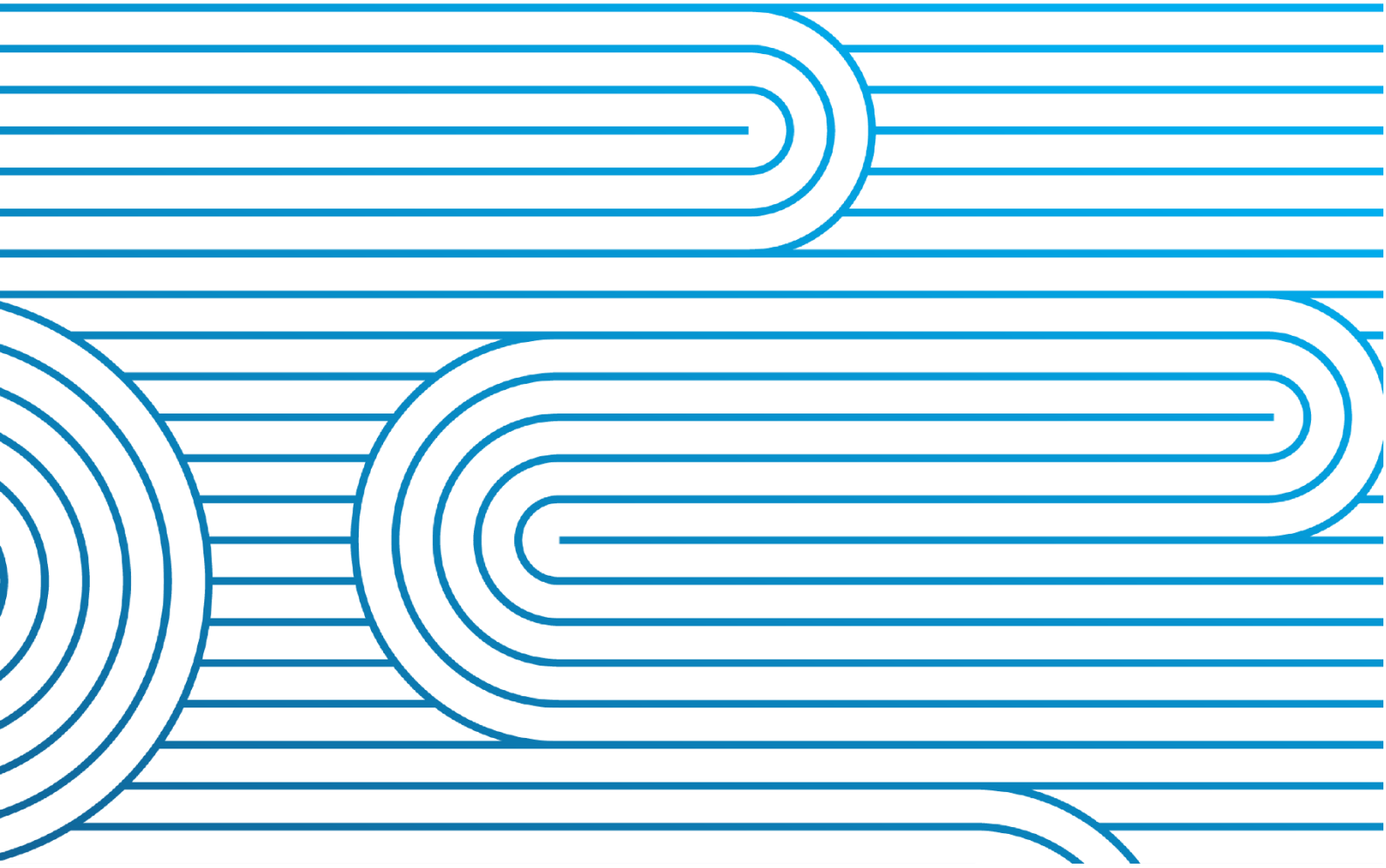
TRANSPOWER

Monthly System Operator performance report

For the Electricity Authority

Date: September 2025



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 2025 System Operator Service Provider Agreement (SOSPA):

*12.2 **Monthly reports**: The **Provider** must provide to the **Authority**, with each self-review report under clause 3.14 of the **Code**:*

*(a) a report on the progress of any **service enhancement capex project** or **market design capex project** that has commenced and has either not been completed or was completed during the month to which the report relates, including:*

*(i) to any actual or expected variance from the **capex roadmap** in relation to that **capex project**; and*

(ii) the reasons for the variance;

*(b) a report on **the technical advisory** services in accordance with the **TAS guideline;***

(c) *the actions taken by the **Provider** during the previous month:*

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

(ii) *in response to participant responses to any participant survey; and*

(iii) *to comply with any remedial plan agreed by the parties under clause 14.1(i);*

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

(e) *in the report relating to the last month of each quarter, the **Provider's** performance against the **performance metrics** for the **financial year** during the previous quarter.*

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

Contents

Key points this month

Operating the power system

- September saw two short notice HVDC pole outages following faults, and issues for two sets of planned outages where system conditions impacted customers. In the Waikato, during the week beginning 22 September, an operational split between Karapiro and Te Awamutu caused problems for Fonterra's Te Awamutu plant. In North Canterbury, outages for the Islington-Southbrook reconductoring put parts of the region on N-security and resulted in voltage and loading challenges being managed in real time.

Security of supply

- *Energy Security Outlook (ESO):* The September ESO indicates increased risk for January to August 2026 due to a decrease in gas storage levels. The update assumes one Rankine is unavailable from 2026, and that Genesis could free up gas used by the Huntly 5 unit through to the end of 2025. National hydro storage increased rapidly through September to 106% of mean due to high inflows mainly in the South Island, increased wind, and lower demand with warmer temperatures.
- *New Zealand Generation Balance (NZGB):* The NZGB has highlighted healthy capacity margins throughout spring. The market will need to remain co-ordinated during periods of high demand right through to the end of December due to limited availability of Huntly 5.
- *Security of Supply Forecasting and Information Policy (SOSFIP) review:* Our draft SOSFIP amendment proposal and consultation documents received approval to consult. The consultation opened for comment in early October.
- *Security of Supply Assessment (SOSA) 2026:* We have progressed work on the 2026 SOSA as we review the reference case assumptions and sensitivities in preparation for consultation on them later this year.
- *Industry Exercise 2025:* We continue to progress actions from the 2025 exercise, while we have proposed a space weather scenario for the next annual industry exercise in 2026.

Investigations

- *11 July 2025 – HVDC event:* At the end of September we finalised our engineering investigation and causer report and have now sent our reports to the Authority.
- *20 June 2024 – Northland loss of supply:* All remaining actions have now been signed off.

Supporting Asset-owner Activity

- *Outage co-ordination:* Average outages of 50 per week for September remained slightly lower than the usual 60-80 per week for this time of year. There were several complex outages, details of which were presented at recent System Operator Industry Forums.
- *Generator commissioning and testing:* Through August we continued our work to support new generation commissioning in the coming months including Twin Rivers Solar Farm near Kaitaia (25 MW), 'Golden Stairs' Solar Farm at Maungaturoto (17.6 MW), Taiohi Solar Farm at Rangiriri (22 MW), Lodestone's Whitianga Solar Farm (24 MW), Mercury Energy's Ngatamariki geothermal expansion near Taupo (54 MW), Eastland Generation's 'TOPP2' geothermal station at Kawarau (52 MW), and Contact Energy's Glenbrook BESS (100 MW).
- *Ancillary services activity:* Through September we have been finalising tender documents and incorporating procurement plan changes into draft contracts in preparation for opening the annual tender in early October. We continue work to disaggregate Hawke's Bay IR and progress engagements with LastMyle, Envex, and Simply Energy.

Commitment to evolving industry needs

- *SO Strategy*: As we work though a comprehensive process to develop a new SO Strategy, our work in September focussed on collating information and resources as part of our environment scan and defining our market engagement approach for this phase.
- *Policy Statement Review:* We have started preparing our draft for the upcoming Policy Statement review, including proposed updates to the Security (Risk and Emergency Management), Dispatch, and Compliance policies.
- *Evolving markets resource co-ordination - Tie-breaker provisions*: We have been progressing our summary and response to submission to our "tie breaker" situations consultation. As the result of a related query, we have also been considering if an urgent code change is appropriate to address the scenario where geothermal generation (usually) is kept on the system in preference to intermittent generation in tie-breaker scenarios.
- *Electricity Networks Aotearoa (ENA):* Our representative attended two Future Networks Forum meetings in relation to the Authority's consideration of three potential TSO/DSO models and consideration of completing a full cost benefit analysis of the options.
- *Grid Owner Outage Optimisation:* The System Operator continues to support the Grid Owner to implement initiatives that will enable longer outage lead times and improve cross-industry outage planning and co-ordination.

Risk & Assurance

- *Risk management:* We have started our 6-monthly control self-assessments which will cover five out of ten of our critical controls.
- *Business assurance audits:* We have commenced the first audit of four this year, black start test planning, and have drafted the scope for the second, preparedness for space weather events.

1 Operating the power system

1.1 System events

Event Date	Event Name	Event Activity
16 September 2025 and 25 September 2025	Short notice HVDC outages	On 16 September, damage to an Earth switch indication cable meant that Pole 2 could not deblock and its capability was dropped to zero for 45 mins. On 25 September a Transducer fault inhibited the deblock functionality on Pole 3 for 67 minutes, with its capability dropped to zero for the outage timeframe. In both cases the alternative pole managed the dispatched transfer with no other inhibiting factors.
22 - 26 September	Waikato outages impacting Fonterra	Multiple planned outages in the Waikato involved an operational system split between Karapiro and Te Awamutu (TMU). These outages coupled with the operational system split caused some issues for both Mercury's Karapiro generation capability and Fonterra's Te Awamutu plant (who were impacted by voltage swings at TMU). This was escalated, and an operational decision to move the system split from KPO_TMU to Hangatiki-Te Awamutu (HTI_TMU) was made and communicated to affected parties, to alleviate these issues. Subsequent investigation by the System Operator and Grid Owner have showed voltages remained within Code limits.
September (ongoing)	Voltage and thermal issues during ISL-SBK reconductoring outages	During the North Canterbury Islington-Southbrook circuit 1 and 2 reconductoring, the region has been on N-security and has had some voltage and loading challenges that have been managed in Real Time.

1.2 Market operations

Forecast v real-time residual variability: We monitor the variations between forecast and real-time dispatch conditions to determine if the 200 MW residual continues to provide sufficient coverage to cater for within trading period variations in demand and supply. 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 July more than 98% 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.

2 Security of supply

Security of supply forecasting and information policy (SOSFIP) review: The SOSFIP consultation document was progressed for release in the week commencing 6 October. We responded to feedback from the Authority in response to our request for consent to consult. Separately, a System Operator white paper will be produced to share analysis from the SOSFIP review process, considering potential system cost and risk implications of any decision to ease access to contingent storage, and a review of international approaches to strategic reserve arrangements (including the closed Whirinaki strategic reserve arrangement).

Energy Security Outlook (ESO): The latest Energy Security Outlook published on 25 September showed an increased supply risk for January to August 2026. This is primarily due to a decrease in gas storage levels. The update continued to assume one Rankine is unavailable from 2026. However, we also studied a scenario where all three Rankine units remain available, which reduced the risk curves. Genesis announced that it would free up gas used by the Huntly 5 unit from October to December 2025 and this has been factored into the ESO.

National hydro storage increased rapidly from 77% of the seasonal mean at the end of August to 106% of mean on 29 September. This was due to high inflows especially to South Island catchments, high wind periods, and lower demand with warmer temperatures during September. Capacity margins were healthy with almost all peaks exceeding 500 MW of residual.

New Zealand Generation Balance (NZGB) potential shortfalls: The latest NZGB update is available through our Customer Portal. The base case that reflects the total installed capacity not on outage indicates healthy capacity margins through the rest of spring. However, Huntly 5, which is normally operating in the market, has indicated it will have limited availability from October to end of December and will require 3-5 days to return to service. This has been captured in NZGB by removing it from the firm capacity scenario and replacing it with a single Rankine unit. This equates to an approximately 250 MW drop in firm capacity. This scenario indicates that right up to the end of December we are relying on the market to co-ordinate its slow start thermal to meet periods of high demand, supported by the occurrence of high wind generation when available.

Security of Supply Assessment (SOSA) 2026: We have progressed work on SOSA 2026 as we review the reference case assumptions and sensitivities in preparation for consultation on them later this year.

Industry Exercise 2025: The actions from the 2024/25 industry exercise have been finalised, and we will share these with the Authority in October. We have suggested a space weather scenario to the Authority for the next annual industry exercise and their Board is supportive of this plan.

3 Investigations

Under-frequency event investigations

11 July 2025 HVDC event: At the end of September, we finalised our engineering investigation and causer report and have now sent our reports to the Authority.

Significant incident investigations

20 June 2024 - Northland loss of supply Actions: All actions have now been signed off.

4 Supporting Asset-owner activity

4.1 Outage Coordination

The first month of spring had approximately 50 market outages per week compared to the typical seasonal outage profile of 60 – 80 seen during spring, summer and autumn.

There were some complex outages. Details and impacts of these were discussed in the fortnightly System Operator Industry Forums. They included:

- Three weeks of Ashburton – Islington circuit outages for reinsulating, concurrent with Islington – Southbrook circuit for reconductoring. These outages require lines companies to manage load in the upper South Island.
- Completion of outages at Redclyffe, which have seen the Redclyffe transformer commissioned. This means Waikaremoana generation is no longer required to facilitate outages.
- Cable 6 was disconnected from the HVDC Pole 3 for one week of maintenance. This reduced the HVDC capacity by 200 MW during this now completed outage.

Short notice outage requests (SNORs) remain a focus and continue to track at around 33% of total outage windows, maintaining the 10% reduction seen since the start of the year when focus increased on SNORs with the intent to continue to drive a decreasing trend in the number of SNORs.

4.2 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:

- Rānui's Twin Rivers Solar Farm near Kaitaia (25 MW connected to Top Energy) began commissioning in September 2025.
- Eastland Generation's Te Ahi O Maui geothermal generation station at Kawerau (24 MW connected to Horizon) has moved from their existing 11kV connection to a 220kV connection in September with commissioning of their nearby 'TOPP2' geothermal station (52 MW) due to start in November 2025.
- Solar Bay and Maungaturoto Solar Farm Project's 'Golden Stairs' Solar Farm at Maungaturoto (17.6 MW connected to Northpower) is due to begin commissioning in October 2025.
- New Power's Taiohi Solar Farm at Rangiriri (22 MW connected to WEL Networks) is due to begin commissioning in October 2025.
- Lodestone's Whitianga Solar Farm (24 MW connected to Powerco) is due to begin commissioning in November 2025.
- Mercury Energy's Ngatamariki expansion near Taupo (addition of a new 54 MW geothermal unit) is due to begin commissioning in November 2025.
- Contact's Glenbrook BESS (100 MW at GLN) next to the NZ Steel mill is due to begin commissioning January 2026.

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

In addition, we are working with NZ Steel on the commissioning of their STATCOM and Arc Furnace at Glenbrook. We are currently discussing options for operational communications with NZ Steel and

the Grid Owner and encouraging NZ Steel to progress their planning of compliance-related commissioning and testing.

Demand commissioning and testing

Fonterra Whareroa Load: In mid-2026, Fonterra will become a direct connect customer at Hāwera with their Whareroa dairy factory. We expect embedded generation at this site to cease and processing demand of up to 80 MW. As the variability of these large industrial process loads is not forecastable by the System Operator, we have written to the Authority to propose that this node be classified as non-conforming without waiting for up to a year's worth of data. We are having good discussions with the Authority regarding this.

4.3 Ancillary Services activity

Ancillary Services Tender: We have completed our update and initial legal review of the Ancillary Service contracts, including the incorporation of updates from the recent Procurement Plan review, as we finalise them and our tender documents in preparation for the 2025 tender for Instantaneous Reserves, Frequency Keeping, and North Island Black Start services to commence in early October.

Commissioning support: LastMyle have been successfully modelled in our pre-production environment. We will work with them to complete their proposal signoff and dispatch testing before deploying to production when they are ready to offer reserves. We are working with Simply Energy to transfer dispatch of reserves (contracted through Contact Energy) from Contact to Simply.

Ancillary Services optimisation initiative: The discovery and analysis phase continues to progress well. We have progressed our current state analysis and conducted further interviews with internal and external stakeholders, and complementing 'Voice of the Customer' survey. We are working on visualising feedback along the service blueprint and customer journey map. This will allow synthesising the feedback into key themes and help identify key opportunities for improvement.

Disaggregation of Interruptible Load (IL) at Kawerau and in Hawke's Bay: The disaggregation of Interruptible Load (IL) in the Kawerau and Hawke's Bay regions progressed in September. This has focussed on working with affected reserve providers to model the new disaggregated loads. We have completed testing with Simply Energy and will deploy these changes in late October.

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	1 site	N/A	
Additional resource	5 sites	9.377 MW FIR	9.972 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	4
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. Testing was carried out in August however further testing is required before the station can offer frequency keeping.

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

5 Commitment to evolving industry needs

SO Strategy development: As we progress a comprehensive process to develop a new SO Strategy, work in September focussed on collating available information and resources as part of the environment scan and we started work on our market engagement plan for this phase.

Policy Statement review: We have been preparing our draft for the upcoming Policy Statement review, including proposed updates to the Security (Risk and Emergency Management), Dispatch, and Compliance policies.

Evolving markets resource co-ordination - Tie-breaker provisions: We have completed our consultation and are progressing our summary and response to submissions on how "tie-breaker" situations should be resolved for multiple competing generation offers at the same location in the wholesale electricity market.

Separate to the consultation process, we received a related query from Top Energy concerning dispatch of resources on their network and connected to the Kaikohe GXP. We are considering whether it is appropriate, and needed, to propose an urgent Code change. The intent of the Code change would be to 'automate' the manual outcomes in the decision-making process which result in geothermal generation (usually) being kept on the system in preference to intermittent generation. The Code change proposal would suggest the use of restrictions to offer prices to give effect to this.

Electrical Industry Space Weather Working Group (EISWWG): The working group met at the end of September, providing a general update on the different workstreams that are underway. The System Operator continued refinement of its internal response procedure to better align with the industry response to a 'catastrophic' event. We continue to engage with NEMA and are planning to support their space weather exercise scheduled for 3 – 6 November.

Electricity Networks Aotearoa (ENA) Future Networks Forum (FNF): During September, two meetings concerning the Capabilities, Roles, and Functions needed to enable distributed flexibility ("TSO:DSO") were attended by the System Operator's representative. The focus of the first meeting was to assist the Authority with their thinking on performing a cost benefit analysis (CBA) on the three models (Total TSO, Total DSO, hybrid) presented in their "The future operation of New Zealand's power system" consultation. The second meeting focussed on what the Authority could do instead of a CBA, because the difficulty of undertaking a meaningful CBA had resulted in the Authority halting plans to undertake a CBA. This decision was also informed by the near universal support for the Hybrid DSO:TSO operating model.

Grid Owner Outage Optimisation: The System Operator will continue to support the Grid Owner to implement its identified target state. The implementation is expected to be complete by February. Four Grid Owner initiatives are being progressed:

- Create a process to agree and implement a rolling 4 monthly locked down plan. The Grid Owner completed its second monthly process in August and next time changes and approach for delivering the FY26/27 annual outage plan with increased outage numbers.

- Next time they will begin by locking down 2 months in advance, with the intent to lock down 4 months by February.
- The System Operator is supporting their initiative by scanning for outages that have significant work associated with them and providing a preliminary outage assessment up to 6 months in advance. This allows the Grid Owner to adjust their plans very early in the planning process as opposed to the normal 10 week timeframe provided by the System Operator.

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 coordination.

Outage Coordination: We receive positive market feedback when we provide information on high level operational impacts of material outages via our System Operator forum. In response to this we have made a conscious effort to release more information on a regular basis. During August and September, we shared information on the impact of the:

- Synchronous condenser 3&4 outages on the HVDC transfer.
- Islington Ashburton circuit outages on upper South Island load.
- Dates and generation impacts of Wairakei ring outages.
- We also shared the operational impacts of the new Karapiro Special Protection Scheme on Karapiro generation.

During October and November, we plan to setup a routine segment in the System Operator Industry Forums to highlight the top 10 market impacting outages over the following 4 weeks.

Connecting with the industry

System Operator Industry Forums: Our fortnightly discussions on current operational and market issues were held on 16 and 30 September. 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[1] 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[2]:

- 07 September: IG flags and wind/solar curtailment
- 14 September: Changes in the peak-to-average load ratio
- 21 September: BESS impacts on reserve market prices
- 28 September: Regional conforming load sensitivities to temperature variance

5.1 Supporting the Authority

Emergency Reserve Scheme (ERS): TAS 122 is underway which is investigating options for implementing a Minimum Viable Product (MVP) ERS before Winter 2026. We have considered three implementation options at a high level, but all of these have significant deliverability risks, and none of the three solutions satisfy all of the Authority's requirements. The System Operator continues to consider that an absolute minimum of 6 months will be needed to implement any MVP ERS. Resourcing requirements would need to be confirmed once the Authority has decided on next steps.

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

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

MFK Review: We have engaged with the Authority to confirm their needs for this scope of work, which is planned to commence mid-October. We have also worked to ensure alignment between this work and activities planned and underway within the FSR work programme and continue to emphasise the need for the Authority to consider a wider frequency management strategy that ensures FSR and MFK developments are complementary.

FSR Programme: We have been actively supporting the Authority in reviewing the submissions and in their preparation of the code amendment proposal decision papers following the Authority's consultations on frequency management, voltage management and information sharing requirements.

SOSPA transition update: One of the last remaining transition items, to complete an update of the Joint Work Planning Team (JWPT) Terms of Reference (ToR) and TAS Guideline, has been progressing through September with updates drafted into the ToR and TAS Guideline documents. The parties have agreed that, due to resource constraints, this work will be finalised and agreed in October.

Consultation on Future system operation: DSO models: We engaged with the Authority's Future System Operations (FSO) project team via our membership of the ENA FNF TSO/DSO working group. The Authority had been working with this group to progress an RFI for estimated costs for provision of each of the three FSO options (Total TSO, Total DSO, and hybrid) from each of the 29 EDBs and Transpower to enable the Authority to undertake a CBA on each of the options. Through these meetings, we were collectively able to highlight to the Authority the likely inaccuracy of any cost estimate provided within the proposed 3-week timeframe and the low utility they would provide the Authority in their decision making. Subsequently, the Authority has advised they are not progressing with the RFI. We are awaiting 'next steps' advice from the Authority.

Intermittent generation central forecasting project: Through September we have engaged with the Authority and DNV, providing data insights and operational observations on the forecasting service and participants use of it, to support ongoing improvements in forecast accuracy. We also presented performance comparisons against another forecast provider during the monthly meeting with DNV and the Authority. Work is continuing with EMS to start building a new real-time curtailment data feed to DNV in October.

5.2 International Engagement

Nothing to report for September.

5.3 Media interactions

We did not issue any media releases or receive any media enquiries during the month of September.

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 will deliver new software (ASCAS) to replace previous end-of-life technology which is vital to accurate information sharing with the Authority and NZX. The project remains on schedule. Milestone 2 deployment is planned for early November. User acceptance testing is underway in advance of the release. A planning exercise is being undertaken for the remaining 3 major releases.

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. The Business Case Adjustment, which shifts the Commissioning Date to 31 March 2026, has received formal approval. Testing activities - including system acceptance, user acceptance, and simulation testing - are actively underway. Although early progress was hindered by integration challenges and Severity 2 defects, these issues have been resolved, and testing is now progressing at pace.

RBP Consulting has completed the SPD Regression Audit, and no issues were identified. The resulting Audit Opinion has been shared with the Electricity Authority.

Operational stakeholder engagement is ongoing to ensure alignment with change management and transition planning. Teams impacted by upcoming changes have been kept informed through their respective forums.

Control room of the future (CRoF): We continue to support the development of the SO Strategy and as a part of this preparation to engage with external stakeholders, the Grid and System Operator leadership visited Airways Air Traffic Control Centre to learn from the aviation sector and appropriately refine our CRoF settings.

7 Technical advisory hours and services

TAS Statement of Work (SOW)	Status	Hours worked during month
TAS 108 – Extended Reserves implementation	In progress	0.0 (SME) 5.0 (PM)
TAS 121 – Future Security and Resilience	In progress	160.0 (SME) 20.0 (PM)
TAS 122 – Investigation into implementation options for an MVP Emergency Reserve Scheme	In progress	86.0 (SME) 13.0 (PM)

Progress:

TAS 108 Extended Reserve Implementation 23/24 – Extended Implementation: Wellington Electricity informed the System Operator that they completed their AUFLS transition early August 2025. Unison transition work is progressing as planned to be completed in October 2025.

TAS 121 FSR Workstream - Part 8 of the Code - Common Quality Requirements: In September, we completed the CACTIS consultation, with the main focus being on receiving feedback on the technical requirements of the new proposed standard. We received 15 submissions. These submissions will be reviewed alongside the submissions received by the Authority on the information sharing consultation and proposed CACTIS in August. Collaboration continues with the Authority on progressing the BESS AOPOs and hybrid arrangements investigation and supporting the Authority ahead of their upcoming Code Amendment Proposals. Separately, the System Operator completed a follow-up meeting with the Authority to further discuss the outcomes of our FSR Roadmap review and consider next steps.

TAS 122 – Investigation into implementation options for an MVP Emergency Reserve Scheme: The project remains on track and within budget. The System Operator has led workshops with key subject matter experts and the Authority to advance the definition of the Minimum Viable Product (MVP). Post-analysis of this work has resulted in a preferred MVP option being identified. The project team has developed high-level estimates for implementation costs and timeframes, which have been incorporated into the draft recommendations report. This report is progressing as planned and is scheduled to be shared with the Authority by 13 October.

8 Risk and assurance

8.1 Risk Management

We have started our 6-monthly control self-assessment which will cover five out of the ten critical controls.

8.2 Business assurance audits

We have commenced the 'black start test planning' audit which is the first of four this year, and have drafted the scope for the second, which will be on preparedness for space weather events.

9 Compliance

[redacted]

System Operator breaches: We received a no-action letter from the Authority on a breach that we self-notified in February (incorrect conductor rating modelling in Market System and EMS). There are currently no open breaches against the System Operator.

AUFLS compliance: Following the delivery of our annual AUFLS report in August and ahead of the Authority's Compliance Committee meeting which will review this, we met with the Authority's Compliance team to discuss the Authority's approach to AUFLS non-compliance. The next step is to agree risk-based priorities and establish an approach to ensure the process is well coordinated.

10 Conflicts of Interest

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.

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. This 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

11 Impartiality of System Operator

This section covers specific activity this month that involved internal information barriers in place, the separation of key roles and functions, and oversight by Corporate Counsel, Compliance and Impartiality.

On 12 September the Grid Owner advised that it is reviewing its position on the HVDC Events of 26 June 2025 and 28 June 2025 which relate to the change to offer provisions. The Grid Owner position was shared with the System Operator. The System Operator conflict of interest protocols are in place.

At the Grid Owner's request, we met to hear their comments on the CACTIS consultation. The Grid Owner confirmed that they would make a submission on any areas of concern for the Grid Owner.

HVDC Runback: (11 July 2025). We continued to manage the conflict of interest as discussed with the Authority while we completed our engineering investigation into this UFE.

12 Performance 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 (PMI) Agreement with the Authority. A quarterly review session is then held to discuss and agree an interim / indicative score. At 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

We finalised and agreed the 2025/26 PMI Agreement with the Authority on 31 July 2025. The updated agreement introduces some new operational measures, enhanced transparency, and a focus on reliability and market impact. Further detail about the new performance metrics can be found in appendix C of this report.

The current year-to-date overall outcome score is 3.78, equating to a 78% performance rating. These results represent our current performance status as of this point in the year. Our forecasted end of year score is 4.86, further details can be found in appendix C of this report.

The current year-to-date (YTD) overall outcome score is 3.78, equating to a 78% performance rating. These results represent our current performance status as of this point in the year. Our forecast outcome score is 4.86,

Quarter 1 interim metrics:

New security and reliability risks are identified and appropriately managed	**4.42** O1 Score
Significant events are appropriately scoped, understood, prepared for and managed	**4.00** O2 Score
The Authority is supported to evolve and develop the electricity market and power systems	**3.22** O3 Score
Relevant market information is made accessible to stakeholders	**3.20** O4 Score
Stakeholders are effectively informed on and included in decisions where relevant	**2.63** O5 Score
Stakeholders are satisfied with our service	**5.00** O6 Score
SOSPA delivery provides value	**3.33** O7 Score

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

Overall Outcome Score

3.78

Performance % Score

78%

13 Actions taken

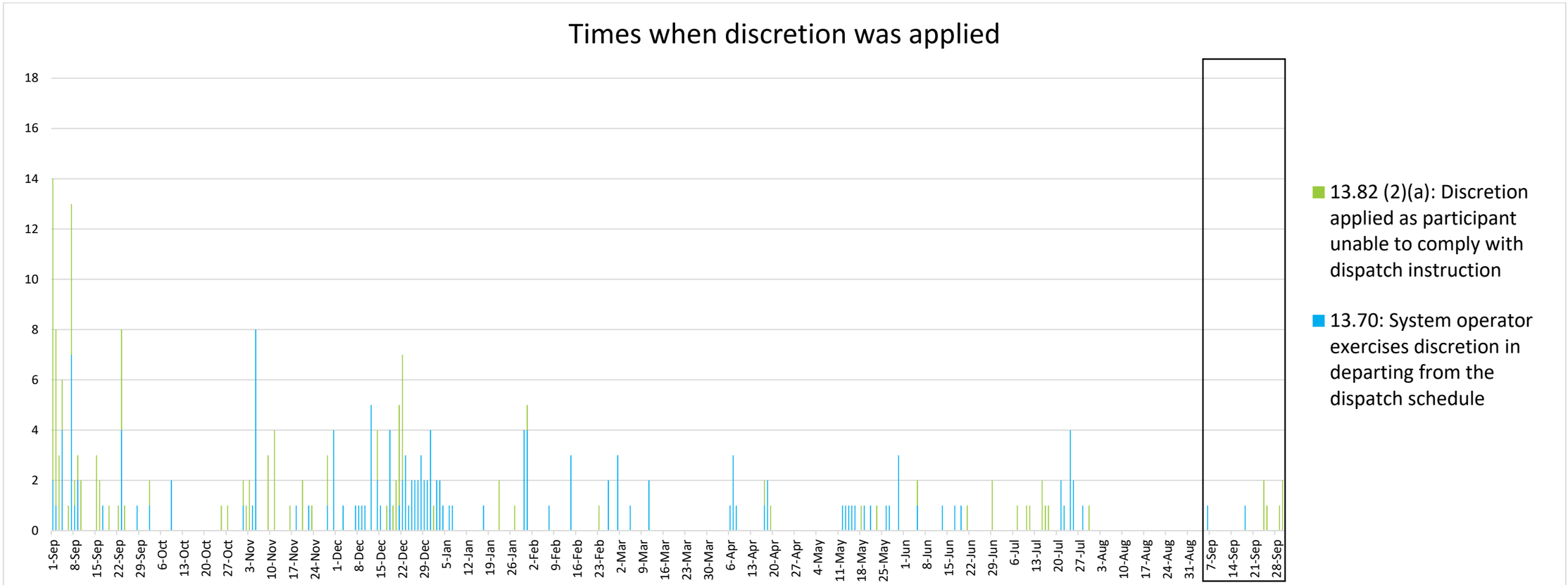
The following table contains a full list of actions taken this month regarding the System Operator business plan, statutory objective work plan, participant survey responses and any remedial plan, as required by SOSPA 12.2 (c).

Items of interest	Actions taken
(i) To give effect to the **System Operator business plan** strategic initiative	***Undertake a full review of the System Operator strategy informed by stakeholder consultation.*** We have continued our work on a refreshed System Operator Strategy. We have completed our preliminary planning and are now working on the environment scan and planning for the first round of targeted industry engagement.

Items of interest	Actions taken
	Support security of supply for the future power system by delivering the SOSFIP review. We are currently undertaking a review of the SOSFIP, at the end of the quarter we have completed the analysis phase and our draft amendment proposal and consultation documents are near final with the consultation now scheduled for early October. ***Support future-focused market developments through white papers, consultation processes and cross-industry forums*** In September Transpower as System Operator submitted to the Authority's consultation on Permanent Code change to the System Operator's information gathering powers for security of supply. ***Develop and begin implementation of system health, tool and modelling roadmap.*** We continued our investigation of our power system health monitoring requirements. ***Continue to deliver modelling process improvements and build maturity of modelling assurance and monitoring.*** As an extension of the quality assurance initiative, an end-to-end asset modelling process optimisation is now underway. The goal is to embed the foundational quality assurance tools, including the new framework, peer-review checklists, and a reporting dashboard to help monitor the health of the process. ***Ensure our service keeps pace in an ever increasingly complex world by implementing Control Room of the Future (CRoF) roadmap.*** We continue to support the development of System Operator strategy and as a part of this preparation to engage with external stakeholders, the Grid and System Operator leadership visited Airways Air Traffic Control Centre to learn from the aviation sector and appropriately refine our CROF settings.
(ii) To comply with the **statutory objective work plan**:	***System Operator Forecasting and Information Policy (SOSFIP)*** *Refer to update in business plan section above.* ***Policy Statement review*** We have started preparing the draft for the upcoming Policy Statement review, including proposed updates to the Security (Risk and Emergency Management), Dispatch, and Compliance policies. ***Ancillary Service Procurement Plan review***

Items of interest	Actions taken
	The Authority approved the updated version submitted and the new procurement plan will come into effect on 7 August. We have been incorporating changes into our contract documents. ***Reset SO Strategy*** *Refer to update in business plan section above.*
(iii) In response to participant responses to any **participant survey**	In response to feedback from the 2024-25 survey question How could we measure the outcomes of our performance more effectively? We received the following feedback: "**As a distributor, we believe the system stability, demand headroom and quality forecasting**." We have updated our Performance Metrics and Incentives Agreement for 2025/26 to better reflect these priorities. Notably, we have introduced several new metrics (PM19–PM22) that directly address system stability and operational reliability. These new metrics complement our existing measures and are designed to provide a more comprehensive view of system performance. While our operational forecasting is performed by an external agency, we actively monitor forecasting accuracy as part of our performance oversight. We include "Forecast vs. real-time residual variability" data in appendix B of this report.
(iv) To comply with any **remedial plan** agreed by the parties under SOSPA 14.1	*N/A – No remedial plan in place.*

Appendix A: Discretion



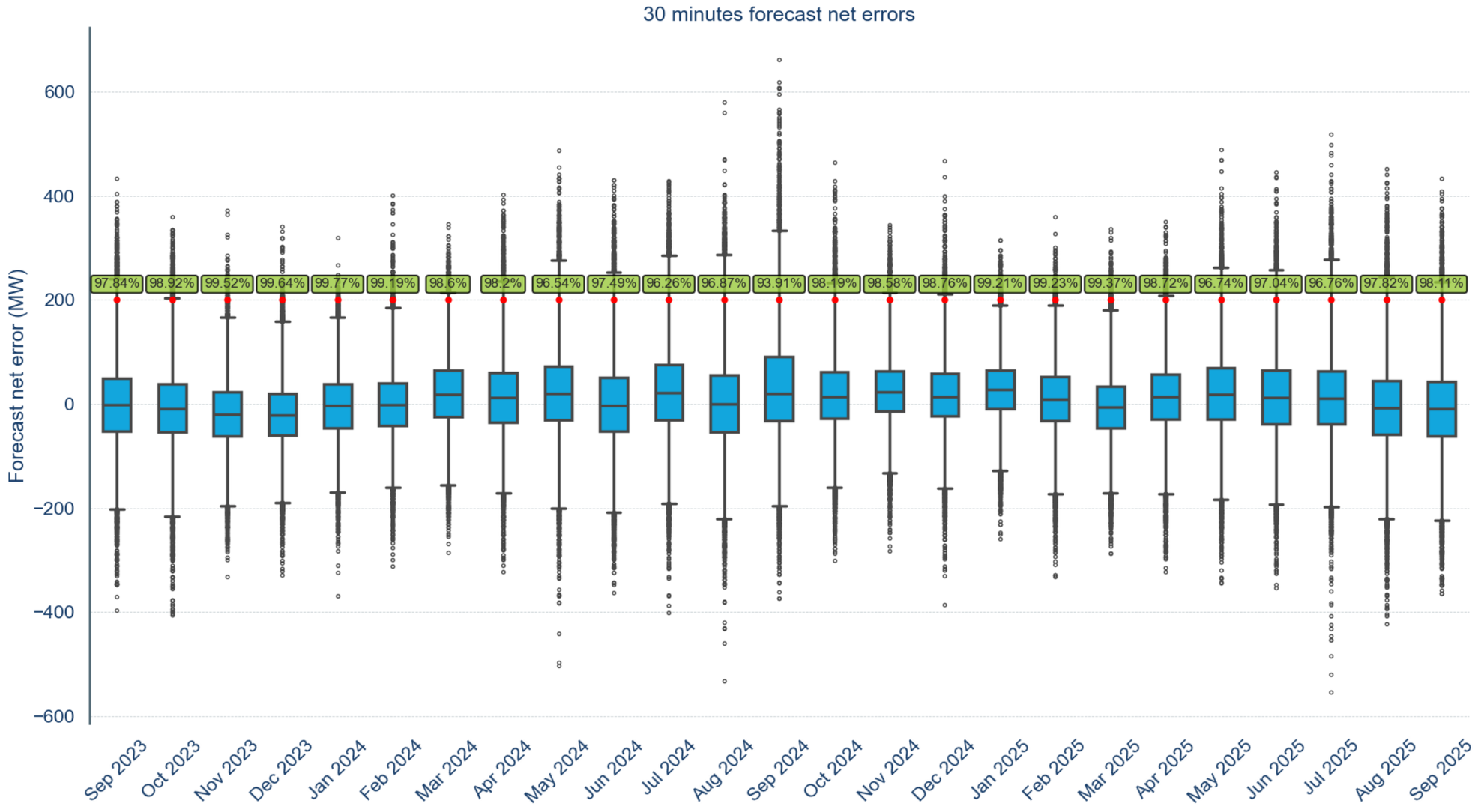
System Operator applied discretion under cl 13.70 in 8 instances:

- 6 September, 1 instance applied at Kaikohe (KOE) due to tripping.
- 18 September, 1 instance applied at Kumara (KUM) as security coordinator gave a verbal dispatch of 3MW for KUM generation as any dispatch less than 3 MW made the generation come off.
- 24 September, 2 instances applied due to switching at Arapuni (ARI) and Karapiro (KPO).
- 25 September, 1 instance applied at Ngatamariki (NTM) Nga Awa Purua (NAP) by traders in response to a 13.82(2)(a) as they were dispatched below minimum run.
- 29 September 1 instance applied at NAP by traders in response to a 13.82(2)(a) as they were scheduled below minimum run.
- 30 September, 2 instances applied at: Huntly (HLY) and Tauhara (TAB) by traders in response to a 13.82(2)(a) as they were scheduled below minimum run.

Appendix B: Forecast v real-time residual variability

The below figure highlights the variability of the differences between 30-minute forecast values from the Non-response Schedule Short (NRSS) and 5-minute dispatch values from Real Time Dispatch (RTD). This variability is measured as the difference between the forecast requirements on non-intermittent generation (30 minutes ahead of time) versus the requirements on non-intermittent generation during real-time dispatch. Therefore in addition to load and intermittent generation forecast errors, the variations also capture the intra-trading period variability i.e. the difference between half-hour average quantities (as used in the forecast schedules) vs 5-minute quantities (as used in RTD).

We monitor the percentage of the time where the error between what has been dispatched and what is forecasted to dispatched is less than 200 MW. Last month, this error was less than 200 MW 98.11% of the time. This indicates that entering a trading period with ~200 MW of Residual provides a high chance of having sufficient dispatchable market resources to meet variability between the 30-minute ahead forecast and the requirements within the trading period. We monitor this variability and how it compares to the residual threshold to understand trends and inform any future updates of this threshold



Appendix C: Performance Metrics

Scoring

Quarter 1 scores are shown as shaded cells in the figure below, the year-end forecasts are shown by blue text in a bright blue outline.

A number of the metrics cannot be reported on as they are dependent on actions that will happen later in the year. Of those that have reported, we anticipate the scores to improve as we increase the number of items to be delivered during the year.

Performance metric scores as at Q1

Metric	Definition	Q1 score (Jul-Sep)	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	3	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	5	< 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	
PM4	% of actions from industry exercises which were completed on time	N/A	< 50 %	≥ 50 % and < 65 %	≥ 65 % and < 75 %	≥ 75 % and < 100 %	100%	
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	N/A	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	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	N/A	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	
PM10	% of industry submissions, made in response to system operator consultations, which are responded to	2	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	
PM12	Average satisfaction score from stakeholders from Annual Survey	N/A	< 73 %	≥ 73 % and < 76 %	≥ 76 % and < 85 %	≥ 85 % and < 89 %	≥ 90 %	
PM13	Average score from stakeholders on their perception of SO impartiality	N/A	< 60 %	≥ 60 % and < 70 %	≥ 70 % and < 80 %	≥ 80 % and < 89 %	≥ 90 %	
PM14	Coordinate with the Authority on thought leadership publications and participant education	2	Score not available	No thought leadership publications or participant education pieces 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	2	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	3	< 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	
PM19	TAS project delivery performance	5	< 40% achieved in the approved time	≥ 40% and < 55% achieved in the approved time	≥ 55% and < 70% achieved in the approved time	≥ 70% and < 90% achieved in the approved time	≥ 90% achieved in the approved time	
PM20	Market impact of breaches remain below threshold	5	> 4 breaches with market impact > $50k	4 breaches with market impact > $50k	3 breaches with market impact > $50k	<3 breaches with market impact > $50k	No breaches with market impact > $50k	
PM21	Sustained SCADA (Supervisory Control and Data Acquisition) availability	5	< 99.0% SCADA availability	≥ 99.0% and < 99.90% SCADA availability	≥ 99.90% and < 99.93% SCADA availability	≥ 99.93% and < 99.97% SCADA availability	≥ 99.97% SCADA availability	
PM22	Unplanned dispatch outage - unplanned time spent on Stand Alone Dispatch (SAD).	5	> 7 unplanned outages or > 300 unplanned minutes on SAD	≤ 7 unplanned outages or ≤ 300 unplanned minutes on SAD	< 6 unplanned outages or < 200 unplanned minutes on SAD	< 5 unplanned outages or < 150 unplanned minutes on SAD	< 4 unplanned outages or < 120 unplanned minutes on SAD	

Key

Shaded square = current score

Blue text and outlines = predicted final score

Appendix C (cont): Performance Metrics

Relationship between performance metrics and outcomes

These relationships explain why some performance metrics have a greater influence on the outcomes than others.

Note: Where the score of the performance metric is currently N/A, that performance metric does not contribute to the outcome or overall score

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: Stakeholders are satisfied with our service	O 7: SOSPA delivery provides value	PM contribution to overall outcome score
PM 1	Risk register has been updated and tested externally with the Authority and widely among industry participants	17%	20%	11%		13%			12%
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	17%	20%						8%
PM 3	[Revoked]								0%
PM 4	% of actions from industry exercises which were completed on time	0%	0%						0%
PM 5	[Revoked]								0%
PM 6	Percentage of actions from significant events which are closed on time	8%	40%	11%					14%
PM 7	On time delivery of significant event reports		0%	0%	0%			0%	0%
PM 8	Average satisfaction score from stakeholders, as per responses received to transactional surveys taken at forums and asked for in correspondence				20%	13%	29%	17%	7%
PM 9	All categories of stakeholders are actively engaged by the system operator throughout the year	0%		0%	0%	0%	0%	0	0%
PM 10	% of industry submissions, made in response to system operator consultations, which are responded to			11%	20%	25%	0	33%	8%
PM 11	[Revoked]								0%
PM 12	Average satisfaction score from stakeholders from Annual Survey				0%	0%	0%	0%	0%
PM 13	Average score from stakeholders on their perception of SO impartiality				0%	0%	0%	0%	0%
PM 14	Number of thought leadership publications on specific areas of system operator work that affect and/or are of interest to the industry	8%		22%	20%	13%			9%
PM 15	[Revoked]								0%
PM 16	# of SO Industry Forums held		20%	11%	20%	25%			12%
PM 17	% of key SOSPA documents delivered on time to the Authority			11%		13%		33%	5%
PM 18	[Revoked]								0%
PM 19	TAS project delivery performance			22%				17%	5%
PM 20	Market impact of breaches remain below threshold	17%					14%		5%
PM 21	Sustained SCADA availability	17%			10%		29%		7%
PM 22	Unplanned dispatch outage - inplanned time spent on Stand Alone Dispatch (SAD)	17%			10%		29%		7%
TOTAL		100%	100%	100%	100%	100%	100%	100%	100%
Outcome weighting to overall outcome score		**20%**	**25%**	**20%**	**10%**	**10%**	**10%**	**5%**	