

Meeting Date: 24 October 2024

## WINTER 2025 OUTLOOK AND REGULATORY RESPONSES

## SECURITY AND RELIABILITY COUNCIL

This paper introduces a presentation from the Authority's operations policy team on Winter 2025 and includes regulatory responses to issues facing the sector. This is a recurring Q4 item in the SRC's forward work programme.

**Note:** This paper has been prepared for the purpose of the Security and Reliability Council (SRC). Content should not be interpreted as representing the views or policy of the Electricity Authority except where specifically noted.

# Winter 2025 outlook and regulatory responses

## 1. Introduction

- 1.1.1. The SRC has asked the secretariat to provide an update on the Authority's work to address energy and capacity issues impacting the sector and consumers, primarily in the winter months. This presentation is a recurring Q4 item in the SRC's forward work programme.
- 1.2. The secretariat will continue to provide links and updates at each meeting, via the regular *Actions and Updates* paper, enabling the winter presentation to focus on current and emerging issues and updates on the Authority's relevant security and reliability workstreams.
- 1.3. Members are encouraged to consider how they want to receive winter updates from the Authority and what they would like the content to include. Pending further guidance from members, the secretariat will continue to work with the Authority teams to develop and refine the material, to best present the most relevant information.
- 1.4. Members of the Policy Operations team will present the material and be available for questions.
- 1.5. Members are encouraged to consider additional areas of focus or methodology, ask questions, and provide feedback.
- 1.6. The presentation is included as **Appendix A** to this paper.

## 2. Questions for the SRC to consider

The SRC is asked to consider the following general questions.

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|-----|--|
| Q1. | What further information, if any, does the SRC wish to have provided to it?  |
| Q2. | For future editions, how would members like the material to be presented to support the best possible understanding of the issues and enable robust and meaningful discussion? |
| Q3. | What advice, if any, does the SRC wish to provide to the Authority?  |

### **3. Appendix A: Winter 2025 outlook and regulatory response paper.**

# Winter 2025 outlook

SRC October 2024

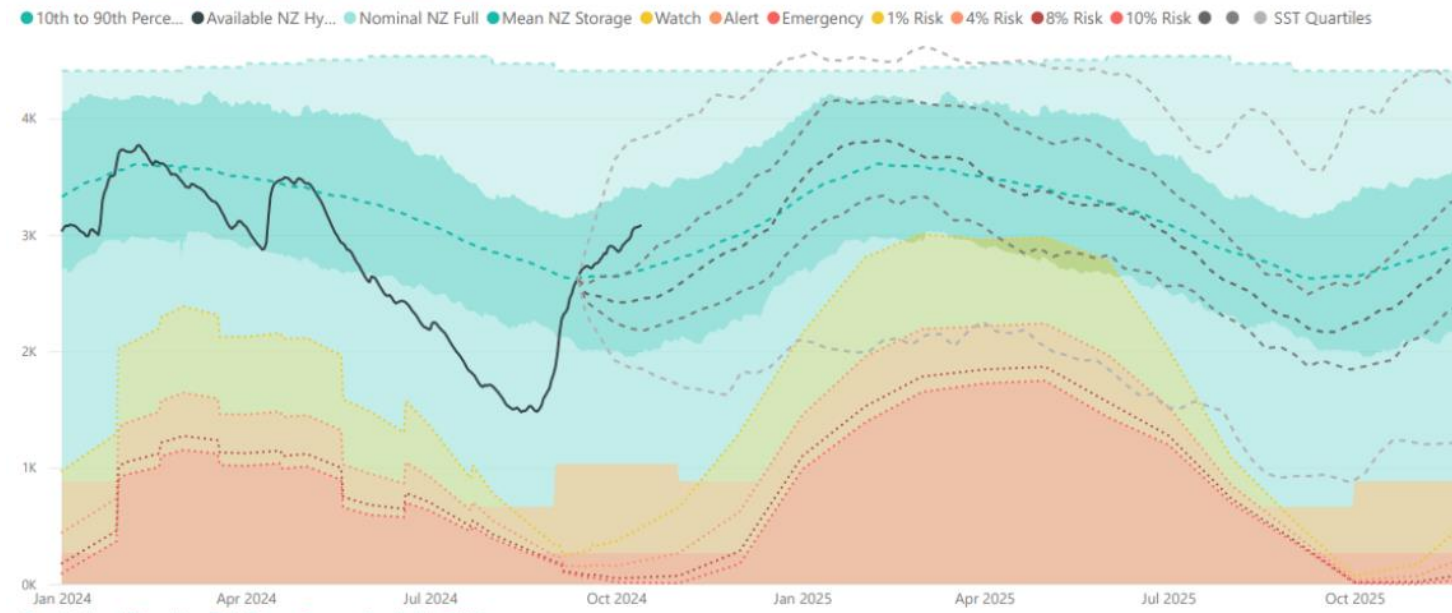
# Agenda

- Winter 2024 retrospective
- System operator monitoring
- Supply-side changes for 2025
- Policy work

# Winter 2024 retrospective

- **Winter 2024 started with capacity concerns in early May**
- **By mid-May rapidly declining hydro storage resulted in the commitment of significant thermal generation**
- **Three significant decisions made at the end of August:**
  - SO adjusted contingent storage buffers for September and October
  - Methanex sale of gas to Contact and Genesis
  - Meridian calling on maximum demand response from Tiwai

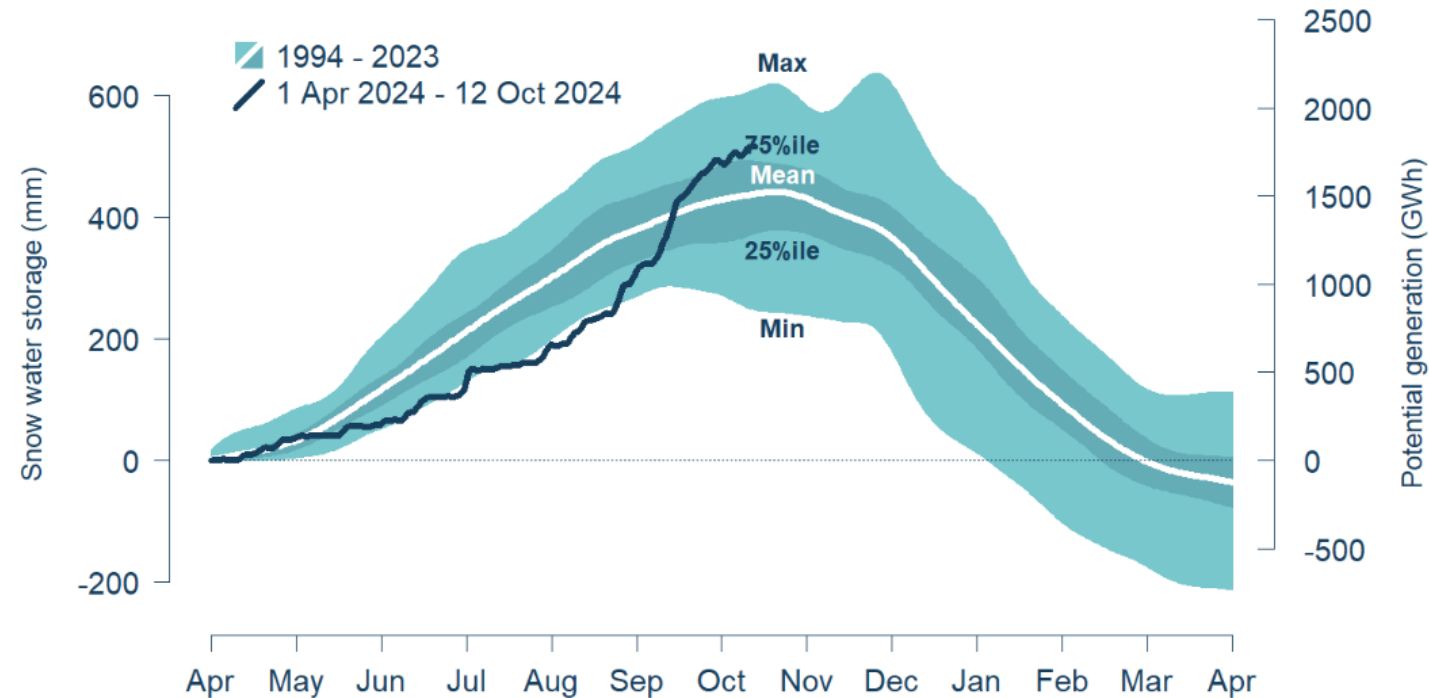
New Zealand Electricity Risk Status Curves (Available GWh)



# Winter 2024 retrospective

- Early September saw the start of significant and sustained inflows and snow storage (118% mean)
- Coupled with a sustained increase in wind generation, thermal generation significantly reduced
- Methanex gas has found its way to the spot market and Ahuroa gas storage
- Genesis announced that its Huntly Firing Option was over-subscribed and the target 85MW has been sold

Seasonal snow storage in Waitaki catchment as at 12 October 2024

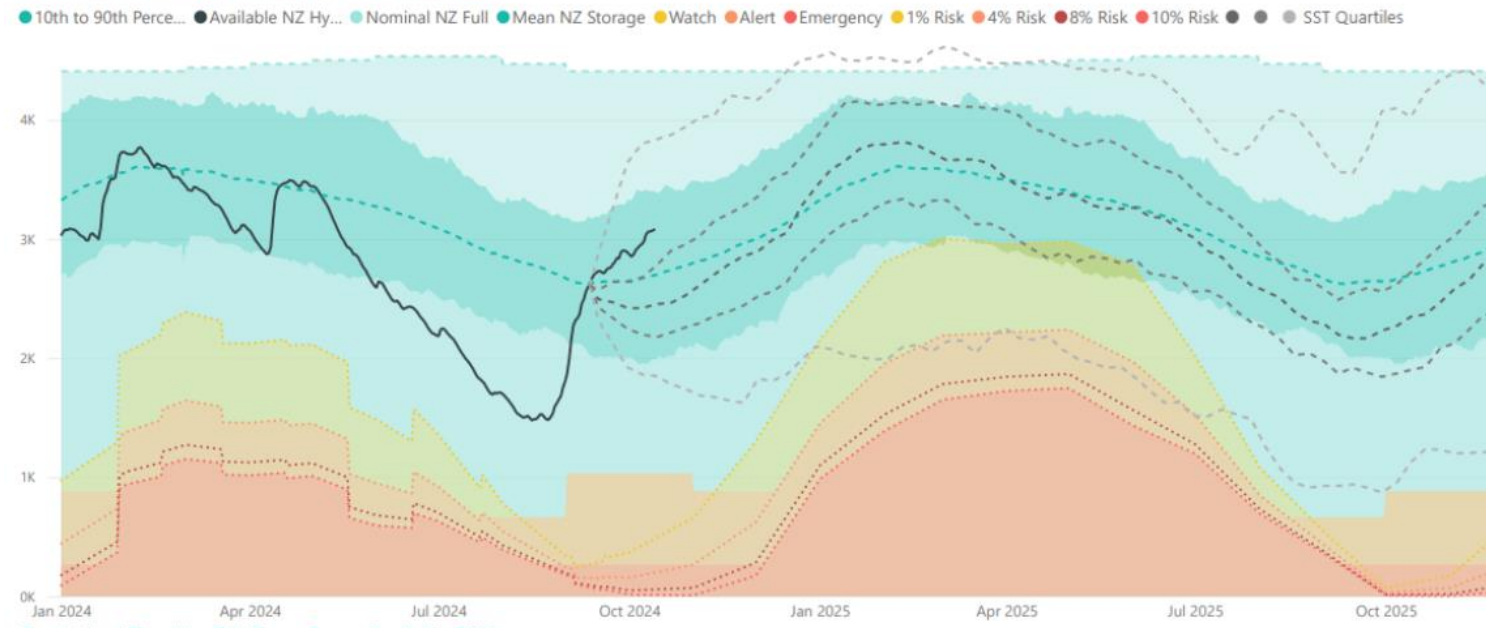


# System operator monitoring

## Energy

- Overall storage above mean but concentrated in lower South Island lakes
- Pūkaki, Hawea and Taupō still below mean
- ERCs for 2025 are heavily dependent on thermal fuel assumptions

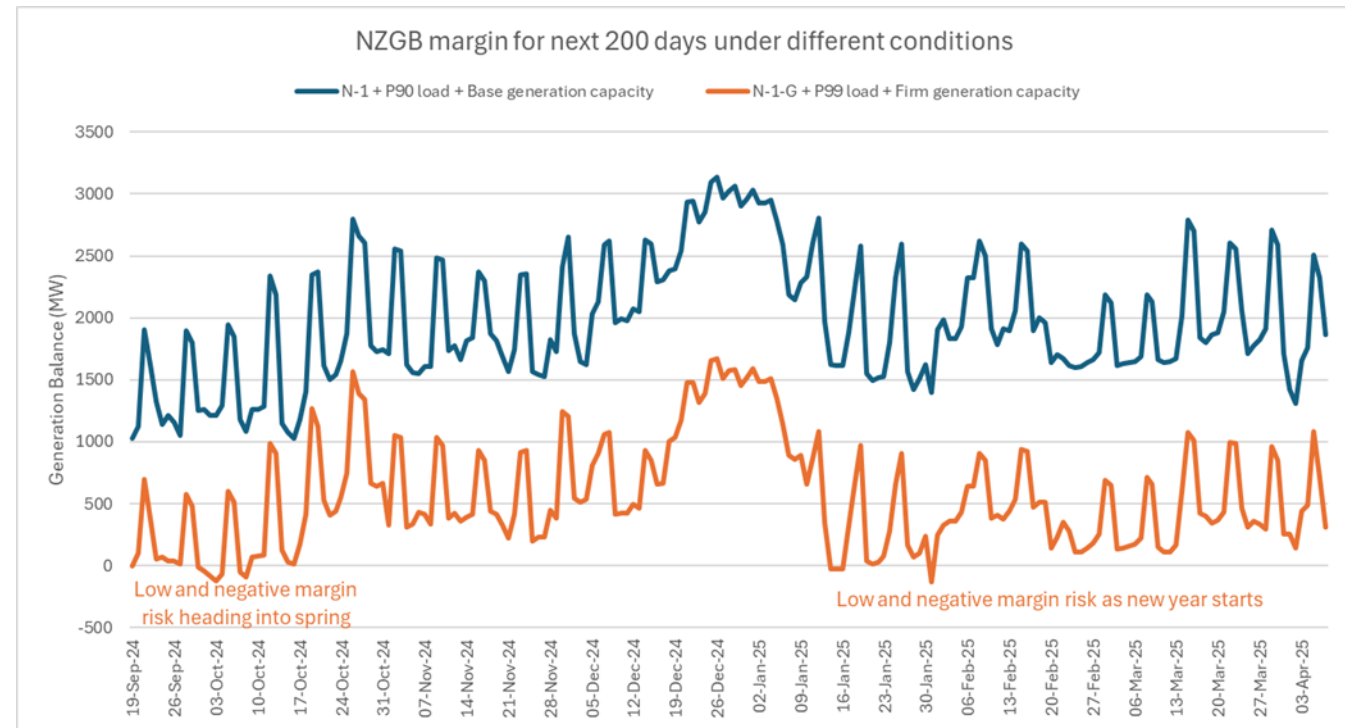
New Zealand Electricity Risk Status Curves (Available GWh)





# System operator monitoring

- **Capacity margins are susceptible to multiple coincident events**
- **Unseasonably high load, coupled with the unexpected loss of the largest supply source and very low intermittent generation levels could result in very low or slightly negative margins in the near term**
- **This would result in low residual notice and market impacts (discretionary demand management, and deficit reserve procurement in the first instance)**

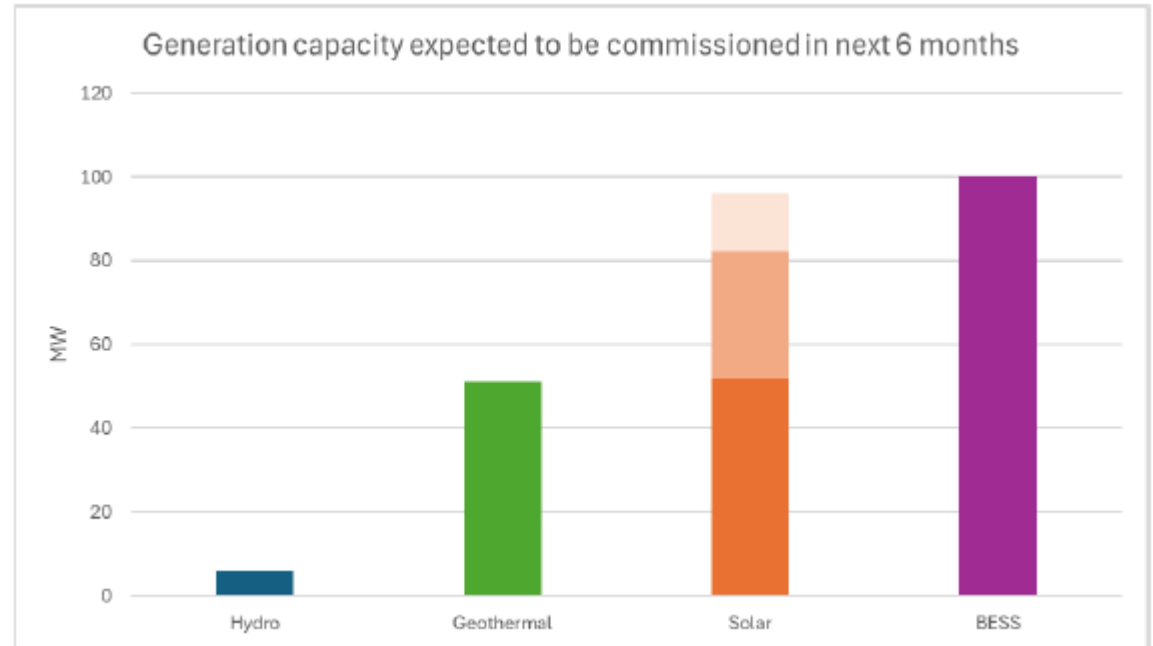


Source: System operator Outlook September 2024 [link when published]

# Supply side changes for 2025

## Capacity

- **System operator expects ~250MW of additional capacity to be commissioned in the next 6 months though nearly half is intermittent**
- **In addition to new capacity, 2025 should see the return of one Manapouri unit (128MW), an additional 18MW from Tauhara and a Stratford peaker unit (100MW), all absent from winter 2024**
- **De-commissioning of TCC (-330MW) raises capacity concerns without firm thermal commitment and if commissioning is delayed**

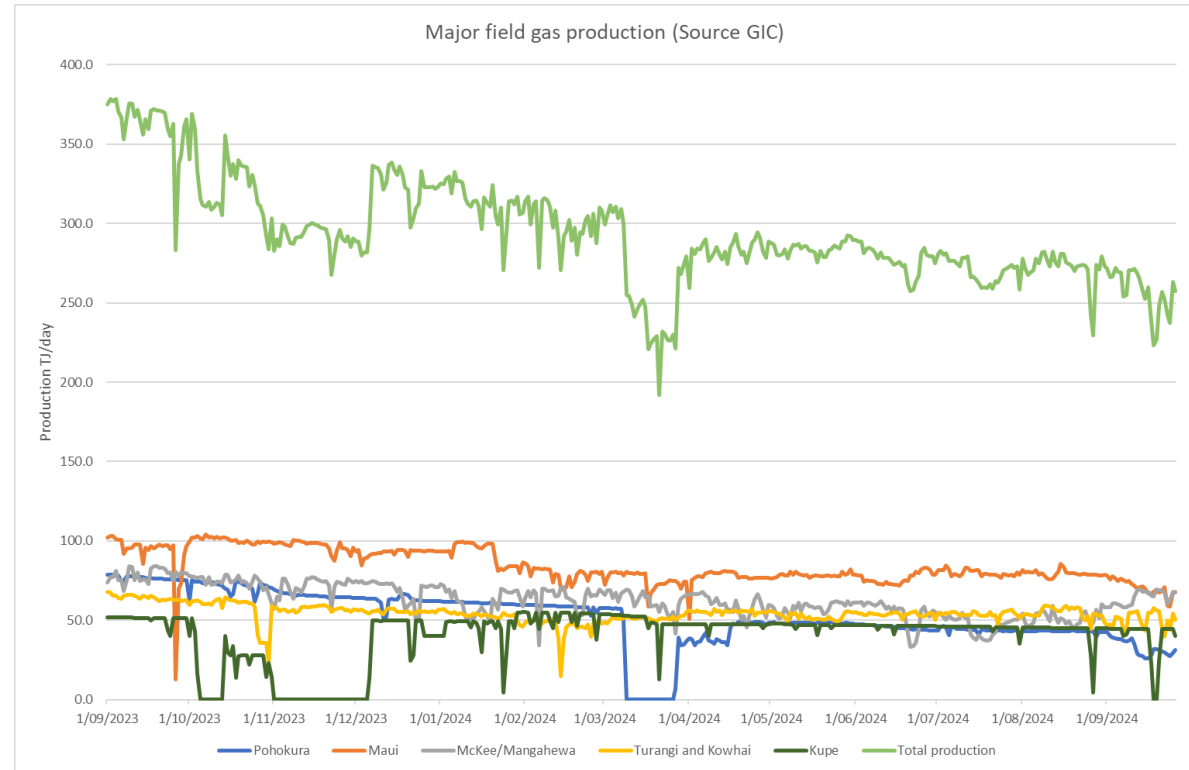


Source: System operator Outlook September 2024

[<https://www.transpower.co.nz/system-operator/notices-and-reporting/system-and-market-insights>]

# Supply side changes for 2025

- **Production expectations from existing wells continue to decline**
- **Tariki-5 expected to tie in by 11 November and add 8.5TJ/day when delivering**
- **Investigating further upgrades to increase delivery capacity should the well be capable**
- **LNG import feasibility is being explored by the Gas Security Response Group**



Source: GIC monitoring data (<https://www.gasindustry.co.nz/data/gas-production-and-consumption/>)

# Authority work

Recent announcement of the ComCom / EA market competition review has prompted a re-prioritisation of EA work

Immediate priority work is being progress with available resources

Ongoing work is being progressed at a slower pace as resources become available or is in flight and needs minimal Authority resource to support

# Security of supply work

## Immediate priority

- Public trust and confidence (MDAG recommendation 22)
- Scarcity Pricing review – review the operational implementation of scarcity pricing in the wholesale market
- Outage co-ordination enhancements – enhancing SO's ability to co-ordinate asset outages to support security of supply
- Security of supply monitor function
- Thermal fuel disclosures
- SOSPA renewal
- Power Innovation Pathway

## Ongoing work

- Extended reserve implementation
- BESS enhancements – enhance market participation tools
- 5-minute variability ancillary service (MFK review)
- Security Standards Assumptions Document (SSAD) review

# Security of supply monitoring 2025

- **Intelligence gathering** – best data for monitoring security of supply:
- **Establish seasonal outlooks** for security of supply:
  - Outlooks based on scenarios: high, low and medium hydro and thermal
  - Objective: identify developing risks and how vulnerable the power system is to a low inflow sequence
  - Present risks in a matrix
  - Updated monthly and published on our website
- **Developing risks identified** in seasonal outlook will trigger actions
- **Enhanced engagement** with DPMC, MBIE and the sector.