December 2025 Energy Security Outlook

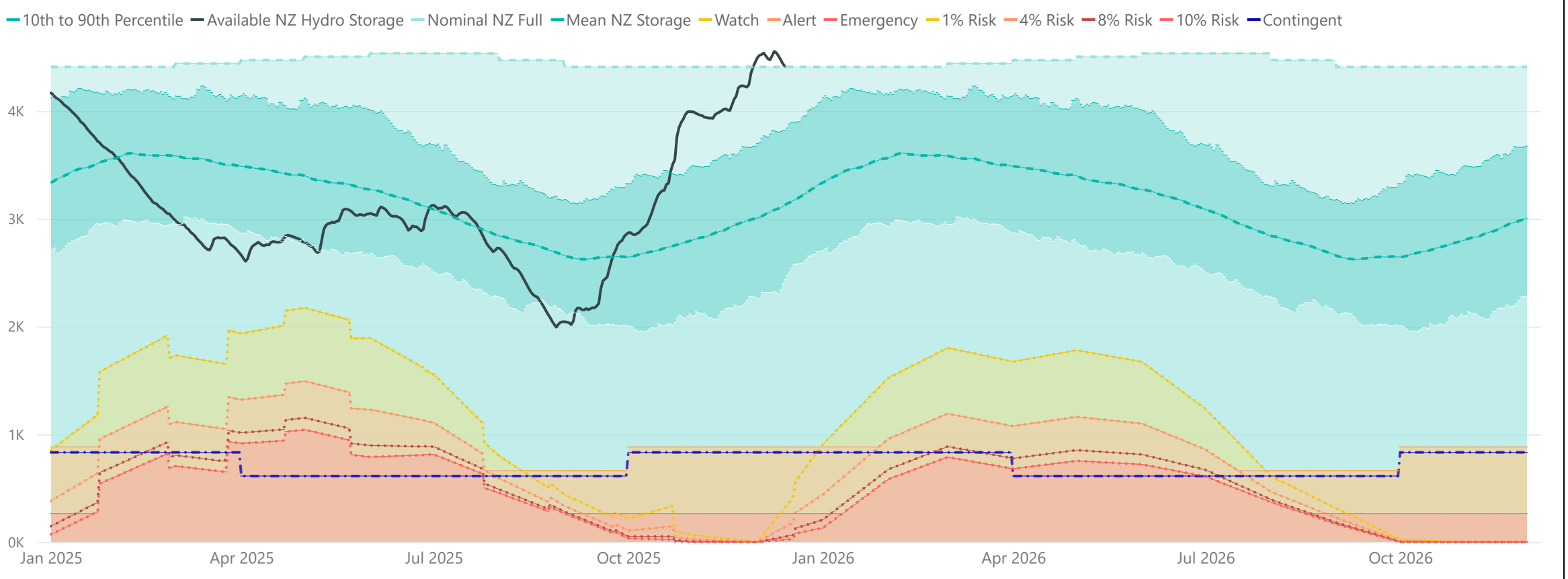
Friday, 19 December 2025

- The national controlled hydro storage position remains very high and now sits at 139% of the historic mean at 19 December. South Island storage is also at 139%.
- There has been little change to the security of supply situation since the November Energy Security Outlook. The Electricity Risk Curves (ERCs) for 2026 are slightly lower than in last month's update, with higher starting gas storage and gas production forecasts over 2026. However, the planned outage at Huntly Unit 2 is now expected to extend through to the end of April, compared with an end date of 1 January 2026 in the November ESO update. This results in a mild uplift to the Watch, Alert, and Emergency curves over the January–March 2026 period.
- No Simulated Storage Trajectories (SSTs) cross the Watch curve in 2026. This assumes 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, an ongoing focus on hydro storage management and ensuring sufficient backup thermal fuels and capacity to support increased thermal generation under any extended periods of low inflows remains necessary to mitigate the potential for very high prices.

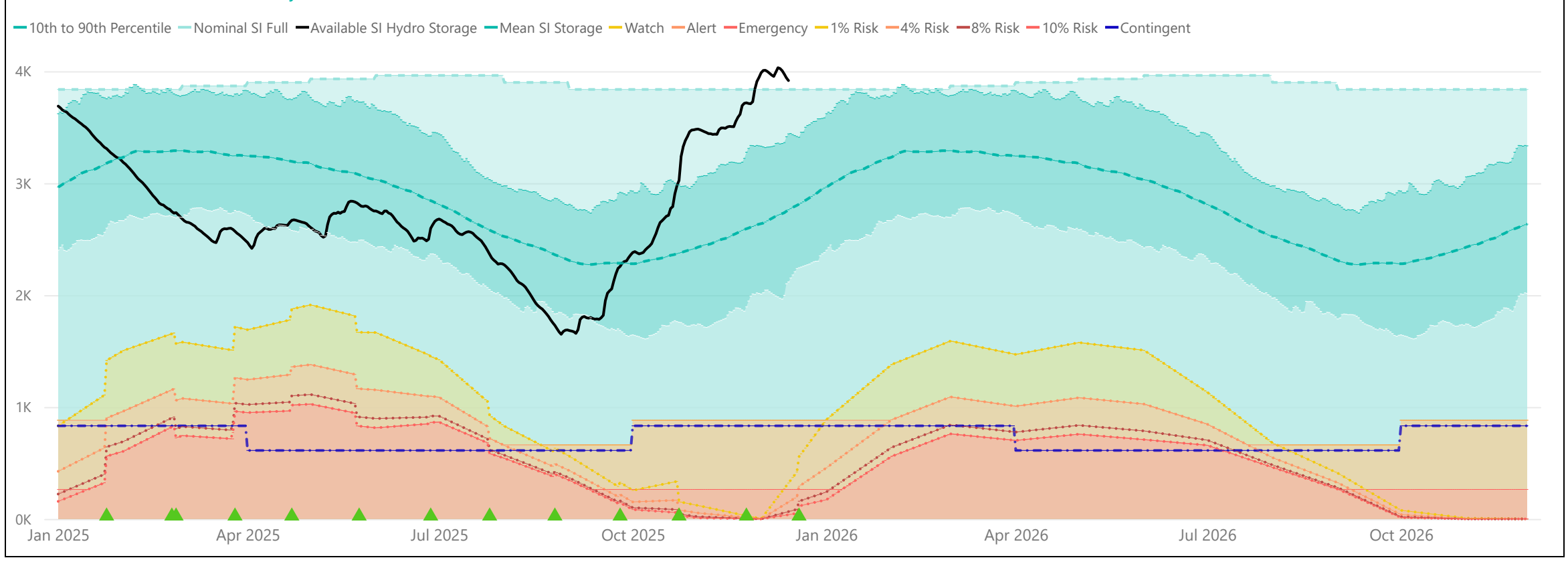
Base Case - Electricity Risk Curves (ERCs) Updates and Assumptions

- An increase in Ahuroa gas storage and an increase to the gas production forecast for the period to the end of October 2026. Gas production forecasts for 2027 have slightly decreased since the November update.
- All three Huntly Rankine units are available in 2026 with the exception of Huntly Unit 2 on outage from now until the end of April.
- TCC is modelled to exit in line with its announced decommissioning at the end of 2025.
- Updates to planned generator outages and upcoming commissioning dates.
- Input data was prepared as of 12 December. The current hydro storage level is as of 19 December.

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

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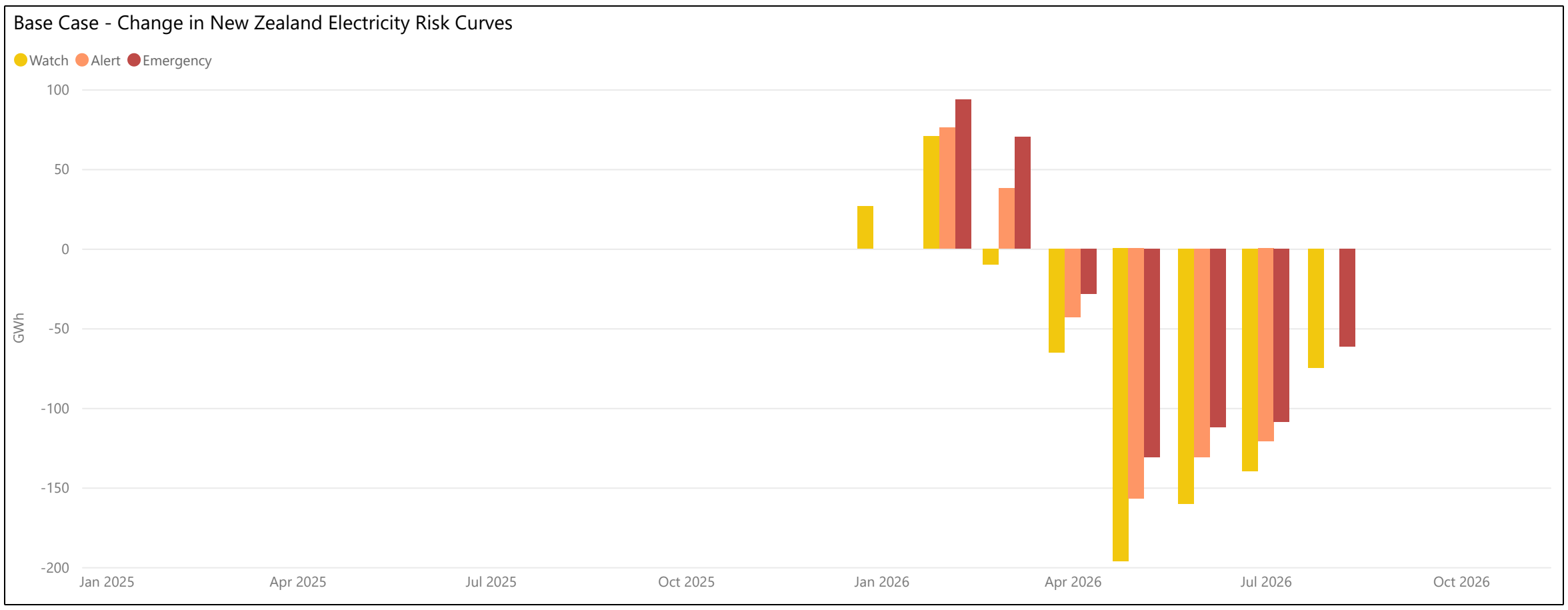
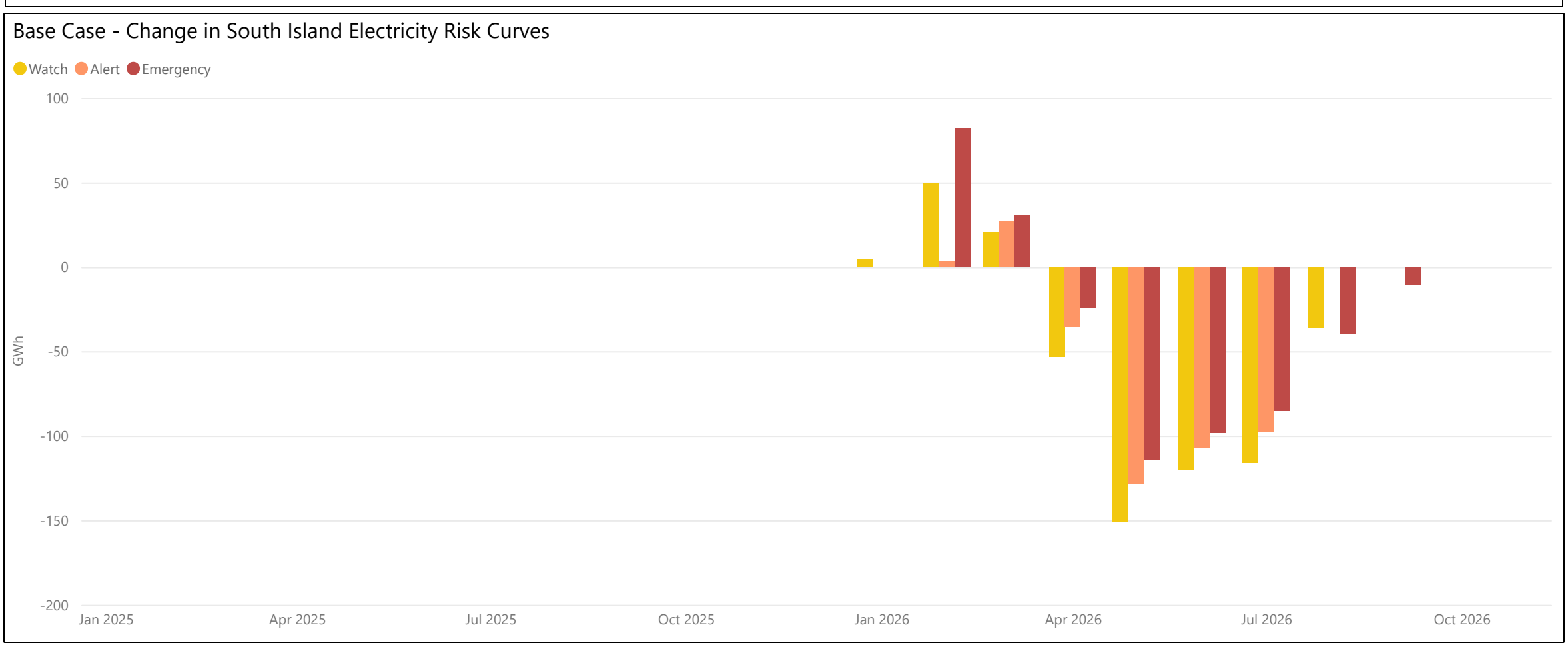
The changes to the Watch/Alert/Emergency curves compared to the last update are shown below.

The most significant changes in this update to the ERCs are increases to both stored gas in the Ahuroa Gas Storage facility (AGS) and forecast gas production in the risk period of 2026, as well as a long term outage on Huntly Unit 2 until the end of April 2026. These changes result in a slight increase to the risk curves from January to March 2026, and a decrease to the risk curves thereafter.

The New Zealand Watch curve decreased by up to 196 GWh (in May 2026), while the Emergency curve decreased by up to 131 GWh (also in May 2026). The South Island Watch and Emergency curves decreased by up to 151 GWh and 114 GWh respectively, also in May 2026.

The New Zealand and South Island Watch curves both increased by 70 GWh and 50 GWh respectively in February 2026.





Base Case - Thermal Deratings

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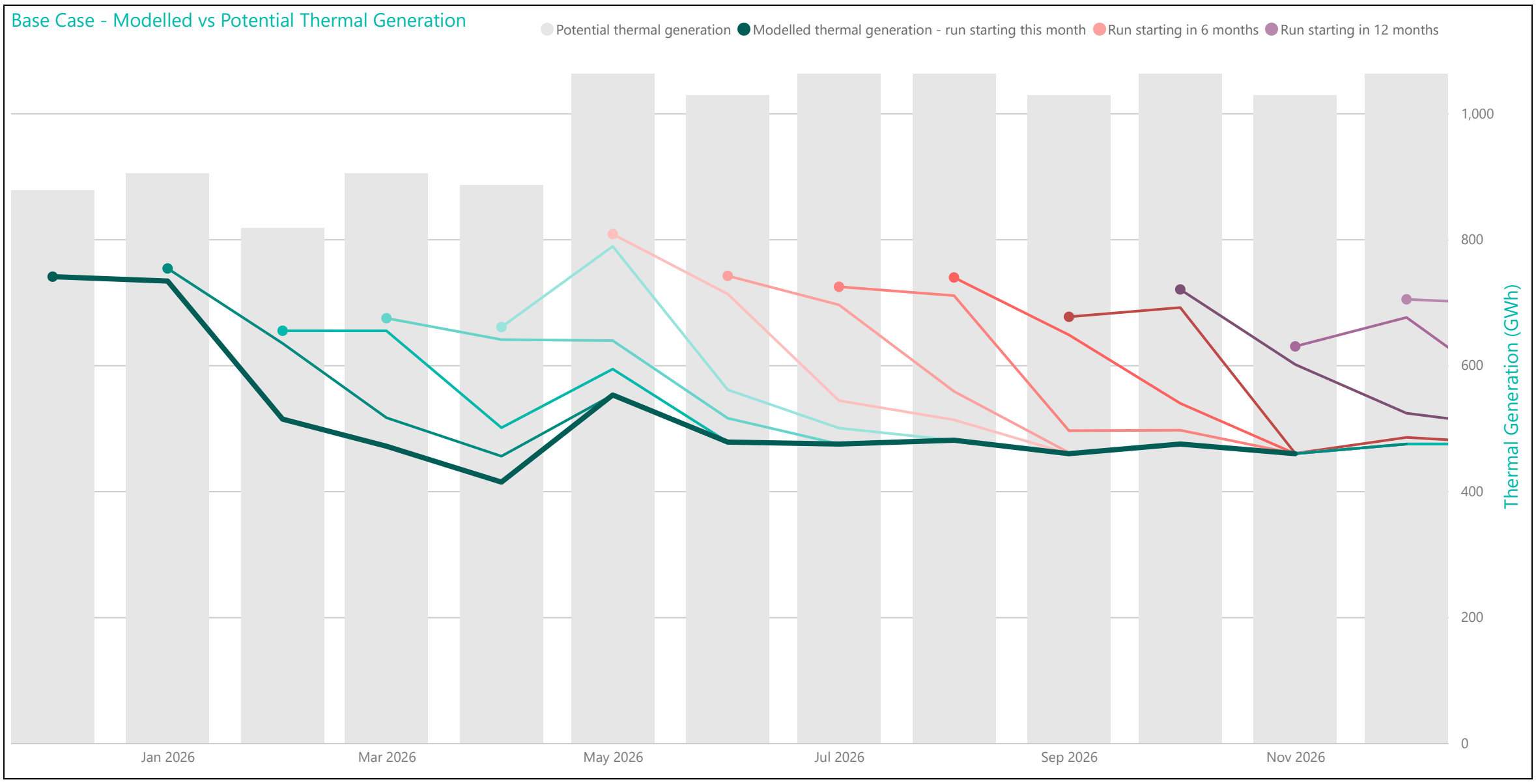
The thermal deratings and key considerations for the December 2025 ERCs update are below:

- Thermal generation capability increased through most of next year in this update, due to a greater quantity of stored gas.
- An increase in the gas production forecast over the next 12 months also contributed to an increase in thermal generation capability relative to last month's update.
- 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.
- Gas storage levels at AGS have increased to 5 PJ as of the beginning of December and could fuel a large combined cycle gas plant at full output for ~3 months (ignoring draw down rates) or a peaker for ~8 months.
- The current coal stockpile can fuel three Rankines at full output for ~4 months, or one Rankine for ~13 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

Run Month	2025-12	2026-01	2026-02	2026-03	2026-04	2026-05	2026-06	2026-07	2026-08	2026-09	2026-10	2026-11	2026-12
2025-12	740	733	514	471	414	553	478	475	481	459	475	459	
2026-01		753	634	516	455	553	478	475	481	459	475	459	475
2026-02			654	654	500	594	478	475	481	459	475	459	475
2026-03				674	640	639	516	475	481	459	475	459	475
2026-04					660	788	561	500	481	459	475	459	475
2026-05						808	713	544	513	459	475	459	475
2026-06							742	696	558	461	475	459	475
2026-07								724	710	496	497	459	475
2026-08									739	648	539	459	475
2026-09										677	691	460	485
2026-10											720	601	524
2026-11												630	676
2026-12													704

Base Case - Simulated Storage Trajectories (SSTs)

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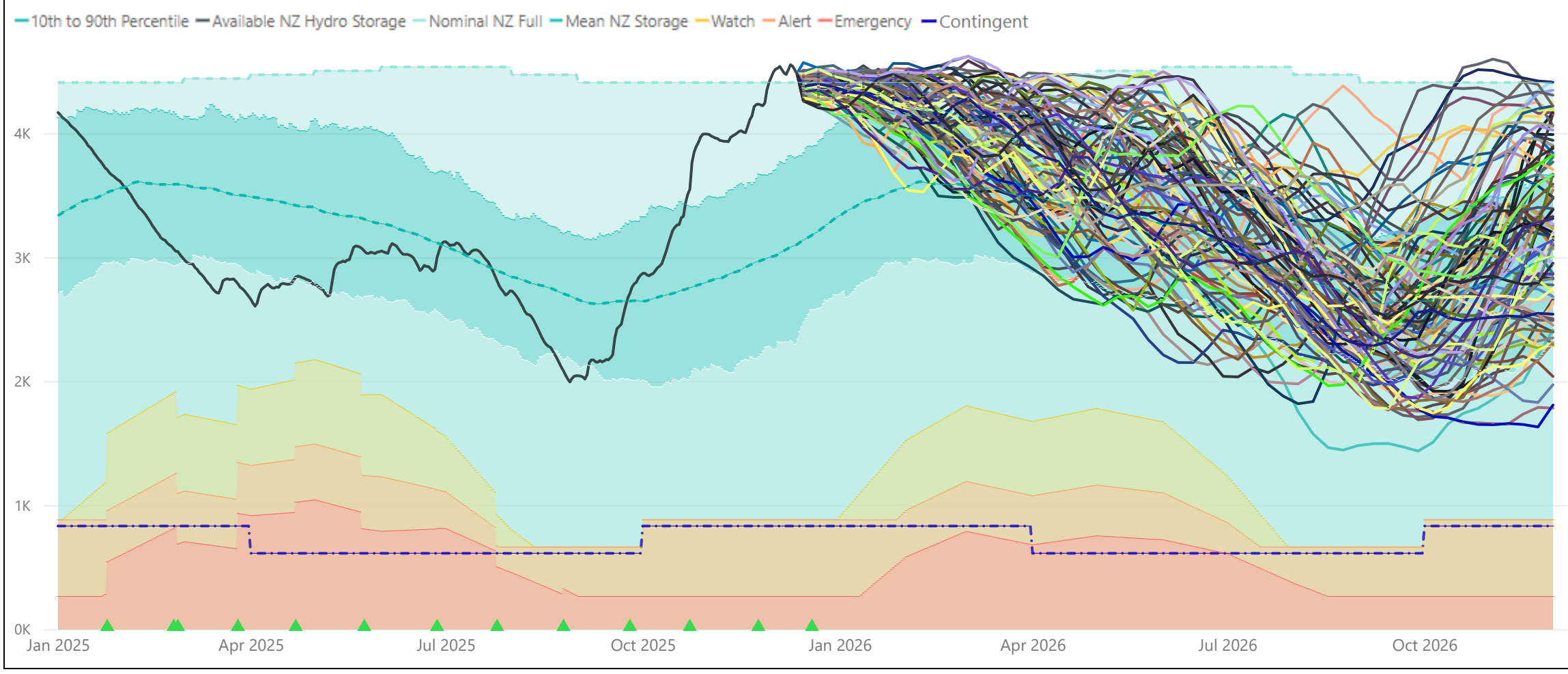
The December SST update is shown below. No SSTs cross any risk curves during the outlook horizon (to the end of 2026).

SSTs have a hydro storage starting date of 12 December.

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



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