

Electricity Pricing Event Report – Thursday 28 July 2016

Market Outcomes: Spot price in Tasmania reached \$2,402.02/MWh for trading interval (TI) ending 0930 hrs.

Energy and FCAS prices in other regions were not affected by this event. Fast Raise FCAS price in Tasmania was elevated, but remained below the reporting threshold.

Detailed Analysis: The 5-Minute dispatch price in Tasmania reached the Market Price Cap (MPC) of \$14,000/MWh for dispatch interval (DI) ending 0910 hrs. This high price can be mainly attributed to a reduction in available generation from Musselroe wind farm, during the morning peak demand period.

High wind speeds (> 23 m/s) at Musselroe Wind Farm caused high wind speed cut-out of some turbines, resulting in a reduction in generation output. Between DIs ending 0905 hrs and 0910 hrs, Musselroe Wind Farm availability decreased by approximately 94 MW, from 162 MW at DI ending 0905 hrs to 68 MW at DI ending 0910 hrs.

During the high priced DI, the target flow on Basslink was forced towards Victoria by the thermal constraint equation $T >> T_NIL_BL_EXP_6E$. This constraint equation is a network control system protection scheme (NCSPS) constraint that prevents overload on a Sheffield-George Town 220 kV line for the loss of the parallel line.

Lower priced generation was available but limited by ramp rates (Gordon PS, Poatina PS units 1 – 6), required more than one DI to synchronise (Tamar Valley Peaking PS unit 2) or was constrained off by the thermal constraint equation $T >> T_NIL_BL_EXP_6E$ (Reece 2 PS, Fisher PS, Meadowbank PS, Trevallyn PS).

The reduction in available generation from Musselroe during the morning peak demand as well as forced export to Victoria on Basslink resulted in a tight supply situation in Tasmania. Due to the tight supply, target flow towards Victoria on Basslink was limited to 105 MW. This caused the thermal constraint equation $T >> T_NIL_BL_EXP_6E$ to violate for DI ending 0910 hrs.

For DI ending 0910 hrs, the violated constraint reduced generation from a number of Tasmanian generating units by approximately 58 MW.

The decreased target flow towards Victoria on the Basslink interconnector resulted in increased FCAS Contingency Raise requirements in Tasmania. Prices for Fast Raise FCAS were elevated to \$551.46, however remained below the reporting threshold.

The 5-minute dispatch price reduced to \$76.61/MWh for DI ending 0915 hrs, when demand reduced by approximately 96 MW, 10 MW of generation capacity from Gordon PS was rebid from \$282.68/MWh to -\$999.64/MWh and the constraint equation $T >> T_NIL_BL_EXP_6E$ was no longer violating.

The high 30-minute spot price was not forecasted in any of the pre-dispatch schedules, as it was due to the reduction in generation availability within the trading interval.