Market Operations Weekly Report - Week Ended 17 May 2026

Overview

National hydro storage remains above average, with levels at 113% of the historic mean for this time of year. North Island storage continues to be exceptionally high at 208% of the historic mean, while South Island storage is close to average at 106% of the mean.

This week we're starting a three-part deep dive series on the electricity sector's readiness for winter. Today's part looks at installed generation vs peak capacity risk.

Security of Supply

Energy

National hydro storage remains at 113% of historic mean at the end of last week. South Island storage is steady at 105% and North Island storage decreased from 225% to 208% with lower than average inflows for North Island last week.

Capacity

Residuals were healthy during morning and evening peaks last week. The lowest residual of 749 MW occurred during the morning of Friday 15 May, which coincided with the highest demand peak of the week.

The N-1-G margins in the NZGB forecast remain healthy, but are trending downwards into winter with tighter spots appearing; 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 764 GWh to 795 GWh for the week due to colder than average mornings. The highest demand peak of 6,058 MW occurred at 7:30am on Friday 15 May.

Weekly Prices

The average wholesale electricity spot price at Ōtāhuhu last week increased to $69/MWh from $38/MWh the week prior. Wholesale prices peaked at $213/MWh at Ōtāhuhu at 7:30am on Friday 15 May, coinciding with the highest demand peak of the week,

Generation Mix

Wind generation has decreased from 14% to 6% of the generation mix last week, lower than its yearly average of 10%. Hydro generation has increased from 53% to 59% of the mix and thermal generation remained at 6%, Geothermal generation was unchanged at 25%, continuing to sit above its annual average of 23%, as seen in recent weeks due to the additional geothermal capacity at Ngā Tamariki and TOPP2.

HVDC

HVDC flows last week were predominantly northward with very brief periods of southward flow overnight. Overall, 113 GWh was transferred north, while 5 GWh was transferred south during the week.

Consultations and Engagement

SOSA

We received six submissions to our draft SOSA 2026 consultation, which have been published on the consultation page. We are now in a period for cross submissions which closes this Thursday 21 May.
The SOSA provides a 10-year outlook (2026–2035) on supply-demand balance to support security of supply risk management and investment decisions.

Emergency Reserve scheme

Expressions of interest are also open until Wednesday 20 May for an industry co-design panel to support the development of the new Emergency Reserve ancillary service, enabled by recent Electricity Authority Code changes.

Draft Policy Statement

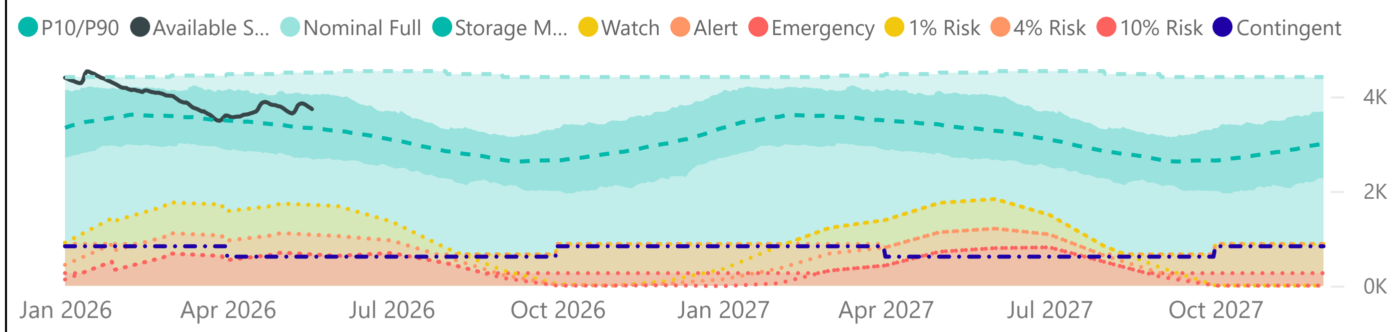
Consultation is open on our draft Policy Statement amendment proposal with submissions due by Thursday 4 June.
The Policy Statement describes the policies and processes the System Operator uses to meet the principal performance obligations (PPOs) in the Code for maintaining a stable and resilient power system in real-time, and to manage technical compliance and conflicts of interest.

New Zealand Energy Risk

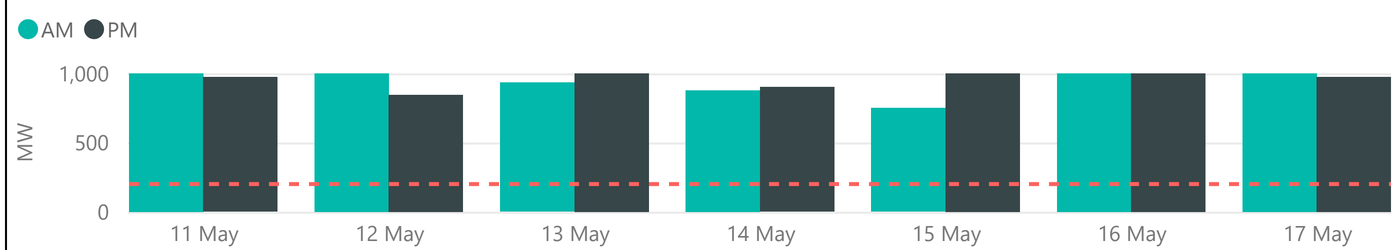
South Island Energy Risk

Normal Watch Alert Emergency

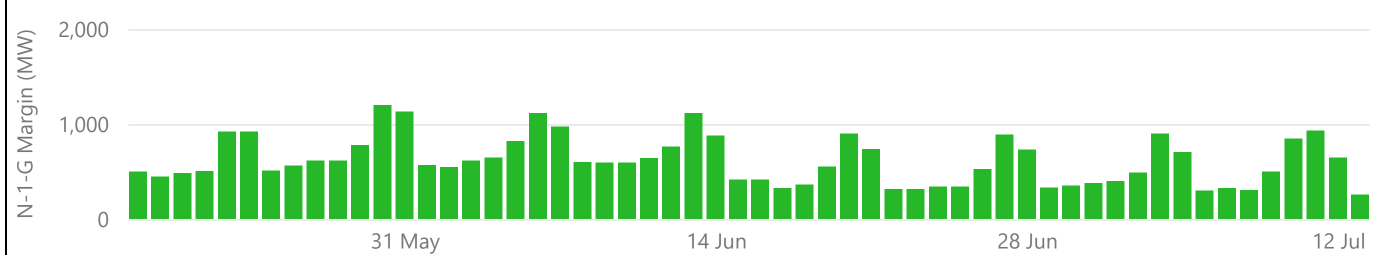
New Zealand Electricity Risk Status Curves (Available GWh)



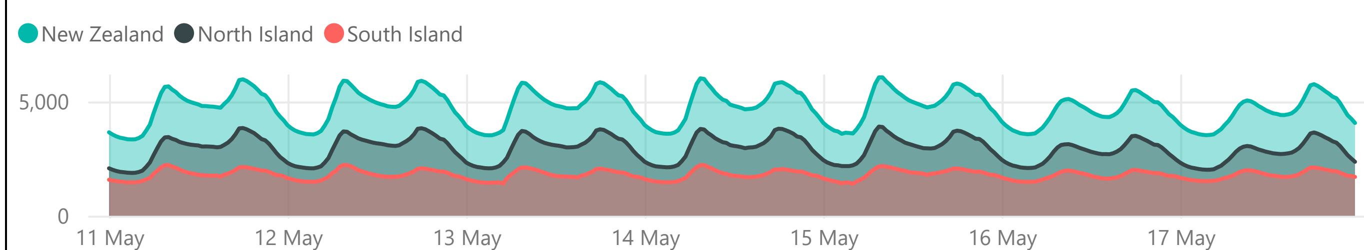
Lowest Residual Points - MW



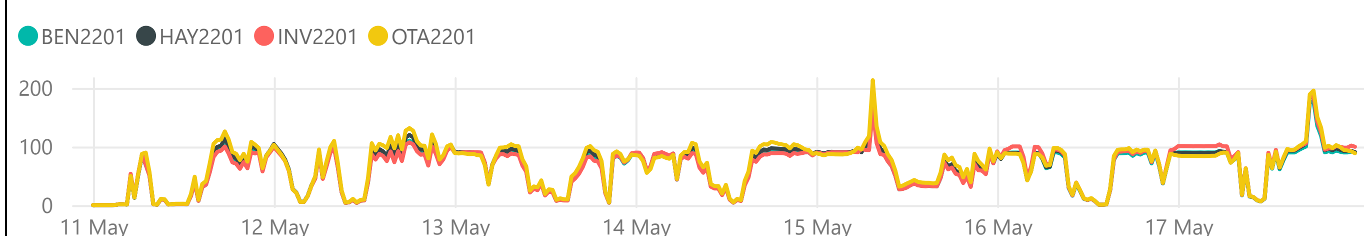
NZGB Look-Ahead (excluding next 7 days)



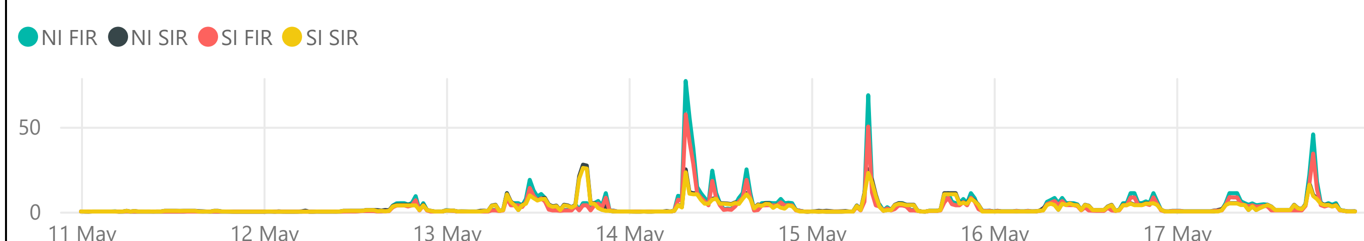
National Demand by Trading period - MW



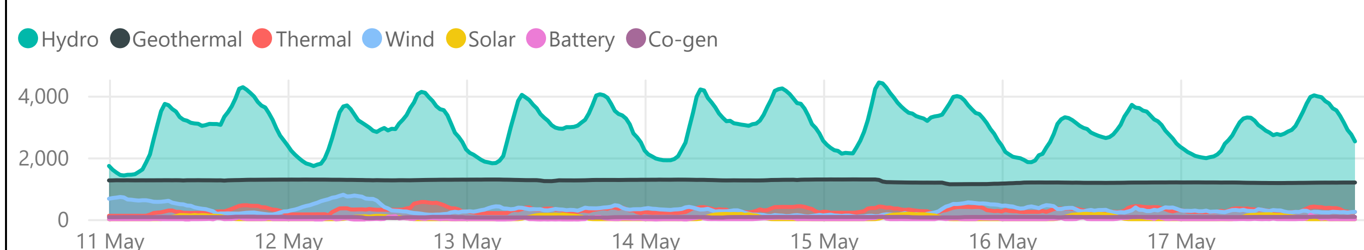
Energy Prices - $/MWh



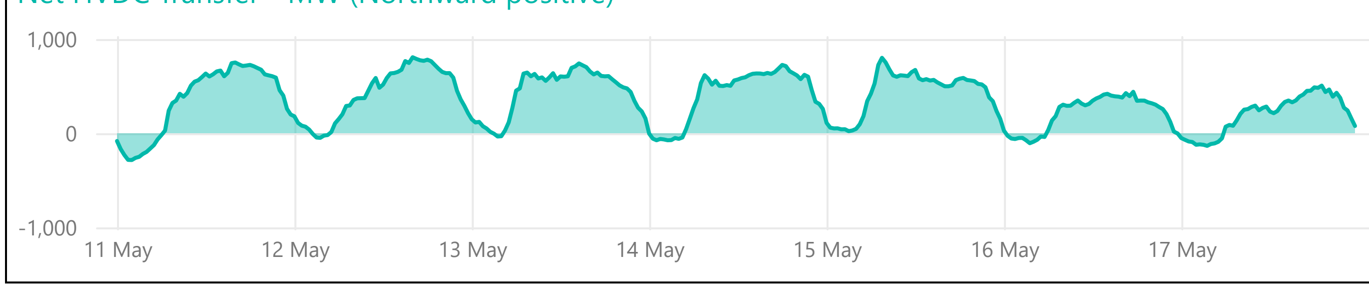
Reserve Prices - $/MW



Generation - MW



Net HVDC Transfer - MW (Northward positive)



Weekly Insight - Winter 2026 preparedness: Installed generation vs peak capacity risk

With winter fast approaching, we are taking a three-part deep dive into the preparedness of the sector to manage Aotearoa's unique energy and capacity challenges. This builds on the annual System Operator Industry Forum that we held at the end of April to ensure our partners across the sector know their roles and are prepared to work together to keep the lights on for Kiwis.

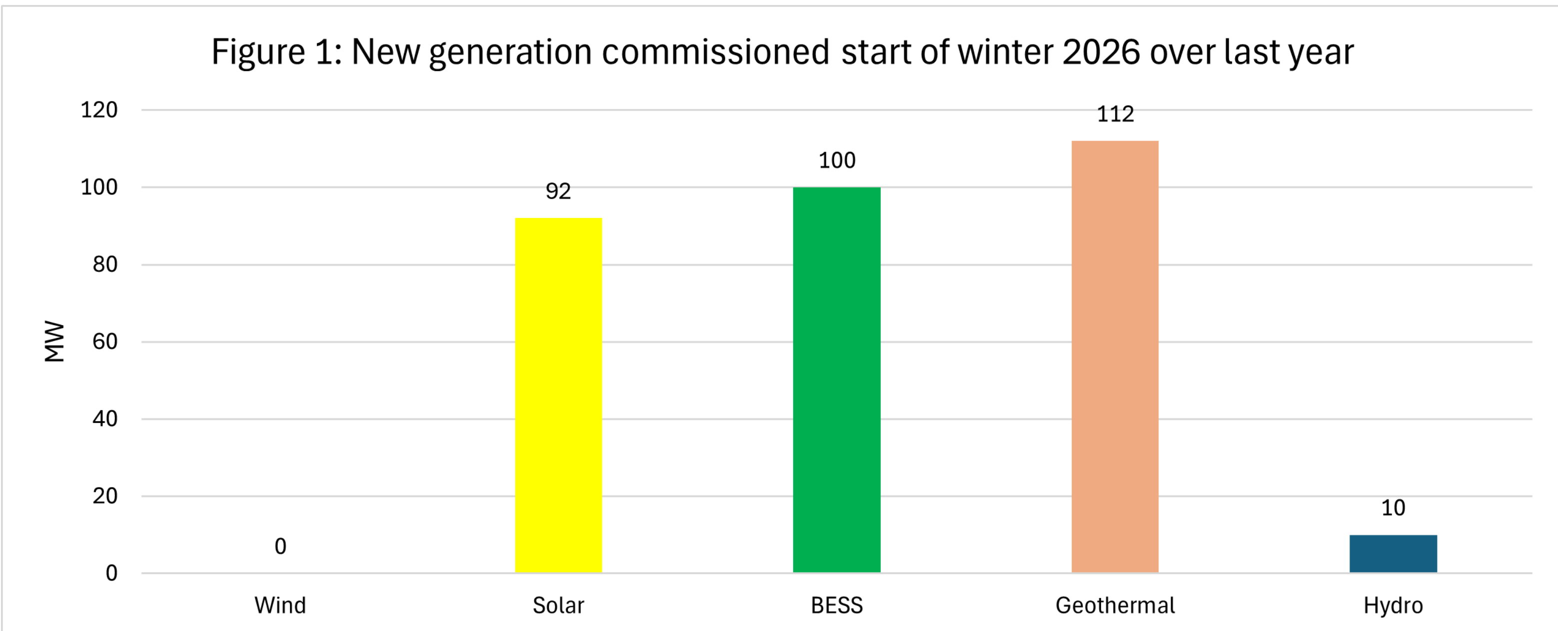
New Zealand's power system remains fundamentally winter peaking, with demand driven heavily by morning and evening heating. Peak demand can reach ~7,100 MW, occurring at times that can coincide with low wind and low solar output, increasing reliance on dispatchable capacity.

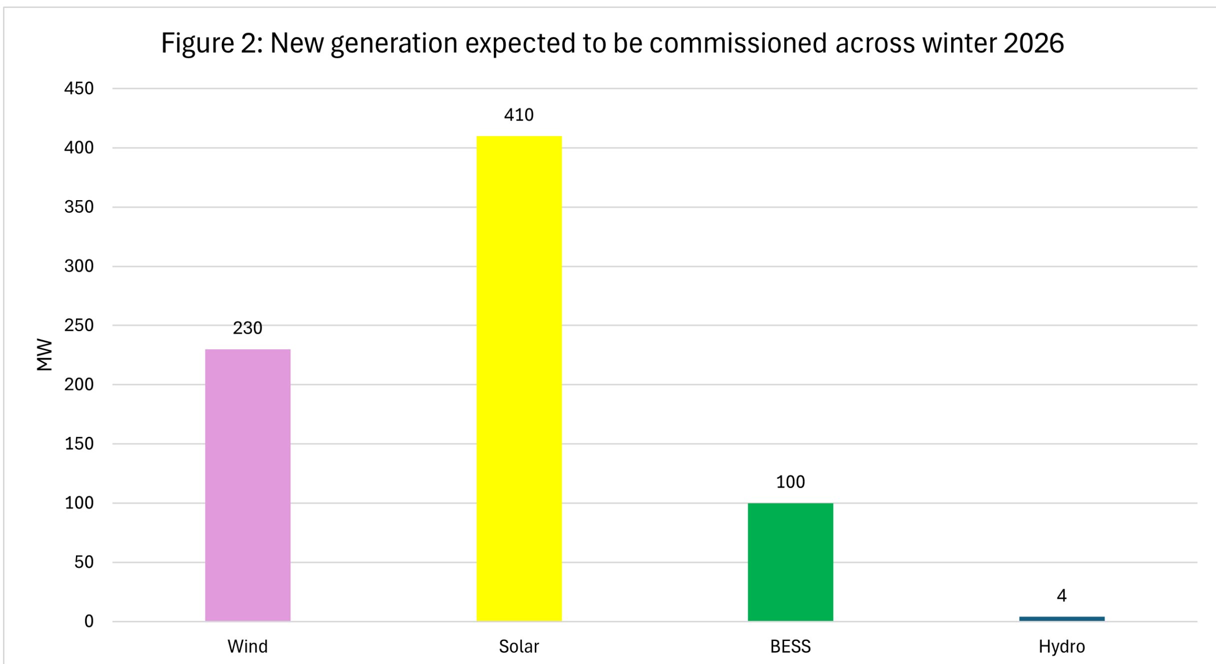
While installed generation capacity (10,300 MW) exceeds peak demand, this does not translate directly into deliverable capacity. Peak conditions require sufficient firm and flexible generation after accounting for outages, reserves, and operational constraints. As a result, if hydro storage is high and average prices are low over winter, security of supply becomes primarily a capacity problem at peak periods, rather than an energy scarcity problem.

Compared to winter 2025, the system enters this winter in a stronger starting storage position, with approximately 2.5 TWh of additional stored energy across hydro (including snowpack), gas, and coal. This reduces near term energy scarcity risk and provides a more comfortable buffer under normal conditions. However, several structural changes materially alter how the system operates:

- Net reduction in firm capacity: When TCC was running, it provided firm capacity. The retirement of TCC (330 MW)[1] is only partially offset by new Geothermal (112 MW) and Hydro (10 MW), resulting in an overall reduction of baseline reliability.
- Addition of flexible capacity: The Glenbrook BESS (100 MW), and the upcoming Huntly BESS (100 MW) add to vital fast-response flexibility but these have limited storage capability (2 hours at 100 MW output) and so careful coordination of this capacity is needed.
- Growth in intermittency: New Wind (230 MW) and Solar (410 MW) increase exposure to weather-driven variability with more coming online soon (Figure 2). Our analysis in the draft SOSA 2026 shows that wind contributes 29.3% to peak demand on average, while solar contributes 4.3%.

Figure 1 shows the new generation commissioned at the start of Winter 2026 compared to last year. We are expecting additional 640 MW intermittent generation to finish commissioning across winter 2026, as shown in Figure 2 below.





Taken together, the system now has greater fast-response flexibility and more overall stored energy. However, it relies heavily on accurate forecasting and the advance unit commitment of slow-start thermal generation. Because intermittent renewables drive price volatility, thermal units may be less likely to commit in advance. While new battery storage can cover short capacity gaps, it lacks the energy depth to replace sustained thermal generation. Therefore, although the system is less constrained from a pure capacity perspective, operational outcomes are more uncertain during tight periods.

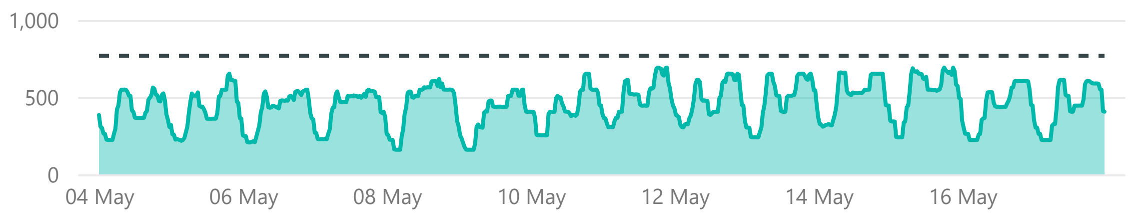
The New Zealand Generation Balance (NZGB) provides a structured view of how these risks manifest under different demand scenarios. Next week, we'll look at how the risks we have identified manifest under different demand scenarios through a deep dive into our NZGB tool.

1 TCC ran closer to its rated capacity mostly in winters. In recent years, it was generating max up to 330 MW, instead of its rated 383 MW.

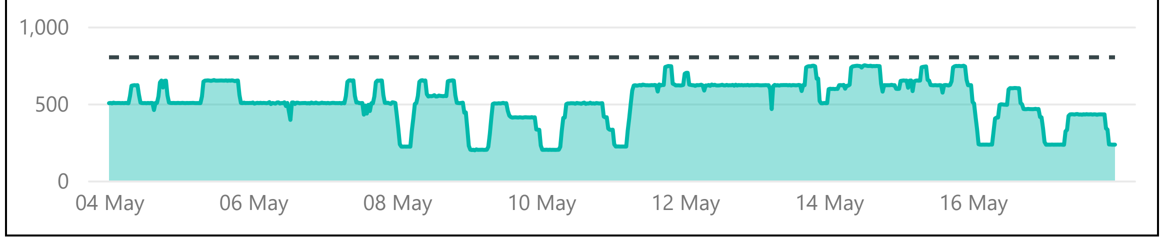
Generation Breakdown - Last Two Weeks

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

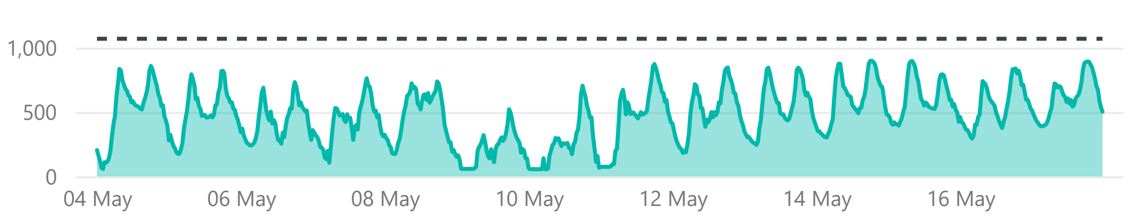
Clutha



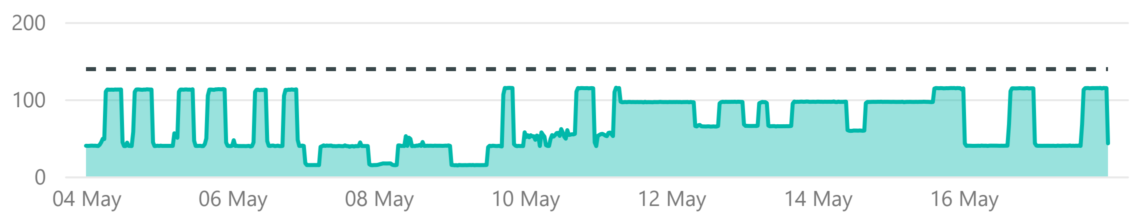
Manapouri



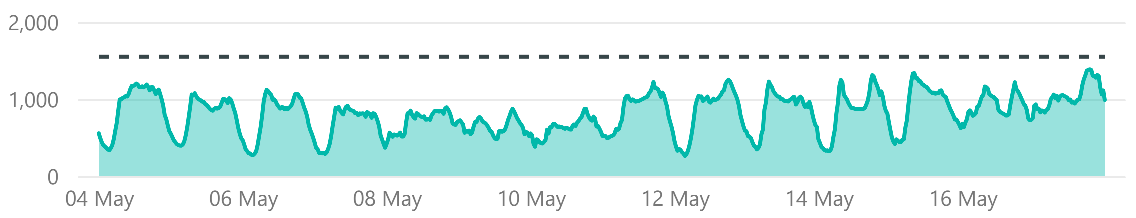
Waikato



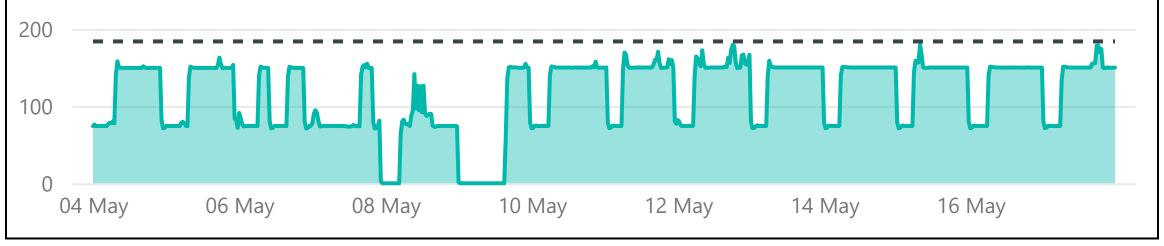
Waikaremoana



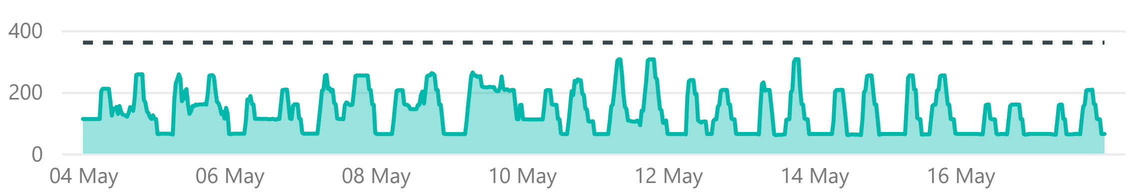
Waitaki



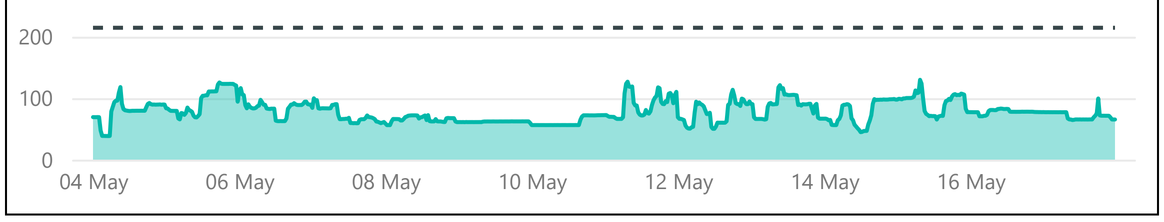
Tekapo



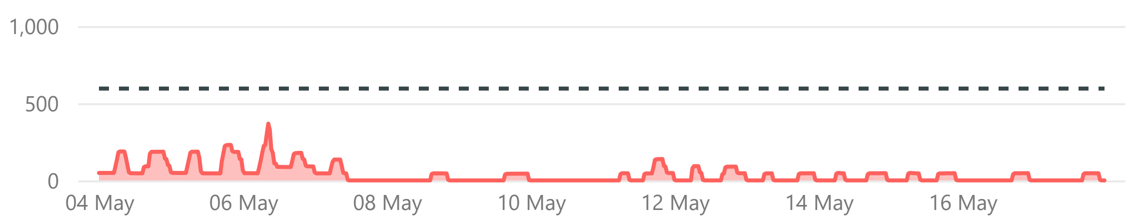
Tongariro



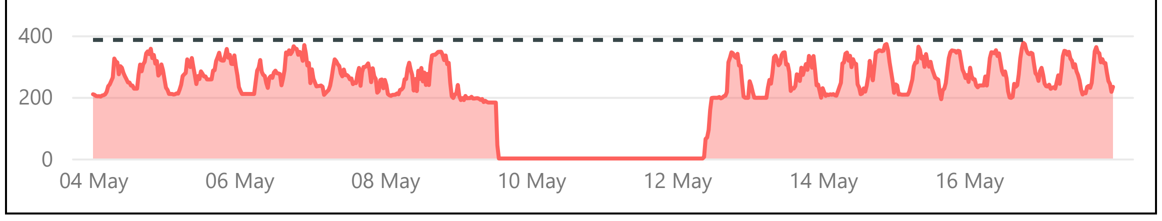
Other SI Hydro



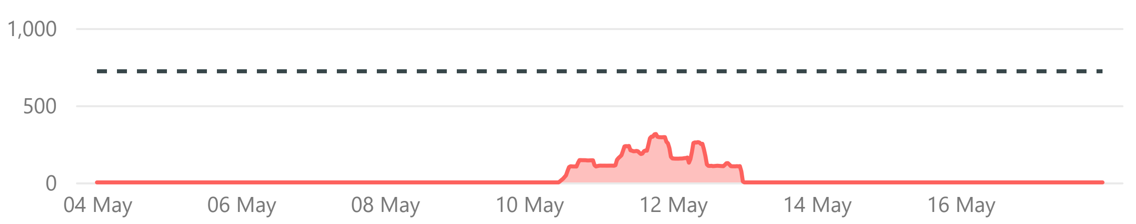
Thermal Peaking Plant



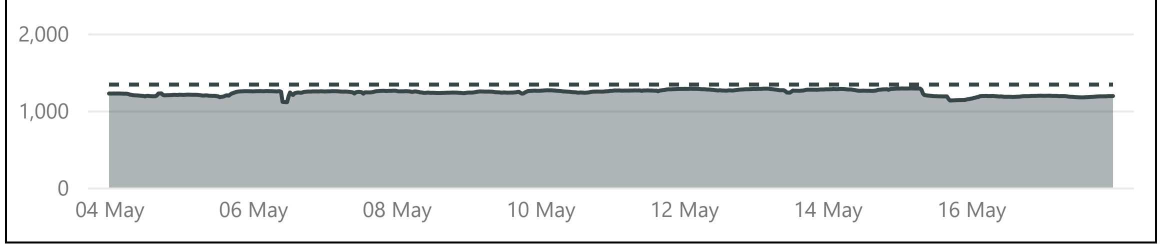
Huntly U5



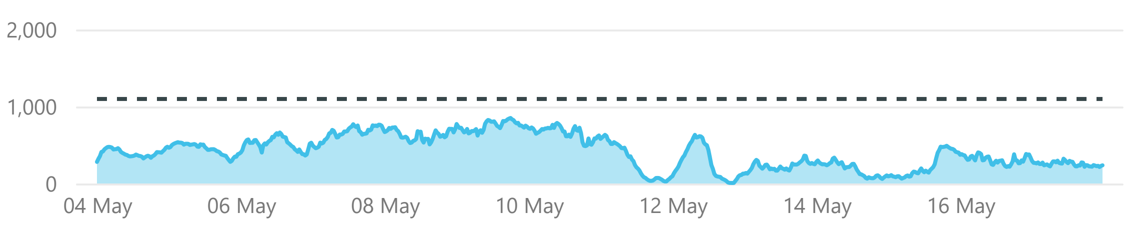
Huntly Rankines



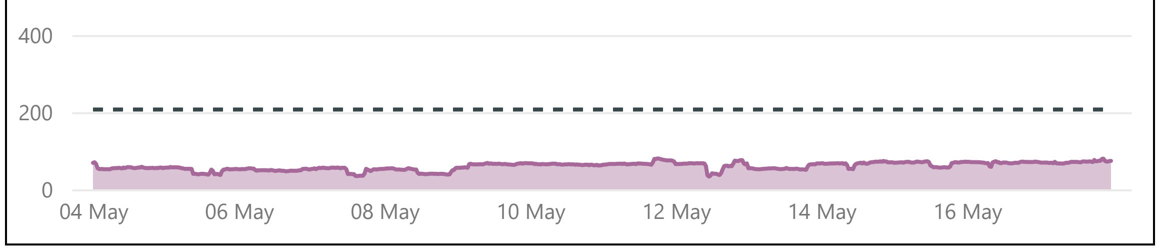
Geothermal



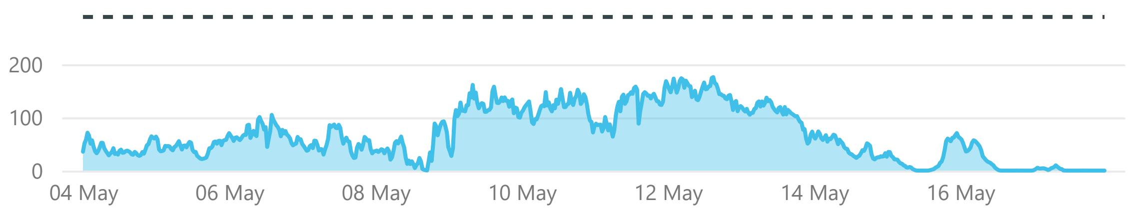
North Island Wind



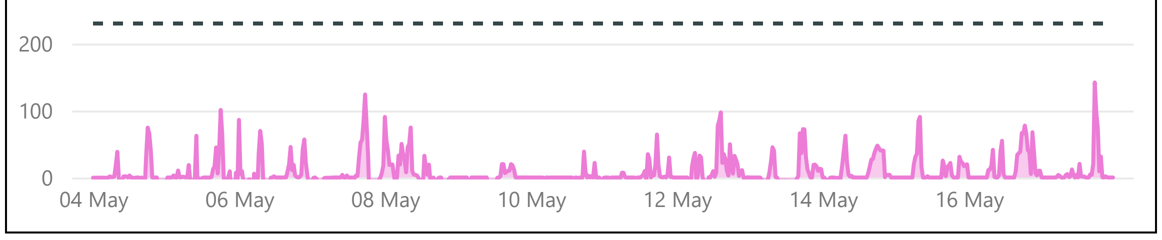
Co-Generation



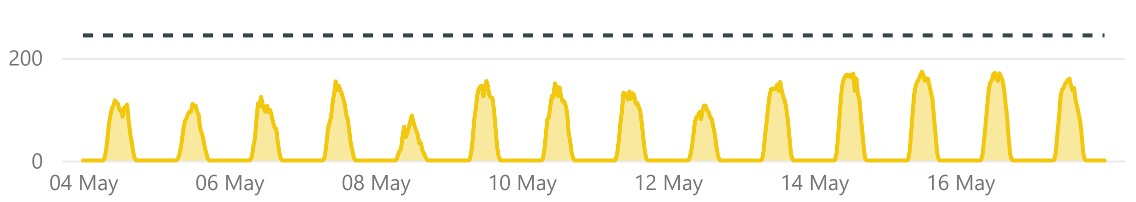
South Island Wind



BESS

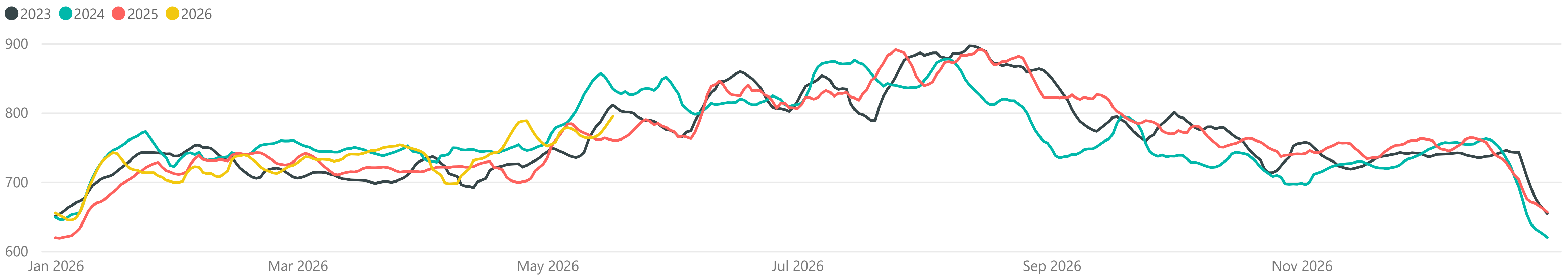


Solar

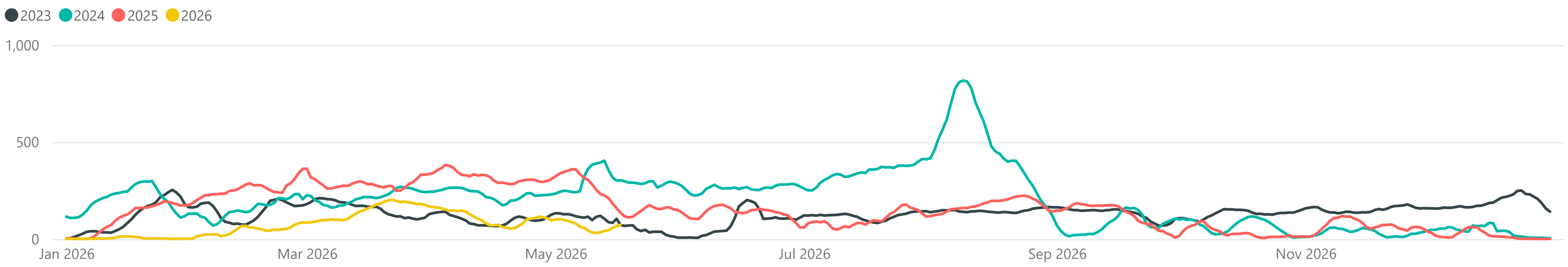


Weekly Profiles

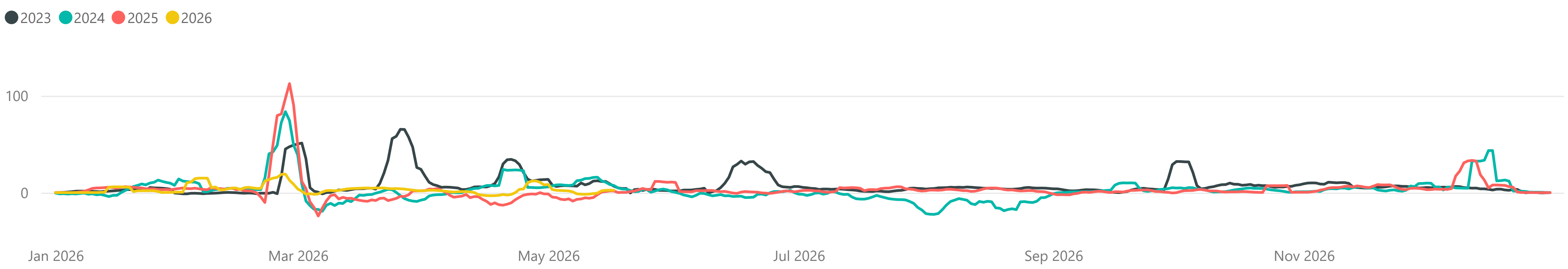
National Weekly Demand - GWh - 7 Day Rolling



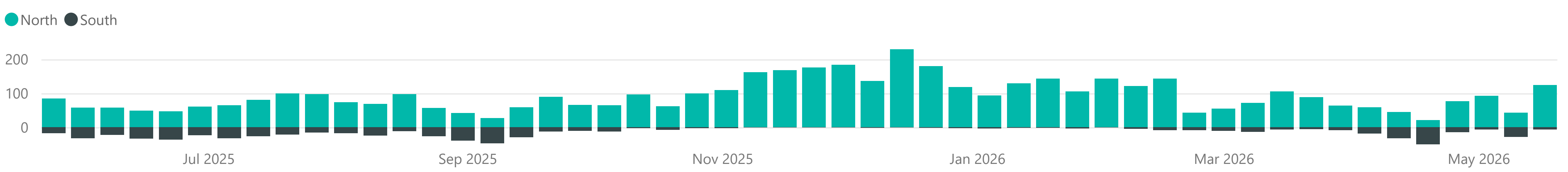
OTA2201 Weekly Rolling Average Spot Price - $/MWh



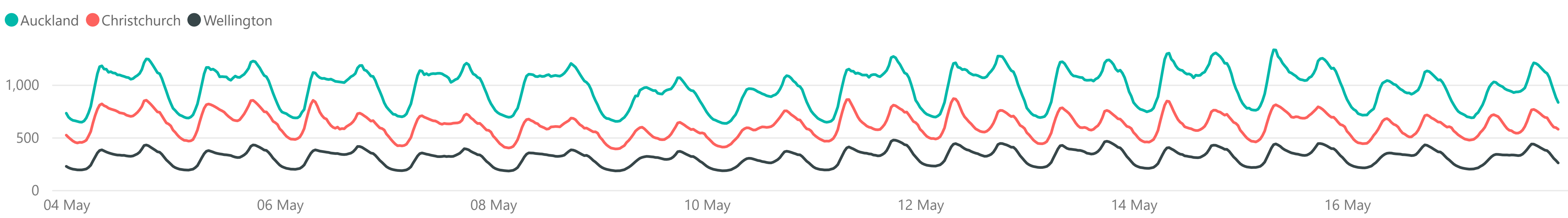
Weekly Rolling Price Separation (HAY2201 - BEN2201) - $/MWh



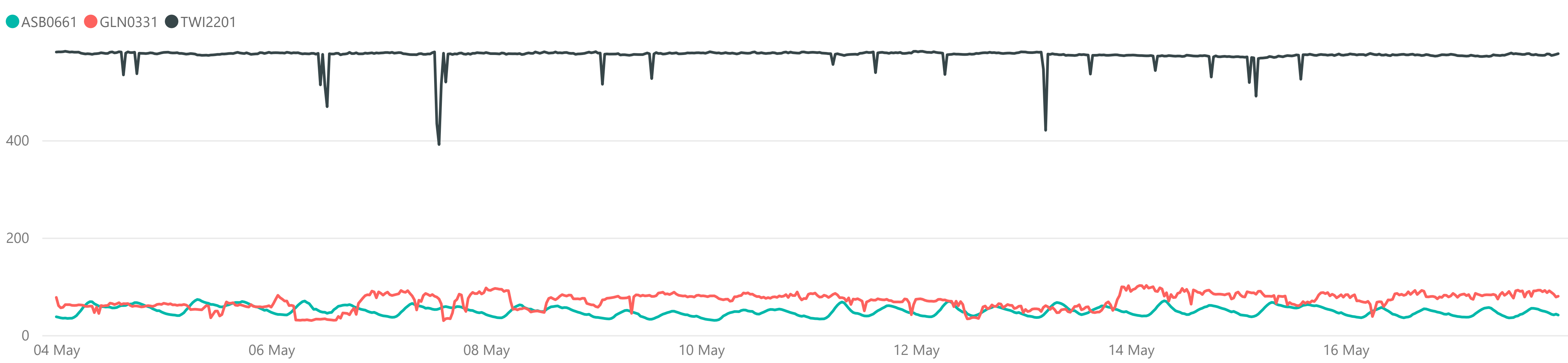
HVDC Transfer - Weekly GWh



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

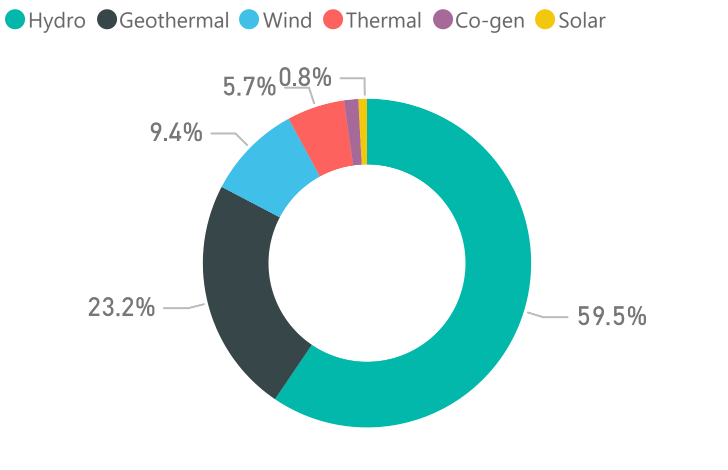


Non-Conforming Load Profiles - Last Two Weeks *Measured in MW shown by GXP*

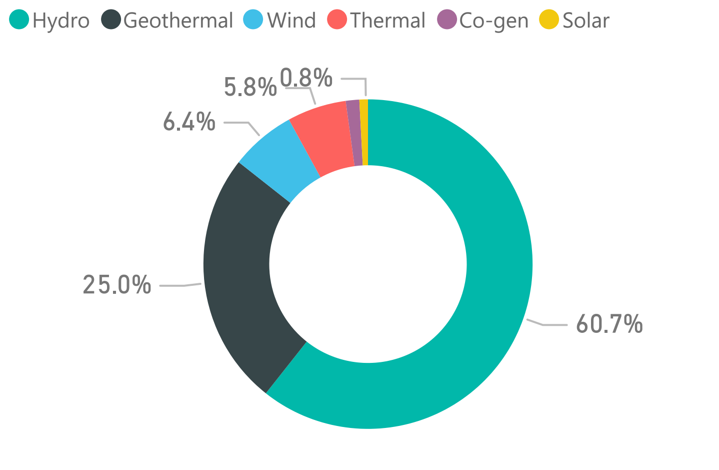


Generation Mix

Last 52 Weeks Generation Mix - Weekly GWh



Last 7 Days Generation Mix - Weekly GWh



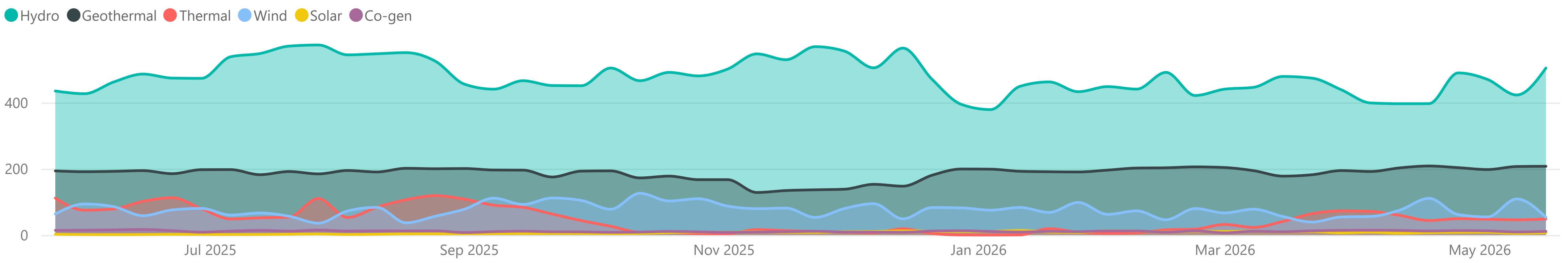
Average Metrics Last 7 Days

Renewable Percentage	CO2e Tonnes/Week	CO2e g/kWh
93%	44,654	53.9

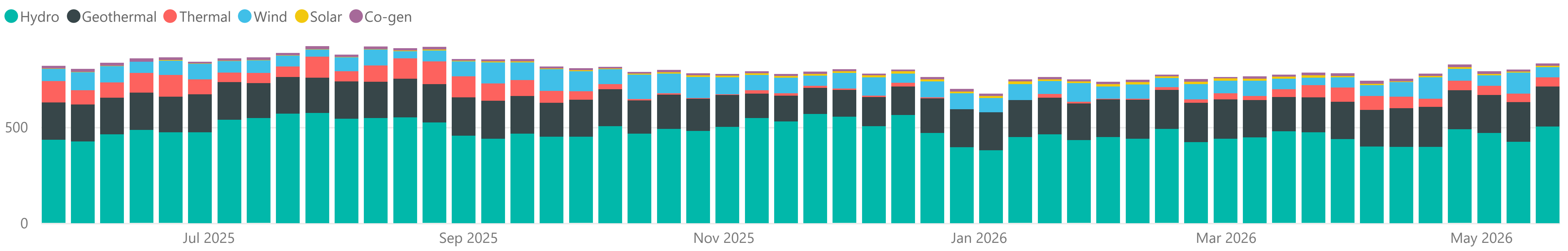
Average Metrics Last 52 Weeks

Renewable Percentage	CO2e Tonnes/Week	CO2e g/kWh
93%	42,901	52.1

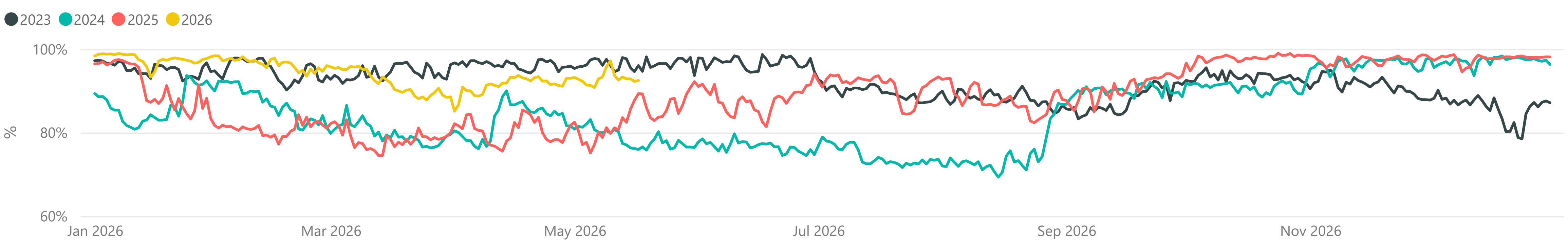
Weekly Generation Mix - GWh



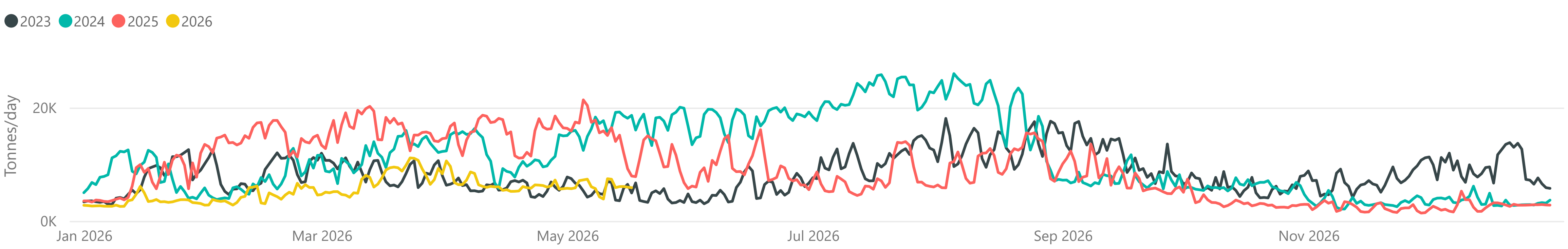
Weekly Generation Mix - GWh



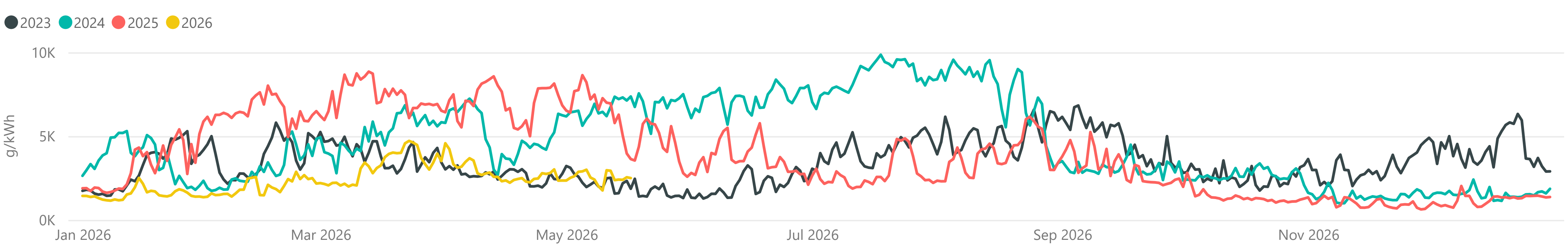
NZ Renewable Percentage



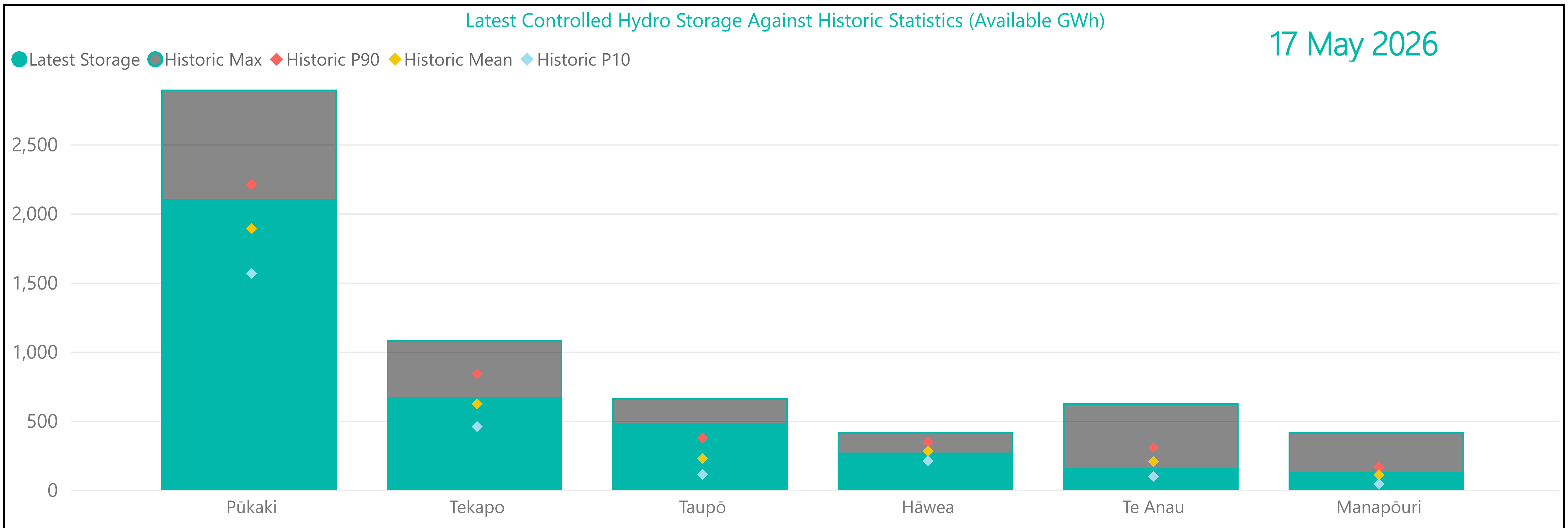
CO2 Tonnes/Day

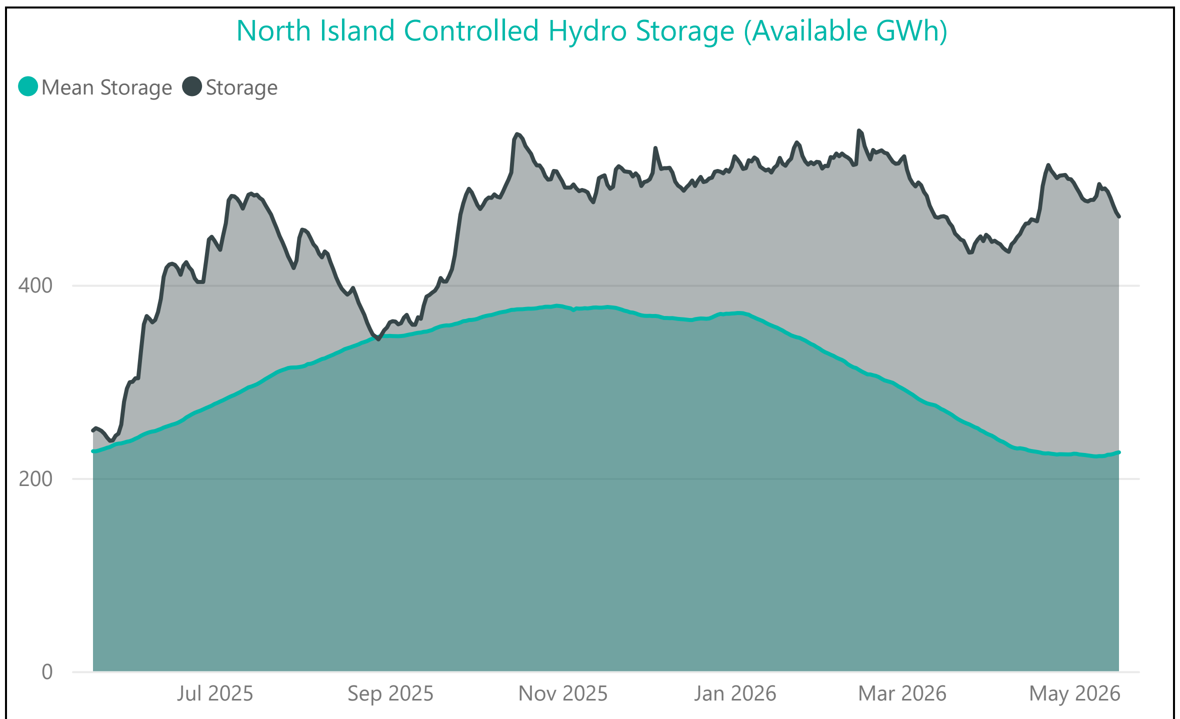


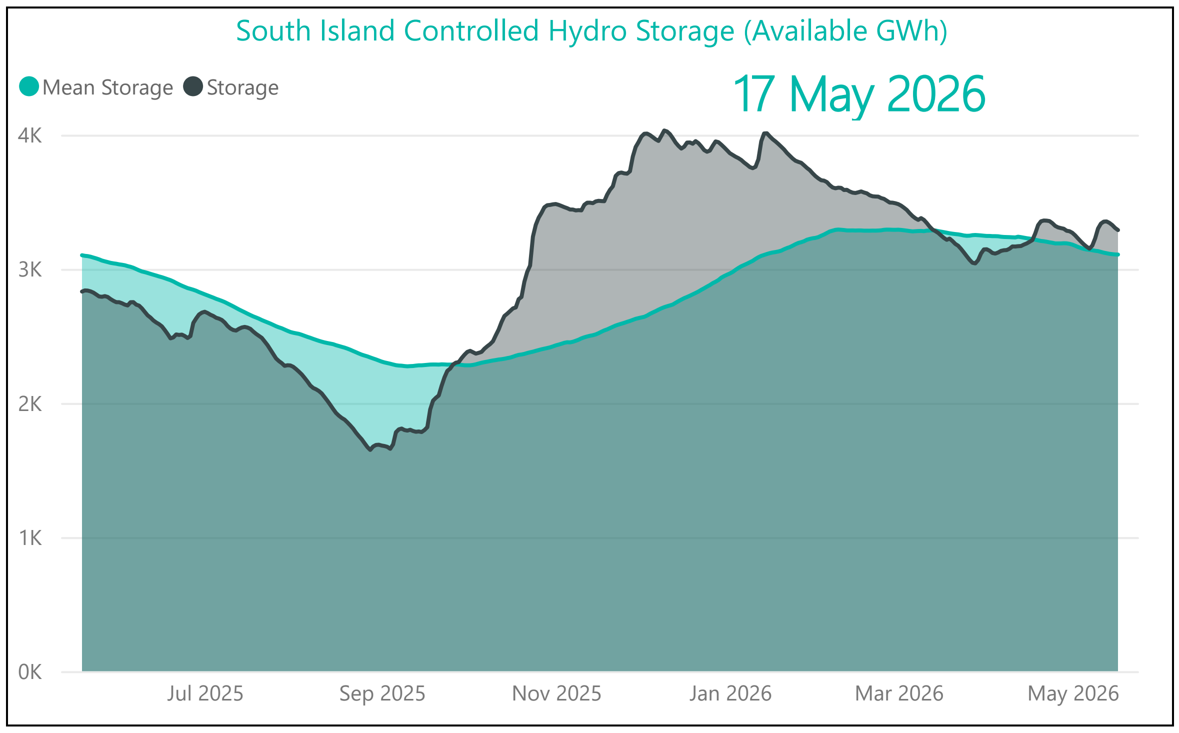
CO2 g/kWh

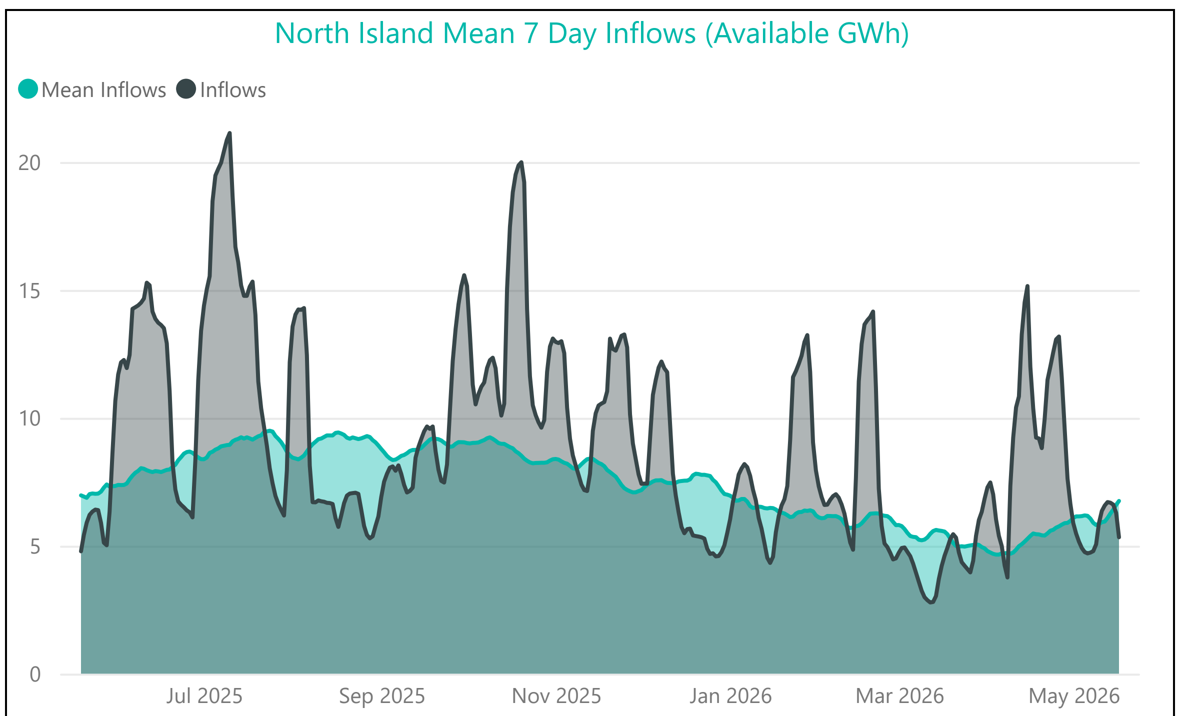


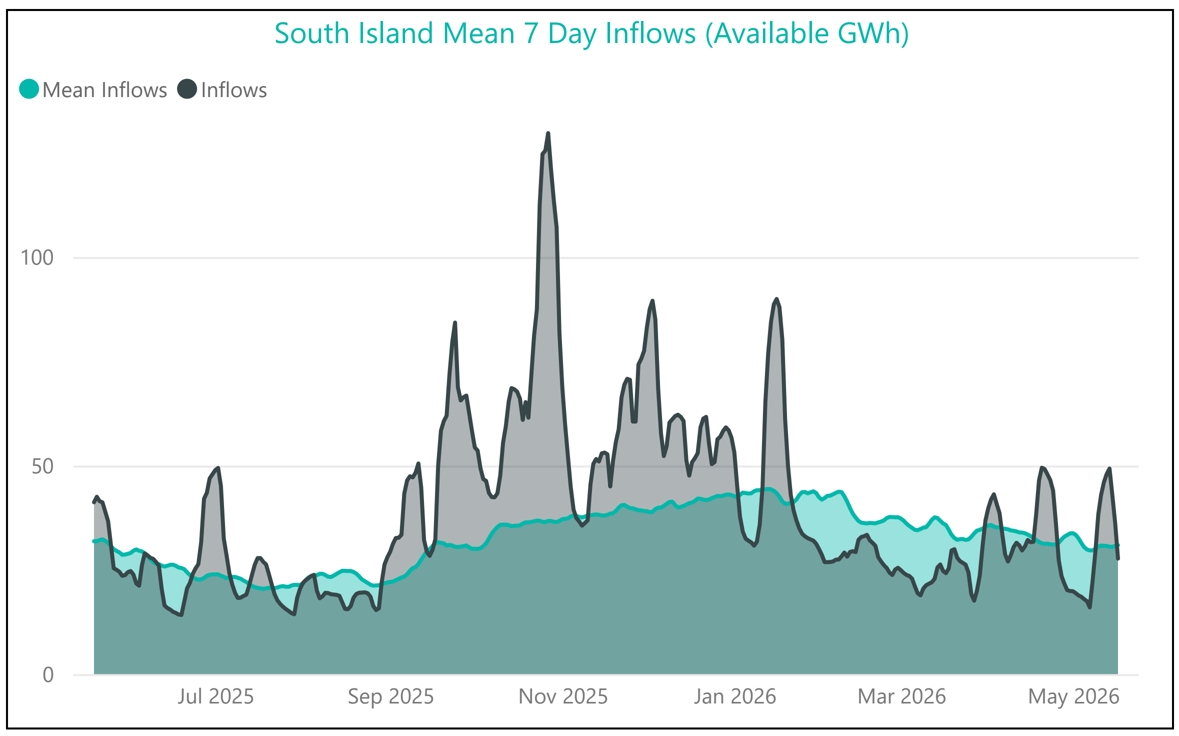
Hydro Storage











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

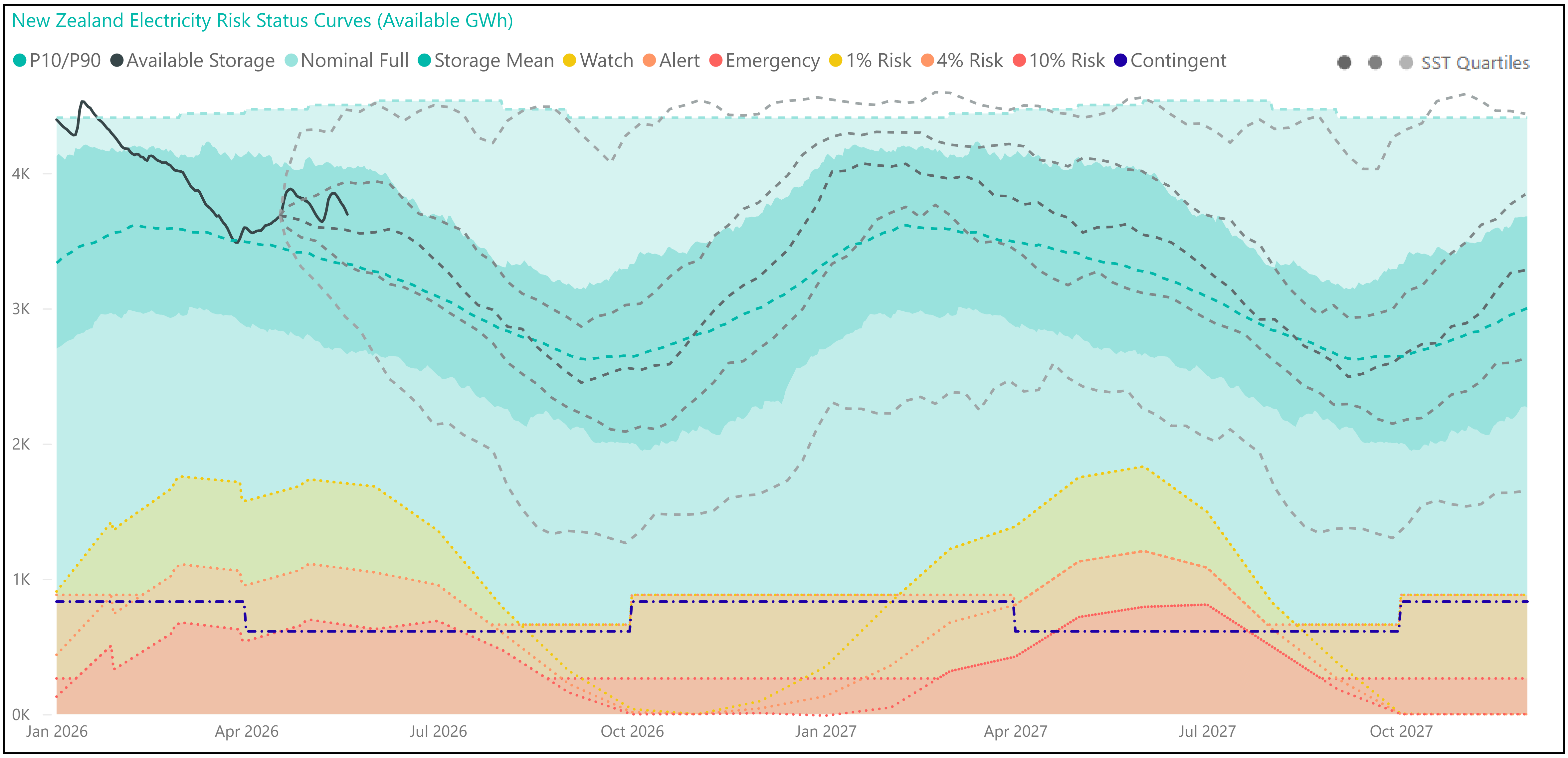
For any inquiries related to security of supply contact market.operations@transpower.co.nz

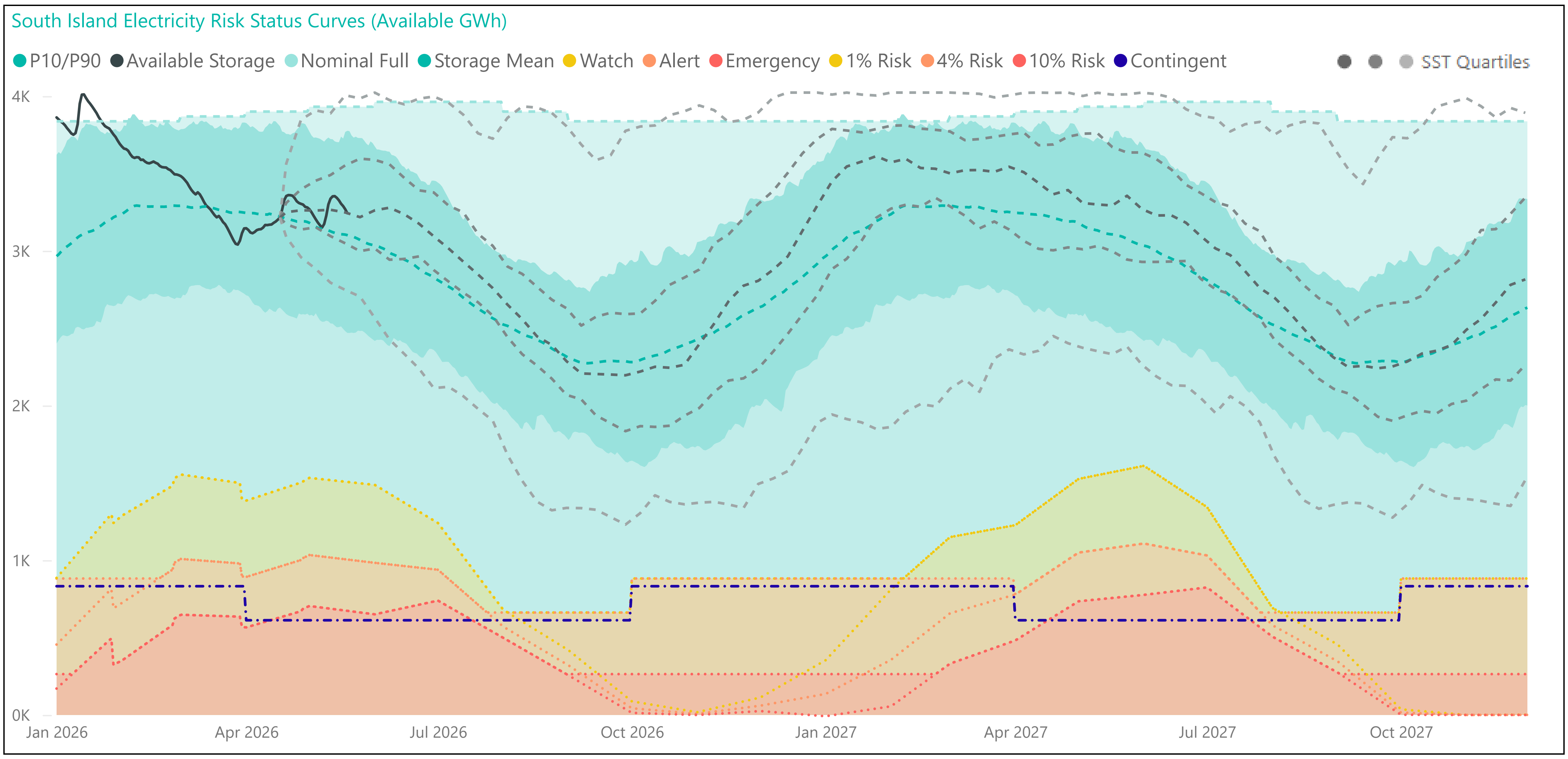
Hydro data used in this report is sourced from *NZX Hydro*.

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).