Market Highlights[1] (November 28–December 11)

- The average DLAP price in the integrated forward market was $70.41. The maximum and minimum DLAP prices were $203.34 and $23.30, respectively. The maximum and minimum PNode prices in the integrated forward market were $423.26 and -$86.60 respectively.

- The top two interties congested in the integrated forward market were MALIN500 and PALOVRDE_ITC. Congestion rents in these two weeks totaled $30,489,146.69.

- The average day-ahead ancillary service prices were between $0.00 and $48.42.

- Approximately 95.86 percent of the RUC requirements were met from RA units.

- The average real-time FMM DLAP price was $60.74, with a maximum price of $235.12 and a minimum price of -$3.12. The maximum and minimum PNode prices in the FMM were $999.38 and -$313.94, 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, 10 intervals saw ELAP prices above $250 and 0 intervals saw ELAP prices below -$150.

- The average real-time FMM ELAP price was $52.49, with a maximum price of $975.20 and a minimum price of -$68.22.

- The average real-time RTD DLAP price was $67.43, with a maximum price of $1,174.60 and a minimum price of -$35.03. The maximum and minimum PNode prices in the RTD were $1,197.67 and -$537.18, respectively.

- Out of the total 4,032 RTD intervals, 58 intervals saw DLAP prices above $250 and 0 interval saw DLAP prices below -$150.

- Out of the total 4,032 RTD intervals, 63 intervals saw ELAP prices above $250 and 28 intervals saw ELAP prices below -$150. The average real-time RTD ELAP price was $55.65, with a maximum price of $1,044.32 and a minimum price of -$155.00.

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

Table 1 FMM Intervals	
Trade Date	**Root Cause**
FMM Nov 29 HE 9	Load changes and renewable deviation.
FMM Nov 29 HE 17	Load changes, renewable deviation, and forced generator outage
FMM Nov 30 HE 17	Load changes and renewable deviation.

[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**
FMM Dec 1 HE 16-17	Load changes and renewable deviation.
FMM Dec 2 HE 20, 22	Congestion on 7820_TL 230S_OVERLOAD_NG.
FMM Dec 3 HE 6, 7, 17	Load changes
FMM Dec 5 HE 6	Load changes
FMM Dec 5 HE 20	Congestion on 7820_TL23040_IV_SPS_NG and renewable deviation
FMM Dec 6 HE 19	Congestion on 6410_CP5_NG
FMM Dec 7 HE 17	Load changes
FMM Dec 9 HE 18-20	Congestion on 7820_TL 230S_OVERLOAD_NG.
FMM Dec 11 HE 17	Load changes and renewable deviation.

Table 2 RTD Intervals	
Trade Date	**Root Cause**
RTD Nov 29 HE 8, 14, 21	Load changes and renewable deviation
RTD Nov 29 HE 16	Load changes, renewable deviation, and forced generator outage
RTD Dec 1 HE 22, 23	Load changes and renewable deviation
RTD Dec 2 HE 20, 22	Congestion on 7820_TL 230S_OVERLOAD_NG.
RTD Dec 3 HE 17	Load changes
RTD Dec 6 HE 9-10, 13-14	Load changes and renewable deviation
RTD Dec 8 HE 18	Congestion on 7820_TL 230S_OVERLOAD_NG.
RTD Dec 9 HE 18, 20	Congestion on 7820_TL 230S_OVERLOAD_NG.
RTD Dec 10 HE 8-9	Load changes and renewable deviation

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

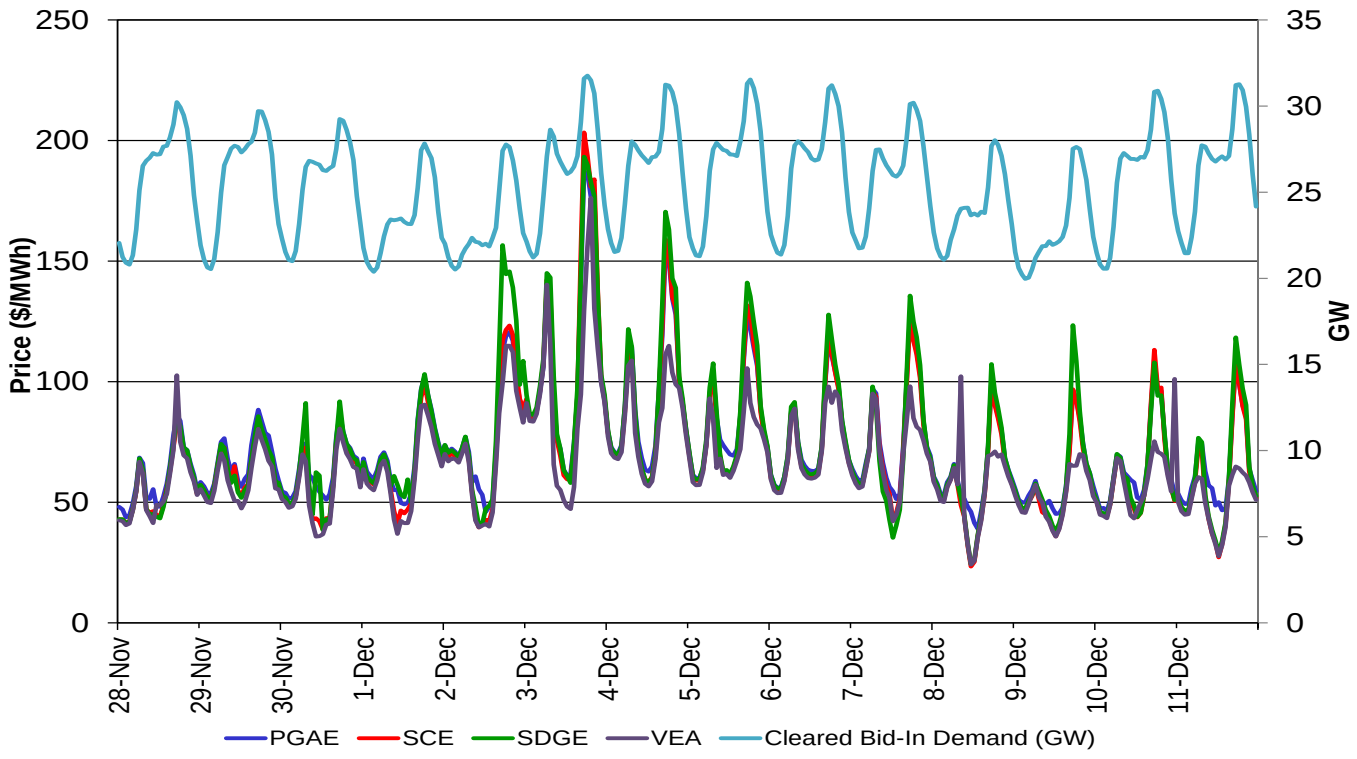

Figure 2: Day-Ahead Congestion Rents

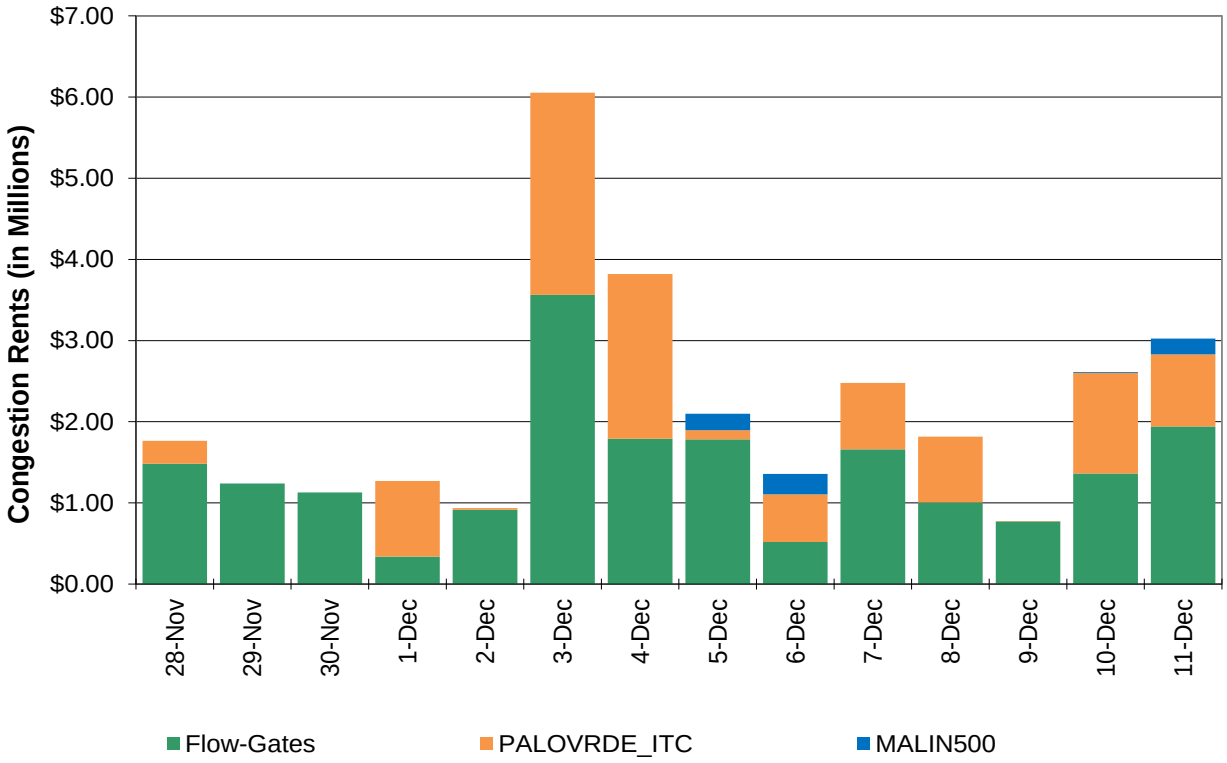

Figure 3: Day-Ahead Congestion Rents for Flow-Based Constraints

Transmission Constraint	Congestion Rent
24086_LUGO _500_26105_VICTORVL_500_BR_1 _1	$ 11,483,974.98
7820_TL 230S_OVERLOAD_NG	$ 759,575.74
7510-PAS-BAI-PAR-OOS_NG	$ 665,860.25
30060_MIDWAY _500_29402_WIRLWIND_500_BR_1 _2	$ 542,825.17
6310_MWN_NRAS	$ 512,426.81
30055_GATES1 _500_30060_MIDWAY _500_BR_1 _3	$ 380,042.38
30515_WARNERVL_230_30800_WILSON _230_BR_1 _1	$ 341,192.71
OMS_6585368_TL23055_NG	$ 303,457.61
24016_BARRE _230_24154_VILLA PK_230_BR_1 _1	$ 227,421.82
30050_LOSBANOS_500_30055_GATES1 _500_BR_1 _1	$ 186,399.08
OMS_5940391_GATES_MDWY	$ 175,800.21
34105_CERTANJ1_115_34121_SHARON T_115_BR_1 _1	$ 139,678.21
35616_SNJOSEB _115_35612_TRIMBLE _115_BR_1 _1	$ 134,177.70
7820_TL23040_IV_SPS_NG	$ 71,746.52
34121_SHARON T_115_34128_OAKH_JCT_115_BR_1 _1	$ 71,545.73
31080_HUMBOLDT_60.0_31092_MPLE CRK_60.0_BR_1 _1	$ 56,460.29
24036_EAGLROCK_230_24059_GOULD _230_BR_1 _1	$ 56,120.47
24804_DEVERS _230_25666_EL CASCO_230_BR_1 _2	$ 39,014.09
31080_HUMBOLDT_60.0_31088_HMBLT JT_60.0_BR_1 _1	$ 33,565.27

Transmission Constraint	Congestion Rent
31566_KESWICK _60.0_31582_STLLWATR_60.0_BR_1 _1	$ 26,776.59
34157_PANOCHET_115_34156_MENDOTA _115_BR_1 _1	$ 24,695.43
35618_SN JSE A_115_35620_EL PATIO_115_BR_1 _1	$ 24,310.93
22056_BERNARDO_69.0_22676_R.CARMEL_69.0_BR_1 _1	$ 20,037.77
31000_HUMBOLDT_115_31015_BRDGVLLE_115_BR_1 _1	$ 16,799.34
31104_CARLOTTA_60.0_31105_RIODLLTP_60.0_BR_1 _1	$ 16,125.49
31214_GEYERS56_115_31220_EGLE RCK_115_BR_1 _1	$ 9,923.98
24025_CHINO _230_24093_MIRALOM _230_BR_3 _1	$ 9,104.43
31461_JESSTAP _115_31464_COTWDPGE_115_BR_1 _1	$ 8,770.67
22136_CLAIRMNT_69.0_22140_CLARMTTP_69.0_BR_1 _1	$ 6,174.12
HUMBOLDT_IMP_NG	$ 5,038.09
31093_HYMPOMJT_60.0_31553_BIG BAR _60.0_BR_1 _1	$ 4,055.07
31000_HUMBOLDT_115_31452_TRINITY _115_BR_1 _1	$ 3,967.75
31464_COTWDPGE_115_30105_COTTNWD _230_XF_1	$ 1,164.09
36075_COBURN _60.0_30760_COBURN _230_XF_1	$ 858.35
31108_SWNS FLT_60.0_31110_BRDGVLLE_60.0_BR_1 _1	$ 703.19
31092_MPLE CRK_60.0_31093_HYMPOMJT_60.0_BR_1 _1	$ 455.16
34859_PRMTFMTP_70.0_34873_Q484TP _70.0_BR_1 _1	$ 350.40

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

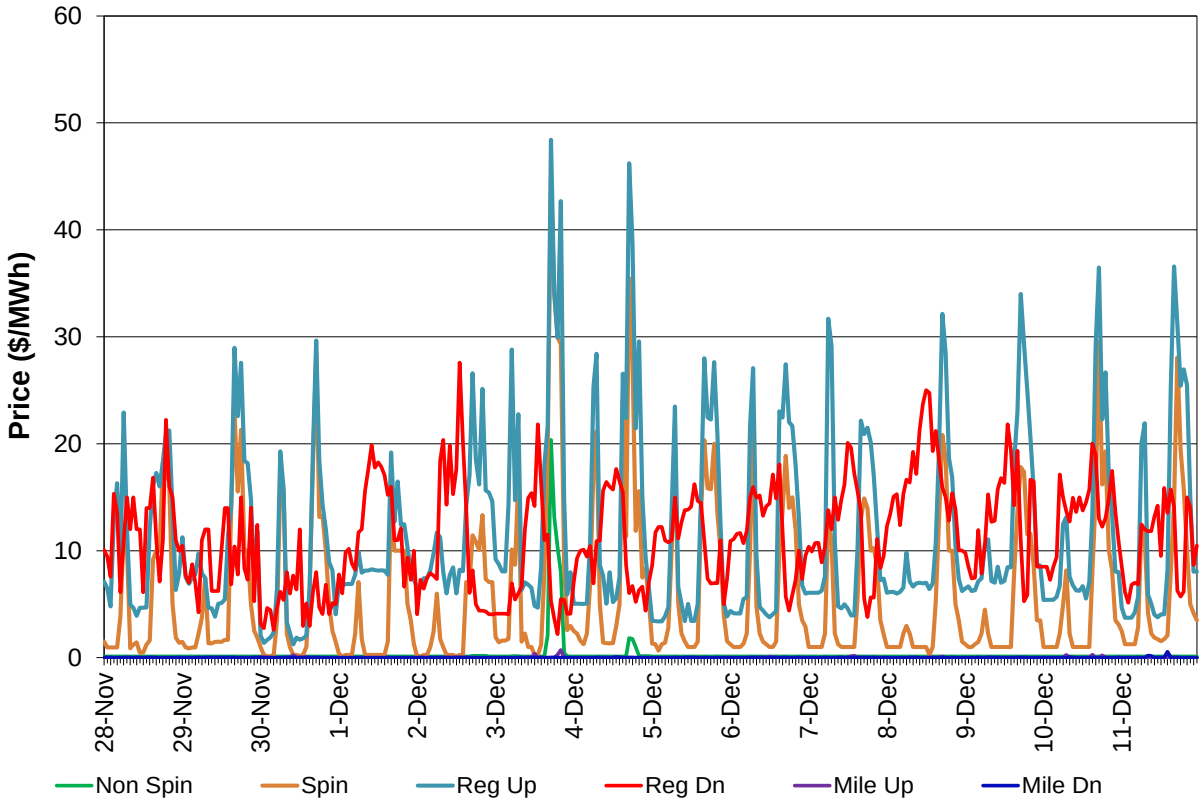

Figure 5: Day-Ahead Average RUC Price

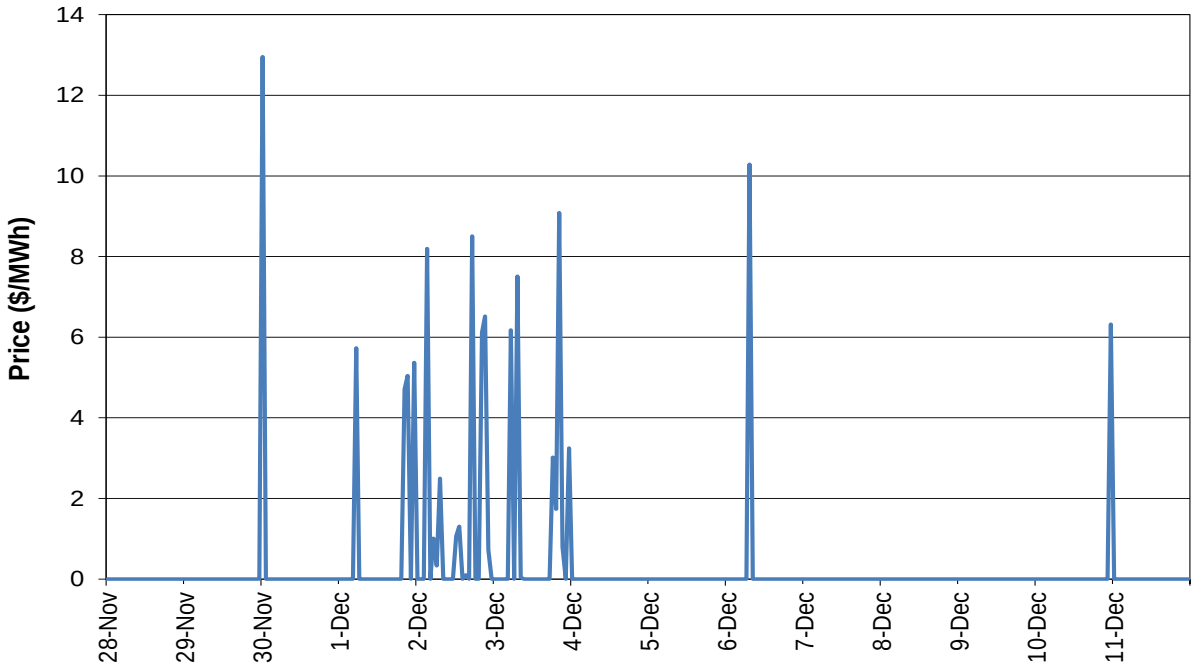

Figure 6: Real-Time FMM Average A/S Price

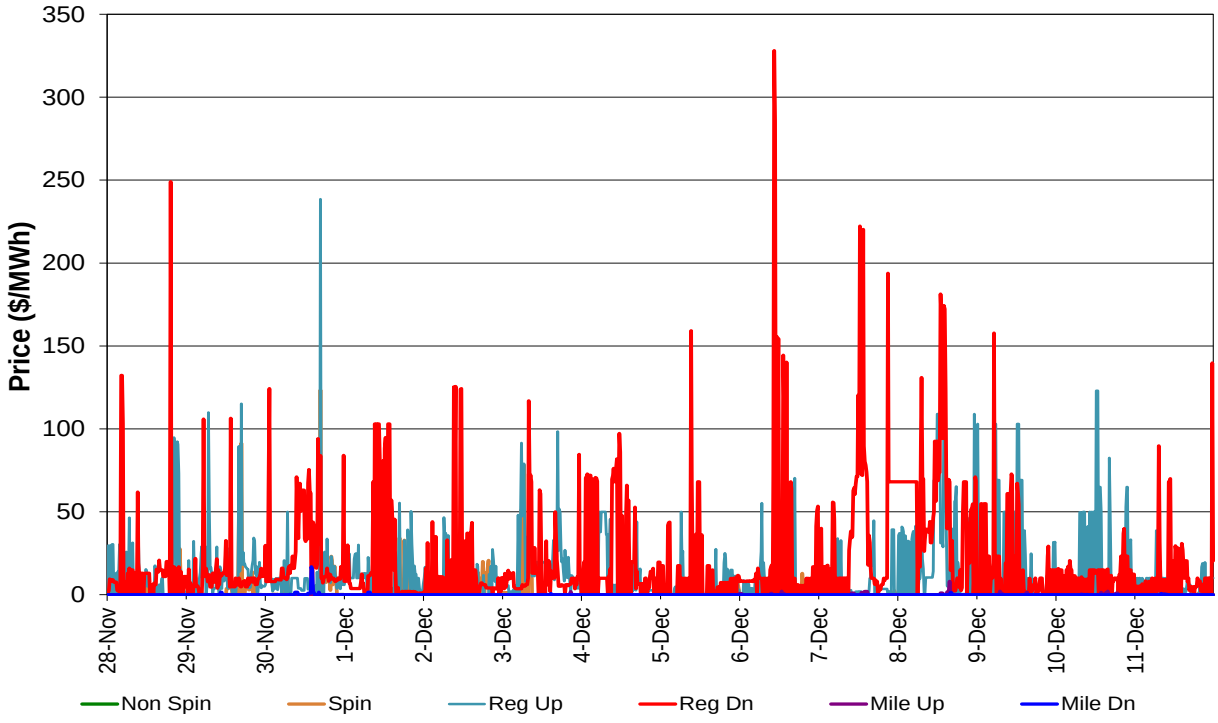

Figure 7: Real-Time FMM DLAP LMP

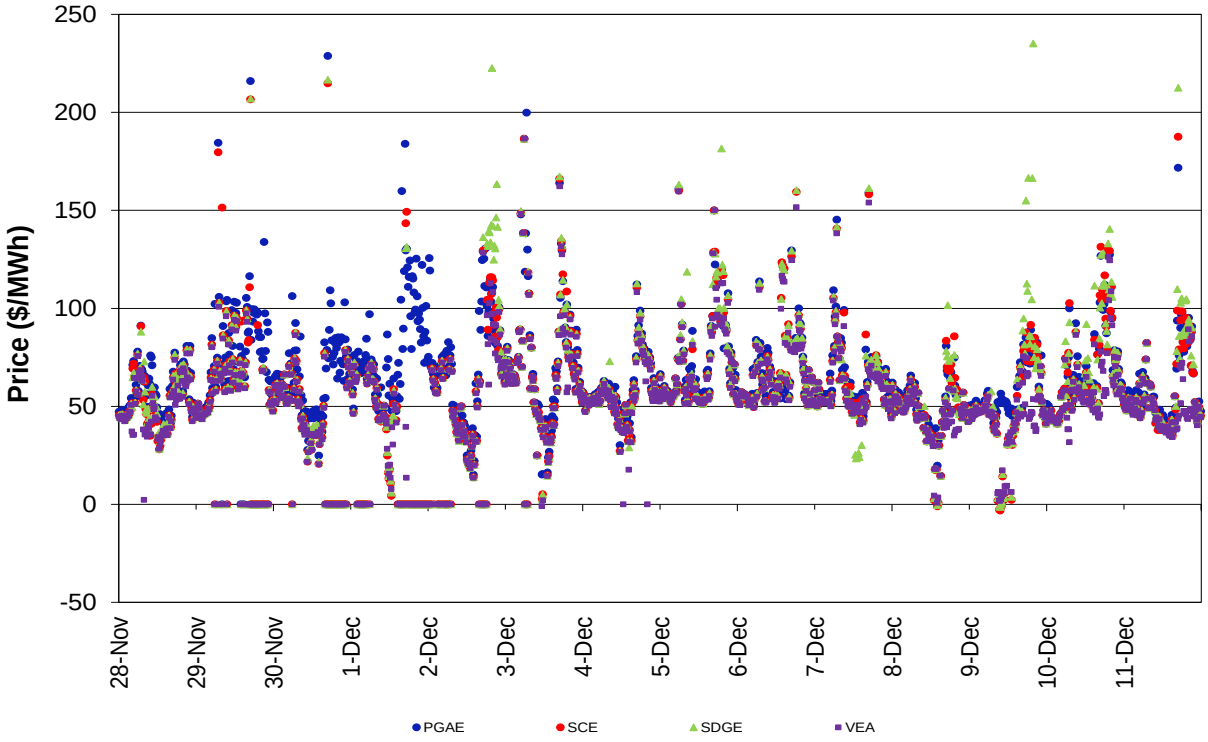

Figure 8: Real-Time RTD DLAP LMP

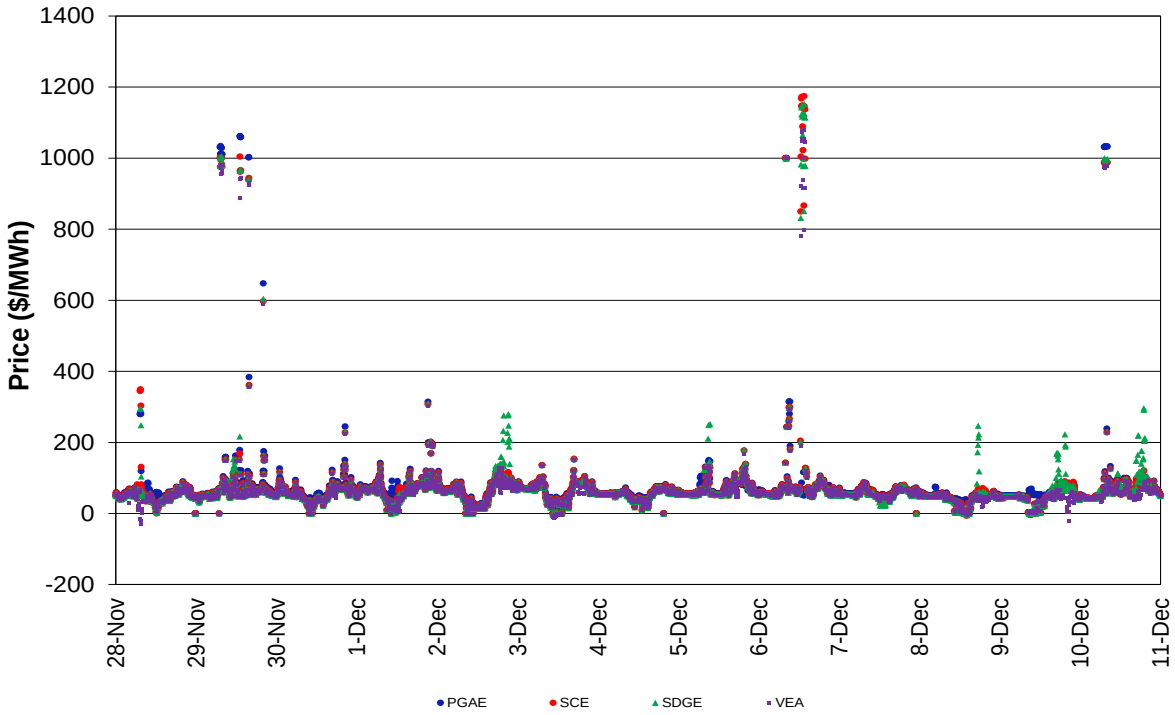

Figure 9: Real-Time FMM ELAP LMP

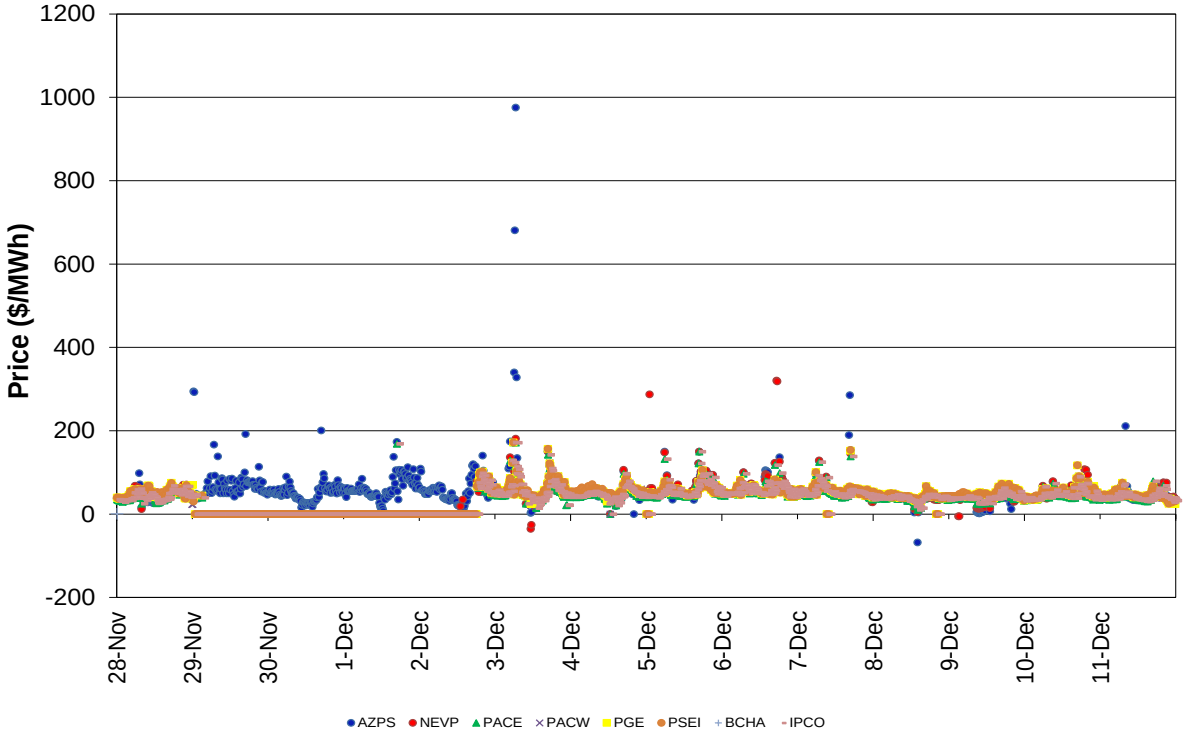

Figure 10: Real-Time RTD ELAP LMP