Market Highlights[1] (April 17–April 30)

- The average DLAP price in the integrated forward market was $22.22. The maximum and minimum DLAP prices were $88.12 and -$10.67, respectively. The maximum and minimum PNode prices in the integrated forward market were $326.71 and -$1,140.84 respectively.

- The top two interties congested in the integrated forward market were MALIN500_ITC and NOB_ITC. Congestion rents in these two weeks totaled $15,142,263.61.

- The average day-ahead ancillary service prices were between $0.00 and $99.60.

- Approximately 91.36 percent of the RUC requirements were met from RA units.

- The average real-time FMM DLAP price was $32.08, with a maximum price of $1,071.98 and a minimum price of -$16.68. The maximum and minimum PNode prices in the FMM were $1,381.11 and -$1,786.97, respectively.

- Out of the total 1,344 FMM intervals,19 intervals saw DLAP prices above $250, and 0 intervals saw DLAP prices below -$150.

- Out of the total 1,344 FMM intervals, 80 intervals saw ELAP prices above $250 and 115 intervals saw ELAP prices below -$150.

- The average real-time FMM ELAP price was $24.00, with a maximum price of $1,024.60 and a minimum price of -$155.96.

- The average real-time RTD DLAP price was $32.58, with a maximum price of $1,108.56 and a minimum price of -$15.86. The maximum and minimum PNode prices in the RTD were $1,765.56 and -$963.05, respectively.

- Out of the total 4,032 RTD intervals, 67 intervals saw DLAP prices above $250 and 0 interval saw DLAP prices below -$150.

- Out of the total 4,032 RTD intervals, 257 intervals saw ELAP prices above $250 and 393 intervals saw ELAP prices below -$150. The average real-time RTD ELAP price was $24.80, with a maximum price of $1,233.58 and a minimum price of -$155.67.

- Root causes for daily high price events are noted in Tables 1 and 2.

[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**
17 Apr HE 20	Load changes
18 Apr HE 20, 21	Load changes
23 Apr HE 20	Increase in AS requirements and forced generation outage
24 Apr HE 20, 21	Load changes, increase in AS requirements, and decrease in renewable generation
25 Apr HE 8	Renewable generation
25 Apr HE 19-21	Load changes
30 Apr HE 19	Renewable generation

Table 2 RTD Intervals	
Trade Date	**Root Cause**
17 Apr HE 23	Renewable generation
18 Apr HE 7	Forced generation outage
18 Apr HE 20-22	Increase in AS requirements
19 Apr HE 14	Renewable generation
20 Apr HE 20	Renewable generation and load changes
22 Apr 20, 23	Load changes
23 Apr HE 23	Renewable generation and load changes
24 Apr HE 19	Renewable generation
25 Apr HE 15, 18, 19	Renewable generation and load changes
25 Apr HE 19	Renewable generation, load changes and forced generation outage
26 Apr HE 18	Renewable generation and load changes
28 Apr HE 6, 15-16, 18-19, 22	Renewable generation and load changes
29 Apr HE 8	Renewable generation, load changes and forced generation outage
29 Apr HE 13, 23	Renewable generation and load changes
30 Apr HE 7	Renewable generation and load changes
30 Apr HE 23	Renewable generation, load changes and forced generation outage

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

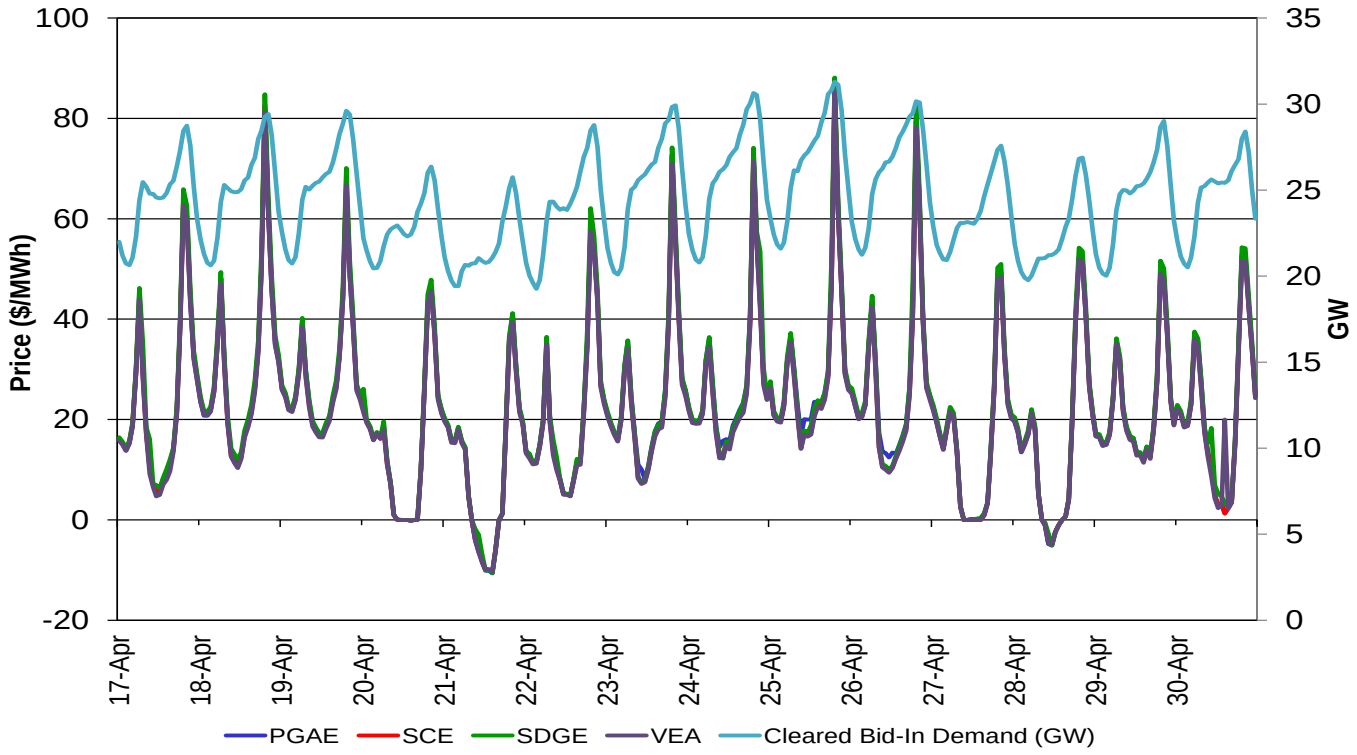

Figure 2: Day-Ahead Congestion Rents

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

Transmission Constraint	Congestion Rent
30105_COTTNWD _230_30245_ROUND MT_230_BR_2 _1	$ 2,061,385.74
30105_COTTNWD _230_30245_ROUND MT_230_BR_3 _1	$ 1,478,033.08
30750_MOSSLD _230_30797_LASAGUIL_230_BR_1 _1	$ 1,168,440.65
33936_MELNS JB_115_33951_VLYHMTP1_115_BR_1 _1	$ 986,253.85
34548_KETTLEMN_70.0_34552_GATES _70.0_BR_1 _1	$ 365,999.63
30523_CC SUB _230_30525_C.COSTA _230_BR_1 _1	$ 234,830.39
34112_EXCHEQUR_115_34116_LE GRAND_115_BR_1 _1	$ 221,249.73
7510-MAG-PAS1-OOS_NG	$ 215,257.06
22480_MIRAMAR _69.0_22756_SCRIPPS _69.0_BR_1 _1	$ 209,406.84
34427_ATWELL _115_34701_SMYRNA 1_115_BR_1 _1	$ 193,292.31
7820_TL23040_IV_SPS_NG	$ 186,665.54
7750_D-ECASCO_OOS_CP6_NG	$ 173,124.84
34418_KINGSBRG_115_34405_FRWT TAP_115_BR_1 _1	$ 154,383.63
32212_E.NICOLS_115_32214_RIO OSO _115_BR_1 _1	$ 126,435.33
30500_BELLOTA _230_30515_WARNERVL_230_BR_1 _1	$ 122,875.01
22356_IMPRLVLY_230_22360_IMPRLVLY_500_XF_81	$ 109,133.46
33020_MORAGA _115_32780_CLARMNT _115_BR_2 _1	$ 91,082.10
7820_TL 230S_OVERLOAD_NG	$ 90,428.57
34116_LE GRAND_115_34134_WILSONAB_115_BR_1 _1	$ 88,713.52

22192_DOUBLTTP_138_22300_FRIARS _138_BR_1 _1	$	87,132.72
33916_CURTISS _115_33917_FBERBORD_115_BR_1 _1	$	83,555.50
34860_TAFT _70.0_34943_Q356TAP _70.0_BR_1 _1	$	70,275.27
32225_BRNSWKT1_115_32222_DTCH2TAP_115_BR_1 _1	$	68,357.00
33951_VLYHMTP1_115_33516_RIPON J _115_BR_1 _1	$	63,152.39
34474_HELM _70.0_34556_STRD JCT_70.0_BR_1 _1	$	62,263.87
33543_AEC_TP2 _115_33540_TESLA _115_BR_1 _1	$	57,749.60
34700_SMYRNA 2_115_34742_SEMITRPJ_115_BR_1A_1	$	52,233.28
30275_CRESTA _230_30330_RIO OSO _230_BR_1 _1	$	51,551.72
33916_CURTISS _115_33920_RCTRK J._115_BR_1 _1	$	50,009.59
30800_WILSON _230_30795_STOREY 2_230_BR_2 _1	$	46,520.68
34859_PRMTFMTP_70.0_34873_Q484TP _70.0_BR_1 _1	$	37,866.66
32308_COLGATE _60.0_32313_NRRWS2TP_60.0_BR_2 _1	$	36,778.86
30280_POE _230_30330_RIO OSO _230_BR_1 _1	$	35,293.36
31466_JESSUP _115_31469_SPI_AND _115_BR_1 _1	$	34,390.98
24420_NEENACH _66.0_24452_TAP 85 _66.0_BR_1 _1	$	34,051.06
33932_MELONES _115_33936_MELNS JB_115_BR_1 _1	$	32,471.84
30335_ATLANTC _230_30337_GOLDHILL_230_BR_1 _1	$	32,244.99
22592_OLD TOWN_69.0_22873_VINE SUB_69.0_BR_1 _1	$	21,075.60
31208_CLOVRDLE_115_31210_MPE TAP _115_BR_1 _1	$	18,817.74
OMS_7087963_CP12_NG	$	16,994.42
34469_GFFNJCT _70.0_34470_GIFFEN _70.0_BR_1 _1	$	14,011.85
32208_GLEAF TP_115_32214_RIO OSO _115_BR_1 _1	$	11,909.20
31000_HUMBOLDT_115_31452_TRINITY _115_BR_1 _1	$	10,857.26
30515_WARNERVL_230_30800_WILSON _230_BR_1 _1	$	10,171.64
33926_CH.STNJT_115_33930_PEORIA _115_BR_1 _1	$	9,985.53
34149_CHENYT _115_34158_PANOCHE _115_BR_1 _1	$	9,241.05
32200_PEASE _115_32288_E.MRY J1_115_BR_1 _1	$	8,055.78
24036_EAGLROCK_230_24059_GOULD _230_BR_1 _1	$	6,902.81
22644_PENSQTOS_69.0_22444_MESA RIM_69.0_BR_1 _1	$	6,508.99
22192_DOUBLTTP_138_22648_PENSQTOS_138_BR_1 _1	$	5,725.54
32290_OLIVH J1_115_32214_RIO OSO _115_BR_1 _1	$	5,648.79
22831_SYCAMORE_138_22124_CHCARITA_138_BR_1 _1	$	5,340.82
34474_HELM _70.0_34564_STROUD _70.0_BR_2 _1	$	5,307.32
32218_DRUM _115_32244_BRNSWKT2_115_BR_2 _1	$	3,539.73
30765_LOSBANOS_230_30790_PANOCHE _230_BR_2 _1	$	3,484.74
31604_COTTONWD_60.0_31611_RAWSON _60.0_BR_2 _1	$	3,240.78
34321_MCSWAINJ_70.0_34232_EXCHEQUR_70.0_BR_1 _1	$	3,095.48
33914_MI-WUK _115_33917_FBERBORD_115_BR_1 _1	$	2,396.51
31214_GEYERS56_115_31220_EGLE RCK_115_BR_1 _1	$	1,629.34
33020_MORAGA _115_32780_CLARMNT _115_BR_1 _1	$	1,183.70
33045_FIBRJCT1_115_33049_RIVERVEW_115_BR_1 _1	$	974.44
32218_DRUM _115_32222_DTCH2TAP_115_BR_1 _1	$	893.55
31336_HPLND JT_60.0_31206_HPLND JT_115_XF_2	$	848.66
22644_PENSQTOS_69.0_22164_DELMARTP_69.0_BR_1 _1	$	550.38
33514_MANTECA _115_33539_CROSRDJ2_115_BR_1 _1	$	310.62
32348_BEALE2J2_60.0_32352_WEST JCT_60.0_BR_1 _1	$	185.67
33920_RCTRK J._115_33926_CH.STNJT_115_BR_1 _1	$	134.16

33516_RIPON J _115_33514_MANTECA _115_BR_1 _1	$	104.88
34269_BIOMSJCT_70.0_34268_MENDOTA _70.0_BR_1 _1	$	67.94
31476_KANAKAJT_115_31482_PALERMO _115_BR_1 _1	$	60.61
34556_STRD JCT_70.0_34564_STROUD _70.0_BR_1 _1	$	30.61
31593_COWCREEK_60.0_31597_DESCHTP1_60.0_BR_1 _1	$	22.74

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

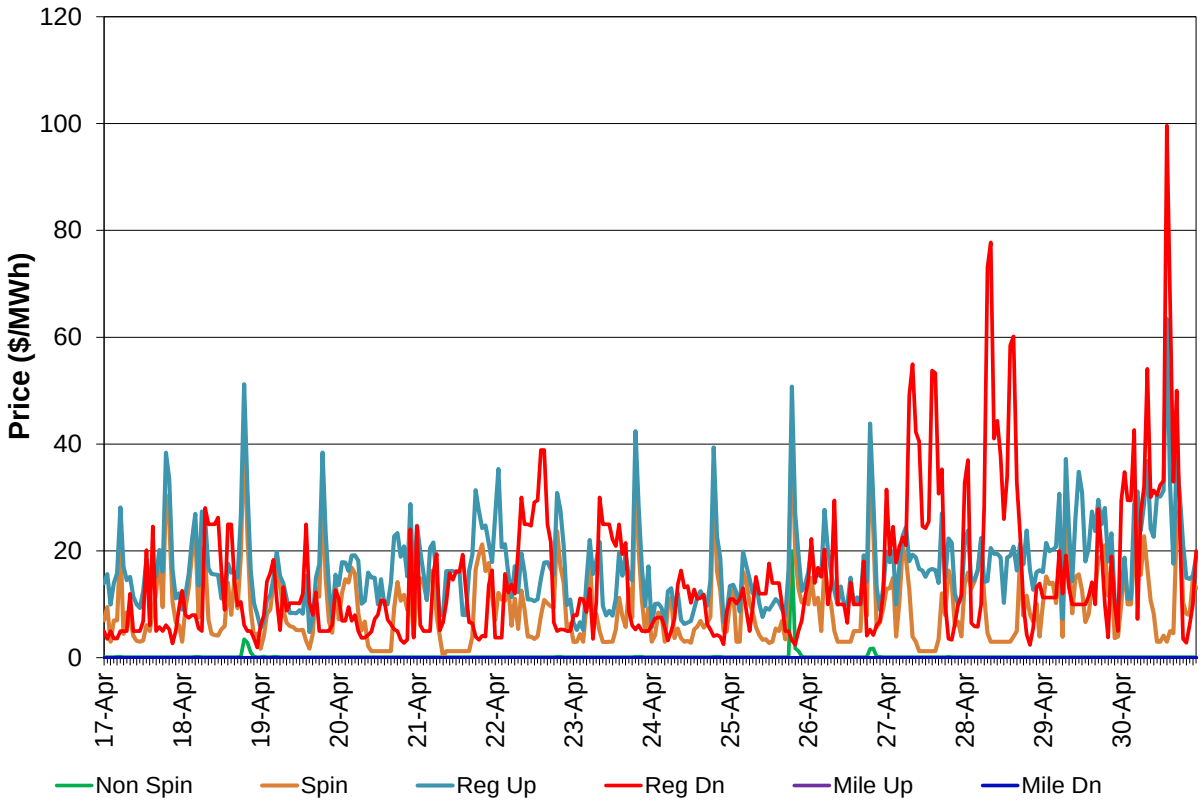

Figure 5: Day-Ahead Average RUC Price

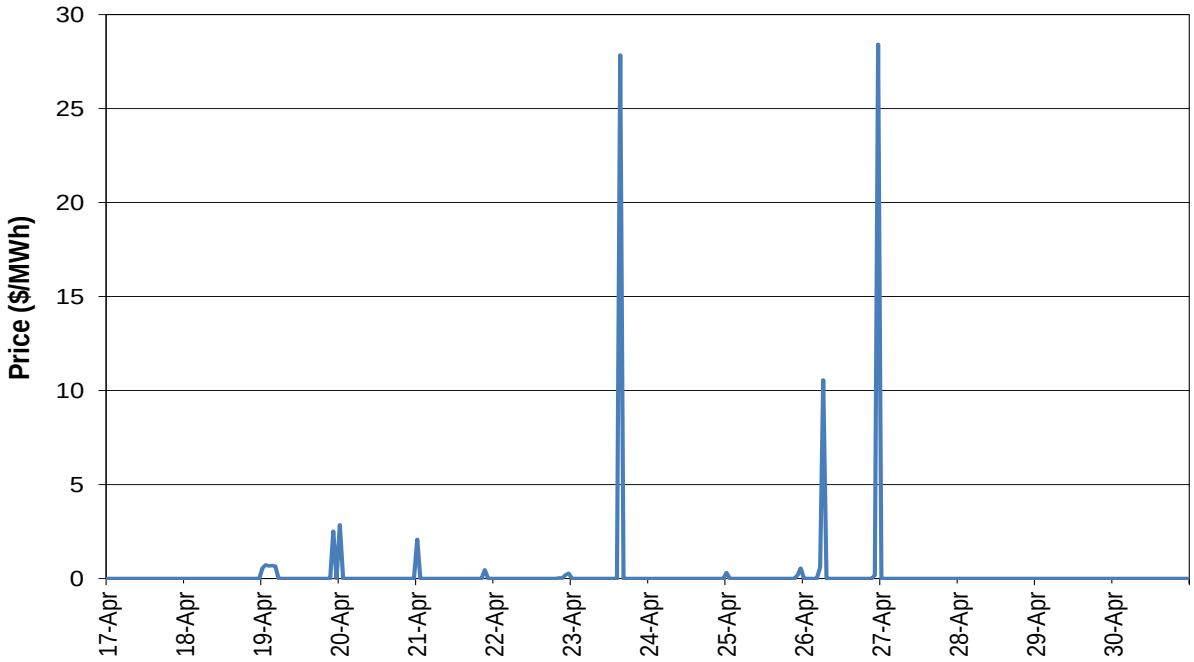

Figure 6: Real-Time FMM Average A/S Price

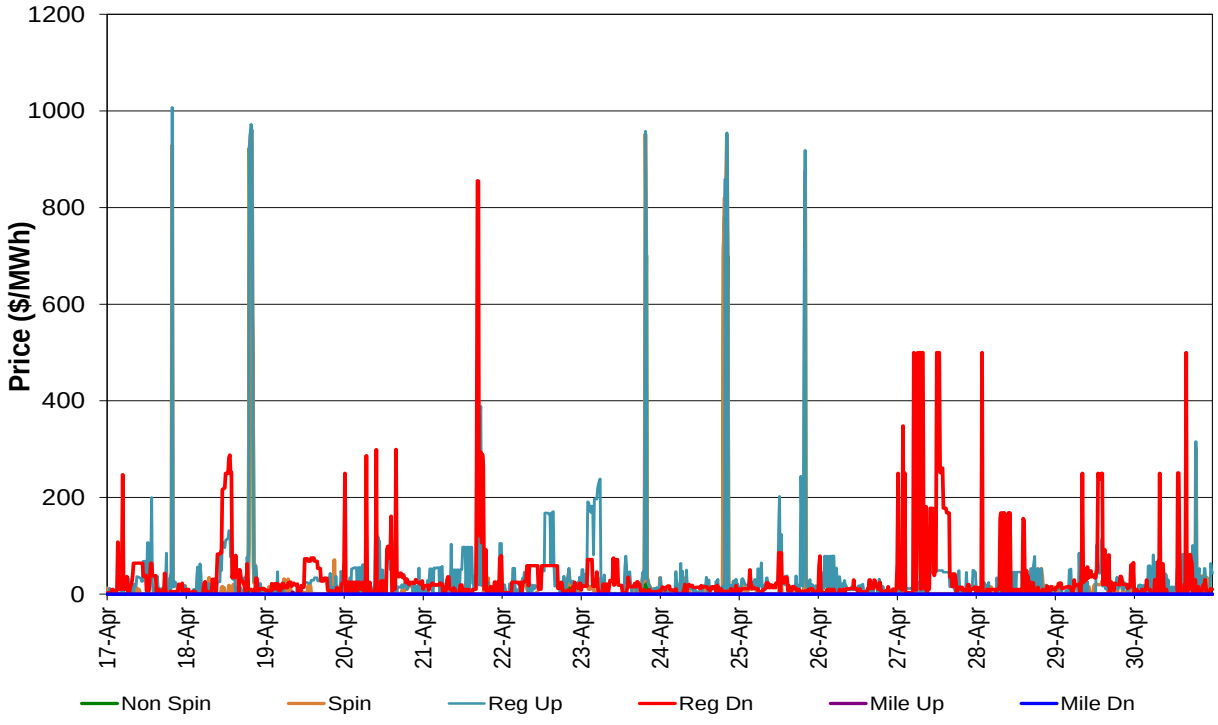

Figure 7: Real-Time FMM DLAP LMP

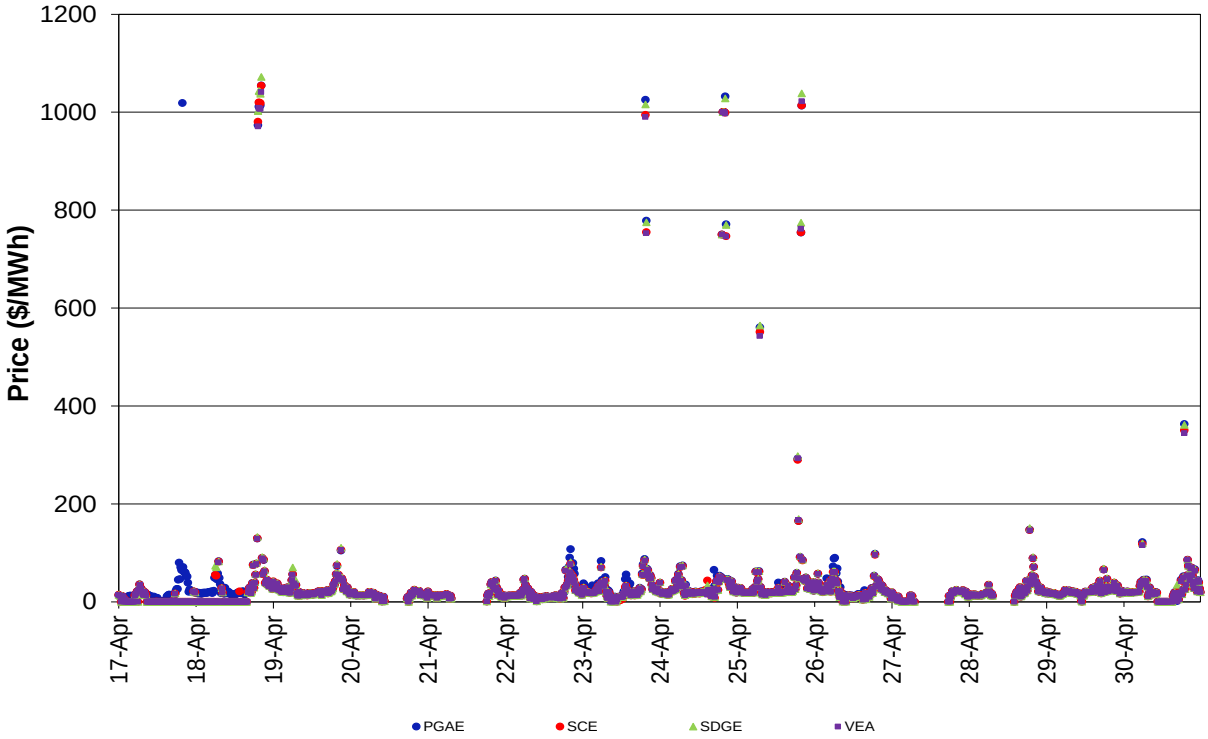

Figure 8: Real-Time RTD DLAP LMP

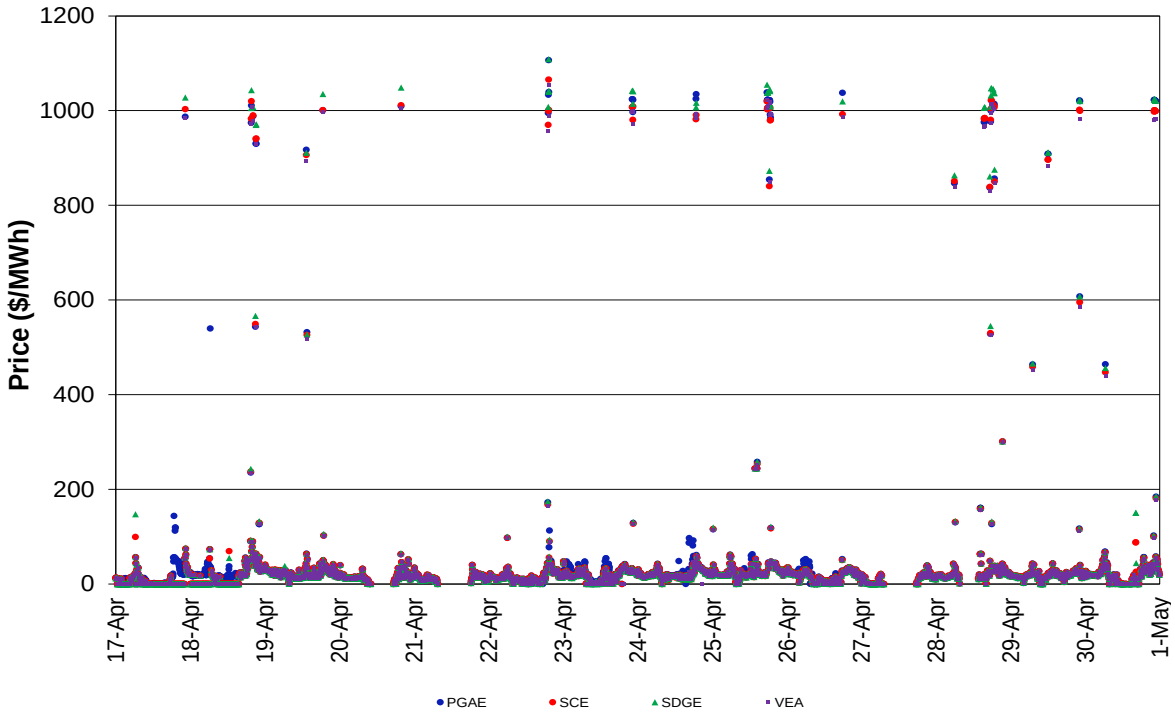

Figure 9: Real-Time FMM ELAP LMP

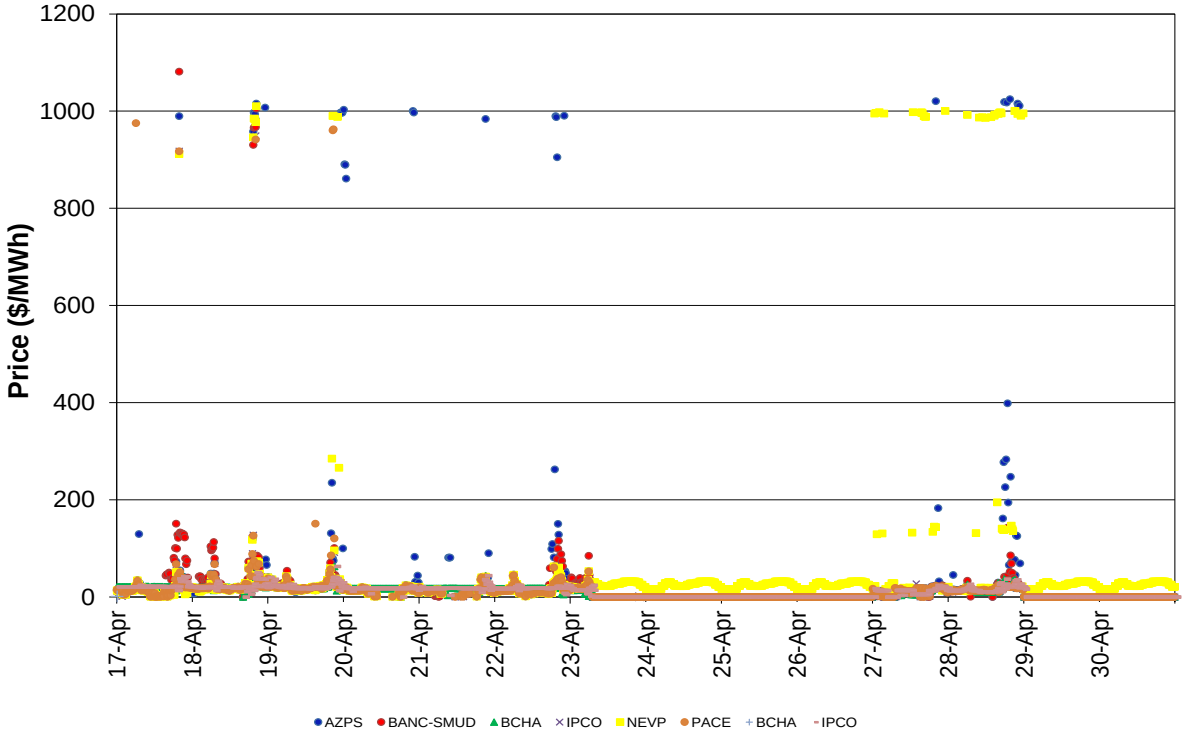

Figure 10: Real-Time RTD ELAP LMP