

To the Public Utility Commission of Texas

ERCOT Wholesale Electricity Market Monthly Report

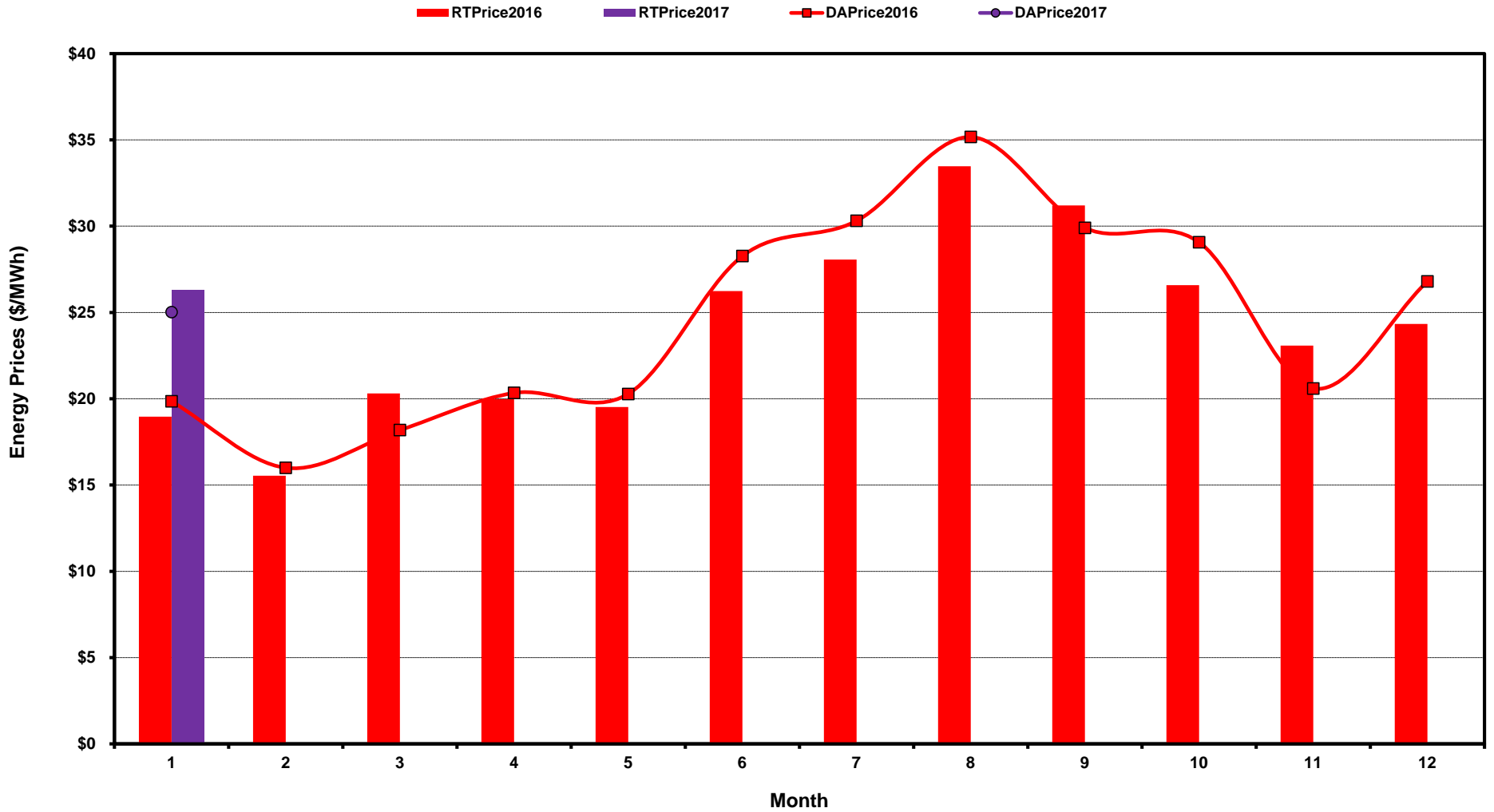
Monday, February 13, 2017

Potomac Economics, Ltd.
Independent Market Monitor

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

ERCOT-wide Average Energy Prices DA vs RT

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



[Home <<](#)

[previous <<](#)

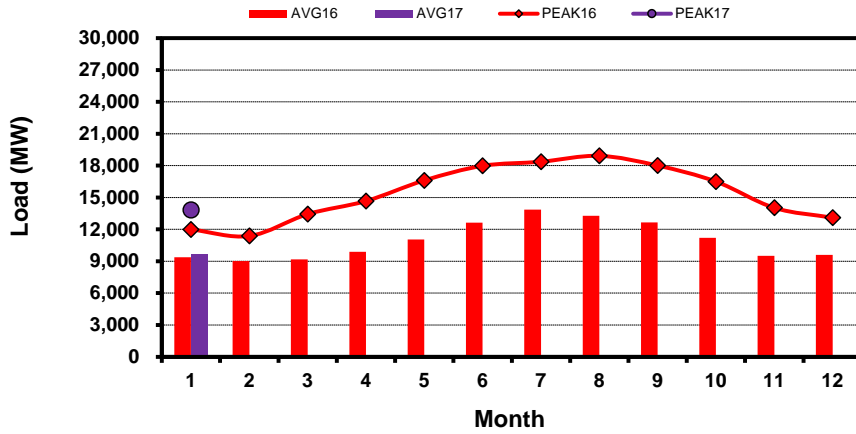
[next >>](#)

[data](#)

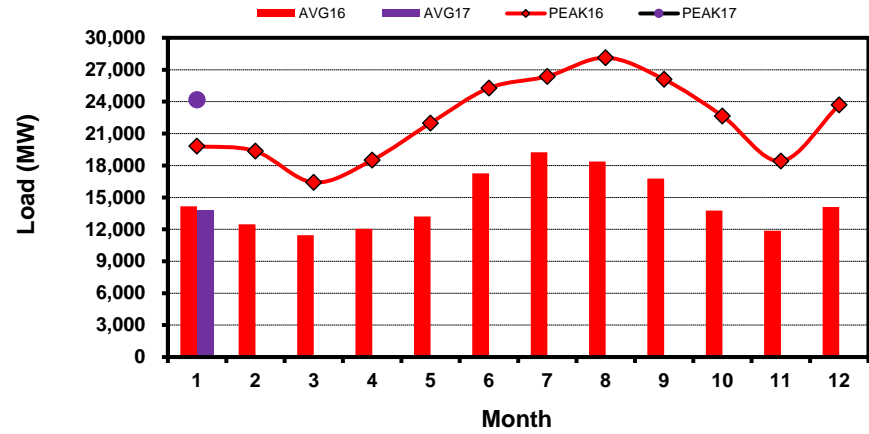
Load Zone Load Statistics

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

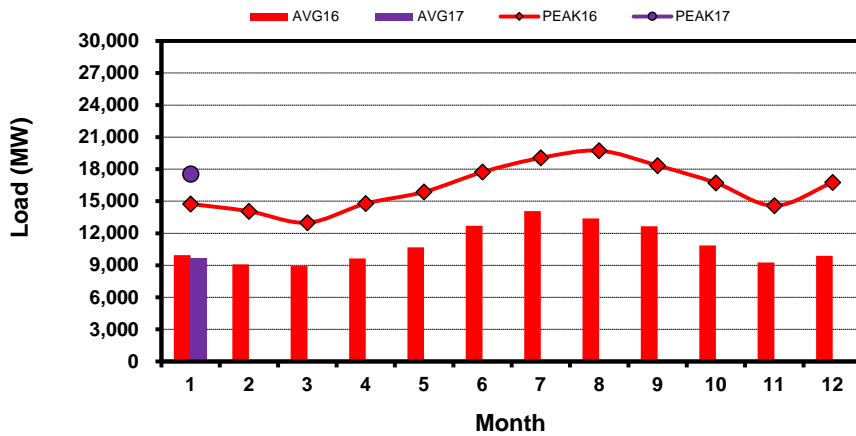
Houston Zone



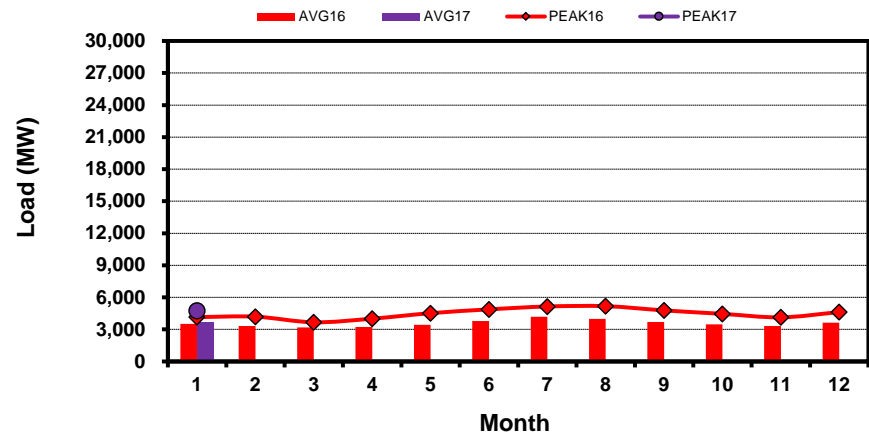
North Zone



South Zone



West Zone



[Home <<](#)

[previous <<](#)

[next >>](#)

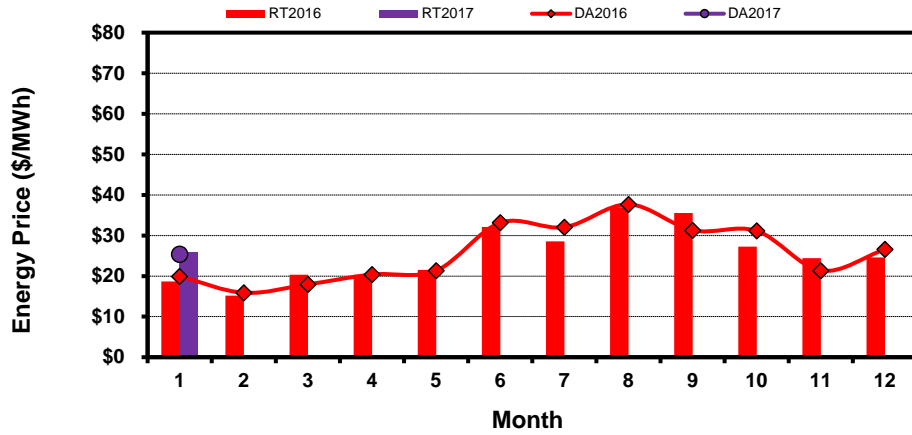
[data](#)

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)

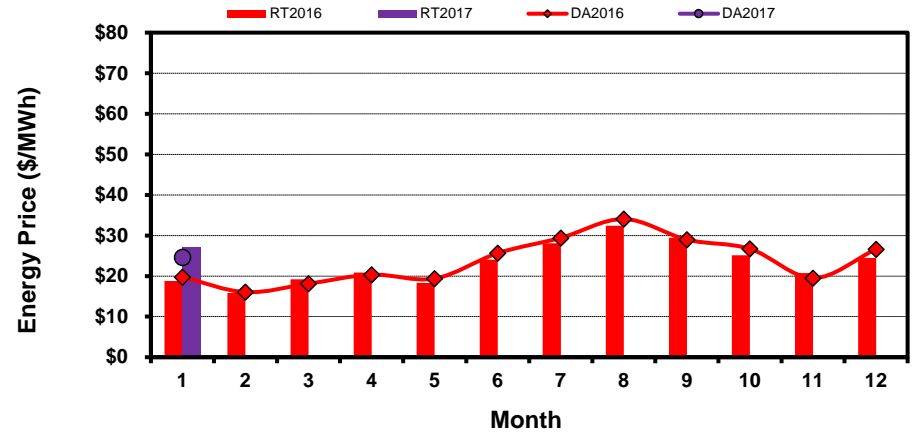
Load Zone Monthly Average Energy Price DA vs RT

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

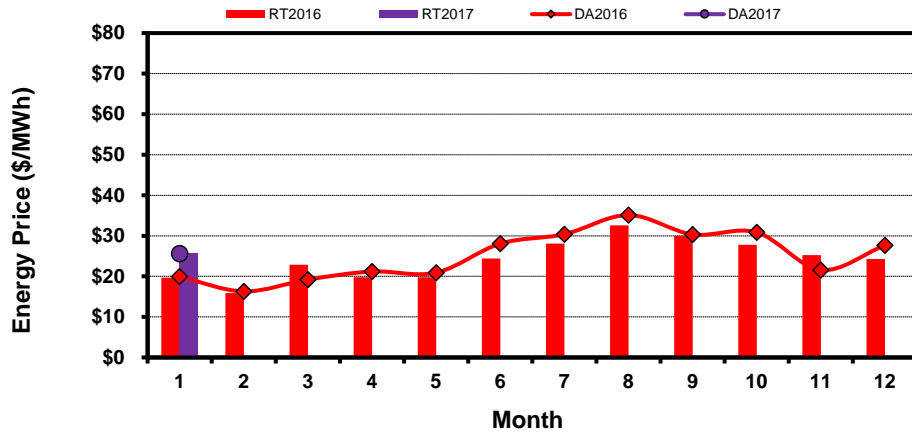
Houston Zone



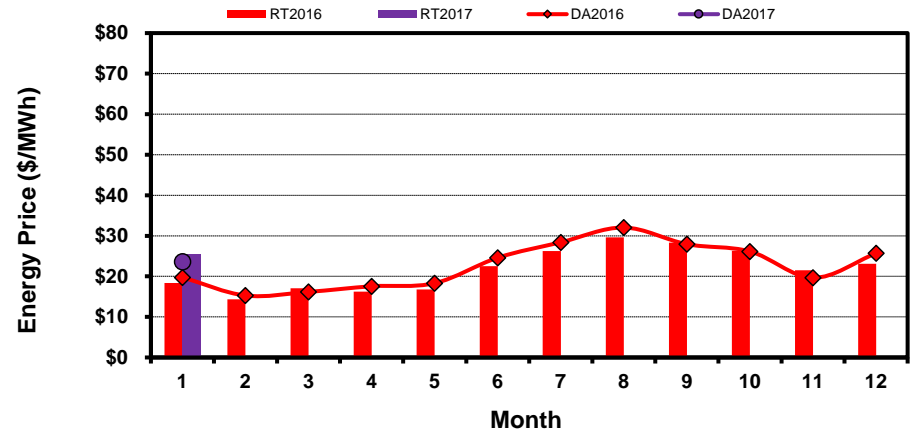
North Zone



South Zone



West Zone



[Home <<](#)

[previous <<](#)

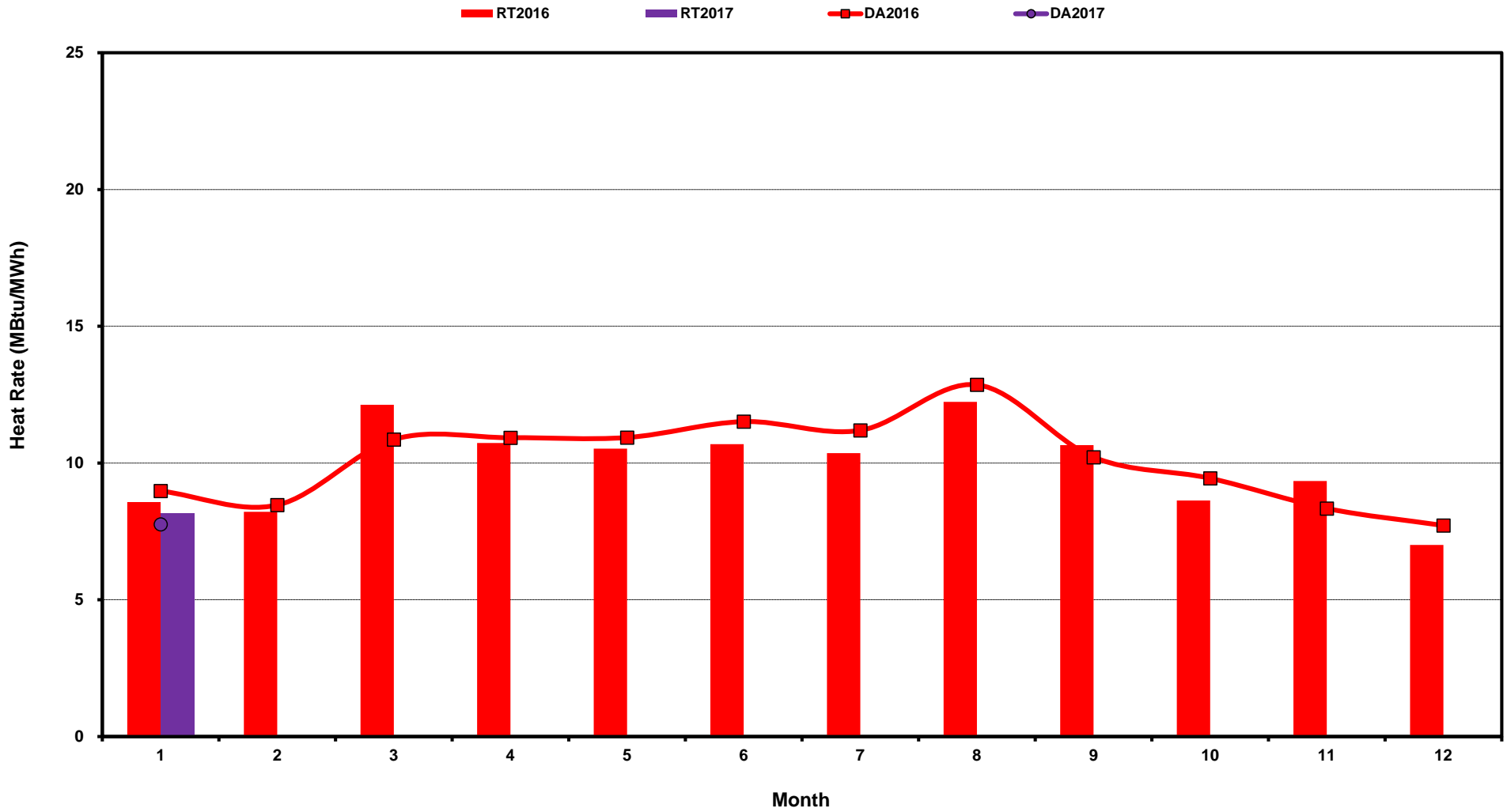
[next >>](#)

[data](#)

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)



[Home <<](#)

[previous <<](#)

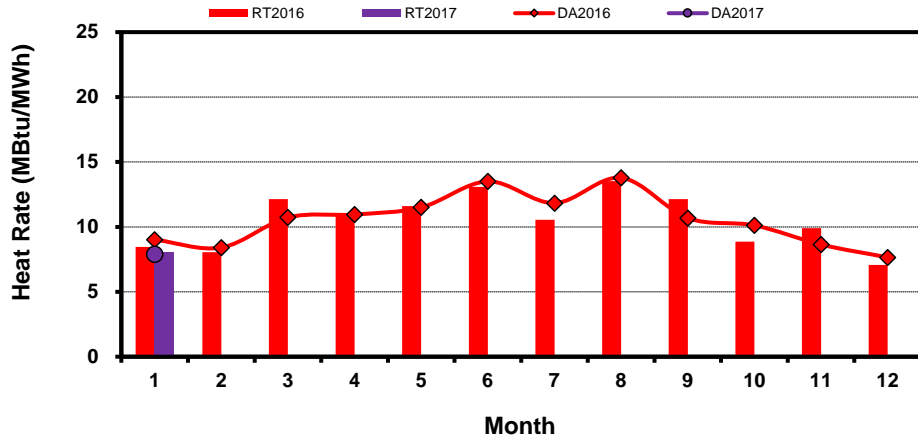
[next >>](#)

[data](#)

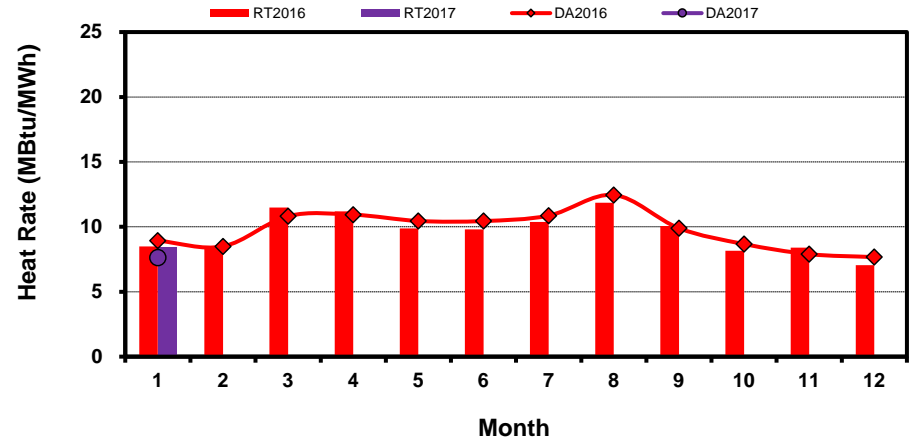
Load Zone Monthly Implied Heat Rate DA vs RT

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

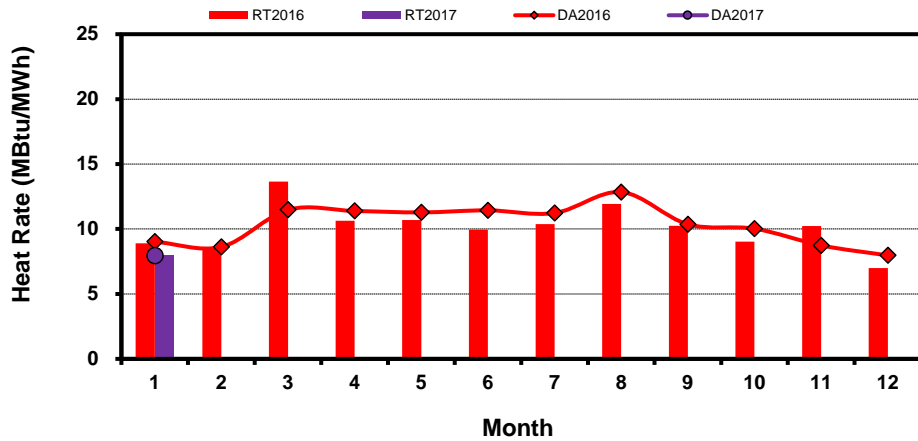
Houston Zone



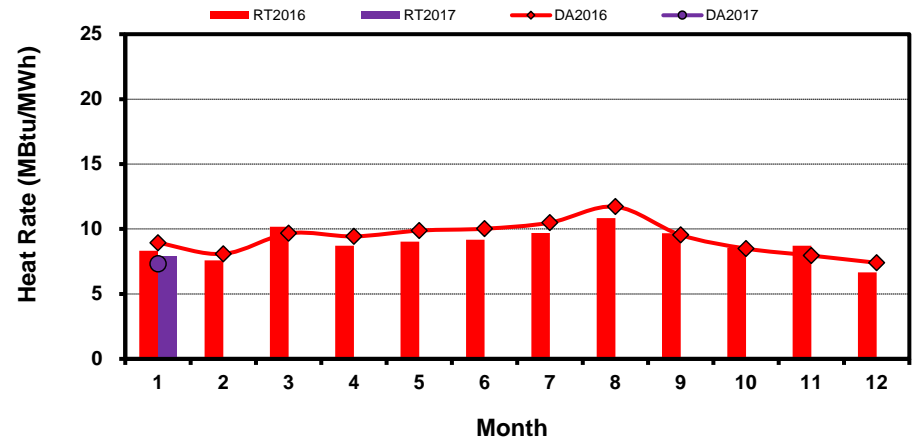
North Zone



South Zone



West Zone



[Home <<](#)

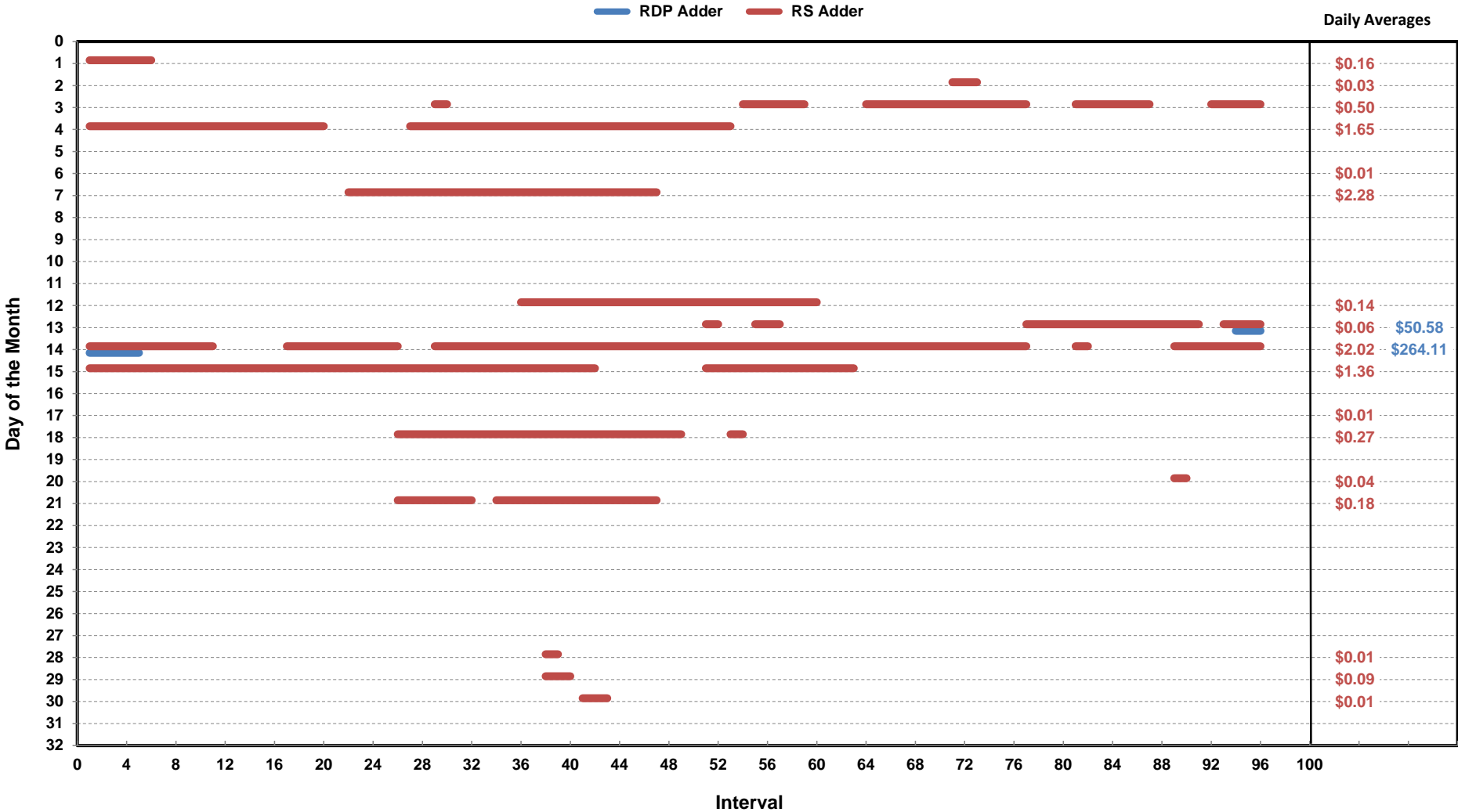
[previous <<](#)

[next >>](#)

[data](#)

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 Jan-2017



[Home <<](#)

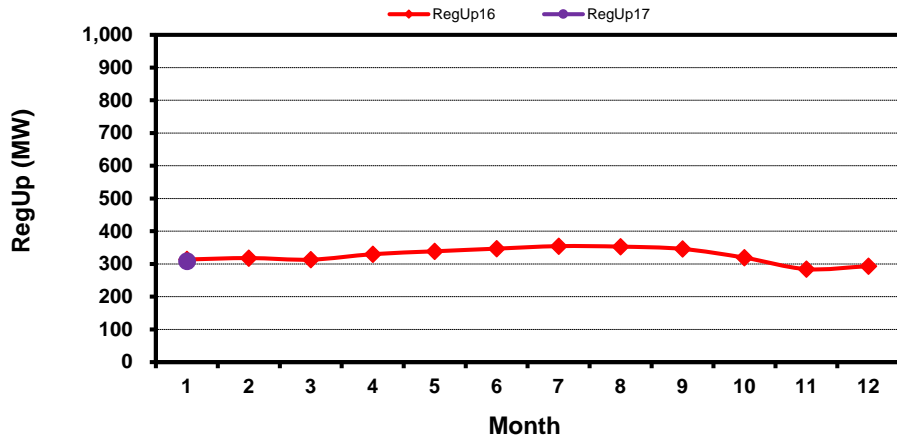
[previous <<](#)

[next >>](#)

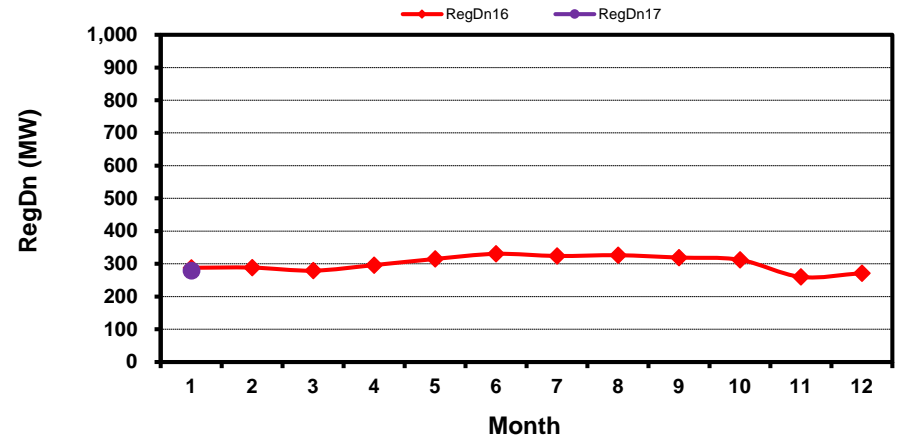
[data](#)

Monthly Average of Ancillary Services Required MW

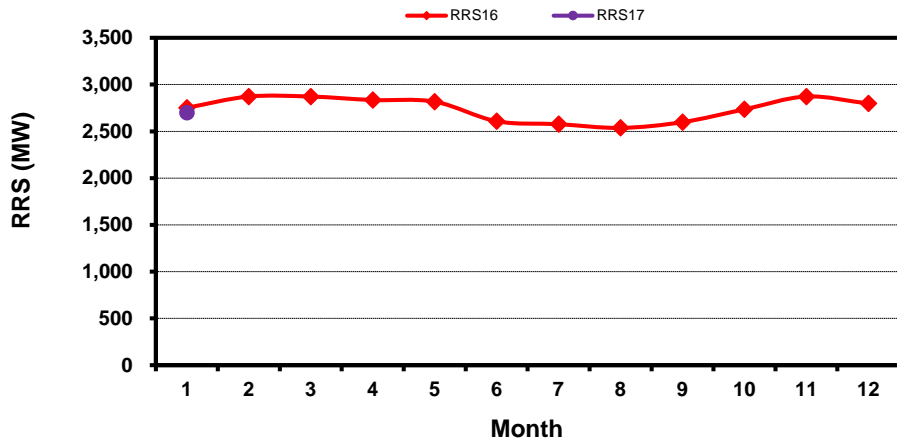
Regulation Up



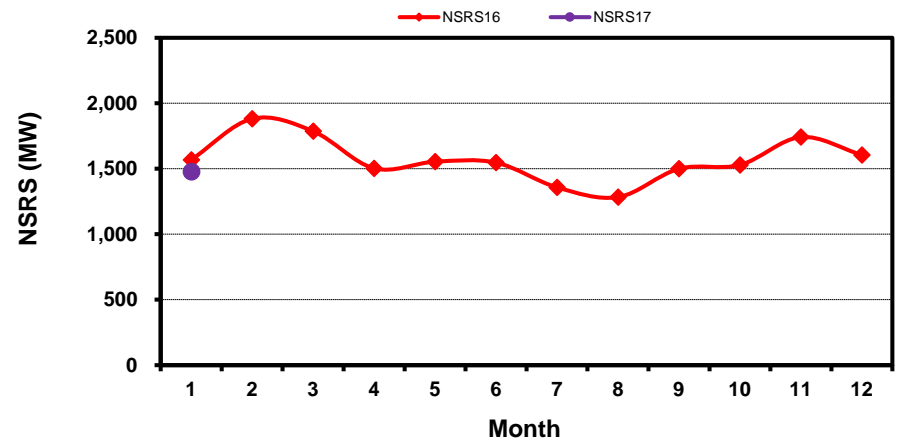
Regulation Down



Responsive Reserve



Non-Spin Reserve



[Home <<](#)

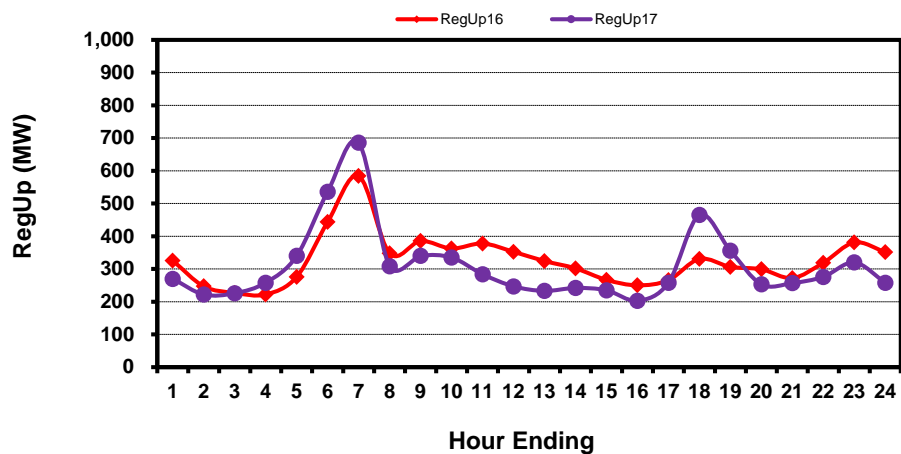
[previous <<](#)

[next >>](#)

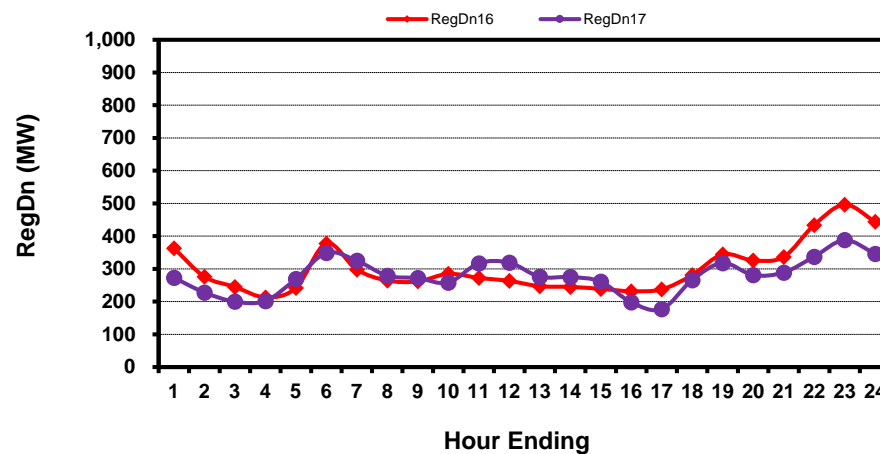
[data](#)

Hourly Average of Ancillary Services Required MW

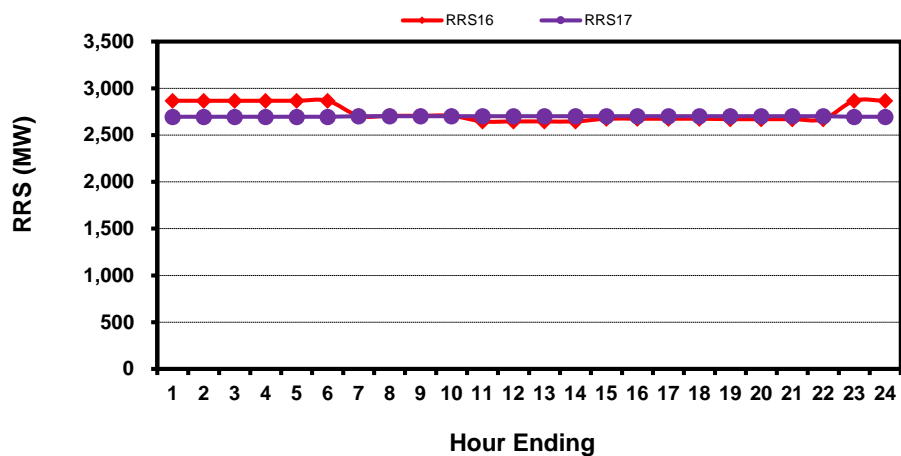
Regulation Up



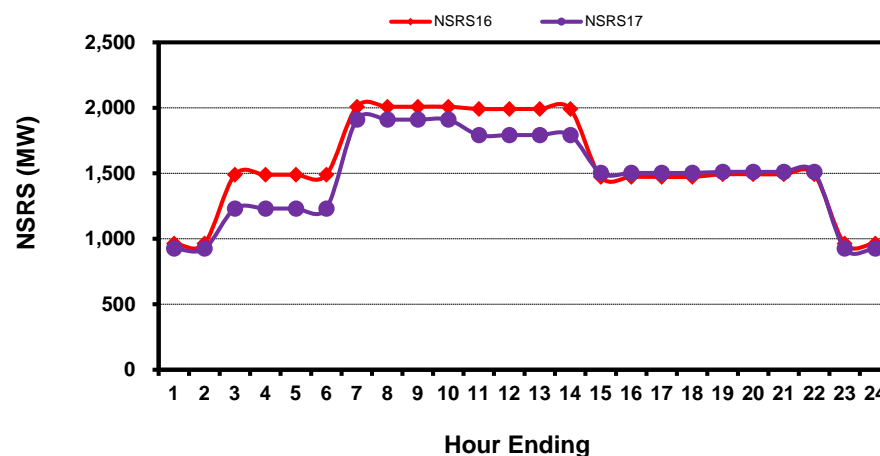
Regulation Down



Responsive Reserve



Non-Spin Reserve



[Home <<](#)

[previous <<](#)

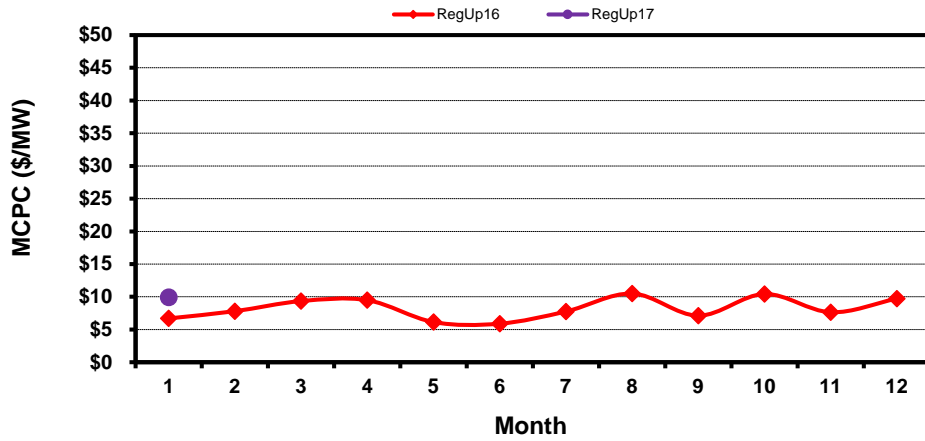
[next >>](#)

[data](#)

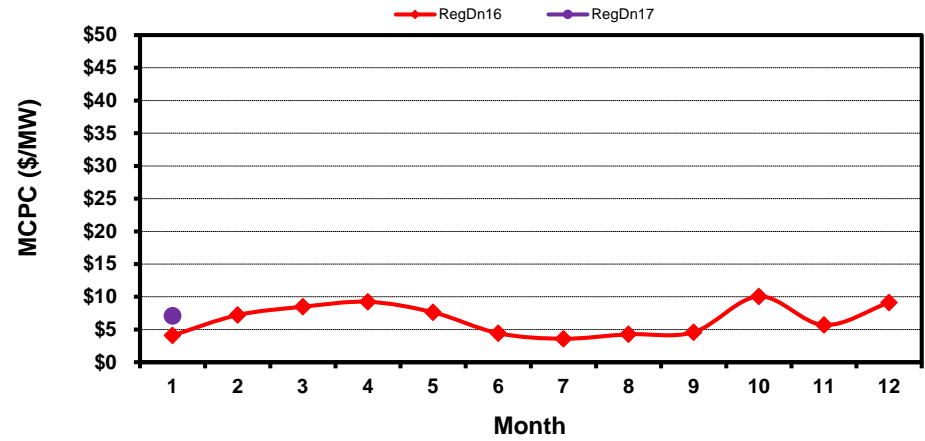
Monthly Average Ancillary Services Price

(weighted by A/S Quantities Required)

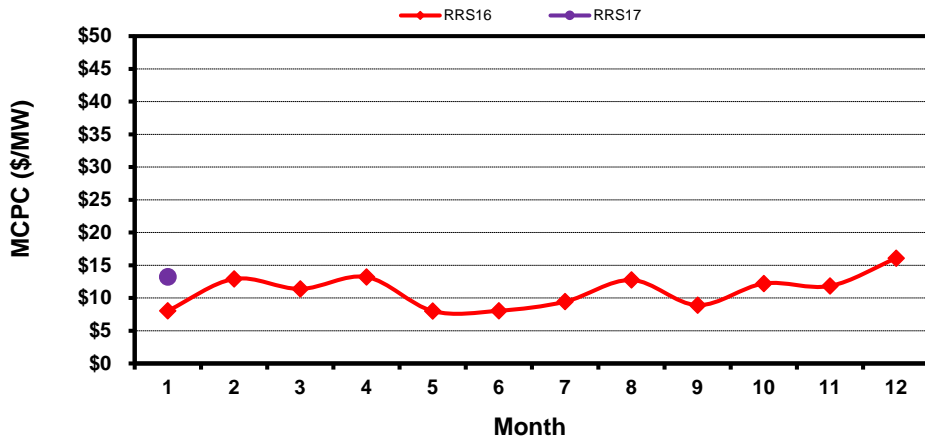
Regulation Up



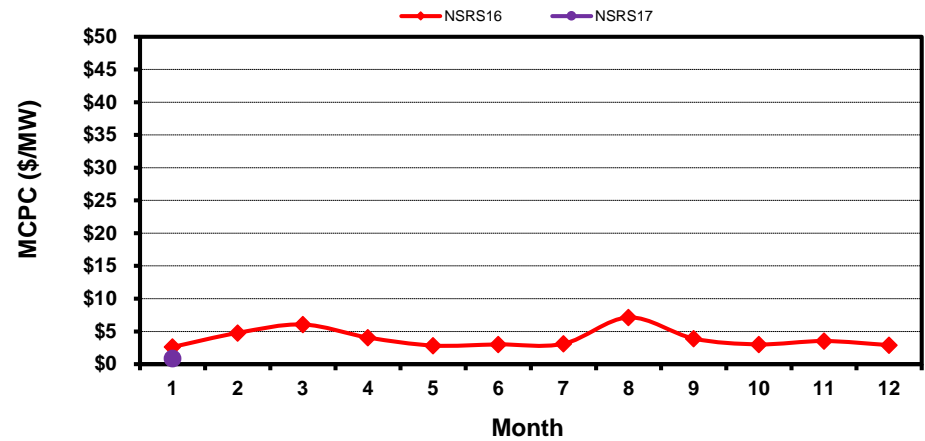
Regulation Down



Responsive Reserve



Non-Spin Reserve



[Home <<](#)

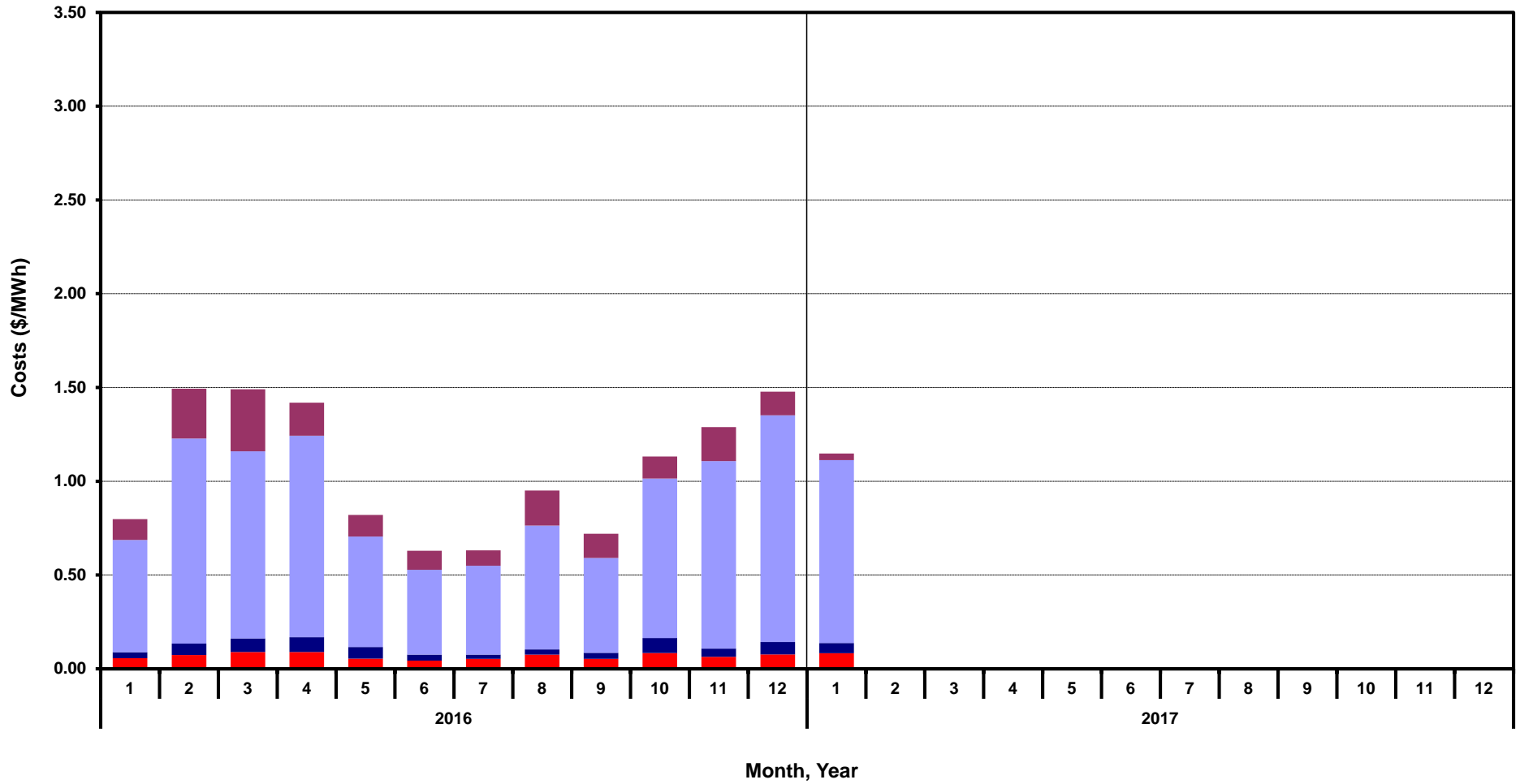
[previous <<](#)

[next >>](#)

[data](#)

Monthly Average A/S Cost per MWh Load

RegUp RegDn RRS NonSpin



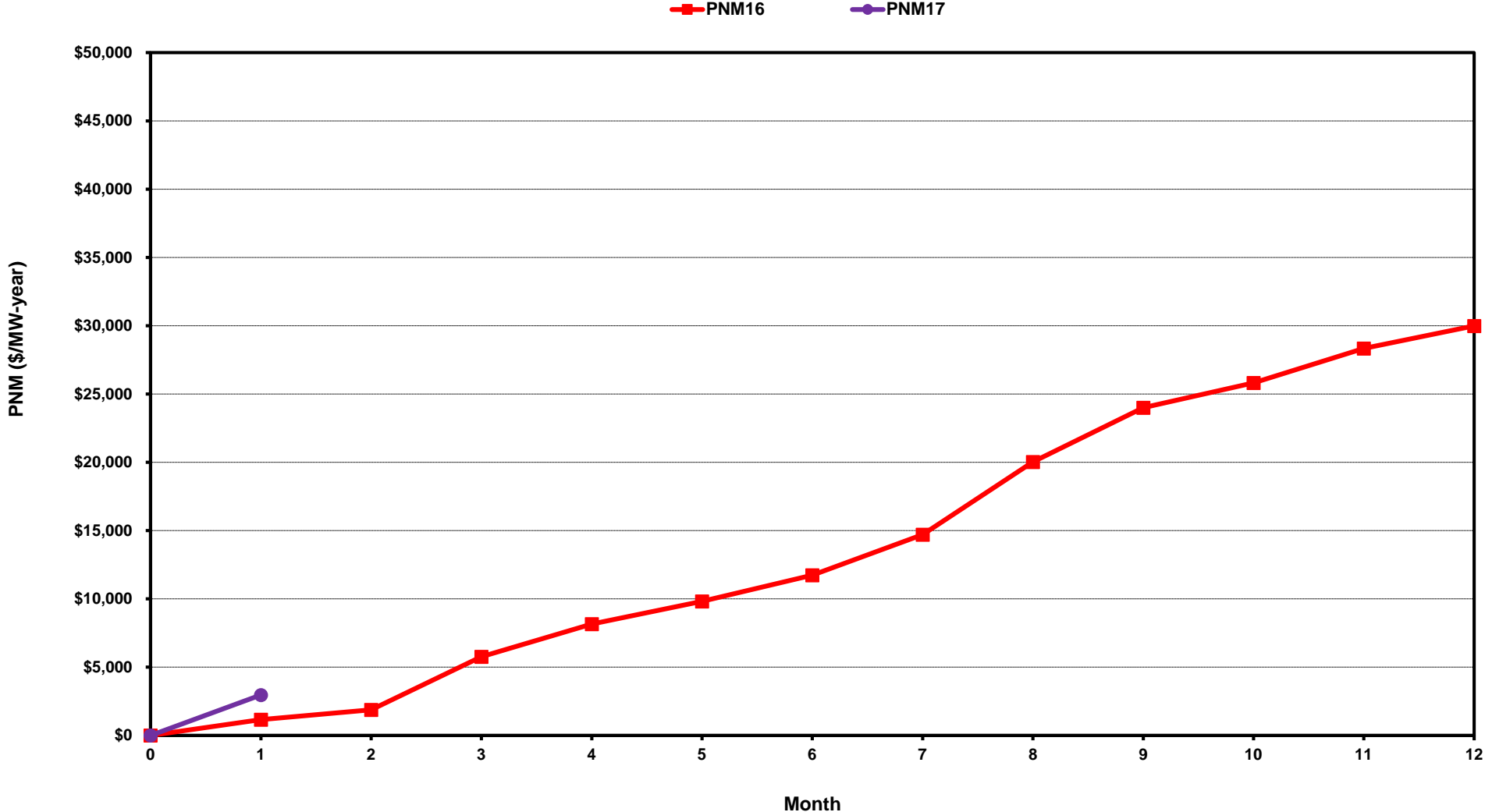
[Home <<](#)

[previous <<](#)

[next >>](#)

[data](#)

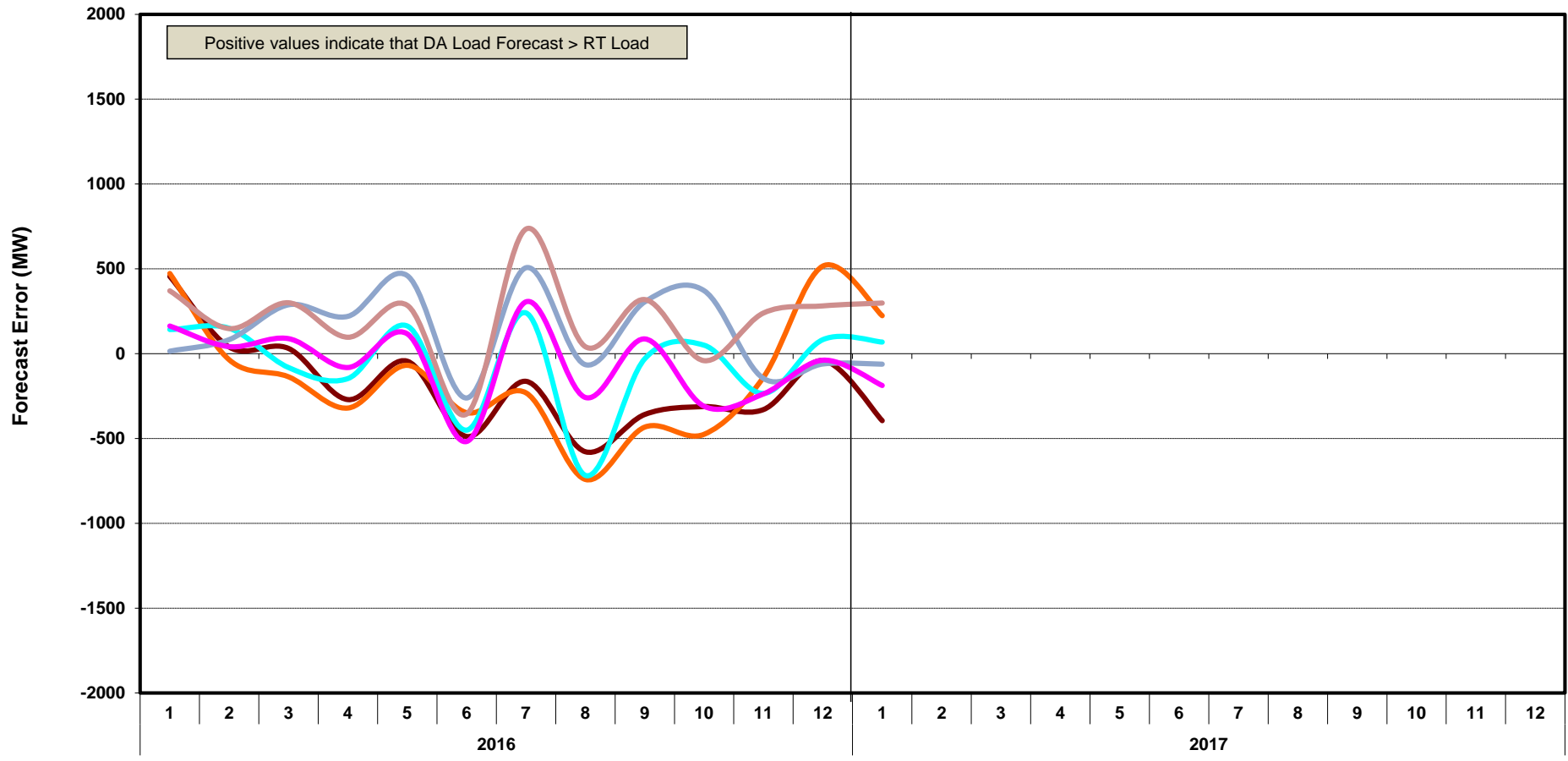
ERCOT-wide Cumulative Peaker Net Margin



[Home <<](#) [previous <<](#) [next >>](#)
[data](#)

DA vs. RT Load Forecast Error by Hour Ending

HE_1_4 HE_5_8 HE_9_12 HE_13_16 HE_17_20 HE_21_24



Month, Year

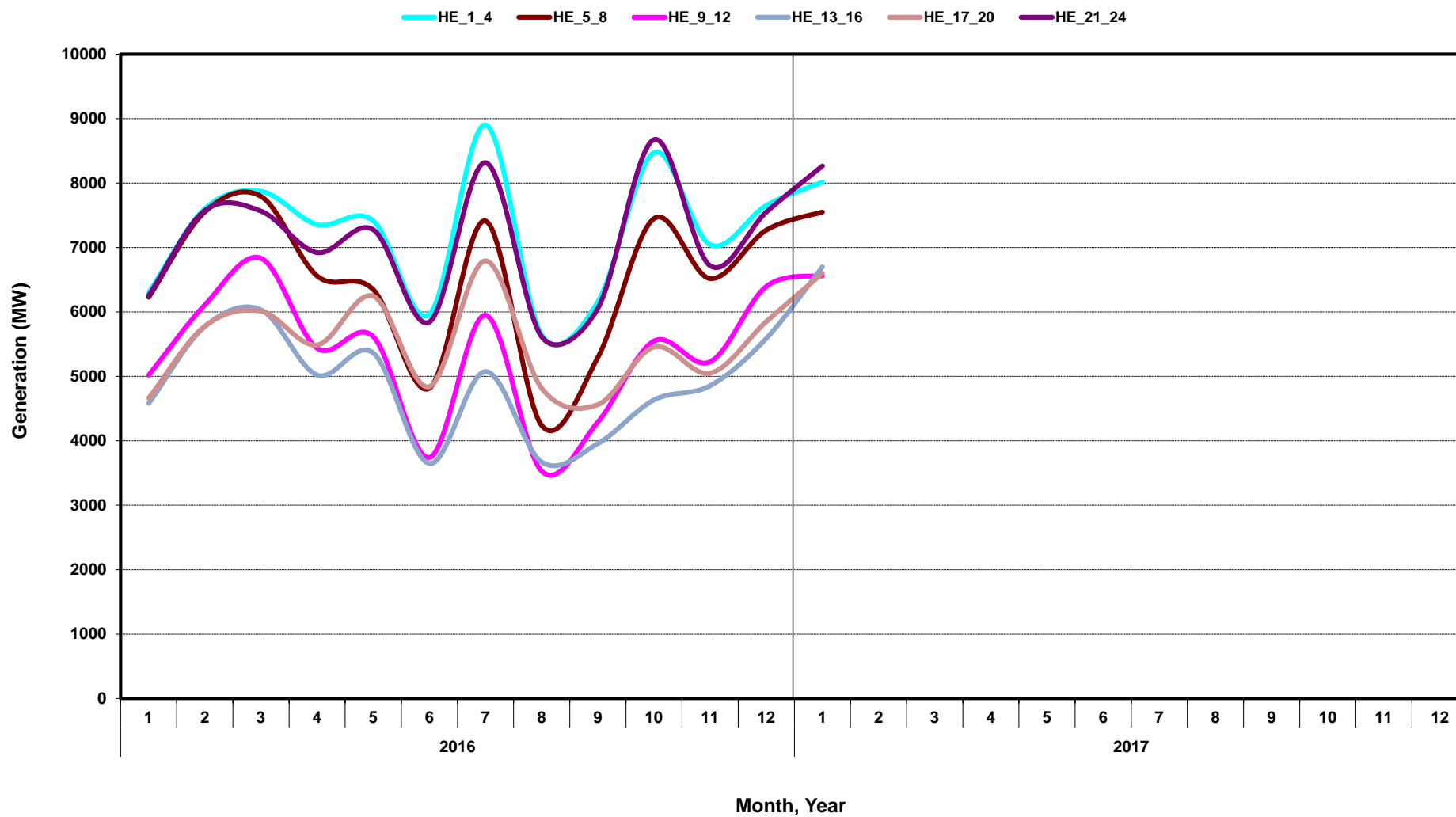
[Home <<](#)

[previous <<](#)

[next >>](#)

[data](#)

Monthly Average of Wind Generation by Hour Ending



[Home <<](#)

[previous <<](#)

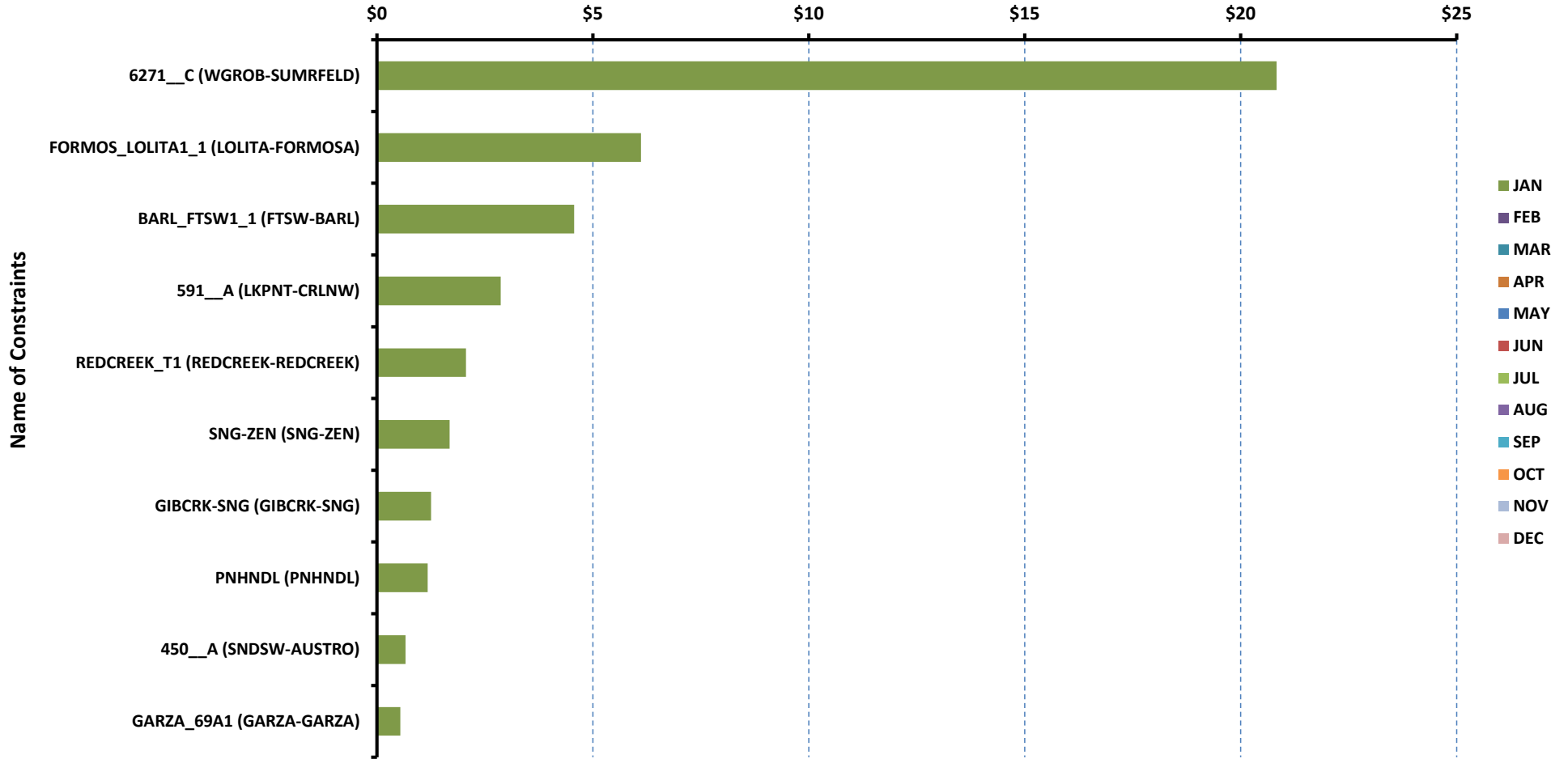
[next >>](#)

[data](#)

RT Congestion Constraint Rankings - 1

Top 10 Constraints by Total Congestion Value

Congestion Rent in \$ million



[Home <<](#)

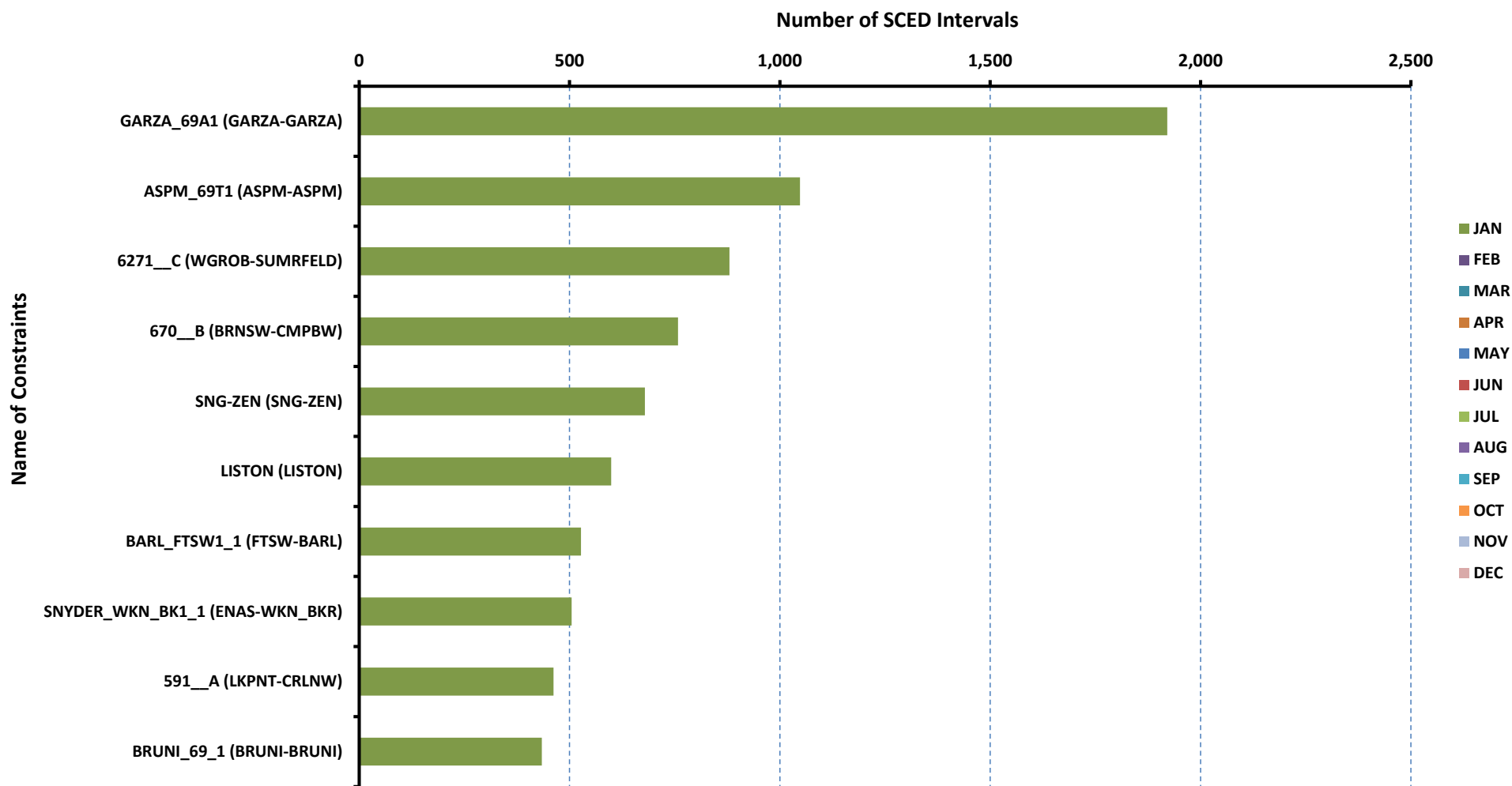
[previous <<](#)

[next >>](#)

[data](#)

RT Congestion Constraint Rankings - 2

Top 10 Constraints by Binding Frequency



[Home <<](#)

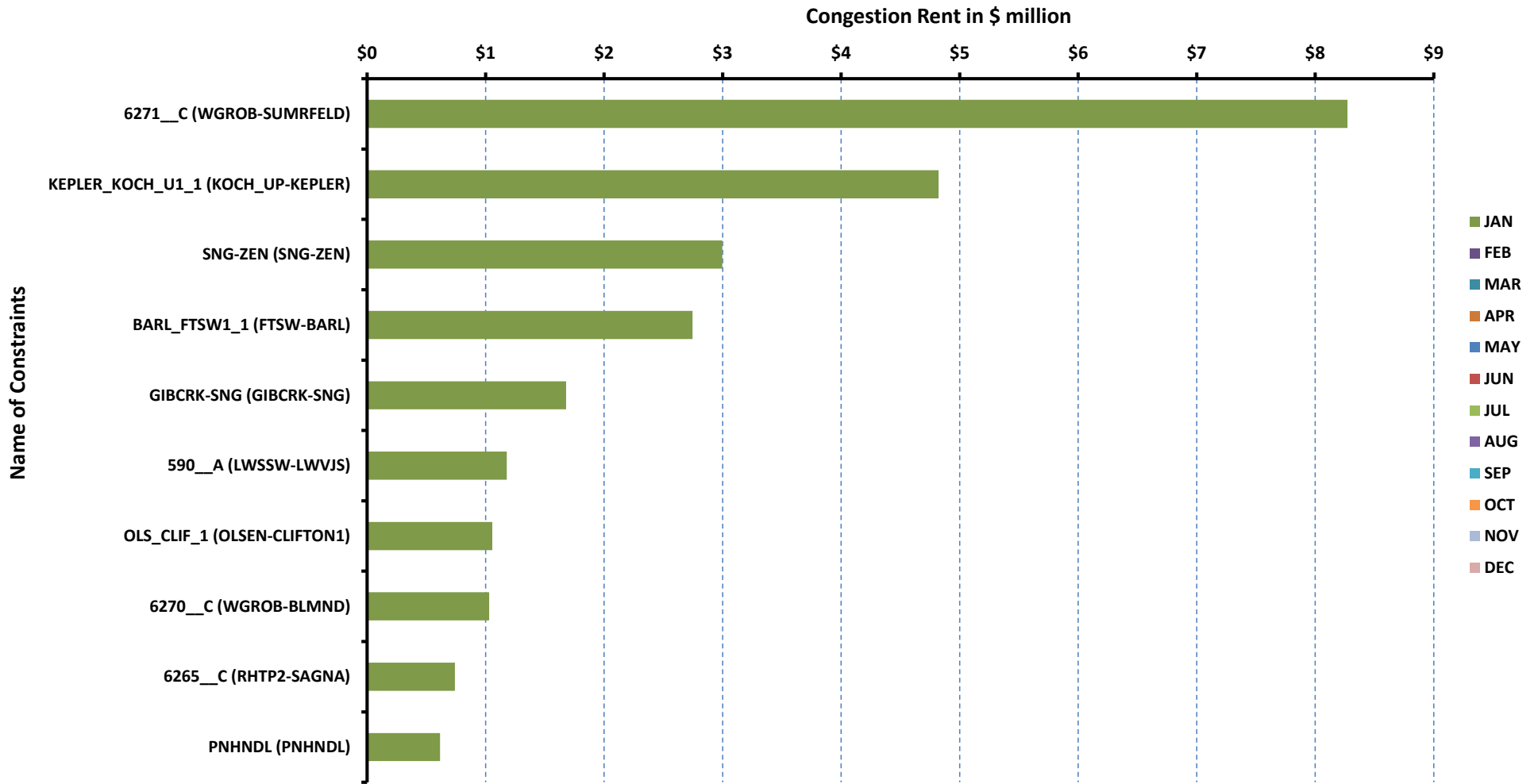
[previous <<](#)

[next >>](#)

[data](#)

DA Congestion Constraint Rankings - 1

Top 10 Constraints by Total Congestion Value



[Home <<](#)

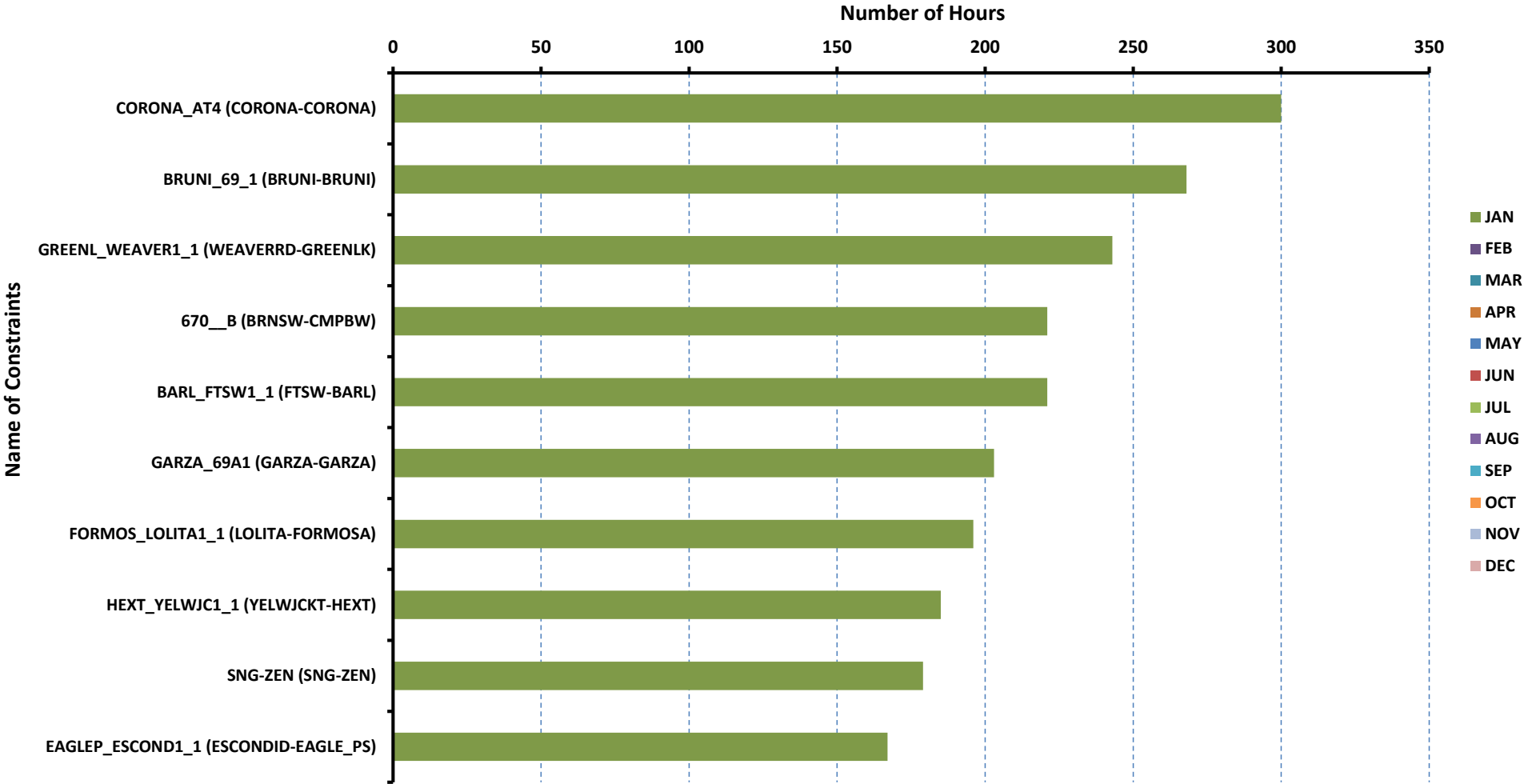
[previous <<](#)

[next >>](#)

[data](#)

DA Congestion Constraint Rankings - 2

Top 10 Constraints by Binding Frequency



[Home <<](#)

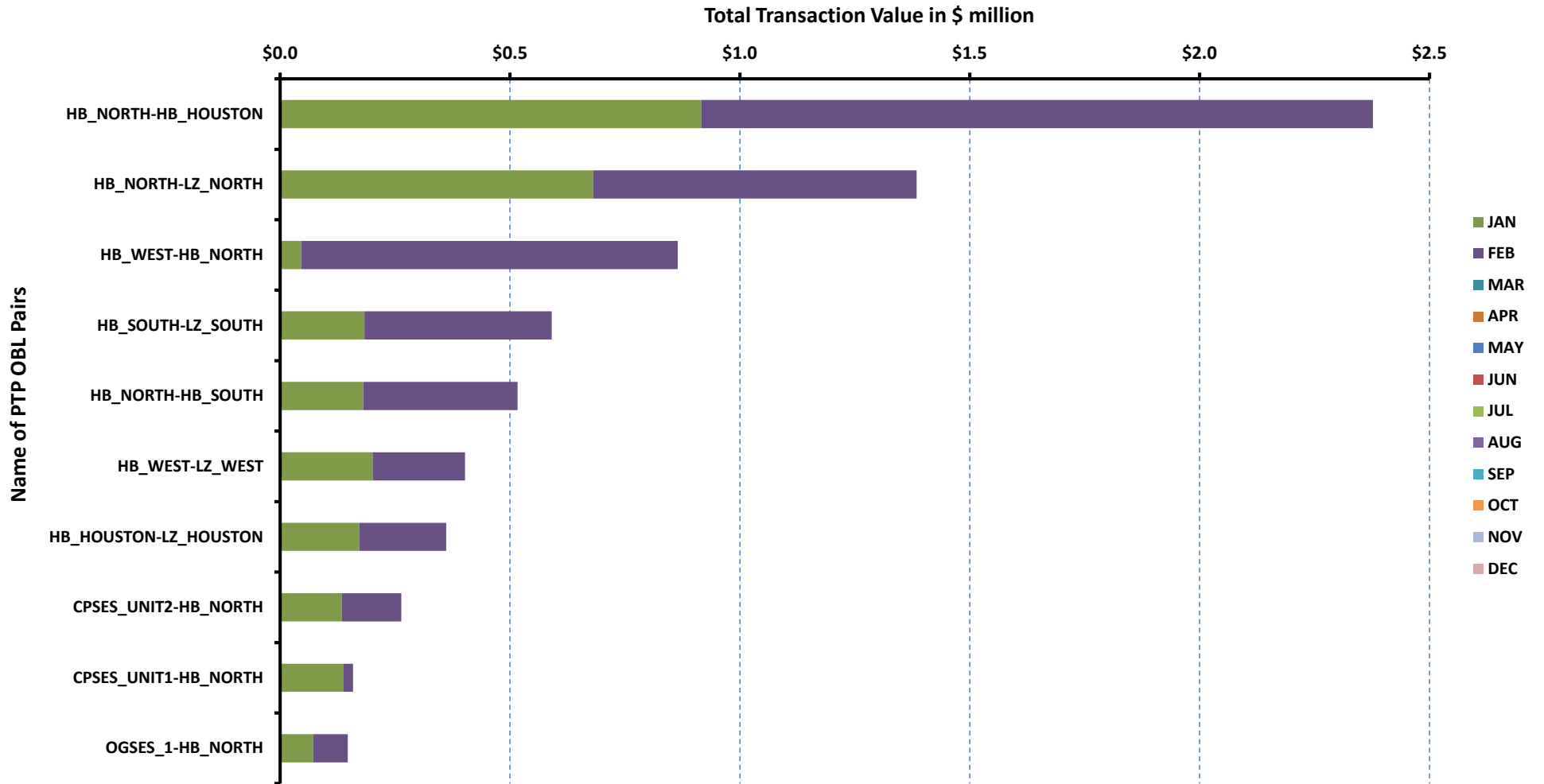
[previous <<](#)

[next >>](#)

[data](#)

Top 10 CRR Pairs Ranked by Monthly Auction Values - 1

Top 10 PTP Obligations by Total Transaction Value



[Home <<](#)

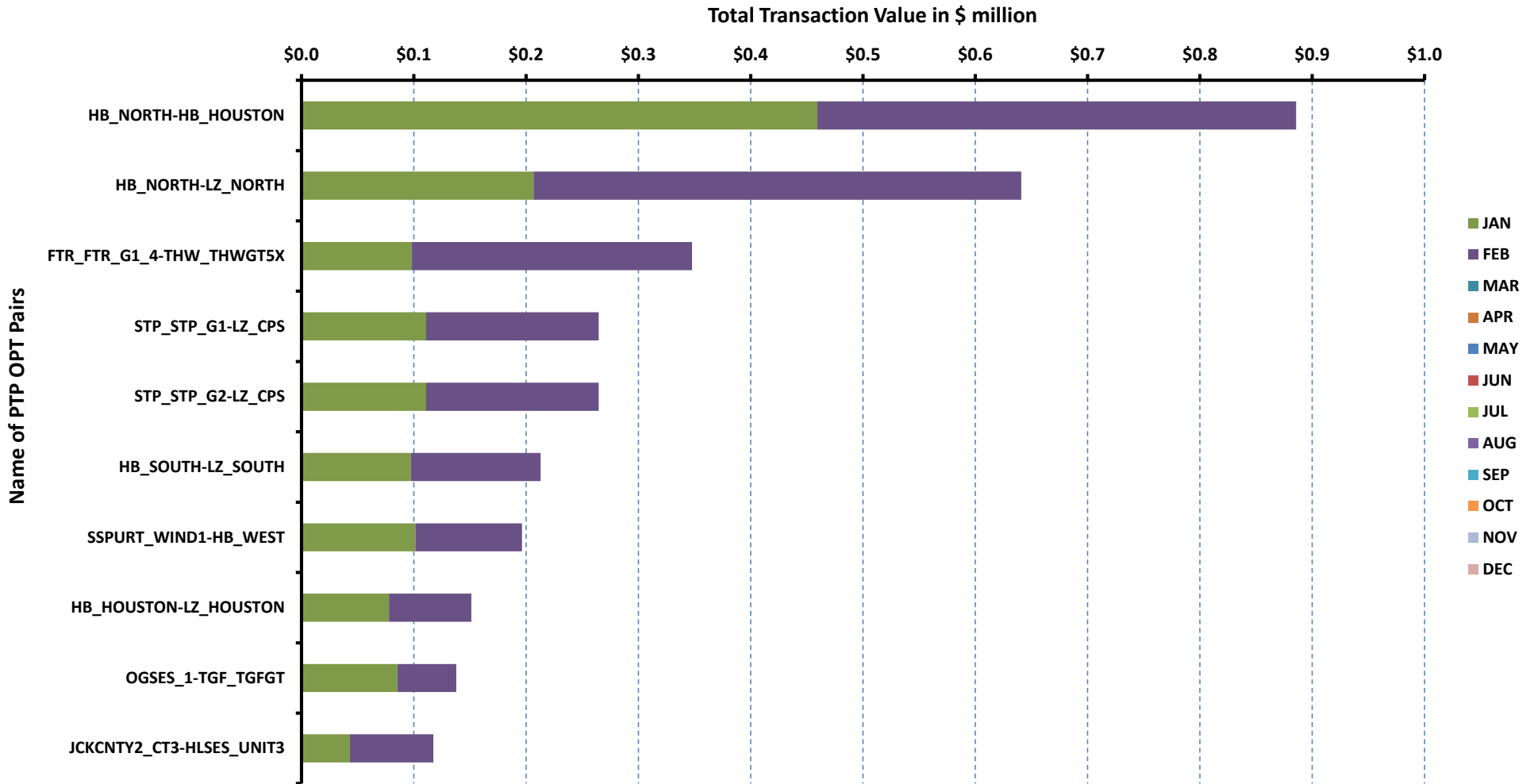
[previous <<](#)

[next >>](#)

[data](#)

Top 10 CRR Pairs Ranked by Monthly Auction Values - 2

Top 10 PTP Options by Total Transaction Value



[Home <<](#)

[previous <<](#)

[next >>](#)

[data](#)

ERCOT-wide Avg. Energy Price - DA vs. RT			
year	month	dam_spp	rtm_spp
2016	1	\$ 19.85	\$ 18.96
	2	\$ 16.00	\$ 15.54
	3	\$ 18.18	\$ 20.30
	4	\$ 20.34	\$ 19.98
	5	\$ 20.28	\$ 19.52
	6	\$ 28.27	\$ 26.23
	7	\$ 30.31	\$ 28.06
	8	\$ 35.17	\$ 33.47
	9	\$ 29.90	\$ 31.20
	10	\$ 29.07	\$ 26.58
	11	\$ 20.59	\$ 23.07
	12	\$ 26.80	\$ 24.33
2017	1	\$ 25.02	\$ 26.29
	2	\$ -	\$ -
	3	\$ -	\$ -
	4	\$ -	\$ -
	5	\$ -	\$ -
	6	\$ -	\$ -
	7	\$ -	\$ -
	8	\$ -	\$ -
	9	\$ -	\$ -
	10	\$ -	\$ -
	11	\$ -	\$ -
	12	\$ -	\$ -

[Home <<](#)

[previous <<](#)

[next >>](#)

[chart](#)

Load Zone Load Statistics										
year	month	loadPEAK_Houston	loadPEAK_North	loadPEAK_South	loadPEAK_West	loadAVG_Houston	loadAVG_North	loadAVG_South	loadAVG_West	
2016	1	11,996	19,817	14,745	4,154	9,367	14,160	9,958	3,525	
	2	11,378	19,345	14,062	4,194	9,027	12,473	9,085	3,318	
	3	13,434	16,410	12,996	3,667	9,184	11,447	8,934	3,177	
	4	14,666	18,506	14,780	4,007	9,890	12,058	9,634	3,239	
	5	16,608	21,991	15,871	4,520	11,044	13,212	10,679	3,423	
	6	17,981	25,275	17,724	4,876	12,627	17,254	12,696	3,795	
	7	18,366	26,374	19,056	5,146	13,866	19,238	14,083	4,192	
	8	18,920	28,134	19,726	5,174	13,282	18,383	13,382	3,976	
	9	18,005	26,091	18,339	4,781	12,648	16,770	12,650	3,697	
	10	16,498	22,649	16,716	4,457	11,207	13,760	10,855	3,471	
	11	14,030	18,417	14,579	4,131	9,509	11,877	9,268	3,330	
	12	13,097	23,695	16,760	4,620	9,611	14,088	9,874	3,638	
2017	1	13,844	24,183	17,552	4,760	9,604	13,771	9,669	3,668	
	2	-	-	-	-	-	-	-	-	
	3	-	-	-	-	-	-	-	-	
	4	-	-	-	-	-	-	-	-	
	5	-	-	-	-	-	-	-	-	
	6	-	-	-	-	-	-	-	-	
	7	-	-	-	-	-	-	-	-	
	8	-	-	-	-	-	-	-	-	
	9	-	-	-	-	-	-	-	-	
	10	-	-	-	-	-	-	-	-	
	11	-	-	-	-	-	-	-	-	
	12	-	-	-	-	-	-	-	-	

[Home <<](#)

[previous <<](#)

[next >>](#)

[chart](#)

Load Zone Monthly Average Energy Price - DA vs. RT										
year	month	avgRTMp_Houston	avgRTMp_North	avgRTMp_South	avgRTMp_West	avgDAMp_Houston	avgDAMp_North	avgDAMp_South	avgDAMp_West	
2016	1	\$ 18.68	\$ 18.77	\$ 19.69	\$ 18.39	\$ 19.93	\$ 19.74	\$ 19.95	\$ 19.76	
	2	\$ 15.20	\$ 15.84	\$ 15.89	\$ 14.35	\$ 15.89	\$ 16.05	\$ 16.30	\$ 15.28	
	3	\$ 20.31	\$ 19.22	\$ 22.84	\$ 17.04	\$ 17.95	\$ 18.12	\$ 19.22	\$ 16.18	
	4	\$ 20.32	\$ 20.84	\$ 19.79	\$ 16.22	\$ 20.39	\$ 20.35	\$ 21.20	\$ 17.56	
	5	\$ 21.52	\$ 18.32	\$ 19.82	\$ 16.75	\$ 21.33	\$ 19.38	\$ 20.92	\$ 18.32	
	6	\$ 32.12	\$ 24.08	\$ 24.42	\$ 22.53	\$ 33.15	\$ 25.64	\$ 28.08	\$ 24.60	
	7	\$ 28.55	\$ 28.07	\$ 28.10	\$ 26.26	\$ 32.03	\$ 29.41	\$ 30.40	\$ 28.41	
	8	\$ 36.96	\$ 32.41	\$ 32.61	\$ 29.64	\$ 37.68	\$ 34.06	\$ 35.13	\$ 32.05	
	9	\$ 35.54	\$ 29.45	\$ 30.02	\$ 28.35	\$ 31.27	\$ 28.97	\$ 30.34	\$ 27.94	
	10	\$ 27.27	\$ 25.14	\$ 27.77	\$ 26.33	\$ 31.14	\$ 26.70	\$ 30.86	\$ 26.15	
	11	\$ 24.43	\$ 20.73	\$ 25.25	\$ 21.51	\$ 21.34	\$ 19.50	\$ 21.58	\$ 19.64	
	12	\$ 24.59	\$ 24.50	\$ 24.29	\$ 23.12	\$ 26.58	\$ 26.63	\$ 27.67	\$ 25.70	
2017	1	\$ 25.96	\$ 27.15	\$ 25.69	\$ 25.51	\$ 25.44	\$ 24.64	\$ 25.66	\$ 23.64	
	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	4	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	6	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	7	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	8	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	9	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	10	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	11	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	12	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	

[Home <<](#)

[previous <<](#)

[next >>](#)

[chart](#)

ERCOT-wide Monthly Implied Heat Rate - DA vs. RT						
year	month	gasprice	rtm_spp	HR_rtm	dam_spp	HR_dam
2016	1	\$ 2.21	\$ 18.96	8.58	\$ 19.85	8.98
	2	\$ 1.89	\$ 15.54	8.22	\$ 16.00	8.46
	3	\$ 1.67	\$ 20.30	12.13	\$ 18.18	10.86
	4	\$ 1.86	\$ 19.98	10.73	\$ 20.34	10.92
	5	\$ 1.85	\$ 19.52	10.52	\$ 20.28	10.93
	6	\$ 2.46	\$ 26.23	10.69	\$ 28.27	11.51
	7	\$ 2.71	\$ 28.06	10.36	\$ 30.31	11.19
	8	\$ 2.73	\$ 33.47	12.24	\$ 35.17	12.86
	9	\$ 2.93	\$ 31.20	10.66	\$ 29.90	10.21
	10	\$ 3.08	\$ 26.58	8.63	\$ 29.07	9.44
	11	\$ 2.47	\$ 23.07	9.34	\$ 20.59	8.34
	12	\$ 3.47	\$ 24.33	7.00	\$ 26.80	7.72
2017	1	\$ 3.22	\$ 26.29	8.16	\$ 25.02	7.76
	2	\$ -	\$ -	-	\$ -	-
	3	\$ -	\$ -	-	\$ -	-
	4	\$ -	\$ -	-	\$ -	-
	5	\$ -	\$ -	-	\$ -	-
	6	\$ -	\$ -	-	\$ -	-
	7	\$ -	\$ -	-	\$ -	-
	8	\$ -	\$ -	-	\$ -	-
	9	\$ -	\$ -	-	\$ -	-
	10	\$ -	\$ -	-	\$ -	-
	11	\$ -	\$ -	-	\$ -	-
	12	\$ -	\$ -	-	\$ -	-

[Home <<](#)

[previous <<](#)

[next >>](#)

[chart](#)

Load Zone Monthly Implied Heat Rate - DA vs. RT									
year	month	HRdam_Houston	HRdam_South	HRdam_North	HRdam_West	HRrtm_Houston	HRrtm_South	HRrtm_North	HRrtm_West
2016	1	9.02	9.02	8.93	8.94	8.45	8.91	8.49	8.32
	2	8.41	8.62	8.49	8.08	8.04	8.41	8.38	7.59
	3	10.73	11.48	10.82	9.67	12.13	13.65	11.48	10.18
	4	10.95	11.39	10.93	9.43	10.92	10.63	11.20	8.71
	5	11.50	11.28	10.45	9.88	11.60	10.68	9.88	9.03
	6	13.50	11.44	10.44	10.02	13.08	9.95	9.81	9.18
	7	11.83	11.23	10.86	10.49	10.55	10.38	10.37	9.70
	8	13.78	12.84	12.45	11.72	13.52	11.92	11.85	10.84
	9	10.68	10.36	9.89	9.54	12.14	10.25	10.06	9.68
	10	10.11	10.02	8.67	8.49	8.86	9.02	8.16	8.55
	11	8.64	8.74	7.89	7.95	9.89	10.22	8.39	8.71
	12	7.65	7.97	7.67	7.40	7.08	6.99	7.05	6.66
2017	1	7.89	7.96	7.64	7.33	8.05	7.97	8.42	7.92
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-
	5	-	-	-	-	-	-	-	-
	6	-	-	-	-	-	-	-	-
	7	-	-	-	-	-	-	-	-
	8	-	-	-	-	-	-	-	-
	9	-	-	-	-	-	-	-	-
	10	-	-	-	-	-	-	-	-
	11	-	-	-	-	-	-	-	-
	12	-	-	-	-	-	-	-	-

[Home <<](#)

[previous <<](#)

[next >>](#)

[chart](#)

Daily ORDC Adders Average Values and Interval Duration								
YEAR	MONTH	DAY	PRICE_RS	PRICE_RDP	RS_CNT	RDP_CNT	RS_POS	RDP_POS
2017	1	1	\$ 0.16	\$ -	6	0	80	90
2017	1	2	\$ 0.03	\$ -	3	0	80	90
2017	1	3	\$ 0.50	\$ -	35	0	80	90
2017	1	4	\$ 1.65	\$ -	48	0	80	90
2017	1	5	\$ -	\$ -	0	0	80	90
2017	1	6	\$ 0.01	\$ -	1	0	80	90
2017	1	7	\$ 2.28	\$ -	27	0	80	90
2017	1	8	\$ -	\$ -	0	0	80	90
2017	1	9	\$ -	\$ -	0	0	80	90
2017	1	10	\$ -	\$ -	0	0	80	90
2017	1	11	\$ -	\$ -	0	0	80	90
2017	1	12	\$ 0.14	\$ -	25	0	80	90
2017	1	13	\$ 0.06	\$ 50.58	25	3	80	90
2017	1	14	\$ 2.02	\$ 264.11	80	5	80	90
2017	1	15	\$ 1.36	\$ -	55	0	80	90
2017	1	16	\$ -	\$ -	0	0	80	90
2017	1	17	\$ 0.01	\$ -	2	0	80	90
2017	1	18	\$ 0.27	\$ -	26	0	80	90
2017	1	19	\$ -	\$ -	0	0	80	90
2017	1	20	\$ 0.04	\$ -	2	0	80	90
2017	1	21	\$ 0.18	\$ -	21	0	80	90
2017	1	22	\$ -	\$ -	0	0	80	90
2017	1	23	\$ -	\$ -	0	0	80	90
2017	1	24	\$ -	\$ -	0	0	80	90
2017	1	25	\$ -	\$ -	0	0	80	90
2017	1	26	\$ -	\$ -	0	0	80	90
2017	1	27	\$ -	\$ -	0	0	80	90
2017	1	28	\$ 0.01	\$ -	2	0	80	90
2017	1	29	\$ 0.09	\$ -	3	0	80	90
2017	1	30	\$ 0.01	\$ -	3	0	80	90
2017	1	31	\$ -	\$ -	0	0	80	90

[Home <<](#)

[previous <<](#)

[next >>](#)

[chart](#)

Monthly Average of Ancillary Services Required MW					
year	month	ASMW_REGDN	ASMW_NSPIN	ASMW_RRS	ASMW_REGUP
2016	1	288	1,568	2,752	314
	2	289	1,882	2,872	318
	3	279	1,787	2,872	313
	4	296	1,503	2,835	330
	5	315	1,554	2,817	339
	6	331	1,547	2,608	347
	7	324	1,358	2,577	354
	8	326	1,283	2,537	353
	9	319	1,500	2,598	346
	10	312	1,529	2,735	319
	11	260	1,742	2,872	284
	12	272	1,605	2,797	293
2017	1	279	1,479	2,700	309
	2	-	-	-	-
	3	-	-	-	-
	4	-	-	-	-
	5	-	-	-	-
	6	-	-	-	-
	7	-	-	-	-
	8	-	-	-	-
	9	-	-	-	-
	10	-	-	-	-
	11	-	-	-	-
	12	-	-	-	-

[Home <<](#)

[previous <<](#)

[next >>](#)

[chart](#)

Hourly Average of Ancillary Services Required MW					
year	DELIVERY_HOUR	ASMW_REGDN	ASMW_NSPIN	ASMW_RRS	ASMW_REGUP
2016	1	363	964	2,867	325
	2	276	964	2,867	247
	3	245	1,489	2,867	227
	4	213	1,489	2,867	222
	5	242	1,489	2,867	276
	6	378	1,489	2,867	444
	7	298	2,008	2,706	584
	8	264	2,008	2,706	348
	9	262	2,008	2,706	385
	10	285	2,008	2,706	363
	11	273	1,991	2,646	378
	12	263	1,991	2,646	353
	13	247	1,991	2,646	324
	14	245	1,991	2,646	302
	15	239	1,473	2,675	267
	16	232	1,473	2,675	250
	17	237	1,473	2,675	266
	18	281	1,473	2,675	331
	19	344	1,492	2,670	306
	20	326	1,492	2,670	299
	21	337	1,492	2,670	272
	22	434	1,492	2,670	319
	23	496	964	2,867	381
	24	444	964	2,867	352
2017	1	273	925	2,696	270
	2	228	925	2,696	222
	3	200	1,231	2,696	226
	4	202	1,231	2,696	258
	5	269	1,231	2,696	340
	6	349	1,231	2,696	536
	7	325	1,910	2,702	686
	8	279	1,910	2,702	308
	9	272	1,910	2,702	340
	10	258	1,910	2,702	335
	11	317	1,792	2,702	284
	12	319	1,792	2,702	247
	13	276	1,792	2,702	233
	14	275	1,792	2,702	242
	15	261	1,503	2,702	235
	16	198	1,503	2,702	203
	17	177	1,503	2,702	258
	18	266	1,503	2,702	465
	19	318	1,511	2,702	356
	20	281	1,511	2,702	253
	21	289	1,511	2,702	257
	22	337	1,511	2,702	276
	23	388	925	2,696	320
	24	346	925	2,696	258

[Home <<](#)

[previous <<](#)

[next >>](#)

[chart](#)

Monthly Average Ancillary Services Price					
year	month	MCPC_REGDN	MCPC_NSPIN	MCPC_RRS	MCPC_REGUP
2016	1	\$ 4.10	\$ 2.62	\$ 8.05	\$ 6.69
	2	\$ 7.21	\$ 4.77	\$ 12.91	\$ 7.80
	3	\$ 8.47	\$ 6.06	\$ 11.39	\$ 9.34
	4	\$ 9.23	\$ 4.07	\$ 13.20	\$ 9.48
	5	\$ 7.63	\$ 2.84	\$ 8.01	\$ 6.14
	6	\$ 4.43	\$ 3.02	\$ 8.05	\$ 5.89
	7	\$ 3.59	\$ 3.11	\$ 9.44	\$ 7.75
	8	\$ 4.27	\$ 7.13	\$ 12.75	\$ 10.49
	9	\$ 4.59	\$ 3.91	\$ 8.91	\$ 7.12
	10	\$ 10.06	\$ 3.02	\$ 12.21	\$ 10.42
	11	\$ 5.68	\$ 3.53	\$ 11.84	\$ 7.64
	12	\$ 9.13	\$ 2.91	\$ 16.08	\$ 9.72
2017	1	\$ 7.10	\$ 0.89	\$ 13.26	\$ 9.94
	2	\$ -	\$ -	\$ -	\$ -
	3	\$ -	\$ -	\$ -	\$ -
	4	\$ -	\$ -	\$ -	\$ -
	5	\$ -	\$ -	\$ -	\$ -
	6	\$ -	\$ -	\$ -	\$ -
	7	\$ -	\$ -	\$ -	\$ -
	8	\$ -	\$ -	\$ -	\$ -
	9	\$ -	\$ -	\$ -	\$ -
	10	\$ -	\$ -	\$ -	\$ -
	11	\$ -	\$ -	\$ -	\$ -
	12	\$ -	\$ -	\$ -	\$ -

[Home <<](#)

[previous <<](#)

[next >>](#)

[chart](#)

Monthly Average A/S Cost per MWh Load					
year	month	AScost_REGDN	AScost_NSPIIN	AScost_RRS	AScost_REGUP
2016	1	\$ 0.03	\$ 0.11	\$ 0.60	\$ 0.06
	2	\$ 0.06	\$ 0.26	\$ 1.09	\$ 0.07
	3	\$ 0.07	\$ 0.33	\$ 1.00	\$ 0.09
	4	\$ 0.08	\$ 0.18	\$ 1.07	\$ 0.09
	5	\$ 0.06	\$ 0.12	\$ 0.59	\$ 0.05
	6	\$ 0.03	\$ 0.10	\$ 0.45	\$ 0.04
	7	\$ 0.02	\$ 0.08	\$ 0.47	\$ 0.05
	8	\$ 0.03	\$ 0.19	\$ 0.66	\$ 0.08
	9	\$ 0.03	\$ 0.13	\$ 0.51	\$ 0.05
	10	\$ 0.08	\$ 0.12	\$ 0.85	\$ 0.08
	11	\$ 0.04	\$ 0.18	\$ 1.00	\$ 0.06
	12	\$ 0.07	\$ 0.13	\$ 1.21	\$ 0.08
2017	1	\$ 0.05	\$ 0.04	\$ 0.98	\$ 0.08
	2	\$ -	\$ -	\$ -	\$ -
	3	\$ -	\$ -	\$ -	\$ -
	4	\$ -	\$ -	\$ -	\$ -
	5	\$ -	\$ -	\$ -	\$ -
	6	\$ -	\$ -	\$ -	\$ -
	7	\$ -	\$ -	\$ -	\$ -
	8	\$ -	\$ -	\$ -	\$ -
	9	\$ -	\$ -	\$ -	\$ -
	10	\$ -	\$ -	\$ -	\$ -
	11	\$ -	\$ -	\$ -	\$ -
	12	\$ -	\$ -	\$ -	\$ -

[Home <<](#)

[previous <<](#)

[next >>](#)

[chart](#)

ERCOT-wide Cumulative PNM			
year	month	pnm	pnm_accum
2016	0	\$ -	\$ -
	1	\$ 1,160.69	\$ 1,160.69
	2	\$ 720.57	\$ 1,881.26
	3	\$ 3,883.41	\$ 5,764.67
	4	\$ 2,389.99	\$ 8,154.66
	5	\$ 1,661.50	\$ 9,816.16
	6	\$ 1,922.76	\$ 11,738.92
	7	\$ 2,969.44	\$ 14,708.36
	8	\$ 5,321.18	\$ 20,029.54
	9	\$ 3,967.65	\$ 23,997.19
	10	\$ 1,824.61	\$ 25,821.80
	11	\$ 2,510.79	\$ 28,332.59
	12	\$ 1,658.38	\$ 29,990.97
2017	0	\$ -	\$ -
	1	\$ 2,964.83	\$ 2,964.83
	2	\$ -	\$ -
	3	\$ -	\$ -
	4	\$ -	\$ -
	5	\$ -	\$ -
	6	\$ -	\$ -
	7	\$ -	\$ -
	8	\$ -	\$ -
	9	\$ -	\$ -
	10	\$ -	\$ -
	11	\$ -	\$ -
	12	\$ -	\$ -

[Home <<](#)

[previous <<](#)

[next >>](#)

[chart](#)

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
2016	1	455	14	371	163	473	142
	2	39	83	148	42	(36)	150
	3	31	288	300	89	(136)	(82)
	4	(271)	220	97	(82)	(320)	(147)
	5	(44)	460	285	117	(69)	163
	6	(488)	(261)	(356)	(518)	(348)	(451)
	7	(163)	507	735	306	(231)	240
	8	(578)	(65)	41	(258)	(741)	(717)
	9	(358)	305	319	87	(433)	(30)
	10	(312)	371	(41)	(310)	(475)	50
	11	(329)	(146)	240	(237)	(139)	(234)
	12	(41)	(61)	282	(38)	516	83
2017	1	(395)	(62)	298	(188)	224	69
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	5	-	-	-	-	-	-
	6	-	-	-	-	-	-
	7	-	-	-	-	-	-
	8	-	-	-	-	-	-
	9	-	-	-	-	-	-
	10	-	-	-	-	-	-
	11	-	-	-	-	-	-
	12	-	-	-	-	-	-

[Home <<](#)

[previous <<](#)

[next >>](#)

[chart](#)

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
2016	1	6,300	4,581	4,663	6,253	6,228	5,019
	2	7,602	5,772	5,779	7,573	7,552	6,109
	3	7,872	6,033	6,013	7,565	7,793	6,833
	4	7,356	5,020	5,488	6,921	6,559	5,437
	5	7,414	5,363	6,245	7,275	6,347	5,617
	6	5,963	3,648	4,840	5,845	4,816	3,741
	7	8,903	5,074	6,793	8,315	7,411	5,948
	8	5,644	3,670	4,814	5,613	4,238	3,529
	9	6,159	3,957	4,561	6,057	5,295	4,291
	10	8,472	4,634	5,455	8,674	7,449	5,548
	11	7,043	4,855	5,049	6,718	6,517	5,225
	12	7,653	5,588	5,849	7,549	7,270	6,395
2017	1	8,014	6,700	6,599	8,265	7,550	6,562
	2	-	-	-	-	-	-
	3	-	-	-	-	-	-
	4	-	-	-	-	-	-
	5	-	-	-	-	-	-
	6	-	-	-	-	-	-
	7	-	-	-	-	-	-
	8	-	-	-	-	-	-
	9	-	-	-	-	-	-
	10	-	-	-	-	-	-
	11	-	-	-	-	-	-
	12	-	-	-	-	-	-

[Home <<](#)

[previous <<](#)

[next >>](#)

[chart](#)

RT Congestion Constraint Rankings - Top 10 Constraints by Binding Frequency and Top 10 Constraints by Total Congestion Rent																
category	year	item	rankvar	rank	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
FREQ_EXIST	2017	GARZA_69A1 (GARZA-GARZA)	1,921	1	1,921	-	-	-	-	-	-	-	-	-	-	-
FREQ_EXIST	2017	ASPM_69T1 (ASPM-ASPM)	1,048	2	1,048	-	-	-	-	-	-	-	-	-	-	-
FREQ_EXIST	2017	6271_C (WGROB-SUMRFELD)	880	3	880	-	-	-	-	-	-	-	-	-	-	-
FREQ_EXIST	2017	670_B (BRNSW-CMPBW)	758	4	758	-	-	-	-	-	-	-	-	-	-	-
FREQ_EXIST	2017	SNG-ZEN (SNG-ZEN)	679	5	679	-	-	-	-	-	-	-	-	-	-	-
FREQ_EXIST	2017	LISTON (LISTON)	599	6	599	-	-	-	-	-	-	-	-	-	-	-
FREQ_EXIST	2017	BARL_FTSW1_1 (FTSW-BARL)	527	7	527	-	-	-	-	-	-	-	-	-	-	-
FREQ_EXIST	2017	SNYDER_WKN_BK1_1 (ENAS-WKN_BKR)	505	8	505	-	-	-	-	-	-	-	-	-	-	-
FREQ_EXIST	2017	591_A (LKPNT-CRLNW)	462	9	462	-	-	-	-	-	-	-	-	-	-	-
FREQ_EXIST	2017	BRUNI_69_1 (BRUNI-BRUNI)	434	10	434	-	-	-	-	-	-	-	-	-	-	-
TOP10_RENT	2017	6271_C (WGROB-SUMRFELD)	\$ 20.83	1	\$ 20.83	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOP10_RENT	2017	FORMOS_LOLITA1_1 (LOLITA-FORMOSA)	\$ 6.11	2	\$ 6.11	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOP10_RENT	2017	BARL_FTSW1_1 (FTSW-BARL)	\$ 4.56	3	\$ 4.56	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOP10_RENT	2017	591_A (LKPNT-CRLNW)	\$ 2.86	4	\$ 2.86	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOP10_RENT	2017	REDCREEK_T1 (REDCREEK-REDCREEK)	\$ 2.06	5	\$ 2.06	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOP10_RENT	2017	SNG-ZEN (SNG-ZEN)	\$ 1.68	6	\$ 1.68	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOP10_RENT	2017	GIBCRK-SNG (GIBCRK-SNG)	\$ 1.25	7	\$ 1.25	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOP10_RENT	2017	PNHNDL (PNHNDL)	\$ 1.17	8	\$ 1.17	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOP10_RENT	2017	450_A (SNSW-AUSTRO)	\$ 0.66	9	\$ 0.66	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOP10_RENT	2017	GARZA_69A1 (GARZA-GARZA)	\$ 0.54	10	\$ 0.54	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

[Home <<](#)

[previous <<](#)

[next >>](#)

[chart 1](#)

[chart 2](#)

DA Congestion Constraint Rankings - Top 10 Constraints by Binding Frequency and Top 10 Constraints by Total Congestion Rent																	
category	year	item	rankvar	rank	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
FREQ_EXIST	2017	CORONA_AT4 (CORONA-CORONA)	300	1	300	-	-	-	-	-	-	-	-	-	-	-	
FREQ_EXIST	2017	BRUNI_69_1 (BRUNI-BRUNI)	268	2	268	-	-	-	-	-	-	-	-	-	-	-	
FREQ_EXIST	2017	GREENL_WEAVR1_1 (WEAVERRD-GREENLK)	243	3	243	-	-	-	-	-	-	-	-	-	-	-	
FREQ_EXIST	2017	670_B (BRNSW-CMPBW)	221	4	221	-	-	-	-	-	-	-	-	-	-	-	
FREQ_EXIST	2017	BARL_FTSW1_1 (FTSW-BARL)	221	5	221	-	-	-	-	-	-	-	-	-	-	-	
FREQ_EXIST	2017	GARZA_69A1 (GARZA-GARZA)	203	6	203	-	-	-	-	-	-	-	-	-	-	-	
FREQ_EXIST	2017	FORMOS_LOLITA_1 (LOLITA-FORMOSA)	196	7	196	-	-	-	-	-	-	-	-	-	-	-	
FREQ_EXIST	2017	HEXT_YELWJCT1_1 (YELWJCT-HEXT)	185	8	185	-	-	-	-	-	-	-	-	-	-	-	
FREQ_EXIST	2017	SNG-ZEN (SNG-ZEN)	179	9	179	-	-	-	-	-	-	-	-	-	-	-	
FREQ_EXIST	2017	EAGLEP_ESCOND1_1 (ESCONDID-EAGLE_PS)	167	10	167	-	-	-	-	-	-	-	-	-	-	-	
TOP10_RENT	2017	6271_C (WGROB-SUMRFELD)	\$ 8.27	1	\$ 8.27	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
TOP10_RENT	2017	KEPLER_KOCH_U1_1 (KOCH_UP-KEPLER)	\$ 4.82	2	\$ 4.82	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
TOP10_RENT	2017	SNG-ZEN (SNG-ZEN)	\$ 3.00	3	\$ 3.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
TOP10_RENT	2017	BARL_FTSW1_1 (FTSW-BARL)	\$ 2.75	4	\$ 2.75	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
TOP10_RENT	2017	GIBCRK-SNG (GIBCRK-SNG)	\$ 1.68	5	\$ 1.68	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
TOP10_RENT	2017	590_A (LWSSW-LWVJS)	\$ 1.18	6	\$ 1.18	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
TOP10_RENT	2017	OLS_CLIF_1 (OLSEN-CLIFTON1)	\$ 1.06	7	\$ 1.06	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
TOP10_RENT	2017	6270_C (WGROB-BLMND)	\$ 1.03	8	\$ 1.03	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
TOP10_RENT	2017	6265_C (RHPT2-SAGNA)	\$ 0.74	9	\$ 0.74	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
TOP10_RENT	2017	PNHNDL (PNHNDL)	\$ 0.61	10	\$ 0.61	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	

[Home <<](#)

[previous <<](#)

[next >>](#)

[chart 1](#)

[chart 2](#)

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																	
fr_option	year	pair	total_value	rank	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
N	2017	HB NORTH-HB HOUSTON	\$ 2.38	1	\$ 0.92	\$ 1.46	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
N	2017	HB NORTH-LZ NORTH	\$ 1.38	2	\$ 0.68	\$ 0.70	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
N	2017	HB WEST-HB NORTH	\$ 0.87	3	\$ 0.05	\$ 0.82	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
N	2017	HB SOUTH-LZ SOUTH	\$ 0.59	4	\$ 0.18	\$ 0.41	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
N	2017	HB NORTH-HB SOUTH	\$ 0.52	5	\$ 0.18	\$ 0.34	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
N	2017	HB WEST-LZ WEST	\$ 0.40	6	\$ 0.20	\$ 0.20	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
N	2017	HB HOUSTON-LZ HOUSTON	\$ 0.36	7	\$ 0.17	\$ 0.19	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
N	2017	CPSES_UNIT2-HB NORTH	\$ 0.26	8	\$ 0.13	\$ 0.13	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
N	2017	CPSES_UNIT1-HB NORTH	\$ 0.16	9	\$ 0.14	\$ 0.02	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
N	2017	OGSES_1-HB NORTH	\$ 0.15	10	\$ 0.07	\$ 0.08	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Y	2017	HB NORTH-HB HOUSTON	\$ 0.89	1	\$ 0.46	\$ 0.43	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Y	2017	HB NORTH-LZ NORTH	\$ 0.64	2	\$ 0.21	\$ 0.43	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Y	2017	FTR FTR G1 4-THW THWGT5X	\$ 0.35	3	\$ 0.10	\$ 0.25	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Y	2017	STP STP G1-LZ CPS	\$ 0.26	4	\$ 0.11	\$ 0.15	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Y	2017	STP STP G2-LZ CPS	\$ 0.26	5	\$ 0.11	\$ 0.15	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Y	2017	HB SOUTH-LZ SOUTH	\$ 0.21	6	\$ 0.10	\$ 0.12	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Y	2017	SSPURT WIND1-HB WEST	\$ 0.20	7	\$ 0.10	\$ 0.09	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Y	2017	HB HOUSTON-LZ HOUSTON	\$ 0.15	8	\$ 0.08	\$ 0.07	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Y	2017	OGSES_1-TGF TGFGT	\$ 0.14	9	\$ 0.09	\$ 0.05	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Y	2017	JCKCNTY2_CT3-HLSES_UNIT3	\$ 0.12	10	\$ 0.04	\$ 0.07	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	

[Home <<](#)

[previous <<](#)

[chart 1](#)

[chart 2](#)