

To the Public Utility Commission of Texas

ERCOT Wholesale Electricity Market Monthly Report

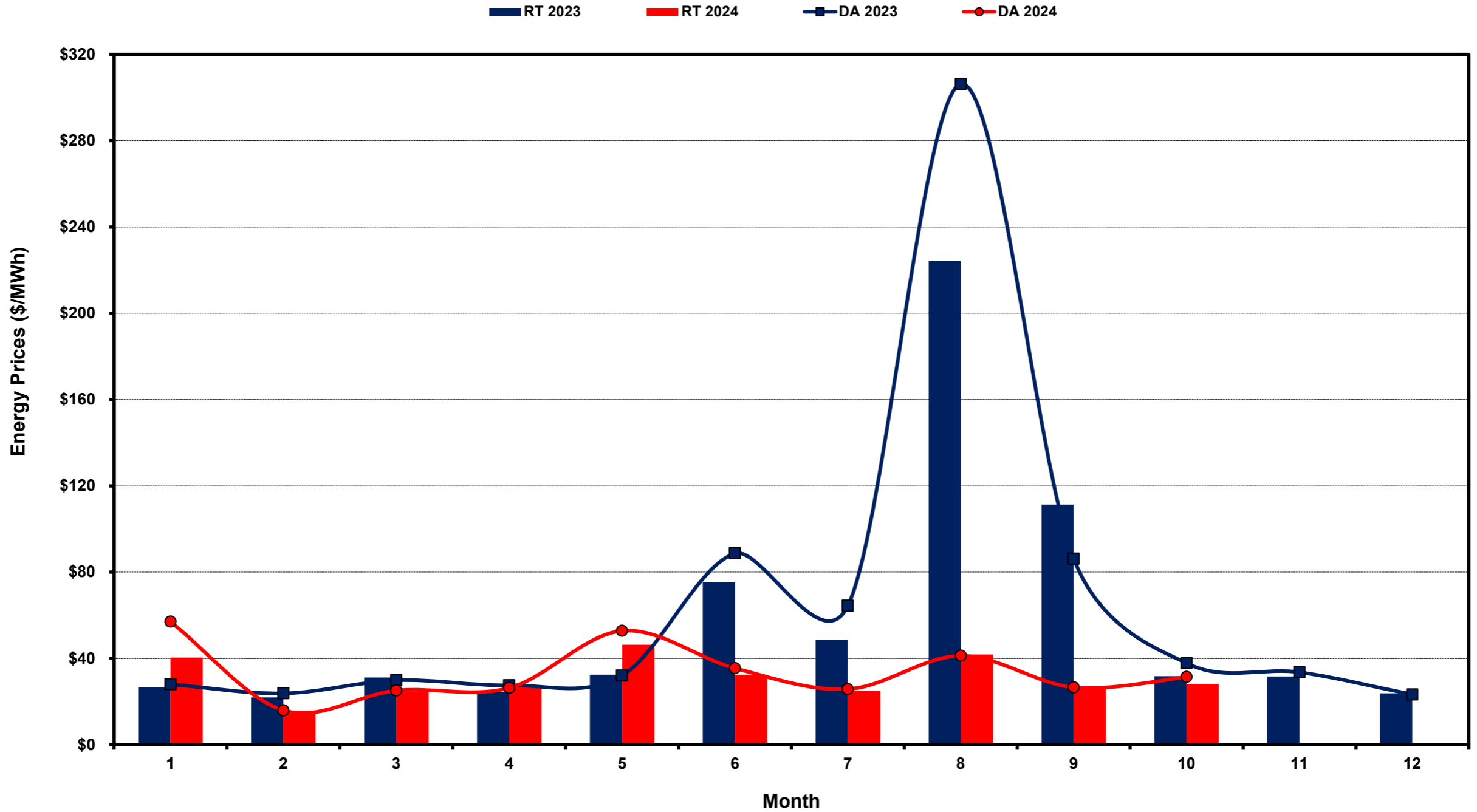
Monday, November 11, 2024

Potomac Economics, Ltd.
Independent Market Monitor

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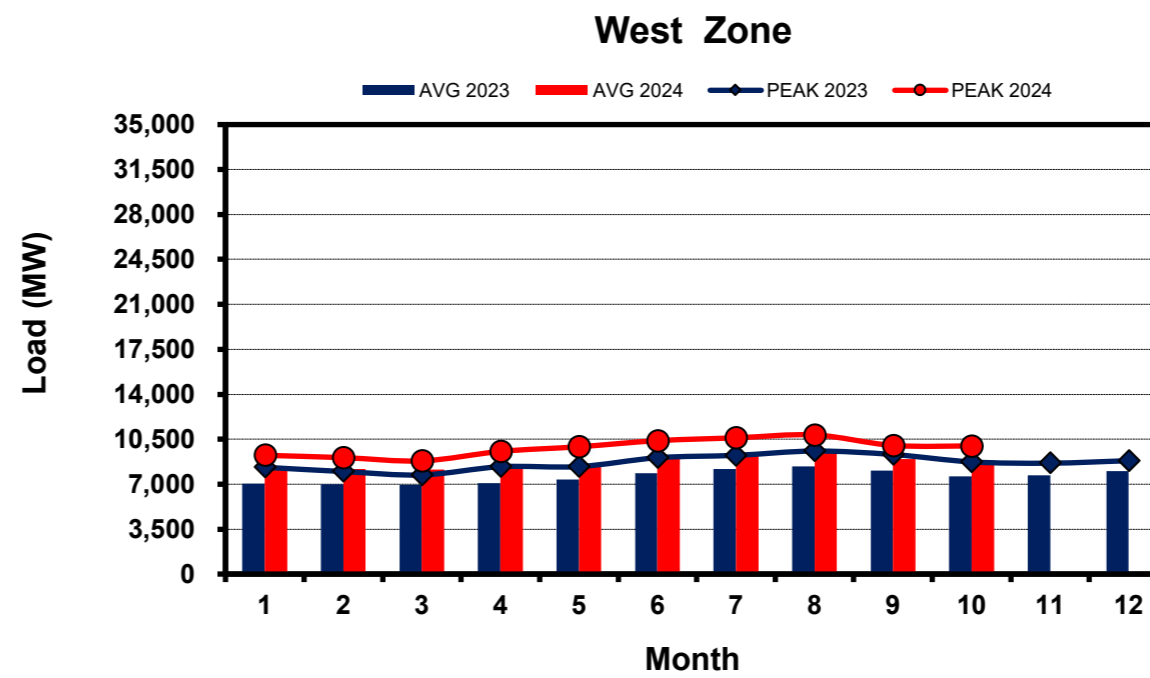
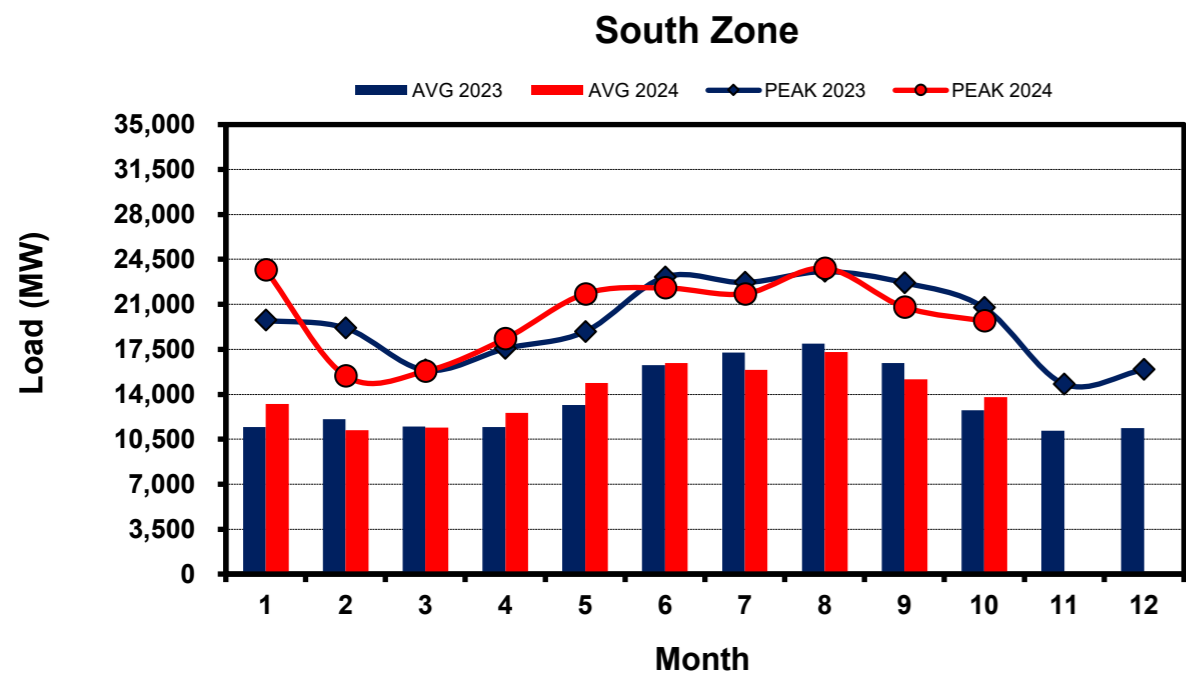
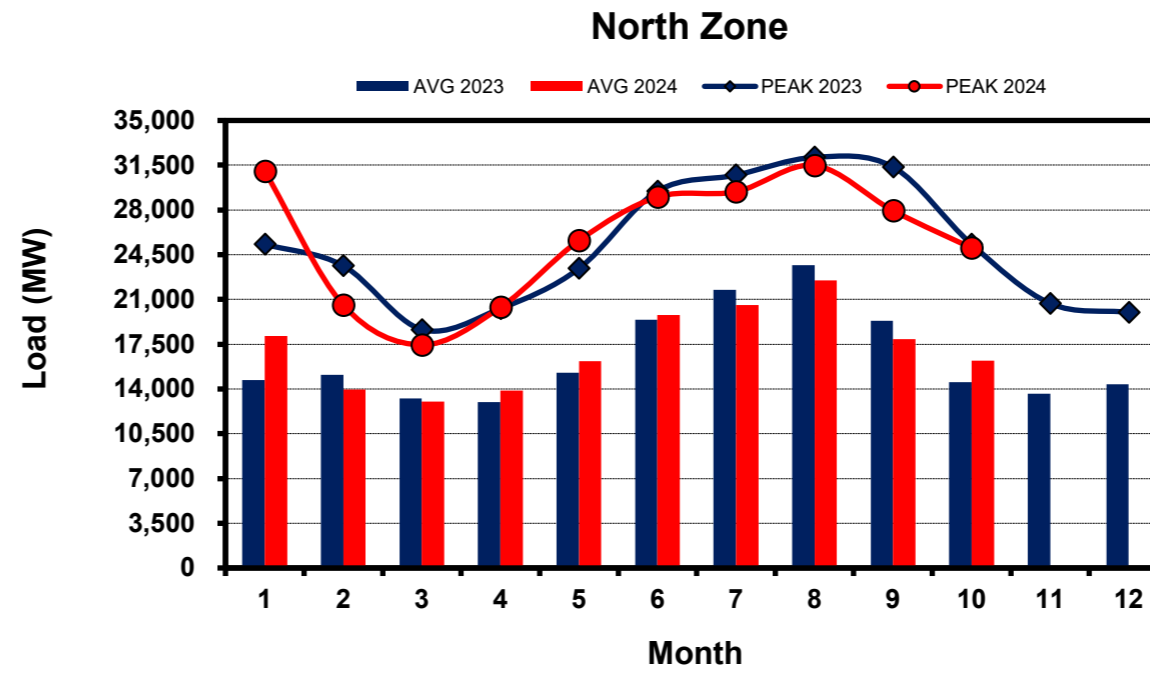
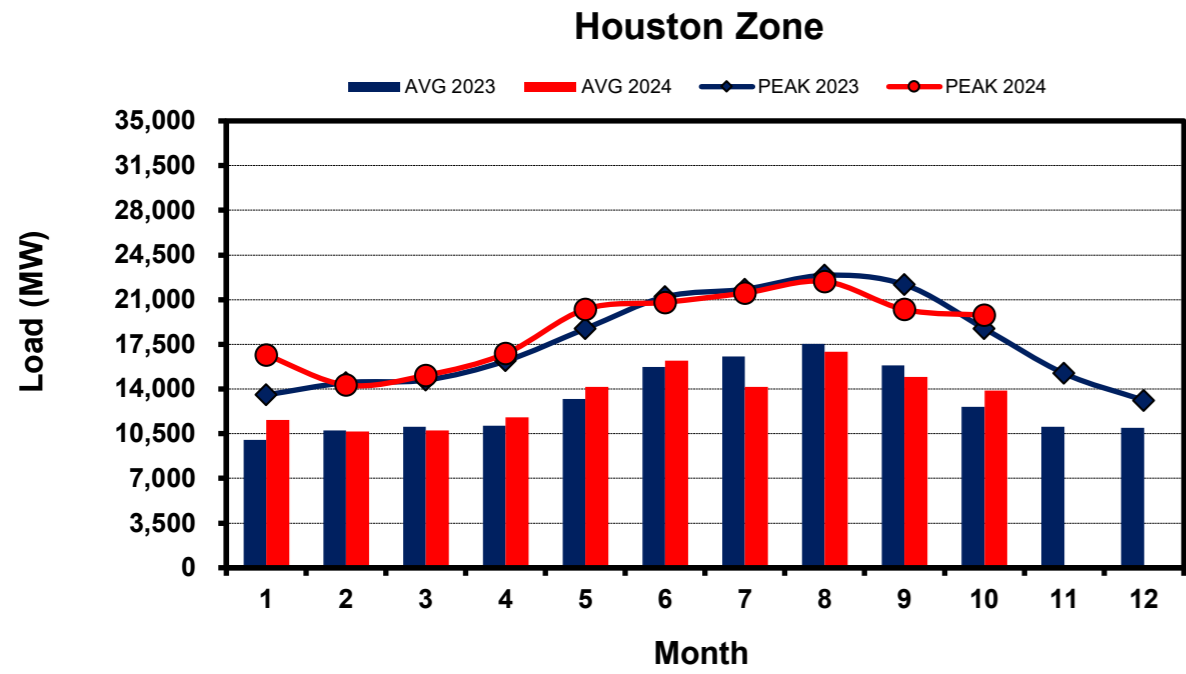
ERCOT-wide Average Energy Prices DA vs RT

(avg. DA & RT SPPs weighted by Real Time Settlement Loads)



Load Zone Load Statistics

(Nodal load zone made comparable to zonal system Load Zone definitions*)

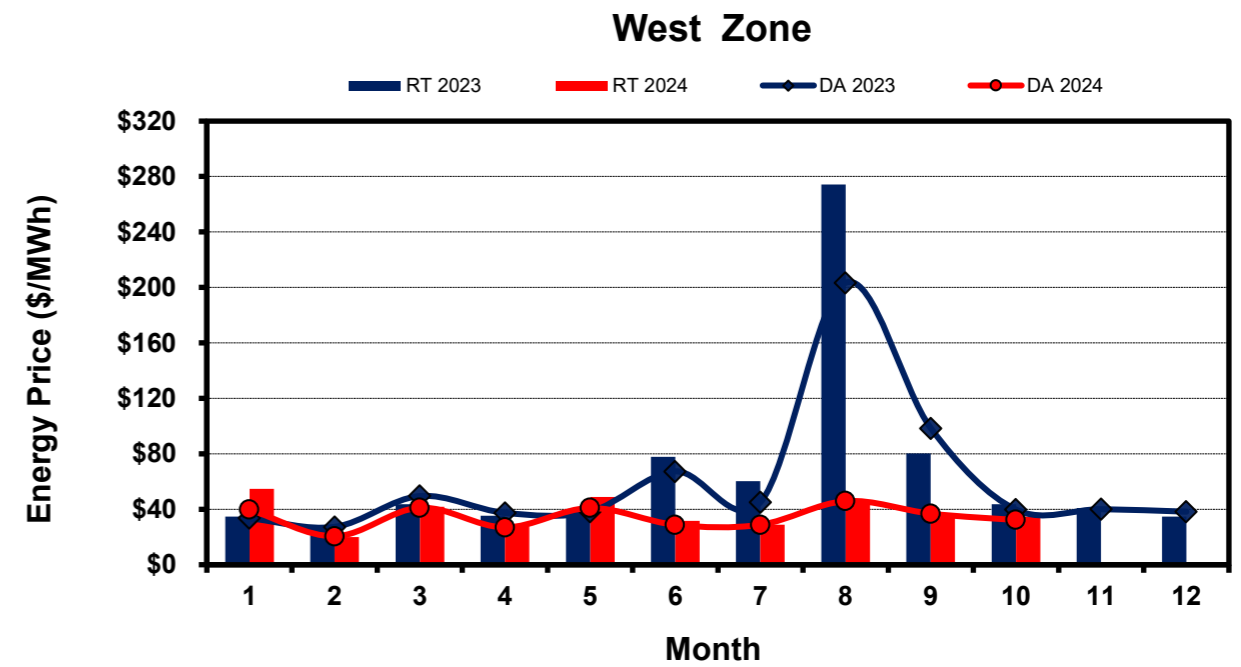
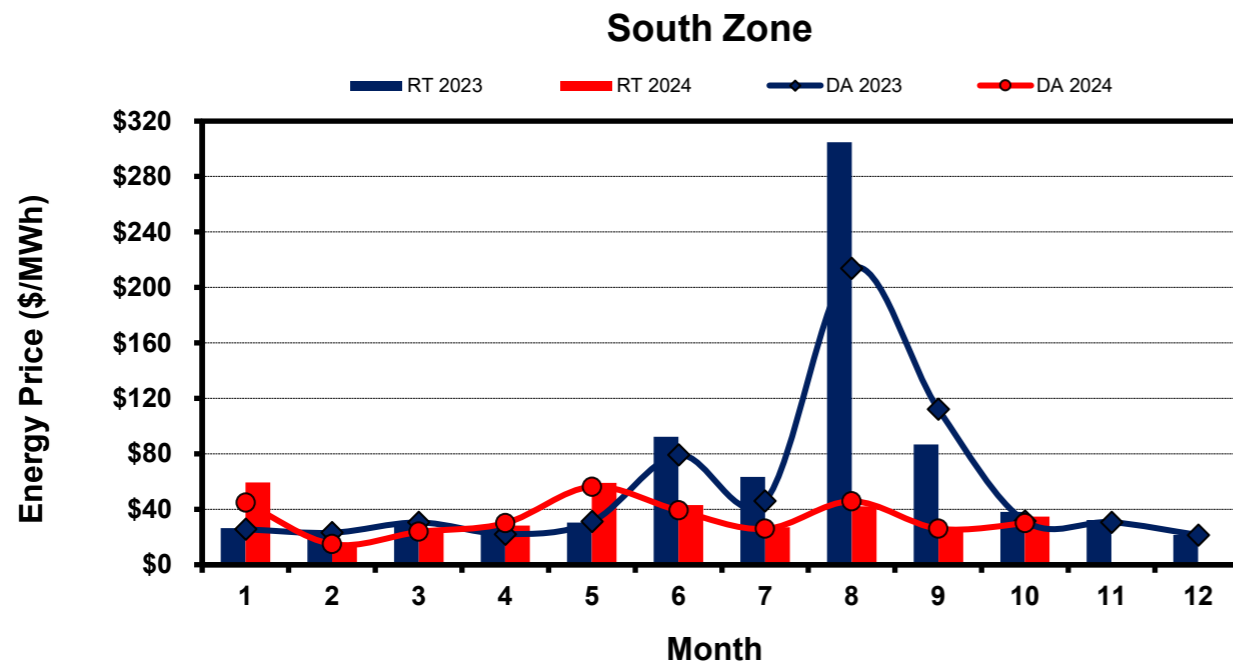
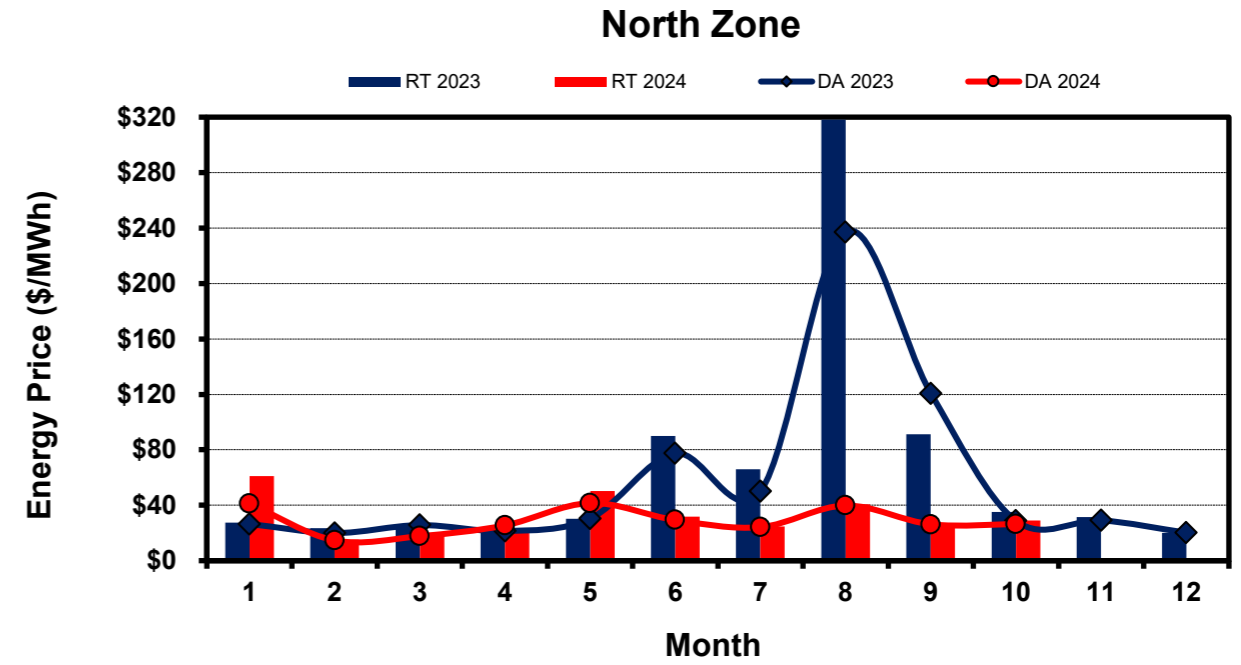
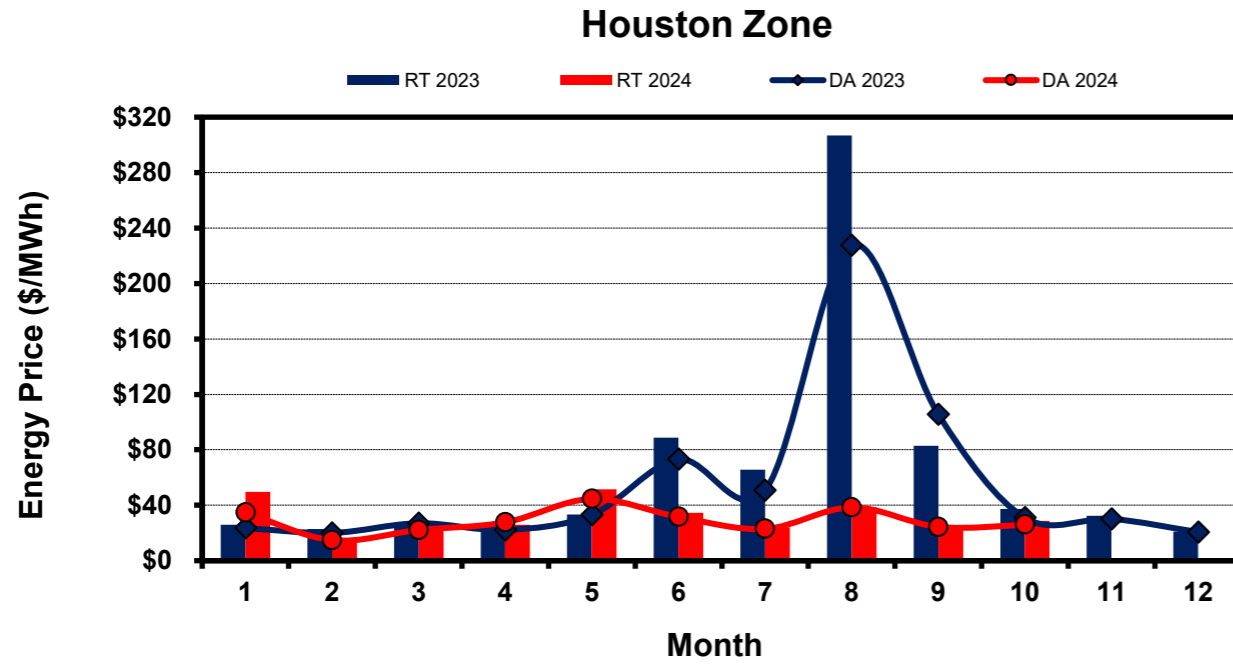


Year	Month	ERCOT-Wide	
		Average Load	Peak Load
2023	1	10,807	25,319
2023	2	11,244	23,636
2023	3	10,687	18,648
2023	4	10,657	20,284
2023	5	12,251	23,418
2023	6	14,813	29,468
2023	7	15,935	30,724
2023	8	16,882	32,117
2023	9	14,912	31,357
2023	10	11,890	25,315
2023	11	10,877	20,691
2023	12	11,181	19,994
2024	1	12,830	31,031
2024	2	11,000	20,566
2024	3	10,835	17,450
2024	4	11,618	20,381
2024	5	13,431	25,610
2024	6	15,407	29,012
2024	7	14,971	29,426
2024	8	16,559	31,479
2024	9	14,235	27,945
2024	10	13,179	25,032
2024	11	-	-
2024	12	-	-

Note: * Zonal load zone definition vs. Nodal comparable load zone definition: LZ_Houston=LZ_Houston; LZ_West=LZ_West; LZ_North=(LZ_North,LZ_RAYBN); LZ_South=(LZ_South,LZ_CPS,LZ_AEN,LZ_LCRA)

Load Zone Monthly Average Energy Price DA vs RT

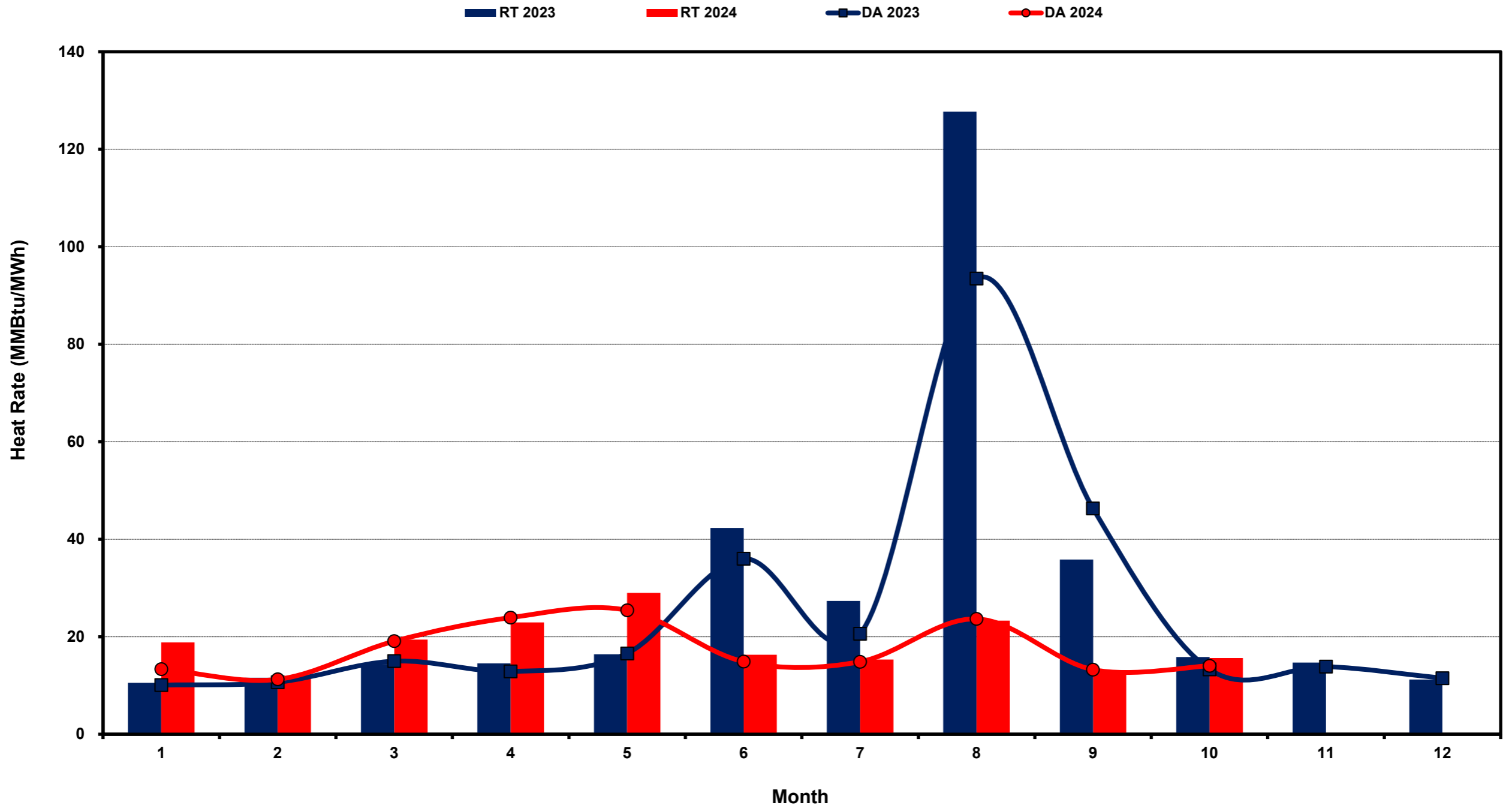
(avg. DA & RT SPPs weighted by Real Time Settlement Loads)
 (Nodal load zone made comparable to zonal system Load Zone definitions*)



Note: * Zonal load zone definition vs. Nodal comparable load zone definition: LZ_Houston=LZ_Houston; LZ_West=LZ_West; LZ_North=(LZ_North,LZ_RAYBN); LZ_South=(LZ_South,LZ_CPS,LZ_AEN,LZ_LCRA)

ERCOT-wide Monthly Implied Heat Rate DA vs RT

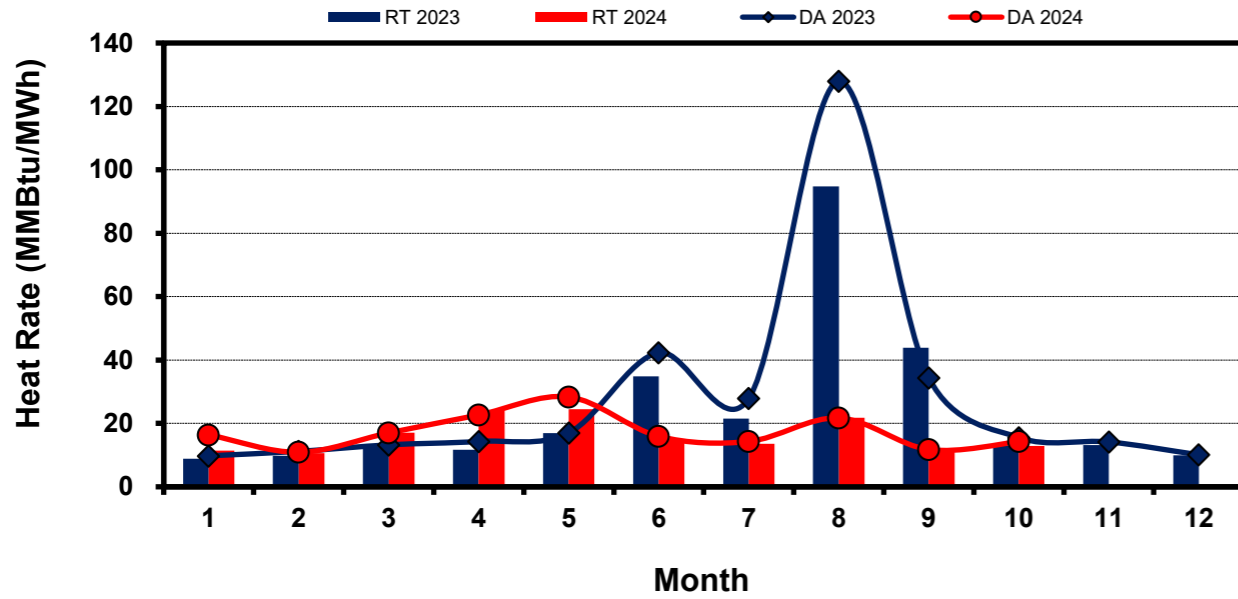
(avg. heat rates weighted by Real Time Settlement Loads)



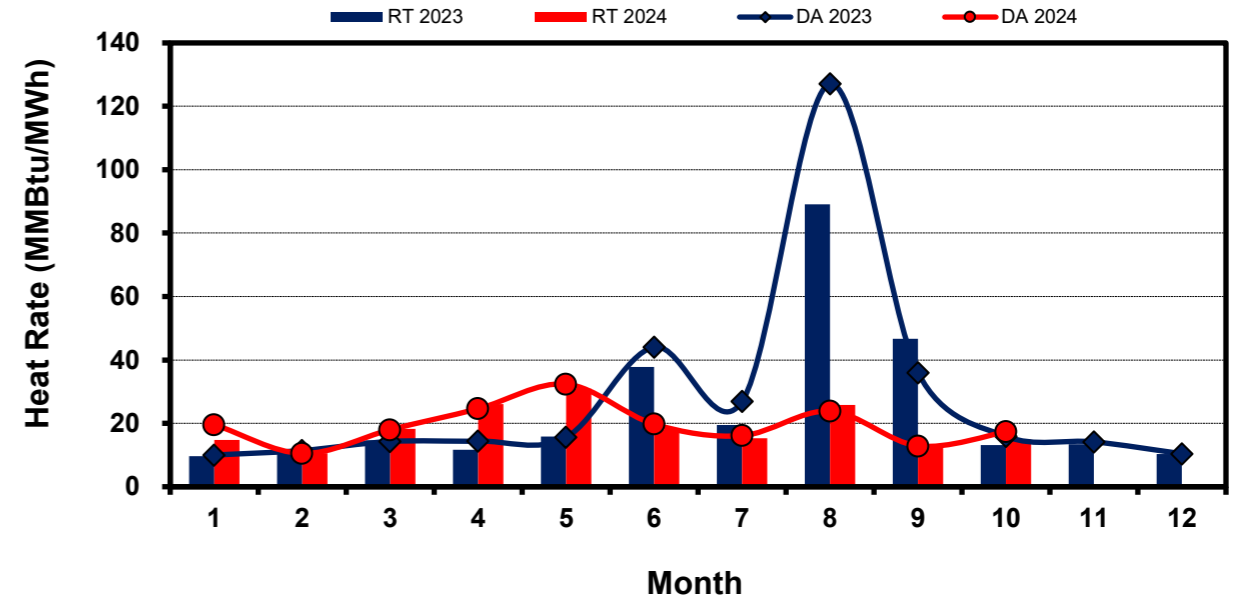
Load Zone Monthly Implied Heat Rate DA vs RT

(avg. heat rates weighted by Real Time Settlement Loads)
 (Nodal load zone made comparable to zonal system Load Zone definitions*)

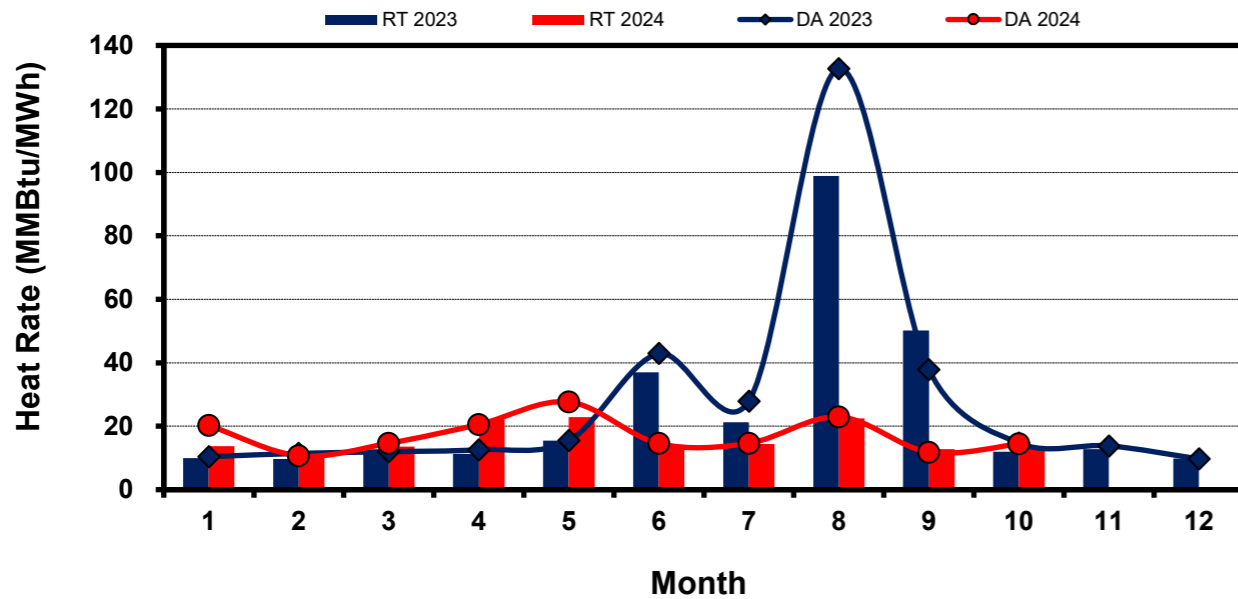
Houston Zone



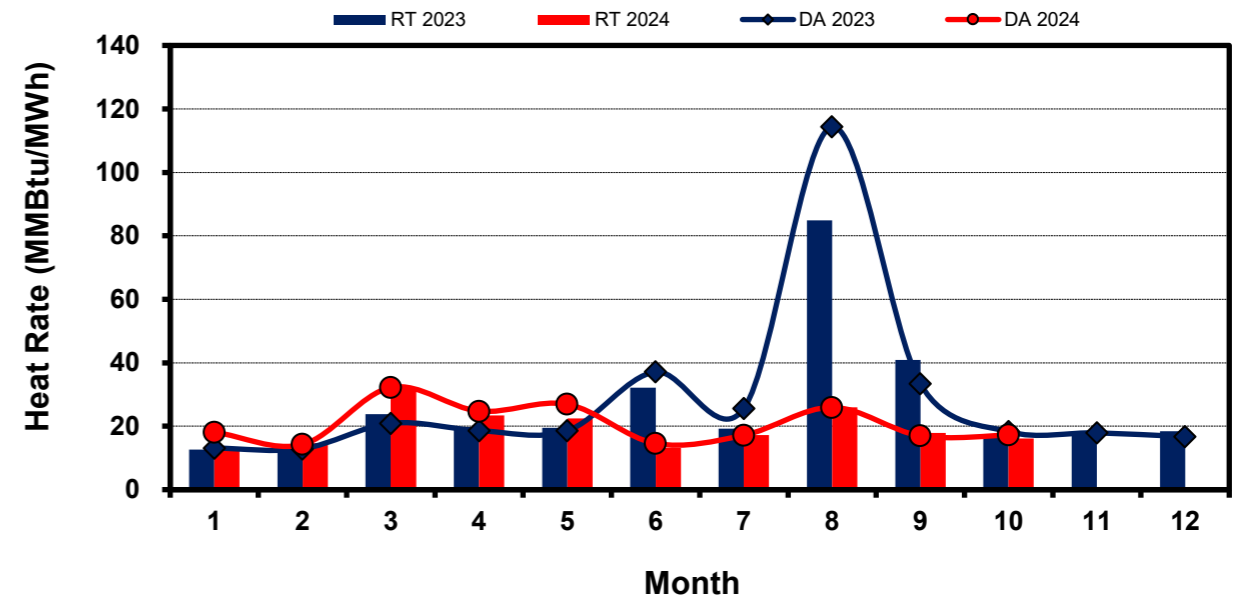
North Zone



South Zone



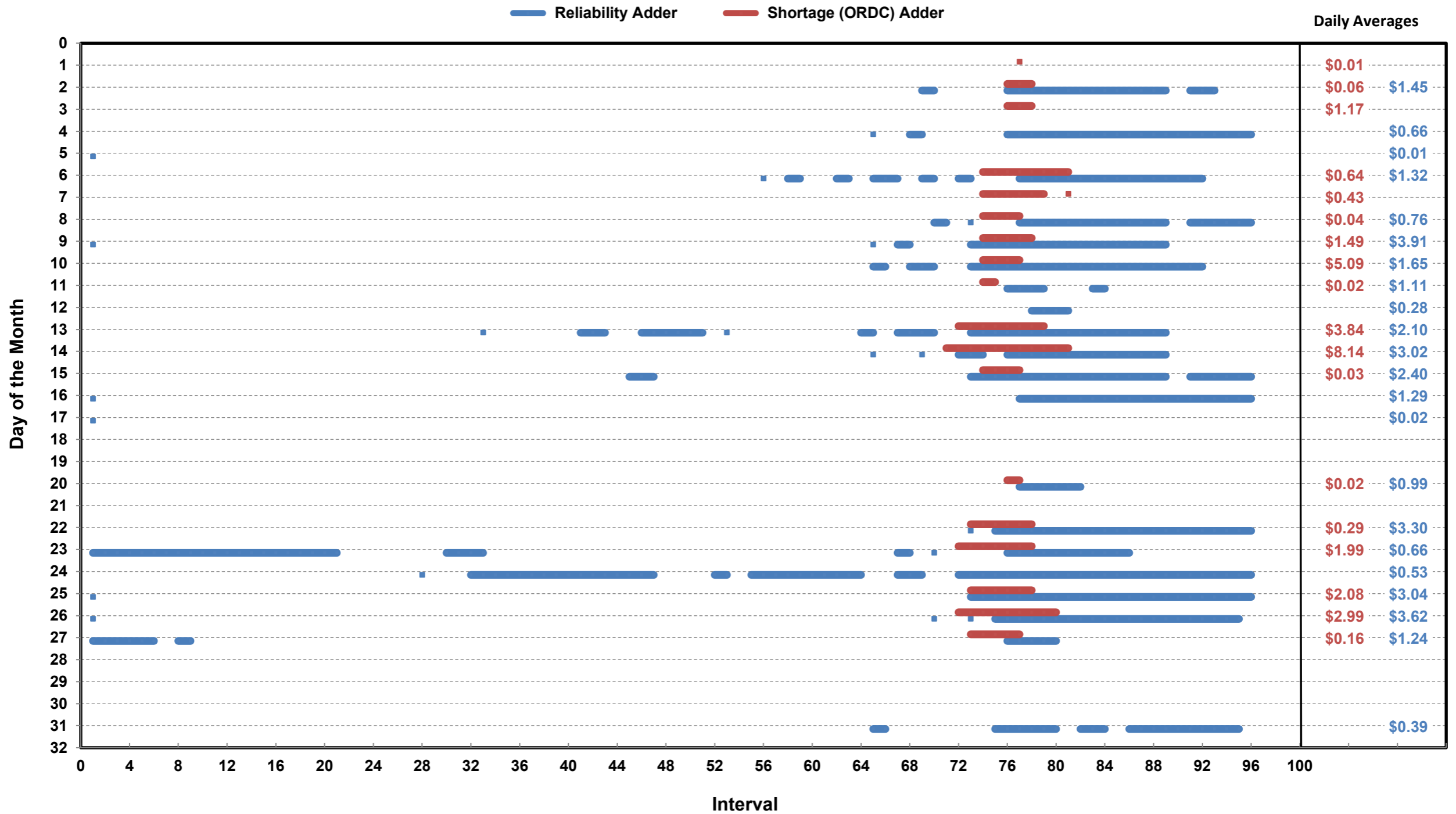
West Zone



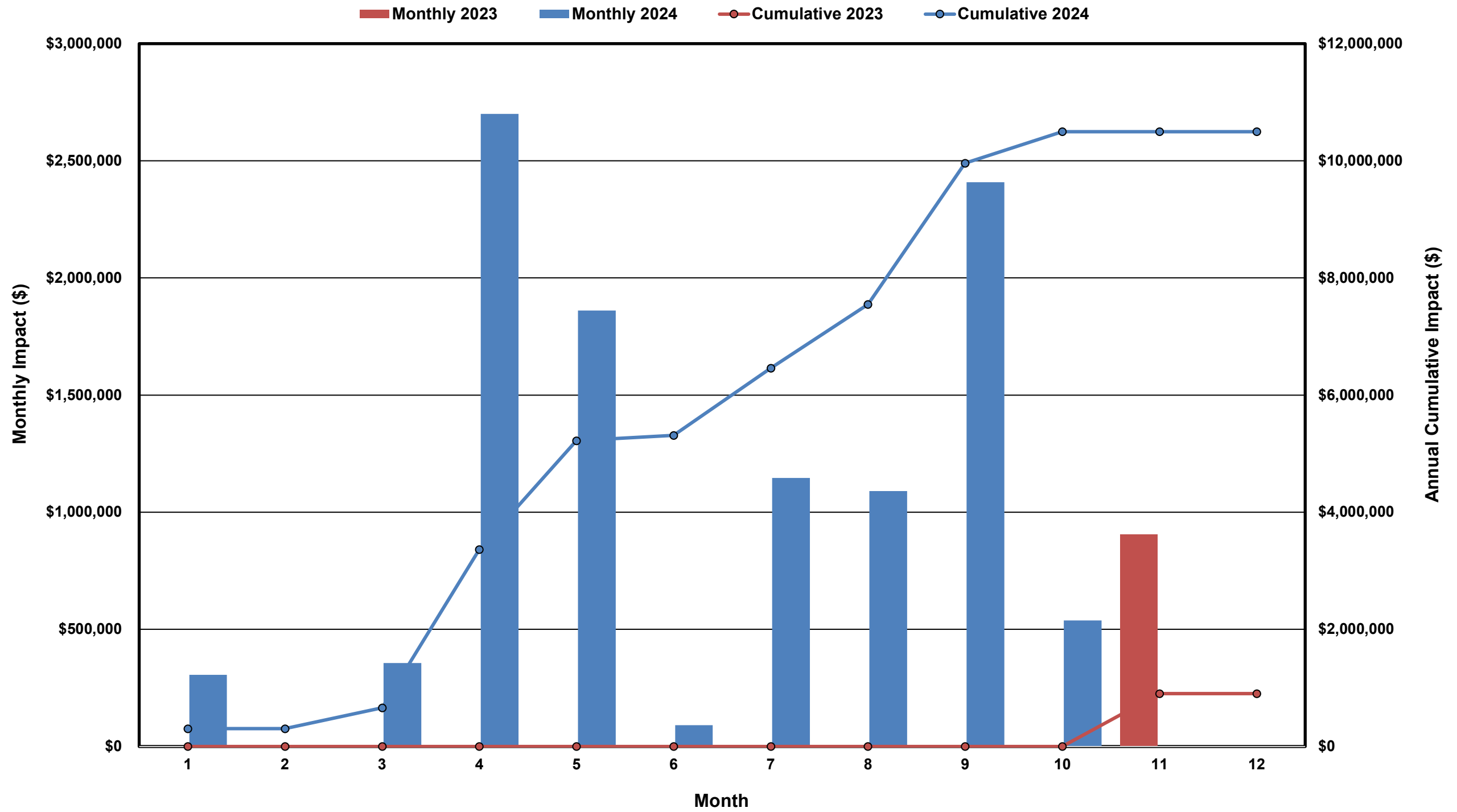
Note: * Zonal load zone definition vs. Nodal comparable load zone definition: LZ_Houston=LZ_Houston; LZ_West=LZ_West; LZ_North=(LZ_North,LZ_RAYBN); LZ_South=(LZ_South,LZ_CPS,LZ_AEN,LZ_LCRA)

Daily Shortage (ORDC) and Reliability Adders Average Values and Duration

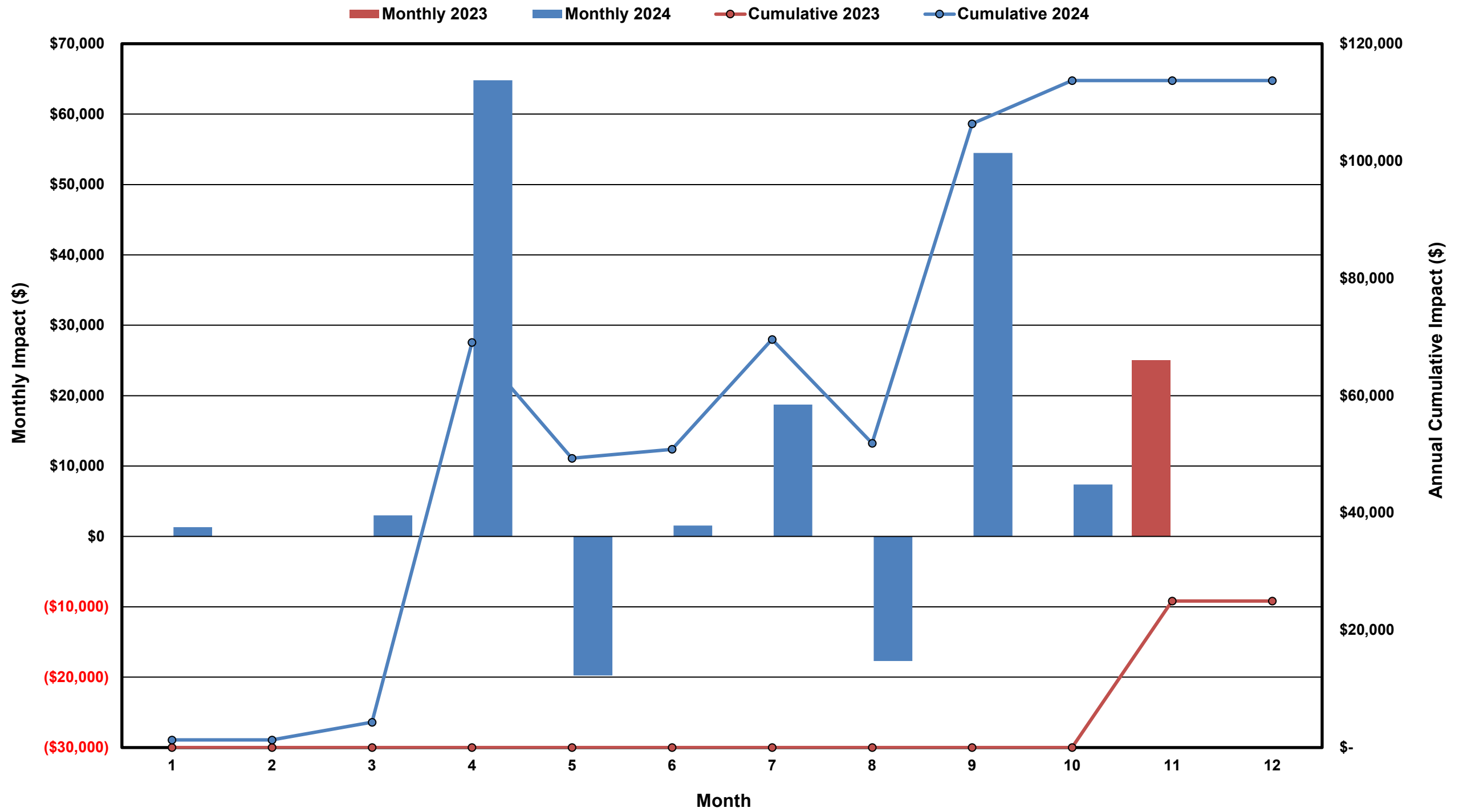
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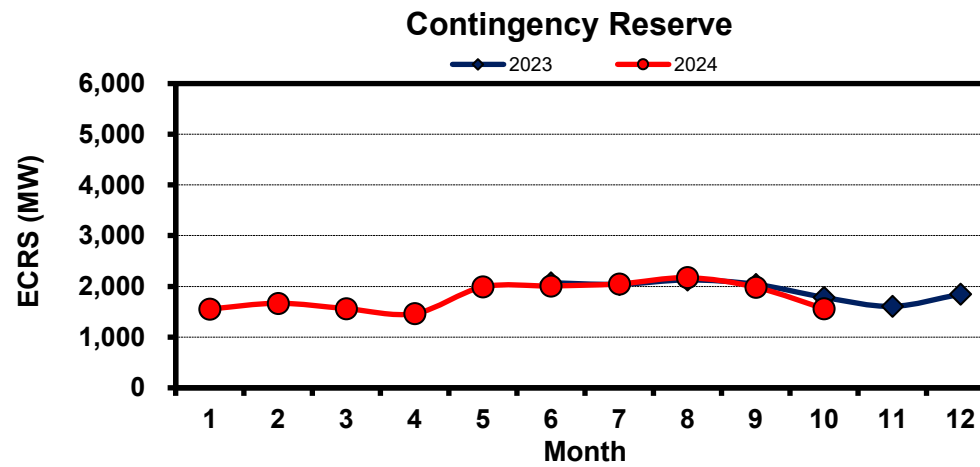
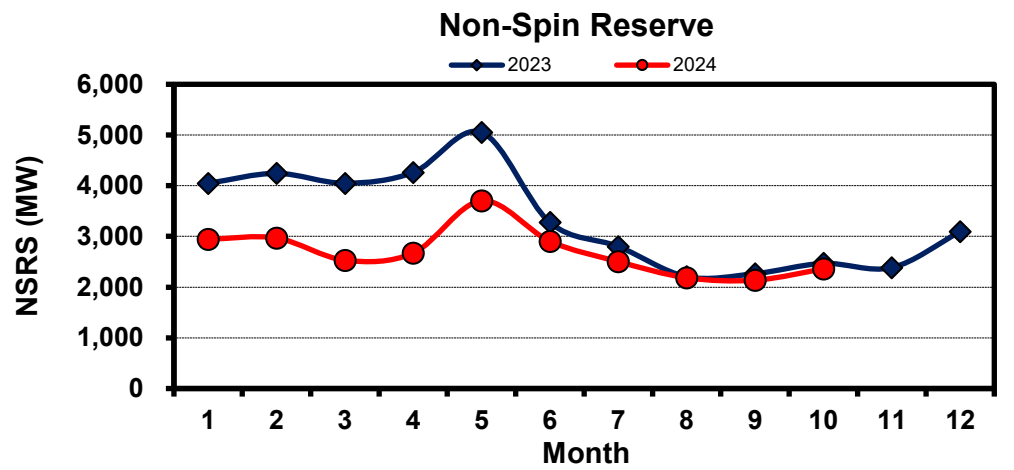
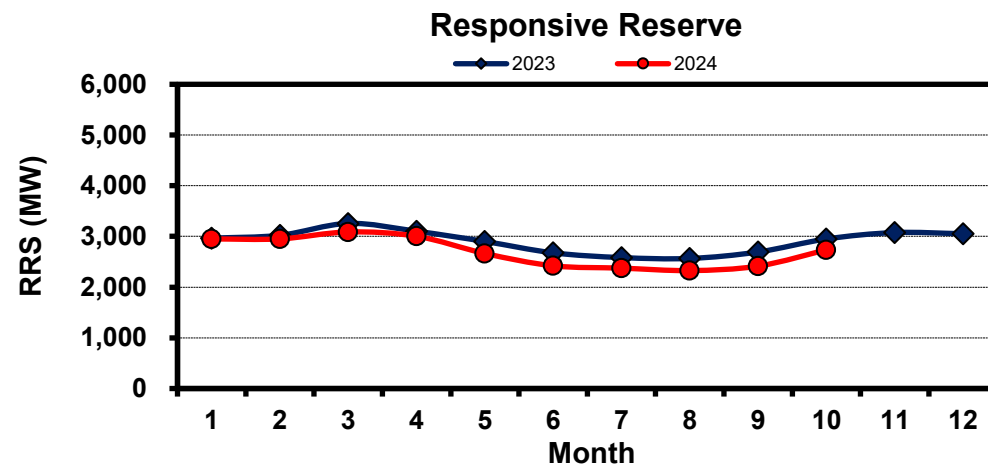
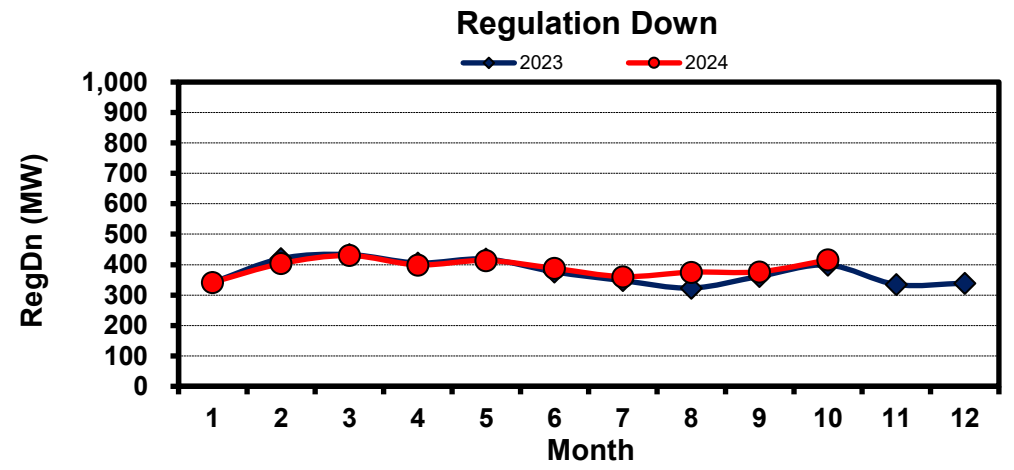
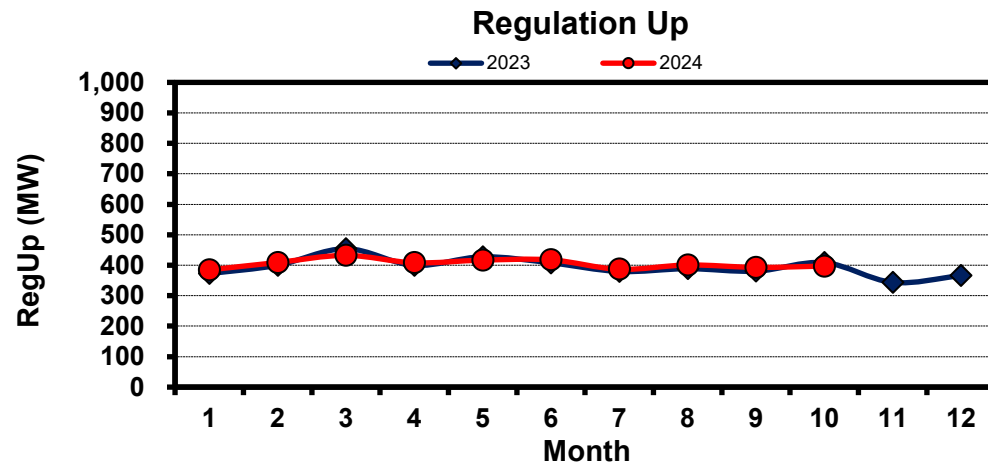
Shortage (ORDC) and Reliability Adder Floor Impact on Energy Cost



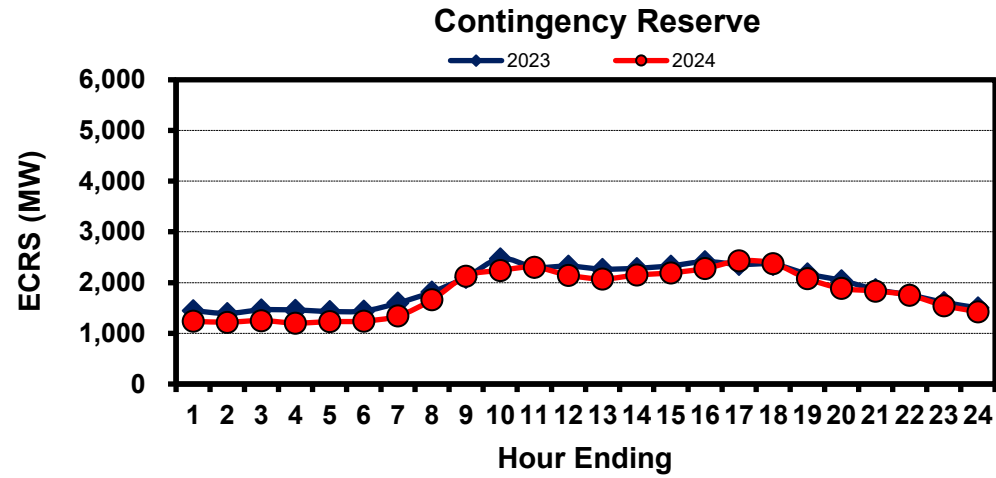
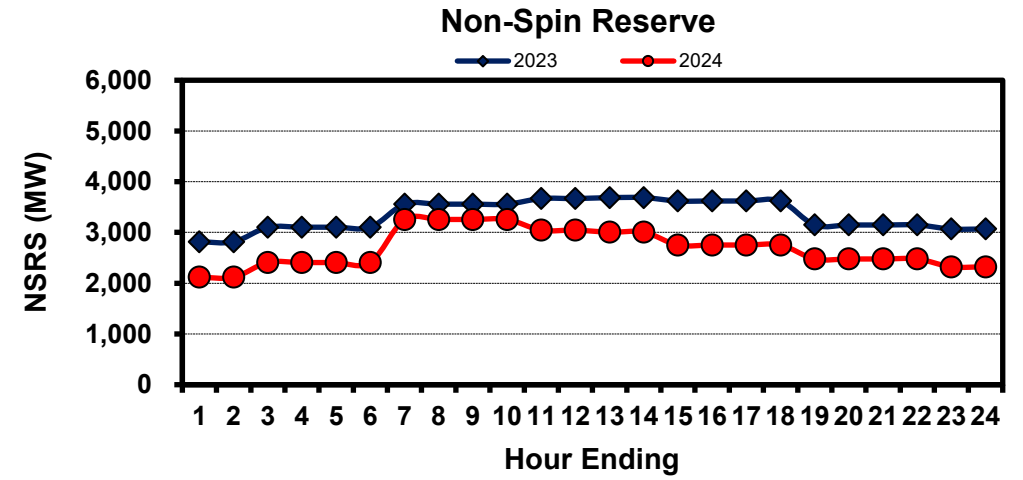
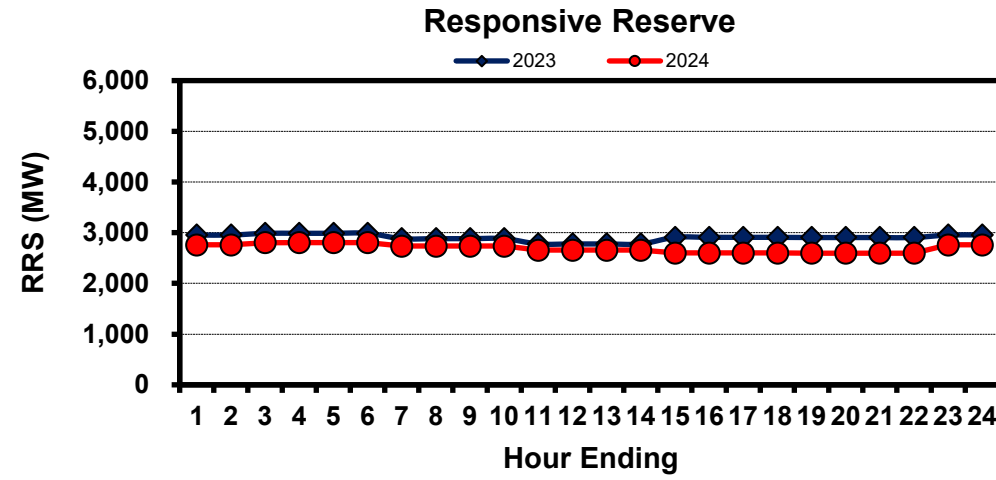
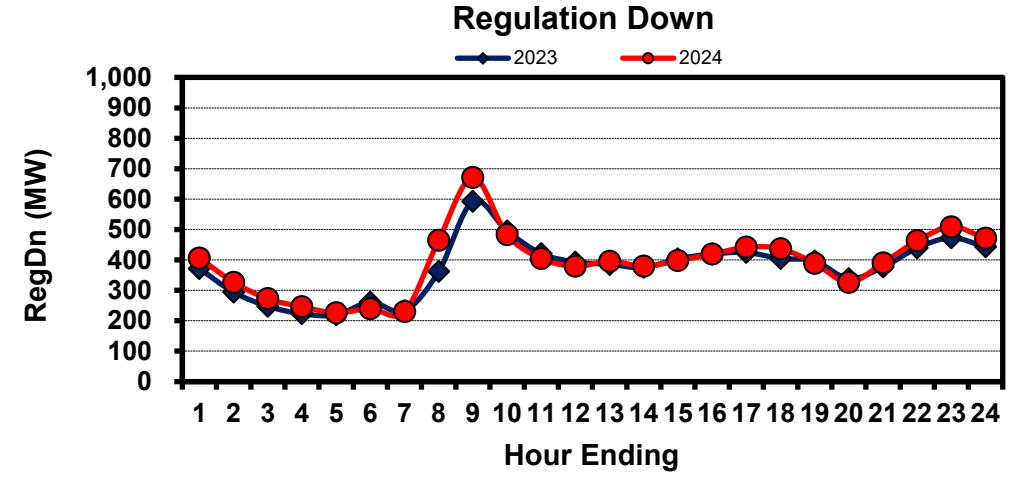
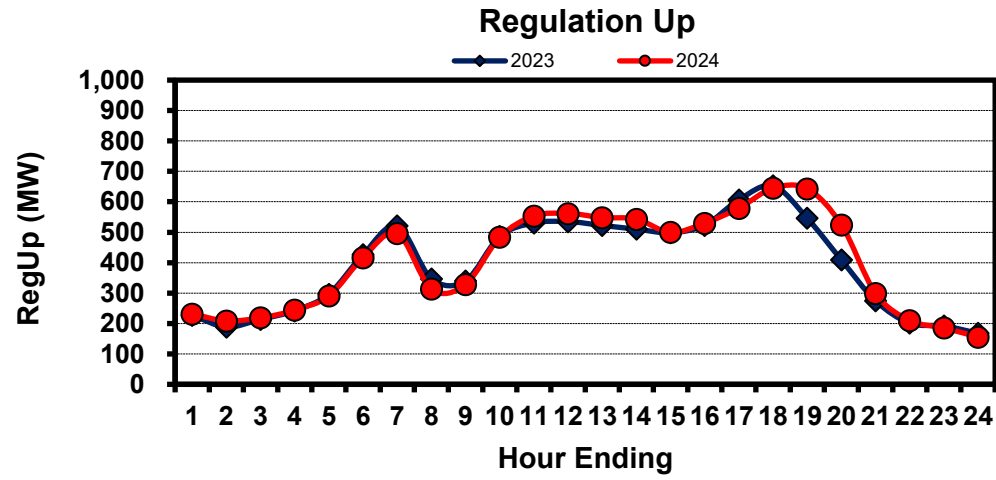
Shortage (ORDC) and Reliability Adder Floor Impact on A/S Imbalance



Monthly Average of Ancillary Services Required MW

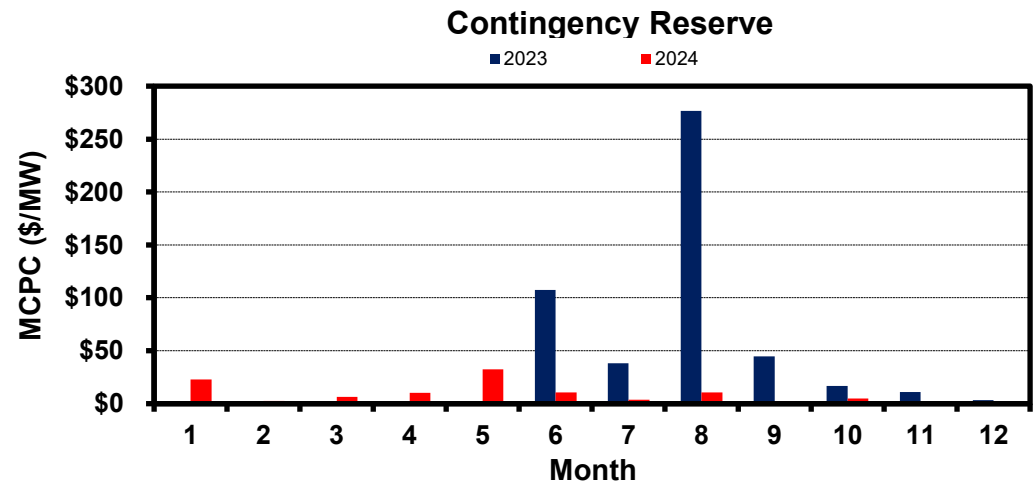
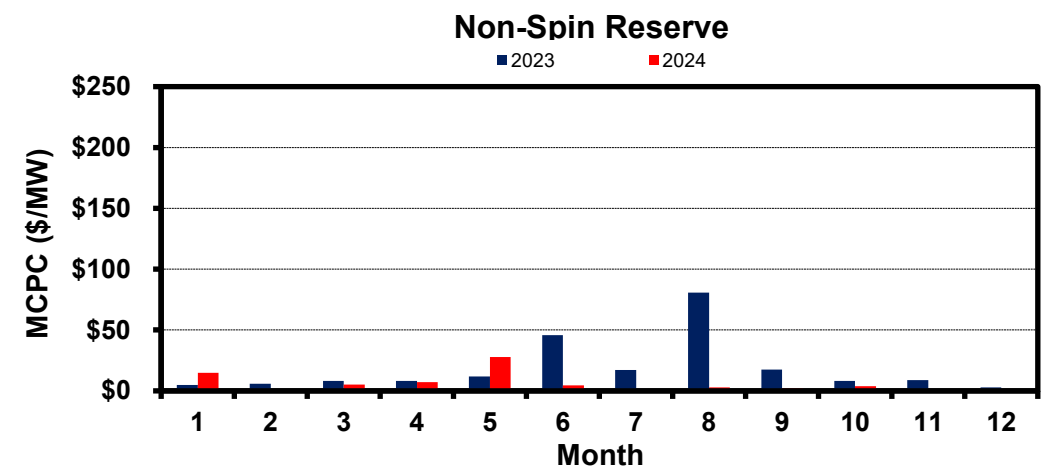
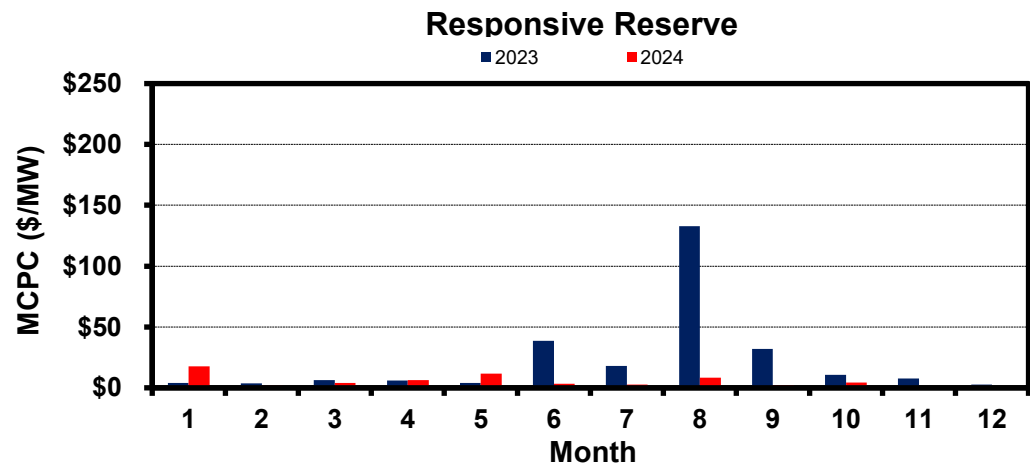
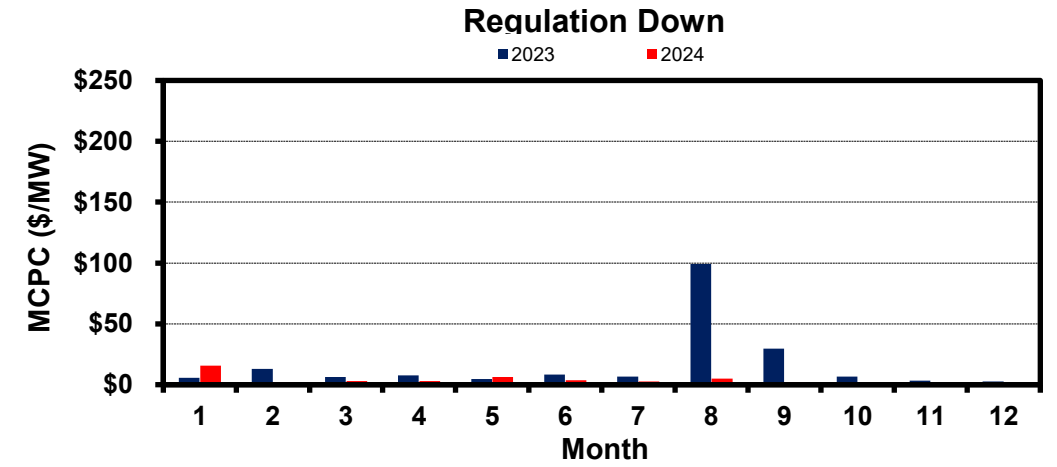
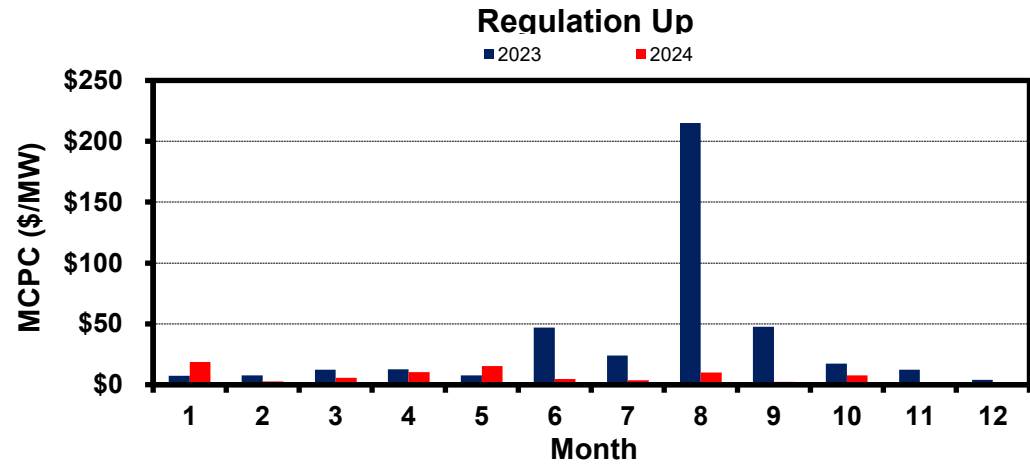


Hourly Average of Ancillary Services Required MW



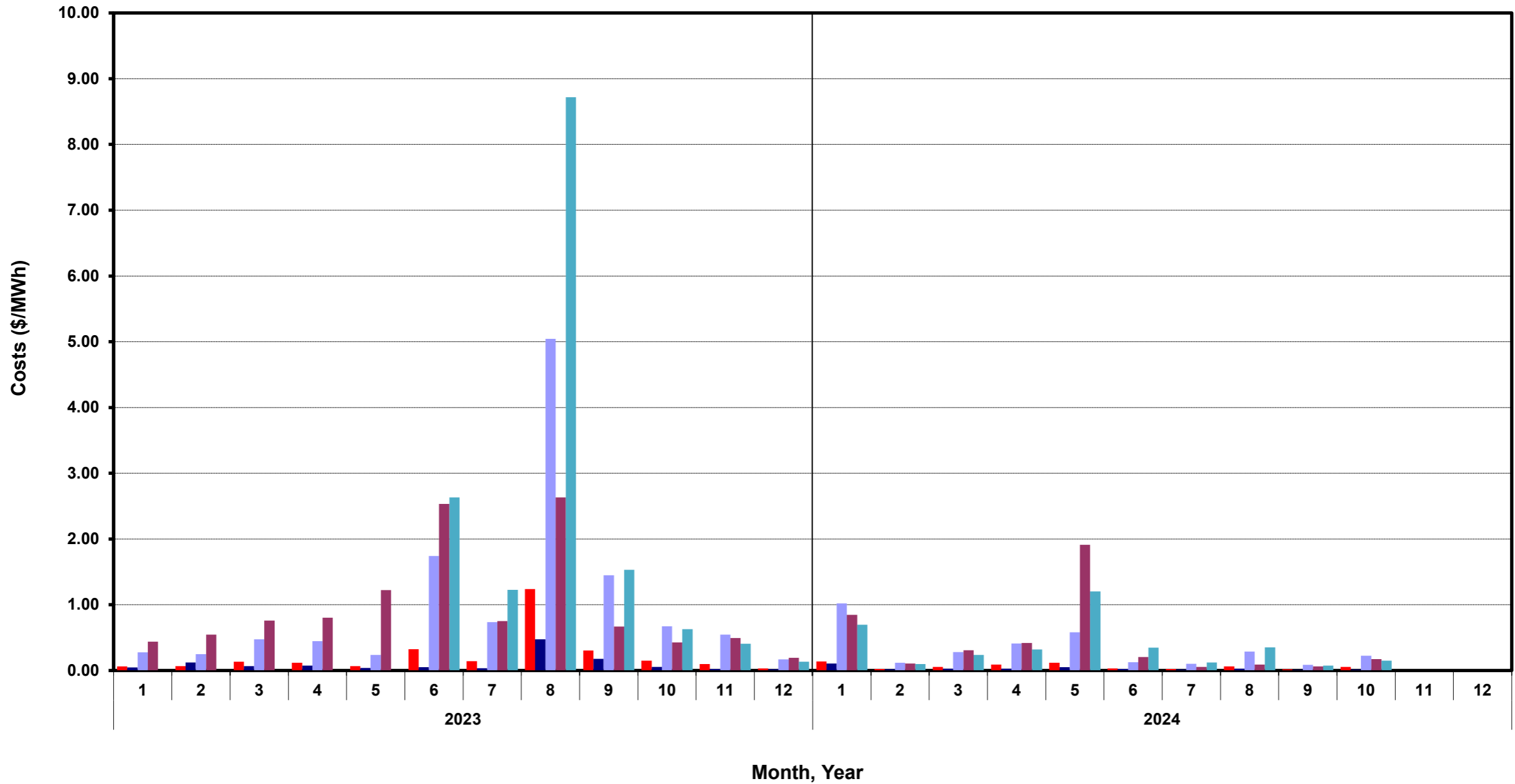
Monthly Average Ancillary Services Prices

(weighted by A/S Quantities Required)

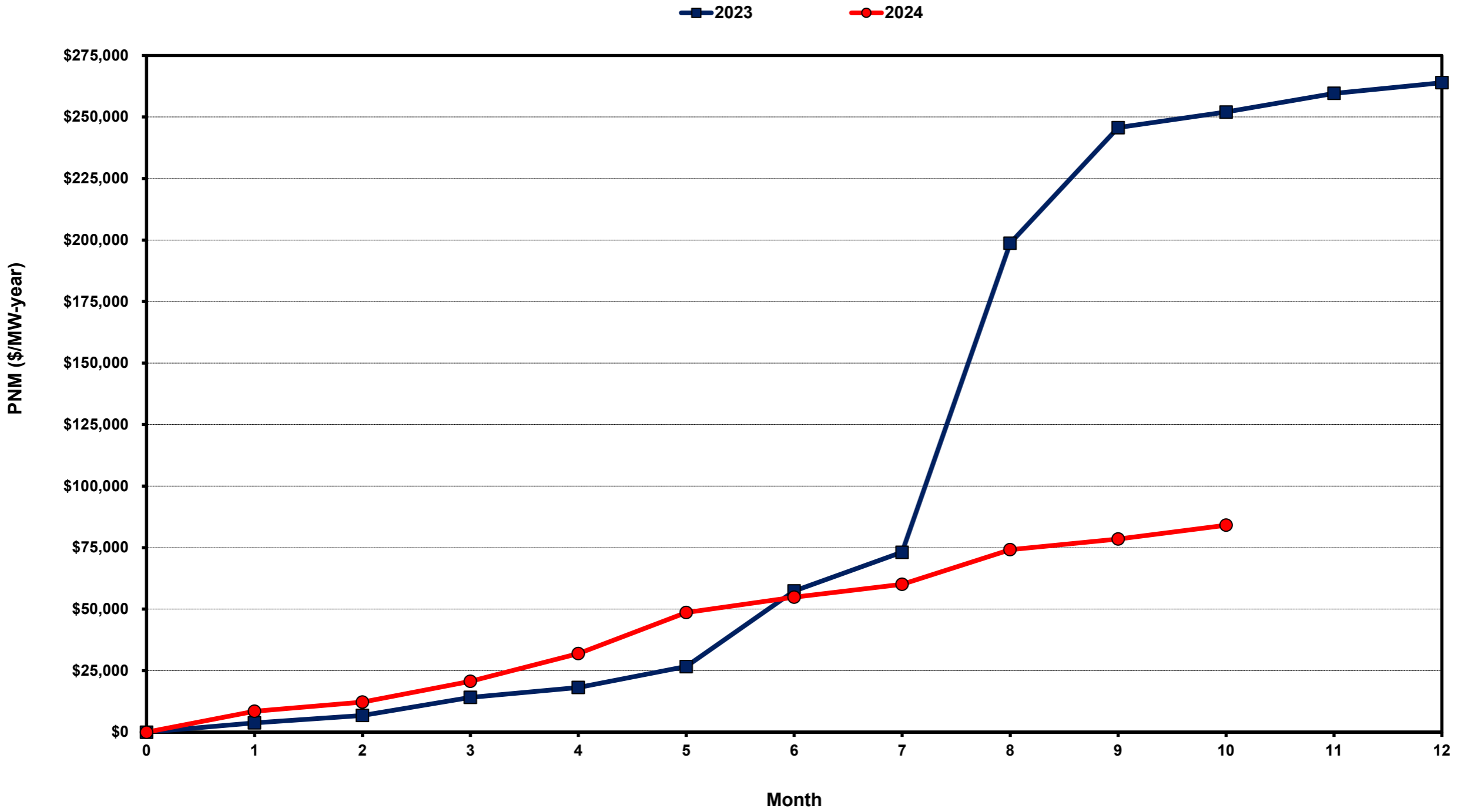


Monthly Average Ancillary Services Cost per MWh Load

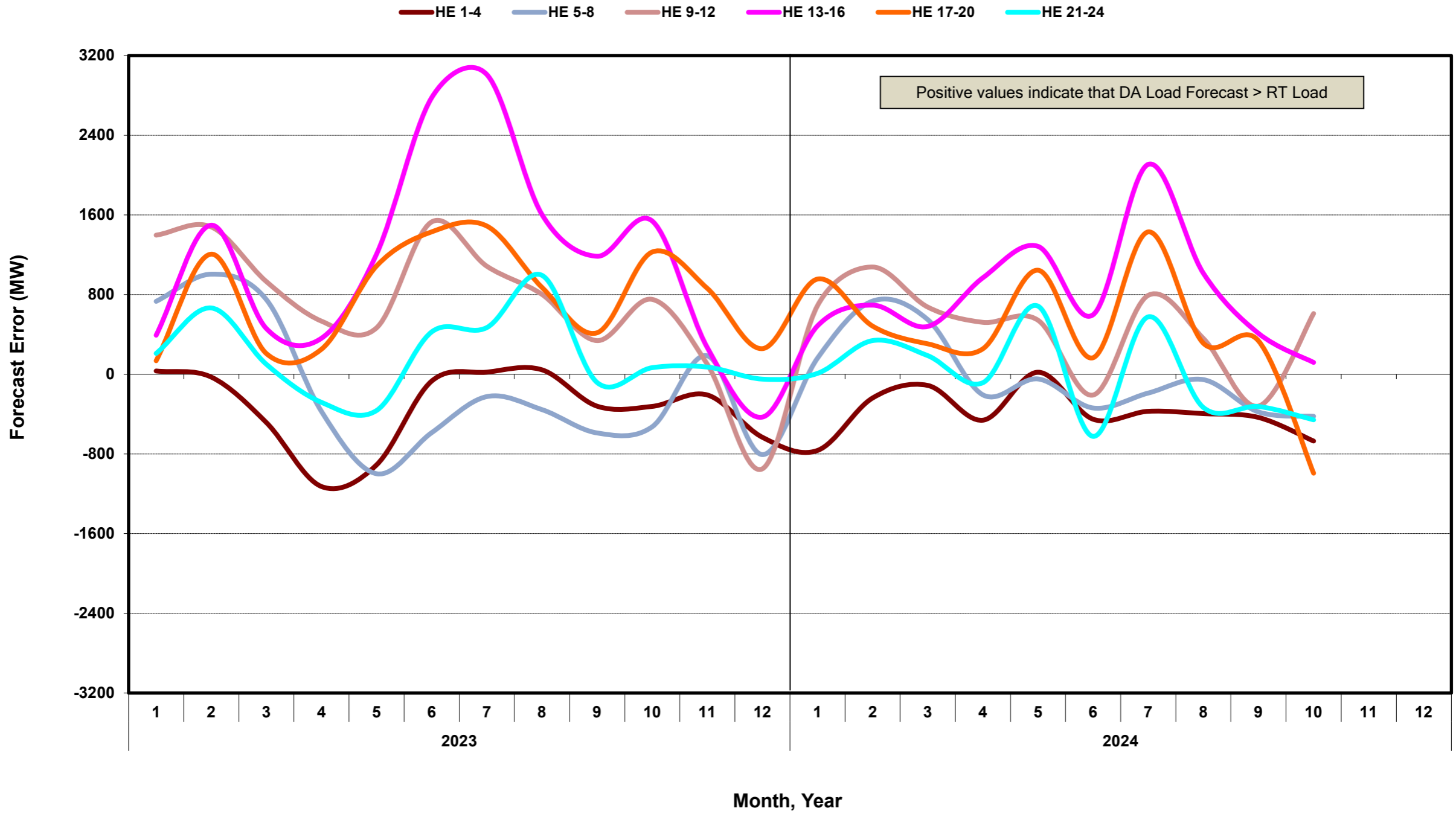
RegUp RegDn RRS NonSpin ECRS



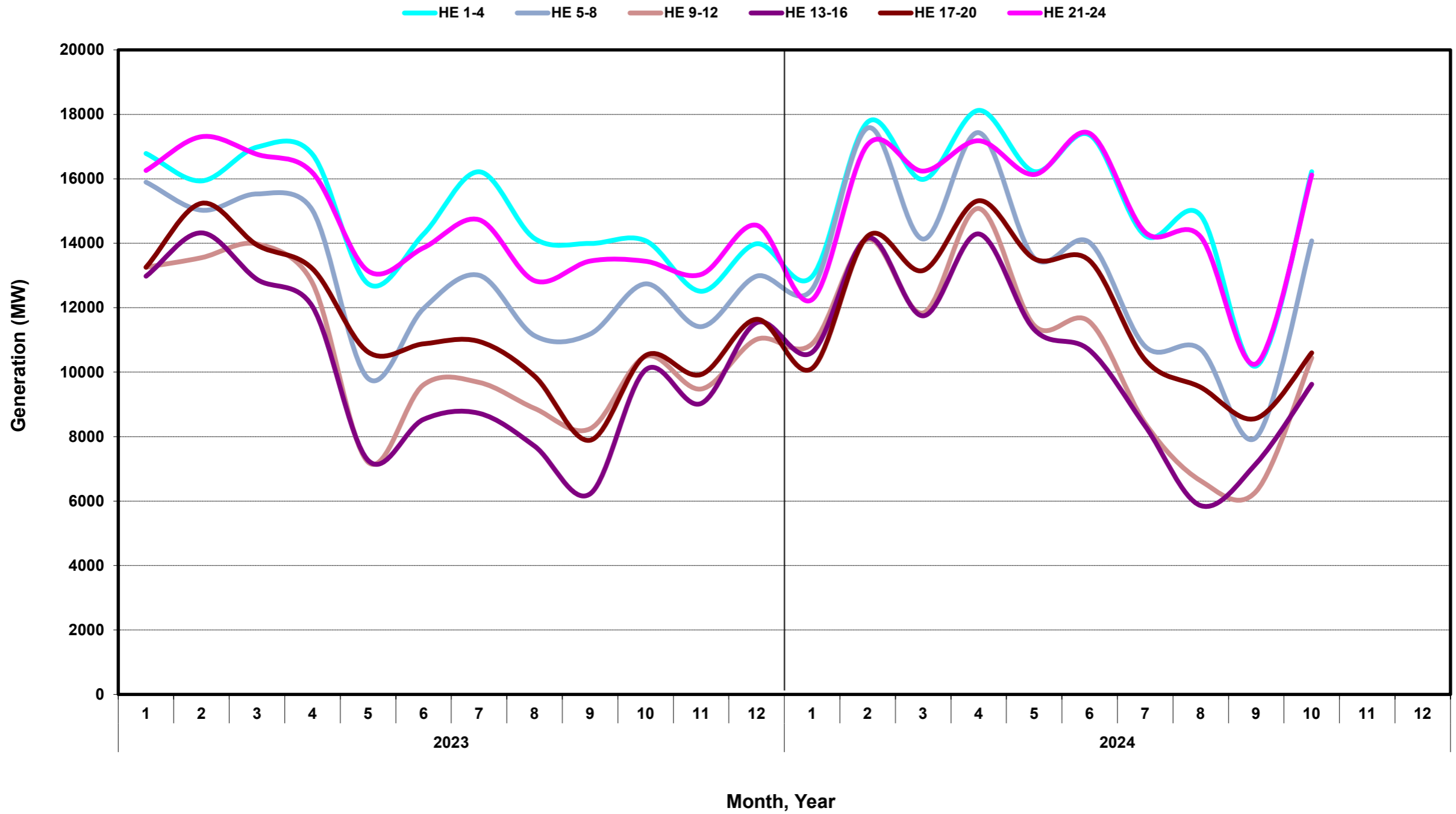
ERCOT-wide Cumulative Peaker Net Margin



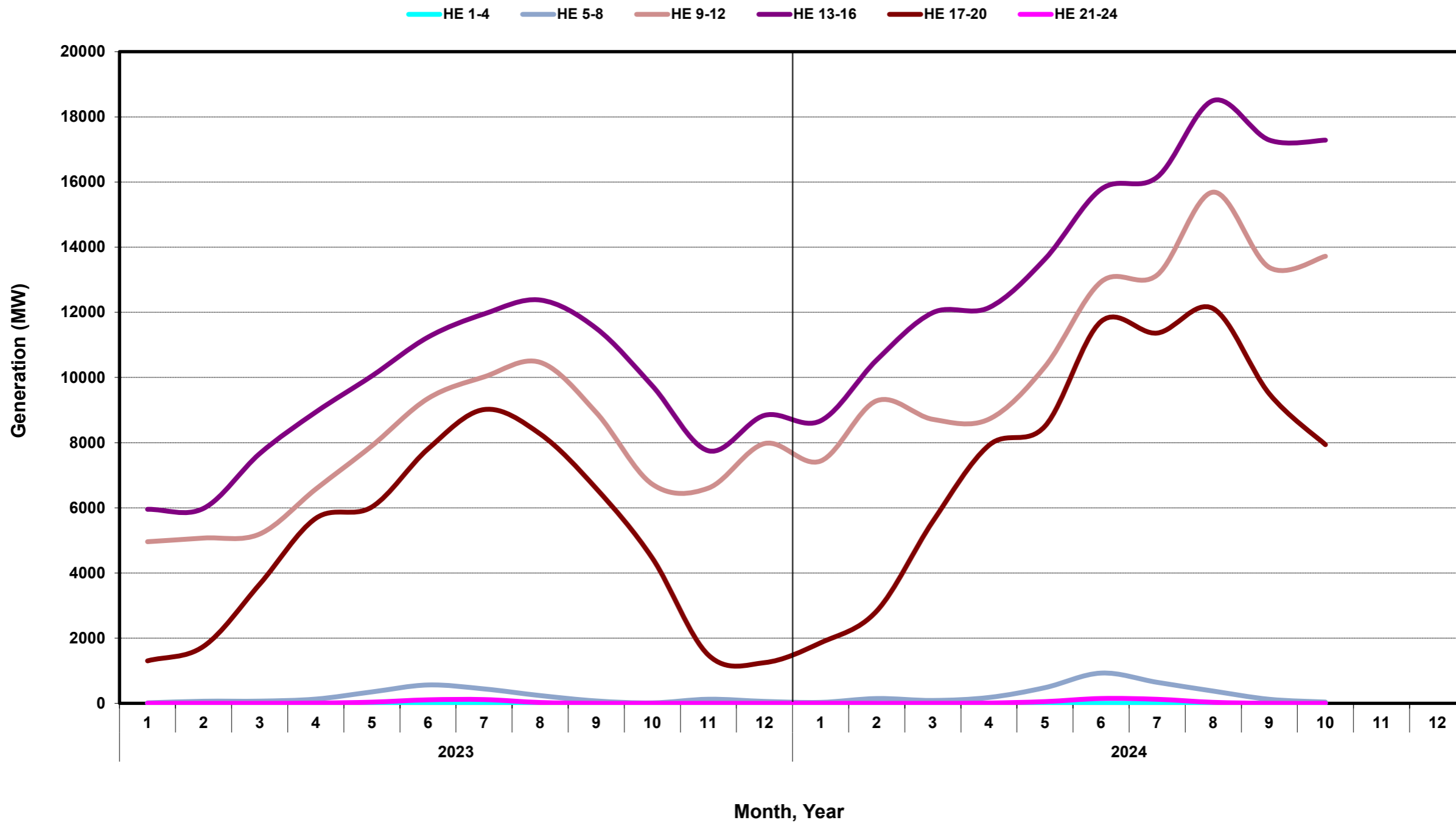
DA vs. RT Load Forecast Error by Hour Ending



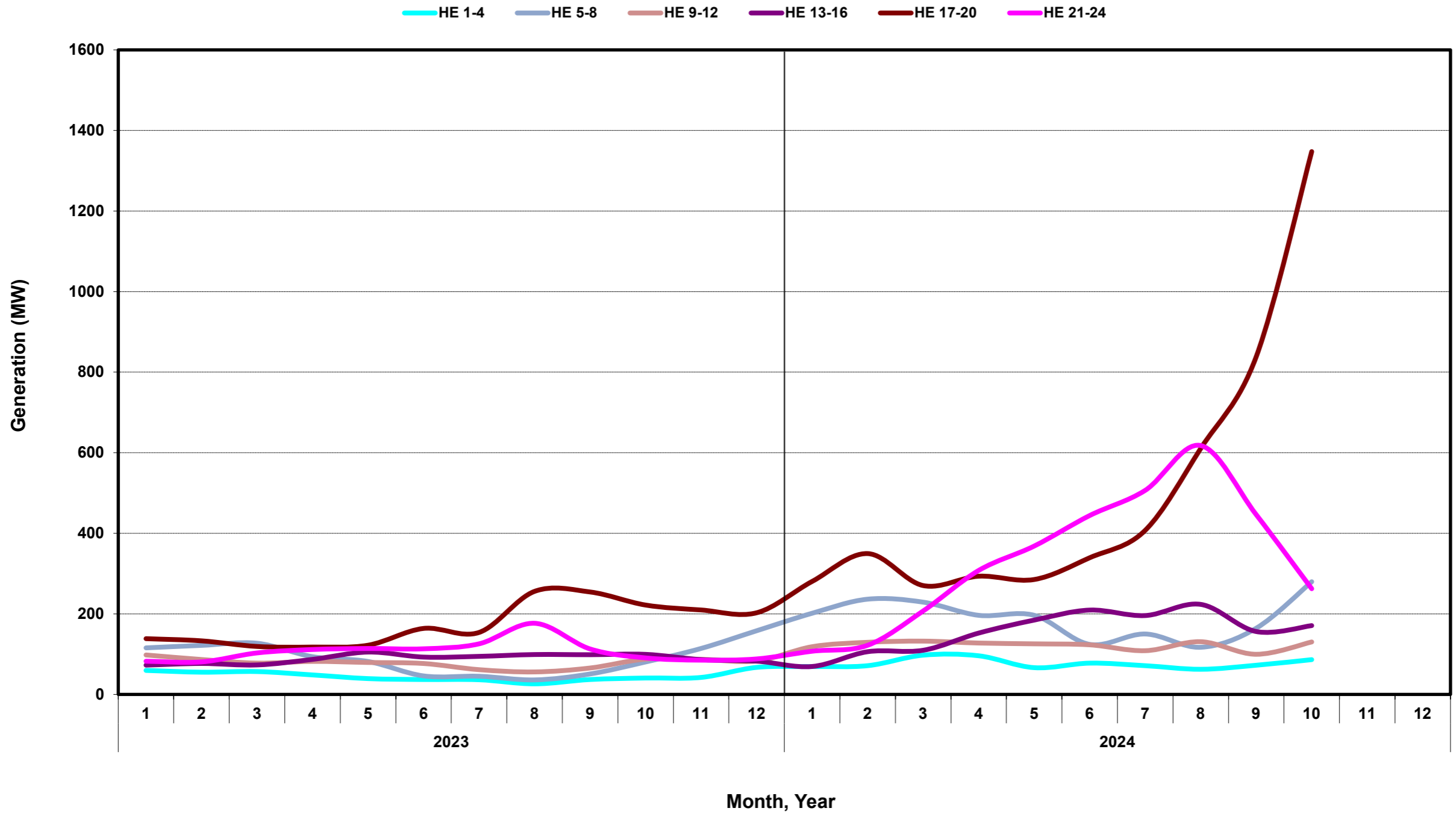
Monthly Average of Wind Generation by Hour Ending



Monthly Average of Solar Generation by Hour Ending

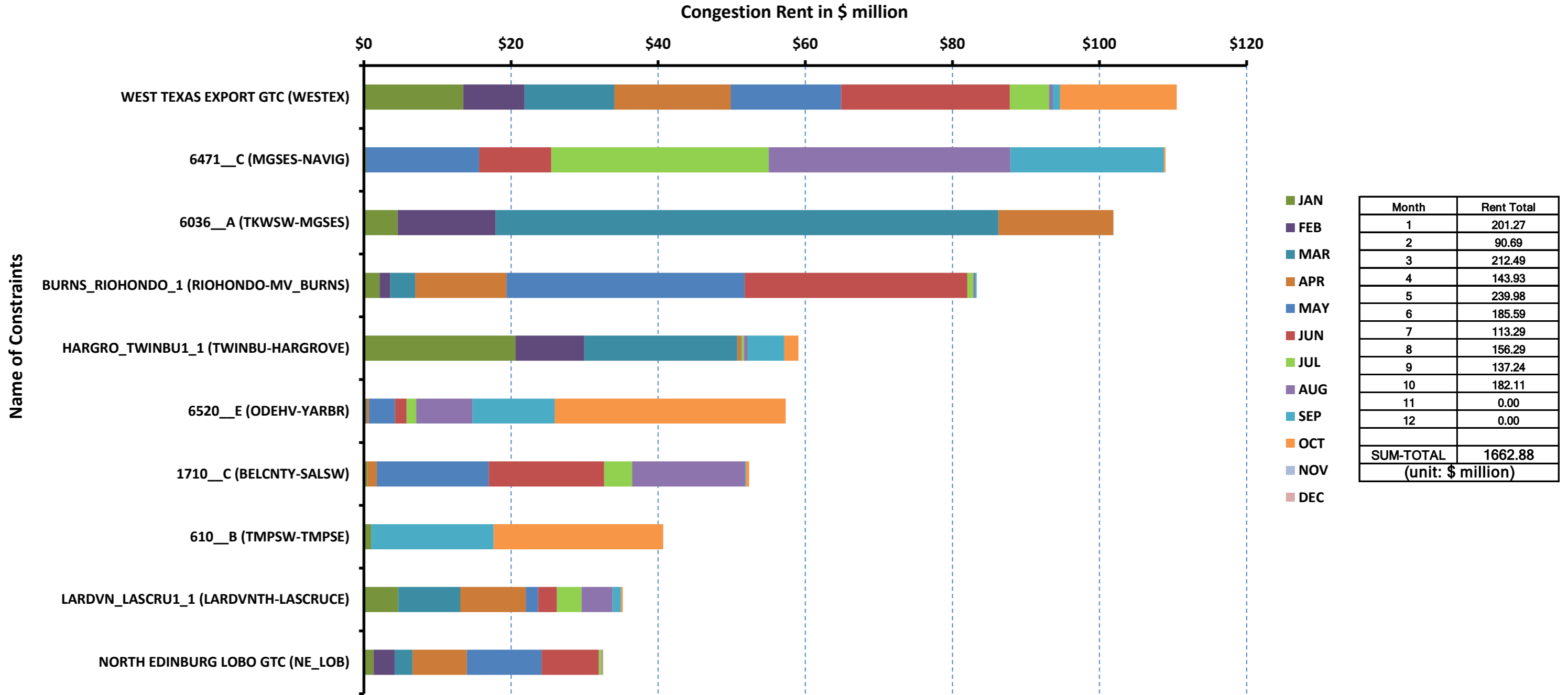


Monthly Average of Battery Generation by Hour Ending



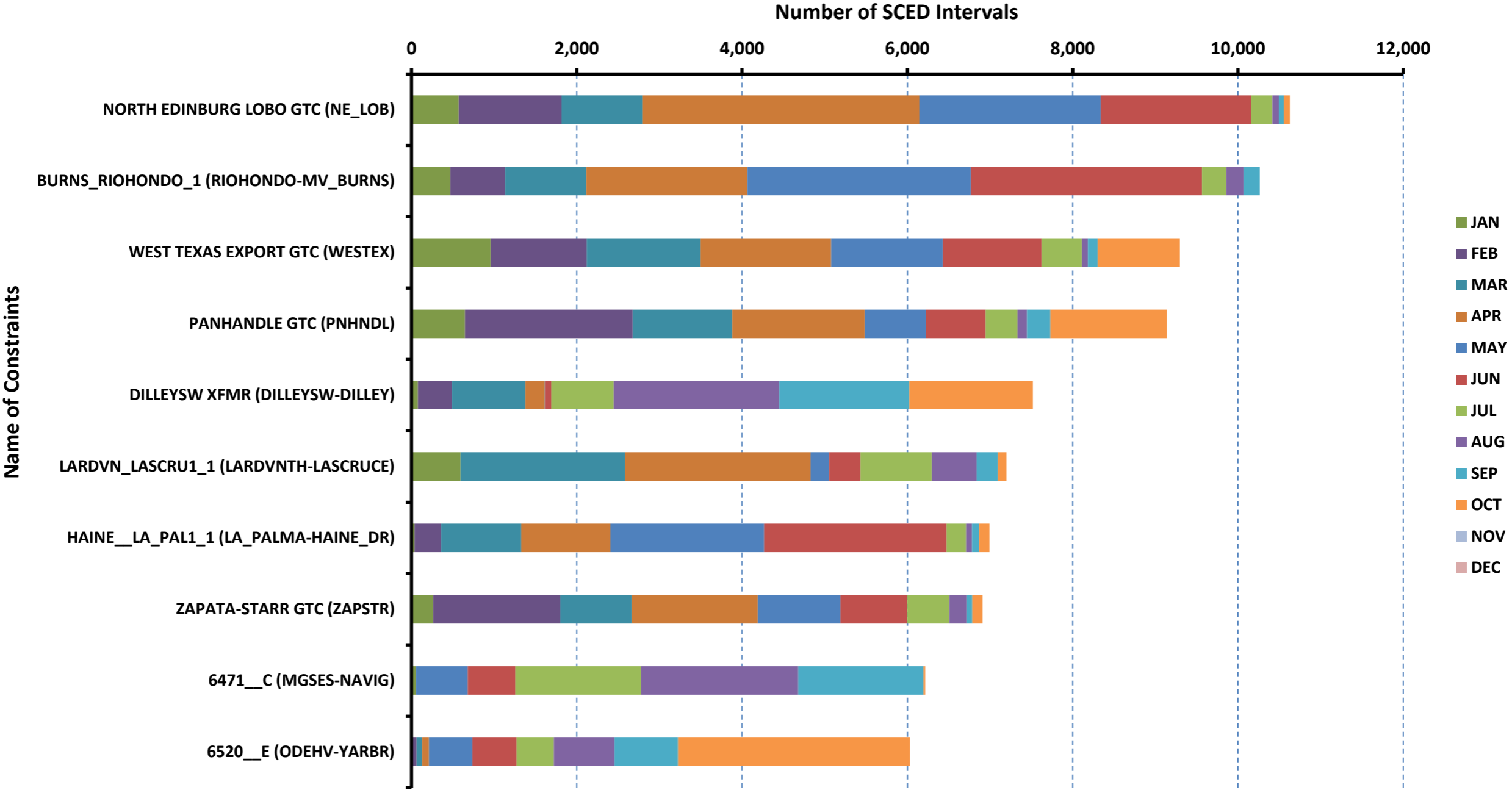
RT Congestion Constraint Rankings - 1

Top 10 Constraints by Total Congestion Value - 2024



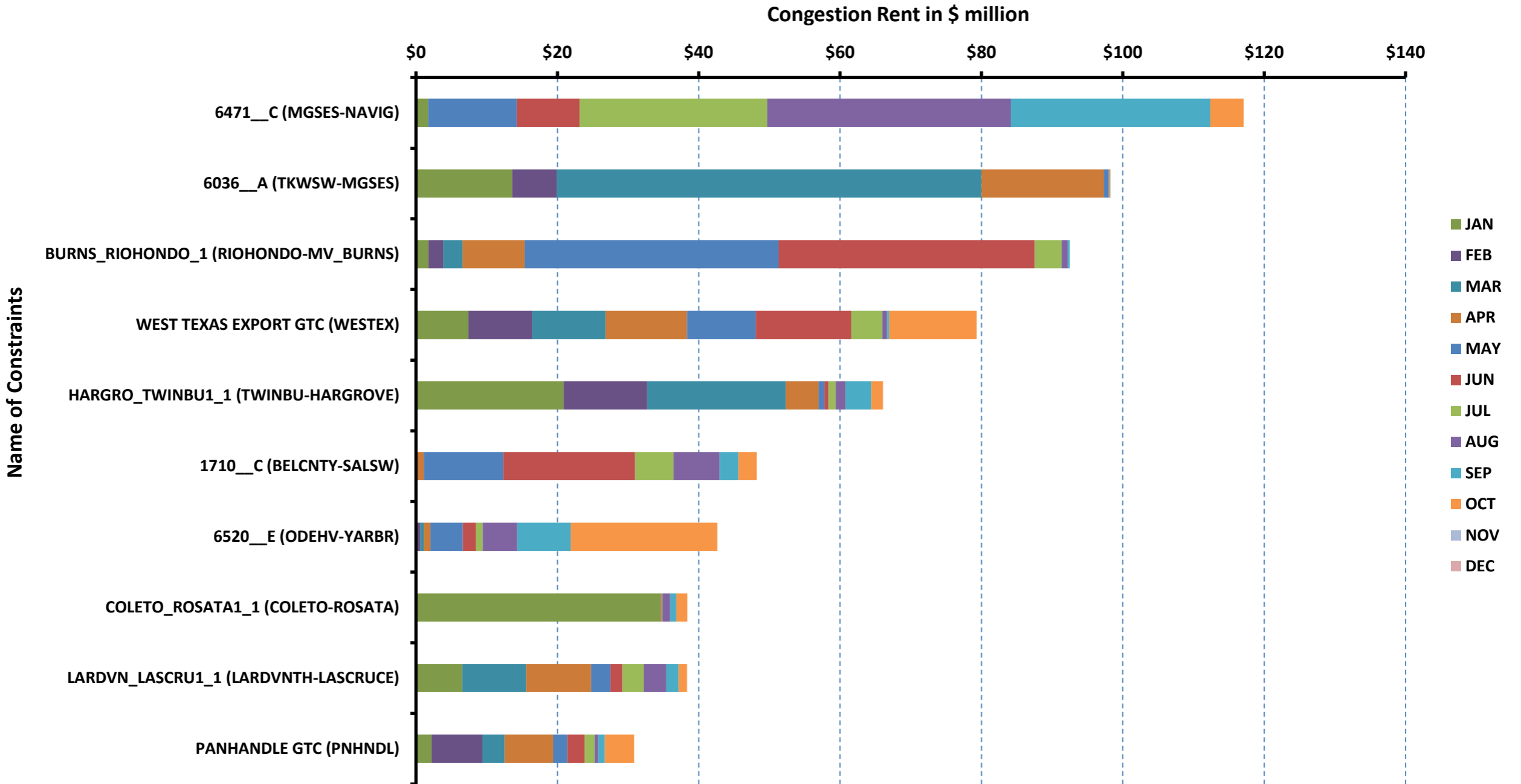
RT Congestion Constraint Rankings - 2

Top 10 Constraints by Binding Frequency - 2024



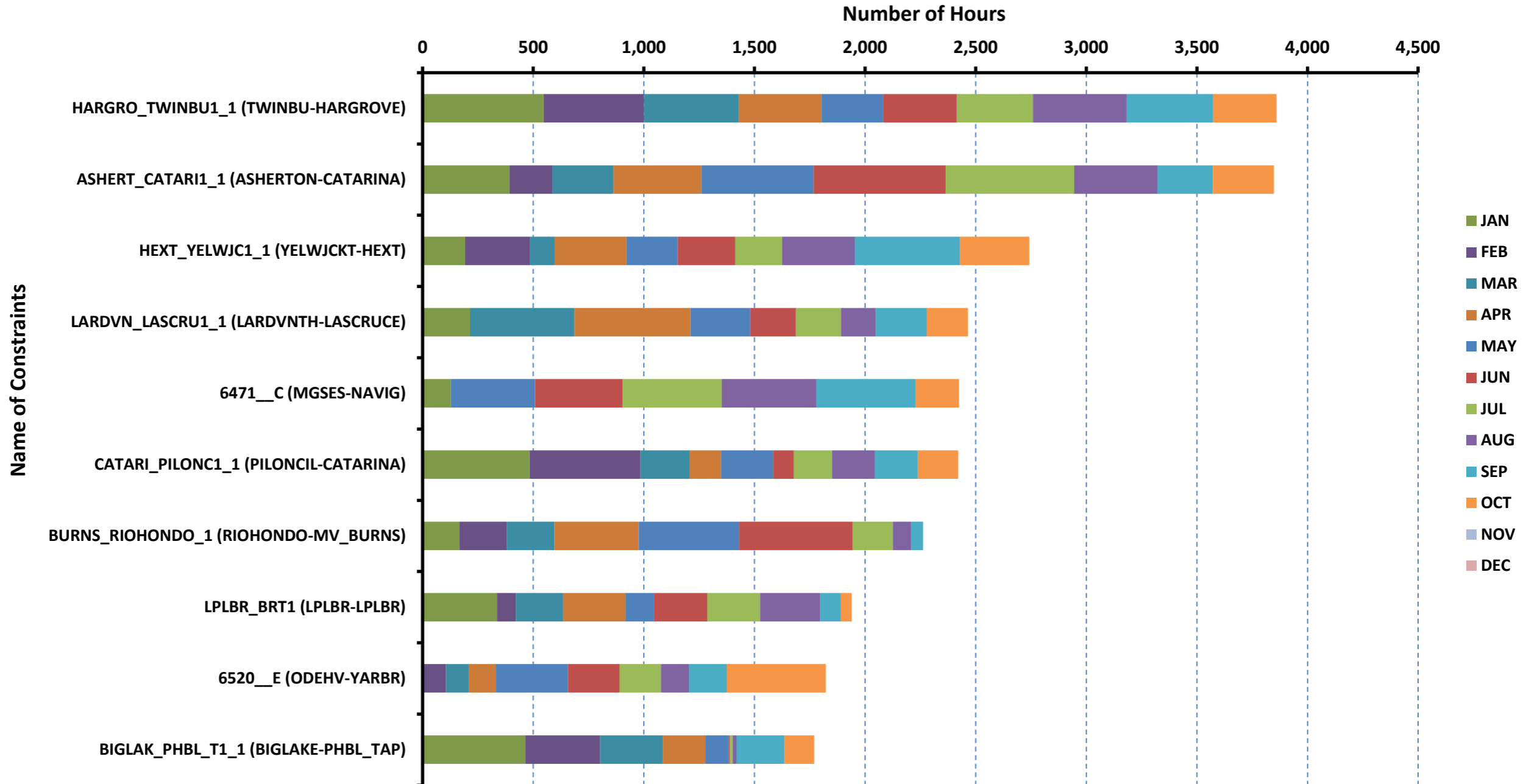
DA Congestion Constraint Rankings - 1

Top 10 Constraints by Total Congestion Value - 2024



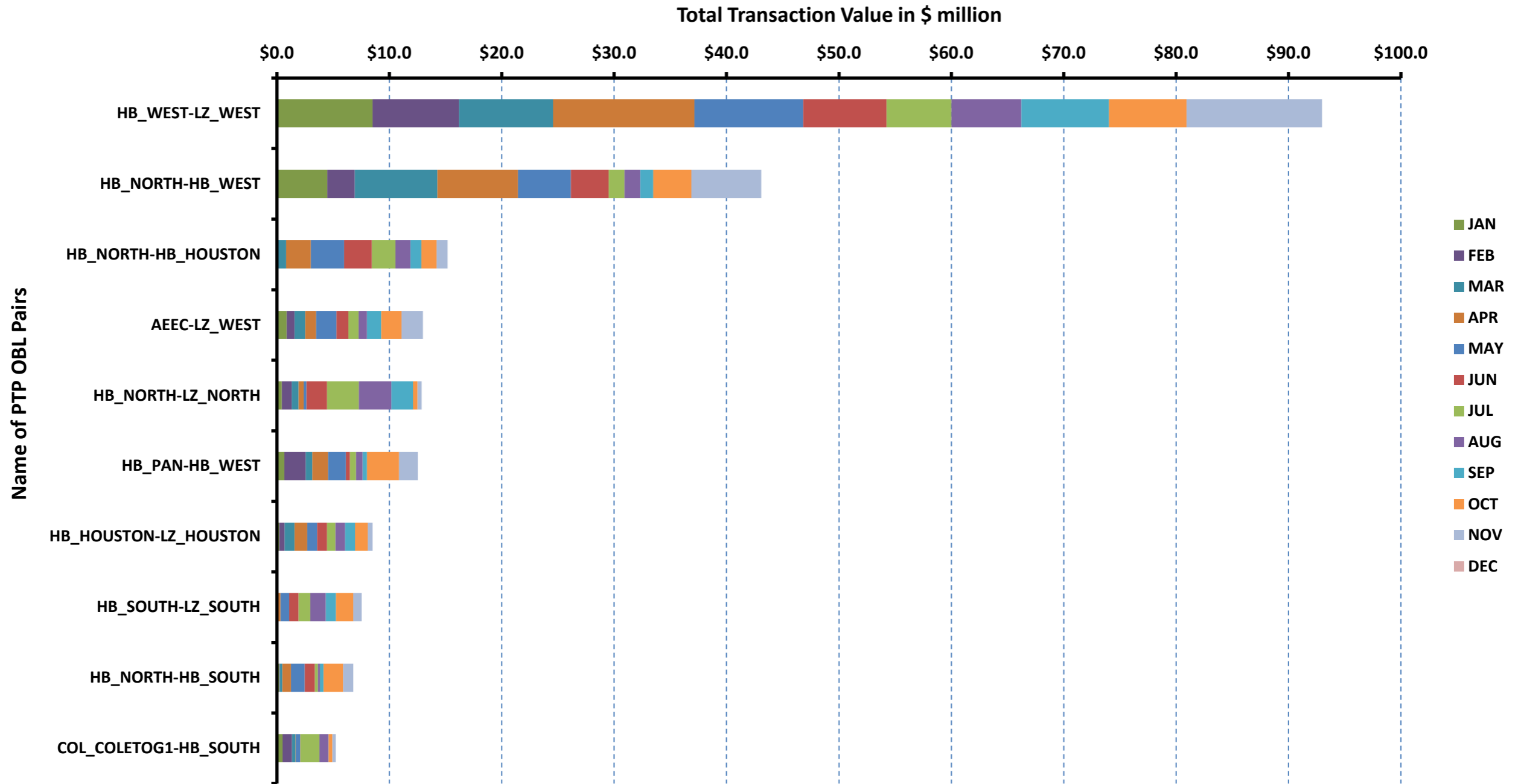
DA Congestion Constraint Rankings - 2

Top 10 Constraints by Binding Frequency - 2024



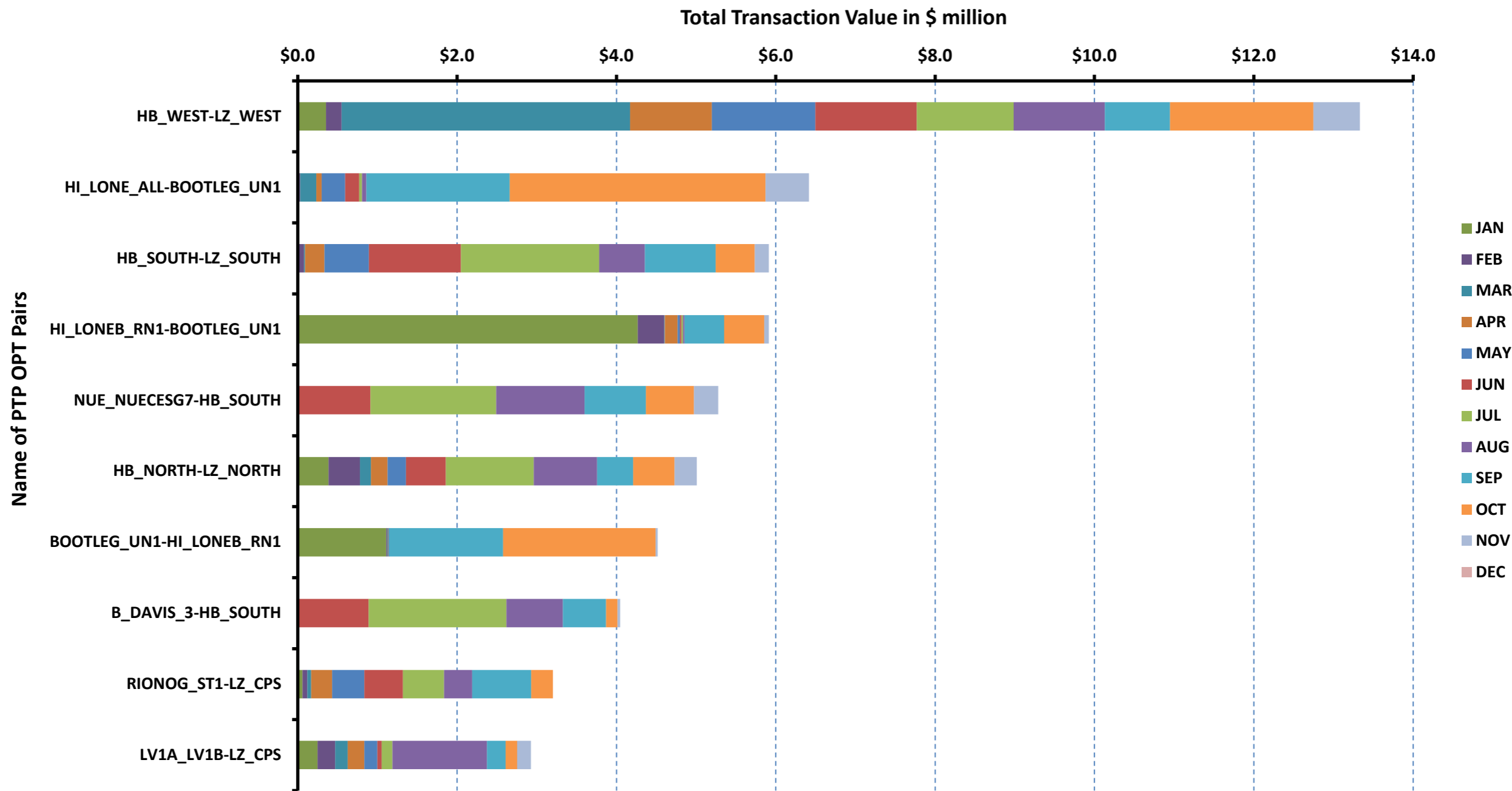
Top 10 CRR Pairs Ranked by Monthly Auction Values - 1

Top 10 PTP Obligations by Total Transaction Value - 2024



Top 10 CRR Pairs Ranked by Monthly Auction Values - 2

Top 10 PTP Options by Total Transaction Value - 2024



ERCOT-wide Avg. Energy Price - DA vs. RT			
Year	Month	DA Settlement Point Price (\$/MWh)	RT Settlement Point Price (\$/MWh)
2023	1	\$ 28.02	\$ 26.68
	2	\$ 23.83	\$ 21.95
	3	\$ 29.90	\$ 31.20
	4	\$ 27.58	\$ 24.45
	5	\$ 32.08	\$ 32.48
	6	\$ 88.69	\$ 75.44
	7	\$ 64.45	\$ 48.58
	8	\$ 306.22	\$ 224.18
	9	\$ 86.20	\$ 111.36
	10	\$ 37.83	\$ 31.84
	11	\$ 33.62	\$ 31.71
	12	\$ 23.30	\$ 23.87
2024	1	\$ 57.00	\$ 40.43
	2	\$ 15.96	\$ 15.83
	3	\$ 25.15	\$ 24.75
	4	\$ 26.34	\$ 27.50
	5	\$ 52.83	\$ 46.32
	6	\$ 35.48	\$ 32.46
	7	\$ 25.80	\$ 25.03
	8	\$ 41.24	\$ 41.88
	9	\$ 26.58	\$ 27.33
	10	\$ 31.40	\$ 28.23
	11	\$ -	\$ -
	12	\$ -	\$ -

ERCOT-wide Monthly Implied Heat Rate - DA vs. RT

Year	Month	Gas Price (\$/MMBtu)	DA Settlement Point Price (\$/MWh)	DA Heat Rate (MWh/MMBtu)	RT Settlement Point Price (\$/MWh)	RT Heat Rate (MWh/MMBtu)
2023	1	\$ 2.65	\$ 28.02	10.58	\$ 26.68	10.07
	2	\$ 2.05	\$ 23.83	11.60	\$ 21.95	10.69
	3	\$ 2.08	\$ 29.90	14.37	\$ 31.20	15.00
	4	\$ 1.90	\$ 27.58	14.54	\$ 24.45	12.89
	5	\$ 1.96	\$ 32.08	16.39	\$ 32.48	16.59
	6	\$ 2.10	\$ 88.69	42.32	\$ 75.44	36.00
	7	\$ 2.36	\$ 64.45	27.35	\$ 48.58	20.62
	8	\$ 2.40	\$ 306.22	127.70	\$ 224.18	93.49
	9	\$ 2.41	\$ 86.20	35.84	\$ 111.36	46.30
	10	\$ 2.39	\$ 37.83	15.83	\$ 31.84	13.32
	11	\$ 2.29	\$ 33.62	14.71	\$ 31.71	13.88
	12	\$ 2.07	\$ 23.30	11.23	\$ 23.87	11.51
2024	1	\$ 3.02	\$ 57.00	18.85	\$ 40.43	13.37
	2	\$ 1.41	\$ 15.96	11.36	\$ 15.83	11.26
	3	\$ 1.30	\$ 25.15	19.40	\$ 24.75	19.09
	4	\$ 1.15	\$ 26.34	22.92	\$ 27.50	23.93
	5	\$ 1.82	\$ 52.83	29.02	\$ 46.32	25.44
	6	\$ 2.18	\$ 35.48	16.29	\$ 32.46	14.90
	7	\$ 1.68	\$ 25.80	15.34	\$ 25.03	14.88
	8	\$ 1.77	\$ 41.24	23.30	\$ 41.88	23.66
	9	\$ 2.06	\$ 26.58	12.88	\$ 27.33	13.24
	10	\$ 2.01	\$ 31.40	15.63	\$ 28.23	14.06
	11	\$ -	\$ -	-	\$ -	-
	12	\$ -	\$ -	-	\$ -	-

Daily Shortage (ORDC) and Reliability Adders Average Values and Duration						
Year	Month	Day	Shortage Adder (\$/MW)	Reliability Adder (\$/MW)	Hours of Positive Shortage Adder	Hours of Positive Reliability Adder
2024	10	1	\$ 0.01	\$ -	1	0
2024	10	2	\$ 0.06	\$ 1.45	3	19
2024	10	3	\$ 1.17	\$ -	3	0
2024	10	4	\$ -	\$ 0.66	0	24
2024	10	5	\$ -	\$ 0.01	0	1
2024	10	6	\$ 0.64	\$ 1.32	8	28
2024	10	7	\$ 0.43	\$ -	7	0
2024	10	8	\$ 0.04	\$ 0.76	4	22
2024	10	9	\$ 1.49	\$ 3.91	5	21
2024	10	10	\$ 5.09	\$ 1.65	4	25
2024	10	11	\$ 0.02	\$ 1.11	2	6
2024	10	12	\$ -	\$ 0.28	0	4
2024	10	13	\$ 3.84	\$ 2.10	8	34
2024	10	14	\$ 8.14	\$ 3.02	11	19
2024	10	15	\$ 0.03	\$ 2.40	4	26
2024	10	16	\$ -	\$ 1.29	0	21
2024	10	17	\$ -	\$ 0.02	0	1
2024	10	18	\$ -	\$ -	0	0
2024	10	19	\$ -	\$ -	0	0
2024	10	20	\$ 0.02	\$ 0.99	2	6
2024	10	21	\$ -	\$ -	0	0
2024	10	22	\$ 0.29	\$ 3.30	6	23
2024	10	23	\$ 1.99	\$ 0.66	7	39
2024	10	24	\$ -	\$ 0.53	0	57
2024	10	25	\$ 2.08	\$ 3.04	6	25
2024	10	26	\$ 2.99	\$ 3.62	9	24
2024	10	27	\$ 0.16	\$ 1.24	5	13
2024	10	28	\$ -	\$ -	0	0
2024	10	29	\$ -	\$ -	0	0
2024	10	30	\$ -	\$ -	0	0
2024	10	31	\$ -	\$ 0.39	0	22

Shortage (ORDC) and Reliability Adder Floor Impact on Energy Cost			
Year	Month	Monthly Impact (\$)	Annual Cumulative Impact (\$)
2023	1	\$ -	\$ -
2023	2	\$ -	\$ -
2023	3	\$ -	\$ -
2023	4	\$ -	\$ -
2023	5	\$ -	\$ -
2023	6	\$ -	\$ -
2023	7	\$ -	\$ -
2023	8	\$ -	\$ -
2023	9	\$ -	\$ -
2023	10	\$ -	\$ -
2023	11	\$ 903,568	\$ 903,568
2023	12	\$ -	\$ 903,568
2024	1	\$ 305,655	\$ 305,655
2024	2	\$ -	\$ 305,655
2024	3	\$ 356,079	\$ 661,734
2024	4	\$ 2,700,062	\$ 3,361,796
2024	5	\$ 1,860,853	\$ 5,222,649
2024	6	\$ 90,904	\$ 5,313,553
2024	7	\$ 1,146,261	\$ 6,459,814
2024	8	\$ 1,090,732	\$ 7,550,546
2024	9	\$ 2,408,538	\$ 9,959,085
2024	10	\$ 537,649	\$ 10,496,733
0	0	\$ -	\$ 10,496,733
0	0	\$ -	\$ 10,496,733

Shortage (ORDC) and Reliability Adder Floor Impact on A/S Imbalance			
Year	Month	Monthly Impact (\$)	Annual Cumulative Impact (\$)
2023	1	\$ -	\$ -
2023	2	\$ -	\$ -
2023	3	\$ -	\$ -
2023	4	\$ -	\$ -
2023	5	\$ -	\$ -
2023	6	\$ -	\$ -
2023	7	\$ -	\$ -
2023	8	\$ -	\$ -
2023	9	\$ -	\$ -
2023	10	\$ -	\$ -
2023	11	\$ 24,983	\$ 24,983
2023	12	\$ -	\$ 24,983
2024	1	\$ 1,307	\$ 1,307
2024	2	\$ -	\$ 1,307
2024	3	\$ 3,006	\$ 4,313
2024	4	\$ 64,791	\$ 69,104
2024	5	\$ (19,776)	\$ 49,328
2024	6	\$ 1,528	\$ 50,856
2024	7	\$ 18,724	\$ 69,580
2024	8	\$ (17,690)	\$ 51,890
2024	9	\$ 54,477	\$ 106,367
2024	10	\$ 7,356	\$ 113,723
0	0	\$ -	\$ 113,723
0	0	\$ -	\$ 113,723

Monthly Average of Ancillary Services Required MW						
Year	Month	Regulation Down (MW)	Non-Spinning Reserve Service (MW)	Responsive Reserve Service (MW)	Regulation Up (MW)	ERCOT Contingency Reserve Service (MW)
2023	1	342	4,048	2,965	372	-
	2	420	4,243	3,022	400	-
	3	433	4,049	3,256	454	-
	4	405	4,262	3,102	400	-
	5	418	5,052	2,901	428	-
	6	376	3,275	2,676	408	2,073
	7	347	2,801	2,583	379	2,041
	8	323	2,207	2,566	389	2,127
	9	362	2,265	2,693	381	2,041
	10	399	2,467	2,950	409	1,784
	11	335	2,385	3,076	344	1,607
	12	339	3,092	3,053	366	1,847
2024	1	342	2,945	2,951	385	1,554
	2	403	2,968	2,951	409	1,668
	3	430	2,530	3,088	432	1,562
	4	399	2,672	3,003	408	1,464
	5	414	3,702	2,664	417	1,988
	6	388	2,906	2,420	418	2,009
	7	361	2,503	2,375	387	2,049
	8	375	2,185	2,326	401	2,172
	9	377	2,137	2,414	393	1,983
	10	416	2,361	2,737	397	1,558
	11	-	-	-	-	-
	12	-	-	-	-	-

Hourly Average of Ancillary Services Required MW						
Year	Month	Regulation Down (MW)	Non-Spinning Reserve Service (MW)	Responsive Reserve Service (MW)	Regulation Up (MW)	ERCOT Contingency Reserve Service (MW)
2023	1	372	2,816	2,954	227	1,447
	2	294	2,816	2,954	189	1,393
	3	248	3,101	2,987	214	1,462
	4	223	3,103	2,988	242	1,460
	5	219	3,103	2,988	297	1,431
	6	261	3,103	2,988	426	1,440
	7	233	3,558	2,883	521	1,598
	8	362	3,558	2,883	347	1,815
	9	592	3,558	2,883	340	2,104
	10	495	3,558	2,883	486	2,474
	11	421	3,668	2,778	530	2,305
	12	393	3,668	2,778	535	2,325
	13	385	3,687	2,778	522	2,267
	14	375	3,687	2,778	510	2,283
	15	404	3,620	2,908	499	2,331
	16	419	3,620	2,908	523	2,413
	17	424	3,620	2,908	606	2,359
	18	405	3,620	2,908	652	2,359
	19	397	3,147	2,905	546	2,172
	20	338	3,147	2,905	409	2,042
	21	376	3,147	2,905	275	1,864
	22	439	3,147	2,905	201	1,756
	23	472	3,068	2,954	192	1,612
	24	443	3,068	2,954	168	1,501
2024	1	406	2,118	2,760	231	1,237
	2	327	2,118	2,760	209	1,220
	3	273	2,409	2,803	218	1,251
	4	246	2,408	2,804	244	1,203
	5	226	2,408	2,804	291	1,230
	6	240	2,408	2,804	417	1,242
	7	230	3,256	2,737	497	1,343
	8	465	3,256	2,737	313	1,663
	9	671	3,256	2,737	329	2,129
	10	483	3,256	2,737	484	2,243
	11	405	3,046	2,655	553	2,303
	12	379	3,046	2,655	562	2,146
	13	396	3,006	2,655	548	2,074
	14	379	3,006	2,655	543	2,148
	15	397	2,753	2,600	499	2,194
	16	419	2,753	2,600	530	2,276
	17	441	2,753	2,600	579	2,428
	18	437	2,753	2,600	645	2,378
	19	389	2,478	2,596	643	2,078
	20	326	2,478	2,596	524	1,887
	21	391	2,478	2,596	299	1,834
	22	463	2,478	2,596	210	1,751
	23	509	2,323	2,760	185	1,548
	24	471	2,323	2,760	156	1,425

Monthly Average Ancillary Services Prices

Year	Month	Regulation Down (MW)	Non-Spinning Reserve Service (MW)	Responsive Reserve Service (MW)	Regulation Up (MW)	ERCOT Contingency Reserve Service (MW)
2023	1	\$ 5.69	\$ 4.69	\$ 4.00	\$ 7.27	\$ -
	2	\$ 12.99	\$ 5.79	\$ 3.72	\$ 7.58	\$ -
	3	\$ 6.42	\$ 8.01	\$ 6.24	\$ 12.47	\$ -
	4	\$ 7.65	\$ 8.03	\$ 6.12	\$ 12.52	\$ -
	5	\$ 4.74	\$ 11.87	\$ 4.03	\$ 7.66	\$ -
	6	\$ 8.20	\$ 45.87	\$ 38.57	\$ 47.00	\$ 107.44
	7	\$ 6.53	\$ 17.12	\$ 18.14	\$ 23.85	\$ 38.30
	8	\$ 99.16	\$ 80.61	\$ 132.73	\$ 215.17	\$ 276.73
	9	\$ 29.48	\$ 17.56	\$ 32.12	\$ 47.44	\$ 44.76
	10	\$ 6.59	\$ 8.23	\$ 10.82	\$ 17.38	\$ 16.78
	11	\$ 3.19	\$ 8.98	\$ 7.73	\$ 12.42	\$ 11.06
	12	\$ 2.60	\$ 2.81	\$ 2.50	\$ 3.91	\$ 3.28
2024	1	\$ 15.69	\$ 14.74	\$ 17.72	\$ 18.47	\$ 22.98
	2	\$ 2.15	\$ 1.58	\$ 1.74	\$ 2.65	\$ 2.64
	3	\$ 2.90	\$ 5.29	\$ 3.95	\$ 5.52	\$ 6.54
	4	\$ 3.01	\$ 7.30	\$ 6.37	\$ 10.41	\$ 10.16
	5	\$ 6.40	\$ 27.75	\$ 11.74	\$ 15.37	\$ 32.49
	6	\$ 3.62	\$ 4.39	\$ 3.20	\$ 4.71	\$ 10.62
	7	\$ 2.66	\$ 1.34	\$ 2.62	\$ 3.53	\$ 3.59
	8	\$ 4.91	\$ 2.70	\$ 8.17	\$ 10.10	\$ 10.67
	9	\$ 1.87	\$ 1.69	\$ 2.07	\$ 2.47	\$ 2.17
	10	\$ 1.73	\$ 3.88	\$ 4.36	\$ 7.51	\$ 5.05
	11	\$ -	\$ -	\$ -	\$ -	\$ -
	12	\$ -	\$ -	\$ -	\$ -	\$ -

Monthly Average Ancillary Services Cost per MWh Load						
Year	Month	Regulation Down (MW)	Non-Spinning Reserve Service (MW)	Responsive Reserve Service (MW)	Regulation Up (MW)	ERCOT Contingency Reserve Service (MW)
2023	1	\$ 0.04	\$ 0.44	\$ 0.27	\$ 0.06	\$ -
	2	\$ 0.12	\$ 0.55	\$ 0.25	\$ 0.07	\$ -
	3	\$ 0.06	\$ 0.76	\$ 0.48	\$ 0.13	\$ -
	4	\$ 0.07	\$ 0.80	\$ 0.45	\$ 0.12	\$ -
	5	\$ 0.04	\$ 1.22	\$ 0.24	\$ 0.07	\$ -
	6	\$ 0.05	\$ 2.53	\$ 1.74	\$ 0.32	\$ 2.63
	7	\$ 0.04	\$ 0.75	\$ 0.73	\$ 0.14	\$ 1.23
	8	\$ 0.47	\$ 2.63	\$ 5.04	\$ 1.24	\$ 8.72
	9	\$ 0.18	\$ 0.67	\$ 1.45	\$ 0.30	\$ 1.53
	10	\$ 0.06	\$ 0.43	\$ 0.67	\$ 0.15	\$ 0.63
	11	\$ 0.02	\$ 0.49	\$ 0.55	\$ 0.10	\$ 0.41
	12	\$ 0.02	\$ 0.19	\$ 0.17	\$ 0.03	\$ 0.14
2024	1	\$ 0.10	\$ 0.85	\$ 1.02	\$ 0.14	\$ 0.70
	2	\$ 0.02	\$ 0.11	\$ 0.12	\$ 0.02	\$ 0.10
	3	\$ 0.03	\$ 0.31	\$ 0.28	\$ 0.06	\$ 0.24
	4	\$ 0.03	\$ 0.42	\$ 0.41	\$ 0.09	\$ 0.32
	5	\$ 0.05	\$ 1.91	\$ 0.58	\$ 0.12	\$ 1.20
	6	\$ 0.02	\$ 0.21	\$ 0.13	\$ 0.03	\$ 0.35
	7	\$ 0.02	\$ 0.06	\$ 0.10	\$ 0.02	\$ 0.12
	8	\$ 0.03	\$ 0.09	\$ 0.29	\$ 0.06	\$ 0.35
	9	\$ 0.01	\$ 0.06	\$ 0.09	\$ 0.02	\$ 0.08
	10	\$ 0.01	\$ 0.17	\$ 0.23	\$ 0.06	\$ 0.15
	11	\$ -	\$ -	\$ -	\$ -	\$ -
	12	\$ -	\$ -	\$ -	\$ -	\$ -

ERCOT-wide Cumulative Peaker Net Margin			
Year	Month	PNM (\$)	Cumulative (\$)
2023	0	\$ -	\$ -
	1	\$ 3,758.67	\$ 3,758.67
	2	\$ 3,066.65	\$ 6,825.32
	3	\$ 7,327.65	\$ 14,152.97
	4	\$ 3,963.19	\$ 18,116.16
	5	\$ 8,532.76	\$ 26,648.92
	6	\$ 30,725.00	\$ 57,373.92
	7	\$ 15,736.44	\$ 73,110.36
	8	\$ 125,626.42	\$ 198,736.78
	9	\$ 46,968.45	\$ 245,705.23
	10	\$ 6,299.66	\$ 252,004.89
	11	\$ 7,639.84	\$ 259,644.73
	12	\$ 4,296.20	\$ 263,940.93
2024	0	\$ -	\$ -
	1	\$ 8,527.11	\$ 8,527.11
	2	\$ 3,701.32	\$ 12,228.43
	3	\$ 8,447.84	\$ 20,676.27
	4	\$ 11,209.11	\$ 31,885.38
	5	\$ 16,738.09	\$ 48,623.47
	6	\$ 6,214.57	\$ 54,838.04
	7	\$ 5,216.01	\$ 60,054.05
	8	\$ 14,133.36	\$ 74,187.41
	9	\$ 4,269.52	\$ 78,456.93
	10	\$ 5,634.59	\$ 84,091.52
		11	\$ -
	12	\$ -	\$ -

DA vs. RT Load Forecast Error (MW) by Hour Ending							
Year	Month	HE 1-4	HE 5-8	HE 9-12	HE 13-16	HE 17-20	HE 21-24
2023	1	33	732	1,397	392	136	210
	2	(28)	1,005	1,480	1,497	1,206	666
	3	(484)	750	931	459	208	100
	4	(1,127)	(373)	534	362	252	(282)
	5	(909)	(998)	467	1,207	1,088	(363)
	6	(68)	(586)	1,530	2,778	1,430	426
	7	22	(224)	1,085	3,009	1,488	469
	8	45	(355)	802	1,604	872	994
	9	(320)	(589)	338	1,185	417	(82)
	10	(322)	(527)	752	1,539	1,228	67
	11	(207)	186	101	268	863	73
	12	(632)	(806)	(949)	(429)	258	(48)
2024	1	(764)	163	690	486	956	9
	2	(237)	735	1,077	694	483	339
	3	(112)	549	675	481	306	187
	4	(461)	(206)	522	969	256	(84)
	5	21	(47)	543	1,284	1,045	684
	6	(451)	(338)	(208)	598	167	(623)
	7	(371)	(188)	793	2,108	1,430	577
	8	(395)	(53)	360	1,014	312	(333)
	9	(433)	(378)	(319)	411	336	(323)
	10	(670)	(421)	610	119	(993)	(457)
	11	-	-	-	-	-	-
	12	-	-	-	-	-	-

RT Congestion Constraint Rankings - Top 10 Constraints by Binding Frequency and Top 10 Constraints by Total Congestion Rent																
Category	Year	Constraint	Value	Rank	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
FREQ_EXIST	2024	NORTH EDINBURG LOBO GTC (NE_LOB)	10629	1	571	1245	977	3350	2195	1822	257	77	59	76	0	0
FREQ_EXIST	2024	BURNS_RIOHONDO_1 (RIOHONDO-MV_BURNS)	10263	2	469	664	982	1949	2705	2794	296	210	194	0	0	0
FREQ_EXIST	2024	WEST TEXAS EXPORT GTC (WESTEX)	9297	3	958	1163	1377	1578	1353	1195	487	73	117	996	0	0
FREQ_EXIST	2024	PANHANDLE GTC (PNHNDL)	9143	4	647	2029	1204	1604	742	721	385	115	284	1412	0	0
FREQ_EXIST	2024	DILLEYSW XFMR (DILLEYSW-DILLEY)	7519	5	77	412	888	235	7	72	756	2003	1574	1495	0	0
FREQ_EXIST	2024	LARDVN_LASCRU1_1 (LARDVNTH-LASCRUCE)	7197	6	595	0	1988	2246	223	380	863	543	259	100	0	0
FREQ_EXIST	2024	HAINA_LA_PAL1_1 (LA_PALMA-HAINA_DR)	6994	7	36	321	971	1079	1859	2209	234	72	88	125	0	0
FREQ_EXIST	2024	ZAPATA-STARR GTC (ZAPSTR)	6909	8	261	1539	864	1526	998	810	511	206	69	125	0	0
FREQ_EXIST	2024	6471_C (MGSES-NAVIG)	6216	9	52	0	0	0	630	574	1520	1905	1512	23	0	0
FREQ_EXIST	2024	6520_E (ODEHV-YARBR)	6031	10	0	62	64	84	527	535	449	735	769	2806	0	0
TOP10_RENT	2024	WEST TEXAS EXPORT GTC (WESTEX)	\$ 110.50	1	\$ 13.53	\$ 8.32	\$ 12.19	\$ 15.85	\$ 14.98	\$ 22.95	\$ 5.34	\$ 0.47	\$ 1.01	\$ 15.88	\$ -	\$ -
TOP10_RENT	2024	6471_C (MGSES-NAVIG)	\$ 108.98	2	\$ 0.29	\$ -	\$ -	\$ -	\$ 15.37	\$ 9.80	\$ 29.57	\$ 32.88	\$ 20.88	\$ 0.20	\$ -	\$ -
TOP10_RENT	2024	6036_A (TKWSW-MGSES)	\$ 101.90	3	\$ 4.60	\$ 13.29	\$ 68.38	\$ 15.63	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOP10_RENT	2024	BURNS_RIOHONDO_1 (RIOHONDO-MV_BURNS)	\$ 83.29	4	\$ 2.14	\$ 1.46	\$ 3.38	\$ 12.42	\$ 32.34	\$ 30.31	\$ 0.79	\$ 0.27	\$ 0.18	\$ -	\$ -	\$ -
TOP10_RENT	2024	HARGRO_TWINBU1_1 (TWINBU-HARGROVE)	\$ 59.08	5	\$ 20.59	\$ 9.39	\$ 20.80	\$ 0.51	\$ 0.05	\$ -	\$ 0.33	\$ 0.49	\$ 4.96	\$ 1.95	\$ -	\$ -
TOP10_RENT	2024	6520_E (ODEHV-YARBR)	\$ 57.36	6	\$ -	\$ 0.14	\$ 0.22	\$ 0.35	\$ 3.51	\$ 1.61	\$ 1.29	\$ 7.64	\$ 11.16	\$ 31.44	\$ -	\$ -
TOP10_RENT	2024	1710_C (BELCNTY-SALSW)	\$ 52.36	7	\$ 0.46	\$ -	\$ -	\$ 1.32	\$ 15.19	\$ 15.71	\$ 3.79	\$ 15.35	\$ 0.15	\$ 0.40	\$ -	\$ -
TOP10_RENT	2024	610_B (TMPSW-TMPSE)	\$ 40.69	8	\$ 0.99	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16.64	\$ 23.05	\$ -	\$ -
TOP10_RENT	2024	LARDVN_LASCRU1_1 (LARDVNTH-LASCRUCE)	\$ 35.20	9	\$ 4.67	\$ -	\$ 8.45	\$ 8.91	\$ 1.66	\$ 2.56	\$ 3.35	\$ 4.22	\$ 1.14	\$ 0.25	\$ -	\$ -
TOP10_RENT	2024	NORTH EDINBURG LOBO GTC (NE_LOB)	\$ 32.51	10	\$ 1.33	\$ 2.85	\$ 2.42	\$ 7.41	\$ 10.17	\$ 7.77	\$ 0.39	\$ 0.09	\$ 0.05	\$ 0.05	\$ -	\$ -

Month	Rent Total
1	\$201.27
2	\$90.69
3	\$212.49
4	\$143.93
5	\$239.98
6	\$185.59
7	\$113.29
8	\$156.29
9	\$137.24
10	\$182.11
11	\$0.00
12	\$0.00
Cumulative	\$1,662.88

DA Congestion Constraint Rankings - Top 10 Constraints by Binding Frequency and Top 10 Constraints by Total Congestion Rent																
Category	Year	Constraint	Value	Rank	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
FREQ_EXIST	2024	HARGRO_TWINBU1_1 (TWINBU-HARGROVE)	3,860	1	547	454	428	374	279	334	343	423	391	287	-	-
FREQ_EXIST	2024	ASHERT_CATARI1_1 (ASHERTON-CATARINA)	3,849	2	393	194	276	398	506	597	582	377	249	277	-	-
FREQ_EXIST	2024	HEXT_YELWJC1_1 (YELWJCKT-HEXT)	2,743	3	192	293	112	325	231	260	212	329	475	314	-	-
FREQ_EXIST	2024	LARDVN_LASCRU1_1 (LARDVNTH-LASCRUCE)	2,465	4	214	-	473	524	270	207	203	157	231	186	-	-
FREQ_EXIST	2024	6471_C (MGSES-NAVIG)	2,425	5	128	-	-	-	380	396	449	427	449	196	-	-
FREQ_EXIST	2024	CATARI_PILONC1_1 (PILONCIL-CATARINA)	2,421	6	484	501	221	143	236	93	173	193	195	182	-	-
FREQ_EXIST	2024	BURNS_RIOHONDO_1 (RIOHONDO-MV_BURNS)	2,262	7	166	215	215	381	453	514	182	83	53	-	-	-
FREQ_EXIST	2024	LPLBR_BRT1 (LPLBR-LPLBR)	1,940	8	336	86	214	282	128	241	239	271	93	50	-	-
FREQ_EXIST	2024	6520_E (ODEHV-YARBR)	1,823	9	5	101	103	121	327	233	188	126	171	448	-	-
FREQ_EXIST	2024	BIGLAK_PHBL_T1_1 (BIGLAKE-PHBL_TAP)	1,770	10	465	338	283	193	105	6	12	17	217	134	-	-
TOP10_RENT	2024	6471_C (MGSES-NAVIG)	\$ 117.10	1	\$ 1.72	\$ -	\$ -	\$ -	\$ 12.53	\$ 8.90	\$ 26.55	\$ 34.46	\$ 28.23	\$ 4.71	\$ -	\$ -
TOP10_RENT	2024	6036_A (TKWSW-MGSES)	\$ 98.22	2	\$ 13.59	\$ 6.30	\$ 60.11	\$ 17.30	\$ 0.63	\$ 0.11	\$ 0.06	\$ 0.02	\$ 0.09	\$ 0.01	\$ -	\$ -
TOP10_RENT	2024	BURNS_RIOHONDO_1 (RIOHONDO-MV_BURNS)	\$ 92.50	3	\$ 1.76	\$ 2.08	\$ 2.73	\$ 8.78	\$ 35.95	\$ 36.21	\$ 3.83	\$ 0.84	\$ 0.30	\$ -	\$ -	\$ -
TOP10_RENT	2024	WEST TEXAS EXPORT GTC (WESTEX)	\$ 79.32	4	\$ 7.41	\$ 8.98	\$ 10.43	\$ 11.52	\$ 9.72	\$ 13.50	\$ 4.40	\$ 0.69	\$ 0.29	\$ 12.37	\$ -	\$ -
TOP10_RENT	2024	HARGRO_TWINBU1_1 (TWINBU-HARGROVE)	\$ 66.07	5	\$ 20.87	\$ 11.87	\$ 19.58	\$ 4.65	\$ 0.83	\$ 0.57	\$ 1.01	\$ 1.40	\$ 3.66	\$ 1.65	\$ -	\$ -
TOP10_RENT	2024	1710_C (BELCNTY-SALSW)	\$ 48.20	6	\$ 0.00	\$ -	\$ 0.01	\$ 1.12	\$ 11.22	\$ 18.65	\$ 5.43	\$ 6.50	\$ 2.67	\$ 2.59	\$ -	\$ -
TOP10_RENT	2024	6520_E (ODEHV-YARBR)	\$ 42.64	7	\$ 0.00	\$ 0.62	\$ 0.49	\$ 0.94	\$ 4.57	\$ 1.83	\$ 1.00	\$ 4.89	\$ 7.57	\$ 20.73	\$ -	\$ -
TOP10_RENT	2024	COLETO_ROSATA1_1 (COLETO-ROSATA)	\$ 38.37	8	\$ 34.68	\$ -	\$ -	\$ -	\$ -	\$ 0.09	\$ 0.12	\$ 1.09	\$ 0.85	\$ 1.54	\$ -	\$ -
TOP10_RENT	2024	LARDVN_LASCRU1_1 (LARDVNTH-LASCRUCE)	\$ 38.33	9	\$ 6.56	\$ -	\$ 9.01	\$ 9.18	\$ 2.75	\$ 1.69	\$ 3.01	\$ 3.18	\$ 1.75	\$ 1.18	\$ -	\$ -
TOP10_RENT	2024	PANHANDLE GTC (PNHNDL)	\$ 30.86	10	\$ 2.20	\$ 7.21	\$ 3.12	\$ 6.87	\$ 2.02	\$ 2.45	\$ 1.40	\$ 0.49	\$ 0.94	\$ 4.16	\$ -	\$ -

Top 10 CRR Pairs Ranked by Monthly Auction Values - Top 10 PTP Obligations by Total Transaction Values and Top 10 PTP Options by Total Transaction Values																
FTR Option	Year	CCR Pair	Total Value	Rank	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
N	2024	HB WEST-LZ WEST	\$ 92.98	1	\$ 8.52	\$ 7.67	\$ 8.38	\$ 12.56	\$ 9.68	\$ 7.43	\$ 5.76	\$ 6.23	\$ 7.79	\$ 6.90	\$ 12.06	\$ -
N	2024	HB NORTH-HB WEST	\$ 43.10	2	\$ 4.48	\$ 2.45	\$ 7.35	\$ 7.16	\$ 4.72	\$ 3.37	\$ 1.39	\$ 1.41	\$ 1.14	\$ 3.41	\$ 6.22	\$ -
N	2024	HB NORTH-HB HOUSTON	\$ 15.19	3	\$ 0.04	\$ 0.02	\$ 0.77	\$ 2.18	\$ 2.97	\$ 2.46	\$ 2.11	\$ 1.33	\$ 0.97	\$ 1.37	\$ 0.97	\$ -
N	2024	AEEC-LZ WEST	\$ 12.98	4	\$ 0.85	\$ 0.71	\$ 0.95	\$ 0.98	\$ 1.80	\$ 1.07	\$ 0.89	\$ 0.76	\$ 1.26	\$ 1.81	\$ 1.89	\$ -
N	2024	HB NORTH-LZ NORTH	\$ 12.88	5	\$ 0.44	\$ 0.87	\$ 0.61	\$ 0.46	\$ 0.25	\$ 1.83	\$ 2.84	\$ 2.88	\$ 1.94	\$ 0.41	\$ 0.36	\$ -
N	2024	HB PAN-HB WEST	\$ 12.53	6	\$ 0.65	\$ 1.90	\$ 0.59	\$ 1.41	\$ 1.58	\$ 0.38	\$ 0.53	\$ 0.61	\$ 0.37	\$ 2.85	\$ 1.68	\$ -
N	2024	HB HOUSTON-LZ HOUSTON	\$ 8.50	7	\$ 0.21	\$ 0.47	\$ 0.89	\$ 1.12	\$ 0.88	\$ 0.88	\$ 0.74	\$ 0.87	\$ 0.88	\$ 1.12	\$ 0.43	\$ -
N	2024	HB SOUTH-LZ SOUTH	\$ 7.53	8	\$ -	\$ -	\$ 0.00	\$ 0.31	\$ 0.77	\$ 0.85	\$ 1.05	\$ 1.36	\$ 0.92	\$ 1.53	\$ 0.75	\$ -
N	2024	HB NORTH-HB SOUTH	\$ 6.79	9	\$ 0.20	\$ 0.06	\$ 0.23	\$ 0.77	\$ 1.23	\$ 0.89	\$ 0.26	\$ 0.19	\$ 0.33	\$ 1.74	\$ 0.89	\$ -
N	2024	COL COLETOG1-HB SOUTH	\$ 5.23	10	\$ 0.51	\$ 0.82	\$ 0.33	\$ 0.00	\$ 0.38	\$ 0.03	\$ 1.70	\$ 0.79	\$ 0.02	\$ 0.34	\$ 0.31	\$ -
Y	2024	HB WEST-LZ WEST	\$ 13.33	1	\$ 0.35	\$ 0.20	\$ 3.62	\$ 1.03	\$ 1.30	\$ 1.27	\$ 1.22	\$ 1.14	\$ 0.82	\$ 1.80	\$ 0.58	\$ -
Y	2024	HI LONE ALL-BOOTLEG_UN1	\$ 6.42	2	\$ -	\$ 0.03	\$ 0.20	\$ 0.07	\$ 0.29	\$ 0.18	\$ 0.03	\$ 0.05	\$ 1.80	\$ 3.21	\$ 0.55	\$ -
Y	2024	HB SOUTH-LZ SOUTH	\$ 5.91	3	\$ 0.02	\$ 0.06	\$ 0.01	\$ 0.25	\$ 0.56	\$ 1.15	\$ 1.74	\$ 0.57	\$ 0.89	\$ 0.49	\$ 0.18	\$ -
Y	2024	HI LONEB RN1-BOOTLEG_UN1	\$ 5.91	4	\$ 4.27	\$ 0.33	\$ 0.01	\$ 0.16	\$ 0.03	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.50	\$ 0.50	\$ 0.06	\$ -
Y	2024	NUE NUECESG7-HB SOUTH	\$ 5.28	5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.91	\$ 1.58	\$ 1.11	\$ 0.77	\$ 0.60	\$ 0.31	\$ -
Y	2024	HB NORTH-LZ NORTH	\$ 5.01	6	\$ 0.39	\$ 0.39	\$ 0.14	\$ 0.21	\$ 0.23	\$ 0.50	\$ 1.10	\$ 0.80	\$ 0.45	\$ 0.52	\$ 0.28	\$ -
Y	2024	BOOTLEG_UN1-HI LONEB RN1	\$ 4.52	7	\$ 1.11	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.00	\$ -	\$ -	\$ 1.43	\$ 1.92	\$ 0.03	\$ -
Y	2024	B DAVIS 3-HB SOUTH	\$ 4.05	8	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.89	\$ 1.73	\$ 0.71	\$ 0.54	\$ 0.14	\$ 0.03	\$ -
Y	2024	RIONOG_ST1-LZ CPS	\$ 3.20	9	\$ 0.06	\$ 0.06	\$ 0.05	\$ 0.26	\$ 0.41	\$ 0.48	\$ 0.52	\$ 0.35	\$ 0.74	\$ 0.27	\$ -	\$ -
Y	2024	LV1A LV1B-LZ CPS	\$ 2.93	10	\$ 0.25	\$ 0.22	\$ 0.16	\$ 0.21	\$ 0.16	\$ 0.05	\$ 0.13	\$ 1.19	\$ 0.23	\$ 0.14	\$ 0.17	\$ -