Electricity Pricing Event Report – Friday 22 July 2016 PM

Market Outcomes: Spot price in South Australia reached $2,484.65/MWh and $2,337.47/MWh for trading intervals (TIs) ending 1630 hrs and 1700 hrs respectively.

FCAS prices in all regions and Energy prices for the other NEM regions were not affected by this event.

Detailed Analysis: 5-Minute dispatch price reached the Market Price Cap (MPC) of $14,000/MWh in South Australia for dispatch intervals (DIs) ending 1630 hrs and 1635 hrs. These high prices can be mainly attributed to a planned network outage limiting Heywood interconnector flows, planned generator outages and a reduction in wind generation.

Planned outage of the Tailem Bend – South East No.2 275kV line was scheduled from 1000 hrs on 16 July 2016 and returned to service at 2049 hrs on 22 July 2016. This planned outage reduced the interconnector capacity on the Heywood Interconnector. Constraint set S-TBSE_1 was invoked for the duration of the outage.

For DIs ending 1630 hrs and 1635 hrs, the target flow on the Heywood interconnector was forced to 28 MW and 25 MW, respectively, towards Victoria by the transient stability constraint equation, V::S_SETB_TBSE_1. This constraint equation prevents transient instability across the VIC-SA cutset, for the loss of one South East – Tailem Bend 275kV line, during the outage of the parallel line. For the same DIs, the target flow towards South Australia on the Murraylink was limited to 220 MW by the upper transfer limit constraint equation VSML_220.

Several South Australian generating units were unavailable during the high priced DIs. These included Torrens Island A units 1, 3 and 4 (360 MW total), Torrens Island B unit 3 (210 MW) and Pelican Point CCGT (510 MW).

South Australia wind generation reduced by 309 MW, from 918 MW for DI ending 1600 hrs, to 609 MW for DI ending 1635 hrs. The reduction in wind generation was caused by high wind speed cut-out of turbines at some wind farms due to extreme wind conditions.

For both high priced DIs, less than 120 MW of South Australian generation capacity was offered between $350/MWh and $10,549.68/MWh, resulting in a steep supply curve.

Lower priced generation was available but required more than one DI to synchronise (Hallet GT, Quarantine GT unit 5, Mintaro GT) or was constrained off by the transient stability constraint equation V::S_SETB_TBSE_1 (Lake Bonney WF Stage 2 and 3).

For DI ending 1640 hrs, the 5-minute price reduced to $17.86/MWh in South Australia when 745 MW of generation capacity was rebid from bands priced at or above $79.99/MWh to the Market Floor Price (MFP) of -$1000/MWh.

The high 30-minute spot price for South Australia was not forecast in the latest pre-dispatch schedule, due to lower demand forecast and higher wind generation forecast in the Pre-Dispatch runs.

Version Control

VER	DATE	REVISION DESCRIPTION	AUTHOR	CHECKED	RESPONSIBLE MANAGER	APPROVED
v1	24/07/16	Original Document	Ellise Harmer	Eloise Taylor Abraham Yohannan	Laura Walsh	