Market Operations Weekly Report - Week Ended 5 July 2026

Overview

National hydro storage remains above average, with levels at 128% of the historic mean for this time of year. Residuals are lower with higher winter demand but the sector is managing these peaks well.

This week's insight looks at off-peak load surges and the involvement of time-of-use plans.

Security of Supply

Energy

National hydro storage decreased slightly to 128% of historic mean at the end of last week from 130% the week prior. South Island storage has remained steady at 128% and North Island storage decreased from 155% to 135% with inflows below the average for this time of year.

Capacity

Residuals continued to be lower than usual during morning and evening peaks most of the last week. The lowest residual of 419 MW occurred during the morning of Friday 3rd July, which coincided with the highest North Island demand peak of the week.

The N-1-G margins in the NZGB forecast show tighter spots appearing as we are now in winter; we recommend the industry watch these closely. 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 was again high this week at 857 GWh, up from 842 GWh last week due to colder than average mornings. The highest demand peak of 6,750 MW occurred at 8:00am on Wednesday 1st July. This is the highest demand peak of the year but well short of records set in recent years.

Weekly Prices

The average wholesale electricity spot price at Ōtāhuhu last week jumped to $78/MWh from $47/MWh the week prior. Wholesale prices peaked at $290/MWh at Ōtāhuhu at 8:00am on Friday 3rd July, coinciding with the lowest residual. Energy and reserve prices spiked in the North Island but not the South Island with the HVDC link setting the North Island risk.

Generation Mix

Wind generation made up 6% of the generation mix last week, lower than its yearly average of 9%. Hydro generation was unchanged at 63% of the mix and thermal generation increased slightly from 4% to 5% of the generation mix. Geothermal generation increased from 22% to 24%, sitting above its annual average of 23%.

HVDC

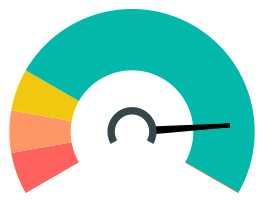
HVDC flows last week were predominantly northward with very brief periods of southward flow overnight. Overall, 155 GWh was transferred north, while only 2 GWh was transferred south during the week.

Consultations and Engagement

System Operator Strategy

Our Phase 2 Consultation for the development of a new System Operator Strategy is open. Responses are due by Friday 24 July 2026. The draft Strategy sets out our proposed direction for how the System Operator service will need to evolve over the next ten years to support a secure, reliable and efficient power system.

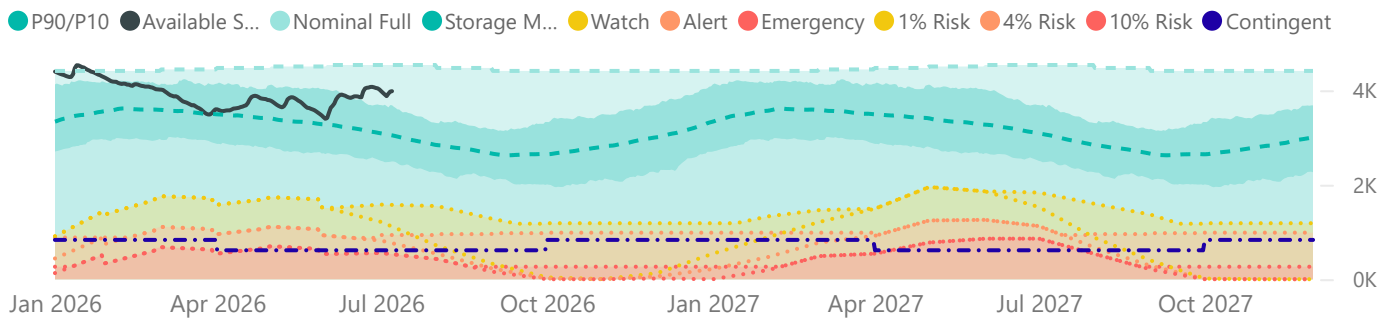
New Zealand Energy Risk



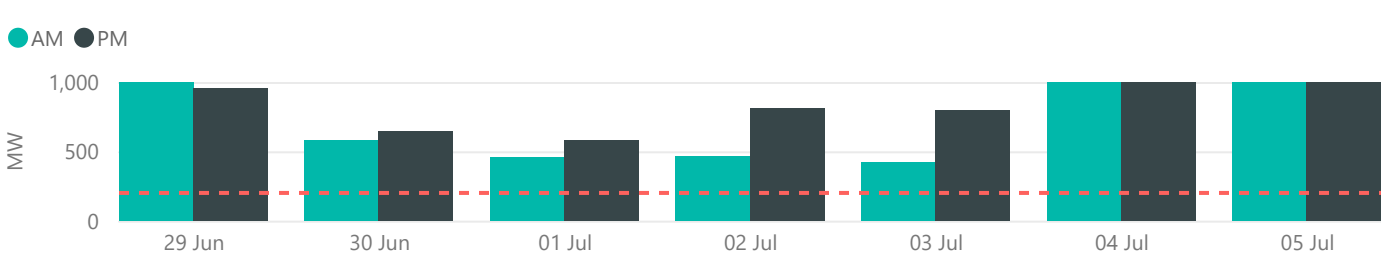
South Island Energy Risk

Normal Watch Alert Emergency

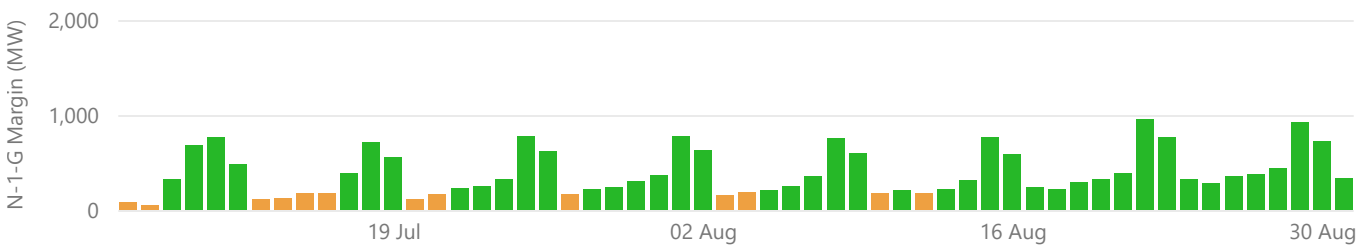
New Zealand Electricity Risk Status Curves (Available GWh)



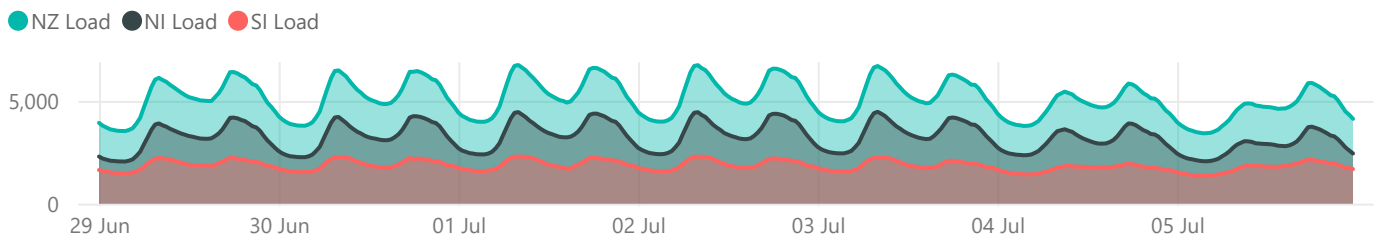
Lowest Residual Points - MW



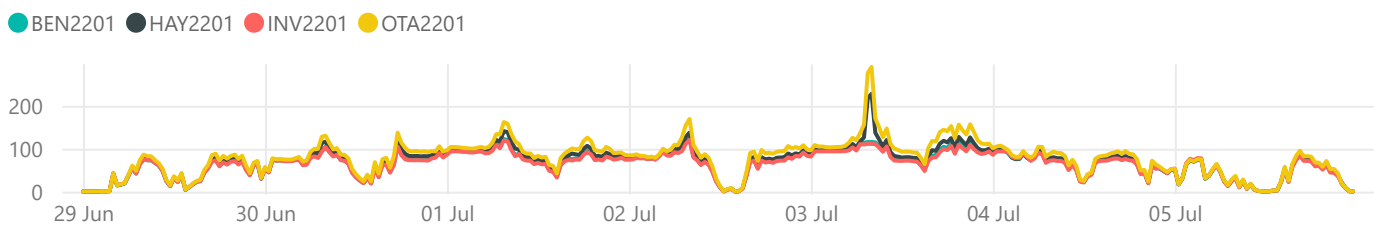
NZGB Look-Ahead (excluding next 7 days)



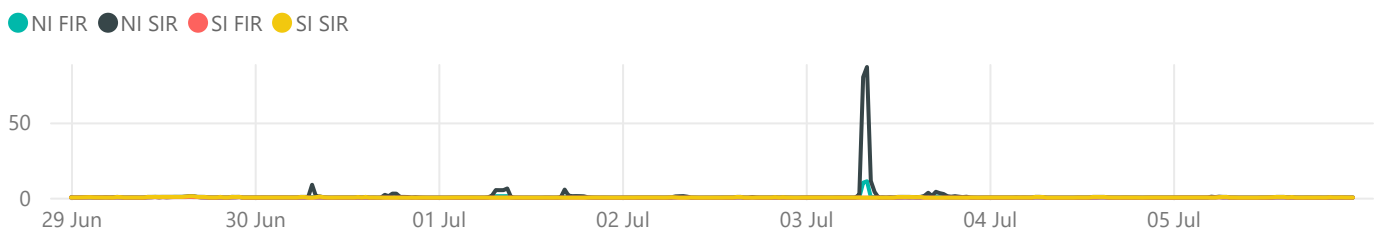
National Demand by Trading period - MW



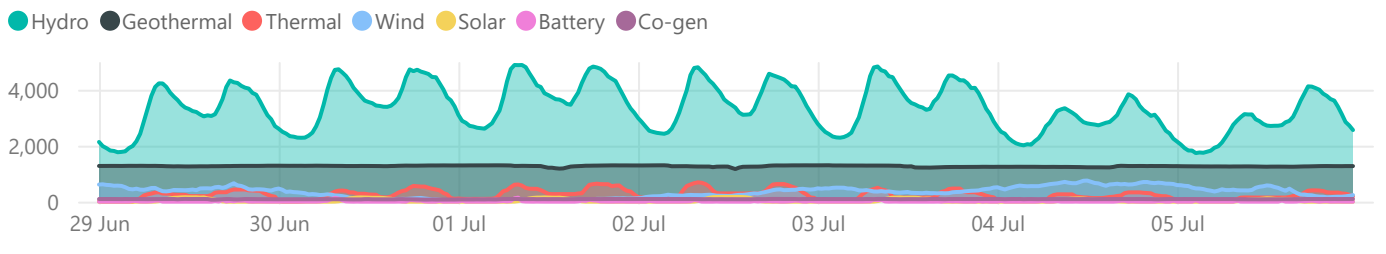
Energy Prices - $/MWh



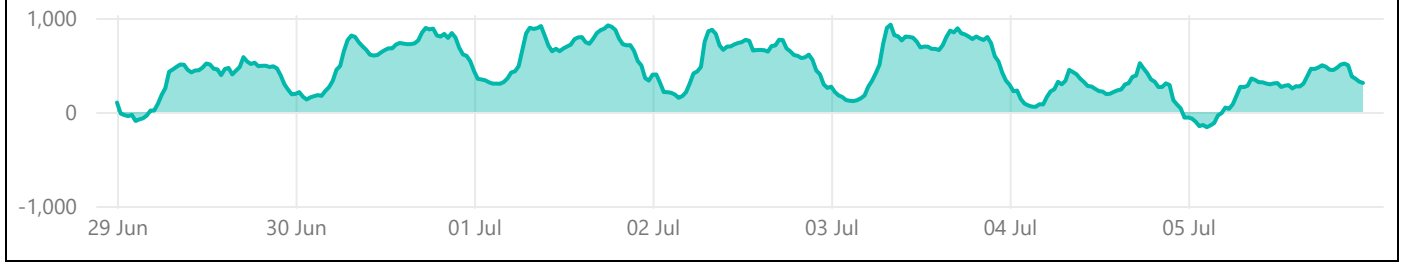
Reserve Prices - $/MW



Generation - MW



Net HVDC Transfer - MW (Northward positive)



Weekly Insight - Off-peak load surges

This week's insight investigates the involvement of time-of-use (TOU) pricing plans in off-peak load surges that we have identified occurring at 9pm and 11pm most evenings.

TOU pricing plans offer cheaper (or sometimes free) electricity consumption rates during "off-peak" periods to incentivise consumers to shift their demand away from peak periods. While they have been available for many years, the Government recently made it compulsory for retailers with more than 5% market share to offer at least one TOU plan from 1 July 2026.

TOU plans enable retailers to decrease how much electricity they have to buy at peak times when wholesale prices are typically at their highest, enabling them to pass these savings on to consumers who shift their electricity use to lower demand periods. This also reduces the need for relatively more expensive thermal generation to supplement renewable generation at peak times, putting further downward pressure on prices. Figure 1 shows the average 24-hour conforming[1] load profile for the week ending 5 July 2026. The morning and evening peaks are well known and easily identified, but if you look closely at the load profile, you might also notice small interruptions to the downward trend of load after the evening peak. These occur at 9pm and 11pm, with the 11pm surge more prominent in the South Island.

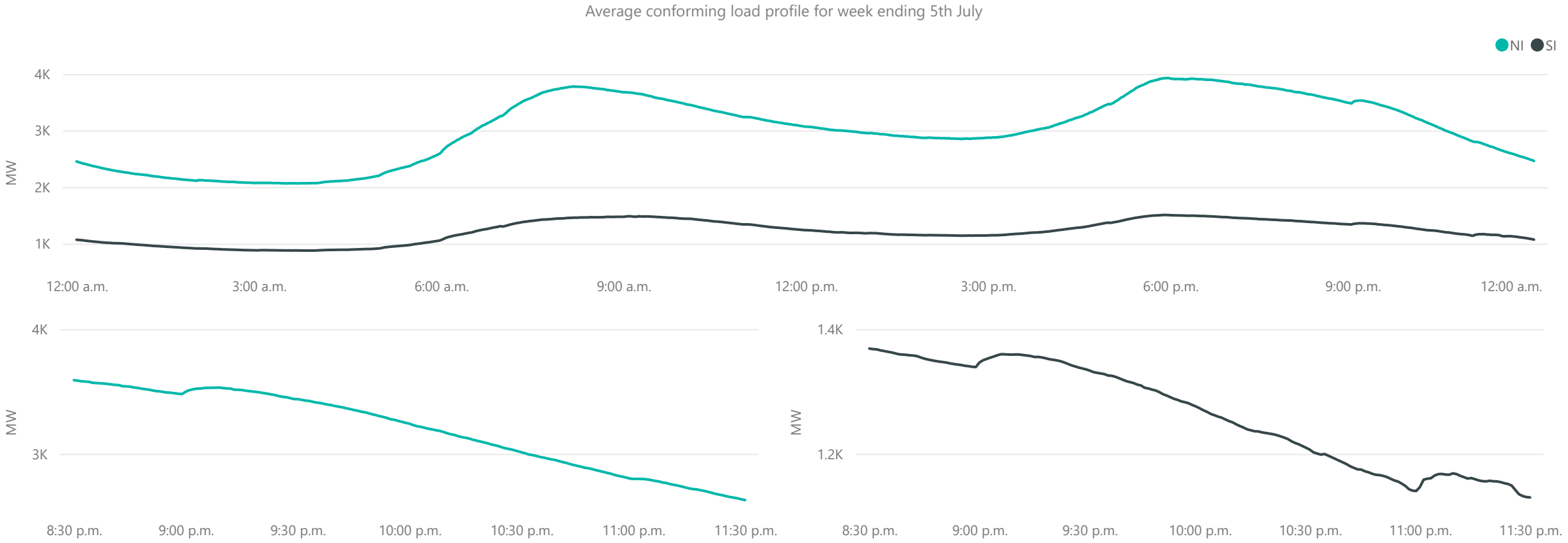
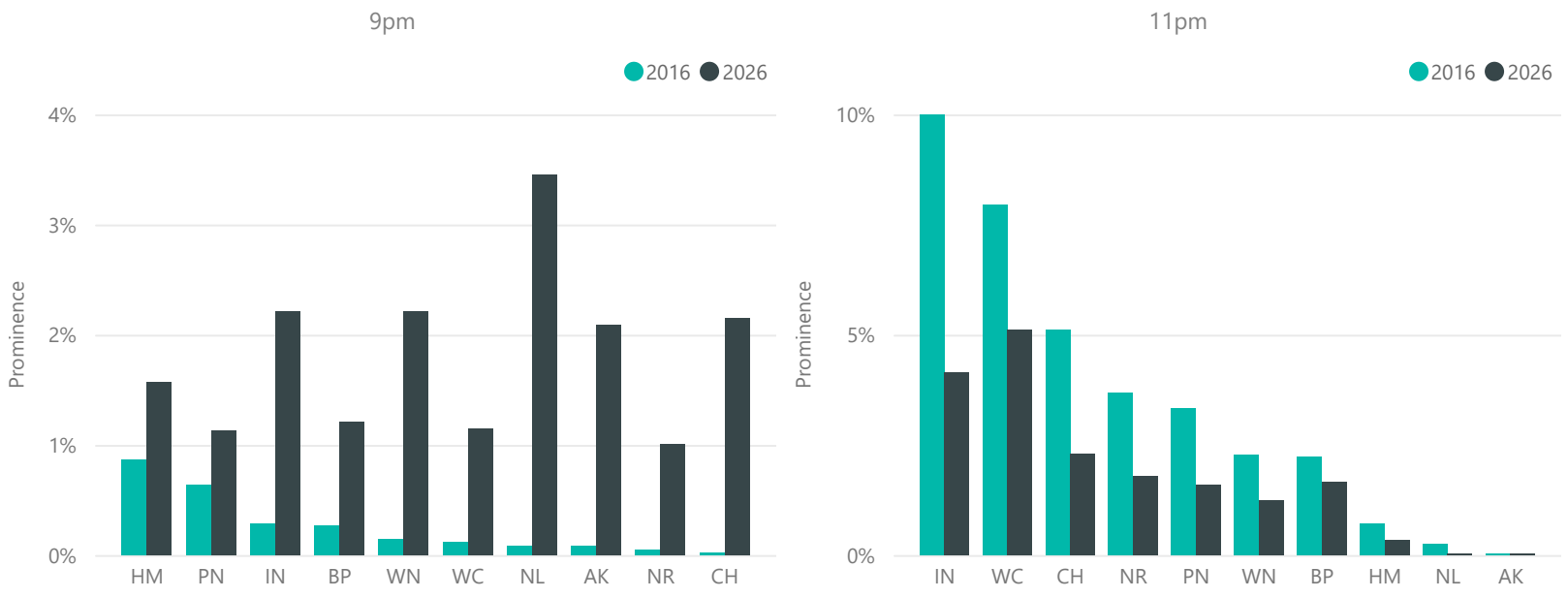


Figure 1: 24-hour conforming[1] load curve showing morning and evening peaks (top) and close up of 9pm and 11pm load surges in the North and South Islands (bottom left and right, respectively).

To look at the impact of TOU plans on demand, we compared load profiles from June this year with June 2016 when TOU plans were not widely available. As shown in Figure 2, there is a prominent average 9pm load surge in June 2026 and a negligible one in 2016, coinciding with the increase in use of cheaper off-peak rates starting at 9pm.



Region Code Definitions

Region Code	Area
AK	Auckland
BP	Bay of Plenty
CH	Christchurch + Canterbury
HM	Hamilton + Waikato
IN	Invercargill + Lower South Island
NL	Northland
NR	Napier + Hawkes Bay
PN	Palmerston North + Taranaki
WC	West Coast + Upper South Island
WN	Wellington

Figure 2: Prominence of the 9pm (left) and 11pm (right) conforming load surge in June 2026 vs 2016

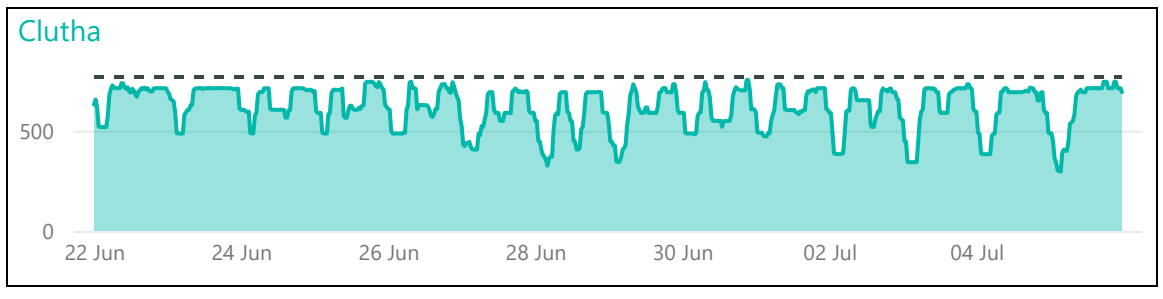
The prominence of the load surge was calculated by finding the maximum load during the load surge period (9:00pm to 9:30pm or 11:00pm to 11:30pm) and dividing it by the minimum load during the previous period. Northland has the largest prominence for the 9pm load surge, followed by denser populated regions such as the lower South Island (including Dunedin) and Wellington.

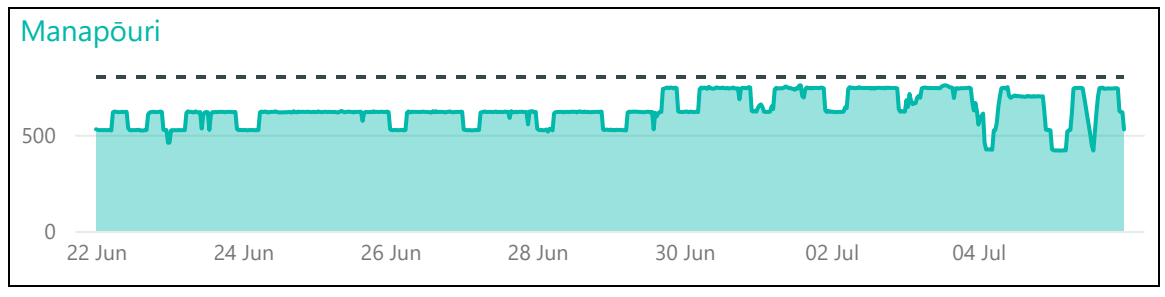
Looking more closely at the 11pm surge, this has actually declined in magnitude since 2016. While we believe the surge in 2026 reflects some time of use plans kicking in from 11pm, we think the decrease in magnitude reflects are decrease in the extent that local lines companies have been using ripple control to manage peak demand or changes in the timing of ripple control load restoration over the decade. Ripple control is where lines companies can switch off hot water cylinders for a time to manage demand peaks.

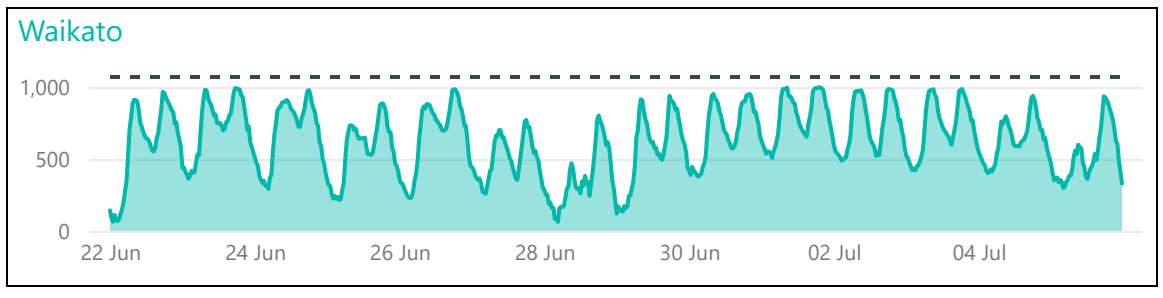
[1] *Conforming load is load from grid exit points that follows a predictable daily demand pattern. In most cases, this is a grid exit point supplying a local lines company. Non-conforming load mostly occurs at grid exit points that exist to serve a single large industrial load.*

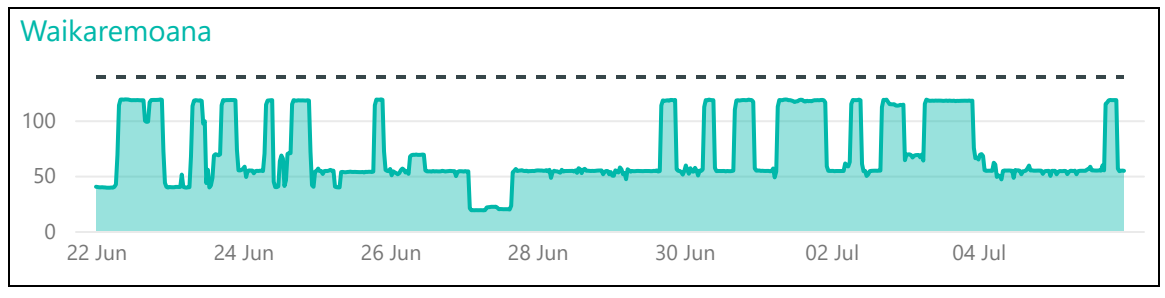
Generation Breakdown - Last Two Weeks

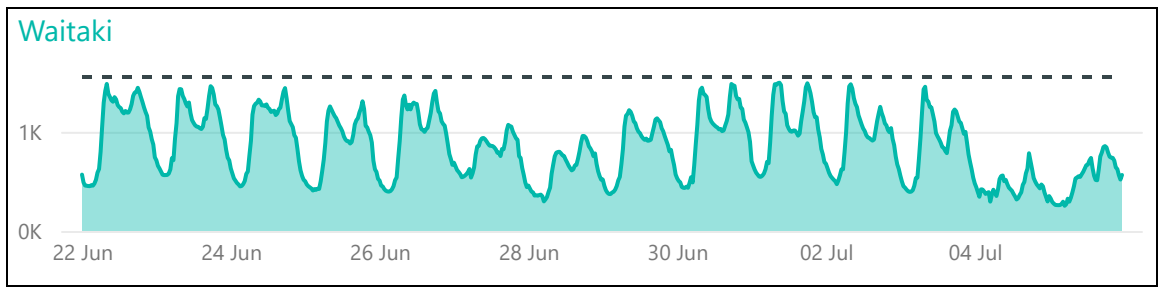
Measured in MW and displayed at trading period level for last 14 days

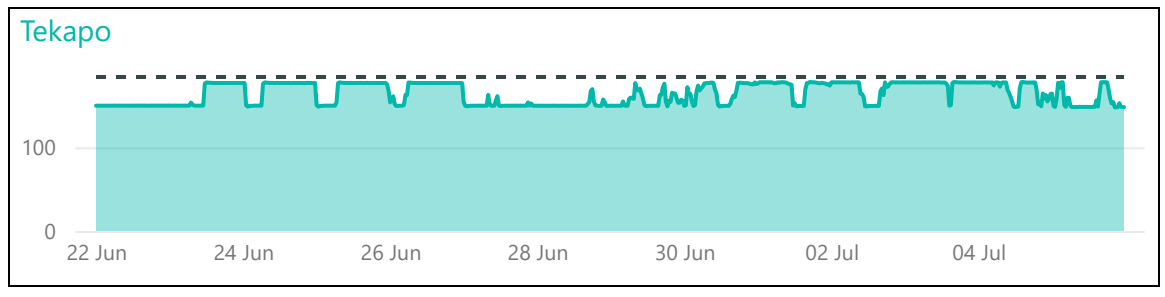


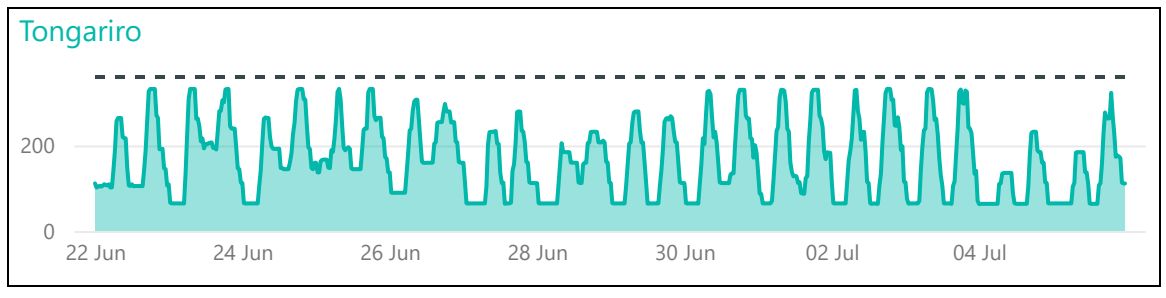


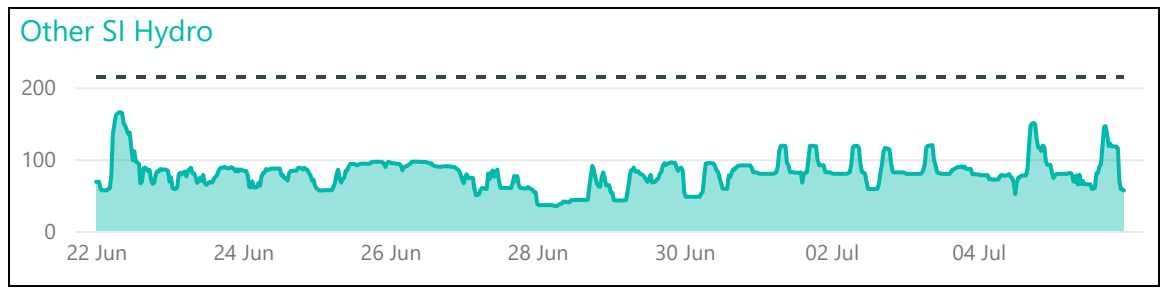


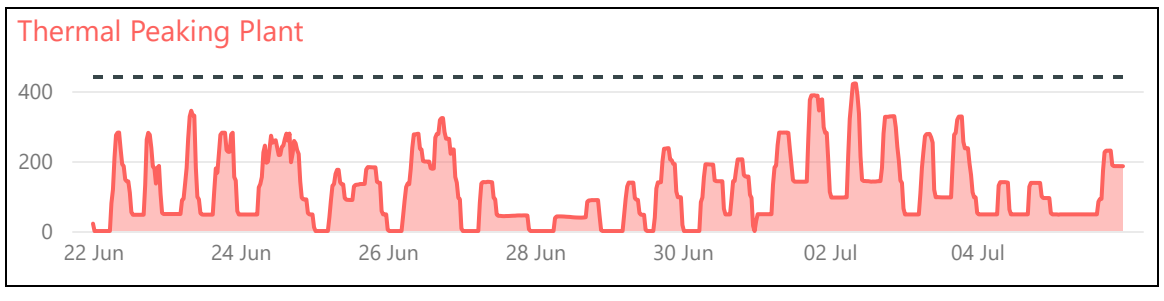


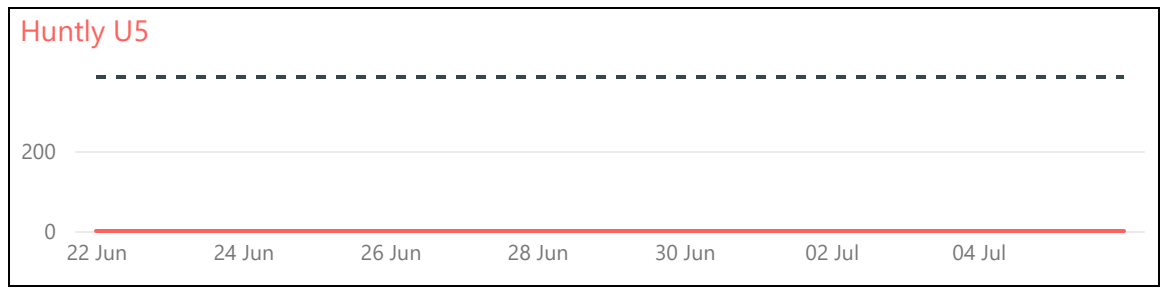


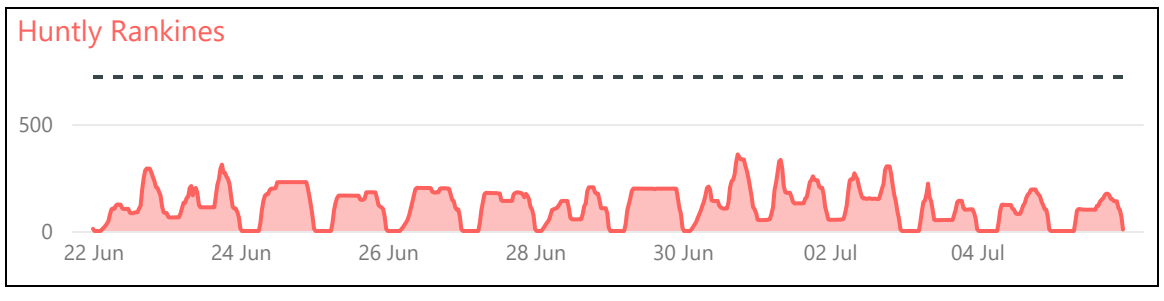


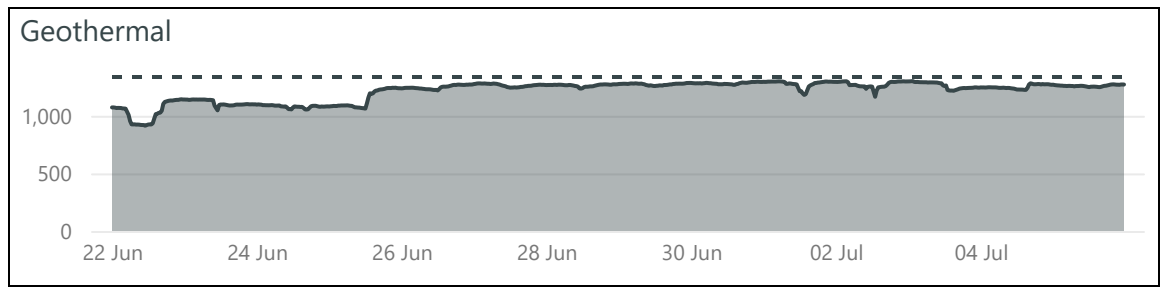


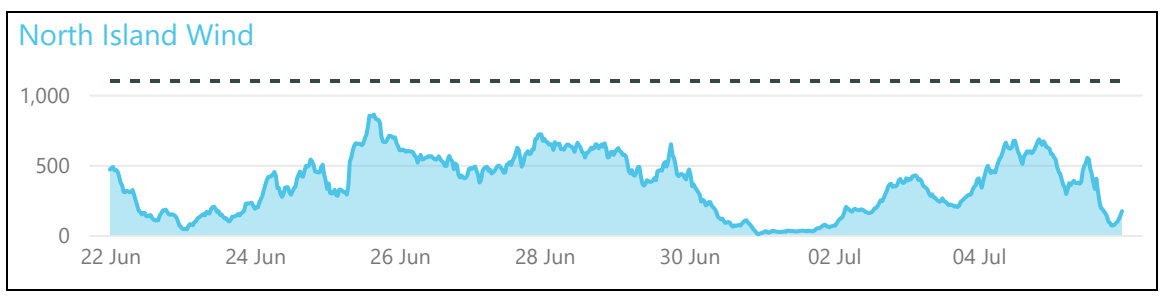


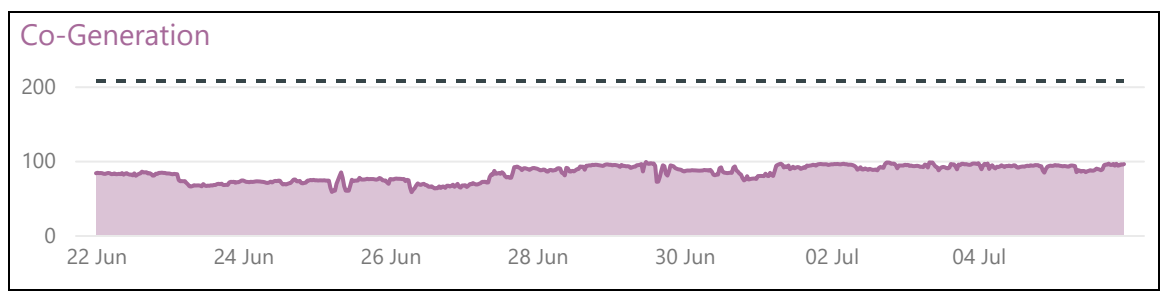


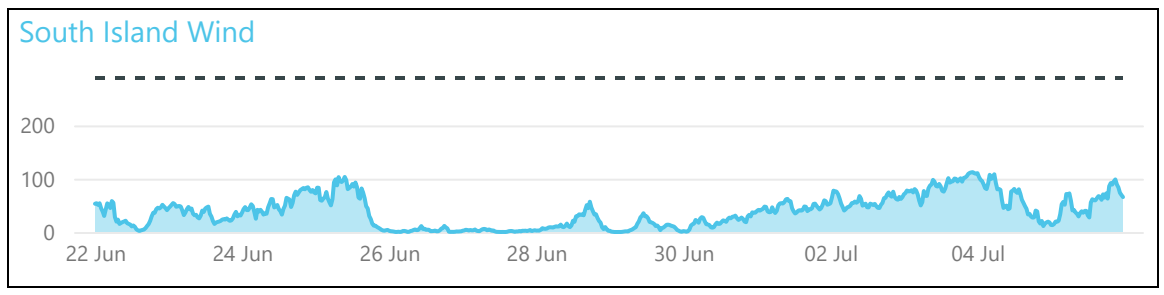


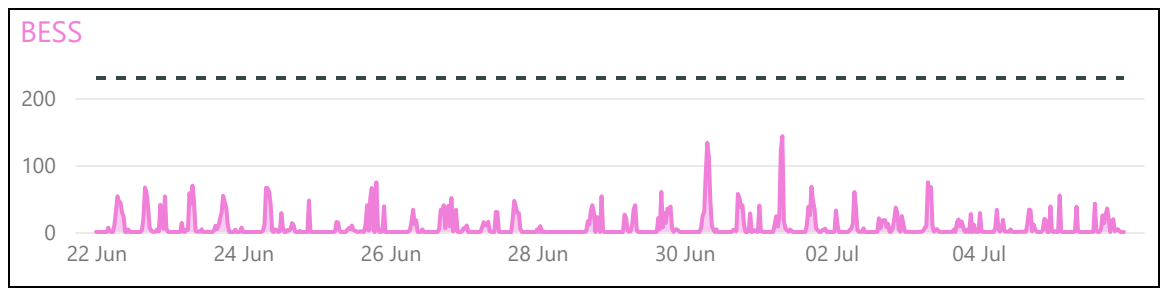


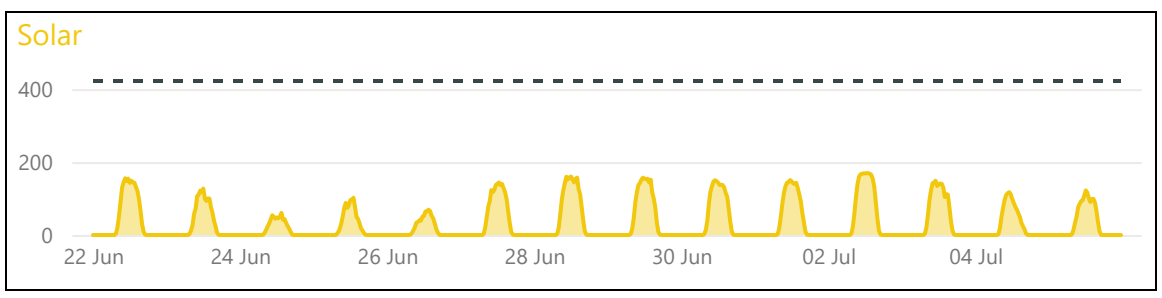






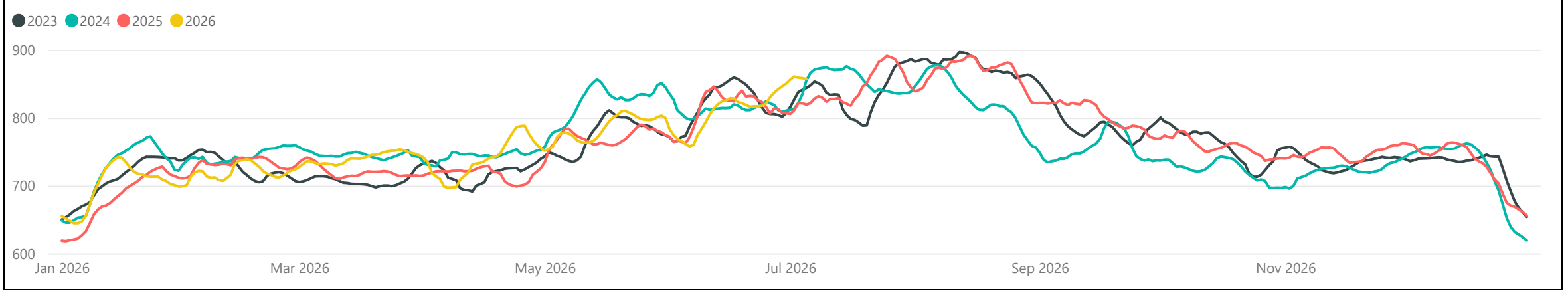




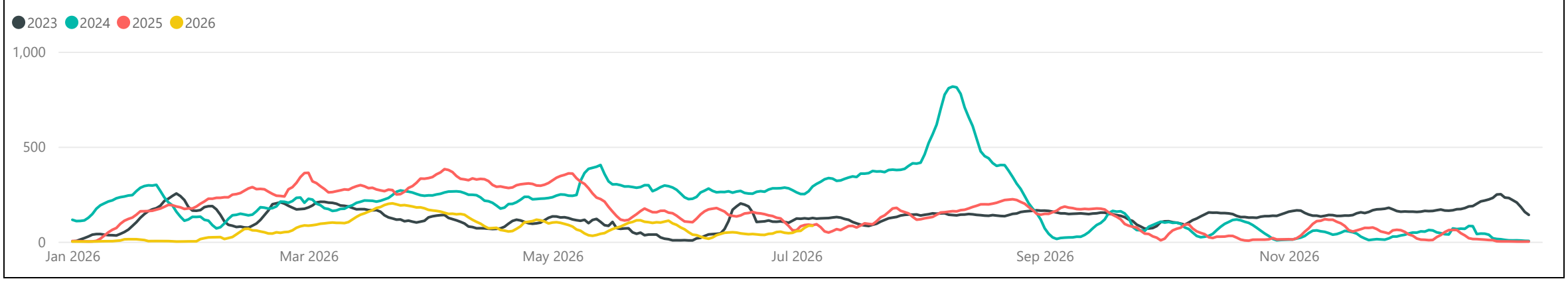


Weekly Profiles

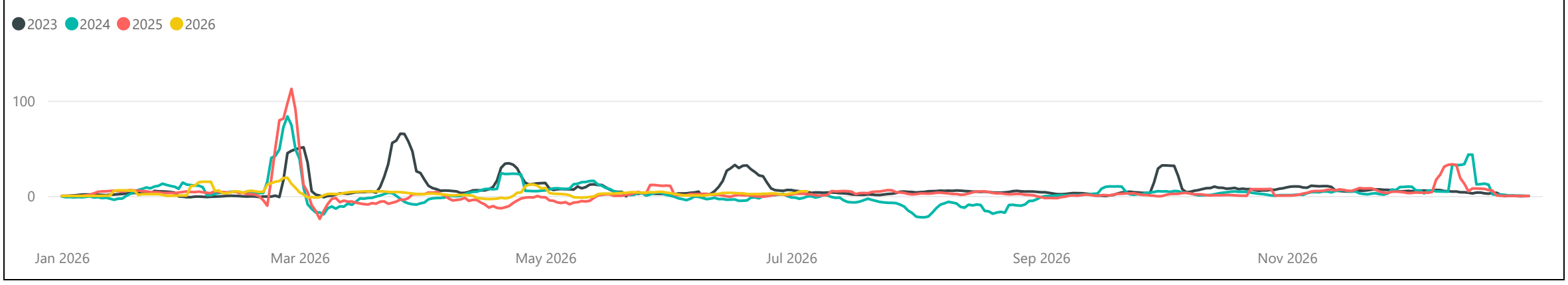
National Weekly Demand - GWh - 7 Day Rolling



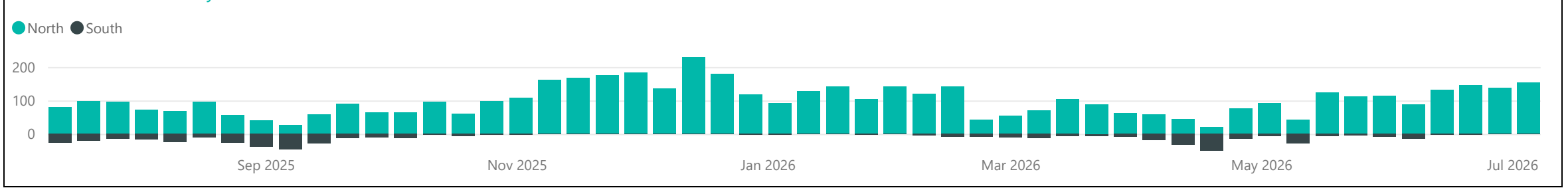
OTA2201 Weekly Rolling Average Spot Price - $/MWh



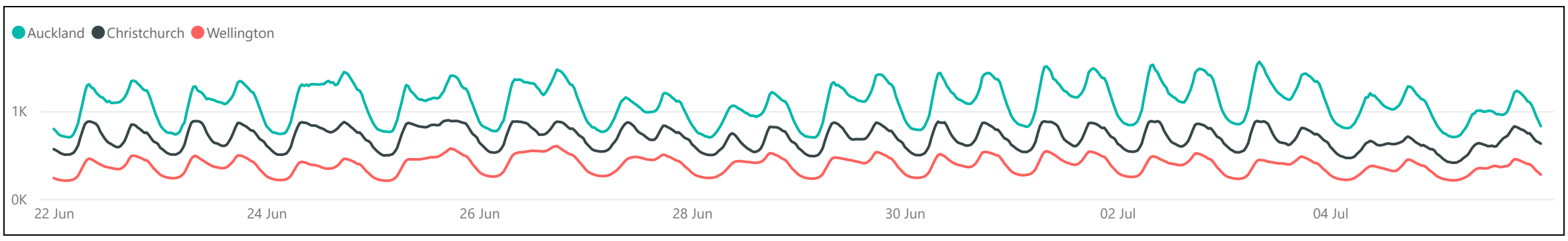
Weekly Rolling Price Separation (HAY2201 - BEN2201) - $/MWh



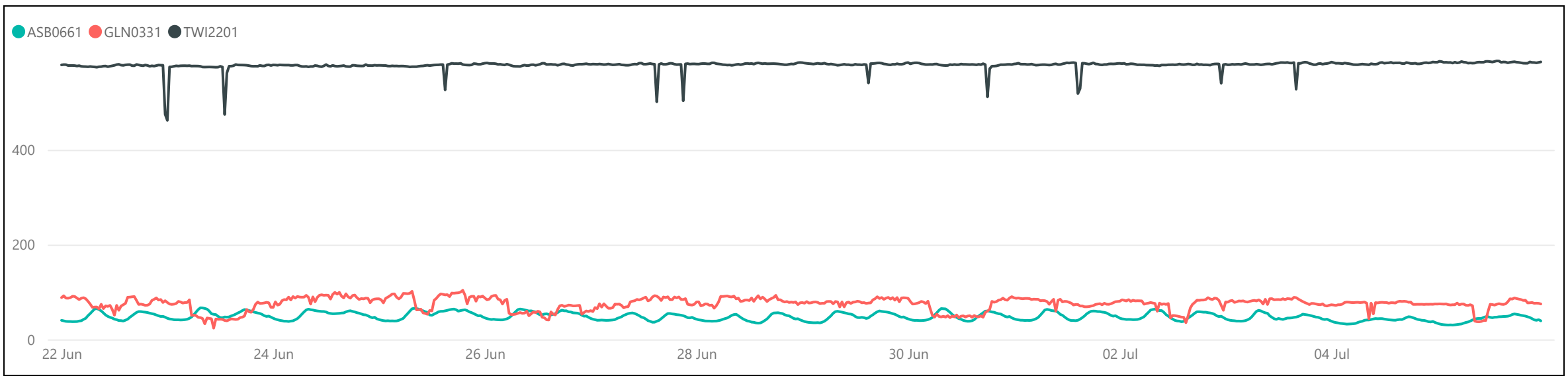
HVDC Transfer - Weekly GWh



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



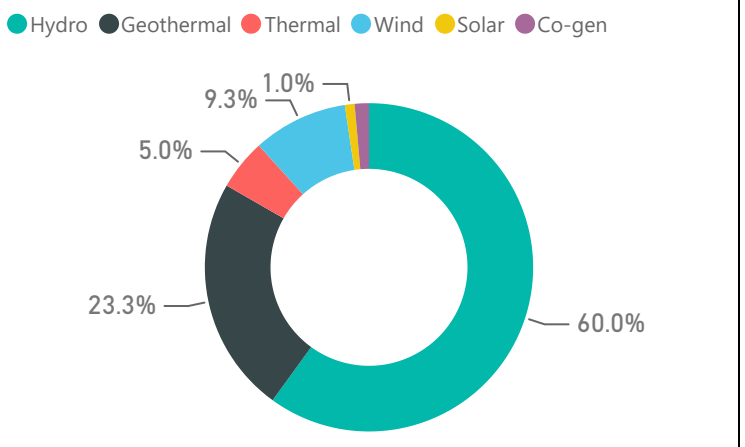
Non-Conforming Load Profiles - Last Two Weeks *Measured in MW shown by GXP*



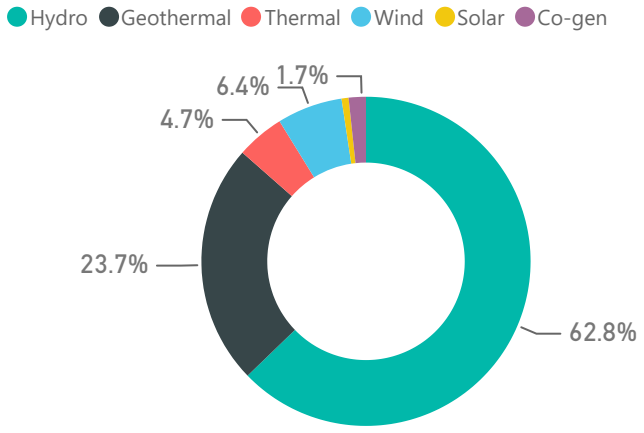
TRANSPOWER

Generation Mix

Last 52 Weeks Generation Mix - Weekly GWh



Last 7 Days Generation Mix - Weekly GWh



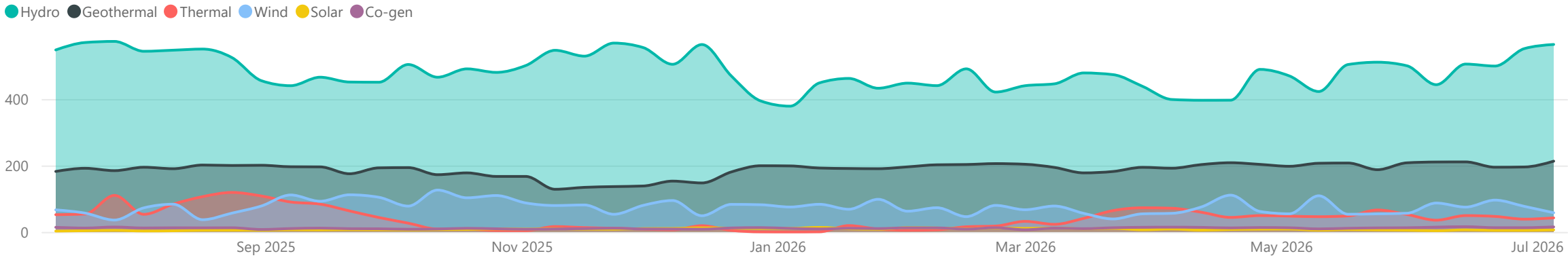
Average Metrics Last 7 Days

Renewable Percentage	CO2e Tonnes/Week	CO2e g/kWh
94%	48,480	52.4

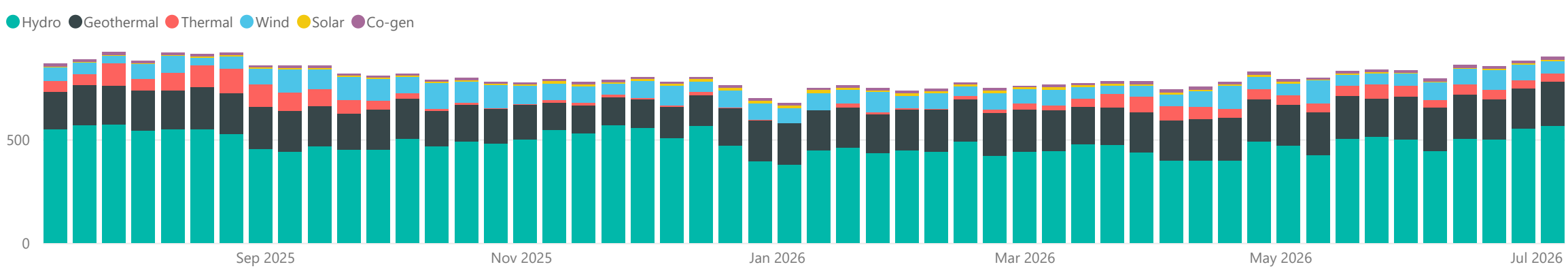
Average Metrics Last 52 Weeks

Renewable Percentage	CO2e Tonnes/Week	CO2e g/kWh
94%	40,155	48.7

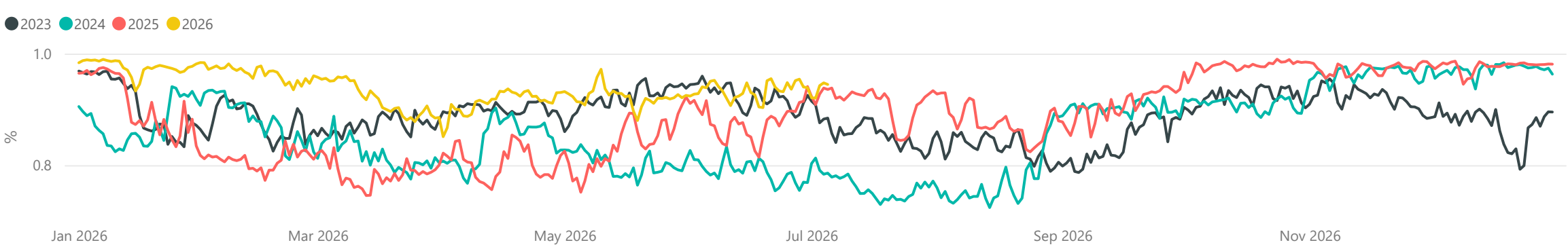
Weekly Generation Mix - GWh



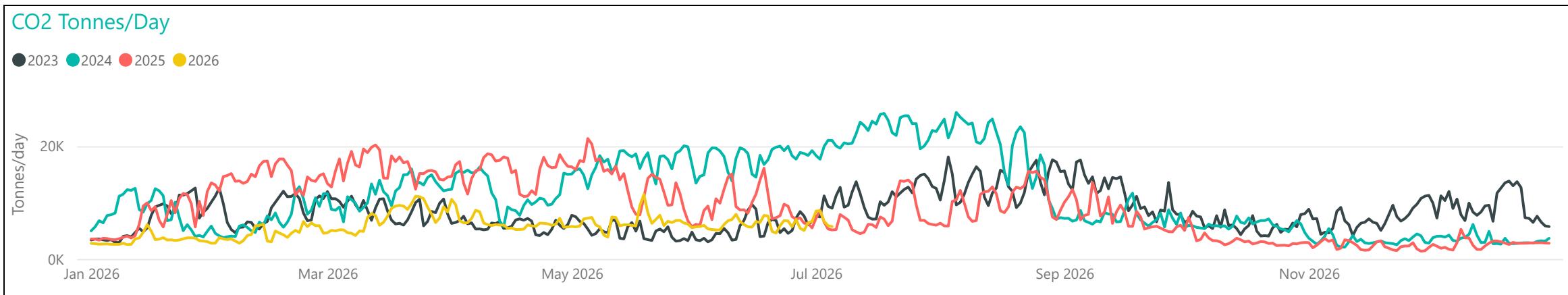
Weekly Generation Mix - GWh



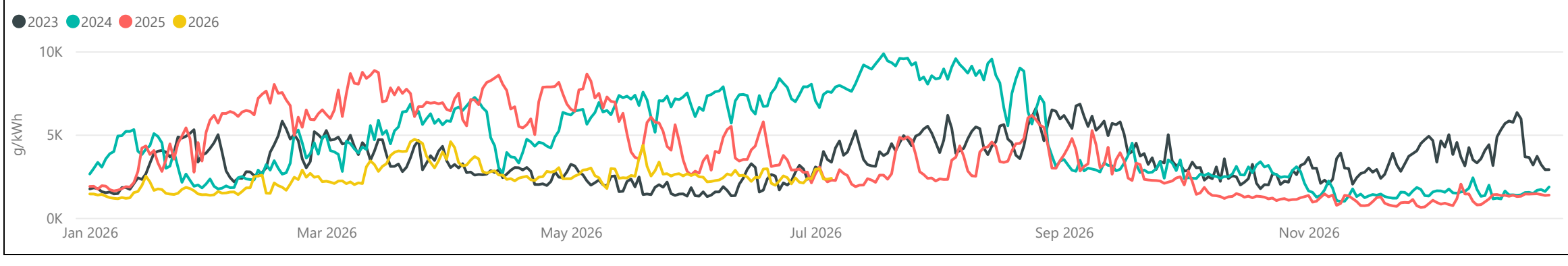
NZ Renewable Percentage



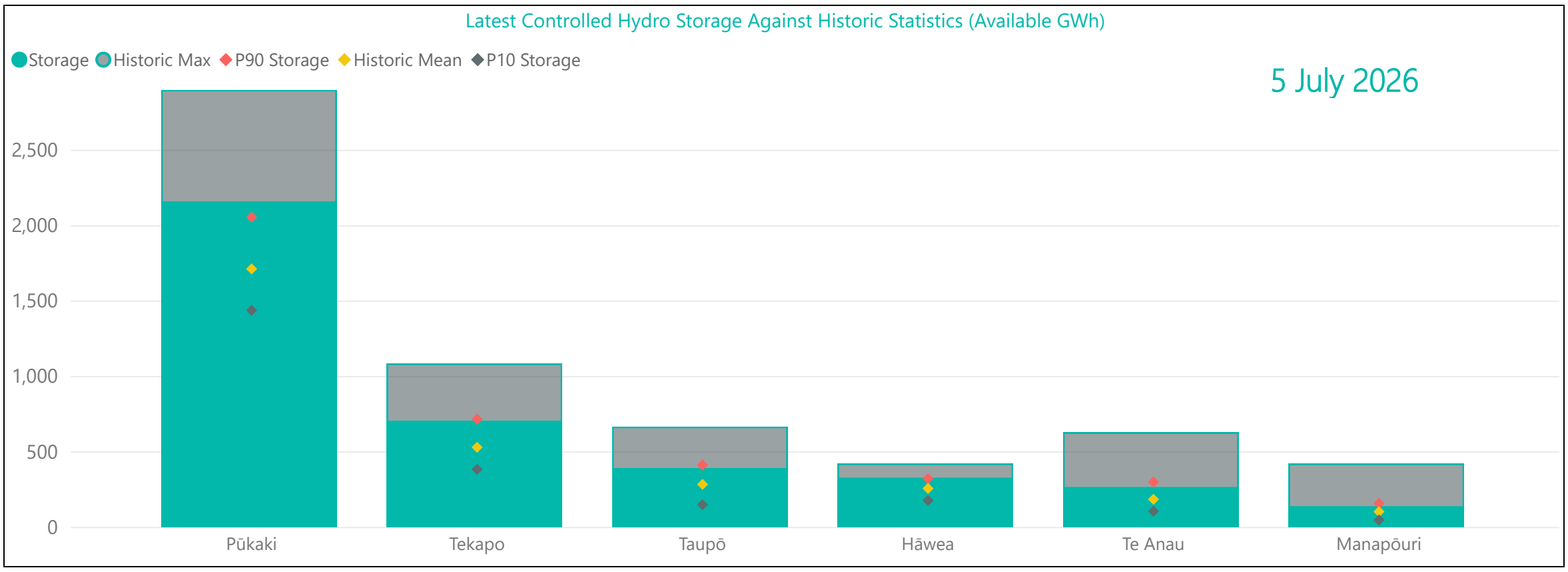
CO2 Tonnes/Day

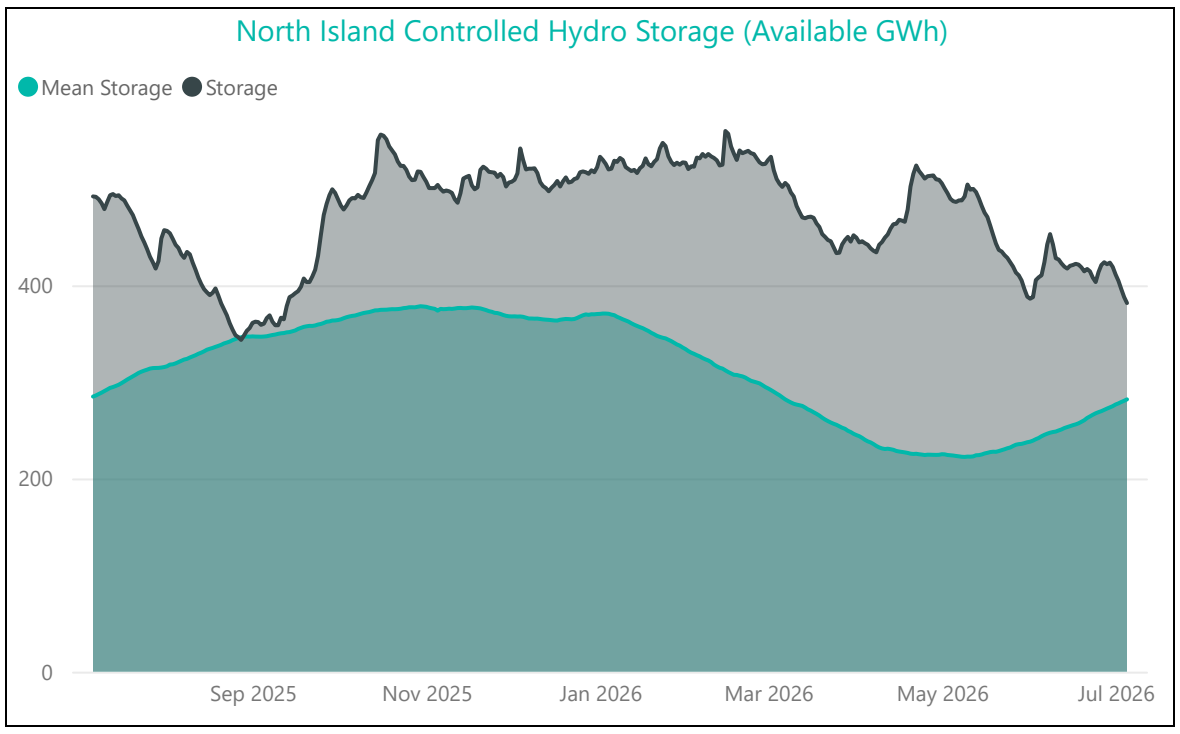


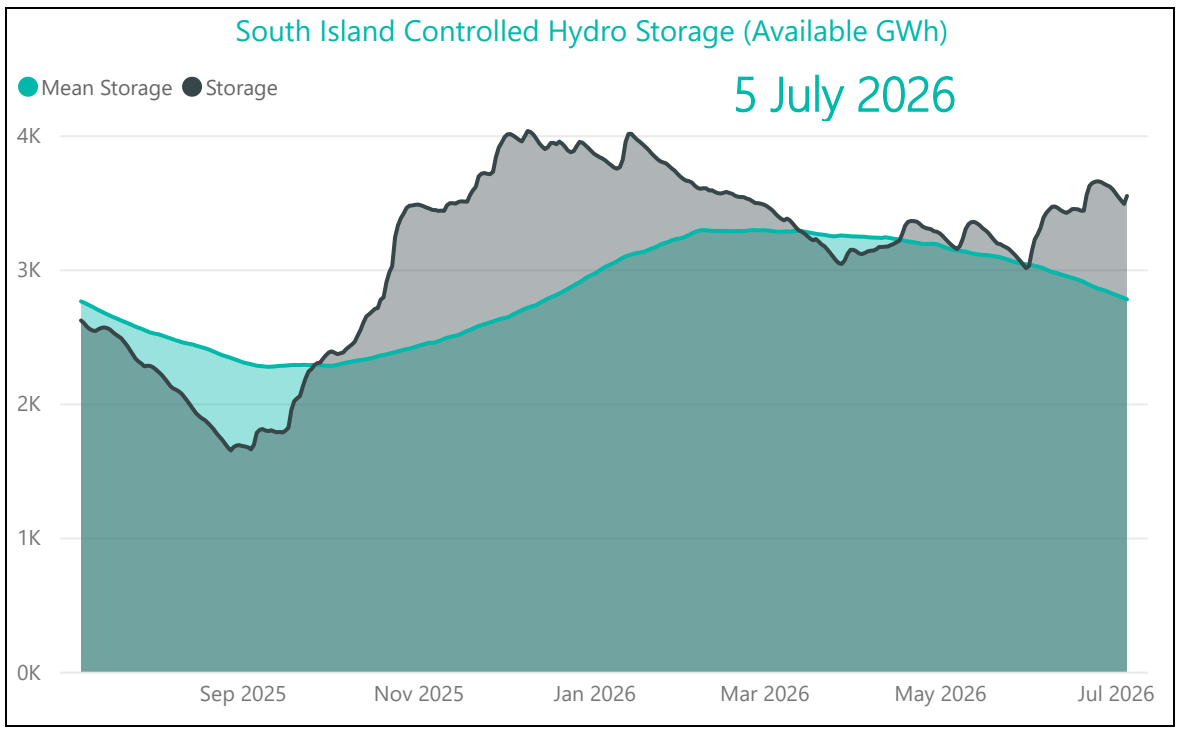
CO2 g/kWh

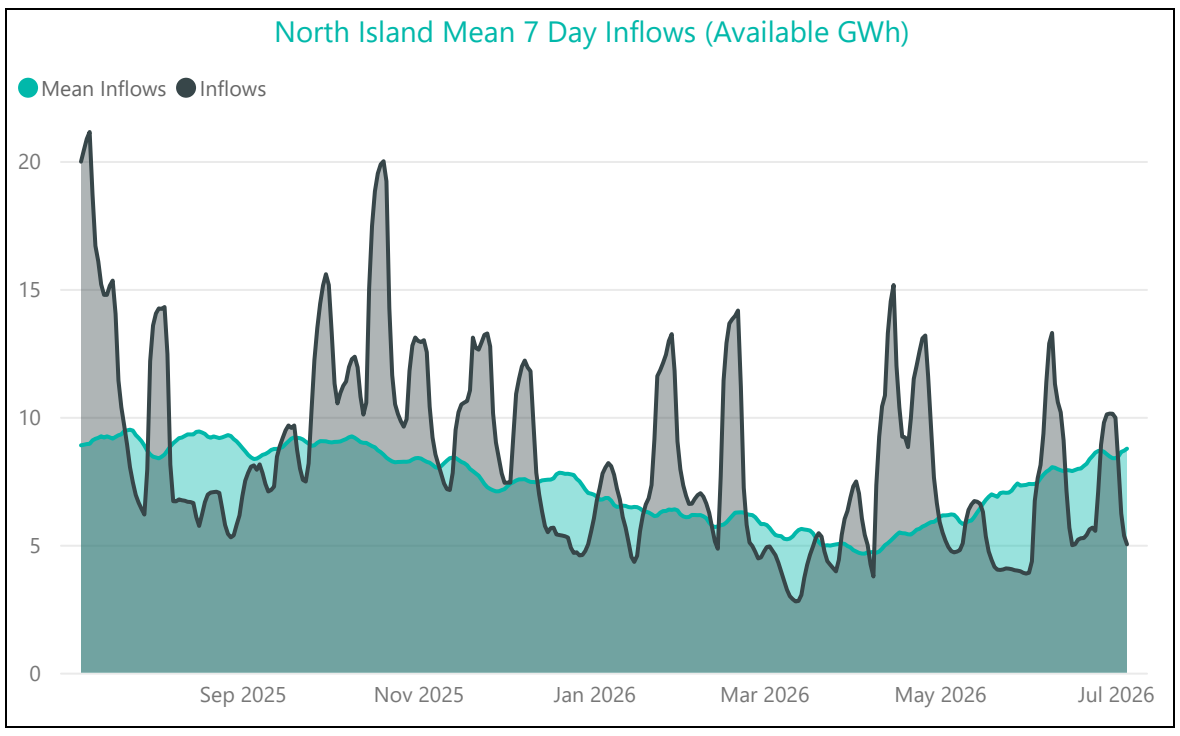


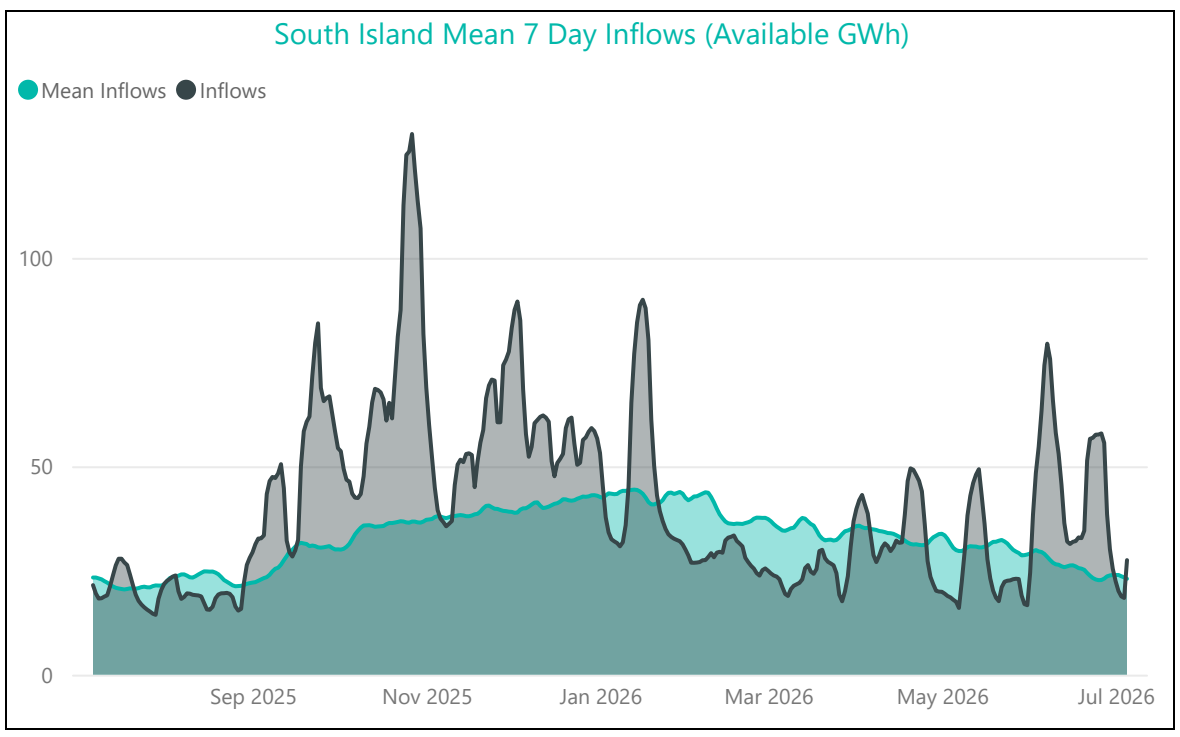
Hydro Storage











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

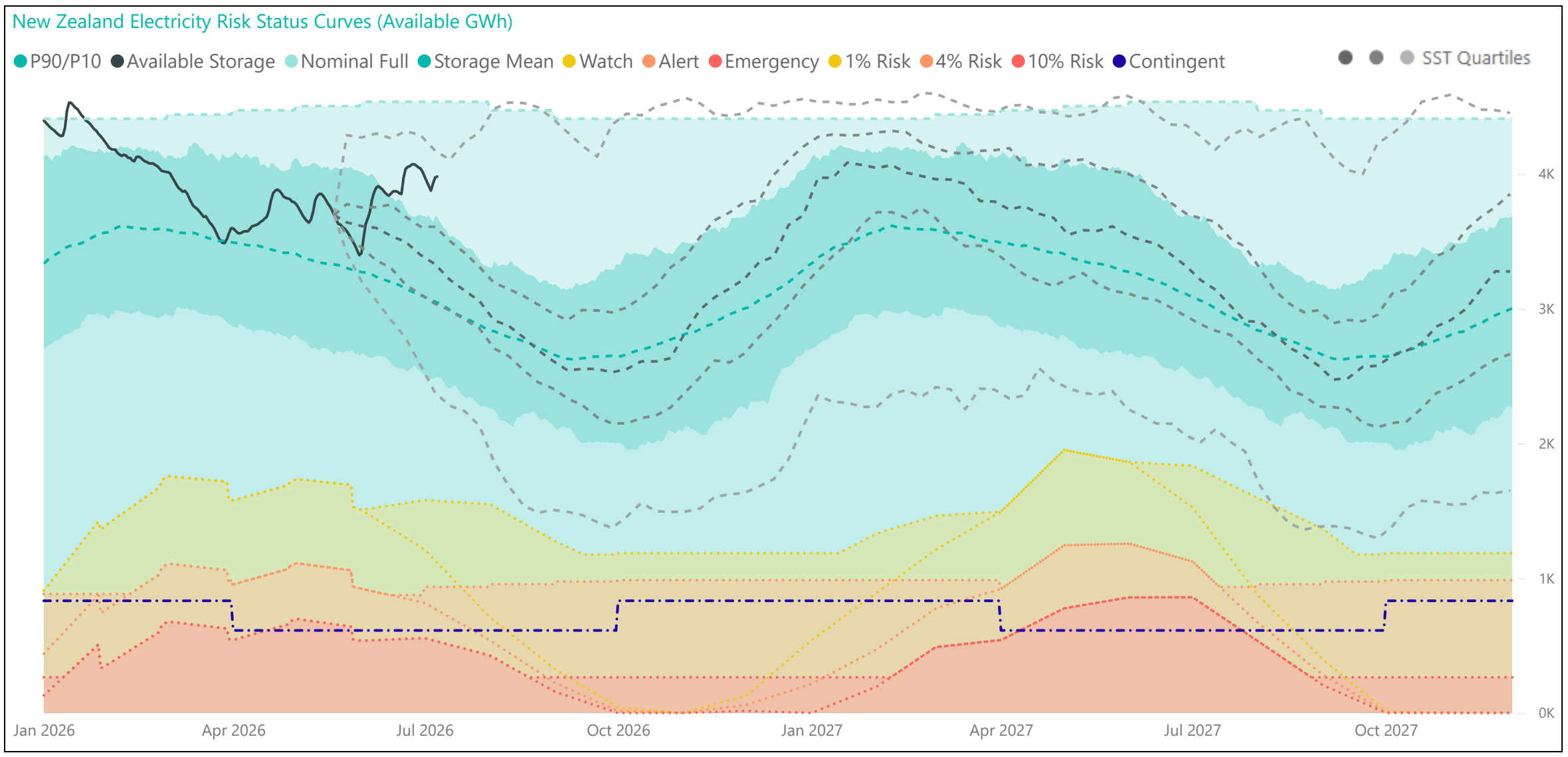
For any inquiries related to security of supply contact market.operations@transpower.co.nz

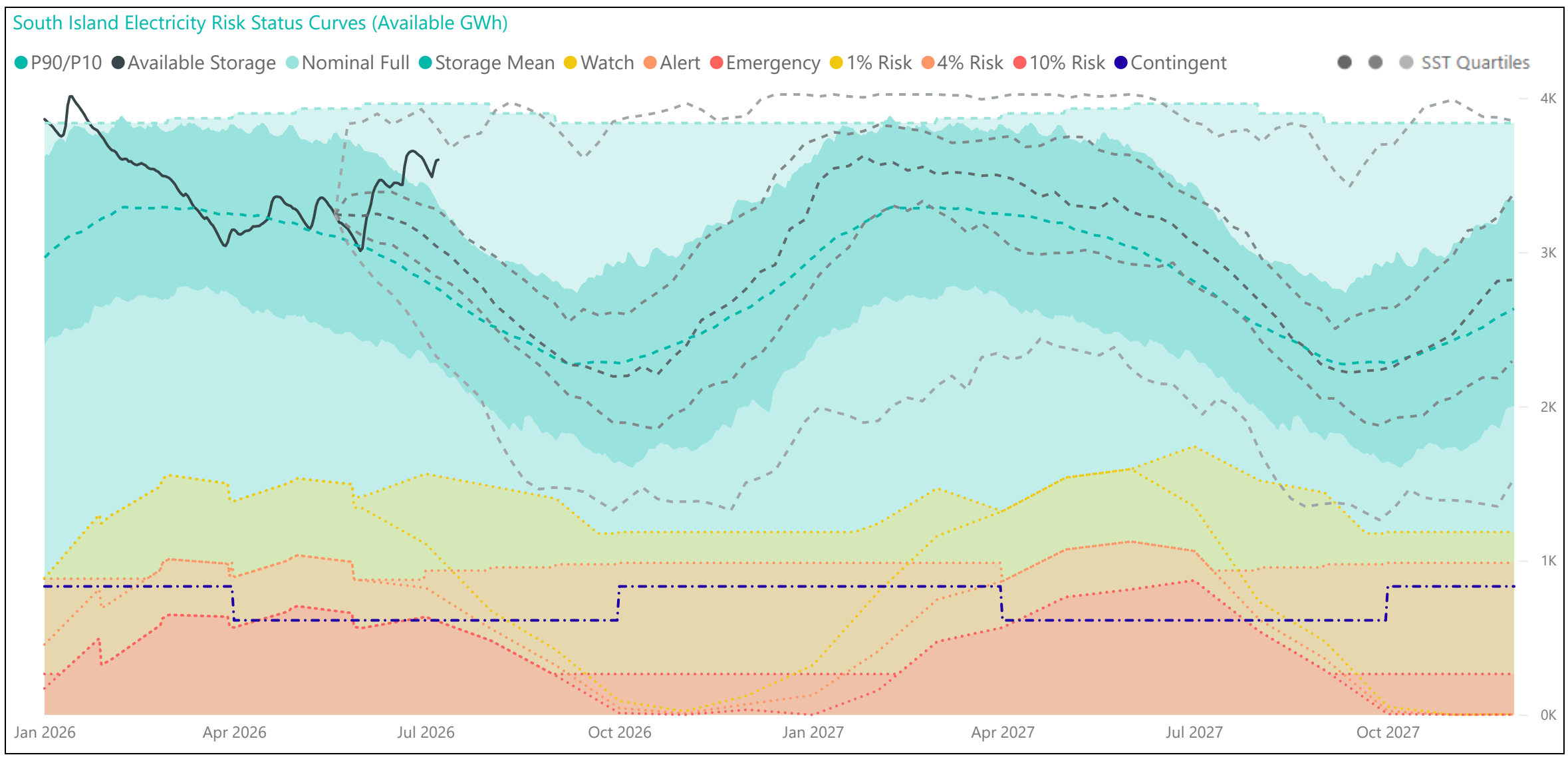
Hydro data used in this report is sourced from *NZX Hydro*.

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





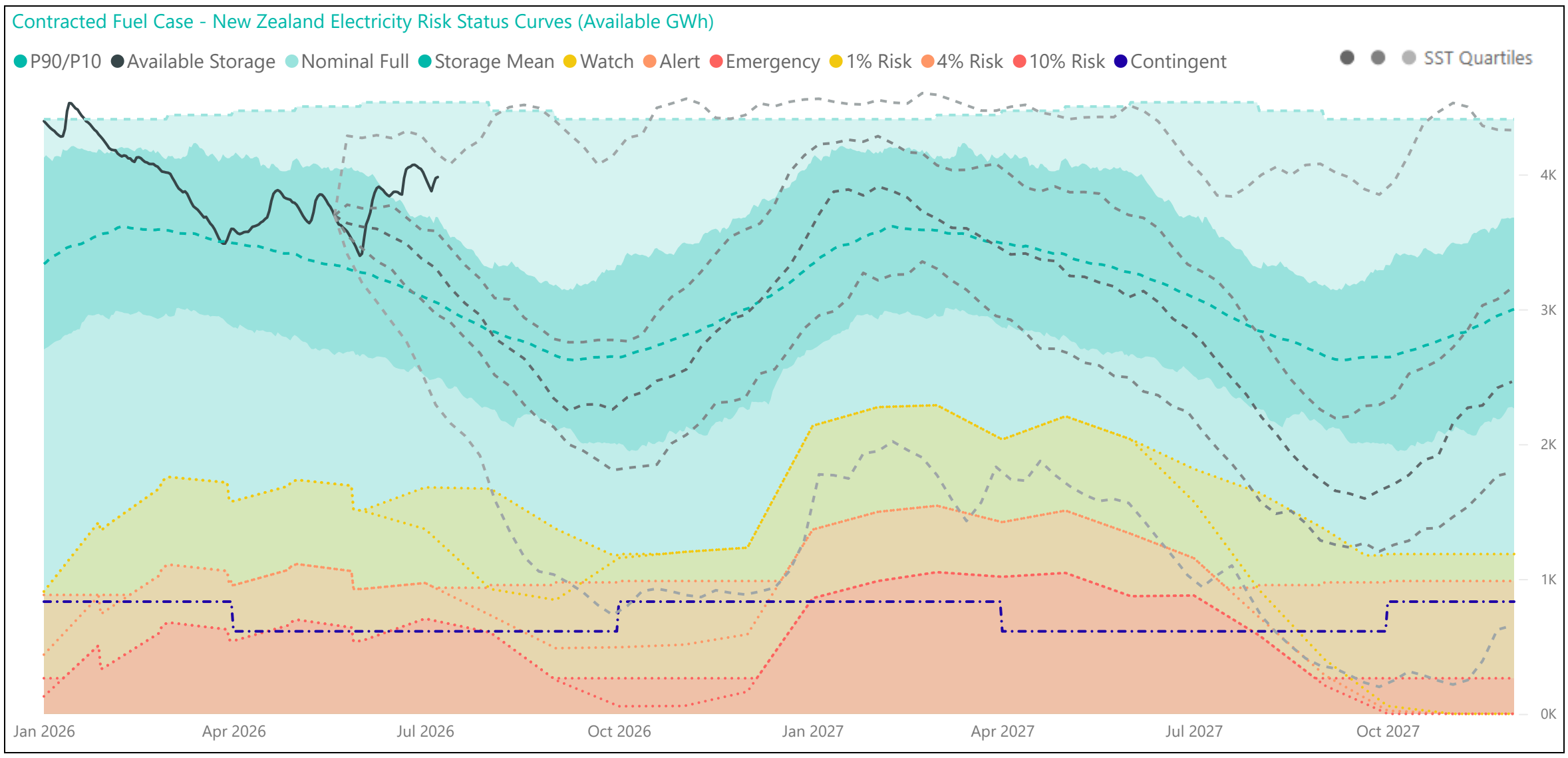
Electricity Risk Curve Explanation:

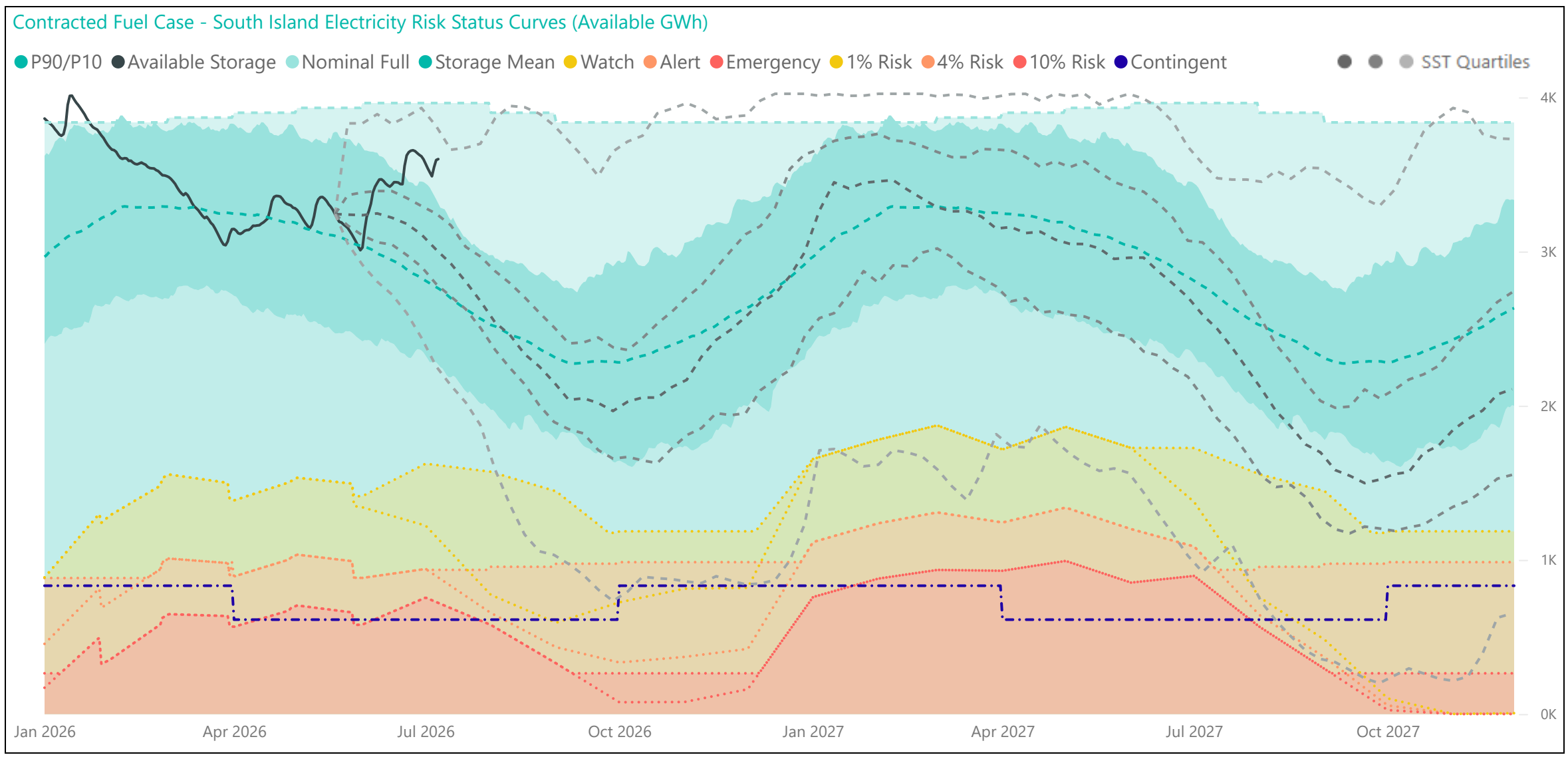
Watch Curve - The maximum of the one percent risk curve or the Alert curve plus the greater of the Watch adder or the worst-case simulated storage drop
Alert Curve - The maximum of the four percent risk curve and the floor and buffer
Emergency Curve - The maximum of the 10 percent risk curve and the 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, and the buffer as specified in the SOSFIP.

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).

Electricity Risk Curves - Contracted Fuel Case





Electricity Risk Curve Explanation:

Watch Curve - The maximum of the one percent risk curve or the Alert curve plus the greater of the Watch adder or the worst-case simulated storage drop
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

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, and the buffer as specified in the SOSFIP.

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).