

Electricity Pricing Event Report – Sunday 21 February 2016

Market Outcomes: South Australia spot price was -\$151.29/MWh for trading interval (TI) ending 0030 hrs.

South Australia FCAS prices as well as energy and FCAS prices in other regions were not affected.

Further details are provided below.

Detailed Analysis: 5-Minute dispatch price in South Australia decreased to the Market Floor Price (MFP) of -\$1,000/MWh for dispatch interval (DI) ending 0010 hrs. The negative price can be attributed to excess generation in South Australia during a short-notice outage of APD potline 1.

APD potline 1 commenced a short-notice outage at 0000 hrs. The potline consumption reduced from 230 MW at 2359 hrs to 0 MW at 0000 hrs. The outage of the potline increased the flow across the South Morang F2 500/330 kV transformer from 963 MVA at 0000 hrs to 1096 MVA at 0005 hours, exceeding the 1000 MVA continuous rating of the transformer.

The increased loading on the transformer caused the thermal constraint equation $V_{2A_R} > V_{NIL_2A_R}$ to bind. This constraint equation prevents the overload of South Morang F2 500/330 kV transformer under system normal conditions. The binding constraint equation resulted in the target flow towards South Australia on the Heywood interconnector to increase from 134 MW at DI ending 0005 hrs to 421 MW at DI ending 0010 hrs.

With excess cheaper priced generation available from Victoria during the low demand period, the South Australia price decreased to the MFP for DI ending 0010 hrs.

The target flow on the Murraylink interconnector was limited up to 125 MW towards Victoria by the thermal constraint $S_{RBNW} > V_{NIL_NIL_RBNW}$. This constraint equation prevents the overload of Robertstown - North West Bend No.1 or 2 132kV lines under system normal conditions.

The 5-minute price in South Australia increased to \$13.50/MWh for the subsequent DI when the South Morang F2 500/330 kV transformer loading decreased to 830 MVA and the target flow towards South Australia on the Heywood interconnector reduced to 120 MW.

The negative spot price for South Australia was not forecast in the pre-dispatch schedules, as it was a result of a short-notice potline outage.