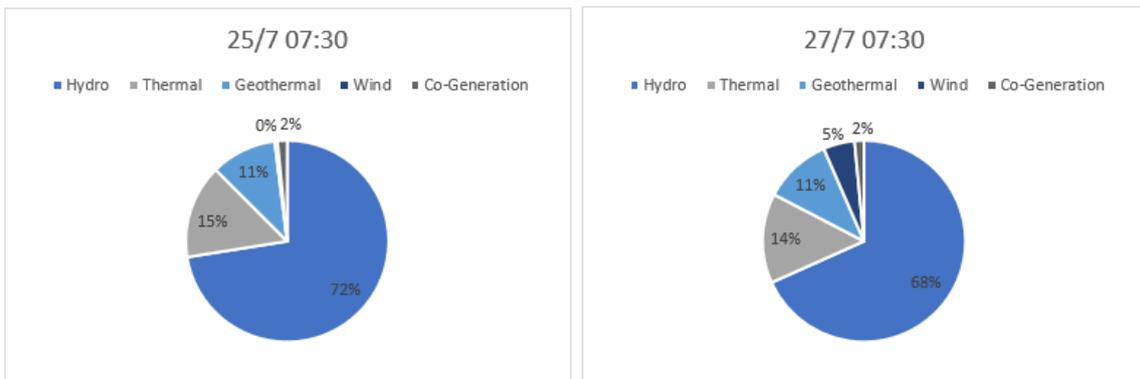


The tale of two mornings – how wind generation can impact on energy prices

On two mornings during the last week of July, Wednesday 25th and Friday 27th, demand and system conditions were very similar and yet we ended up with vastly different prices for the 07:30 trading period. The final price for 07:30 at Haywards on the 25th was \$1,120/MWh, compared to \$69/MWh on the 27th. The key difference between the two days was wind generation. On the 25th when we saw the high price, there was just 25MW of wind generation on the system, compared to a whopping 419MW on the 27th.

Generation mix comparison

The following charts show the generation mix for the 07:30 trading period on the two days. On the 27th, wind made up 4.98% of the generation mix, replacing mostly hydro and some thermal generation. On the 25th, wind made up just 0.44% of the generation mix.

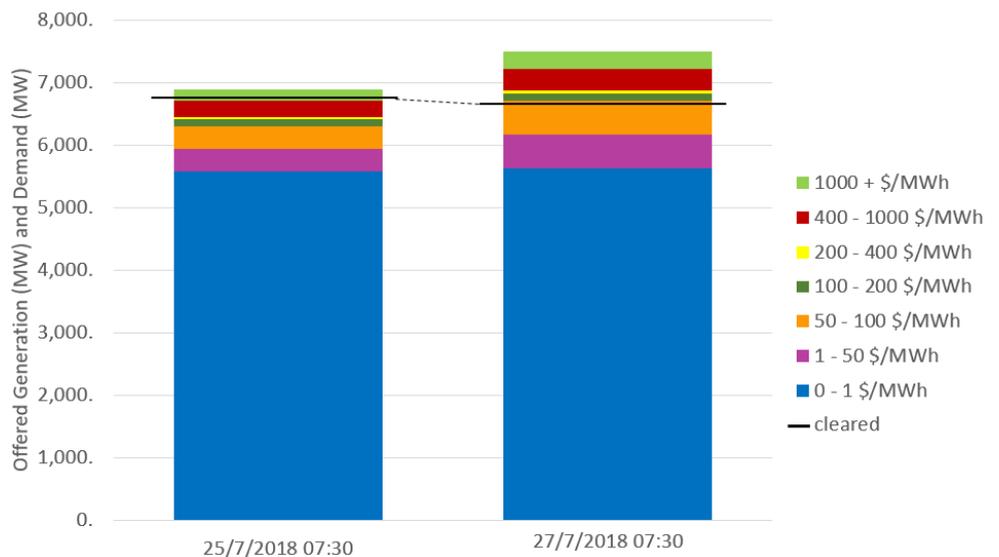


Offer stack

Wind generation is offered into the market at either \$0.00 or \$0.01 /MWh. This is shown in the offer tranches below as the \$0-1/MWh (blue) tranche.

On the 27th (when the wind was high) you would expect to see more MW offered in the \$0-1/MWh tranche than on the 25th. However, because more wind generation was expected on the 27th, market offers adjusted. On the 27th approximately 260MW of hydro generation and 110MW of thermal generation shifted from the \$0-1/MWh tranche to the \$1-50 /MWh (pink) and \$50-100/MWh (orange) tranches.

Offered Generation and Demand for 07:30 on 25/7 and 27/7



The low price on the 27th was therefore not due to more MWs in the \$0-1/MWh, it was due to more offered generation in the stack and more offers less than \$100/MWh (the 27th was less steep offer stack than the 25th). On the 25th the demand cleared in the \$1000/MWh + tranche, near to the top of the offer stack. Whereas on the 27th when there was 600 MW more in the offer stack (around 400 MW due to wind generation) the market cleared in the lower \$50-100 MWh tranche.