Electricity Pricing Event Report – Wednesday 18 May 2016

Market Outcomes: Spot price was $1,175.46/MWh in South Australia and -$142.28/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.

Counter price flows caused negative settlement residues of approximately $213,000 to accumulate on the South Australia to Victoria directional interconnector for TIs ending 0000 hrs and 0030 hrs. AEMO managed negative residues from 2340 hrs to 0100 hrs (Market Notices 53406 and 53407).

Detailed Analysis: 5-Minute dispatch price was $10,781/MWh in South Australia and -$898.85/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 Cherry Gardens – Tailem Bend 275kV line.

Between DIs ending 2330 hrs and 2335 hrs, South Australian demand increased by 168MW, due to hot water load management. Wind generation in South Australia was moderate, at 436 MW, for TI ending 0000 hrs.

During the same period, target flow on the Heywood interconnector reversed from 117 MW towards Victoria to 7 MW towards South Australia. Over this period, the Heywood interconnector was limited by the thermal constraint equation, S>>X_CGTB+TB35+36_13. This constraint equation prevents the overload of the Snuggery – Keith 132kV line for the loss of the South East – Tailem Bend no.2 275kV line, during the outage of the Cherry Gardens – Tailem Bend 275kV line and Tailem Bend 275kV circuit breakers no.6536 and no.6535.

The target flow on the Murraylink interconnector reversed from 60 MW towards Victoria to 4 MW towards South Australia and the target flow on the VIC-NSW interconnector reduced from 633 MW to 132 MW towards New South Wales. For these DIs, both interconnectors were limited by the thermal constraint equation, V>>SML_NIL_CONT_7B. This constraint equation prevents the overload of the Buangor – Arrarat 66kV line for the loss of the Ballarat – Waubra – Horsham 220kV line, under system normal conditions. These interconnector flow changes resulted in excess availability of cheaper priced generation capacity within Victoria, which caused the price to collapse to -$898.85/MWh for DI ending 2335 hrs.

Cheaper priced generation was available in South Australia, but was constrained off by the thermal constraint equation S>>X_CGTB+TB35+36_13 (Ladbroke PS, Lake Bonney 2 WF and Lake Bonney 3 WF).

Due to the counter-price flow on the South Australia to Victoria directional interconnector, the Negative Settlement Residue Management (NRM) constraint equation NRM_SA1_VIC1 was invoked between DIs ending 2345 hrs and 0045 hrs. A spike in demand followed by rebidding to the MPF in South Australia, during this period, caused the flows on Heywood interconnector to change direction

rapidly, resulting in intervals when negative residues accumulated. The NRM constraint equation bound for 11 DIs during this period.

The 5-minute price reduced to $30.70/MWh in South Australia and increased to $31.99/MWh in Victoria, for DI ending 2340 hrs, when 168 MW of generation capacity was rebid in South Australia from bands priced at or above $10,781.81/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, due to different formulation of the thermal constraint equation, S>>X_CGTB+TB35+36_13, in pre-dispatch and dispatch.

Version Control

VER	DATE	REVISION DESCRIPTION	AUTHOR	CHECKED	RESPONSIBLE MANAGER	APPROVED
v1	19/05/16	Original Document	Eloise Taylor	Abraham Yohannan Jennie Liu	Yvonne Tan	