New York ISO
Independent System Operator

NYISO CEO/COO Report

Rich Dewey
President & Chief Executive Officer

Rick Gonzales
Senior Vice President & Chief Operating Officer

Management Committee Meeting:
January 27, 2021 Rensselaer, NY

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NYISO CEO/COO Report

- **CEO Report**

- **COO Report**
  - Market Performance Highlights – For Information Only
  - Operations Performance Metrics Monthly Report

New York ISO

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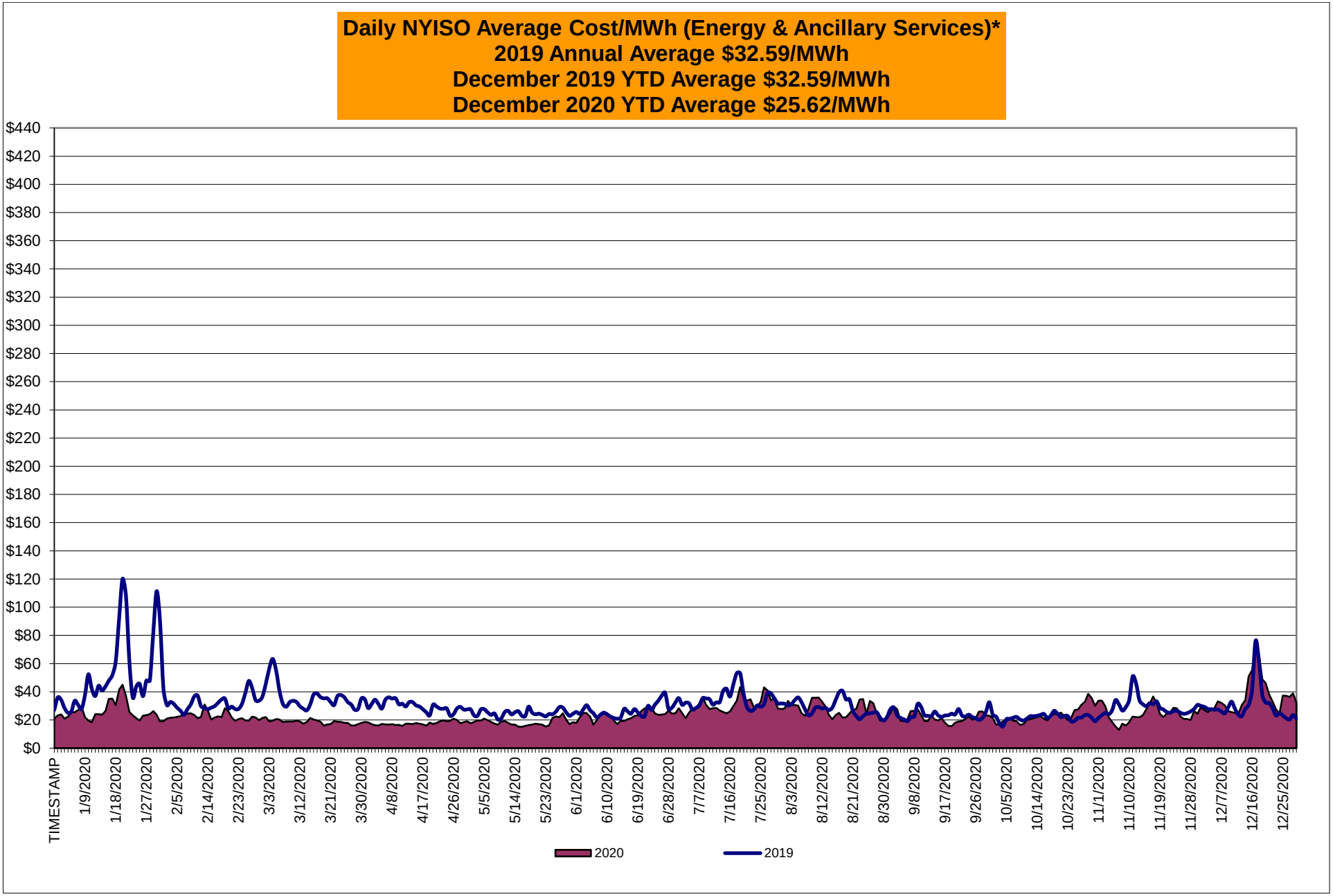
Market Performance Highlights
December 2020

- LBMP for December is $33.70/MWh; higher than $22.57/MWh in November 2020 and $29.52/MWh in December 2019.
  - Day Ahead Load Weighted LBMPs and Real Time Load Weighted LBMPs are higher compared to November.
- December 2020 average year-to-date monthly cost of $25.70/MWh is a 21% decrease from $32.59/MWh in December 2019.
- Average daily sendout is 417 GWh/day in December; higher than 377 GWh/day in November 2020 and lower than 427 GWh/day in December 2019.
- Natural gas prices and distillate prices are higher compared to the previous month.
  - Natural Gas (Transco Z6 NY) was $2.78/MMBtu, up from $1.47/MMBtu in November.
  - Natural gas prices are up 8.9% year-over-year.
  - Jet Kerosene Gulf Coast was $9.81/MMBtu, up from $8.39/MMBtu in November.
  - Ultra Low Sulfur No.2 Diesel NY Harbor was $10.33/MMBtu, up from $8.87/MMBtu in November.
  - Distillate prices are down 28.7% year-over-year.
- Uplift per MWh is lower compared to the previous month.
  - Uplift (not including NYISO cost of operations) is ($0.33)/MWh; lower than ($0.07)/MWh in November.
    - Local Reliability Share is $0.05/MWh, lower than $0.12/MWh in November.
    - Statewide Share is ($0.38)/MWh, lower than ($0.19)/MWh in November.
  - TSA $ per NYC MWh is $0.00/MWh.
  - Total uplift costs (Schedule 1 components including NYISO Cost of Operations) are lower than November.



* Excludes ICAP payments.

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

2020	January	February	March	April	May	June	July	August	September	October	November	December
LBMP	24.77	21.11	17.11	15.77	16.14	21.36	28.86	26.13	20.52	20.90	22.57	33.70
NTAC	0.91	0.70	0.86	0.91	1.05	0.95	1.24	1.03	0.78	0.84	1.05	1.35
Reserve	0.46	0.43	0.47	0.50	0.53	0.45	0.39	0.39	0.42	0.61	0.51	0.49
Regulation	0.09	0.08	0.09	0.08	0.10	0.08	0.06	0.07	0.09	0.11	0.09	0.08
NYISO Cost of Operations	0.68	0.69	0.68	0.66	0.71	0.74	0.76	0.75	0.74	0.73	0.69	0.70
FERC Fee Recovery	0.08	0.09	0.09	0.10	0.11	0.09	0.06	0.07	0.09	0.10	0.10	0.08
Uplift	(0.15)	(0.23)	(0.19)	(0.08)	0.09	(0.05)	0.07	0.17	(0.07)	(0.05)	(0.07)	(0.33)
Uplift: Local Reliability Share	0.07	0.06	0.07	0.14	0.32	0.24	0.38	0.50	0.22	0.08	0.12	0.05
Uplift: Statewide Share	(0.22)	(0.29)	(0.26)	(0.21)	(0.23)	(0.29)	(0.31)	(0.33)	(0.28)	(0.13)	(0.19)	(0.38)
Voltage Support and Black Start	0.44	0.44	0.44	0.43	0.45	0.45	0.46	0.46	0.45	0.45	0.44	0.45
Avg Monthly Cost	27.29	23.32	19.55	18.38	19.16	24.09	31.91	29.07	23.03	23.70	25.40	36.52
Avg YTD Cost	27.29	25.40	23.48	22.38	21.82	22.21	24.11	24.88	24.69	24.62	24.68	25.70
TSA $ per NYC MWh	0.00	0.00	0.00	0.00	0.00	0.04	0.18	0.54	0.00	0.00	0.00	0.00

2019	January	February	March	April	May	June	July	August	September	October	November	December
LBMP	50.93	33.51	34.91	28.01	23.10	24.43	33.18	27.83	22.22	20.84	27.39	29.52
NTAC	0.51	0.69	0.98	1.16	0.72	1.08	1.01	0.98	0.48	0.57	0.88	0.77
Reserve	0.54	0.51	0.55	0.63	0.63	0.50	0.44	0.49	0.50	0.62	0.50	0.44
Regulation	0.13	0.11	0.10	0.33	0.13	0.09	0.07	0.09	0.09	0.13	0.11	0.10
NYISO Cost of Operations	0.68	0.68	0.69	0.69	0.68	0.69	0.70	0.70	0.69	0.67	0.67	0.67
FERC Fee Recovery	0.08	0.09	0.09	0.10	0.10	0.08	0.06	0.07	0.09	0.09	0.09	0.08
Uplift	(0.25)	(0.44)	(0.33)	(0.15)	0.13	0.07	(0.06)	(0.20)	(0.13)	(0.09)	(0.13)	(0.19)
Uplift: Local Reliability Share	0.32	0.11	0.31	0.20	0.23	0.19	0.44	0.25	0.17	0.11	0.19	0.17
Uplift: Statewide Share	(0.57)	(0.55)	(0.64)	(0.35)	(0.11)	(0.12)	(0.50)	(0.45)	(0.30)	(0.20)	(0.31)	(0.35)
Voltage Support and Black Start	0.37	0.37	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.37	0.37	0.36
Avg Monthly Cost	52.99	35.51	37.38	31.16	25.88	27.32	35.78	30.33	24.32	23.21	29.89	31.76
Avg YTD Cost	52.99	44.93	42.54	40.12	37.57	35.76	35.75	34.96	33.88	32.94	32.69	32.59
TSA $ per NYC MWh	0.00	0.00	0.01	0.01	0.19	0.77	1.00	0.33	0.43	0.00	0.00	0.00

* Excludes ICAP payments.
Market Mitigation and Analysis
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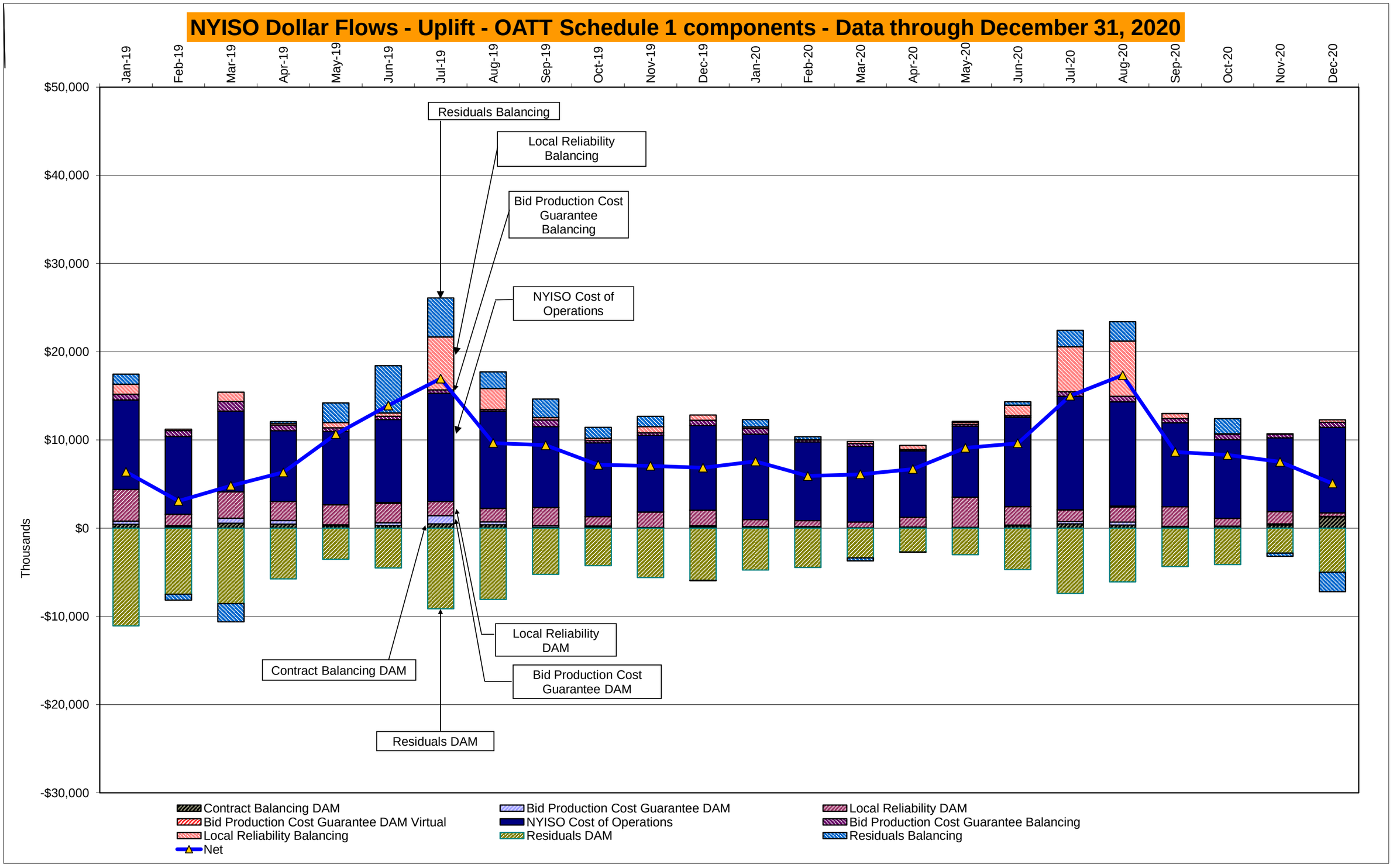
As of Jan. 2016, the annual FERC fee is recovered separately from Cost of Ops.



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

2020	January	February	March	April	May	June	July	August	September	October	November	December
Day Ahead Market MWh	14,194,609	13,172,669	12,495,999	11,372,390	11,462,320	13,825,178	16,629,337	15,671,629	13,122,542	12,338,638	12,157,281	13,748,181
DAM LSE Internal LBMP Energy Sales	56%	56%	59%	54%	55%	58%	65%	63%	60%	56%	57%	59%
DAM External TC LBMP Energy Sales	6%	5%	5%	7%	4%	3%	2%	4%	4%	5%	5%	5%
DAM Bilateral - Internal Bilaterals	30%	30%	27%	30%	31%	29%	26%	27%	30%	32%	33%	31%
DAM Bilateral - Importl/Non-LBMP Market Bilaterals	5%	5%	6%	6%	6%	5%	3%	3%	2%	3%	3%	2%
DAM Bilateral - Export/Non-LBMP Market Bilaterals	2%	2%	2%	2%	2%	2%	1%	2%	2%	2%	2%	2%
DAM Bilateral - Wheel Through Bilaterals	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%	0%	2%
Balancing Energy Market MWh	-26,753	-142,168	144,076	22,599	-137,565	-180,149	403,914	212,307	-173,115	-89,451	-54,598	156,891
Balancing Energy LSE Internal LBMP Energy Sales	-1080%	-221%	-85%	-884%	-187%	-134%	85%	99%	-95%	-220%	-459%	-12%
Balancing Energy External TC LBMP Energy Sales	1156%	181%	240%	1233%	137%	99%	35%	43%	104%	187%	382%	107%
Balancing Energy Bilateral - Internal Bilaterals	62%	5%	12%	55%	12%	7%	2%	1%	0%	4%	3%	7%
Balancing Energy Bilateral - Importl/Non-LBMP Market Bilaterals	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	9%	6%
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	127%	16%	18%	92%	12%	5%	2%	4%	7%	17%	33%	11%
Balancing Energy Bilateral - Wheel Through Bilaterals	-365%	-81%	-85%	-396%	-74%	-77%	-24%	-46%	-116%	-107%	-69%	-19%
Transactions Summary												
LBMP	62%	62%	65%	61%	59%	62%	68%	67%	64%	61%	62%	64%
Internal Bilaterals	31%	31%	27%	30%	32%	30%	26%	27%	31%	32%	33%	31%
Import Bilaterals	5%	5%	6%	6%	6%	5%	3%	3%	2%	3%	3%	2%
Export Bilaterals	2%	2%	2%	2%	2%	2%	1%	2%	2%	2%	2%	2%
Wheels Through	0%	1%	0%	0%	0%	1%	1%	1%	1%	2%	0%	2%
Market Share of Total Load												
Day Ahead Market	100.2%	101.1%	98.9%	99.8%	101.2%	101.3%	97.6%	98.7%	101.3%	100.7%	100.5%	98.9%
Balancing Energy +	-0.2%	-1.1%	1.1%	0.2%	-1.2%	-1.3%	2.4%	1.3%	-1.3%	-0.7%	-0.5%	1.1%
Total MWH	14,167,856	13,030,501	12,640,075	11,394,989	11,324,755	13,645,029	17,033,251	15,883,935	12,949,426	12,249,187	12,102,682	13,905,071
Average Daily Energy Sendout/Month GWh	423	417	375	344	345	430	530	489	408	367	377	417

2019	January	February	March	April	May	June	July	August	September	October	November	December
Day Ahead Market MWh	15,299,458	13,391,383	13,527,834	11,811,029	12,521,583	13,723,372	17,416,589	16,379,968	13,588,715	12,567,821	13,036,152	14,345,711
DAM LSE Internal LBMP Energy Sales	57%	57%	59%	59%	57%	58%	64%	63%	58%	57%	54%	56%
DAM External TC LBMP Energy Sales	6%	5%	3%	1%	3%	3%	3%	3%	3%	4%	6%	6%
DAM Bilateral - Internal Bilaterals	29%	30%	30%	31%	32%	29%	26%	26%	30%	32%	32%	30%
DAM Bilateral - Importl/Non-LBMP Market Bilaterals	5%	5%	5%	5%	6%	5%	4%	4%	5%	5%	5%	5%
DAM Bilateral - Export/Non-LBMP Market Bilaterals	1%	1%	2%	2%	2%	2%	1%	1%	2%	2%	2%	2%
DAM Bilateral - Wheel Through Bilaterals	2%	2%	2%	2%	1%	2%	2%	2%	2%	1%	1%	1%
Balancing Energy Market MWh	-322,442	-323,188	-261,217	-218,482	-392,699	-102,044	103,628	-514,102	-247,267	-112,057	-17,421	46,828
Balancing Energy LSE Internal LBMP Energy Sales	-120%	-126%	-138%	-178%	-150%	-264%	-2%	-119%	-163%	-346%	-1332%	-480%
Balancing Energy External TC LBMP Energy Sales	65%	67%	82%	113%	68%	233%	199%	41%	93%	266%	1435%	699%
Balancing Energy Bilateral - Internal Bilaterals	-4%	-1%	-3%	2%	1%	0%	5%	0%	-4%	6%	103%	39%
Balancing Energy Bilateral - Importl/Non-LBMP Market Bilaterals	0%	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%	0%
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	3%	7%	6%	7%	2%	8%	8%	1%	6%	25%	170%	70%
Balancing Energy Bilateral - Wheel Through Bilaterals	-45%	-47%	-47%	-44%	-21%	-77%	-125%	-23%	-31%	-52%	-476%	-229%
Transactions Summary												
LBMP	63%	62%	61%	60%	59%	62%	68%	65%	61%	61%	60%	63%
Internal Bilaterals	29%	30%	30%	31%	33%	30%	25%	27%	30%	32%	32%	30%
Import Bilaterals	5%	5%	6%	6%	6%	5%	4%	5%	5%	5%	5%	5%
Export Bilaterals	1%	2%	2%	2%	2%	2%	1%	1%	2%	2%	2%	2%
Wheels Through	1%	1%	1%	1%	0%	1%	1%	1%	2%	0%	0%	0%
Market Share of Total Load												
Day Ahead Market	102.2%	102.5%	102.0%	101.9%	103.2%	100.7%	99.4%	103.2%	101.9%	100.9%	100.1%	99.7%
Balancing Energy +	-2.2%	-2.5%	-2.0%	-1.9%	-3.2%	-0.7%	0.6%	-3.2%	-1.9%	-0.9%	-0.1%	0.3%
Total MWH	14,977,016	13,068,195	13,266,617	11,592,547	12,128,884	13,621,328	17,520,217	15,865,866	13,341,448	12,455,764	13,018,731	14,392,539
Average Daily Energy Sendout/Month GWh	449	436	411	371	373	429	539	487	419	377	401	427

+ 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.

Market Mitigation and Analysis
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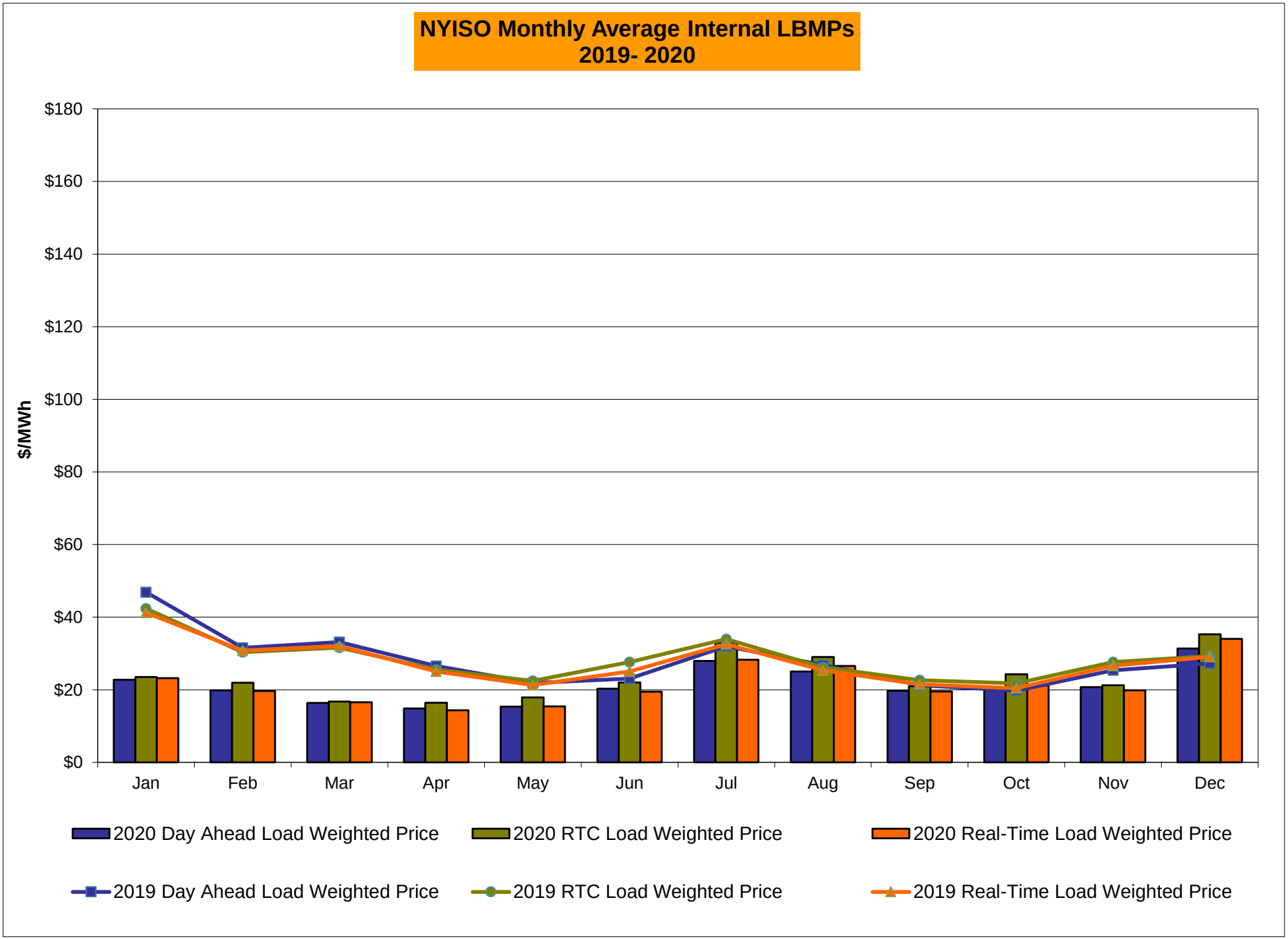
NYISO Markets 2020 Energy Statistics

	January	February	March	April	May	June	July	August	September	October	November	December
DAY AHEAD LBMP												
Price *	$22.11	$19.48	$16.07	$14.67	$14.97	$19.15	$26.30	$23.61	$18.88	$19.40	$20.07	$30.45
Standard Deviation	$7.43	$4.45	$3.21	$2.71	$3.55	$6.40	$10.45	$8.56	$5.41	$6.36	$7.15	$12.35
Load Weighted Price **	$22.77	$19.84	$16.36	$14.86	$15.37	$20.28	$27.94	$25.01	$19.72	$19.91	$20.75	$31.36
RTC LBMP												
Price *	$22.86	$21.48	$16.48	$16.23	$17.46	$20.84	$30.70	$26.86	$19.90	$23.35	$20.39	$34.01
Standard Deviation	$9.33	$53.30	$4.84	$5.17	$8.61	$11.26	$17.92	$17.17	$11.37	$14.44	$14.19	$25.41
Load Weighted Price **	$23.50	$21.94	$16.74	$16.44	$17.89	$22.01	$32.92	$29.01	$20.99	$24.25	$21.23	$35.28
REAL TIME LBMP												
Price *	$22.53	$19.29	$16.24	$14.14	$14.90	$18.35	$26.56	$24.68	$18.63	$20.44	$18.96	$32.72
Standard Deviation	$11.90	$8.68	$7.48	$6.98	$8.35	$9.33	$16.45	$13.95	$7.15	$12.01	$12.66	$24.29
Load Weighted Price **	$23.20	$19.68	$16.58	$14.35	$15.42	$19.46	$28.27	$26.53	$19.54	$21.15	$19.84	$34.04
Average Daily Energy Sendout/Month GWh	423	417	375	344	345	430	530	489	408	367	377	417

NYISO Markets 2019 Energy Statistics

	January	February	March	April	May	June	July	August	September	October	November	December
DAY AHEAD LBMP												
Price *	$45.01	$30.66	$32.34	$25.97	$21.16	$21.79	$30.16	$25.35	$20.45	$19.18	$24.65	$26.29
Standard Deviation	$25.67	$12.86	$9.30	$6.32	$5.89	$7.28	$12.06	$8.73	$5.57	$5.09	$7.73	$11.81
Load Weighted Price **	$46.88	$31.53	$33.14	$26.57	$21.89	$23.04	$31.98	$26.83	$21.23	$19.77	$25.36	$27.22
RTC LBMP												
Price *	$40.86	$29.74	$31.04	$25.07	$21.88	$25.67	$32.23	$24.92	$21.70	$20.92	$26.82	$28.17
Standard Deviation	$23.02	$10.79	$8.48	$7.53	$8.01	$23.45	$21.96	$14.96	$9.22	$13.95	$10.37	$16.26
Load Weighted Price **	$42.39	$30.32	$31.62	$25.54	$22.44	$27.64	$33.92	$26.14	$22.60	$21.76	$27.64	$29.24
REAL TIME LBMP												
Price *	$39.54	$30.13	$31.46	$24.47	$20.56	$23.30	$30.77	$24.01	$20.49	$19.53	$25.82	$27.81
Standard Deviation	$26.03	$13.77	$12.54	$17.27	$10.35	$17.49	$20.63	$12.36	$9.62	$12.02	$11.60	$19.64
Load Weighted Price **	$41.24	$30.80	$32.06	$25.06	$21.28	$25.05	$32.53	$25.34	$21.50	$20.43	$26.64	$29.05
Average Daily Energy Sendout/Month GWh	449	436	411	371	373	429	539	487	419	377	401	427

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


NYISO Monthly Average Internal LBMPs
2019- 2020
$/MWh
$180
$160
$140
$120
$100
$80
$60
$40
$20
$0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
2020 Day Ahead Load Weighted Price
2020 RTC Load Weighted Price
2020 Real-Time Load Weighted Price
2019 Day Ahead Load Weighted Price
2019 RTC Load Weighted Price
2019 Real-Time Load Weighted Price

December 2020 Zonal LBMP Statistics for NYISO ($/MWh)

	WEST Zone A	GENESEE Zone B	NORTH Zone D	CENTRAL Zone C	MOHAWK VALLEY Zone E	CAPITAL Zone F	HUDSON VALLEY Zone G	MILLWOOD Zone H	DUNWOODIE Zone I	NEW YORK CITY Zone J	LONG ISLAND Zone K
DAY AHEAD LBMP											
Unweighted Price *	19.15	18.75	15.39	19.69	20.13	37.51	32.70	33.08	33.01	33.09	48.55
Standard Deviation	8.21	8.32	9.04	8.61	8.98	16.14	13.17	13.32	13.23	13.26	21.79
RTC LBMP											
Unweighted Price *	23.17	21.48	19.27	22.66	23.56	40.12	35.47	35.84	35.74	35.78	55.69
Standard Deviation	26.89	21.27	22.92	22.03	22.97	28.06	24.72	24.93	24.86	25.01	64.61
REAL TIME LBMP											
Unweighted Price *	21.49	21.10	18.49	22.11	23.02	40.25	35.43	35.80	35.70	35.69	49.70
Standard Deviation	20.74	21.35	24.21	21.73	22.97	30.71	26.21	26.47	26.36	26.56	38.11

	ONTARIO IESO Zone O	HYDRO QUEBEC (Wheel) Zone M	HYDRO QUEBEC (Import/Export) Zone M	PJM Zone P	NEW ENGLAND Zone N	CROSS SOUND CABLE Controllable Line	NORTHPORT-NORWALK Controllable Line	NEPTUNE Controllable Line	LINDEN VFT Controllable Line	HUDSON Controllable Line	Dennison Controllable Line
DAY AHEAD LBMP											
Unweighted Price *	18.19	16.29	16.29	18.19	36.41	26.29	48.77	42.34	15.09	32.94	47.88
Standard Deviation	7.89	8.37	8.37	7.89	15.27	10.34	22.02	18.39	8.83	13.15	21.73
RTC LBMP											
Unweighted Price *	18.95	18.48	18.48	18.95	40.65	28.66	56.63	49.04	20.12	35.10	52.86
Standard Deviation	14.77	18.57	18.57	14.77	23.86	18.19	65.66	51.65	29.01	21.87	59.72
REAL TIME LBMP											
Unweighted Price *	19.88	17.72	17.72	19.88	38.96	28.29	50.73	44.54	19.10	34.05	47.56
Standard Deviation	19.88	21.31	21.31	19.88	25.99	19.67	40.08	32.61	30.33	30.40	35.14

* Straight LBMP averages

Market Mitigation and Analysis
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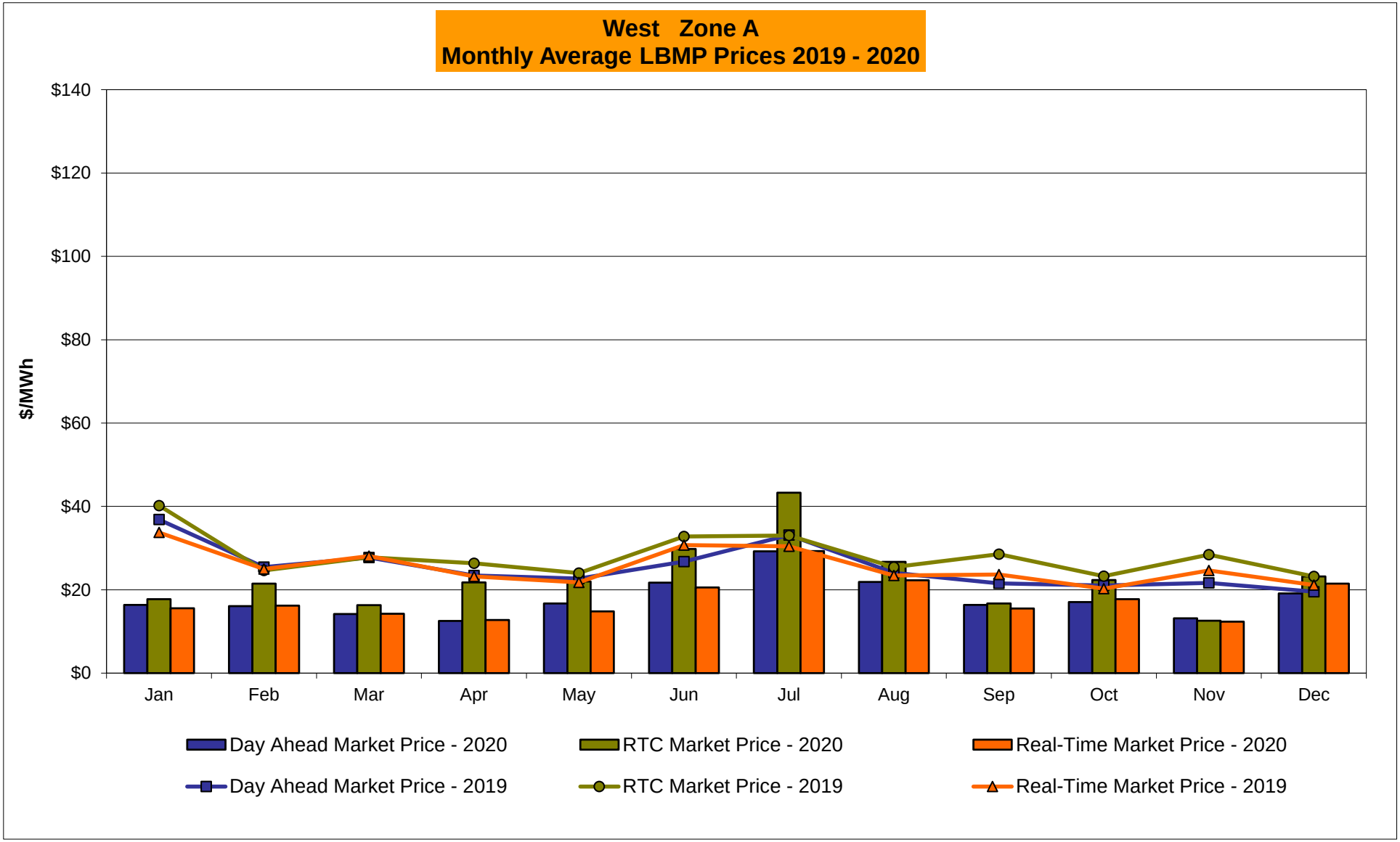
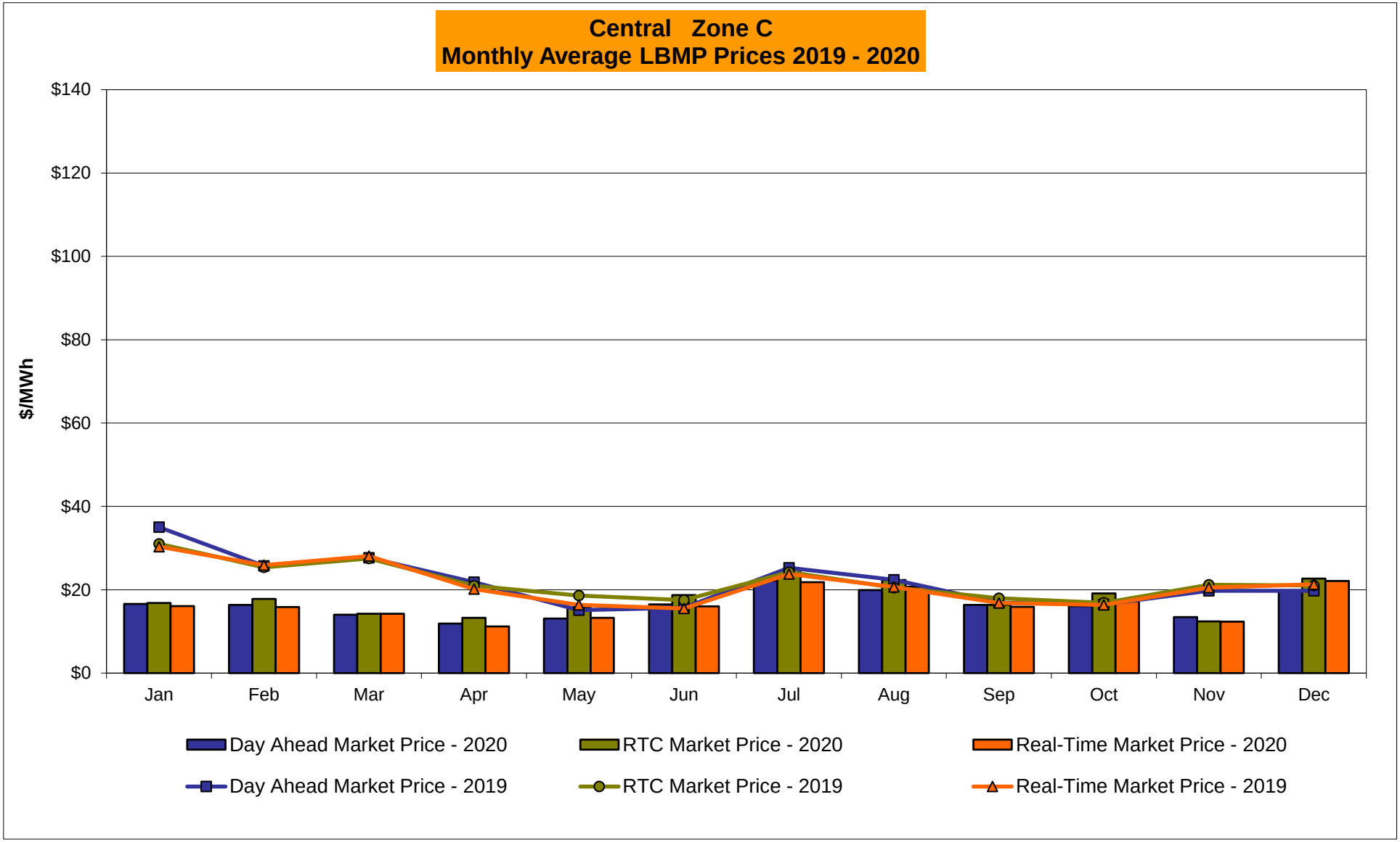
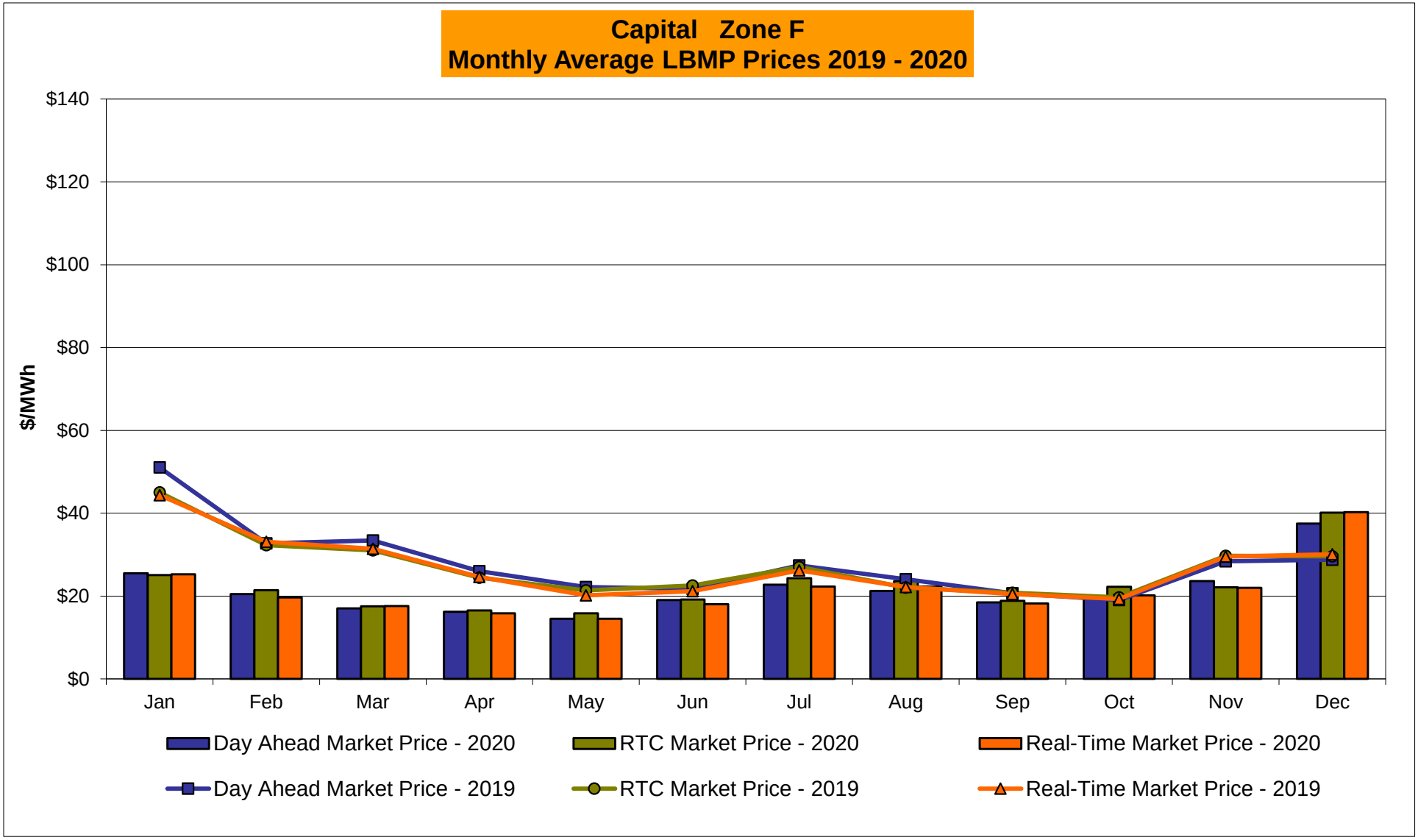
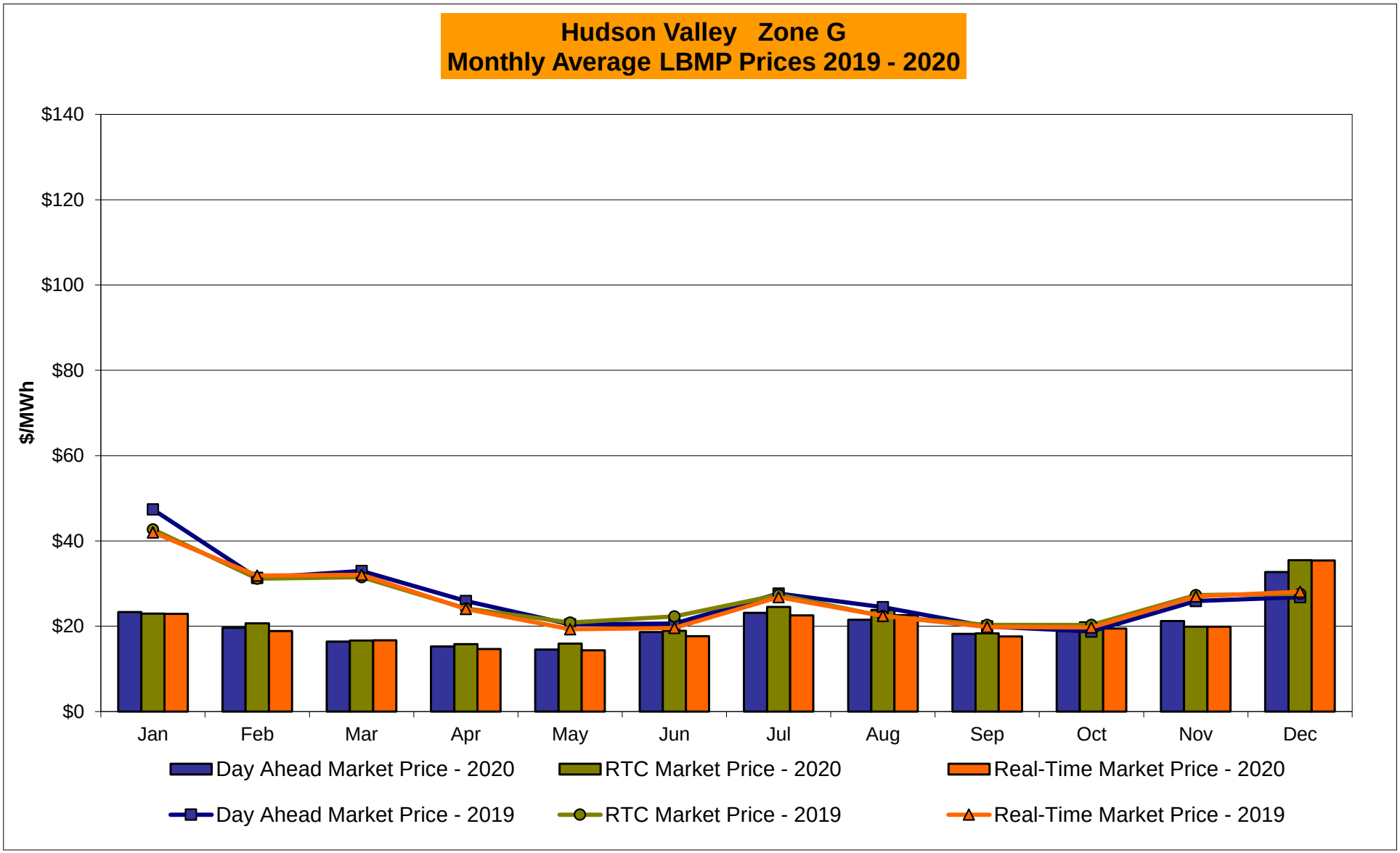
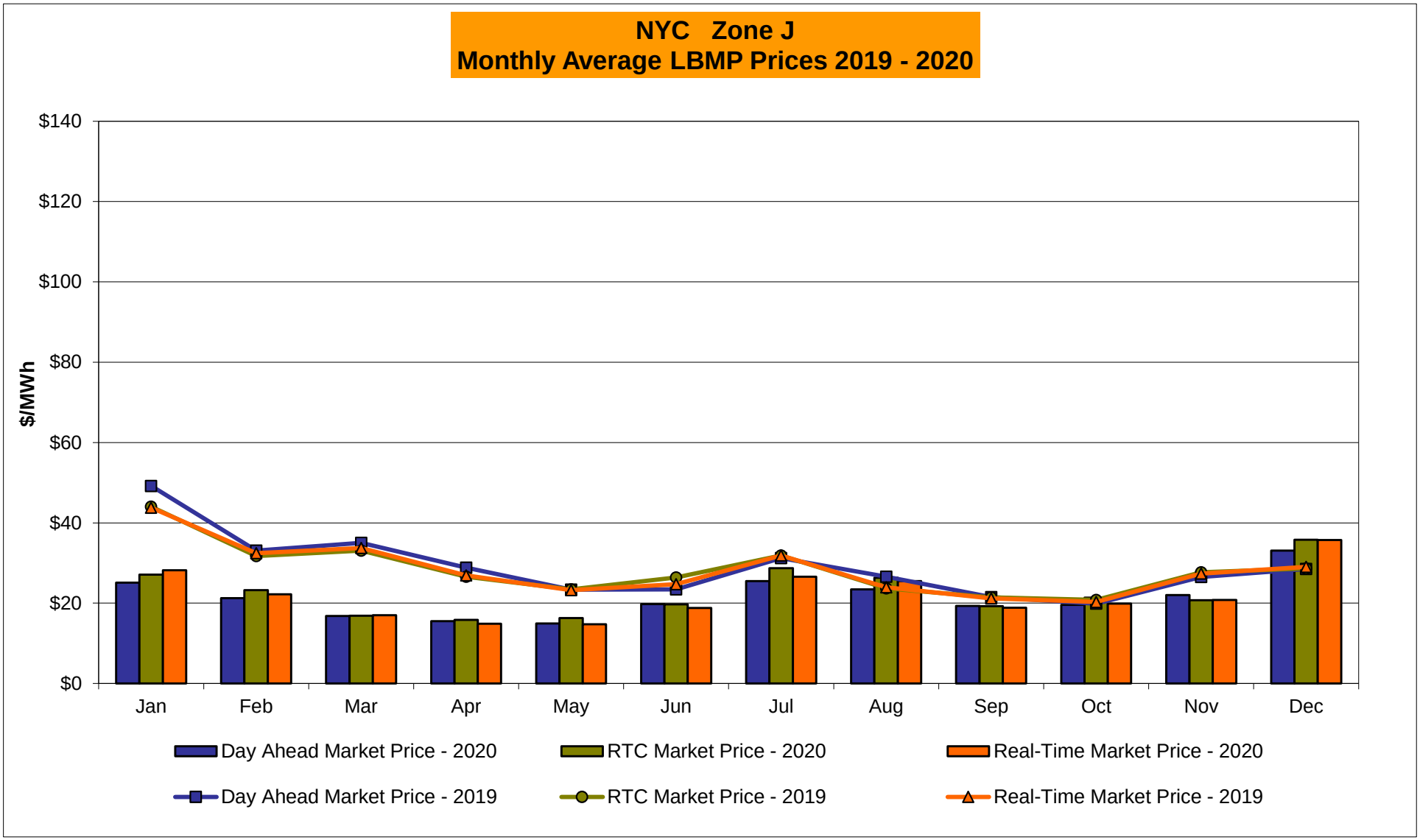
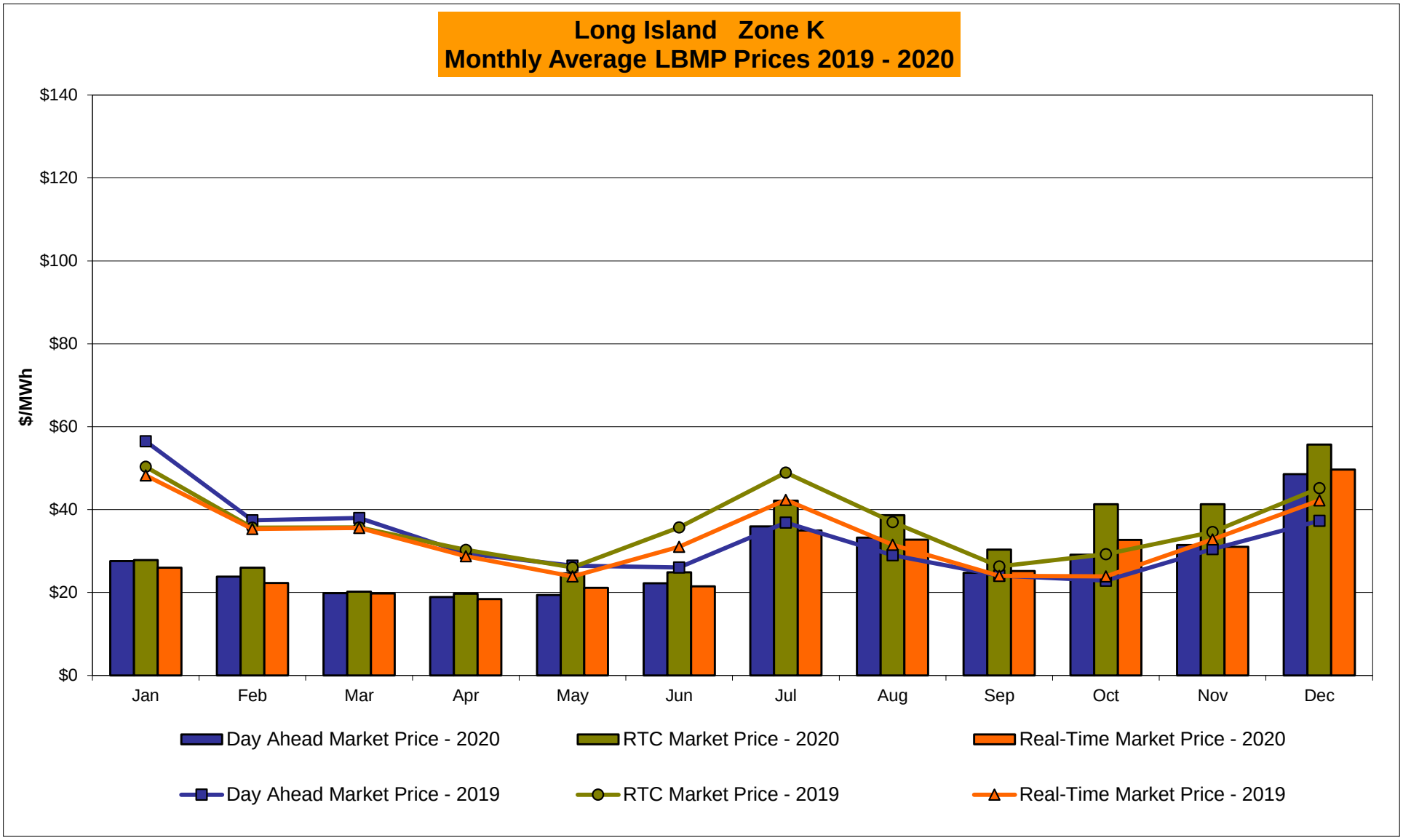

West Zone A
Monthly Average LBMP Prices 2019 - 2020
$/MWh
$140
$120
$100
$80
$60
$40
$20
$0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Day Ahead Market Price - 2020
RTC Market Price - 2020
Real-Time Market Price - 2020
Day Ahead Market Price - 2019
RTC Market Price - 2019
Real-Time Market Price - 2019


Central Zone C
Monthly Average LBMP Prices 2019 - 2020
$/MWh
$140
$120
$100
$80
$60
$40
$20
$0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Day Ahead Market Price - 2020
RTC Market Price - 2020
Real-Time Market Price - 2020
Day Ahead Market Price - 2019
RTC Market Price - 2019
Real-Time Market Price - 2019


Capital Zone F
Monthly Average LBMP Prices 2019 - 2020
$/MWh
$140
$120
$100
$80
$60
$40
$20
$0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Day Ahead Market Price - 2020
RTC Market Price - 2020
Real-Time Market Price - 2020
Day Ahead Market Price - 2019
RTC Market Price - 2019
Real-Time Market Price - 2019


Hudson Valley Zone G
Monthly Average LBMP Prices 2019 - 2020
$/MWh
$140
$120
$100
$80
$60
$40
$20
$0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Day Ahead Market Price - 2020
RTC Market Price - 2020
Real-Time Market Price - 2020
Day Ahead Market Price - 2019
RTC Market Price - 2019
Real-Time Market Price - 2019


NYC Zone J
Monthly Average LBMP Prices 2019 - 2020
$/MWh
$140
$120
$100
$80
$60
$40
$20
$0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Day Ahead Market Price - 2020
RTC Market Price - 2020
Real-Time Market Price - 2020
Day Ahead Market Price - 2019
RTC Market Price - 2019
Real-Time Market Price - 2019



Market Mitigation and Analysis
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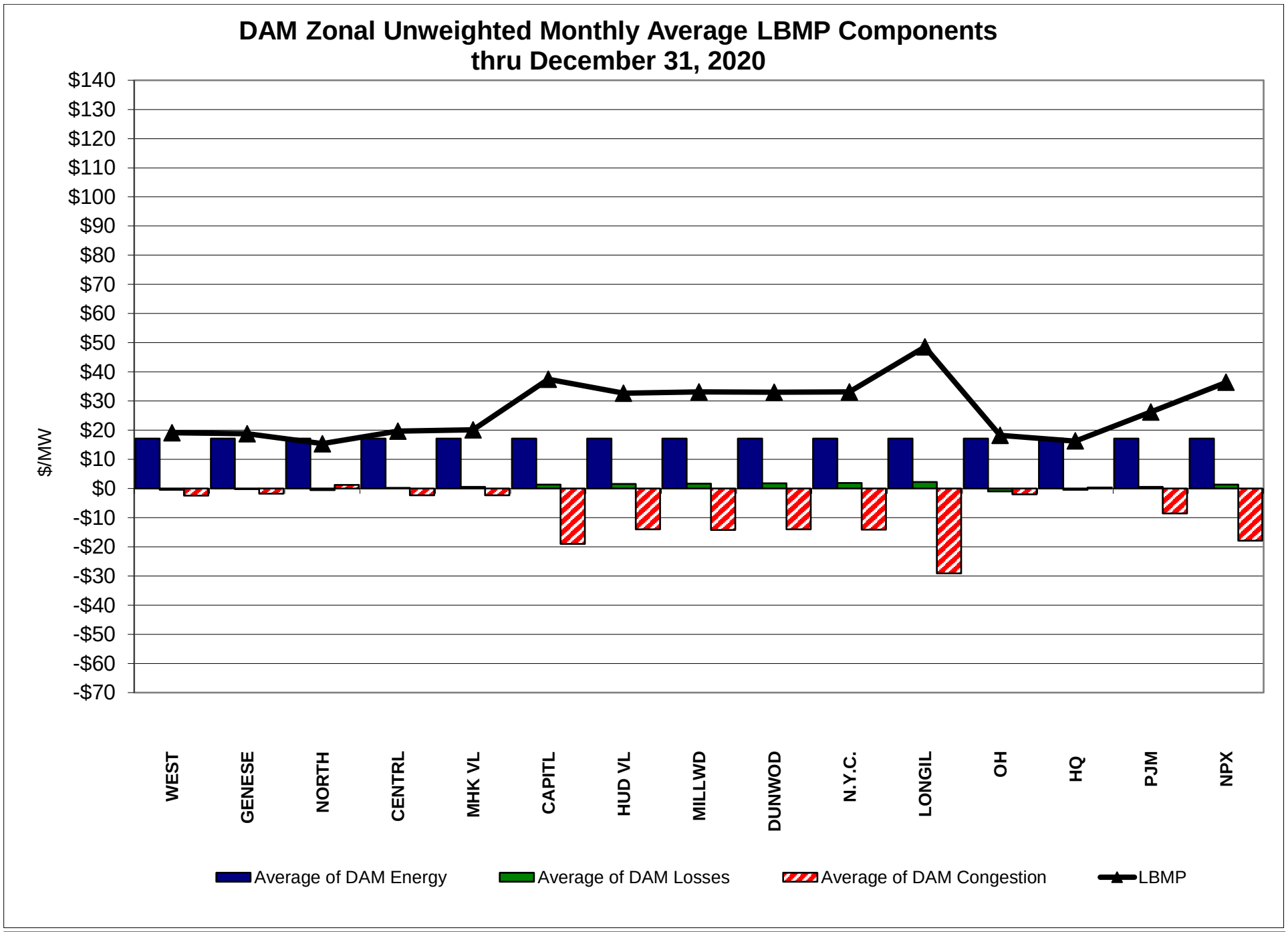
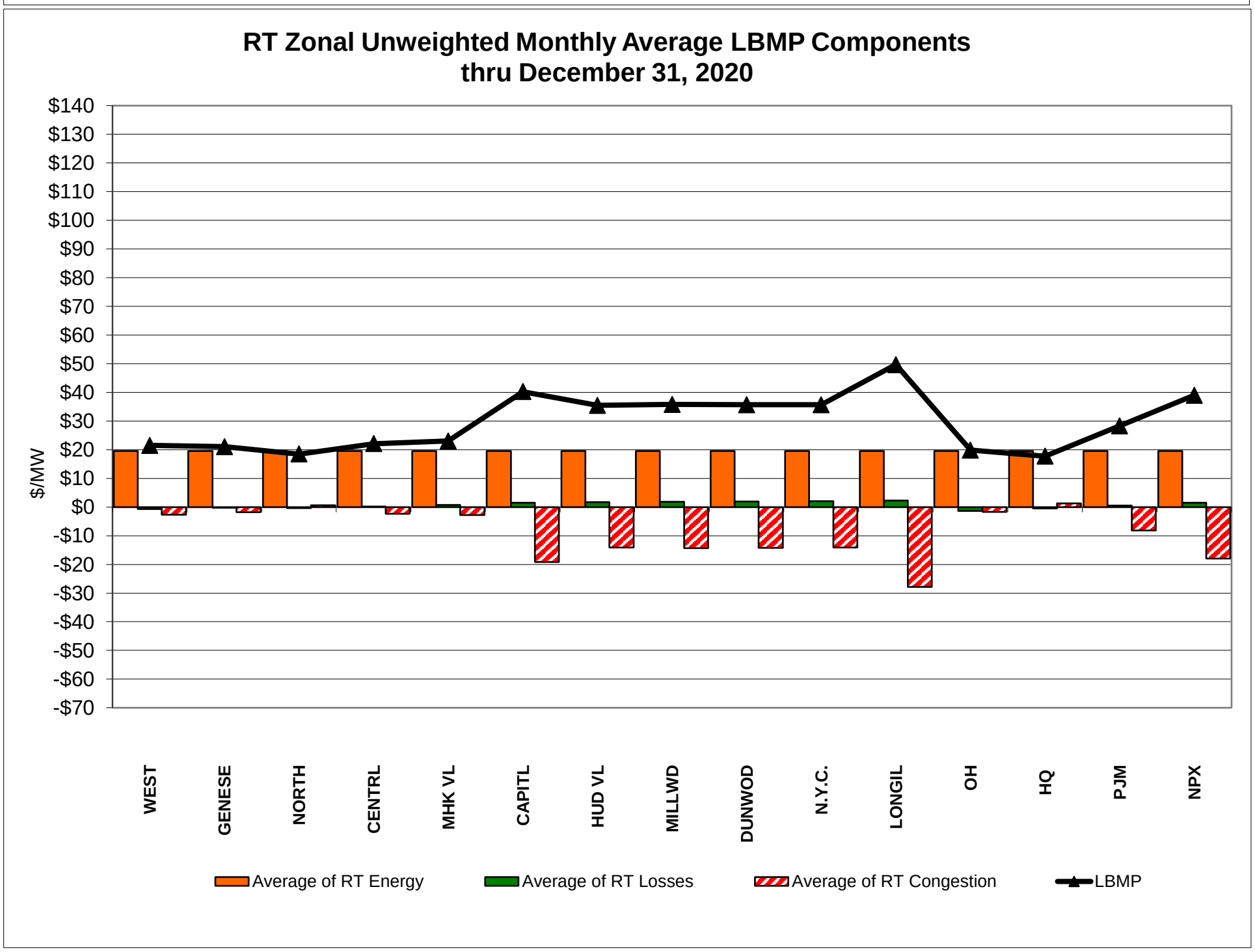
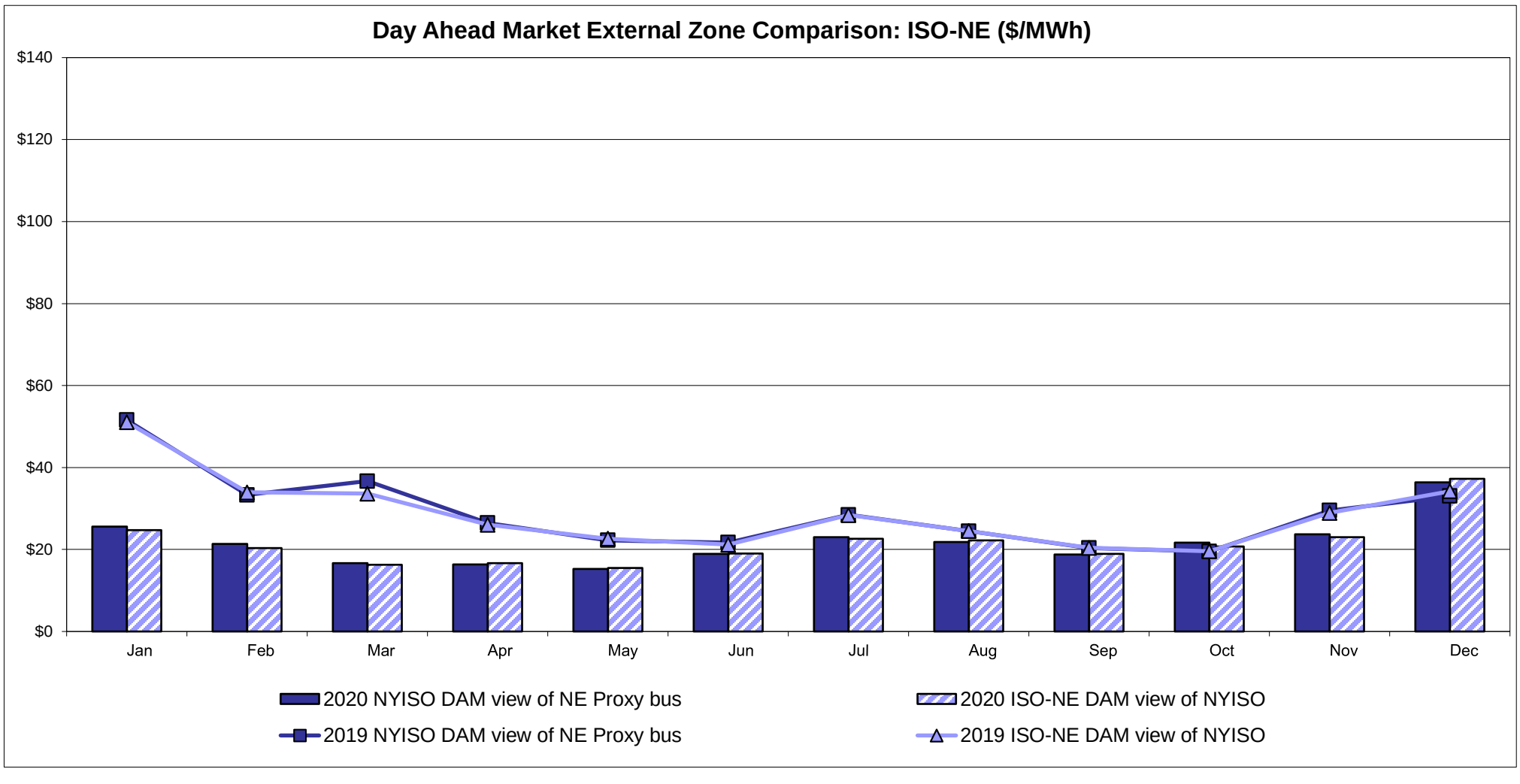
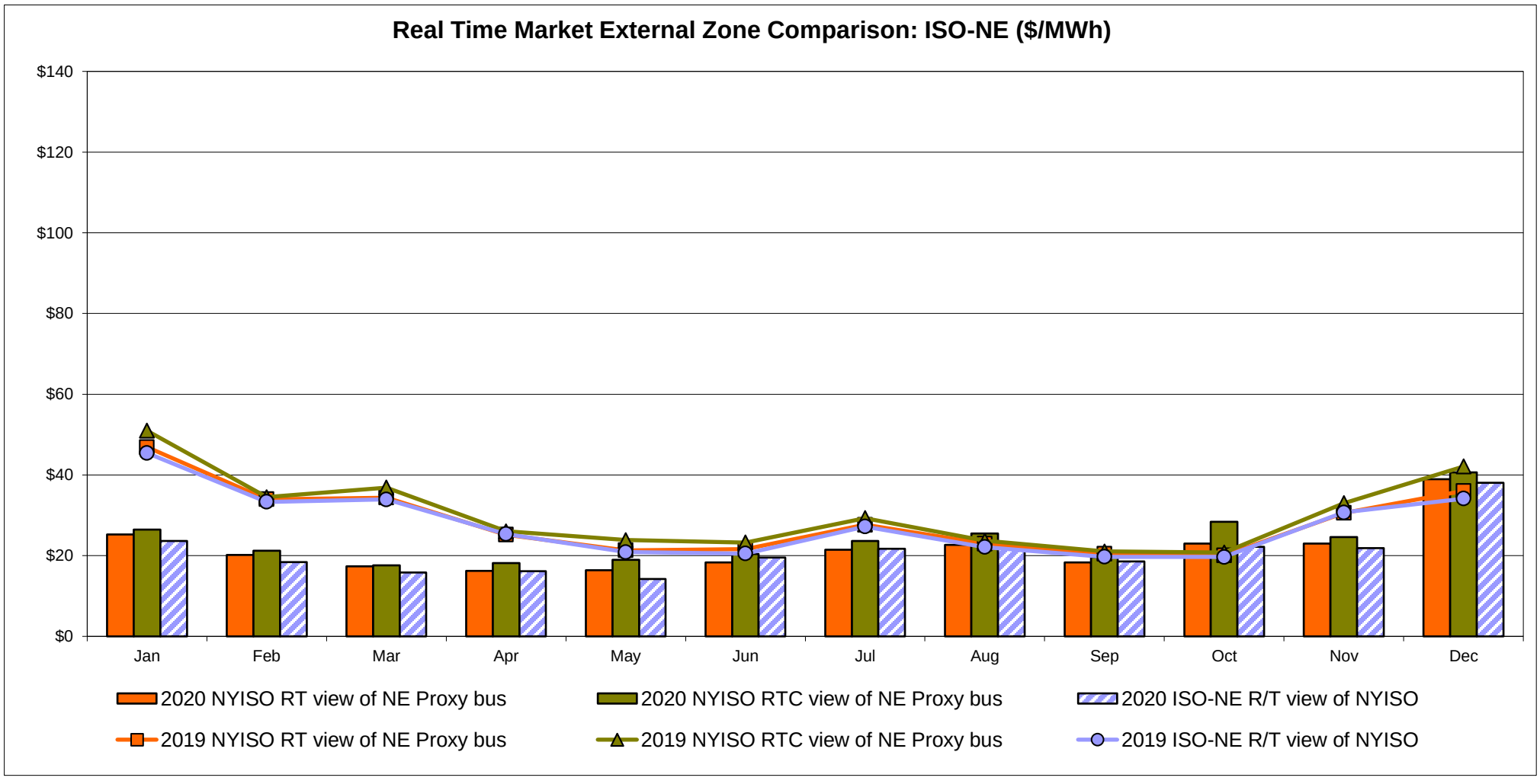
M


DAM Zonal Unweighted Monthly Average LBMP Components
thru December 31, 2020
$/MW
$140
$130
$120
$110
$100
$90
$80
$70
$60
$50
$40
$30
$20
$10
$0
-$10
-$20
-$30
-$40
-$50
-$60
-$70
WEST
GENESE
NORTH
CENTRL
MHK VL
CAPITL
HUD VL
MILLWD
DUNWOD
N.Y.C.
LONGIL
OH
HQ
PJM
NPX
Average of DAM Energy
Average of DAM Losses
Average of DAM Congestion
LBMP

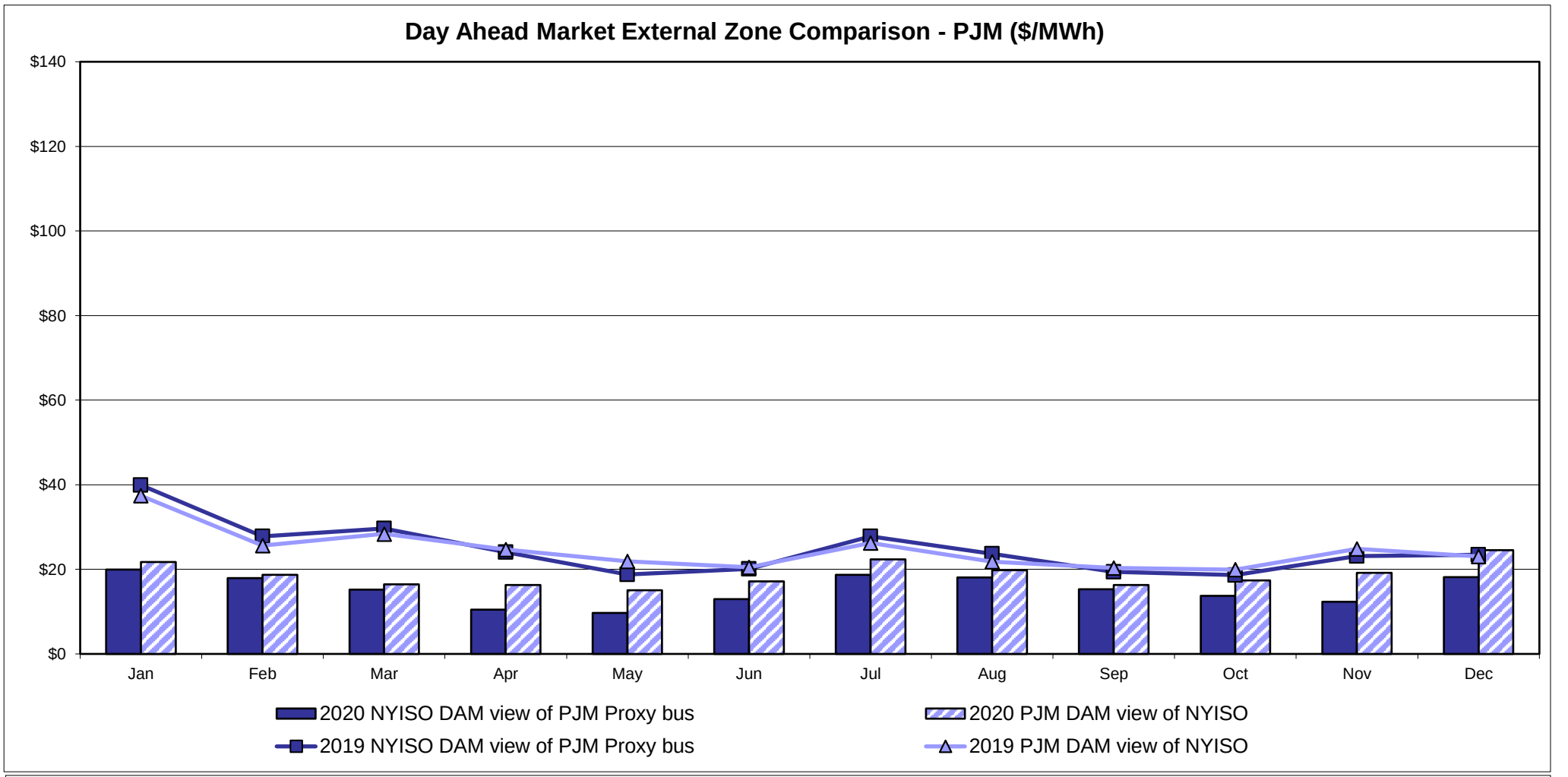

RT Zonal Unweighted Monthly Average LBMP Components
thru December 31, 2020
$/MW
$140
$130
$120
$110
$100
$90
$80
$70
$60
$50
$40
$30
$20
$10
$0
-$10
-$20
-$30
-$40
-$50
-$60
-$70
WEST
GENESE
NORTH
CENTRL
MHK VL
CAPITL
HUD VL
MILLWD
DUNWOD
N.Y.C.
LONGIL
OH
HQ
PJM
NPX
Average of RT Energy
Average of RT Losses
Average of RT Congestion
LBMP

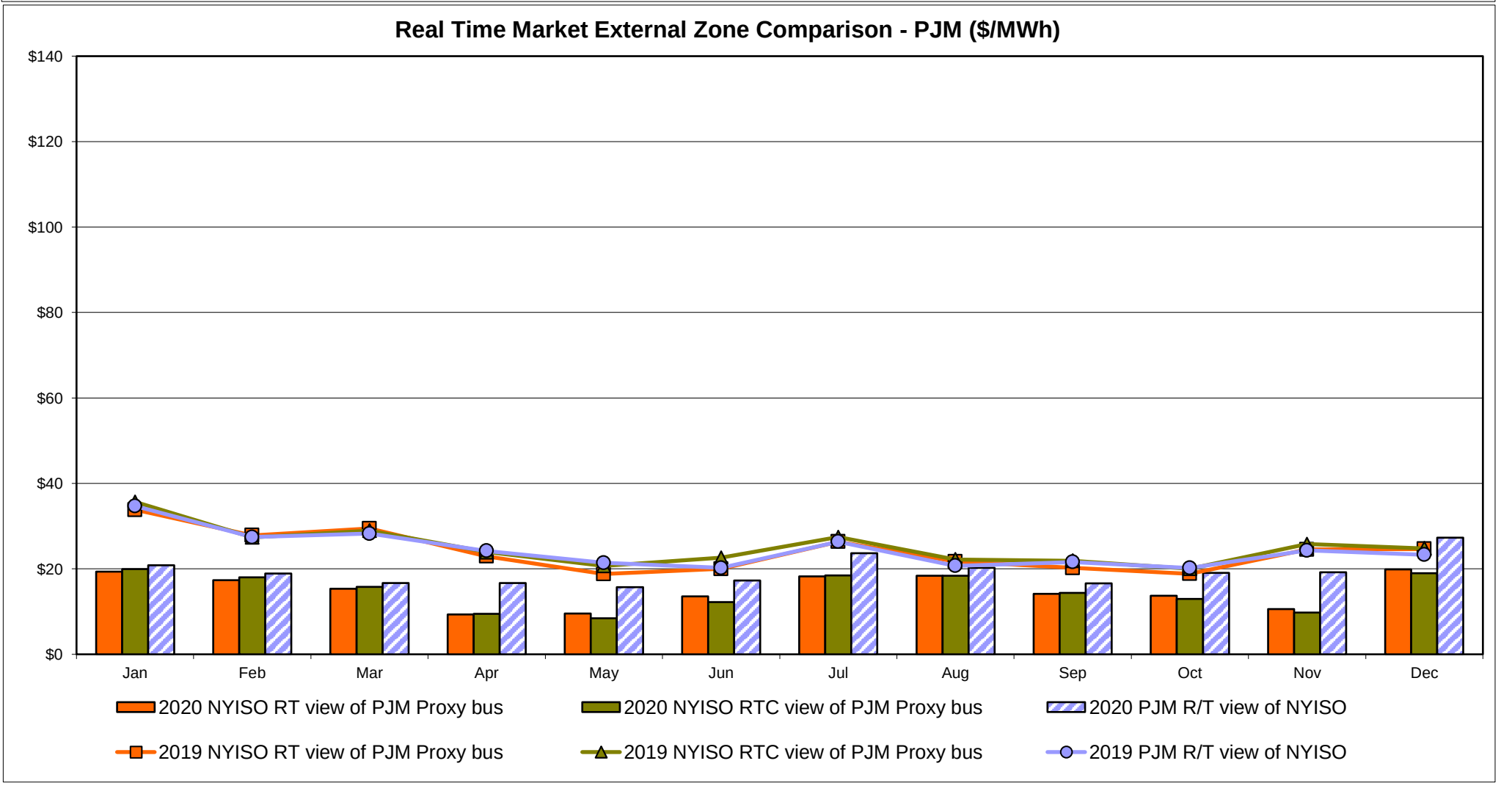
External Comparison ISO-New England



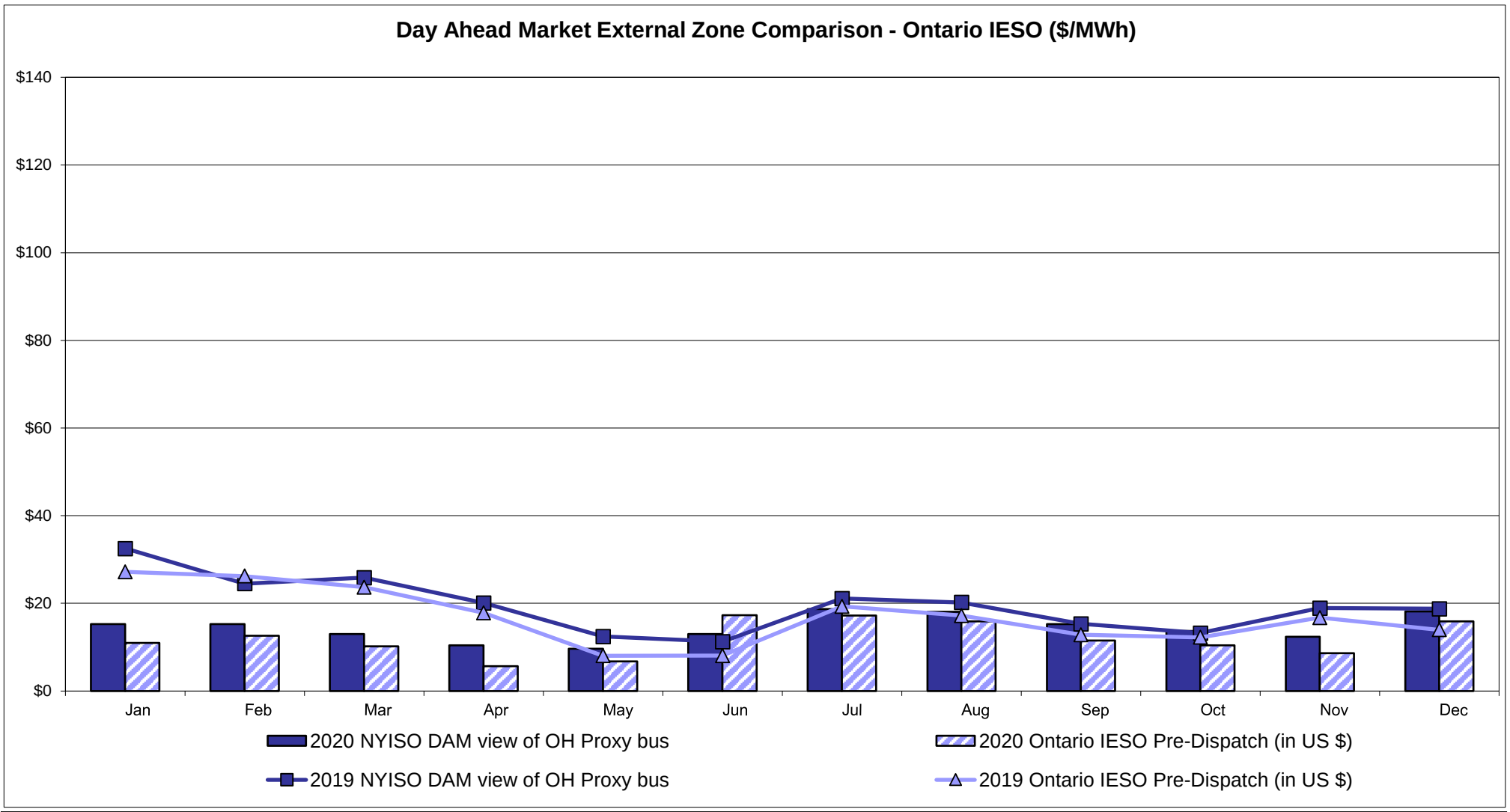


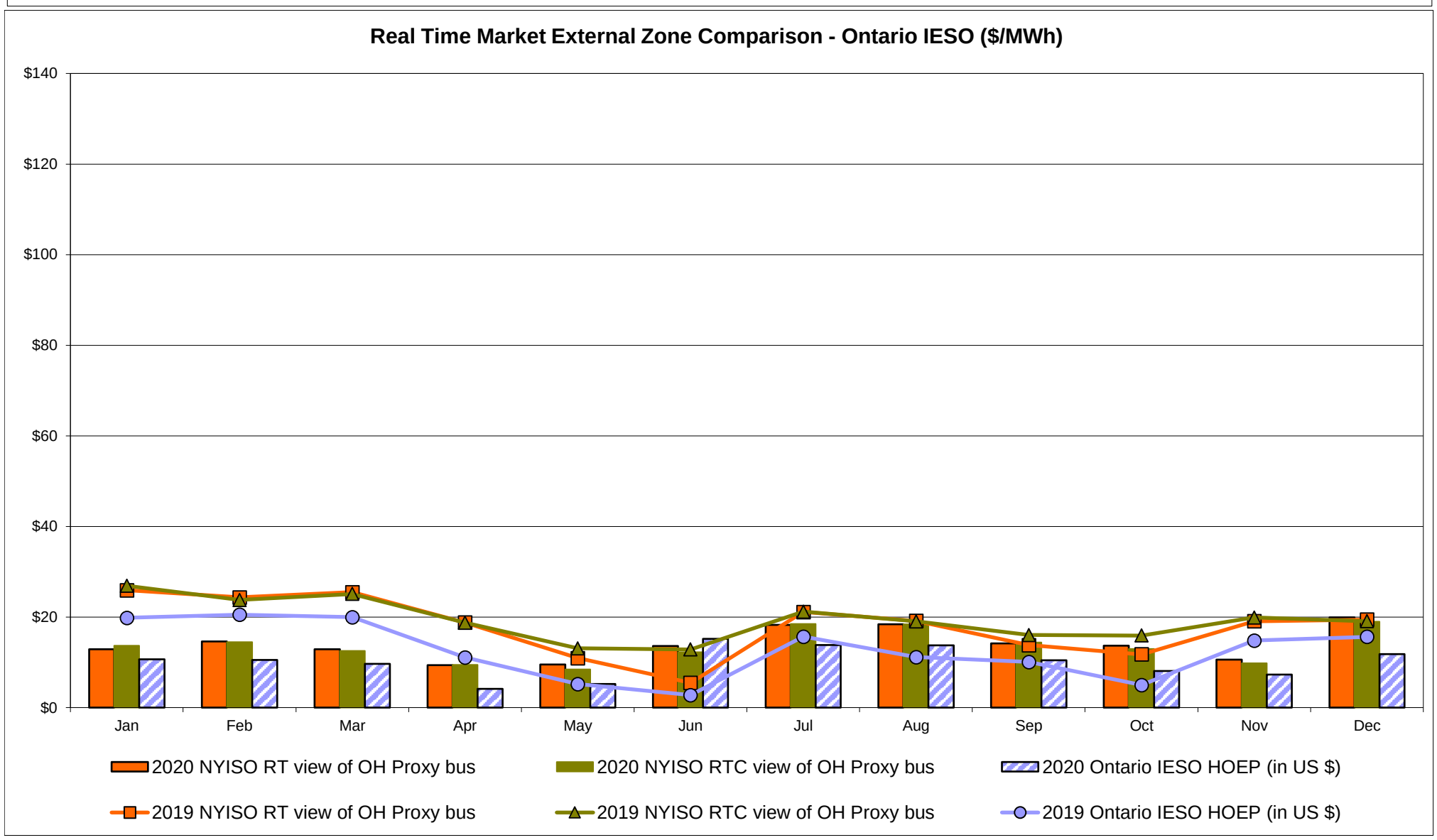
External Comparison PJM





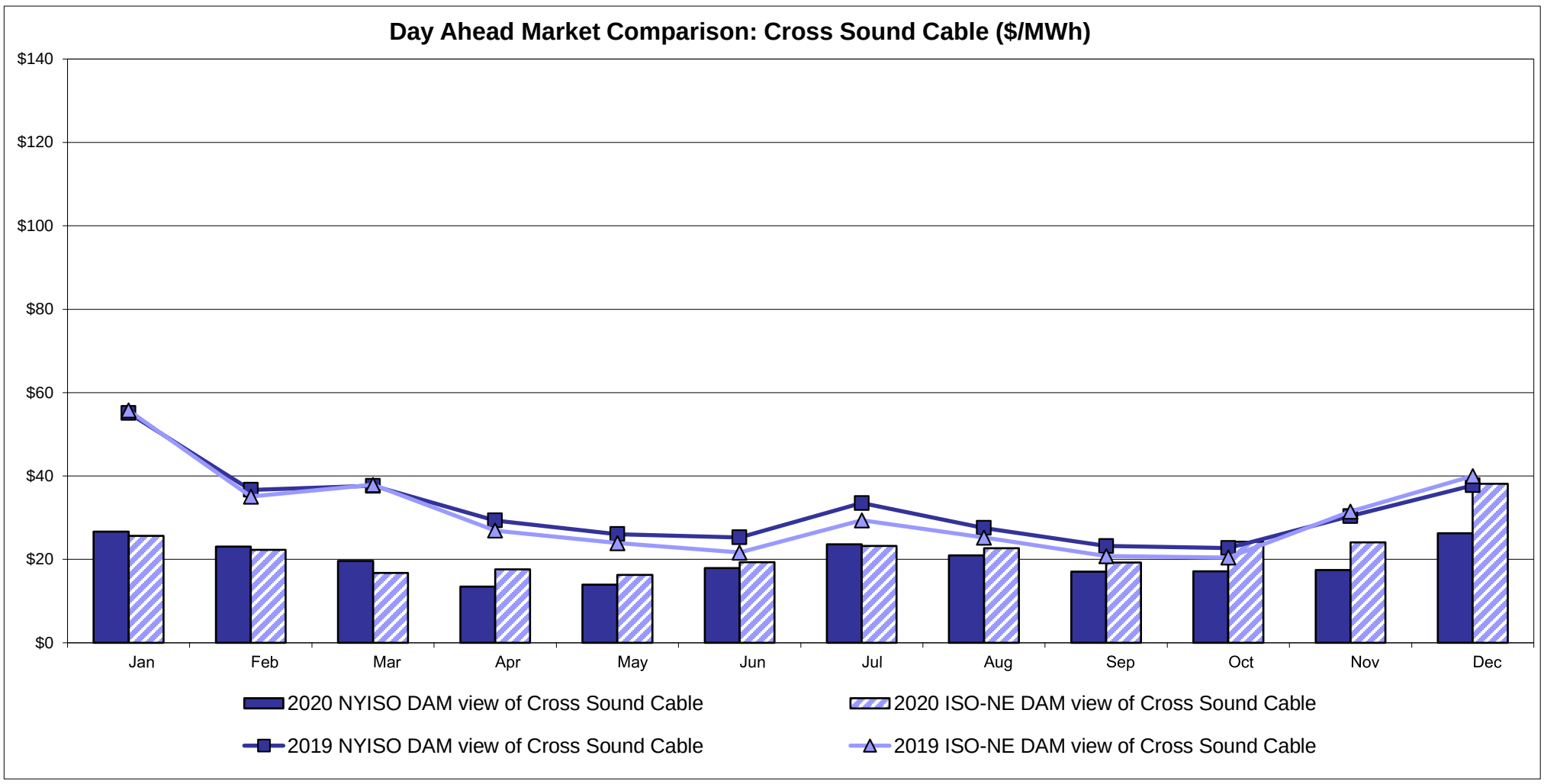
External Comparison Ontario IESO

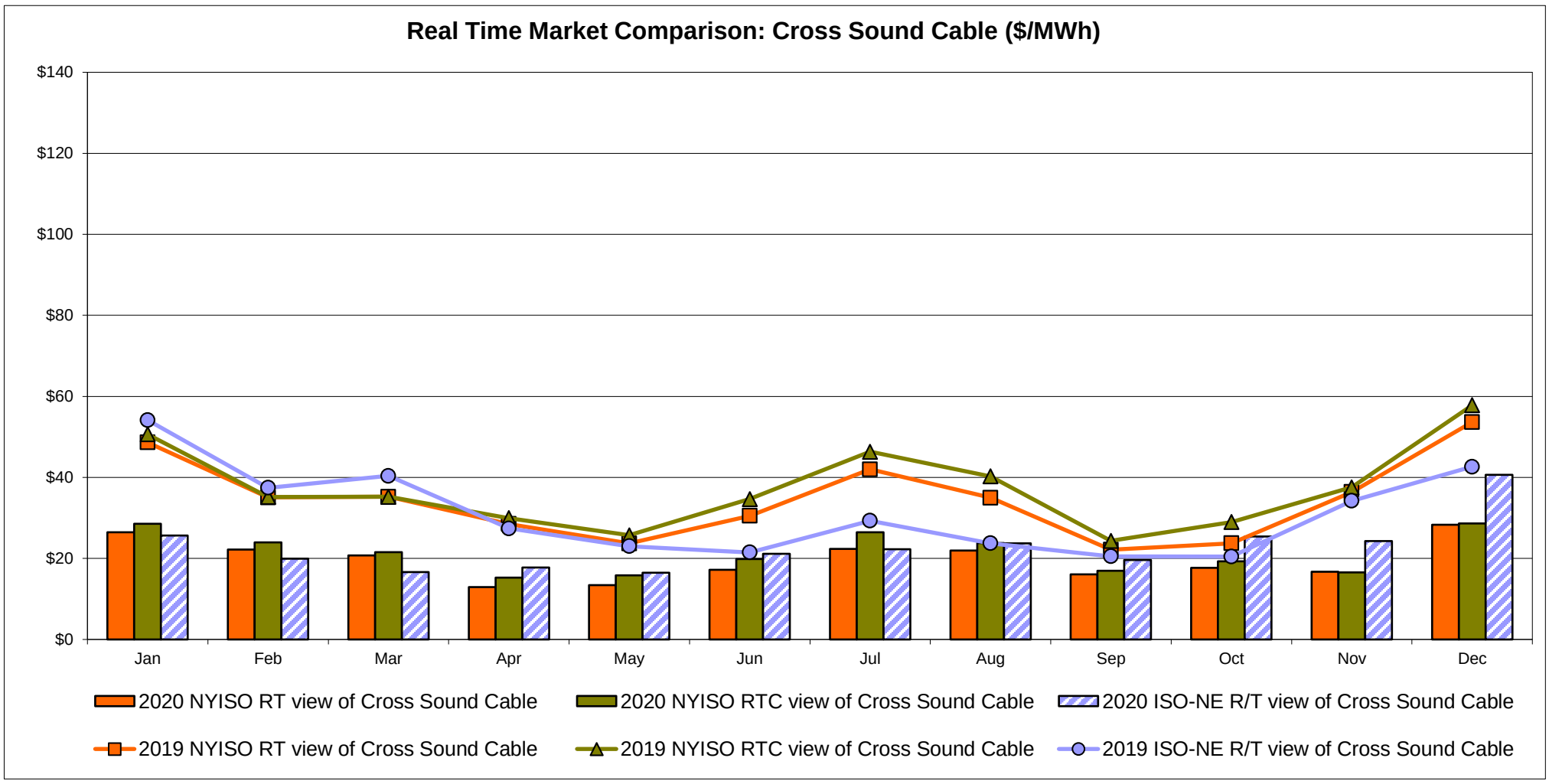




Notes: Exchange factor used for December 2020 was 0.780701069560465 to US
HOEP: Hourly Ontario Energy Price
Pre-Dispatch: Projected Energy Price

External Controllable Line: Cross Sound Cable (New England)

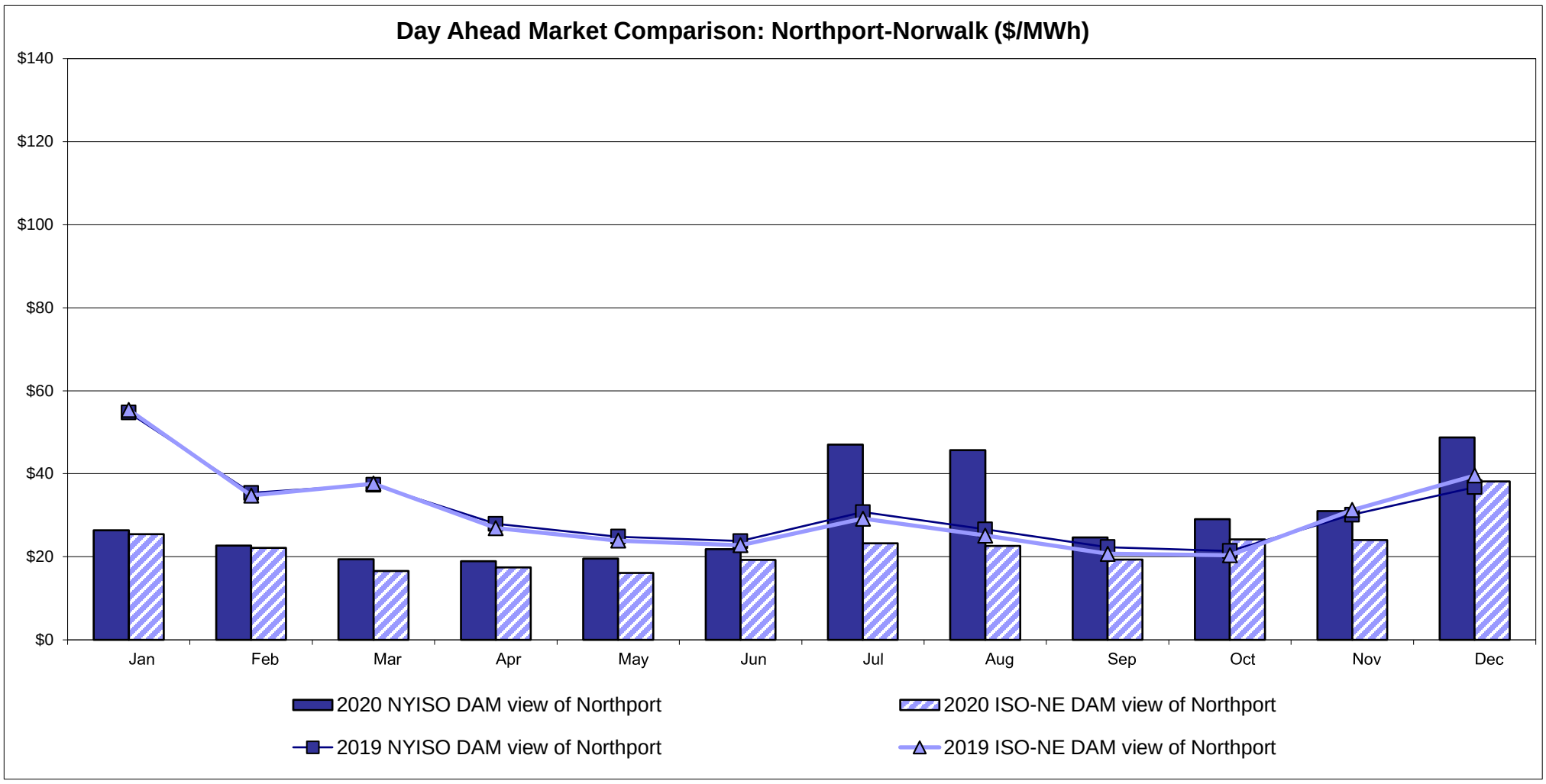


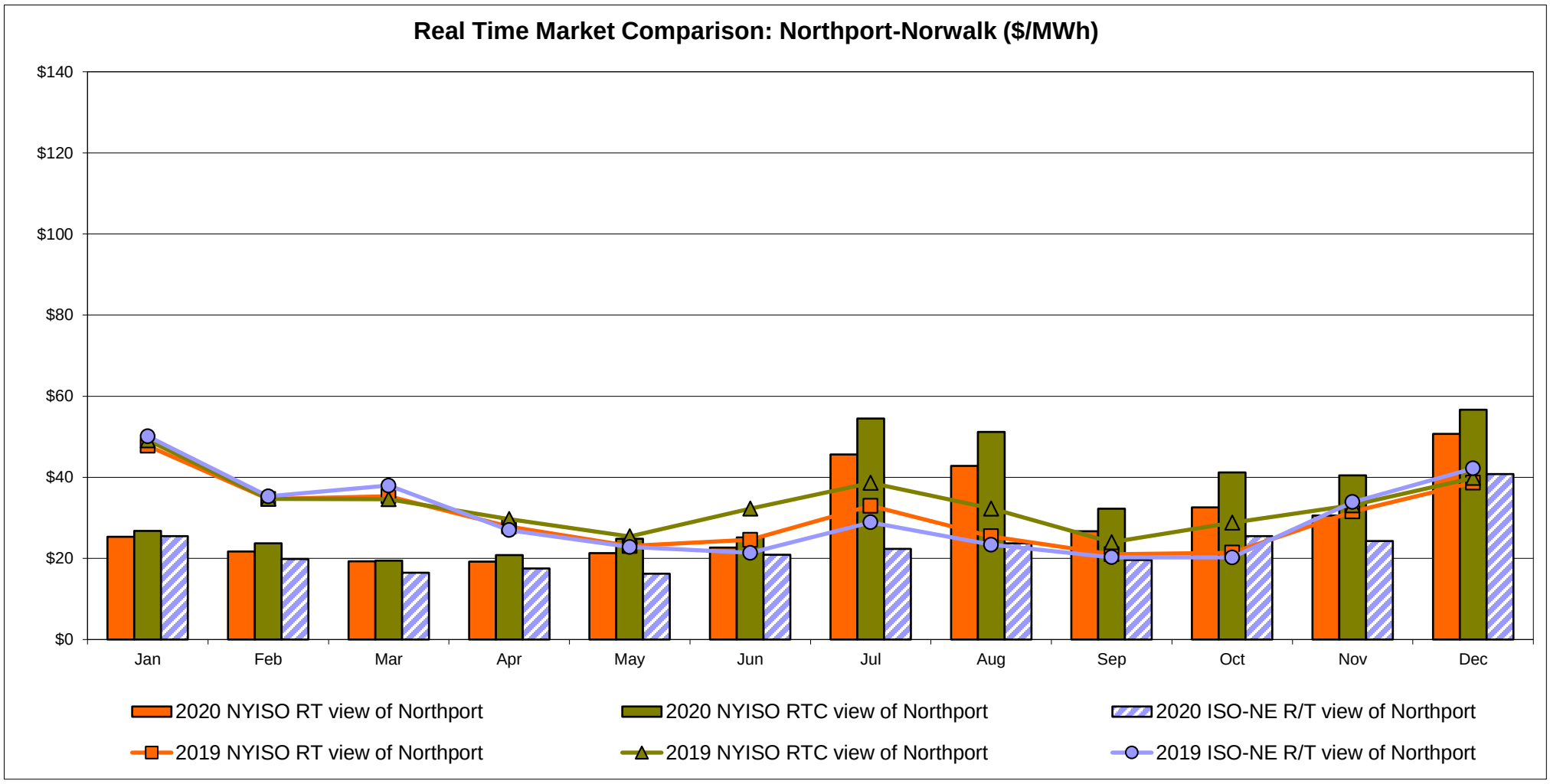


Note:

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

External Controllable Line: Northport - Norwalk (New England)

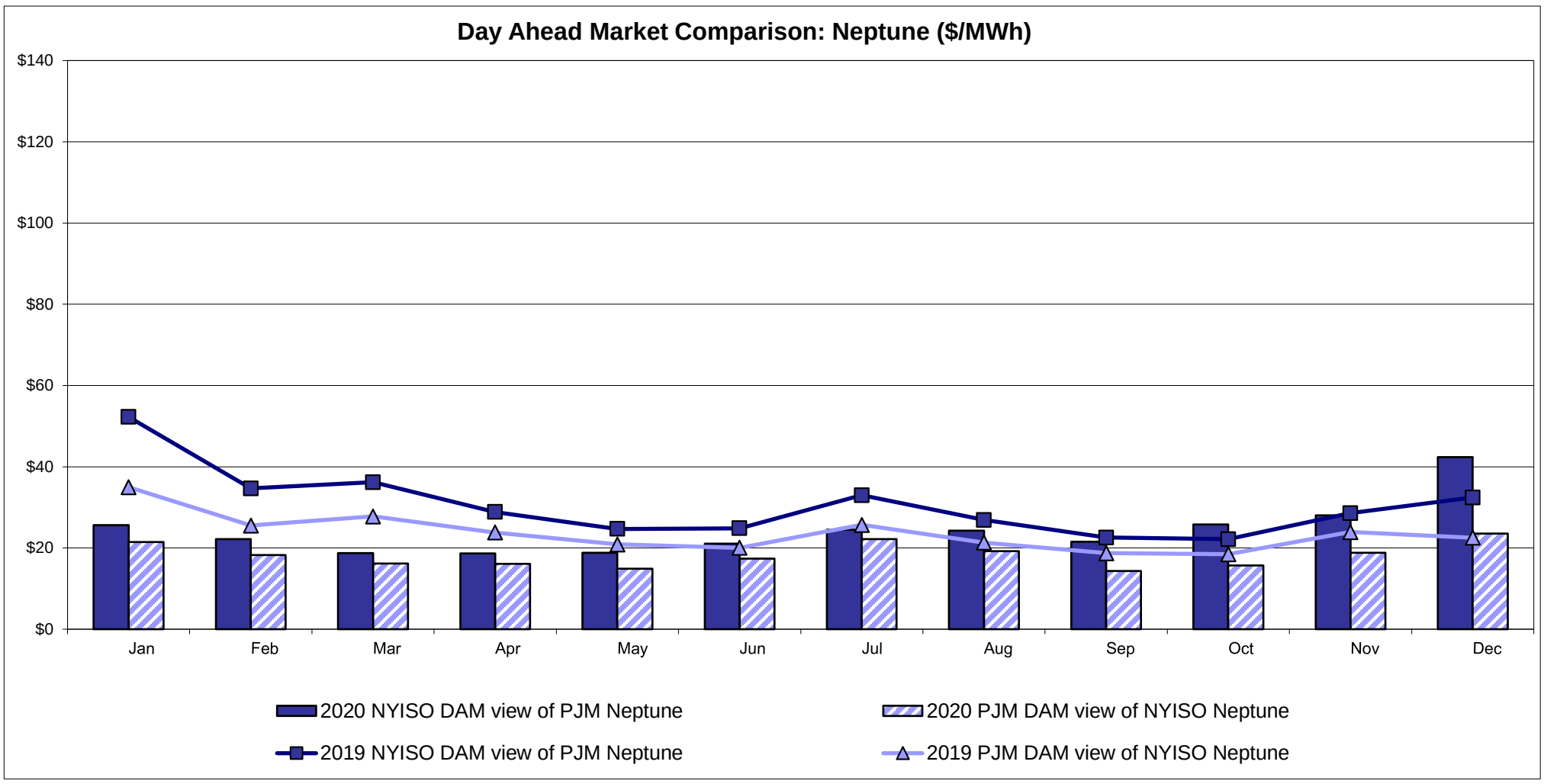


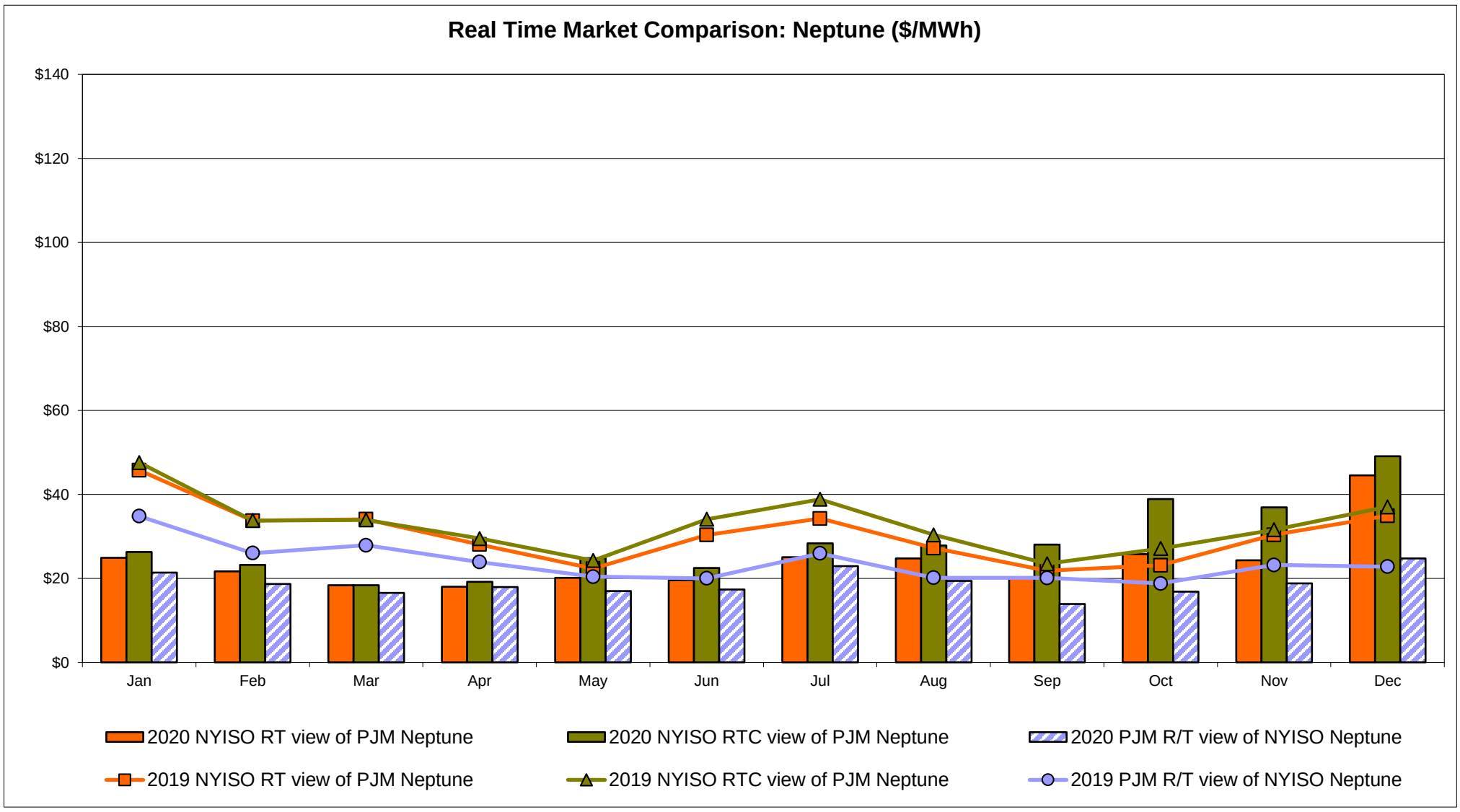


Note:

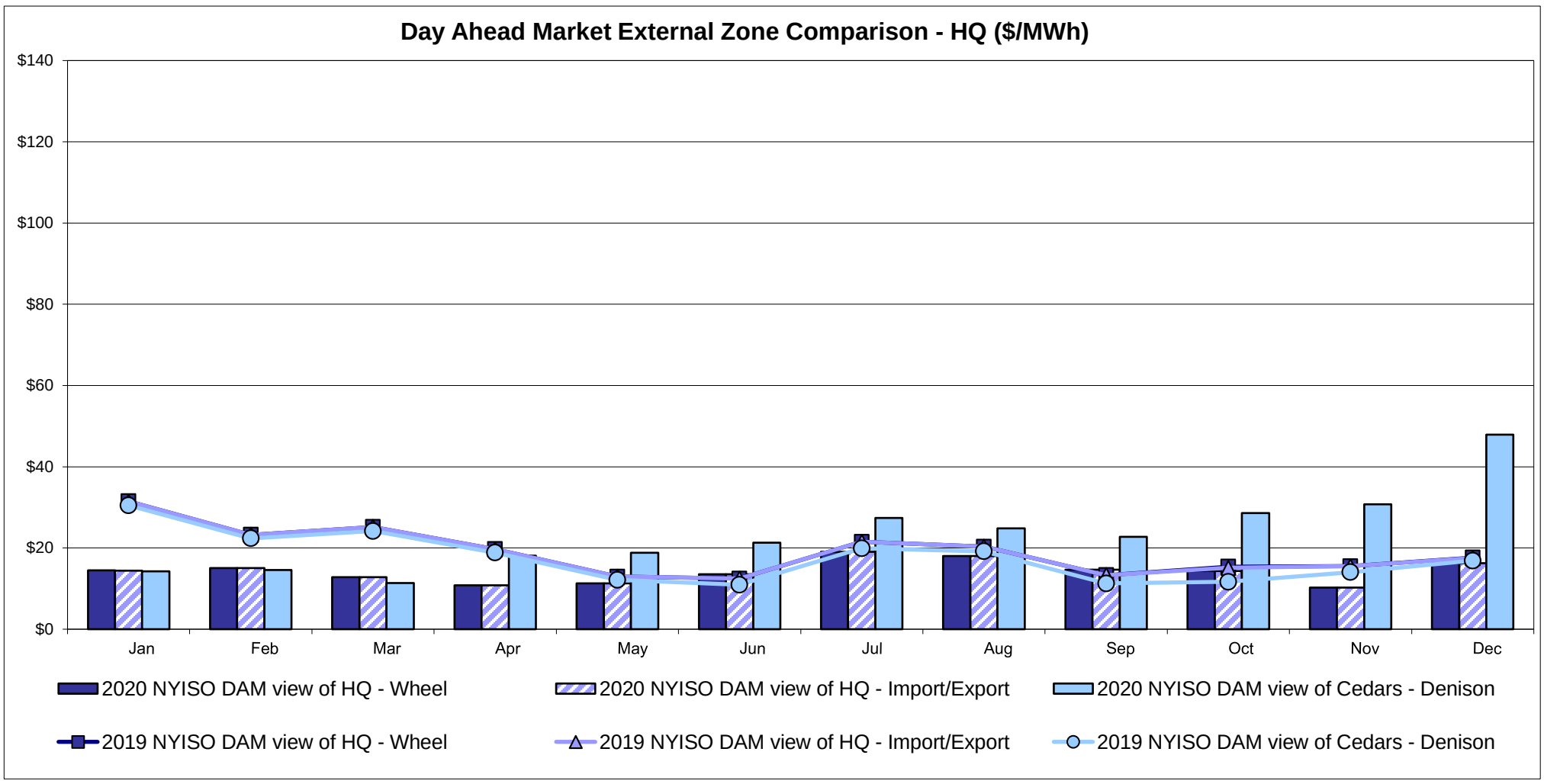
ISO-NE Forecast is an advisory posting @ 18:00 day before.
The DAM and R/T prices at the Northport 138 interface are used for ISO-NE.
The DAM and R/T prices at the 1385 interface are used for NYISO.

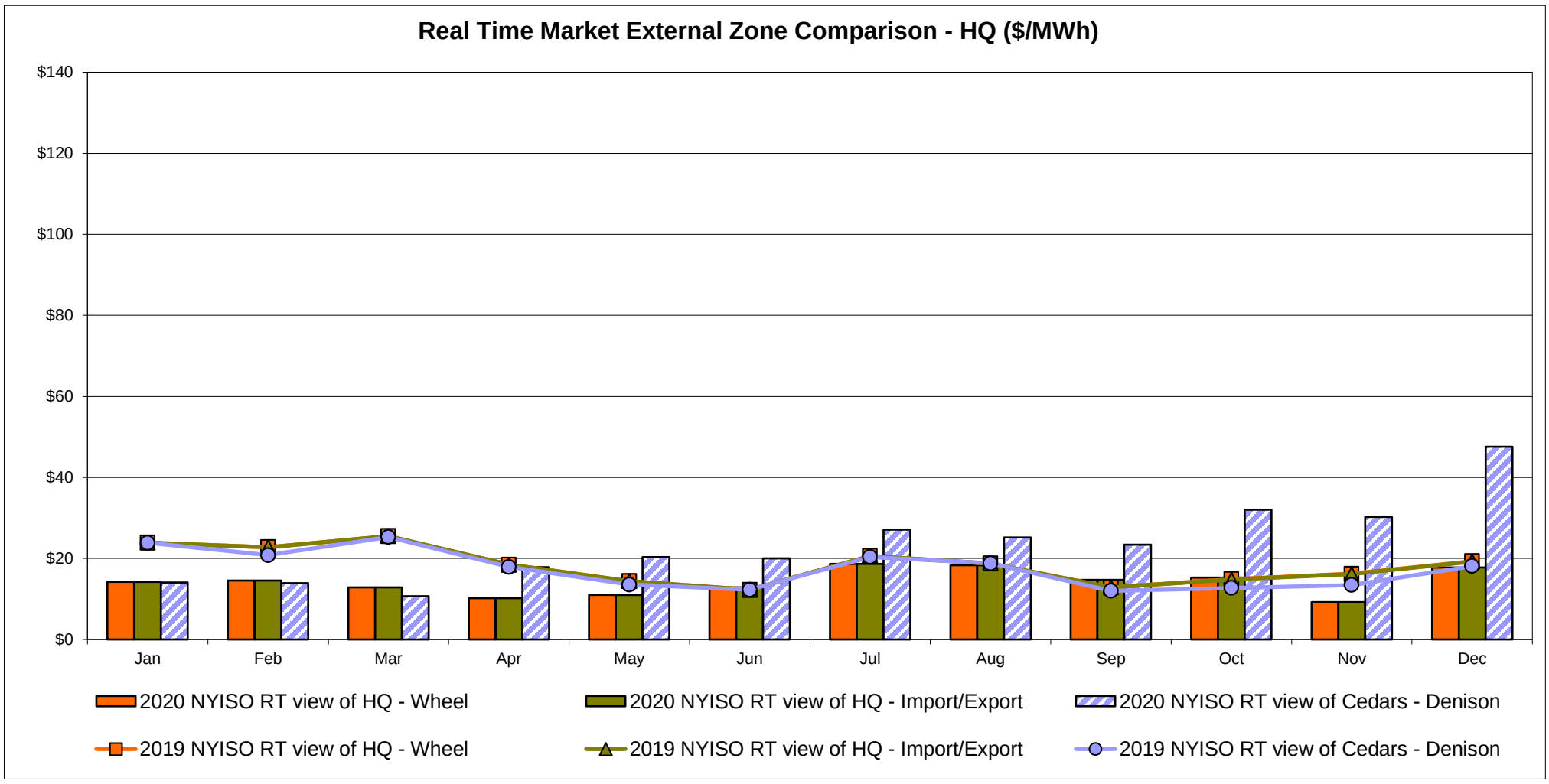
External Controllable Line: Neptune (PJM)





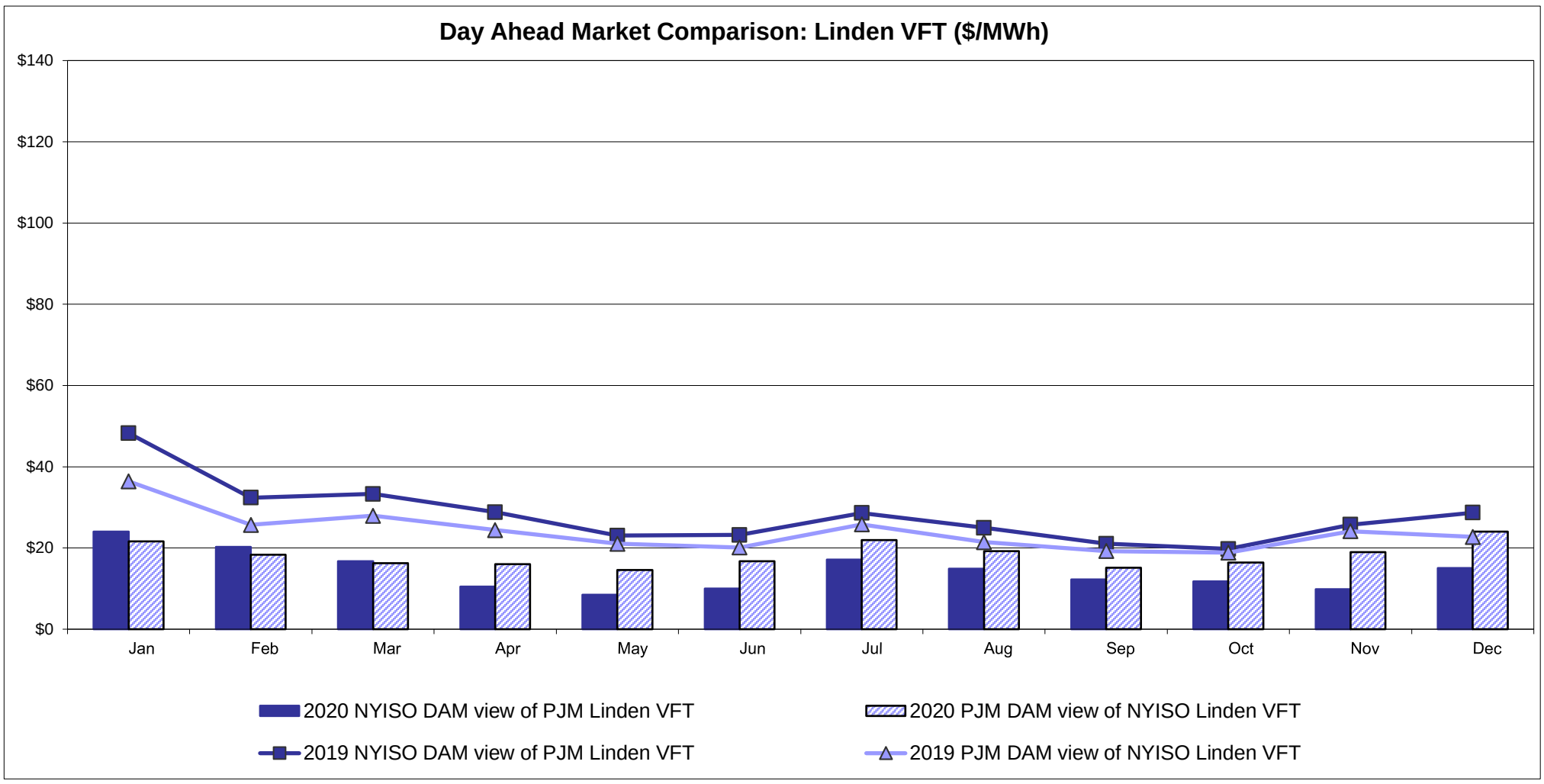
External Comparison Hydro-Quebec

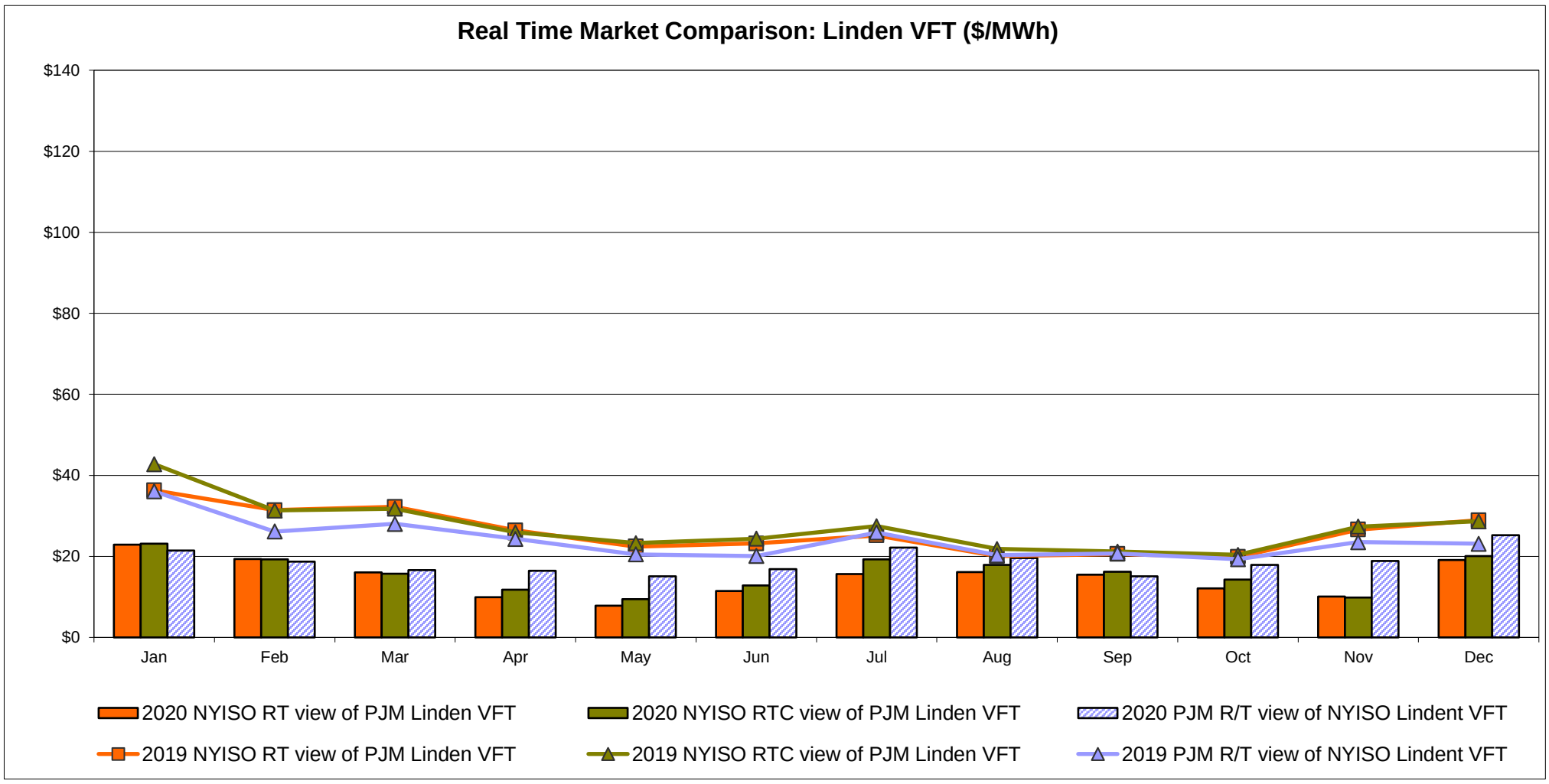




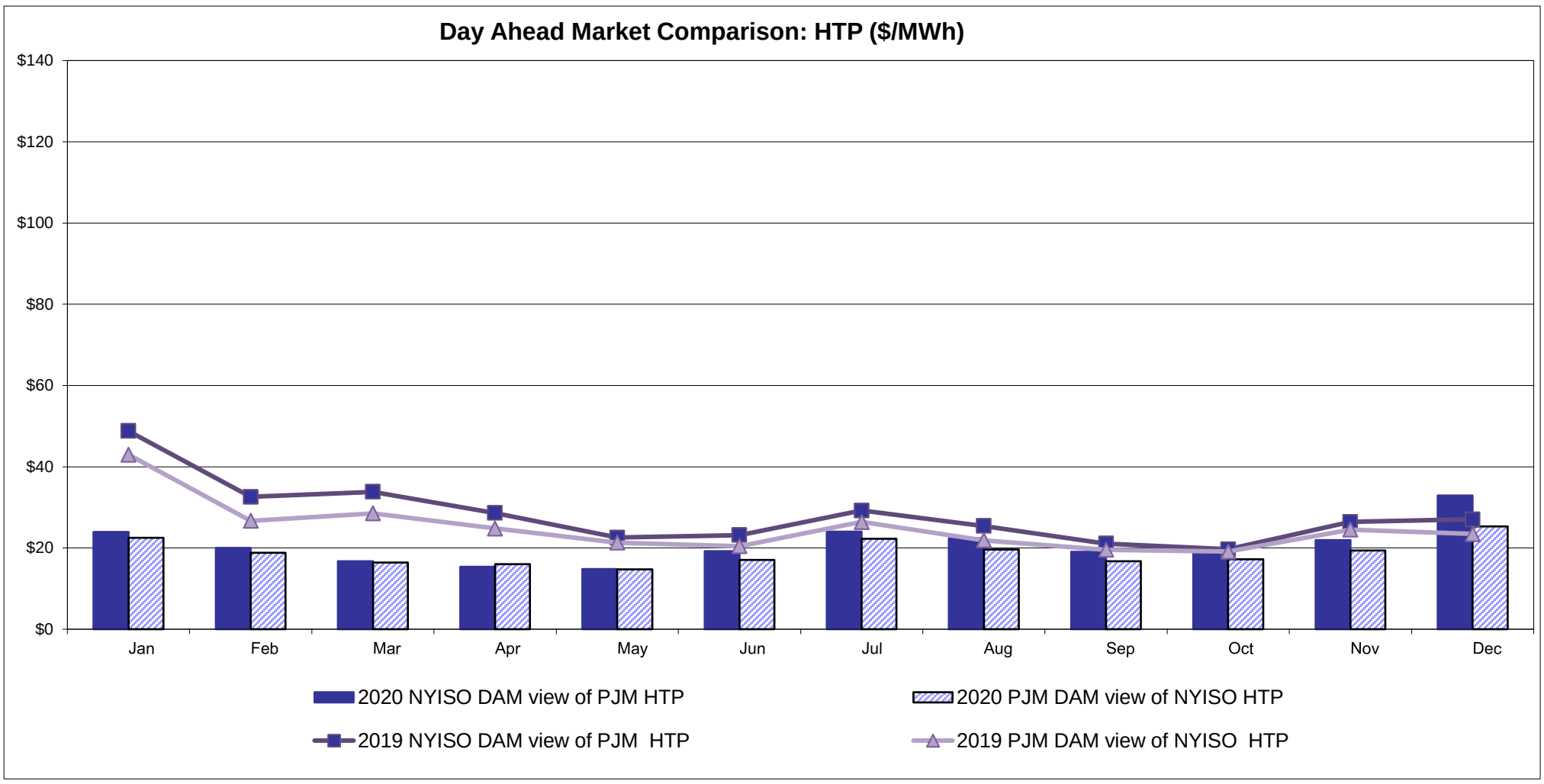
Note:
Hydro-Quebec Prices are unavailable.

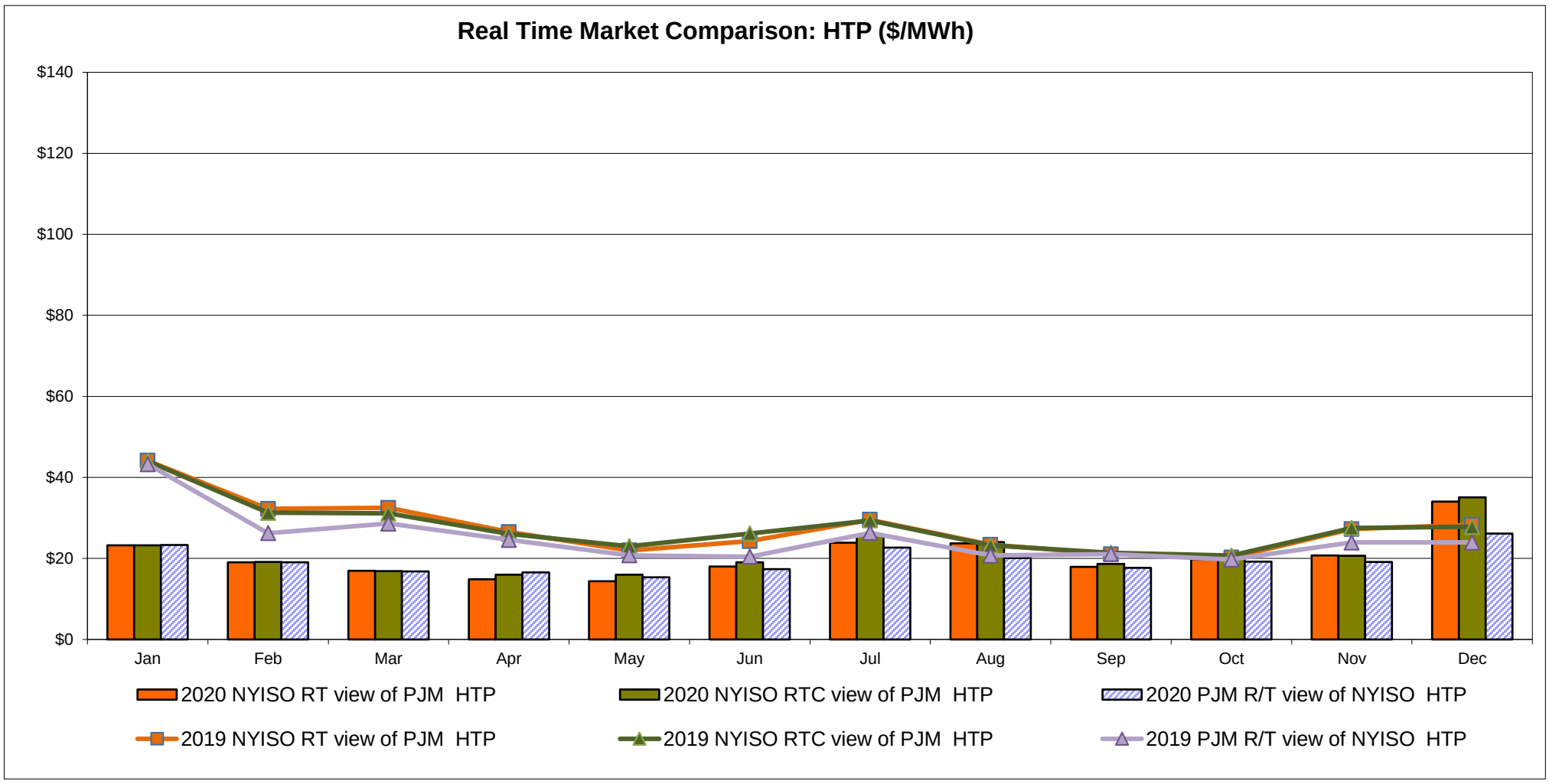
External Controllable Line: Linden VFT (PJM)





External Controllable Line: Hudson (PJM)





NYISO Real Time Price Correction Statistics

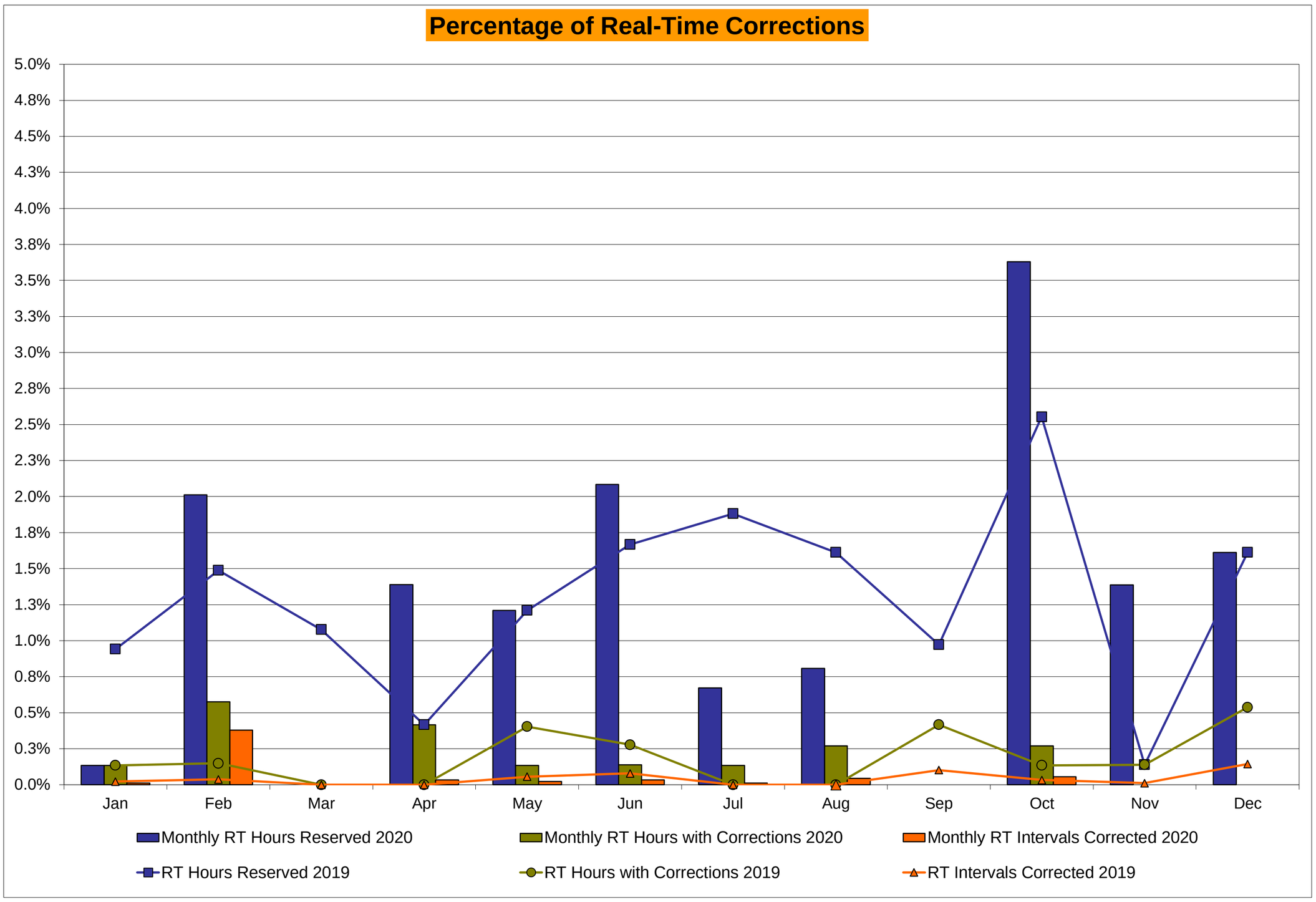
2020		January	February	March	April	May	June	July	August	September	October	November	December
Hour Corrections													
Number of hours with corrections	in the month	1	4	0	3	1	1	1	2	0	2	0	0
Number of hours	in the month	744	696	743	720	744	720	744	744	720	744	721	744
% of hours with corrections	in the month	0.13%	0.57%	0.00%	0.42%	0.13%	0.14%	0.13%	0.27%	0.00%	0.27%	0.00%	0.00%
% of hours with corrections	year-to-date	0.13%	0.35%	0.23%	0.28%	0.25%	0.23%	0.22%	0.22%	0.20%	0.20%	0.19%	0.17%
Interval Corrections													
Number of intervals corrected	in the month	1	32	0	3	2	3	1	4	0	5	0	0
Number of intervals	in the month	9,088	8,460	9,011	8,776	9,030	8,826	9,128	9,156	8,810	9,048	8,790	9,083
% of intervals corrected	in the month	0.01%	0.38%	0.00%	0.03%	0.02%	0.03%	0.01%	0.04%	0.00%	0.06%	0.00%	0.00%
% of intervals corrected	year-to-date	0.01%	0.19%	0.12%	0.10%	0.09%	0.08%	0.07%	0.06%	0.06%	0.06%	0.05%	0.05%
Hours Reserved													
Number of hours reserved	in the month	1	14	0	10	9	15	5	6	0	27	10	12
Number of hours	in the month	744	696	743	720	744	720	744	744	720	744	721	744
% of hours reserved	in the month	0.13%	2.01%	0.00%	1.39%	1.21%	2.08%	0.67%	0.81%	0.00%	3.63%	1.39%	1.61%
% of hours reserved	year-to-date	0.13%	1.04%	0.69%	0.86%	0.93%	1.12%	1.06%	1.02%	0.91%	1.19%	1.21%	1.24%
Days to Correction *													
Avg. number of days to correction	in the month	2.00	1.00	0.00	3.00	3.00	2.00	3.00	3.00	0.00	3.00	0.00	0.00
Avg. number of days to correction	year-to-date	2.00	1.50	1.50	2.25	2.40	2.33	2.43	2.56	2.56	2.64	1.38	2.64
Days Without Corrections													
Days without corrections	in the month	30	28	31	28	30	29	30	29	30	29	30	31
Days without corrections	year-to-date	30	58	89	117	147	176	206	235	265	294	324	355

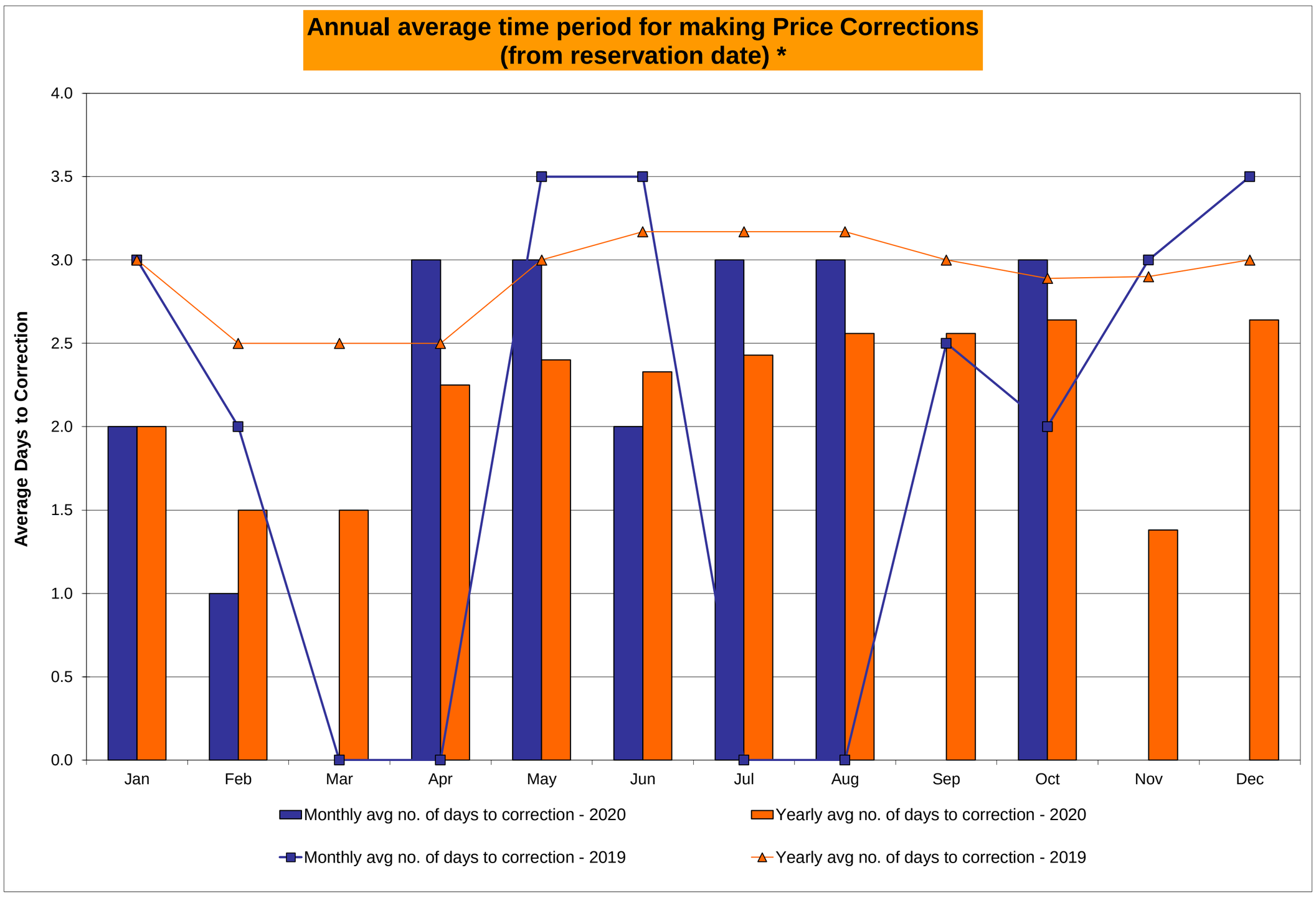
2019		January	February	March	April	May	June	July	August	September	October	November	December
Hour Corrections													
Number of hours with corrections	in the month	1	1	0	0	3	2	0	0	3	1	1	4
Number of hours	in the month	744	672	743	720	744	720	744	744	720	744	721	744
% of hours with corrections	in the month	0.13%	0.15%	0.00%	0.00%	0.40%	0.28%	0.00%	0.00%	0.42%	0.13%	0.14%	0.54%
% of hours with corrections	year-to-date	0.13%	0.14%	0.09%	0.07%	0.14%	0.16%	0.14%	0.12%	0.15%	0.15%	0.15%	0.18%
Interval Corrections													
Number of intervals corrected	in the month	2	3	0	0	5	7	0	0	9	3	1	13
Number of intervals	in the month	9,071	8,131	9,008	8,750	9,033	8,863	9,243	9,048	8,820	9,087	8,788	9,021
% of intervals corrected	in the month	0.02%	0.04%	0.00%	0.00%	0.06%	0.08%	0.00%	0.00%	0.10%	0.03%	0.01%	0.14%
% of intervals corrected	year-to-date	0.02%	0.03%	0.02%	0.01%	0.02%	0.03%	0.03%	0.02%	0.03%	0.03%	0.03%	0.04%
Hours Reserved													
Number of hours reserved	in the month	7	10	8	3	9	12	14	12	7	19	1	12
Number of hours	in the month	744	672	743	720	744	720	744	744	720	744	721	744
% of hours reserved	in the month	0.94%	1.49%	1.08%	0.42%	1.21%	1.67%	1.88%	1.61%	0.97%	2.55%	0.14%	1.61%
% of hours reserved	year-to-date	0.94%	1.20%	1.16%	0.97%	1.02%	1.13%	1.24%	1.29%	1.25%	1.38%	1.27%	1.30%
Days to Correction *													
Avg. number of days to correction	in the month	3.00	2.00	0.00	0.00	3.50	3.50	0.00	0.00	2.50	2.00	3.00	3.50
Avg. number of days to correction	year-to-date	3.00	2.50	2.50	2.50	3.00	3.17	3.17	3.17	3.00	2.89	2.90	3.00
Days Without Corrections													
Days without corrections	in the month	30	27	31	30	29	28	31	31	28	30	29	29
Days without corrections	year-to-date	30	57	88	118	147	175	206	237	265	295	324	353

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

Market Mitigation and Analysis
Prepared: 1/11/2021 10:55 AM

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



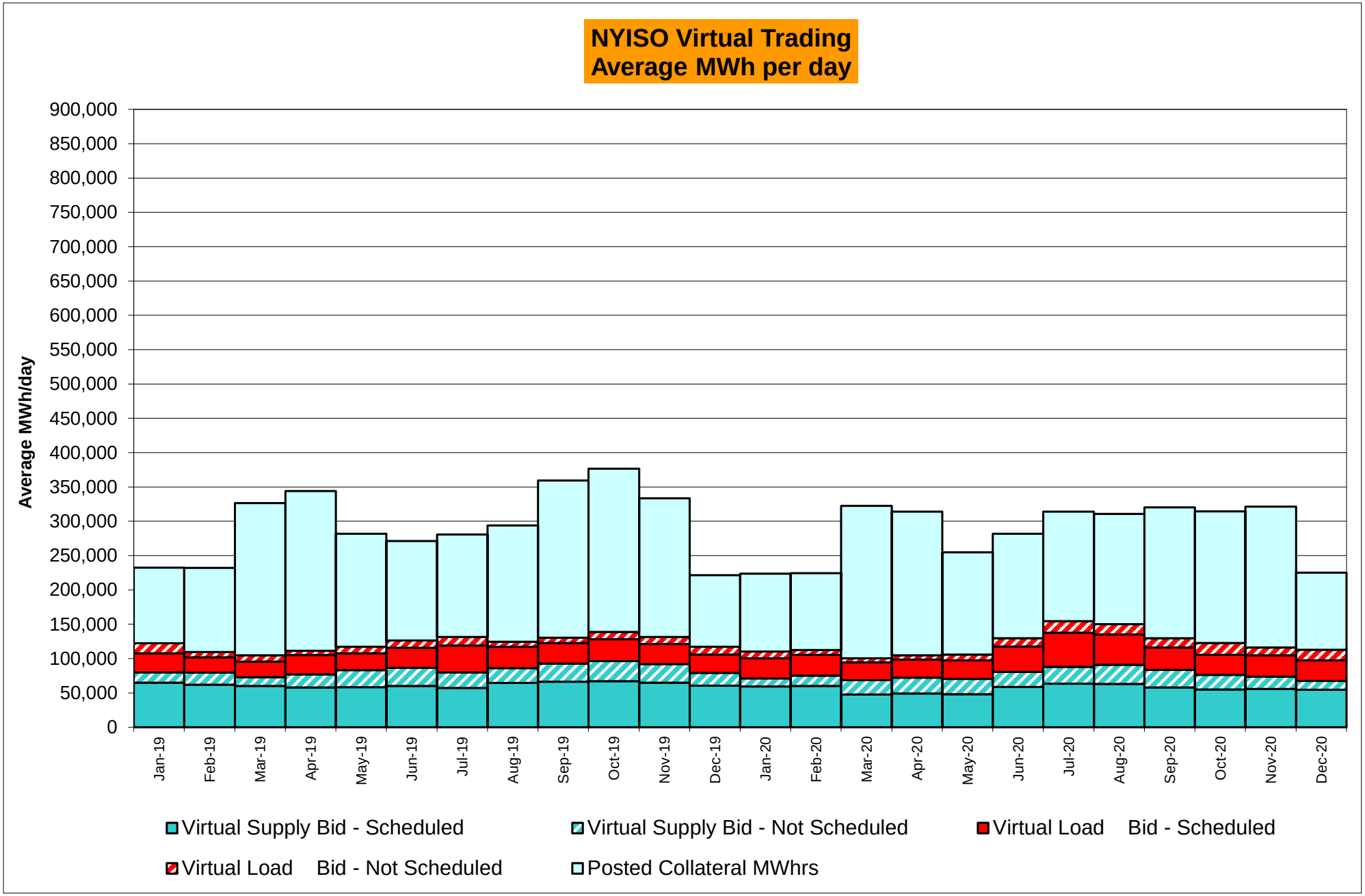


*Calendar days from reservation date; for June 2018 forward, business days from market date

Market Mitigation and Analysis
Prepared: 1/11/2021 10:55 AM

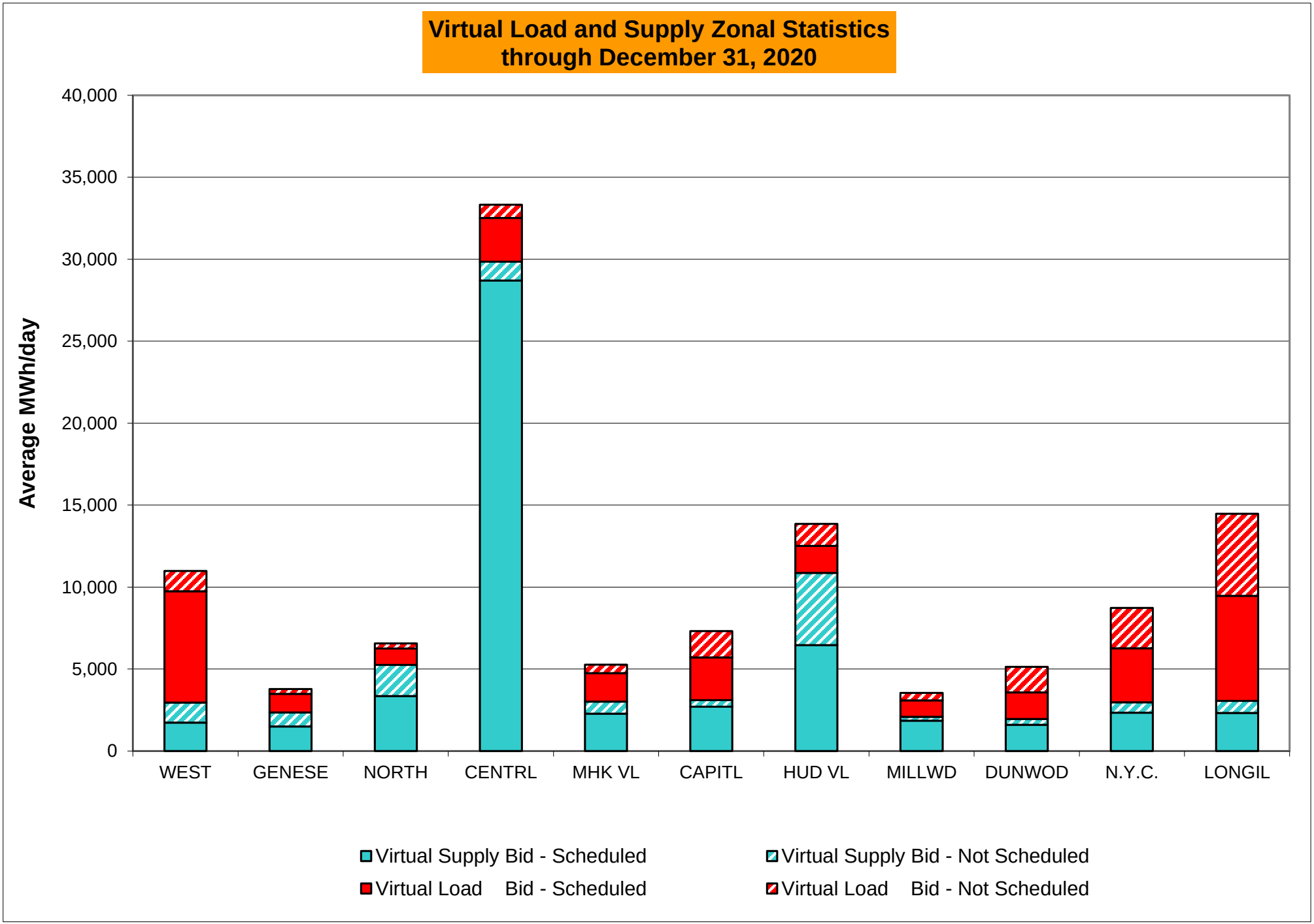
Y

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



Market Mitigation and Analysis
Prepared: 1/11/2021 10:51 AM

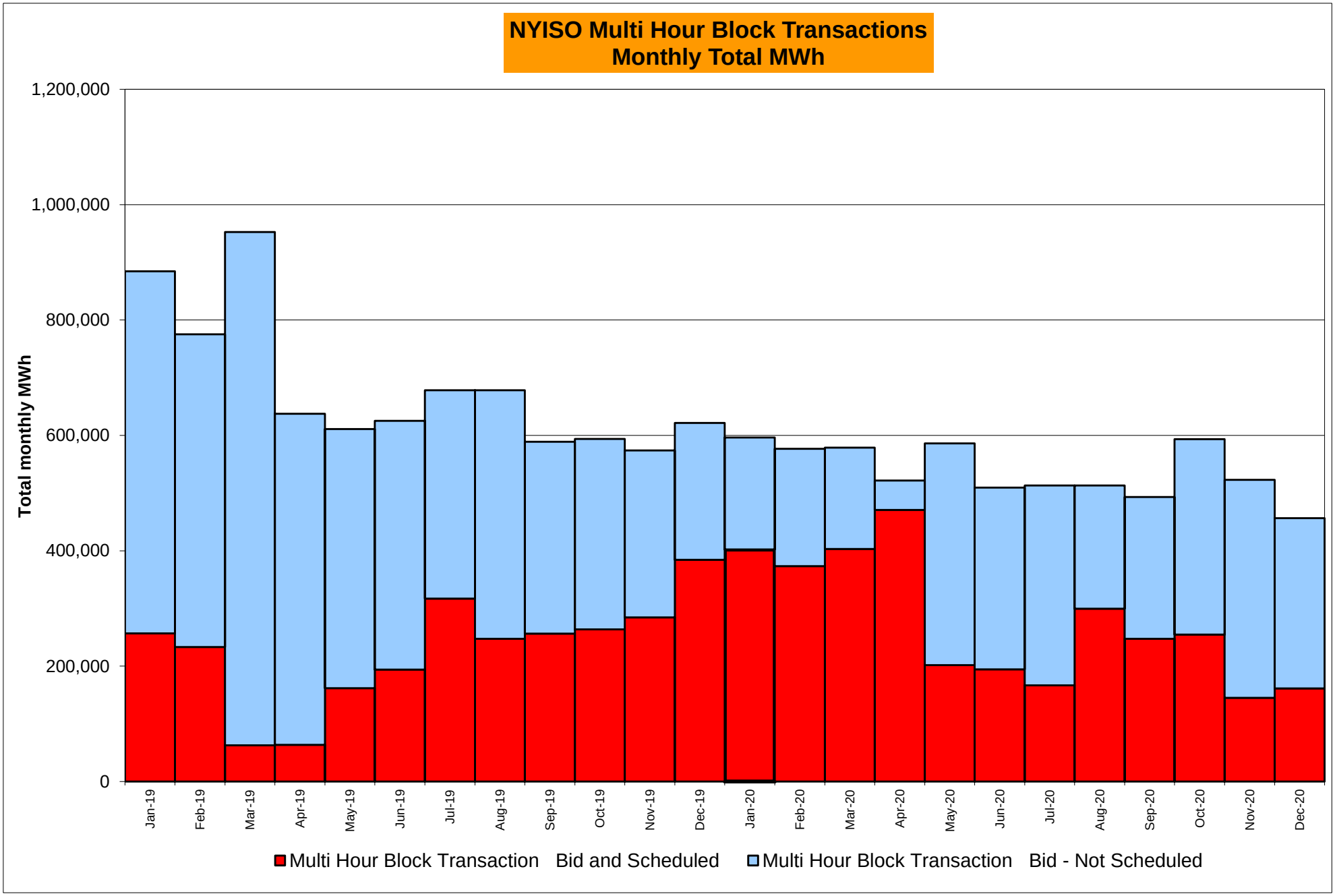
Z



Market Mitigation and Analysis
Prepared: 1/11/2021 10:51 AM

Virtual Load and Supply Zonal Statistics (Average MWh/day) - 2020

		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-20	7,809	1,328	1,765	984		**MHK VL**	Jan-20	747	77	2,155	793		**DUNWOD**	Jan-20	1,120	241	3,191	370
	Feb-20	8,213	1,248	2,597	947			Feb-20	724	88	2,339	504			Feb-20	536	298	3,782	368
	Mar-20	9,155	1,778	1,637	1,236			Mar-20	481	97	2,455	542			Mar-20	766	109	3,143	282
	Apr-20	10,056	2,032	1,542	1,018			Apr-20	577	86	2,599	888			Apr-20	1,185	423	2,336	504
	May-20	7,943	3,322	2,105	3,397			May-20	586	70	1,878	287			May-20	1,114	196	2,373	323
	Jun-20	8,014	3,448	1,729	1,706			Jun-20	746	100	2,597	770			Jun-20	1,893	1,124	2,881	789
	Jul-20	8,616	4,286	2,582	1,469			Jul-20	1,144	250	3,965	951			Jul-20	2,944	1,069	3,181	416
	Aug-20	8,911	2,132	2,255	1,956			Aug-20	1,278	296	2,801	1,273			Aug-20	2,985	837	3,403	1,142
	Sep-20	8,119	2,224	2,136	1,707			Sep-20	1,174	676	2,791	738			Sep-20	1,566	990	1,969	1,050
	Oct-20	6,778	2,589	1,884	1,655			Oct-20	1,225	535	1,990	901			Oct-20	1,087	1,727	2,106	1,174
	Nov-20	7,232	1,067	1,449	1,697			Nov-20	1,274	270	3,476	856			Nov-20	1,899	1,539	1,745	886
	Dec-20	6,786	1,230	1,731	1,233			Dec-20	1,740	516	2,272	740			Dec-20	1,619	1,567	1,607	346
GENESE	Jan-20	553	131	1,749	995		**CAPITL**	Jan-20	1,772	539	3,324	1,235		**N.Y.C.**	Jan-20	6,699	2,678	2,148	1,639
	Feb-20	534	79	2,082	640			Feb-20	2,046	418	3,149	673			Feb-20	9,452	1,841	1,316	1,894
	Mar-20	397	46	2,294	550			Mar-20	1,446	443	3,181	837			Mar-20	4,317	1,126	1,676	2,571
	Apr-20	422	42	2,940	622			Apr-20	2,367	825	3,335	928			Apr-20	2,089	546	1,864	2,269
	May-20	356	47	2,051	618			May-20	1,982	151	2,597	541			May-20	2,759	548	1,692	1,049
	Jun-20	949	163	2,238	939			Jun-20	1,622	328	2,994	472			Jun-20	6,448	1,621	1,273	889
	Jul-20	1,633	590	1,508	1,123			Jul-20	1,547	392	6,489	1,247			Jul-20	14,514	2,512	1,013	1,005
	Aug-20	1,435	486	3,028	1,745			Aug-20	1,551	783	4,741	1,525			Aug-20	12,432	2,728	1,492	1,387
	Sep-20	866	700	2,911	1,108			Sep-20	2,428	896	2,400	1,556			Sep-20	6,194	1,598	1,671	2,053
	Oct-20	801	539	2,440	1,234			Oct-20	2,962	1,288	2,358	1,124			Oct-20	3,396	1,549	1,818	1,943
	Nov-20	917	258	2,268	1,095			Nov-20	2,598	1,077	2,092	668			Nov-20	4,180	1,423	2,488	1,364
	Dec-20	1,123	299	1,506	851			Dec-20	2,607	1,612	2,703	399			Dec-20	3,295	2,450	2,331	647
NORTH	Jan-20	811	206	5,038	1,765		**HUD VL**	Jan-20	891	1,274	7,573	2,206		**LONGIL**	Jan-20	5,640	2,824	2,246	1,109
	Feb-20	402	276	5,144	2,014			Feb-20	886	722	8,517	5,838			Feb-20	4,795	1,683	1,678	1,217
	Mar-20	335	293	5,075	2,315			Mar-20	944	634	6,811	10,029			Mar-20	5,402	1,429	1,602	1,683
	Apr-20	321	210	5,153	2,057			Apr-20	1,001	813	5,955	12,414			Apr-20	5,033	1,036	1,620	1,672
	May-20	2,305	381	3,547	1,757			May-20	1,088	806	5,998	12,839			May-20	5,948	2,125	1,844	1,045
	Jun-20	1,277	696	3,692	2,128			Jun-20	1,877	745	9,825	12,284			Jun-20	8,361	2,434	1,568	809
	Jul-20	1,031	612	3,848	2,745			Jul-20	2,011	1,091	9,899	12,718			Jul-20	8,727	4,710	1,853	840
	Aug-20	1,084	532	3,349	2,392			Aug-20	2,047	805	10,449	12,462			Aug-20	6,498	4,527	2,398	1,423
	Sep-20	950	644	3,846	1,998			Sep-20	1,415	800	8,027	12,119			Sep-20	6,834	2,901	1,860	1,452
	Oct-20	924	536	3,085	2,055			Oct-20	1,607	1,321	7,328	8,194			Oct-20	7,578	5,397	1,473	929
	Nov-20	904	308	3,354	2,191			Nov-20	2,987	1,140	6,345	7,060			Nov-20	6,125	3,551	1,854	673
	Dec-20	996	314	3,351	1,905			Dec-20	1,657	1,347	6,467	4,392			Dec-20	6,409	4,999	2,325	740
CENTRL	Jan-20	3,050	214	28,503	541		**MILLWD**	Jan-20	270	68	1,646	213		**NYISO**	Jan-20	29,361	9,580	59,340	11,849
	Feb-20	2,567	118	27,919	487			Feb-20	281	68	1,811	229			Feb-20	30,434	6,838	60,334	14,811
	Mar-20	2,340	113	17,986	481			Mar-20	494	19	1,844	174			Mar-20	26,077	6,087	47,704	20,700
	Apr-20	2,568	131	20,490	491			Apr-20	563	55	1,510	90			Apr-20	26,181	6,200	49,344	22,953
	May-20	2,736	296	22,414	414			May-20	502	198	1,442	76			May-20	27,319	8,140	47,941	22,346
	Jun-20	4,053	770	28,114	903			Jun-20	1,756	558	1,789	312			Jun-20	36,995	11,988	58,701	22,003
	Jul-20	3,622	620	28,085	1,455			Jul-20	4,003	800	1,054	553			Jul-20	49,792	16,933	63,478	24,522
	Aug-20	2,244	727	28,045	1,949			Aug-20	3,960	992	989	537			Aug-20	44,424	14,846	62,951	27,790
	Sep-20	1,735	1,451	28,835	1,369			Sep-20	1,501	501	1,467	375			Sep-20	32,781	13,381	57,913	25,526
	Oct-20	2,231	1,196	29,075	1,769			Oct-20	730	361	1,349	443			Oct-20	29,321	17,037	54,905	21,421
	Nov-20	1,942	632	28,951	1,158			Nov-20	916	281	1,678	297			Nov-20	30,975	11,545	55,702	17,945
	Dec-20	2,671	799	28,698	1,153			Dec-20	1,009	451	1,852	234			Dec-20	29,913	15,584	54,843	12,639



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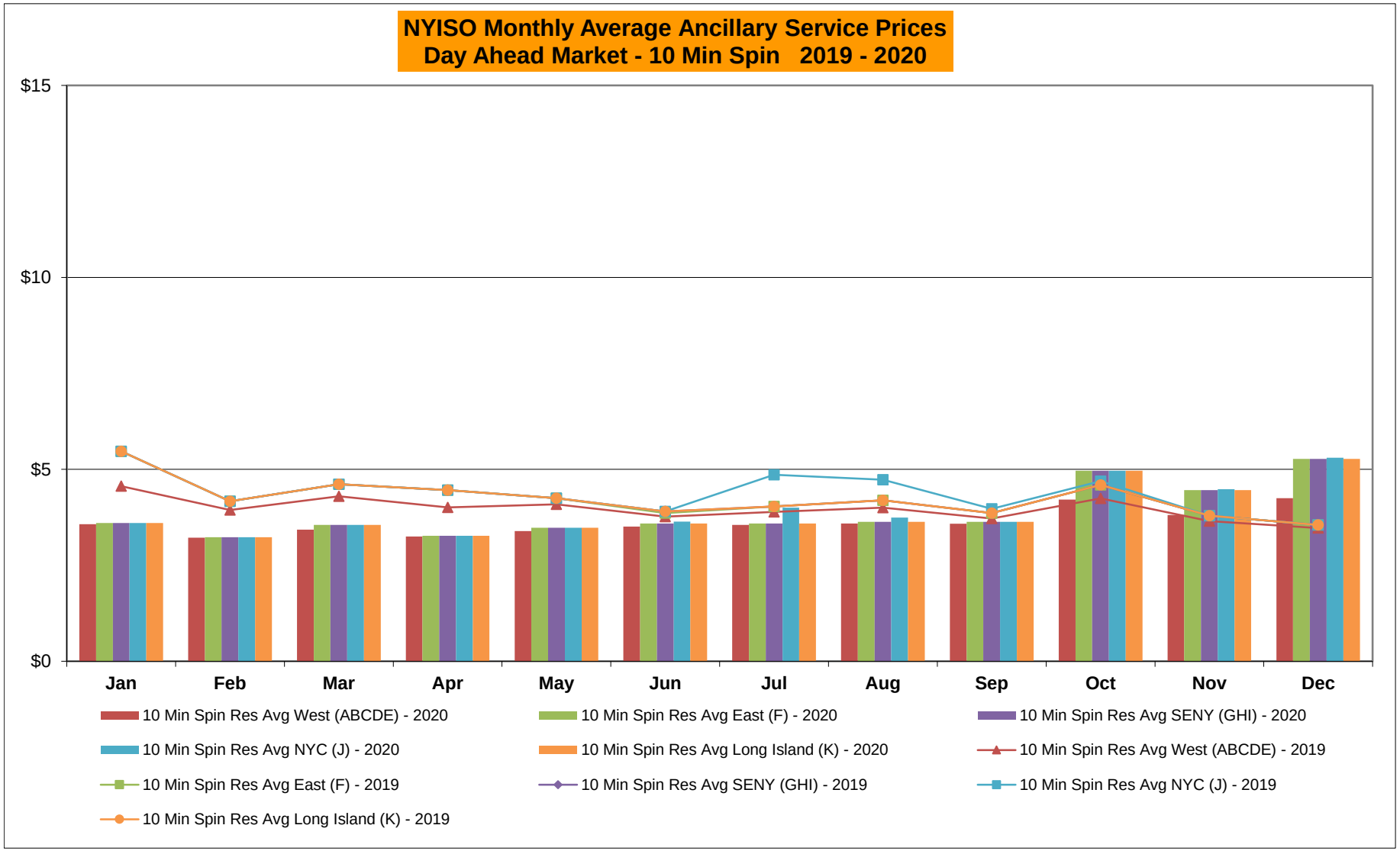
AC

Historical values updated
as of April 2017



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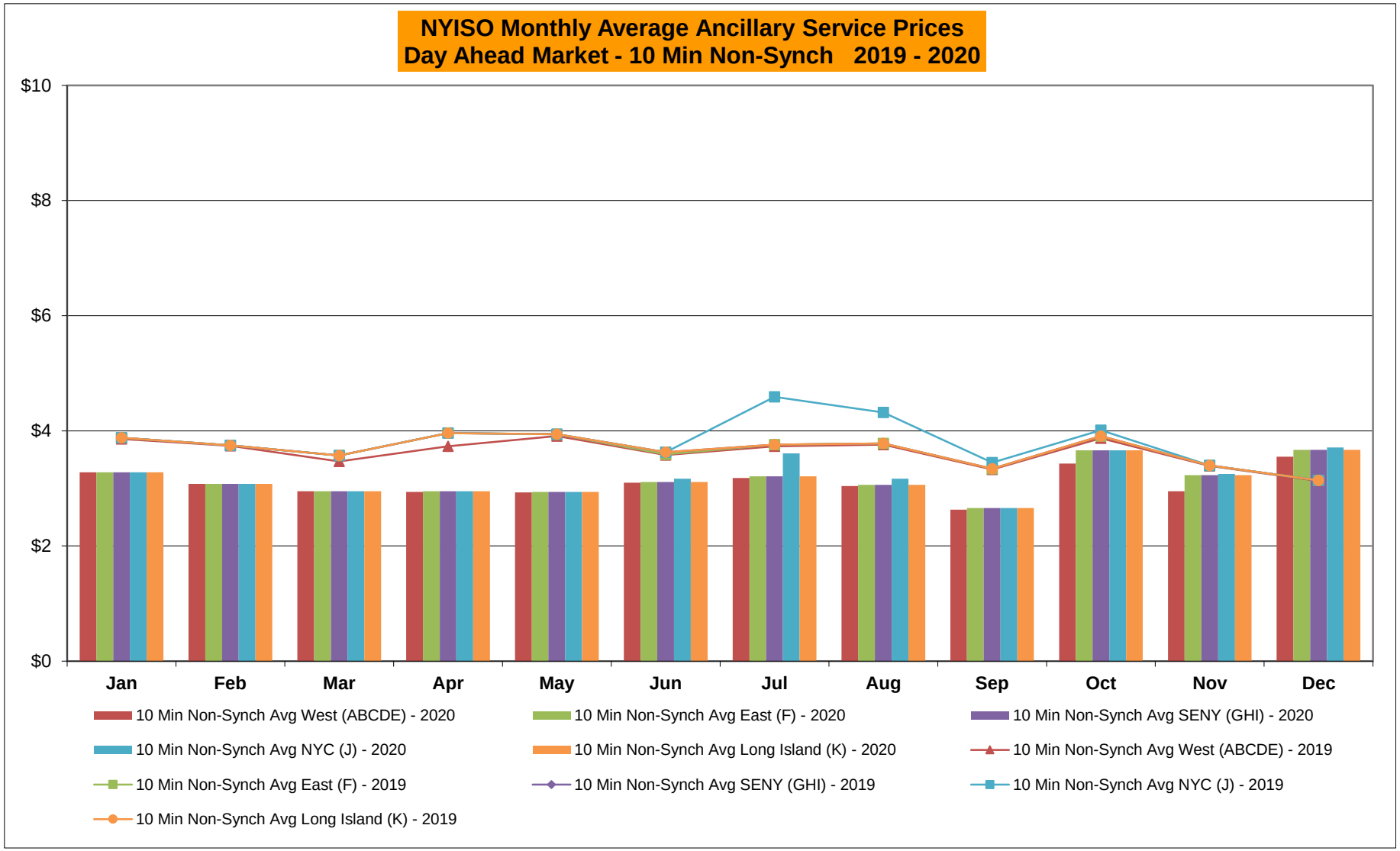
Comprehensive Scarcity Pricing activation in June 2016.



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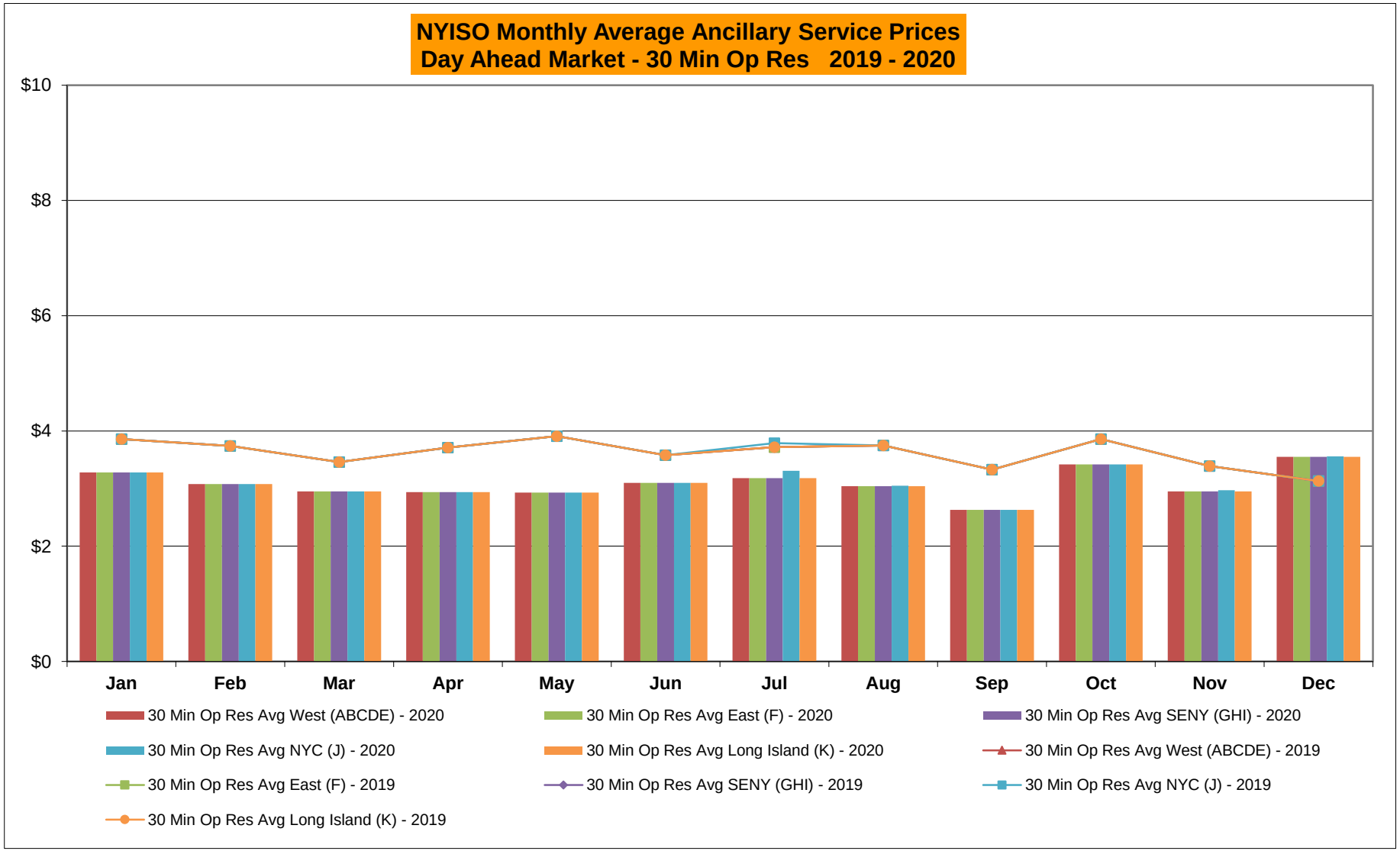

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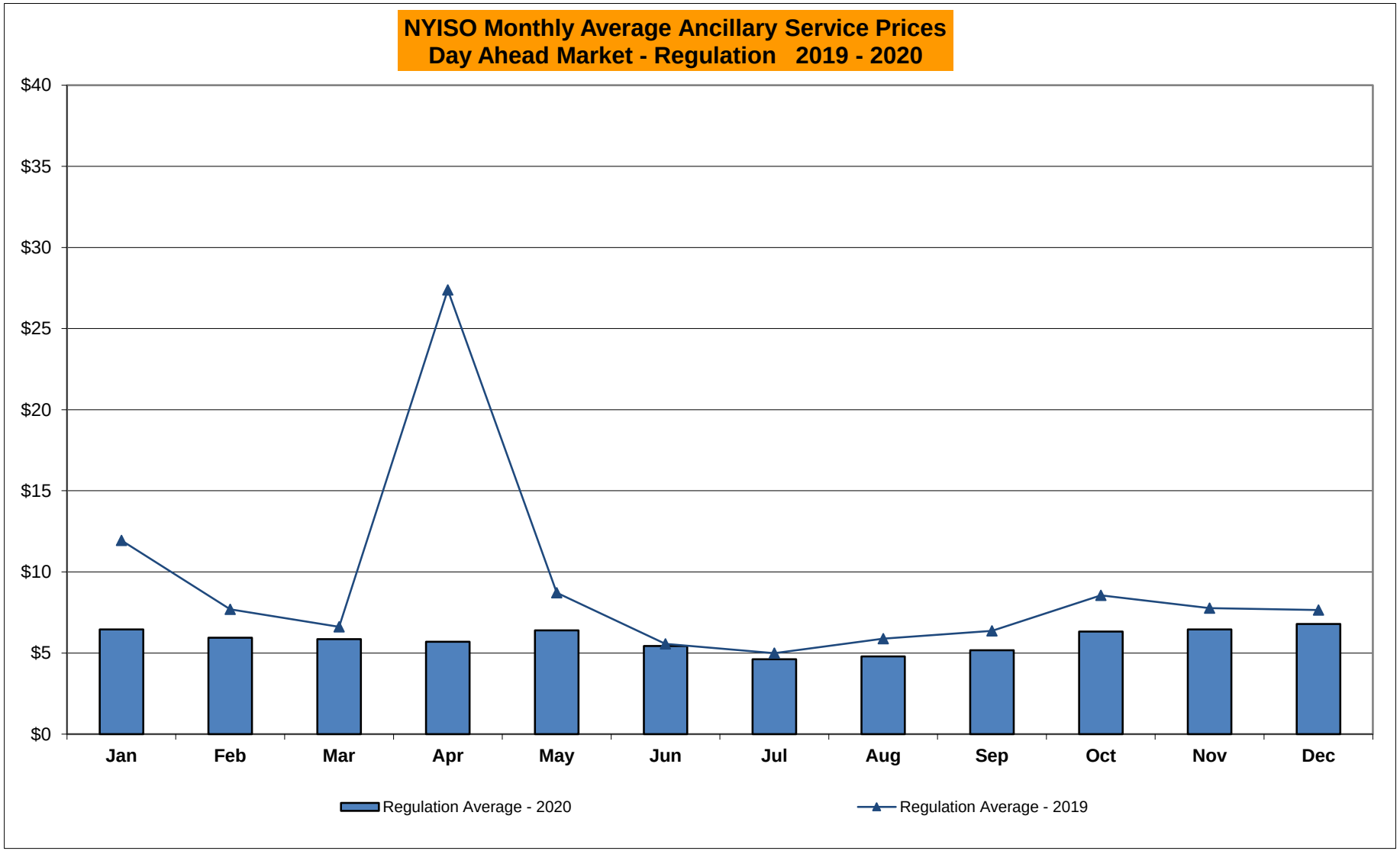

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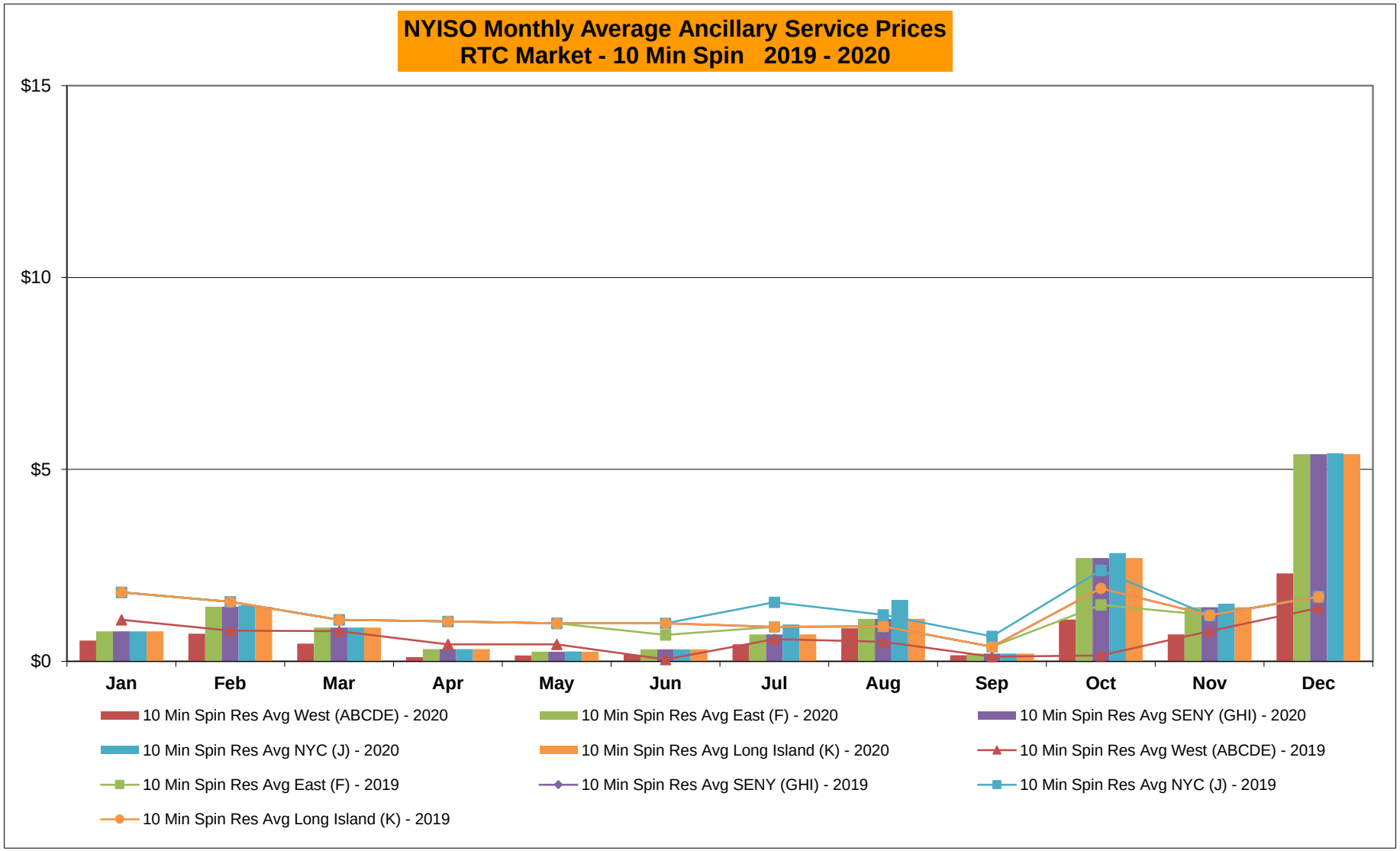

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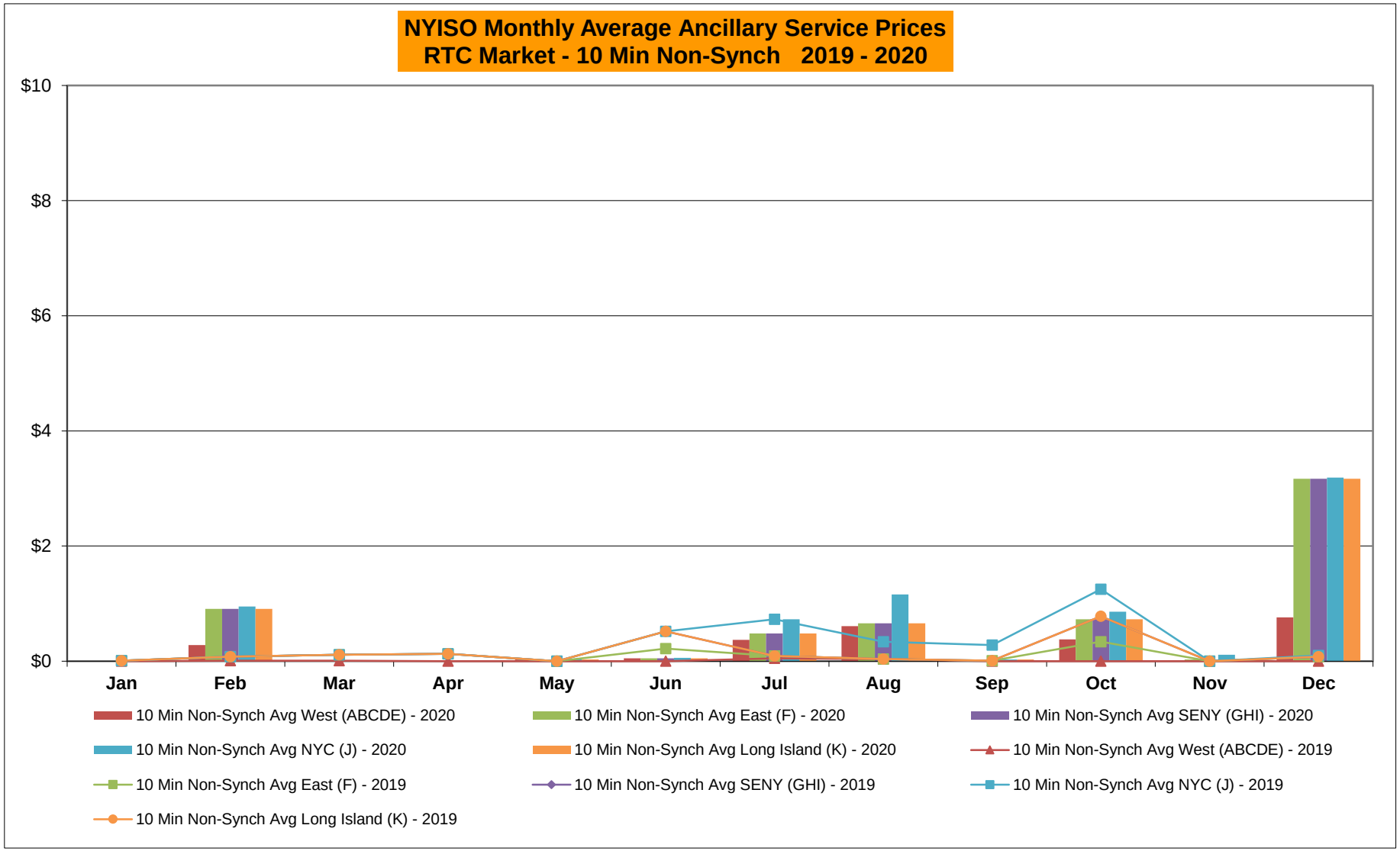

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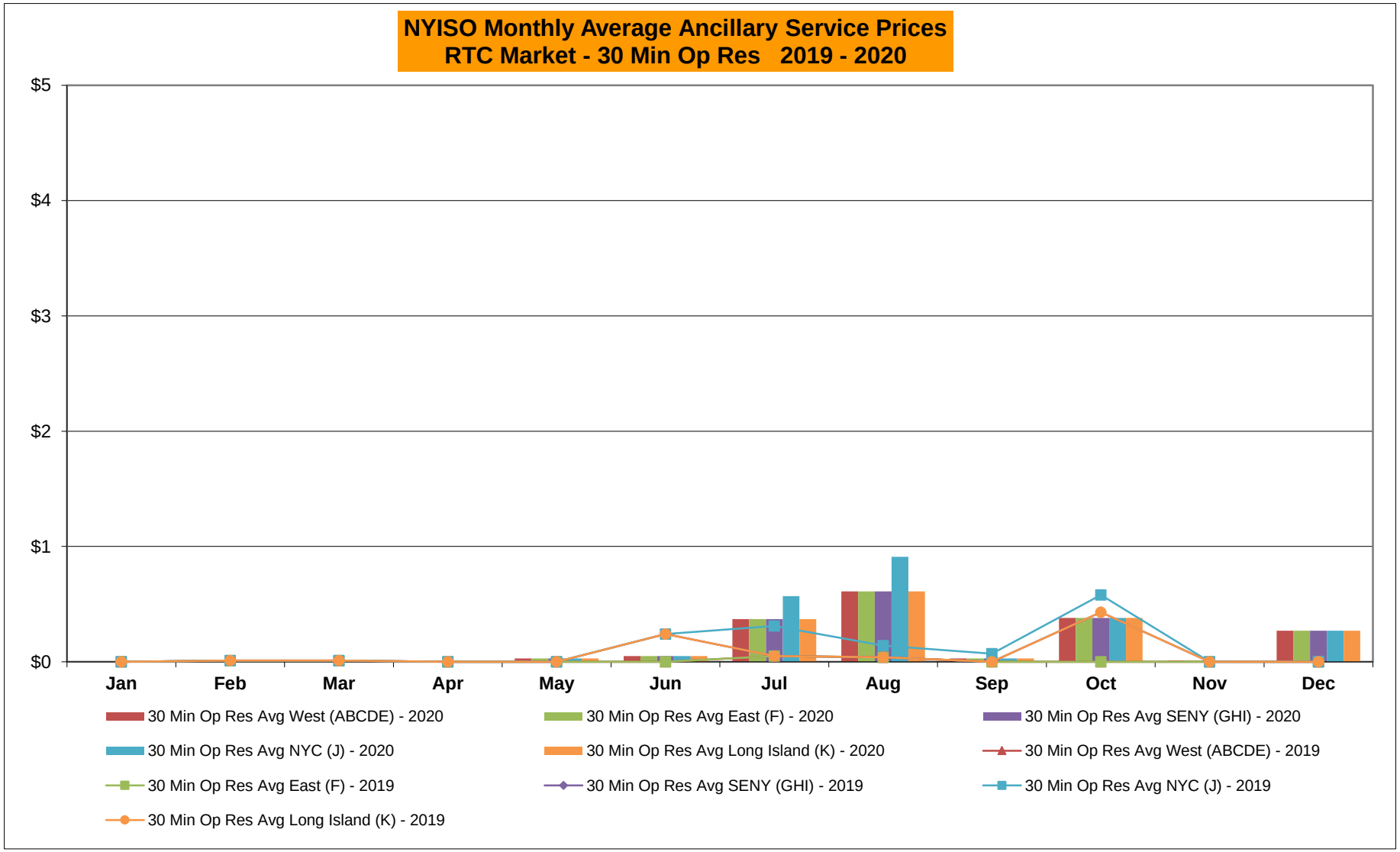

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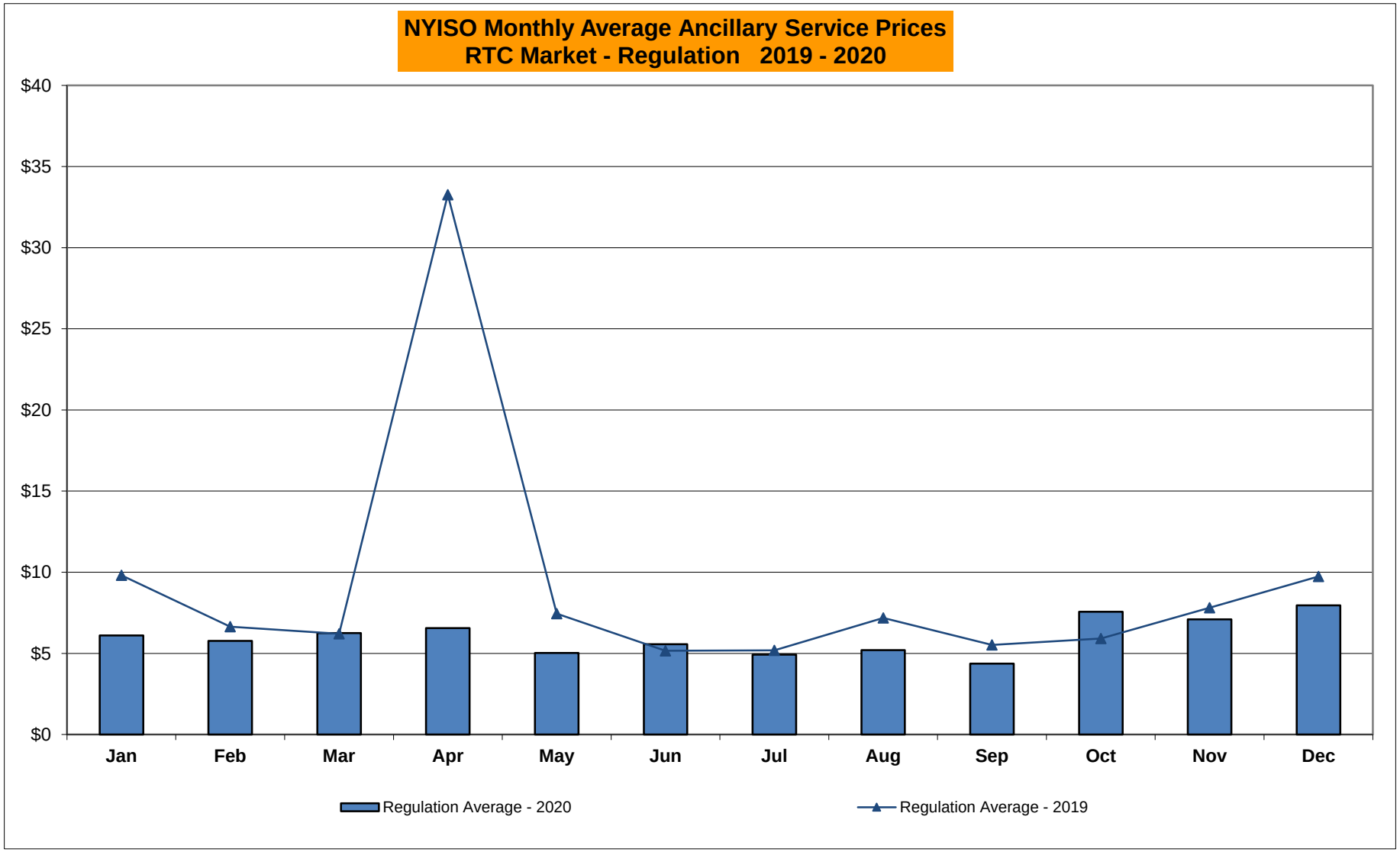

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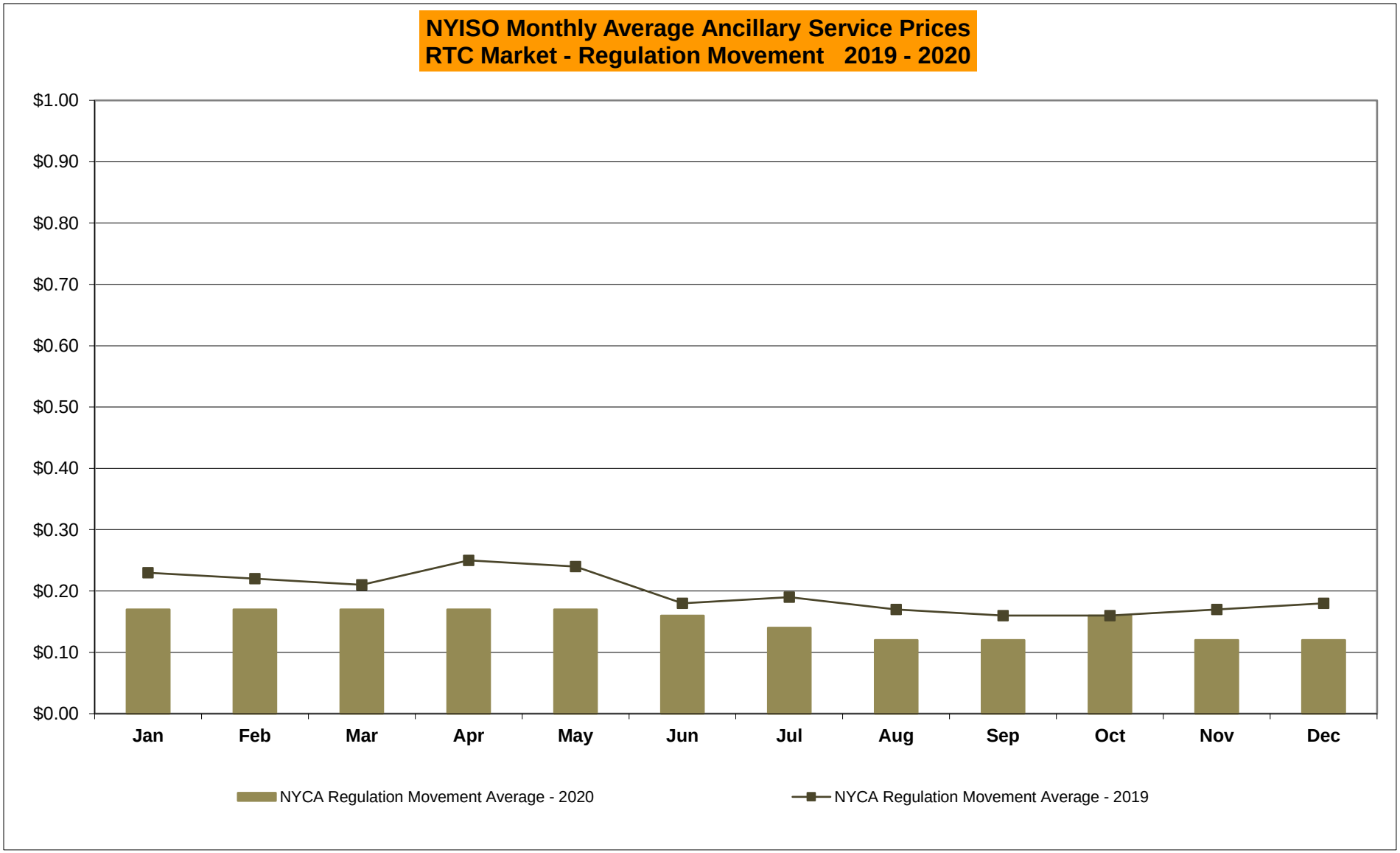

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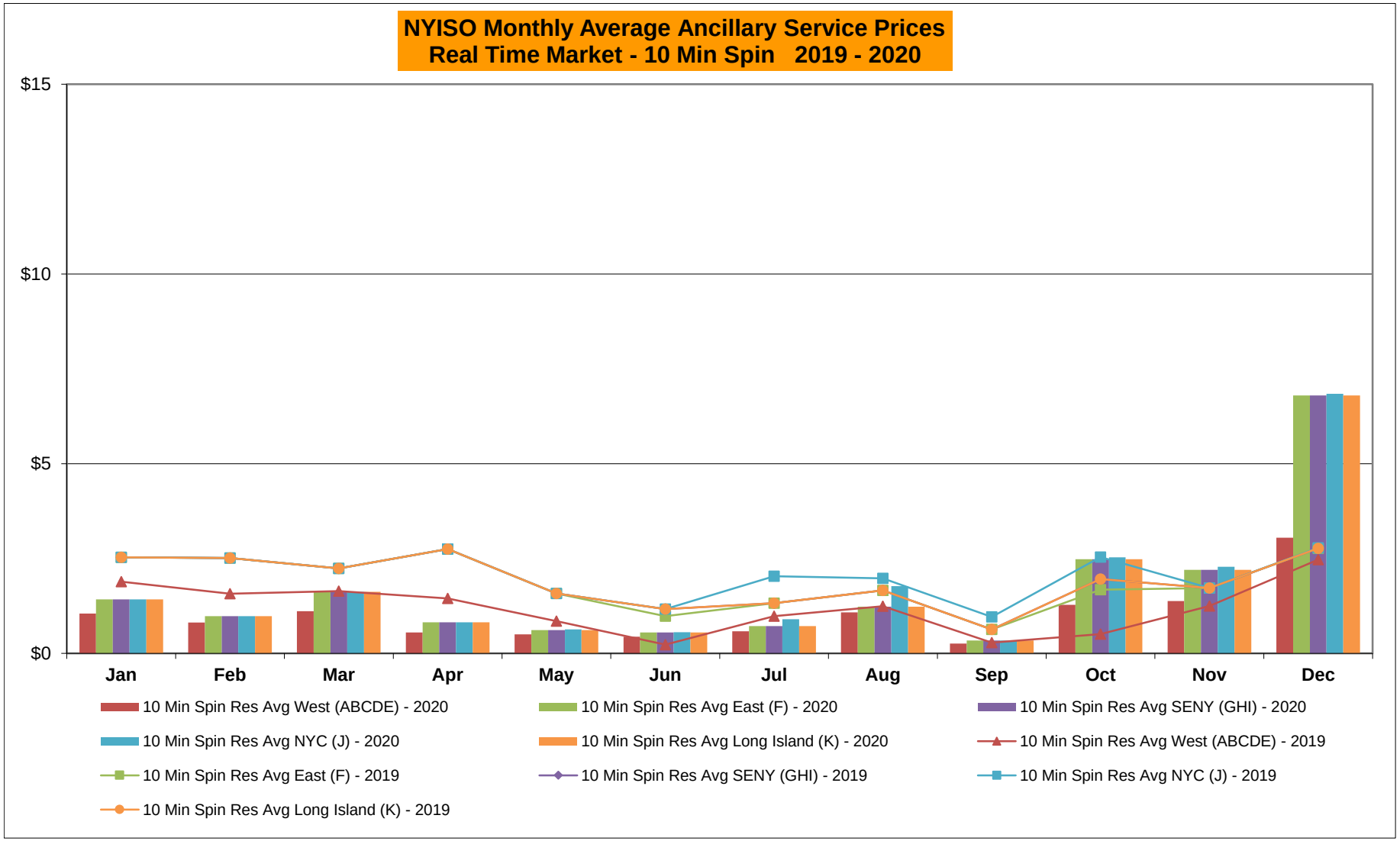

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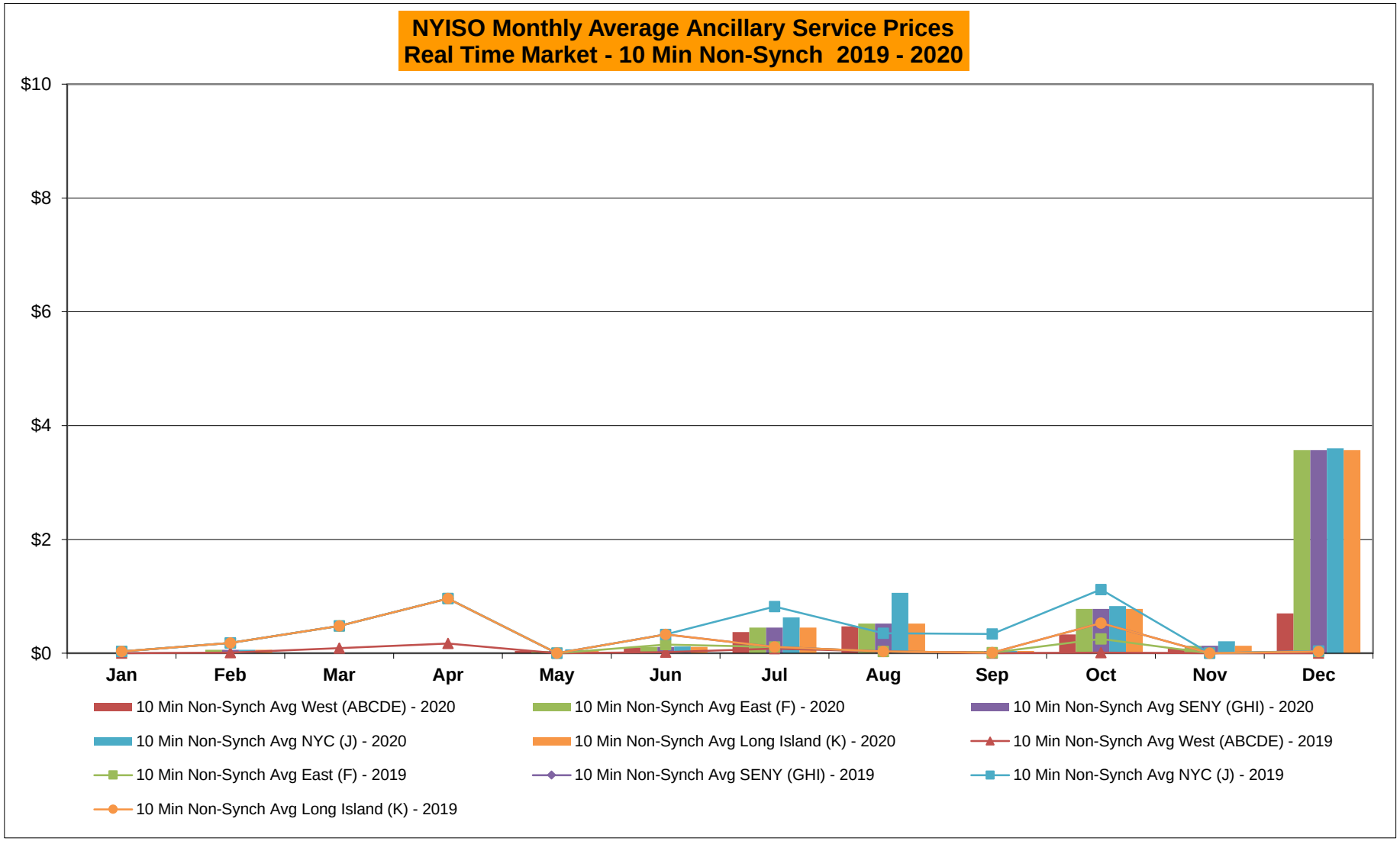

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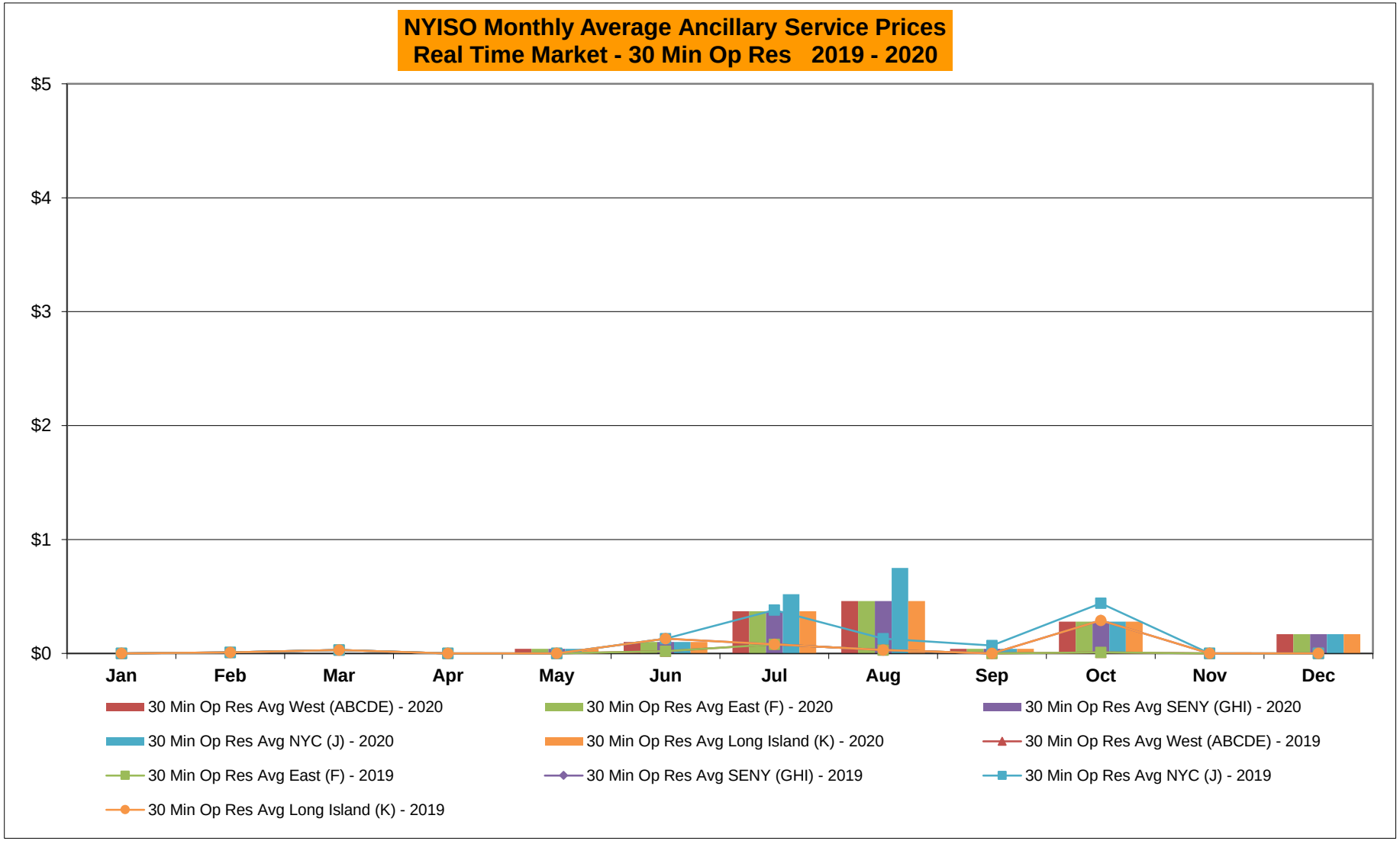

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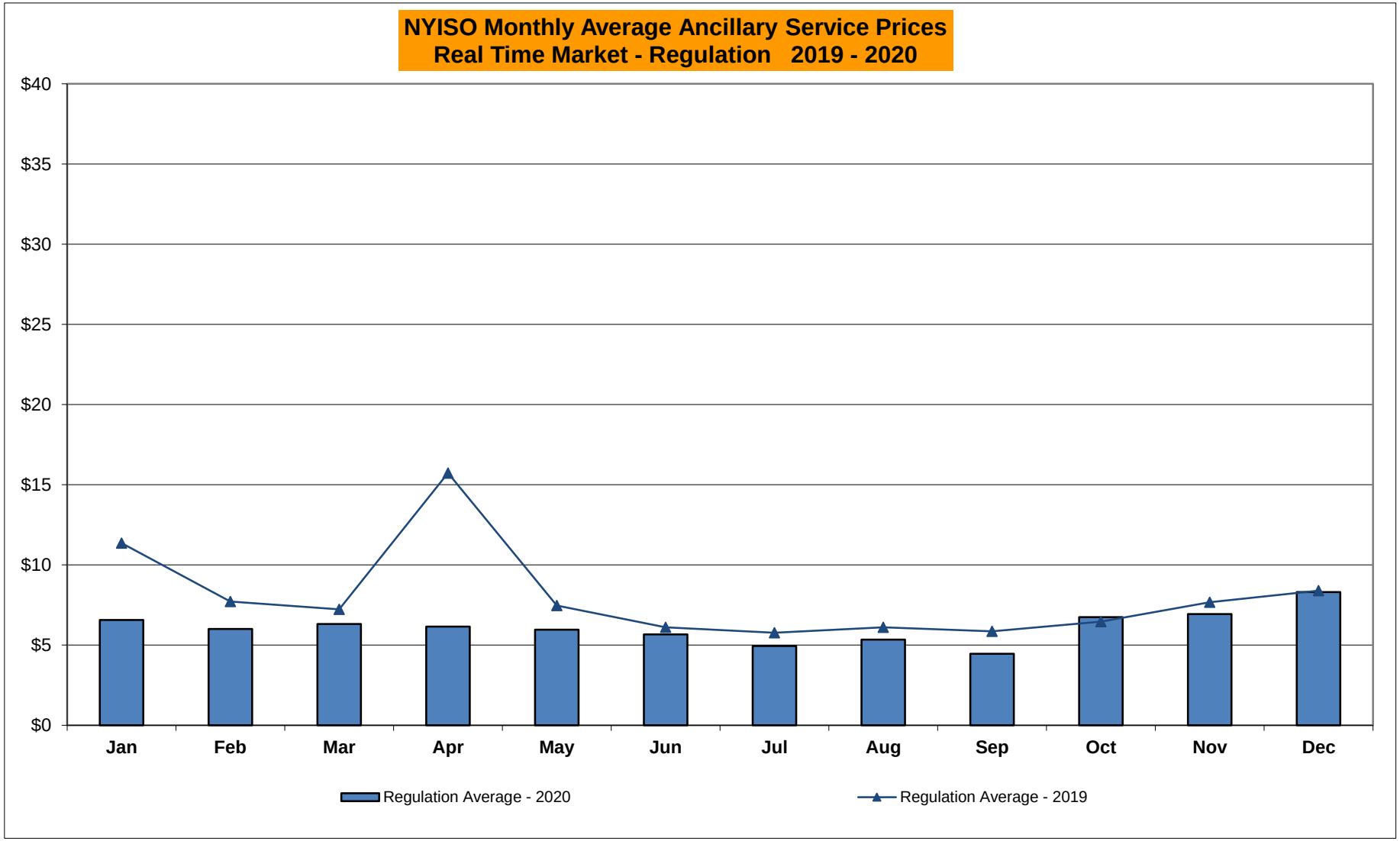

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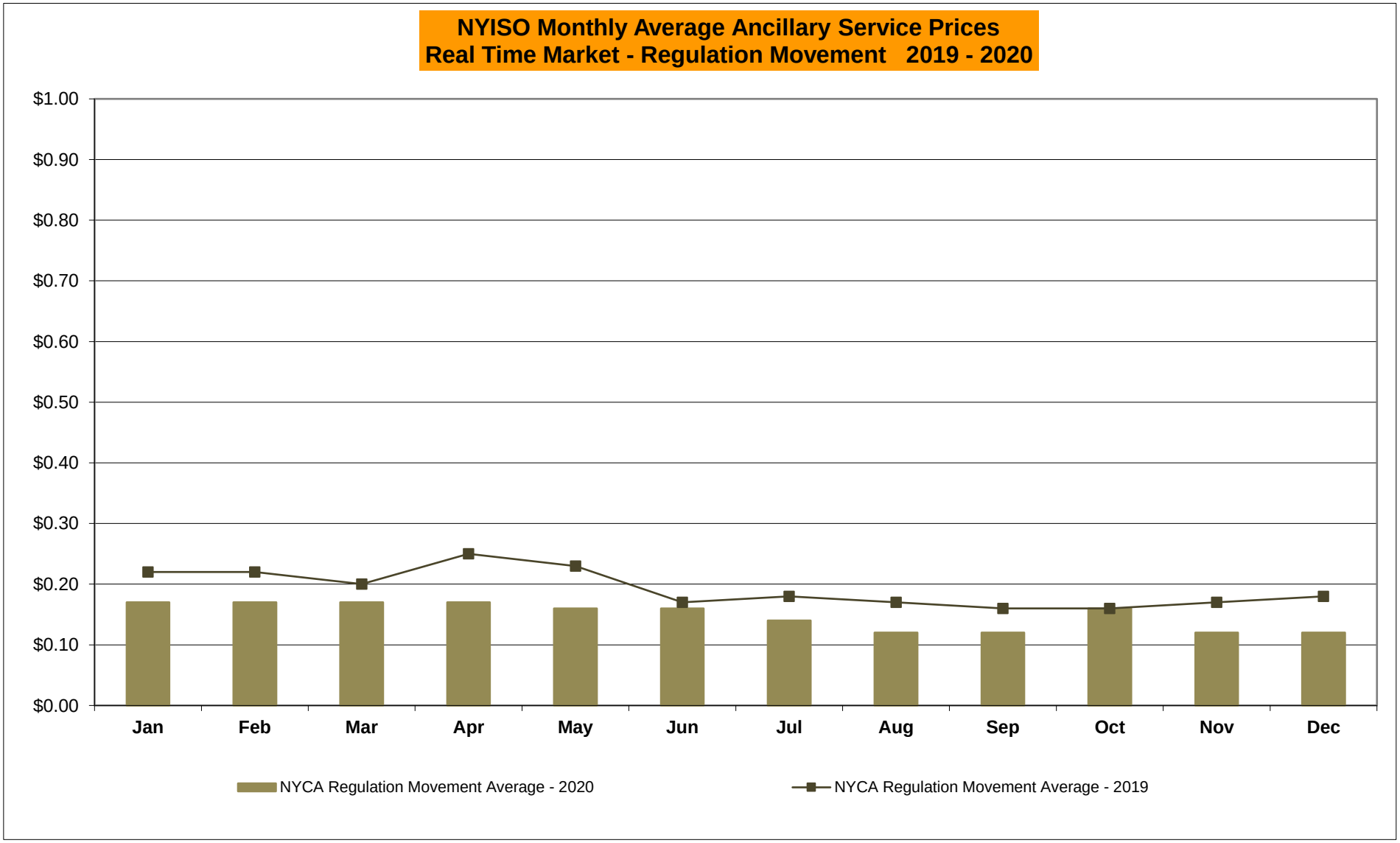

Market Mitigation and Analysis.
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AQ

Changes have been made to this graph due to
Comprehensive Scarcity Pricing activation in June 2016.

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

2020	January	February	March	April	May	June	July	August	September	October	November	December
Day Ahead Market												
10 Min Spin Long Island (K)	3.60	3.23	3.55	3.27	3.48	3.59	3.59	3.63	3.63	4.96	4.46	5.27
10 Min Spin NYC (J)	3.60	3.23	3.55	3.27	3.48	3.64	4.00	3.74	3.63	4.96	4.48	5.30
10 Min Spin SENY (GHI)	3.60	3.23	3.55	3.27	3.48	3.59	3.59	3.63	3.63	4.96	4.46	5.27
10 Min Spin East (F)	3.60	3.23	3.55	3.27	3.48	3.59	3.59	3.63	3.63	4.96	4.46	5.27
10 Min Spin West (ABCDE)	3.57	3.22	3.43	3.25	3.39	3.51	3.55	3.59	3.58	4.21	3.81	4.25
10 Min Non Synch Long Island (K)	3.28	3.08	2.95	2.95	2.94	3.11	3.21	3.06	2.66	3.66	3.23	3.67
10 Min Non Synch NYC (J)	3.28	3.08	2.95	2.95	2.94	3.17	3.61	3.17	2.66	3.66	3.25	3.71
10 Min Non Synch SENY (GHI)	3.28	3.08	2.95	2.95	2.94	3.11	3.21	3.06	2.66	3.66	3.23	3.67
10 Min Non Synch East (F)	3.28	3.08	2.95	2.95	2.94	3.11	3.21	3.06	2.66	3.66	3.23	3.67
10 Min Non Synch West (ABCDE)	3.28	3.08	2.95	2.94	2.93	3.10	3.18	3.04	2.63	3.43	2.95	3.55
30 Min Long Island (K)	3.28	3.08	2.95	2.94	2.93	3.10	3.18	3.04	2.63	3.42	2.95	3.55
30 Min NYC (J)	3.28	3.08	2.95	2.94	2.93	3.10	3.31	3.05	2.63	3.42	2.97	3.56
30 Min SENY (GHI)	3.28	3.08	2.95	2.94	2.93	3.10	3.18	3.04	2.63	3.42	2.95	3.55
30 Min East (F)	3.28	3.08	2.95	2.94	2.93	3.10	3.18	3.04	2.63	3.42	2.95	3.55
30 Min West (ABCDE)	3.28	3.08	2.95	2.94	2.93	3.10	3.18	3.04	2.63	3.42	2.95	3.55
Regulation	6.46	5.94	5.86	5.70	6.40	5.44	4.61	4.79	5.17	6.32	6.45	6.79

2019	January	February	March	April	May	June	July	August	September	October	November	December
Day Ahead Market												
10 Min Spin Long Island (K)	5.47	5.47	4.61	4.46	4.25	4.25	4.25	4.25	4.25	4.59	3.79	3.55
10 Min Spin NYC (J)	5.47	5.47	4.61	4.46	4.25	4.25	4.25	4.25	4.25	4.69	3.79	3.55
10 Min Spin SENY (GHI)	5.47	4.17	4.61	4.46	4.25	3.90	4.03	4.19	3.86	4.59	3.79	3.55
10 Min Spin East (F)	5.47	4.17	4.61	4.46	4.25	3.86	4.03	4.19	3.86	4.59	3.79	3.55
10 Min Spin West (ABCDE)	4.56	3.94	4.30	4.01	4.09	3.77	3.89	4.00	3.72	4.24	3.65	3.47
10 Min Non Synch Long Island (K)	3.88	3.88	3.57	3.96	3.94	3.94	3.94	3.94	3.94	3.91	3.40	3.14
10 Min Non Synch NYC (J)	3.88	3.88	3.57	3.96	3.94	3.94	3.94	3.94	3.94	4.01	3.40	3.14
10 Min Non Synch SENY (GHI)	3.88	3.75	3.57	3.96	3.94	3.63	3.76	3.78	3.34	3.91	3.40	3.14
10 Min Non Synch East (F)	3.88	3.75	3.57	3.96	3.94	3.59	3.76	3.78	3.34	3.91	3.40	3.14
10 Min Non Synch West (ABCDE)	3.86	3.74	3.47	3.73	3.91	3.58	3.73	3.76	3.33	3.87	3.39	3.13
30 Min Long Island (K)	3.86	3.86	3.46	3.71	3.91	3.91	3.91	3.91	3.91	3.86	3.39	3.13
30 Min NYC (J)	3.86	3.86	3.46	3.71	3.91	3.91	3.91	3.91	3.91	3.86	3.39	3.13
30 Min SENY (GHI)	3.86	3.74	3.46	3.71	3.91	3.58	3.72	3.75	3.33	3.86	3.39	3.13
30 Min East (F)	3.86	3.74	3.46	3.71	3.91	3.58	3.72	3.75	3.33	3.86	3.39	3.13
30 Min West (ABCDE)	3.86	3.74	3.46	3.71	3.91	3.58	3.72	3.75	3.33	3.86	3.39	3.13
Regulation	11.94	7.69	6.62	27.38	8.71	5.57	4.99	5.89	6.36	8.55	7.77	7.65

Changes have been made to this table due to
Comprehensive Scarcity Pricing activation in June 2016.

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

2020	January	February	March	April	May	June	July	August	September	October	November	December
RTC Market												
10 Min Spin Long Island (K)	0.78	1.42	0.88	0.32	0.25	0.31	0.70	1.11	0.20	2.69	1.41	5.40
10 Min Spin NYC (J)	0.78	1.46	0.88	0.32	0.26	0.31	0.96	1.60	0.20	2.82	1.50	5.42
10 Min Spin SENY (GHI)	0.78	1.42	0.88	0.32	0.25	0.31	0.70	1.11	0.20	2.69	1.41	5.40
10 Min Spin East (F)	0.78	1.42	0.88	0.32	0.25	0.31	0.70	1.11	0.20	2.69	1.41	5.40
10 Min Spin West (ABCDE)	0.54	0.72	0.46	0.11	0.15	0.17	0.44	0.86	0.16	1.09	0.70	2.29
10 Min Non Synch Long Island (K)	0.00	0.91	0.00	0.00	0.03	0.05	0.48	0.66	0.03	0.73	0.03	3.17
10 Min Non Synch NYC (J)	0.00	0.95	0.00	0.00	0.04	0.06	0.73	1.16	0.03	0.86	0.11	3.19
10 Min Non Synch SENY (GHI)	0.00	0.91	0.00	0.00	0.03	0.05	0.48	0.66	0.03	0.73	0.03	3.17
10 Min Non Synch East (F)	0.00	0.91	0.00	0.00	0.03	0.05	0.48	0.66	0.03	0.73	0.03	3.17
10 Min Non Synch West (ABCDE)	0.00	0.28	0.00	0.00	0.03	0.05	0.37	0.61	0.03	0.38	0.01	0.76
30 Min Long Island (K)	0.00	0.01	0.00	0.00	0.03	0.05	0.37	0.61	0.03	0.38	0.01	0.27
30 Min NYC (J)	0.00	0.01	0.00	0.00	0.03	0.05	0.57	0.91	0.03	0.38	0.01	0.27
30 Min SENY (GHI)	0.00	0.01	0.00	0.00	0.03	0.05	0.37	0.61	0.03	0.38	0.01	0.27
30 Min East (F)	0.00	0.01	0.00	0.00	0.03	0.05	0.37	0.61	0.03	0.38	0.01	0.27
30 Min West (ABCDE)	0.00	0.01	0.00	0.00	0.03	0.05	0.37	0.61	0.03	0.38	0.01	0.27
Regulation	6.11	5.77	6.25	6.56	5.02	5.56	4.92	5.20	4.37	7.57	7.09	7.96
NYCA Regulation Movement	0.17	0.17	0.17	0.17	0.17	0.16	0.14	0.12	0.12	0.16	0.12	0.12

2019	January	February	March	April	May	June	July	August	September	October	November	December
RTC Market												
10 Min Spin Long Island (K)	1.80	1.80	1.08	1.04	0.99	0.99	0.99	0.99	0.99	1.90	1.20	1.68
10 Min Spin NYC (J)	1.80	1.80	1.08	1.04	0.99	0.99	0.99	0.99	0.99	2.37	1.20	1.69
10 Min Spin SENY (GHI)	1.80	1.55	1.08	1.04	0.99	0.99	0.90	0.91	0.38	1.90	1.20	1.68
10 Min Spin East (F)	1.80	1.55	1.08	1.04	0.99	0.69	0.90	0.91	0.38	1.47	1.20	1.68
10 Min Spin West (ABCDE)	1.08	0.80	0.79	0.44	0.44	0.05	0.58	0.51	0.12	0.15	0.79	1.39
10 Min Non Synch Long Island (K)	0.01	0.01	0.11	0.13	0.00	0.00	0.00	0.00	0.00	0.78	0.00	0.08
10 Min Non Synch NYC (J)	0.01	0.01	0.11	0.13	0.00	0.00	0.00	0.00	0.00	1.25	0.00	0.10
10 Min Non Synch SENY (GHI)	0.01	0.08	0.11	0.13	0.00	0.52	0.09	0.04	0.01	0.78	0.00	0.08
10 Min Non Synch East (F)	0.01	0.08	0.11	0.13	0.00	0.22	0.09	0.04	0.01	0.34	0.00	0.08
10 Min Non Synch West (ABCDE)	0.00	0.01	0.01	0.00	0.00	0.00	0.05	0.04	0.00	0.00	0.00	0.00
30 Min Long Island (K)	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.00	0.00
30 Min NYC (J)	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00
30 Min SENY (GHI)	0.00	0.01	0.01	0.00	0.00	0.24	0.05	0.04	0.00	0.43	0.00	0.00
30 Min East (F)	0.00	0.01	0.01	0.00	0.00	0.00	0.05	0.04	0.00	0.00	0.00	0.00
30 Min West (ABCDE)	0.00	0.01	0.01	0.00	0.00	0.00	0.05	0.04	0.00	0.00	0.00	0.00
Regulation	9.81	6.64	6.21	33.26	7.45	5.16	5.19	7.19	5.52	5.91	7.81	9.74
NYCA Regulation Movement	0.23	0.22	0.21	0.25	0.24	0.18	0.19	0.17	0.16	0.16	0.17	0.18

Changes have been made to this table due to
Comprehensive Scarcity Pricing activation in June 2016.

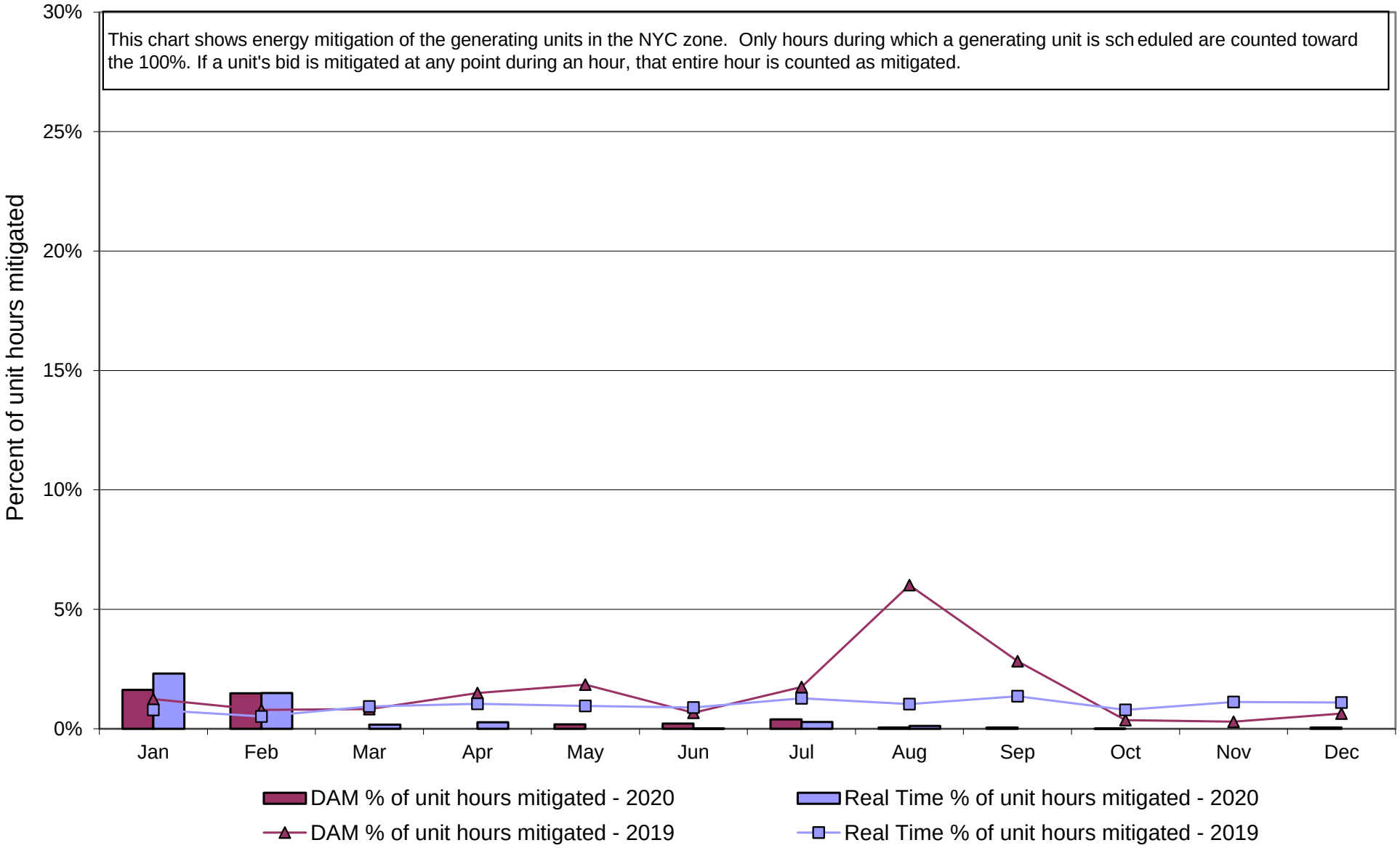
NYISO Markets Ancillary Services Statistics - Unweighted Price ($/MWH) - RT

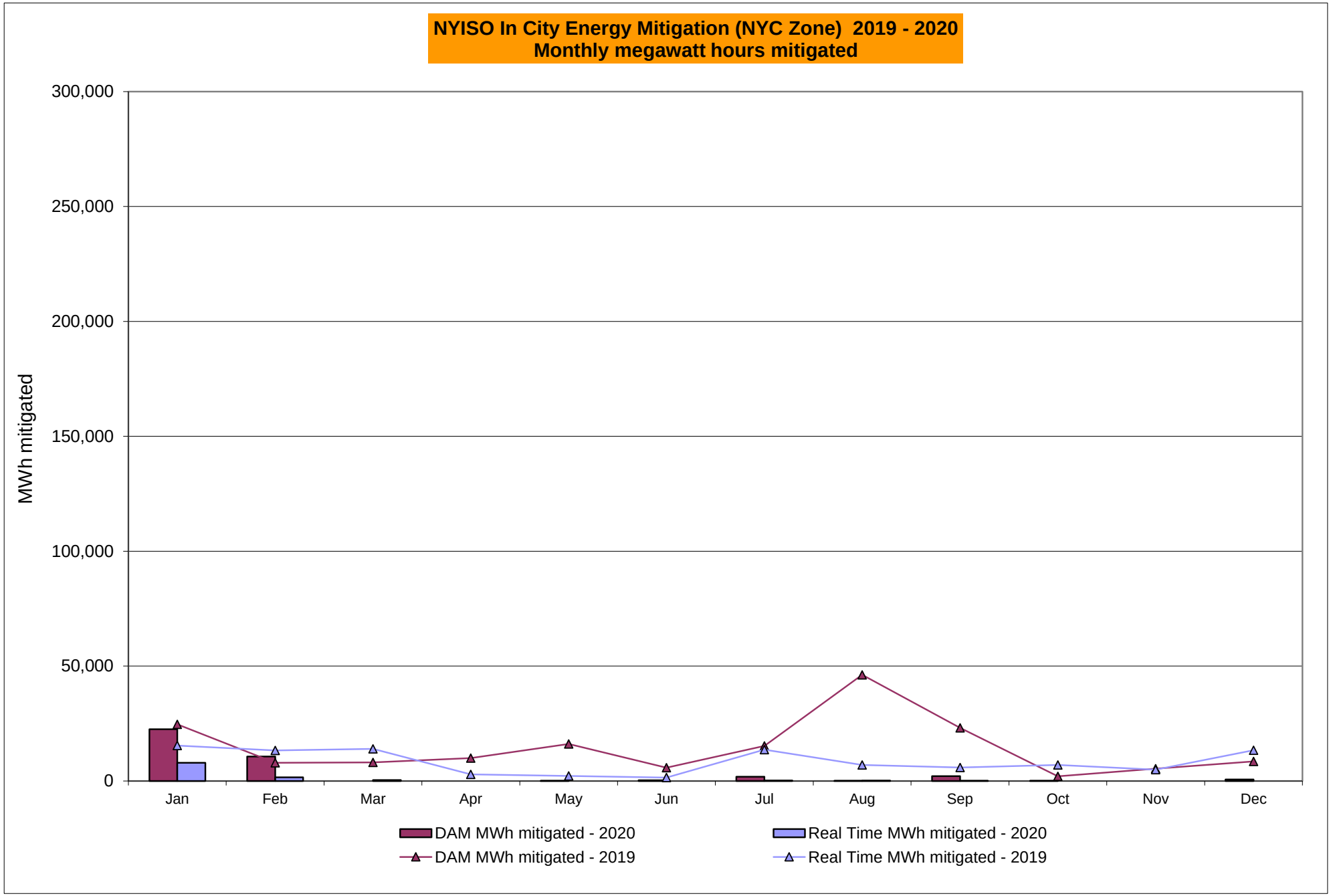
2020	January	February	March	April	May	June	July	August	September	October	November	December
Real Time Market												
10 Min Spin Long Island (K)	1.42	0.98	1.62	0.82	0.61	0.55	0.72	1.23	0.34	2.48	2.20	6.80
10 Min Spin NYC (J)	1.42	0.98	1.62	0.82	0.63	0.56	0.90	1.77	0.34	2.53	2.28	6.84
10 Min Spin SENY (GHI)	1.42	0.98	1.62	0.82	0.61	0.55	0.72	1.23	0.34	2.48	2.20	6.80
10 Min Spin East (F)	1.42	0.98	1.62	0.82	0.61	0.55	0.72	1.23	0.34	2.48	2.20	6.80
10 Min Spin West (ABCDE)	1.05	0.81	1.11	0.55	0.50	0.44	0.58	1.08	0.26	1.28	1.38	3.05
10 Min Non Synch Long Island (K)	0.00	0.06	0.00	0.00	0.04	0.11	0.45	0.52	0.04	0.78	0.13	3.57
10 Min Non Synch NYC (J)	0.00	0.06	0.00	0.00	0.07	0.12	0.63	1.06	0.04	0.83	0.21	3.60
10 Min Non Synch SENY (GHI)	0.00	0.06	0.00	0.00	0.04	0.11	0.45	0.52	0.04	0.78	0.13	3.57
10 Min Non Synch East (F)	0.00	0.06	0.00	0.00	0.04	0.11	0.45	0.52	0.04	0.78	0.13	3.57
10 Min Non Synch West (ABCDE)	0.00	0.00	0.00	0.00	0.04	0.10	0.37	0.47	0.04	0.33	0.08	0.70
30 Min Long Island (K)	0.00	0.00	0.00	0.00	0.04	0.10	0.37	0.46	0.04	0.28	0.01	0.17
30 Min NYC (J)	0.00	0.00	0.00	0.00	0.04	0.10	0.52	0.75	0.04	0.28	0.01	0.17
30 Min SENY (GHI)	0.00	0.00	0.00	0.00	0.04	0.10	0.37	0.46	0.04	0.28	0.01	0.17
30 Min East (F)	0.00	0.00	0.00	0.00	0.04	0.10	0.37	0.46	0.04	0.28	0.01	0.17
30 Min West (ABCDE)	0.00	0.00	0.00	0.00	0.04	0.10	0.37	0.46	0.04	0.28	0.01	0.17
Regulation	6.57	6.00	6.32	6.16	5.96	5.67	4.94	5.34	4.46	6.75	6.93	8.31
NYCA Regulation Movement	0.17	0.17	0.17	0.17	0.16	0.16	0.14	0.12	0.12	0.16	0.12	0.12

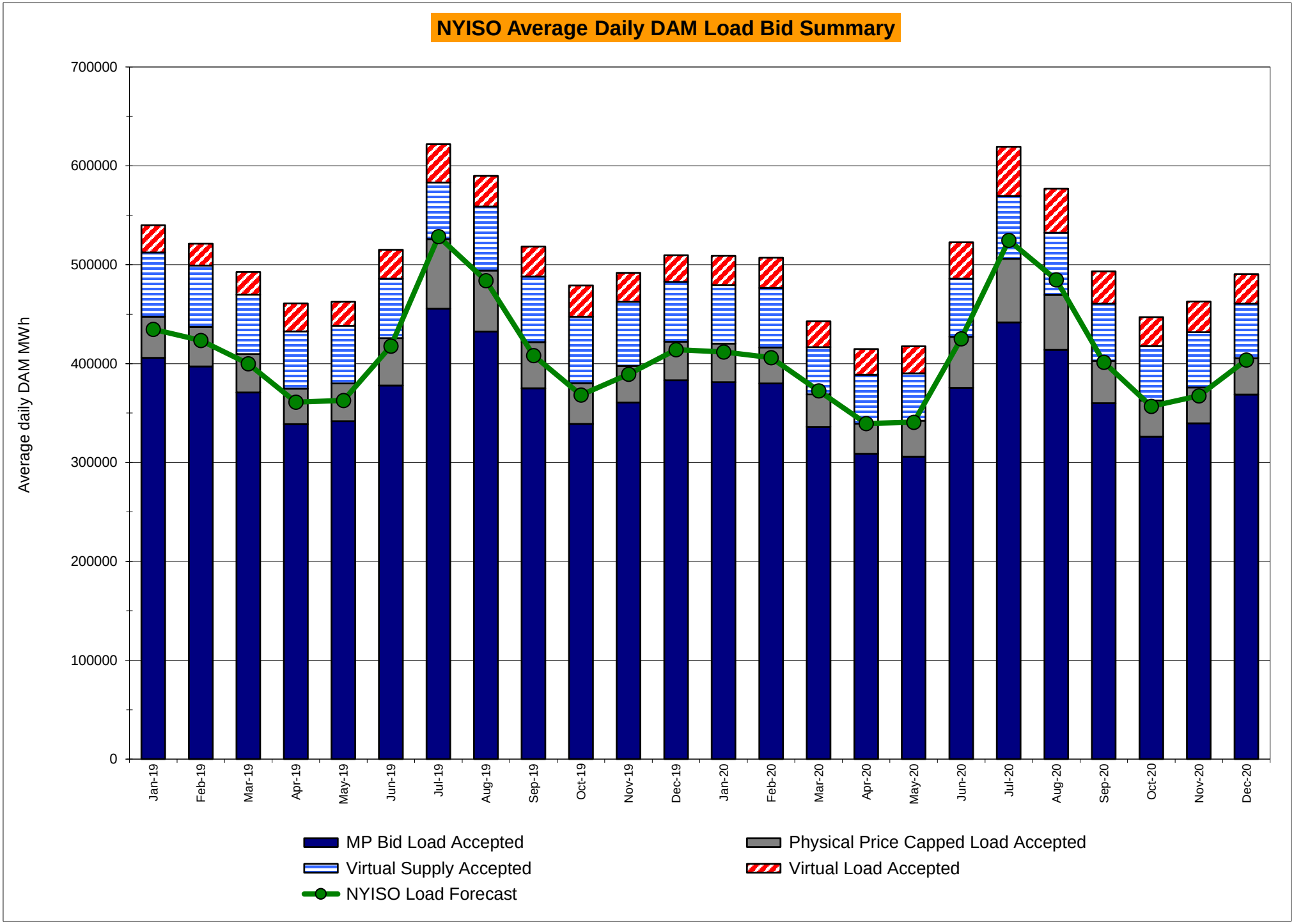
2019	January	February	March	April	May	June	July	August	September	October	November	December
Real Time Market												
10 Min Spin Long Island (K)	2.53	2.53	2.24	2.75	1.58	1.58	1.58	1.58	1.58	1.96	1.72	2.77
10 Min Spin NYC (J)	2.53	2.53	2.24	2.75	1.58	1.58	1.58	1.58	1.58	2.54	1.72	2.78
10 Min Spin SENY (GHI)	2.53	2.51	2.24	2.75	1.58	1.17	1.32	1.66	0.63	1.96	1.72	2.77
10 Min Spin East (F)	2.53	2.51	2.24	2.75	1.58	0.98	1.32	1.66	0.63	1.68	1.72	2.77
10 Min Spin West (ABCDE)	1.89	1.57	1.64	1.45	0.85	0.23	0.98	1.24	0.28	0.51	1.25	2.47
10 Min Non Synch Long Island (K)	0.03	0.03	0.48	0.96	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.03
10 Min Non Synch NYC (J)	0.03	0.03	0.48	0.96	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.04
10 Min Non Synch SENY (GHI)	0.03	0.18	0.48	0.96	0.00	0.33	0.11	0.03	0.01	0.53	0.00	0.03
10 Min Non Synch East (F)	0.03	0.18	0.48	0.96	0.00	0.15	0.11	0.03	0.01	0.25	0.00	0.03
10 Min Non Synch West (ABCDE)	0.00	0.01	0.09	0.17	0.00	0.02	0.08	0.03	0.00	0.01	0.00	0.00
30 Min Long Island (K)	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.00
30 Min NYC (J)	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00
30 Min SENY (GHI)	0.00	0.01	0.03	0.00	0.00	0.13	0.08	0.03	0.00	0.29	0.00	0.00
30 Min East (F)	0.00	0.01	0.03	0.00	0.00	0.02	0.08	0.03	0.00	0.01	0.00	0.00
30 Min West (ABCDE)	0.00	0.01	0.03	0.00	0.00	0.02	0.08	0.03	0.00	0.01	0.00	0.00
Regulation	11.36	7.72	7.23	15.73	7.47	6.11	5.77	6.11	5.86	6.47	7.67	8.40
NYCA Regulation Movement	0.22	0.22	0.20	0.25	0.23	0.17	0.18	0.17	0.16	0.16	0.17	0.18

Changes have been made to this table due to
Comprehensive Scarcity Pricing activation in June 2016.

NYISO In City Energy Mitigation - AMP (NYC Zone) 2019 - 2020
Percentage of committed unit-hours mitigated




NYISO In City Energy Mitigation (NYC Zone) 2019 - 2020
Monthly megawatt hours mitigated
MWh mitigated
300,000
250,000
200,000
150,000
100,000
50,000
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
DAM MWh mitigated - 2020
Real Time MWh mitigated - 2020
DAM MWh mitigated - 2019
Real Time MWh mitigated - 2019



Market Mitigation and Analysis
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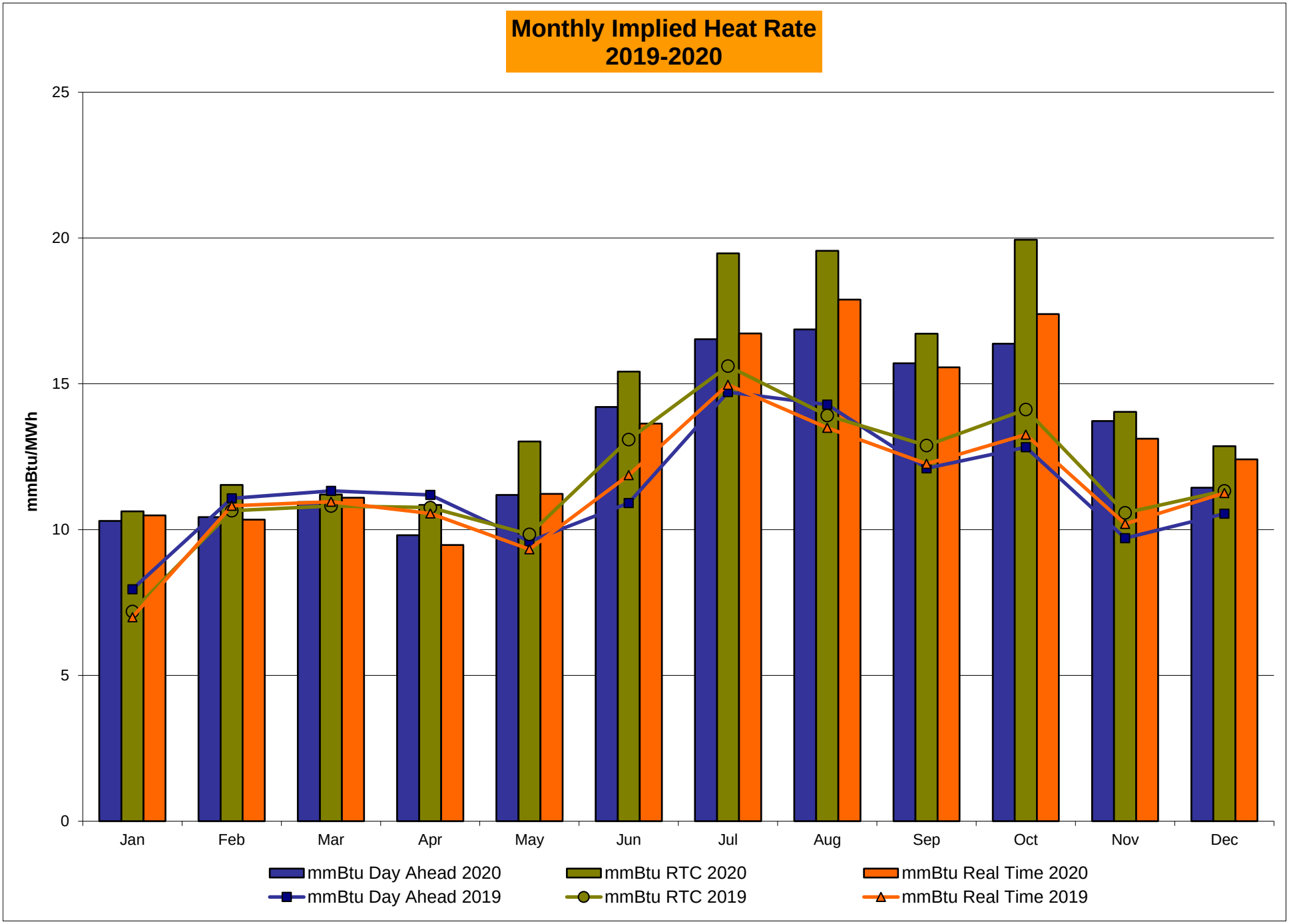
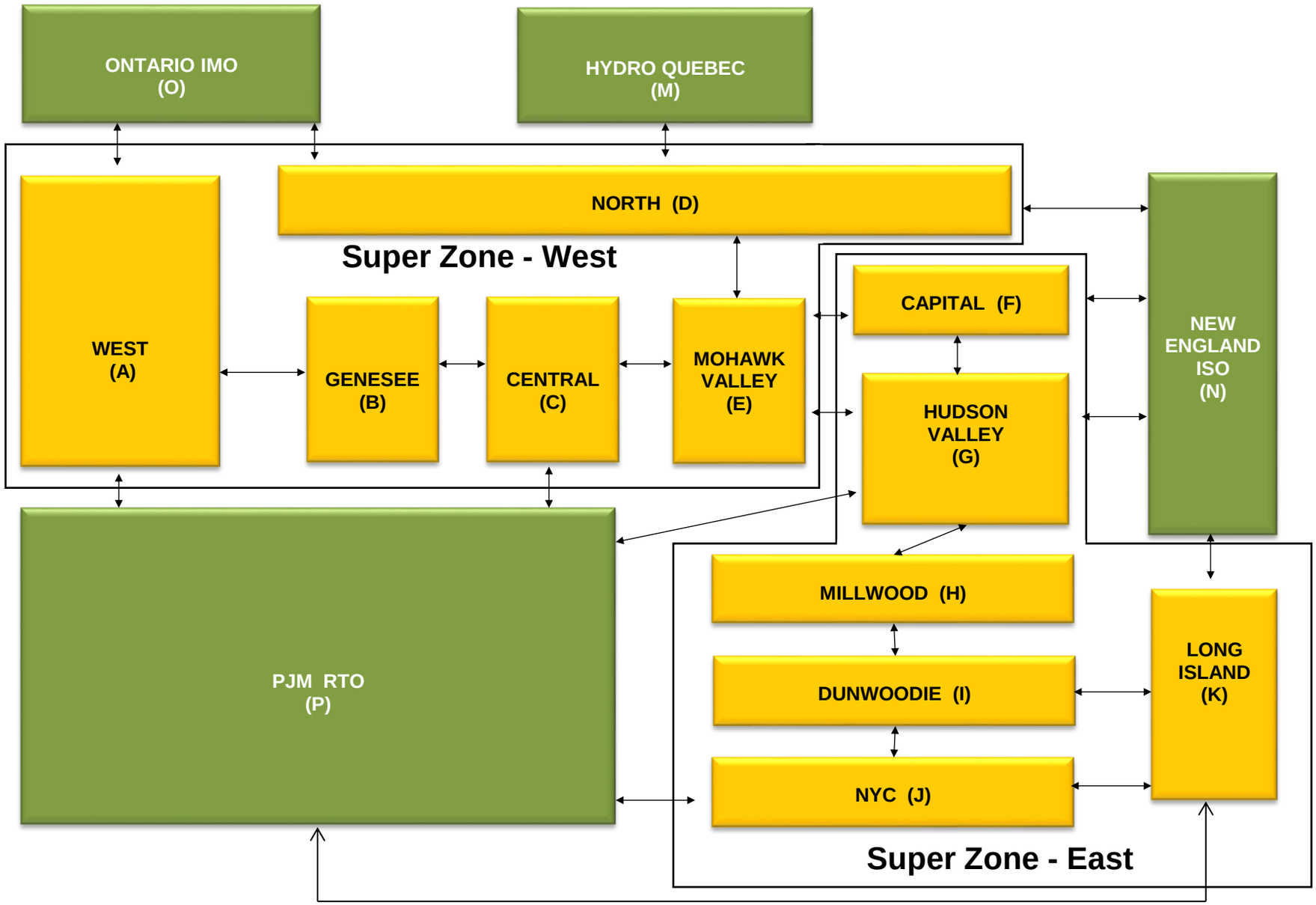

Monthly Implied Heat Rate
2019-2020
mmBtu/MWh
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
mmBtu Day Ahead 2020
mmBtu RTC 2020
mmBtu Real Time 2020
mmBtu Day Ahead 2019
mmBtu RTC 2019
mmBtu Real Time 2019

NYISO LBMP ZONES



Market Mitigation and Analysis
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Billing Codes for Chart C

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

Our mission, in collaboration with our stakeholders, is to serve the public interest and provide benefit to consumers by:

- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policymakers, stakeholders and investors in the power system

New York ISO

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Summary Description of Upcoming Regulatory Compliance Filings, Recently Submitted Filings and Issued Orders on NYISO Matters

Upcoming Compliance Filings

Filing Due Date	Upcoming Compliance Filings (Description)	Docket Number

Recently Issued Orders

Filing Date	Filing Summary (Order Issued)	Order Date	Order Summary	Docket Number
11/10/2020	NYISO and New York State Electric & Gas Corporation ("NYSEG") joint 205 filing of an Amended and Restated LGIA (SA 1894) between NYISO, NYSEG, and Stony Creek Energy LLC	01/07/2021	Order accepted LGIA effective 10/28/2020, as requested	ER21-361-000
11/02/2020	NYISO and Niagara Mohawk Power Corporation (National Grid) Joint 205 filing of SGIA (SA 2573) among NYISO, National Grid and Grissom Solar, LLC	01/12/2021	Order accepted agreement effective 11/12/2020, as requested	ER21-451-000
11/23/2020	NYISO and Niagara Mohawk Power Corporation (National Grid) Joint 205 filing of SGIA (SA 2574) among NYISO, National Grid and Grissom Solar, LLC	01/13/2021	Order accepted SGIA effective 11/9/2020, as requested	ER21-452-000
11/24/2020	NYISO and Niagara Mohawk Power Corporation ("National Grid") joint filing of a SGIA (SA 2572) among NYISO, National Grid, and Bakerstand Solar, LLC	01/14/2021	Order accepted SGIA effective 11/16/2020, as requested	ER21-465-000
11/24/2020	NYISO and Niagara Mohawk Power Corporation ("National Grid") joint 205 filing of a SGIA (SA 2576) among the NYISO, National Grid and Sky High Solar	01/19/2021	Order accepted SGIA effective 11/16/2020, as requested	ER21-474-000
11/24/2020	NYISO and Niagara Mohawk Power Corporation ("National Grid") joint 205 filing of a SGIA (SA 2571) among the NYISO, National Grid and Martin Rd Solar	01/14/2021	Order accepted SGIA effective 11/16/2020, as requested	ER21-464-000
11/25/2020	NYISO 205 filing of proposed revisions to the Transmission Congestion Contract ("TCC") credit requirements	01/12/2021	Order accepted tariff revisions directed NYISO to file two weeks effective date notice	ER21-486-000

12/7/2020	NYISO 205 filing of proposed tariff revisions to modifying market participant eligibility to utilize Meter Services Entities (MSEs) by permitting Demand Response Providers and Demand Side Ancillary Services Program providers to become MSEs	01/22/2021	Letter Order accepting the revisions effective 2/8/2021, as requested.	ER21-595-000

Recently Submitted Filings

Filing Date	Filing Summary	Docket Number
11/30/2020	NYISO 205 filing of the ICAP Demand Curves for the 2021/2022 Capability Year and the methodologies and inputs for use in conducting annual updates to determine the demand curves for the 2022/2023, 2023/2024, and 2024/2025 Capability Years	ER21-502-000
01/05/2021	NYISO answer to comments and protests filed in response to its proposal for establishing ICAP Demand Curves for the 2021/2022 Capability Year	ER21-502-000
01/08/2021	NYISO filing of an errata to the December 22, 2020 filing to modify the NYISO's Self Supply Exemption (SSE) under the NYISO's buyer-side capacity market power mitigation rules (the BSM Rules)	ER16-1404-007
01/11/2021	NYISO 205 filing of proposed tariff revisions to remove the notarization requirement from the officer's certificate of compliance with minimum participation requirements established by the NYISO.	ER21-863-000
01/15/2021	NYISO 205 filing of proposed clarification to tailored availability metric (TAM) tariff provisions	ER21-890-000
01/15/2021	NYISO 205 filing of proposed tariff amendments to extend the market rules that apply to wind resources to include solar resources	ER21-892-000