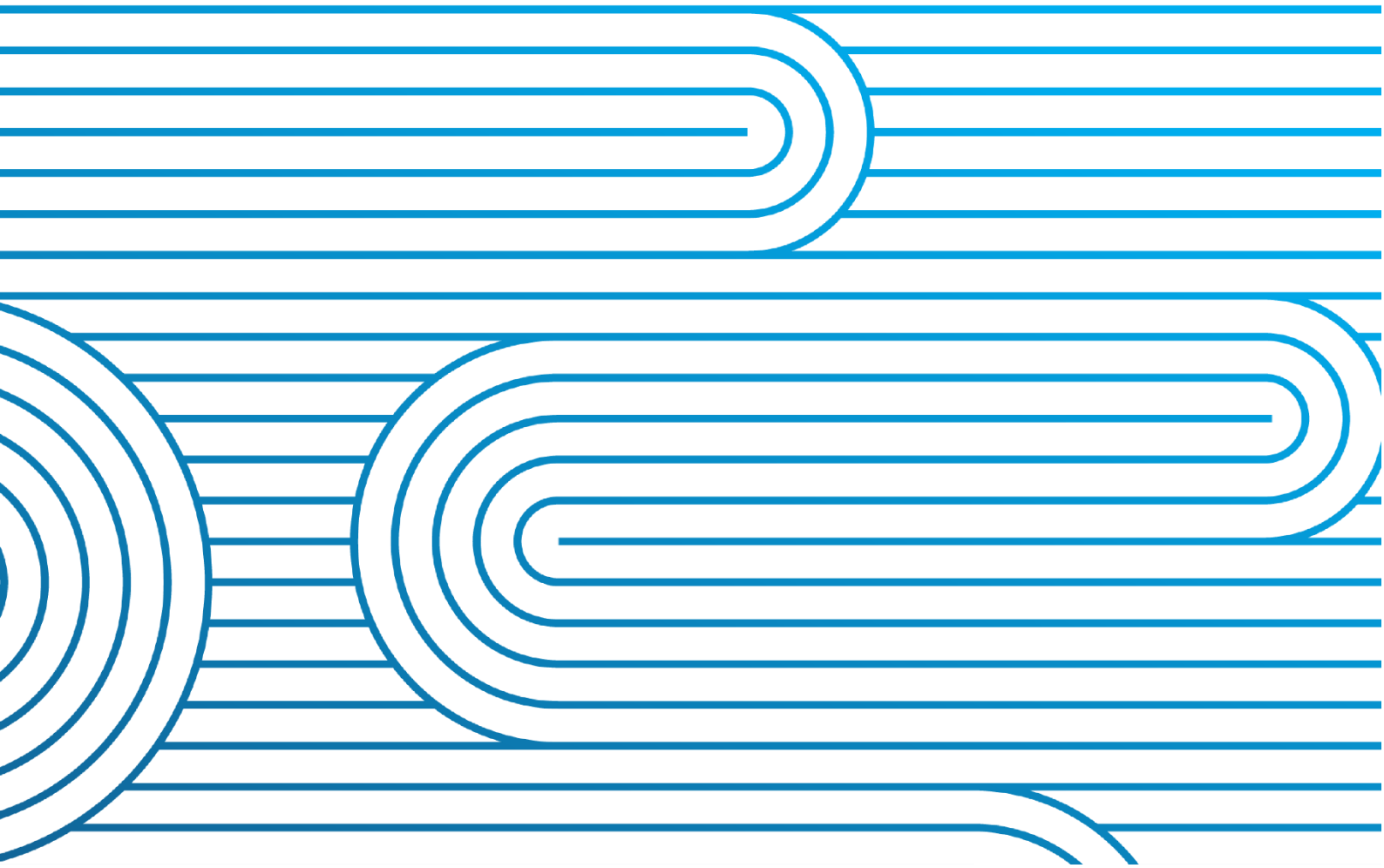
TRANSPOWER

Monthly System Operator performance report

For the Electricity Authority

June 2025



Report Purpose

This report is Transpower's review of its performance as System Operator in accordance with clauses 3.13 and 3.14 of the Electricity Industry Participation Code 2010 (the Code):

3.13 Self-review must be carried out by market operation service providers

*(1) Each **market operation service provider** must conduct, on a monthly basis, a self-review of its performance.*

*(2) The review must concentrate on the **market operation service provider's** compliance with—*

*(a) its obligations under this Code and Part 2 and Subpart 1 of Part 4 of the **Act**; and*

*(b) the operation of this Code and Part 2 and Subpart 1 of Part 4 of the **Act**; and*

*(c) any performance standards agreed between the **market operation service provider** and the **Authority**; and*

*(d) the provisions of the **market operation service provider agreement**.*

3.14 Market operation service providers must report to Authority

*(1) Each **market operation service provider** must prepare a written report for the **Authority** on the results of the review carried out under clause 3.13.*

*(1A) A **market operation service provider** must provide the report prepared under subclause (1) to the **Authority**—*

*(a) within 10 **business days** after the end of each calendar month except after the month of December:*

*(b) within 20 **business days** after the end of the month of December.*

(2) The report must contain details of—

*(a) any circumstances identified by the **market operation service provider** in which it has failed, or may have failed, to comply with its obligations under this Code and Part 2 and Subpart 1 of Part 4 of the **Act**; and*

*(b) any event or series of events that, in the **market operation service provider's** view, highlight an area where a change to this Code may need to be considered; and*

*(c) any other matters that the **Authority**, in its reasonable discretion, considers appropriate and asks the **market operation service provider**, in writing within a reasonable time before the report is provided, to report on.*

By agreement with the Authority, this report also provides monthly (rather than quarterly) reporting in accordance with clause 12.3 of the System Operator Service Provider Agreement (SOSPA):

*12.3 **Quarterly reports**: The **Provider** must provide to the **Authority**, with each third self-review report under clause 3.14 of the **Code** during a **financial year**, a report on:*

*(a) the **Provider's** performance against the performance metrics for the financial year during the previous quarter;*

*(b) the actions taken by the **Provider** during the previous quarter:*

*(i) to give effect to the **system operator business plan**;*
*(ii) to comply with the **statutory objective work plan**;*

(iii) *in response to **participant** responses to any **participant survey**; and (iv) to comply with any remedial plan agreed by the parties under clause 14.1(i);*

(c) the progress during the previous quarter of:

*(i) the feasibility study into **cost-of-services reporting** referred to in clause Error! Reference source not found.; and*

(ii) if agreed in accordance with clause Error! Reference source not found., the implementation of cost-of-services reporting; and

*(d) the **technical advisory hours** for the previous quarter and a summary of **technical advisory services** to which those **technical advisory hours** related.*

System Operator performance reports are published on the Electricity Authority website in accordance with clause 7.12 of the Electricity Industry Participation Code 2010 (the Code):

7.12 Authority must publish system operator reports

*(1) The **Authority** must publish all self-review reports that are received from the **system operator** and that are required to be provided by the system operator to the **Authority** under this Code.*

*(2) The **Authority** must **publish** each report within 5 **business days** after receiving the report.*

Following the end of each Quarter, a system performance report is published on the Transpower website

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Commentary

Key points this month

Operating the power system

- On 28 June an unplanned outage of HVDC Pole 2 occurred and a CAN was issued to notify industry. The Grid Owner was working on the cooling system when an alarm activated indicating Pole 2 was unable to start (deblock). The Grid Owner resolved the issue and the industry notified with an updated CAN resulting in an unplanned outage lasting an hour.
- On 5 June line 2 to the Tiwai aluminium smelter tripped due to insulation contamination in their switch yard. The situation was well managed by Tiwai and Meridian but did result in the potline being deenergised for a significant amount of time.
- On 5 June the Opunake-Kapuni-Stratford 2 circuit tripped resulting in an approximately 15 MW loss of connection to Nova Energy at Kapuni.

Security of supply

- *Security of supply forecasting and information policy (SOSFIP) review:* We continued to progress the analysis phase of the SOSFIP review through June, meeting with Authority staff to confirm scope and timeline. This phase will continue through July and we are on track for consultation in September.
- *2025 annual Security of Supply Assessment (SOSA):* We published our SOSA 2025 report, which found that declining gas availability means the market needs to lift the pace at which it is delivering new electricity generation in order to reliably meet growing demand over the coming years.
- *Energy Security Outlook (ESO):* The June update showed a decreased risk in July and August 2025 and January to August 2026. The decrease is primarily due to increased gas production forecasts, a higher coal stockpile and increased gas storage. No Simulated Storage Trajectories (SSTs) cross the Watch curve in 2025. By month end national hydro storage had increased to 101% of the historic mean for this time of year but remained below mean in the South Island.
- *ESO 101:* Having published the ESO 101 education piece in May, on 24 June we held an extended System Operator Industry Forum at which we provided an overview of the ESO 101 document.
- *Industry Exercise 2025:* A draft lessons learned document is circulating for final approval and is planned to be published during July.
- *New Zealand Generation Balance (NZGB) :* The NZGB shows that we are resilient to the loss of the largest generator or HVDC pole tripping provided all assets not on planned outage are available to the market. As storage has improved through June, we have been seeing lower thermal unit commitment with only 1 Rankine unit and Huntly 5 committing to the market. This is in line with our firm capacity scenario, indicting a reliance on the market to co-ordinate slow start units over cold winter peaks.

Investigations

- *UFE Event Number 4550:* We have sent the causation report to the EA and await their determination of the causer of the event.
- *20 June 2024 – Northland loss of supply:* We continue to work on completing our actions in response to both the Ray Hardy report and the Authority's report. All actions are currently on track.

Supporting Asset-owner Activity

- *Generator commissioning and testing:* Far North Solar Farm (FNSF) and Aquila's Pukenui Solar Farm (20 MW in Northland) completed commissioning on 16 June.
- *Ancillary services activity:* Our Ancillary Services Procurement Plan amendment proposal was submitted to the Authority on 6 June. We continue to work with LastMyle and they are now modelled in our dispatch simulator to enable them to build their dispatch system. Planning is underway for Black Start testing at Tokaanu in October 2025.

Commitment to evolving industry needs

- *Scheduling, Pricing and Dispatch (SPD) 101:* Our latest education piece, SPD101, provides an overview of how the SPD application operates within the electricity market.
- *Electricity Networks Aotearoa (ENA):* The ENA FNF DSO Project team, including our System Operator representative, met twice with Authority staff progressing the Authority's FSO initiative. Independently, the team met twice to discuss the Authority's request for assistance and the release of the Authority's FSO Issues and high-level options consultation paper.
- *Grid Owner Outage Optimisation:* The System Operator continues to support the Grid Owner in its implementation of its outage optimisation project that aims to enable more work on the grid without increasing the number of outages and the risks and costs they pose to system operations.
- *Grid Owner HVDC major Capex proposal short-list consultation:* The System Operator made a submission recommending a close working relationship between the Grid Owner's HVDC upgrade project team and the System Operator.
- *Outage co-ordination:* We are in the process of turning asset owner feedback into a work plan to guide development of POCP and NZGB.
- *Evolving markets resource co-ordination – tie-breaker provisions:* We are in the final stages of preparing consultation documents to seek industry feedback on how "tie breaker" situations should be resolved.
- *System Operator Forums:* Forums were held on 10 and 24 June.

Risk & Assurance

- *Risk management:* A workshop with the Authority to identify current and emerging risks took place on 5 June. The revised risk register will be provided to the Authority in early 2025/26. The BCP exercise was carried out, providing a mix of practical training and a cyber-related exercise to equip operations staff to perform in an IMT situation.
- *Business assurance audits:* All four audits for the 2024/25 financial year have now been completed and the final reports delivered to the Authority. We have identified four business assurance audits for 2025/26. In addition, we have provided the Authority with a list of indicative audits for the following two financial years.

1 Operating the power system

System Events

EVENT DATE	EVENT NAME	EVENT ACTIVITY
28 June 2025	HVDC Pole 2 unplanned outage	At approximately 08:51 a CAN was issued notifying industry of an unplanned outage of HVDC Pole 2 from 08:30 – 10:30. The Grid Owner was working on the cooling system at the time when an alarm activated indicating Pole 2 was unable to start (deblock). The issue was resolved at approximately 09:20, with an updated CAN issued to industry informing that the outage had ended by 09:30.
5 June 2025	Tiwai extended potline	During the afternoon of 5 June 2025 there were issue at the Tiwai aluminium smelter when line 2 tripped due to insulation contamination in their switch yard. The situation was well managed by Tiwai and Meridian, but did result in the potline being deenergised for a significant amount of time compared to a typical tripping.
5 June 2025	Loss of connection at Kapuni	On 5 June at approximately 03:40 the Opunake-Kapuni-Stratford 2 circuit tripped resulting in a loss of connection to Nova Energy of approximately 15 MW at Kapuni. Connection was restored at 03:59. There was heavy rain and strong winds at the time.

Market Operations

Forecast v real-time residual variability: We monitor the variations[1] between forecast and real-time dispatch conditions to determine if the 200 MW residual continues to provide sufficient coverage to cater for this variability. The graph in Appendix B presents, for the last 24 months, the proportion of time within each month that a 200 MW residual was sufficient to cover the variation in load and intermittent generation between forecast (30 minutes ahead of real-time) and real-time.

In June more than 97% of the variability is covered by the 200 MW residual. This indicates that entering a trading period with at least 200 MW of residual provided a high chance of having sufficient market resources to meet the variability within the period.

Process for notifying and managing energy or reserve shortfalls: In June we published our new webpage detailing the process for notifying and managing electricity market operations during periods of low supply margins. This resource provides guidance on how the System Operator monitors residual energy levels and initiates Customer Advice Notices (CANs) when supply margins fall below 200MW. The page also explains the criteria for escalating communications and the roles of

[1] The variability measure is the same as outlined in Page 11 of our Low Residual Situation Review Consultation paper.

various market participants in responding to potential shortfalls. This update enhances transparency and supports coordinated industry responses to ensure system reliability during critical periods.

2 Security of supply

Our Security of supply webpage collates material we produce under our statutory role to provide information and near to medium term forecasting on all aspects of security of supply, and manage supply emergencies.[2] It also provides links to the regulatory framework under which we do so as set by the Authority.

Security of supply forecasting and information policy (SOSFIP) review: We continued to progress the analysis phase of the SOSFIP review through June to test key assumptions, ensure energy and capacity risks are appropriately captured as part of the Security of Supply reporting, consider any wider risk scenarios, and assess contingent storage and broader strategic options. This phase will continue through July and we are on track for consultation commencing in September. We are engaging regularly with the Authority as we progress the review.

2025 annual Security of Supply Assessment (SOSA): On 30 June we published our SOSA 2025 report. This year's assessment finds that declining gas availability means the New Zealand Winter Energy Margin (NZ-WEM) could cross the standard in 2026. The market has to lift the pace at which it is delivering new electricity generation to reliably meet growing demand over the coming years. The final report has regard to feedback on a draft report released for consultation in May.

Energy Security Outlook (ESO): The June update, published on 27 June (available here), showed a decreased risk in July and August 2025 and January to August 2026. This is primarily due to increased gas production forecasts, along with a higher coal stockpile and increased gas storage. This update also reflected the announced early return of NZAS load under the demand response agreement with Meridian.

The national controlled hydro storage position was at 93% of the historic mean as of 22 June. Looking ahead, no Simulated Storage Trajectories (SSTs) cross the Watch curve in 2025, but 11 of the 93 SSTs cross the watch curve in January to July 2026.

The market response and arrival of some inflows has helped reduce hydro storage risk in 2025. Continued focus on hydro storage management and ensuring sufficient backup thermal fuel availability will help support an increased generation response if there are extended periods of low inflows over winter (including potential late arrival of expected spring inflows) and/or unplanned, extended plant outages.

By the end of June national storage had lifted to 101% of historic mean, but remained below mean in the South Island.

Energy Security Outlook (ESO) 101: To help participants get the most out of our ESO 101 education piece (published in May) and better understand our Energy Security Outlooks going forward, we hosted an extended SO Industry Forum on 24 June. We ran through the outlook and how it forms a key part of the electricity industry's security of supply forecasting and information framework.

Industry Exercise 2025: A draft lessons learned document is circulating for final approval and will be published during July (pending Authority approval).

[2] Electricity Industry Act 2010, s8

Winter risk communications: We continue to use our SO Industry Forums to update industry on winter risks. Our approach is now well-established and we are ready to use pan-industry communications channels if and when necessary.

New Zealand Generation Balance (NZGB) potential shortfalls: The latest NZGB update is available through our Customer Portal. The NZGB shows that we are resilient to the loss of the largest generator or HVDC pole tripping under a 90th percentile load, provided all available assets not on planned outage are available to the market, with wind generating at 20% of its capacity. This is the primary measure we use to inform the market and coordinate outages in a way that maintains capacity margins. However, as storage has improved, through June we have been seeing lower thermal unit commitment with only 1 Rankine unit and Huntly 5 committing to the market. This is in line with our firm capacity scenario. This scenario shows margins will be low or negative if a large unit goes on unplanned outage, indicating a reliance on the market to co-ordinate slow start units over cold winter peaks.

3 Investigations

Under-frequency event investigations

21 April 2025 – Huntly generation trip: We have sent the causation report the EA. We will await their determination of the causer of the event.

Significant incident investigations

20 June 2024 - Northland loss of supply: We continue to work on completing our actions in response to both the Ray Hardy report and the Authority's report. There is one outstanding action which is due end of this calendar year which is approaching completion. It involves assessing contingency plans for other regions to determine where relaxed security standards can be provided during an event.

4 Supporting Asset-owner activity

Outage Coordination

Following the typical outage profile, average weekly outages have trended downwards to around 50 per week compared to 60 – 70 in the two months prior. Due to lower outage numbers and favourable generation profiles there were very few constraints as a result of planned outages reducing their market impact.

During June the System Operator worked with Contact Energy and the Grid Owner to find secure times to align outages on the Wairakei ring and a Tauhara geothermal outage – to reduce the market impact relative to progressing the two outages at separate times.. Contact and the Grid Owner reached agreement on a timing that works for both parties, and satisfied the System Operator concerns over these major outages overlapping with the planned shutdown of Kupe and Huntly 5.

Generator commissioning and testing

The Power Systems and Markets teams are working with the following generators who are commissioning or expecting to connect in the next 6 months:

- Far North Solar Farm (FNSF) and Aquila's Pukenui Solar Farm (20 MW in Northland) completed commissioning 16 June 2025.
- Ranui's Twin Rivers Solar Farm (25 MW connected to Top Energy) is due to begin commissioning in August 2025.
- Solar Bay and Maungaturoto Solar Farm Project's 'Golden Stairs' Solar Farm (17.6 MW in Northland) is due to begin commissioning in August 2025.
- Eastland Generations 'TAOM' geothermal generation (24 MW) is due to move from their existing 11kV connection at Kawerau to the 220kV connection at Kawerau in September, ahead of their new 'TOPP2' geothermal generator (52 MW) starting in October 2025.
- New Power's Taiohi Solar Farm (22 MW connected to WEL Networks) is due to begin commissioning in October 2025.
- Contact's Glenbrook BESS (100 MW at GLN) is due to begin commissioning November 2025.
- Lodestone's Whitianga Solar Farm (24 MW connected to Powerco) is due to begin commissioning in November 2025.

We are also working with existing generators to commission maintenance and upgrade projects.

Demand commissioning and testing

Edendale load forecast: The Authority has commenced its review to consider of whether Edendale (EDN0331) GXP should be assessed as non-conforming.

Ancillary Services activity

Lastmyle: We have modelled LastMyle in our dispatch simulator so they can build their dispatch system. We are working with LastMyle as they get connected to our systems.

Ancillary Services Procurement Plan Review: Our final Ancillary Services Procurement Plan amendment proposal was submitted to the Authority on 6 June. A number of complex changes were deferred following the feedback received during the consultation process. We intend to gather further information and address the deferred items as part of an out-of-cycle review. The Authority has responded with minor initial feedback, which has been addressed in an updated version to be submitted to the Authority in early July.

Interruptible Load: The following table provides an overview of interruptible load testing activity by the number of sites tested and associated additional quantities for those sites.

	Number of sites	Additional quantities in MW	
Annual testing	0 sites	N/A	
Additional resource	2 sites	1.475 MW FIR	0.149 MW SIR

Over-Frequency Reserve (OFR): The following table provides an overview of OFR testing activity.

	Number of sites overdue
Four yearly end-to-end relay testing	2
Two yearly control and indication testing	22
Circuit breaker testing	27

Frequency Keeping: One station in the South Island remains unavailable to provide frequency keeping as a result of failed testing.

Black Start: Planning is underway for testing at Tokaanu Power Station in October 2025.

5 Commitment to evolving industry needs

Scheduling, Pricing, and Dispatch (SPD) 101: On 27 June we published our latest education piece, SPD101 which provides an overview of how the Scheduling, Pricing, and Dispatch application operates within New Zealand's electricity market. This document is intended for stakeholders, market participants, and anyone interested in understanding the application. It explains SPD's role in the secure, efficient, and economically optimised power system; how SPD calculates prices, how and why those prices vary through time and location, the interaction between instantaneous reserves prices and energy prices. It also includes a section on what SPD does not do. The content has been informed by our interactions with participants.

Electricity Networks Aotearoa (ENA) Future Networks Forum (FNF): In June the ENA FNF DSO Project team, including our System Operator representative, met twice with Authority staff progressing the Authority's FSO initiative. The Authority requested the meetings to assist with development of a CBA to inform future decision making. Independently, the ENA FNF DSO Project team also met twice to discuss the Authority's request for assistance and the release of the Authority's FSO Issues and high-level options consultation paper (released 24 June).

Grid Owner Outage Optimisation: The System Operator is supporting the Grid Owner to implement its identified target state. Four Grid Owner initiatives are being progressed:

- Increase outage quantity in the annual outage plan. This will be led by the Works Scheduling and Optimisation team and has been handed over. A workshop has been scheduled to be completed by 31 July for delivery in the 26/27 annual planning process.
- Create a process to agree and implement a rolling 4 monthly locked down plan. In July we are locking down the August month using our new optimisation dashboard. Governance has been setup to support the implementation expected to kick off in September. We expect to be locking down 4 months by the end of December.
- Create a data product to highlight outage optimisation opportunities: This was completed in June and is now in use to support the 4 monthly locked down plan.
- Create a roadmap of system changes that will support optimisation: We have completed a 5 week sprint with partners in performance to identify technical features we should include in the OHMS enhancements phase of work to support outage optimisation. It has also recommended we start looking at the next generation of outage optimisation tooling as OHMS is currently limited in its ability to support optimisation.

The System Operator supports these initiatives as they will result in longer Grid Owner outage lead times and certainty. This will enable better, more certain cross-industry outage planning and co-ordination.

Grid Owner HVDC major capex proposal short-list consultation: The System Operator made a submission noting the intertwined nature of the HVDC control system, elements of the electricity market design, and operational practices. For these reasons we recommended a close working relationship between the Grid Owner's HVDC upgrade project team and the System Operator.

Outage Co-ordination: The System Operator has completed talking to the asset owners (including the Grid Owner) to identify areas where it can improve tools and processes. This feedback is being turned into a work plan over the next month. This will guide development of outage co-ordination tools POCP and NZGB, and where we might progress information or process improvements.

Evolving markets resource co-ordination - Tie-breaker provisions: We are in the final stages of preparing consultation documents to seek industry feedback on how "tie-breaker" situations should be resolved for multiple competing generator offers at the same location in the wholesale electricity market. This will help the market to resolve situations when there is an oversupply of very low-priced generation which is becoming more common as renewable energy grows. We have had a number of queries from generation investors seeking clarity and certainty on how the System Operator will resolve tie-breaker situations. The consultation includes a proposed tie-breaking solution and alternative options. We will open the consultation period in early July.

Connecting with the industry

System Operator Industry Forums: Our fortnightly discussions on current operational and market issues were held on 10 and 24 June. The 24 June forum was extended to include a detailed overview of our energy security outlook process as outlined in the recently published ESO101 education piece. Recent slide packs and recordings for forums within the last month are available on our System Operator Industry Forum webpage.

Market Operations Weekly Reports: Our Market Operations Weekly Reports provide information to assist interested parties' understanding of the current security of supply situation[3] and other market events. These reports also include a Market Insight each week covering a topic of interest to the industry. The reports we published this month, and the Market Insight in each are as follows[4]:

- 8 June: Week-Ahead Dispatch Schedule Overview and Example.
- 15 June: Ancillary Services Procurement Plan Update
- 29 June: Security of Supply Assessment 2025

Supporting the Authority

Emergency Reserve Scheme (ERS): In June the Authority commissioned the System Operator to review a preliminary design for an Emergency Reserve Scheme - essentially a paid demand response product for real-time supply shortfalls. The preliminary design was prepared by Robinson Bowmaker Paul (RBP) and considered the operational processes involved in the System Operator procuring, scheduling and activating such a scheme, and how cost allocation and compensation may be affected. We provided feedback on the proposal to the Authority noting that as designed, the scheme is likely not implementable by winter 2026, but there are several less sophisticated options to explore which could satisfy industry requirements in the interim.

Rewarding Industrial demand flexibility consultation: We contacted ENA to ensure they understood how broad the proposed actions on the roadmap contained within this consultation were. The response from ENA confirmed their initial assessment of this consultation (based on review of the Executive Summary) had missed the impacts to their members. ENA did subsequently submit to this consultation.

MFK Enhancements: The Authority has begun revisiting a proposal to redirect the multiple frequency keeping (MFK) tool to balance intermittent generation (IG) variability between dispatch. The impact of IG variability is expected to increase significantly as more plant is commissioned, which challenges maintenance of the normal frequency band. The MFK tool currently provides signals to MFK providers to increase or decrease output in a coordinated fashion. The work will investigate whether MFK is suitable for managing intra-dispatch variability caused by IG and the impact it might have on

[3] As required by the Security of Supply Forecasting and Information Policy section 11, incorporated by reference into the Electricity Industry Participation Code 2010

[4] Past Market Operations Weekly Reports including our weekly insights can be viewed on our website,.

how frequency needs to be managed as IG grows. We continue emphasising to the Authority the need for a programme strategy to manage the multiple initiatives underway, or planned, which will impact frequency management.

Intermittent generation central forecasting project: In May we raised a potential issue with the approved Code which will be gazetted effective 31 July. We queried whether the Code would achieve the desired outcome of placing the same timing obligations on participants who use their own forecasts as those participants using the new central forecast. We noted if the Authority agreed an issue did exist it could be managed via conditions attached by the Authority to their approval of a participant to use their own forecasts. We will follow up with the Authority on this topic as we are aware several participants intend to use their own forecasts.We have completed TAS 119 by providing advice and support to assist with the successful implementation of the Authority's new hybrid forecasting arrangement, which is scheduled to take effect on 31 July 2025.

Frequency-related Code amendment proposal: Our submission to the Authority's consultation supported lowering the excluded-generator threshold to 10MW and introduction of a ±0.1 Hz deadband. We encouraged the Authority to progress a strategy for normal frequency management and review its FSR roadmap. In our view both these initiatives are increasingly important to progress near-term given we are seeing increasing intermittent generation variability and reducing system inertia, and the now 3-year-old FSR roadmap may need reprioritisation. We also highlighted the need for close integration of the Authority's common quality and market development activities, to balance regulatory obligations with market incentives.

Decentralisation green paper: We contributed to a Transpower submission to the Authority on this topic. Our input focussed on the need to consider market settings in the context of a more decentralised power system.

International Engagement

GE Venova Conference: From 9–13 June a System Operator representative attended the GE conference in Boston where they collaborated with the GE Product Team and industry peers from around the world. We were able to confirm that our Control Room of the Future (CROF) strategy is highly aligned to GE's perspective, including how AI and machine learning will enable the CROF Vision.

Australian Energy Week 2025 (AEW): Form 17–20 June a System Operator representative attended AEW in Melbourne. While the Australian context for the electrification/decarbonisation transition is different, our electricity market designs are similar and the challenges the Australian industry is working on are very much the same as ours. Connections were made with key people at AEMO and AER. In particular, the Markets group is now working to build closer relationships with counterparts in AEMO.

AFRY: On 25 June we responded to a request from AFRY (engineering consultants) who are engaged in work supporting the UK National Energy System Operator (NESO) in developing their market system and control room processes. We met with representatives from AFRY and other consultants to talk through recent developments and lessons learned in market scheduling, with particular interest in probabilistic modelling and sensitivity and scenario analysis. We expect continued engagement after they review technical materials we provided.

Media interactions

We issued a media release on 30 June to promote the final Security of Supply Assessment for 2025. Thie resulted in widespread media coverage, including:

- The Post – Transpower sees 'increasing urgency' for more power generation | The Post

- NZ Herald – Transpower warns NZ needs more power generation amid gas decline - NZ Herald
- Business Desk – Transpower confirms warning about potential energy shortfall next winter | BusinessDesk
- Newstalk ZB – Transpower head addresses concerns over declining energy supply

There were no other enquiries from media about the System Operator service.

6 Project updates

Progress against high value, in-flight market design, service enhancement and service maintenance projects are included below along with details of any variances from the current CAPEX plan.

6.1 Market design and service enhancement project updates

There are no market design or service enhancement projects in-flight.

6.2 Other projects and initiatives

Ancillary Services Cost Allocation System (ASCAS): This project is delivering a new AST and GSS software (ASCAS) replacing previous end-of-life tech vital to accurate information sharing with the Authority and NZX. The development remains on schedule. User Acceptance Testing for the third tranche is complete and team has successfully completed an interim production release with the purpose of technical verification of the application.

D&A Modernisation – Market System Data: This project is migrating Market Systems data to the newly established Cloud Data Platform to meet interim requirements for Ancillary Service Reports (ahead of completion of the ASCAS project) and increase consistency and efficiency. Go Live of MS Data and BI Publisher completed successfully on 28th May. BAU Handover sessions are completed. Project Closure report is in the process of being drafted.

SCADA Habitat and EMP Refresh: This project is to upgrade critical components of the SCADA system and Market Solvers, to ensure operational integrity of the System Operator's market system tools into the future. Factory Acceptance Testing and System Integration Testing have been extended to resolve and re-test Critical and High severity defects. A Go/No-Go decision meeting on 30 June 2025, recommended delaying the December go-live date due to delays and eroded contingency. This recommendation was endorsed by the Project Governance Board, and a new timeline will be presented in the July Project Governance Meeting. Collaboration with Operations teams on training requirements and business process documentation updates continues. Preparatory work for the SCADA Staging environment for initial testing of the implementation plan is underway.

Control room of the future (CRoF): This month we have focused on how to incorporate CRoF external engagement as part of the proposal for developing the SO Strategy with the Authority. We have also worked on how to articulate the CRoF in a simple and meaningful way for different stakeholders considering the different EPRI aligned pillars. Planning has also begun on how to showcase to the wider Grid & System Operations team the eight CRoF strategic shifts needed moving forward to maintain our operational service levels given increasing complexity, with each Operations Manager allocated a shift to champion.

7 Technical advisory hours and services

The following table provides the technical advisory hours for the month and a summary of technical advisory services to which those hours related (SOSPA 12.3 (d) refers).

TAS Statement of Work (SOW)	Status	Hours worked during Month
TAS 108 – Extended Reserves implementation	In progress	123.0
TAS 112 – Future Security and Resilience	Closed	169.0
TAS 117 – Scarcity Pricing	Closed	4.5
TAS 118 – Emergency Reserve Scheme (ERS)	Closed	119.5
TAS 119 – Consultation on new Central Forecast Arrangement	Closed	15.5

Progress:

TAS 108 Extended Reserve Implementation 23/24 – Extended Implementation: Transition continued in June with a total of 1,458 feeders (95%) transitioned to the 4-block AUFLS scheme. Two of the NI CAOs have not completed and are continuing their transition beyond 30 June 2025. Wellington Electricity has 68 to complete and Unison has 2.

TAS 112 FSR Workstream - Part 8 of the Code - Common Quality Requirements: In June, the System Operator continued supporting the Authority by providing technical input and reviewing draft options decisions and Code amendment proposals where needed. Work also advanced on System Strength Phase 1, with the report completed for CQTG review. Additional low inertia analysis was progressed and sent to the Authority for review in early July. Planning and prioritisation of the FY25/26 FSR scope also continued in collaboration with the Authority.

TAS 117 – Scarcity Pricing: The final deliverable, scarcity pricing animation, has been completed and uploaded on to the system operator website. Project Close out report was submitted to the Authority on the 25th of June.

TAS 118: Emergency Reserve Scheme initial scoping: The System Operator reviewed the Authority's draft consultation paper and provided feedback/comment to the Authority on 19 June 2025 and reviewed and provided feedback on the Authority's RBP Emergency Reserve Scheme Options Report on 27 June 2025. Both reports were discussed with members of the Authority team prior to being shared. No meetings were set by the Authority for discussion of the ERS solution with any other parties. Project Close out report was submitted to the Authority on the 30th of June.

TAS 119: Consultation on new Central Forecast Arrangement: A Principal Market Advisor has been available to answer Authority and DNV Services questions related to the central forecasting

arrangement – in terms of procurement and specifications - throughout June 2025. Project Close out report was submitted to the Authority on the 30th of June and is pending the Authority's approval.

8 Risk & Assurance

Risk Management

Risk Register workshop with the Authority: A 'blank sheet' workshop with the Authority to identify current and emerging risks took place on 5 June. The workshop proved a good way to gather perceived risks from both parties and the output will be incorporated into our risk framework. The revised risk register will be provided to the Authority in early 2025/26.

BCP exercise: This year the BCP exercise enabled CIMS-trained staff to put their training into practice. The exercise provided a mix of practical training and with a Cyber-related exercise to equip a wider range of Operations staff to confidently perform their roles in an IMT situation should they be required.

Business assurance audits

2024/24 Business Assurance Audits: All four audits for the 2024/25 financial year have been completed and the final reports delivered to the Authority.

- Audit 50. Commissioning and Decommissioning Requirements
- Audit 51. Manage a National SCADA EMS Failure
- Audit 52. Electricity Risk Curves Modelling
- Audit 53. Manage Security Constraints

The control effectiveness was calculated to be "full" for all four audits, indicating minimal uncontrolled risks due to evidence that good controls are in place, tested and monitored. All recommendations identified by the auditors were priority 3, reflecting actions to address opportunities for continuous improvement to improve the overall efficiency for a fully effective audit.

2025/26 Business Assurance Audit Plan, including business planning for 2026/27 and 2027/28: We have identified four business assurance audits for 2025/26. In addition, this year we have provided the Authority with a list of indicative business assurance audits for the following two financial years. The list was created following a discussion with Authority staff on 16 June and delivered to the Authority on 23 June. The final date for agreement of this plan is subject to the SOSPA3 contract transitional arrangements and will be signed off prior to 31 July 2025.

9 Compliance

[redacted]

[redacted]

System Operator Compliance: On June 9, the Authority notified the System Operator of the Authority's concern about AUFLS compliance in the South Island. The Authority requested that the System Operator use its powers under the Code to request the Grid Owner undertake remedial action to demonstrate all South Island AUFLS systems meet the record keeping, testing or routine testing requirements, as applicable. On June 23 we wrote to the Grid Owner and advised that the System Operator reasonably believes that Grid Owner asset/assets may not comply with Technical Code A. We required the Grid Owner to advise the System Operator of its remedial or test plan for the assets; and undertake any remedial action or testing of its assets in accordance with its plan advised to the System Operator. We also noted the role of the Grid Owner in relation to SI AUFLS and our expectation that the remedial or test plan will contain information on all SI AUFLS systems, including those provided by others such as distribution businesses. We have now received a response from the Grid Owner which we are assessing.

10 Impartiality of Transpower roles

We have two open items in the Conflict of Interest Register (below). These are being actively managed in accordance with our Conflict of Interest procedure.

System Operator Open Conflict of Interest Issues		
ID	**Title**	**Managed by**
40	General System Operator/Grid Owner dual roles: This is a general item that will remain permanently open to cover all employees with a dual System Operator/Grid Owner role. The item documents the actions necessary to ensure impartiality in these circumstances; these items will be monitored to ensure their continue effectiveness.	Corporate Counsel, Compliance and Impartiality
41	General relationship situation: This is a general item that will remain permanently open to cover all potential conflicts of interest arising under a relationship situation. This item documents the actions necessary to prevent an actual conflict arising and will be monitored by the System Operator Compliance & Impartiality Manager to ensure their continued effectiveness.	Corporate Counsel, Compliance and Impartiality

Ara Ake Trial: The System Operator and Grid Owner are collaborating on the FlexPoint platform. As outlined in previous reports, there are currently no actual or potential conflicts of interest identified. We will continue to monitor the trial from an impartiality perspective.

AUFLS Equivalence Arrangement at Tiwai: Transpower, as the Grid Owner, has applied for a new equivalence arrangement in relation to AUFLS obligations at Tiwai. The System Operator has completed the engineering assessment, taking into account various NZAS operating conditions, including demand response arrangements with its electricity suppliers. The System Operator has approved this equivalence arrangement with conditions. Interested participants, including the Authority, have been notified of this decision.

AUFLS 2024 Compliance Assessment: The System Operator is conducting annual compliance assessments for all AUFLS providers, including the Grid Owner, for the 2024 annual load profile information submission. We have agreed on the compliance scope, reporting timeframes, and approach with the Authority for all providers.

11 Performance metric and monitoring

Our System Operator performance against the performance metrics for the financial year as required by SOSPA 12.3 (a) will be provided in the final monthly report each quarter. Each quarter we report our year-to-date performance against the Performance Metrics and Incentives Agreement with the Authority. A quarterly review session is then held to discuss and agree an interim / indicative score. Following the end of the financial year we reach a joint determination of our full-year performance, that is used to determine our performance incentive outcome. The final results will be published in our Annual Self Review.

The current performance metrics will be revised with minor changes for the 2024/25 reporting year.

Q4 interim outcome scores

New security and reliability risks are identified and appropriately managed	**4.22** O1 Score
Significant events are appropriately scoped, understood, prepared for and managed	**4.64** O2 Score
The Authority is supported to evolve and develop the electricity market and power systems	**4.27** O3 Score
Relevant market information is made accessible to stakeholders	**4.38** O4 Score
Stakeholders are effectively informed on and included in decisions where relevant	**4.21** O5 Score
Stakeholders are satisfied with our service	**4.57** O6 Score
SOSPA delivery provides value	**4.55** O7 Score
Overall Performance Score	**4.40**
Performance % Score	**80%**

Score	Level of performance
1	Poor/unacceptable performance, requires focused improvement
2	Partially meets requirements, some improvement needed
3	Performance of all requirements in line with requirements of the Code and SOSPA
4	Exceeds some aspects of what is required by the Code and SOSPA
5	Consistent delivery of exceptional performance of (or beyond) what is required by the Code and SOSPA

11.1 System Operator Service Provider Agreement (SOSPA) annual deliverables

The following SOSPA deliverables were delivered on time:

- Capex roadmap
- Capex plan
- Completion of current year's business assurance audits (up to 5 a years)
- Participant survey

The Authority and Transpower executed the SOSPA covering the next 3 financial years. The following documents, originally scheduled for delivery by 30 June 2025, have been deferred to 31 July 2025 in accordance with the Schedule 5 transitional arrangements under the SOSPA 2025 contract:

- Business assurance audit plan 2024–25
- Education and engagement plan 2024–25
- Performance metrics and incentives agreement 2024–25
- Statutory objective work plan 2024–25
- System operator business plan 2024–25

12 Cost of services reporting

The cost of services reporting for 2024/25 was delivered to the Authority on 30 June.

13 Actions taken

The following table contains a full list of actions taken this month regarding the System Operator business plan, statutory objective work plan, participant survey responses and any remedial plan, as required by SOSPA 12.3 (b).

We note that re-prioritisation of our resources to support the System Operator and the Authority's Northland loss of supply investigations, the 2024 security of supply situation, and the SOSPA3 process has constrained our capacity to progress our work on these activities to planned timelines.

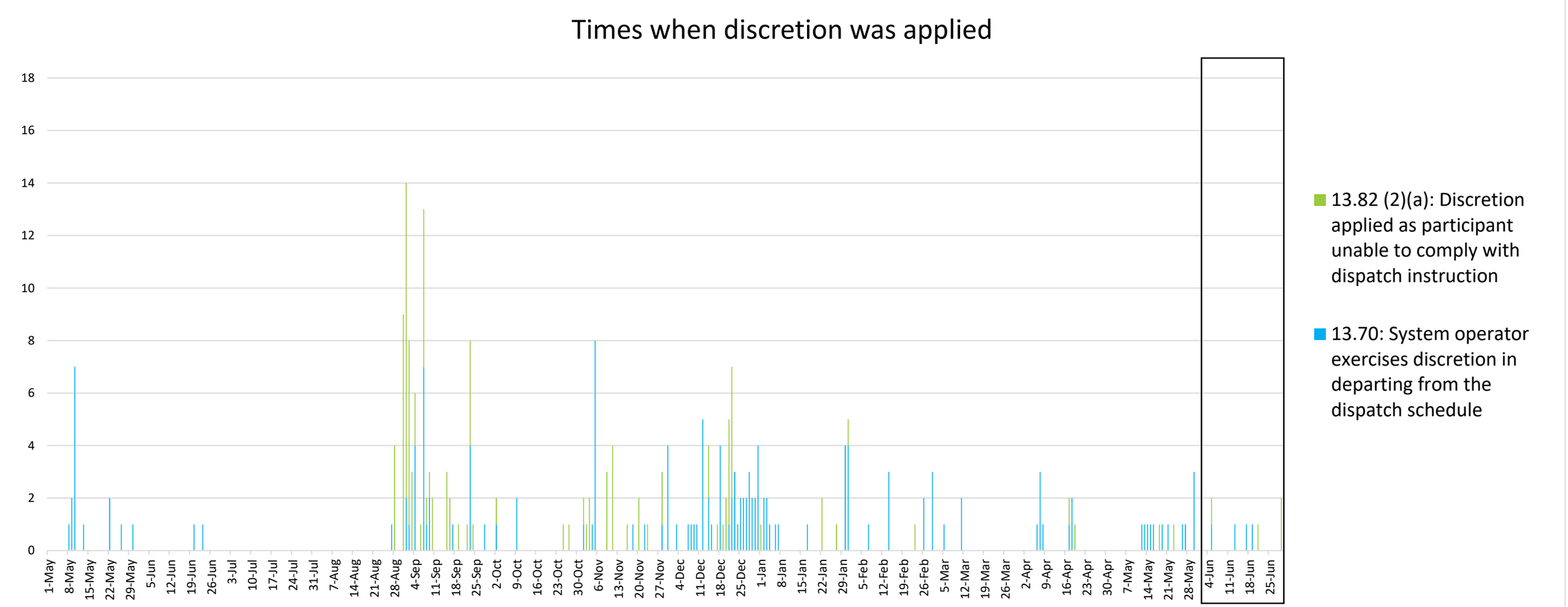
Item of interest	Actions taken
(i) To give effect to the **System Operator business plan** strategic initiative	***Support future-focused market developments through white papers, consultation processes and cross-industry forums*** • Continued to participate in the Electricity Networks Aotearoa Future Network Forum's *Roles and Functions to enable distributed flexibility* project team weekly meetings. This project is actively engaging with the Authority. • 2025 Security of Supply Assessment: We have now published our 2025 SOSA. • Published ESO101 and presented it to participants through an extended SO Industry Forum. • Published SPD101. • Submitted to the Grid Owner's HVDC link programme upgrade consultation • Submitted to the Authority's Frequency-related Code amendment consultation. • Contributed to a Transpower submission to the Authority's Decentralisation Green paper consultation ***Develop a view of the information, market and standards required to operate the future electricity system to support the FSR work program*** • Work continued to support the Authority's FSR programme, and we have continued predominantly focussing on providing the Authority with support preparing for their Information Sharing Options and Code Amendment Proposal Consultation Paper, which will be published at the start of July. • We completed the draft report covering phase 1 of the system strength investigation initiative. The report focusses on identifying system strength-related operational issues that the New Zealand power system will likely face with a

Item of interest	Actions taken
	continued uptake of IBR and discussion of various mitigations that can be applied to resolve the issues. We presented the investigation findings at the June CQTG meeting • We completed additional analysis to validate the initial outputs from the low system inertia threshold study. This provided increased confidence in the low inertia threshold band for monitoring, which is proposed in the study report. • We progressed planning and prioritisation of work with the Authority and shared the estimates to complete all the identified FSR work for FY25/26 at the JWPT meeting in June. This resulted in further prioritisation. The result was drafted in the FY25/26 TAS SOW and submitted to the Authority late June. • A close out report for the FSR work completed in FY24/25 was submitted to the Authority end of June. ***Enhance quality assurance through delivery of the Modelling Quality Assurance Framework*** • Finalised QA tools incorporating a standardised peer-review checklist and a SharePoint-based database to capture and centralise review data across multiple teams. The system integrates with a dynamic dashboard that provides real-time visibility into peer review status and outcomes, all of which have passed integration and data recording testing. In parallel, a work management solution was configured to support an agreed interim process for tracking end-to-end asset model changes from initiation to completion. ***Implement stage 1 of new enterprise business process management (BPM) capability for system operations*** • Documented and finalised key processes within the Power Systems Group as a case study to guide broader implementation. The process architecture was updated to reflect newly identified value streams. Development of a wider adoption strategy is underway as the initiative transitions into business-as-usual under the new OPTI structure. ***Leverage data and analytics developments to improve our data modelling and reporting*** • Transfer of Market System Data into the new data warehouse is now complete. ***Deliver improvements to our generator commissioning management and assessment process*** • New and updated generation commissioning documentation and webpages were published in late January 2025, with the changes communicated to the Industry throughout February,

Item of interest	Actions taken
	including at the System Operator Industry Forum. This process has now bedded in, and regular Generator commissioning updates are provided at the fortnightly System Operator Forum.
(ii) To comply with the **statutory objective work plan**:	***Policy statement review*** *(review due 1 November 2024)* • The review has been completed with the Authority approving the submitted draft which took effect on 14 March. ***AS procurement plan review*** *(review due 8 June 2025)* • The draft Ancillary Services Procurement Plan was submitted to the Authority on 6 June. • The Authority responded with feedback, which will be addressed in an updated version to be submitted to the Authority in July. • A number of changes were deferred following the feedback received during the consultation process. We intend to gather further information and address the deferred items as part of an out-of-cycle review. ***Identify low residual / informational CANs*** *(due 28 March 2025)* • Completed September 2024, and ongoing in each Quarterly System Performance Information report. ***Low residual notices, threshold and process review*** *(due April 2025)* • Complete. On 4 April we published our summary and response to the 6 submissions and 2 cross-submissions to our Low Residual Situation review consultation paper. We will develop and consult on potential Policy Statement amendments related to Low Residual Situations as part of the next Policy Statement review.
(iii) In response to participant responses to any **participant survey**:	In response to feedback from the 2024-25 survey ***"Emergencies can be overwhelming, so having clear bullet point-style information helps people quickly understand what to expect."*** We have recently released our new webpage Process for Notifying and Managing an Event this page demonstrates this approach, offering structured and accessible guidance that supports effective decision-making during an energy or reserve shortfall.
(iv) To comply with any **remedial plan** agreed by the parties under SOSPA 14.1	*N/A – No remedial plan in place.*

Appendix

Appendix A: Discretion



System Operator applied discretion under cl 13.70 in 7 instances:

- 5 June: 2 instances applied:
  - 1 instance applied at Kaponga (KPA) as Opunake (OPK) - KPA – Stratford (SFD) tripped.
  - 1 instance applied at Huntly (HLY) by traders in response to a 13.82(2)(a) due to HLY unit 5 being dispatched below minimum run of 182MW
- 17 June: 1 instance applied at Rotorua (ROT) as Wheao (WHE) was discretioned to 0 MW to allow a planned switching for ROT – Tarukenga (TRK) outage
- 19 June: 1 instance applied at ROT for ROT – TRK to return to service
- 21 June: 1 instance applied at HLY and Tauhara B (TAB) by traders in response to a 13.82(2)(a) as they were dispatched below minimum run
- 29 June: 2 instances applied at Huntly (HLY) by traders in response to a 13.82(2)(a) due to HLY unit 5 being dispatched below minimum run of 182MW

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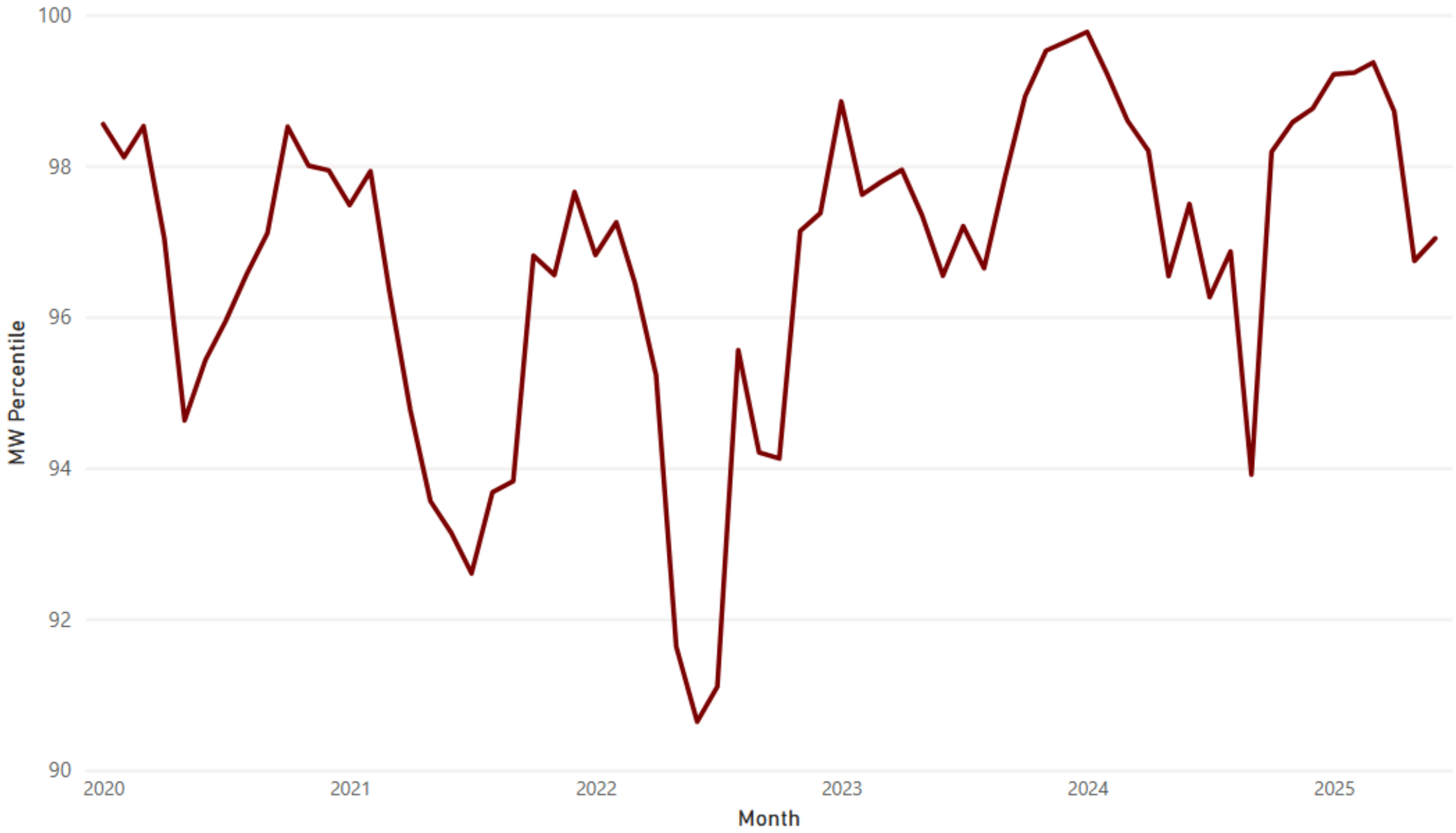
Appendix B: Forecast v real-time residual variability

The graph below presents, for the last 24 months, the proportion of time within each month ('MW Percentile') that a 200 MW residual was sufficient to cover the variation in load and intermittent generation between forecast (30 minutes ahead of real-time) and real-time.

Date	Percentile	Forecast horizon
June 2025	97.04	30 minutes
May 2025	96.74	30 minutes
April 2025	98.72	30 minutes
March 2025	99.37	30 minutes
February 2025	99.23	30 minutes
January 2025	99.21	30 minutes
December 2024	98.76	30 minutes
November 2024	98.58	30 minutes
October 2024	98.19	30 minutes
September 2024	93.91	30 minutes
August 2024	96.87	30 minutes
July 2024	96.26	30 minutes
June 2024	97.49	30 minutes
May 2024	96.54	30 minutes
April 2024	98.20	30 minutes
March 2024	98.60	30 minutes
February 2024	99.19	30 minutes
January 2024	99.77	30 minutes
December 2023	99.64	30 minutes
November 2023	99.52	30 minutes
October 2023	98.92	30 minutes
September 2023	97.84	30 minutes
August 2023	96.64	30 minutes
July 2023	97.20	30 minutes
June 2023	96.55	30 minutes



Appendix C: Performance Metrics

Scoring

Performance metric scores as at June

Metric	Definition	June	Score out of 5: 1	2	3	4	5	N/A
PM1	Risk register has been updated and tested externally with the Authority and widely among industry participants	4	Internal Risk Register has not been updated in the last 12 months, no engagements have been held to identify new threats or assess current threats	Internal Risk Register has been reviewed and updated internally in the last 12 months	Internal Risk Register has been reviewed and updated internally in the last 6 months	An annual workshop is held with the Authority, OR representatives from a diverse range of stakeholders, to review threats and identify and assess new security and reliability threats	An annual workshop is held with each of the Authority, AND representatives from a diverse range of stakeholders, to review threats and identify and assess new security and reliability threats	
PM2	% of SMART actions from the control self-assessment with maturity ratings of 1 or 2 will be addressed by the planned due date	4	< 50% of SMART actions with a maturity rating of 1 and 2 are completed by due date	≥ 50% of SMART actions with a maturity rating of 1 and 2 are completed by due date	≥ 75% of SMART actions with a maturity rating of 1 and 2 are completed by due date	100% of SMART actions with a maturity rating of 1 and ≥ 75% of SMART actions with a maturity rating of 2 are completed by due date	100% of SMART actions with a maturity rating of 1 and 2 are completed by due date	
PM3	At least one pan-industry event exercise held to test existing controls	5	-	-	0 pan-industry event exercises	1 pan-industry event exercise	2 event exercises (1 of which must be a pan-industry exercise) – includes smaller event exercises with industry involvement	
PM4	% of actions from industry exercises which were completed on time	N/A	< 50 %	≥ 50 % and < 65 %	≥ 65 % and < 75 %	≥ 75 % and < 100 %	100%	
PM5	Average score of internal process assessments arising from significant events	5	Poor	Below Expectations	Acceptable	Good	Excellent	
PM6	Percentage of actions from significant events which are closed on time	5	< 50 %	≥ 50 % and < 65 %	≥ 65 % and < 75 %	≥ 75 % and < 100 %	100%	
PM7	On time delivery of significant event reports	4	Less than 100% of major preliminary reports delivered on time	All major preliminary reports and 60% of other reports delivered on time	All major preliminary reports and 80% of other reports delivered on time	100% of all reports delivered on time	Score not available	
PM8	Average satisfaction score from stakeholders, as per responses received to transactional surveys taken at forums and asked for in correspondence	5	< 35 %	≥ 35 % and < 50 %	≥ 50 % and < 70 %	≥ 70 % and < 85 %	≥ 85 %	
PM9	All categories of stakeholders are actively engaged by the system operator throughout the year	2	SO Annual Participant Survey is not sent to a diverse range of stakeholders	SO Annual Participant Survey sent to a diverse range of stakeholders to request their feedback on how well they believe market information has been made accessible to them	Responses are received from a diverse range of stakeholders and are considered by the SO for improvement of engagement activities	Specific action is taken to build engagement from a diverse range of stakeholders	More than one action is taken as a result of feedback received from the Annual Participant Survey or other industry mechanisms and forums, with the aims of improving engagement with stakeholders	
PM10	% of industry submissions, made in response to system operator consultations, which are responded to	5	Not all submissions acknowledged	All submissions acknowledged and < 50% responded to	All submissions acknowledged and ≥ 50 % responded to	All submissions acknowledged and ≥ 75 % responded to	All submissions acknowledged and ≥ 90 % responded to	
PM11	Stakeholder engagement in project delivery	3	The stakeholder engagement planning process is not undertaken during the year – ie no list of suitable projects and target list of stakeholder engagement is created	A list of suitable projects and target list of stakeholder engagement is created	The consultation process for the projects is carried out	Stakeholder engagement is actively monitored and managed throughout the year	Stakeholder input is incorporated into the process	
PM12	Average satisfaction score from stakeholders from Annual Survey	5	< 73 %	≥ 73 % and < 76 %	≥ 76 % and < 85 %	≥ 85 % and < 89 %	≥ 90 %	
PM13	Average score from stakeholders on their perception of SO impartiality	5	< 60 %	≥ 60 % and < 70 %	≥ 70 % and < 80 %	≥ 80 % and < 89 %	≥ 90 %	
PM14	Number of thought leadership publications on specific areas of system operator work that affect and/or are of interest to the industry	5	Score not available	No thought leadership publications and 1 participant education piece in the financial year	1-2 thought leadership publications and 1 participant education piece in the financial year	3-4 thought leadership publications and 2 participant education piece in the financial year	>4 thought leadership publications and 3 participant education piece in the financial year	
PM16	# of SO Industry Forums held	5	Score not available	1-10 forums	11-19 forums	20 or more forums	20 or more forums, plus 1 longer format forum	
PM17	% of key SOSPA documents delivered on time to the Authority	5	< 70%	≥ 70 % and < 100%	100%	SO works proactively with Authority staff to enhance the accessibility of existing content in >50% of key documents	SO works proactively with Authority staff to provide new, value-add content in >50% of key documents	

Appendix C (cont): Performance Metrics

Relationship between performance metrics and outcomes

Performance metric ref	Metric	O 1: New security and reliability risks are identified and appropriately managed	O 2: Significant events are appropriately scoped, understood, prepared for and managed	O 3: The Authority is supported to evolve and develop the electricity market and power systems	O 4: Relevant market information is made accessible to stakeholders	O 5: Stakeholders are effectively informed on and included in decisions where relevant	O 6: System Operator stakeholders are satisfied with our service	O 7: SOSPA delivery provides value	PM contribution to overall performance score
PM 1	Risk register has been updated and tested externally with the Authority and widely among industry participants	22%	9%	9%	6%	7%			10%
PM 2	% of SMART actions from the control self-assessment with maturity ratings of 1 or 2 will be addressed by the planned due date	22%	9%						7%
PM 3	At least one pan-industry event exercise held to test existing controls	11%	18%	9%	6%	0%	0	9%	10%
PM 4	% of high value actions from industry exercises which were completed on time								0%
PM 5	Average score of internal process audits arising from significant events	11%	18%						7%
PM 6	Percentage of priority actions from system events which are closed on time	11%	18%	9%					9%
PM 7	Average delivery time for final reports for moderate and major events, and preliminary reports for major events		18%	18%	6%			18%	10%
PM 8	Average satisfaction score from stakeholders, as per responses received to transactional surveys taken at forums and asked for in correspondence.				13%	7%	29%	9%	5%
PM 9	All categories of stakeholders are actively engaged by the system operator throughout the year	11%		9%	13%	14%	14%	9%	9%
PM 10	% of system operator consultations for which industry submissions are responded to			9%	13%	14%		18%	5%
PM 11	% of SO-led JWP projects which require stakeholder engagement that have carried out stakeholder engagement			9%	6%	14%			4%
PM 12	Average satisfaction score from stakeholders from Annual Survey				6%	7%	29%		4%
PM 13	Average score from stakeholders on their perception of SO impartiality				6%	7%	29%		4%
PM 14	Number of thought leadership publications on specific areas of system operator work that affect and/or are of interest to the industry	11%		18%	13%	7%			8%
PM 15	~~Revoked~~	0%	0	0%	0%	0%	0%	0%	0
PM 16	# of SO Industry Forums held		9%	9%	13%	14%		18%	8%
PM 17	% of key SOSPA documents delivered on time to the Authority					7%		18%	2%
PM 18	~~Revoked~~	0%	0	0%	0%	0%	0%	0%	
TOTAL		100%	100%	100%	100%	100%	100%	100%	100%
Outcome weighting to final performance score		**20%**	**25%**	**20%**	**10%**	**10%**	**10%**	**5%**	