

## Market Highlights<sup>1</sup> (January 10–January 23)

- The average DLAP price in the integrated forward market was \$34.30. The maximum and minimum DLAP prices were \$82.53 and \$6.79, respectively. The maximum and minimum PNode prices in the integrated forward market were \$73.92 and \$3.32 respectively.
- The top two interties congested in the integrated forward market were NOB\_ITC and MALIN500. Congestion rents in these two weeks totaled \$14,635,476.53.
- The average day-ahead ancillary service prices were between \$0.00 and \$32.62.
- Approximately 98.18 percent of the RUC requirements were met from RA units.
- The average real-time FMM DLAP price was \$33.85, with a maximum price of \$247.98 and a minimum price of -\$31.43. The maximum and minimum PNode prices in the FMM were \$634.99 and -\$520.05, 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, 13 intervals saw ELAP prices above \$250 and 2 intervals saw ELAP prices below -\$150.
- The average real-time FMM ELAP price was \$26.15, with a maximum price of \$991.97 and a minimum price of -\$151.01.
- The average real-time RTD DLAP price was \$31.72, with a maximum price of \$1,347.73 and a minimum price of -\$18.06. 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, 14 intervals saw DLAP prices above \$250 and 0 interval saw DLAP prices below -\$150.
- Out of the total 4,032 RTD intervals, 16 intervals saw ELAP prices above \$250 and 22 intervals saw ELAP prices below -\$150. The average real-time RTD ELAP price was \$23.36, with a maximum price of \$999.36 and a minimum price of -\$502.09.
- Root cause for daily high price events are noted in Tables 1.

Table 1 RTD Intervals	
Trade Date	Root Cause
RTD Jan 10 HE 17	Renewable deviation.
RTD Jan 13 HE 7, 8	Load changes and re-dispatch of resources.
RTD Jan 15 HE 20	Congestion on OMS 4646120 ELD_MKP_SCIT_NG and renewable deviation.

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

Table 1 RTD Intervals	
Trade Date	Root Cause
RTD Jan 17 HE 13	Congestion on 24138_SERRANO_500_24137_SERRANO_230_XF_1_P
RTD Jan 20 HE 7	Load changes, renewable deviation, and reduction of net imports.
RTD Jan 20 HE 9	Renewable deviation.
RTD Jan 22 HE 7	Generator outage, load changes, and renewable deviation.
RTD Jan 22 HE 22	Load changes and renewable deviation

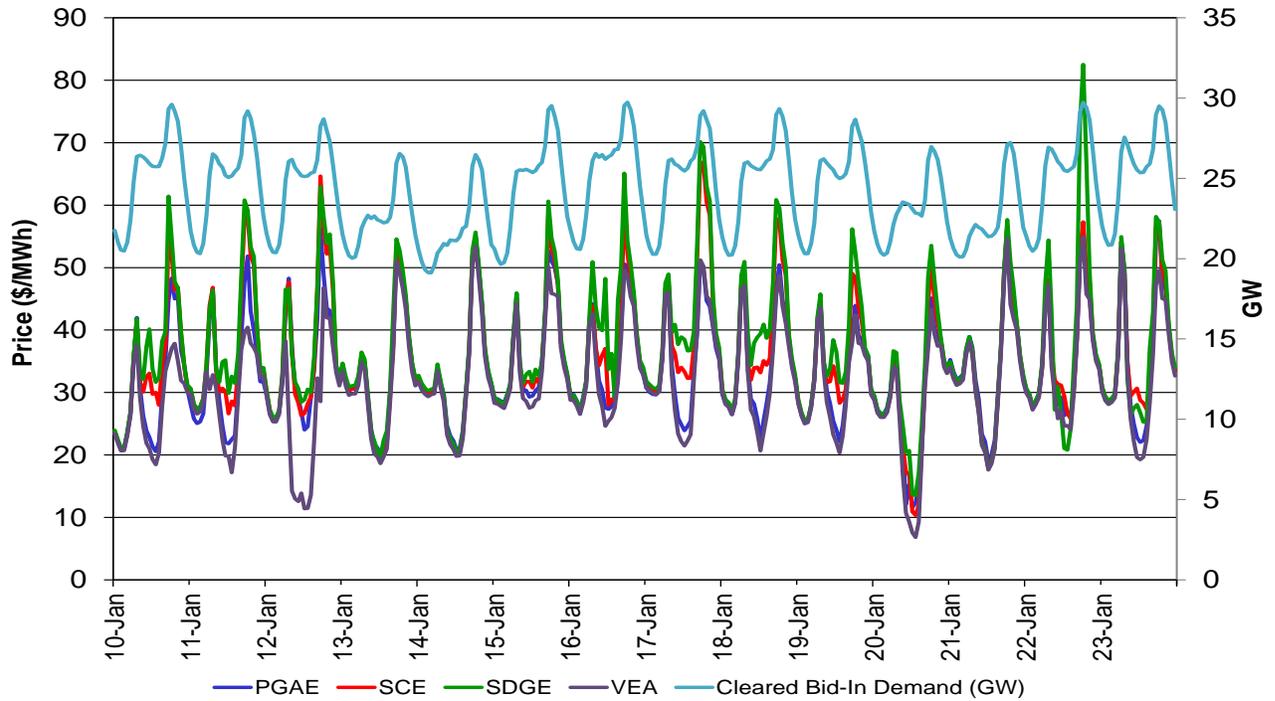
**Figure 1: Day-Ahead (IFM) LAP LMP and Cleared Bid-In Demand**




Figure 2: Day-Ahead Congestion Rents

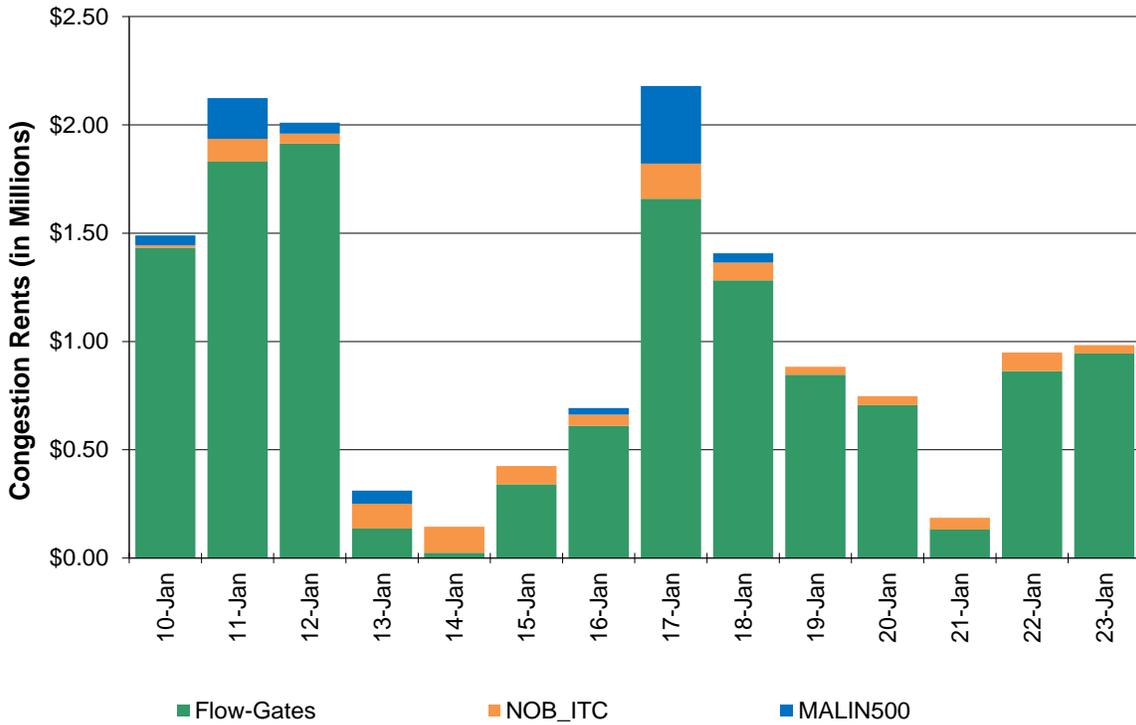


Figure 3: Day-Ahead Congestion Rents for Flow-Based Constraints

Transmission Constraint	Congestion Rent
24138_SERRANO_500_24137_SERRANO_230_XF_1_P	\$ 5,338,686.24
OMS_4646120_ELD_MKP_SCIT_NG	\$ 2,841,709.14
OMS_4646112_OP-6610	\$ 1,431,861.01
22192_DOUBLTTP_138_22300_FRIARS_138_BR_1_1	\$ 1,143,000.62
30055_GATES1_500_30900_GATES_230_XF_11_S	\$ 525,699.87
24086_LUGO_500_26105_VICTORVL_500_BR_1_1	\$ 174,042.48
OMS_4790142_Caribou Bank	\$ 164,683.47
24016_BARRE_230_25201_LEWIS_230_BR_1_1	\$ 147,759.17
6310_CP8_NG	\$ 133,323.41
22740_SANYSYRO_69.0_22608_OTAY_TP_69.0_BR_1_1	\$ 112,257.17
22480_MIRAMAR_69.0_22756_SCRIPPS_69.0_BR_1_1	\$ 95,851.72
22824_SWTWTRTP_69.0_22820_SWEETWTR_69.0_BR_1_1	\$ 85,274.23
36851_NORTHERN_115_36852_SCOTT_115_BR_1_1	\$ 75,853.65
22820_SWEETWTR_69.0_22476_MIGUELTP_69.0_BR_1_1	\$ 75,375.41
30275_CRESTA_230_30330_RIO_OSO_230_BR_1_1	\$ 67,246.66
7820_TL_230S_OVERLOAD_NG	\$ 65,513.11
31336_HPLND_JT_60.0_31206_HPLND_JT_115_XF_2	\$ 56,134.26
31336_HPLND_JT_60.0_31370_CLVRDLJT_60.0_BR_1_1	\$ 39,395.57
IID-SCE_BG	\$ 37,965.39

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

Transmission Constraint	Congestion Rent
31214_GEYERS56_115_31220_EGLE RCK_115_BR_1_1	\$ 21,553.21
32056_CORTINA_60.0_30451_CRTNA M_1.0_XF_1	\$ 17,670.80
31227_HGHLNDJ2_115_31950_CORTINA_115_BR_1_1	\$ 16,606.61
31488_GRIZ JCT_115_31512_BIG BEN2_115_BR_1_1	\$ 14,018.52
SUMMIT_BG	\$ 13,285.97
32214_RIO OSO_115_32244_BRNSWKT2_115_BR_2_1	\$ 6,478.24
31576_WNTU PMS_60.0_31578_LOMS JCT_60.0_BR_1_1	\$ 5,537.77
99254_J.HINDS2_230_24806_MIRAGE_230_BR_1_1	\$ 5,160.37
31576_WNTU PMS_60.0_31570_BENTON_60.0_BR_1_1	\$ 4,554.52
34548_KETTLEMN_70.0_34552_GATES_70.0_BR_1_1	\$ 3,463.59
22208_EL CAJON_69.0_22408_LOSCOCHS_69.0_BR_1_1	\$ 2,871.56
HUMBOLDT_IMP_NG	\$ 2,069.04
24114_PARDEE_230_24147_SYLMAR S_230_BR_2_1	\$ 1,504.06
<b>Total</b>	<b>\$ 12,726,406.83</b>

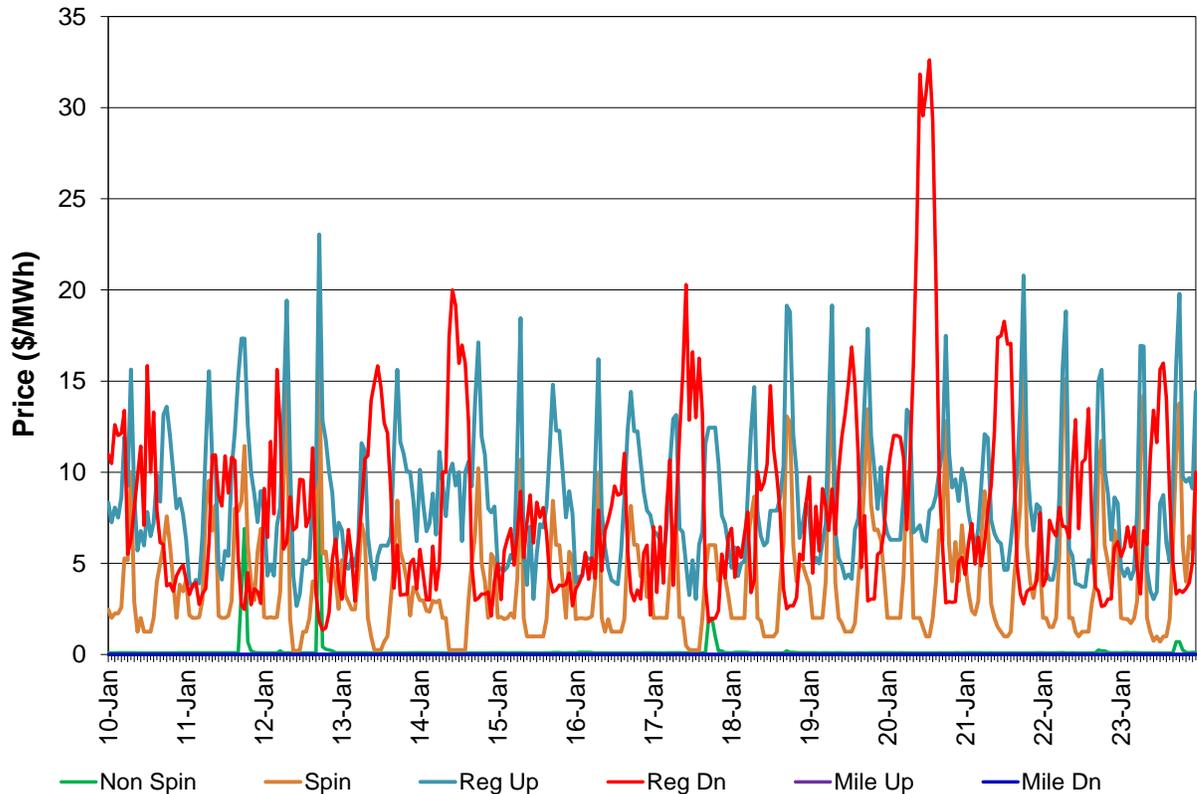
**Figure 4: Day-Ahead (IFM) Average A/S Price**




Figure 5: Day-Ahead Average RUC Price

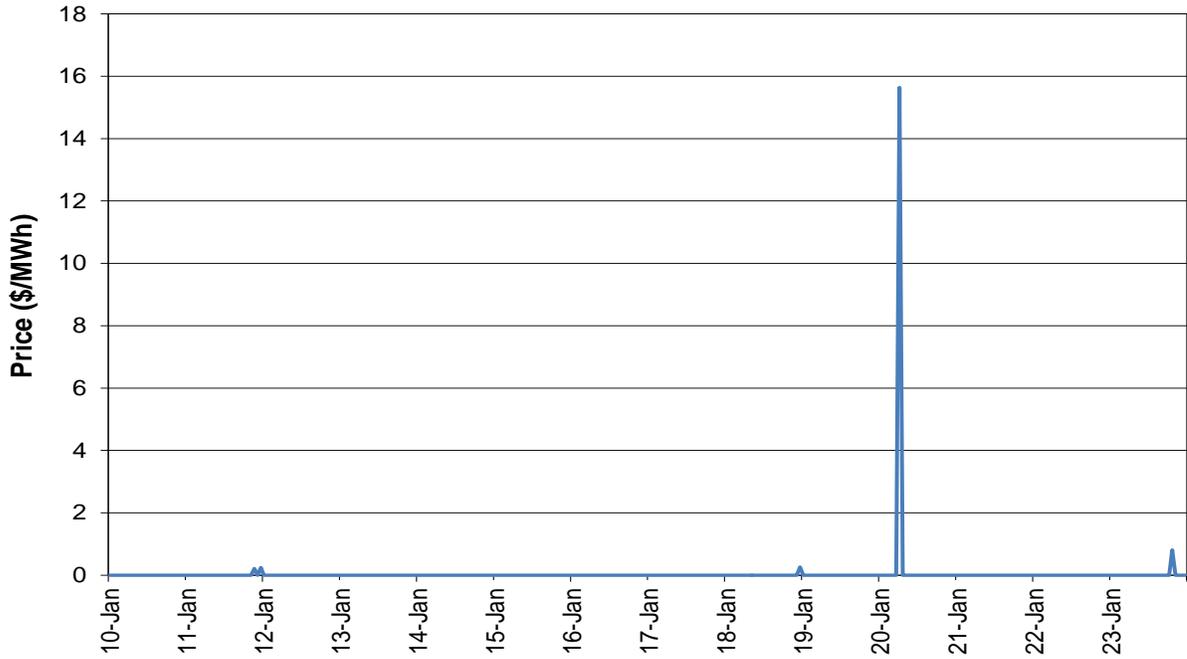
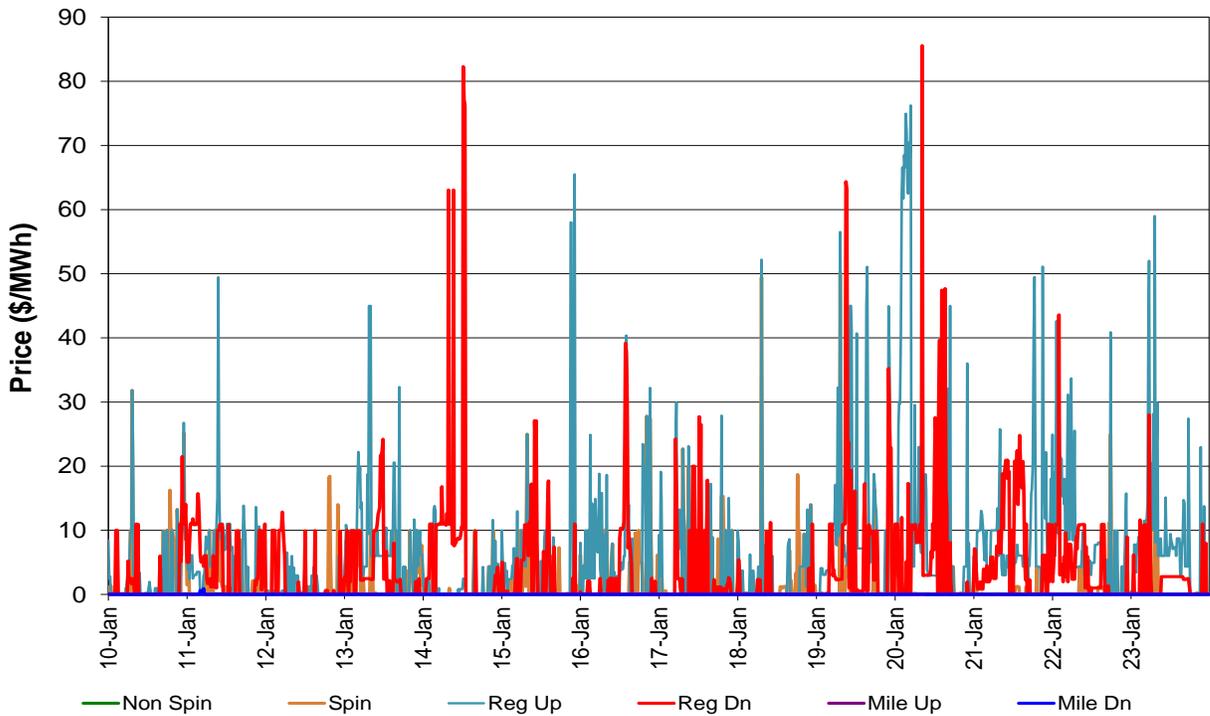
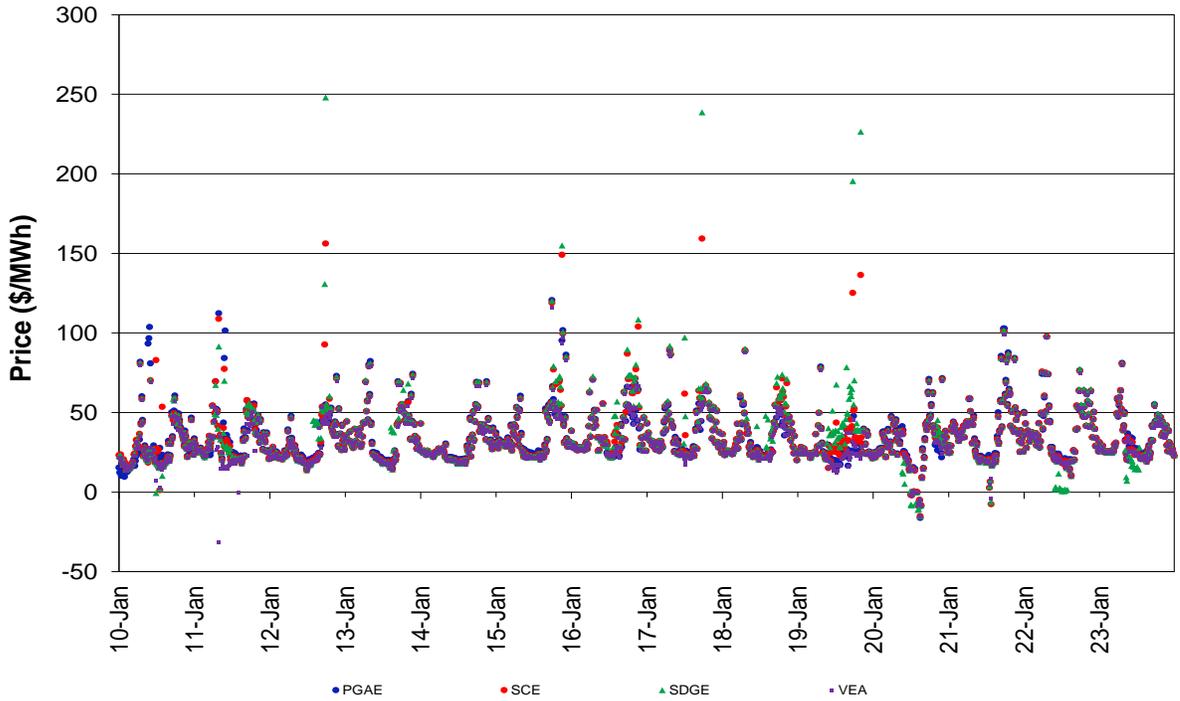


Figure 6: Real-Time FMM Average A/S Price



**Figure 7: Real-Time FMM DLAP LMP**



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

