Market Operations Weekly Report - Week Ended 15 March 2026

Overview

New Zealand hydro storage decreased to around average sitting at 107% of the historic mean last week, with renewable generation dipping slightly but remaining relatively high at 93% of the mix. The average wholesale price increased last week in line with declining hydro storage.

This week's insight looks at the impacts of Ruakākā BESS on the energy and reserve markets.

Security of Supply

Energy

National hydro storage has decreased by two percentage points to 107% of the historic mean at the end of last week. South Island hydro storage decreased from 103% to 101% of the historic mean, and North Island storage decreased from 180% to 175%.

Capacity

Residuals remain relatively healthy with the lowest residual of 812 MW occurring during the morning of Monday 9 March.

The N-1-G margins in the NZGB forecast are healthy through to the end of April. Within seven days we monitor these more closely through the market schedules. The latest NZGB report is available on the NZGB website.

Electricity Market Commentary

Weekly Demand

Total demand last week increased from 732 GWh to 740 GWh for the week and is in line with average demand at this time of year over the past three years. The highest demand peak of 5,306 MW occurred at 8:00am on Thursday 12 March.

Weekly Prices

The average wholesale electricity spot price at Ōtāhuhu continued to increase last week, reaching an average price of $145/MWh (from $97/MWh the week prior). This is in line with increased demand, reduced geothermal generation and declining hydro storage. Wholesale prices peaked at $229/MWh at Ōtāhuhu at 1:00pm on Friday 13 March during a period of low wind generation.

Generation Mix

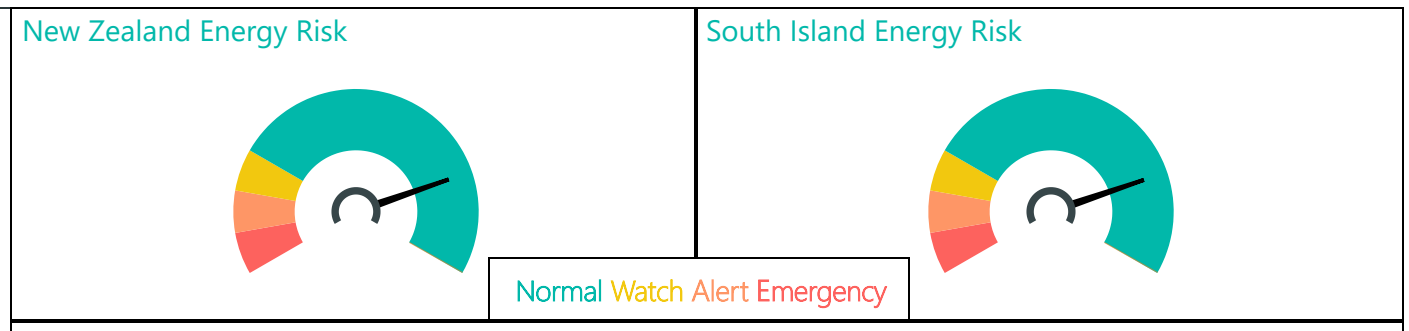
Wind generation was low last week, dropping to 7% of the mix, three percentage points lower than historic averages. Hydro generation increased to 62% of the mix, from 59% the week prior. Thermal generation increased to 5% of the mix, still below its yearly average of 8% of the mix. The geothermal share decreased to 23% of the mix from 25% the week prior, and solar contributed 1% to the generation mix.

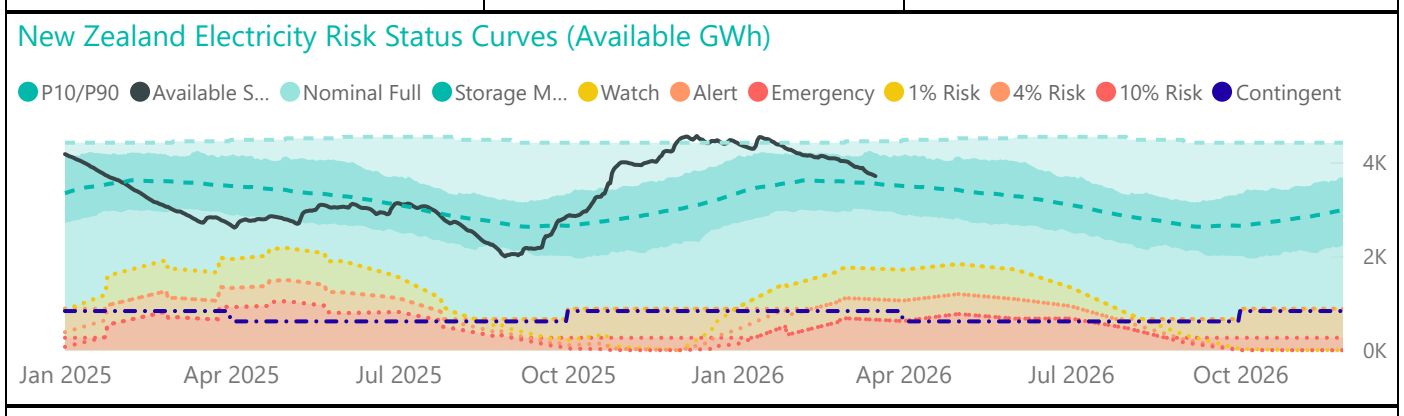
HVDC

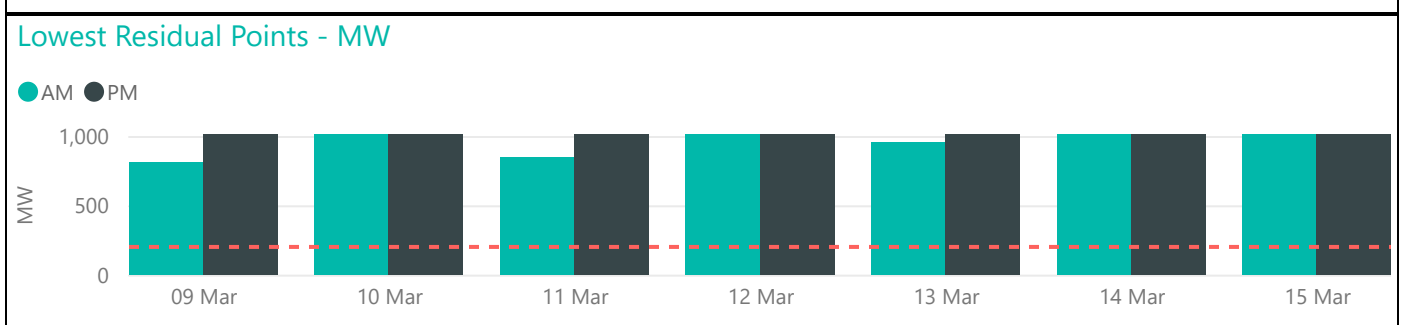
HVDC flow last week was predominantly northward with the exception of some brief periods of overnight low southward flow. These periods coincided with periods of high wind generation and lower North Island demand. In total, 104 GWh was transferred north and just 7 GWh was transferred south.

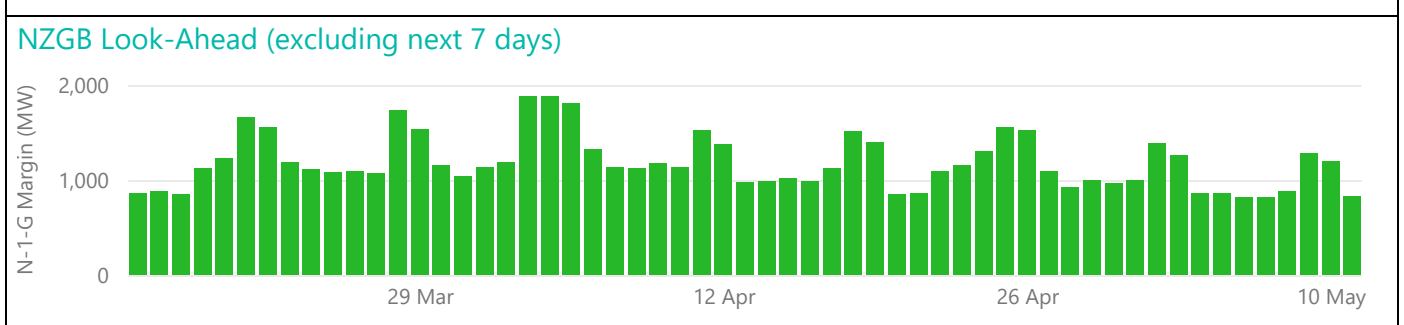
Surveys and Engagement

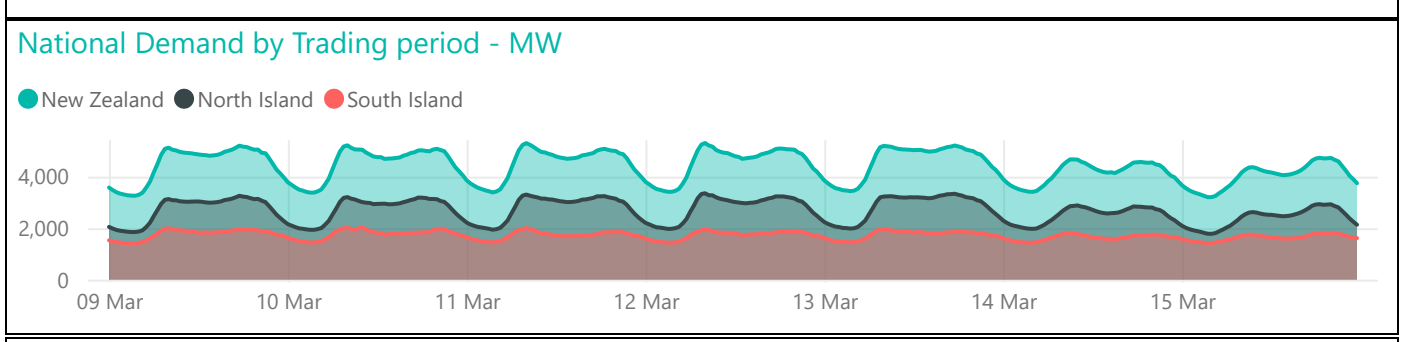
We have opened our Annual System Operator Participant Survey to provide an opportunity for participants to set out their expectations and help us understand how we are performing the System Operator service. If you have not received the survey but would like to have your say, you can complete it here.

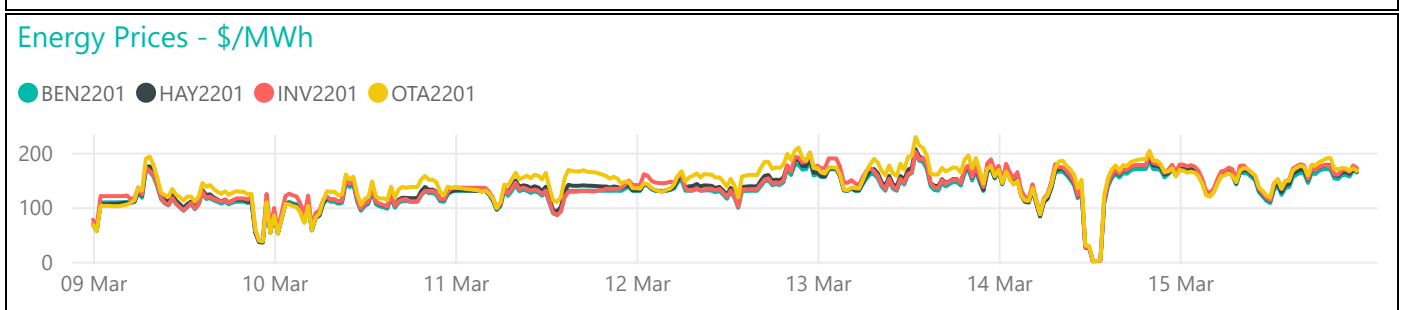


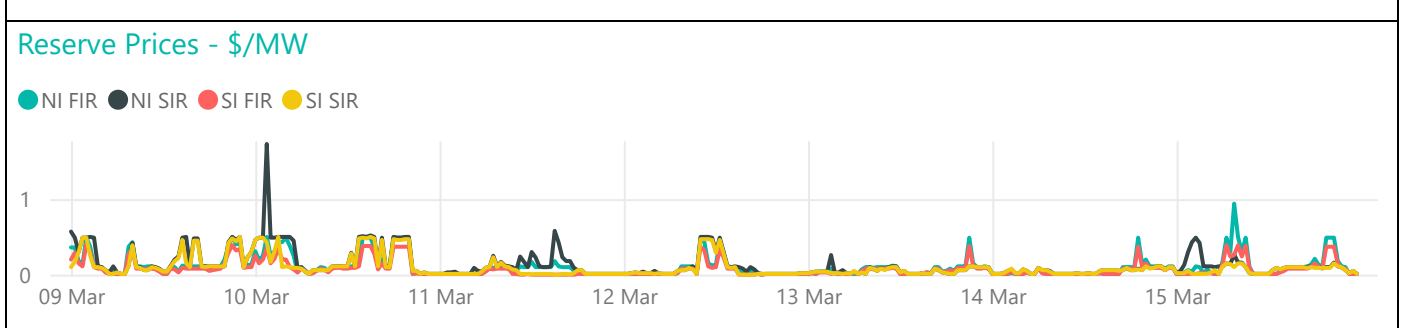


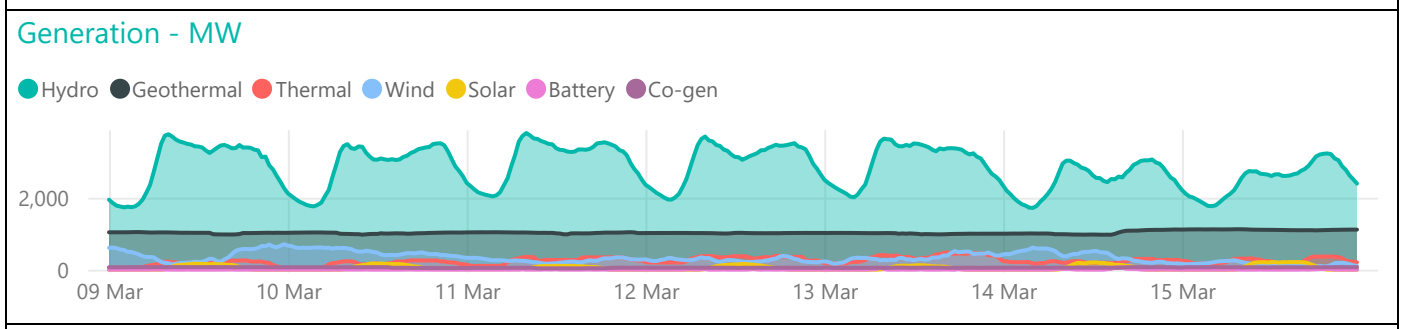


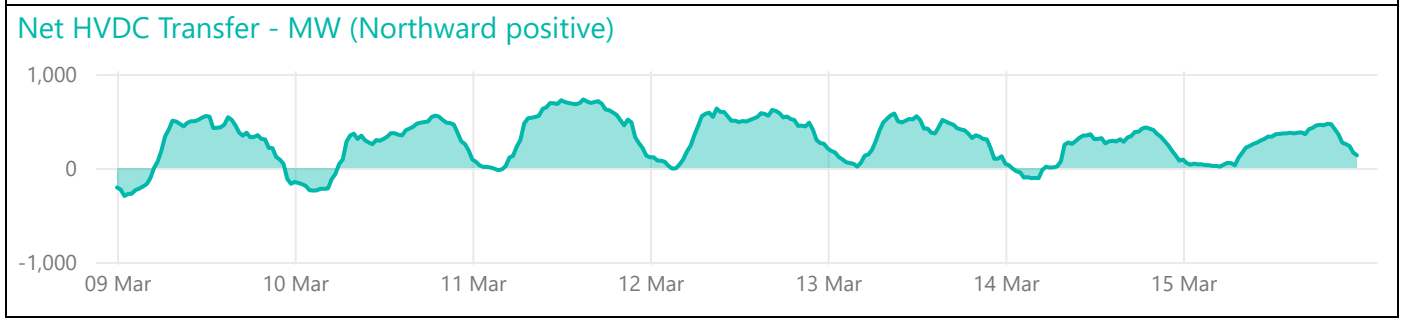






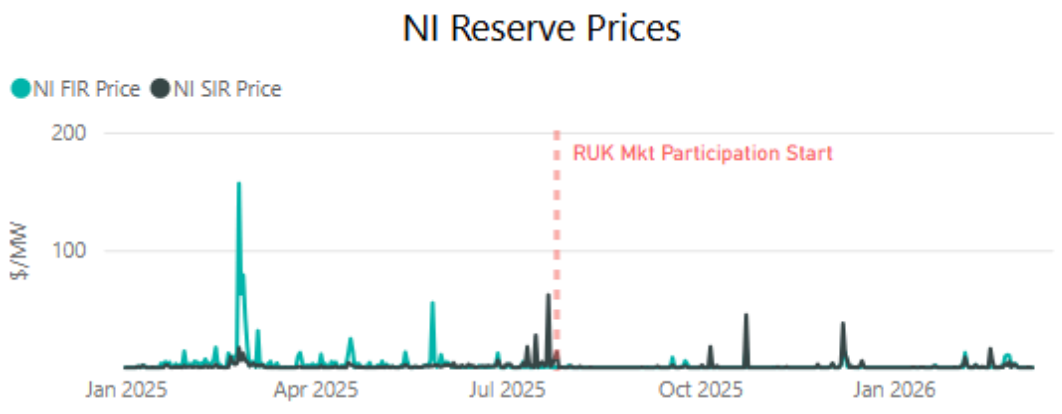


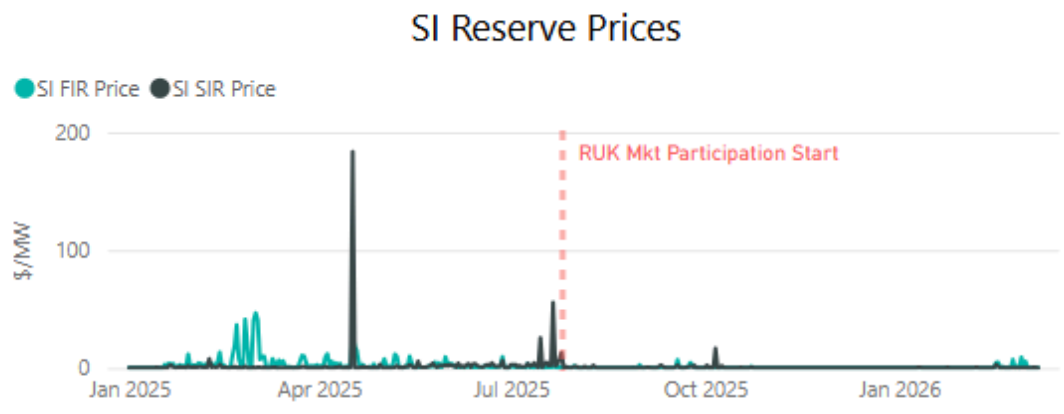




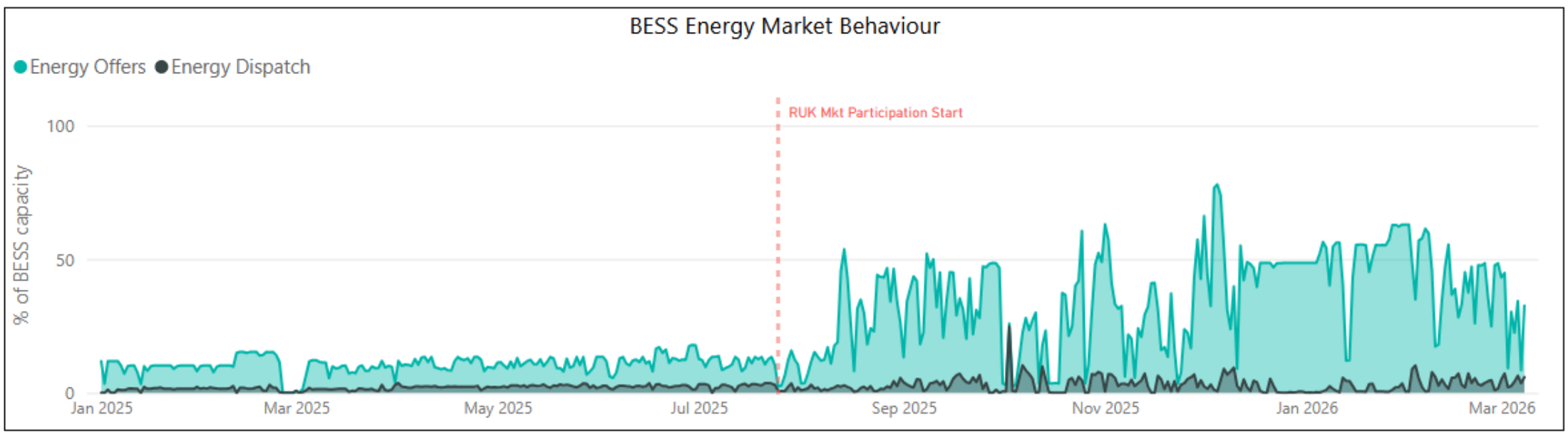
Weekly Insight - Ruakākā Battery in NZ wholesale electricity markets

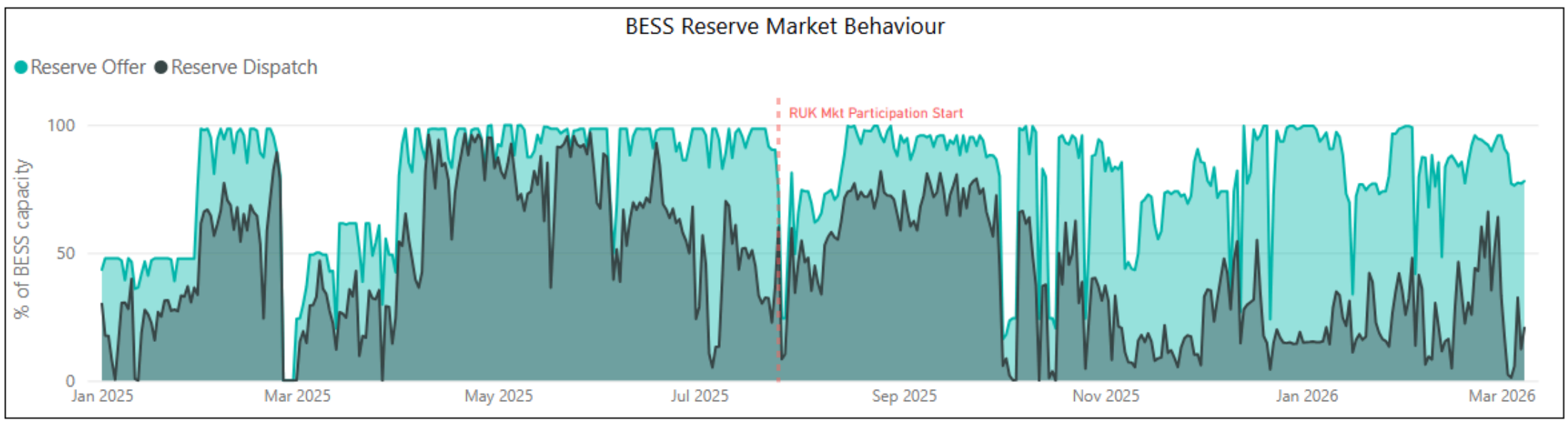
In this week's insight, we revisit the impact on reserve markets from the integration of 100 MW (200 MWh) Ruakākā BESS (Battery Energy Storage System) into the wholesale electricity market in late July 2025. While the earlier operation of the 35 MW (35 MWh) Rotohiko battery provided valuable learnings, its wholesale market impact remained limited. In contrast, the full integration of the larger Ruakākā BESS fundamentally altered the reserve offer stack. Figures below show a visible dampening of volatility and a reduction across both North Island and South Island fast and sustained instantaneous reserve prices. As noted in similar analysis by Concept Consulting [1], this shift has largely decoupled reserve and energy price trajectories. Even as wholesale energy prices trend higher, the reserve prices have remained relatively low.





Current dispatch outcomes strongly reflect the physical parameters of short-duration storage within the market's co-optimisation framework. As shown in figures below, there is a disproportionate clearing of battery capacity in reserve markets compared to the energy market. Given their limited capacity for sustained energy dispatch, this makes them an ideal candidate for providing reserves. By structuring their offer curves to favour reserve clearance, participants earn reserve revenue while preserving their state of charge as actual contingent events requiring discharge are infrequent. This commercial strategy avoids premature energy depletion, allowing assets to remain continuously cleared and compensated for being ready to provide a quick response following a contingent event rather than exhausting their limited energy capacity in a short dispatch window.





This offering behaviour also reflects a broader portfolio strategy rather than standalone asset optimisation. By offering significant reserve volumes at low prices, participants can actively reduce price separation across HVDC link when it is setting the risk. This reduces the cost of covering contingent events, ensuring that lower-cost South Island generation can flow freely to the North Island without being limited by high-priced North Island reserves.

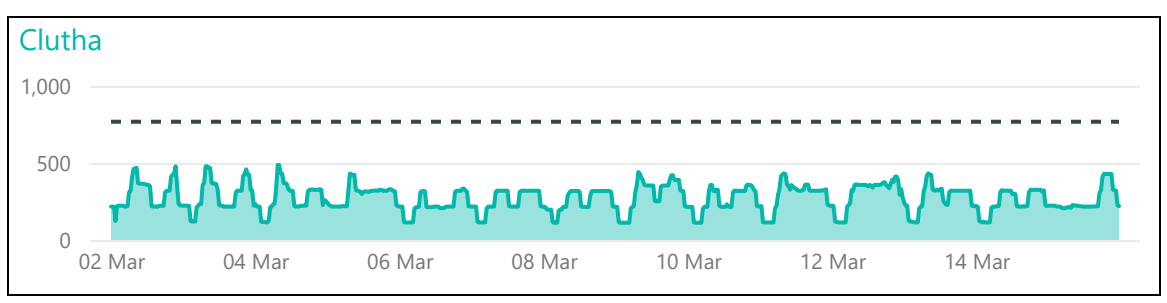
The proportional increase in energy offers following Ruakākā's entry reflects its longer two-hour duration and an evolving commercial strategy. With a larger state-of-charge buffer, participants confidently park a higher percentage of their capacity at extreme energy prices to maximise reserve clearance.

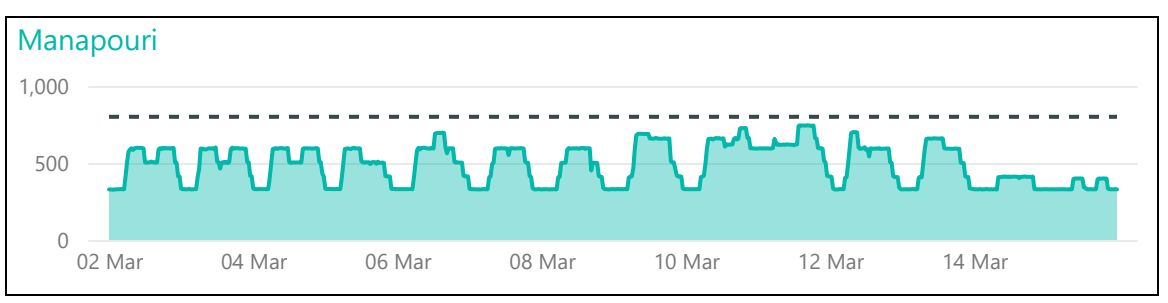
Tracking international precedents like Ireland, early BESS deployment naturally favours reserve services [2]. However, as storage durations increase and intermittent renewable penetration accelerates, battery participation will broaden across the co-optimised markets. For New Zealand, this evolution will improve battery peak contribution during winter evening peaks, as market price signals will increasingly incentivise the time-shifting of intermittent renewable generation to firm up system capacity when the demand is highest.

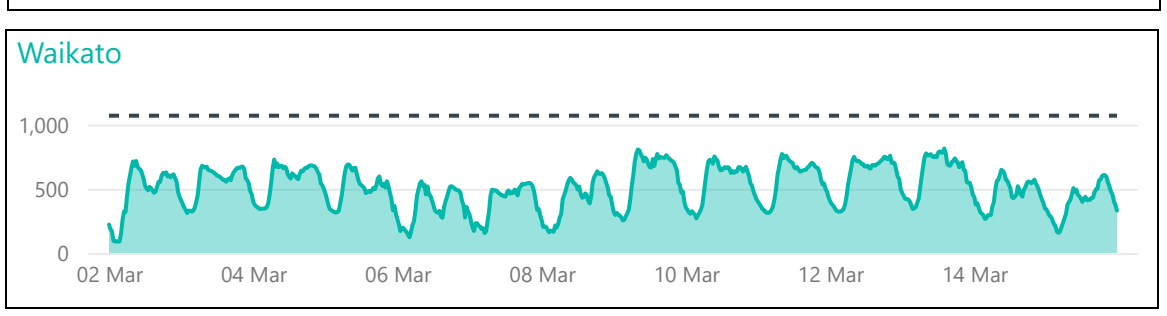
[1]: https://www.concept.co.nz/uploads/1/2/8/3/128396759/2026-01-22_-_battery_report.pdf
[2]: https://www.energy-storage.news/ireland-enters-new-era-with-battery-storage-units-participating-in-wholesale-market-for-first-time/

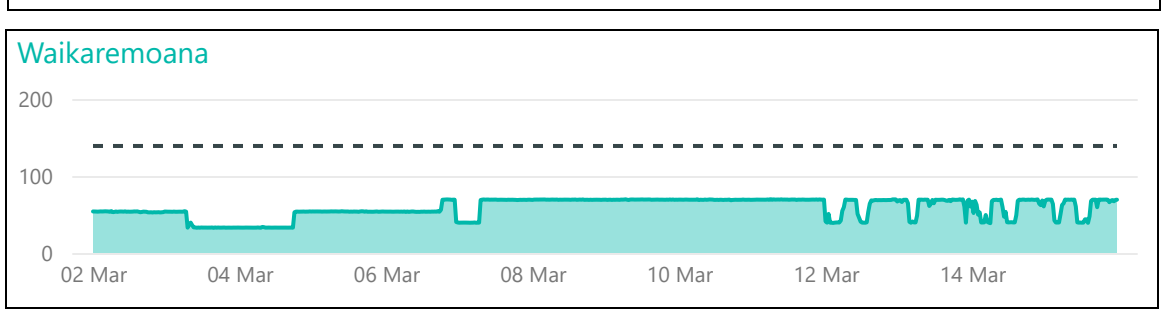
Generation Breakdown - Last Two Weeks

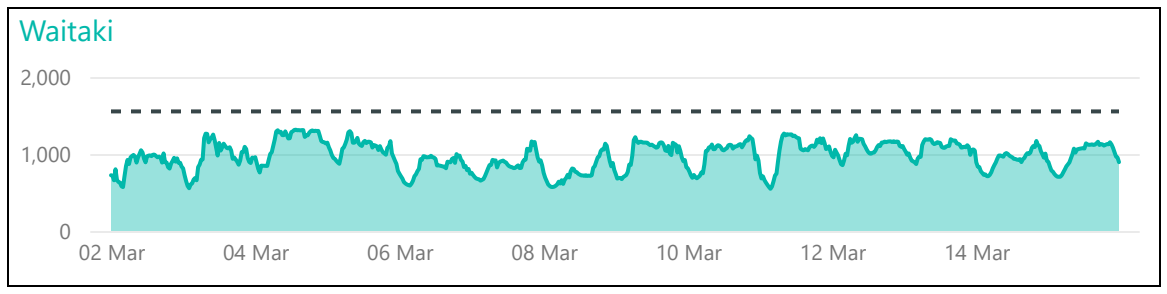
Measured in MW and displayed at trading period level for last 14 days

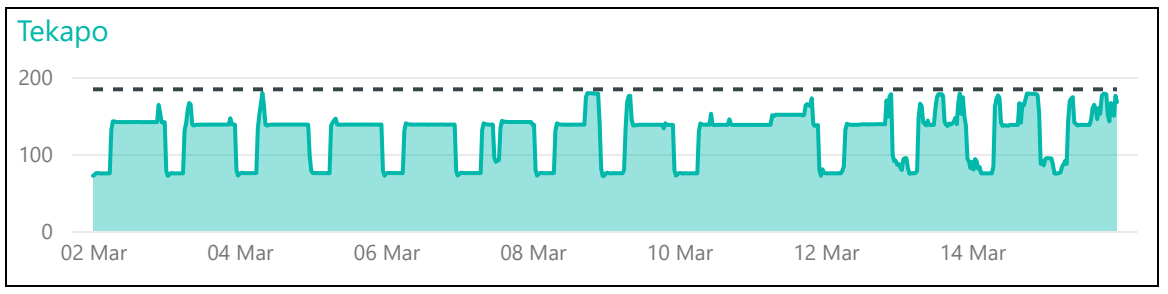


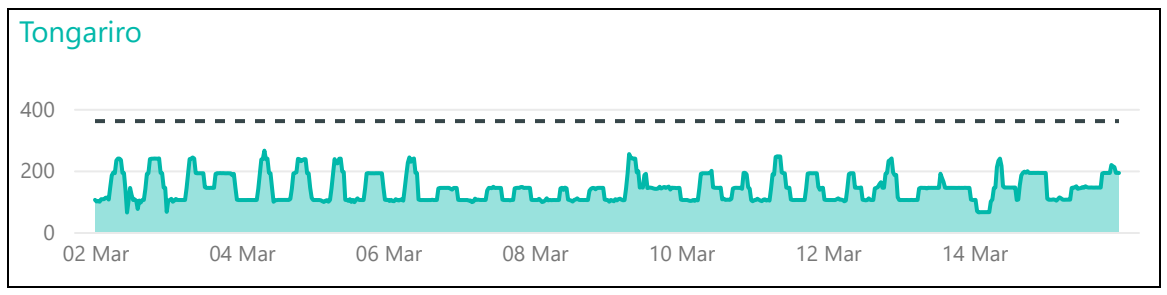


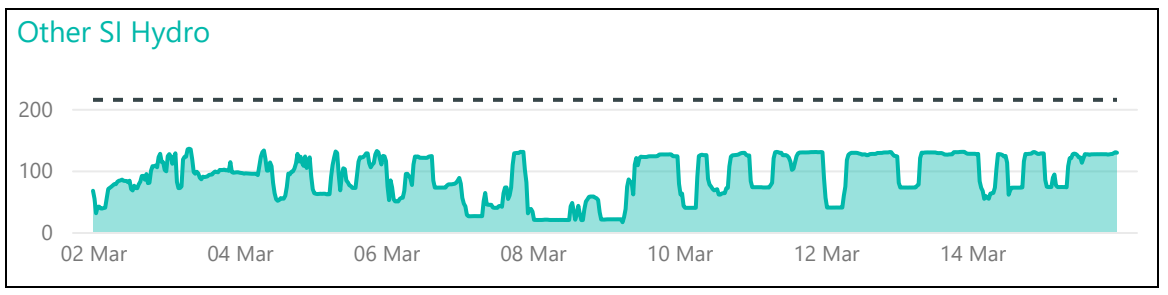


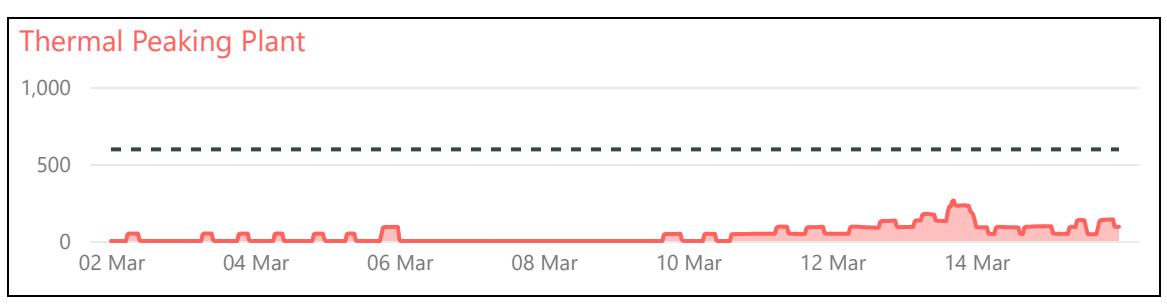


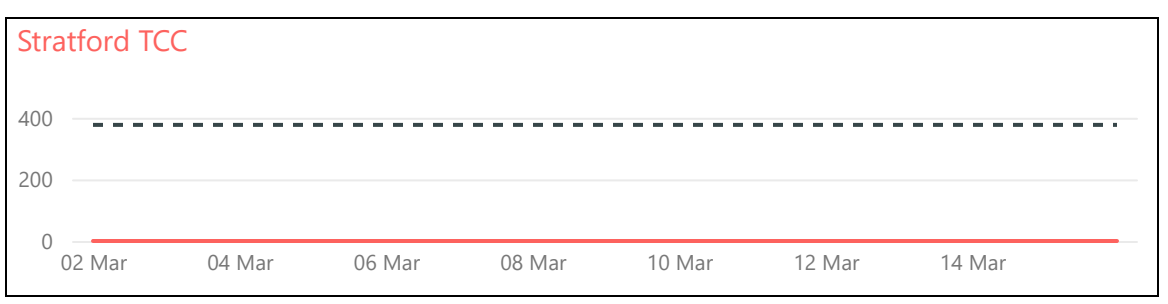


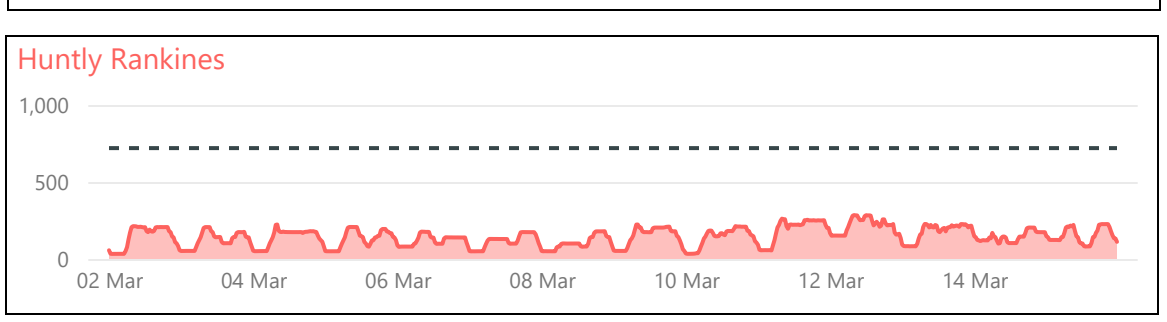


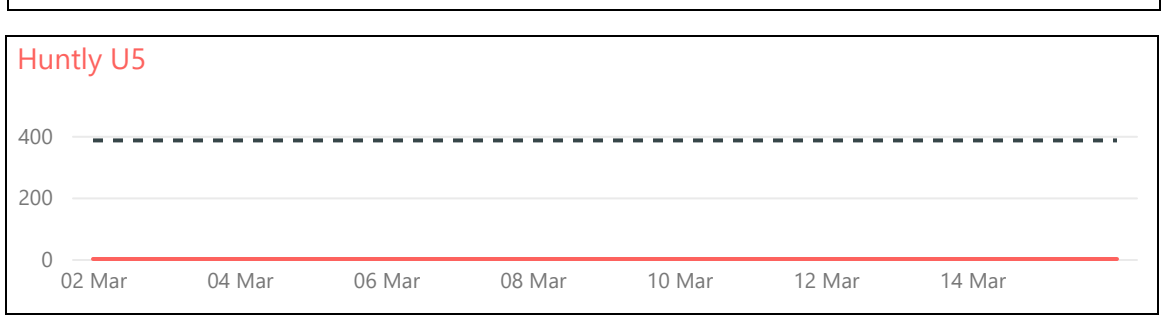


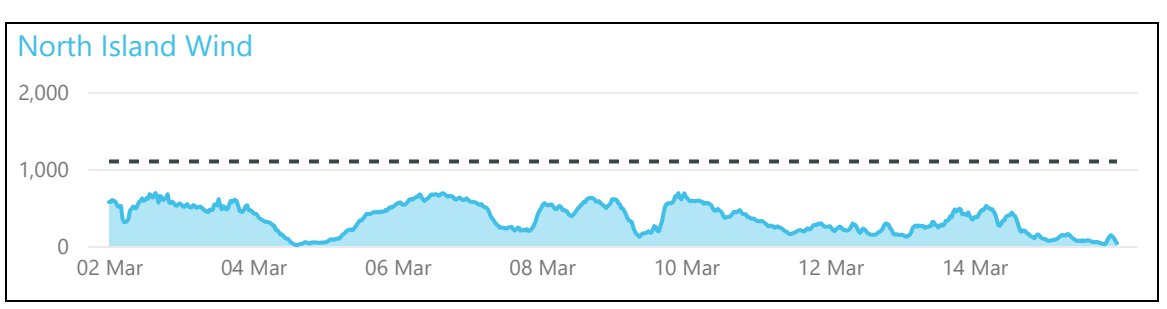


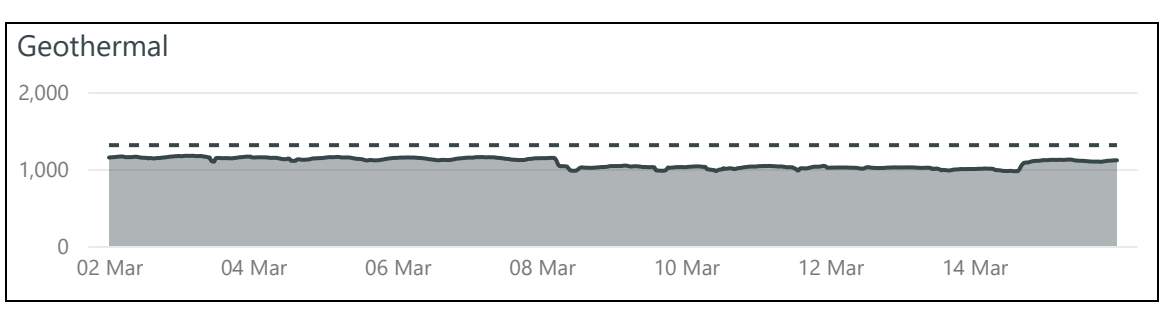


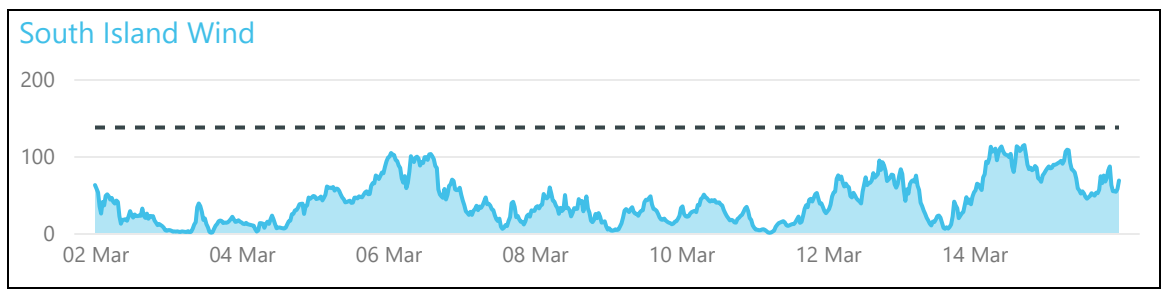


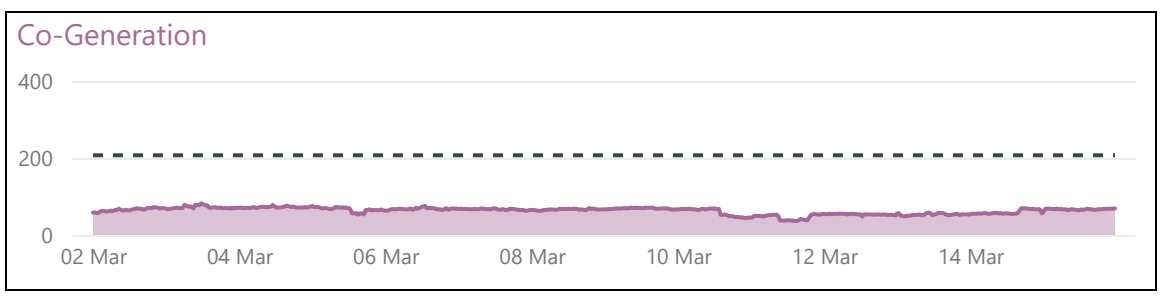


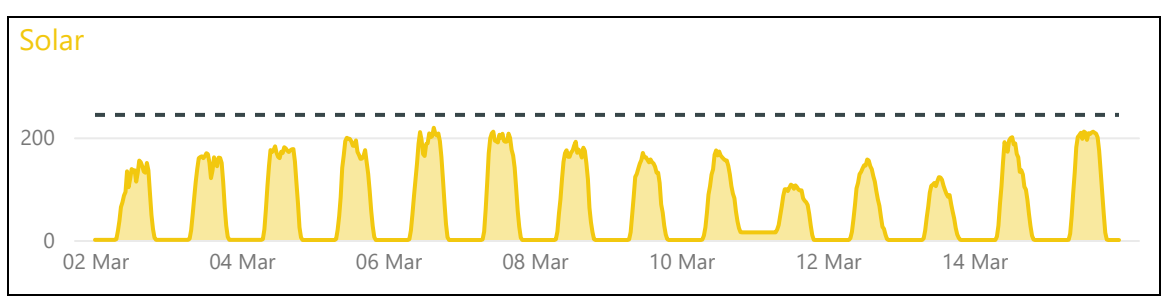


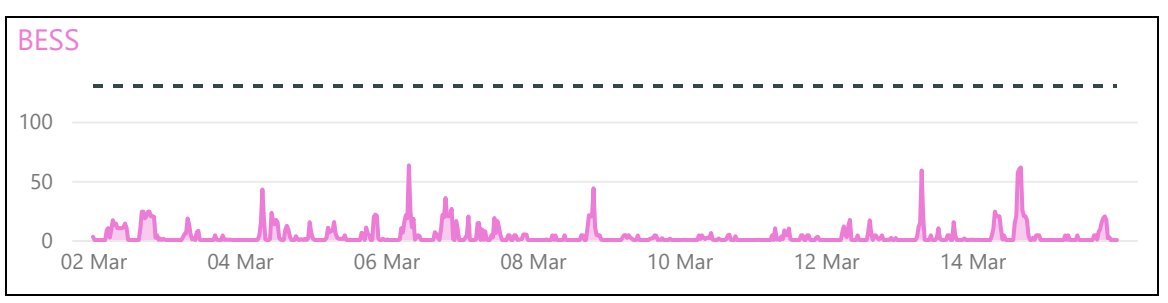






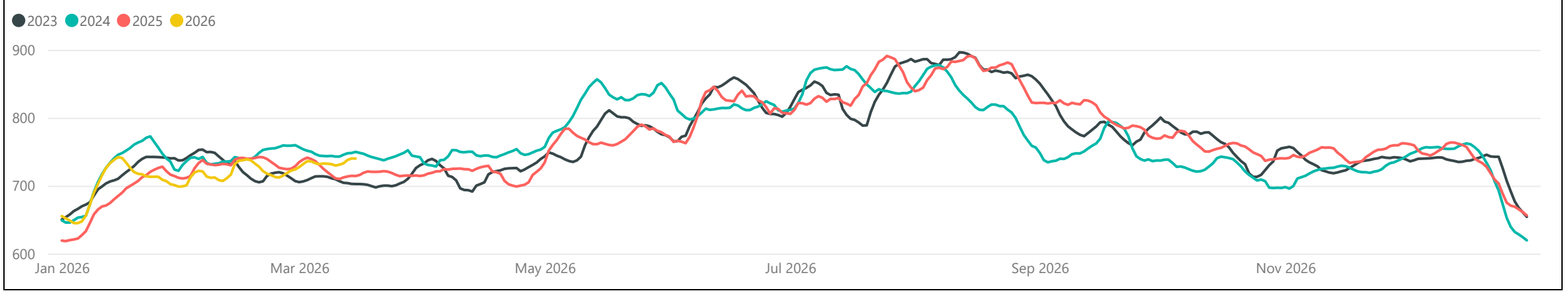




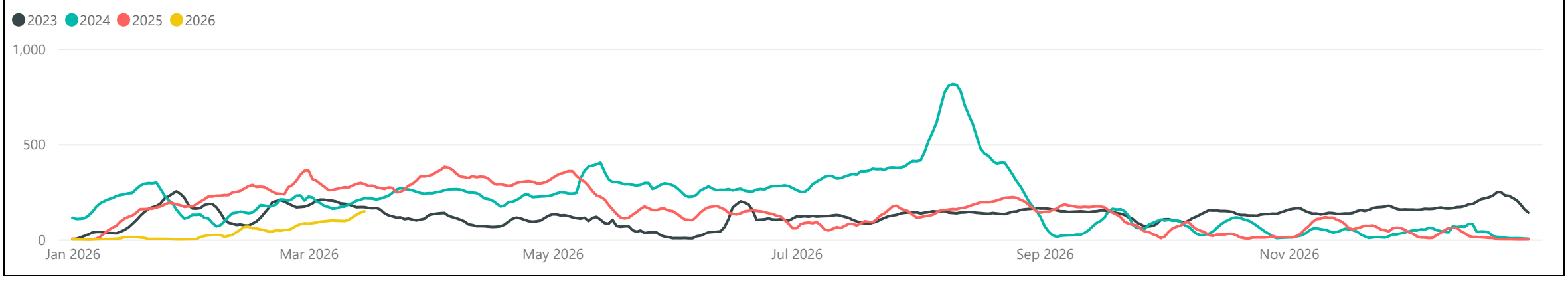


Weekly Profiles

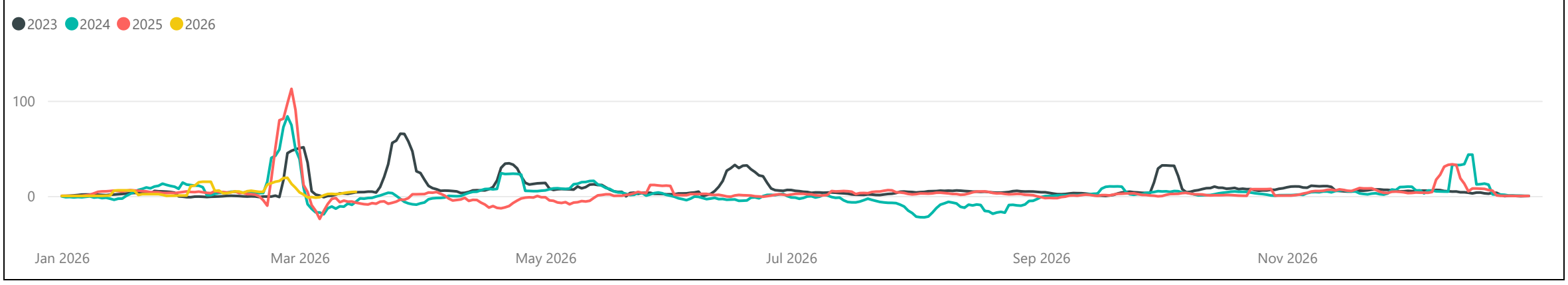
National Weekly Demand - GWh - 7 Day Rolling



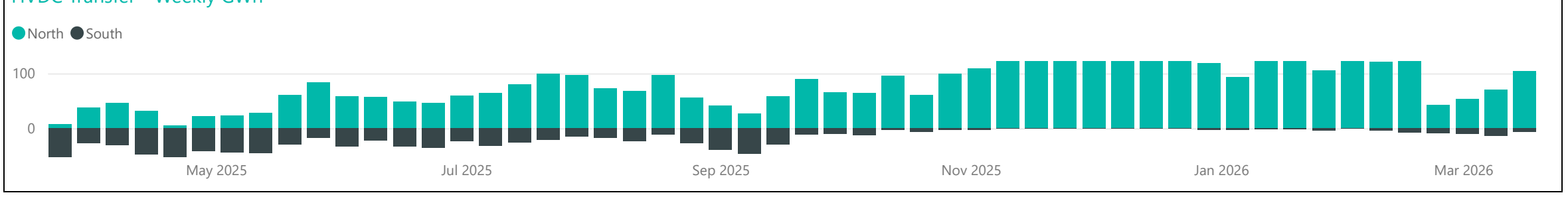
OTA2201 Weekly Rolling Average Spot Price - $/MWh



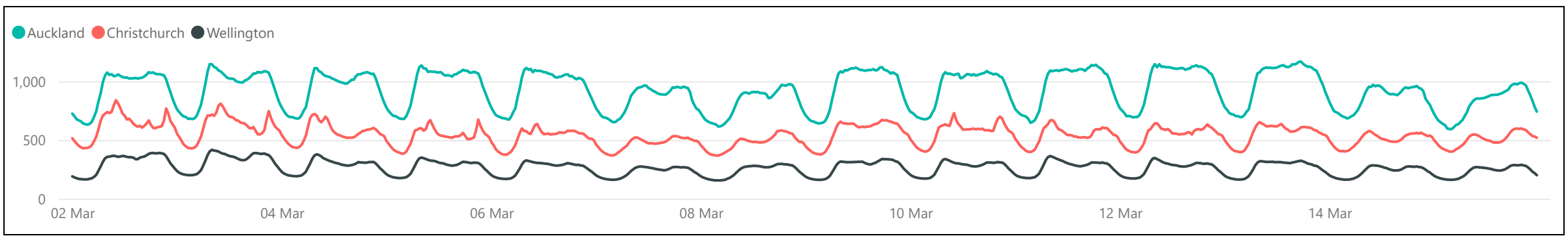
Weekly Rolling Price Separation (HAY2201 - BEN2201) - $/MWh



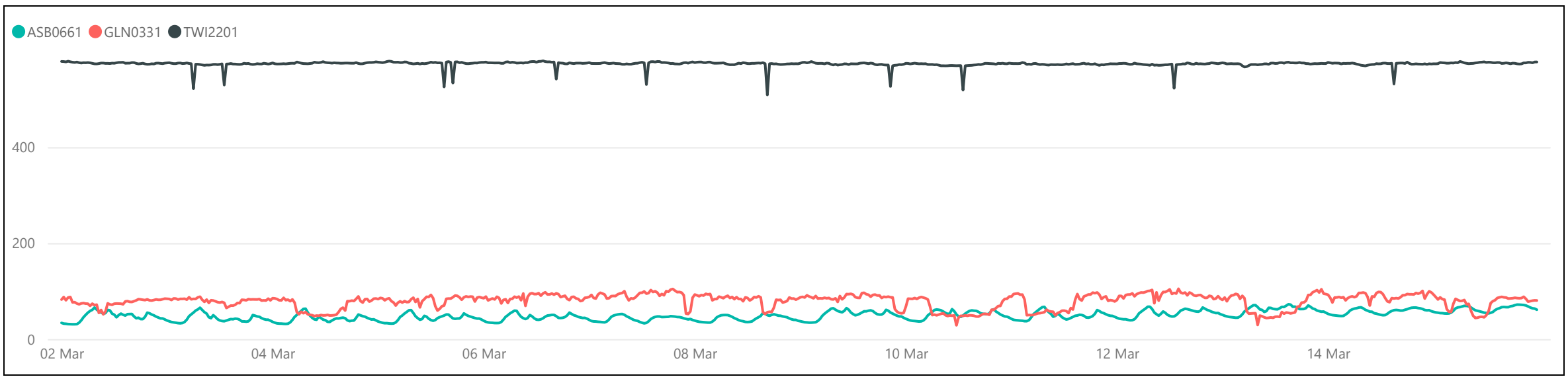
HVDC Transfer - Weekly GWh



Conforming Load Profiles - Last Two Weeks *Measured in MW shown by region*



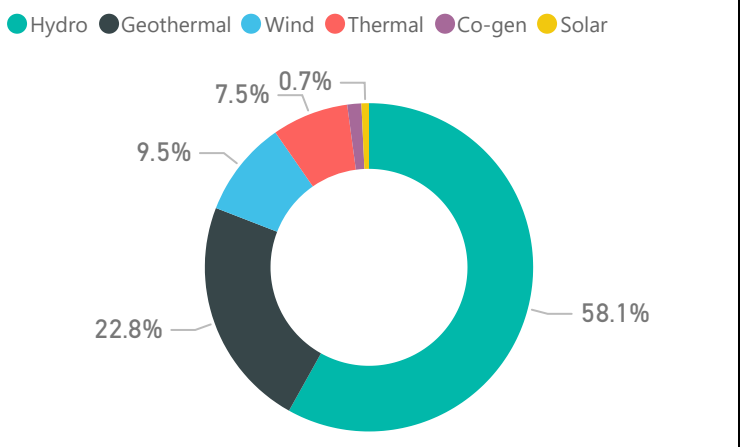
Non-Conforming Load Profiles - Last Two Weeks *Measured in MW shown by GXP*



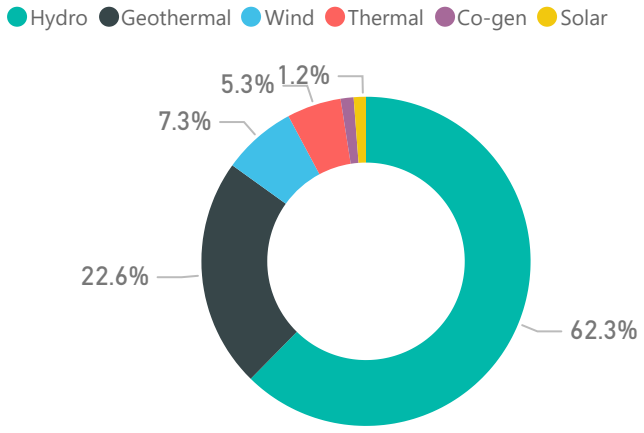
TRANSPOWER

Generation Mix

Last 52 Weeks Generation Mix - Weekly GWh



Last 7 Days Generation Mix - Weekly GWh



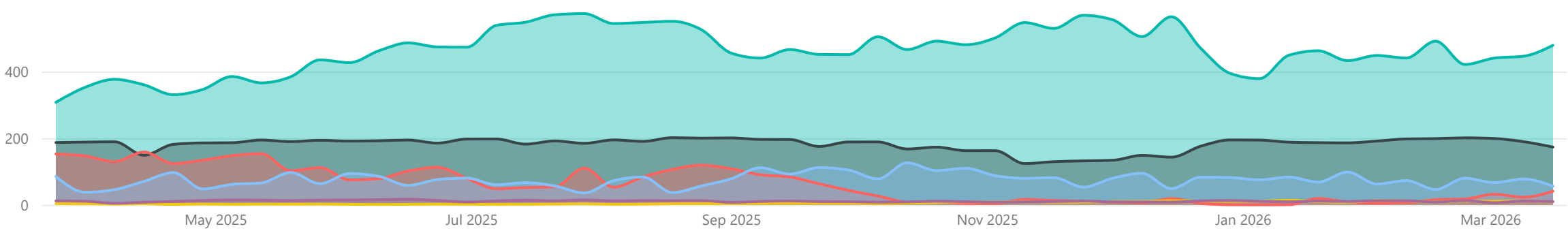
Average Metrics Last 7 Days

Renewable Percentage		CO2e g/kWh
93%	See details	39.2

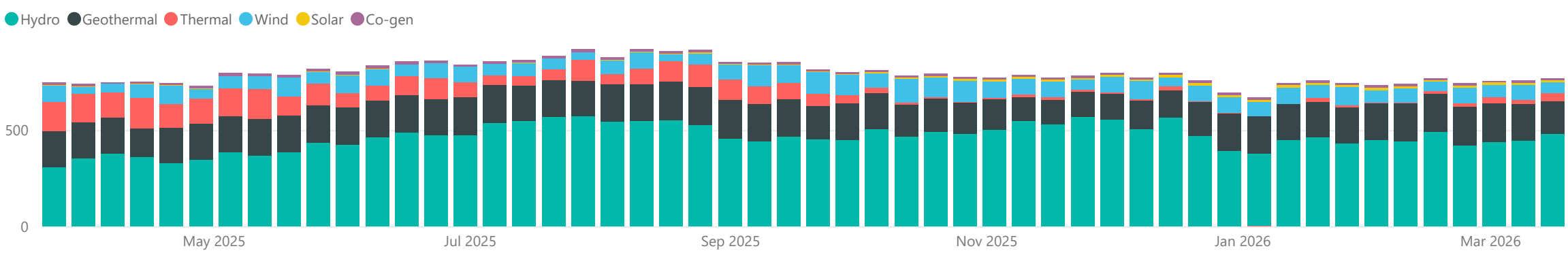
Average Metrics Last 52 Weeks

Renewable Percentage	CO2e Tonnes/Week	CO2e g/kWh
91%	53,176	66.1

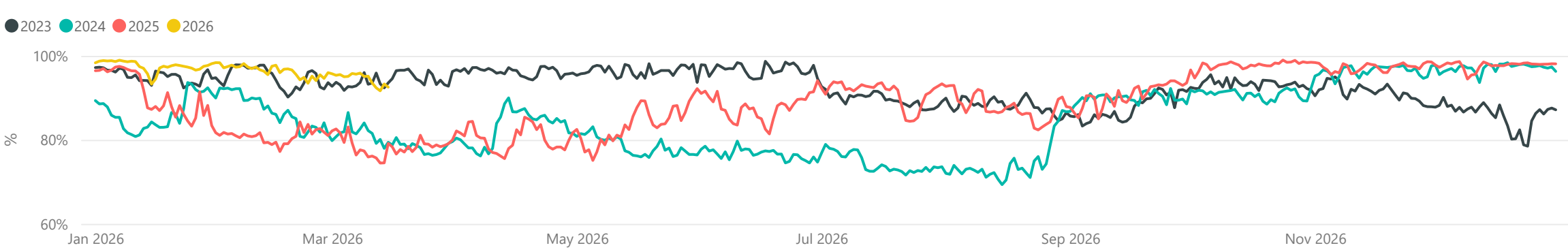
Weekly Generation Mix - GWh



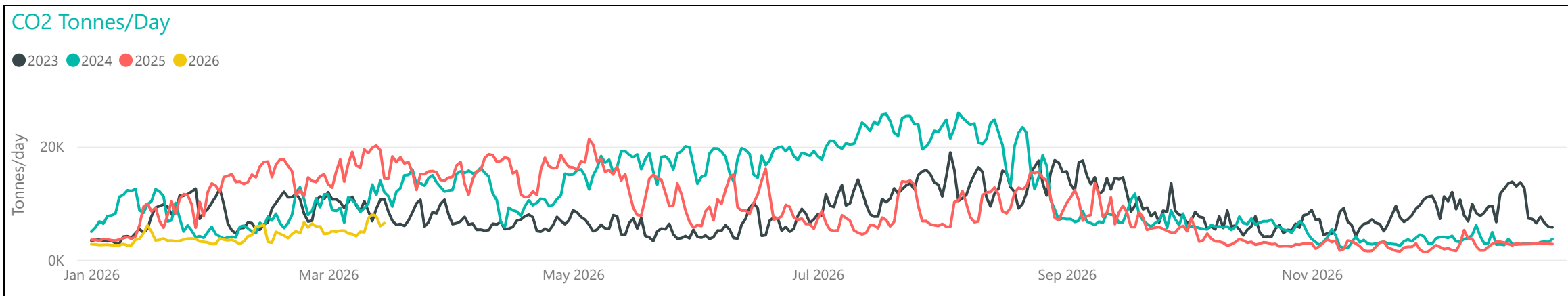
Weekly Generation Mix - GWh



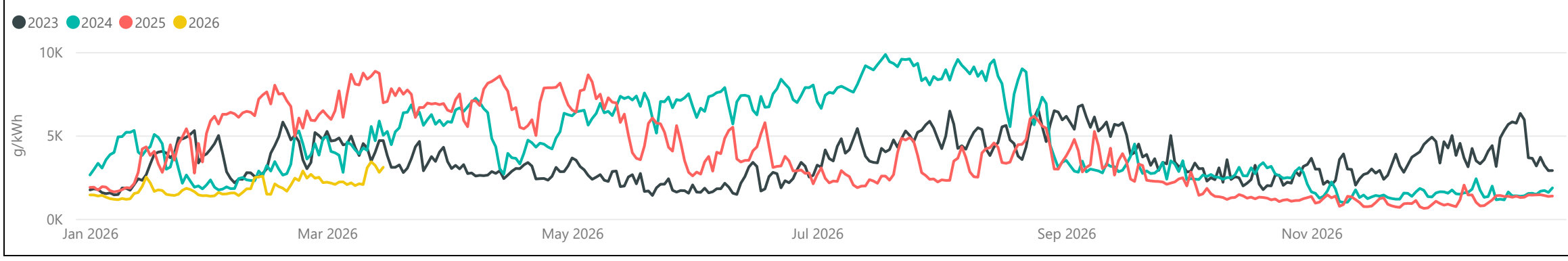
NZ Renewable Percentage



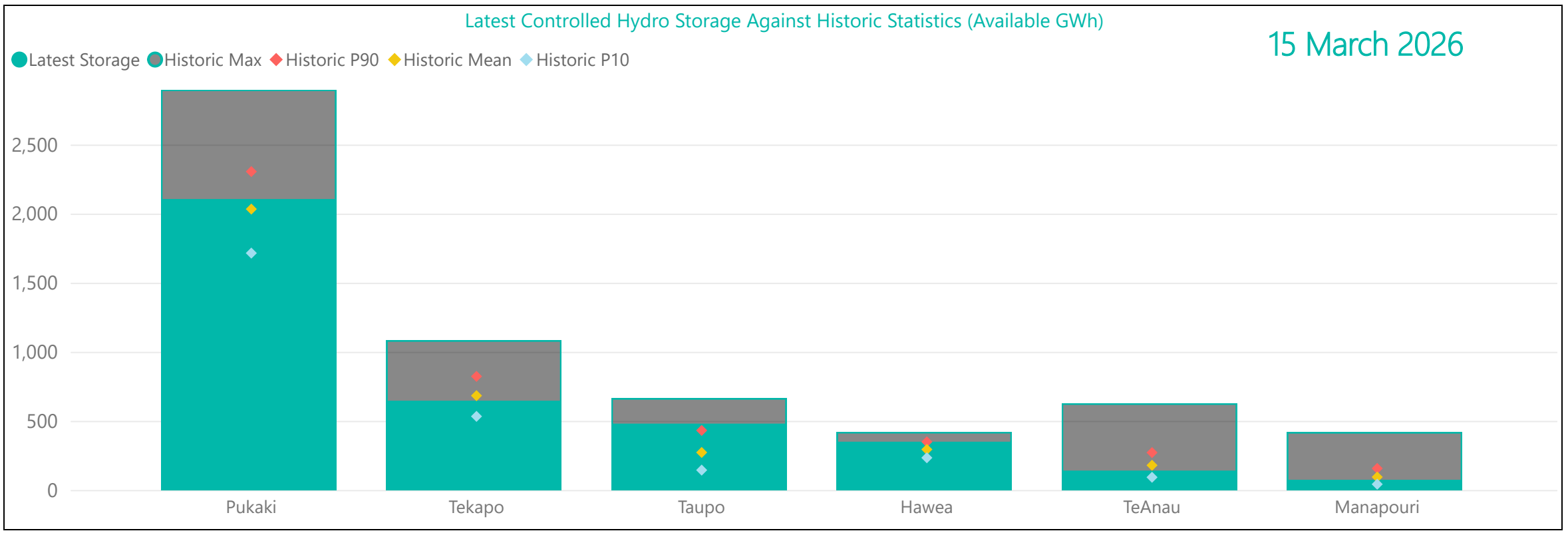
CO2 Tonnes/Day

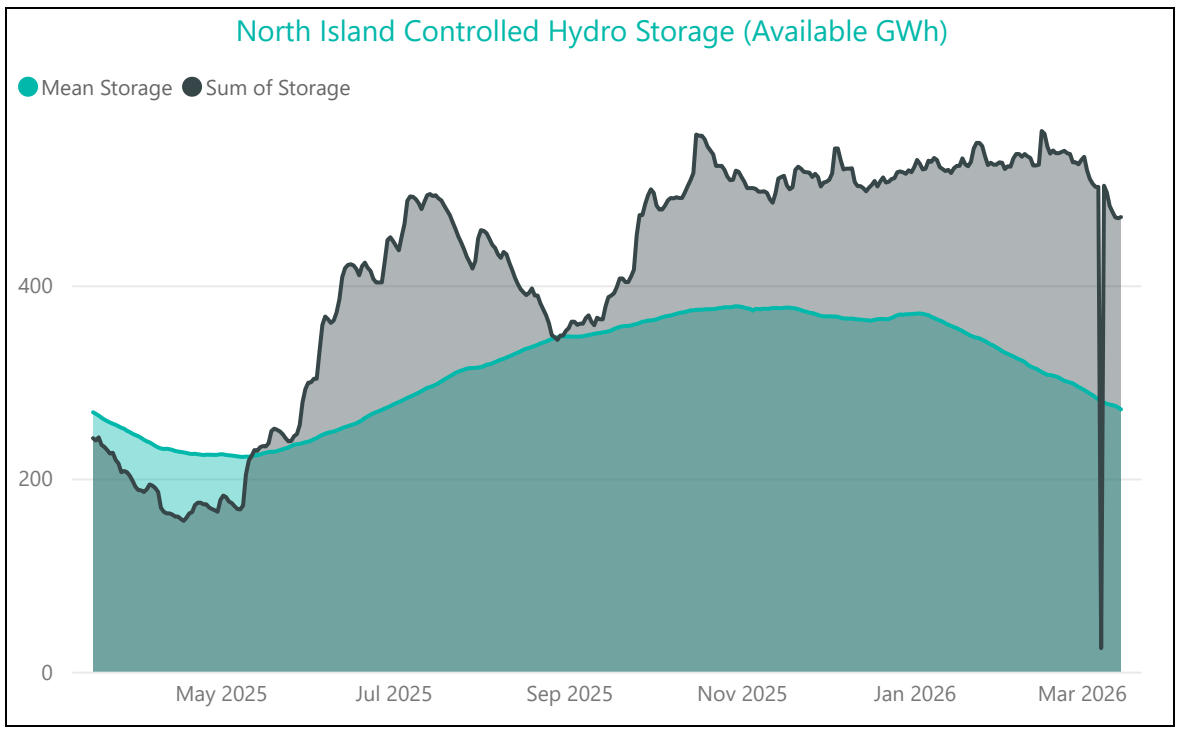


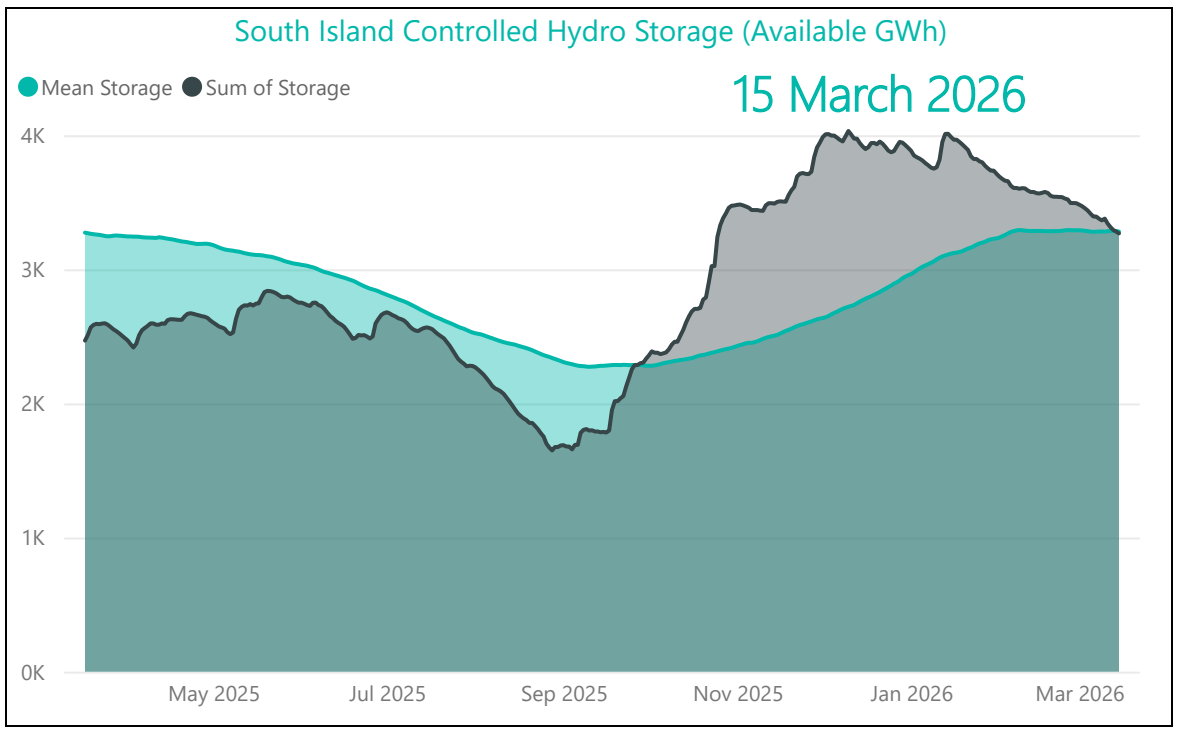
CO2 g/kWh

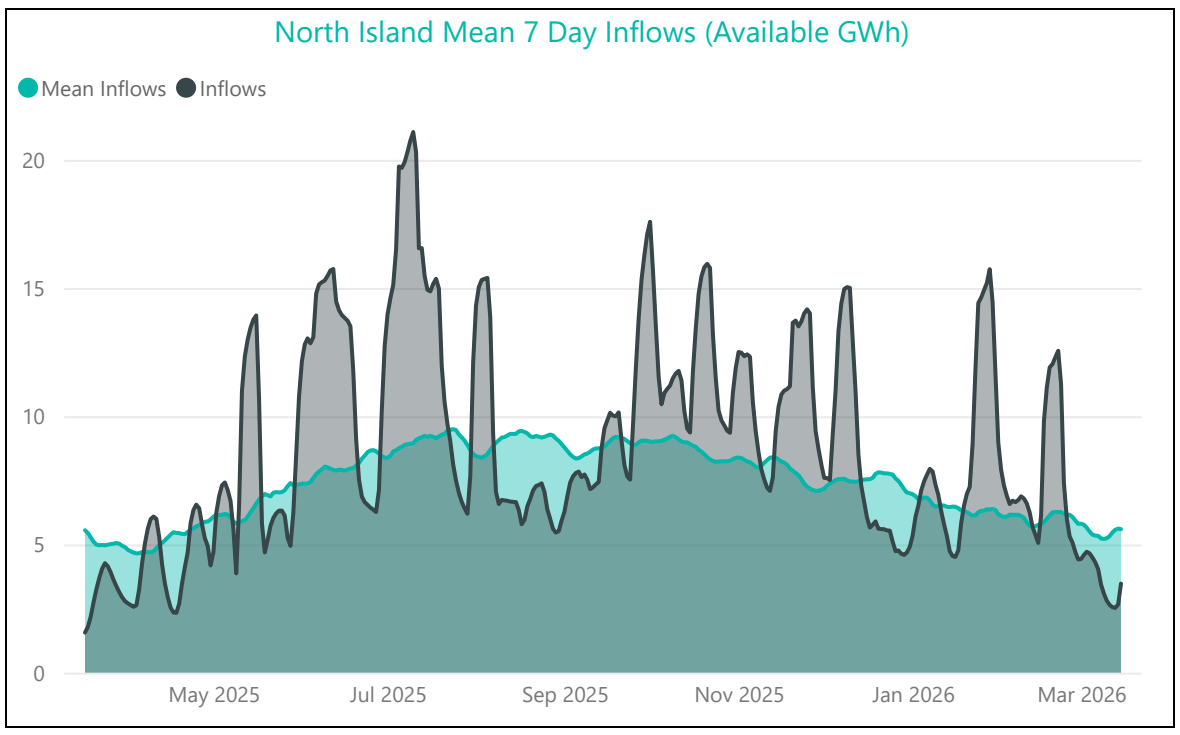


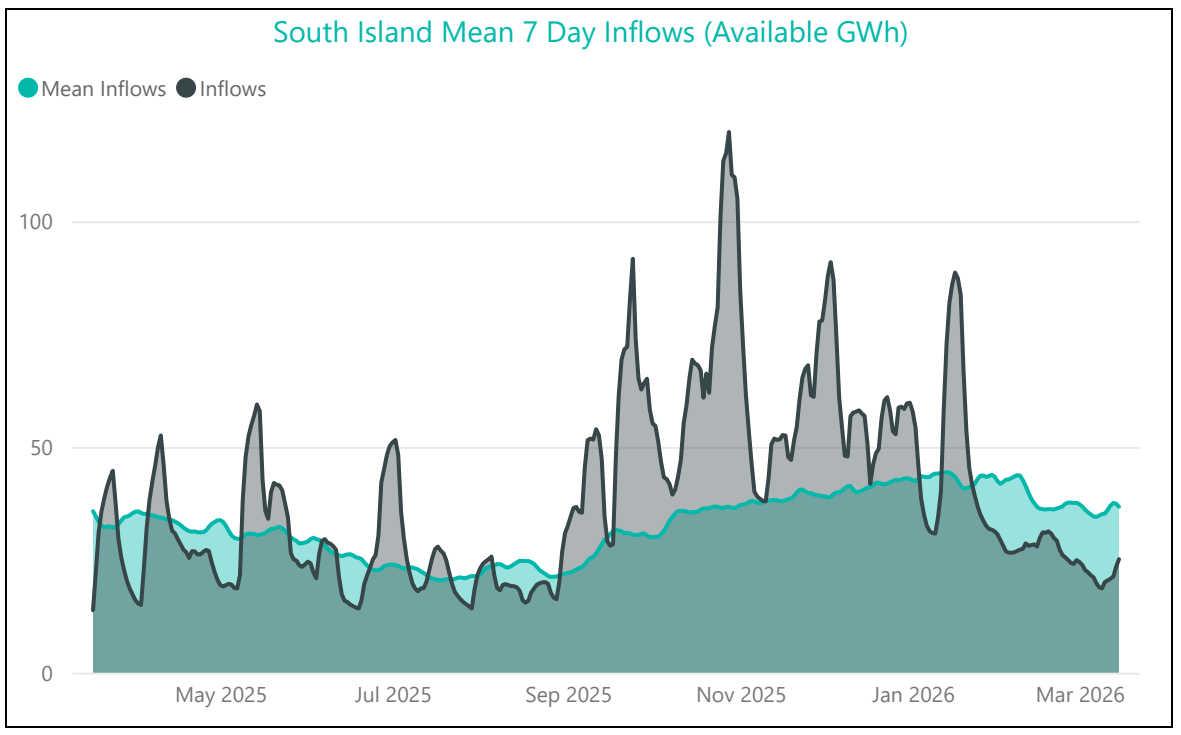
Hydro Storage











For further information on security of supply and Transpower's responsibilities as the System Operator, refer to our webpage here: https://www.transpower.co.nz/system-operator/security-supply

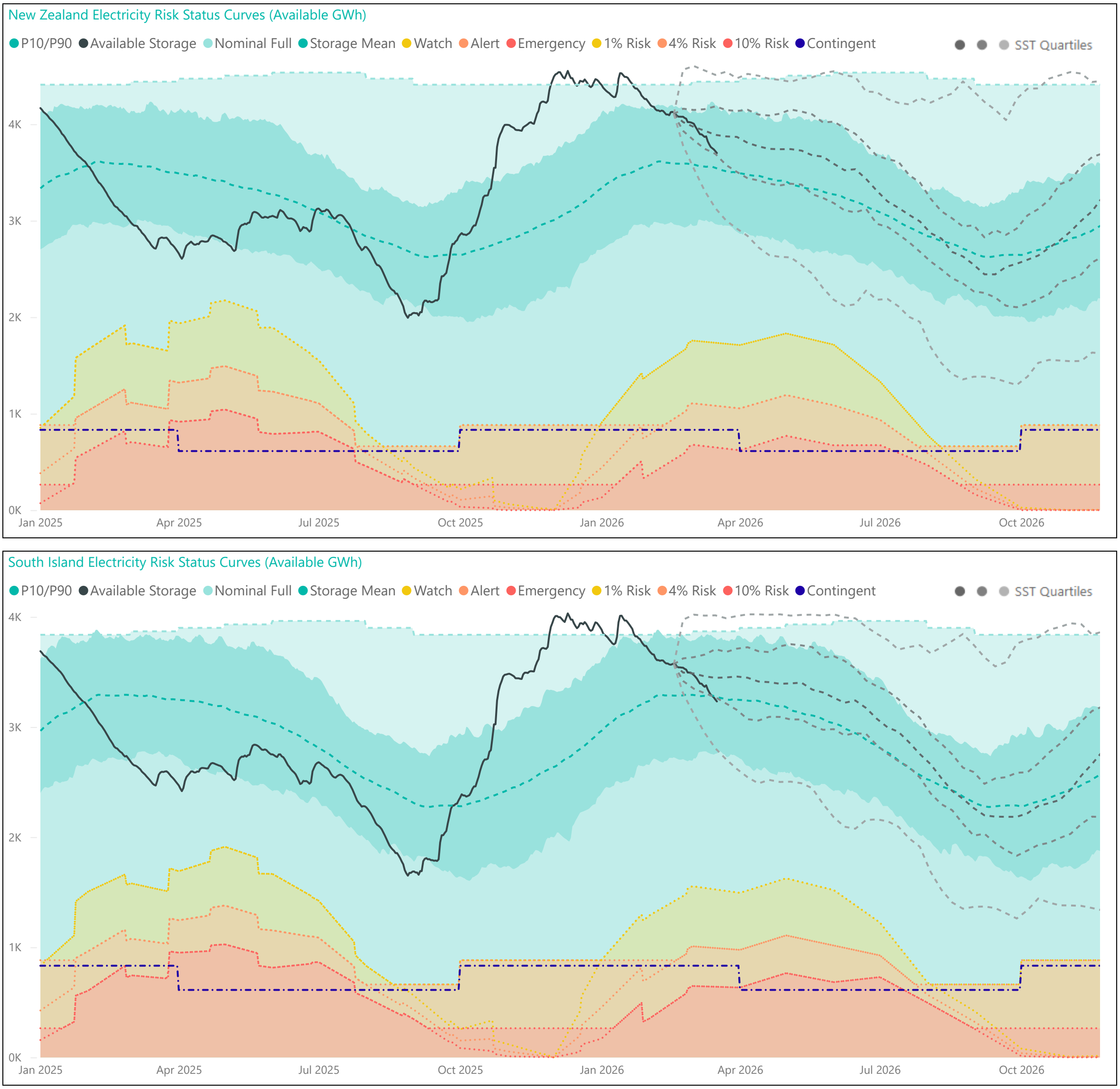
For any inquiries related to security of supply contact market.operations@transpower.co.nz

Hydro data used in this report is sourced from *NZX Hydro*.

Electricity risk curves have been developed for the purposes of reflecting the risk of extended energy shortages in a straightforward way, using a standardised set of assumptions.

Further information on the methodology of modelling electricity risk curves may be found here: https://www.transpower.co.nz/system-operator/security-supply/hydro-risk-curves-explanation

Electricity Risk Curves



Electricity Risk Curve Explanation:

Watch Curve - The maximum of the one percent risk curve and the floor and buffer
Alert Curve - The maximum of the four percent risk curve and the floor and buffer
Emergency Curve - The maximum of the 10 percent risk curve and the floor and buffer
Official Conservation Campaign Start - The Emergency Curve
Official Conservation Campaign Stop - The maximum of the eight percent risk curve and the floor and buffer

Note: The floor is equal to the amount of contingent hydro storage that is linked to the specific electricity risk curve, plus the amount of contingent hydro storage linked to electricity risk curves representing higher levels of risk of future shortage, if any. The buffer is 50 GWh.

The dashed grey lines represent the minimum, lower quartile, median, upper quartile and the maximum range of the simulated storage trajectories (SSTs). These will be updated with each Electricity Risk Curve update (monthly).