Electricity Pricing Event Report – Saturday 01 August 2015

Market Outcomes: South Australian spot price reached $4,542.03/MWh for trading interval (TI) ending 1400 hrs.

South Australian FCAS prices and energy and FCAS prices for the other NEM regions were not affected by this event.

Detailed Analysis: 5-Minute dispatch price reached $13,500/MWh in South Australia for dispatch intervals (DIs) ending 1355 hrs and 1400 hrs. The high price can be attributed to rebidding of generation capacity resulting in a steep supply curve during a period of low wind generation in South Australia.

The South Australian demand was 1,676 MW for TI ending 1400 hrs. During the high priced TI, wind generation in South Australia was 89 MW.

For DI ending 1355 hrs, AGL rebid 270 MW of generation capacity from Torrens Island B PS units 1, 3 and 4 from bands priced at or below $64.99/MWh to bands priced at $13,500/MWh. South Australian generation capacity was offered at less than $591/MWh or above $10,759/MWh resulting in a steep supply curve. Cheaper priced generation was available but limited due to ramp rates (Osbourne PS), FCAS profiles (Northern PS unit 1) or required more than one DI to synchronise (Ladbroke PS and Quarantine PS units 1 and 2).

For DI ending 1400 hrs, Origin Energy withdrew 48 MW of generation capacity from Quarantine PS. Cheaper priced generation was available but limited due to ramp rates (Osbourne PS), FCAS profiles (Northern PS unit 1) or required more than one DI to synchronise (Ladbroke PS).

For the high priced intervals, generation offers at $13,500/MWh had to be cleared from Torrens Island B PS units to meet the demand for the high priced DIs. Northern PS unit 2 which generally offers capacity up to 273 MW was unavailable.

During the affected DIs, the target flow towards South Australia on the Heywood interconnector was constrained up to 439 MW by the Victoria to South Australia Heywood upper transfer limit thermal constraint equation, V>S_460 and the transient stability constraint equation, V::S_NIL_MAXG_AUTO. The V::S_NIL_MAXG_AUTO constraint equation prevents transient instability by limiting flow on the Heywood interconnector from Victoria to South Australia for the loss of the largest generation block in South Australia.

The target flow on the Murraylink interconnector was limited to 220 MW towards South Australia by the Victoria to South Australia Murraylink upper transfer limit constraint equation VSML_220.

The 5-minute price reduced to $54.99/MWh in the subsequent DI to the high priced intervals. 290 MW of generation capacity was shifted or rebid from higher price bands to bands priced at or below $64.98/MWh which also contributed to reducing the dispatch price.

The high 30-minute spot price for South Australia was not forecast in the pre-dispatch schedules, as it was a result of rebidding or withdrawal of generation capacity within the affected trading interval.