



TRANSPower

Monthly System Operator performance report

For the Electricity Authority
Report period: August 2026

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1 Key points this month

Operating the power system

- On 4 August, generation at Huntly tripped, causing North Island frequency to fall to 49.24 Hz and resulting in an under-frequency event. The System Operator has initiated the required investigation process to identify and recommend the causer to the Authority.
- Four low residual events occurred during August, where residual generation was forecast to be below 200 MW during a morning or evening peak. In each case, the System Operator issued a Customer Advice Notice (CAN), monitored generation, and demand, and managed the events mitigating any shortfall, and without loss of supply or consumer impact. For the most significant event, on 6 August, we stood up an incident management team, and the remaining events were managed through normal System Operator processes.
 - 6 August – morning peak: Exceptionally cold weather drove a record half-hour average peak demand of 7,415 MW, while wind generation was very low and unplanned outages created availability concerns. The real-time residual fell to 81 MW.
 - 7 August – morning peak: We made the decision to issue a potential shortfall CAN on 5 August, which was upgraded shortly after midnight on 7 August to a Low Residual CAN for 07:30–08:30. The situation was managed without a shortfall.
 - 17 August – evening peak: Tight residual forecast, along with wind and demand uncertainty were factors that indicated residuals could fall to 197 MW in trading period 37 and 177 MW in trading period 38. The situation was managed without a shortfall.
 - 20 August – morning peak: Risk of a low residual situation increased after Stratford Unit 21 failed to start and removed its offers. The minimum real-time residual was approximately 170 MW. Dispatch of one Whirinaki unit and available HVDC residual capacity supported secure operation.
- On 19 August, the System Operator declared a Grid Emergency at Waihou after significant voltage fluctuations were observed in the area. To stabilise the network, Tauhei Solar Farm was disconnected from the grid, and the Grid Emergency was lifted at 8:00am once conditions had returned to normal. The event resulted in reported customer impacts within the affected network area and is being investigated.
- On 23 August, a disturbance in the lower South Island triggered an under-frequency event (UFE) in both islands, with frequency falling to 48.08 Hz in the South Island and 49.18 Hz in the North Island. Multiple transmission assets tripped, resulting in the loss of generation, industrial load and electricity supply to parts of Southland. A Grid Emergency was declared to support grid reconfiguration and supply restoration and was lifted once system conditions had stabilised. Significant event and UFE causer investigations are underway.

Security of supply

- *Energy Security Outlook (ESO)*: The August Energy Security Outlook indicates that the outlook for winter 2026 remains healthy, supported by above-average hydro storage and strong coal and gas inventories. National hydro storage stood at 127% of the historic mean on 30 August following higher-than-average South Island inflows.
- *New Zealand Generation Balance (NZGB)*: Base-case generation margins remain positive through spring, summer and autumn, based on 90th-percentile demand, 20% of installed wind capacity and all available thermal generation operating. Sensitivity analysis indicates that meeting demand

above the 90th percentile will continue to depend on sufficient slow-start generation commitment, intermittent generation and unit availability until early October.

Investigations

- *Significant Event 23 August 2026:* The 23 August disturbance that resulted in a Grid Emergency being declared after a significant amount of generation tripped or reduced in output and a substantial loss of Southland supply, has been classified as a moderate event. A formal event report is being prepared, and a preliminary summary has been provided to the Authority.
- *Under-frequency events:* Two UFE investigations commenced during August. The first relates to the North Island event on 4 August following the loss of generation at Huntly, and the second to the 23 August event in both islands. The System Operator is investigating the causer in accordance with the Electricity Industry Participation Code and will provide its recommendations to the Authority.

Supporting asset-owner activity

- *Outage coordination:* The System Operator continued working with the Grid Owner to reduce the market and operational effects of its work programme. The number of short-notice outage requests (SNORs) has increased, although most requests relate to secondary systems, customer-driven outages, fault repairs or minor equipment changes with limited grid impact. SNORs affecting primary assets represented 9% of these requests during August.
- *Generation commissioning and testing:* Support continued for a substantial pipeline of new generation and storage developments. Projects under commissioning included Kaiwera Downs 2 (150 MW) and Kaiwaikawe (77 MW) wind farms, Tauhei (150 MW) and Kōwhai Park (150 MW) solar farms, and the Huntly BESS (100 MW). The System Operator is also preparing to support upcoming commissioning at Ruakākā (130 MW), Maungatapere (24 MW), Te Mihi (51 MW) and Te Rahui (200 MW). In parallel, work continued with existing generators on maintenance and upgrade projects and with Contact Energy on the decommissioning of the Taranaki Combined Cycle generator.
- *Large loads commissioning and testing:* Fonterra's Whareroa dairy factory became a direct-connected large load in August, with Simply Energy commencing bidding at the associated non-conforming nodes from 1 August. The System Operator also continued supporting the commissioning of NZ Steel's arc furnace at Glenbrook, where first steel production was achieved on 3 August and testing remains under way. Preparatory work is also progressing with the asset owners of two proposed large-scale data centres, including the development of guidance addressing modelling, commissioning, fault performance, demand variability and secure operation.
- *Ancillary Services activity:* Setup activities continued for a new ancillary services provider, with no ancillary services contract variations made during August. Proposed amendments to the Procurement Plan necessary for establishment of the new Emergency Reserve ancillary service and associated consultation materials were provided to the Authority for its approval decision. Proposed amendments supporting planned Code changes for Fast and Sustained Instantaneous Reserves were finalised, alongside lower-risk changes deferred from the 2025 Procurement Plan review.

Commitment to evolving industry needs

- *System Operator strategy development:* The draft System Operator Strategy was provided to the Authority for feedback on 19 August and subsequently presented to the Market Operations Committee (MOC) in early September.
- *Policy Statement review:* The Authority also approved the June 2026 Policy Statement amendment proposal, which will take effect on 1 October. Work on the next Policy Statement review is under way and will incorporate proposed changes to support implementation of the new Emergency Reserve ancillary service.
- *Dynamic Market Node Constraints:* The Dynamic Market Node Constraint capability was implemented in the Market System on 27 August. The initiative is intended to support the management of transmission outages where multiple geothermal generators may need to remain at their minimum feasible operating levels. The capability was successfully applied in real time on the evening it went live and has subsequently been used to manage inflexible geothermal generation.
- *Multiple Frequency Keeping (MFK) trial:* The Multiple Frequency Keeping trial report was published in August ahead of the trial commencing on 1 September. During the three-month trial, the aggregate national frequency keeping band will increase from 30 MW to 50 MW between 5.00am and 9.00pm, while the existing 30 MW setting will remain outside those hours.
- *International engagement:* The System Operator hosted two representatives from the Indian Energy Exchange through the Association of Power Exchanges (APEx) employee exchange programme, which including engagements with the Authority, NZX and generation and control-room operations.

Technical advisory services (TAS):

- *TAS 123 - FSR Part 8 of the Code – common quality requirements:* FSR workstream continued progress on technical work to identify frequency reserve needs for managing low-inertia system conditions, support reactive power management policy development, and assess methods for managing inverter-driven instability. Technical discussions with the Authority continued to determine hybrid Asset Owner Performance Obligations and market changes.
- *TAS 124 – BESS Enhancements:* The BESS Enhancements market-design investigation continued during August, with stakeholder requirements being finalised. The project scope includes bidirectional offers, incorporating battery state of charge into scheduling and dispatch, and enabling full participation by battery energy storage systems in the frequency keeping market.

Risk & assurance

- *Risk management:* The System Operator Risk Dashboard has been updated to link System Operator risks with wider industry risks and was presented to Transpower's SOC in August before submission to the Authority MOC in September.
- *Business assurance audits:* We continued work on the first two Business Assurance Audits in the 2026/27 Audit Plan - Build and Maintain Reactive profiles, Operational Procedures and Acknowledgement. These audits will take place in Q2 of the financial year.

2 Operating the power system

2.1 System events

Event Date	Event Name	Event Activity
4 August 2026	Huntly generation tripped	At approximately 19:45 on 4 August, generation at Huntly tripped, causing North Island frequency to fall to 49.24 Hz and resulting in an under-frequency event. The System Operator has initiated the required investigation process to identify and recommend the causer to the Authority.
6 August 2026	Low Residual Situation	On 4 August a Low Residual CAN was issued advising that national residual generation was forecast to be less than 200 MW for the morning peak on 6 August. The notice covered the 07:30 to 08:30 period and reflected the latest national residual schedule at the time. An industry briefing was held on the 4 August to alert industry to the risk. We established an incident management team and undertook additional engagement with generators, grid owner and industry to ensure the system was in the best position to get through the at-risk period – including industrial load response, return of grid outages and BESS and cogeneration increases. On the morning of 6 August 2026, New Zealand experienced exceptionally cold weather, resulting in a record half-hour peak demand of 7,415 MW. At the same time, wind generation was very low, and there were concerns about generation availability following unplanned outages. The lowest real-time residual reached 81 MW during the morning peak. The System Operator successfully managed the event without issuing Warning or Grid Emergency notices, without needing to use controllable load, and without any loss of supply.
7 August 2026	Low Residual Situation	On 5 August a CAN was issued advising industry of a potential national shortfall or low residual situation for the morning peak on 7 August, based on the week-ahead schedule. This was upgraded shortly after midnight on 7 August to a Low Residual CAN advising that national residual generation was forecast to be less than 200 MW between 07:30 and 08:30. The situation was monitored and managed through normal System Operator processes, with no

Event Date	Event Name	Event Activity
		shortfall, loss of supply or consumer impact recorded.
17 August 2026	Low Residual Situation	On 16 August a Low Residual CAN was issued advising that North Island residual generation was forecast to be less than 200 MW for the evening peak on 17 August. The risk was driven by tight forecast residuals, uncertainty in wind forecasts and the potential for colder-than-forecast temperatures to increase demand. System Operator analysis indicated residuals could fall to approximately 197 MW in trading period 37 and 177 MW in trading period 38 after allowing for wind and demand sensitivities. The notice window was extended to begin at 17:30 to support generation availability ahead of the evening demand increase. The situation was managed through normal processes, with no shortfall, loss of supply or consumer impact recorded.
19 August 2026	Grid Emergency – Voltage Stability Event Waihou	At approximately 06:55 on 19 August, a Grid Emergency was declared at Waihou to manage large voltage fluctuations that occurred at Tauhei solar farm. Waihou 110 kV voltage was observed fluctuating between approximately 104.2 kV and 116 kV, with 33 kV voltage between approximately 30.6 kV and 34 kV. The System Operator instructed NGOC to open Waihou circuit breaker 172 to disconnect Tauhei generation and stabilise voltage. The Grid Emergency ended at 08:00. Powerco and WEL Networks reported customer impacts and complaints, including at Fonterra Te Awamutu. The System Operator will continue to work with the participant to address this.
20 August 2026	Low Residual Situation	On 19 August a Low Residual CAN was issued advising that North Island residual generation was forecast to be less than 200 MW for the morning peak on 20 August. The risk was heightened by Stratford Unit 21 removing offers after failing to start on 19 August. In real time, the minimum residual was approximately 170 MW. Wind and demand were both slightly lower than forecast, one Whirinaki unit was dispatched on, and HVDC residual capacity remained available. The situation was managed

Event Date	Event Name	Event Activity
		through normal System Operator processes, with no shortfall, loss of supply or consumer impact recorded.
23 August 2026	Grid Emergency – Unplanned outage North Makarewa, Brydone and Edendale	At approximately 11:24 on 23 August, a lower South Island disturbance caused an under-frequency event in both islands, with frequency falling to approximately 48.08 Hz in the South Island and 49.18 Hz in the North Island. Multiple circuits and transformers tripped due to suspected lightning strikes, resulting in the loss of Manapouri generation, Kaiwera Downs and White Hill wind generation, two Tiwai potlines, and supply to North Makarewa, Brydone and Edendale. A Grid Emergency was declared at 11:52 to reconfigure the grid and restore supply. High voltages were observed in parts of the lower South Island following the loss of generation and Tiwai load. The Grid Emergency ended at 12:27, with interruptible load providers subsequently contacted to restore load following the under-frequency event. This is classified as a 'Moderate' event. We are progressing an event investigation, and investigation into the under-frequency event causer. Both the causer recommendation and the full event report will be provided to the Electricity Authority.

2.2 Market operations

Application of discretion:

During August the System Operator coordinators applied discretion in 21 instances, with 11 of these due to low residual situations. Each instance of discretion is set out in Appendix A.

Forecast v real-time residual 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.¹ In August more than 96% of the variability was covered by the 200 MW residual threshold. 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.

¹ 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.

3 Security of supply

Energy Security Outlook:

We published our [August Energy Security Outlook](#) (ESO) on 28 August. This update incorporates lower gas storage, similar coal stockpile, higher forecast gas production in early 2027, changes to generation commissioning dates, and additional planned generator outages. Compared with the July update, the energy security risk curves decreased for 2027. The reduction is primarily driven by higher forecast gas production in the first half of 2027, increasing the gas available for electricity generation. Two additional solar farms and a battery are now expected to be commissioned in 2027 compared with the previous update.

The outlook for the remainder of winter 2026 remains healthy, supported by above-average hydro storage and strong coal and gas inventories. The contracted fuel case continues to show a strong fuel position in 2026 relative to the physical capability to source thermal fuels. A wider gap emerges in 2027, reflecting participants' tendency to contract thermal fuel supplies closer to delivery. The contracted risk curves also decreased compared with the previous update, primarily due to increased contracted gas volumes.

National hydro storage now sits at 127% of the historic mean (on 30 August), following higher than average inflow in South Island. Our latest and previous weekly market updates are available here: [Markets Operations Weekly Report](#)

On 3 July, Meridian received final approval to access its contingent storage via the fast-track panel. This gives them access until the end of 2028, but there are conditions precedent that Meridian needs to work through with Genesis within one year before the water can be accessed. We are engaging with both parties to understand the expected timing and any implications for our modelling assumptions and future reports.

New Zealand Generation Balance (NZGB) potential shortfalls:

NZGB margins in the base case remain positive through Spring, Summer and Autumn reflecting seasonal lower demand. The base case assumes a 90th percentile demand, 20% of wind capacity and all available thermal plant operating. N-1-G calculates the loss of our largest risk setter if the next largest also becomes unavailable.

However, our sensitivities and scenarios show that if demand is higher than the 90th percentile we will continue to be relying on a mix of high levels of slow start unit commitment, high levels of intermittent generation, and units to remain in service until early October.

Once past the seasonal demand drop off and into the late spring, summer and autumn period, there are only two periods where we are relying on this mix of conditions to meet a load higher than the 90th percentile. The first is during the Te Mihi-Whakamaru circuit outage on 16 – 21 November and the second is the HVDC outages from 18 February to 2 March.

4 Investigations

4.1 New under-frequency event (UFE) investigations

- On 4 August 2026, at 7.45pm, a UFE occurred in the North Island. The System Operator has commenced its investigation as to the causer of the UFE in accordance with the Code.
- On 23 August 2026, at 11.24am, a UFE occurred in the North and South Islands following multiple trippings. The System Operator has commenced its investigation as to the causer of the UFE in accordance with the Code.

4.2 Significant incident investigations

On 23 August 2026 at 11.24am, there was a significant event in the lower South Island, triggered by a disturbance on the power system. During the event a significant amount of generation tripped or reduced output, and a significant volume of demand lost supply. As a result of the disturbance, system frequency in the South Island dropped to 48.08 Hz and the North Island frequency dropped to 49.18 Hz. A Grid Emergency was declared to facilitate grid reconfiguration and restoration activities. Supply was restored within hours. While the event is classified as moderate, given the complexity the System Operator's investigation is commissioning an independent review of its investigation. A preliminary summary has been provided to the Authority.

5 Supporting asset-owner activity

5.1 Outage coordination

We continue to work with the Grid Owner to minimise the impact of its work programme by encouraging longer outage lead times, more work per outage, smoother outage volumes, and strong market engagement for high-impact outages. Longer lead times and smoother outage volumes allow the market to coordinate effectively. Bundling more work into each outage reduces the total number of outages needed, reducing the market impact of the Grid Owner's growing RCP4 work programme.

- The 12-month rolling average number of Short Notice Outage Requests (SNORs) has been increasing. However, this is mostly driven by high volume of secondary system outages, customer driven outages, fault repairs or minor changes to effected equip which have little impact on the grid or are unplannable. Short notice outages on primary asset amounted to 9% of all SNORs or 8 in total.

	Sep-25	Oct-25	Nov-25	Dec-25	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26
Short Notice Outage Requests (SNORs) (%)	10.8	13	8	11	11	10	20	11	12	7	8	9

- The 12-month rolling average of Operational Requests per Outage Window shows the effectiveness of outage bundling and the benefit of incorporating multiple work orders and work crews into each outage. Work orders per outage continued to increase. The number of work crews per outage was maintained, with August 2026 3.6% higher than August 2025.
- Weekly outage volumes during July were managed within the System Operator's guideline of 80 outages per week provided to the Grid Owner. This means outage-driven workload can be managed within typical System Operator control room resourcing levels.

5.2 Generator and large loads commissioning and testing

Generation commissioning and testing

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

- Mercury Energy's Kaiwera Downs 2 wind farm (150 MW connecting to the Transpower grid at KIW) commenced commissioning 1 April 2026, due to complete in October 2026.
- Harmony Energy's Tauhei at Waihou solar farm (150 MW connected to the Transpower grid at WHU) commenced commissioning in June 2026, due to complete in September 2026.
- Mercury's Kaiwaikawe Wind Farm (77 MW connected to Northpower) commenced commissioning in July 2026, due to complete commissioning in September 2026.
- Genesis Energy's Huntly BESS (100 MW connecting to the Transpower Grid at HLY) commenced commissioning in July 2026, due to complete commissioning in September 2026.
- Contact Energy & Lightsources's Kōwhai Park Solar Farm at Christchurch Airport (150 MW connecting to Orion) commenced commissioning in August 2026, due to complete commissioning in October 2026.
- Meridian's Ruakākā Solar Farm (130 MW directly connecting to the Transpower grid at BRB) is due to begin commissioning in October 2026.
- Northpower's new solar farm at Maungatapere (24 MW connecting to Northpower) is due to begin commissioning in November 2026.
- Contact's new geothermal unit (2A G6) at Te Mihi (51 MW directly connecting to Transpower grid at THI) is due to begin commissioning in January 2027.
- Meridian & Nova Energy's Te Rahui Solar Farm (200MW connecting to the Transpower grid at TRU) is due to commence commissioning in February 2027.

We are also working with existing generators to commission maintenance and upgrade projects, and with Contact Energy to decommission the Taranaki Combined Cycle (TCC) generator.

Large loads commissioning and testing

The Power Systems and Markets teams are working with the following large-scale data centre participants

- Datagrid's new data centre at (300MW directly connecting to Transpower grid between INV and NMA)

- Contact's new data centre (250MW directly connecting to Transpower grid at SFD)

In parallel we are developing guidelines for large load information, modelling and commissioning obligations, and considering the wider regulatory and operational needs to be able to onboard this emerging type of participant securely.

Operational and regulatory complexities with these large datacentre projects include:

- Potentially large swings in active power demand at short timescales, exceeding the maximum ramp rates for purchasers allowed in paragraph 39B of the Policy Statement. Asset owners plan to use large co-located BESS to mitigate this, but the SO requires mechanisms for enforcement in real-time.
- Fault ride-through capability given the sensitive equipment, the size of the load, and wider variations in grid conditions such as frequency in New Zealand relative to other markets.
- A lack of clear rules governing the behaviour of large BESS used for load smoothing at very short (sub-dispatch) timescales.
- Potential inability to securely supply these large loads in certain locations, grid conditions and outage states while also securely supplying existing load, depending on the extent to which the load brings its own firm generation, uses BESS as a back-up and/or has the ability to flex its demand requirements.

Fonterra's Whareroa dairy factory at Hāwera became a directly connected large load in August. Simply Energy commenced bidding the load at non-conforming nodes HWA1101 and HWA1102 from 1 August.

We continue to support NZ Steel with the commissioning of their arc furnace at Glenbrook. First steel production was achieved on 3 August and testing is now complete.

Glenbrook co-generation ownership change

There will be a change in ownership of the Glenbrook co-generation plant in early September 2026. The System Operator continues to assist NZ Steel as the new asset owner and trader in their obligations and changing the market system to accommodate the required trading and dispatch changes.

5.3 Ancillary Services activity

Setup continues with a new ancillary services provider.

No ancillary services contract variations were made during August.

The ERS-related Procurement Plan review was progressed in August. Draft amendments and consultation documents were submitted to the Authority for their review to enable feedback to be incorporated before seeking Authority approval to consult. Approval to consult was formally requested, and given, in early September. The ERS Procurement Plan update was released for industry consultation on 7 September. In parallel, we have finalised the Fast and Sustained Instantaneous Reserves amendments to support the Authority's planned Code change. We have also finalised our lower-risk amendments deferred from the 2025 Ancillary Services Procurement Plan review for Authority approval by 31 August. Further consultation is not expected to be required.

Interruptible Load (IL):

The following table provides an overview of IL testing activity by the number of sites tested and associated additional quantities for those sites. Work is ongoing to review the performance of reserves service providers against contractual requirements during recent UFE's.

	Number of sites	Additional quantities in MW	
Annual testing	0 sites	N/A	
Additional resource	0 sites	0 MW FIR	0 MW SIR
Removal of resources	0 sites	0 MW FIR	0 MW SIR

Generation Reserve (GR):

There are two units with outstanding testing requirements for each Partly Loaded Spinning Reserve (PLSR) and Tail Water Depressed Reserve (TWDR). The asset owner has advised that testing has been completed and data will be provided to the System Operator shortly.

We are currently carrying out an audit of equipment upgrades in order to ensure any additional out-of-cycle testing requirements have been met.

	Number of units overdue
Scheduled testing	2

Over-Frequency Reserve (OFR):

The following table provides an overview of OFR testing activity. In August a number of units were due for testing. We are working with participants to ensure this testing is undertaken and this information is updated as we receive the test results.

	Number of units overdue
Four yearly end-to-end relay testing	10
Two yearly control and indication testing	10
Circuit breaker testing	9

6 Commitment to evolving industry needs

System Operator Strategy development:

The draft System Operator Strategy was provided to the Authority for feedback on 19 August. This was then presented to Market Operations Committee (MOC) in early September. We expect to consider feedback during October, before finalising and publishing this before the end of 2026, as required by the SOSPA.

Policy Statement review:

The Authority approved our June 2026 amendment proposal and it will take effect on 1 October 2026. Initial work on the next Policy Statement review continues and will cover changes to support the establishment of the new Emergency Reserve ancillary service. We expect to give the Authority a draft consultation paper in December 2026.

Pan-industry exercise:

The lessons learned report for the exercise is being reviewed by the Authority. We have provided our feedback and will respond to any questions from the Authority review, which we are anticipating to receive in September.

Evolving markets resource co-ordination – Dynamic Market Node constraints:

The Dynamic Market Node Constraint initiative is designed to address the problem associated with, and similar to, the Wairakei Ring transmission outages, which occur when there are multiple geothermal generators needing to remain at their minimum feasible levels of operation. The change to deploy market node constraint went live in the Market System on 27 August. It was applied and used successfully in real-time that evening, and since then, for inflexible geothermal generation.

TSO:DSO Coordination

Consistent with our feedback to the Authority on the DSO Roadmap, the System Operator is developing a paper proposing the key areas of alignment needed for efficient and secure system operations with DSOs. We think this as a useful step towards building the industry consensus needed for the future.

Multiple Frequency Keeping (MFK) Trial:

We have published the MFK trial report in August and will start the trial from 1 September, ending 30 November 2026. During the trial period, the aggregate national MFK band will increase from 30 MW to 50 MW during the hours of 05:00 to 21:00, equivalent to 25 MW per island under normal operation. Outside those hours, the current 30 MW national setting will remain in place. The trial will also include two defined test periods to assess procurement of the full 50 MW band within a single island, where operationally and cost feasible, including 5 to 11 October 2026 in the North Island and 2 to 8 November 2026 in the South Island.

As we prepared for the trial and reviewed frequency quality metrics, including duration outside the normal frequency band and threshold crossings, we observed a marked deterioration in performance between August 2025 and August 2026. In the North Island, duration outside the normal band increased from 35.95 to 64.83 minutes, while threshold crossings increased from 317 to 630, representing an increase of approximately 80-100%. This reinforces the need for increased FK procurement and supports the rationale for the trial. We will continue to monitor frequency quality throughout the trial and assess whether the increased procurement results in measurable improvements.

Code omnibus #7 – submission

We submitted to the Authority's proposal to require annual director certification of compliance with their organisation's AUFLS obligations. We support the strengthening of AUFLS compliance and accountability and note director certification is one way to achieve this. We raised some concerns in our submission, particularly around the need changes to drafting if this is to be adopted.



Sharing common quality information between System Operator and Grid Owner

In our role as System Operator we contributed to the Transpower submission supporting the Authority's proposal to enable sharing of asset owner common quality information between the System Operator and Grid Owner. We note the proposal will result in streamlined information provision requirements and efficiencies for the parties involved.

6.1 Connecting with the industry

System Operator industry forums:

We ran two standard industry forums in August. In the first forum we provided a detailed review of the cold snap in early August, that saw national demand reach record highs, and how this was managed. The second forum shared information on our current and upcoming commissioning, routine testing and upgrade projects for 2026.

Market Operations weekly reports:

Our [Market Operations Weekly Report](#) provides information to assist interested parties' understanding of the current security of supply situation² 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 follows³:

- 2 August - The Low Residual Customer Advice Notices (CANs) sent last week and the industry response
- 9 August - Record demand peaks and Low Residual Customer Advice Notices
- 16 August - HVDC transfer, hydro storage, and price separation
- 23 August - Recent records in solar generation output

6.2 Supporting the Authority

Intermittent generation central forecasting project:

In August, we continue to support the Authority and DNV in improving and streamlining forecast arrangements, with a particular focus on improving forecast accuracy during generator commissioning phases.

6.3 International engagements

The Association of Power Exchanges (APEx) is running an exchange program for employees to exchange with an overseas counterpart. The System Operator hosted two members from Indian Energy Exchange in August. Their visit included engagements with the Authority, NZX and generator assets and control rooms. In return, two of our staff will be travelling to India in September.

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

3 Past Market Operations Weekly Reports including our weekly insights can be viewed on our website.

6.4 Media interactions

There was extensive coverage of our management of a number of low residual situations in August resulting from severe cold weather that brought with it still conditions and low wind generation. The lower South Island outage in late August generated some media enquiries. Newsroom asked about the potential impact of the National Policy Statement on renewable generation investment, which we referred on to the Authority. We also fielded enquiries about the grid emergency we called to temporarily disconnect Tauhei Solar Farm from the system on security grounds.

7 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.

7.1 Market design and service enhancement project updates

Emergency Reserve scheme (ERS):

The ERS Market Design capital project operational workstream opened consultation on the ERS updates to the procurement plan on 7 September. This followed a collaborative process with the Authority during August and early September to incorporate their feedback into the procurement plan and consultation documents prior to officially requesting, and receiving, consent to consult. Tooling workstreams are progressing in parallel, including market system requirements, test strategy approval, FlexPoint security and contract activities, and ASCAS commencement of the analysis and design phase. Authority and System Operator teams maintain close engagement through weekly meetings and joint governance.

Instantaneous Reserve Cost Allocation (IRCA):

The IRCA project remains on track and continued progressing as planned during August. Key activities included finalising the at-risk generation list, confirming generators liable for reserve costs, and preparing communications for newly liable generators ahead of the list's publication on 1 October. The project will involve a small, planned scope extension to ASCAS and related business change activities across Operations. Authority and System Operator teams maintain close engagement through weekly meetings and joint governance, which (given the relatively small scale of the project) leverage forums already established for the ERS project.

7.2 Other Projects

Control room of the future (CRoF):

The project has entered the Concept phase, with key deliverables targeted for completion by December. Through Transpower's existing relationship with Gartner, we have commissioned them to complete an international scan to identify technology options including indicative costs that can be considered for CRoF. Planning is underway for the business design activities that will define the future operating model, with outputs informing the programme roadmap, funding options, and future Investment Case development.

Market Operator Interface (MOI) Foundations:

This project is tracking to plan, with key milestones on schedule and costs remaining within the approved budget. Release 1 testing is complete, with go-live scheduled for 17 September 2026. Release 2 development is progressing as planned, with go-live scheduled for February 2027.

Ancillary Services Cost Allocation System (ASCAS):

The final production release, with all critical functionality in place for ASCAS to become the production system, was successfully deployed to production on 25 August following completion of final user acceptance testing on 19 August, enabling the ASCAS to go live in September as planned. During parallel run testing, a previously identified issue reoccurred. A fix has been developed, successfully tested, and is scheduled for deployment on 2 September. NZX reporting remains on track for delivery by the end of September and quarterly performance reports for the EA are being rebuilt by the Markets team utilising data now in Snowflake and PowerBI. The related IR Cost Allocation tooling change will be delivered through ASCAS, with go-live planned for 1 October 2026. Planning is also underway to support ERS implementation.

Configuration Scenario Sensitivity Schedule (CSSS):

The project initiative addresses a growing risk to power system security and market performance arising from increasing system complexity, higher penetration of intermittent generation, and more volatile demand patterns. The investigation is progressing as planned.

7.3 Joint Work Planning Team (JWPT)

The next quarterly JWPT meeting with the Authority is scheduled for November. Preparation of materials for this session commenced in October particularly incorporating feedback into the Capex Roadmap update and work that will support the discussion on SME and system capacity to support the programme of delivery.

8 Technical advisory hours and services

TAS Statement of Work (SOW)	Status	Hours worked during month
TAS 123 – Future Security and Resilience	In progress	253.25 (SME)
		18.0 (PM)
TAS 124 – BESS Enhancements	In progress	288 (SME)
		40 (PM)

During August stakeholder requirements for the BESS Enhancements investigation were largely completed, and key FSR workstreams progressed, including reactive power hybrid curve refinement, inertia assessments, system strength studies, and frequency management analysis. Both committed TAS projects remain on track and the current forecast is to utilise 89% of the FY27 TAS annual baseline (excluding contingency), leaving approximately 542 hours of capacity remaining for other work. BESS enhancements may be expanded to cover hybrid connections and attention is turning to hybrid

connections common quality technical requirements. The FSR budget includes 200h for these hybrids workstreams. TAS work this year is heavily front-loaded, with Q1 and Q2 forecast at 148% and 144% of baseline respectively. While the current forecast remains within the approved annual baseline, scope extensions and new investigations could place pressure on remaining capacity and specialist resource availability. Continued planning, prioritisation, and coordination through the JWPT will be critical to balancing TAS demand with core System Operator service commitments.

TAS 123 FSR Workstream - Part 8 of the Code - common quality requirements:

In August, we submitted several reports to the Authority; one outlining the findings when frequency and inertia issues on the power system require intervention and the other covering further refinement of the reactive power studies undertaken last year. The findings were presented at the August Common Quality Technical Group (CQTG) and will inform the Authority's development of the frequency management strategy and the reactive power options work the Authority is progressing. We have also progressed investigations into system strength matrices and assessment methodologies to manage inverter-driven instability.

Following the Authority's hybrid issues and options consultation we have continued supporting discussions with the Authority on how to progress the hybrid Asset Owner Performance Obligations (AOPs) and market development changes to accommodate hybrid arrangements.

TAS 124 BESS Enhancements:

The BESS enhancement market design investigation continued in August. The project will deliver scope including bidirectional offers, incorporating state of charge (SOC) in the scheduling and dispatch processes, and changes to facilitate full BESS participation in the frequency keeping market. We are finalising the stakeholder requirements. A scope extension to accommodate dispatch of hybrid stations (BESS co-located with IG and/or large load) is being considered by the Authority.

9 Risk and assurance

9.1 Risk management

The System Operator Risk Dashboard was presented to Transpower's System Operator Committee (SOC) ahead of the updated dashboard and accompanying paper being presented to MOC in September.

9.2 Business assurance audits

We continue to draft the Consultancy Services Order for the first two Business Assurance Audits in the 2026/27 Audit Plan - Build and Maintain Reactive Profiles, and Operational Procedures and Acknowledgement. These audits will take place in Q2 of the financial year.

10 Compliance

The Compliance actions for this month are set out below:

Notification of Code Breaches

Assisting the Authority under clause 15.10 of the SOSPA

11 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

12 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.

- As previously advised, the System Operator is involved with the Grid Owner's HVDC Cable replacement and Control Systems MCP planning. We identified no immediate (actual or perceived) conflicts of interest that would prevent us from working with the Grid Owner as they procured assets and designed the control system that have a high level of national importance. In our role as System Operator, we are particularly interested in a Grid Owner solution that works from both a market efficiency and operability aspect. The Grid Owner is procuring an asset that will impact us operationally and we have the expertise to inform their process for a better outcome for the power system and New Zealand. That is the only benefit to both parties of this collaboration. We will continue to monitor for any future risks as the project proceeds through its stages.
- On 31 August 2026, the System Operator submitted its response on the Authority's draft determination of the 23 October 2025 (5.42pm) UFE, which named the System Operator as the causer. The System Operator's submission was developed with information barriers in place and employees with dual System Operator and Grid Owner roles were excluded from the analysis and decisions informing our submission. The System Operator did not name the Grid Owner as causer but the submission raises process questions about the lack of consideration of the Grid Owner's proximity to the cause of this UFE.

13 Performance & monitoring

Our System Operator performance against the performance metrics for the financial year, as required by SOSPA 12.2 (e), will be provided in the final monthly report each quarter.

14 Actions taken

The following table contains a full list of actions taken this month regarding the 2026-27 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
To give effect to the System Operator business plan strategic initiative	Finalise and implement the new System Operator Strategy and deliver against the strategic initiatives: The draft System Operator Strategy was provided to the Authority for feedback on 19 August and staff presented the strategy to MOC in early September. We expect to consider your feedback during October, before finalising and publishing before the end of 2026 as required by the SOSPA. Support development of the wholesale market design. Deliver key enhancements to the market design and market system for BESS, frequency keeping, ERS, Hybrid arrangements: As detailed above System operator staff continue to support development of wholesale market design through: • the BESS enhancements project (section 8), • the Emergency reserve scheme (section 7) System Stability and Power System health with the delivery of a clear needs assessment of inertia and frequency to drive timely mitigations. Trial new system and software for monitoring power system health: The Investigation approval is ready for the next phase of the power system health project. The project will enable the System Operator to better monitor and track system health, allowing sufficient time to assess risks and implement effective mitigation measures. Embed internal processes to support generator and ancillary services commissioning and onboarding operations, and provide quality external communications to deliver on the CACTIS requirements, along with improvements to streamline processes for customers. Work progressed on the technical requirements for 'large loads'. This will help define interim connection requirements to improve the connection process for large loads to the power system. We also continued work on amending our own guidelines to align with CACTIS.

Items of interest	Actions taken
	Deliver the Control Room of the Future (CRoF) roadmap by implementing the Operational Intelligence, training environment enhancements, and knowledge management initiatives: A concept investigation has commenced to finalise a robust CRoF timeline and cost estimate for inclusion in an investment case for future SOSPA funding. Increase focus on Security of Supply and Forecasting (SOSF) with the establishment of a dedicated SOSF team. Embed the new structure to meet our SOSF obligations: The dedicated Security of Supply and Forecasting (SOSF) team continues to embed into operational delivery, strengthening capability to meet increasing security of supply and stakeholder expectations. Early focus has been on establishing work programmes, governance arrangements, and identifying priority operational risks and capability gaps. Establish a clear process for SOSPA4 development working closely with the EA We have commenced our internal planning for the SOSPA4 reset, including some initial discussions with the Authority in preparation for closely aligned joint processes and governance as the planning and proposal stages ramp up from Q3 2026-27.
To comply with the statutory objective work plan:	Ancillary Services Procurement Plan – Emergency Reserve: In progress refer to update in section 7.1. Ancillary Services Procurement Plan (non-consultation) – FIR/SIR & 2025 deferred updates: The amendment proposal for the FIR/SIR and the 2025 deferred items was submitted to the Authority on 31 August. (refer section 5.3) Policy Statement review: In progress refer to update in section 6. Finalise System Operator Strategy: In progress refer to update in section 6.
In response to participant responses to any participant survey	Some respondents to our 2026 Participant Survey requested we contact them back to discuss their feedback. We have undertaken that action and gained insights to their responses.
To comply with any remedial plan agreed by the parties under SOSPA 14.1	No remedial plan in place.

Appendix A: 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 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.

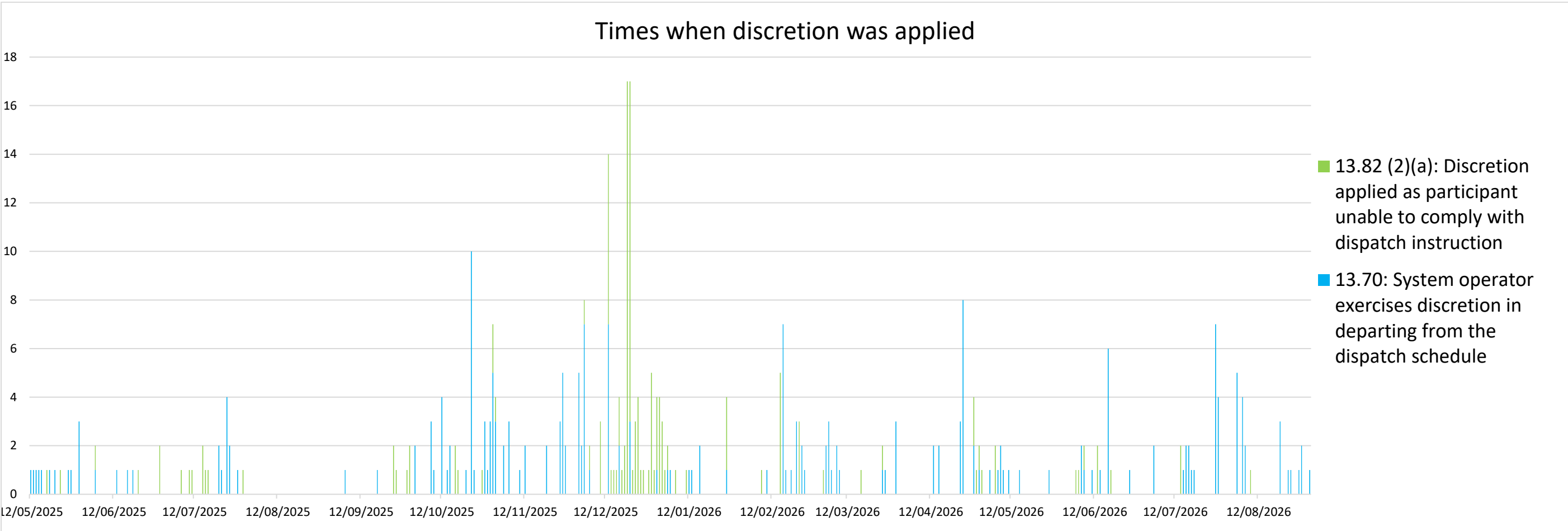
System Operator performance reports are published on the [Electricity Authority](#) website in accordance with clause 7.12 of the Electricity Industry Participation Code 2010 (the Code):

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](#).

Appendix B: DISCRETION



System Operator applied discretion in 21 instances:

- 2 instances at Stratford (SDF):
 - 4 Aug, 2 instances, claimed cl 13.70 due to low residual situation.
- 11 instances at Whirinaki (WHI):
 - 4 Aug, 3 instances, claimed cl 13.70 due to low residual situation.
 - 6 Aug, 4 instances, claimed cl 13.70 due to low residual situation.
 - 7 Aug, 2 instances, claimed cl 13.70 due to low residual situation.
 - 20 Aug, 2 instances, claimed cl 13.70 due to minimum run.
- 1 instance at Nga Awa Purua (NAP, Ngatamariki (NTM) and Ohaaki (OKI) risk group:
 - 9 Aug, 1 instance, claimed cl 13.82.2(a) due to being pulled below minimum run due to reserve optimisation during a planned transmission outage.
- 1 instance at Huntly (HLY):
 - 20 Aug, 1 instance claimed cl 13.70 due Huntly U2 tripping.
- 1 instance at Manapouri (MAN):
 - 23 Aug, 1 instance, claimed cl 13.70 as discretion required for security.
- 4 instances at Argyle (ARG):
 - 24 Aug, 1 instance, claimed cl 13.70 for planned switching.
 - 28 Aug, 2 instances, claimed cl 13.70 for planned switching
 - 31 Aug, 1 instance, claimed cl 13.70 for Argyle_Kikiwa_1 RS and Argyle_Blenheim_1 for planned switching.
- 1 instance at Tauhara (TAB):
 - 27 Aug, 1 instance, claimed cl 13.70 to prevent dispatch below minimum safe operating level.

Appendix C: 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 96.78% 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.

