

To the Public Utility Commission of Texas

# ERCOT Wholesale Electricity Market Monthly Report

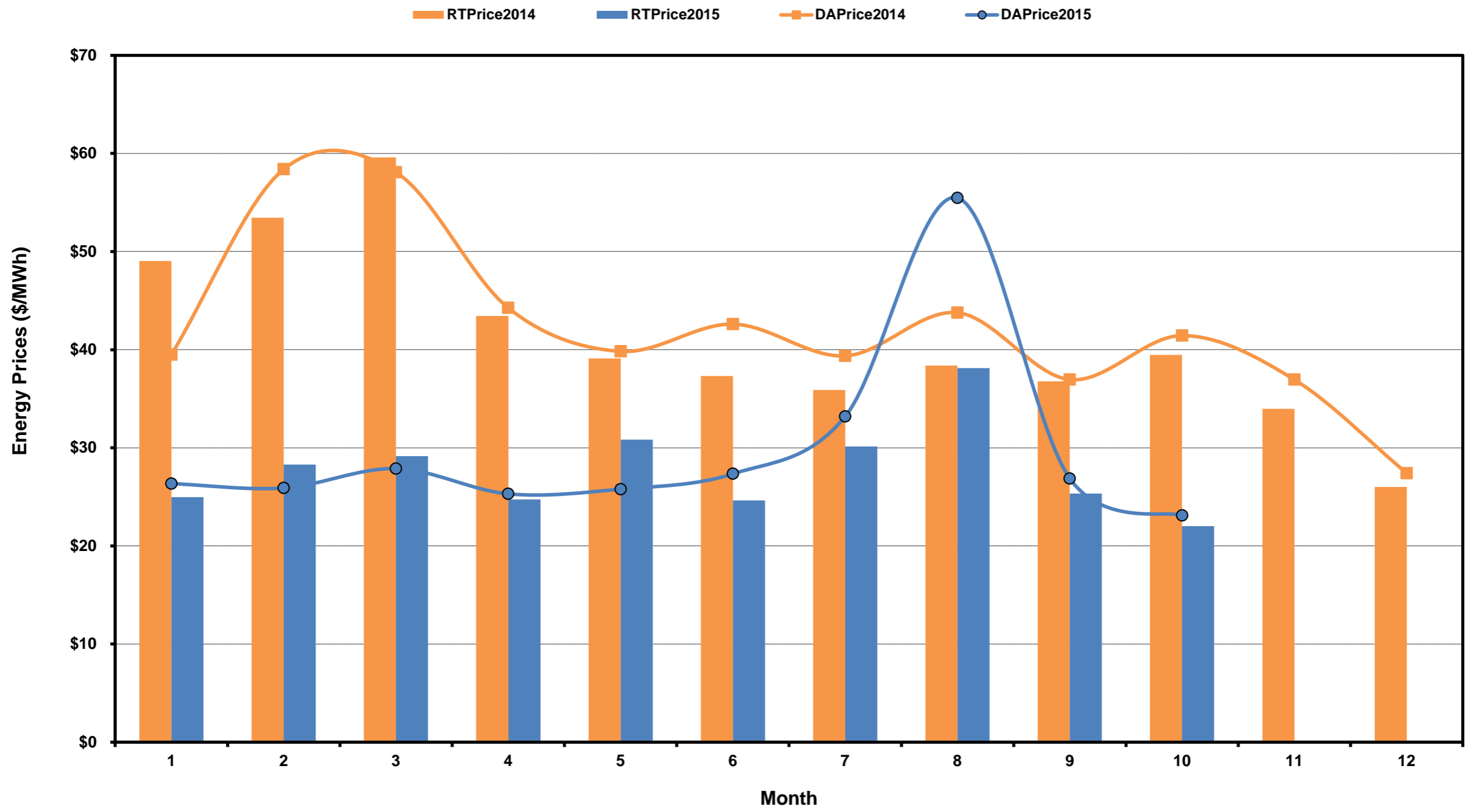
Tuesday, November 17, 2015

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)

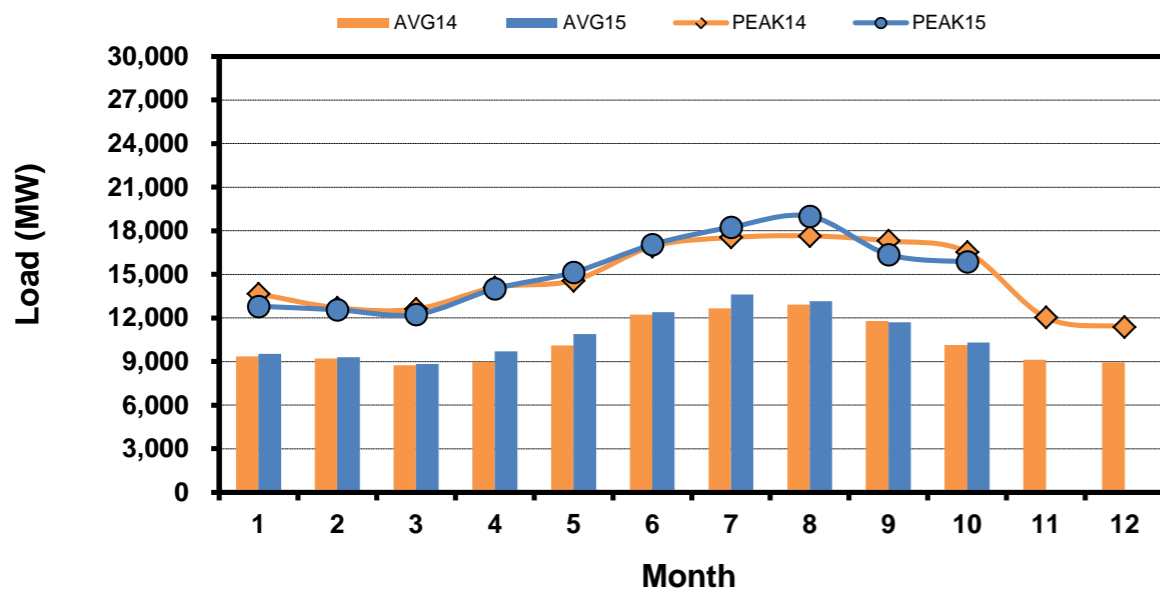


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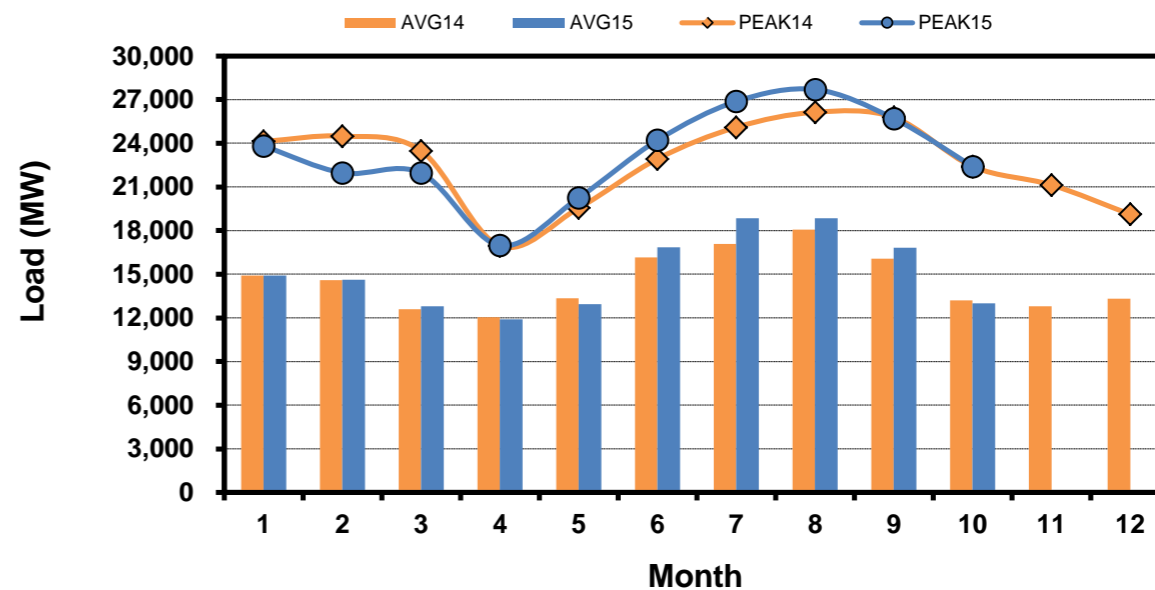
# Load Zone Load Statistics

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

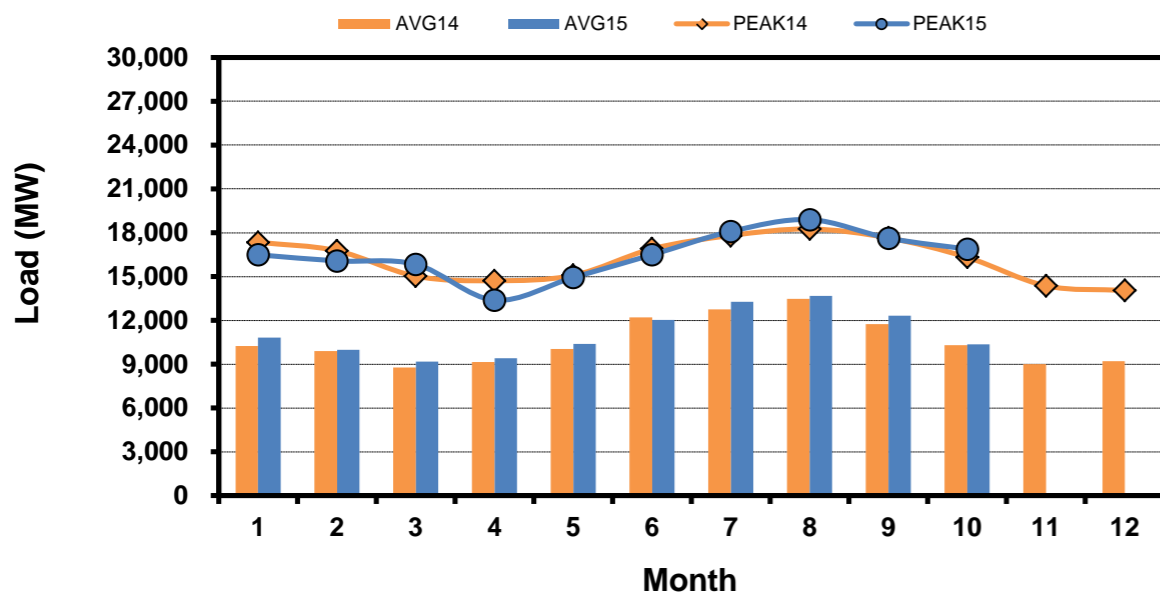
## Houston Zone



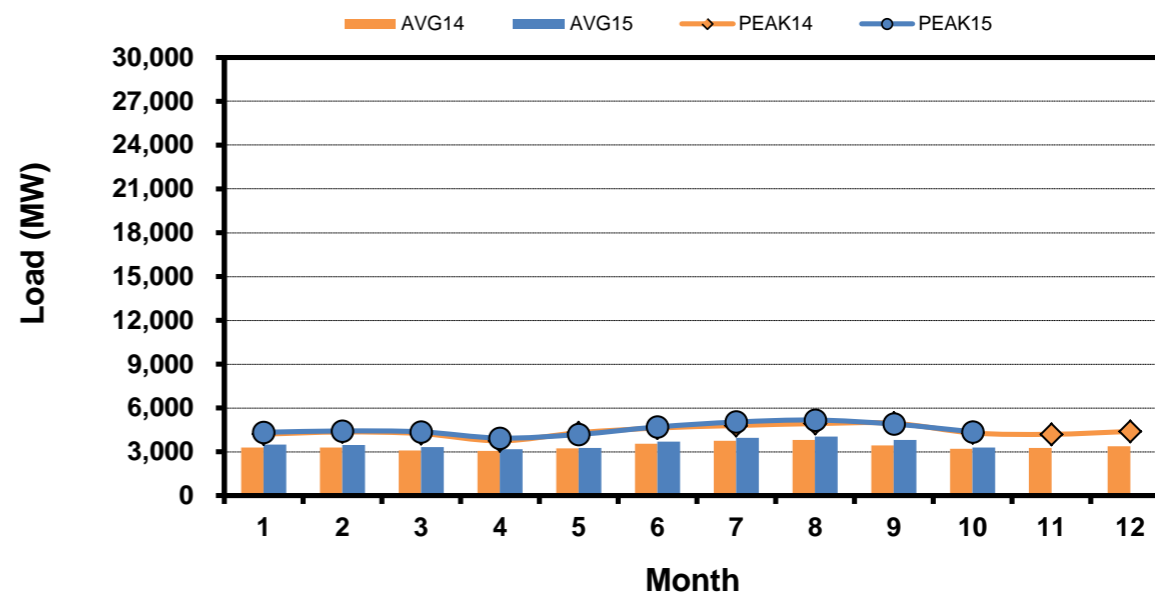
## North Zone



## South Zone



## West Zone



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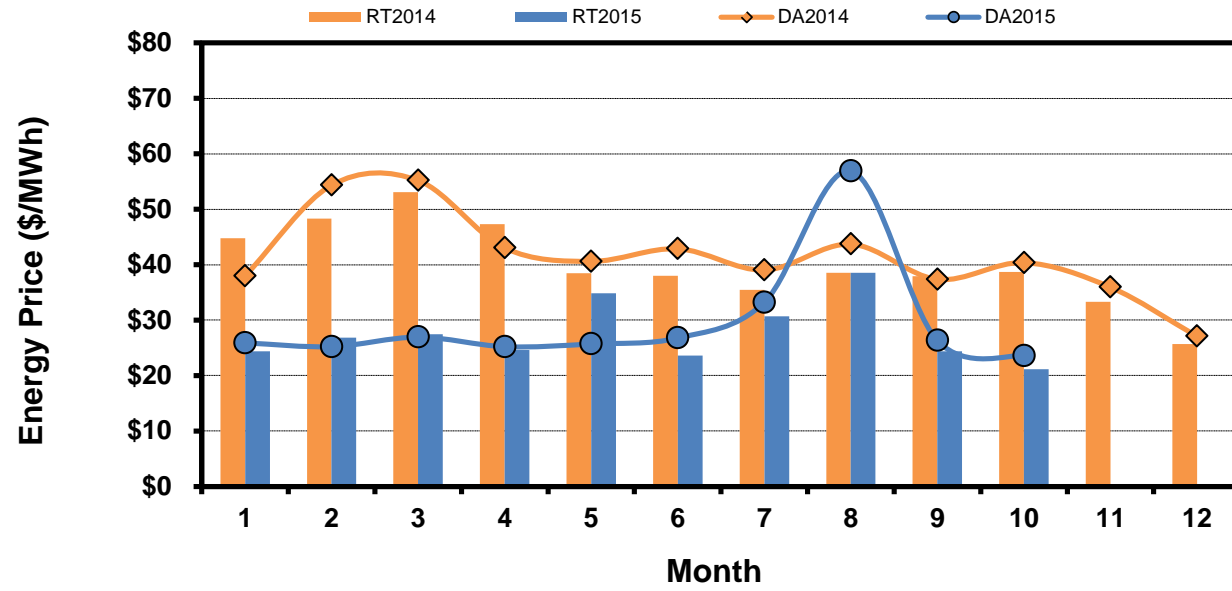
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**Note:** \* Zonal load zone definition vs. Nodal comparable load zone definition: LZ\_Houston=LZ\_Houston; LZ\_West=LZ\_West; LZ\_North=(LZ\_North,LZ\_RAYBN); LZ\_South=(LZ\_South,LZ\_CPS,LZ\_AEN,LZ\_LCRA)

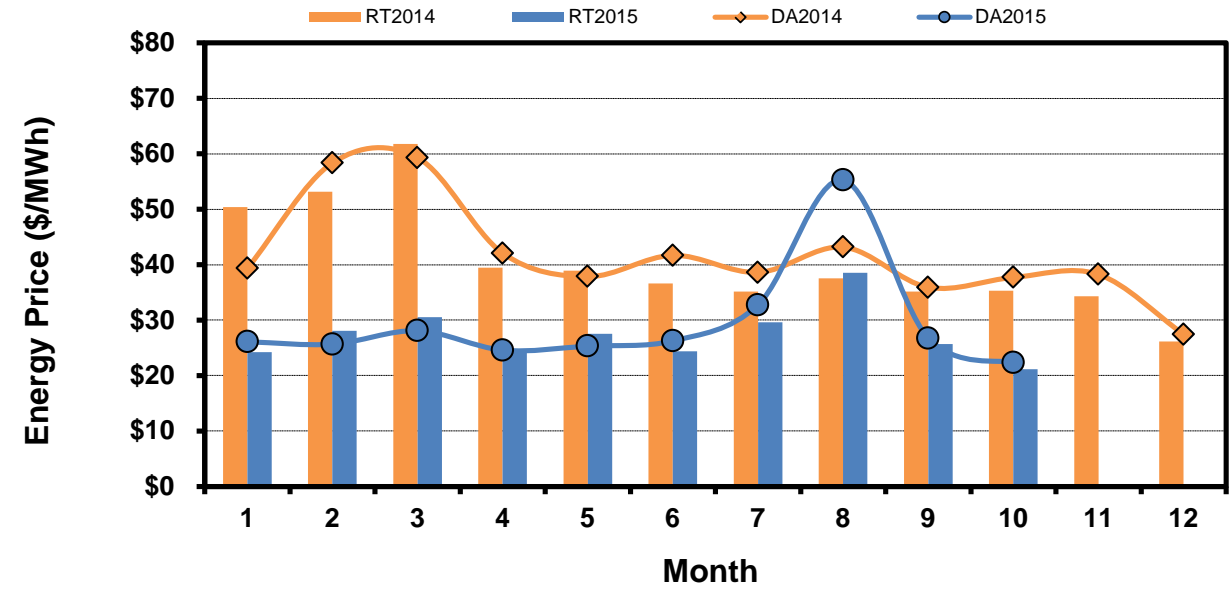
# Load Zone Monthly Average Energy Price DA vs RT

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

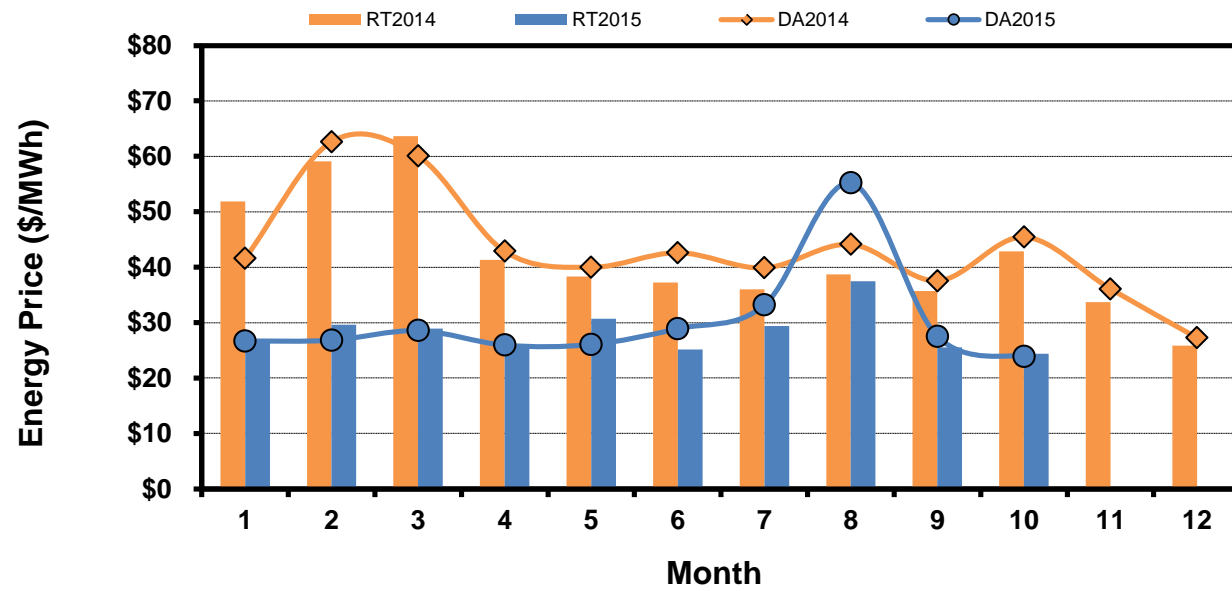
## Houston Zone



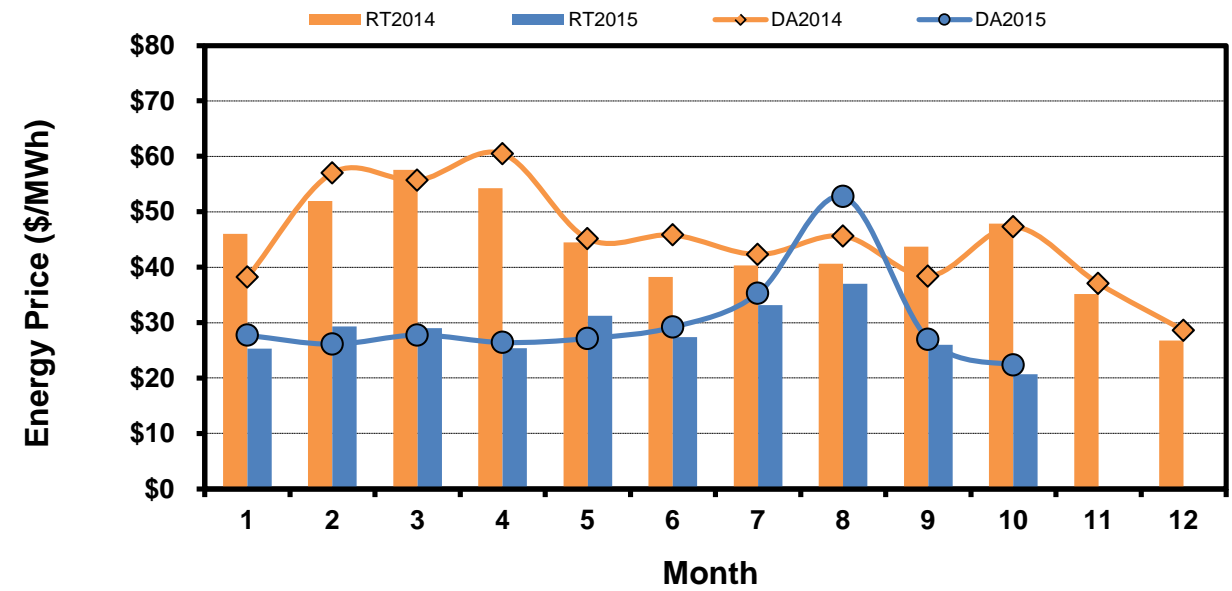
## North Zone



## South Zone



## West Zone



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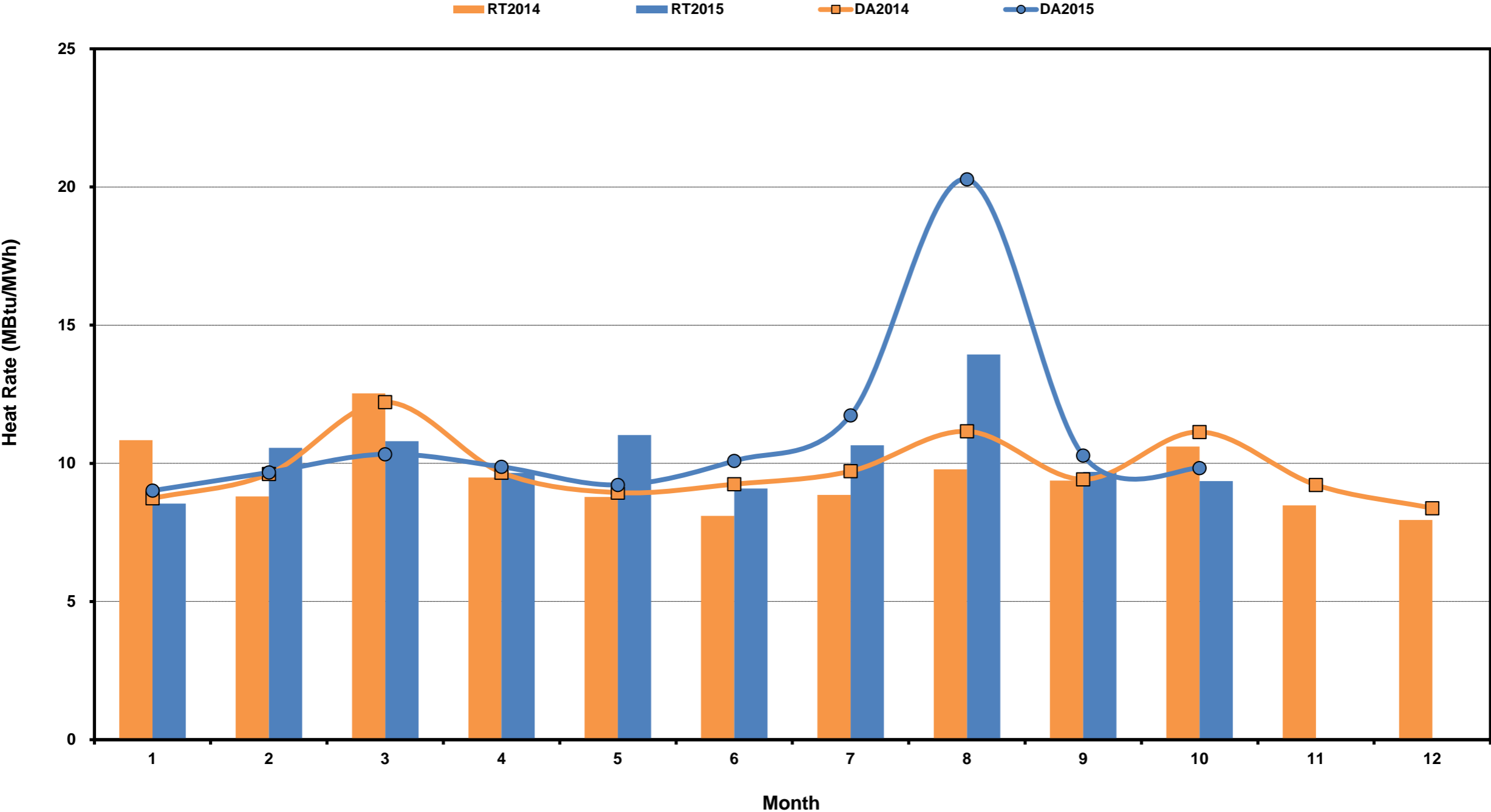
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**Note:** \* Zonal load zone definition vs. Nodal comparable load zone definition: LZ\_Houston=LZ\_Houston; LZ\_West=LZ\_West; LZ\_North=(LZ\_North,LZ\_RAYBN); LZ\_South=(LZ\_South,LZ\_CPS,LZ\_AEN,LZ\_LCRA)

# ERCOT-Wide Monthly Implied Heat Rate DA vs RT

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



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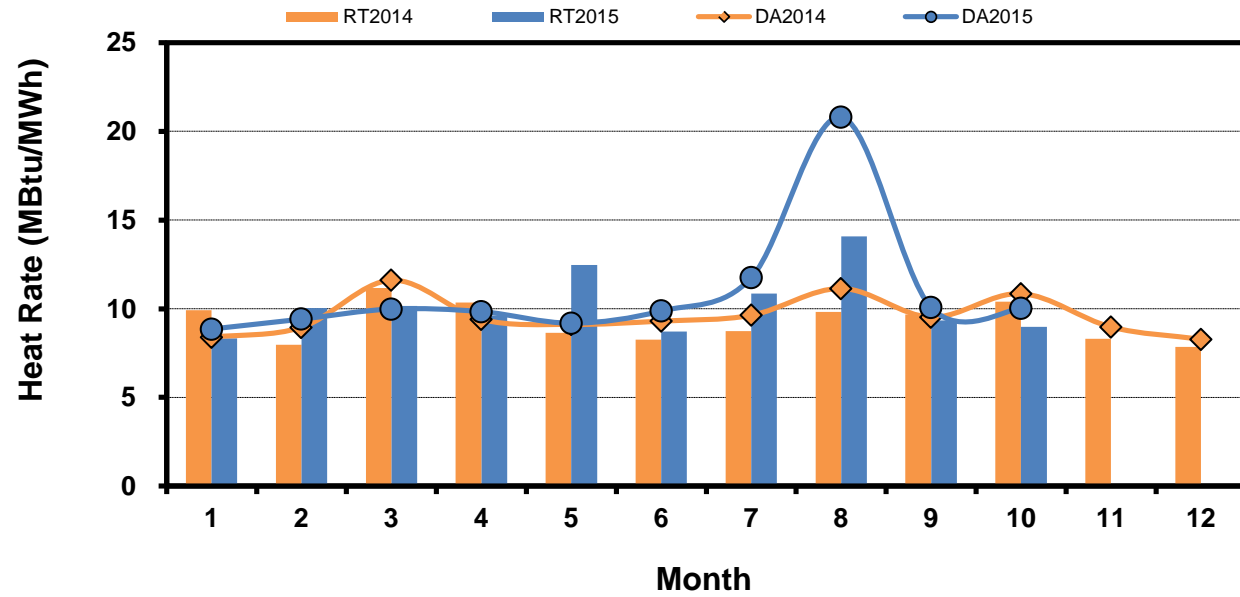
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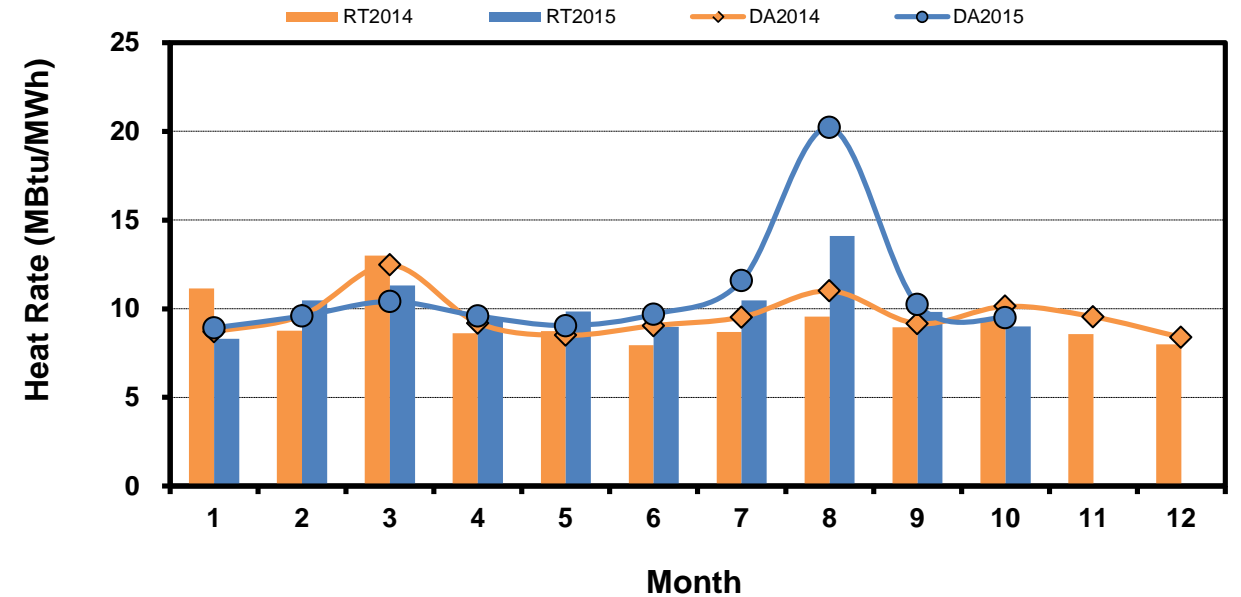
# Load Zone Monthly Implied Heat Rate DA vs RT

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

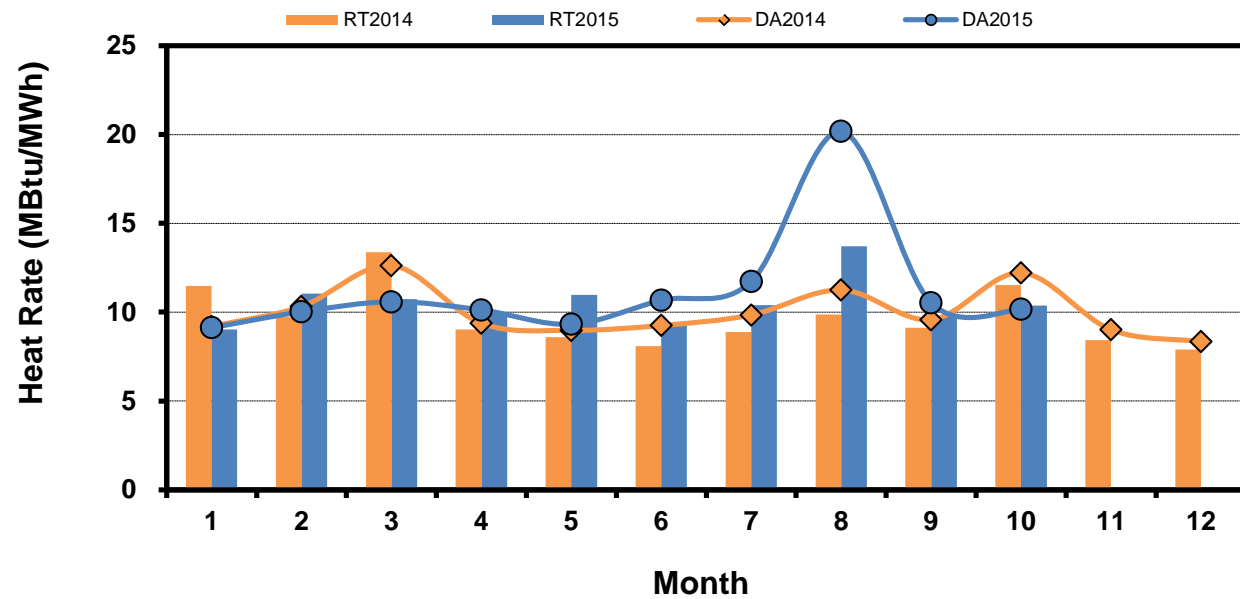
## Houston Zone



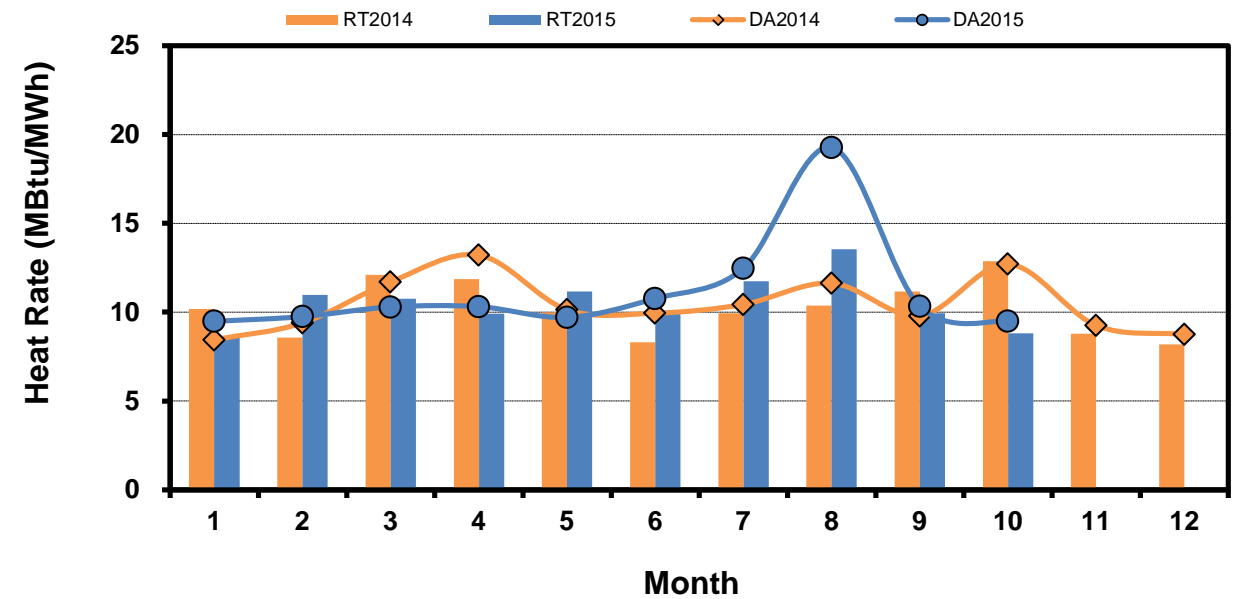
## North Zone



## South Zone



## West Zone



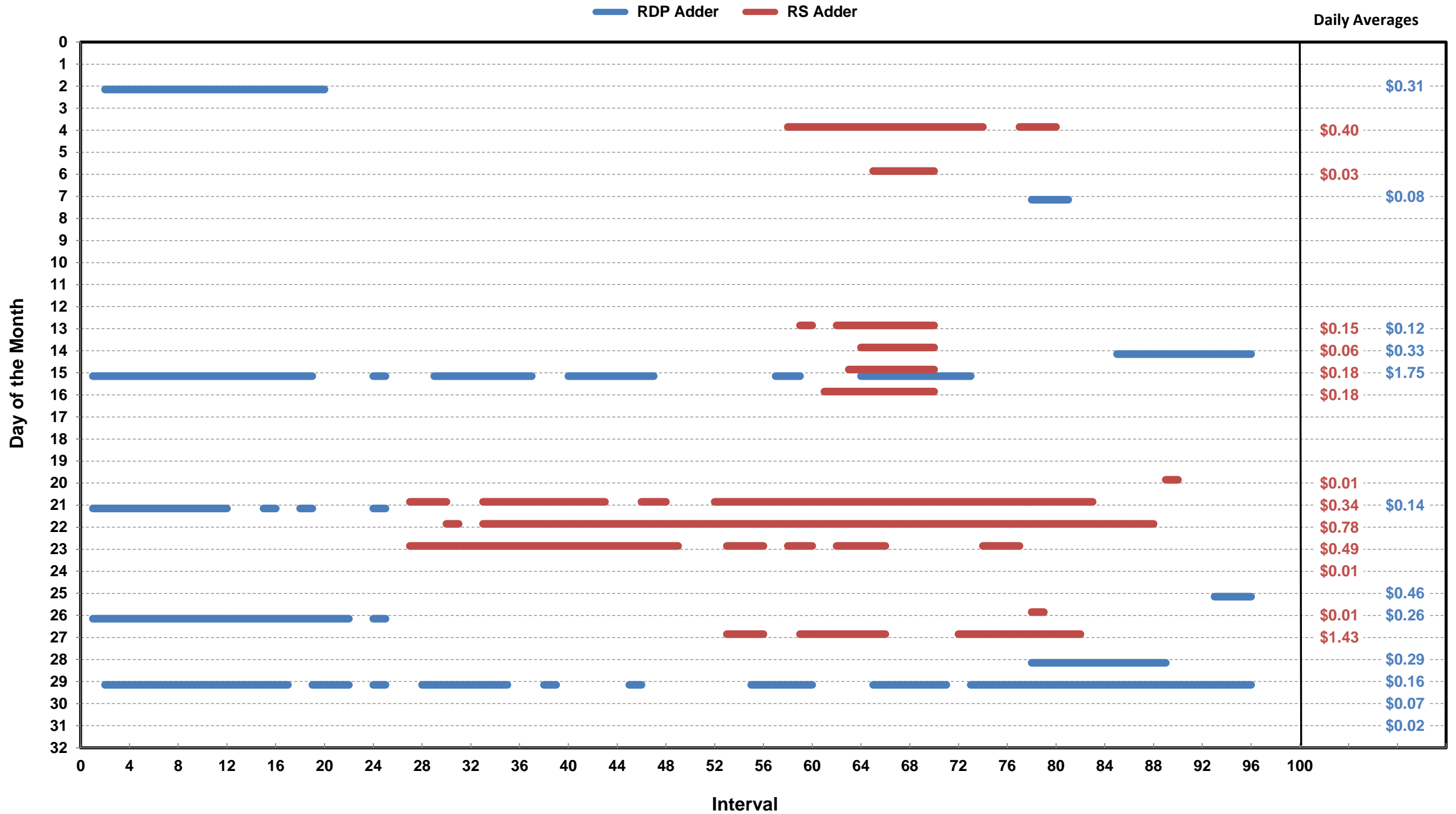
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**Note:** \* Zonal load zone definition vs. Nodal comparable load zone definition: LZ\_Houston=LZ\_Houston; LZ\_West=LZ\_West; LZ\_North=(LZ\_North,LZ\_RAYBN); LZ\_South=(LZ\_South,LZ\_CPS,LZ\_AEN,LZ\_LCRA)

# Daily ORDC Adders Average Values and Interval Duration Oct-2015



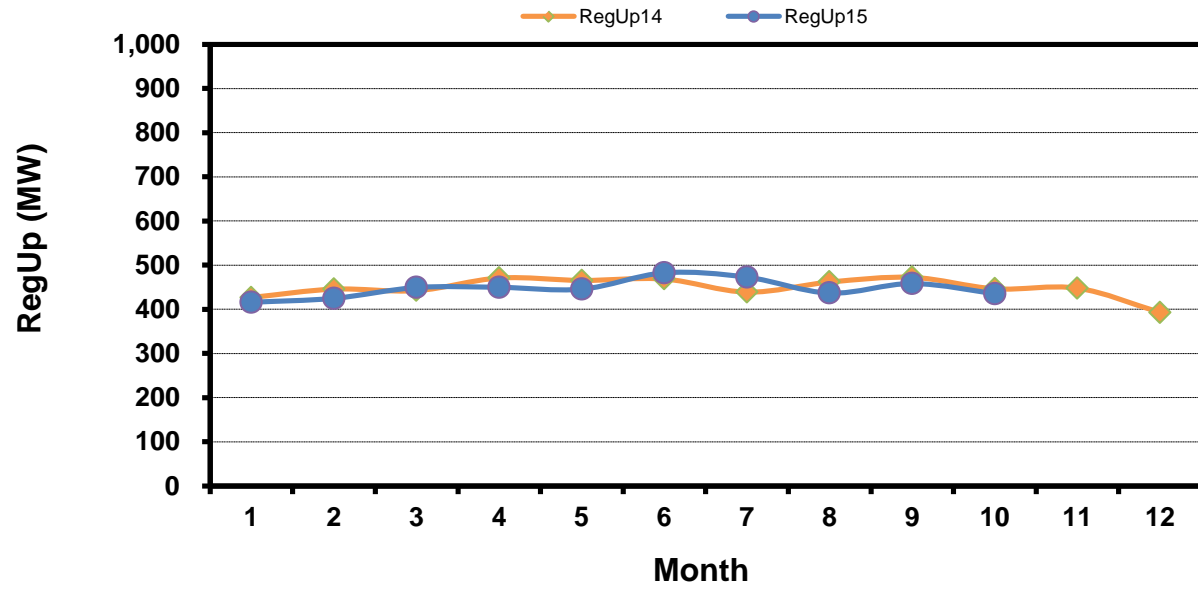
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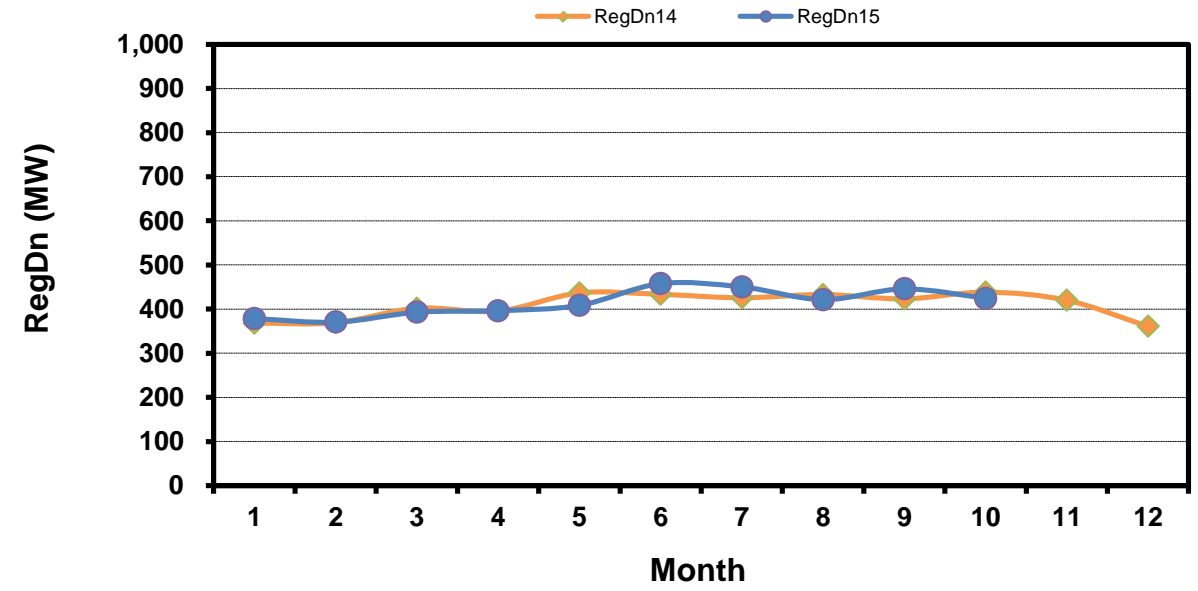
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# Monthly Average of Ancillary Services Required MW

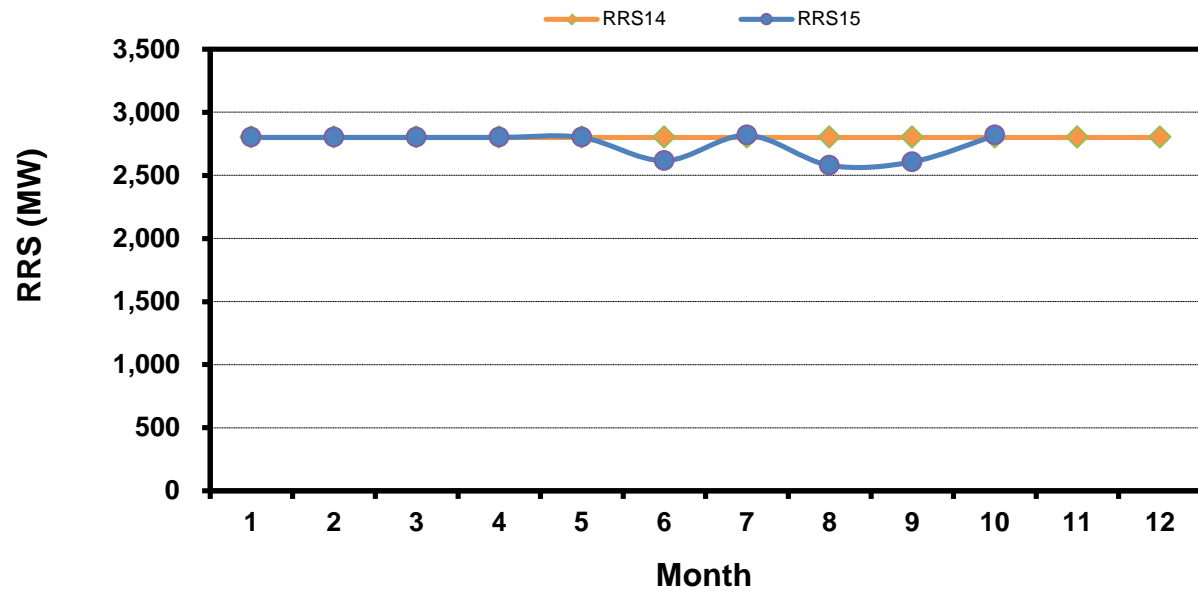
## Regulation Up



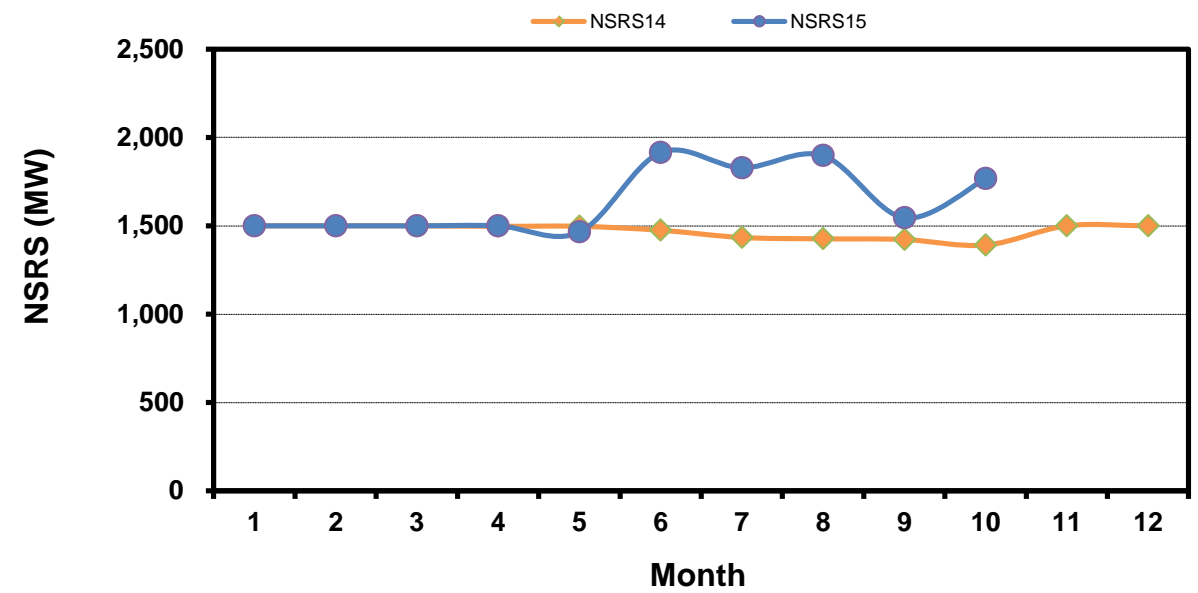
## Regulation Down



## Responsive Reserve



## Non-Spin Reserve



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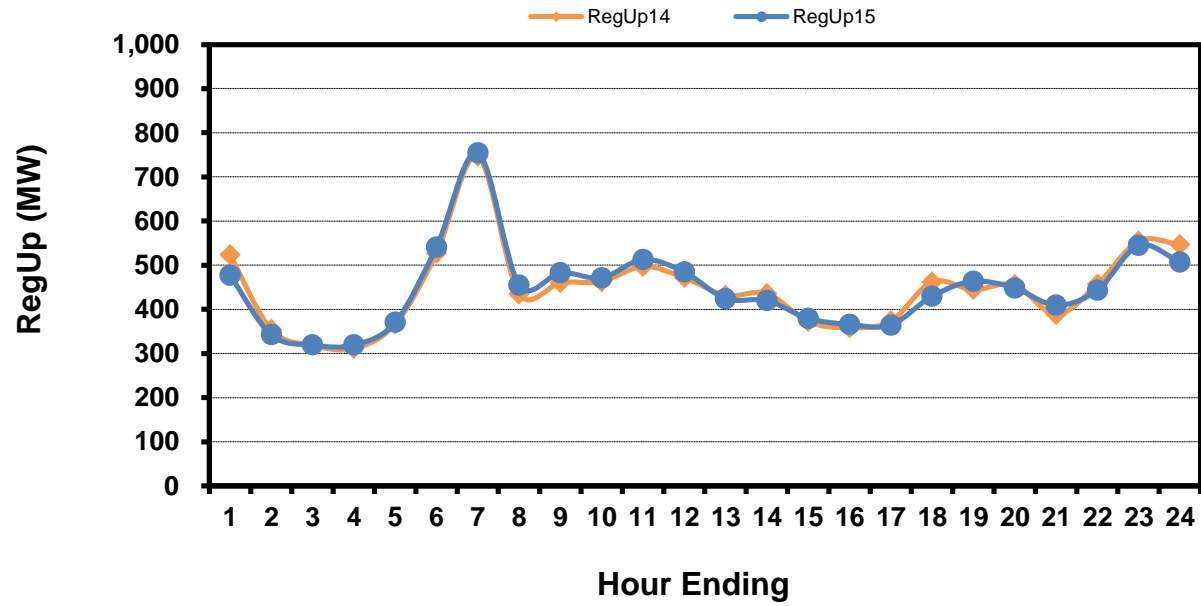
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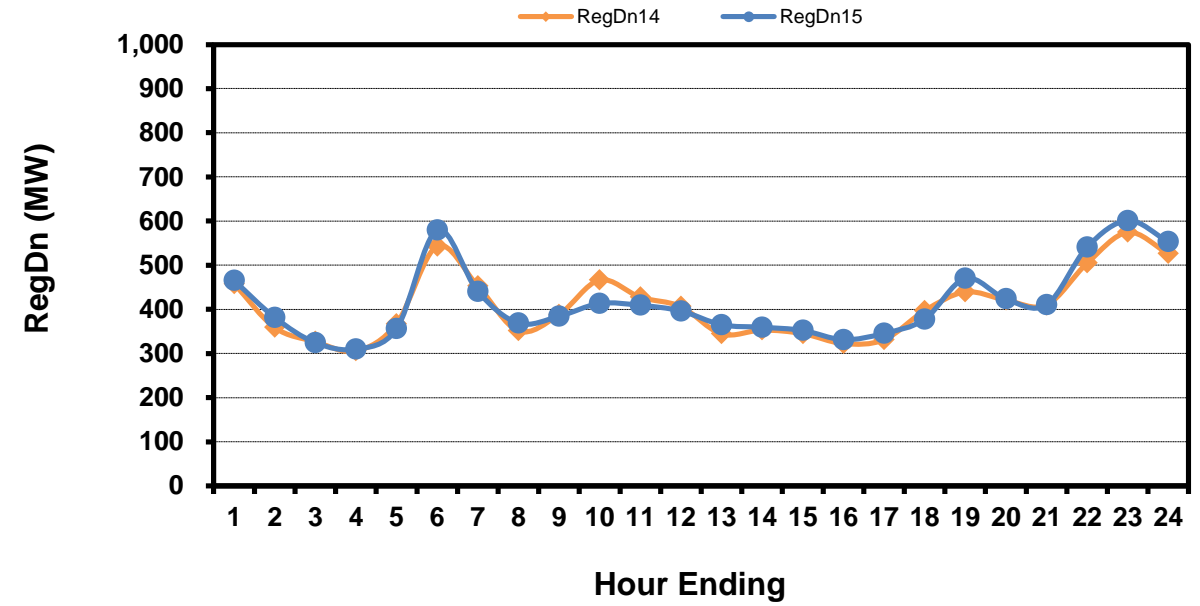


# Hourly Average of Ancillary Services Required MW

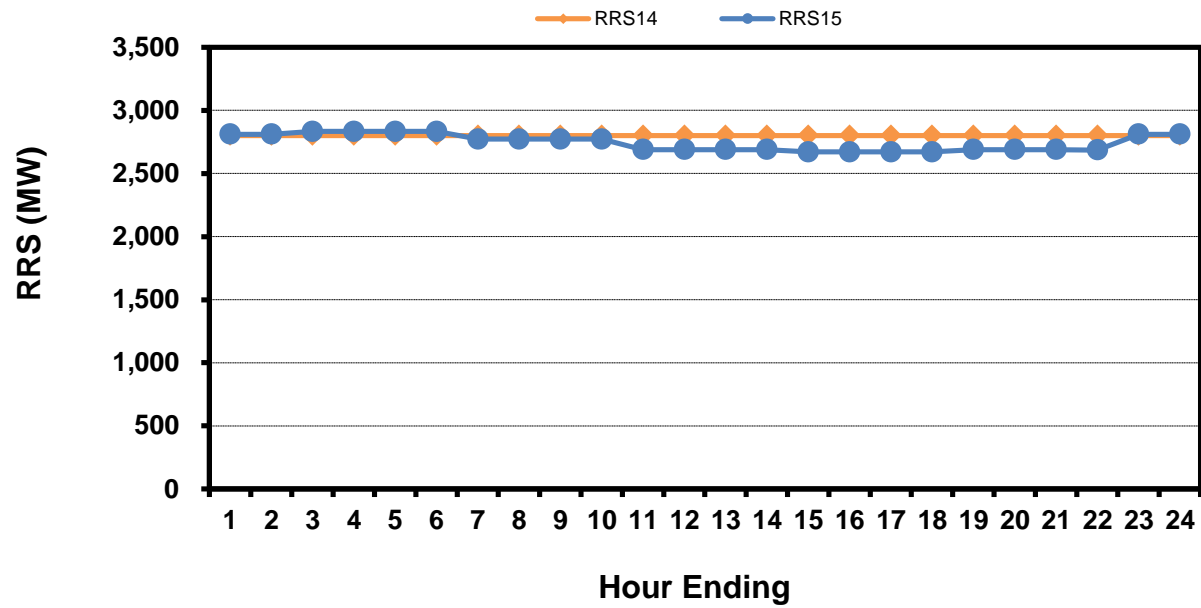
## Regulation Up



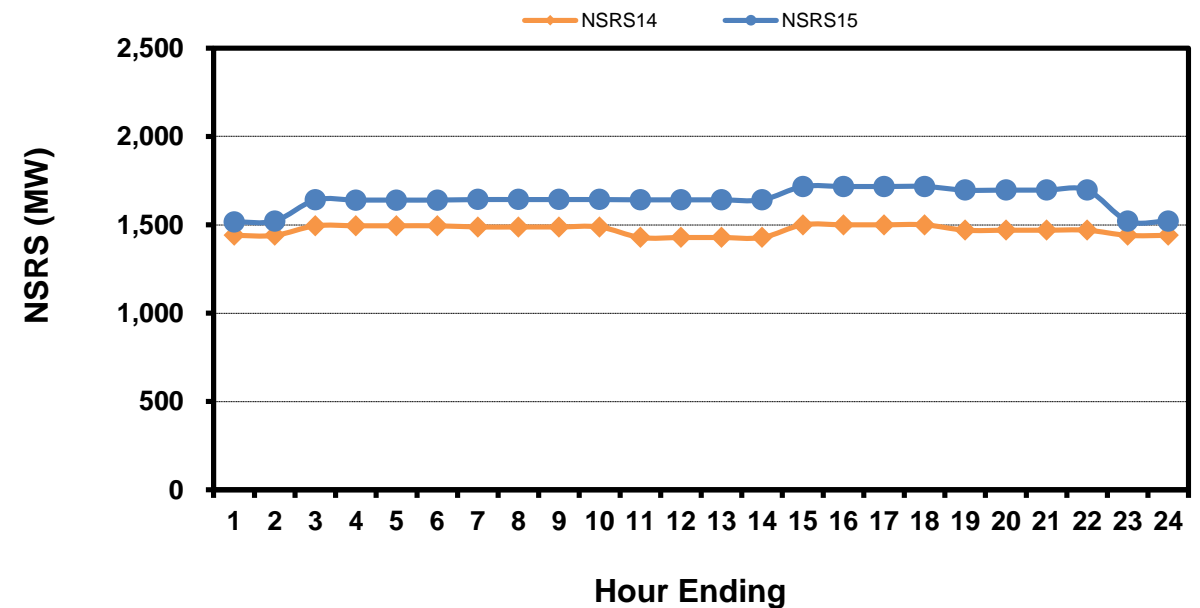
## Regulation Down



## Responsive Reserve



## Non-Spin Reserve



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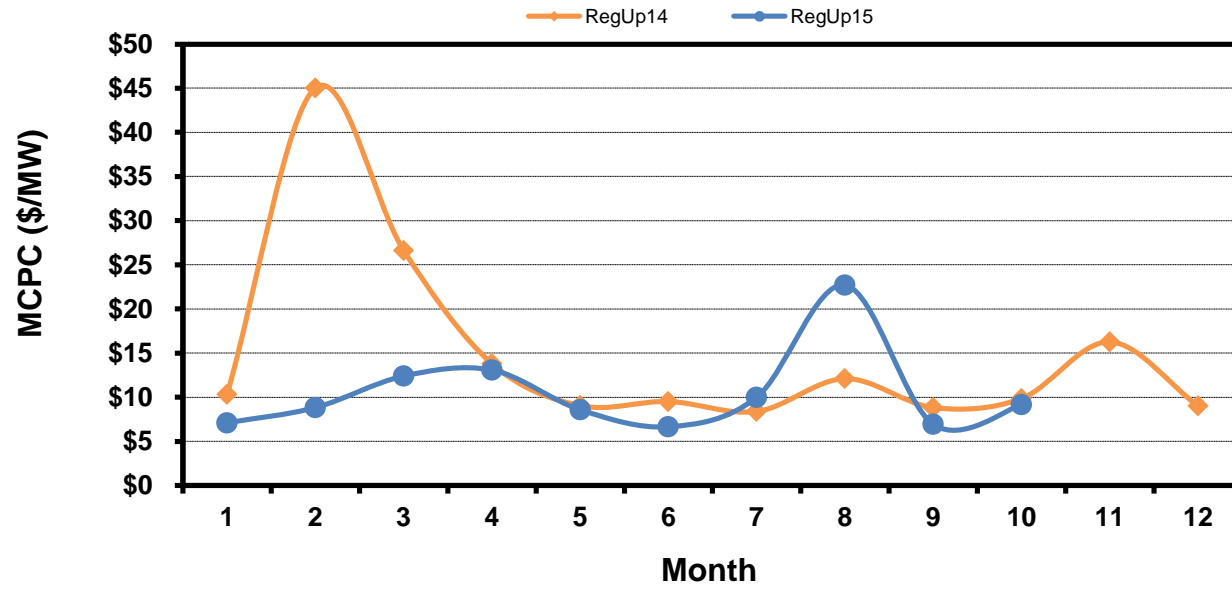
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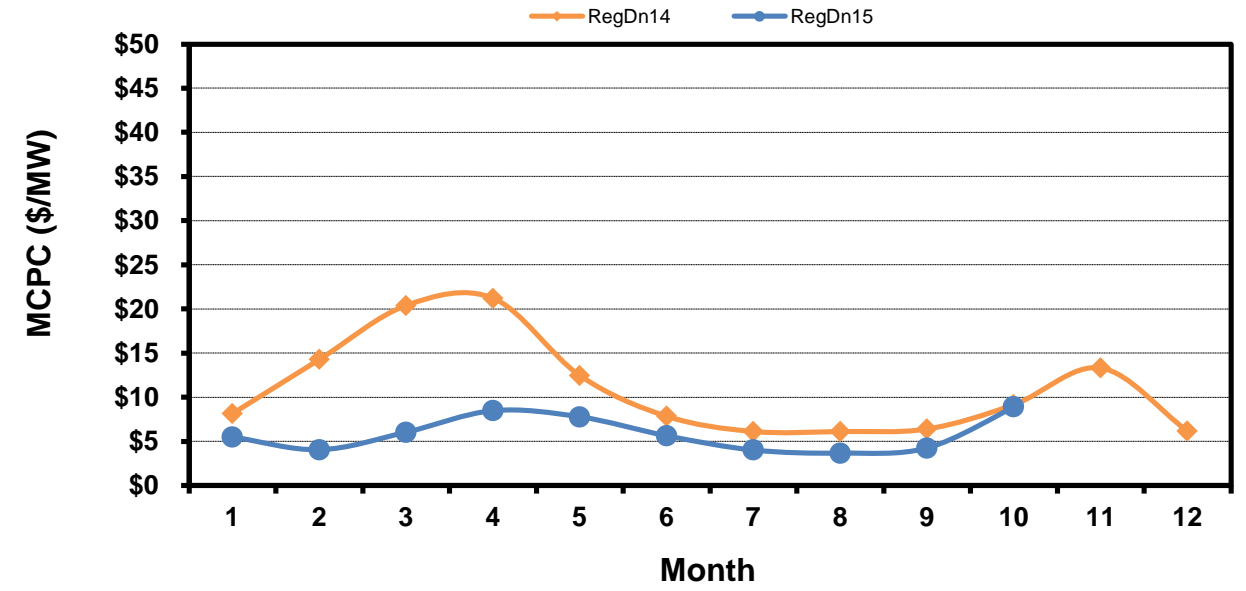
# Monthly Average Ancillary Services Price

(weighted by A/S Quantities Required)

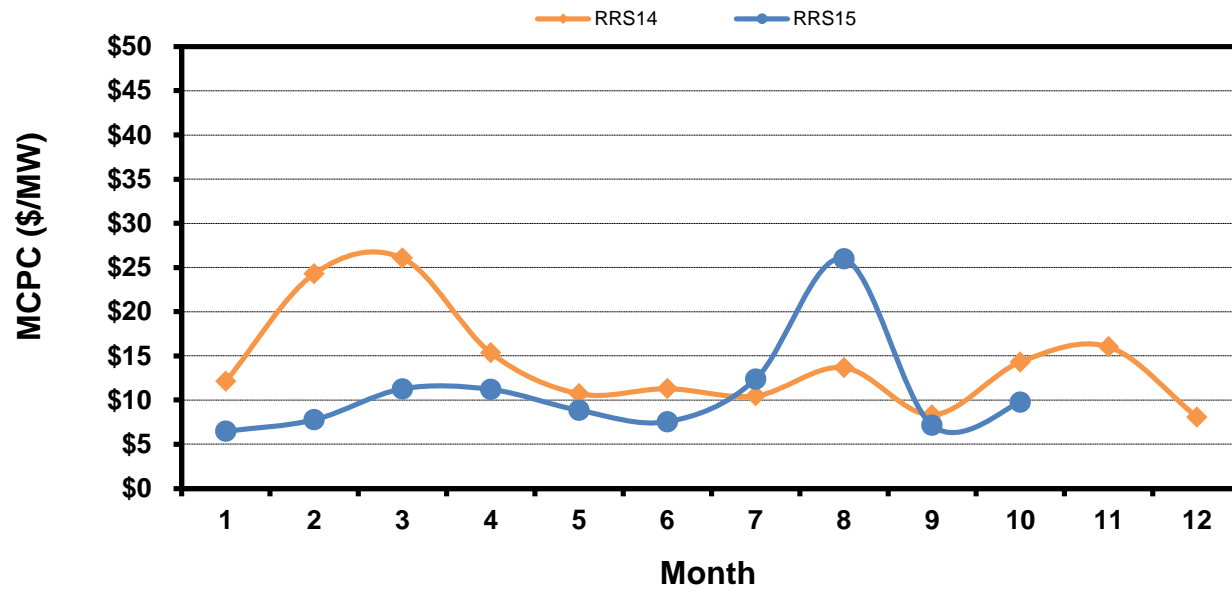
### Regulation Up



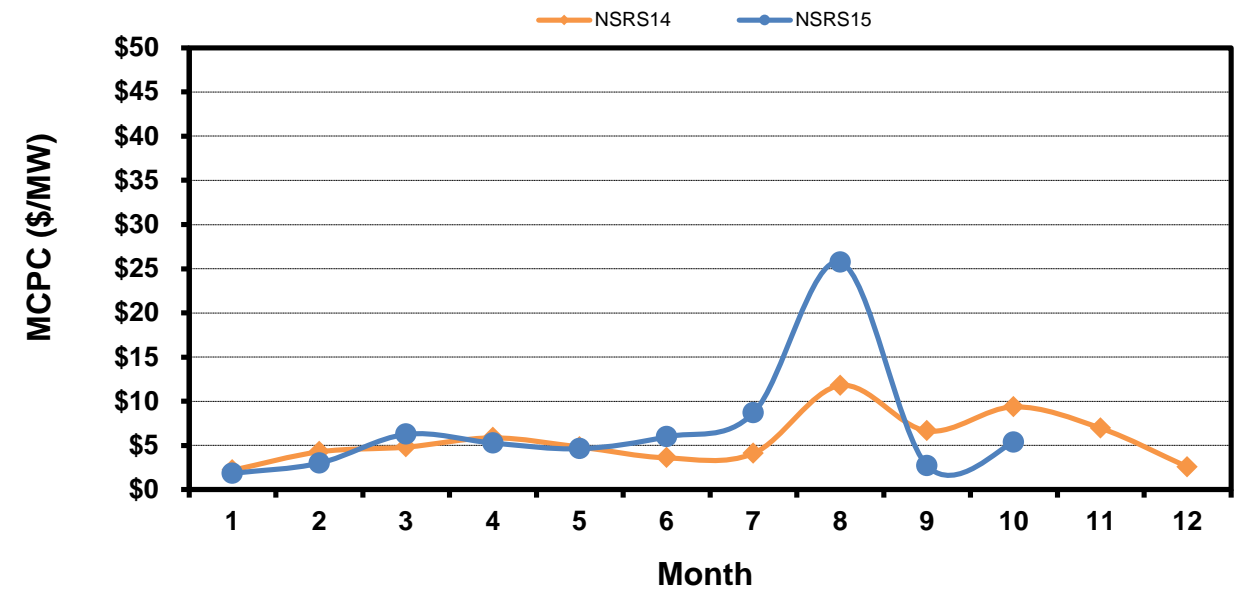
### Regulation Down



### Responsive Reserve



### Non-Spin Reserve



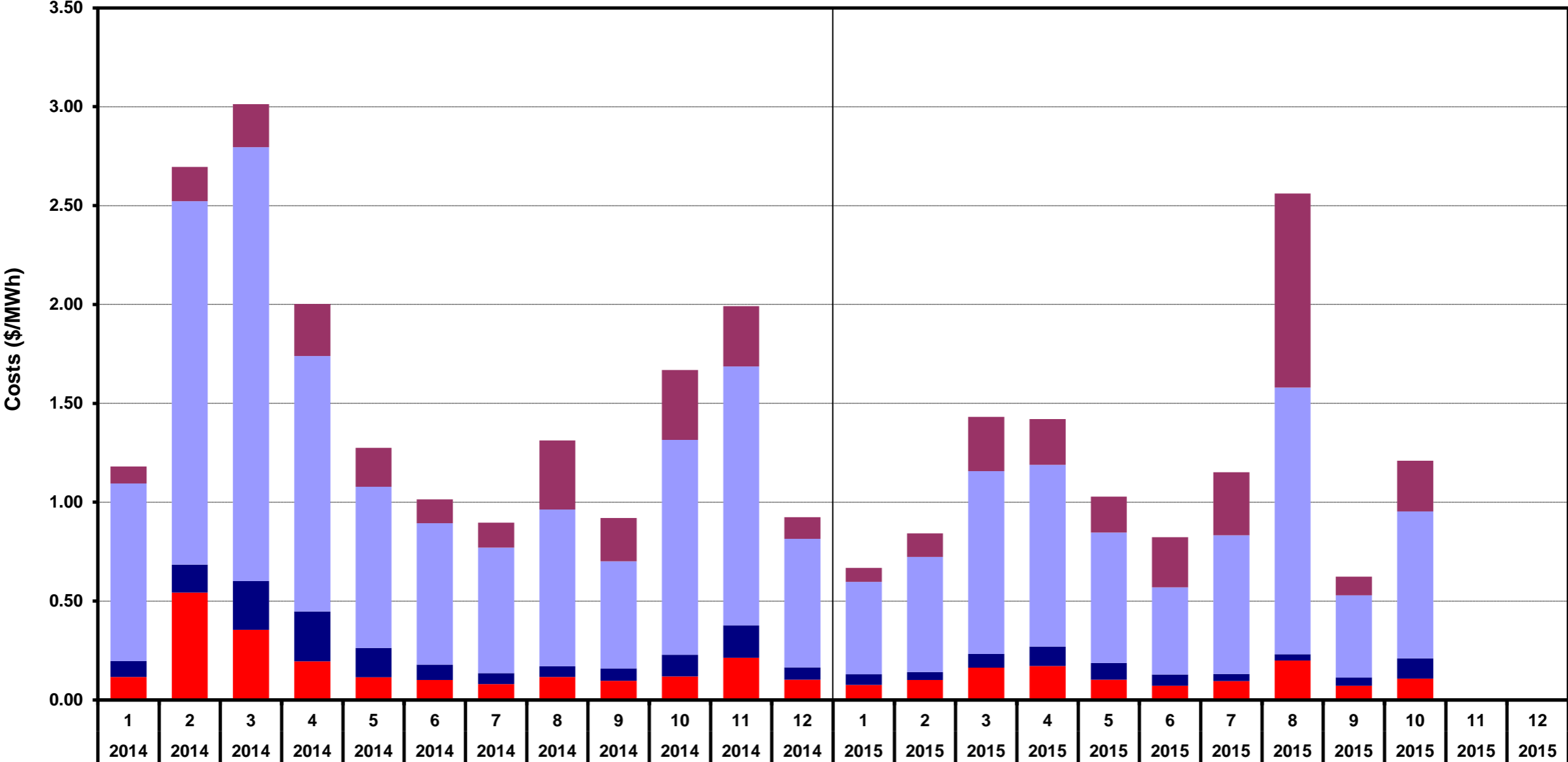
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# Monthly Average A/S Cost per MWh Load

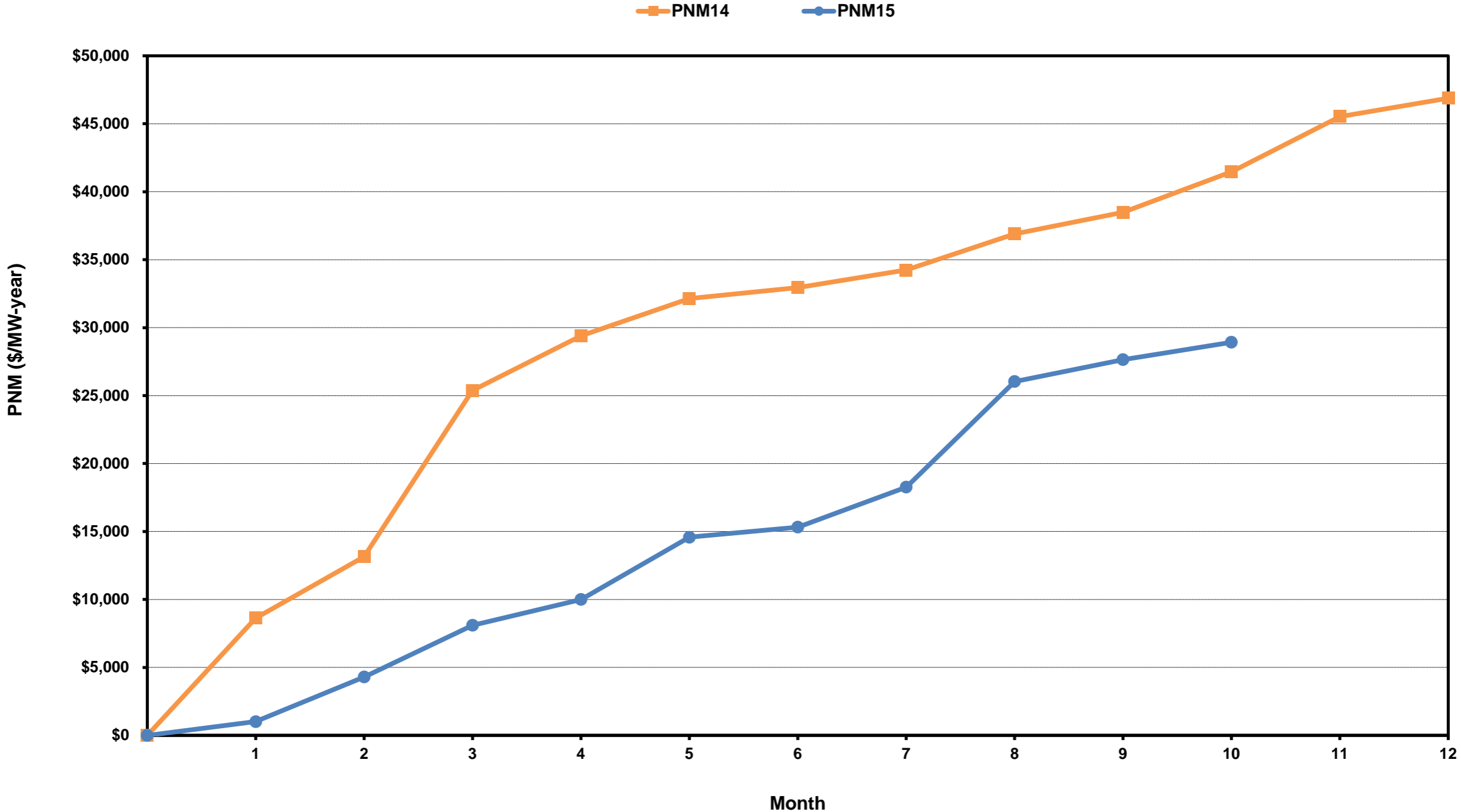
RegUp RegDn RRS NonSpin



Month, Year

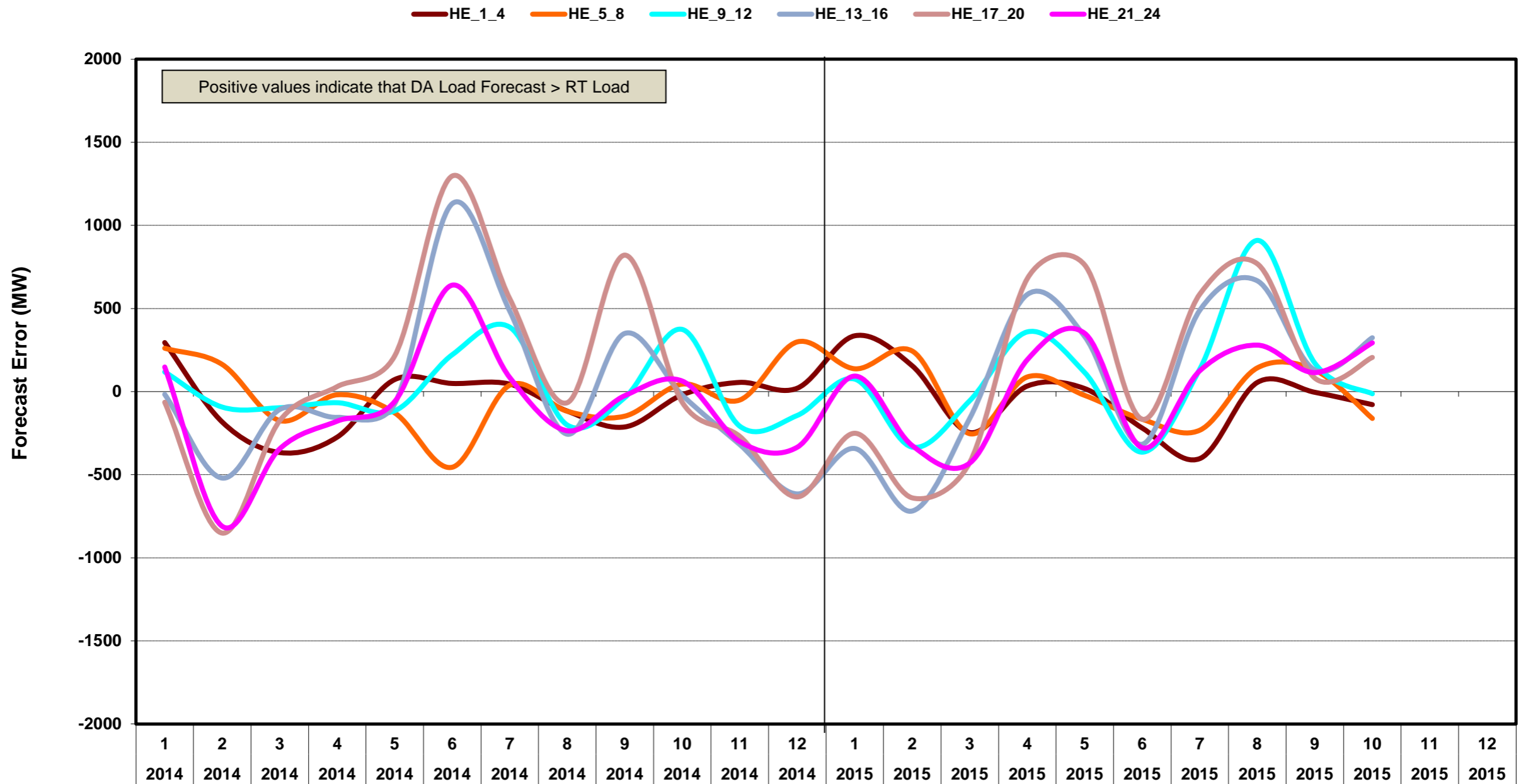
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# ERCOT-Wide Cumulative Peaker Net Margin



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# DA vs. RT Load Forecast Error by Hour Ending



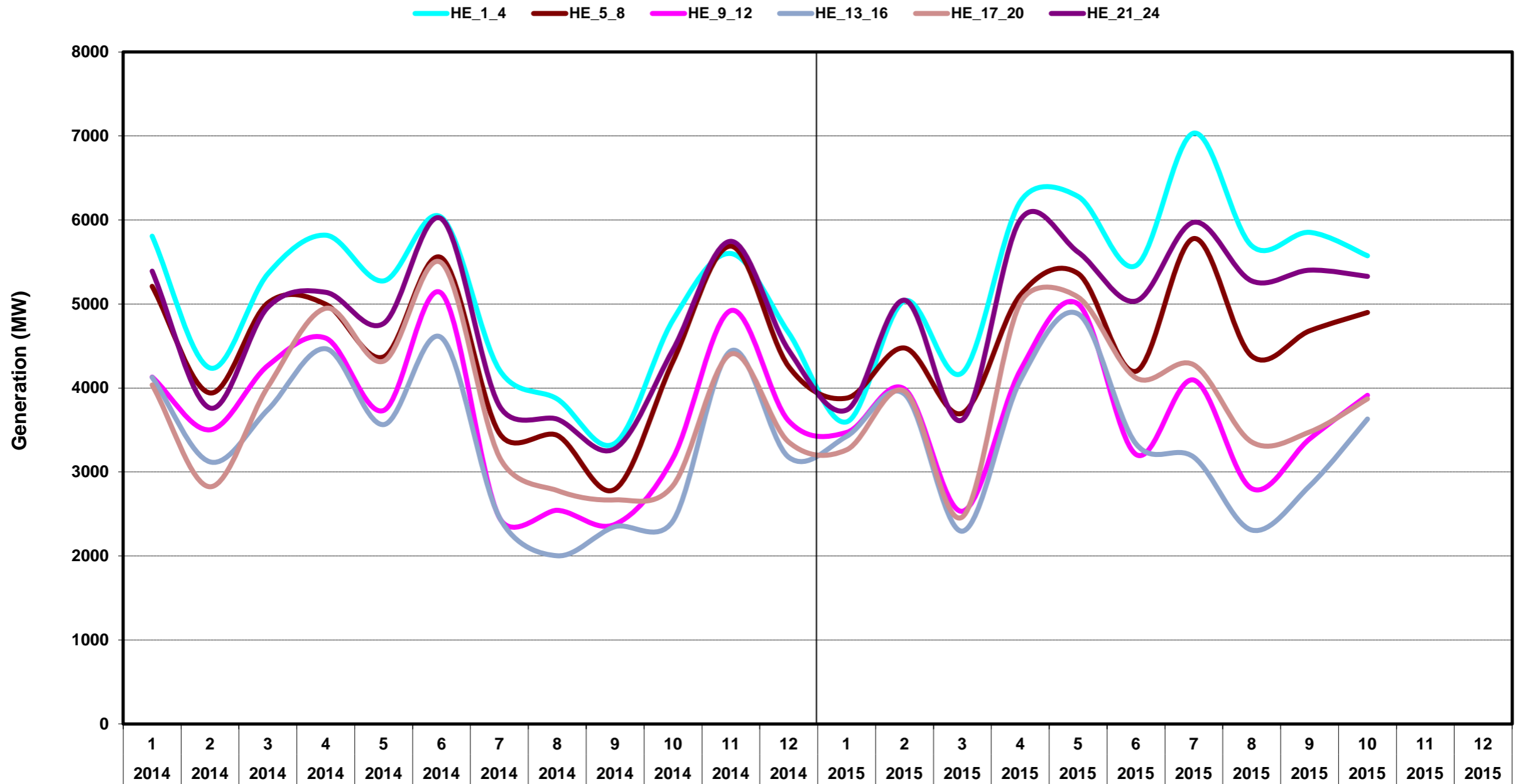
Month, Year

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# Monthly Average of Wind Generation by Hour Ending



Month, Year

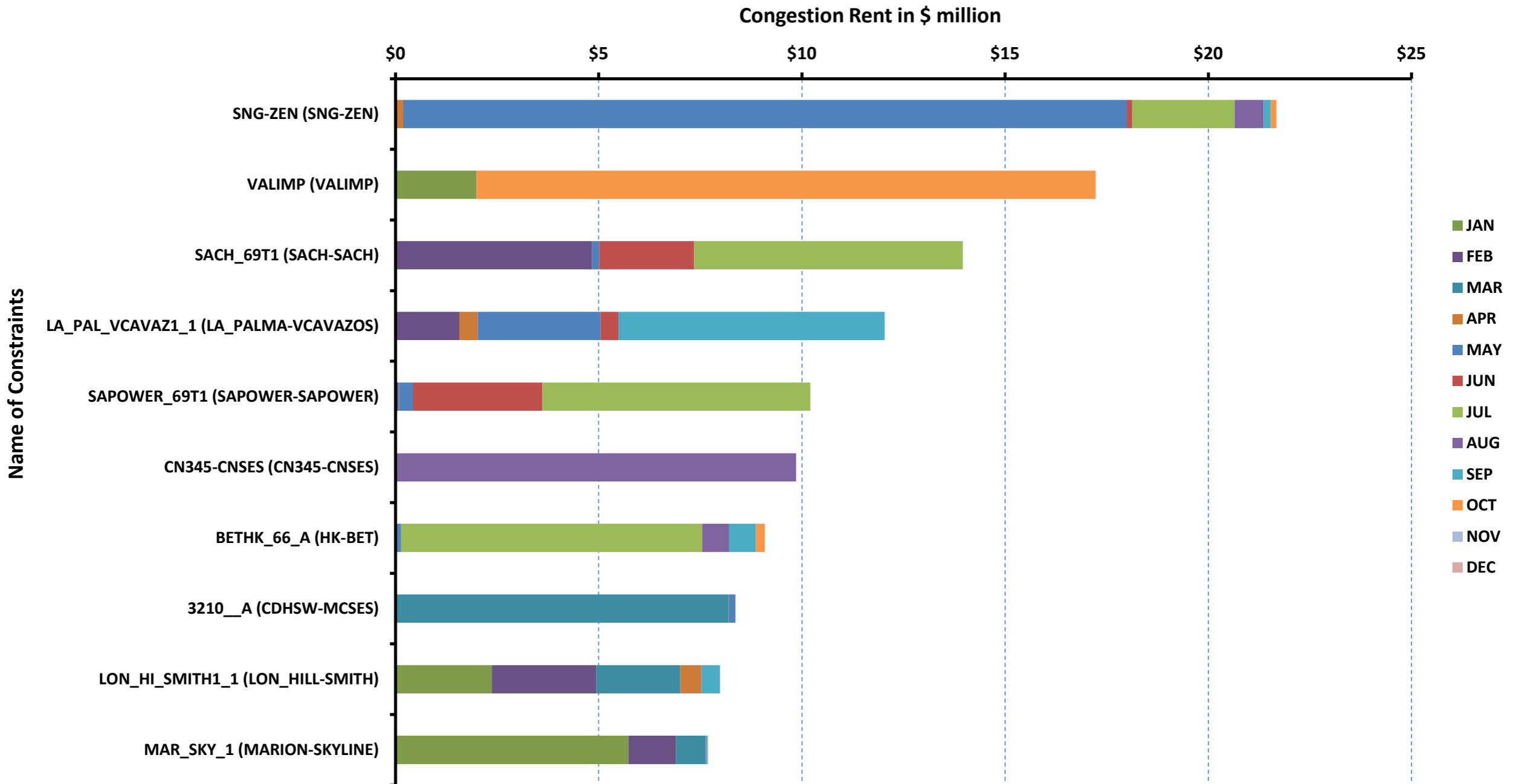
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# RT Congestion Constraint Rankings - 1

## Top 10 Constraints by Total Congestion Rent



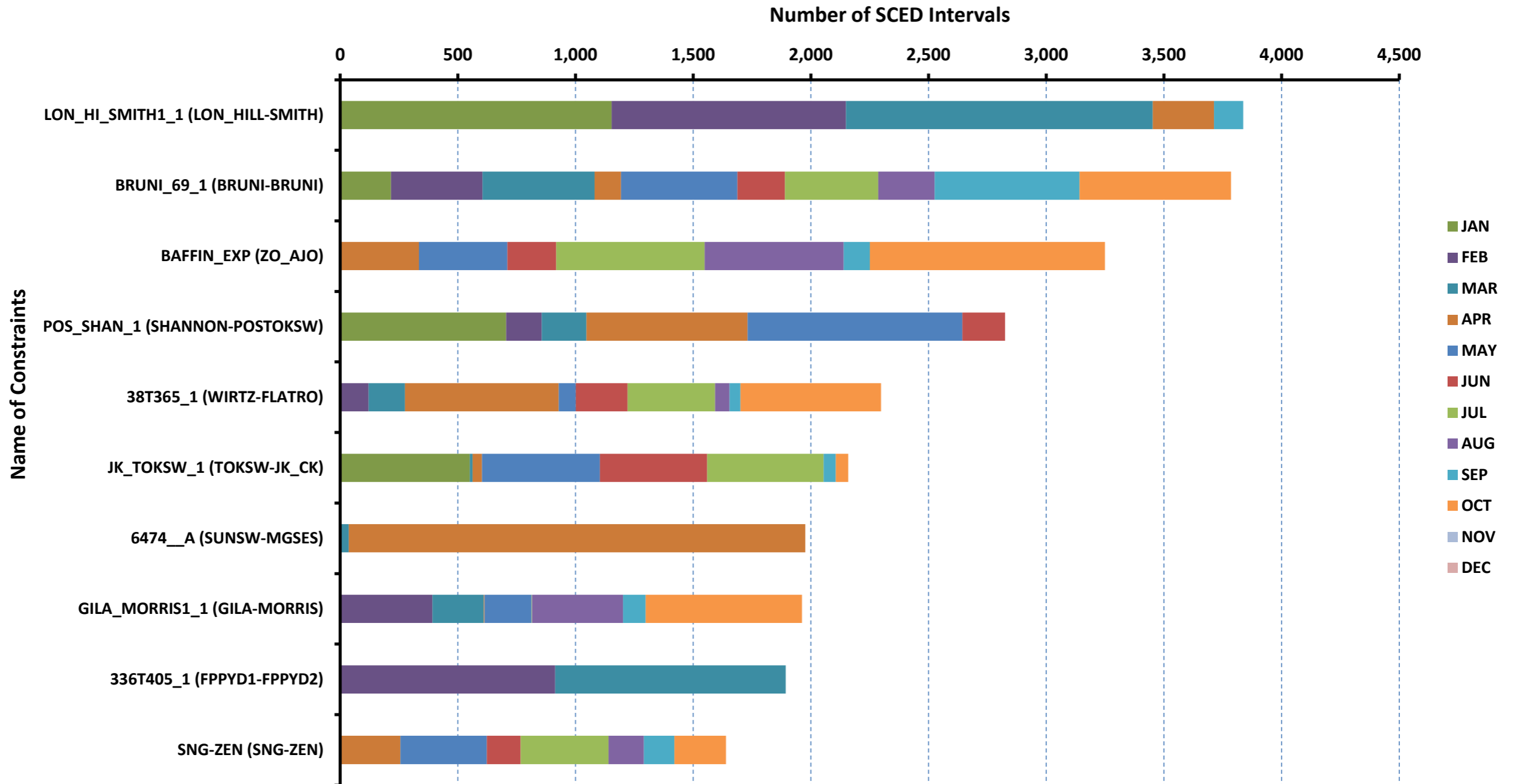
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# RT Congestion Constraint Rankings - 2

## Top 10 Constraints by Binding Frequency



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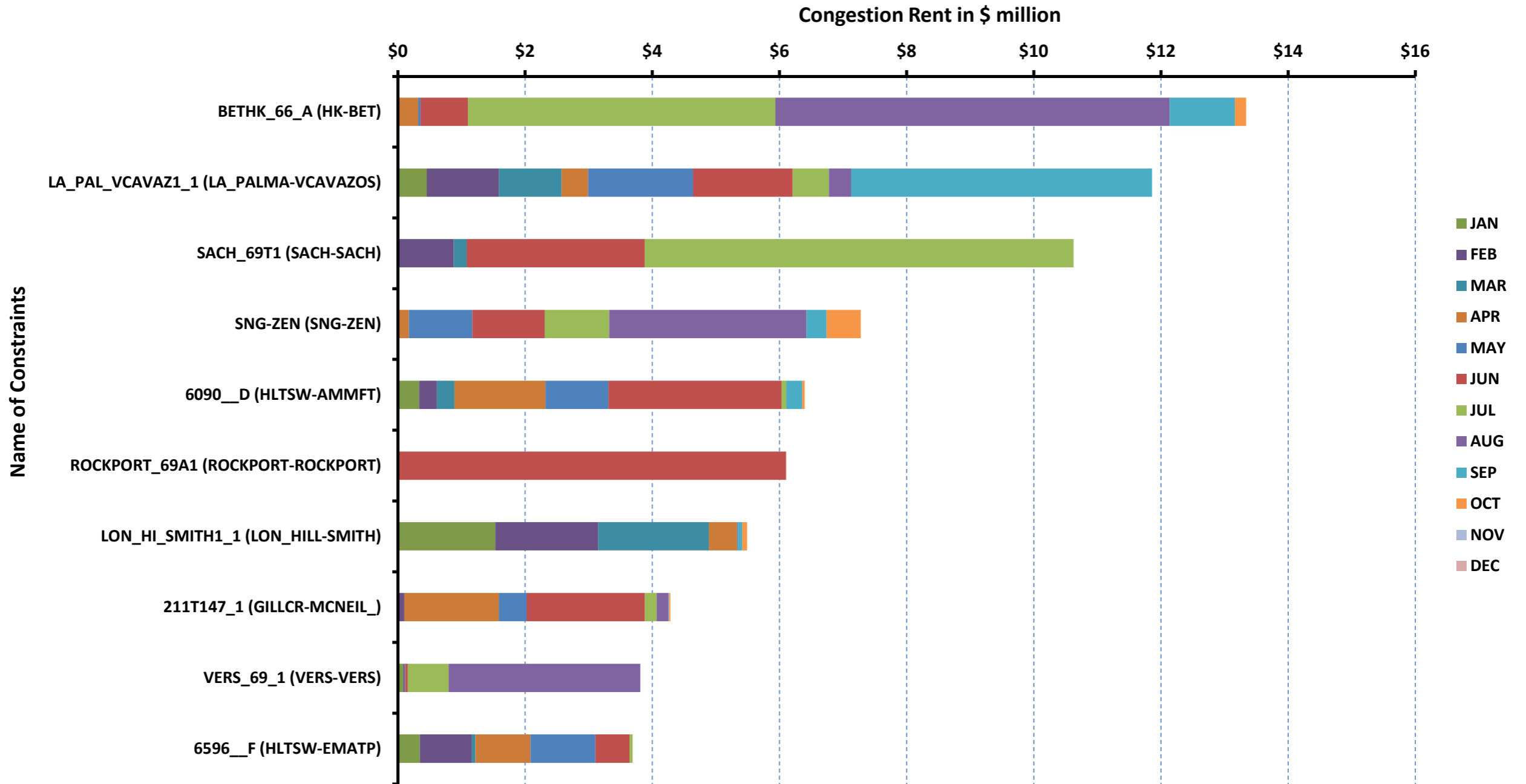
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# DA Congestion Constraint Rankings - 1

## Top 10 Constraints by Total Congestion Rent



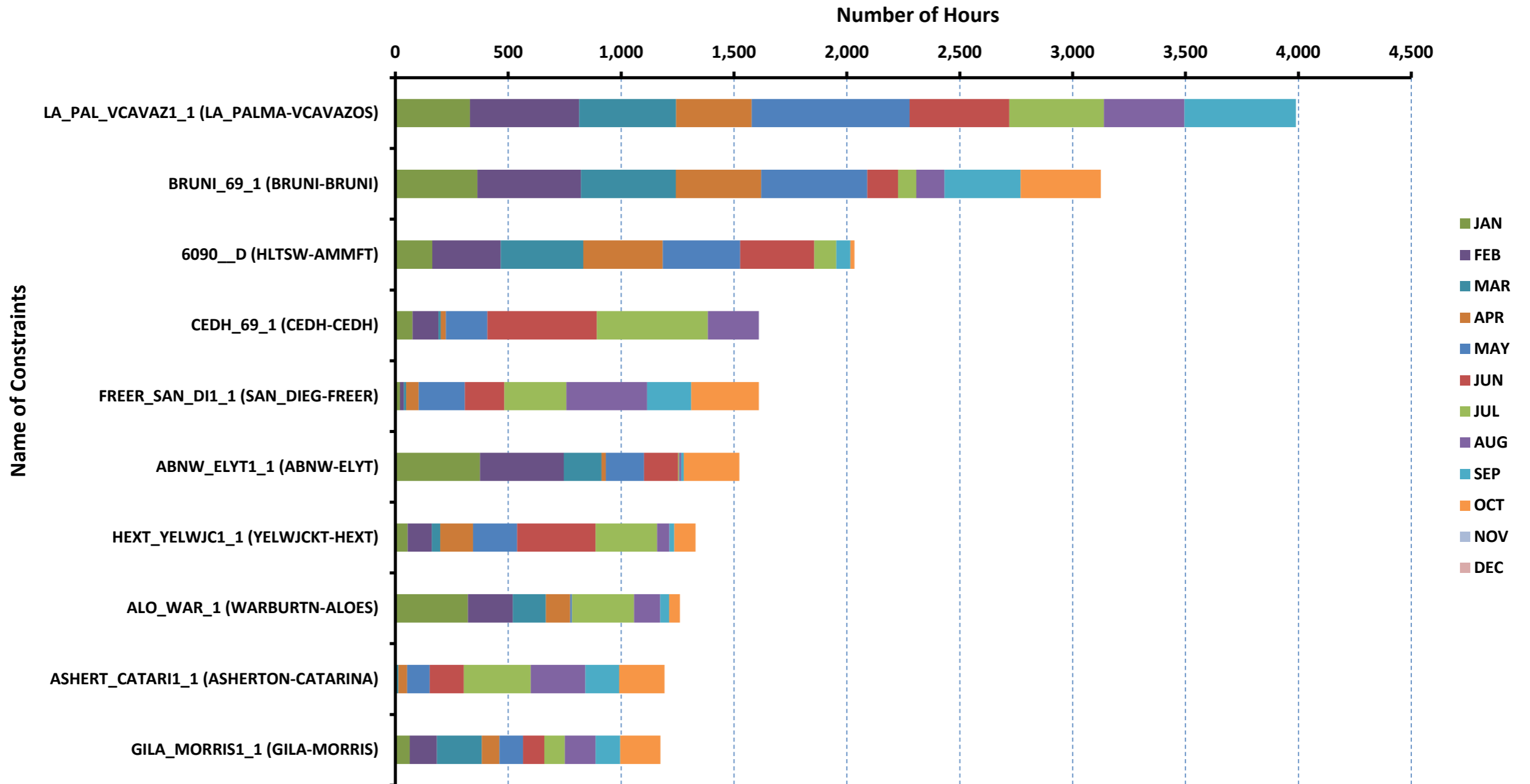
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# DA Congestion Constraint Rankings - 2

## Top 10 Constraints by Binding Frequency



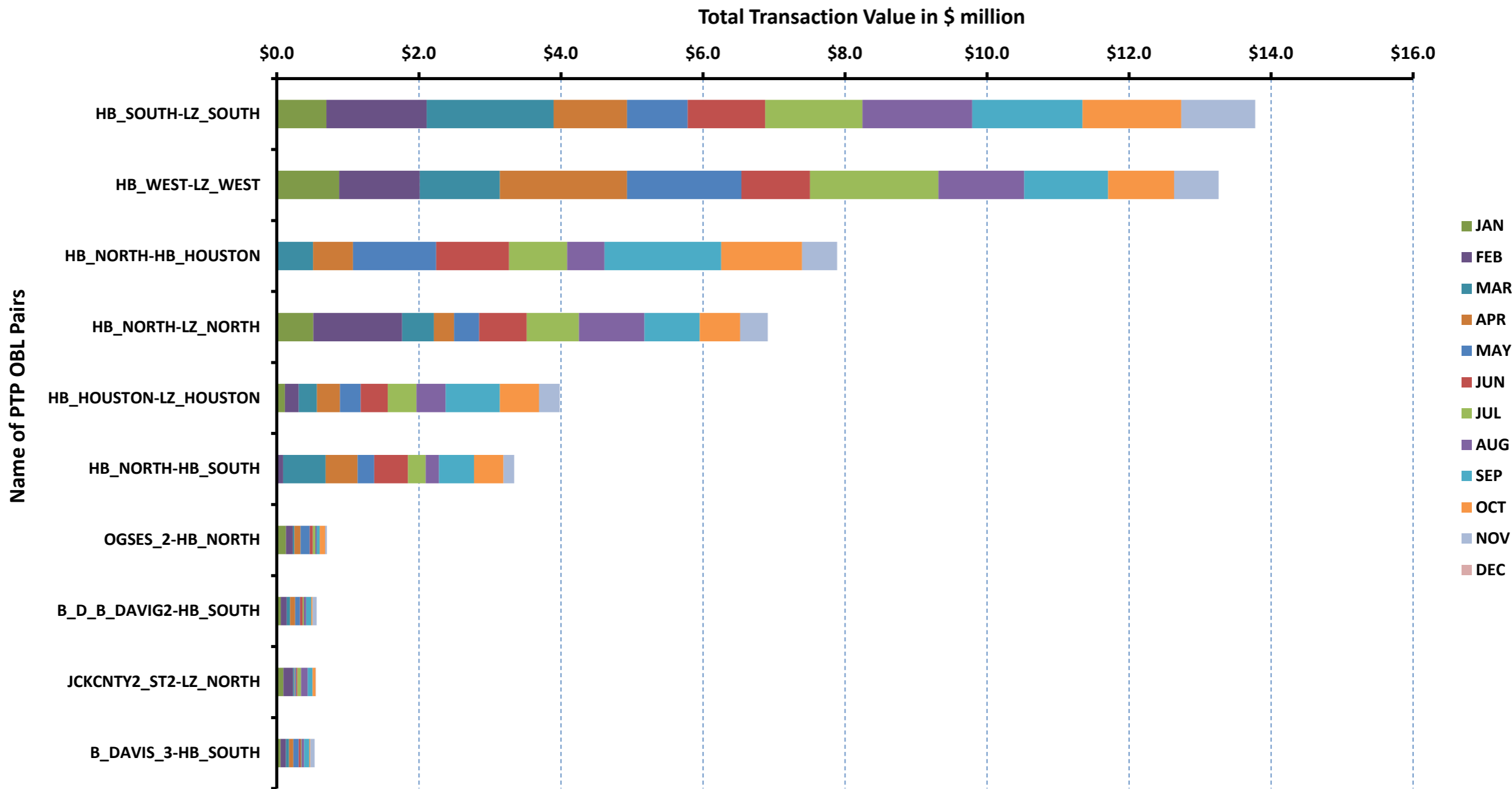
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# Top 10 CRR Pairs Ranked by Monthly Auction Values - 1

## Top 10 PTP Obligations by Total Transaction Value



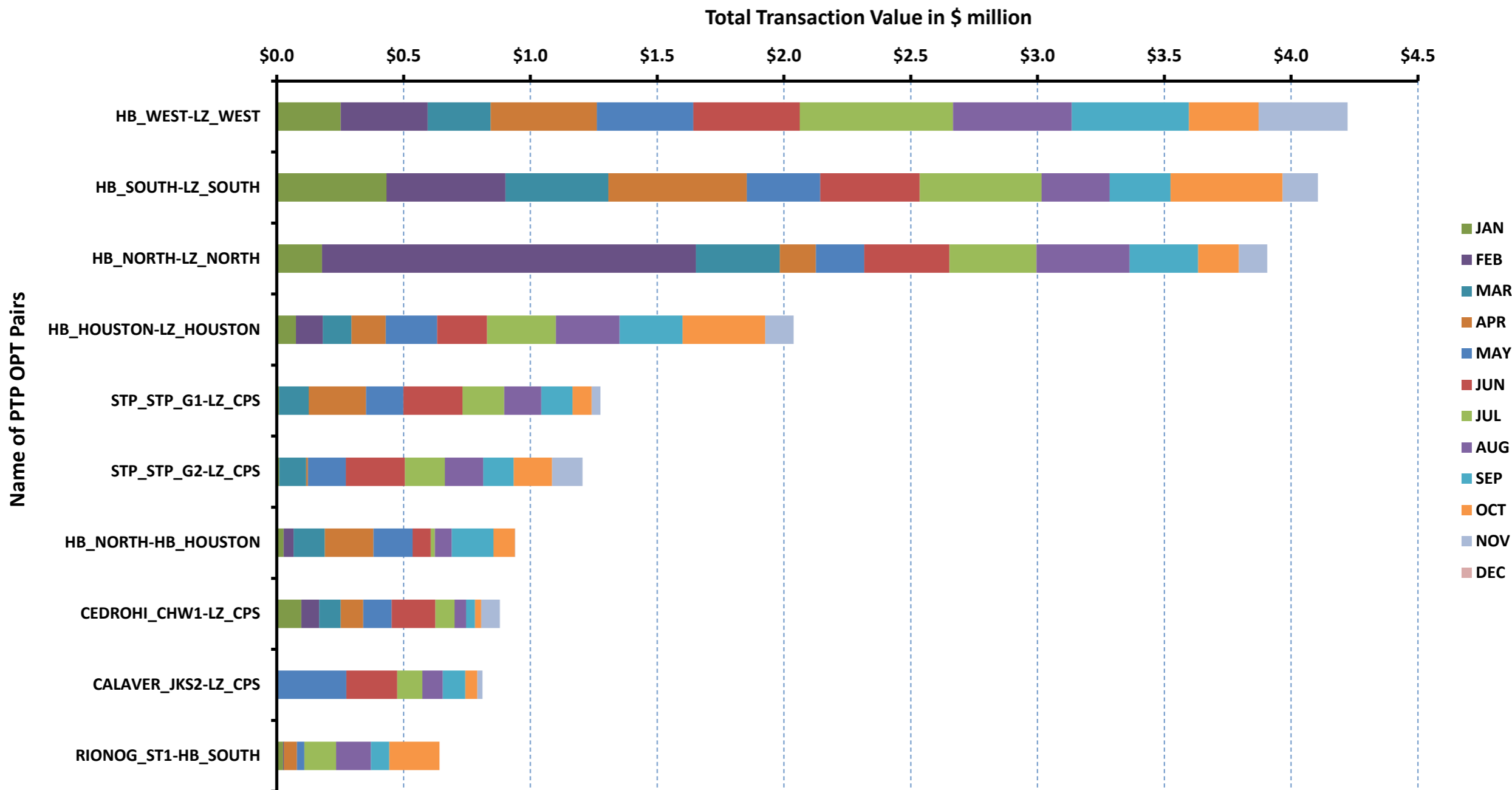
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# Top 10 CRR Pairs Ranked by Monthly Auction Values - 2

## Top 10 PTP Options by Total Transaction Value



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year	month	dam_spp	rtm_spp
2014	1	\$ 39.50	\$ 49.04
2014	2	\$ 58.39	\$ 53.46
2014	3	\$ 58.07	\$ 59.59
2014	4	\$ 44.25	\$ 43.45
2014	5	\$ 39.83	\$ 39.12
2014	6	\$ 42.60	\$ 37.31
2014	7	\$ 39.37	\$ 35.89
2014	8	\$ 43.77	\$ 38.37
2014	9	\$ 36.95	\$ 36.77
2014	10	\$ 41.43	\$ 39.46
2014	11	\$ 36.94	\$ 33.97
2014	12	\$ 27.41	\$ 26.02
2015	1	\$ 26.35	\$ 24.97
2015	2	\$ 25.90	\$ 28.28
2015	3	\$ 27.88	\$ 29.14
2015	4	\$ 25.30	\$ 24.74
2015	5	\$ 25.78	\$ 30.84
2015	6	\$ 27.35	\$ 24.63
2015	7	\$ 33.20	\$ 30.14
2015	8	\$ 55.48	\$ 38.12
2015	9	\$ 26.87	\$ 25.33
2015	10	\$ 23.11	\$ 22.02
2015	11		
2015	12		





year	month	gasprice	rtm_spp	HR_rtm	dam_spp	HR_dam
2014	1	\$ 4.52	\$ 49.04	10.84	\$ 39.50	8.73
2014	2	\$ 6.07	\$ 53.46	8.81	\$ 58.39	9.62
2014	3	\$ 4.75	\$ 59.59	12.53	\$ 58.07	12.21
2014	4	\$ 4.58	\$ 43.45	9.49	\$ 44.25	9.67
2014	5	\$ 4.45	\$ 39.12	8.78	\$ 39.83	8.94
2014	6	\$ 4.61	\$ 37.31	8.10	\$ 42.60	9.25
2014	7	\$ 4.05	\$ 35.89	8.86	\$ 39.37	9.71
2014	8	\$ 3.92	\$ 38.37	9.78	\$ 43.77	11.16
2014	9	\$ 3.92	\$ 36.77	9.38	\$ 36.95	9.42
2014	10	\$ 3.72	\$ 39.46	10.61	\$ 41.43	11.14
2014	11	\$ 4.01	\$ 33.97	8.48	\$ 36.94	9.22
2014	12	\$ 3.27	\$ 26.02	7.95	\$ 27.41	8.38
2015	1	\$ 2.92	\$ 24.97	8.54	\$ 26.35	9.01
2015	2	\$ 2.68	\$ 28.28	10.56	\$ 25.90	9.67
2015	3	\$ 2.70	\$ 29.14	10.80	\$ 27.88	10.33
2015	4	\$ 2.56	\$ 24.74	9.66	\$ 25.30	9.87
2015	5	\$ 2.80	\$ 30.84	11.03	\$ 25.78	9.22
2015	6	\$ 2.71	\$ 24.63	9.09	\$ 27.35	10.09
2015	7	\$ 2.83	\$ 30.14	10.66	\$ 33.20	11.74
2015	8	\$ 2.74	\$ 38.12	13.94	\$ 55.48	20.28
2015	9	\$ 2.61	\$ 25.33	9.69	\$ 26.87	10.28
2015	10	\$ 2.35	\$ 22.02	9.36	\$ 23.11	9.83
2015	11					
2015	12					





YEAR	MONTH	DAY	PRICE_RS	PRICE_RDP	RS_CNT	RDP_CNT	RS_POS	RDP_POS
2015	10	1	\$ -	\$ -	0	0	5	10
2015	10	2	\$ -	\$ 0.31	0	19	5	10
2015	10	3	\$ -	\$ -	0	0	5	10
2015	10	4	\$ 0.40	\$ -	22	0	5	10
2015	10	5	\$ -	\$ -	0	0	5	10
2015	10	6	\$ 0.03	\$ -	6	0	5	10
2015	10	7	\$ -	\$ 0.08	0	4	5	10
2015	10	8	\$ -	\$ -	0	0	5	10
2015	10	9	\$ -	\$ -	0	0	5	10
2015	10	10	\$ -	\$ -	0	0	5	10
2015	10	11	\$ -	\$ -	0	0	5	10
2015	10	12	\$ -	\$ -	0	0	5	10
2015	10	13	\$ 0.15	\$ 0.12	11	2	5	10
2015	10	14	\$ 0.06	\$ 0.33	7	12	5	10
2015	10	15	\$ 0.18	\$ 1.75	8	52	5	10
2015	10	16	\$ 0.18	\$ -	10	0	5	10
2015	10	17	\$ -	\$ -	0	0	5	10
2015	10	18	\$ -	\$ -	0	0	5	10
2015	10	19	\$ -	\$ -	0	0	5	10
2015	10	20	\$ 0.01	\$ -	2	0	5	10
2015	10	21	\$ 0.34	\$ 0.14	50	19	5	10
2015	10	22	\$ 0.78	\$ -	58	0	5	10
2015	10	23	\$ 0.49	\$ -	40	0	5	10
2015	10	24	\$ 0.01	\$ -	1	0	5	10
2015	10	25	\$ -	\$ 0.46	0	4	5	10
2015	10	26	\$ 0.01	\$ 0.26	3	24	5	10
2015	10	27	\$ 1.43	\$ -	23	0	5	10
2015	10	28	\$ -	\$ 0.29	0	12	5	10
2015	10	29	\$ -	\$ 0.16	0	72	5	10
2015	10	30	\$ -	\$ 0.07	0	1	5	10

year	month	ASMW_REGDN	ASMW_NSPIN	ASMW_RRS	ASMW_REGUP
2014	1	368	1,500	2,800	427
2014	2	369	1,500	2,800	446
2014	3	402	1,500	2,800	442
2014	4	396	1,497	2,800	471
2014	5	437	1,497	2,800	465
2014	6	434	1,475	2,800	469
2014	7	426	1,434	2,800	439
2014	8	433	1,427	2,800	462
2014	9	423	1,423	2,800	472
2014	10	439	1,391	2,800	446
2014	11	420	1,500	2,800	448
2014	12	361	1,500	2,800	393
2015	1	379	1,500	2,800	416
2015	2	370	1,500	2,800	425
2015	3	393	1,500	2,800	449
2015	4	396	1,500	2,800	450
2015	5	409	1,464	2,800	446
2015	6	458	1,915	2,616	483
2015	7	450	1,828	2,817	473
2015	8	422	1,897	2,579	437
2015	9	446	1,545	2,607	458
2015	10	424	1,768	2,817	435
2015	11				
2015	12				

year	DELIVERY_HOUR	ASMW_REGDN	ASMW_NSPIN	ASMW_RRS	ASMW_REGUP
2014	1	458	1,440	2,800	524
2014	2	359	1,440	2,800	354
2014	3	327	1,494	2,800	318
2014	4	306	1,494	2,800	312
2014	5	367	1,494	2,800	366
2014	6	543	1,494	2,800	527
2014	7	453	1,488	2,800	747
2014	8	351	1,488	2,800	435
2014	9	388	1,488	2,800	461
2014	10	467	1,488	2,800	463
2014	11	427	1,428	2,800	497
2014	12	406	1,428	2,800	472
2014	13	344	1,428	2,800	432
2014	14	353	1,428	2,800	436
2014	15	345	1,500	2,800	372
2014	16	322	1,500	2,800	358
2014	17	331	1,500	2,800	373
2014	18	397	1,500	2,800	462
2014	19	439	1,469	2,800	445
2014	20	421	1,469	2,800	455
2014	21	410	1,469	2,800	388
2014	22	505	1,469	2,800	456
2014	23	574	1,440	2,800	555
2014	24	526	1,440	2,800	547
2015	1	465	1,516	2,811	477
2015	2	382	1,522	2,811	342
2015	3	324	1,640	2,833	319
2015	4	310	1,640	2,833	319
2015	5	356	1,640	2,833	371
2015	6	579	1,640	2,833	541
2015	7	441	1,643	2,771	755
2015	8	369	1,643	2,771	455
2015	9	384	1,643	2,771	483
2015	10	413	1,643	2,771	471
2015	11	409	1,641	2,689	513
2015	12	396	1,641	2,689	485
2015	13	365	1,641	2,689	424
2015	14	359	1,641	2,689	420
2015	15	352	1,717	2,670	380
2015	16	331	1,717	2,670	366
2015	17	346	1,717	2,670	364
2015	18	377	1,717	2,670	430
2015	19	470	1,696	2,689	464
2015	20	423	1,696	2,689	448
2015	21	410	1,696	2,689	409
2015	22	541	1,696	2,686	443
2015	23	601	1,522	2,811	545
2015	24	553	1,522	2,811	507

year	month	MCPC_REGDN	MCPC_NSPIN	MCPC_RRS	MCPC_REGUP
2014	1	\$ 8.15	\$ 2.20	\$ 12.12	\$ 10.32
2014	2	\$ 14.28	\$ 4.28	\$ 24.28	\$ 45.03
2014	3	\$ 20.40	\$ 4.81	\$ 26.05	\$ 26.63
2014	4	\$ 21.21	\$ 5.86	\$ 15.35	\$ 13.80
2014	5	\$ 12.45	\$ 4.82	\$ 10.71	\$ 9.04
2014	6	\$ 7.84	\$ 3.59	\$ 11.29	\$ 9.51
2014	7	\$ 6.11	\$ 4.11	\$ 10.47	\$ 8.38
2014	8	\$ 6.12	\$ 11.79	\$ 13.67	\$ 12.10
2014	9	\$ 6.40	\$ 6.64	\$ 8.33	\$ 8.82
2014	10	\$ 9.16	\$ 9.37	\$ 14.31	\$ 9.85
2014	11	\$ 13.31	\$ 6.95	\$ 16.01	\$ 16.26
2014	12	\$ 6.14	\$ 2.56	\$ 8.08	\$ 9.01
2015	1	\$ 5.49	\$ 1.84	\$ 6.47	\$ 7.10
2015	2	\$ 4.05	\$ 3.00	\$ 7.77	\$ 8.83
2015	3	\$ 6.04	\$ 6.26	\$ 11.27	\$ 12.39
2015	4	\$ 8.47	\$ 5.27	\$ 11.21	\$ 13.08
2015	5	\$ 7.78	\$ 4.63	\$ 8.84	\$ 8.58
2015	6	\$ 5.63	\$ 5.98	\$ 7.56	\$ 6.65
2015	7	\$ 4.01	\$ 8.69	\$ 12.37	\$ 10.00
2015	8	\$ 3.67	\$ 25.73	\$ 25.98	\$ 22.70
2015	9	\$ 4.25	\$ 2.70	\$ 7.13	\$ 6.93
2015	10	\$ 8.90	\$ 5.34	\$ 9.76	\$ 9.15
2015	11				
2015	12				

year	month	AScost_REGDN	AScost_NSPIIN	AScost_RRS	AScost_REGUP
2014	1	\$ 0.08	\$ 0.09	\$ 0.90	\$ 0.12
	2	\$ 0.14	\$ 0.17	\$ 1.84	\$ 0.54
	3	\$ 0.25	\$ 0.22	\$ 2.19	\$ 0.35
	4	\$ 0.25	\$ 0.26	\$ 1.29	\$ 0.20
	5	\$ 0.15	\$ 0.20	\$ 0.82	\$ 0.11
	6	\$ 0.08	\$ 0.12	\$ 0.72	\$ 0.10
	7	\$ 0.06	\$ 0.13	\$ 0.63	\$ 0.08
	8	\$ 0.05	\$ 0.35	\$ 0.79	\$ 0.12
	9	\$ 0.06	\$ 0.22	\$ 0.54	\$ 0.10
	10	\$ 0.11	\$ 0.35	\$ 1.09	\$ 0.12
	11	\$ 0.16	\$ 0.30	\$ 1.31	\$ 0.21
	12	\$ 0.06	\$ 0.11	\$ 0.65	\$ 0.10
2015	1	\$ 0.05	\$ 0.07	\$ 0.47	\$ 0.08
	2	\$ 0.04	\$ 0.12	\$ 0.58	\$ 0.10
	3	\$ 0.07	\$ 0.28	\$ 0.92	\$ 0.16
	4	\$ 0.10	\$ 0.23	\$ 0.92	\$ 0.17
	5	\$ 0.08	\$ 0.18	\$ 0.66	\$ 0.10
	6	\$ 0.06	\$ 0.25	\$ 0.44	\$ 0.07
	7	\$ 0.04	\$ 0.32	\$ 0.70	\$ 0.10
	8	\$ 0.03	\$ 0.98	\$ 1.35	\$ 0.20
	9	\$ 0.04	\$ 0.09	\$ 0.42	\$ 0.07
	10	\$ 0.10	\$ 0.26	\$ 0.74	\$ 0.11
	11				
	12				

year	month	pnm	pnm_accum
2014	0	\$ -	\$ -
2014	1	\$ 8,628.41	\$ 8,628.41
2014	2	\$ 4,513.33	\$ 13,141.74
2014	3	\$ 12,232.21	\$ 25,373.95
2014	4	\$ 4,024.62	\$ 29,398.57
2014	5	\$ 2,749.41	\$ 32,147.98
2014	6	\$ 803.02	\$ 32,951.00
2014	7	\$ 1,288.07	\$ 34,239.07
2014	8	\$ 2,655.57	\$ 36,894.64
2014	9	\$ 1,599.84	\$ 38,494.48
2014	10	\$ 2,974.67	\$ 41,469.15
2014	11	\$ 4,062.52	\$ 45,531.67
2014	12	\$ 1,345.36	\$ 46,877.03
2015	0	\$ -	\$ -
2015	1	\$ 1,009.59	\$ 1,009.59
2015	2	\$ 3,289.14	\$ 4,298.73
2015	3	\$ 3,800.54	\$ 8,099.27
2015	4	\$ 1,900.94	\$ 10,000.21
2015	5	\$ 4,578.64	\$ 14,578.85
2015	6	\$ 738.37	\$ 15,317.22
2015	7	\$ 2,945.67	\$ 18,262.89
2015	8	\$ 7,767.43	\$ 26,030.32
2015	9	\$ 1,612.54	\$ 27,642.86
2015	10	\$ 1,283.56	\$ 28,926.42
2015	11		
2015	12		

year	month	HE_1_4	HE_13_16	HE_17_20	HE_21_24	HE_5_8	HE_9_12
2014	1	295	(16)	(64)	148	261	118
	2	(183)	(520)	(851)	(810)	163	(93)
	3	(366)	(107)	(175)	(344)	(174)	(97)
	4	(273)	(155)	30	(177)	(19)	(67)
	5	73	(73)	216	(59)	(128)	(115)
	6	49	1,131	1,297	641	(455)	222
	7	45	484	559	85	39	388
	8	(117)	(256)	(67)	(236)	(118)	(201)
	9	(213)	350	821	(24)	(148)	(36)
	10	(19)	(21)	(65)	64	45	374
	11	56	(318)	(269)	(301)	(50)	(208)
	12	21	(616)	(633)	(334)	299	(143)
2015	1	336	(342)	(251)	93	137	75
	2	155	(718)	(639)	(325)	244	(334)
	3	(246)	(160)	(425)	(430)	(253)	(54)
	4	34	585	680	192	88	359
	5	18	330	761	350	(23)	114
	6	(219)	(317)	(166)	(338)	(167)	(364)
	7	(403)	490	587	126	(232)	136
	8	55	667	769	280	143	910
	9	(4)	130	81	114	129	171
	10	(78)	324	206	294	(161)	(13)
	11						
	12						



year	month	HE_1_4	HE_13_16	HE_17_20	HE_21_24	HE_5_8	HE_9_12
2014	1	5,808	4,127	4,036	5,391	5,211	4,131
	2	4,238	3,120	2,824	3,762	3,941	3,502
	3	5,359	3,742	4,014	4,962	5,013	4,267
	4	5,819	4,467	4,949	5,139	4,996	4,593
	5	5,275	3,564	4,320	4,769	4,371	3,733
	6	6,030	4,599	5,489	6,014	5,549	5,127
	7	4,216	2,459	3,177	3,787	3,461	2,457
	8	3,869	2,003	2,779	3,629	3,436	2,544
	9	3,344	2,350	2,668	3,280	2,796	2,377
	10	4,810	2,418	2,839	4,457	4,317	3,166
	11	5,601	4,442	4,404	5,746	5,689	4,922
	12	4,654	3,175	3,356	4,449	4,254	3,607
2015	1	3,597	3,424	3,264	3,738	3,879	3,471
	2	5,036	3,927	3,961	5,045	4,476	3,988
	3	4,182	2,295	2,465	3,622	3,701	2,532
	4	6,218	4,090	5,011	6,002	5,105	4,209
	5	6,280	4,882	5,081	5,617	5,362	5,000
	6	5,457	3,335	4,120	5,036	4,199	3,209
	7	7,034	3,176	4,275	5,973	5,779	4,094
	8	5,692	2,309	3,357	5,275	4,380	2,803
	9	5,853	2,834	3,476	5,403	4,681	3,394
	10	5,574	3,631	3,871	5,329	4,899	3,913
	11						
	12						

category	year	item	rankvar	rank	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
FREQ_EXIST	2015	LON_HI_SMITH1_1 (LON_HILL-SMITH)	3,837	1	1,153	996	1,303	261	-	-	-	-	124	-		
FREQ_EXIST	2015	BRUNI_69_1 (BRUNI-BRUNI)	3,785	2	216	389	476	112	495	202	396	240	616	643		
FREQ_EXIST	2015	BAFFIN_EXP (ZO_AJO)	3,249	3	-	-	-	335	376	207	631	590	111	999		
FREQ_EXIST	2015	POS_SHAN_1 (SHANNON-POSTOKSW)	2,825	4	705	151	190	685	913	181	-	-	-	-		
FREQ_EXIST	2015	38T365_1 (WIRTZ-FLATRO)	2,298	5	-	121	154	654	72	220	372	61	47	597		
FREQ_EXIST	2015	JK_TOKSW_1 (TOKSW-JK_CK)	2,159	6	551	-	11	40	502	455	495	-	52	53		
FREQ_EXIST	2015	6474__A (SUNSW-MGSES)	1,976	7	-	-	37	1,939	-	-	-	-	-	-		
FREQ_EXIST	2015	GILA_MORRIS1_1 (GILA-MORRIS)	1,962	8	-	392	218	3	200	-	2	387	96	664		
FREQ_EXIST	2015	336T405_1 (FPPYD1-FPPYD2)	1,893	9	-	914	979	-	-	-	-	-	-	-		
FREQ_EXIST	2015	SNG-ZEN (SNG-ZEN)	1,639	10	6	-	-	250	367	144	373	150	130	219		
TOP10_RENT	2015	SNG-ZEN (SNG-ZEN)	\$ 21.67	1	\$ 0.00	\$ -	\$ -	\$ 0.19	\$ 17.80	\$ 0.13	\$ 2.52	\$ 0.71	\$ 0.18	\$ 0.14		
TOP10_RENT	2015	VALIMP (VALIMP)	\$ 17.23	2	\$ 1.99	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15.24		
TOP10_RENT	2015	SACH_69T1 (SACH-SACH)	\$ 13.96	3	\$ -	\$ 4.83	\$ -	\$ -	\$ 0.18	\$ 2.33	\$ 6.61	\$ -	\$ -	\$ -		
TOP10_RENT	2015	LA_PAL_VCAVAZ1_1 (LA_PALMA-VCAVAZOS)	\$ 12.04	4	\$ -	\$ 1.58	\$ -	\$ 0.45	\$ 3.02	\$ 0.44	\$ 0.00	\$ -	\$ 6.55	\$ -		
TOP10_RENT	2015	SAPOWER_69T1 (SAPOWER-SAPOWER)	\$ 10.21	5	\$ -	\$ 0.08	\$ 0.01	\$ -	\$ 0.34	\$ 3.19	\$ 6.60	\$ -	\$ -	\$ -		
TOP10_RENT	2015	CN345-CNSES (CN345-CNSES)	\$ 9.86	6	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9.86	\$ -	\$ -		
TOP10_RENT	2015	BETHK_66_A (HK-BET)	\$ 9.09	7	\$ -	\$ -	\$ -	\$ -	\$ 0.14	\$ -	\$ 7.41	\$ 0.66	\$ 0.66	\$ 0.22		
TOP10_RENT	2015	3210__A (CDHSW-MCSES)	\$ 8.37	8	\$ -	\$ -	\$ 8.20	\$ 0.01	\$ 0.15	\$ -	\$ -	\$ 0.00	\$ -	\$ -		
TOP10_RENT	2015	LON_HI_SMITH1_1 (LON_HILL-SMITH)	\$ 7.98	9	\$ 2.37	\$ 2.56	\$ 2.08	\$ 0.52	\$ -	\$ -	\$ -	\$ -	\$ 0.46	\$ -		
TOP10_RENT	2015	MAR_SKY_1 (MARION-SKYLINE)	\$ 7.69	10	\$ 5.73	\$ 1.17	\$ 0.70	\$ 0.00	\$ -	\$ -	\$ -	\$ 0.02	\$ 0.05	\$ 0.01		

category	year	item	rankvar	rank	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
FREQ_EXIST	2015	LA_PAL_VCAVAZ1_1 (LA_PALMA-VCAVAZOS)	3,989	1	330	484	429	336	699	442	419	356	494	-		
FREQ_EXIST	2015	BRUNI_69_1 (BRUNI-BRUNI)	3,125	2	363	459	420	378	470	137	81	124	338	355		
FREQ_EXIST	2015	6090_D (HLTSW-AMMFT)	2,034	3	164	303	365	352	343	328	98	-	63	18		
FREQ_EXIST	2015	CEDH_69_1 (CEDH-CEDH)	1,610	4	76	115	10	23	184	485	491	226	-	-		
FREQ_EXIST	2015	FREER_SAN_DI1_1 (SAN_DIEG-FREER)	1,610	5	20	18	10	55	205	175	274	358	196	299		
FREQ_EXIST	2015	ABNW_ELYT1_1 (ABNW-ELYT)	1,524	6	375	371	167	19	169	152	4	9	12	246		
FREQ_EXIST	2015	HEXT_YELWJC1_1 (YELWJCKT-HEXT)	1,330	7	55	106	38	145	195	348	273	54	21	95		
FREQ_EXIST	2015	ALO_WAR_1 (WARBURTN-ALOES)	1,261	8	322	198	147	107	8	-	275	116	40	48		
FREQ_EXIST	2015	ASHERT_CATARI1_1 (ASHERTON-CATARINA)	1,192	9	2	1	11	38	100	151	297	242	149	201		
FREQ_EXIST	2015	GILA_MORRIS1_1 (GILA-MORRIS)	1,174	10	64	120	199	78	105	94	91	136	109	178		
TOP10_RENT	2015	BETHK_66_A (HK-BET)	\$ 13.34	1	\$ 0.01	\$ 0.00	\$ -	\$ 0.31	\$ 0.04	\$ 0.75	\$ 4.83	\$ 6.20	\$ 1.03	\$ 0.18		
TOP10_RENT	2015	LA_PAL_VCAVAZ1_1 (LA_PALMA-VCAVAZOS)	\$ 11.86	2	\$ 0.45	\$ 1.14	\$ 0.98	\$ 0.42	\$ 1.65	\$ 1.57	\$ 0.57	\$ 0.35	\$ 4.73	\$ -		
TOP10_RENT	2015	SACH_69T1 (SACH-SACH)	\$ 10.62	3	\$ -	\$ 0.88	\$ 0.21	\$ -	\$ -	\$ 2.80	\$ 6.74	\$ -	\$ -	\$ -		
TOP10_RENT	2015	SNG-ZEN (SNG-ZEN)	\$ 7.28	4	\$ -	\$ -	\$ -	\$ 0.17	\$ 1.00	\$ 1.14	\$ 1.01	\$ 3.10	\$ 0.32	\$ 0.53		
TOP10_RENT	2015	6090_D (HLTSW-AMMFT)	\$ 6.40	5	\$ 0.33	\$ 0.28	\$ 0.28	\$ 1.43	\$ 0.99	\$ 2.72	\$ 0.07	\$ -	\$ 0.25	\$ 0.04		
TOP10_RENT	2015	ROCKPORT_69A1 (ROCKPORT-ROCKPORT)	\$ 6.11	6	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6.11	\$ -	\$ -	\$ -	\$ -		
TOP10_RENT	2015	LON_HI_SMITH1_1 (LON_HILL-SMITH)	\$ 5.49	7	\$ 1.53	\$ 1.62	\$ 1.74	\$ 0.44	\$ 0.02	\$ -	\$ -	\$ -	\$ 0.06	\$ 0.08		
TOP10_RENT	2015	211T147_1 (GILLCR-MCNEIL_)	\$ 4.29	8	\$ 0.00	\$ 0.10	\$ 0.00	\$ 1.49	\$ 0.44	\$ 1.86	\$ 0.18	\$ 0.19	\$ 0.01	\$ 0.02		
TOP10_RENT	2015	VERS_69_1 (VERS-VERS)	\$ 3.81	9	\$ 0.08	\$ 0.02	\$ 0.01	\$ -	\$ -	\$ 0.04	\$ 0.64	\$ 3.02	\$ -	\$ -		
TOP10_RENT	2015	6596_F (HLTSW-EMATP)	\$ 3.69	10	\$ 0.35	\$ 0.81	\$ 0.06	\$ 0.87	\$ 1.02	\$ 0.54	\$ 0.05	\$ -	\$ -	\$ -		

ft_option	year	pair	total_value	rank	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
N	2015	HB_SOUTH-LZ_SOUTH	\$ 13.78	\$ 1.00	\$ 0.70	\$ 1.41	\$ 1.79	\$ 1.04	\$ 0.85	\$ 1.09	\$ 1.37	\$ 1.55	\$ 1.55	\$ 1.39	\$ 1.04	
N	2015	HB_WEST-LZ_WEST	\$ 13.26	\$ 2.00	\$ 0.88	\$ 1.14	\$ 1.13	\$ 1.79	\$ 1.61	\$ 0.97	\$ 1.81	\$ 1.21	\$ 1.18	\$ 0.93	\$ 0.62	
N	2015	HB_NORTH-HB_HOUSTON	\$ 7.89	\$ 3.00	\$ -	\$ -	\$ 0.51	\$ 0.56	\$ 1.17	\$ 1.03	\$ 0.82	\$ 0.53	\$ 1.64	\$ 1.14	\$ 0.50	
N	2015	HB_NORTH-LZ_NORTH	\$ 6.91	\$ 4.00	\$ 0.51	\$ 1.25	\$ 0.45	\$ 0.29	\$ 0.35	\$ 0.67	\$ 0.74	\$ 0.92	\$ 0.78	\$ 0.57	\$ 0.39	
N	2015	HB_HOUSTON-LZ_HOUSTON	\$ 3.98	\$ 5.00	\$ 0.11	\$ 0.19	\$ 0.26	\$ 0.33	\$ 0.29	\$ 0.38	\$ 0.41	\$ 0.41	\$ 0.77	\$ 0.55	\$ 0.29	
N	2015	HB_NORTH-HB_SOUTH	\$ 3.34	\$ 6.00	\$ -	\$ 0.09	\$ 0.60	\$ 0.45	\$ 0.23	\$ 0.48	\$ 0.25	\$ 0.19	\$ 0.49	\$ 0.41	\$ 0.15	
N	2015	OGSES 2-HB_NORTH	\$ 0.70	\$ 7.00	\$ 0.13	\$ 0.10	\$ 0.02	\$ 0.09	\$ 0.13	\$ 0.04	\$ 0.03	\$ 0.02	\$ 0.04	\$ 0.08	\$ 0.03	
N	2015	B_D_B_DAVIG2-HB_SOUTH	\$ 0.56	\$ 8.00	\$ 0.05	\$ 0.08	\$ 0.05	\$ 0.07	\$ 0.07	\$ 0.04	\$ 0.02	\$ 0.03	\$ 0.07	\$ 0.01	\$ 0.06	
N	2015	JCKCNTY2_ST2-LZ_NORTH	\$ 0.55	\$ 9.00	\$ 0.09	\$ 0.14	\$ 0.02	\$ 0.01	\$ 0.01	\$ 0.02	\$ 0.05	\$ 0.09	\$ 0.07	\$ 0.04	\$ 0.00	
N	2015	B_DAVIS_3-HB_SOUTH	\$ 0.53	\$ 10.00	\$ 0.05	\$ 0.08	\$ 0.04	\$ 0.06	\$ 0.07	\$ 0.03	\$ 0.01	\$ 0.03	\$ 0.07	\$ 0.01	\$ 0.06	
Y	2015	HB_WEST-LZ_WEST	\$ 4.22	\$ 1.00	\$ 0.25	\$ 0.34	\$ 0.25	\$ 0.42	\$ 0.38	\$ 0.42	\$ 0.60	\$ 0.47	\$ 0.46	\$ 0.27	\$ 0.35	
Y	2015	HB_SOUTH-LZ_SOUTH	\$ 4.11	\$ 2.00	\$ 0.43	\$ 0.47	\$ 0.41	\$ 0.55	\$ 0.29	\$ 0.39	\$ 0.48	\$ 0.27	\$ 0.24	\$ 0.44	\$ 0.14	
Y	2015	HB_NORTH-LZ_NORTH	\$ 3.91	\$ 3.00	\$ 0.18	\$ 1.47	\$ 0.33	\$ 0.14	\$ 0.19	\$ 0.34	\$ 0.34	\$ 0.37	\$ 0.27	\$ 0.16	\$ 0.11	
Y	2015	HB_HOUSTON-LZ_HOUSTON	\$ 2.04	\$ 4.00	\$ 0.07	\$ 0.11	\$ 0.11	\$ 0.14	\$ 0.20	\$ 0.20	\$ 0.27	\$ 0.25	\$ 0.25	\$ 0.33	\$ 0.11	
Y	2015	STP_STP_G1-LZ_CPS	\$ 1.28	\$ 5.00	\$ 0.01	\$ -	\$ 0.12	\$ 0.23	\$ 0.15	\$ 0.23	\$ 0.16	\$ 0.15	\$ 0.12	\$ 0.08	\$ 0.03	
Y	2015	STP_STP_G2-LZ_CPS	\$ 1.21	\$ 6.00	\$ 0.01	\$ -	\$ 0.11	\$ 0.01	\$ 0.15	\$ 0.23	\$ 0.16	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	
Y	2015	HB_NORTH-HB_HOUSTON	\$ 0.94	\$ 7.00	\$ 0.03	\$ 0.04	\$ 0.12	\$ 0.19	\$ 0.15	\$ 0.07	\$ 0.02	\$ 0.07	\$ 0.16	\$ 0.09	\$ 0.00	
Y	2015	CEDROHI_CHW1-LZ_CPS	\$ 0.88	\$ 8.00	\$ 0.10	\$ 0.07	\$ 0.08	\$ 0.09	\$ 0.11	\$ 0.17	\$ 0.08	\$ 0.05	\$ 0.04	\$ 0.02	\$ 0.07	
Y	2015	CALAVER_JKS2-LZ_CPS	\$ 0.81	\$ 9.00	\$ -	\$ -	\$ 0.00	\$ 0.00	\$ 0.27	\$ 0.20	\$ 0.10	\$ 0.08	\$ 0.09	\$ 0.05	\$ 0.02	
Y	2015	RIONOG_ST1-HB_SOUTH	\$ 0.64	\$ 10.00	\$ 0.02	\$ 0.00	\$ 0.00	\$ 0.05	\$ 0.03	\$ -	\$ 0.13	\$ 0.14	\$ 0.07	\$ 0.20	\$ -	