

Electricity Pricing Event Report – Sunday 22 May 2016

Market Outcomes: The Mainland (Queensland, New South Wales, Victoria and South Australia) had high Delayed Raise Frequency Control Ancillary Service (FCAS) and Raise Regulation FCAS prices, both reaching \$83.25/MWh for trading interval (TI) ending 1800 hrs and \$78.94/MWh for TI ending 1830 hrs.

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 and Delayed Raise FCAS prices in the Mainland were above \$75.00/MWh for 8 dispatch intervals (DIs) between DIs ending 1740 hrs and 1815 hrs. These high FCAS prices can be mainly attributed to increased Delayed Raise FCAS requirements on the Mainland, planned generator outages, limited availability of cheaper priced FCAS capacity, a steep supply curve in the FCAS markets and increased demand during the afternoon peak period. In addition, FCAS support from Tasmania was unavailable due to the outage of the Basslink interconnector from 20 December 2015.

Since early April 2016, there has been limited availability of cheaper priced Raise Regulation FCAS capacity across the Mainland. Several generating units that typically provide cheaper priced Raise Regulation were unavailable for extended periods. These include, Bayswater PS Unit 2, Vales Point PS Unit 6, Torrens Island PS A Units 1 – 4 and Torrens Island PS B Unit 2.

For DI ending 1705 hrs, Snowy Hydro withdrew 240 MW of Delayed Raise capacity from Tumut 3 PS with the reason '16:32 A NSW: 30MPD PRICE \$164.05 HGR THN 30MPD 17:30@16:02'.

For DI ending 1735 hrs, Delta shifted 15MW of Delayed Raise FCAS capacity from bands priced at or below \$30.37/MWh to bands priced at or above \$101.25/MWh. For the same DI, Delta shifted 25 MW of Raise Regulation capacity from bands priced at or below \$101.25/MWh to bands priced at \$13,971.85/MWh.

A number of units providing cheaper priced FCAS in the Mainland were dispatched close to or at their maximum capacity in the energy market, which effectively reduced their Raise FCAS availability.

Between TIs ending 1730 hrs and 1830 hrs, Mainland operational demand increased by 1,030 MW, reaching a maximum of 22,640 MW for TI ending 1830 hrs. Thus, additional generation capacity was dispatched in the energy market, which further reduced the Delayed Raise and Raise Regulation availability during this period. For the high priced DIs, 5-minute energy prices were elevated up to \$307.06/MWh across the Mainland regions. The energy prices impacted the FCAS prices as the Raise FCAS availability was adjusted against the energy dispatch. In addition, Raise Regulation was dispatched to substitute for expensive Delayed Raise.

The Mainland FCAS prices for Raise Regulation and Delayed Raise Services both reduced to \$59.65/MWh, for DI ending 1820 hrs, when Mainland demand decreased by 165 MW and Delayed Raise availability increased.

The high 30-minute Mainland FCAS prices were forecast in the pre-dispatch schedules.

Version Control

VER	DATE	REVISION DESCRIPTION	AUTHOR	CHECKED	RESPONSIBLE MANAGER	APPROVED
v1	24/05/16	Original Document	Ellise Harmer	Eloise Taylor Basilisa Choi	Yvonne Tan	