Electricity Pricing Event Report – Wednesday 16 March 2016

Market Outcomes: Queensland spot price reached $2,313.04/MWh for trading interval (TI) ending 0700 hrs.

Counter price flows caused negative settlement residues of approximately $275,000 to accumulate on the Queensland to New South Wales directional interconnector between 0630 hrs and 1030 hrs. AEMO managed these from 0655 hrs to 1130 hrs (Market Notices 52381 and 52382).

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 Queensland reached $12,947.50/MWh for Dispatch Interval (DI) ending 0655 hrs. This high price can be attributed to the rebidding of generation capacity during a planned outage.

Planned outage of the Armidale – Tamworth no. 85 330kV line was scheduled between 0640 hrs and 1353 hrs on 16 March 2016. Outage constraint sets F-N_ARTW_85 and N_ARTW_85 were invoked between DIs ending 0635 hrs and 1355 hrs. Various ramping constraints were invoked between DIs ending 0600 hrs and 0700 hrs to prepare for this outage. During the high priced DI, these ramping constraints were binding, which forced the target flow across the QNI and Terranora interconnectors towards New South Wales.

For DI ending 0655 hrs, CS Energy rebid 163 MW of generation capacity from bands priced at or below $27.40/MWh to bands priced above $13,799/MWh.

Cheaper priced generation was available but were limited by ramp rates (Darling Downs PS), or required more than one DI to synchronise (Braemar PS 1 unit 2).

Between DIs ending 0705 hrs and 1355 hrs, target flow on the QNI interconnector was forced to flow towards New South Wales by the outage constraint equations N^^Q_ARTW_B1 or N>N-ARTW85_1B. The N^^Q_ARTW_B1 constraint equation prevents voltage collapse in New South Wales for the loss of Kogan Creek PS during the outage of an Armidale – Tamworth 330 kV line. The N>N-ARTW85_1B constraint equation avoids the overload of the Armidale – Tamworth no. 86 330kV line for the loss of the largest generation in QLD, during the outage of Armidale – Tamworth no. 85 330kV line.

For 47 DIs between DIs ending 0705 hrs and 1355 hrs, target flow on the Terranora interconnector was forced to flow towards New South Wales by the constraint equations N^^Q_ARTW_B1 or N>N-ARTW85_1B.

Due to the counter-price flow on the QLD to NSW directional interconnector, the Negative Settlement Residue management (NRM) constraint equation NRM_QLD1_NSW1 was invoked between DIs ending 0700hrs and 1130 hrs. The NRM constraint equation bound or violated for 34 DIs during this period.

The 5-minute price reduced to $24.94/MWh in the DI subsequent to the high priced interval, when demand reduced by 154 MW and 58 MW of generation capacity was rebid from bands priced at or above $12,947.49/MWh to the Market Floor Price (MFP) of -$1000/MWh.

The high 30-minute spot price for Queensland was not forecast in the pre-dispatch schedules, as it was a result of rebidding of generation capacity during a period of planned outages affecting interconnector flows.