

Electricity Pricing Event Report – Thursday 24 March 2016

Market Outcomes: Queensland spot price and Fast Raise Frequency Control Ancillary service (FCAS) prices reached \$2,355.62/MWh and \$2,201.28/MWh for trading interval (TI) ending 0700 hrs.

Counter price flows caused negative settlement residues of approximately \$143,000 to accumulate on the Queensland to New South Wales directional interconnector for TI ending 0700 hrs. AEMO managed negative settlement residues from 0700 hrs to 0735 hrs (Market Notices No. 52520 and 52521).

FCAS prices and energy prices in other NEM regions were not affected.

Detailed Analysis: The Queensland spot price reached \$13,799.99/MWh for Dispatch Interval (DI) ending 0700 hrs. For the same DI, the Fast Raise FCAS price reached \$13,176.25/MWh. The high spot price can be attributed to the rebidding of generation capacity and limited interconnector flows during a planned network outage. The high FCAS price can be attributed to steep supply curves of Fast Raise FCAS capacity and local FCAS requirements in Queensland during planned outage period.

Planned outage of the Armidale – Tamworth no. 86 330kV line was scheduled between 0630 hrs and 1224 hrs on 24 March 2016. The outage increased the risk of synchronous separation between Queensland and New South Wales, which created a need for Contingency FCAS in QLD and limited interconnector flows. Outage constraint sets F-N_ARTW_86 and N_ARTW_86 were invoked between DIs ending 0630 hrs and 1230 hrs.

The target flow on the QNI interconnector was limited to 142 MW towards Queensland by the various Queensland raise FCAS requirement constraint equations F_Q++ARTW_R6 and F_Q++ARTW_R60. The target flow on the Terranora interconnector was forced to 9 MW towards New South Wales by the same constraint equations. The circular flow on the parallel interconnectors was to maximise the net flow towards Queensland.

Between DIs ending 0635 hrs and ending 0700 hrs, CS Energy, Stanwell and Millmerran rebid 581 MW of generation capacity from bands priced at or below \$60.90/MWh to bands priced at the Market Price Cap (MPC) of \$13,800/MWh.

For DI ending 0700 hrs, local requirements for the Queensland Fast Raise and Slow Raise FCAS both increased by 29 MW. For the same DI, Queensland Fast Raise FCAS capacity was offered at less than \$145/MWh or above \$12,999/MWh, resulting in a steep supply curve.

Due to the counter-price flow on the Queensland to New South Wales directional interconnector, the Negative Settlement Residue Management (NRM) constraint equation NRM_QLD1_NSW1 was invoked between DIs ending 0705hrs and 0735 hrs. The NRM constraint equation bound for 3 DIs during this period. The 5-minute price reduced to \$33.98/MWh in the DI subsequent to the high priced interval, when demand reduced by up to 262MW and 911 MW of generation capacity was rebid or shifted from bands priced at or above \$12,496.11/MWh to bands priced at or below \$200.15/MWh.

The Queensland Fast Raise FCAS price reduced to \$5.00/MWh for DI ending 0705 hrs when raise service requirements reduced.

The high 30-minute spot price for Queensland was not forecast in the pre-dispatch schedules, as it was a result of the rebidding of generation capacity within the affected trading interval.