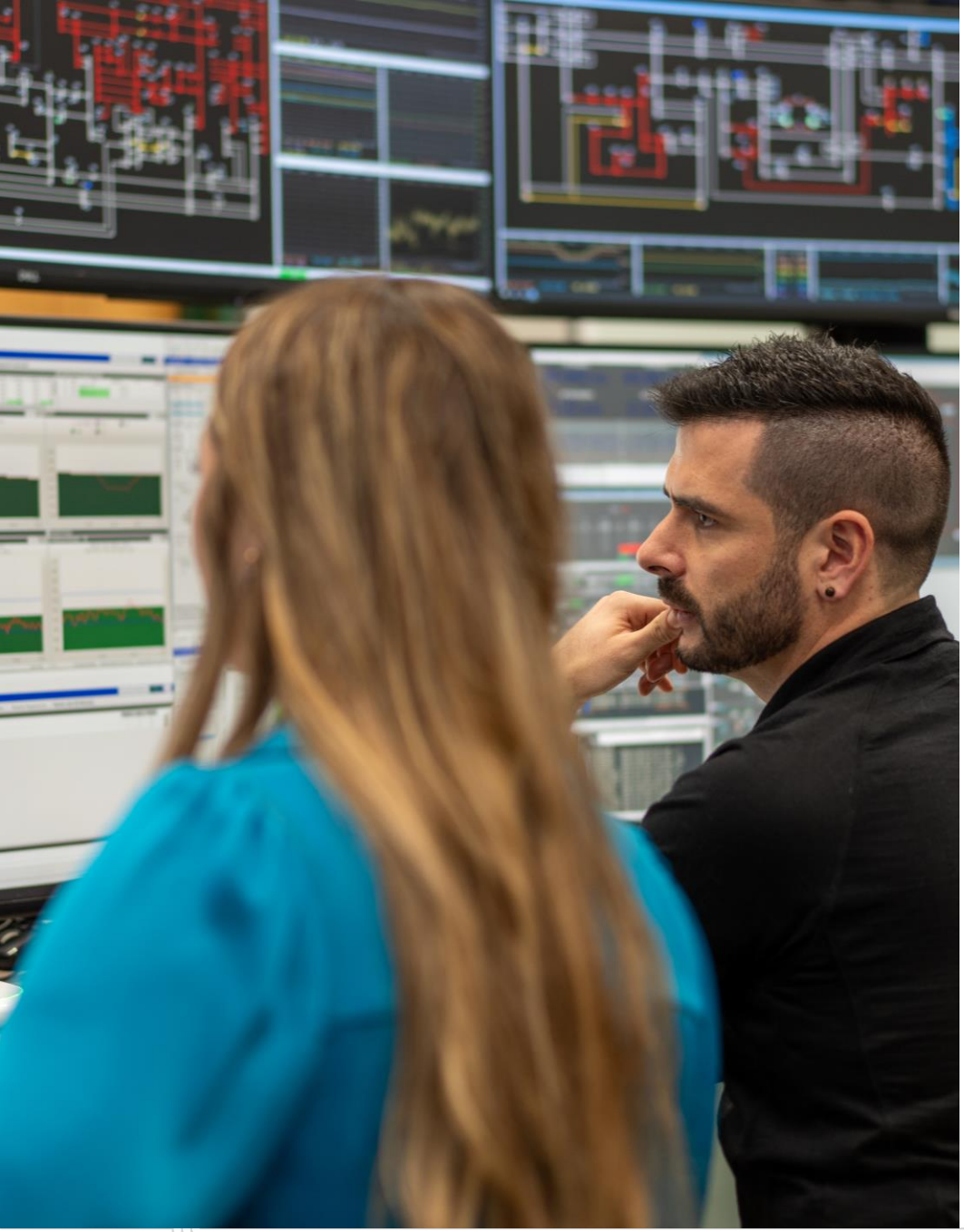
TRANSPOWER

System Operator Industry Forum

27 January 2026

Today's agenda

- Key messages
- Market update
- NZGB update
- Outage update – next four weeks
- Operational update
- Consultations, publications and events
- Questions / Patai



Key Messages

- National hydro storage is high – near nominal full levels.
- Thermal fuel storage (coal and gas) are also high.
- We are still seeing low levels of thermal generation and high levels of renewables.
- Annual HVDC pole outages coming up in February and March.

Market update

Energy: National hydro storage

National storage now sits just below the nominal full level. Pūkaki continues to spill.

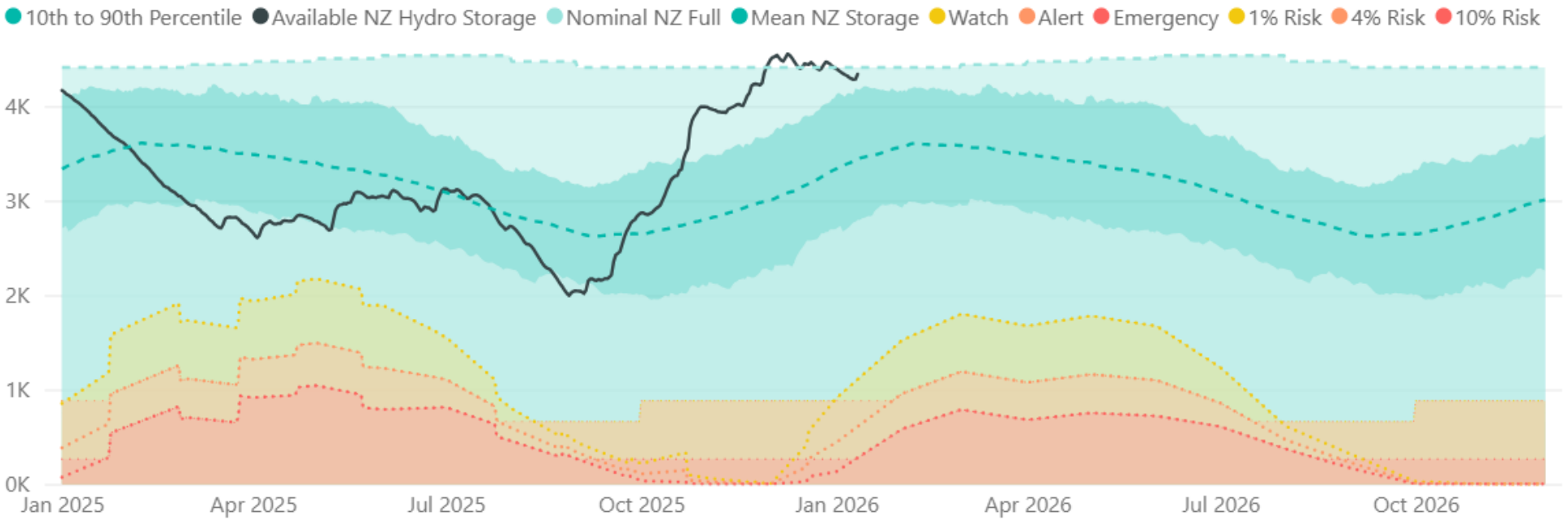
	Hydro storage level (% of mean ▲/▼)		
	New Zealand	South Island	North Island
Last forum	129%	128%	144%
Now	122% ▼	119% ▼	154% ▲

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

New Zealand Energy Risk

South Island Energy Risk

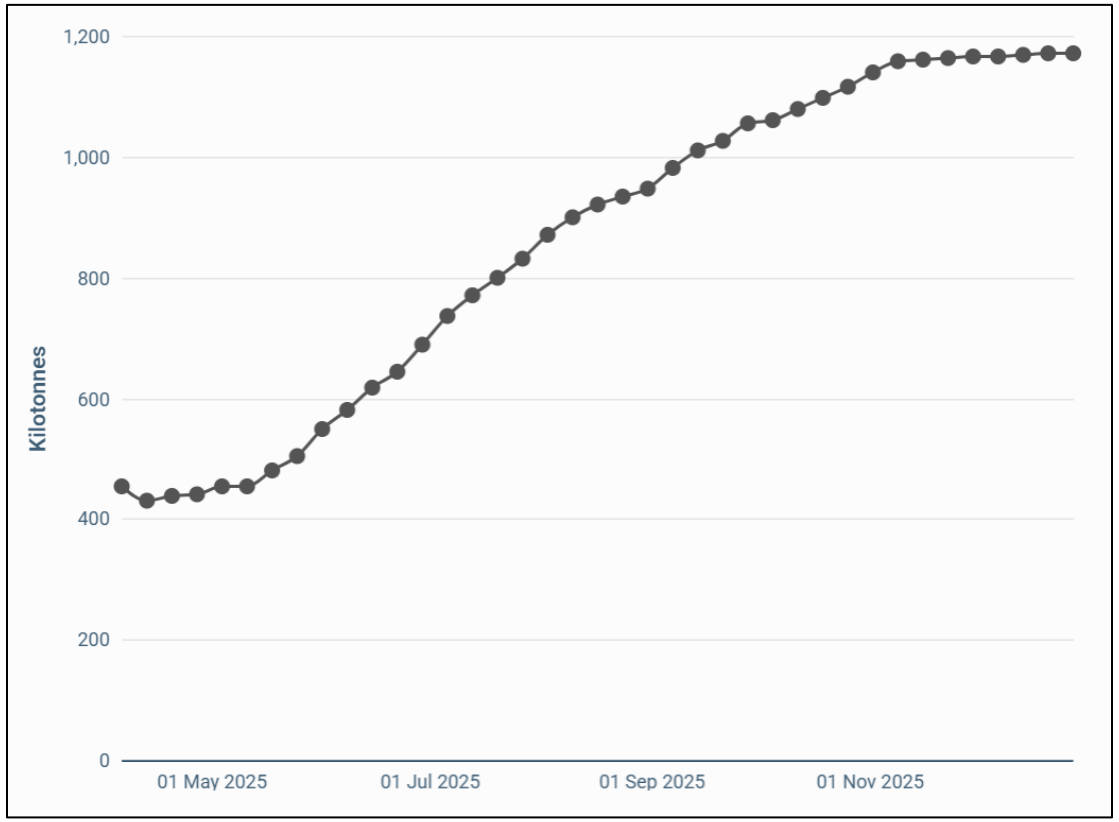
New Zealand Electricity Risk Status Curves (Available GWh)



Energy: Thermal fuel storage

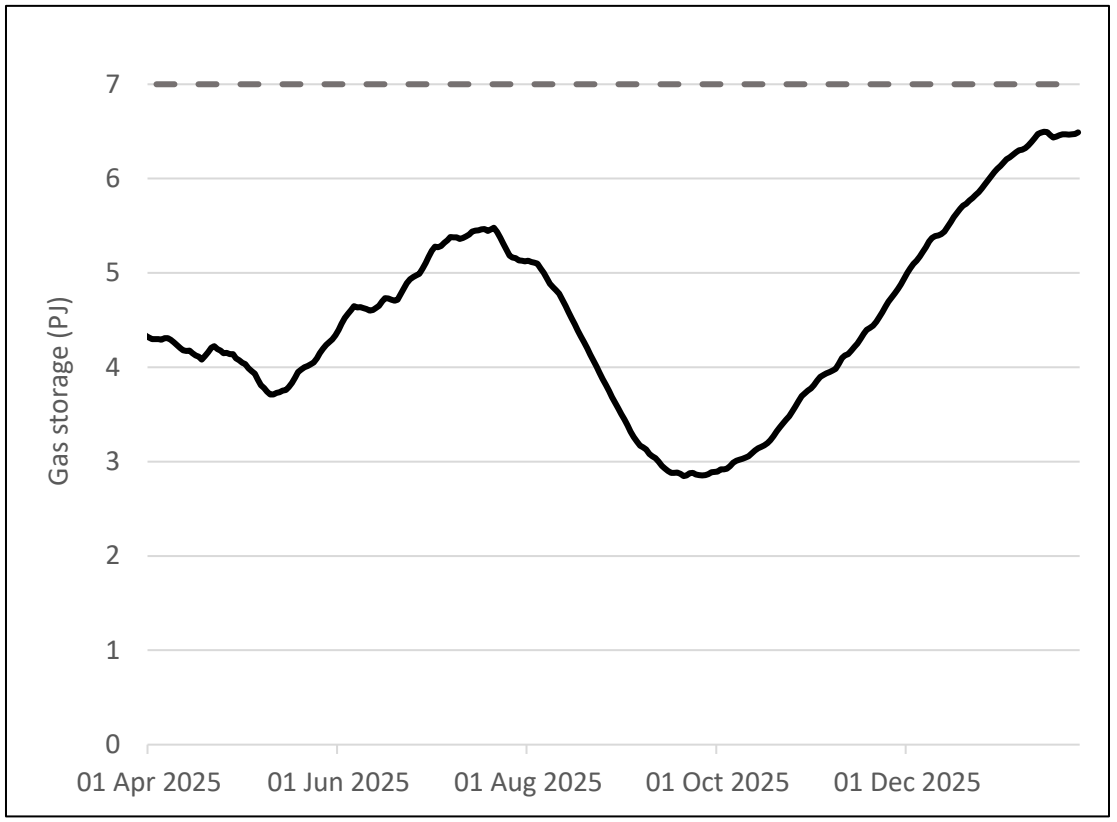
Coal and gas storage are also near full.

Coal stockpile: 1.2 Mt



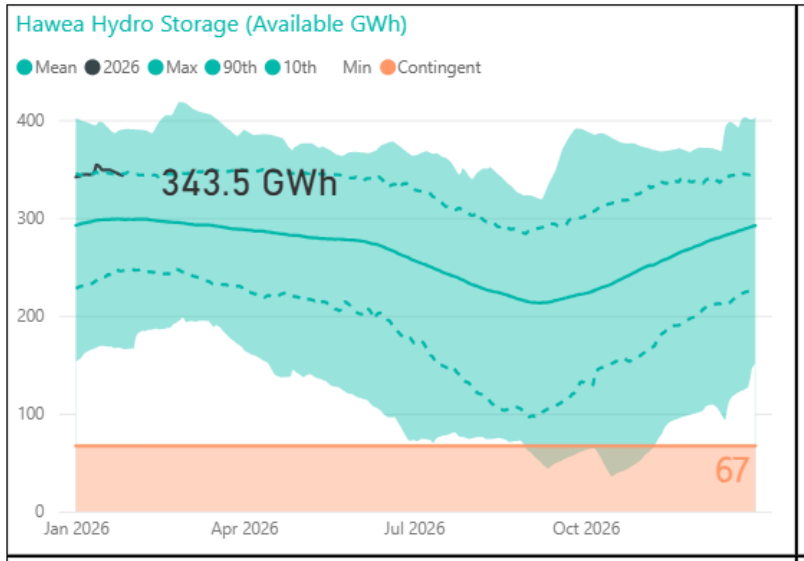
Source: Electricity Authority

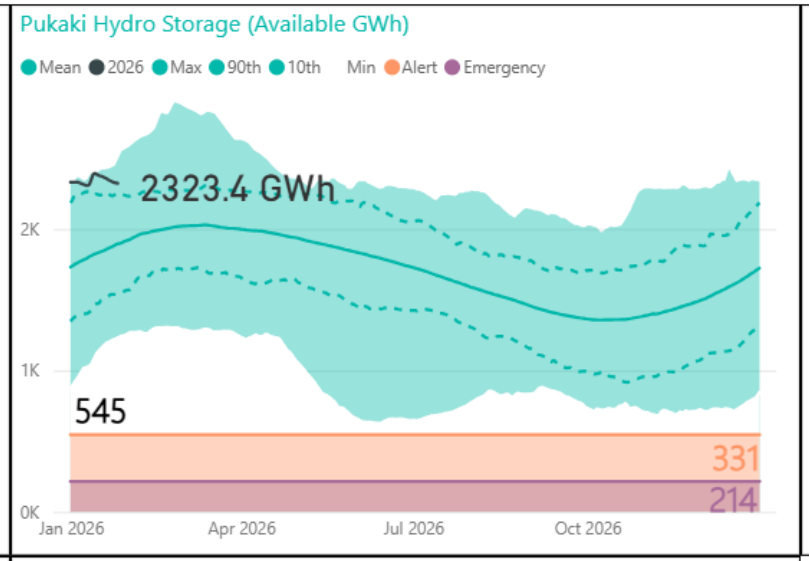
Ahuroa gas storage: 6.5 PJ (of 7 PJ capacity)

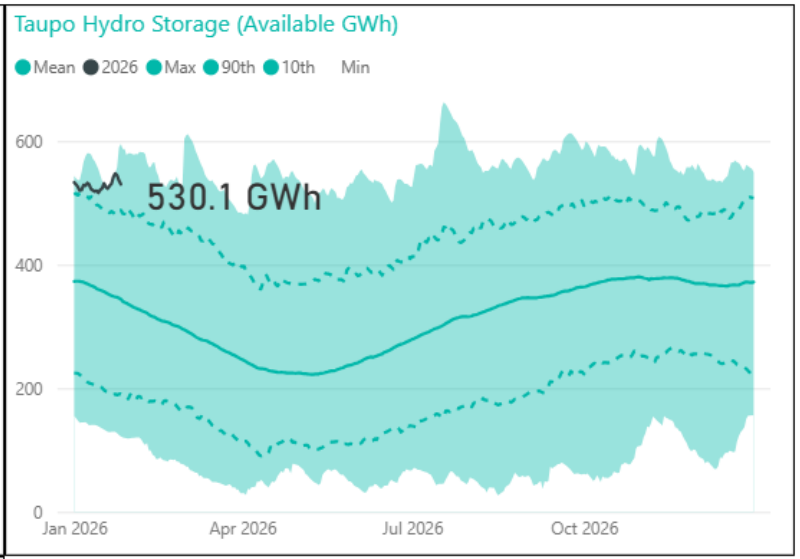


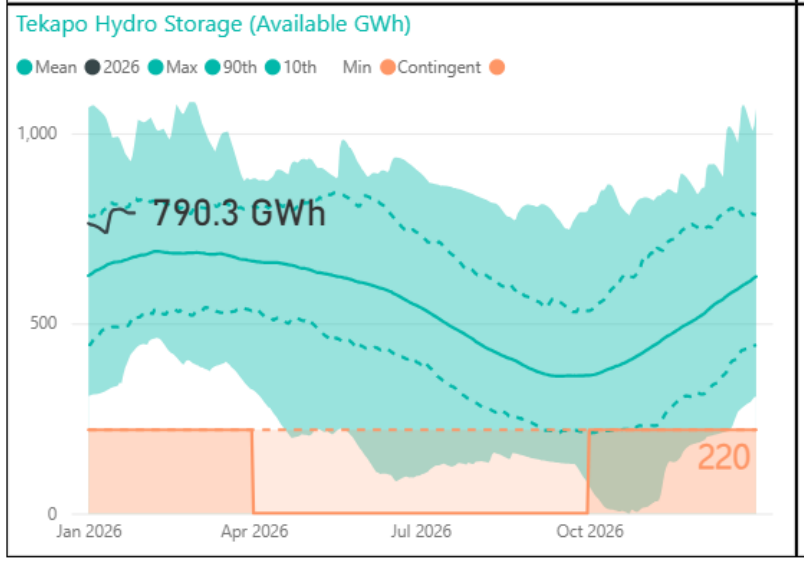
Source: Gas industry company

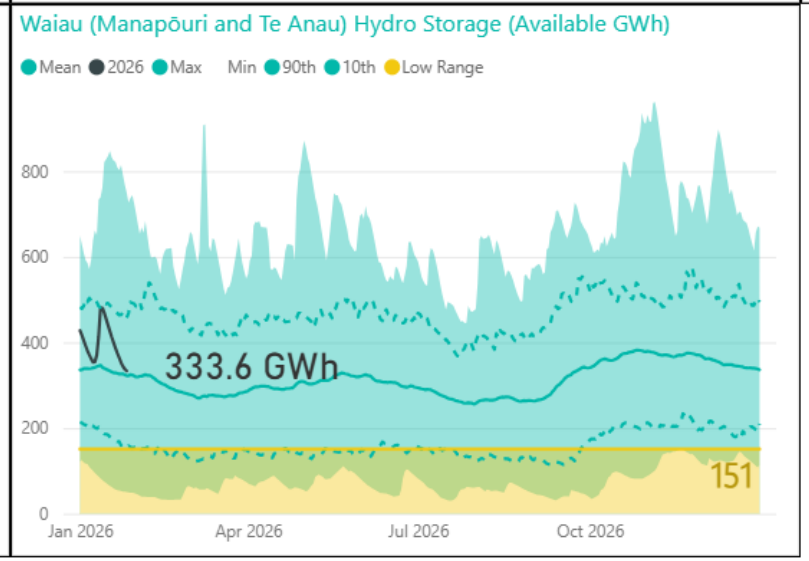
Hydro storage by catchment







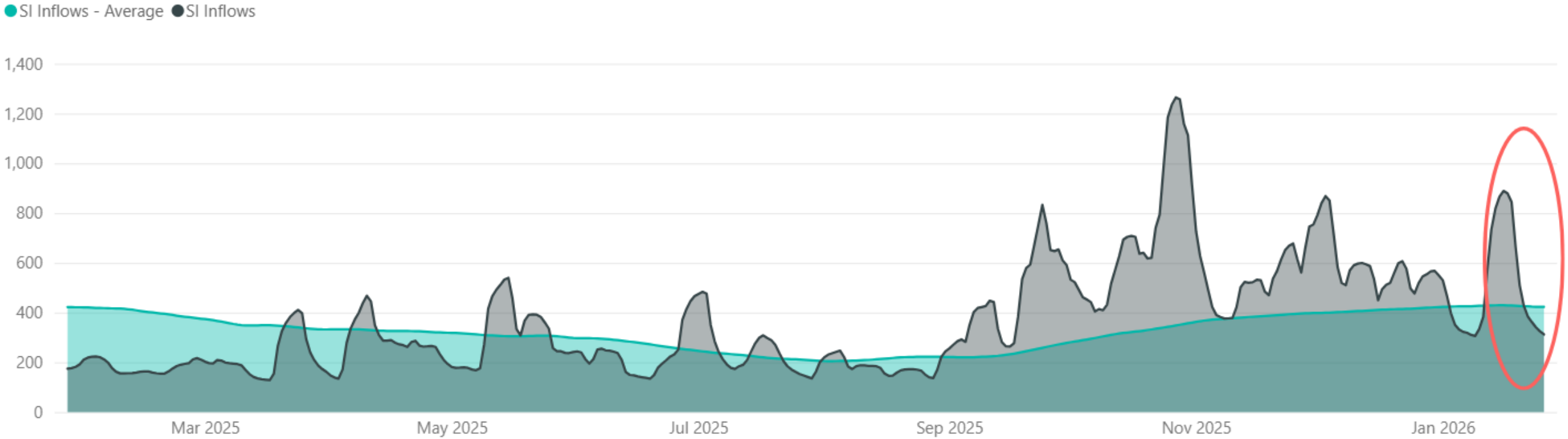




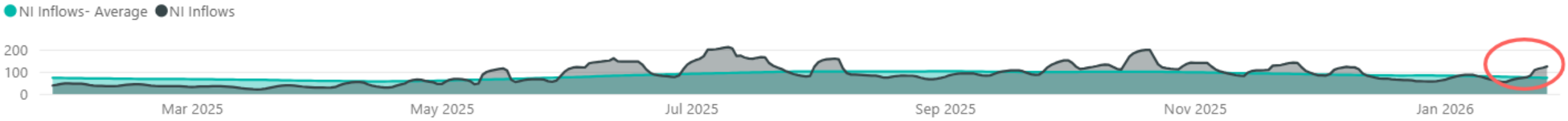
Lake	Current (%) avg
nz_controlled	122
si_controlled	119
hawea	115
pukaki	123
manapouri	129
te_anau	90
tekapo	117
taupo	154

Hydro inflows

South Island Mean 7 Day Inflows (Available GWh)

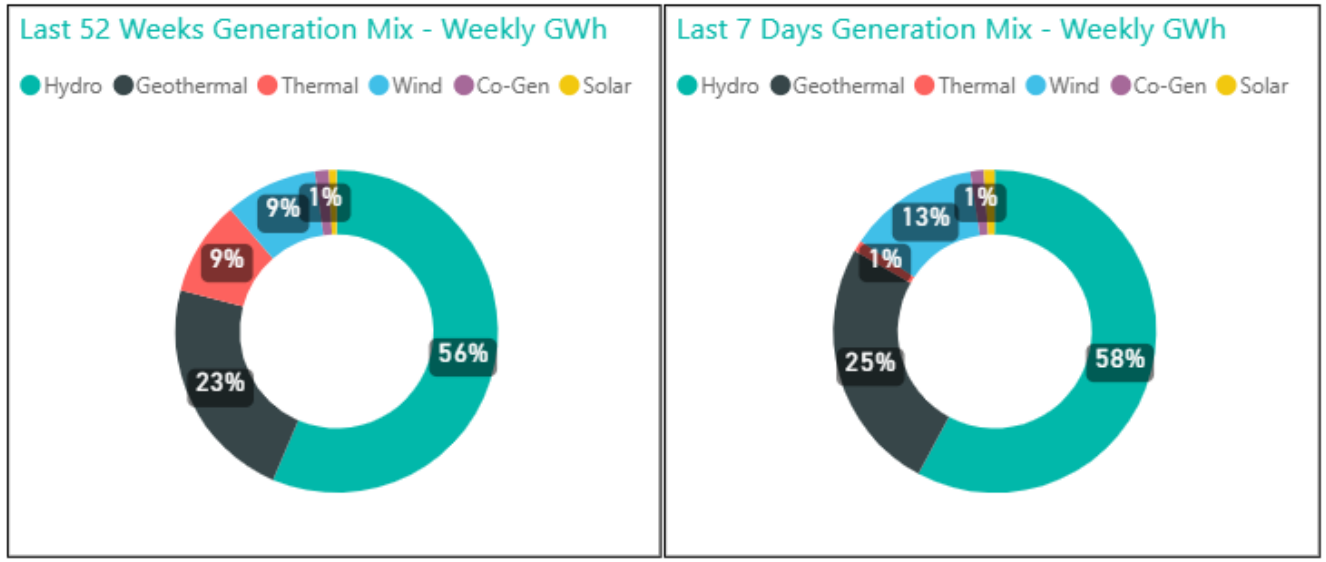


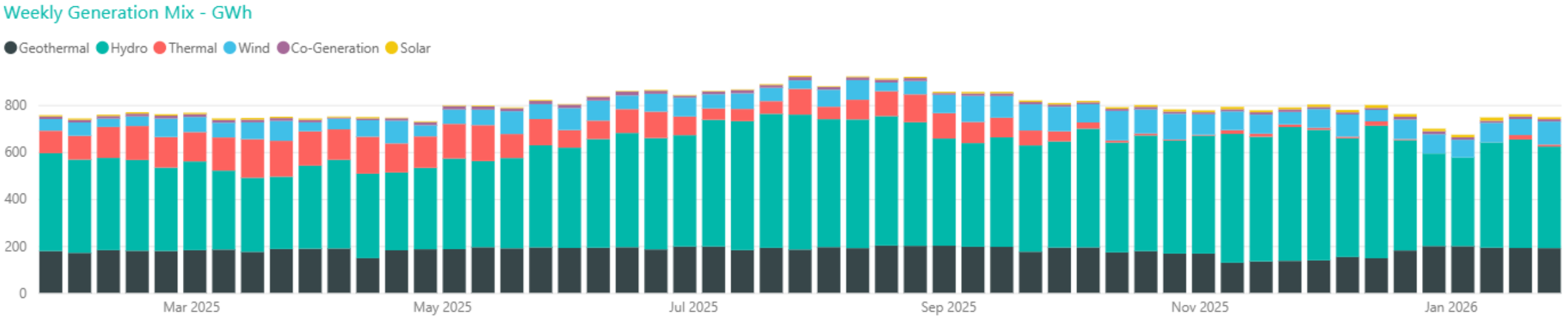
North Island Mean 7 Day Inflows (Available GWh)



Generation mix

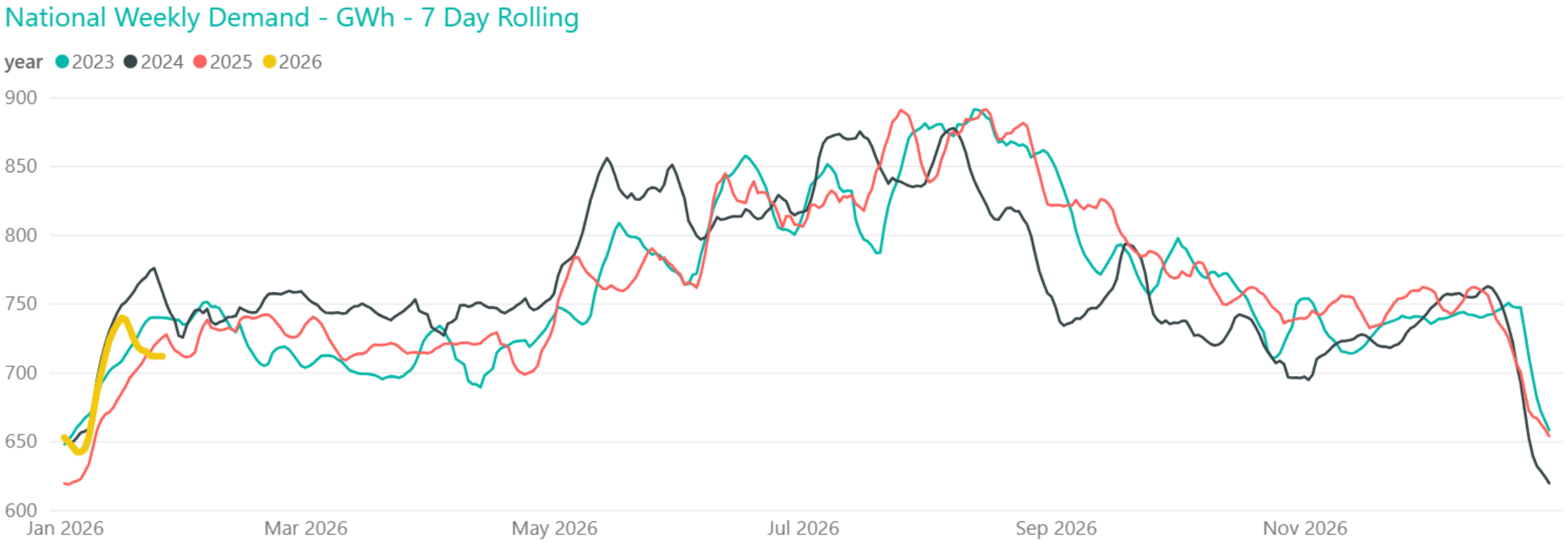
- Hydro generation share high at 58% last week
- Wind generation above average at 13%
- Thermal generation very low at 1%
- Renewable share >96% for the sixteen consecutive weeks





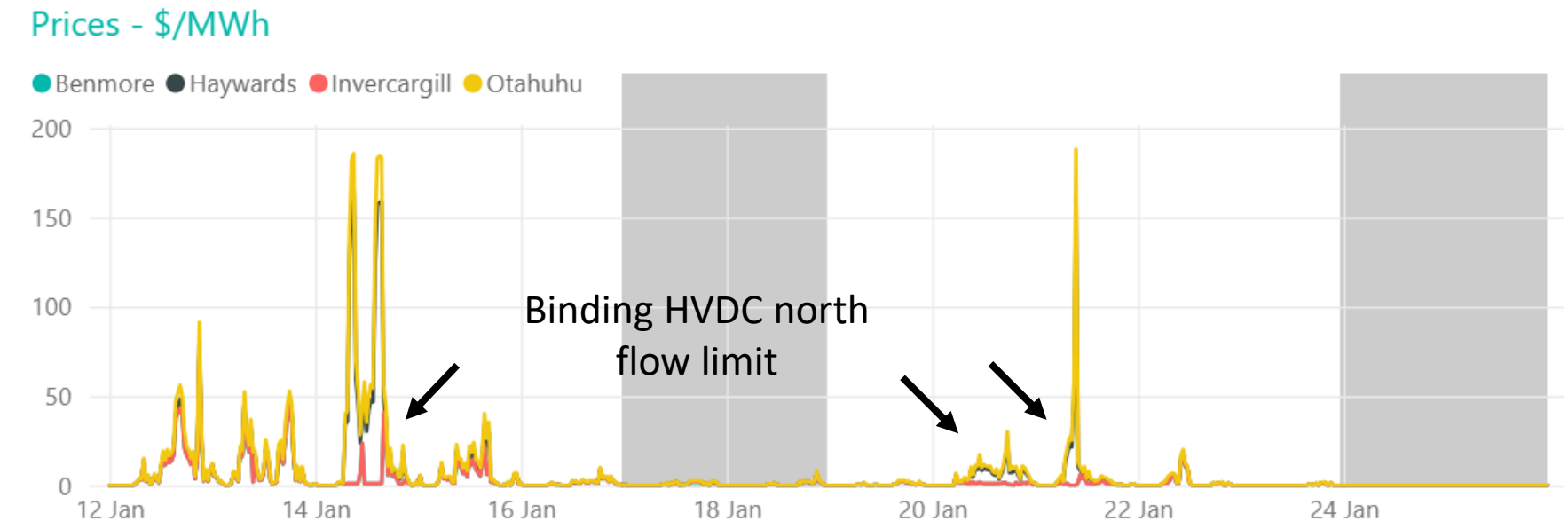
Demand

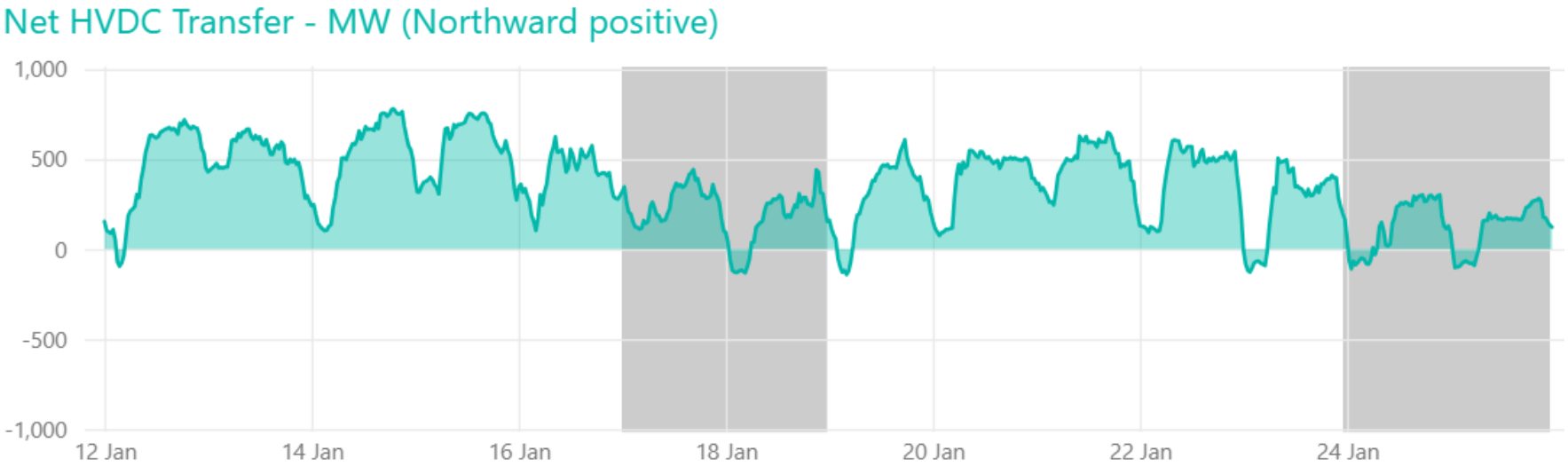
- Demand has dropped since early/mid January, with cooler temperatures



Pricing

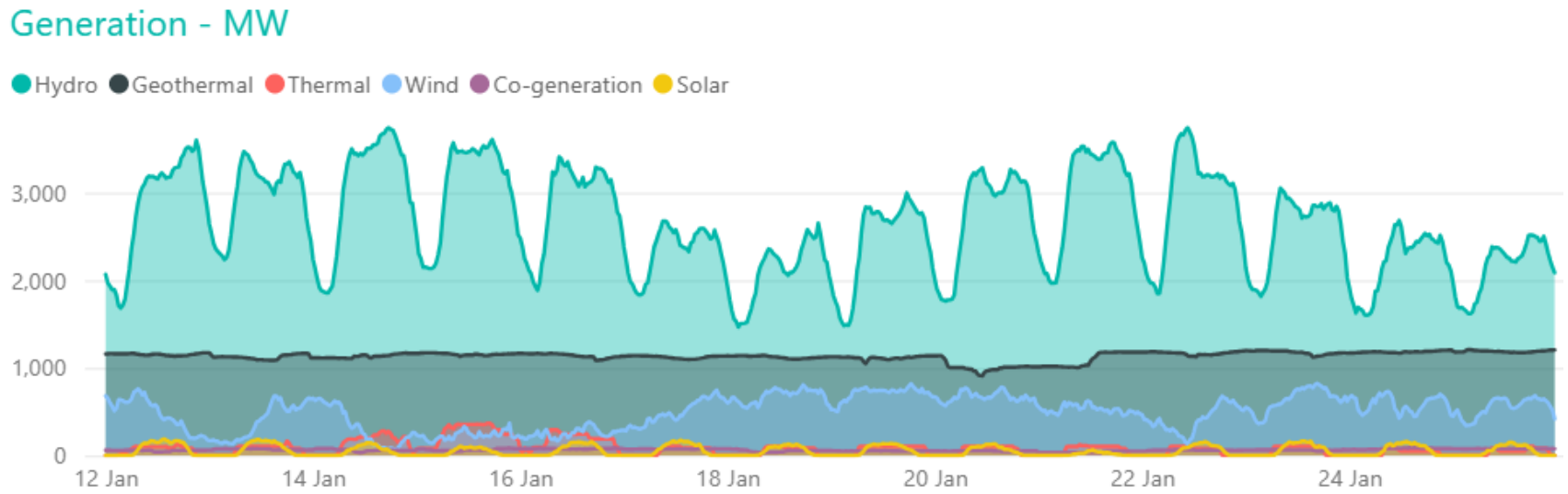
- Low average wholesale prices, in line with low demand and high hydro storage
- Average Ōtāhuhu price was $7/MWh over the past fortnight. Benmore average was $3. Price separation due to reduced HVDC northward capacity.
- Peak of $188/MWh at Ōtāhuhu, 9:30 am on 21 January with constrained HVDC north flow

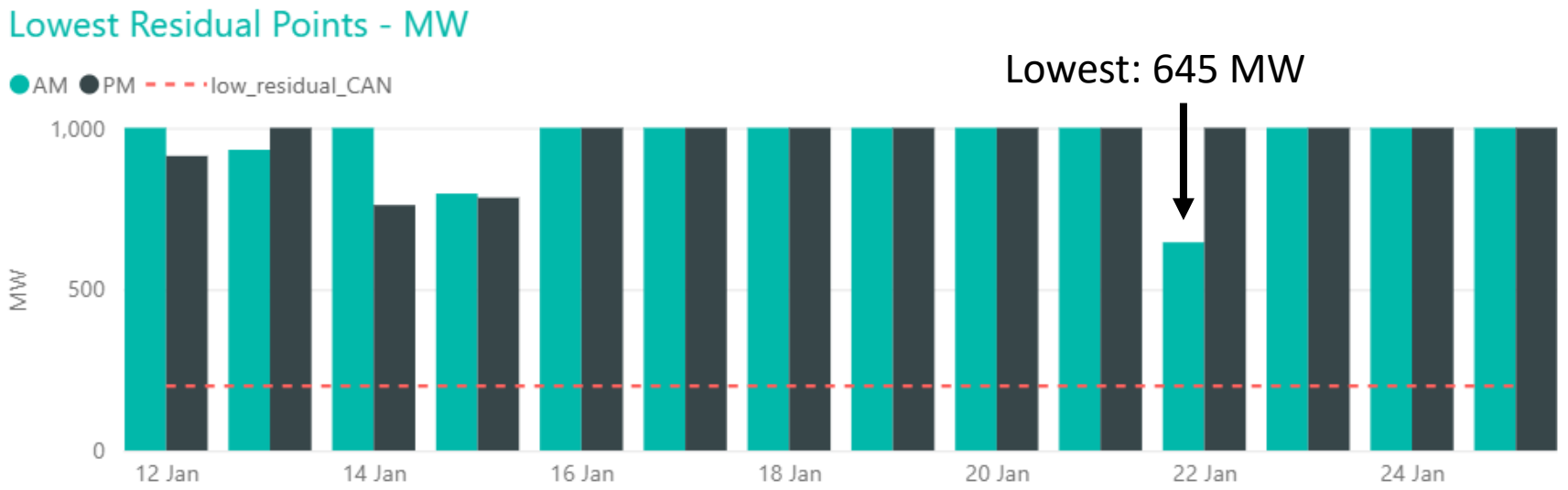




Capacity residual margins

- Residuals remain healthy with low demand, despite low thermal unit commitment
- Some residuals <1000 MW at times of low wind generation



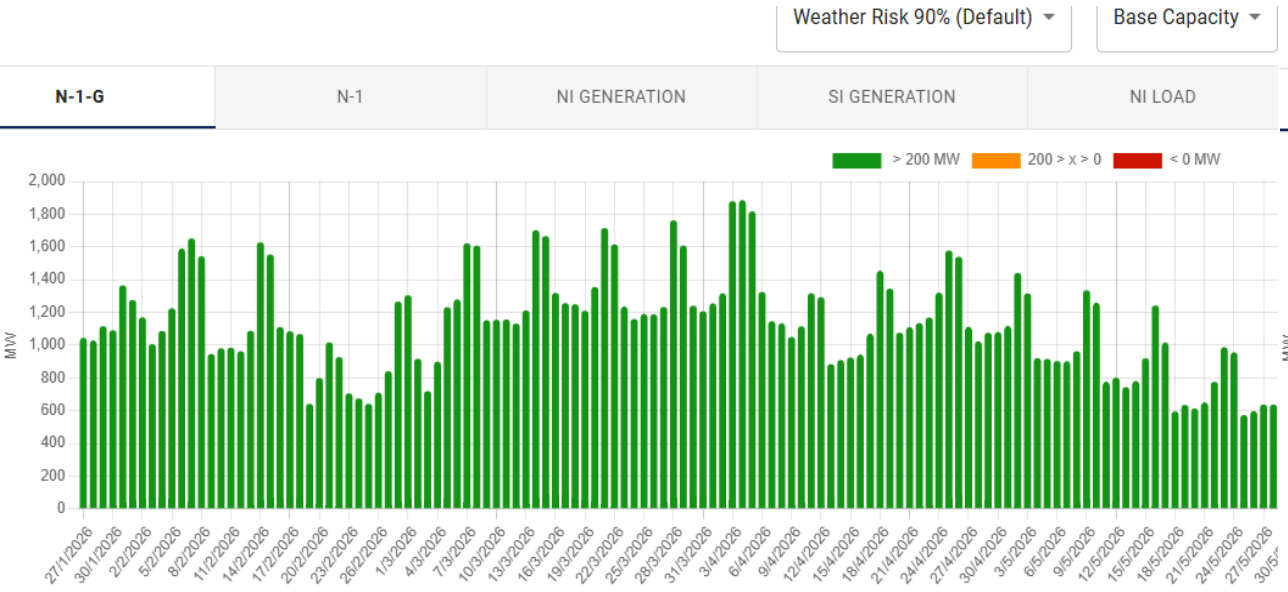


NZGB update

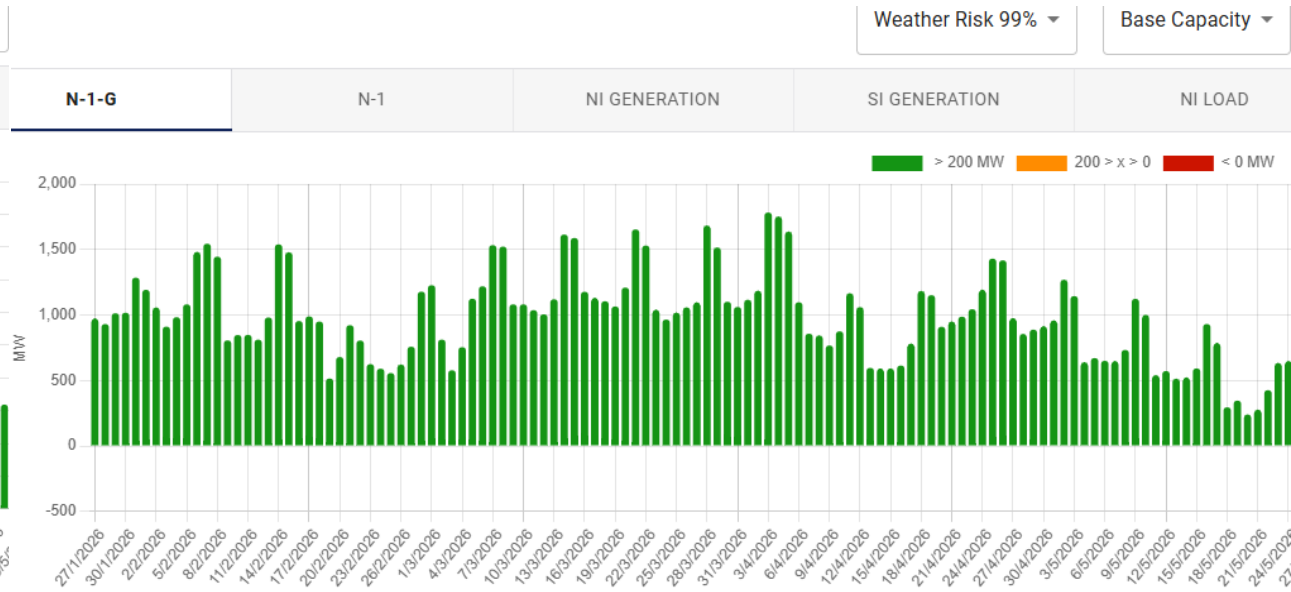
NZGB update: base capacity N-1-G

- 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



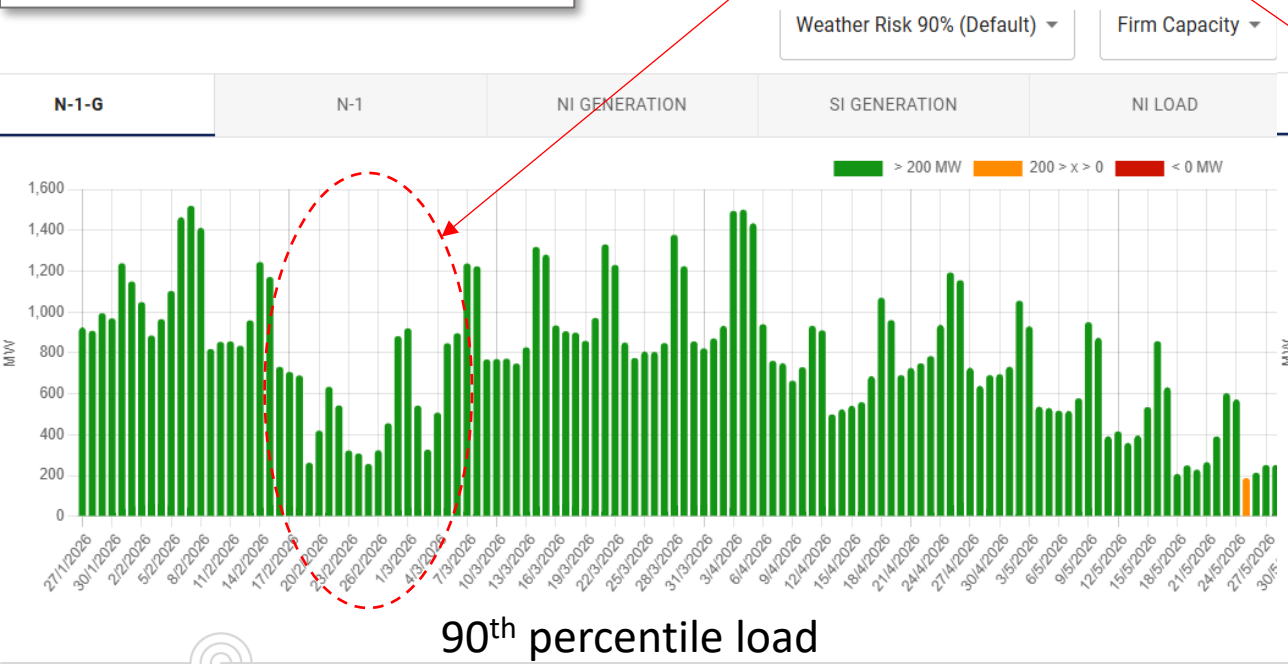
99th percentile load

NZGB update: firm capacity only N-1-G

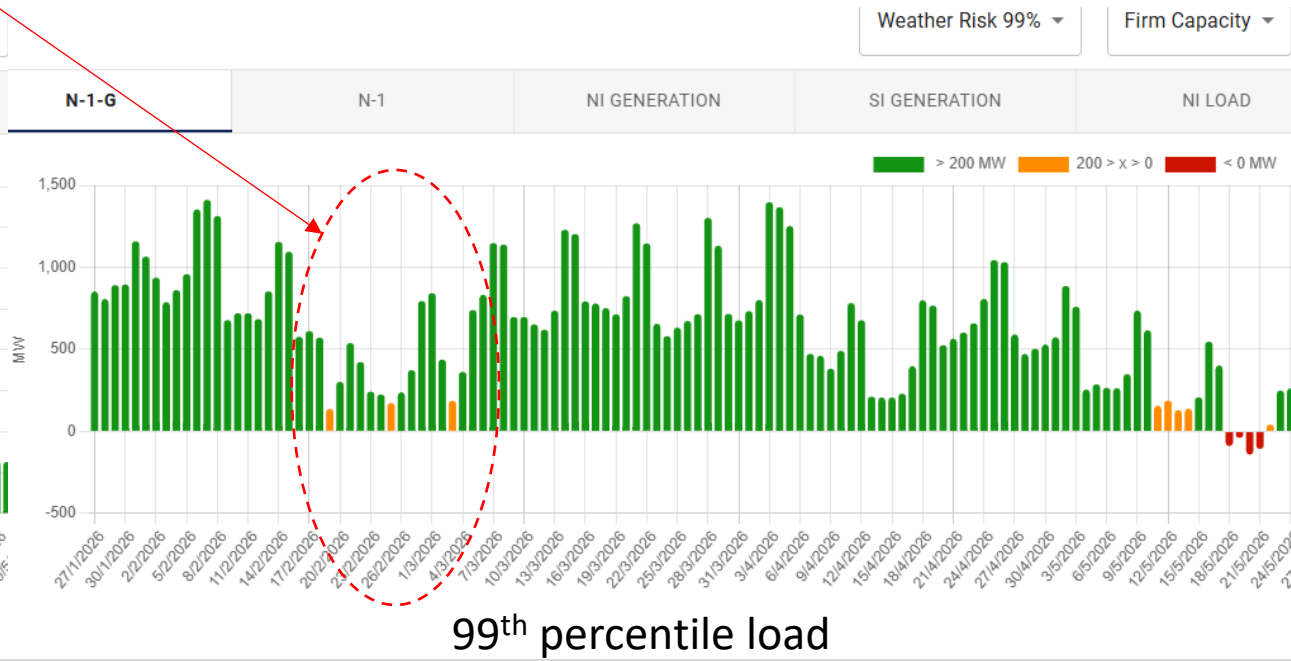
- Firm capacity scenario reflects units that historically operate for at least 90% of AM & PM peaks.
- Any shortfall or low margin periods highlight the potential reliance on these units to be available to cover N-1-G
- This means we are relying on the market to coordinate especially slow starting thermal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

Firm capacity removes
- 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)

HVDC outage

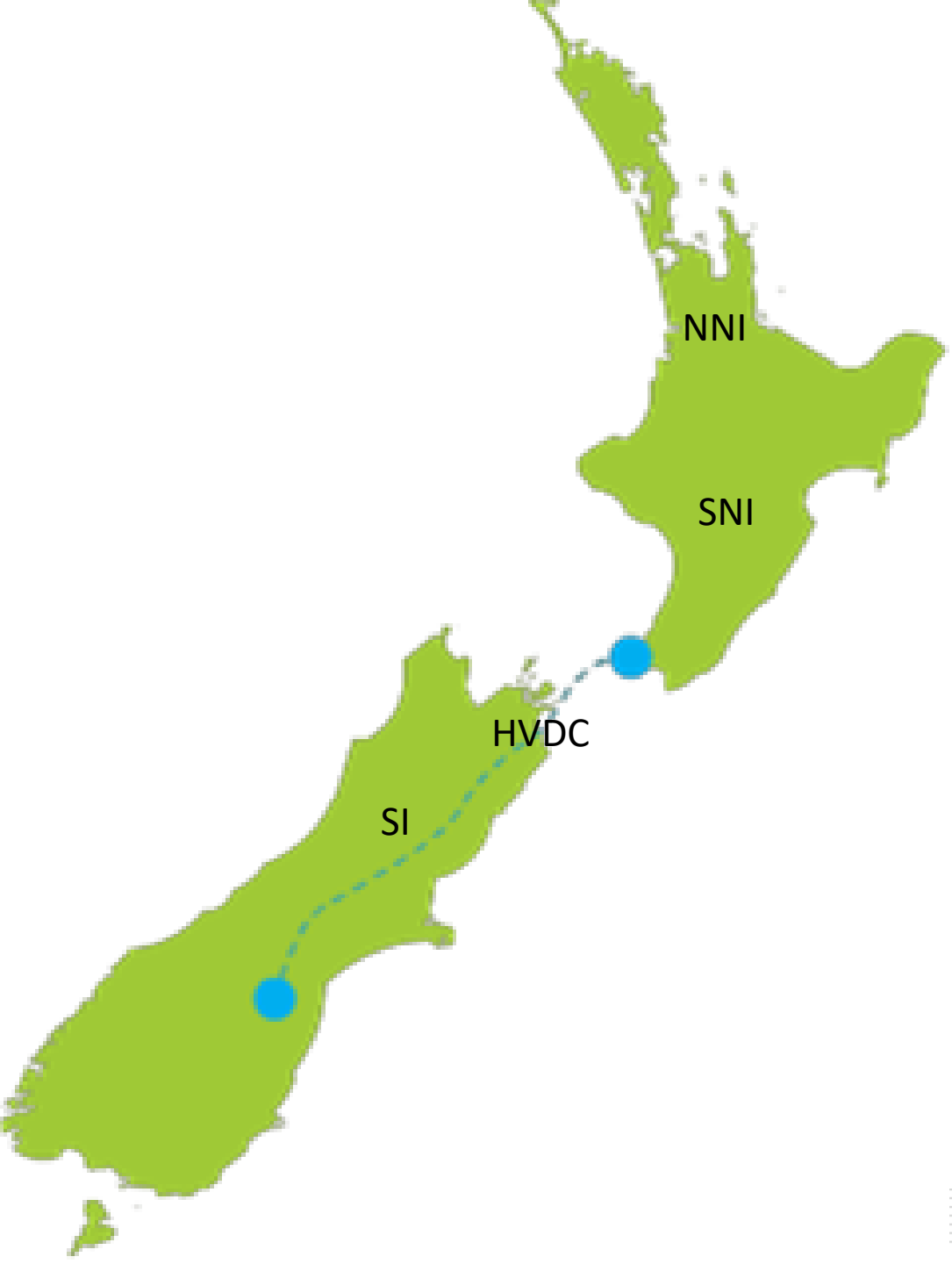


90th percentile load



99th percentile load

Outages next 4 weeks



Outages

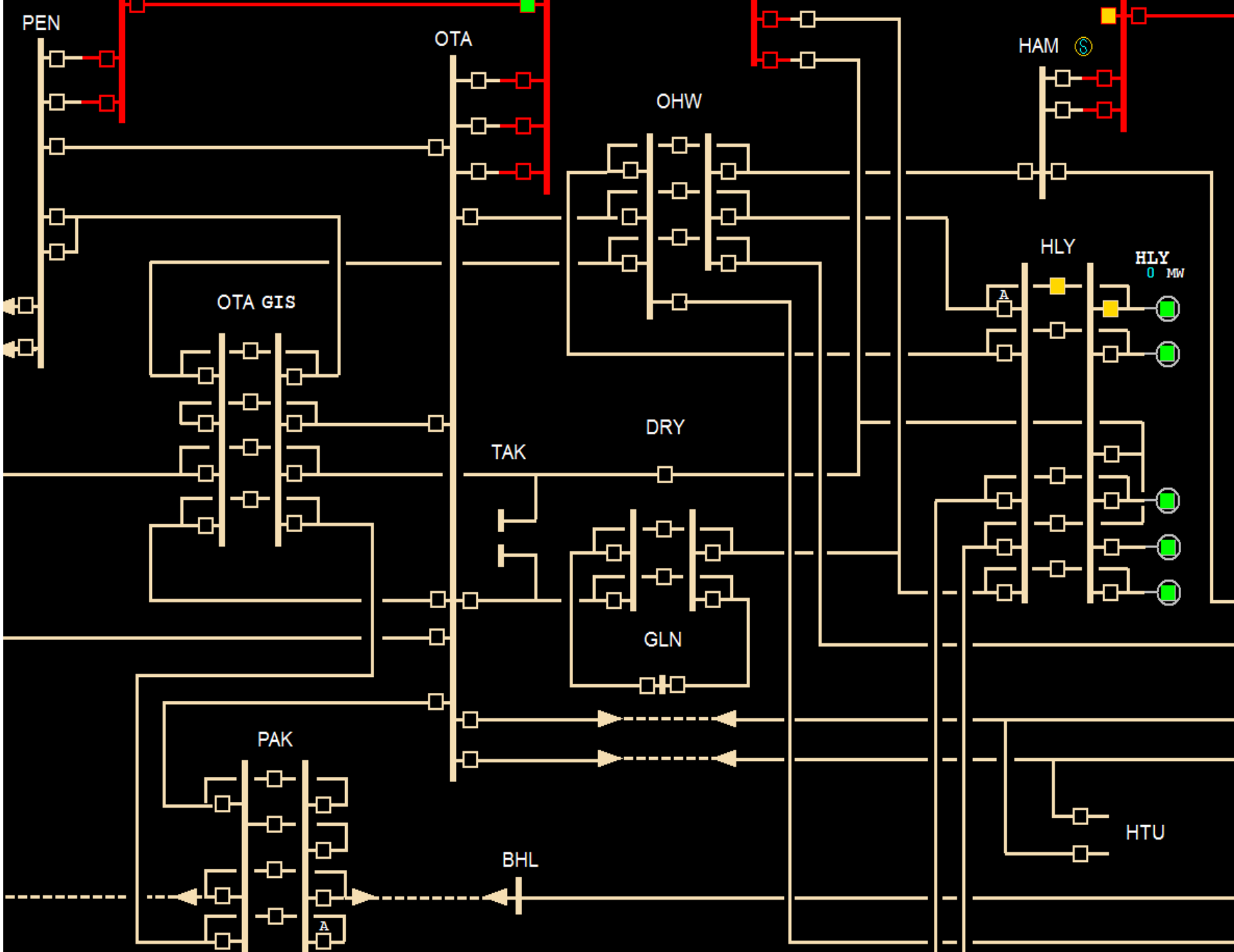
- NNI outages
- SNI outages
- SI outages

Asset owners

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

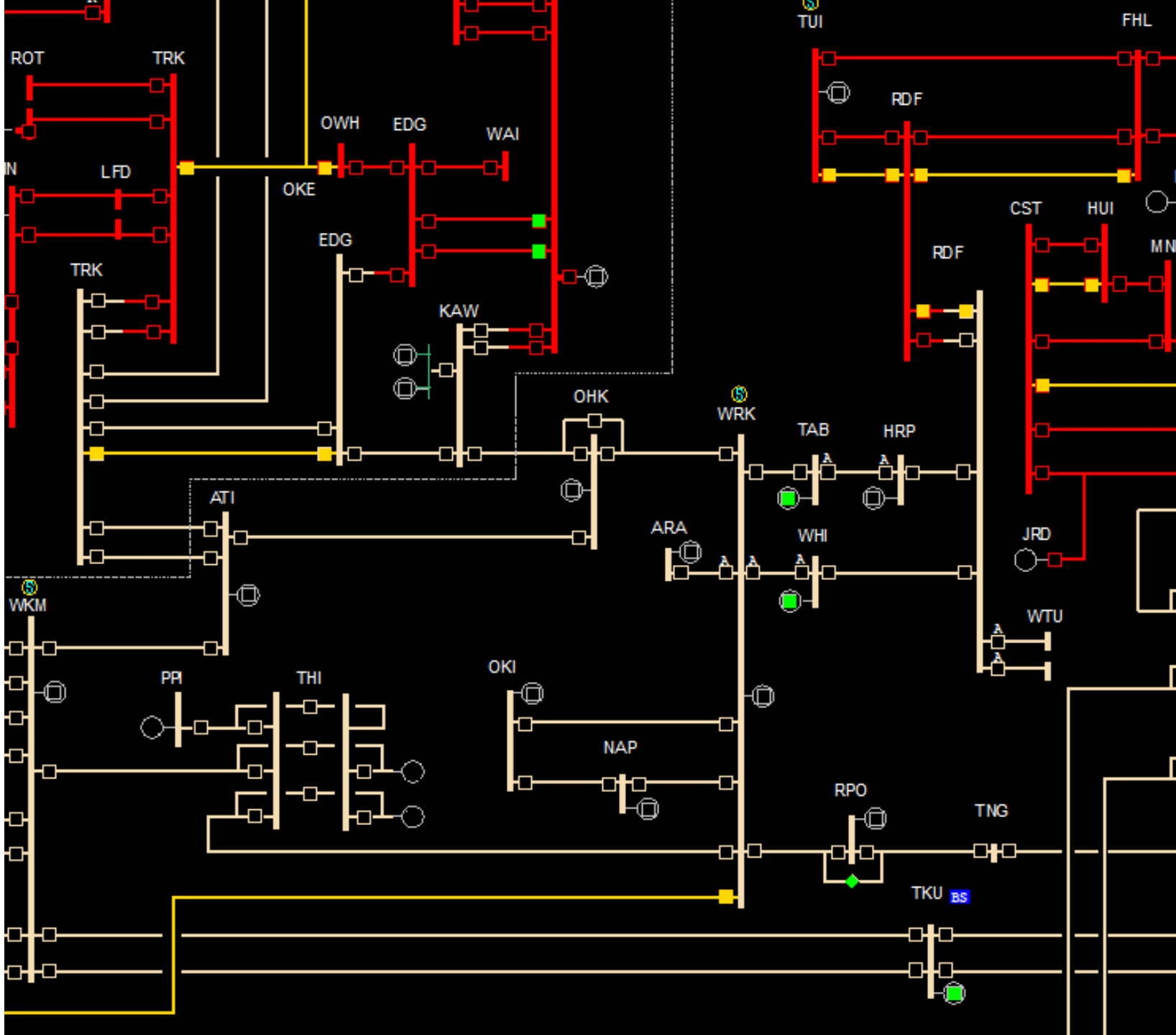
NNI Outages

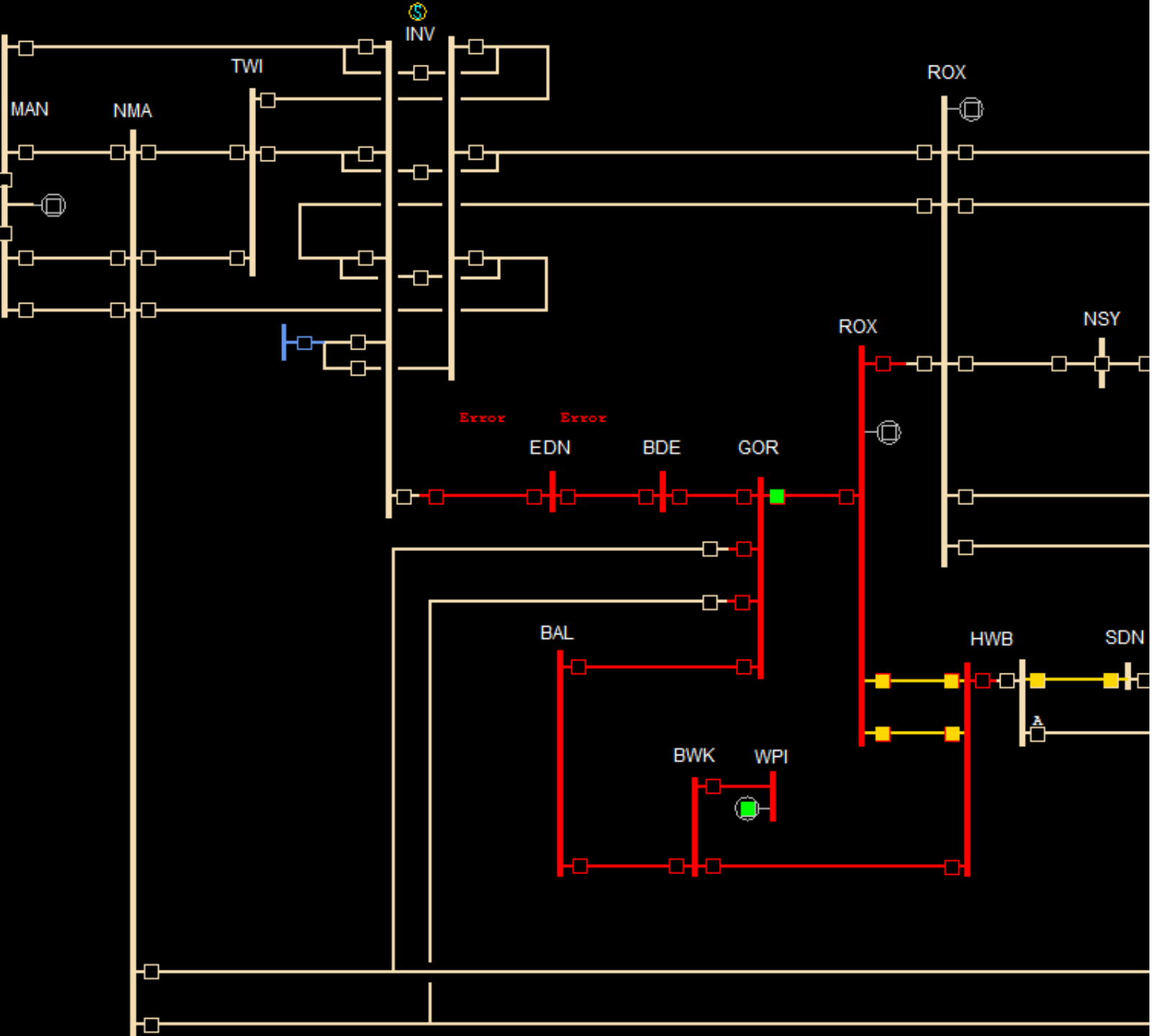
- Week of 2 Feb
  - OHW_WKM_1
  - OTA_PEN_6
  - DRY_GLN_1 followed by DRY_GLN_2
  - EDG_TRK_1 & 2
- Week of 9 Feb
  - ALB_WRD_4
  - OTA_T3
- Week of 16 Feb
  - ALB_WRD_4
  - OTA_Tie_5
  - OTA_T4
  - HAM_WKM_1
- Week of 23 Feb
  - ALB_WRD_4



SNI Outages

- Week of 2 Feb
  - TKU_WKM_2
  - BPE_TKU_2
  - BPE_BRK_1
- Weeks of 9 Feb
  - TKU_WKM_2
  - BRK_SFD_1
- Week of 16 Feb
  - TKU_WKM_2
  - BRK_SFD_1
- Week of 23 Feb
  - TKU_WKM_2
  - BRK_SFD_2
  - RDF_WHI_1

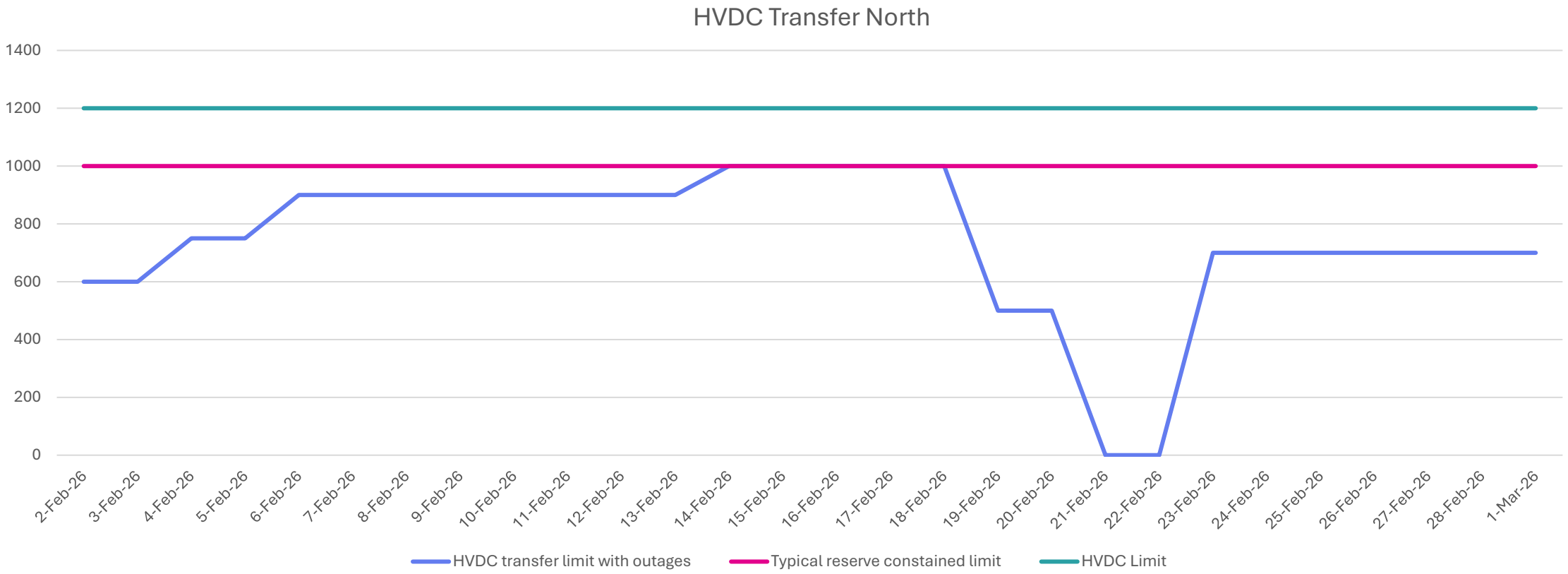




SI Outages

- Week of 2 Feb
  - BEN_OHC_2
  - OHA_TWZ_2
  - NMA_TWI_2
- Week of 9 Feb
  - MAN_NMA_3
- Week of 16 Feb
  - No Significant outages
- Week of 23 Feb
  - No Significant outages

HVDC North transfer limit



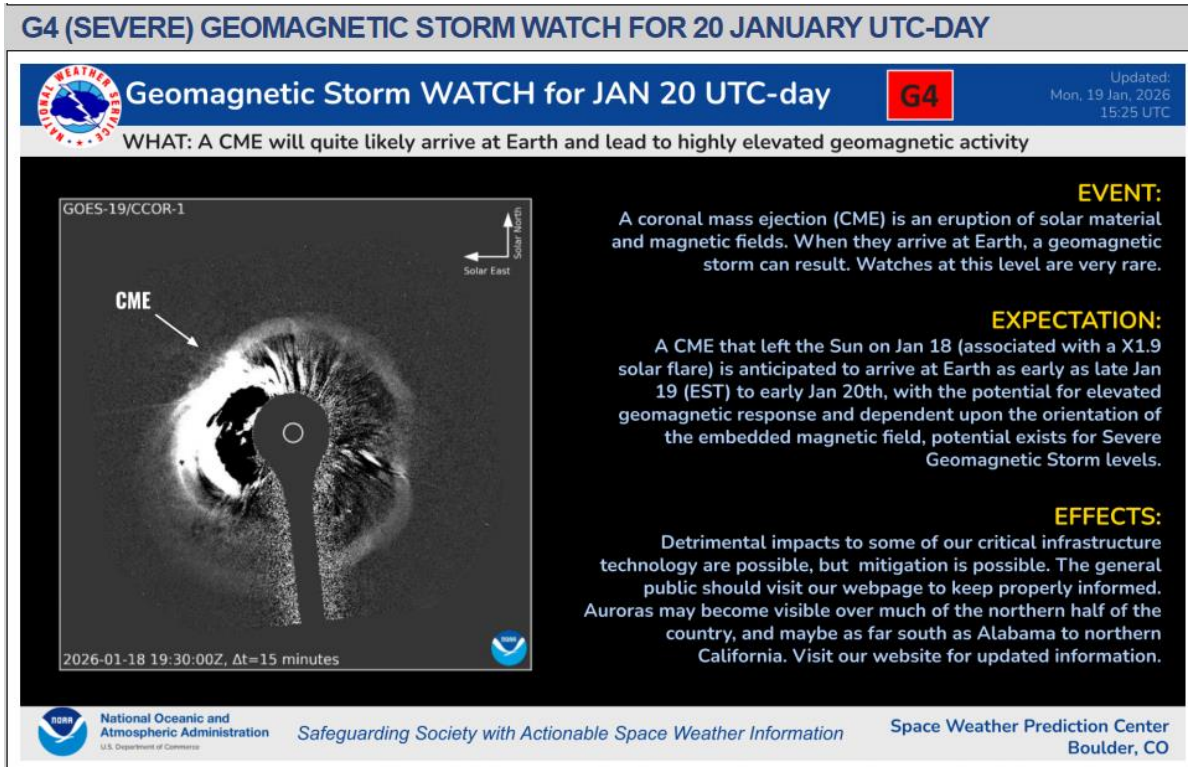
The HVDC transfer capacity during the outages will be as follows:

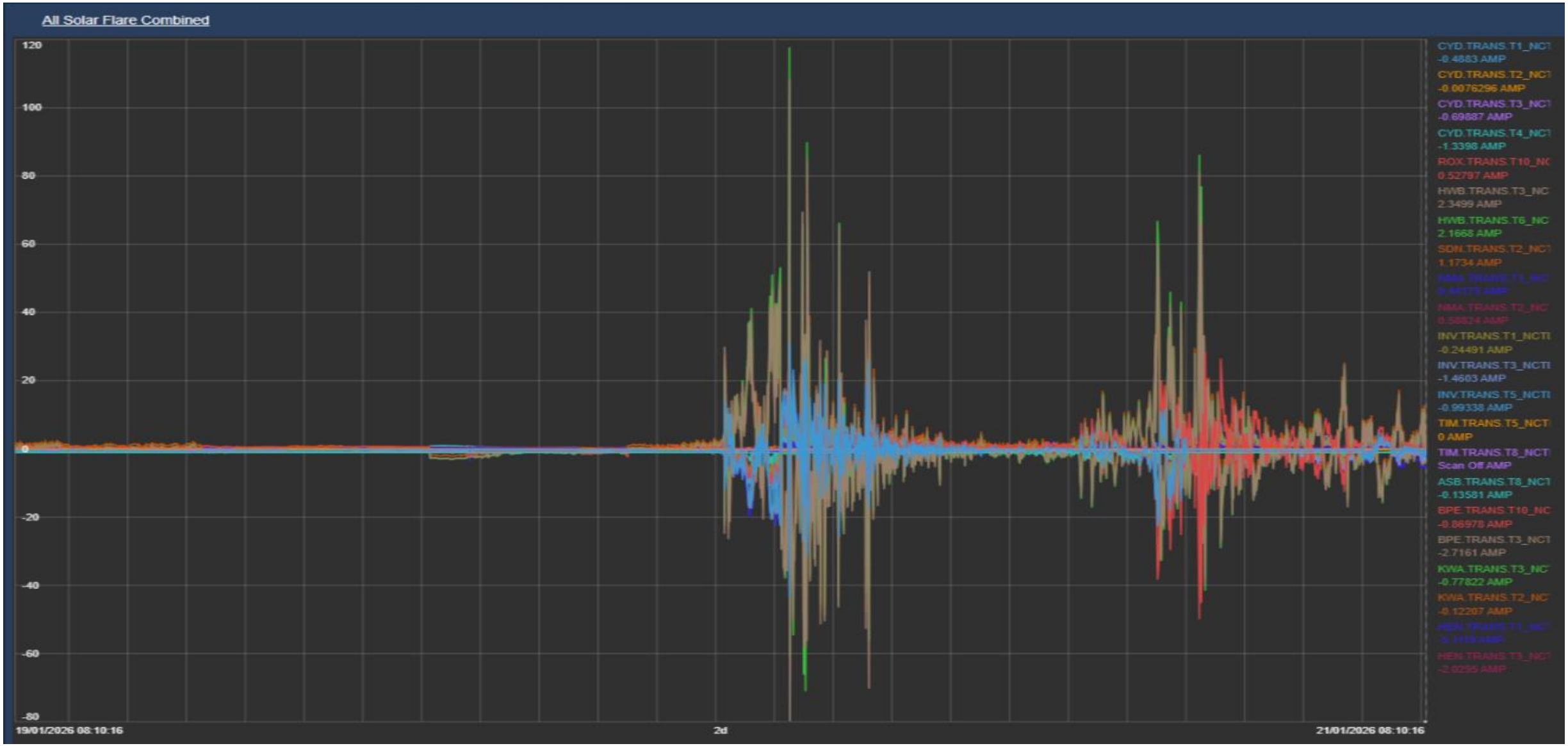
Asset	North capacity	South capacity
Pole 3 outage: 05:00 19 February to 05:00 21 February		
HVDC Pole 2	500 MW	489 MW
HVDC Pole 3	0 MW	0 MW
Bipole Outage: 05:00 21 February to 22:00 22 February		
HVDC Pole 2	0 MW	0 MW
HVDC Pole 3	0 MW	0 MW
Pole 2 outage: 22:00 22 February to 22:00 2 March		
HVDC Pole 2	0 MW	0 MW
HVDC Pole 3	780 MW	780 MW

Operational update

Solar Storm 20-21 January 2026

- First notification was a watch for “Geomagnetic Storm category G4 or greater predicted” received at 01:04 on the 20th
- Numerous Geomagnetic K-index 7, 8, 9 and G4 warnings and alerts received throughout that day
- Geomatic induced currents exceeded neutral earth resister (NER) alarm thresholds at numerous sites at various times.
- Most severe were in the South Island with the largest seen at Halfway Bush
- NER currents were transient and of short duration
- Studies carried out for circuit removal with teams prepared to initiate if required




All Solar Flare Combined
120
100
80
60
40
20
0
-20
-40
-60
-80
19/01/2026 08:10:16
2d
21/01/2026 08:10:16
CYD.TRANS.T1_NCT
-0.4883 AMP
CYD.TRANS.T2_NCT
-0.0076296 AMP
CYD.TRANS.T3_NCT
-0.69887 AMP
CYD.TRANS.T4_NCT
-1.3398 AMP
ROX.TRANS.T10_NC
0.52797 AMP
HWB.TRANS.T3_NC
2.3499 AMP
HWB.TRANS.T6_NC
2.1668 AMP
SDN.TRANS.T2_NCT
1.1734 AMP
INV.TRANS.T1_NCTI
-0.24491 AMP
INV.TRANS.T3_NCTI
-1.4603 AMP
INV.TRANS.T5_NCTI
-0.99338 AMP
TIM.TRANS.T5_NCT
0 AMP
TIM.TRANS.T8_NCT
Scan Off AMP
ASB.TRANS.T8_NCT
-0.13581 AMP
BPE.TRANS.T10_NC
-0.86978 AMP
BPE.TRANS.T3_NCT
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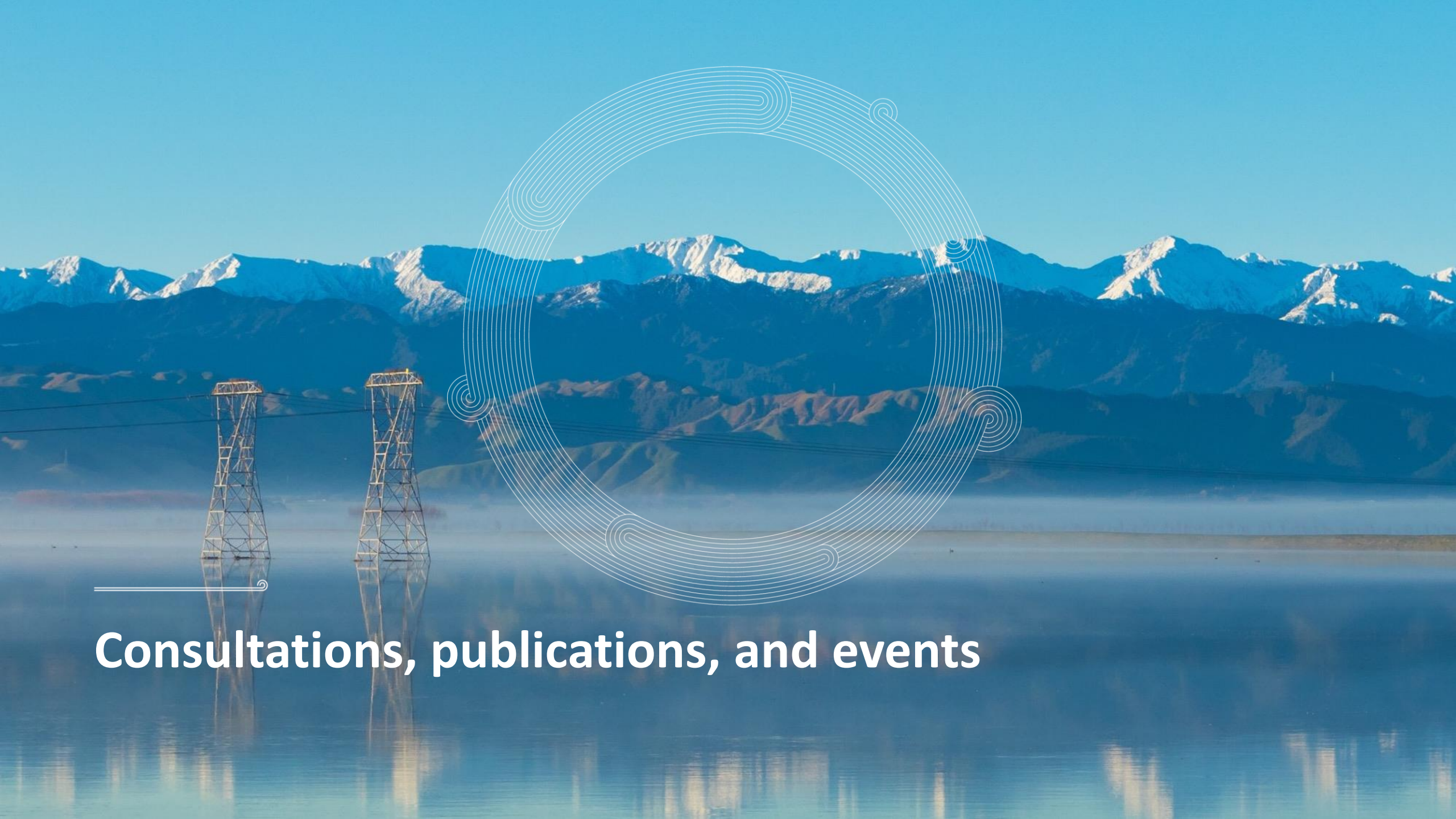
KWA.TRANS.T3_NC
-0.77822 AMP
KWA.TRANS.T2_NC
-0.12207 AMP



Consultations, publications, and events

Consultations, publications, and events

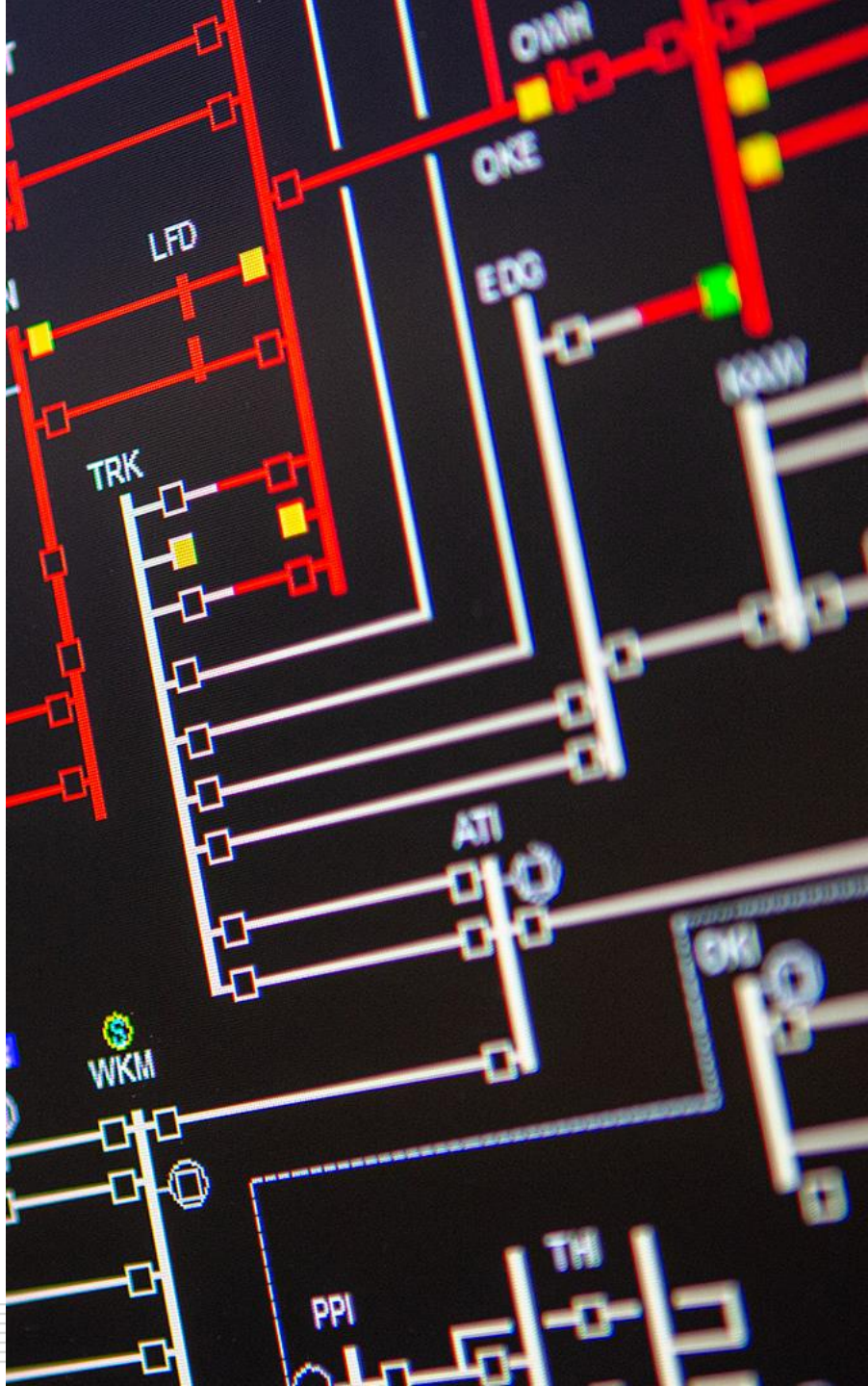
We have a consultation open on **Key Trends and Issues** in the industry and invite feedback by 27 February to help inform the refresh of our **System Operator Strategy**.

We will publish the January **Energy Security Outlook** on our website this week.

The **Grid Owner has published its proposed annual outage plan for 2026/27**. These outages can be viewed in IONS and POCP, and the plan is also published on the Transpower website. The Grid Owner will engage industry on this proposed plan over the next few months.

On 26 February Transpower will host the Electricity Authority's **Reactive Power and Voltage Coordination workshop**. You can find more information and register for the workshop on the Authority's website.

We will be running our **annual Industry Exercise** with the Electricity Authority on 20-21 May, which simulates a major space weather event. More information will be sent to key contacts at your organisation today.



Questions / Patai

Please raise your hand

If you have feedback let us know via our **Feedback Form**

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