

Electricity Pricing Event Report – Saturday 02 July 2016

Market Outcomes: The NEM had high Raise Regulation Frequency Control Ancillary Service (FCAS) prices, reaching \$249.97/MWh for trading interval (TI) ending 2330 hrs. The Fast Raise and Regulation Raise prices reached up to \$100.21/MWh and \$111.39/MWh, respectively, for TI ending 2330 hrs.

Energy prices across all NEM regions were elevated, but did not reach the price threshold for reporting purposes.

Detailed Analysis: The 5-Minute Raise Regulation FCAS prices in the NEM reached between \$97.53/MWh and \$248.91/MWh between dispatch intervals (DIs) ending 2310 hrs and 2320hrs. The 5-minute Fast Raise FCAS prices reached between \$77.71/MWh and \$229.68/MWh for the same DIs. These high FCAS prices can be mainly attributed to increased regulation FCAS requirements in the NEM, due to an increased accumulated time error in the NEM. Other contributing factors include shifting and withdrawal of FCAS capacity, limited availability of cheaper priced FCAS capacity and steep supply curves in the Raise FCAS markets.

Between TIs ending 1430 hrs and 2300 hrs, wind generation reduced across South Australia from 342 MW to 96 MW and Victoria from 558 MW to 415 MW This contributed to an increase in the accumulated time error in the NEM.

The accumulated time error in the NEM had been continuously below -1.5 seconds since DI ending 2215 hrs. To manage the time error, the amount of Raise Regulation services enabled had been above the default level of 130 MW since DI ending 2215 hrs. Between DIs ending 2310 hrs and 2320 hrs, the accumulated time error in the NEM was between -1.86 seconds and -2.79 seconds. The amount of Raise Regulation services enabled increased from 136 MW for DI ending 2305 hrs to a maximum 207 MW for DI ending 2315 hrs.

For all high priced DIs, there was up to 19 MW of Raise Regulation capacity and up to 35 MW of Fast Raise capacity offered between \$40/MWh and \$400/MWh across all NEM regions, resulting in steep supply curves.

Between DIs ending 2305 hrs and 2315 hrs, NEM demand increased by 232 MW. During this period, a number of units providing cheaper priced FCAS in the Mainland were dispatched close to their maximum capacity in the energy market, which effectively reduced their Raise FCAS availability. Between DIs ending 2310 hrs and 2320 hrs, 5-minute energy prices were between \$104.59/MWh and \$323.70/MWh across all NEM regions.

For DI ending 2305 hrs, AGL shifted up to 160 MW of Torrens Island A and B Power Station's Fast Raise and Raise Regulation FCAS capacity from bands priced at \$47.93/MWh or below to bands priced at \$13,780.70/MWh with the reason '1150~F~00 INITIAL BID~'. For the same DI, Origin Energy withdrew 65 MW of Regulation Raise FCAS capacity from Mortlake PS with the reason '2240A ENERGY/FCAS TRADEOFF SL'.

For DI ending 2325 hrs, the 5-minute Raise Regulation and Fast Raise FCAS prices in the NEM reduced to \$43.13/MWh and \$33.53/MWh, respectively, when the time error recovered to within +/-2 seconds and the Raise Regulation requirement in the NEM reduced.

The high 30-minute NEM FCAS prices were forecast in the latest pre-dispatch schedule.