Market Highlights[1] (December 27–January 9)

- The average DLAP price in the integrated forward market was $37.16. The maximum and minimum DLAP prices were $110.20 and $16.93, respectively. The maximum and minimum PNode prices in the integrated forward market were $97.22 and $15.42 respectively.

- The top two interties congested in the integrated forward market were MALIN500 and NOB_ITC. Congestion rents in these two weeks totaled $15,738,899.20.

- The average day-ahead ancillary service prices were between $0.00 and $27.39.

- Approximately 98.84 percent of the RUC requirements were met from RA units.

- The average real-time FMM DLAP price was $37.22, with a maximum price of $635.23 and a minimum price of $4.80. The maximum and minimum PNode prices in the FMM were $634.99 and -$520.05, respectively.

- Out of the total 1,344 FMM intervals, 8 intervals saw DLAP prices above $250, and 0 intervals saw DLAP prices below -$150.

- Out of the total 1,344 FMM intervals, 9 intervals saw ELAP prices above $250 and 0 intervals saw ELAP prices below -$150.

- The average real-time FMM ELAP price was $28.14, with a maximum price of $324.51 and a minimum price of -$148.49.

- The average real-time RTD DLAP price was $38.34, with a maximum price of $1,635.86 and a minimum price of -$8.05. The maximum and minimum PNode prices in the RTD were $1,642.09 and -$718.00, respectively.

- Out of the total 4,032 RTD intervals, 35 intervals saw DLAP prices above $250 and 0 interval saw DLAP prices below -$150.

- Out of the total 4,032 RTD intervals,19 intervals saw ELAP prices above $250 and 9 intervals saw ELAP prices below -$150. The average real-time RTD ELAP price was $27.53, with a maximum price of $972.03 and a minimum price of -$207.09.

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

Table 1 FMM Intervals	
Trade Date	**Root Cause**
FMM Dec 27 HE 16; Jan 3 HE 14; Jan 5 HE 18	Congestion on 24138_SERRANO _500_24137_SERRANO _230_XF_1 _P
FMM Jan 3 HE 18;	Congestion on OMS 4646120 ELD_MKP_SCIT_NG, load changes, and re-

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Table 1 FMM Intervals	
Trade Date	**Root Cause**
Jan 4 HE 18	dispatch of resources.
FMM Jan 9 HE 20	Congestion on 7820_TL23040_IV_SPS_NG and 24138_SERRANO _500_24137_SERRANO _230_XF_1 _P

| Table 2 RTD Intervals	
Trade Date	**Root Cause**
RTD Dec 27 HE 9	Congestion on OMS 5489791 TL23055_NG
RTD Jan 1 HE 1	Load changes and reduction of net import
RTD Jan 3 HE 10, 11	Congestion on 24138_SERRANO _500_24137_SERRANO _230_XF_1 _P
RTD Jan 3 HE 13, 14 int 1-2	Load changes, renewable deviation and re-dispatch of resources
RTD Jan 3 HE 14 int 3-9; Jan 5 HE 21	Congestion on OMS 4646120 ELD_MKP_SCIT_NG, load changes, renewable deviation and re-dispatch of resources.
RTD Jan 3 HE 21	Reduction of net import, load changes, renewable deviation and re-dispatch of resources
RTD Jan 5 HE 20	Congestion on OMS 4646120 ELD_MKP_SCIT_NG, load changes and re-dispatch of resources
RTD Jan 8 HE 11,13, 14, 15	Congestion on OMS 4646120 ELD_MKP_SCIT_NG and re-dispatch of resources

Figure 1: Day-Ahead (IFM) LAP LMP and Cleared Bid-In Demand
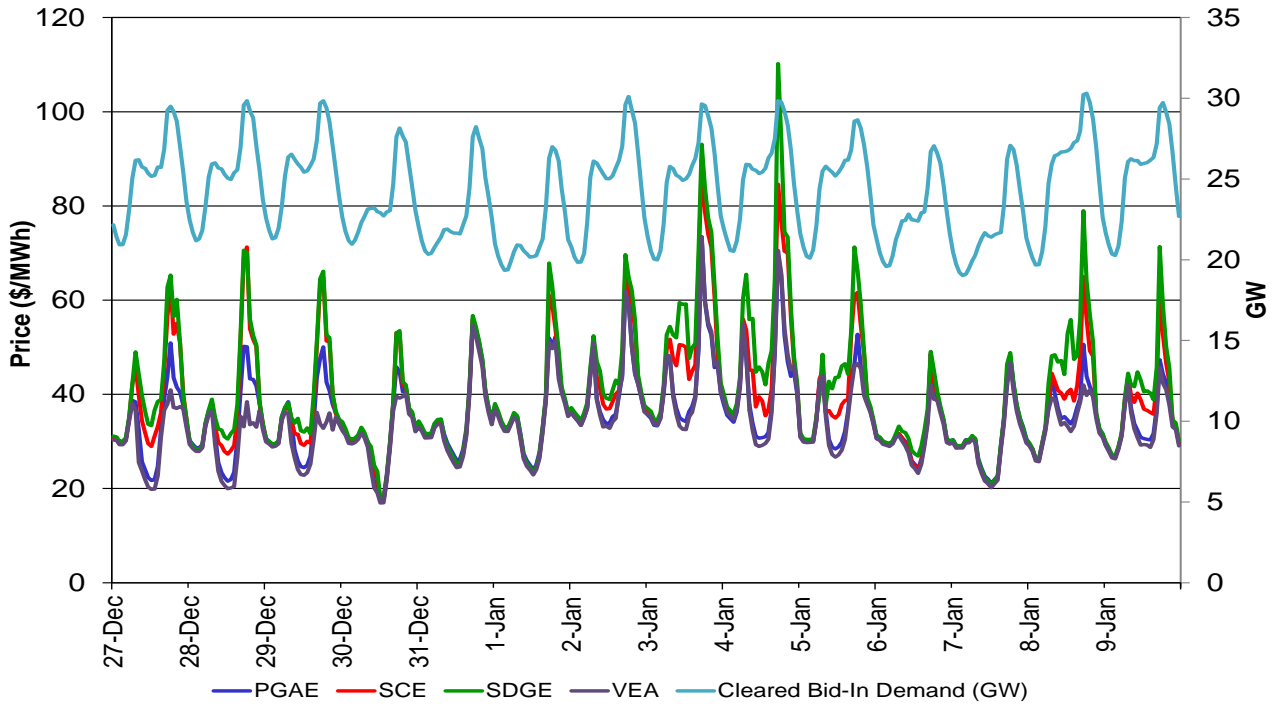
Figure 2: Day-Ahead Congestion Rents
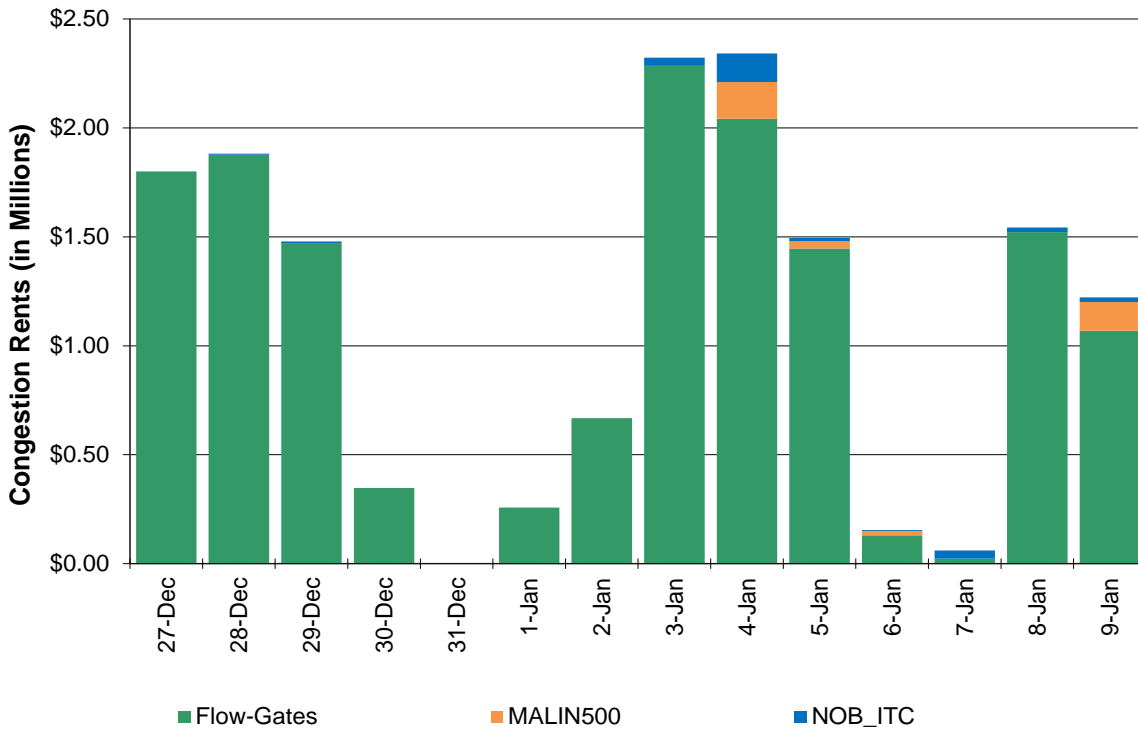
Figure 3: Day-Ahead Congestion Rents for Flow-Based Constraints

Transmission Constraint	Congestion Rent
24138_SERRANO _500_24137_SERRANO _230_XF_1 _P	$ 6,931,732.31
OMS 4646120 ELD_MKP_SCIT_NG	$ 5,326,355.09
OMS 4646112_OP-6610	$ 891,208.69
22192_DOUBLTTP_138_22300_FRIARS _138_BR_1 _1	$ 613,996.54
24036_EAGLROCK_230_24059_GOULD _230_BR_1 _1	$ 468,038.44
24086_LUGO _500_26105_VICTORVL_500_BR_1 _1	$ 216,165.88
30523_CC SUB _230_30525_C.COSTA _230_BR_1 _1	$ 118,489.63
IID-SCE_BG	$ 117,000.95
22480_MIRAMAR _69.0_22756_SCRIPPS _69.0_BR_1 _1	$ 86,350.67
22820_SWEETWTR_69.0_22476_MIGUELTP_69.0_BR_1 _1	$ 76,566.92
7820_TL 230S_OVERLOAD_NG	$ 31,019.99
OMS 4790142 Caribou Bank	$ 19,393.99
22644_PENSQTOS_69.0_22164_DELMARTP_69.0_BR_1 _1	$ 8,737.74
22824_SWTWTRTP_69.0_22820_SWEETWTR_69.0_BR_1 _1	$ 8,388.88
HUMBOLDT_IMP_NG	$ 8,228.75
31512_BIG BEN2_115_31516_WYANDJT2_115_BR_1 _2	$ 6,667.21
OMS_5493048_Humboldt_SVC	$ 6,417.24
31464_COTWDPGE_115_30105_COTTNWD _230_XF_1	$ 4,514.98
30250_CARIBOU _230_30255_CARBOU M_ 1.0_XF_11	$ 833.83

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

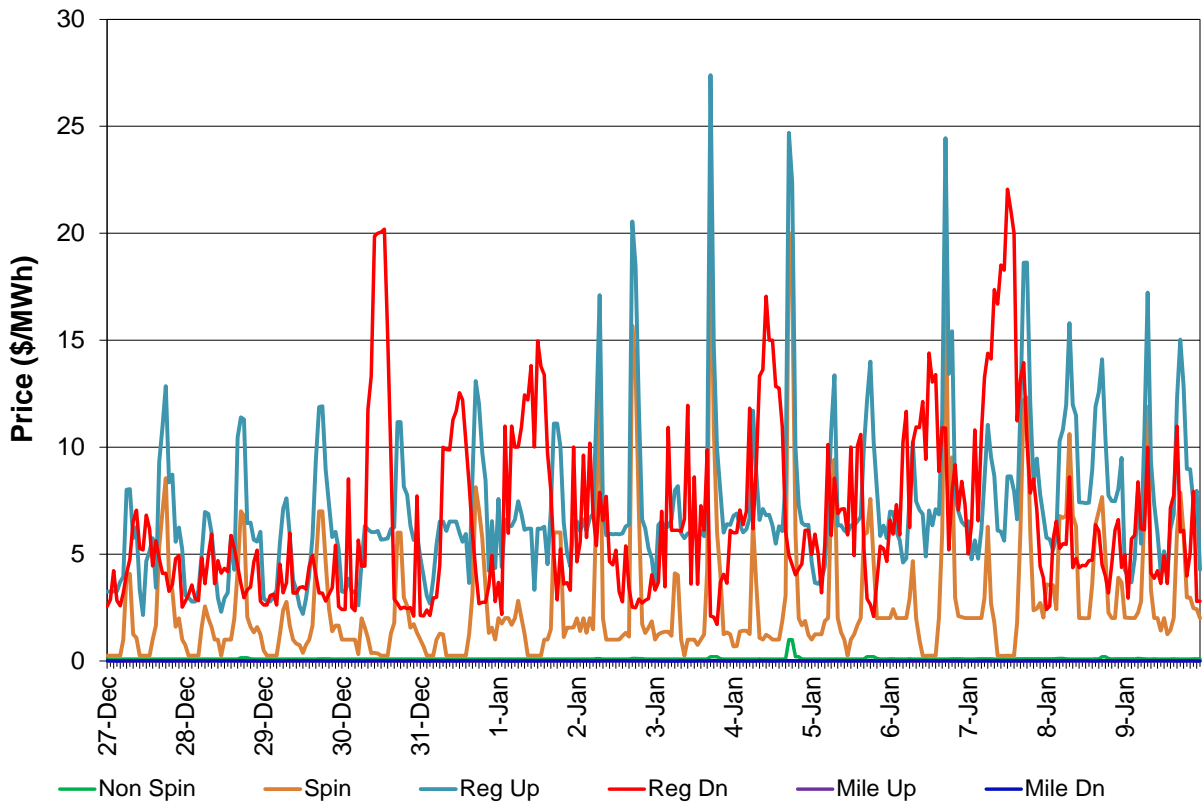| Transmission Constraint	Congestion Rent
31597_DESCHTP1_60.0_31592_DESCHUTS_60.0_BR_1 _1	$ 264.88
Total	**$ 14,940,372.60**

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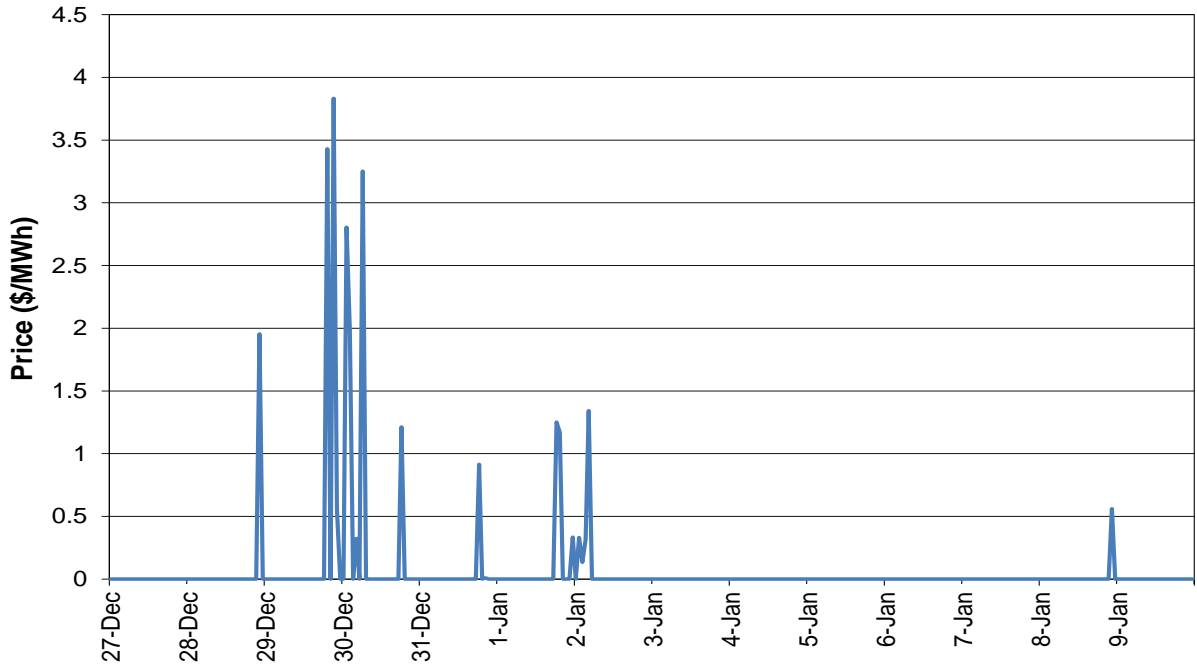
Figure 5: Day-Ahead Average RUC Price
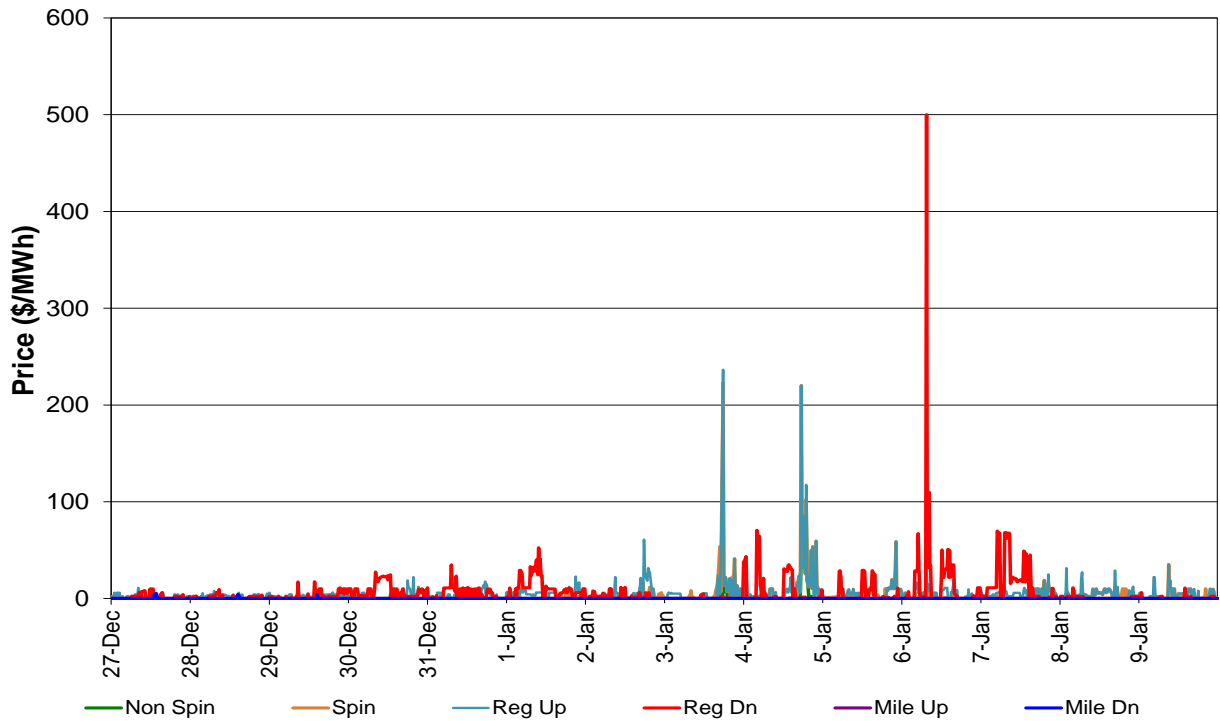

Figure 6: Real-Time FMM Average A/S Price
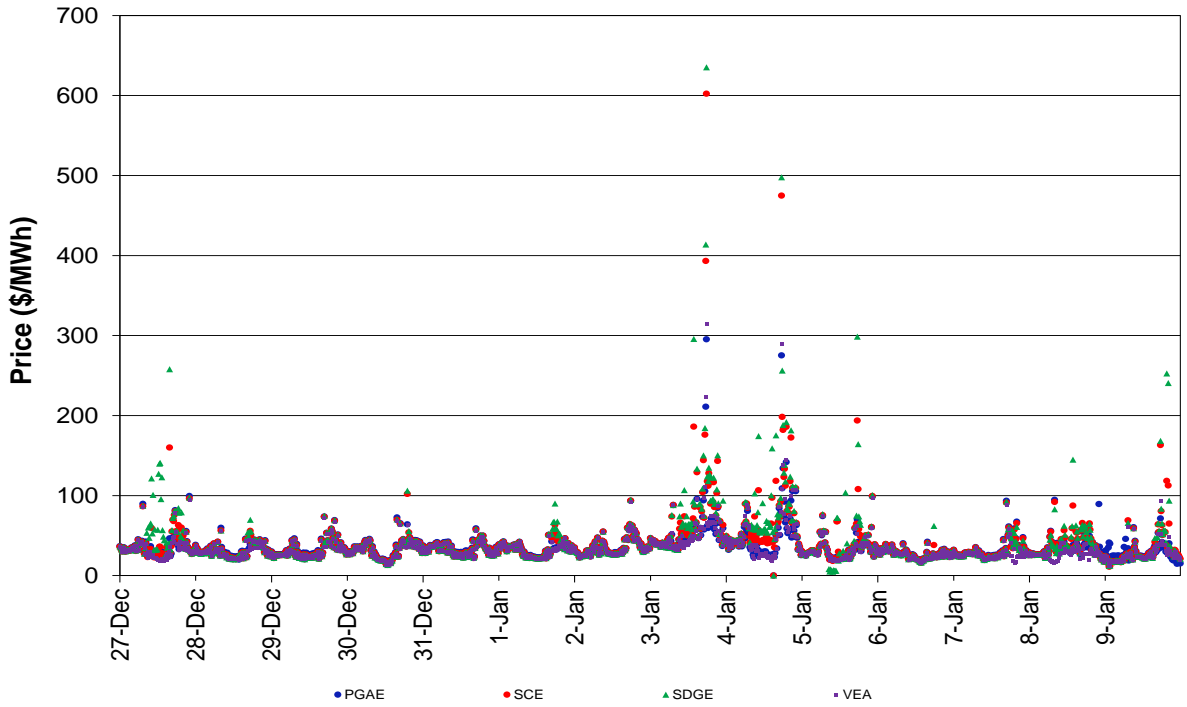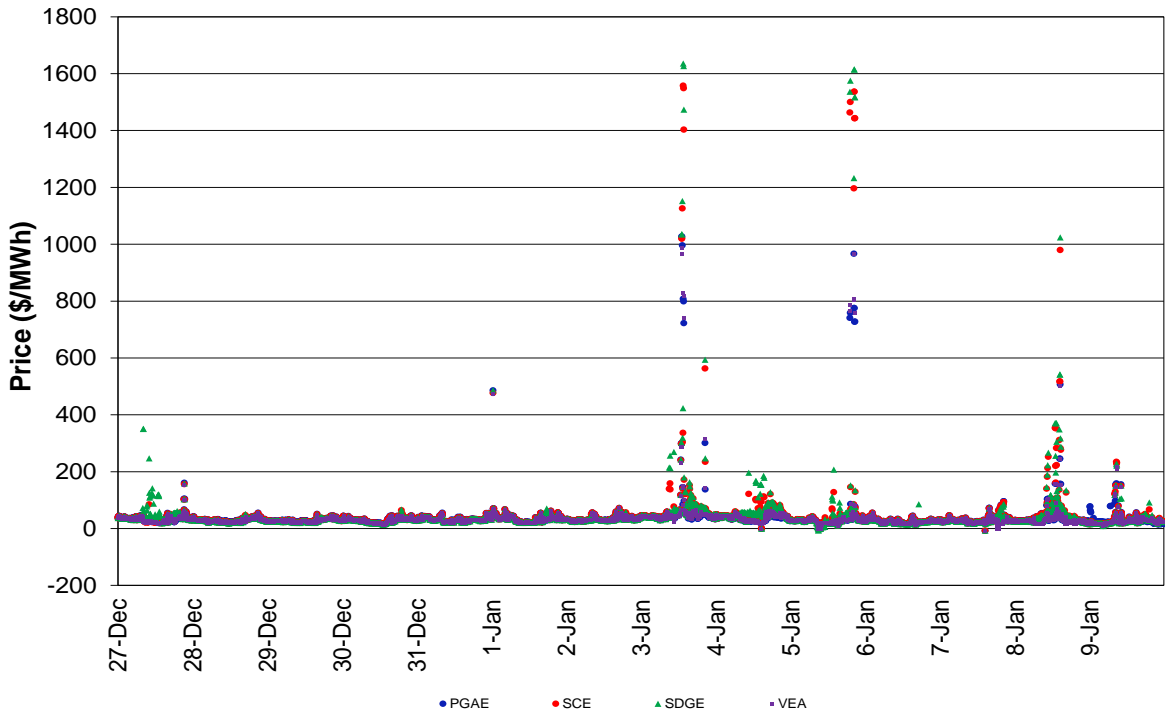
Figure 7: Real-Time FMM DLAP LMP

Figure 8: Real-Time RTD DLAP LMP

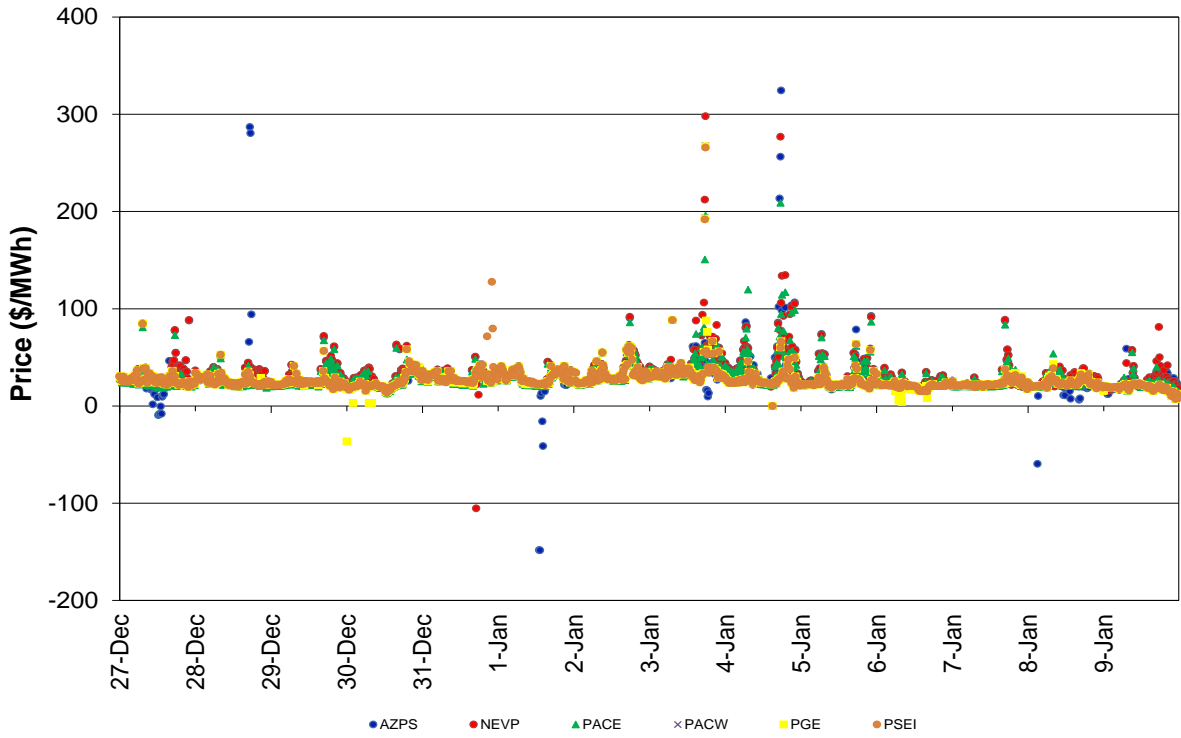## Figure 9: Real-Time FMM ELAP LMP

Legend: AZPS, NEVP, PACE, PACW, PGE, PSEI

Figure 10: Real-Time RTD ELAP LMP

Legend: AZPS, NEVP, PACE, PACW, PGE, PSEI