



## Market Highlights<sup>1</sup> (March 8–March 21)

- The average DLAP price in the integrated forward market was \$26.02. The maximum and minimum DLAP prices were \$77.78 and -\$10.81, respectively. The maximum and minimum PNode prices in the integrated forward market were \$303.65 and -\$738.18 respectively.
- The top two interties congested in the integrated forward market were MALIN500 and NOB\_ITC. Congestion rents in these two weeks totaled \$10,893,866.12.
- The average day-ahead ancillary service prices were between \$0.00 and \$473.97.
- Approximately 74.88 percent of the RUC requirements were met from RA units.
- The average real-time FMM DLAP price was \$26.04, with a maximum price of \$684.04 and a minimum price of -\$35.44. The maximum and minimum PNode prices in the FMM were \$1,162.10 and -\$867.02, respectively.
- Out of the total 1,344 FMM intervals, 2 intervals saw DLAP prices above \$250, and 0 intervals saw DLAP prices below -\$150.
- Out of the total 1,344 FMM intervals, 19 intervals saw ELAP prices above \$250 and 11 intervals saw ELAP prices below -\$150. The average real-time FMM ELAP price was \$18.23, with a maximum price of \$1,006.02 and a minimum price of -\$161.05.
- The average real-time RTD DLAP price was \$20.42, with a maximum price of \$1,141.51 and a minimum price of -\$158.01. The maximum and minimum PNode prices in the RTD were \$1,430.50 and -\$853.46, respectively.
- Out of the total 4,032 RTD intervals, 31 intervals saw DLAP prices above \$250 and 2 intervals saw DLAP prices below -\$150.
- Out of the total 4,032 RTD intervals, 80 intervals saw ELAP prices above \$250 and 47 intervals saw ELAP prices below -\$150. The average real-time RTD ELAP price was \$14.01, with a maximum price of \$1,022.76 and a minimum price of -\$168.92.
- Root cause for daily high price events are noted in Tables 1 and 2.

Table 1 FMM Intervals	
Trade Date	Root Cause
FMM Mar 13 HE 20	Load changes, renewable forecast change and re-dispatch of resources

<sup>1</sup> 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 Mar 8 HE 14	Congestion on 7820_TL 230S_OVERLOAD_NG and 92320_SYCA TP1_230_22832_SYCAMORE_230
RTD Mar 9 HE 17	Load changes
RTD Mar 9 HE 18	Load changes, renewable deviation and re-dispatch of resources
RTD Mar 10 HE 12, 13	Renewable deviation
RTD Mar 11 HE 17, 18	Congestion on PATH26_N-S, renewable deviation and re-dispatch of resources
RTD Mar 13 HE 18	Renewable deviation
RTD Mar 13 HE 19	Load changes and renewable deviation
RTD Mar 14 HE 1	Reduction of net import
RTD Mar 15 HE 13	Congestion on 7820_TL 230S_OVERLOAD_NG and 92320_SYCA TP1_230_22832_SYCAMORE_230
RTD Mar 16 HE 18	Load changes and renewable deviation
RTD Mar 17 HE 17	Load changes, renewable deviation and reduction of net import
RTD Mar 17 HE 18	Load changes and reduction of net import
RTD Mar 18 HE 18	Load changes and renewable deviation
RTD Mar 18 HE 19	Reduction of net import and renewable deviation
RTD Mar 19 HE 11	Congestion on OMS_3861717_Path15, load changes and renewable deviation
RTD Mar 19 HE 16	Load changes and renewable deviation
RTD Mar 21 HE 10	Renewable deviation and re-dispatch of resources

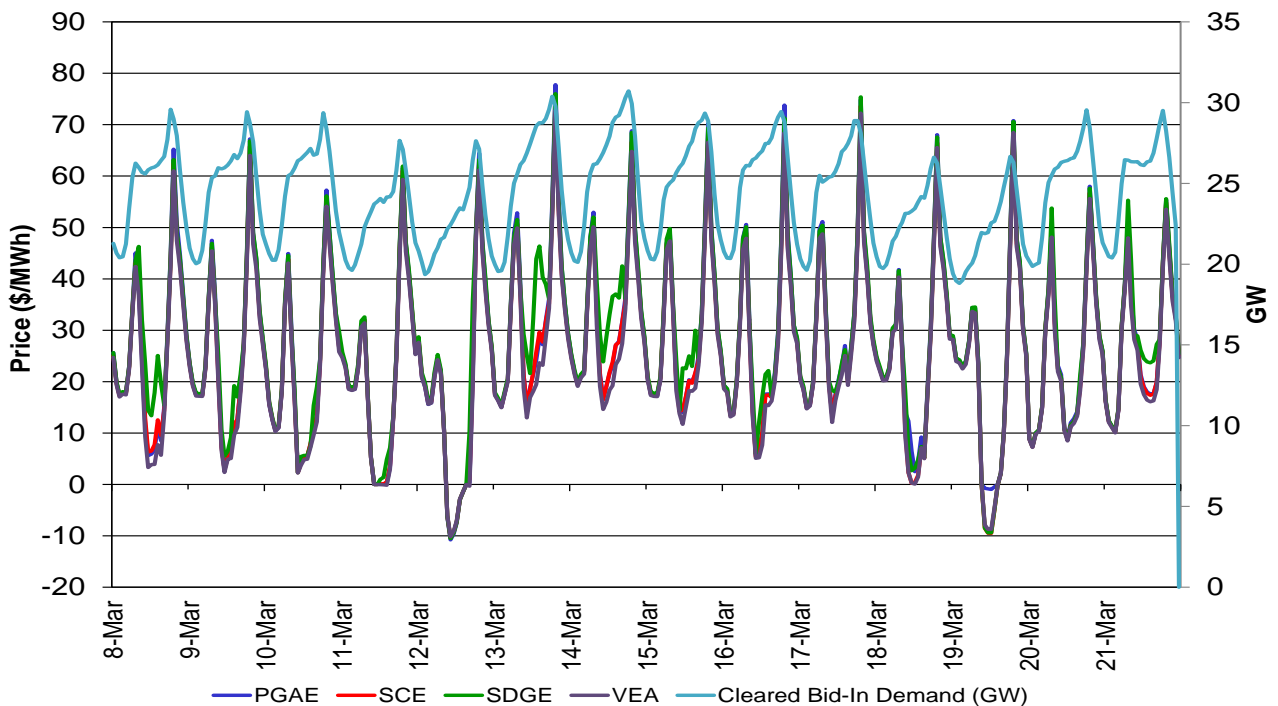
**Figure 1: Day-Ahead (IFM) LAP LMP and Cleared Bid-In Demand**




Figure 2: Day-Ahead Congestion Rents

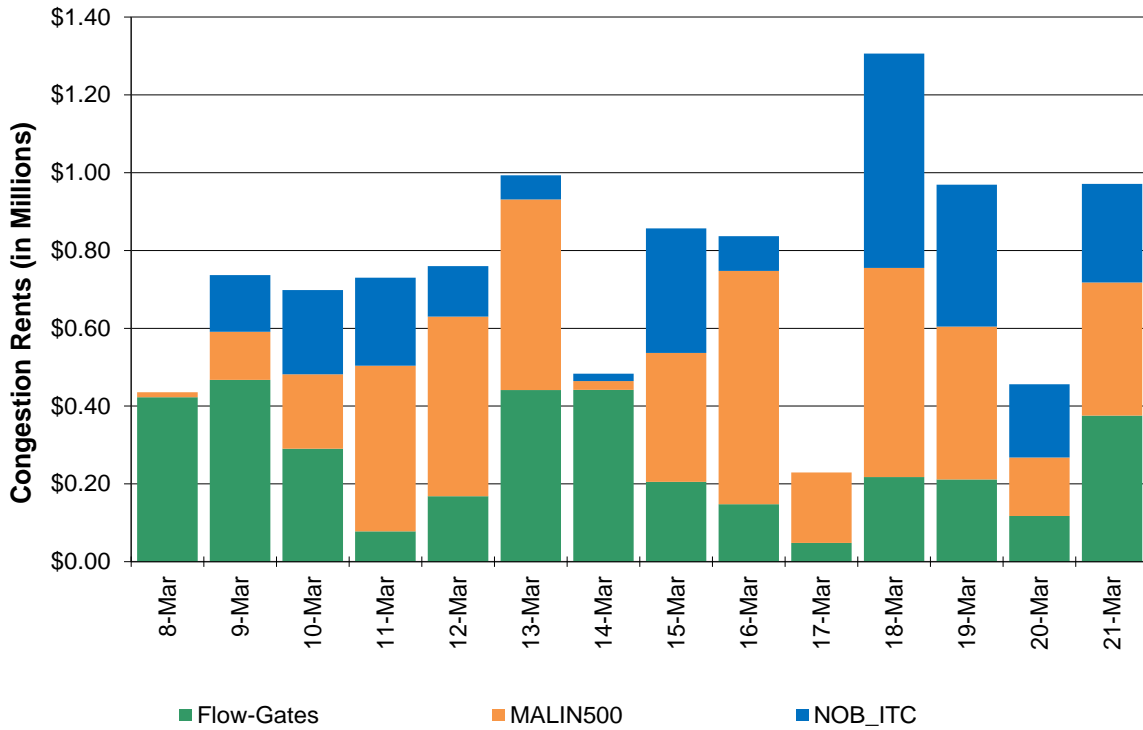


Figure 3: Day-Ahead Congestion Rents for Flow-Based Constraints

Transmission Constraint	Congestion Rent
92320_SYCA TP1_230_22832_SYCAMORE_230_BR_1_1	\$ 1,278,847.24
7820_TL23040_IV_SPS_NG	\$ 935,524.27
22192_DOUBLTTP_138_22300_FRIARS_138_BR_1_1	\$ 403,399.19
31486_CARIBOU_115_30255_CARBOU M_1.0_XF_11	\$ 353,323.68
OMS_3861717_Path15	\$ 250,316.29
7820_TL 230S_OVERLOAD_NG	\$ 226,100.46
33541_AEC_TP1_115_33540_TESLA_115_BR_1_1	\$ 100,150.36
31224_INDIN_VL_115_31215_LUCERNJ1_115_BR_1_1	\$ 19,936.73
31336_HPLND JT_60.0_31206_HPLND JT_115_XF_2	\$ 19,607.93
32228_PLACER_115_32238_BELL PGE_115_BR_1_1	\$ 11,814.70
32314_SMRTSVLE_60.0_32316_YUBAGOLD_60.0_BR_1_1	\$ 11,797.05
31464_COTWDPGE_115_30105_COTTNWD_230_XF_1	\$ 8,184.41
HUMBOLDT_IMP_NG	\$ 7,698.95
34758_LAMONT_115_34805_ARVINJ1_115_BR_1_1	\$ 2,981.02
31566_KESWICK_60.0_31582_STLLWATR_60.0_BR_1_1	\$ 2,590.23
34548_KETTLEMN_70.0_34552_GATES_70.0_BR_1_1	\$ 889.86
34874_WHEELER_70.0_34756_WHEELER_115_XF_2	\$ 116.34
<b>Totals</b>	<b>\$ 3,633,278.73</b>



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

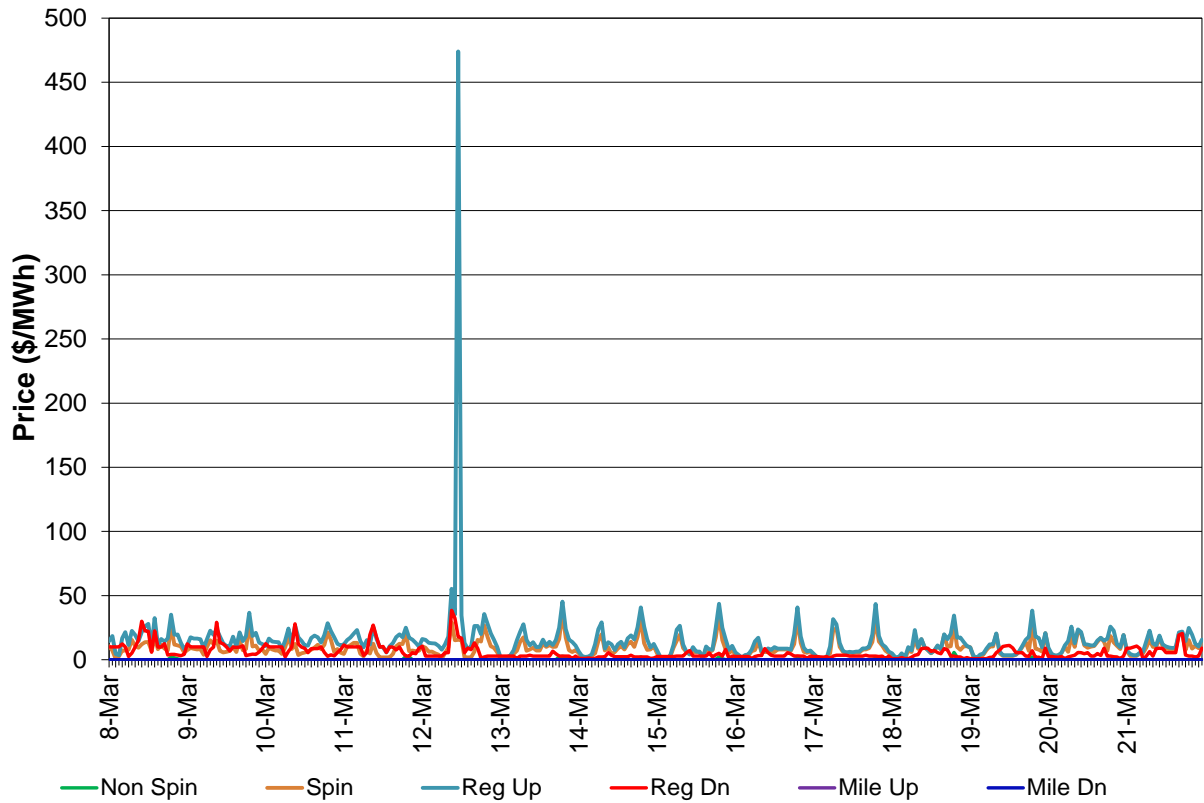


Figure 5: Day-Ahead Average RUC Price

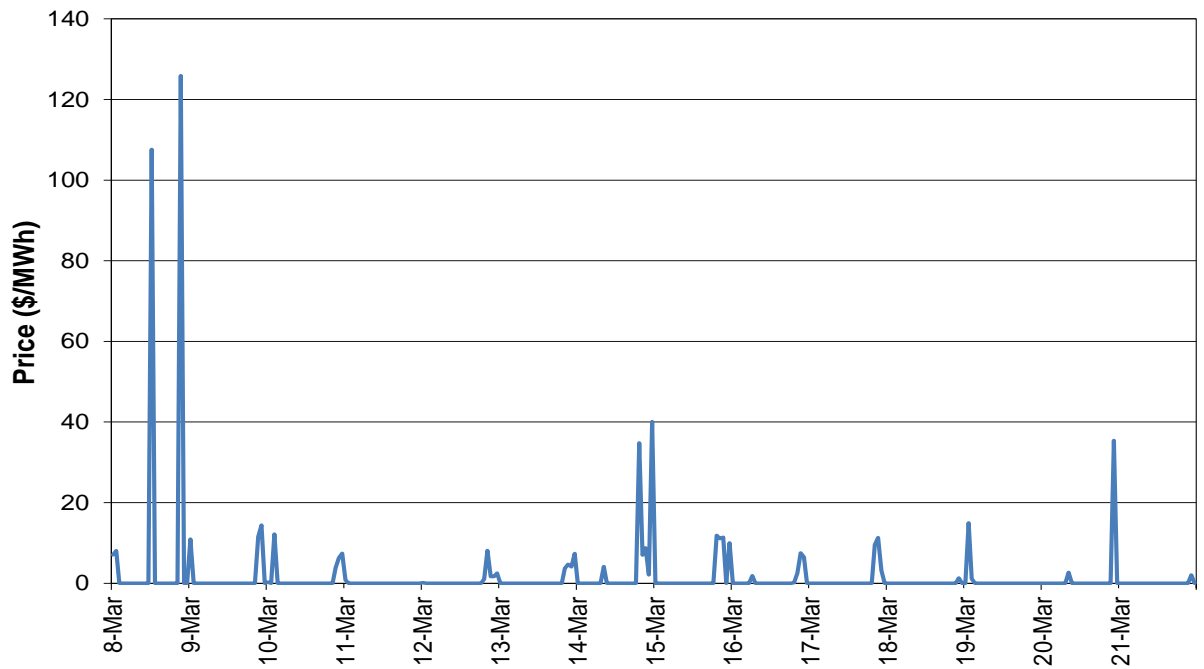




Figure 6: Real-Time FMM Average A/S Price

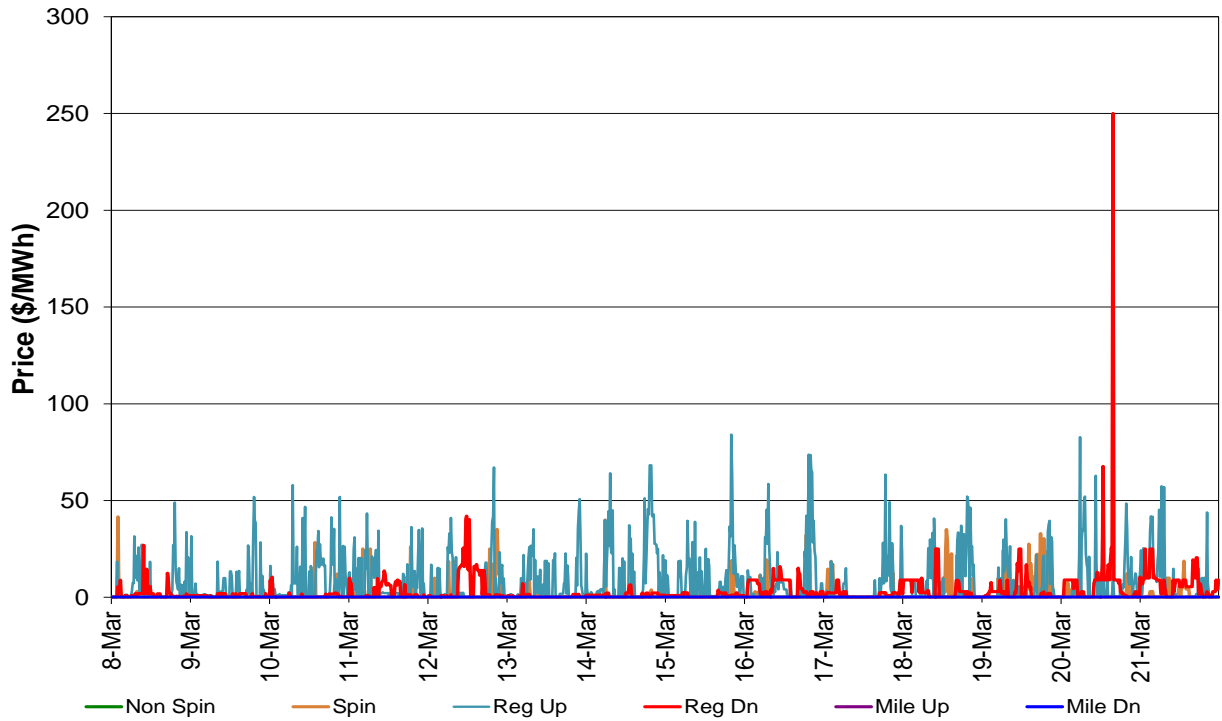
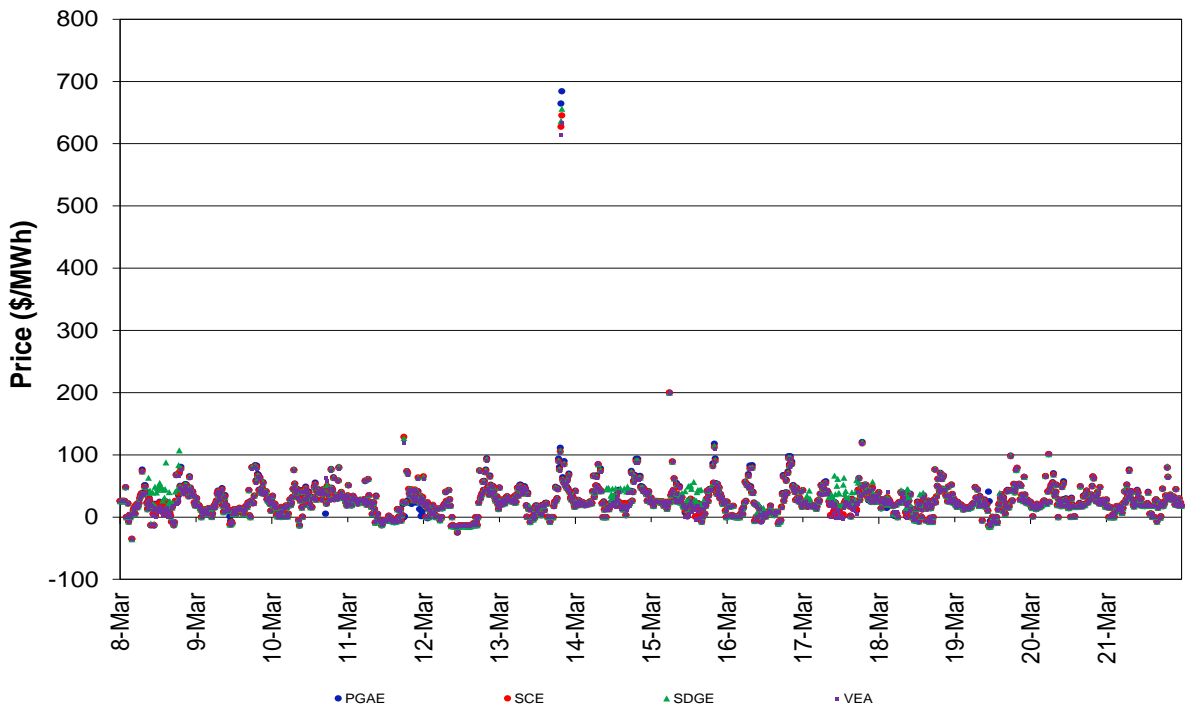
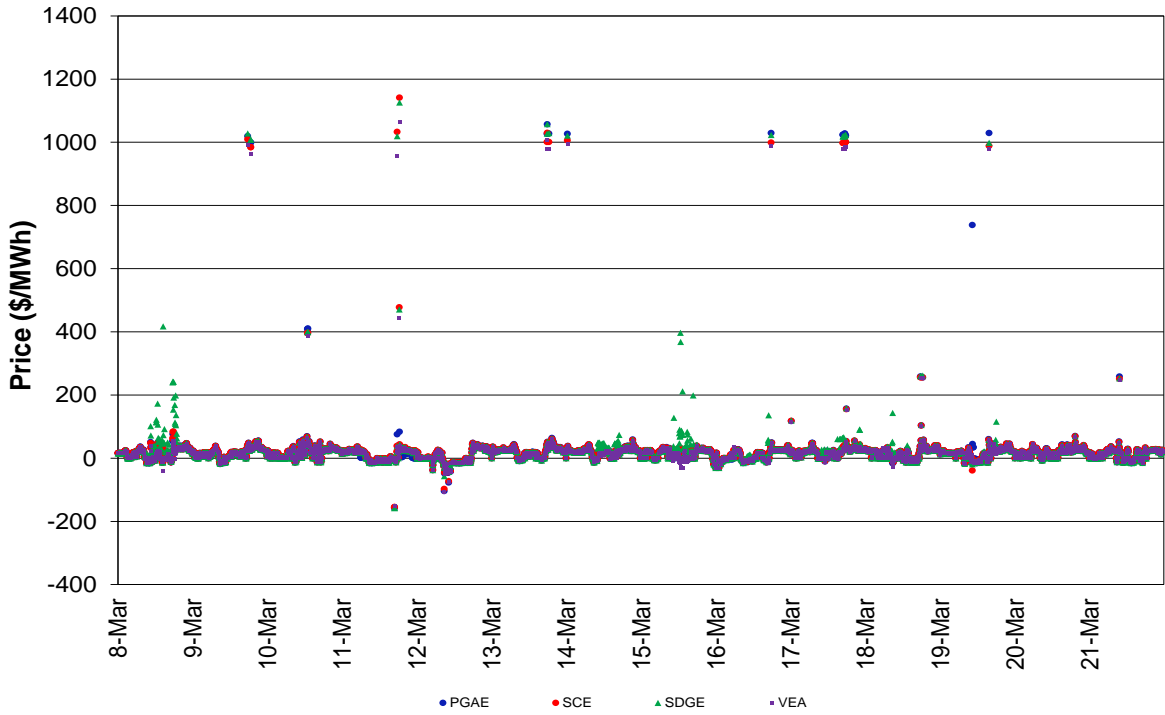


Figure 7: Real-Time FMM DLAP LMP



**Figure 8: Real-Time RTD DLAP LMP**



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

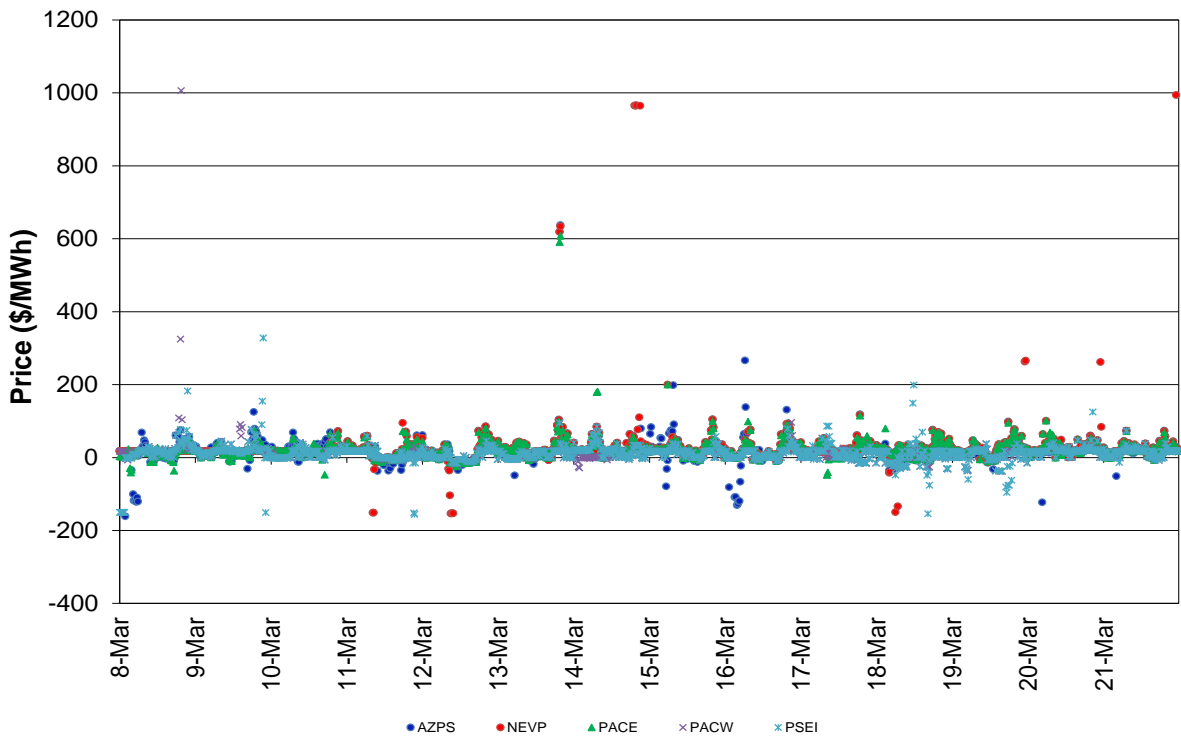




Figure 10: Real-Time RTD ELAP LMP

