

To the Public Utility Commission of Texas

# ERCOT Wholesale Electricity Market Monthly Report

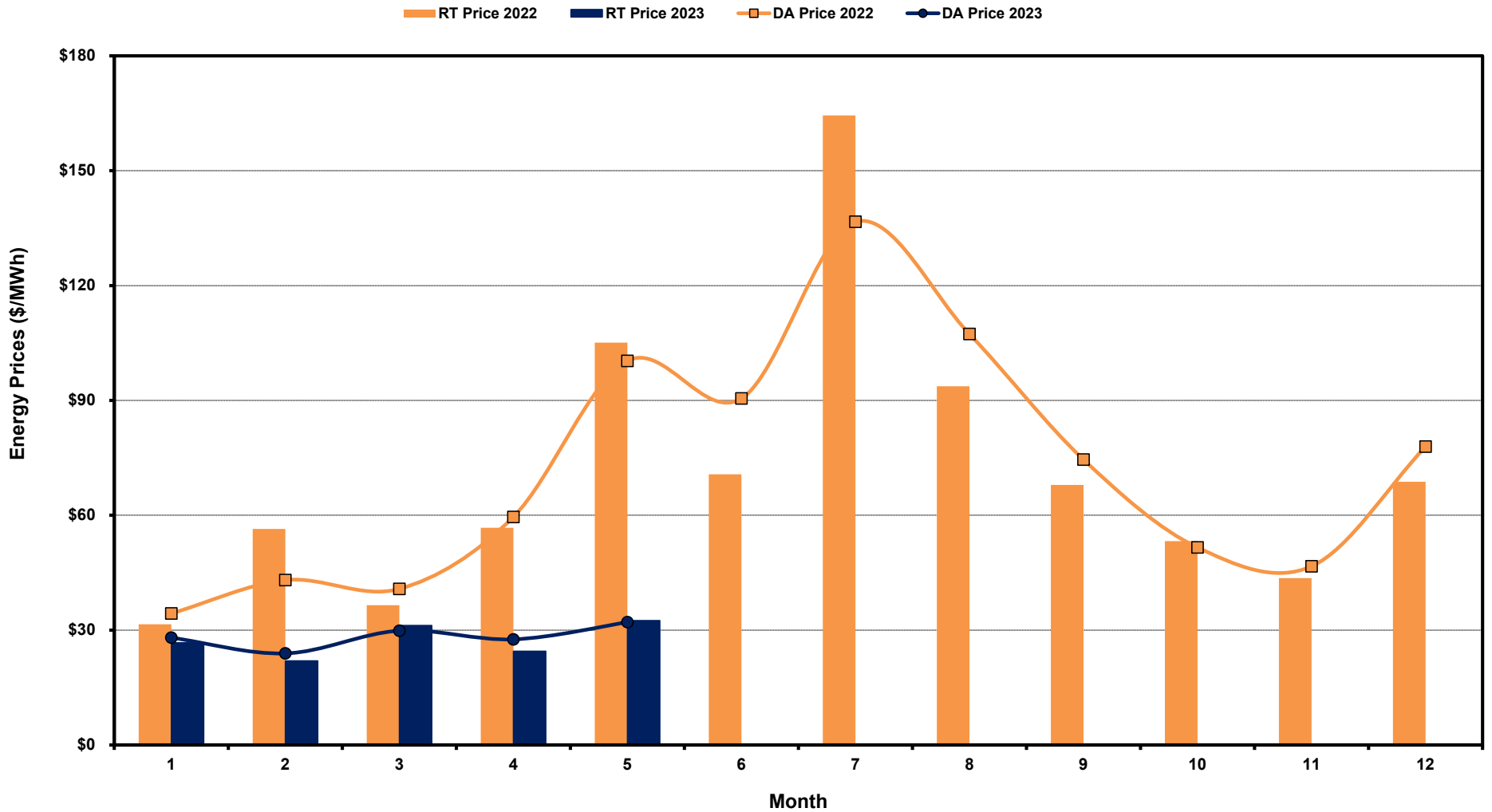
Monday, June 12, 2023

Potomac Economics, Ltd.  
Independent Market Monitor

<b>1</b>	<b>ERCOT-wide Average Energy Prices DA vs. RT</b>
<b>2</b>	<b>Load Zone Load Statistics</b>
<b>3</b>	<b>Load Zone Monthly Average Energy Prices DA vs RT</b>
<b>4</b>	<b>ERCOT-wide Monthly Implied Heat Rates DA vs RT</b>
<b>5</b>	<b>Load Zone Monthly Implied Heat Rates DA vs RT</b>
<b>6</b>	<b>Daily ORDC Reserve Adder Avg. Value and Duration</b>
<b>7</b>	<b>Monthly Ancillary Services Required MW</b>
<b>8</b>	<b>Hourly Average of Ancillary Services Required MW</b>
<b>9</b>	<b>Monthly Average Ancillary Services Price</b>
<b>10</b>	<b>Monthly Average A/S Cost per MWh Load</b>
<b>11</b>	<b>Ercot-wide Cumulative Peaker Net Margin</b>
<b>12</b>	<b>DA vs. RT Load Forecast Error by Hour Ending</b>
<b>13</b>	<b>Monthly Average of Wind Generation by Hour Ending</b>
<b>14</b>	<b>Monthly Average of Solar Generation by Hour Ending</b>
<b>15</b>	<b>RT Constraint Rankings</b>
	<b>- Top 10 Constraints by Total Congestion Value</b>
	<b>- Top 10 Constraints by Binding Frequency</b>
<b>16</b>	<b>DA Constraint Rankings</b>
	<b>- Top 10 Constraints by Total Congestion Value</b>
	<b>- Top 10 Constraints by Binding Frequency</b>
<b>17</b>	<b>CRR Pairs by Monthly Auction Value Rankings</b>
	<b>- Top 10 PTP Obligations by Total Transaction Value</b>
	<b>- Top 10 PTP Options by Total Transaction Value</b>

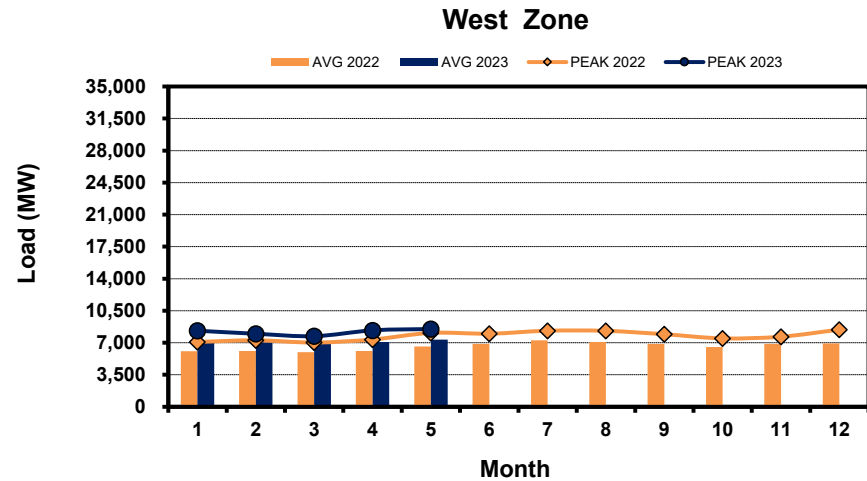
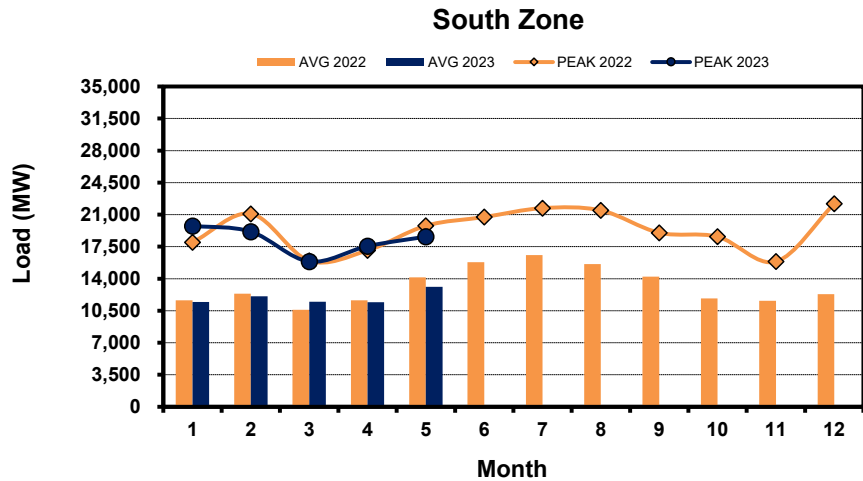
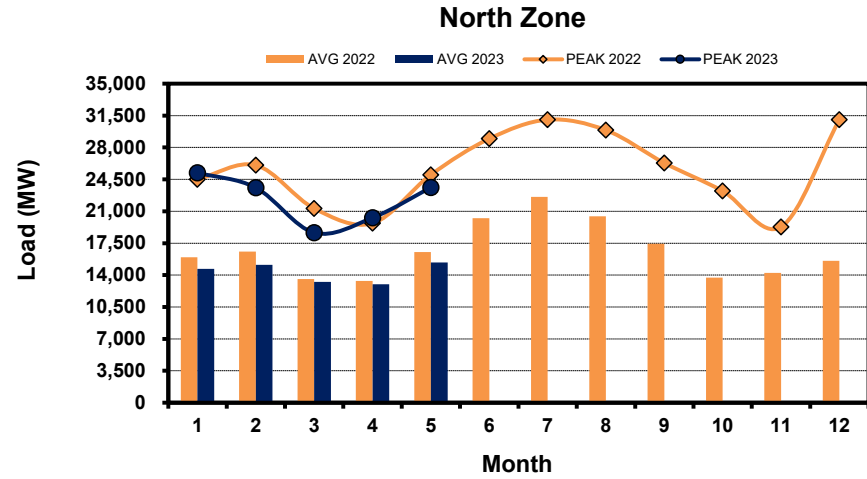
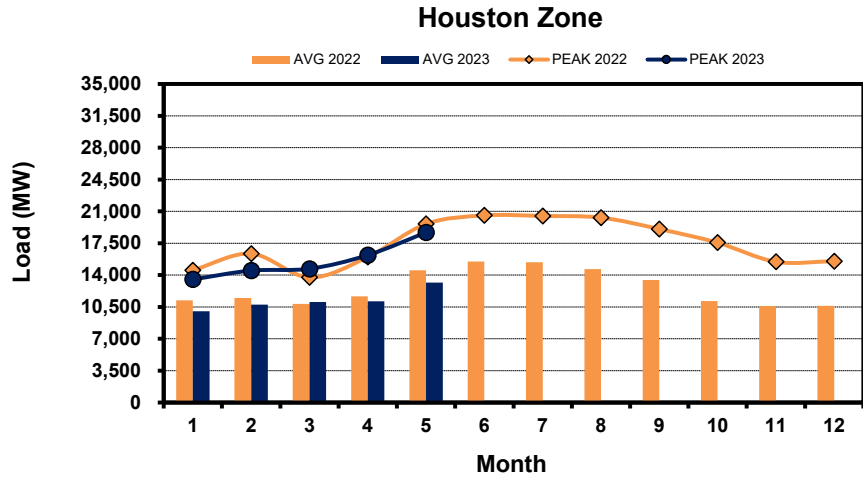
# ERCOT-wide Average Energy Prices DA vs RT

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



# Load Zone Load Statistics

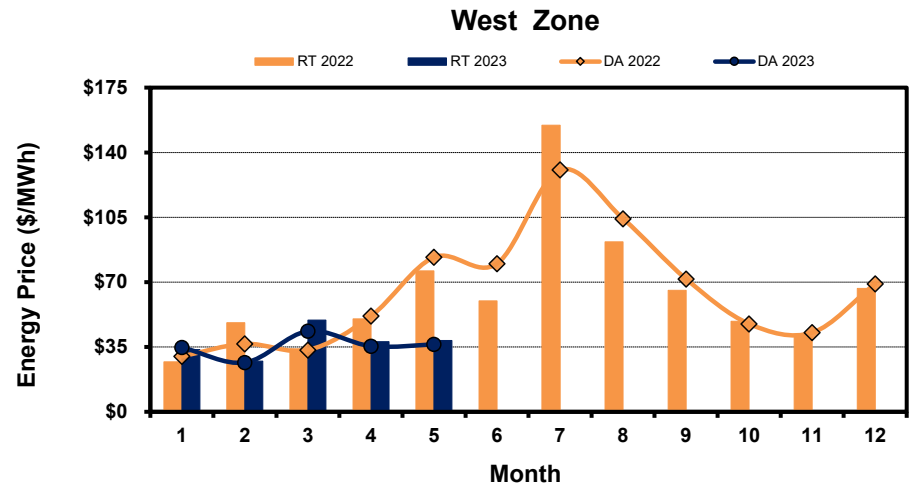
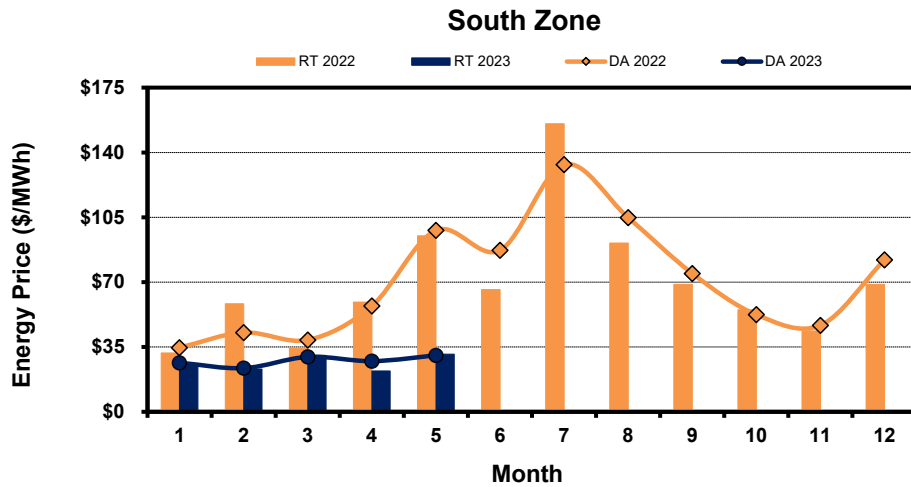
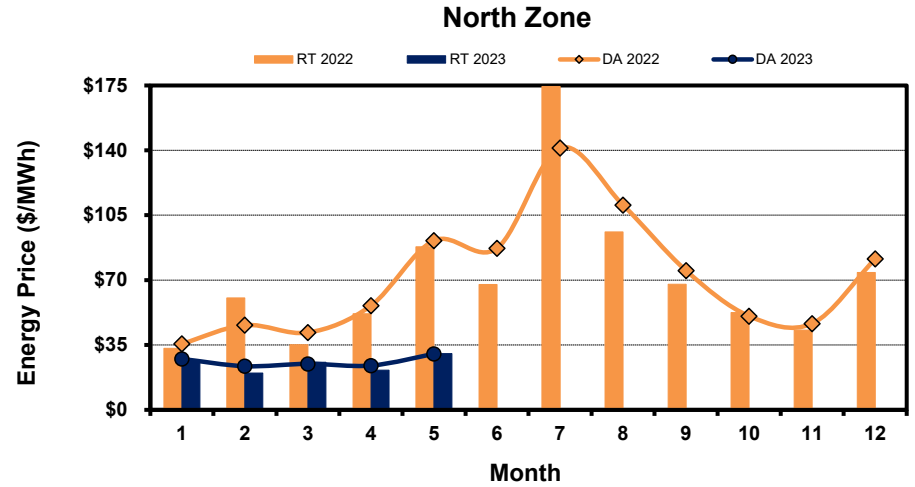
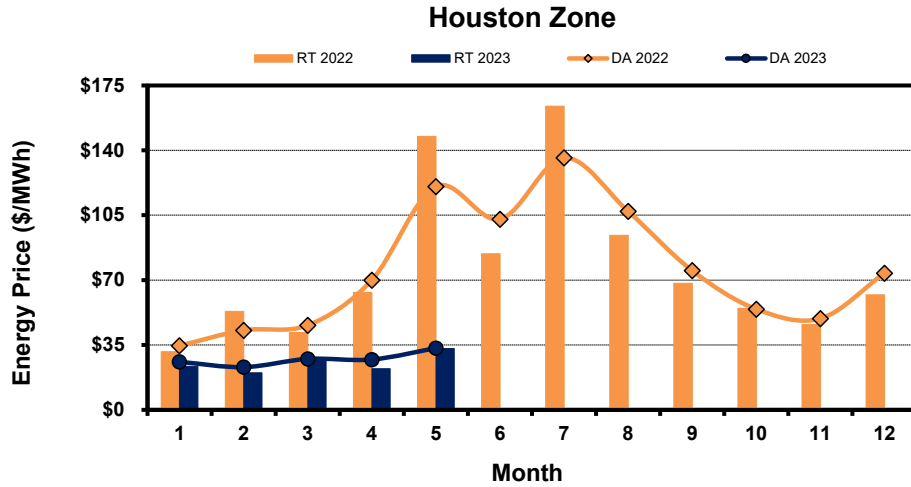
(Nodal load zone made comparable to zonal system Load Zone definitions\*)



**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

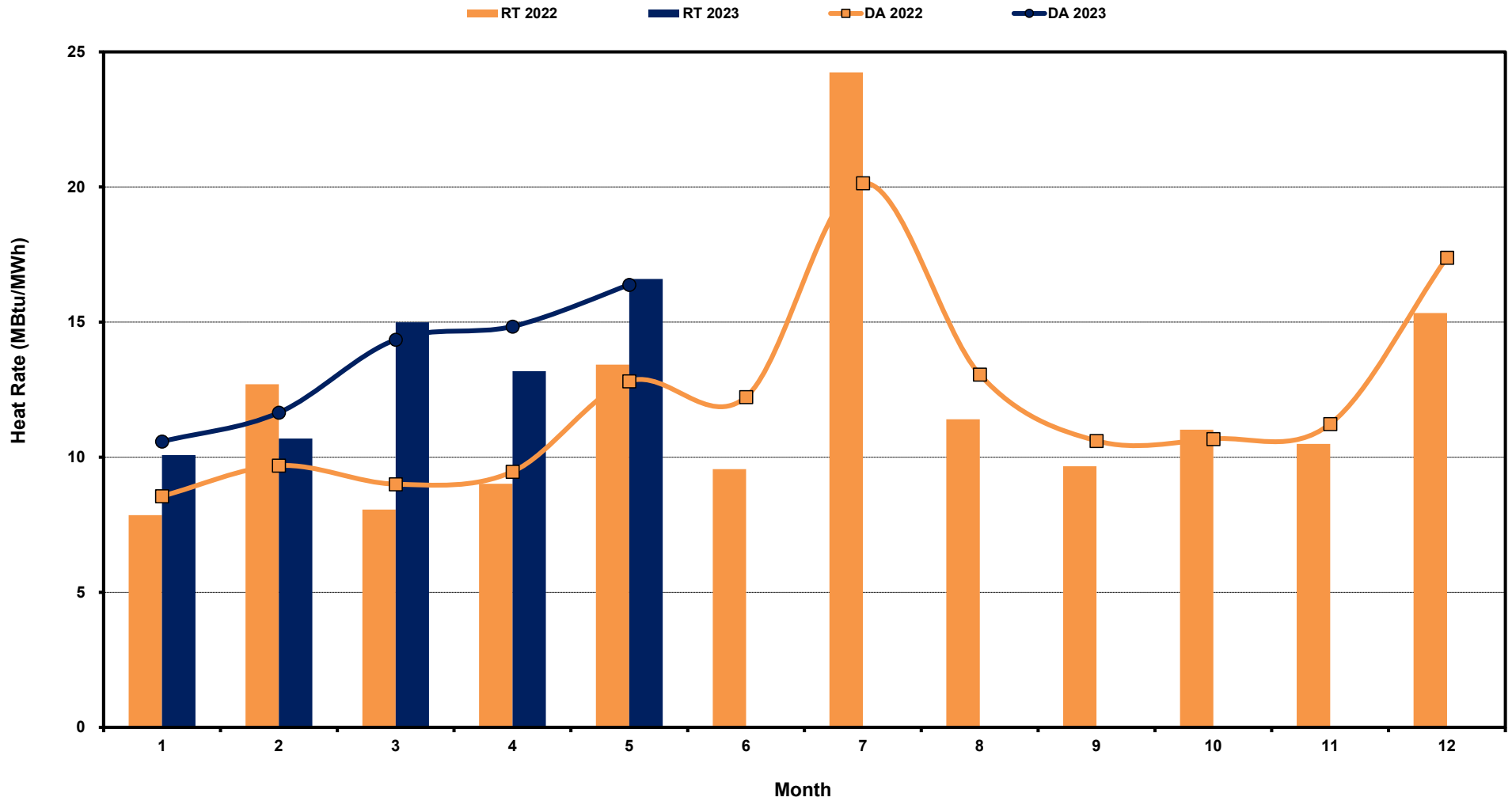
(avg. DA & RT SPPs weighted by Real Time Settlement Loads)  
 (Nodal load zone made comparable to zonal system Load Zone definitions\*)



**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

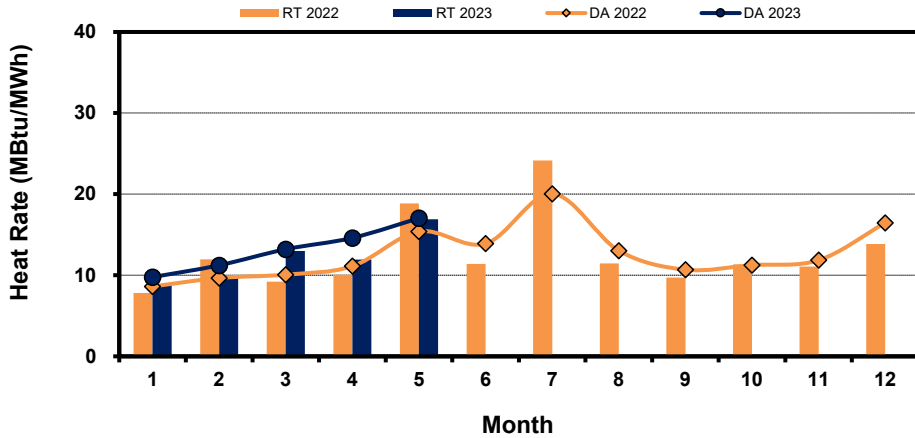
(avg. heat rates weighted by Real Time Settlement Loads)



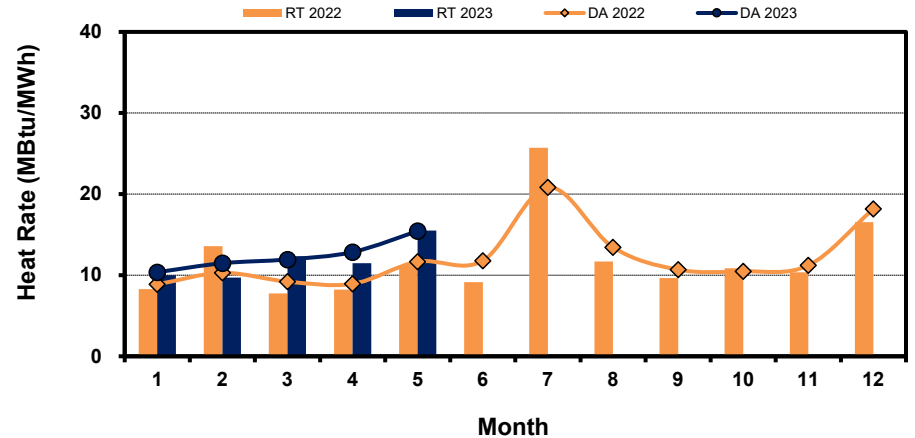
# Load Zone Monthly Implied Heat Rate DA vs RT

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

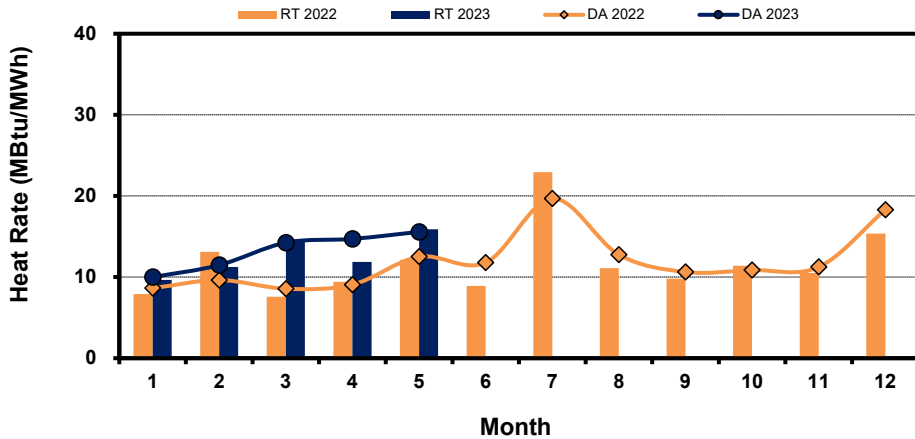
### Houston Zone



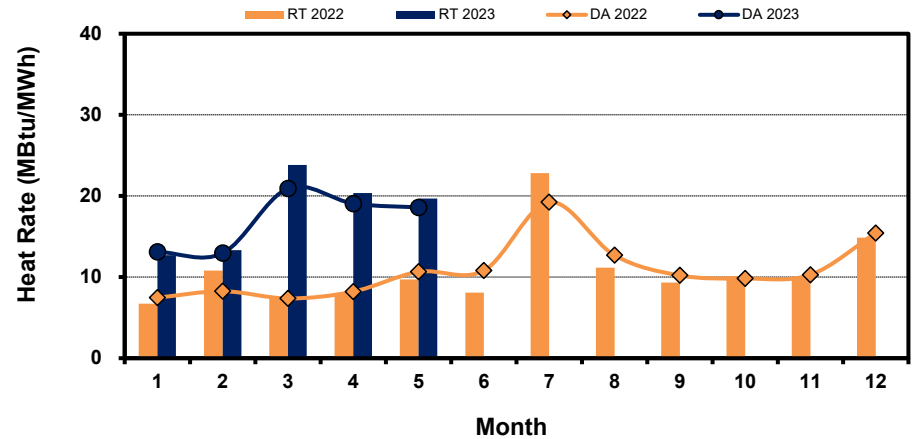
### North Zone



### South Zone



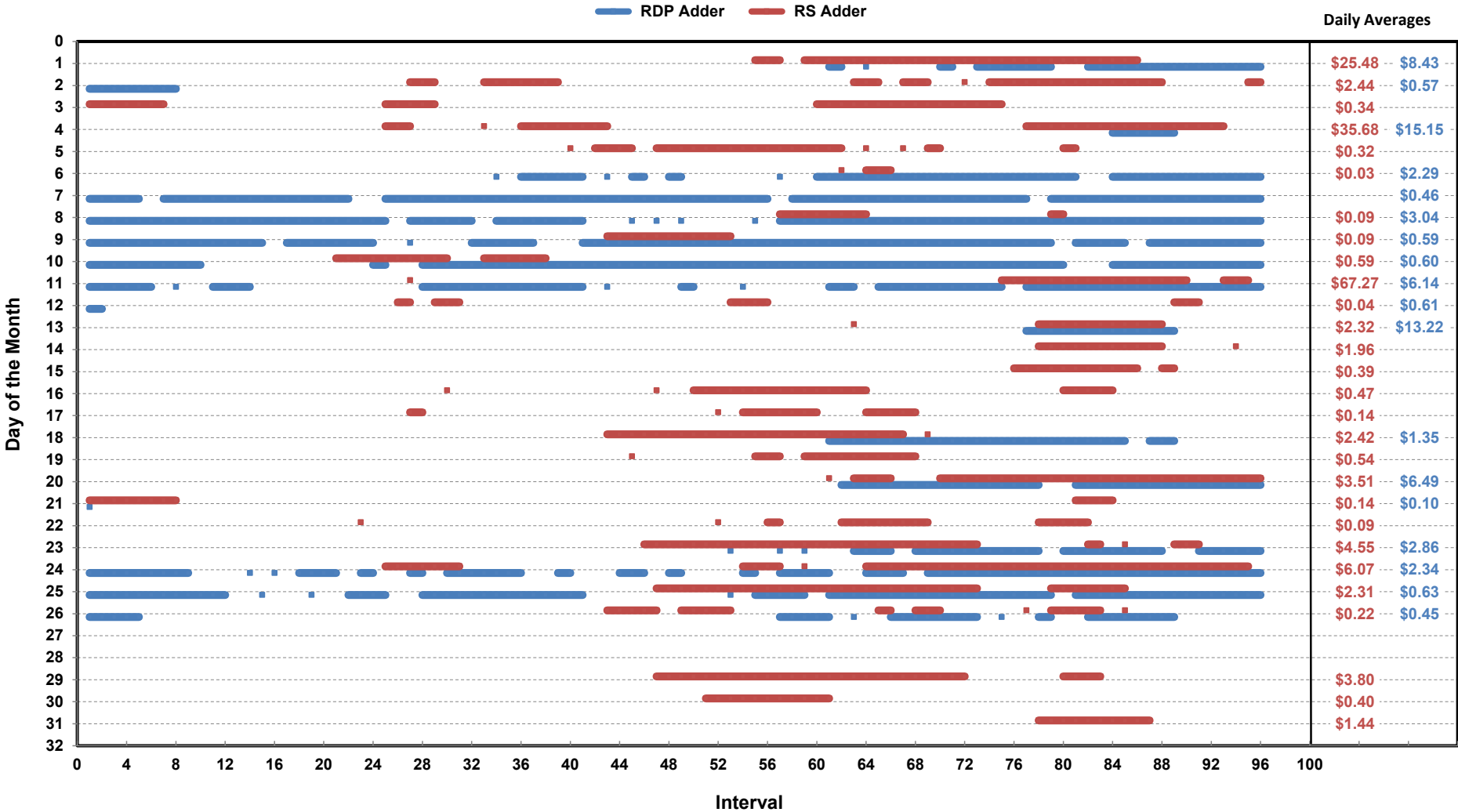
### West Zone



**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)

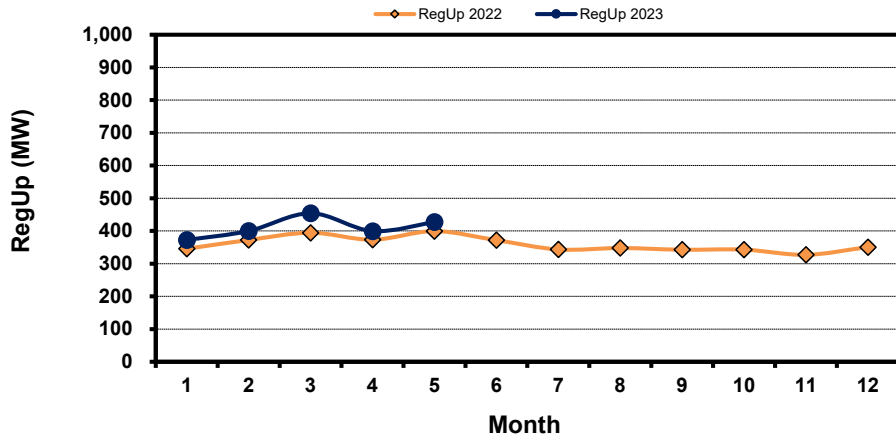
# Daily ORDC Adders Average Values and Interval Duration

## May-2023

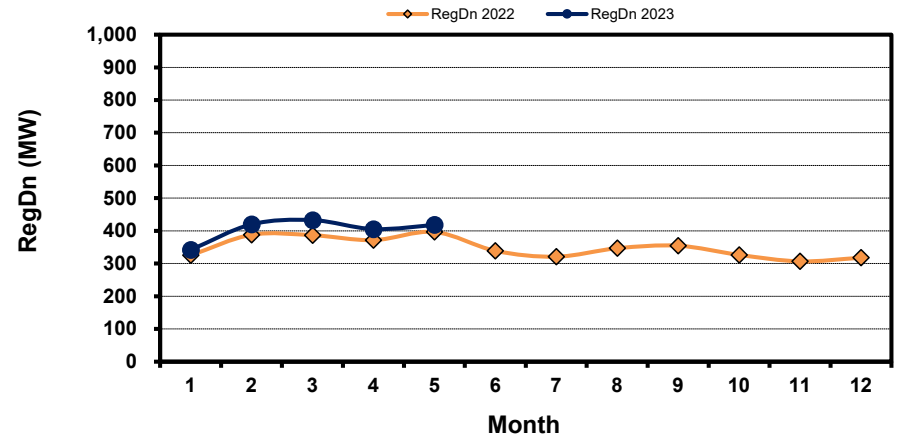


# Monthly Average of Ancillary Services Required MW

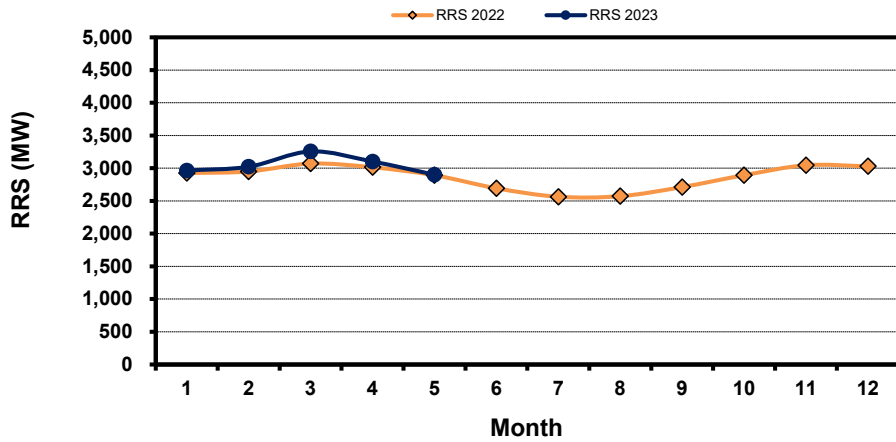
## Regulation Up



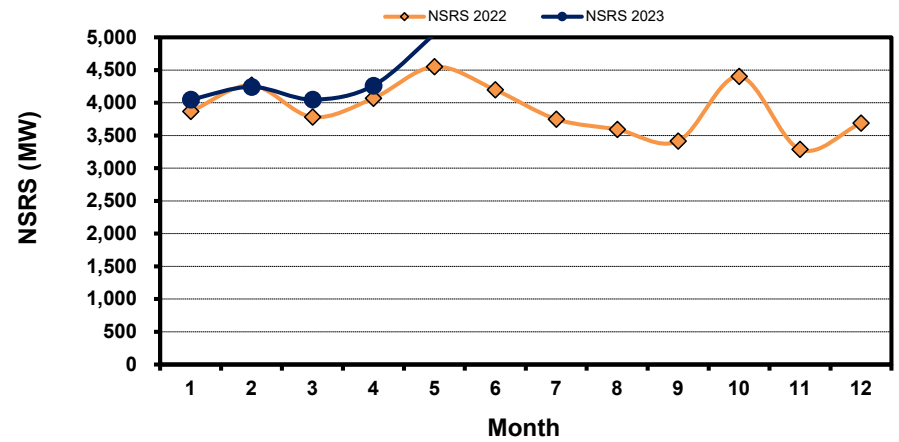
## Regulation Down



## Responsive Reserve



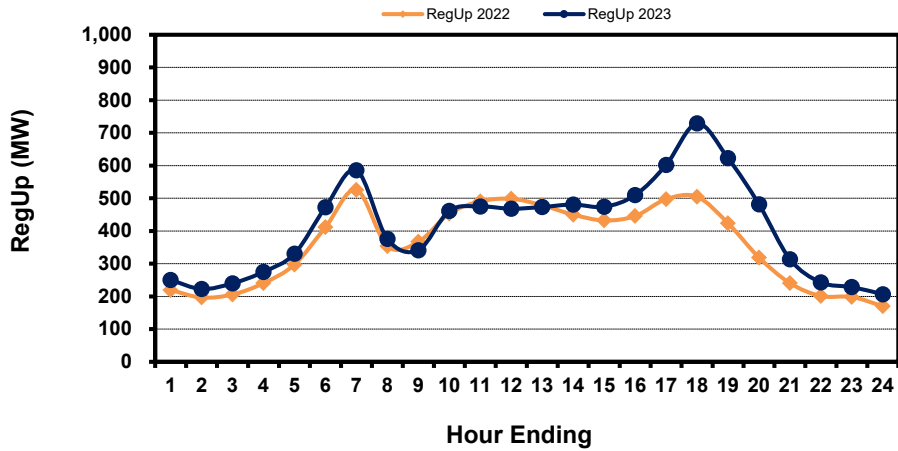
## Non-Spin Reserve



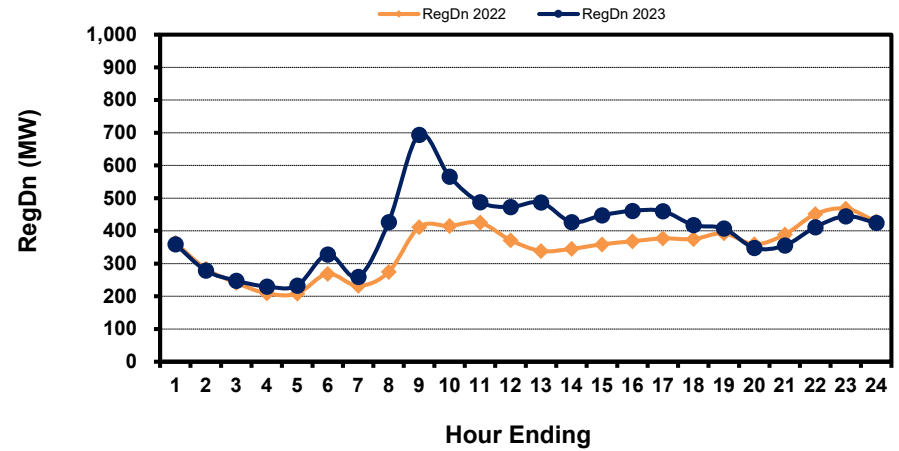


# Hourly Average of Ancillary Services Required MW

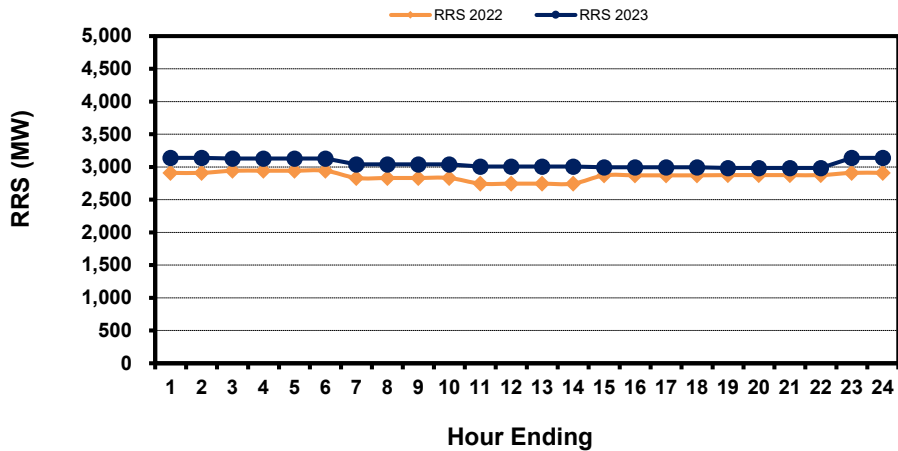
## Regulation Up



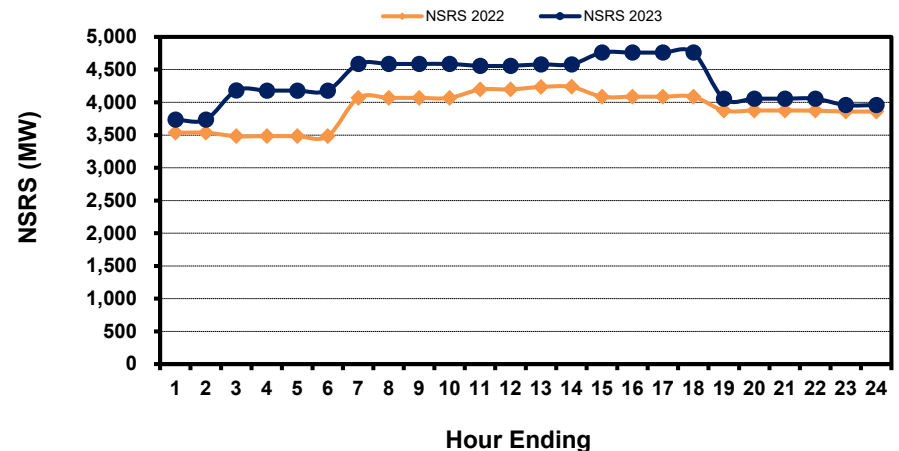
## Regulation Down



## Responsive Reserve



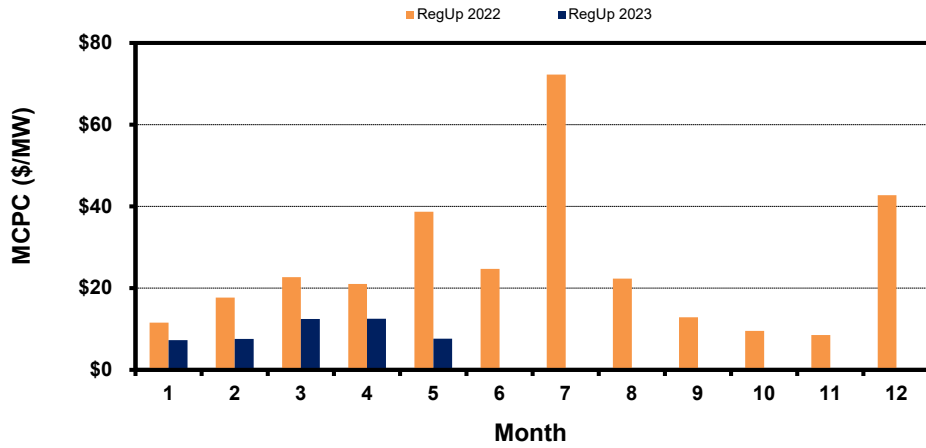
## Non-Spin Reserve



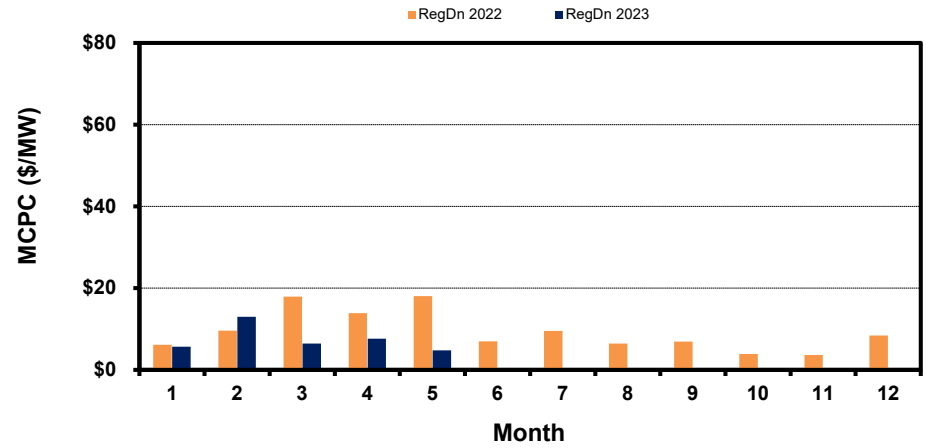
# Monthly Average Ancillary Services Price

(weighted by A/S Quantities Required)

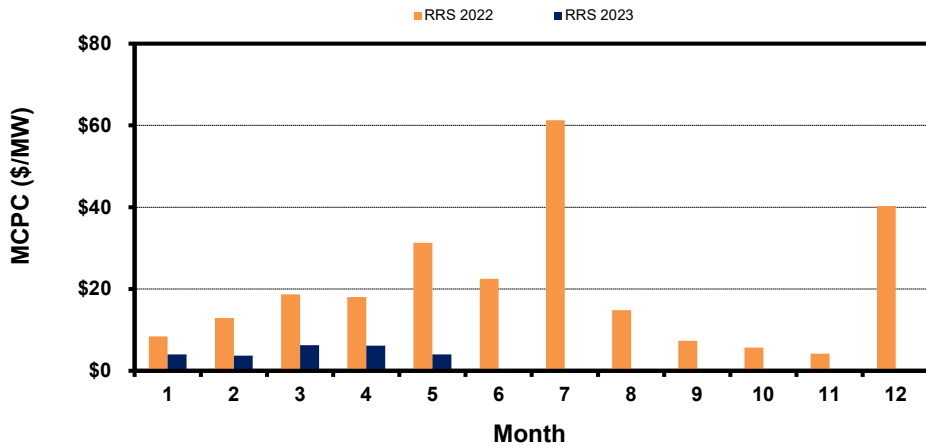
### Regulation Up



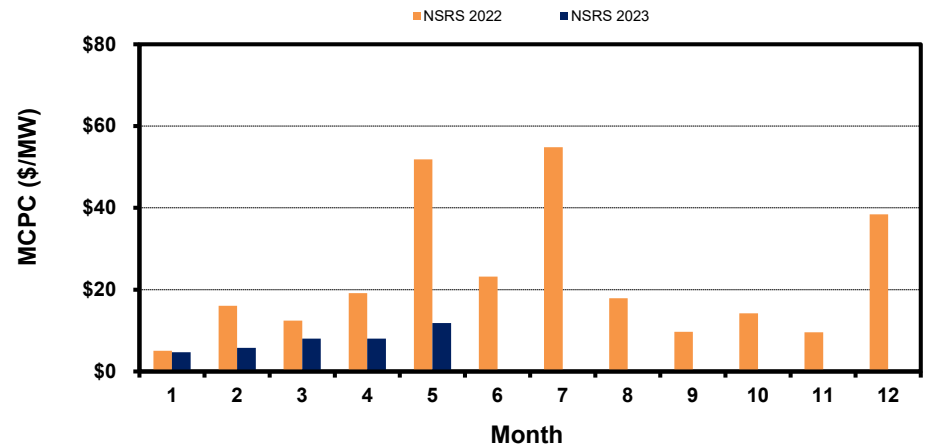
### Regulation Down



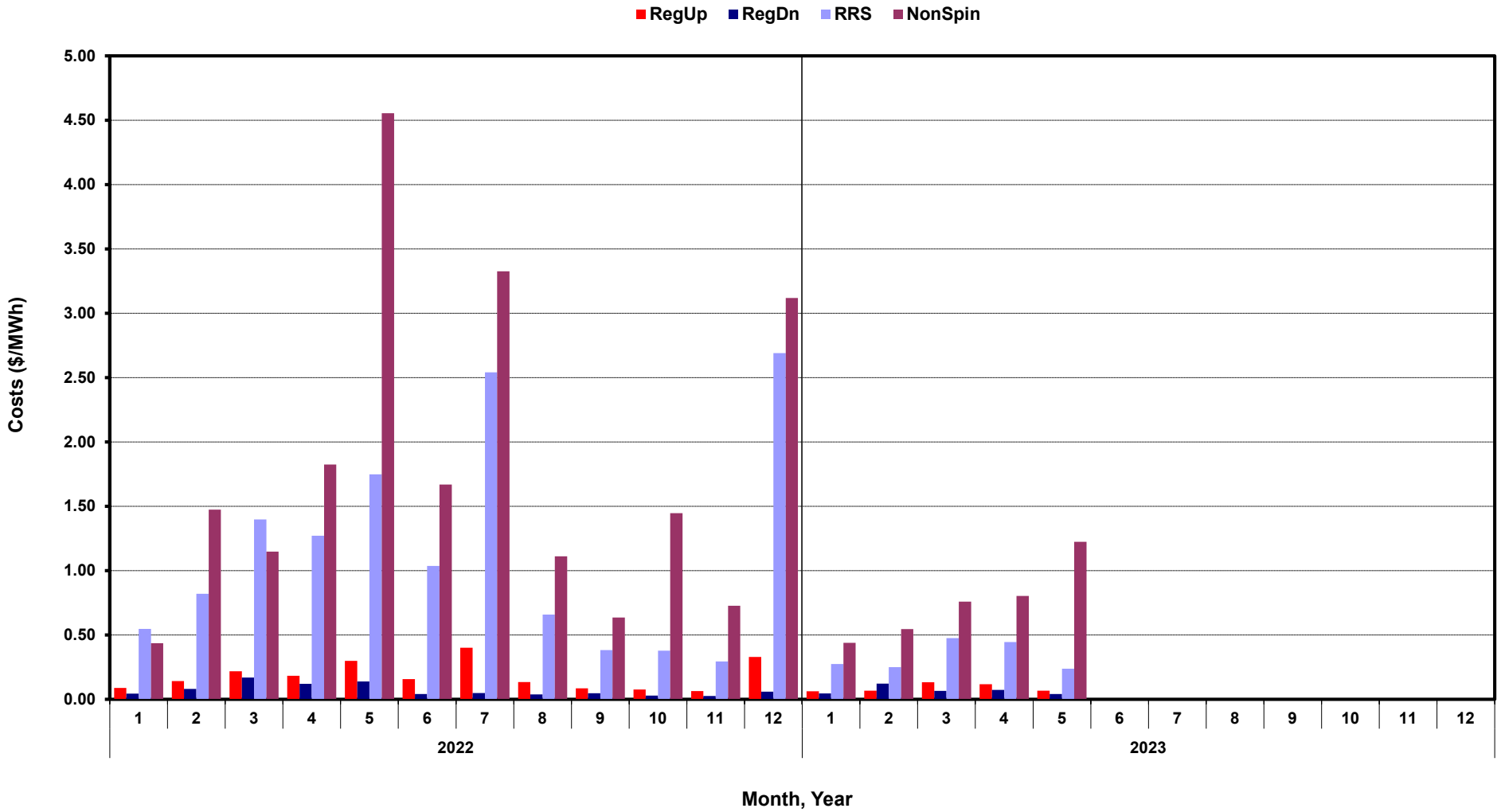
### Responsive Reserve



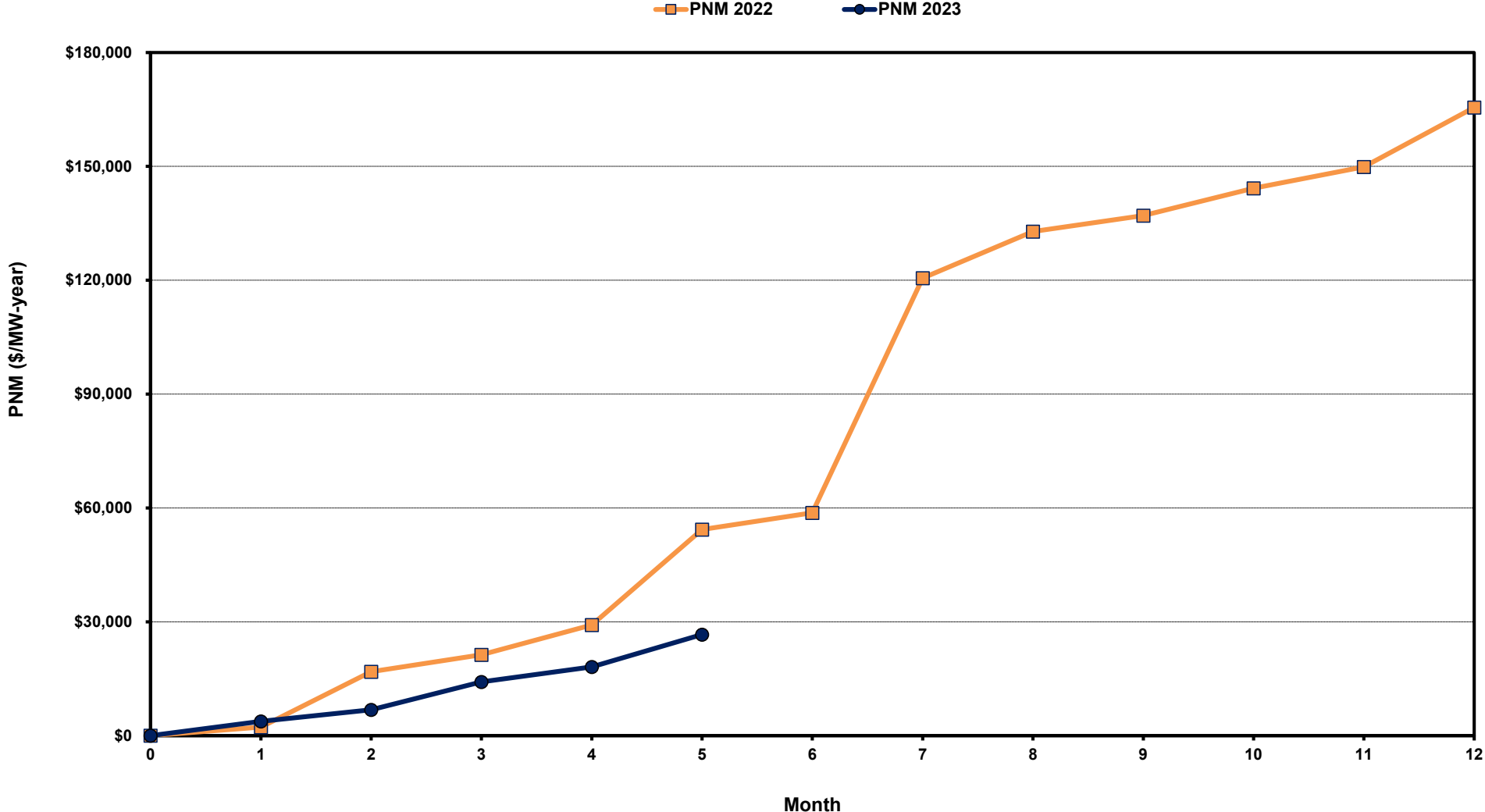
### Non-Spin Reserve



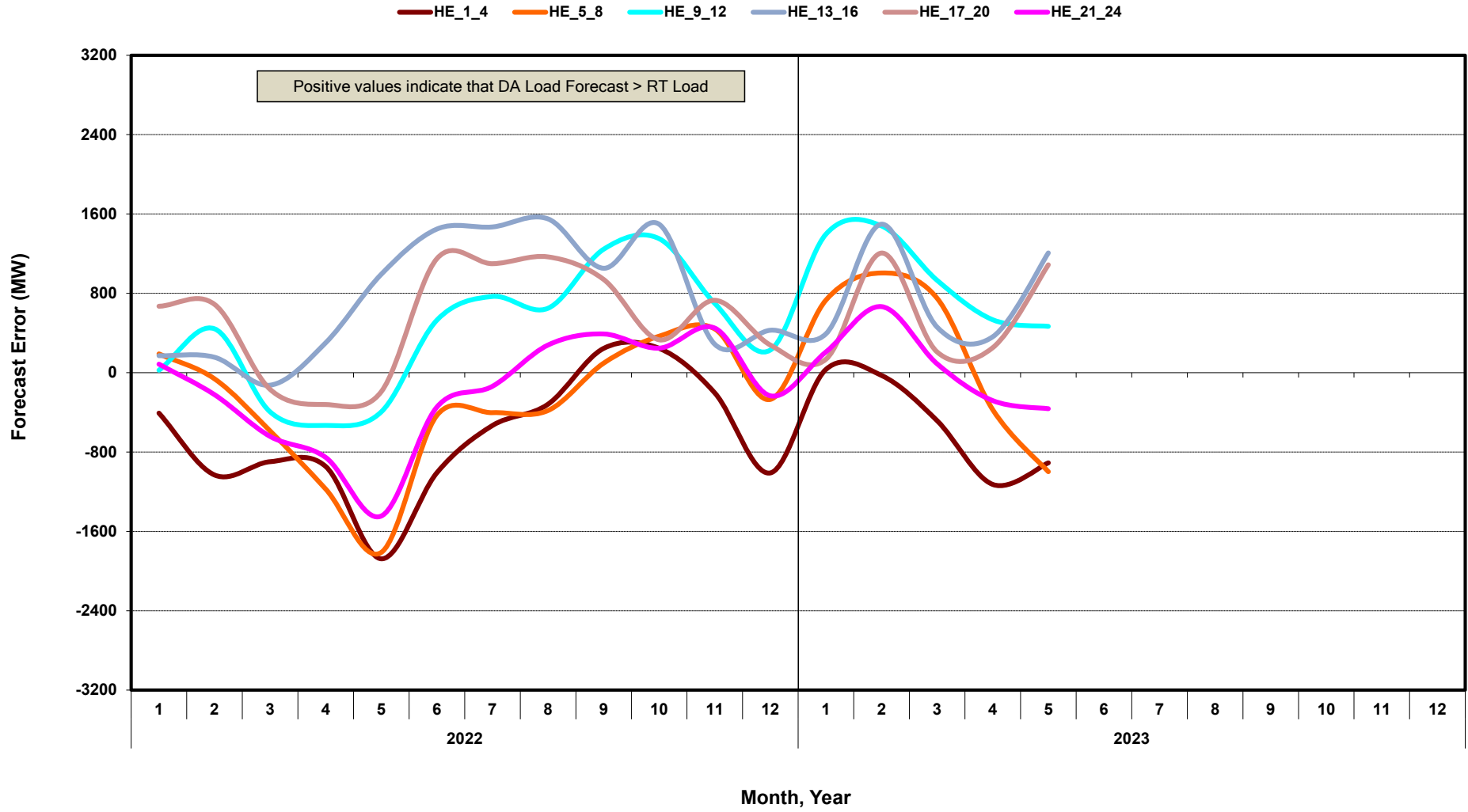
# Monthly Average A/S Cost per MWh Load



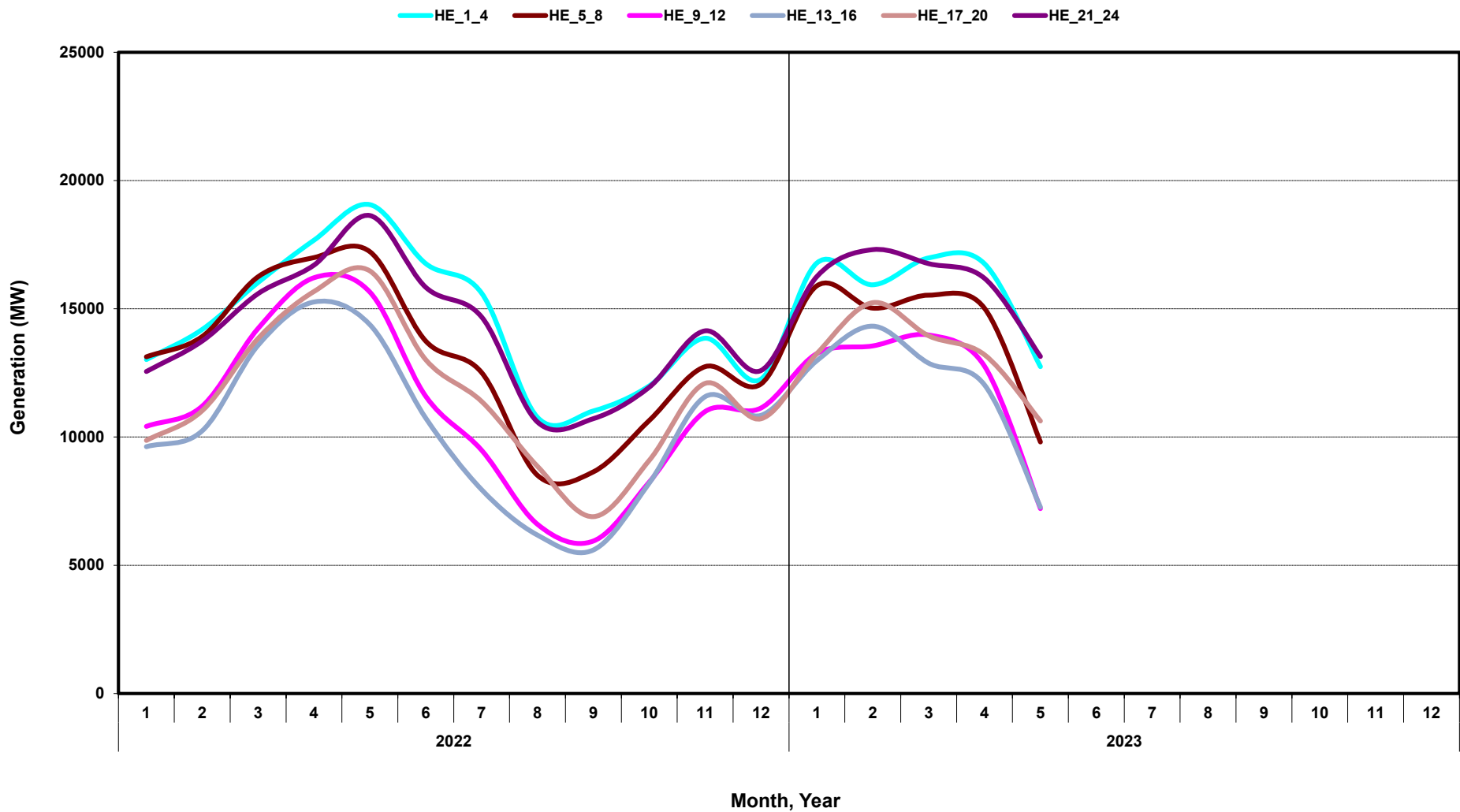
# ERCOT-wide Cumulative Peaker Net Margin



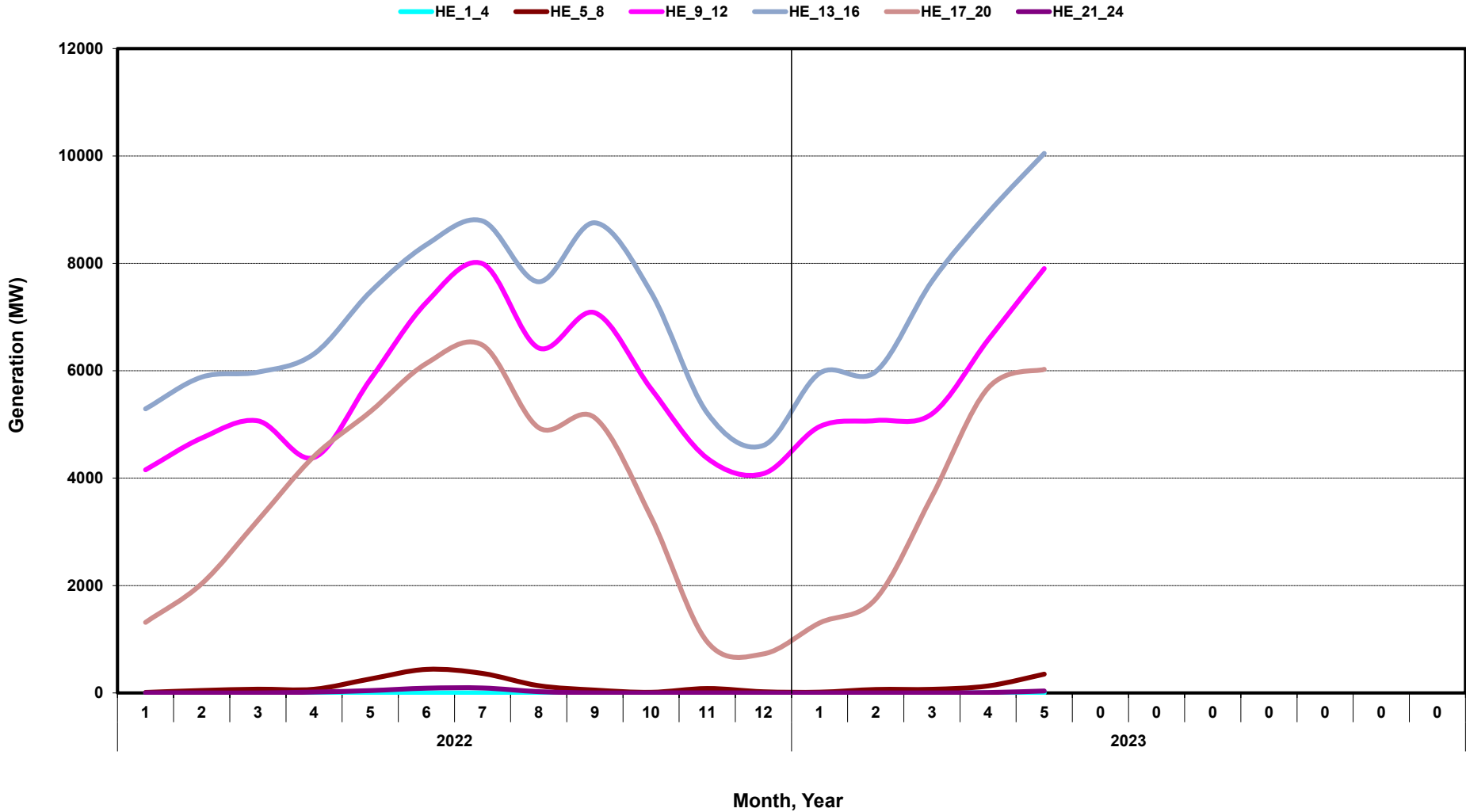
# DA vs. RT Load Forecast Error by Hour Ending



# Monthly Average of Wind Generation by Hour Ending



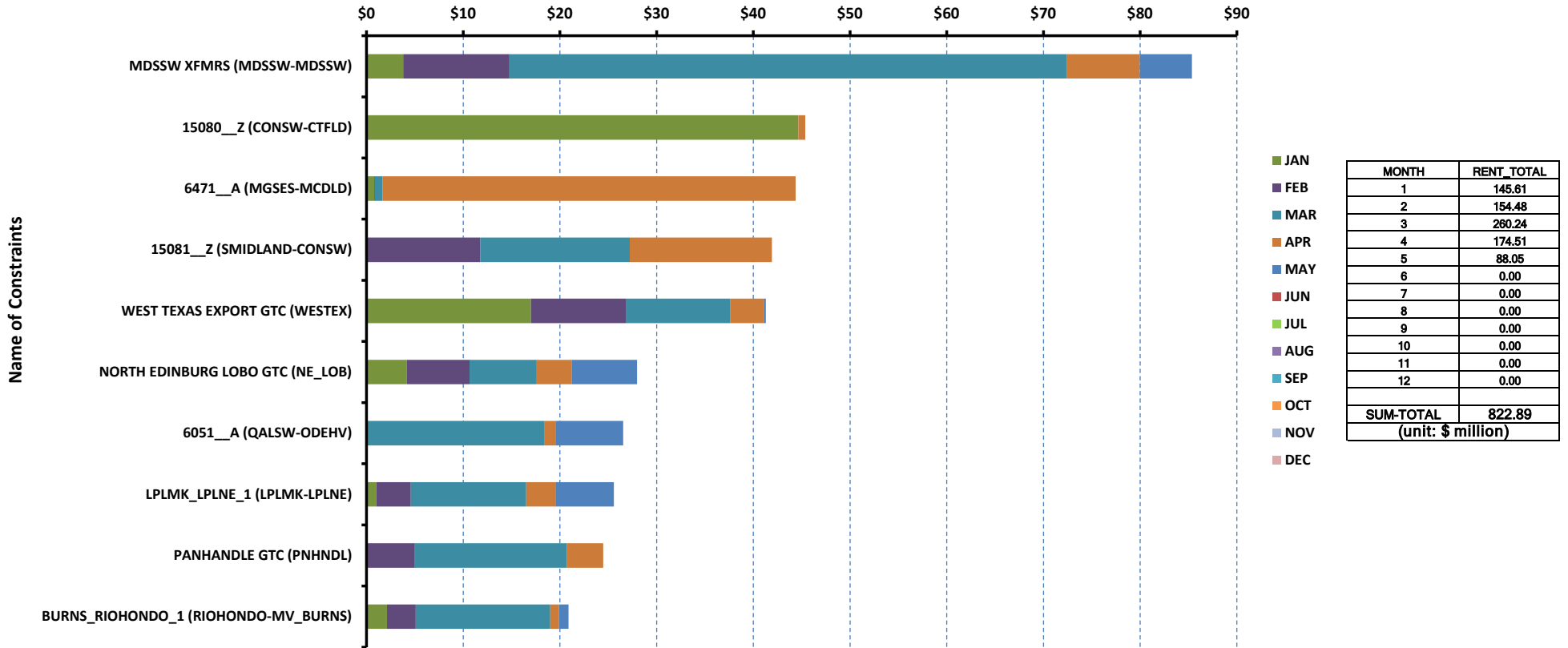
# Monthly Average of Solar Generation by Hour Ending



# RT Congestion Constraint Rankings - 1

## Top 10 Constraints by Total Congestion Value - 2023

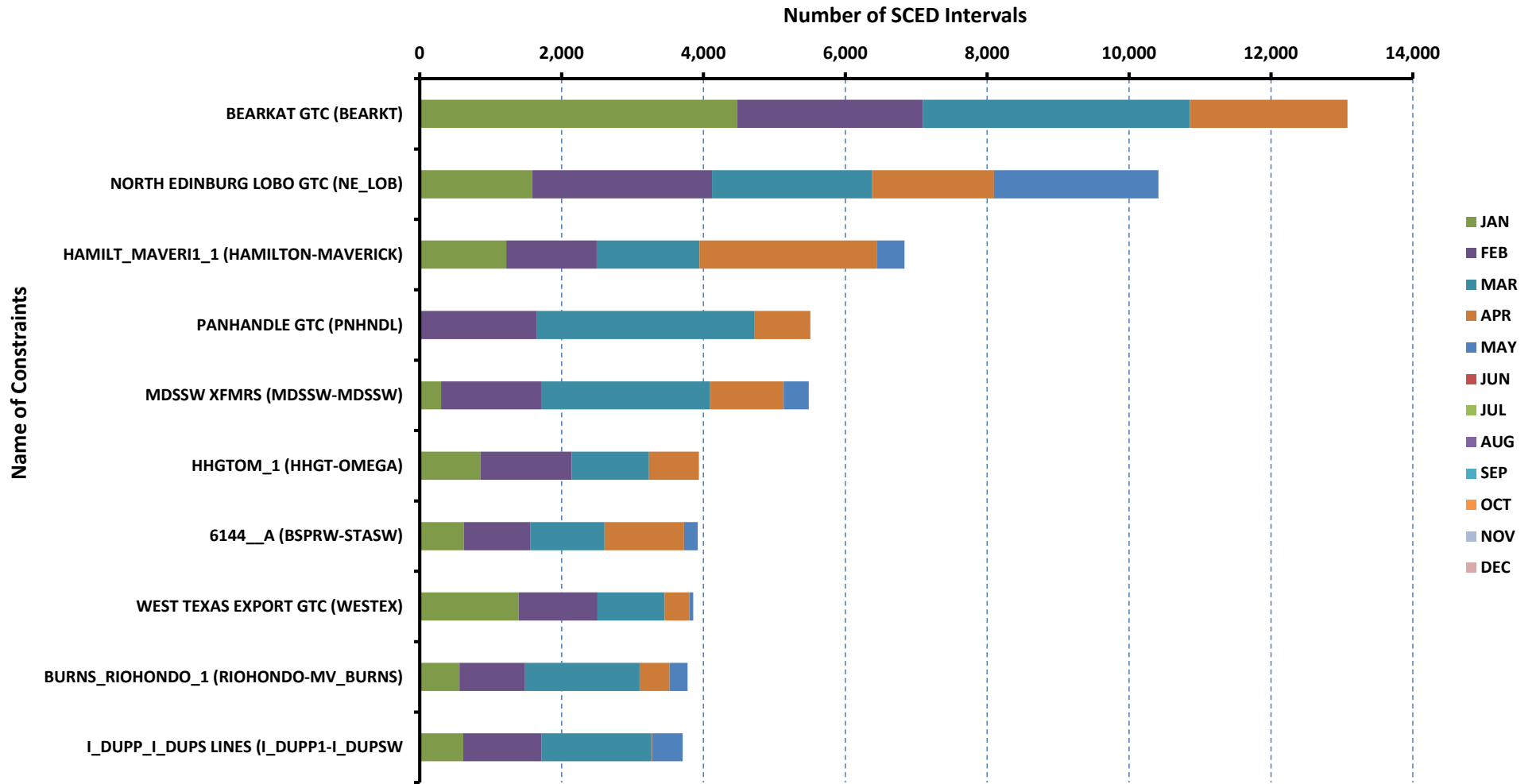
Congestion Rent in \$ million





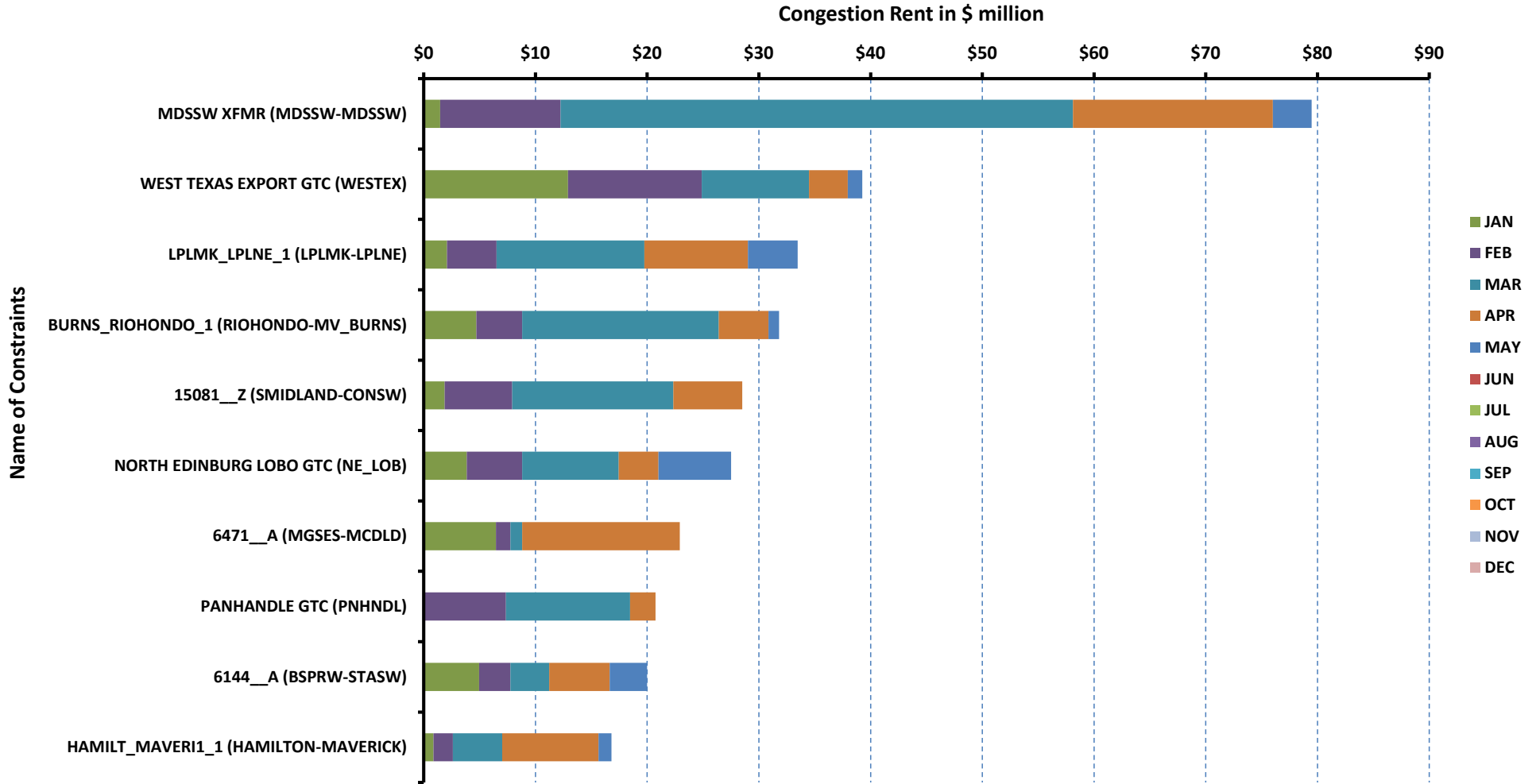
# RT Congestion Constraint Rankings - 2

## Top 10 Constraints by Binding Frequency - 2023



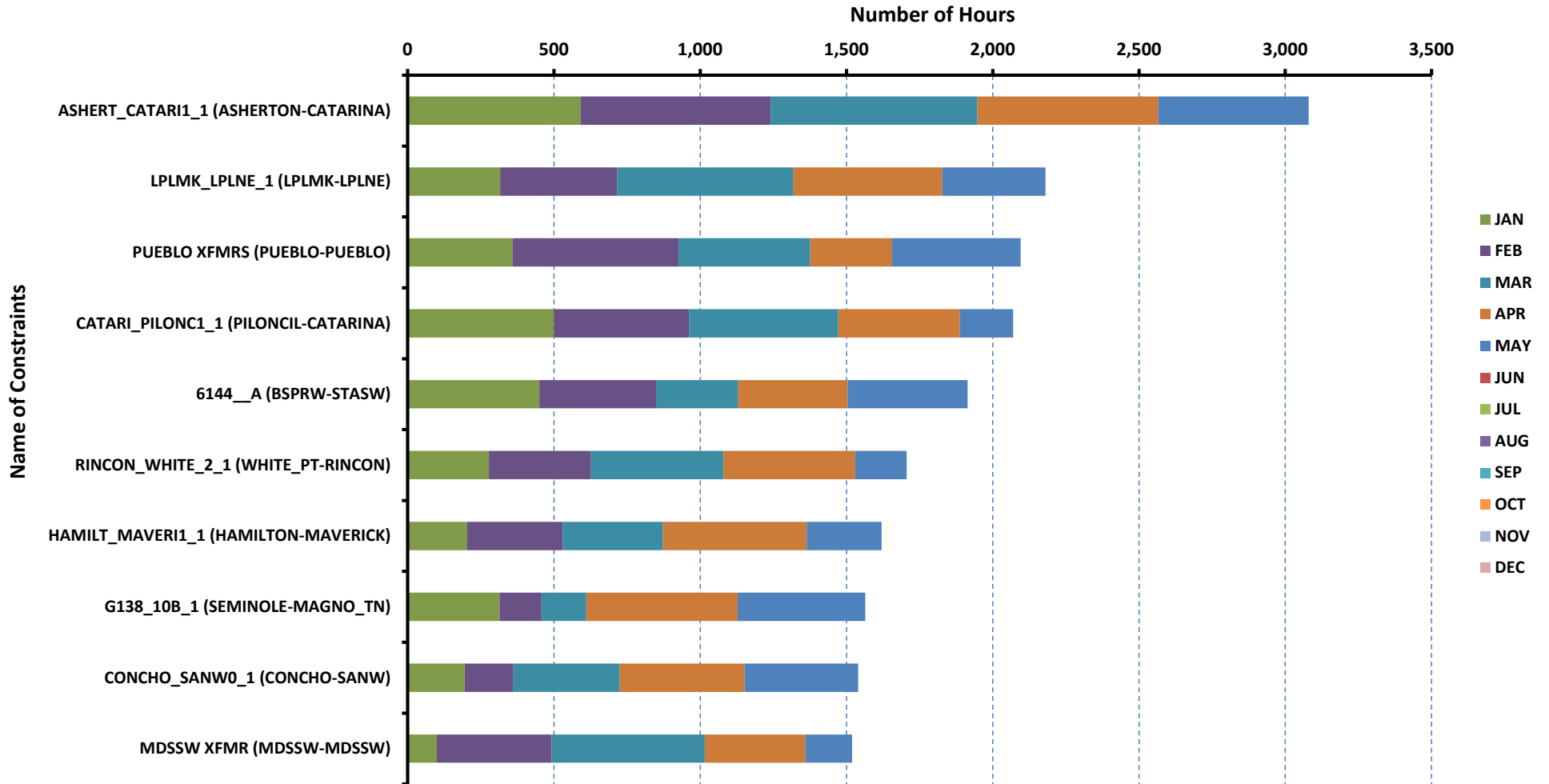
# DA Congestion Constraint Rankings - 1

## Top 10 Constraints by Total Congestion Value - 2023



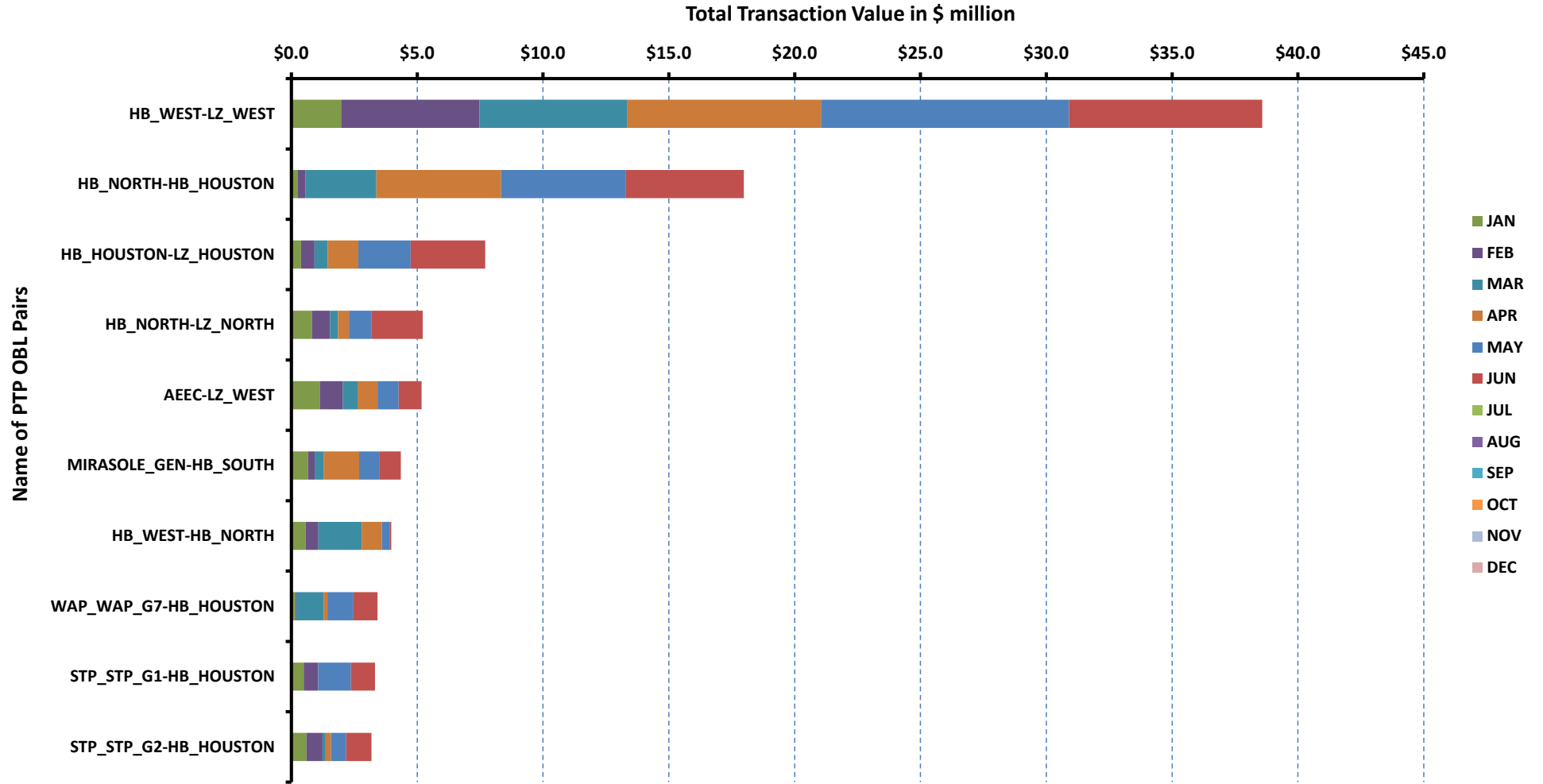
# DA Congestion Constraint Rankings - 2

## Top 10 Constraints by Binding Frequency - 2023



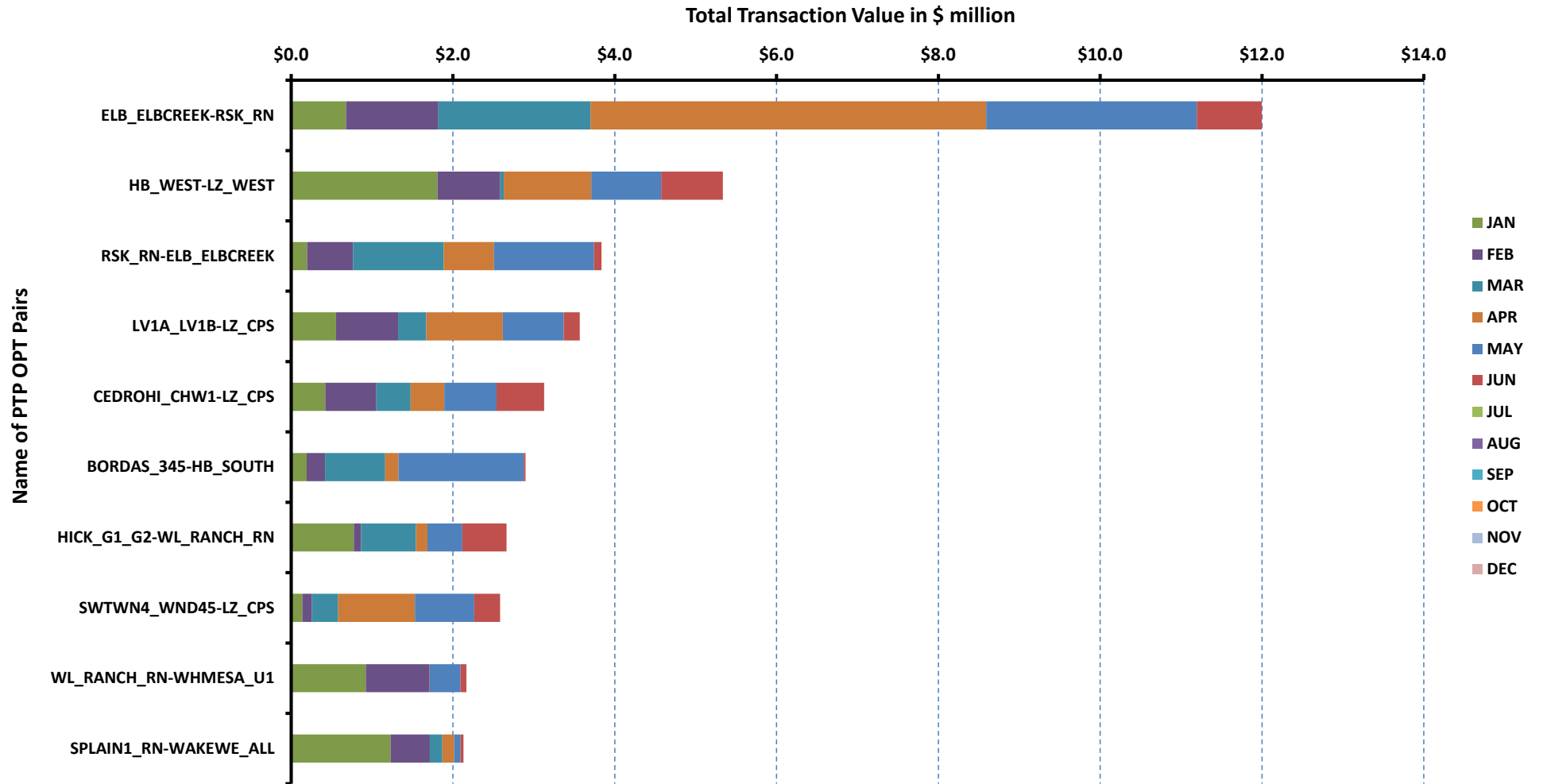
# Top 10 CRR Pairs Ranked by Monthly Auction Values - 1

## Top 10 PTP Obligations by Total Transaction Value - 2023



# Top 10 CRR Pairs Ranked by Monthly Auction Values - 2

## Top 10 PTP Options by Total Transaction Value - 2023



ERCOT-wide Avg. Energy Price - DA vs. RT			
year	month	dam_spp	rtm_spp
2022	1	\$ 34.35	\$ 31.53
	2	\$ 43.07	\$ 56.44
	3	\$ 40.77	\$ 36.50
	4	\$ 59.57	\$ 56.75
	5	\$ 100.33	\$ 105.11
	6	\$ 90.49	\$ 70.68
	7	\$ 136.65	\$ 164.42
	8	\$ 107.33	\$ 93.70
	9	\$ 74.55	\$ 67.90
	10	\$ 51.60	\$ 53.24
	11	\$ 46.66	\$ 43.59
	12	\$ 77.92	\$ 68.72
2023	1	\$ 28.03	\$ 26.70
	2	\$ 23.92	\$ 21.95
	3	\$ 29.85	\$ 31.20
	4	\$ 27.59	\$ 24.51
	5	\$ 32.08	\$ 32.49
	6	\$ -	\$ -
	7	\$ -	\$ -
	8	\$ -	\$ -
	9	\$ -	\$ -
	10	\$ -	\$ -
	11	\$ -	\$ -
	12	\$ -	\$ -







ERCOT-wide Monthly Implied Heat Rate - DA vs. RT						
year	month	gasprice	rtn_spp	HR_rtn	dam_spp	HR_dam
2022	1	\$ 4.01	\$ 31.53	7.86	\$ 34.35	8.56
	2	\$ 4.45	\$ 56.44	12.70	\$ 43.07	9.69
	3	\$ 4.53	\$ 36.50	8.06	\$ 40.77	9.00
	4	\$ 6.29	\$ 56.75	9.02	\$ 59.57	9.46
	5	\$ 7.83	\$ 105.11	13.43	\$ 100.33	12.81
	6	\$ 7.40	\$ 70.68	9.55	\$ 90.49	12.23
	7	\$ 6.78	\$ 164.42	24.24	\$ 136.65	20.15
	8	\$ 8.22	\$ 93.70	11.40	\$ 107.33	13.06
	9	\$ 7.03	\$ 67.90	9.66	\$ 74.55	10.61
	10	\$ 4.83	\$ 53.24	11.02	\$ 51.60	10.68
	11	\$ 4.16	\$ 43.59	10.49	\$ 46.66	11.23
	12	\$ 4.48	\$ 68.72	15.33	\$ 77.92	17.39
2023	1	\$ 2.65	\$ 26.70	10.08	\$ 28.03	10.58
	2	\$ 2.05	\$ 21.95	10.69	\$ 23.92	11.65
	3	\$ 2.08	\$ 31.20	15.00	\$ 29.85	14.35
	4	\$ 1.86	\$ 24.51	13.18	\$ 27.59	14.84
	5	\$ 1.96	\$ 32.49	16.60	\$ 32.08	16.39
	6	\$ -	\$ -	-	\$ -	-
	7	\$ -	\$ -	-	\$ -	-
	8	\$ -	\$ -	-	\$ -	-
	9	\$ -	\$ -	-	\$ -	-
	10	\$ -	\$ -	-	\$ -	-
	11	\$ -	\$ -	-	\$ -	-
	12	\$ -	\$ -	-	\$ -	-



Daily ORDC Adders Average Values and Interval Duration								
YEAR	MONTH	DAY	PRICE_RS	PRICE_RDP	RS_CNT	RDP_CNT	RS_POS	RDP_POS
2023	5	1	\$ 25.48	\$ 8.43	31	27	80	90
2023	5	2	\$ 2.44	\$ 0.57	34	8	80	90
2023	5	3	\$ 0.34	\$ -	28	0	80	90
2023	5	4	\$ 35.68	\$ 15.15	29	6	80	90
2023	5	5	\$ 0.32	\$ -	27	0	80	90
2023	5	6	\$ 0.03	\$ 2.29	4	48	80	90
2023	5	7	\$ -	\$ 0.46	0	91	80	90
2023	5	8	\$ 0.09	\$ 3.04	10	83	80	90
2023	5	9	\$ 0.09	\$ 0.59	11	84	80	90
2023	5	10	\$ 0.59	\$ 0.60	16	78	80	90
2023	5	11	\$ 67.27	\$ 6.14	20	63	80	90
2023	5	12	\$ 0.04	\$ 0.61	12	2	80	90
2023	5	13	\$ 2.32	\$ 13.22	12	13	80	90
2023	5	14	\$ 1.96	\$ -	12	0	80	90
2023	5	15	\$ 0.39	\$ -	13	0	80	90
2023	5	16	\$ 0.47	\$ -	22	0	80	90
2023	5	17	\$ 0.14	\$ -	15	0	80	90
2023	5	18	\$ 2.42	\$ 1.35	26	28	80	90
2023	5	19	\$ 0.54	\$ -	14	0	80	90
2023	5	20	\$ 3.51	\$ 6.49	32	33	80	90
2023	5	21	\$ 0.14	\$ 0.10	12	1	80	90
2023	5	22	\$ 0.09	\$ -	17	0	80	90
2023	5	23	\$ 4.55	\$ 2.86	34	33	80	90
2023	5	24	\$ 6.07	\$ 2.34	44	72	80	90
2023	5	25	\$ 2.31	\$ 0.63	34	73	80	90
2023	5	26	\$ 0.22	\$ 0.45	22	30	80	90
2023	5	27	\$ -	\$ -	0	0	80	90
2023	5	28	\$ -	\$ -	0	0	80	90
2023	5	29	\$ 3.80	\$ -	30	0	80	90
2023	5	30	\$ 0.40	\$ -	11	0	80	90
2023	5	31	\$ 1.44	\$ -	10	0	80	90

Monthly Average of Ancillary Services Required MW					
year	month	ASMW_REGDN	ASMW_NSPIN	ASMW_RRS	ASMW_REGUP
2022	1	325	3,867	2,926	346
	2	388	4,267	2,950	372
	3	387	3,782	3,070	395
	4	372	4,069	3,014	373
	5	397	4,551	2,893	399
	6	339	4,197	2,694	372
	7	321	3,750	2,564	343
	8	347	3,592	2,572	348
	9	355	3,414	2,712	343
	10	327	4,404	2,893	343
	11	307	3,287	3,045	327
	12	318	3,687	3,030	351
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	-	-	-	-
	7	-	-	-	-
	8	-	-	-	-
	9	-	-	-	-
	10	-	-	-	-
	11	-	-	-	-
	12	-	-	-	-

**Hourly Average of Ancillary Services Required MW**

year	DELIVERY_HOUR	ASMW_REGDN	ASMW_NSPIN	ASMW_RRS	ASMW_REGUP
2022	1	364	3,535	2,910	219
	2	284	3,535	2,910	197
	3	241	3,483	2,942	206
	4	209	3,483	2,943	241
	5	208	3,483	2,943	297
	6	269	3,483	2,943	412
	7	232	4,067	2,832	526
	8	274	4,068	2,832	354
	9	411	4,068	2,832	367
	10	415	4,068	2,832	453
	11	425	4,195	2,745	490
	12	372	4,198	2,745	499
	13	339	4,235	2,745	479
	14	345	4,236	2,745	450
	15	359	4,086	2,872	432
	16	368	4,086	2,872	446
	17	377	4,086	2,872	497
	18	375	4,086	2,872	505
	19	393	3,875	2,876	424
	20	359	3,875	2,876	319
	21	389	3,875	2,876	241
	22	451	3,873	2,876	201
	23	468	3,860	2,910	198
	24	429	3,860	2,910	170
2023	1	359	3,736	3,139	250
	2	279	3,736	3,139	223
	3	248	4,181	3,129	240
	4	230	4,179	3,130	275
	5	233	4,179	3,130	331
	6	328	4,179	3,130	473
	7	259	4,586	3,041	586
	8	427	4,586	3,041	376
	9	694	4,586	3,041	341
	10	566	4,586	3,041	462
	11	488	4,558	3,008	475
	12	473	4,558	3,008	468
	13	487	4,581	3,008	473
	14	427	4,581	3,008	481
	15	448	4,760	2,994	474
	16	461	4,760	2,994	510
	17	461	4,760	2,994	602
	18	418	4,760	2,994	729
	19	407	4,056	2,985	623
	20	348	4,056	2,985	482
	21	355	4,056	2,985	314
	22	411	4,056	2,985	243
	23	445	3,958	3,139	229
	24	425	3,958	3,139	207

Monthly Average Ancillary Services Price					
year	month	MCPC_REGDN	MCPC_NSPIN	MCPC_RRS	MCPC_REGUP
2022	1	\$ 6.15	\$ 5.07	\$ 8.39	\$ 11.56
	2	\$ 9.60	\$ 16.07	\$ 12.93	\$ 17.69
	3	\$ 17.94	\$ 12.43	\$ 18.67	\$ 22.69
	4	\$ 13.88	\$ 19.17	\$ 18.04	\$ 20.99
	5	\$ 18.03	\$ 51.85	\$ 31.29	\$ 38.71
	6	\$ 7.01	\$ 23.22	\$ 22.48	\$ 24.71
	7	\$ 9.52	\$ 54.81	\$ 61.26	\$ 72.27
	8	\$ 6.45	\$ 17.89	\$ 14.80	\$ 22.36
	9	\$ 6.93	\$ 9.67	\$ 7.32	\$ 12.85
	10	\$ 3.89	\$ 14.20	\$ 5.65	\$ 9.55
	11	\$ 3.63	\$ 9.58	\$ 4.19	\$ 8.53
	12	\$ 8.42	\$ 38.40	\$ 40.31	\$ 42.73
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	\$ -	\$ -	\$ -	\$ -
	7	\$ -	\$ -	\$ -	\$ -
	8	\$ -	\$ -	\$ -	\$ -
	9	\$ -	\$ -	\$ -	\$ -
	10	\$ -	\$ -	\$ -	\$ -
	11	\$ -	\$ -	\$ -	\$ -
	12	\$ -	\$ -	\$ -	\$ -

Monthly Average A/S Cost per MWh Load					
year	month	AScost_REGDN	AScost_NSPIIN	AScost_RRS	AScost_REGUP
2022	1	\$ 0.04	\$ 0.44	\$ 0.55	\$ 0.09
	2	\$ 0.08	\$ 1.47	\$ 0.82	\$ 0.14
	3	\$ 0.17	\$ 1.15	\$ 1.40	\$ 0.22
	4	\$ 0.12	\$ 1.82	\$ 1.27	\$ 0.18
	5	\$ 0.14	\$ 4.56	\$ 1.75	\$ 0.30
	6	\$ 0.04	\$ 1.67	\$ 1.04	\$ 0.16
	7	\$ 0.05	\$ 3.33	\$ 2.54	\$ 0.40
	8	\$ 0.04	\$ 1.11	\$ 0.66	\$ 0.13
	9	\$ 0.05	\$ 0.64	\$ 0.38	\$ 0.08
	10	\$ 0.03	\$ 1.45	\$ 0.38	\$ 0.08
	11	\$ 0.03	\$ 0.73	\$ 0.29	\$ 0.06
	12	\$ 0.06	\$ 3.12	\$ 2.69	\$ 0.33
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	\$ -	\$ -	\$ -	\$ -
	7	\$ -	\$ -	\$ -	\$ -
	8	\$ -	\$ -	\$ -	\$ -
	9	\$ -	\$ -	\$ -	\$ -
	10	\$ -	\$ -	\$ -	\$ -
	11	\$ -	\$ -	\$ -	\$ -
	12	\$ -	\$ -	\$ -	\$ -

ERCOT-wide Cumulative PNM			
year	month	pnm	pnm_accum
2022	0	\$ -	\$ -
	1	\$ 2,245.58	\$ 2,245.58
	2	\$ 14,589.18	\$ 16,834.76
	3	\$ 4,492.68	\$ 21,327.44
	4	\$ 7,843.68	\$ 29,171.12
	5	\$ 25,120.79	\$ 54,291.91
	6	\$ 4,444.47	\$ 58,736.38
	7	\$ 61,835.52	\$ 120,571.90
	8	\$ 12,243.51	\$ 132,815.41
	9	\$ 4,218.01	\$ 137,033.42
	10	\$ 7,195.67	\$ 144,229.09
	11	\$ 5,637.30	\$ 149,866.39
12	\$ 15,653.63	\$ 165,520.02	
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	\$ -	\$ -
	7	\$ -	\$ -
	8	\$ -	\$ -
	9	\$ -	\$ -
	10	\$ -	\$ -
	11	\$ -	\$ -
12	\$ -	\$ -	



DA vs. RT Load Forecast Error by Hour Ending							
year	month	HE_1_4	HE_13_16	HE_17_20	HE_21_24	HE_5_8	HE_9_12
2022	1	(408)	171	670	86	190	25
	2	(1,031)	155	689	(222)	(62)	442
	3	(897)	(126)	(168)	(643)	(588)	(395)
	4	(946)	302	(321)	(854)	(1,173)	(532)
	5	(1,877)	992	(191)	(1,445)	(1,812)	(395)
	6	(1,009)	1,448	1,149	(347)	(431)	530
	7	(532)	1,469	1,099	(137)	(403)	769
	8	(318)	1,551	1,167	279	(381)	650
	9	245	1,053	940	390	96	1,245
	10	245	1,496	331	247	368	1,351
	11	(204)	286	730	449	441	698
	12	(1,011)	428	278	(233)	(269)	229
2023	1	33	392	136	210	732	1,397
	2	(28)	1,497	1,206	666	1,005	1,480
	3	(484)	459	208	89	750	931
	4	(1,127)	362	252	(282)	(373)	534
	5	(909)	1,207	1,088	(363)	(998)	467
	6	-	-	-	-	-	-
	7	-	-	-	-	-	-
	8	-	-	-	-	-	-
	9	-	-	-	-	-	-
	10	-	-	-	-	-	-
	11	-	-	-	-	-	-
	12	-	-	-	-	-	-

Monthly Average of Wind Generation by Hour Ending							
year	month	HE_1_4	HE_13_16	HE_17_20	HE_21_24	HE_5_8	HE_9_12
2022	1	13,020	9,623	9,868	12,555	13,127	10,415
	2	14,195	10,245	11,028	13,744	13,920	11,206
	3	16,027	13,581	13,844	15,591	16,250	14,236
	4	17,675	15,266	15,674	16,702	16,996	16,211
	5	19,060	14,380	16,476	18,635	17,225	15,650
	6	16,762	10,737	13,012	15,837	13,740	11,588
	7	15,609	7,947	11,386	14,680	12,513	9,484
	8	10,766	6,175	8,856	10,584	8,506	6,596
	9	11,017	5,597	6,896	10,717	8,643	5,946
	10	11,993	8,206	9,091	11,943	10,646	8,245
	11	13,853	11,574	12,093	14,140	12,744	10,994
	12	12,260	10,846	10,713	12,593	12,069	11,133
2023	1	16,786	12,978	13,256	16,258	15,896	13,255
	2	15,935	14,322	15,239	17,307	15,026	13,552
	3	16,983	12,878	13,946	16,760	15,530	13,978
	4	16,756	12,031	13,207	16,187	15,018	12,761
	5	12,744	7,265	10,625	13,140	9,807	7,209
	6	-	-	-	-	-	-
	7	-	-	-	-	-	-
	8	-	-	-	-	-	-
	9	-	-	-	-	-	-
	10	-	-	-	-	-	-
	11	-	-	-	-	-	-
	12	-	-	-	-	-	-



RT Congestion Constraint Rankings - Top 10 Constraints by Binding Frequency and Top 10 Constraints by Total Congestion Rent																
CATEGORY	YEAR	CONSTRAINT	RANKVAR	RANK	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
FREQ_EXIST	2023	BEARKAT GTC (BEARKT)	13082	1	4477	2614	3765	2223	3	0	0	0	0	0	0	0
FREQ_EXIST	2023	NORTH EDINBURG LOBO GTC (NE_LOB)	10415	2	1585	2536	2252	1723	2319	0	0	0	0	0	0	0
FREQ_EXIST	2023	HAMILT MAVERI1_1 (HAMILTON-MAVERICK)	6833	3	1221	1273	1449	2499	391	0	0	0	0	0	0	0
FREQ_EXIST	2023	PANHANDLE GTC (PNHNDL)	5506	4	0	1653	3070	783	0	0	0	0	0	0	0	0
FREQ_EXIST	2023	MDSSW XFMR5 (MDSSW-MDSSW)	5484	5	300	1410	2377	1044	353	0	0	0	0	0	0	0
FREQ_EXIST	2023	HHGTOM_1 (HHGT-OMEGA)	3937	6	856	1285	1091	705	0	0	0	0	0	0	0	0
FREQ_EXIST	2023	6144_A (BSPRW-STASW)	3920	7	620	937	1048	1122	193	0	0	0	0	0	0	0
FREQ_EXIST	2023	WEST TEXAS EXPORT GTC (WESTEX)	3856	8	1395	1111	948	346	56	0	0	0	0	0	0	0
FREQ_EXIST	2023	BURNS RIOHONDO_1 (RIOHONDO-MV_BURNS)	3776	9	561	924	1614	422	255	0	0	0	0	0	0	0
FREQ_EXIST	2023	I_DUPP_I_DUPS_LINES (I_DUPP1-I_DUPSW)	3706	10	613	1100	1556	7	430	0	0	0	0	0	0	0
TOP10_RENT	2023	MDSSW XFMR5 (MDSSW-MDSSW)	\$ 85.35	1	\$ 3.79	\$ 10.99	\$ 57.66	\$ 7.53	\$ 5.98	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOP10_RENT	2023	15080_Z (CONSW-CTFLD)	\$ 45.36	2	\$ 44.65	\$ -	\$ -	\$ 0.71	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOP10_RENT	2023	6471_A (MGSES-MCDLD)	\$ 44.38	3	\$ 0.81	\$ 0.06	\$ 0.77	\$ 42.74	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOP10_RENT	2023	15081_Z (SMIDLAND-CONSW)	\$ 41.93	4	\$ 0.06	\$ 11.73	\$ 15.44	\$ 14.71	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOP10_RENT	2023	WEST TEXAS EXPORT GTC (WESTEX)	\$ 41.30	5	\$ 17.01	\$ 9.87	\$ 10.76	\$ 3.44	\$ 0.21	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOP10_RENT	2023	NORTH EDINBURG LOBO GTC (NE_LOB)	\$ 27.98	6	\$ 4.19	\$ 6.47	\$ 6.94	\$ 3.60	\$ 6.77	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOP10_RENT	2023	6051_A (QALSW-ODEHV)	\$ 26.55	7	\$ -	\$ 0.06	\$ 18.35	\$ 1.18	\$ 6.95	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOP10_RENT	2023	LPLMK_LPLNE_1 (LPLMK-LPLNE)	\$ 25.59	8	\$ 1.01	\$ 3.58	\$ 11.92	\$ 3.08	\$ 5.99	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOP10_RENT	2023	PANHANDLE GTC (PNHNDL)	\$ 24.48	9	\$ -	\$ 5.01	\$ 15.72	\$ 3.75	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOP10_RENT	2023	BURNS RIOHONDO_1 (RIOHONDO-MV_BURNS)	\$ 20.89	10	\$ 2.12	\$ 2.98	\$ 13.91	\$ 0.90	\$ 0.99	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

MONTH	RENT_TOTAL
1	145.61
2	154.48
3	260.24
4	174.51
5	88.05
6	0.00
7	0.00
8	0.00
9	0.00
10	0.00
11	0.00
12	0.00
Sum-Total	822.89



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																
ft_option	year	pair	total_value	rank	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
N	2023	HB WEST-LZ WEST	\$ 38.58	1	\$ 1.97	\$ 5.50	\$ 5.86	\$ 7.71	\$ 9.85	\$ 7.68	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
N	2023	HB NORTH-HB HOUSTON	\$ 17.98	2	\$ 0.24	\$ 0.31	\$ 2.82	\$ 4.96	\$ 4.97	\$ 4.68	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
N	2023	HB HOUSTON-LZ HOUSTON	\$ 7.70	3	\$ 0.38	\$ 0.54	\$ 0.52	\$ 1.22	\$ 2.07	\$ 2.97	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
N	2023	HB NORTH-LZ NORTH	\$ 5.22	4	\$ 0.81	\$ 0.73	\$ 0.31	\$ 0.44	\$ 0.89	\$ 2.05	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
N	2023	AEEC-LZ WEST	\$ 5.17	5	\$ 1.13	\$ 0.91	\$ 0.59	\$ 0.79	\$ 0.84	\$ 0.91	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
N	2023	MIRASOLE_GEN-HB_SOUTH	\$ 4.34	6	\$ 0.66	\$ 0.26	\$ 0.37	\$ 1.40	\$ 0.82	\$ 0.83	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
N	2023	HB WEST-HB NORTH	\$ 3.97	7	\$ 0.56	\$ 0.51	\$ 1.73	\$ 0.80	\$ 0.30	\$ 0.07	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
N	2023	WAP_WAP_G7-HB_HOUSTON	\$ 3.42	8	\$ 0.16	\$ 0.04	\$ 1.09	\$ 0.14	\$ 1.04	\$ 0.96	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
N	2023	STP_STP_G1-HB_HOUSTON	\$ 3.32	9	\$ 0.49	\$ 0.58	\$ 0.00	\$ -	\$ 1.30	\$ 0.95	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
N	2023	STP_STP_G2-HB_HOUSTON	\$ 3.18	10	\$ 0.60	\$ 0.64	\$ 0.13	\$ 0.20	\$ 0.61	\$ 1.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Y	2023	ELB_ELBCREEK-RSK RN	\$ 12.00	1	\$ 0.68	\$ 1.14	\$ 1.88	\$ 4.89	\$ 2.60	\$ 0.80	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Y	2023	HB WEST-LZ WEST	\$ 5.34	2	\$ 1.81	\$ 0.78	\$ 0.04	\$ 1.08	\$ 0.86	\$ 0.76	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Y	2023	RSK RN-ELB_ELBCREEK	\$ 3.84	3	\$ 0.20	\$ 0.57	\$ 1.12	\$ 0.62	\$ 1.24	\$ 0.09	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Y	2023	LV1A_LV1B-LZ CPS	\$ 3.57	4	\$ 0.55	\$ 0.77	\$ 0.35	\$ 0.95	\$ 0.75	\$ 0.20	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Y	2023	CEDROHI_CHW1-LZ CPS	\$ 3.13	5	\$ 0.42	\$ 0.63	\$ 0.43	\$ 0.42	\$ 0.64	\$ 0.59	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Y	2023	BORDAS_345-HB_SOUTH	\$ 2.90	6	\$ 0.19	\$ 0.23	\$ 0.74	\$ 0.16	\$ 1.55	\$ 0.02	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Y	2023	HICK_G1_G2-WL_RANCH RN	\$ 2.66	7	\$ 0.77	\$ 0.09	\$ 0.68	\$ 0.14	\$ 0.43	\$ 0.55	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Y	2023	SWTWN4_WND45-LZ CPS	\$ 2.58	8	\$ 0.14	\$ 0.12	\$ 0.33	\$ 0.95	\$ 0.73	\$ 0.32	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Y	2023	WL_RANCH RN-WHMESA_U1	\$ 2.17	9	\$ 0.92	\$ 0.79	\$ -	\$ 0.00	\$ 0.38	\$ 0.07	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Y	2023	SPLAIN1_RN-WAKEWE_ALL	\$ 2.13	10	\$ 1.23	\$ 0.48	\$ 0.15	\$ 0.15	\$ 0.08	\$ 0.04	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -