TRANSPOWER

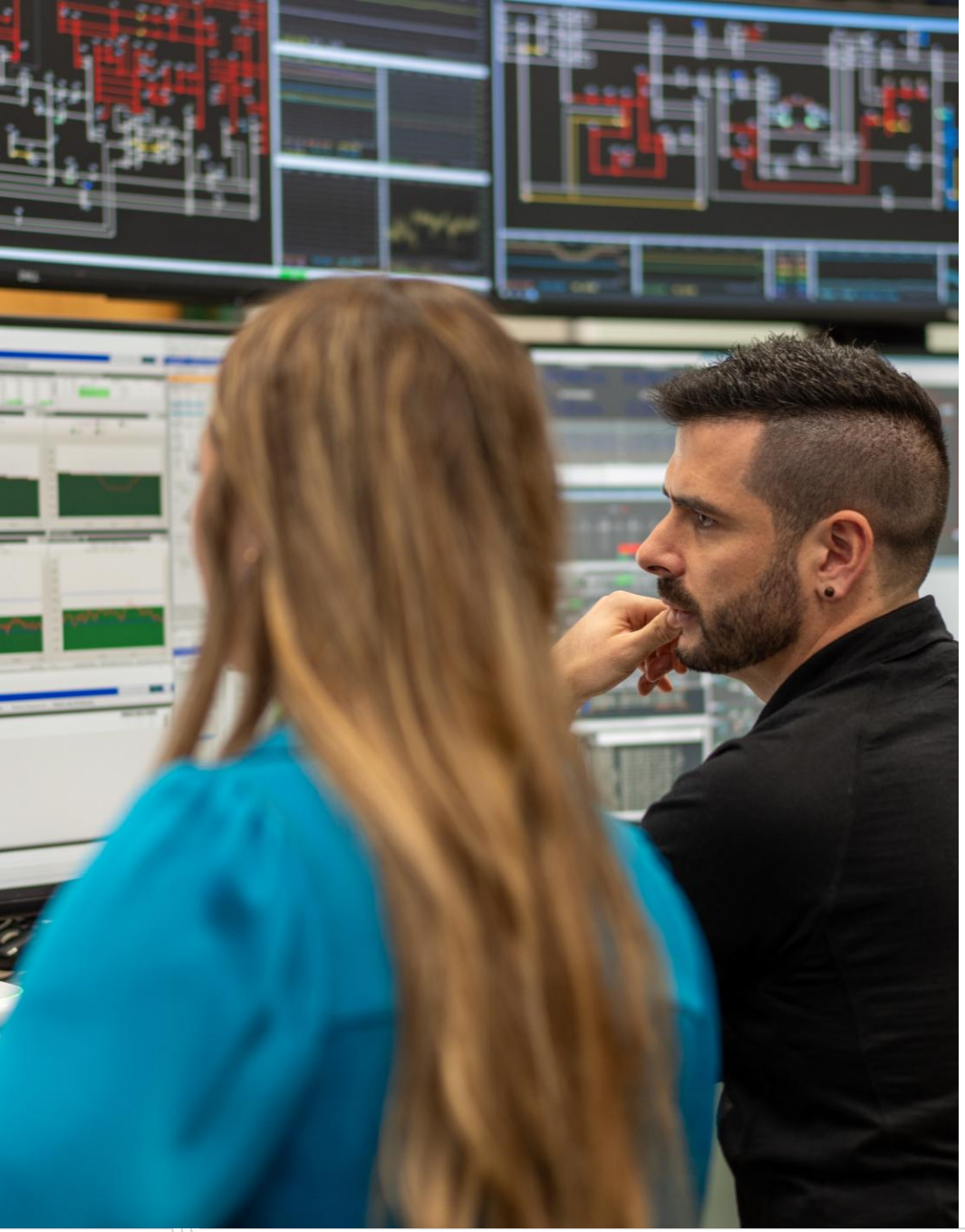
System Operator Industry Forum

3 November 2026

Today’s agenda

- Key messages
- Market update
- Security of supply update
- NZGB update
- Outage update – next four weeks
- Operational update
- Consultations, publications, and events
- Questions / Pātai





Key Messages

- Hydro storage is declining in the North Island but healthy in the South Island. This is leading to healthy national storage levels and high HVDC north flow.
- As we head into summer the increase in solar generation combined with high national storage is leading to almost 100% renewable generation.
- First Wairakei Ring outage was well managed thanks to industry support. These will continue through November so please continue to focus on unit commitment when required, plant availability, and flexibility.



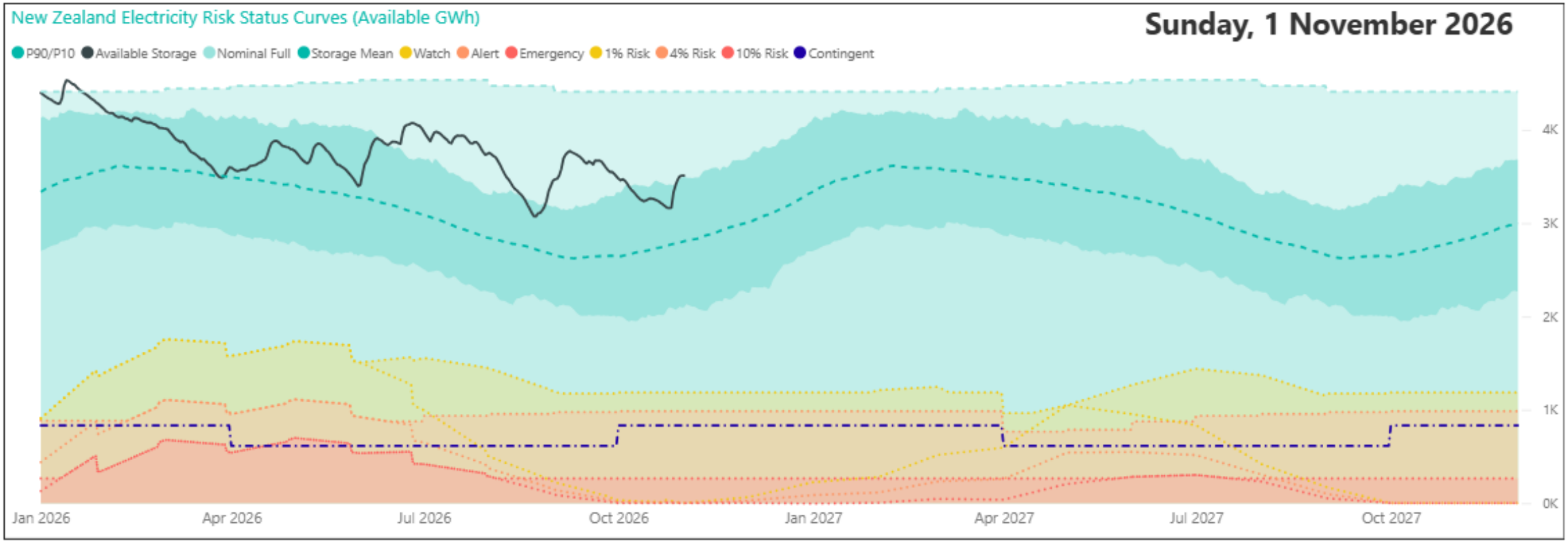
Market update

Energy: National hydro storage TBD

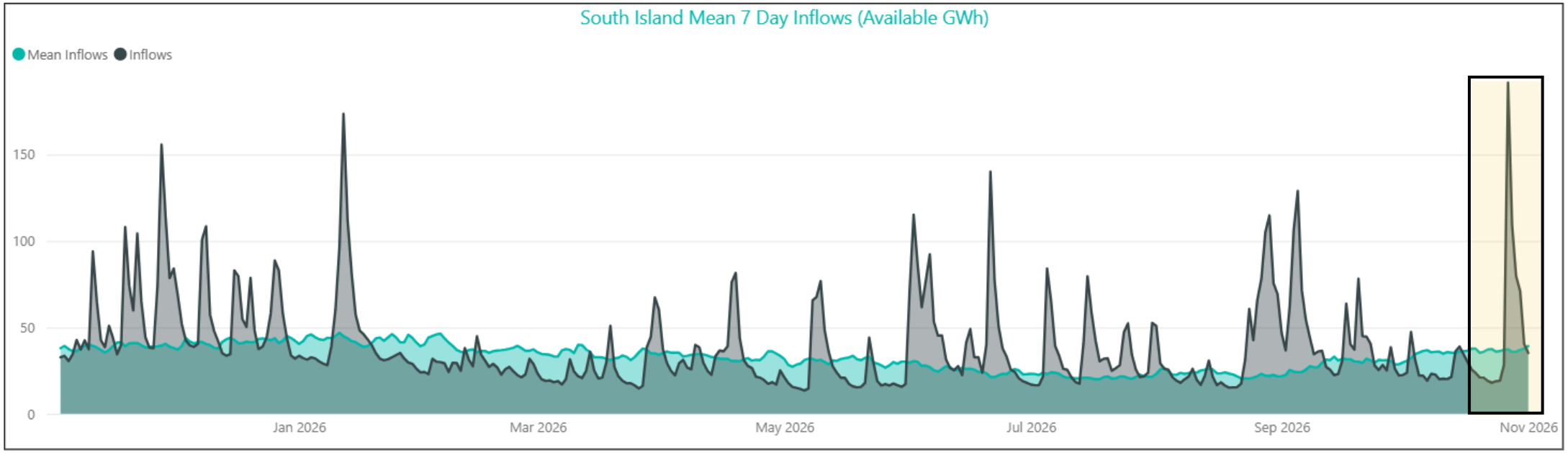
National hydro storage is back above the 90th percentile with recent South Island inflows.

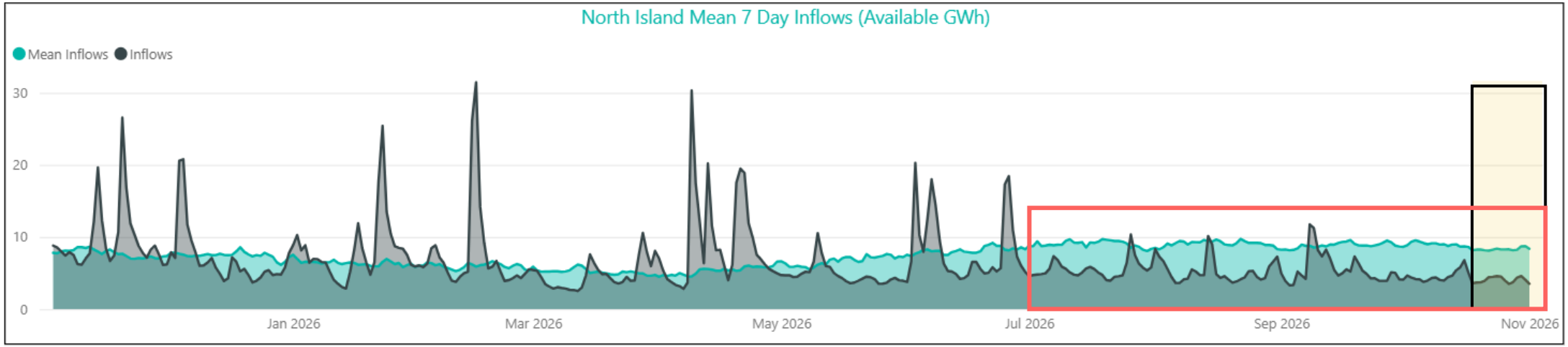
	Hydro storage level (% of mean ▲/▼)		
	New Zealand	South Island	North Island
Last forum	119%	126%	76%
Now	125% ▲	133% ▲	75% ▼

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

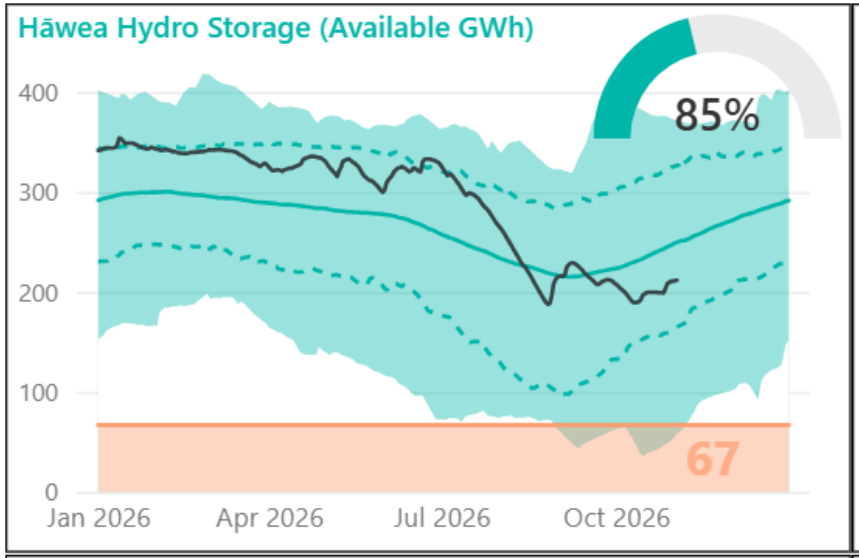


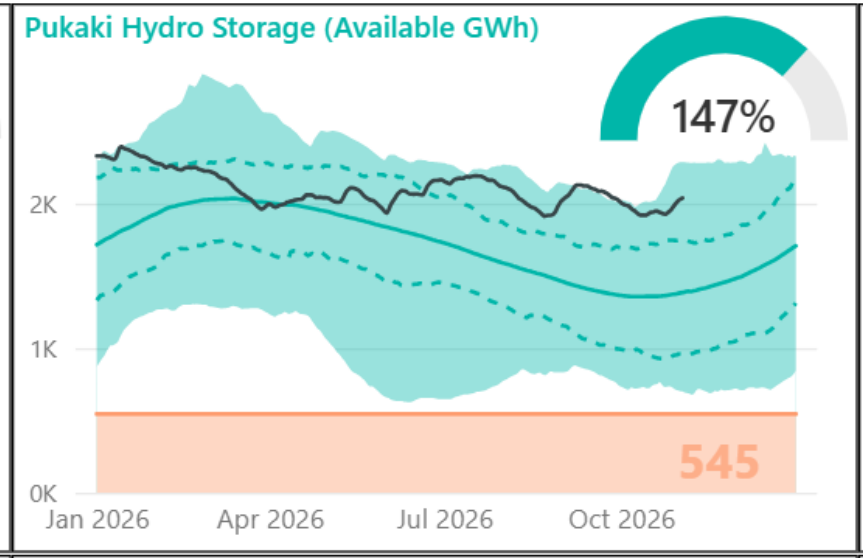
Hydro inflows

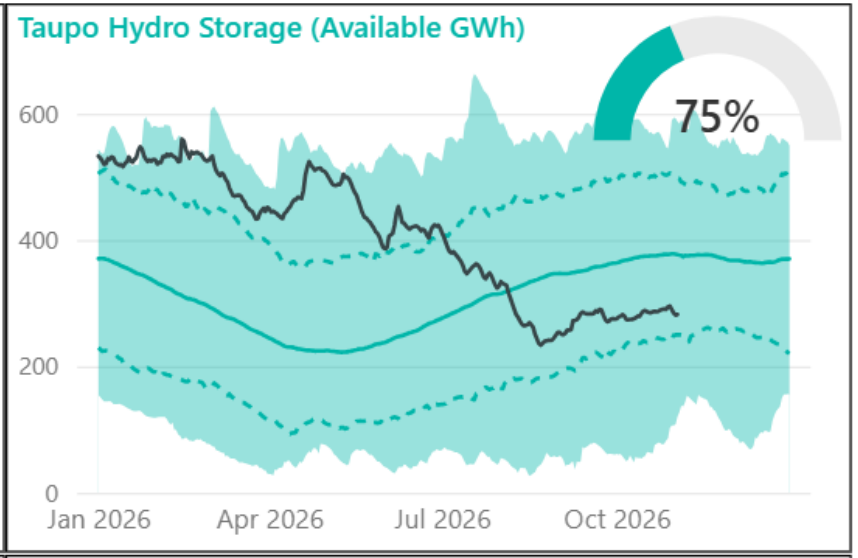


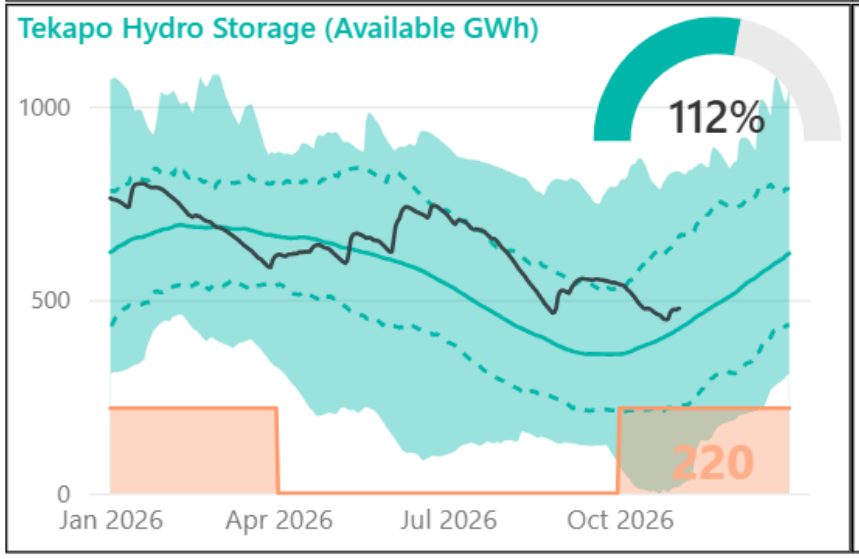


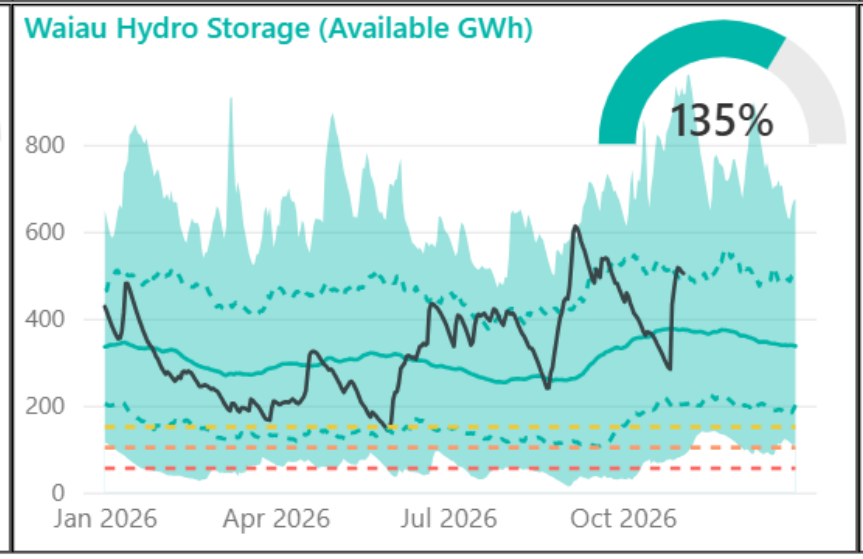
Hydro storage by catchment









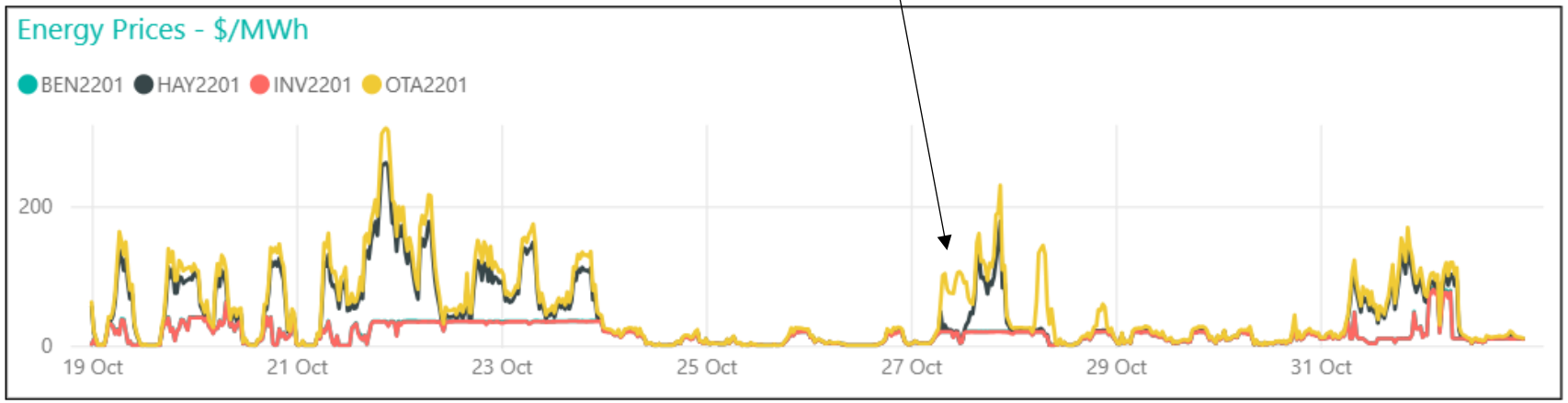


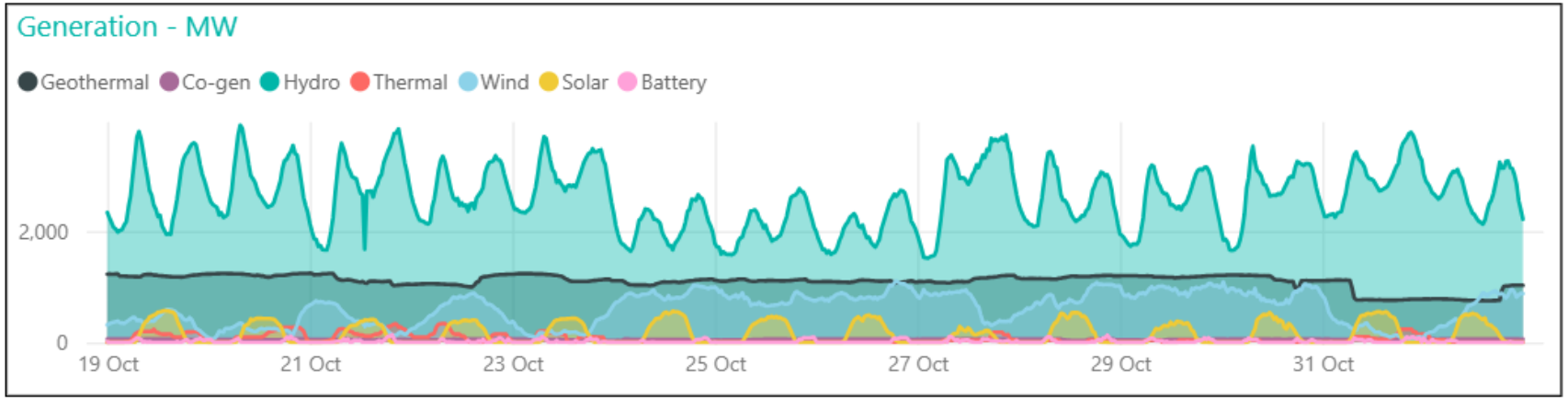
Lake	Percent	GWh	Mean
Hāwea	85%	212	250
Manapōuri	122%	158	130
New Zealand	125%	3514	2812
Pūkaki	147%	2038	1385
South Island	133%	3231	2435
Taupō	75%	282	377
Te Anau	141%	346	245
Tekapo	112%	477	425

Pricing

- Inter-island price separation:
  - Outages of lower North Island grid equipment lowering the northward transfer limit
  - Periods of low North Island wind generation, and lower geothermal generation during WRK ring (WKM_WRK) outage
- Price at Ōtāhuhu averaged $36/MWh last week and $66/MWh the week before
- Prices peaked at $312/MWh at Ōtāhuhu on Wednesday 21 October – low NI wind generation, constrained HVDC transfer

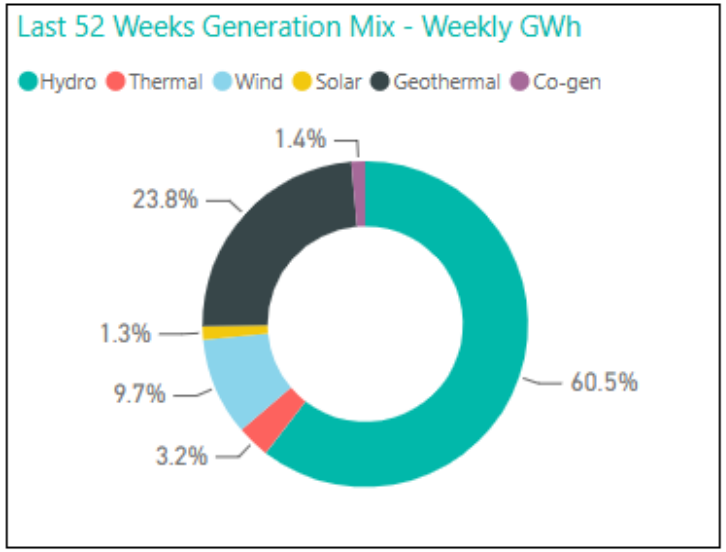
Intra-NI price separation: Constraints to protect BPE_TKU circuits with HLY_SFD outage and high northward flow

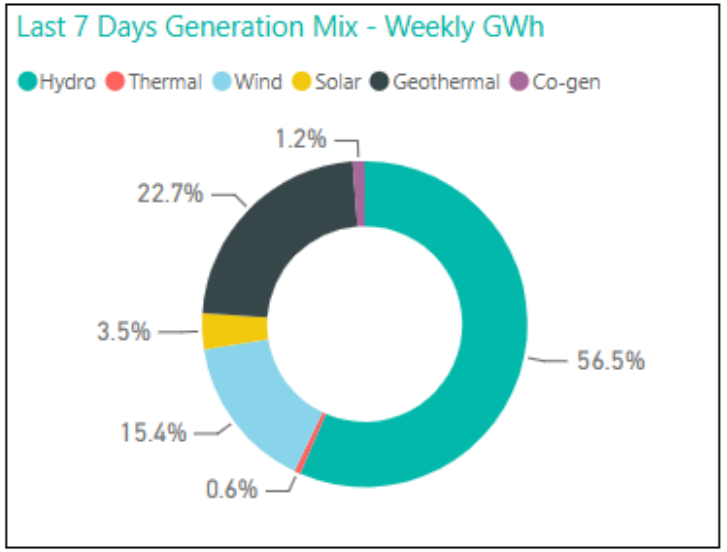


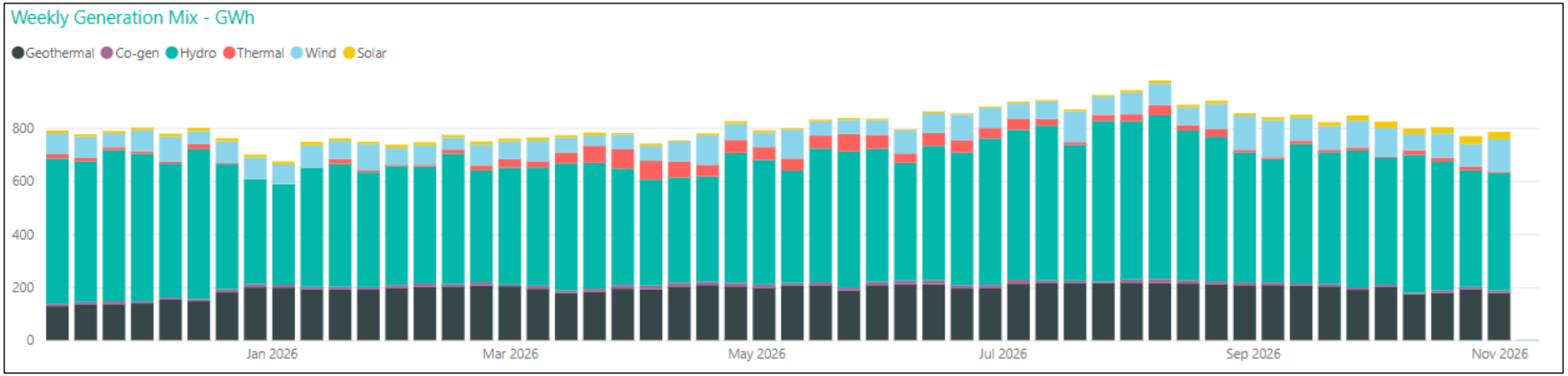


Generation mix

- Hydro below average at 57%
- Thermal below average at 0.6%
- Geothermal close to average 23%
- Wind above average at 15%
- Solar reaching 3.5%
- Cogen around 1.2%

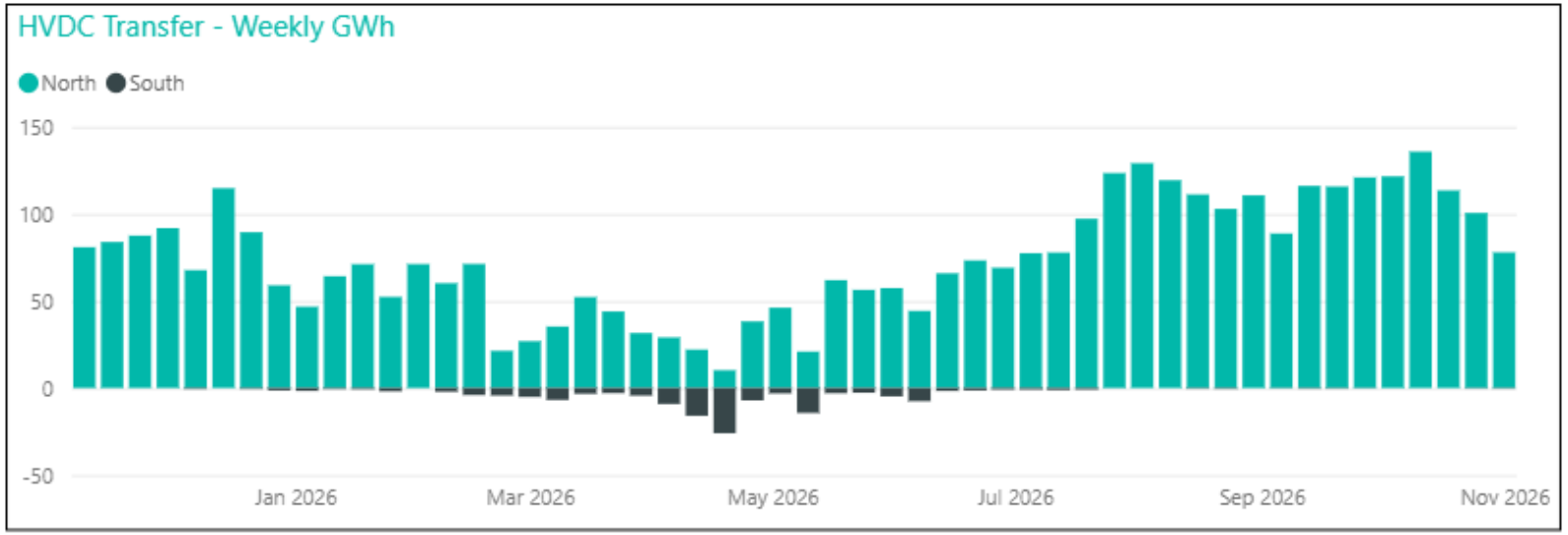


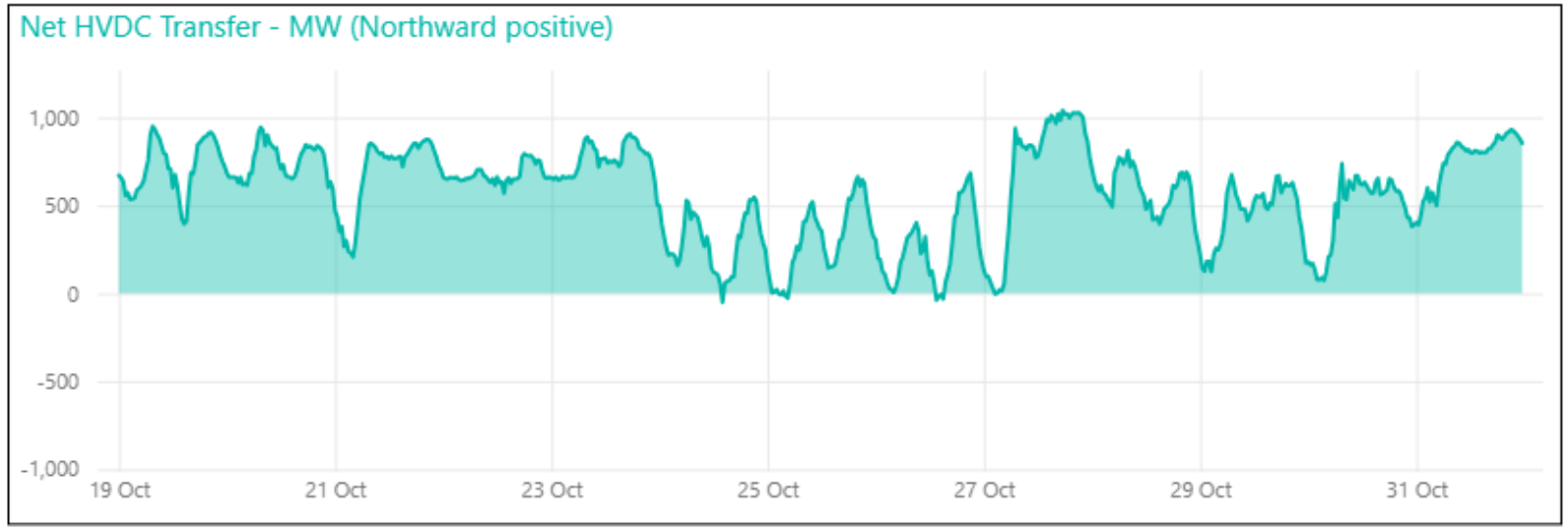




HVDC transfer TBC

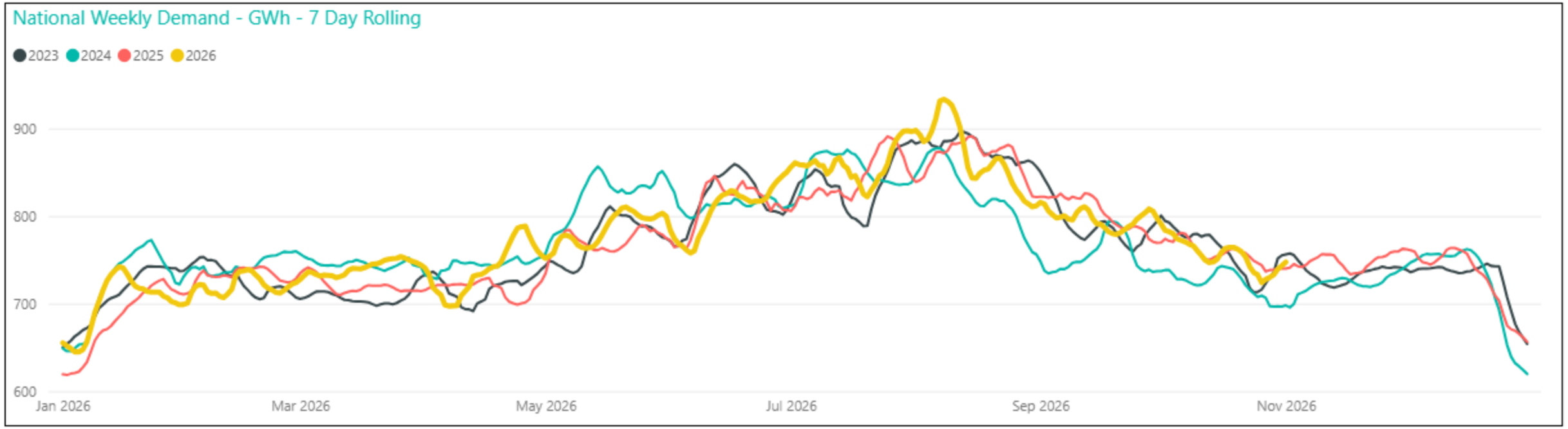
- HVDC transfer was mostly northward during the last fortnight, with high SI hydro and low NI hydro
- Northward transfer was ~ 101 GWh during the first week and ~78 GWh in the second week





Demand

- Demand was 747 GWh last week and 733 GWh the week prior, similar to previous years
- This masks some demand growth served by embedded solar outside the market





Security of Supply update

Energy Security Outlook

Fuel Capability Case

Changes in October'26:

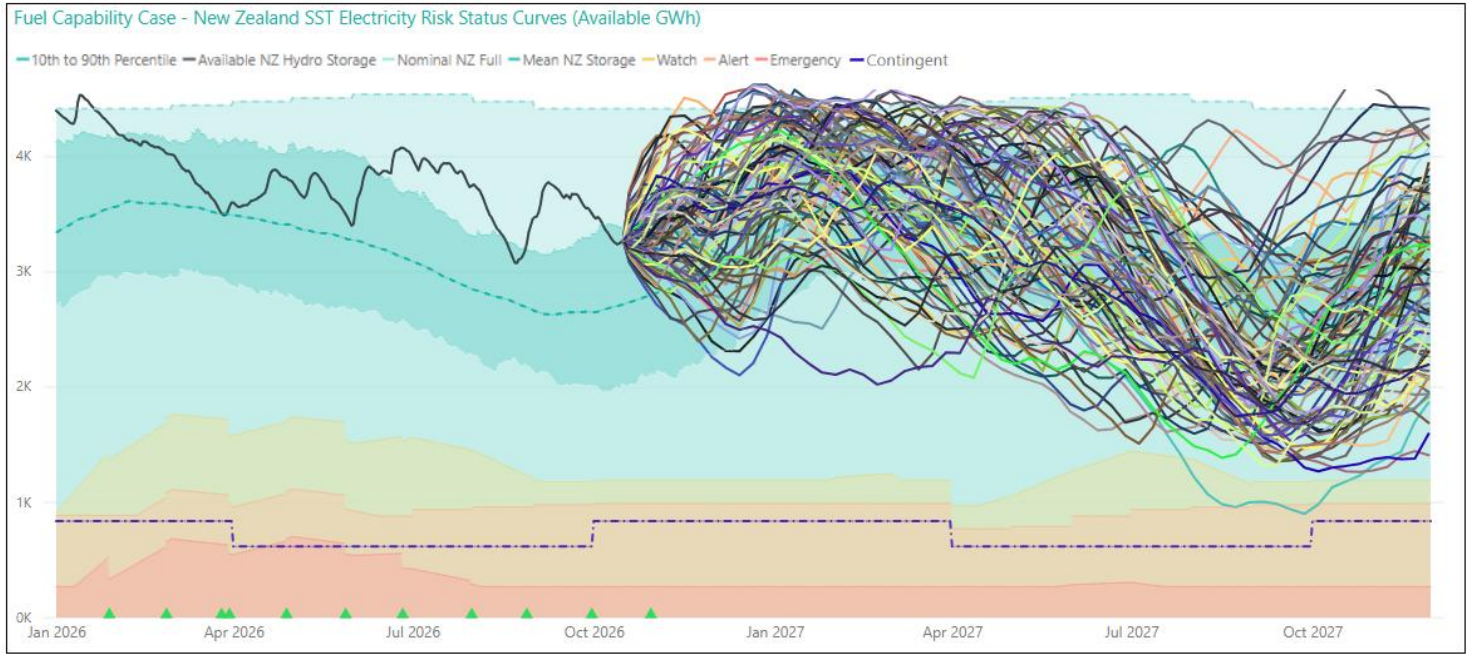
- Coal stockpile near maximum, AGS at (~64%) at start of October.
- Decreased forecast of gas availability for electricity generation and increased demand forecast.
- Additional commissioning project in 2028.

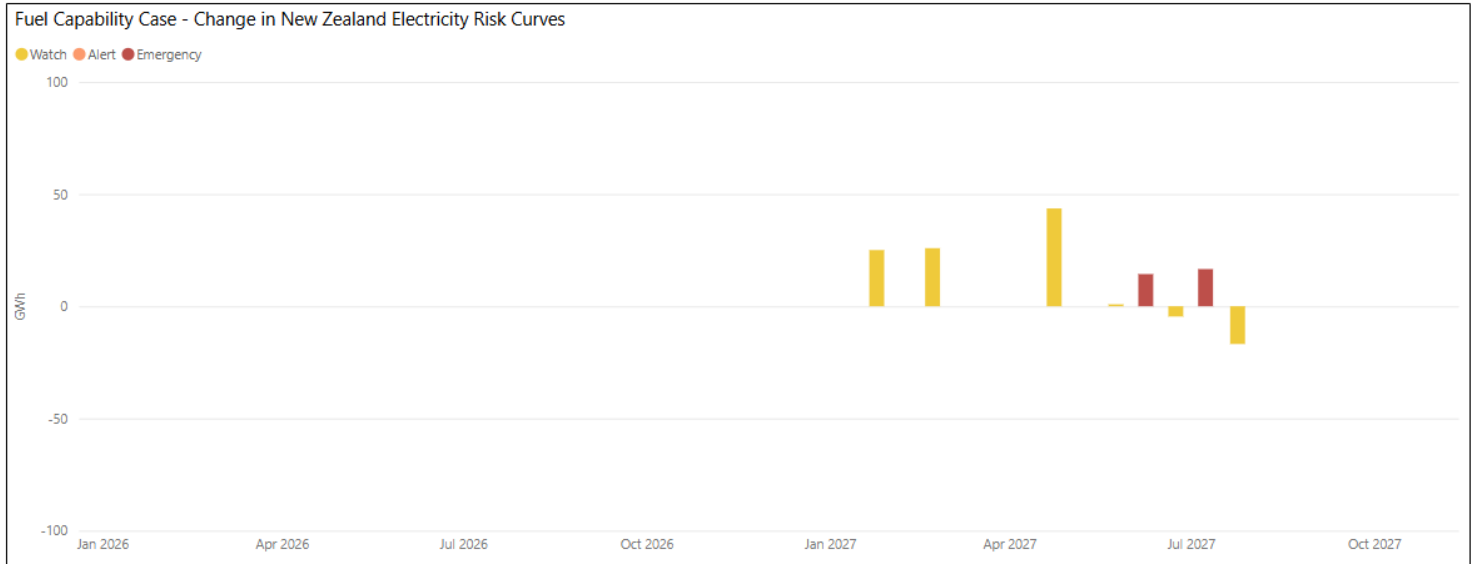
Changes of up to:

- 44 GWh Watch increase (May 2027)
- 17 GWh Watch decrease (August 2027)

SSTs (Simulated Storage Trajectories) crossing NZ:

	Watch	Alert	Emergency
2026	0	0	0
2027	1	1	0





Energy Security Outlook

Contracted Fuel Case

Available thermal energy restricted to currently secured (firm) contracts by generators.

Changes in October'26:

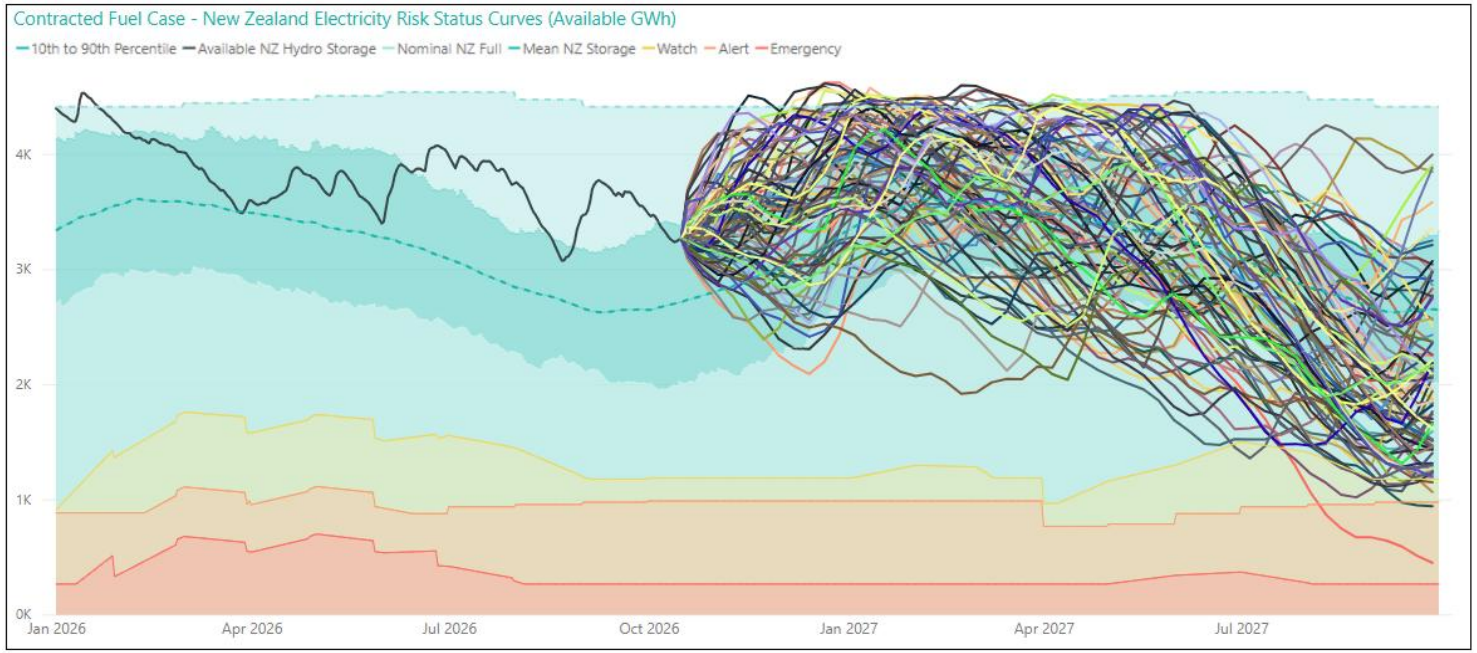
Decreased contracted gas volumes in the first half of 2027 followed by increase later in the year.

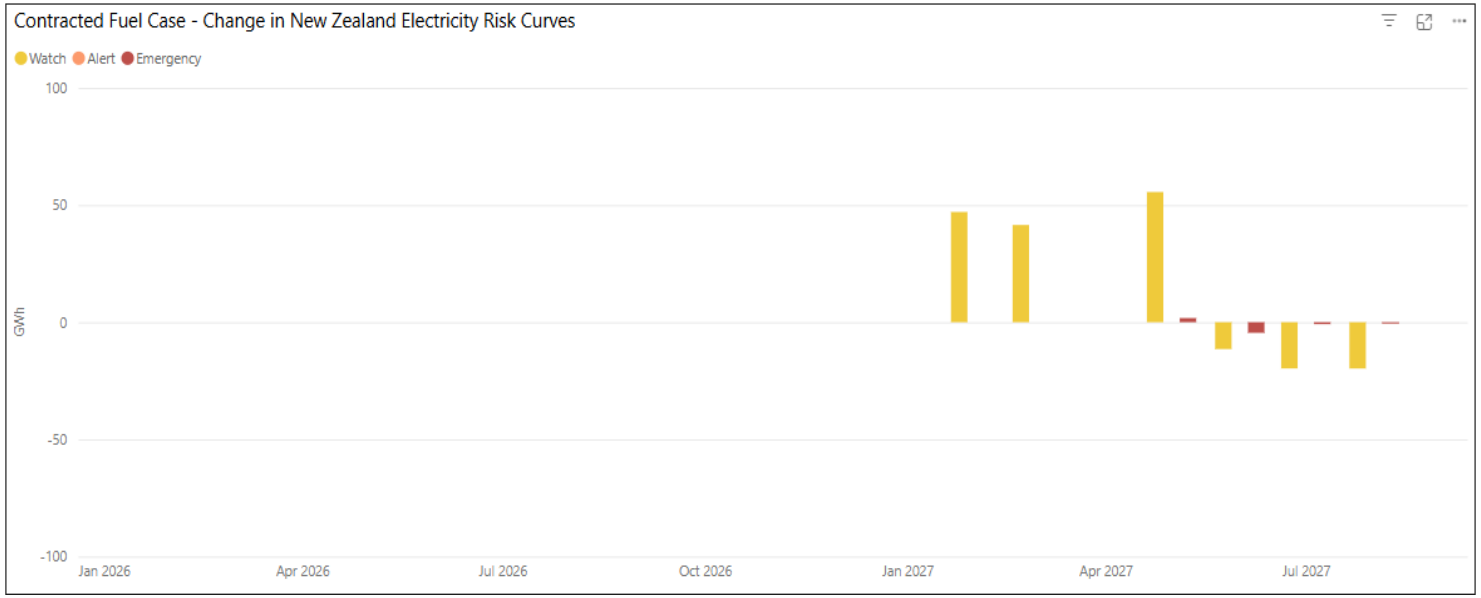
Changes of up to:

- 55 GWh Watch increase (May 2027)
- 20 GWh Watch decrease (July-August 2027)

SSTs (Simulated Storage Trajectories) crossing NZ:

	Watch	Alert	Emergency
2026	0	0	0
2027	10	2	0

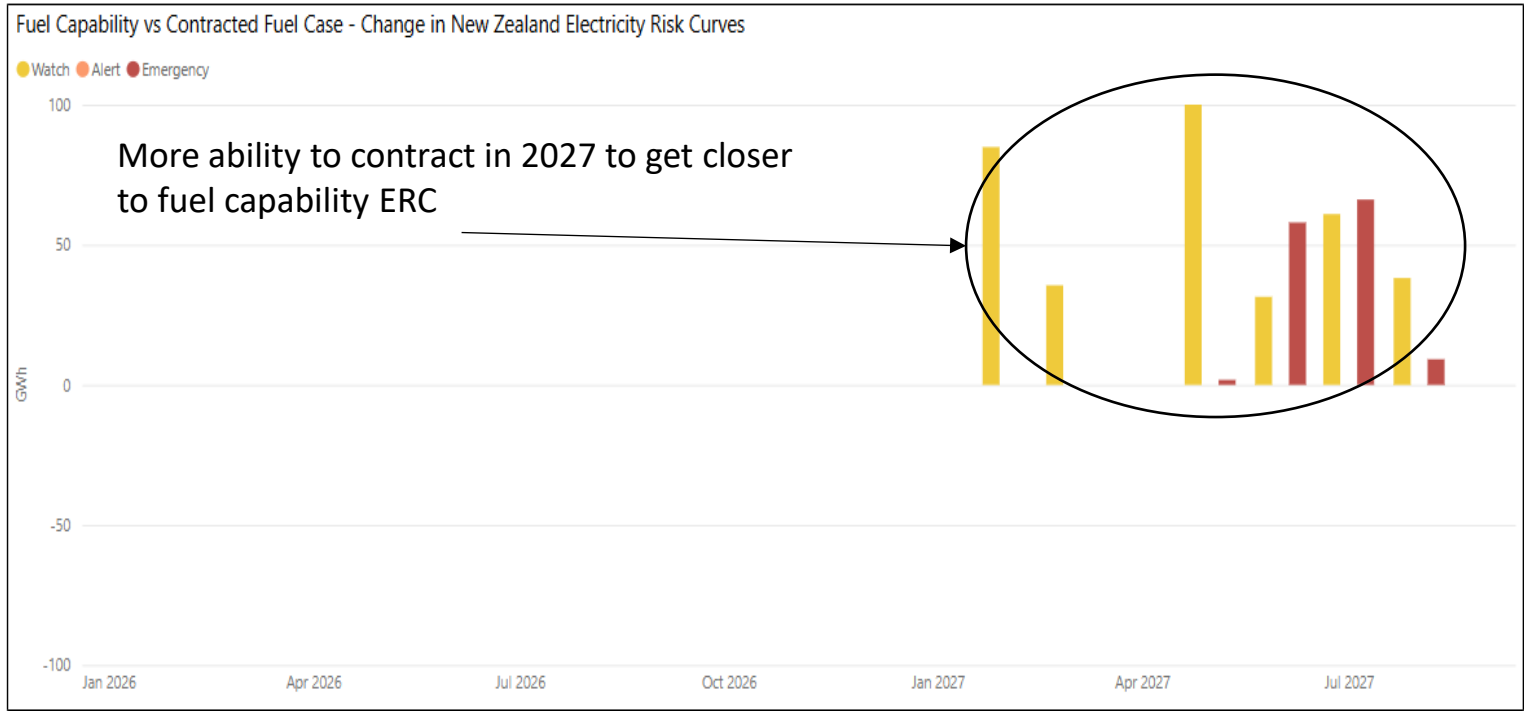




Energy Security Outlook

Fuel Capability vs Contracted Fuel Case

- All the system's thermal generation capability is currently deliverable in 2026
- The gap is present in 2027 (larger compared to last month update), reflecting the market's tendency to contract fuel closer to need



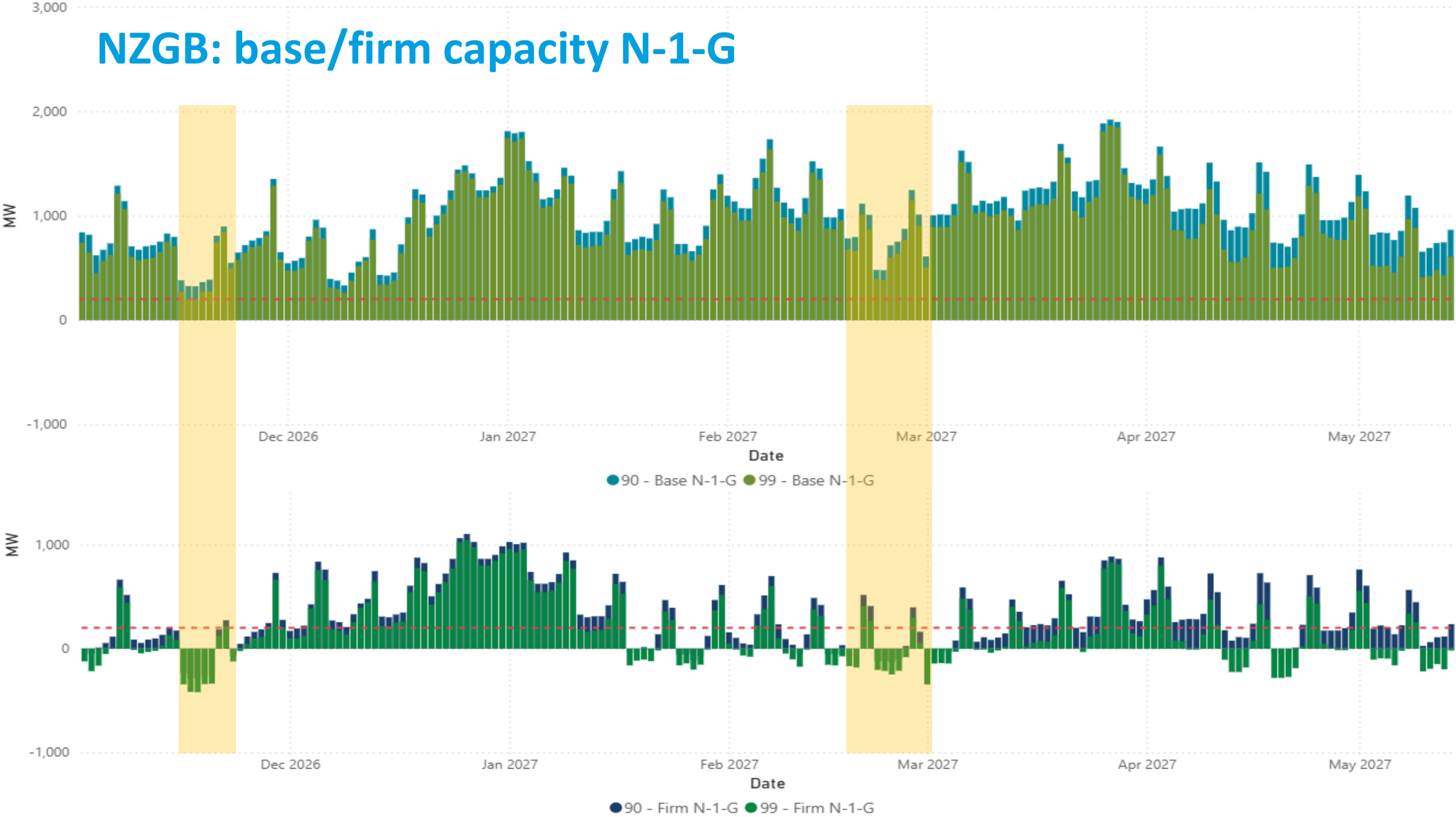
Differences of up to:

- 110 GWh Watch (May 2027)

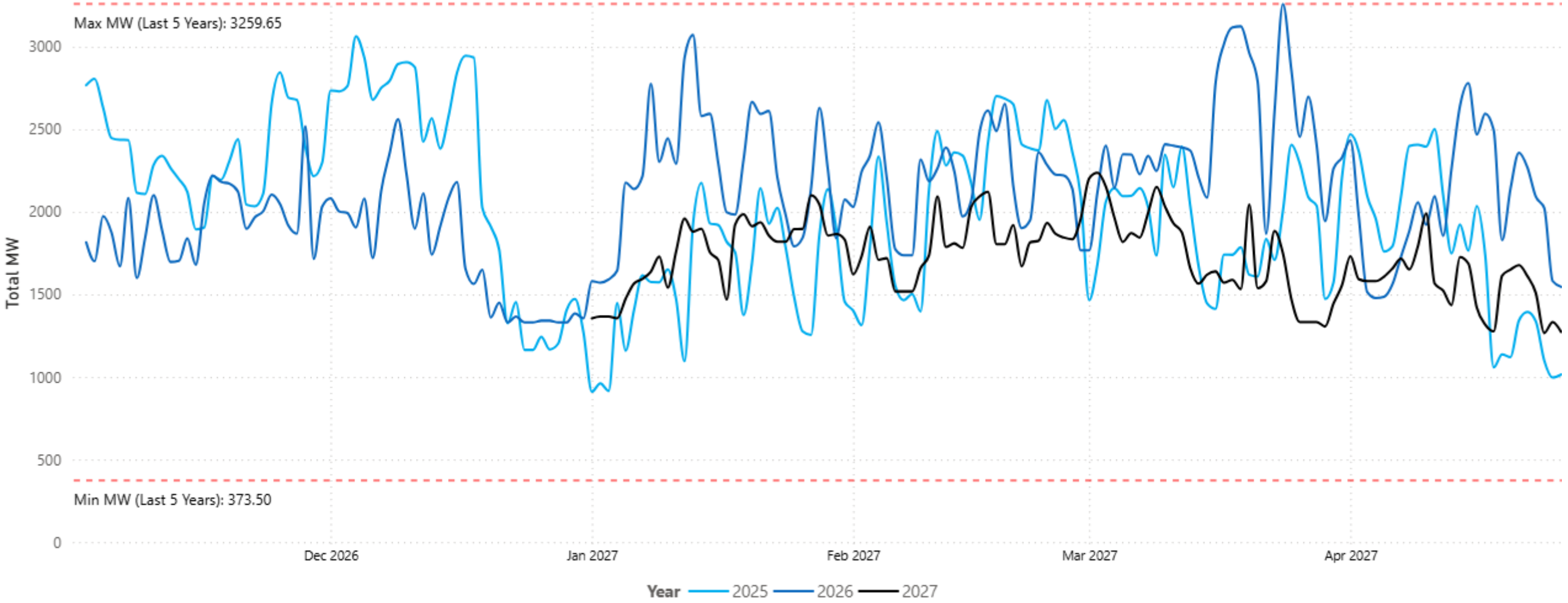


NZGB update

NZGB: base/firm capacity N-1-G



POCP Generation Outages



Mean YoY Difference

-490.04 ...

Mean YoY % Difference

-19.55%

Date

2/11/2026

26/04/2027

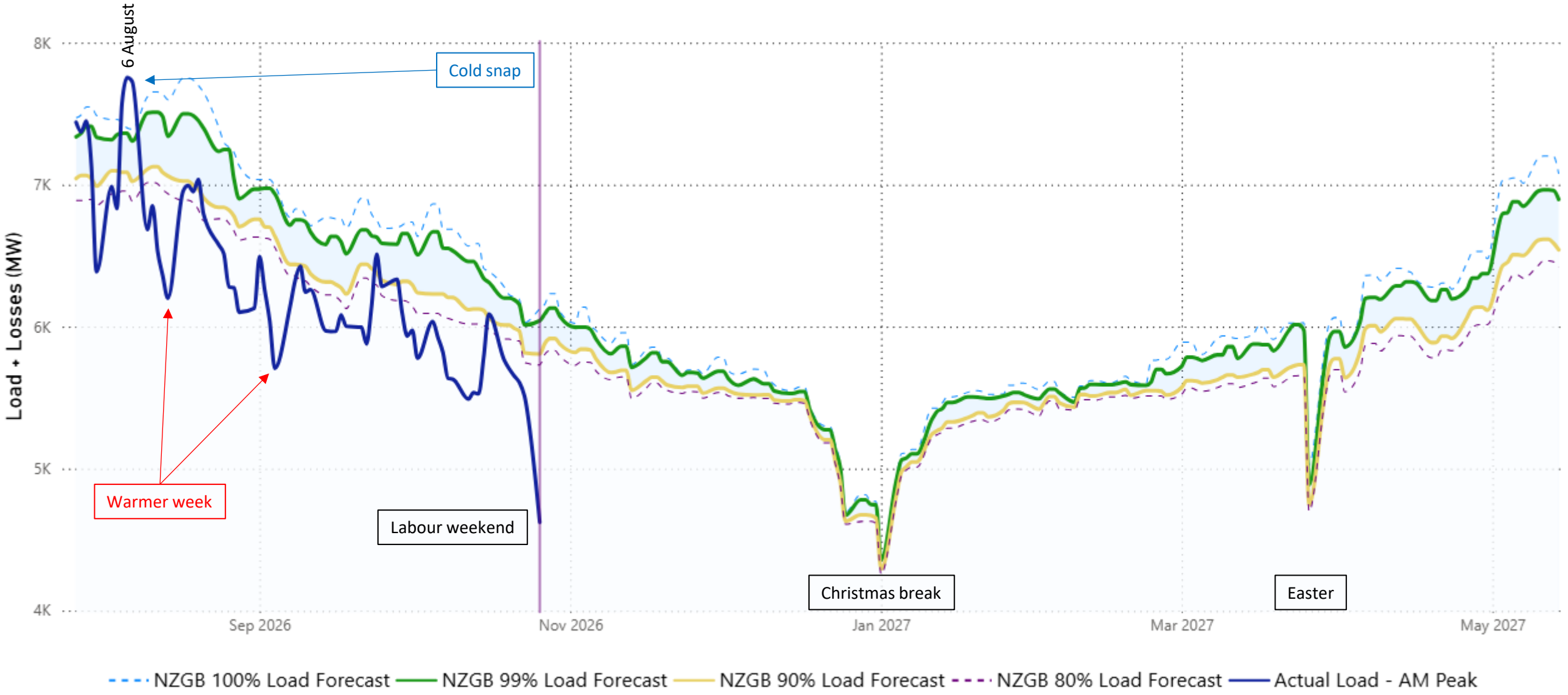
Year

2025

2026

2027

Peak Load vs Forecast





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 9 November

- MNG_ROS_2 / MNG_OTA_2
- HEP_ROS_1 / OTA_ROS_2
- KMO_TGA_1
- KPO_TMU_1

Week of 16 November

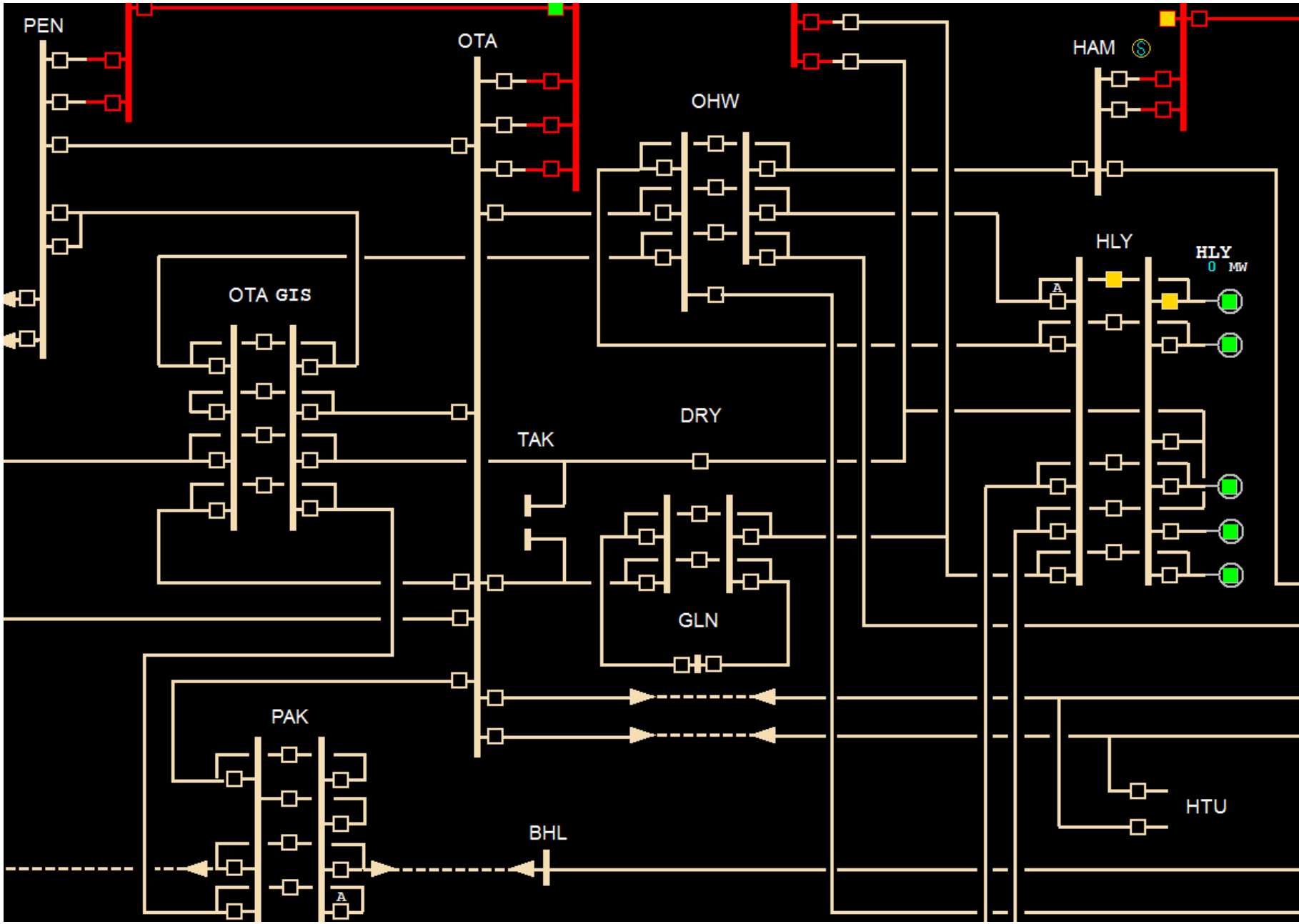
- KMO_TGA_1
- HOB_PEN_1 / PAK_PEN_3
- HEN_HEP_1 / HEN_HEP_2

Week of 23 November

- ALB_HPI_1 / HPI_MDN_1
- OTA_HTU_WKM_1
- KMO_TGA_1

Week of 30 November

- ALB_HEN_3 / HEN_OTA_1
- OTA_HTU_WKM_2
- KMO_MTM_TGA_2
- HAM_KPO_1



SNI Outages

Week of 9 November

- SFD_TMN_1
- HAY_WIL_LTN_1
- FHL_RDF_1 then FHL_RDF_2
- ATI_WKM_1
- THI_WKM_1

Week of 16 November

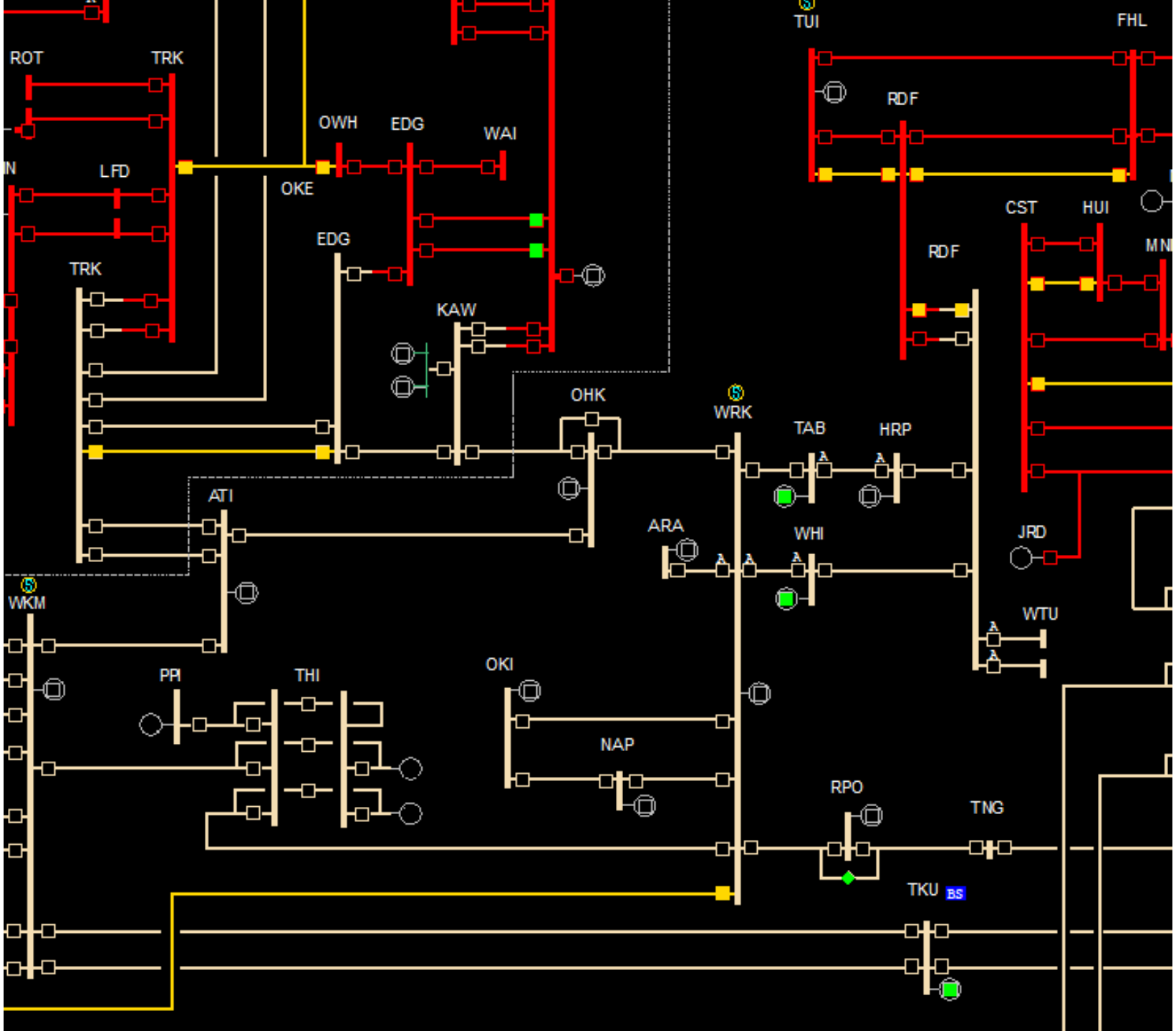
- THI_WKM_1
- THI_WRK_1
- CPK_WWD_WIL_2

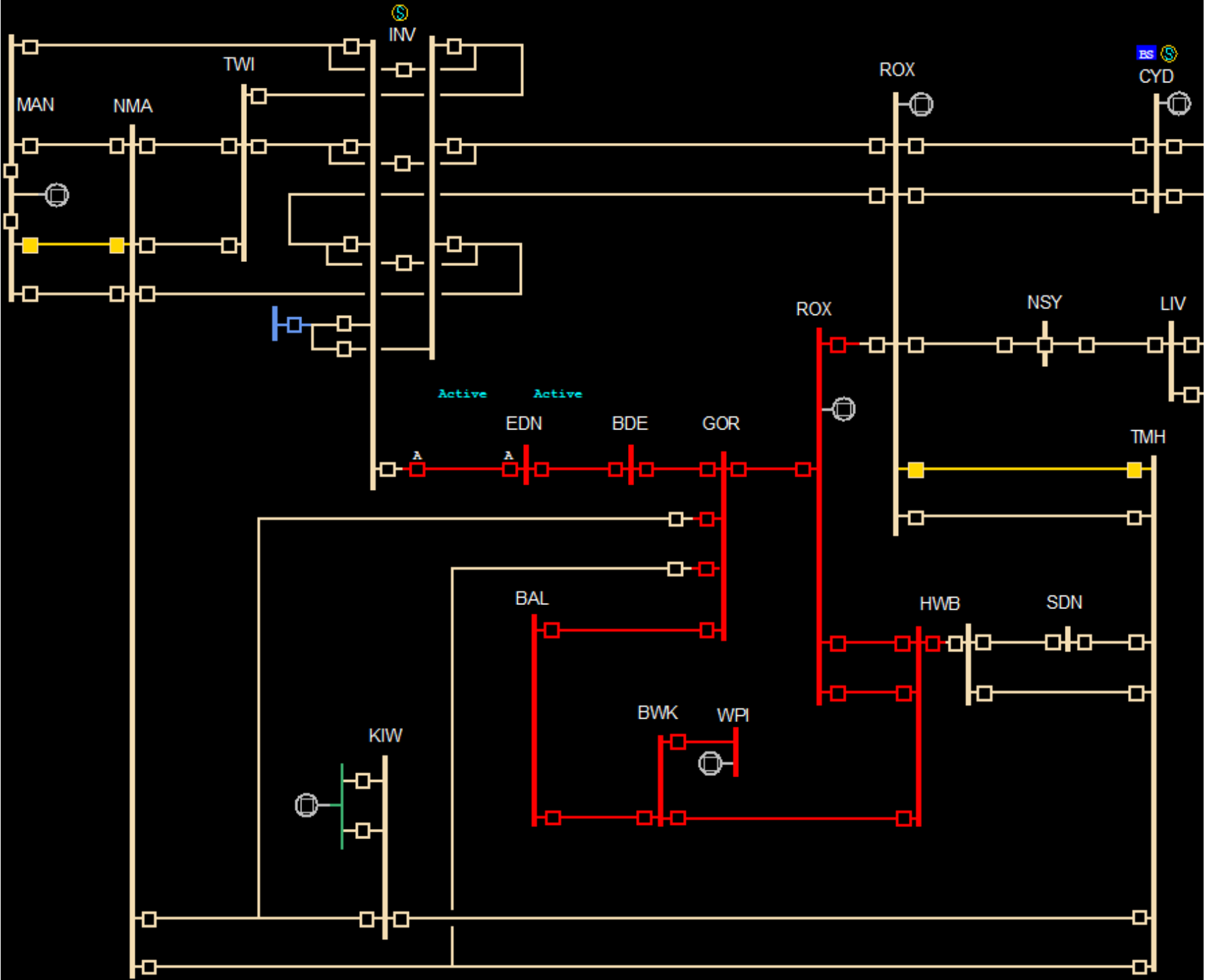
Week of 23 November

- THI_WRK_1
- BPE_TWC_LTN_1
- MTI – Black start test (Saturday)

Week of 30 November

- BPE_TNG_1
- BPE_LTN_2
- TMN_TWH_1





SI Outages

Week of 9 November

- HWB_ROX_1 / HWB_ROX_2
- MAN_NMA_1
- KIW_GOR_NMA_1
- AVI_BEN_2
- HKK_KUM_1

Week of 16 November

- MAN_NMA_1
- INV_TWI_2
- CML_FKN_1
- DOB_RFN_IGH_2 / IGH_KIK_2 / IGH_ROB_1

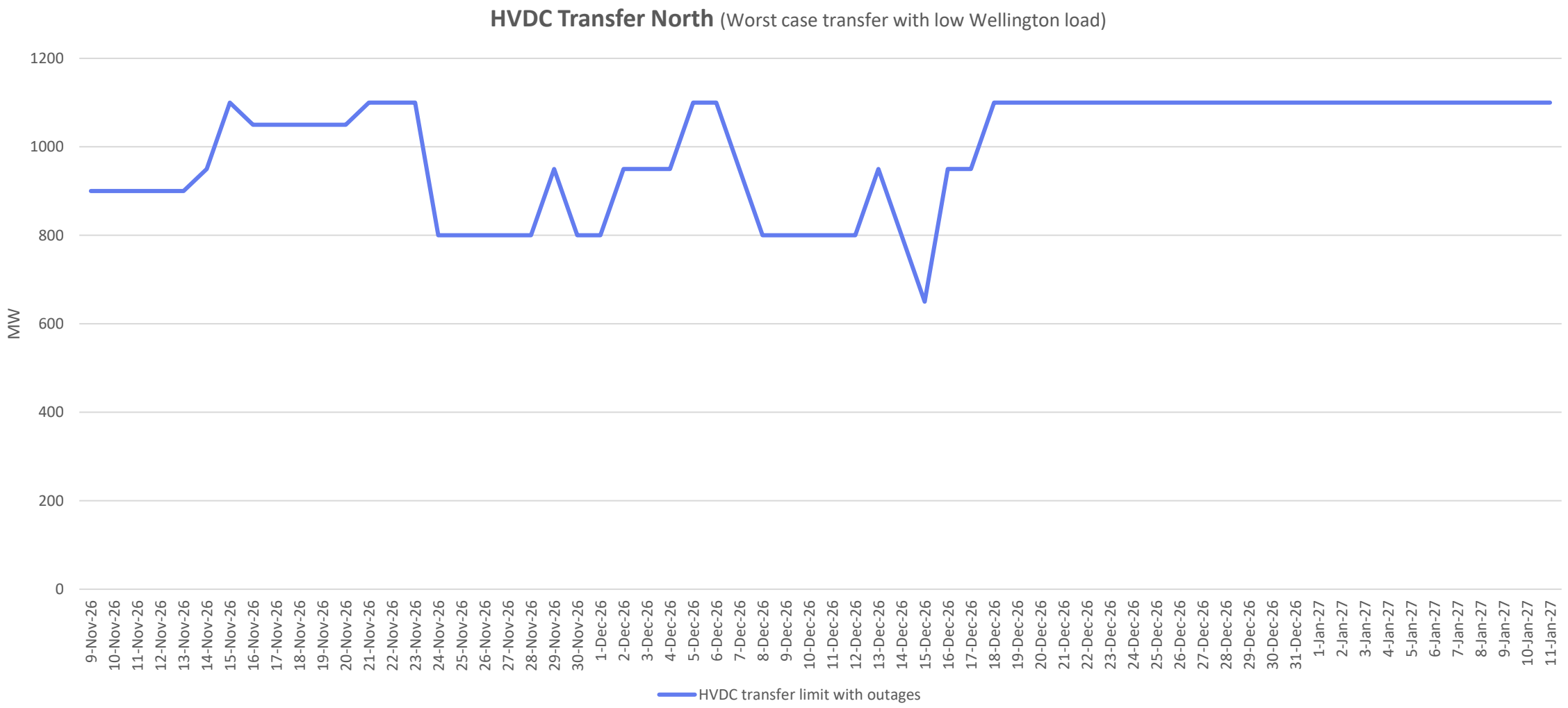
Week of 23 November

- MAN_NMA_1
- DOB_RFN_IGH_2 (Possible WC split)

Week of 30 November

- MAN_NMA_1
- KIK_STK_1

HVDC North transfer limit





Operational update

International Control Room Week

Thank you for the calm judgement, clear communication and round-the-clock mahi.



Who are the National Coordination Centre (NCC)?

CONTROL ROOMS	Hamilton and Wellington
ROLES	4x Operations Managers 32x System Coordinators
SHIFTWORK	12 Hour shifts, 365 x 24/7
TECH / TOOLS	SCADA, MOI, LTS2005, PI Vision, MetConnect, SDTF, SalesForce, …



What does NCC do?

Our core purpose is the secure and economic real-time coordination and operation of New Zealand's electricity market and system.

SECURE	Maintain real-time power system security
BALANCE	Dispatch energy / reserves to meet real-time demand
MARKET	Operate the wholesale electricity market in real-time
VOLTAGE	Actively manage real-time reactive power / transmission voltages
COORDINATE	Communicate and work with generators, distributors, Grid Owner and industry participants
RESPOND	**Manage emerging events, emergencies and restoration**



Keeping supply and demand in balance

When generation matches load, system frequency holds at 50 Hz and the power system is secure.

Generation / Supply

Hydro, geothermal, wind, solar, thermal generation, BESS dispatched onto the grid



Load / Demand

Homes, businesses, industry and major users drawing power right now

In balance = the power system is running securely

More generation than load and the see-saw tips, pushing frequency above 50 Hz.

System Coordinators hold the see-saw level in real time, second by second.

More load than generation and it tips the other way, pulling frequency below 50 Hz.

New Learning Resource – Generation Control Room 101

A short, practical refresher for working confidently and effectively with NCC.

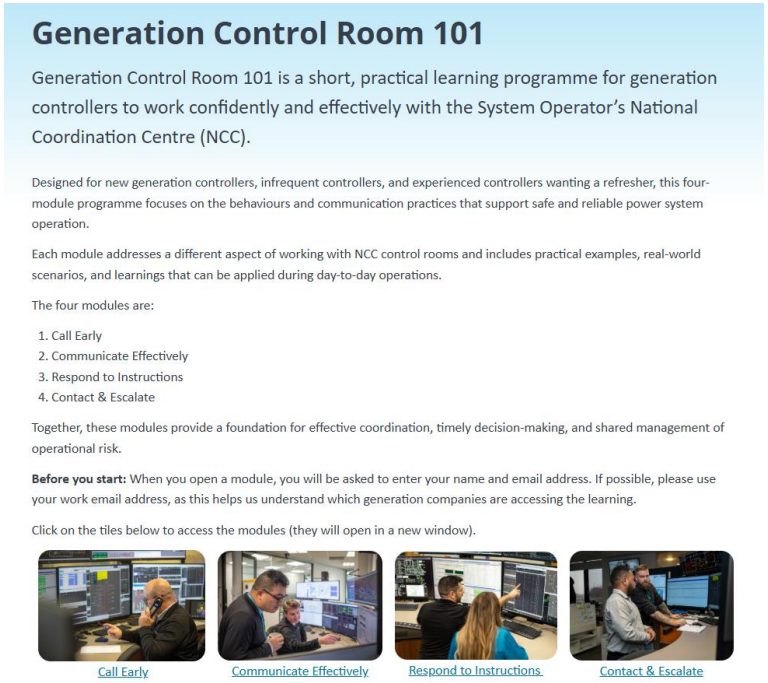
Four practical modules

01 **Call Early**

02 **Communicate Effectively**

03 **Respond to Instructions**

04 **Contact & Escalate**



Generation Control Room 101

Generation Control Room 101 is a short, practical learning programme for generation controllers to work confidently and effectively with the System Operator's National Coordination Centre (NCC).

Designed for new generation controllers, infrequent controllers, and experienced controllers wanting a refresher, this four-module programme focuses on the behaviours and communication practices that support safe and reliable power system operation.

Each module addresses a different aspect of working with NCC control rooms and includes practical examples, real-world scenarios, and learnings that can be applied during day-to-day operations.

The four modules are:

1. Call Early
2. Communicate Effectively
3. Respond to Instructions
4. Contact & Escalate

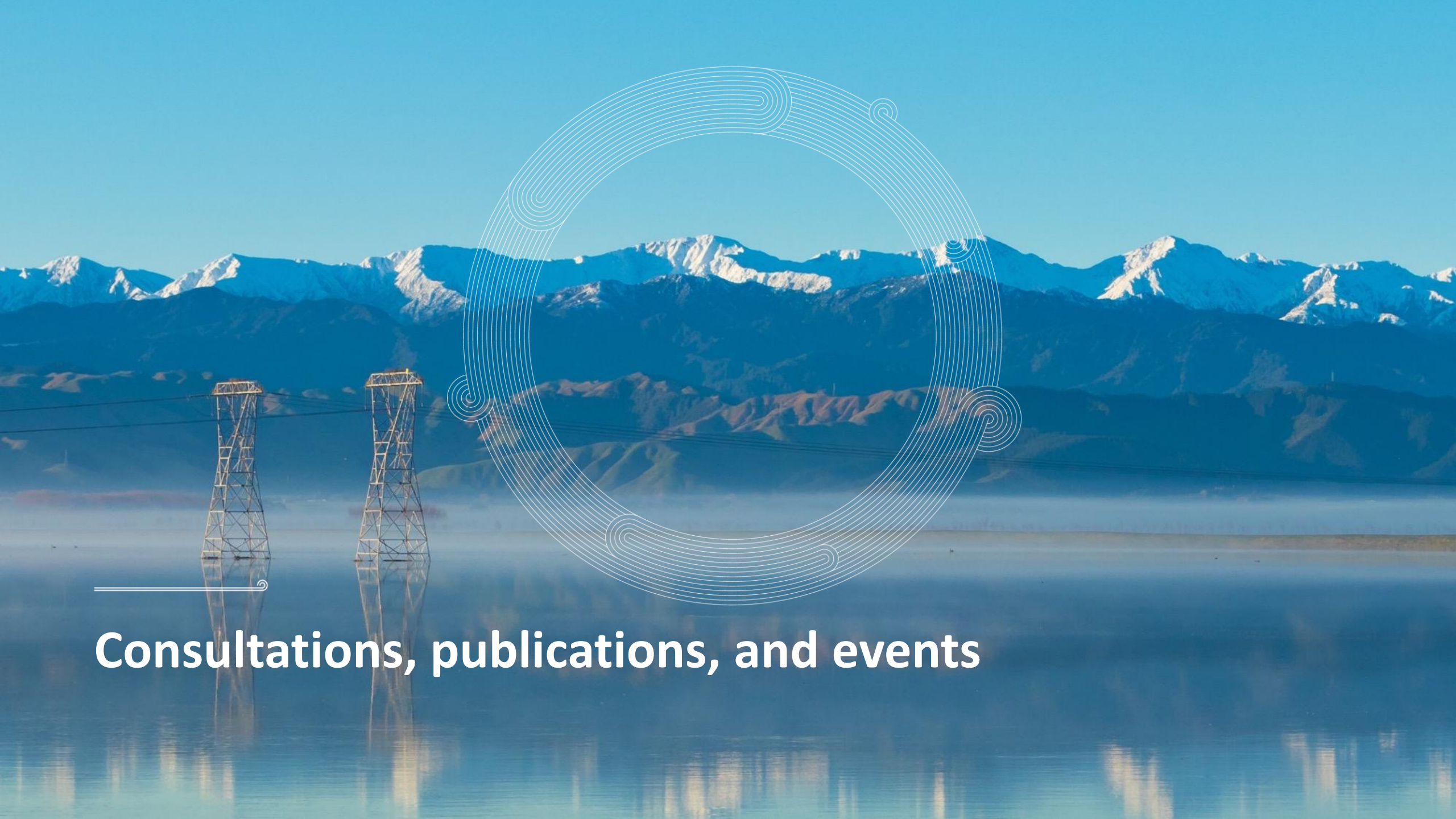
Together, these modules provide a foundation for effective coordination, timely decision-making, and shared management of operational risk.

Before you start: When you open a module, you will be asked to enter your name and email address. If possible, please use your work email address, as this helps us understand which generation companies are accessing the learning.

Click on the tiles below to access the modules (they will open in a new window).

Built for new, infrequent and experienced generation controllers and teams who want a refresher.

transpower.co.nz › System Operator › Learning Centre › Generation Control Room 101



Consultations, publications, and events

Consultations, publications, and events

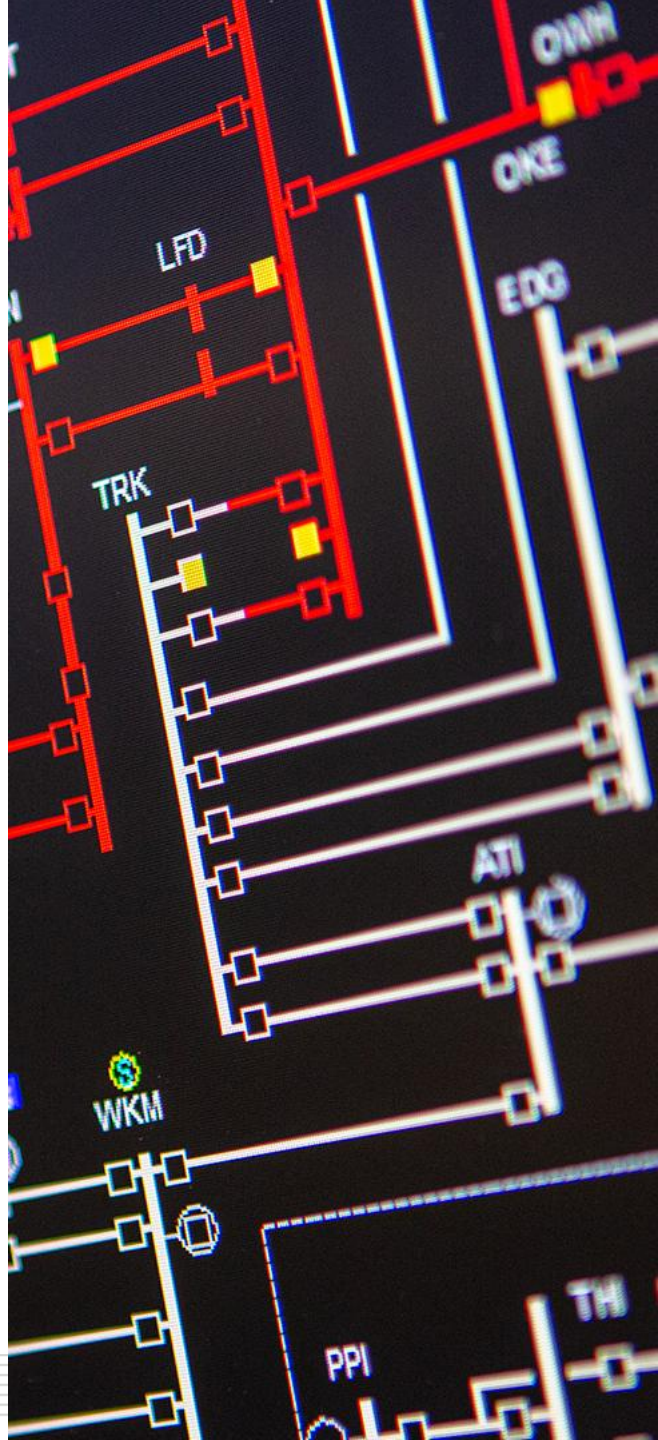
Last Friday we published the **October Energy Security Outlook** on our website

Our **2026 Ancillary Services Tender** for Over Frequency Reserves and South Island Black Start services closes at 5pm today, documents and details are available on our website.

Please submit any feedback on our **TSO-DSO coordination – Operational requirements** discussion paper by this Friday 6 November, details are on the consultation page.

The **Participants Forum** will be held on Thursday 12 November, attendance in person at our Wellington office. Please RSVP by 5 November, if you have any questions contact us at system.operator@transpower.co.nz.

We have scheduled an **Industry Webinar** for 11am on 24 November to demonstrate our changes to the **Asset Capability Statement (ACS) Application**. Invitations will be sent to ACS users shortly.



Questions / Pātai

Please raise your hand

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

TRANSPOWER.CO.NZ