

Market Operations Report

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SENIOR VICE PRESIDENT – MARKET STRUCTURES, NYISO

Business Issues Committee Meeting

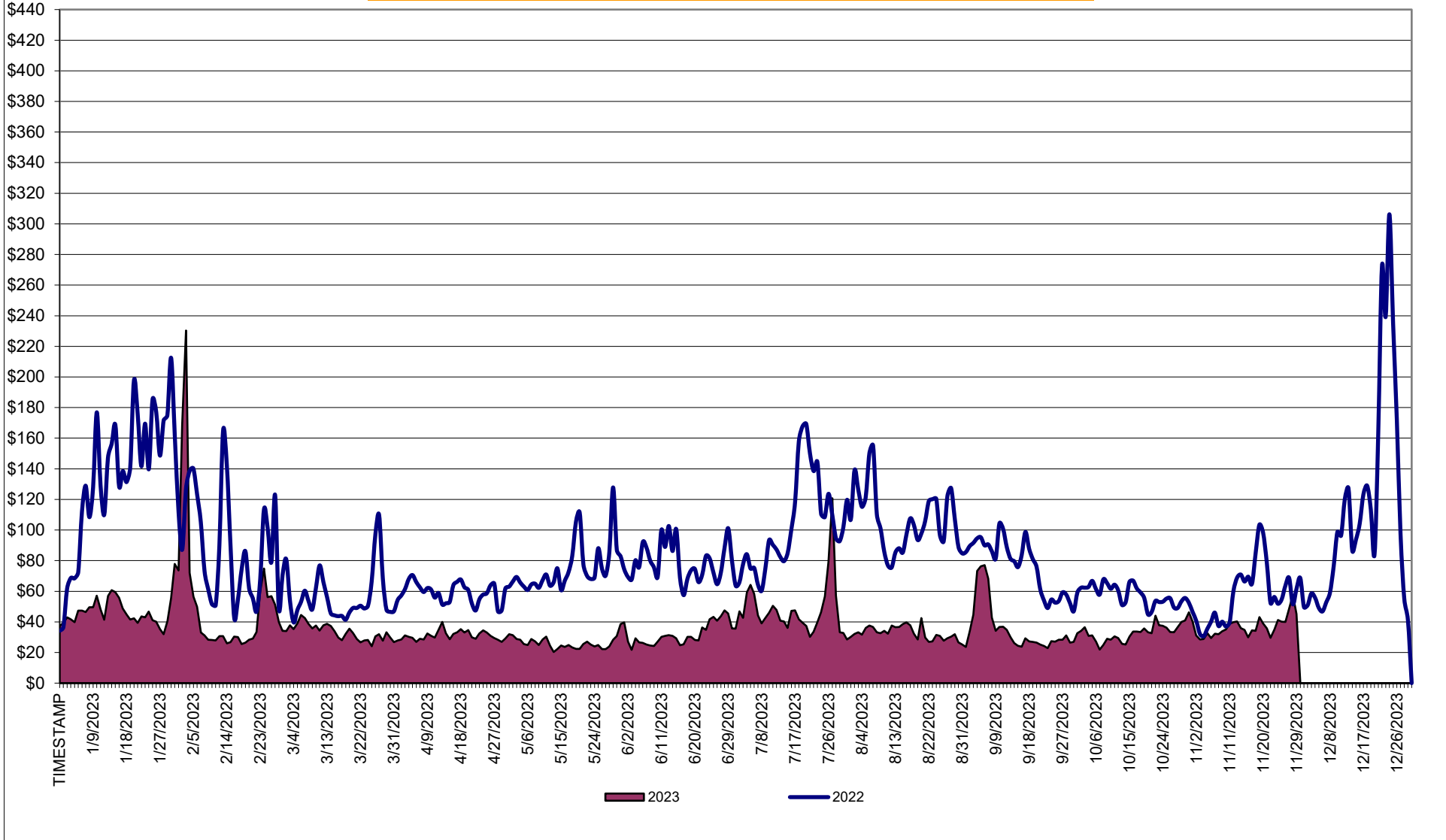
December 13, 2023 Rensselaer, NY

Market Performance Highlights

November 2023

- LBMP for November is \$34.90/MWh; higher than the \$28.10/MWh in October 2023 and lower than \$52.47/MWh in November 2022.
 - Day Ahead Load Weighted LBMPs and Real Time Load Weighted LBMPs are higher compared to October.
- November 2023 average year-to-date monthly cost of \$39.32/MWh is a 55% decrease from \$86.97/MWh in November 2022.
- Average daily send-out is 387 GWh/day in November; higher than 367 GWh/day in October 2023 and higher than 382 GWh/day in November 2022.
- Natural gas are higher and distillate prices are lower compared to the previous month.
 - Natural Gas (Transco Z6 NY) was \$2.20/MMBtu, up from \$1.30/MMBtu in October.
 - Natural gas prices (Transco Z6 NY) are down 54.3% year-over-year.
 - Jet Kerosene Gulf Coast was \$19.75/MMBtu, down from \$21.41/MMBtu in October.
 - Jet Kerosene Gulf Coast prices are down 16.5% from last year.
 - Ultra Low Sulfur No.2 Diesel NY Harbor was \$20.73/MMBtu, down from \$22.32/MMBtu in October.
 - Distillate prices are down 30.0% year-over-year.
- Uplift per MWh is lower compared to the previous month.
 - Uplift (not including NYISO cost of operations) is (\$0.11)/MWh; lower than \$1.35/MWh in October.
 - Local Reliability Share is \$0.08/MWh, lower than \$1.44/MWh in October.
 - Statewide Share is (\$0.19)/MWh, lower than (\$0.09)/MWh in October.
 - TSA \$ per NYC MWh is \$0.00/MWh.
 - Total uplift costs (Schedule 1 components including NYISO Cost of Operations) are lower than October.

Daily NYISO Average Cost/MWh (Energy & Ancillary Services)*
2022 Annual Average \$89.23/MWh
November 2022 YTD Average \$86.97/MWh
November 2023 YTD Average \$39.32/MWh



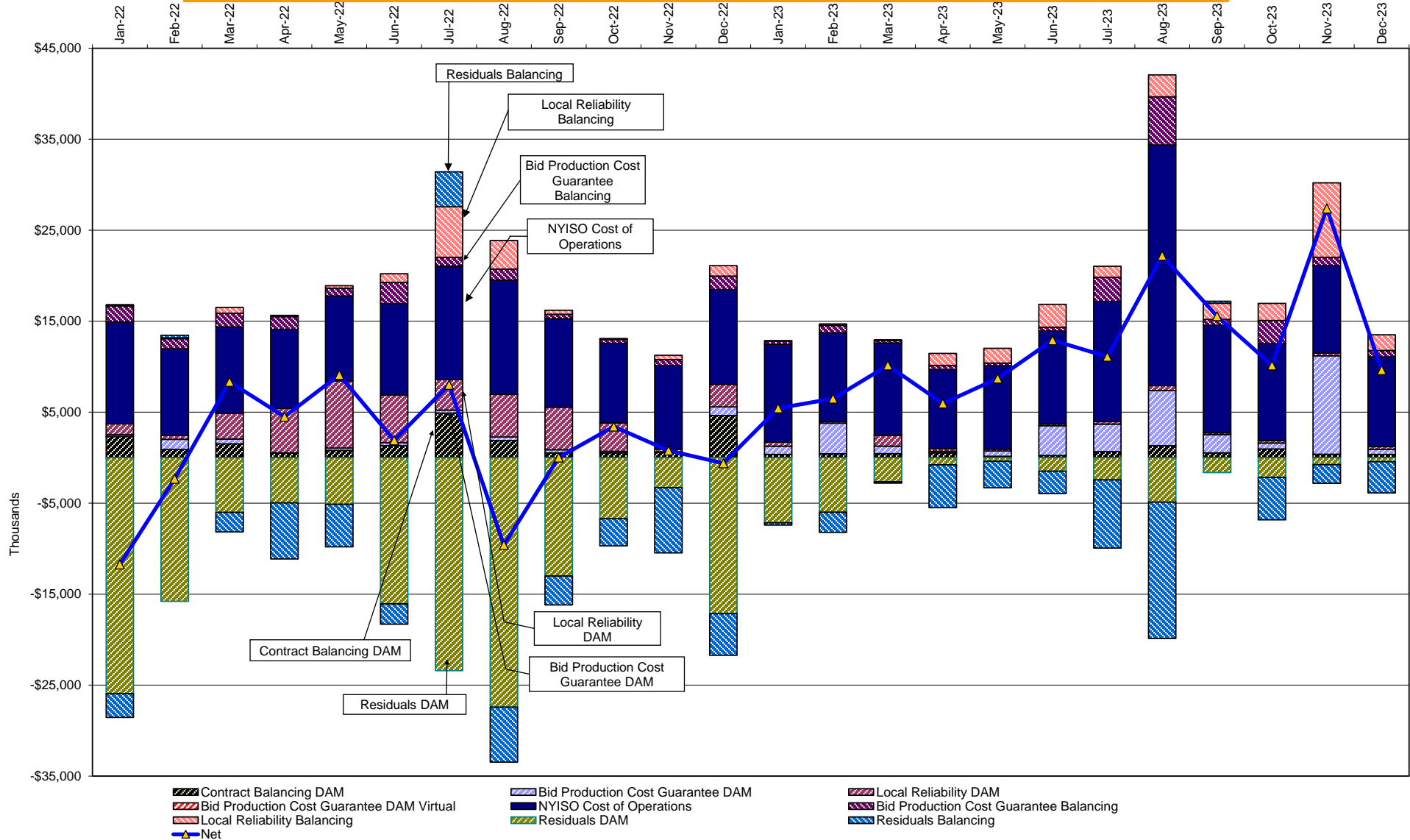
* Excludes ICAP payments.

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	45.70	29.95	36.92	28.10	34.90	
NTAC	2.82	1.15	1.39	1.72	1.38	1.62	1.79	1.74	1.19	1.43	1.36	
Reserve	0.72	0.90	0.73	0.85	0.81	0.69	0.76	0.56	0.50	0.77	0.66	
Regulation	0.09	0.13	0.13	0.15	0.12	0.10	0.10	0.09	0.08	0.18	0.11	
NYISO Cost of Operations	0.77	0.77	0.77	0.78	0.78	0.78	0.80	0.80	0.80	0.79	0.76	
FERC Fee Recovery	0.08	0.09	0.09	0.10	0.10	0.09	0.06	0.07	0.08	0.09	0.08	
Uplift	(0.38)	(0.27)	(0.00)	(0.34)	(0.13)	0.09	(0.43)	0.16	(0.58)	1.35	(0.11)	
Uplift: Local Reliability Share	0.03	0.03	0.09	0.04	0.07	0.35	0.20	0.19	0.11	1.44	0.08	
Uplift: Statewide Share	(0.41)	(0.30)	(0.10)	(0.38)	(0.20)	(0.26)	(0.62)	(0.03)	(0.68)	(0.09)	(0.19)	
Voltage Support and Black Start	0.42	0.42	0.43	0.43	0.43	0.43	0.44	0.44	0.44	0.44	0.42	
Avg Monthly Cost	46.56	58.58	34.58	31.67	26.55	33.60	49.17	33.76	39.38	33.07	38.13	
Avg YTD Cost	46.64	52.36	46.65	43.45	40.45	39.27	41.18	40.13	40.06	39.44	39.32	
TSA \$ per NYC MWh	0.00	0.00	0.00	0.00	0.00	0.08	0.74	0.07	1.27	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: 12/8/2023 4:50 PM

NYISO Dollar Flows - Uplift - OATT Schedule 1 components - Data through November 30, 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

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>
Day Ahead Market MWh	13,662,137	12,355,489	12,651,083	11,058,870	11,601,426	12,934,709	16,199,282	14,407,179	12,745,161	11,638,707	12,376,575	
DAM LSE Internal LBMP Energy Sales	55%	55%	56%	55%	55%	57%	63%	62%	63%	58%	57%	
DAM External TC LBMP Energy Sales	7%	7%	4%	4%	4%	6%	4%	3%	4%	3%	7%	
DAM Bilateral - Internal Bilaterals	28%	29%	30%	30%	31%	29%	25%	28%	27%	30%	29%	
DAM Bilateral - Import/Non-LBMP Market Bilaterals	5%	5%	6%	6%	6%	6%	5%	4%	4%	5%	3%	
DAM Bilateral - Export/Non-LBMP Market Bilaterals	2%	2%	2%	2%	2%	2%	1%	2%	2%	2%	2%	
DAM Bilateral - Wheel Through Bilaterals	3%	2%	2%	2%	2%	2%	2%	1%	2%	2%	1%	
Balancing Energy Market MWh	328,840	397,488	420,170	303,381	-77,279	-40,037	235,270	217,374	455,261	491,286	437,159	
Balancing Energy LSE Internal LBMP Energy Sales	65%	38%	43%	53%	-157%	37%	118%	79%	98%	79%	62%	
Balancing Energy External TC LBMP Energy Sales	68%	68%	58%	69%	223%	143%	47%	72%	19%	38%	48%	
Balancing Energy Bilateral - Internal Bilaterals	2%	1%	2%	-1%	-5%	28%	5%	8%	2%	-1%	2%	
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	0%	0%	0%	0%	7%	0%	0%	0%	0%	0%	0%	
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	7%	6%	6%	5%	10%	18%	5%	5%	2%	3%	5%	
Balancing Energy Bilateral - Wheel Through Bilaterals	-43%	-13%	-18%	-16%	-178%	-326%	-75%	-64%	-21%	-19%	-17%	
Transactions Summary												
LBMP	63%	63%	62%	61%	60%	63%	69%	67%	68%	64%	66%	
Internal Bilaterals	28%	28%	29%	29%	31%	29%	25%	27%	26%	28%	28%	
Import Bilaterals	5%	5%	6%	6%	6%	6%	4%	4%	4%	4%	3%	
Export Bilaterals	2%	2%	2%	3%	2%	2%	1%	2%	2%	2%	2%	
Wheels Through	2%	1%	1%	2%	1%	0%	0%	0%	1%	1%	0%	
Market Share of Total Load												
Day Ahead Market	97.6%	96.9%	96.8%	97.3%	100.7%	100.3%	98.6%	98.5%	96.6%	95.9%	96.6%	
Balancing Energy +	2.4%	3.1%	3.2%	2.7%	-0.7%	-0.3%	1.4%	1.5%	3.4%	4.1%	3.4%	
Total MWh	13,990,977	12,752,977	13,071,253	11,362,252	11,524,147	12,894,671	16,434,552	14,624,553	13,200,422	12,129,993	12,813,735	
Average Daily Energy Sendout/Month GWh	410	408	387	349	350	401	503	450	419	367	387	

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>
Day Ahead Market MWh	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%
Balancing Energy Market MWh	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%
Transactions Summary												
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%
Market Share of Total Load												
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	\$41.75	\$28.18	\$30.79	\$27.05	\$33.40	
Standard Deviation	\$10.32	\$47.20	\$7.42	\$6.50	\$6.46	\$9.25	\$24.21	\$8.54	\$17.49	\$8.78	\$9.83	
Load Weighted Price **	\$41.37	\$50.55	\$30.37	\$27.38	\$23.02	\$28.99	\$44.71	\$29.28	\$34.09	\$27.86	\$34.23	
<u>RTC LBMP</u>												
Price *	\$38.28	\$42.67	\$28.02	\$26.93	\$21.13	\$27.94	\$40.11	\$30.37	\$37.36	\$27.23	\$31.67	
Standard Deviation	\$31.37	\$39.75	\$11.53	\$9.23	\$7.61	\$12.06	\$25.96	\$12.80	\$48.96	\$10.57	\$14.33	
Load Weighted Price **	\$39.04	\$44.80	\$28.49	\$27.39	\$21.62	\$29.24	\$42.24	\$31.41	\$44.14	\$27.97	\$32.35	
<u>REAL TIME LBMP</u>												
Price *	\$38.76	\$43.99	\$28.15	\$27.41	\$20.76	\$27.44	\$37.88	\$30.75	\$36.50	\$28.44	\$31.19	
Standard Deviation	\$45.06	\$43.54	\$15.02	\$13.08	\$9.13	\$12.38	\$23.42	\$21.44	\$52.32	\$23.62	\$13.67	
Load Weighted Price **	\$39.68	\$46.75	\$28.72	\$27.97	\$21.27	\$28.66	\$39.88	\$32.06	\$43.32	\$29.27	\$31.87	
Average Daily Energy Sendout/Month GWh	410	408	387	349	350	401	503	450	419	367	387	

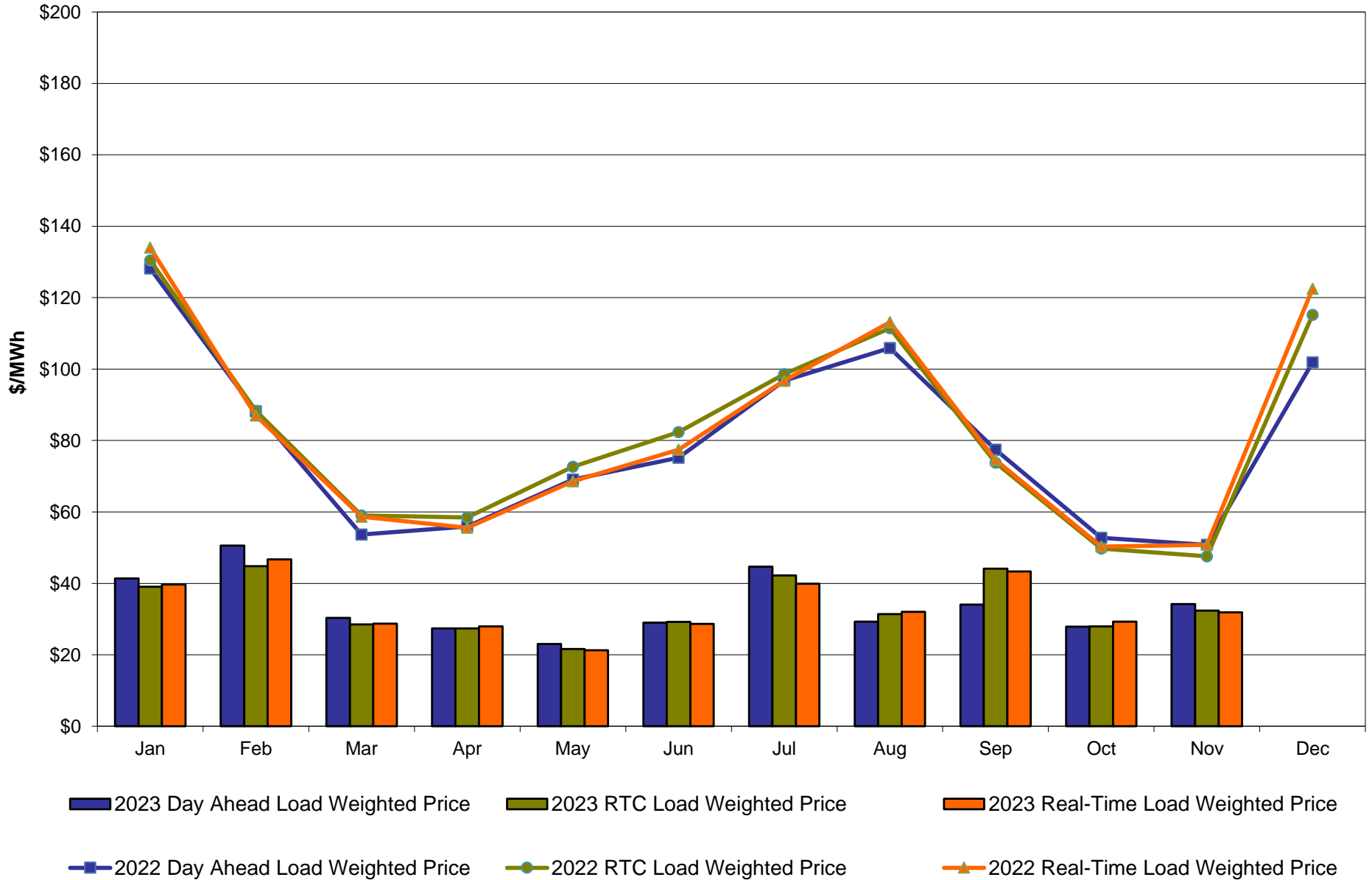
NYISO Markets 2022 Energy Statistics

	<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

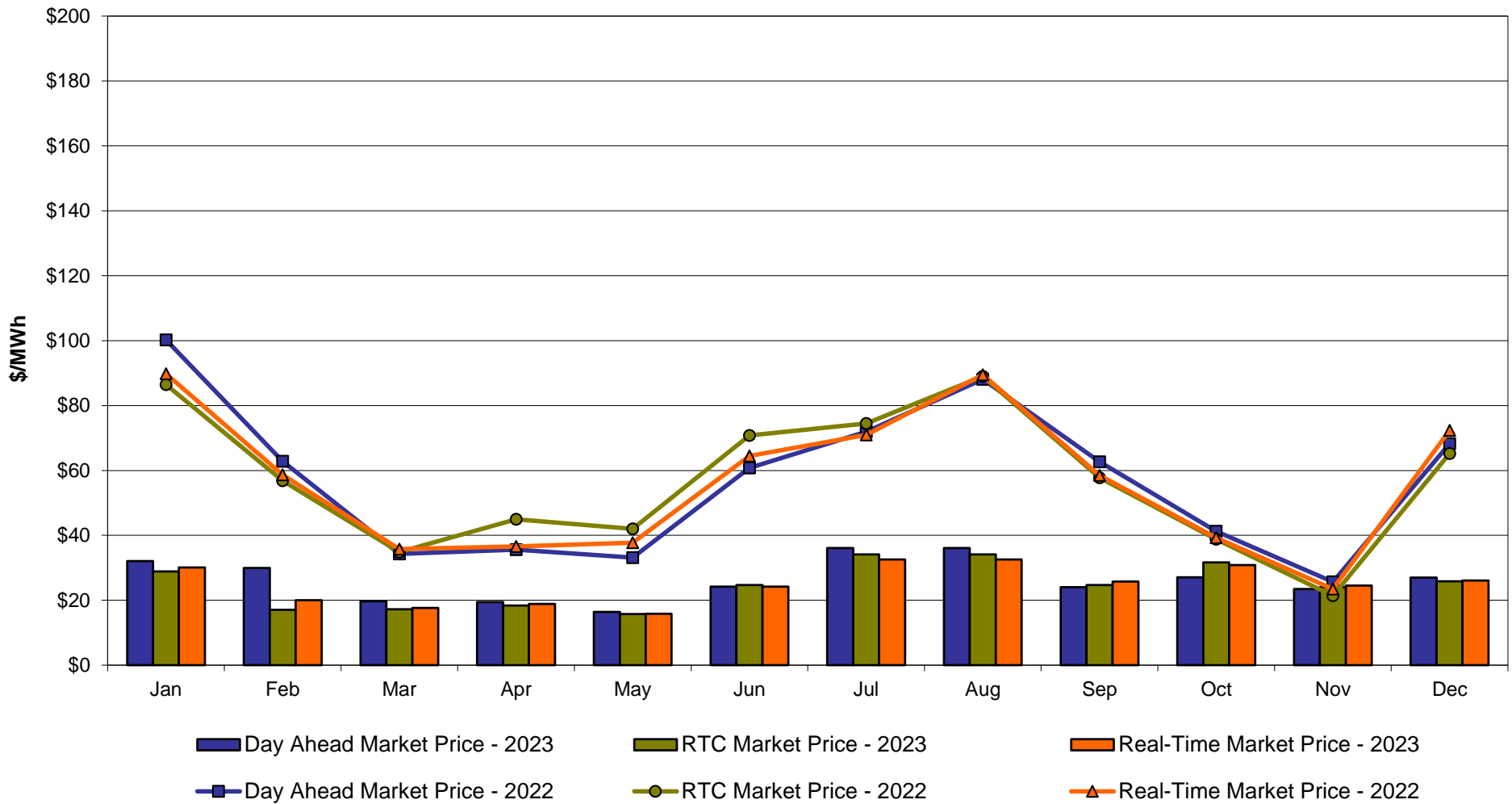


November 2023 Zonal LBMP Statistics for NYISO (\$/MWh)

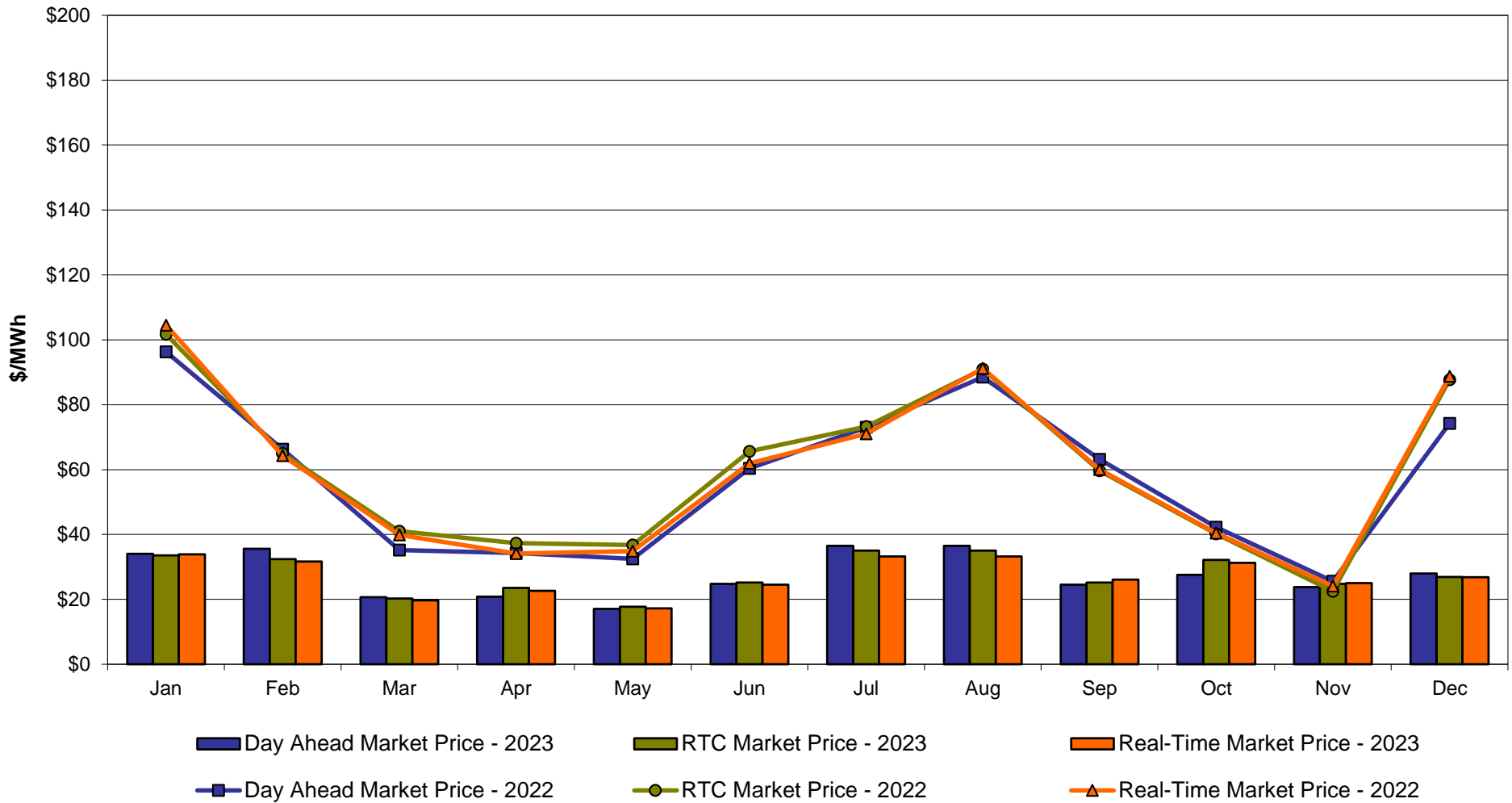
	<u>WEST Zone A</u>	<u>GENESEE Zone B</u>	<u>NORTH Zone D</u>	<u>CENTRAL Zone C</u>	<u>MOHAWK VALLEY Zone E</u>	<u>CAPITAL Zone F</u>	<u>HUDSON VALLEY Zone G</u>	<u>MILLWOOD Zone H</u>	<u>DUNWOODIE Zone I</u>	<u>NEW YORK CITY Zone J</u>	<u>LONG ISLAND Zone K</u>
<u>DAY AHEAD LBMP</u>											
Unweighted Price *	27.03	27.12	23.69	28.00	28.68	36.92	35.02	35.42	35.50	35.57	42.01
Standard Deviation	7.42	7.69	10.52	7.92	8.37	12.83	10.86	11.08	11.07	11.04	15.68
<u>RTC LBMP</u>											
Unweighted Price *	25.82	26.07	24.19	26.88	27.64	33.53	32.35	32.59	32.62	32.71	42.86
Standard Deviation	13.42	13.80	16.91	14.13	14.73	14.19	13.49	13.57	13.59	13.49	37.24
<u>REAL TIME LBMP</u>											
Unweighted Price *	26.08	26.16	24.11	26.83	27.60	33.24	32.07	32.42	32.47	32.57	40.00
Standard Deviation	12.97	13.24	16.89	13.62	14.27	13.94	13.17	13.29	13.33	13.34	30.10
	<u>ONTARIO IESO Zone O</u>	<u>HYDRO QUEBEC (Wheel) Zone M</u>	<u>HYDRO QUEBEC (Import/Export) Zone M</u>	<u>PJM Zone P</u>	<u>NEW ENGLAND Zone N</u>	<u>CROSS SOUND CABLE Controllable Line</u>	<u>NORTHPORT- NORWALK Controllable Line</u>	<u>NEPTUNE Controllable Line</u>	<u>LINDEN VFT Controllable Line</u>	<u>HUDSON Controllable Line</u>	<u>Dennison Controllable Line</u>
<u>DAY AHEAD LBMP</u>											
Unweighted Price *	26.50	25.05	25.05	31.28	36.61	43.72	39.80	40.57	35.33	35.43	24.13
Standard Deviation	7.23	9.02	9.02	8.62	13.48	22.69	13.78	14.32	10.97	11.02	10.16
<u>RTC LBMP</u>											
Unweighted Price *	25.16	25.14	25.14	28.70	36.96	47.46	40.28	37.94	32.56	32.70	24.97
Standard Deviation	13.66	15.14	15.14	22.77	26.09	56.54	35.34	31.24	14.07	14.17	18.03
<u>REAL TIME LBMP</u>											
Unweighted Price *	27.35	25.13	25.13	28.34	34.54	43.31	37.77	35.67	31.99	32.39	24.96
Standard Deviation	14.51	15.87	15.87	23.17	18.27	42.75	29.06	22.63	15.27	13.67	17.23

* Straight LBMP averages

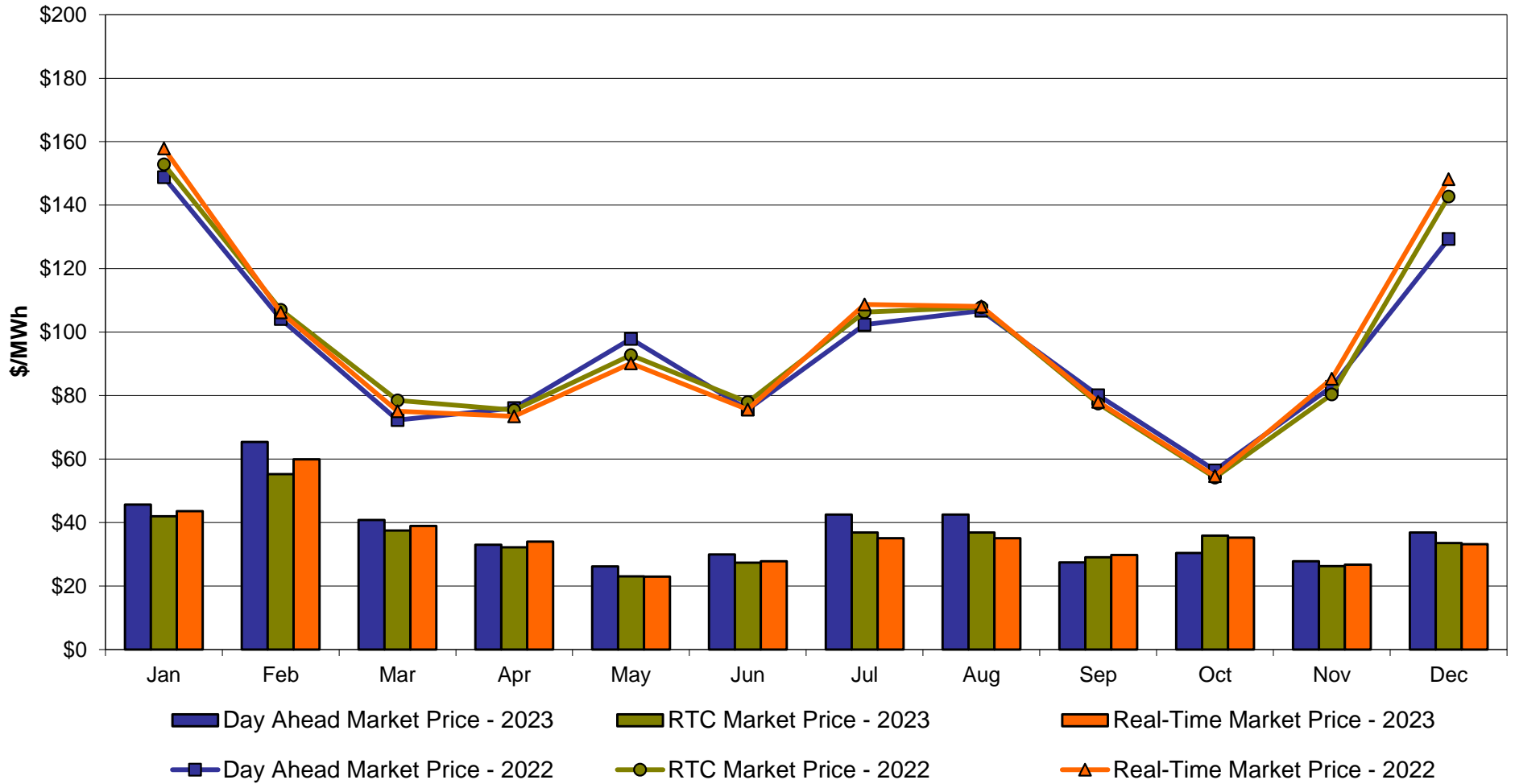
**West Zone A
Monthly Average LBMP Prices 2022 - 2023**



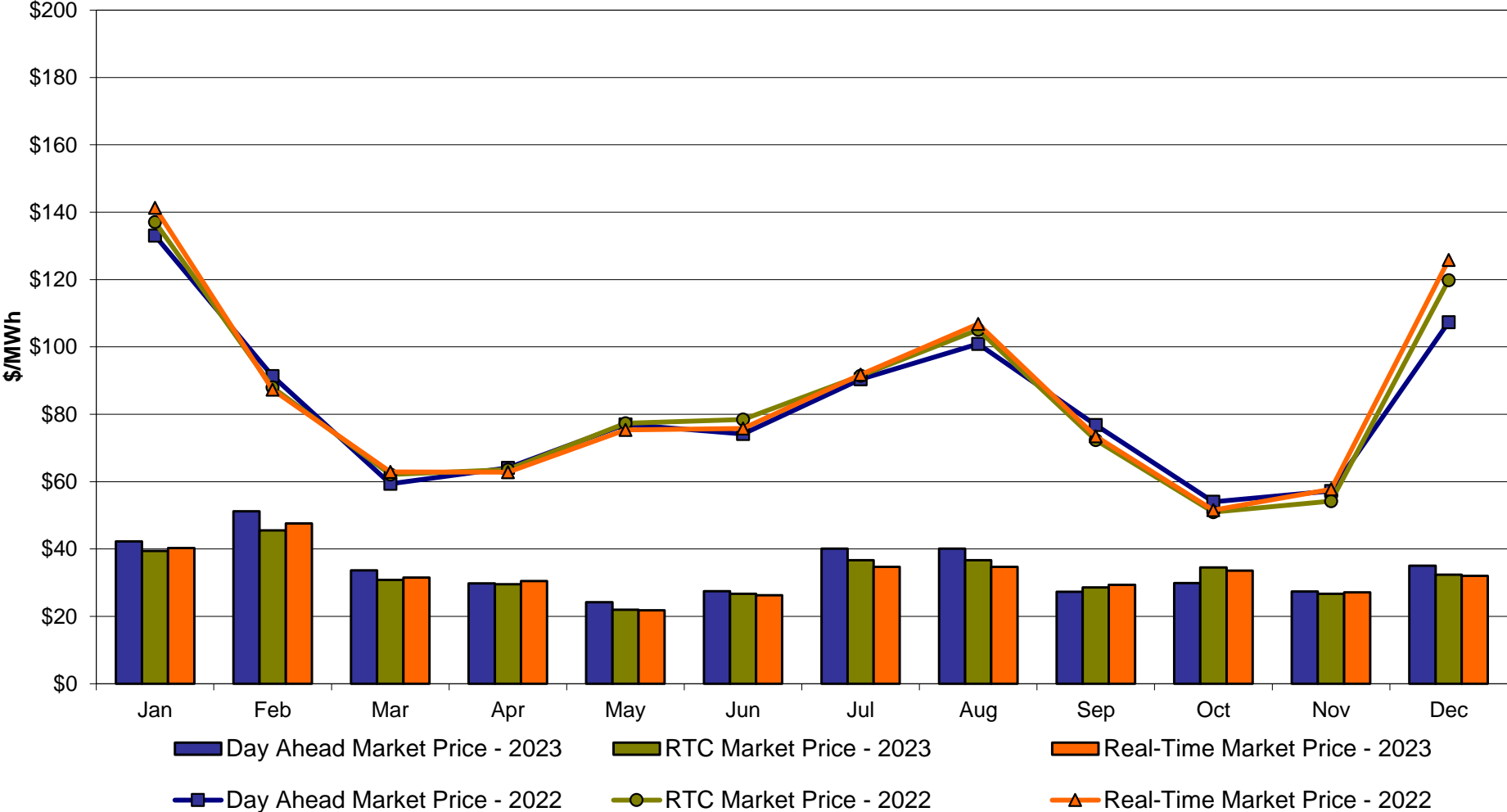
**Central Zone C
Monthly Average LBMP Prices 2022 - 2023**



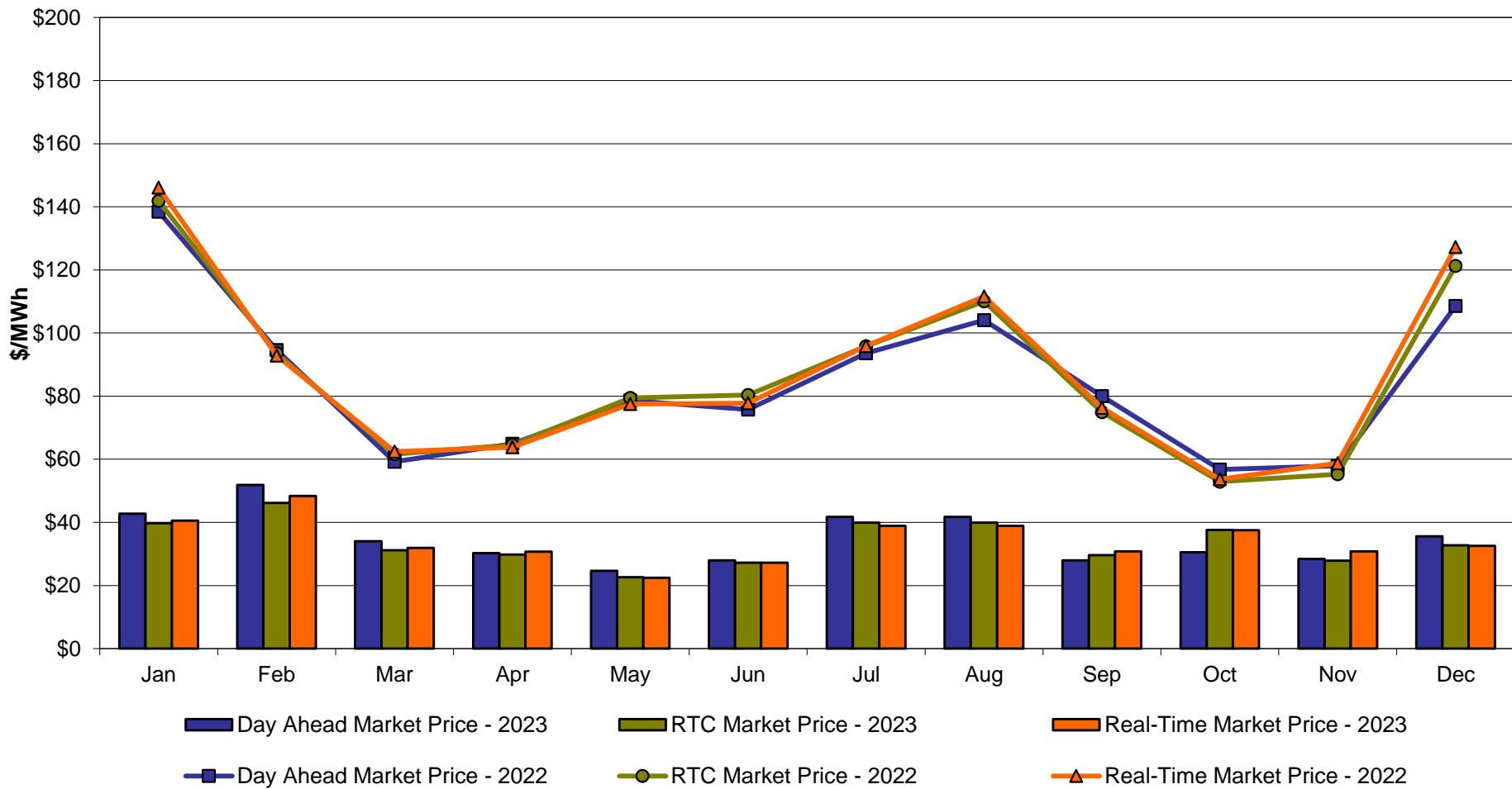
Capital Zone F Monthly Average LBMP Prices 2022 - 2023



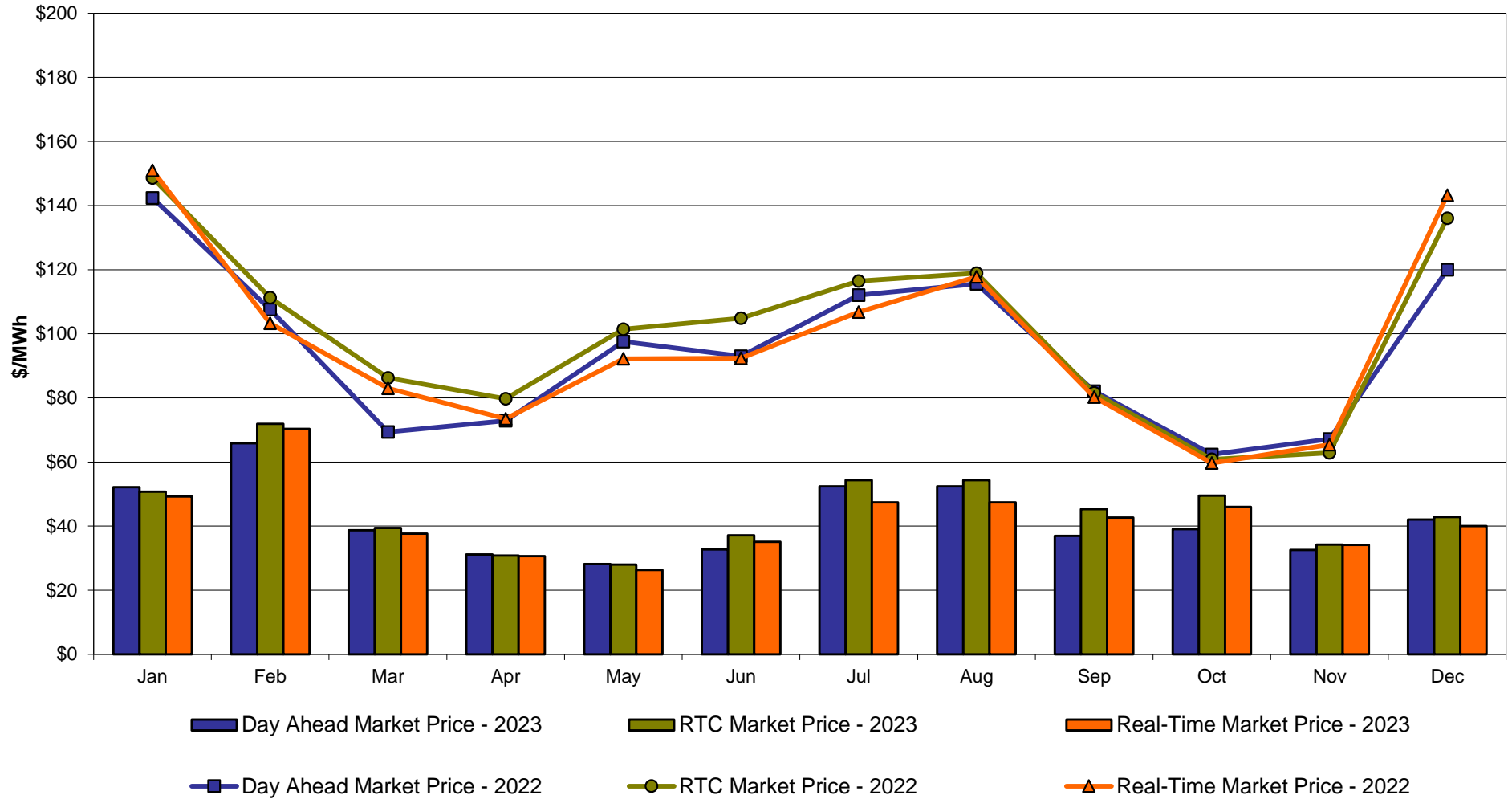
Hudson Valley Zone G Monthly Average LBMP Prices 2022 - 2023



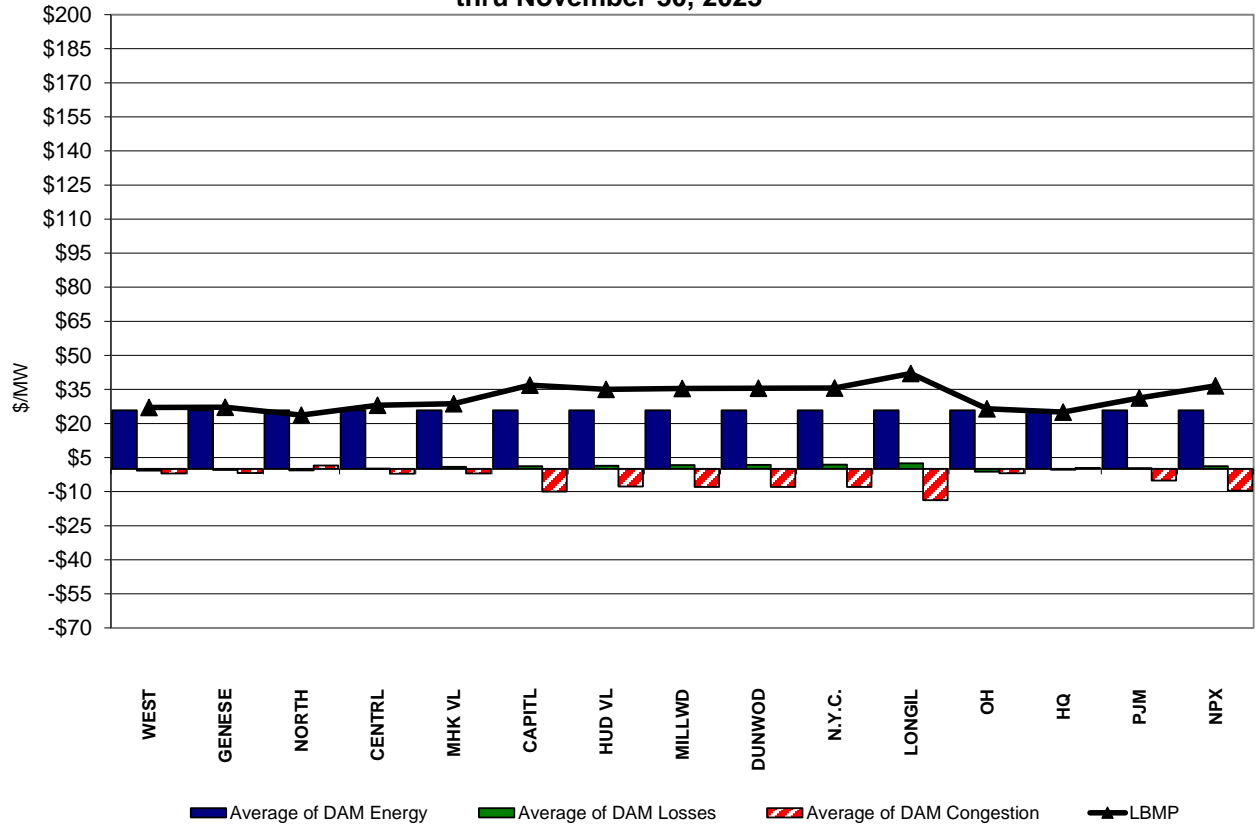
NYC Zone J Monthly Average LBMP Prices 2022 - 2023



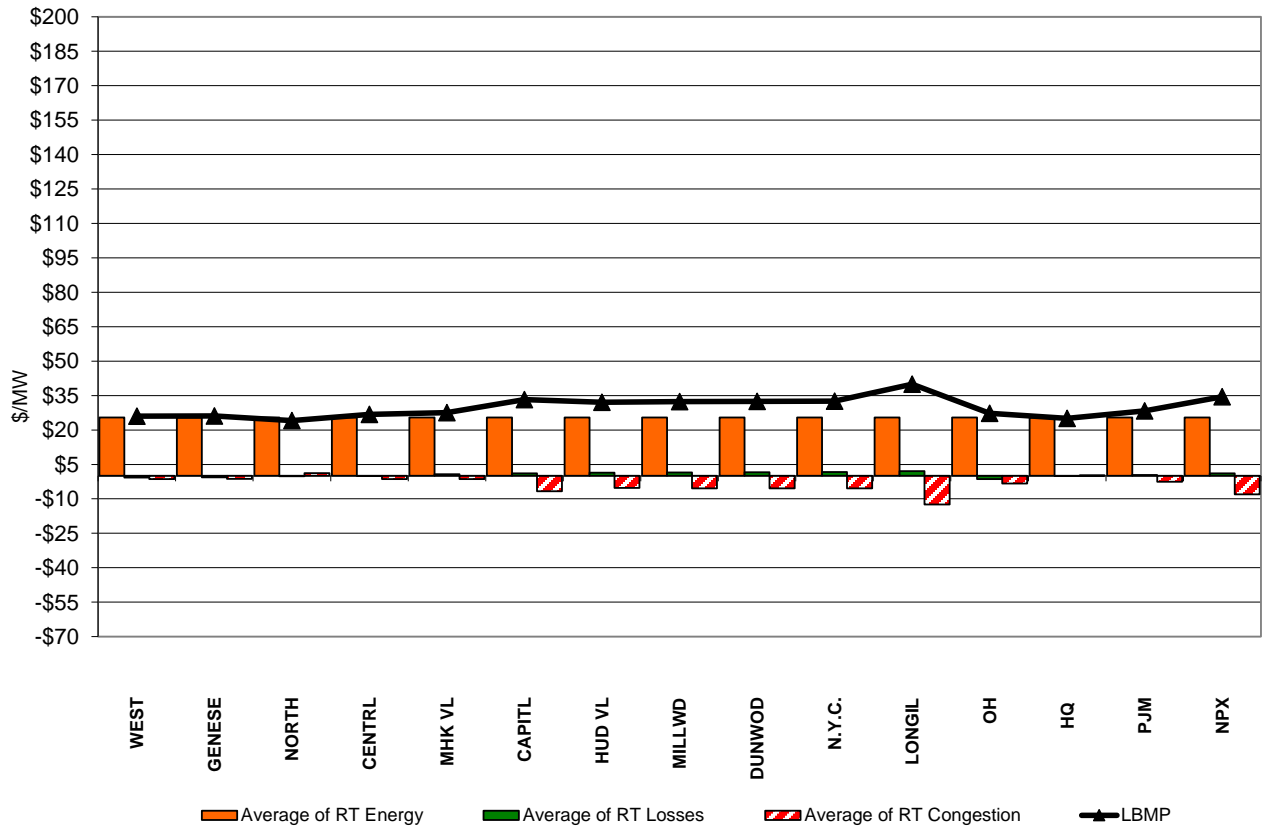
Long Island Zone K Monthly Average LBMP Prices 2022 - 2023



**DAM Zonal Unweighted Monthly Average LBMP Components
thru November 30, 2023**

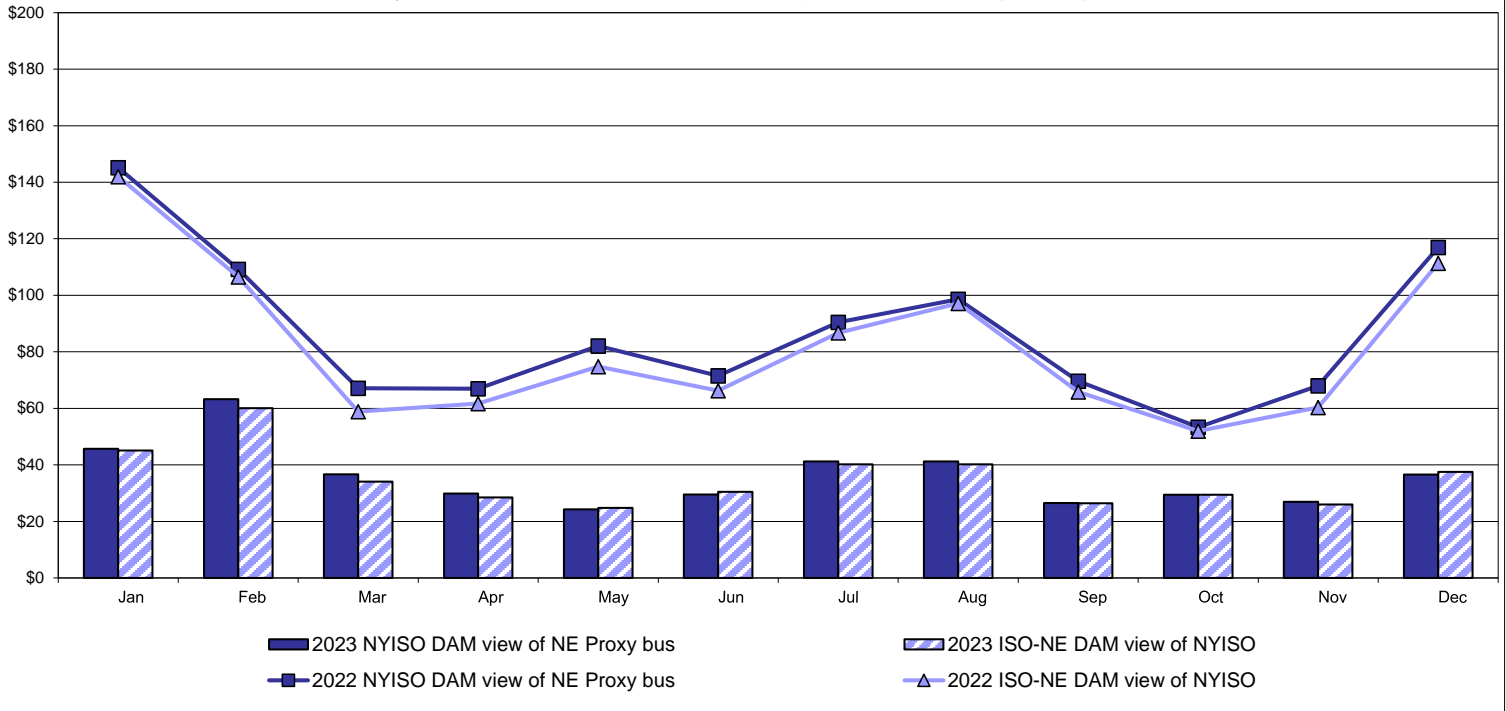


**RT Zonal Unweighted Monthly Average LBMP Components
thru November 30, 2023**

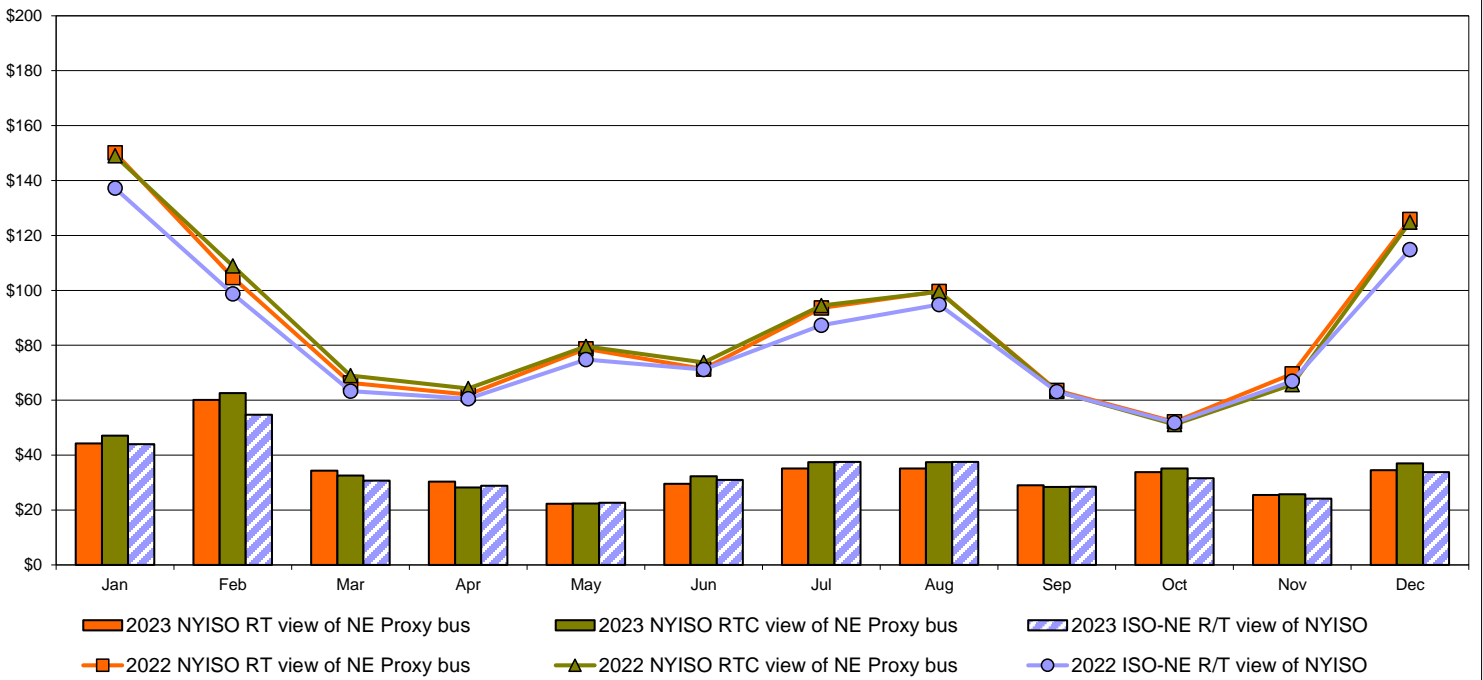


External Comparison ISO-New England

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

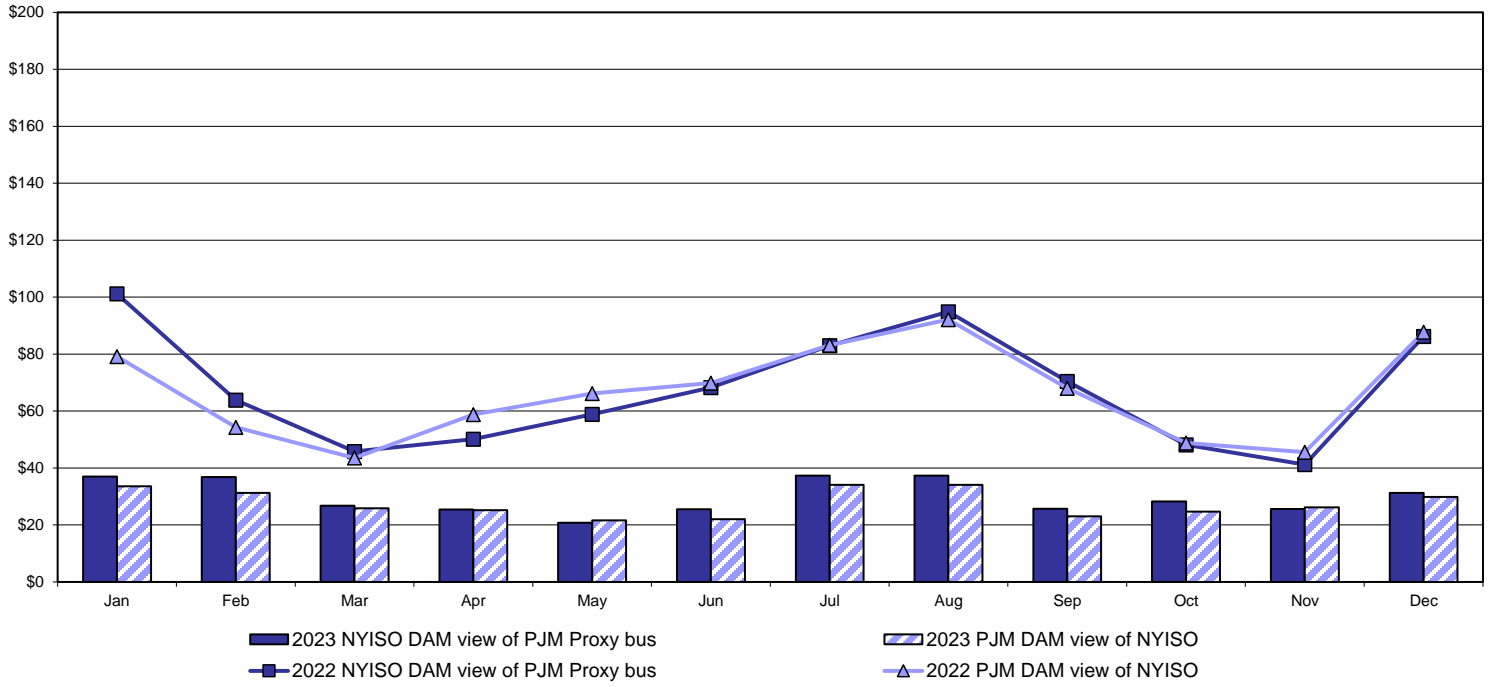


Real Time Market External Zone Comparison: ISO-NE (\$/MWh)

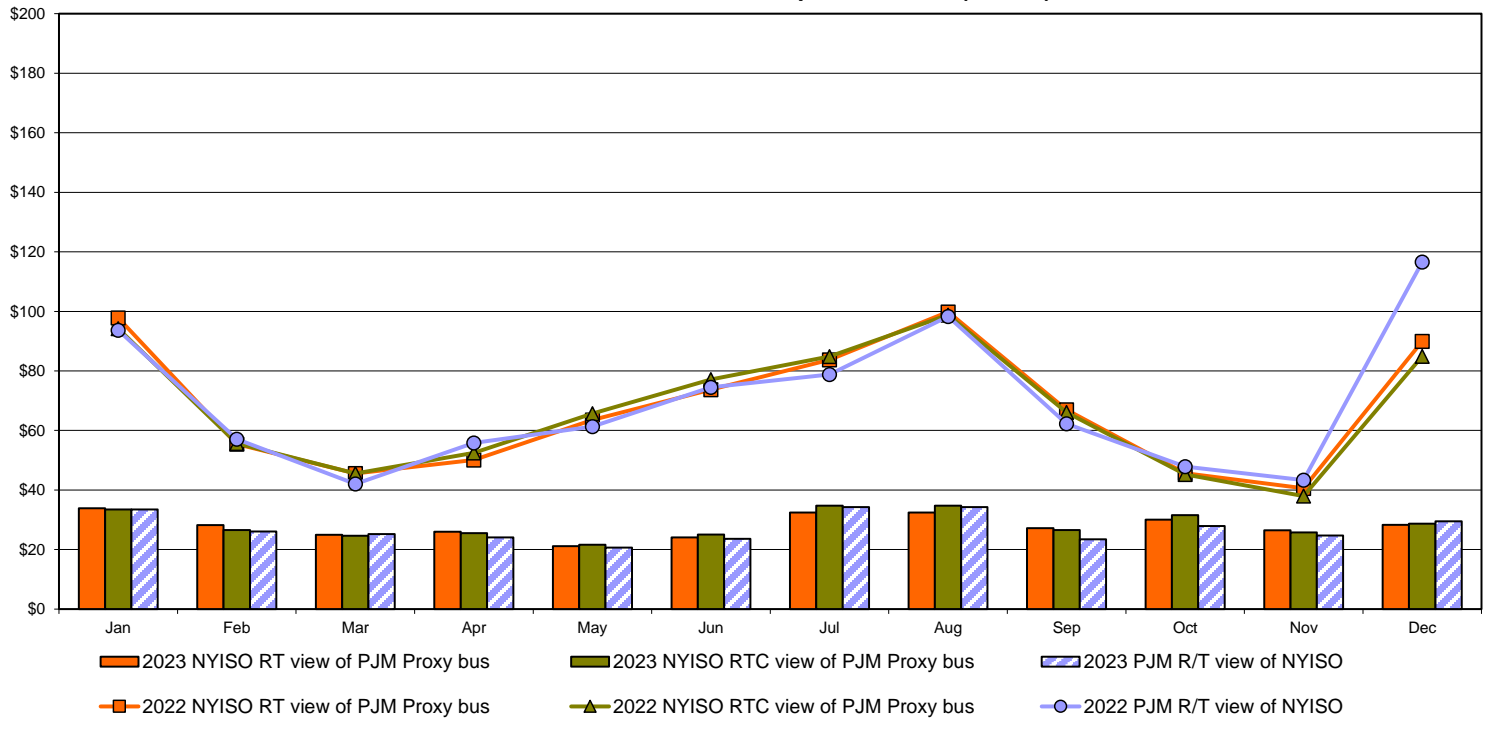


External Comparison PJM

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

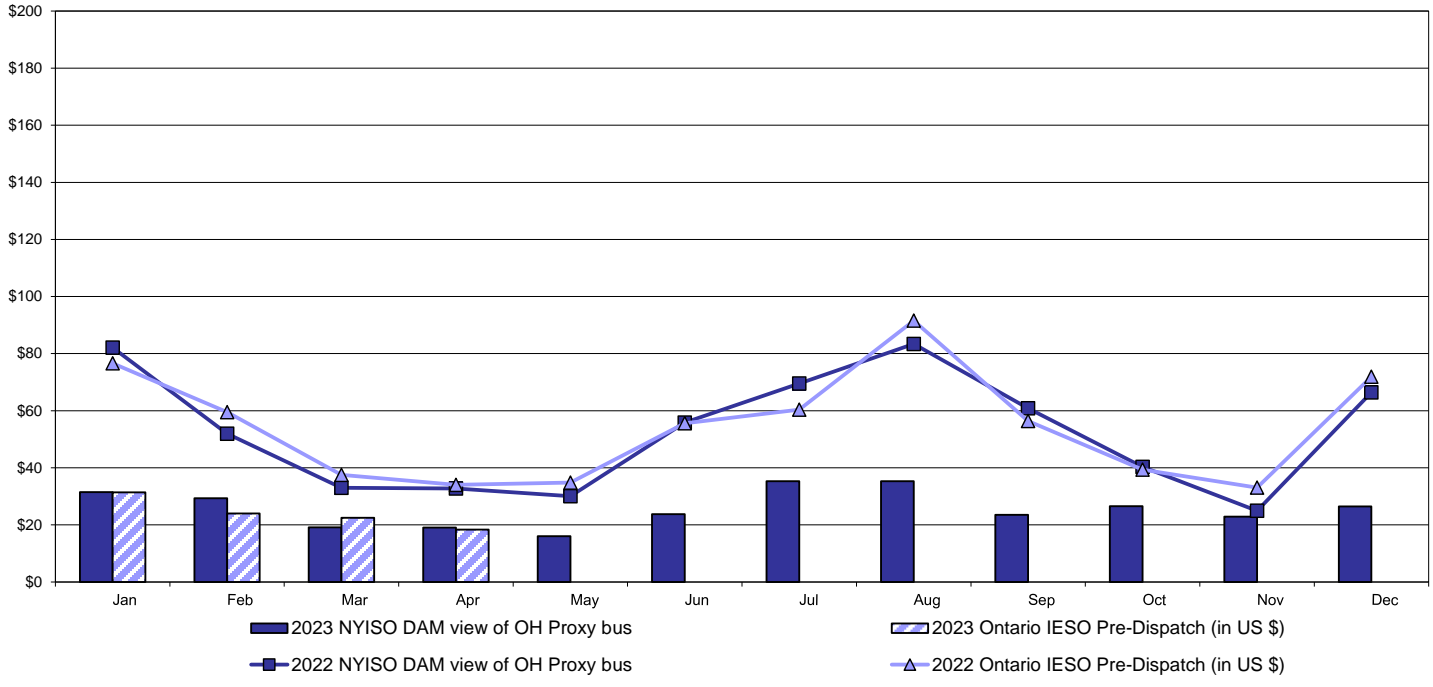


Real Time Market External Zone Comparison - PJM (\$/MWh)

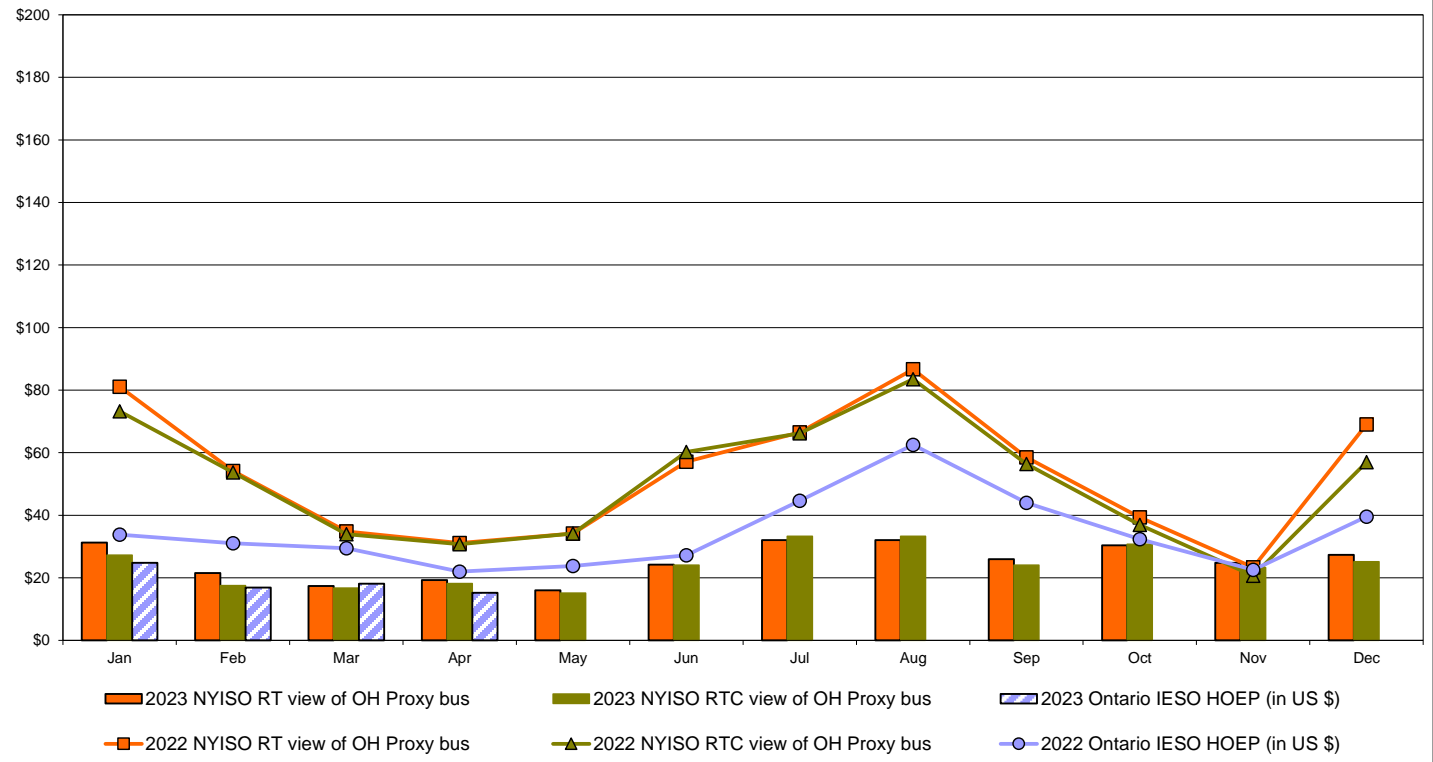


External Comparison Ontario IESO

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

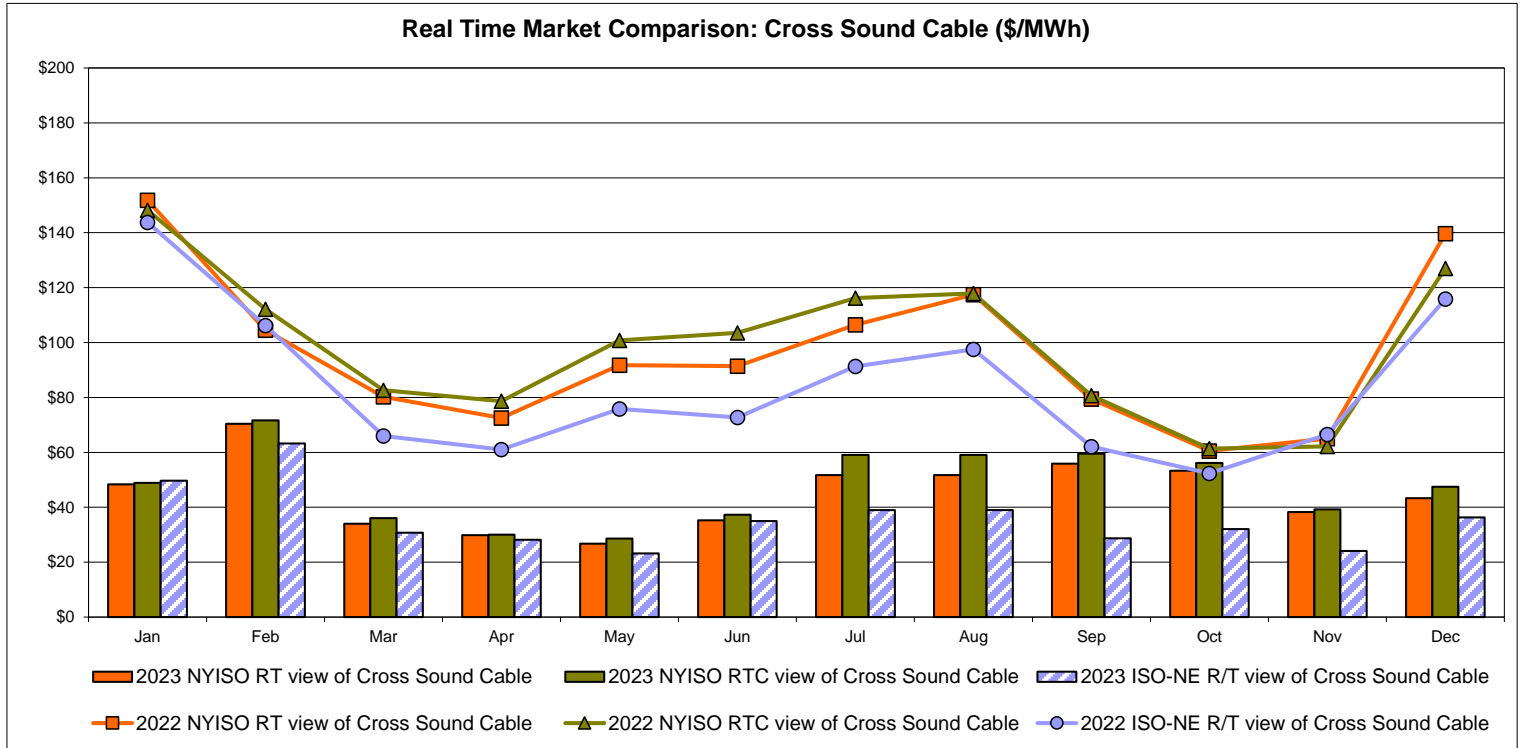
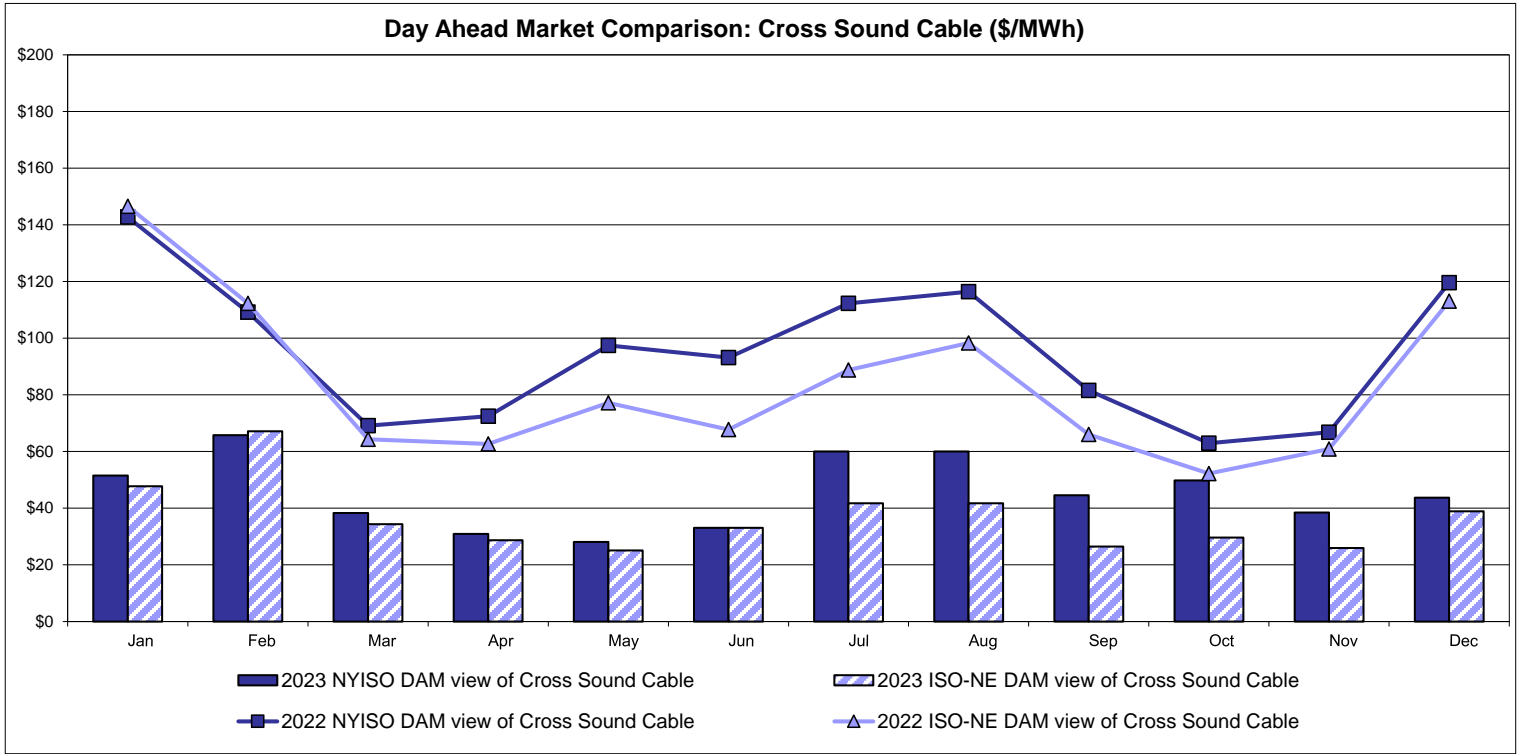


Real Time Market External Zone Comparison - Ontario IESO (\$/MWh)



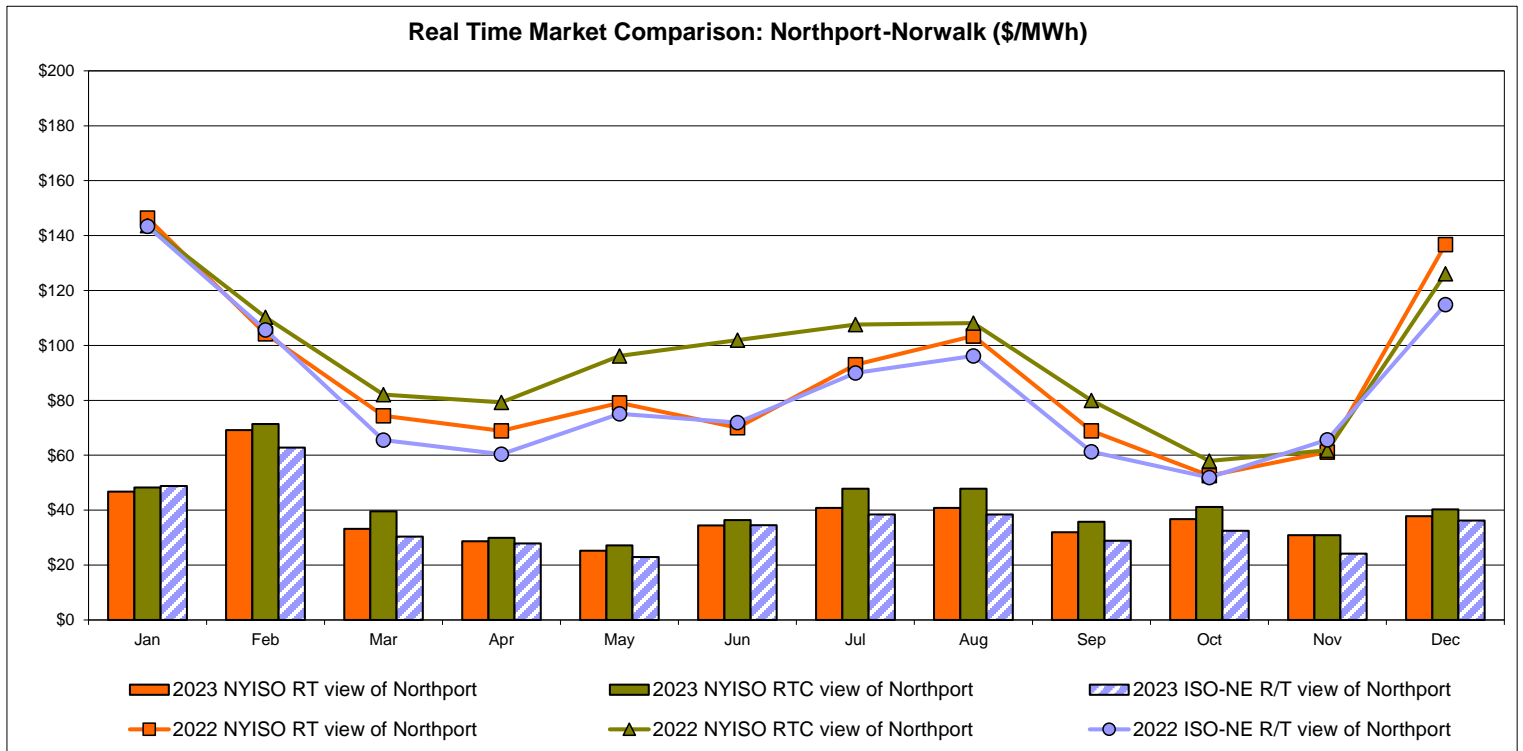
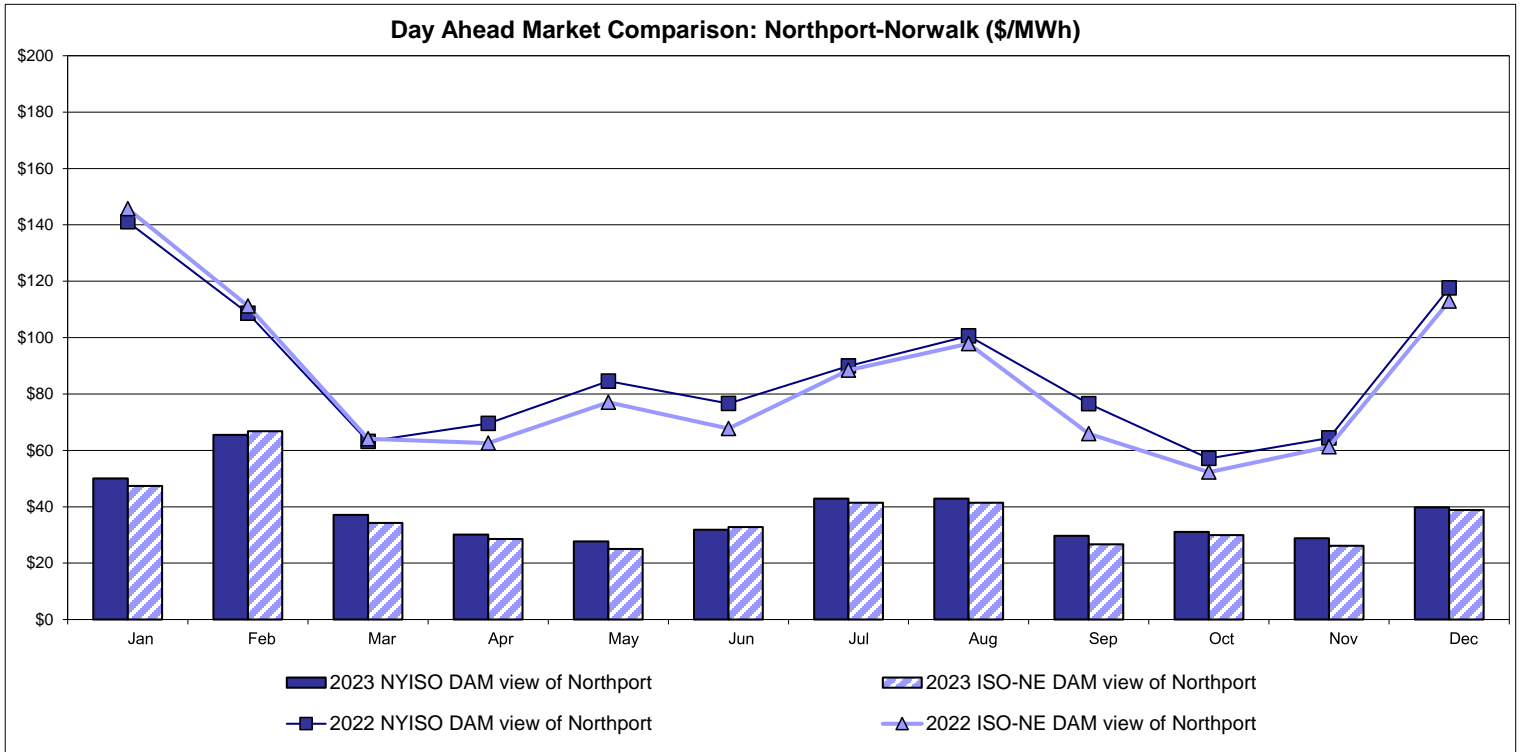
Notes: Exchange factor used for November 2023 was to US
 HOEP: Hourly Ontario Energy Price
 Pre-Dispatch: Projected Energy Price

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.

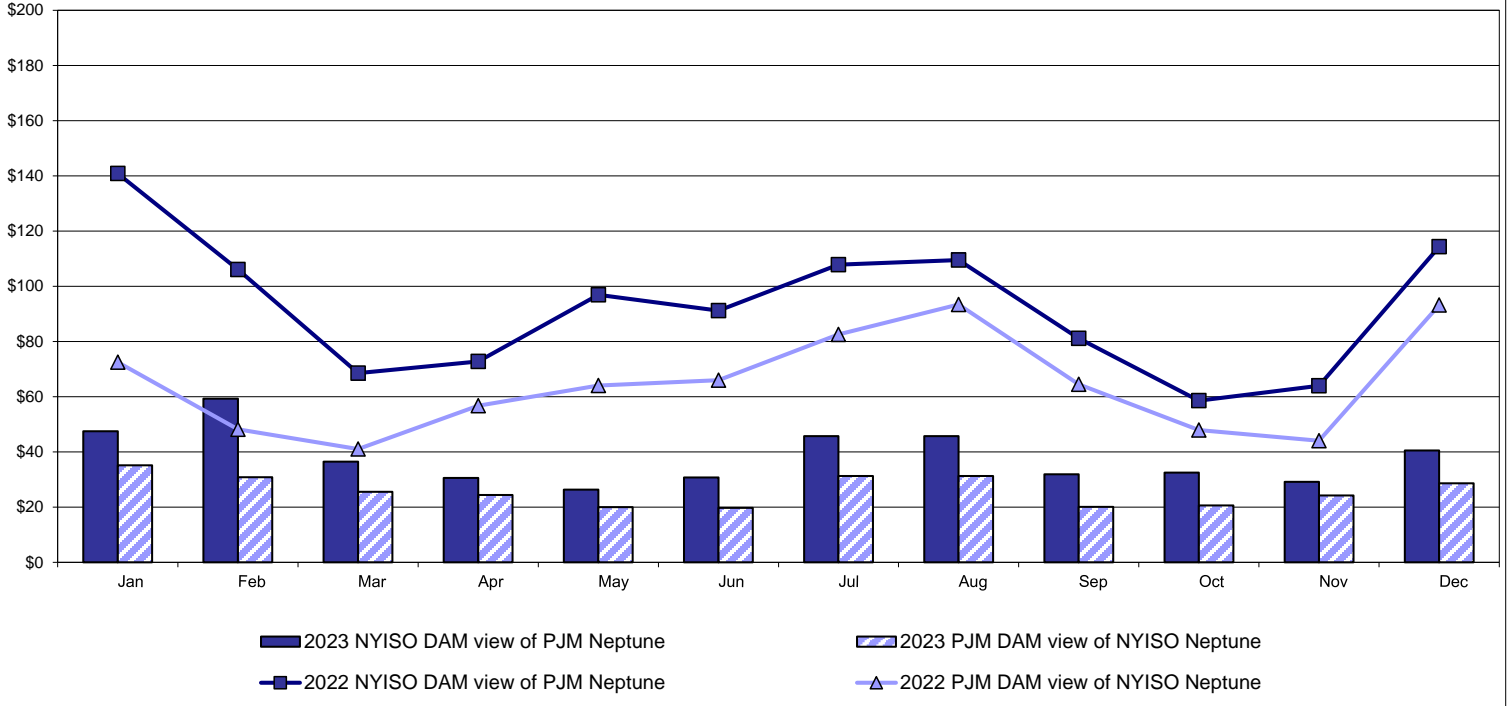
External Controllable Line: Northport - Norwalk (New England)



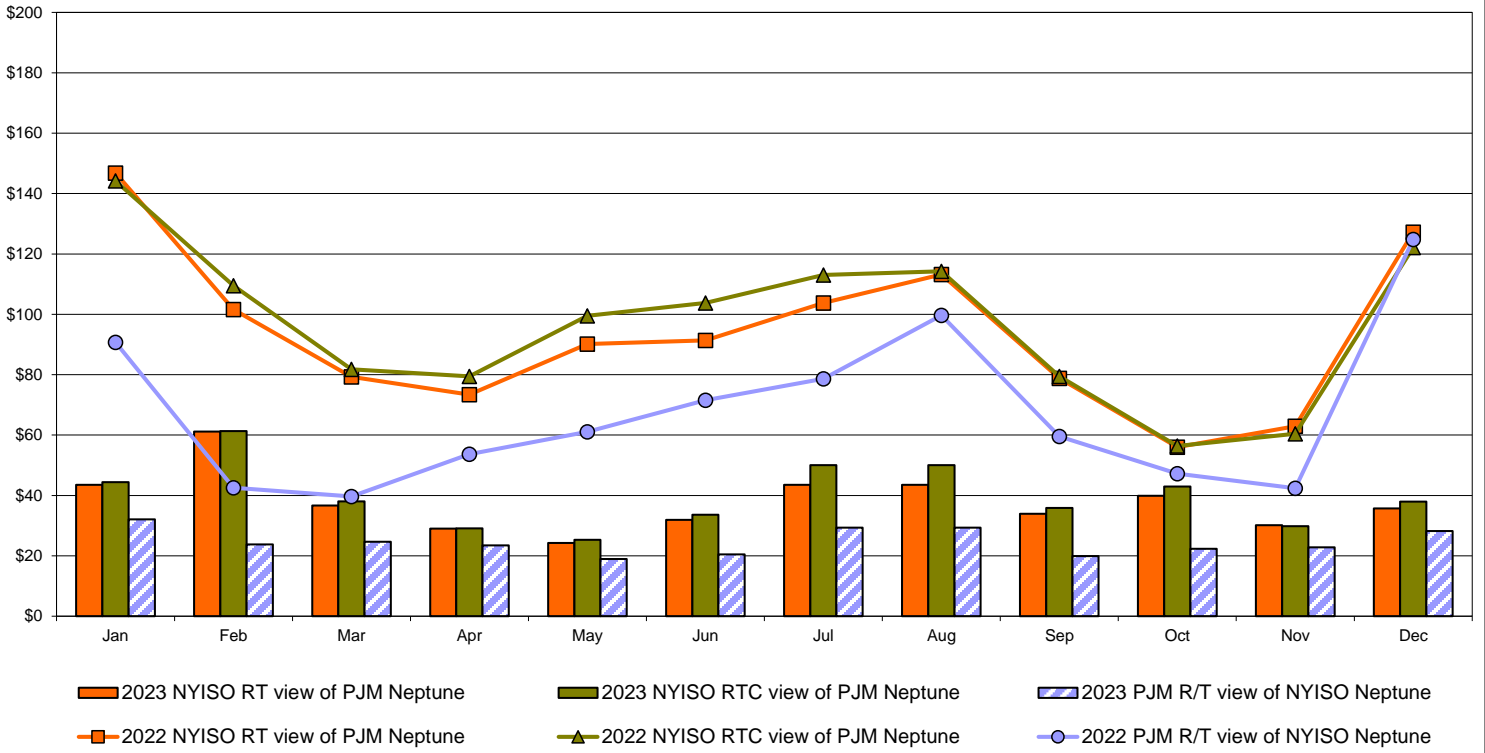
Note:
 ISO-NE Forecast is an advisory posting @ 18:00 day before.
 The DAM and R/T prices at the Northport 138 interface are used for ISO-NE.
 The DAM and R/T prices at the 1385 interface are used for NYISO.

External Controllable Line: Neptune (PJM)

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

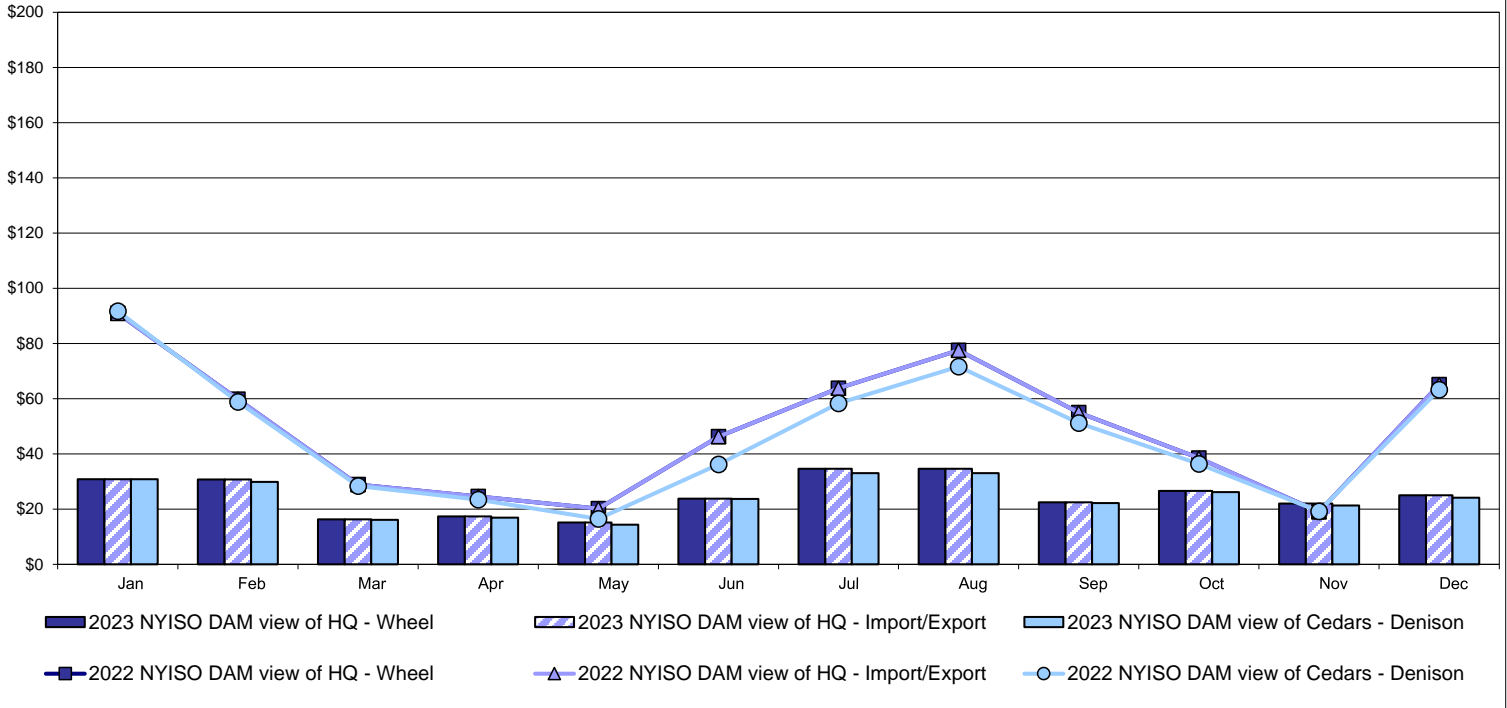


Real Time Market Comparison: Neptune (\$/MWh)

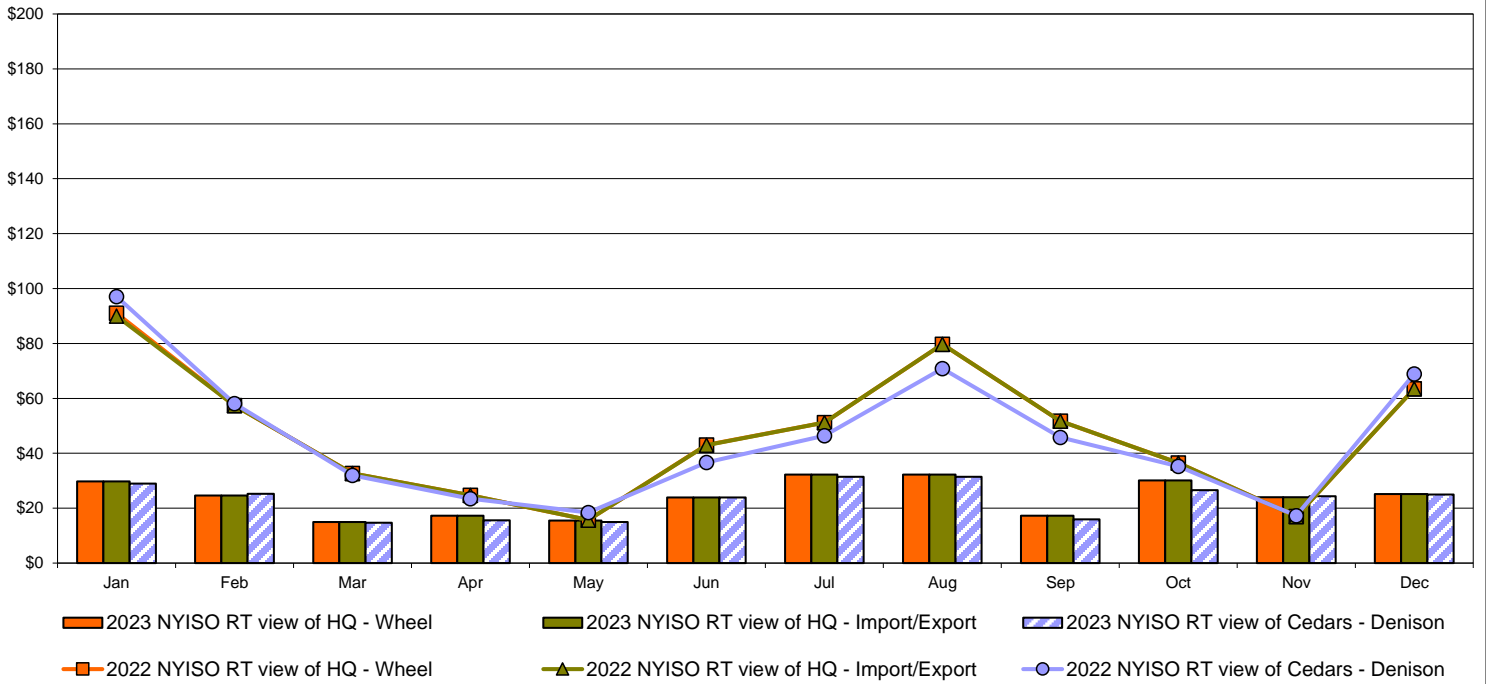


External Comparison Hydro-Quebec

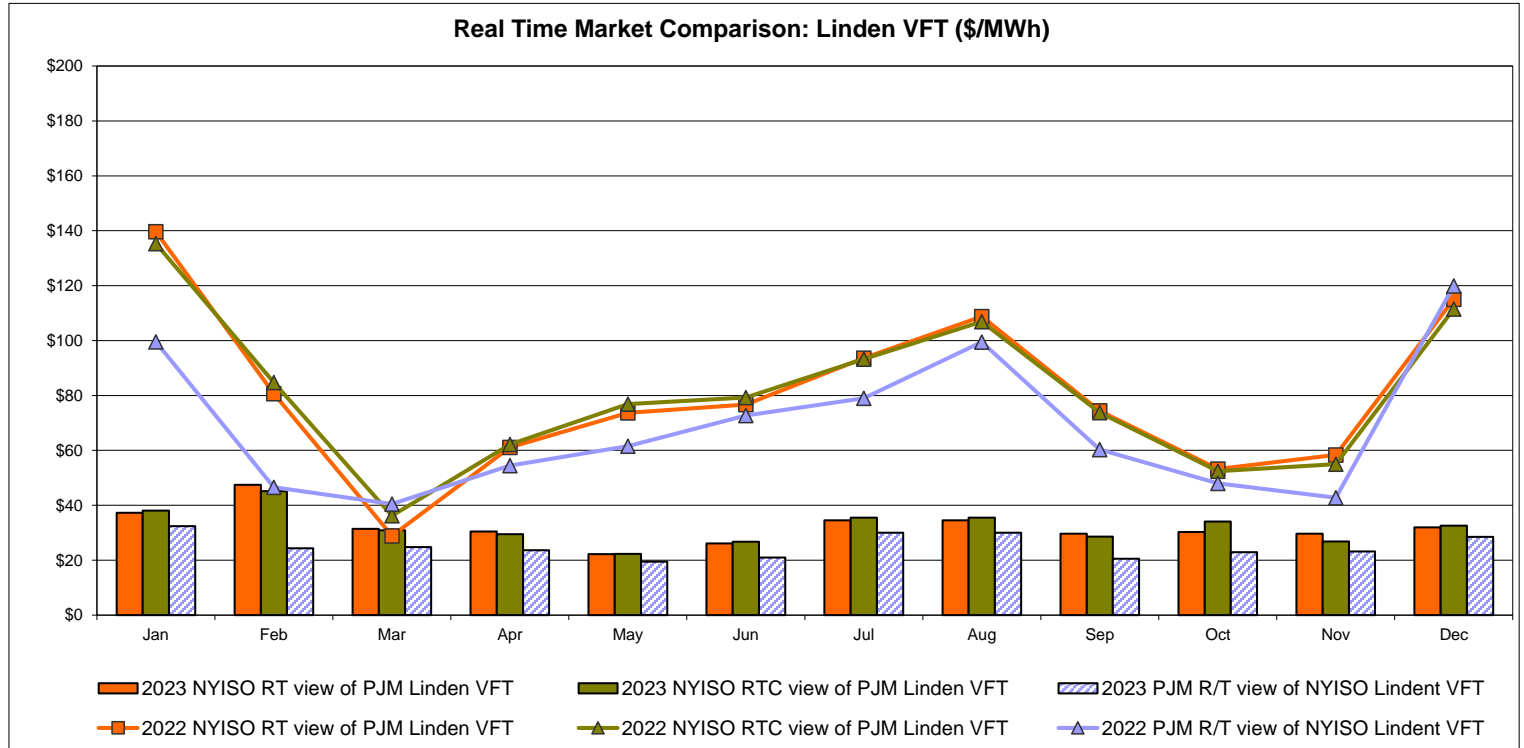
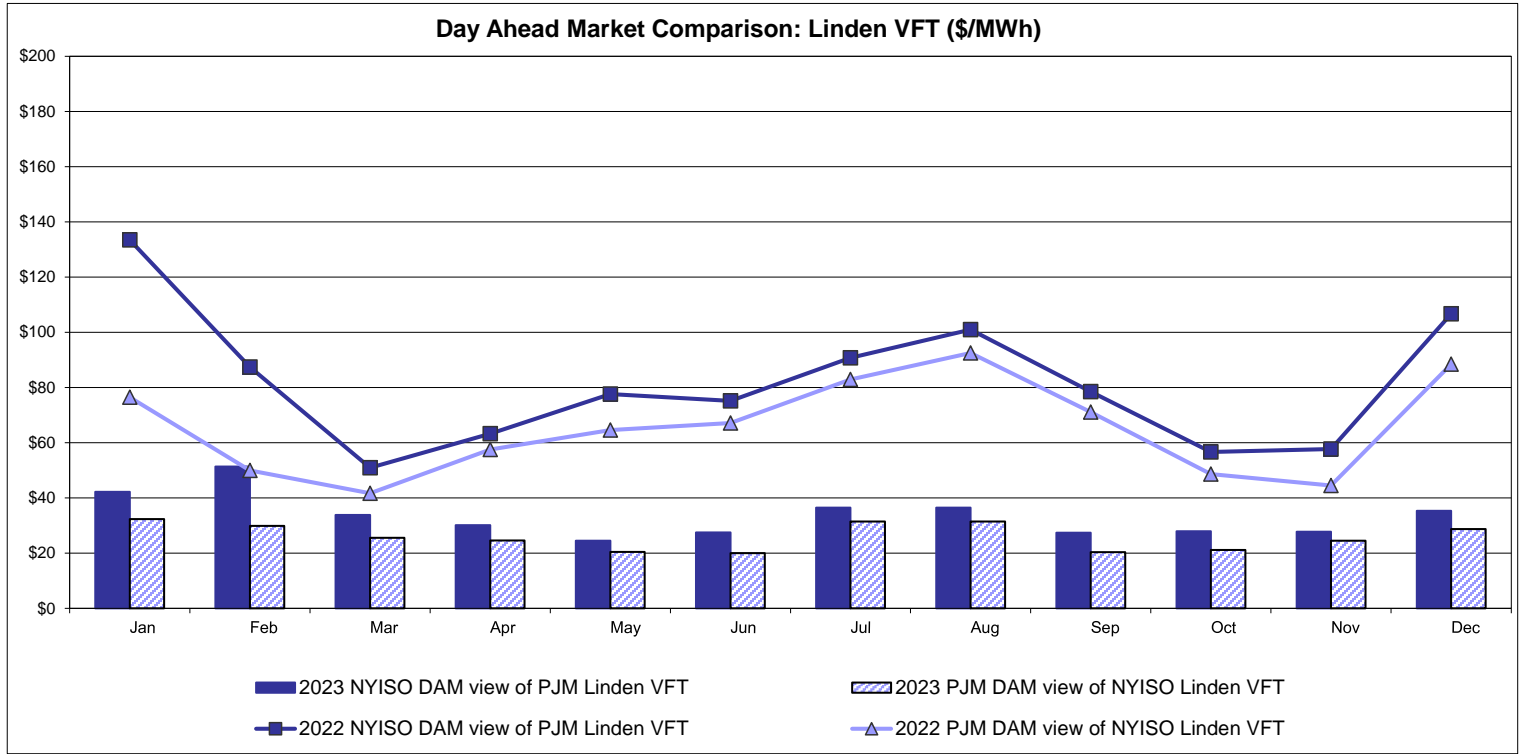
Day Ahead Market External Zone Comparison - HQ (\$/MWh)



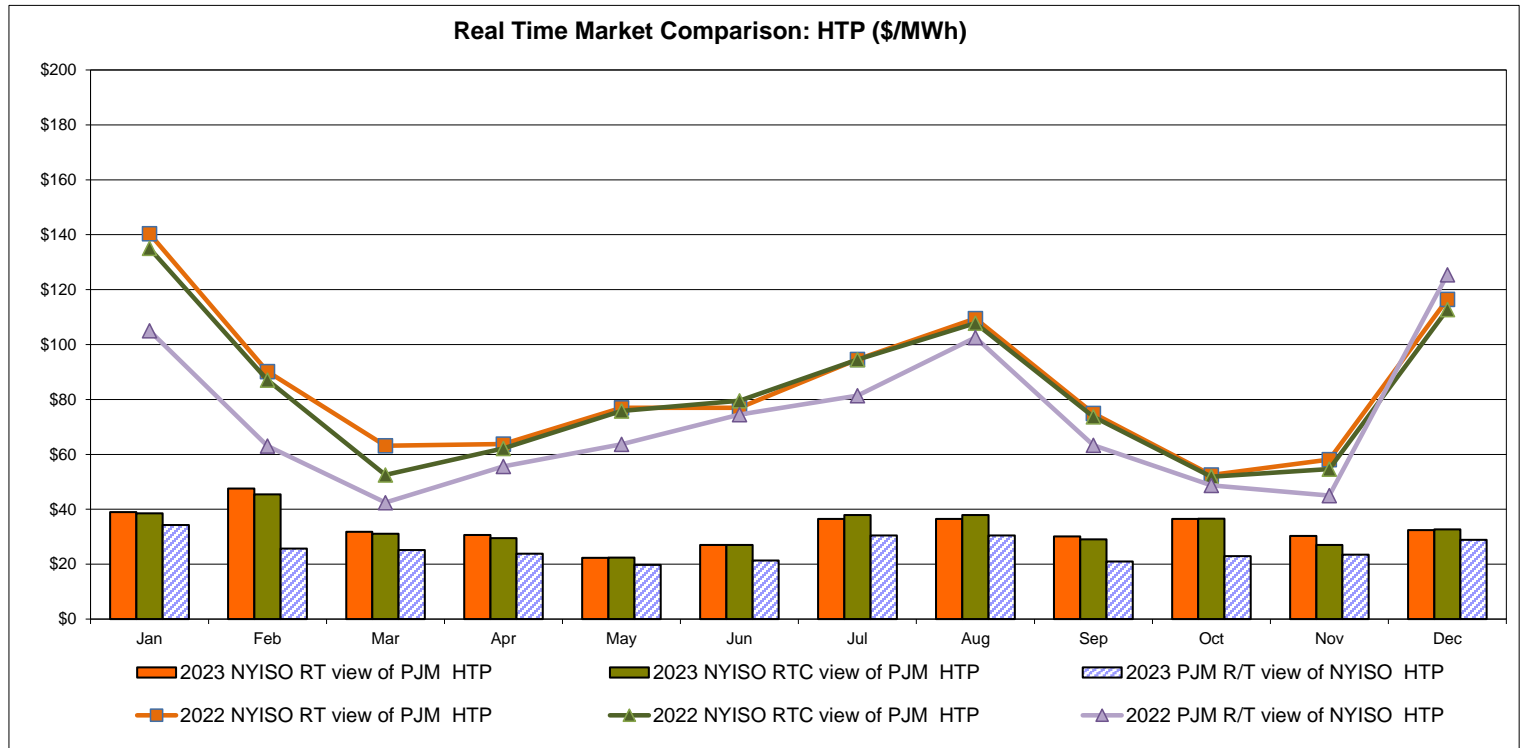
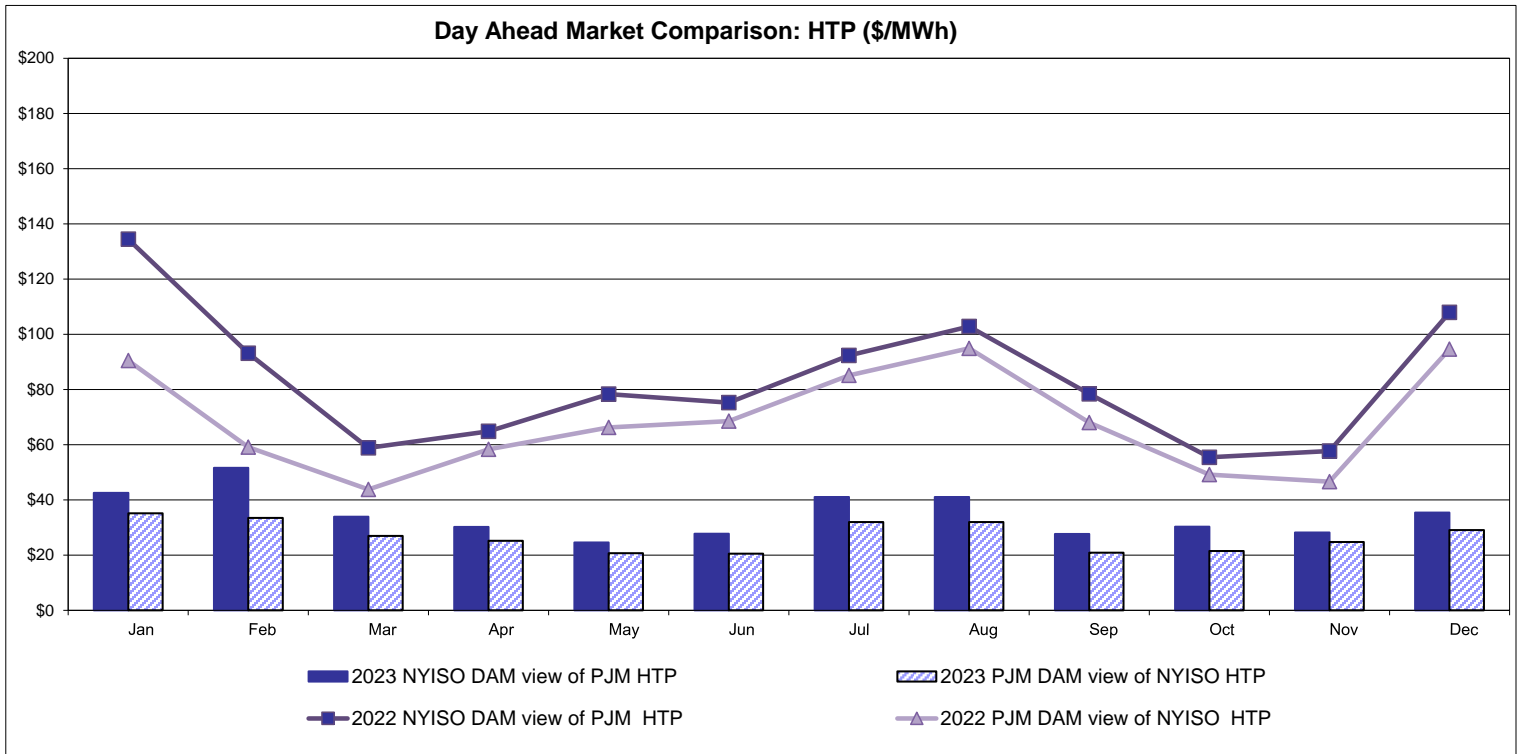
Real Time Market External Zone Comparison - HQ (\$/MWh)



External Controllable Line: Linden VFT (PJM)



External Controllable Line: Hudson (PJM)

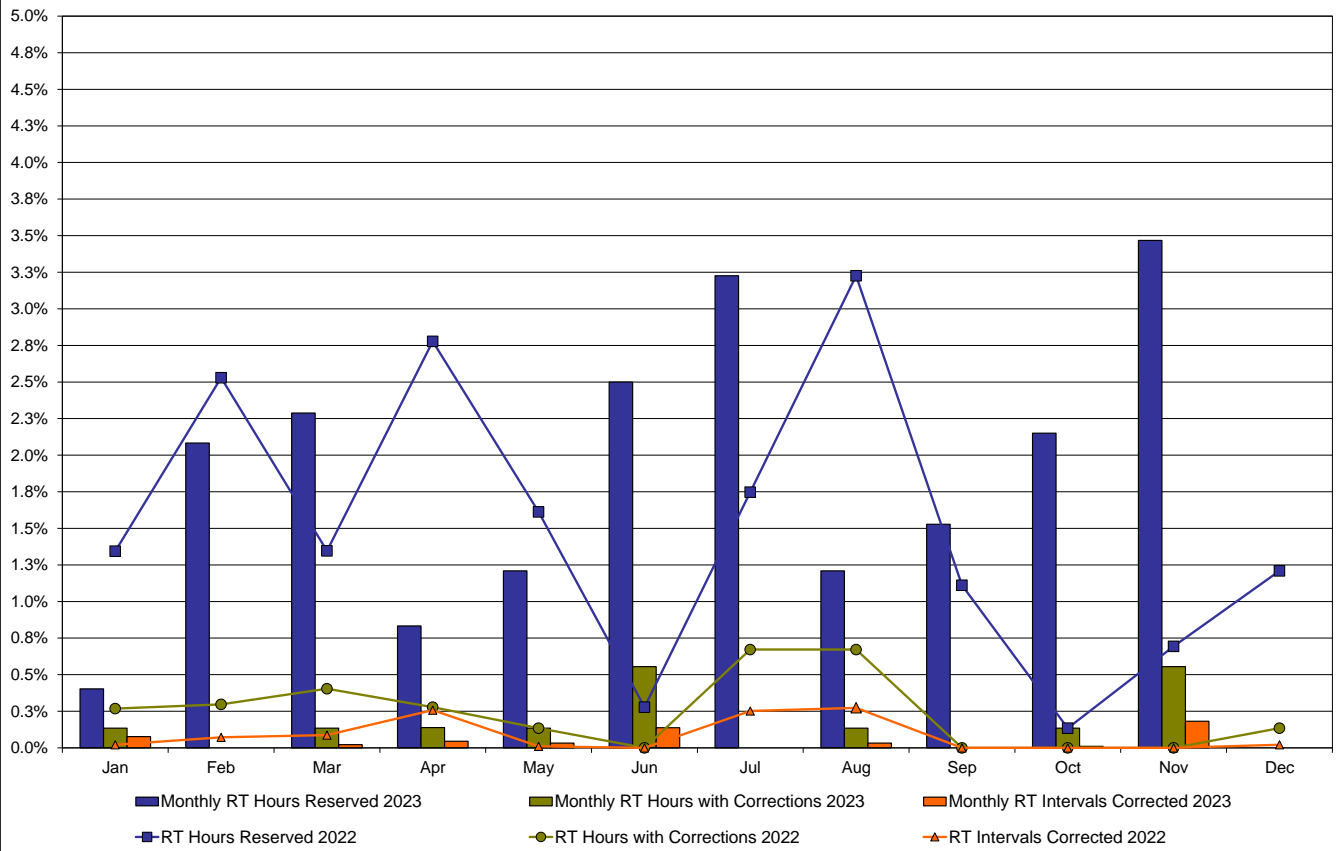


NYISO Real Time Price Correction Statistics

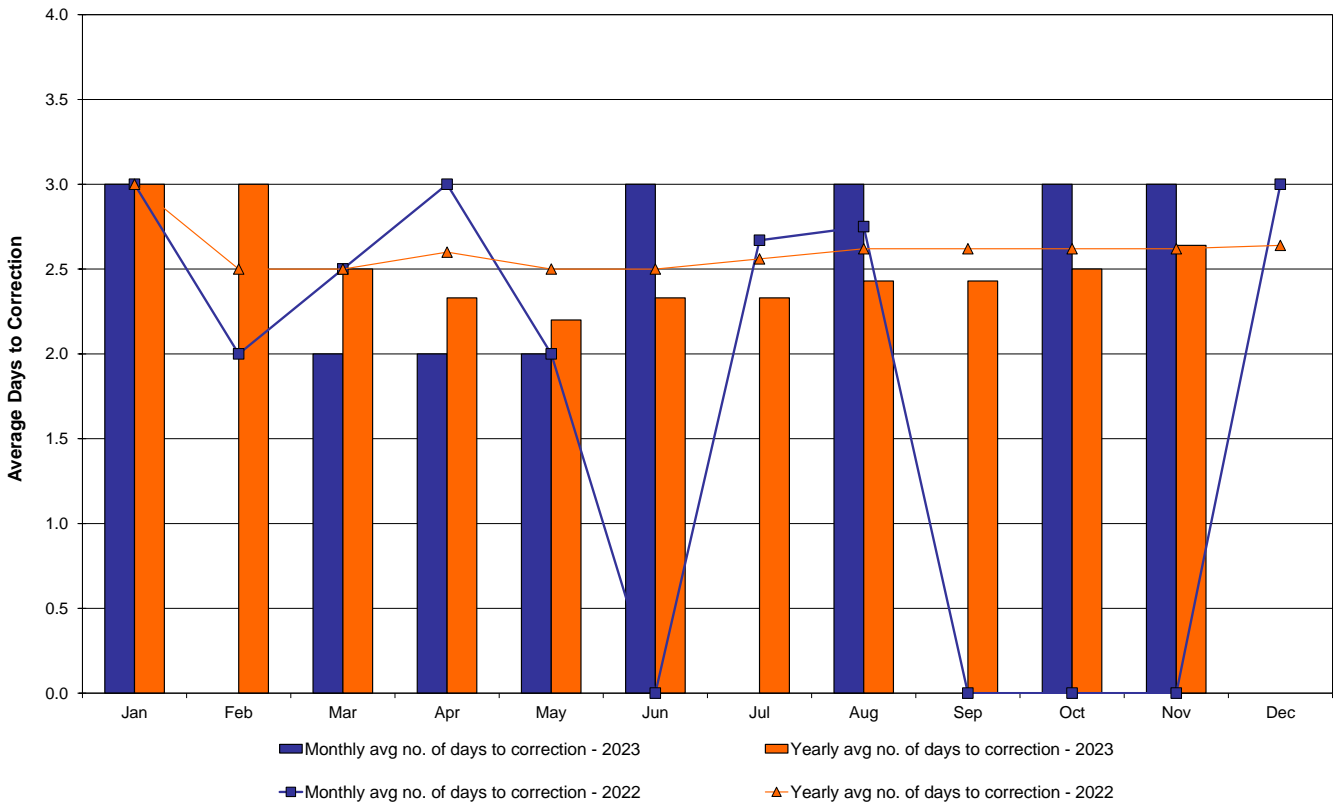
2023		<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
Hour Corrections													
Number of hours with corrections	in the month	1	0	1	1	1	4	0	1	0	1	4	
Number of hours	in the month	744	672	743	720	744	720	744	744	720	744	721	
% of hours with corrections	in the month	0.13%	0.00%	0.13%	0.14%	0.13%	0.56%	0.00%	0.13%	0.00%	0.13%	0.55%	
% of hours with corrections	year-to-date	0.13%	0.07%	0.09%	0.10%	0.11%	0.18%	0.16%	0.15%	0.14%	0.14%	0.17%	
Interval Corrections													
Number of intervals corrected	in the month	7	0	2	4	3	12	0	3	0	1	16	
Number of intervals	in the month	9,082	8,373	9,171	8,890	9,160	8,733	9,085	9,107	8,790	9,069	8,804	
% of intervals corrected	in the month	0.08%	0.00%	0.02%	0.04%	0.03%	0.14%	0.00%	0.03%	0.00%	0.01%	0.18%	
% of intervals corrected	year-to-date	0.08%	0.04%	0.03%	0.04%	0.04%	0.05%	0.04%	0.04%	0.04%	0.04%	0.05%	
Hours Reserved													
Number of hours reserved	in the month	3	14	17	6	9	18	24	9	11	16	25	
Number of hours	in the month	744	672	743	720	744	720	744	744	720	744	721	
% of hours reserved	in the month	0.40%	2.08%	2.29%	0.83%	1.21%	2.50%	3.23%	1.21%	1.53%	2.15%	3.47%	
% of hours reserved	year-to-date	0.40%	1.20%	1.57%	1.39%	1.35%	1.54%	1.79%	1.71%	1.69%	1.74%	1.90%	
Days to Correction *													
Avg. number of days to correction	in the month	3.00	0.00	2.00	2.00	2.00	3.00	0.00	3.00	0.00	3.00	3.00	
Avg. number of days to correction	year-to-date	3.00	3.00	2.50	2.33	2.20	2.33	2.33	2.43	2.43	2.50	2.64	
Days Without Corrections													
Days without corrections	in the month	30	28	30	29	29	29	31	30	30	30	27	
Days without corrections	year-to-date	30	58	88	117	146	175	206	236	266	296	323	
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

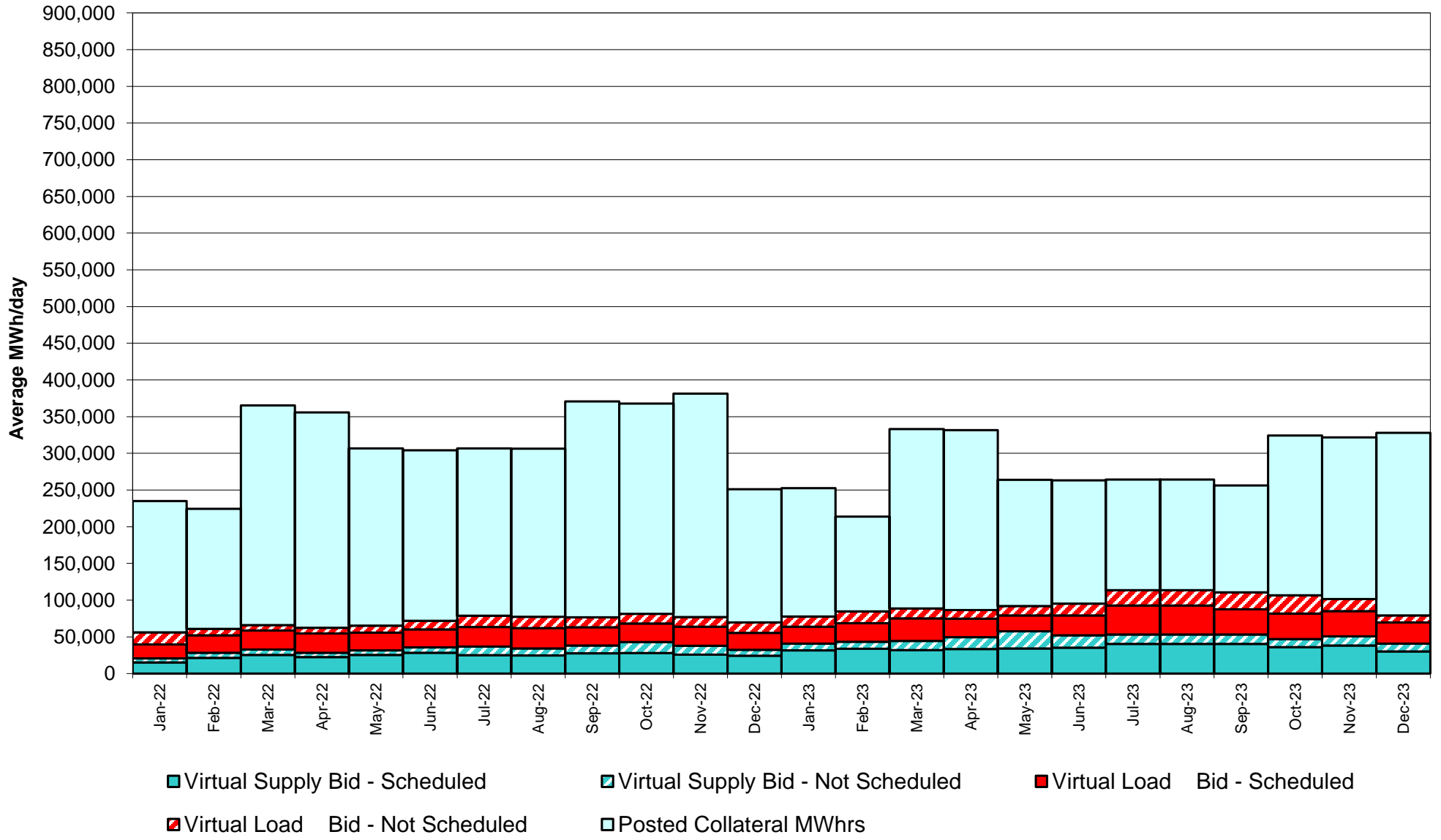
Percentage of Real-Time Corrections



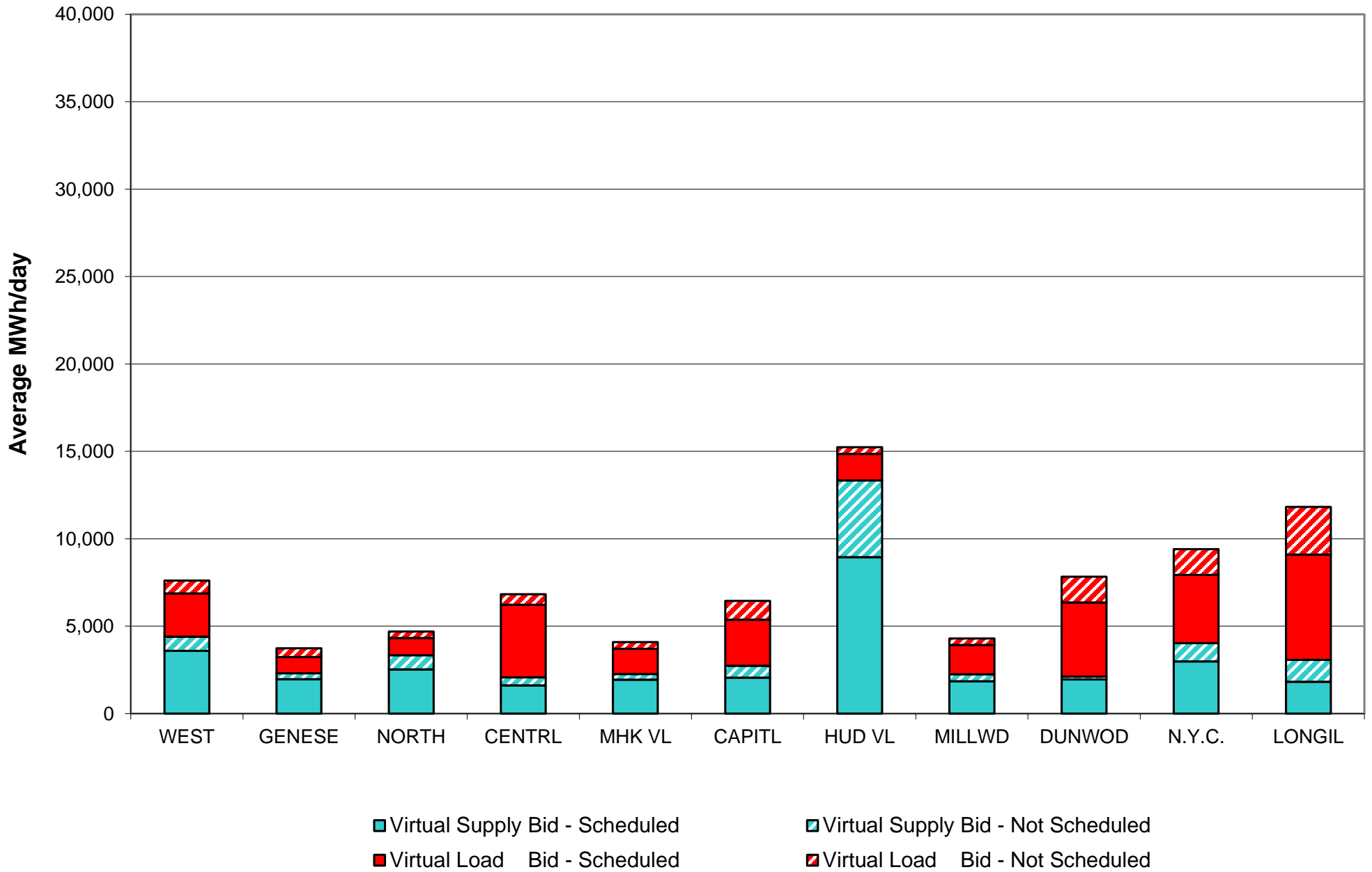
Annual average time period for making Price Corrections (from reservation date) *



NYISO Virtual Trading Average MWh per day



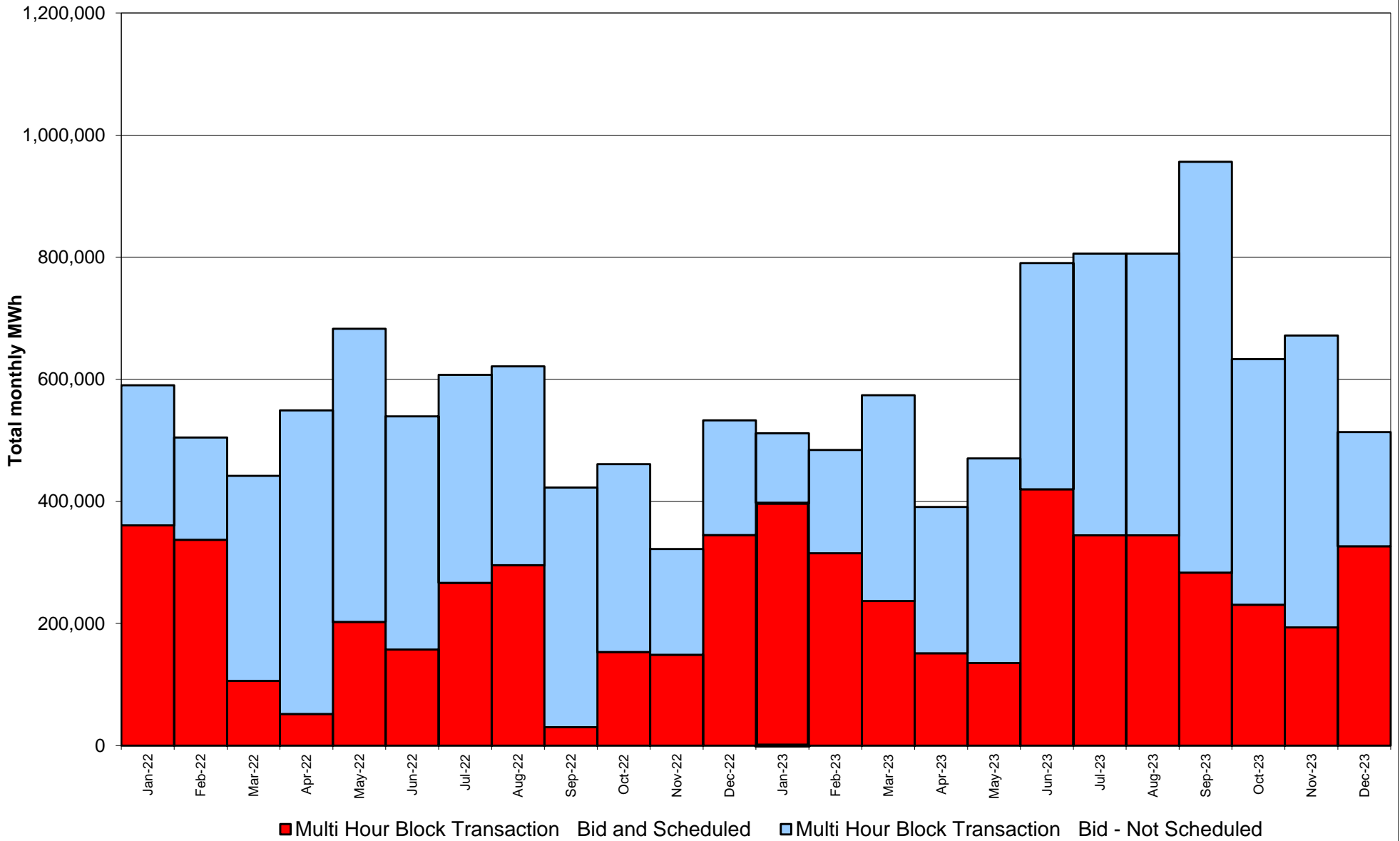
Virtual Load and Supply Zonal Statistics through November 30, 2023



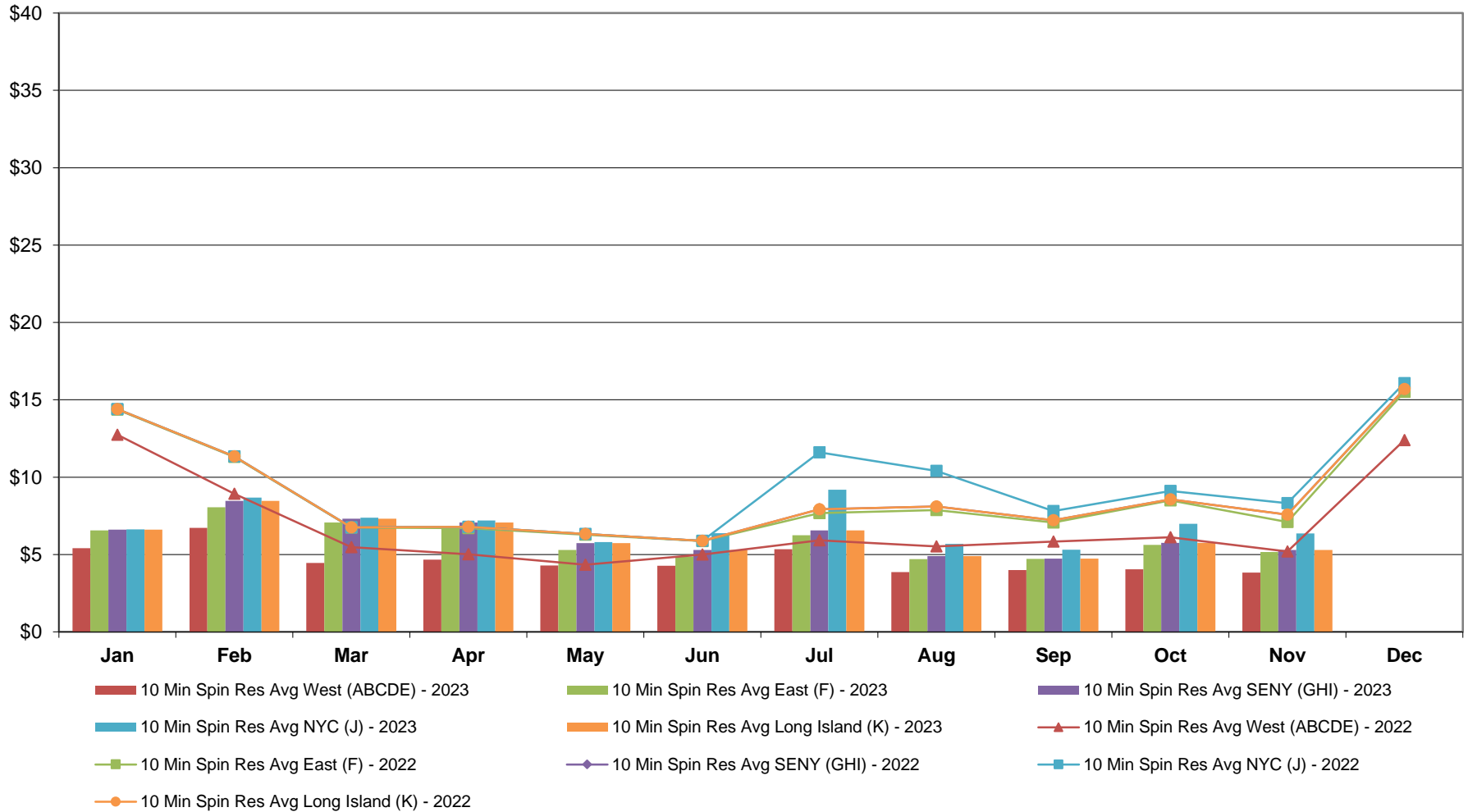
Virtual Load and Supply Zonal Statistics (Average MWh/day) - 2023

		Virtual Load Bid		Virtual Supply Bid				Virtual Load Bid		Virtual Supply Bid				Virtual Load Bid		Virtual Supply Bid			
Zone	Date	Scheduled	Not	Scheduled	Not	Zone	Date	Scheduled	Not	Scheduled	Not	Zone	Date	Scheduled	Not	Scheduled	Not		
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	2,407	1,561	5,939	1,245		Apr-23	1,182	841	1,556	450		Apr-23	1,941	1,615	1,682	633		
	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	2,719	680		
	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	2,299	522		
	Jul-23	2,249	2,400	4,471	1,796		Jul-23	1,402	1,292	2,986	350		Jul-23	5,415	3,132	1,968	592		
	Aug-23	2,425	1,631	4,806	1,636		Aug-23	1,237	1,372	2,604	447		Aug-23	3,845	3,593	2,504	371		
	Sep-23	2,119	2,227	2,994	874		Sep-23	1,300	1,390	2,204	513		Sep-23	4,581	4,422	2,162	573		
	Oct-23	2,639	1,282	4,240	1,203		Oct-23	1,076	822	2,253	362		Oct-23	5,345	2,669	2,046	321		
	Nov-23	2,463	737	3,597	809		Nov-23	1,436	385	1,942	329		Nov-23	4,232	1,481	1,954	168		
	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
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		982	746	1,817	584	Apr-23	2,509		960	2,303	695	Apr-23	2,032	1,683		3,490	1,100		
May-23		721	408	1,807	568	May-23	1,691		681	2,810	736	May-23	2,063	2,034		4,284	1,488		
Jun-23		933	520	1,811	529	Jun-23	2,121		783	3,359	808	Jun-23	4,139	2,409		3,742	1,700		
Jul-23		747	412	1,947	394	Jul-23	2,610		863	3,616	1,027	Jul-23	9,758	3,758		3,562	1,862		
Aug-23		790	224	1,674	435	Aug-23	2,081		2,114	3,087	1,208	Aug-23	7,143	3,406		3,912	1,955		
Sep-23		898	499	1,893	549	Sep-23	2,428		2,228	2,775	1,521	Sep-23	6,326	3,975		4,593	1,722		
Oct-23		921	431	1,889	498	Oct-23	1,987		1,135	2,474	1,036	Oct-23	4,054	2,644		4,267	1,380		
Nov-23		928	497	1,969	337	Nov-23	2,626		1,086	2,060	682	Nov-23	3,899	1,476		2,981	1,054		
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
	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	615	332	3,338	854	Apr-23		896	846	8,301	7,864	Apr-23	4,436		1,401	2,087	746		
	May-23	938	184	2,274	964	May-23		1,119	937	7,383	13,585	May-23	3,608		1,817	2,640	1,073		
	Jun-23	1,032	148	2,685	629	Jun-23		1,784	1,120	8,337	7,759	Jun-23	5,238		2,124	1,770	1,359		
	Jul-23	777	179	3,193	699	Jul-23		1,397	1,690	12,207	2,396	Jul-23	6,977		3,999	2,319	1,911		
	Aug-23	840	104	3,144	1,024	Aug-23		1,074	1,768	9,868	1,973	Aug-23	7,301		4,466	2,796	1,516		
	Sep-23	931	217	3,142	668	Sep-23		1,559	1,961	9,906	1,804	Sep-23	8,018		5,016	2,958	1,605		
	Oct-23	768	259	3,610	1,015	Oct-23		967	978	10,576	3,923	Oct-23	7,710		3,399	2,047	1,343		
	Nov-23	990	363	2,527	808	Nov-23		1,509	385	8,946	4,395	Nov-23	6,023		2,723	1,816	1,261		
	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
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		6,824	914	1,546	855	Apr-23	1,564		853	1,566	831	Apr-23	25,387	11,752		33,625	15,856		
May-23		5,246	1,357	1,858	830	May-23	995		1,119	2,250	784	May-23	21,553	12,874		34,260	23,216		
Jun-23		3,257	1,442	2,305	784	Jun-23	1,392		1,329	2,385	667	Jun-23	27,199	15,886		35,419	16,693		
Jul-23		3,351	1,609	2,416	423	Jul-23	4,935		1,437	1,914	1,124	Jul-23	39,618	20,771		40,598	12,575		
Aug-23		3,177	1,759	2,562	608	Aug-23	3,526		1,592	2,188	1,174	Aug-23	33,440	22,030		39,145	12,347		
Sep-23		2,937	1,838	2,261	767	Sep-23	4,973		1,793	2,210	830	Sep-23	36,069	25,565		37,099	11,426		
Oct-23		4,649	1,187	1,875	545	Oct-23	3,267		1,253	1,560	425	Oct-23	33,382	16,058		36,836	12,051		
Nov-23		4,144	613	1,612	468	Nov-23	1,679		378	1,847	396	Nov-23	29,927	10,123		31,250	10,708		
Dec-23						Dec-23						Dec-23							

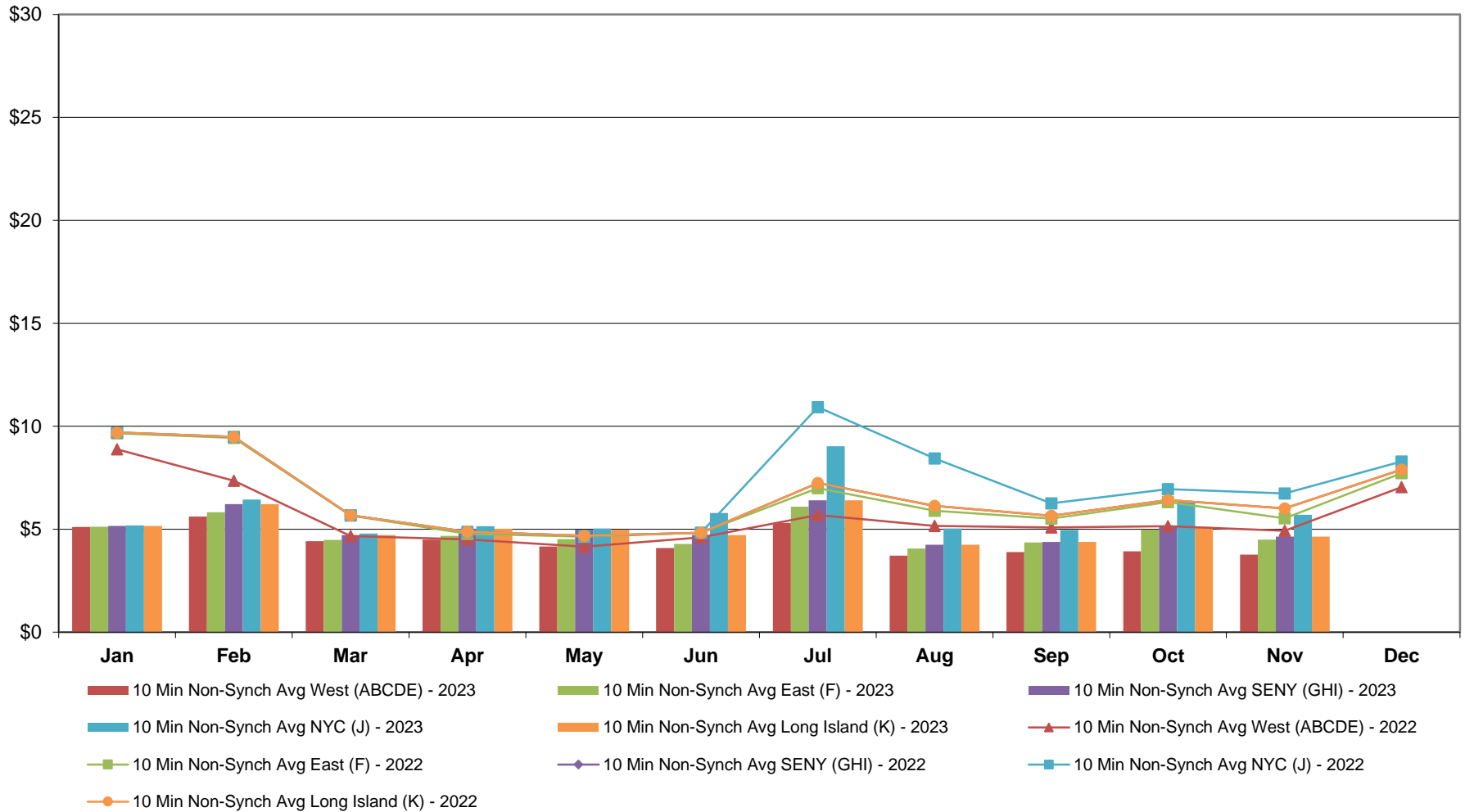
NYISO Multi Hour Block Transactions Monthly Total MWh



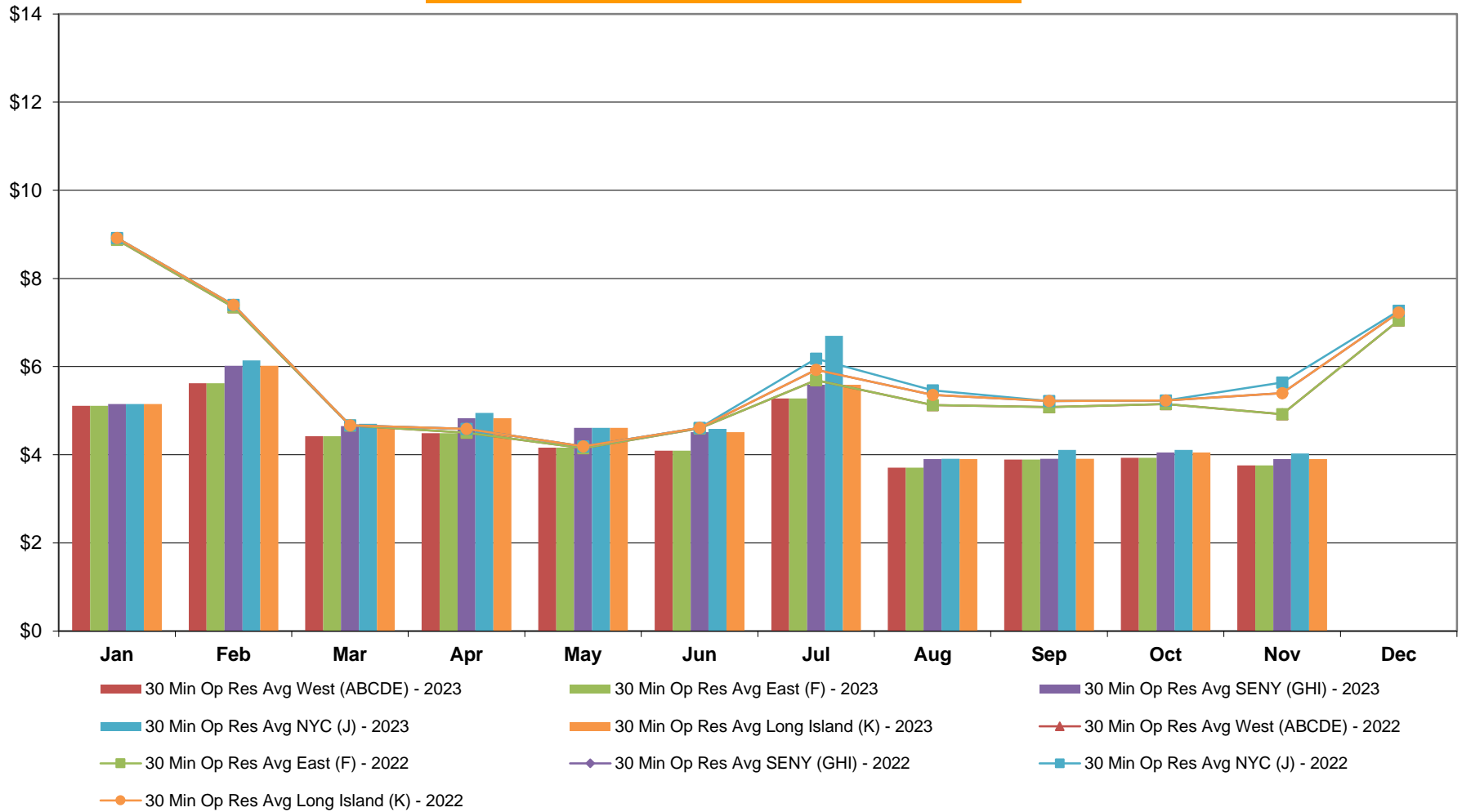
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - 10 Min Spin 2022 - 2023**



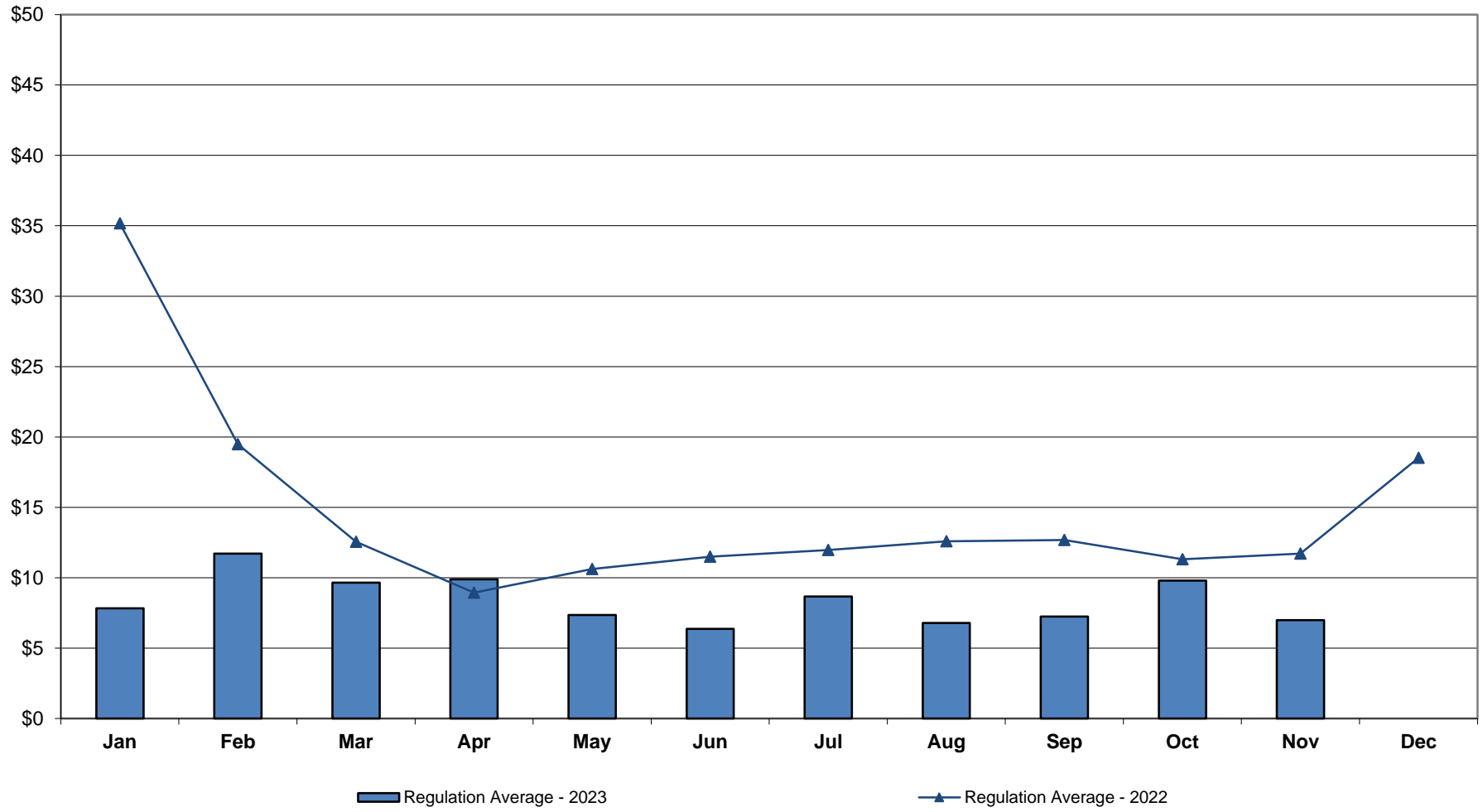
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - 10 Min Non-Synch 2022 - 2023**



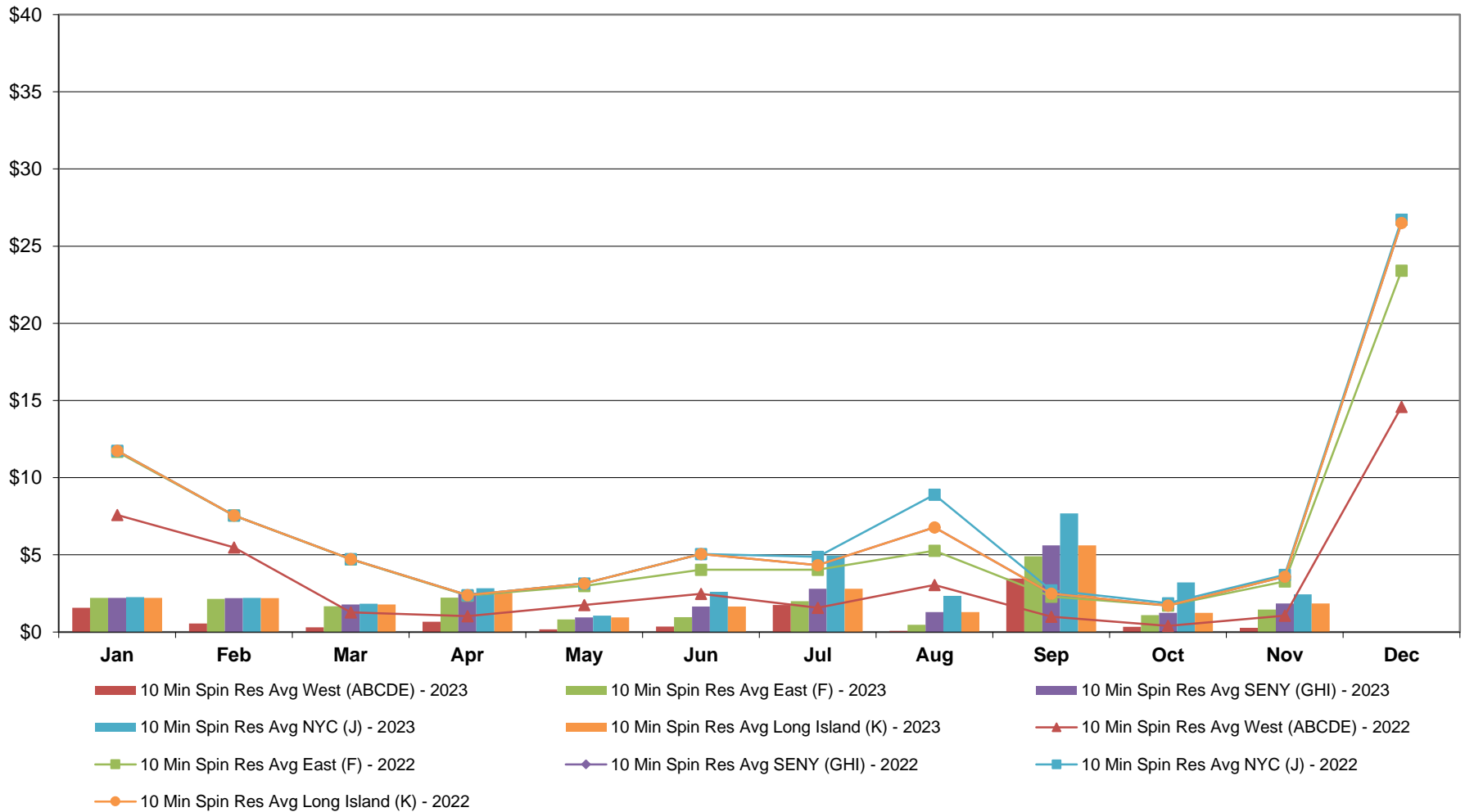
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - 30 Min Op Res 2022 - 2023**



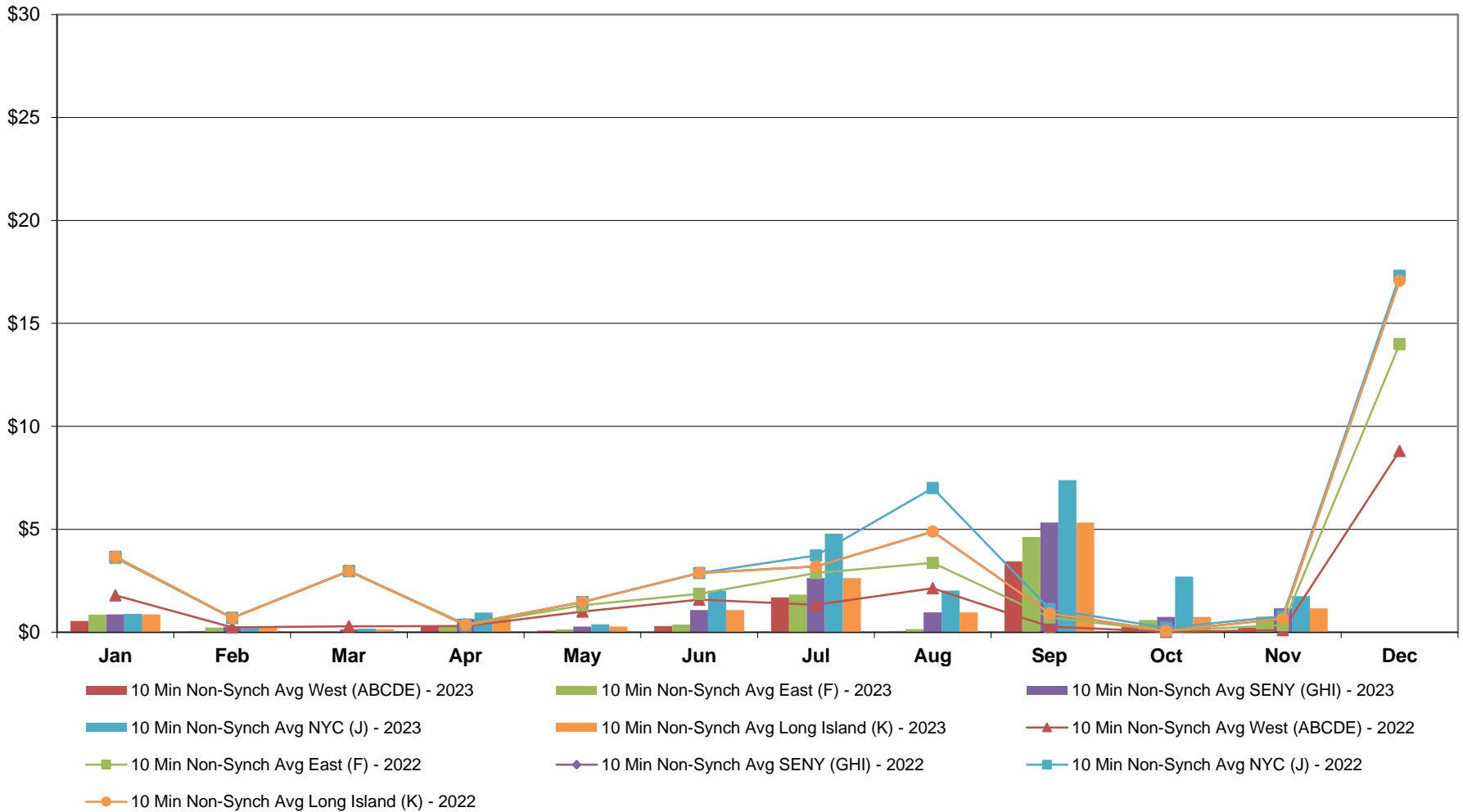
**NYISO Monthly Average Ancillary Service Prices
Day Ahead Market - Regulation 2022 - 2023**



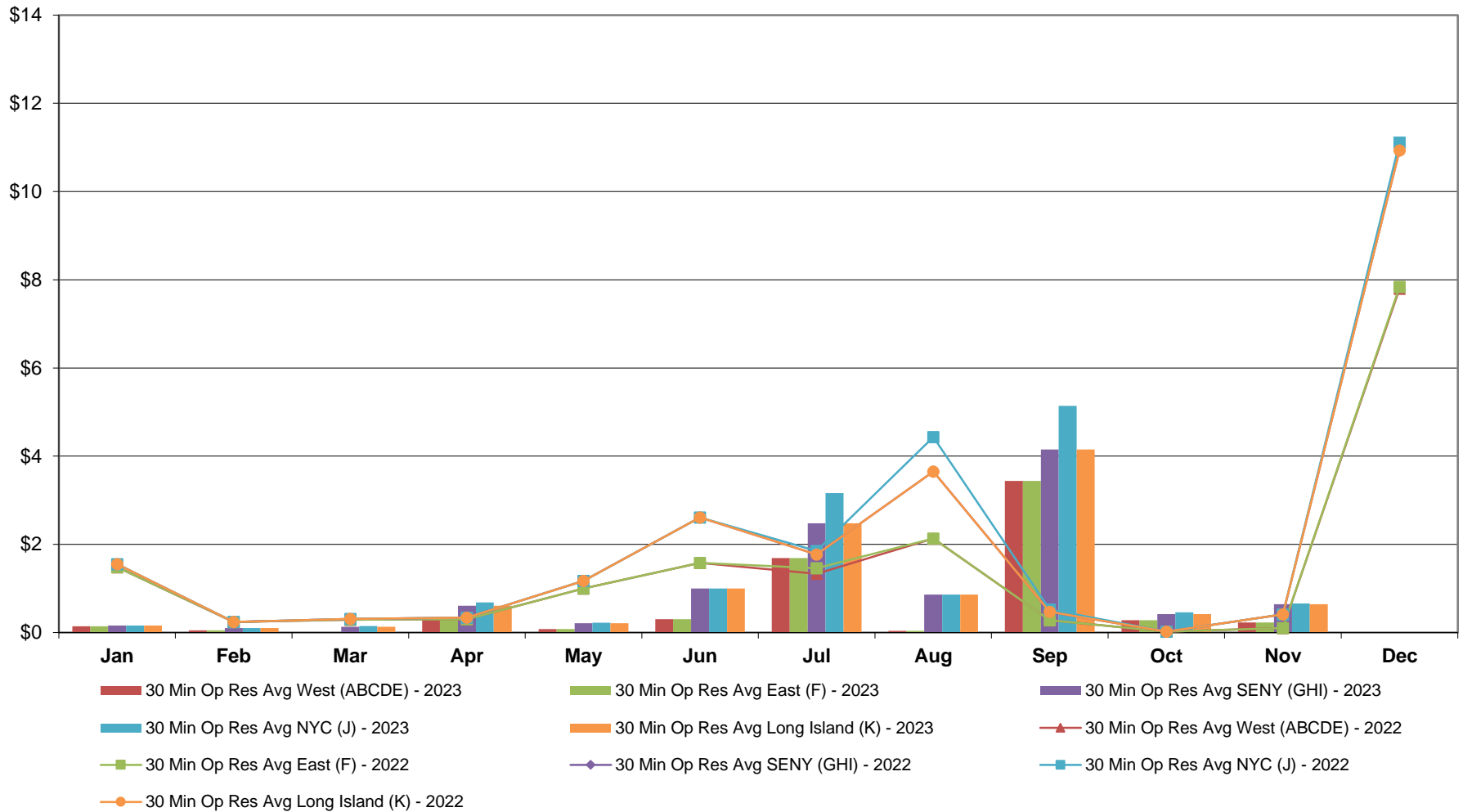
NYISO Monthly Average Ancillary Service Prices RTC Market - 10 Min Spin 2022 - 2023



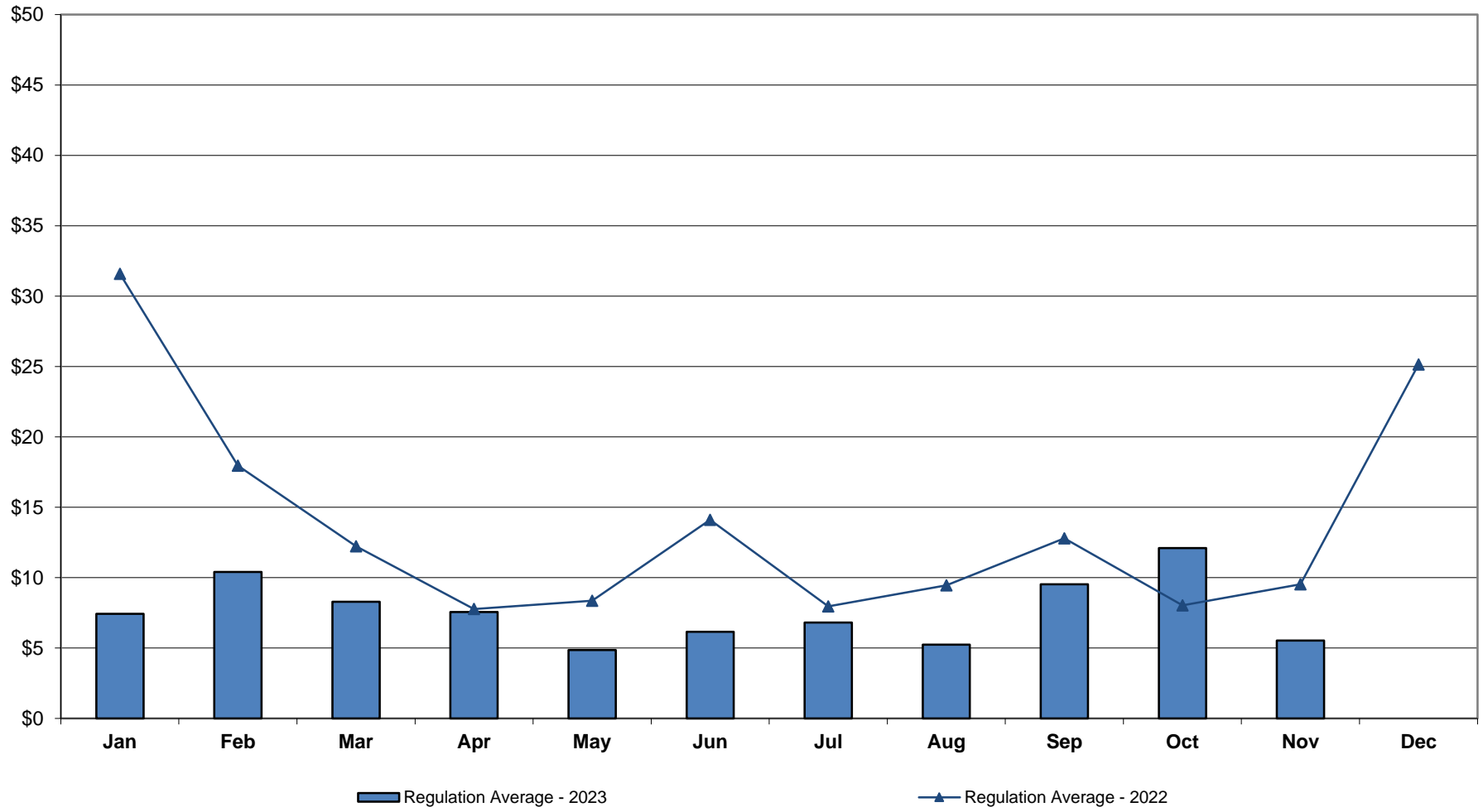
**NYISO Monthly Average Ancillary Service Prices
RTC Market - 10 Min Non-Synch 2022 - 2023**



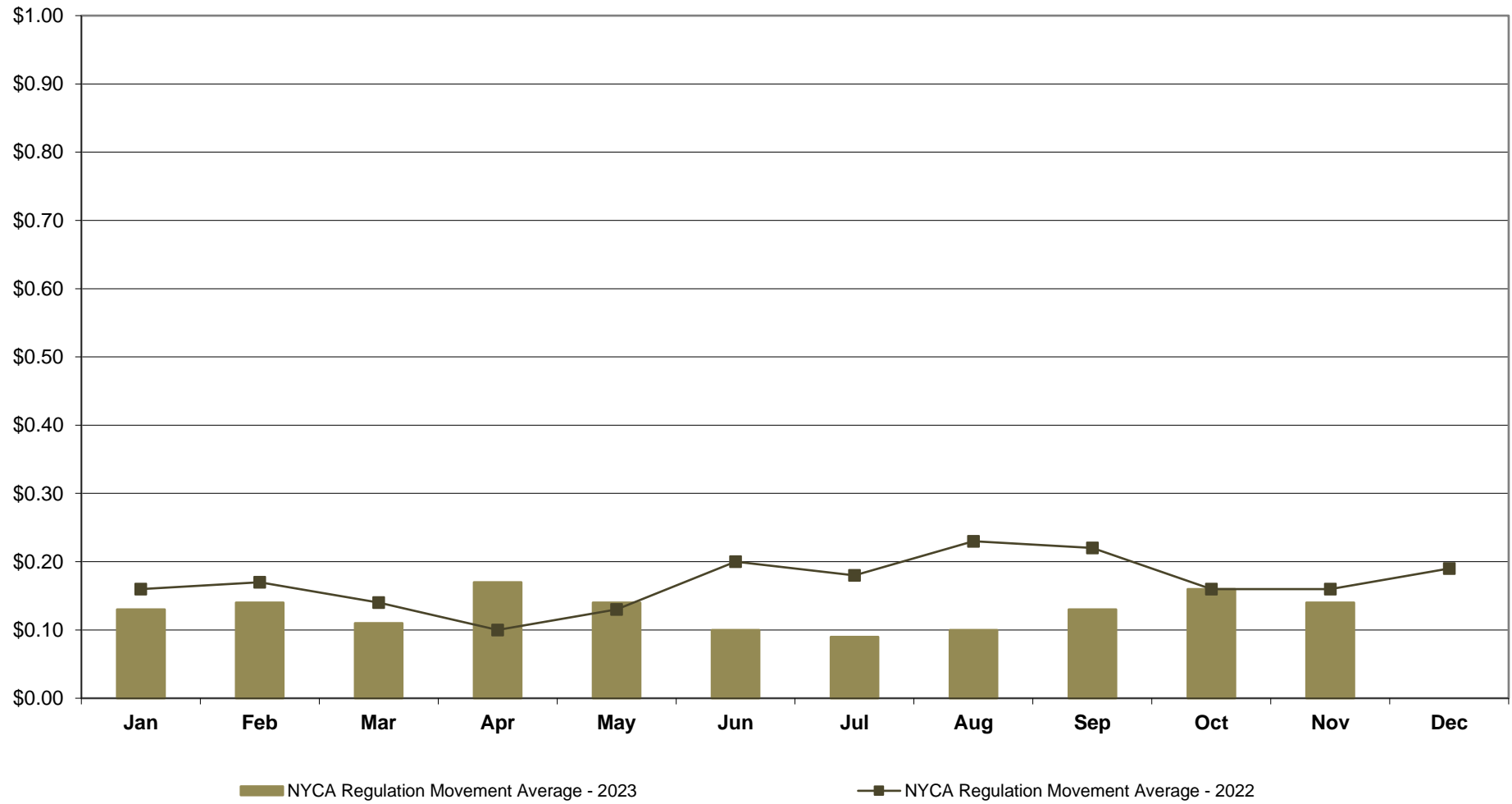
**NYISO Monthly Average Ancillary Service Prices
RTC Market - 30 Min Op Res 2022 - 2023**



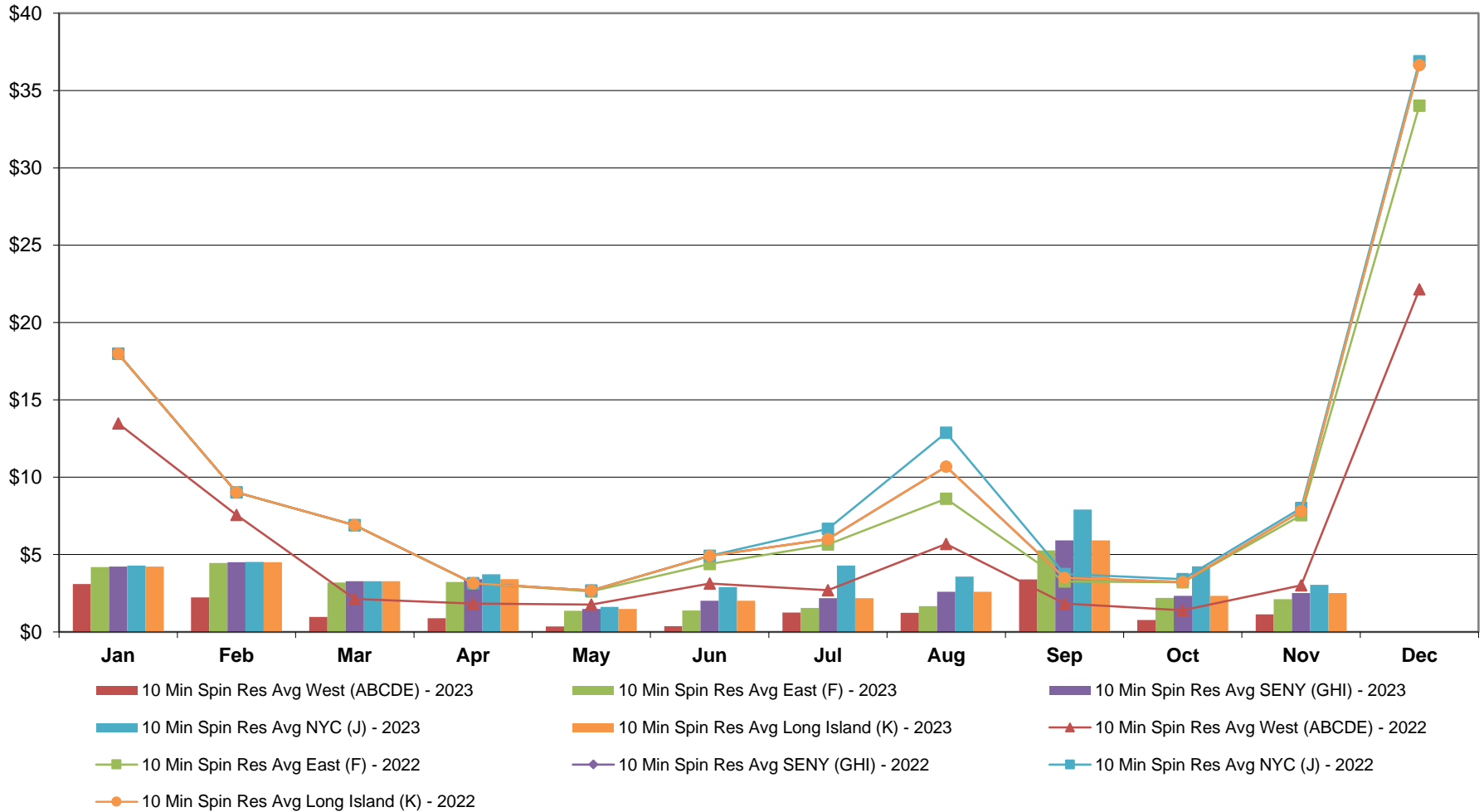
**NYISO Monthly Average Ancillary Service Prices
RTC Market - Regulation 2022 - 2023**



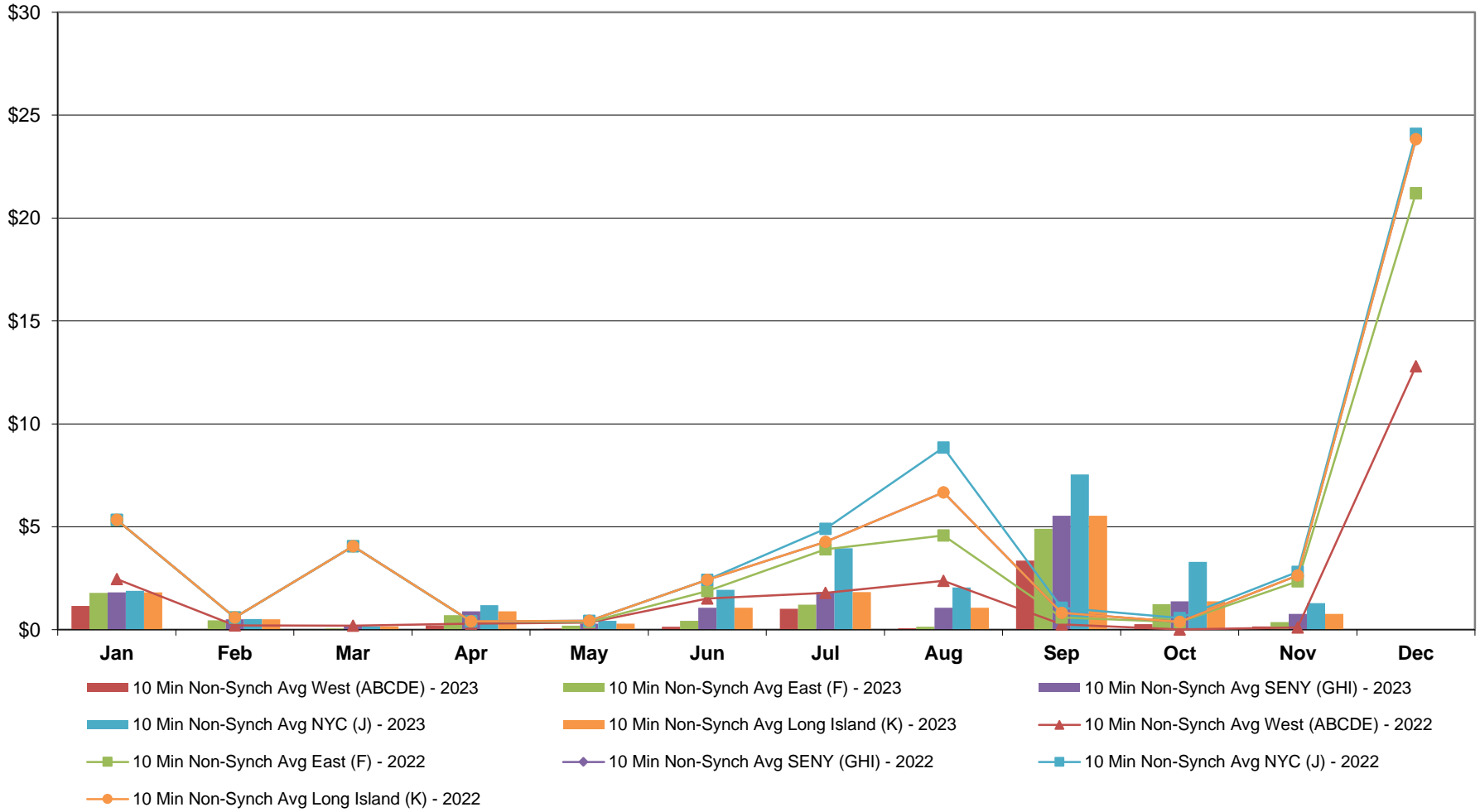
**NYISO Monthly Average Ancillary Service Prices
RTC Market - Regulation Movement 2022 - 2023**



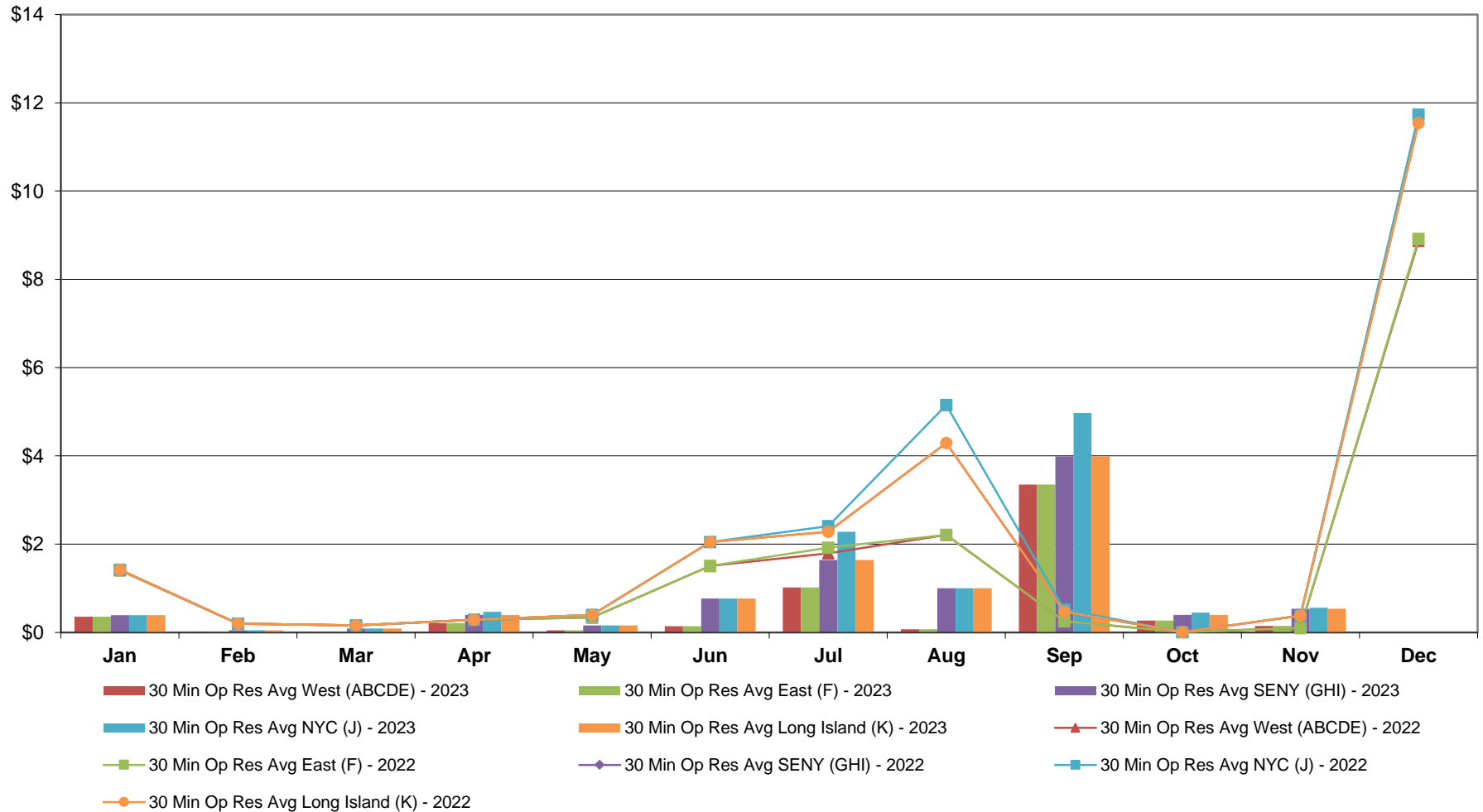
**NYISO Monthly Average Ancillary Service Prices
Real Time Market - 10 Min Spin 2022 - 2023**



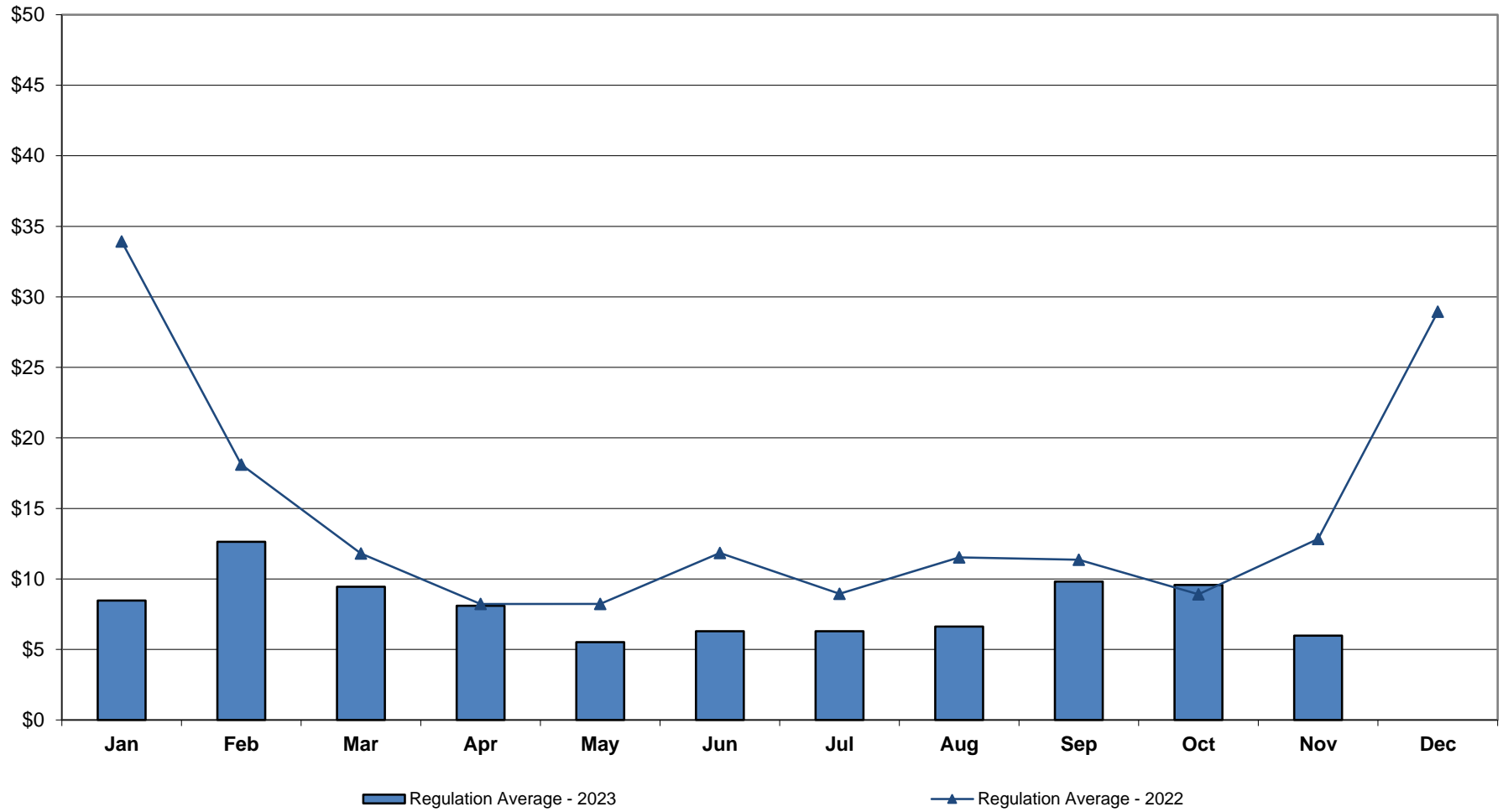
**NYISO Monthly Average Ancillary Service Prices
Real Time Market - 10 Min Non-Synch 2022 - 2023**



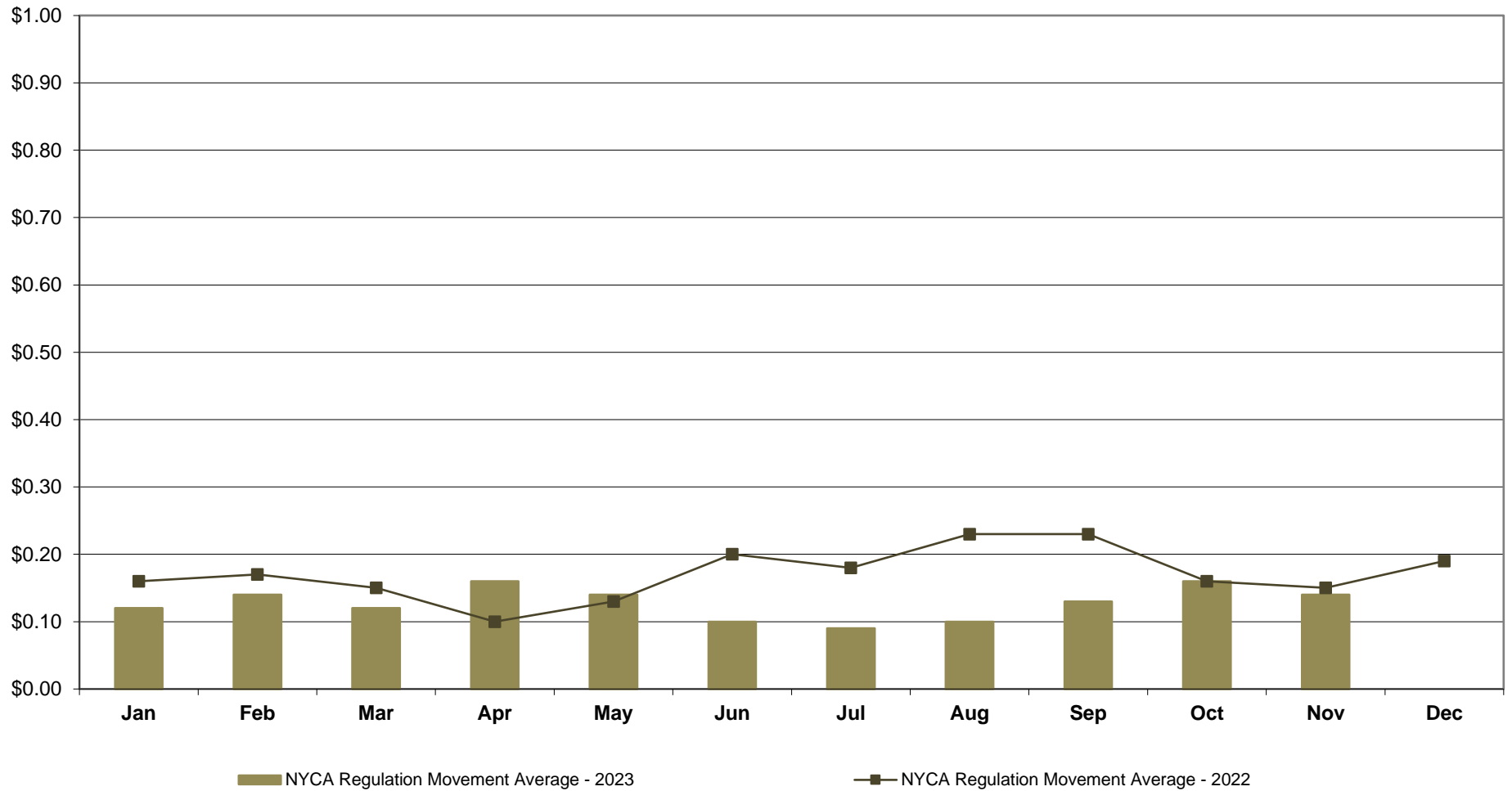
**NYISO Monthly Average Ancillary Service Prices
Real Time Market - 30 Min Op Res 2022 - 2023**



**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

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>
Day Ahead Market												
10 Min Spin Long Island (K)	6.60	8.46	7.31	7.07	5.74	5.29	6.56	4.89	4.74	5.75	5.30	
10 Min Spin NYC (J)	6.63	8.68	7.38	7.20	5.81	6.37	9.18	5.68	5.31	6.98	6.36	
10 Min Spin SENEY (GHI)	6.60	8.46	7.31	7.07	5.74	5.29	6.56	4.89	4.74	5.75	5.30	
10 Min Spin East (F)	6.56	8.06	7.07	6.73	5.30	4.87	6.25	4.70	4.72	5.62	5.16	
10 Min Spin West (ABCDE)	5.41	6.73	4.45	4.67	4.29	4.27	5.34	3.87	3.99	4.04	3.83	
10 Min Non Synch Long Island (K)	5.16	6.22	4.72	5.02	4.97	4.71	6.40	4.24	4.38	5.11	4.64	
10 Min Non Synch NYC (J)	5.18	6.44	4.79	5.15	5.04	5.79	9.03	5.03	4.96	6.35	5.70	
10 Min Non Synch SENEY (GHI)	5.16	6.22	4.72	5.02	4.97	4.71	6.40	4.24	4.38	5.11	4.64	
10 Min Non Synch East (F)	5.12	5.82	4.48	4.68	4.52	4.28	6.10	4.06	4.36	4.99	4.49	
10 Min Non Synch West (ABCDE)	5.11	5.62	4.42	4.49	4.16	4.09	5.30	3.71	3.89	3.93	3.76	
30 Min Long Island (K)	5.15	6.02	4.65	4.83	4.61	4.51	5.59	3.90	3.91	4.05	3.90	
30 Min NYC (J)	5.15	6.14	4.70	4.95	4.61	4.59	6.70	3.91	4.11	4.11	4.03	
30 Min SENEY (GHI)	5.15	6.02	4.65	4.83	4.61	4.51	5.59	3.90	3.91	4.05	3.90	
30 Min East (F)	5.11	5.62	4.42	4.49	4.16	4.09	5.28	3.71	3.89	3.93	3.76	
30 Min West (ABCDE)	5.11	5.62	4.42	4.49	4.16	4.09	5.28	3.71	3.89	3.93	3.76	
Regulation	7.82	11.71	9.65	9.88	7.36	6.37	8.66	6.79	7.24	9.80	6.99	
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>
Day Ahead Market												
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 SENEY (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 SENEY (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 SENEY (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

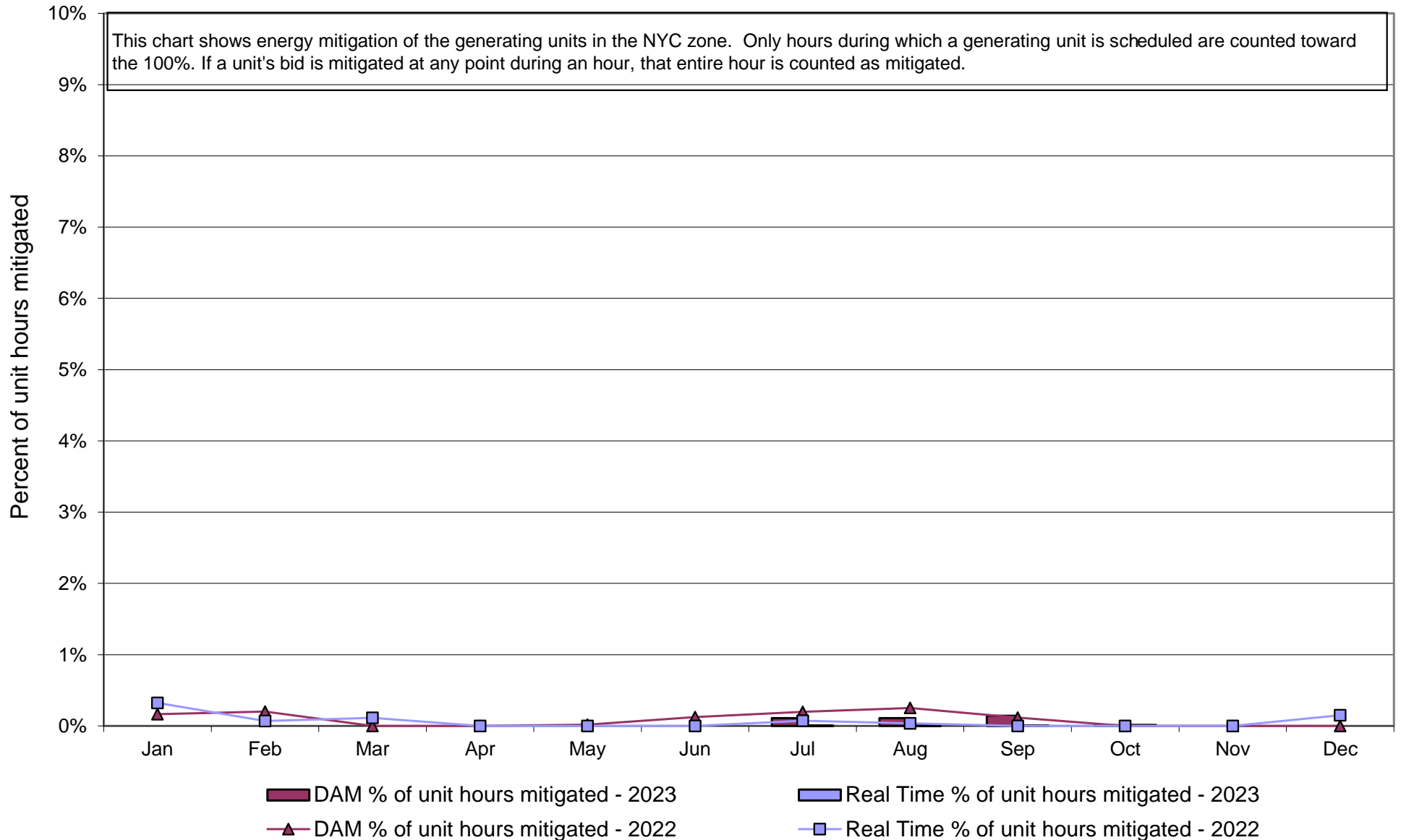
NYISO Markets Ancillary Services Statistics - Unweighted Price (\$/MWH) - RTC

<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>
RTC Market												
10 Min Spin Long Island (K)	2.22	2.19	1.79	2.55	0.95	1.66	2.80	1.29	5.62	1.25	1.86	
10 Min Spin NYC (J)	2.26	2.21	1.83	2.84	1.07	2.60	4.96	2.35	7.68	3.21	2.45	
10 Min Spin SENEY (GHI)	2.22	2.19	1.79	2.55	0.95	1.66	2.80	1.29	5.62	1.25	1.86	
10 Min Spin East (F)	2.21	2.15	1.67	2.23	0.82	0.96	2.00	0.47	4.91	1.10	1.45	
10 Min Spin West (ABCDE)	1.57	0.56	0.30	0.67	0.17	0.36	1.75	0.08	3.46	0.34	0.27	
10 Min Non Synch Long Island (K)	0.86	0.26	0.14	0.65	0.27	1.07	2.63	0.97	5.33	0.74	1.16	
10 Min Non Synch NYC (J)	0.89	0.27	0.18	0.95	0.39	2.01	4.79	2.03	7.39	2.70	1.75	
10 Min Non Synch SENEY (GHI)	0.86	0.26	0.14	0.65	0.27	1.07	2.63	0.97	5.33	0.74	1.16	
10 Min Non Synch East (F)	0.85	0.22	0.02	0.34	0.14	0.37	1.83	0.15	4.62	0.59	0.75	
10 Min Non Synch West (ABCDE)	0.54	0.05	0.00	0.29	0.08	0.30	1.69	0.04	3.44	0.28	0.23	
30 Min Long Island (K)	0.16	0.10	0.13	0.61	0.21	1.00	2.48	0.86	4.15	0.42	0.64	
30 Min NYC (J)	0.16	0.10	0.15	0.68	0.22	1.00	3.16	0.86	5.14	0.46	0.66	
30 Min SENEY (GHI)	0.16	0.10	0.13	0.61	0.21	1.00	2.48	0.86	4.15	0.42	0.64	
30 Min East (F)	0.14	0.05	0.00	0.29	0.08	0.30	1.69	0.04	3.44	0.28	0.23	
30 Min West (ABCDE)	0.14	0.05	0.00	0.29	0.08	0.30	1.69	0.04	3.44	0.28	0.23	
Regulation	7.44	10.40	8.29	7.55	4.86	6.16	6.81	5.25	9.52	12.10	5.53	
NYCA Regulation Movement	0.13	0.14	0.11	0.17	0.14	0.10	0.09	0.10	0.13	0.16	0.14	
2022												
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 SENEY (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 SENEY (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 SENEY (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

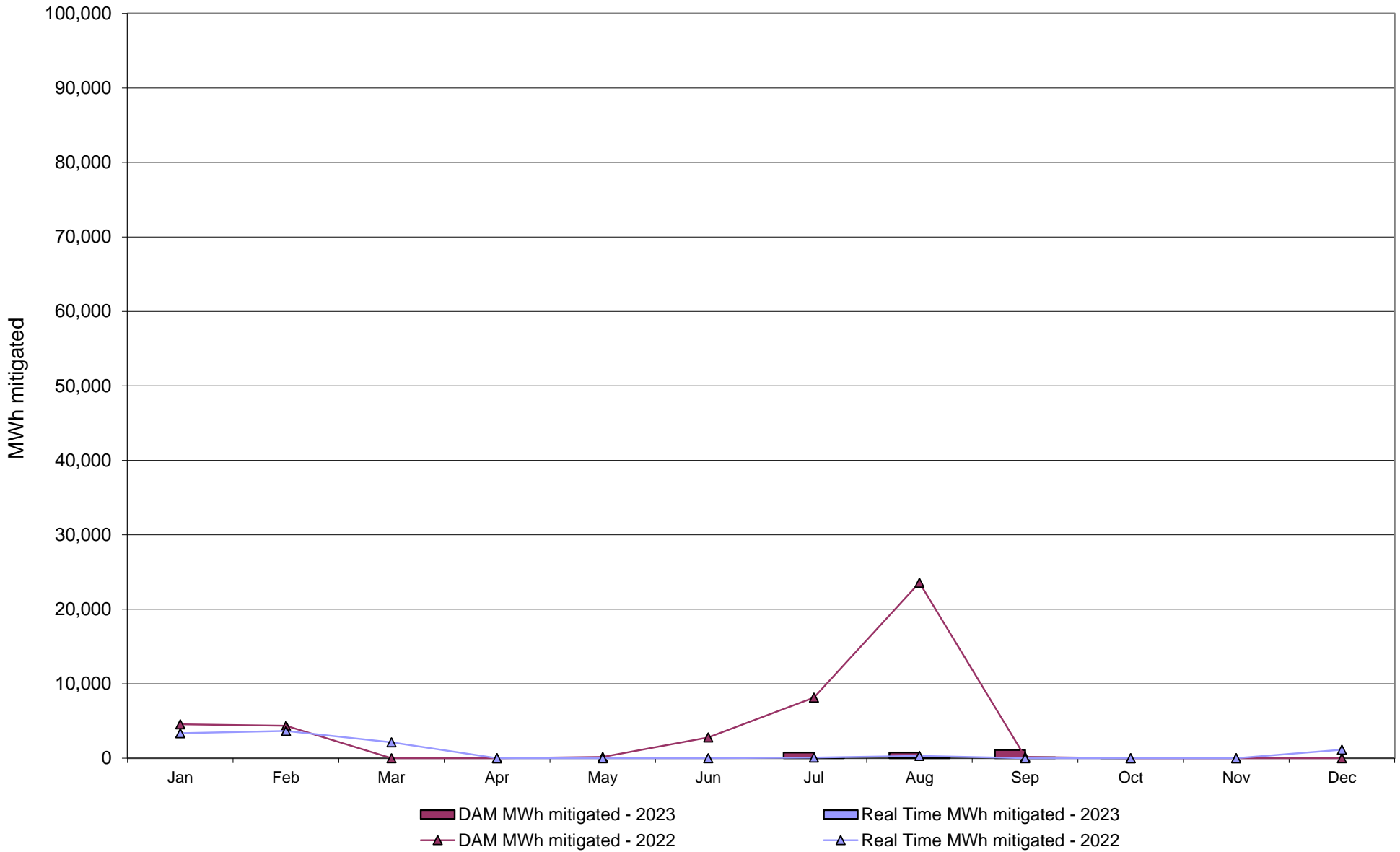
NYISO Markets Ancillary Services Statistics - Unweighted Price (\$/MWH) - RT

<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>
Real Time Market												
10 Min Spin Long Island (K)	4.22	4.51	3.28	3.42	1.48	2.02	2.18	2.60	5.92	2.33	2.51	
10 Min Spin NYC (J)	4.30	4.53	3.28	3.72	1.61	2.89	4.30	3.58	7.92	4.25	3.04	
10 Min Spin SENEY (GHI)	4.22	4.51	3.28	3.42	1.48	2.02	2.18	2.60	5.92	2.33	2.51	
10 Min Spin East (F)	4.20	4.46	3.19	3.23	1.37	1.38	1.56	1.67	5.28	2.20	2.12	
10 Min Spin West (ABCDE)	3.10	2.24	0.97	0.89	0.36	0.38	1.26	1.24	3.39	0.77	1.13	
10 Min Non Synch Long Island (K)	1.81	0.50	0.15	0.89	0.29	1.07	1.83	1.07	5.54	1.37	0.77	
10 Min Non Synch NYC (J)	1.89	0.52	0.15	1.19	0.43	1.94	3.95	2.05	7.54	3.29	1.29	
10 Min Non Synch SENEY (GHI)	1.81	0.50	0.15	0.89	0.29	1.07	1.83	1.07	5.54	1.37	0.77	
10 Min Non Synch East (F)	1.79	0.45	0.05	0.70	0.19	0.43	1.21	0.14	4.90	1.24	0.37	
10 Min Non Synch West (ABCDE)	1.15	0.01	0.00	0.21	0.05	0.14	1.02	0.07	3.35	0.27	0.15	
30 Min Long Island (K)	0.39	0.05	0.09	0.40	0.16	0.77	1.64	1.00	3.99	0.40	0.54	
30 Min NYC (J)	0.39	0.05	0.09	0.47	0.16	0.77	2.28	1.00	4.97	0.45	0.56	
30 Min SENEY (GHI)	0.39	0.05	0.09	0.40	0.16	0.77	1.64	1.00	3.99	0.40	0.54	
30 Min East (F)	0.36	0.01	0.00	0.21	0.05	0.14	1.02	0.07	3.35	0.27	0.15	
30 Min West (ABCDE)	0.36	0.01	0.00	0.21	0.05	0.14	1.02	0.07	3.35	0.27	0.15	
Regulation	8.46	12.64	9.44	8.10	5.52	6.30	6.30	6.62	9.82	9.57	5.98	
NYCA Regulation Movement	0.12	0.14	0.12	0.16	0.14	0.10	0.09	0.10	0.13	0.16	0.14	
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 SENEY (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 SENEY (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 SENEY (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

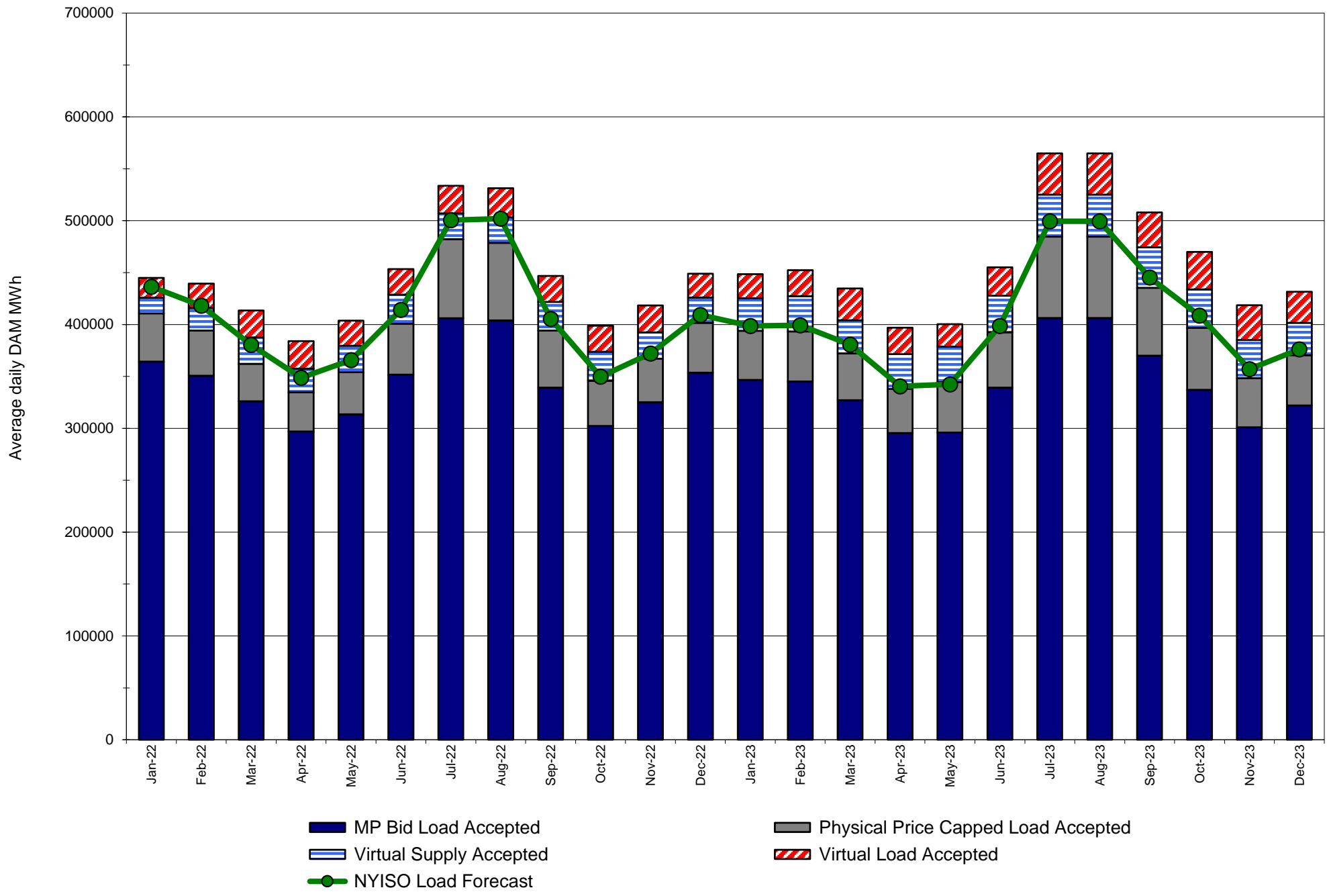
NYISO In City Energy Mitigation - AMP (NYC Zone) 2022 - 2023 Percentage of committed unit-hours mitigated



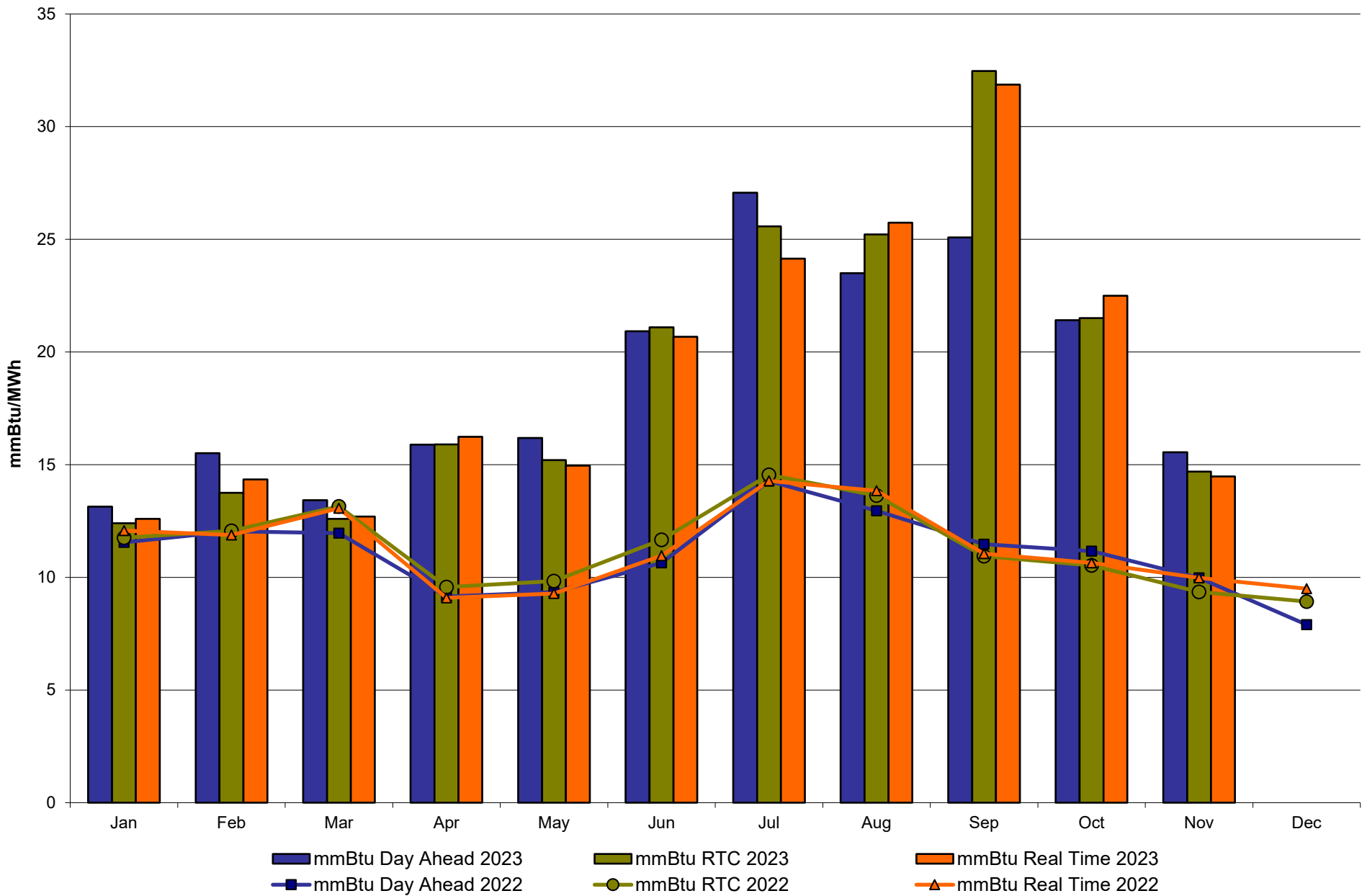
NYISO In City Energy Mitigation (NYC Zone) 2022 - 2023
Monthly megawatt hours mitigated



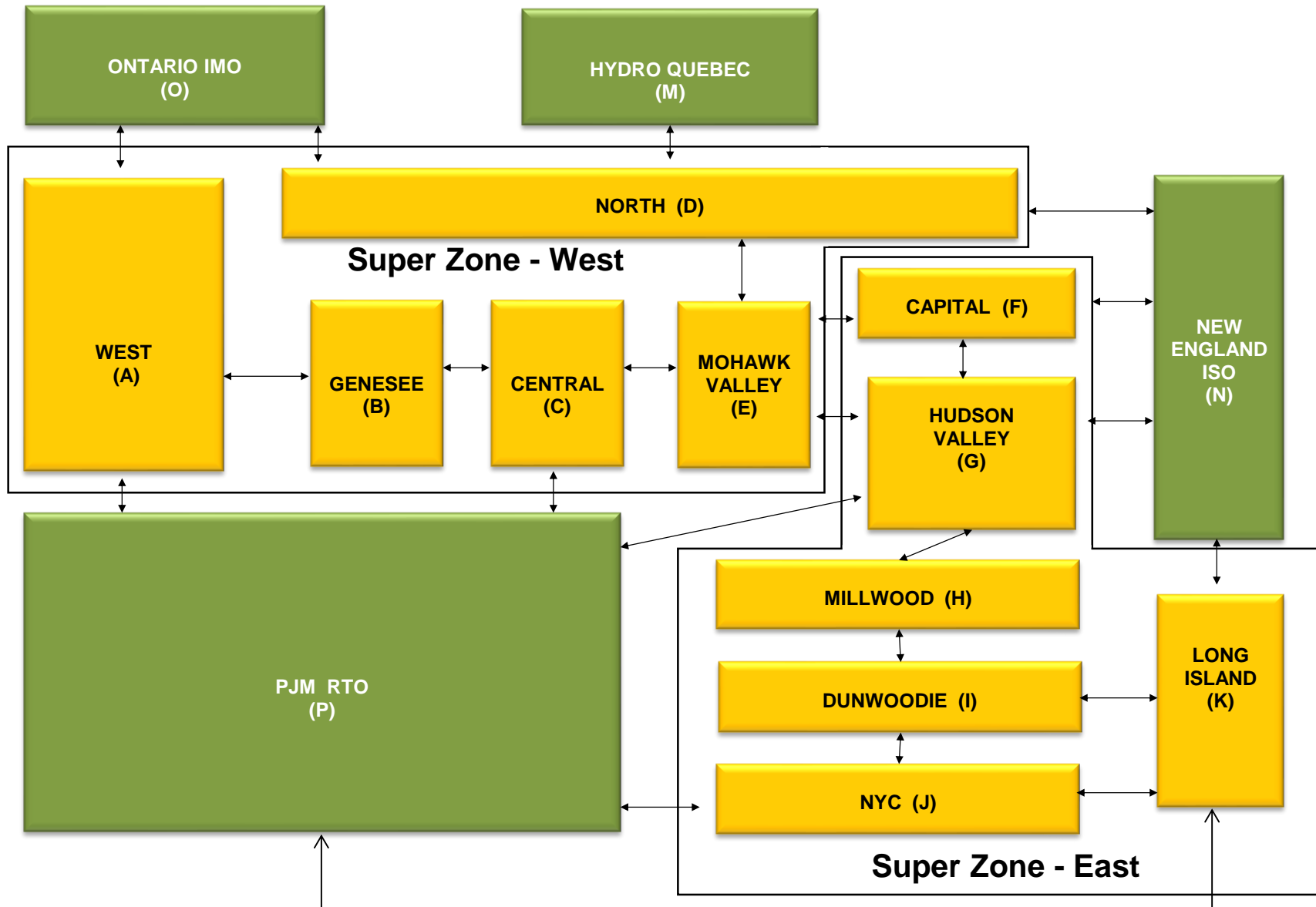
NYISO Average Daily DAM Load Bid Summary



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

Our Mission & Vision



Mission

Ensure power system reliability and competitive markets for New York in a clean energy future



Vision

Working together with stakeholders to build the cleanest, most reliable electric system in the nation