



TRANSPower

System Operator Industry Forum

20 October 2026



Today's agenda

- Key messages
- Market update
- NZGB update
- Outage update – next four weeks
- Operational update
- Guest presentation: HVDC Link Upgrade Programme & 2028 Maintenance Outage update
- Consultations, publications, and events
- Questions / Pātai





Key Messages

- National hydro storage is declining and now sits below the 90th percentile. As we head into summer we are seeing increasing solar generation.
- Heading out of winter also means increased planned outages on the system. This can increase low residual and regional constraint risks.
- Upcoming Wairakei Ring outages in November need industry focus on unit commitment, plant availability, and flexibility.
- Maintaining frequency for a bipole risk has at times required flows across the inter-island link to be constrained.
- In-person Participants Forum is now scheduled for 12 November.



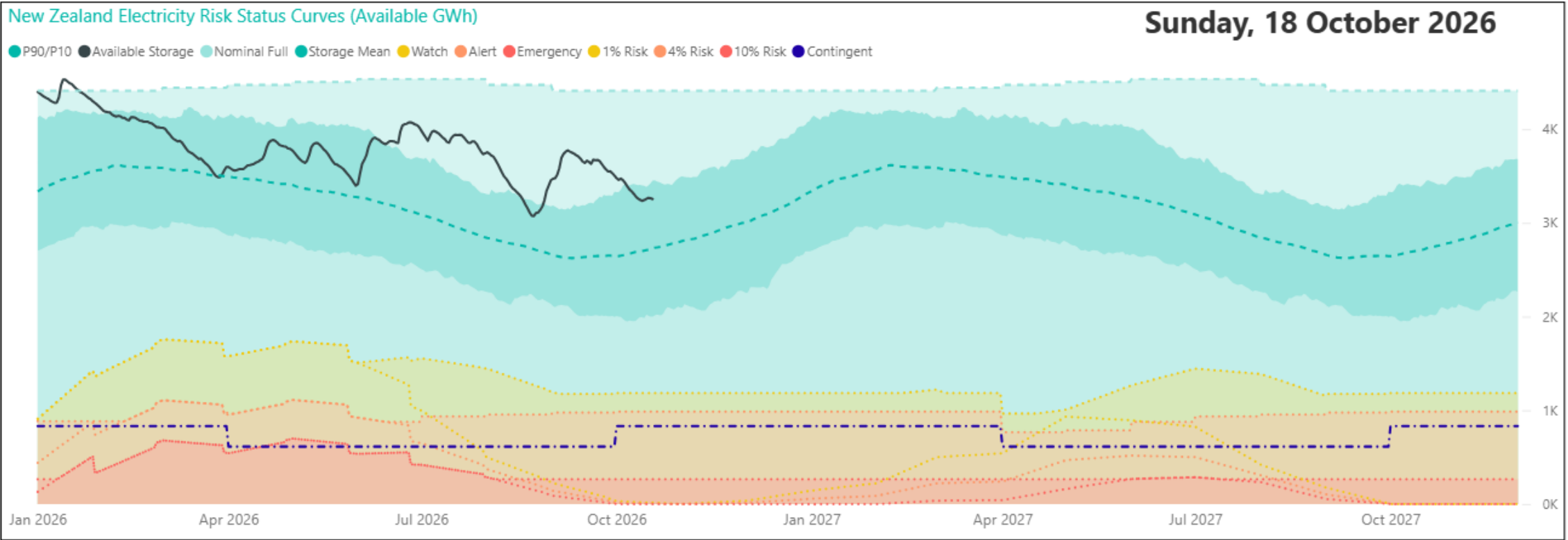
Market update

Energy: National hydro storage

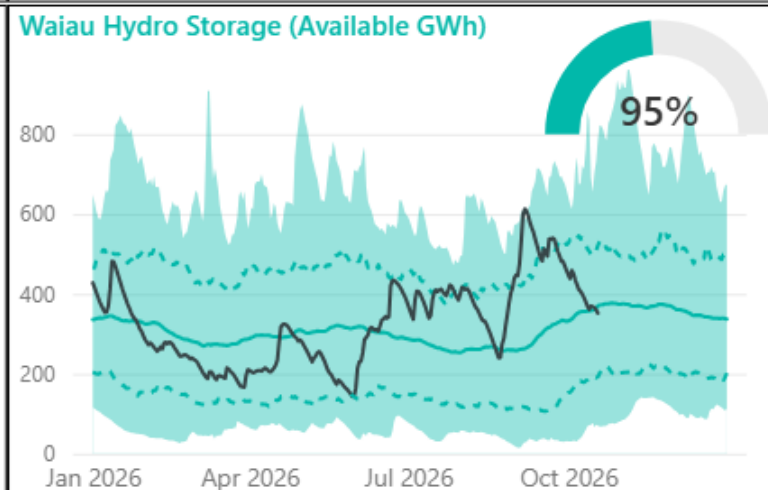
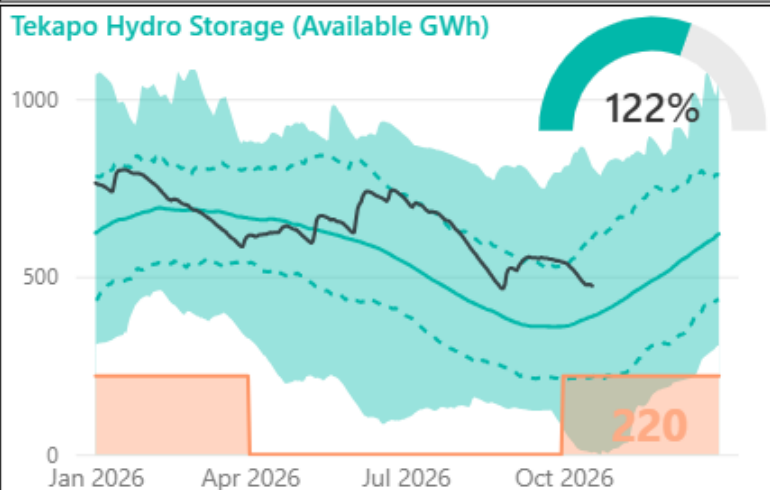
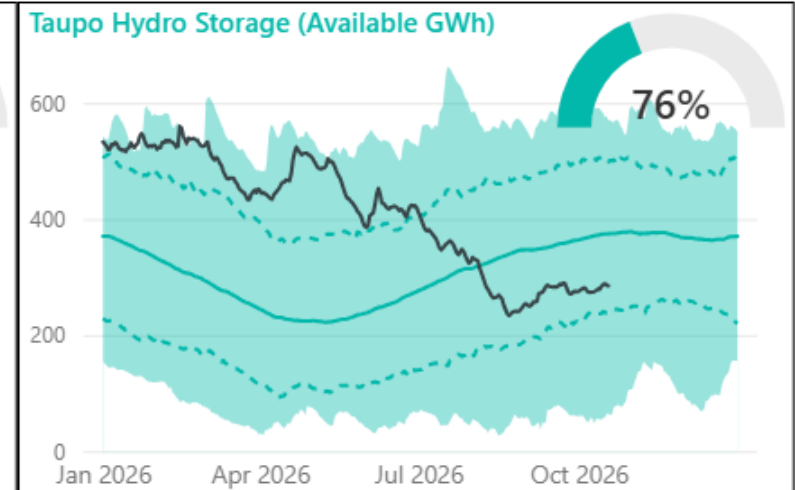
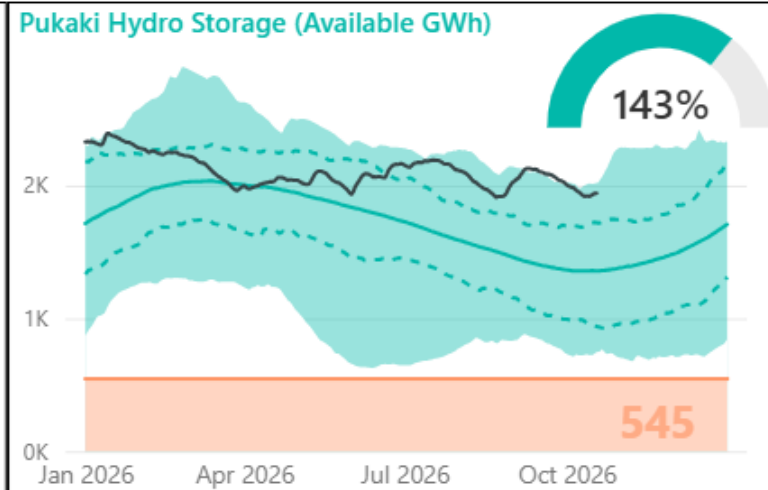
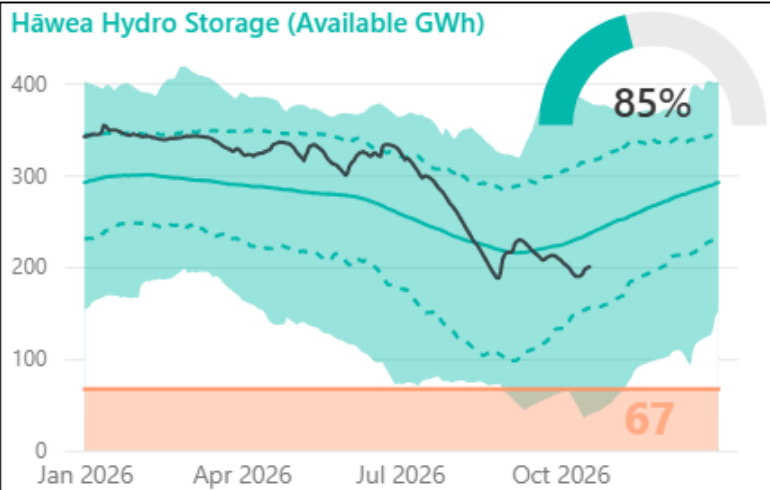
National hydro storage remains healthy and above average. Some decrease to storage since last forum

	Hydro storage level (% of mean ▲ / ▼)		
	New Zealand	South Island	North Island
Last forum	130%	139%	77%
Now	119% ▼	126% ▼	76% ▼

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



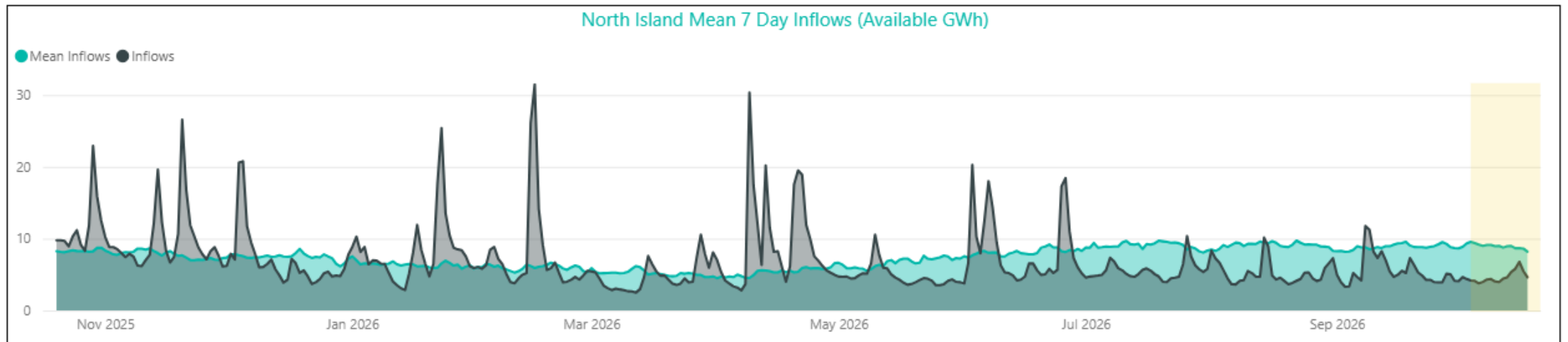
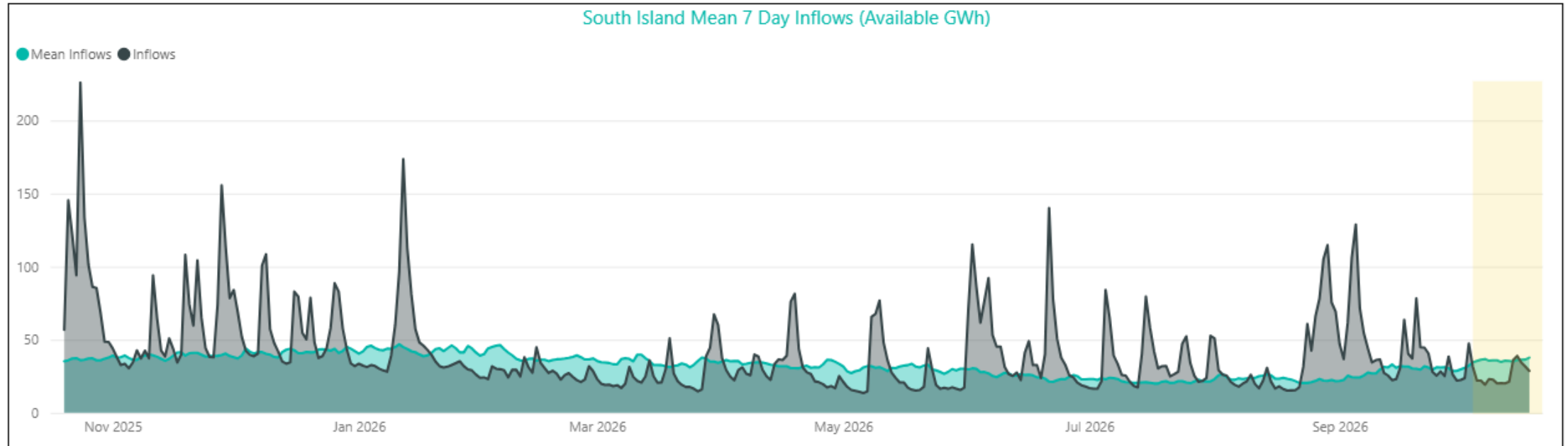
Hydro storage by catchment



Lake	Percent	GWh	Mean
Hāwea	85%	200	236
Manapōuri	110%	138	125
New Zealand	119%	3254	2727
Pūkaki	143%	1943	1358
South Island	126%	2968	2352
Taupō	76%	285	375
Te Anau	87%	214	245
Tekapo	122%	474	388



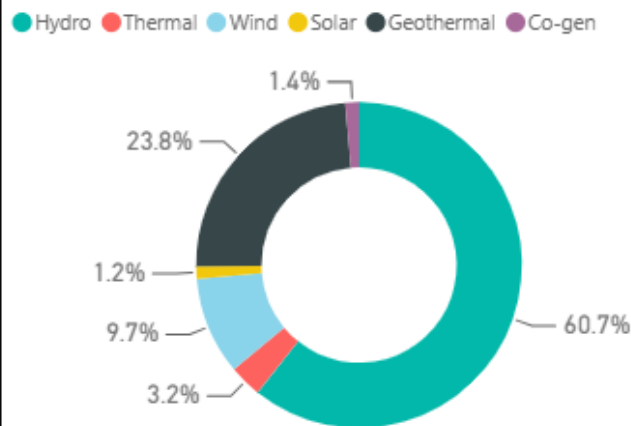
Hydro inflows



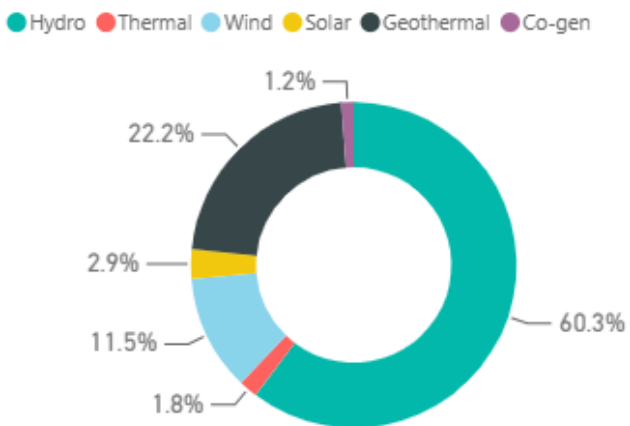
Generation mix

- Hydro around average at 60%
- Thermal below average at 2%
- Geothermal close to average 22%
- Wind above average at 12%
- Solar reaching 3%
- Cogen around 1%

Last 52 Weeks Generation Mix - Weekly GWh

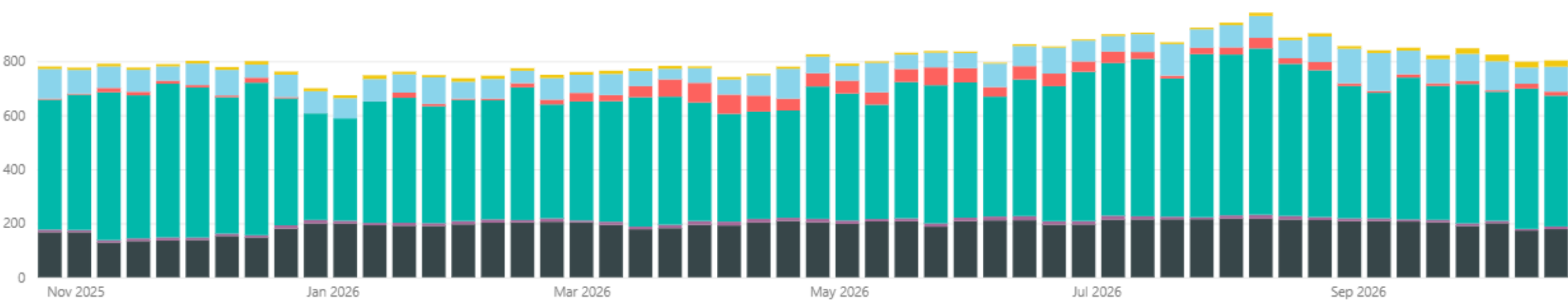


Last 7 Days Generation Mix - Weekly GWh



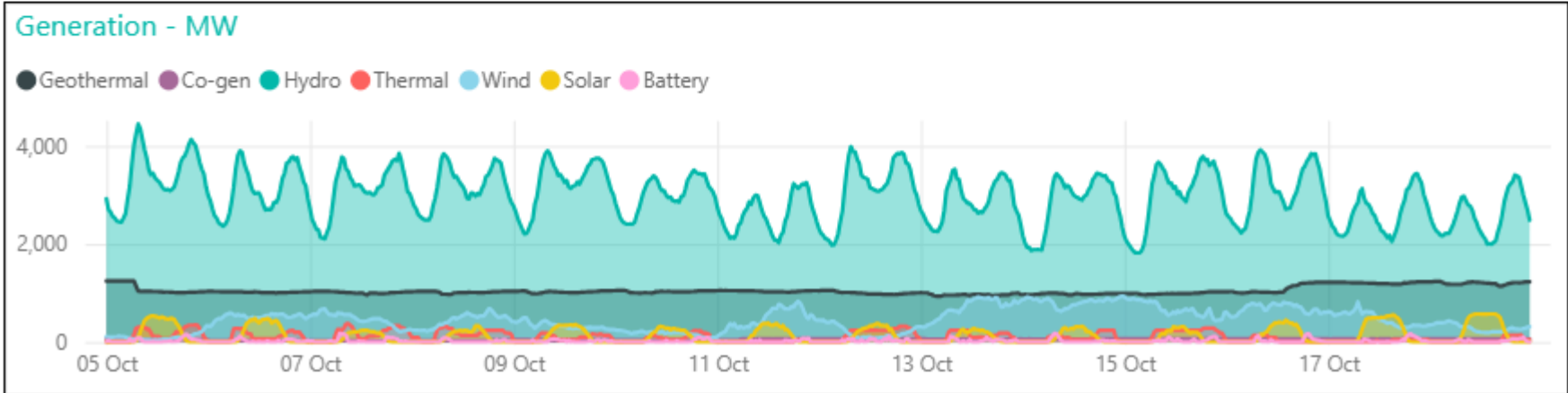
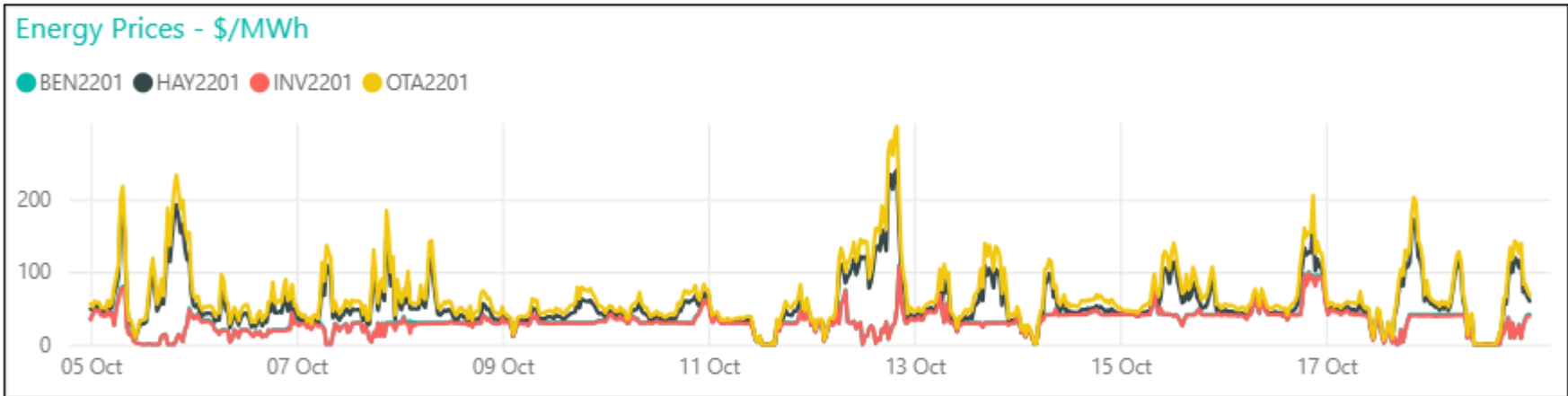
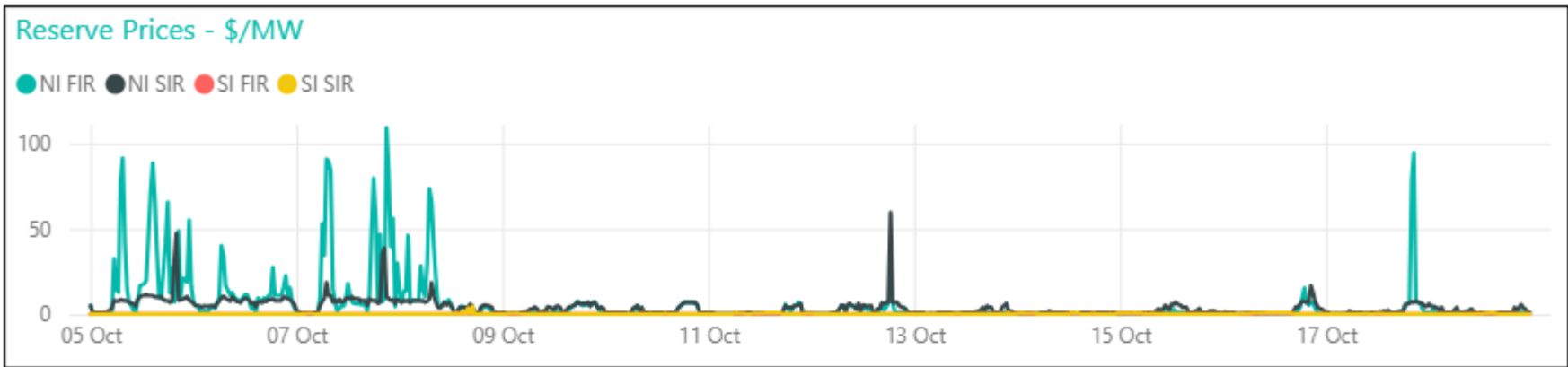
Weekly Generation Mix - GWh

Geothermal Co-gen Hydro Thermal Wind Solar



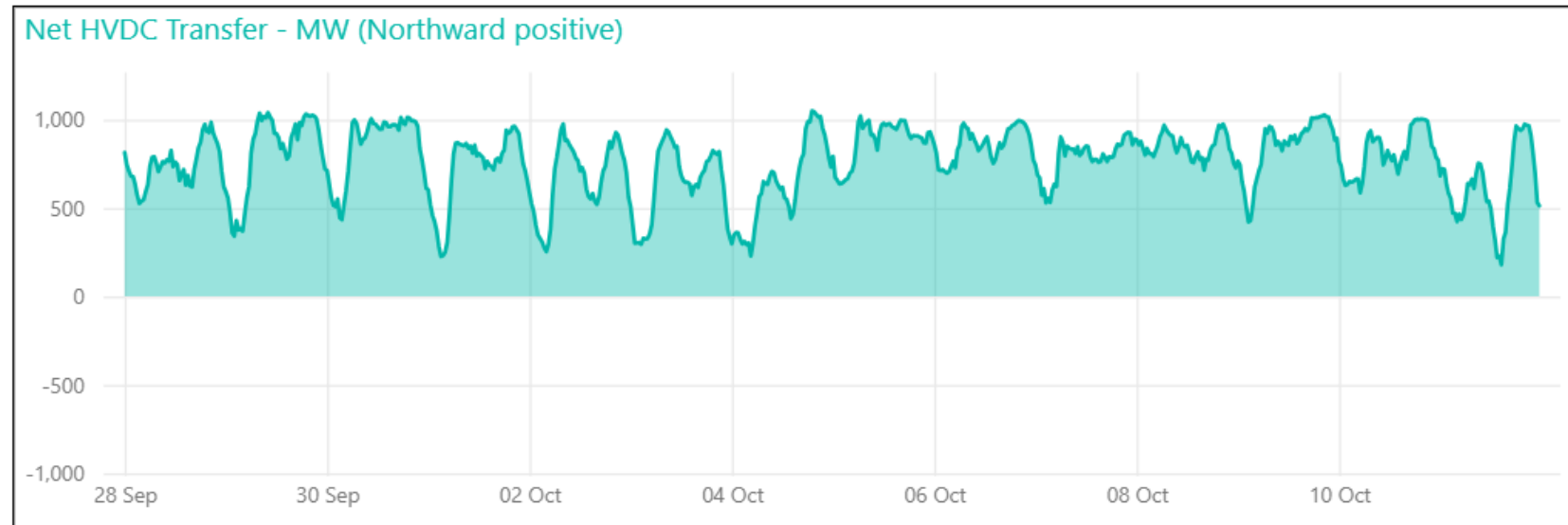
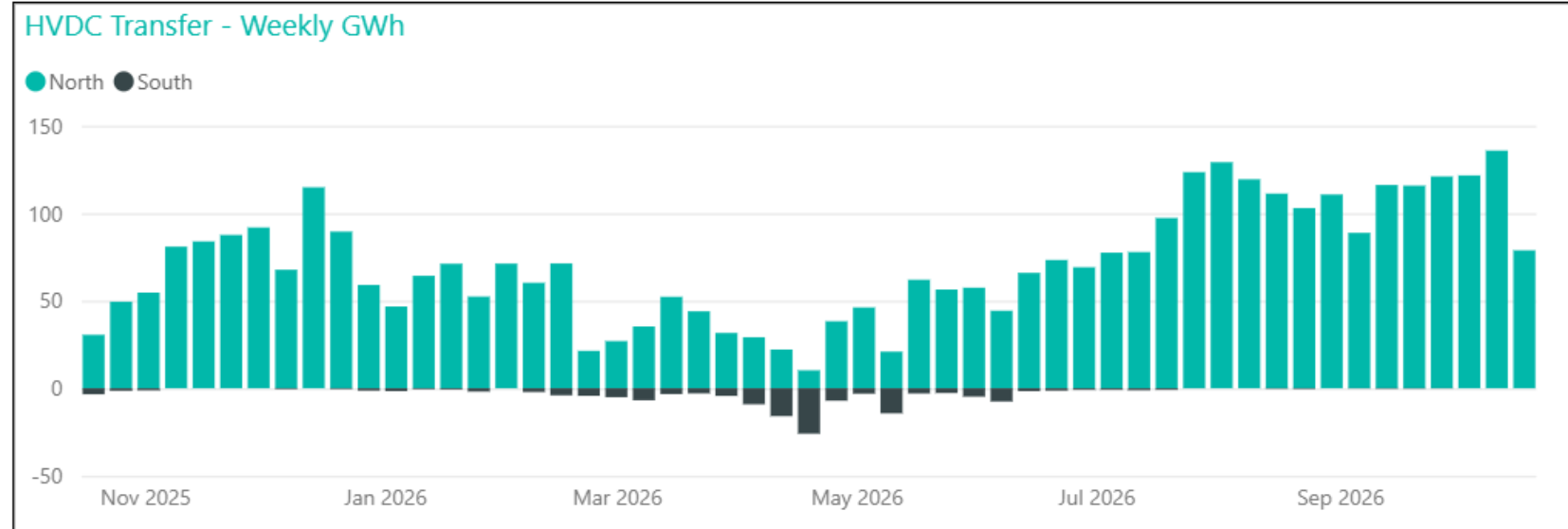
Pricing

- Price separation occurred at times due to periods of low wind generation and at other times during periods of high HVDC transfer
- Price at Ōtāhuhu averaged \$75/MWh last week and \$60/MWh the week before
- Prices peaked at \$300/MWh at Ōtāhuhu on Monday 12 October during evening peak



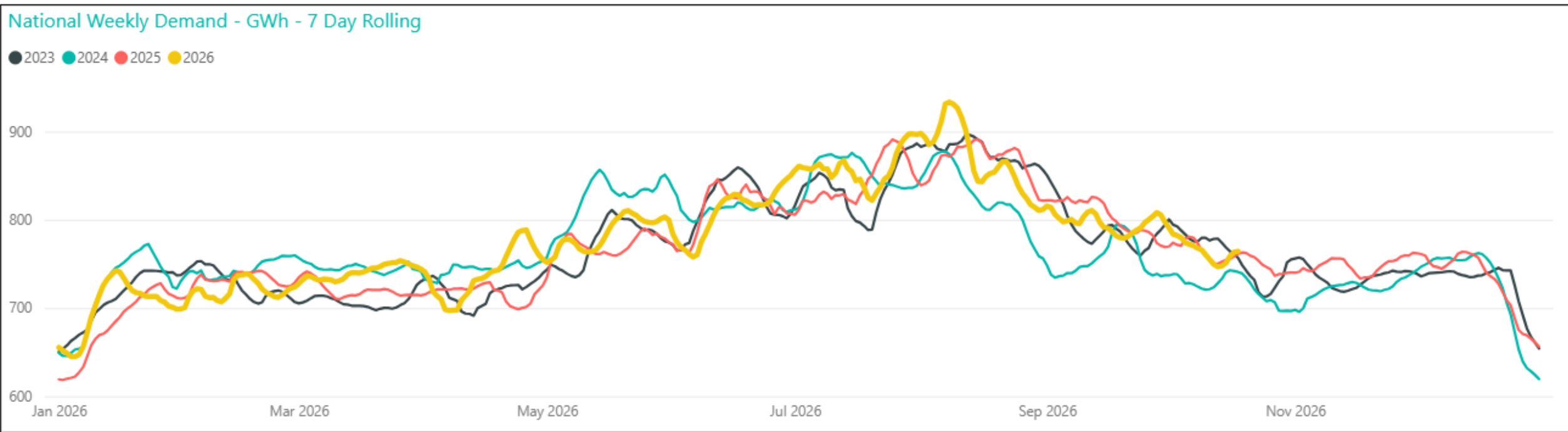
HVDC transfer

- HVDC transfer was entirely northward during the last fortnight.
- Northward transfer was 136 GWh during the first week and ~96 GWh in the second



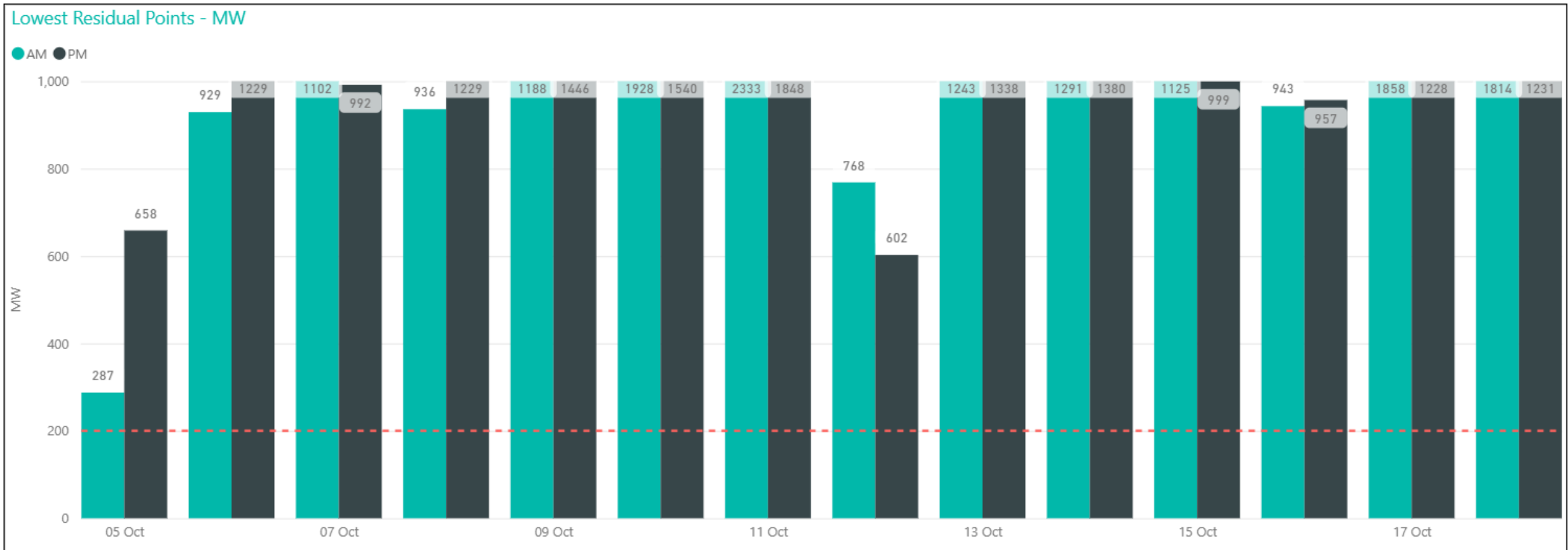
Demand

- Peak demand reached 5,849 MW on the morning of Friday 16 October
- In total, demand was 764 GWh last week and 755 GWh the week prior



Capacity residual margins

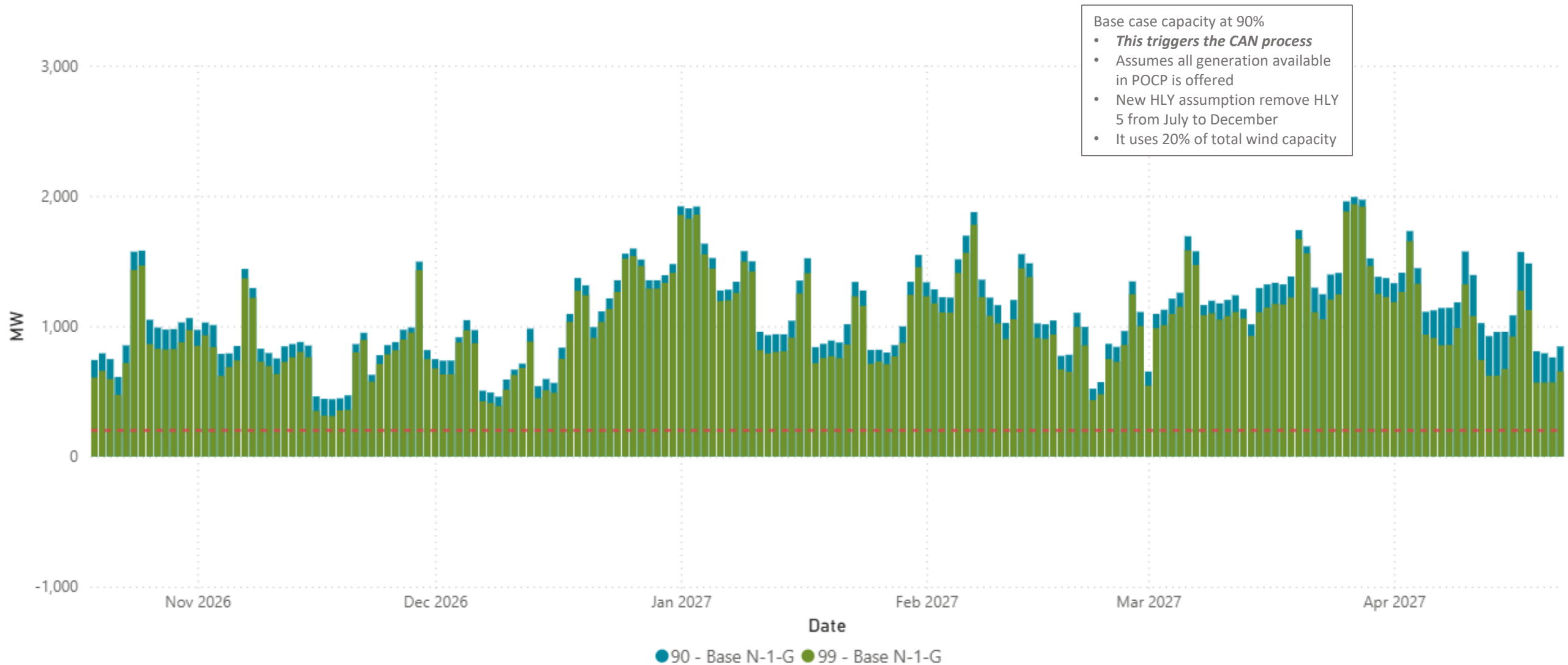
- Healthy residuals overall
- The lowest residual of 287 MW occurred on Monday 5 October coinciding with low wind, relatively high demand, and the beginning of a geothermal station outage.



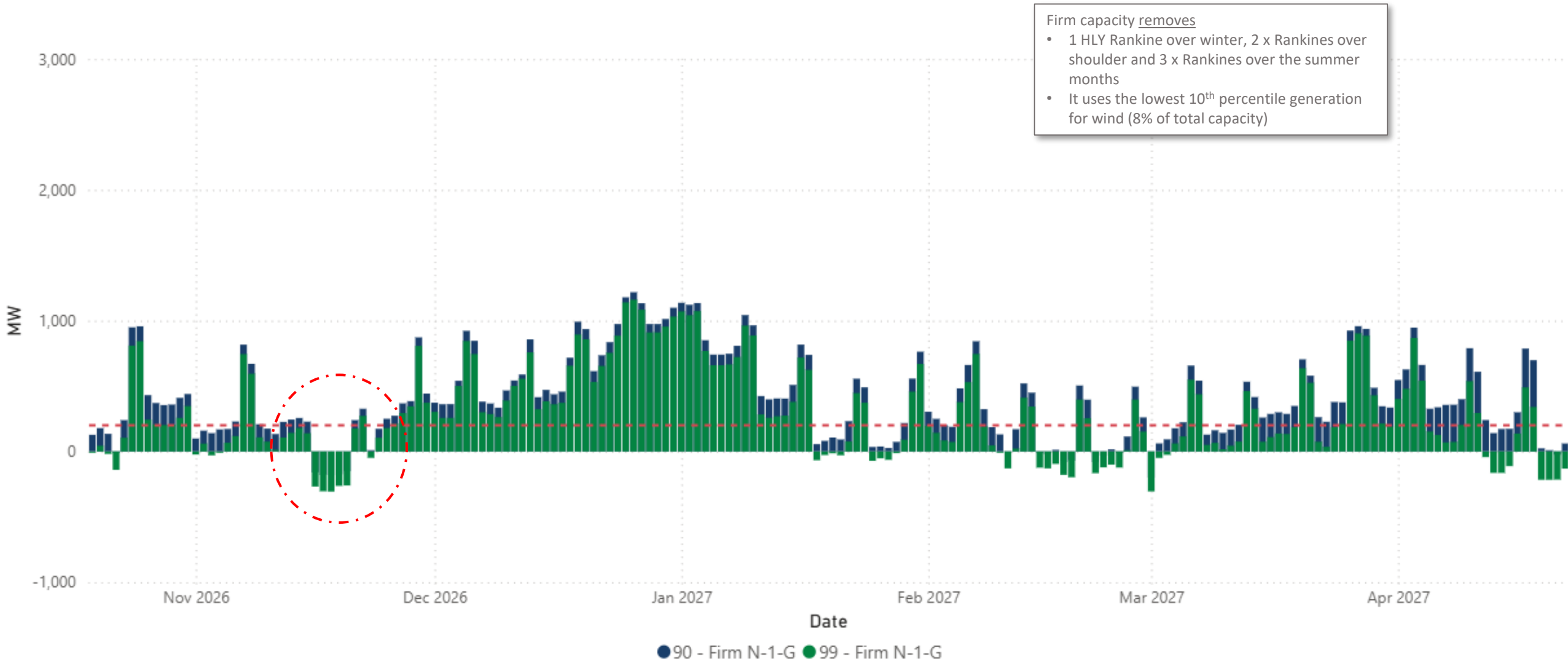


NZGB update

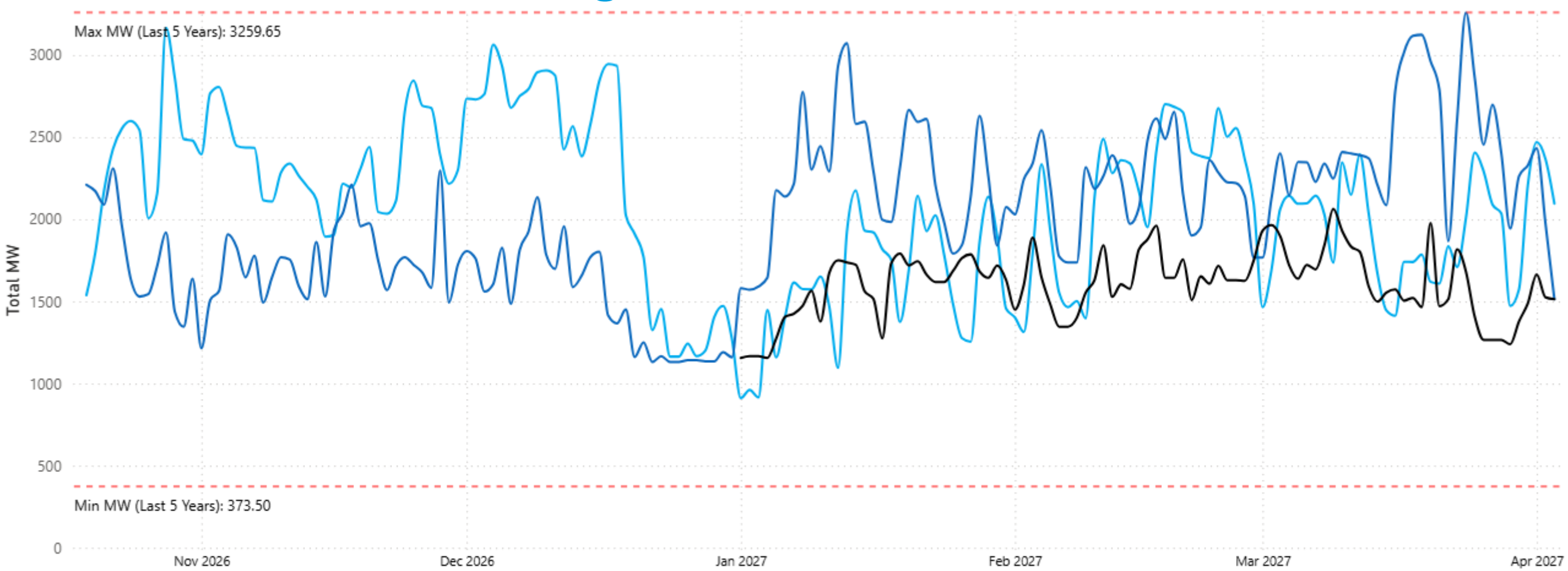
NZGB update: base capacity N-1-G



NZGB update: firm capacity only N-1-G



POCP Generation Outages



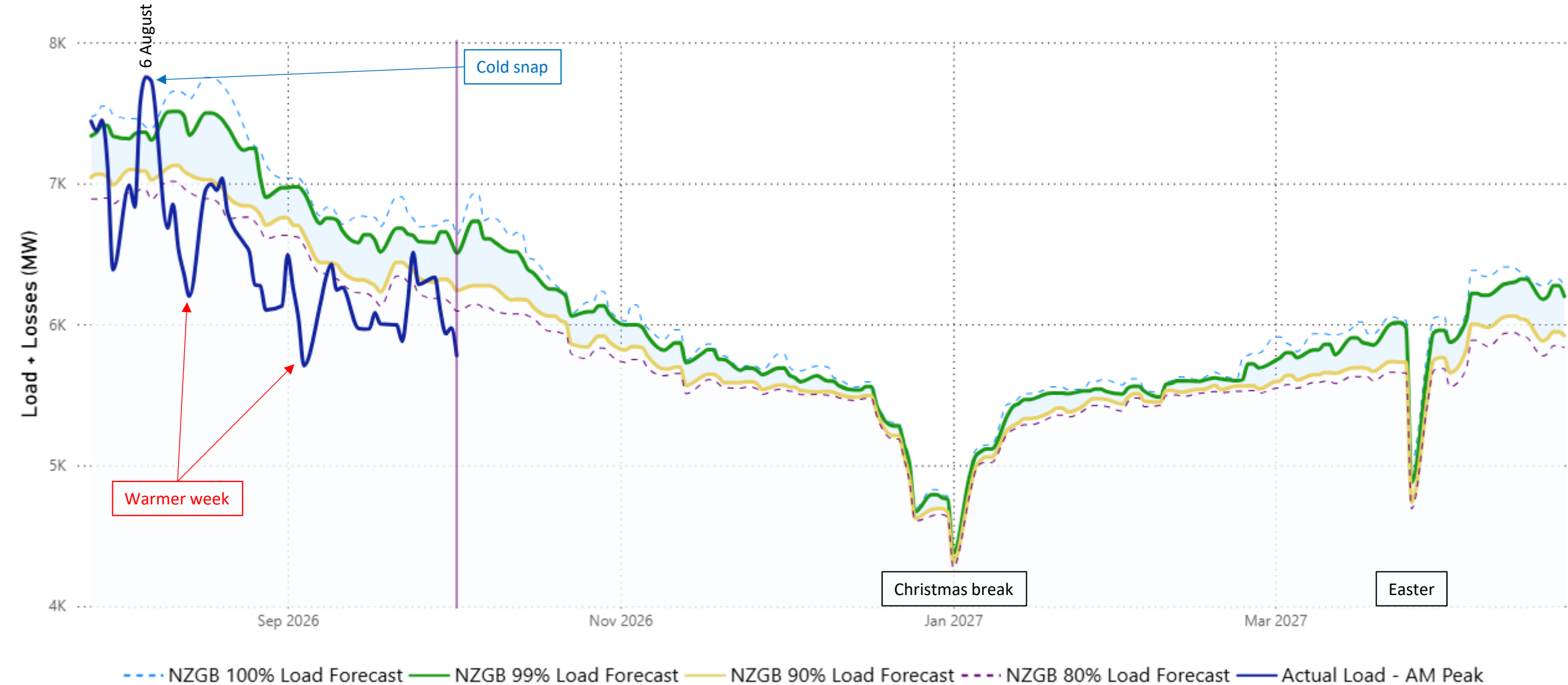
Mean YoY Difference
-665.36 M...

Mean YoY %
Difference
-27.11%

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



SNI Outages

Week of 26 October

- RPO_WRK_1 / TAB_WRK_1
- HLY_SFD_1
- WKM_WRK_1 (Weekend)

Week of 2 November

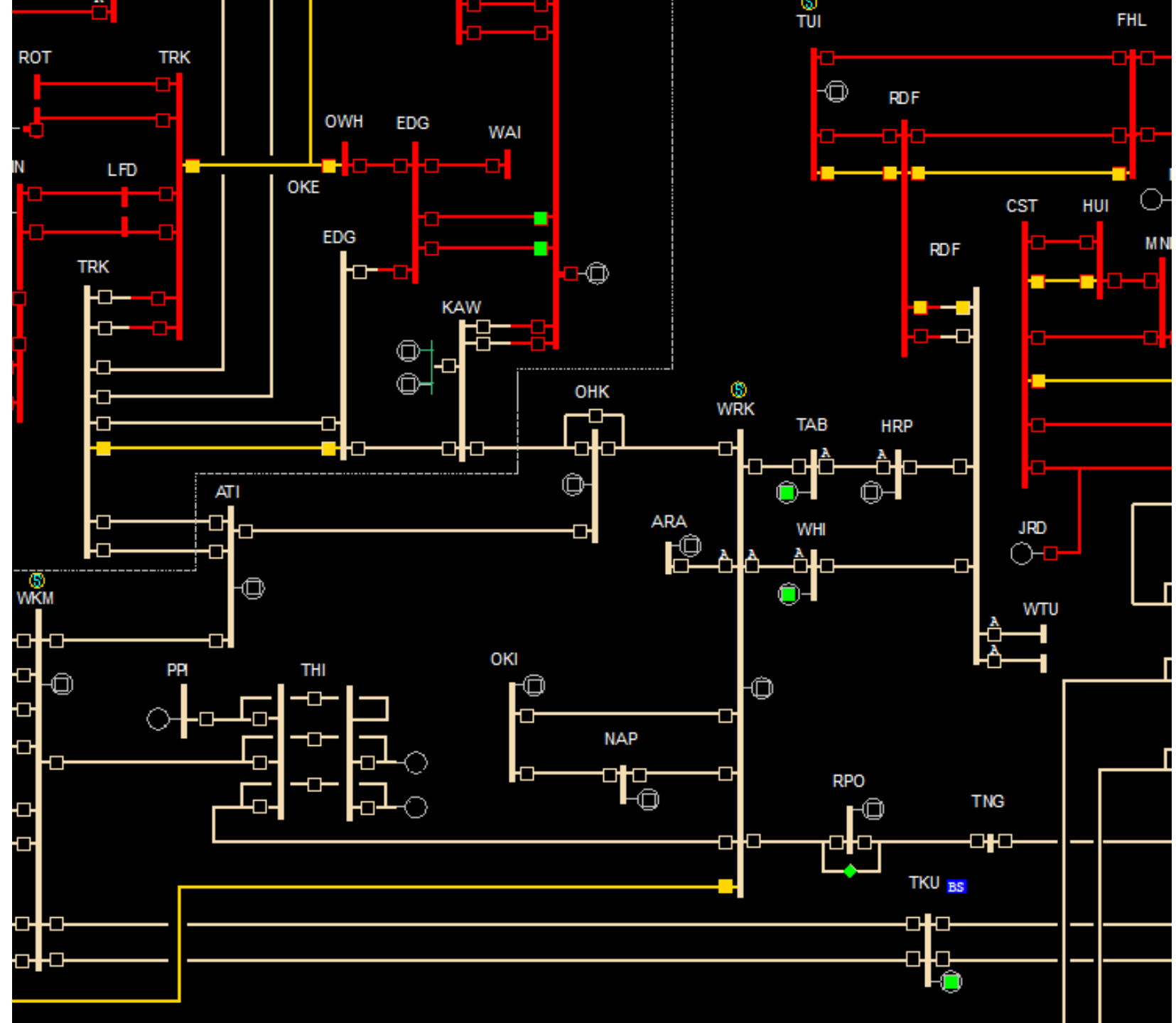
- HLY_SFD_1
- SFD_TMN_1
- HAY_WIL_LTN_1

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



SI Outages

Week of 26 October

- MAN_NMA_2
- NMA_GOR_TMH_2
- ASB_ISL_1

Week of 2 November

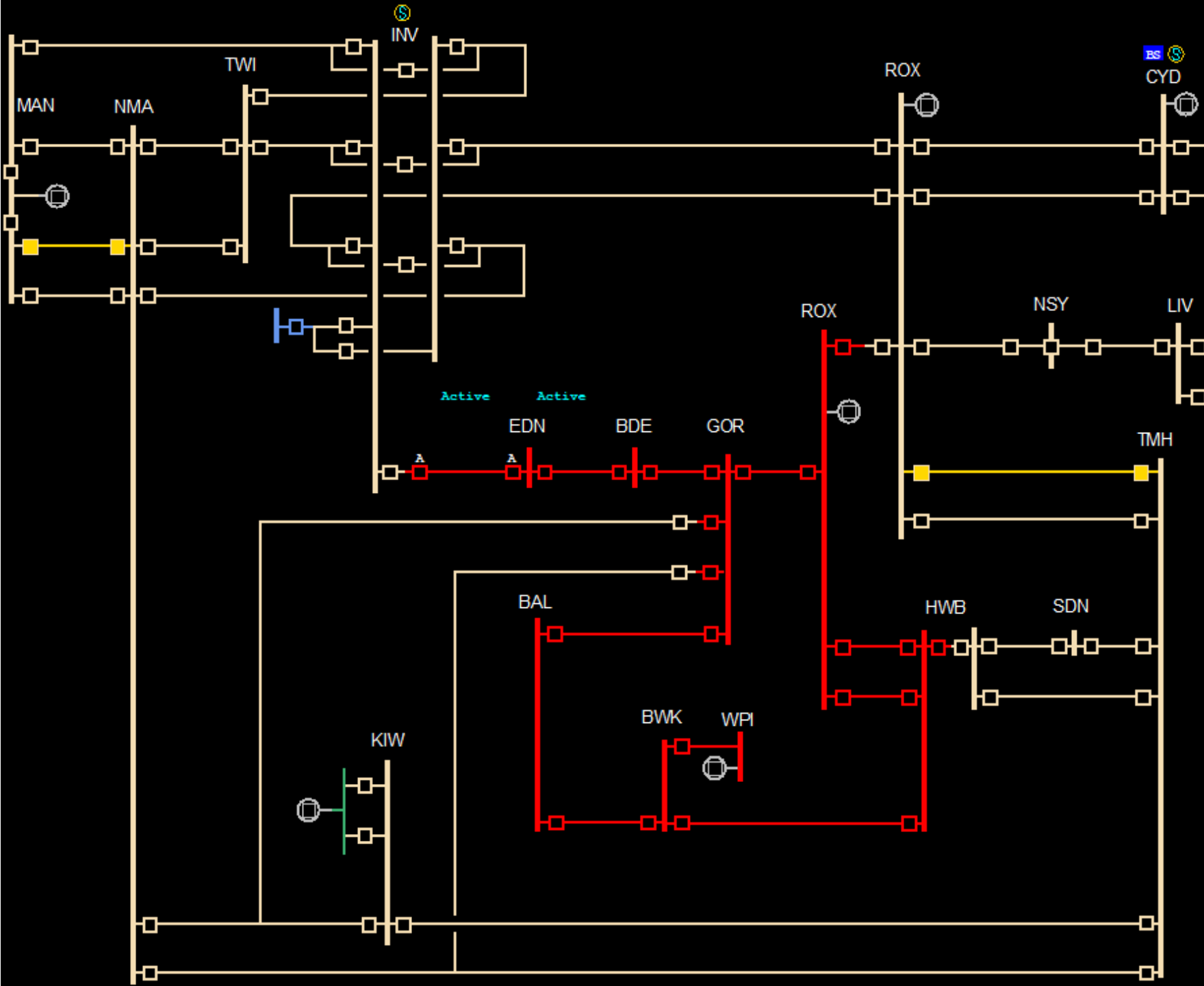
- MAN_NMA_2
- HWB_ROX_1 / HWB_ROX_2
- ISL_SVC_3

Week of 9 November

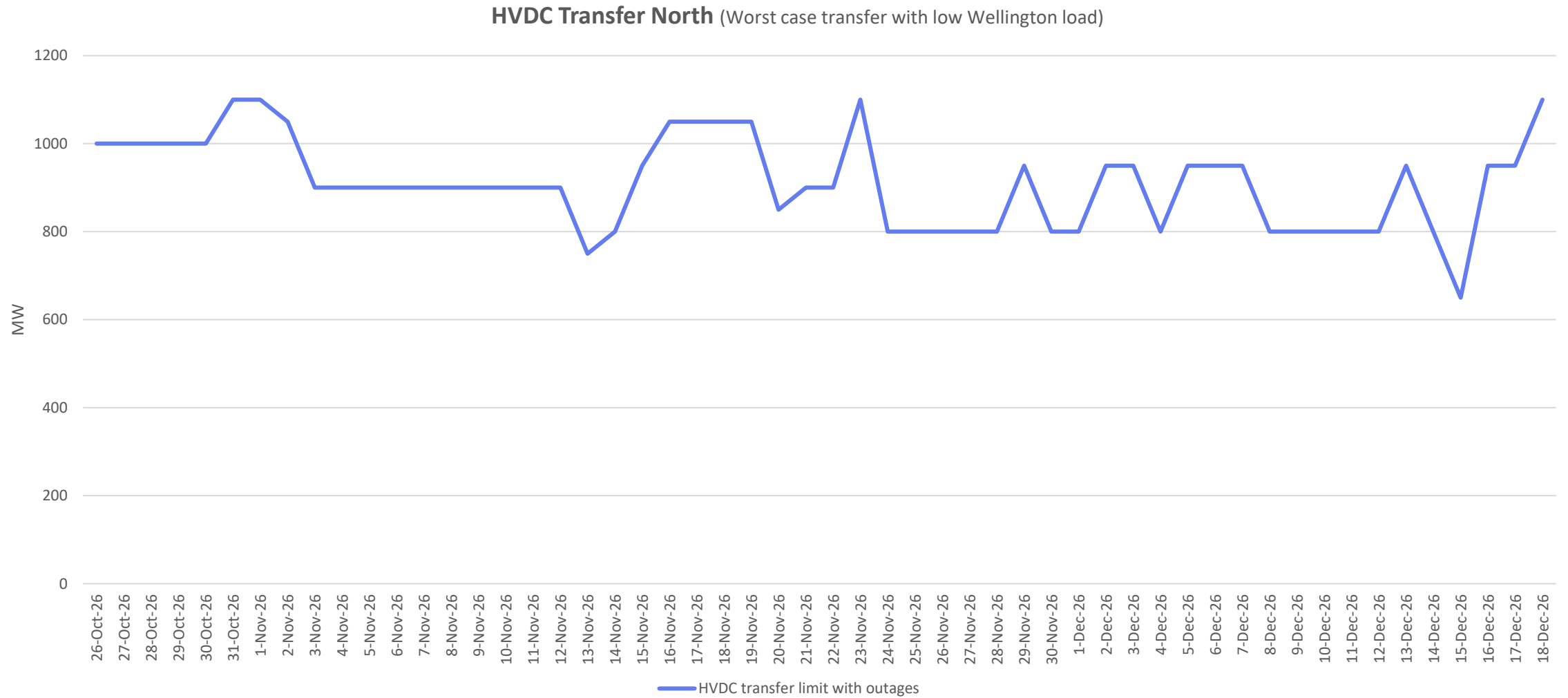
- HWB_ROX_1 / HWB_ROX_2
- MAN_NMA_1
- KIW_GOR_NMA_1
- AVI_BEN_2
- HKK_KUM_1

Week of 16 November

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



HVDC North transfer limit





Operational update

WRK ring circuit outage times

Whakamaru Wairakei circuit outage

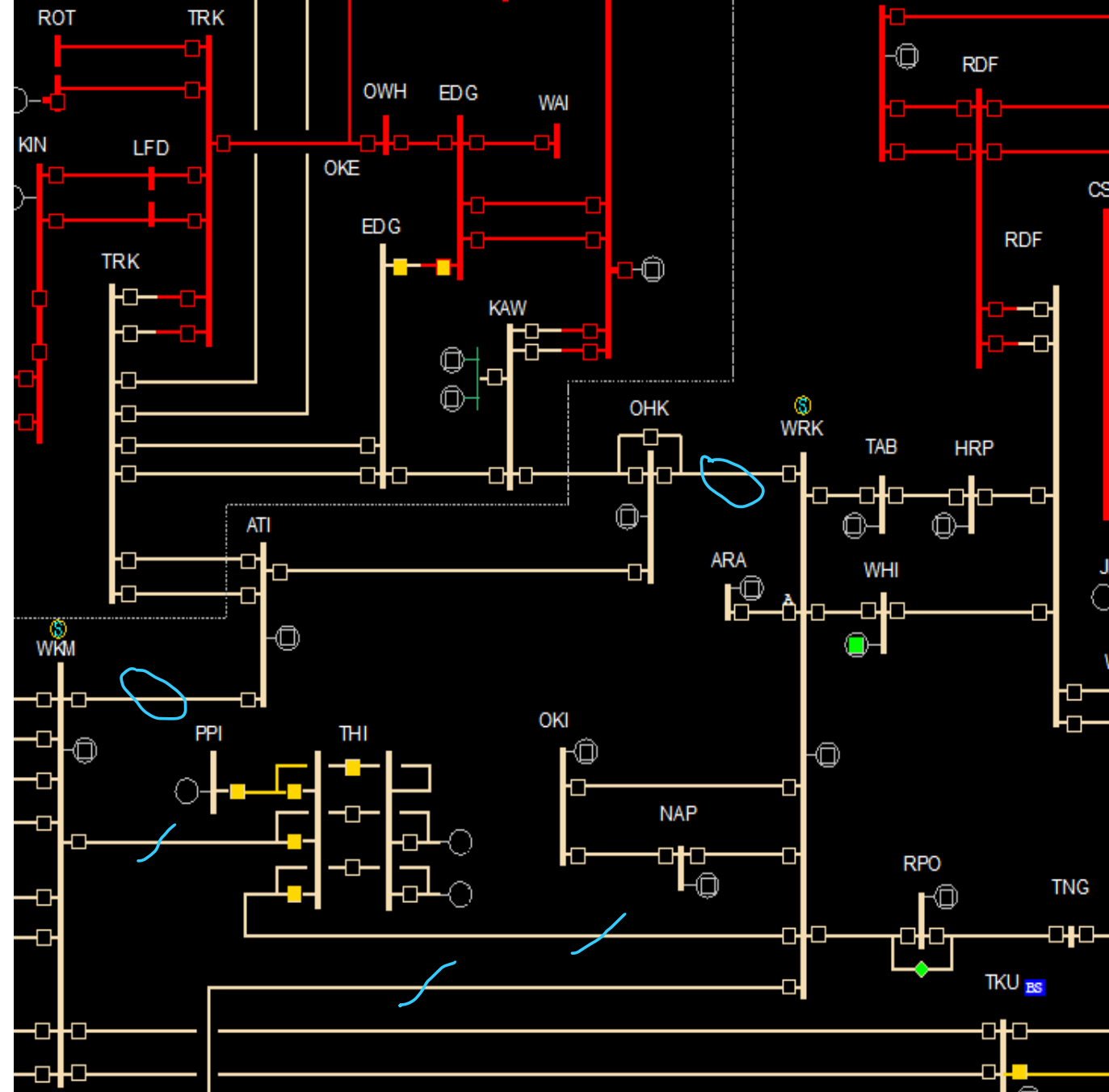
31 Oct 07:30 – 01 Nov 18:30

Ti Mihi Whakamaru circuit outage

14 Nov 07:30 – 21 Nov 18:30

Ti Mihi Wairakei circuit outage

22 Nov 07:30 – 23 Nov 18:30



WRK outage requirements

Geothermals on minimum with dynamic market node constraints applied

Flexible generation within ring likely to be constrained at various stages throughout outages

Post contingent actions could include tripping of inflexible generation within ring and/or northern load

Very dependent on battery capability at the time of an event

Worse case scenarios might require WRK Ring generators to be tripped and/or UNI load to be shed





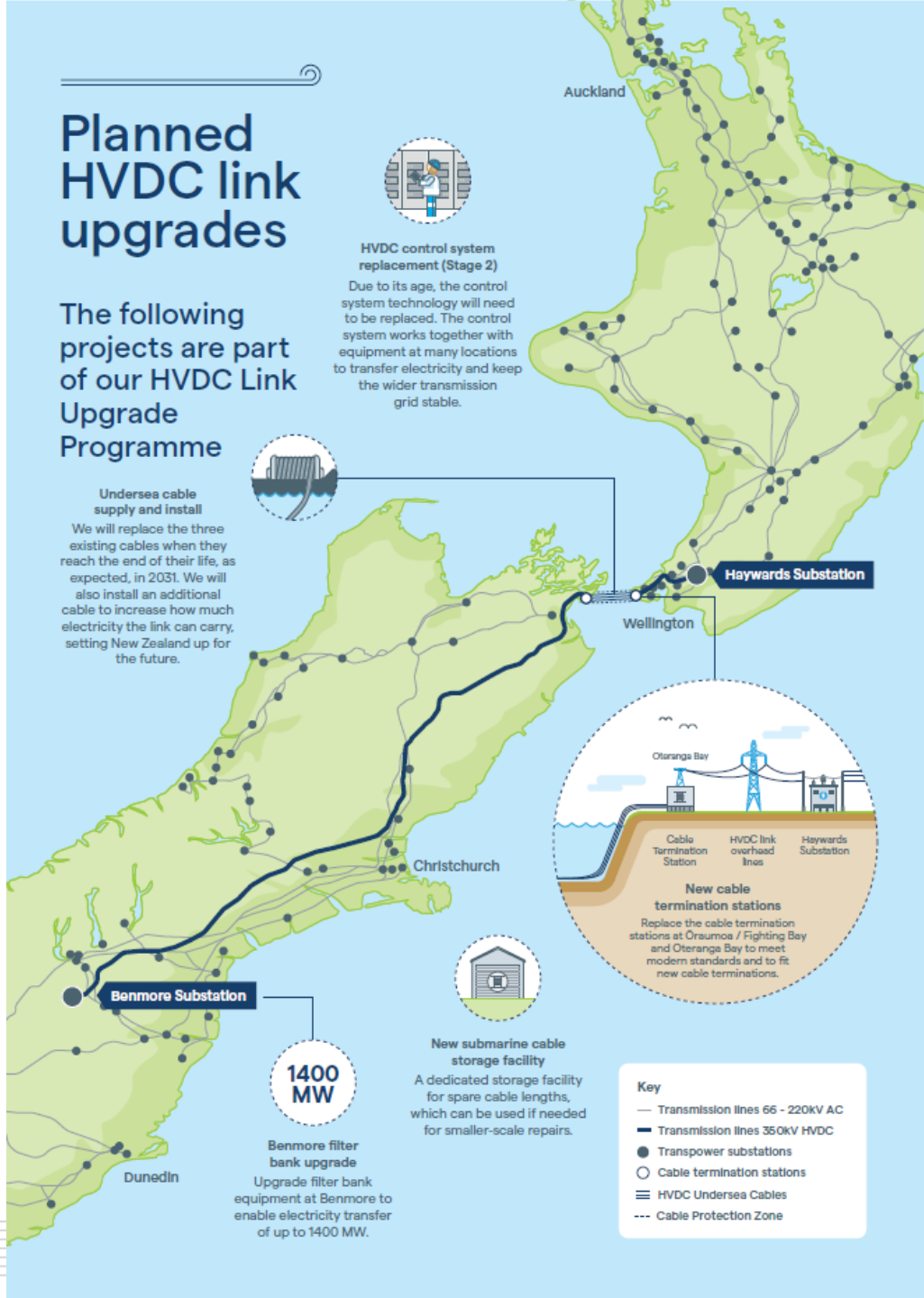
HVDC Link Upgrade Programme 2028 Maintenance Outage Update

HVDC Link Upgrade Programme

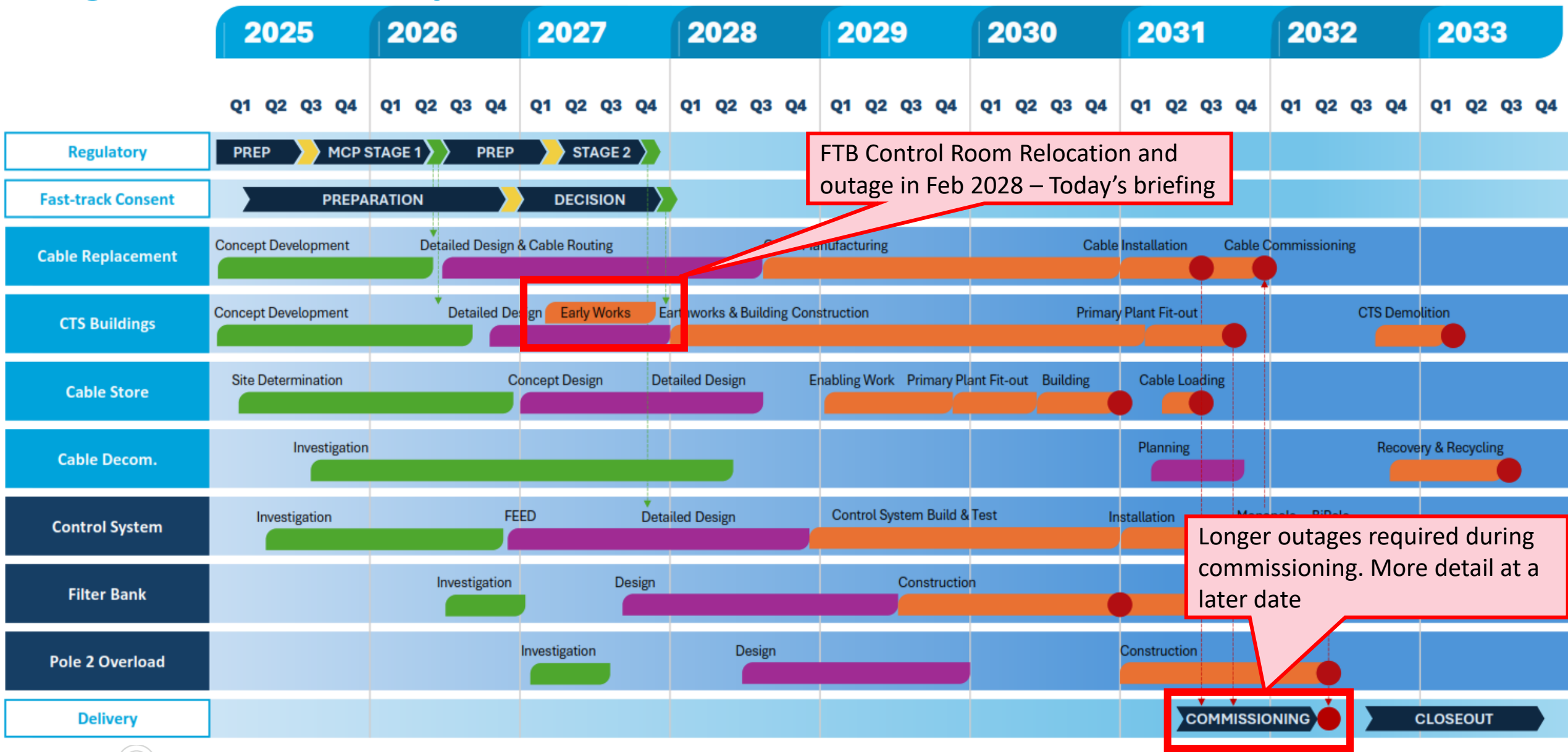
Project	Expected Commissioning
New Cable Termination Stations	2030
Cable storage facility	2030
Pole 2 overload scheme	2031
Benmore filter bank upgrade	2031
Undersea cables supply and install (1400 MW)	2031
HVDC control system replacement	2032

Planned HVDC link upgrades

The following projects are part of our HVDC Link Upgrade Programme



Programme Roadmap



Cable termination stations

- Oteranga Bay (North Island)
- Ōraumoa/Fighting Bay (South Island)
- Both buildings to be replaced
- Resilience is a major consideration
- Subject to approvals, work on site would start 2027/28, to be ready for the cables to arrive in 2031.

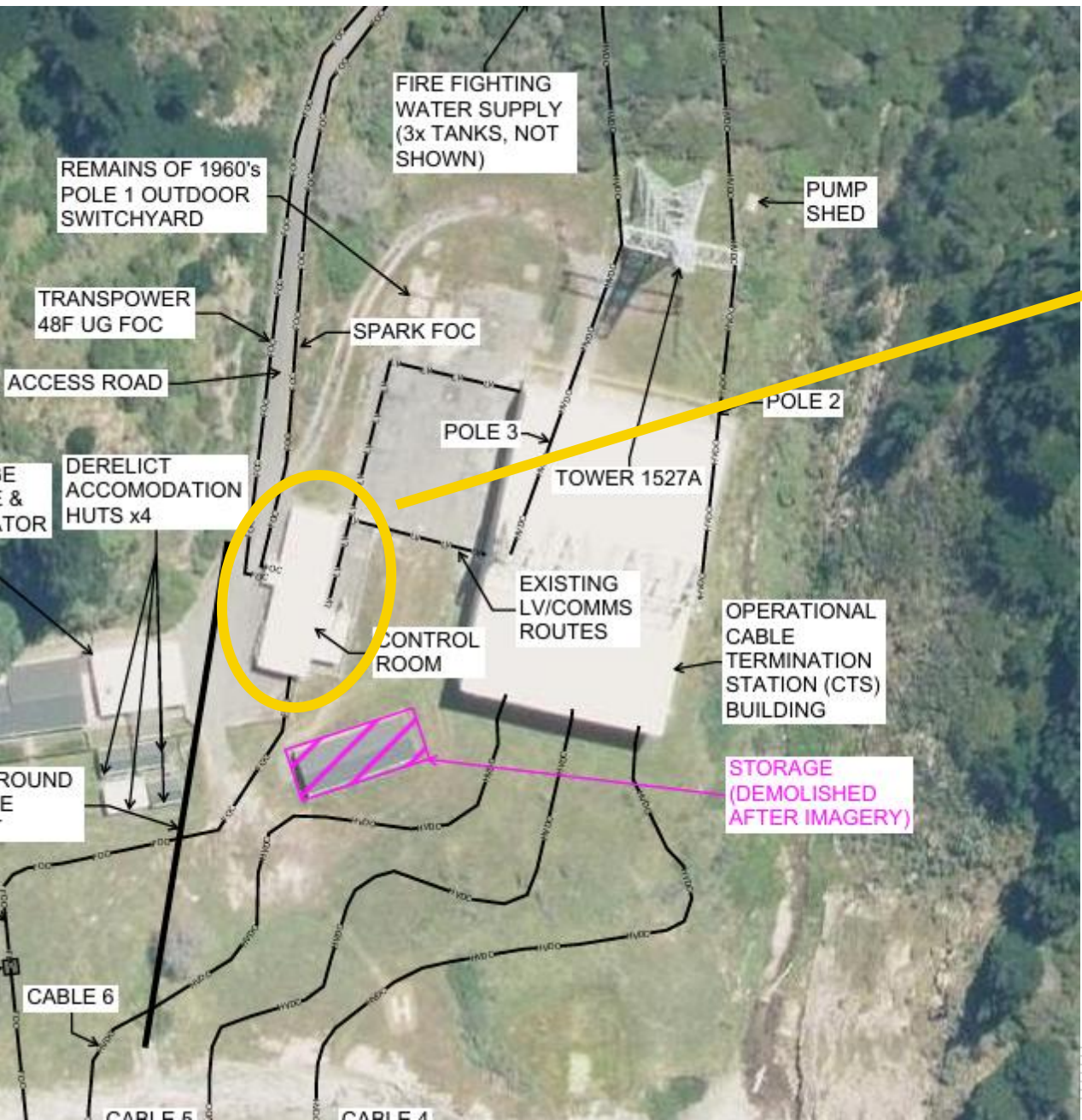


Oteranga Bay CTS
North Island

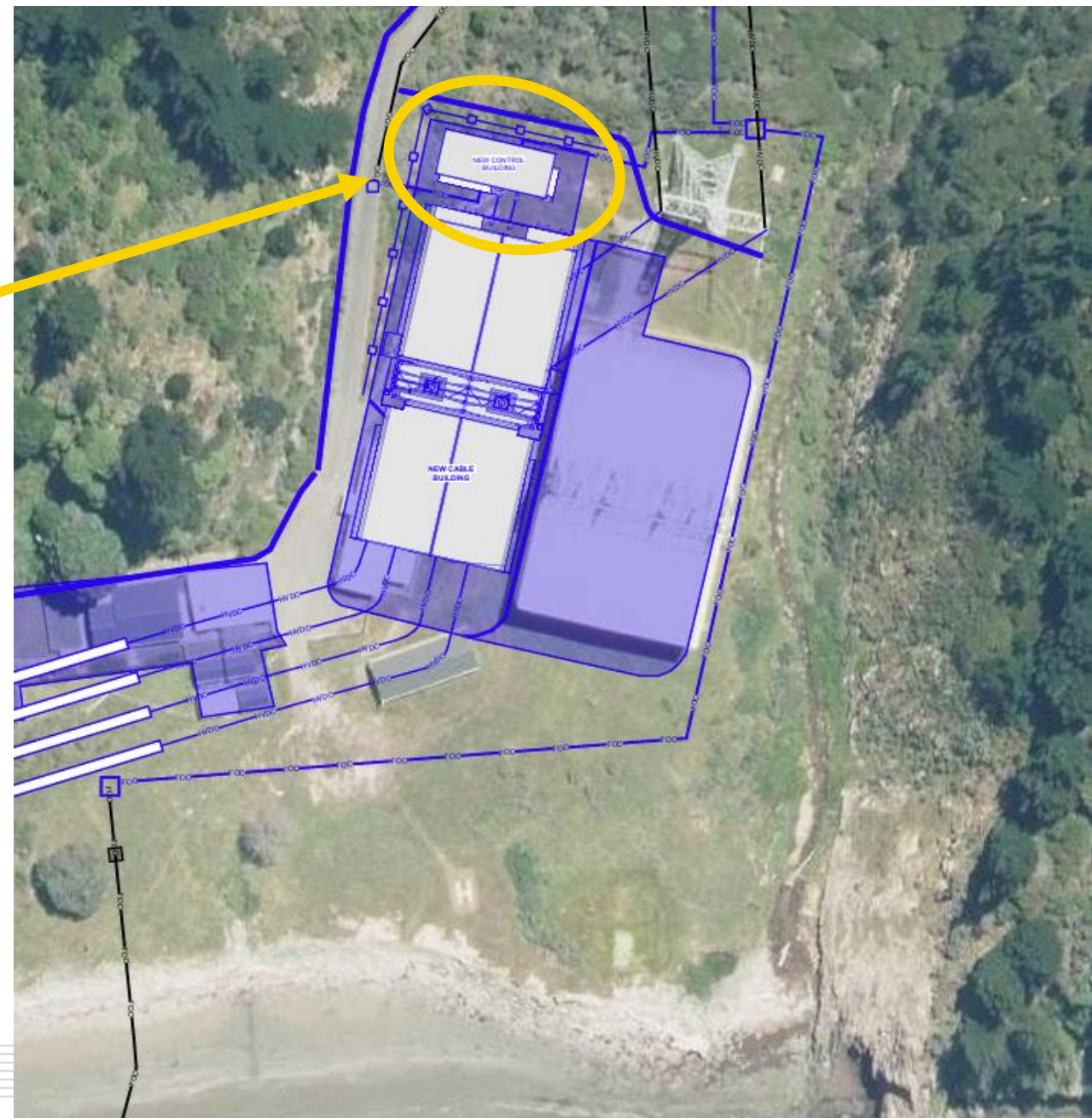


Fighting Bay CTS
South Island

Ōraumoa/Fighting Bay existing site layout



Future site layout



Extended 2028 Maintenance Outage

- Two monopoles extended to ten days (10 – 20 Feb, 19 – 29 Feb)
- Bipole outage remains unchanged at two days (19 – 20 Feb)
- Durations to be refined as design develops

Outage Block Description of Work	Planned Start	Planned Finish	Timeframe	Nature	Recall Time	Status
BEN_HAY_1 Scheduled Maintenance	19/02/2028 05:00	29/02/2028 22:00	Continuous	RS - Removal from Se...	1 Minute(s)	Approved
BEN_POLE_3 Affected Equipment Sched...	19/02/2028 05:00	29/02/2028 22:00	Continuous	RS - Removal from Se...	1 Minute(s)	Approved
HAY_POLE_3 Affected Equipment Sched...	19/02/2028 05:00	29/02/2028 22:00	Continuous	RS - Removal from Se...	1 Minute(s)	Approved
BEN_BIPOLE Scheduled Maintenance	19/02/2028 05:00	20/02/2028 22:00	Continuous	RS - Removal from Se...	1 Minute(s)	Approved
HAY_BIPOLE Scheduled Maintenance	19/02/2028 05:00	20/02/2028 22:00	Continuous	RS - Removal from Se...	1 Minute(s)	Approved
BEN_HAY_2 Scheduled Maintenance	10/02/2028 05:00	20/02/2028 22:00	Continuous	RS - Removal from Se...	1 Minute(s)	Approved
BEN_POLE_2 Affected Equipment Sched...	10/02/2028 05:00	20/02/2028 22:00	Continuous	RS - Removal from Se...	1 Minute(s)	Approved
HAY_POLE_2 Affected Equipment Sched...	10/02/2028 05:00	20/02/2028 22:00	Continuous	RS - Removal from Se...	1 Minute(s)	Approved



Control system replacement

- The existing control system is due for replacement in the early 2030s
- Aligning the control system replacement with the work to install new cables is expected to reduce the number of outages required overall
- A Stage 2 Major Capex Proposal for this is planned to be submitted to the Commerce Commission in 2027
- We expect to consult in the next few months on the control system replacement and would welcome your feedback.



Next Steps

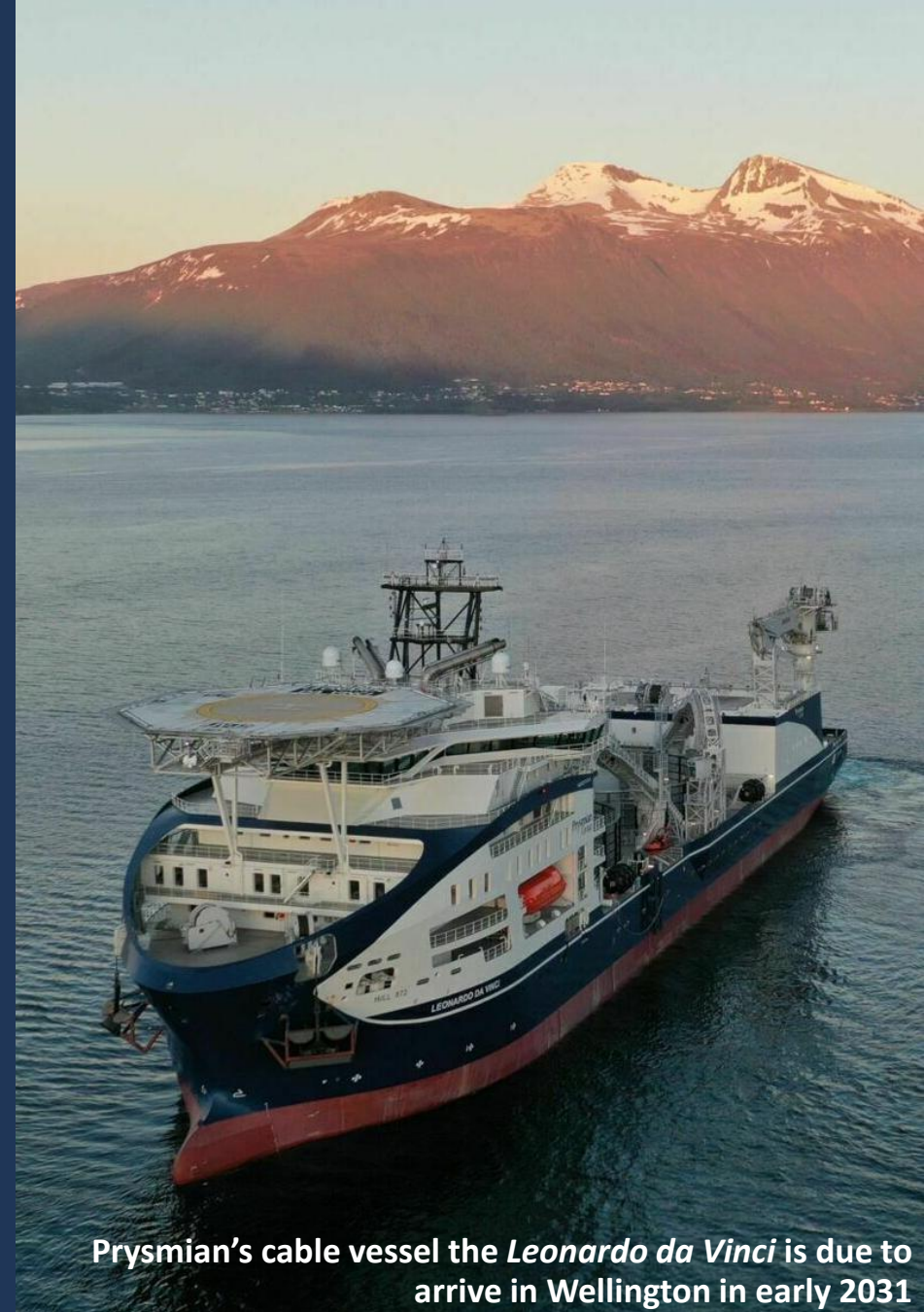
Transpower is continuing with design and procurement for the Control Room Relocation works.

We expect to have refined outage durations for the Control Room Relocation by mid-2027 and will provide another update to the market at that time if there are changes.

We will provide information on the longer commissioning outages planned for 2031-2032 as details are further confirmed.

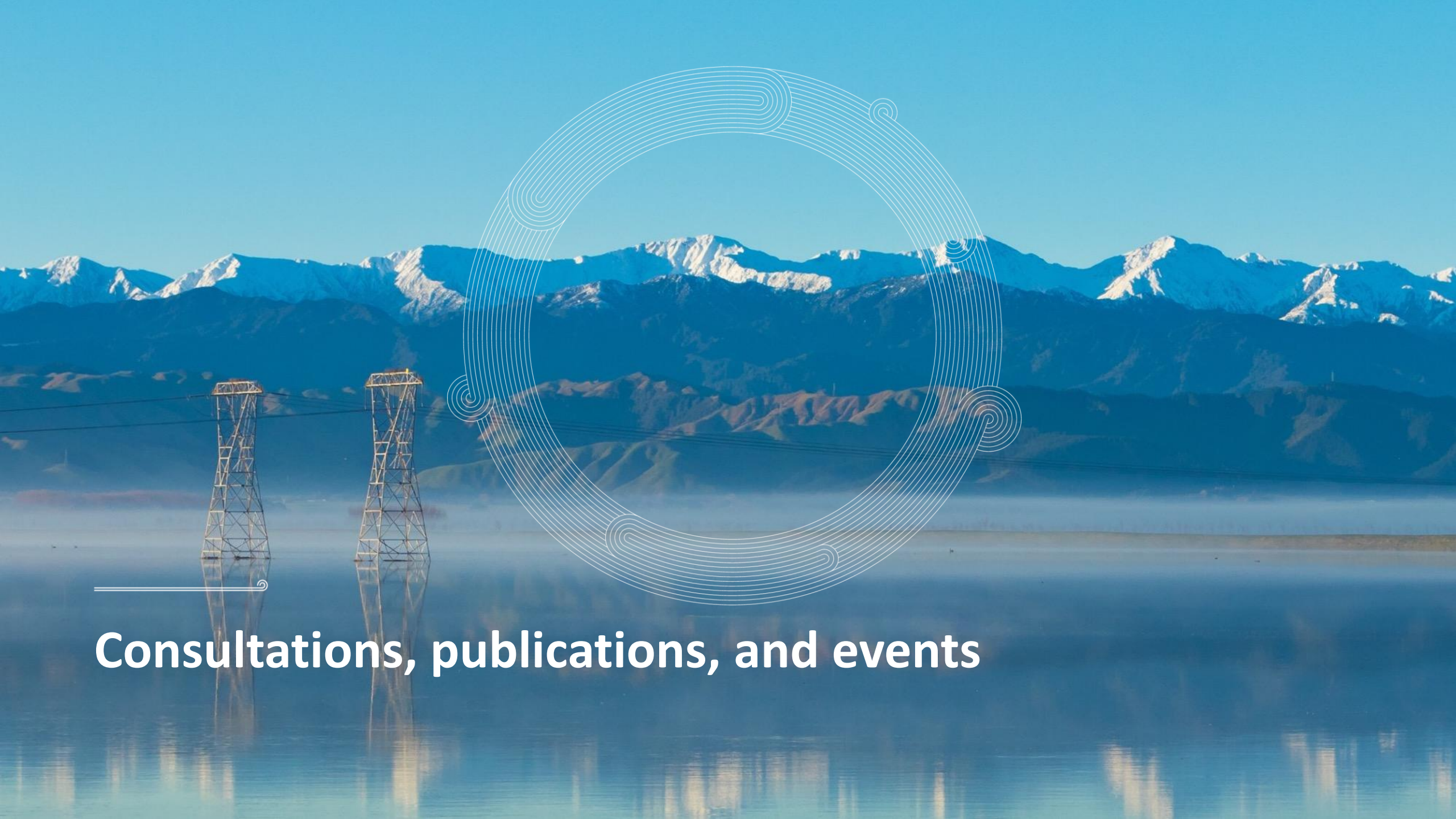
Questions

Send any questions to communications@transpower.co.nz



Prysmian's cable vessel the *Leonardo da Vinci* is due to arrive in Wellington in early 2031





Consultations, publications, and events

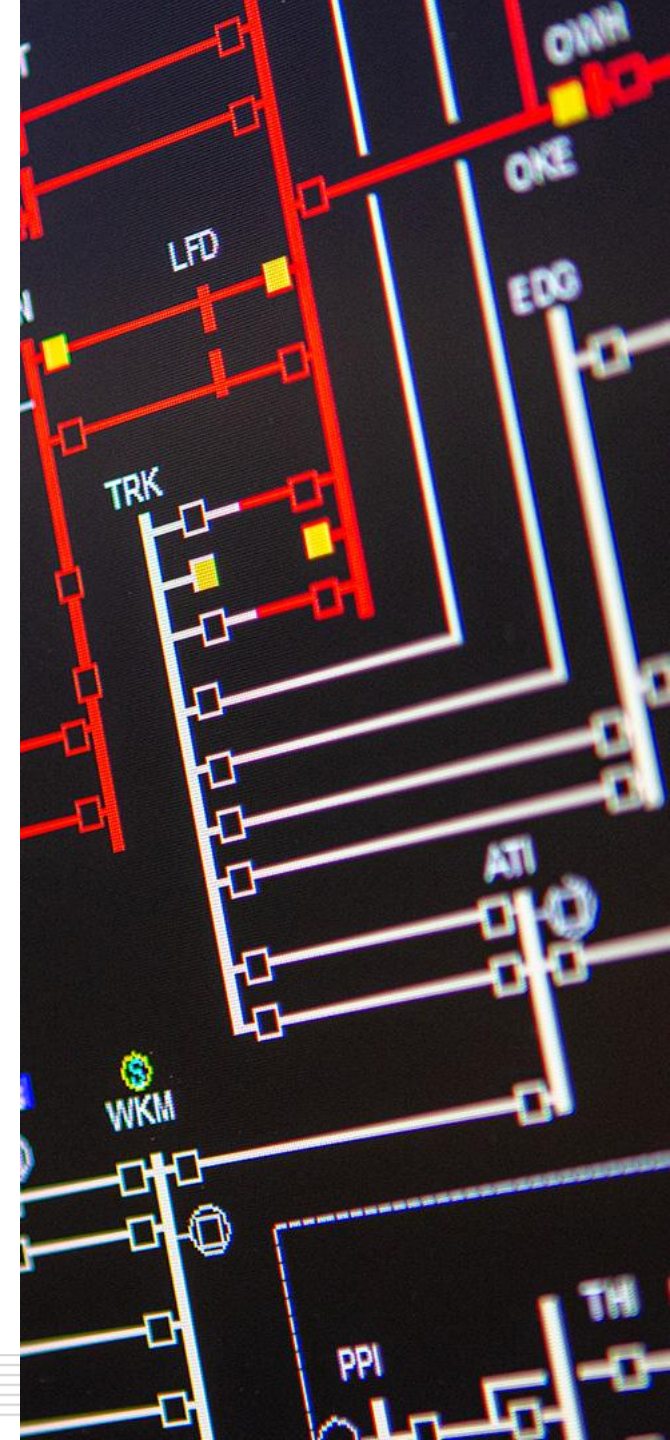
Consultations, publications, and events

Last week we published a discussion paper on [TSO-DSO coordination – Operational requirements](#) and are seeking industry feedback by Friday 6 November.

Our [2026 Ancillary Services Tender](#) is now open, this year we are contracting Over Frequency Reserves and South Island Black Start services. The tender closes at 5pm on Tuesday 3 November, tender documents and details are available on our website.

We have published a new [Technical guideline for commissioning large loads](#) on our [website](#) covering requirements for performance, connection, modelling, and testing.

We are holding an in-person **Participants Forum** on Thursday 12 November, here in Wellington. We will workshop emerging system operations topics with you, including the TSO–DSO interface and operation of the new Emergency Reserve ancillary service. Invitations were sent yesterday any questions contact us at system.operator@transpower.co.nz.



Questions / Pātai



Please raise your hand

If you have feedback let us know via our [Feedback Form](#)

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