# Market Operations Weekly Report - Week Ended 16 August 2026

## Overview

Last week demand was moderate compared to the frequent record-breaking demand peaks seen in recent weeks. Total demand nationwide was 10% less than the week prior and healthy residuals were maintained throughout the week.

In this week's insight we discuss the interactions between HVDC transfer, hydro and thermal generation, and price separation.

## Security of Supply

### Energy

National hydro storage continued to decrease but remains above the historic mean at 120%. South Island storage decreased from 130% to 125% and North Island storage decreased from 87% to 80%.

### Capacity

Residuals last week were healthier than in recent weeks with the lowest residual of 418 MW occurring during the evening of Wednesday 12 August.

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 decreased to 843 GWh last week from 930 GWh the week prior. The highest demand peak occurred at 7:30 am on Tuesday 11 August at 6,551 MW.

### Weekly Prices

The average wholesale electricity spot price at Ōtāhuhu last week decreased from $140/MWh the week prior to $77/MWh. Wholesale prices peaked at $209/MWh at Ōtāhuhu at 6:00 pm on Wednesday 12 August during the lowest residual period for the week.

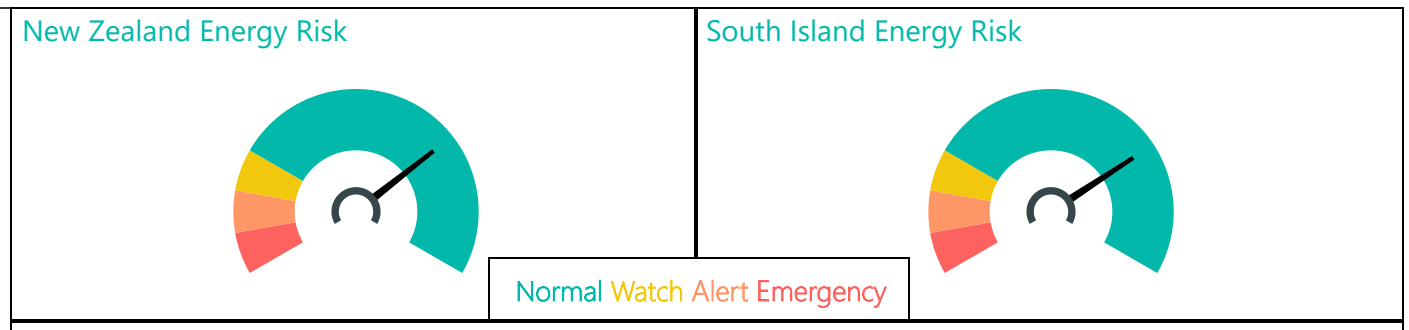
There was some price separation between the North and South Island, particularly during the start of the week. The reserve price separation was highest at Monday 10 August 9:00 pm.

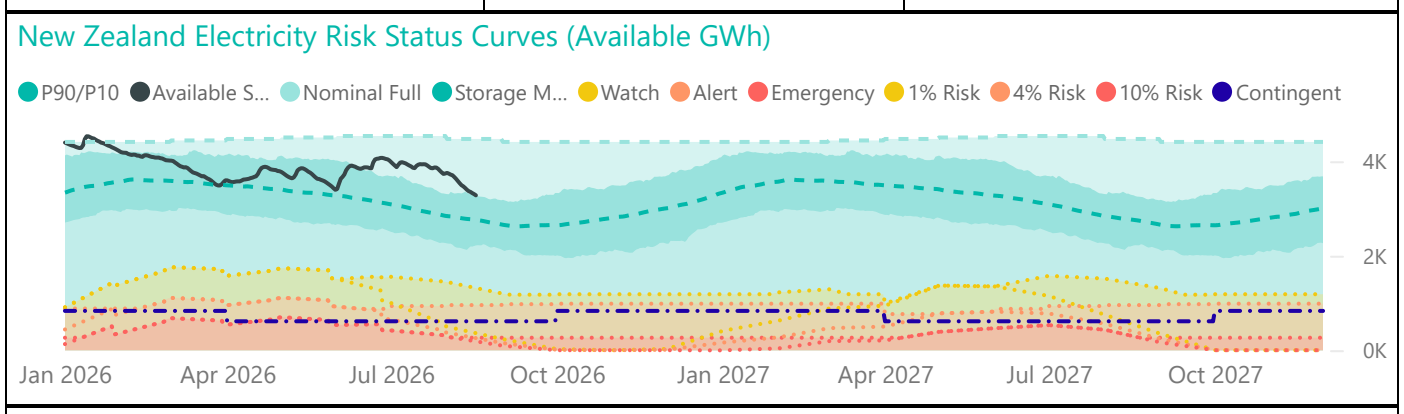
### Generation Mix

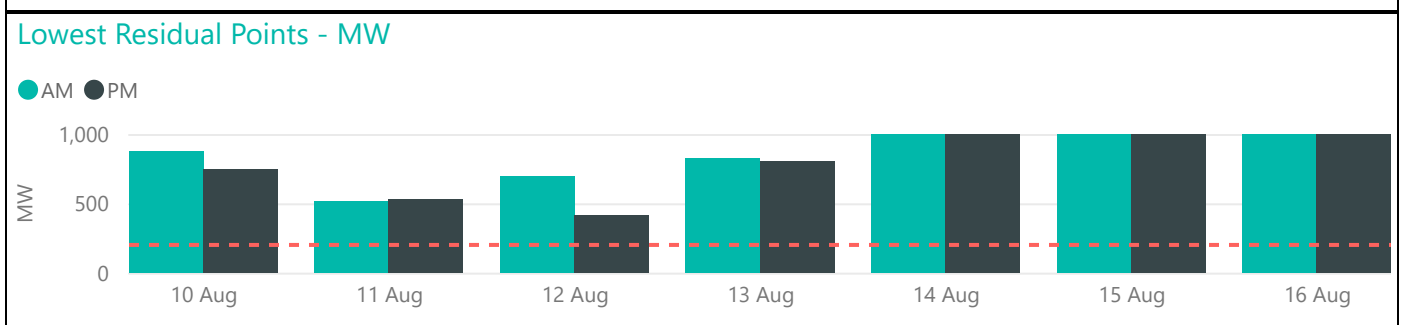
Wind generation remained at 8% of the generation mix last week. Hydro generation contributed 63%, above its yearly average of 60%. Thermal generation decreased to 2% of the mix. Geothermal generation contributed 24% last week.

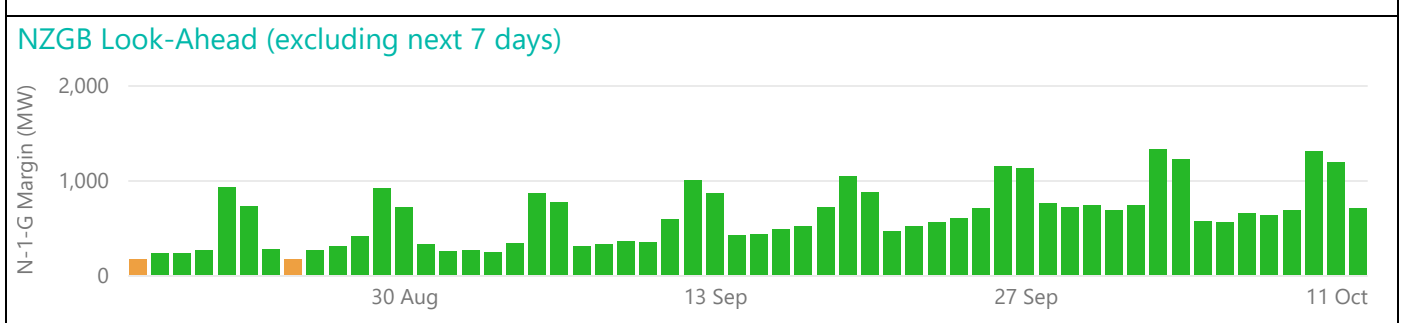
### HVDC

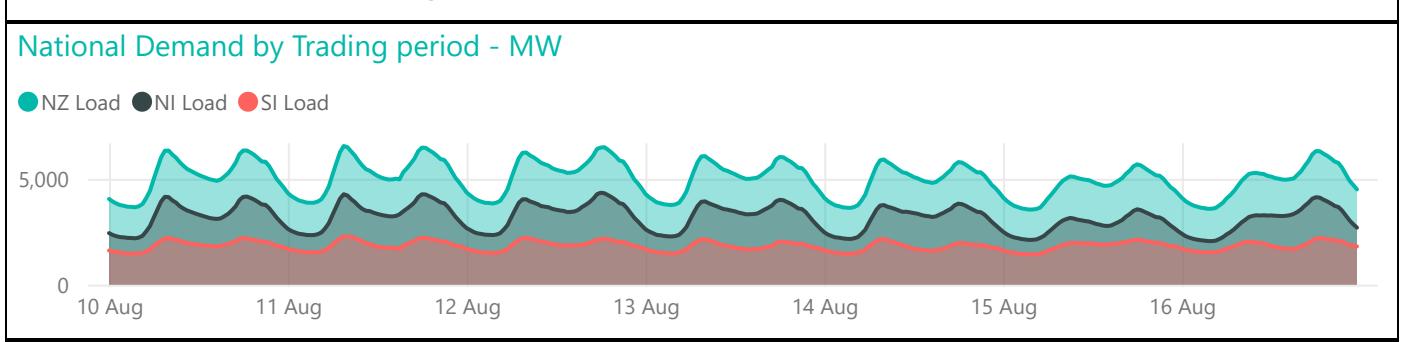
HVDC flows last week were almost entirely northward. Overall, 111 GWh was transferred north. There was a brief period of southward flow in the early hours of Sunday 16 August.

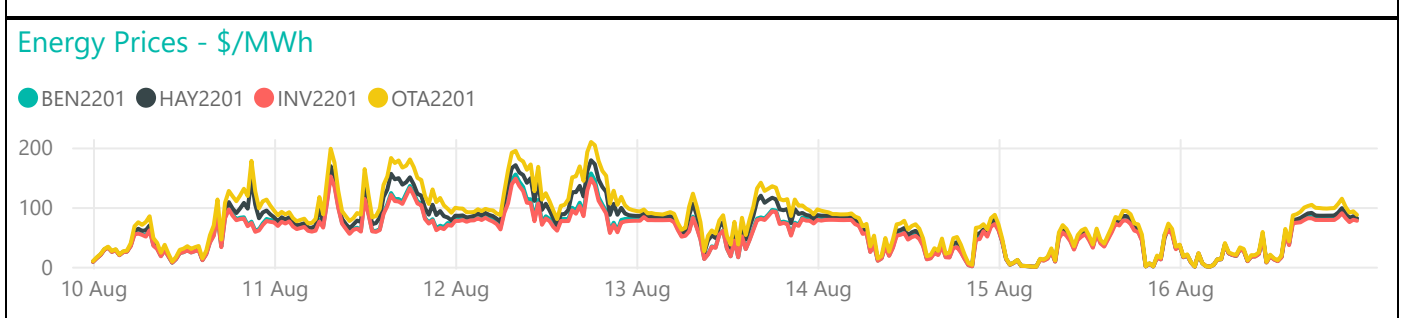


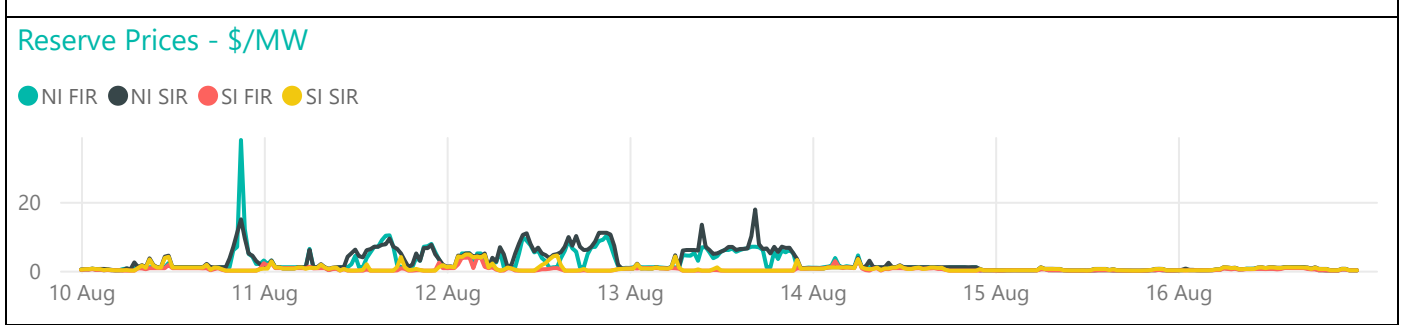



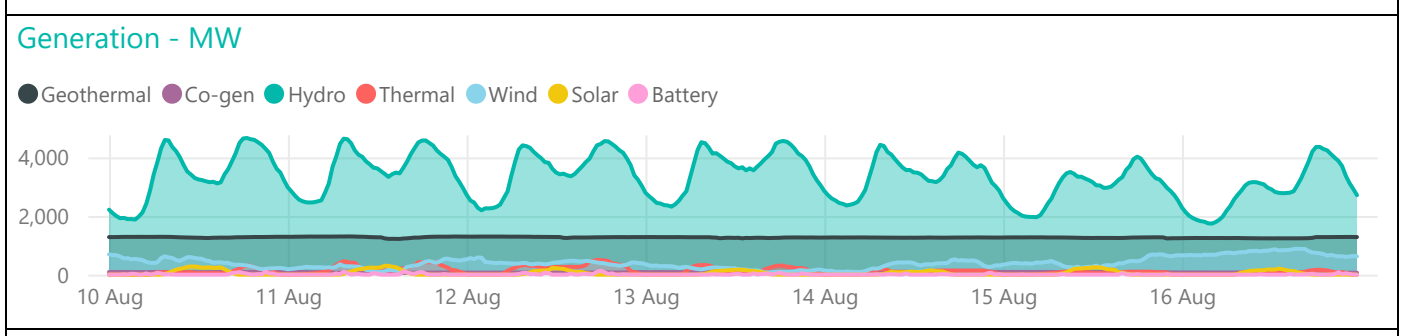



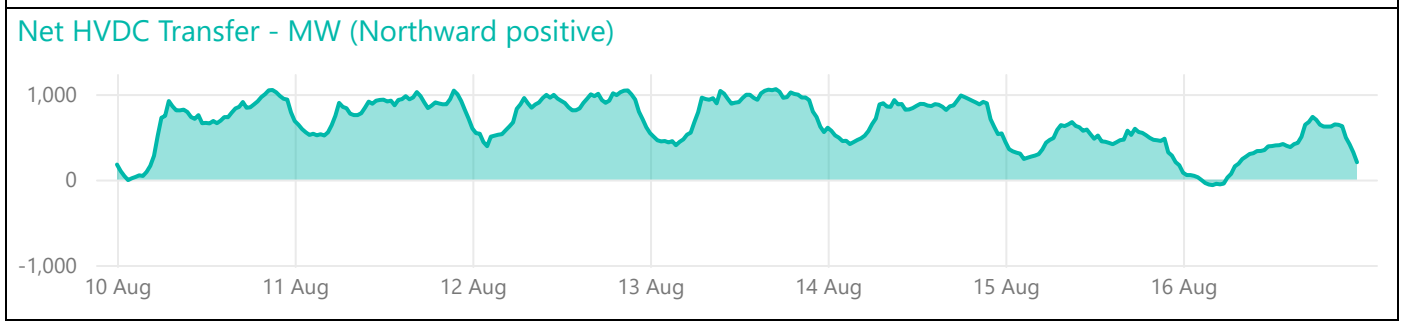



# Weekly Insight - HVDC transfer, hydro storage, and price separation

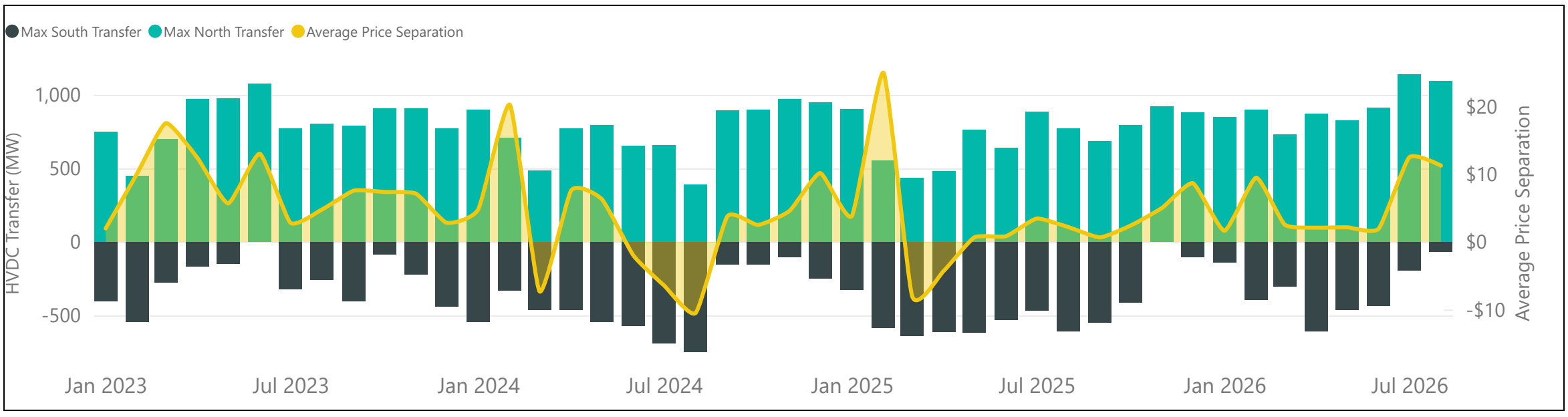
This week's insight investigates HVDC transfer and its relationship with thermal and hydro generation, as well as its influence on inter-island price separation.

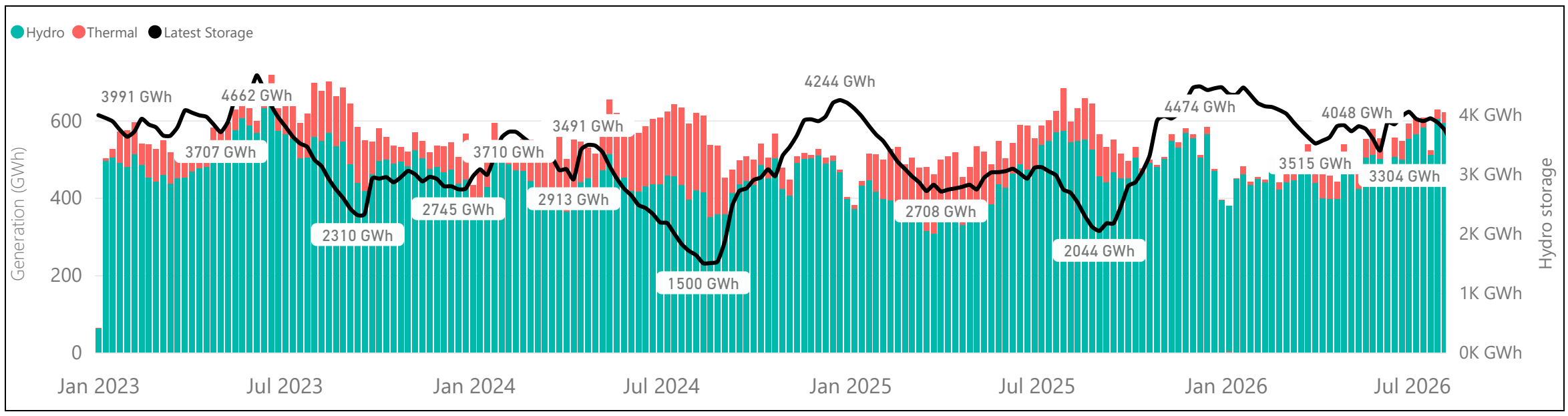
The HVDC link provides a crucial connection between the North and South Island's electricity networks. With Aotearoa's largest population centres in the North Island, the HVDC link enables the large hydroelectric generators in the South Island to provide a significant proportion of the country's electricity use. The HVDC link also enables thermal plants in the North Island to supply the South Island when needed, such as in dry periods when hydro inflows are low.

Price separation is when the wholesale energy price differs significantly between nodes, regions, or islands. Price separation over the HVDC link (between the Benmore and Haywards nodes) usually occurs for one of two reasons: the HVDC reaching its maximum physical capacity, or HVDC flow being limited by reserve availability or pricing in the receiving island to cover the sudden loss of an HVDC pole. Outages (for example of synchronous condensers at Haywards) can reduce the HVDC's maximum physical capacity, and pole outages prevent the HVDC link from providing self-cover for the trip of a pole, causing price separation due to a significant increase in required reserves.

When the hydro levels are high, as they have been recently, flow on the HVDC link is predominantly northward. High amounts of hydro generation in the South Island and its lower demand can lead to price separation with the North Island as either northward flow reaches capacity, or reserves must be met by more expensive generation. Conversely, dry periods of low hydro storage are more likely to lead to relatively high prices in the South Island.

The first figure below shows the monthly maximum HVDC transfer North (positive) and South (negative) since January 2023. The average price separation for each month is shown in yellow, with positive values indicating higher prices in the North Island. Note that HVDC outages are planned annually around late February/early March, often leading to high price separation (see our 15 February 2026 insight for more detail). The second figure below shows the hydro (blue) and thermal (red) generation over the same period, with the latest hydro storage overlaid (black line).



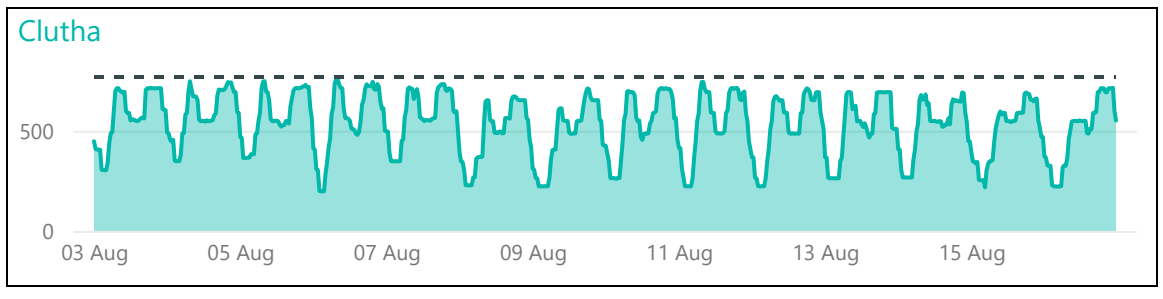

With these two figures together, the influence of hydro storage on price separation can be seen. Negative price separations (i.e. South Island prices exceeding the North Island prices) can be seen when the storage drops and thermal generation increases, notably during the 2024 winter. Conversely, relatively high prices in the North Island often occur during periods of higher South Island hydro storage and generation, as has been the case in recent weeks.

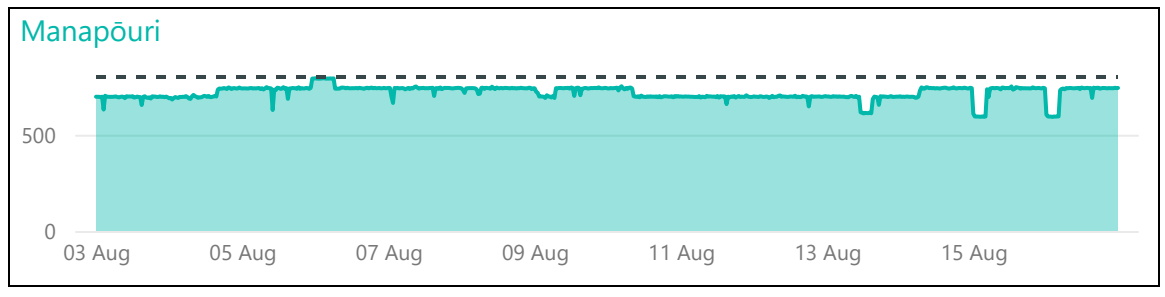
HVDC dispatch is typically limited to 1,170 MW transfer with a further 30 MW reserved for modulation[1]. Transfer on the HVDC link reached a record-high 1,137 MW Northwards on Monday 27 July during the 4:30pm trading period. The total HVDC transfer including modulation has been at its absolute maximum of 1,200 MW for a few moments within trading periods. The 10 September 2023 Insight provides a useful overview of the interactions between the HVDC link, reserves, and price separation.

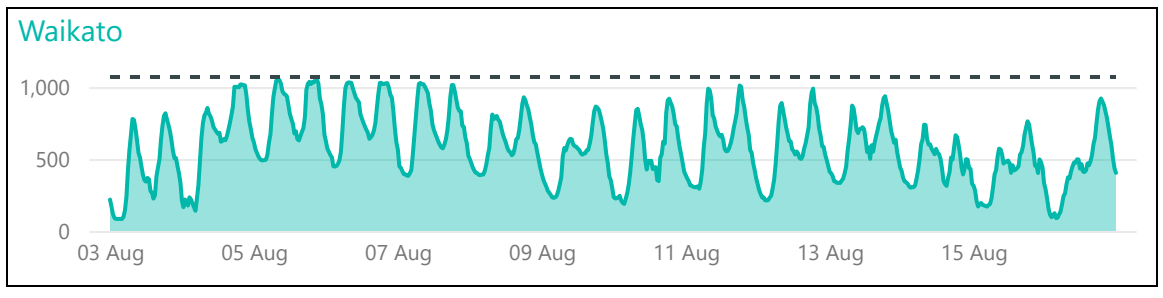
[1] Modulation is where the power transfer on the HVDC link is used to join and manage the frequencies of each Island.

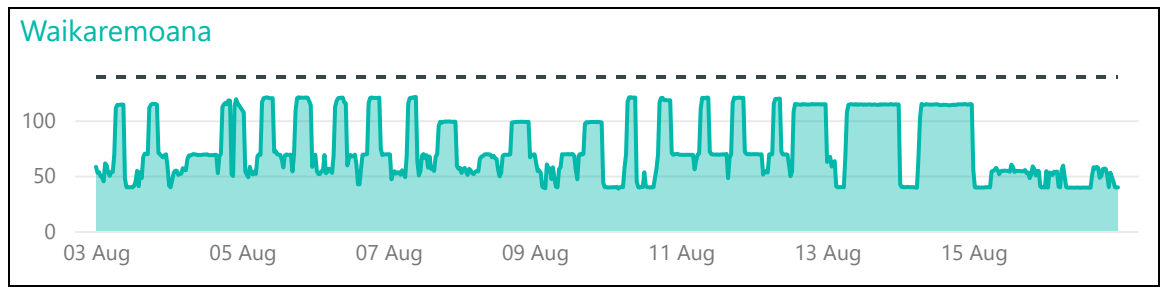
# Generation Breakdown - Last Two Weeks

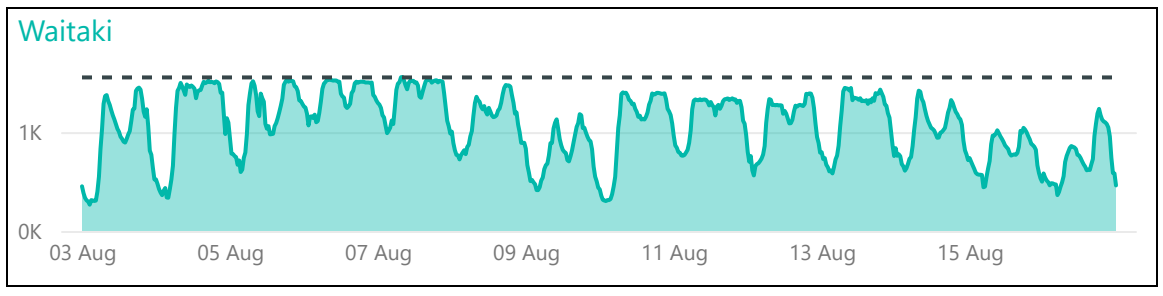
*Measured in MW and displayed at trading period level for last 14 days*

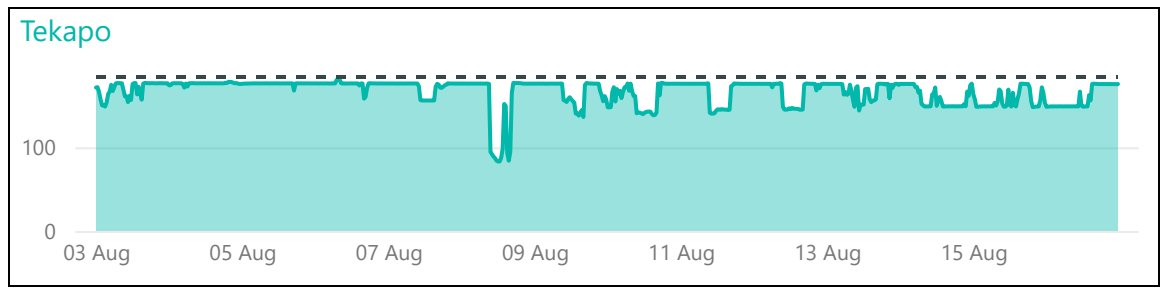


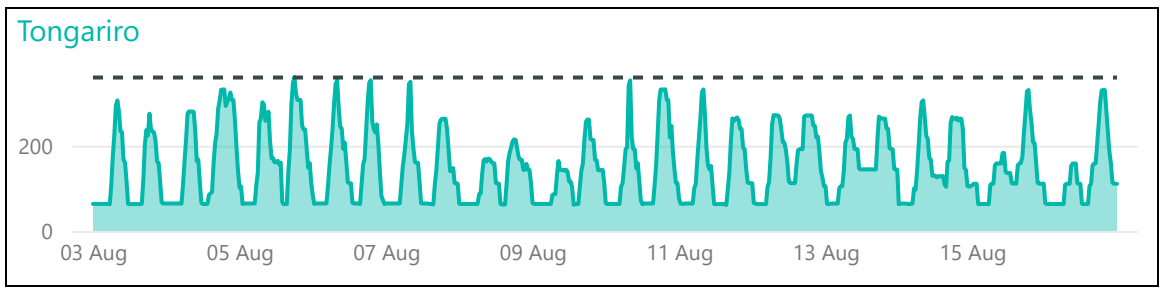



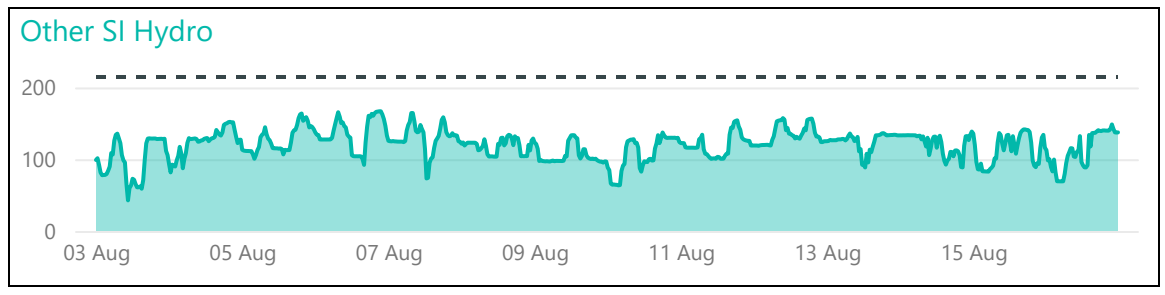



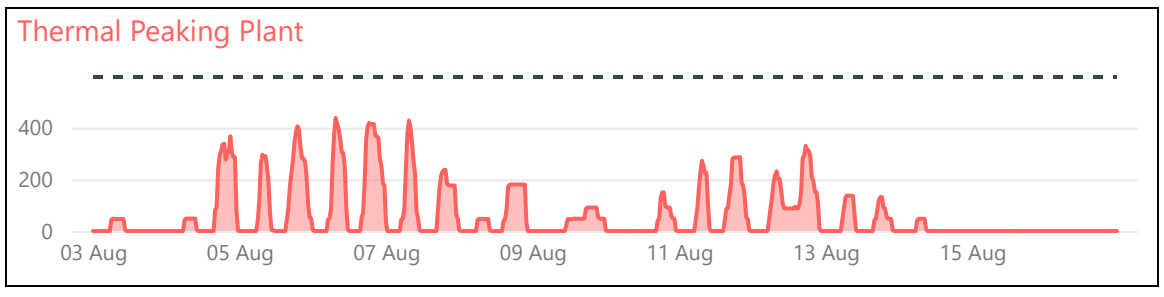



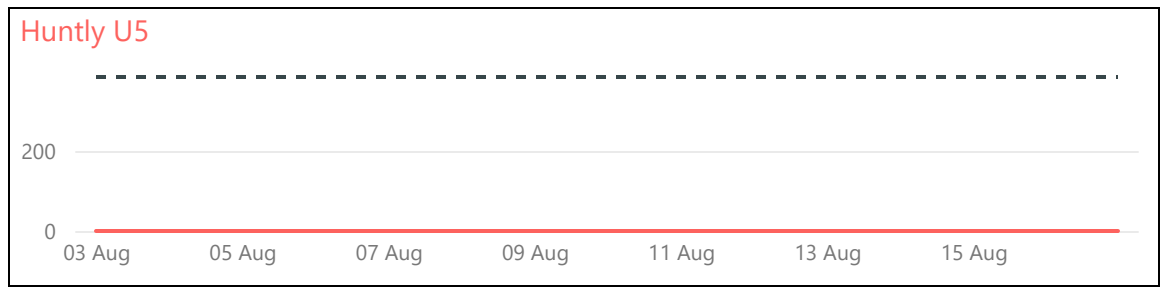



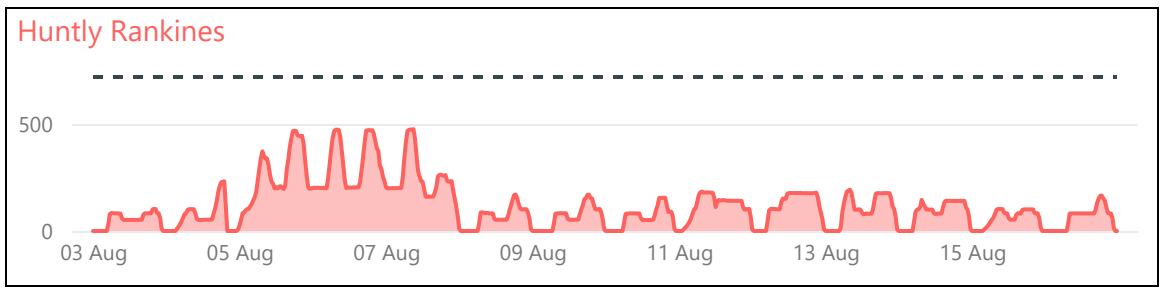



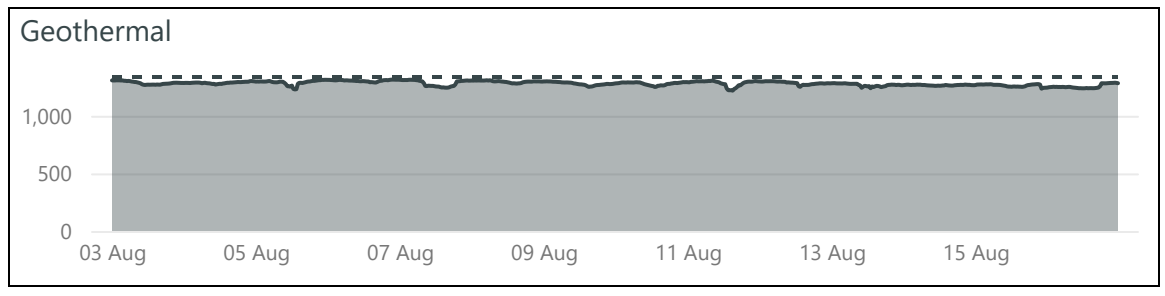



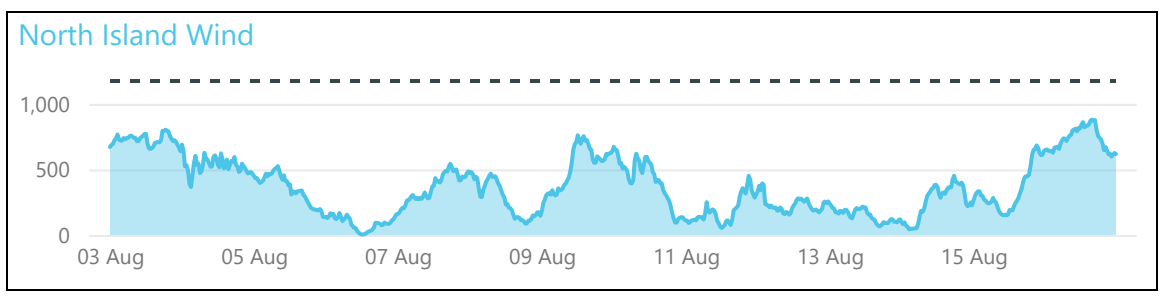



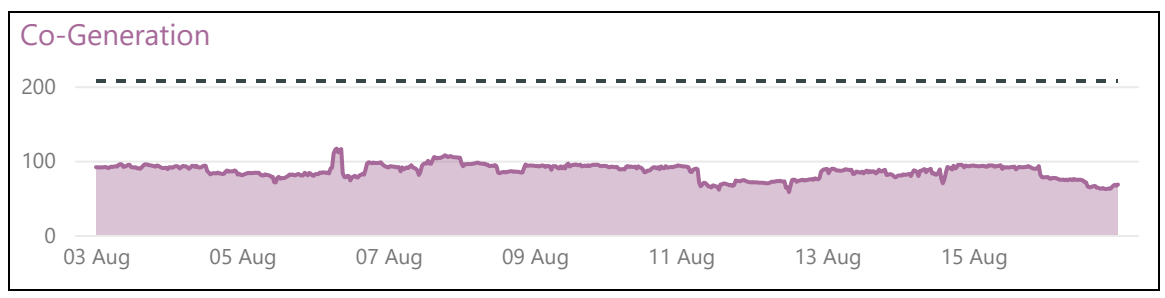



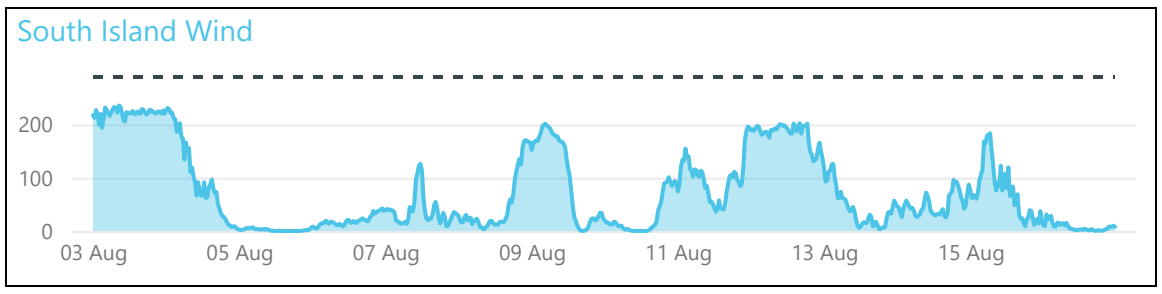



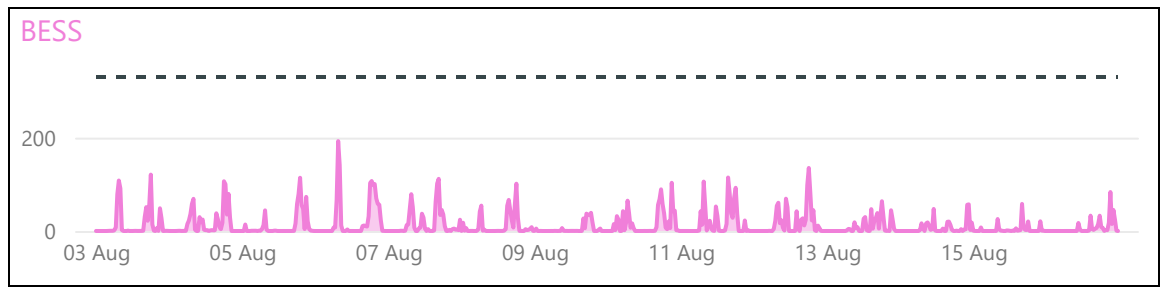



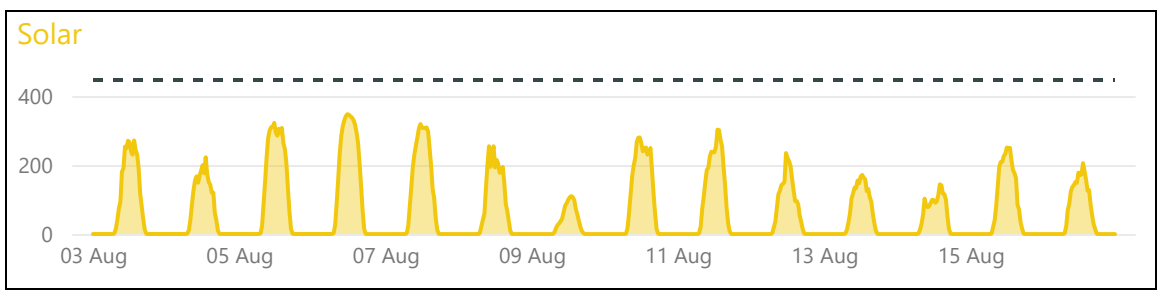



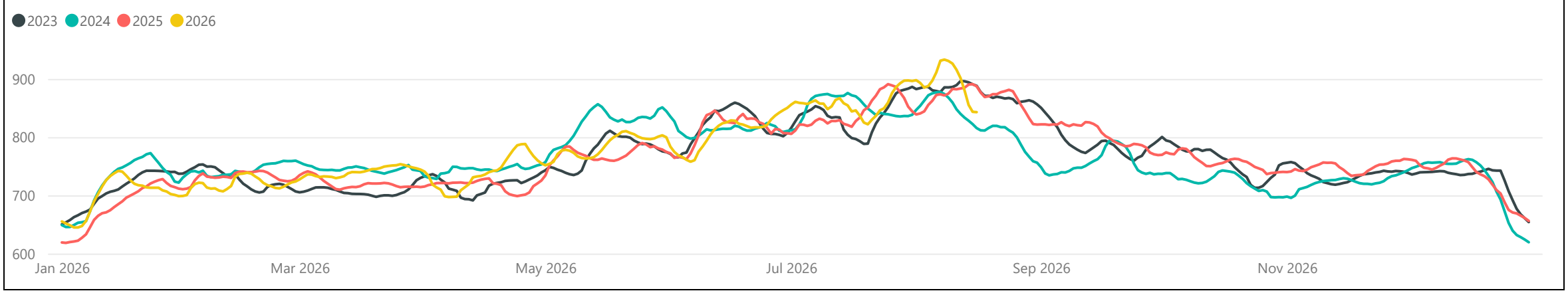



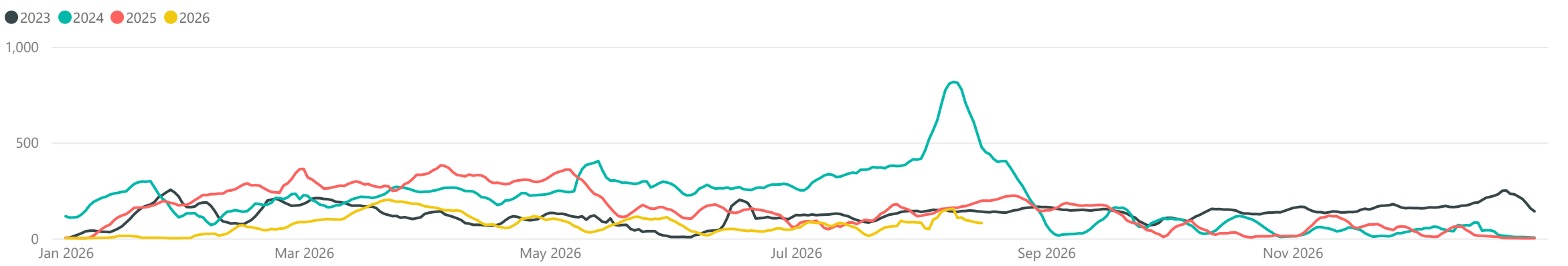



# Weekly Profiles

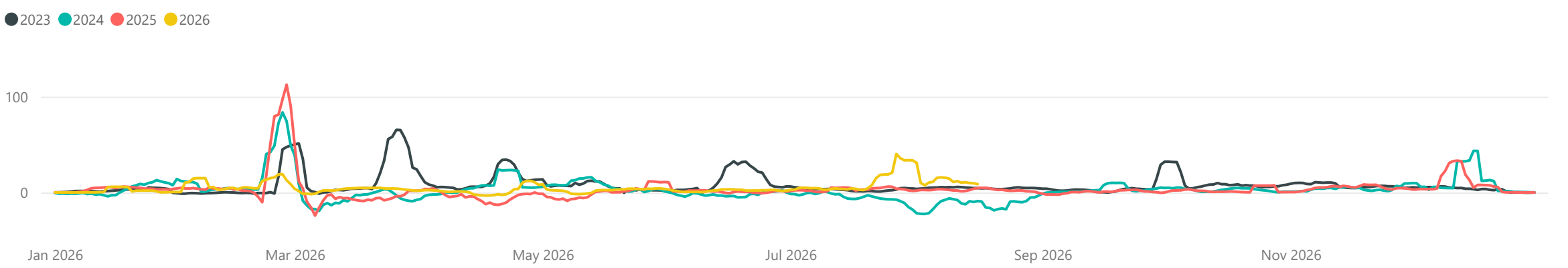
## National Weekly Demand - GWh - 7 Day Rolling



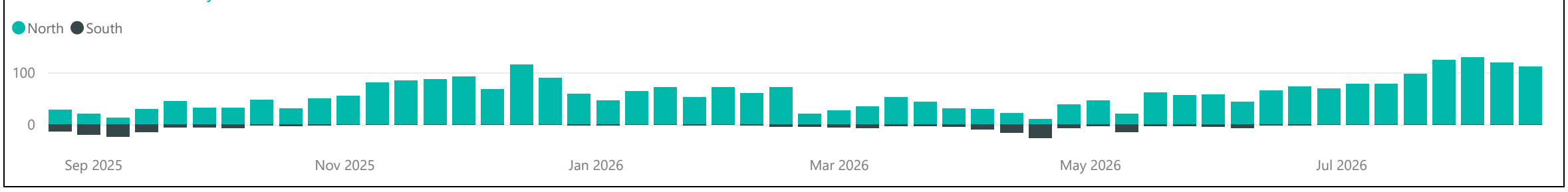

## OTA2201 Weekly Rolling Average Spot Price - $/MWh



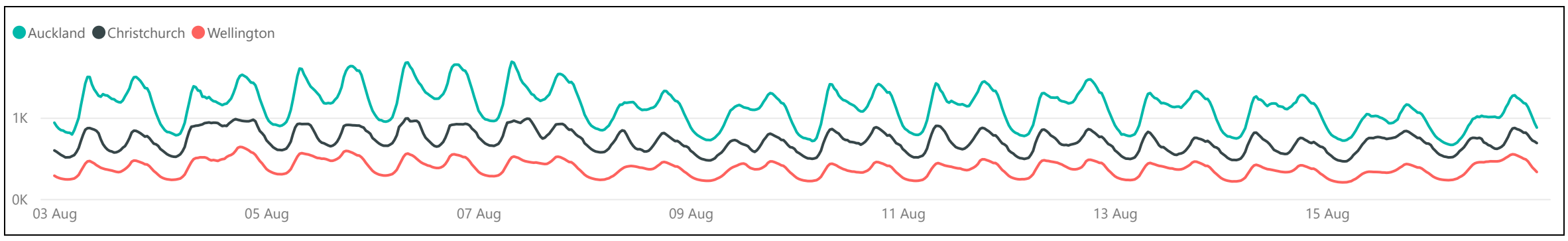

## Weekly Rolling Price Separation (HAY2201 - BEN2201) - $/MWh



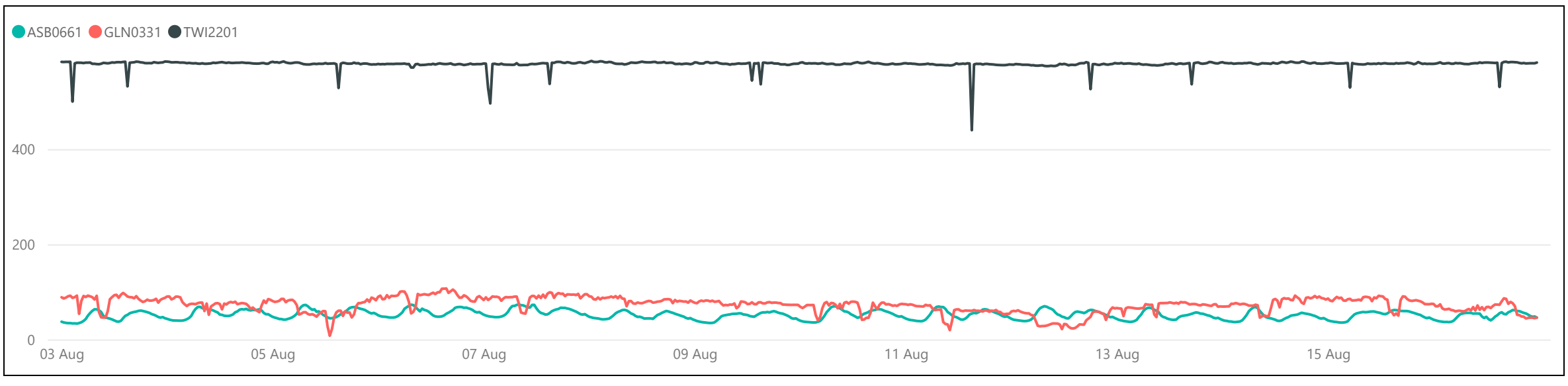

## HVDC Transfer - Weekly GWh




## 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*



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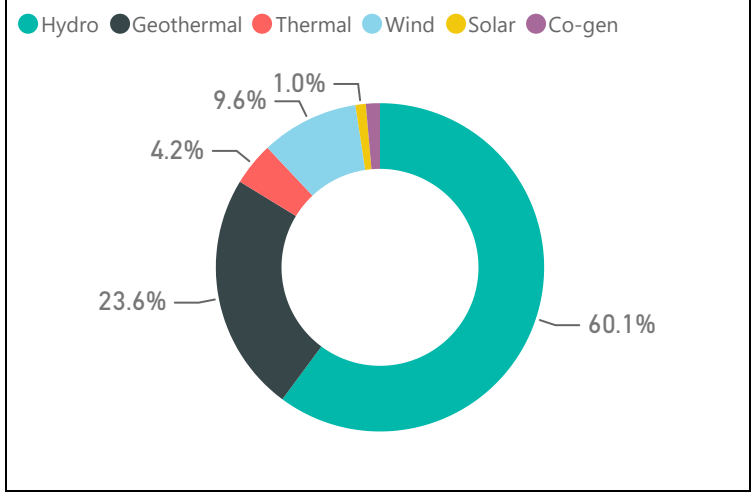
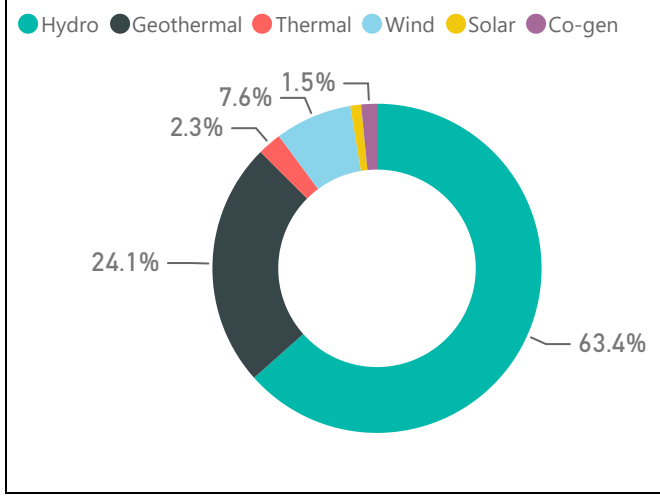
# Generation Mix

## Last 52 Weeks Generation Mix - Weekly GWh




## Last 7 Days Generation Mix - Weekly GWh



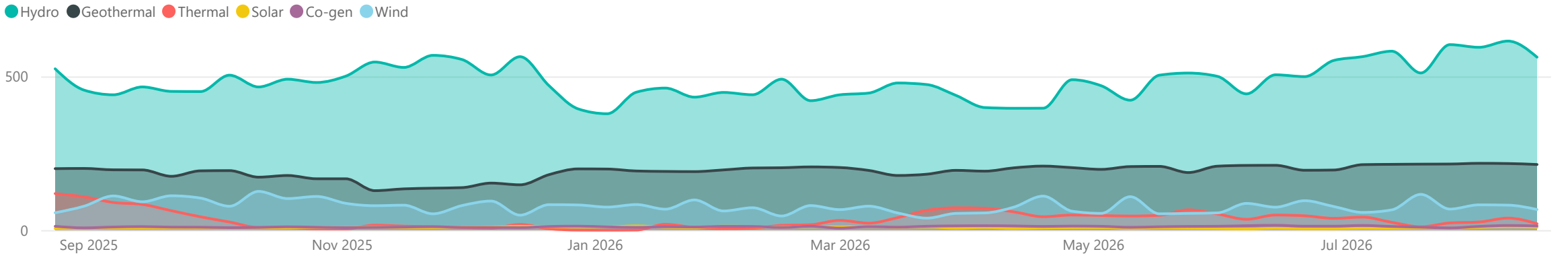

## Average Metrics Last 7 Days

| Renewable Percentage | CO2e Tonnes/Week | CO2e g/kWh |
|---|---|---|
| 96% | 35,278 | 38.9 |

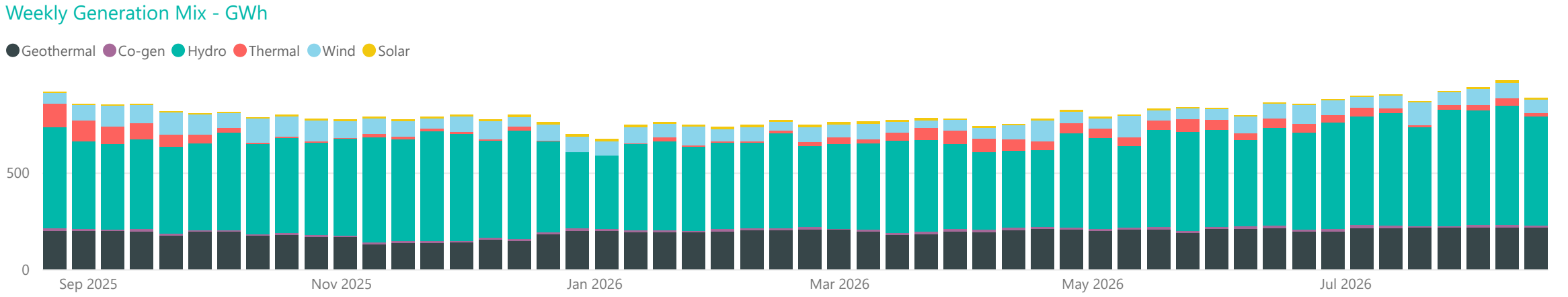
## Average Metrics Last 52 Weeks

| Renewable Percentage | CO2e Tonnes/Week | CO2e g/kWh |
|---|---|---|
| 94% | 37,749 | 45.9 |

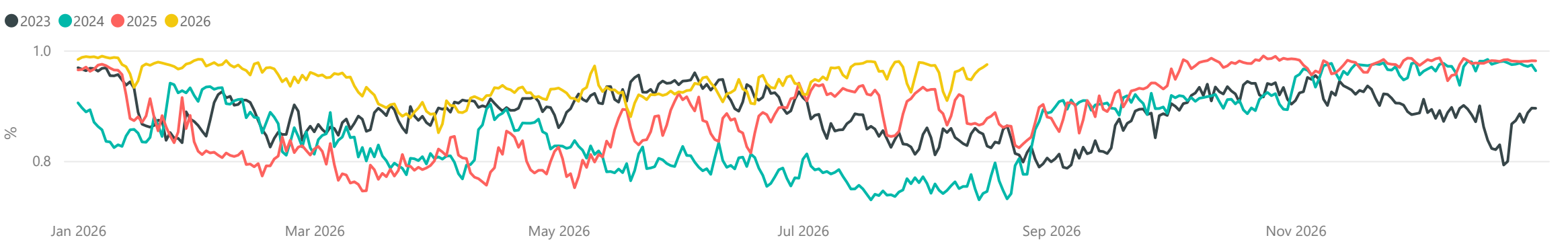
## Weekly Generation Mix - GWh



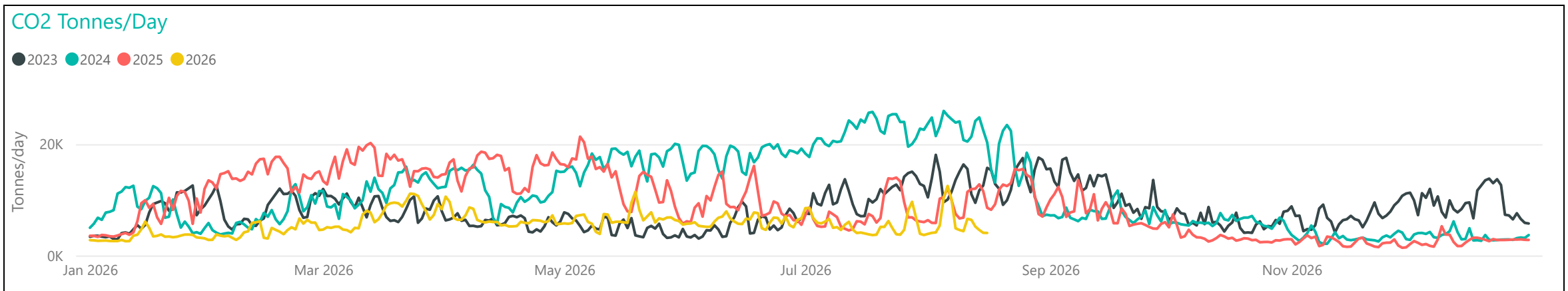

## Weekly Generation Mix - GWh



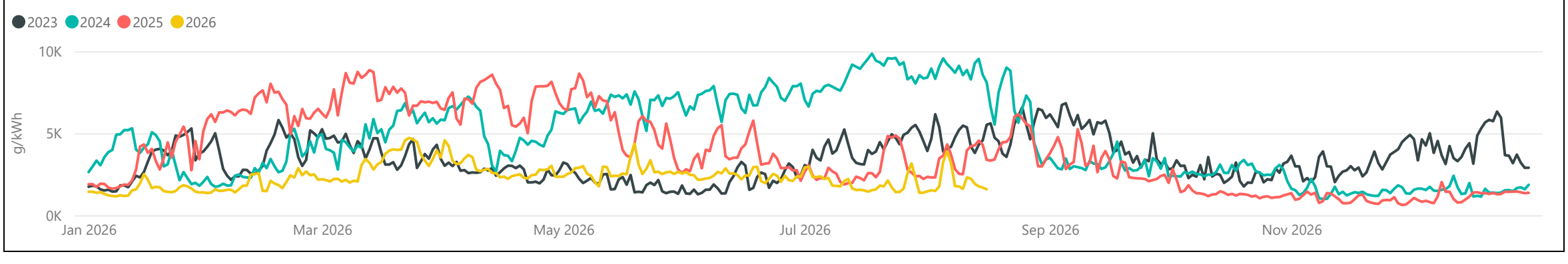

## NZ Renewable Percentage



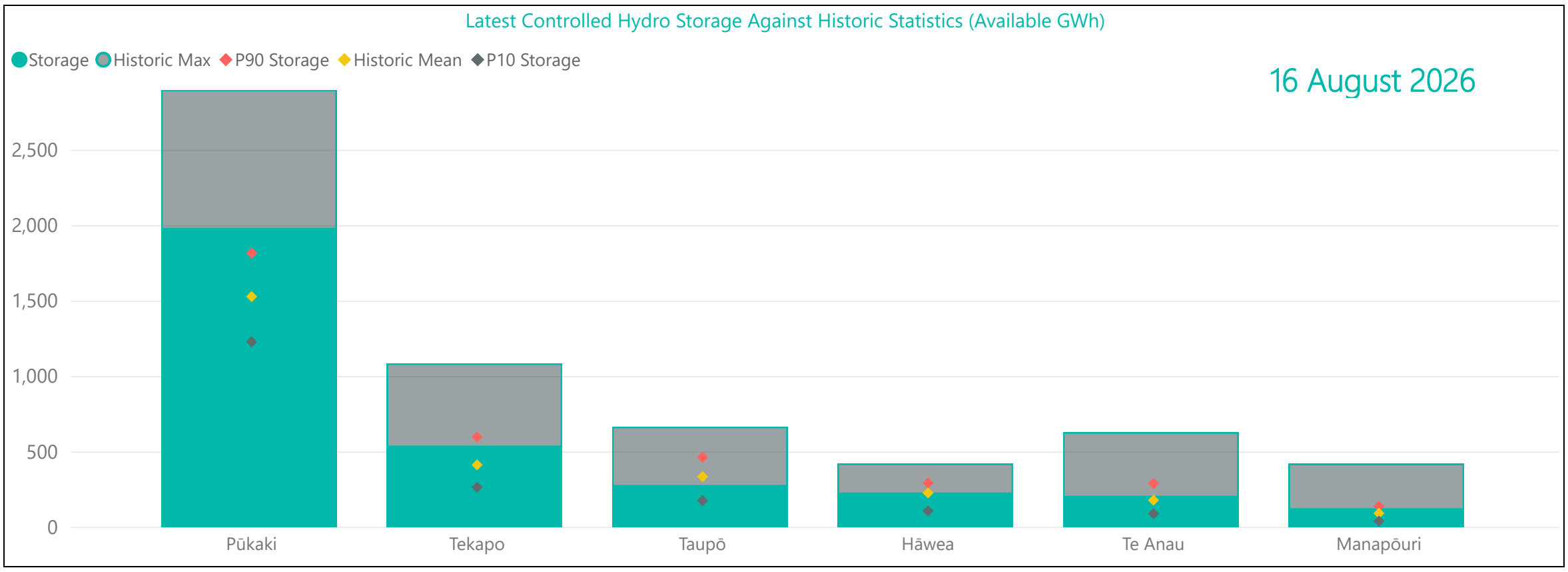

## CO2 Tonnes/Day

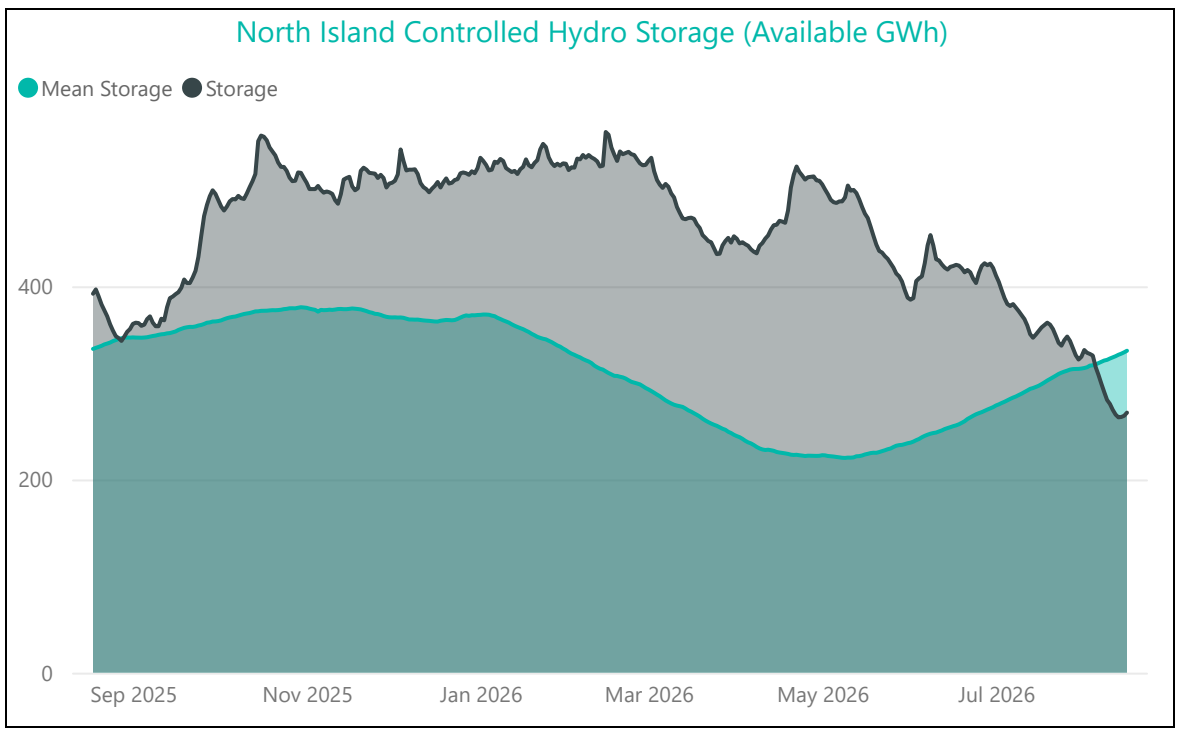


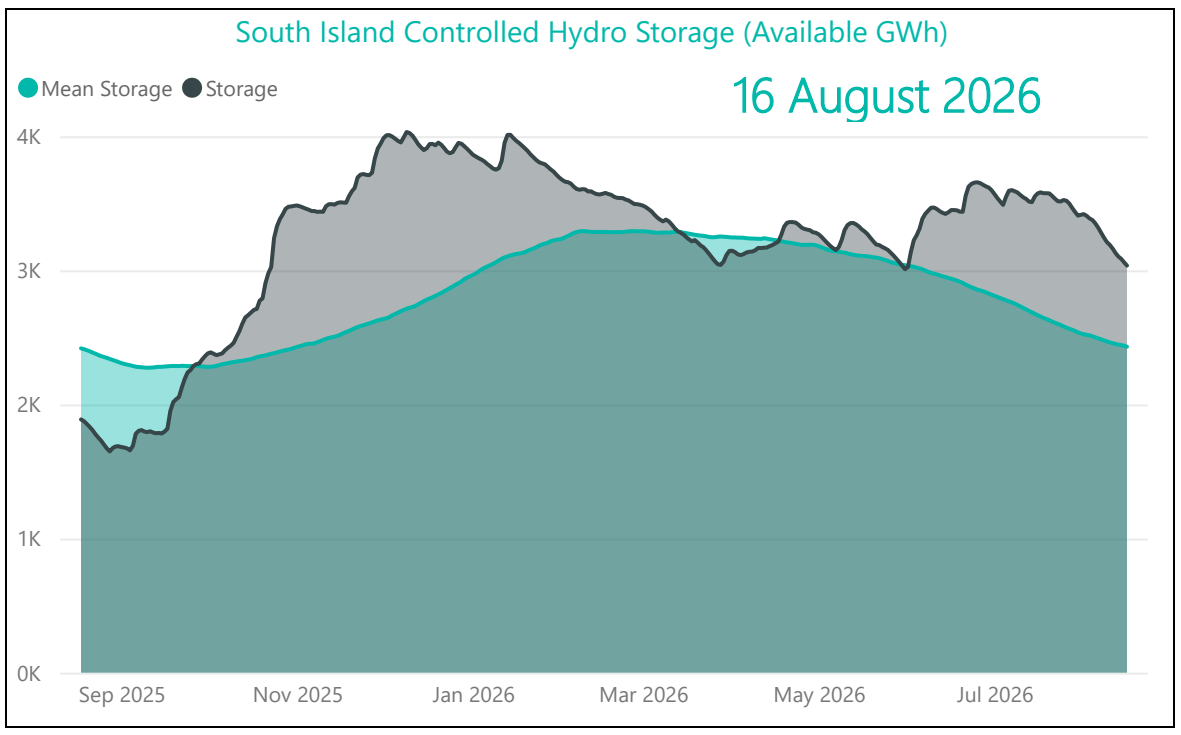

## CO2 g/kWh

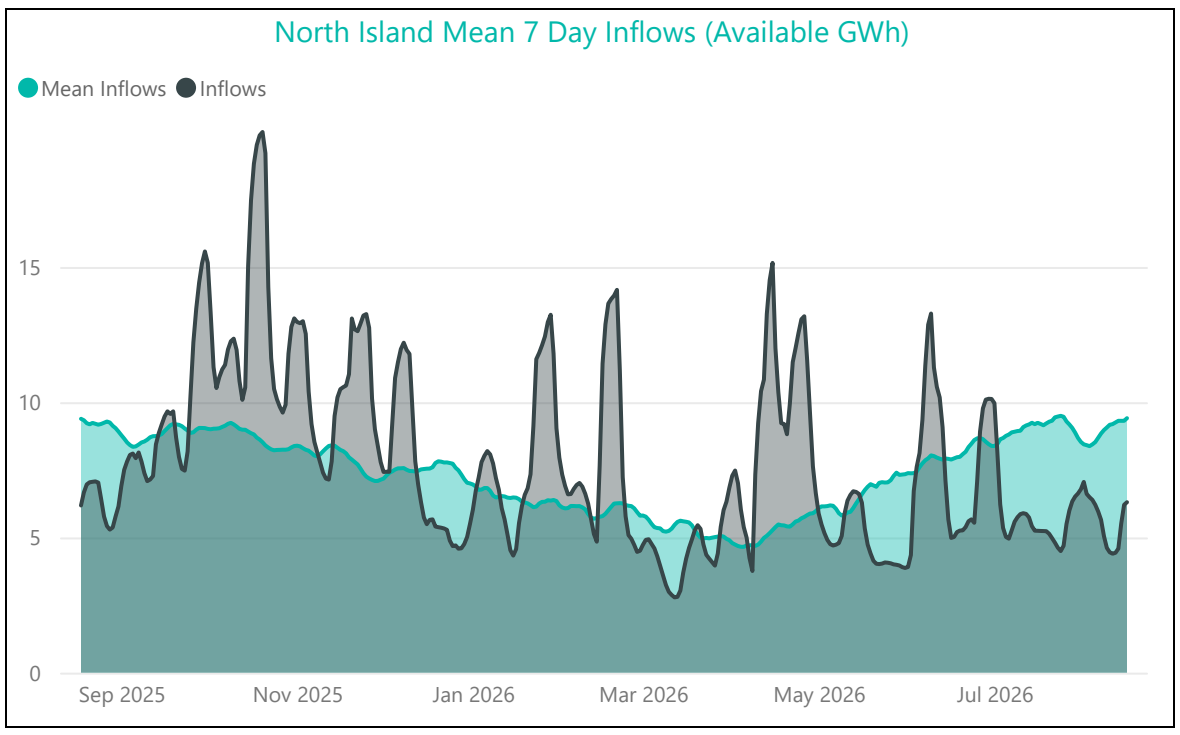


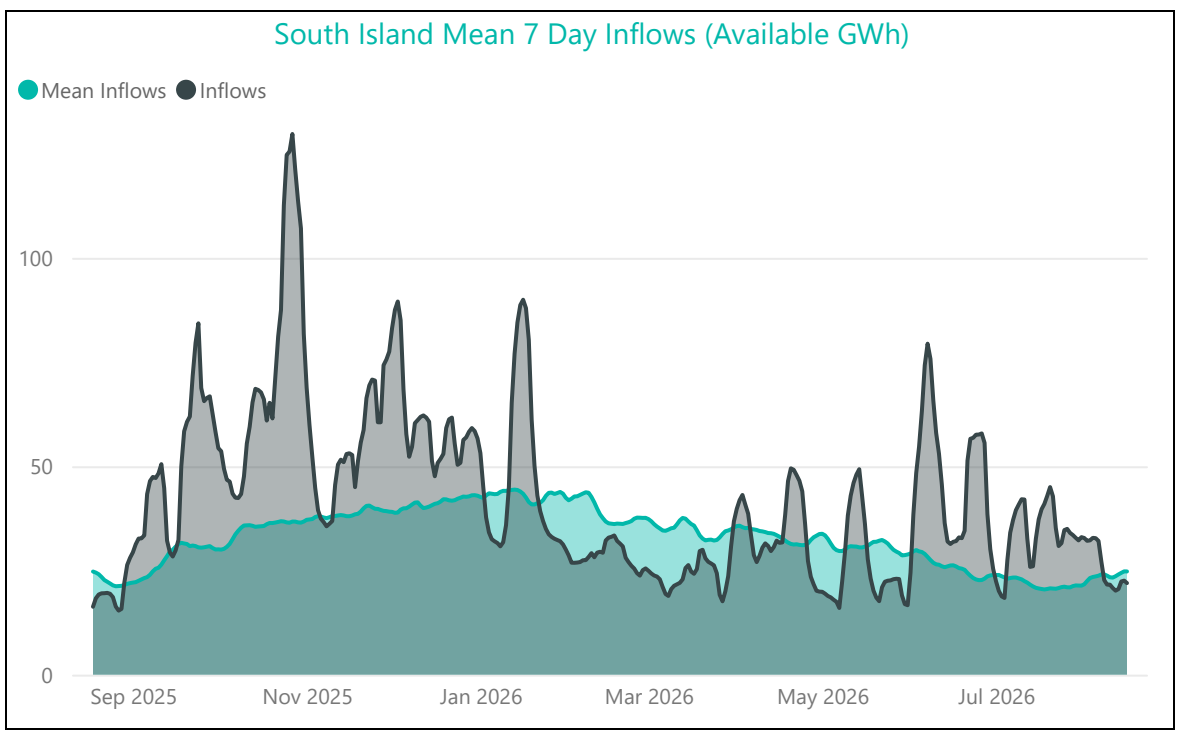
## Hydro Storage




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

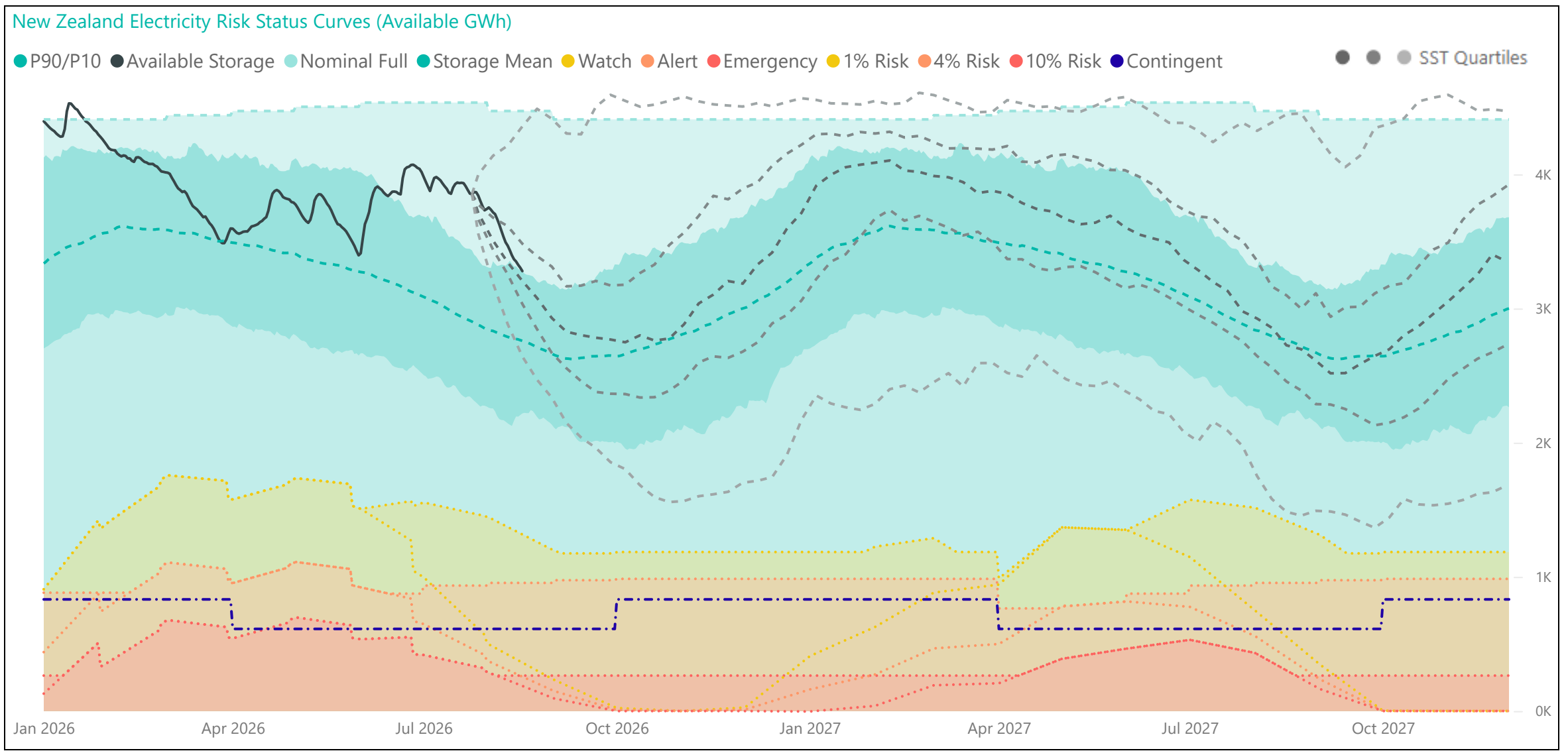
For any inquiries related to security of supply contact market.operations@transpower.co.nz

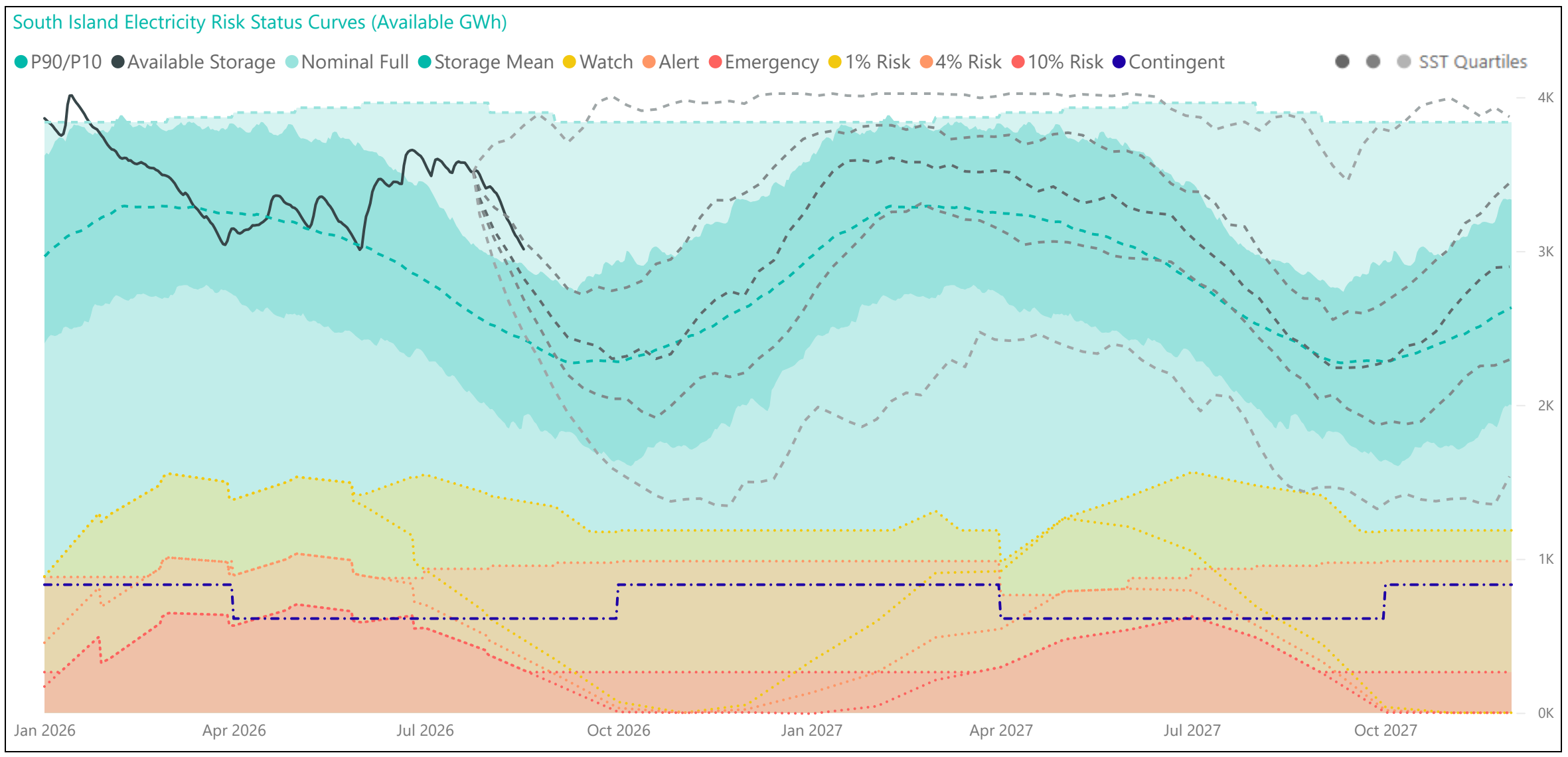
Hydro data used in this report is sourced from *NZX Hydro*.

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



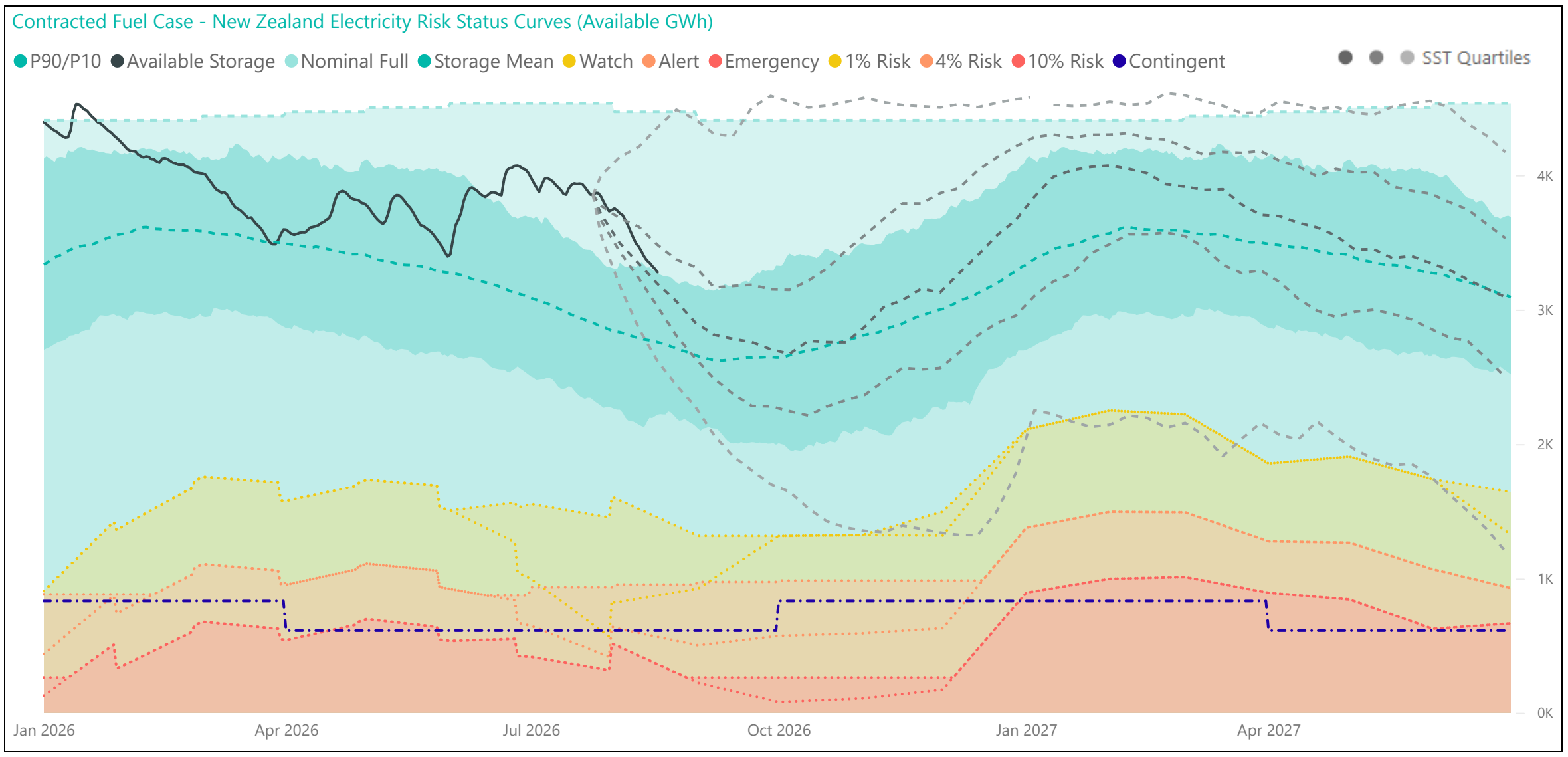

Electricity Risk Curve Explanation:

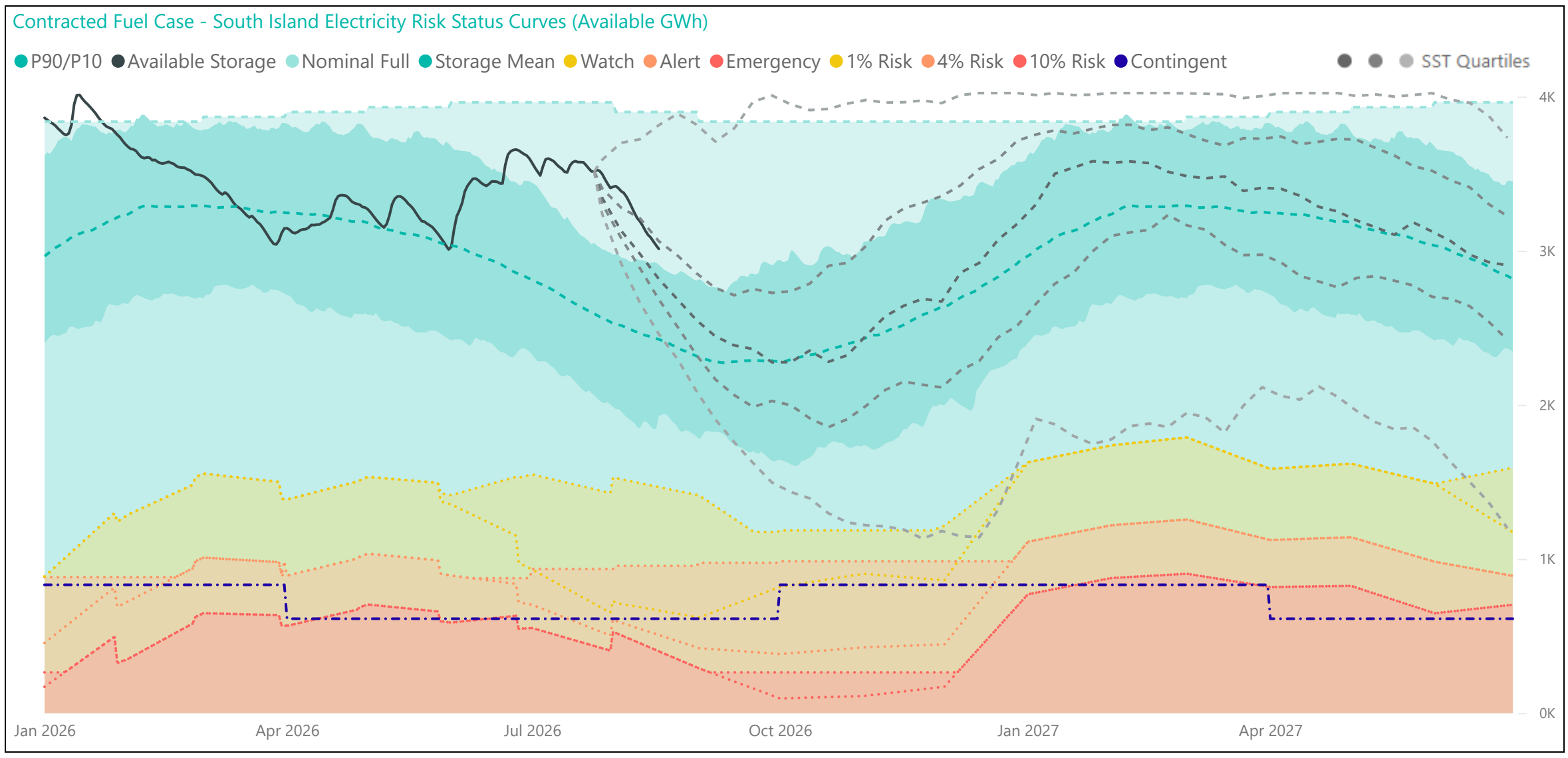
Watch Curve - The maximum of the one percent risk curve or the Alert curve plus the greater of the Watch adder or the worst-case simulated storage drop
Alert Curve - The maximum of the four percent risk curve and the floor and buffer
Emergency Curve - The maximum of the 10 percent risk curve and the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