Electricity Pricing Event Report – Monday 11 July 2016 (TI ending 0000 on 12 July 2016)

Market Outcomes: Spot price was $2,324.03/MWh in South Australia and -$196.93/MWh in Victoria for trading interval (TI) ending 0000 hrs.

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 and the Market Floor Price (MFP) of -$1000/MWh in Victoria for dispatch interval (DI) ending 2335 hrs. The high South Australian price and negative Victorian price can be mainly attributed to a spike in South Australian demand and resulting changes to interconnector flows during the outage of the Tailem Bend West 275 kV bus (including Tailem Bend – South East No. 1 275 kV line)

The Tailem Bend West 275 kV Bus (including Tailem Bend to South East No 1 275 kV line) was on a planned outage from 0811 hrs on 04 July and returned to service at 2039 hrs on 14 July. This planned outage reduced the interconnector capacity on the Heywood Interconnector. Constraint set S-TB_275KV_W_BUS was invoked for the duration of the outage.

Between DIs ending 2330 hrs and 2335 hrs, South Australian demand increased by 221 MW, due to hot water load management. As a result of the increased demand, flow across the Heywood, Murraylink and VIC-NSW interconnectors changed.

Between DIs ending 2330 hrs and 2335 hrs, the target flow on the Heywood interconnector was reversed from 45 MW towards Victoria to 13 MW towards South Australia by the transient stability constraint equation, V::S_TB_275KV_W_B_1. This constraint equation prevents the transient instability across the VIC-SA cutset for the loss of the South East - Tailem Bend No. 2 275 kV line, during the outage of the Tailem Bend West 275 kV Bus (including Tailem Bend – South East No. 1 275 kV line).

Between DIs ending 2330 hrs and 2335 hrs, the thermal constraint equation V>>SML_NIL_CONT_7B reduced the flow towards Victoria on the Murraylink interconnector from 140 MW to 9 MW and reversed the flow on the VIC-NSW interconnector from 649 MW towards New South Wales to 326 MW towards Victoria. This constraint equation prevents the overload of the Buangor – Arrarat 66kV line for the loss of the Ballarat – Horsham 220kV line, under system normal conditions.

For DI ending 2335 hrs, the Victorian price reduced to -$1,000/MWh, due to the forced import from New South Wales and limited export to South Australia, causing the marginal dispatch of cheaper priced generation capacity within Victoria.

For DI ending 2335 hrs, only 84 MW of South Australian generation capacity was offered between $150/MWh and $13,330/MWh, resulting in a steep supply curve. The price in South Australia increased to the MPC for DI ending 2335 hrs.

Lower priced generation was available in South Australia but was limited due to ramp rates (Torrens Island PS B Units 3), required more than one DI to synchronise (Hallett PS, Dry Creek CGT unit 3) or

was constrained off by the transient stability constraint V::S_TB_275KV_W_B_1 (Ladbroke PS, Lake Bonney WF and Snuggery PS unit 1).

For DI ending 2340 hrs, the 5-minute price reduced to $299.54/MWh in South Australia and increased to $0/MWh in Victoria, when 137 MW of generation capacity was rebid in South Australia from bands priced at or above $13,300.3/MWh to the Market Floor Price (MFP) of -$1,000/MWh.

The high 30-minute spot price for South Australia and low 30-minute price for Victoria were not forecast in the latest pre-dispatch schedule, as they occued as a result of a spike in 5-minute demand in South Australia during the affected TI.