

## Electricity Pricing Event Report – Sunday 30 August 2015

**Market Outcomes:** South Australian spot price reached \$2,288.47/MWh and \$1,846.35/MWh for TIs ending 1900 hrs and 1930 hrs respectively on 30 August 2015.

South Australian FCAS prices and energy and FCAS prices for the other NEM regions were not affected by this event.

Actual Lack of Reserve Level 1 (LOR1) condition had been declared for the South Australian region from 1900 hrs to 1930 hrs (Market Notices 49699 and 49704).

**Detailed Analysis:** 5-Minute dispatch prices in South Australia reached \$13,331.28 and \$10,759.20/MWh for dispatch intervals (DIs) ending 1840 hrs and 1920 hrs respectively. The high price can be attributed to generator tripping, decrease of non-scheduled generation and rebidding during the evening peak period.

The South Australian demand averaged 1,899 MW between TIs ending 1900 hrs and 1930 hrs. For the same intervals, the wind generation in South Australia was very low with an average of 58 MW.

Torrens Island B unit 4 tripped from approximately 200 MW at 1816 hrs. Northern PS unit 2 which generally offers capacity up to 273 MW was unavailable since DI ending 0430 hrs on 27 August 2015.

For DI ending 1840 hrs, the South Australian demand increased by 97 MW when non-scheduled generation decreased by 71 MW. Cheaper priced generation was available but limited due to ramp rates (Northern PS unit 1), or required more than one DI to synchronise (Dry Creek unit 3). The target flow on the Heywood interconnector was at 455 MW towards South Australia, which violated the limit of 435 MW set by the thermal constraint equation,  $V > S\_NIL\_HYTX\_HYTX$ . This system normal constraint equation manages post contingent flow on the Heywood 275/500 kV transformers by reducing the Heywood interconnector flow when the actual flow exceeds the pre-defined transformer rating. The target flow on the Murraylink interconnector was limited to 214 MW towards South Australia by a voltage stability constraint equation,  $V^{\wedge}SML\_NSWRB\_2$ . This constraint equation avoids voltage collapse in Victoria for loss of the Darlington Point to Buronga (X5) 220 kV line.

The 5-minute price reduced to \$75.34/MWh in the subsequent interval, DI ending 1845 hrs, when the demand reduced by approximately 120 MW while 110 MW of non-scheduled generation came online. Also, a total of 650 MW of generation capacity was rebid from higher priced bands to the market floor price (MFP) of -\$1,000/MWh.

For DI ending 1920 hrs, Synergen and Alinta rebid a total of 123 MW of generation capacity from the bands priced at lower than \$95/MWh to bands priced at above \$10,759/MWh. Cheaper priced generation from Dry Creek unit 2 was available but was limited due to ramp rates. The target flow on the Heywood interconnector was limited to 446 MW towards South Australia by constraint equation,  $V > S\_NIL\_HYTX\_HYTX$ . The target flow on the Murraylink interconnector was limited to 220 MW towards South Australia by the upper transfer limit constraint equation,  $VSML\_220$ .

The 5-minute price reduced to \$46.05/MWh in the subsequent interval, DI ending 1925 hrs, when the demand reduced by approximately 116 MW while 99 MW of non-scheduled generation came

online. Also, a total of 270 MW of generation capacity was rebid from higher priced bands to the MFP.

The high 30-minute spot price for South Australia for TI ending 1900 hrs and 1930 hrs was not forecast in the latest pre-dispatch schedule as it was a result of a fluctuation of the 5-minute demand and rebidding of generation capacity within the affected trading interval.