Electricity Pricing Event Report – Tuesday 19 July 2016*

Market Outcomes: Spot price in South Australia reached $1,659.54/MWh for trading interval (TI) ending 0700 hrs.

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

Detailed Analysis: The 5-Minute dispatch price in South Australia reached $10,569.69/MWh for dispatch interval (DI) ending 0640 hrs. This high price can be mainly attributed to a planned network outages limiting flow across the Heywood and Murraylink interconnectors. Other contributing factors include planned generator outages, low wind generation and a steep supply curve in South Australia.

- Planned outage of the Tailem Bend – South East No.2 275kV line was scheduled from 1000 hrs on 16 July 2016 until 2049 hrs on 22 July 2016. This planned outage reduced the interconnector capacity on the Heywood Interconnector. Outage constraint set S-TBSE_1 was invoked during this period.
- For the high priced DI, the target flow towards South Australia on the Heywood interconnector was limited to 8 MW by the transient stability constraint equation V::S_SETB_TBSE_1 contained within the constraint set S-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 high priced DI, the target flow towards South Australia on the Murraylink interconnector was limited to 102 MW by the hard ramping constraint equation #R014291_014_RAMP_F. This ramping constraint equation was invoked in preparation for the planned outage of the Red Cliffs – Wemen 220 kV line.
- Several South Australian generating units were unavailable for the duration of the day. These include Torrens Island A unit 1 (120 MW) and Torrens Island B unit 4 (210 MW). Pelican Point CCGT (510 MW) had 240 MW available.
- For DI ending 0640 hrs, 40 MW of South Australian generation capacity was offered between $300/MWh and $10,569/MWh, resulting in a steep supply curve.
- For TI ending 0700 hrs, South Australia demand increased 97 MW and wind generation decreased by 31 MW to 244 MW.
- Lower priced generation was available but required more than one DI to synchronise (Hallet GT and Quarantine PS unit 5).

The 5-minute price in South Australia reduced to $76.63/MWh for DI ending 0645 hrs, when:

- 346 MW of generation capacity was rebid from bands priced at $94.99/MWh or above to MFP.

The 5-minute price in South Australia reduced to -$998.50/MWh for DI ending 0700 hrs, when:

- For DIs ending 0650 hrs and 0700 hrs, 470 MW and 20 MW, respectively, of generation capacity was rebid from $578.81/MWh and above to the MFP.
- For DI ending 0700 hrs, only 67 MW of South Australia generation capacity was offered between -$987/MWh and $10,569/MWh, resulting in a steep supply curve.

The 5-minute price in South Australia increased to $33.13/MWh for DI ending 0705 hrs, when:

- 777 MW of generation capacity was shifted from the MFP to bands priced at $94.99/MWh or above.

The high prices for DI ending 0640 hrs was not forecast in the latest pre-dispatch schedule, as it was a result of implementation of ramping constraints in the dispatch run, which limited flow on the Murraylink interconnector.

** A summary was prepared as the maximum daily spot price was between $500/MWh and $2,000/MWh.*