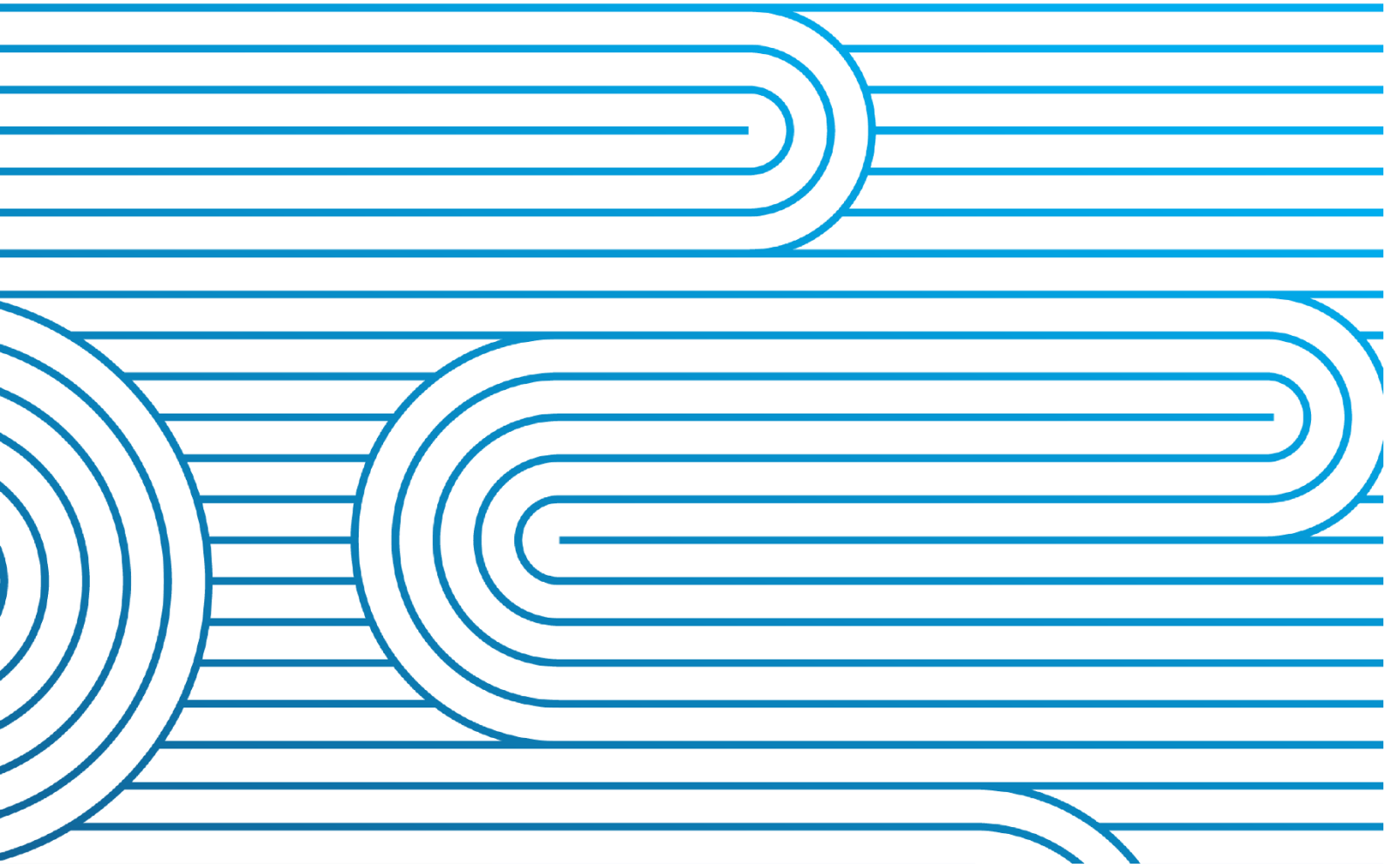
TRANSPOWER

Building the renewable generation we need to deliver New Zealand's energy future

A discussion document for consenting authorities

July 2025



Transpower is enabling an electrified Aotearoa

Transpower is the owner and operator of the national electricity transmission grid that carries electricity from where it is generated to where it is used by homes and businesses across the country. We also operate the power system to balance electricity demand and supply so that Kiwis can access electricity when they need it, every second of every day.

A key part of our role as **system operator** is to provide information about how much electricity New Zealand will need over both the short and longer term. Our shorter-term views help guide the operational decisions needed to keep the lights on day-to-day, and our longer-term views are used by market participants to help guide investment decisions, including about development of new generation and transmission infrastructure.

When a generation company or new investor decides to move ahead with a new generation plant, it is then our role as **grid owner** to connect it to the national grid. You can read more about our grid connection process here.

Electrifying the economy to support economic and climate aspirations

Electrification is well underway across Aotearoa New Zealand and is set to pick up pace as we increasingly shift towards using electricity from clean, renewable energy sources to power the way we live and work.

As set out in one of Transpower's key strategic documents, *Whakamana i Te Mauri Hiko*, this energy transition must be a high priority for New Zealand if we are to meet our climate change targets and our related international commitments.

But this is not just about climate change – electrifying the economy can deliver gains across each part of the energy trilemma, delivering affordable, sustainable and reliable energy to power our lives and the economy. By 2050, we expect Kiwis to be using around 70% more electricity than we do now[1]. To enable this transition and to help Aotearoa thrive, we must be set up as an industry and as a country to build the new renewable generation required.

Some of these new wind and solar farms – and critical technologies, such as the batteries that support them – will connect directly to Transpower's national electricity transmission grid. Others will be embedded through local electricity distribution networks across the country.

Either way, they need to be consented and built in order for New Zealand to electrify, grow our economy and meet our 2050 climate change targets. We know that Councils are processing many resource consents under the Resource Management Act for new renewable energy generation facilities so have prepared this brief document to provide information you may find useful to consider. This information will also be relevant for resource consent applications being processed via the Fast-track Approvals Act.

[1] This is based on the Accelerated Electrification scenario in *Whakamana i Te Mauri Hiko*.

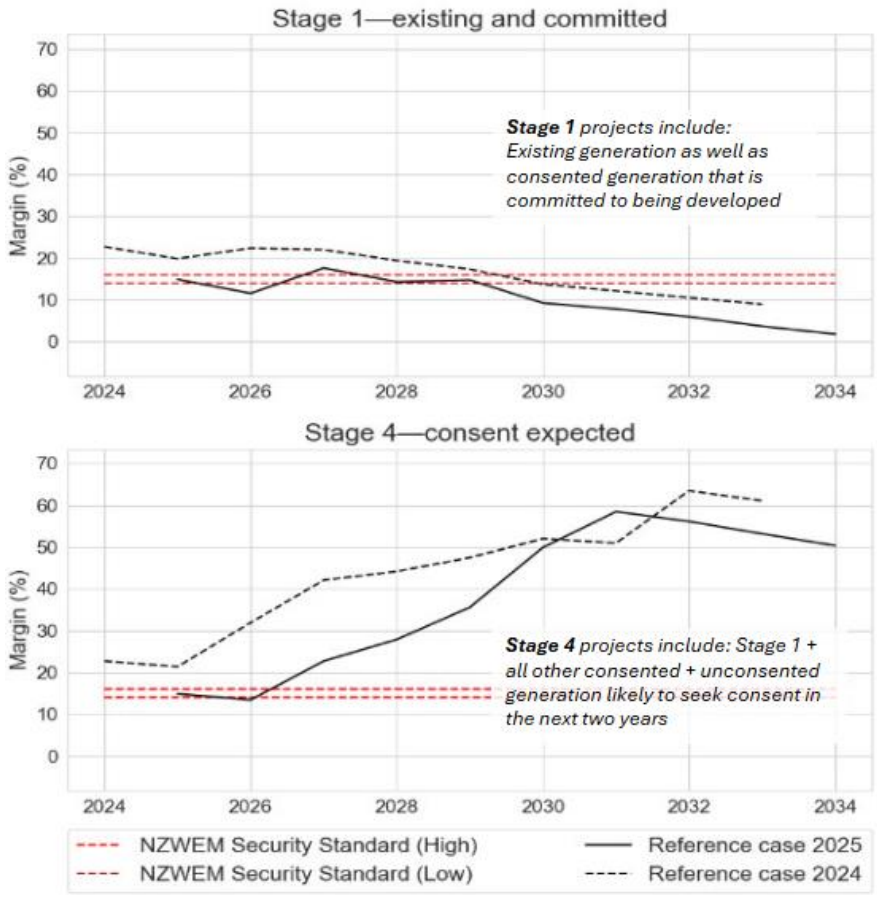
Transpower analysis shows the time for action is now

One of Transpower's key roles is to predict how much electricity we will need to power the country now and out into the future. We take a long-term view through *Whakamana i Te Mauri Hiko* and other related work, and we also look at more immediate and medium-term horizons. Our main view of the balance between electricity supply and demand across the medium-term is our annual Security of Supply Assessment (SOSA).

Our most recent Security of Supply Assessment, released at the end of June 2025, looks out at the decade through to 2034. The results of that assessment are mixed. While there has been significant investment in new generation and batteries in recent years, a faster-than-expected decline in gas availability for electricity generation means there is a real tightening of the balance between supply and demand.

Critically, we are set to dip below one of our key security standards – the New Zealand Winter Energy Margin – as early as 2026, as shown in the chart below from SOSA. This is a key measure of whether we have enough energy to power the country across the winter. When we released the equivalent assessment last year, we didn't expect to fall below this margin until 2030.

The winter energy margin for the decade ahead



While this doesn't mean there will be power cuts next winter, it does increase the risk and provides further evidence of a need for the acceleration of investment in new electricity sources. This is further underscored by the impact that tight supply has on wholesale power prices. Some businesses found it impossible to continue operation on the back of high power prices last winter. The stakes are very real for communities across the country if a failure to develop sufficient generation undermines economic growth.

The chart on the previous page shows the winter energy margin over the decade to come under a range of possible scenarios. The key takeout is that the situation remains tight over the next five years then deteriorates over the rest of the decade if we just look at consented generation where there is commitment to delivering. If we include consented projects that are on hold and/or requiring reconsent and projects that are expecting consents to be granted (stage 4), the picture improves significantly.

But for the situation to improve, renewable generation facilities need to get consented and built.

We're moving fast, but need to move faster

Our Security of Supply Assessment shows that the electricity sector is already responding to the challenge with a 350 MW increase in newly commissioned generation since the last assessment in 2024. This is around 3.5% of existing installed generation capacity, which is enough to power Wellington, the Hutt Valley and Kapiti on the average weekday.

The quantity of consented projects has also increased by approximately 1,500 MW since the last assessment, or 15% of current installed capacity. The quantity of planned projects that don't currently have consent has increased by 2,600 MW.

These movements indicate that the supply pipeline is being developed and continues to expand. However, not all of the consented projects are certain to be delivered due to commercial and other considerations, and uncertainty is even higher for unconsented projects. There is a real risk that many of these projects could be delayed, deferred or dropped.

This makes it essential for New Zealand that we pick up the pace and move planned projects quickly through the financing, consenting, design, build and commissioning phases so that they can start contributing much-needed megawatts towards New Zealand's prosperity.

Looking ahead

We know that demand is growing at pace. Over the last 18 months, we have completed 20 customer projects to connect new demand or relocate existing assets to make way for development, and we have 16 more currently in delivery.

We also know that investors see New Zealand as a favourable place to build renewable generation. Transpower is currently connecting 15 new generation projects that will collectively add 2,100 MW to New Zealand's electricity supply. The strong pipeline of projects signals that industry is working hard to ensure there will be enough power for our growing communities and for big industrial users to electrify their operations.

This discussion document provides an accessible guide to our SOSA findings to illustrate the urgency with which New Zealand must address the challenge of powering up our communities across the country.

We hope this provides useful context for consent authorities when you are reviewing and processing resource consent applications for renewable electricity generation facilities.

If you would like further information, please get in touch with Joanne Mooar on +64 4 590 6060 or at Joanne.Mooar@transpower.co.nz

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