Electricity Pricing Event Report – Thursday 31 March 2016

Market Outcomes: Spot price in Victoria was -$148.73/MWh for trading interval (TI) ending 0030 hrs.

FCAS prices in all regions and Energy prices in other NEM regions were not affected.

Further details are provided below.

Detailed Analysis: 5-Minute dispatch price in Victoria decreased to the Market Floor Price (MFP) of -$1,000/MWh for dispatch interval (DI) ending 0015 hrs. The negative price was mainly attributed to reduced interconnector flows from Victoria to manage the power system transient stability during a low demand period.

At 2337 hrs, AEMO's Dynamic Stability Analysis indicated that a fault on a Hazelwood to South Morang 500 kV line would cause system instability. To prevent this transient instability, AEMO invoked a system normal constraint set V-DSA_STAB-200 between DIs ending 0015 hrs and 0325 hrs (Market Notices no. 52628 and 52630). This constraint set was to reduce Victorian transient stability export limits by 200 MW.

For DI ending 0015 hrs, the target flow on the VIC-NSW interconnector was reduced from 525 MW to 441 MW towards New South Wales by the transient stability constraint equation V::N_NIL_V4_-200. This constraint equation prevents transient instability for the fault and loss of a Hazelwood to South Morang 500 kV line. The target flow on the Heywood interconnector was limited to 451 MW towards South Australia by the same constraint equation. The target flow on the Murraylink interconnector was limited to 220 MW towards South Australia by the upper transfer limit constraint equation, VSML_220.

The Victorian generating units that were not constrained and offered capacity at higher than -$1,000/MWh were ramp down rate bound (i.e. their outputs could not be reduced further). This limited dispatch targets of the generating units that were constrained on by the constraint equation V::N_NIL_V4_-200 from increasing further.

With excess cheaper priced generation available in Victoria during the low demand period, the price decreased to the MFP for DI ending 0015 hrs.

The 5-minute price in Victoria increased to $10.50/MWh for the subsequent DI, when Victorian demand and interconnector export flows increased marginally.

The negative spot price for Victoria was not forecast in the pre-dispatch schedules, as the constraint set invoked in real time to manage the change of power system transient stability that was not foreseen.