

Electricity Pricing Event Report – Friday 18 March 2016

Market Outcomes: Queensland spot prices were between \$2,114.8/MWh and \$4,648.35/MWh for 3 trading intervals (TIs) between TIs ending 1700 hrs and 1830 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 prices in Queensland were between \$12,496.11/MWh and \$13,788.88/MWh for 4 Dispatch Intervals (DIs) between DIs ending 1655 hrs and 1830 hrs. These high prices can be attributed to the rebidding of generation capacity during periods of limited interconnector availability.

During the high priced DIs, CS Energy, Millmerran and Alinta shifted or rebid up to 493 MW of generation capacity from bands priced at or below \$299.91/MWh to bands priced at or above \$12,496.11/MWh. For DI ending 1700 hrs, 64 MW of generation capacity was withdrawn from Roma GT units 7 and 8 with the reason “1650A AVOID UNECONOMIC START SL”.

Cheaper priced generation was available for the high price DIs ending 1655 hrs, 1800 hrs and 1830 hrs, but required more than one DI to synchronise (Roma PS units 7 and 8) or was limited by ramp rates (Darling Downs PS, Oakey PS unit 2, Tarong PS units 2 and 4, Millmerran PS unit 2 and Tarong PS units 1, 2, 3 and 4) or constrained off by system normal constraint equation $Q > \text{NIL_MRTA_A}$ (Oakey PS unit 1 and 2) and $Q > \text{NIL_BI_FB}$ (Gladstone unit 3 and 4). The $Q > \text{NIL_MRTA_A}$ constraint equation prevents thermal overload of a Middle Ridge – Tangkam 110 kV line for loss of the parallel Middle Ridge – Tangkam 110 kV line. The $Q > \text{NIL_BI_FB}$ constraint equation prevents overloading of feeder bushings at Boyne Island for the contingent loss of one Calliope River – Boyne Island 132 kV line.

During the high priced DIs, target flow on the QNI interconnector was limited up to 274 MW towards Queensland by the system normal constraint equation $N^A Q_NIL_A$. The $N^A Q_NIL_A$ constraint equation prevents voltage collapse in New South Wales for the loss of Liddell – Muswellbrook no. 83 330kV transmission line. The target flow on the Terranora interconnector was limited up to 9 MW towards Queensland by the same constraint equation.

The 5-minute price reduced to below \$59.45/MWh in the DIs subsequent to the high priced DIs, when demand reduced by up to 326 MW and generation capacity was rebid from higher price bands to lower price bands.

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.