



September 2025 Energy Security Outlook

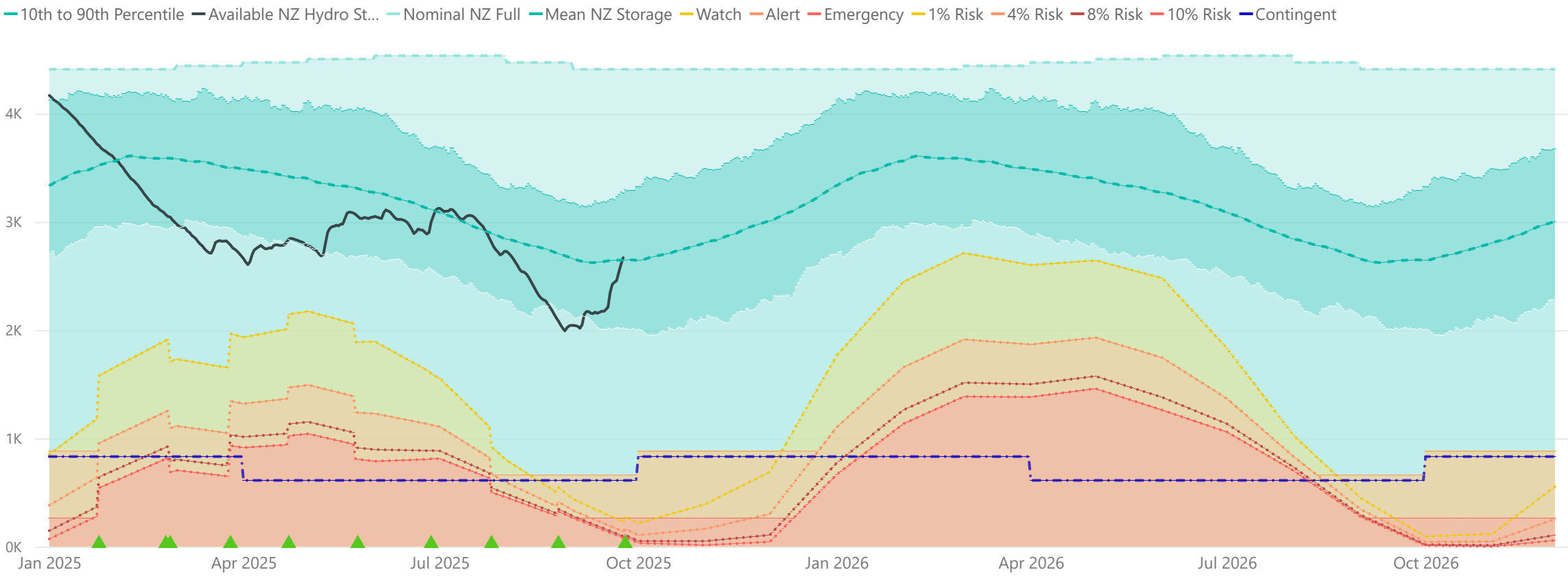
Thursday, 25 September 2025

- The national controlled hydro storage position has increased since last month's update and sits at 102% of the historic mean at 25 September (up from 77% at 25 August). South Island storage is lower at 99%.
- The Electricity Risk Curves (ERCs) have lifted for most months in 2026 relative to the August update, predominantly due to a decrease in gas storage levels. There was little change to the risk curves for the remainder of 2025 when the curves are set by the Alert and Emergency floors reflecting energy held in contingent hydro storage.
- No Simulated Storage Trajectories (SSTs) cross the Watch curve in 2025. 31 of the 93 SSTs cross the Watch curve in January-July 2026. This assumes the third Rankine unit retires in January 2026 and the market supplements the existing coal stockpile at its maximum import capability to maintain increased thermal generation during low hydro inflows.
- Looking ahead to winter 2026, electricity supply risks can be reduced through hydro storage management and ensuring sufficient backup thermal fuel and capacity to support increased thermal generation under extended periods of low inflows.
- In this month's scenario we look at the impact on the ERCs if the third Rankine unit were to remain available in 2026, which is currently awaiting [Commerce Commission](#) approval. This lowers the NZ Watch curve by up to 931 GWh and results in four SSTs briefly crossing the Watch curve in 2026.

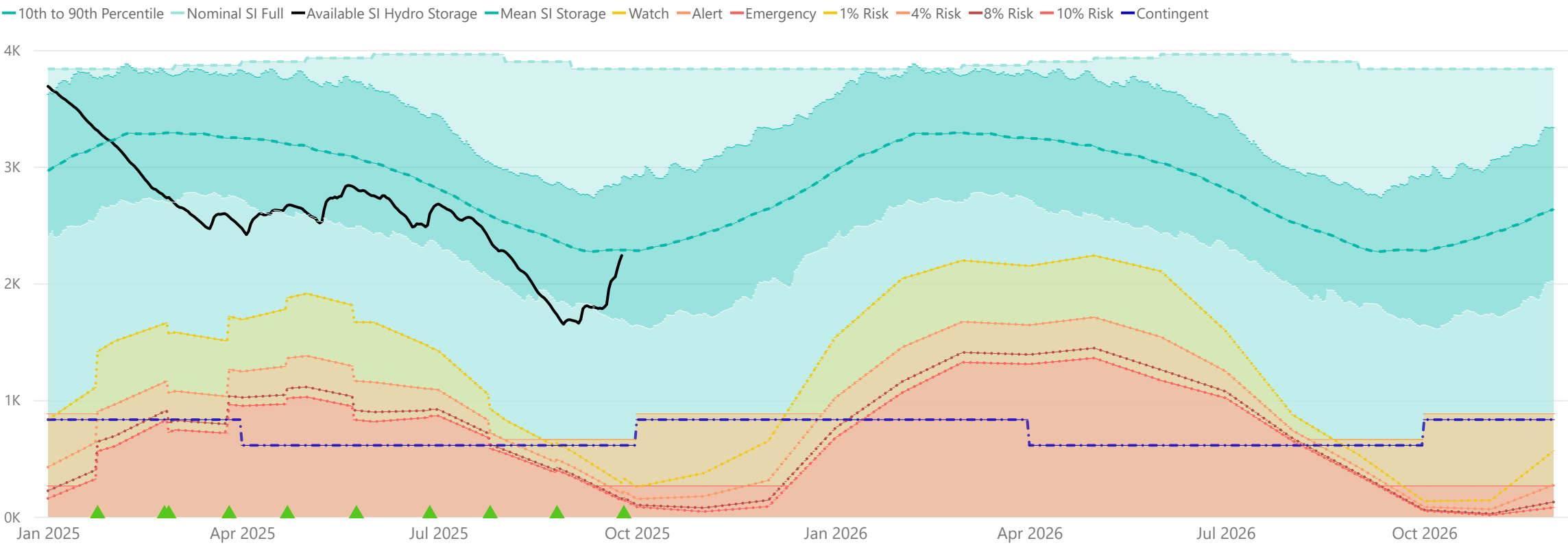
Base Case - Electricity Risk Curves (ERCs) Updates and Assumptions

- A significant decrease in Ahuroa gas storage, and an slight increase to the current coal stockpile.
- TCC is modelled to exit at the earlier of its estimated remaining operating hours being exhausted or its announced decommissioning at the end of 2025, depending on the inflow sequence.
- Updates to planned generator outages and upcoming commissioning dates.
- Input data was prepared as of 15 September. The current hydro storage level is as of 25 September.

Base Case New Zealand Electricity Risk Status Curves (Available GWh)



Base Case South Island Electricity Risk Status Curves (Available GWh)



Energy Security Outlook Explanation:
[Energy Security Outlook 101](#)

Watch Curve - The one percent risk curve.
Alert Curve - The maximum of the four percent risk curve and the floor.
Emergency Curve - The maximum of the 10 percent risk curve and the floor.
Official Conservation Campaign Start - See cl. 9.23 of the code.
Official Conservation Campaign Stop - See cl. 9.23A of the code.
Triggers and actions of Watch/Alert/Emergency status are set only by the official base case curves (not scenario curves).

Note: The floor is equal to the amount of contingent hydro storage that is linked to the specific electricity risk curve, plus any contingent hydro storage linked to electricity risk curves representing higher levels of risk of future shortage, and the buffer. The default buffer is 50 GWh.

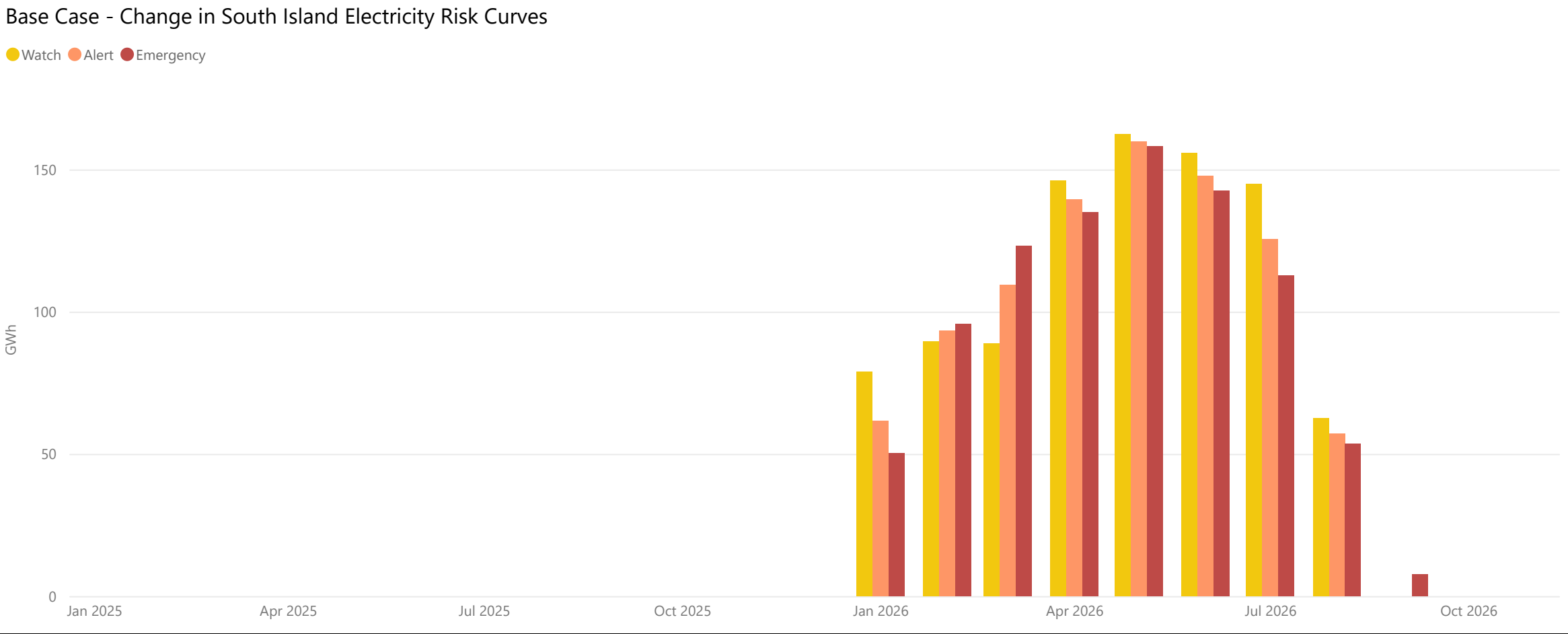
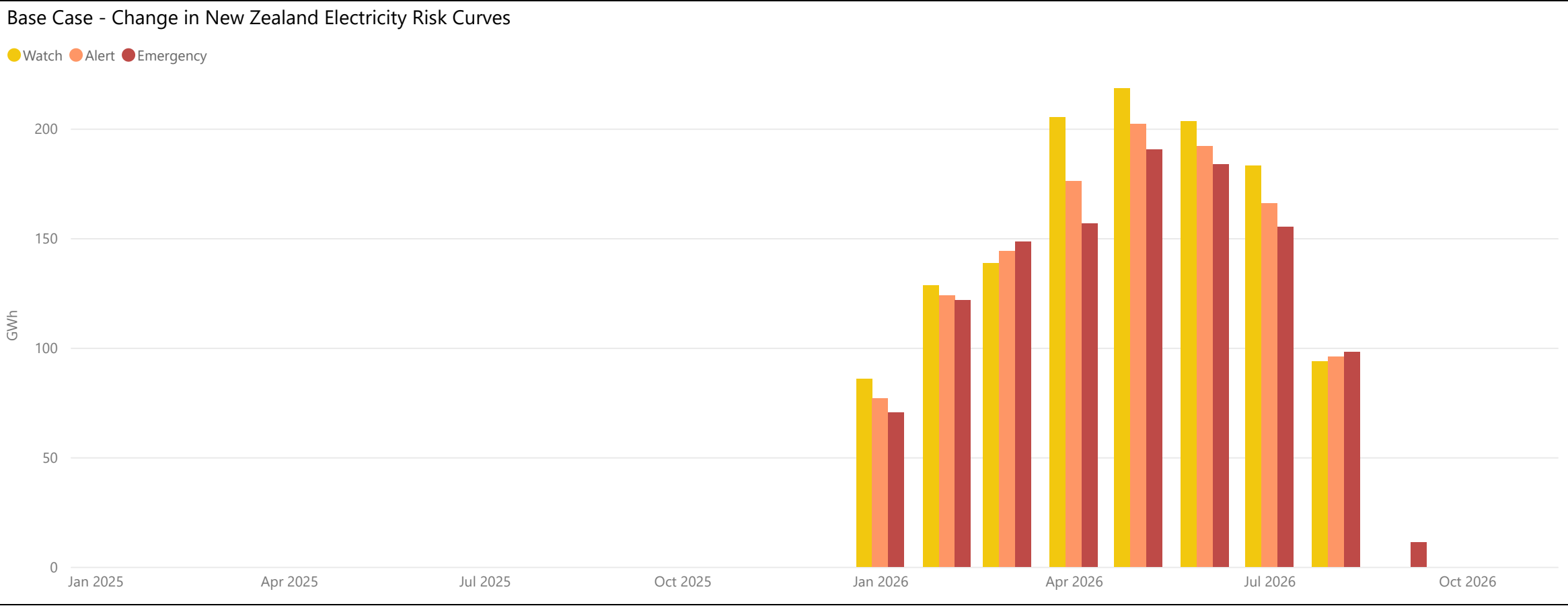
Base Case - Changes in the Electricity Risk Curves From Previous Update

 Thursday, 25 September 2025

The changes to the Watch/Alert/Emergency curves compared to the last update are shown below.

The most significant change in this update to the ERCs is the decrease in modelled thermal generation capability over most months in 2026 as a result of decreased gas storage levels. As a result, the ERCs have increased during 2026 as there is a net increase in hydro storage drawdown relative to the last update. There is little change to the ERCs in the remainder of 2025 as this is the period when the ERCs are set by the Alert and Emergency floors.

The New Zealand Watch curve increased by up to 219 GWh (in May 2026), while the Emergency curve increased by up to 191 GWh (in May 2026). The South Island Watch curve increased by up to 162 GWh (in May 2026) while the Emergency curve increased by up to 158 GWh (in May 2026).



Base Case - Thermal Deratings

 Thursday, 25 September 2025

The thermal deratings and key considerations for the September 2025 ERCs update are below:

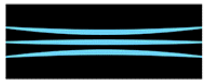
- Thermal generation capability decreased through most of next year in this update, due to a decrease in gas storage levels.
- Note that the deratings on thermal generation would decrease if more coal or gas is made available for electricity generation than what has been modelled. Continued focus on fuel (both hydro and thermal) and asset availability is needed to reduce energy risk ahead of winter 2026.
- Modelled gas storage levels have decreased to 3.4 PJ as of the beginning of September and could fuel a large combined cycle gas plant at full output for ~2 months (ignoring draw down rates) or a peaker for ~5 months.
- The current coal stockpile can fuel three Rankines at full output for ~4 months, or one Rankine for ~11 months without further imports.

On the chart below, potential thermal generation is the total capacity of available units. Modelled thermal generation (shown by the lines) is what those units could generate using the gas and coal available for electricity generation. There is a separate model run starting each month, with the start of each run shown by a dot. In the table, each row corresponds to a separate run. Each run starts with a stockpile of stored coal and gas, and modelled generation tends to decline initially as this stockpile is consumed. Whirinaki is a diesel generator and is not included in the charts below, however it is still included in the model where it is limited to 60 GWh generation over a 6 month period.



Modelled Thermal Generation (GWh) by Run Month

[illegible]



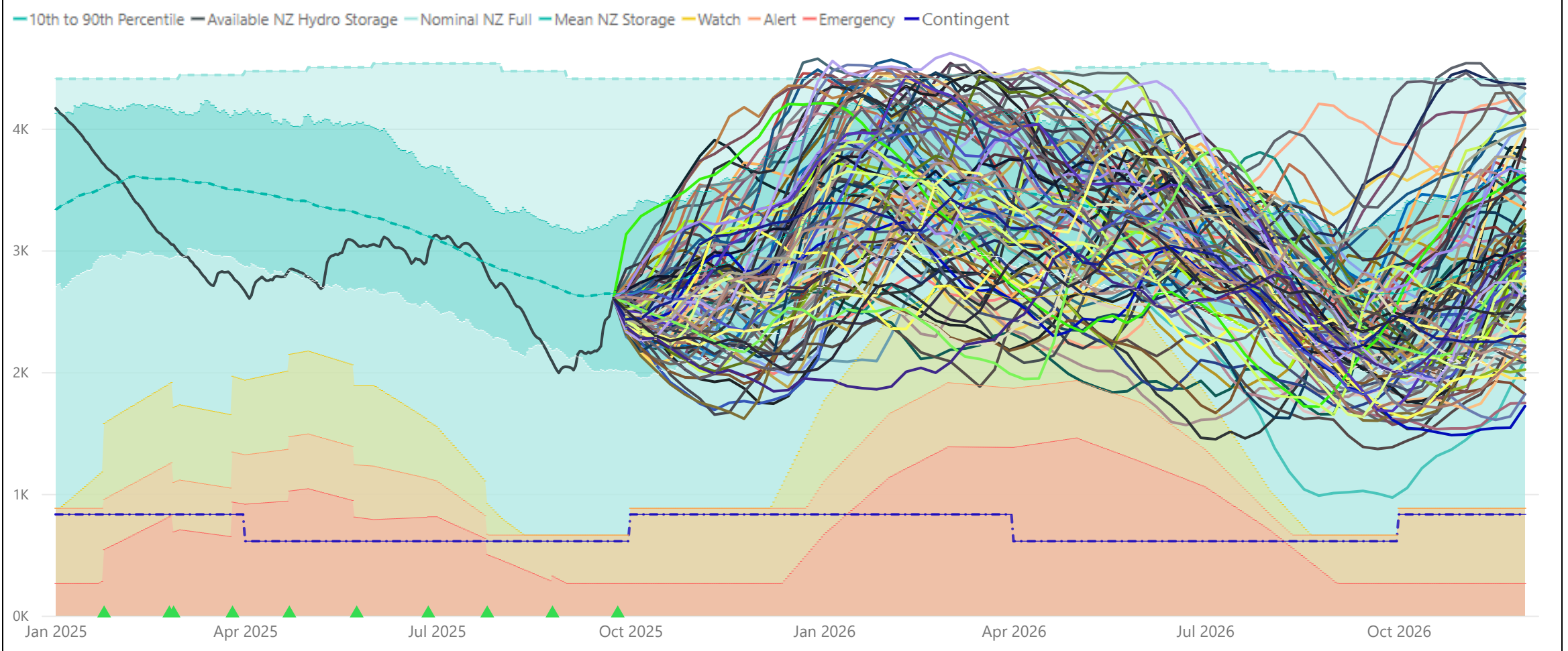
Base Case - Simulated Storage Trajectories (SSTs)

▲ Thursday, 25 September 2025

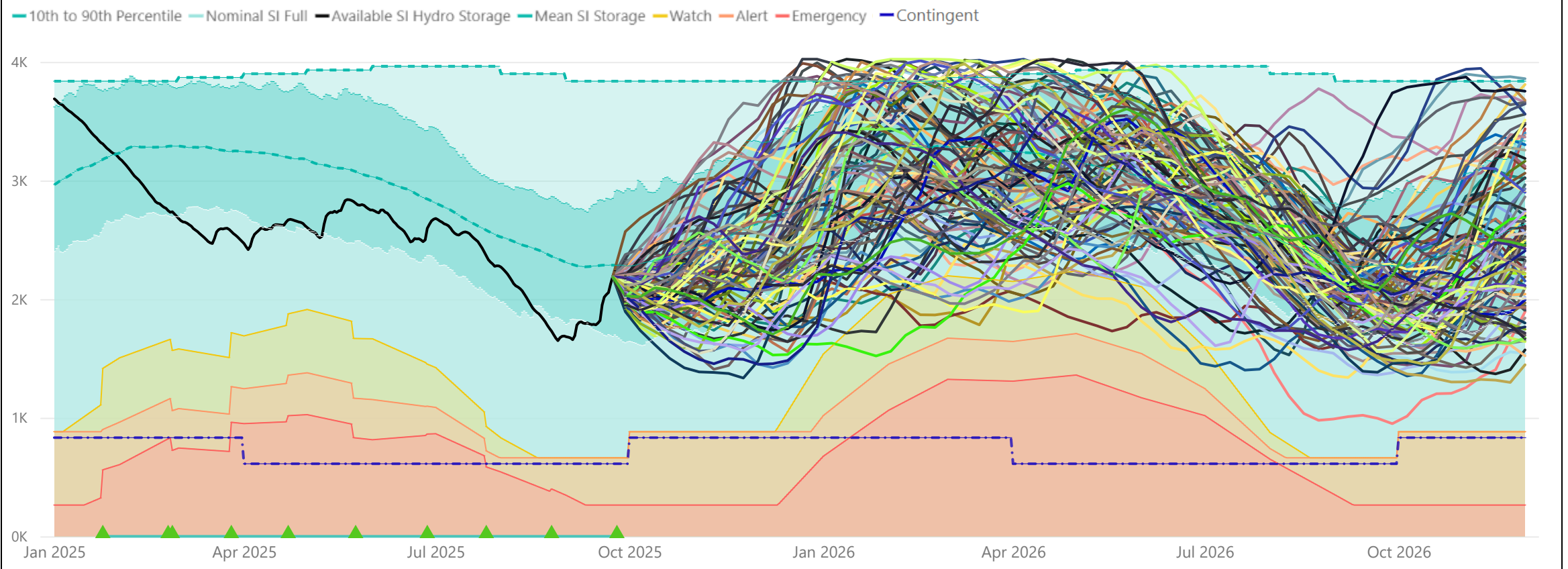
The September SST update is shown below:

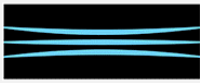
- No SSTs cross the NZ Watch status curve in 2025. 31 of the 93 modelled SSTs cross the NZ Watch status curve in 2026.
- No SSTs cross the NZ Alert status curve in 2025. One SST crosses the NZ Alert status curve in 2026.
- No SSTs cross the South Island Watch status curve in 2025. 16 of the SSTs cross the South Island Watch status curve in 2026.
- No SSTs cross the South Island Alert status curve in 2025 or 2026.

Basecase - New Zealand SST Electricity Risk Status Curves (Available GWh)



Basecase - South Island SST Electricity Risk Status Curves (Available GWh)





September 2025 Rankine Remains Scenario - Electricity Risk Curves

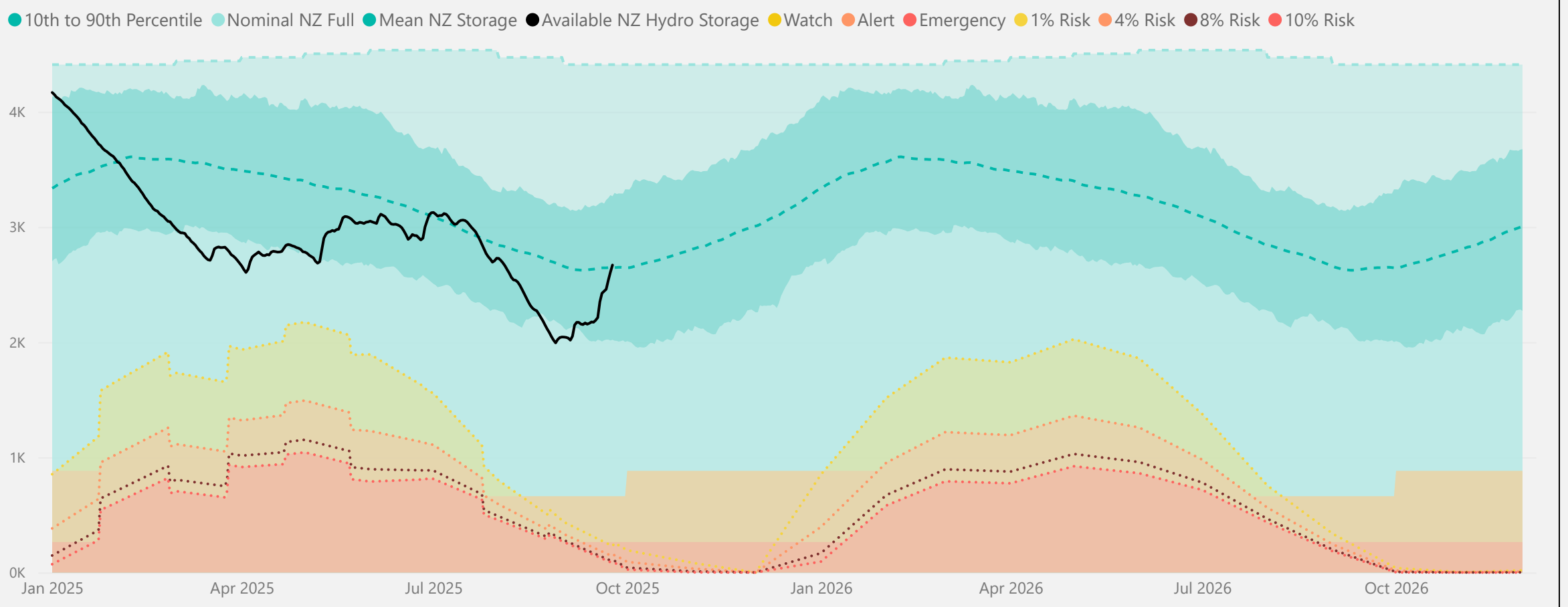
Our base case Electricity Risk Curves (ERCs) for September assume that a Rankine unit at Huntly will be retired in January as indicated in Genesis's [FY25 Q3 Performance Report](#).

This scenario examines the impact on ERCs (relative to the base case assumptions) if all three Rankine units were to remain available. This lowers the New Zealand Watch curve by up to 931 GWh in February 2026 and results in four SSTs briefly crossing the Watch curve in 2026, where 31 SSTs crossed it under the base case.

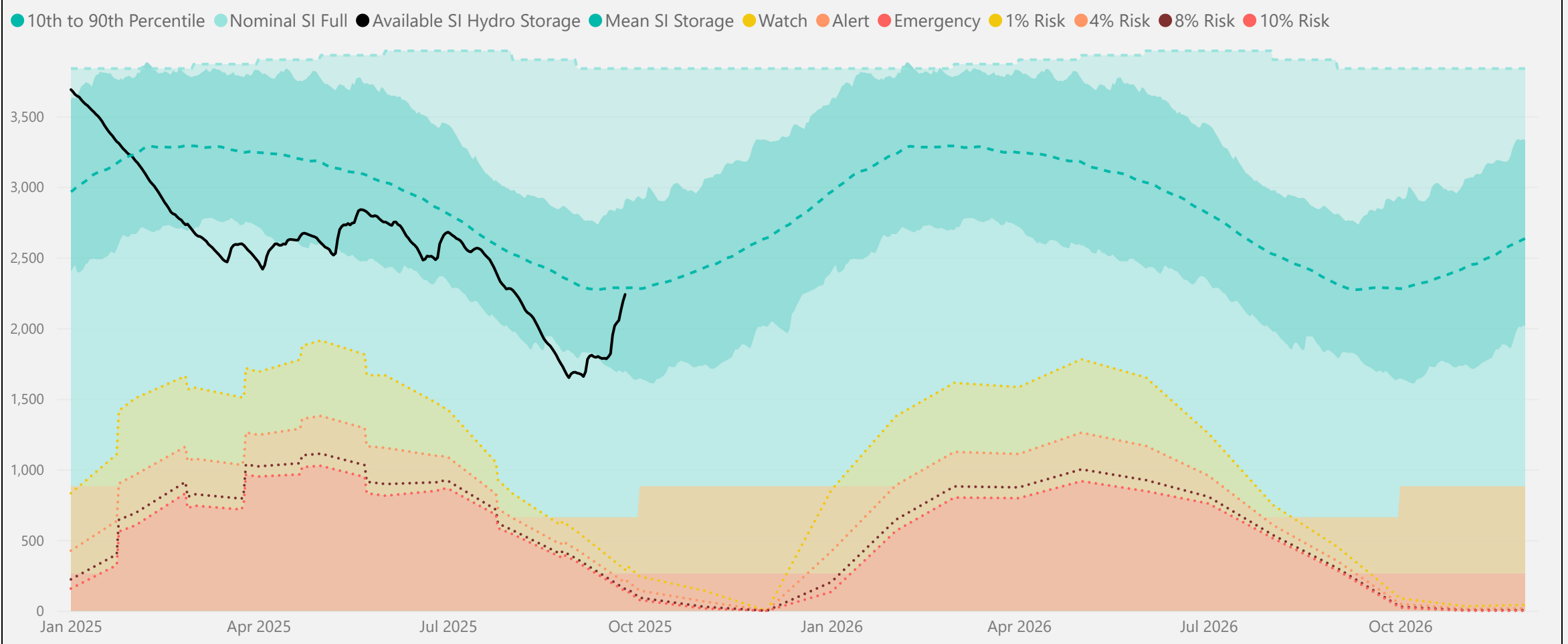
We note on 4 August [Genesis announced](#) that the major gentailers had signed an agreement to support national energy security through Huntly capacity, including the third Rankine unit. However this remains subject to [Commerce Commission](#) approval, so in the mean time our base case assumes the unit is planned for decommissioning.

The September 2025 ERCs Scenario is shown below.

Scenario - New Zealand Energy Risk Status Curves (Available GWh)



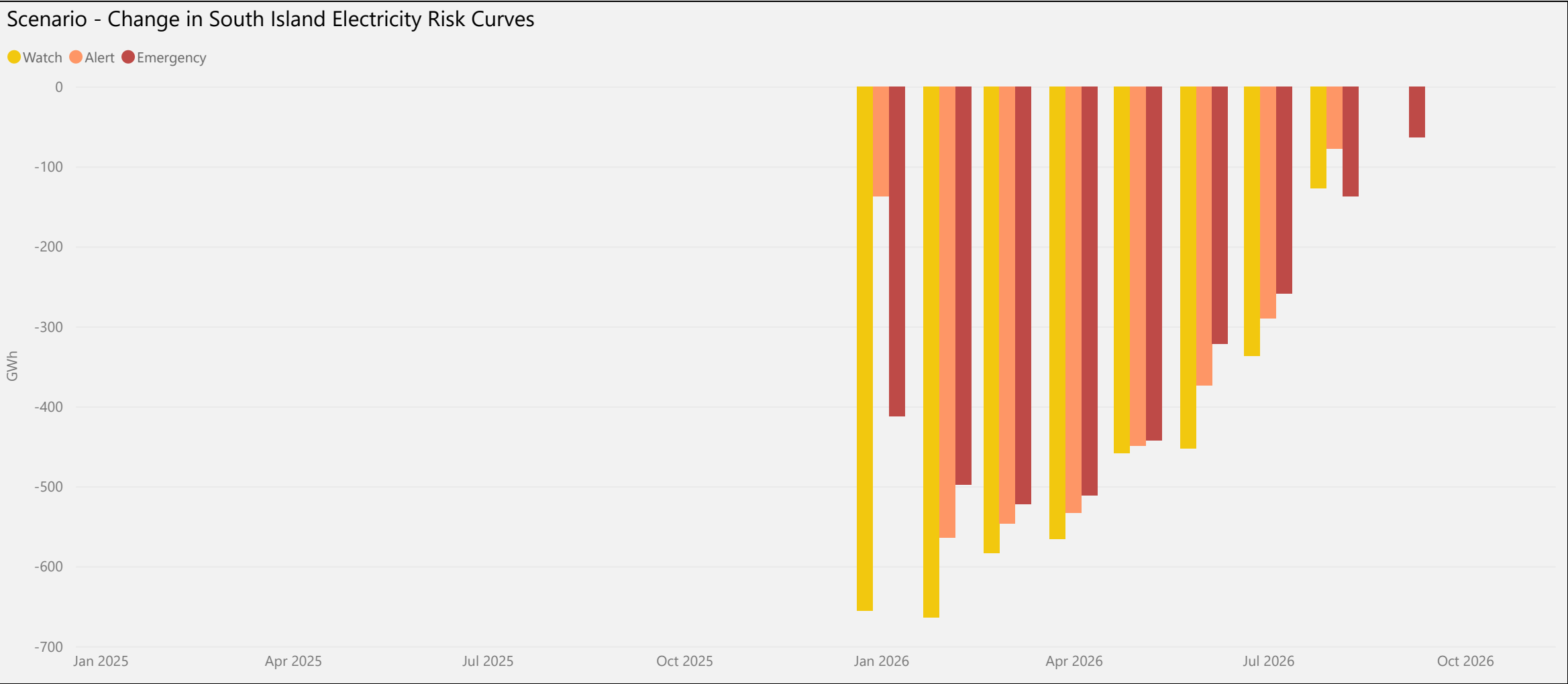
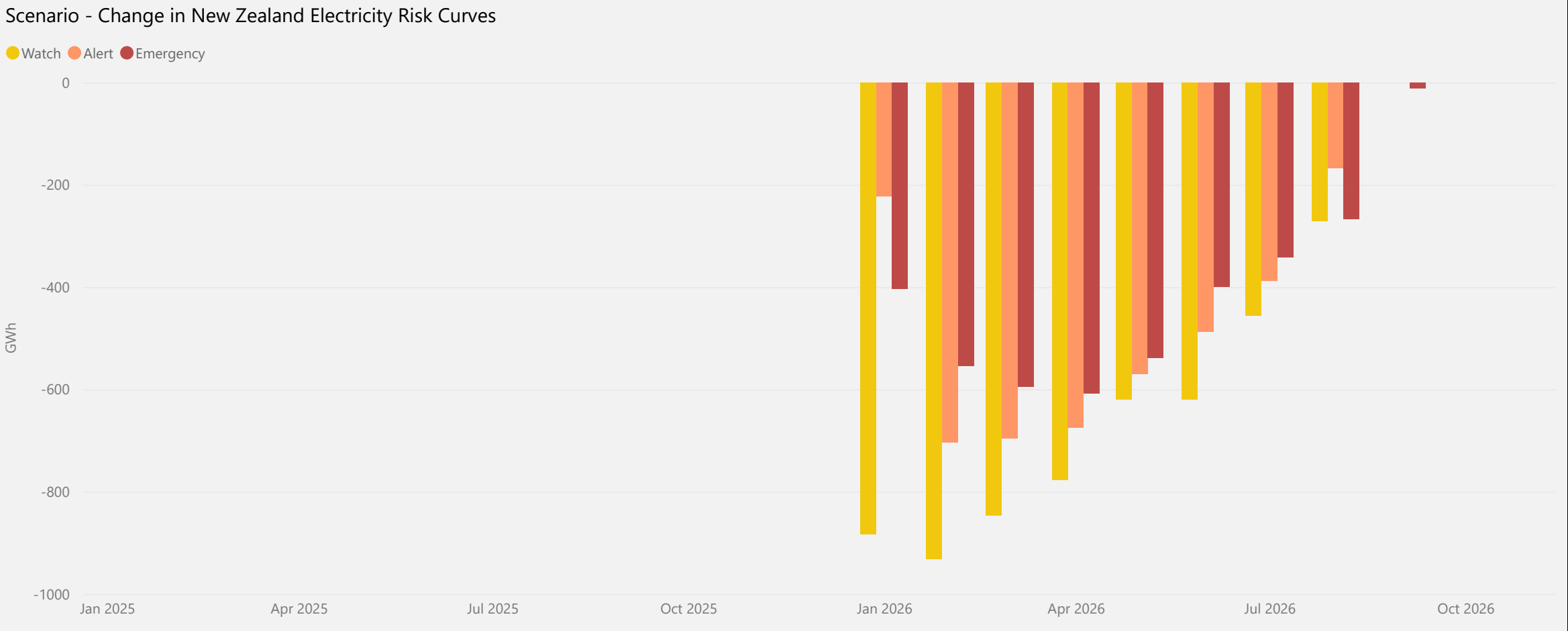
Scenario - South Island Energy Risk Status Curves (Available GWh)





Scenario - Changes in the Electricity Risk Curves from the Base Case

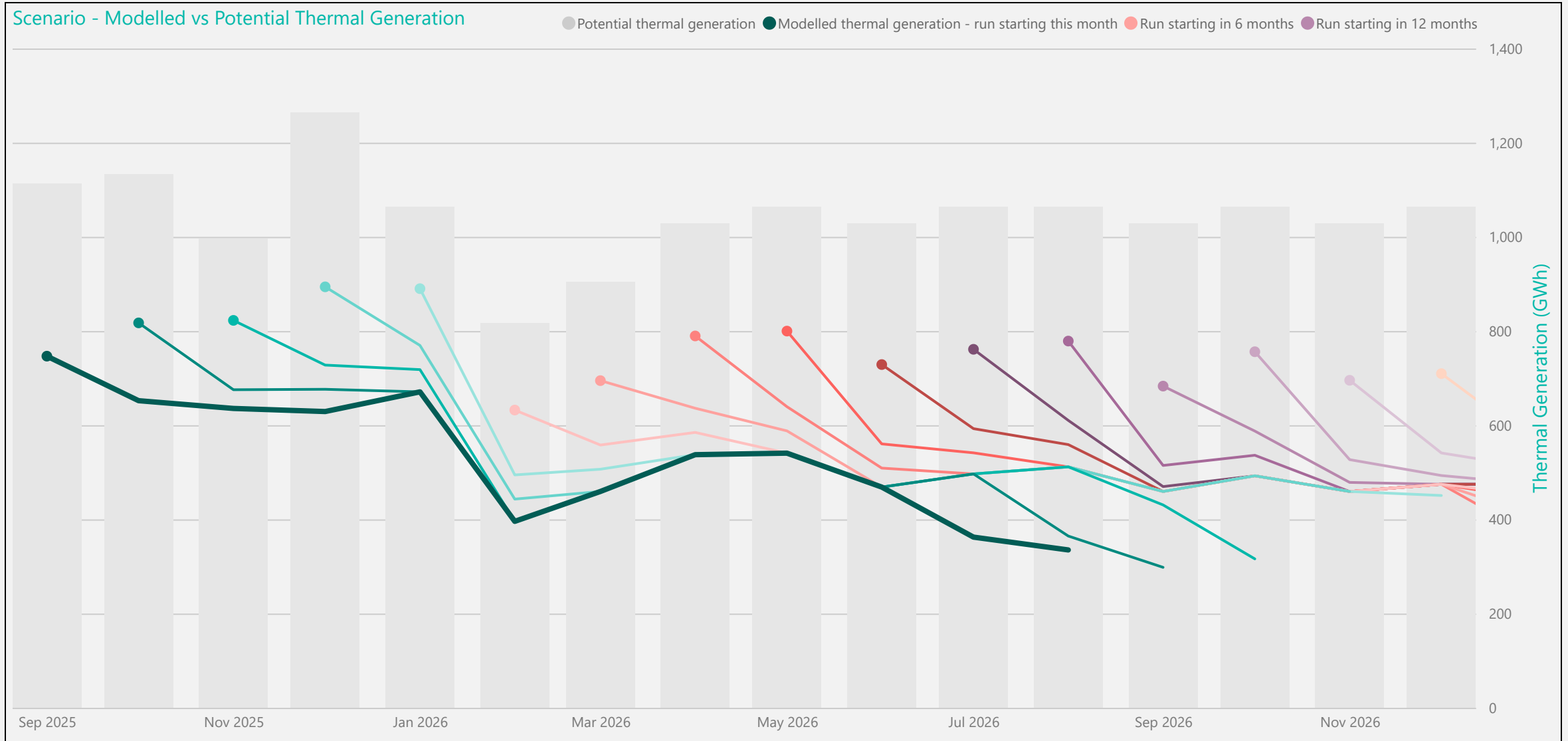
The changes to the scenario Watch/Alert/Emergency curves compared to the base case are shown below. The decrease in the curves over 2026 is the result of all three Huntly Rankine units remaining available (versus one being retired in January 2026 in the base case)



Scenario - Thermal Deratings

The thermal deratings and key considerations for the September 2025 Rankine Remains scenario are below.

Potential thermal generation in 2026 (grey bars) is significantly higher with all three Rankine units available. This results in increased generation in the early months of each run, which reduces risk. Because there is more thermal plant capacity available to burn through stockpiles, thermal generation in each run reaches a steady state more quickly in this scenario.



Modelled Thermal Generation (GWh) by Run Month

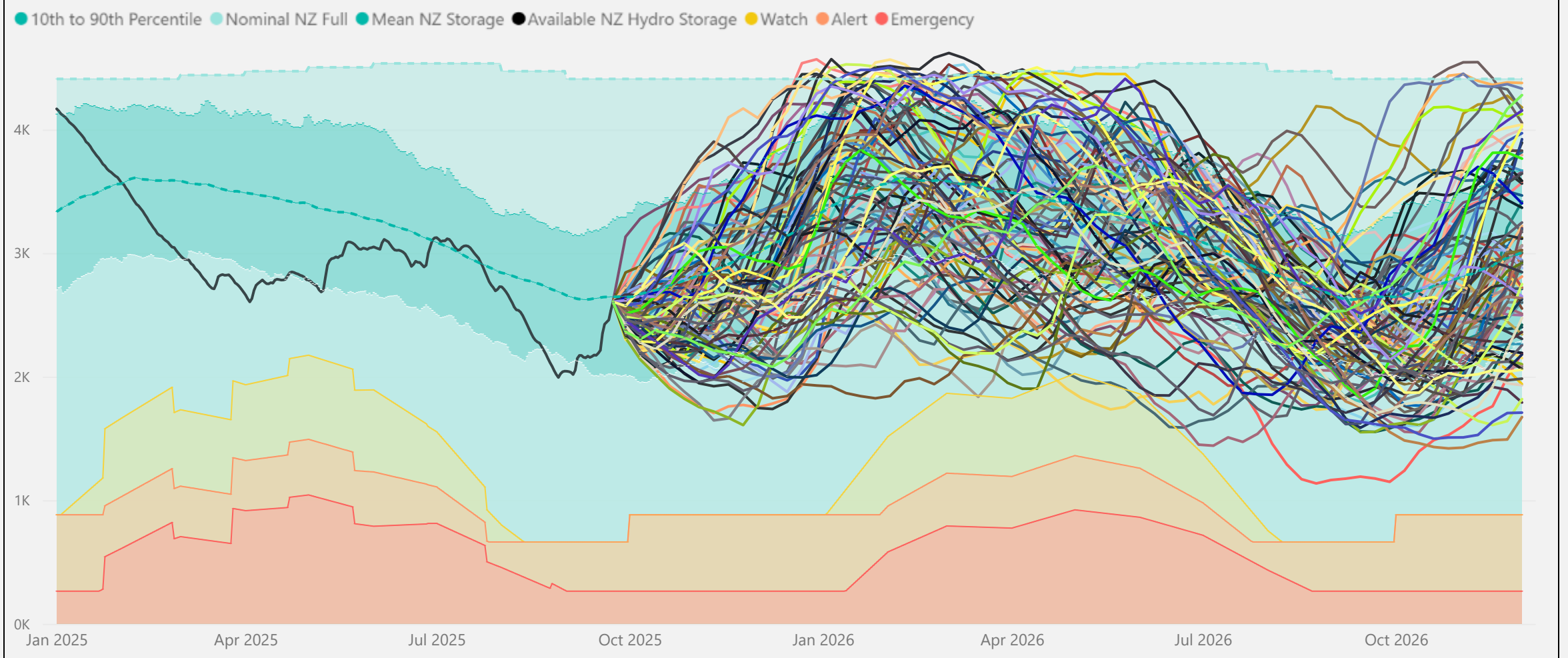
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Scenario - Simulated Storage Trajectories

The risk curves have decreased in the Rankine Remains scenario as this assumes the market has access to more thermal generation capacity. The decrease in risk curves results in four SSTs briefly crossing the Watch curve in 2026, where 31 SSTs crossed it under the base case. The scenario results in no SSTs crossing the Alert or Emergency curves in 2025 or 2026.

Scenario - New Zealand Electricity Risk Status Curves (Available GWh)



Scenario - South Island Electricity Risk Status Curves (Available GWh)

