

Market Highlights¹ (May 15–May 28)

- The average DLAP price in the integrated forward market was \$15.39. The maximum and minimum DLAP prices were \$68.23 and -\$12.59, respectively. The maximum and minimum PNode prices in the integrated forward market were \$1,000.00 and -\$150.97 respectively.
- The top two interties congested in the integrated forward market were IPPDCADLN_ITC and PALOVRDE_ITC. Congestion rents in these two weeks totaled \$13,726,286.50.
- The average day-ahead ancillary service prices were between \$0.00 and \$78.00.
- Approximately 97.59 percent of the RUC requirements were met from RA units.
- The average real-time FMM DLAP price was \$14.08, with a maximum price of \$200.03 and a minimum price of -\$49.03. The maximum and minimum PNode prices in the FMM were \$1,212.23 and -\$883.37, respectively.
- Out of the total 1,344 FMM intervals, 0 intervals saw DLAP prices above \$250, and 0 intervals saw DLAP prices below -\$150.
- Out of the total 1,344 FMM intervals, 7 intervals saw ELAP prices above \$250 And 37 intervals saw ELAP prices below -\$150.
- The average real-time FMM ELAP price was \$12.47, with a maximum price of \$1,000.00 and a minimum price of -\$239.28.
- The average real-time RTD DLAP price was \$20.31, with a maximum price of \$1,084.80 and a minimum price of -\$77.49. The maximum and minimum PNode prices in the RTD were \$1,477.86 and -\$965.77, respectively.
- Out of the total 4,032 RTD intervals, 45 intervals saw DLAP prices above \$250 and 0 interval saw DLAP prices below -\$150.
- Out of the total 4,032 RTD intervals, 69 intervals saw ELAP prices above \$250 and 200 intervals saw ELAP prices below -\$150. The average real-time RTD ELAP price was \$16.14, with a maximum price of \$1,036.12 and a minimum price of -\$191.71.
- Root causes for daily high price events are noted in Tables 1 and 2.

Market Quality and Renewable Integration/L.Hernandez

¹ A description of the metrics presented in this report is available at http://www.caiso.com/Documents/WeeklyPerformanceReportMetricsKey.pdf



Table 1 FMM Intervals		
Trade Date	Root Cause	
	None	

Table 2 RTD Intervals		
Trade Date	Root Cause	
15 May HE 7-8	Load changes, renewable deviation, and congestion on OMS 7228298_OP-6610	
15 May HE 9, 10, 5, 16	Renewable deviation and congestion on OMS 7228298_OP-6610	
15 May HE 17-18	Load changes, renewable deviation, and congestion on OMS 7228298_OP-6610	
16 May HE 7, 8, 20	Load changes, renewable deviation, and congestion on OMS 7228298_OP-6610	
18 May HE 14	Load changes.	
18 May HE 18	Renewable deviation and net import reduction.	
19 May HE 9	Renewable deviation	
19 May HE 17	Load changes and renewable generation	
20 May HE24	Load changes and renewable generation	
21 May HE 19, 24	Load changes and renewable generation	
23 May HE 2	Load changes, renewable deviation, and re-dispatch of resources.	
24 May HE 19	Load changes and renewable generation	
26 May HE 19	Load changes and renewable generation	



Figure 1: Day-Ahead (IFM) LAP LMP and Cleared Bid-In Demand

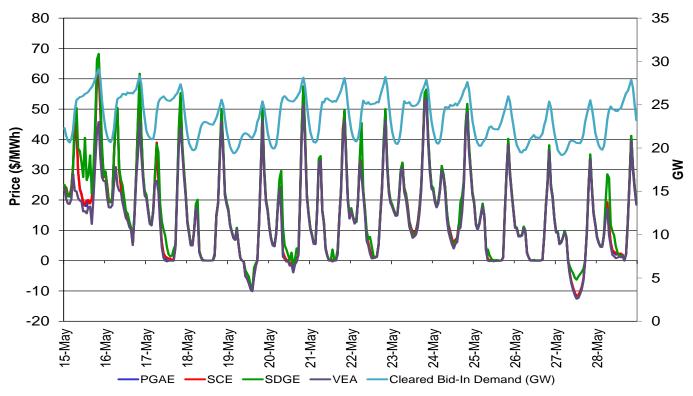


Figure 2: Day-Ahead Congestion Rents

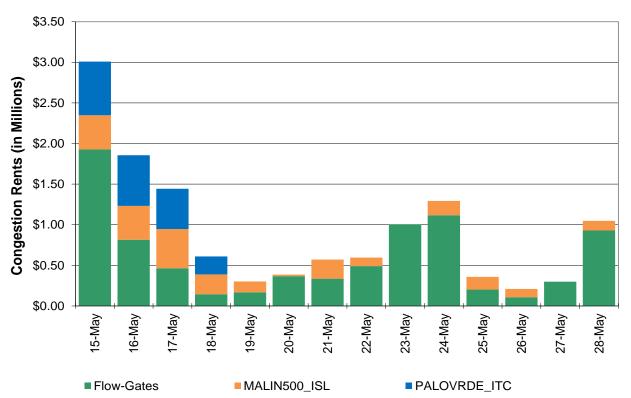




Figure 3: Day-Ahead Congestion Rents for Flow-Based Constraints

Transmission Constraint	
Transmission Constraint	Congestion Rent
7750_D-ECASCO_OOS_CP6_NG	\$ 8,165,666.02
7750_D-ECASCO_OOS_N1SV500_NG	\$5,261,667
7820_TL 230S_OVERLOAD_NG	\$1,289,432
30060_MIDWAY _500_24156_VINCENT _500_BR_2 _3	\$1,104,315
34418_KINGSBRG_115_34405_FRWT TAP_115_BR_1_1	\$1,015,088
30055_GATES1 _500_30060_MIDWAY _500_BR_1 _3	\$838,118
24086_LUGO _500_26105_VICTORVL_500_BR_1_1	\$628,166
24115_PASTORIA_230_24217_WARNETAP_230_BR_1 _1	\$564,280
7820_TL23040_IV_SPS_NG	\$513,504
22820_SWEETWTR_69.0_22476_MIGUELTP_69.0_BR_1 _1	\$335,978
24114_PARDEE _230_24147_SYLMAR S_230_BR_1 _1	\$273,093
22192_DOUBLTTP_138_22300_FRIARS _138_BR_1 _1	\$268,198
SDGE_CFEIMP_BG	\$173,028
30810_GREGG _230_30879_HENTAP1 _230_BR_1 _1	\$123,442
24036_EAGLROCK_230_24059_GOULD	\$96,222
OMS 6777914_PAS-BAI_OOS_NG	\$85,192
37650_TESLA TP_115_33574_LLNL	\$69,242
HUMBOLDT_IMP_NG	\$67,120
24804_DEVERS _230_24806_MIRAGE _230_BR_2 _1	\$60,514
34704_SEMITRPC_115_34774_MIDWAY _115_BR_1 _1	\$54,834
34548_KETTLEMN_70.0_34552_GATES	\$44,615
34469_GFFNJCT _70.0_34470_GIFFEN _70.0_BR_1 _1	\$43,826
34112_EXCHEQUR_115_34116_LE GRAND_115_BR_1 _1	\$42,578
34121_SHARON T_115_34128_OAKH_JCT_115_BR_1 _1	\$38,824
30280_POE230_30330_RIO OSO _230_BR_1 _1	\$35,396
24303_BIG CRK3_230_24235_RECTOR _230_BR_1 _1	\$34,311
22480_MIRAMAR _69.0_22756_SCRIPPS _69.0_BR_1 _1	\$33,903
32225_BRNSWKT1_115_32222_DTCH2TAP_115_BR_1_1	\$32,273
30765_LOSBANOS_230_30790_PANOCHE _230_BR_2 _1	\$28,590
7510-PAS-BAI-PAR-OOS_NG	\$25,928
22256_ESCNDIDO_69.0_22724_SANMRCOS_69.0_BR_1 _1	\$20,123
31000_HUMBOLDT_115_31015_BRDGVLLE_115_BR_1 _1	\$20,052
34474_HELM _70.0_34556_STRD JCT_70.0_BR_1 _1	\$11,525
31461_JESSTAP _115_31464_COTWDPGE_115_BR_1 _1	\$9,586
34116_LE GRAND_115_34134_WILSONAB_115_BR_1 _1	\$7,657
35648_LLAGAS _115_35655_MORGN J2_115_BR_1 _1	\$7,296
24087_MAGUNDEN_230_24153_VESTAL _230_BR_2 _1	\$4,729
32214_RIO OSO _115_32244_BRNSWKT2_115_BR_2 _1	\$4,114
31566_KESWICK _60.0_31582_STLLWATR _60.0_BR _1 _1	\$3,720
OMS 6700415 HUMBOLDT_IMP_NG	\$2,842
34528_CORCORAN_70.0_34530_BSWLL TP_70.0_BR_1 _1	\$2,678
22644_PENSQTOS_69.0_22856_TOREYPNS_69.0_BR_1 _1	\$1,261
31080_HUMBOLDT_60.0_31092_MPLE CRK_60.0_BR_1 _1	\$15
Totals	\$ 21,442,940.51



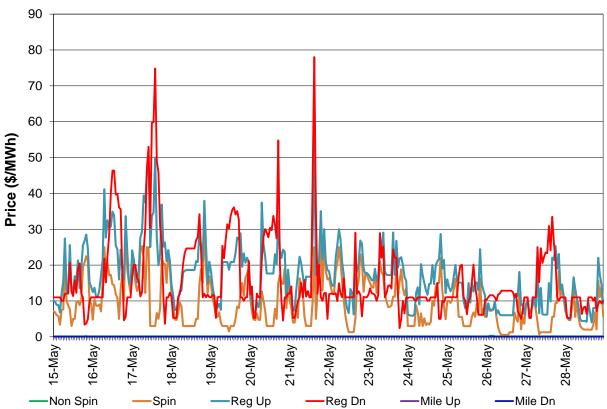
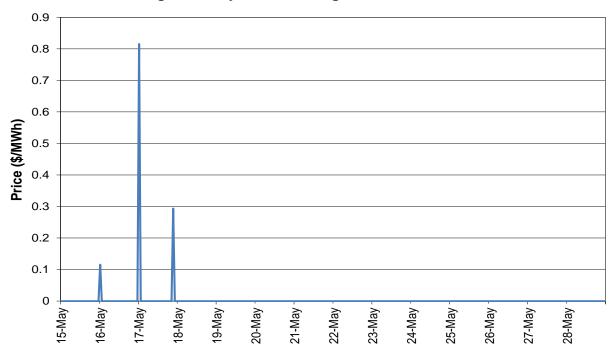


Figure 4: Day-Ahead (IFM) Average A/S Price







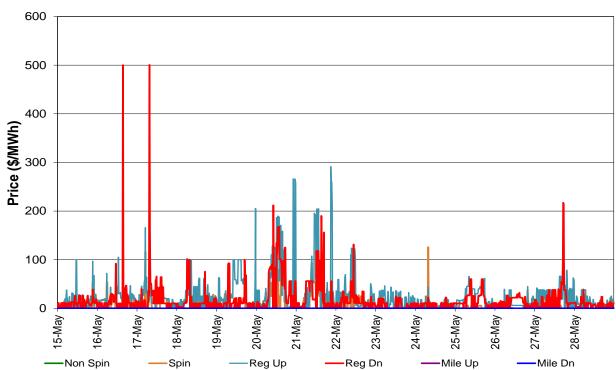


Figure 6: Real-Time FMM Average A/S Price



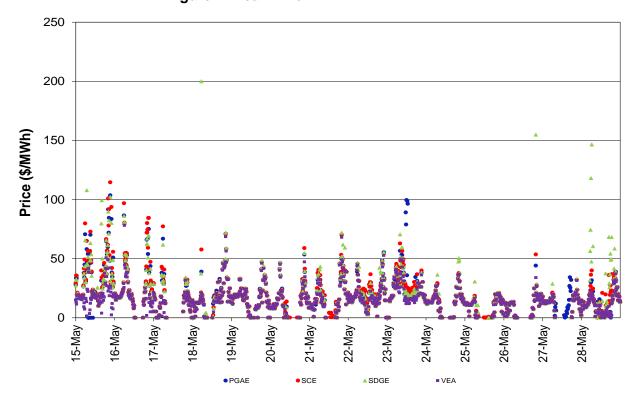




Figure 8: Real-Time RTD DLAP LMP

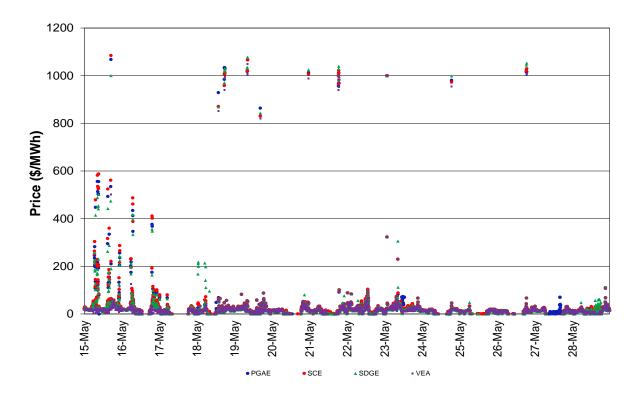
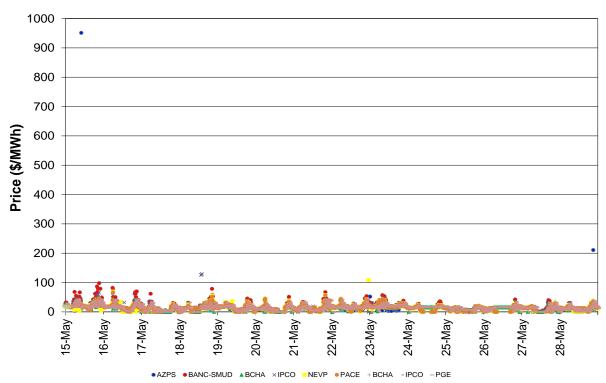
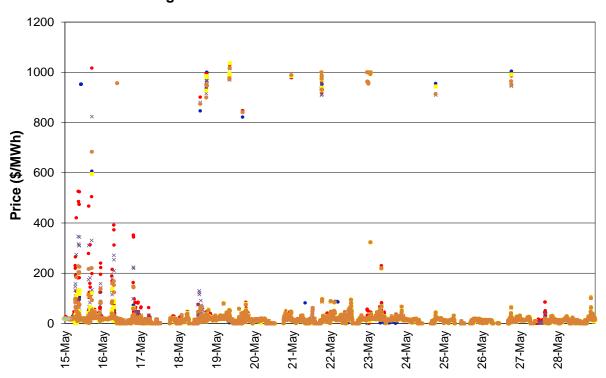


Figure 9: Real-Time FMM ELAP LMP







•AZPS •BANC-SMUD •BCHA ×IPCO •NEVP •PACE +PACW -PGE -PSEI

Figure 10: Real-Time RTD ELAP LMP