Market Highlights[1] (November 15–November 28)

- The average DLAP price in the integrated forward market was $35.73. The maximum and minimum DLAP prices were $179.42 and $10.14, respectively. The maximum and minimum PNode prices in the integrated forward market were $181.09 and $9.00 respectively.

- The top two interties congested in the integrated forward market were PALOVRDE_ITC and MALIN500. Congestion rents in these two weeks totaled $29,859,974.67.

- The average day-ahead ancillary service prices were between $0.00 and $60.60.

- Approximately 95.85 percent of the RUC requirements were met from RA units.

- The average real-time FMM DLAP price was $35.21, with a maximum price of $698.15 and a minimum price of -$14.12. The maximum and minimum PNode prices in the FMM were $697.99 and -$155.00, respectively.

- Out of the total 1,344 FMM intervals, 3 intervals saw DLAP prices above $250, and 0 intervals saw DLAP prices below -$150.

- Out of the total 1,344 FMM intervals, 8 intervals saw ELAP prices above $250 and 17 intervals saw ELAP prices below -$150. The average real-time FMM ELAP price was $23.92, with a maximum price of $1,011.40 and a minimum price of -$658.58.

- The average real-time RTD DLAP price was $35.34, with a maximum price of $1,763.06 and a minimum price of -$52.97. The maximum and minimum PNode prices in the RTD were $1,827.27 and -$968.76, respectively.

- Out of the total 4,032 RTD intervals, 30 intervals saw DLAP prices above $250 and 0 interval saw DLAP prices below -$150.

- Out of the total 4,032 RTD intervals, 35 intervals saw ELAP prices above $250 and 92 intervals saw ELAP prices below -$150. The average real-time RTD ELAP price was $23.57, with a maximum price of $1,000.93 and a minimum price of -$890.40.

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

Table 1 FMM Intervals	
Trade Date	**Root Cause**
FMM Nov 16 HE 18	Congestion on OMS 4646120 ELD_MKP_SCIT_NG and change in renewable forecast
FMM Nov 21 HE 17,18	Congestion on 24138_SERRANO _500_24137_SERRANO _230_XF_1 _P

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[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 Nov 15 HE 9; Nov 16 HE 11, 23	Congestion on OMS 4646120 ELD_MKP_SCIT_NG and renewable deviation
RTD Nov 16 HE 12	Congestion on 24138_SERRANO _500_24137_SERRANO _230_XF_1 _P
RTD Nov 16 HE 14	Load changes and renewable deviation
RTD Nov 17 HE 8	Congestion on congestion on OMS 5431557_SCIT_McC-Vic-1 and re-dispatch of resources
RTD Nov 17 HE 17	Congestion on OMS 4646120 ELD_MKP_SCIT_NG and load changes
RTD Nov 17 HE 18; Nov 23 HE 16; Nov 25 HE 17	Congestion on OMS 4646120 ELD_MKP_SCIT_NG
RTD Nov 27 HE20	Congestion on OMS 4646120 ELD_MKP_SCIT_NG and OMS 4646112_OP-6610
RTD Nov 27 HE 23	Load changes and re-dispatch of resources
RTD Nov 28 HE 8	Congestion on OMS 4646120 ELD_MKP_SCIT_NG, load changes and renewable deviation
RTD Nov 28 HE 16	Congestion on OMS 4646120 ELD_MKP_SCIT_NG and renewable deviation

Figure 1: Day-Ahead (IFM) LAP LMP and Cleared Bid-In Demand
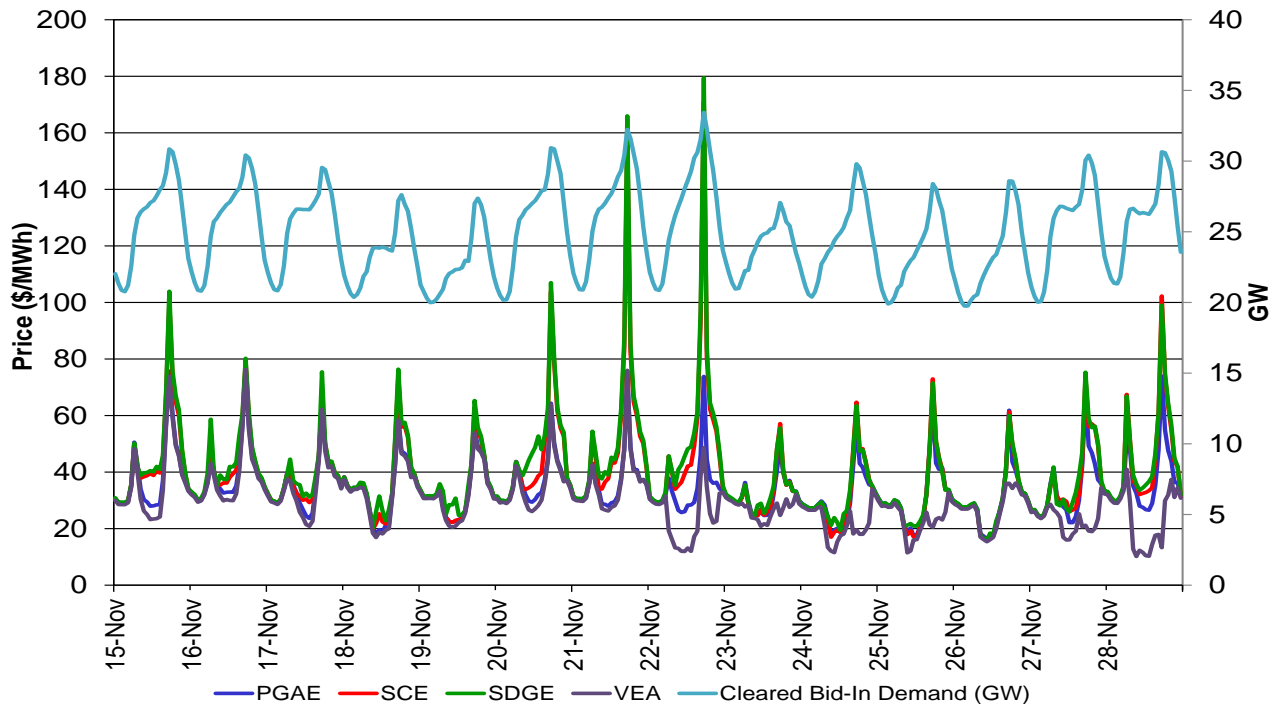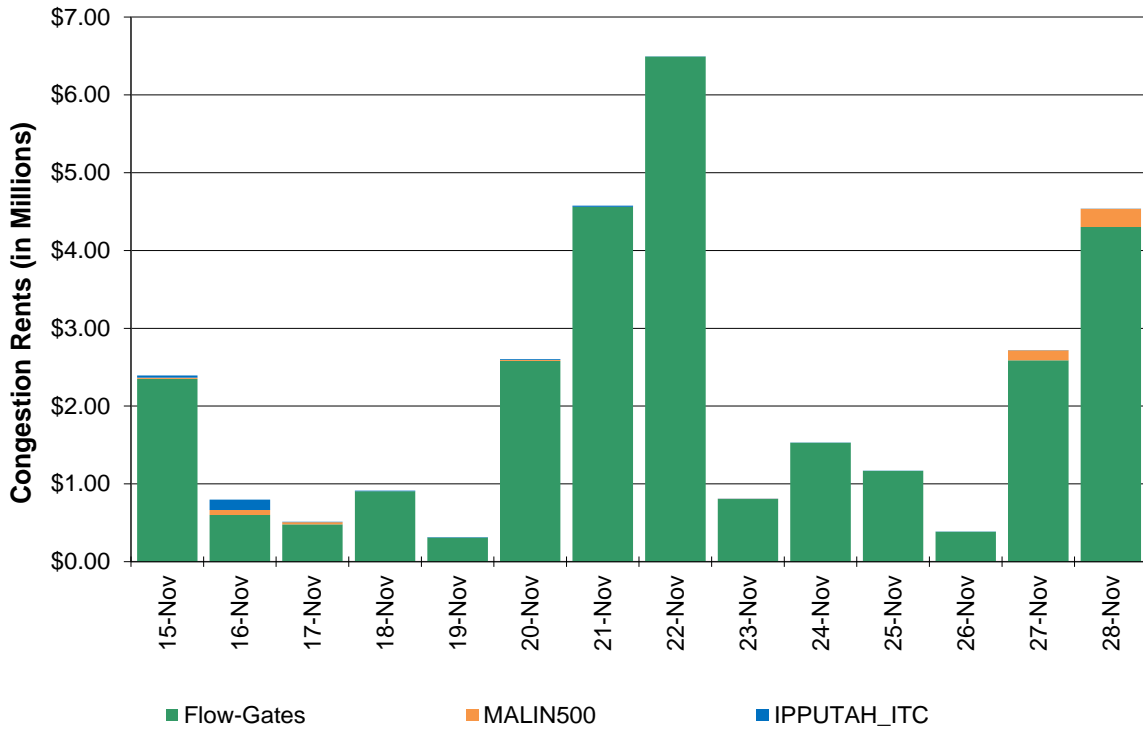
Figure 2: Day-Ahead Congestion Rents

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

Transmission Constraint	Congestion Rent
OMS 4646120 ELD_MKP_SCIT_NG	$ 16,782,679.93
OMS 4646112_OP-6610	$ 5,988,414.55
24138_SERRANO _500_24137_SERRANO _230_XF_1 _P	$ 4,587,226.09
24036_EAGLROCK_230_24059_GOULD _230_BR_1 _1	$ 565,701.38
22192_DOUBLTTP_138_22300_FRIARS _138_BR_1 _1	$ 485,238.16
7820_TL 230S_OVERLOAD_NG	$ 377,474.84
92320_SYCA TP1_230_22832_SYCAMORE_230_BR_1 _1	$ 187,176.60
22208_EL CAJON_69.0_22408_LOSCOCHS_69.0_BR_1 _1	$ 34,975.13
35612_TRIMBLE _115_35616_SNJOSEB _115_BR_1 _1	$ 14,803.13
31464_COTWDPGE_115_30105_COTTNWD _230_XF_1	$ 9,163.22
22668_POWAY _69.0_22664_POMERADO_69.0_BR_1 _1	$ 6,146.26
22331_MIRASNTO_69.0_22644_PENSQTOS_69.0_BR_1 _1	$ 5,761.73
31555_MSS TAP2_60.0_31553_BIG BAR _60.0_BR_1 _1	$ 3,921.91
31593_COWCREEK_60.0_31597_DESCHTP1_60.0_BR_1 _1	$ 2,923.30
31110_BRDGVLLE_60.0_31112_FRUITLND_60.0_BR_1 _1	$ 2,091.87
31090_HMBLT BY_60.0_31100_EEL RIVR_60.0_BR_1 _1	$ 1,104.71
31597_DESCHTP1_60.0_31592_DESCHUTS_60.0_BR_1 _1	$ 856.60

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

Transmission Constraint	Congestion Rent	
31080_HUMBOLDT_60.0_31092_MPLE CRK_60.0_BR_1 _1	$	251.28
31114_FRT SWRD_60.0_31116_GRBRVLLE_60.0_BR_1 _1	$	251.16
31080_HUMBOLDT_60.0_31088_HMBLT JT_60.0_BR_1 _1	$	130.18
31093_HYMPOMJT_60.0_31553_BIG BAR _60.0_BR_1 _1	$	99.81
31336_HPLND JT_60.0_31206_HPLND JT_115_XF_2	$	77.54
22324_GLENCLIF_69.0_22328_GLNCLFTP_69.0_BR_1 _1	$	25.58
31104_CARLOTTA_60.0_31105_RIODLLTP_60.0_BR_1 _1	$	18.53
Total	**$**	**29,056,513.50**

Figure 4: Day-Ahead (IFM) Average A/S Price
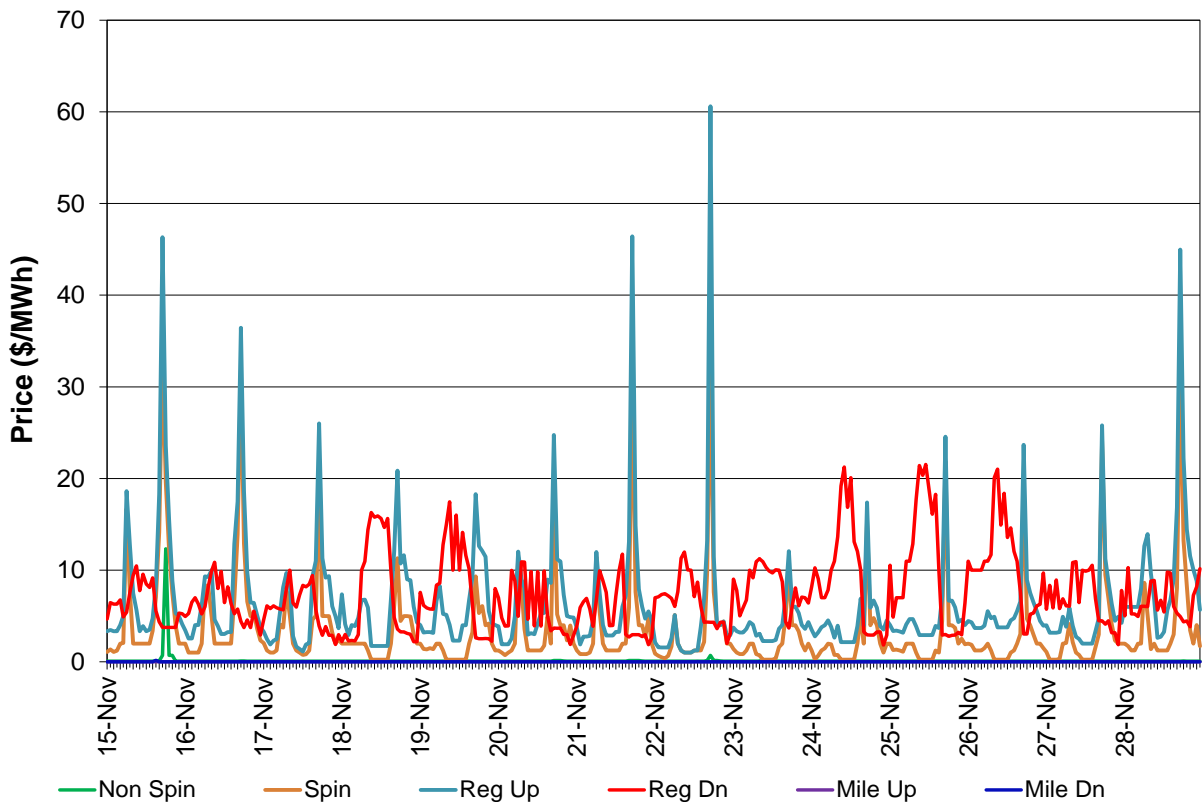
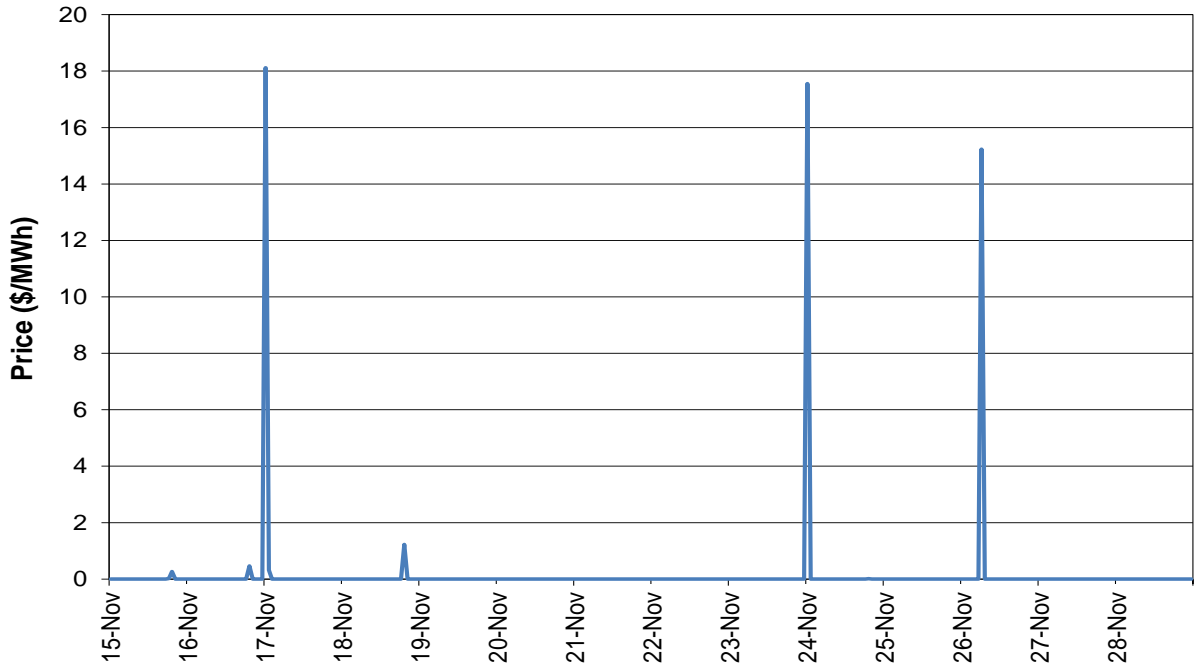**Figure 5: Day-Ahead Average RUC Price**

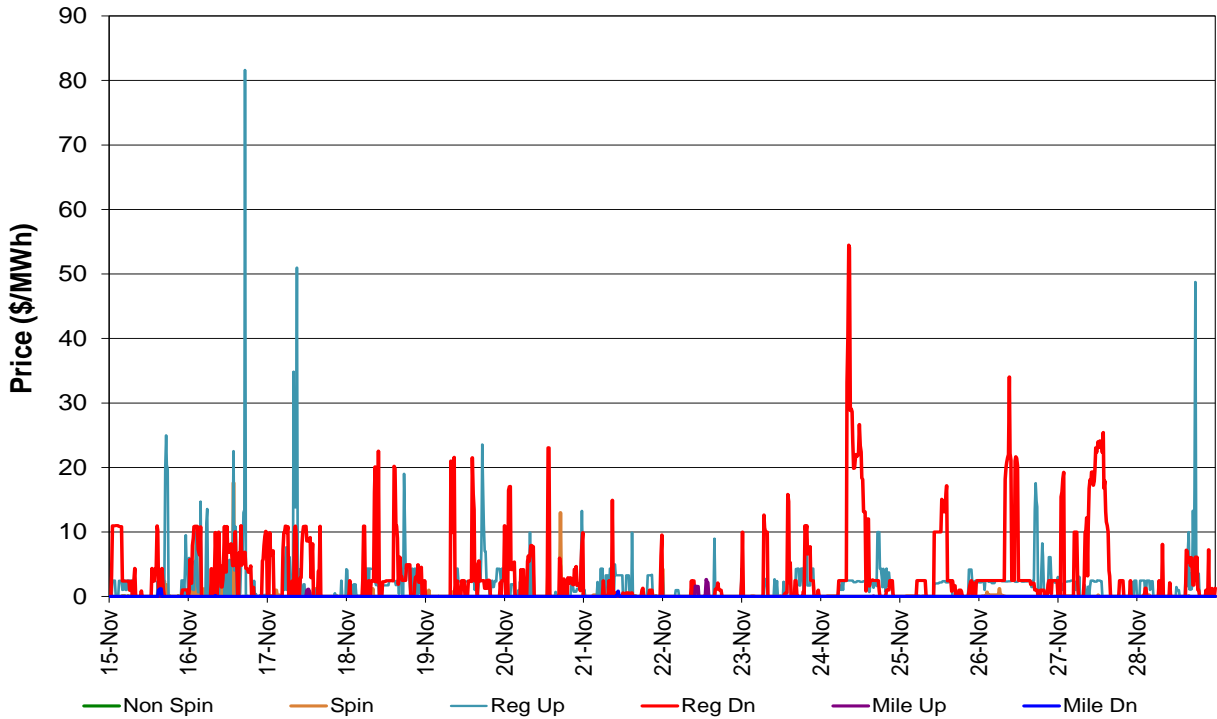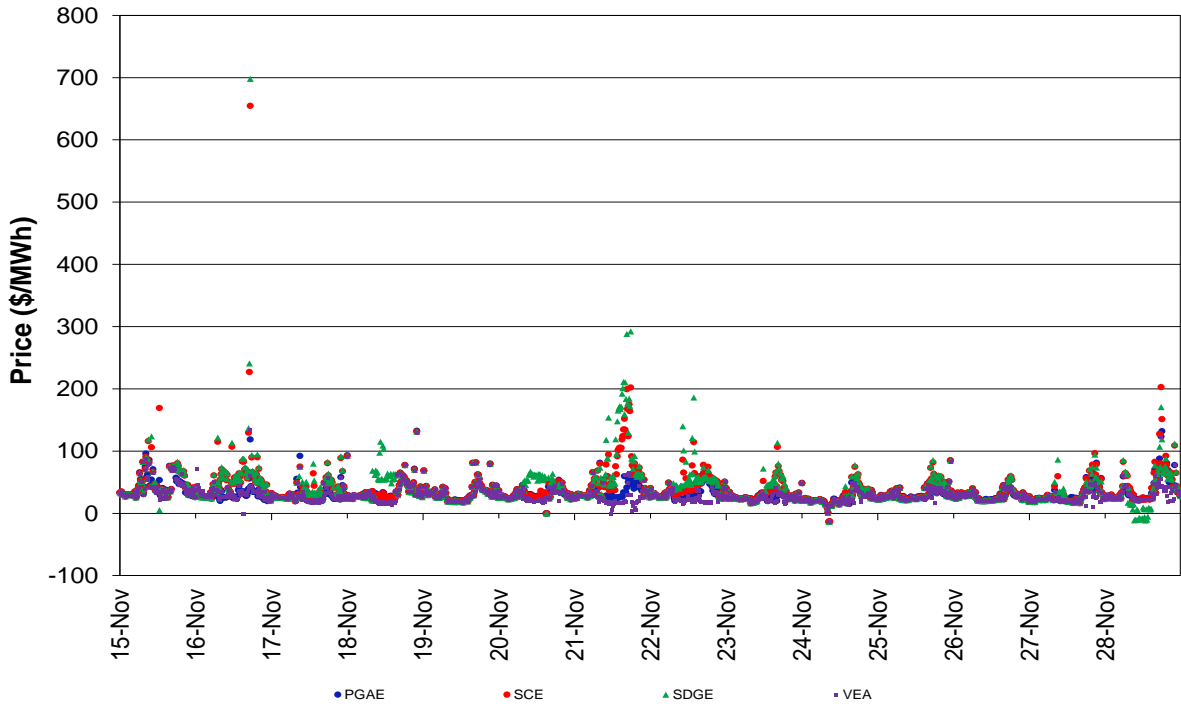**Figure 6: Real-Time FMM Average A/S Price**

Figure 7: Real-Time FMM DLAP LMP
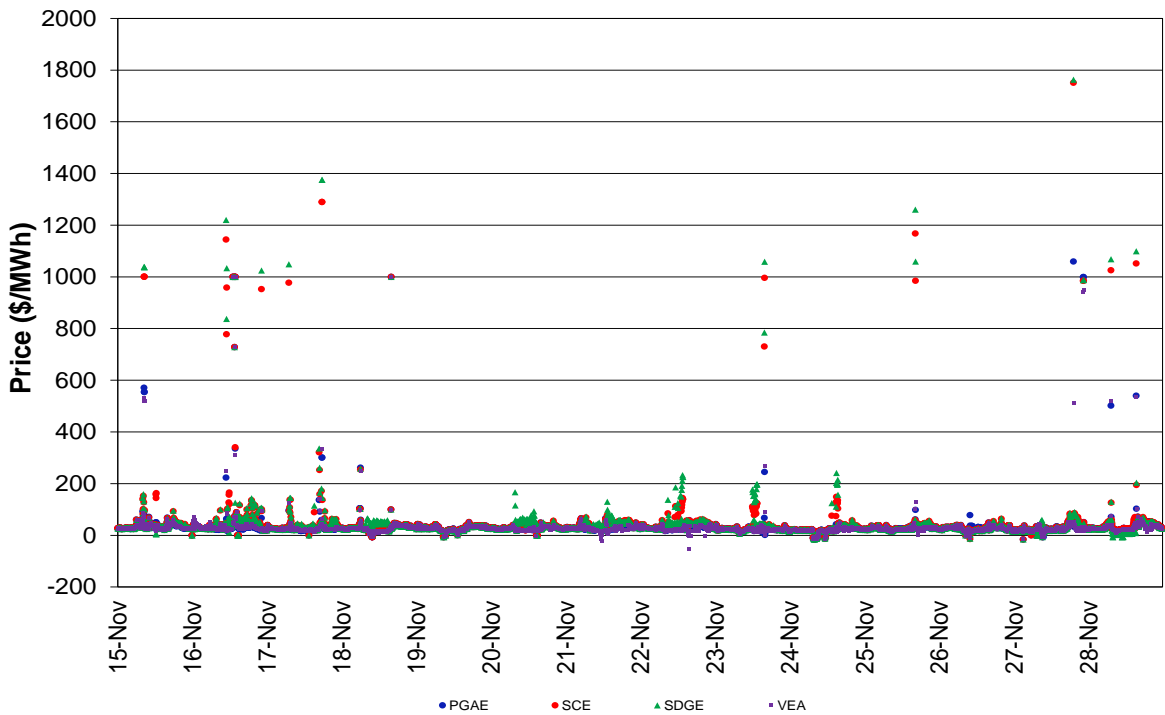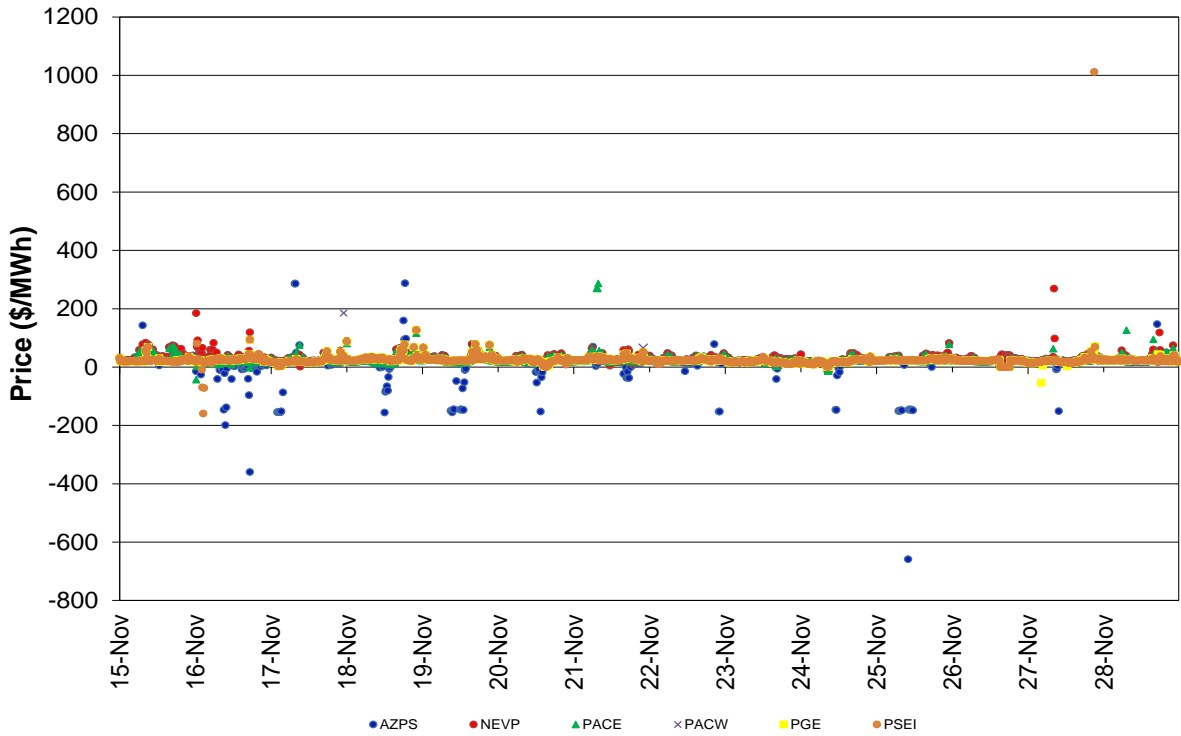

Figure 8: Real-Time RTD DLAP LMP

Figure 9: Real-Time FMM ELAP LMP

Figure 10: Real-Time RTD ELAP LMP