

## Market Highlights<sup>1</sup> (August 22–September 4)

- The average DLAP price in the integrated forward market was \$37.11. The maximum and minimum DLAP prices were \$99.02 and \$13.76, respectively. The maximum and minimum PNode prices in the integrated forward market were \$1,000.00 and -\$150.00 respectively.
- The top two interties congested in the integrated forward market were MALIN500 and NOB\_ITC. Congestion rents in these two weeks totaled \$25,566,129.35.
- The average day-ahead ancillary service prices were between \$0.00 and \$34.21.
- Approximately 97.43 percent of the RUC requirements were met from RA units.
- The average real-time FMM DLAP price was \$32.13, with a maximum price of \$191.78 and a minimum price of \$5.49. The maximum and minimum PNode prices in the FMM were \$414.21 and -\$150.00, 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, 8 intervals saw ELAP prices above \$250 and 2 intervals saw ELAP prices below -\$150.
- The average real-time FMM ELAP price was \$24.58, with a maximum price of \$899.33 and a minimum price of -\$160.50.
- The average real-time RTD DLAP price was \$30.69, with a maximum price of \$1,000.48 and a minimum price of \$0.01. The maximum and minimum PNode prices in the RTD were \$1,099.68 and -\$154.36, respectively.
- Out of the total 4,032 RTD intervals, 7 intervals saw DLAP prices above \$250 and 0 interval saw DLAP prices below -\$150.
- Out of the total 4,032 RTD intervals, 33 intervals saw ELAP prices above \$250 and 31 intervals saw ELAP prices below -\$150. The average real-time RTD ELAP price was \$23.71, with a maximum price of \$1,016.09 and a minimum price of -\$154.10.
- Root cause for daily high price events are noted in Tables 1.

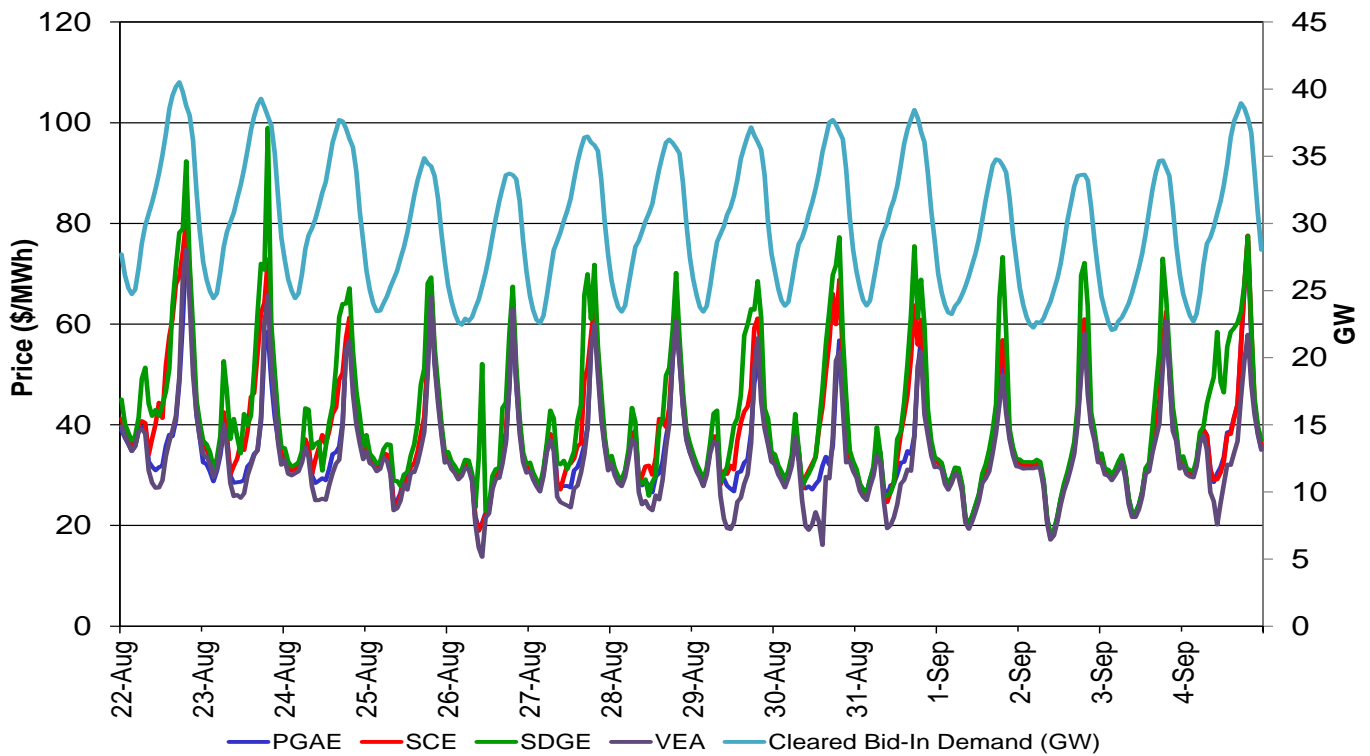
| Table 1 RTD Intervals          |   |
|--------------------------------|---|
| Trade Date                     | Root Cause  |
| RTD Aug 25 HE 17; Aug 29 HE 18 | Load changes and renewable deviation.                       |
| RTD Sep 4 HE 10                | Congestion on MIGUEL_BKs_MXFLW_NG, congestion on OMS6277840 |

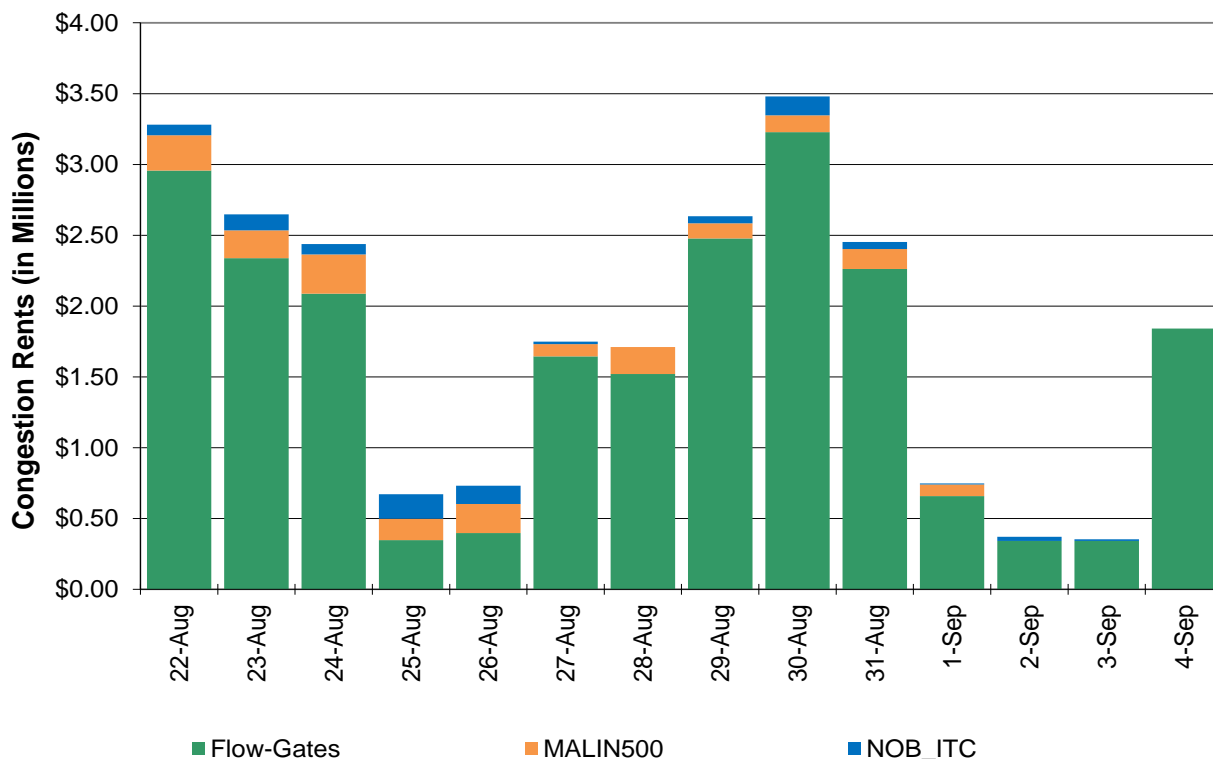
<sup>1</sup> A description of the metrics presented in this report is available at <http://www.caiso.com/Documents/WeeklyPerformanceReportMetricsKey.pdf>



| Table 1 RTD Intervals |  |
|-----------------------|--|
| Trade Date            | Root Cause   |
|                       | TL50005_NG, and renewable deviation.                       |
| RTD Sep 4 HE 12       | Congestion on MIGUEL_BKs_MXFLW_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**

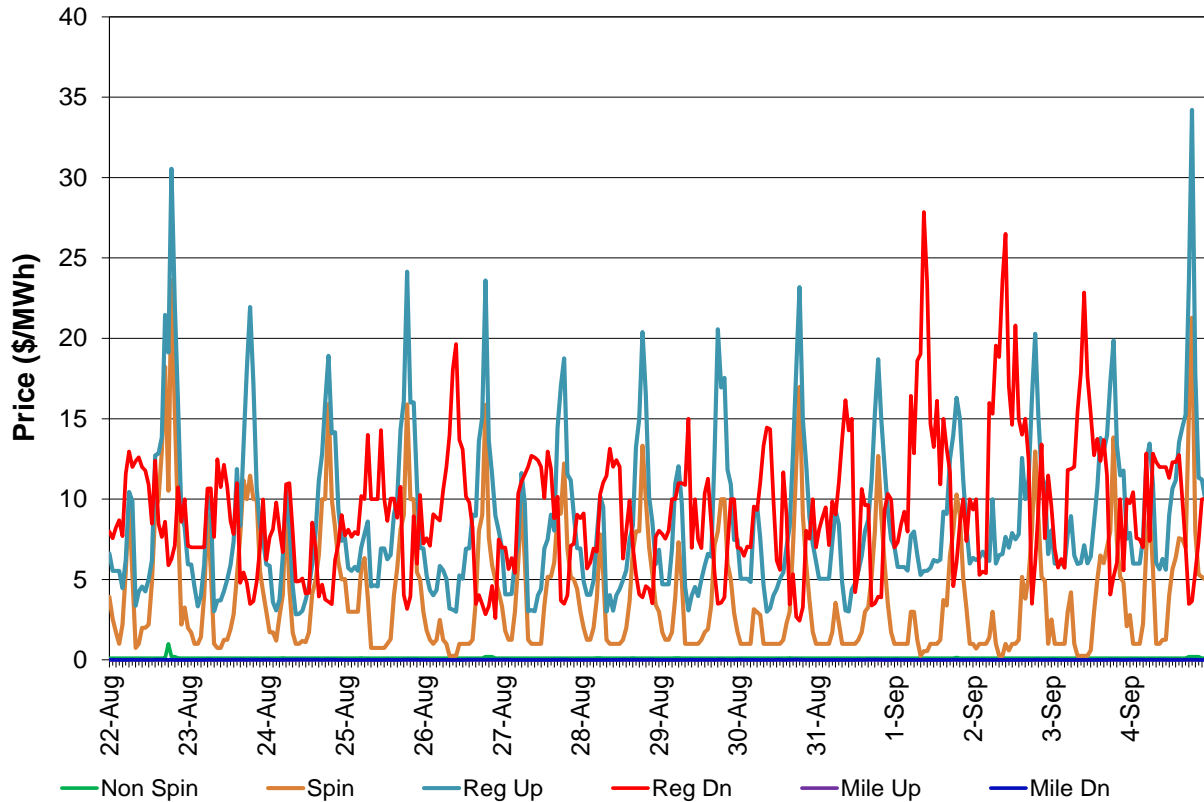
| Transmission Constraint                        | Congestion Rent |
|--|-----------------|
| 24016_BARRE_230_24154_VILLA PK_230_BR_1_1      | \$ 5,526,236.43 |
| 24036_EAGLROCK_230_24059_GOULD_230_BR_1_1      | \$ 1,930,433.03 |
| 22192_DOUBLTTP_138_22300_FRIARS_138_BR_1_1     | \$ 1,713,807.65 |
| 24016_BARRE_230_25201_LEWIS_230_BR_1_1         | \$ 1,644,421.73 |
| 24086_LUGO_500_26105_VICTORVL_500_BR_1_1       | \$ 889,035.80   |
| 7750_D-VISTA1_OOS_CP5_NG                       | \$ 880,091.69   |
| 30915_MORROBAY_230_30916_SOLARSS_230_BR_1_1    | \$ 454,553.73   |
| 22208_EL CAJON_69.0_22408_LOSCOCHS_69.0_BR_1_1 | \$ 375,332.31   |
| 30280_POE_230_30330_RIO OSO_230_BR_1_1         | \$ 318,318.37   |
| 30060_MIDWAY_500_24156_VINCENT_500_BR_1_1      | \$ 245,829.33   |
| 22480_MIRAMAR_69.0_22756_SCRIPPS_69.0_BR_1_1   | \$ 244,601.68   |
| 22597_OLDTWNTTP_230_22504_MISSION_230_BR_1_1   | \$ 187,257.37   |
| 34860_TAFT_70.0_34943_Q356TAP_70.0_BR_1_1      | \$ 163,957.36   |
| 34548_KETTLEMN_70.0_34552_GATES_70.0_BR_1_1    | \$ 159,579.69   |
| 30763_Q0577SS_230_30765_LOSBANOS_230_BR_1_1    | \$ 154,519.11   |
| 24092_MIRALOMA_500_24093_MIRALOM_230_XF_1_P    | \$ 147,555.01   |
| 22136_CLAIRMNT_69.0_22140_CLARMTTP_69.0_BR_1_1 | \$ 114,558.98   |
| 32225_BRNSWKT1_115_32222_DTCH2TAP_115_BR_1_1   | \$ 87,202.77    |
| 7820_TL_230S_OVERLOAD_NG                       | \$ 67,045.30    |

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

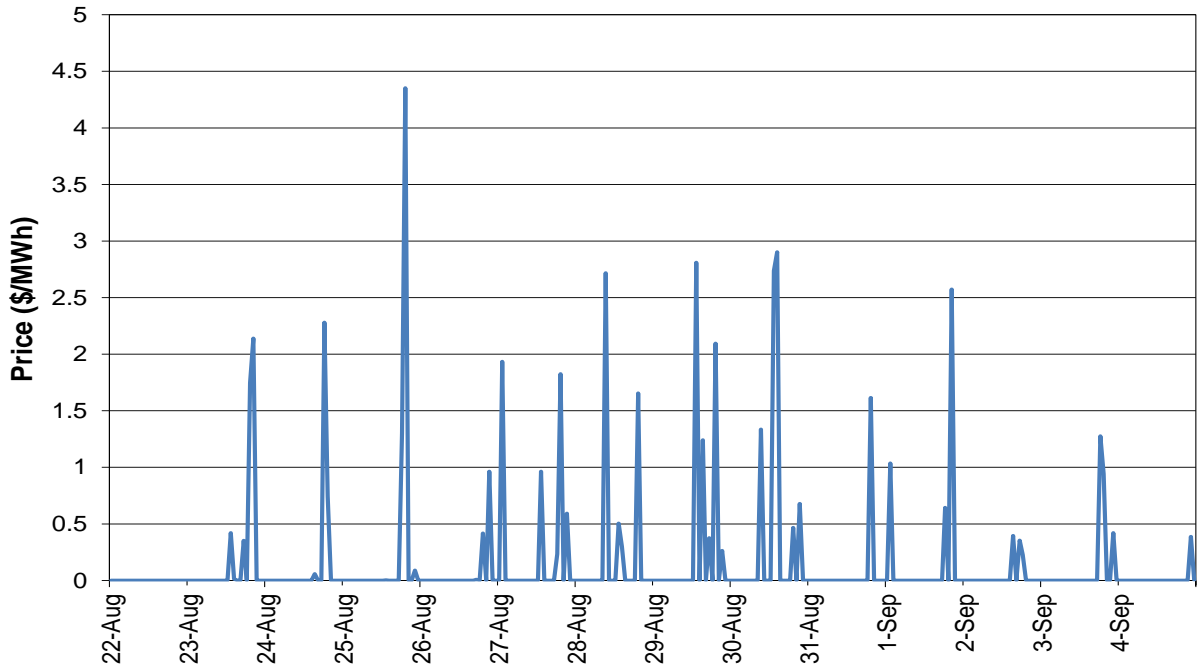
| Transmission Constraint                         | Congestion Rent |
|---|-----------------|
| 34469_GFFNJCT_70.0_34470_GIFFEN_70.0_BR_1_1     | \$ 58,954.32    |
| 30915_MORROBAY_230_30916_SOLARSS_230_BR_2_1     | \$ 57,882.66    |
| 31334_CLER_LKE_60.0_31338_KONOCTI6_60.0_BR_1_1  | \$ 54,132.90    |
| 22192_DOUBLTTP_138_22648_PENSQTOS_138_BR_1_1    | \$ 36,185.35    |
| 34112_EXCHEQUR_115_34116_LE GRAND_115_BR_1_1    | \$ 34,046.76    |
| 22644_PENSQTOS_69.0_22164_DELMARTP_69.0_BR_1_1  | \$ 32,946.48    |
| 25001_GOODRICH_230_24076_LAGUBELL_230_BR_1_1    | \$ 25,654.46    |
| 34214_LOS BANS_70.0_30765_LOSBANOS_230_XF_3     | \$ 23,231.10    |
| 31220_EGLE RCK_115_31228_HOMSTKTP_115_BR_1_1    | \$ 23,051.24    |
| 33506_STANISLS_115_33503_FRGTNTP2_115_BR_1_1    | \$ 20,792.06    |
| 31640_TRES VIS_60.0_31644_BIGGSJCT_60.0_BR_1_1  | \$ 17,468.61    |
| 24402_ANTELOPE_66.0_24420_NEENACH_66.0_BR_1_1   | \$ 14,213.56    |
| OMS_5548842_HUMB_TRNTY                          | \$ 13,837.80    |
| 99254_J.HINDS2_230_24806_MIRAGE_230_BR_1_1      | \$ 13,729.43    |
| 30515_WARNERVL_230_30800_WILSON_230_BR_1_1      | \$ 13,544.38    |
| 31336_HPLND JT_60.0_31206_HPLND JT_115_XF_2     | \$ 11,154.84    |
| 32218_DRUM_115_32244_BRNSWKT2_115_BR_2_1        | \$ 11,091.43    |
| 22604_OTAY_69.0_22616_OTAYLKTP_69.0 BR_1_1      | \$ 10,011.24    |
| 22356_IMPRLVLY_230_21025_ELCENTRO_230_BR_1_1    | \$ 9,958.58     |
| 30765_LOSBANOS_230_38615_DS AMIGO_230_BR_1_1    | \$ 8,474.72     |
| 31556_TRINITY_60.0_31555_MSS TAP2_60.0 BR_1_1   | \$ 6,786.25     |
| 31604_COTTONWD_60.0_31611_RAWSON_60.0 BR_2_1    | \$ 6,455.66     |
| 31080_HUMBOLDT_60.0_31088_HMBLT JT_60.0 BR_1_1  | \$ 6,082.73     |
| 31338_KONOCTI6_60.0_31344_EGLE RCK_60.0 BR_1_1  | \$ 4,117.16     |
| 22296_FENTONTP_69.0_22292_FENTON_69.0 BR_1_1    | \$ 3,367.17     |
| 32970_CLAYTN_115_33035_LKWD_JCT_115 BR_1_1      | \$ 3,000.48     |
| 33506_STANISLS_115_33501_FRGTNTP1_115 BR_1_1    | \$ 2,003.12     |
| 31336_HPLND JT_60.0_31370_CLVRDLJT_60.0 BR_1_1  | \$ 1,982.84     |
| 31227_HGHLNDJ2_115_31950_CORTINA_115 BR_1_1     | \$ 1,617.70     |
| 32218_DRUM_115_32222_DTCH2TAP_115 BR_1_1        | \$ 1,589.55     |
| HUMBOLDT_IMP_NG                                 | \$ 1,500.96     |
| 33200_LARKIN_115_33204_POTRERO_115 BR_2_1       | \$ 1,346.50     |
| 31080_HUMBOLDT_60.0_31092_MPLE CRK_60.0 BR_1_1  | \$ 1,305.05     |
| 34774_MIDWAY_115_34225_BELRDG J_115 BR_1_1      | \$ 742.58       |
| 22696_ROSE CYN_69.0_22140_CLARMTTP_69.0 BR_1_1  | \$ 734.52       |
| 31104_CARLOTTA_60.0_31105_RIODLLTP_60.0 BR_1_1  | \$ 725.47       |
| 31110_BRDGVILLE_60.0_31112_FRUITLND_60.0 BR_1_1 | \$ 631.45       |
| 31214_GEYERS56_115_31220_EGLE RCK_115 BR_1_1    | \$ 527.11       |
| 32374_DRUM_60.0_32376_BONNIE N_60.0 BR_1_1      | \$ 353.31       |
| 38136_MARBLE_69.0_64281_MARBLSP_60.0_XF_1       | \$ 337.06       |
| 34480_KEARNEY_70.0_34512_CARUTHRS_70.0 BR_1_1   | \$ 224.91       |
| 33936_MELNS JB_115_33951_VLYHMTP1_115 BR_1_1    | \$ 213.68       |

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

| Transmission Constraint                        | Congestion Rent         |
|--|-------------------------|
| 31114_FRT SWRD_60.0_31116_GRBRVLE_60.0_BR_1_1  | \$ 159.74               |
| 22524_MORHILTP_69.0_22528_MOROHILL_69.0_BR_1_1 | \$ 140.95               |
| 34887_TAP SKRN_70.0_34882_SAN EMDO_70.0_BR_1_1 | \$ 134.84               |
| 39021_SC21ATP_70.0_39022_S621A_70.0_BR_1_1     | \$ 121.44               |
| 34321_MCSWAINJ_70.0_34232_EXCQUEUR_70.0_BR_1_1 | \$ 119.21               |
| 34116_LE GRAND_115_34134_WILSONAB_115_BR_1_1   | \$ 85.38                |
| <b>Totals</b>                                  | <b>\$ 15,841,106.09</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**

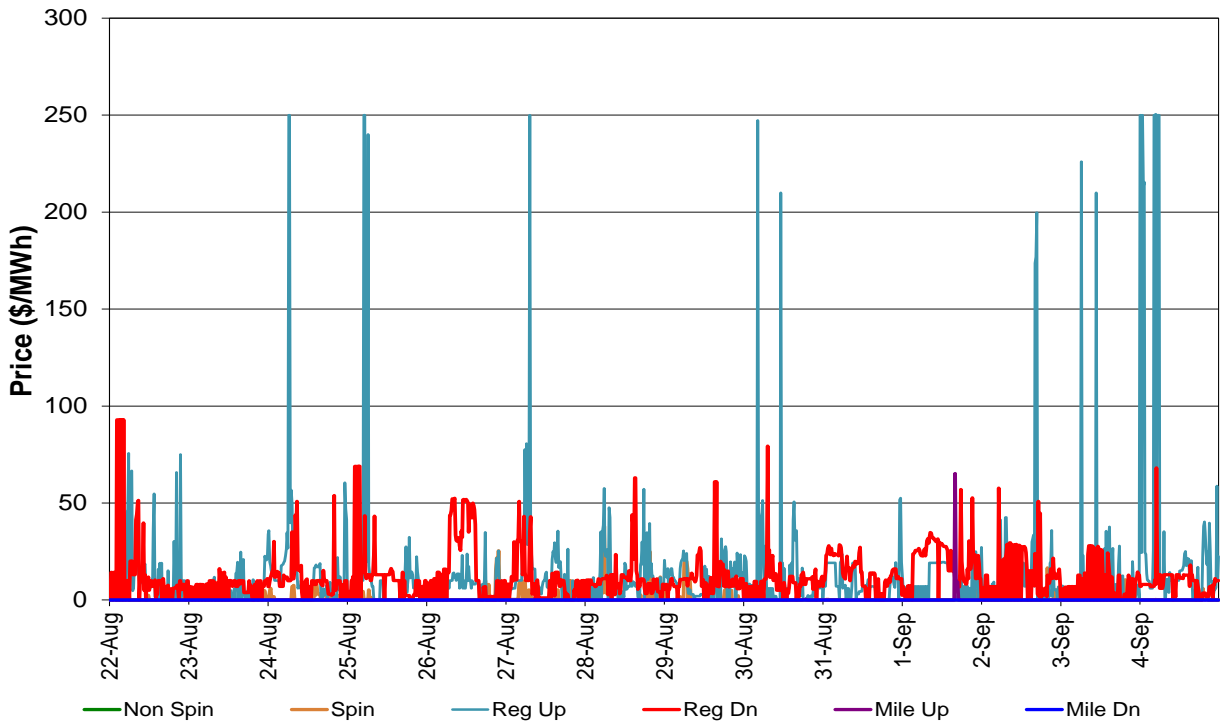




Figure 7: Real-Time FMM DLAP LMP

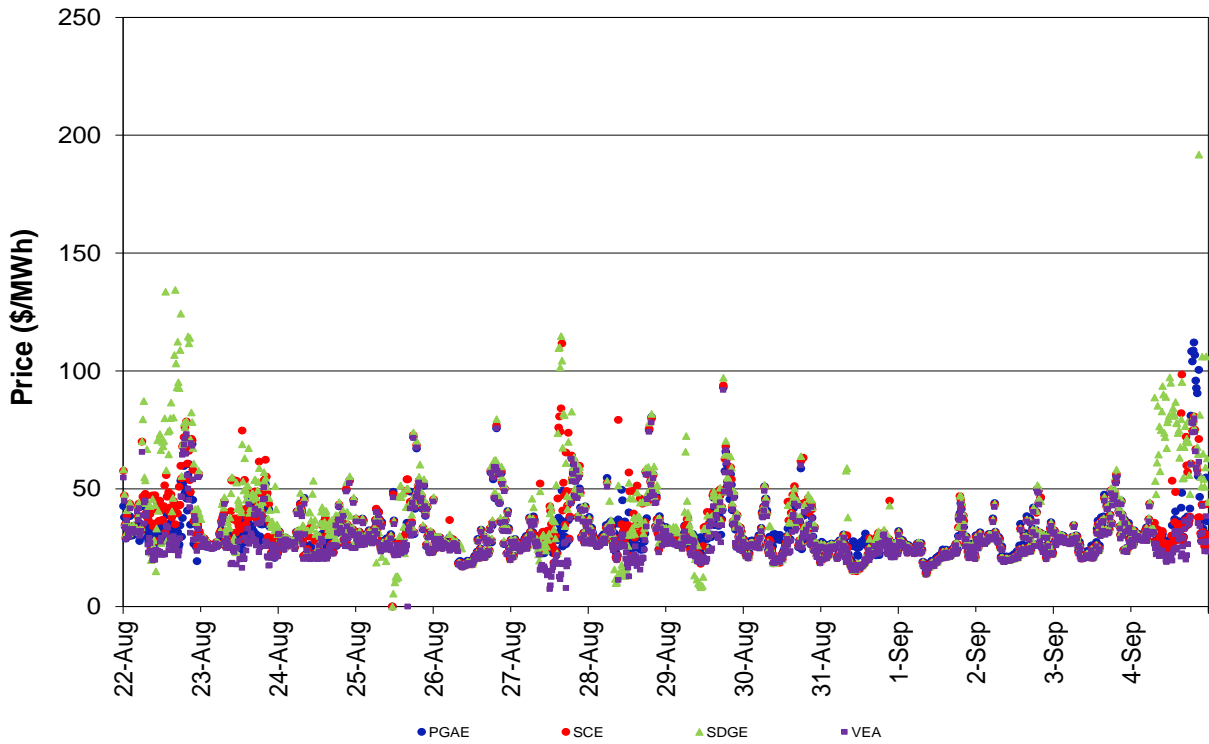
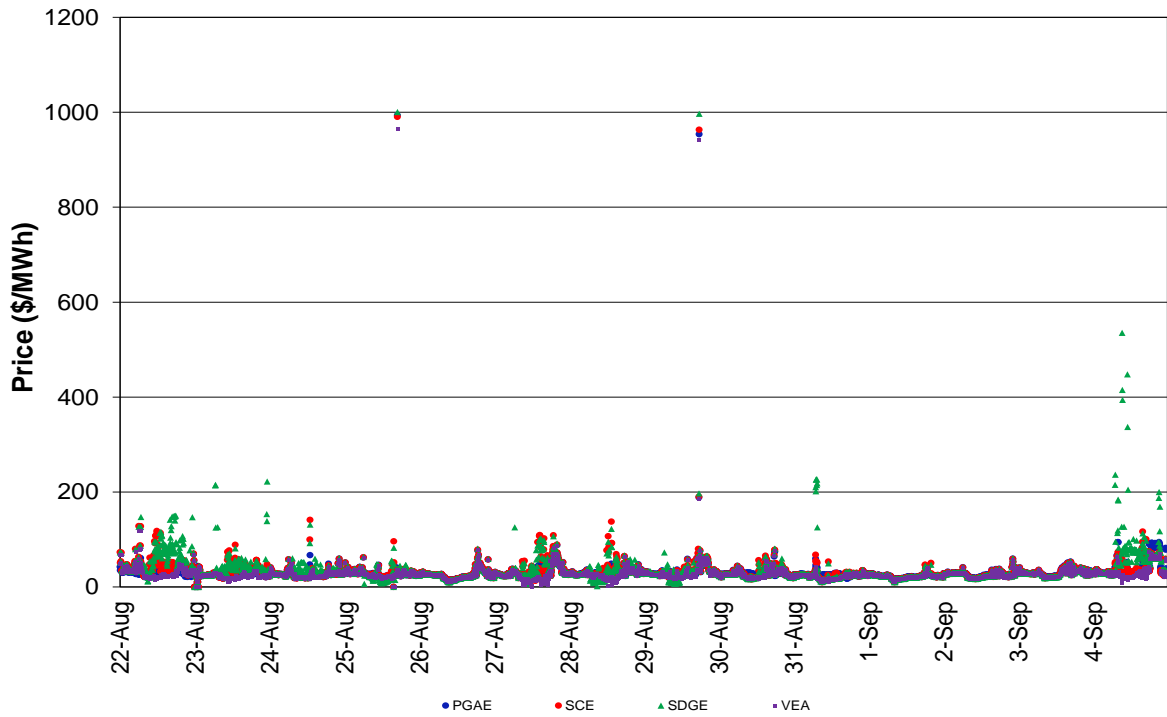
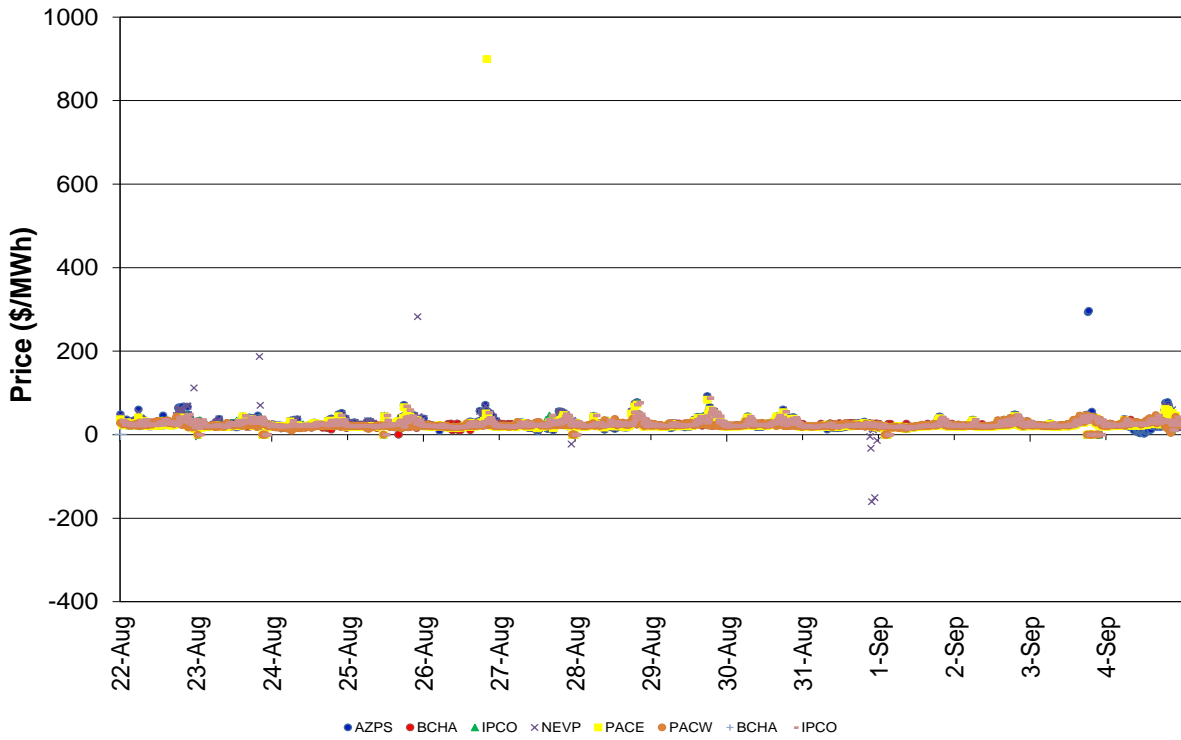


Figure 8: Real-Time RTD DLAP LMP



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



**Figure 10: Real-Time RTD ELAP LMP**

