TRANSPOWER

D17

Optimising the transition

Integrated Report
FY 2024

THIRTY YEARS EMPOWERING THE ENERGY FUTURE

2024

1994

Ka mua, ka muri
Walking backwards into the **future**

For over 100 years, our people have been the kaitiaki of the transmission lines and substations that form the National Grid.

We first took the name Transpower in the late 80s, as an operating division of the Electricity Corporation of New Zealand.

Then in 1994, we became a state-owned enterprise, taking on the role of managing and operating the grid and the electricity system.

They were times of great change, of reform and a critical shift in how we operated.

A time for rolling up the sleeves and getting the job done, despite the unknowns and the challenges.

Today, as we prepare for our decarbonised future, we draw on the lessons of our past.

Much has changed. From employing the first women in our control rooms to ensuring a diverse and inclusive team, and space for all. From on-site manual practices to a world of digital technologies and remote control.

Yet much remains the same.

We are as committed today as we were then to delivering for the people of Aotearoa New Zealand.

To ensure that our assets and operations are reliable and resilient, and meet the nation's needs for generations to come.

We learn from our past, our successes, our failures. We acknowledge the steps we have taken to bring us to here, and we must now make strides into the future.

We walk backwards into the future, for the next 30 years and beyond as we continue to deliver on our purpose: Whakamana i te Mauri Hiko, tū mai Aotearoa – empowering the energy future for New Zealand.

How to read this report

Since launching our first integrated report in FY2021, we have continued to evolve our reporting in accordance with disclosure requirements and to meet the expectations of our stakeholders.

This year's integrated report is in four sections.

- In the 'Introduction' section, you will find the details of who we are, our strategy, our value creation and the material issues that matter most to our stakeholders.
- In the sections titled 'Optimising our assets', 'Working in partnership' and 'A sustainable business', we bring you stories from our year that cover our work on our assets and operations, our partnerships and our work across the entire system as we focus on a sustainable approach to the operation of our business.
- In the section titled 'Our business', you will find more information about our targets and our structures for corporate governance and the management of Transpower.
- Finally, in the last section, 'Financial performance', you will find our financial statements.

Transpower is a climate reporting entity for the purposes of the Financial Sector (Climate-related Disclosures and Other Matters) Amendment Act 2021.

In accordance with the Aotearoa New Zealand Climate Standards, we have published our *Transpower Climate Statement FY2024*, outlining our climate-related risks and opportunities, plus our governance structure and management actions. It includes our annual greenhouse gas (GHG) emissions report, previously contained in this document.

Our GHG emissions report is produced in accordance with the GHG Protocol[1] and ISO 14046[2], which includes assurance from EY in accordance with the International Standard on Assurance Engagements (New Zealand) 3000 and Assurance Engagements on Greenhouse Gas Statements 3410.

Transpower does not produce a separate sustainability report. Rather, tracking against our sustainability objectives and targets is contained in this integrated report in section three.

You can also visit our website transpower.co.nz, for more details regarding our materiality assessment, our *Sustainability Strategy*, our *Climate Statement 2024* and our GHG inventory reports.

Scan to visit:
Sustainability - Transpower

1 GHG Protocol provides standards, guidance, tools and training for business and government to measure and manage climate-warming emissions. **www.ghgprotocol.org**
2 A commonly used standard for measuring and reporting GHG emissions. **www.iso.org**

Contents

Our focus areas

Who we are

Transpower owns and operates the National Grid, a lifeline utility that runs the full length of the country from Kaikohe to Tiwai Point.

Our infrastructure network includes thousands of kilometres of lines strung across thousands of towers connecting to hundreds of substations.

We move electricity from where it is made to where it is needed, enabling local lines companies to power millions of homes and businesses all around the motu.

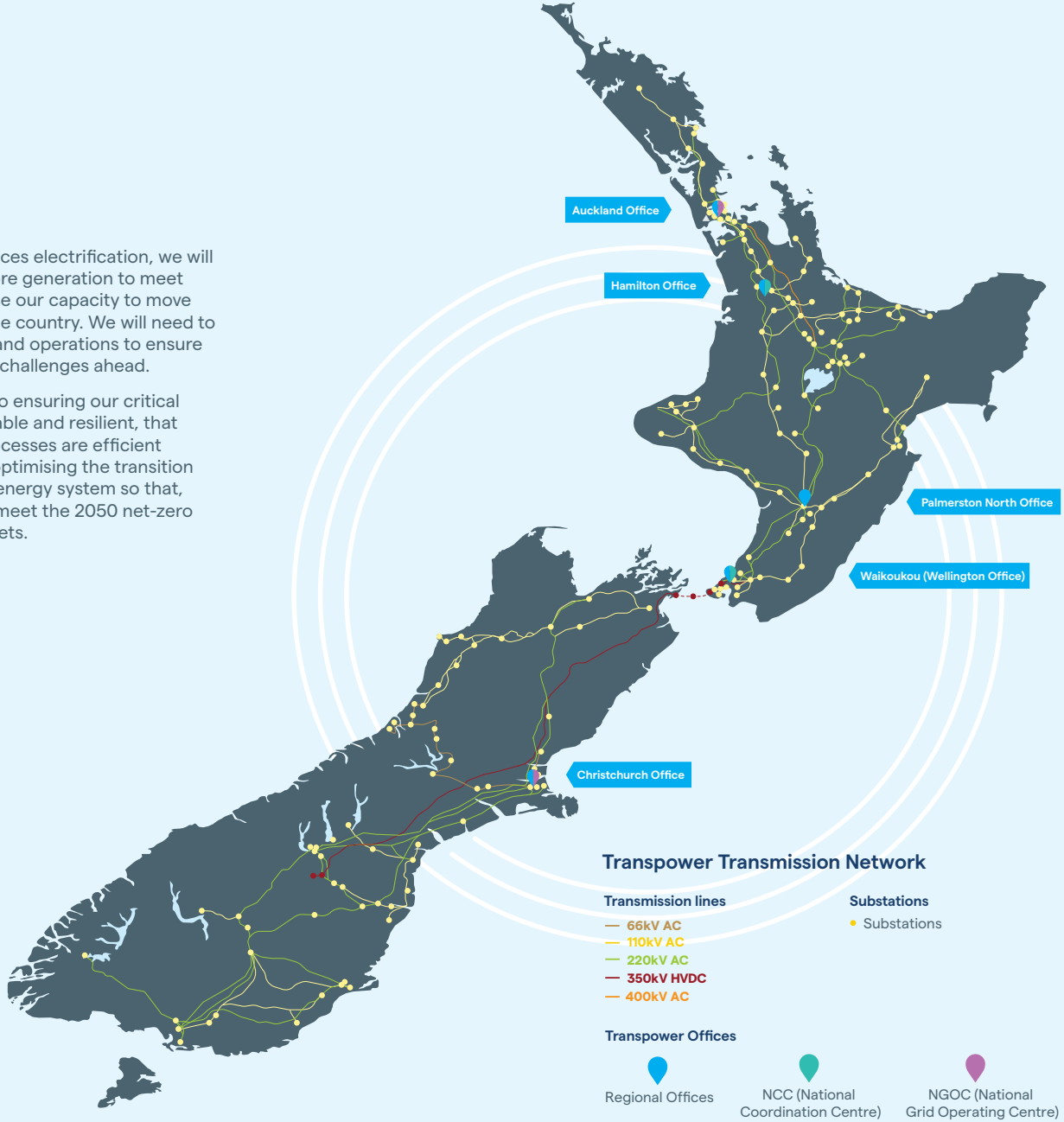
In our role as the System Operator we run the electricity market, balancing supply and demand 365 days a year, 24 hours a day, to keep the power flowing.

Our people and our service provider whānau are the most important part of Transpower; their expertise and dedication are critical to our delivery of a reliable and secure electricity system.

Aotearoa New Zealand aspires to a decarbonised future through electrification. We must ensure that our infrastructure, our systems and our people are ready for the expected 68 per cent increase in electricity demand by 2050.

As the nation embraces electrification, we will need to connect more generation to meet demand and increase our capacity to move electricity around the country. We will need to evolve our systems and operations to ensure we can manage the challenges ahead.

We are committed to ensuring our critical infrastructure is reliable and resilient, that our systems and processes are efficient and secure, and to optimising the transition path for Aotearoa's energy system so that, as a nation, we can meet the 2050 net-zero climate change targets.



Where we fit in

1 **Generation**
Generation companies generate power from wind, thermal, hydro and geothermal. They sell the power they generate on the electricity market. Emerging distributed generation includes electric vehicles, batteries and solar photovoltaic.

2 **New grid connects**
As New Zealand moves to electrify its economy, Transpower is receiving more requests to connect to the grid. This includes new generation such as solar and wind, as well as new industrial demand.

3 **Transmission**
Transpower transports high voltage electricity from where it is generated to distribution companies and some large directly connected customers.

4 **Industrial customers**
A few major industrial companies receive their power directly from Transpower.

5 **Substations**
Substations reduce the voltage at the point where electricity is delivered to distribution companies – our customers.

6 **System Operator**
Operates the wholesale electricity market and manages system security.

7 **Distribution**
The lower voltage electricity is transported by distribution companies to homes and businesses throughout New Zealand.

8 **Commercial**
Some commercial customers that consume large quantities of energy purchase power directly from the wholesale electricity market.

9 **Retail**
Retailers buy power on the electricity market, package it together with other costs of delivering power (transmission and distribution), and on-sell it to customers.

10 **Domestic and business users**
Domestic and business users receive their electricity directly from retail companies, which deliver power to homes, businesses and commercial operations using distribution companies' lines.

How we create value

Inputs → What we do → Outcomes

Transpower is responsible for planning, building, maintaining and operating the National Grid. Our role is to transport electricity from where it is generated to where it is used.

Manufactured capital
Our physical assets, our offices, technology and grid infrastructure

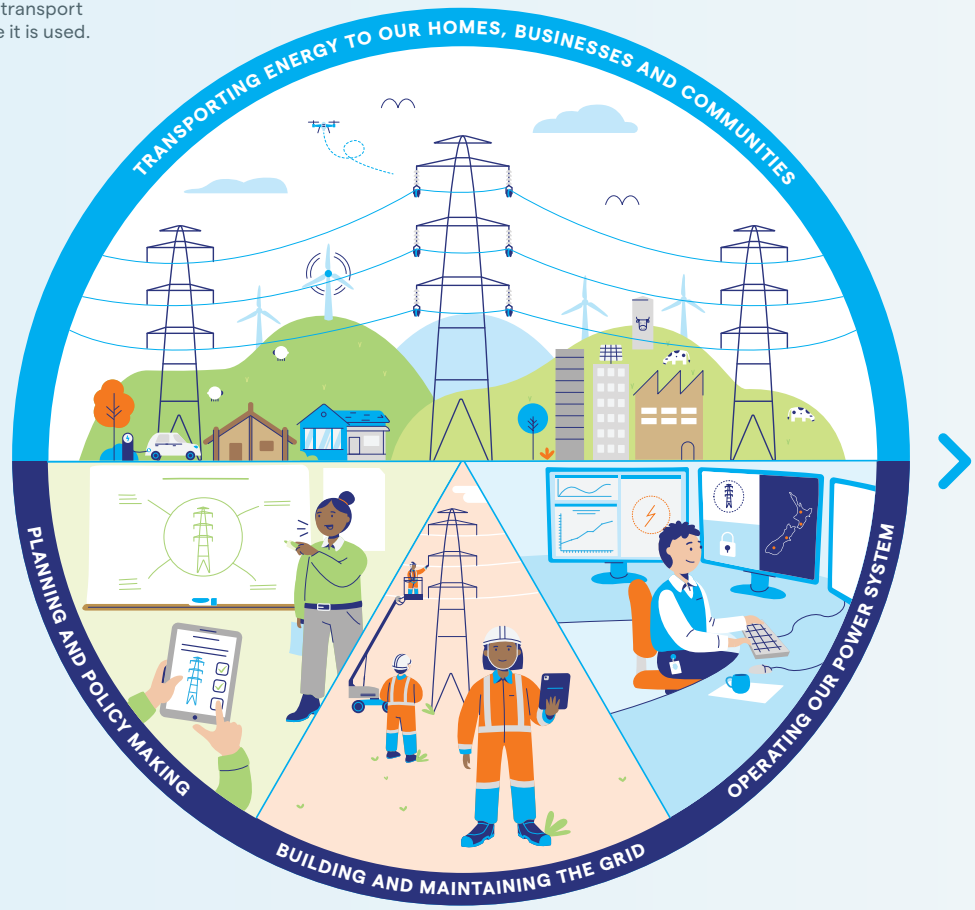
Human capital
Our employees and Service Providers; their knowledge, skills and diversity

Intellectual capital
Our knowledge translated into service specifications, standards, policies and procedures, how we innovate and teach

Natural capital
The natural resources we use and the natural and cultural characteristics of where our assets are located

Social capital
Our relationships with all stakeholders and and how we give back to communities

Financial capital
Income from our regulated and unregulated activities



Safety
The safe operation of our assets and the protection of everyone near them

People
Diversity in our approach and excellence in our operation

Relationships
Stakeholder needs are met and relationships are enduring

Sustainability
Addressing climate change, being environmental stewards and supporting our communities

Customers
Ensuring a secure and reliable supply for all connected parties

Financial
Delivering results that meet expectations and create a sustainable business

OUR PURPOSE

Whakamana i te mauri hiko tū mai Aotearoa Empowering the energy future for New Zealand

Chair column

On 1 July 2024, it was 30 years since Transpower was separated from the Electricity Corporation of New Zealand as a stand-alone state-owned enterprise (SOE), to plan, build and maintain the high-voltage transmission network. As we reflect on the past 30 years and look to the future, one thing is clear: change is constant.

Additionally, the pace of change across our sector is accelerating as the nation advances decarbonisation, and greater climate extremes require us to place an even greater focus on climate impacts as the country pursues the development of a circular economy. It's a future of new technologies, a changing workforce and more complex consumer expectations.

As Transpower enters its fourth decade as a SOE, it continues to apply its technical excellence and the lessons of its past to manage this constant change, to optimise today's performance and meet the needs of tomorrow.

Our governance and reporting goals

Our integrated report is a chance to take stock of how Transpower is delivering impact and to share potential barriers to progress.

As well as fulfilling our statutory reporting requirements as a regulated SOE and an NZX-listed company (for debt instruments), this report reflects the Board's commitment to transparency and accountability.

This year, alongside our integrated report, we have also published an enhanced climate statement as required by the Aotearoa New Zealand Climate Standards. It follows four years of voluntary climate-related disclosures. The statement has been prepared in compliance with the standards published by the External Reporting Board and outlines our climate-related risks and opportunities, and management actions.

It includes our annual GHG emissions report, previously contained in the integrated report, and produced in accordance with the GHG Protocol and ISO 14046.

Climate impacts and the new normal

Transpower's advancing work in climate resilience and adaptation are key examples of where the business is learning from the past to prepare for the future.

This year the Climate Leaders Coalition a CEO-led community of almost 90 New Zealand organisations recognised Transpower as making positive progress in meeting the requirements of its new Statement of Ambition, acknowledging our role in reducing New Zealand's overall emissions.

The Commerce Commission also agreed to exclude the electricity interruptions and outages caused by Cyclone Gabrielle from Transpower's annual performance quality measures, acknowledging that we demonstrated good industry practice during the event and that the impacts were beyond our reasonable control and normal expectations.

The Commission said the cyclone highlighted the need for a 'new normal' in asset management planning and investment strategies. It is this 'new normal' that led the business to consult on its first proactive grid resilience programme for inclusion in its proposal for the fourth regulatory control period (RCP4), including investments in cyber security and tools to support operations within ICT.

Transpower's first *Adaptation Plan for Climate Change*, as signalled in Aotearoa New Zealand's First National Adaptation Plan (2022) will also be published in September 2024.

Sustainability

Transpower's Sustainability and Climate Risk Governance Group has oversight of the sustainability and climate risk work programmes, and this is actively overseen by the Board, with six-monthly updates and annual reporting.

Transpower's first *Sustainability Strategy* was published in 2020 and has continued to evolve with the programme becoming firmly embedded in the organisation. A new work programme has been endorsed for FY2025 that will refresh GHG emission targets to ensure they account for Transpower's upcoming growth phase.

The Board is encouraging Transpower's focus on minimising GHG emissions, waste to landfill and contaminants to land and water, and on achieving a net biodiversity gain.

Power system security

The past two winters have seen periods of tight supply that were carefully managed without incident. However, in May this year, a generation shortfall over a morning peak period led Transpower to ask the public for support in

reducing demand. The fact that supply was uninterrupted is testament to the work that has been undertaken over the past few years to better enable industry communication and collaboration in times of emergency, and to the public's willingness to play their part.

However, it is a lever that can only be used on the rarest of occasions. These shortfalls will only be solved by increased investment in generation and economic incentives for flexible demand. Developing, financing and building the more than 14,000 MW of new capacity that is in the pipeline will take time. We must also adapt the system to accommodate increasing volumes of diverse, distributed, and intermittent sources of both generation and load which will require further industry collaboration.

While the recent news of utilising the significant demand response contract with

New Zealand Aluminium Smelter is a positive step for managing peak demand, the lack of a cohesive energy strategy and supporting policy frameworks for the sector that address how we will collectively manage these and other issues, will continue to be a barrier to success.

Financial results

Transpower's financial performance has been steady over the last financial year, and has remained responsive to both long-term project work and short-term demands of significant events. We continue to deliver solid returns for our shareholder, the New Zealand Government. However, given the increased investment expectations from 2025 onwards, the dividend for the 2024 year is $10 million lower than 2023.

Operating expenses were $385 million, a six per cent increase from the previous year, mainly due to higher people costs, following an increase in employee numbers to support electrification. This includes an increase in preparation and investigations to enable our increasing capital works programme in the coming years, and higher industry-related levies.

Net profit after tax was $90 million, a 29 per cent decrease from the prior year, primarily due to an increase in deferred tax expense of $34 million following the removal of tax depreciation deductions on non-residential buildings.

The Commerce Commission 2023 Input Methodology final decision, released in December 2023, confirmed Transpower's regulated asset base will be inflation indexed from its RCP4. The Board notes that this decision materially reduces the revenue that Transpower will derive over the next 10 to 15 years relative to the current nominal approach for RCP3. As a result of this, and the substantial capital works programme anticipated over the next 10 years, the Board anticipates lower dividends from the start of RCP4.

Looking ahead

For a third of its existence, Transpower has been under the leadership of Alison Andrew who stepped down on 30 June 2024.

Alison has been a leading voice in the discussion around empowering the nation's electrification which began with Transpower's 2018 publication of *Te Mauri Hiko* and continues today. She has been equally robust in her advocacy for diversity across our sector and her work to encourage more engagement with the science, technology, engineering and maths subjects in schools to shore up the future of our industry.

On behalf of myself and the Board, we thank her for her decade of service and leadership of Transpower. We wish her all the very best for her future endeavours.

I'd also like to extend my thanks to my fellow Board members, to John Clarke who has stepped into the role of Acting Chief Executive, and to the whole team of Transpower for all their work over this past 12 months.

Dr Keith Turner
Chair

Chief Executive column

There can be no question that the future Transpower has been preparing for, is just around the corner. The pace of change across the sector has accelerated as Aotearoa New Zealand electrifies its economy, decarbonises and responds to the impacts of climate change.

However, a focus on the future cannot and does not detract from performance today. Transpower's most fundamental role remains constant and that is to keep electricity flowing to communities and businesses across the nation regardless of the changes around us.

The events of 20 June, when maintenance crews failed to follow procedure, causing a tower to fall and Northland to lose electricity, made for a bitterly disappointing way to end the year.

While we are grateful no one was hurt, we understand the significance of the impact the outage has had on a community that has already been through a lot. Many people were affected and we are committed to learning from this event and making changes where they need to be made.

We extend our thanks to the landowner and Glorit community, to the businesses and people of Northland, our lines company partners, service provider crews and local generators for their support and assistance during the long hours of restoration.

We delivered 13 of our 16 targets set out in *Transpower's 2023/2024 Statement of Corporate Intent*, missing one service performance measure due to unplanned cable repair work that was required. Overall, this demonstrates our ability to deliver on our core purpose while working in partnership, achieving sustainable outcomes and protecting the health and safety of our workers.

We achieved two of our four financial measures. The two missed were return on equity and return on capital employed, both due to the tax legislation change relating to depreciation on non-residential buildings.

As we accelerate toward an electrified future, the challenges we face leave no room for complacency.

Sharing our vision for the future

Our goal is to increase visibility of the challenges and opportunities ahead and help build industry and community alignment on how we can tackle them. This work began in 2018 with the release of *Te Mauri Hiko* and continues each year.

This year our *Winter 2024 Outlook* called for a step change in investment in flexible power system resources like fast starting generators, grid-scale batteries and demand response, that can support security of supply. Shortly after publishing that report, we were forced to call on public support in managing peak demand on the morning of 10 May. The decision to do so was not taken lightly. It is a testament to our kaimahi (staff), to industry commitment and public understanding that we were able to maintain supply to everyone.

We also released a high-level analysis on the integration of offshore wind into the electricity grid. We have received around 5 GW worth of connection enquiries from developers, but we must balance this opportunity with a careful consideration of the grid integration and system stability challenges.

The years ahead

In November we delivered our proposed five-year workplan for 2025-2030 to the Commerce Commission for RCP4. In its draft decision released in late May, the Commerce Commission agreed with more than 98 per cent of our proposed expenditure plan, excluding some resilience specific expenditure. However, four per cent of this is contingent on Transpower demonstrating that we can deliver the planned work.

Expenditure on the grid to maintain the current system will need to increase over the coming years with replacement of the many assets built in the 1950s through to the 1970s, which are at end of life.

In addition, there is a significant increase in new customer connection work and major capital projects to be delivered, so we can meet the needs of the future. Overall, the make-up of this work is shifting from predominantly maintenance and refurbishment to significant new builds and upgrades.

Affordability is top of mind for everyone. While our contribution to the total electricity bill remains small, increasing electricity costs are a challenge for consumers. We are highly conscious of the impact of this and the need to balance prudent investment against current and future needs.

The investment outlined in our RCP4 proposal is essential to enable us to support continued electrification and will enable us to avoid more costly and pressured expenditure in the future. However, we will continue to focus our efforts on exploring the potential for non-transmission alternatives to defer grid investments, and on driving internal improvement.

Driving productivity improvements

We expect to deliver approximately 80 per cent more work in RCP4 than we have during RCP3.

As a result, the business continues to build on internal initiatives to ensure our processes are scalable and driving productivity improvements. We are undertaking a review of our end-to-end delivery processes to ensure we can scale efficiently and support the ongoing productivity improvements needed to deliver this growth. As part of this, we have identified opportunities for improvement in our customer connections management process to handle the increase

in volume of connection enquiries that has occurred over the last four years.

Further improving our process to set milestones for a connection will ensure the framework remains efficient and fit for purpose – directing resources to well-developed projects.

It will provide certainty to investors supporting Aotearoa New Zealand's position as an attractive place to invest and supports the Government's desire to increase the amount of new renewable generation.

Working together to accelerate the change

The pace of growth and changing make-up of our work has meant we've had to look closely at how we deliver. We are taking an enterprise-wide approach to reviewing our processes and systems, ensuring we are delivering in the most efficient way possible and making the best use of the resources available to us.

We continue to evolve our Connection Management Framework and by taking a more collaborative and coordinated approach to planning, we have been able to deliver regional development plans for consultation in record time.

We are working closely with our service providers on a workforce development strategy to tackle the challenge of building our future workforce. The changes we are making in our business, and in how we are working with our customers and communities will be critical to us meeting the challenge of electrification.

It is clear that Transpower must focus its attention on its core work as Grid Owner and System Operator. For this reason, we took the decision in May to divest the gas and carbon trading platform emsTradepoint. We are currently running a sale process and will advise the outcome in due course.

Changes across the leadership team

In August 2023, we farewelled our long-serving General Manager Operations, Stephen Jay after nine years with the business. Steve's departure presented the opportunity to look at the structure of our leadership team as we prepare for the step change we need to take to meet the needs of the future.

As such, we have created a new division called Future Grid which is focused on what the transmission network and power system will look like out to 2050 and support the development of a more optimised transition path. John Clarke, who has been on the leadership team for many years, has been appointed to the role of Executive General Manager Future Grid. Late in June I was pleased to announce the appointment of Matt Webb as Executive General Manager Grid Development, commencing in August.

Chantelle Bramley, formerly our General Manager Strategy and Customer, was appointed to the role of Executive General Manager Operations. Her previous role was disestablished, with responsibilities divided between other executives. The customer and commercial portfolio now sits with the Executive General Manager Customer and External Affairs, and the strategy function with the Executive General Manager Strategy, Regulation and Governance. These changes across the newly named Executive Leadership Team, came into effect in February. I'd like to extend my thanks to the whole Executive Leadership Team for their support this year, and to our Board of Directors and Chair, Dr Keith Turner.

Departing at a time of growth and strength

It has been an enormous privilege to lead this organisation for the past 10 years and I leave confident in the strength of the entire team at Transpower and in the organisation's preparedness for, and dedication to, the future we face.

Our people work incredibly hard every day to deliver against the values of this organisation. The Transpower whānau is courageous, caring and inclusive; it values careful consideration and decisive action. It is unquestionably, a great place to work.

I want to thank everyone for their support over the years and their whēro (challenge) that keeps Transpower continually striving to do better.

And to all the people who wear the logo with pride – thank you for your 24/7 delivery on our purpose: Whakamana i te Mauri Hiko, tū mai Aotearoa, empowering the energy future for New Zealand.

Alison Andrew
Chief Executive
Until 30 June, 2024

John Clarke
Acting Chief Executive
Commenced 1 July, 2024

The year in numbers

▼ 29%
$90m
NET PROFIT AFTER TAX

▲ 2%
$930m
REVENUE

▲ 25%
$475m
CAPITAL EXPENDITURE

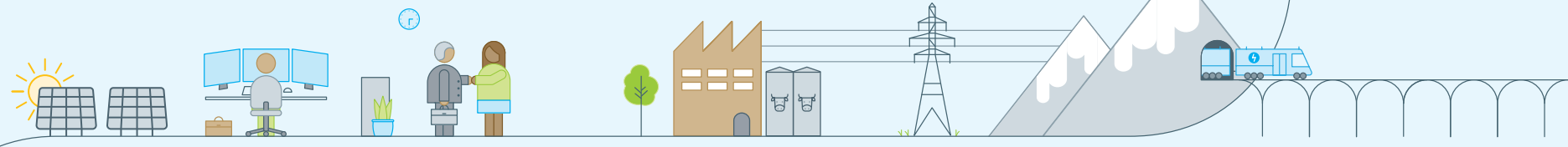
▼ 44%
$18m
TAX PAID

95%
STATED 2030 GHG EMISSIONS REDUCTION TARGET ACHIEVED

$613m
MAINTENANCE, REPLACEMENT AND ENHANCEMENT EXPENDITURE

$116m
DIVIDENDS PAID OUT TO THE CROWN

$477m
FUNDS RAISED IN BOND ISSUES



$4.7 billion
PROPOSED SPENDING FOR RCP4

91%
LANDOWNER SATISFACTION SCORE

72%
CUSTOMER SATISFACTION SCORE

969
STAFF

$720,000
FUNDS GRANTED TO COMMUNITY PROJECTS

14,500
NEW PLANTS AROUND OUR TAKAPŪ SUBSTATION

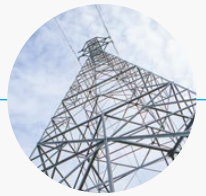
Milestones

July 2023

Transpower features in BBC's 'Humanising Energy'

August

Transpower and Unison win Energy Excellence Award



Work begins to remove transmission lines over Spotswood

September

Transpower releases high-level analysis on the integration of offshore wind into the grid

October

Transpower announces plans to replace 45 cable joints between Brownhill and Pakuranga

Rotohiko 33 MW capacity battery commissioned

STAR Awards held

November

Transpower releases its *Winter 2024 Outlook*

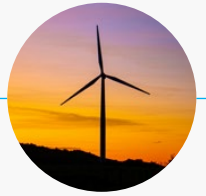
Commerce Commission approves $393 million Net Zero Grid Pathways Phase One investment

February 2024

Murihiku Southland Electrification Development Plan published

Norwood Grid Exit Point (GXP) becomes first new GXP since 2013

December

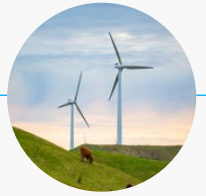


Mercury Energy 43 MW capacity wind farm at Kaiwera Downs commissioned

RCP4 proposal delivered to the Commerce Commission

March

Transpower's Connection Management Framework review released for consultation



Partial commissioning of Meridian Energy 176 MW wind farm at Harapaki

April

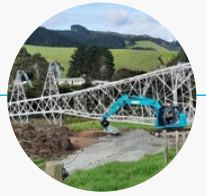
Transpower wins Red Hat Award

May

Preferred solution for the rebuild of the Redclyffe substation released for consultation

Kiwis reduce power use to avoid grid emergency

June



Northland tower fall

The environment we operate in

The decarbonisation of Aotearoa New Zealand is well under way with a shift toward greater electrification across the economy and increased renewability of the electricity system. It is within this context that Transpower continues to deliver on its dual role as Grid Owner and System Operator, enabling both the energy transition and a secure and sustainable electricity system.

As Grid Owner, Transpower must enable the rapid connection of new renewable energy sources and increase the capacity of the grid to support these connections as well as connecting new demand. As System Operator, Transpower must continue to operate a stable power system that seamlessly integrates more highly distributed and intermittent energy sources while maintaining steady voltage, frequency, power quality and supply in real-time, 24/7.

The company's strategy *Transmission Tomorrow* and annual business plan are geared toward enabling this transition and delivering on Transpower's dual role, while responding to the opportunities and challenges that arise within the operating environment.

Both are set against the strategic context outlined in Transpower's *Whakamana i te mauri hiko (WiTMH) – Empowering the Energy Future for New Zealand (2020)*. *WiTMH* explores the country's energy transformation in depth, outlining the potential electricity demand and supply scenarios that could impact the nation's energy future out to 2050.

Since its publication, Transpower has continued to monitor global and national trends and the impact they are having on the energy sector and pace of decarbonisation.

The international environment

In October 2023, the International Energy Agency released a report, *Electricity Grids and Secure Energy Transitions*, which requires a doubling of global investment in electricity grids to meet global climate and energy goals. This shows the importance of distribution and transmission networks to support the global trend of electrification.

Emissions reduction also continues to be a concern worldwide. Following the COP28 in Dubai and considering the increasingly tangible impacts of global warming, more countries have taken firm commitments to move away from fossil fuels and decarbonise their economies. Internationally, we have seen significant energy policies, such as the United States' Inflation Reduction Act and the European Commission's REPowerEU, driven by governments to promote and incentivise the adoption of clean energy.

The importance of energy security is also growing against a backdrop of geopolitical tension and the global energy crisis, leading to ongoing growth in clean energy investment. The global drive for electrification is impacting supply chains worldwide, driving up prices and increasing lead times.

Aotearoa New Zealand

Here in Aotearoa, we have felt the impact of these events, and as a country increasingly recognise the important role electrification and renewable energy play in meeting our decarbonisation goals. To date, Aotearoa New Zealand continues to track against the *WiTMH* 'Accelerated Electrification' scenario, which estimates a 68 per cent increase in electricity demand will be needed by 2050.

The pace and scale of electrification is being driven by a myriad of factors, including declining new technology costs, consumer preferences, investor priorities, regulatory change, climate impacts and government targets–the latter of which include wanting 50 per cent of total energy use to be renewable by 2035 and a doubling of renewable electricity generation by 2050.

Demand is growing

Key sectors expected to drive demand growth are transport and process heat.

Despite a recent slow-down in electric vehicle uptake, long-term projections for the electrification of the transport sector remain highly positive, with the cost of batteries falling and manufacturers increasingly including plug-in options in their fleet. The pattern is much the same for process heat with strong interest in electrification influenced by the previous government's co-funding to accelerate decarbonisation of business, phase-out of coal-fired boilers and the Emissions Trading Scheme.

Over time, demand for electricity will continue to increase, due to general population and economic growth. Plus, there are emerging signals from the market for future growth from potential new load such as data centre developments and green hydrogen for aviation.

So too is supply

In terms of electricity supply, connection requests for renewable utility-scale generation are greater than what is required to meet our 2050 forecast demand. New technologies and new business models are developing at pace; a virtual power plant was commissioned in a pilot project between solarZero and Ara Ake and began operating in winter 2023, the first grid-scale solar farm was commissioned in October and the first utility-scale battery connected to the power system was commissioned this year.

Transpower also expects to see growth in distributed energy resources, on both the supply and demand sides, within distribution networks. Most new generation and much of the new demand connecting to the system will be digital, making use of power electronics technology and internet-based control and communications systems, requiring changes in how the system operates. The digitisation of the electricity system also increases the risk from cyber threats, which must be mitigated.

Peak demand is increasing, and instances of high winter peaks are becoming more numerous each year. The elevated dry year risk we are currently facing is another energy challenge to solve – where prolonged dry spells see Aotearoa's hydro lakes fall below average levels, affecting Transpower's ability to meet energy demand. This can occur during any season but is intensified in winter when electricity demand is highest. As the nation shifts to a highly renewable and more intermittent electricity supply, increased investment in flexible resources such as batteries, fast start peaking generation and demand response will be needed to manage the winter peak challenge. Longer term, the energy system requires renewable storage options to eliminate the need for ongoing thermal generation to cover dry winters.

Significant new investment is required along with legislative change

To incorporate new supply and continue to deliver electricity to where it is needed, significant investment in transmission and distribution infrastructure is required. Transpower estimates that between 50 and 70 new grid-scale connections, each requiring new lines and potentially new substations, will be required between now and 2035.

The Government intends to make it easier to gain consent for new infrastructure through fast-track legislation. However, there are numerous other legislative requirements Transpower must also navigate, including those related to land access rights and other environmental legislation.

Community support a key factor in achieving success

Working closely with landowners who are affected by new infrastructure and broader community sentiment will become even more of a focus for the business in the years ahead. Research conducted in 2023 shows understanding and acceptance are critical to retaining a 'social licence to operate' and allow for the grid investment required to meet the demands of today and the future. Increasingly, winter peaks, disruptions from severe weather events and increasing power bills are focusing consumers' attention on the electricity energy system and security of supply.

As homes and communities become increasingly reliant on electricity across all aspects of daily life, the impact of a power outage also increases. While data shows the number of outages is decreasing, this is cold comfort to people experiencing periods when they can no longer run their heating, charge their electronics, cook meals or run a business.

What's more, the overall cost of living continues to increase including in areas such as council and interest rates, insurance, fuel, food, and water charges. Electricity networks are also facing increasing costs and these will be passed onto consumers. When power outages occur due to weather, natural hazards, equipment failure or human error, consumer support will be harder to maintain.

It is against this backdrop that Transpower must continue to maintain and invest in the grid and system operations, while continuing to build trust with consumers.

This *FY2024 Integrated Report* provides examples of where and how Transpower is responding to these challenges and the opportunities presented by the electrification of Aotearoa New Zealand.

Northland tower fall

On 20 June, Transpower's service provider in the Auckland and Northland regions, Omexom, was completing routine maintenance on a tower near Glorit. The specifications and procedures for this type of work were not followed which caused the tower to fall and a Grid Emergency to be declared.

Some 100,000 consumers lost power.

Within a couple of hours, Transpower and crews from Omexom were able to provide partial restoration with the System Operator able to reconfigure the power system to provide power including from local sources. However, it was unable to supply all the region and local lines companies were asked to reduce power use on their networks over the hours and days that followed.

The erection of a temporary tower enabled full restoration of power on 23 June.

What happened was unacceptable and we apologise to all those who were affected. With investigations still under way, all the lessons to be learnt from this event are becoming clear. We will identify where changes need to be made, make them, and continue to work with the Northland community on the development of a Northland Resilience and Reliability Plan.

We know that any power outage, big or small, has impacts on individuals, families, businesses and communities.

We wish to sincerely thank everyone who worked on the replacement tower along with local lines companies Northpower, Top Energy and Vector and local generators Ngāwhā, Manawa and KTA Solar for their assistance in managing the situation.

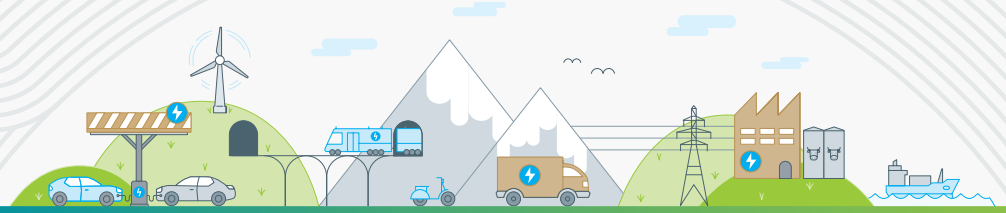
We also thank the large industrial companies in the region that took steps to reduce their power use, along with services like the hospital that used standby generators to allow the available electricity to go further.

Finally, a special thanks to the landowner for facilitating access to the site, especially given the extent of the civil works required, and to the local Glorit community for their support of our team on the ground.

Our strategic framework

OUR CONTEXT

Te Mauri Hiko



OUR PURPOSE

Whakamana i te mauri hiko tū mai Aotearoa
Empowering the energy future for New Zealand

OUR STRATEGY

Transmission Tomorrow

OUR STRATEGIC PRIORITIES

- Deliver services that meet our customers' needs
- Facilitate delivery of an optimised transition path for Aotearoa New Zealand's energy system
- Enhance our social licence to operate
- Accelerate electrification through our asset investments
- Advance our organisational effectiveness

OUR PERFORMANCE

- **Safety:** The safe operation of our assets and the protection of everyone near them
- **People:** Diversity in our approach and excellence in our operation
- **Relationships:** Stakeholder needs are met and relationships are enduring
- **Sustainability:** Addressing climate change, being environmental stewards and supporting our communities
- **Customers:** Ensuring a secure and reliable supply for all connected parties
- **Financials:** Delivering results that meet expectations and create a sustainable business

OUR BEHAVIOURS

Nimble and considered › **Inclusive and decisive** › **Courageous and caring**

Our strategic priorities

Transpower's strategic thinking is framed by a clear understanding of the local and global drive to decarbonise and the potential ways this energy future could be achieved.

The role Transpower plays in enabling electrification is vital in delivering a safe, efficient, affordable supply of electricity today and into the future.

We hold ourselves accountable to key initiatives that govern our goals and deliverables in the short, medium and long term.

This allows us to act in both a systematic and responsive fashion as we tackle the challenges ahead in decarbonising Aotearoa New Zealand.

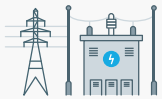
In FY2024, our five strategic priorities and 10 key project initiatives were as follows.

Progress against our strategic priorities

Strategic Priority	Initiative Name	Status	Comments
 **Enhance our social licence to operate**	Deliver RCP3 plan and service measures and complete a successful RCP4 submission	✓	RCP3 delivery programme on track; delivery was above business plan for both capital projects and maintenance. Grid service measures were broadly achieved, although affected by the events of late June. Despite this, Transpower achieved the least number of interruptions to our customers in our history. This continues the positive reducing trend in interruptions.
		✓	RCP4 proposal submitted to the Commerce Commission, with a draft decision released in May 2024.
	Provide an effective System Operator service and support the development of a solution to peaking issues	✓	Released *Winter 2024 Outlook* and comunicated with industry via industry forums.
		✓	Worked with regulatory and policy-making agencies on developing potential solutions for winter peak capacity challenges.
 **Deliver services that meet our customers' needs**	Review prioritisation process for customer and reliability related work	✓	A prioritisation framework has been developed; it is being refined and embedded via our project to improve end-to-end delivery efficiency.
		✓	Connection Management Framework review completed, effectively managing queue for investigation resource and increasing throughput.
		✓	Customer engagement score of 72% in June 2024 (target 71.8%).
	Influence the development of an effective market design to support the transition to 100% renewables	✓	Supported work in developing the information, market changes and data required to operate the future electricity system.
		✓	Worked with industry, including Flex Forum and Electricity Networks Aotearoa Future Networks forum, on ongoing industry workstreams.
		✓	Supported the Electricity Authority to develop common quality consultations on the future operation of New Zealand's power system, specifically relating to common quality requirements, as specified in the Electricity Industry Participation Code (the Code), and submitted on future system operations.
 **Facilitate delivery of an optimised transition path for Aotearoa New Zealand's energy system**	Advocate for new frameworks and relevant changes to the regulatory investment decision-making process to support rapid electrification	✓	Provided analysis and feedback (including submissions) on regulatory and policy making including the Commerce Commission's Input Methodologies Review and the Government's resource management reform (including submissions on the review of the National Policy Statement for Electricity Transmission and the National Environmental Standards for Electricity Transmission).
		✓	Supported the Ministry of Business, Innovation and Employment on its consultation to advance New Zealand's energy transition.
	Support development of a New Zealand energy strategy to further electrification at pace	✓	Completed a research report on consumer understanding of Transpower and electrification in the energy transition.

Key:

- ⊗ Not achieved
- ◔ Some progress
- ◑ In progress
- ◕ Significant progress
- ✓ Achieved

Strategic Priority	Initiative Name	Status	Comments
		✓	Released a discussion paper on the future role of the High Voltage Direct Current (HVDC) link.
		✓	Released a study on enabling the potential for offshore renewable energy generation and impacts on the National Grid.
 **Accelerate electrification through our asset investments**	Drive electrification through thought leadership and partnerships with the Energy Efficiency & Conservation Authority (EECA), electricity distribution businesses (EDBs) and innovators	✓	Published Power Purchase Price Agreement (PPA) paper which advocates for use of Corporate Buyer PPAs to drive new renewable electricity generation investment.
		✓	Commenced regional development strategies with customers and local stakeholders in western Bay of Plenty, Southland (completed) and Queenstown.
		✓	Worked with the Energy Efficiency and Conservation Authority (EECA) on its work programmes on regional decarbonisation and process heat.
	Finalise analysis on the next phase of Net Zero Grid Pathways	◑	Established a Future Grid division to support longer-term planning to enable the future transmission grid.
		◑	Agreed approach with the Commerce Commission for the next three stages of Net Zero Grid Pathways and HVDC consultation.
 **Advance our organisational effectiveness**	Embed and drive value from data and data analytics capability	◑	The Enterprise Business Capability Programme is under way focused on streamlining Transpower's business processes and information tools. A roadmap has been developed, initial team has been established and procurement for investigation partner is under way.
		◑	A business process modelling solution has been implemented. Associated business process architecture to embed this across the organisation is being developed.
		◑	Successfully delivered data and analytics modernisation, delivering the Cloud Data Platform and migration of core systems and reports from the old Oracle data warehouse. Started the final data and analytics migration of the market system data warehouse.
	Deploy initiatives to support the capacity build required for RCP4 and forward work programme	◑	Service providers are developing policies, processes and initiatives to retain and lift their workforce capacity to meet demand. Trainee uptake has increased significantly, along with increased levels of immigration.
		✓	Developed a transmission sector workforce strategy which supports workforce growth of both Transpower and our core grid service providers.
		✓	Defined and completed the programme of work for increased promotion of our business as a place of employment.

Key:

- ⊗ Not achieved
- ◔ Some progress
- ◑ In progress
- ◕ Significant progress
- ✓ Achieved

Engaging and connecting: Our stakeholders

The work we do has many different physical and organisational touchpoints, and we rely on close connections with our stakeholders. We engage continuously to ensure we understand their interests, strategies and activities so we can consider this within our operations and planning.

We aim to provide as many opportunities as possible to meet our stakeholders in person where possible and hold regular in-person meetings and events, hui, our biannual stakeholder function and regular *Consumer* Advisory Panel forums.

In addition to operational notices such as Customer Advice Notices (CANs), we provide a monthly round-up of news and events via our emailed bulletin *News from Transpower* and regular updates on our website, including dedicated pages for key projects.

Those who take an active interest in our work can follow us on social media, subscribe to media releases and receive regular digital updates from a range of projects on our **Subscribe and Updates** page.

We measure our engagement approach through annual surveys and feedback with key stakeholder groups, including our landowners, customers and market participants, and in our role as System Operator we deliver an annual education and engagement plan to the Electricity Authority Te Mana Hiko (the Authority), as well as monthly and quarterly performance reports and an annual self-review.

Our stakeholders

Landowners and communities

Our key stakeholders in the community are those with towers and lines on their properties or who neighbour our substations. Others include those in wider communities impacted by our assets, such as the Department of Conservation as a landowner; landowner representative bodies such as Federated Farmers, Horticulture New Zealand and the New Zealand Forest Owners Association; and developers impacted by our assets.

Service providers and suppliers

We contract service providers to build, maintain and service our transmission lines and substations. They also provide project services, engineering design consultancy, facilities management, IT services and equipment.

Customers

Our customers are companies that connect directly to the National Grid including distribution companies, electricity generators and major industrial companies.

Electricity industry and major users

We liaise extensively with the wider sector, including electricity market participants and customers in Aotearoa and abroad.

Central and local government

As a state-owned enterprise, the Government is a key stakeholder, as are local authorities, which manage compliance of our work with the Resource Management Act 1991.

Iwi

Some of our assets are located on land owned by mana whenua, or land where mana whenua have strong cultural connections.

Investors

Transpower is listed on the NZX debt market and has numerous investors who hold debt securities in multiple jurisdictions.

Regulators

Our regulatory stakeholders include the Commerce Commission (regulating our economic return and performance, and representing the rights of consumers), the Electricity Authority (regulating our electricity market, setting industry standards and transmission pricing), the Financial Markets Authority (regulating our debt issuance) and the Reserve Bank (regulating the insurance activities of the company's captive insurer – Risk Reinsurance Ltd).

Consumers

All electricity consumers are affected by the work we do to bring electricity to communities.

Materiality assessment: Understanding what matters most

Understanding what matters most to our stakeholders is vital to our operations at Transpower.

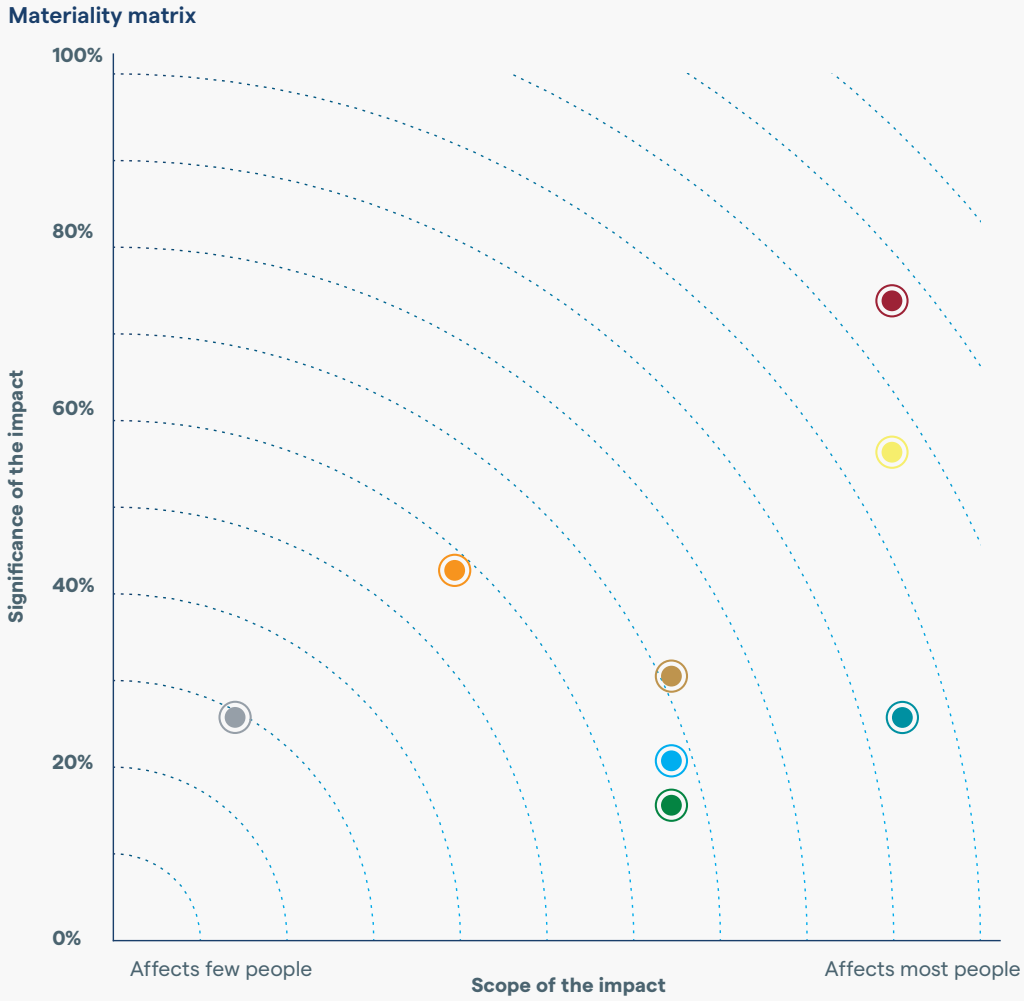
We first undertook an extensive materiality assessment with independent consultancy Proxima in 2021. Since then, we have evolved our understanding of material issues to ensure we are reflecting updates to the Global Reporting Initiative[3] standards and to deepen our understanding of the positive and negative impacts of each issue, their potential scale, scope and severity, and likely risk of occurrence.

Our three top materiality issues have not shifted since our first assessment: they are climate change mitigation; our work to support customers and consumers, whether through reducing the possibility of disrupted supply or enabling the connection of growing numbers of customers; and our community and landowner relationships.

Other material issues identified include advocacy, environmental stewardship, future workforce, good governance and cyber security. Our response to these issues is highlighted across this report.

For further detail, please see our material issues index on page 30, or visit our website **What matters most? | Transpower**

- Climate change mitigation and adaptation
- Advocacy
- Good governance
- Future workforce
- Environmental stewardship
- Customers and consumers
- Community and Landowner relationships
- Cybersecurity



3 The independent, international organisation that provides a common language for reporting impacts. GRI - Home **(globalreporting.org)**

Research highlights public understanding of electrification and Transpower

As we plan the growth of the grid to support increased electrification, we need to maintain a clear view on how we are perceived as an organisation. We need to understand and respond to stakeholder sentiment regarding our social, environmental and economic impacts.

For this reason, we conducted new research this year to build our understanding of how electrification, infrastructure development and Transpower itself are perceived across the wider population.

The research used both qualitative and quantitative methods, including focus groups and a nationwide survey of more than 2,000 people. Participants were selected to ensure the research was representative of the general population.

The results serve as a stark reminder of the challenge that exists for the whole industry when it comes to maintaining community support for our work.

By and large, the people of Aotearoa New Zealand are unsure about electrification —what it is, what it involves and how it may impact them. When provided with more detail and context, they were supportive of the overall aims of electrification, but raised concerns about the cost implications and equity of the transition. In short, electrification is not a topic that people are getting overly excited about.

This general lack of awareness and understanding was also seen in relation to Aotearoa's net-zero targets, how the electricity system operates, who the players are and Transpower itself.

When we asked about the need for more infrastructure to enable the country's transition, respondents were pragmatic, citing factors such as reliability, environmental benefits and future growth being reasons to support new builds. However, this support dropped as awareness of the potential impacts on individuals grew. Visual impacts, environmental impacts and perceived safety issues were the primary obstacles to people's support for new infrastructure 'near to me'.

Despite this, there was widespread agreement of the need to invest; the challenge arises when people considered themselves to be personally affected.

We have been sharing this research with others in the industry and are looking at both individual and shared initiatives to help build greater public awareness and understanding. Additional information gathered on how people wish to receive information, is informing our communications and engagement work.

Our goal is to help our communities gain a greater understanding of what is coming and what it means for them. Only through increased information and engagement can we hope to gain the acceptance we need for the work that is required.

The research will be repeated in 2025 to track change over time.

Aligning to Sustainable Development Goals

Transpower is a member of the Sustainable Business Council and New Zealand's Climate Leaders Coalition. In addition to our materiality assessment, we use the World Business Council for Sustainable Development's *Sustainable Development Goals Roadmap for Electric Utilities* (March 2021) to help inform where we can have the greatest impact across the following:

Climate and energy
- Decarbonise electricity generation in line with limiting global warming to 1.5°C
- Enhance electricity system flexibility, resilience, and efficiency

People and communities
- Ensure access to affordable, reliable, sustainable, and modern electricity services for all
- Attract and retain a diverse and inclusive workforce
- Leave no one behind in the energy transition and respect human rights

Nature
- Protect, restore, and promote sustainable use of ecosystems and drive net biodiversity gains

Circular economy
- Accelerate the transition to a circular electric utility sector

Our work also contributes directly to four of the United Nations Sustainable Development Goals and indirectly to a further five.

Direct impact

SDG 7
Ensure access to affordable, reliable, sustainable modern energy for all.

SDG 9
Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation.

SDG 13
Take urgent action to combat climate change and its impacts.

SDG 15
Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat deforestation, and halt and reverse land degradation and halt biodiversity loss.

Indirect impact

SDG 5
Achieve gender equality and empower all women and girls.

SDG 6
Ensure availability and sustainable management of water and sanitation for all.

SDG 8
Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

SDG 11
Make cities and human settlements inclusive, safe, resilient and sustainable.

SDG 12
Ensure sustainable consumption and production patterns.

Key risks and related strategic priorities

Transpower's risk management is enterprise-wide and covers strategic, operational, commercial and financial aspects.

Transpower uses bowtie risk analysis and semi-quantitative risk assessment, enabling a comprehensive understanding of the risks faced and the control environment used to manage those risks. Our key risks align with the materiality issues identified, as illustrated by the following table.

Key risks are reviewed and reassessed on a quarterly basis by management and the Audit & Risk Committee. Further context for each of the key risks including what Transpower is doing to mitigate the risk is available on our website **Risk management | Transpower**.

	Materiality issues addressed							
Key risks	Climate change mitigation and adaptation	Customers and consumers	Community and landowner relationships	Advocacy	Good governance	Environmental stewardship	Future workforce	Cyber security
Workplace injury or death at one of our sites or involving our assets			⊙		⊙			
Property damage, serious injury or death of a member of the public at one of our sites or involving our assets		⊙	⊙		⊙			⊙
Serious harm to the environment			⊙			⊙		
Significant power supply interruptions	⊙	⊙	⊙					
Power system operations	⊙	⊙	⊙		⊙			⊙
Cyber security breach					⊙			⊙
Not being able to find the resources we need to effectively deliver our services	⊙	⊙		⊙			⊙	
Not having the right grid at the right place at the right time	⊙	⊙		⊙			⊙	
Reputational risk	⊙	⊙	⊙			⊙	⊙	
Financial risk		⊙			⊙			⊙
Supply chain risk		⊙			⊙		⊙	⊙

Material issues index

Material issue	Sustainable Development Goals	Material impacts	Material impact definition	Relevant section of report
Climate change mitigation and adaptation • Manufactured capital • Human capital • Intellectual capital • Natural capital • Social capital		Support the transition to a low carbon economy	Electrification leads to decarbonisation, enabling net zero carbon goals	• Optimising our assets
		Responsibility for greenhouse gas emissions	GHG emissions from operating and building our assets, focusing on minimising transmission losses and SF_6 gas use across the grid and influencing our supply chain emissions	• A sustainable business
		Promoting renewable energy generation and carbon reduction initiatives	Reducing the impacts of the electricity system by enabling and incentivising renewable energy generation	• Optimising our assets • Working in partnership
		Climate change impacts from use of non-renewable energy sources	Ongoing role of thermal gas and coal electricity generation in New Zealand's electricity system	• Working in partnership
		Power outages caused by climate-related events	Impact of climate change on New Zealand's electricity transmission infrastructure, and potential electricity supply disruptions	• Optimising our assets • See *Climate Statement*
Customer and consumers • Manufactured capital • Human capital • Intellectual capital • Natural capital • Social capital • Financial capital		Impact to consumers due to disrupted electricity supply	Planning for potential power supply disruptions arising from insufficient electricity	• Working in partnership
		Increasing the electricity supply by connecting a growing number of new generation customers together with meeting increasing demand	Facilitating and enabling the increased demand for new electricity generation and load connections for customers	• Optimising our assets • Working in partnership
		Electricity affordability	Increasing the capacity and resilience of the transmission network in a transparent way to support electricity affordability	• Optimising our assets
Community and landowner relationships • Manufactured capital • Human capital • Natural capital • Social capital		Visual impact of our towers and transmission lines	Communities are affected by the physical presence of transmission lines and associated structures	• A sustainable business
		Potential safety impacts associated with the installation, operation and maintenance of transmission lines	The presence and functioning of transmission lines on or across some areas may potentially cause harm to people and communities	• Optimising our assets • Working in partnership

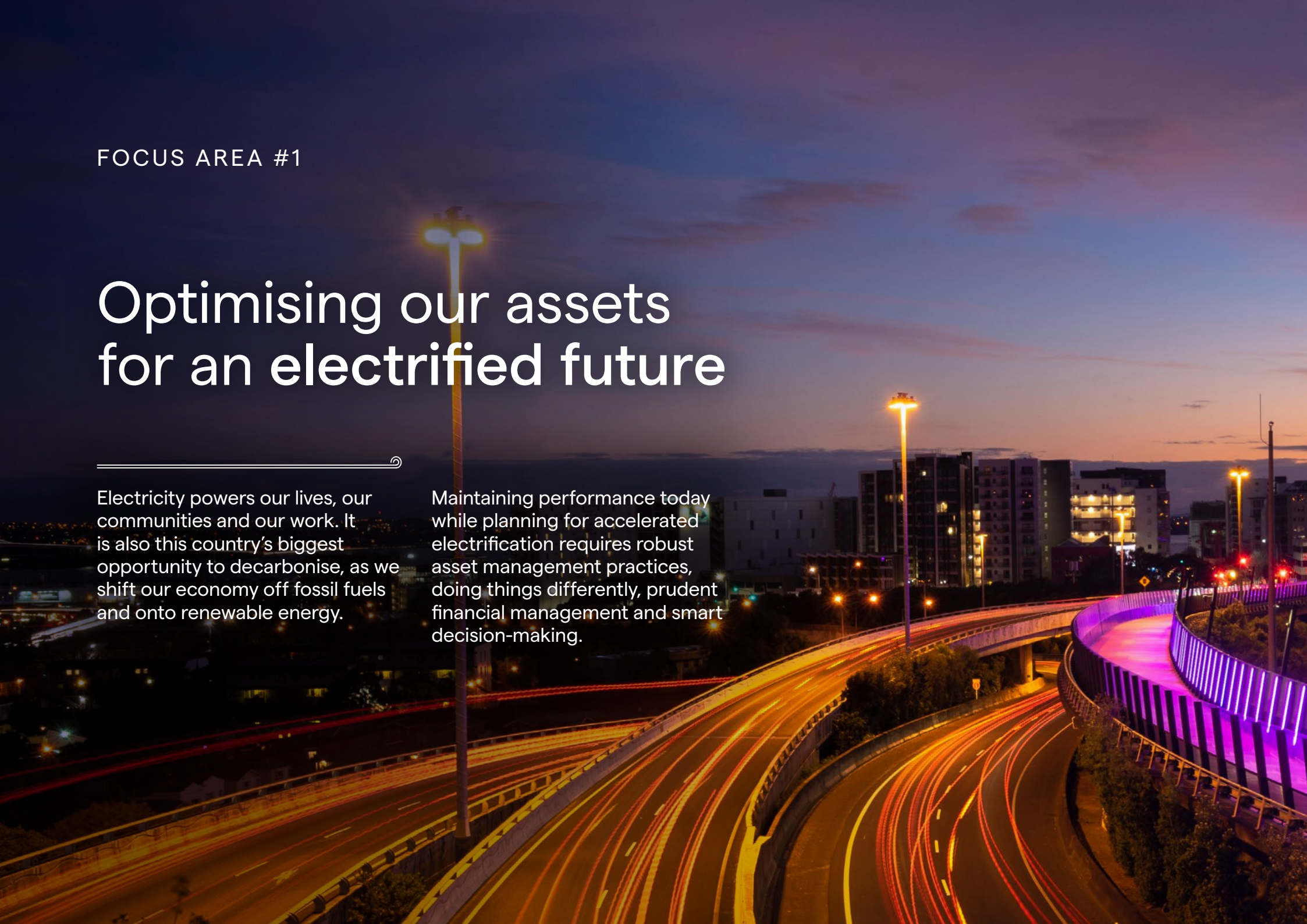
Material issue	Sustainable Development Goals	Material impacts	Material impact definition	Relevant section of report
Advocacy • Human capital • Intellectual capital • Natural capital • Social capital • Financial capital		Increased adoption of new technologies in the electricity market	Supporting research and innovation and adopting new technologies to improve the operational performance of the National Grid	• Optimising our assets • A sustainable business
		Regulatory changes to achieve a more efficient and effective electricity system	Proactive engagement and advocacy to ensure the ongoing development and maintenance of the National Grid infrastructure	• Working in partnership
Environmental Stewardship • Manufactured capital • Human capital • Natural capital • Social capital		Harm to the natural and physical environment	Minimising adverse effects on the environment associated with the operation and maintenance of the National Grid	• Working in partnership • A sustainable business
		Pollution of the environment from Transpower's operations	Operating and maintaining Transpower's assets can inadvertently result in pollution or contamination to air, land and waterways	• A sustainable business
Future workforce • Human capital • Intellectual capital • Social capital		Low employee retention rate due to tight labour market and low unemployment	Addressing current and future electricity sector skill shortage challenges through training, remuneration and personal development opportunities	• A sustainable business
		Workforce competency	Ensuring the ongoing competency and wellbeing of the electricity sector workforce through training and skills development	• A sustainable business
		Insufficient talent attraction	A lack of structured career development leads to an inability to attract potential employees affecting organisational culture and success	• A sustainable business
Good governance • Human capital • Intellectual capital • Social capital • Financial capital		Long-term planning and integrated thinking	Ensuring longer-term electrification and decarbonisation strategy is not delayed by short-term financial drivers	• Optimising our assets • Working in partnership
Cybersecurity • Manufactured capital • Human capital • Intellectual capital		Risks to the electricity grid and market due to cyber attacks	Potential social and economic effects from cyber attacks on the electricity market and the integrity of the National Grid	• Working in partnership

FOCUS AREA #1

Optimising our assets for an **electrified future**

Electricity powers our lives, our communities and our work. It is also this country's biggest opportunity to decarbonise, as we shift our economy off fossil fuels and onto renewable energy.

Maintaining performance today while planning for accelerated electrification requires robust asset management practices, doing things differently, prudent financial management and smart decision-making.



Performance markers

Addressing our material issues

- Climate change mitigation and adaptation
- Customers and consumers
- Advocacy

Delivering on our strategic objectives

- Deliver services that meet our customers' needs
- Facilitate delivery of an optimised path for Aotearoa New Zealand's energy system
- Accelerate electrification through our asset investments
- Enhance our social licence to operate

Enhancing the value of our capitals

- Manufactured capital
- Intellectual capital
- Human capital
- Social capital
- Financial capital

Overview

Planning our next five years of investment

In November 2023, we delivered our proposed five-year workplan to the Commerce Commission for the years from April 2025–30 March 2030, for RCP4.

Our proposal sets out up to $4.7 billion of spending, in constant 2022/2023 dollars, for the work needed to deliver a sustainable, reliable and safe network that is enhanced to meet future needs and is resilient when major events occur.

RCP4 requires an intensified work programme to replace or upgrade ageing assets, many of which were built between the 1950s and 1970s. This work is also an essential foundation for any future enhancements to the grid to support electrification. Alongside the growing work programme, costs reflect the impact of higher interest rates and inflationary pressures throughout the supply chain.

Our work to develop this proposal began in 2021 and involved significant consultation with our customers and stakeholders. It was reassuring to have an independent verifier review our proposal and conclude it is consistent with good electricity industry practice.

The Commerce Commission is consulting on its draft decision, which was to approve more than 98 percent of our proposal. We expect a final decision in November.

A stronger focus on resilience and adaptation to climate impacts

Within our RCP4 proposal we have placed an increased emphasis on planning and delivering a resilient network that avoids extended outages and restores power quickly when major events occur.

When it comes to climate-related risks, we know our assets will become increasingly vulnerable, and we know what we need to do to mitigate the effects. We primarily provide a resilient network by strengthening assets as we refurbish and replace them. However, we recognise the need to be more proactive.

We have developed proactive resilience programmes for our vulnerable and critical assets and run regular pan-industry exercises to test our responses in an emergency.

This year we will publish our first *Adaptation Plan for Climate Change*, as required by the Government's *National Adaptation Plan*. In it, we will outline the principles and actions of how we intend to adapt to climate change, to provide a climate-resilient service.

Development and implementation will be in consultation with stakeholders from across the electricity, infrastructure and climate science sectors; emergency management; and mana whenua sectors, emergency management, and with mana whenua. We expect to publish the plan in September 2024.

A refreshed strategy for the System Operator

As Aotearoa New Zealand's System Operator, our core priority is to operate the system securely and efficiently every second of the day, while facilitating the transition to a low emission system.

The Electricity Authority (the Authority) oversees this work as the regulator, and we develop our activities to meet its strategic objectives.

This work spans the real-time operation of the power system and electricity market from within our control centres; monitoring compliance with the Code; maintaining standby resources and automatic control systems to mitigate the impact of potential risks; monitoring and planning work to enable outages; and providing all participants with research and information to support the need to adjust for the future.

Our areas of focus centre on engaging with participants on the rapidly changing power system and electricity market. Central to this has been ongoing enhancements to our capacity and energy adequacy analyses, including the short-term view provided through the **New Zealand Generation Balance** and the longer ten-year-view provided through the annual **Security of Supply Assessment**.

This work has been central to identifying emerging issues like the winter peak capacity challenge, which enabled us to design and deliver improvements to operational information through our **Winter 2023 initiatives** work with the Authority.

We are investing in operational improvements to ensure the system remains stable and reliable throughout the energy transition and optimising our commissioning process to ensure new connections are readily able to participate in the market.

Our strategic plan outlines the growing uncertainty in the system and market, the accelerating pace of change and how as the System Operator, we will proactively engage with this change.

A resilient Redclyffe

The Redclyffe substation in Hawkes' Bay provides an illustration of our approach to building greater resilience into our network. In May, we began consultation on our preferred solution for the substation, which was severely damaged in the 2023 flooding caused by Cyclone Gabrielle.

Our plan is to rebuild the substation at its current location to provide a cost-effective and timely solution to improve resilience, while also allowing for predicted demand growth. We plan to totally replace the high-voltage equipment in the 220 kV yard that was most affected, raising the ground level of the substation to protect it from similar weather events. In parallel, we will also make investments that increase the resilience of the higher 110 kV yard as we upgrade equipment.

The approach takes into account updated, independent flood modelling to understand the effect of extreme weather events on the site. The rebuild will be to modern design standards that account for the impact of climate change. We will utilise engineering and technology approaches we know will deliver assets that can withstand severe floods and other natural disasters.

We reached our view following extensive engagement with the local distribution network Unison and stakeholders to better understand the region's long-term electricity needs. The approach we are proposing will result in a substation that is more resilient than it has ever been, and equally as resilient as a new site would be, delivered in a much shorter time frame and at lower cost than the alternative of relocating.

Advancing the Net Zero Grid Pathways programme

Strengthening the backbone of the transmission grid is the primary objective of our Net Zero Grid Pathways programme. It is to first optimise the capacity of the existing grid ahead of likely expansion from the mid-2030s. This year, we received Commerce Commission approval of our Stage One, $393 million package of least-regrets grid enhancements across three sections of the existing National Grid, out to 2035. This includes upgrading our Central North Island and Wairakei lines and approval to increase the capacity of our inter-island High Voltage Direct Current (HVDC) link so that it can more consistently deliver its full 1200 MW capacity.

We continue to investigate possible Stage Two upgrades, including the potential need for new lines in the Central North Island and Wairakei area, due to a high number of generation enquiries and committed projects there.

We have also done some early work on the next phase of work, looking out to 2050. This includes assessing the public's wider appetite for new transmission build as a more optimised pathway to upgrade and expand the grid plus early thinking on what the power system might look like.

Exploring the opportunity of offshore wind

Meeting future needs will most certainly require a different approach. This past year has seen significant advancements in our understanding of the opportunity, and challenges, presented by offshore wind generation.

We have been working closely with developers, the New Zealand Wind Energy Association and the Ministry of Business, Innovation and Employment to better understand the opportunities ahead. We have published power system studies on offshore wind connections, and worked collaboratively the March publication of the *National Impact Study: New Zealand Offshore Wind Industry*.

There are currently connection enquiries from developers seeking to connect offshore wind totalling around 5 GW worth of electricity. This equates to around half the required increase in installed generation that we predict is needed to meet increased demand between now and 2050.

Our current research indicates we can integrate a significant amount of new offshore wind capacity within the current capacity of the grid without needing major grid investment. Our ability to do this is made easier if it connects into different locations of the grid and close to future major new industries. While offshore renewable energy is a significant opportunity, we must balance that with a careful consideration of the grid integration and system stability challenges, in particular as onshore renewable generation also grows.

It does however, present a significant opportunity for the electrification of this country and a clear focus area for our work in the years ahead.

Crossing the Strait: What does the future hold for the HVDC link?

The future of the HVDC link, and the critical role it plays in the country's electricity system, are key topics of discussion between Transpower and its stakeholders, with several core decisions needed in the coming years.

The link connects the electricity system between Benmore in Te Waipounamu (the South Island) and Haywards in Te Ika-a-Māui (the North Island) and includes undersea cables across Te Moana-o-Raukawa (Cook Strait).

The link is fundamental to how the power system functions, supporting system stability and moving generation within and between the islands to efficiently manage supply and demand.

The country's reliance on the link presents its own set of challenges, which we are progressively working through with suppliers, customers and stakeholders.

The initial task is to replace the 34-year-old undersea cables within the next 10 years, just as electrification accelerates. Procurement of new cables is already under way, as orders for HVDC cables have a seven to 10-year lead time.

Internationally, the growing number of countries seeking both High Voltage Alternating Current (HVAC) and HVDC cables and the limited number of suitable submarine cable manufacturers and installers are presenting challenges. International demand is high, driven in large part by offshore wind developments.

Contracting the manufacture of new cable requires booking space and installation resources. This includes an early financial commitment to secure an agreement, increasing the financial and logistical challenges that need to be overcome.

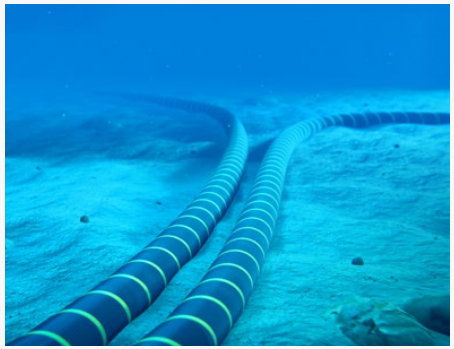
In recognising these challenges, the Commerce Commission has made the draft decision to cover this required payment via an amendment to Transpower's Input Methodology and Transpower's RCP4 Individual Price-quality Path.

That's also why we are already well into planning and procurement to secure a 2029 manufacturing slot and having new cables installed when the existing cables reach end of life after 40 years' service in 2031.

This year, the Commerce Commission approved a $76 million investment to increase the ability of the HVDC link to deliver full transfer capacity of 1200 MW through the installation of reactive plant, filter banks and associated equipment.

This is part of the Net Zero Grid Pathways Stage One, major capital projects work. Planning for Stage Two is also under way. One option will be to take the opportunity, while replacing the existing subsea cables, to increase the capacity of the HVDC link across Cook Strait by a further 200 MW.

We are also seeking stakeholder input beyond these plans and into the future role of the cables from 2030 onwards, with a discussion paper ***Examining the purpose and future role of our HVDC link***.



There are a range of possibilities on the table, depending on how Aotearoa New Zealand businesses and communities will generate and use electricity in the future. For example, the link could help provide efficiencies by further smoothing out the intermittent electricity from wind farms at times when the wind drops; be set up to supply large amounts of power between islands in case of emergencies; or play a smaller role if each island became more reliant on its own generation.

As with all our major works, the different benefits, challenges and trade-offs must be weighed up. By engaging now, we hope to reach a shared understanding that enables decisions to be made and actioned, ensuring we can stay ahead of our future needs.

A year for the record books: New connection projects at an all-time high

There is no denying the data: the electrification of Aotearoa New Zealand is well under way and accelerating at pace.

The past year was a bumper one for the organisation and our customers with four new renewable generation connections commissioned (the most in a single year since the current market was established in 1996); the completion of Transpower's first new Grid Exit Point (GXP) since 2013; the nation's first fully electrified dairy factory is now in operation; and the first ever utility-scale battery energy storage system began operating.

However, these successes are just a sample of what is to come: there is an impressive pipeline of work on the horizon.

More than 14,000 MW of new generation across 85 projects is at an advanced stage in the development process. This work includes up to 9,000 MW of new solar, 3,500 MW of onshore wind, 1,200 MW of battery storage and 300 MW of geothermal.

A further 4,000 MW of non-generation connections are also in play, thanks to population growth, the electrification of industrial businesses and vehicles, and the establishment of new data centres.

Transpower's role in enabling projects to move through the connections process is critical to ensuring the pace of electrification does not slow. Our key area of focus is on maintaining steady throughput of work from investigation to commissioning and undertaking the right work at the right time, be that enabling new generation projects or increasing existing capacity to meet community and industrial needs.

At the centre sits our Connection Management Framework and online **New Connection Enquiries Dashboard**, providing an aggregated view of the forward pipeline of works.

We are continually seeking ways to enhance the dashboard, based on what customers say they need. This year, changes were implemented to handle the doubling in volume of connection enquiries that has occurred in each of the last three years. More rigorous requirements and an application fee have also enabled the team to efficiently progress those projects that are most likely to be built, rather than expending significant resource on more speculative enquiries.

Following feedback from consultation in April, further changes are planned to increase visibility of exactly what stage projects are at, provide visibility of Transpower's key performance indicators and milestones and the development of a constraints map that shows regional transmission constraints and confirmed work that will alleviate these.

Despite the increasing workload, customer support for Transpower has remained high. Our annual customer survey shows that 72 per cent of respondents 'agree' or 'strongly agree' with our statements of performance.

WEL Networks' Rotohiko BESS

WEL Networks' 35 MW battery energy storage system at Rotohiko was commissioned in October 2023. It is the first battery of its scale in Aotearoa New Zealand and can store enough energy to meet the daily demands of around 2,000 homes: a significant contribution to maintaining supply when demand is high. Such battery systems reduce the need for non-renewable energy sources, lowering emissions.

Lodestone Energy Kohirā and Edgecumbe solar farms

Lodestone Energy Limited's Kohirā solar farm at Kaitaia began generating in November 2023. The solar farm consists of more than 61,000 solar panels and is expected to produce approximately 55 GW annually. In February 2024, the 60,000-panel Edgecumbe farm began offering energy into the market. It is expected to produce a further 54 GW annually.

Mercury NZ Kaiwera Downs wind farm and Mataura Valley Milk electrification

Transpower and PowerNet collaborated to increase capacity at Transpower's Gore substation to enable electrification at Mataura Valley Milk and, at the same time, the connection of the first stage of Kaiwera Downs wind farm. The wind farm, generating around 43 MW, was connected in November 2023 via a new 15 km overhead line to the Gore substation.

Meridian Energy Harapaki wind farm

The Meridian Harapaki wind farm project reached completion in July and is now fully operational. It is New Zealand's second-largest wind farm, with a total capacity of 176 MW.

Contact Energy Tauhara geothermal power station

Contact is building Tauhara Power Station in Taupō in what will become the company's sixth geothermal power station in the area. Tauhara is expected to be fully operational in the spring of 2024. Contact's geothermal plants already supply eight per cent of Aotearoa New Zealand's electricity and this will increase to just over 12 per cent once Tauhara is fully commissioned.

Waipā Networks Hautapu GXP

December 2024 is the expected completion date of the Hautapu GXP in Cambridge, delivered in collaboration with Waipā Networks. With GDP growth for Cambridge currently more than twice the national average the Hautapu substation ensures network resilience, increased capacity and security of supply for both Cambridge and the wider Waipā region.

Managing peak demand through improved information resources

Over the past 18 months, Transpower in its role as System Operator has delivered a range of new information initiatives that have improved the industry's response to challenging winter peak demand situations.

The delivery of four new information tools in under five months ahead of winter 2023 was achieved, in part, due to strong industry relationships.

The work was timely. With improved information, the industry responded well to numerous tight electricity supply situations, including managing near record demand on at least six occasions. On four of those occasions, low residual situations could have escalated to grid emergencies if industry had not responded through a mix of delayed or cancelled outages, the commitment of additional slow-start thermal units and proactive management of controllable load.

The new information resources and improved collaboration they enable were also instrumental to the successful management of the potential electricity shortfall on the morning of 10 May 2024, when industry and consumers were asked to conserve electricity.

The winter peak capacity challenge

Capacity risk is the risk of not being able to generate enough electricity to meet demand at any given time. It is highest on those calm, cold mornings and evenings when the wind is not blowing and not all generation is available; for instance, as a result of planned outages, faults or constraints, or for commercial reasons.

Our work to address the emerging peak capacity risk began in November 2022, when we published a market insight analysing the challenge. The Authority consulted in December 2022 on 11 options to better manage these risks, and in March 2023 confirmed four new information initiatives it wanted implemented by the end of May that year.

They were:

1. to provide better information on headroom in the supply stack, which resulted in new residual capacity schedules showing how much 'spare' capacity is offered into the market for future trading periods;
2. to provide forecast spot prices under demand sensitivity cases, which resulted in new sensitivity schedules, showing what the market price would be if demand were to increase or decrease;
3. for the System Operator to review wind offers using an external forecast, which led to the wind generation forecast comparing aggregated offers of wind generation against a central forecast of potential wind generation; and
4. to clarify the availability and use of controllable load, specifically the number of hot water systems that can be switched off for a short time through ripple control, which resulted in this becoming visible to all participants in the market system for the periods where they may be requested or instructed to use this capacity.

Additionally, this all had to occur alongside the final phase of the multi-year and multi-million-dollar real-time pricing project that Transpower and NZX were delivering alongside the Authority.

The tight turnaround between the green light for delivering these requirements and the onset of winter required the team to approach project design and delivery based around minimal viable products that were stand-alone and could be deployed quickly to address the immediate challenge.

What proved invaluable was that we had already identified the need for two of these tools and were already trialling the sensitivity schedules and wind generation forecast.

The team also focused on improving their event management processes, with the winter information initiatives at the centre of efforts. In May 2024, Transpower ran its third annual pan-industry exercises for control room operators and communications staff. The timing of these was serendipitous with communications teams completing their exercise the day before the lead-up to the 10 May potential shortfall event.

Work is now under way to provide enhancements to these initiatives to improve their functionality, as well as to support the Authority's ongoing 'Managing peak electricity demand' work programme.

Dry year risk

As we transition to a highly renewable power system, we also face a challenge in managing the dry year risk, where rainfall is below average for weeks to months. Until more flexible resources and long duration storage options are added to the system, the industry will need to continue to work together to ensure a reliable electricity supply for New Zealanders.

Exploring non-transmission alternatives

While transmission lines may be core to Transpower's business, we are always always looking for ways to minimise the cost and community impact associated with new investments.

This year with multiple major capital projects (MCPs) in train the company is focused on whether there are alternative investment options to meet the needs of the power system. We are hoping to work with providers offering non-transmission alternatives.

If feasible, a non-transmission alternative could either meet the need for, or defer the timing of, transmission upgrades, at an overall lower cost to customers and communities.

Potential non-transmission solutions to growing electricity demand, or the need to maintain voltage stability, include flexibility services like batteries and other distributed energy resources and agreements to help reduce electricity load.

It's early days but Transpower is engaging with industry and providers and looking at what could be available in future to reduce the need for new investment. The current focus areas for this work are associated with MCPs in the upper South Island, Waikato and Auckland.

In April, Transpower sought proposals from potential providers of flexibility services in the upper South Island and is planning to seek proposals from North Island providers as part of preparing proposals for Waikato and Auckland.

Proposals will be considered alongside transmission infrastructure investments as Transpower develops its investment shortlists for these projects.

As we develop our grid investment solutions, we will provide the opportunity for non-transmission solutions to play a role in order to meet the electricity needs of businesses and communities.

Working with communities when disruption is inevitable

Transpower has a significant job on its hands in south-east Auckland: not just in delivering its planned replacement of 45 cable joints but in managing community acceptance of the inevitable disruption over the two-to-three-year work programme.

The work comes after two cable joint faults on one of our cables in the past three years required rapid remedial action to avoid the potential for wider issues.

Reacting to an unexpected fault is never ideal. Having assessed a range of other remedial options, Transpower took the prudent decision to replace all joints on the cable in a coordinated way. In doing so, it will return this important cable to its intended condition, so it can operate effectively for its expected remaining life.

However, replacing 45 joints on an underground electricity cable between the Brownhill and Pakuranga substations will not go unnoticed by the busy communities nearby. It is a complex project, involving excavations the size of two city buses in 15 locations across approximately 10 km of cable route. Transpower anticipates it will take between five and seven months to complete the work for each joint bay.

Ten of the cable joint bays are located within roads or on roadsides, two are in council reserves, two are on private property and one is on Transpower property. Six are located within densely populated urban areas.

Extensive traffic management is planned for working on the roads; traffic restrictions are in place around worksites. Excavations involve teams manually breaking out backfill material; this will be undertaken in accordance with specifically developed noise and vibration management plans.

Community consultation for this project has been a priority, particularly so that Transpower can better understand the impact the work will have on surrounding communities.

The team has been working with residents and businesses who are directly affected by the works, with mana whenua and community groups, three Auckland Council local boards, city councillors and local Members of Parliament. They have also been consulting with other agencies delivering infrastructure projects in the area to identify where efficiencies can be achieved and impacts reduced. These projects include the Eastern Busway project and other local Auckland Transport roading upgrade projects.

The electricity supply into Auckland and Northland will continue to be secure during the works thanks to a companion cable on the circuit between Brownhill and Pakuranga, and a recently built temporary bypass line in north Waikato will provide additional security.

Evolving our work as System Operator

Just as the electricity system is changing, so too is Transpower in its delivery of its role as System Operator, to maintain its core priority: to operate the system securely and efficiently every second of the day, while facilitating the transition to a low-emission energy system.

The current system consists of mostly synchronous generation, with predictable behaviour and controls, resulting in a stable system with mature ancillary service markets. Power flow is typically from generation, through transmission and distribution, to demand, and the modelling of demand is well established. Security of supply is managed effectively through the market, and new generation build is signalled via prices.

However, the future will be different. The increase in renewable, intermittent generation, is affecting how the system operates, and an anticipated increase in distributed energy resources will make demand more difficult to forecast. Current ancillary services may no longer be appropriate, and new technologies will be needed.

Over the past year, events in the system such as the low residual capacity situation of 10 May, space weather and other grid emergencies have reflected the impacts of the changing generation mix and consumer expectations as to how we conduct our operations.

There is a need to deploy new technology and ways of working, facilitate competitive markets and support stakeholders in their own innovation.

One key focus area for the System Operator is on integrating new asset technologies. We know that new solar, wind and battery technologies are connecting and will continue to connect to the system and will increasingly complement and may eventually displace some traditional synchronous hydro and thermal generation.

We are working closely with the Authority to help with the review of common quality obligations for the future electricity system. Our initial work was to understand the key changes we expect to experience and build new models of the power system accounting for how intermittent generation will affect frequency and voltage management. We then devised sets of scenarios and tests to help analyse the impacts.

The resulting papers and reports will help regulatory discussion and decisions on how wind, solar and batteries will operate when connected to the power system.

Another key project has been the transition to a new approach to automatic under-frequency load shedding: when geographical blocks of electricity load are automatically tripped in times of a severe under-frequency event, to avoid total system collapse. In the North Island, the system is undergoing major change : providers are moving from a two-block scheme to a four-block scheme for more effective management of an under-frequency event.

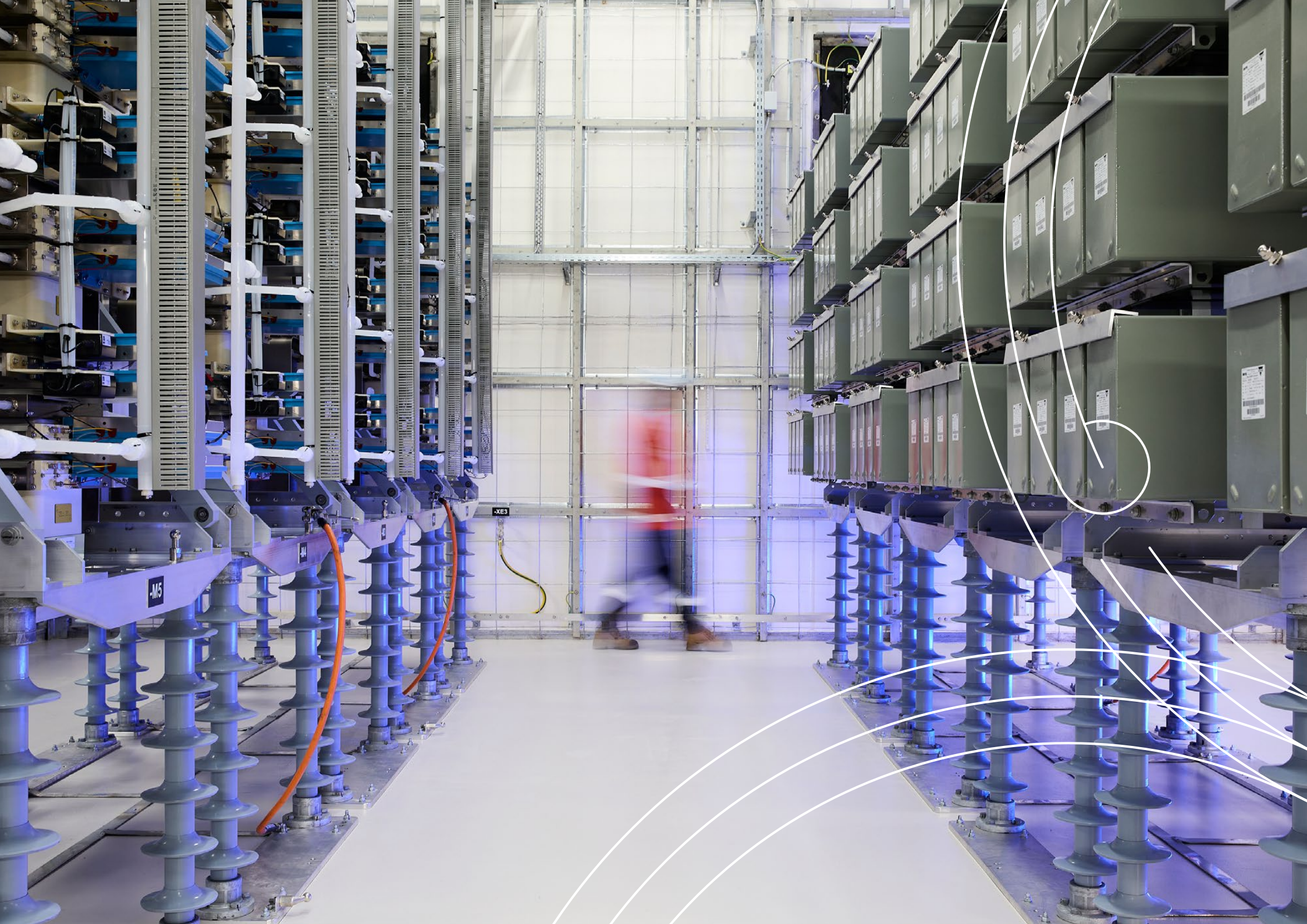
The project, led by the Authority, has been 18 months in development. It requires coordination across North Island distributors, directly connected customers and Transpower. There was no prescribed process for the transition, meaning the team needed to start from scratch and establish how to deliver the work and maintain a secure system as the transition got under way.

Continuous collaboration between the Authority, industry participants and Transpower has been key with the transition beginning in January and expected to be successfully completed in June 2025.

A summary of the material impacts outlined in this section and where relevant, how we are addressing those across the business.

For more detail on material impacts, visit our website **What matters most? | Transpower**.

Impact	Description	Actions and commitments
Support the transition to a low carbon economy	Electrification leads to decarbonisation, enabling net-zero carbon goal	• Net Zero Grid Pathways programme • Continued thought leadership via *Whakamana i te Mauri Hiko* monitoring • Continued collaboration with EECA and EDBs on process heat electrification
Increasing electricity supply by connecting new generation and expanding our network to meet increasing demand by our customers	Facilitating and enabling the increased demand for new electricity generation customer connections	• Increase in MW of renewable generation connected annually • Enhancements to Connections Management Framework • Continued work to improve connection process for demand-side and generation customers • Consistently high customer engagement survey results
Electricity affordability	Increasing the capacity and resilience of the transmission network in a transparent way to support electricity affordability	• Exploring non-transmission alternatives • Regional development programmes aimed at maximising regional investment
Climate change impacts from use of non-renewable energy sources	Ongoing role of thermal gas and coal electricity generation in New Zealand's electricity system	• Reporting on the sector's progress towards net-zero carbon to inform industry decarbonisation • Our *Sustainability Strategy* outlines our commitments and initiatives in more detail • Renewable grid indicator on Transpower and EM6 websites
Power outages caused by climate-related events	Impact of climate change on New Zealand's electricity transmission infrastructure, and potential electricity supply disruptions	• Resilience and climate change adaptation planning • Work programme preparing our Adaptation Plan for Climate Change and our *Climate Statement FY2024*
Long-term planning and integrated thinking	Ensuring longer-term electrification and decarbonisation strategy is not delayed by short-term financial drivers	• Establishment of a Future Grid division • Building electrification, resilience and sustainability commitments into the RCP4 funding submitted to the Commerce Commission • *Whakamana i te Mauri Hiko* work • Continuing to collaborate with EECA and EDBs on process heat electrification • Delivery of *Sustainability Strategy*
Increased adoption of new technologies in the electricity market	Supporting research and innovation and adopting new technologies to improve the operational performance of the National Grid	• Managing the electricity system through improved information resources • Publication of a paper on offshore wind connection opportunities • Exploring non-transmission solutions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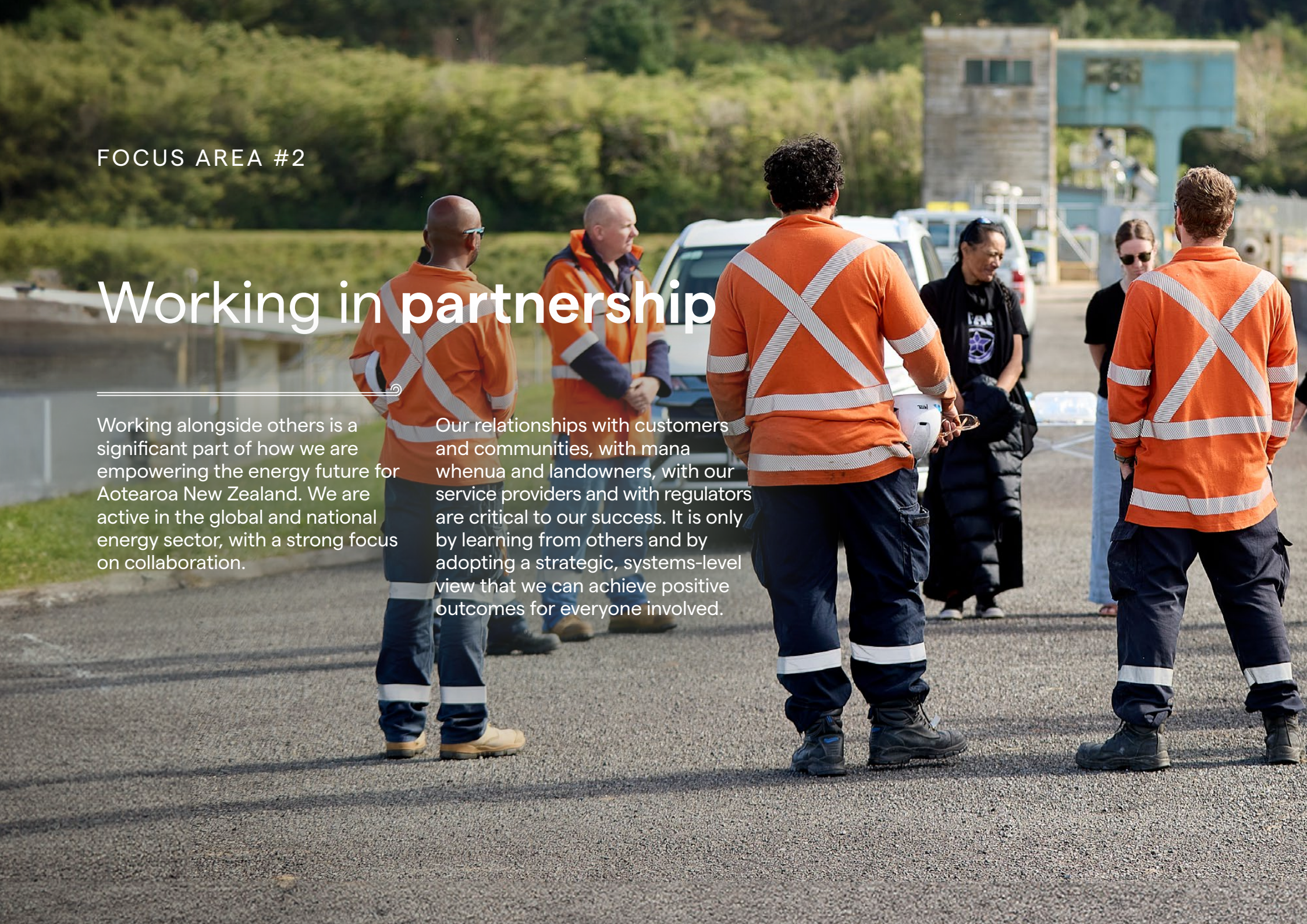
FOCUS AREA #2

Working in **partnership**

Working alongside others is a significant part of how we are empowering the energy future for Aotearoa New Zealand. We are active in the global and national energy sector, with a strong focus on collaboration.

Our relationships with customers and communities, with mana whenua and landowners, with our service providers and with regulators are critical to our success. It is only by learning from others and by adopting a strategic, systems-level view that we can achieve positive outcomes for everyone involved.



Performance markers

Addressing our material issues

- Customer and consumers
- Community and landowners
- Good governance

Delivering on our strategic objectives

- Deliver services that meet our customers' needs
- Facilitate delivery of an optimised path for Aotearoa New Zealand's energy system
- Accelerate electrification through our asset investments
- Enhance our social licence to operate

Enhancing the value of our capitals

- Intellectual capital
- Human capital
- Social capital
- Financial capital

Overview

Global and local connections

The challenges of the future will not be solved by any one player and there is much that can be learnt by working with others. Transpower is an active member of association groups such as the Electricity Engineers' Association, New Zealand Wind Energy Association, the Sustainable Business Council and the New Zealand Association of Training and Development.

Internationally, we are members of CIGRE—the International Council on Large Electric Systems, which promotes collaboration between experts from all around the world, and Edison Electric Institute, which represents investor-owned electric companies, including more than 70 international electric companies. Our membership of the Association of Power Exchanges (APEx) links us with other market operators across the globe, and we are also part of specialist technical groups of comprising owners of HVDC links.

Transpower is also a member of the Climate Leaders Coalition, and Global Women—Champions for Change, a group of over 80 leading CEOs and Chairs, each with a personal mission to accelerate inclusive and diverse leadership in our workplaces.

Transpower is active in its support for Power Women | Mana Wāhine, a network of women from across industry and government in New Zealand's energy sector. It was created to bring women from across the sector together to connect, build influence, share experience, learn, support women's professional growth and attract more women to pursue a career in energy.

Alison Andrew with Authority Chief Executive Sarah Gillies.

Our relationship with our two regulators is critical. In the past year we signed an updated relationship charter with the Authority, setting out principles for how we work and outlining our mutual commitment to a productive and collegial relationship.

We have also launched a new relationship charter with service providers, which reflects shared expectations of how we will work together and the behaviours we want to reflect through our shared mahi on the National Grid. Its three key themes are committed, collaborative, and clear.

Advocating for change

It is clear that changes across a broad range of legislation, regulation and industry codes are required to support the transition to a highly electrified economy, and to enable the industry to become more effective and efficient. These changes span not just the issues of timely investment and resource management but also market systems, hazard management and land access rights.

Transpower continues to advocate for change across the industry that will result in better outcomes for the people of New Zealand.

In the past year, we have submitted on the building consent system review, the New Zealand Emissions Trading Scheme, targeted distribution pricing reform, the enquiry into climate adaptation, the Fast-track Approvals Bill and advancing the energy transition, among many others.

Working collectively to test preparedness

In 2023 we facilitated our bi-annual GridEx exercise. Originating in North America, GridEx is an exercise that simulates a real-world emergency and requires organisations to respond and implement recovery plans under an accelerated time frame. Transpower customised the US scenarios to better reflect the local environment, combining a severe weather event with a ransomware attack. More than 60 Transpower staff and 30 other organisations and agencies were involved, helping all participants to understand their competencies in an emergency, and areas for improvement.

We also tested the preparedness of our National Coordination Centre and National Grid Operating Centre for a 'black start' event with industry, running a simulation to restart a power system that was completely shut down. The exercise tested contingency plans, identified areas of improvement and served as a valuable learning experience for all involved.

Finally, control room operators and communications practitioners from across the country came together to test the industry's response in alerting the public and key agencies to events that could affect the supply of electricity to consumers. The near real-time simulation exercise was a key part of Transpower's work with the Authority and the wider industry to test processes for managing and responding to potential electricity supply shortfalls.

Giving back to our communities

Transpower is committed to giving back to local communities. Our partnership with non-profit organisation Recycle-A-Device has seen 240 decommissioned laptops refurbished and then donated to schools in areas where Transpower has conducted work nearby and would have had a noticeable presence.It is a great way to extend the useful life of devices, provide schools with the means to enhance students' learning capabilities and make a difference in the communities we operate in.

The CommunityCare Fund also provides one-off donations to support projects within a geographical radius of our assets, supporting schools, sports associations, marae and other community groups. Our Community and Business Partnership Fund invests in longer-term partnerships with businesses to maximise a collective approach to bringing change.

Over the past year, Transpower has supported projects to the value of $720,000, including a three-year commitment to Capital Kiwi Trust, an equipment upgrade for the Encounter Hope Foodbank in Auckland, fencing and planting at Kairanga School in Palmerston North, a new playground for Pāuatahanui School in Wellington and the Roxburgh River Track upgrade in Central Otago. Read more about the projects benefitting from the fund on our website **CommunityCare Fund | Transpower**.

Transpower team complete tree planting for their volunteer day.

Collaboration with mana whenua strengthens capability and kaupapa

Transpower's network of infrastructure has a significant physical footprint, occupying and crossing land spanning the length and breadth of the country.

Construction of this infrastructure began in the early 1900s and the approach that was taken with landowners then was typical of the times, prioritising the work over relationships.

Today, we are focused on building trust and respect into our relationships with landowners. We aim to work more collaboratively with them to achieve mutually beneficial outcomes.

Critical to this is acknowledging and respecting the primacy of mana whenua's relationship to the land Transpower occupies. Transmission infrastructure currently crosses the rohe of over 90 iwi and many hundreds more hapū. As the volume of work needed to decarbonise Aotearoa New Zealand increases, yet more infrastructure will be needed on more land.

In recent years, kaimahi (staff) have begun partnering with Māori in new ways. The work is guided by our Māori Relationship Strategy, focused on improving kaimahi capability in te ao Māori and attracting and retaining people with a Māori world view.

Participation continues to grow in our te reo Māori training, Te Tiriti o Waitangi workshops, quarterly noho marae and Wall Walk interactive workshops on Aotearoa New Zealand's bicultural history.

We have also sought new opportunities for kaimahi within the organisation who identify as Māori. This has included two of our team participating in the Downer/Te Puni Kōkiri Te Ara Whanake (Māori leadership) course, as well as opportunities for kaimahi to play a greater role in events such as mihi whakatau for dignitaries, guests and new starters.

Our ability to undertake work on our assets with the blessing of mana whenua is another indicator of the health of our local relationships. Our aim is to build lasting connections that endure well beyond any specific work. Kaimahi are now engaging with iwi much earlier in projects, prioritising people and relationships over operations.

Any work that involves removing earth and disturbing soil is discussed with mana whenua to ensure it is done in a culturally safe manner that reaffirms our connection to the people and the place, its past and present before clearing the path into the future.

No project is too small to receive a site blessing: from the Whakatikei River ford replacement with Ngāti Toa Rangatira, through to more significant projects, such as a tower-to-pole replacement in Belmont Region Park with Ngāti Toa, or the Waiotahe substation development with Te Ūpokorehe.

In December, we completed the final part of our Clutha Upper Waitaki Lines Project with the commissioning of a tohu whenua (land symbol) in the Ida Valley. This provides a significant cultural landmark and tells the story of Kōpūwai, a kaitiaki, or poutiriao (spiritual guardian), who roamed the region long before Transpower's assets arrived.

Our collaborative approach with mana whenua can present unique opportunities. Early last year, Transpower supported Ngāti Tahu/Ngāti Whaoa to develop an electric vehicle charging station on their marae, which led to the question: could we provide a reo Māori interface for these chargers?

We worked with Huia Publishers to deliver a kaupapa of word and term identification across three different translators, providing a common understanding of preferred terms, before registering the kupu (words) with Te Taura Whiri i te Reo Māori (Māori Language Commission) for anyone to use. The work was commended by Te Taura Whiri for the collaborative approach taken and the process adopted.

Our focus now is on equipping more of our people and partners with the tools they need to enshrine iwi engagement in their everyday mahi. This includes working with our own kaimahi and grid service providers to ensure our expectations of them are clear and that we can support them where required with processes and tools.

> We commend Transpower for looking at practical everyday solutions to incorporate te reo Māori as part of their business. This is a valuable contribution to the use and visibility of te reo Māori that supports te reo Māori revitalisation. In addition, we commend Transpower for embedding te reo Māori me ōna tikanga into their organisational culture.
>
> **Ngahiwi Apanui-Barr,**
> **Tumu Whakahaere | Chief Executive,**
> **Te Taura Whiri i te Reo Māori**

The year ahead promises more collaborative activity with mana whenua, with year three of a five-year sustainability activity with Ngāti Koroki Kahukura and a new plan for the restoration and protection of a site of significance with Ngāti Toa.

Tohu whenua in the Ida Valley.

Long-term partnerships: Nā tō rourou, nā taku rourou, ka ora ai te iwi

'With your food basket and my food basket the people will thrive.'

Transpower is committed developing long-term community partnerships to maximise a collective approach to bringing change.

At the end of the last financial year, an agreement was signed with Nau Mai Rā, the first power company in Aotearoa New Zealand based on kaupapa Māori principles.

Our financial contribution has enabled the company to boost social programmes run by the company's charitable trust, the Whānau Fund, and tackle some of the challenges faced by whānau who have accounts with the retailer.

Their programme supports vulnerable consumers to keep their electricity flowing through direct energy credits. To date, more than 220 whānau applications for support have been approved.

The company also runs a Healthy Homes programme, connecting customers with organisations that can support whānau to achieve greater energy efficiency and conservation in their homes through practical measures like draft stoppers or quality curtains.

Finally, the company funds in-home coaching to support whānau to understand their power plans, bills and usage, to give them greater control over their spend on electricity and achieve safe and effective ways to save on electricity.

We are proud to be a contributor to these programmes and continue to work with Nau Mai Rā, supporting its goal of lifting its most vulnerable customers out of energy poverty.

Ezra Hirawani of Nau Mai Rā (third from left) with the Transpower team.

Regional alignment drives success for Transpower, its customers and communities

Developing relationships and aligning on a shared vision for the future, well in advance of major work, is Transpower's primary focus as it seeks to enable regional growth.

This year, significant progress has been made in advancing integrated system planning across the motu, which in turn will deliver more effective and efficient investment and more holistic outcomes for communities.

In the past 12 months, we have delivered a plan for electrification in Murihiku Southland, a plan for the rebuild of Redclyffe substation in Hawke's Bay and options for major infrastructure upgrades in the Western Bay of Plenty. Work is also underway to develop plans for growth within the Auckland, Queenstown and Upper Clutha regions.

Our approach has been the same regardless of location, time frames and complexity. We know that listening, learning, sharing and aligning are key to achieving the best possible outcome. It begins by understanding a region's aspirations for the future; the most critical step to achieving consensus and collaboration. This means working closely with network customers to jointly engage with local government and other regional stakeholders to understand the issues they face, and what they are trying to achieve.

Once a shared purpose and objectives are established, Transpower and its partners can adopt a broader, integrated approach to planning that encompasses multiple perspectives, delivers an efficient approach to grid and distribution network investments, enables a clearer picture of benefits and costs involved and, most importantly, is more likely to achieve community buy-in.

The Murihiku Southland Electrification Development Plan: A six-month sprint

When we found ourselves managing 23 enquiries for new generation projects and 18 enquiries for potential non-generation connections in one region alone, it was clear that we needed a different approach.

Given the significant level of investment and build expected, the long lead times and the collaboration that would be needed, it was important for all stakeholders to have a better understanding and visibility of regional goals and aspirations—and an integrated plan for achieving them.

In July 2023, an initial discussion document was published to provide the context and drivers for electrification in the region. Feedback then informed our September technical options paper, which outlined a range of investment options to support electrification in the region. The resulting electrification development plan, and roadmap were published in December 2023.

The *Murihiku Southland Electrification Development Plan* maps out six possible infrastructure investments, including short-term upgrades to both our own and local distributor Powernet's networks and longer-term projects that have been identified for further investigation.

The first of the short-term upgrades is a special protection scheme on Transpower's 110 kV transmission lines linking Gore with Roxburgh and Brydone, planned for delivery in 2025. This will enable Fonterra to start the electrification of its largest coal-burning site.

Western Bay of Plenty

In the Western Bay of Plenty region, Transpower and Powerco have spent the past 18 months working together on the development of a long-term delivery programme spanning the next 10 years.

Kaimahi from both businesses have been jointly meeting with local government, other infrastructure operators, agencies, major electricity users, iwi and stakeholders to gain an understanding of the region's needs and aspirations before establishing an approach to development that will enable the region's growth.

In July 2023, the first consultation document was published, outlining our shared thinking on possible options for network upgrades.

Consultation on a short list of options has commenced, integrating the work that both organisations will need to undertake.

Work is ongoing to reach a final development plan for the region.

Redclyffe: When nature forces your hand

When Cyclone Gabrielle forced the hands of Transpower and Unison, it was clear that the need for a long-term regional plan would be critical. There were numerous options for rebuilding or replacing the flooded substation; each stakeholder had different factors to consider, and a different set of assumptions.

Making a commitment to open communication, transparency, and a shared understanding of the need for greater resilience in the future, we were able to reach a consensus with Unison on the best approach for the region with an eye to the longer-term needs of a growing community.

In May, it was announced that the preferred way forward was to rebuild the Redclyffe substation at its existing location with new high-voltage equipment and and a raised ground level, to protect the substation from similar weather events in the future.

> We have engaged with local stakeholders to better understand the region's long-term electricity needs. Those stakeholders include some of the region's largest power users, key infrastructure and interest groups including Napier Port, Hawke's Bay Airport, mana whenua groups and the Regional Recovery Agency.
>
> Through that process, we've had good feedback around community concerns... questions around different options, but ultimately I think, support for the process we have been through.
>
> **Jason Larkin,**
> **Unison Networks General Manager Commercial & Regulation**

Mark Ryall with Unison General Manager Commercial and Regulatory Jason Larkin.

Accelerating delivery by doing things differently

December 2023 saw the opening of a new GXP and zone substation in the Selwyn district, achieved in partnership with local distributor Orion.

The Norwood GXP was the first Transpower had completed since 2013 and the first for the Canterbury region in 50 years. Now fully commissioned, it has added 25 per cent more capacity to Orion's network.

This was a complex and challenging project that was successfully delivered at speed and within budget, thanks to the adoption of new ways of working. By collaborating on every aspect of the project, the site was successfully commissioned just three years from commencement.

While physical work began late in 2022, planning and consultation had been under way for months prior.

Orion's community connections and local knowledge meant it was able to lead the land acquisition and consenting process, avoiding the need for Transpower to start building its own community relationships from scratch. Their success was evident with the process taking only 18 months.

While distribution companies have led the land acquisition process for such projects before, this was the first time a distribution company had also led the consenting process, in an approach that recognised and leveraged Orion's strong local relationships.

With the project running against the background of the COVID-19 pandemic, procurement was another challenge to overcome. However, Transpower and Connetics used their procurement teams to source, order, and store equipment well in advance of when it was needed.

Orion Group Chief Executive Nigel Barbour.

To go from farmland to a full GXP and zone substation in a year is a fantastic example of collaboration in action.

The Norwood project was also used as the starting point for a project to create a standard design for 220 kV customer connections which can accelerate projects by allowing them to apply for consents before they complete their detailed design.

As a result, two sets of standard drawings for substation design have been developed: one for consenting applications and the other for conceptual design purposes, with an accompanying designer's log for the conceptual design.

The standard 220 kV single circuit substation concept design and (soon to be added) 110 kV single circuit tower connection designs provide a starting point for applicable Transpower connection investigations.

The team has a planned pipeline of work to develop different iterations, including 220 kV and 110 kV double circuit substation concept designs, next financial year.

> Orion was able to engage directly with landowners because we were the face that they knew. We knew the landowners, we knew the families, we knew the history. They trusted us and we delivered on that trust.
>
> **Steve Macdonald,**
> **GM Electricity Network, Orion**

> Our relationship with Transpower during this project was really collaborative. We both worked out early that we had mutual skill sets and networks and capabilities we could bring that could actually enable the project to be delivered faster than say if we'd just done it in a very sequential process where they had done what they would traditionally do, and we would have done what we traditionally did.
>
> **Nigel Barbour,**
> **Chief Executive, Orion Group**

A summary of the material impacts outlined in this section and where relevant, how we are addressing those across the business.

For more detail on material impacts, visit our website **What matters most? | Transpower**.

Impact	Description	Actions and commitments
Impact to consumers due to disrupted electricity supply	Planning for potential power supply disruptions arising from insufficient electricity	• Net Zero Grid Pathways programme • Continued thought leadership via *Whakamana i te Mauri Hiko* monitoring • Connections Management Framework • Continued work to improve connection process services for demand-side customers • Building electrification, resilience and sustainability commitments into the RCP4 funding proposal submitted to the Commerce Commission • Resilience and climate change adaptation planning • Industry exercises dealing with emergency situations • Managing the electricity system through improved information resources
Promoting renewable energy generation and carbon reduction initiatives	Reducing the impacts of the electricity system by enabling and incentivising renewable energy generation	• Net Zero Grid Pathways programme • Green bond financing framework • Connections Management Framework • Continued work to improve connection process for demand-side and generation customers • Collaboration with EECA and EDBs on process heat electrification • Climate-risk reporting to Aotearoa New Zealand Climate Standards
Long-term planning and integrated thinking	Ensuring longer-term electrification and decarbonisation strategy is not delayed by short-term financial drivers	• Iwi and community partnership developments • Net Zero Grid Pathways programme • Building electrification, resilience and sustainability commitments into our RCP4 funding proposal • Supporting the development of an energy strategy for Aotearoa New Zealand
Regulatory changes to achieve more efficient and effective electricity system	Proactive engagement and advocacy to ensure the ongoing development and maintenance of the National Grid infrastructure	• Provided inputs and regulatory submissions to the Climate Change Commission, Electricity Authority, Ministry of Business, Innovation and Employment, Ministry for the Environment and New Zealand Utilities Advisory Group
Risk to the electricity grid and market as a result of cyber attacks	Planning for potential cyber attacks on our network and assets	• Cyber security initiatives, including engagement with security entities and exercises dealing with cyber threats

FOCUS AREA #3

A **sustainable** business

Ensuring present growth doesn't borrow from future generations means adopting a sustainable approach to all aspects of our business: our people and culture, systems and processes. We must protect and enhance the critical resources that enable our delivery and tread lightly on the land.

We must ensure we pave the way for a better tomorrow where diversity, equity and inclusion are embedded within the business and the capacity and capability of our workforce is well placed to meet the challenges ahead.

Performance markers

Addressing our material issues

- Climate change mitigation and adaptation
- Environmental stewardship
- Future workforce

Delivering on our strategic objectives

- Facilitate delivery of an optimised path for Aotearoa New Zealand's energy system
- Enhance our social licence to operate
- Advance our organisational effectiveness

Enhancing the value of our capitals

- Intellectual capital
- Human capital
- Social capital
- Financial capital
- Natural capital

Overview

Wonder Project powering up STEM in schools

Transpower needs a workforce of people, including service provider kaimahi (staff), with expertise in STEM subjects—science, technology, engineering and maths. Ensuring that rangatahi (young people) are interested in STEM and excited at the prospect of a career in a related field is key. In 2021, Transpower partnered with Engineering New Zealand to develop the Wonder Project's Power Challenge.

In term three of 2023, Transpower kaimahi supported teachers and their students as Power Challenge ambassadors in working their way through four learning modules.

The programme provides STEM teaching resources aimed at boosting students' knowledge of electricity and providing a hands-on activity designd to spark wonder in students and open their eyes to the possibilities of a future STEM career. It also offers our kaimahi a hugely rewarding experience supporting local schools and helping to strengthen rangatahi interest in STEM careers and the electricity sector.

In 2024, 99 Transpower ambassadors were enrolled to support 118 schools with their term three Power Challenge.

Alison Andrew with students participating in the Wonder Project.

A great place to work

As kaimahi recruitment and retention remains challenging across the sector, our employee engagement survey results continue to put Transpower in the top 25th percentile of the energy and utilities sector internationally. This year, we welcomed 192 new employees into the organisation, with each participating in a comprehensive two-day induction programme.

In December, we welcomed our largest summer intern programme cohort to date, with 32 students joining us while on a summer break from their tertiary education studies. Then in February, we welcomed 15 new graduates into our two-year graduate programme, designed to accelerate their development and build capability in our critical engineering domains.

A significant focus this year has been to raise the profile of our key roles and the meaningful work that is on offer at Transpower. To this end, we produced 26 short videos with the contribution of more than 80 staff who shared their stories on camera. The videos are in use on our website, in recruitment campaigns and in presentations as a key element in promoting Transpower as a great place to work.

To ensure that Transpower remains competitive in its employment offering, we reviewed and made amendments to our employee leave benefit. We are now providing an additional week's annual leave to permanent employees who have completed five-years' continuous service. We also increased our paid parental leave provisions, to ensure employees who receive government-funded parental leave are 'topped up' by Transpower to 100 per cent of their salary for up to 26 weeks.

Enhancing our systems and processes

Based on forecast network requirements, Transpower expects to have to deliver up to 80 per cent more work over RCP4 than it is delivering in its current work programme, meaning there will be a need for not just more people but more efficient processes. A new project initiated this year, the end-to-end project, aims to deliver a roadmap of improvement initiatives that will drive productivity and enable Transpower to efficiently deliver the changing work programme.

Transpower's telecommunications network, connecting its 191 substations and sites, is also undergoing a significant refresh. This provides one of the most critical ICT services, teleprotection, and carries other critical services that must continue to perform in 'doomsday'-type scenarios in which no commercial telecommunications or internet services are running. The network will reach its end of life in 2028. A work programme to replace it is expected to commence by the middle of next year. With more than 800 teleprotection circuits supported by this network, the impact of this work cannot be underestimated.

Data and analytics also play a key role in driving more efficient ways of working. With assets spread across New Zealand, digital tools and automation are increasingly used to improve quality across the asset lifecycle, better utilise our scarce resources over the work which needs to be done and drive continuous improvement.

Green finance

Transpower has had a Green Financing Framework in place since 2022. This is certified by the Climate Bonds Initiative under the global Climate Bonds Standard – the first transmission grid in the world to receive this certification under the 'Electrical Grids and Storage' criteria.

We have issued $1.394 billion in funds raised through our certified green bonds, enabled by strong demand across New Zealand, Australian and Swiss debt capital markets.

Green bonds are growing in popularity, and Transpower has $1.125 billion of green bonds listed on the NZX.

Our Green Financing Framework reflects Transpower's commitment to achieving a net-zero carbon transmission grid and supporting Aotearoa New Zealand's net-zero carbon targets.

Shining a light on health and safety

Protecting the health and wellbeing of everyone who works in and around our assets is of critical importance to the business. Transpower's STAR Awards (Safety Thanks and Recognition) give recognition to, and celebrate the brightest and the best who build, operate and maintain the National Grid while maintaining the highest possible standards of health, safety and wellbeing.

They are held every two years. In October 2023, our seventh event was held, celebrating six category winners and the overall Supreme Award winner.

2023 STAR Awards winners.

Frontline leadership
- Evan McKenzie of Ventia

Thought leadership:
- Craig Moore of Venita and Gene Peters of Omexom (tied)

Future of safety
- Harry Baker of Omexom

Hauora Wellbeing Initiative
- DIALOG Fitzroy: What's My Why Initiative

Safety innovation / Safety by design
- Northpower: Ladder anchor system with fall restraint

Team safety
- Ventia, Omexom, Downer, Northpower and Transpower: Protection and automation improvements

STAR Supreme Award
- Craig Moore of Venita and DIALOG Fitzroy: What's My Why Initiative (tied)

Embedding sustainability in all we do

A commitment to sustainability plays a pivotal role in supporting Transpower to develop long-term relationships with iwi and hapū, customers, landowners, communities, central and local government stakeholders and international peer organisations.

It is also critical to maintaining social licence to operate, and has increasingly become an important factor for potential employees looking to work with an organisation that has embedded sustainability into its practices.

Our *Sustainability Strategy* sets out our aspirations to 2050, with tangible targets for 2030. Substantial progress has been made in delivering the programme this year, as shown by the dashboard (next page). Alongside this, applying a sustainability lens to our work is becoming business as usual.

Several initiatives are a work in progress given their multi-year nature and will continue to feature in next year's programme. For example, despite a deepening understanding of the fundamental challenge of transmission losses, progress has been slow in part due to our inability to control, and therefore reduce, these emissions.

This challenge is shared by other international grid owners, and we are working with organisations including the UK's National Grid and Scottish and Southern Electricity Networks to share knowledge on potential solutions.

The years ahead promise an increase in activity as we upgrade the grid in response to the nation's electrification and design sustainability initiatives designed to respond to this. A major focus is on refreshing targets for Scope 1, 2 and 3 GHG emissions to ensure they account for this upcoming growth phase.

We are focused on minimising GHG emissions from our growing grid work programme, waste to landfill and contaminants to land and water, and on achieving a net biodiversity gain. Work with service providers and suppliers is ongoing to ensure alignment between our sustainability aspirations and their work and service delivery for us.

Biodiversity at Takapū Road: a community effort

Transpower has embarked on a large restoration project to improve the biodiversity and ecological condition of the land and waterways surrounding its Takapū substation as part of its commitment to achieve a net gain in biodiversity. This long-term project is the first big initiative of the biodiversity strategy, and is happening in collaboration with many partners, such as The Growing Places Charitable Trust, mana whenua Ngāti Toa Rangatira, Greater Wellington Regional Council, the Department of Conservation, Porirua City Council, Wellington City Council, local schools and landowners.

This initiative aims to restore 20 hectares with native plants and thanks to the dedicated efforts of all partners and volunteers, a remarkable 14,500 plants are already in the ground!

Addressing the issue of waste

The goal of Transpower's waste strategy is to operate as close to a zero-waste organisation as possible. Repurposing waste is a core concept in the circular economy, whereby materials are repurposed and reused in a perpetual cycle.

Our waste strategy includes the target of reducing the proportion of waste sent to disposal by 30 per cent from FY2023 levels by 2030. The target accounts for an increase in waste expected as the grid expands.

One example of work currently under way is the recycling of concrete foundations from transmission towers removed as part of the Albany-Henderson line dismantling project in Auckland. By June 2024, service provider Northpower had sent almost 415 tonnes of reinforced concrete to be recycled for use in construction projects; for example, the base of footpaths.

The approach delivers both environmental and cost savings, plus significant emission reduction costs associated with the recycling and reuse of our assets.

In another new initiative, our end-of-life glass insulators will now be recycled into Pink® Batts® for glass wool insulation and bottle manufacture, resulting in around 125 tonnes of insulator glass being diverted from landfills annually.

Innovation in oil recycling: a local win

In 2015, as part of routine testing, we identified corrosive sulphur within our transformer fleets' oil, detrimental to the performance and lifespan of these critical, long-lived and expensive assets.

To address this issue, we contacted eNZoil, a Wellington-based company that has been supplying new and regenerated transformer oil since 2004. Working together, we sought a cost-effective and permanent solution that could remove the contaminants but also address the total lifecycle sustainability of our large fleet of transformers.

A new process was trialled, using eNZoil's 'Regen' oils to completely flush the contaminants from the transformer, then emptying them and refilling them again with fresh eNZoil regenerated oil. The original contaminated and flushing oils were captured and returned to eNZoil for re-processing back to as-new oil for future reuse, maintaining the circularity of the process.

With 55 of 70 transformers refilled with fresh regenerated oil between 2018 and 2023, benefits include:

- a 98 per cent reduction in CO_2 emissions compared to new vs new imported mineral oils
- total estimated CO_2 emissions savings of 12,709 tonnes
- direct oil cost savings of more than $1.3 million by using regenerated oils
- a 98 per cent recovery of used oils for reuse in the wider transmission and distribution sector.

We have incorporated the requirement to return used transformer oil to eNZoil into our service provider standards so that the oil can be retained in circulation.

Scan to visit:
Sustainability - Transpower

Sustainability Strategy 2023/24

Key: Not achieved | Some progress | In progress | Significant progress | Achieved

Challenge	Focus	Strategic Outcome	KPI	Indicator
Climate change				
	**Enabling renewable and electrification connections**	New load and generation is connected and grid backbone capacity is increased	Increase MW of renewable generation and demand connected annually	Achieved
			Demonstrate energy sector leadership in electrification and decarbonisation	Achieved
	Planning networks	Ensure the grid is resilient to climate change	Climate risks disclosed and integrated into asset and network planning	Significant progress
	Carbon footprint	Our carbon footprint is reduced 60% by 2030, on track to achieve a net-zero grid by 2050	Reduce Scope 1 and 2 GHG emissions, focusing on carbon intensity of operations	Significant progress
			Reduce Scope 3 GHG emissions, focusing on major suppliers	Significant progress
Environmental stewardship				
	**Natural environment**	Environmental impacts are minimised, with a net gain in biodiversity	Deliver a net biodiversity gain	Achieved
			Improve water quality and reduce run-off and contamination risks across all of our operational sites	Achieved
			Reduce waste to landfill	Achieved
Sustainable business				
	**Good governance**	Decision frameworks consider social and environmental impacts	Include carbon and sustainability considerations in core decision-making frameworks	Significant progress
	Our people	Enable our people	Maintain progress against gender diversity target (40/40/20)	In progress
			Employee engagement survey results in top quartile for Energy & Utilities sector	Achieved
			Total Recordable Injury Frequency Rate (TRIFR) < 6.0 and High Profile Injury Frequency Rate (HPIFR) < 3.0	Achieved
	Iwi relations	Foster connections with iwi, landowners and communities	Implement Māori Partnership Strategy	Achieved
			Refresh community funding programme to deliver on *Whakamana i te mauri hiko*	Achieved
			Maintain relationships with landowners	Achieved

Digital technologies the way of the future

Growth will define Transpower's future: growth in electricity supply and demand, growth in work volumes, growth in the workforce. To ensure our business can keep pace, we need to move away from the complex, manual processes of old, and embrace the benefits that digital technologies can offer.

Our future will see more people working in the sector and a higher turnover of staff. By digitising our systems and processes, we can more effectively scale up to train a bigger workforce and face less risk from the loss of institutional knowledge and experience.

Two projects advanced this year highlight the benefits digitisation will bring in enhancing the accuracy, efficiency and safety of our work.

Eye in the sky enhances vegetation management

Transpower's National Vegetation Management Programme, with its use of LiDAR technology, promises to revolutionise aspects of how we manage vegetation hazards.

LiDAR, or Light Detection and Ranging, uses lasers to create detailed 3D maps of our assets, providing a much clearer picture than before of vegetation near power lines.

Vegetation management is critical to mitigating the risk of fires potentially ignited by our assets and outages caused by extreme weather-related damage.

The use of LiDAR provides more detailed and accurate information about vegetation encroachments, leading to better planning and scheduling of work, improved safety for workers and the public, and better visual aids to support landowner discussions.

Data gathered over the 2023 summer from the entire network is now informing our vegetation management decisions. We anticipate continuing to survey the network as required each year to update the existing data. This will be instrumental in maintaining a comprehensive understanding of vegetation growth patterns and hazard management.

There is also the future potential to use satellite imagery, and artificial intelligence and machine learning in the future to identify tree species and predict growth, further enhancing how we monitor and respond to risks.

Digital switch management

When it comes to electricity outages and faults in the system, the process of 'switching' lines and equipment in and out of action is a critical one.

The switching process and the transfer of operational control parties currently depend heavily on manual, paper-based processes. Enter digitisation.

The Digital Switch Management (DSM) project is a multi-year programme designed to digitise the switching and operational control transfers required when we are working on planned and unplanned outages.

This project will enable our skilled staff to focus more on tasks that require a high level of judgement and situational awareness, and less on manual processes. Ultimately, the benefits of digitisation will come from our ability to respond to the increasing volume of switching work we know is coming with increased safety and accuracy.

The past financial year has seen the project deliver a key milestone with all grid operations planners and grid asset controllers in our National Grid Operation Centres now using DSM for planning switching, which facilitates access to grid equipment to allow outage work to be carried out.

The planning process has been enhanced through the introduction of structured data (as opposed to free-text fields). This lays the foundation for switching instructions to be validated against the grid for improved accuracy and safety. And with the inclusion of outage information from the Integrated Outage Notification System, the project is reducing the need for staff to work between two systems.

The system can also now provide metrics and data for use in reporting.

By the end of the calendar year, we expect to have delivered the next stage of the programme, introducing systems-based validations and digital assistance for checking operating documentation, before moving toward the switch execution stage in 2025.

Our carbon footprint

We have been publicly reporting our GHG emissions since 2005, setting emissions reduction targets and working with our suppliers to reduce their emissions. This year, the details can be found within our *GHG Inventory Report*, and our comprehensive *Climate Statement FY2024* published in accordance with the Aotearoa New Zealand Climate Standards.

Enabling the transition to a renewable electricity system is the biggest contribution Transpower can make to reduce emissions for Aotearoa New Zealand. However, as we build and upgrade infrastructure, our own carbon footprint is set to increase substantially. This will be a result of transmission losses and an increase in embodied carbon as part of the physical construction required.

The increase in Transpower's carbon footprint will ultimately be offset by the greater benefit of electrification nationwide.

In 2021, we set an ambitious goal: to achieve a 60 per cent reduction of our controllable Scope 1 and 2 emissions by 2030. This excludes non-controllable emissions from transmission losses, which is energy lost in transit along transmission and distribution networks as well as at substations.

Overall, we are well on track to achieve these targets with Scope 1 and 2 emissions in FY2024 seeing a 57 per cent decrease compared to our FY2006 baseline. In FY2024, we achieved 95 per cent of our stated 2030 emission reduction target[4]. However, our total GHG emissions this year are up four per cent from last year, primarily as a result of increases in our purchased goods and services, capital goods and construction. This is in line with our expectations.

Our total emissions are estimated at 169,485 tonnes of carbon dioxide equivalent (tCO_2e), an increase of 6,602 tCO_2e from FY2023.

Scope 1

Scope 1 emissions are those that arise directly from our operations. They include emissions from our use of fugitive gases and fuel usage in vehicles. Transpower is the country's largest holder of sulphur hexafluoride (SF_6), which we use as an insulating gas in our essential high-voltage switchgear.

In 2021, we developed our SF_6 management strategy. Our overarching goal is to replace low-voltage switchgear with SF_6-free alternatives at end of life and monitor international best practice to enable investment in SF_6-free high-voltage switchgear.

This year, we have almost halved our losses from SF_6 and other fugitive gases, from 6,087 tCO_2e to 3,109 tCO_2e[4]. This decrease reflects our work to implement an increasing number of SF_6 leak repairs, although the size of the decrease is in part due to unusually high SF_6 emissions in FY2023.

We have continued our long-running work programme to switch to electric vehicles where suitable options exist. As of FY2024, Transpower's passenger fleet is now 100 per cent electric battery or plug-in hybrid vehicles, up from only 15 per cent in FY2019.

Scope 2

Scope 2 emissions relate to electricity usage in our buildings and substations and includes non-controllable transmission losses associated with operating the National Grid. Scope 2 emissions make up most of our carbon footprint, with transmission losses by far the largest contributor.

This year we have seen a decrease in transmission losses from 111,323 tCO_2e to 107,573 tCO_2e.

GHG emissions arising from transmission losses fluctuate year to year, largely driven by factors outside of Transpower's control; notably climatic patterns, which in turn influence electricity generation patterns in New Zealand. The proportion of overall emissions from thermal generation allocated to transmission losses is also inversely linked to the proportion of renewable generation. As the generation mix becomes more renewable, transmission losses may increase, but emissions linked to transmission losses will fall.

As part of our *Sustainability Strategy*, we are seeking to better understand Transpower's role in transmission losses, focusing effort on areas within our control.

Scope 3

Scope 3 emissions in the categories of purchased goods and services and capital goods increased by 53 per cent and 26 per cent respectively. These increases are not unexpected; they reflect improved data collection reported from some of our service providers and the increase in work undertaken to maintain the existing grid and build new infrastructure.

We're undertaking further analysis to understand the emissions intensity profile of these to determine if there may have been a reduction in intensity despite an overall increase in emissions.

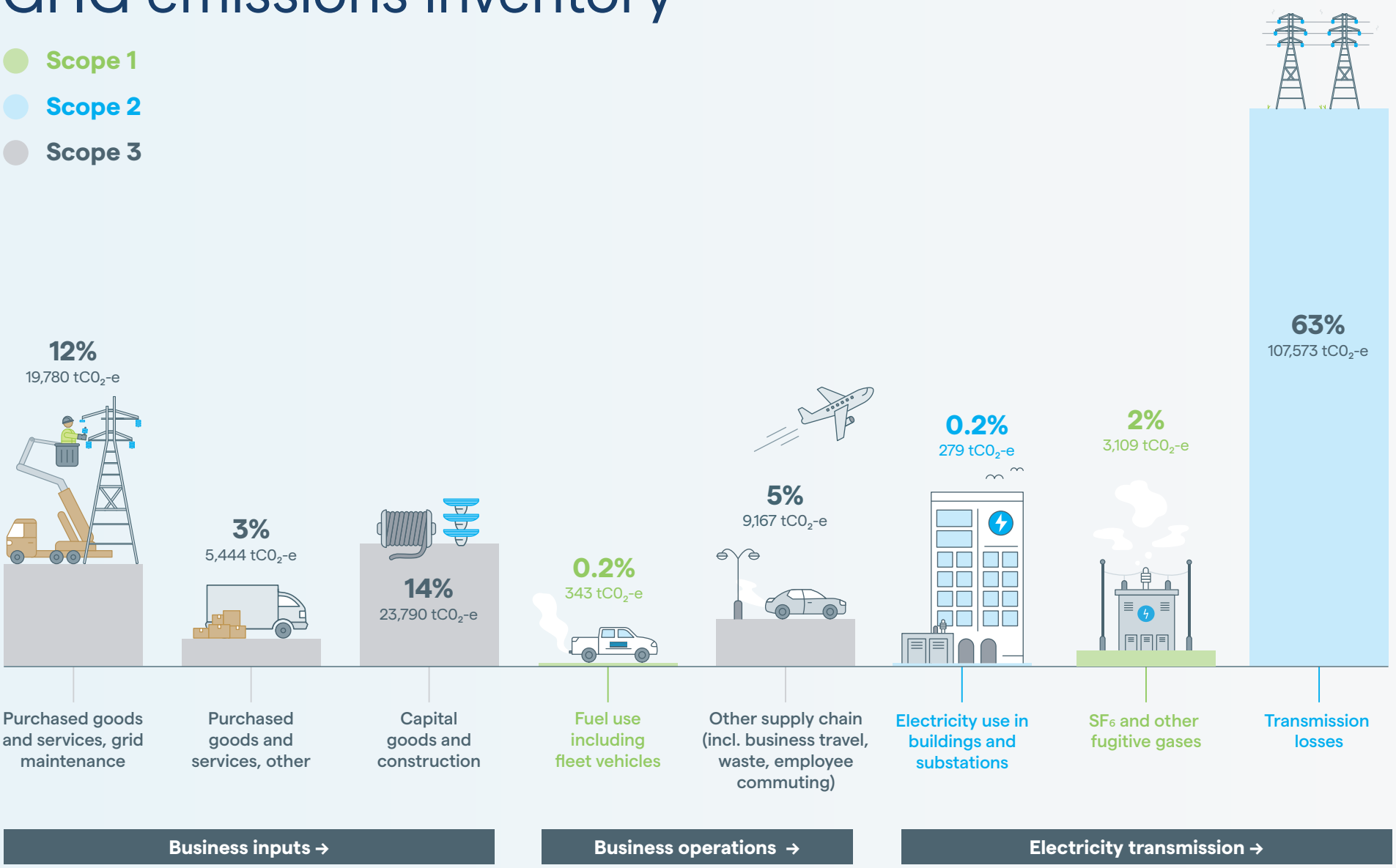
Emissions from waste increased significantly from 49 tCO_2e to 103 tCO_2e. This can be explained by the fact that we have been working on providing actual data for all landfill waste we generate, and this past year was the first in which we included all offices and warehouses in our reporting.

Employee commuting increased 76 per cent over the past year; our commuting survey showed that, on average, employees spent 33 per cent more time in our offices this year than they did last year. Conversely, alongside a decrease of staff working from home, a significant change in the way the Ministry for the Environment calculates the working from home emission factor, resulted in a 92 per cent decrease in working-from-home emissions, down from 48 tCO_2e to 4 tCO_2e.

4 Our Scope 1 emissions include emissions from sulphur hexafluoride (SF_6). Our reported SF_6 emissions data has been calculated using our gas transactions data reporting on the gas used to fill our assets or taken out of our assets when degassing them. See our 2023/24 GHG Inventory Report for information on some SF_6 data anomalies, net to 4.3 kg of SF_6 gas or 101 tCO_2e, which are excluded from our total reported SF_6 emissions. If we had included the anomalies net delta our total SF_6 emissions would increase by three per cent to 3,192 tCO_2e, FY2024's decrease from FY2006 would be 56 per cent and our achievement towards our Scope 1 and 2 controllable emissions reduction target would remain at 95 per cent.

GHG emissions inventory

- Scope 1
- Scope 2
- Scope 3



Creative problem-solving wins Red Hat Innovation award

Transpower's complex 10-year programme to modernise the market system and enable rapidly evolving technologies was recently singled out for its excellence in the international Red Hat Innovation Awards.

Transpower was named one of only four winners by Red Hat, a global provider of enterprise open-source solutions.

Since 2006, Red Hat has used the awards to recognise the technological achievements of its customers around the world who demonstrate creative problem-solving to make a positive impact on the business world and on society.

Transpower won the award for its multi-year market system transformation project, which concluded with the delivery of Real-Time Pricing, the biggest change to the wholesale electricity market since it had been created in 1996.

The market system is now more resilient and flexible to the changing landscape of the electricity sector and has a skilled and dependable team supporting it now and into the future.

Our work in this area began in 2013 when we identified several aspects of the market system that were reaching end of life. At the time, knowledge of the system and experience of working with it were diminishing.

We needed an ambitious and integrated plan for change that would deliver a tall order: to modernise the system and ensure it was fit-for-purpose, resilient, cost-effective and capable of adapting to future change without compromising the reliability of a critical service.

A 10-year modernisation journey was set in motion, focused on the people capability, processes and technological change.

We adopted agile ways of working whereby development and operations teams worked more collaboratively at every stage of the project, resulting in better software delivery.

A strategic decision was made to adopt open-source technology more widely, along with the use of a modern programming language and a framework-based approach to simplify the architecture. This helped expand the pool of people who could support and maintain the products into the future.

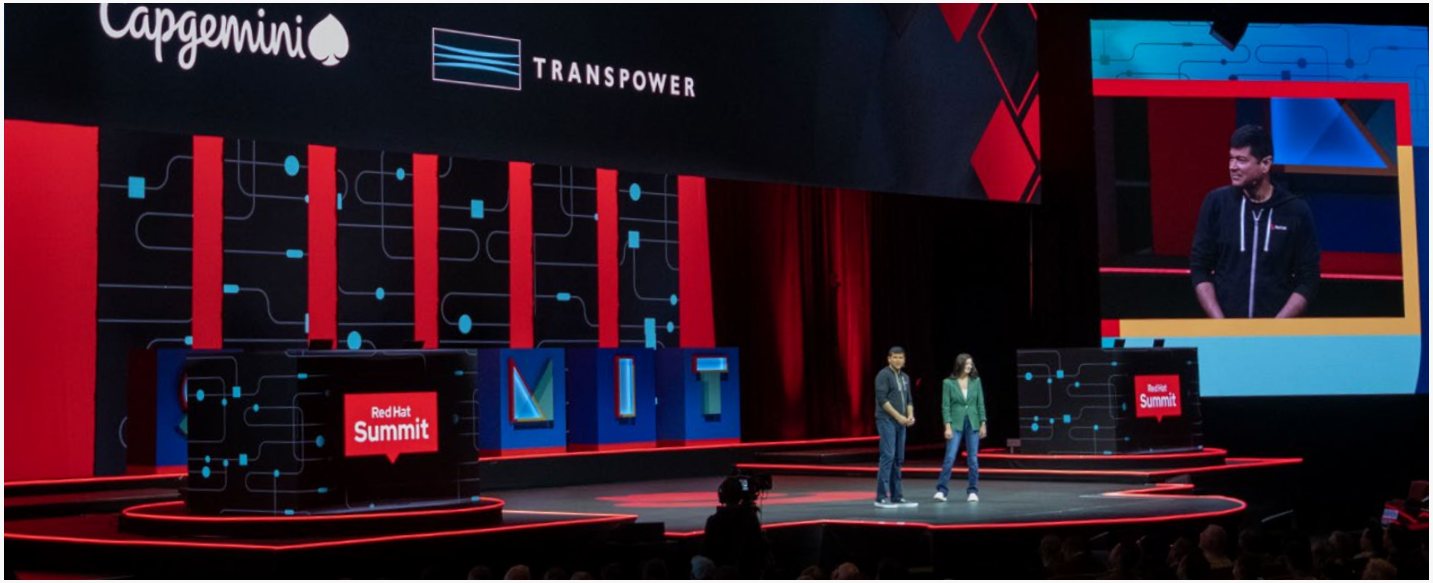
As a result, we were able to avoid a full system swap-out, avoid major costs and minimise service disruption, all the while continuing to operate the critical service.

Transpower teams were also celebrated for the following:

2023 New Zealand Energy Excellence Awards

Winner: Network Initiative of the Year, with Unison, for the innovative and collaborative efforts taken to restore power in Hawke's Bay following Cyclone Gabrielle

Finalist: Innovation in Energy Award, with the Electricity Authority Te Mana Hiko and NZX for the real-time pricing project.



Meeting the challenge of a growing workforce

One of the biggest challenges the industry faces is securing and retaining the skilled people needed to deliver the sector's accelerated work programme.

This need covers the entire sector, affecting generation, transmission and distribution. Addressing the challenge requires the support of regulators, training providers and government agencies.

There are several factors at play, including levels of awareness of the electricity sector and the career opportunities it provides; the availability of career pathways, from education into the sector and onwards through the industry; and the current training system, which is not designed to scale to meet the demand needed for the future workforce required.

At Transpower we are stepping forward to ensure that we address the barriers and opportunities the requirement for an increased workforce presents.

A three-year plan has been developed, detailing initiatives to support promotion of the sector, job opportunities and career pathways, and investment in people through trades and compliance training.

Potential solutions are grouped into three key themes:

- **Accelerate**: providing wider and quicker access to jobs in the transmission sector as well as reducing time to competency and productivity
- **Build capacity**: using tools, systems and processes to attract and scale training development and delivery
- **Enhanced training resources**: supporting the delivery of training through the use of technology, simulators and our training facilities.

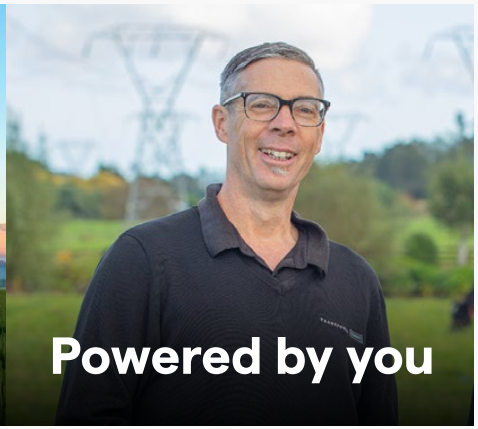
In preparation, this year we have evaluated our training management function, and the curriculum that's currently provided, to ensure we have an appropriate platform to support growth.

In addition, we have provided support to service providers who undertake field work for us, to support their investment in increased numbers of trainees.

We deliver training for our service provider staff through Grid Skills, which is a registered private training establishment. Courses are specifically designed to teach the required skills for work on Transpower's high-voltage assets and work sites. This past year 2,124 staff from 103 organisations participated in Grid Skills training.

In the year ahead, Transpower will be working more closely with its stakeholders to invest greater resource into sector promotion and the development of a workforce training pathway, while continuing to refine training programmes to accelerate staff development.

Internally, we continue to drive improvements in our organisational effectiveness and efficiency through the development of people, the establishment of 'practices' (e.g. project management, business analysis, software development), improvements in our approach to risk management and advancing innovation and digitalisation.



Our career progression pathways, such as engineering, project management and software development, are being continually enhanced to support growth of our critical capabilities.

We have increased investment in our graduate programme, taking 15 engineering graduates per year for the two-year programme. Participants provide key capability for our engineering functions, and the programme sets them up well for a career at Transpower.

Our business brings together people from 28 countries and many different cultures and capabilities. We invest in the diversity of our people and an inclusive environment.

Our Communities of Transpower play an important role in helping our people to make connections, raise awareness and understanding and celebrate the diversity of our people. Communities are employee-led and championed by the Executive Leadership Team. They include the Sustainability Collective, Open Minds—for exploring all things relating to mental health, Ngā Rangatira mō āpōpō—Young Professionals, the Hearing-Impaired Community, Kia Ora New Zealand Community, the Muslim Community, the Rainbow Network, Whakamana Wāhine, the Neurodiversity Community, Whanaungatanga and Power Parents.

A summary of the material impacts outlined in this section and where relevant, how we are addressing those across the business.

For more detail on material impacts, visit our website **What matters most? | Transpower**.

Impact	Description	Actions and commitments
Responsibility for GHG emissions due to transmission losses	GHG emissions from operating our assets, including transmission losses and SF_6 gas use across the National Grid as well as influencing our supply chain emissions	• Work programme to understand Transpower's role in transmission losses and prioritise our efforts • Implementation of SF_6 gas management strategy • Focus on understanding and influencing our Scope 3 (supply chain) emissions • Grid services contract requirement for sustainability plans and carbon reporting, linking to Transpower's reduction targets • Roll-out of our low emissions fleet and fast-charging electric vehicle infrastructure across our assets • Sustainability in design standard • Embodied carbon tools developed
Visual impact of our towers and transmission lines	Communities are affected by the physical presence of transmission lines and associated structures	• Consultation with affected communities and landowners • Community investment programme • Iwi partnerships • Working with landowners to minimise impact on their land when completing our work • Biennial landowner satisfaction survey • Tower and circuit removals, tower to pole conversions
Potential safety impacts associated with the installation, operation and maintenance of transmission lines	The presence and functioning of transmission lines may potentially cause harm to people and communities	• Health, Safety and Wellbeing Management System and Public Safety Management System, which ensure we meet our obligations under the Health and Safety at Work Act 2015 • Biennial STAR Awards, which celebrate those in the industry who demonstrate excellence in health and safety • Ongoing promotion of a health and safety reporting culture
Increased adoption of new technologies in the electricity market	Supporting research and innovation and adopting new technologies to improve the operational performance of the National Grid	• Continued our drone programme to improve our grid maintenance • LiDAR initiative for vegetation management
Harm to the natural and physical environment	Minimising adverse effects on the environment associated with the operation and maintenance of the National Grid	• Our *Sustainability Strategy*, which outlines our commitments and initiatives in more detail, including our *Biodiversity Strategy* • Resource Management Act approvals regime
Pollution of the environment from Transpower's operation	Operating and maintaining Transpower's assets can inadvertently result in pollution or contamination to air, land and waterways	• Our *Sustainability Strategy*, which outlines our commitments and initiatives in more detail, including our *Waste Management Strategy* • Contaminated land strategy adopted
Low employee retention rate due to tight labour market and low unemployment	Addressing current and future electricity skill shortage challenges through training, remuneration and personal development opportunities	• Maintaining progress against our gender diversity target (40/40/20) female/male/gender diverse • Actions resulting from employee engagement survey • Commitment to training and development opportunities available for all staff
Workforce competency	Ensuring the ongoing competency and wellbeing of the electricity sector workforce through training and skills development	• Grid Skills training to build competence in workers completing work on the National Grid • Graduate and internship programmes • Specialist training in technical domain areas • *Workforce Development Strategy*
Insufficient talent attraction	A lack of structured career development leads to an inability to attract potential employees, affecting organisational culture and success	• Promotion of our employee value proposition • Career pathways programme • Communities of Transpower, representing diverse groups and interests

Our business

Together, our Board and Executive Leadership Team set and guide our strategic focus and business activities and manage our risks to ensure we empower Aotearoa New Zealand's energy future.

Transpower measures its performance against the targets set out in the *Statement of Corporate Intent*, as well as against a wider range of environmental, social and economic measures.

Targets and outcomes

Statement of Corporate Intent 2023/24

Performance area	Measure	2023/24	2022/23	2021/22	Target 2023/24	Comments
Safety and our people	Number of fatalities or injuries causing permanent disability	0	0	0	0	
	Total recordable injury frequency rate (TRIFR) rolling 12 months	4.41	5.45	4.17	≤ 6	
	High potential incident frequency rate (HPIFR) rolling 12 months[1]	1.10	3.22	2.61	≤ 3	
	Staff engagement	Top 25%	Top 25%	Top 25%	Top 25% percentile score for energy & utilities sectors (12 month rolling average)	
Sustainability	Deliver sustainability strategy milestones	Achieved	Achieved	Achieved	Meet target	
Service performance	**Grid interruptions:**					
	GP1 Achieve collars for occurrence (unplanned interruptions)	6	6	6	≥ 4 out of 6	
	GP2 Achieve collars for average unplanned interruption duration[2]	4	2	5	≥ 4 out of 6	
	Grid availability:					
	AP1 HVDC energy availability	96.99%	97.89%	97.18%	> 96.75%	
	AP2 Key HVAC assets availability[3]	97.91%	98.69%	97.61%	> 98.6%	Quality standard not met due to PAK-WKM-1 and two circuits unavailable for service (temporarily decommissioned) for OHW bypass and cable repair/replacement
	Achieve system operation targets	Achieved	Achieved	Achieved	70	
Asset health measures	Power transformers	4.21%	3.18%	3.46%	<= 8.65%	
	Outdoor circuit breakers	0.37%	0.37%	0.96%	<= 7.63%	

Performance area	Measure	2023/24	2022/23	2021/22	Target 2023/24	Comments
Financial performance	Free funds from operations (FFO) interest coverage	5.4	5.4	6.2	4.5	
	FFO/debt	13.5%	13.3%	14.7%	11.7%	
	Return on equity	4.7%	6.3%	8.1%	5.3%	Target missed due to the tax legislation change to remove tax depreciation on commercial buildings resulting in a $34m increase in tax expense
	Return on capital employed	2.8%	3.4%	3.8%	3.2%	Target missed as per comment above

Downstream 24.

Environmental

Sustainability

	Unit	Change (up/down)	2023/24	2022/23	2021/22	Comments
Environmental management						
Significant/severe incidents	number		-	-	-	
Moderate incidents	number	^	2	-	2	
Minor incidents	number		18	18	22	
Carbon emissions						
Scope 1 emissions (emissions arising directly from our operations)	tonnes CO_2e (equivalents)	v	3,452	6,452	4,534	
Scope 2 emissions (emissions associated with electricity usage, including transmission losses)	tonnes CO_2e (equivalents)	v	107,851	111,572	169,318	This increase reflects improved data collection reported from some of our service providers, and an increase in work undertaken to maintain the existing grid and build new infrastructure
Scope 3 emissions (emissions arising from activities in our supply chain)	tonnes CO_2e (equivalents)	^	58,182	44,859	44,440	
Total carbon emissions	tonnes CO_2e (equivalents)	^	169,485	162,883	218,293	
Emission to air						
SF_6 and other fugitive gases	kg	v	132	267	194	
Energy consumption						
Progress towards 2030 GHG emissions reduction target	% of target achieved	^	95	38	72	This reflects the significant SF_6 emissions reduction achieved in FY24
Total gas consumption in non-operation buildings	GJ	^	938	760	759	
Total energy consumption in non-operational buildings	kWH	v	2,312,923	2,318,605	2,226,672	
Total energy consumption in operational buildings	kWH	^	1,136,008	1,037,407	1,069,324	
Business travel						
Fuel used in operational plant and vehicles	litres	^	117,367	111,159	102,863	
Flights - distance travelled	pkm	^	4,074,937	3,391,001	1,430,785	As with FY2023, this reflects increased rates of travel after the COVID-19 pandemic
Distance travelled company vehicles	km	^	1,573,485	1,458,570	1,203,319	
Distance travelled in rental vehicles	km	v	262,531	317,649	161,181	

Social

		Unit	Change (up/down)	2023/24	2022/23	2021/22	Comments
Safety	**Safety**						
	High potential incident frequency rate (HPIFR) (employees and contractors)	per million hours	↓	1.1	3.2	2.6	
	Total recordable injury frequency rate (TRIFR) (employees and contractors)	per million hours	↓	4.4	5.5	4.2	
	Number of fatalities or injuries causing permanent disability (employees and contractors)	number		0	0	0	
People	**Workforce composition**						
	Total Transpower employees	number	↑	969	884	829	In line with need to grow workforce
	Median age of employees	years		46	46	44	
	Mean/median length of service	years	↓	7.91	8.25	8.65	
	Average employee earnings	$	↑	148k	142.1k	136.4k	
	Gender balance						
	Gender identity by role – All	% female/male/gender diverse		32/68/0	31/68/1	32/67/1	
	Gender identity by role – People leaders	% female/male/gender diverse		31/69/0	30/70/0	30/69/0	
	Gender identity by role – General management	% female/male/gender diverse		56/44/0	50/50/0	40/60/0	
	Gender identity by role – Board	% female/male/gender diverse		57/43/0	57/43/0	38/62/0	
	Gender pay gap	%	↓	15.3	17.0	16.7	
	Ethnicity (All)						
	% staff providing ethnicity data	%	↑	76	72	67	
	European (Incl New Zealanders)	%	↓	72	74	76	
	Māori	%	↑	6	5	6	
	Middle Eastern/Latin America/African	%		4	4	8	
	Asian	%	↑	26	24	21	
	Pacific	%		4	3	3	
	Other Ethnicity	%		4	4	4	
	Employee engagement						
	Employee engagement survey participation	%	↓	93	96	97	
	Employee engagement survey results – % Peakon quartile for Energy & Utilities sector	%		top 25%	top 25%	top 25%	

Social

		Unit	Change (up/down)	2023/24	2022/23	2021/22	Comments
People	**Workforce stability and wellbeing**						
	Total staff turnover	%	↓	9.9	11.3	16.4	
	Voluntary turnover	% turnover	↓	9.2	10.7	15.4	
	Average number of sick days per employee	days per employee	↓	5.8	6	5	
	Employees skill and capability						
	Learning and development expenditure (technical training inclusive)	$	↑	2.3m	2.0m	1.9m	
	Investment in pipeline training (graduate programme)	$	↑	1.9m	1.2m	0.7m	This increase is due to the growth in the number of graduates being hired
	Internal hires to total hires	%	↓	24	29	28	As Transpower is increasing FTE to meet RCP4 goals the % of internal hires will be lower
	Skill and capability of wider industry						
	Training of industry/service providers	$	↑	4.7m	4.1m	3.4m	
Relationships	**Business ethics**						
	Speak up contacts made (number contacts to fair call service)	number		0	0	0	
	Notifiable Privacy Breaches	number		0	0	0	
Customers	**Community**						
	Number of voluntary days used	number	↑	338	284	258	
	Investments in communities	$	↑	720k	620k	761k	
	Stakeholder satisfaction						
	Percentage of customers who agree or strongly agree with the seven customer engagement statements	%	↑	72.0	66.6	71.4	
	Satisfaction from customers on System Operator performance	%	↓	77	89	95	Our measurement approach changed in FY2024
	Landowner Satisfaction – Landowner satisfaction survey (biennial)	%	↓	91	-	94	
	Landowner Satisfaction – Number of claims against Transpower to Utility Disputes	number		0	0	0	

Economic

Financial

	Unit	Change	2023/24	2022/23	2021/22	Comments
Financial performance						
Net Profit After Tax (After Fair Value Changes)	$ million	↓	90	127	166.6	This is due to the tax legislation change to remove tax depreciation on commercial buildings resulting in a non-cash increase in tax expense of $34m
Return on capital employed	%	↓	2.8	3.4	3.8	Please refer to commentary above
Return on equity	%	↓	4.7	6.3	8.1	Please refer to commentary above
Dividends paid per year	$ million	↓	116	120	120	
Taxation						
Current tax paid	$ million	↓	17.1	31.8	33.7	
Capital investment and supply chain						
Total capital expenditure	$ million	↑	475	379	323	
Total procurement spend	$ million	↑	860	741	634	Total opex + capex spending
Asset Value	$ million	↓	6,271	6,417	6,055	
Network performance						
Number of loss of supply events greater than 0.05 system minutes	number	↓	9	13	9	
Number of loss of supply events greater than one system minute	number		1	1	0	
Unplanned HVAC circuit unavailability	%	↓	0.062	0.494	0.34	FY2024 is noticeably lower as there was no long duration unplanned outage compared to the previous year (Cyclone Gabrielle impact on our Redclyffe substation). FY2023 has been restated as the dates for outages relating to Cyclone Gabrielle have been established.
Unplanned HVDC bi-pole unavailability (%)	%	↑	0.066	0.05	1.26	
Total impact of interruptions (measured in system minutes)	number	↓	2.53	334.46	6.04	FY23 increase was due to the impact of Cyclone Gabrielle on our Redclyffe substation
Generators (Injection)	GWh	↑	38,373	37,945	37,621	
GXP-EDBs (offtake)	GWh	↑	32,003	31,115	30,876	
GXP-direct connects (Offtake)	GWh	↓	6,342	6,541	6,698	
HVDC flows north	GWh	↓	2,324	3,445	3,206	
HVDC flows south	GWh	↑	380	208	171	
HVDC losses	GWh	↓	90	136	122	
AC System losses	GWh	↓	1,241	1,361	1,314	

Executive Leadership Team

Alison Andrew

Chief Executive

Alison joined Transpower in February 2014 and her last day was 30 June 2024. Prior to joining Transpower, she had held a number of senior executive roles across various industry sectors, including as Global Head of Chemicals for Orica PLC, and senior roles at Fonterra Cooperative Group and across the Fletcher Challenge Group in energy, forests and paper.

Alison has an MBA from Warwick University and studied engineering (chemicals and materials) at Auckland University. She is a Director for Port of Tauranga and was previously a Director for Genesis Energy.

John Clarke

Executive General Manager Future Grid, Acting Chief Executive – Effective 1 July 2024

Chantelle Bramley
Executive General Manager Operations

Brighid Kelly
Executive General Manager People

David Knight
Executive General Manager Strategy, Regulation and Governance

Raewyn Moss
Executive General Manager Customer and External Affairs

Cobus Nel
Executive General Manager Information Services & Technology

Mark Ryall
Executive General Manager Grid Delivery

Catherine Shaw
Chief Financial Officer

Matt Webb
Executive General Manager Grid Development
(commenced 13 August 2024)

Visit our website to read leadership team profiles **Executive Leadership Team | Transpower**

The Board

The Board is a collective unit directing and guiding Transpower's strategic focus and business activities. They are appointed by and are accountable to the shareholding Ministers. The directors collectively bring skills and expertise to support the Executive Leadership Team to set and deliver on the strategic objectives and direction of the business, as well as responding to the shareholding Ministers' expectations.

Complementing the Board's overarching view of the business, each Board member spends time with our Executive Leadership Team, extending their knowledge base in the day-to-day operations and their understanding of what happens at every layer of the organisation.

The Board spends time learning from other national and global organisations, as well as extending their knowledge and understanding of our stakeholders, customers and end-consumers.

This list reflects our Board of Directors as at 30 June 2024. Visit our website to read Board profiles **Board of Directors | Transpower**.

Dr Keith Turner

Chair

Keith has more than 50 years' experience in the electricity industry, having held senior executive positions in Meridian Energy (CEO), the former Electricity Corporation of New Zealand (COO), and its predecessor NZED. His experience includes extensive participation in major reform initiatives that reshaped New Zealand's electricity system including being a member of the Transpower Establishment Board, a founding Director of The Market Company (MCo) and a founding member of the Market Surveillance Committee.

Since 2008, he has held Directorships on a range of major boards in New Zealand and Australia including Fisher and Paykel Appliances (former Chair), Auckland International Airport (former Deputy Chair), Chorus, Trustpower, Team NZ (former Chair) and Australian-based Spark Infrastructure, Transgrid, Victoria Power Networks and South Australia Power Networks. He is currently a Director of EnergyCo, a State of New South Wales developer of large scale transmission for Renewable Energy Zones. Keith has a PhD in engineering, is a Distinguished Fellow of Engineering NZ and holds the Sir William Pickering Medal for Engineering Leadership.

Whaimutu Dewes

Deputy Chair

Owen Coppage

Michele Embling

Vanessa Oakley

Parekawhia McLean

Heather Simpson

Corporate governance

Board Committees

Transpower has four regular Board committees:

1. the Audit & Risk Committee (Kāhui tātari kaute me tūraru)
2. the People & Performance Committee (Kāhui whakahaere tangata me te mahi)
3. the Health, Safety & Wellbeing Committee (Kāhui hauora me te marutau)
4. the System Operator Committee (Kāhui whakamahi pūnaha)

Each committee has terms of reference that outline its role, rights, responsibilities, and membership requirements. You can find this information, along with committee membership, on our website.

Board committees | Transpower

Meeting attendance

The Executive General Manager Strategy, Regulation and Governance (in performing his roles as General Counsel and Company Secretary) attends all meetings as Secretary. Committee terms of reference set out that:

- the Chief Executive and Chief Financial Officer are included as attendees at the Audit & Risk Committee meetings at the request of the Chair of the committee
- the Chief Executive and relevant Executive General Managers are included as attendees at the Health, Safety & Wellbeing Committee meetings
- the Chief Executive and Executive General Manager People are included as attendees at People & Performance Committee meetings
- that the Chief Executive and Executive General Manager Operations are included as attendees at the System Operator Committee meetings

Director	Commenced	Ceased	Board	Audit & Risk	Health, Safety & Wellbeing	People & Performance	System Operator
Keith Turner	1 December 2021		9/10	4/4	4/5	3/4	1/3
Whaimutu Dewes	1 July 2023		10/10		5/5	4/4	
Michele Embling	1 March 2022		10/10	4/4	4/5		
Heather Simpson	1 December 2021		10/10	4/4		4/4	3/3
Parekawhia McLean	8 July 2022		10/10		5/5	4/4	
Vanessa Oakley	8 July 2022		9/10	4/4			3/3
Owen Coppage	1 July 2023		10/10	3/4			2/3

Scan to visit:
Who we are - Transpower

Director skills matrix

*As 12 July 2024

Transpower's Board of Directors comprises individuals with a broad and diverse set of skills and experience that collectively benefit our company and the electricity sector.

Key:

- ● High Capability
- ○ Moderate Capability

Strategic priority	Director skills and experience	Capability
Play an active role in enabling New Zealand's energy future	**Industry experience** Executive experience in the electricity industry in transmission, distribution and/or generation.	●●●○○
	New technologies Leadership experience of innovation, new technologies in electricity systems, real-time data systems for decision making and digital transformation.	●●●○○
	Strategic thinking Skills that enable critical thinking to solve complex problems and plan for the future.	●●●●●
Our role in environmental, social and governance	**Governance** Experience in corporate governance, including with listed companies or other government owned companies.	●●●●●
	Risk Understanding of operational, project, financial and non-financial risk management.	●●●○○
	Community and te ao Māori Leadership in decarbonisation, impact on communities, efficiency in energy use and impact on energy poverty.	●●●●○
	Health and safety Understanding of workplace health and safety, including knowledge of legal obligations.	●●●○○
	Climate-related risks Understanding of climate-related risks, and governance, strategy and management of such risks.	●●●○○
	Environment and sustainability Experience in delivering sustainability strategies and managing environmental challenges, application of tikanga Māori.	●●●●○

Strategic priority	Director skills and experience	Capability
Match our infrastructure to need over time	**Finance and capital markets** Knowledge of financial business drivers, capital allocation and financing.	●●●○○
	Government and regulation Understanding of regulatory environment, particularly regulated businesses and energy sector and associated challenges for infrastructure.	●●●○○
	Large-scale infrastructure and projects Experience overseeing large-scale infrastructure growth, project investment, large project management, project execution and maintenance programmes.	●●●○○
Evolve our services to meet customers' needs	**Stakeholder management** The skills and relationships to support stakeholder management from government and mana whenua to delivering on a customer-centric approach.	●●●●○
	Commercial capability Understanding of commercial alignment, impact of innovation and transformation.	●●●●○
Accelerate our organisational effectiveness	**Executive leadership** Former senior executive leadership experience, including strategic growth, evolving culture, identifying priorities and driving delivery.	●●●●○
	Asset management and real-time operations Experience in deployment of best practice asset management technology and digital tools for power systems. Knowledge of real-time data systems for decision making.	●●●○○
	Security, data and technology Leadership of using data, AI, conversion to digital and security of systems supporting the national security of the grid, systems-enabled operational efficiencies and data use for the benefit of the community.	●●○○○

Directors' interests

Transpower's *Directors' Interests Policy* governs how Transpower resolves and manages the way directors' individual interests are disclosed.

No directors hold shares in Transpower, have loans from Transpower or have made any request to use company information received in their capacity as directors that would not otherwise have been available to them.

The following current directors have made general disclosures of interest (as at 30 June 2024) with certain external organisations based on them being a chair, director, board member, trustee, council member, member, employee or consultant of those organisations or holding material securities or shares of those organisations.

Note: Some directors hold shares in energy companies either directly or through trusts and these are disclosed in accordance with the policy.

Name	Description	Date
Keith Turner	Chair, Queenstown Lakes Spatial Plan Governance Group and Steering Committee	27 June 2024
	Board Member, Energy Corporation of NSW Advisory Board	
	Director (and Chair), Red Phase Technologies Limited	
Heather Simpson	Director, Environmental Protection Authority	27 June 2024
	Board Member, Board of Antarctica New Zealand	
Michele Embling	Chair, External Reporting Board (XRB)	27 June 2024
	Board Member, Toitū Tahua | The Centre for Sustainable Finance	
	Board Member, Australian Government Financial Reporting Council	
	Deputy Chair, University of Auckland Business School Advisory Board	
	Board Member, AIA New Zealand Limited	
	Director, IAG New Zealand Limited	
	Director, Risk Reinsurance Limited	
Vanessa Oakley	Chief General Counsel, Company Secretary and Property Officer, KiwiRail Holdings Limited	27 June 2024
	Director and Shareholder, VJO NZ Limited	
Parekawhia McLean	Chair, Hauora Māori Advisory Committee to the Minister of Health	27 June 2024
	Chair, Te Roopu Manukura, University of Waikato Council	
	Board Member, Waikato Tainui (Te Aratuara)	
	Tumu Whakarae I CEO, To Kahui Tatari Ture I Criminal Cases Review Commission	
	Director, Sports Waikato	
Whaimutu Dewes	Director, Whainiho Developments Limited	27 June 2024
	Director, Ngati Porou Whanui Forests Limited	
	Director, Ngati Porou Forests Limited	
	Director, High Value Nutrition (NSC) Limited	
Owen Coppage	Independent Advisor to Genesis Energy Retail Platform Transformation	27 June 2024
	Independent Advisor to Tata Consultancy Services	
	Director, EnergyOS Pty Limited	

Remuneration

Board remuneration

Remuneration and benefits payable to directors for services as a director are determined by shareholding ministers.

Remuneration paid to Transpower's directors during FY2024 is shown in the table.

Director	Date commenced in office	Date ceased in office	FY24 $000	FY23 $000
Dean Carroll[5]	1 November 2016	31 May 2023	3.33	73.03
Roger Blakeley[6]	1 June 2020	30 April 2023	1.74	51.82
Dr Keith Turner (Chair)	1 December 2021		120.63	121.13
Heather Simpson	1 December 2021		61.18	60.92
Michele Embling	1 March 2022		61.68	59.17
Parekawhia McLean	8 July 2022		60.07	56.14
Vanessa Oakley	8 July 2022		59.92	56.14
Whaimutu Dewes	1 July 2023		71.96	
Owen Coppage	1 July 2023		57.32	

During FY2024, no director of Transpower or the Transpower Group has received or become entitled to receive any benefit other than that disclosed above.

Subsidiary companies

Information on directors of subsidiary companies as at 30 June 2024.

TB and T Limited	Risk Reinsurance Limited	Halfway Bush Finance Limited	emsTradepoint Limited
David Knight Chris Sutherland	Michele Embling (Chair) David Knight John Clarke Catherine Shaw	David Knight Chris Sutherland	David Knight Catherine Shaw John Clarke

5 Previous Director (finished term 31 May 2023) however received special fees in September 2023.
6 Previous Director (finished term 30 April 2023) however received special fees in September 2023.

Chief Executive remuneration

Transpower's *Remuneration Policy* and framework for officers is managed by the People & Performance Committee in line with the Committee's terms of reference.

The Chief Executive can earn an incentive payment of 40 per cent of salary, subject to company and individual performance targets being met and at the discretion of the Board. Any change to the Chief Executive's salary is subject to approval by the Board following a review by the People & Performance Committee.

Members of the Executive Leadership Team can earn incentive payments, subject to company and individual performance targets being met. Such payments are at the absolute discretion of the Board. The Board may approve up to 120 per cent of the company performance component of the incentive where the company meets or exceeds 100 per cent of planned earnings before interest and taxation, depreciation and amortisation and fair value adjustments EBITDAIF.

Executive Leadership Team salaries are informed by performance achievement as assessed by the Chief Executive against objectives. Incentives can be 20–25 per cent of their of team members' salary. In relation to their FY2023 performance objectives, the leadership team received an average of 98 per cent of their available incentives. Changes to salaries are subject to consultation with the Chair and reviewed by the People & Performance Committee annually.

Category	Weighting	Performance driver	Measure	Target
Safety	30%	High Potential Incident Frequency Rate	High Potential Incident Frequency Rate	≤ 3.0 (rolling 12-month average)
People	20%	Engagement	Transpower targeted engagement score	Top 25% percentile score (rolling 12 month average)
Customer	20%	Service performance	GP1: Achieve collars for occurrence - unplanned interruptions	>= 4 out of 6
			GP2: Achieve collars for average unplanned interruption duration	>= 4 out of 6
Sustainability	10%	Customer Engagement Plan	TCFD framework & ESG Reporting frame work	Year 4 Milestones
Financial	20%	Operating profit	EBITDAIF (adjusted passthrough and recoverable costs)	Achieve plan EBITDAIF (+/-2%)
		Grid works	Deliver 23/24 base capex plan (spend basis)	Deliver 95% -105% of 23/24 base capex plan (spend basis)

Chief Executive individual objectives for 1 July 2022 to 30 June 2023

1. **Industry leadership of the emerging decarbonisation and 100 per cent renewables transition.**
   - i. Highly credible profile for Transpower and Chief Executive
   - ii. Strong exposure of transmission system development plans to gain support
   - iii. Resolving in principle problem definition, Transpower role, regulatory stance, Transmission Pricing Methodology, and economics for protecting the economies of scale for the future build of the grid, in response to a multitude of new connections
   - iv. Maintain company position in industry debates
   - v. No major or catastrophic system events that erode confidence in Transpower
2. **Earn a high level of stakeholder respect across all stakeholder touch points:**
   - i. Political/Ministers
   - ii. Government agencies
   - iii. Electricity Authority
   - iv. Commerce Commission
   - v. Electricity distribution businesses
   - vi. New connections
   - vii. Generation retailers
3. **Engender a culture and employment brand that can deliver on Transpower's objectives.**
   - i. Ensure Transpower has a high value employment brand in the electricity industry and in New Zealand
   - ii. Joined up team performance is obvious to stakeholders and Board
   - iii. Responsive to customers
   - iv. Adequate resources are attracted for both 'business as usual' roles and major projects
   - v. Strong senior leadership succession planning

The details of the Chief Executive's remuneration are set out below. Figures include KiwiSaver. Incentives are based on company and individual performance objectives. The performance incentive is paid during the financial year but relates to the prior years' performance as it is paid after balance date.

Year	Base salary[1] $000	Benefits[2] $000	Fixed remuneration $000[3]	Discretionary payment $000[4]	Amount of incentive paid $000[5]	Total remuneration $000	% Incentive achieved[6]
2023/24	1,158	58	1,216	–	450	1,666	99
2022/23	1,097	55	1,152	–	415	1,568	97
2021/22	1,035	52	1,087	–	407	1,494	97
2020/21	944	46	990	42	313	1,345	100
2019/20	973	47	1,020	–	292	1,312	97

1. The Chief Executive agreed to a 20 per cent reduction in base salary for four months of FY2021 and two months of FY2020, reflecting the financial impact of COVID-19.
2. Benefits include KiwiSaver, insurances and carpark.
3. Fixed remuneration is the total of base salary and benefits.
4. One-off payment of four per cent to align the Chief Executive's remuneration with market movement, in accordance with the Remuneration Policy.
5. Includes KiwiSaver paid on incentive.
6. Incentive relates to prior financial year.

Remuneration of Transpower employees including executives

The performance management framework is designed to provide line of sight between the company's performance objectives and individual performance objectives. The remuneration framework ensures we provide market comparable salaries to staff to attract, retain and motivate employees.

All employees have fixed remuneration, adjusted each year in accordance with a budget agreed by the Board on recommendation from the People & Performance Committee. Any increase is informed by data from independent remuneration specialists. Employee fixed remuneration is based on a matrix of employees' performance and how their salary compares that of employees of a comparable position in the market. Aside from the Chief Executive, Transpower employees who received total remuneration of greater than $100,000 were in the following bands.

Remuneration $000	2024	2023
640-649	1	0
620-629	1	0
610-619	1	1
600-609	1	
590-599	1	
570-579		1
560-569		1
540-549		1
520-529	1	
510-519	1	
500-509		1
490-499		1
480-489	1	1
470-479		1
460-469		1
350-359	1	
340-349	2	1
330-339	1	2
320-329	3	1
310-319	1	
300-309	2	4
290-299	5	2
280-289	10	1
270-279	8	10
260-269	7	6
250-259	5	8
240-249	7	7

Remuneration $000	2024	2023
230-239	10	9
220-229	11	6
210-219	22	16
200-209	35	*22
190-199	34	*30
180-189	40	35
170-179	69	40
160-169	85	*75
150-159	80	82
140-149	62	83
130-139	77	57
120-129	64	67
110-119	68	58
100-109	50	48
	767	679

The remuneration bands above include all remuneration paid to or on behalf of employees, including base salary, performance payment, insurance, death and disability insurance, KiwiSaver, medical insurance, income protection insurance and severance or redundancy payments.

* The asterisk indicates those include at least one former employee remuneration who received a severance or redundancy payment, without which they would not have been in that band.

Statutory and additional disclosures

NZX disclosures

Transpower is a limited liability company and a state-owned enterprise with our shares held on behalf of the Crown by the Minister of Finance and the Minister for State-Owned Enterprises. Transpower has debt listed on the NZX and is, therefore, required to comply with debt listing obligations.

This corporate governance statement reports our activities against the NZX Corporate Governance Code (the NZX Code). The NZX Code is the primary guidance on corporate governance for NZX-listed issuers, describing principles of corporate governance and the recommended action to demonstrate best practice.

There are certain parts of the NZX Code that do not apply to Transpower, such as those clauses related to director appointments, takeovers, directors' remuneration and shareholder rights.

As a state-owned enterprise, these governance arrangements are the responsibility of the Crown and are set out in the State-Owned Enterprises Act 1986 and Transpower's constitution.

Transpower's Corporate Governance Statement is **detailed in full on Transpower's website** along with relevant policy documents.

Securities listed on the NZX Debt Market

As at 30 June 2024 Transpower has securities listed on the NZX Debt Market quoted under the ticker codes TRP050, TRP070, TRP080, TRP090 and TRP100. As a listed issuer, Transpower is subject to certain requirements and obligations under the NZSX/NZDX Listing Rules, including a continuous disclosure obligation.

Other disclosures

Based on the register of bondholders, Transpower has at least the following number of bond holders as at 30 June 2024.

	TRP050			TRP070			TRP080			TRP090			TRP0100		
	No. of bond holders	**No. of bonds**	**% of bonds**	**No. of bond holders**	**No. of bonds**	**% of bonds**	**No. of bond holders**	**No. of bonds**	**% of bonds**	**No. of bond holders**	**No. of bonds**	**% of bonds**	**No. of bond holders**	**No. of bonds**	**% of bonds**
1,001 – 5,000	5	25,000	3.7	2	10,000	1	0	0	12	60,000	8.70	9	9	45,000	3.9
5,001 – 10,000	21	197,000	15.7	18	161,000	7	3	30,000	20	181,000	14.49	34	34	327,000	14.6
10,001 – 50,000	71	2,003,000	53.0	137	3,878,000	56	14	471,000	61	1,457,000	44.20	134	134	3,613,000	57.5
50,001 – 100,000	11	859,000	8.2	36	2,738,000	15	8	698,000	15	1,170,000	10.87	23	23	1,830,000	9.9
>100,001	26	121,916,000	19.4	52	443,213,000	21	24	148,801,000	30	197,132,000	21.74	33	33	194,185,000	14.2
Total	**134**	**125,000,000**	**100.0**	**245**	**450,000,000**	**100.0**	**49**	**150,000,000**	**138**	**200,000,000**	**100.0**	**233**	**233**	**200,000,000**	**100.0**

	TRP050	TRP070	TRP080	TRP090	TRP0100
Top 20 largest listed bondholders 30 June 2024					
	ASB Bank Limited	Tea Custodians Limited	New Zealand Local Government Funding Agency Limited	Tea Custodians Limited	Westpac New Zealand Limited
	Custodial Services Limited	BNP Paribas Nominees NZ Limited	BNP Paribas Nominees NZ Limited	Westpac New Zealand Limited	Custodial Services Limited
	FNZ Custodians Limited	Citibank Nominees (NZ) Ltd	Tea Custodians Limited	Custodial Services Limited	Tea Custodians Limited
	BNP Paribas Nominees NZ Limited	FNZ Custodians Limited	FNZ Custodians Limited	BNP Paribas Nominees NZ Limited	BNP Paribas Nominees NZ Limited
	Tea Custodians Limited	Custodial Services Limited	JBWERE (NZ) Nominees Limited	FNZ Custodians Limited	Forsyth Barr Custodians Limited
	Forsyth Barr Custodians Limited	New Zealand Local Government Funding Agency Limited	TSB Bank Ltd (Associate)	New Zealand Local Government Funding Agency Limited	FNZ Custodians Limited
	HSBC Nominees (New Zealand) Limited	ASB Bank Limited	Citibank Nominees (NZ) Ltd	Kiwibank Limited	Kiwibank Limited
	JBWERE (NZ) Nominees Limited	JBWERE (NZ) Nominees Limited	HSBC Nominees (New Zealand) Limited	Forsyth Barr Custodians Limited	TSB Bank Ltd (Associate)
	Pt (Booster Investments) Nominees Limited	HSBC Nominees (New Zealand) Limited	Kiwibank Limited	Citibank Nominees (NZ) Ltd	JBWERE (NZ) Nominees Limited
	Investment Custodial Services Limited	TSB Bank Ltd (Associate)	Custodial Services Limited	TSB Bank Ltd (Associate)	HSBC Nominees (New Zealand) Limited
	Dunedin City Council	Forsyth Barr Custodians Limited	ANZ Wholesale NZ Fixed Interest Fund	HSBC Nominees (New Zealand) Limited	Investment Custodial Services Limited
	Mt Nominees Limited	Premier Nominees Ltd, Armstrong Jones Secure Income Fund	Bank Of New Zealand, Wellington Treasury	JBWERE (NZ) Nominees Limited	JPMORGAN Chase Bank
	Citibank Nominees (NZ) Ltd	Investment Custodial Services Limited	JPMORGAN Chase Bank	Bank Of New Zealand, Wellington Treasury Operations	Public Trust
	NZX WT Nominees Limited	ANZ Wholesale NZ Fixed Interest Fund	Investment Custodial Services Limited	ANZ Wholesale NZ Fixed Interest Fund	HSBC Nominees (NZ) Limited
	Jo Ann Arlene Scoggin & John Michael Sundheim	ANZ National Bank Limited	Public Trust Ipm Nominees Limited	JPMORGAN Chase Bank	Public Trust Ipm Nominees Limited
	Malaghan Institute of Medical Research Trust Board	Southland Building Society	Mt Nominees Limited	Westpac Banking Corporation	NZX WT Nominees Limited
	ANZ National Bank Limited	The Co Operative Bank Limited	Commonwealth Bank of Australia	Dunedin City Council	Lode Roger Missiaen
	Private Nominees Limited	NZX WT Nominees Limited	Forsyth Barr Custodians Limited	Pin Twenty Limited	McMillan Nominees Limited
	Somsmith Nominees Limited	Woolf Fisher Trust Inc	Pin Twenty Limited	Investment Custodial Services Limited	Malaghan Institute of Medical Research Trust Board
	Ruapapa Limited	Commonwealth Bank of Australia	Jo Ann Arlene Scoggin & John Michael Sundheim	Mt Nominees Limited	Jo Ann Arlene Scoggin & John Michael Sundheim

Financial performance

For the year ended 30 June 2024

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Consolidated financial statements

Notes to the consolidated financial statements

Statement of comprehensive income

For the year ended 30 June 2024

Group ($m)	Notes	2024	2023
Operating revenue	A1	**930**	**913**
Operating expenses	A3	**(385)**	**(362)**
Earnings before interest, tax, depreciation, amortisation, asset write-offs, impairment and changes in the fair value of financial instruments (EBITDAIF)		**545**	**551**
Depreciation, amortisation, asset write-offs and impairment	B1	(288)	(307)
Interest revenue		13	8
Interest expense	C6	(111)	(101)
Net profit before tax and changes in the fair value of financial instruments		**159**	**151**
Gain / (loss) in the fair value of financial instruments	D7	13	23
Net profit before tax		**172**	**174**
Income tax expense	A5	(82)	(47)
Net profit		**90**	**127**
Attributable to:			
Non-controlling interest		2	(2)
Owners of the parent		88	129

Group ($m)	Notes	2024	2023
Other comprehensive income / (expense)			
Items that will not be reclassified to profit or loss			
Net gain / (loss) on credit spreads changes on own debt	D7	(11)	(15)
Items that may be reclassified to profit or loss			
Net gain / (loss) on cash flow hedges	D7	(76)	(4)
Other comprehensive income / (expense)		**(87)**	**(19)**
Attributable to:			
Non-controlling interest		-	-
Owners of the parent		(87)	(19)
Total comprehensive income / (expense)		**3**	**108**
Attributable to:			
Non-controlling interest		2	(2)
Owners of the parent		1	110

These statements are to be read in conjunction with the accompanying notes.

Statement of financial position

As at 30 June 2024

Group ($m)	Notes	2024	2023
Current assets			
Cash and cash equivalents		118	396
Investments	E2	28	35
Trade receivables and other assets	E4	103	81
Derivative financial instruments	D6	107	150
		356	**662**
Non-current assets			
Trade receivables and other assets	E4	6	7
Derivative financial instruments	D6	91	137
NZPCL investment	E1	87	82
Property, plant and equipment	B1	5,324	5,124
Intangible assets	B2	407	405
		5,915	**5,755**
Total assets		**6,271**	**6,417**
Current liabilities			
Trade and other payables	E5	130	117
Tax payable		6	8
Deferred income	A2	1	1
Derivative financial instruments	D6	48	68
Provisions	E3	26	27
Borrowings	C4	301	609
Lease liabilities	C5	9	8
		521	**838**

Group ($m)	Notes	2024	2023
Non-current liabilities			
Deferred income	A2	212	187
Derivative financial instruments	D6	21	56
Provisions	E3	34	44
Borrowings	C4	2,953	2,683
NZPCL debt	E1	88	85
Lease liabilities	C5	82	83
Deferred tax	A5	626	594
		4,016	**3,732**
Total liabilities		**4,537**	**4,570**
Equity			
Capital	C1	1,200	1,200
Retained earnings		477	516
Cash flow hedge reserve	D7	58	134
Non-controlling interest	E1	(1)	(3)
Total equity		**1,734**	**1,847**
Total funds employed		**6,271**	**6,417**

The Board of Directors of Transpower New Zealand Limited authorised these financial statements for issue on 27 August 2024.

For, and on behalf of, the Board

Dr Keith Turner
Chair

Michele Embling
Chair of Audit & Risk Committee

These statements are to be read in conjunction with the accompanying notes.

Statement of changes in equity

For the year ended 30 June 2024

Group ($m)	Notes	Ordinary shares	Retained earnings	Cash flow hedge reserve	Owners of the Parent	Non controlling interest	Total
Equity at 1 July 2022		1,200	522	138	1,860	(1)	1,859
Net profit		-	129	-	129	(2)	127
Other comprehensive income / (expense)		-	(15)	(4)	(19)	-	(19)
Total comprehensive income / (expense)		**-**	**114**	**(4)**	**110**	**(2)**	**108**
Dividends paid	C3	-	(120)	-	(120)	-	(120)
Total equity at 30 June 2023		**1,200**	**516**	**134**	**1,850**	**(3)**	**1,847**
Net profit		-	88	-	88	2	90
Other comprehensive income / (expense)		-	(11)	(76)	(87)	-	(87)
Total comprehensive income / (expense)		**-**	**77**	**(76)**	**1**	**2**	**3**
Dividends paid	C3	-	(116)	-	(116)	-	(116)
Total equity at 30 June 2024		**1,200**	**477**	**58**	**1,735**	**(1)**	**1,734**

These statements are to be read in conjunction with the accompanying notes.

Cash flow statement

For the year ended 30 June 2024

Group ($m)	Notes	2024	2023
Receipts from customers		940	928
Interest received		13	8
Payments to suppliers and employees		(380)	(355)
Tax payments		(18)	(32)
Interest paid		(112)	(111)
Operating cash flows		**443**	**438**
Sale of property, plant and equipment		-	3
Sale of investments		37	53
Purchase of property, plant and equipment and intangibles		(487)	(383)
Purchase of investments		(28)	(15)
Investing cash flows		**(478)**	**(342)**
Proceeds from bonds, term debt and commercial paper		667	742
Collateral received / (paid)		(9)	(17)
Dividends paid	C3	(116)	(120)
Payment of lease liabilities		(9)	(8)
Repayment of bonds, term debt and commercial paper		(776)	(355)
Financing cash flows		**(243)**	**242**
Net increase / (decrease) in cash flow		(278)	338
Cash at the beginning of year		396	58
Cash at the end of year		**118**	**396**
Cash comprises:			
Bank balances and on-call deposits		73	61
Restricted cash - retention money held on trust		5	5
Short-term deposits with original maturity less than three months		40	330

These statements are to be read in conjunction with the accompanying notes.

Cash flow statement reconciliation

A reconciliation of net profit to operating cash flows is provided below:

Group ($m)	Notes	2024	2023
Net profit		90	127
Add / (deduct) non-cash items:			
(Gain) in the fair value of financial instruments		(14)	(23)
Depreciation, amortisation, asset write-offs and impairment		288	307
Deferred tax		66	16
Capitalised interest	C6	(7)	(6)
Movements in working capital items:			
(Increase) / decrease in trade and other receivables		(20)	13
(Increase) in prepayments		-	(3)
Increase in trade and other payables, interest payable and deferred income		38	4
(Decrease) in taxation payable		(2)	(1)
Increase in provisions		4	4
Operating cash flows		**443**	**438**

Transpower Group information

Reporting entity

These financial statements are for Transpower New Zealand Limited (Transpower) and its subsidiaries (together, "the Group"). Transpower is a state-owned enterprise registered in New Zealand under the Companies Act 1993 and is an FMC reporting entity under the Financial Markets Conduct Act 2013.

The Group is the owner and operator of New Zealand's national electricity grid and its operations are not considered seasonal or cyclical in nature.

Basis of preparation

Transpower's financial statements are prepared:

- in accordance with New Zealand generally accepted accounting practice (GAAP) and comply with New Zealand equivalents to International Financial Reporting Standards (IFRS) and IFRS as appropriate for profit-oriented entities;
- in accordance with the requirements of the Financial Markets Conduct Act 2013 and the State-Owned Enterprise Act 1986;
- in millions of New Zealand dollars (NZD), unless otherwise noted;
- on a historical cost basis, except for certain investments and financial instruments held at fair value;
- exclusive of GST, with the exception of receivables and payables;
- using the same accounting policies for all reporting periods presented.

Material accounting estimations and judgements

Accounting policies and information about judgements that have had a material effect on the amounts recognised in the financial statements are disclosed in the following notes:

i.	Property, plant and equipment	B1
ii.	Lease liabilities	C5
iii.	Derivative financial instruments	D6

New accounting standards

All mandatory amendments and interpretations have been adopted in the current year. None have had a material impact on these financial statements.

There are no new accounting standards issued, but not yet effective, which materially impact the Group.

Non-GAAP measures

Transpower use non-GAAP measures that are not in accordance with NZ IFRS. These non-GAAP measures provide useful information to users of the financial statements to assist in understanding financial performance. These measures are also used internally to evaluate performance and have been consistently applied.

Non-GAAP measures included in these financial statements are:

- **EBITDAIF** – Earnings before interest, tax, depreciation, amortisation, asset write-offs, impairment and changes in the fair value of financial instruments EBITDAIF adds back interest, depreciation, amortisation, asset write-offs and impairment to earnings before tax and changes in the fair value of financial instruments.
- **Net tangible assets per share** – The net tangible asset calculation divides tangible assets, being total equity less intangible assets, by the total number of shares on issue.

A: Financial performance

A1. Operating revenue

Group ($m)	2024	2023
Transmission revenue		
Interconnection	732	711
Connection	121	122
EV (rebate)	(25)	(25)
Other regulated transmission	1	3
Insurance recoverable	5	-
Customer investment contracts	28	33
Undergrounding and transmission realignment	3	8
Other transmission	5	3
Total transmission revenue	**870**	**855**
Other revenue		
System operator	49	46
Other	11	12
Total other revenue	**60**	**58**
Total operating revenue	**930**	**913**

Description

Transmission revenue is regulated and set by the Commerce Commission (the Commission). It consists of charges for the transmission of electricity from the point of generation to the point of supply, being high voltage alternating current (HVAC) interconnection, connection and high voltage direct current (HVDC).

Customer investment contracts are entered into with customers to build grid connection assets.

Undergrounding and transmission realignment contracts are entered into with third parties to underground and/or realign certain transmission line assets.

System operator income relates to payments received to operate the electricity market.

Included in "Other revenue" is $3m (2023: $3m) subject to the Telecommunications Development Levy.

Accounting policies

The key revenue recognition criteria are as follows:

Transmission revenue and system operator revenue	On a monthly basis as services are delivered to customers.
Customer investment contracts	Assets built for customers, which are owned by Transpower, which provides services over the life of the asset, being the monthly transmission of electricity. Revenue is grossed up for an imputed interest expense and recognised over the expected life of the related customer assets, irrespective of contract durations, which can vary from up-front to 50 years.
Undergrounding and transmission realignment - Government	In accordance with NZ IAS 20 Government Grants, revenue is grossed up for an imputed interest expense and recognised over the life of the related transmission assets.
Undergrounding and transmission realignment - non-Government	Recognised at the time transmission assets are commissioned. The decommissioned transmission assets are then immediately written-off.
Wholesale market-related ancillary services, losses and constraint payments	Transactions are treated as "pass-through" and are not recorded in profit or loss. Pass-through occurs because Transpower is deemed to act only as an agent. Similarly, Transpower acts as agent relating to its natural gas and carbon market operations.
Insurance recoverable	Recognised when realisation is virtually certain.

A2. Deferred income

Group ($m)	2024	2023
Customer investment contracts	168	143
Undergrounding and transmission realignment	41	40
Other	4	5
Total deferred income	**213**	**188**
Current portion	1	1
Non-current portion	212	187
Total deferred income	**213**	**188**

A reconciliation of deferred income as it relates to revenue is shown below for the two material categories:

	2024		2023	
Group ($m)	**Customer investment contracts**	**Undergrounding and transmission realignment**	**Customer investment contracts**	**Undergrounding and transmission realignment**
As at 1 July	143	40	125	41
Advance payments from customers	44	1	39	3
Net revenue recognised in the year from				
Amounts included in the contract liability at the beginning of the year	(1)	-	(1)	(1)
Advance payments applied to current year	(18)	-	(20)	(3)
As at 30 June	**168**	**41**	**143**	**40**

A3. Operating expenses

Group ($m)	2024	2023
Grid maintenance		
Substations maintenance - HVAC	61	58
Substations and cables maintenance - HVDC	16	13
Lines maintenance - HVAC	43	49
Lines maintenance - HVDC	2	5
Transmission-related rates	7	7
Other	9	8
	138	**140**
IST maintenance and operations		
Support and maintenance	18	16
Outsourced services	17	15
Licences	14	12
Other IST	2	2
	51	**45**
Other operating expenses		
Investigations	29	24
Ancillary service costs	4	8
Employee benefits	150	135
Capitalised salary costs	(33)	(27)
Salary transferred to investigations	(10)	(8)
Contractors and consultants	12	12
Industry levies	14	10
Insurance	9	7
Travel and vehicle costs	3	3
Other business support costs	18	13
	196	**177**
Total operating expenses	**385**	**362**

Description

Grid maintenance includes inspection, servicing and repair costs. Other grid maintenance expenses include maintenance support, communication systems costs and training for service providers and third parties.

Information Service Technology (IST) maintenance and operations expenses include system and software support, configuration and customisation of cloud-based service arrangements, software license fees and service lease charges.

Investigations include work conducted prior to the commencement of a capital project, updates to maintenance standards and demand-response costs.

Other business support costs include lease expenses relating to short-term leases and low-value assets, legal fees, office equipment and communications.

A4. Auditor's remuneration

Fees paid to Transpower's auditor (Ernst & Young) were $854,000 (2023: $1,103,000).

Group ($000)	**2024**	**2023**
Audit and review of the statutory financial statements		
Year-end audit	538	525
Review of the half year financial statements	65	61
	603	**586**
Audit or review related services required by legislation to be provided by the auditors		
Independent assurance of Transpower's Trust deed requirements[1]	7	7
Reasonable assurance engagement on Risk Reinsurance Limited (RRL) annual solvency return	15	-
Annual regulatory disclosure assurance engagement	158	150
	180	**157**
Other assurance services where there is discretion as to whether the service is provided by the auditor or another firm		
Assurance engagement		
Independent assurance and AUP on revised TPM assumptions and calculations[2]	-	195
Independent assurance of Transpower's green financing framework	-	40
Independent review of Transpower's Greenhouse gas emissions inventory	43	42
Independent assurance of Independent Price-Quality Path (IPP) reopener	-	45
Independent assurance of regulatory Maximum Allowable Revenue forecast	-	20
Independent review of Transpower's Commercial Value financial model	20	11
	63	**353**
Other services		
Acquisition of remuneration benchmarking reports[3]	8	7
	8	**7**
Total auditor's remuneration	**854**	**1,103**

1. Trust deed requirements include fees to review Directors' certificates in relation to debt held against one trust deed.
2. This includes the independent review of Transpower's models, calculations and assumptions under the new Transmission Pricing Methodology (TPM). The new TPM was effective from 1 April 2023.
3. The provision of the remuneration benchmarking reports, which provide market-based sector information and no specific recommendations to Transpower, is not considered to impact on auditor independence.

A5. Taxation

Reconciliation to profit before tax

Group ($m)	2024	2023
Net profit before tax	172	174
Income tax at 28%	48	49
Tax effect of:		
Removal of building depreciation	34	-
Research and Development tax credit	-	(2)
Total income tax expense	**82**	**47**
Comprising		
Current	16	31
Deferred	66	16

Description

There are no unrecognised deferred tax balances (2023: nil).

In March 2024, the Government removed the deductibility of depreciation on buildings not primarily used for residential accommodations, for tax purposes. This amendment was effective from 1 April 2024. The impact of this change decreases the tax base for these assets, giving rise to an increased difference between the carrying cost and tax base and results in a increase in deferred tax liability and increase in tax expense of $34 million.

Accounting policies

Deferred tax arises from differences between the accounting and tax values of assets and liabilities, except where the initial recognition exemption applies.

For property, plant and equipment, deferred tax typically arises from the accounting book including capitalised interest, differences in depreciation rates between tax and accounting and the capital contribution rules.

Deferred tax assets and liabilities are offset only if there are legally enforceable rights to set off current tax assets against current tax liabilities and when they relate to the same taxable entity and taxation authority.

Imputation credits

The imputation credit balance at 30 June 2024 is $12 million (2023: $11 million).

Deferred tax

Group ($m)	As at 1 July 2022	Recognised in profit or loss	Recognised in OCI	As at 30 June 2023	Recognised in profit or loss	Recognised in OCI	As at 30 June 2024
Property, plant and equipment	570	9	-	579	64	-	643
Fair value of net debt and derivatives	38	7	(8)	37	3	(34)	6
Deferred income	(2)	1	-	(1)	(2)	-	(3)
Dismantling provision	(7)	1	-	(6)	1	-	(5)
Other	(13)	(2)	-	(15)	-	-	(15)
Total deferred tax	586	**16**	**(8)**	594	**66**	**(34)**	626

A6. Segment performance

The Group's segments are:

- **Transmission** - the transmission of electricity from the point of generation to the point of connection.
- **System operator** - operates the electricity market to dispatch generation to ensure the short term security of the New Zealand electricity system.
- **Other** - includes RRL, which provides insurance services for the group, as well as revenue from energy market services and fibre lease services.

External revenue is derived from New Zealand customers and assets based in New Zealand. The Group has no other reportable segments.

	Transmission		System Operator		Other		Total	
Group ($m)	**2024**	**2023**	**2024**	**2023**	**2024**	**2023**	**2024**	**2023**
External revenue	871	855	49	46	10	12	930	913
Capex	467	366	8	13	-	-	475	379

Major customers

External customers that contribute 10% or more of total Group revenue are:

Customer	% of Group Revenue	Segment
Vector Limited	20 (2023: 20)	Transmission
Powerco Limited	10 (2023: 11)	Transmission

B: Assets

B1. Property, plant and equipment

Group ($m)	HVAC transmission lines	HVDC transmission lines	HVAC substations	HVDC substations and submarine cables	Communi-cations	Administration assets	Right-of-use lease assets	Work in progress	Total property, plant and equipment
At 30 June 2024									
Cost	3,187	180	3,233	927	495	228	157	240	8,647
Accumulated depreciation	(1,065)	(78)	(1,118)	(511)	(327)	(172)	(52)	-	(3,323)
Net book value	**2,122**	**102**	**2,115**	**416**	**168**	**56**	**105**	**240**	**5,324**
Comprising									
Opening net book value	2,072	105	2,045	419	169	57	107	150	5,124
Additions	1	-	4	1	-	-	9	439	454
Transfers from work in progress	138	2	151	22	26	9	-	(348)	-
Disposals	(2)	-	(2)	-	(1)	-	-	(1)	(6)
Depreciation	(87)	(5)	(84)	(26)	(26)	(10)	(11)	-	(249)
Impairment reversal	-	-	1	-	-	-	-	-	1
Closing net book value	**2,122**	**102**	**2,115**	**416**	**168**	**56**	**105**	**240**	**5,324**
At 30 June 2023									
Cost	3,060	178	3,091	905	474	221	147	150	8,226
Accumulated depreciation	(988)	(73)	(1,046)	(486)	(305)	(164)	(40)	-	(3,102)
Net book value	**2,072**	**105**	**2,045**	**419**	**169**	**57**	**107**	**150**	**5,124**
Comprising									
Opening net book value	2,042	106	1,939	435	170	58	118	163	5,031
Additions	1	-	2	-	1	-	1	352	357
Transfers from work in progress	115	5	196	8	24	9	-	(357)	-
Disposals	-	(1)	(12)	-	-	-	-	(8)	(21)
Depreciation	(86)	(5)	(82)	(24)	(26)	(10)	(12)	-	(245)
Impairment reversal	-	-	2	-	-	-	-	-	2
Closing net book value	**2,072**	**105**	**2,045**	**419**	**169**	**57**	**107**	**150**	**5,124**

Land and buildings are contained within the above classes and have a net book value of $278 million (2023: $273 million).

The Right-of-use assets primarily relate to the lease of fibre optic cables for Transpower's communication network and property lease for office buildings and IT data centres.

Depreciation, amortisation, write-offs and dismantling

Group ($m)	2024	2023
Depreciation	249	245
Amortisation	34	33
Impairment reversal	(1)	(1)
Net loss on disposal	5	18
Dismantling expense	1	12
	288	**307**

Work in progress is split into the following classes:

Group ($m)	2024	2023
HVAC transmission lines	37	30
HVAC substations	177	106
Communications	4	4
Other	22	10
	240	**150**

Capital Commitments

At 30 June 2024, Transpower has $274 million of property, plant and equipment commitments (2023: $223 million), all of which is due within one year of balance date.

Accounting policies

Property, plant and equipment is initially measured at cost and subsequently stated at cost less accumulated depreciation and any impairment losses. Cost is determined by including all costs directly associated with bringing the assets to their location and condition for use. Finance costs incurred during construction are capitalised to the total cost of assets. Assets are transferred from work in progress to property, plant and equipment at cost as they become operational and available for use.

The carrying amounts of property, plant and equipment assets are reviewed annually for any indications of impairment. If any indication exists, the recoverable amount of the asset or cash generating unit is estimated in order to determine the extent of the impairment loss (if any). The recoverable amount for regulated assets is equal to the regulatory book value for revenue recovery purposes. There has been no impairment to the regulatory asset base for the year ended 30 June 2024 (2023: nil).

For unregulated assets, Transpower tests for indicators of impairment, such as deterioration in the credit worthiness of the customer, and any indicated factors in pricing the future cash flows Transpower expects to receive. For the year ended 30 June 2024, there was an impairment reversal of $1 million in relation to unregulated assets (2023: $2 million impairment reversal).

Depreciation

Depreciation of property, plant and equipment is on a straight-line basis. This allocates the cost, less any residual value, over an asset's estimated useful life. The residual value and useful lives are reviewed, and, if appropriate adjusted at each balance date. The estimated weighted average of useful lives is as follows:

HVAC transmission lines	58 years
HVAC transmission high voltage cables	45 years
HVAC transmission lines (tower painting)	15 years
HVAC substations	43 years
HVDC substations (including submarine cables)	28 years
HVDC transmission lines	55 years
Communication assets	15 years
Administration assets	16 years
Right-of-use assets	9-20 years

Key judgements and estimates

Transpower has exercised judgement in the following areas:

1. Determining the estimated remaining useful lives of assets and whether any indications of impairment exist. Transpower uses assistance from independent engineers to determine useful lives. For transmission line assets, the proximity to the coastline is a key assumption.
2. Whether or not an item is capital in nature and the appropriate component level of asset at which to depreciate.
3. Determining the appropriate time to commission an asset and commence depreciation.
4. Determination of whether or not a right-of-use asset exists through assessment of contractual arrangements.
5. Where a lease contract contains options to extend or terminate the lease, consideration of the likelihood of exercising the options based on past practice.

B2. Intangible assets

Group ($m)	Easements and right-to-access	Software and other intangibles	Work in progress	Total intangible assets
At 30 June 2024				
Cost	311	508	26	845
Accumulated amortisation	(8)	(430)	-	(438)
Net book value	**303**	**78**	**26**	**407**
Comprising				
Opening net book value	304	90	11	405
Additions	-	-	36	36
Transfers from work in progress	-	21	(21)	-
Amortisation	(1)	(33)	-	(34)
Closing net book value	**303**	**78**	**26**	**407**
At 30 June 2023				
Cost	311	487	11	809
Accumulated amortisation	(7)	(397)	-	(404)
Net book value	**304**	**90**	**11**	**405**
Comprising				
Opening net book value	304	91	17	412
Additions	-	-	27	27
Transfers from work in progress	1	32	(33)	-
Impairment	-	(1)	-	(1)
Amortisation	(1)	(32)	-	(33)
Closing net book value	**304**	**90**	**11**	**405**

Capital commitments

At 30 June 2024, Transpower has $1 million of intangible asset commitments (2023: $1 million), all of which are due within one year of balance date.

Description

The most significant right-to-access asset relates to the 2011 purchase of access rights to the Vector Tunnel in Auckland for $50 million.

Accounting policies

The cost of acquiring a finite-life intangible asset is amortised on a straight line basis from the date the underlying asset is ready for use over the period of its expected benefit. Assets are transferred from work in progress to intangible assets at cost as they become operational and available for use. Easements are deemed to have an indefinite useful life and are tested for impairment annually. Certain easements have been donated by the Crown and are recognised at cost (nil) plus any direct cost associated with putting the easement in place.

The estimated useful lives are as follows:

Software	5-8 years
Right-to-access asset	90 years

Emissions units acquired are carried at cost less any accumulated impairments. For the year ended 30 June 2024, no impairment loss was recognised in relation to emissions units (2023: $1 million).

C: Funding

C1. Share capital

Transpower has 1,200,000,000 issued and fully paid $1 ordinary shares (2023: same).

Under the State-Owned Enterprises Act 1986, Transpower's ordinary shares are held equally by the Minister of Finance and the Minister for State-Owned Enterprises.

C2. Net tangible assets per share

Group ($m)	Note	2024	2023
Net assets / (equity)		1,734	1,847
Less intangible assets	B2	(407)	(405)
Total net tangible assets		**1,327**	**1,442**
Net tangible assets per share ($)		**1.11**	**1.20**

Net tangible assets per share is a non-GAAP financial measure and is not prepared in accordance with NZ IFRS.

C3. Dividends

	2024		2023	
Dividends declared and paid	**($m)**	**cents per share**	**($m)**	**cents per share**
Final dividend paid (2023:2022)	72	6	72	6
Interim dividend paid (2024:2023)	44	4	48	4
	116	**10**	**120**	**10**
Final dividend declared	**66**	**6**	**72**	**6**

On 27 August 2024, the Directors approved the payment of the final dividend of $66 million. The dividend will be partially imputed and is expected to be paid on 20 September 2024.

C4. Borrowings

Facilities

The Group has three borrowings programmes. Under these programmes, the aggregate principal amount outstanding may not exceed the following:

Group ($m)	Issuance currency	Foreign currency equivalent	NZ$M	Utilised NZ$M
Domestic medium term note programme	NZD	-	No set limit	1,600
Domestic commercial paper programme	NZD	-	500	-
Australian medium term note programme	AUD	1,000	1,093	542

Green financing

Transpower's Green Finance Programme ("The Programme") supports Transpower's commitment to achieve a net-zero carbon transmission grid. Transpower has achieved a Programmatic Certification with the Climate Bonds Standard Version 3.0.

The Programme covers both existing and future issuances of Transpower's borrowings instruments, the proceeds of which are allocated to finance or refinance Eligible Green Assets - Transpower's transmission lines and substations, key enabling infrastructure in supporting the increasing take up of renewable generation in New Zealand.

The following instruments listed are all certified as Green Financing Instruments under the Programme.

Group ($m)	Issuance	Maturity	Coupon (%)	2024	2023
Domestic Bonds					
Bonds 2024	NZ$150	14-Mar-24	2.73	-	148
Bonds 2025	NZ$125	06-Mar-25	3.82	125	123
Bonds 2025	NZ$175	09-Jun-25	BKBM + 0.32	176	176
Bonds 2025	NZ$450	04-Sep-25	1.74	433	417
Bonds 2026	NZ$150	08-Apr-26	1.52	141	135
Bonds 2026	NZ$200	08-Sep-26	2.05	189	182
Bonds 2026	NZ$200	14-Sep-26	BKBM + 0.37	201	-
Bonds 2027	NZ$200	16-Sep-27	4.63	201	198
Bonds 2028	NZ$100	15-Mar-28	5.89	105	105
Australian Medium Term Notes					
AUD MTN 2023	AU$300	28-Aug-23	5.75	-	333
AUD MTN 2028	AU$200	29-Nov-28	4.98	220	218
AUD MTN 2030	AU$300	30-Jun-30	5.23	340	325
Swiss Bonds					
CHF MTN 2027	CHF125	16-Dec-27	0.02	220	208
CHF MTN 2029	CHF160	16-Mar-29	0.04	278	260
CHF EMTN 2031	CHF150	21-Mar-31	1.35	277	-
US Private Placement					
USPP 2023	US$78	13-Oct-23	3.58	-	128
USPP 2026	US$75	28-Jun-26	2.81	119	114
USPP 2026	US$70	13-Oct-26	3.83	113	111
USPP 2028	US$75	28-Jun-28	2.91	116	111
Carrying value of borrowings				**3,254**	**3,292**
Comprising					
Current				301	609
Non-current				2,953	2,683

The effective interest rate on borrowings, including the effect of all derivative financial instruments, was 3.0% (2023: 3.0%).

Group debt, net of cash, maturing in the 12 month period is $208 million (2023: $213 million), within the $750 million policy threshold. The contractual amount Transpower is required to repay is disclosed as "issuance" in the table above and may be greater than the fair value presented on the financial statements.

Changes in borrowings	2024	2023
As at 1 July	3,292	2,928
Net cash borrowed / (repaid)	(109)	387
Non-cash change in fair value adjustment through P&L	57	(51)
Non-cash change in fair value adjustment through OCI	15	21
Other	(1)	7
As at 30 June	**3,254**	**3,292**

Fair value changes in the table above include foreign exchange movements. The cumulative change in fair value of debt that is attributable to changes in Transpower's own credit risk is an increase of $14 million (2023: a decrease of $1 million).

Accounting policies

Debt is designated as fair value through profit or loss. Fair value movements relating to changes in Transpower's own credit risk are recognised through other comprehensive income.

Fair values of borrowings are determined by converting currency exposures and discounting cash flows based on the relevant yield curve. The yield curve is adjusted to reflect the credit risk of Transpower. These valuations are considered level two in the fair value hierarchy. There has been no movement between levels during the year.

C5. Lease liabilities

Group ($m)	2024	2023
As at 1 July	91	99
Additions	9	1
Accretion of interest	3	3
Payments	(12)	(12)
As at 30 June	**91**	**91**
Comprising		
Current	9	8
Non-current	82	83

For the year ended 30 June 2024, $2 million (2023: $2 million) is included in operating expenses relating to short-term leases and low-value assets.

Total cash outflow for leases was $14 million (2023: $14 million).

Accounting policies

Lease liabilities are recognised based on the present value of the remaining lease payments, including lease renewals that are deemed reasonably certain to be exercised. Transpower uses the incremental borrowing rate at the lease commencement date to calculate the present value of lease payments.

Key judgements and estimates

Transpower has exercised judgement in the following areas:

1. Where a lease contract contains options to extend or terminate the lease, consideration of the likelihood of exercising the options based on past practice; and
2. Use of a single discount rate to a portfolio of leases with reasonably similar characteristics.

C6. Interest expense

Group ($m)	2024	2023
Interest expenses and associated fees	103	93
Capitalised interest	(7)	(6)
Lease interest	3	3
Imputed interest	12	11
	111	**101**

Description

Capitalised interest is based on Transpower's forecast weighted average cost of borrowing, being 3.32% for the year-ended 30 June 2024 (2023: 3.00%).

Imputed interest arises on deferred income and the unwinding of the discount of future cash flows related to provisions.

D: Financial instruments used to manage risk

D1. Financial risk management

Transpower's activities expose it to a variety of financial risks, including liquidity risk, interest rate risk, currency risk, credit risk, regulatory risk, climate change risk and insurance risk. The Board has established policies that provide an overall risk management framework.

Transpower manages capital to maintain its strong credit rating and to have sufficient capital available to meet its financing and operating requirements. Surplus equity is returned by way of dividends to shareholders.

Transpower's investment grade credit rating is Standard & Poor's AA (2023: AA).

A summary of the financial risks that impact the Group, how they arise and how they are managed is presented in this section:

Nature and exposure	Note	How the risk is managed
Liquidity risk The risk the Group is not able to meet its financial obligations as they fall due. This might result from the Group not maintaining adequate funding facilities or being unable to refinance existing maturities.	D2	The Group's policy requires the total amount of net borrowings (being total borrowings, net of cash including on-call and short-term deposits) maturing in any 12-month period to not exceed NZ$750m, or up to NZ$1bn with prior Board approval. In addition, the Group maintains access to committed funding facilities in excess of borrowings that mature in the next six months and cumulative anticipated operating cash flow requirements. At year end the Group has committed standby facilities split into two tranches of NZ$250m each, maturing 7 December 2024 and 31 December 2025. These facilities have been undrawn since inception (2023: same).
Interest rate risk Transpower is exposed to interest rate risk through its borrowing at both fixed and floating interest rates. Changes in market interest rates expose the Group to changes in: a. future interest payments on borrowings subject to floating interest rates (cash flow risk); and b. the fair value of borrowings subject to fixed interest rates (fair value risk).	D3, D6	The Group uses interest rate derivatives to provide certainty of interest rates and costs during Regulatory Control Periods. The Group's policy sets minimum and maximum hedging parameters expressed as a percentage of forecast debt. Interest rate swaps and options are used to change the interest rate profile on existing and forecast debt and cross-currency interest rate swaps entered into.
Currency risk The Group is exposed to currency risk as a result of borrowings and operational transactions being denominated in a currency other than the Group's functional currency.	D6	*Operational transactions:* The Group uses foreign exchange contracts to manage foreign exchange risk on operational transactions in accordance with the Group's Treasury policy. Foreign exchange forwards are used to hedge the value back to New Zealand Dollars. *Overseas borrowings:* The Group uses cross-currency interest rate swaps (CCIRS) to manage foreign exchange risk on foreign currency borrowings. All interest and principal repayments are economically hedged. The combination of the foreign-denominated debt and CCIRS results in a net exposure to New Zealand dollar floating interest rates and a fixed New Zealand dollar-denominated principal repayment. The New Zealand dollar floating interest rate risk is managed using the process described in the interest rate risk section above.

Nature and exposure	Note	How the risk is managed
Credit risk Credit risk is the risk that a counterparty will default on its financial obligations. Transpower's credit risk arises from its investments, financial derivatives and accounts receivable.	D4	***Cash and cash equivalents and financial derivative contracts:*** Is managed by acquiring high quality credit from counterparties with a minimum long-term Standard & Poor's credit rating of A "stable" or better (or equivalent from Fitch or Moody's). In addition, establishing appropriate credit limits, which are constrained at 20% of Shareholders Funds. The Group's exposure and the credit ratings of its counterparties are continuously monitored to ensure the risk is spread among approved counterparties. ***Regulated customers:*** Transpower recovers the value of regulated transmission assets in accordance with the Commission input methodologies. The effect of the regulations are that a customer default would result in Transpower recovering any revenue shortfall from all other transmission customers. ***Unregulated customers:*** Bank guarantees are held for outstanding balances owed in relation to transmission realignments undertaken on behalf of unregulated customers. ***Customer investment contracts:*** Risk is minimised through applying credit limits and appropriate credit management practices, such as monitoring the size and nature of exposures and mitigating the risk deemed to be above acceptable levels.
Insurance risk: Insurance risk is the risk the Group is unable to acquire sufficient cover in the event of asset loss.	D5	Along with external insurance, Transpower operates a captive insurance company through its subsidiary Risk Reinsurance Limited (RRL). RRL maintains an investment portfolio to meet potential insurance claims.
Regulatory risk: Transpower is a natural monopoly that is regulated by the Commission and the Authority. ***The Commission:*** Transpower is regulated by the Commission under Part 4 of the Commerce Act and is subject to information disclosure and individual price-quality path regulation. Non-compliance could result in financial penalties of up to $5m per breach. Via individual price-quality regulation, the Commission sets Transpower's allowed revenue and required service quality levels, including determining the rate of return that applies to the Group's regulated assets, base expenditure and approval of major capital projects. There is a risk that the rate of return set is too low to adequately compensate Transpower. The operating expenditure and base capital expenditure incentive is approximately 24% on any over- or under-spend against the allowance. In addition, Transpower incurs financial rewards or penalties should it exceed or fail to meet some of its performance targets. The overall value of the service performance incentive is approximately +/- $11 m per annum. ***The Authority:*** Oversees and regulates the electricity market. There is a risk that errors by Transpower in its management and operation of the grid and power system could result in breaches of the Electricity Industry Participation Code, which would result in financial penalties of up to $2m per breach and up to $10,000 for every day or part of a day during which the breach continues.		Regulatory risk is managed via continuous monitoring, monthly reporting, regular internal and external stakeholder engagement, and active Board and senior management oversight. Transpower's regulatory disclosures are subject to annual independent assurance and Transpower maintains a continuous dialogue with both the Commission and the Authority on regulatory matters. An update of regulatory matters, developments and incentive performance is presented to management each month and Transpower management updates the Board on regulatory matters and major risks as and when required. This enables business decision-making with the most up-to-date regulatory context in mind.
Climate risk: Under our current regulatory settings, the extent of any underestimation of the frequency, severity and cost of remediating climate-related damage is an additional cost over and above the regulatory allowance for such repairs.		Transpower insures to cover ongoing business risks and catastrophic events based on what is considered prudent and in line with good practice. Additionally, the Commission has the capacity to reopen the price path following a catastrophic event.

D2. Liquidity risk

The effective net contractual cash flows in the table below are presented on an undiscounted basis. Where the amount payable/(receivable) is not fixed, the amount disclosed has been determined by applying the applicable swap curve to determine the expected future cash flows.

2024

Group ($m)	<1 year	1 - 2 years	2 - 5 years	>5 years	Total
Borrowings	411	802	1,799	635	3,647
Borrowings-related derivatives	85	47	(42)	9	99
Interest rate swap (portfolio) - liabilities	7	3	-	-	10
Interest rate swap (portfolio) - assets	(109)	-	1	(1)	(109)
Trade and other payables	130	-	-	-	130
Leases	13	12	33	54	112
Total contractual cash flows	**537**	**864**	**1,791**	**697**	**3,889**

2023

Group ($m)	<1 year	1 - 2 years	2 - 5 years	>5 years	Total
Borrowings	695	392	1,845	876	3,808
Borrowings-related derivatives	83	74	(2)	(44)	111
Interest rate swap (portfolio) - liabilities	7	7	3	-	17
Interest rate swap (portfolio) - assets	(116)	(105)	-	-	(221)
Trade and other payables	117	-	-	-	117
Leases	11	11	33	56	111
Total contractual cash flows	**797**	**379**	**1,879**	**888**	**3,943**

D3. Interest rate risk

Transpower groups its interest rate derivative financial instruments into two categories:

- **Borrowings related derivative** – IRS and CCIRS that relate directly to particular debt issues and convert from fixed to floating interest rates. These IRS and CCIRS are entered into to mitigate the variability in interest costs as they align interest rate exposures to the Regulatory Control Period (RCP).
- **Portfolio derivatives** – IRS that are not directly related to underlying borrowings and are used to manage the net exposure to interest rate risk in line with Board approved hedging policy and profile.

The notional and fair value of interest rate derivatives are below:

			2024		2023	
Group ($m)	**Currency**	**Maturity Date**	**Notional value**	**Fair value**	**Notional value**	**Fair value**
Borrowings-related derivatives						
IRS	NZD	2024-2028	1,225	46	1,375	86
CCIRS	AUD	2024-2030	542	(5)	883	16
	CHF	2027-2031	715	(41)	438	(22)
	USD	2024-2028	306	(32)	402	(49)
Portfolio derivatives						
IRS	NZD	2024-2030	4,660	(97)	3,450	(194)
Total derivatives fair value (assets) / liabilities				**(129)**		**(163)**

The table below summarises the impact on interest expense and fair value movements resulting from a parallel shift in the interest yield curve by 1%:

Group ($m)	**2024**		**2023**	
Movement in yield curve	**+100bp**	**-100bp**	**+100bp**	**-100bp**
Impact on pre-tax profit and loss				
Interest expense (annual impact)	(5)	5	(6)	6
Fair value adjustments	8	(8)	6	(6)
Impact on other comprehensive income				
Fair value increase / (decrease)	46	(49)	41	(42)

D4. Credit risk

Financial derivative contracts

Credit risk arising from financial derivatives is minimised through the set-off provisions contained in the Group's International Swaps and Derivatives Association (ISDA) agreements.

The maximum credit exposure is the net mark-to-market valuation by counterparty where the net valuation is positive, as follows:

Group ($m)	2024	2023
CCIRS	78	67
IRS	83	163
Foreign exchange forward contracts	-	1
Total	**161**	**231**

Regulated customers

Transpower's customers comprise electricity generators, distribution companies and some large industrial users. There is a high concentration of credit risk with respect to trade receivables due to the small number of significant customers. Collateral is held against some of these customers. At 30 June 2024, the collateral held was $0.1 million (2023: $0.2 million).

Receivables balances greater than 10% of the total trade receivables are:

	2024		2023	
Group	($m)	(%)	($m)	(%)
Vector Limited	20	21	18	20
Powerco Limited	9	10	9	10

Unregulated customers

The majority of unregulated credit exposure relates to Electricity Lines companies and Electricity Generators, most of whom remain financially stable.

There have been no customer defaults in 2024 (2023: nil).

D5. Insurance coverage

The Group maintains insurance cover through its captive insurance company RRL and external insurance companies. These policies are renewed annually in September.

RRL has assumed the following major insurance risks in 2024 (net of any excess payable) of $49.0 million (2023: $49.0 million):

Insurance policy

Group ($m)	Amount Insured	Deductible	RRL Retained risk	Externally insured risk
HVDC submarine cables	75	-	45	30
Material Damage and Business Interruption	650	1	640	9
Transmission lines	10	-	-	10

D6. Derivative financial instruments

Transpower groups its derivative financial instruments into two categories:

	2024		2023	
Group ($m)	**Asset**	**Liabilities**	**Asset**	**Liabilities**
Borrowings related derivatives				
Interest rate swaps (portfolio) - cash flow hedge accounted	108	(1)	210	-
Interest rate swaps (portfolio)	4	(60)	1	(103)
Cross-currency interest rate swaps	86	(8)	73	(18)
Purchasing related derivatives and hedge commitment				
Foreign exchange forward contracts	-	-	1	(2)
Commitment on fair value hedges	-	-	2	(1)
Total derivatives and hedge commitment	**198**	**(69)**	**287**	**(124)**
Comprising				
Current	107	(48)	150	(68)
Non-current	91	(21)	137	(56)

The interest rate swaps (portfolio) have an average contracted fixed interest rate of 2.11% (2023: 1.31%).

Accounting policies

Derivatives are initially measured at fair value on the date the contract is entered into and are subsequently remeasured to fair value. The gain or loss on remeasurement is recognised in the income statement, unless the derivative is designated into an effective hedge relationship as a hedging instrument, in which case the timing of recognition in the income statement depends on the nature of the designated hedge relationship. Transpower designates derivatives as either:

a. **Cash flow hedges,** where the derivative is used to manage variability in cash flows relating to recognised borrowings. The effective portion of changes in the fair value of cash flow hedges are recognised in other comprehensive income and accumulate in the cash flow hedge reserve. The ineffective portion of changes in the fair value of cash flow hedges is recognised immediately in the income statement in the change in fair value of financial instruments line. Amounts accumulated in other comprehensive income are reclassified to the income statement in the period when the hedged item is recognised in the income statement. Hedge ineffectiveness in the cash flow hedge accounting relationship can arise from movements in credit risk on hedging instrument counterparties. The Group uses the hypothetical derivative method to measure hedge accounting effectiveness, which compares changes in the fair value of the hedging instruments against changes in the fair value of the related hedged item.

b. **Fair value hedges,** where the derivative is used to manage the variability in the fair value of recognised assets and liabilities. Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recorded in the income statement, together with any changes in the fair value of the hedged asset or liability that are attributable to the hedged risk.

All derivatives are classified as level two in the fair value hierarchy.

Key judgements and estimates

The fair value of derivatives is determined by converting currency exposures and discounting cash flows based on the relevant yield curve. The yield curve is adjusted to reflect the credit risk of the counterparty to the transaction or the credit risk of Transpower. These valuations are considered level two in the fair value hierarchy. There has been no movement between levels during the year.

Credit spreads are an estimate of the additional premium over the relevant yield curve that would be required by market participants to compensate for the perceived credit risk inherent in the counterparty and transaction. For derivative transactions, the impact of credit spreads is substantially lower than for debt and investment transactions due to the offsetting nature of the cashflows.

D7. Impact of derivatives on the income statement and equity

The tables below provide a breakdown of the change in fair value of financial instruments recognised in the statement of comprehensive income, credit spread on borrowings and a reconciliation of movements in the cash flow hedge reserve:

Group ($m)	2024	2023
Change in fair value of financial instruments		
Hedged foreign currency purchase commitment	-	(1)
Foreign exchange forward contracts	-	1
Fair value hedges - gain / (loss)	**-**	**-**
Borrowings	(57)	51
NZPCL debt and investment	3	(2)
Cross-currency interest rate swaps	19	(23)
Interest rate swaps	47	(3)
Investments	1	-
Derivatives not designated as hedges - gain / (loss)	**13**	**23**
Total change in fair value of financial instruments in the income statement	**13**	**23**

The change in fair value of investment that is attributable to changes in the credit risk is a gain of $0.2 million (2023: $0.7 million). The fair value movements in the table above do not include interest.

Credit risk components in other comprehensive income

Group ($m)	2024	2023
Credit spread on debt		
Foreign debt	(11)	(17)
NZD debt	(4)	(4)
Gross fair value gain / (loss)	**(15)**	**(21)**
less income tax benefit / (expense)	4	6
Total change in fair value of financial instruments in other comprehensive income	**(11)**	**(15)**
Reconciliation of movements in the cash flow hedge reserve		
As at 1 July	134	138
Effective gain/(loss) on cash flow hedges recognised directly in the cash flow hedge reserve account	(106)	(6)
Income tax on change in cash flow hedge reserve	30	2
As at 30 June	**58**	**134**

E: Other disclosures

E1. NZPCL debt and investment

Group ($m)	2024	2023
NZPCL - non-current investment	87	82
NZPCL - non-current debt	88	85
Net investment (debt)	**(1)**	**(3)**

Description

In November 2009, the Group partially terminated the 2003 cross-border lease in respect of the majority of the HVAC transmission assets in the South Island. As a result of the partial termination, the Group has consolidated a special-purpose vehicle, New Zealand Power Cayman 2003-1 Limited (NZPCL). NZPCL has a USD deposit with a financial institution and a USD loan from another financial institution. The cash flows from the deposit and loan offset. However, the deposit and loan are not offset for accounting purposes as the offsetting requirements are not met. No consideration was transferred. The loan to NZPCL is guaranteed by Transpower. This arrangement continues through to 2030.

As Transpower has no legal ownership interest in NZPCL, the net liabilities and any movements in net liabilities are recognised as a non-controlling interest. The substance of the transaction is such that Transpower rather than the non-controlling interest would be responsible for any shortfall between the value of the asset and the liability.

Accounting policies

NZPCL has a functional currency of US dollars and a presentational currency of New Zealand dollars.

The NZPCL debt and investment are recognised at fair value through profit or loss based on discounted cash flows.

The fair values of assets and liabilities are determined by discounting cash flows based on the relevant yield curves. Gains or losses on the NZPCL debt (including the effects of changes in the credit risk of the debt) is recognised in profit or loss to avoid accounting mismatch.

These valuations are considered level two in the fair value hierarchy.

E2. Investments

Group ($m)	2024	2023
Deposits - RRL	15	14
Corporate bonds - RRL	13	21
Total current investment	**28**	**35**

The cumulative change in fair value of investments attributable to changes in the credit risk is nil (2023: nil).

Description

Risk Reinsurance Limited (RRL) invests premiums received from Transpower. RRL reinsures externally and maintains sufficient investments to meet expected claims. RRL does not offer insurance to external parties.

For RRL cash and bond holdings, the counterparties have maximum limits depending on their credit ratings. Investments in deposits, floating rate notes and corporate bonds were made in financial instruments issued by organisations with credit ratings of BBB or above. RRL counterparty exposures are limited to 10% of total assets or less, by individual counterparty, based on their credit ratings, and exposures are monitored on a daily basis.

Accounting policies

RRL investments are classified as fair value through profit or loss, due to RRL having an active investment programme to back insurance liabilities.

Fair value is established by using discounted cash flows based on the relevant yield curve. The yield curve is adjusted to reflect the credit risk of the counterparty to the transaction.

Deposits and corporate bonds are considered level two in the fair value hierarchy.

E3. Provisions

Group ($m)	Contractors	Dismantling & environmental rehabilitation	Tower and line safety	Other	Total
As at 1 July	5	46	18	2	71
Provisions made during the year	4	5	1	7	17
Provisions used during the year	(3)	(17)	(2)	(2)	(24)
Provisions reversed during the year	-	(4)	-	-	(4)
As at 30 June	**6**	**30**	**17**	**7**	**60**
Comprising					
Current	5	11	5	5	26
Non-current	1	19	12	2	34

Description

Contractor provision

Certain arrangements with contractors contain performance based payments provided certain criteria are met, including a requirement that assets are free from defect and meet prescribed service levels.

Dismantling and environmental rehabilitation

Transpower recognises dismantling and environmental rehabilitation provisions for the expected costs to restore sites and remove asbestos from properties.

Tower and line safety

Transpower has provided for two work programmes to remedy high priority lines underclearance issues and earth potential rise issues on towers, due to health and safety requirements.

Other

Includes provisions for the performance incentive scheme, redundancy, Emissions Trading Scheme obligations and regulatory provisions where amounts can be reliably estimated.

Accounting policies

Provisions are measured at the estimated future cash flows to be paid when the obligations are settled and are discounted to their present value using a risk-free discount rate between 4.42% to 5.37% (2023: 3.7% to 5.28%).

E4. Trade receivables and other assets

Group ($m)	2024	2023
Trade receivables	88	68
Prepayments	17	17
Inventory	4	3
Total trade receivables and other assets	**109**	**88**
Comprising		
Current	103	81
Non-current	6	7
Ageing of trade receivables		
Current	88	67
Past 31 days	-	1
	88	**68**

Description

No expected credit losses have been recognised during the year (2023: nil).

Accounting policies

Trade receivables are measured initially at fair value and subsequently at amortised cost.

The Group applies a simplified approach in calculating expected credit loss and does not track changes in credit risk, but instead recognises a loss allowance based on lifetime expected credit loss at each reporting date.

E5. Trade and other payables

Group ($m)	2024	2023
Trade creditors and accruals	113	91
Employee entitlements	17	17
Collateral posted by counterparties	-	9
Total trade and other payables	**130**	**117**
Comprising		
Current	130	117
Non-current	-	-

Description

For those counterparties with which Transpower has a Collateral Support Agreement (CSA), the Group is required to post collateral to or receive from the counterparty when the net derivative position exceeds the maximum exposure threshold defined by the CSA.

Accounting policies

Trade and other payables are measured initially at fair value and subsequently at amortised cost.

E6. Related parties

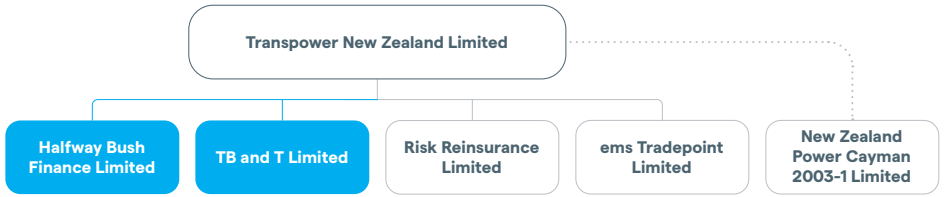
Group entities

The Group financial statements consolidate the financial statements of directly or indirectly controlled subsidiaries. All significant intercompany balances and transactions are eliminated on consolidation.

Other than as detailed below, all subsidiaries are wholly owned, are incorporated in New Zealand and have a balance date of 30 June. The Group discloses a non-controlling interest (NCI) relating to New Zealand Power Cayman 2003-1 Limited (NZPCL). NCI is measured as the NCI's share of net assets.

Transpower has no ownership interest in NZPCL. NZPCL is a special-purpose vehicle registered in the Cayman Islands and is consolidated for financial reporting, indicated by the dotted line in the diagram below. Refer to note "E1. NZPCL debt and investment" for more detail.

At balance date, the Group's entities are as follows:



● Party to a cross-border lease over the majority of the South Island HVAC Assets

Transactions with key management personnel

Aside from compensation payments below, no transactions with key management personnel have conducted.

Key management personnel compensation

Key management personnel received the following compensation for their services to the Group:

Group ($m)	2024	2023
Directors' fees	1	1
Chief Executive Officer and senior management team	7	6
Short-term employee remuneration	**8**	**7**
Defined contribution schemes	-	-

There were no termination payments or long-term compensation paid to key management personnel in 2024 (2023: nil).

Government-related transactions

As a state-owned enterprise, Transpower transacts with other government-related entities. Significant transactions and balances (greater than $15 million) are as follows:

Group ($m)	2024	2023
Meridian Energy Limited - revenue	68	79
Electricity Authority - revenue	50	48
Genesis Energy Limited - revenue	16	12

Meridian Energy Limited (Meridian) is a majority state owned company and is an electricity generator and retailer. Meridian pays Transpower primarily for electricity transmission.

The Electricity Authority is an independent Crown entity responsible for regulating the New Zealand electricity market. The Electricity Authority pays Transpower a contracted fee for its role as system operator.

Genesis Energy Limited (Genesis) is a majority state owned company and is an electricity generator and retailer. Genesis pays Transpower primarily for electricity transmission.

Transpower also settles its income tax and indirect tax obligations with Inland Revenue.

Some Directors of the company may be Directors or officers of other companies or organisations with which Transpower may transact.

E7. Contingencies

(i) Guarantees

New Zealand Power Caymans Limited (NZPCL)

In November 2009, the Group partially terminated the 2003 cross-border lease in respect of the majority of the HVAC transmission assets in the South Island. As a result of the partial termination, Transpower has consolidated a special-purpose vehicle, NZPCL.

NZPCL has a USD deposit with a financial institution and a USD loan from another financial institution. The cash flows from the deposit and loan offset. No consideration was transferred. The loan to NZPCL is guaranteed by Transpower.

The substance of the transaction is such that Transpower would be responsible for any shortfall between the value of the asset and the liability, rather than the non-controlling interest. The likelihood of losses in respect of these matters is considered to be remote.

Borrowings

Transpower has given a negative pledge covenant to debt holders of Transpower's domestic bonds and bank debt through trust deed arrangements and to holders of Swiss bonds, United States Private Placement and Australian Medium Term notes through respective debt documents. The terms are such that, while any debt issued remains outstanding, Transpower will not, subject to certain exceptions, create or permit to exist, any charge or lien over any of its assets.

(ii) Economic Value (EV) account

Transpower operates its revenue-setting methodology within an EV framework that analyses economic gains and losses between those attributable to shareholders and those attributable to customers. Under the Commission regulations, Transpower is required to pass onto, or claim back from customers, the customer balance at the end of RCP2 (31 March 2020). This balance is spread evenly over the 5 years of RCP3 from 1 April 2020 to 31 March 2025. The Commission has set the undiscounted amount to be returned by Transpower to its customers in RCP3 at $18 million per annum based on the forecast closing balance at end of RCP2, which over-returns the actual customer balance by $7 million (discounted). That over-return will be recovered from customers during RCP4.

A positive balance is an amount Transpower will recover from customers in future years. A negative balance is an amount Transpower will return to customers in future years.

The table below provides the movements in EV account balance for the disclosure year ended 30 June 2023, as shown in the published regulatory disclosure of the annual compliance statement 2022-23. The 2023-24 statement will be published in October 2024.

Group ($m)	Total
Opening EV account balance (1 July 2022)	41
Interest on opening balance	2
Returned / (recovered) during year	18
To be recovered from / (paid to) customers in RCP4	19
Closing EV account balance (30 June 2023)	**80**

(iii) Environmental hazards

Transpower has a programme of identifying, mitigating and removing environmental hazards such as asbestos at its sites. The cost of mitigating and/or removing identified hazards will vary, depending on the particular circumstances at the site. Where a reasonable estimate of the cost of mitigating or removal of a hazard can be made, a provision has been established.

(iv) Various lawsuits, claims and investigations

Various other lawsuits, claims and investigations have been brought or are pending against the Group. The Directors of Transpower cannot reasonably estimate the adverse effect (if any) on the Group if any of the foregoing claims are ultimately resolved against the Group's interests.

E8. Subsequent events

Other than dividends declared on 27 August 2024 (refer to note C3), there are no other subsequent events.

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INDEPENDENT AUDITOR'S REPORT

TO THE READERS OF TRANSPOWER NEW ZEALAND LIMITED'S GROUP FINANCIAL STATEMENTS FOR THE YEAR ENDED 30 JUNE 2024

The Auditor-General is the auditor of Transpower New Zealand Limited and its subsidiaries (the Group). The Auditor-General has appointed me, Sam Nicolle, using the staff and resources of Ernst & Young, to carry out the audit of the consolidated financial statements of the Group on his behalf.

Opinion

We have audited the consolidated financial statements of the Group on pages 89 to 116, that comprise the consolidated statement of financial position as at 30 June 2024, the consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated cash flow statement for the year then ended, and the notes to the consolidated financial statements, including material accounting policy information.

In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at 30 June 2024, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with New Zealand equivalents to International Financial Reporting Standards and International Financial Reporting Standards.

Basis for our opinion

We conducted our audit in accordance with the Auditor-General's Auditing Standards, which incorporate the Professional and Ethical Standards and the International Standards on Auditing (New Zealand) issued by the New Zealand Auditing and Assurance Standards Board. Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report. We are independent of the Group in accordance with the Auditor-General's Auditing Standards, which incorporate Professional and Ethical Standard 1: *International Code of Ethics for Assurance Practitioners* issued by the New Zealand Auditing and Assurance Standards Board, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

In addition to the audit we have carried out assignments in the areas of other assurance services, agreed upon procedures and remuneration benchmarking, which are compatible with those independence requirements. Other than in our capacity as auditor and these assignments, we have no relationship with, or interests in, Transpower New Zealand Limited or any of its subsidiaries.

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Key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

We have fulfilled the responsibilities described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of the audit report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of the material misstatement of the consolidated financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the accompanying consolidated financial statements.

Regulated assets

Why significant	How our audit addressed the key audit matter
The Group's regulated assets (consisting of property, plant and equipment, intangible assets and associated capital work in progress) represent 85% of total assets at 30 June 2024. Judgements required to be made by management in relation to the accounting for regulated assets include: - Determining what costs ought to be capitalised; - Determining the appropriate time to commission an asset and commence depreciation; - The period over which regulated assets should be depreciated; and - Whether there are any regulated assets that ought to be impaired and if so the amount of that impairment. Transpower reviews regulated assets for indicators of impairment at each reporting date. As described in Note B1 the recoverable amount of regulated assets is generally their regulatory book value. Regulatory book value is the amount Transpower is able to recover from customers through future revenue under the terms of the regulations per Part 4 of the Commerce Act 1986. Transpower allocates its regulated assets between cash generating units and compares the carrying amount against the regulated book value to identify possible indicators of impairment.	In obtaining sufficient appropriate audit evidence we: - Assessed the appropriateness of a sample of capitalised costs against the criteria contained in NZ IAS 16 *Property, Plant and Equipment* and NZ IAS 38 *Intangible Assets*. - Tested a sample of assets commissioned in the period to consider whether depreciation was charged from the appropriate date. - Considered a sample of large capital work-in-progress project balances to determine whether they ought to have been commissioned and depreciated as at 30 June 2024. - Considered how Transpower has assessed the assumed asset useful lives that are the basis on which depreciation has been charged. - Assessed cash generating units identified against the requirements of NZ IAS 36 *Impairment of Assets* and the allocation of regulated assets between cash generating units. - Tested management's identification of differences between the financial statement carrying amounts and regulatory book values at 30 June 2024 and considered the reasons for such differences. - Independently considered the completeness of management's assessment of indicators of impairment with reference to NZ IAS 36 *Impairment of Assets*.

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Disclosures regarding regulated assets are included in Notes B1 and B2 to the consolidated financial statements.	- Assessed whether the Group's disclosures in Notes B1 and B2 of the consolidated financial statements in relation to regulated assets comply with NZ IAS 16 *Property, Plant and Equipment*, NZ IAS 38 *Intangible Assets* and NZ IAS 36 *Impairment of Assets*. We considered the results of the procedures above satisfactory in forming our opinion on the financial statements as a whole.

Debt and derivatives

Why significant	How our audit addressed the key audit matter
Transpower has significant debt and derivative financial instruments. The total debt and derivative portfolio at 30 June 2024 was a net liability position of $3.1b and is detailed in Notes C4 and D6 to the consolidated financial statements. Some, but not all, of Transpower's derivatives used to hedge the Group's interest rate exposure are designated into hedging relationships for accounting purposes. Debt and derivatives are both recorded at fair value. Movements in the fair value of debt and related derivative financial instruments impact profit or loss, or the cash flow hedge reserve where the derivative is in a designated hedge relationship. The valuation of these instruments involves the application of valuation techniques which require the exercise of judgement and the use of estimates as described in Notes C4 and D6 to the consolidated financial statements.	In obtaining sufficient appropriate audit evidence we: - Obtained counterparty confirmations for all debt and derivatives at 30 June 2024. - Performed independent valuations for a sample of debt and derivative instruments. - Assessed the Group's documentation of hedging relationships against the requirements of NZ IFRS 9 *Financial Instruments*. - Assessed the Group's analysis of the effectiveness of its hedging relationships in achieving offsetting changes in the fair values of the hedging instrument and the hedged item. - Assessed the appropriateness of accounting adopted for derivative instruments dependent on whether they were designated in hedging relationships or not. - Assessed the disclosures in the financial statements, including whether they appropriately reflected the Group's exposure to financial instrument risk with reference to NZ IFRS 7 *Financial Instruments: Disclosure*. We considered the results of the procedures above satisfactory in forming our opinion on the financial statements as a whole.

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Other information

The Directors are responsible on behalf of the Group for the other information. The other information comprises all information in the Integrated Report other than the consolidated financial statements and our auditor's report thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of audit opinion or assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Directors' responsibilities for the consolidated financial statements

The Directors are responsible on behalf of the Group for the preparation and fair presentation of the consolidated financial statements in accordance with New Zealand equivalents to International Financial Reporting Standards and International Financial Reporting Standards, and for such internal control as the Directors determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the Directors are responsible on behalf of the Group for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

The Directors' responsibilities arise from the Financial Markets Conduct Act 2013.

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the Auditor-General's Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of readers taken on the basis of these consolidated financial statements.

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As part of an audit in accordance with the Auditor-General's Auditing Standards, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of the use of the going concern basis of accounting by the directors and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Directors with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Directors, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we

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determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Our responsibilities arise from the Public Audit Act 2001.

Ernst & Young

Sam Nicolle
Chartered Accountants
On behalf of the Auditor-General
Wellington, New Zealand
27 August 2024

Directory

Board of Directors

Dr Keith Turner – Chair

Whaimutu Dewes – Deputy Chair

Owen Coppage

Michele Embling

Parekawhia McLean

Vanessa Oakley

Heather Simpson

Executive Leadership Team

Alison Andrew
Chief Executive
(departed 30 June 2024)

John Clarke
Acting Chief Executive
(effective 1 July 2024)

Executive General Manager
Grid Development

Catherine Shaw
Chief Financial Officer

Chantelle Bramley
Executive General Manager Operations

Brighid Kelly
Executive General Manager People

David Knight
Executive General Manager Strategy,
Regulation and Governance

Raewyn Moss
Executive General Manager
Customer and External Affairs

Cobus Nel
Executive General Manager Information
Services and Technology

Mark Ryall
Executive General Manager Grid Delivery

Matt Webb
Executive General Manager Grid Development
(effective 13 August 2024)

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Ngā mihi
Thank you

TRANSPOWER

www.transpower.co.nz