

Electricity Pricing Event Report – Sunday 1 May 2016

Market Outcomes: Tasmania had a negative spot price of -\$404.13/MWh for trading interval (TI) ending 0800 hrs.

FCAS prices in Tasmania were elevated for TI ending 0800 hrs, but did not reach the threshold value of \$3,000/MWh for reporting purposes. FCAS and Energy prices for the other NEM regions were not affected by this event.

Detailed Analysis: The 5-Minute dispatch price reduced to below -\$999.00/MWh for dispatch intervals (DIs) ending 0735 hrs, 0745 hrs and 0750 hrs. These negative prices can be attributed to high wind generation, a steep supply curve and the reclassification of transmission lines in Tasmania, while Basslink was out of service.

For the high priced DIs, wind generation in Tasmania was between 149 MW and 162 MW, accounting for at least 20% of Tasmania generation during those intervals. Tasmania generation capacity was offered at less than \$0/MWh or above \$100/MWh, resulting in a steep supply curve.

In response to lightning storms in the area, the loss of the Liapootah – Waddamana Tee Palmerston No. 1 and No. 2 220 kV Lines was declared a credible contingency from 0615 hrs until 0755 hrs (Market Notices no. 52946 and 52979). The reclassification constraint set T-LIPM_N-2 was invoked during this period to manage the possible simultaneous tripping of the lines.

Between DIs ending 0735 and 0755, the binding constraint equation $T > T_NIL_LIPM_N-2_2B$ from the reclassification constraint set T-LIPM_N-2 constrained on up to 212 MW of hydro generation. This constraint equation prevents overload of the Palmerston – Waddamana 110 kV line for the contingent loss of both the Liapootah – Waddamana Tee Palmerston No.1 and No.2 220 kV lines.

The 5-minute price in Tasmania increased to at or above \$100.32/MWh for the DIs subsequent to the negative priced DIs, when demand increased and wind generation decreased. From DI ending 0755 hrs, the constraint equation T_MRWF_ZERO was invoked, which constrain generation at Musselroe wind farm to 0MW, reducing wind generation. This constraint equation is a discretionary 0 MW upper limit on Musselroe Wind Farm.

The negative spot price was not forecast in the latest pre-dispatch schedule, as it was a result of reclassification of transmission lines and changes in wind generation within the affected TI.

Version Control

VER	DATE	REVISION DESCRIPTION	AUTHOR	CHECKED	RESPONSIBLE MANAGER	APPROVED
v1	04/05/16	Original Document	Ellise Harmer	Jennie Lu Eloise Taylor Abraham Yohannan	Nathan White	