

To the Public Utility Commission of Texas

ERCOT Wholesale Electricity Market Monthly Report

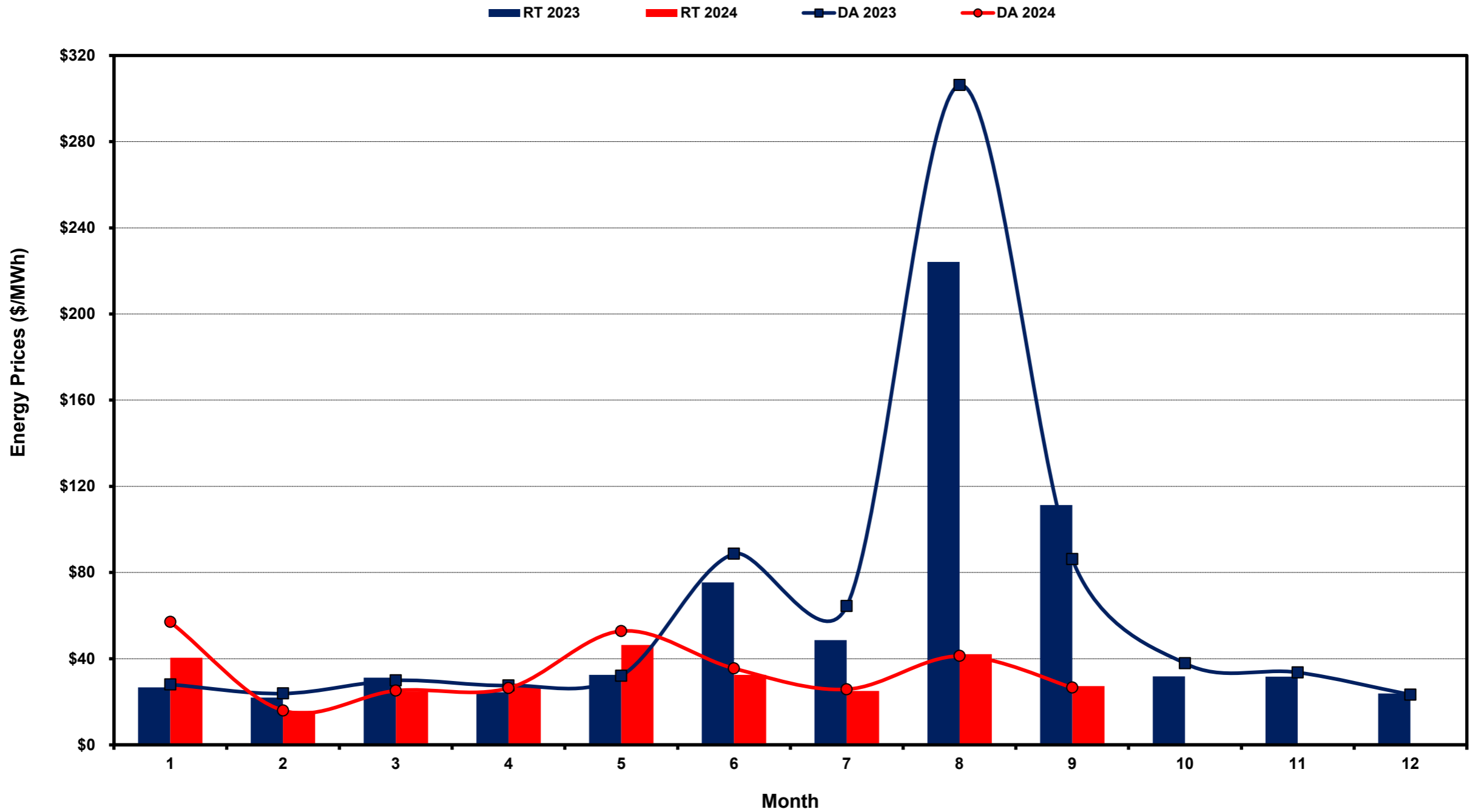
Tuesday, October 15, 2024

Potomac Economics, Ltd.
Independent Market Monitor

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ERCOT-wide Average Energy Prices DA vs RT

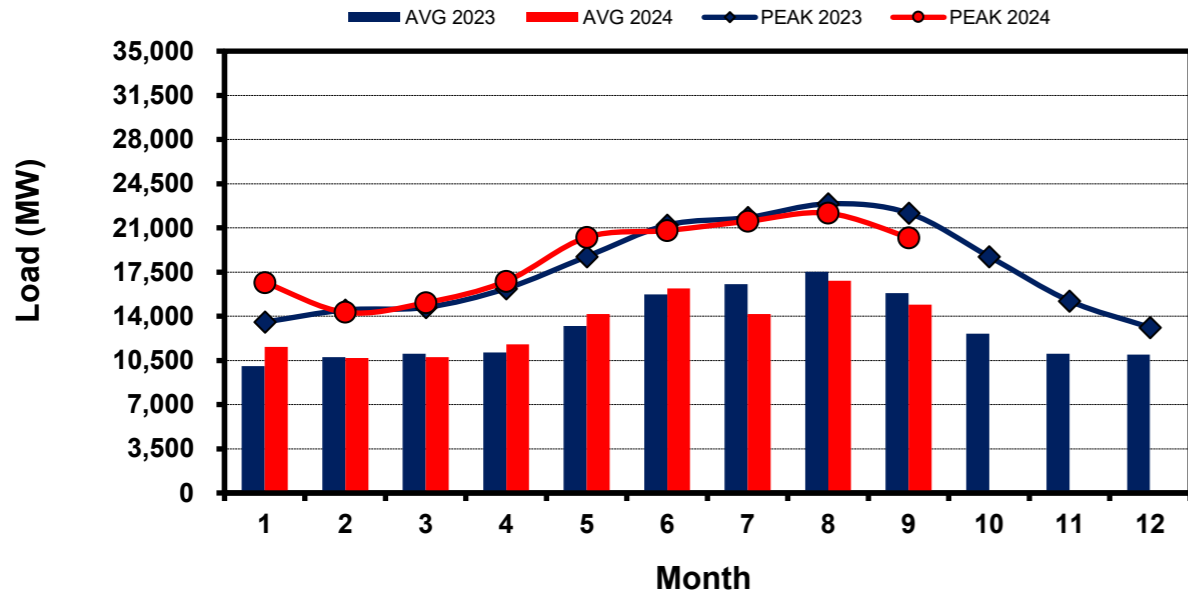
(avg. DA & RT SPPs weighted by Real Time Settlement Loads)



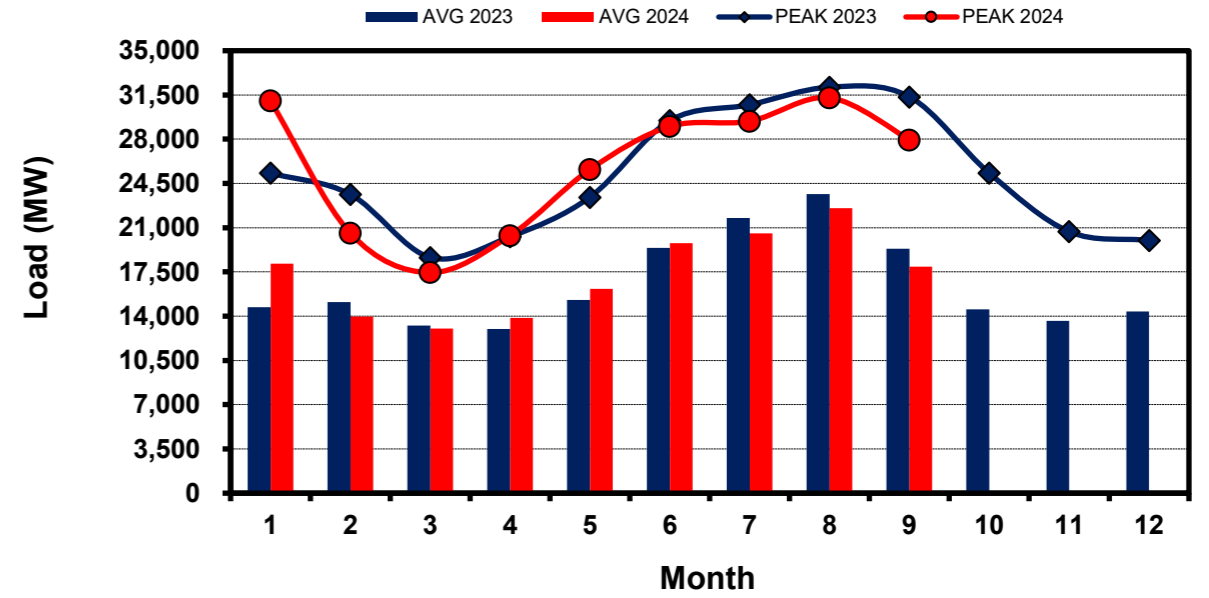
Load Zone Load Statistics

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

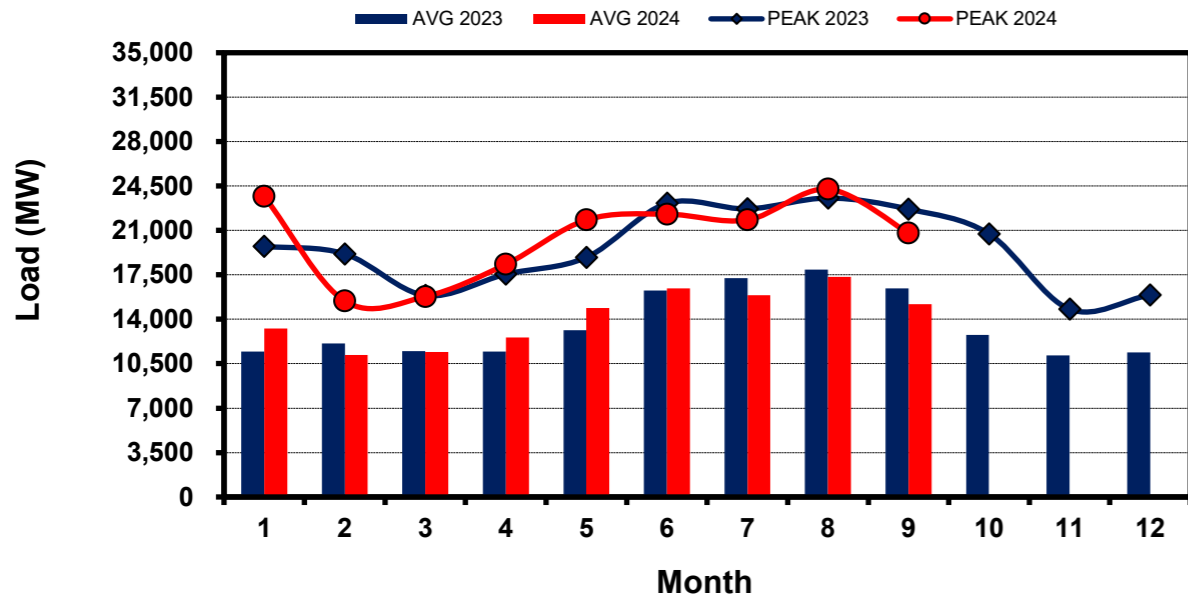
Houston Zone



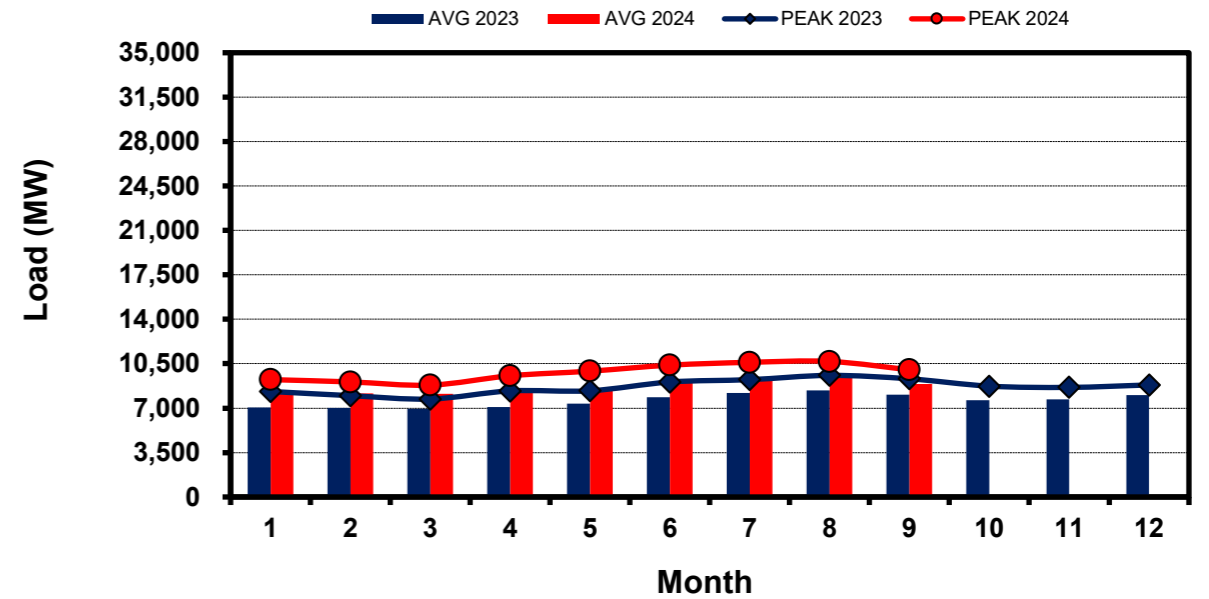
North Zone



South Zone



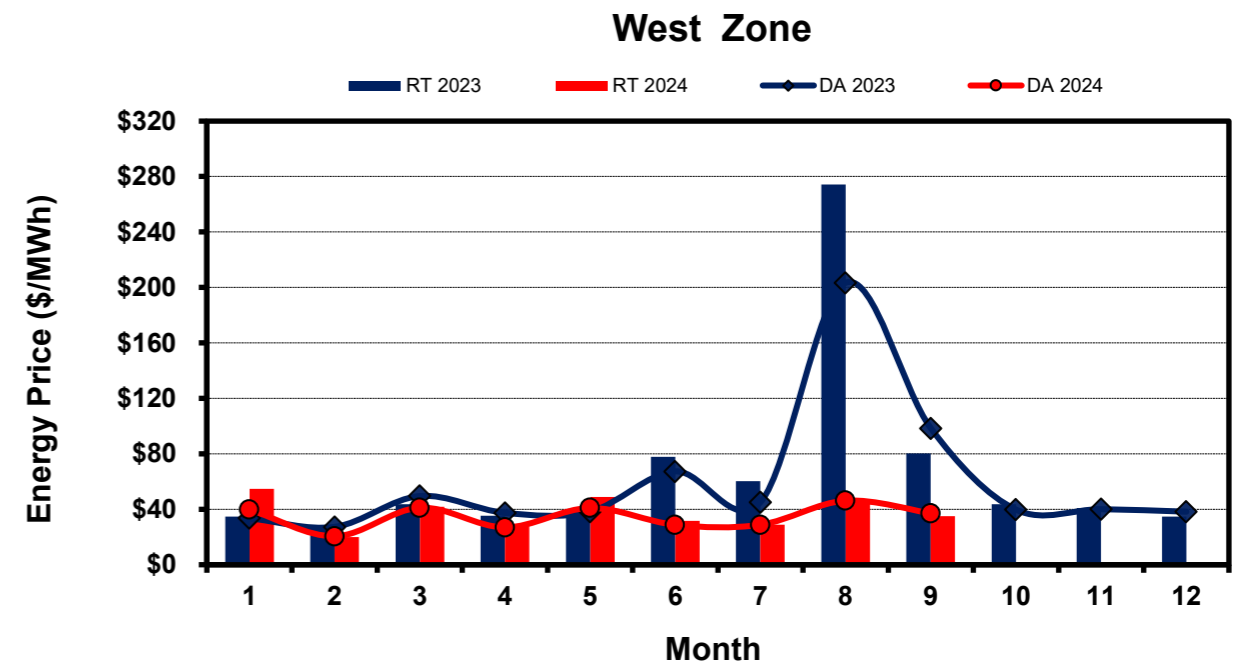
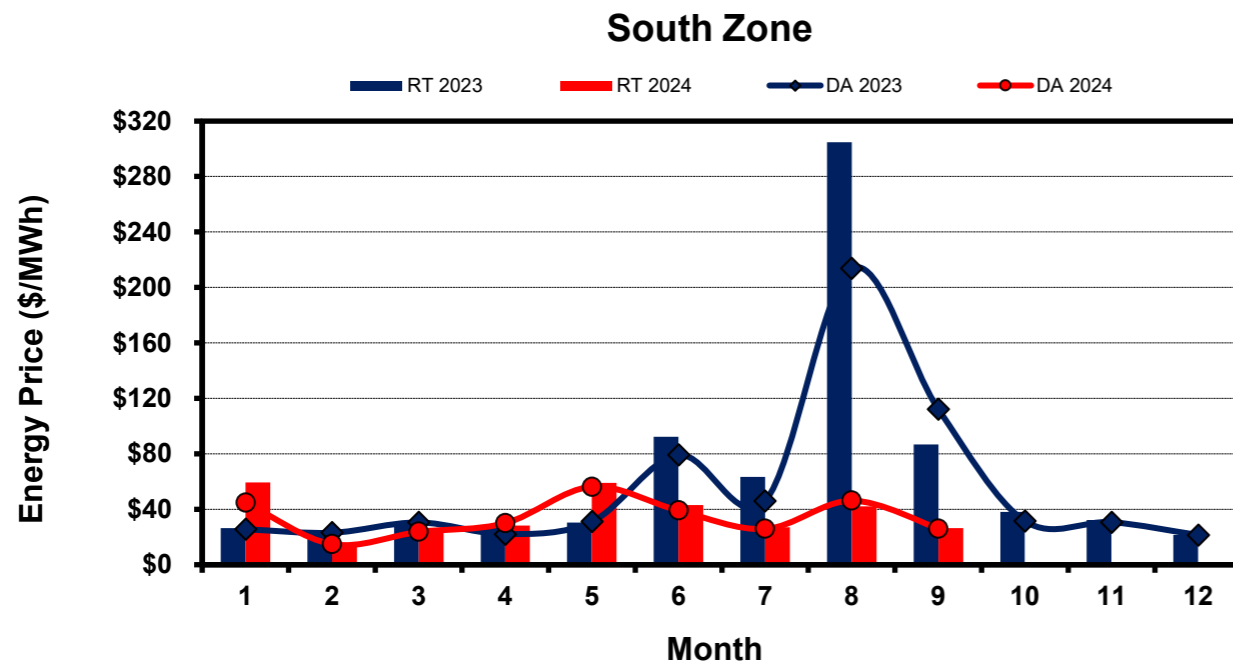
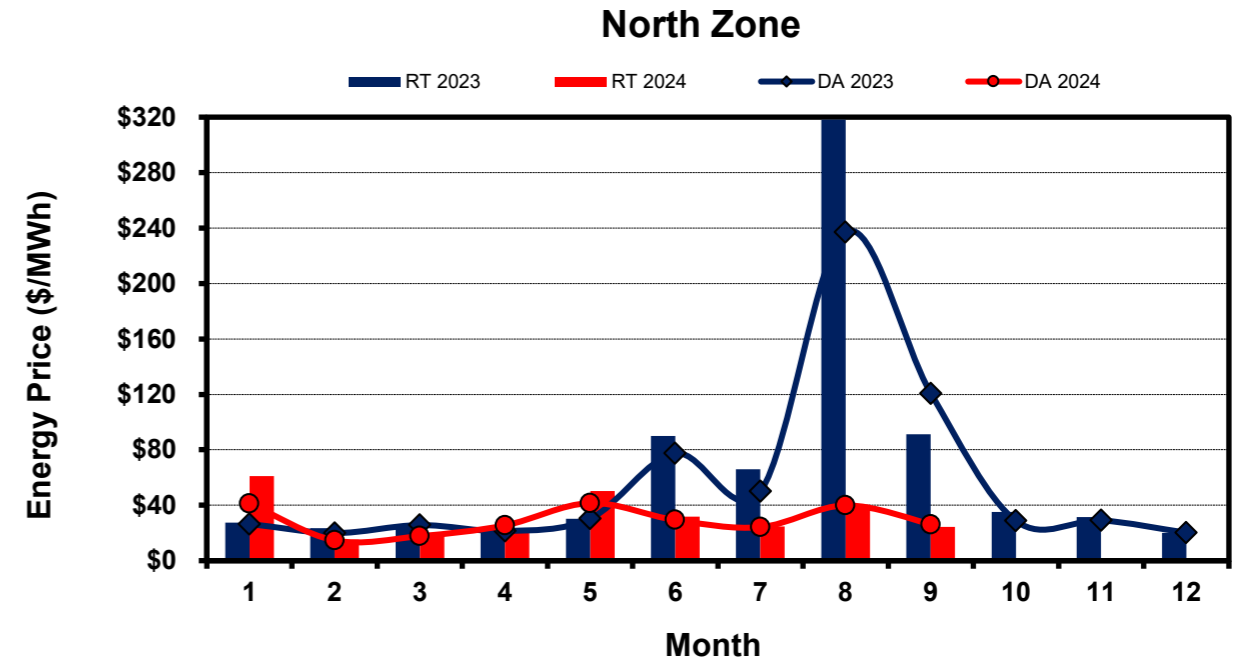
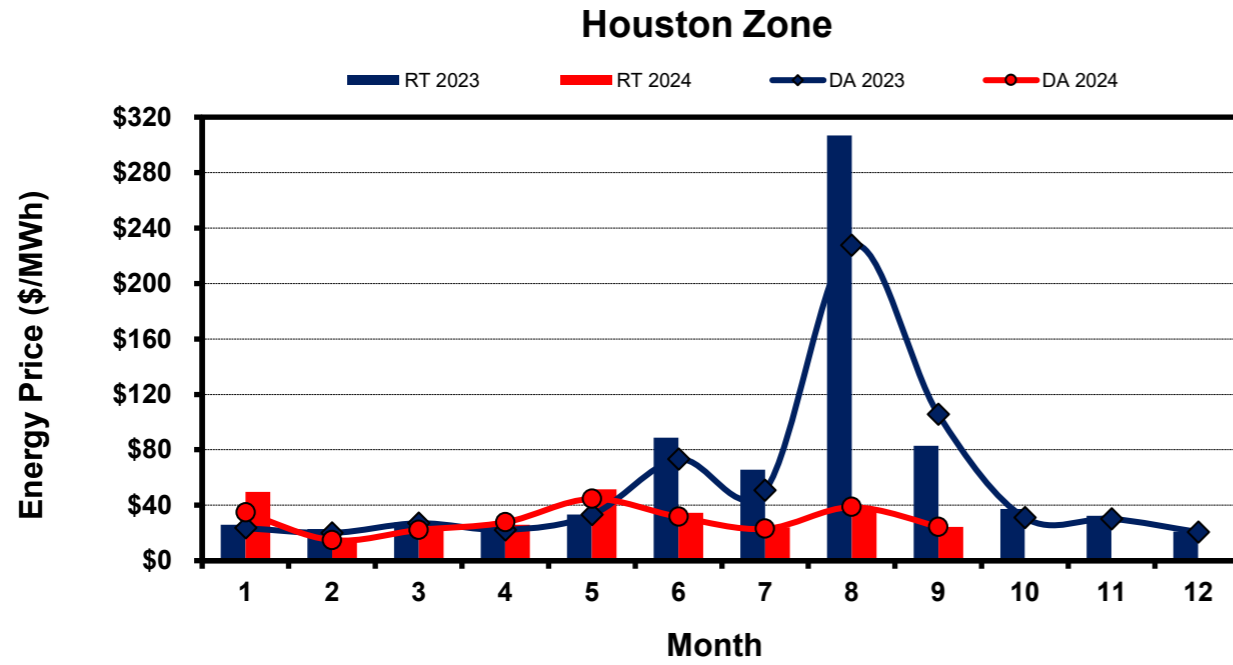
West Zone



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)

Load Zone Monthly Average Energy Price DA vs RT

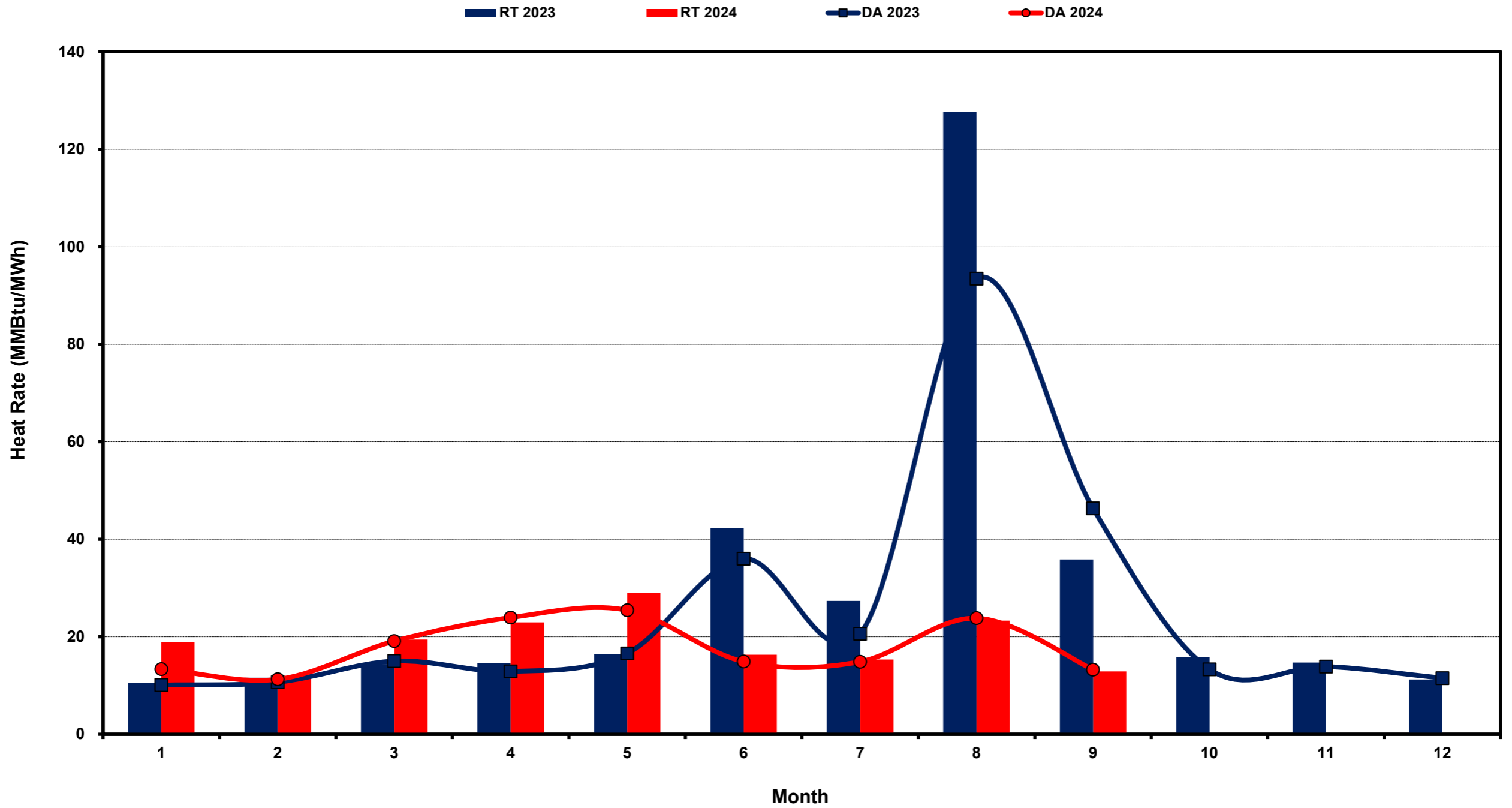
(avg. DA & RT SPPs weighted by Real Time Settlement Loads)
 (Nodal load zone made comparable to zonal system Load Zone definitions*)



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

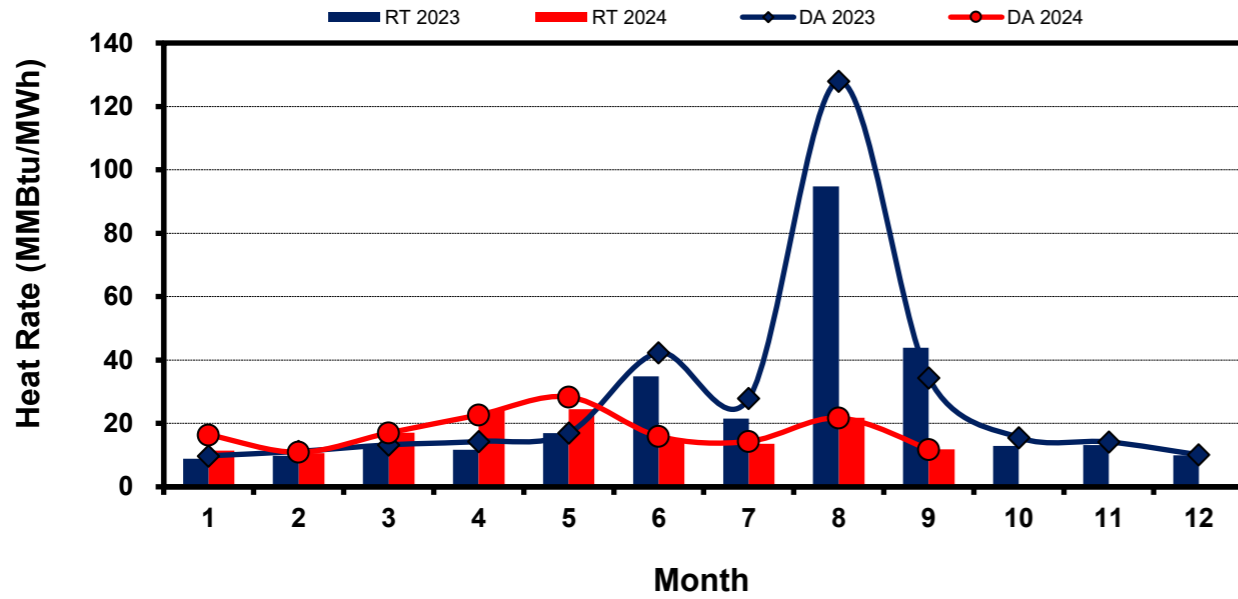
(avg. heat rates weighted by Real Time Settlement Loads)



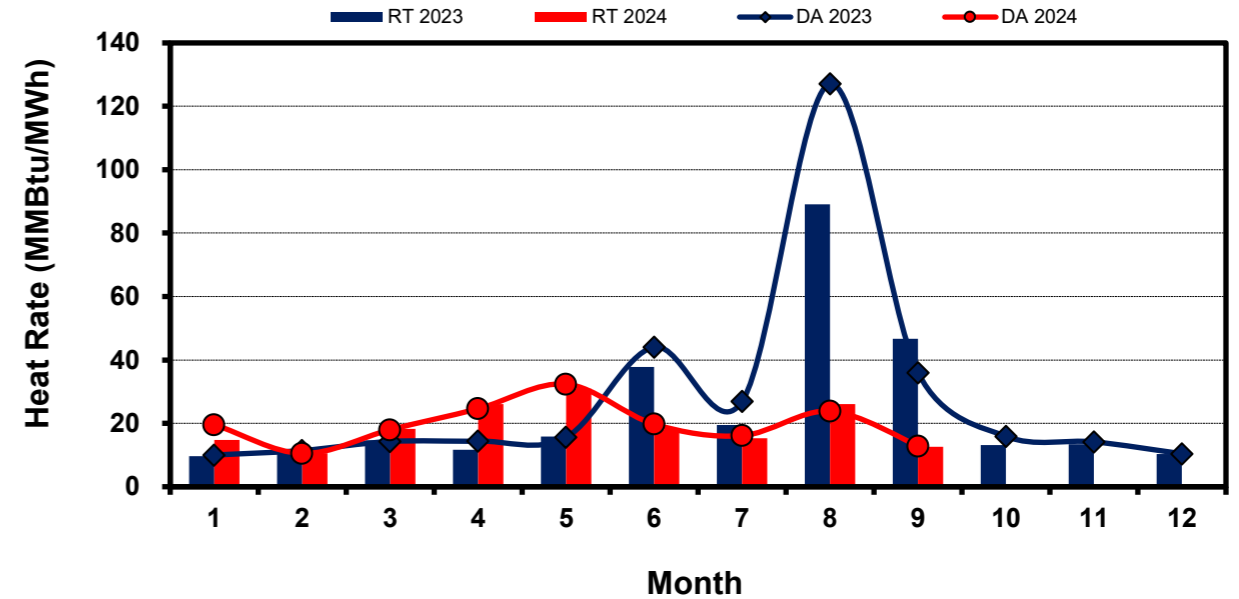
Load Zone Monthly Implied Heat Rate DA vs RT

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

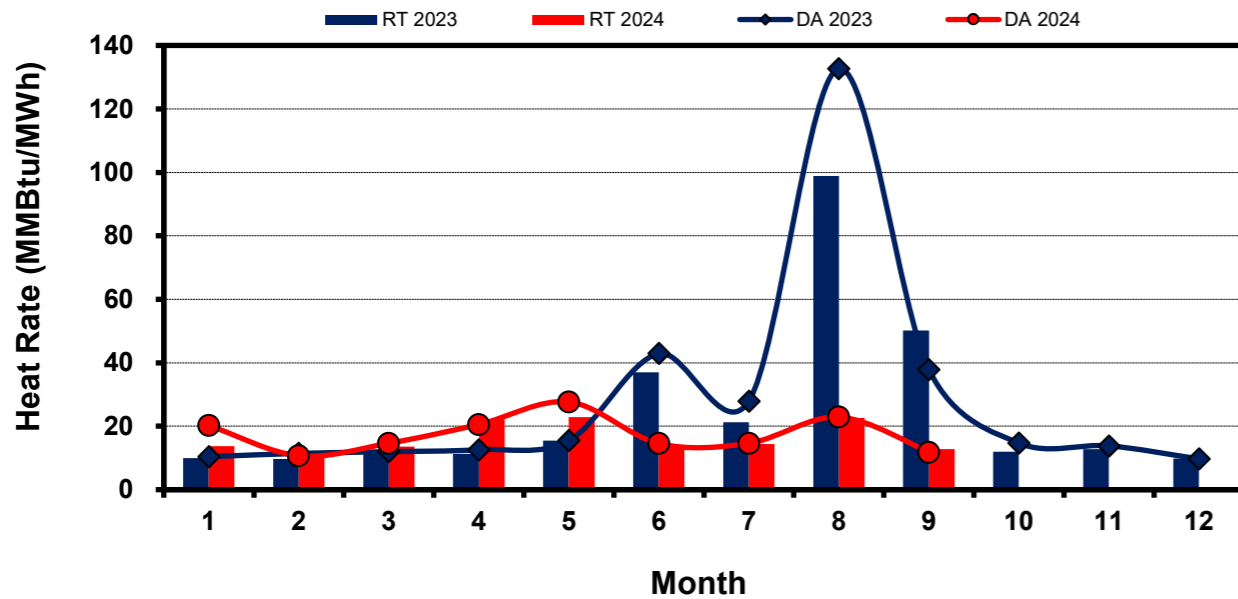
Houston Zone



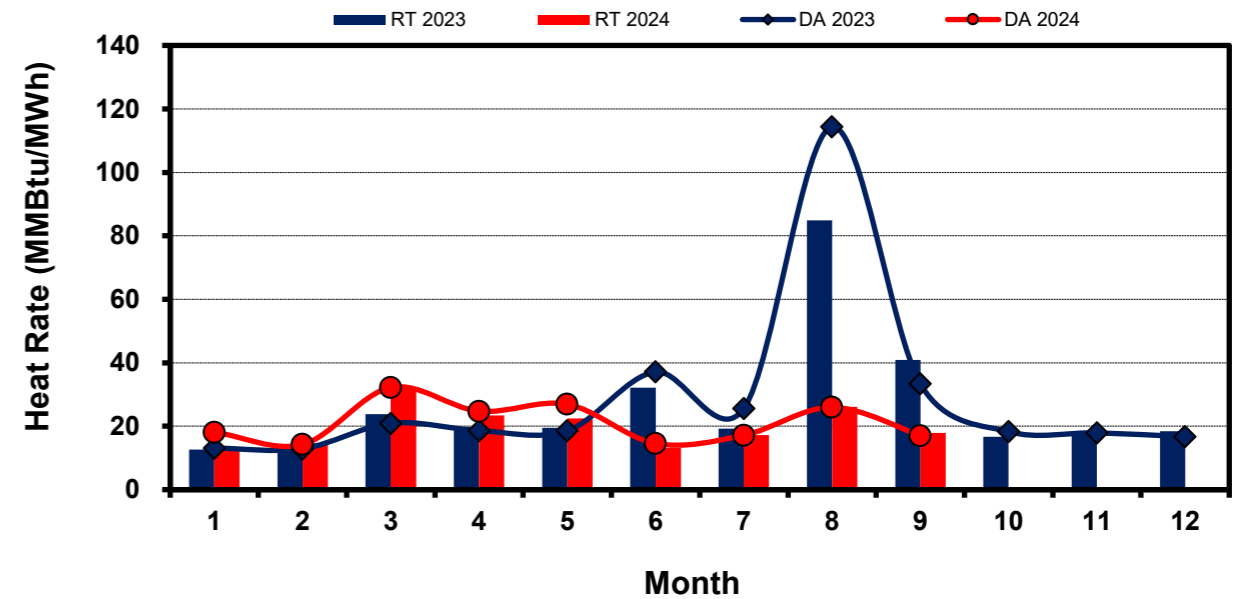
North Zone



South Zone



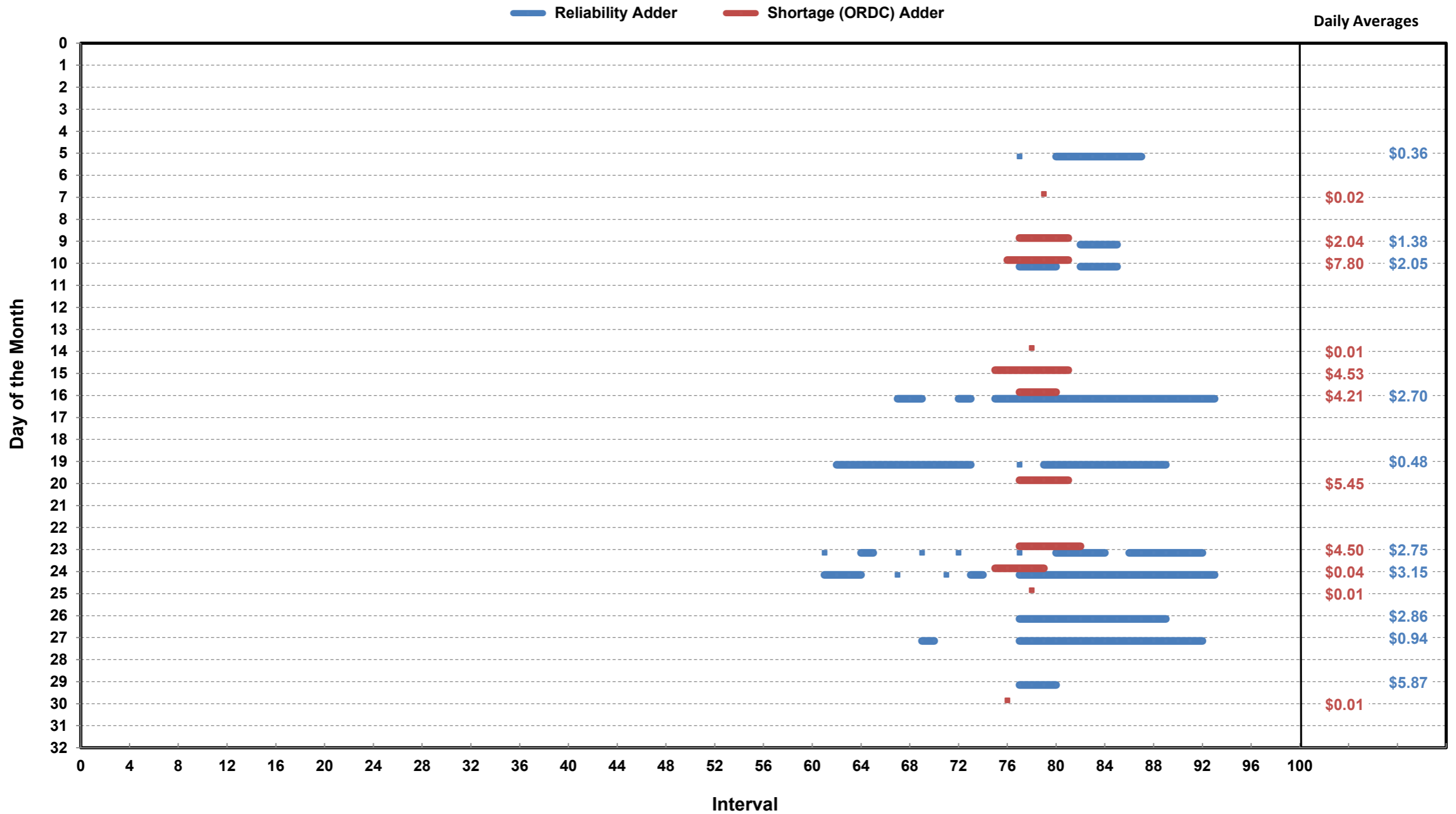
West Zone



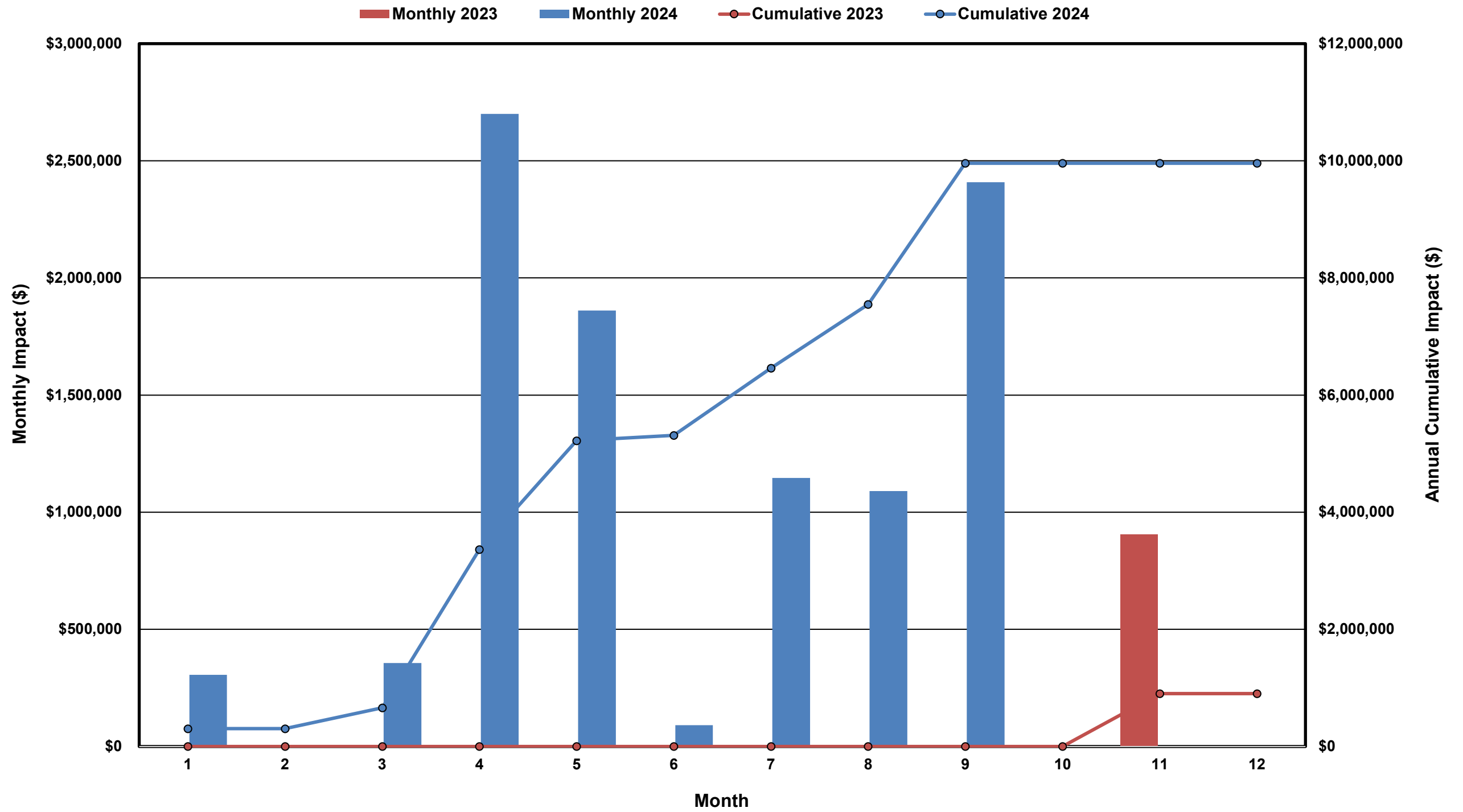
Note: * Zonal load zone definition vs. Nodal comparable load zone definition: LZ_Houston=LZ_Houston; LZ_West=LZ_West; LZ_North=(LZ_North,LZ_RAYBN); LZ_South=(LZ_South,LZ_CPS,LZ_AEN,LZ_LCRA)

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

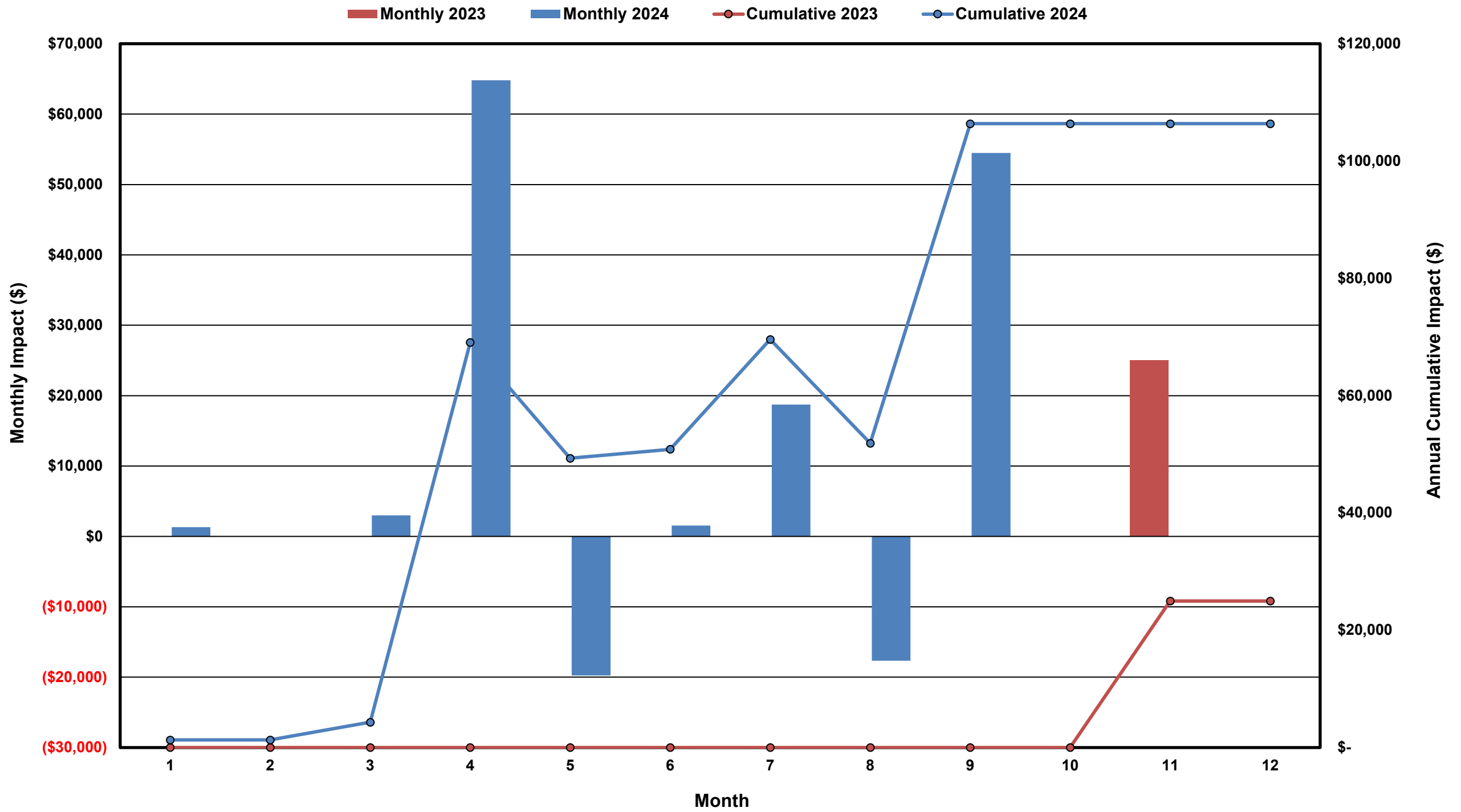
Sep-2024



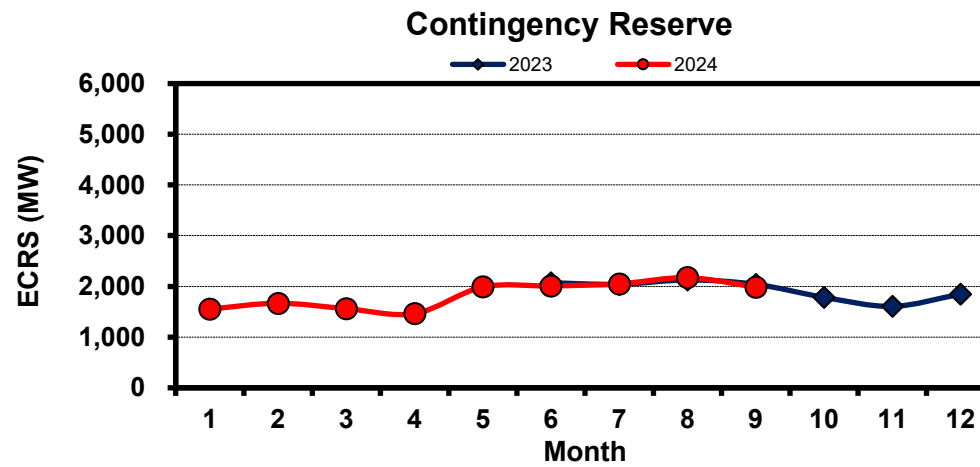
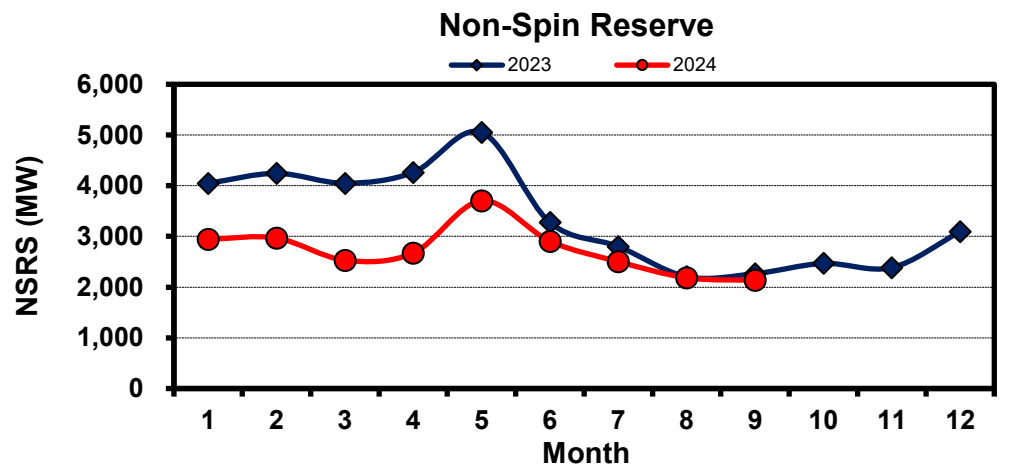
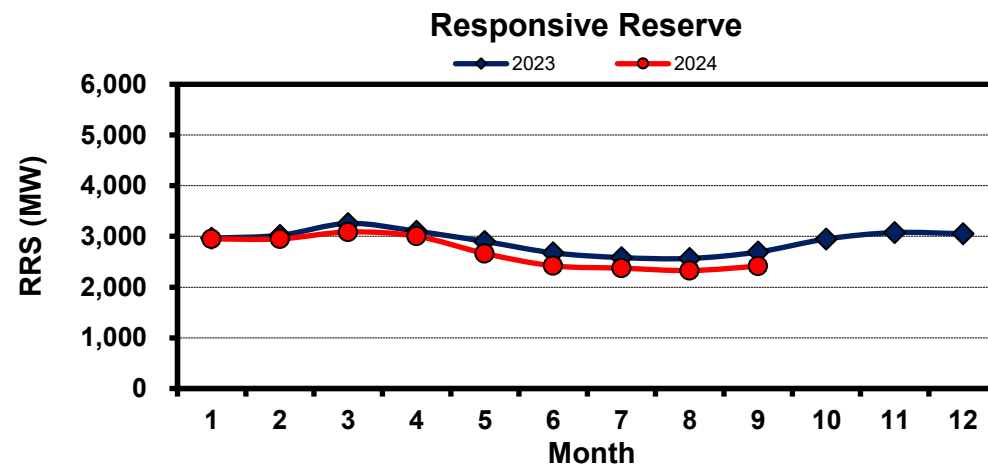
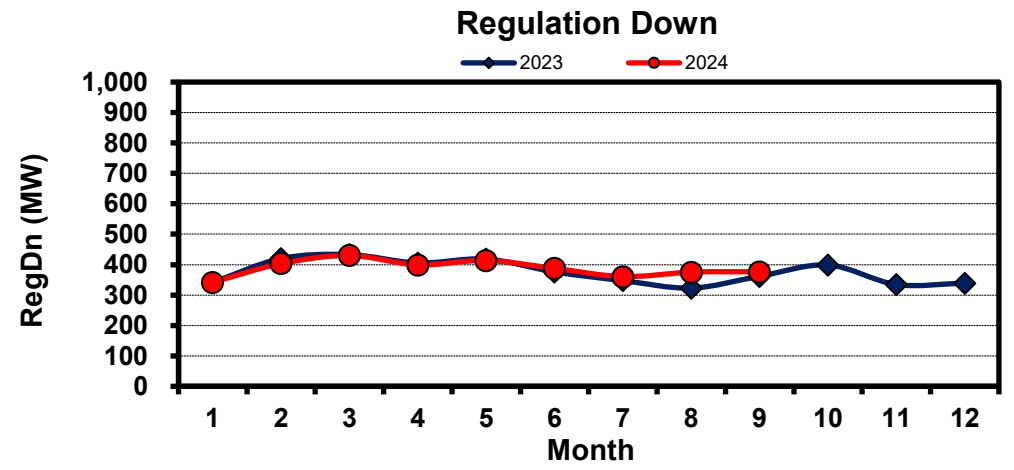
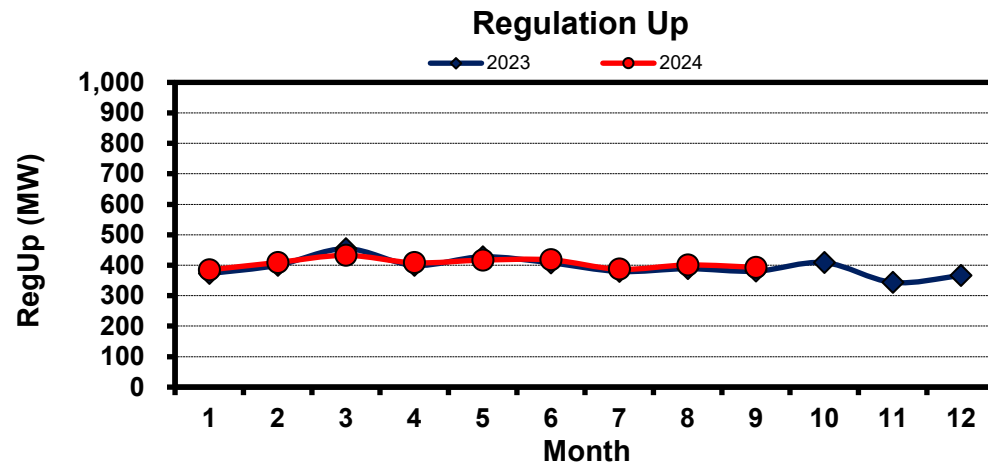
Shortage (ORDC) and Reliability Adder Floor Impact on Energy Cost



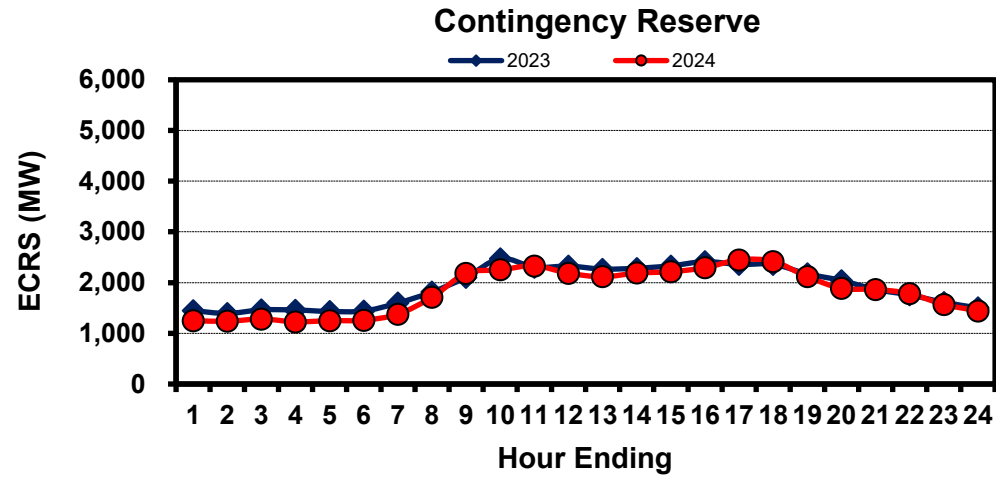
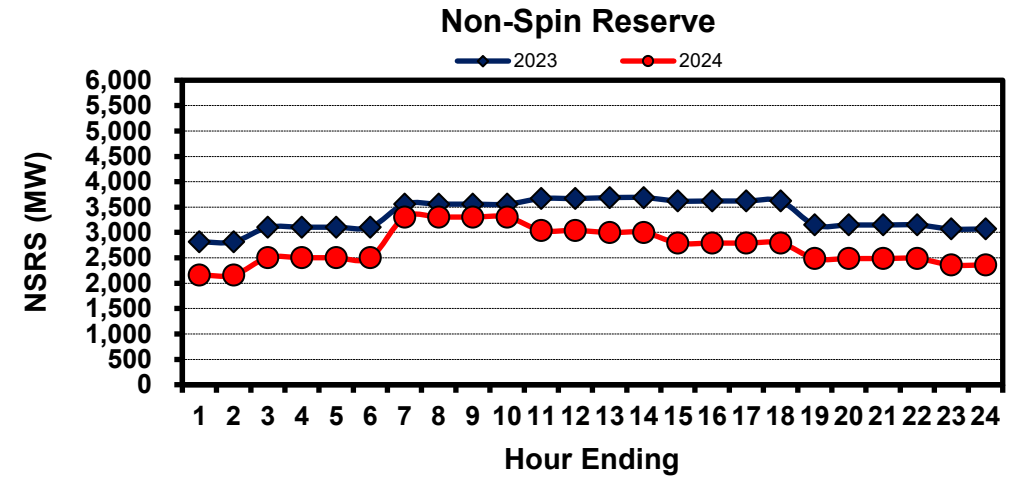
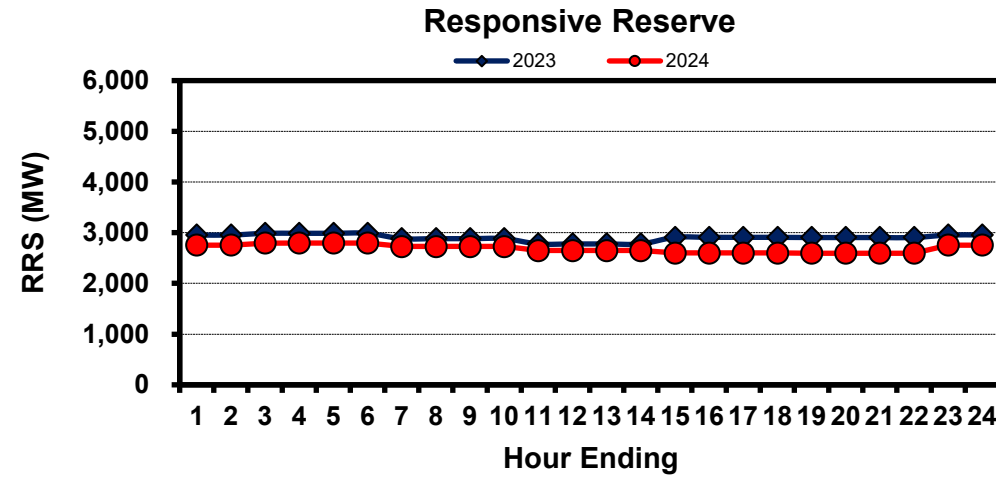
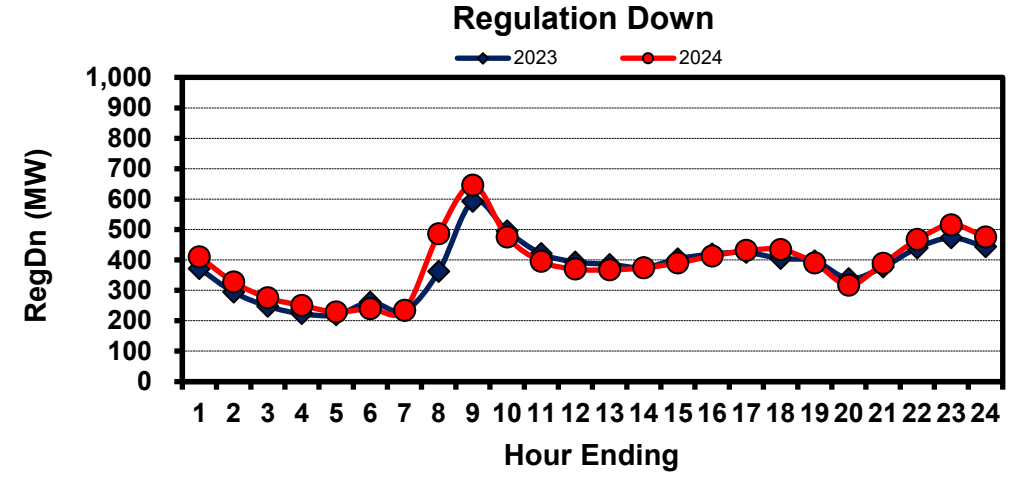
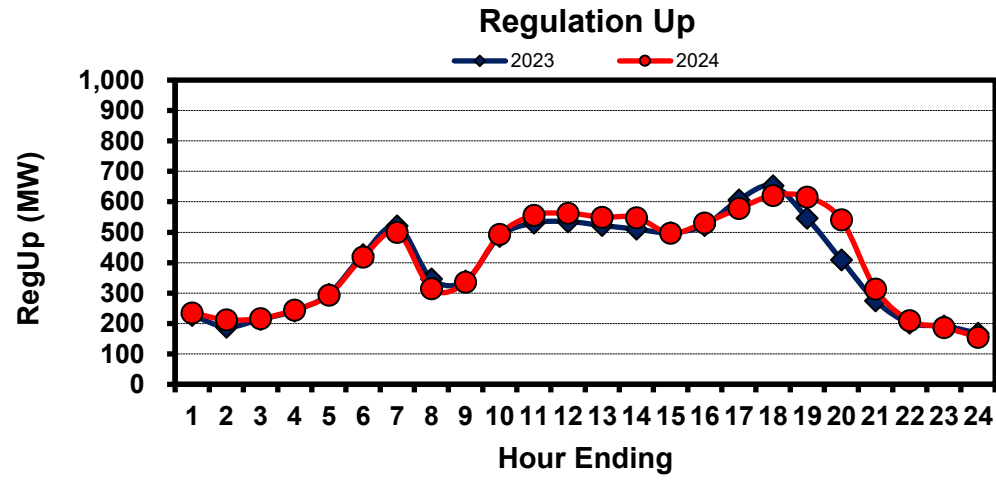
Shortage (ORDC) and Reliability Adder Floor Impact on A/S Imbalance



Monthly Average of Ancillary Services Required MW

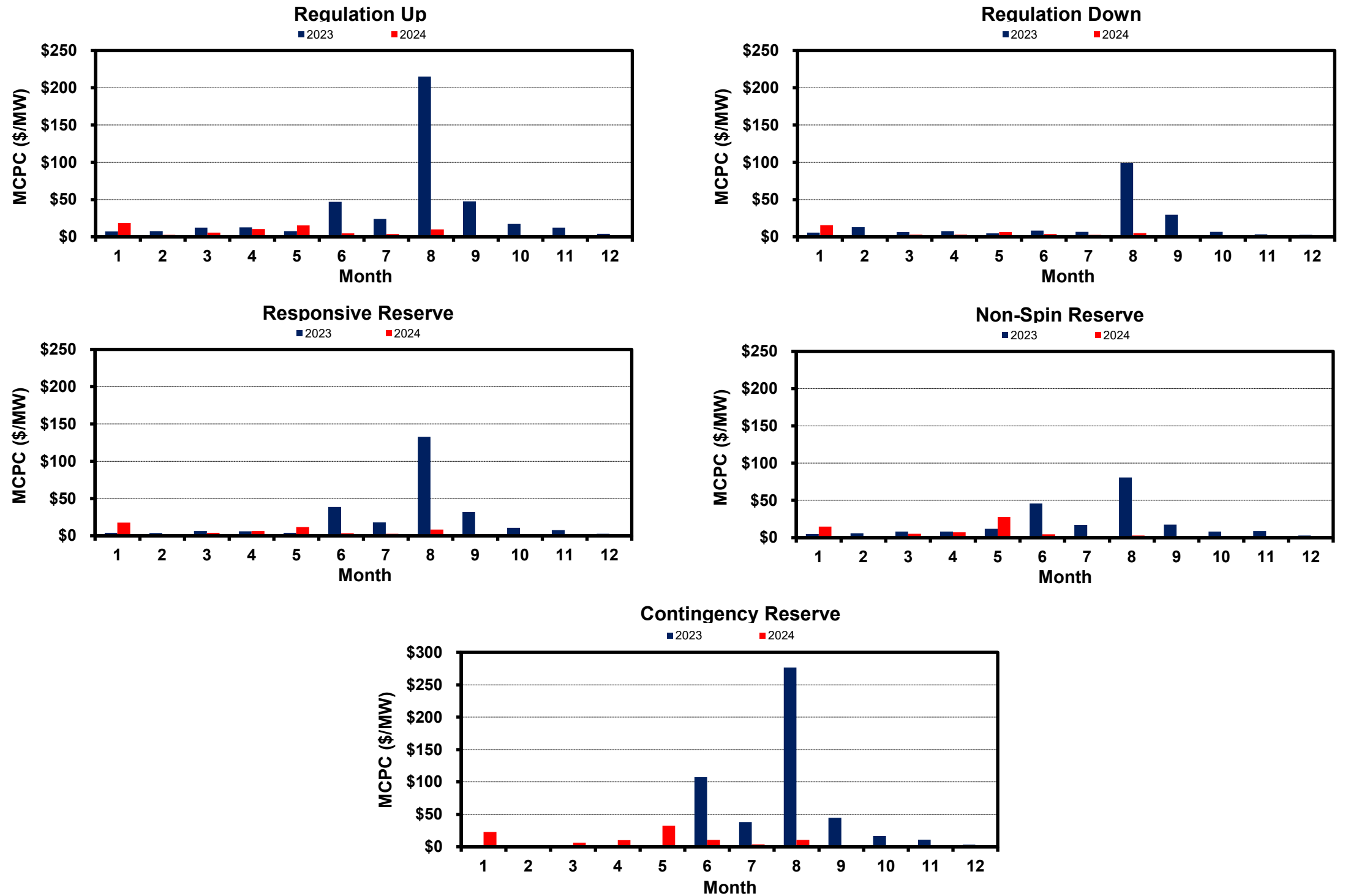


Hourly Average of Ancillary Services Required MW



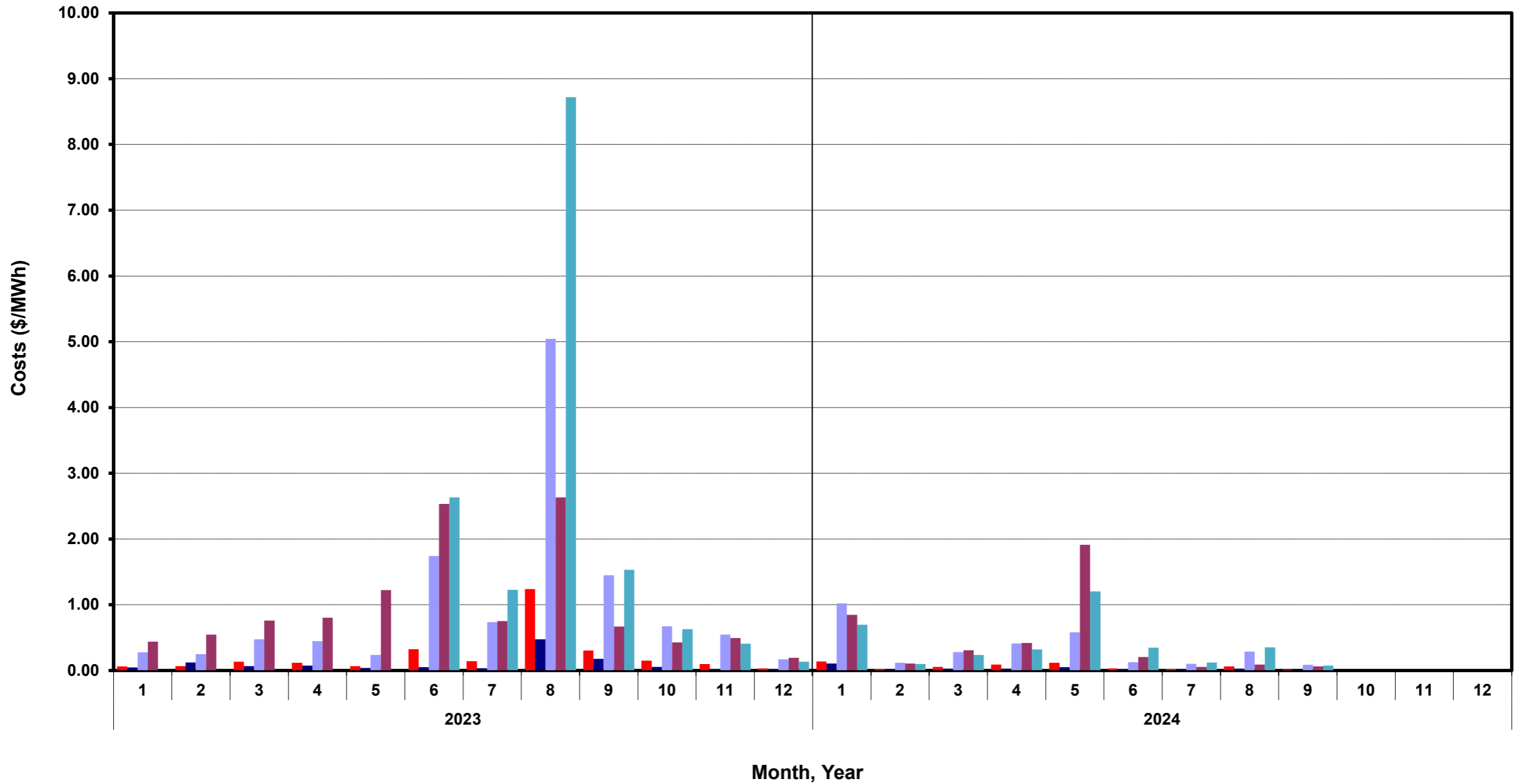
Monthly Average Ancillary Services Prices

(weighted by A/S Quantities Required)

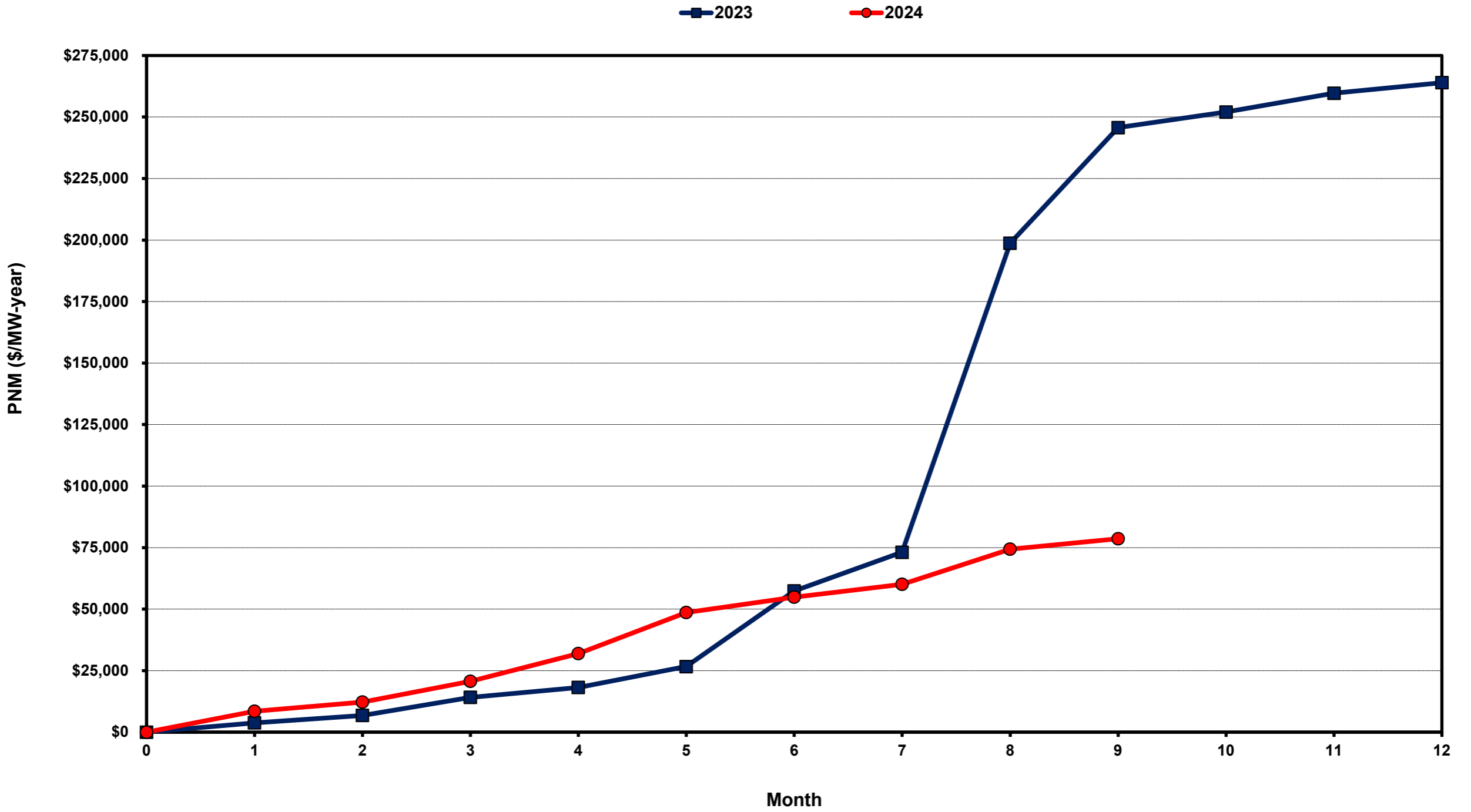


Monthly Average Ancillary Services Cost per MWh Load

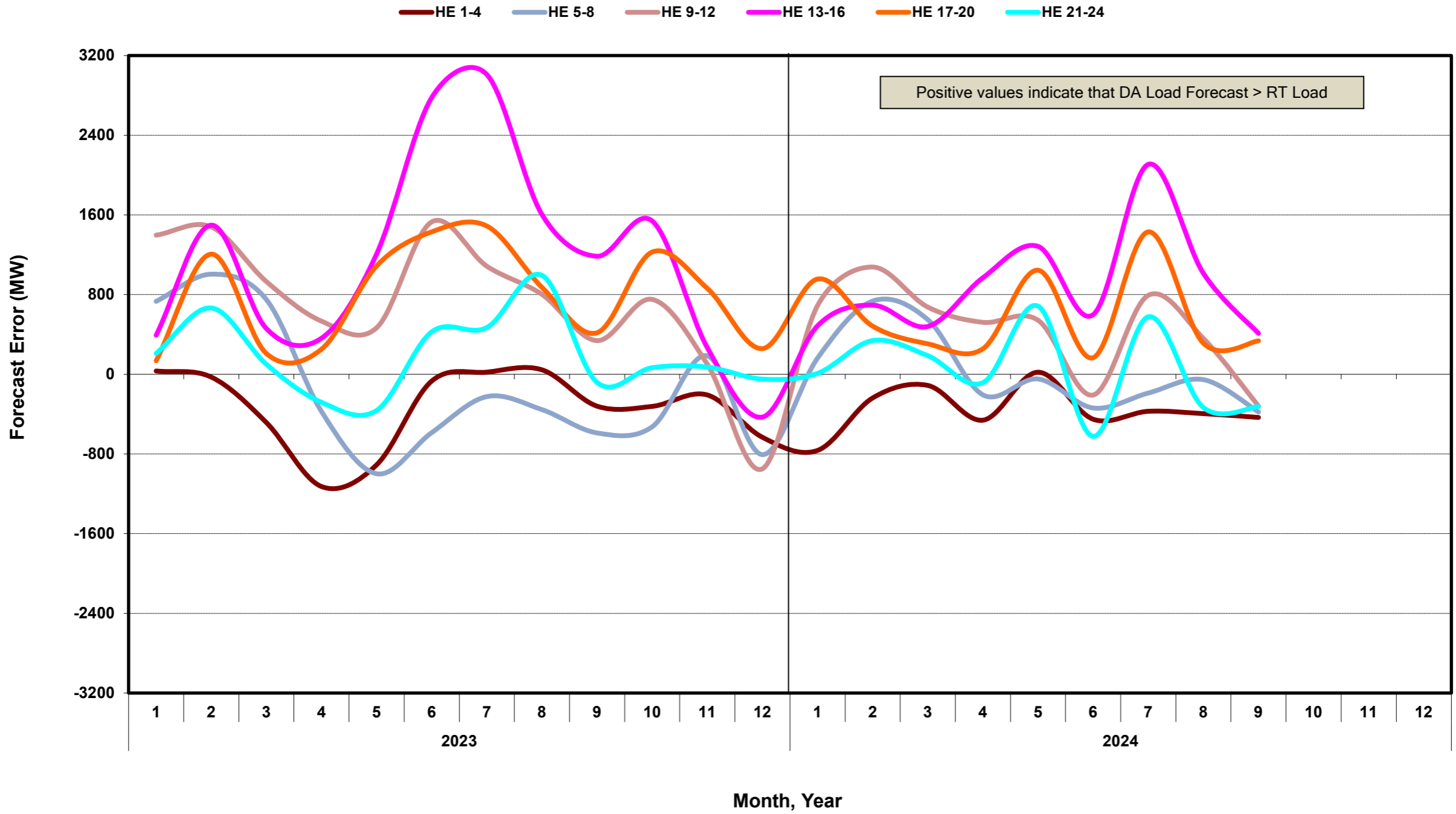
RegUp RegDn RRS NonSpin ECRS



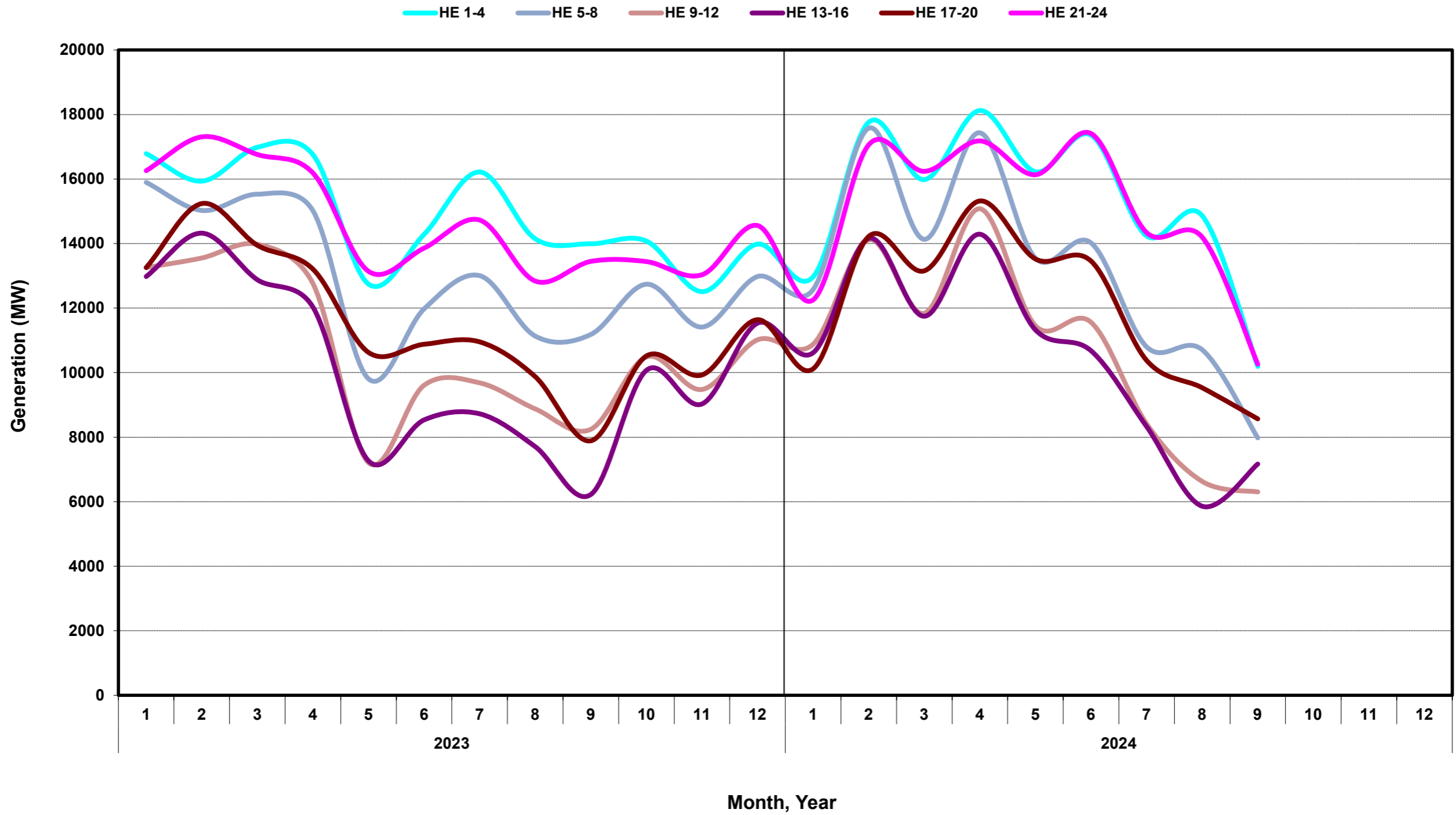
ERCOT-wide Cumulative Peaker Net Margin



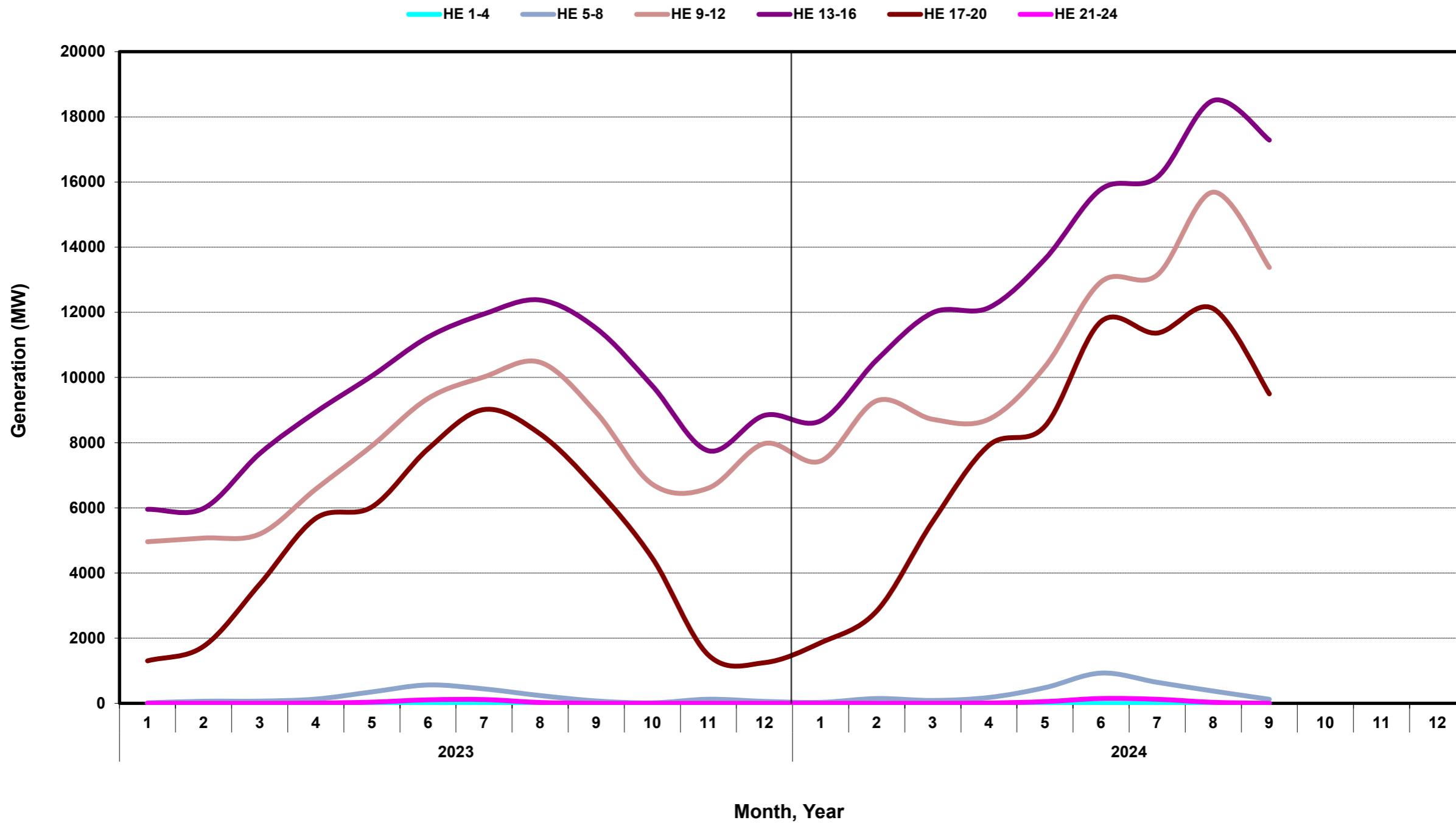
DA vs. RT Load Forecast Error by Hour Ending



Monthly Average of Wind Generation by Hour Ending

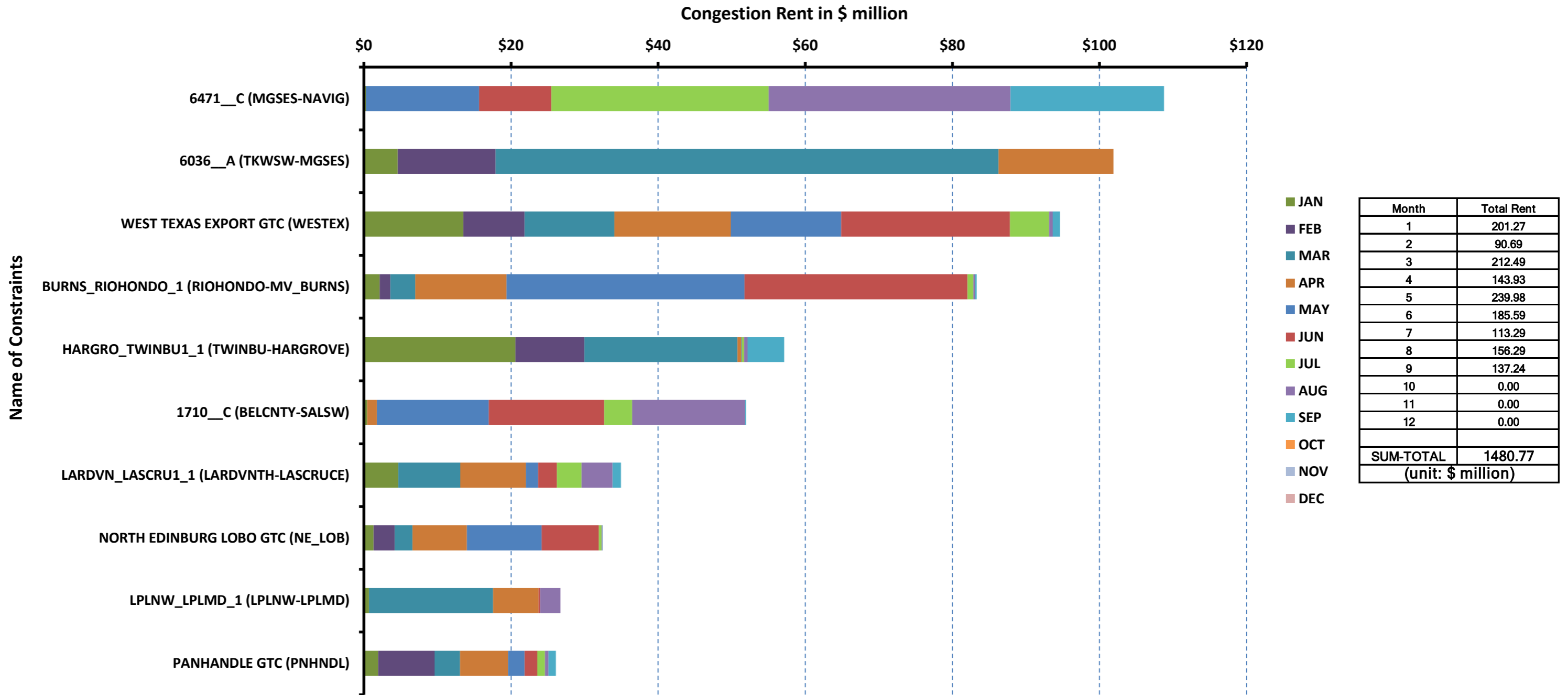


Monthly Average of Solar Generation by Hour Ending



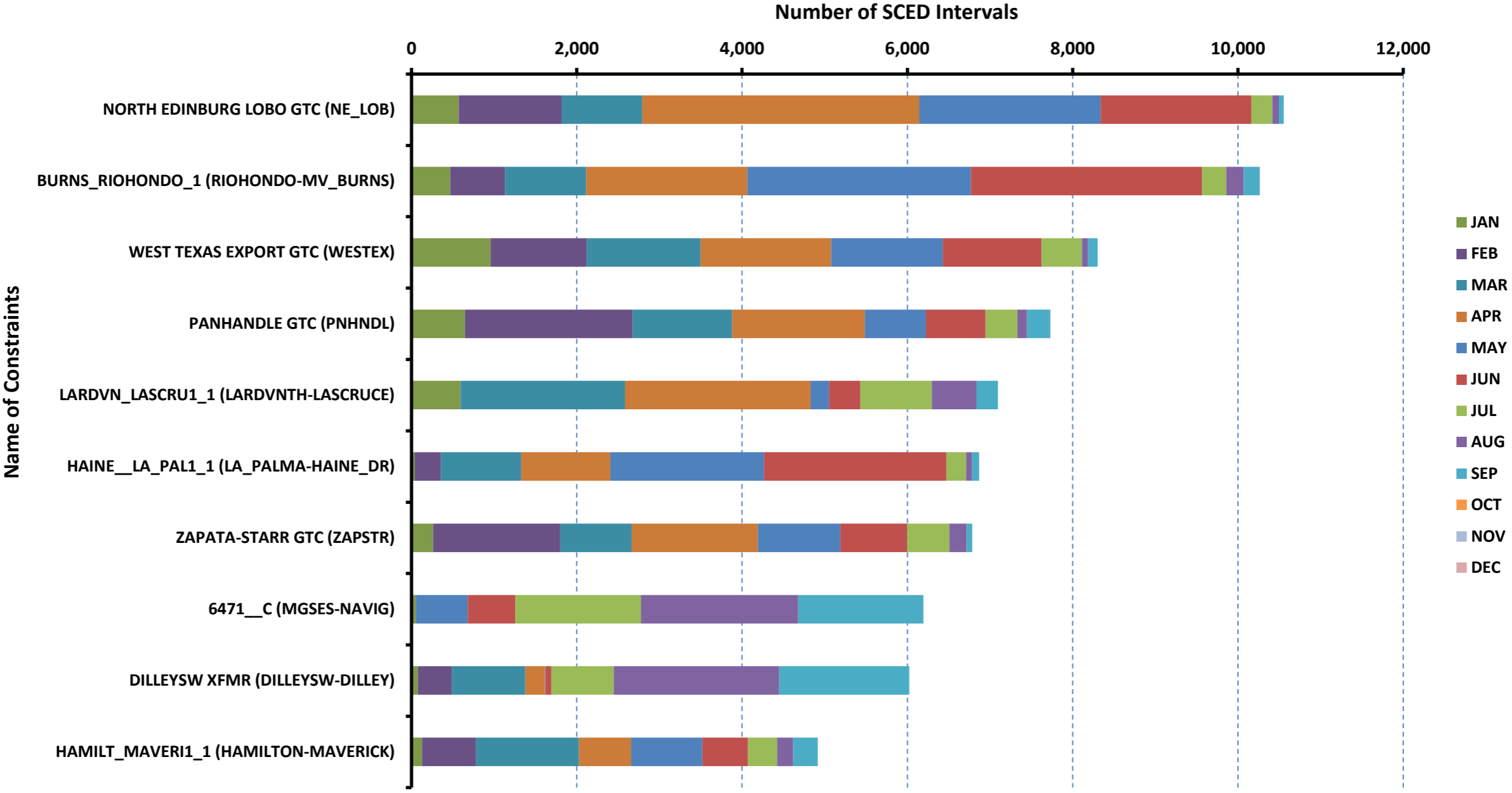
RT Congestion Constraint Rankings - 1

Top 10 Constraints by Total Congestion Value - 2024



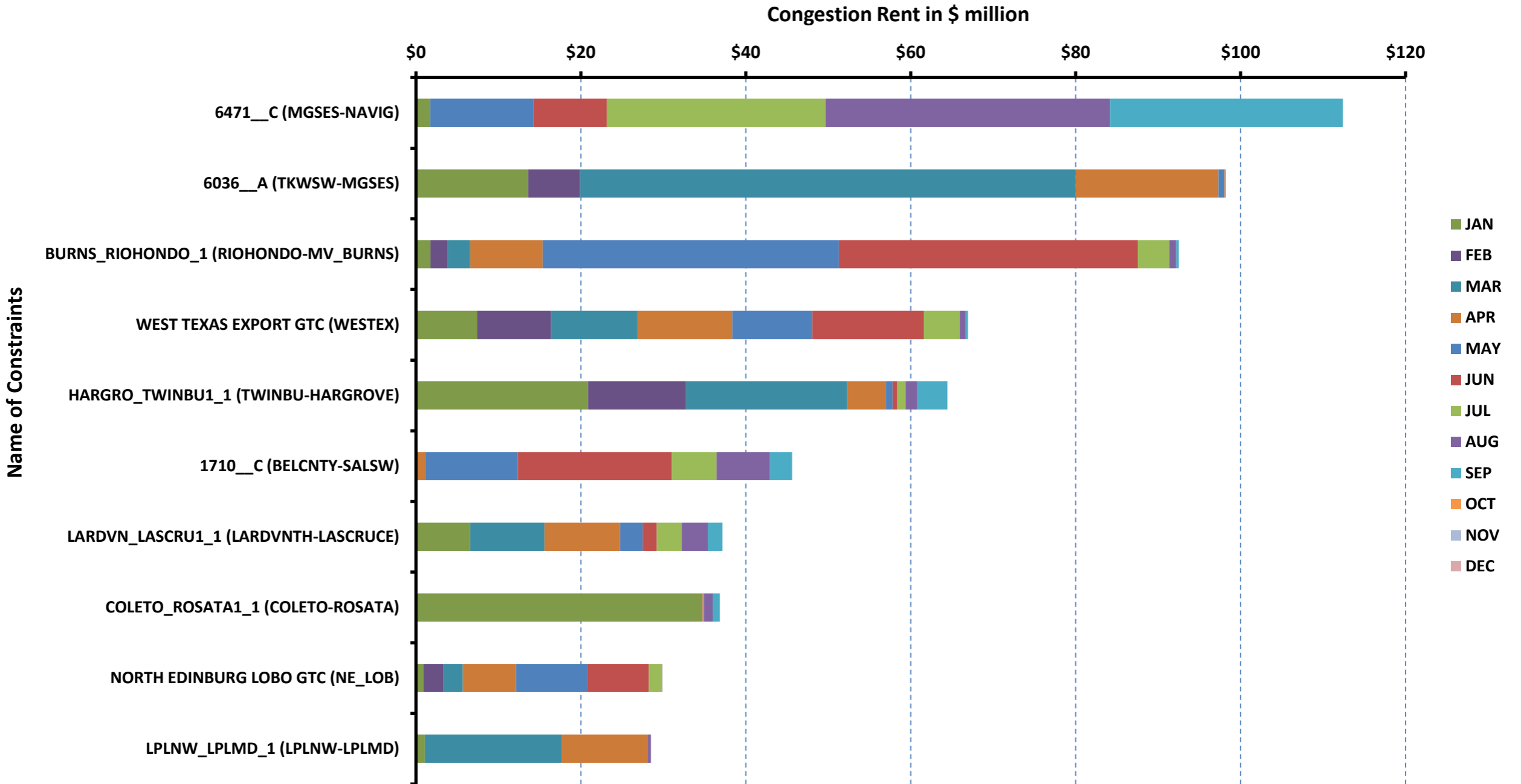
RT Congestion Constraint Rankings - 2

Top 10 Constraints by Binding Frequency - 2024



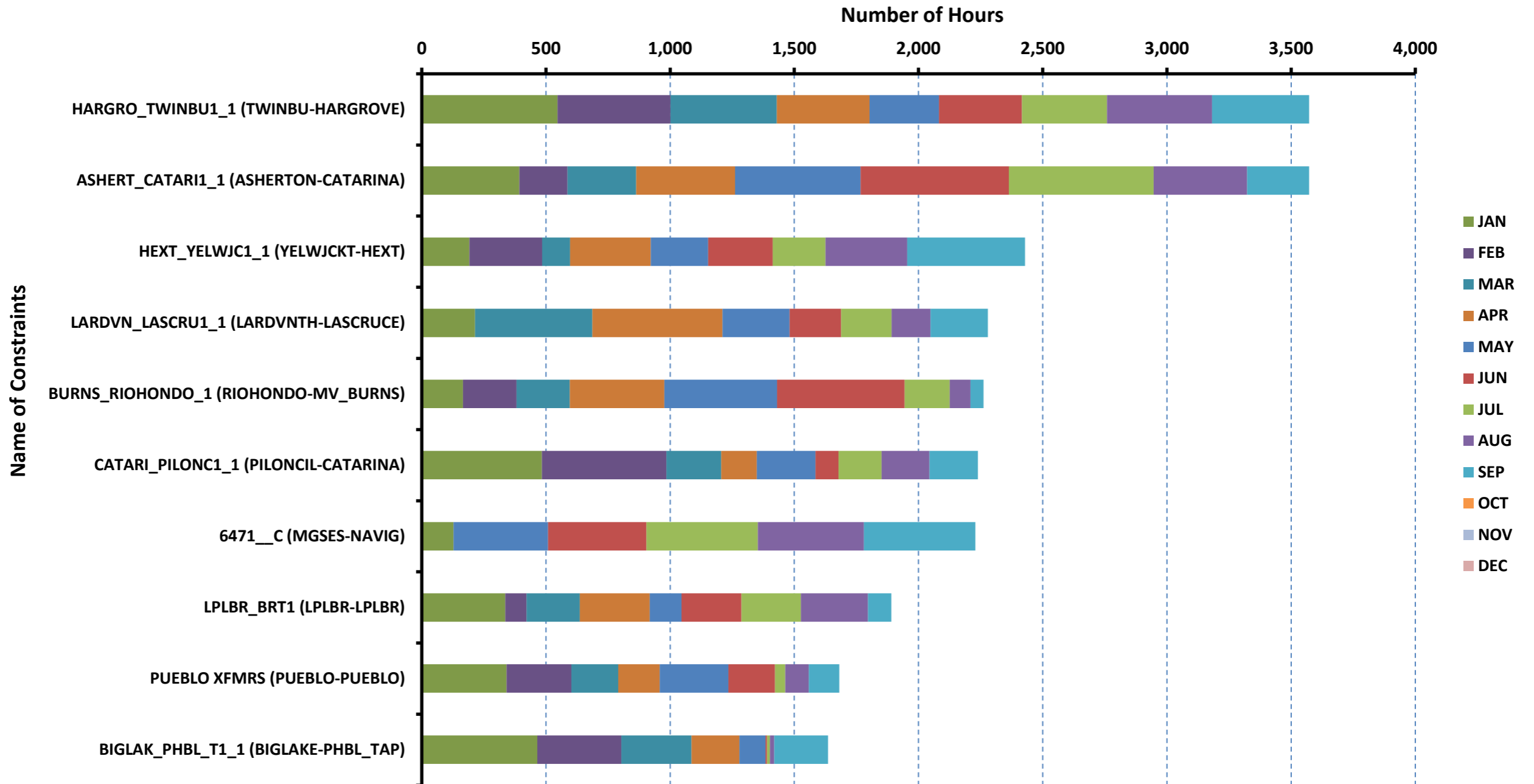
DA Congestion Constraint Rankings - 1

Top 10 Constraints by Total Congestion Value - 2024



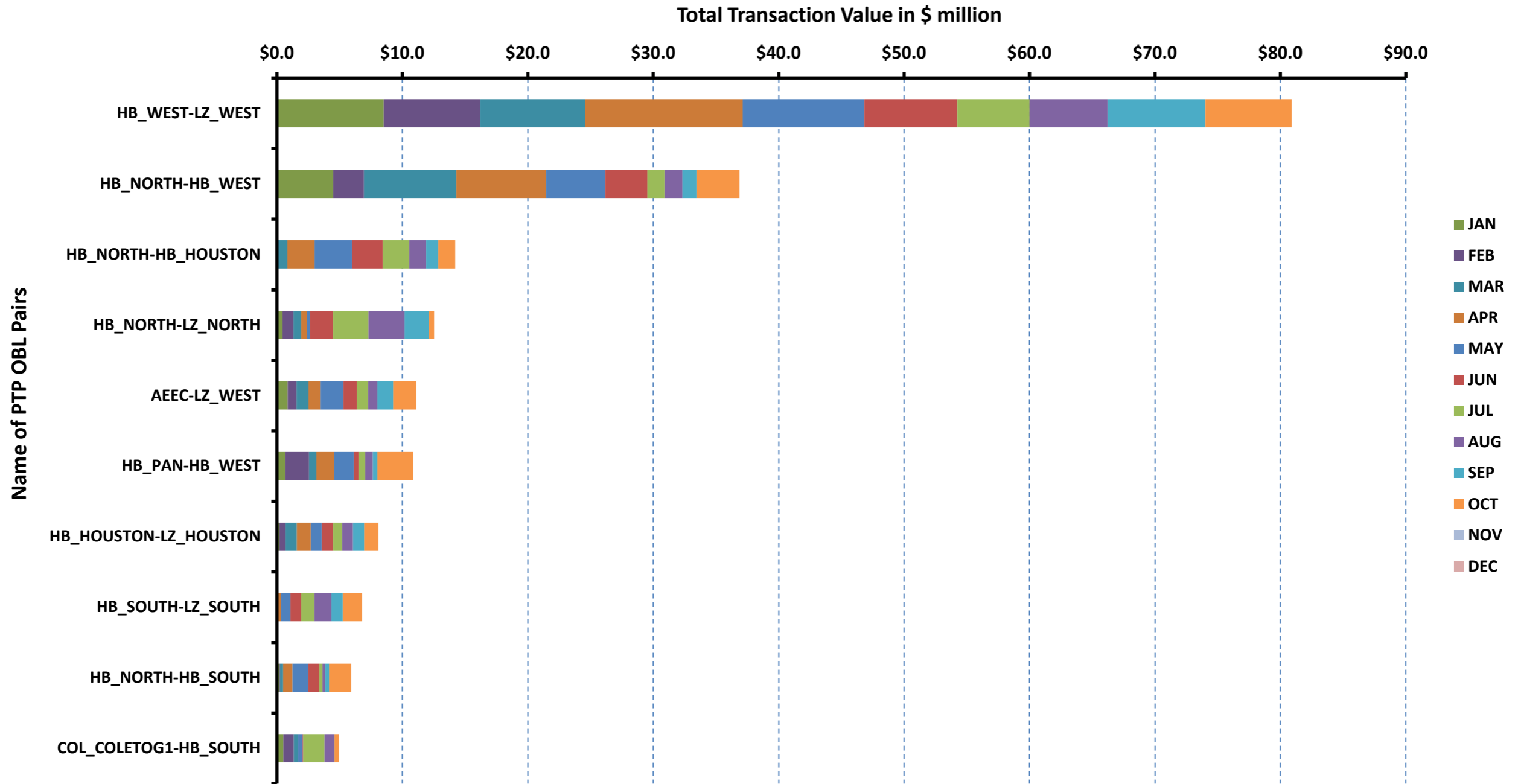
DA Congestion Constraint Rankings - 2

Top 10 Constraints by Binding Frequency - 2024



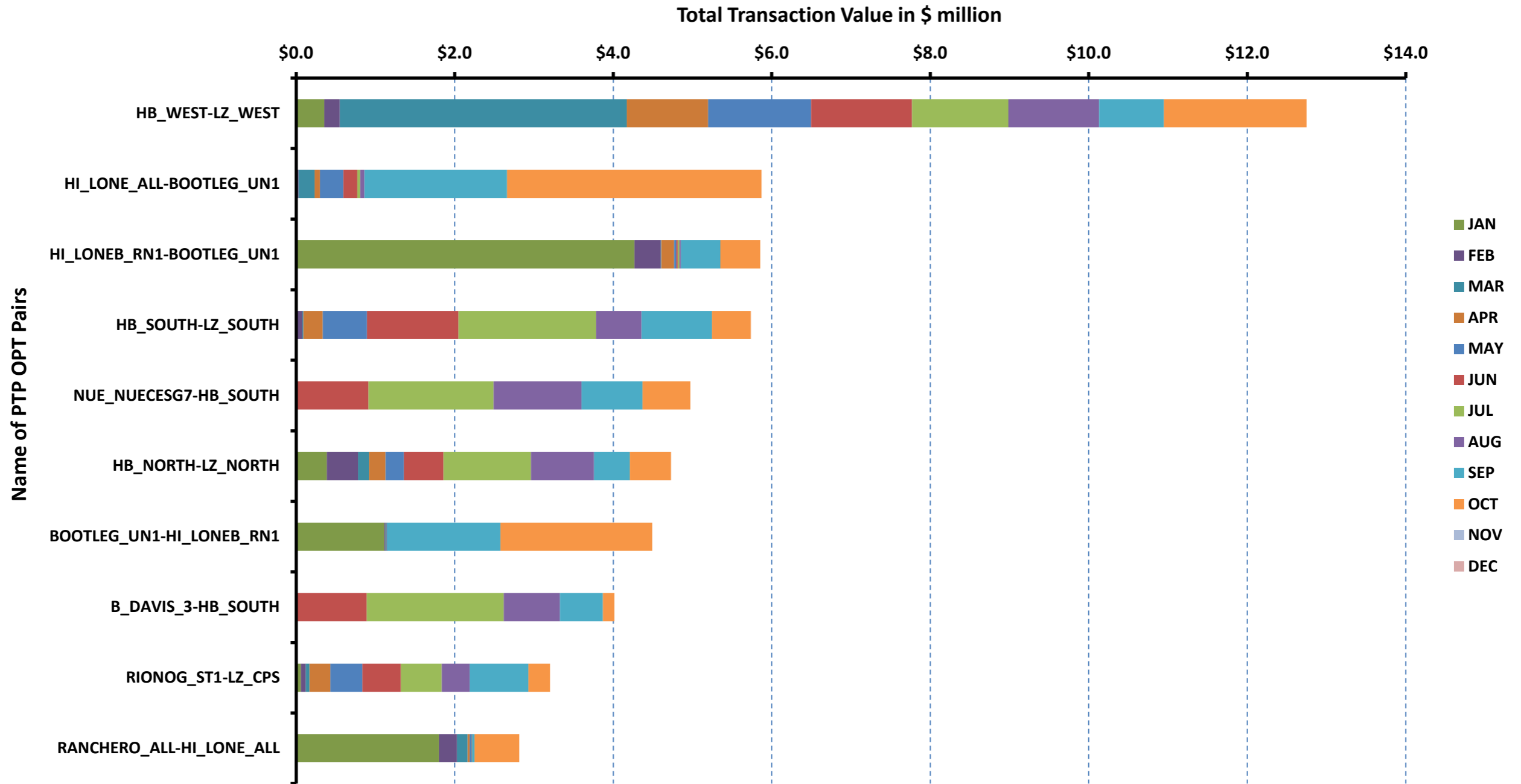
Top 10 CRR Pairs Ranked by Monthly Auction Values - 1

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	\$ 42.14
	9	\$ 26.58	\$ 27.33
	10	\$ -	\$ -
	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	\$ 42.14	23.81
	9	\$ 2.06	\$ 26.58	12.88	\$ 27.33	13.24
	10	\$ -	\$ -	-	\$ -	-
	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	9	1	\$ -	\$ -	0	0
2024	9	2	\$ -	\$ -	0	0
2024	9	3	\$ -	\$ -	0	0
2024	9	4	\$ -	\$ -	0	0
2024	9	5	\$ -	\$ 0.36	0	9
2024	9	6	\$ -	\$ -	0	0
2024	9	7	\$ 0.02	\$ -	1	0
2024	9	8	\$ -	\$ -	0	0
2024	9	9	\$ 2.04	\$ 1.38	5	4
2024	9	10	\$ 7.80	\$ 2.05	6	8
2024	9	11	\$ -	\$ -	0	0
2024	9	12	\$ -	\$ -	0	0
2024	9	13	\$ -	\$ -	0	0
2024	9	14	\$ 0.01	\$ -	1	0
2024	9	15	\$ 4.53	\$ -	7	0
2024	9	16	\$ 4.21	\$ 2.70	4	24
2024	9	17	\$ -	\$ -	0	0
2024	9	18	\$ -	\$ -	0	0
2024	9	19	\$ -	\$ 0.48	0	24
2024	9	20	\$ 5.45	\$ -	5	0
2024	9	21	\$ -	\$ -	0	0
2024	9	22	\$ -	\$ -	0	0
2024	9	23	\$ 4.50	\$ 2.75	6	18
2024	9	24	\$ 0.04	\$ 3.15	5	25
2024	9	25	\$ 0.01	\$ -	1	0
2024	9	26	\$ -	\$ 2.86	0	13
2024	9	27	\$ -	\$ 0.94	0	18
2024	9	28	\$ -	\$ -	0	0
2024	9	29	\$ -	\$ 5.87	0	4
2024	9	30	\$ 0.01	\$ -	1	0
0	0	0	\$ -	\$ -	0	0

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	\$ 1,090,341	\$ 7,550,155
2024	9	\$ 2,408,462	\$ 9,958,618
0	0	\$ -	\$ 9,958,618
0	0	\$ -	\$ 9,958,618
0	0	\$ -	\$ 9,958,618

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	\$ (19,773)	\$ 49,331
2024	6	\$ 1,528	\$ 50,859
2024	7	\$ 18,724	\$ 69,583
2024	8	\$ (17,683)	\$ 51,900
2024	9	\$ 54,477	\$ 106,377
0	0	\$ -	\$ 106,377
0	0	\$ -	\$ 106,377
0	0	\$ -	\$ 106,377

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	-	-	-	-	-
	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	410	2,163	2,755	235	1,250
	2	327	2,163	2,755	212	1,238
	3	275	2,505	2,795	217	1,282
	4	250	2,503	2,796	245	1,228
	5	229	2,503	2,796	294	1,249
	6	240	2,503	2,796	418	1,259
	7	235	3,304	2,729	499	1,378
	8	485	3,304	2,729	314	1,712
	9	646	3,304	2,729	336	2,183
	10	476	3,304	2,729	493	2,253
	11	395	3,041	2,648	556	2,330
	12	370	3,041	2,648	562	2,186
	13	367	2,999	2,648	550	2,116
	14	374	2,999	2,648	548	2,188
	15	390	2,791	2,599	497	2,215
	16	413	2,791	2,599	531	2,293
	17	431	2,791	2,599	578	2,449
	18	434	2,791	2,599	621	2,418
	19	390	2,486	2,595	616	2,116
	20	317	2,486	2,595	541	1,889
	21	389	2,486	2,595	313	1,866
	22	467	2,486	2,595	210	1,783
	23	515	2,360	2,755	187	1,568
	24	475	2,360	2,755	155	1,444

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	\$ -	\$ -	\$ -	\$ -	\$ -
	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	\$ -	\$ -	\$ -	\$ -	\$ -
	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	\$ 6,305.54	\$ 252,010.77
	11	\$ 7,639.84	\$ 259,650.61
12	\$ 4,296.20	\$ 263,946.81	
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	\$ 14,288.91	\$ 74,342.96
	9	\$ 4,269.52	\$ 78,612.48
	10	\$ -	\$ -
	11	\$ -	\$ -
12	\$ -	\$ -	

DA vs. RT Load Forecast Error 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	-	-	-	-	-	-
	11	-	-	-	-	-	-
	12	-	-	-	-	-	-

Monthly Average of Wind Generation 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	16,786	15,896	13,255	12,978	13,256	16,258
	2	15,935	15,026	13,552	14,322	15,239	17,307
	3	16,983	15,530	13,978	12,878	13,946	16,760
	4	16,756	15,018	12,761	12,031	13,207	16,187
	5	12,744	9,807	7,209	7,265	10,625	13,140
	6	14,285	11,975	9,609	8,535	10,879	13,859
	7	16,218	13,006	9,683	8,723	10,953	14,729
	8	14,147	11,131	8,875	7,705	9,874	12,837
	9	13,994	11,182	8,244	6,223	7,888	13,447
	10	14,077	12,740	10,486	10,071	10,516	13,441
	11	12,510	11,412	9,478	9,029	9,928	13,033
	12	13,984	12,979	11,017	11,534	11,641	14,558
2024	1	12,969	12,574	10,880	10,617	10,118	12,254
	2	17,760	17,575	14,116	14,160	14,221	17,060
	3	15,982	14,130	11,839	11,747	13,155	16,239
	4	18,123	17,432	15,079	14,290	15,320	17,181
	5	16,225	13,545	11,451	11,325	13,522	16,133
	6	17,360	14,020	11,560	10,678	13,458	17,409
	7	14,238	10,798	8,413	8,329	10,379	14,340
	8	14,863	10,709	6,629	5,859	9,531	14,198
	9	10,190	7,977	6,303	7,167	8,566	10,262
	10	-	-	-	-	-	-
	11	-	-	-	-	-	-
	12	-	-	-	-	-	-

Monthly Average of Solar Generation 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	0.3	14.6	4,959.9	5,954.5	1,303.5	0.7
	2	0.9	64.5	5,072.6	5,984.7	1,750.2	1.0
	3	0.2	67.8	5,196.4	7,665.3	3,657.6	0.4
	4	0.2	130.2	6,575.6	8,939.2	5,678.3	7.1
	5	0.2	350.0	7,903.1	10,047.5	6,026.7	36.3
	6	0.3	563.2	9,356.5	11,237.5	7,807.2	107.4
	7	0.5	442.2	10,019.0	11,950.8	9,016.3	114.9
	8	0.3	237.9	10,464.6	12,377.6	8,266.7	25.0
	9	0.2	73.3	8,924.6	11,508.5	6,593.0	0.4
	10	0.1	13.8	6,723.8	9,743.6	4,456.3	0.7
	11	0.4	125.5	6,606.1	7,750.9	1,479.5	0.4
	12	0.0	59.6	7,972.6	8,837.9	1,248.3	0.1
2024	1	0.1	29.9	7,435.8	8,671.2	1,858.3	2.4
	2	0.3	147.0	9,285.9	10,538.0	2,832.7	0.4
	3	0.8	88.2	8,715.8	11,990.2	5,583.0	0.7
	4	0.7	179.2	8,720.3	12,143.5	7,918.3	8.9
	5	0.9	480.7	10,332.1	13,635.7	8,505.4	52.3
	6	0.5	928.2	12,935.4	15,777.8	11,719.2	147.9
	7	1.0	644.3	13,145.4	16,149.5	11,363.5	123.5
	8	0.3	375.8	15,688.4	18,500.9	12,114.1	30.5
	9	0.7	123.7	13,377.5	17,286.7	9,497.5	0.7
	10	-	-	-	-	-	-
	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)	10553	1	571	1245	977	3350	2195	1822	257	77	59	0	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)	8301	3	958	1163	1377	1578	1353	1195	487	73	117	0	0	0
FREQ_EXIST	2024	PANHANDLE GTC (PNHNDL)	7731	4	647	2029	1204	1604	742	721	385	115	284	0	0	0
FREQ_EXIST	2024	LARDVN_LASCRU1_1 (LARDVNTH-LASCRUCE)	7097	5	595	0	1988	2246	223	380	863	543	259	0	0	0
FREQ_EXIST	2024	HAIN LA PAL1_1 (LA PALMA-HAINE DR)	6869	6	36	321	971	1079	1859	2209	234	72	88	0	0	0
FREQ_EXIST	2024	ZAPATA-STARR GTC (ZAPSTR)	6784	7	261	1539	864	1526	998	810	511	206	69	0	0	0
FREQ_EXIST	2024	6471_C (MGSES-NAVIG)	6193	8	52	0	0	0	630	574	1520	1905	1512	0	0	0
FREQ_EXIST	2024	DILLEYSW XFMR (DILLEYSW-DILLEY)	6024	9	77	412	888	235	7	72	756	2003	1574	0	0	0
FREQ_EXIST	2024	HAMILT_MAVERI1_1 (HAMILTON-MAVERICK)	4915	10	127	654	1246	630	862	552	352	193	299	0	0	0
TOP10_RENT	2024	6471_C (MGSES-NAVIG)	\$ 108.78	1	\$ 0.29	\$ -	\$ -	\$ -	\$ 15.37	\$ 9.80	\$ 29.57	\$ 32.88	\$ 20.88	\$ -	\$ -	\$ -
TOP10_RENT	2024	6036_A (TKWSW-MGSES)	\$ 101.90	2	\$ 4.60	\$ 13.29	\$ 68.38	\$ 15.63	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOP10_RENT	2024	WEST TEXAS EXPORT GTC (WESTEX)	\$ 94.62	3	\$ 13.53	\$ 8.32	\$ 12.19	\$ 15.85	\$ 14.98	\$ 22.95	\$ 5.34	\$ 0.47	\$ 1.01	\$ -	\$ -	\$ -
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)	\$ 57.13	5	\$ 20.59	\$ 9.39	\$ 20.80	\$ 0.51	\$ 0.05	\$ -	\$ 0.33	\$ 0.49	\$ 4.96	\$ -	\$ -	\$ -
TOP10_RENT	2024	1710_C (BELCNTY-SALSW)	\$ 51.96	6	\$ 0.46	\$ -	\$ -	\$ 1.32	\$ 15.19	\$ 15.71	\$ 3.79	\$ 15.35	\$ 0.15	\$ -	\$ -	\$ -
TOP10_RENT	2024	LARDVN_LASCRU1_1 (LARDVNTH-LASCRUCE)	\$ 34.95	7	\$ 4.67	\$ -	\$ 8.45	\$ 8.91	\$ 1.66	\$ 2.56	\$ 3.35	\$ 4.22	\$ 1.14	\$ -	\$ -	\$ -
TOP10_RENT	2024	NORTH EDINBURG LOBO GTC (NE_LOB)	\$ 32.46	8	\$ 1.33	\$ 2.85	\$ 2.42	\$ 7.41	\$ 10.17	\$ 7.77	\$ 0.39	\$ 0.09	\$ 0.05	\$ -	\$ -	\$ -
TOP10_RENT	2024	LPLNW_LPLMD_1 (LPLNW-LPLMD)	\$ 26.72	9	\$ 0.68	\$ -	\$ 16.88	\$ 6.19	\$ -	\$ 0.21	\$ -	\$ 2.76	\$ -	\$ -	\$ -	\$ -
TOP10_RENT	2024	PANHANDLE GTC (PNHNDL)	\$ 26.10	10	\$ 1.92	\$ 7.68	\$ 3.48	\$ 6.52	\$ 2.25	\$ 1.71	\$ 1.06	\$ 0.47	\$ 1.01	\$ -	\$ -	\$ -

Month	Total Rent
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	\$0.00
11	\$0.00
12	\$0.00
Cumulative	\$1,480.77

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)	3,573	1	547	454	428	374	279	334	343	423	391	-	-	-
FREQ_EXIST	2024	ASHERT_CATARI1_1 (ASHERTON-CATARINA)	3,572	2	393	194	276	398	506	597	582	377	249	-	-	-
FREQ_EXIST	2024	HEXT_YELWJC1_1 (YELWJCKT-HEXT)	2,429	3	192	293	112	325	231	260	212	329	475	-	-	-
FREQ_EXIST	2024	LARDVN_LASCRU1_1 (LARDVNTH-LASCRUCE)	2,279	4	214	-	473	524	270	207	203	157	231	-	-	-
FREQ_EXIST	2024	BURNS_RIOHONDO_1 (RIOHONDO-MV_BURNS)	2,262	5	166	215	215	381	453	514	182	83	53	-	-	-
FREQ_EXIST	2024	CATARI_PILONC1_1 (PILONCIL-CATARINA)	2,239	6	484	501	221	143	236	93	173	193	195	-	-	-
FREQ_EXIST	2024	6471_C (MGSES-NAVIG)	2,229	7	128	-	-	-	380	396	449	427	449	-	-	-
FREQ_EXIST	2024	LPLBR_BRT1 (LPLBR-LPLBR)	1,890	8	336	86	214	282	128	241	239	271	93	-	-	-
FREQ_EXIST	2024	PUEBLO_XFMRS (PUEBLO-PUEBLO)	1,681	9	341	261	189	167	276	188	41	95	123	-	-	-
FREQ_EXIST	2024	BIGLAK_PHBL_T1_1 (BIGLAKE-PHBL_TAP)	1,636	10	465	338	283	193	105	6	12	17	217	-	-	-
TOP10_RENT	2024	6471_C (MGSES-NAVIG)	\$ 112.39	1	\$ 1.72	\$ -	\$ -	\$ -	\$ 12.53	\$ 8.90	\$ 26.55	\$ 34.46	\$ 28.23	\$ -	\$ -	\$ -
TOP10_RENT	2024	6036_A (TKWSW-MGSES)	\$ 98.21	2	\$ 13.59	\$ 6.30	\$ 60.11	\$ 17.30	\$ 0.63	\$ 0.11	\$ 0.06	\$ 0.02	\$ 0.09	\$ -	\$ -	\$ -
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)	\$ 66.94	4	\$ 7.41	\$ 8.98	\$ 10.43	\$ 11.52	\$ 9.72	\$ 13.50	\$ 4.40	\$ 0.69	\$ 0.29	\$ -	\$ -	\$ -
TOP10_RENT	2024	HARGRO_TWINBU1_1 (TWINBU-HARGROVE)	\$ 64.42	5	\$ 20.87	\$ 11.87	\$ 19.58	\$ 4.65	\$ 0.83	\$ 0.57	\$ 1.01	\$ 1.40	\$ 3.66	\$ -	\$ -	\$ -
TOP10_RENT	2024	1710_C (BELCNTY-SALSW)	\$ 45.60	6	\$ 0.00	\$ -	\$ 0.01	\$ 1.12	\$ 11.22	\$ 18.65	\$ 5.43	\$ 6.50	\$ 2.67	\$ -	\$ -	\$ -
TOP10_RENT	2024	LARDVN_LASCRU1_1 (LARDVNTH-LASCRUCE)	\$ 37.14	7	\$ 6.56	\$ -	\$ 9.01	\$ 9.18	\$ 2.75	\$ 1.69	\$ 3.01	\$ 3.18	\$ 1.75	\$ -	\$ -	\$ -
TOP10_RENT	2024	COLETO_ROSATA1_1 (COLETO-ROSATA)	\$ 36.83	8	\$ 34.68	\$ -	\$ -	\$ -	\$ -	\$ 0.09	\$ 0.12	\$ 1.09	\$ 0.85	\$ -	\$ -	\$ -
TOP10_RENT	2024	NORTH EDINBURG LOBO GTC (NE_LOB)	\$ 29.85	9	\$ 0.89	\$ 2.41	\$ 2.38	\$ 6.44	\$ 8.67	\$ 7.45	\$ 1.60	\$ 0.01	\$ -	\$ -	\$ -	\$ -
TOP10_RENT	2024	LPLNW_LPLMD_1 (LPLNW-LPLMD)	\$ 28.48	10	\$ 1.07	\$ -	\$ 16.58	\$ 10.47	\$ -	\$ 0.00	\$ 0.01	\$ 0.36	\$ -	\$ -	\$ -	\$ -

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	\$ 80.92	1	\$ 8.52	\$ 7.67	\$ 8.38	\$ 12.56	\$ 9.68	\$ 7.43	\$ 5.76	\$ 6.23	\$ 7.79	\$ 6.90	\$ -	\$ -
N	2024	HB_NORTH-HB_WEST	\$ 36.87	2	\$ 4.48	\$ 2.45	\$ 7.35	\$ 7.16	\$ 4.72	\$ 3.37	\$ 1.39	\$ 1.41	\$ 1.14	\$ 3.41	\$ -	\$ -
N	2024	HB_NORTH-HB_HOUSTON	\$ 14.21	3	\$ 0.04	\$ 0.02	\$ 0.77	\$ 2.18	\$ 2.97	\$ 2.46	\$ 2.11	\$ 1.33	\$ 0.97	\$ 1.37	\$ -	\$ -
N	2024	HB_NORTH-LZ_NORTH	\$ 12.52	4	\$ 0.44	\$ 0.87	\$ 0.61	\$ 0.46	\$ 0.25	\$ 1.83	\$ 2.84	\$ 2.88	\$ 1.94	\$ 0.41	\$ -	\$ -
N	2024	AEEC-LZ_WEST	\$ 11.08	5	\$ 0.85	\$ 0.71	\$ 0.95	\$ 0.98	\$ 1.80	\$ 1.07	\$ 0.89	\$ 0.76	\$ 1.26	\$ 1.81	\$ -	\$ -
N	2024	HB_PAN-HB_WEST	\$ 10.85	6	\$ 0.65	\$ 1.90	\$ 0.59	\$ 1.41	\$ 1.58	\$ 0.38	\$ 0.53	\$ 0.61	\$ 0.37	\$ 2.85	\$ -	\$ -
N	2024	HB_HOUSTON-LZ_HOUSTON	\$ 8.07	7	\$ 0.21	\$ 0.47	\$ 0.89	\$ 1.12	\$ 0.88	\$ 0.88	\$ 0.74	\$ 0.87	\$ 0.88	\$ 1.12	\$ -	\$ -
N	2024	HB_SOUTH-LZ_SOUTH	\$ 6.78	8	\$ -	\$ -	\$ 0.00	\$ 0.31	\$ 0.77	\$ 0.85	\$ 1.05	\$ 1.36	\$ 0.92	\$ 1.53	\$ -	\$ -
N	2024	HB_NORTH-HB_SOUTH	\$ 5.89	9	\$ 0.20	\$ 0.06	\$ 0.23	\$ 0.77	\$ 1.23	\$ 0.89	\$ 0.26	\$ 0.19	\$ 0.33	\$ 1.74	\$ -	\$ -
N	2024	COL_COLETG1-HB_SOUTH	\$ 4.92	10	\$ 0.51	\$ 0.82	\$ 0.33	\$ 0.00	\$ 0.38	\$ 0.03	\$ 1.70	\$ 0.79	\$ 0.02	\$ 0.34	\$ -	\$ -
Y	2024	HB_WEST-LZ_WEST	\$ 12.75	1	\$ 0.35	\$ 0.20	\$ 3.62	\$ 1.03	\$ 1.30	\$ 1.27	\$ 1.22	\$ 1.14	\$ 0.82	\$ 1.80	\$ -	\$ -
Y	2024	HI_LONE_ALL-BOOTLEG_UN1	\$ 5.87	2	\$ -	\$ 0.03	\$ 0.20	\$ 0.07	\$ 0.29	\$ 0.18	\$ 0.03	\$ 0.05	\$ 1.80	\$ 3.21	\$ -	\$ -
Y	2024	HI_LONEB_RN1-BOOTLEG_UN1	\$ 5.85	3	\$ 4.27	\$ 0.33	\$ 0.01	\$ 0.16	\$ 0.03	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.50	\$ 0.50	\$ -	\$ -
Y	2024	HB_SOUTH-LZ_SOUTH	\$ 5.74	4	\$ 0.02	\$ 0.06	\$ 0.01	\$ 0.25	\$ 0.56	\$ 1.15	\$ 1.74	\$ 0.57	\$ 0.89	\$ 0.49	\$ -	\$ -
Y	2024	NUE_NUECESG7-HB_SOUTH	\$ 4.97	5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.91	\$ 1.58	\$ 1.11	\$ 0.77	\$ 0.60	\$ -	\$ -
Y	2024	HB_NORTH-LZ_NORTH	\$ 4.73	6	\$ 0.39	\$ 0.39	\$ 0.14	\$ 0.21	\$ 0.23	\$ 0.50	\$ 1.10	\$ 0.80	\$ 0.45	\$ 0.52	\$ -	\$ -
Y	2024	BOOTLEG_UN1-HI_LONEB_RN1	\$ 4.49	7	\$ 1.11	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.00	\$ -	\$ -	\$ 1.43	\$ 1.92	\$ -	\$ -
Y	2024	B_DAVIS_3-HB_SOUTH	\$ 4.01	8	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.89	\$ 1.73	\$ 0.71	\$ 0.54	\$ 0.14	\$ -	\$ -
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	RANCHERO_ALL-HI_LONE_ALL	\$ 2.81	10	\$ 1.80	\$ 0.23	\$ 0.13	\$ 0.02	\$ 0.03	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.03	\$ 0.56	\$ -	\$ -