

Keeping the lights on: Electricity security of supply snapshot

28 April 2025



Information to help you understand this snapshot

The Electricity Authority Te Mana Hiko is focused on making sure Aotearoa New Zealand has a **reliable and continuous power supply**, ensuring that everyone has electricity when it's needed.

The ability of our electricity supply to meet demand is called 'security of supply'.

To explain how well the electricity system is functioning to ensure the lights (and kettles, stoves etc) stay on, we have published a new explainer that we are calling 'Keeping the lights on'.

Every week, we will publish a 'snapshot' of how our system is looking in terms of overall security, together with supporting information on rainfall, hydro storage, geothermal generation and wholesale electricity prices.

The graph on page 5 shows the **Electricity Risk Curves (ERCs) and national hydro storage**. The ERCs are based on how much fuel is available to generate electricity. They are designed to show how low hydro storage would need to be to cause concern about security of supply.

The dashed blue line shows where hydro storage normally is during the year, and the solid black line shows how much hydro storage there has

been since the beginning of 2024. **You can see that it is currently lower than it typically is at this time of year, but it hasn't reached the ERCs.**

The three maps of Aotearoa New Zealand on page 6 show **the forecast rainfall over the next 35 days**.

The winter 2025/2025 comparison chart shows 'contingent arrangements' – the amount of fuel that is stored should it be needed for power generation. There has been a significant increase in fuel available for this winter compared to last winter.

The chart on page 8 shows **the amount of power generation infrastructure 'on outage'**, which means it will not be available to generate electricity.

The chart on page 9 provides **an estimate of spot prices for this month and quarter**, based on recent prices and forward prices.

The final chart, on page 10, shows **wholesale forward prices** - the cost for purchasing electricity for a given time period in advance. They reflect expectations of future electricity demand and generation costs.

This week's snapshot

This week's data shows that although national hydro storage is still low, it has increased slightly since last week. *There have been regular inflows in the lakes since 16 March. Each increase, however small, reduces the risk of a shortage of water for generating electricity over winter.*

While wholesale prices remain elevated, there is currently enough energy (stored coal, water and gas) in the power system to get through the winter. Wholesale prices are again reflecting the risk caused by low inflows and diminished gas availability. If we benefit from more rain, we may see near-term wholesale prices lower.

It is important to understand there are different drivers of wholesale and retail price increases. The current retail prices increases are driven by increases to lines charges and increases to energy costs passed through by retailers.



Summary of overall electricity system risk for the next three months

Based on current information

Wholesale prices

Average daily prices are likely to be above \$350/MWh for the rest of the month and quarter

Security of supply (energy)

Overall risk to national energy supply is significantly lower than last winter

Security of supply (capacity)

Transpower's NZ Generation Balance shows no days where capacity will be a problem

Security of supply outlook for the next three months:

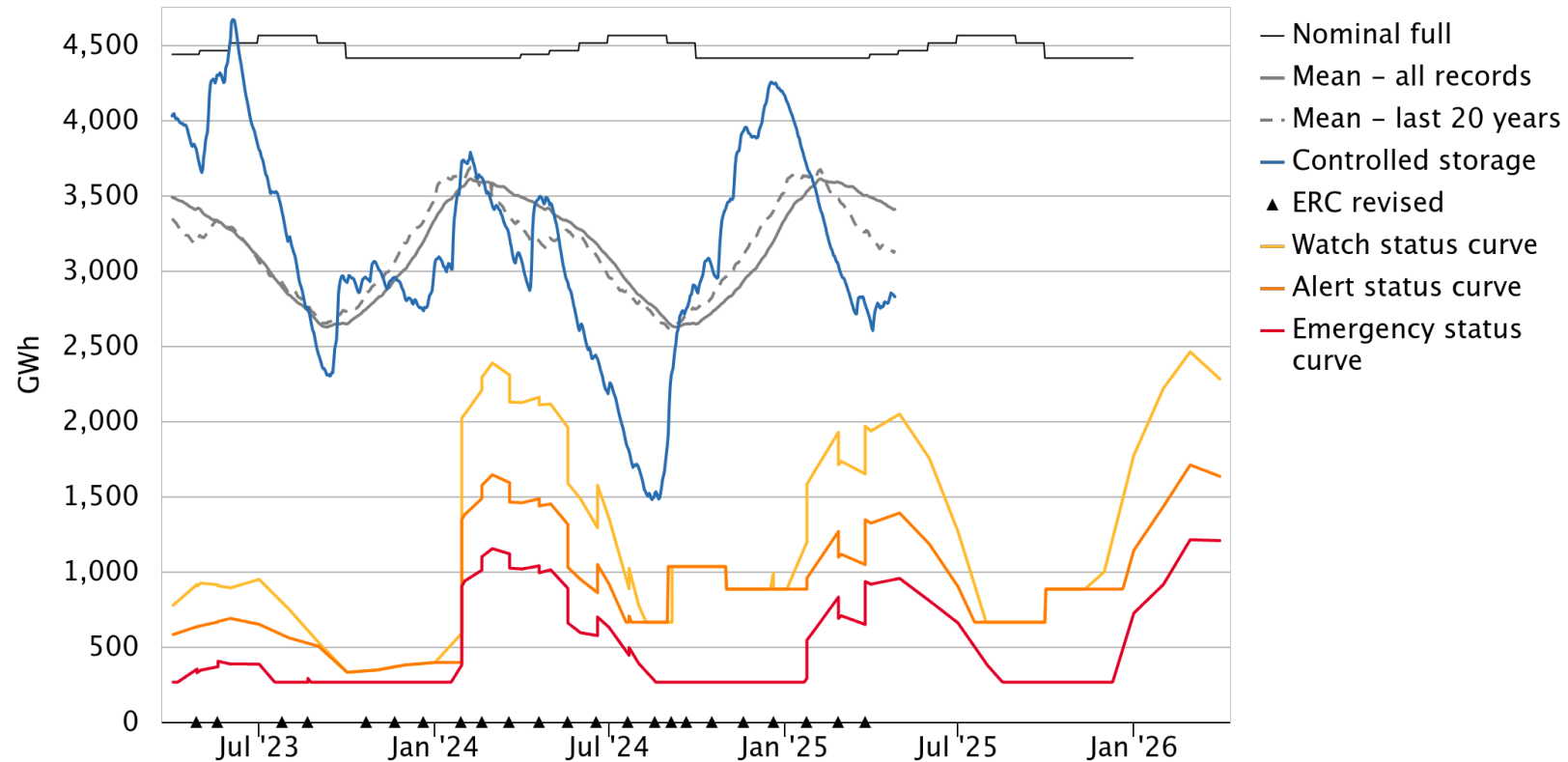
Hydro storage is likely to remain low, which will push wholesale spot prices up. However, fuel supply and generation capacity will be sufficient to meet national demand.

Electricity market information in this snapshot:

- New Zealand Electricity Risk Status Curves (Available GWh)
- 35-day rainfall forecast
- Winter 2024/2025 comparison
- Planned maintenance shut-downs of power generation infrastructure
- Forecast wholesale electricity spot prices
- Forward curve – average future wholesale electricity price.



New Zealand Electricity Risk Status Curves (Available GWh)

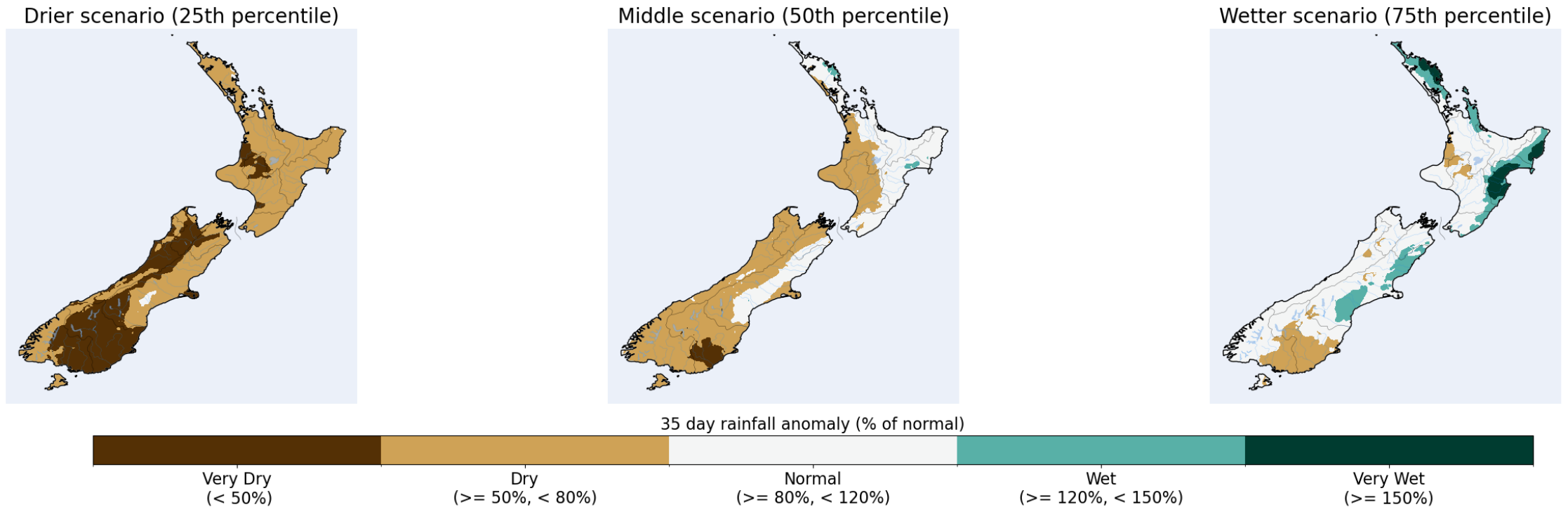


emi.ea.govt.nz/r/ph211

This chart shows that national hydro storage remains above the risk curves, with a small increase from the recent rainfall.

Source: Transpower as the System Operator

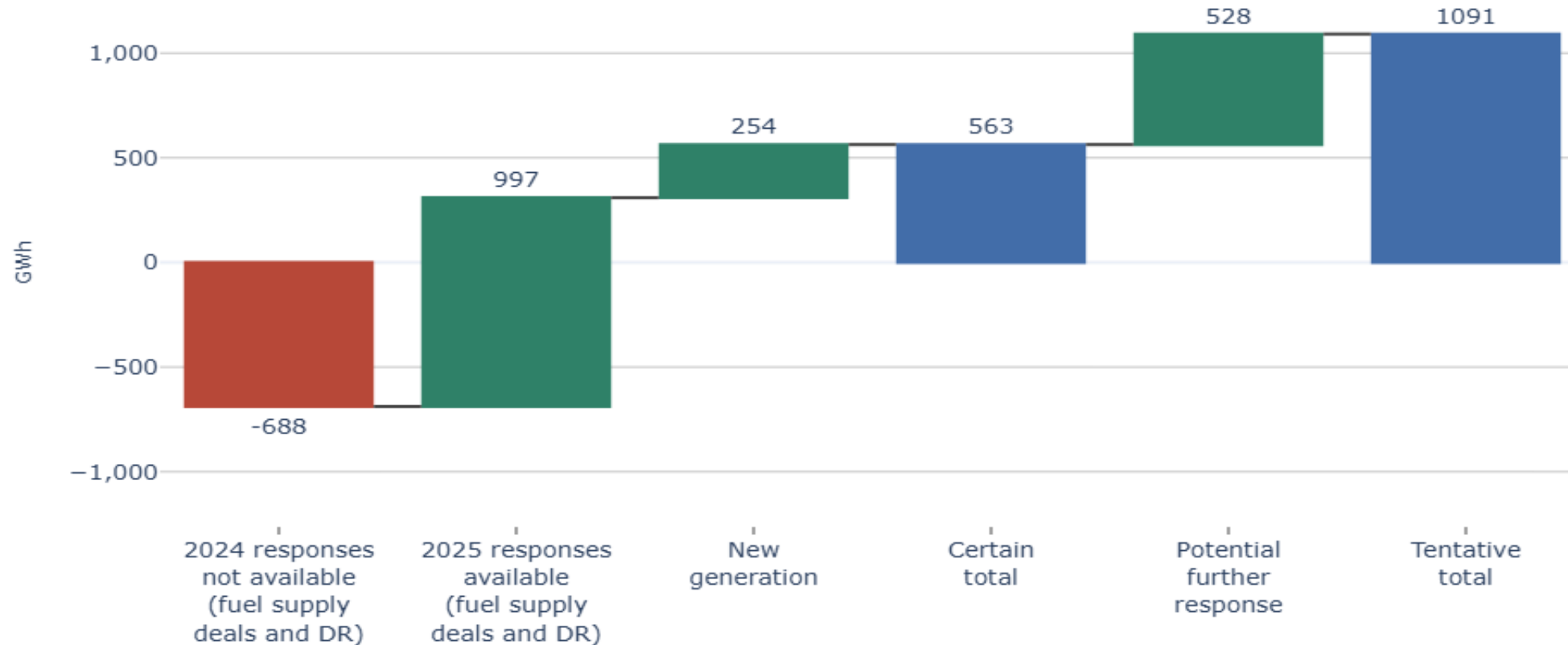
35-day rainfall forecast



These maps show that this week's forecast is that rainfall over the next 35 days is likely to be low.

Source: NIWA

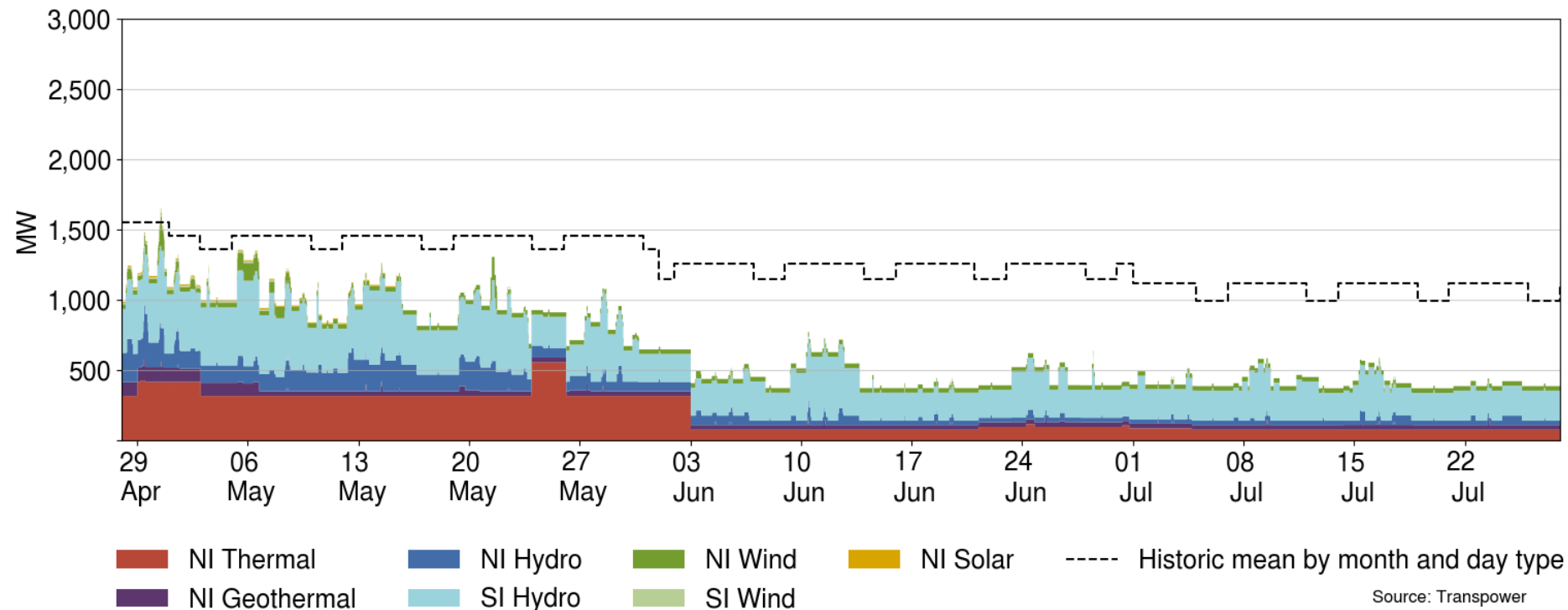
Winter 2024/2025 comparison



Source: Electricity Authority

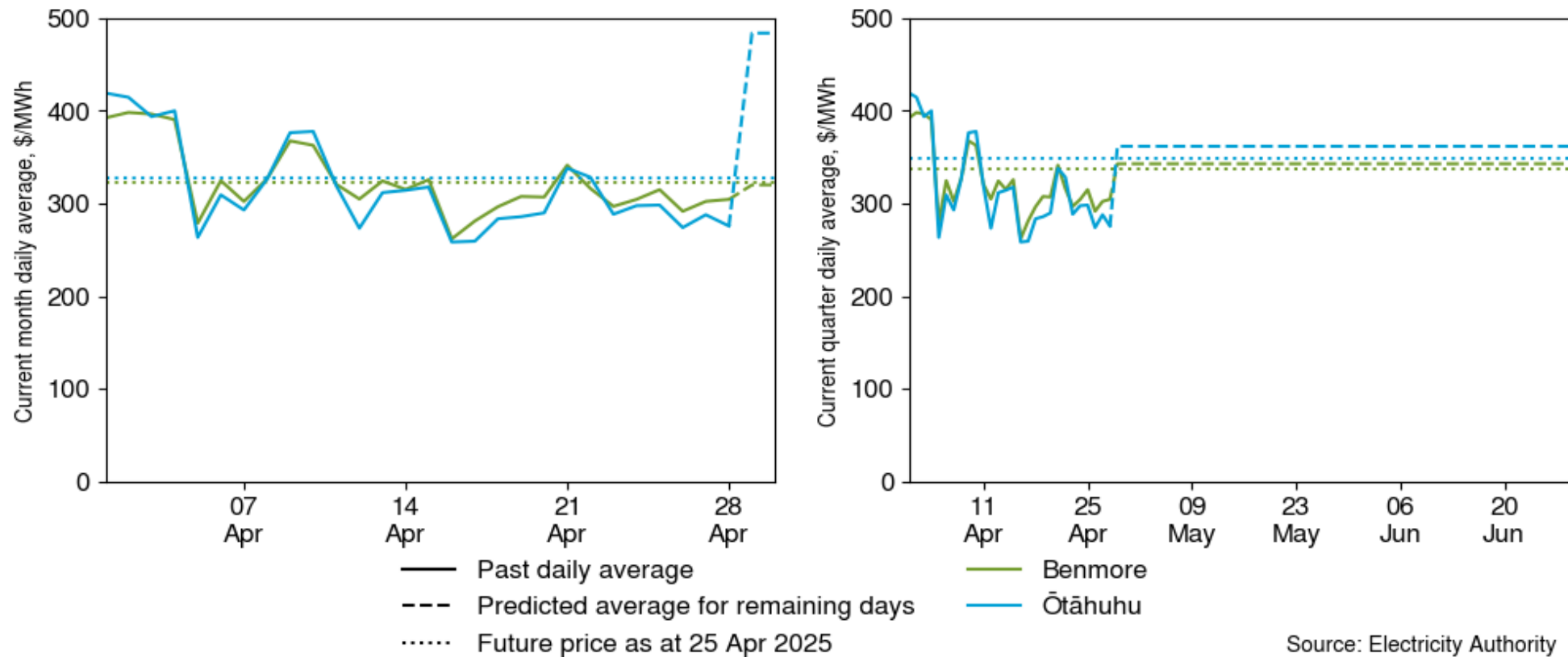
This chart shows that 'contingent arrangements' (fuel stored in case it's needed for power generation) is higher than it was in 2024. This reduces risk for this winter compared to last year, contributing to a total net improvement of 1,091GWh.

Planned maintenance shut-downs of power generation infrastructure – by infrastructure type



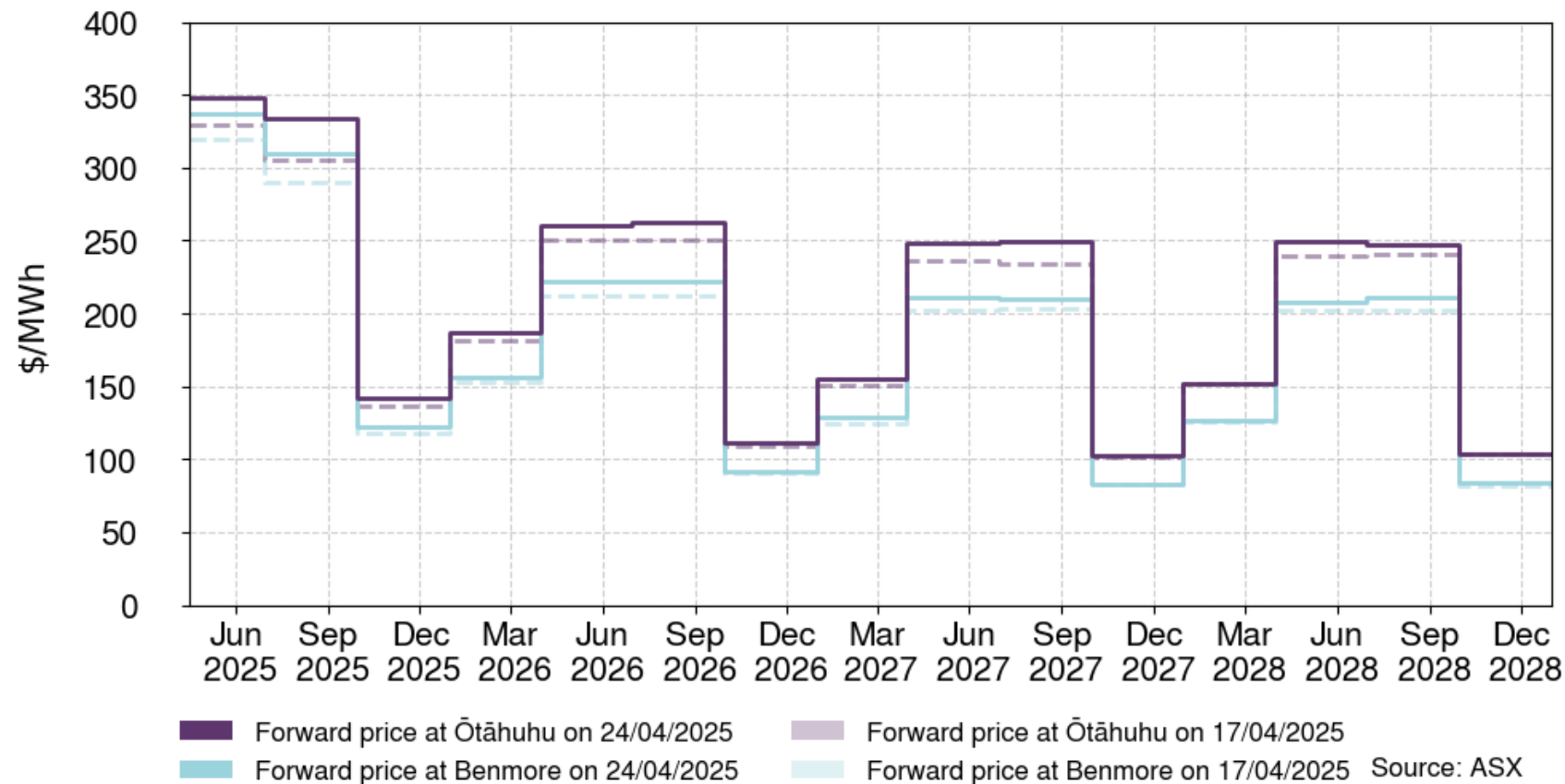
This chart shows that the amount of power generation infrastructure 'on outage' (shut down for planned maintenance) over the next three months is expected to be below average on most days.

Wholesale electricity spot prices



This chart shows that the forecast daily average wholesale spot prices are over ~\$400/MWh for this month, and ~\$350/MWh for the quarter. While this price is high, they reflect the underlying supply conditions and enable generators to contract for fuel for the winter.

Forward curve – average future wholesale electricity price



This chart shows that the average future wholesale price for June 2025 is currently \$342/MWh. This is an increase of \$17/MWh since last week. If it rains in the coming weeks and hydro lake levels rise, we expect to see these 2025 winter future prices decrease.

Find more information
at yourpower.co.nz