

Meeting Date: 29 May 2025

WINTER 2025 OUTLOOK AND REGULATORY RESPONSES

SECURITY AND RELIABILITY COUNCIL

This paper introduces a presentation from the Authority's Market Monitoring team on Winter 2025 and includes regulatory responses to issues facing the sector. This is a recurring item in the SRC's agenda for each meeting.

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. The SRC has asked the secretariat to provide an update on energy and capacity issues impacting the sector and consumers, primarily in the winter months. This presentation is a recurring item in the SRC's agenda for each meeting.
- 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 monitoring team to develop and refine the material, to best present the most relevant and up-to-date information.
- 1.4. Representatives from the Authority's monitoring team and Transpower, as system operator, 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.

- | | |
|-----|--|
| 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 May 2025

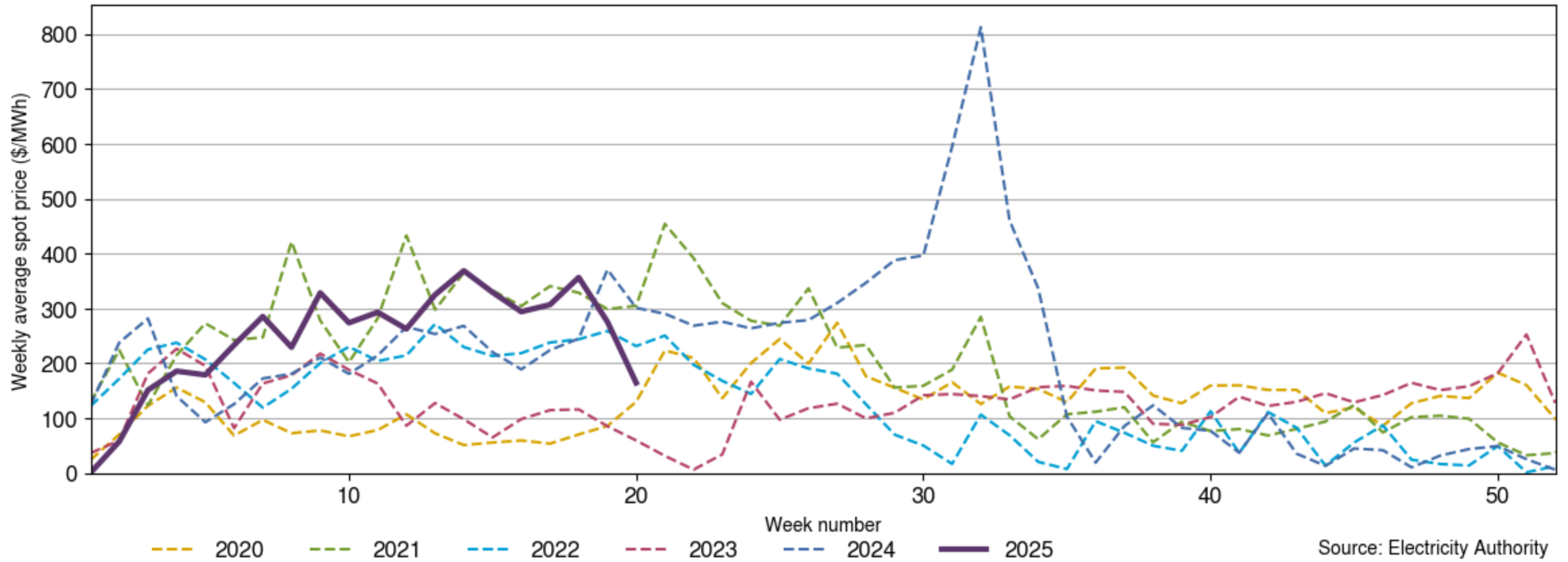
Current Situation

- **Hydro storage has increased slightly:** X% of mean and X% nominally full as of 23 May
- **January-April** was the **driest** on record
- Less **demand response** is available from Tiwai this winter
- **Methanex gas** swap until July, TCC turned back on.

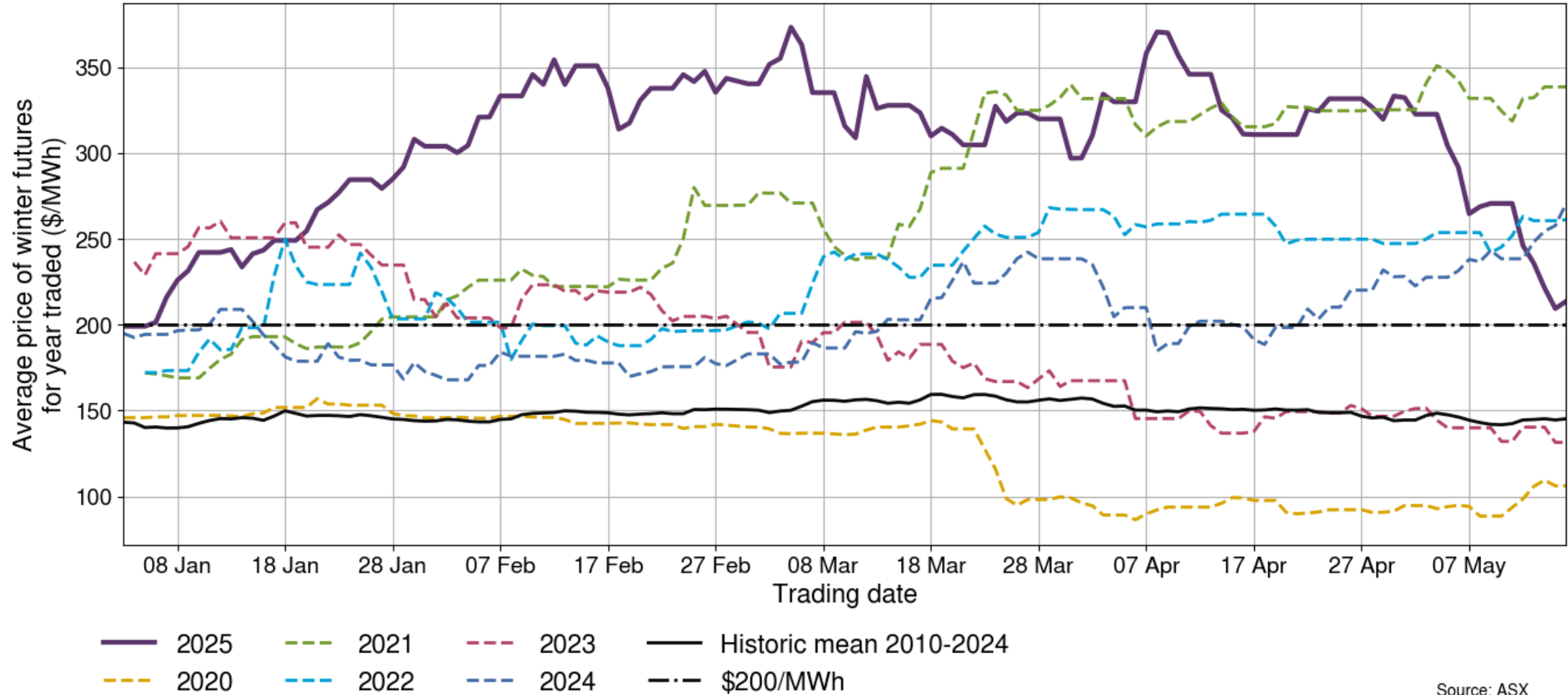
Gas swap and rainfall have driven a recent decrease in spot and futures prices:

- Average spot price last week was \$X/MWh, compared to \$326/MWh over April
- 2025 winter future prices are ~\$210/MWh, compared to ~\$325/MWh at start of May

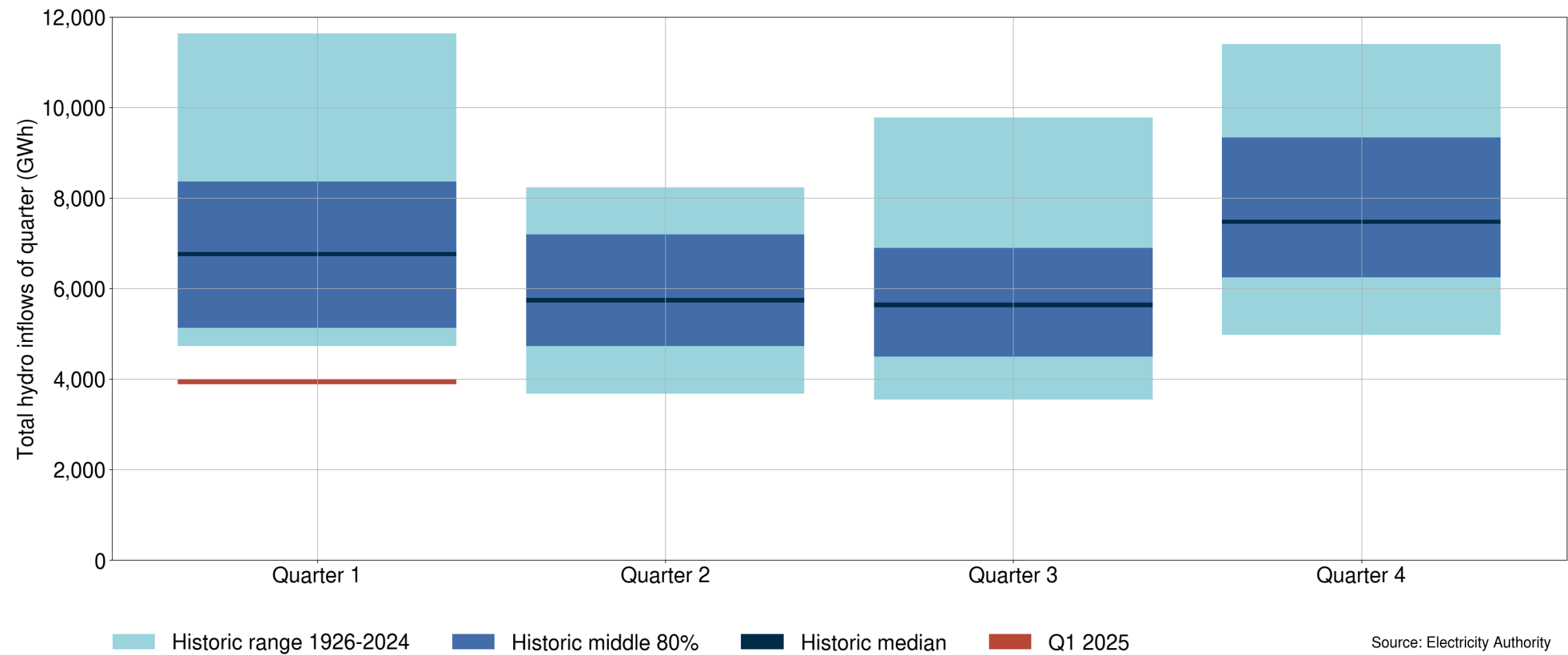
Prices comparison with previous years



Forward winter prices dropped with Methanex gas deal announcements



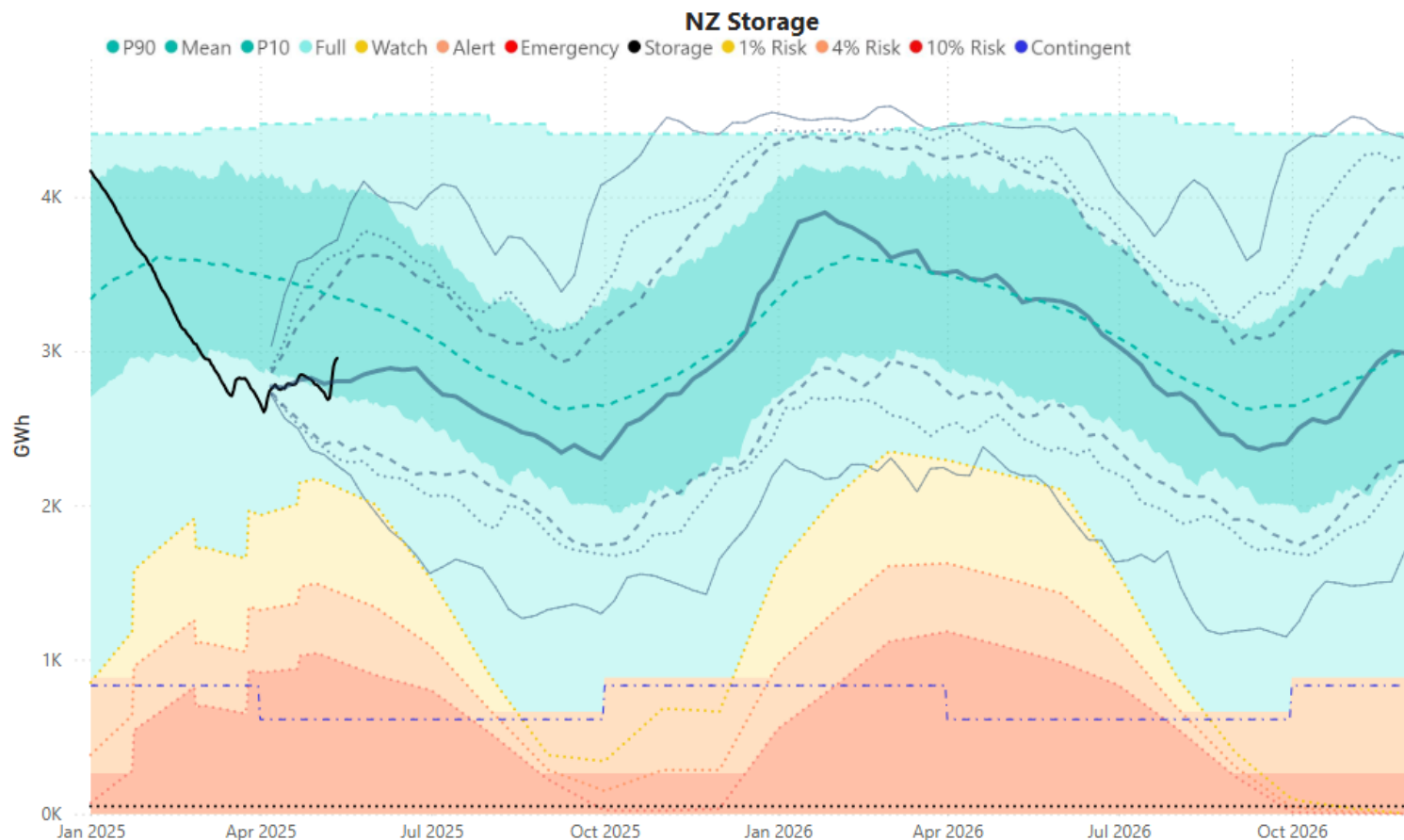
Inflows have been lowest on record



Source: Electricity Authority

Hydro storage

- Recent inflows have helped increase hydro storage with national storage now 88% of mean and 66% of full as of 13 May
- While two of the April SSTs cross the NZ Watch in 2026, storage is now tracking well above minimum SSTs and closer to (slightly above) the median SST
- April ERCs increased (compared to March) due largely to decline in forecast gas production
- Market has been responding to the increased risk and contracting more thermal fuel. Gap between physical capability and contracted quantities is reducing. This includes:
 - Genesis importing more coal
 - Contact procuring additional gas from Methanex
- Our next Energy Security Outlook update will include the effects of the Contact-Methanex deal which will likely reduce the ERCs (provided no other major changes that could increase the ERCs)

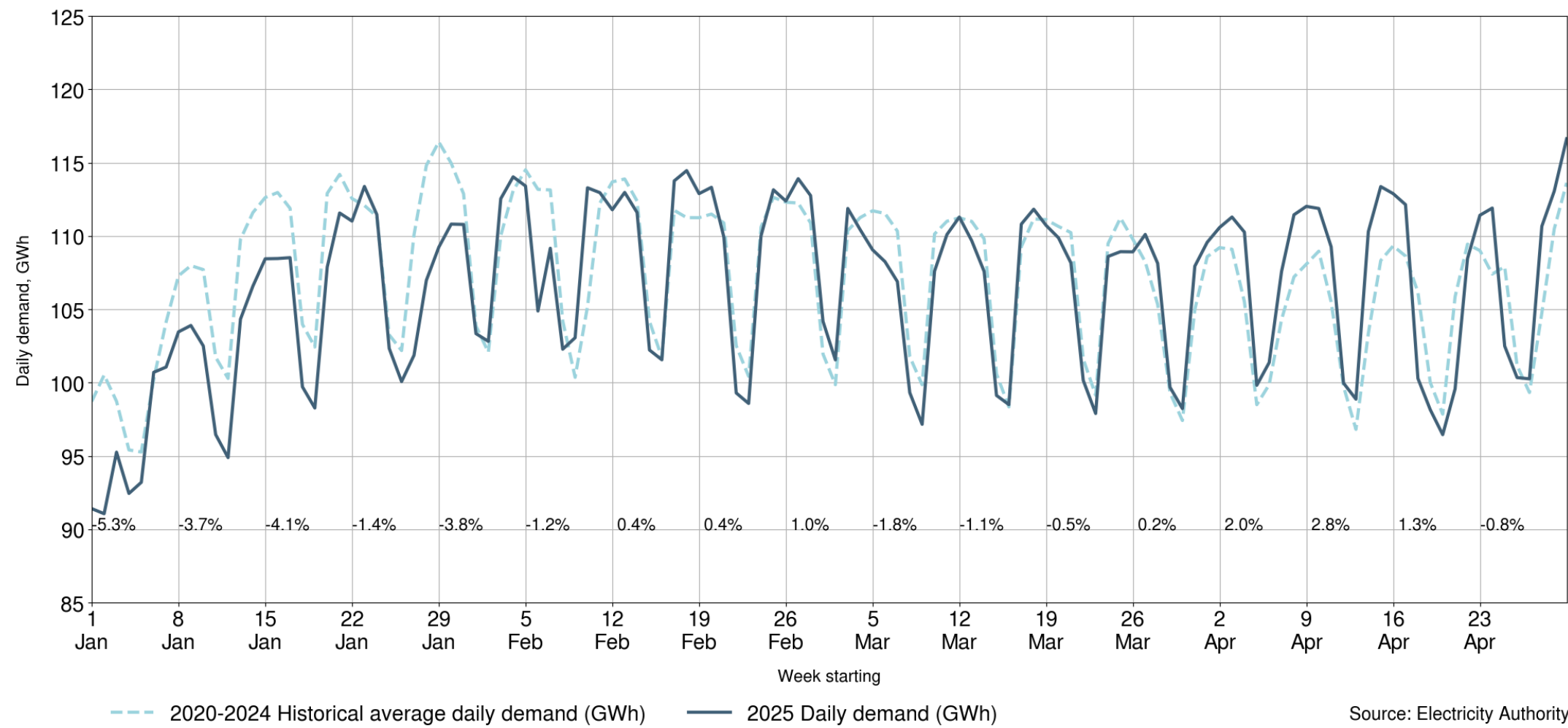


Source: Transpower as the system operator

Note: ERCs reflect the physical capability of the system (rather than contracted thermal fuel arrangements), price-responsive and known contracted demand response, contracted industrial gas swaps, and assume the market is operating to minimise hydro generation as would be done during times of extended low inflows (as observed in winter 2024)

The simulated storage trajectories assume the market will contract to supplement current thermal fuel storage levels, and provide sufficient thermal generation under different simulated hydro inflow scenarios

Electricity demand mostly higher than average in April



Source: Electricity Authority

Gas supply

Contact
2.8PJ

50TJ/day

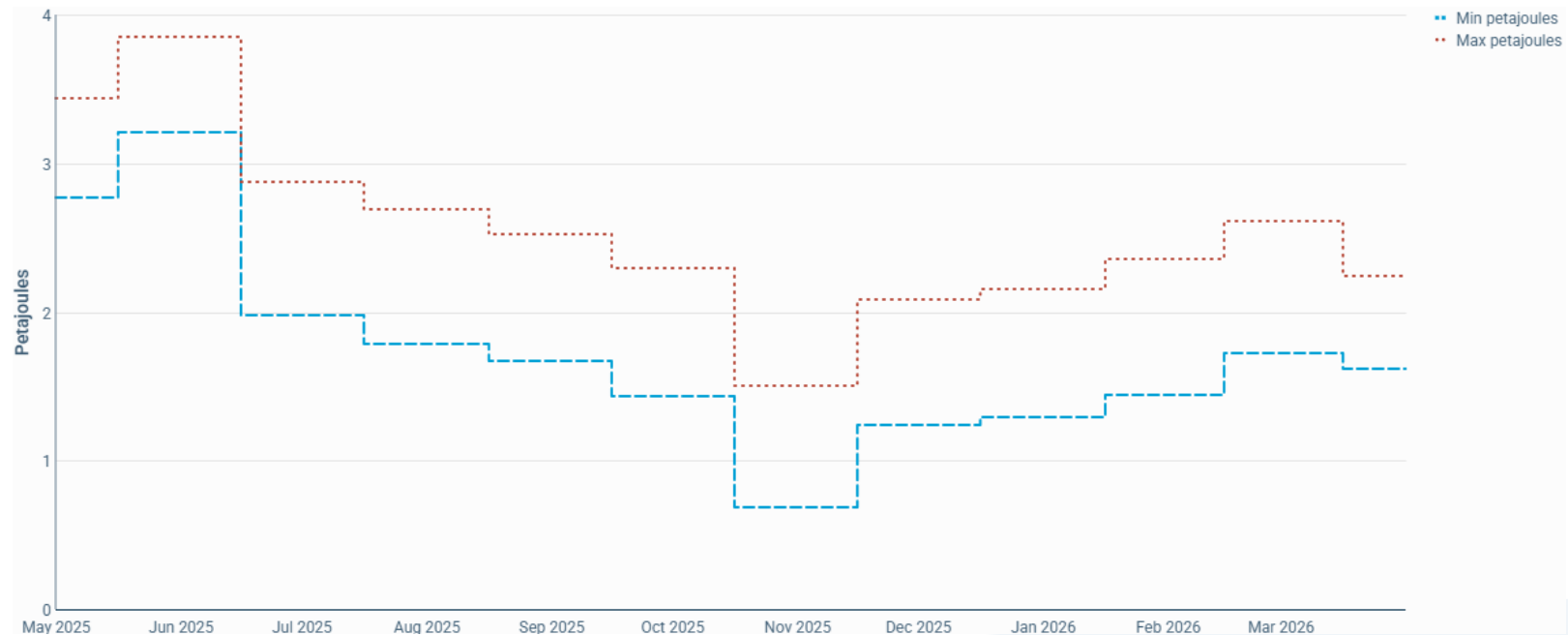
TCC at 310MW =
55TJ/day

Genesis
Up to 1.26PJ

22-23TJ/day

Methanex can call on Genesis to
take gas while Motonui is idle

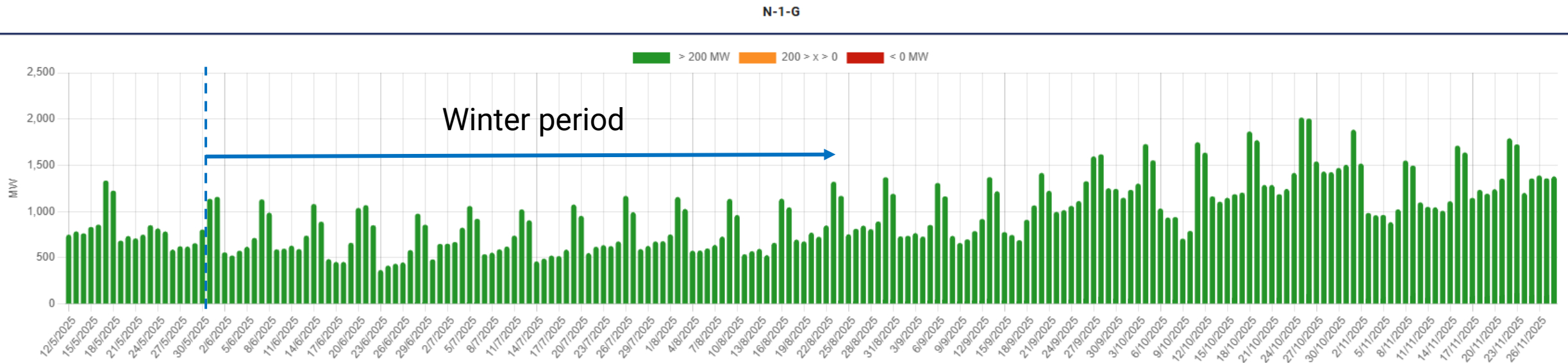
Displace coal



Source: GIC

Capacity Monitoring (New Zealand Generation Balance – NZGB) – base capacity N-1-G

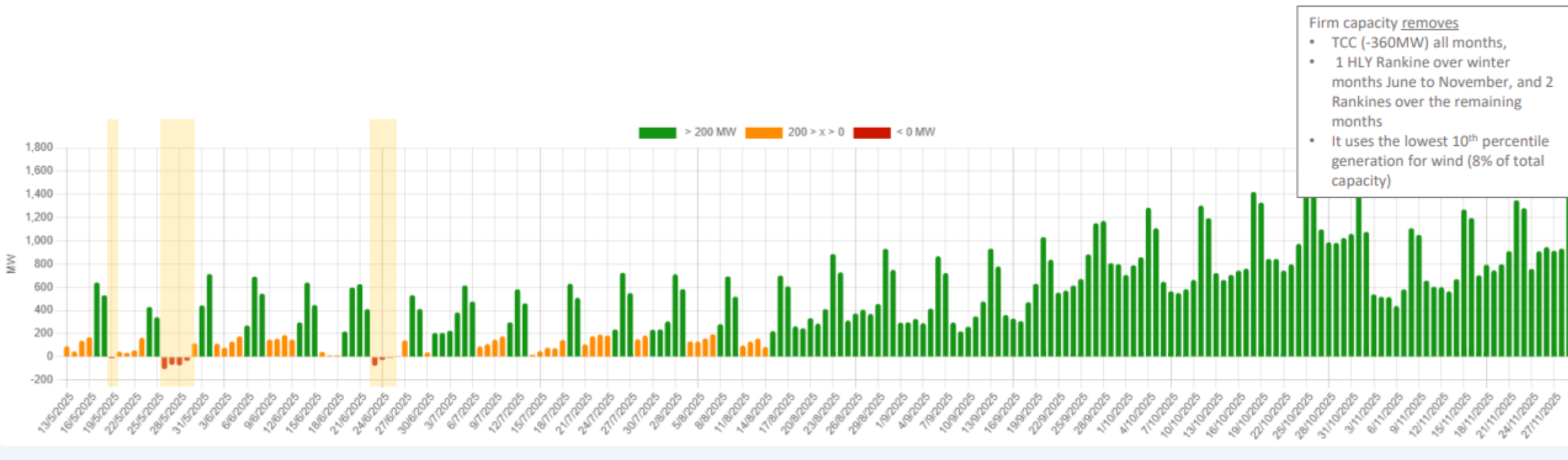
- N-1-G margins are looking healthy so far in 2025
- High levels of unit commitment, so excluding fluctuations in wind we are seeing a base case model that is reflective of the current environment



* - N-1-G margins reflect the impact on margins of the loss of the two largest sources of supply and the dispatch of reserves to cover the next largest loss

Firm capacity only N-1-G

- Firm capacity scenario reflects units that historically operate for at least 90% of AM and PM peaks
- The low margin periods highlight the potential reliance on these units to be available to cover N-1-G
 - The change from the previous outlook is due to the addition of a SFD peaker outage which has pushed the margins down
- This means we are relying on the market to coordinate especially slow starting thermal units, to get through peak load periods



EA Near-term regulatory action underway

Energy risk management

Winter 2025

- **Ensuring generators are prepared for winter** (Generator contingent arrangements review)
- **Ensuring market resource information is collected and published** (Thermal fuel publication, reinforce system operator information gathering powers, support system operator minor ERC review)

Winter 2026+

- **Support system operator contingent storage buffer levels review** (SOSFIP part 6)
- **Ensure security of supply standards are up to date** (review of security standards and security standards assumptions document (SSAD))

Capacity risk management

Winter 2025

- **Reinforce market signals and information to commit resources when needed** (Scarcity pricing review, outage coordination improvements, system operator low residual review)
- **Risk management products are available** (Standardised flex products (Task force 1B))

Winter 2026+

- **Reinforce market signals to build and commit flexible resources** (Peak management ancillary service (MFK) review, Industrial consumer demand response rewards (Taskforce 2D, improve BESS participation))
- **Ensure security of supply standards are up to date** (security standards and SSAD review)

System Operator preparations for Winter 2025

- **Security of Supply webpage:** Heightened focus on security of supply monitoring and information provision, and accessibility of information. [Security of supply | Transpower](#)
 - **Event readiness:** Refining our established security of supply event processes, as we do each year, to ensure learnings are acted upon.
 - **Low residual event management:** industry refresher on Winter Peaks, the different information the system operator provides and other information available to understand potential peak risks. [SO Industry Forum slides 29 April 2025](#)
 - **Difference Bids refresher workshop** (with a live test) with the Electricity Authority and Electricity Distribution Businesses (EDBs) on 6 May. Difference Bids are used to signal to the market the potential controllable load available from EDBs during low residual situations.
 - **Scarcity pricing:** completed implementation of the Authority's updated scarcity price settings in the market system. Increased scarcity prices will reduce the need for the system operator to apply discretion allowing a greater ability for the market to clear higher-priced resources which are needed during tight capacity situations.
- **Industry exercises:** Together with the Authority we hosted a dry-year related industry exercise on 9 April 2025, supported by preparatory webinars on 4 and 18 March to provide participants with knowledge to support their involvement. This year's exercise covered our dry year processes, Official Conservation Campaigns (OCCs), rolling outage plans, consumer care obligations and communications between the System Operator, market participants, public agencies, customers and key stakeholders.
 - **Black Start industry exercise and testing:** successfully completed annual South Island Black Start simulation exercise (19 February) with key participants and stakeholders, and Black Start test (10 May) of the Clyde hydro station.
 - **Updating the ERC 101 document** to incorporate the contingent storage release boundary (CSRB) buffer discretion process set out in the SOSFIP review Issues paper [Summary and Decision paper](#) and consolidate our [ERC and SST assumptions document](#) into the [ERC101](#) (removing duplication). Publication expected in May 2025;
 - Ongoing discussions with generators on **generator operational constraints information**
 - Working with ECAN and Genesis on the **Tekapo 'shadow' constraint**