Market Operations Weekly Report - Week Ended 13 July 2025

Overview

New Zealand hydro storage remained at 102% of the historic mean last week continuing to sit close to historic averages for the time of year. However, South Island storage remains below the mean. An under-frequency event on Friday 11 July saw energy and reserve prices spike.

This week's insight takes a look at the recent electrical islanding of the Tekapo power station that occurred between 8-10 July.

Security of Supply

Energy

New Zealand hydro storage remained at 102% of the historic mean last week with continued inflows throughout most of the motu. South Island hydro storage remained at 95% while North Island storage decreased from 171% to 166% last week.

Capacity

Capacity margins remained relatively healthy last week with the tightest peak being on the evening of Wednesday 9 July when residual generation dropped to 505 MW. This coincided with cold evening temperatures across the motu.

The N-1-G margins in the NZGB forecast are healthy through to early August, with moderate margins through to next weekend. 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

Despite total demand increasing to 829 GWh last week from 821 GWh the week prior, total demand for the time of year is lower than the last three years as a consequence of milder temperatures across the motu. The highest demand peak was 6,544 MW, which occurred at 6:00pm on Monday 7 July, coinciding with cooler temperatures.

Weekly Prices

The average wholesale electricity spot price at Ōtāhuhu last week decreased to $67/MWh from $81/MWh the week prior. Wholesale prices peaked at $1,001/MWh at Ōtāhuhu at 1:00pm on Friday 11 July during the under-frequency event which caused inter-island price separation.

Generation Mix

The generation mix last week was relatively unchanged from the week prior. Hydro generation remained at 63% of the mix. Thermal generation remained at 6% of the mix. Wind generation increased from 7% to 8% of the mix and cogeneration from 1% to 2%, which was offset by a drop in geothermal from 23% to 21%.

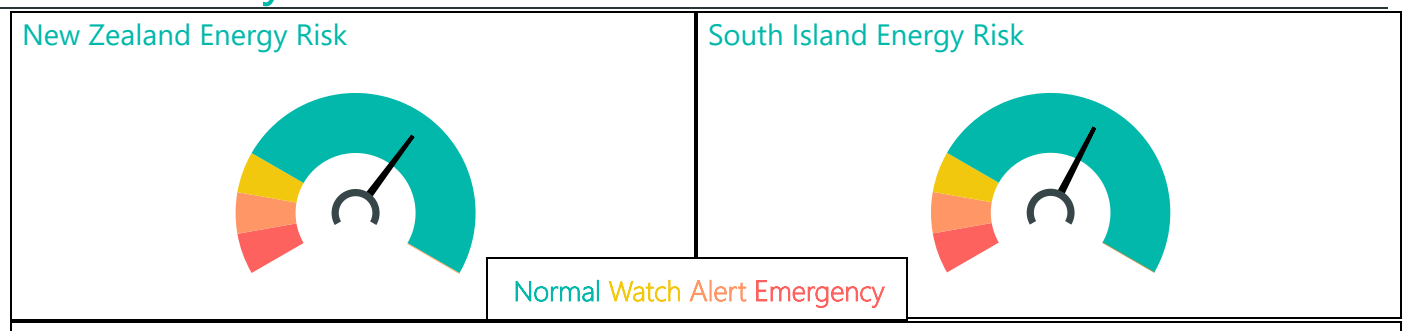
Tauhara power station coming offline for a period can be seen in the small drop in geothermal on 9 July.

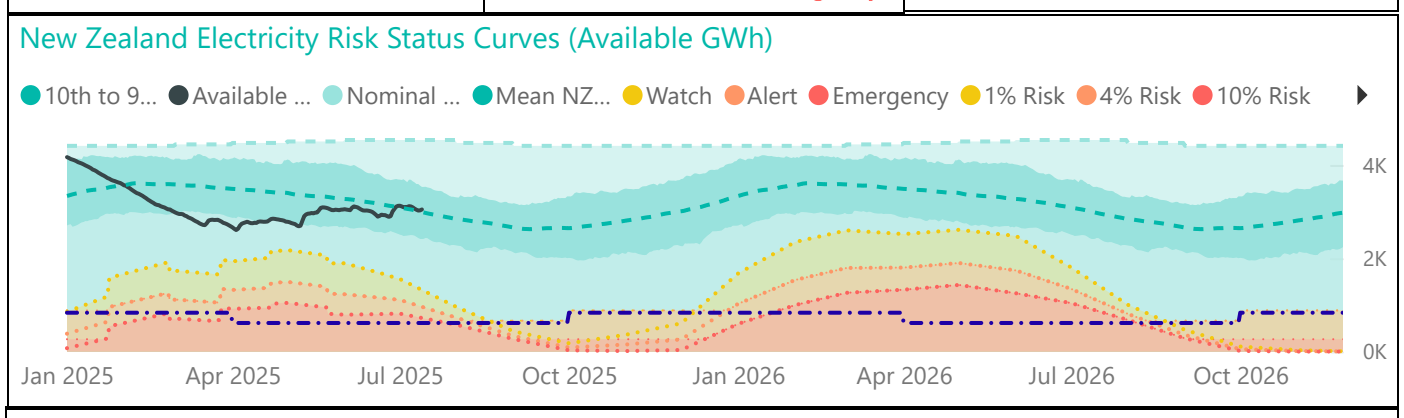
HVDC

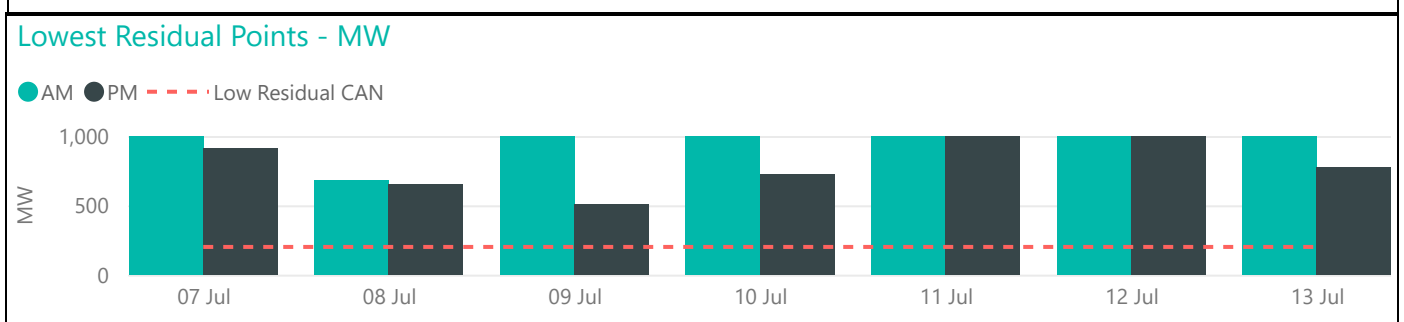
HVDC flow last week was predominantly northward with overnight periods of southward flow coinciding with periods of lower demand. In total, 39 GWh was sent north and 12 GWh was sent south.

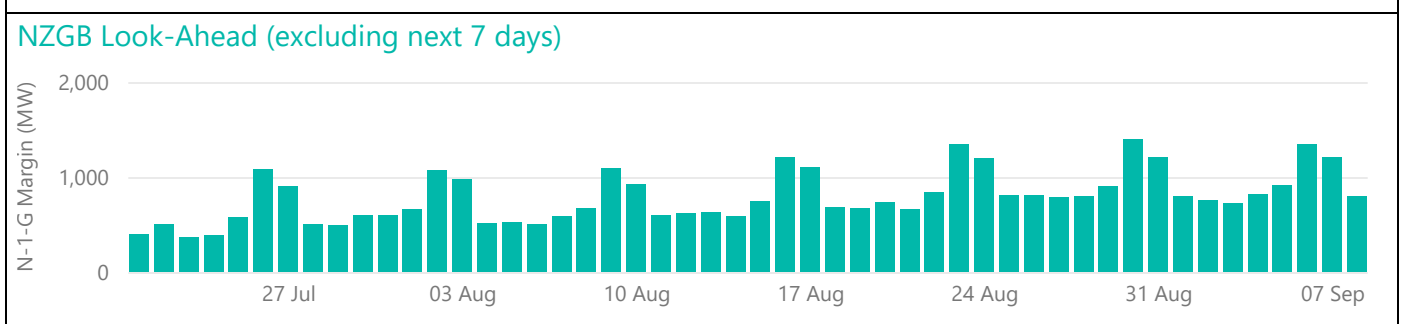
Under-frequency event

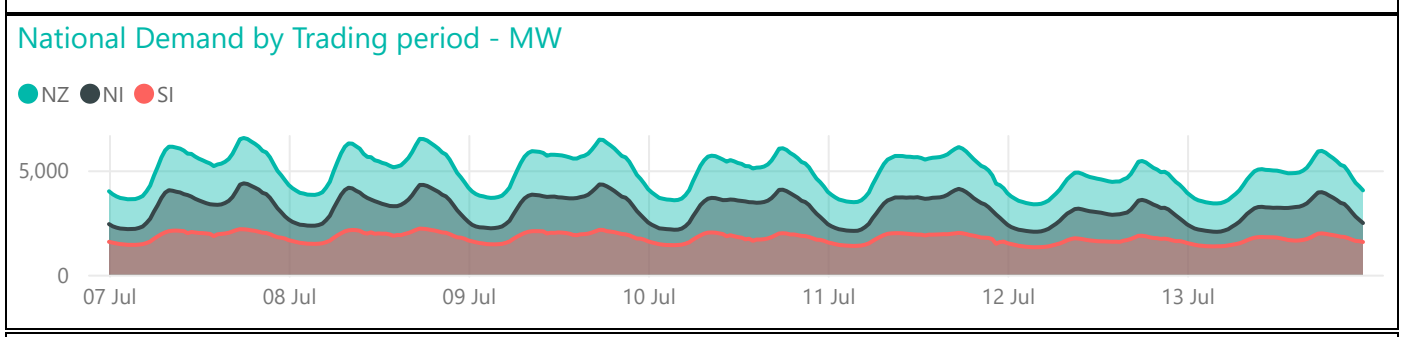
An under-frequency event occurred in the North Island on Friday 11 July at 1:04pm. A Customer Advice Notice (CAN) was issued regarding this.

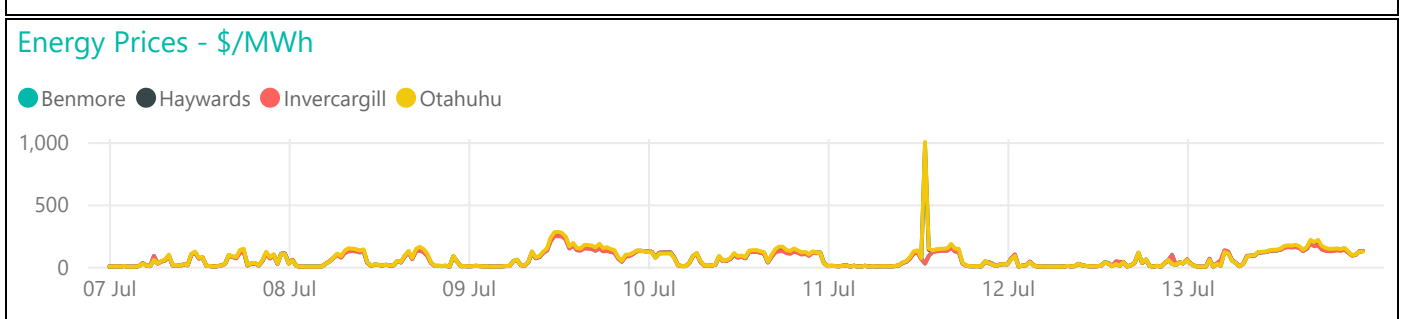


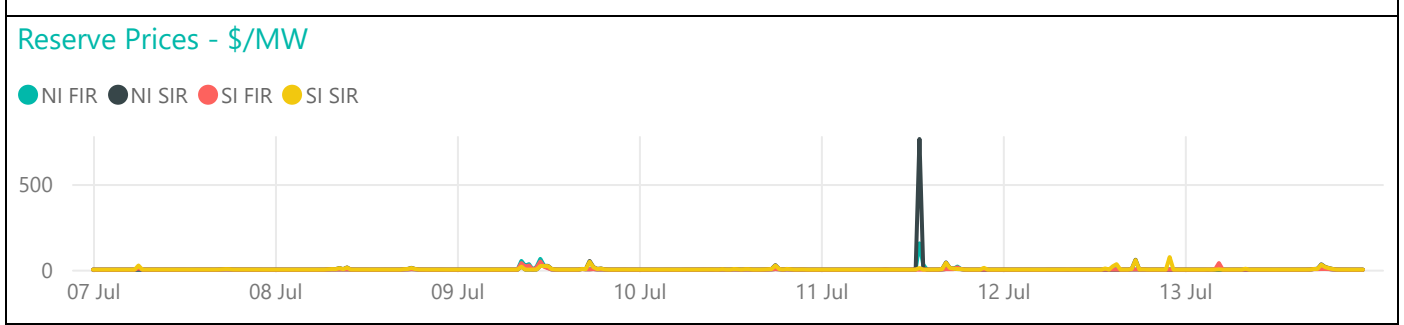


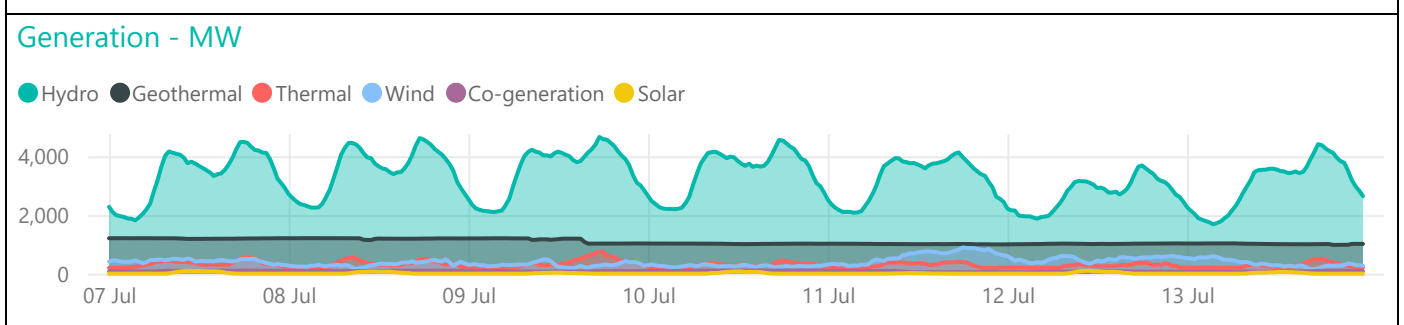


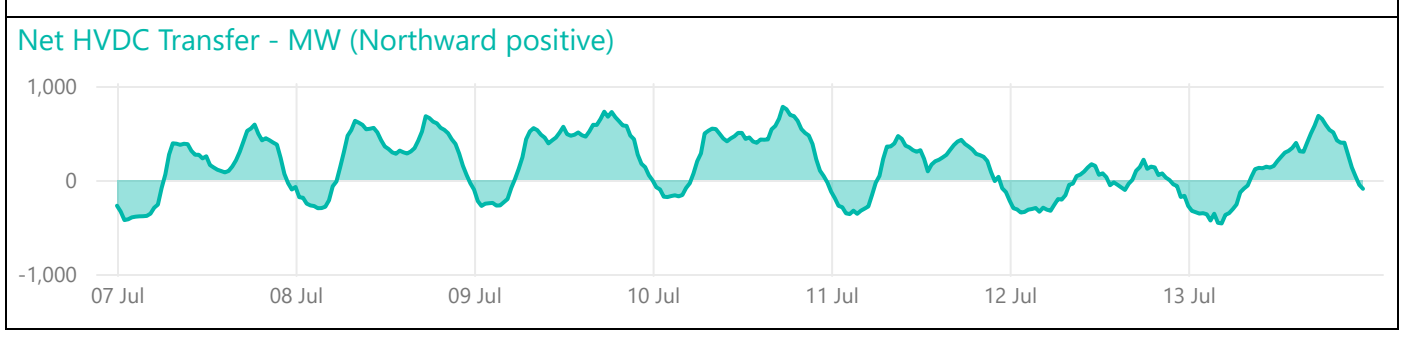












Weekly Insight - Tekapo A electrical islanding

This week's insight takes a look at the recent electrical islanding of Tekapo A power station that occurred between 8-10 July.

An electrical island occurs when an area of the grid is electrically disconnected from the surrounding sections of the grid, becoming fully or partially isolated. Generation within the islanded area continues to provide electricity within the electrical island but no generation can be imported from outside. Electrical islanding can occur because of planned or unplanned outages of parts of the transmission grid.

Any outages of Albury – Tekapo circuits (line ABY_TKA_1) or Albury – Timaru circuits (line ABY_TIM_1) that result in Tekapo A power station being electrically islanded mean that load at Tekapo (TKA0331) and/or Tekapo (TKA0331) and Albury (ALB0111) must be met by the Tekapo A power station as there are no alternative connections to the grid (see Figure 1 below). During these outages, the system operator requires the Tekapo power station to provide single provider frequency keeping (SFK) for system security within the electrical island.

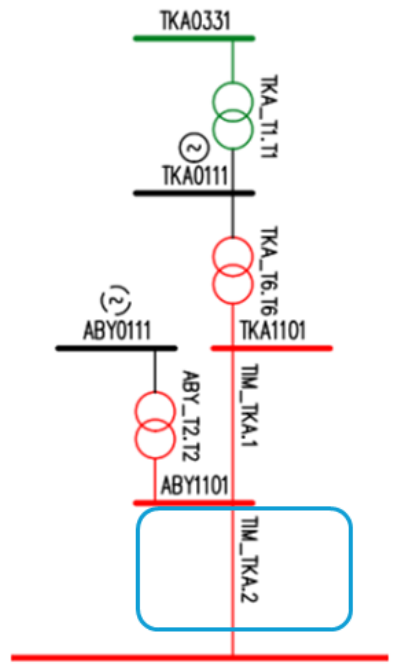


Figure 1: Graphical representation of the grid around Tekapo power station showing the outage line in blue.

The recent planned outage of the Albury – Timaru line (ABY_TIM_1) on 8-10 July meant that Tekapo and Albury were both electrically islanded with Tekapo power station providing frequency keeping for the island. This also meant that the prices at Tekapo and Albury were set by the offers from the Tekapo A power station. These prices differ from the South Island reference price at BEN2201 (see Figure 2).

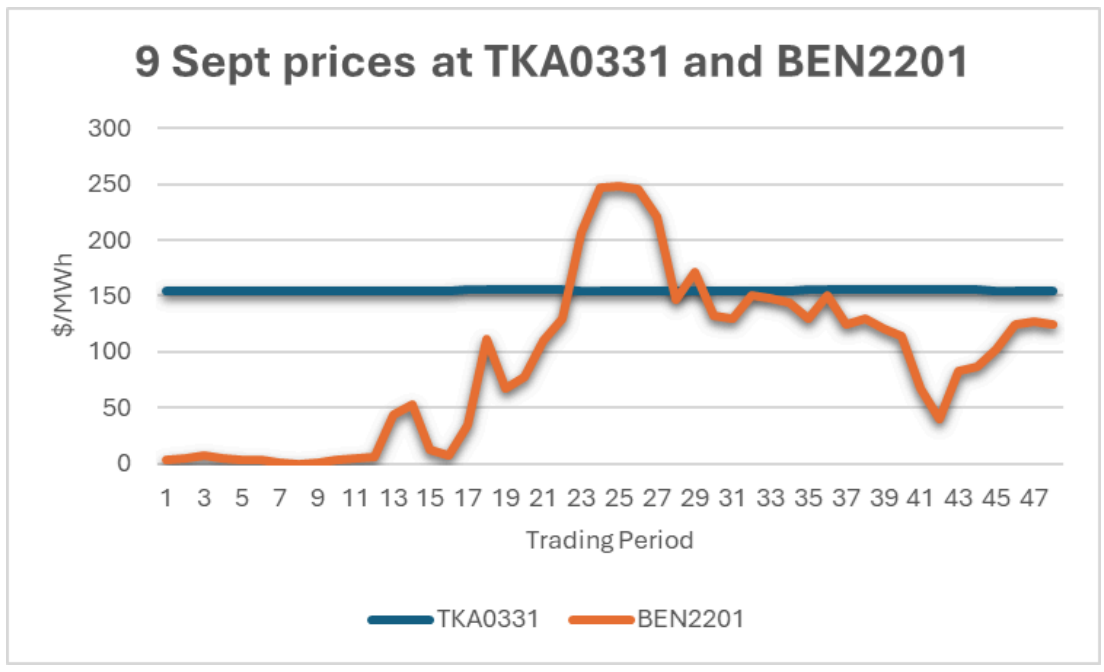
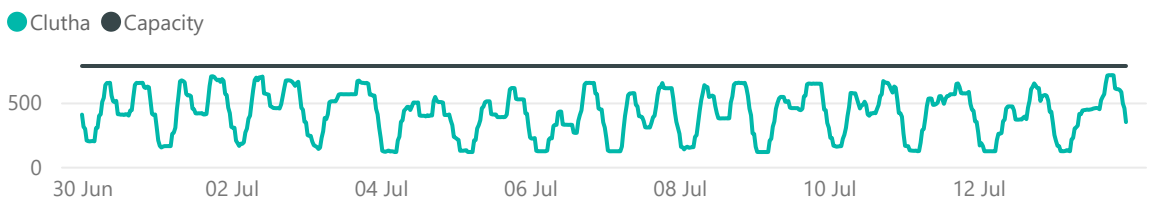


Figure 2: Prices for 9 September at TKA0331 and BEN2201.

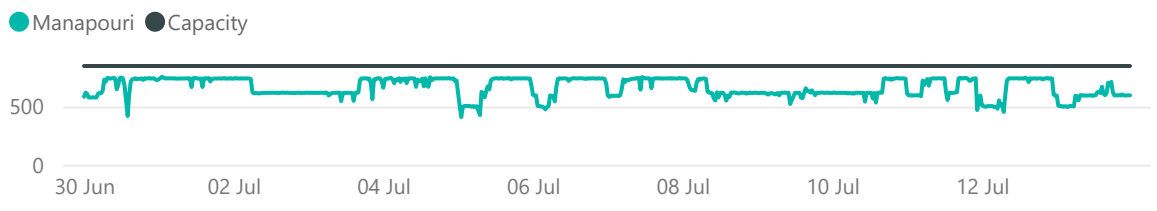
Generation Breakdown - Last Two Weeks

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

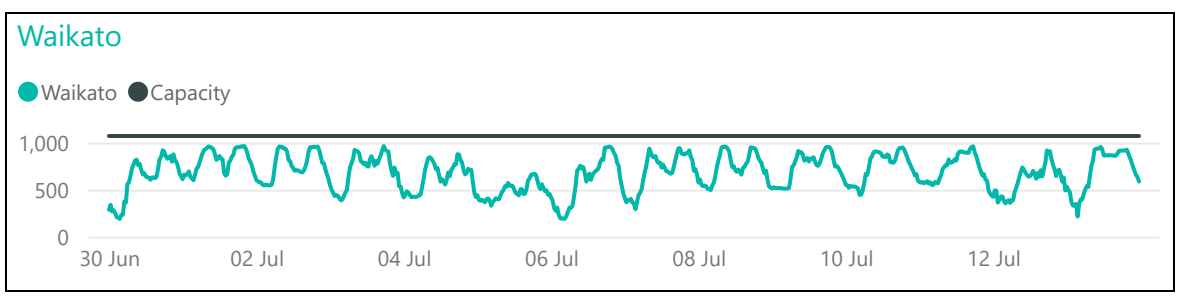
Clutha



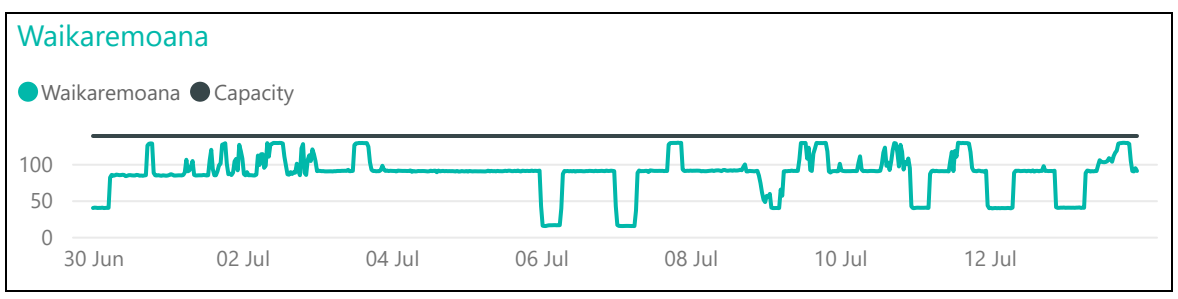
Manapouri



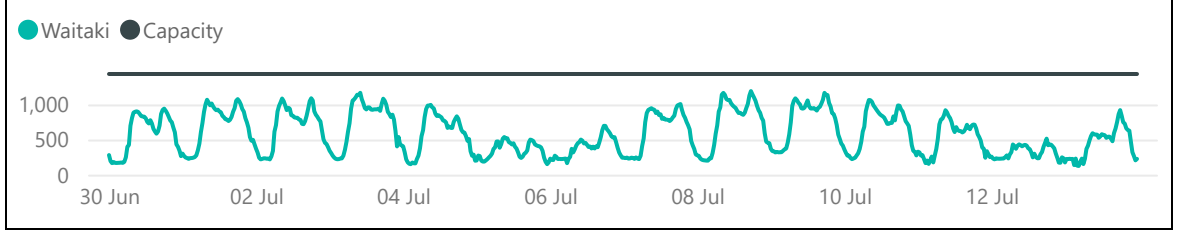
Waikato



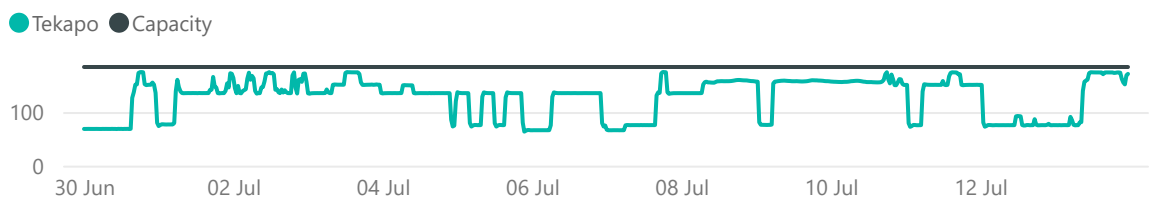
Waikaremoana



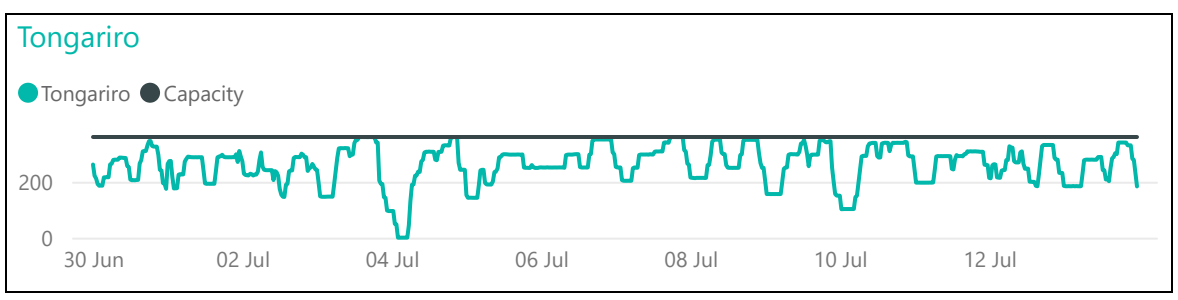
Waitaki



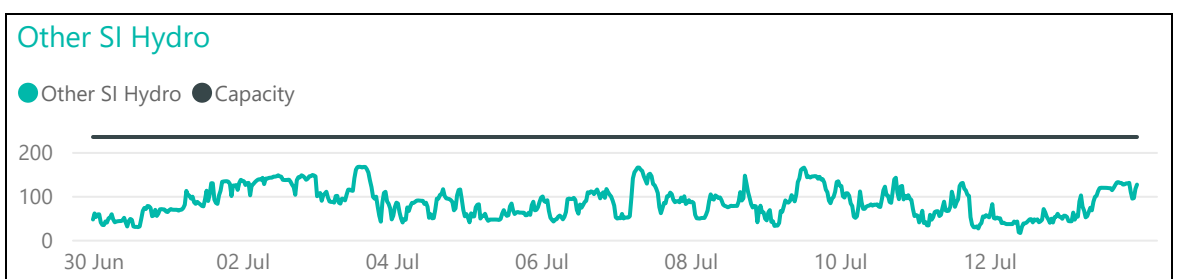
Tekapo



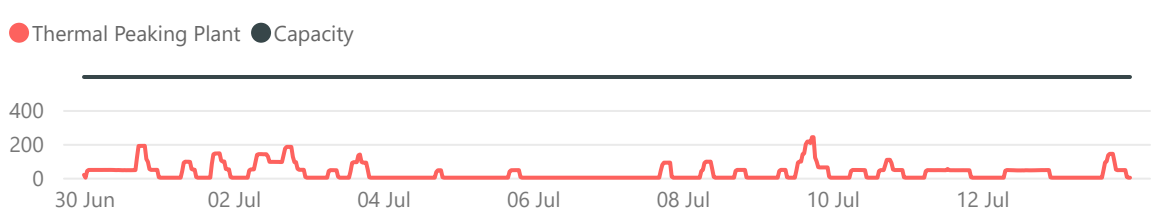
Tongariro



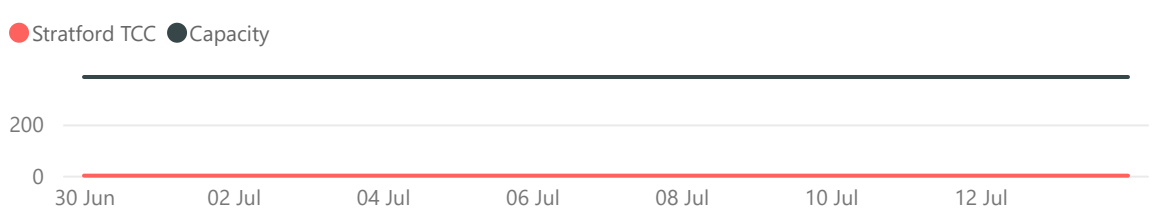
Other SI Hydro



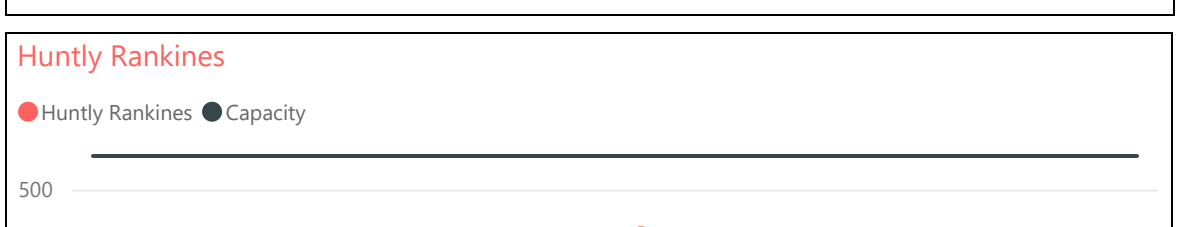
Thermal Peaking Plant



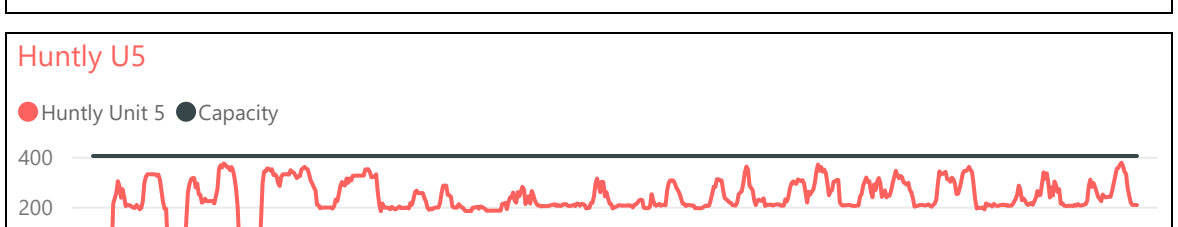
Stratford TCC



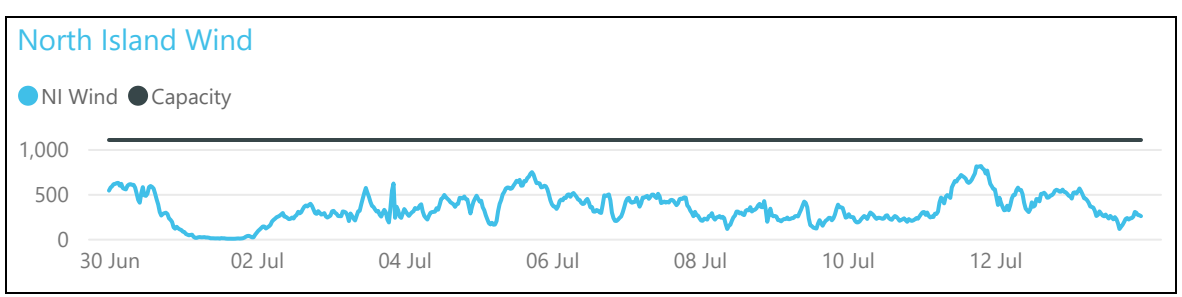
Huntly Rankines



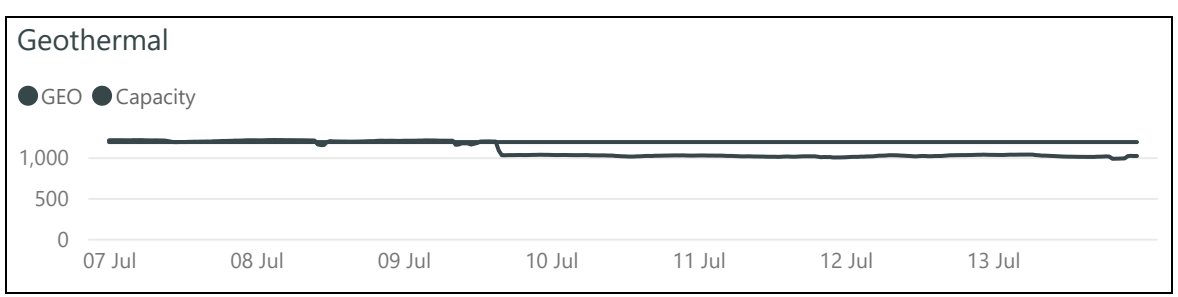
Huntly U5



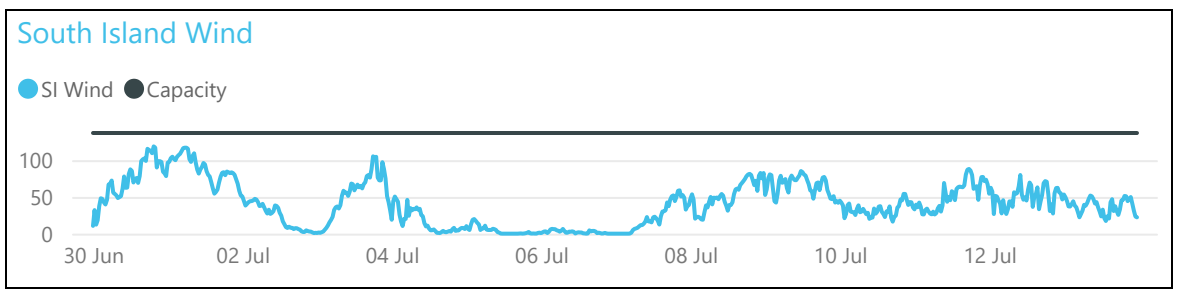
North Island Wind



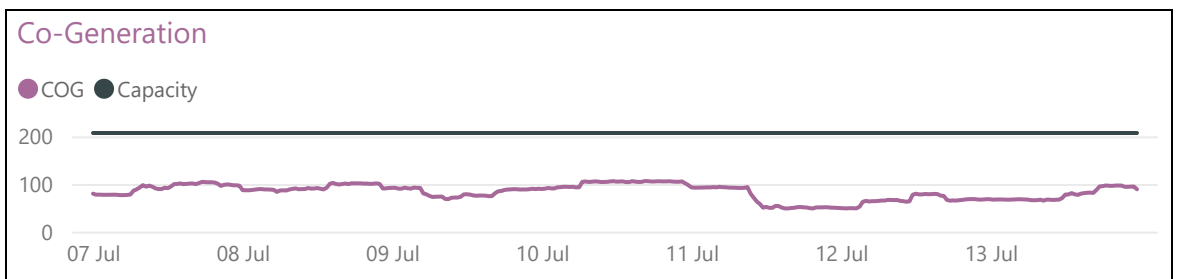
Geothermal



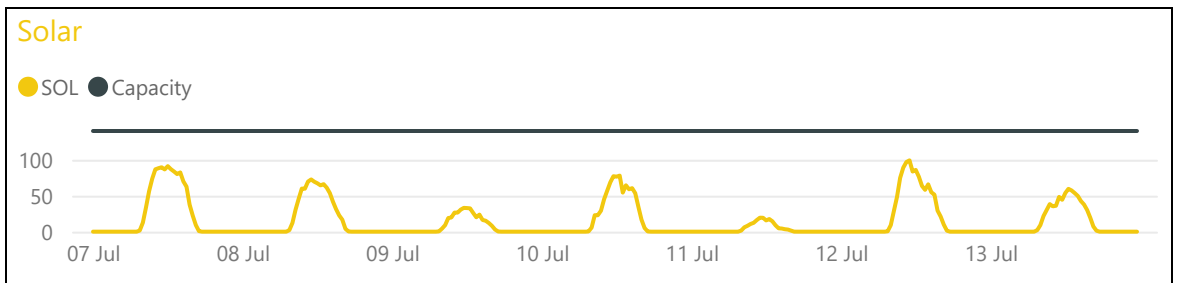
South Island Wind



Co-Generation

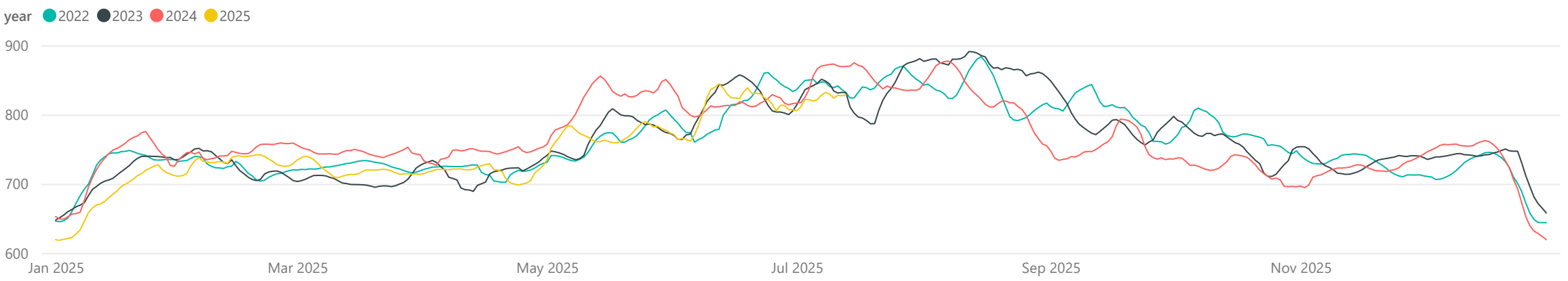


Solar

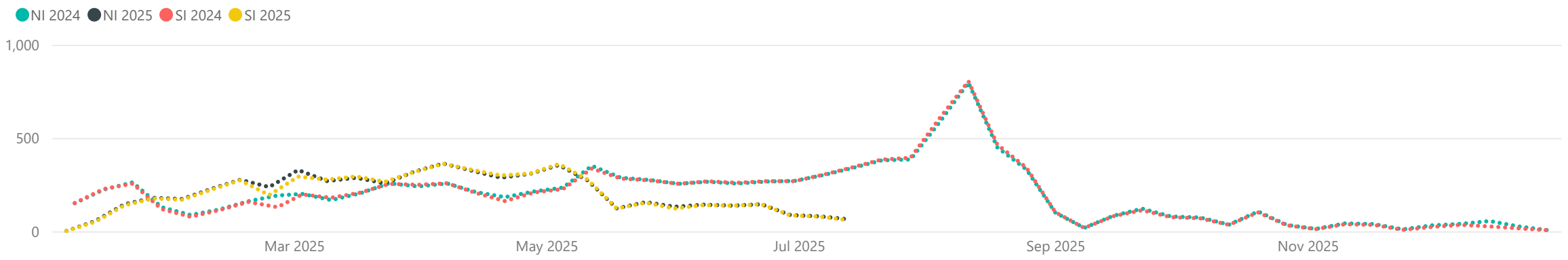


Weekly Profiles

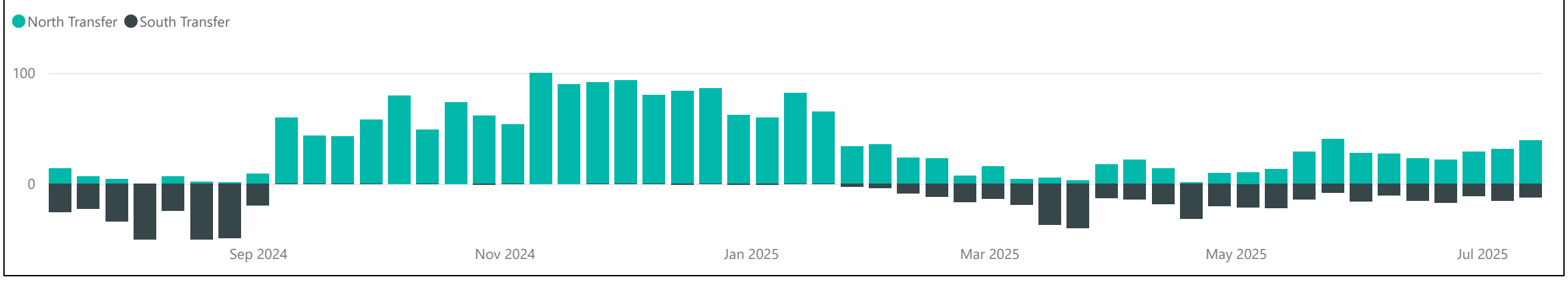
National Weekly Demand - GWh - 7 Day Rolling



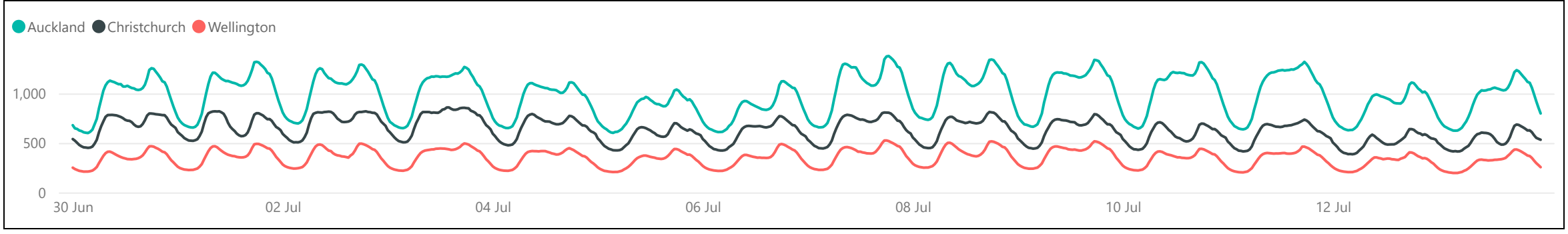
Weekly Spot Price - $/MWh



HVDC Transfer - Weekly GWh



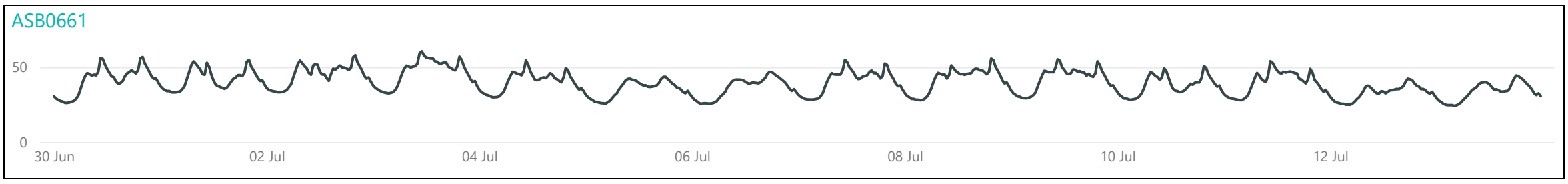
Conforming Load Profiles - Last Two Weeks *Measured in MW shown by region*



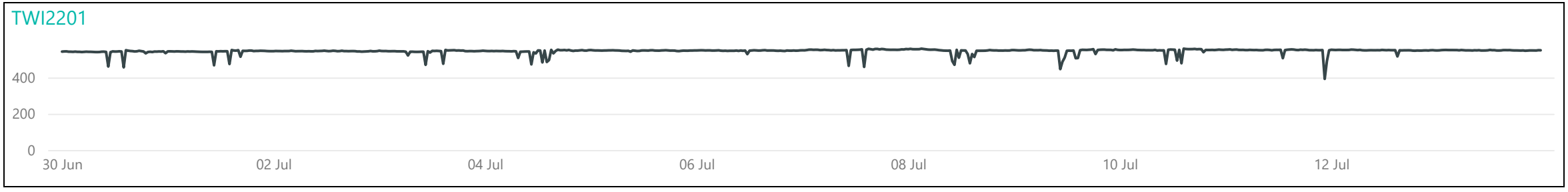
Non-Conforming Load Profiles - Last Two Weeks *Measured in MW shown by GXP*

GLN0331

ASB0661



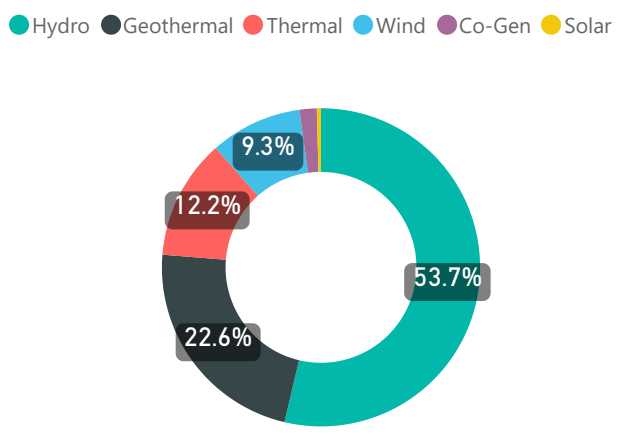
TWI2201



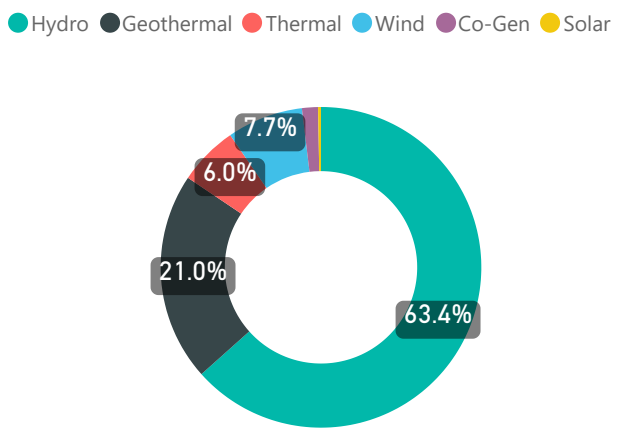
TRANSPOWER

Generation Mix

Last 52 Weeks Generation Mix - Weekly GWh



Last 7 Days Generation Mix - Weekly GWh



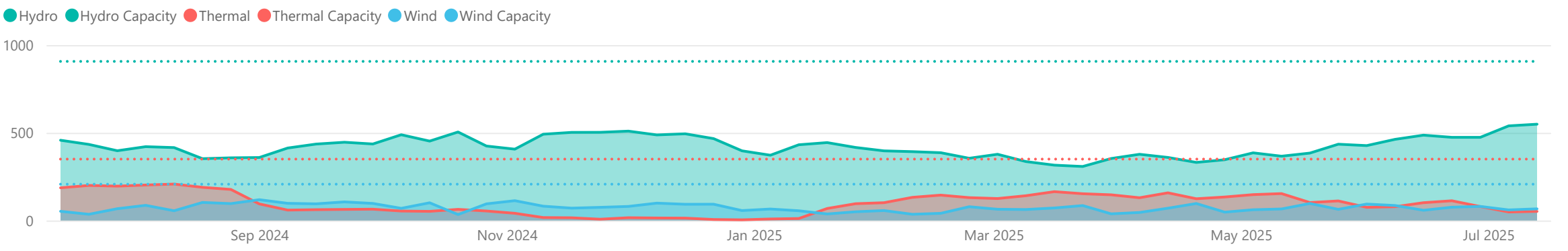
Average Metrics Last 7 Days

Renewable Percentage	CO2e Tonnes/Week	CO2e g/kWh
92%	41,419	47.4

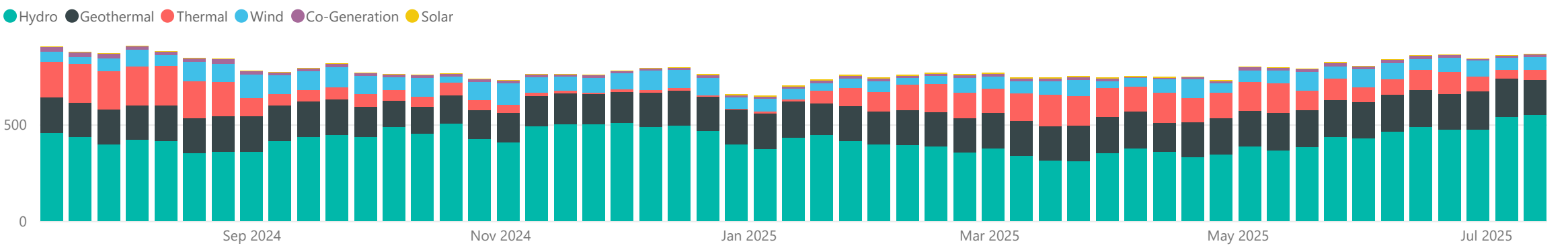
Average Metrics Last 52 Weeks

Renewable Percentage	CO2e Tonnes/Week	CO2e g/kWh
86%	77,228	97.1

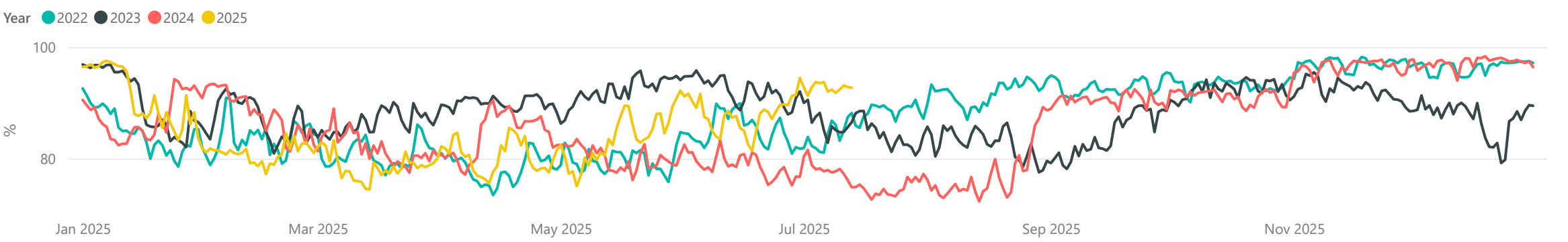
Weekly Generation Mix vs Capacity - GWh



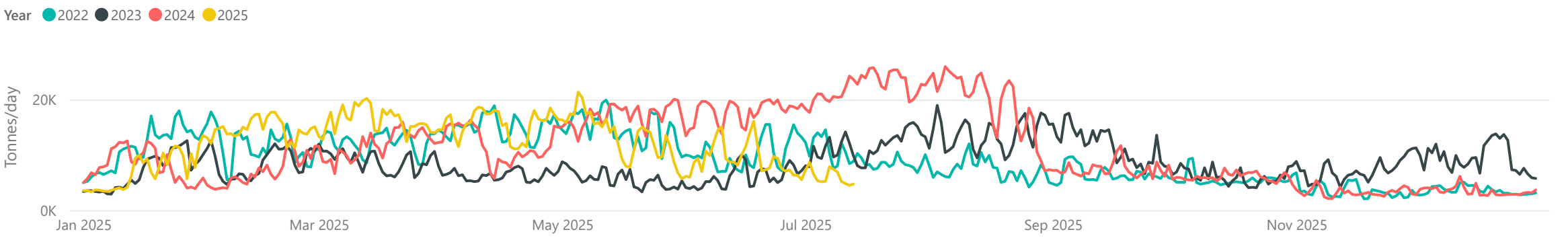
Weekly Generation Mix - GWh



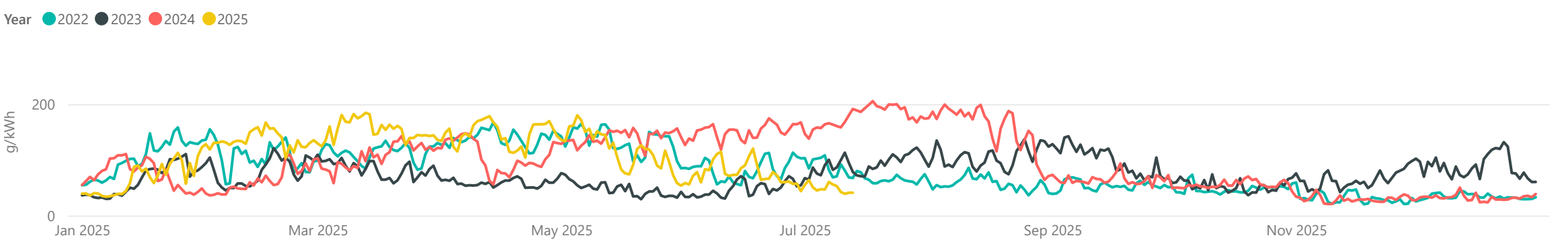
NZ Renewable Percentage



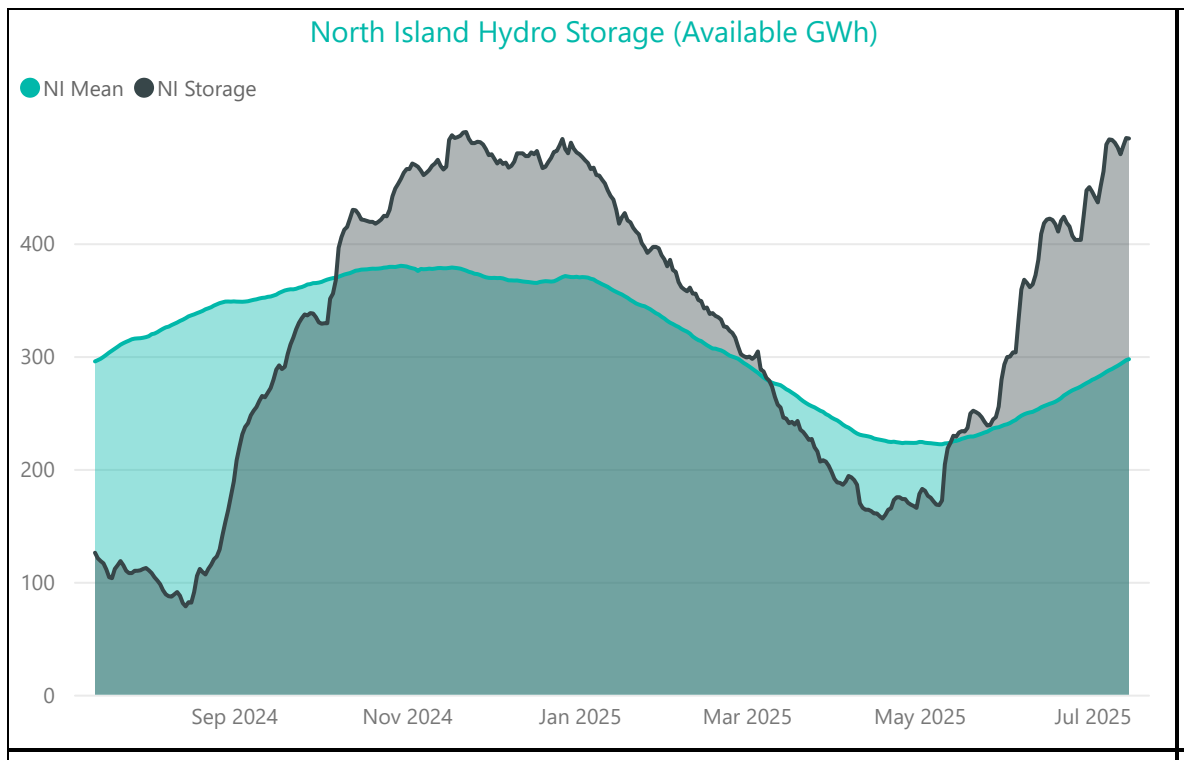
CO2 Tonnes/Day

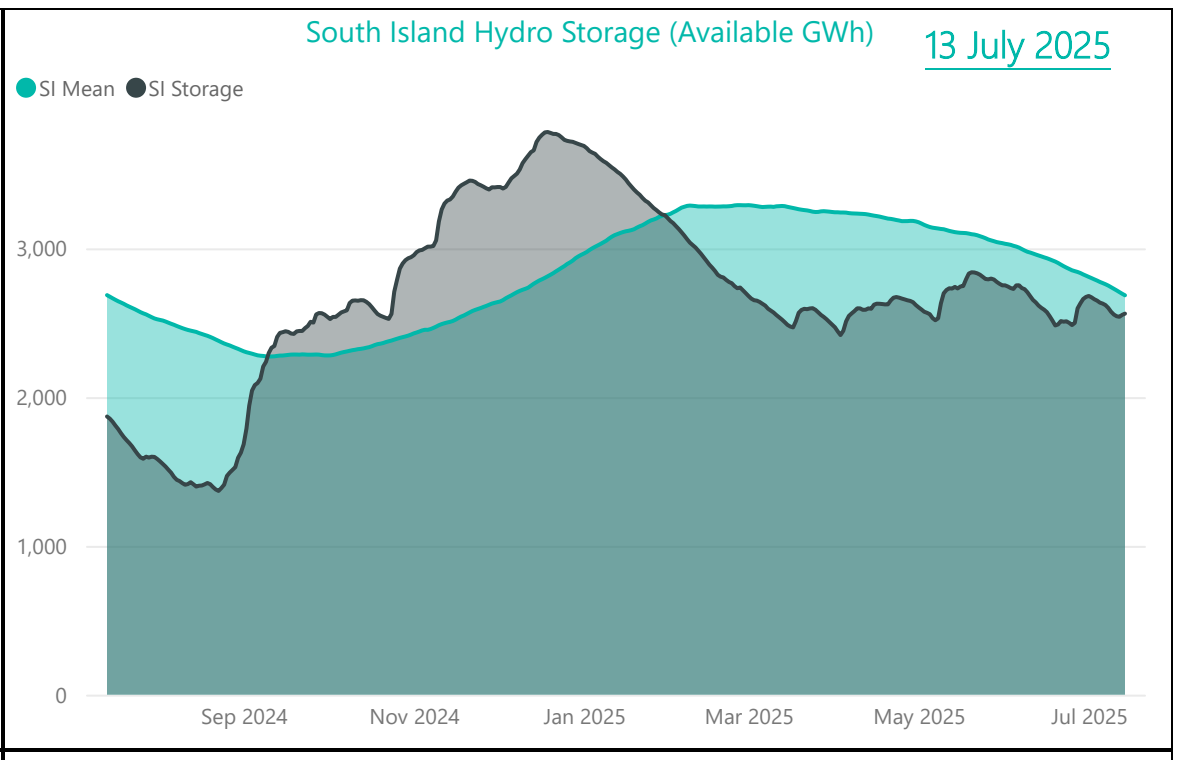


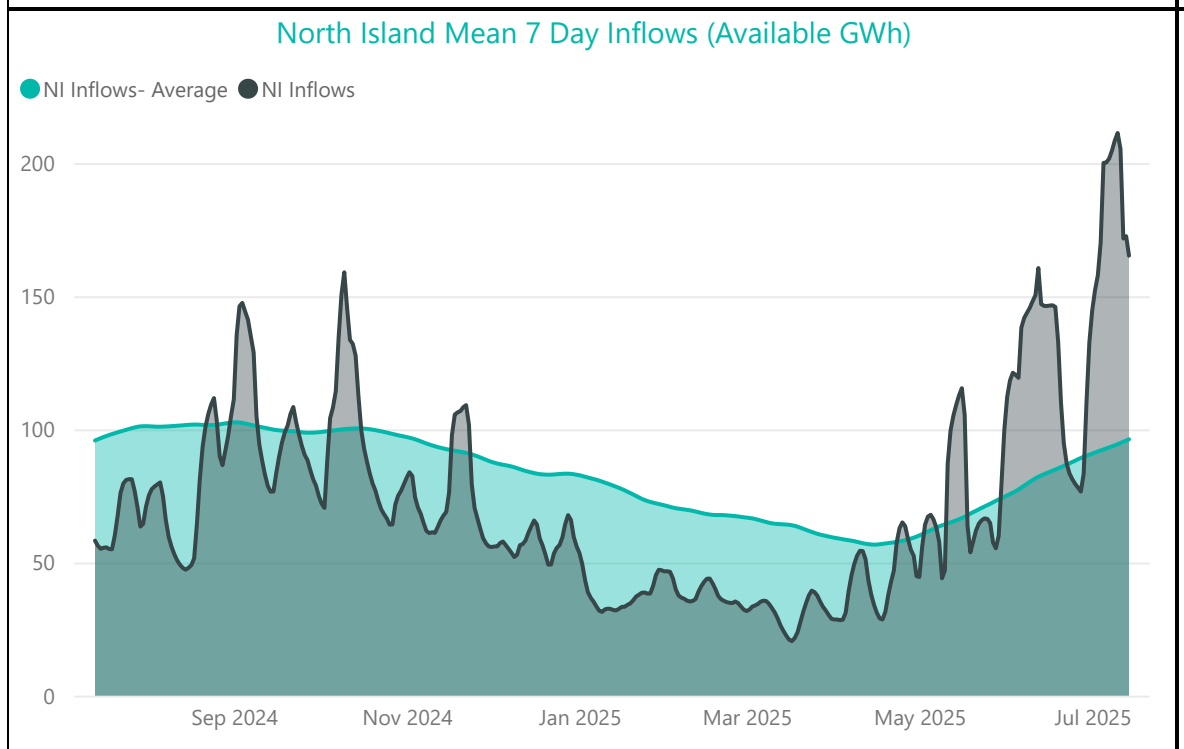
CO2 g/kWh

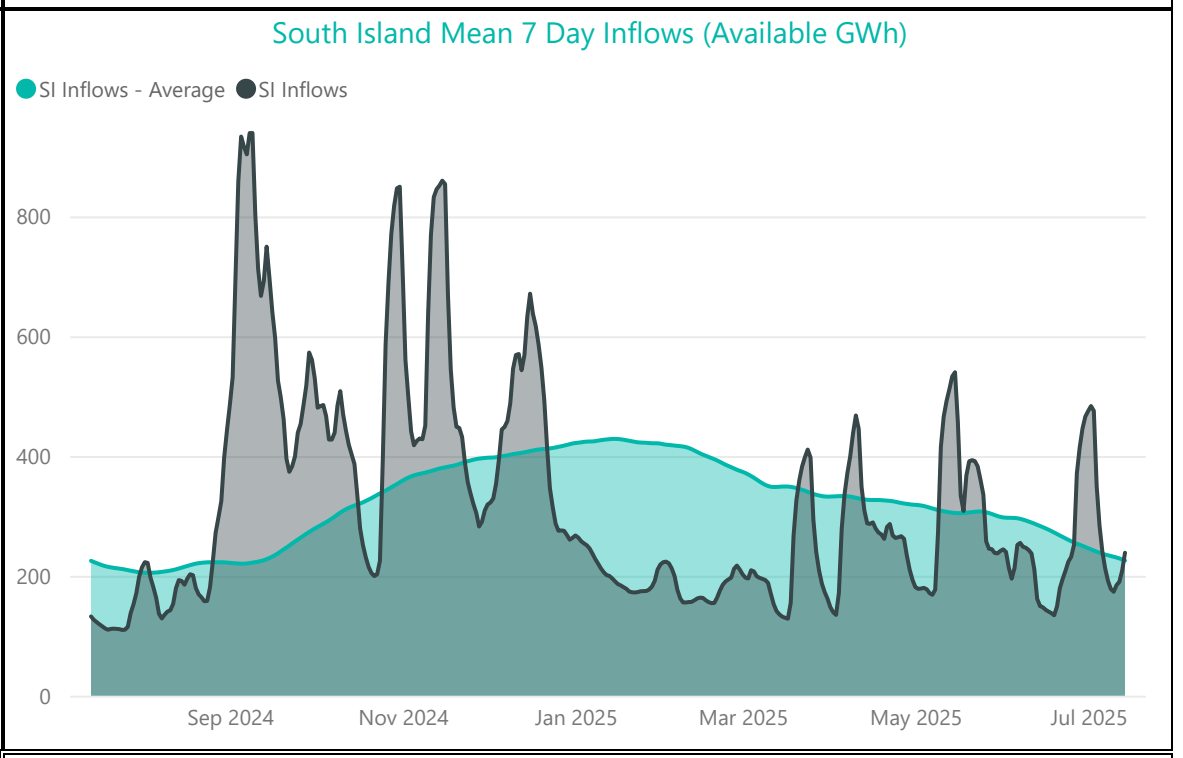


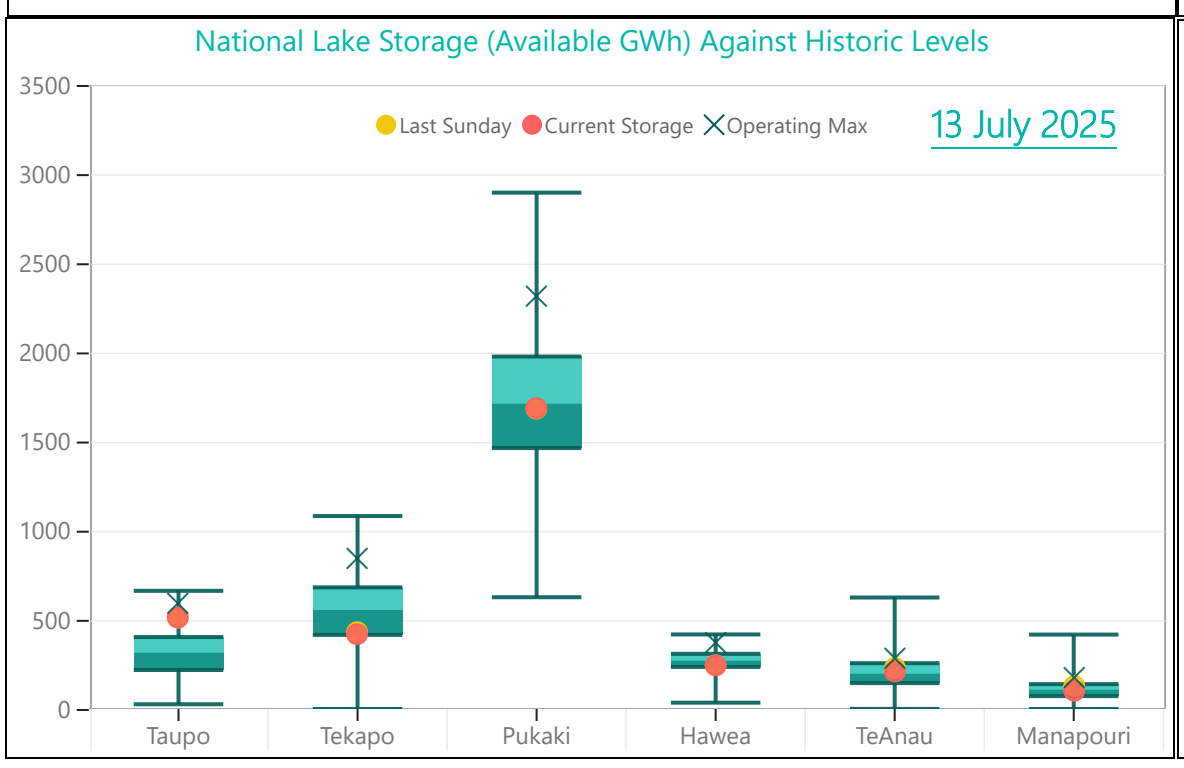
Hydro Storage

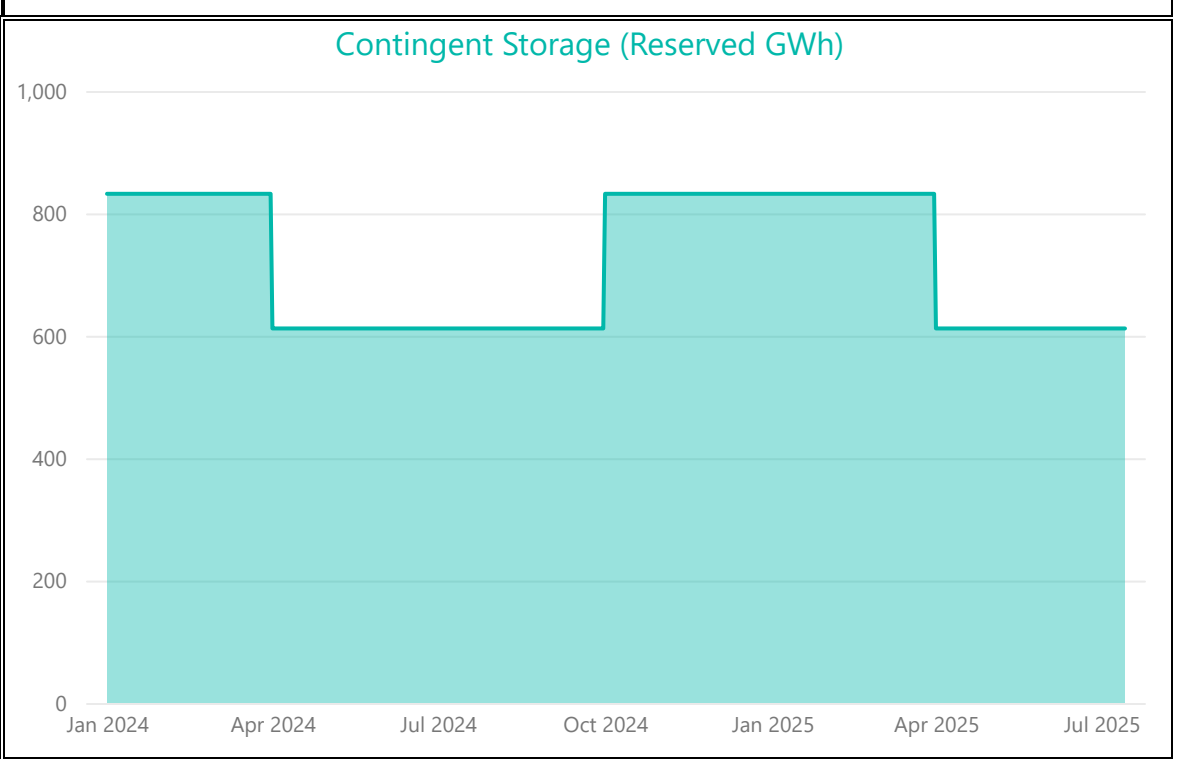












For further information on security of supply and Transpower's responsibilities as the System Operator, refer to our webpage here: https://www.transpower.co.nz/system-operator/security-supply

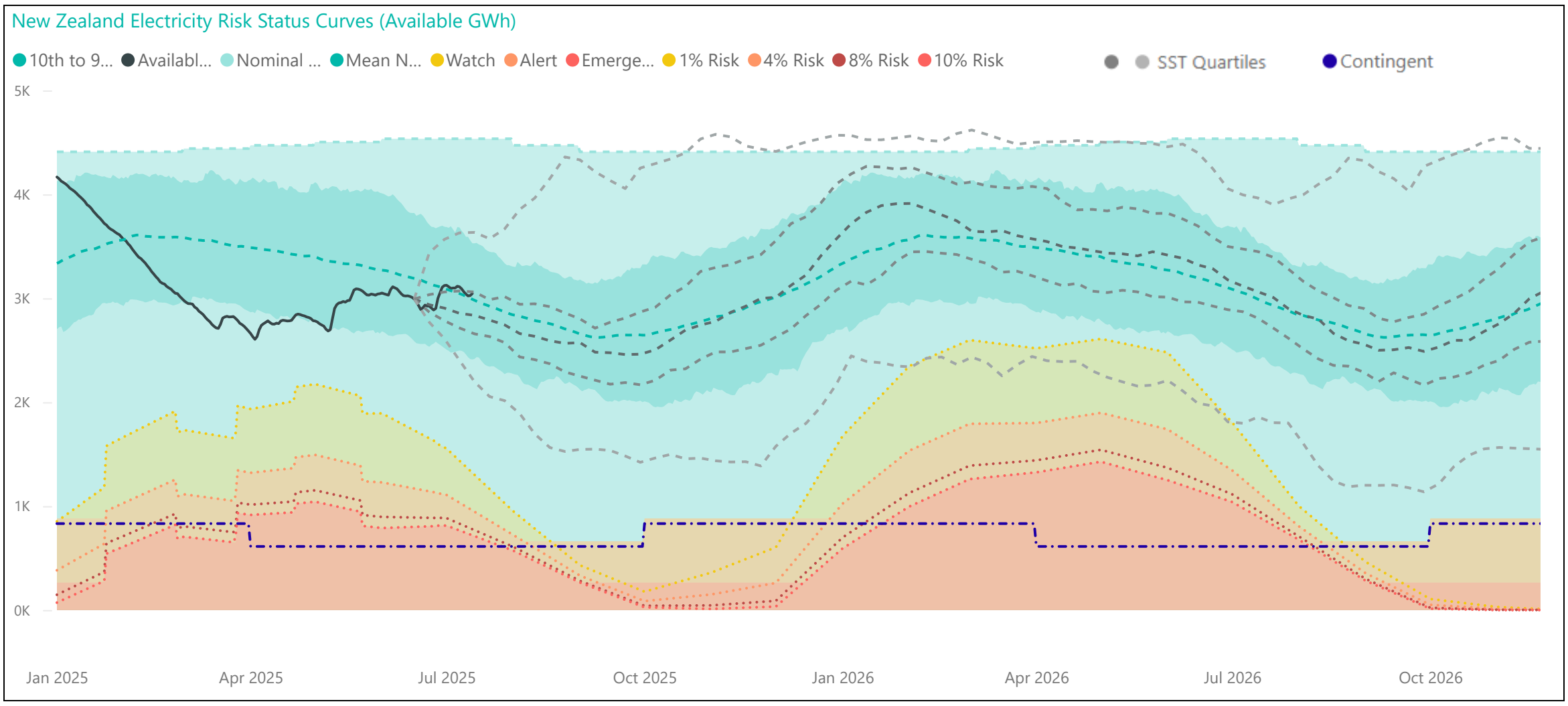
For any inquiries related to security of supply contact market.operations@transpower.co.nz

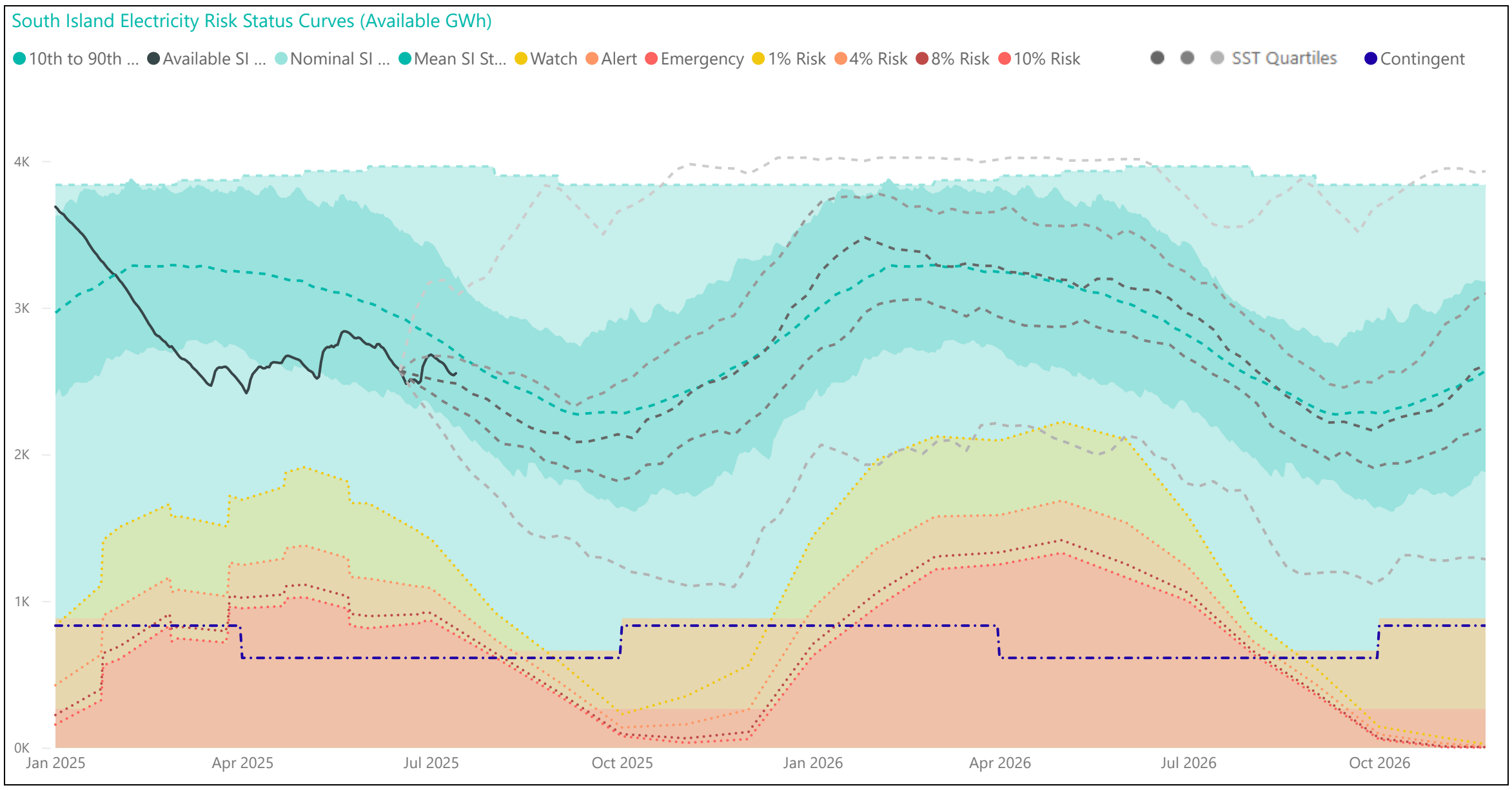
Hydro data used in this report is sourced from *NZX Hydro*.

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).