

Electricity Pricing Event Report – Saturday 7 January 2017

Market Outcomes: Spot price in South Australia (SA) reached \$2,357.40/MWh for trading interval (TI) ending 1630 hrs on 7 January 2017.

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

Detailed Analysis: The 5-Minute dispatch Energy price in South Australia reached \$13,164/MWh for dispatch interval (DI) ending 1610 hrs on 7 January 2017. This high price can mainly be attributed to constrained interconnector flow during times of high demand.

Demand in SA was high, reaching 2,649 MW during the high priced TI. This high demand coincided with high temperatures in SA, with a daily peak of 39.2 degrees (Adelaide Airport).

Between DI ending 1605 hrs and 1610 hrs demand increased by 30 MW while wind generation in the region reduced by 56 MW.

At DI ending 1605 hrs, the target on the Heywood interconnector was 600 MW towards South Australia. However at 1605 hrs, the actual flow was 651 MW. The interconnector exceedance was caused by actual demand being higher than forecast in SA and a number of generators in SA not reaching their targets. This resulted in the target flow on the Heywood interconnector being limited to 549 MW towards South Australia by the oscillatory stability constraint equation V:S_600_HY_TEST_DYN. This constraint equation limits the dynamic headroom for the upper transfer limit on the VIC to SA Heywood interconnector to 600 MW. Once the 600 MW flow limit is exceeded by more than 10 MW, the limit is temporarily reduced by the amount of exceedance.

Between DIs ending 1605 hrs and 1610 hrs, flow on Murraylink towards SA reduced by 3 MW and was limited to 111 MW by the upper transfer limit constraint equation V^SML_NSWRB_2. V^SML_NSWRB_2 is a system normal voltage stability constraint equation which avoids voltage collapse in Victoria for the loss of the Darlington Point - Buronga (X5) 220 kV line.

For DI ending 1605 hrs, Origin shifted 45 MW of generation capacity from bands priced at \$298.89/MWh or below to band priced at \$13,164/MWh. Lower priced capacity was available but required more than one DI to synchronise (Snuggery) or was limited by ramp rates (Hallet PS).

For DI ending 1615 hrs, the 5-minute price reduced to \$144.21/MWh when demand reduced by 40 MW and 300 MW of generation capacity in SA was rebid from bands priced at or above \$278.81/MWh to the Market Floor Price (MFP) of -\$1,000/MWh.

The high 30-minute spot price for South Australia was not forecast in the latest pre-dispatch schedules. This was due to a lower demand and increased flow across Heywood interconnector forecast in pre-dispatch as compared to dispatch.