

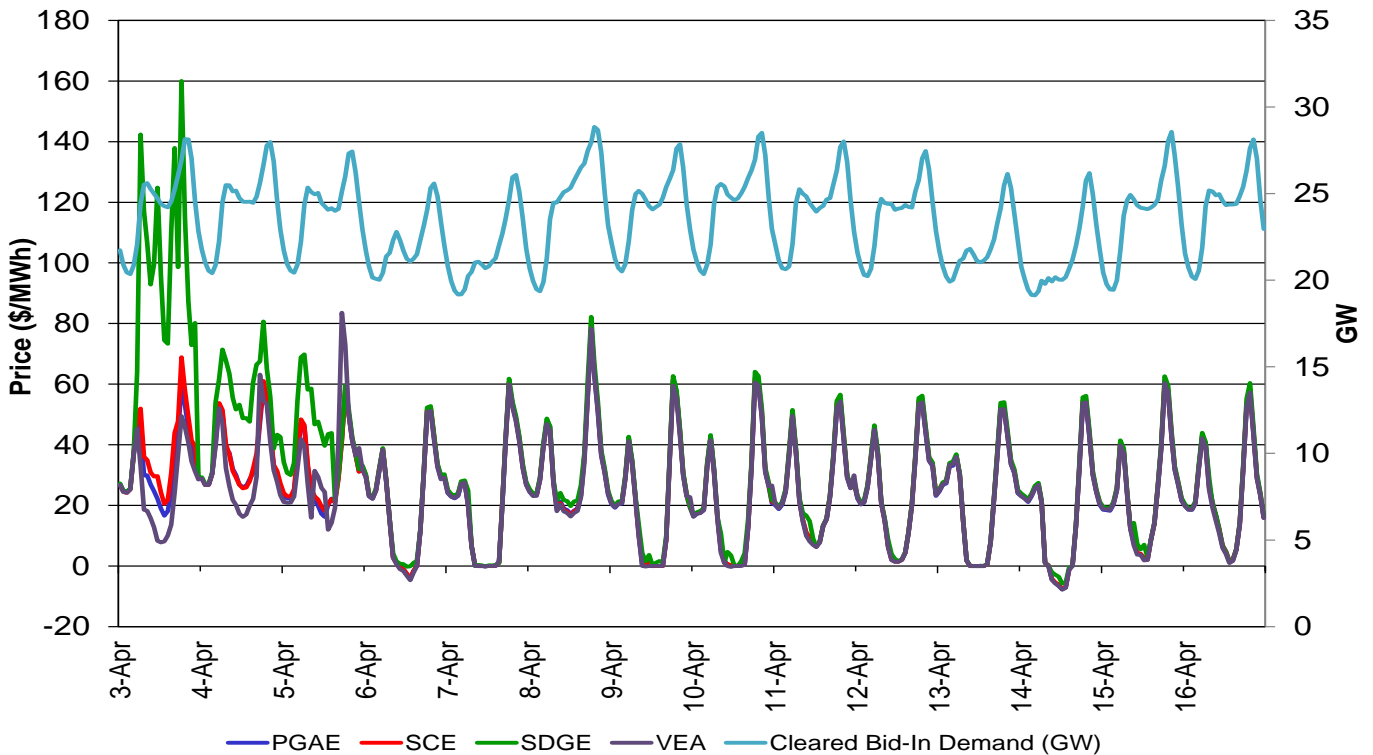
## Market Highlights<sup>1</sup> (April 3–April 16)

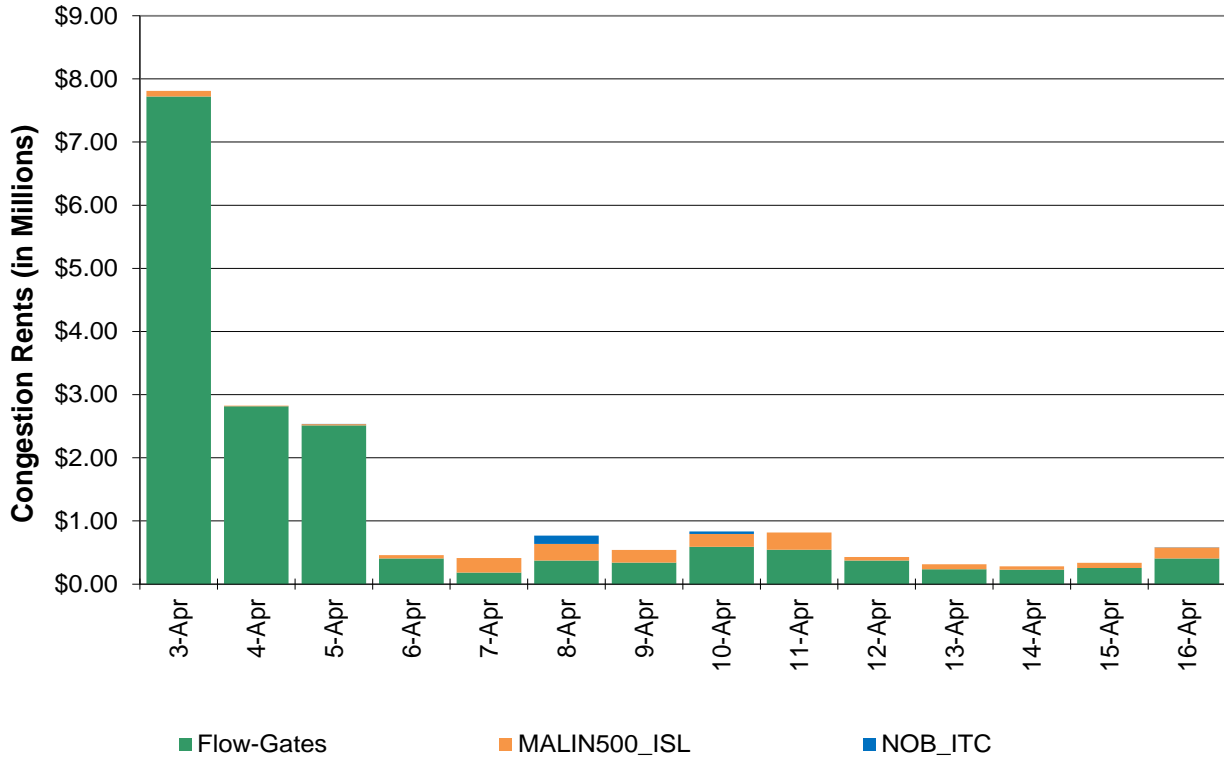
- The average DLAP price in the integrated forward market was \$26.60. The maximum and minimum DLAP prices were \$160.01 and -\$7.76, respectively. The maximum and minimum PNode prices in the integrated forward market were \$537.28 and -\$1,079.09 respectively.
- The top two interties congested in the integrated forward market were MALIN500\_ITC and NOB\_ITC. Congestion rents in these two weeks totaled \$18,958,175.13.
- The average day-ahead ancillary service prices were between \$0.00 and \$293.71.
- Approximately 91.91 percent of the RUC requirements were met from RA units.
- The average real-time FMM DLAP price was \$26.29, with a maximum price of \$222.32 and a minimum price of -\$20.50. The maximum and minimum PNode prices in the FMM were \$1,074.70 and -\$1,580.07, 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, 33 intervals saw ELAP prices above \$250 And 8 intervals saw ELAP prices below -\$150.
- The average real-time FMM ELAP price was \$23.41, with a maximum price of \$1,013.72 and a minimum price of -\$154.21.
- The average real-time RTD DLAP price was \$32.59, with a maximum price of \$1,185.00 and a minimum price of -\$21.86. The maximum and minimum PNode prices in the RTD were \$1,588.89 and -\$1,198.68, respectively.
- Out of the total 4,032 RTD intervals, 85 intervals saw DLAP prices above \$250 and 0 interval saw DLAP prices below -\$150.
- Out of the total 4,032 RTD intervals, 151 intervals saw ELAP prices above \$250 and 44 intervals saw ELAP prices below -\$150. The average real-time RTD ELAP price was \$27.25, with a maximum price of \$1,016.76 and a minimum price of -\$200.82.
- Root causes for daily high price events are noted in Tables 1 and 2.

Table 1 FMM Intervals	
Trade Date	Root Cause
None	None

<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 Apr 3 HE 7; Apr 9 HE 8, HE 9	Congestion on OMS 6840921_TL50003_NG
RTD Apr 3 HE 9	Renewable deviation and congestion on OMS 6840921_TL50003_NG.
RTD Apr 3 HE 13, HE 23; Apr 4 HE 16, HE 17	Congestion on OMS 6840921_TL50003_NG and MIGUEL_BKs_MXFLW_NG.
RTD Apr 3 HE 14; Apr 4 HE 6; Apr 5 HE 12	Congestion on MIGUEL_BKs_MXFLW_NG.
RTD Apr 3 HE 18; Apr 4 HE 9, HE 10; Apr 11 HE 19; Apr 16 HE 14	Renewable deviation.
RTD Apr 4 HE 19; Apr 5 HE 19, HE 20; Apr 8 HE 18; Apr 9 HE 19, HE 20, HE 21; Apr 10 HE 8; Apr 12 HE 24	Load changes and renewable deviation.
RTD Apr 7 HE 1	Renewable deviation and re-dispatch of resources.
RTD Apr 8 HE 13; Apr 16 HE 19	Load changes.
RTD Apr 11 HE 23	Generator de-rate.
RTD Apr 12 HE 8	Reduction of net imports.

**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 6840921_TL50003_NG	\$ 4,065,934.35
30275_CRESTA_230_30330_RIO OSO_230_BR_1_1	\$ 3,258,734.23
7750_D-ECASCO_OOS_CP6_NG	\$ 2,503,736.03
MIGUEL_BKs_MXFLW_NG	\$ 2,274,086.80
30500_BELLOTA_230_30515_WARNERVL_230_BR_1_1	\$ 1,424,750.76
33936_MELNS JB_115_33951_VLYHMTP1_115_BR_1_1	\$ 738,951.58
34112_EXCHEQUR_115_34116_LE GRAND_115_BR_1_1	\$ 588,396.31
34548_KETTLEMN_70.0_34552_GATES_70.0_BR_1_1	\$ 287,822.23
7510-MAG-PAS2-OOS_NG	\$ 278,296.12
34427_ATWELL_115_34701_SMYRNA 1_115_BR_1_1	\$ 264,844.05
7820_TL 230S_OVERLOAD_NG	\$ 242,324.46
32225_BRNSWKT1_115_32222_DTCH2TAP_115_BR_1_1	\$ 133,307.93
32218_DRUM_115_32244_BRNSWKT2_115_BR_2_1	\$ 119,080.29
34700_SMYRNA 2_115_34742_SEMITRPJ_115_BR_1A_1	\$ 115,438.86
34700_SMYRNA 2_115_34742_SEMITRPJ_115_BR_1_1	\$ 47,133.22
34860_TAFT_70.0_34943_Q356TAP_70.0_BR_1_1	\$ 46,944.32
34474_HELM_70.0_34556_STRD JCT_70.0_BR_1_1	\$ 45,203.76
31576_WNTU PMS_60.0_31578_LOMS JCT_60.0_BR_1_1	\$ 44,405.96
33926_CH.STNJT_115_33930_PEORIA_115_BR_1_1	\$ 32,391.86
30330_RIO OSO_230_30337_GOLDHILL_230_BR_1_1	\$ 31,559.97

<b>Transmission Constraint</b>	<b>Congestion Rent</b>
34859_PRMTFMTP_70.0_34873_Q484TP_70.0_BR_1_1	\$ 30,607.49
33951_VLYHMTP1_115_33516_RIPON J_115_BR_1_1	\$ 30,409.60
33916_CURTISS_115_33920_RCTRK J_115_BR_1_1	\$ 29,560.06
24036_EAGLROCK_230_24059_GOULD_230_BR_1_1	\$ 27,542.40
33916_CURTISS_115_33917_FBERBORD_115_BR_1_1	\$ 27,295.12
24420_NEENACH_66.0_24452_TAP 85_66.0_BR_1_1	\$ 25,793.17
7820_TL23040_IV_SPS_NG	\$ 23,304.04
33310_SANMATEO_115_33315_RAVENSWD_115_BR_1_1	\$ 22,847.88
30515_WARNERVL_230_30800_WILSON_230_BR_1_1	\$ 20,685.33
30800_WILSON_230_30795_STOREY 2_230_BR_2_1	\$ 20,387.13
22604_OTAY_69.0_22616_OTAYLKTP_69.0_BR_1_1	\$ 18,802.98
33020_MORAGA_115_30550_MORAGA_230_XF_3_P	\$ 18,499.64
24016_BARRE_230_24044_ELLIS_230_BR_1_1	\$ 17,323.42
33543_AEC_TP2_115_33540_TESLA_115_BR_1_1	\$ 16,929.52
34116_LE GRAND_115_34134_WILSONAB_115_BR_1_1	\$ 16,780.34
34469_GFFNJCT_70.0_34470_GIFFEN_70.0_BR_1_1	\$ 16,263.38
32308_COLGATE_60.0_32313_NRRWS2TP_60.0_BR_2_1	\$ 13,162.98
31000_HUMBOLDT_115_31452_TRINITY_115_BR_1_1	\$ 9,300.34
33932_MELONES_115_33936_MELNS JB_115_BR_1_1	\$ 6,792.36
34418_KINGSBRG_115_34419_WAUKENA_115_BR_1_1	\$ 6,462.42
33914_MI-WUK_115_33917_FBERBORD_115_BR_1_1	\$ 6,415.97
31218_ER_FTNJT_115_31220_EGLE RCK_115_BR_1_1	\$ 5,273.98
31461_JESSTAP_115_31464_COTWDPGE_115_BR_1_1	\$ 4,484.58
34321_MCSWAINJ_70.0_34232_EXCHEQUR_70.0_BR_1_1	\$ 3,395.98
22136_CLAIRMNT_69.0_22140_CLARMTTP_69.0_BR_1_1	\$ 3,045.22
OMS_7072961_BRDGVL-CTTNWD	\$ 3,011.16
7510-Magunden-Pastoria_NG	\$ 2,738.39
7690-CONTRL-INYOKN_EXP_NG	\$ 2,540.51
22644_PENSQTOS_69.0_22164_DELMARTP_69.0_BR_1_1	\$ 2,246.80
31604_COTTONWD_60.0_31611_RAWSON_60.0_BR_2_1	\$ 1,879.00
22416_LOVELAND_69.0_22168_DESCANSO_69.0_BR_1_1	\$ 1,703.21
HUMBOLDT_IMP_NG	\$ 1,291.41
31092_MPLE CRK_60.0_31093_HYMPOMJT_60.0_BR_1_1	\$ 1,193.77
33516_RIPON J_115_33514_MANTECA_115_BR_1_1	\$ 980.31
31696_CNTRVLE_60.0_31551_Q477TAP_60.0_BR_1_1	\$ 607.00
32214_RIO OSO_115_32244_BRNSWKT2_115_BR_2_1	\$ 300.00
30280_POE_230_30330_RIO OSO_230_BR_1_1	\$ 297.86
32218_DRUM_115_32222_DTCH2TAP_115_BR_1_1	\$ 286.21
32212_E.NICOLS_115_32214_RIO OSO_115_BR_1_1	\$ 266.18
32218_DRUM_115_32220_DTCH FL1_115_BR_1_1	\$ 179.44
31555_MSS TAP2_60.0_31553_BIG BAR_60.0_BR_1_1	\$ 165.33
34144_MERCED_115_34202_MERCED_70.0_XF_2	\$ 61.21
34471_SNJQJCT_70.0_34469_GFFNJCT_70.0_BR_1_1	\$ 0.23
<b>Totals</b>	<b>\$ 16,984,456.55</b>



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

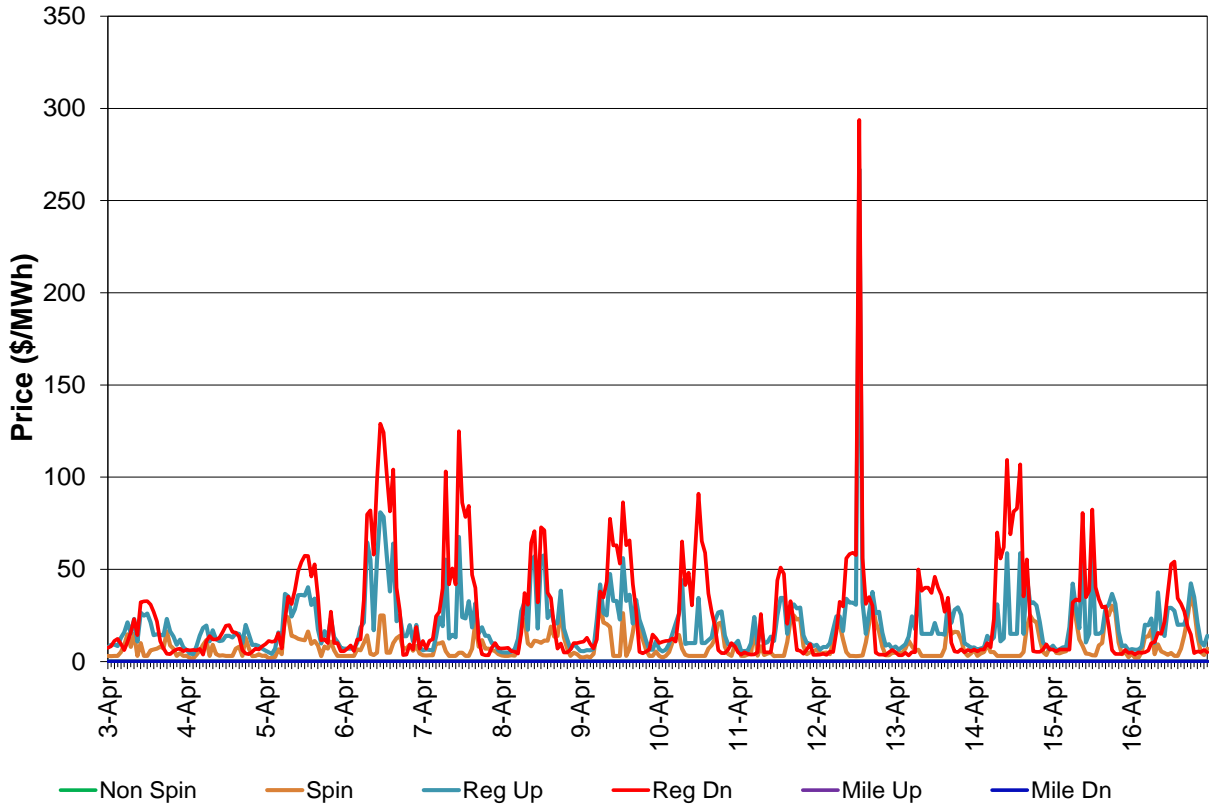


Figure 5: Day-Ahead Average RUC Price

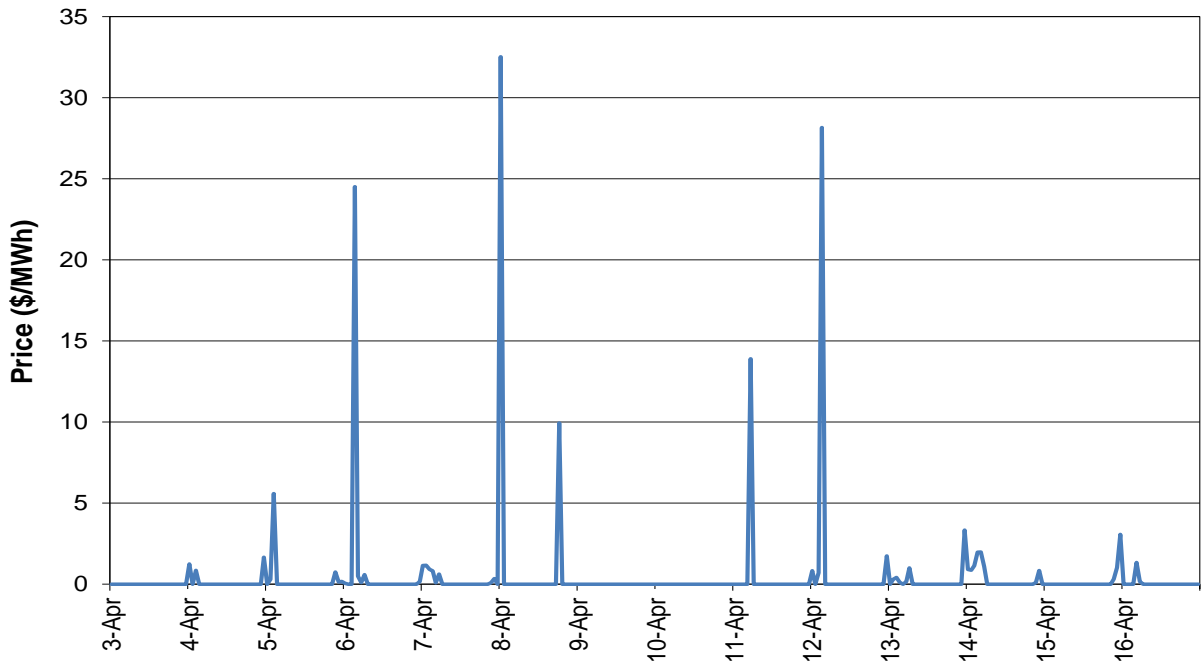




Figure 6: Real-Time FMM Average A/S Price

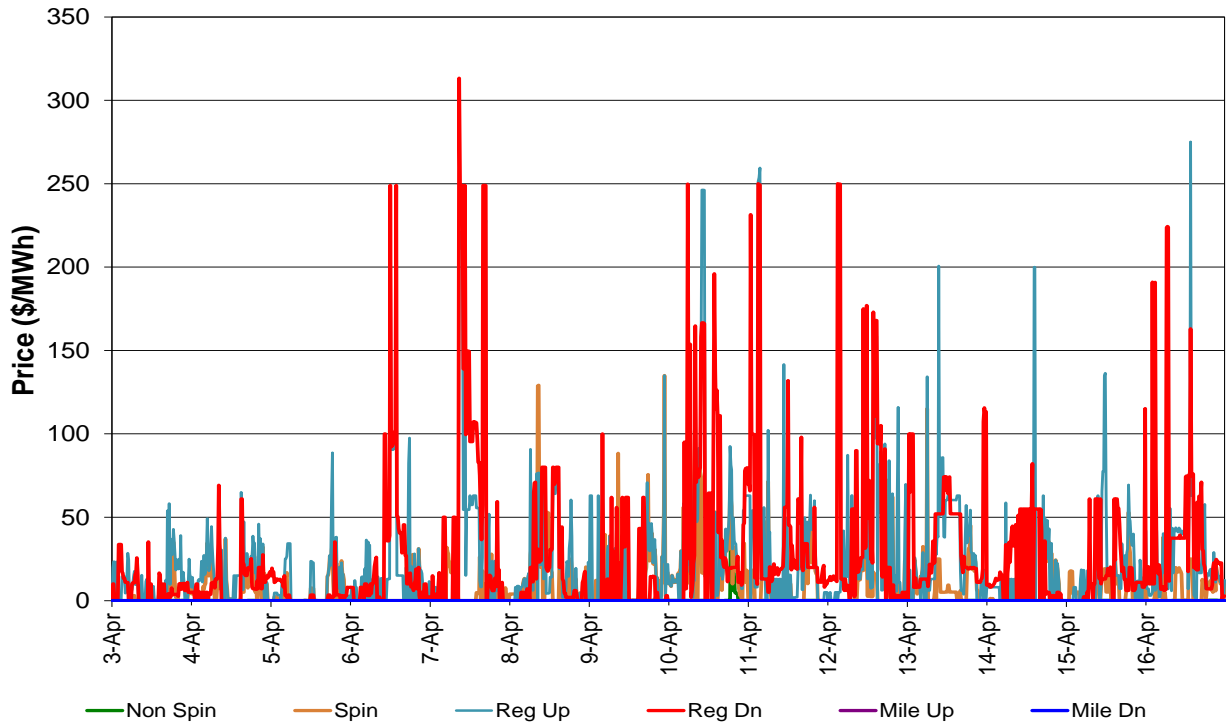
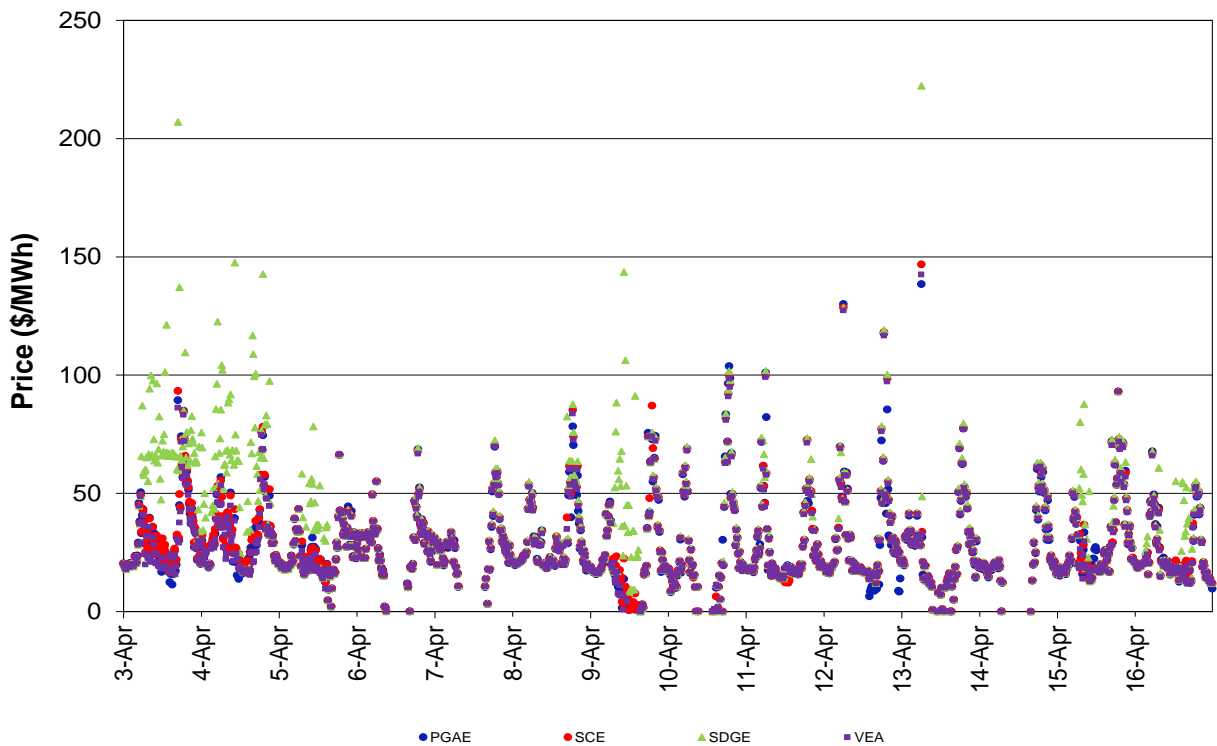
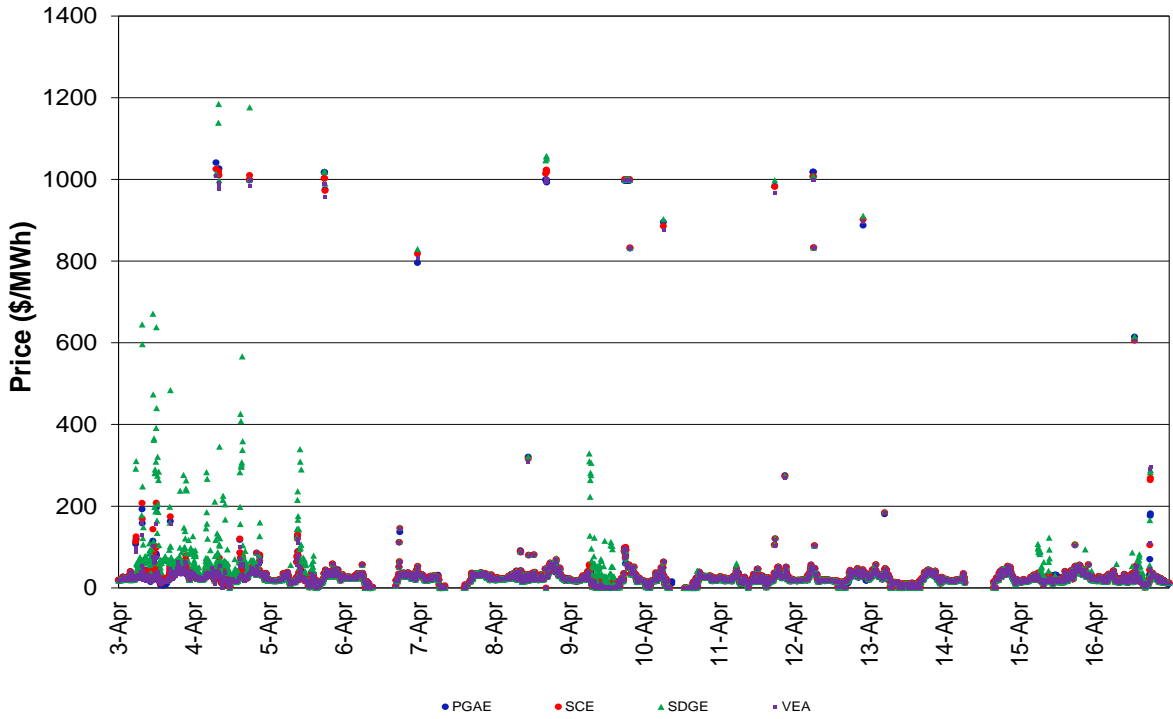


Figure 7: Real-Time FMM DLAP LMP



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



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

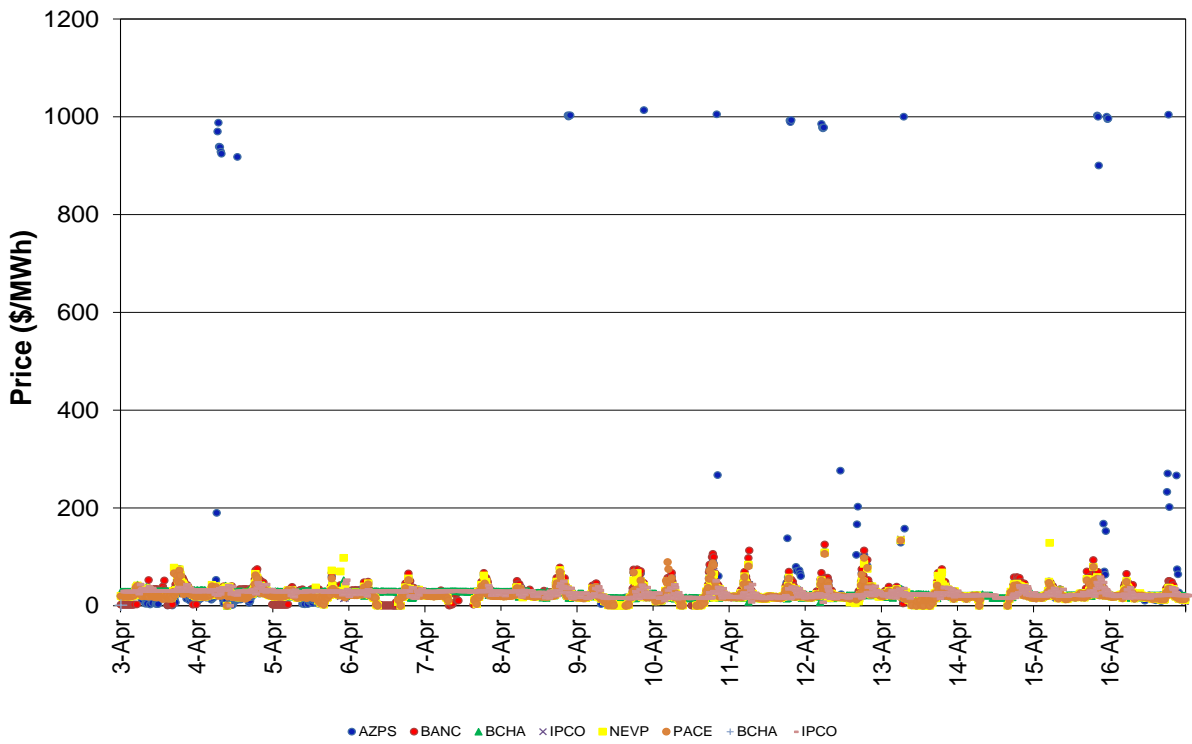




Figure 10: Real-Time RTD ELAP LMP

