



Market Highlights¹ (July 26–August 8)

- The average DLAP price in the integrated forward market was \$46.63. The maximum and minimum DLAP prices were \$413.35 and \$16.12, respectively. The maximum and minimum PNode prices in the integrated forward market were \$462.76 and -\$125.86 respectively.
- The top two interties congested in the integrated forward market were MALIN500 and NOB_ITC. Congestion rents in these two weeks totaled \$7,937,829.38.
- The average day-ahead ancillary service prices were between \$0.00 and \$356.96.
- Approximately 97.54 percent of the RUC requirements were met from RA units.
- The average real-time FMM DLAP price was \$36.65, with a maximum price of \$1,000.00 and a minimum price of \$3.28. The maximum and minimum PNode prices in the FMM were \$1,027.23 and -\$327.50, 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, 42 intervals saw ELAP prices above \$250 and 0 intervals saw ELAP prices below -\$150.
- The average real-time FMM ELAP price was \$34.69, with a maximum price of \$1,017.79 and a minimum price of -\$150.00.
- The average real-time RTD DLAP price was \$34.14, with a maximum price of \$1,028.25 and a minimum price of -\$26.36. The maximum and minimum PNode prices in the RTD were \$1,177.01 and -\$534.13, respectively.
- Out of the total 4,032 RTD intervals, 11 intervals saw DLAP prices above \$250 and 0 interval saw DLAP prices below -\$150.
- Out of the total 4,032 RTD intervals, 78 intervals saw ELAP prices above \$250 and 4 intervals saw ELAP prices below -\$150. The average real-time RTD ELAP price was \$31.42, with a maximum price of \$1,003.17 and a minimum price of -\$342.54.
- Root cause for daily high price events are noted in Tables 1 and 2.

Table 1 FMM Intervals	
Trade Date	Root Cause
FMM Aug 1 HE 17	Load changes, renewable deviation, and re-dispatch of resources

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

Table 2 RTD Intervals	
Trade Date	Root Cause
RTD Jul 30 HE 19	Resource de-rate and renewable deviation
RTD Aug 3 HE 16, 17	Load changes and renewable deviation.
RTD Aug 7 HE 19	Load changes and re-dispatch of resources.

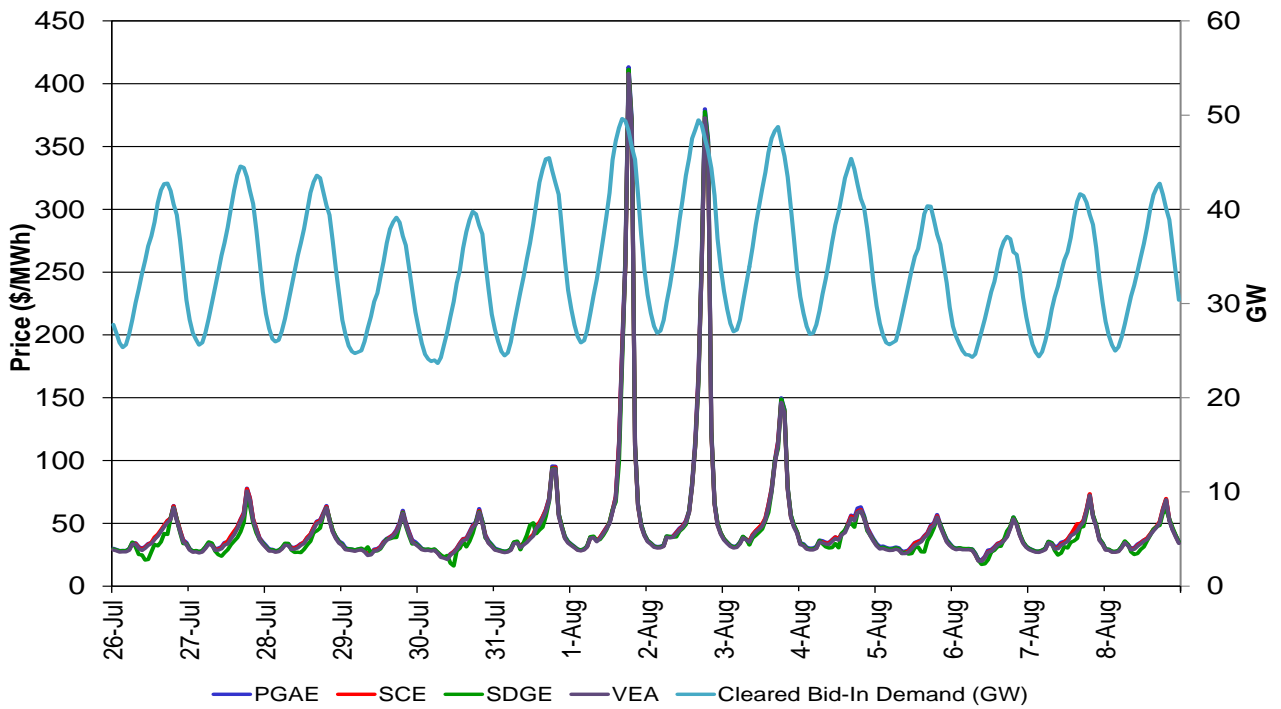
Figure 1: Day-Ahead (IFM) LAP LMP and Cleared Bid-In Demand




Figure 2: Day-Ahead Congestion Rents

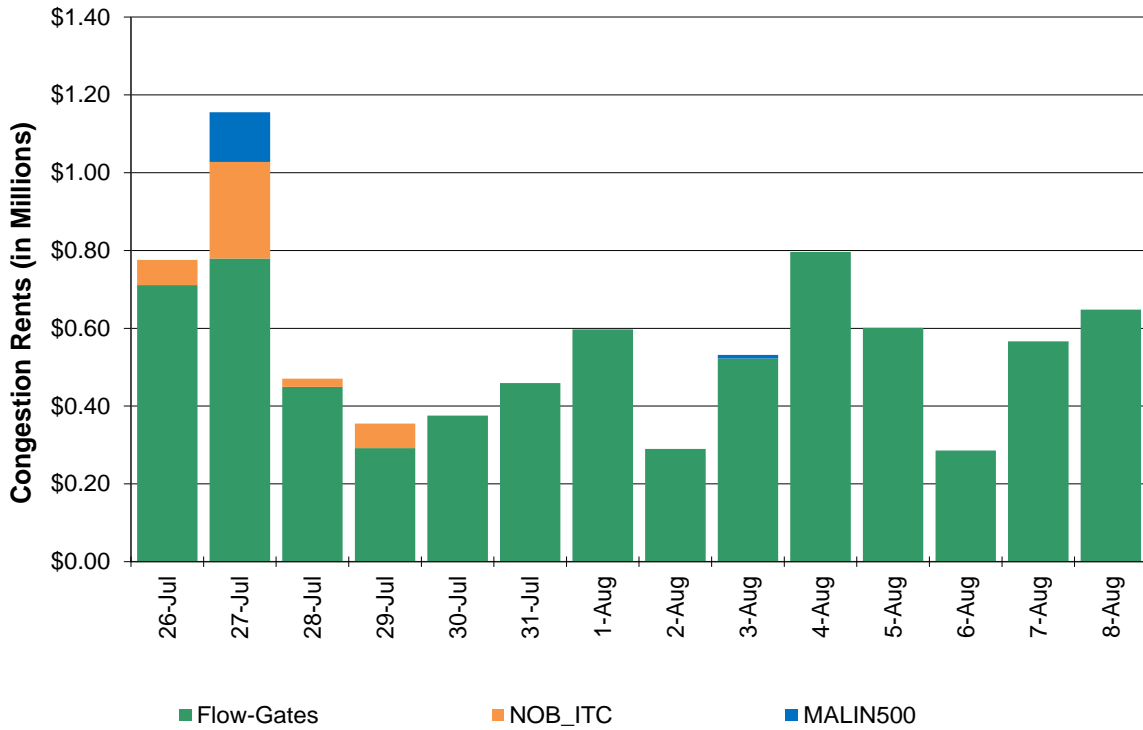


Figure 3: Day-Ahead Congestion Rents for Flow-Based Constraints

Transmission Constraint	Congestion Rent
22192_DOUBLTTP_138_22300_FRIARS_138_BR_1_1	\$ 3,670,815.37
30515_WARNERVL_230_30800_WILSON_230_BR_1_1	\$ 1,006,864.59
22831_SYCAMORE_138_22832_SYCAMORE_230_XF_1	\$ 650,940.87
37016_RNCHSECO_230_30510_CAMANCH_230_BR_2_1	\$ 265,861.87
34112_EXCHEQUR_115_34116_LE GRAND_115_BR_1_1	\$ 254,679.37
24016_BARRE_230_24154_VILLA PK_230_BR_1_1	\$ 168,840.31
32056_CORTINA_60.0_30451_CRTNA M_1.0_XF_1	\$ 139,105.75
22227_ENCINATP_230_22716_SANLUSRY_230_BR_2_1	\$ 133,611.94
7820_TL_230S_OVERLOAD_NG	\$ 123,403.10
32218_DRUM_115_32244_BRNSWKT2_115_BR_2_1	\$ 116,329.45
31512_BIG BEN2_115_31516_WYANDJT2_115_BR_1_2	\$ 104,339.74
33549_GWFTRACY_115_33529_LAMMERS_115_BR_1_1	\$ 103,872.04
33020_MORAGA_115_30550_MORAGA_230_XF_1_P	\$ 93,395.60
22604_OTAY_69.0_22616_OTAYLKTP_69.0_BR_1_1	\$ 59,873.82
RM_TM12_NG	\$ 53,771.80
34469_GFFNJCT_70.0_34470_GIFFEN_70.0_BR_1_1	\$ 49,475.86
99254_J.HINDS2_230_24806_MIRAGE_230_BR_1_1	\$ 49,164.44
34548_KETTLEMN_70.0_34552_GATES_70.0_BR_1_1	\$ 39,990.17

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

Transmission Constraint	Congestion Rent
30261_BELDENTP_230_30300_TABLMTN_230_BR_1_1	\$ 36,932.90
HUMBOLDT_IMP_NG	\$ 32,071.72
32326_ENCL TAP_60.0_32332_PEASE_60.0_BR_1_1	\$ 31,501.77
30060_MIDWAY_500_24156_VINCENT_500_BR_2_2	\$ 19,154.12
31566_KESWICK_60.0_31582_STLLWATR_60.0_BR_1_1	\$ 17,415.06
31640_TRES VIS_60.0_31718_TBLE MTN_60.0_BR_1_1	\$ 16,133.91
35353_MT VIEW_115_35356_MNTA VSA_115_BR_1_1	\$ 15,545.57
31090_HMBLT BY_60.0_31100_EEL RIVR_60.0_BR_1_1	\$ 15,247.61
22256_ESCNDIDO_69.0_22724_SANMRCOS_69.0_BR_1_1	\$ 14,413.02
99100_PIT-ESH1_230_30527_PITSBRG_230_BR_1_1	\$ 13,506.42
35618_SN JSE A_115_35616_SNJOSEB_115_BR_1_1	\$ 11,717.92
34427_ATWELL_115_34701_SMYRNA 1_115_BR_1_1	\$ 11,670.55
6110_SOL7_NG	\$ 11,105.09
33542_LEPRINO_115_33546_TRACY JC_115_BR_1_1	\$ 7,608.76
22208_EL CAJON_69.0_22408_LOSCOCHS_69.0_BR_1_1	\$ 7,533.27
22500_MISSION_138_22120_CARLTNHS_138_BR_1_1	\$ 6,442.10
34807_ARVINJ2_115_34758_LAMONT_115_BR_1_1	\$ 4,816.71
34134_WILSONAB_115_30800_WILSON_230_XF_1	\$ 4,663.83
33514_MANTECA_115_33526_KASSONJ1_115_BR_1_1	\$ 3,052.18
31080_HUMBOLDT_60.0_31088_HMBLT JT_60.0_BR_1_1	\$ 2,668.05
31580_CASCADE_60.0_31582_STLLWATR_60.0_BR_1_1	\$ 2,509.52
22056_BERNARDO_69.0_22284_FELCTATP_69.0_BR_1_1	\$ 1,885.58
22300_FRIARS_138_22500_MISSION_138_BR_1_1	\$ 775.59
31104_CARLOTTA_60.0_31105_RIODLLTP_60.0_BR_1_1	\$ 550.43
34116_LE GRAND_115_34134_WILSONAB_115_BR_1_1	\$ 260.65
31110_BRDGVLL_60.0_31112_FRUITLND_60.0_BR_1_1	\$ 133.09
30500_BELLOTA_230_30515_WARNERVL_230_BR_1_1	\$ 84.98
34107_CERTANTP_115_34101_CERTANJ2_115_BR_1_1	\$ 12.30
Totals	\$ 7,373,748.77

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

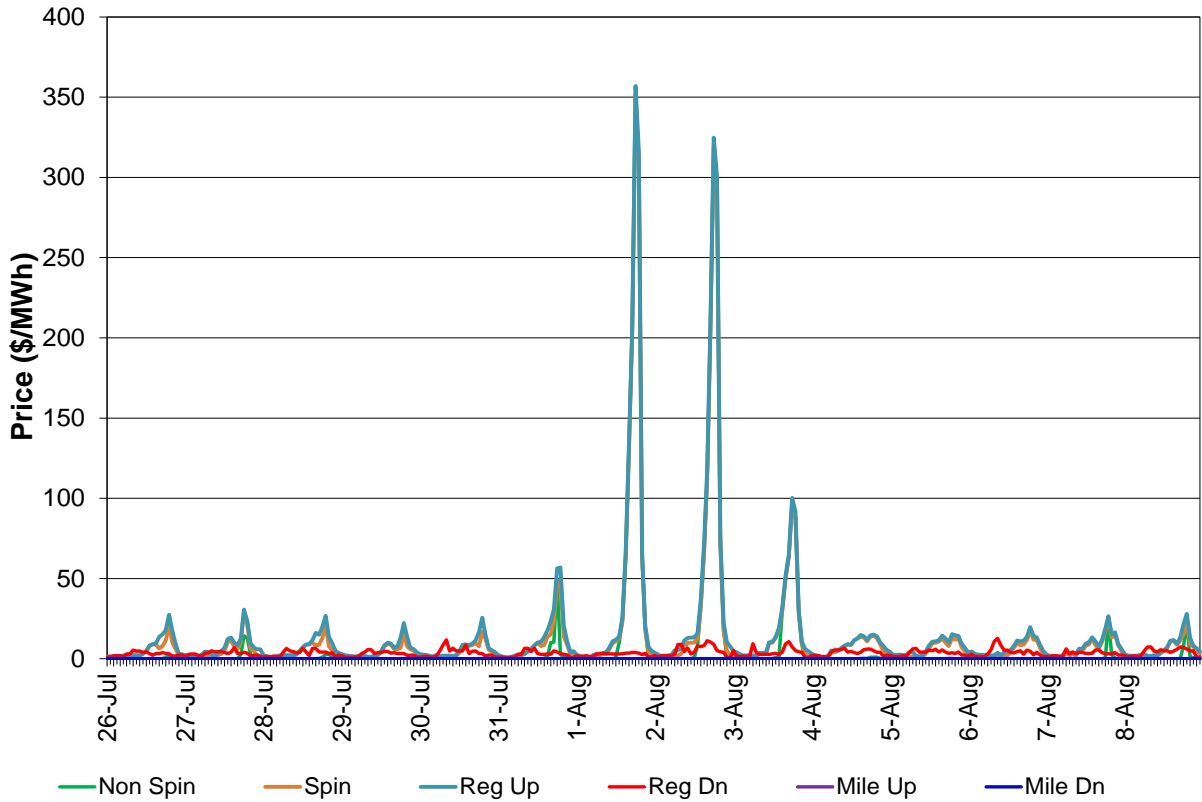


Figure 5: Day-Ahead Average RUC Price

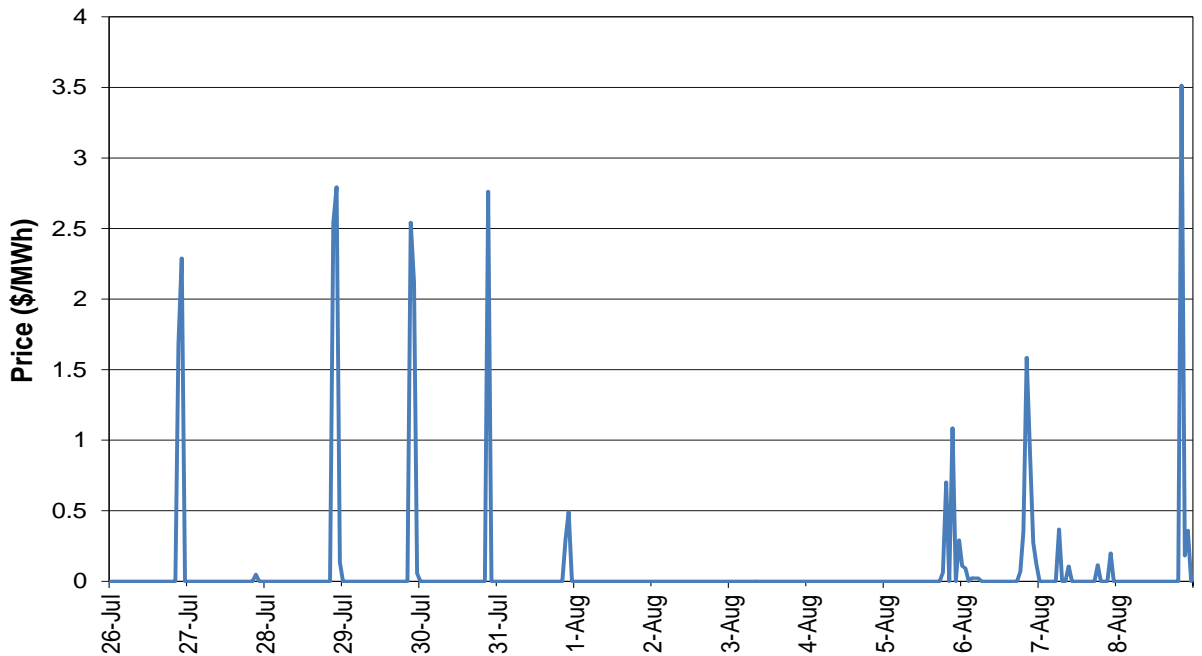


Figure 6: Real-Time FMM Average A/S Price

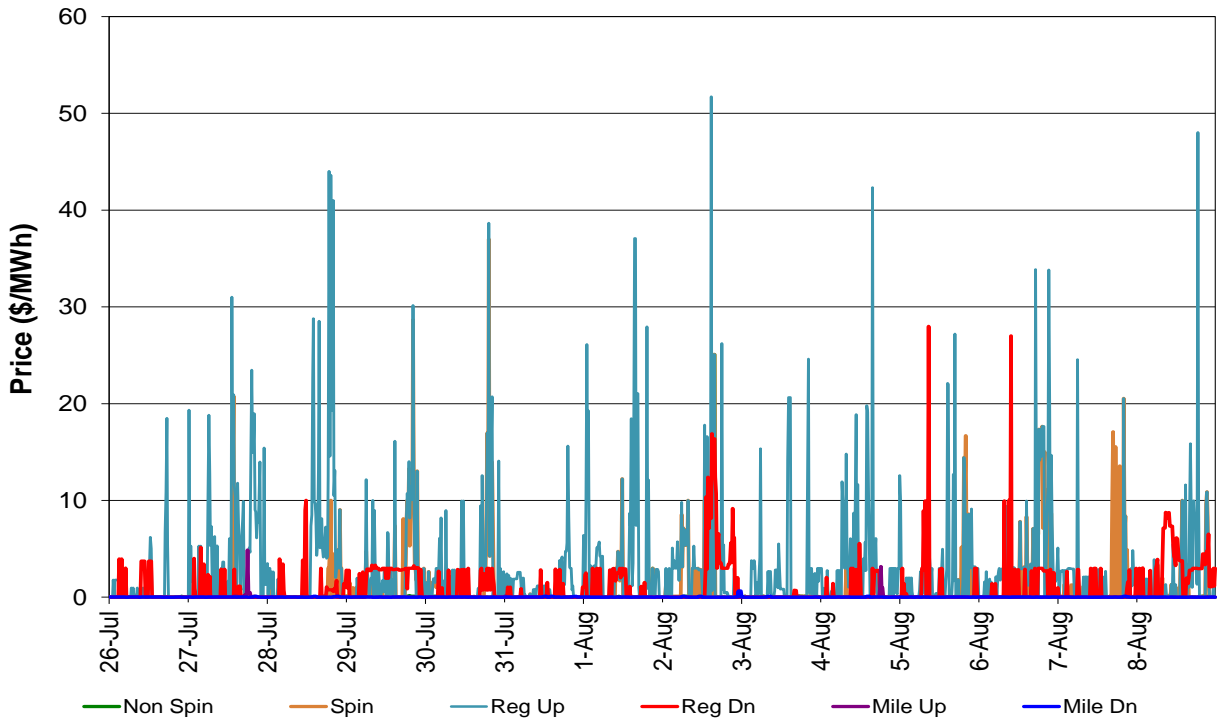


Figure 7: Real-Time FMM DLAP LMP

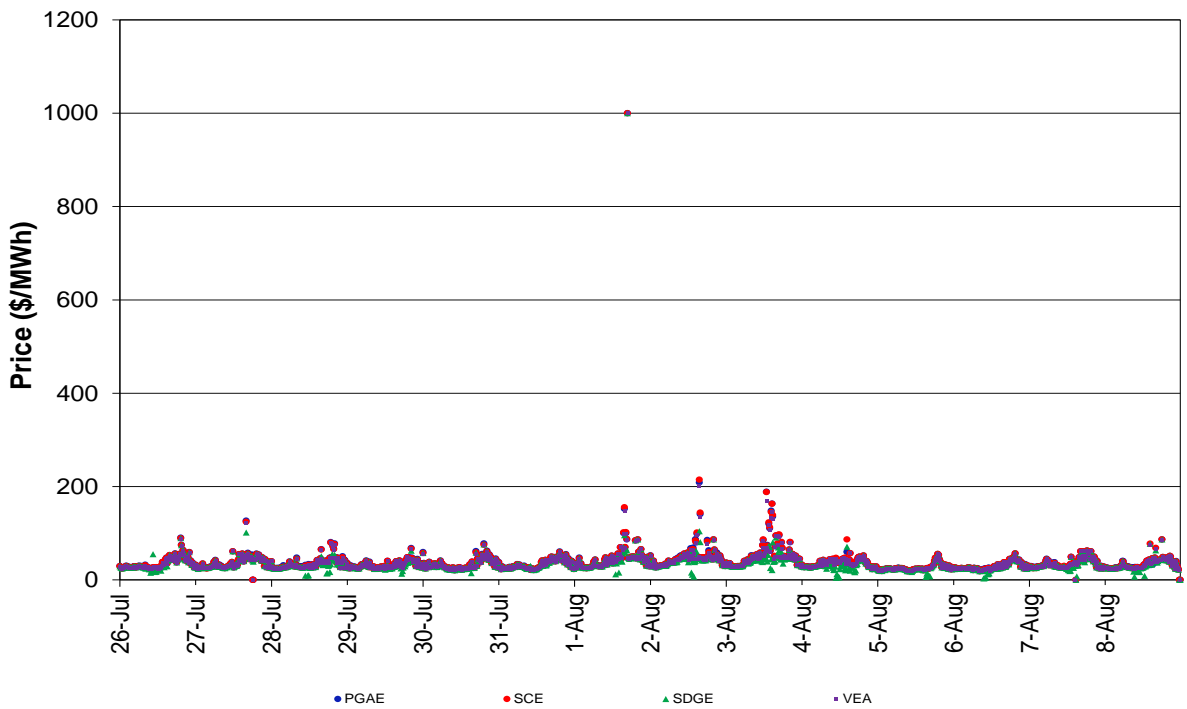


Figure 8: Real-Time RTD DLAP LMP

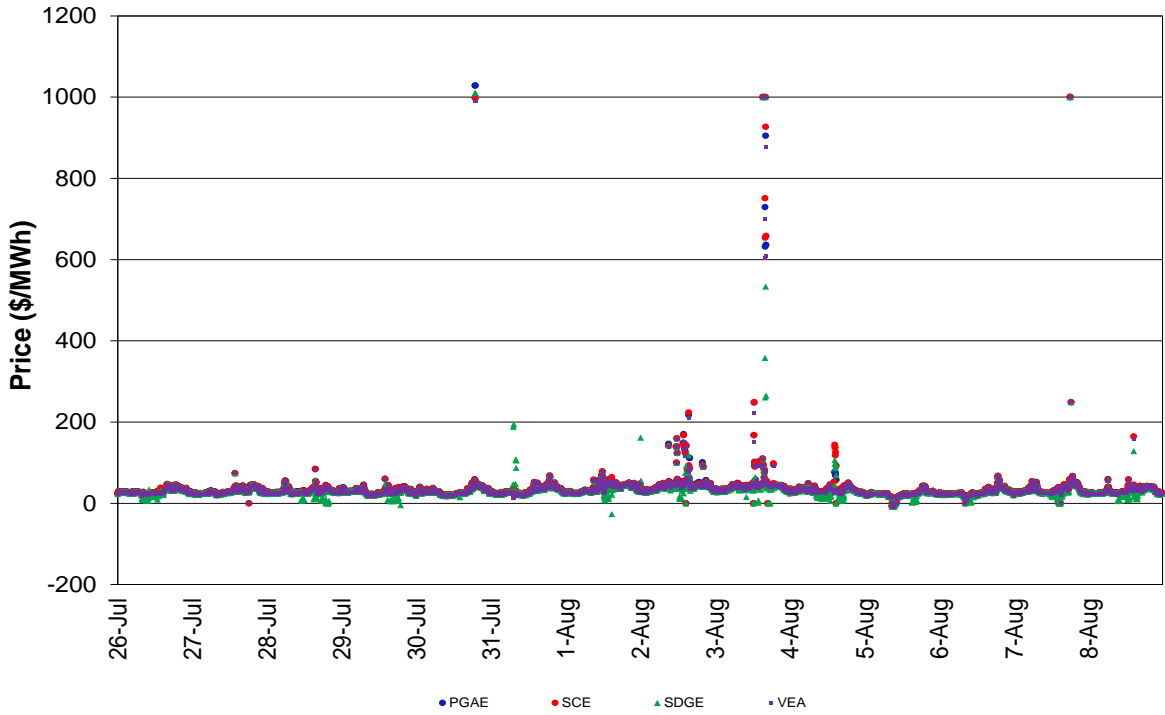


Figure 9: Real-Time FMM ELAP LMP

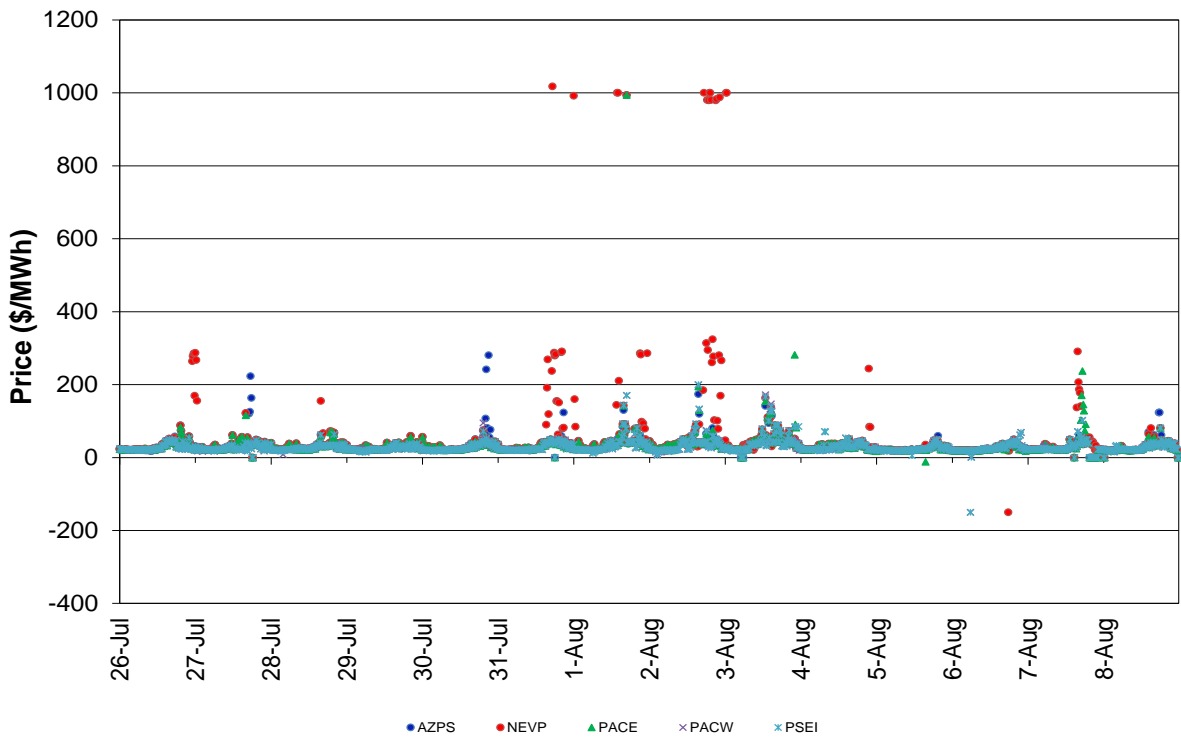


Figure 10: Real-Time RTD ELAP LMP

