Electricity Pricing Event Report – Tuesday 28 June 2016

Market Outcomes: South Australian spot price reached $1,862.16/MWh, $2,054.51/MWh and $3,102.23/MWh for trading intervals (TIs) ending 1000 hrs, 1830 hrs and 1900 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 in South Australia reached $10,760.69/MWh for dispatch interval (DI) ending 0935 hrs and ranged between $7,281.39/MWh and $10,761.96/MWh for 3 DIs between DIs ending 1825 hrs and 1840 hrs. These high prices can be attributed to a steep supply curve in South Australia, rebidding of generation capacity and limited interconnector support.

South Australian demand peaked at 2108 MW for TI ending 1930 hrs. Between TIs ending 1800 hrs and 1900 hrs, demand increased by 224 MW. For all high priced DIs, semi-scheduled wind generation in South Australia was low, between 125 MW and 215 MW.

For all high priced DIs, South Australian generation capacity was offered at either below $362/MWh or above $10,586/MWh.

For all high priced DIs, the thermal constraint equation, V>>S_KNPW_SETB_SGKH was binding. This constraint equation prevents overload of the Snuggery – Keith 132kV line for loss of one South East – Tailem Bend 275kV line, during outage of the Kincraig – Penola West 132kV line. This constraint equation constrained off cheaper priced generation in South Australia from Ladbroke Grove PS units 1 and 2 and Lake Bonney WF units 2 and 3 and limited the target flow towards South Australia on the Heywood interconnector up to 346 MW.

For the high priced DIs, the target flow on the Murraylink interconnector was limited to 24 MW towards Victoria by the thermal constraint equation, V>SMLBAHO4. This constraint equation prevents the overload of the Buronga – Redcliffs (0X1) 220 kV line for loss of either the Bendigo – Kerang 220 kV line or the Ballarat – Horsham 220 kV line, during the outage of either the Bendigo – Kerang 220 kV line or the Ballarat – Horsham 220 kV line.

For DI ending 0935 hrs, AGL and Energy Australia shifted 146 MW of generation capacity from bands priced at $484.99 or below to bands priced at $10,759.99/MWh or above.

For DI ending 1815 hrs, Lumo rebid 111 MW of generation capacity from the Market Floor Price (MFP) of -$1,000/MWh to the Market Price Cap (MPC) of $13,800/MWh.

For DI ending 1835 hrs, AGL and Synergen shifted 47 MW of generation capacity from the MFP to bands priced at $10,759.99/MWh or above.

For DI ending 1840 hrs, Synergen rebid 53 MW of generation capacity from the MPC to the MFP. For DI ending 1840 hrs, prices dropped to $7,281.39/MWh.

Additional cheaper priced generation was available but required more than one DI to synchronise (Quarantine PS unit 5, Dry Creek GT unit 1), or was limited by fast start profiles (Lonsdale PS, Dry Creek GT unit 2, Quarantine PS units 1 and 2, Snuggery PS) for at least one of the high priced DIs.

For the DIs subsequent to the high priced DIs, the South Australian dispatch price reduced to $305.49/MWh or below, when up to 305 MW of generation capacity was rebid from bands priced at $12,195.07/MWh or above to the Market Floor Price (MFP) of -$1000/MWh.

The high spot prices were not forecast in the latest pre-dispatch schedules, as rebidding of generation capacity occurred within the affected TIs.