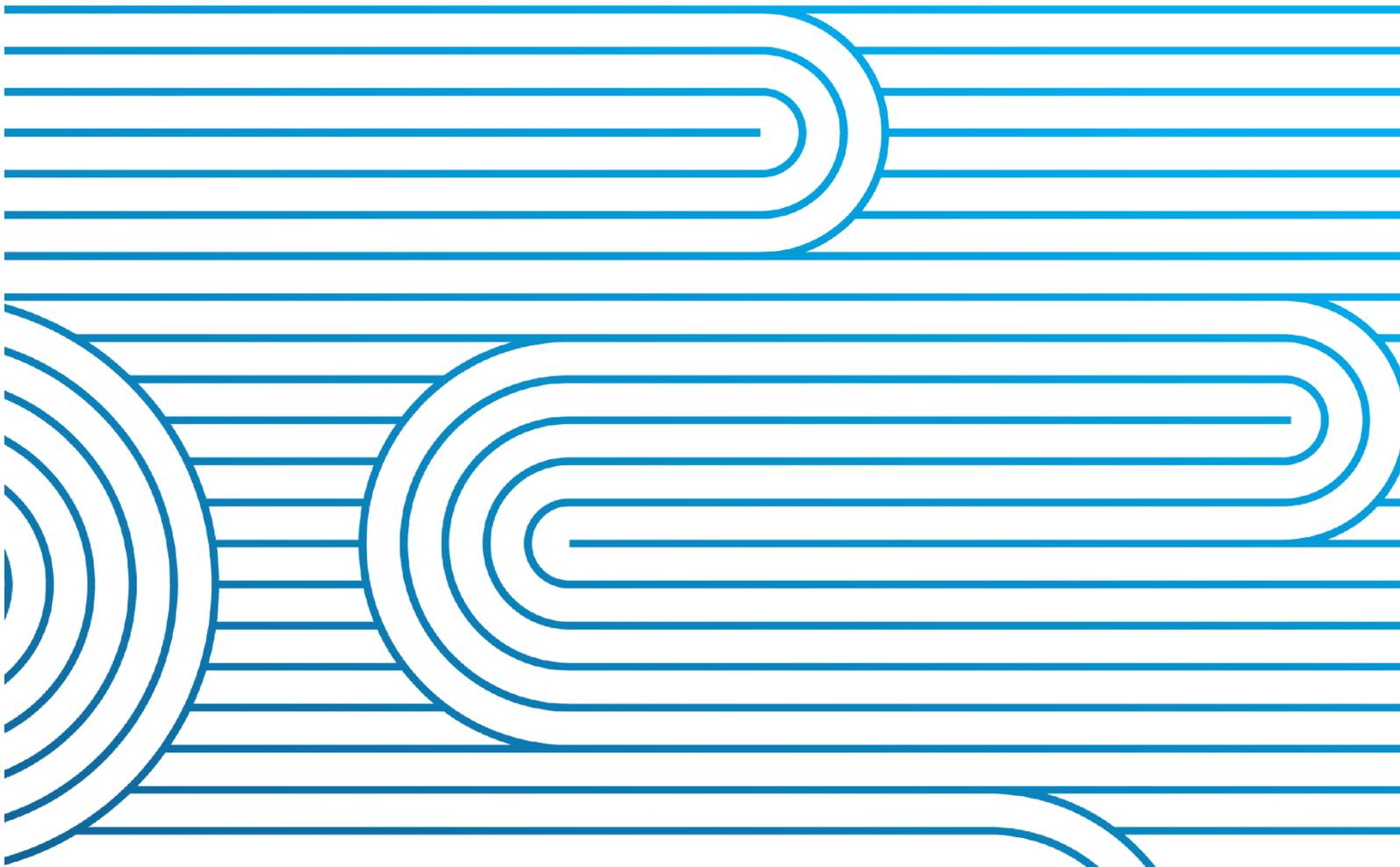


Monthly System Operator report

for the Electricity Authority

October 2023



Report Purpose

This report is Transpower's review of its performance as system operator for October 2023, in accordance with clause 3.14 of the Electricity Industry Participation Code 2010 (the Code).

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Key points this month

- We published our [Winter 2023 Review](#) on our website on 20 October.
- We provided further support to the Authority to accurately frame Section 1 of its Authority's Future System Operation discussion paper.
- There were several system events which we successfully managed over the month, including small loss of supply events, Meridian's loss of visibility and remote control of their generation and an unplanned outage of HVDC Pole 2 due to high winds resulting in pole flashovers.
- We have three current commissioning activities (one wind and two solar) and three pre-commissioning activities underway (one wind and one geothermal, and a proposed battery currently planned for Autumn 2024).
- There is a significant spike of concurrent grid and generation outages starting through late October to early November. Their start times are being proactively spread to avoid high workload in the control room and risk of switching error or security assessment error.

1 Commitment to the evolving industry needs

Winter Review

We published our [Winter 2023 Review](#) on our website on 20 October. We also discussed the review with the CEO Forum on 31 October.

Future of system operation

We provided further support to the Authority to accurately frame Section 1 of its Future System Operation discussion paper (describing the status quo), which is due to be published in November/December.

2 Risk & Assurance

Risk Management

We expect to complete both our initial view of our risk register and our six-monthly control self-assessment before the end of year break.

Business assurance audits

The 2023/2024 Audit Plan is ahead of schedule. The first audit regarding our system operator gatekeeper process is complete, with two priority 3 findings only. This has been provided to the Authority. Our auditor has drafted the second audit report on use of discretion within the demand/generation shortfall process. Our third audit - Management of Inputs to RMT is underway.

3 Compliance

We did not report any system operator self-breaches in October.

We received a Warning Letter from the Authority on 11 October. The Warning letter related to a modelling error on 11 January 2023. Arapuni generating unit G8 (ARI_G8) was physically switched from the Arapuni North Bus to the South Bus, but it was still mapped to the North Bus price node. Because of this, SPD incorrectly

scheduled more generation than was physically possible. The affected period was 2 hours on 11 January. We responded to the Warning Letter on 25 October.

4 Impartiality of Transpower roles

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

System Operator Open Conflict of Interest Issues		
ID	Title	Managed by
40	General system operator/grid owner dual roles: This is a general item that will remain permanently open to cover all employees with a dual system operator/grid owner role. The item documents the actions necessary to ensure impartiality in these circumstances; these items will be monitored to ensure their continue effectiveness.	SO Compliance & Impartiality Manager
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 SO Compliance & Impartiality Manager to ensure their continued effectiveness.	SO Compliance & Impartiality Manager

5 Project updates and other initiatives

5.1 Market design and service enhancement project updates

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

Future Security and Resilience (FSR) Programme

The final Common Quality Technical Group (CQTG) study scopes for the three frequency and three voltage management studies were shared with the CQTG members. We have progressed with the studies and shared initial results with the Authority’s FSR team.

We continue the monitoring and discussions of the other changes we would like to implement in Part 8 with the Authority’s FSR team.

Extended Reserves – Automatic Under-Frequency Load Shedding (AUFLS) Project

We have largely completed the preparation activities ahead of the start of the AUFLS transition period, starting in January. We updated the AUFLS Transition Plan that will be shared with the Authority in November. In addition, we are preparing for the industry sessions on 8 and 9 November, where we will share the detailed transition process and reiterate our expectations of what we require from North Island Connection Asset Owners during this period.

5.2 Other projects and initiatives

Operational Excellence

Our prototype resource planning tool which forecasts expected demands on operators is being trialled which will help inform future resourcing needs. This tool accounts for seasonal workload changes, leave patterns, training and release time required to improve tools and procedures.

System Operator Service Provider Agreement (SOSPA) contract reset

Transpower's SOSPA reset planning has been completed and we have commenced work on our capital planning cycle. An initial conversation has been held with the Authority's Commercial Manager, with the intent to start working on some of the detailed elements from the new year. An initial estimate of the SOSPA3 financial envelope has been provided to the Authority to signal the impact on the future appropriations.

6 Technical advisory hours and services

Technical advisory hours and a summary of all technical advisory services (TAS) to which those hours related (SOSPA 12.3 (d) refers) will be provided in the next quarterly report.

7 Outage planning and coordination

Outage planning – near real time

Planned outages requested by the grid owner and other market participants are increasing as we come out of the winter period. Through November to Christmas we are expecting over 150 grid and generation planned outages to start every week. Outage start times are being negotiated with assets owners to manage the high workload in the control room and risk of security assessment error. In the new year outage numbers will still be between 100 and 150 a week for the first quarter of 2024.

New Zealand Generation Balance (NZGB) analysis

On 20 October, we issued a CAN that highlighted a revised NZGB assessment for a potential generation shortfall on 1 November. The shortfall highlighted was for an N-1-G scenario and would be in the event of high peak demand.

NZGB margins remain low up to 12 November. From the 12 November they start to improve significantly as demand drops off quickly as we move into summer months.

8 Operating the power system

There were several system events which we successfully managed over the month including:

- October 2023: Low residual situation CAN sent for following morning, industry briefing held. No shortfall eventuated.
- October 2023: Tiwai reduction line tripped due to suspected high winds causing a flashover on their bus. Numerous offloads over the next 48 hours while work was undertaken to rectify the situation.

- October 2023: Loss of supply of 6 MW to Pauatahanui substation following a double circuit tripping of Pauatahanui – Takapu Road 1 & 2.
- 14 October 2023: Unplanned outage of HVDC Pole 2 due to high winds resulting in pole flashovers.
- 16 October 2023: Meridian lost visibility and remote control of their generation assets. Personal were sent to generation sites and mitigations planned should the situation have extended over the morning peak.
- 22 October 2023: Loss of supply of 2 MW at Brydon substation following a fire in a protection panel.

9 Power systems investigations and reporting

Significant incident investigations

No new significant events were identified in October.

Commissioning

We have three current commissioning activities (one wind and two solar) and three pre-commissioning activities underway (one wind and one geothermal, and a proposed battery currently planned for Autumn 2024).

10 Performance metrics 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 quarterly report.

11 Cost-of-services reporting

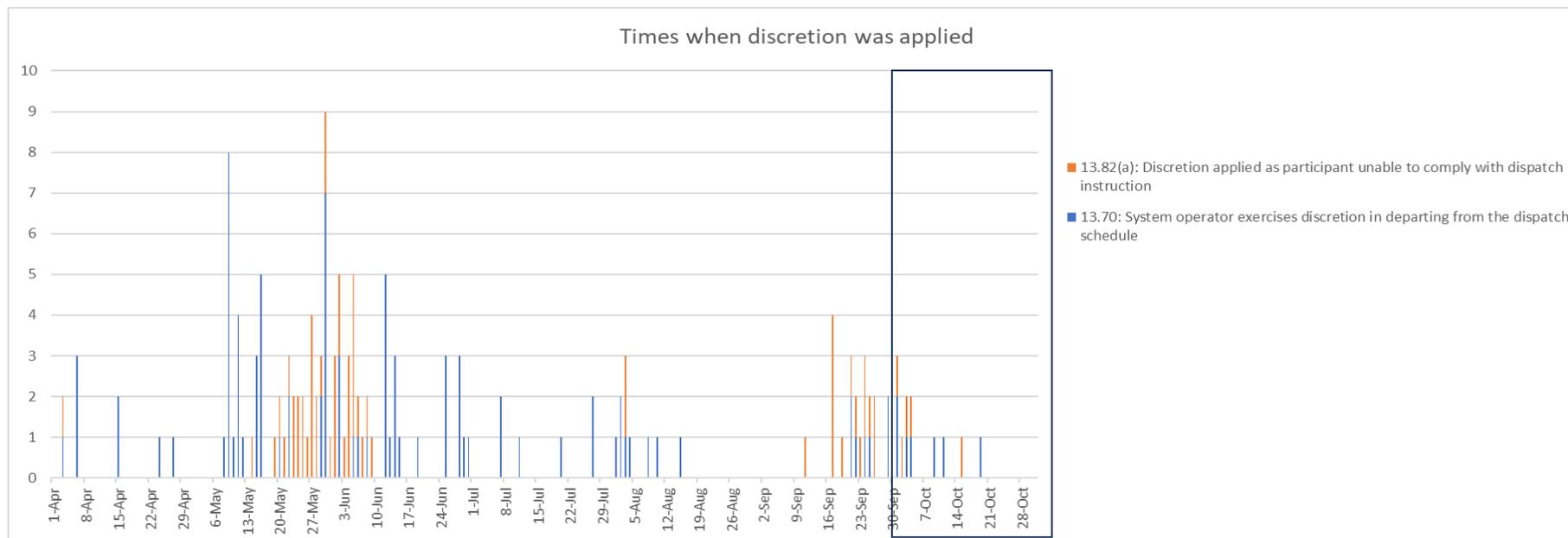
The cost of services reporting for 2022/23 will be delivered to the Authority by the end of the financial year.

12 Actions taken

A full list of actions taken regarding the system operator business plan, statutory objective work plan, participant survey responses and any remedial plan, as required by SOSPA 12.3 (b) will be provided in the next quarterly report.

Appendix A: Discretion

The graph below shows a recent trend of all instances of discretion application with a summary beneath of some of the individual instances of application this month.



12 instances

7 applied in response to discretion clause 13.70 (for example, to maintain west coast voltage stability, to allow for switching, TWI reduction line restoration, to increase manual risk when multiple generators setting the risk during an outage)

5 applied in response to discretion clause 13.82(a) (to prevent generators being dispatched below their minimum running range when required for voltage support and subsequent length of time to restart, to enable safe running range and to prevent environmental issues)