



Whirinaki Dispatch Query – 9 June 2010

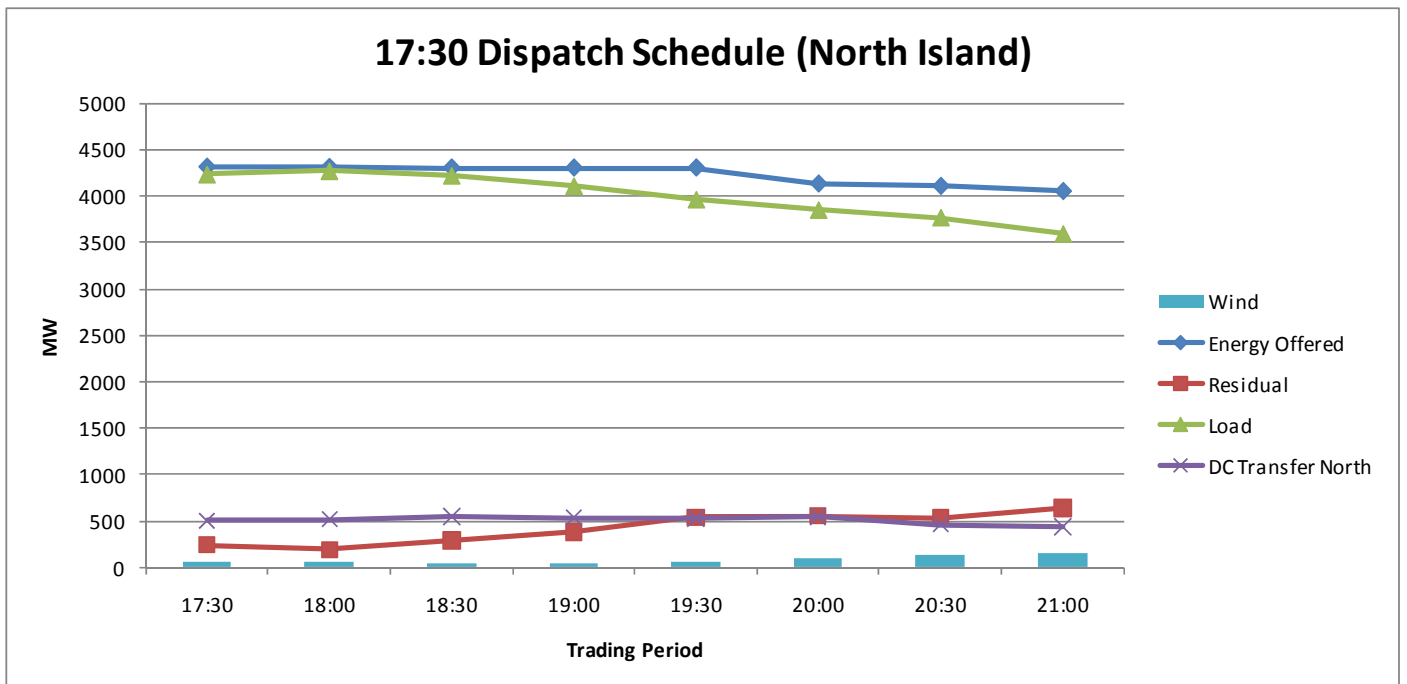
Background

On 9 June 2010, the System Operator dispatched the Whirinaki Power Station (WHI) between 17:58 - 20:09.

The System Operator has been asked to explain the circumstances that led to the dispatch of WHI on this occasion.

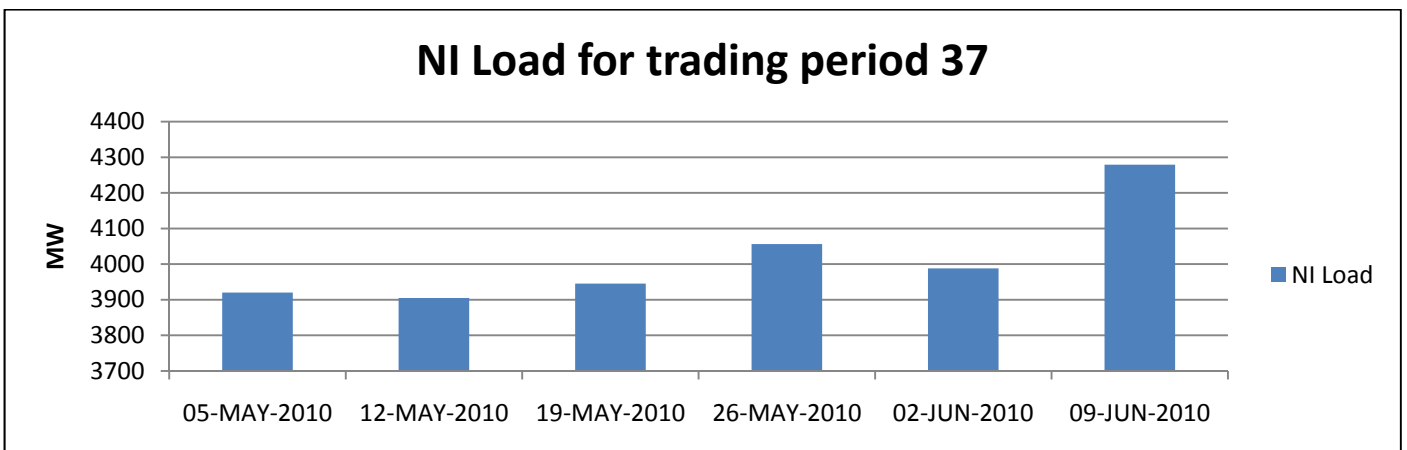
Sequence of Events

On the evening of 9 June 2010, residual North Island generation was scheduled to be notably low for the 18:00 trading period. This can be seen in the 17:30 Schedule of Dispatch Prices and Quantities (SDPQ) below:



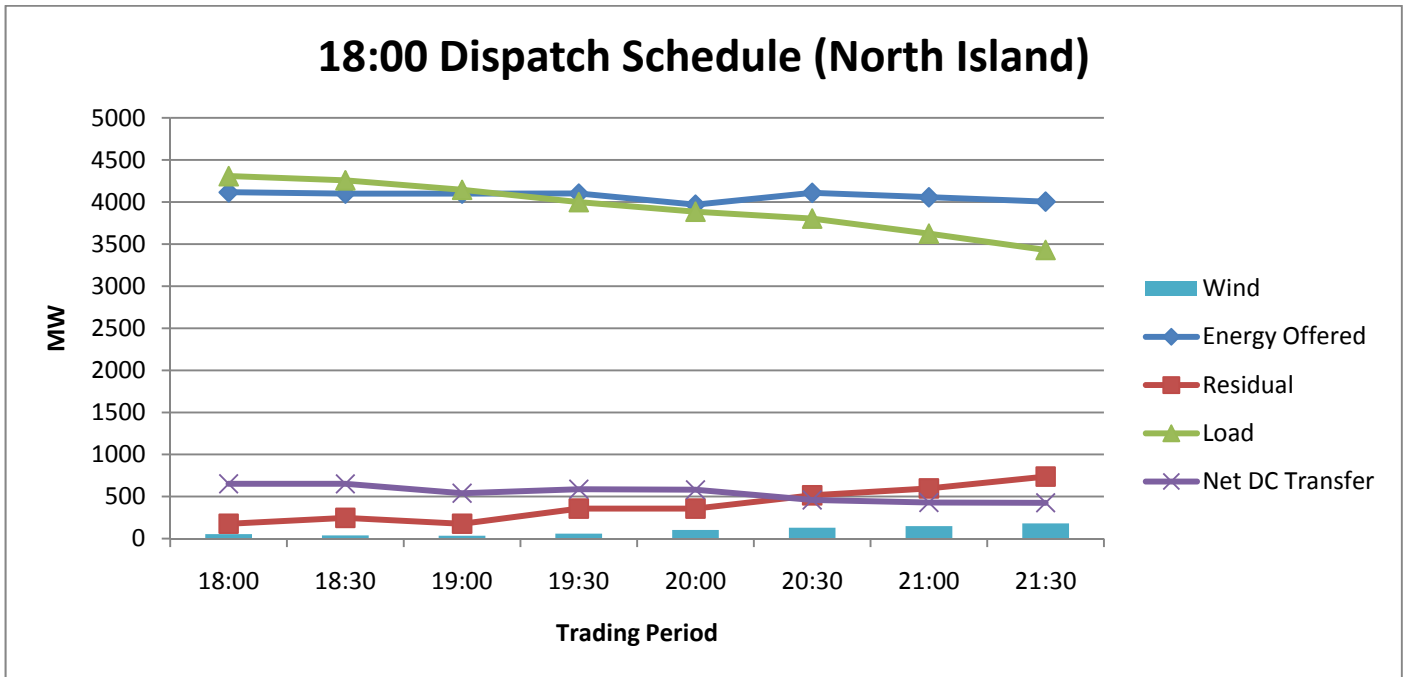
The residual amount of generation is all offered generation that has not been dispatched. This amount includes plant such as Whirinaki (156MW). It also assumes current levels of wind generation, at the time the schedule was run, and excludes any unoffered generation.

Load for the 18:00 trading period was notably higher than that of the same day in previous weeks:





At 17:40, Stratford (SPL) claimed a bona fide to reduce output from 330MW to 150MW. The 180MW reduction in SPL generation created an immediate shortfall situation.



At 17:50, the System Operator declared a grid emergency for the North Island due to insufficient energy and reserves. Participants were requested to increase energy and reserve offers and advised that demand management was to be exercised if the response was insufficient.

At 17:57, the System Operator dispatched WHI to 100MW using discretionary constraints. WHI would have been dispatched in the order of merit regardless, however, the level of generation (100MW) dispatched was a figure determined by the System Operator after taking into account the rapidly growing load and the low ramping nature of the plant.

At 18:01, the System Operator adjusted the Reserve Adjustment Factor (RAF) to 0.6 for the North Island. This reduces the reserve requirement, making more energy available and allows additional transfer across the HVDC.

The System Operator managed WHI generation level via discretionary constraints over the evening peak. It was dispatched to zero at 20:09.

Zero North Island RAF for 18:00 trading period

Market participants have queried why the North Island RAF was set to zero for the 18:00 trading period in Final Pricing while reserves were subsequently dispatched.

The reserve requirements for Final Pricing are set by the initial conditions at the start of each trading period. The System Operator was working to determine the level of reserves that could be dispatched just prior to 18:00. This process involves running numerous dispatch schedules while varying the RAF. At 18:00 the North Island RAF was set to zero as part of this process. While this wasn't the figure used for any actual dispatch solution it was the one used for Final Pricing for determining the amount of reserves required for the 18:00 trading period.



Conclusion

The System Operator faced an immediate energy shortfall situation upon SPL's bona-fide reduction in energy offer. WHI was dispatched and the North Island RAF was reduced in response to the energy shortfall. Both actions were required to prevent the need for demand management over the evening peak.