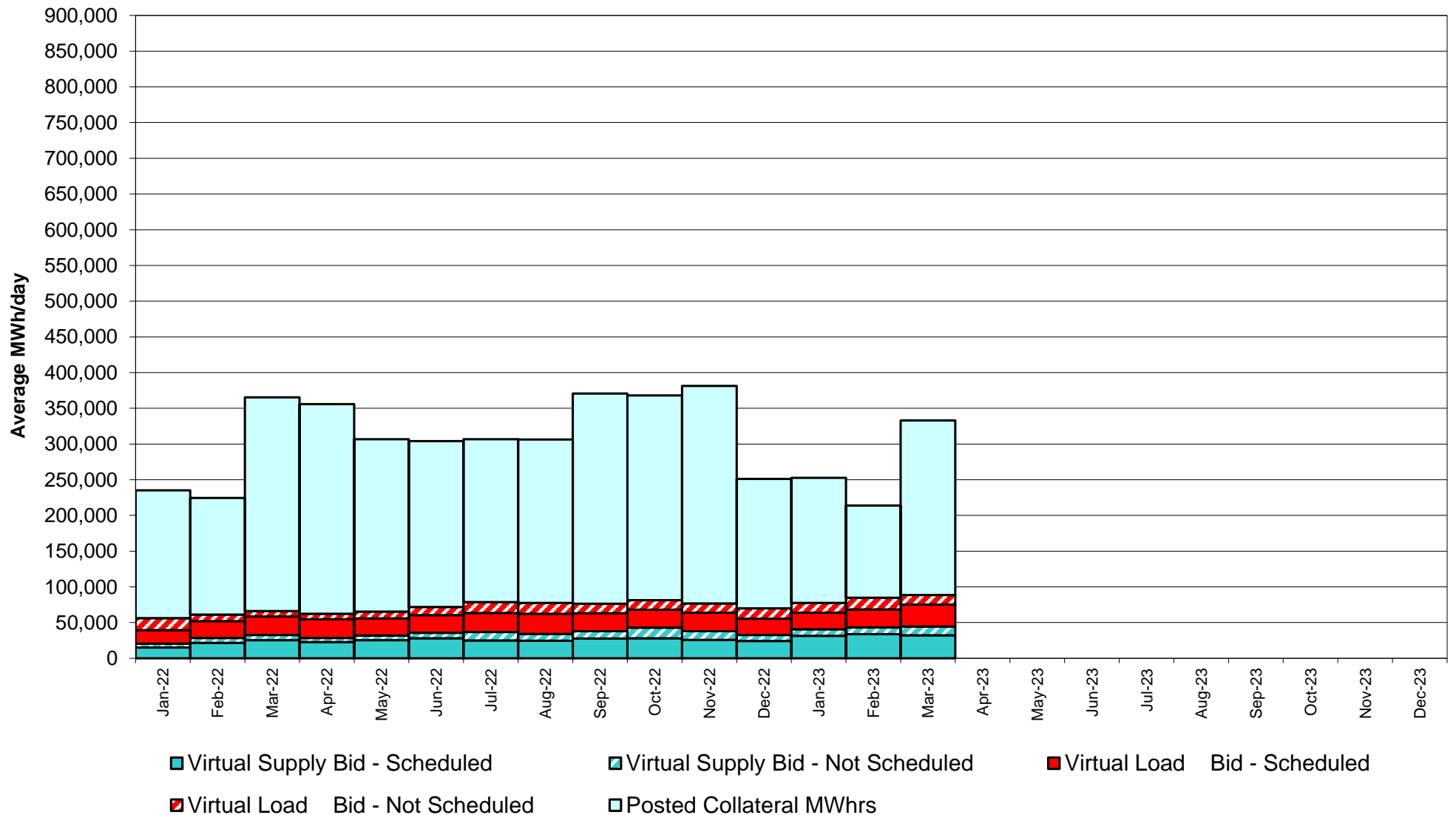
*Calendar days from reservation date; for June 2018 forward, business days from market date

Market Mitigation and Analysis
Prepared: 4/12/2023 10:57 AM

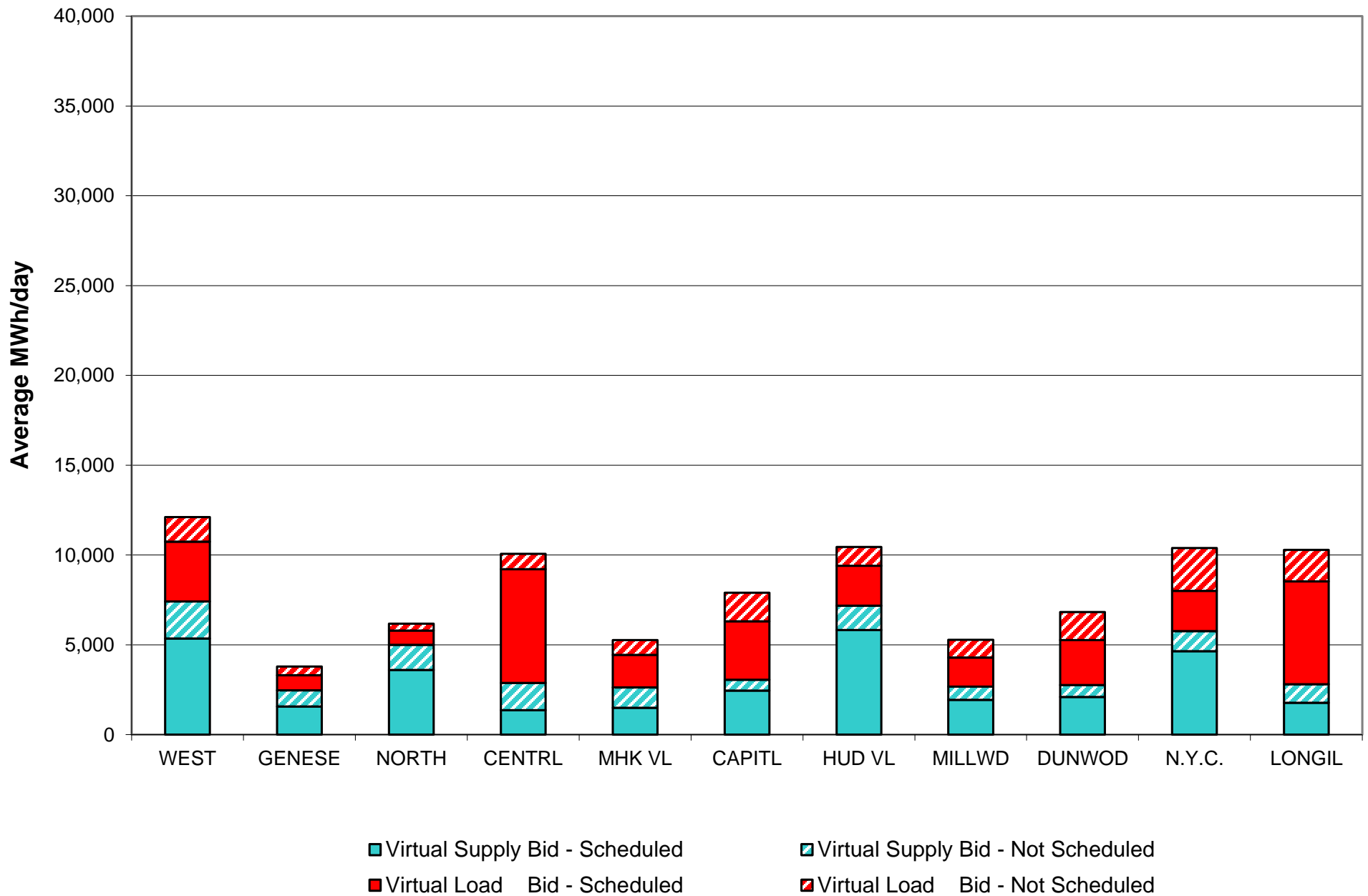
Y

May/June 2017 Hours Reserved data
has been updated for the July 2017
Monthly Market Operations Report.

NYISO Virtual Trading Average MWh per day



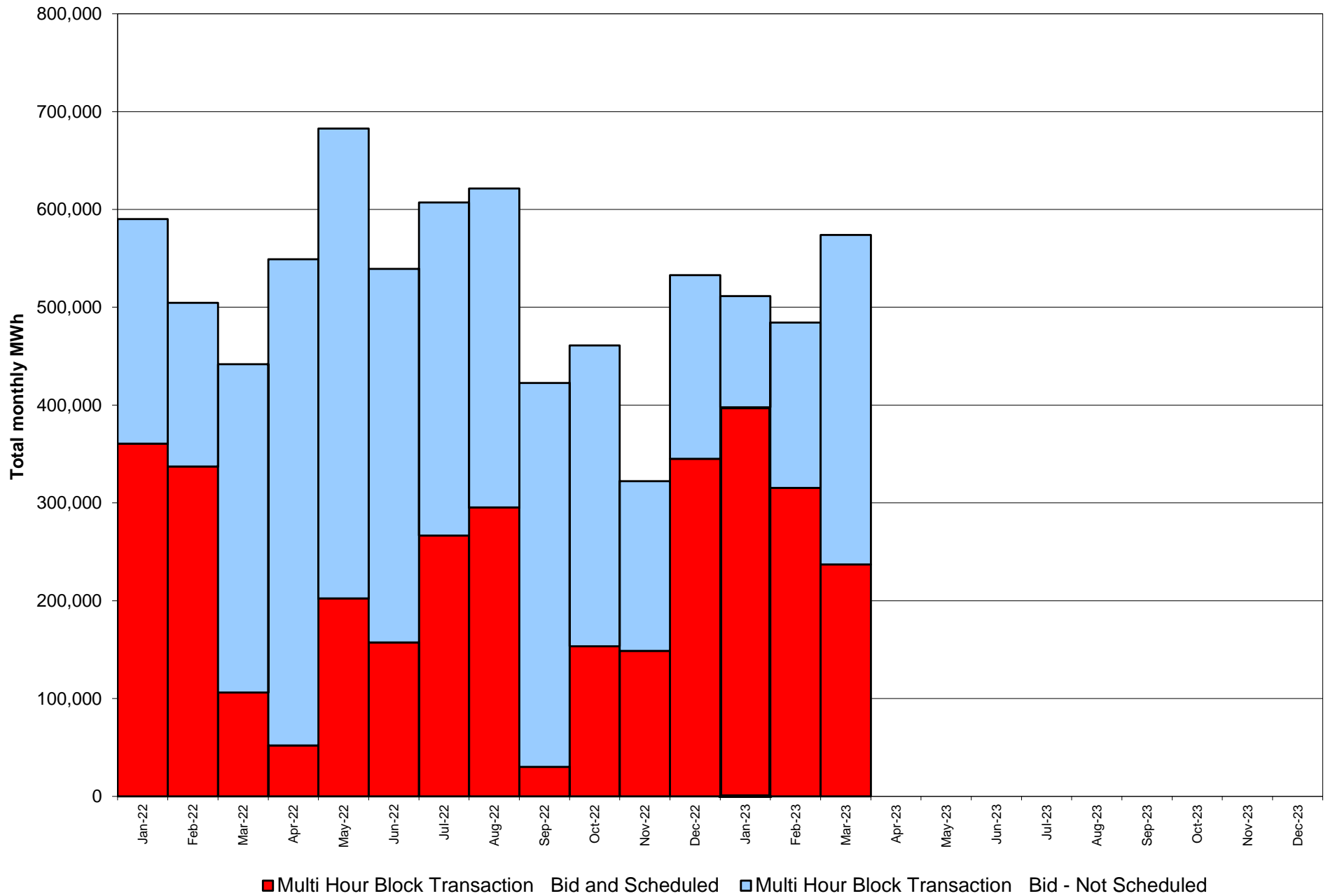
Virtual Load and Supply Zonal Statistics through March 31, 2023



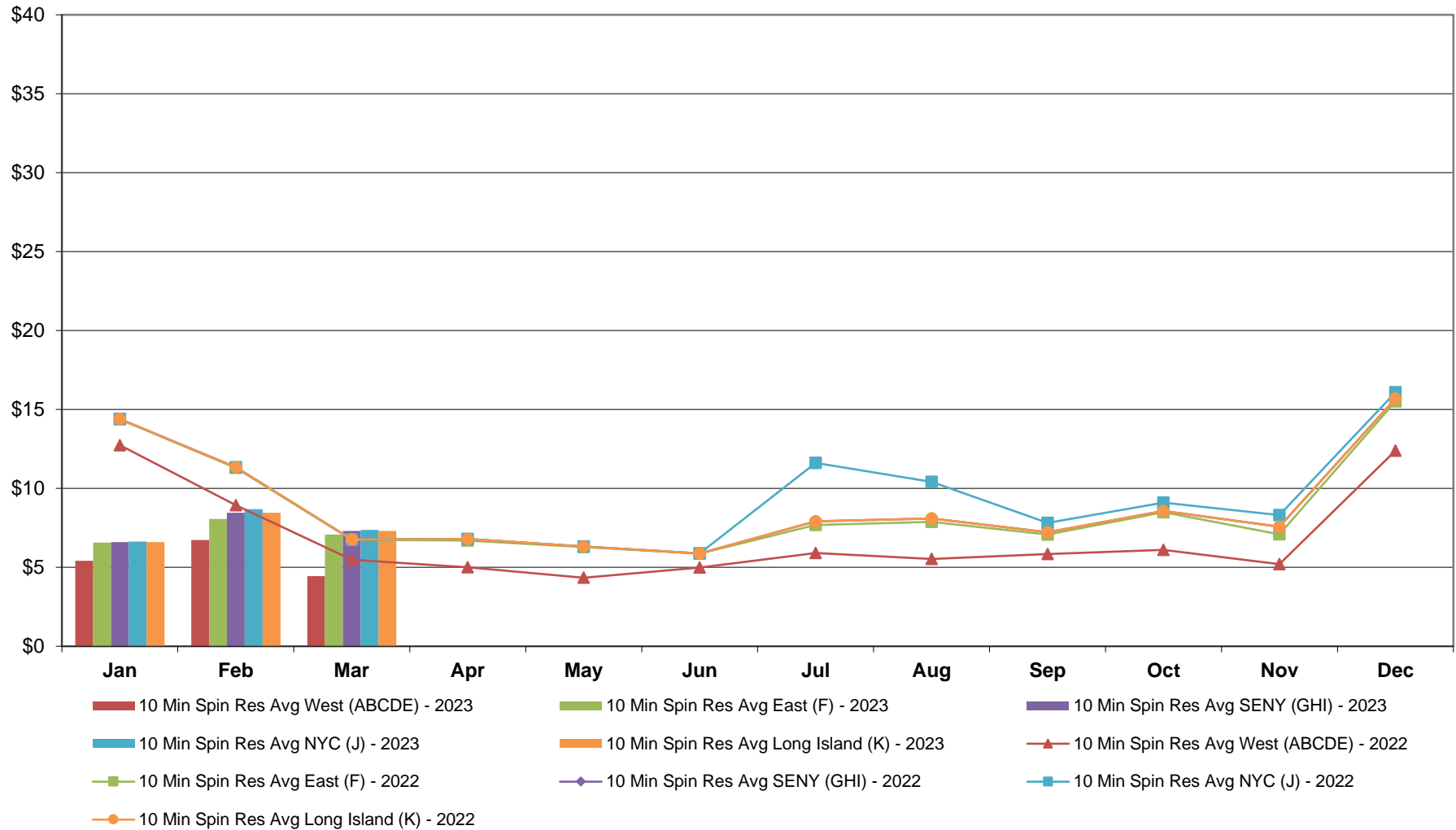
Virtual Load and Supply Zonal Statistics (Average MWh/day) - 2023

		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	2,266	1,863	6,652	1,270			Feb-23	1,146	1,395	2,484	436			Feb-23	1,366	1,793	2,082	408
	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	2,093	670
	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	1,136	523	1,480	586			Feb-23	1,902	1,166	2,655	729			Feb-23	2,663	2,398	3,564	1,126
	Mar-23	835	495	1,562	905			Mar-23	3,256	1,595	2,454	594			Mar-23	2,230	2,393	4,646	1,121
	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	1,111	302	2,854	1,432			Feb-23	1,335	1,484	5,382	1,297			Feb-23	4,408	2,440	2,494	1,130
	Mar-23	789	383	3,605	1,395			Mar-23	2,224	1,049	5,815	1,357			Mar-23	5,725	1,753	1,778	1,029
	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	6,851	1,526	2,219	703			Feb-23	888	1,228	2,021	434			Feb-23	25,071	16,118	33,885	9,552
	Mar-23	6,340	843	1,355	1,520			Mar-23	1,616	992	1,938	736			Mar-23	30,654	13,262	32,086	12,525
	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				

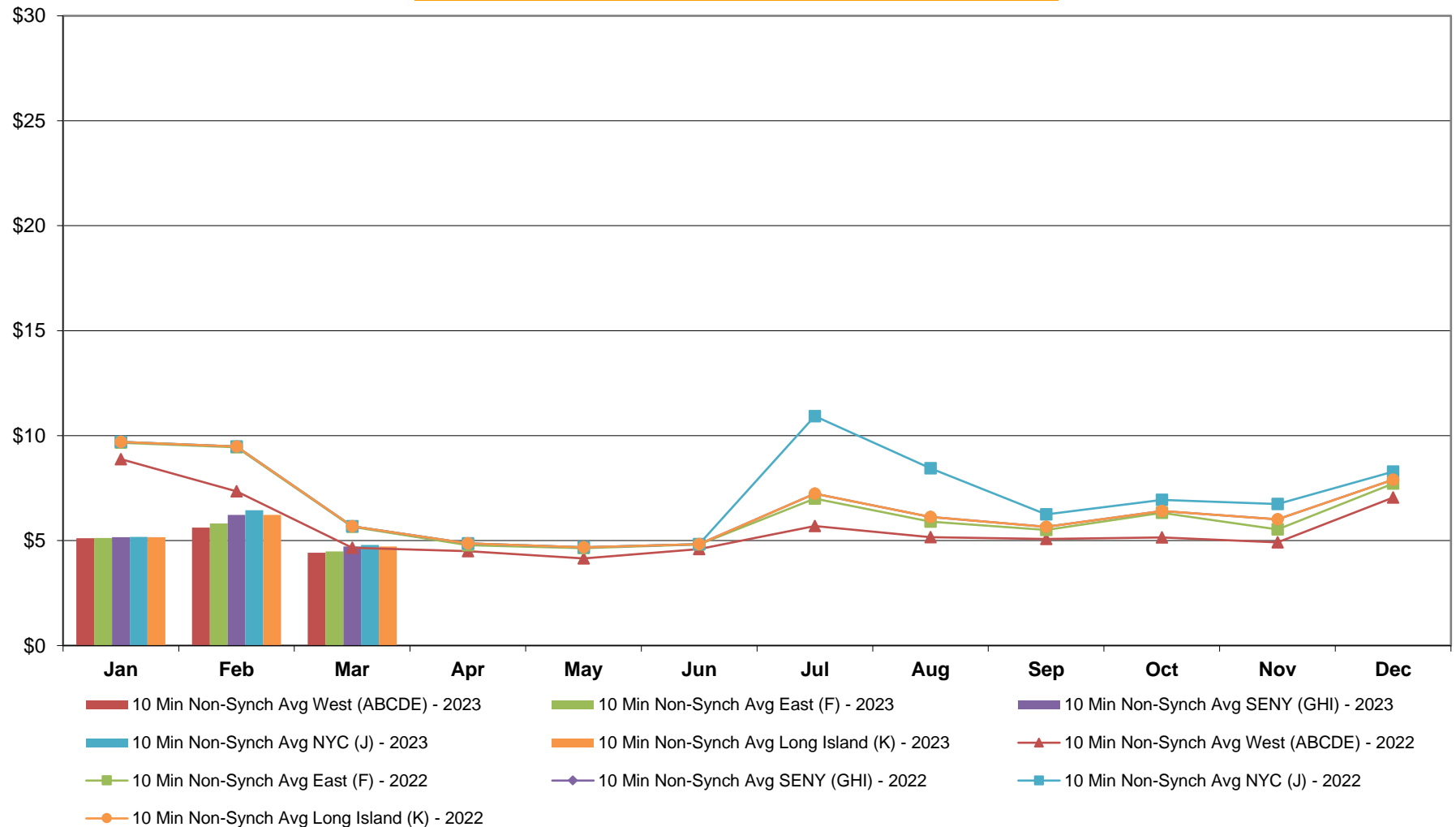
NYISO Multi Hour Block Transactions Monthly Total MWh



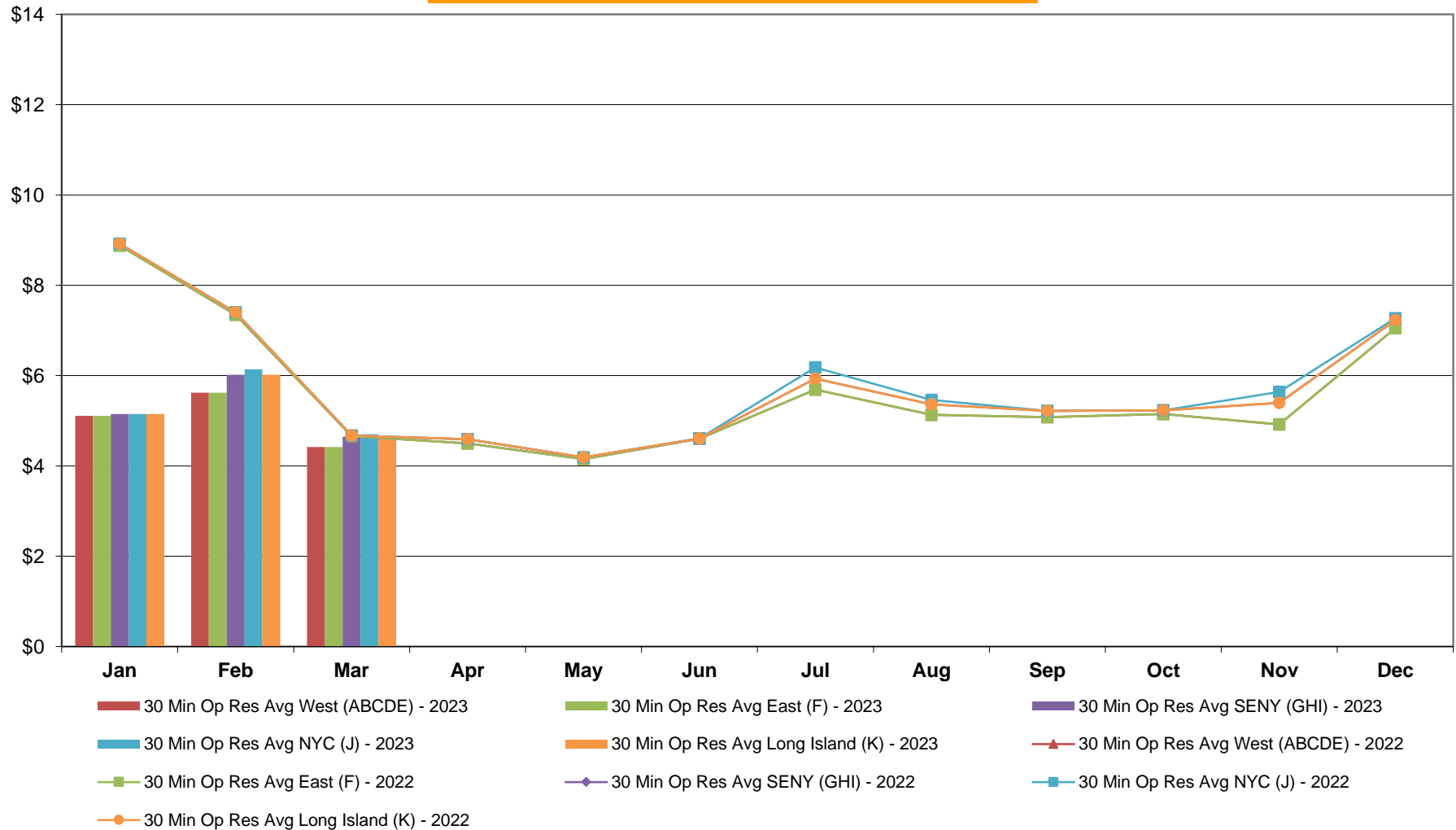
NYISO Monthly Average Ancillary Service Prices **Day Ahead Market - 10 Min Spin 2022 - 2023**

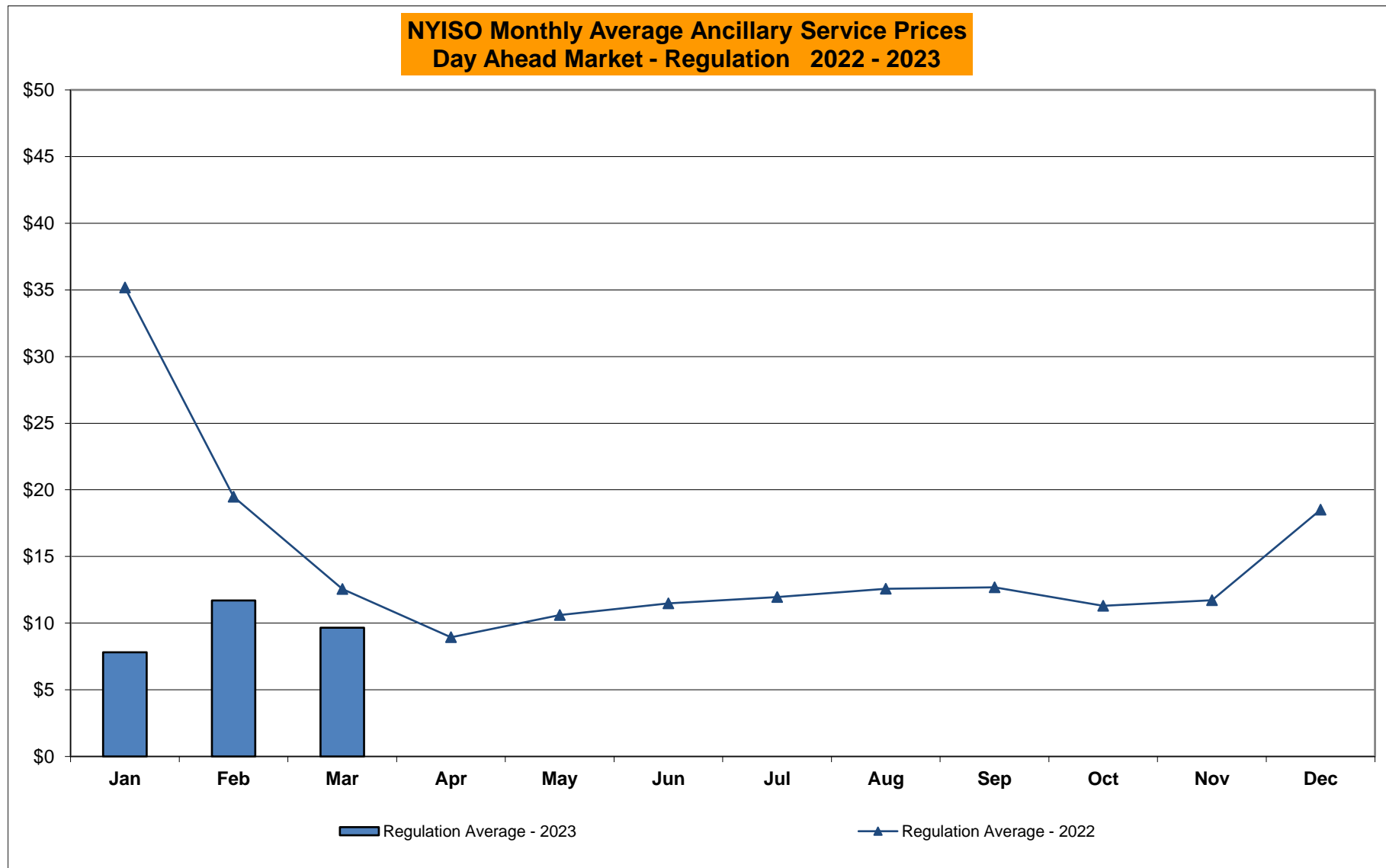


NYISO Monthly Average Ancillary Service Prices Day Ahead Market - 10 Min Non-Synch 2022 - 2023

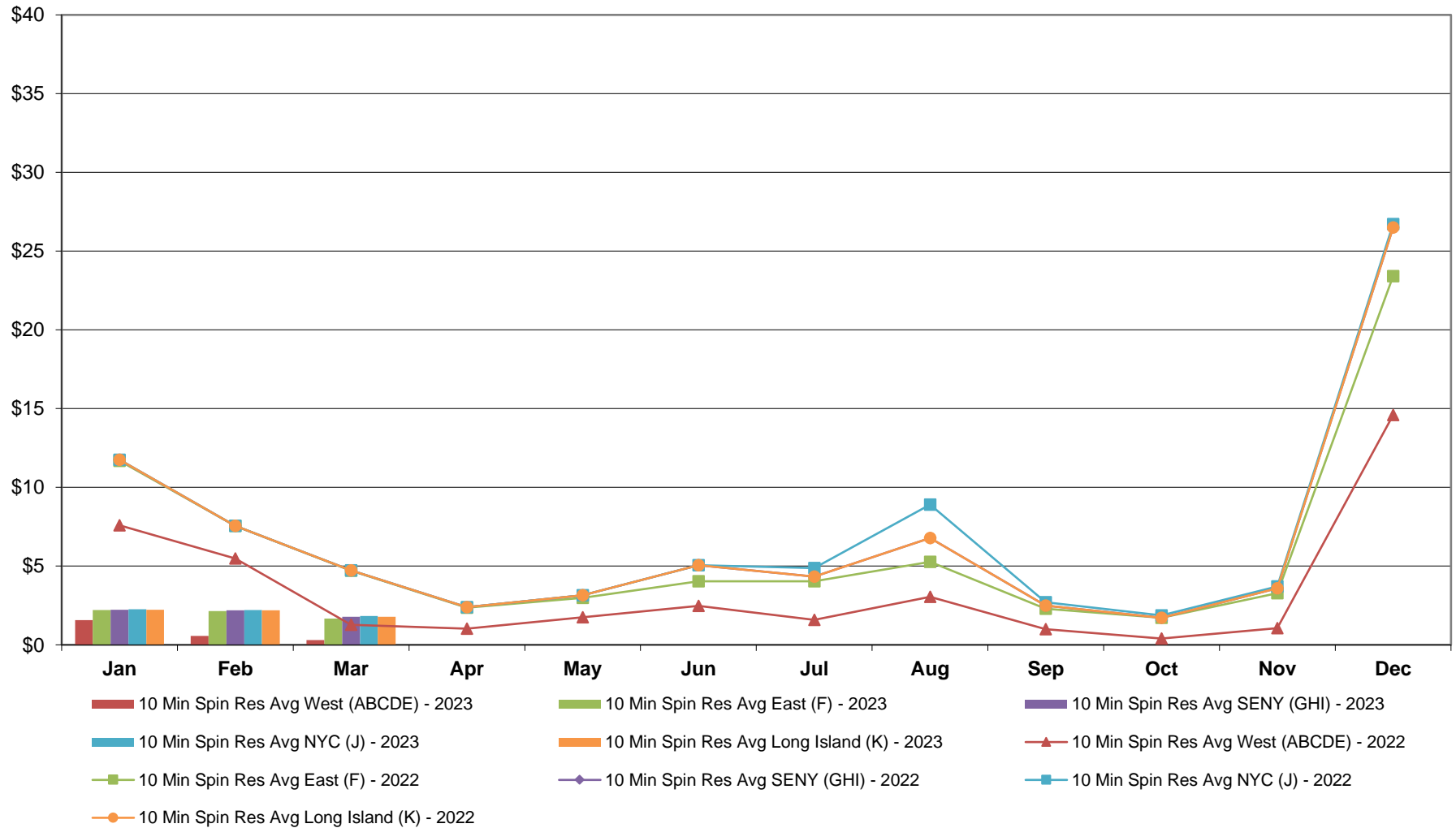


NYISO Monthly Average Ancillary Service Prices Day Ahead Market - 30 Min Op Res 2022 - 2023

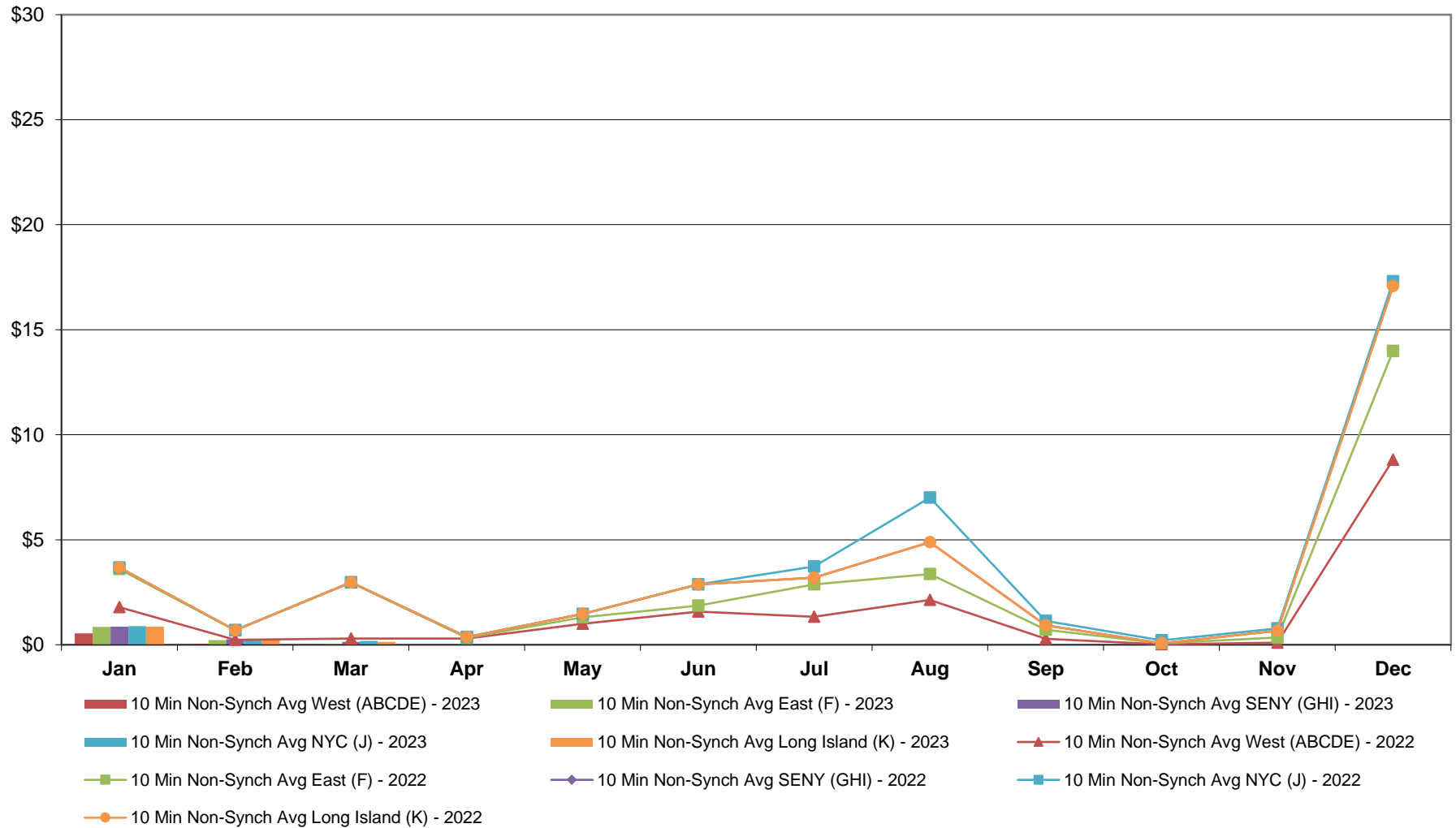




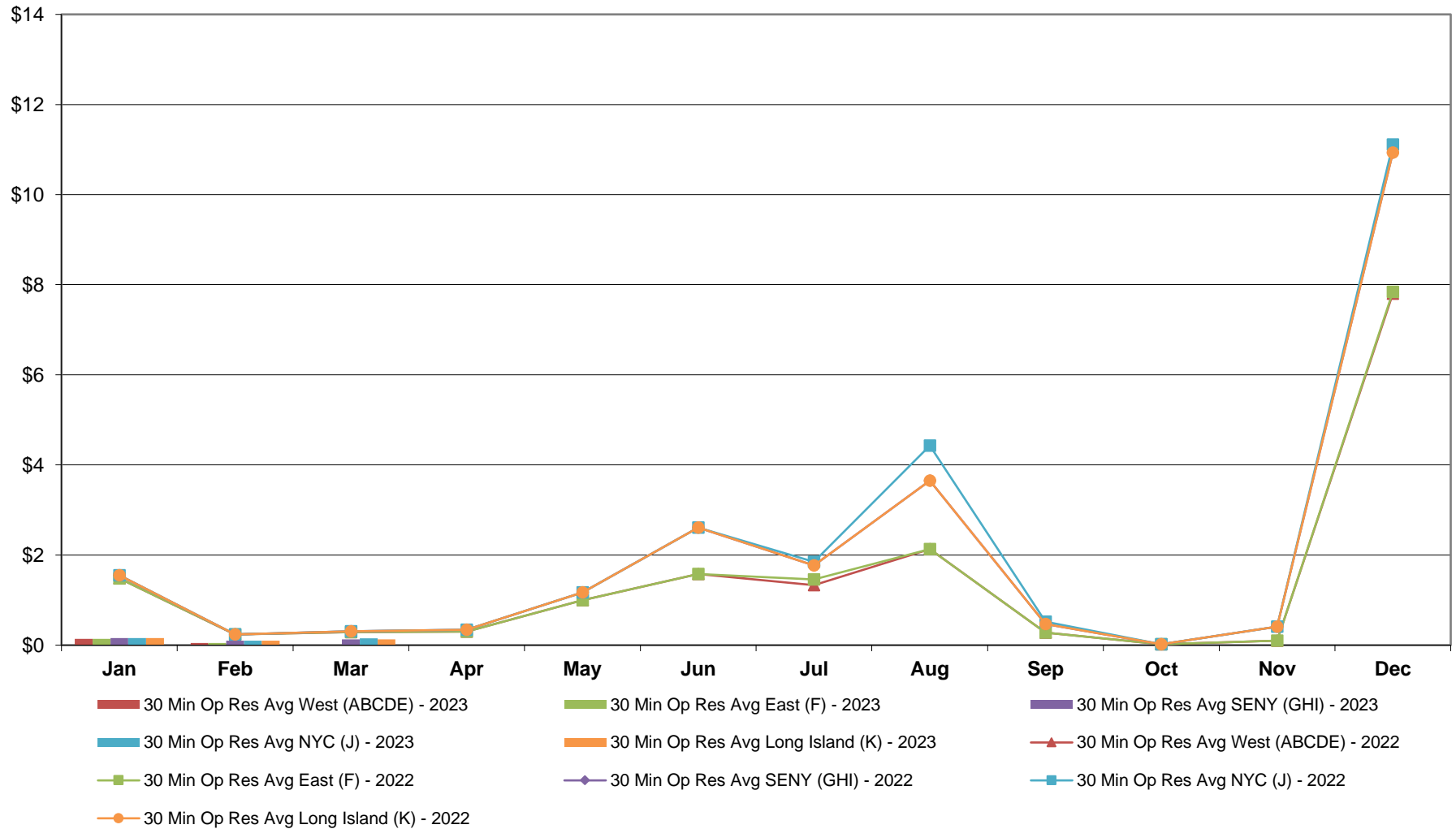
NYISO Monthly Average Ancillary Service Prices RTC Market - 10 Min Spin 2022 - 2023



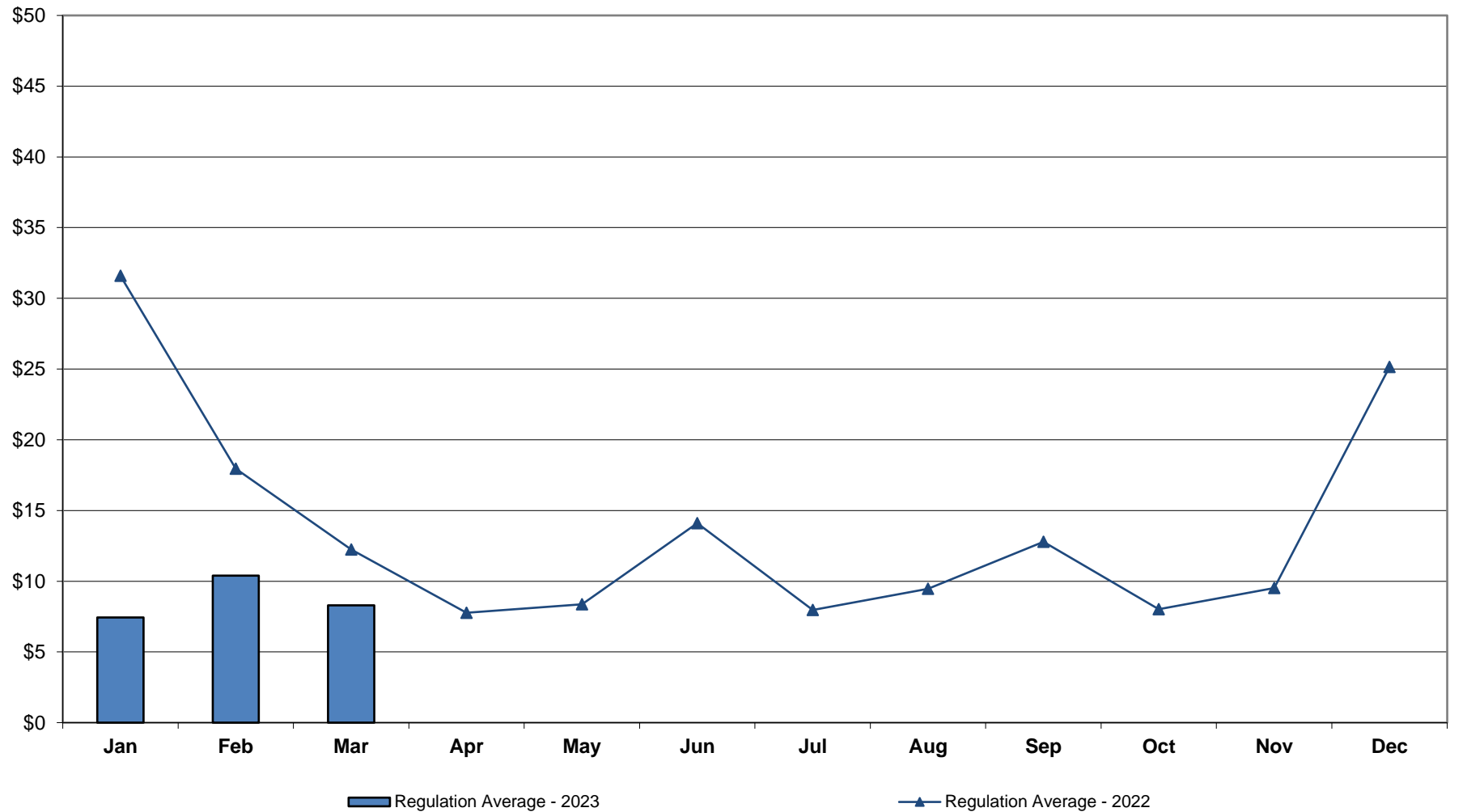
NYISO Monthly Average Ancillary Service Prices RTC Market - 10 Min Non-Synch 2022 - 2023



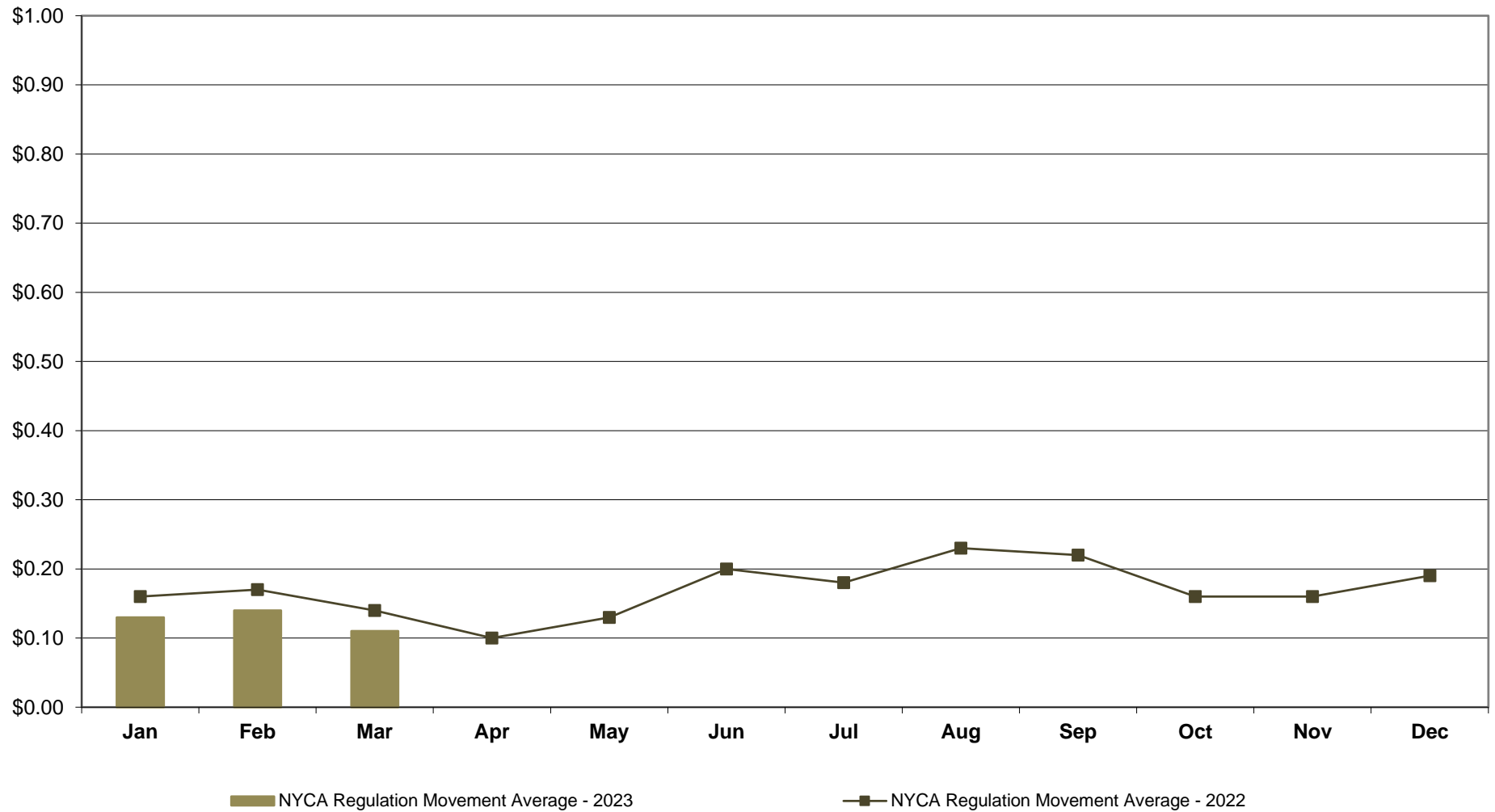
NYISO Monthly Average Ancillary Service Prices RTC Market - 30 Min Op Res 2022 - 2023



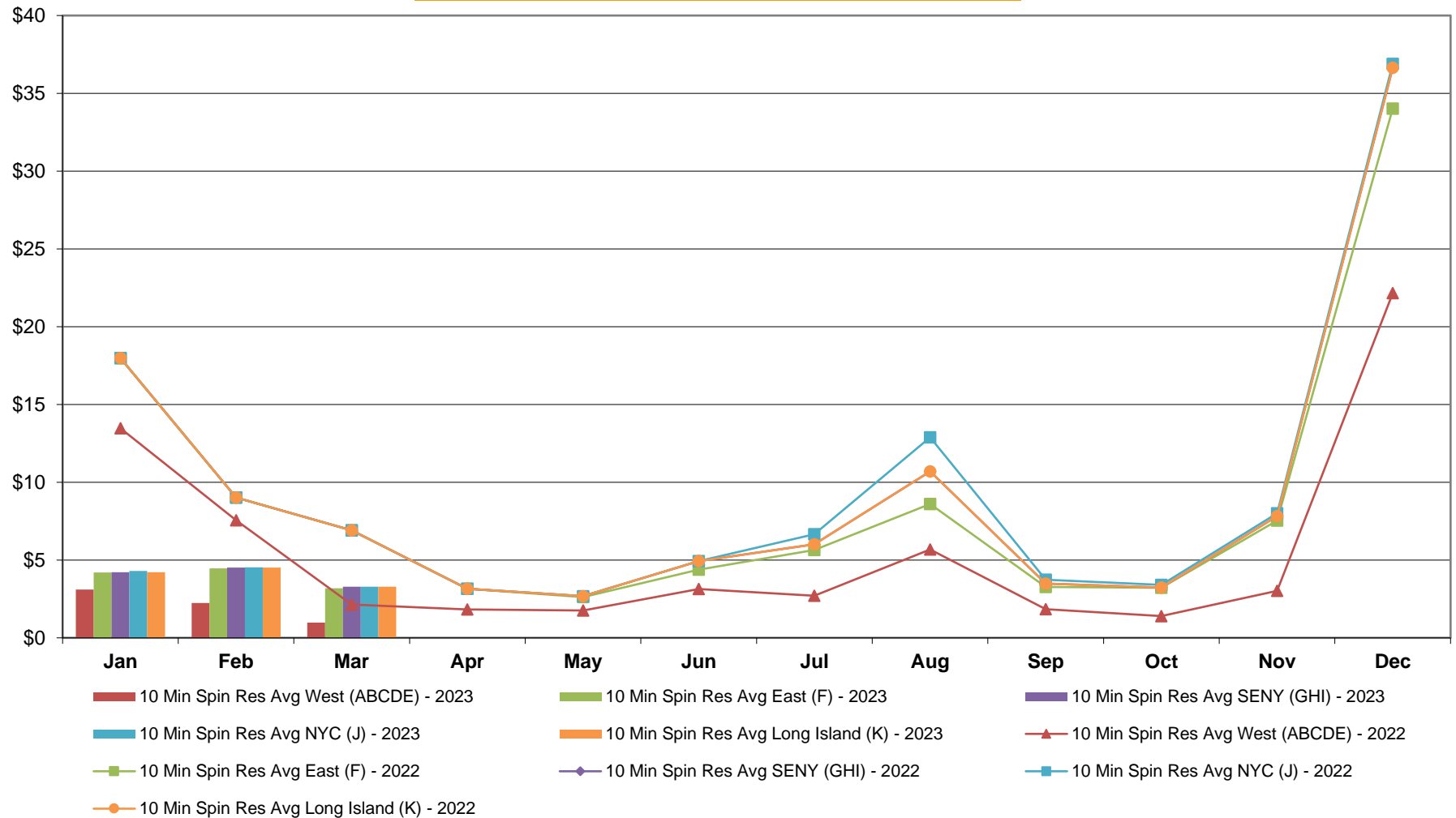
**NYISO Monthly Average Ancillary Service Prices
RTC Market - Regulation 2022 - 2023**



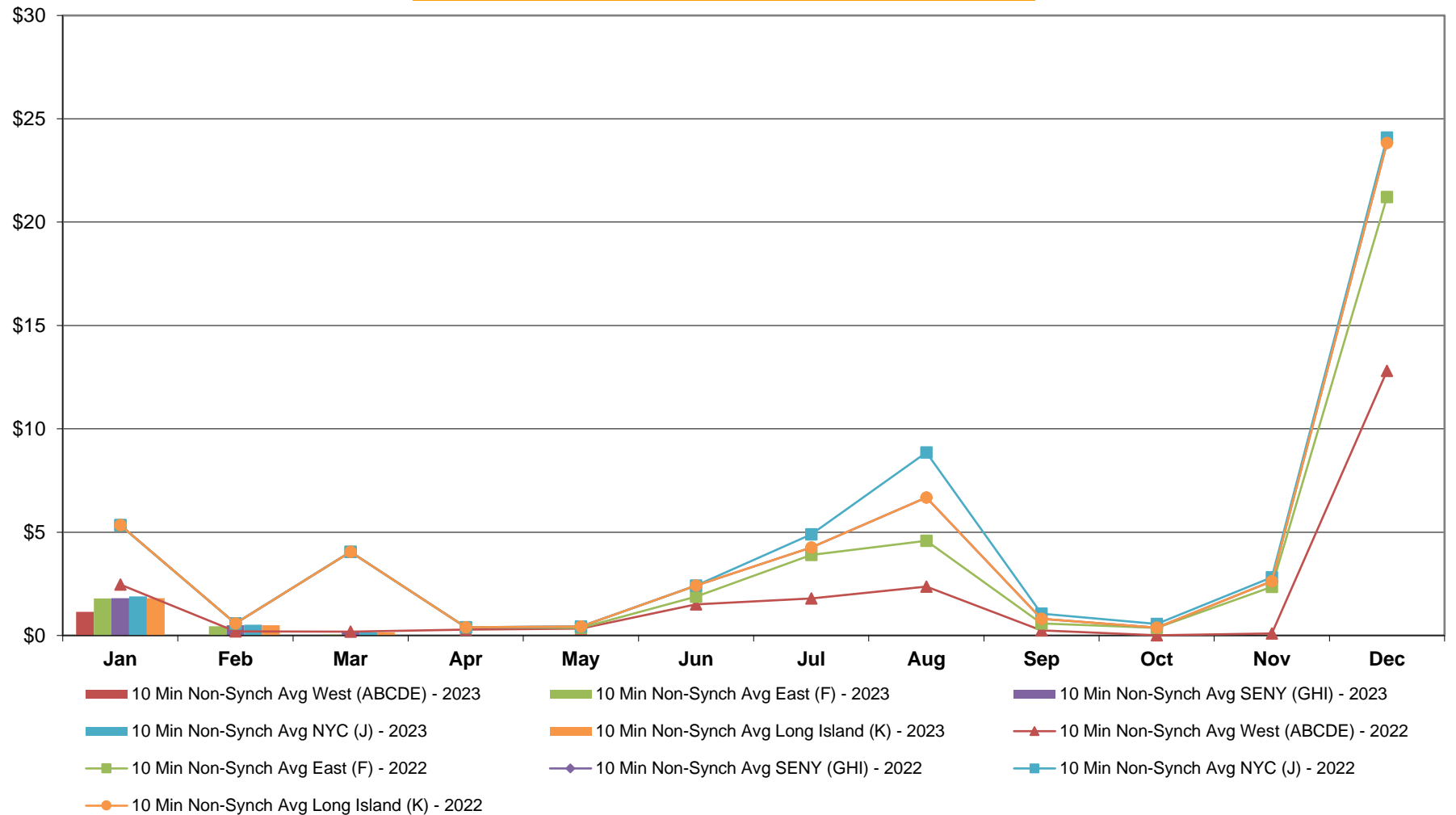
NYISO Monthly Average Ancillary Service Prices RTC Market - Regulation Movement 2022 - 2023



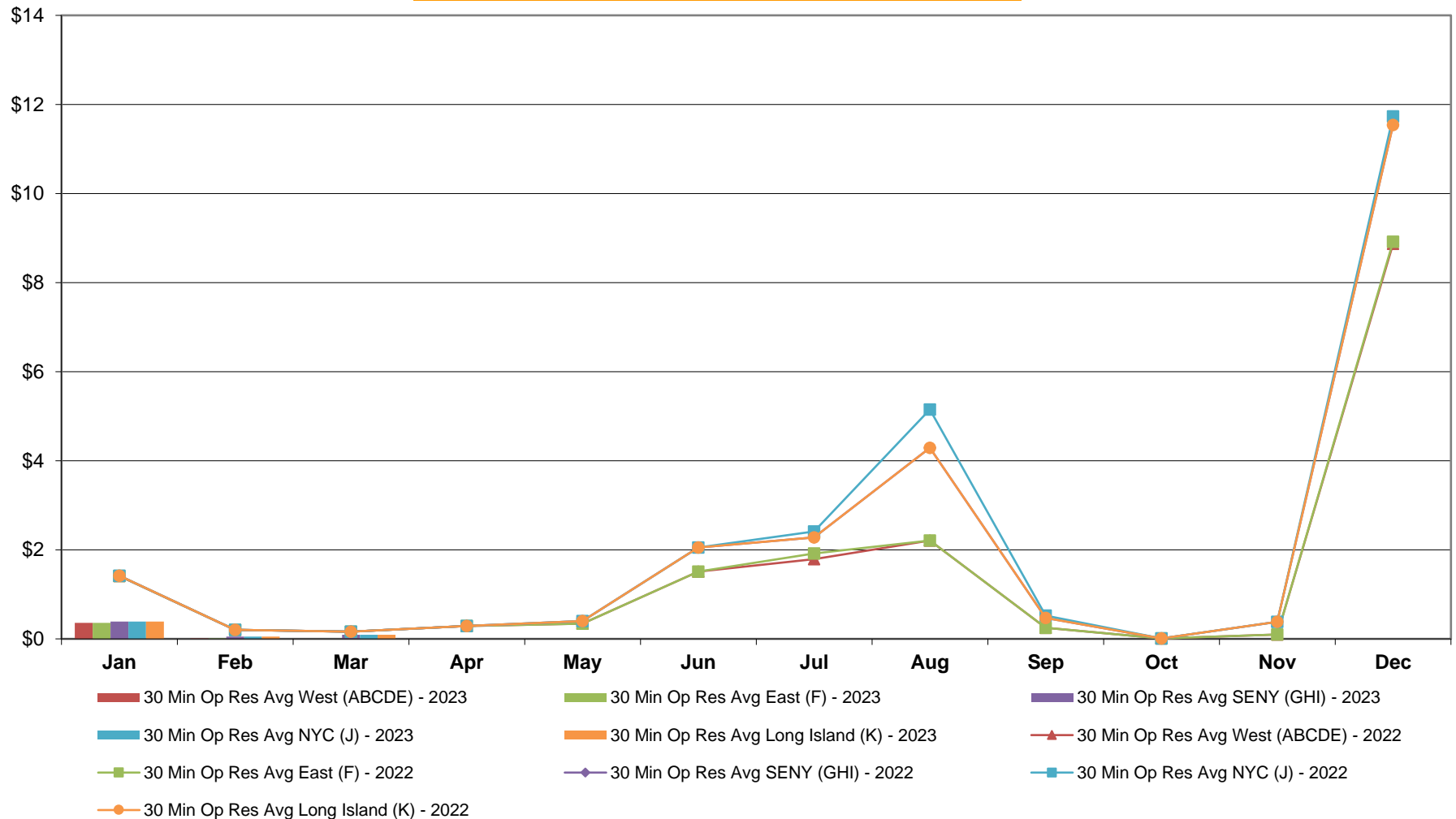
NYISO Monthly Average Ancillary Service Prices Real Time Market - 10 Min Spin 2022 - 2023



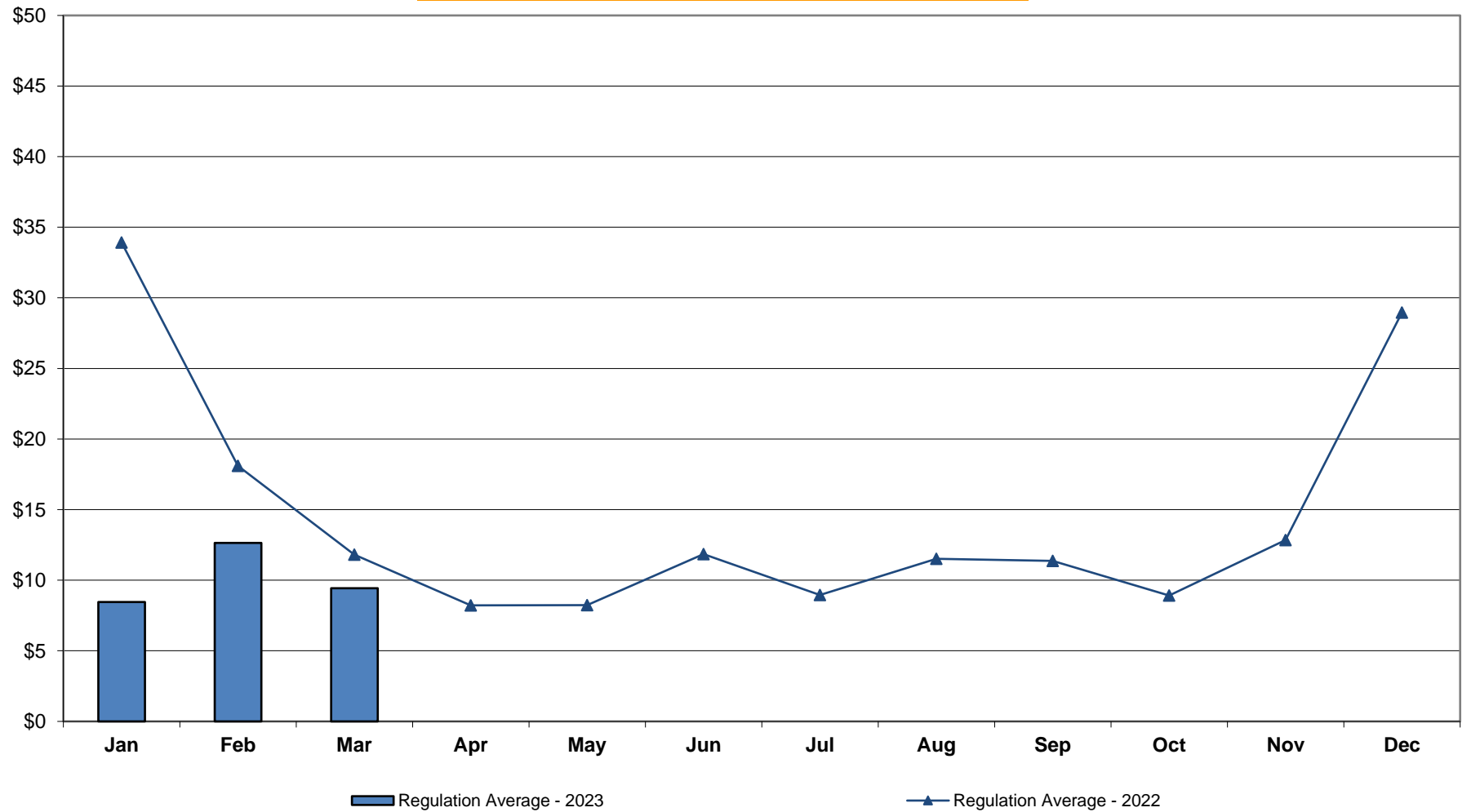
NYISO Monthly Average Ancillary Service Prices Real Time Market - 10 Min Non-Synch 2022 - 2023



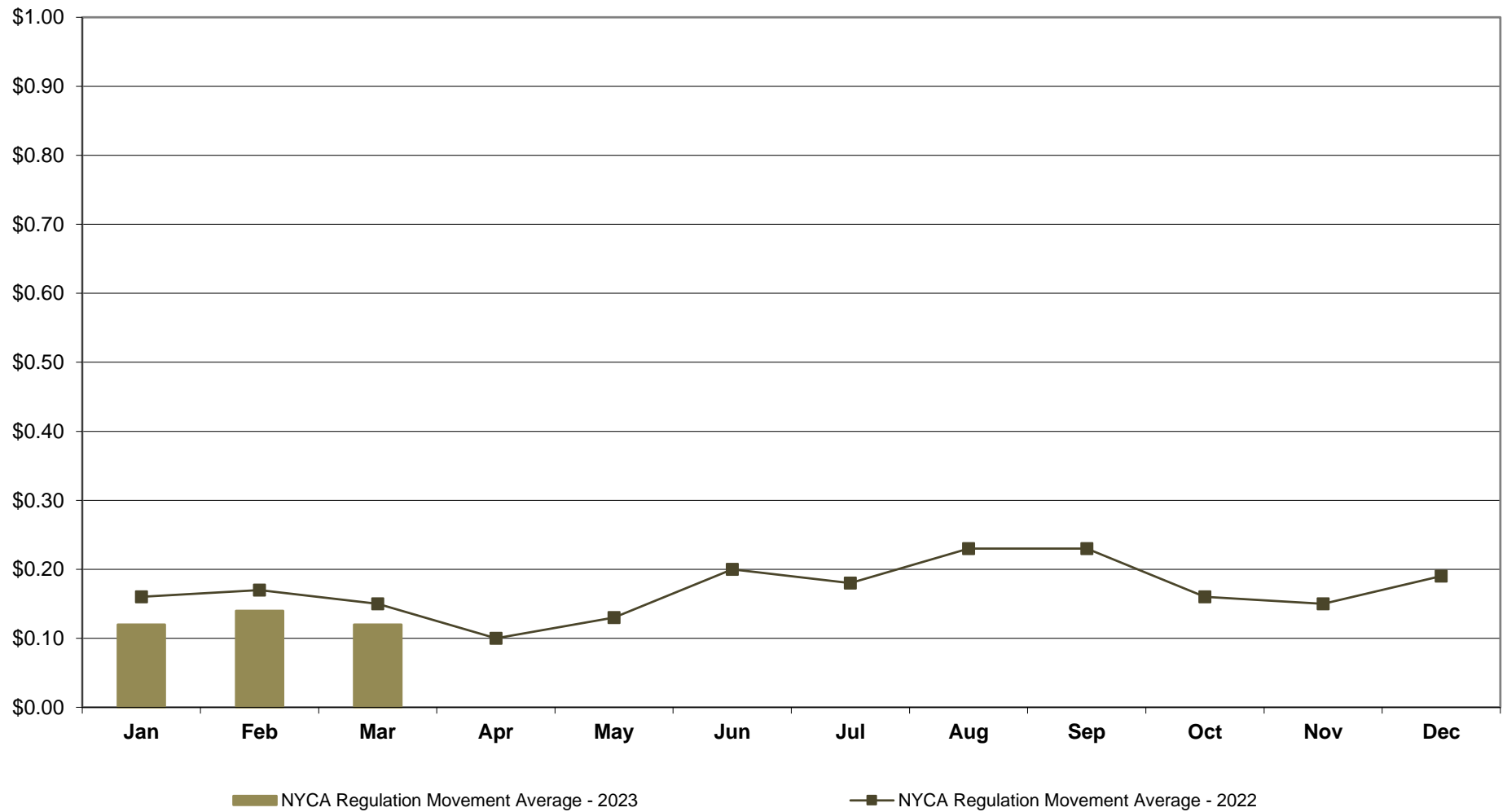
NYISO Monthly Average Ancillary Service Prices Real Time Market - 30 Min Op Res 2022 - 2023



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									
10 Min Spin NYC (J)	6.63	8.68	7.38									
10 Min Spin SENY (GHI)	6.60	8.46	7.31									
10 Min Spin East (F)	6.56	8.06	7.07									
10 Min Spin West (ABCDE)	5.41	6.73	4.45									
10 Min Non Synch Long Island (K)	5.16	6.22	4.72									
10 Min Non Synch NYC (J)	5.18	6.44	4.79									
10 Min Non Synch SENY (GHI)	5.16	6.22	4.72									
10 Min Non Synch East (F)	5.12	5.82	4.48									
10 Min Non Synch West (ABCDE)	5.11	5.62	4.42									
30 Min Long Island (K)	5.15	6.02	4.65									
30 Min NYC (J)	5.15	6.14	4.70									
30 Min SENY (GHI)	5.15	6.02	4.65									
30 Min East (F)	5.11	5.62	4.42									
30 Min West (ABCDE)	5.11	5.62	4.42									
Regulation	7.82	11.71	9.65									
<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

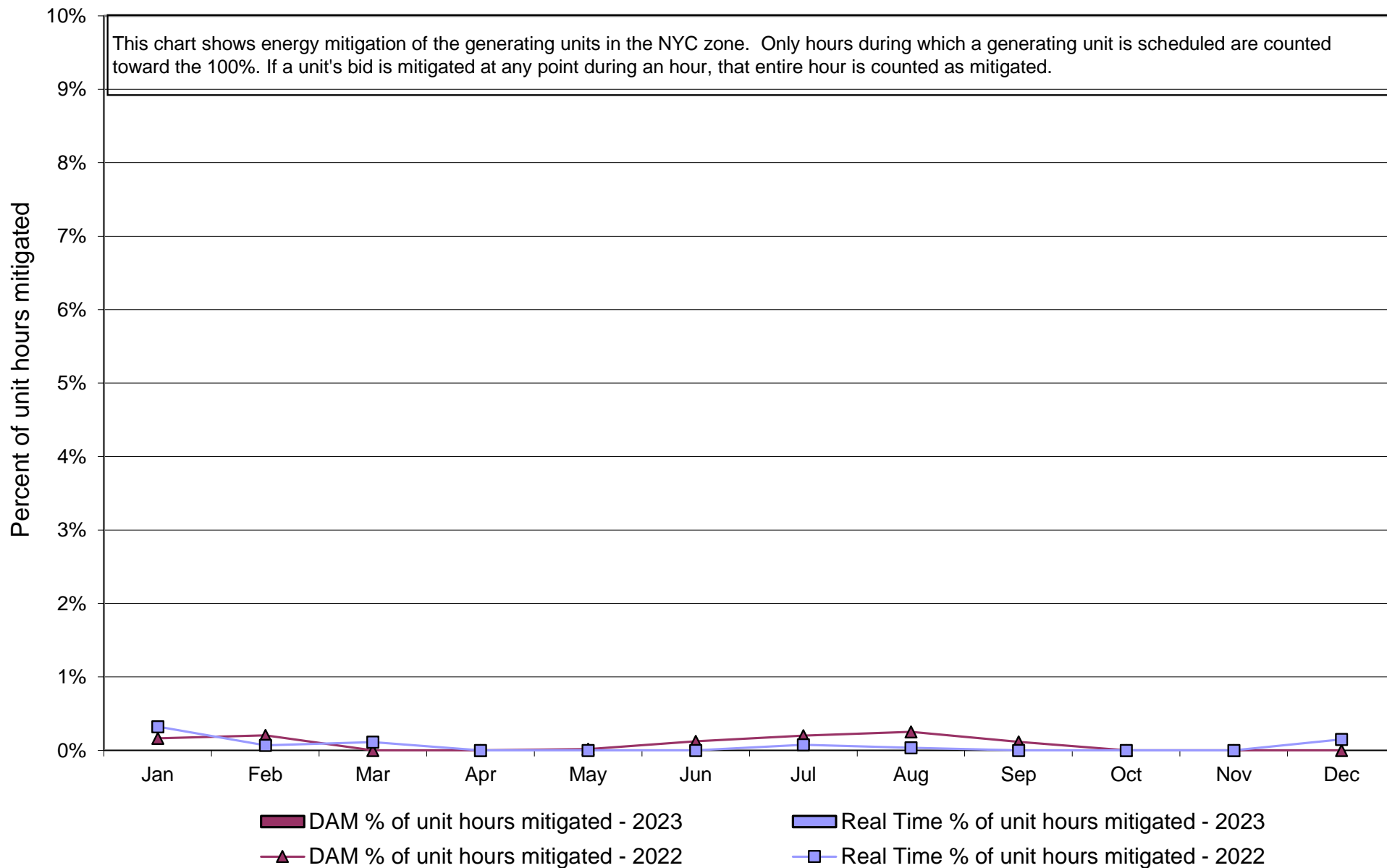
2023	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
RTC Market												
10 Min Spin Long Island (K)	2.22	2.19	1.79									
10 Min Spin NYC (J)	2.26	2.21	1.83									
10 Min Spin SENY (GHI)	2.22	2.19	1.79									
10 Min Spin East (F)	2.21	2.15	1.67									
10 Min Spin West (ABCDE)	1.57	0.56	0.30									
10 Min Non Synch Long Island (K)	0.86	0.26	0.14									
10 Min Non Synch NYC (J)	0.89	0.27	0.18									
10 Min Non Synch SENY (GHI)	0.86	0.26	0.14									
10 Min Non Synch East (F)	0.85	0.22	0.02									
10 Min Non Synch West (ABCDE)	0.54	0.05	0.00									
30 Min Long Island (K)	0.16	0.10	0.13									
30 Min NYC (J)	0.16	0.10	0.15									
30 Min SENY (GHI)	0.16	0.10	0.13									
30 Min East (F)	0.14	0.05	0.00									
30 Min West (ABCDE)	0.14	0.05	0.00									
Regulation	7.44	10.40	8.29									
NYCA Regulation Movement	0.13	0.14	0.11									
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>
RTC Market												
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

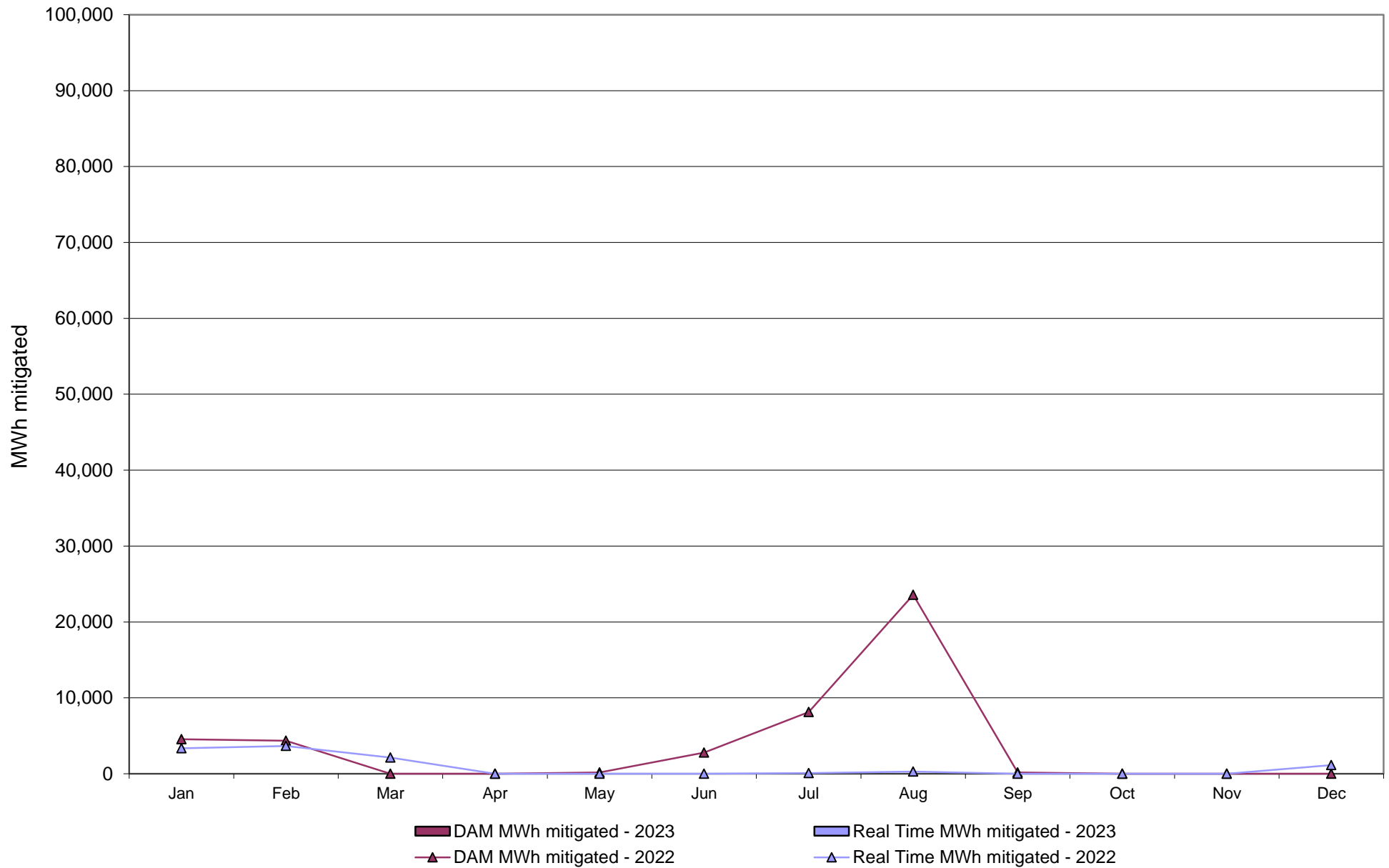
2023	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
Real Time Market												
10 Min Spin Long Island (K)	4.22	4.51	3.28									
10 Min Spin NYC (J)	4.30	4.53	3.28									
10 Min Spin SENY (GHI)	4.22	4.51	3.28									
10 Min Spin East (F)	4.20	4.46	3.19									
10 Min Spin West (ABCDE)	3.10	2.24	0.97									
10 Min Non Synch Long Island (K)	1.81	0.50	0.15									
10 Min Non Synch NYC (J)	1.89	0.52	0.15									
10 Min Non Synch SENY (GHI)	1.81	0.50	0.15									
10 Min Non Synch East (F)	1.79	0.45	0.05									
10 Min Non Synch West (ABCDE)	1.15	0.01	0.00									
30 Min Long Island (K)	0.39	0.05	0.09									
30 Min NYC (J)	0.39	0.05	0.09									
30 Min SENY (GHI)	0.39	0.05	0.09									
30 Min East (F)	0.36	0.01	0.00									
30 Min West (ABCDE)	0.36	0.01	0.00									
Regulation	8.46	12.64	9.44									
NYCA Regulation Movement	0.12	0.14	0.12									
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>
Real Time Market												
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

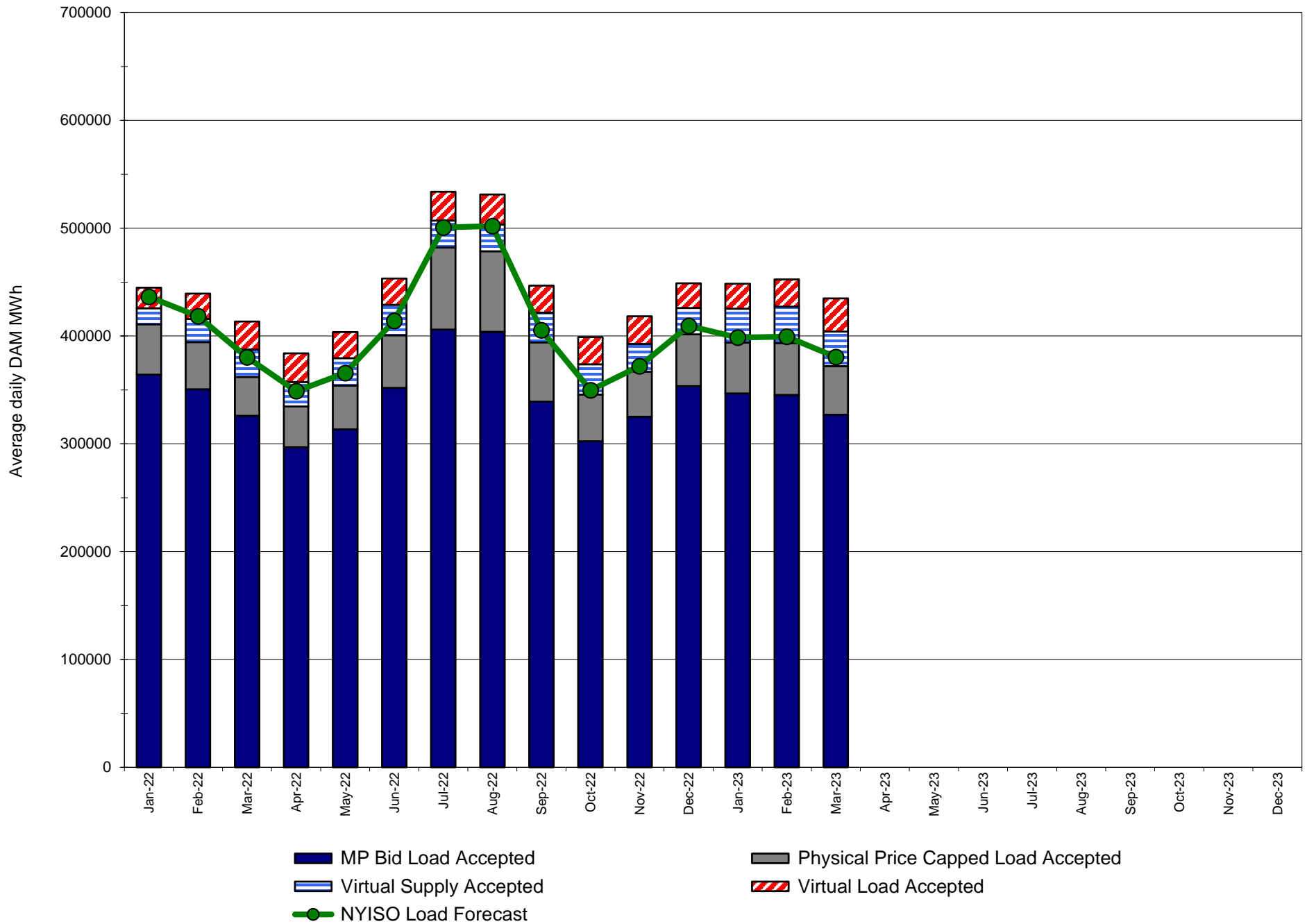
Percentage of committed unit-hours mitigated



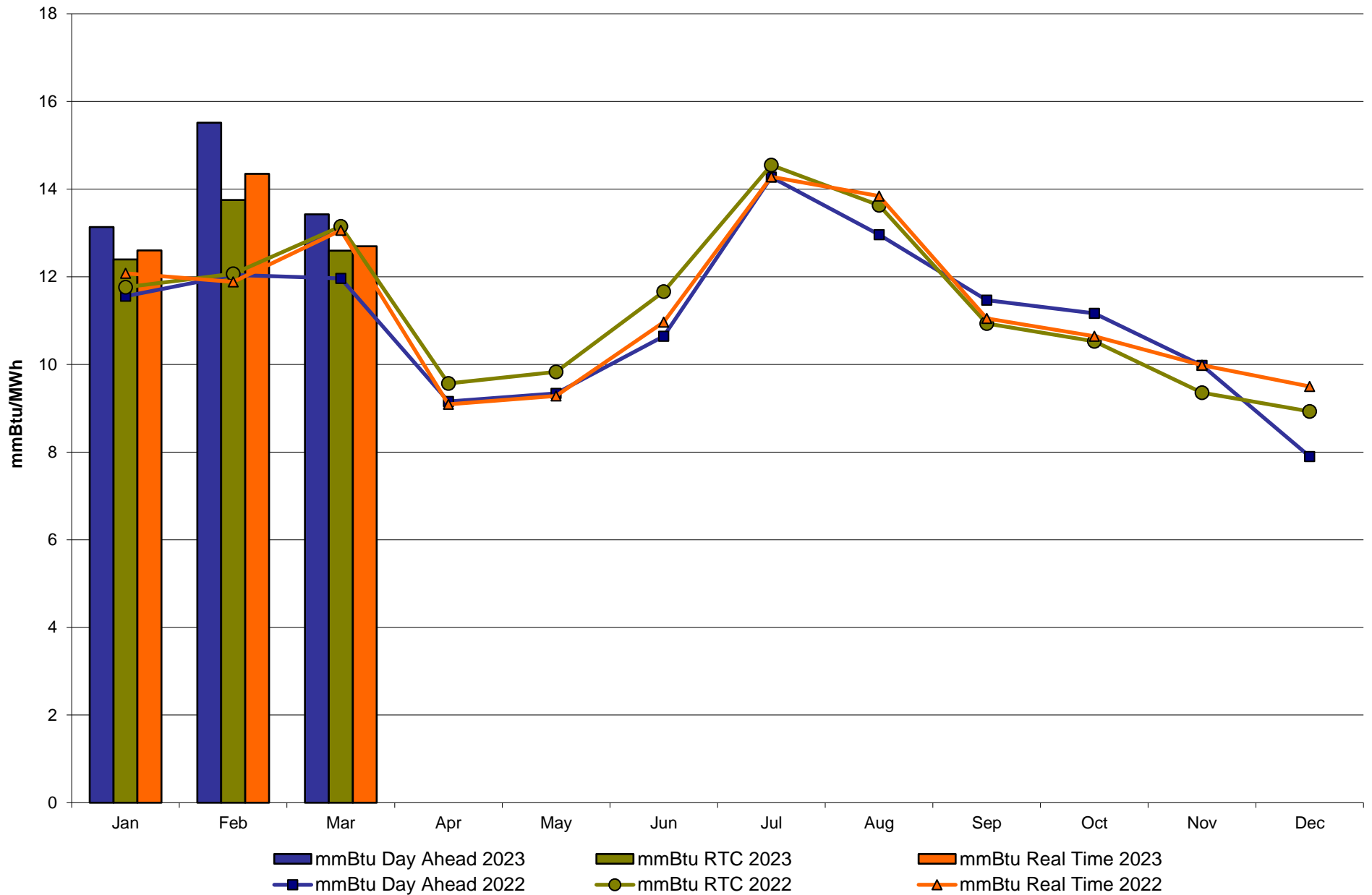
NYISO In City Energy Mitigation (NYC Zone) 2022 - 2023
Monthly megawatt hours mitigated



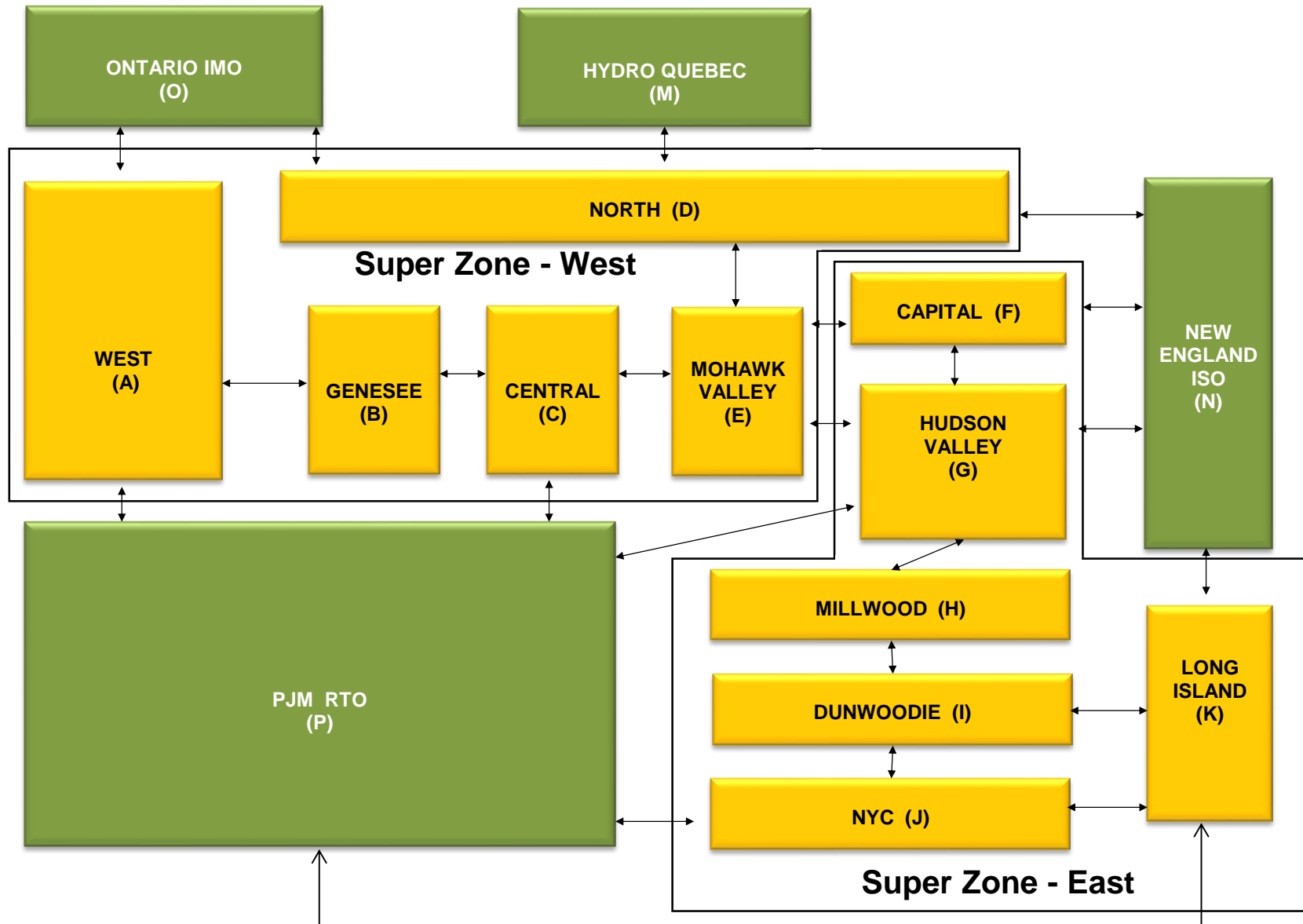
NYISO Average Daily DAM Load Bid Summary



Monthly Implied Heat Rate 2022-2023



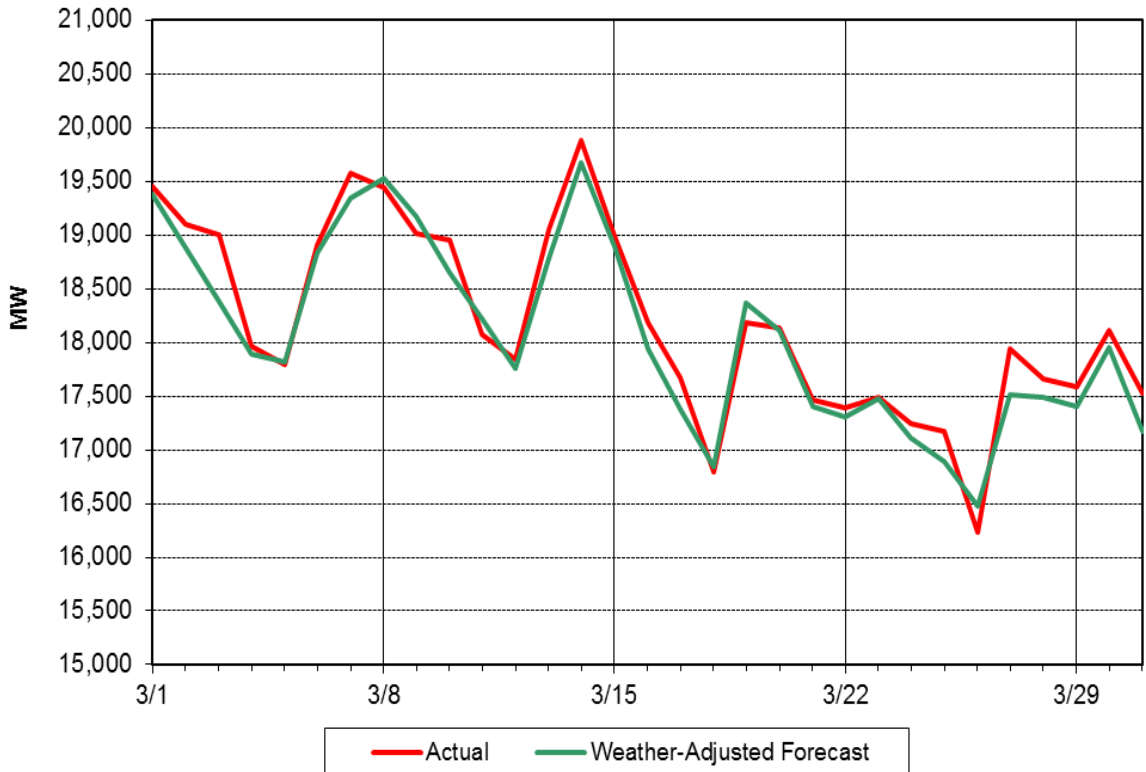
NYISO LBMP ZONES



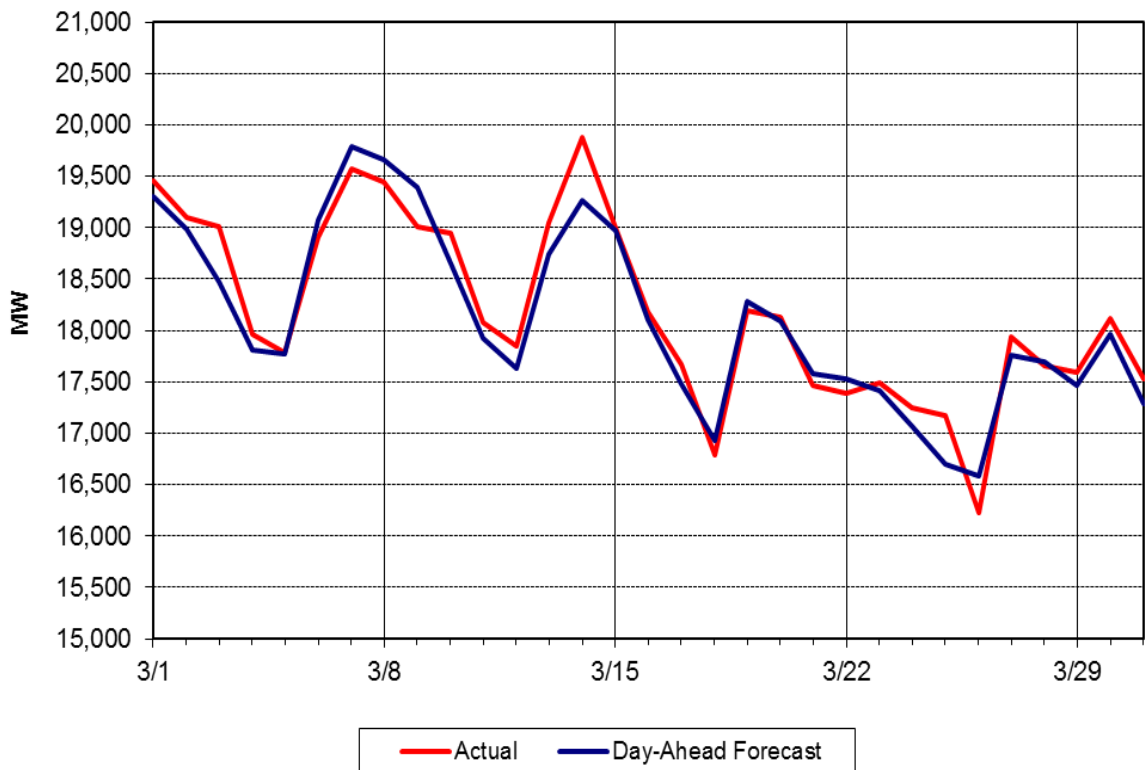
Billing Codes for Chart C

<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

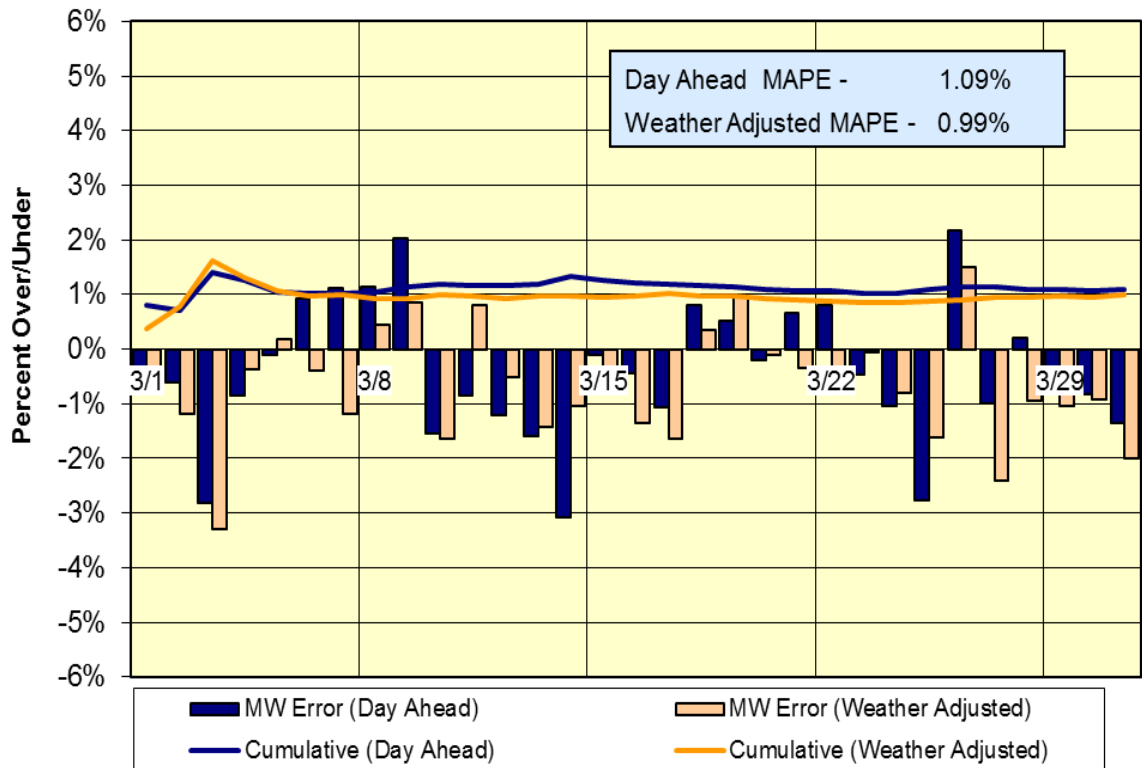
NYISO Daily Peak Load - March 2023
Actual vs. Weather-Adjusted Forecast



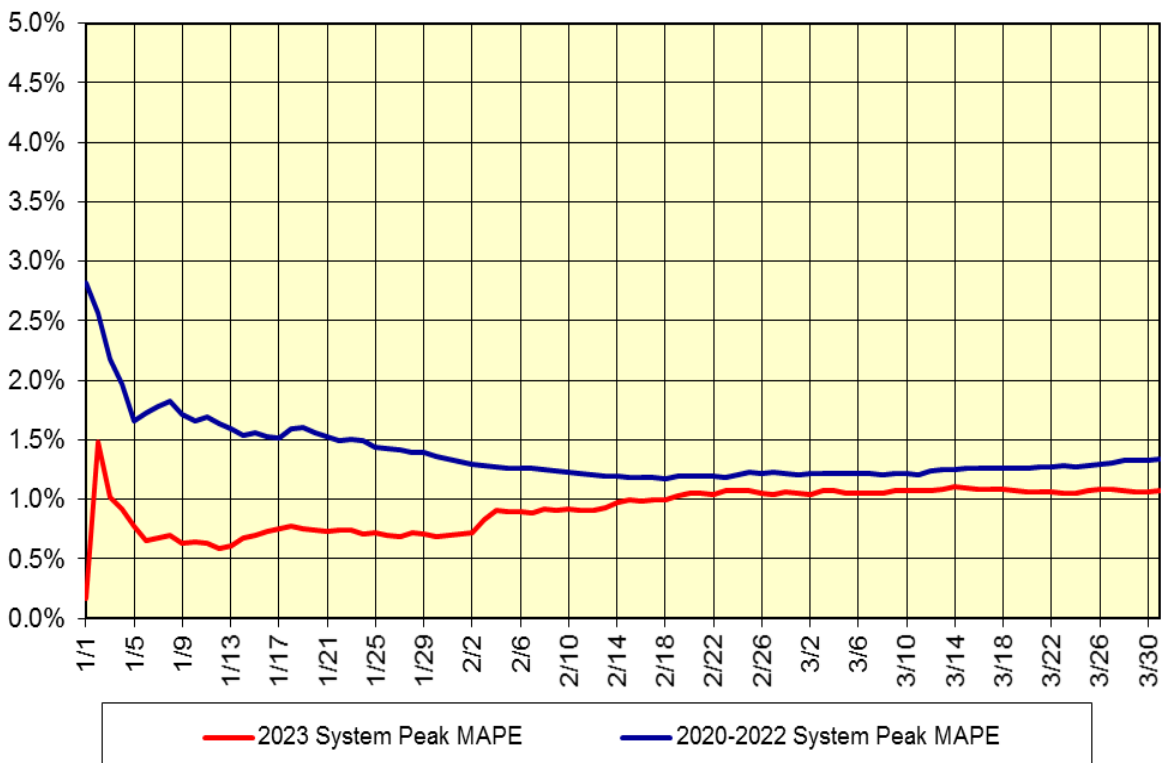
NYISO Daily Peak Load - March 2023
Actual vs. Forecast



Day Ahead Peak Forecast - March 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 – March 2023

Filing Date	Filing Summary	Docket	Order Summary	Order Date
01/05/2023	NYISO-National Grid joint Section 205 filing of an executed Amended & Restated Small Generator Interconnection Agreement (SA No. 2544) among NYISO, National Grid, and Pattersonville Solar Facility for the Pattersonville Solar project.	ER23-777-000	FERC Letter Order accepted the amended and restated agreement, effective December 20, 2022, as requested.	03/06/2023
03/08/2023	The NYISO joined the IRC's comments on Invenergy's request for a technical conference addressing HVDC transmission development.	AD22-13-000		
03/08/2023	The NYISO filed, on behalf of Niagara Mohawk, proposed tariff revisions to Rate Schedule 17 and a new Rate Schedule 20 to provide for NMPC's recovery of costs associated with the Segment A Project.	ER23-1271-000		
03/10/2023	The NYISO filed a Section 205 filing of proposed tariff revisions to better align the credit requirements for Virtual and External Transactions with the risk associated with the transactions.	ER23-1307-000		
03/13/2023	NYISO motion to intervene and comments on Hecate Grid Clermont 1 LLC's March 3, 2023 request for waiver of Sections 30.8.1 and 30.3.6 of Attachment X to the NYISO OATT.	ER23-1255-000		
03/14/2023	The NYISO filed an informational filing in compliance with the Commission's May 10, 2022 order, to provide the NYISO's "Phase 2 Report" describing the implementation details concerning its marginal capacity accreditation market design that were developed through the NYISO's Phase 2 stakeholder process.	ER22-772-000, 001		
03/16/2023	NYISO-National Grid joint Section 205 filing of an executed Small Generator Interconnection Agreement (SA No. 2756) among NYISO, National Grid, and Hawthorn Solar LLC for the Hawthorn Solar project.	ER23-1401-000		
03/23/2023	NYISO Section 205 filing of an executed Amended & Restated Large Generator Interconnection Agreement (SA No. 2709) among NYISO, LIPA, and LI Solar Generation for the Calverton Solar Energy Center project.	ER23-1446-000		
03/24/2023	NYISO-National Grid Joint 205 filing of a second amended and restated Large Generator Interconnection Agreement (SA 2473) among NYISO, National Grid, and Ball Hill Wind for the Ball Hill Wind Facility.	ER23-1454-000		

Filing Date	Filing Summary	Docket	Order Summary	Order Date
03/24/2023	NYISO compliance filing, as directed in FERC's February 23, 2023 order, of proposed revisions to the OATT and Services Tariff to incorporate by reference NAESB WEQ standards required by FERC's Order 676-J.	ER22-1262-001		
03/30/2023	NYISO submitted Form 715, Annual Transmission Planning and Evaluation Report to FERC.	FERC Form 715		
03/31/2023	NYISO annual compliance report re: unreserved use penalties and late study penalties per order 890-A for 2022.	OA08-109-000		
03/31/2023	NYISO filed a Section 205 filing of proposed Services Tariff revisions addressing capacity accreditation rules regarding capacity suppliers with Energy Duration Limitations.	ER23-1527-000		