Electricity Pricing Event Report – Wednesday 27 July 2016*

Market Outcomes: Spot price in Tasmania reached $1,736.90/MWh for trading interval (TI) ending 1830 hrs.

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

Detailed Analysis: The 5-Minute dispatch price in Tasmania reached $9,215.09/MWh for dispatch interval (DI) ending 1830 hrs. This high price can be mainly attributed to a reduction in available generation from Musselroe wind farm during the evening 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.
- Musselroe Wind Farm availability decreased by approximately 92 MW, from 115 MW at DI ending 1810 hrs to 23 MW at DI ending 1830 hrs.
- Demand reached a peak of 1,471 MW at DI ending 1830 hrs.
- Lower priced generation was available but limited by ramp rates (Gordon PS), or required more than one DI to synchronise (Tamar Valley Peaking Plant), or was constrained off by the thermal constraint equation T>>T_NIL_BL_EXP_6E (Fisher PS, John Butters PS).
- Between DIs ending 1820 hrs and 1830 hrs, 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.
- The reduction in generation availability from Musselroe during the evening 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 89 MW. This caused the thermal constraint equation T>>T_NIL_BL_EXP_6E to violate for DI ending 1830 hrs.
- Between DIs ending 1825 hrs and 1830 hrs, the violated constraint reduced the generation from a number of Tasmanian generating units by approximately 67 MW.

The 5-minute dispatch price reduced to $254.39/MWh for DI ending 1835 hrs, when:

- Demand reduced by approximately 15 MW.
- Hydro Tas (Poatina units 3-6) offered up to 57 MW of additional generation capacity into the Raise Regulation, Slow Raise and Delayed Raise FCAS markets.
- The constraint equation T>>T_NIL_BL_EXP_6E was no longer violating.

**A summary was prepared as the maximum daily spot price was between $500/MWh and $2,000/MWh.*