

May 2026 Energy Security Outlook

▲ Thursday, 28 May 2026

- This is the first Energy Security Outlook under the recently approved [Security of Supply Forecasting and Information Policy](#) (SOSFIP)
- The changes to the SOSFIP impacting the Energy Security Outlook include:
 - Updating the Watch curve to ensure Watch is triggered ahead of Alert. This requires increasing the Watch curve above the Alert curve by at least 200 GWh, or by a worst-case simulated storage drop, whichever is greater.
 - Increasing the Alert Contingent Storage Buffer to account for operational restrictions in the Waiau and Lake Tekapo.
 - Removing restrictions on the treatment of industrial gas demand response to enable increased electricity generation.
 - Updating the ERCs and SSTs to include a scenario using contracted fuel information to better support understanding of forward energy risks and mitigating actions by participants. We refer to this scenario as the "Contracted Fuel Case". This will be in addition to the Base Case risk curves which is based on physical thermal generation capability.
- All of the Electricity Risk Meter status and actions triggered will still be based on the risk curves for the Base Case.

Base Case

- There have been reductions to the risk curves in May and June 2026 due to changes in modelling of industrial gas demand response under the new SOSFIP. However, overall the risk curves for 2026 and 2027 have increased due to a combination of:
 - lower gas availability as a result of a small decrease in storage levels and reduced gas production forecasts. These are unrelated to the global fuel shortage issue.
 - scheduled thermal outages later in 2026 and early 2027
 - slightly later commissioning of new generation.
 - SOSFIP updates to the Watch curve and Alert curve
- Since our last update the national controlled hydro storage position has increased to 109% of the historic mean at 24 May, with South Island storage at 103%.
- The [May-July Climate Outlook](#) from Earth Sciences NZ (formerly NIWA) is for "normal or below" rainfall for most of the country with the exception of the western South Island. As we move into winter 2026, an ongoing focus on hydro storage management and ensuring sufficient backup thermal fuels and capacity remains necessary to mitigate the potential for very high prices. Earth Sciences NZ expects strong El Niño conditions towards the end of 2026 which could improve inflows into major SI catchments.
- No Simulated Storage Trajectories (SSTs) cross any curve in 2026 but one SST cross the Watch curve in 2027. This assumes the market supplements the existing coal stockpile at its maximum import capability to maintain increased thermal generation during any extended periods of low hydro inflows.

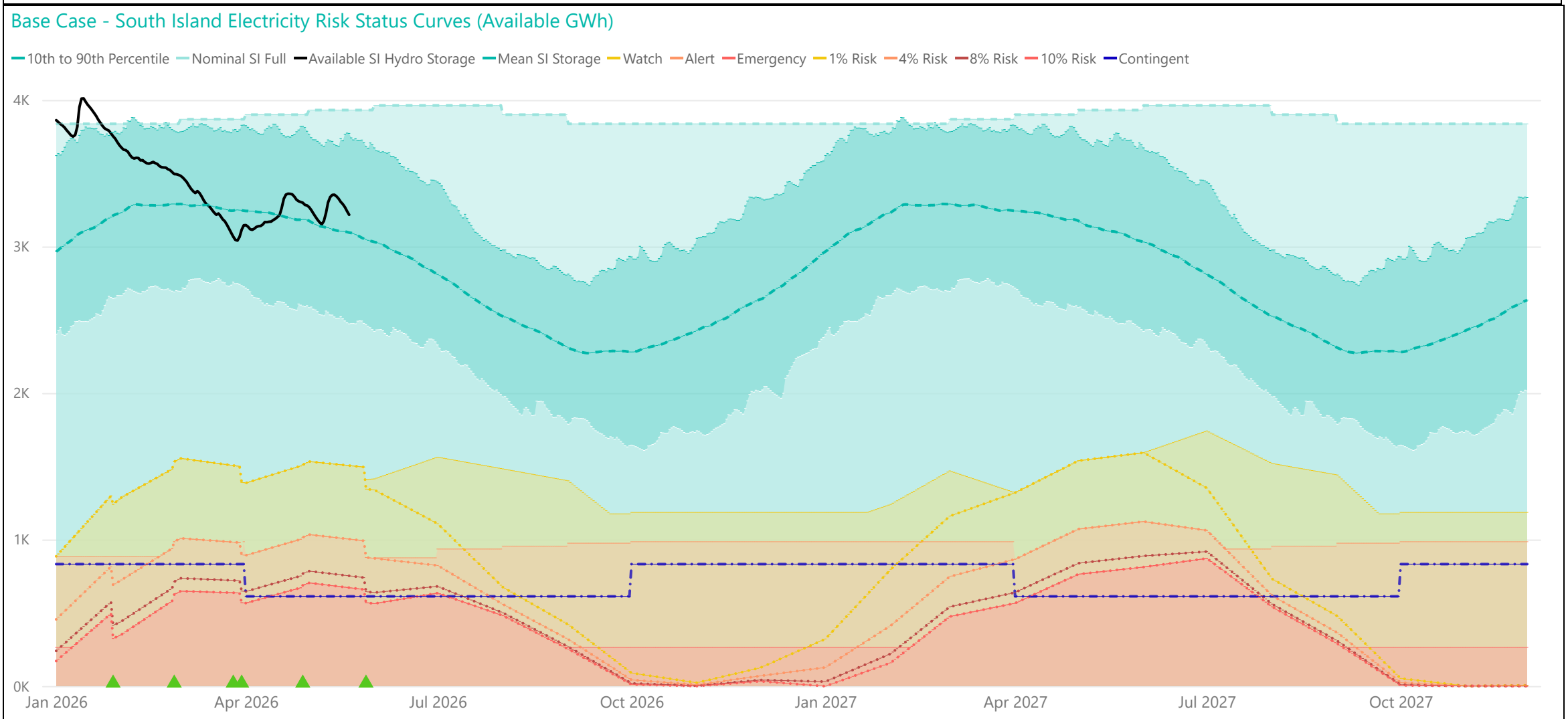
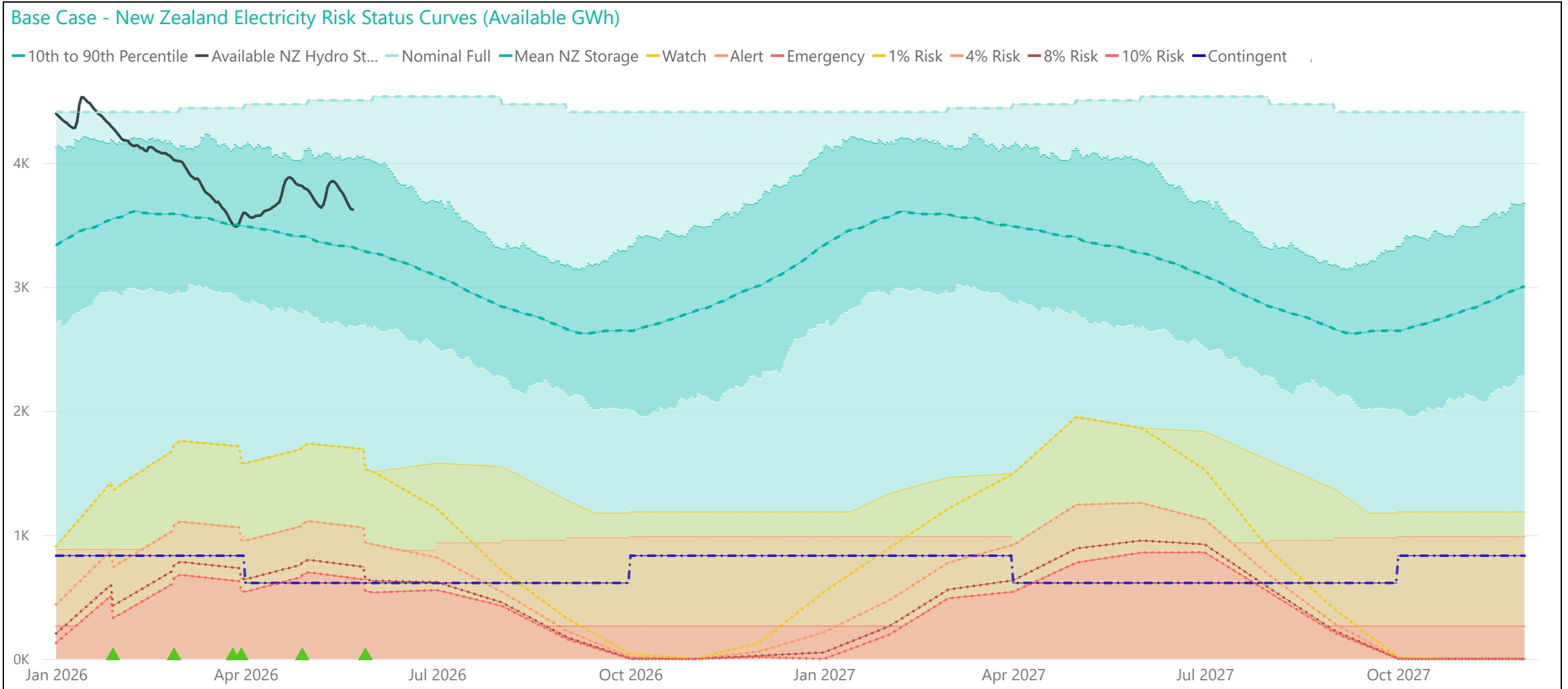
Contracted Fuel Case

- Most of the system's thermal generation capability is currently deliverable in 2026, reflecting a strong near-term contracted fuel position.
- Due to this near-term certainty, 2026 Simulated Storage Trajectories (SSTs) cross the risk boundaries a limited number of times, with 3 Watch and 2 Alert intersections for New Zealand, and 6 Watch and 2 Alert intersections for South Island
- Under dry conditions, as thermal fuel stockpile drops, additional thermal fuel contracts in the near term (2026) can help reduce risk curves and raise the SSTs. The risk curves can reduce by up to ~209 GWh or ~36 Rankine days.
- The gap between the Contracted and Base Case risk curves becomes more pronounced in 2027 (diverging by up to ~950 GWh or ~165 Rankine days) and resulting in more SSTs crossing in 2027 (11 Watch and 1 Alert intersections for New Zealand, and 5 Watch intersections for the South Island), reflecting the market's tendency to contract fuel closer to need.
- By restricting available energy strictly to currently secured contracts, this case intentionally highlights the physical capacity that remains uncontracted, and the ability for additional contracting to reduce risks. This reinforces that contracted positions require continuous updating to provide ongoing security of supply cover.

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

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- Input data prepared as of 22 May indicates a slight increase in the starting coal stockpile and a decrease in Ahuroa Gas Storage (AGS) levels.
- The generation capability of the thermal fleet is reduced for the 2026 outlook. This is driven by scheduled Huntly outages affecting a Rankine, Unit 5, and Unit 6, alongside an extended Unit 4 outage commencing in November 2026.
- The model incorporates updates to planned generator outages and upcoming new generation commissioning dates and retains permanent removal of TCC.



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 as specified in the SOSFIP.

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

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

Reductions in the June 2026 (Watch/Alert/Emergency) and July 2026 (Alert and Emergency) curves are due to additional industrial gas demand response modelled under dry years.

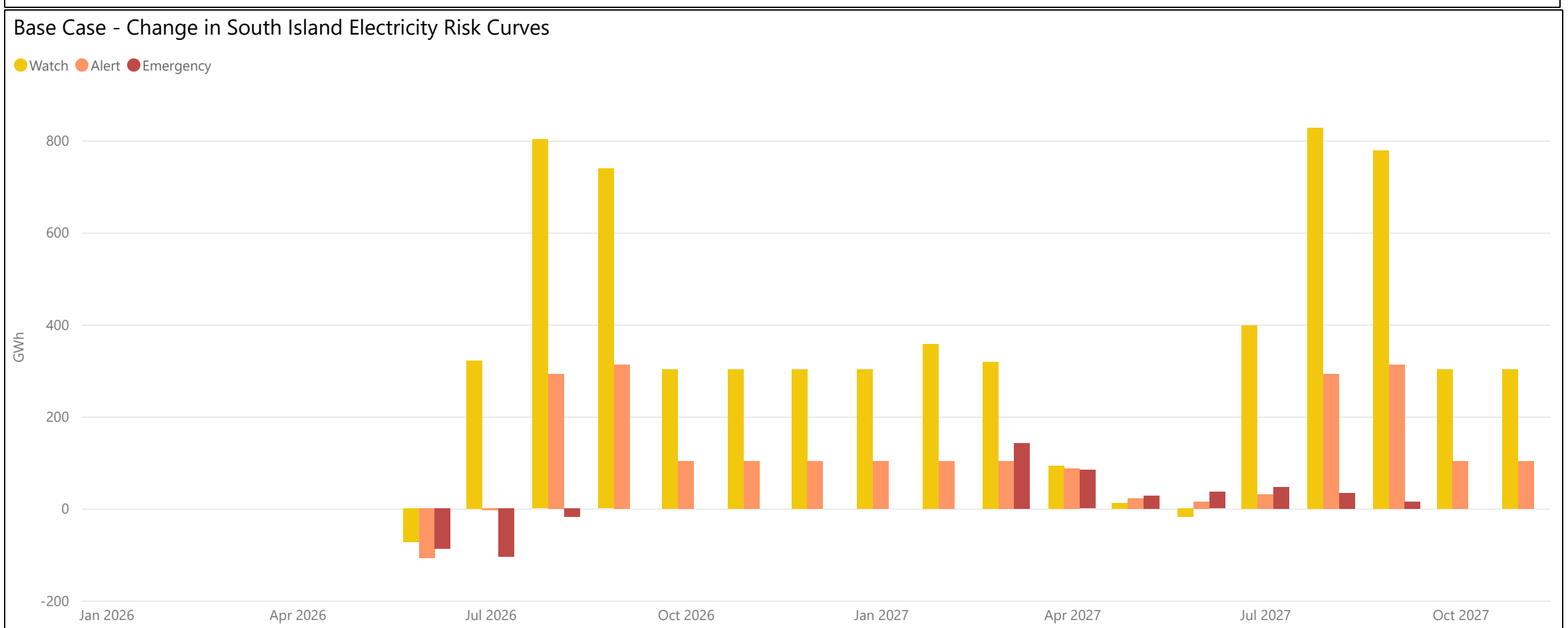
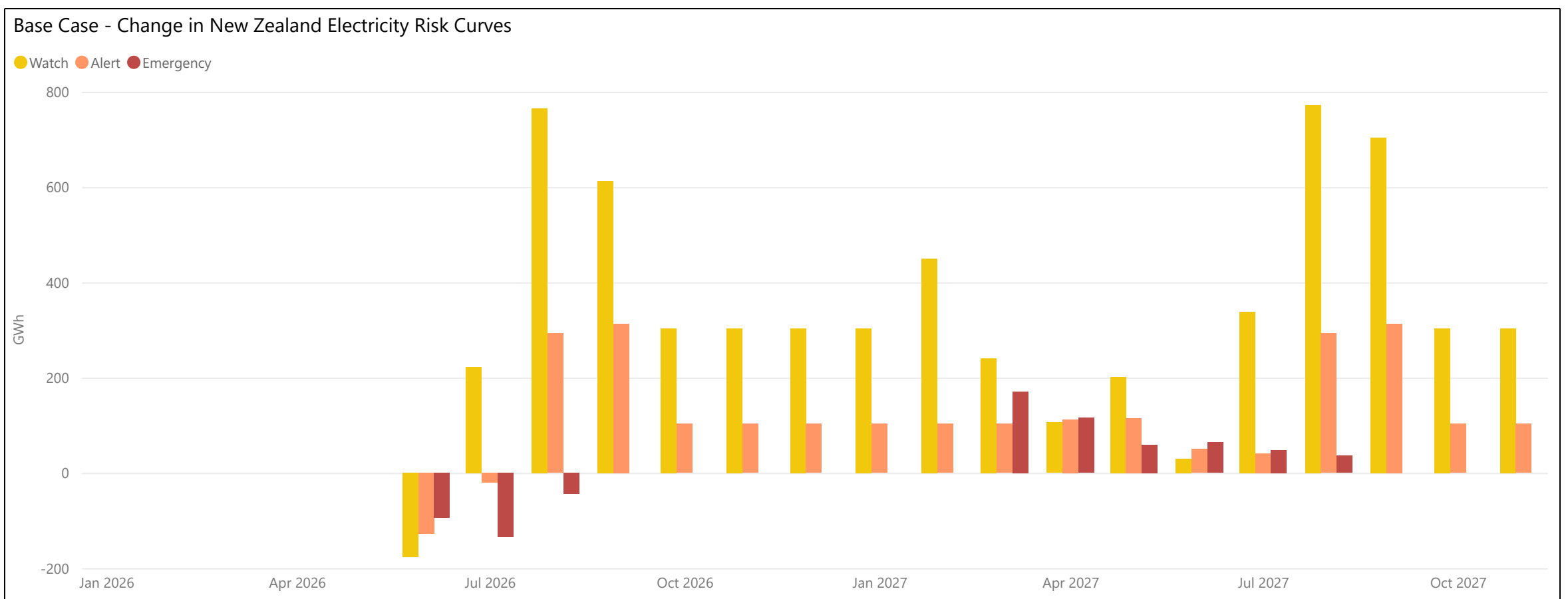
Increases in the 2026 curves (New Zealand Watch curve by up to 724 GWh, South Island by up to 800 GWh).

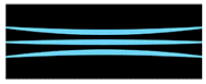
In 2027, increases in the curves (New Zealand Watch curve by up to 731 GWh, South Island by up to 827 GWh).

The large increase in Watch curve is primarily due to Watch adder implemented in this ERC (as part of the SOSFIP updates) to increase time between Watch and Alert. This increased time allows for better market correction or monitoring to system conditions.

The increase in the Alert curve is primarily due to the Alert Contingent Storage buffer update. This increased from 50 GWh under the previous SOSFIP to between 153 GWh to 353 GWh under the current SOSFIP. This increase accounts for operational constraints at Lake Tekapo and the Waiiau catchment.

Across both 2026 and 2027, changes are also influenced by shifts in commissioning project timing. In most cases projects have been pushed out slightly, however the slight decrease in the Watch curve in 2027 reflects a commissioning project being brought forward.





Base Case - Simulated Storage Trajectories (SSTs)

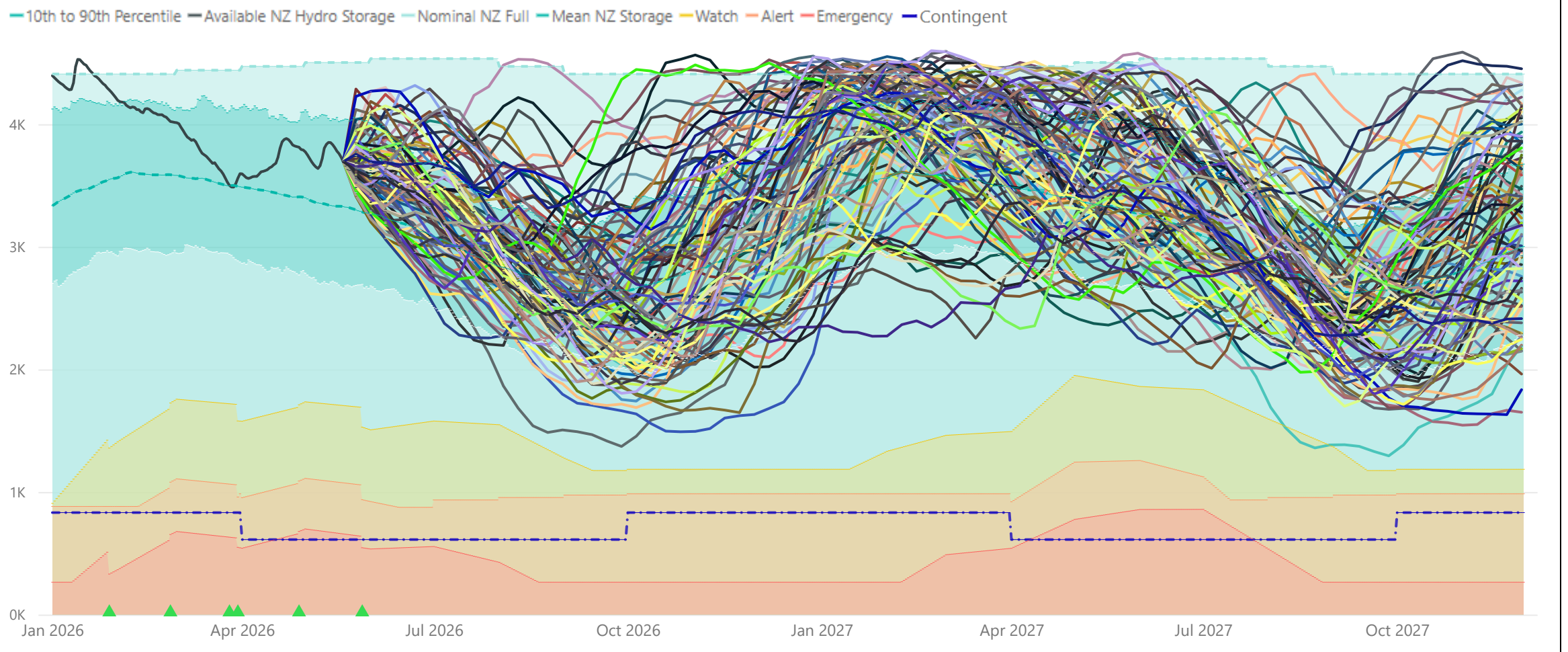
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The May SST update is shown below which have a hydro storage starting date of 20 May.

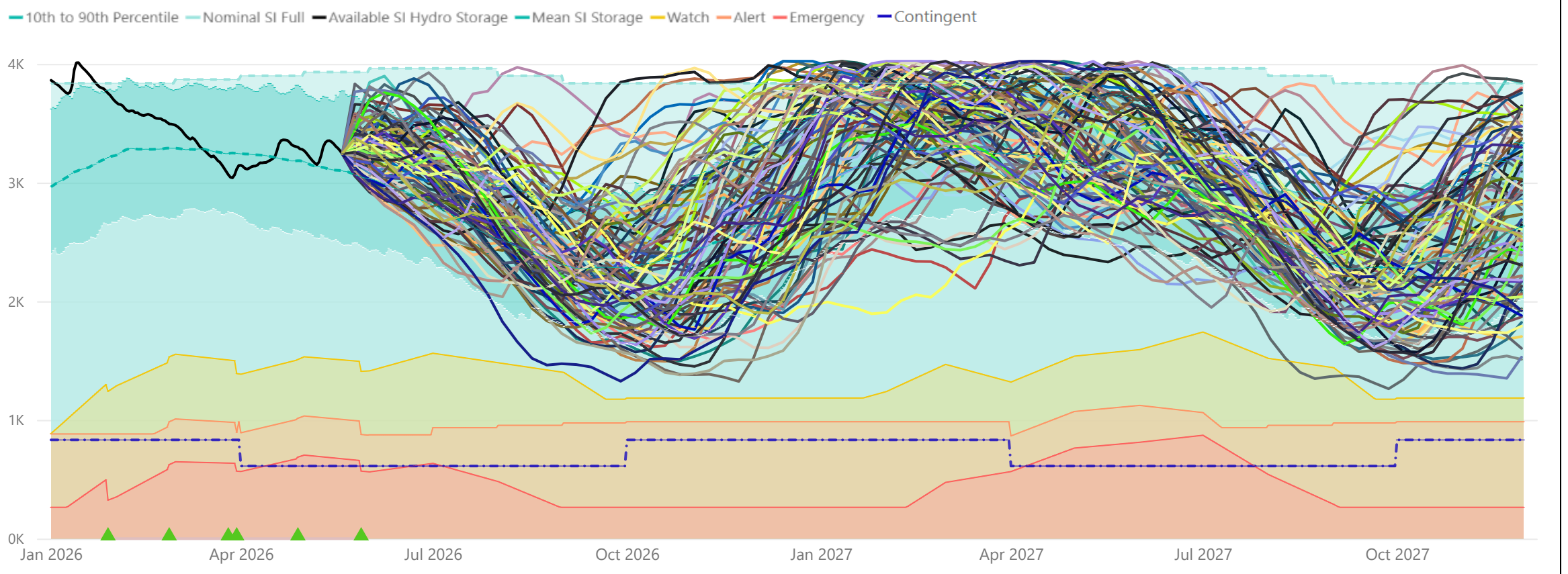
1 SST cross NZ watch curve in 2027.

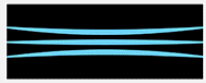
1 SST cross SI watch curve in 2027.

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



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





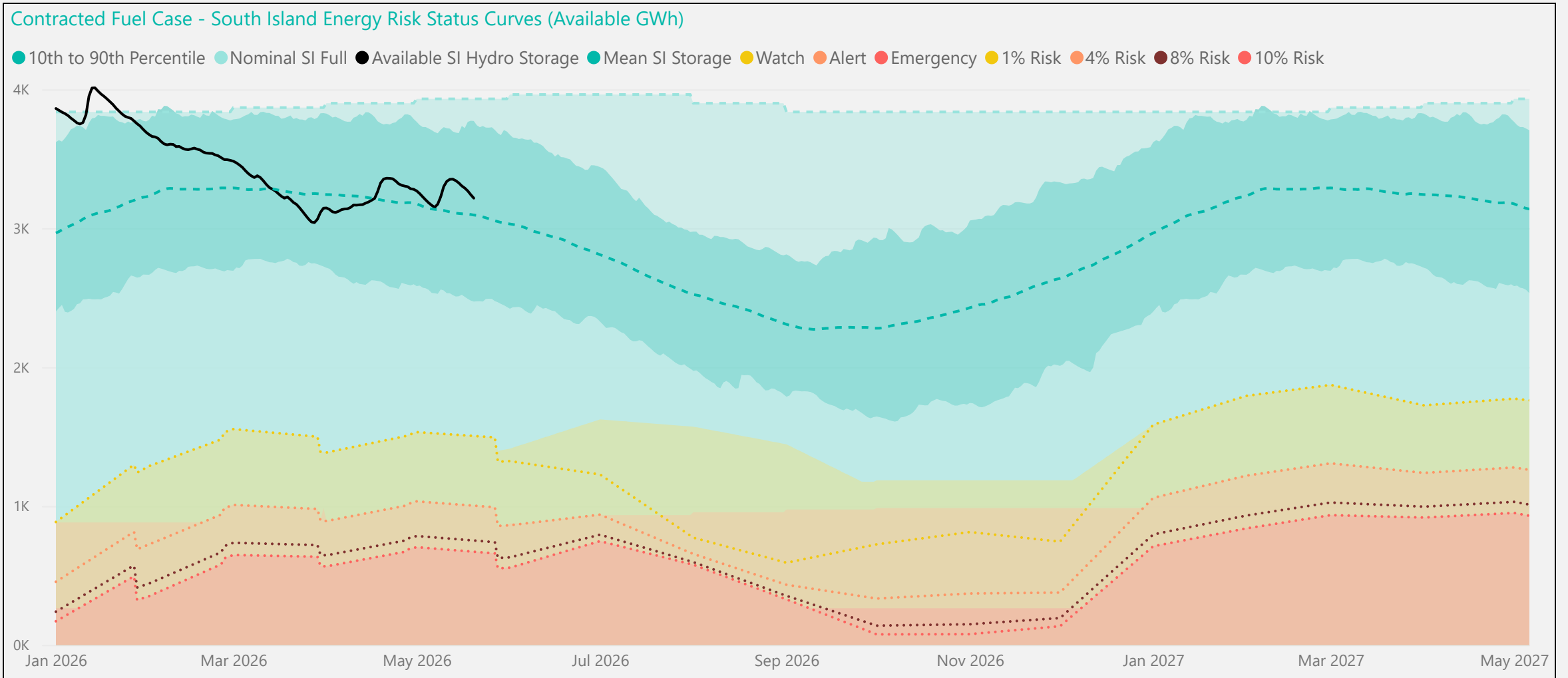
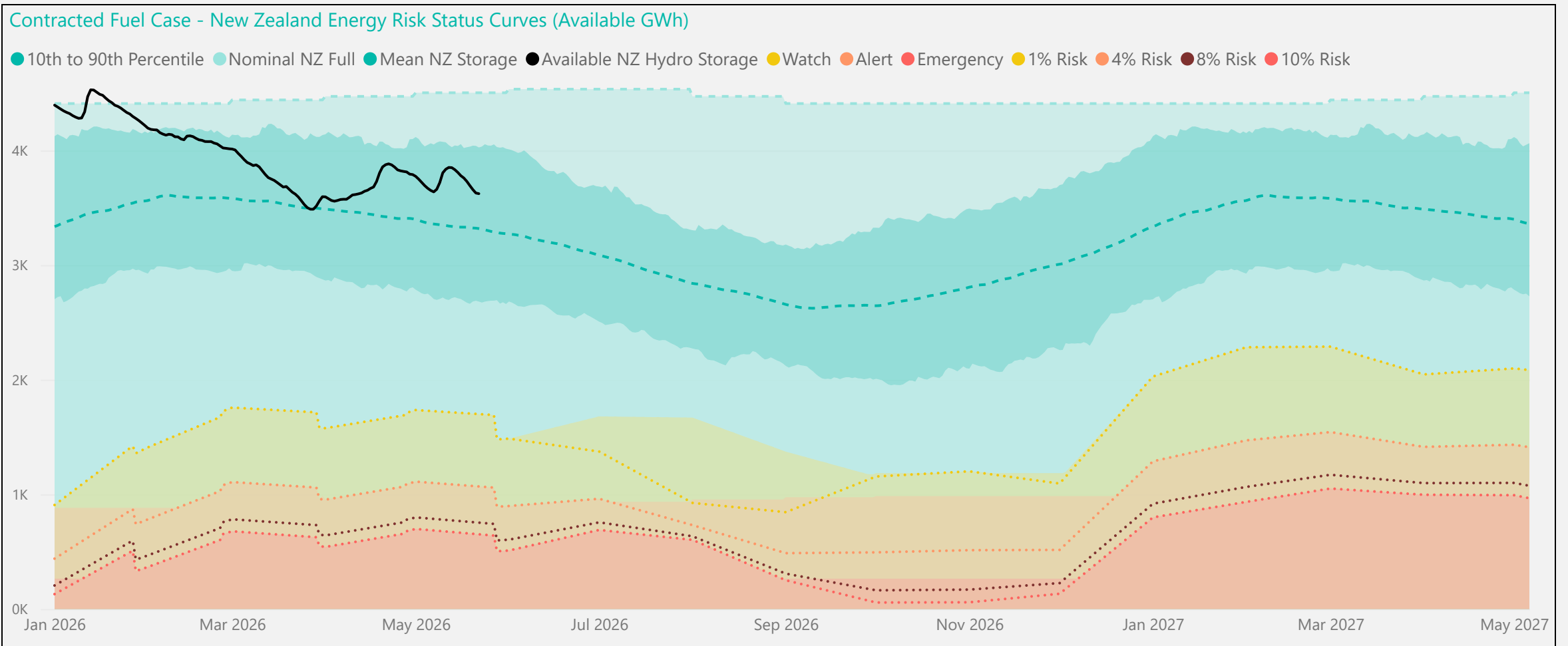
Contracted Fuels Case - Electricity Risk Curves

This case illustrates the shift in the Energy Risk Curves when constrained strictly to firm thermal fuel contracts, as implemented following the SOSFIP review.

In 2026 the risk curves for the Contracted Fuel Case are lower in the near term (till end 2026) compared to 2027. This reflects the increased thermal fuel stockpiles and contracts to enable a stronger thermal response to lower inflows in 2026.

The higher risk curves into 2027 reflects the diminishing ability of current thermal fuel stockpiles and reduced firm thermal fuel contracts further into the future. Under the assumption that these contracts do not get bolstered under low inflow scenarios into 2027 means limited thermal generation response and reflected increased risk curves in 2027. Compared to the Base Case risk curves, this also reflects a larger pool of physically available energy in 2027 that has not yet been commercially secured.

Under a well-functioning market with sufficient incentives, we would expect additional thermal fuel to be contracted as future market conditions (including dry year risk mitigation) become more visible. This would be reflected as a reduction in the risk curves under the Contracted Fuel Case



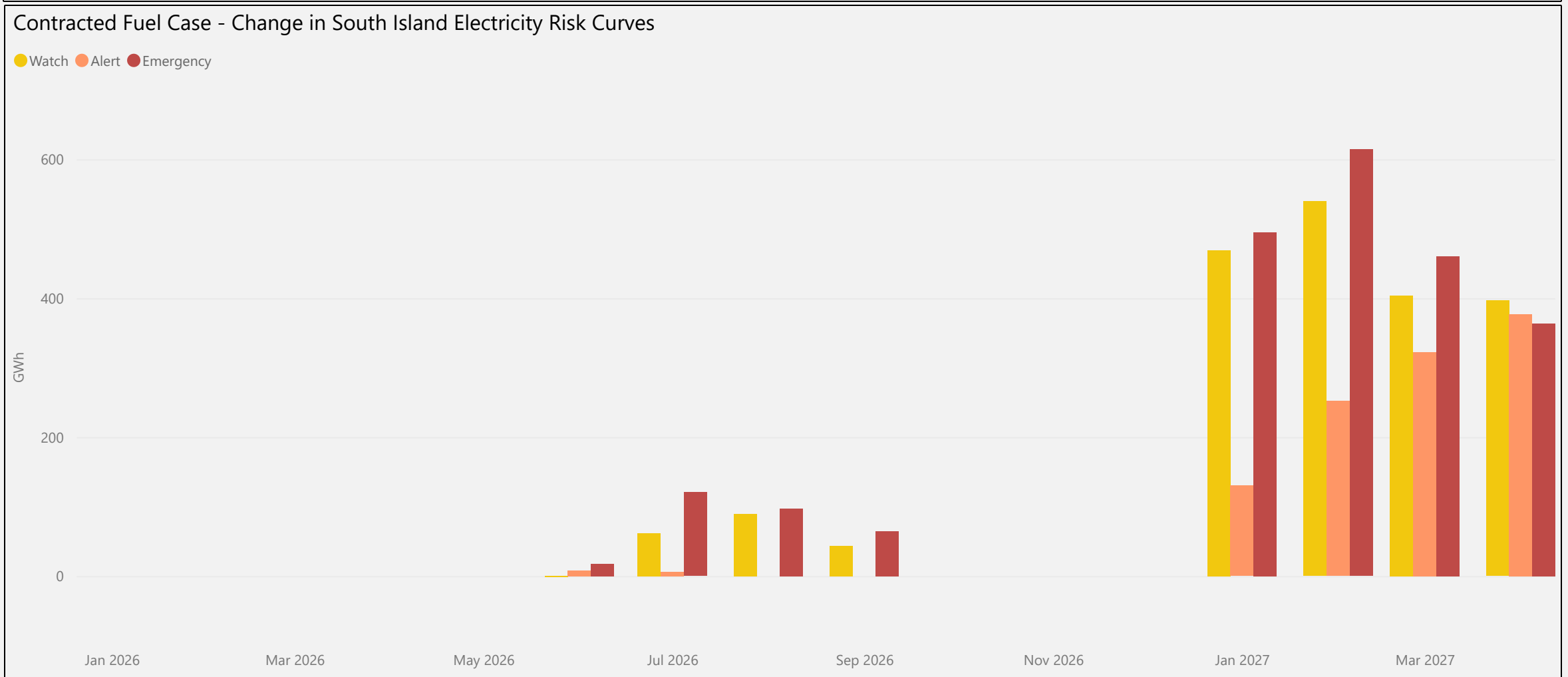
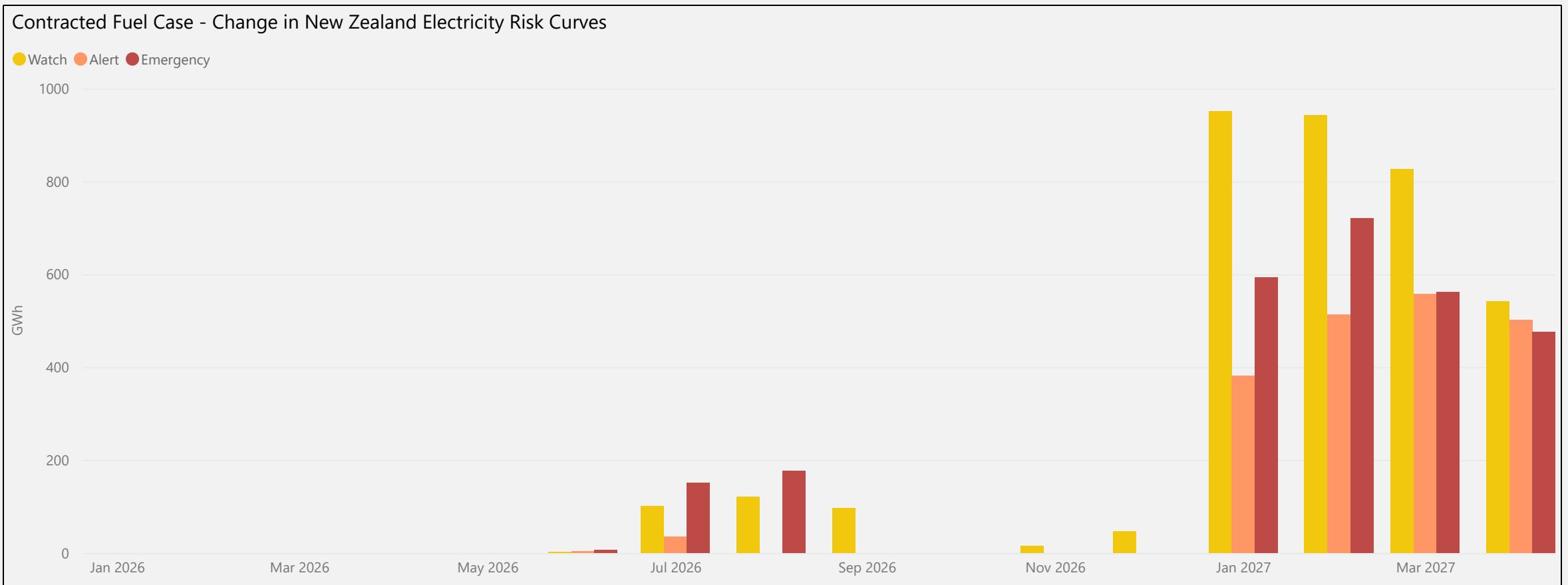
Contracted Fuel Case - Changes in the Electricity Risk Curves from the Base Case

The changes to the Watch, Alert, and Emergency curves under the Contracted Fuel Case compared to the Base Case are detailed below.

Current levels of thermal storage (gas and coal) remain healthy. This is reflected in the Contracted Fuel Case with most of the system thermal generation capability being deliverable in 2026. Additional thermal fuel contracting in 2026 can increase thermal contribution and reduce the New Zealand risk curves in 2026 by up to ~209 GWh or ~36 Rankine days and South Island risk curves by up to 113 GWh or ~20 Rankine days.

In 2027, there is a larger gap between the risk curves based on the Contracted Fuel Case versus the Base Case. This is up to 951 GWh or ~165 Rankine days for the New Zealand Watch curve and 614 GWh or ~106 Rankine days for the South Island Emergency curve. This increase reflects the diminished ability of current fuel stockpiles and lighter firm contracted thermal fuel volumes further into the future to sustain a strong thermal generation response under future low inflow scenarios, relative to the physical thermal generation capability modelled in the Base Case.

As discussed above, this also reflects a larger pool of physically available energy in 2027 that has not yet been commercially secured. The increase of the curves into 2027 reflects the market's tendency toward contracting closer to need, where participants finalise firm fuel contracts closer to the period of actual consumption.





Contracted Fuel Case - Simulated Storage Trajectories

The May Contracted Fuel SST update is shown below which have a hydro storage starting date of 20 May.

3 SST cross watch and 2 SST cross alert in 2026 for NZ. 6 SST cross watch and 2 SST cross alert curve in 2026 for SI.

11 SST cross watch and 1 SST cross alert in 2027 for NZ. 5 SST cross watch in 2027 for SI.

A higher number of SSTs cross the Watch and Alert curves because this case only reflects the actual contracted position at this point in time. Because commercial fuel agreements typically only extend for the near term, this highlights the gap to physical capability and reinforces that contracted positions require continuous updating to provide ongoing security of supply cover.

