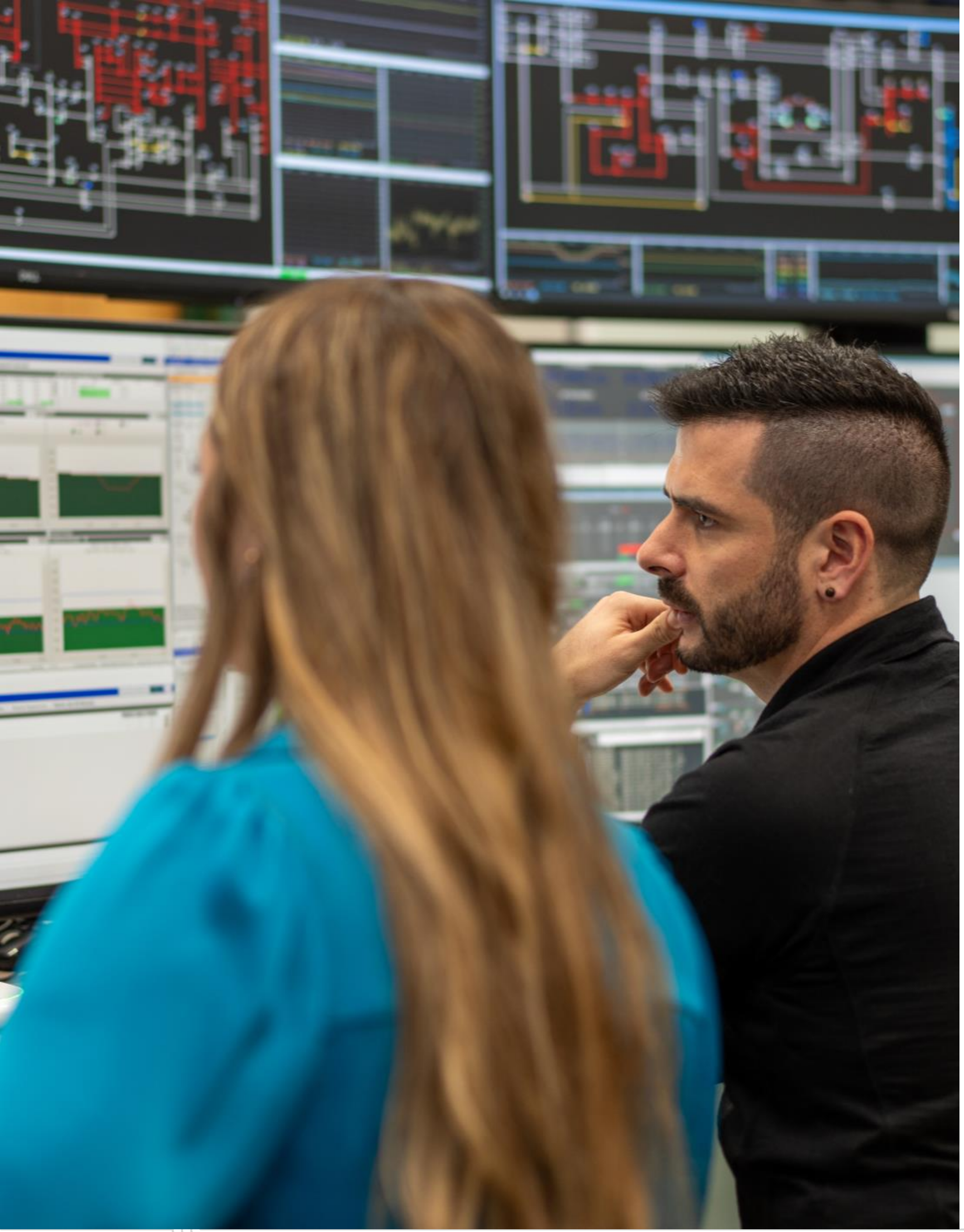
System Operator Industry Forum

19 August 2025

Today’s agenda

Market and Operational updates

- Key messages
- Market update
- NZGB update
- Outage update
- Operational update
- Consultations, publications and events



Key Messages

- Update on Hawke’s Bay WRN for tomorrow
- Nationally hydro storage is continuing to rapidly decline; with the Waiau in the low operating ranges
- We continue to see high loads with cooler weather and at times we are relying on slow start thermal units to meet this peak demand.
- Continued focus on fuel (both hydro and thermal) and asset availability is needed to reduce energy and capacity risk for the remainder of winter.

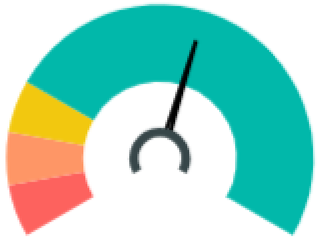
Market update

Energy: National hydro storage

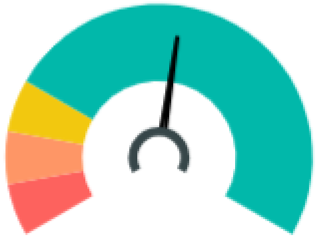
National hydro storage continues to decline at a fast rate. Increased inflows and/or further increases in thermal generation are required to bring these storage values back up.

	Hydro storage level (% of mean ▲/▼)		
	New Zealand	South Island	North Island
Last forum	94%	88%	140%
Now	90% ▼	78% ▼	117% ▼

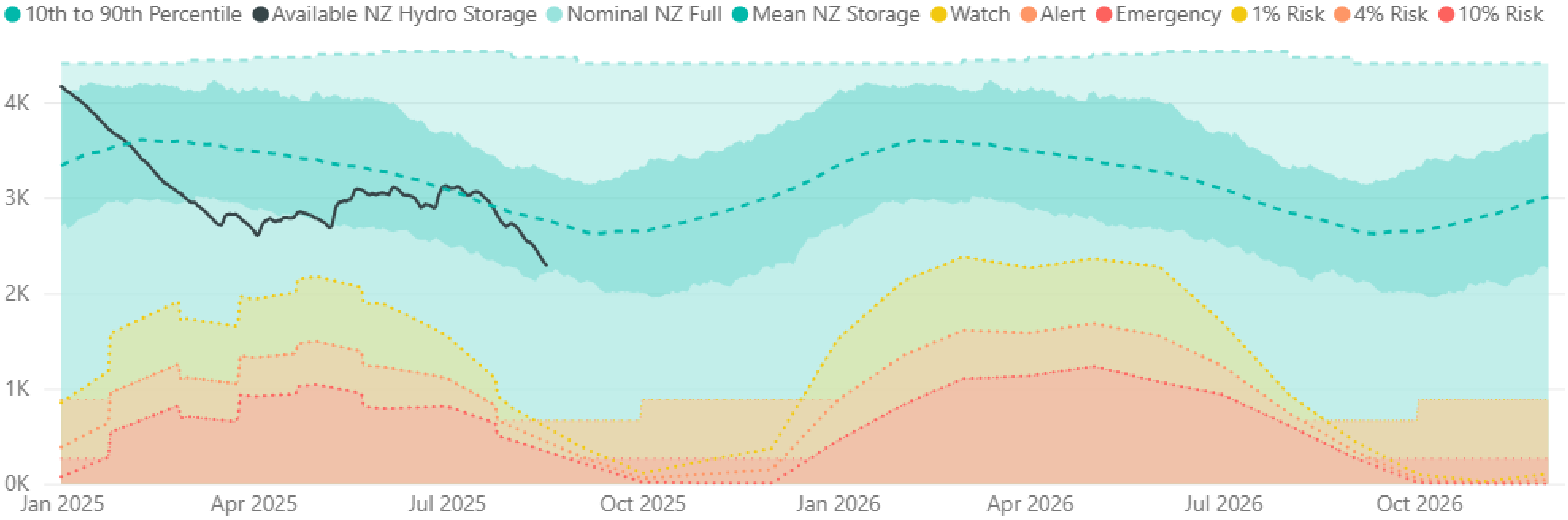
New Zealand Energy Risk



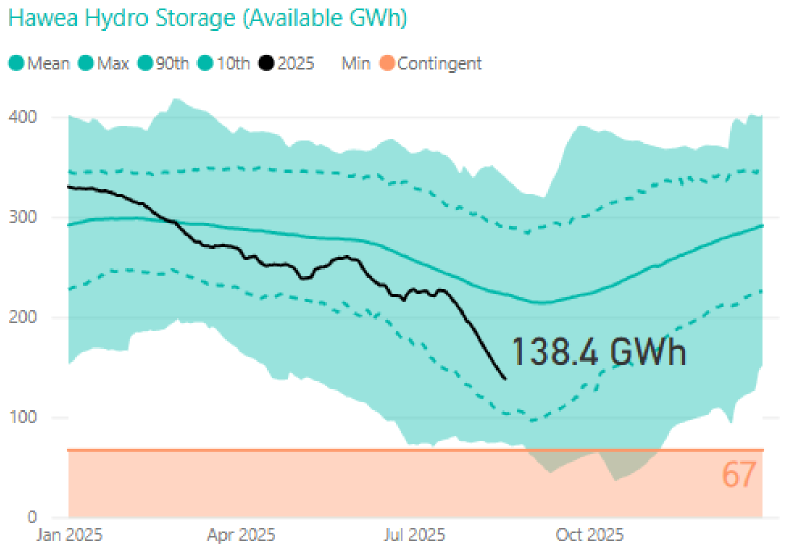
South Island Energy Risk

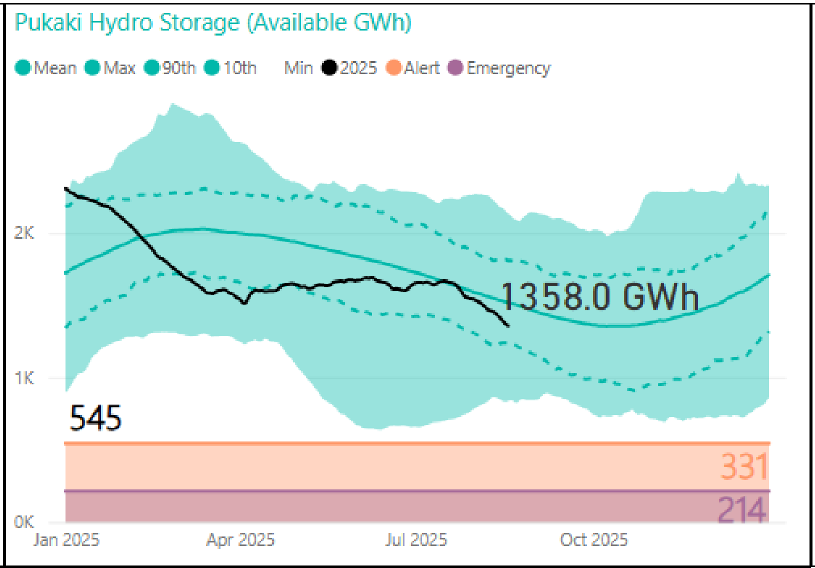


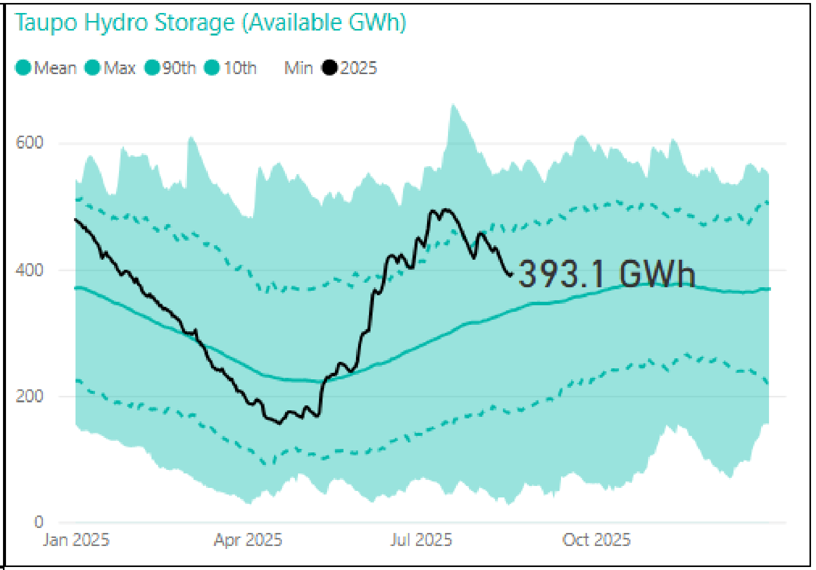
New Zealand Electricity Risk Status Curves (Available GWh)

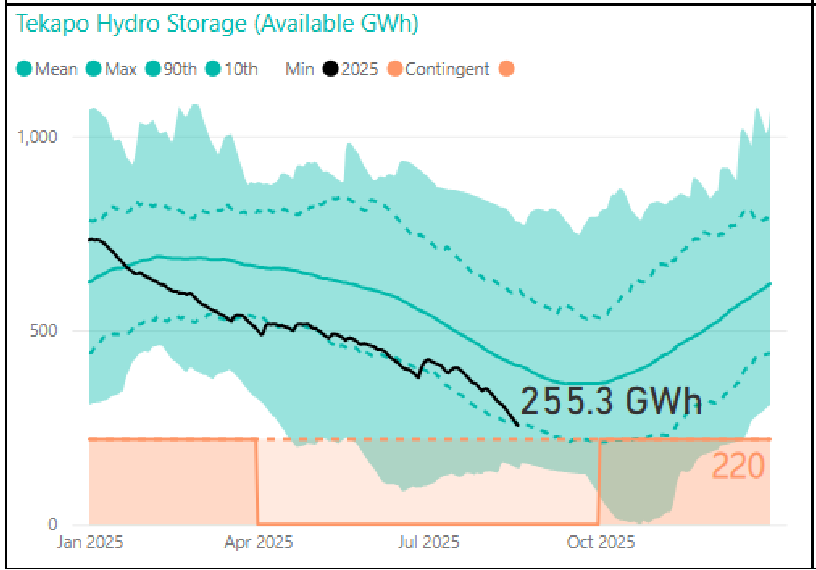


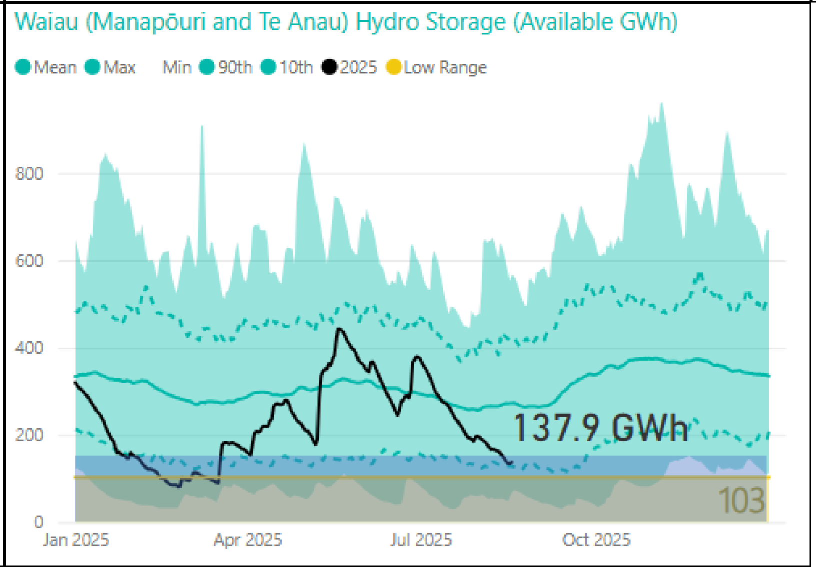
Hydro storage by catchment





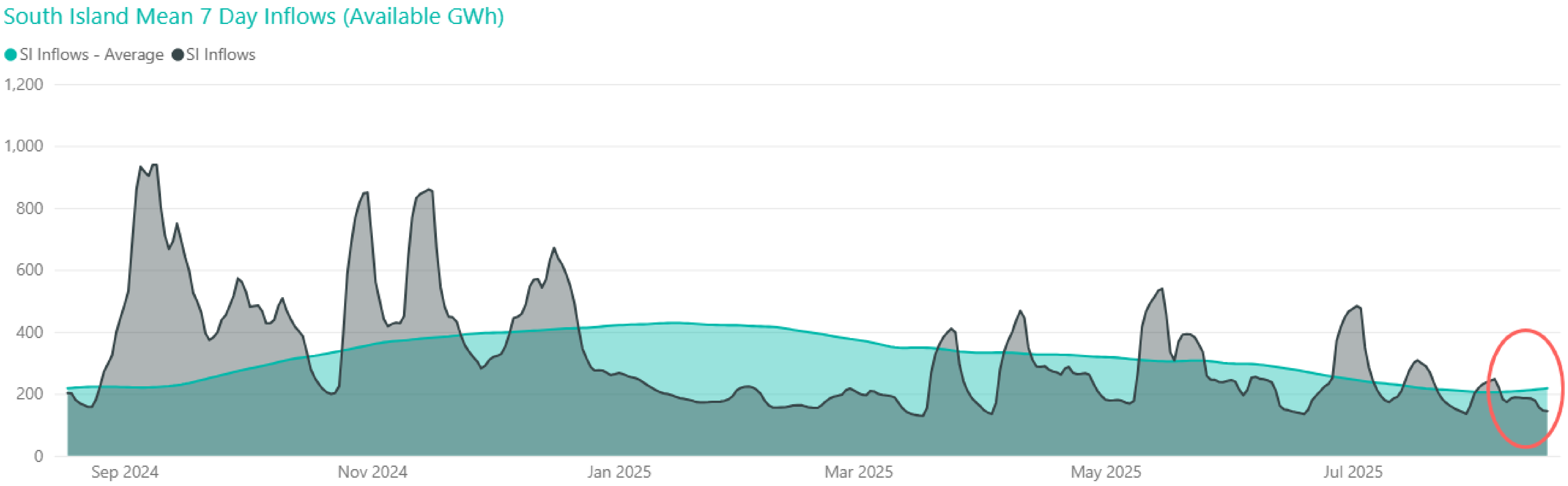


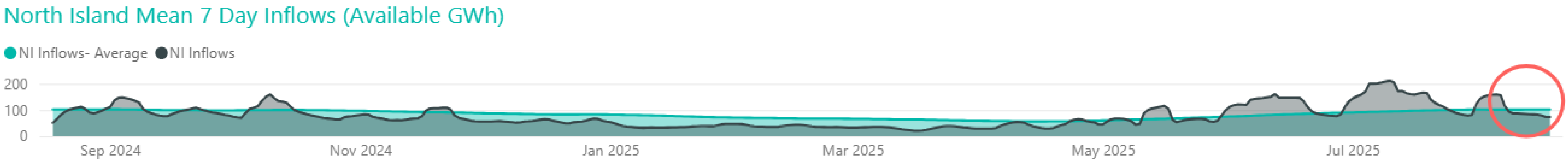




Lake	Current (%) avg
nz_controlled	83
si_controlled	78
hawea	62
pukaki	89
manapouri	63
te_anau	44
tekapo	62
taupo	117

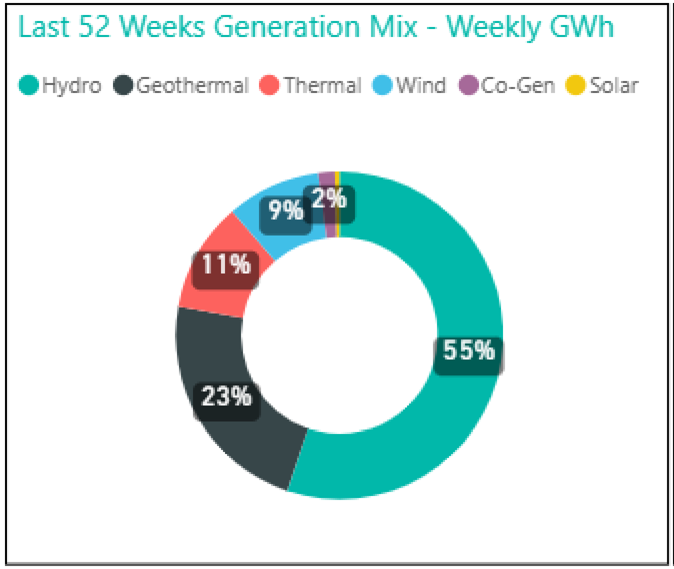
Hydro inflows

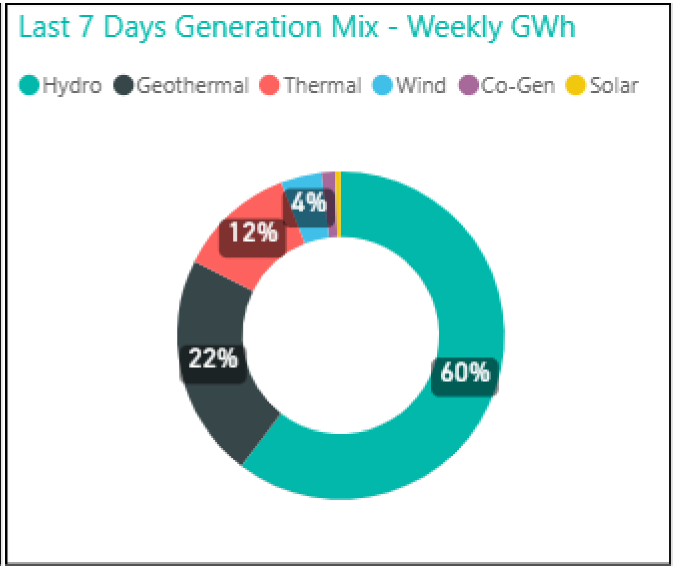


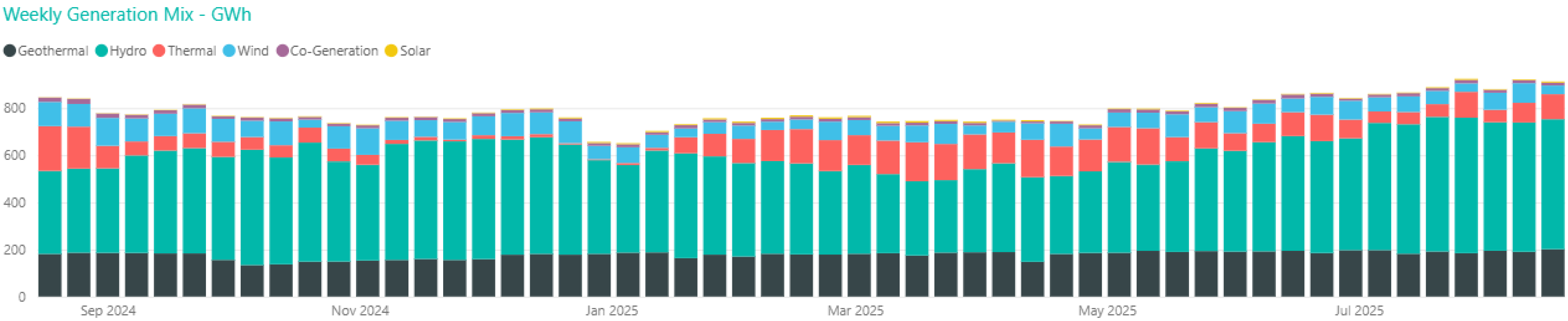


Generation mix

- Hydro generation remains above average at 60% of the mix.
- Thermal mix increased to 12%. Up from 9% last week.
- Low wind generation at 4% of the mix last week. Geothermal remained at 22%.

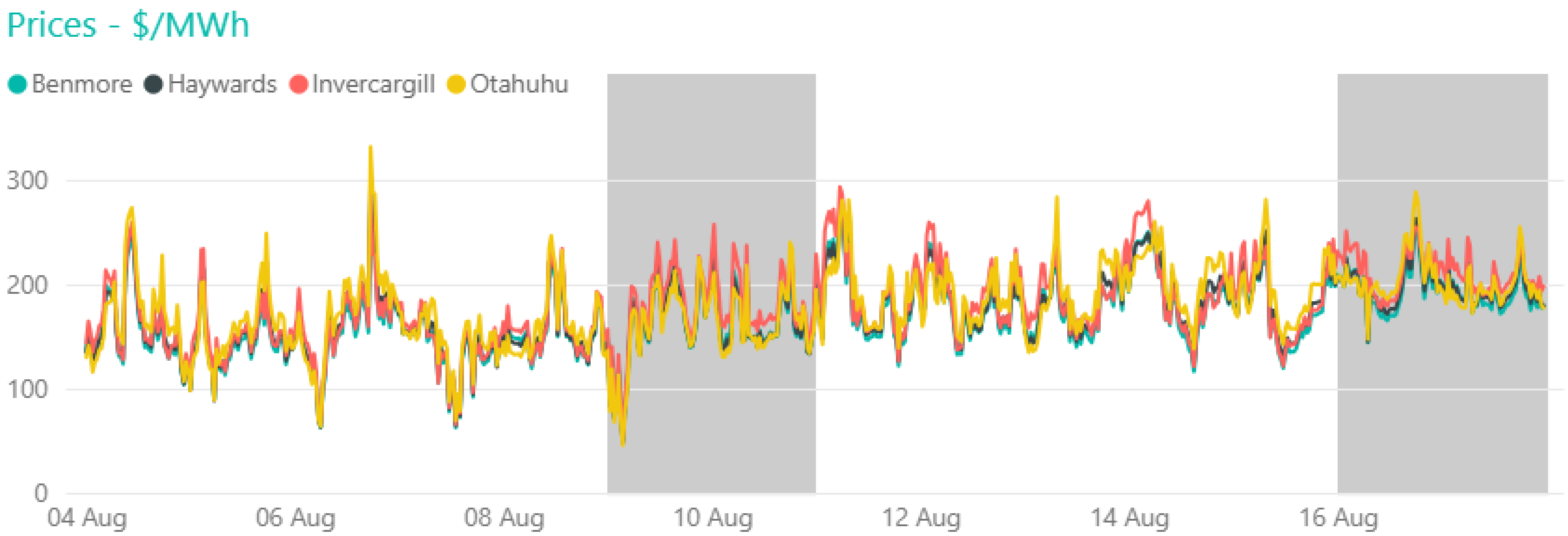


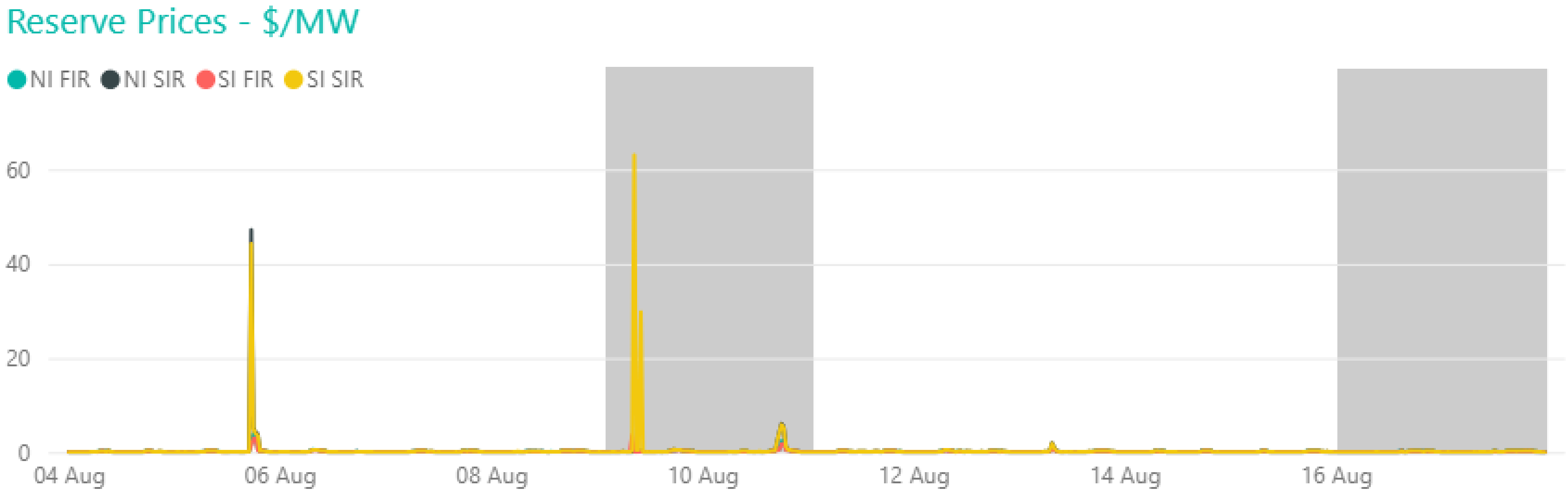




Pricing

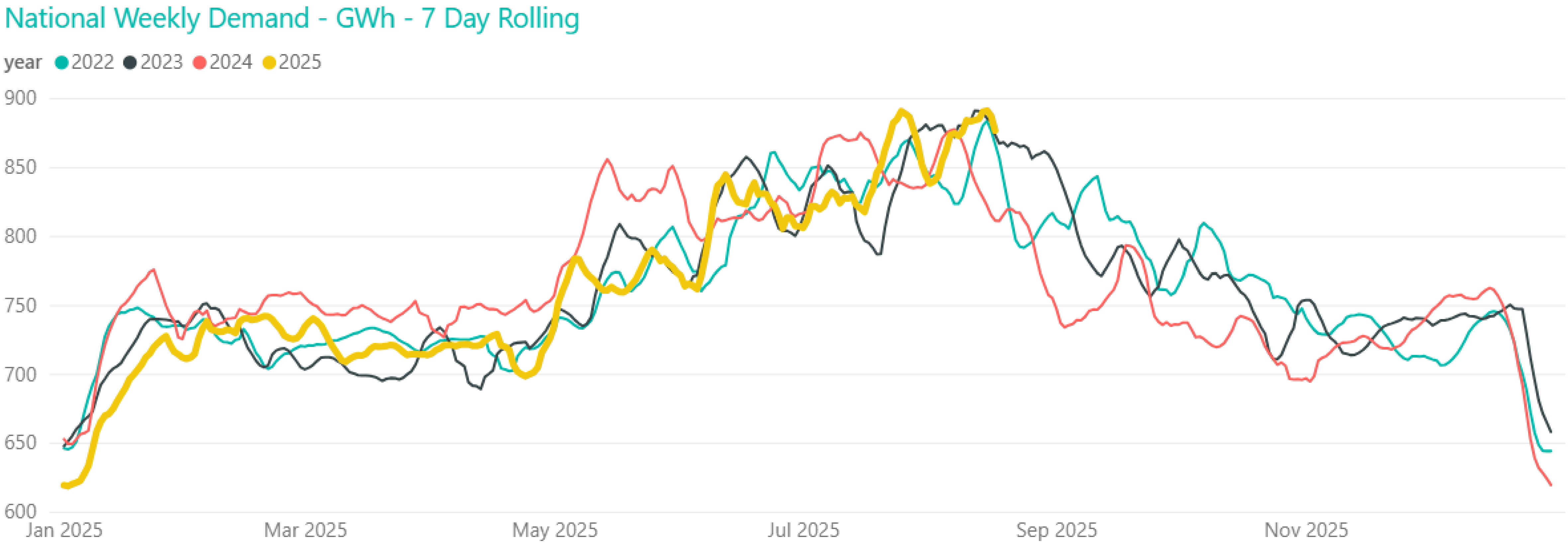
- Average Ōtāhuhu price was $196/MWh last week, and $161/MWh the week prior.
- Wholesale prices peaked at $332/MWh at Ōtāhuhu on 6 August during an evening peak.





Demand

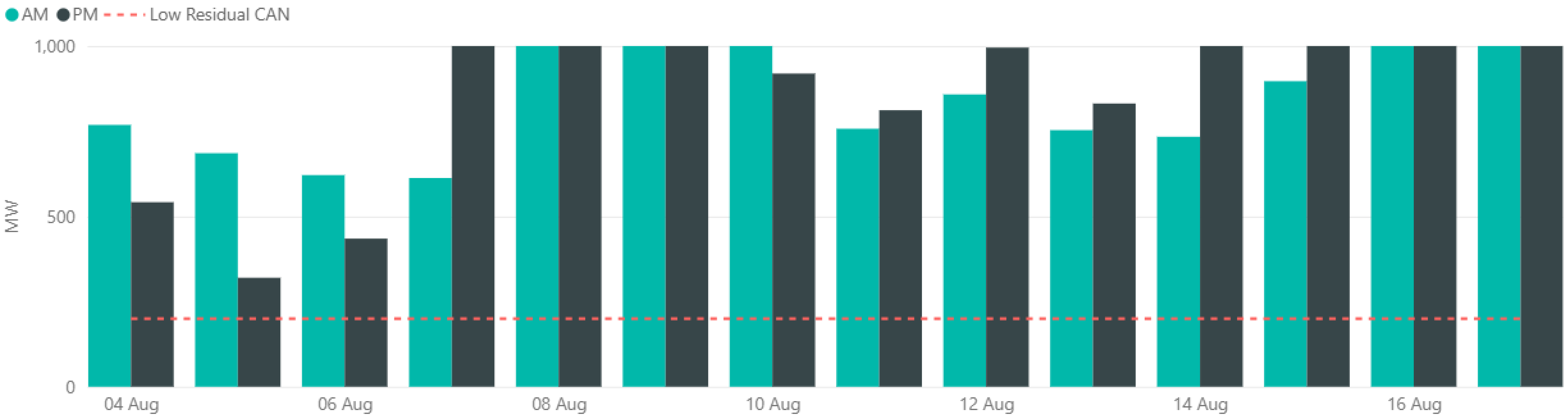
- Continued high demand since the last forum.
- Lower temperatures contribute to higher demand.
- 876 GWh last week, down from 884 GWh the week prior.



Capacity residual margins

- Residuals have been healthy and above 300 MW. Lower residuals coincide with significantly colder temperatures and very high load.
- Lowest residual was 320 MW on Tuesday 5 August.

Lowest Residual Points - MW

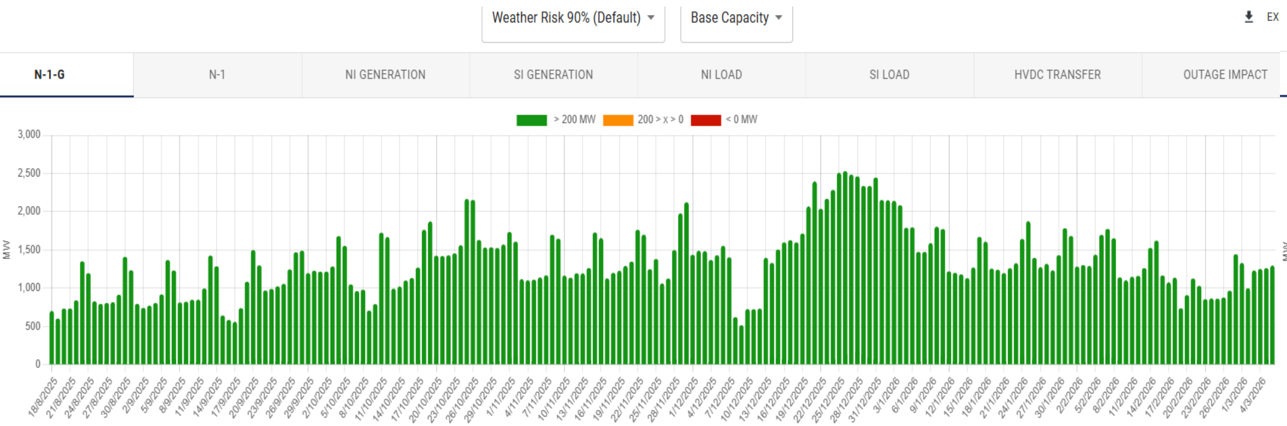


NZGB update

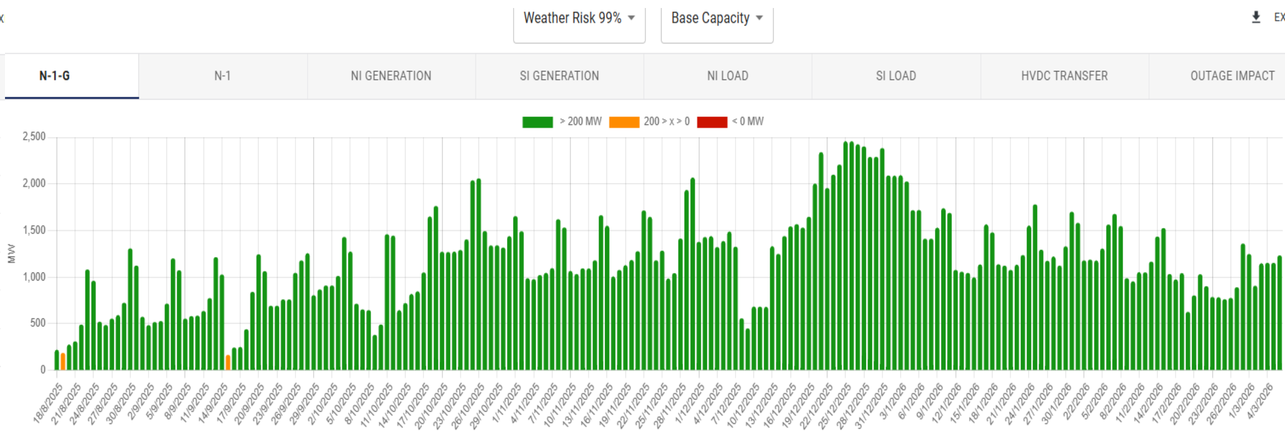
NZGB update: base capacity N-1-G

- N-1-G margins are currently showing healthy values
- Under the 99th percentile load, which we would expect under a winter cold snap, the margins drop to low values close to zero

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

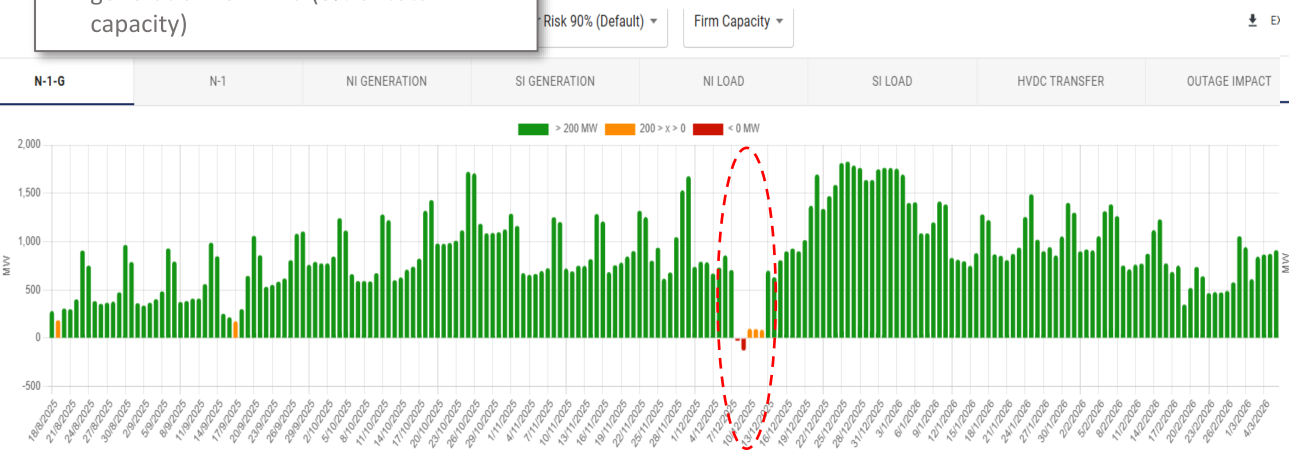


99th percentile load

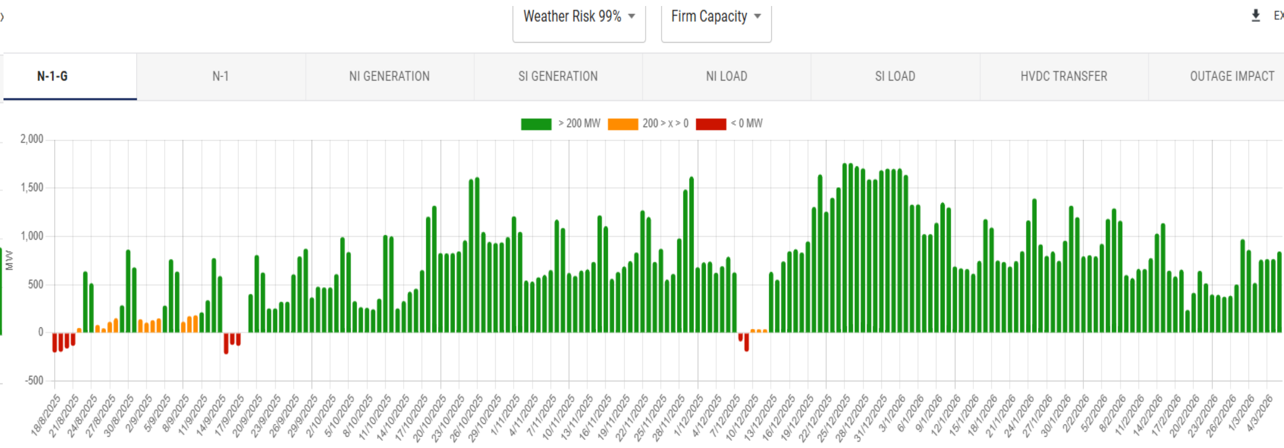
NZGB update: firm capacity only N-1-G

- Firm capacity scenario reflects units that historically operate for at least 90% of AM & PM peaks
- The potential shortfalls 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)



90th percentile load



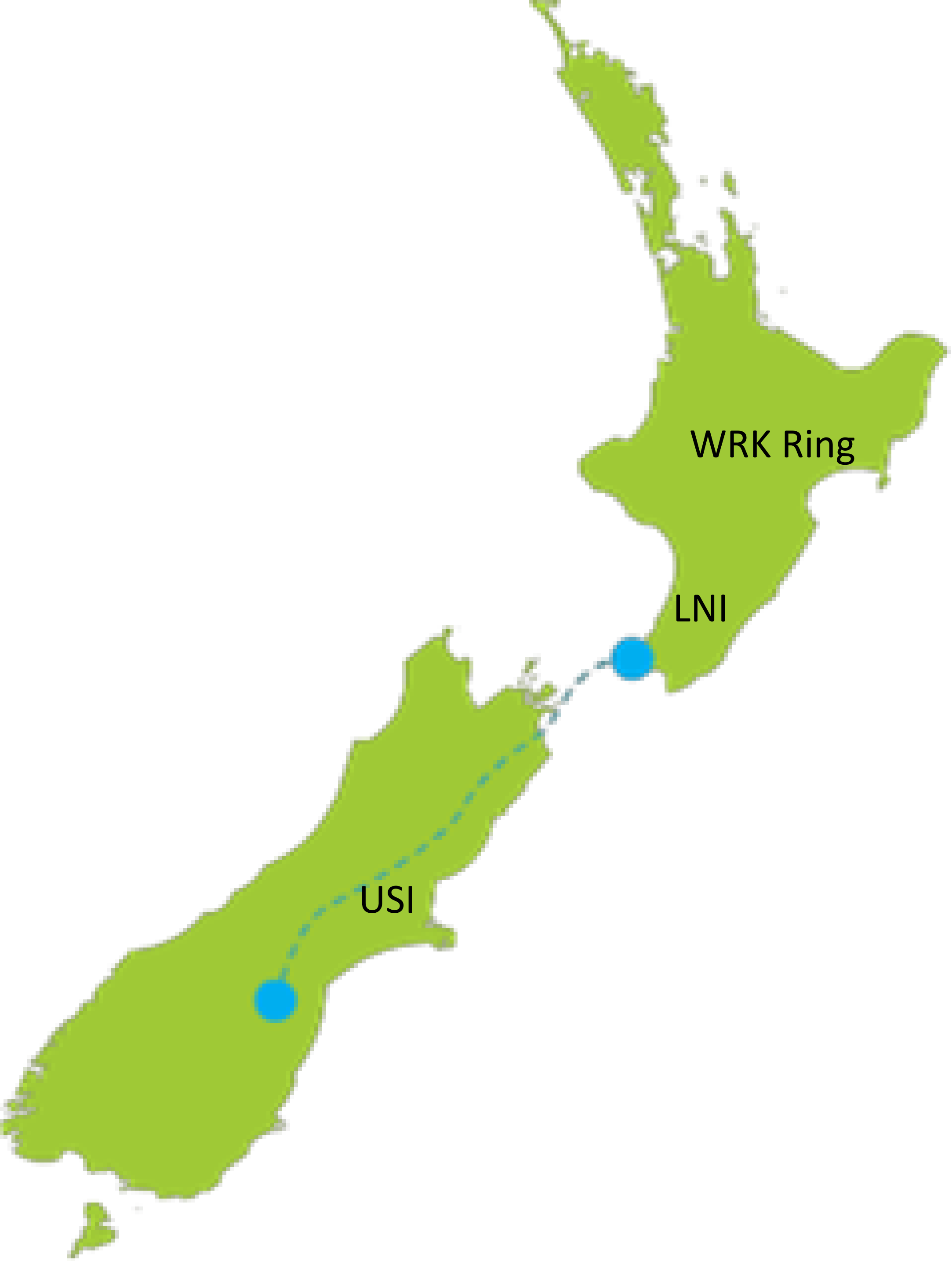
99th percentile load

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 get in touch with SO

Outage update



Outages

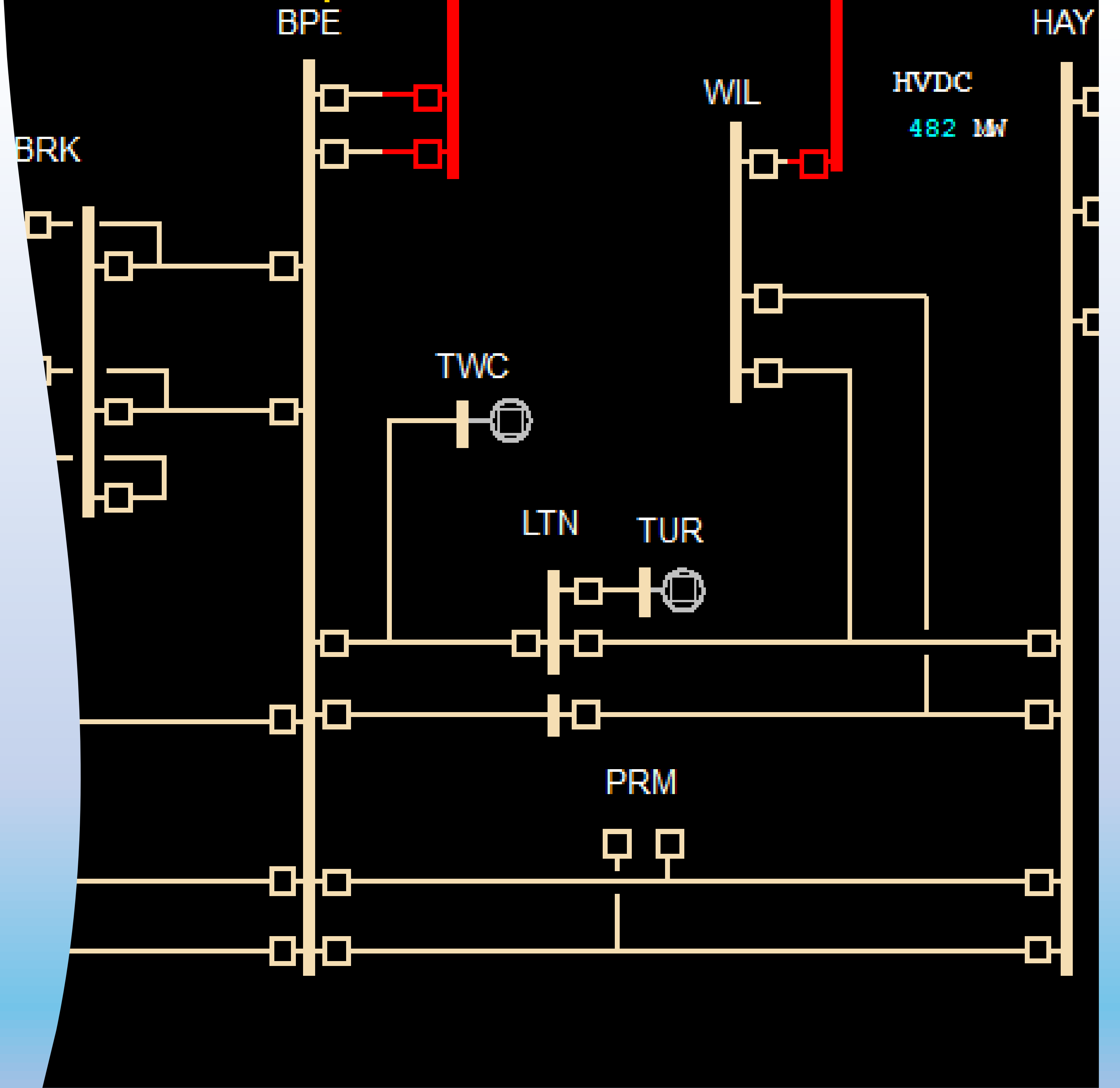
- LNI outages impacting HVDC limits
- USI outages
- Wairakei ring outages

Asset owners

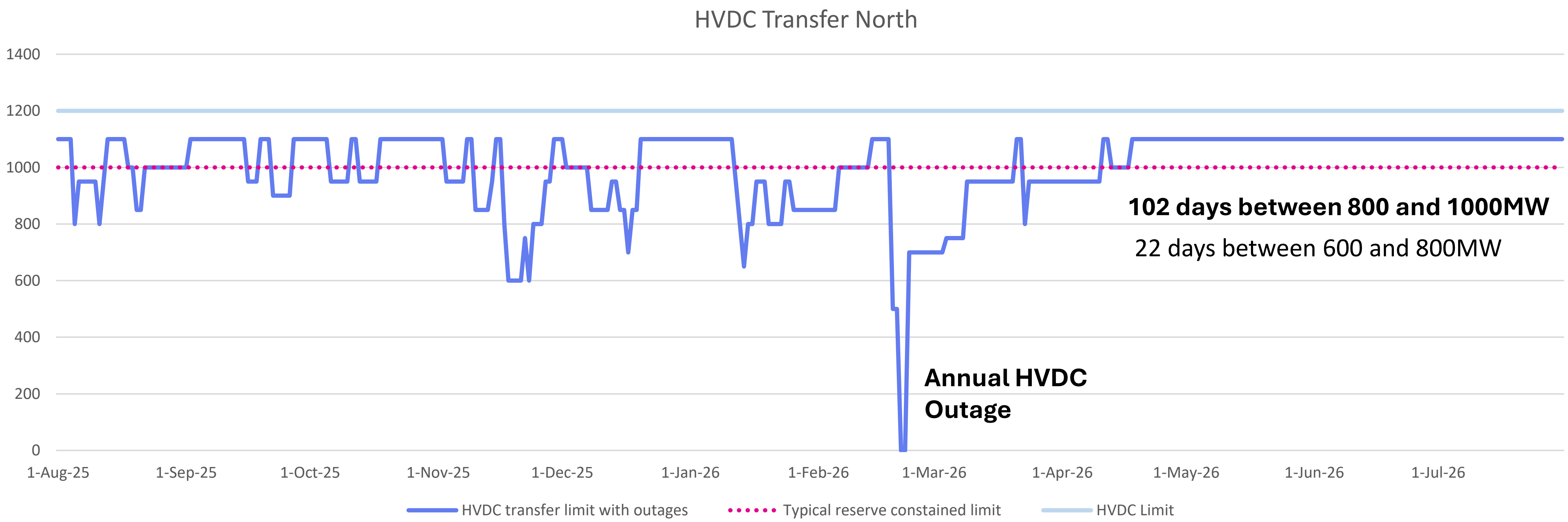
- Check in POCP for detailed dates
- Consider the impact on your own outages

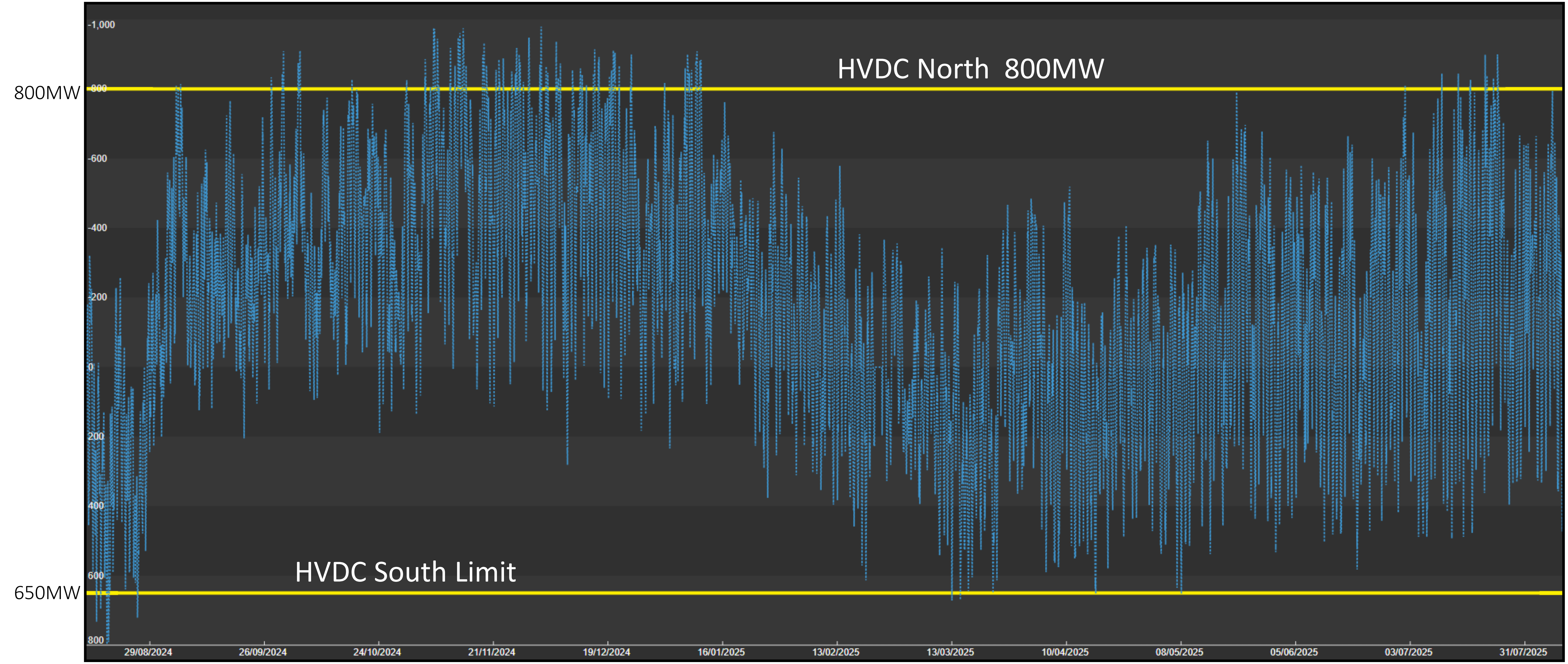
LNI Outages

- HAY SC3 & SC4 – 11 months
- HAY_WIL_LTN_1
- HAY_WIL_LTN_2
- BPE_PRM_HAY_1 for 2 individual weeks
- BPE_PRM_HAY_2 for 2 individual weeks
- BPE_TNG_1
- HAY_T1
- HAY_WIL_LTN_1 (JFD_WIL_1)
- HAY_T5
- HAY_WIL_LTN_2
- BPE_TKU_1

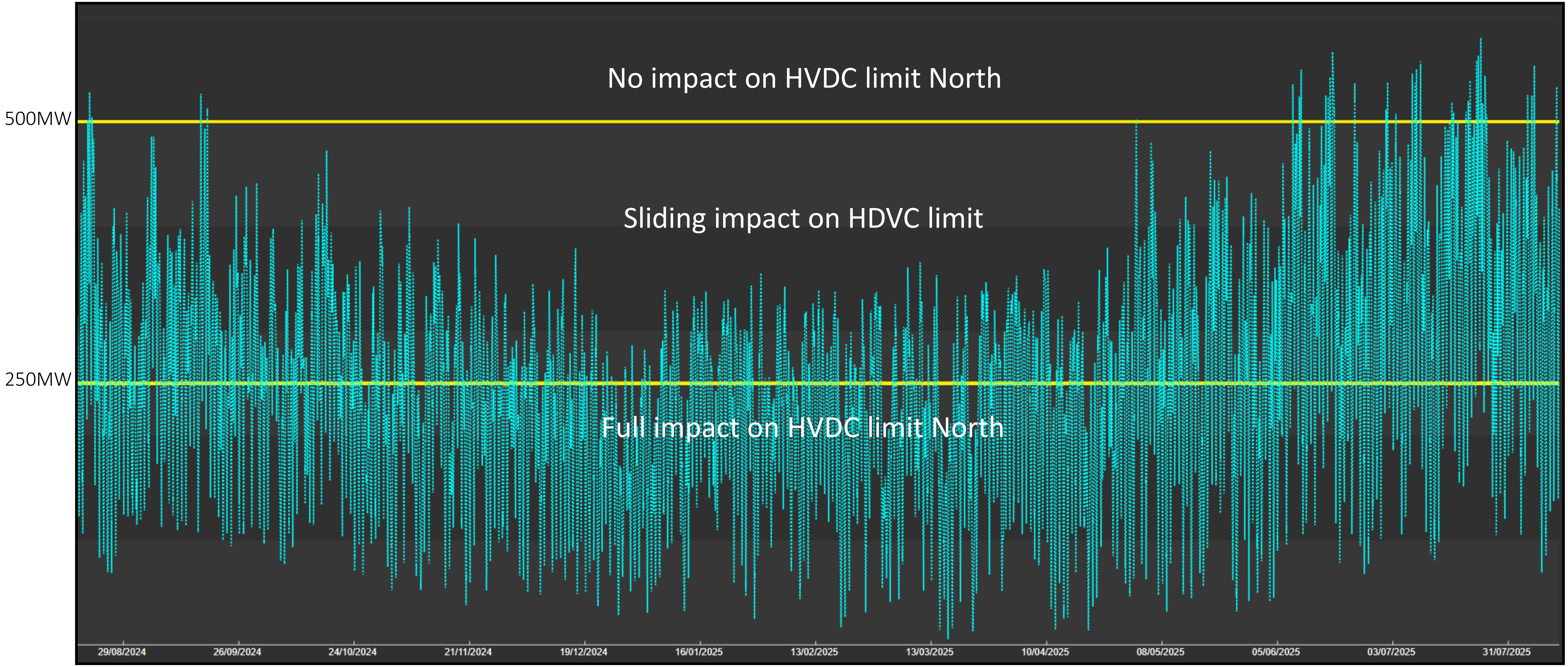


HVDC North transfer limit

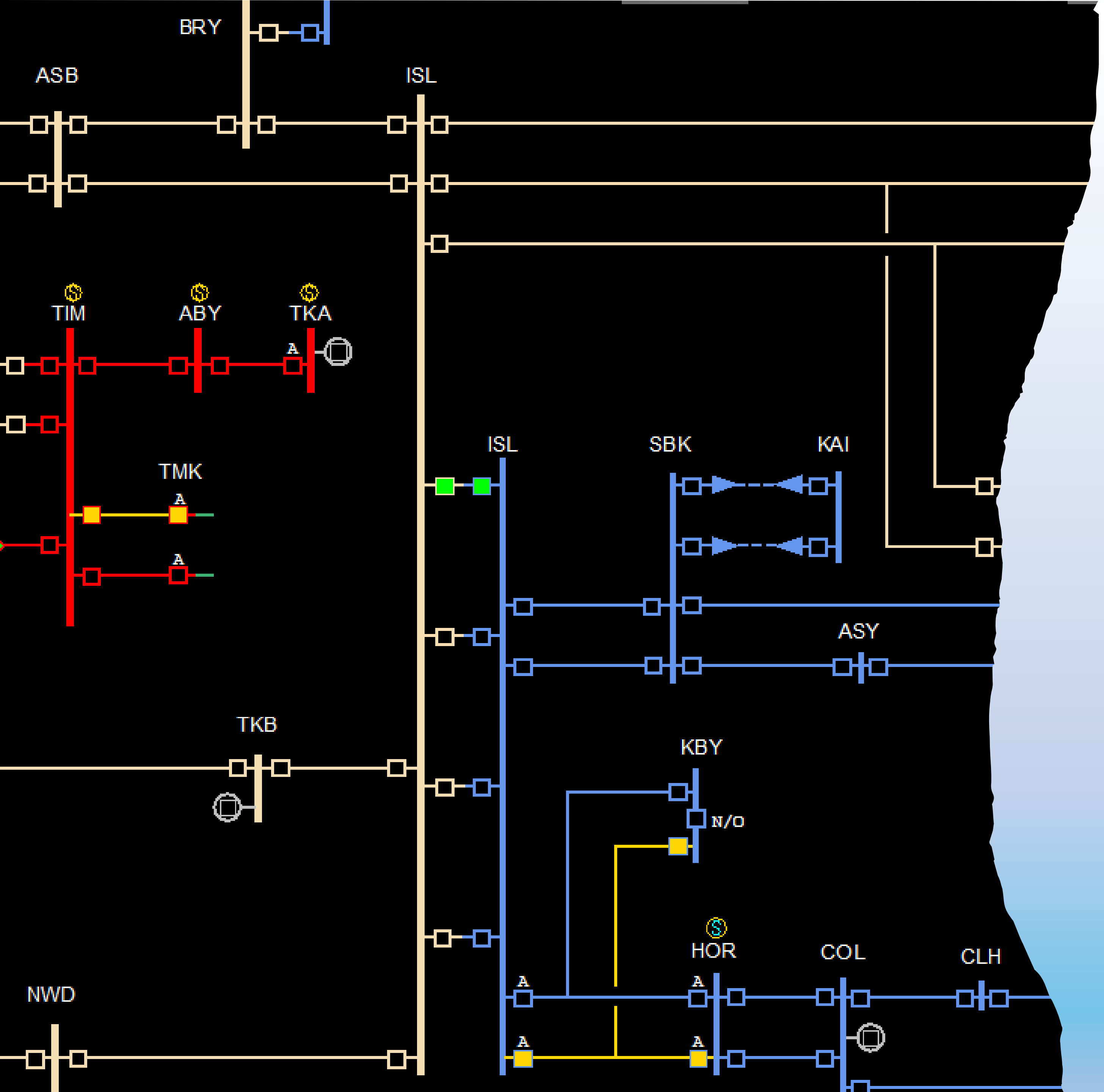




HVDC transfer



Wellington load for HVDC



USI Outages

These outages impact Voltage Stability limits

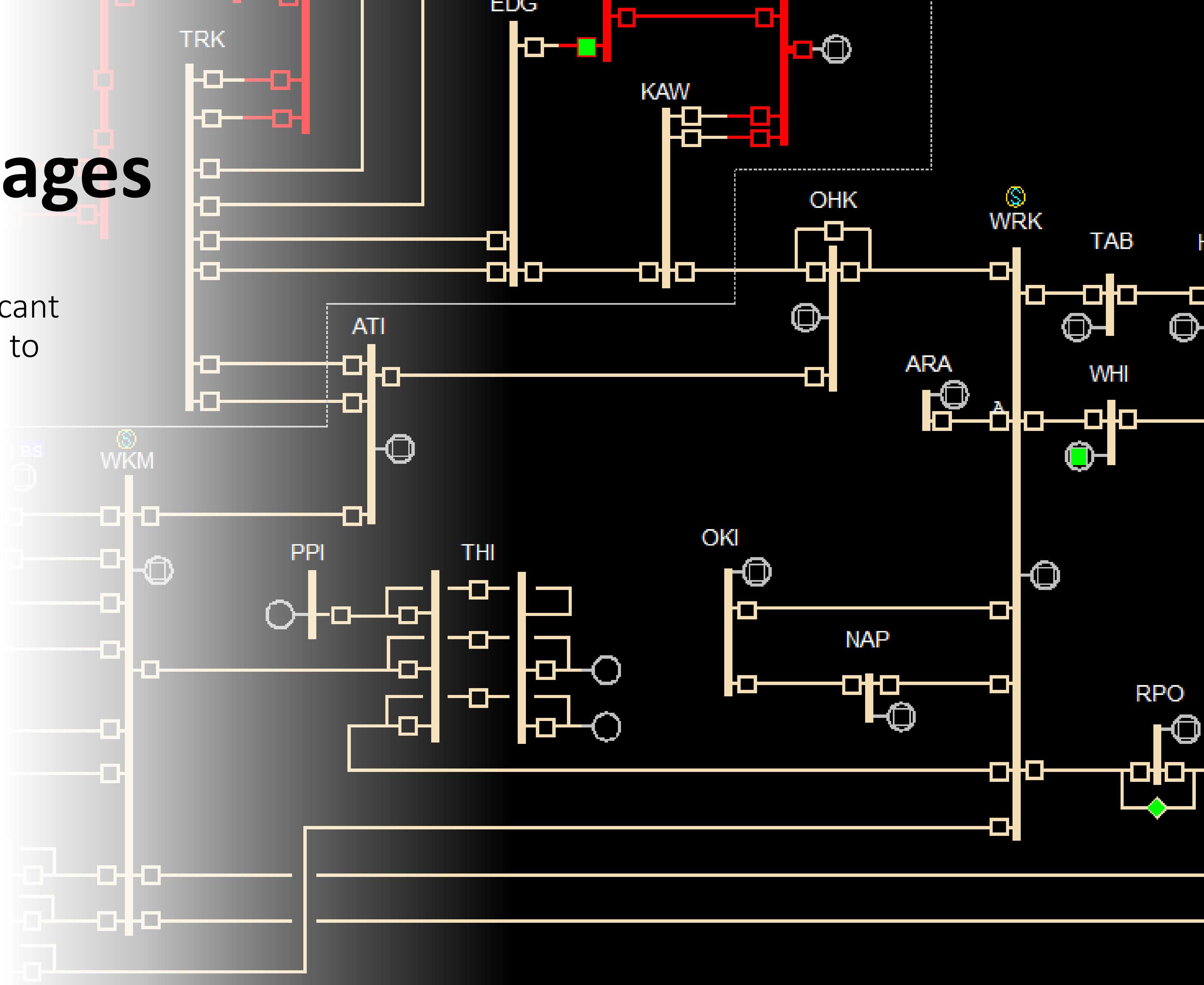
- ISL_TKB (1-7/9)
- ASB_ISL_1 for 3 weeks (8-26/9)
- ISL_NWD_1 (29/9-3/10)
- BRY_ISL_1 (10-13/11)
- ASB_BRY_1 for 2 weeks (24/11-5/12)
- ISL_SBK_1 & 2 for 6 weeks of reconductoring (15/9-24/10)

Note: For LSI outages coming up we will be engaging the Asset Owners due to the developing lower lake levels

WRK Ring Outages

These Outages can have a significant impact on generation connected to the Wairakei ring

- ATI_WKM_1 (4-7/11)
- OHK_WRK_1 (20/11)
- THI_WKM_1 (26-27/11)
- THI_WRK_1 (6-7/12)
- WKM_WRK_1 (8-14/12)



Operational update

Operations Update

TRANSPOWER

Warning Notice

To:	WRN NI Participants	**From:**	The System Operator
Sent:	19-aug-2025 09:37	**Telephone:**	0800 488 500
Ref:	6558300844	**Email:**	NMData@transpower.co.nz

Revision of:

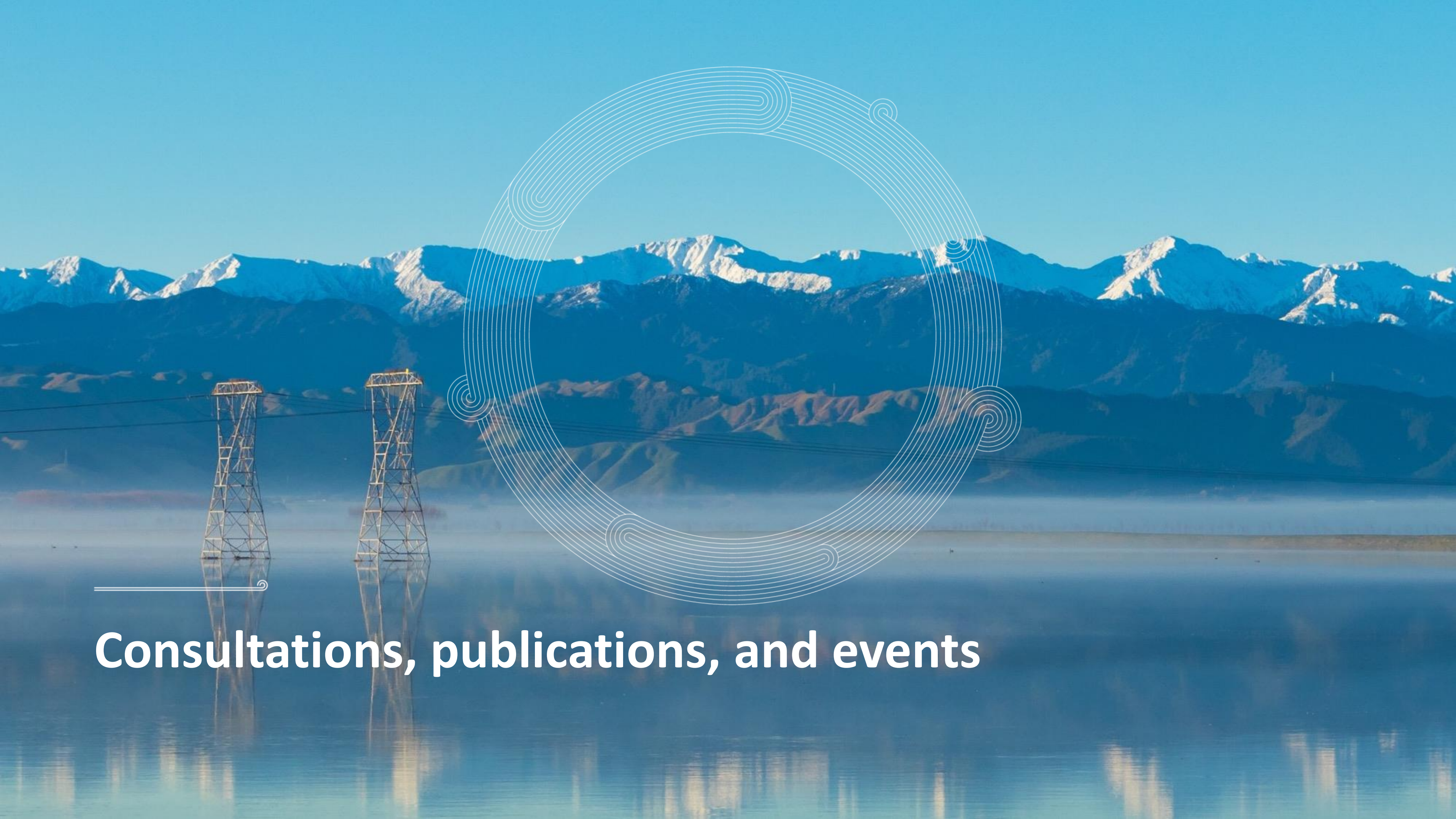
Cause:	Insufficient transmission capacity Hawkes Bay
Region or GXP affected:	Fernhill, Redclyffe, Tuai
Starting:	20-aug-2025 10:00
Ending:	20-aug-2025 15:30

There is insufficient transmission capacity and generation offers to meet demand and provide for N-1 security for a contingent event.

Consequences on the power system:

Risk of exceeding grid assets offered capability.

Participants are Requested to:	**At:**
Decrease demand	Fernhill, Redclyffe, Tuai
Increase Energy Offers	Fernhill, Redclyffe, Tuai
Increase Transmission offers	Fernhill, Redclyffe, Tuai



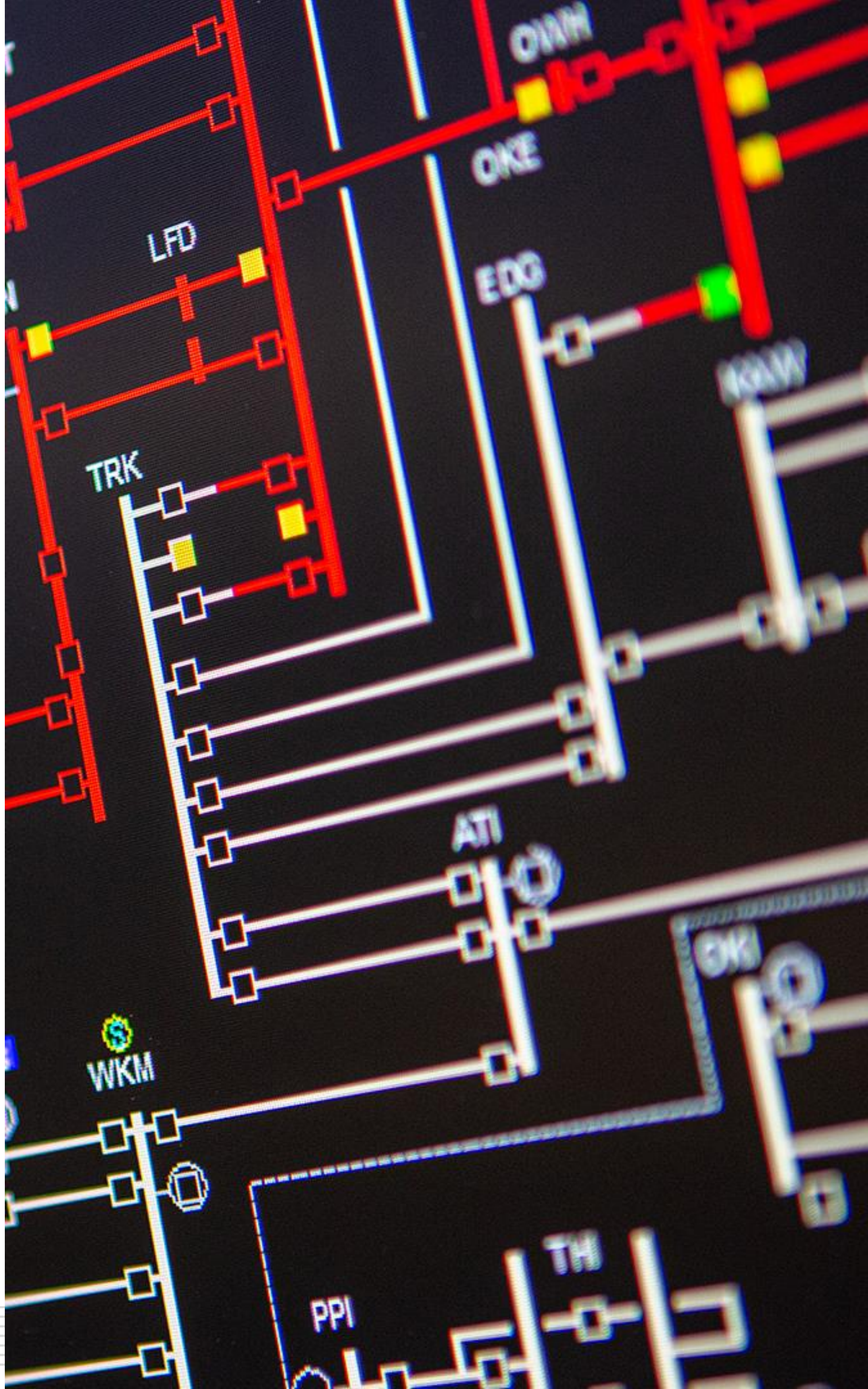
Consultations, publications, and events

Consultations, publications, and events

We received 7 submissions to our **Tie breaker provisions** consultation; these are available on our website. We are now in a period for cross submissions which closes at 5pm this Thursday 21 August.

As part of our System Security Forecast process we have published a report covering additional **Transient Rotor Angle Stability (TRAS) studies** which is available on our website.

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



Any questions

Please raise your hand