

Electricity Pricing Event Report – Monday 04 July 2016

Market Outcomes: The Mainland (Queensland, New South Wales, Victoria and South Australia) had high Raise Regulation Frequency Control Ancillary Service (FCAS) prices, reaching \$93.44/MWh and \$140.21/MWh for trading intervals (TIs) ending 0700 hrs and 0930 hrs, respectively.

FCAS and Energy prices in Tasmania were not affected by this event. Energy prices for the Mainland were elevated but did not reach the price threshold for reporting purposes.

Detailed Analysis: The 5-minute Raise Regulation FCAS prices in the Mainland ranged between \$101.76/MWh and \$195.37/MWh for 8 dispatch intervals (DIs) within the high priced TIs. The 5-minute Fast Raise, Slow Raise and Delayed Raise FCAS prices ranged between \$10.00/MWh and \$34.20/MWh between DIs ending 0635 hrs and 0700 hrs. These high FCAS prices can be mainly attributed to limited availability of cheaper priced Raise FCAS services. Other contributing factors include rebidding of FCAS capacity, and steep supply curves in the Raise FCAS markets.

Demand in the mainland increased by 1628 MW between DIs ending 0630 hrs and 0700 hrs. Several generating units providing cheaper priced Raise Regulation FCAS capacity were dispatched close to or at their maximum capacity in the energy market, which effectively reduced their Raise FCAS availability. These include Earing PS unit 2, Loy Yang B PS units 1 and 2, Yallourn PS units 2 and 3, Callide B PS units 1 and 2, Gladstone PS Unit 2. The energy prices across the mainland were elevated during this period.

For DI ending 0635 hrs, Origin and Energy Australia shifted up to 87 MW of Delay Raise, Fast Raise and Slow Raise FCAS capacity from bands priced at \$1.00/MWh or below to bands priced at \$15.37/MWh or above.

A number of units providing cheaper priced Raise Regulation, Fast Raise and Slow Raise FCAS in the Mainland were trapped or stranded (Bayswater PS Unit 1, Eraring PS Units 1, 2 and 4, Mt Piper PS Units 1 and 2, Callide PS B Unit 2, Gladstone PS Units 2, 3, 5 and 6, Torrens Island PS A Units 1, 2 and 3, Torrens Island PS B Unit 4, Dartmouth PS, McKay Creek PS, Yallourn PS Units 1, 2 and 3).

During the high priced DIs, the increased generation in the energy market combined with the unavailability of Regulation capacity from trapped or stranded units caused the Raise Regulation FCAS availability in the Mainland to decrease by up to 69 MW between consecutive DIs. The Fast Raise and Slow Raise FCAS availability decreased by up to 82 MW and 85 MW between consecutive DIs, respectively.

For all high priced DIs, there was up to 4 MW of Raise Regulation capacity offered between \$75.10/MWh and \$300.00/MWh across all NEM regions, resulting in a steep supply curve.

The Mainland Raise Regulation FCAS price reduced to \$70.04/MWh for DI ending 0705 hrs, and to \$50.00/MWh for DI ending 0935 hrs, when fewer units were trapped or stranded and the availability of Fast and Slow Raise FCAS increased.

The high 30-minute Mainland FCAS prices were not forecast in the latest pre-dispatch schedules due to generation shift in capacity within the high priced trading interval.