Pūkaki Easement Fuel Capability Case - Electricity Risk Curves (ERCs) - Updates and Assumptions

Thursday, 26 November 2026

This scenario uses the same inputs as the November Fuel Capability Case, except for the modelled implementation of the Lake Pūkaki storage easement.

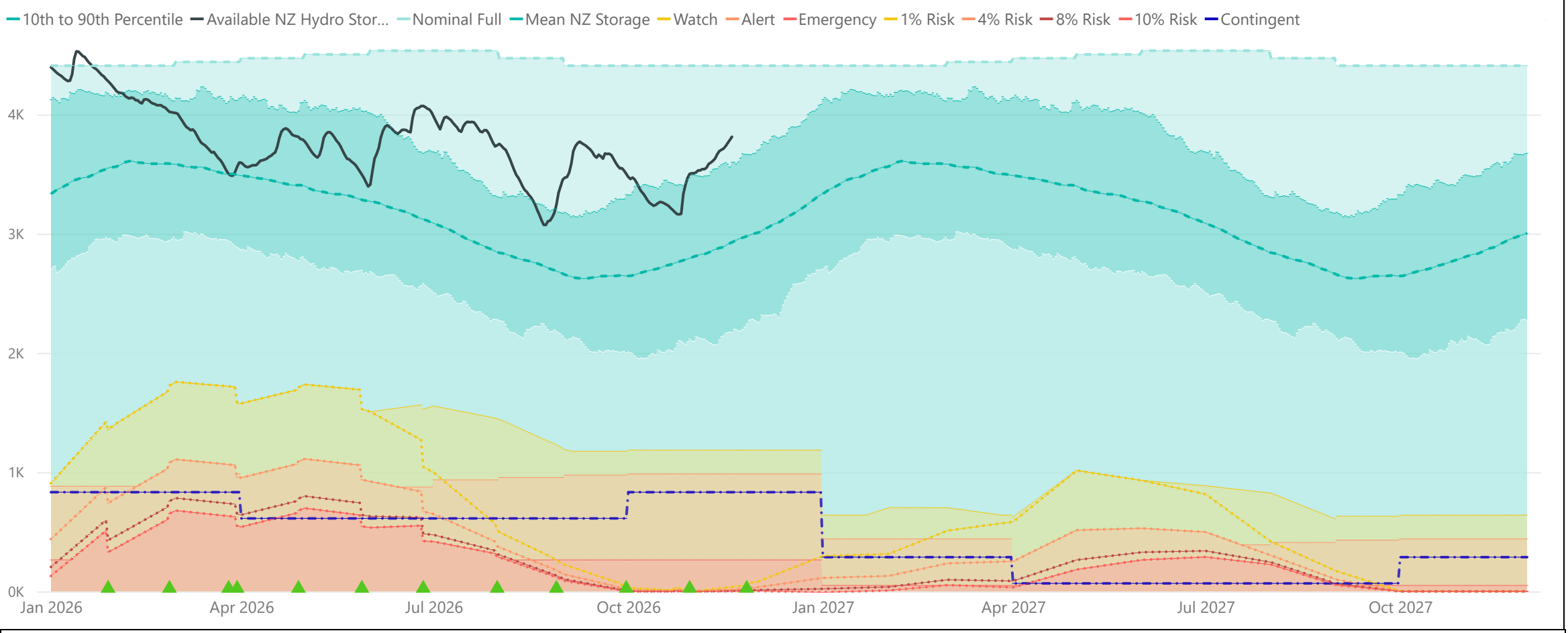
From 1 January 2027, the Lake Pūkaki contingent storage range between 518 m and 513 m RL is modelled as part of its normal operating range rather than contingent storage. This removes the modelled requirement for an Alert or Emergency status to be declared before this storage can be accessed.

Under the Security of Supply Forecasting and Information Policy (SOSFIP), this treatment reduces the contingent storage allowances incorporated into the risk status curve floors. This, by definition, reduces the risk status curves (Watch, Alert and Emergency) reflecting that less contingent storage is available at the applicable risk levels rather than a reduction in the risk.

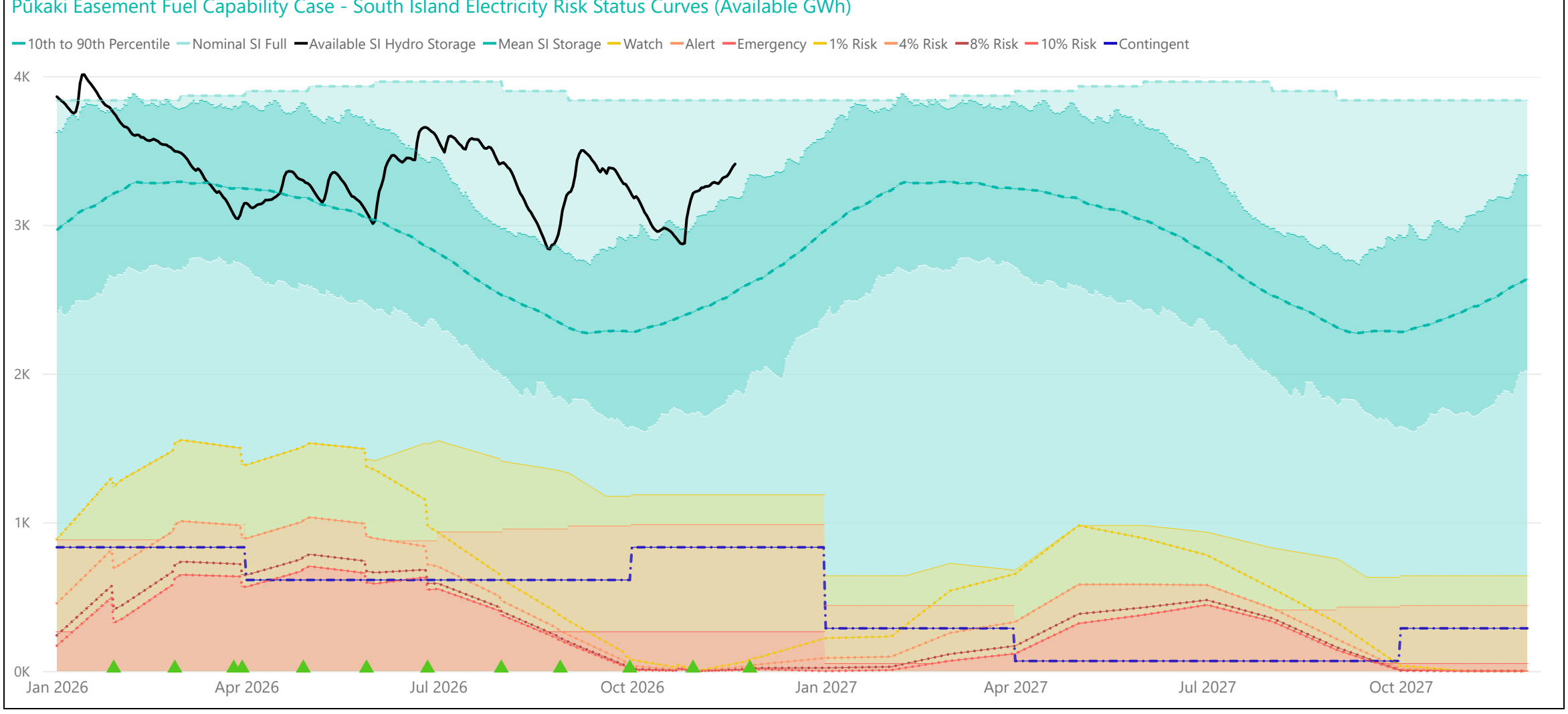
The Watch and Alert thresholds decrease by up to ~545 GWh, while the Emergency threshold decreases by up to ~214 GWh during 2027.

All other assumptions from the November 2026 Fuel Capability Case are retained, including Ahuroa Gas Storage and coal inventories, planned generator and HVDC outages, and updated generation commissioning dates.

Pūkaki Easement Fuel Capability Case - New Zealand Electricity Risk Status Curves (Available GWh)



Pūkaki Easement Fuel Capability Case - South Island Electricity Risk Status Curves (Available GWh)



Pūkaki Easement Fuel Capability Case - Simulated Storage Trajectories (SSTs)

Thursday, 26 November 2026

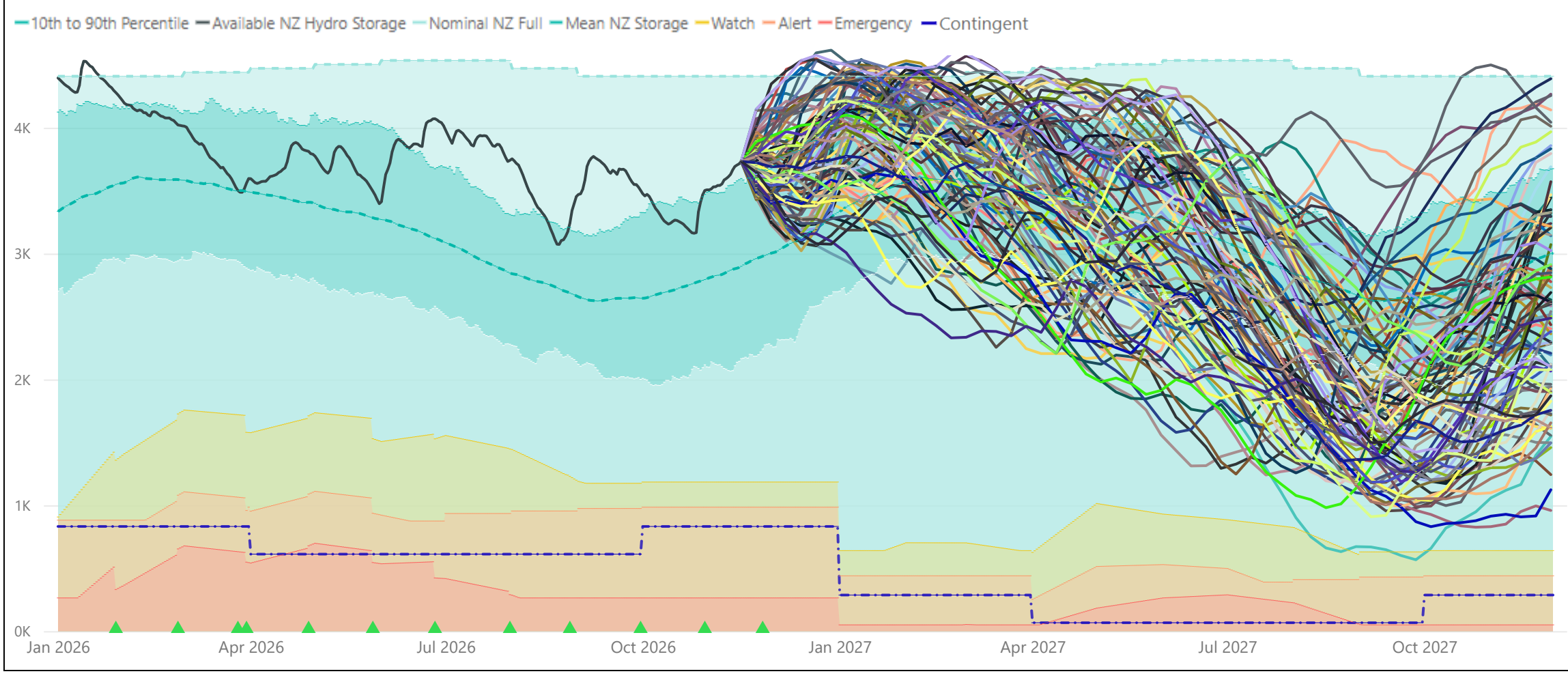
The November Pūkaki Easement SST results are shown below. The hydro storage starting date is 16 November.

No SSTs cross the New Zealand or South Island risk curves in 2026. In 2027:

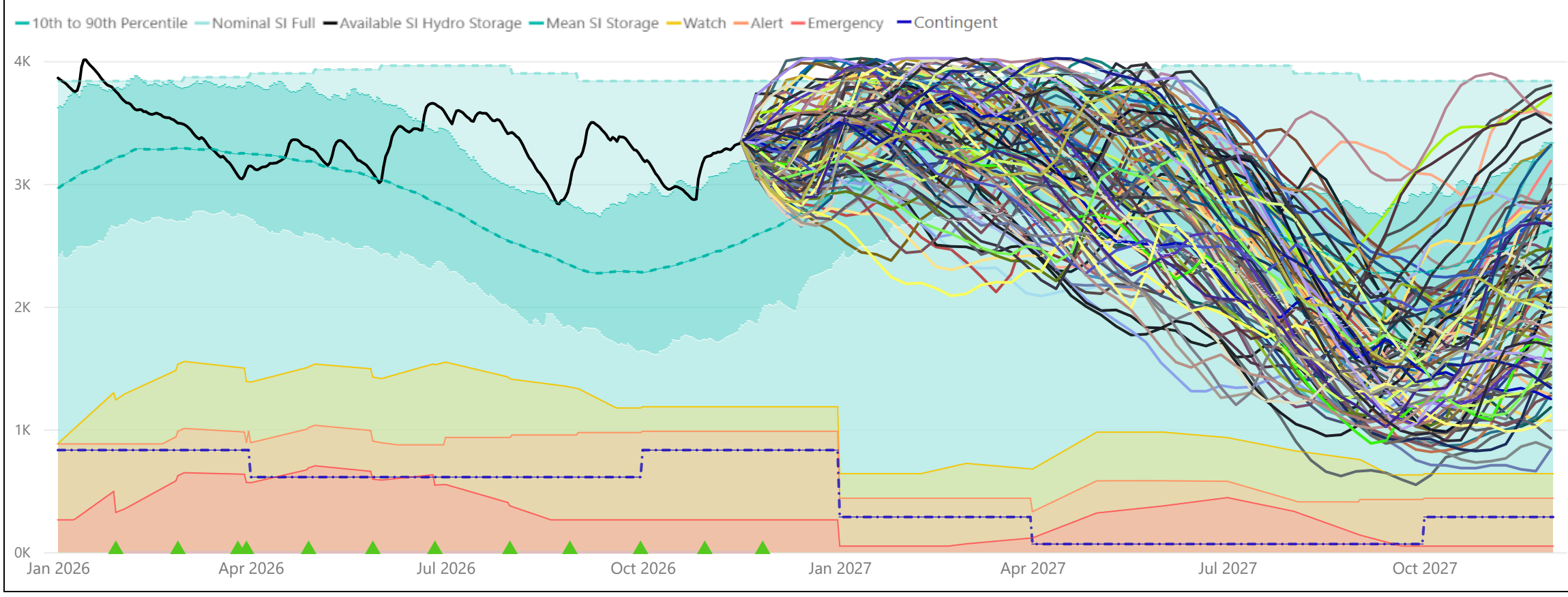
- one SST crosses the New Zealand Watch curve; and
- one SST crosses the South Island Watch curve.

Compared with the November Fuel Capability Case, simulated storage trajectories are lower because access to a wider normal operating range results in increased modelled hydro generation and lower hydro storage levels expected in Lake Pūkaki in 2027, all else being equal.

Pūkaki Easement Fuel Capability Case - New Zealand SST Electricity Risk Status Curves (Available GWh)



Pūkaki Easement Fuel Capability Case - South Island SST Electricity Risk Status Curves (Available GWh)



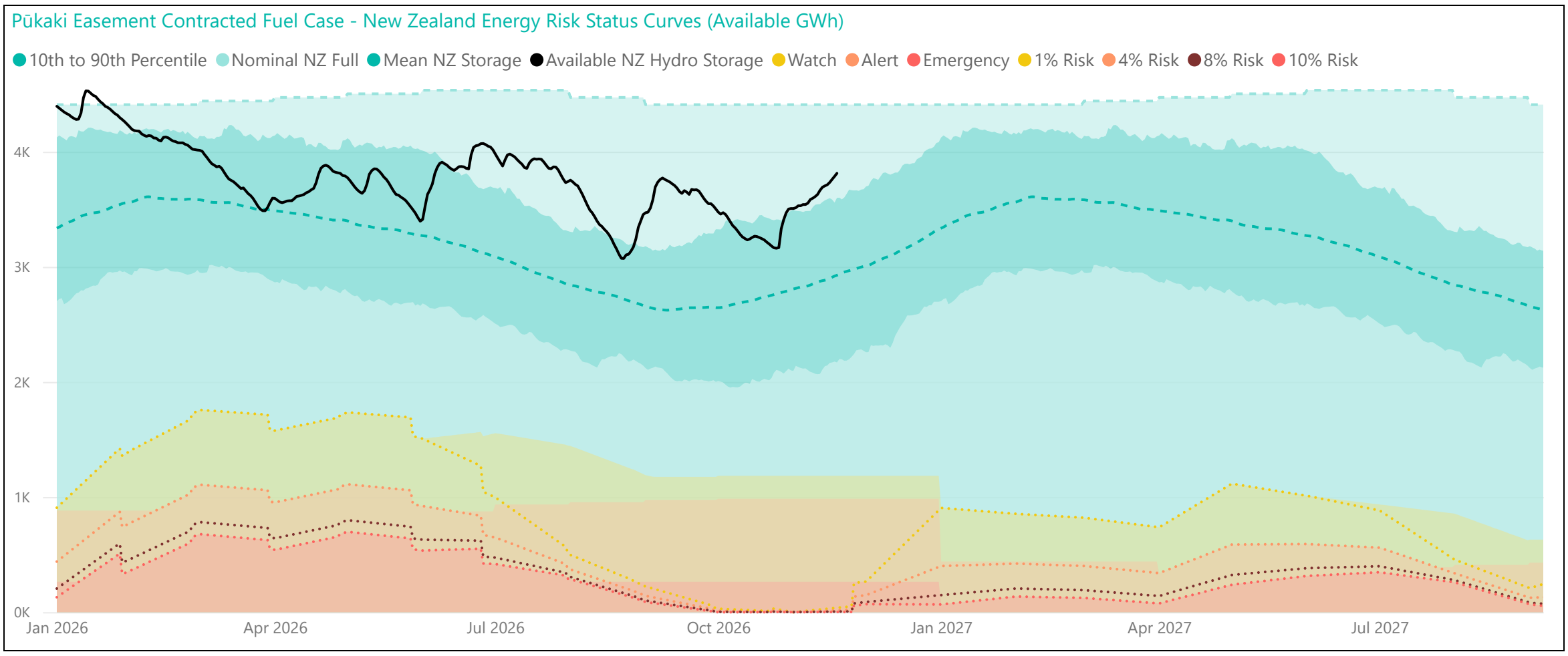
Pūkaki Easement Contracted Fuel Case - Electricity Risk Curves

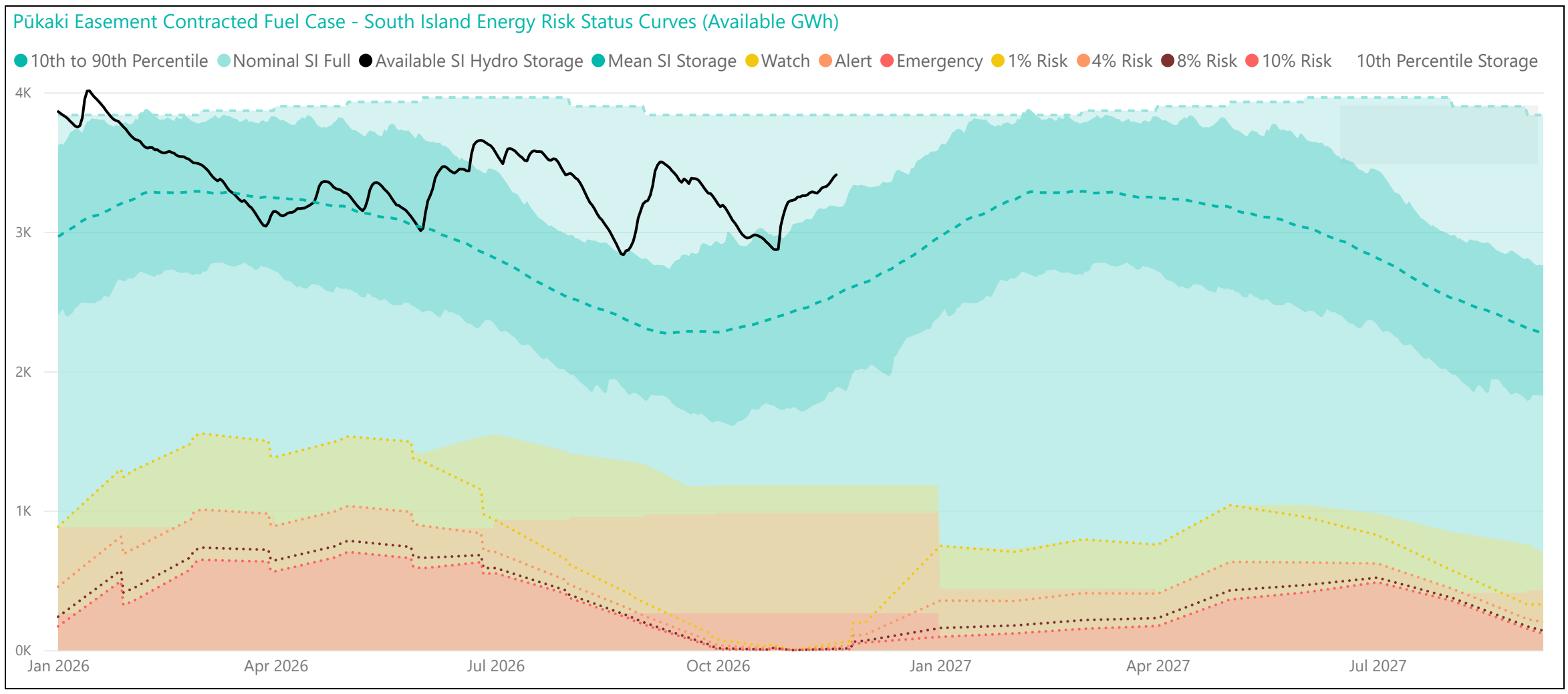
This scenario combines the modelled Lake Pūkaki storage easement with the Contracted Fuel Case, which limits thermal fuel to supplies currently secured through firm contracts. It has been implemented in accordance with the amended Security of Supply Forecasting and Information Policy (SOSFIP), which came into effect on 1 May.

As described in the Contracted Fuel Case section, firm contracts are sufficient to support full thermal-generation capability in 2026 but do not cover all thermal fuel that could be physically sourced and used in 2027.

The Lake Pūkaki easement lowers the Watch, Alert and Emergency thresholds by reducing the contingent storage incorporated into the status-curve floors. As discussed previously, this does not indicate a reduction in risk, rather reflects that less hydro storage is reserved for access after a security status is declared.

Additional thermal-fuel contracting could narrow the gap between the Contracted Fuel and Fuel Capability risk curves and reduce modelled energy security risk under the Contracted Fuel Case.





Pūkaki Easement Contracted Fuel Case - Simulated Storage Trajectories

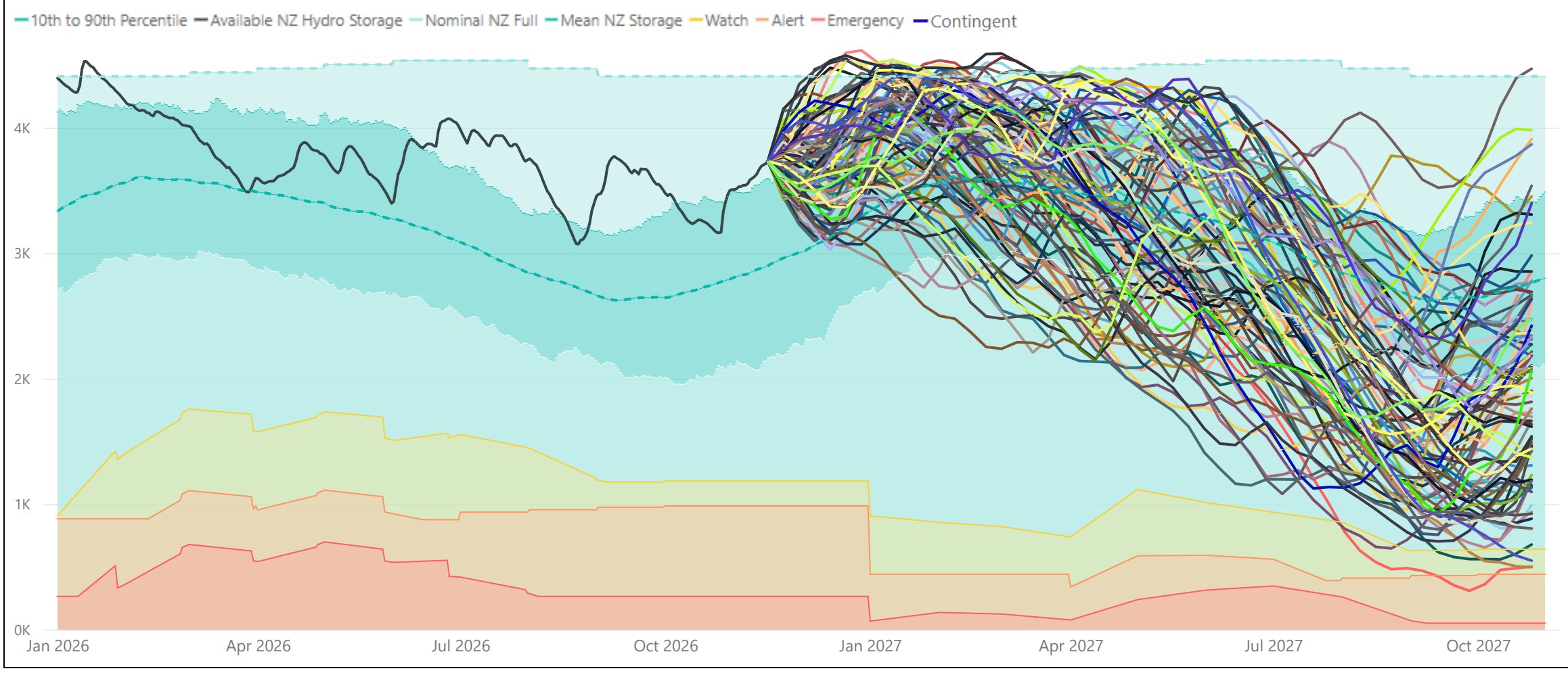
The November Pūkaki Easement Contracted Fuel SST results are shown below. The hydro storage starting date is 16 November.

No SSTs cross the New Zealand or South Island risk curves in 2026. In 2027:

- five SSTs cross the New Zealand Watch curve, including one that also crosses the New Zealand Alert curve; and
- nine SSTs cross the South Island Watch curve, including two that also cross the South Island Alert curve.

The combination of a wider normal operating range for Lake Pūkaki and limits on contracted thermal fuel results in lower simulated storage trajectories. Compared with the November Contracted Fuel case, the trajectories are slightly lower during 2026, reflecting the modelled effect of the wider operating range from 1 January 2027. The difference increases in 2027, leaving less stored hydro energy available under stressed system conditions.

Pūkaki Easement Contracted Fuel Case - New Zealand Electricity Risk Status Curves (Available GWh)



Pūkaki Easement Contracted Fuel Case - South Island Electricity Risk Status Curves (Available GWh)

