Electricity Pricing Event Report - Thursday 2 February 2017

Market Outcomes: Spot prices in Queensland (QLD) ranged between $2,183.77/MWh and $13,399.95/MWh for 6 trading intervals (TIs) between TI ending 1530 hrs and 1900 hrs on 2 February 2017.

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

Counter price flows caused negative settlement residues of approximately $103,000 to accumulate on the Queensland to New South Wales directional interconnector between TIs ending 1630 hrs and 1900 hrs. AEMO managed negative settlement residues from 1650 hrs to 1715 hrs, and from 1915 hrs to 1950 hrs (Market Notices No. 57202, 57203, 57204 and 57205).

Detailed Analysis: The 5-minute energy prices in Queensland (QLD) reached either $12,499.02/MWh, $13,399.91/MWh or $13,995.95/MWh for 13 dispatch intervals (DIs) during the high priced TIs. These high prices can mainly be attributed to high demand while interconnector support was constrained and limited lower priced generation was available.

Demand in QLD was high during the high priced TIs, reaching a peak of 9,031 MW for TI ending 1700 hrs. The high demand coincided with high temperatures in QLD, with a daily peak of 33.4 degrees (Archerfield Airport).

Flow on the Queensland - New South Wales Interconnector (QNI) ranged between 194 MW and 246 MW towards QLD during these high priced DIs, limited by the system normal constraint equations N^^Q_NIL_B1 and N>>N-NIL__3_OPENED. The N^^Q_NIL_B1 constraint equation avoids voltage collapse in New South Wales for trip of Kogan Creek generator. The N>>N-NIL__3_OPENED thermal constraint equation avoids overload of the Liddell - Muswellbrook No.83 330 kV line for the trip of the Liddell - Tamworth No.84 330 kV line.

Flow on the Terranora interconnector ranged between 85 MW and 112 MW towards New South Wales (NSW) during these high priced DIs, limited by the constraint equations N>>N-NIL__3_OPENED and N>N-CHKK_TE_1. The N>N-CHKK_TE_1 thermal constraint equation avoids overload of the Armidale - Koolkhan No.966 132 kV line for the trip of the Coffs Harbour - Lismore No.89 330 kV line during the outage of the Coffs Harbour - Koolkhan No.96H 132 kV line. The planned outage of the Coffs Harbour – Koolkhan No.96H 132 kV line is scheduled between 0705 hrs on 10 January 2017 and 1700 hrs on 30 June 2017.

For most high priced DIs, generation capacity of up to 530 MW was shifted or rebid by a number of generators, from bands priced at $98.66/MWh and below to bands priced at $13,899.95/MWh or above. Lower priced generation was available, but was limited due to ramp rates or the system normal constraints equations Q>NIL_BI_FB (DI ending 1530 hrs) and Q>NIL_MRTA_B (DIs ending 1705 hrs and 1710 hrs). The Q>NIL_BI_FB constraint equation prevents overload of feeder bushing at Boyne Island for the contingent loss of one Calliope River to Boyne Island 132 kV line. The Q>NIL_MRTA_B constraint equation constrains the output of Oakey PS to the rating of the Middle Ridge - Tangkam 110 kV line.

The 5-minute prices reduced to $108.98/MWh or below in the DIs subsequent to the high priced intervals, when demand in the QLD region decreased and generation capacity was also shifted from bands priced at $13,450.03/MWh and above to bands priced at $44.95/MWh and below.

The high 30-minute spot prices for Queensland were forecast in the pre-dispatch schedules.