



Market Operations Weekly Report - Week Ended 2 August 2026

Overview

Last week was a week of power system records with new highs for demand, HVDC transfer, battery injection and solar generation. There were low residuals during last week's record-setting demand peaks, with low wind generation and some thermal generation not running.

In this week's insight we discuss the Low Residual Customer Advice Notices (CANs) sent last week and the industry response.

Security of Supply

National hydro storage decreased slightly from 134% to 132% of the historic mean last week. South Island storage decreased from 137% to 135% and North Island storage decreased from 111% to 105%. Storage levels remain well above average nationally, supported by continued above-average inflows into the South Island catchments.

Capacity

Residuals during the start of last week were low with a cold snap leading to increased demand, low wind generation, and some thermal generation not running. The lowest residual of 58 MW occurred during the evening of Monday 27 July.

The N-1-G margins in the NZGB forecast show tighter spots continuing 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 increased from 875 GWh last week to 893 GWh this week. The highest demand peak occurred at 8:00 am on Monday 27 July, at a record-breaking 7,131 MW.

Weekly Prices

The average wholesale electricity spot price at Ōtāhuhu last week increased from \$64/MWh the week prior to \$79/MWh. Wholesale prices peaked at \$3,296/MWh at Ōtāhuhu at 5:30 pm on Monday 27 July during the lowest residual period for the week.

There has been significant price separation between the North and South Island due to high HVDC transfer going northwards. The reserve price separation was highest at Monday 27 July 5:30 pm.

Generation Mix

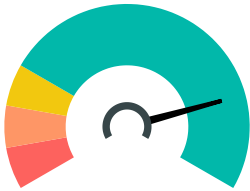
Wind generation increased from 7% of the generation mix to 9%. Hydro generation contributed 63%, above its yearly average of 60%. Thermal generation remained at 3% of the mix. Geothermal generation contributed 23% last week.

Solar and battery generation each reached new records, of 238 MW and 170 MW respectively.

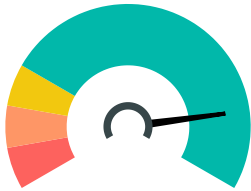
HVDC

HVDC flows last week were entirely northward. Overall, 258 GWh was transferred north. This is the highest weekly northward transfer total since June 2023, which was also a time of high hydro storage and high demand. A record high HVDC transfer for a single trading period, of 1,137 MW northward, occurred on Monday 27 July at 4:30pm.

New Zealand Energy Risk

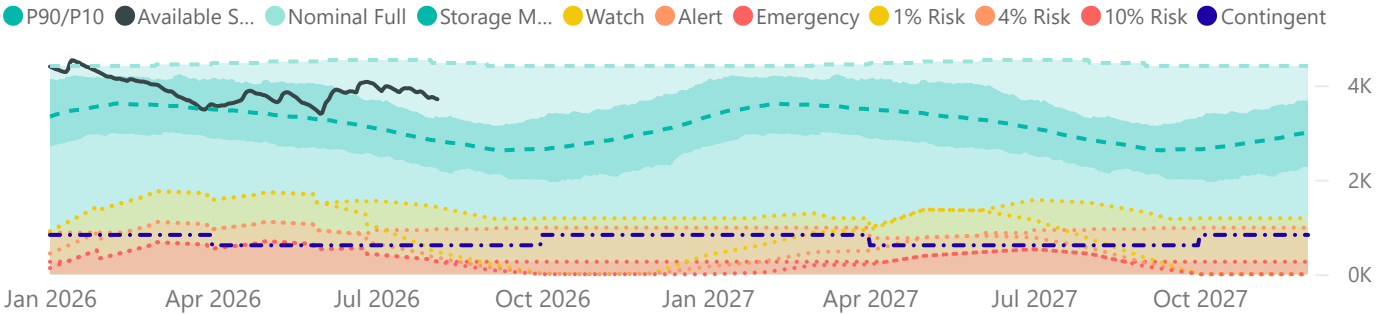


South Island Energy Risk

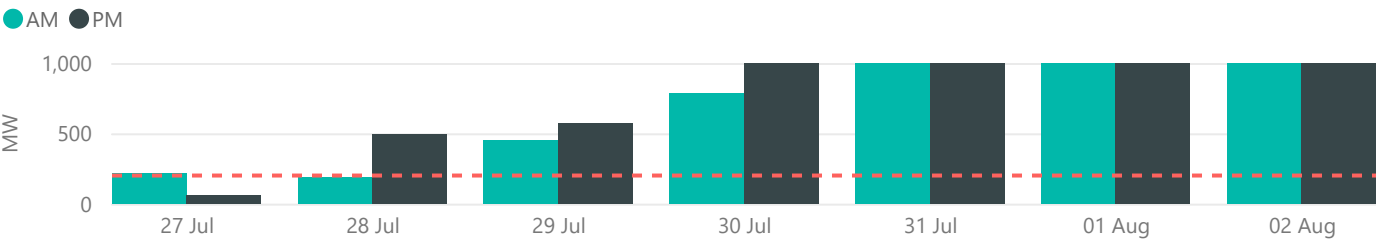


Normal Watch Alert Emergency

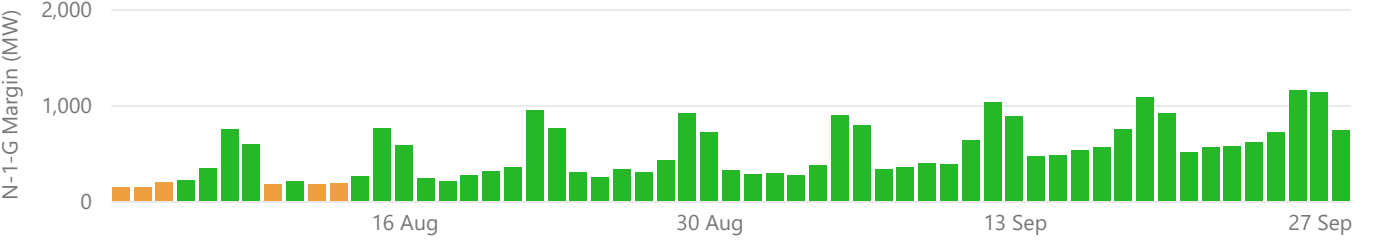
New Zealand Electricity Risk Status Curves (Available GWh)



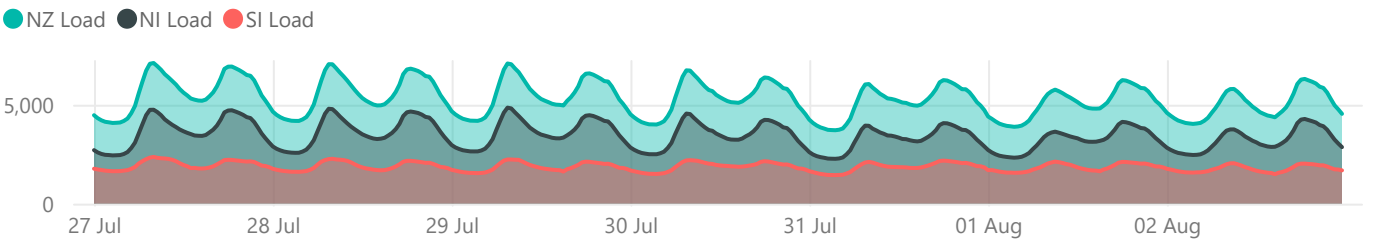
Lowest Residual Points - MW



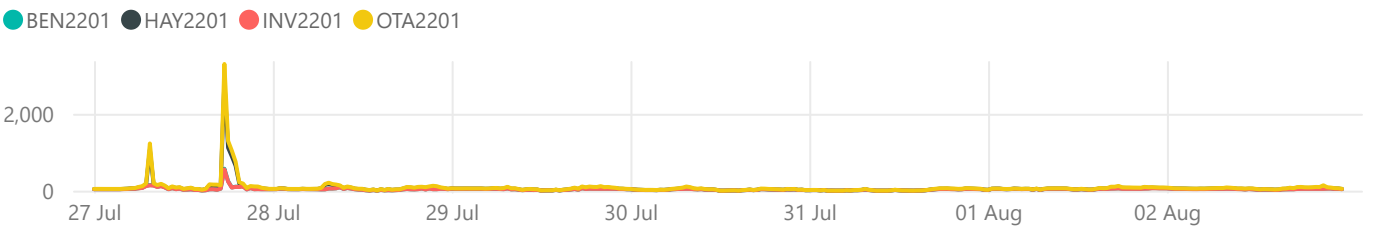
NZGB Look-Ahead (excluding next 7 days)



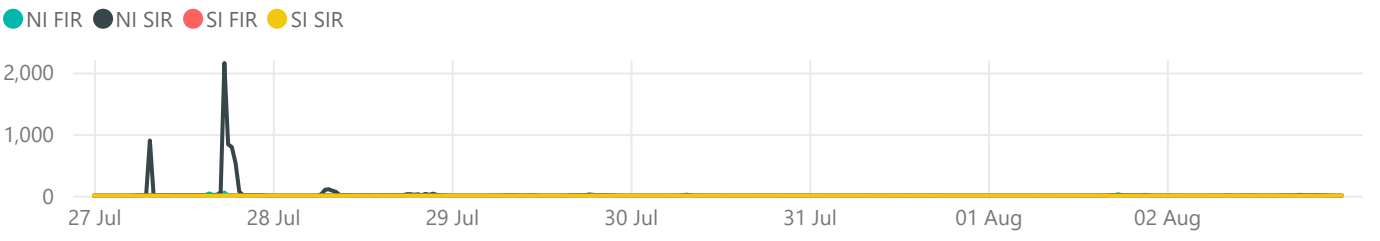
National Demand by Trading period - MW



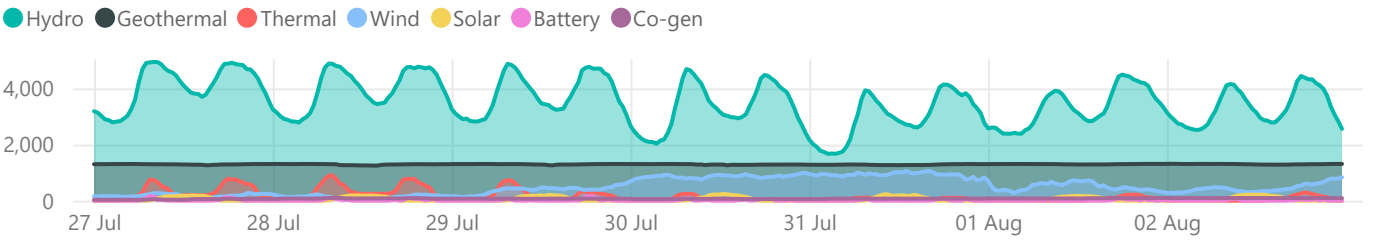
Energy Prices - \$/MWh



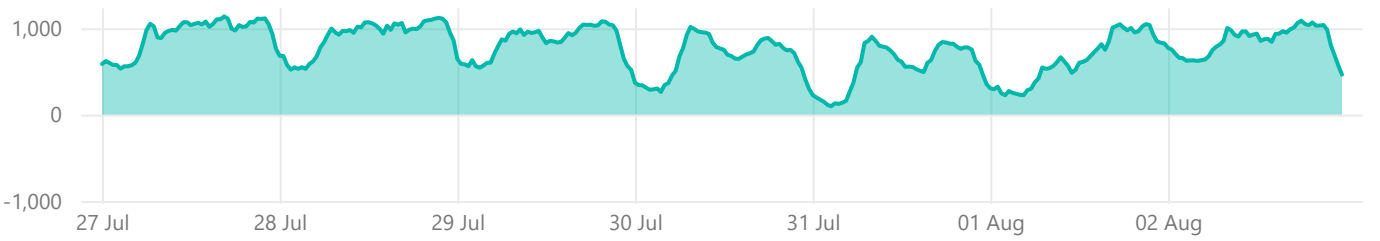
Reserve Prices - \$/MW

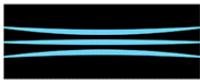


Generation - MW



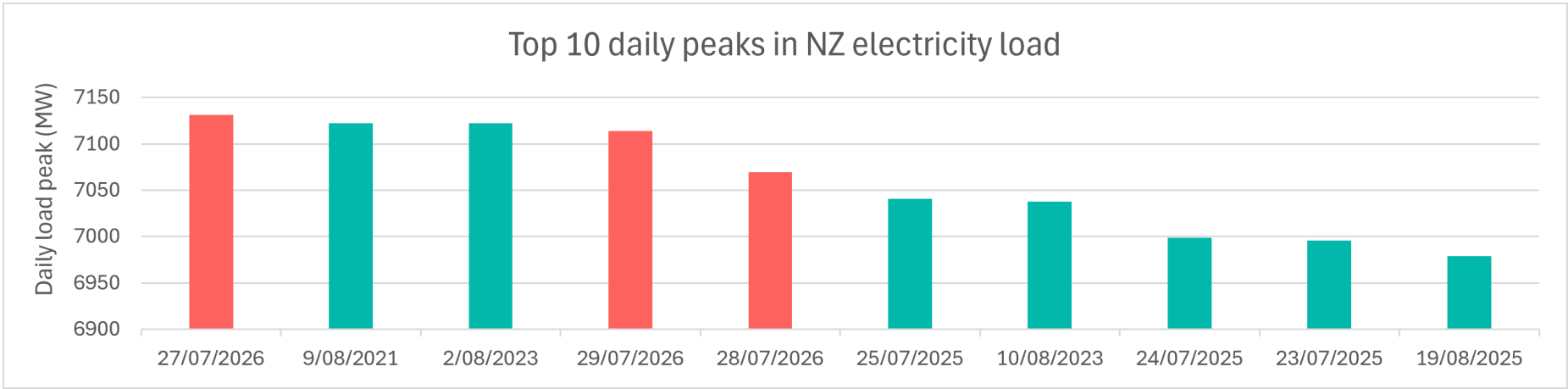
Net HVDC Transfer - MW (Northward positive)





Weekly Insight - Low Residual Customer Advice Notices for the week of Monday 27 July

On Monday, Tuesday and Wednesday last week, morning load reached record and near-record highs. These were the highest, fifth highest and fourth highest ever NZ power system load peaks respectively. They were also the three highest morning peaks ever, with the previous two highest peaks occurring during the evening.

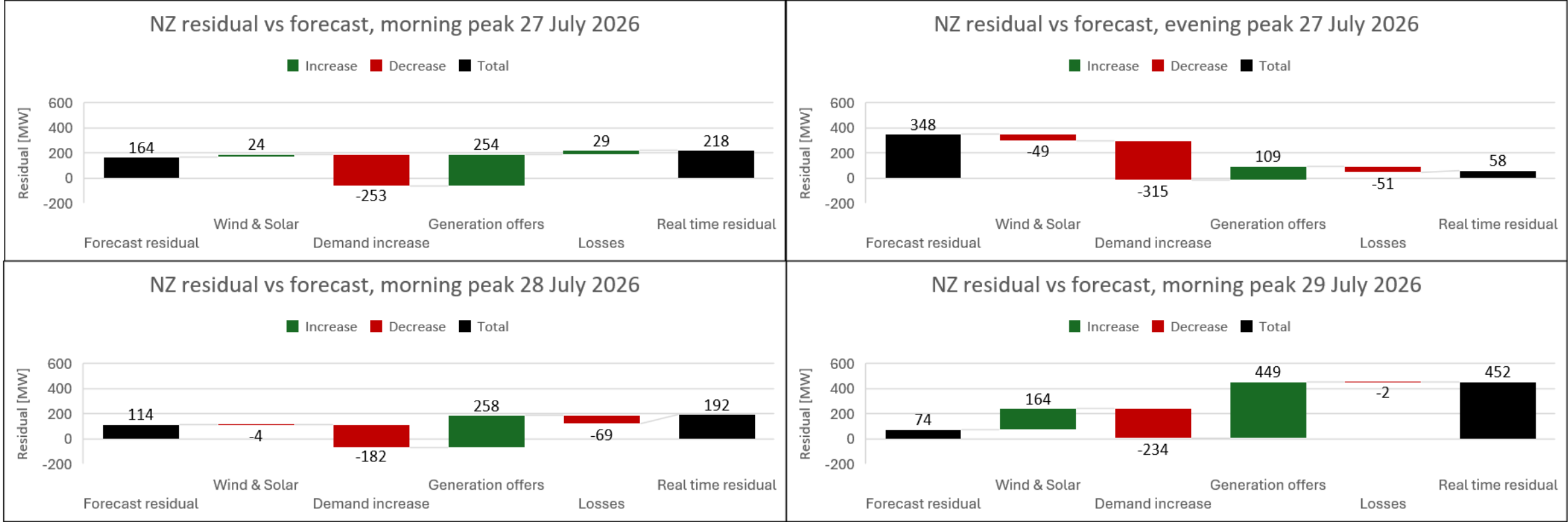


As part of the System Operator’s (SO’s) preparation to meet these high load peaks, we sent customer advice notices (CANs) for low residual situations for Monday morning, Monday evening and Tuesday morning. We also sent a CAN for a potential low residual situation for Wednesday morning. The following table shows when the CANs were sent, the forecast residual, and the lowest residual that occurred in real time.

Peak	CAN issued	Lowest forecast residual	Lowest real-time residual	Time of lowest real-time residual
27 Jul AM	26/07/2026 09:38	149	218	07:45
27 Jul PM	26/07/2026 09:38	176	58	17:50
28 Jul AM	27/07/2026 09:12	114	192	07:45
29 Jul AM	27/07/2026 09:54	74	452	07:40

There was a positive response from industry to the CANs for all four peaks. Generation offers were increased, which helped to increase residual. Difference bids were entered by electricity distribution businesses (EDBs) to inform the SO about quantities of controllable load available on their networks. Controllable load does not count towards residual. It is held in reserve to be used in the event that generation is insufficient to meet demand, to help avoid actual consumer loads being impacted through potential demand management.

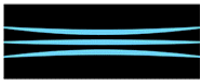
The charts below show how factors affecting residual changed between the CANs being issued and the lowest residual in real time. Changes that increase residual (e.g. higher generation offers) are shown as increases, while changes that decrease residual (e.g. higher demand) are shown as decreases. Demand increased between the CAN being issued and real time for all four peaks, partly as a result of weather forecasts becoming more accurate closer to real time. This is shown in red as a decrease to the residual. Real-time residual was higher than forecast for all peaks except for the evening of 26 July, primarily due to increased generation offers.¹ We thank participants for this response, which ensured the industry collectively navigated record high demand with no impact on consumers.



This week is shaping up for even higher peak demands - updated Wednesday 5 August

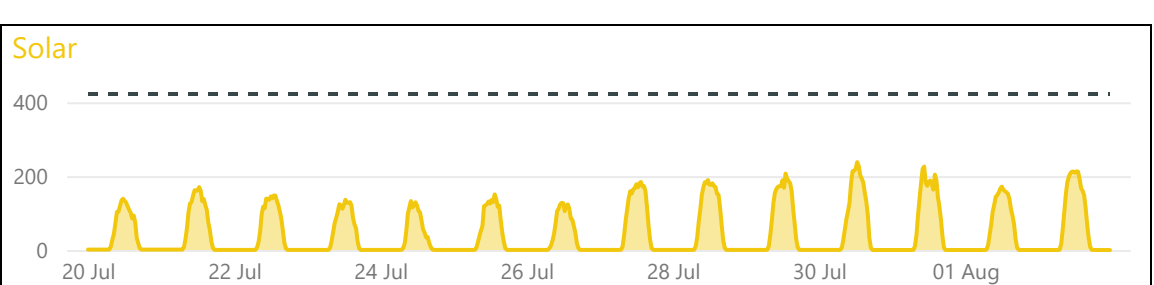
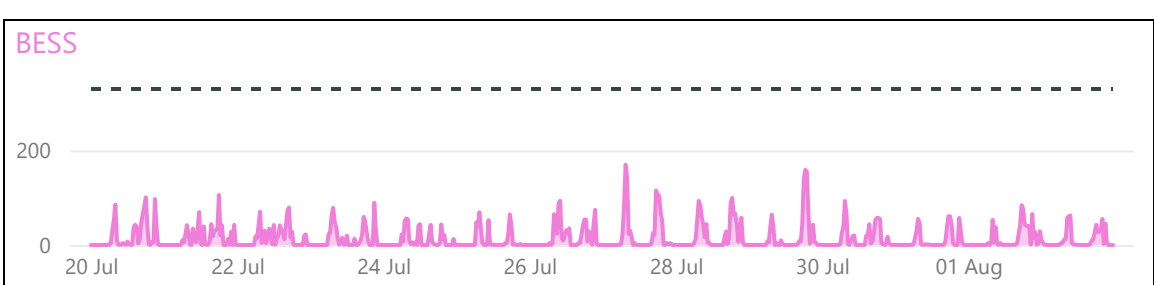
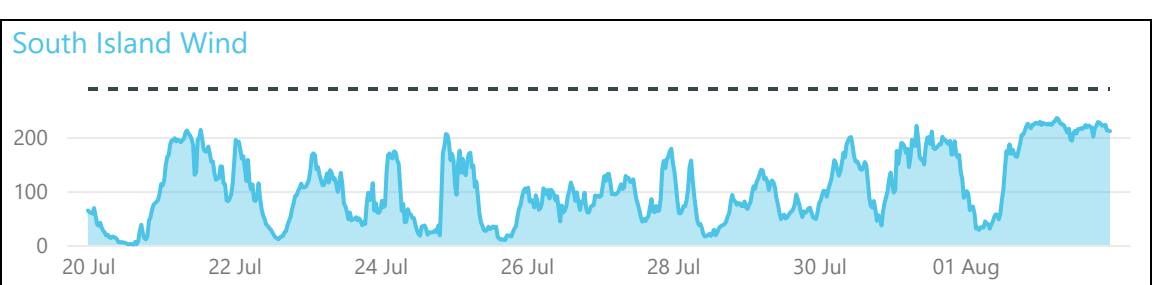
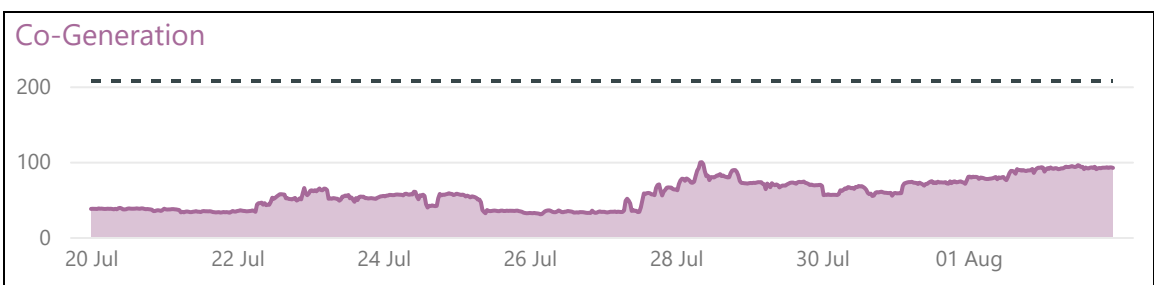
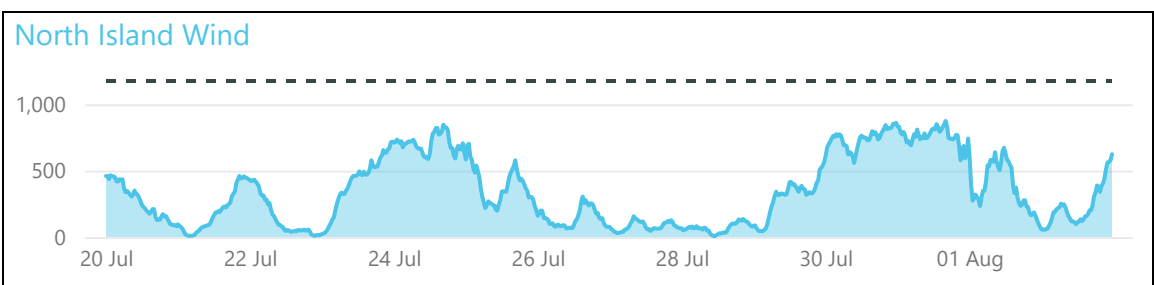
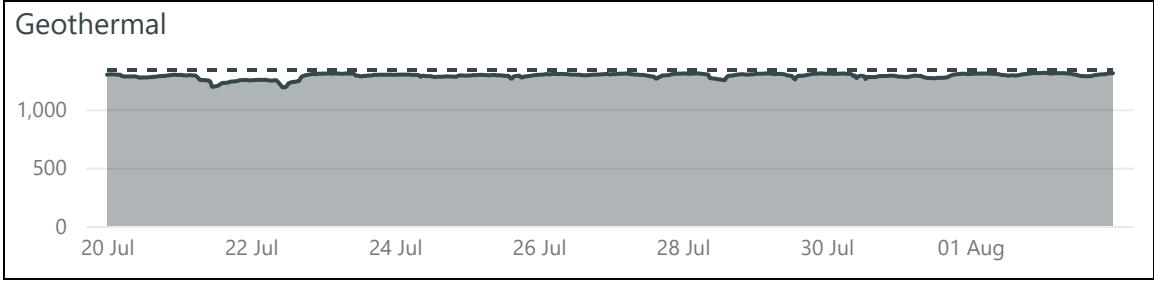
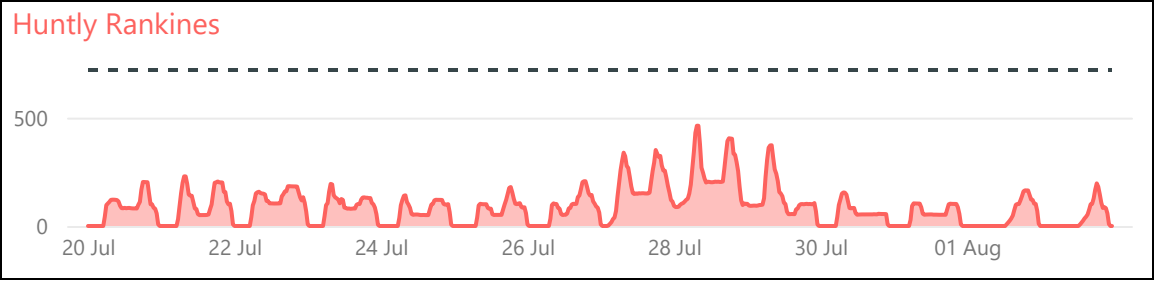
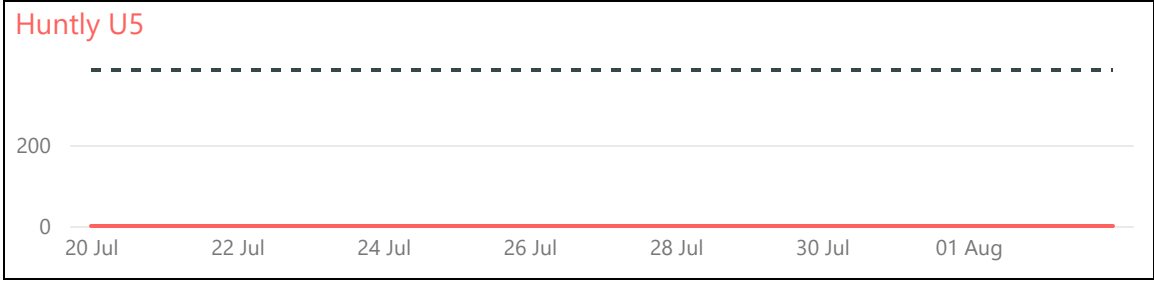
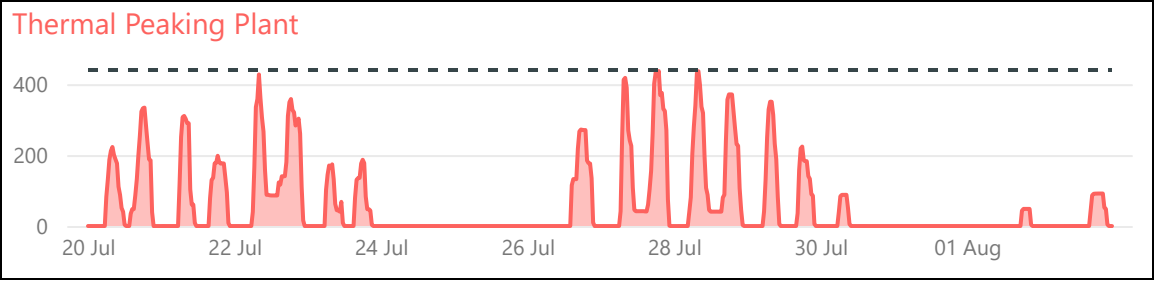
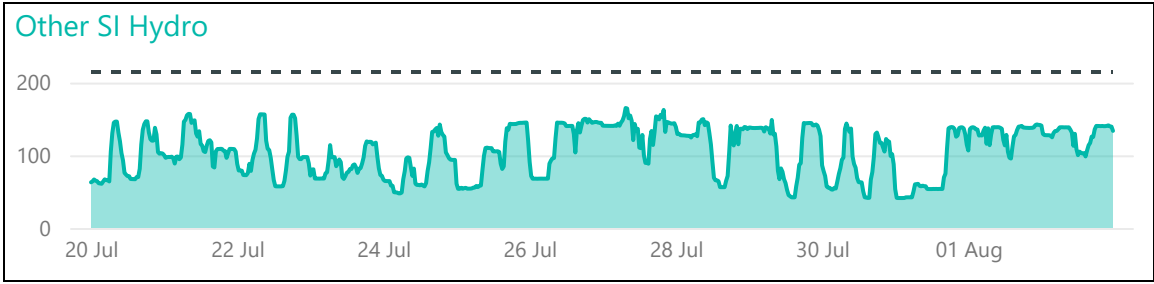
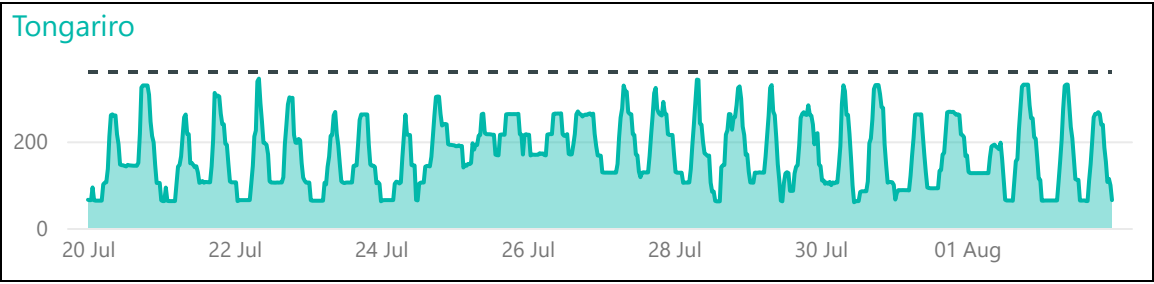
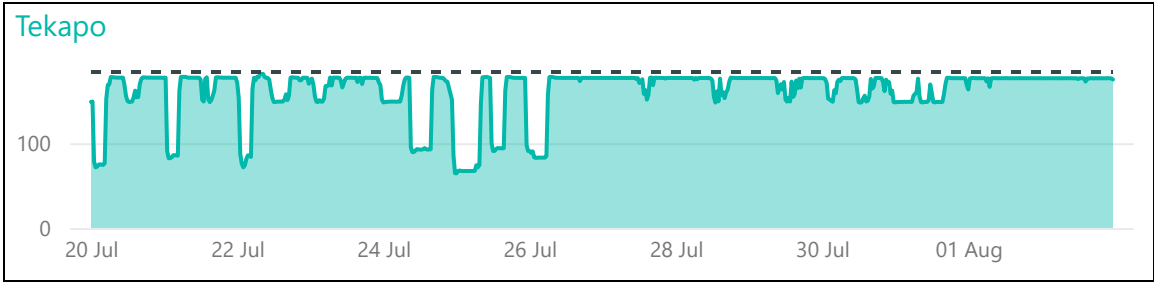
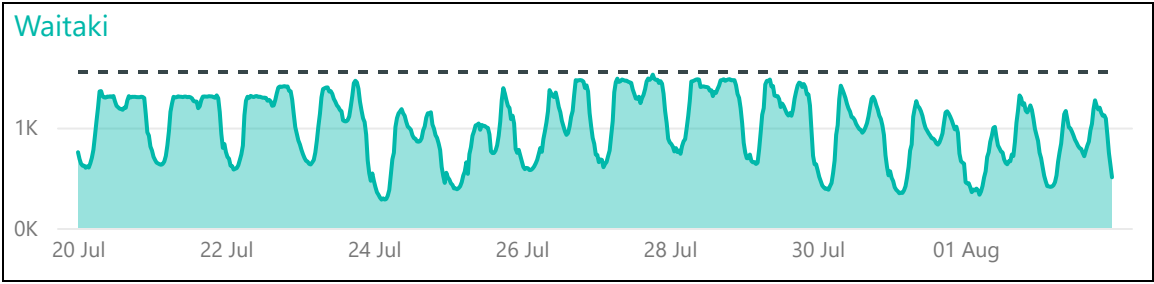
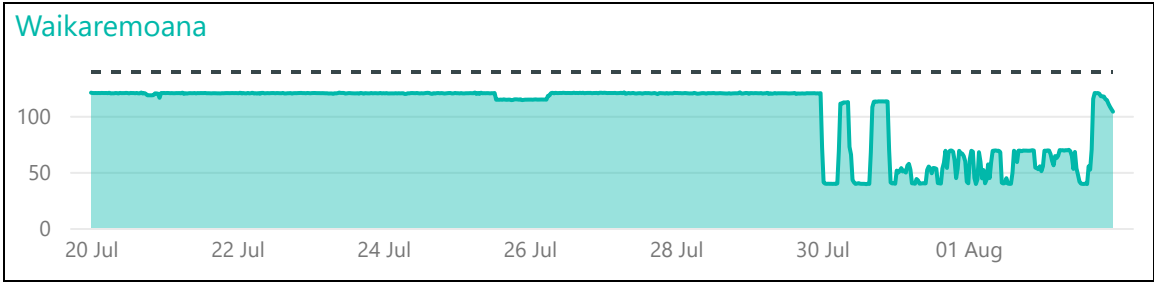
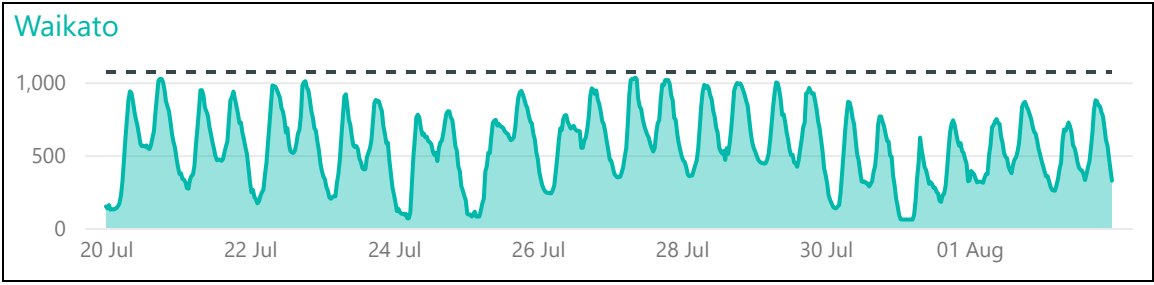
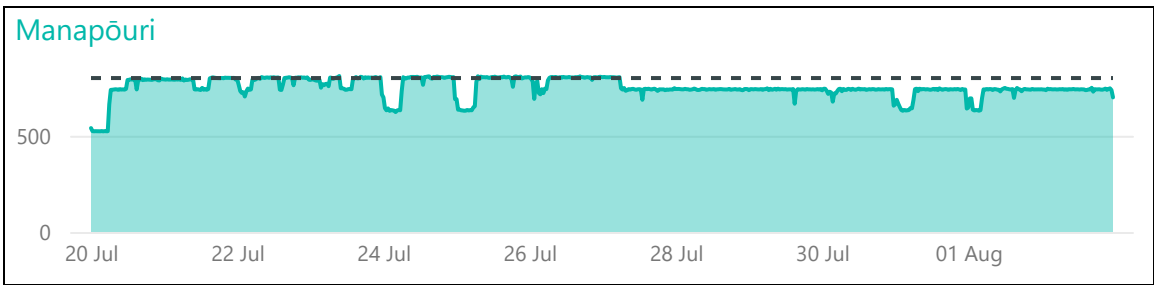
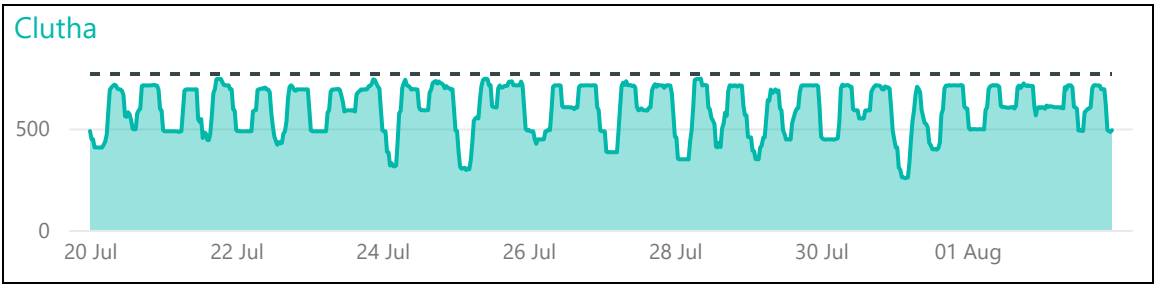
Yesterday afternoon (4 August) we [briefed industry](#) on even higher peak demand forecasts we were seeing from Wednesday morning through to Friday this week. Last night we issued a CAN for a Low Residual Situation for the morning peak of tomorrow 6 August. This morning (5 August) again saw record demand at 7,247 MW, with even higher demand expected for tomorrow morning. Additionally, we issued a CAN this morning for a Potential Shortfall or Low Residual Situation for the morning peak of Friday 7 August. We ask that generators, BESS operators and EDBs are vigilant about the accuracy of bids and offers through this period. This includes increasing generation offers, and submitting difference bids if we request them.

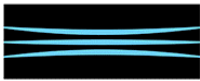
¹ Note that the lowest real-time residual did not always occur at the time of the lowest forecast residual, so the forecast residual in the charts above is different from the lowest forecast residual shown in the table for the morning and evening of 27 July. The charts show factors affecting the residual, but there are other factors such as constraints in the system that can also affect residual. This means the real-time residual is not always exactly equal to the sum of the forecast residual and the changes shown.



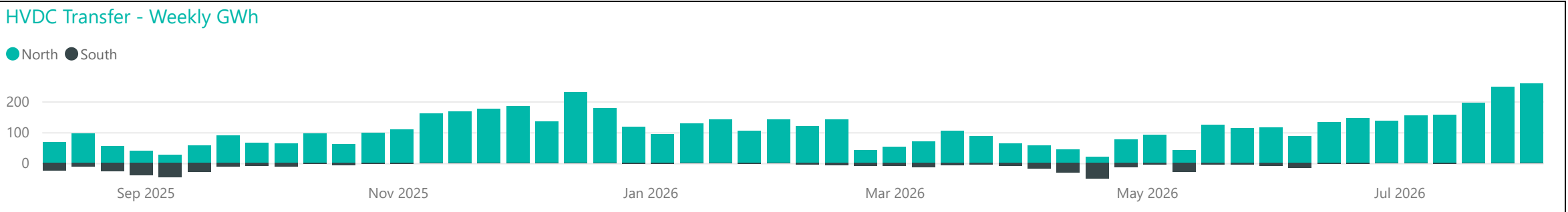
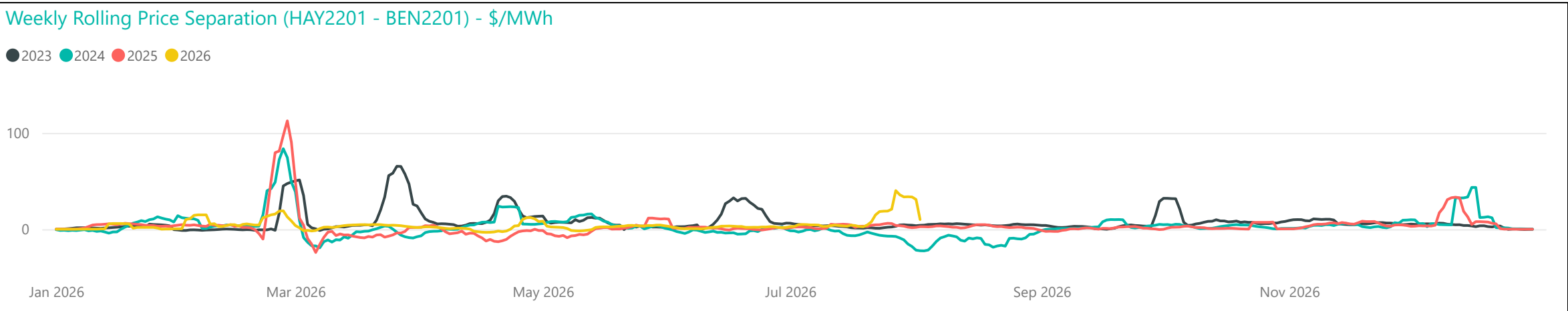
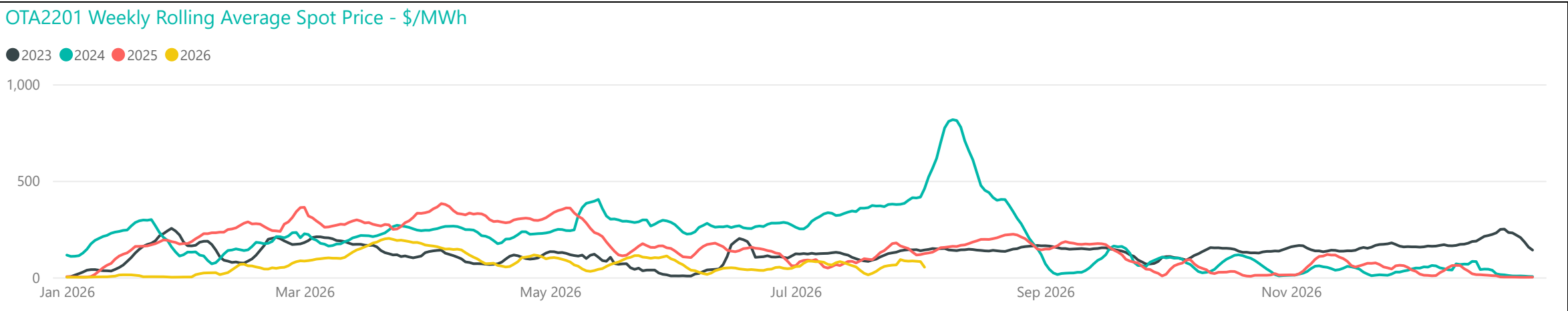
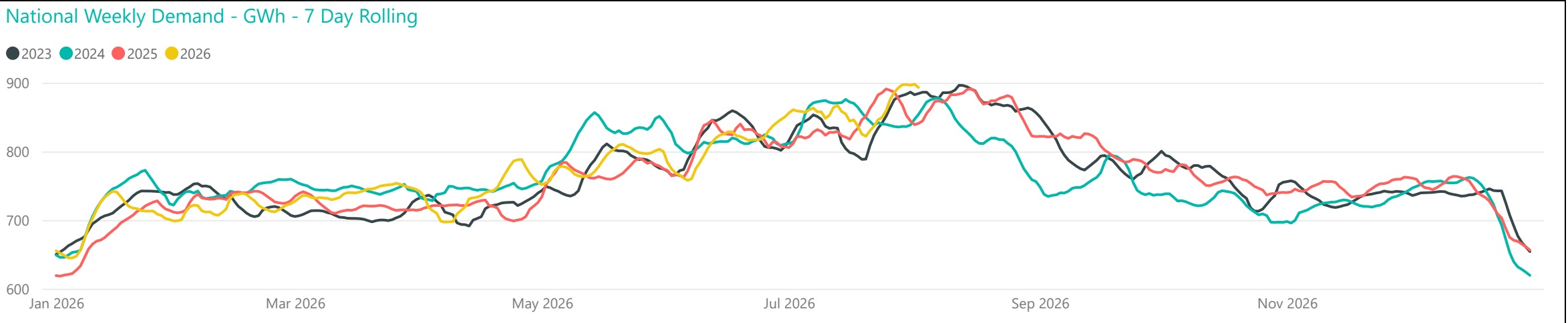
Generation Breakdown - Last Two Weeks

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

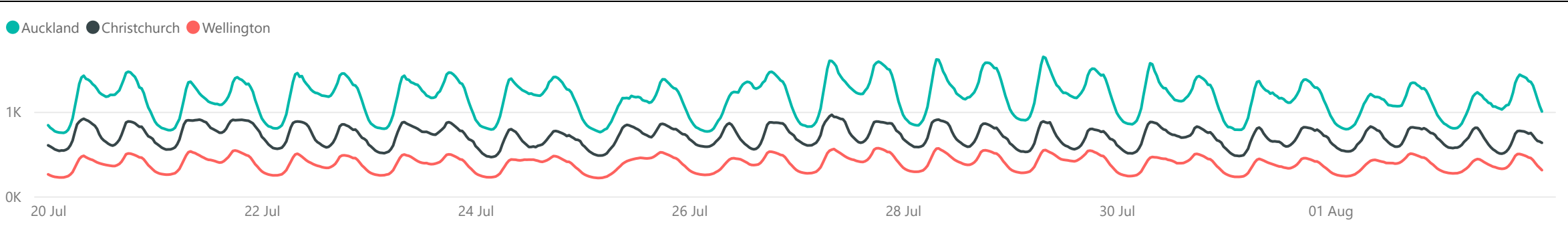




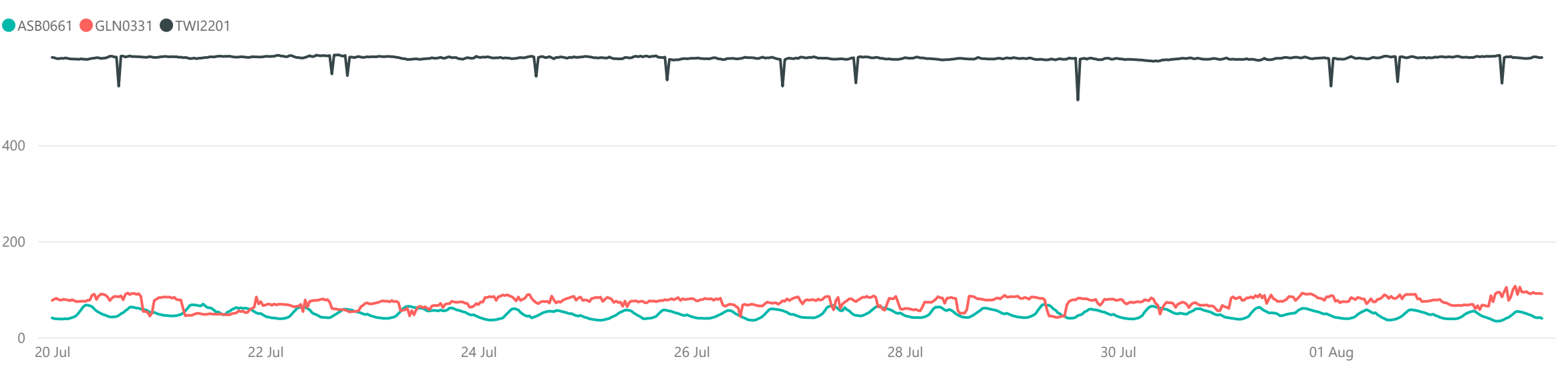
Weekly Profiles



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

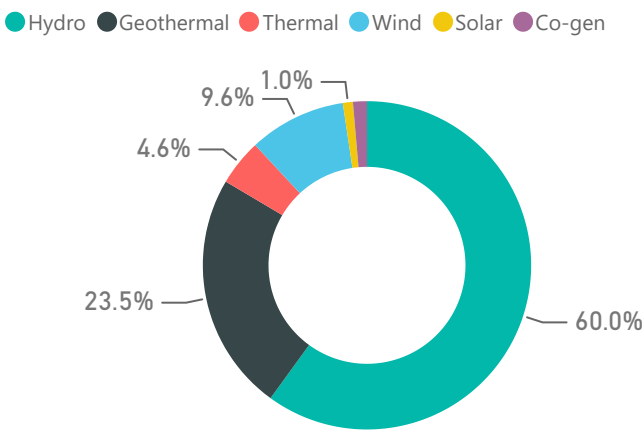


Non-Conforming Load Profiles - Last Two Weeks *Measured in MW shown by GXP*

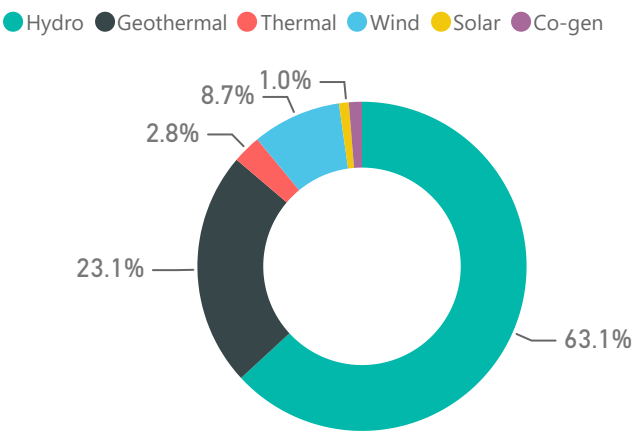


Generation Mix

Last 52 Weeks Generation Mix - Weekly GWh



Last 7 Days Generation Mix - Weekly GWh



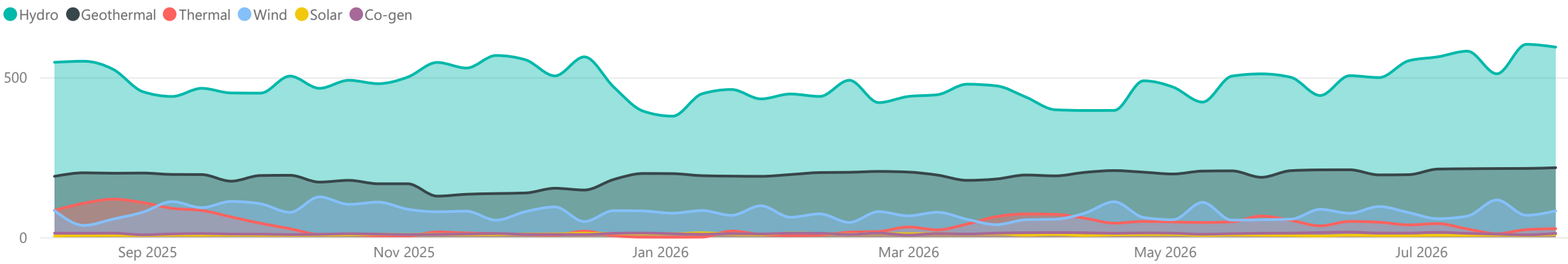
Average Metrics Last 7 Days

Renewable Percentage	CO2e Tonnes/Week	CO2e g/kWh
96%	40,037	40.8

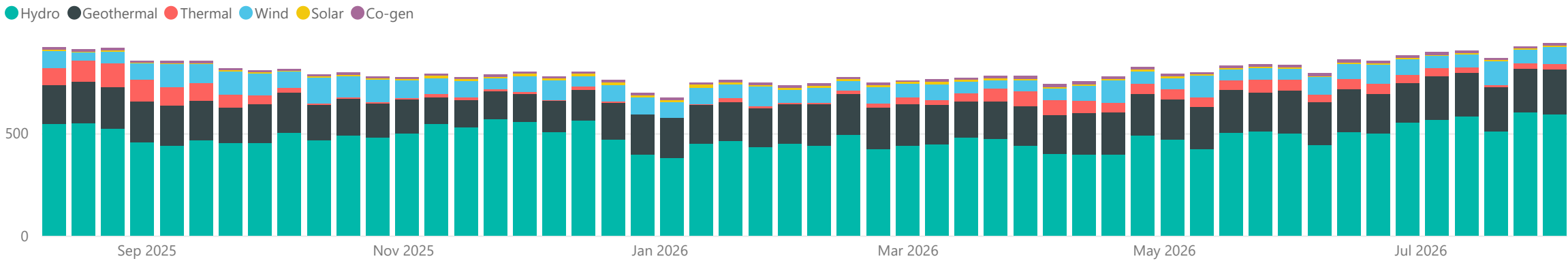
Average Metrics Last 52 Weeks

Renewable Percentage	CO2e Tonnes/Week	CO2e g/kWh
94%	38,769	47.1

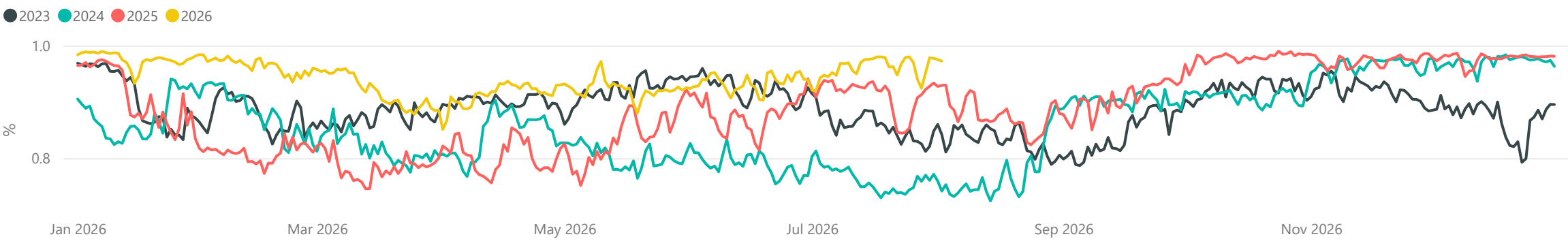
Weekly Generation Mix - GWh



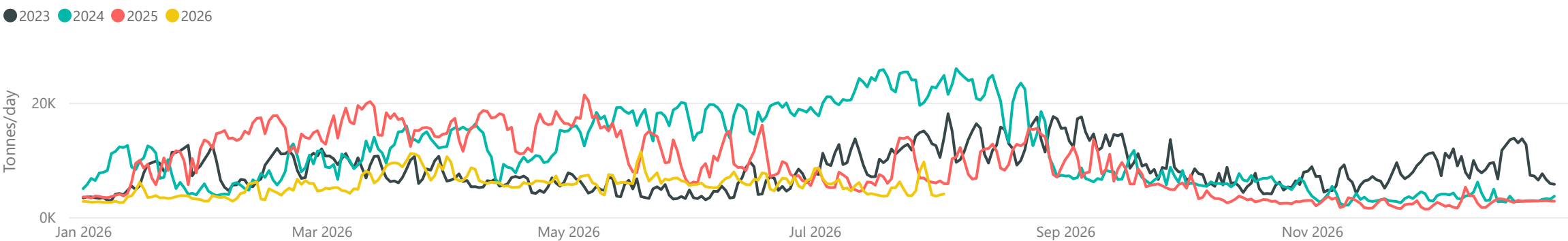
Weekly Generation Mix - GWh



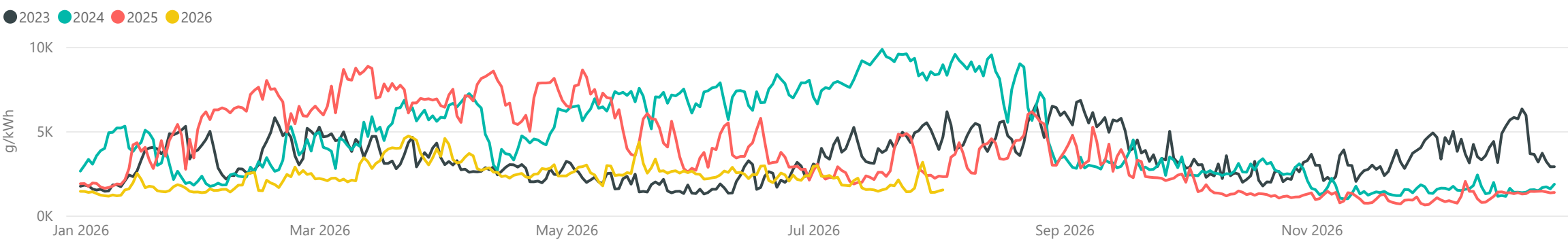
NZ Renewable Percentage

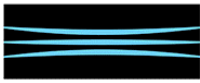


CO2 Tonnes/Day

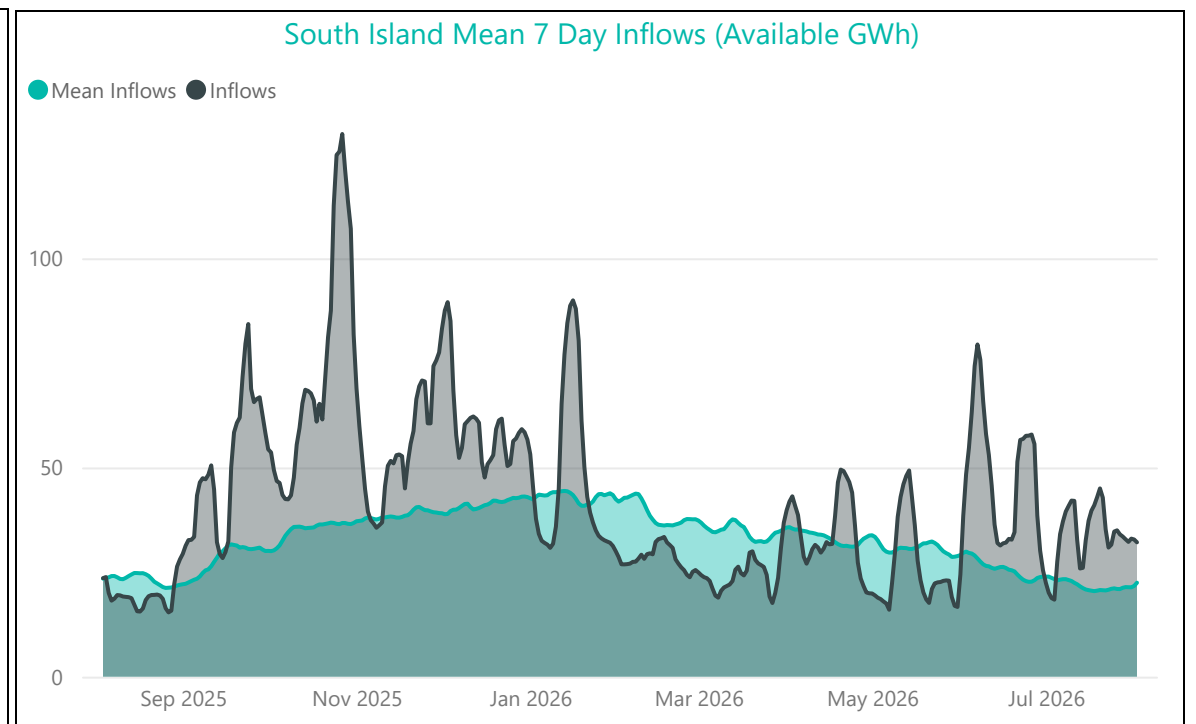
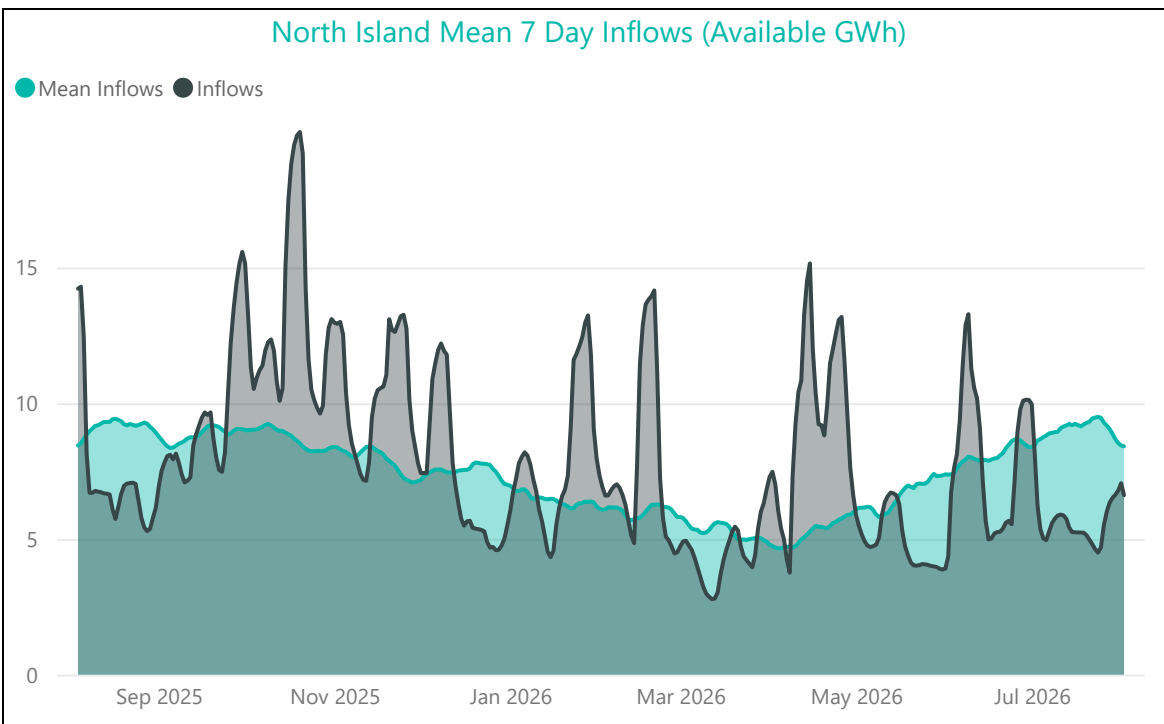
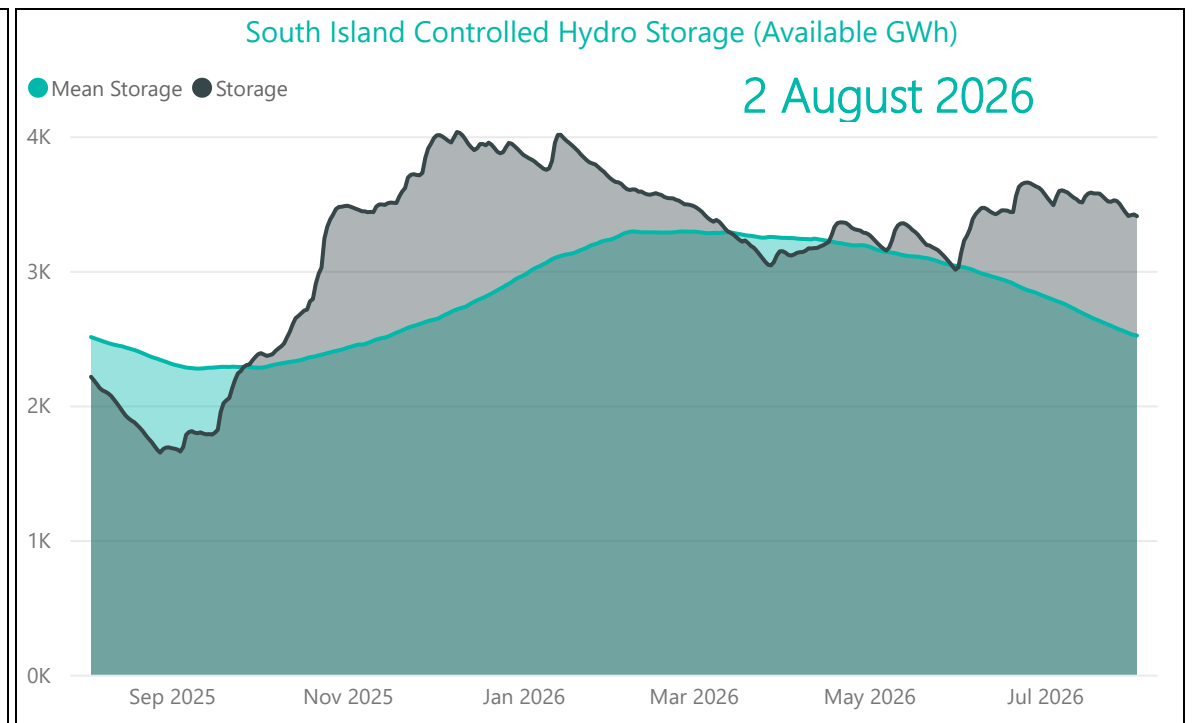
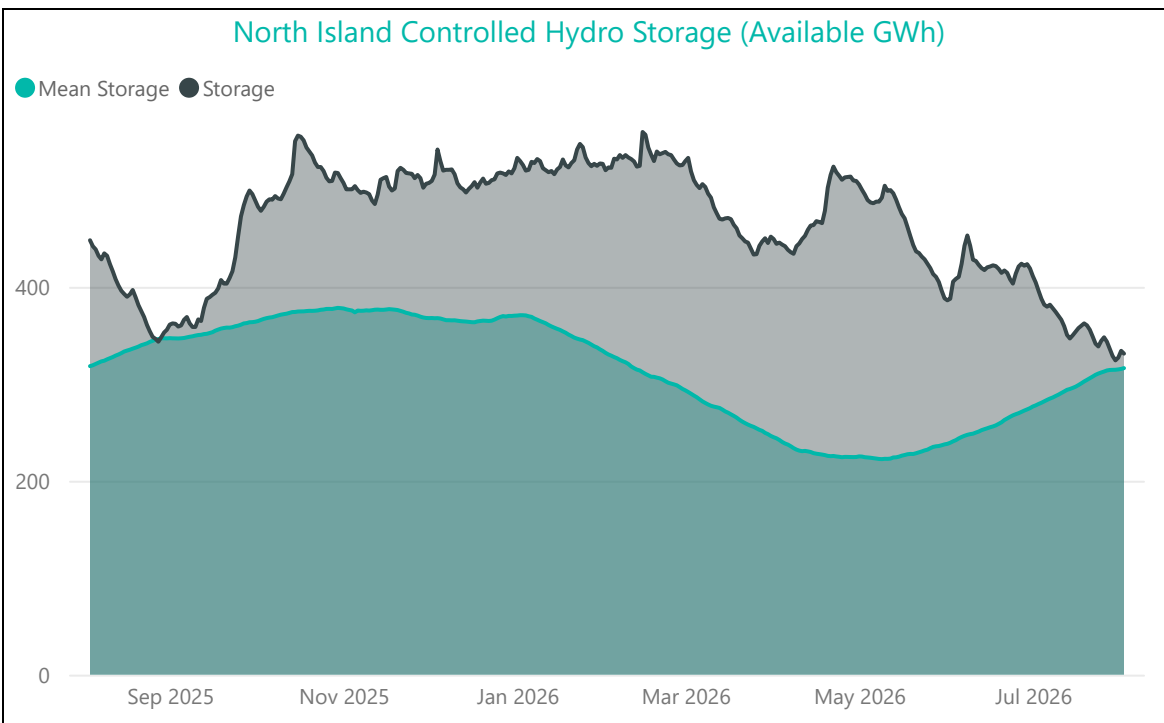
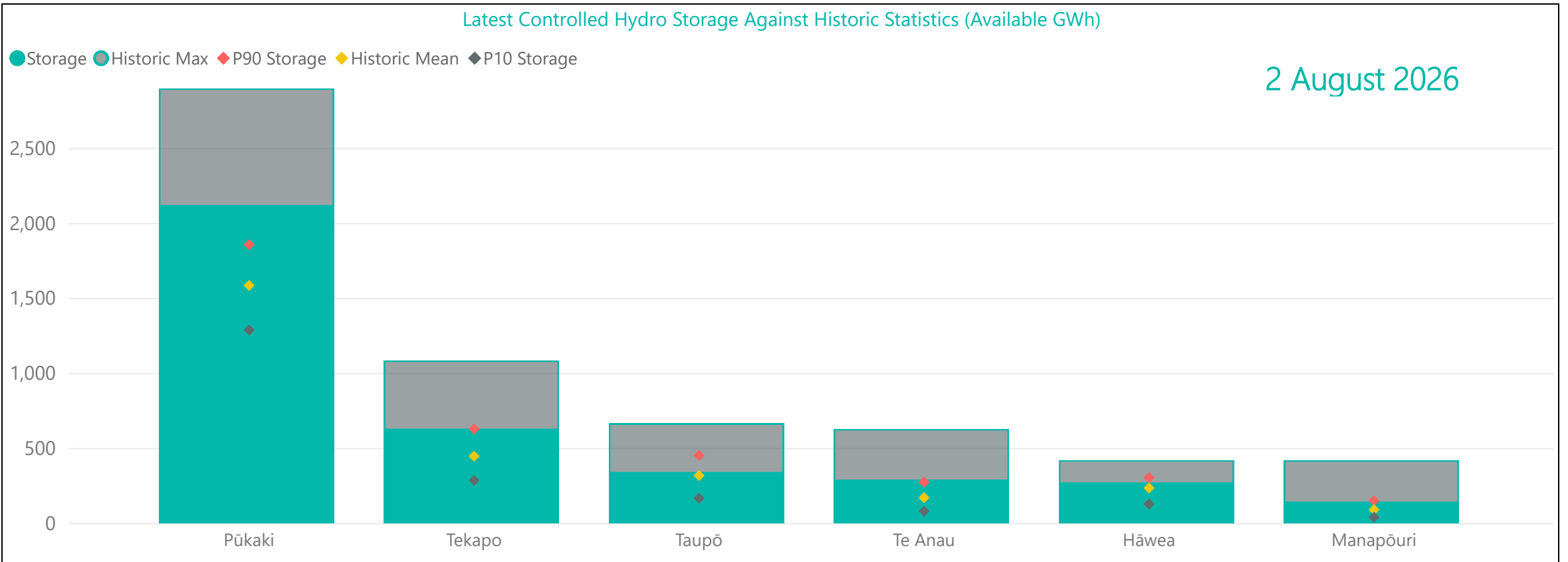


CO2 g/kWh





Hydro Storage



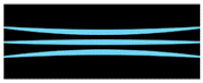
For further information on security of supply and Transpower's responsibilities as the System Operator, refer to our webpage here: <https://www.transpower.co.nz/system-operator/security-supply>.

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](#).

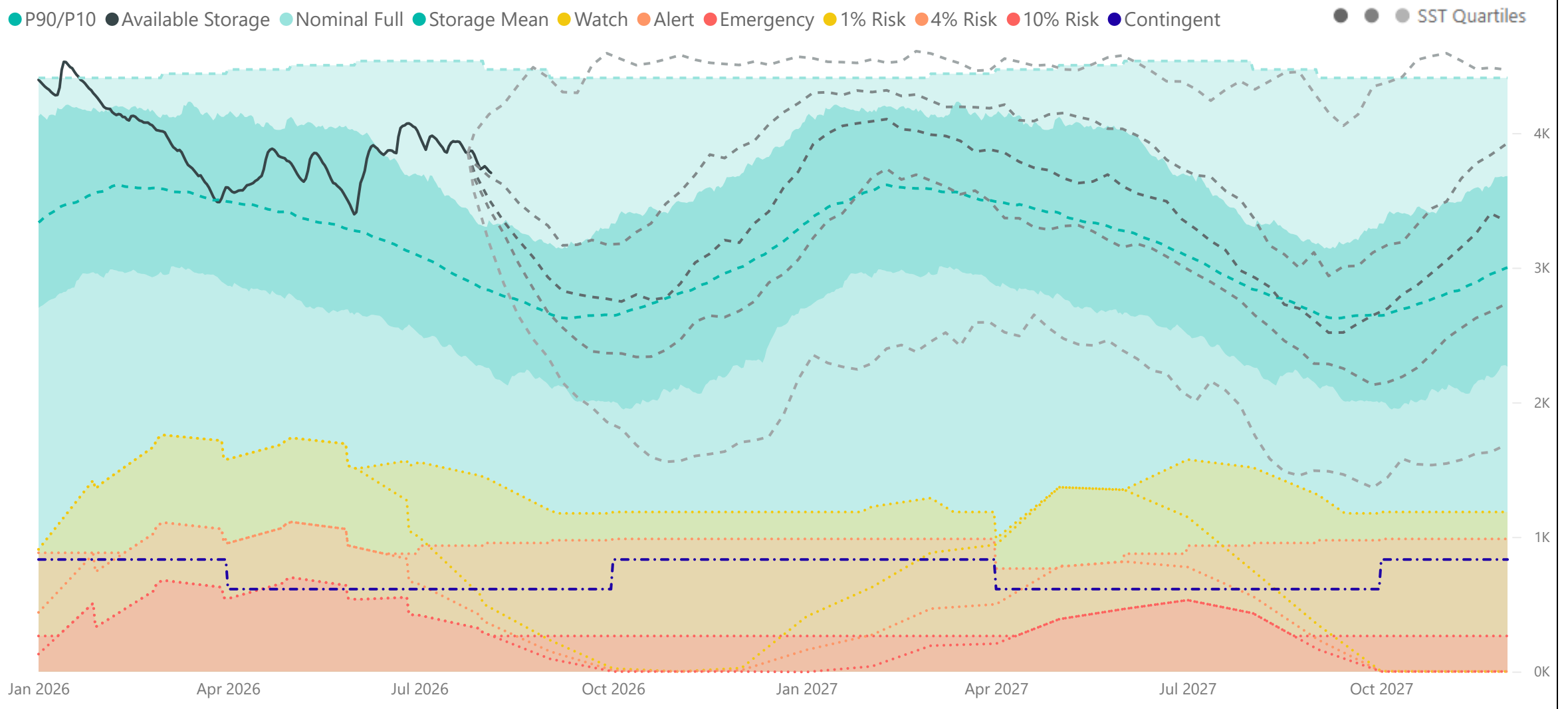
Electricity risk curves have been developed for the purposes of reflecting the risk of extended energy shortages in a straightforward way, using a standardised set of assumptions.

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>

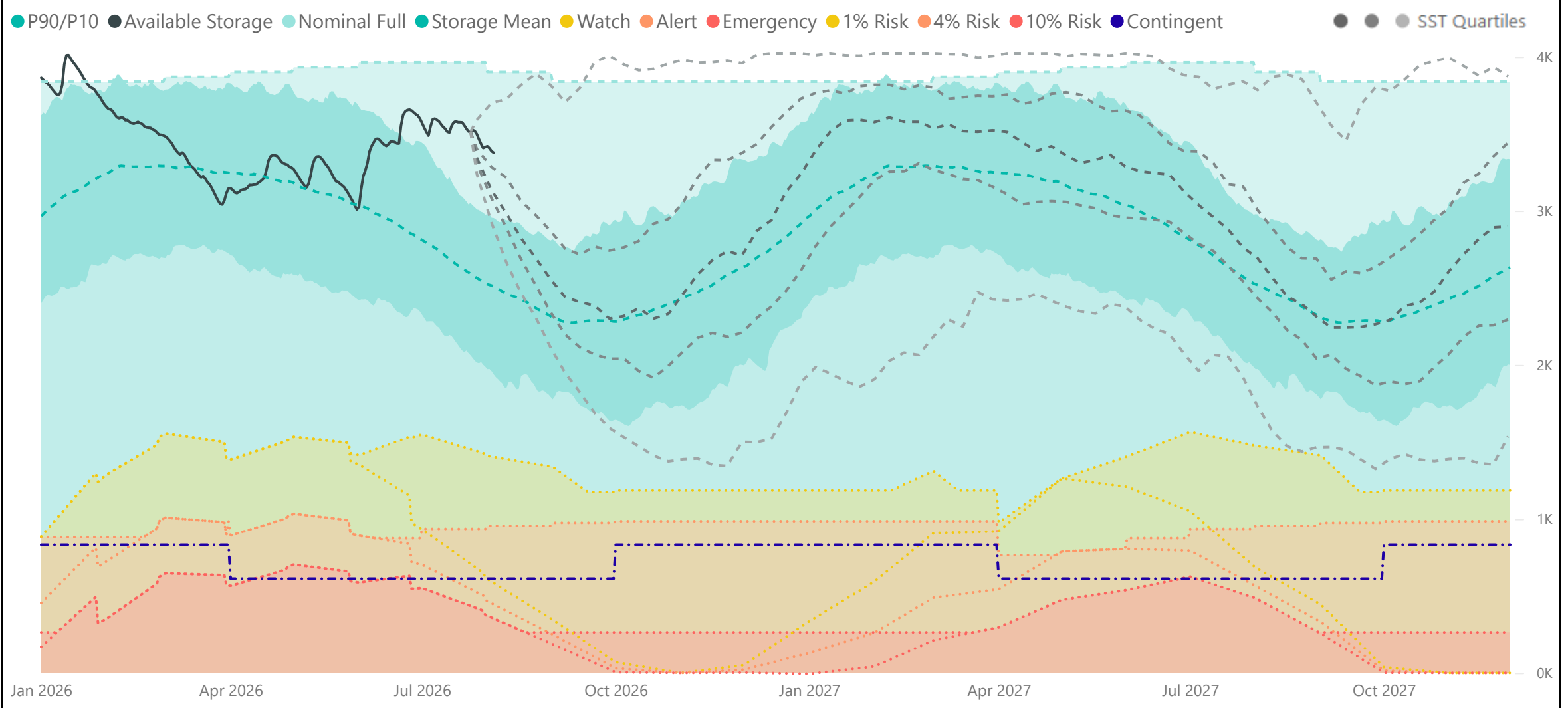


Electricity Risk Curves

New Zealand Electricity Risk Status Curves (Available GWh)



South Island Electricity Risk Status Curves (Available GWh)



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

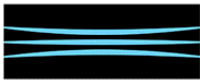
Emergency Curve - The maximum of the 10 percent risk curve and the floor and buffer

Official Conservation Campaign Start - The Emergency Curve

Official Conservation Campaign Stop - The maximum of the eight percent risk curve and the floor and buffer

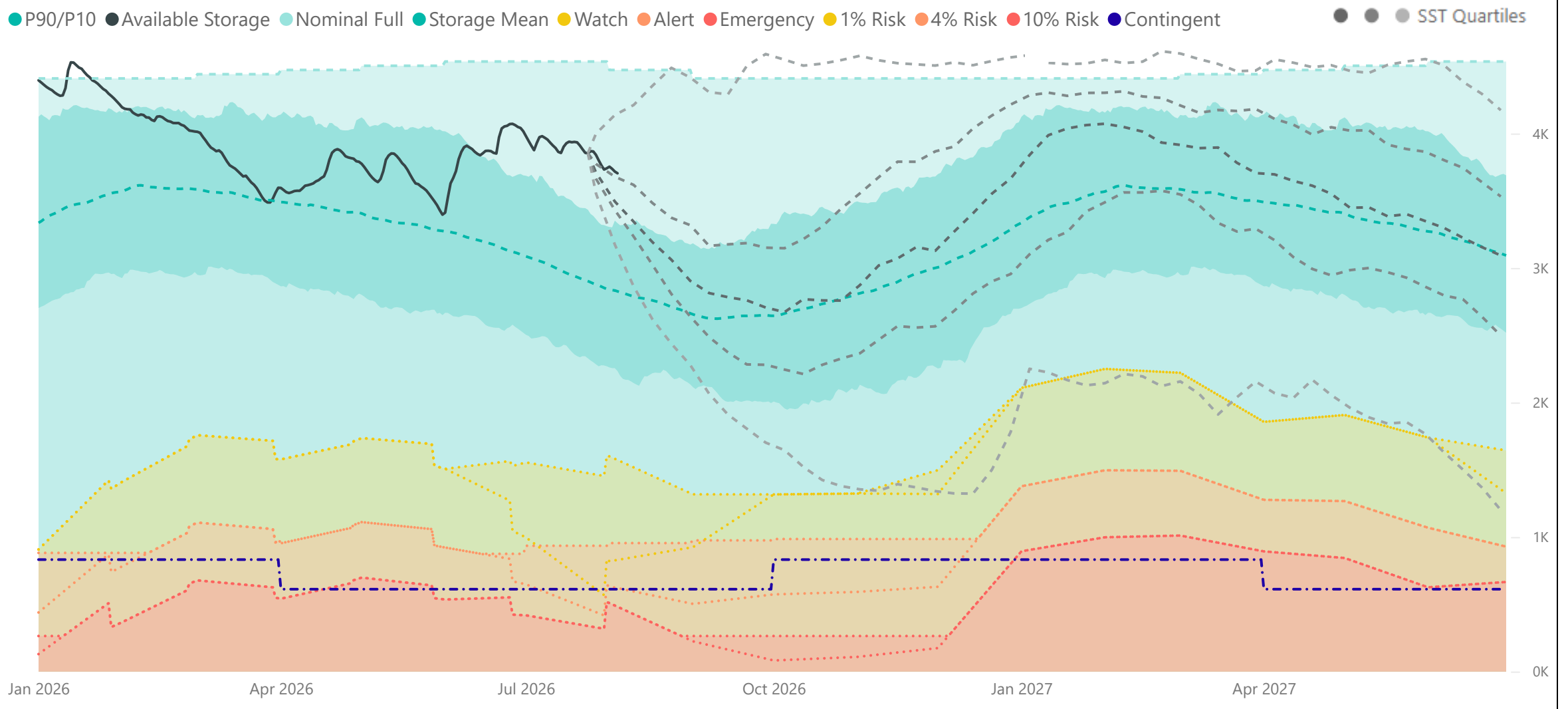
Note: The floor is equal to the amount of contingent hydro storage that is linked to the specific electricity risk curve, plus the amount of contingent hydro storage linked to electricity risk curves representing higher levels of risk of future shortage, if any, and the buffer as specified in the SOSFIP.

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).

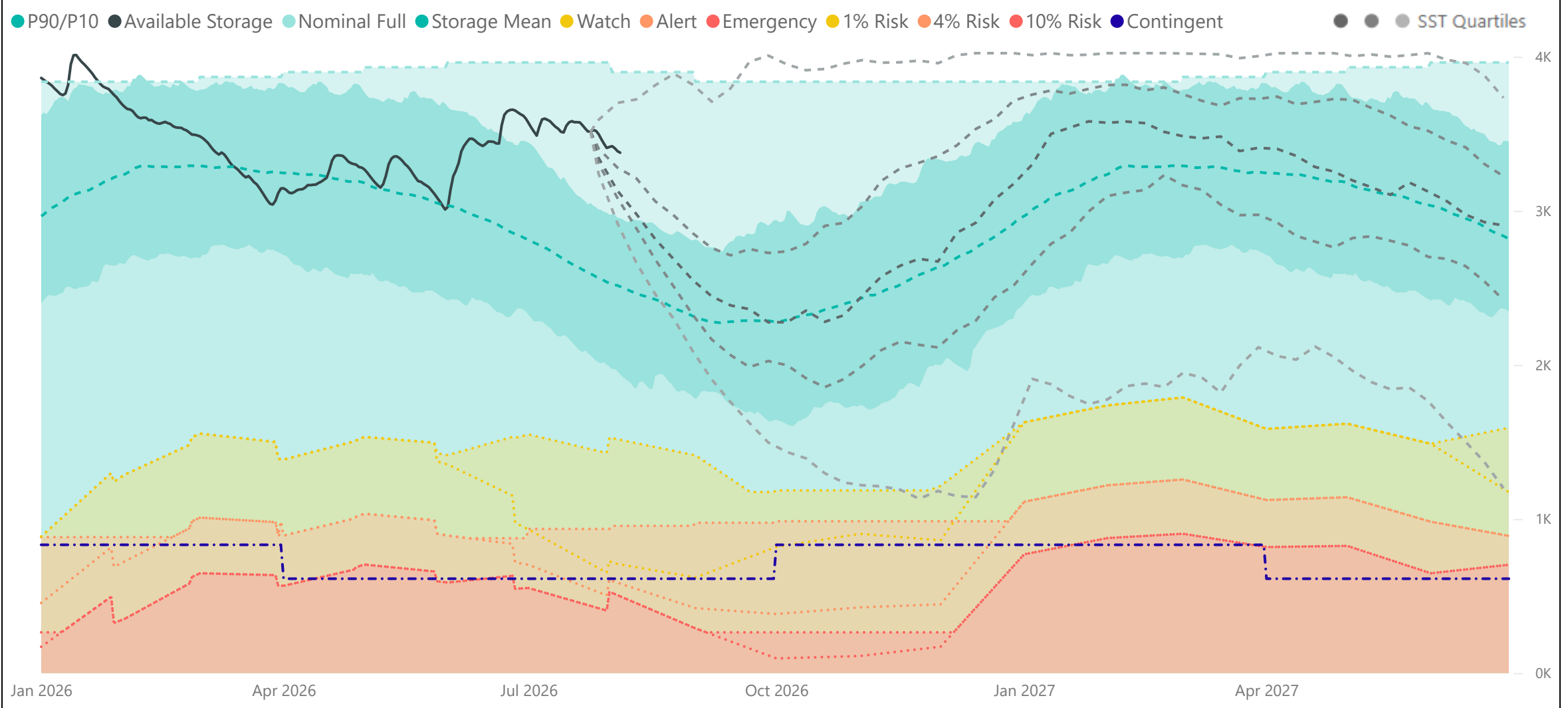


Electricity Risk Curves - Contracted Fuel Case

Contracted Fuel Case - New Zealand Electricity Risk Status Curves (Available GWh)



Contracted Fuel Case - South Island Electricity Risk Status Curves (Available GWh)



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.

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