TRANSPOWER

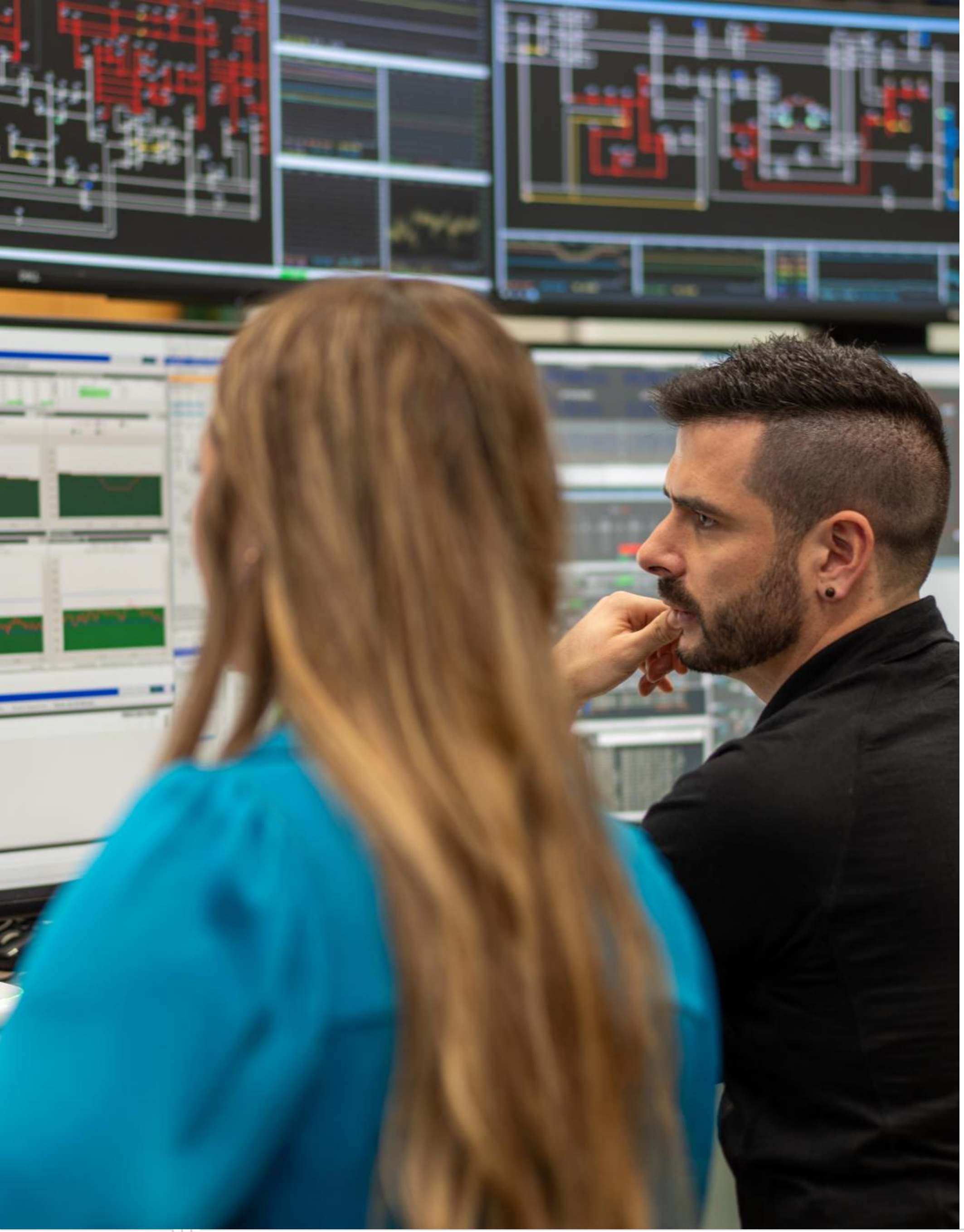
System Operator Industry Forum

16 September 2025

Today’s agenda

Market and Operational updates

- Key messages
- Market update
- North Canterbury 66kV SPS update
- NZGB update
- Operational update
- Consultations, publications and events



Key Messages

- Nationally hydro storage has lifted above the 10th percentile due to increased inflows. There is more rain in the forecast.
- Early spring we have seen demand soften due to warmer weather.
- Continued focus on fuel (both hydro and thermal) and asset availability is needed to reduce energy and capacity risks.

Market update

Energy: National hydro storage

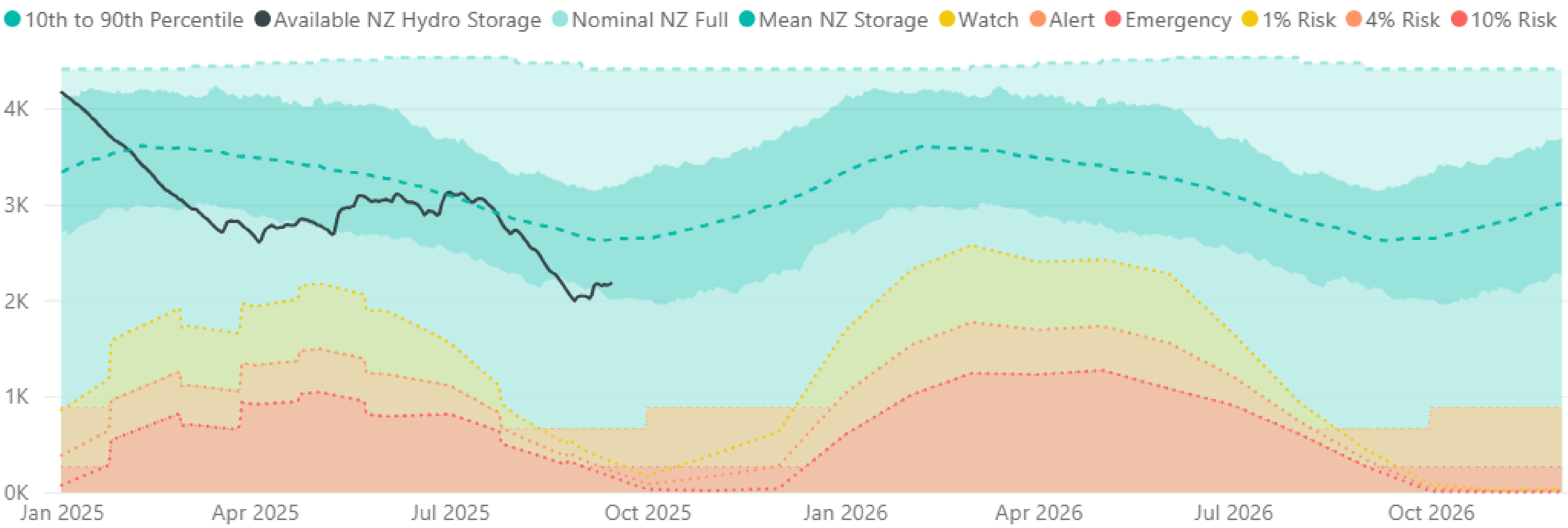
	Hydro storage level (% of mean ▲ / ▼)		
	New Zealand	South Island	North Island
Last forum	77%	73%	104%
Now	83% ▲	78% ▲	110% ▲

Note: these numbers include contingent storage, so they differ from those reported by NZX

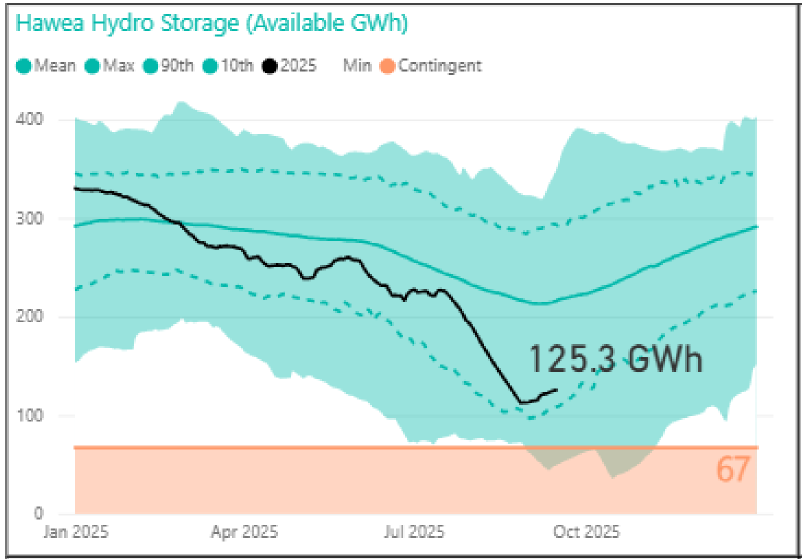
New Zealand Energy Risk

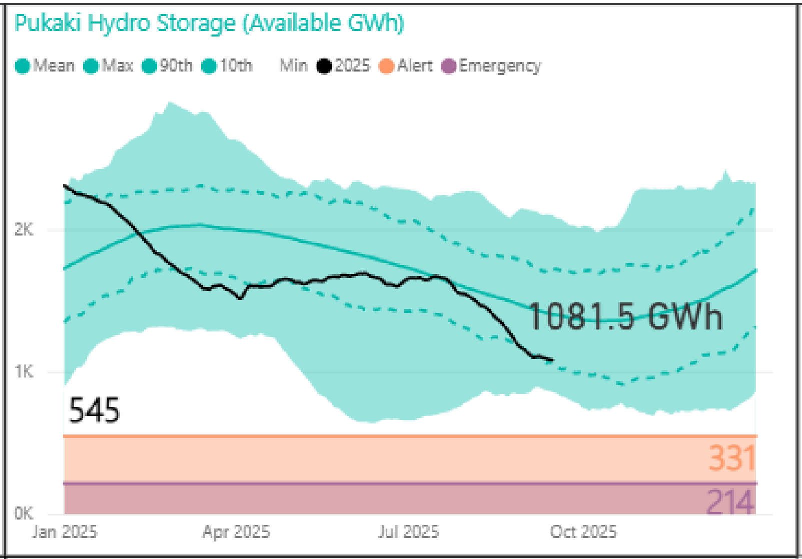
South Island Energy Risk

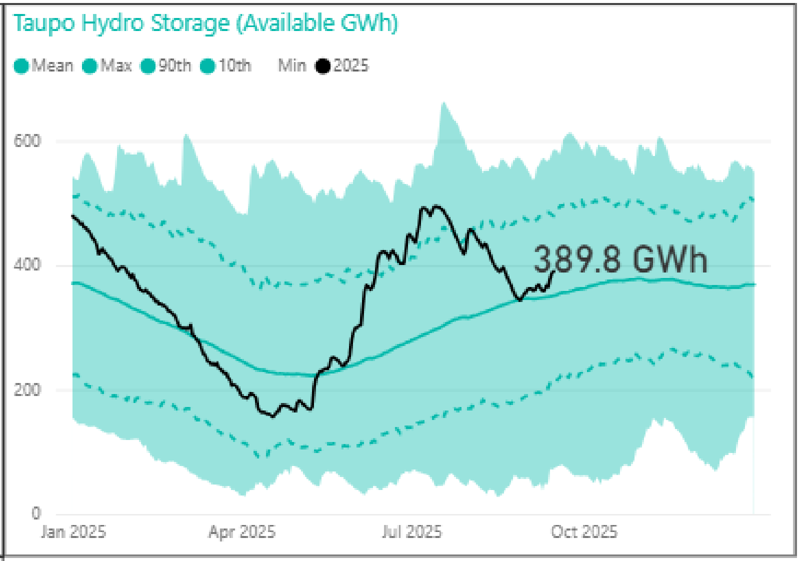
New Zealand Electricity Risk Status Curves (Available GWh)

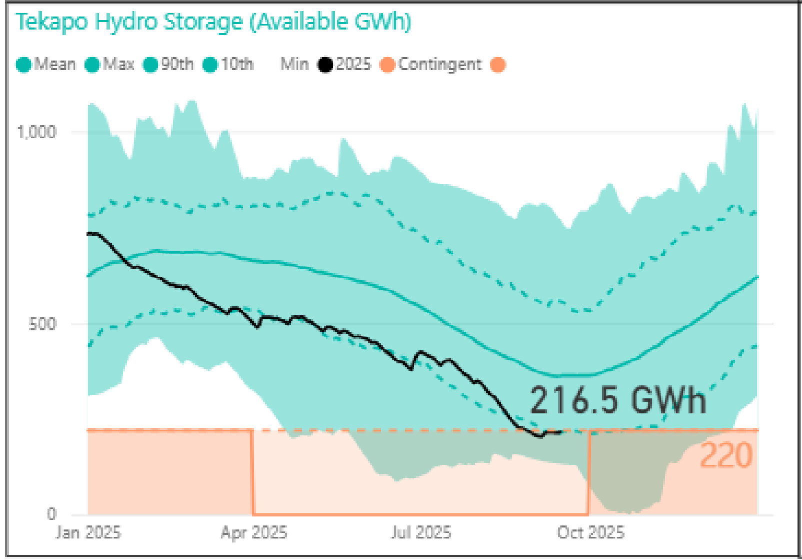


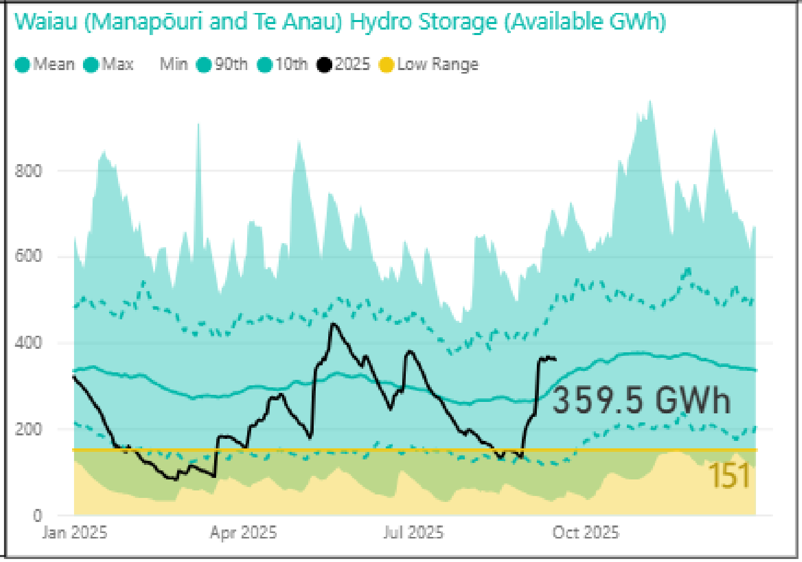
Hydro storage by catchment





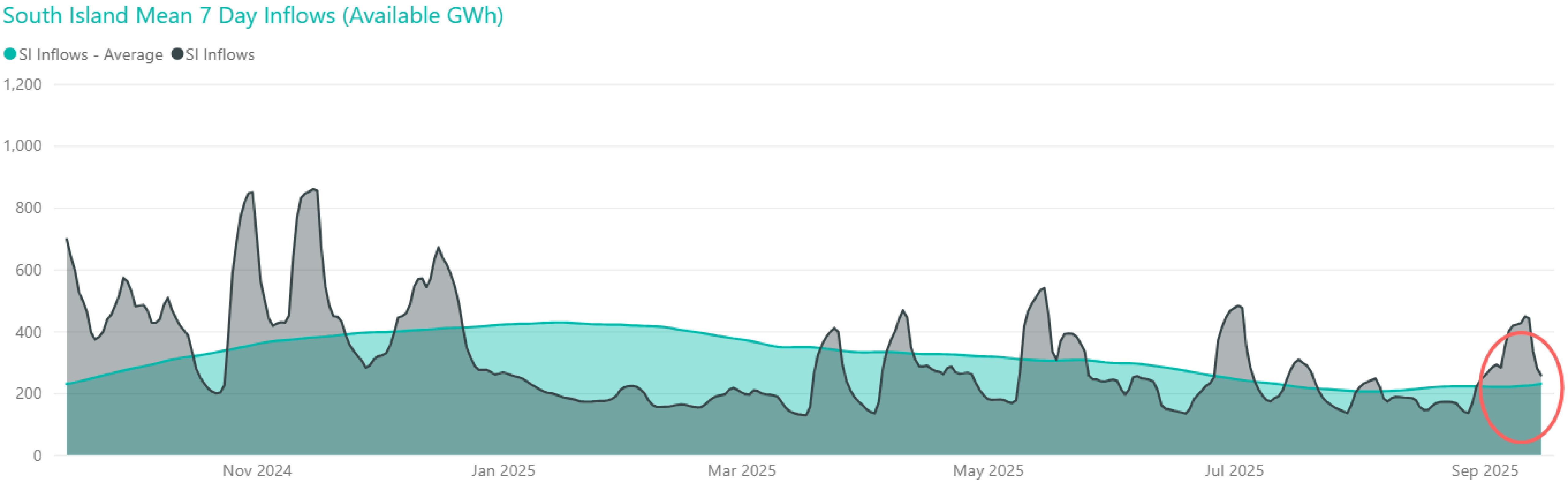


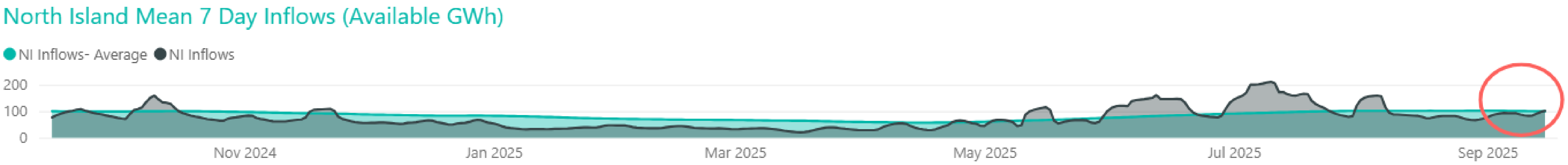




Lake	Current (%) avg
nz_controlled	83
si_controlled	78
hawea	58
pukaki	77
manapouri	106
te_anau	126
tekapo	60
taupo	111

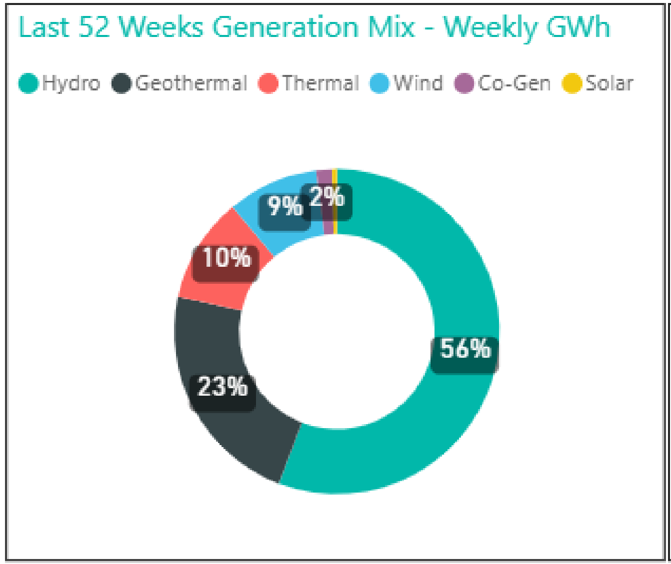
Hydro inflows

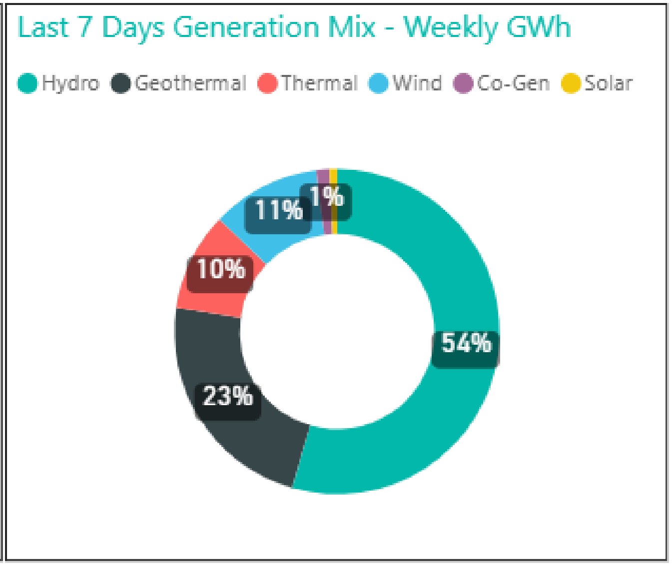


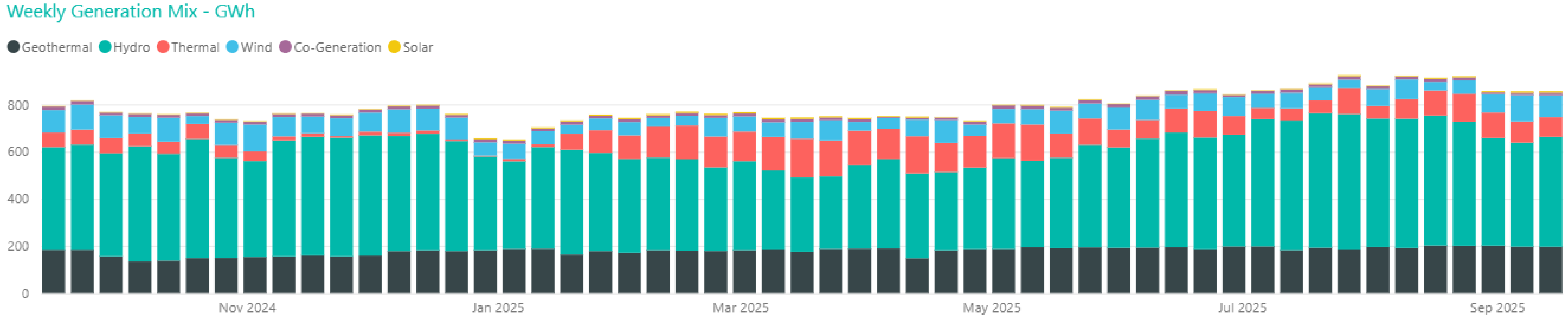


Generation mix

- The hydro generation share remained below the 52-week average, at 54%.
- Wind generation above average at 11%
- Thermal and geothermal generation have been on par with average at 10% and 23% respectively.



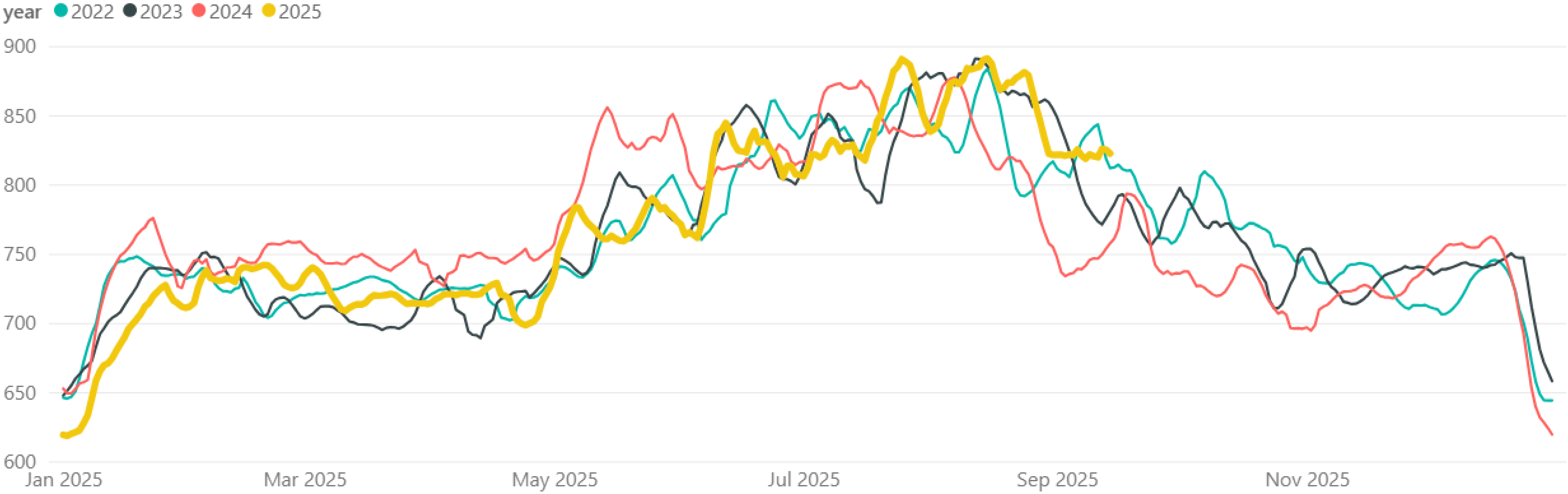




Demand

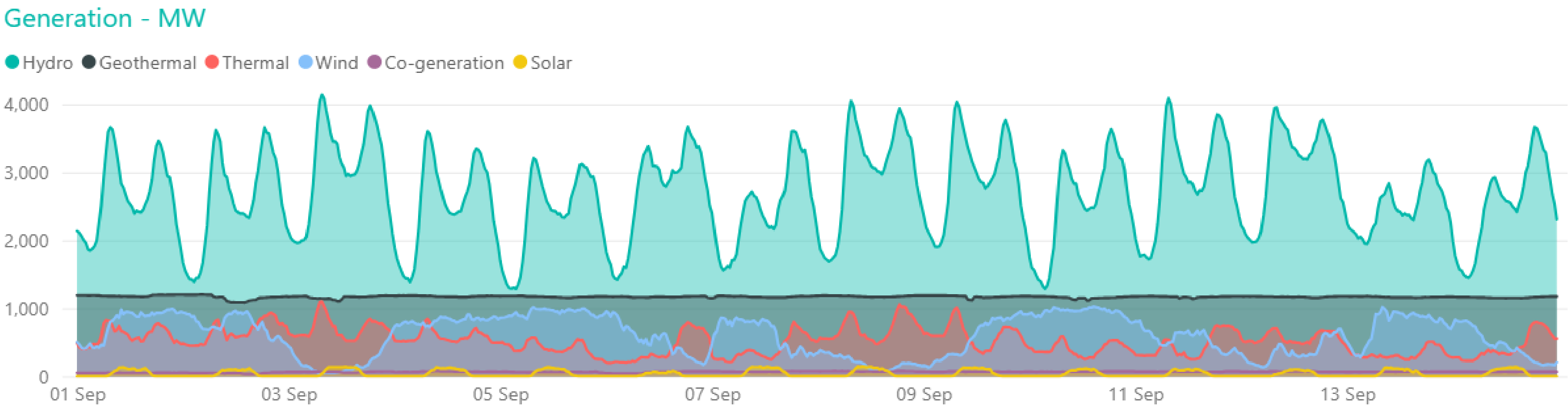
- Demand has remained lower since starting September as spring has brought warmer weather
- 822 GWh last week, and 821 GWh the two weeks prior.

National Weekly Demand - GWh - 7 Day Rolling

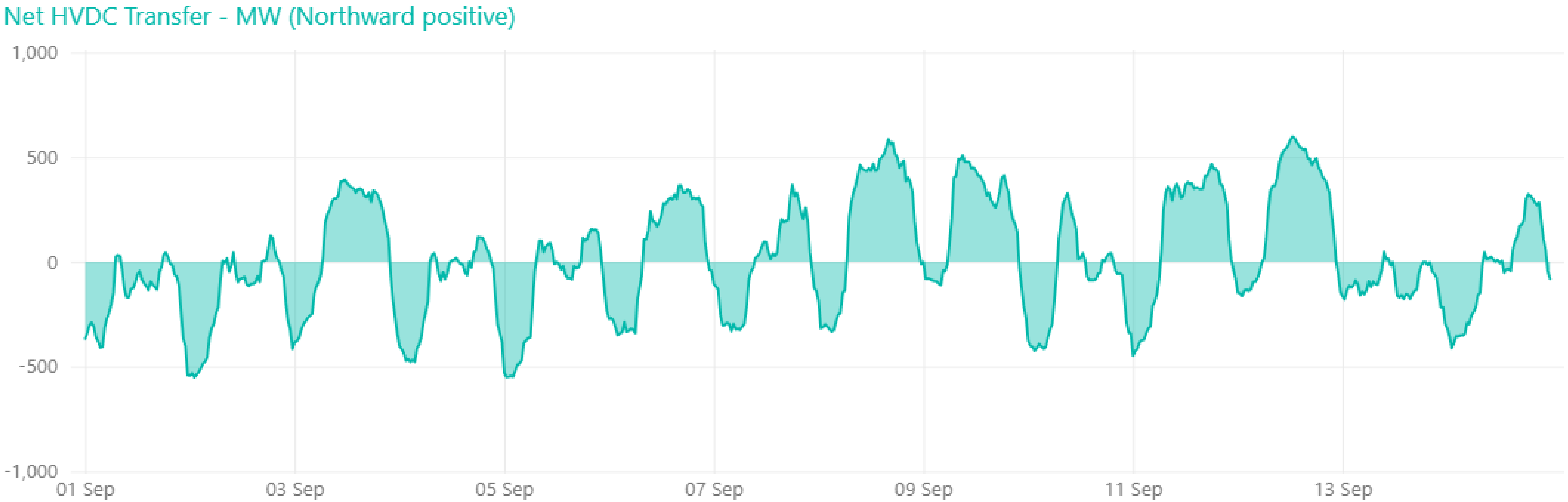


Pricing

- Average Ōtāhuhu price was $174/MWh last week, and $183/MWh the week prior.
- Wholesale prices peaked at $286/MWh at BEN, 6am on Thursday 11 September

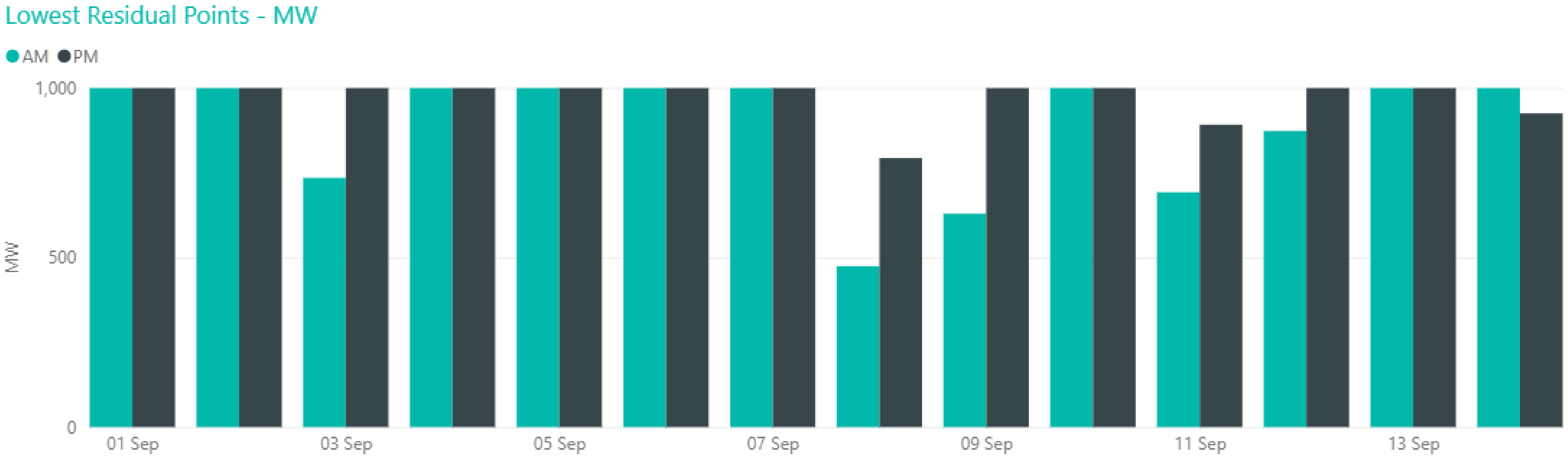


HVDC transfer



Capacity residual margins

- Healthy residual margins (lowest 475 MW)
- Slightly lower last week than recently with lower thermal unit commitment

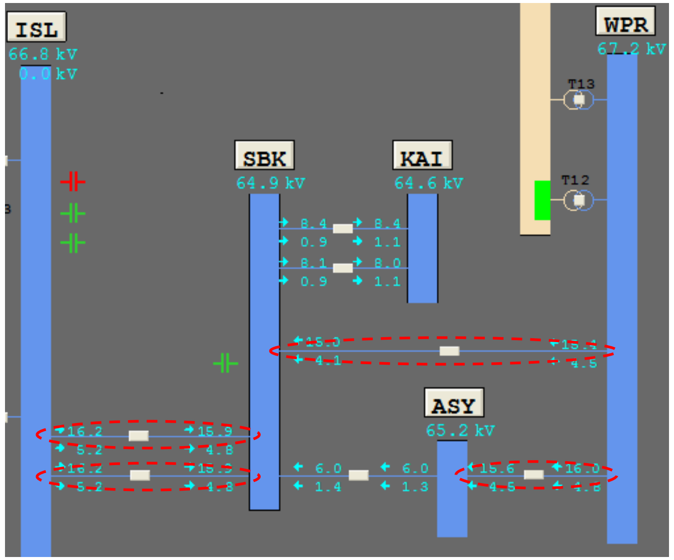


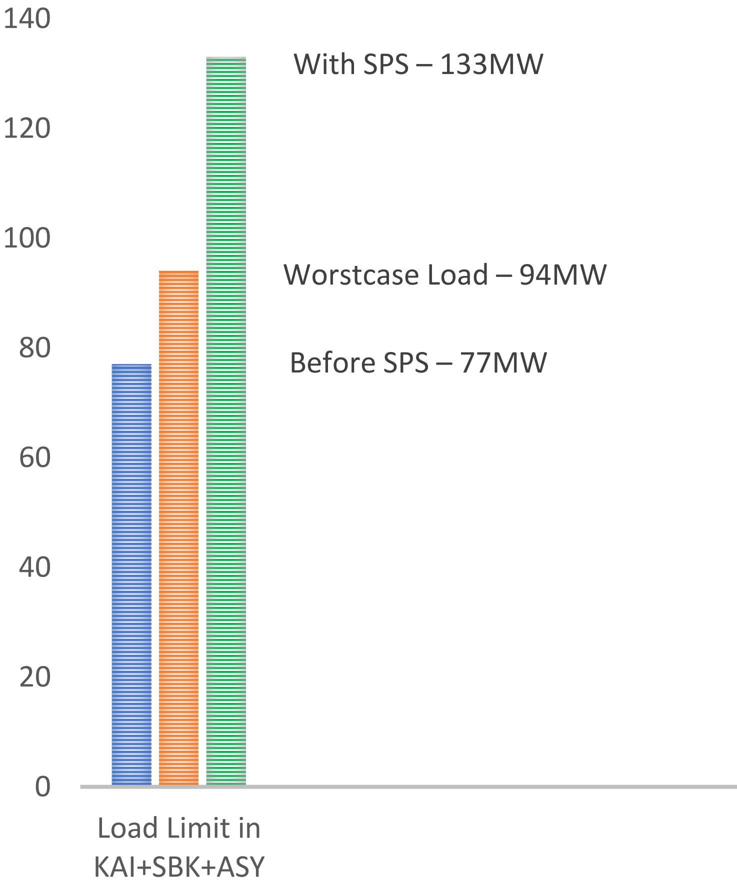
North Canterbury 66kV Special Protection Scheme

North Canterbury 66kV Circuit Overload Protection Scheme (COPS)

The scheme involves four sub schemes, one on each of the following circuits:

- Islington–Southbrook 1
- Islington–Southbrook 2
- Ashley–Waipara 1
- Southbrook–Waipara 1





	N-1-1 (One Planned outage and a tripping)
Without SPS	Load management from ASY, SBK, KAI ≤ 77MW to 80MW
With SPS	More flow to ASY, SBK, KAI up to 133MW (70% more flow into the region)

This COPS will disconnect any overloaded circuit if there is a tripping on the remaining network during a planned outage on the 66kV network

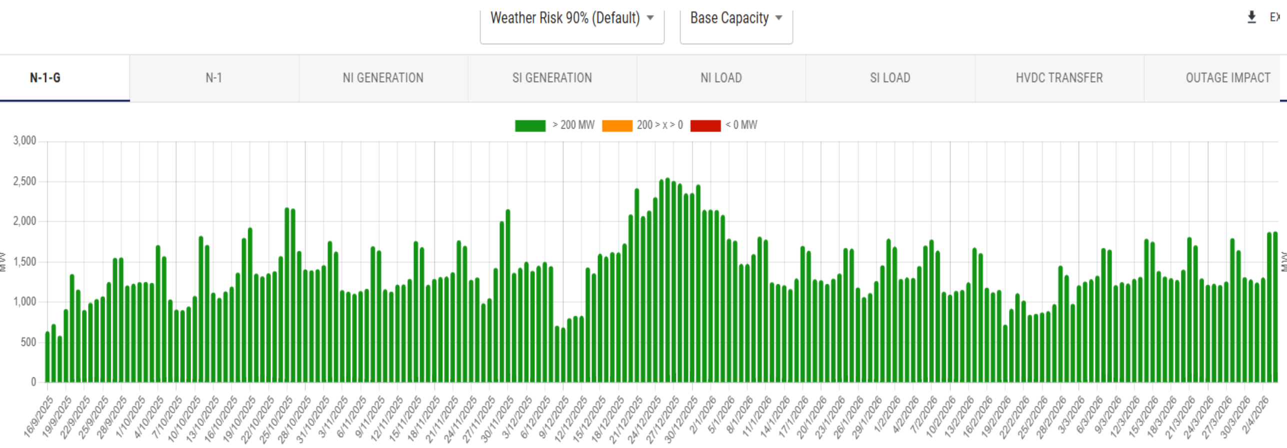
NZGB update

NZGB update: base capacity N-1-G

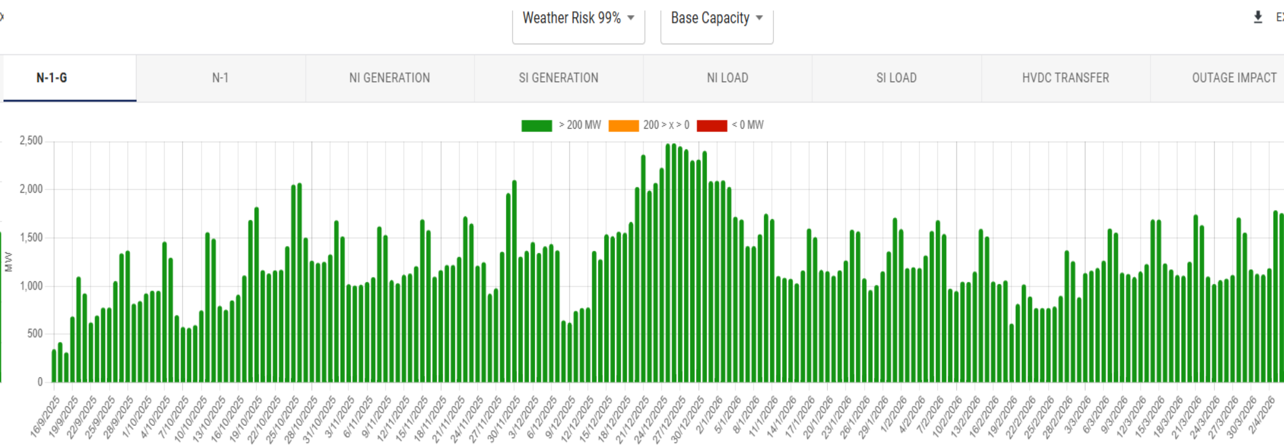
- N-1-G margins are currently showing healthy values
- Under the 99th percentile load, which we would expect under a cold snap, the margins drop but are still healthy

Base case capacity at 90%

- ***This triggers the CAN process***
- Assumes all generation available in POCP is offered
- It uses 20% of total wind capacity



90th percentile load



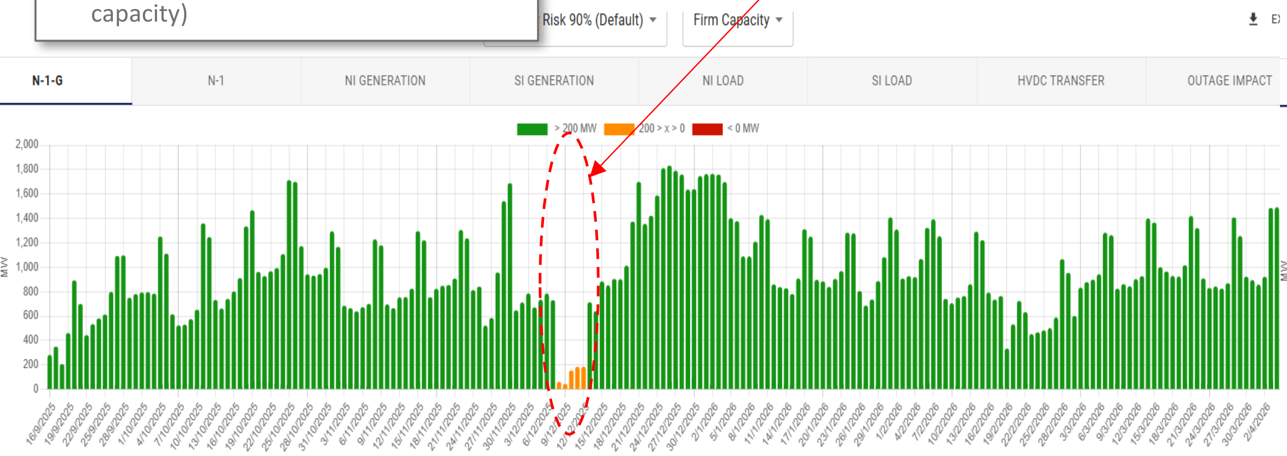
99th percentile load

NZGB update: firm capacity only N-1-G

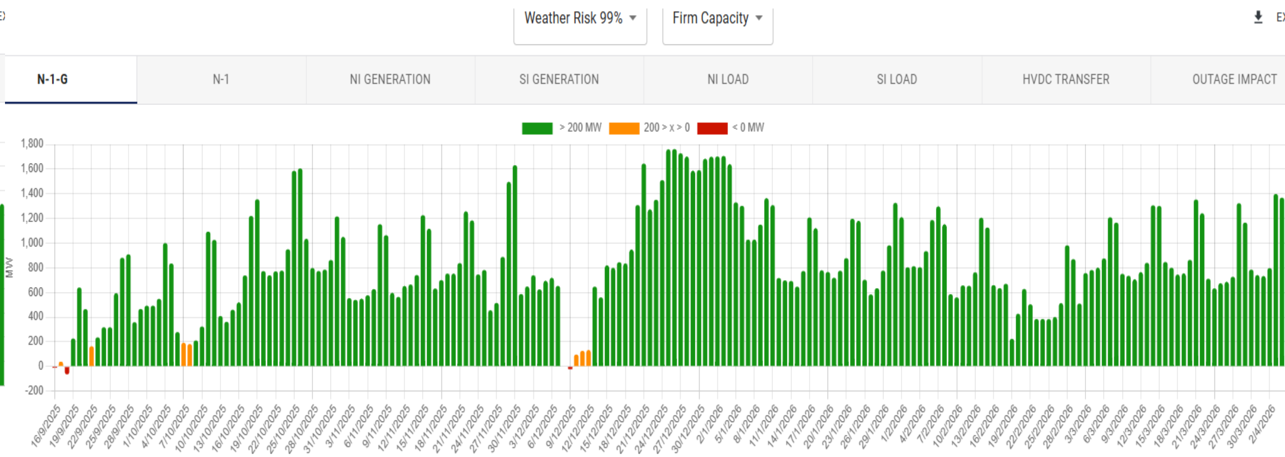
- Firm capacity scenario reflects units that historically operate for at least 90% of AM & PM peaks
- Shortfall and low margin periods highlight the potential reliance on these units to be available to cover N-1-G
- This means we are relying on the market to coordinate especially slow starting thermal units, to get through high peak load periods

Firm capacity removes
- TCC (-360MW) all months,
- 1 HLY Rankine over winter months June to November, and 2 Rankines over the remaining months
- It uses the lowest 10th percentile generation for wind (8% of total capacity)

WKM-WRK-1
outage



90th percentile load

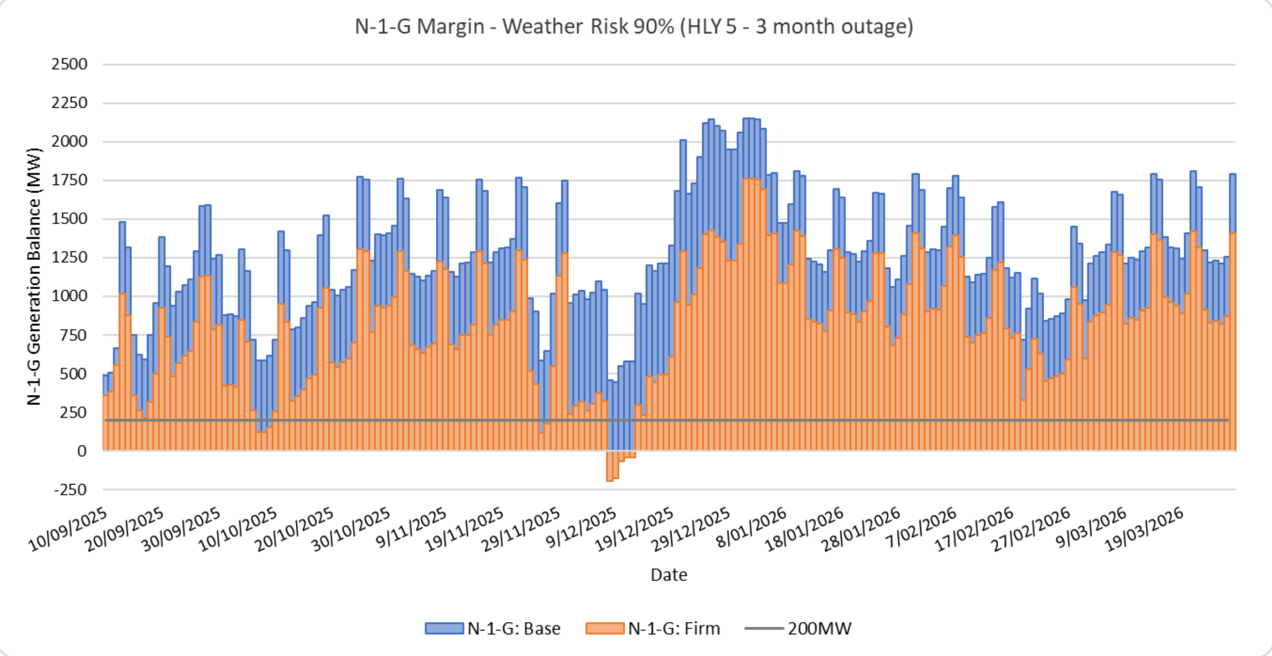


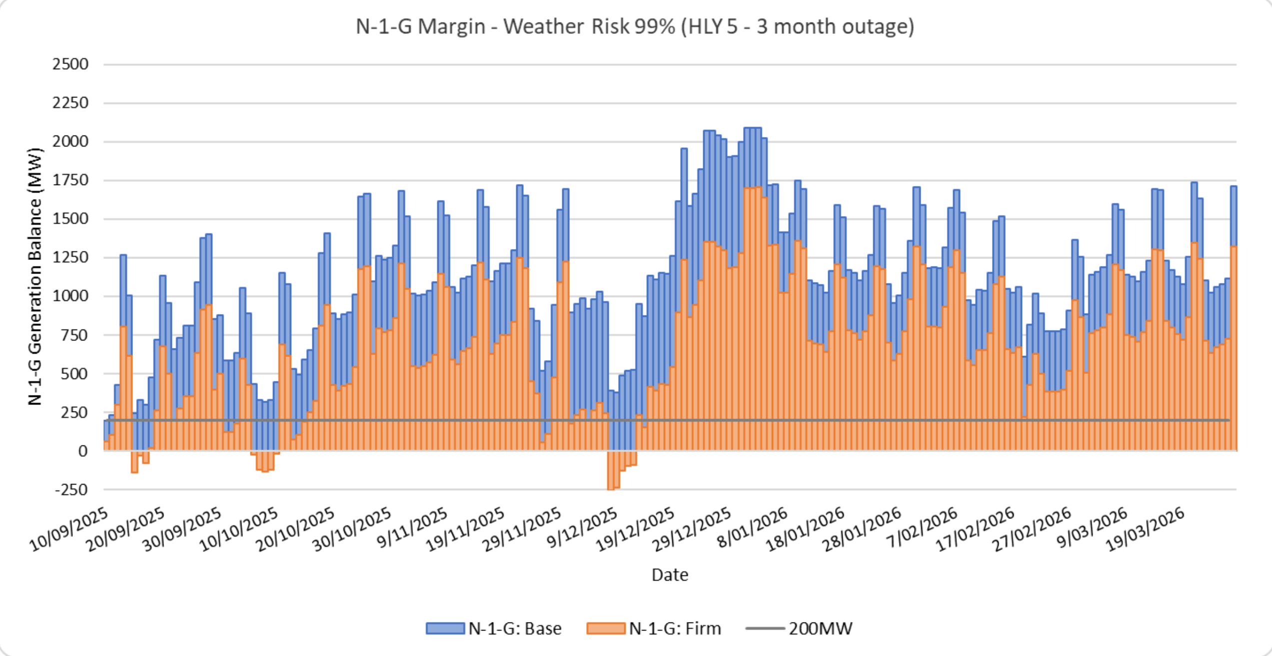
99th percentile load

NZGB update: Information

Additional information from the Industry:

- On 4 September Genesis announced that they will be extending the Huntly Unit 5 outage. This means it will be shut down from 1 October to 31 December to make gas available for commercial and industrial users
- This is not reflected in POCP and NZGB
- To understand this impact, we have modelled the scenario, and it can be seen in the figures below
- The N-1-G balance is still above 200MW and only the firm capacity scenario drops below 0MW during October and the December Wairakei ring outage





NZGB update: Information

Recommendations from SO:

- Avoid further outages during periods with low margins
- Market coordination is required from industry to ensure available generation capacity remains high to cover potential cold snaps
- Keep POCP updated with scheduled or tentative outages
- Keep the WDS up to date with the latest offers
- Any other information on plant availability, please contact the SO

Operational update

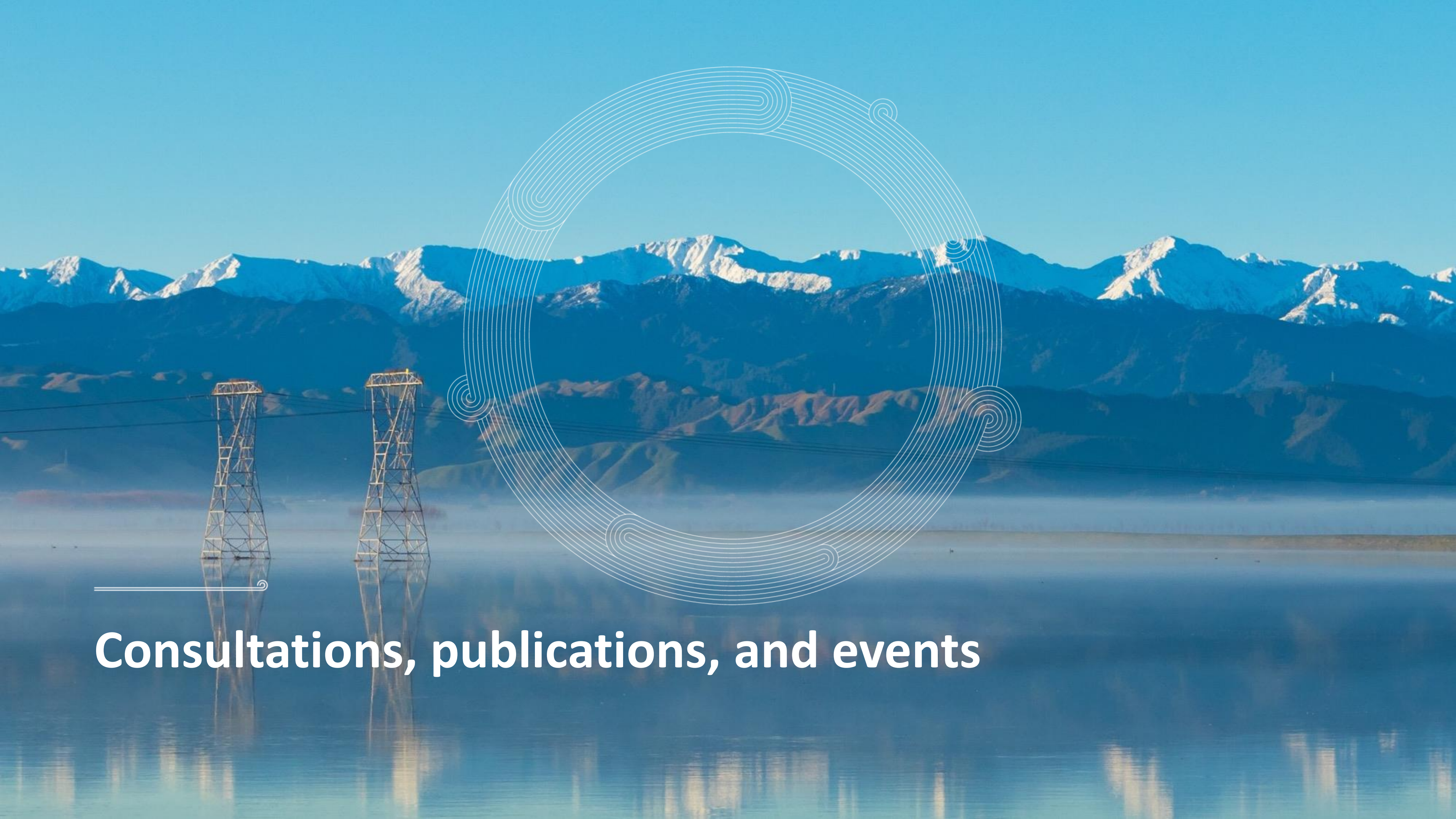
Operations Update: Inflexible Generation Outcomes

- We've spoken previously about priorities when dispatching generation down within a constrained area or during low demand situations.

- SPD looks for the most economic solution. It doesn't account for the physical limitations of generating plant and their ability to consistently vary or generate at very low levels.

- When generation is offered at the same price, infeasible dispatch solutions can arise, at which point NCC can use discretion to produce a viable outcome.

- A general priority is intermittent generation off first, then hydro and thermal down to minimum run (if required on for security reasons), and lastly, geothermal.



Consultations, publications, and events

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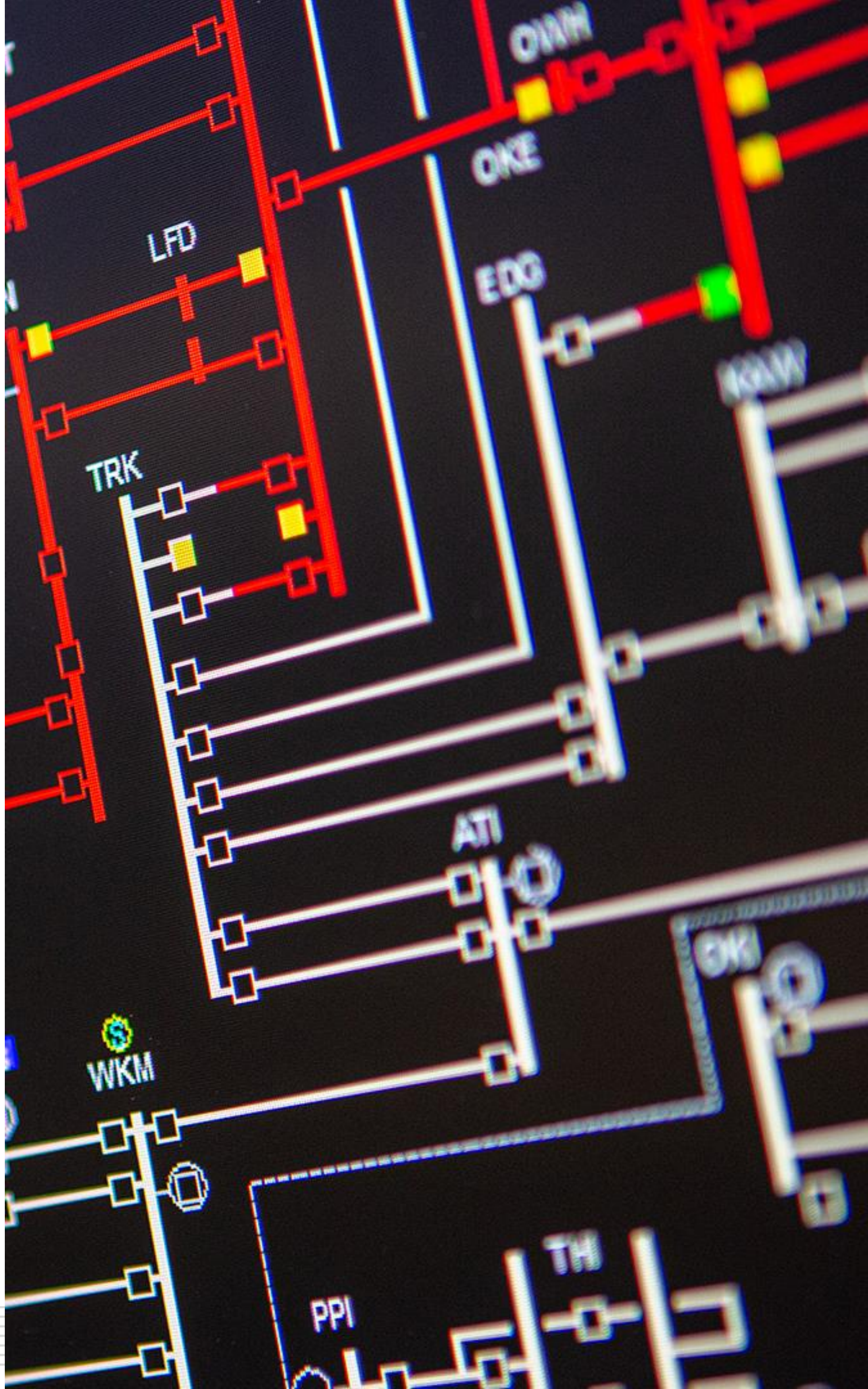
At the end of August we submitted out **Annual Self Review for 2024/25** to the Authority which has now been published their website.

Our **CACTIS consultation** is still open for comment, submissions are due by 5pm on 29 September.

The most recent **Energy Security Outlook** and **Quarterly Security of Supply Outlook** are available on our website.

If you have feedback or suggestions on today’ s forum or other System Operator publications please let as know via our **Feedback Form**



Any questions

Please raise your hand