Security of Supply Outlook – 19 May 2026

Transpower as the System Operator is responsible for providing information and short- to medium-term forecasting on all aspects of security of supply and manages supply emergencies. This document provides the System Operator's assessment of the security of supply outlook through winter 2026 based on the latest Energy Security Outlook, New Zealand Generation Balance (NZGB), generation commissioning expectations, annual Security of Supply Assessment (SOSA), and observed operational conditions. We provide these Security of Supply Outlook updates quarterly[1].

In summary:

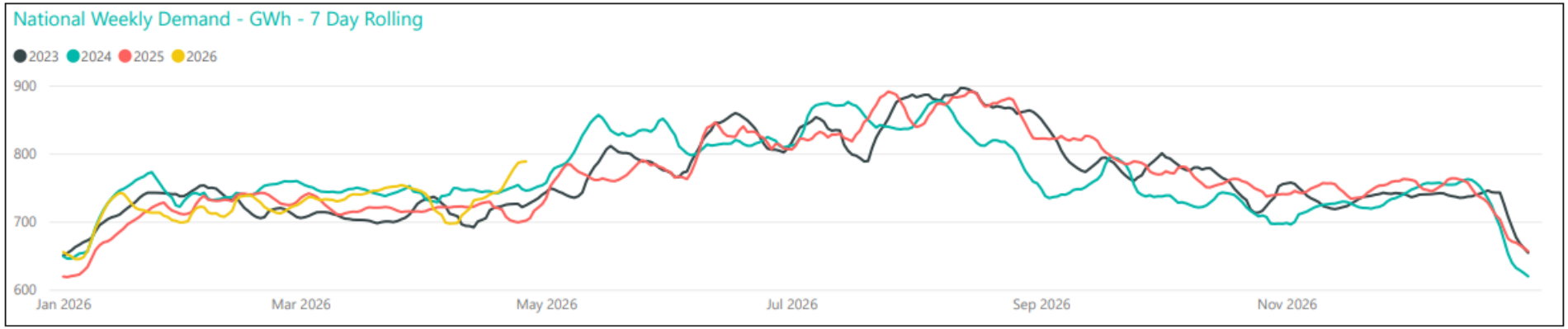
- The current energy and capacity risk outlooks indicate no elevated near-term risk, provided there are no major unplanned outages or fuel supply disruptions. Current fuel stocks are healthy, providing a solid position heading into winter.
- National hydro storage is sitting at 113% of historic mean for this time of year. This continues to be largely driven by North Island hydro storage where Taupō is at 208% of the historic mean. The latest reported coal stockpile at Huntly is ~1.2MT and Ahuroa gas storage is sitting at ~90% of capacity.
- South Island storage is now dropping from its highs earlier in the year. Earth Sciences New Zealand (formerly NIWA) are forecasting normal or above rainfall for regions in the South Island with our major hydro catchments, and drier than normal conditions elsewhere for the next three months. Maintaining healthy thermal fuel stocks and plant availability will help the system respond to any extended periods of low inflows that may occur.

[1] We continue to evolve our analysis and insights to improve the Security of Supply information we provide to industry. We also welcome your feedback and suggestions. Please email system.operator@transpower.co.nz with subject line: SOS Information feedback.

- At this stage, the conflicts in the Middle East are not having major impacts on coal and diesel availability for local electricity generation, although fuel prices remain elevated and supply conditions continue to be monitored closely.
- Capacity margins for the next 200 days are normal provided sufficient generation is committed into the market during tight capacity situations.
- Exposure to risks (both capacity and energy) due to unplanned asset outages remains, particularly in relation to aging thermal plant.
- On the generation front, Contact is currently decommissioning TCC (330 MW), and Genesis is refurbishing its third Rankine (240 MW), which is now due back from outage on 20 May following a delay. We note that since 1 January ~385 MW of new installed supply capacity has come online or is in the process of coming online. A further ~527 MW of installed supply capacity is expected to come online over the next three months. Most of this is solar, wind and a grid-connected battery.
- Wholesale electricity spot prices averaged around $102/MWh in April with New Zealand electricity futures contracts for Q2 (Apr-Jun) and Q3 (Jul-Sep) this year currently at ~$98/MWh and ~$142/MWh respectively. This time last year, average spot prices for April were around three times higher at ~$326/MWh and Q2 and Q3 futures prices were ~$270/MWh and ~$250/MWh. These lower prices correspond to the system holding a stronger security of supply position and lower risk outlook going into winter than last year.
- Looking ahead, demand is expected to increase with the new electric arc furnace load coming online at NZ Steel over the next two-to-three months, various industrial electrification projects progressing (particularly at Fonterra sites over the next six months) and as we head into the colder winter months. These are captured in our forecast.
- Beyond this winter, our draft 2026 Security of Supply Assessment report indicates security margins remain above the security standards until three-to-five years out, at which point additional generation is needed to increase margins back above the standards. Bringing forward generation investment will help reduce exposure to risks (such as reduced thermal generation plant availability or reduced gas availability) and will help support a higher demand growth potential. Submissions on the draft SOSA closed on 14 May with cross submissions closing on 21 May 2026.
- The System Operator is working with the Electricity Authority to implement Emergency Reserve as a new ancillary service. We are currently accepting applications for a panel to participate in workshops through which industry experts will co-design the product with the System Operator. Full details can be found on our website. Applications close on 20 May 2026.

Demand outlook

Cooler than usual weather in mid-April has resulted in higher heating demand, resulting in 2026 load tracking above the 2025 load at the start of Autumn/Winter season this year. Some new loads are expected to come online during winter 2026 with NZ Steel's Electric Arc Furnace expected to bring an additional ~30 MW of load. Fonterra is continuing its electrification plans[2] at its various locations, which will increase electricity consumption at the Whareroa and Edgecumbe sites from mid-late 2026. This follows on from its 20 MW electrode boiler installation at Edendale in late 2024.



Supply outlook

Aggregate hydro storage levels have largely been above average from September 2025 due to above average inflows predominantly from September 2025 with a strong contribution from wind generation (except in late March). This has resulted in lower thermal generation, lower wholesale spot prices and allowed a build-up of the coal stockpile at Huntly and gas storage in Ahuroa.

Under the agreement between Genesis, Meridian, Mercury and Contact to keep the third Rankine unit (HLY2) in service with a strategic coal stockpile level ahead of each winter, HLY2 is currently being refurbished and expected to be available from 20 May 2026. Contact's TCC generator is being decommissioned and so no longer contributes to our energy and capacity risk modelling.

[2] See Fonterra announces electrification plans to future-proof operations

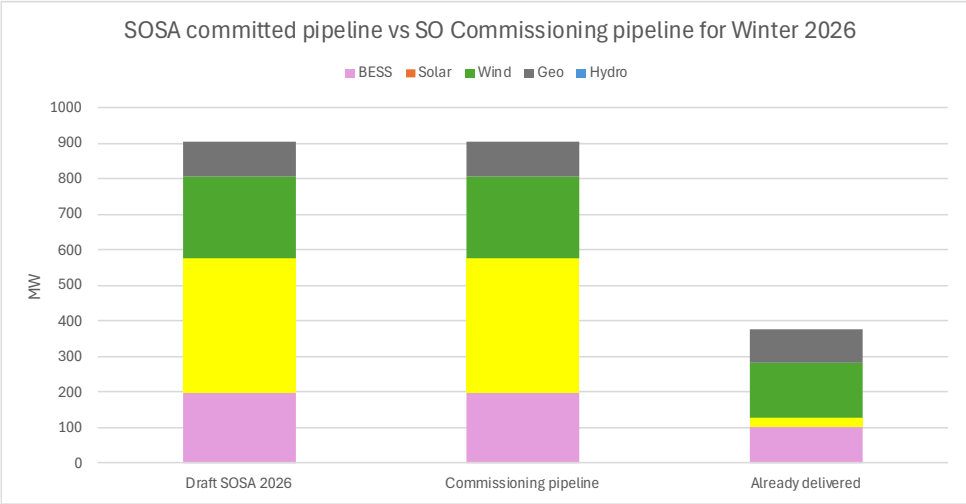
Between January 2026 and April 2026, a total of ~385 MW of additional installed supply capacity has been or is being delivered to the system. This capacity includes ~50 MW of geothermal, ~70 MW of solar, ~150 MW of wind, 100 MW of BESS and 15 MW of hydro. These additions have been offset with the decommissioning of TCC (330 MW) leaving a net increase of ~55 MW of installed supply capacity.

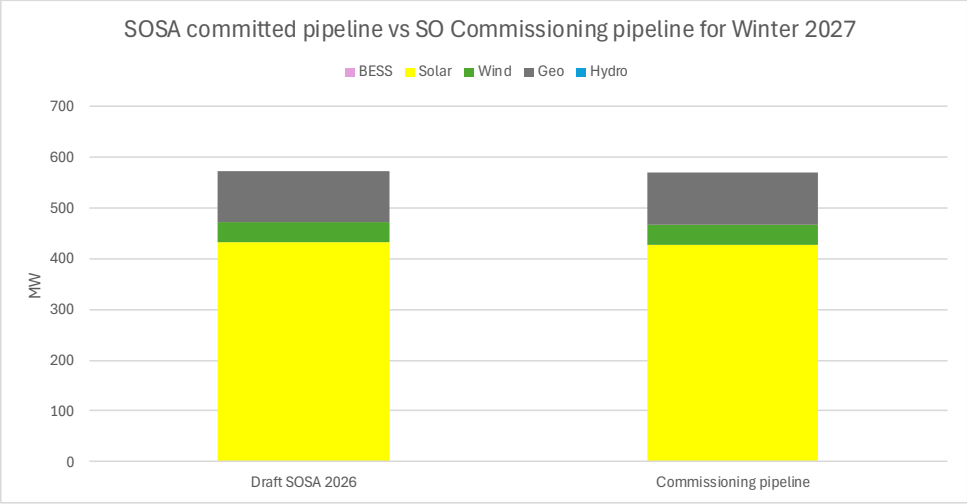
While we report installed capacity, these technologies have quite different contributions to the peak and energy requirements of the system. For example, over the winter months the average[3] contribution from solar is ~16% of its installed capacity (compared, for example, to geothermal which typically operates at ~90% capacity factor). During peak demand periods on cold, dark winter evenings, solar (without BESS) makes no contribution, whereas geothermal, hydro and BESS are firm (non-intermittent) generation sources and could generate up to their maximum. While the new solar generators are an important component of the new supply mix, they provide limited winter energy support and potentially very little during winter peak loads.[4]

Supply pipeline progress against SOSA 2026

The figure below shows the comparison, for winter 2026 and winter 2027, of new generation delivery compared to the committed ("stage 1") generation pipeline published in our most recent Security of Supply Assessments (SOSA 2026 draft).[5] This shows that what we expected to be ready for commissioning in the SOSA analysis has indeed moved into our commissioning process largely on time. If aggregate generation is tracking ahead of the stage 1 pipeline it would indicate build faster than signalled and as a result security margins are likely to be higher than forecast, and the opposite if generation build is lagging.[6]

[3] Average contribution is an indication of its energy contribution.
[4] Solar with BESS could be used to store solar energy for later use during peak load periods.
[5] In this case the 2026 SOSA draft. See 2026 SOSA - Draft Report.pdf
[6] Note the start of winter as defined in the SOSA is 1 April. We have used this date for this comparison.





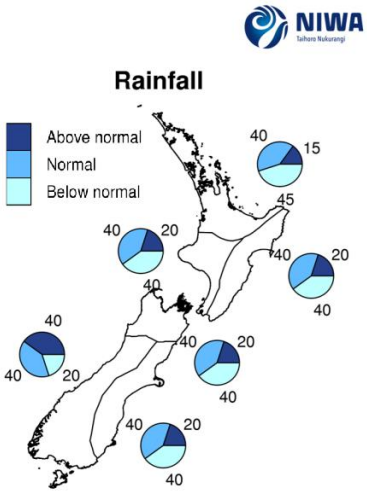
Delivery of solar, wind and BESS projects for winter 2026 are currently around one-to-three months behind that modelled in the respective SOSA pipeline. The current generation delivery pipeline indicates an additional ~527 MW of installed supply capacity (350 MW solar, 100 MW BESS, 77 MW wind) is expected to come online within the next three months. The SOSA was expecting ~900 MW to be online for winter. The net effect is therefore that there is a slightly slower increase in the energy and capacity margins for winter 2026 than modelled in the draft SOSA. The draft SOSA 2026 raised the NZ-WEM for late 2029/early 2030s as a key security concern even with planned projects and delays in new generation coming online will exacerbate these security risks, all else being equal. Ensuring additional new projects enter the committed and consented pipeline as well as delivering existing projects on schedule will help reduce the risks of unexpected project delays and subsequent impacts on security of supply.

National hydro storage

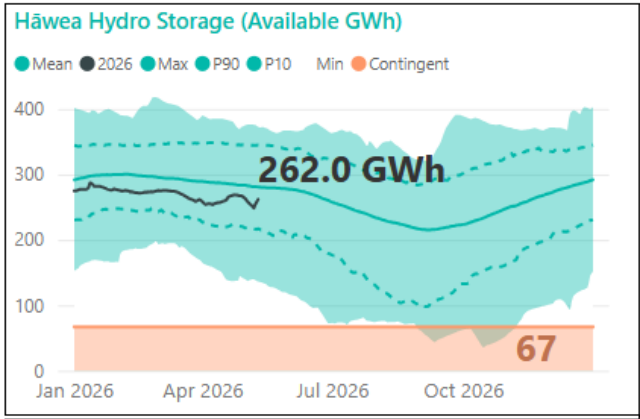
Above average hydro inflows from September 2025 helped increase national controlled storage up to near full levels at the start of this year. Storage has since declined but is still high for this time of year with national controlled storage sitting at 113% of historic mean levels as of 10 May. Very healthy North Island inflows has pushed Taupo above its 90th percentile storage for this time of year. Major South Island controlled hydro catchments are at or near their average storage with Te Anau and Hawea catchments sitting below their average levels. South Island controlled storage is at 105% of average.

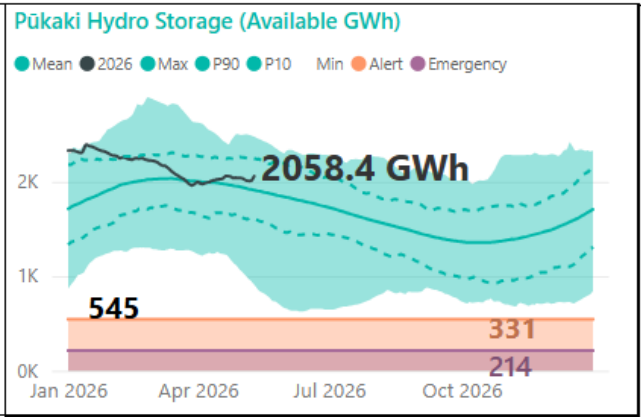
We are mindful of factors that could impact controlled hydro storage levels, including:

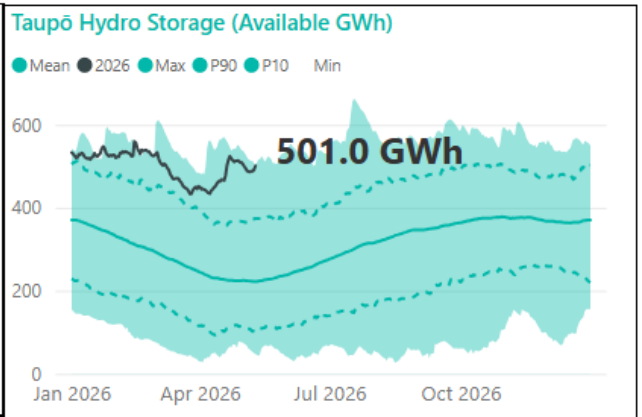
- Earth Sciences New Zealand (formerly NIWA) middle scenario forecast (as of 01 May) is for normal conditions in regions of the South Island with major hydro catchments and dry conditions[7] elsewhere over the next 35 days. As shown in the chart alongside the forecast[8] for the next three months (May-July) has a higher chance of normal to above normal rainfall in the west coast of the South Island and normal to below normal elsewhere.
- Meridian's snowpack estimate shows an above average contribution (for this time of year) from Waitaki snow storage.[9]

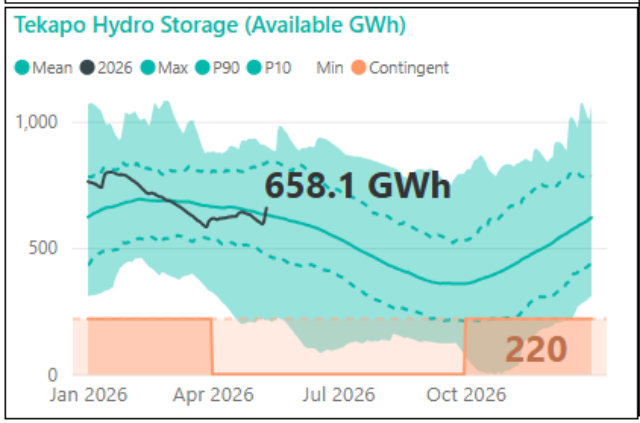


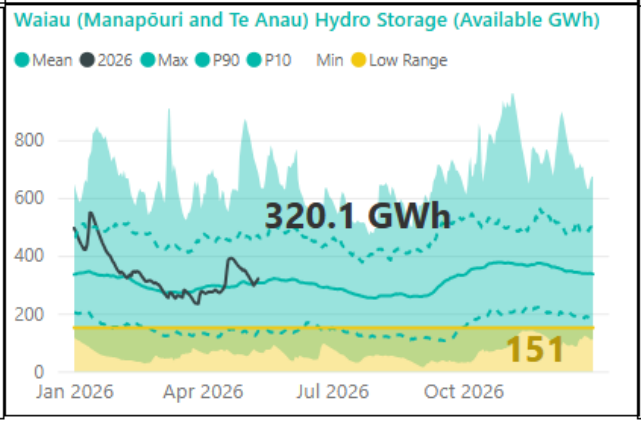
[7] Represented as 50%-80% of normal.
[8] The pie-charts in the figure indicate the forecast probabilities.
[9] As reported by Meridian on 9 May 2026 (Snow storage | Meridian Energy)









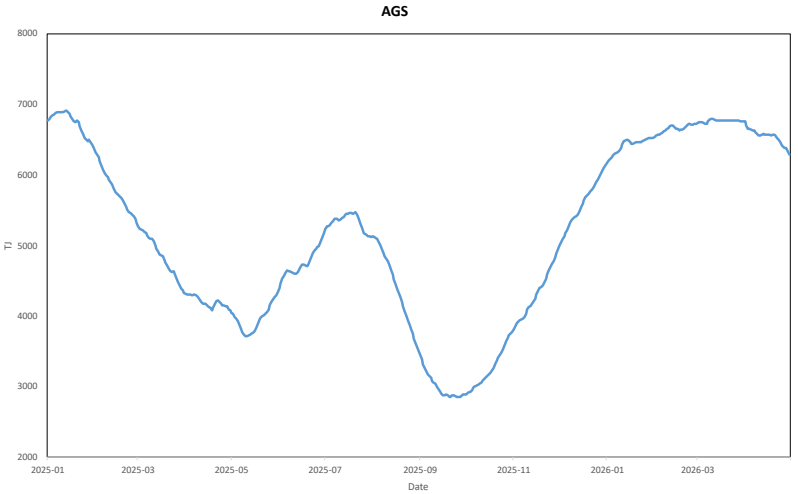


Lake	Latest Storage (%)
Hāwea	93%
Manapōuri	137%
New Zealand	113%
Pūkaki	108%
South Island	105%
Taupō	225%
Te Anau	86%
Tekapo	104%

Thermal fuels

The latest publicly[10] reported Huntly coal stockpile is 1,166 kT (as of 26 April), which is sufficient to produce ~2,350 GWh of electricity from the Rankine generators. This is enough coal to fuel a Rankine generator operating at full output for ~410 days (Rankine days). The approved Huntly Rankine arrangement[11] indicates the Huntly strategic reserve stockpile will initially be set at 600 kT and needs to be maintained at a target level ahead of each winter (600 kT is equivalent to ~1210 GWh which is the energy from one 240 MW Rankine at full capacity for ~210 days). This is in addition to an operational stockpile which Genesis will hold to support its customers which it has indicated would be between 350 and 550 kT.[12]

Ahuroa gas storage (AGS) is currently at 6.3PJ (as of 30 April), which is ~90% of full (~111 Rankine days or ~640 GWh of electricity generation).



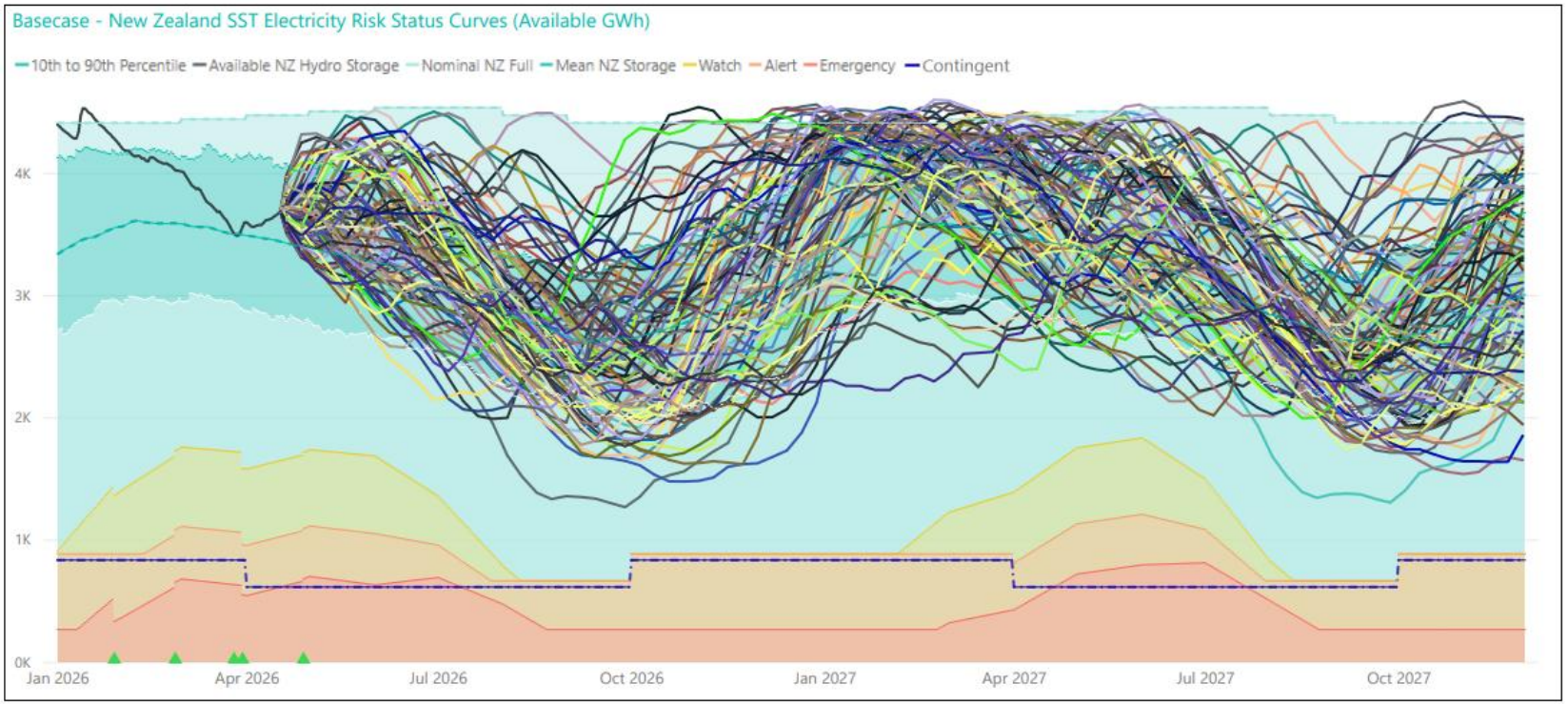
Diesel-fired generation is largely used to provide fast-start, flexible generation during peak load periods (i.e. peaking generation). As such, diesel-fired generators are not expected to run for extended periods of time. There was ~3.82ML of stored diesel available for electricity generation as of 26 April. This is equivalent to ~14 GWh or ~2.4 days of running a Rankine unit at full output.

At this stage, the Middle East conflicts are understood to have minimal impact on coal and diesel availability for local electricity generation, although fuel prices remain elevated and supply conditions continue to be monitored closely.

[10] The Authority has been publishing on its website aggregate information on thermal fuels to increase its transparency in the market. See Thermal fuel information | Electricity Authority
[11] See paragraph 91.5 here
[12] See here.

Energy Security Outlook

Our latest Energy Security Outlook (ESO) update was published on 28 April.[13] It shows a low energy risk over the next 12 months with no SSTs crossing any of the risk curves.[14] This is a result of healthy coal stockpile, gas storage and hydro storage. The electricity risk curves (ERCs), and simulated storage trajectories (SSTs) reflect the availability of all three Huntly Rankine units[15], the exit of TCC, and the assumption that thermal fuels storage will be replenished at the physical capacity to do so during any extended dry period.



[13] The Energy Security Outlook (ERCs and SSTS) are published on our webpage and stakeholders can subscribe to be notified when updates are published: Energy security outlook | Transpower. The ERCs and SSTs use updated generator commissioning information so include the effect of delays discussed in the Supply Outlook section. Our Energy Security Outlook 101 provides more information.

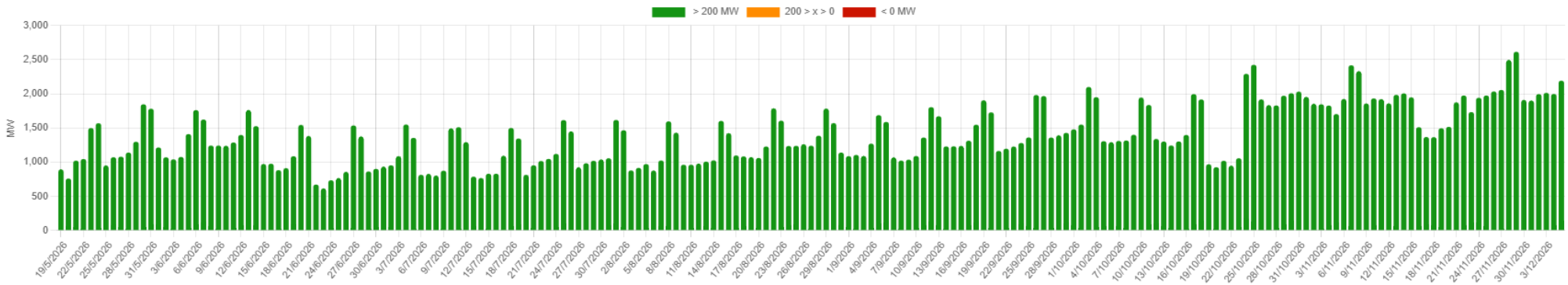
[14] This assumes the market will procure sufficient thermal fuel if needed during periods of extended low hydro inflows.

[15] When not on outage.

Capacity outlook

The New Zealand Generation Balance (NZGB)[16] provides a forward assessment of the potential generation margins 200 days ahead based on a P90 forecast peak demand,[17] asset outage information provided by asset owners, and considering different generation availability and demand scenarios. The figures below show NZGB margins for two scenarios as of 19 May. The scenarios are described before each figure.

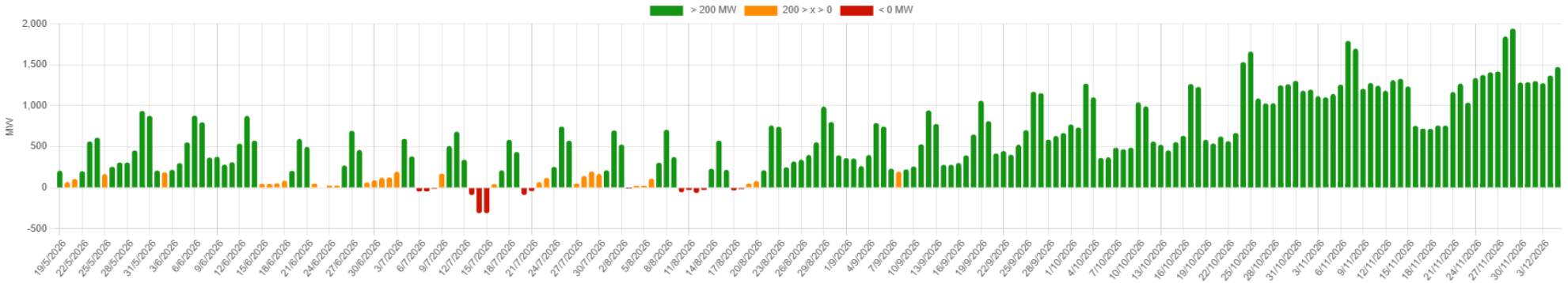
The NZGB scenario below is where all generation not planned to be on outage is available during peak load periods (based on a P90 load forecast and covering the "N-1" risk).[18] Based on current information the forecast residual generation margins over the 200 days to start of December 2026 is likely to be sufficient to cover peak national demand assuming the market co-ordinates the available generation and commits sufficient generation capacity during peak load periods.



Our NZGB tool allows participants to assess the impact on the power system's capacity to meet peak demand should downside risks be realised (for example unplanned outages, commitment of fewer slower-start thermal generators, different levels of forecast demand), as outlined in the scenario below. This example considers a scenario if there were an unplanned outage of the largest risk[19] and high demand[20] (as would be expected during a severe cold snap). There is likely to be sufficient capacity heading into winter (green) however capacity

[16] See here Customer Portal - NZGB (transpower.co.nz)
[17] A P90 load forecast represents the 90th percentile load that we could expect to see on any given day.
[18] Running the system to cover "N-1" risk is normal market operation. The market is cleared to supply the demand and the reserve requirements (largest contingent event risk on the system).
[19] Large generator or HVDC pole
[20] Represented as the P99 load.

margins tighten during winter when loads increase as shown by the orange and red bars. Shifting generator outages can help reduce these risks during high winter peak load periods.



While energy was a key challenge in 2024 and 2025, peak capacity risks are ever-present and will become more acute if there are unplanned outages and/or colder weather. Capacity risks will persist until there is sufficient investment in flexible resources such as BESS, demand response and peaking generation.

The Glenbrook BESS is now operational, and the Huntly BESS is expected online in the next three months. Genesis has announced it will be progressing with another 100MW/200MWh BESS and is also exploring potential for additional fast-start generation capacity at its Huntly power station. Contact has announced it will be progressing with a 200MW/400MWh BESS at Glenbrook following its recently minted 100MW/200MWh BESS at the same location. These investments will help support the system need for firm, fast-start and flexible supply, as increased intermittent generation comes online.

Longer-term outlook (2026-2035)

The System Operator has published its draft annual Security of Supply Assessment (SOSA 2026[21]) which covers the period 2026-2035. Beyond this winter, it indicates security margins remain above the standards until three-to-five years out, at which point additional generation is needed to increase margins back above the standards. While the market has taken meaningful steps to help reduce the risks for winter 2026 with margins sitting above the security standards, bringing forward generation investment will help reduce exposure to risks (such as reduced thermal generation plant availability or reduced gas availability) and will also help support a higher demand growth potential. A summary of the key draft SOSA 2026 findings are shown below.

[21] See 2026 SOSA - Draft Report.pdf

Draft Security of Supply Assessment (SOSA) 2026 – At a glance

1. What is the SOSA?

- Assess three security margins over the next 10 years and compare against the security standards
- Standards represent an efficient range – Expected cost of shortage equals cost of reserve resources
- New Zealand Winter Energy Margin - Do we have enough national energy to get through extended dry winters? [Standards: 14% to 16%]
- South Island Winter Energy Margin - Can the South Island meet its winter energy needs, given both supply and inter-island transfer limits? [Standards: 25.5% to 30%]
- North Island Winter Capacity Margin - Do we have enough generation to meet North Island peak winter demand? [Standards: 630 MW to 780 MW]

2. How do we assess the margins?

- Survey participants and investors on future pipeline projects
- Forecast electricity demand for next 10 years
- Consult on assumptions and sensitivities to key inputs
- Use Security Standards Assumptions Document which specifies the methodology and some key assumptions
- Develop other inputs and assumptions as required (eg. gas forecasts, coal estimates, plant availability)
- Assess margins for Reference case R, Expected Future case E and sensitivities S

3. Key findings from Draft SOSA 2026

New Zealand Winter Energy Margin (NZ-WEM)	
R E S Short-term (2026-2028)	**Adequate but fragile energy margin:** Margins above standards if projects are delivered on-time but fall below the lower standard if gas supply is lower than expected. Project delays, low thermal support, high demand, or weak renewable output increase risks of margins falling below standards. Deliver projects on time and add flexible supply to reduce risks.
R E S Mid-term (2029-2031)	**Emerging energy gap in 2030s:** Margins fall below the standard by 2031 even with planned projects, with lower gas bringing this forward. Risks from delays, reduced thermal support, high demand and weak renewables increase exposure, requiring earlier project delivery, ensuring thermal generation availability and developing a more diverse supply pipeline.
R E S Long-term (2032-2035)	**Pipeline-dependent adequacy:** Margins stay above the standard only if future pipeline delivered, but strong demand growth and weaker thermal, gas, or renewables can still drive shortfalls by ~2035. Reducing risk requires expanding and diversifying the future pipeline, with less reliance on weather-dependent generation.

South Island Winter Energy Margin (SI-WEM)	
R E S Short-term (2026-2028)	**Strong but adequacy sensitive to risks:** Margins remain above the standard under expected conditions with committed project delivery. Delays, reduced thermal support, higher demand, or low gas can drive shortfalls by 2027–2028, so timely delivery and firm backup are critical.
R E S Mid-term (2029-2031)	**Adequate but exposed to risks:** Margins remain above the standards if committed and consented projects proceed on-time but can still fall below the lower standard if gas supply is lower than expected. If new supply projects are delayed or if demand is higher and gas, thermal, or renewables underperform then shortfalls emerge. Expanding and diversifying supply is key.
R E S Long-term (2032-2035)	**Robust but demand-sensitive adequacy:** Margins remain above the standard if committed, consented and unconsented projects are delivered. Strong demand growth with weaker gas, thermal, or renewables can still erode margins, so expanding the future project pipeline is key to manage this risk.

North Island Winter Capacity Margin (NI-WCM)	
R E S Short-term (2026-2028)	**Adequate but capacity risks exist:** Margins remain above the standard in the short term with committed projects. Peak risks from low wind, limited thermal support, and higher demand require timely delivery and strong winter thermal commitment.
R E S Mid-term (2029-2031)	**Emerging capacity shortfalls:** Margins sits between standards if committed and consented projects proceed but fall below by ~2029 if they don't. High demand, weaker thermal/gas, and project delays increase risks, so more flexible peak capacity is needed.
R E S Long-term (2032-2035)	**Enduring peak capacity risk:** Margins remain above the standards if committed, consented and unconsented projects are delivered. High demand, low gas, and operational constraints mean peak risks persist, so expanding flexible, fast-response resources is critical.

Overall implication: Maintaining security of supply over the next decade requires strong delivery discipline, earlier commitment of additional consent ready projects in the short and mid-term to reduce downside risks, ensuring thermal generation and fuel availability and active development of a more diverse and flexible future pipeline.

System Operator planning for winter 2026

The System Operator has been and is continuing to work on multiple initiatives to better manage potential security risks. These include:

- We submitted on Meridian's Fast Track application for access to contingent storage in Lake Pūkaki (through to 2028) without the current risk-based triggers.[22] Our submission outlined the trade-offs in easing access to contingent storage, which include lower system costs but also increased system risks during stressed conditions. In our view, a prudent approach would be to reassess the current mechanisms for access to contingent hydro storage in the next three to five years, once more is known about key near-term uncertainties.[23] In progress
- Following the Electricity Authority's approval of our proposed SOSFIP amendments, we are on track to implement the changes in our May Energy Security Outlook (ESO). Key changes include, (a) introducing a contracted fuel scenario for the ERC and SSTs based on contracted fuel quantities, (b) updates to the Alert contingent storage buffer and (c) updates to the watch curve definition to allow for more time for an industry response before an Alert is triggered. In progress
- Engaging with key hydro generators, particularly those with contingent storage arrangements, to ensure our assumptions about operational constraints due to low lake levels remain correct. Ongoing
- We hosted a special System Operator Industry Forum on 28 April 2026 on Winter preparedness[24] and difference bid live system test with EDBs on 5 May 2026. The forum provided updates to industry on information provided by the system operator and procedures followed during tight capacity situations. The difference bids test was largely successful. Some parties that did not successfully upload their difference bids during the 5 May test successfully retested on 6 May. These tests highlight the importance of ongoing industry engagement and exercises to make sure these infrequent but import processes continue to work as intended. Complete
- We are consulting on incorporating the Low Residual Situations (LRS) process into the Policy Statement through the 2026 review, building on earlier engagement and consultations in 2024. This aims to formalise the process, including the use of discretion during

[22] Access to some contingent storage in Lakes Pukaki (as well as Lake Tekapo and Hawea) is based on controlled hydro storage dropping below the Alert curve. The Alert curve is based on a 4% risk of running out of controlled hydro storage over the next 12 months and the level where contingent storage can be accessed.

[23] These include rate of renewable build, new load additions, future gas supplies including Maui exit and the government-announced LNG terminal. A delay is also prudent as independent analysis done for us indicates that the role of hydro will evolve as more renewables come online and hydro storage will likely be held higher and potential efficiency and risk impacts from easing contingent storage access would reduce in the future.

[24] SO Industry Forum Winter Special Slides

shortfall and scarcity conditions, and improve transparency and industry coordination. The proposal reflects generally supportive feedback from previous consultations. In progress

- We have published the draft SOSA 2026 report for consultation which closed for submissions 5 pm 14 May 2026, followed by a one-week cross submission period closing on 21 May 2026.[25] The final SOSA 2026 report and supporting information will be published by 30 June. In progress
- The Government's 2025 review of the New Zealand electricity system[26] included a decision to "work with Transpower, as the System Operator, to ensure their security-of-supply assessments are fit for purpose for our evolving energy system."[27] We will continue to work with MBIE to support its implementation of the review recommendations. In progress
- Looking beyond winter 2026, the System Operator is working with the Electricity Authority to implement Emergency Reserve as a new ancillary service. We are currently accepting applications for a panel to participate in workshops through which industry experts will co-design the product with the System Operator. The workshops will provide practical, operational and market insights to test design assumptions, identify implementation risks (operational, commercial and technical), build shared understanding of how Emergency Reserve differs from existing ancillary services. This will help inform draft amendments to policy and procurement documentation, and contractual arrangements. Full details can be found on our website. Applications close on 20 May 2026. In progress

[25] Invitation To Comment: Draft Security of Supply Assessment 2026 | Transpower
[26] Securing New Zealand's energy future | Beehive.govt.nz
[27] Ministerial Services briefing template