

## Market Highlights<sup>1</sup> (May 1–May 14)

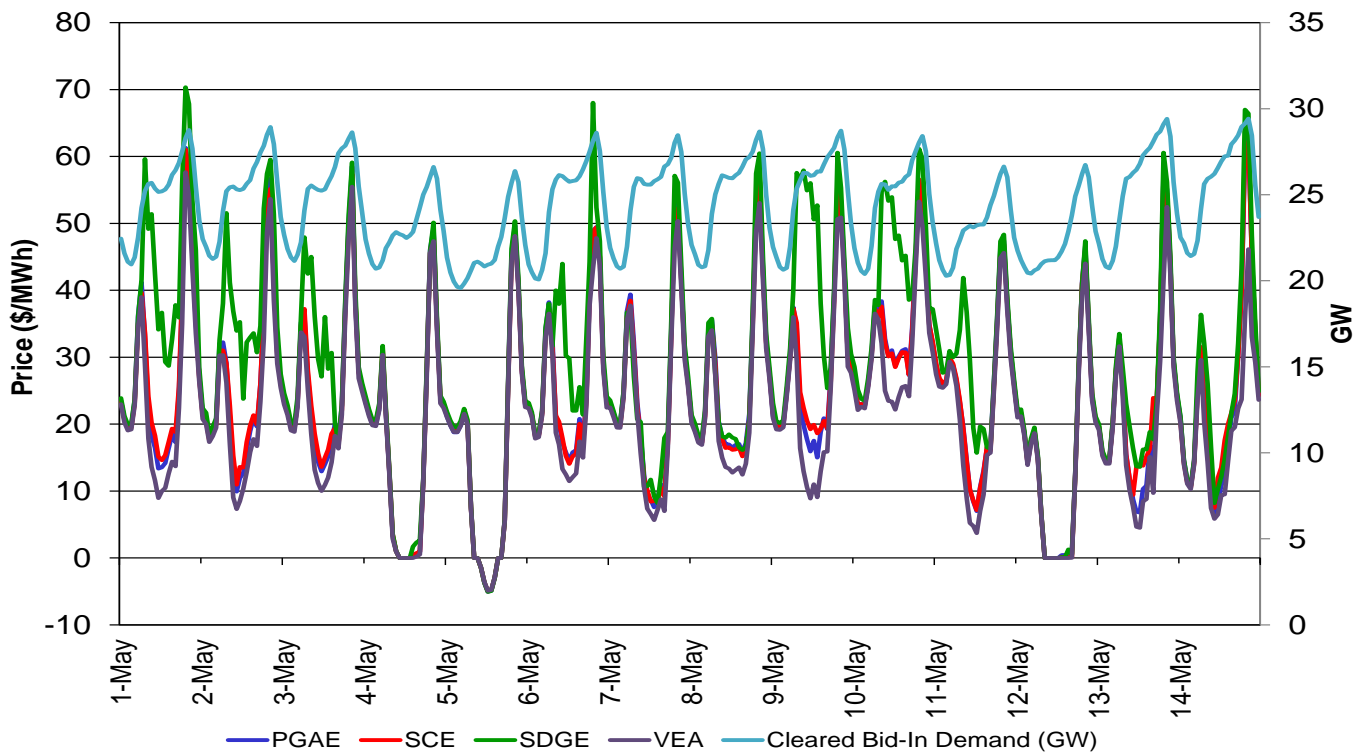
- The average DLAP price in the integrated forward market was \$24.43. The maximum and minimum DLAP prices were \$70.34 and -\$5.07, respectively. The maximum and minimum PNode prices in the integrated forward market were \$371.34 and -\$471.44 respectively.
- The top two interties congested in the integrated forward market were MALIN500\_ITC and NOB\_ITC. Congestion rents in these two weeks totaled \$20,602,971.85.
- The average day-ahead ancillary service prices were between \$0.00 and \$76.68.
- Approximately 97.51 percent of the RUC requirements were met from RA units.
- The average real-time FMM DLAP price was \$21.73, with a maximum price of \$336.28 and a minimum price of -\$11.43. The maximum and minimum PNode prices in the FMM were \$676.88 and -\$1,401.60, respectively.
- Out of the total 1,344 FMM intervals, 1 intervals saw DLAP prices above \$250, and 0 intervals saw DLAP prices below -\$150.
- Out of the total 1,344 FMM intervals, 0 intervals saw ELAP prices above \$250 and 17 intervals saw ELAP prices below -\$150.
- The average real-time FMM ELAP price was \$17.77, with a maximum price of \$103.86 and a minimum price of -\$157.14.
- The average real-time RTD DLAP price was \$23.16, with a maximum price of \$1,052.70 and a minimum price of -\$25.93. The maximum and minimum PNode prices in the RTD were \$2,633.75 and -\$1,045.50, respectively.
- Out of the total 4,032 RTD intervals, 24 intervals saw DLAP prices above \$250 and 0 interval saw DLAP prices below -\$150.
- Out of the total 4,032 RTD intervals, 45 intervals saw ELAP prices above \$250 and 56 intervals saw ELAP prices below -\$150. The average real-time RTD ELAP price was \$19.35, with a maximum price of \$1,004.00 and a minimum price of -\$157.53.
- Root causes for daily high price events are noted in Tables 1 and 2.

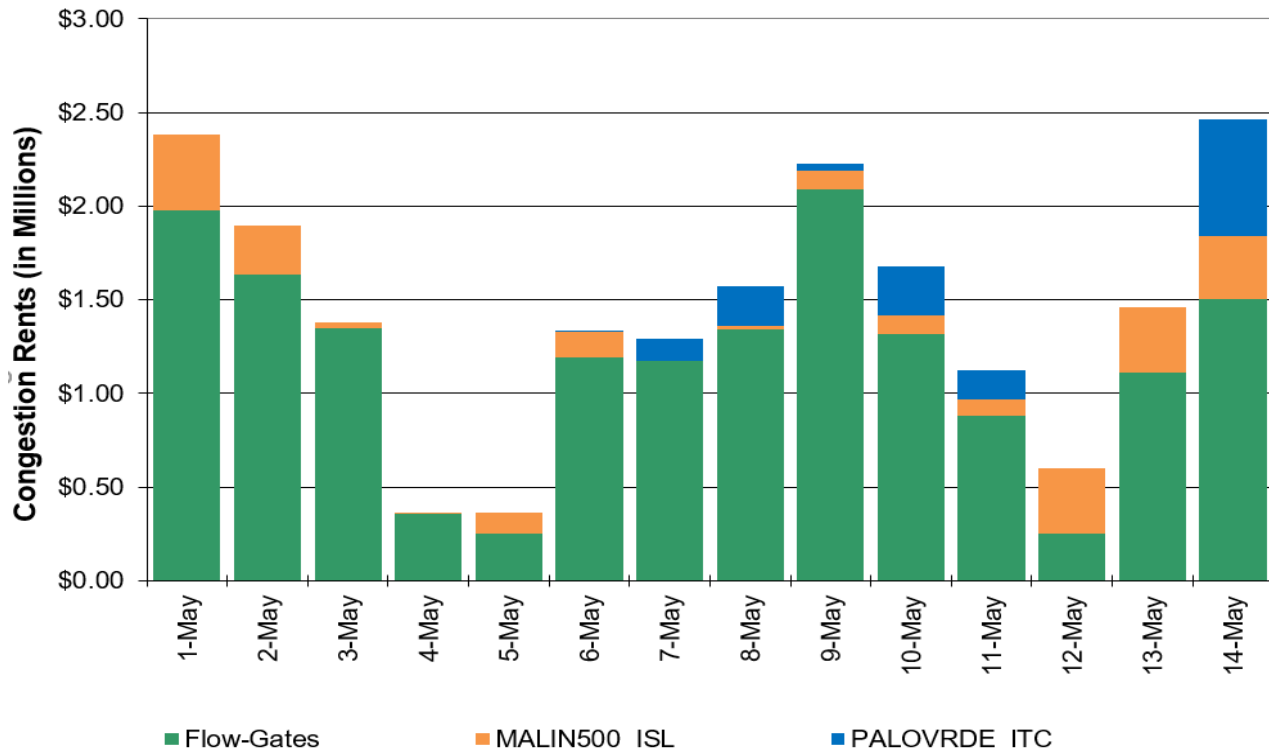
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<sup>1</sup> A description of the metrics presented in this report is available at <http://www.caiso.com/Documents/WeeklyPerformanceReportMetricsKey.pdf>

Table 1 FMM Intervals	
Trade Date	Root Cause
	None

Table 2 RTD Intervals	
Trade Date	Root Cause
4 May HE 1	Load changes
4 May HE 19	Load changes and renewable generation
7 May HE 21-23	Renewable generation
10 May HE 9	Renewable generation
13 May HE 19	Load changes and renewable generation
14 May HE 19	Load changes

**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	Congestion Rent
7750_D-ECASCO_OOS_CP6_NG	\$ 2,441,368.95
22886_SUNCREST_230_22885_SUNCREST_500_XF_1_P	\$ 2,296,745.49
22356_IMPRLVLY_230_22360_IMPRLVLY_500_XF_81	\$ 1,344,256.52
30750_MOSSLD_230_30797_LASAGUIL_230_BR_1_1	\$ 1,248,097.92
33936_MELNS_JB_115_33951_VLYHMTP1_115_BR_1_1	\$ 1,129,429.46
22356_IMPRLVLY_230_21025_ELCENTRO_230_BR_1_1	\$ 871,011.24
7510-MAG-PAS1-OOS_NG	\$ 815,213.09
24086_LUGO_500_26105_VICTORVL_500_BR_1_1	\$ 721,952.51
OMS 7020096_50001_OOS_NG	\$ 626,771.78
30500_BELLOTA_230_30515_WARNERVL_230_BR_1_1	\$ 488,320.50
24016_BARRE_230_25201_LEWIS_230_BR_1_1	\$ 450,553.43
34548_KETTLEMN_70.0_34552_GATES_70.0_BR_1_1	\$ 368,171.74
24016_BARRE_230_24154_VILLA PK_230_BR_1_1	\$ 366,373.38
34112_EXCHEQUR_115_34116_LE GRAND_115_BR_1_1	\$ 354,478.08
24036_EAGLROCK_230_24059_GOULD_230_BR_1_1	\$ 316,180.26
34116_LE GRAND_115_34134_WILSONAB_115_BR_1_1	\$ 215,513.46
30622_EIGHT MI_230_30624_TESLA E_230_BR_1_1	\$ 184,958.66
34427_ATWELL_115_34701_SMYRNA 1_115_BR_1_1	\$ 179,631.36
32225_BRNSWKT1_115_32222_DTCH2TAP_115_BR_1_1	\$ 152,217.29



Transmission Constraint	Congestion Rent
7820_TL 230S_OVERLOAD_NG	\$ 142,529.32
OMS 6833644_50002_OOS_TDM	\$ 139,164.63
22592_OLD TOWN_69.0_22596_OLD TOWN_230_XF_1	\$ 113,216.45
32218_DRUM_115_32244_BRNSWKT2_115_BR_2_1	\$ 103,825.60
30523_CC SUB_230_30525_C.COSTA_230_BR_1_1	\$ 103,683.97
99254_J.HINDS2_230_24806_MIRAGE_230_BR_1_1	\$ 95,917.81
34418_KINGSBRG_115_34405_FRWT TAP_115_BR_1_1	\$ 85,546.13
24087_MAGUNDEN_230_24153_VESTAL_230_BR_1_1	\$ 77,915.60
22820_SWEETWTR_69.0_22476_MIGUELTP_69.0_BR_1_1	\$ 70,196.86
22692_ROSCYNTP_69.0_22696_ROSE CYN_69.0_BR_1_1	\$ 68,418.91
33916_CURTISS_115_33917_FBERBORD_115_BR_1_1	\$ 61,792.55
34860_TAFT_70.0_34943_Q356TAP_70.0_BR_1_1	\$ 53,297.10
30105_COTTNWD_230_30245_ROUND MT_230_BR_3_1	\$ 52,268.30
7820_TL 230S_TL50001OUT_NG	\$ 48,947.18
32308_COLGATE_60.0_32313_NRRWS2TP_60.0_BR_2_1	\$ 47,983.47
22056_BERNARDO_69.0_22676_R.CARMEL_69.0_BR_1_1	\$ 47,188.02
34700_SMYRNA 2_115_34742_SEMITRPJ_115_BR_1A_1	\$ 40,315.37
24303_BIG CRK3_230_24235_RECTOR_230_BR_1_1	\$ 35,909.63
33932_MELONES_115_33936_MELNS JB_115_BR_1_1	\$ 35,847.38
22592_OLD TOWN_69.0_22873_VINE SUB_69.0_BR_1_1	\$ 35,657.04
22873_VINE SUB_69.0_22380_KETTNER_69.0_BR_1_1	\$ 35,109.67
34474_HELM_70.0_34556_STRD JCT_70.0_BR_1_1	\$ 30,483.40
25001_GOODRICH_230_24076_LAGUBELL_230_BR_1_1	\$ 30,353.47
34469_GFFNJCT_70.0_34470_GIFFEN_70.0_BR_1_1	\$ 29,283.25
30915_MORROBAY_230_30916_SOLARSS_230_BR_1_1	\$ 27,743.49
34859_PRMTFMTTP_70.0_34873_Q484TP_70.0_BR_1_1	\$ 26,164.16
22480_MIRAMAR_69.0_22756_SCRIPPS_69.0_BR_1_1	\$ 21,872.94
33951_VLYHMTP1_115_33516_RIPON J_115_BR_1_1	\$ 20,318.69
33045_FIBRJCT1_115_33049_RIVERVEW_115_BR_1_1	\$ 19,382.21
33916_CURTISS_115_33920_RCTRK J_115_BR_1_1	\$ 18,381.04
34118_LE GRNDJ_115_34168_EL NIDO_115_BR_1_1	\$ 18,203.13
31566_KESWICK_60.0_31582_STLLWATR_60.0_BR_1_1	\$ 17,258.13
OMS 7087963_CP12_NG	\$ 16,983.43
31108_SWNS FLT_60.0_31110_BRDGVILLE_60.0_BR_1_1	\$ 13,994.03
35907_PAUL SWT_115_35908_ROB ROY_115_BR_1_1	\$ 13,184.43
31336_HPLND JT_60.0_31206_HPLND JT_115_XF_2	\$ 8,730.00
33920_RCTRK J_115_33922_R.TRACK_115_BR_1_1	\$ 8,439.97
33932_MELONES_115_33922_R.TRACK_115_BR_1_1	\$ 6,337.25
32219_DR360370_115_32242_DRUM 1M_1.0_XF_1	\$ 5,897.10
31336_HPLND JT_60.0_31370_CLVRDLJT_60.0_BR_1_1	\$ 4,479.89
24114_PARDEE_230_24147_SYLMAR S_230_BR_1_1	\$ 4,347.04
24420_NEENACH_66.0_24452_TAP 85_66.0_BR_1_1	\$ 4,027.11
30108_BRNY_FST_230_30185_PIT 1_230_BR_1_1	\$ 3,430.65
30529_BRDSLNG_230_30523_CC SUB_230_BR_1_1	\$ 2,833.34
32208_GLEAF TP_115_32214_RIO OSO_115_BR_1_1	\$ 2,575.34
34873_Q484TP_70.0_34850_BLACKWLL_70.0_BR_1_1	\$ 1,864.43
34149_CHENYT_115_34158_PANOCHÉ_115_BR_1_1	\$ 1,096.95

Transmission Constraint	Congestion Rent
32328_YBA CTYJ_60.0_32332_PEASE_60.0_BR_1_1	\$ 1,040.75
22192_DOUBLTTP_138_22300_FRIARS_138_BR_1_1	\$ 997.88
31604_COTTONWD_60.0_31611_RAWSON_60.0_BR_2_1	\$ 982.19
31580_CASCADE_60.0_31582_STLLWATR_60.0_BR_1_1	\$ 707.77
31114_FRT SWRD_60.0_31116_GRBRVLE_60.0_BR_1_1	\$ 685.63
32314_SMRTSVLE_60.0_32349_BEALE2J1_60.0_BR_1_1	\$ 387.71
31104_CARLOTTA_60.0_31105_RIODLLTP_60.0_BR_1_1	\$ 314.06
34321_MCSWAINJ_70.0_34232_EXCHEQUR_70.0_BR_1_1	\$ 290.24
31080_HUMBOLDT_60.0_31092_MPLE CRK_60.0_BR_1_1	\$ 247.09
31110_BRDGVLE_60.0_31112_FRUITLND_60.0_BR_1_1	\$ 236.45
34144_MERCED_115_34202_MERCED_70.0_XF_2	\$ 161.44
33926_CH.STNJT_115_33930_PEORIA_115_BR_1_1	\$ 113.88
31464_COTWDPGE_115_30105_COTTNWD_230_XF_1	\$ 99.47
31556_TRINITY_60.0_31555_MSS TAP2_60.0_BR_1_1	\$ 84.84
31676_HOWELLS_60.0_31690_CARIBOU_60.0_BR_1_1	\$ 65.43
31593_COWCREEK_60.0_31597_DESCHTP1_60.0_BR_1_1	\$ 42.04

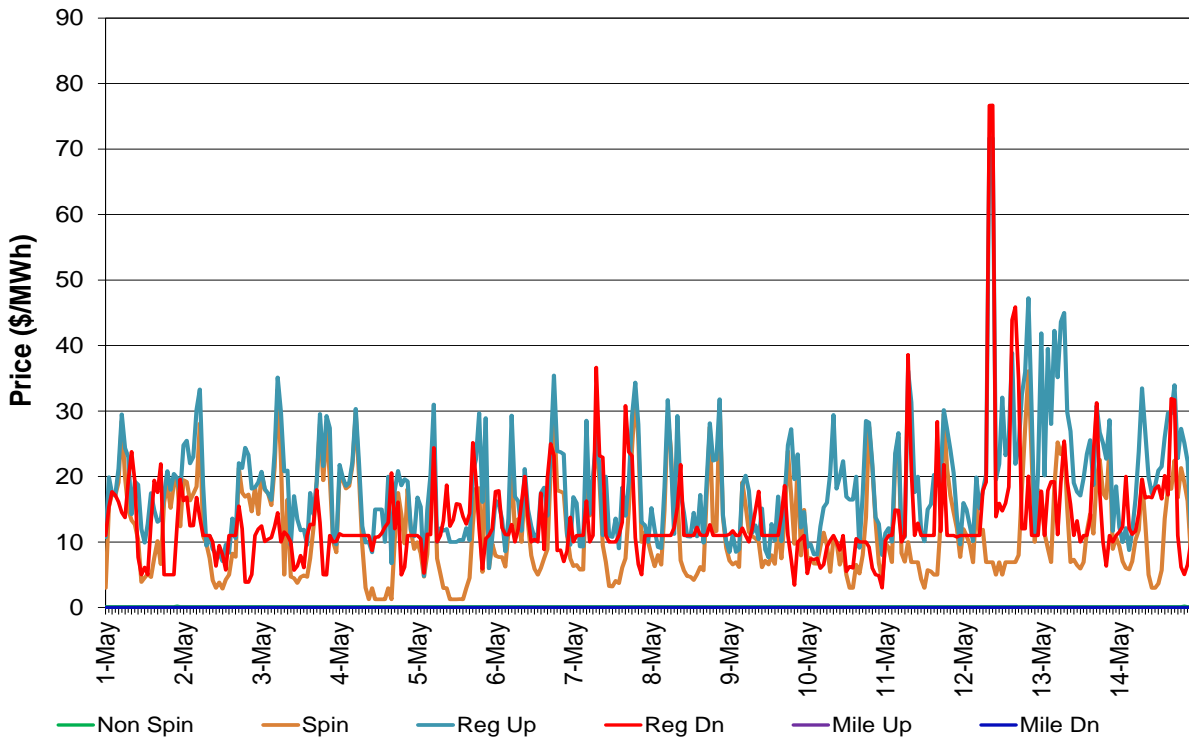
**Figure 4: Day-Ahead (IFM) Average A/S Price**




Figure 5: Day-Ahead Average RUC Price

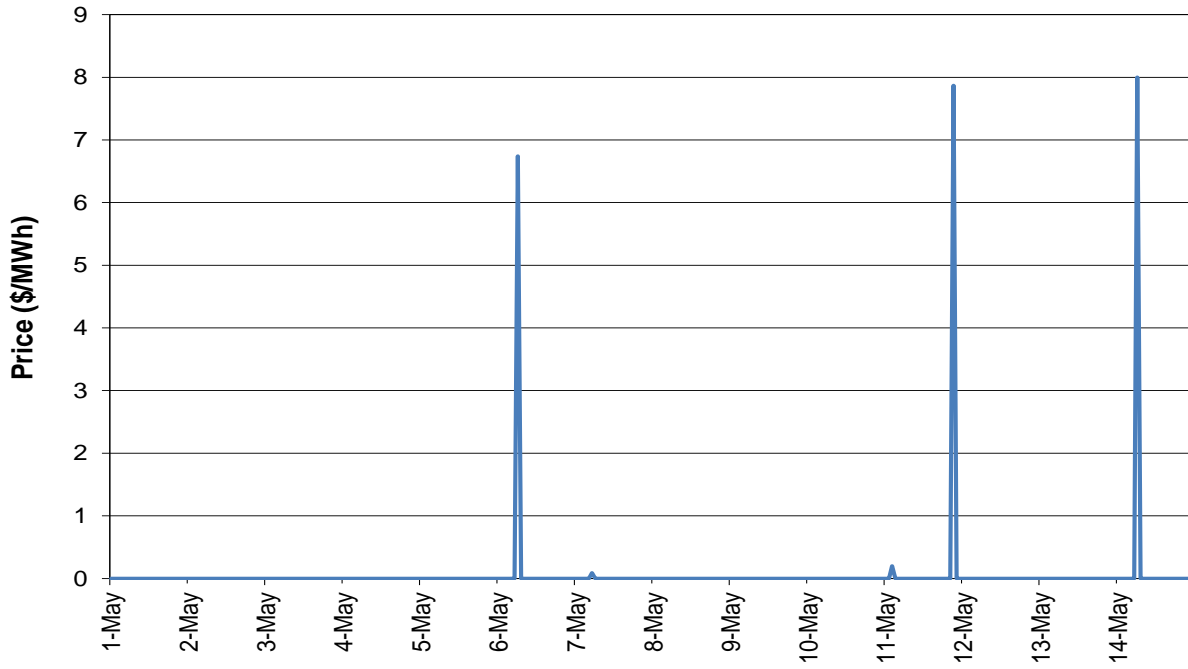


Figure 6: Real-Time FMM Average A/S Price

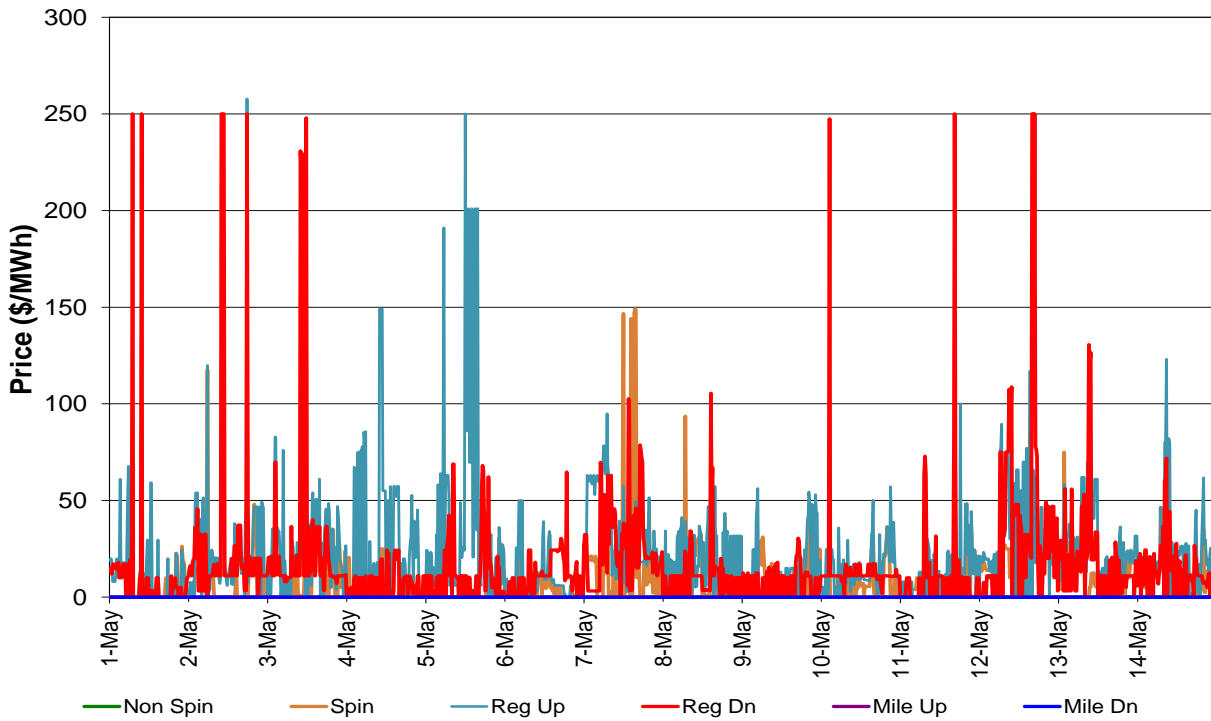




Figure 7: Real-Time FMM DLAP LMP

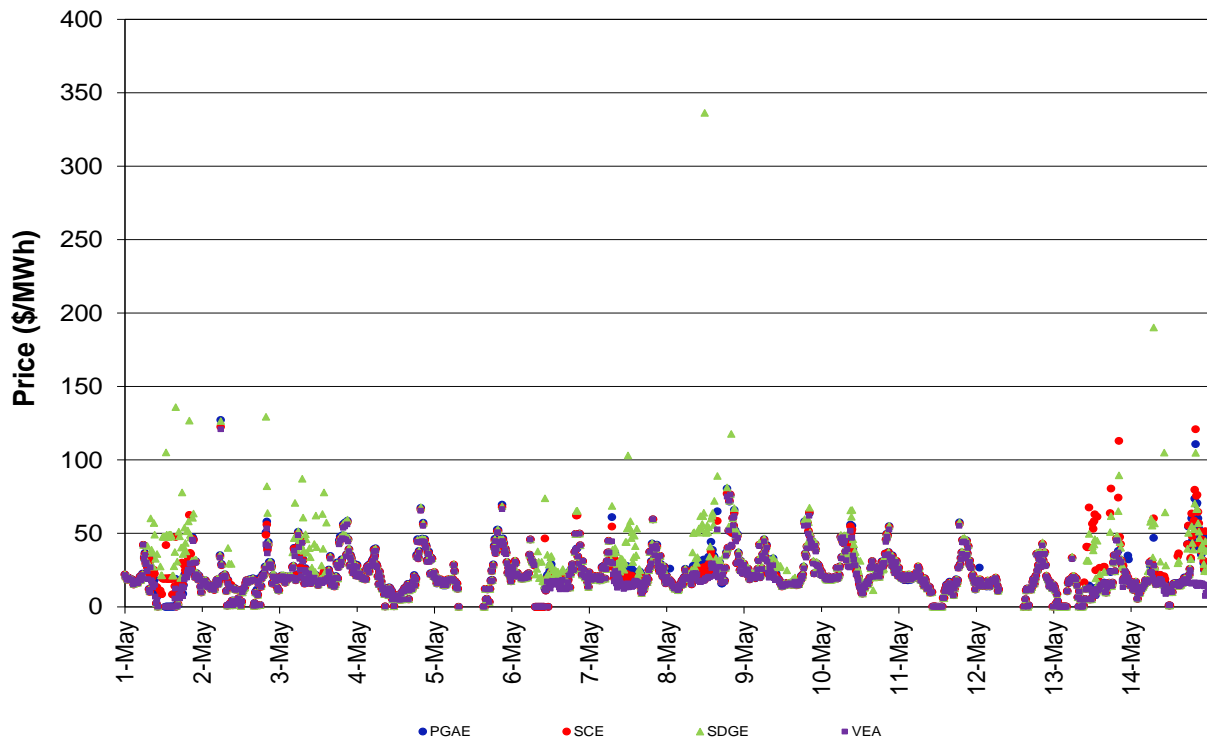
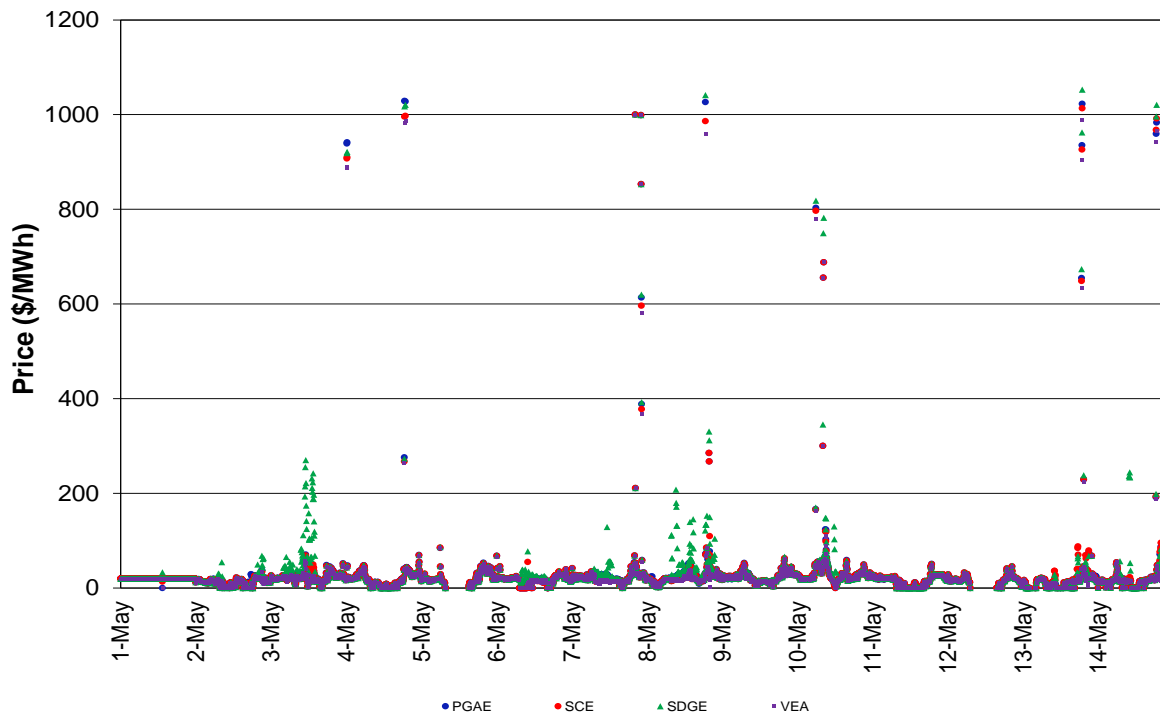
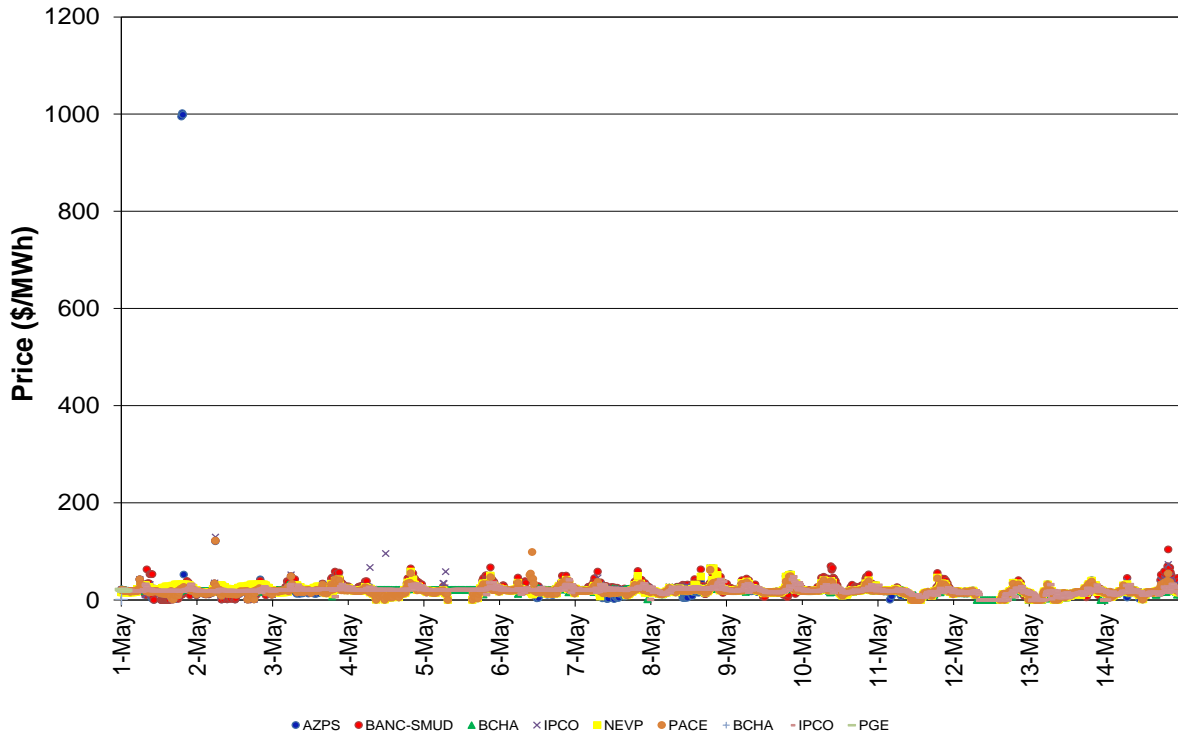


Figure 8: Real-Time RTD DLAP LMP



**Figure 9: Real-Time FMM ELAP LMP**



**Figure 10: Real-Time RTD ELAP LMP**

