



Market Operations Weekly Report - Week Ended 4 October 2026

Overview

Solar generation broke records again this week, generating 24 GWh last week, or 3% of the generation mix. Hydro storage remains above average at 130% of the historic mean. With seasonal plant outages now progressing, lower residual generation margins are occurring during colder and low wind periods.

This weeks insight compares thermal generation during winter 2024 to winter 2026 and analyses the role different types of thermal generation provide.

Security of Supply
Energy

National hydro storage decreased to 130% of the historic mean from 132% the week prior. South Island storage decreased from 143% to 139% and North Island storage increased from 75% to 77%.

Capacity

Residuals were healthy this week with the lowest residual of 618 MW on the morning of Wednesday 30 September.

The N-1-G margins in the NZGB forecast continue to increase with healthy levels through to late November. 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 last week to 780 GWh from 804 GWh the week prior with warmer weather. The highest demand peak of 6,019 MW occurred at 8:00 am on Monday 28 September.

Weekly Prices

Wholesale electricity spot prices decreased last week with the average Ōtāhuhu price decreasing to \$35/MWh from \$67/MWh the previous week. Prices peaked at \$194/MWh at 9:30 pm on Sunday 4 October.

Price separation occurred between Benmore and Invercargill overnight on Thursday 1 Oct. This was due to a transmission constraints during a line outage in the lower south island.

Generation Mix

Solar generation once again broke records this week, contributing 24 GWh or 3% of the generation mix. Wind generation was above its yearly average again at 13% while thermal generation was below its average at 0.6%. Hydro and geothermal generation were slightly below average at 58% and 24% respectively.

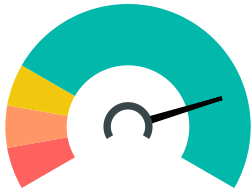
HVDC

HVDC flows last week were entirely northward. In total 122 GWh was transferred north.

New Zealand Energy Risk

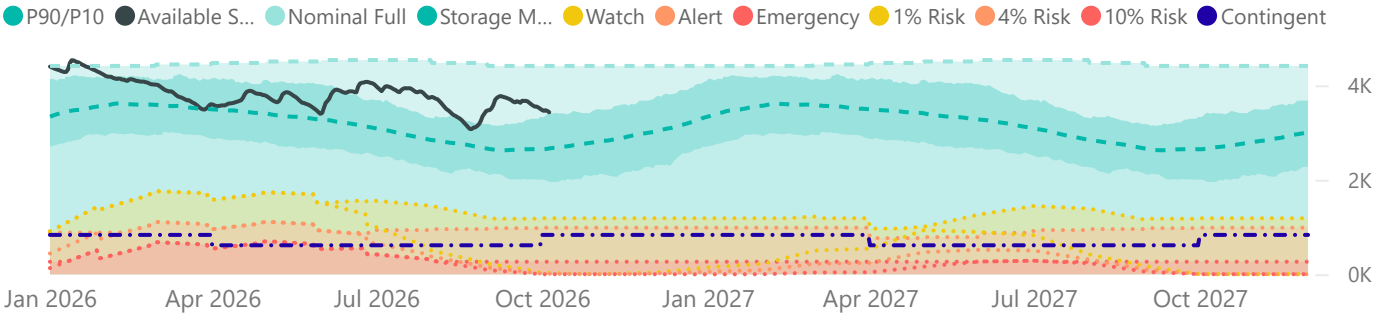


South Island Energy Risk

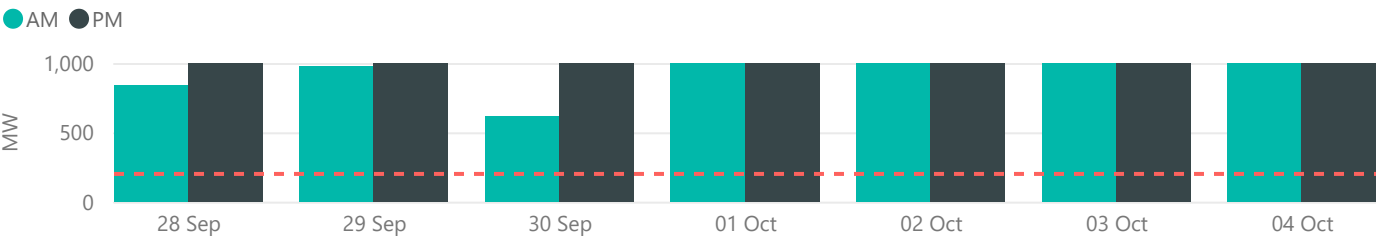


Normal Watch Alert Emergency

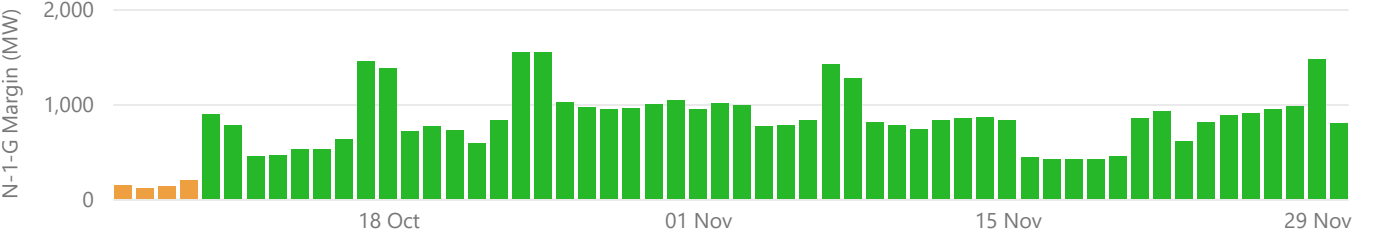
New Zealand Electricity Risk Status Curves (Available GWh)



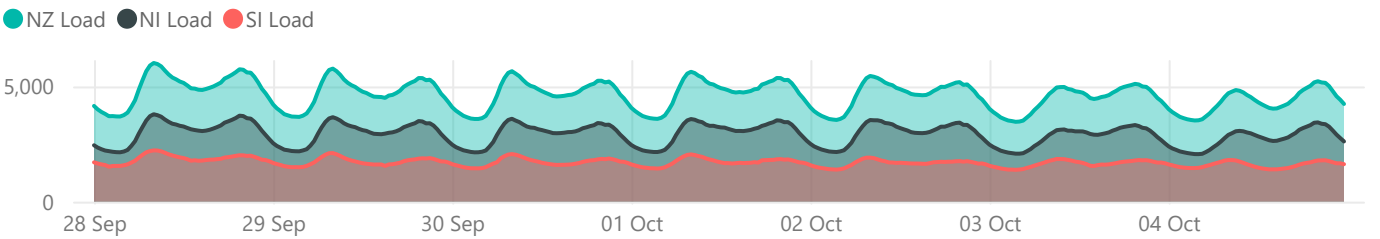
Lowest Residual Points - MW



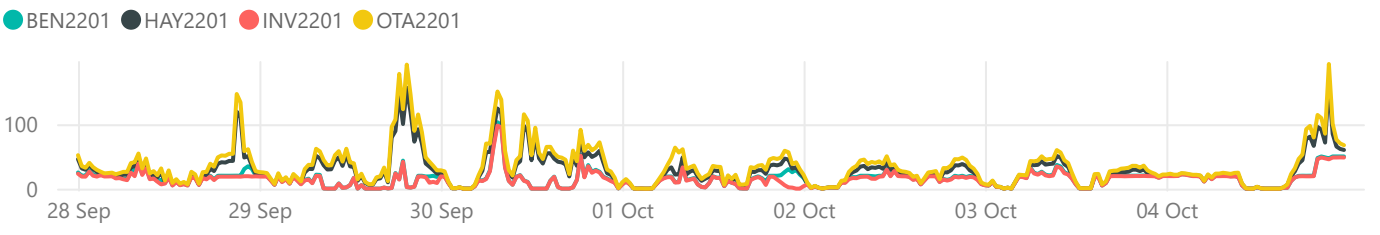
NZGB Look-Ahead (excluding next 7 days)



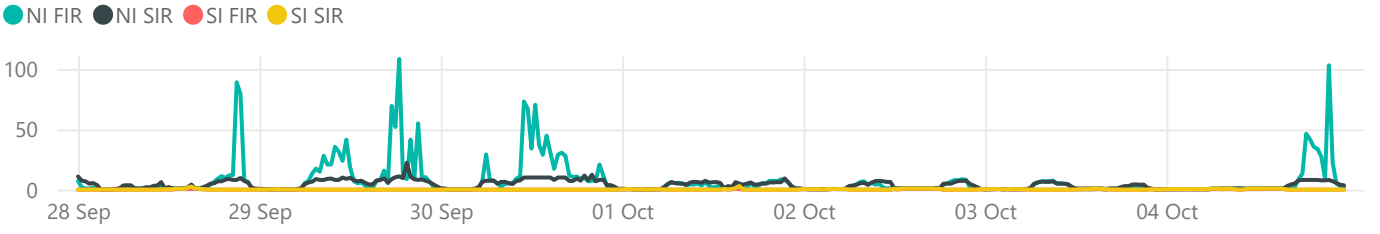
National Demand by Trading period - MW



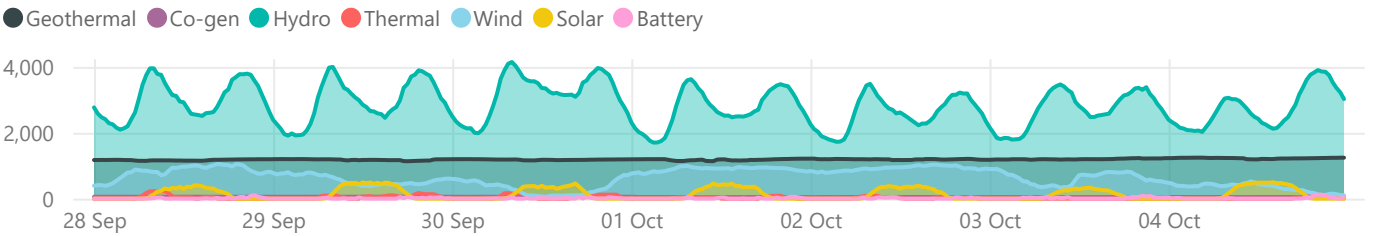
Energy Prices - \$/MWh



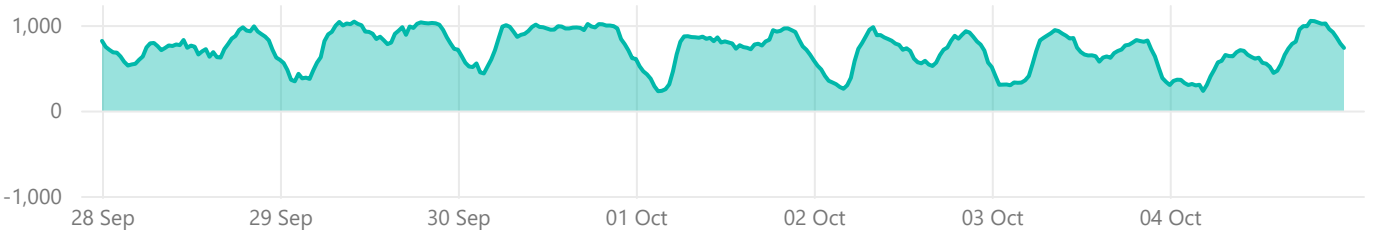
Reserve Prices - \$/MW

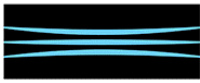


Generation - MW



Net HVDC Transfer - MW (Northward positive)



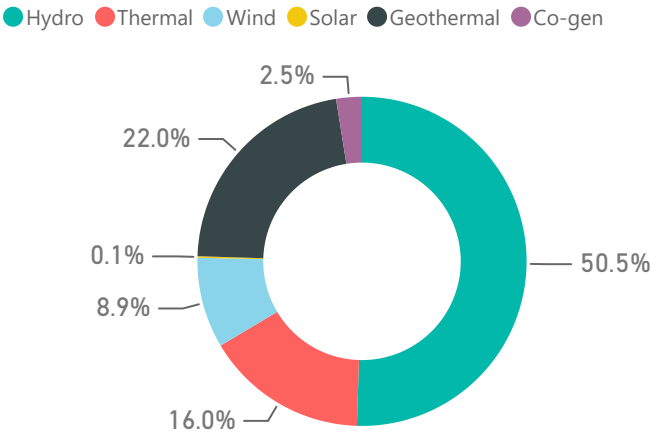


Weekly Insight - Thermal Generation Over Winter - 2024 vs 2026

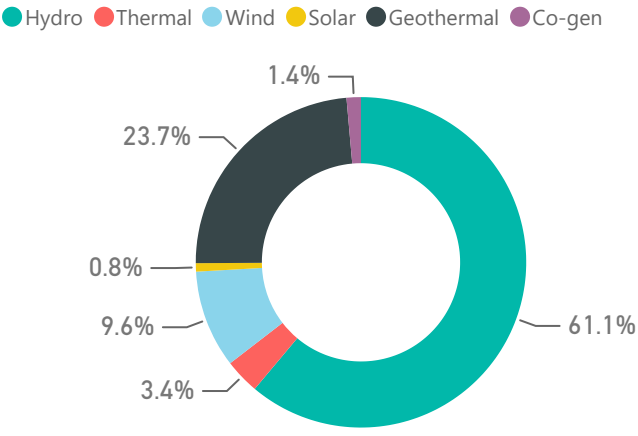
In [previous insights](#) we have covered how high renewable generation and hydro inflows reduced Aotearoa’s consumption of fossil fuels used to generate electricity this winter. This insight compares winter thermal generation over the high-hydro storage period this year to 2024’s dry year.

The figures below show the generation mix over months June-August for 2024 (left) and 2026 (right). Total hydro generation was almost 10% lower in 2024 than 2026, a difference of 1,732 GWh over the entire period . Thermal generation made up 16% of total generation in winter 2024 and just 3.4% this winter, a difference of 1,309 GWh across the three months. There was also less contribution from co-gen in 2026 but more from geothermal, solar, and wind.

2024 Winter Generation Mix

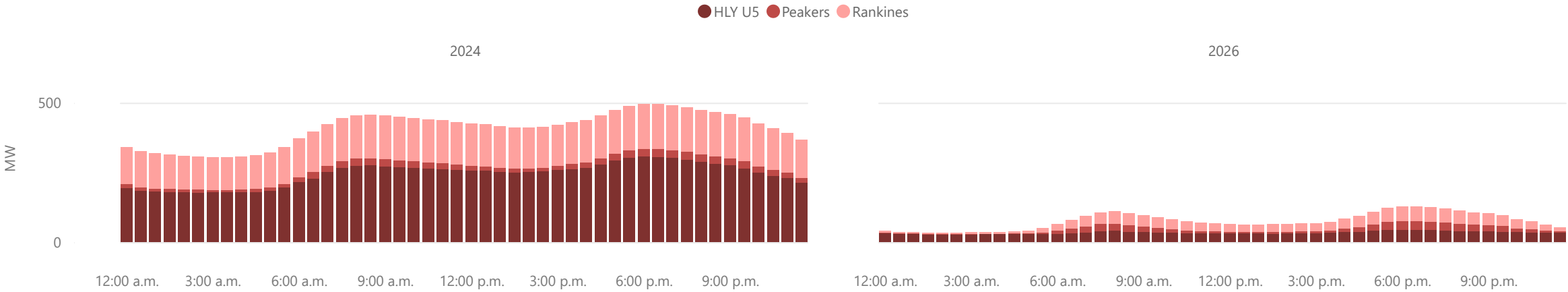


2026 Winter Generation Mix



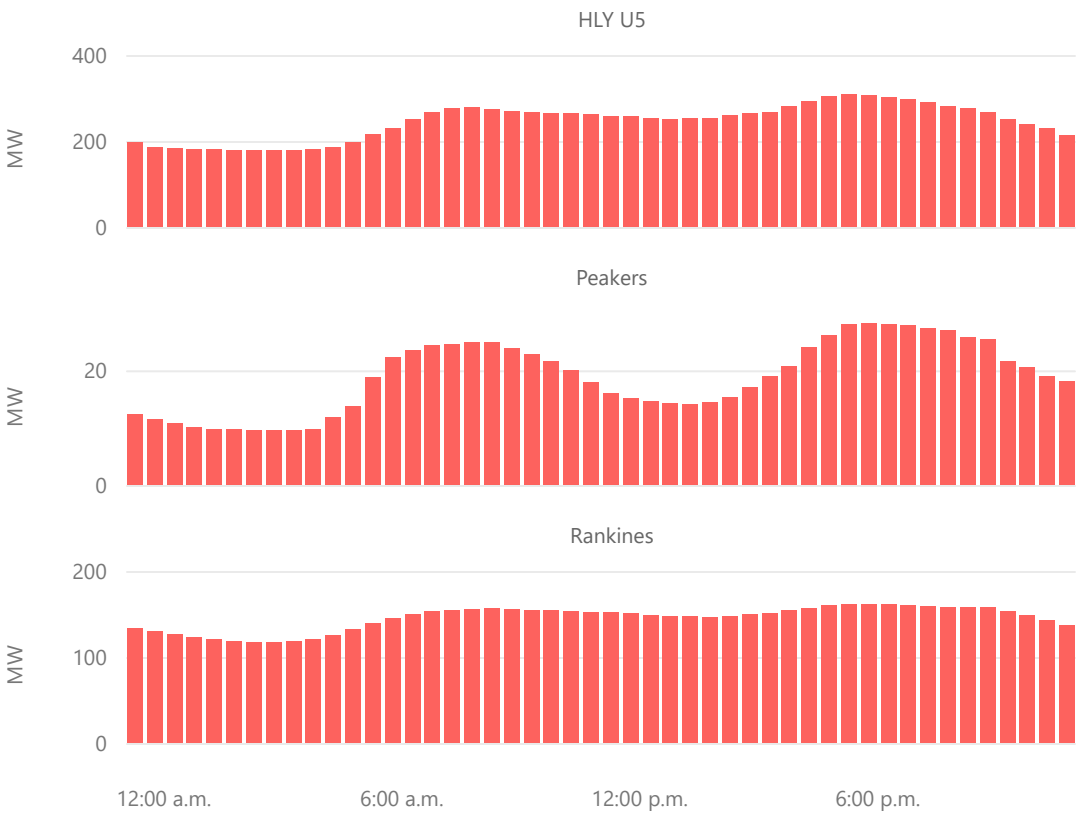
The next figure shows the average daily profile for thermal generation in winter, again comparing 2024’s dry year to this year. This has been further broken down into groups of thermal generators, based on their type and use. Huntly Unit 5 (HLY U5) is a combined cycle gas turbine with a 400 MW capacity used commonly for baseload demand. Rankines consist of three 250 MW coal/gas fuelled units at Huntly power station. Peakers include Huntly’s gas/diesel Unit 6 and the Stratford, Junction Road, and McKee gas turbine units.

Average Winter Day Thermal Generation

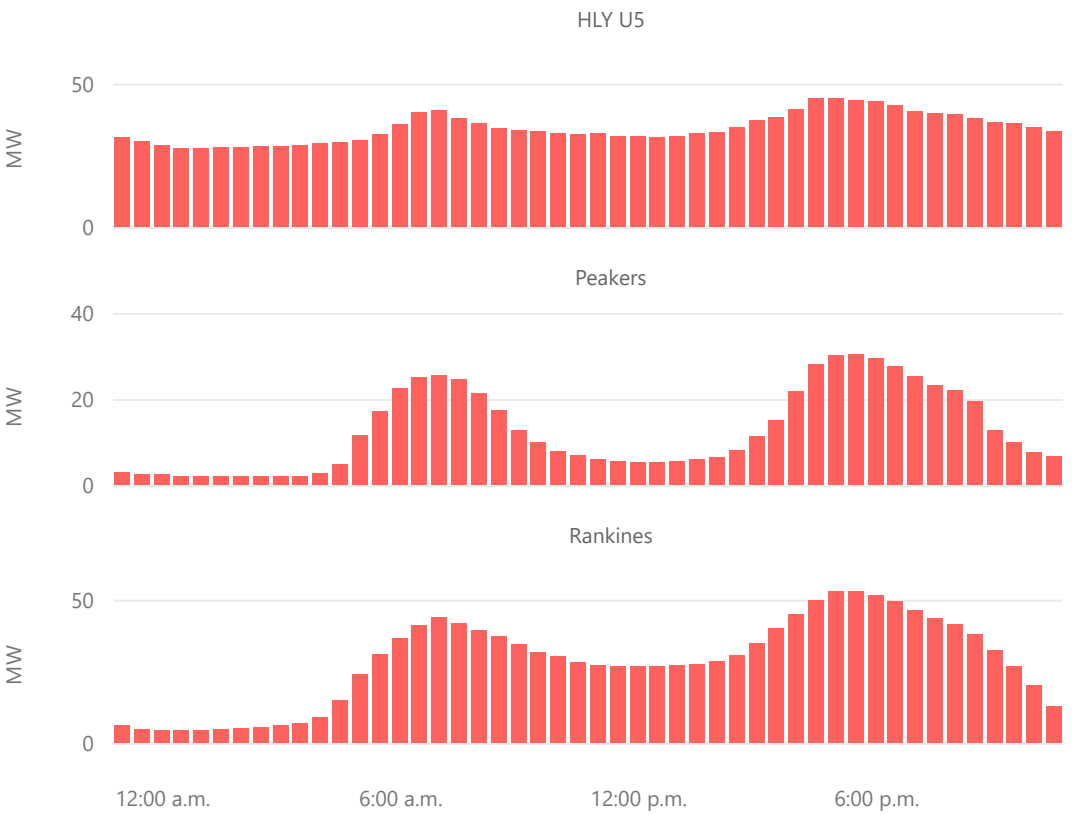


The difference in amount of thermal generation between 2024 and 2026 is clear, and we can see how HLY U5 provided baseload generation across both years but also increased generation during peak periods in 2024. The Peakers primarily generated during peak periods, as the name suggests, while the role of the Rankines varied. In 2024, the Rankines generated consistently both day and night while this winter they primarily generated during the day, with little to no generation overnight. The graphs below look closer at the different shapes in daily profile across both years and groups of thermal generators. Note that the generation (MW) scales differ between graphs.

2024 - Average Winter Day



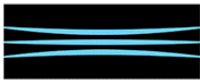
2026 - Average Winter Day



These profiles help to highlight the shift in behaviour of each type of thermal unit between winters. HLY U5 typically ran as a baseload unit but had some capacity to ramp up generation during peak periods. The Peakers output profile was similar across both winters, generating during peak periods, although with some contribution to off-peak periods in 2024. The Rankines demonstrated considerable operational flexibility, transitioning from continuous baseload operation in 2024 to more of a peaking role in 2026, with output concentrated in peak demand periods.

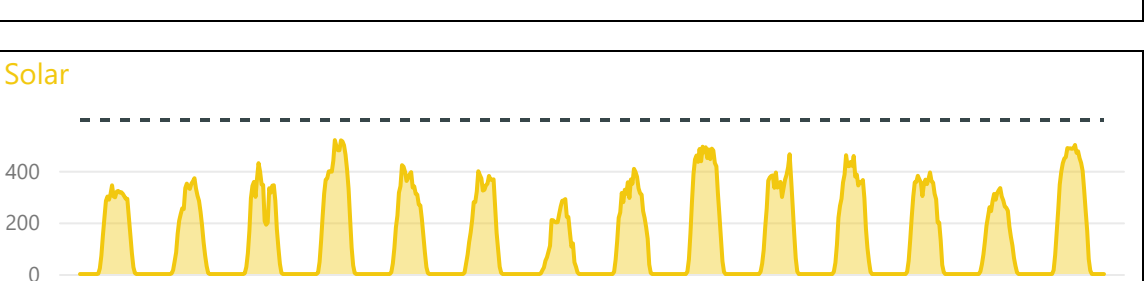
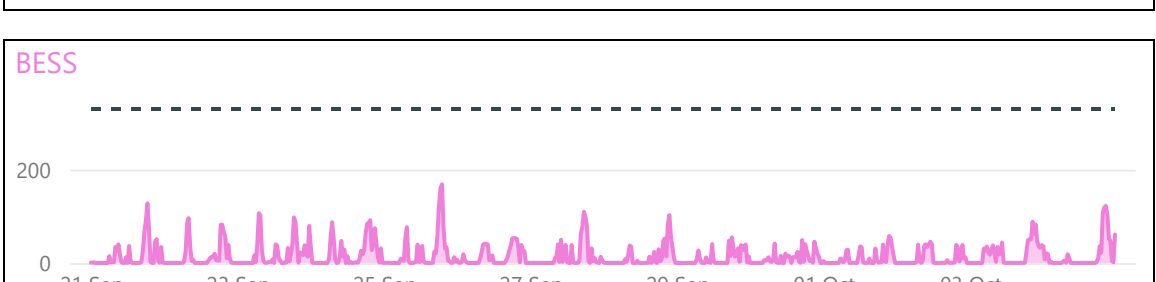
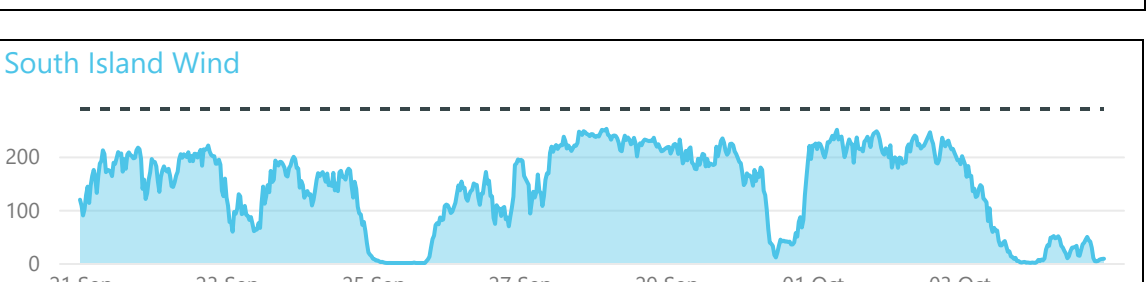
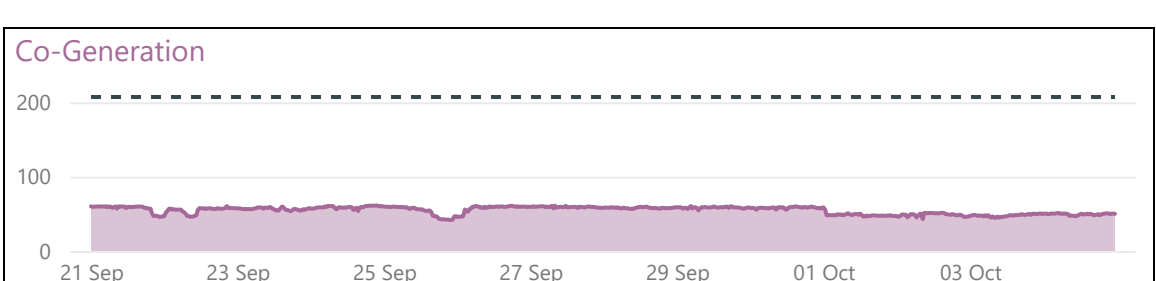
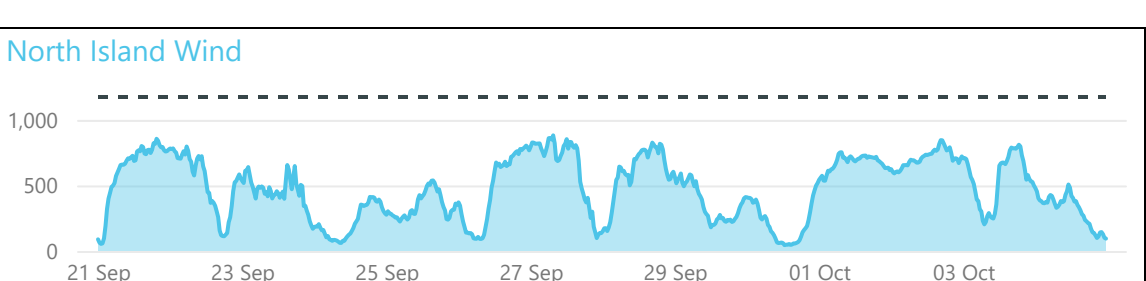
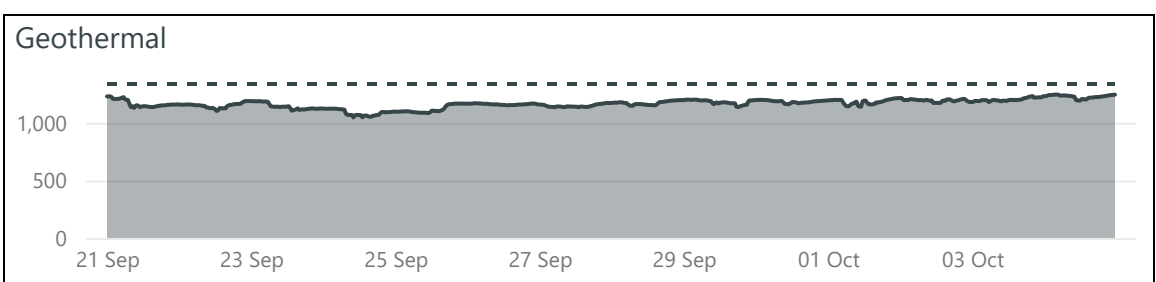
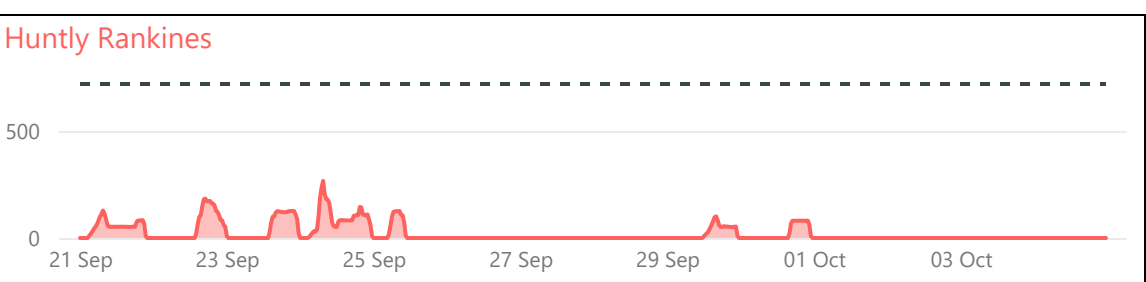
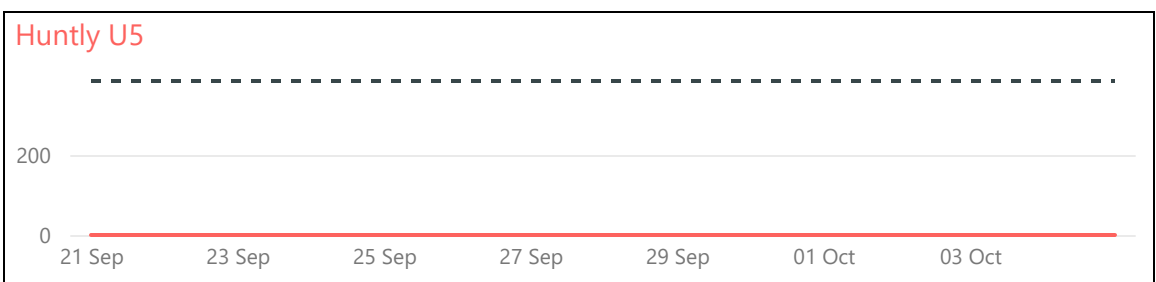
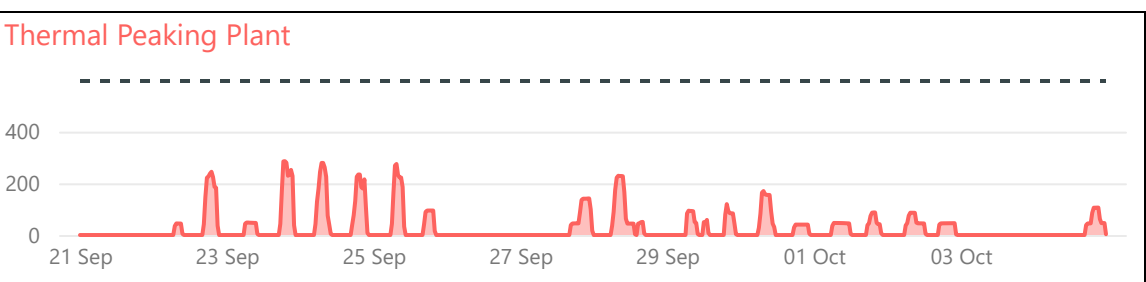
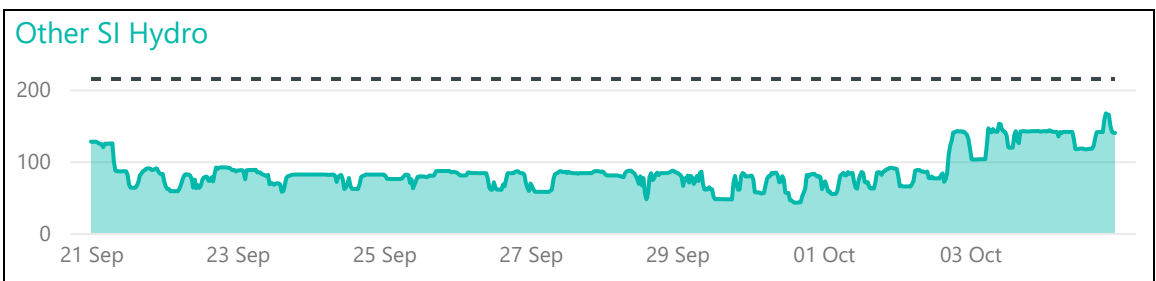
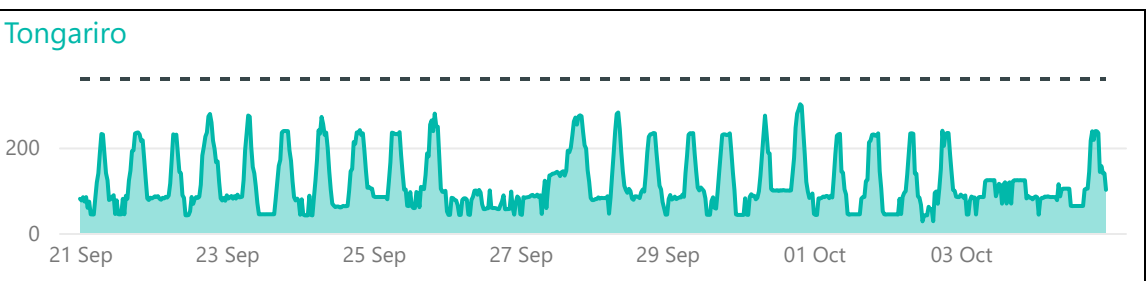
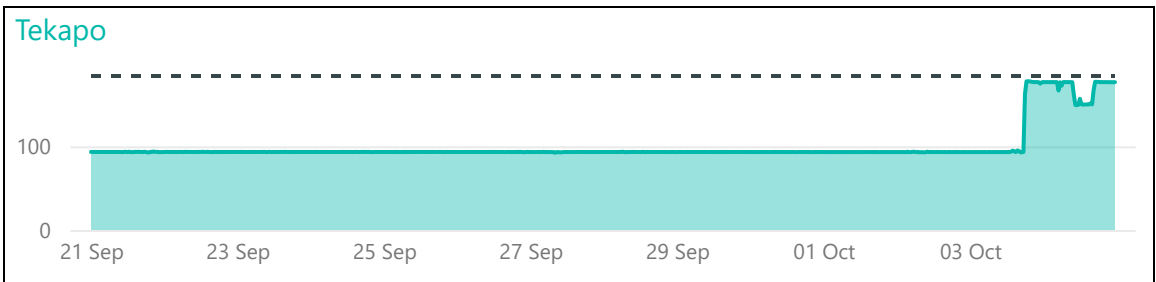
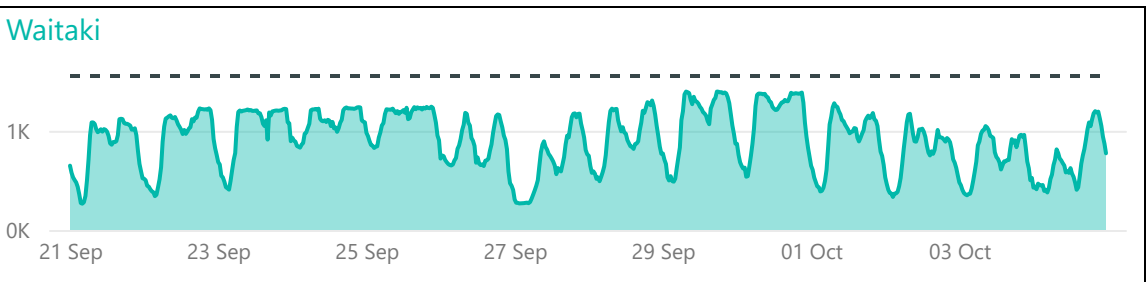
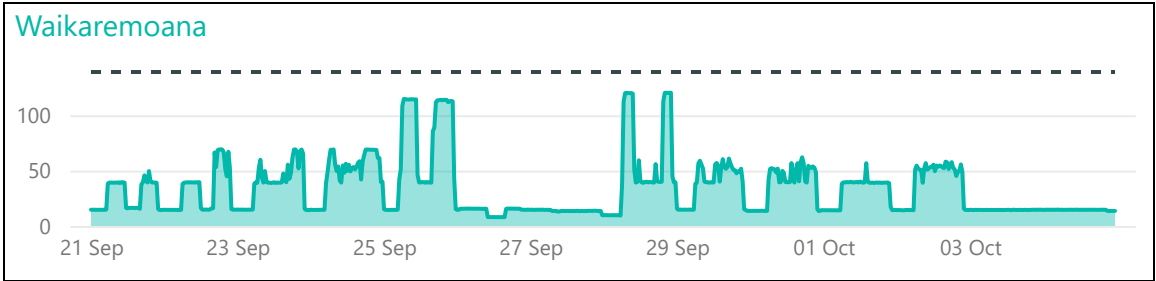
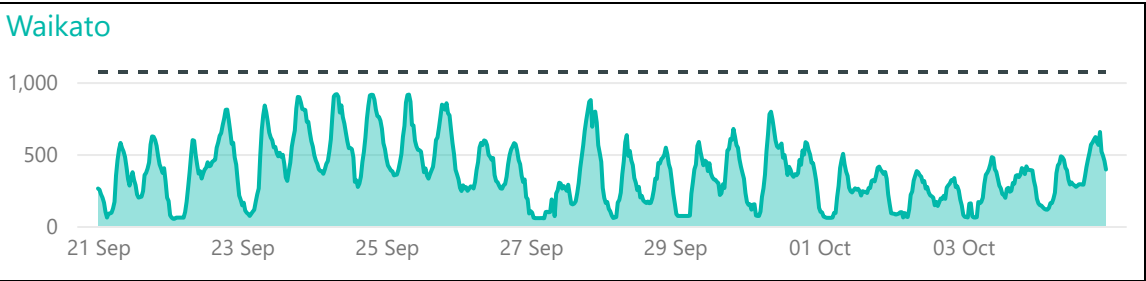
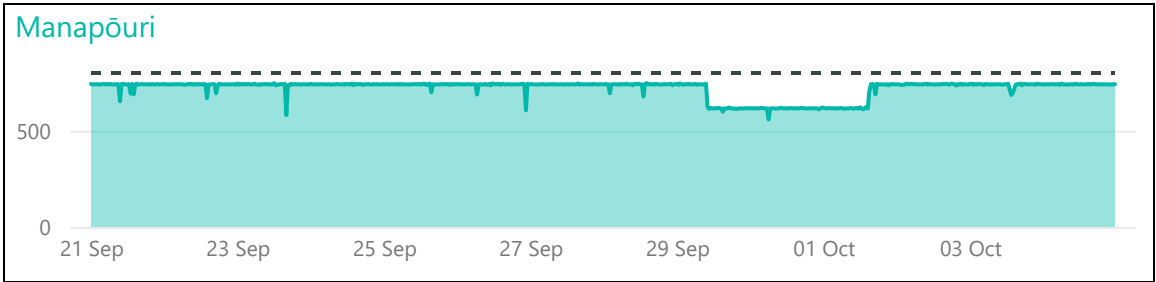
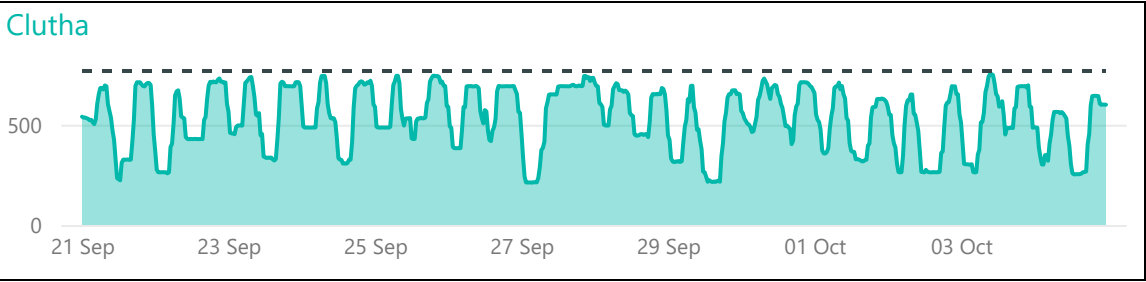
These differences highlight the importance of flexibility within the generation fleet to adapt to changing system conditions.

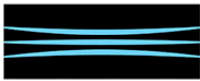
Note: HLY U5 was shut down midway through June this year to make gas available for commercial and industrial users, decreasing its average generation over winter 2026.



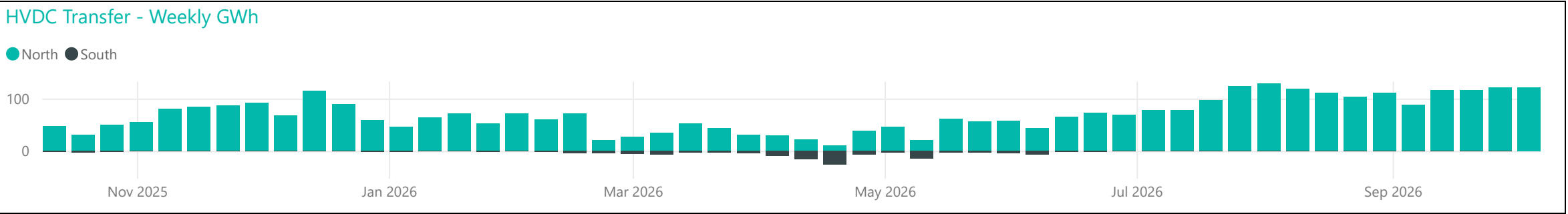
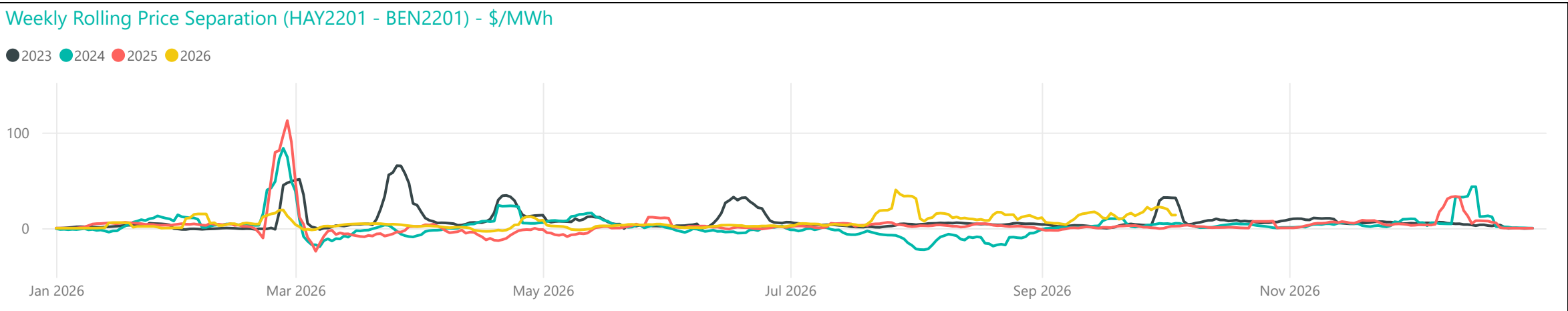
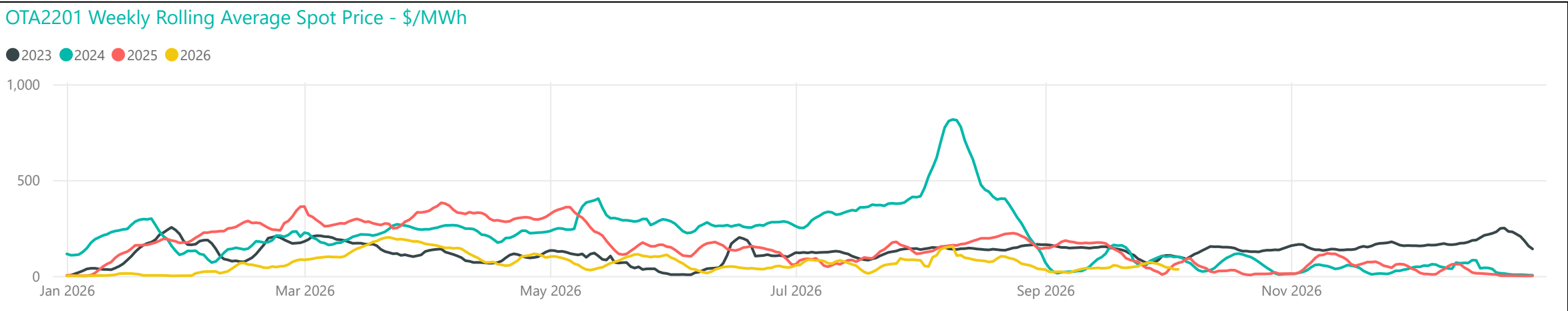
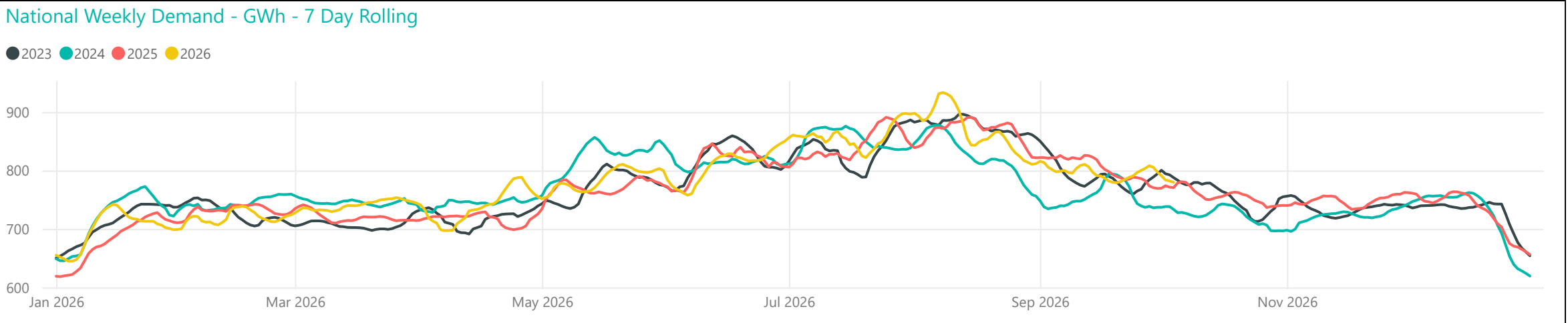
Generation Breakdown - Last Two Weeks

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

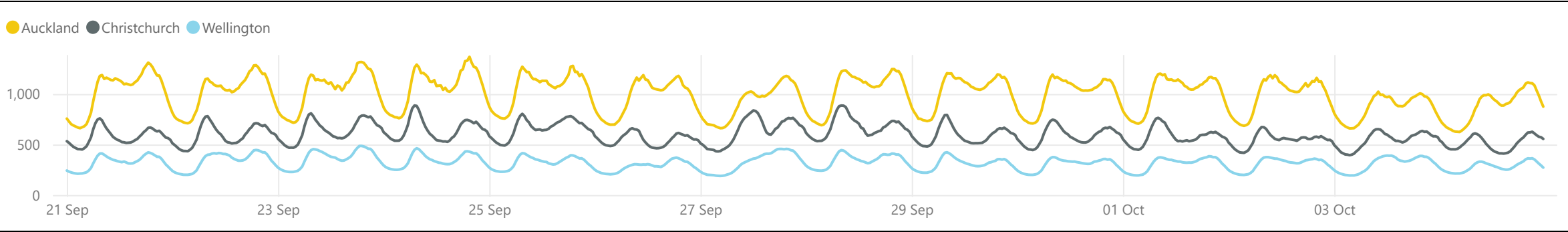




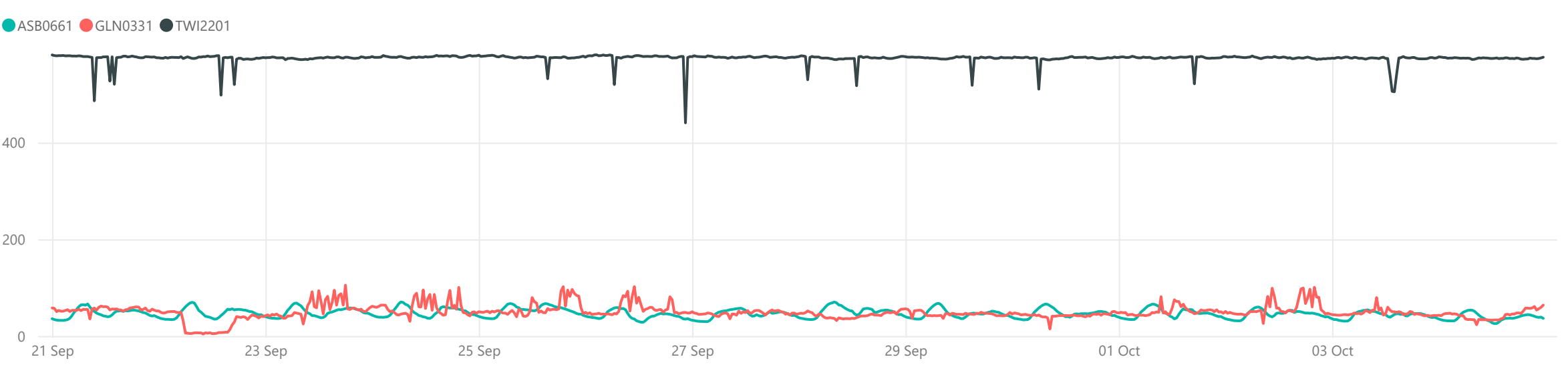
Weekly Profiles



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

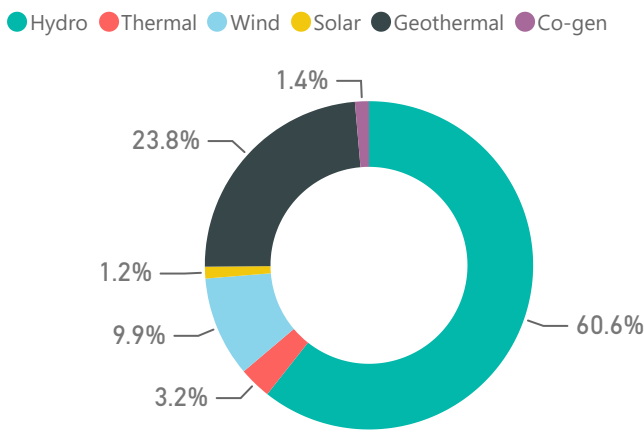


Non-Conforming Load Profiles - Last Two Weeks *Measured in MW shown by GXP*

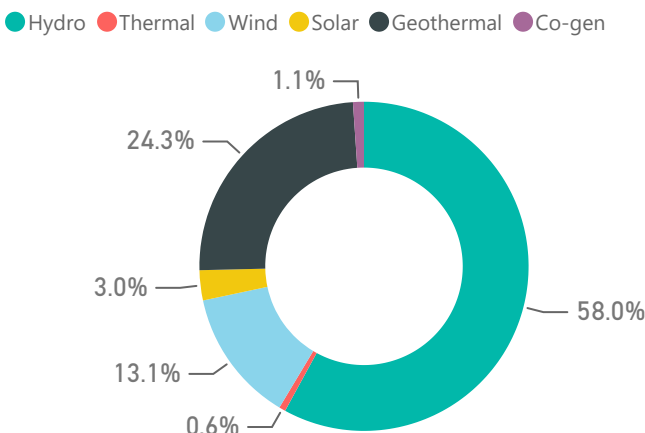


Generation Mix

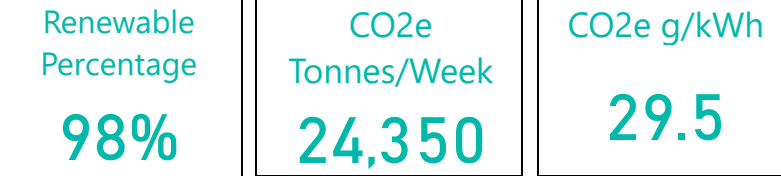
Last 52 Weeks Generation Mix - Weekly GWh



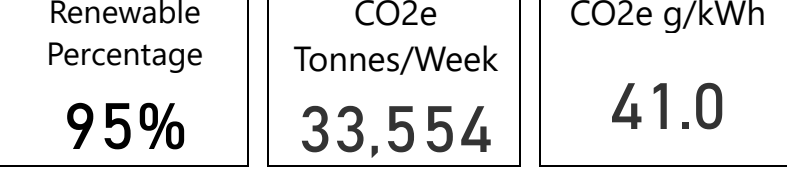
Last 7 Days Generation Mix - Weekly GWh



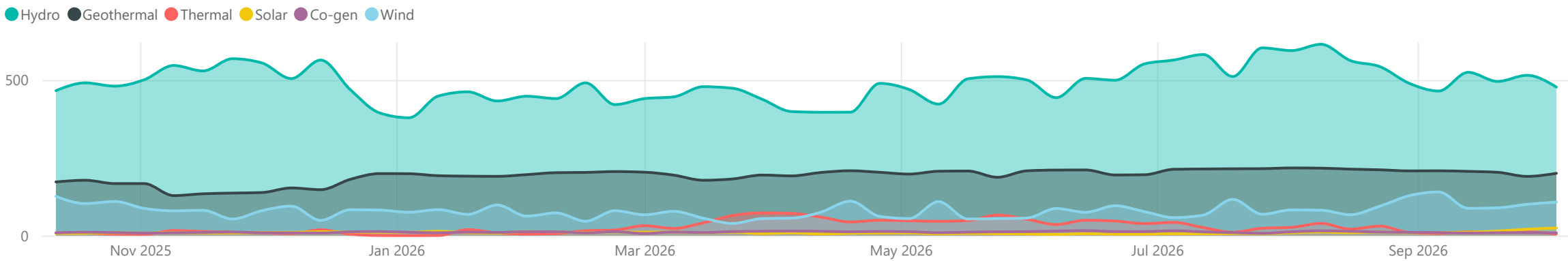
Average Metrics Last 7 Days



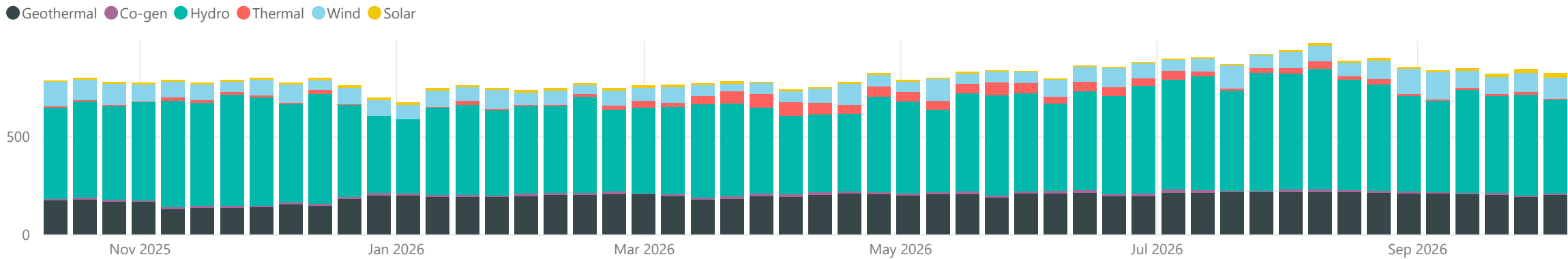
Average Metrics Last 52 Weeks



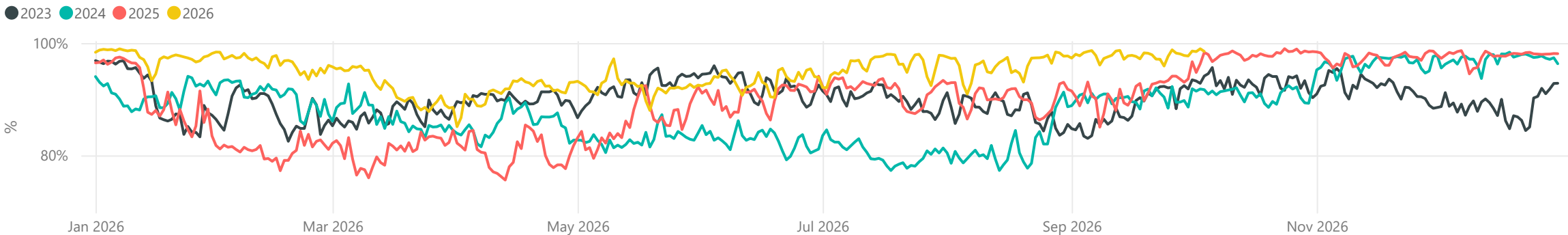
Weekly Generation Mix - GWh



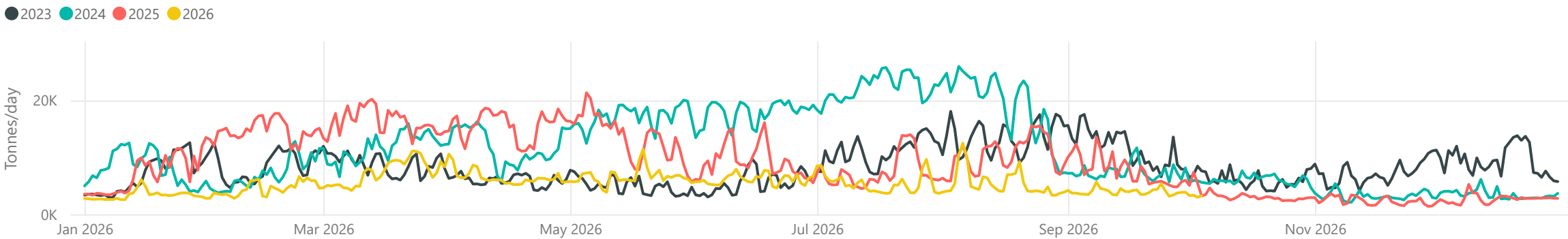
Weekly Generation Mix - GWh



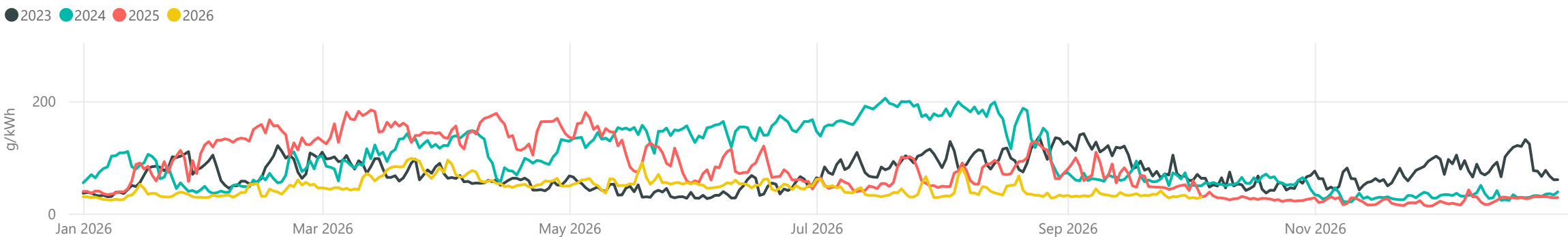
NZ Renewable Percentage

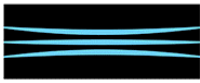


CO2 Tonnes/Day

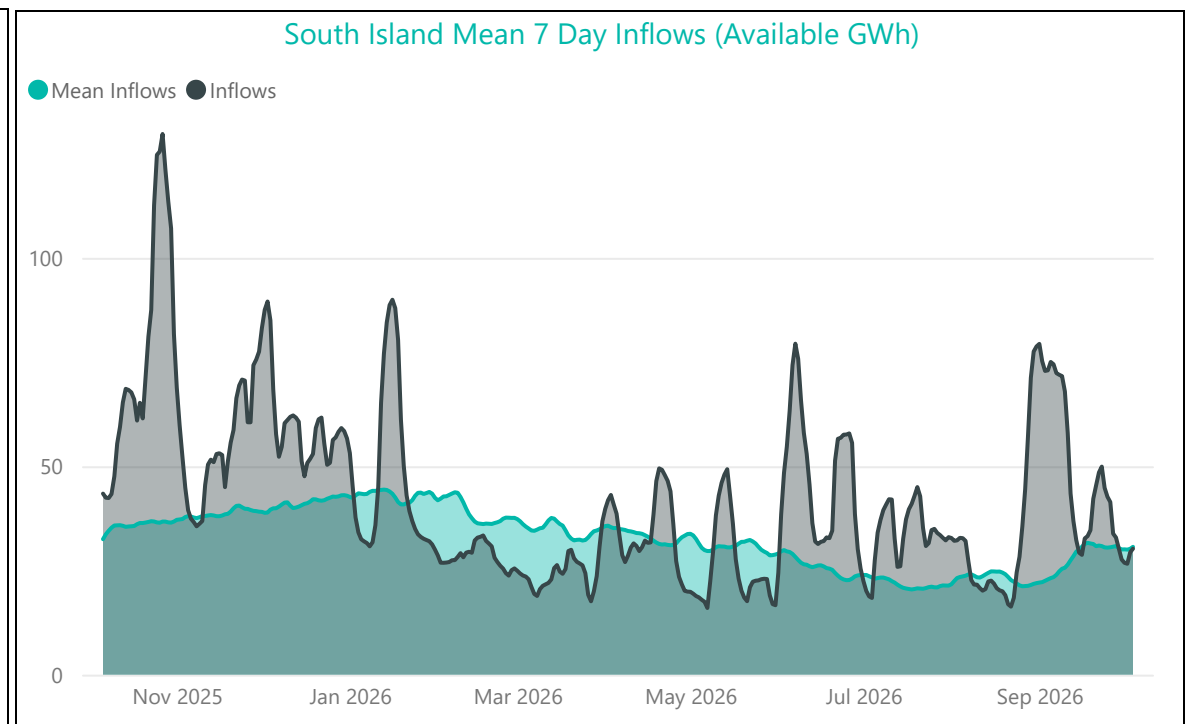
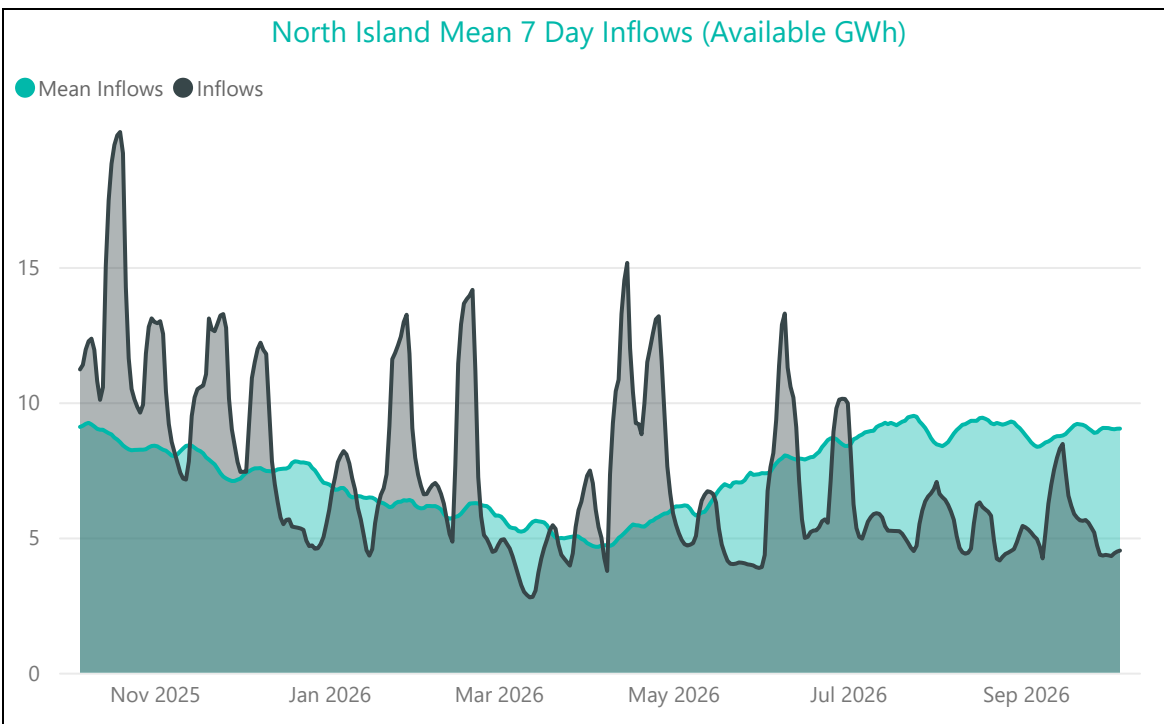
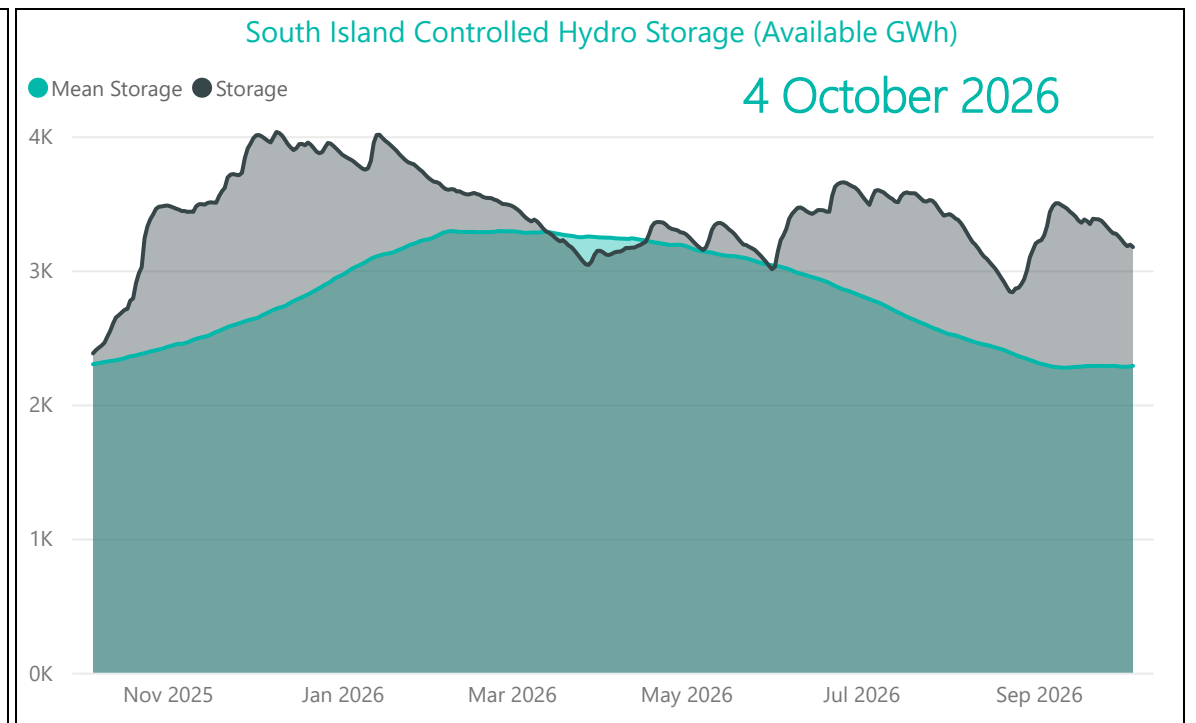
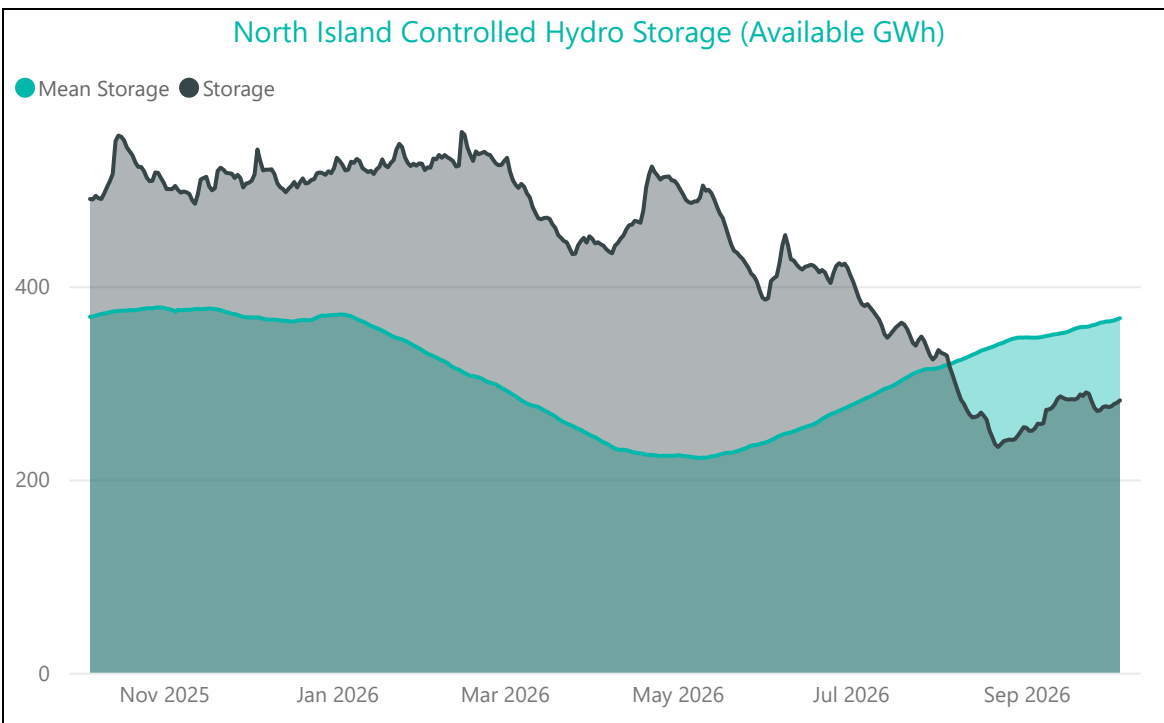
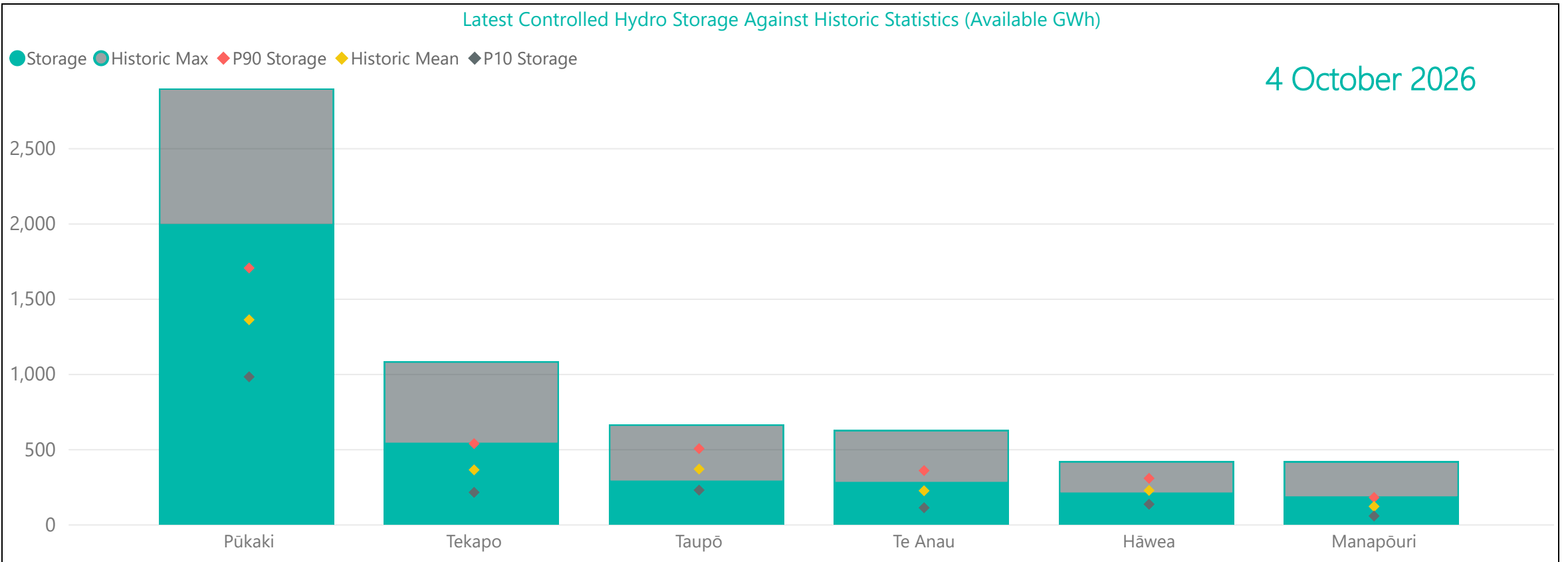


Average CO2 g/kWh





Hydro Storage



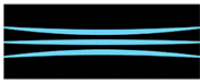
For further information on security of supply and Transpower's responsibilities as the System Operator, refer to our webpage here: <https://www.transpower.co.nz/system-operator/security-supply>.

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

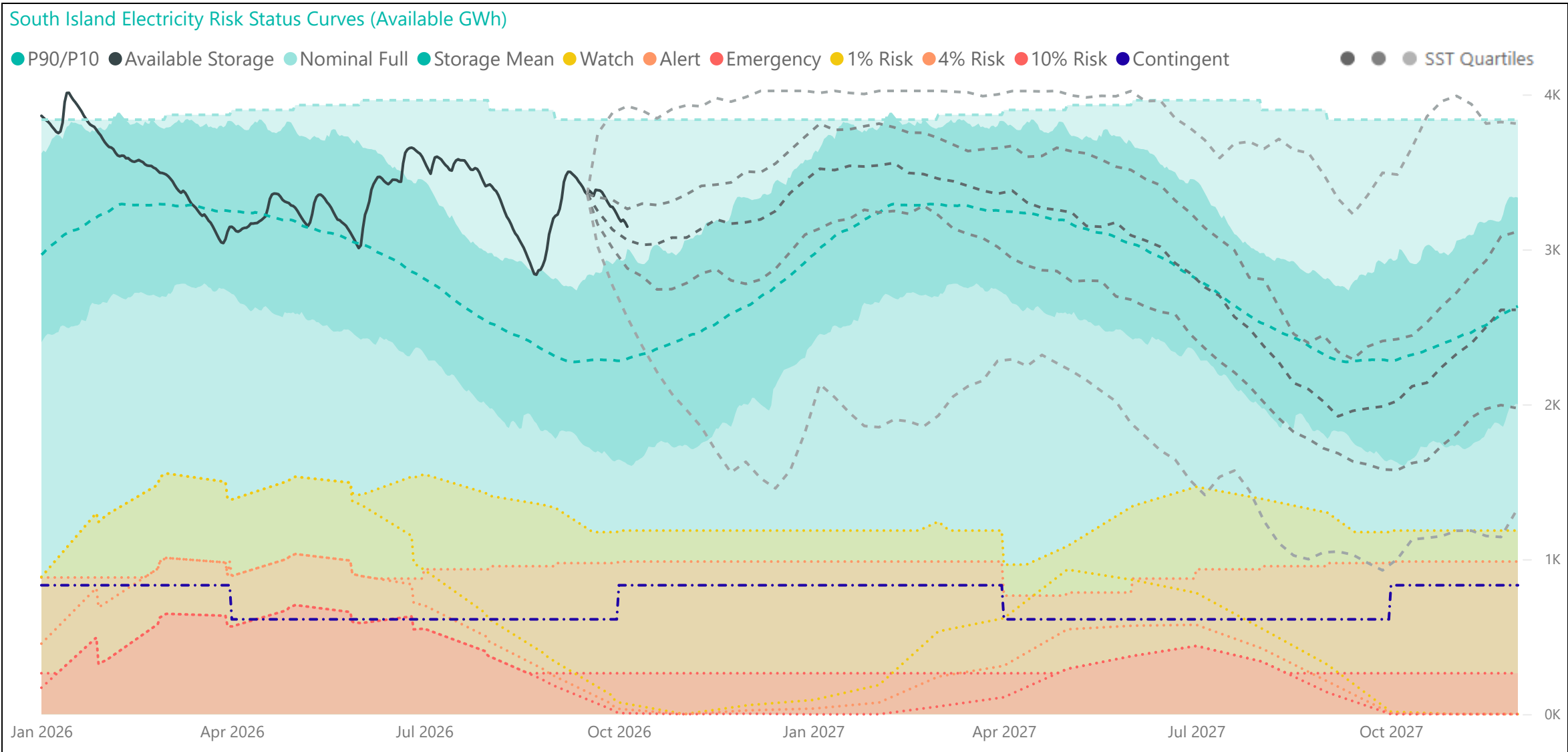
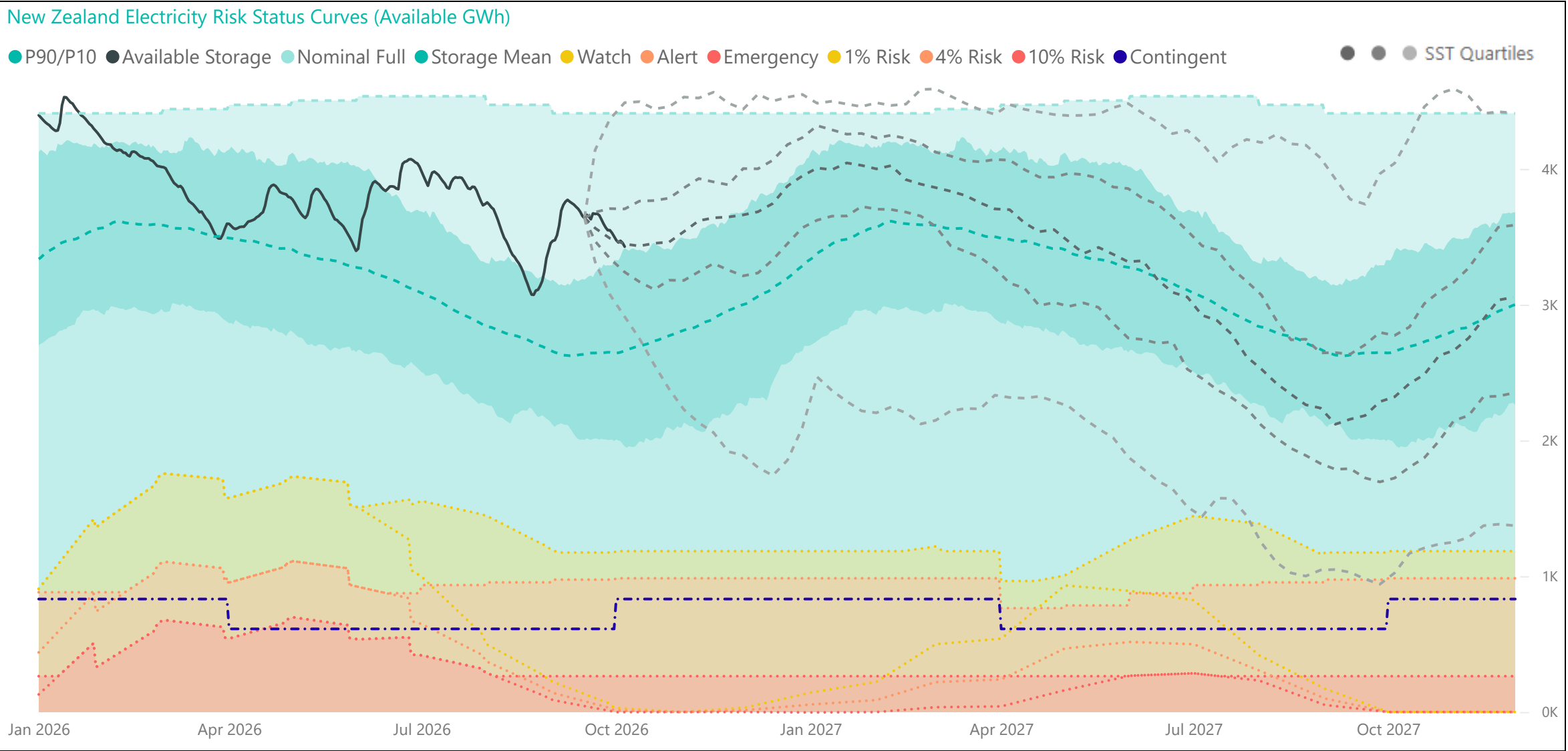
Hydro data used in this report is sourced from [NZX Hydro](https://www.nzx.com/energy/hydro).

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

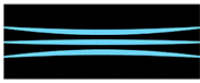


Electricity Risk Curve Explanation:

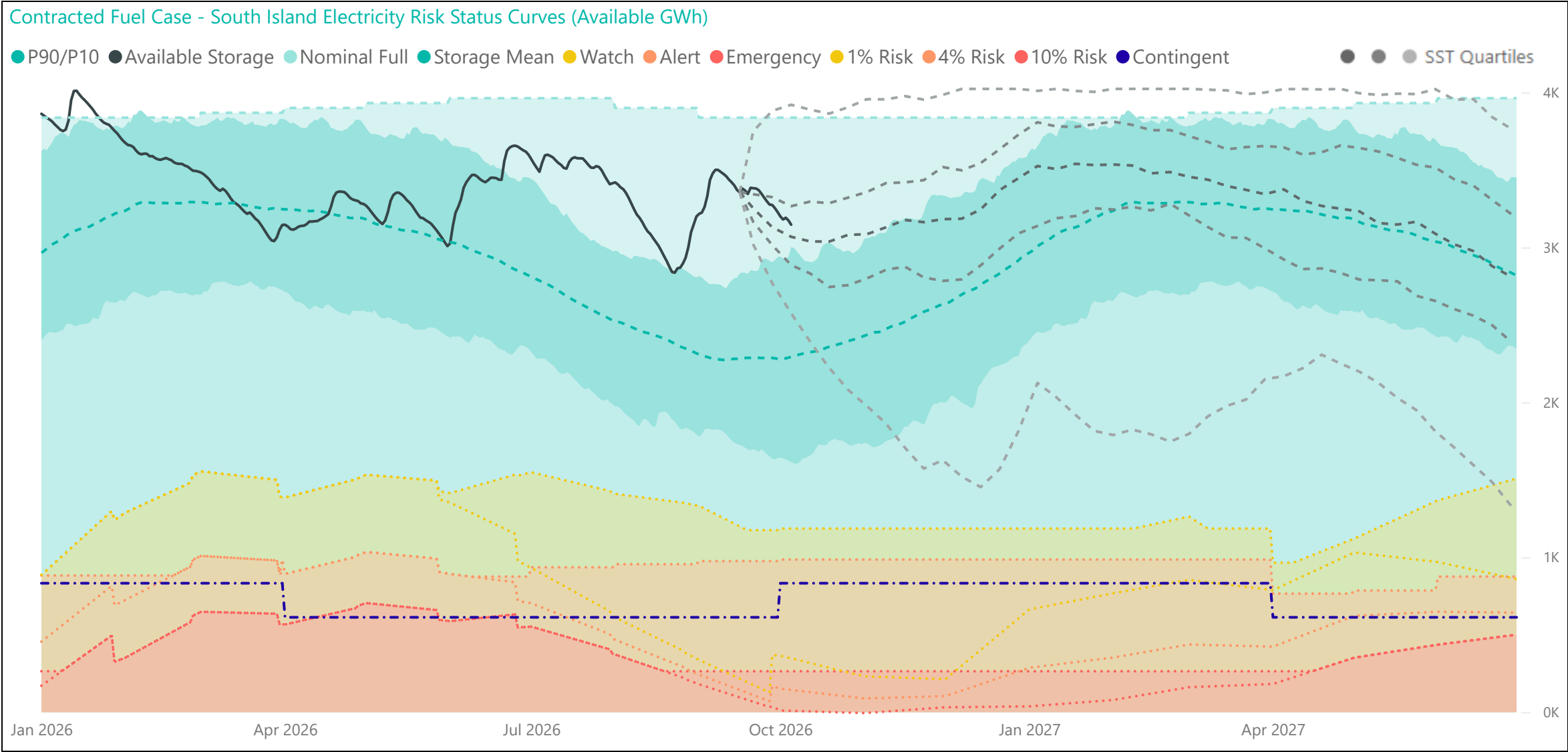
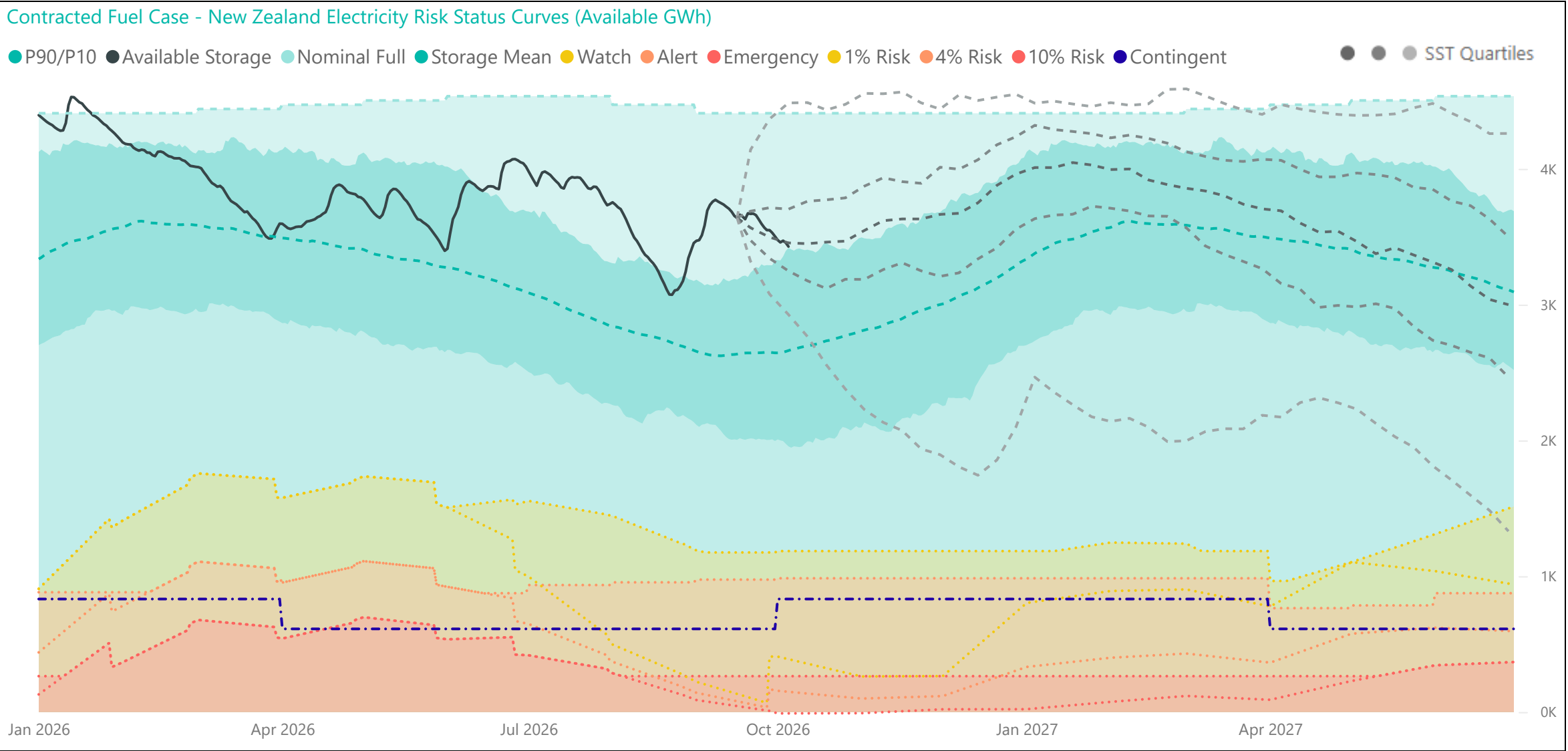
- Watch Curve - The maximum of the one percent risk curve or the Alert curve plus the greater of the Watch adder or the worst-case simulated storage drop
- Alert Curve - The maximum of the four percent risk curve and the floor and buffer
- Emergency Curve - The maximum of the 10 percent risk curve and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

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