TRANSPOWER

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Powering Aotearoa New Zealand

Integrated Report
FY 2023


Building **connections** today,
for **generations to come.**

For over 100 years we have been **connecting people** all around the country as the **kaitiaki of the national grid.**

We own and operate the national grid, a lifeline which runs the full length of New Zealand from Kaikohe to Bluff.

Our transmission lines cross towns, mountain passes, forests, farmland and open sea. We move electricity from where it is made to where it is needed, enabling local lines companies to connect millions of homes and businesses all around the motu.

Building the mauri of Aotearoa New Zealand's electricity – whakamana i te mauri hiko – is about powering every part of our country.

We are committed to ensuring that our critical infrastructure is reliable and resilient, and meets New Zealanders' needs for generations to come.

Working together we can achieve a **zero-carbon energy future.**

Aotearoa New Zealand aspires to a decarbonised future. Our transport and industrial processes will be increasingly powered by electricity, and at Transpower we will need to connect more generation to meet that demand. This is a significant transition that will not be without challenge. But it's vital for our country, our economy, and our planet.

The energy transition isn't something we can do alone. Transpower is just one part of an interconnected whole. We are collaborating with industry, business, iwi, Government, our regulators and New Zealand communities. Working together we can achieve a zero-carbon energy future.

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Who we are

Transpower owns and operates the national grid, a critical utility that runs the full length of New Zealand from Kaikohe to Bluff.

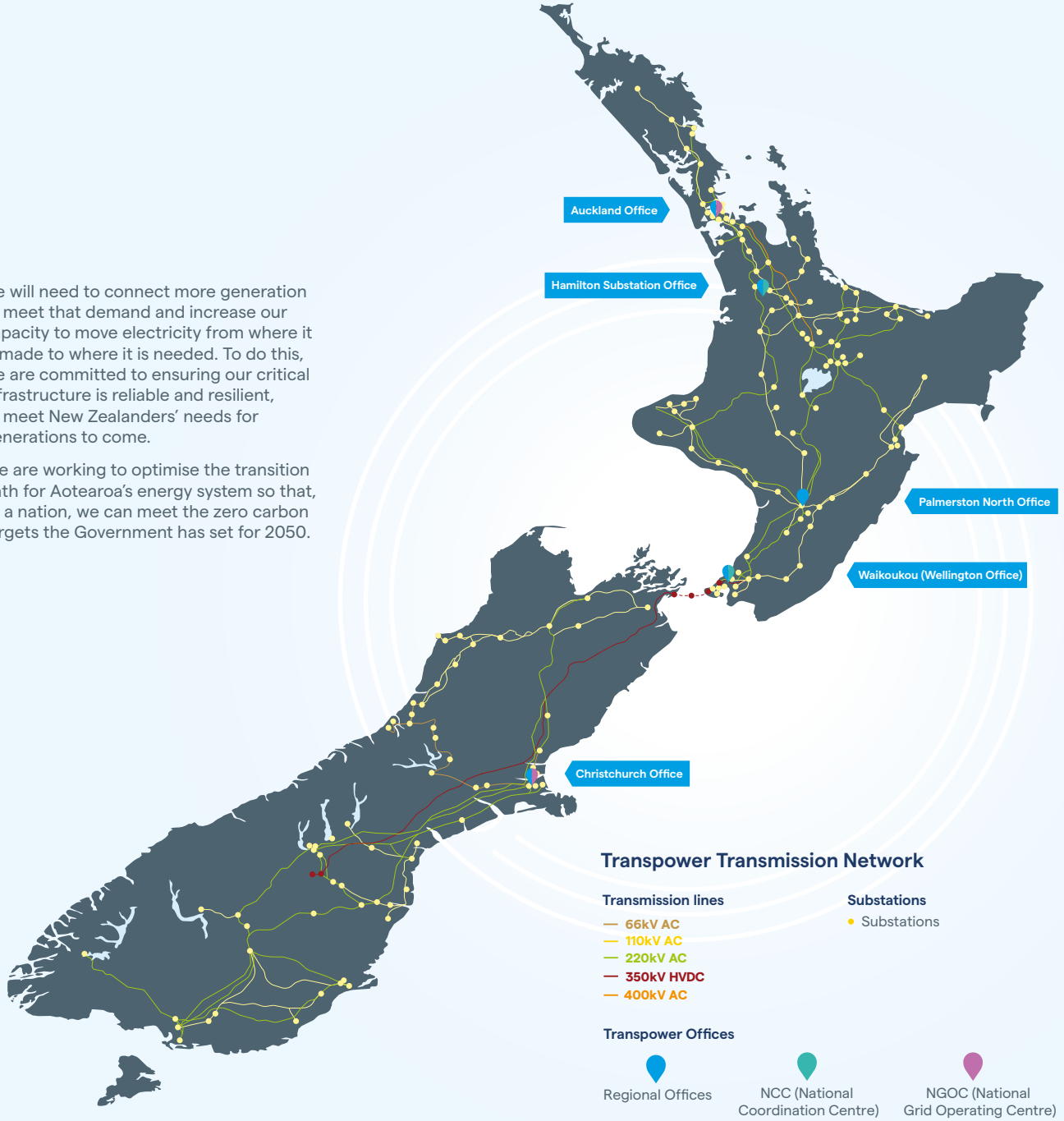
Our transmission lines cross towns, mountain passes, water, forests and farmland. We move electricity from where it is made to where it is needed, enabling local lines companies to connect millions of homes and businesses all around the motu.

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 up and down Aotearoa.

Our network includes thousands of kilometres of lines strung across thousands of towers connecting to hundreds of substations, but our people and our service provider whānau are the most important part. Together they are what make it all possible; their expertise and dedication is critical to building, maintaining and operating the national grid to deliver electricity to all New Zealanders.

New Zealand aspires to a decarbonised future through electrification. Transpower's key role in the transition to electrification is to ensure that our infrastructure, our systems and our people are ready for the expected 68% increase in electricity demand by 2050. As more of New Zealand's transport and industrial processes are powered by electricity, we will need to connect more generation to meet that demand and increase our capacity to move electricity from where it is made to where it is needed. To do this, we are committed to ensuring our critical infrastructure is reliable and resilient, to meet New Zealanders' needs for generations to come.

We are working to optimise the transition path for Aotearoa's energy system so that, as a nation, we can meet the zero carbon targets the Government has set for 2050.



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

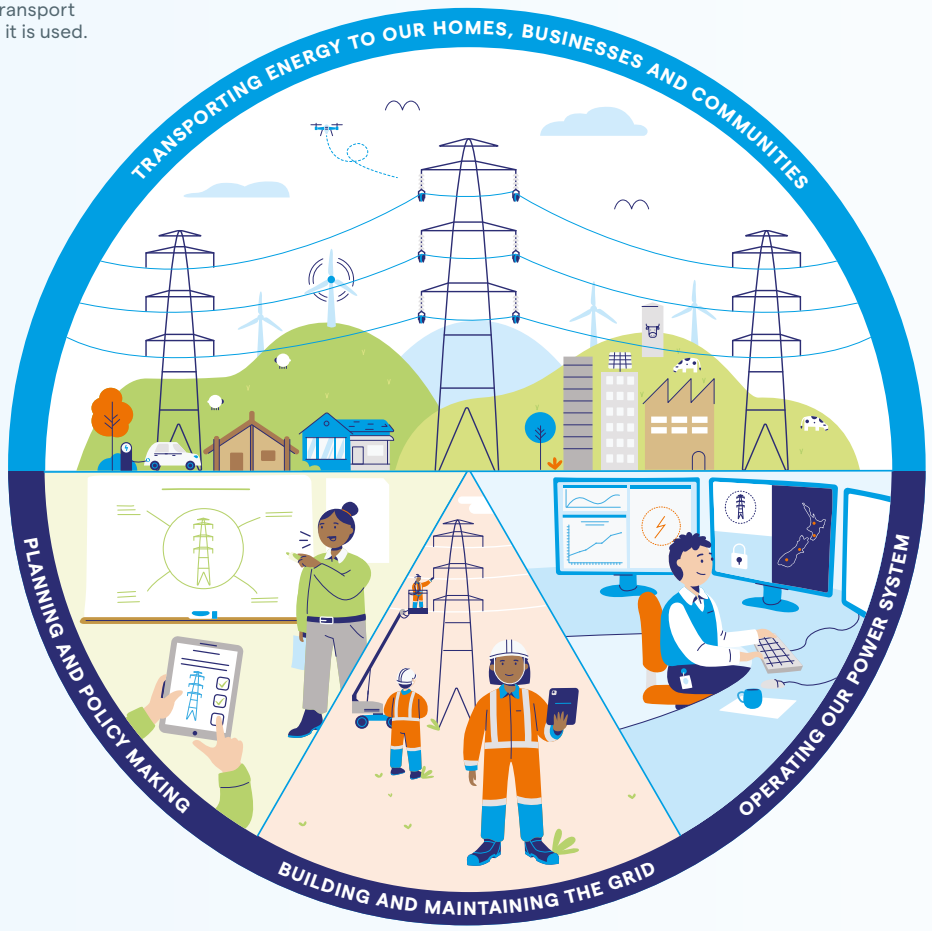
Human capital
Our employees and Service Providers; their knowledge, skills and diversity

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 report

The past year has left Aotearoa New Zealand in little doubt of the gravity of climate change impacts. Cyclone Gabrielle, along with other extreme weather events, was a sharp reminder of the challenge that faces this generation, in moving towards net zero carbon, and the work required to protect and adapt our existing infrastructure for a warmer, more volatile and more extreme climate.

It is of increasing urgency that we accelerate our initiatives, as a sector, to hasten the decarbonisation of our economy. Our CE Alison Andrew draws attention to the significance of Cyclone Gabrielle and the collective effort that drove our response. We need to build on and intensify the strong momentum in place through collaborative efforts like this one. The transition to an electrified economy will bring a variety of challenges, and many hard decisions. But with those hard decisions come long-term rewards. It's also important to acknowledge that the coming years will bring growth and strength to our sector. As custodians of New Zealand's energy future it's important that we remain mindful that this position is one of both responsibility and privilege.

Over the coming years, most countries around the globe will be grappling with the complex priorities and needs of the energy transition. Their challenges are in many ways much greater than ours, and this will bring pressures on our supply chain and resources. Keeping a clear eye on the global context will remain vital. However, I have great faith in what we can achieve as a nation. We have both the natural and the human resources, and the skill and the ingenuity necessary to rise to this challenge. I would like to see Aotearoa New Zealand presenting a model of sustainable and equitable energy transition. By making plans to optimise our decarbonisation pathway now, I am confident we can achieve this, and deliver affordable, secure energy for future generations.

Our reporting goals

Our annual integrated report presents a chance to take stock of the work Transpower is doing to support Aotearoa New Zealand's net zero carbon goals, and to identify potential barriers to progress on the road ahead.

As well as fulfilling our statutory reporting requirements as a regulated state-owned enterprise and a NZX-listed company (for debt instruments), this report reflects our Board's commitment to an increasingly considered approach in our business practice and reporting. As an employer and industry partner with a significant economic and physical footprint in this country, it is vital that we are transparent and account for how we measure and communicate our social, environmental and financial impacts. A number of changes to this FY23 report reflect our commitment to ongoing improvement in this area, including a more accessible representation of our greenhouse gas emissions inventory, and a more detailed account of how we address the key impacts our stakeholders believe to be most material.

Climate risk and sustainability

As this report details, Transpower's central contribution to climate change mitigation is achieved by its role in enabling electricity to substitute for fossil fuels to lower New Zealand's carbon emissions. Transpower's Sustainability Team is responsible for leadership, coordination and advice on our sustainability initiatives, and this is actively overseen by the Board, with six-monthly updates and annual reporting against the Strategy. Alongside our governance and advisory groups, General Managers continue to be accountable for delivering sustainability projects in their respective divisions. The Board have been pleased to observe ongoing progress against key initiatives over the past year. Of note is the improved oversight over Scope 3 emissions and waste management that has been implemented through the new grid service provider contracts that came into effect in August 2022. A further deliverable within the Sustainability Strategy is our organisation's reporting against climate-related risk. The Board is overseeing a systematic work programme in this area, and is pleased to confirm Transpower will be ready to meet the External Reporting Board's proposed Aotearoa New Zealand Climate Standard 1 in FY24.

The refreshed Sustainability Strategy work programme has also been endorsed for FY24, and we look forward to tracking ongoing progress against these targets.

Power system security

Through both last winter and this winter to date, we have had numerous times where supply has been tight over peak periods. These events place critical reliance on the country's older thermal power stations. While discretionary demand control helps in the short term, Transpower also has over 17,000 MW of new connection enquiries (both generation and load). Building and consenting this new capacity, and strengthening the grid to meet the new demands, remains a priority for the whole country in order to preserve security of supply. As the complexity of operating the system grows with more

diverse, distributed and intermittent sources of both generation and load, data gathering and the use of artificial intelligence in real time will emerge as a critical competency for the industry as a whole.

Financial results

The investment required to support Aotearoa New Zealand's electrification will be significant but is nevertheless crucial in ensuring the independence and sustainability of our nation's energy. Transpower's financial performance has been consistent over the last financial year, and has remained responsive to both long-term project work, and the short-term demands of significant climate change events, such as Cyclone Gabrielle. We continue to deliver solid returns for our shareholder, the New Zealand Government.

Operating expenses were $362 million, a 16% increase from the previous year, mainly due to an increase in grid maintenance costs, which includes $8.5 million of remediation work following Cyclone Gabrielle, and growing employee costs.

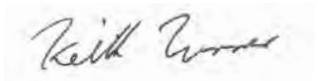
We recognise the importance of delivering an acceptable rate of return to our shareholders while delivering on our strategic priorities. While the level of dividend is intended to remain consistent over a regulatory control period (RCP), the Board is forecasting a $110 million dividend down from $120 million for the final two years of the current regulatory control period (RCP3). The forecast reduction reflects the Board's careful balancing of balance sheet strength against material unfunded costs the company has faced and will continue to incur through RCP3, and the significant investment required in the coming years to meet grid resilience and service expectations for a highly electrified economy, as well as to withstand significant climate change events, such as Cyclone Gabrielle.

Looking ahead

Within the last year we have farewelled two directors, Dr Roger Blakely and Dean Carroll, who reached the end of their terms in April and May 2023, respectively. I'd like to thank both Roger and Dean for their valuable expertise and service in guiding the business through some of its key decisions over the last few years. It was my pleasure to welcome two new directors – Whaimutu Dewes (Deputy Chair) and Owen Coppage on 1 July.

These appointments bring a much-valued diversity of opinion and experience to the Transpower Board and provide a strong complement to our existing capability.

I'd like to extend my thanks to my fellow Board members, to our Chief Executive Alison Andrew and to the whole team of Transpower who are responsible for the day-to-day work behind the scenes that keeps the power flowing for Aotearoa New Zealand, 24/7, 365 days a year.



Dr Keith Turner
Chair

Chief Executive report

The past financial year has been one of change and challenge, and one of action. We are at a defining moment in the way our country powers its energy future, and we are proud to be part of a sector that is making bold and collaborative moves to make this future a reality.

For me, the most significant event of the year unfolded on 14 February when severe weather from Cyclone Gabrielle led to the flooding of our Redclyffe and Whirinaki substations. The subsequent loss of supply affected more than 200,000 homes across the Tairāwhiti and Hawke's Bay regions. I am proud of the speed, innovation and stamina of Transpower's response to what was unprecedented damage to the national grid. Our teams worked alongside local lines companies and service providers to restore power as quickly as possible to those affected. In June, just prior to publication of this report, these efforts were recognised by an International Emergency Response Award from the Edison Electric Institute (EEI) in the United States, for 'outstanding efforts to restore service promptly to the public following a storm or natural disaster.'

The response to Cyclone Gabrielle is not over, and the event has already provided lessons that will shape our planning and thinking as we enable the next phases of the energy transition.

A clear vision of the future

Emergency events such as Cyclone Gabrielle call our attention to the here and now. We must also focus on preparing for the future. This early phase of the energy transition will be characterised by rapid change. Accordingly, we continue to track key sector indicators against our Whakamana i Te Mauri Hiko scenarios every six months. As recently as our May monitoring report we have seen the rapid evolution of major technology and fuel shifts that could alter the shape of our energy future. Such findings reinforce the vital need for accurate modelling and data collection. They also strengthen our commitment to providing thought leadership within the sector and driving dialogue and discussion about how we power change.

While New Zealand's exact pathway to decarbonisation will evolve, what remains clear is that we need to invest now to support the electrification that will drive this transition. Over the past year we have developed a proposal that will be submitted to the Commerce Commission in late 2023 for funding for our forthcoming regulatory control period (RCP4). Our proposal reflects an awareness that the future's increased electricity load will need a secure and highly functional grid. To enable more electricity and connect more renewable generation, we need to ensure our network is reliable, safe and resilient, and that it is environmentally sustainable. Another lesson that Cyclone Gabrielle has brought home: a significant portion of our planned work must be dedicated to building resilience. We need to act now to safeguard our electricity system for future generations.

Supporting balanced growth

In the next 15 years, the energy transition will demand the connection of as much total generation as was built over the last 40 years. Much of the generation build required is already underway and we have been proud to support these projects. Contact Energy's 168 MW Tauhara geothermal power station is due for completion in late 2023 and we have completed work on the substation for Meridian Energy's 176 MW Harapaki wind farm. Mercury's 222 MW Turitea wind farm was formally opened in May this year and its 43 MW Kaiwera Downs wind farm is on track to be operational by the end of 2023. In August last year we signed the first Transpower Works Agreement for grid-connected solar with Helios Energy. These five new connections will deliver a total of 724 MW of renewable generation capacity.

Our new method of managing the connection enquiries pipeline, set in place in November, is working well to support the timely and efficient connection of such new generation to the grid. We are also seeing clear signals of the demand growth that will come with greater electrification of industry and transport, as well as the development of new datacentres and major new residential areas in our country.

We have forged ahead in our programme of staged investments to support this future growth. In December 2022 Transpower submitted the first investment proposal for Net Zero Grid Pathways. This $393 million investment will support three linked projects to maximise our current grid capacity. Key enabling projects to support these broader works have been advanced, including the installation of a voltage stabilising device at our Hamilton substation, the planned installation of another in Ōtāhuhu, the upgrade of our Gore substation, the completion of new grid exit points at Norwood and Hautapu, and the scoping and initiation of work in Frankton, Queenstown.

Working together to power change

Perhaps the biggest lesson imparted by Cyclone Gabrielle is the scale of achievement possible when we act together. The restoration and recovery of electricity after the event is a story of collaboration from start to finish. You can read more about how we worked alongside our sector partners on page 43, and trace other stories of connection and partnership throughout this report.

The open sharing of information and innovation will be vital in helping us meet our decarbonisation goals as a country. Transpower will continue to partner on carbon reduction initiatives like the Regional Energy Transition Accelerator developed by the Energy Efficiency and Conservation Authority (EECA). Clear and focused communication will be needed across industry in the early years of the transition, as we manage the move to a more renewable, and therefore more intermittent, system. I am proud of the work that the System Operator is doing alongside others in the industry to meet the ongoing challenge of New Zealand's winter peak demand, as well as enabling a more flexible and responsive electricity market via the release of real-time pricing in November.

Our performance

For the past financial year, aside from the events associated with Cyclone Gabrielle, we will be on track to meet 15 of our 16 service measures for our transmission service. Subject to accommodation from the Commerce Commission for this major event, we expect to deliver to the majority of our Statement of Corporate Intent targets.

We are a purpose-driven organisation and as we look ahead to continued growth, we are actively improving how we communicate the values we hold to our stakeholders, including future employees. We have grown our graduate programme to support more of the country's top-achieving students into engineering and technology careers, and we held our inaugural Engineering and Technology Excellence awards, a wonderful chance to celebrate the remarkable talent that exists in our sector. We continue to achieve engagement survey results that place us in the top 25th percentile of the energy and utilities sector internationally.

Changes at Executive Team level

Our General Manager System Operations Stephen Jay will leave Transpower in August to take up an opportunity with the Caribbean Utility Company. I'd like to take this chance to express my thanks to Steve, who started with us as General Manager Grid Development in 2014 before moving into his current role in June 2020. We look forward to announcing Steve's successor shortly.

I'd also like to extend my thanks to the whole General Management Team as well as our Board of Directors and Chair, Dr Keith Turner. The Transpower whānau has shown huge commitment over the year, and I continue to be impressed by the vision and drive of those who work here. I have no doubt that the coming years will provide further tests of these qualities. However, I am confident that the talent, innovation and resilience in our teams will allow us to meet both the challenges and the opportunities ahead.

Alison Andrew
Chief Executive

The year in numbers

▼ 24%
$127m
NET PROFIT AFTER TAX

▲ 3%
$913m
REVENUE

▲ 17%
$379m
CAPITAL EXPENDITURE

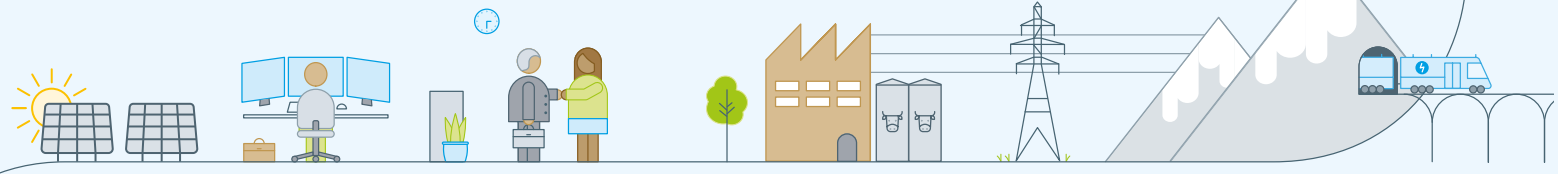
$120m
DIVIDENDS PAID OUT TO THE CROWN

38,000hrs
WORK-HOURS SPENT BY OUR STAFF, CREW AND CONTRACTORS ON RECOVERY FROM CYCLONE GABRIELLE

$742m
FUNDS RAISED IN BOND ISSUES

$519m
MAINTENANCE, REPLACEMENT AND ENHANCEMENT EXPENDITURE

$32m
TAX PAID

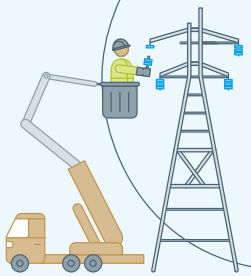


1st
TRANSPOWER WORKS AGREEMENT FOR GRID-CONNECTED SOLAR

1000+
SERVICE PROVIDER EMPLOYEES (WORKING ON TRANSPOWER ASSETS AT ANY TIME)

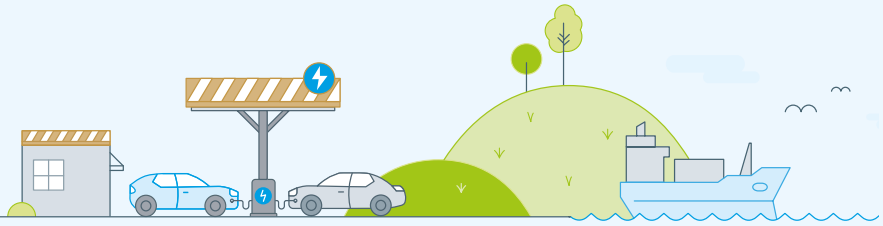
884
STAFF

27,410
LANDOWNER INTERACTIONS



103
CONNECTION ENQUIRIES

$620,000
FUNDS GRANTED TO COMMUNITY PROJECTS



Our strategic framework

Our vision and strategic priorities

Beneath Transpower's strategic thinking is a clear vision of the local and global drive to decarbonise and the different potential pathways toward this energy future. This vision was laid out in our Whakamana i Te Mauri Hiko (WiTMH) work, which analyses the key sector steps necessary to realise New Zealand's net zero carbon ambitions.

The role Transpower plays in decarbonising Aotearoa New Zealand is an enabling one. The transmission grid will remain vital in delivering a safe, efficient, affordable supply of electricity to deliver on Aotearoa New Zealand's decarbonisation goals. Our strategy – Transmission Tomorrow – builds on our WiTMH insights and drives us to deliver on this role. We hold ourselves accountable to key initiatives across our operations that govern our goals and deliverables in the short, mid 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.

Looking ahead

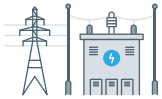
Over the past few years there have been a number of significant local and global events with implications for New Zealand. We are experiencing the tangible impacts of global warming and shifts in the geopolitical climate that emphasise the critical need for energy sovereignty. In light of this context, and as the energy transition ramps up, we have reviewed our strategy to ensure it remains fit for purpose. We believe our overarching strategy remains relevant and acute, and will continue to support our enabling role. However, we have taken this opportunity to refresh the wording of our strategic priorities. These changes reflect the growing need for action and coordination across the industry. In FY24, our five strategic priorities will drive us to:

- 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.

Progress against our strategic priorities

Strategic Priority	Initiative Name	Status	Comments
 **Deliver services that meet our customers' needs**	Deliver year 3 of customer connections process improvement roadmap	✓	Developed and implemented a new connection management framework for generation connection enquiries
		✓	Connection enquiry information dashboard published on our website for generation and load connections
	Implement year 2 of customer engagement plan	✓	Engagement plans in place for all customers
		◕	Customer engagement score of 67% in June 2023 (target 68%).
 **Facilitate delivery of an optimised transition path for Aotearoa New Zealand's energy system**	Continue to position Te Mauri Hiko to support regulatory, legislative and policy agenda for Net Zero Carbon	✓	Provided analysis to support regulatory and policy making including submissions on emissions reduction plans, resource management reform, input methodologies
		✓	Published our six-monthly Whakamana i Te Mauri Hiko monitoring reports
		◕	Continued collaboration with EECA and customers to collect data on thermal fuel energy use for process heat and direct engagement to support regional decarbonisation studies
		✓	Completed a strawperson concept for Renewable Energy Zones and input into the Government's offshore wind regulatory settings
	Submit our first major capex proposal of Net Zero Grid Pathways	✓	Submitted a major capex project proposal to the Commerce Commission on Net Zero Grid Pathways Phase 1, as part of a two staged approach to develop plans for investment in the transmission grid
 **Enhance our social licence to operate**	Implement year 2 of the sustainability plan	✓	Sustainability plans and carbon reports submitted by all key service providers, as part of the Master Grid Services Contracts
		✓	Finalised Transpower's Sustainability in Design standard, to ensure a common approach to sustainability at the design phase of projects
		✓	Completed Year 3 of our Taskforce on Climate-related Financial Disclosures (TCFD) work programme
	Develop a view of the information, market, and standards required to operate the future of the electricity system	✓	Released an issues paper on challenges to power system common quality and insights paper into winter peak capacity challenges
		✓	Worked with the Authority to develop a code change requiring distributors to provide information on their available controllable load to the System Operator
		✓	Supported the Authority to develop a set of indicators to monitor changes to the future security and resilience of the power system as they materialise

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

Strategic Priority	Initiative Name	Status	Comments
 **Accelerate electrification through our asset investments**	Embed the service provider contract reset and end to end works delivery to deliver RCP3 outcomes	✓	Developed and awarded new Grid Service contracts for grid maintenance, fault response and build services
		✓	Delivered significant annual direct and indirect financial benefits for the Grid Services contract
		✓	In conjunction with Grid Development using the value engineering process to drive initiatives to add value
	Build a successful RCP4 proposal	✓	Prepared our RCP4 application for 2025-2030 for submission to the Commerce Commission
		✓	Completed direct stakeholder engagement including three regional engagement workshops
		✓	Establishing a workforce planning model to attract and develop the sector workforce for electricity transmission
 **Advance our organisational effectiveness**	Build digital capability (e.g., Building Information Model, Digital substation)	✓	Selected vendor for Enterprise Management System
		✓	Completed a digital substation trial to allow a fully digital protection and control system
	Develop and implement a compelling Employee Value Proposition	✓	Completed the Employee Value Proposition to promote and advocate for Transpower as an employer

Key:

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

Our material issues

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

Our stakeholders include:

Landowners and communities

Some of our key stakeholders in the community are those with towers and lines on their properties, that neighbour our substations, or those in wider communities impacted by our assets (including the Department of Conservation as a landowner and landowner representative bodies such as Federated Farmers, Hort NZ and the New Zealand Forest Owners Association, as well as 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 electricity market participants in New Zealand 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.

Iwi

Some of our assets are located on land owned by mana whenua, or land where mana whenua have strong cultural connection to the land throughout Aotearoa New Zealand.

Investors

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

Regulators

The Commerce Commission (regulating our economic return and performance, and representing the rights of consumers), and the Electricity Authority (regulating our electricity market, setting industry standards and transmission pricing), Financial Markets Authority (regulating our debt issuance) and 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.

A materiality update

Our work enabling the pathway towards net zero carbon is intensifying as Aotearoa New Zealand navigates the energy transition. It's important that our approach to engaging with our stakeholders evolves to support this. We connect with stakeholder groups across our operations on a regular basis and via a number of different channels. 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 events like Cyclone Gabrielle. 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 Update page. We aim to provide as many opportunities 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. 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, as well as monthly and quarterly performance reports and an annual self-review.

Understanding what matters most

Scan to visit:
GRI Standards

Understanding what matters most to our diverse range of stakeholders is vital to our operations at Transpower. As we look toward the growth of the grid to support increased electrification in Aotearoa New Zealand, we are very mindful of our reliance on a clearly mandated social licence. We need to understand stakeholder sentiment on our social, environmental and economic impacts, and we need to actively maintain a clear view on how we are perceived as an organisation.

We undertook an extensive materiality assessment with independent consultancy Proxima to prepare for our first integrated report in FY21. This assessment included detailed interviews with representatives from our main stakeholder groups, as well as surveys with our General Management Team, a sample of staff and our eight-member Consumer Advisory Panel. This assessment provided direct insight into the material issues our stakeholders see Transpower facing or having an influence on.

In response to updates to the Global Reporting Initiative (GRI) standards to ensure organisations provide a more complete picture of how their work affects the economy, the environment and society, we worked with Proxima in FY22 to ensure our understanding of material issues reflected these changes to reporting standards. Last year's materiality update reflected our work to identify the positive and negative impacts of each issue, their potential scale, scope and severity, and likely risk of occurrence. We intend to conduct a further materiality assessment in 2025.

We also undertook a detailed stakeholder audit to gauge external sentiment of our current engagement process and provide a benchmark for future assessments. The audit provided feedback on how we are perceived as an organisation, where we are meeting stakeholder expectations, and areas in which we can improve.

Our three top materiality issues have not shifted. Our stakeholders have firmly identified that the key areas in which we can have a material impact will be in climate change mitigation; in 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 in our community and landowner relationships.

Climate change mitigation and adaptation

Key impacts identified (high to medium)

- Supporting New Zealand society's transition to a low carbon economy
- Responsibility for GHG emissions due to transmission losses
- Promoting renewable energy generation and carbon reduction initiatives
- Climate change impacts from use of non-renewable energy sources
- Power outages caused by climate-related events.

Society's transition to a low carbon economy remains our top materiality issue. It is a challenge which has an impact on the wider energy sector and New Zealand as a whole. Stakeholders identified Transpower's key material impact here as the work the organisation is doing to enable New Zealand's transition to a low carbon economy, and to promote a more highly renewable grid. They also noted it as an area where Transpower has the potential to deliver wider value beyond our work as grid owner and System Operator.

Customers and consumers

Key impacts identified (high to medium)

- Impact to consumers due to disrupted electricity supply
- Increasing renewable electricity supply by connecting new generation and expanding our network to meet increasing demand by our customers
- Electricity affordability.

Our stakeholders have emphasised the serious economic and social impacts a disrupted power supply can have on our customers and consumers, as well as the positive impact of our work to meet growing electricity demand by processing a higher number of new connection and supply enquiries.

Community and landowner relationships

Key impacts identified (medium to low)

- Visual impact of our towers and transmission lines
- Potential safety impacts associated with the installation, operation and maintenance of transmission lines on private land.

Transpower recognises the potential impacts our work can have on landowners. We work extensively with landowners and communities to build and maintain positive relationships that ensure we can collectively carry on with our activities.

Other materiality issues identified

Advocacy – Our stakeholders recognise that Transpower is in a unique position to have an impact on and enable the ongoing decarbonisation of the electricity sector, and to inform related policy discussions and decisions. Feedback reflected on Transpower's positive impact through facilitating research and innovation and our commitment to dialogue with those who are helping to shape a net zero carbon future.

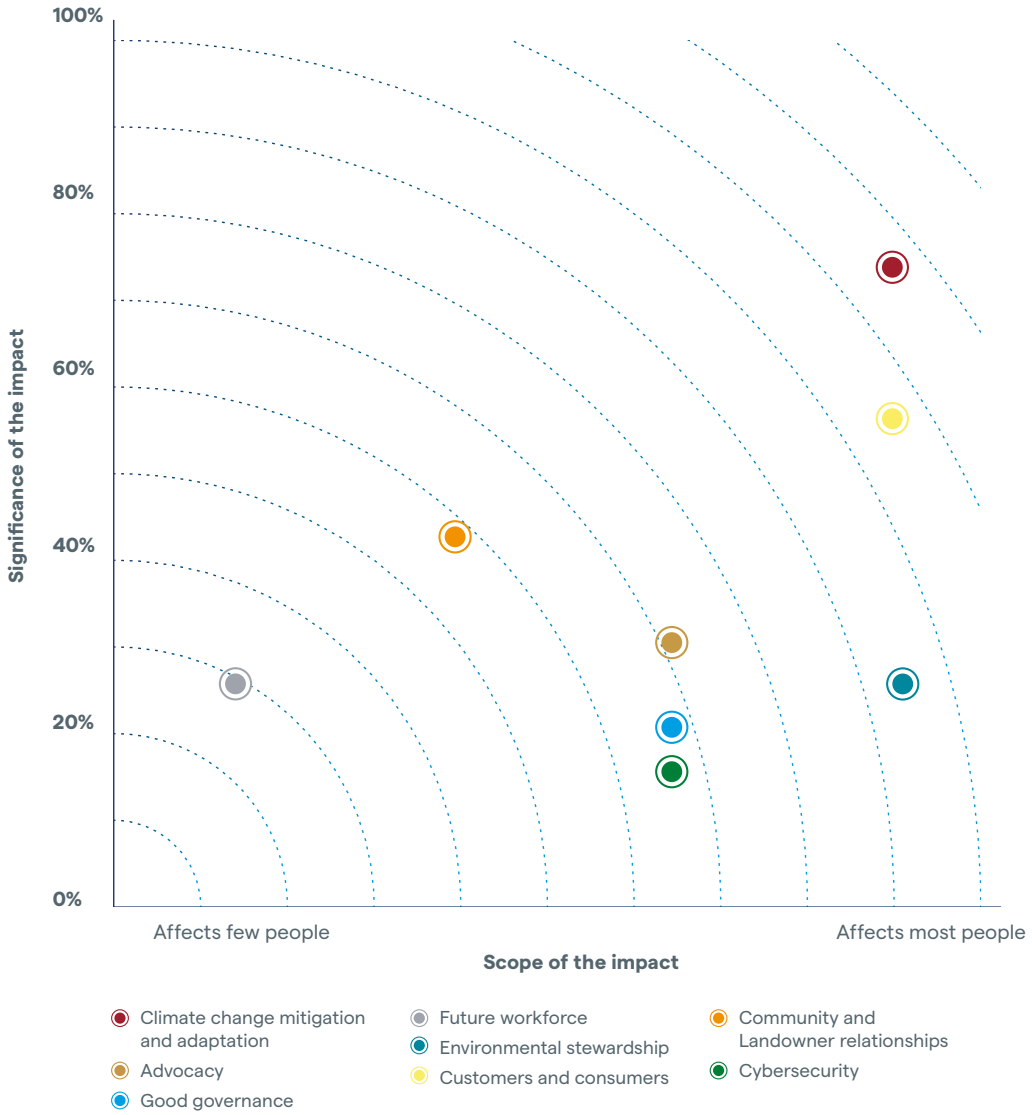
Environmental stewardship – Our stakeholders recognise the potential impact Transpower has as we build, upgrade, operate and maintain the national grid through a wide range of ecosystems and landscapes across New Zealand. Transpower's biodiversity strategy takes a proactive stance via its commitment to a kaitiakitanga role in our day-to-day activities and a net biodiversity gain from future projects.

Future workforce – Transpower's ability to recruit skilled professionals is seen by our stakeholders as having an ongoing impact on our value creation as an organisation. Our stakeholders recognise that we have a vital role in attracting, training, and retaining a skilled workforce and that this benefits the wider New Zealand energy sector and ensures we can deliver on our decarbonisation goals.

Good governance – Transpower's stakeholders have high expectations of our governance, particularly in our assurance of financial and non-financial disclosures. They recognise the potential ongoing impact that long-term integrated thinking will have for the electricity sector. Our stakeholders consider it essential that our senior leadership are educated in environmental, social and governance issues to ensure robust decision-making and operations.

Cybersecurity – Risks to the electricity market and grid due to cyber-attacks continue to concern our stakeholders. Transpower's robust cybersecurity and ongoing monitoring mitigates this risk.

Materiality matrix



Over the last few years they have really upped their game in transparency, being open to feedback, and engagement. They just need to be doing that a lot more, given the sector challenges ahead and the role of the sector in decarbonising New Zealand.

– Stakeholder audit feedback, December 2022

Need to keep focusing on the future and what's going to be needed in the future, obviously keep doing what they need to do in real time. I think more than ever, they need to manage the future and all the uncertainties, changes, transformations that are going to happen.

– Stakeholder audit feedback, December 2022

You have a hard job running the most complex piece of infrastructure in New Zealand. You have more stakeholders than anyone else – everyone in New Zealand ... I think you're doing all right. I think we have learned to work together and I am happy with the result.

– Stakeholder audit feedback, December 2022

Our 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 **WBCSD Sustainable Development Goals Sector Roadmap** for the electric utilities sector (March 2021) to help inform where we can have the greatest impact across:

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

See page 54 for more information on our Sustainable Business Leadership.

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.


TOSHIBA

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	• Connecting up an electric future
		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 national grid and influencing our supply chain emissions	• An interconnected world
		Promoting renewable energy generation and carbon reduction initiatives	Reducing the impacts of the electricity system by enabling and incentivising renewable energy generation	• Building strong connections
		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	• Connecting up an electric future • An interconnected world
		Power outages caused by climate-related events	Impact of climate change on New Zealand's electricity transmission infrastructure, and potential electricity supply disruptions	• Connecting up an electric future
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	• Building strong connections
		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	• Connecting up an electric future
		Electricity affordability	Increasing the capacity and resilience of the transmission network in a transparent way to support electricity affordability	• Connecting up an electric future • Building strong connections
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	• An interconnected world
		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	• An interconnected world

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	• Building strong connections
		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	• Connecting up an electric future
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	• An interconnected world
		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	• An interconnected world
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	• An interconnected world
		Workforce competency	Ensuring the ongoing competency and wellbeing of the electricity sector workforce through training and skills development	• An interconnected world
		Insufficient talent attraction	A lack of structured career development leads to an inability to attract potential employees affecting organisational culture and success	• An interconnected world
Good governance • Human capital • Intellectual capital • Social capital • Financial capital		Long-term planning and integrated thinking	Ensuring longer-term electrification and decarbonisation strategy is placed above short-term financial drivers	• Connecting up an electric future
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	• An interconnected world

Connecting up an electric future

Electricity powers our lives, our homes and our work. It connects whānau and loved ones across the motu – and across the globe. Electricity also provides our biggest opportunity to decarbonise Aotearoa New Zealand. To support this we will need to connect more renewable generation and increase the capacity of the grid to carry this electricity, in order to rapidly electrify transport and process heat. The changes we make this decade are critical. We need to make smart investments to ensure we have a safe, resilient grid that supports the growth of our economy and the needs of future generations. We also need to focus on the resilience of current and future assets as well as maintain our stewardship of the transmission grid and power system, so that the power continues to flow to where it's needed.

SDG 7, SDG 9, SDG 13

Manufactured capital

Intellectual capital

Human capital


ZECK
MIETPARK
RENTAL FLEET

Supporting the transition

The call to decarbonise Aotearoa New Zealand is clear. In 2019, the Government passed its Zero Carbon amendment to the Climate Change Response Act, which set into law our country's commitment to net zero by 2050. To support this goal, the country is working towards an interim target of 50% renewable energy by 2035. Electrification will play a key role in achieving these objectives, particularly the electrification of two of our most carbon-intensive sectors: transport and process heat. According to our *Whakamana i Te Mauri Hiko* modelling, powering this change will mean increasing installed generation from ~9 GW today to ~22 GW, to meet electricity demand.

Transpower's dual roles as owner-operator of the national grid, and operator of our electricity system, place us at the centre of this significant transition. We need to enable the rapid connection of new renewable energy sources and increase the capacity of the grid to support these connections as well as increasing demand. We also need to continue to operate a stable power system that seamlessly integrates more highly distributed and intermittent energy sources.

Our *Whakamana i Te Mauri Hiko* analysis provides the context for our work. By modelling potential decarbonisation scenarios out to 2050 we were able to identify key indicators that act as barometers of our electrification progress. This insight helps us to support and drive awareness of the actions we need to undertake as a sector and as an economy. Every six months we update our national data through our *Whakamana i Te Mauri Hiko* monitoring reports.

Change is rapid and we must make smart, informed decisions. There is ample generation capacity in the pipeline to meet our 2050 energy demand forecasts. Not all these enquiries will eventuate into built projects but the volume is a good indicator that developer appetite remains high. What has shifted over the past year is the make-up of this pipeline. The uptake of new technologies has exceeded our expectations in several areas. We are seeing a far stronger interest in grid-scale solar than originally predicted, along with the more rapid development of wind generation and continued interest in geothermal. Other areas that present significant decarbonisation opportunities are the growth of the sustainable aviation industry, and green hydrogen. We are also beginning to observe a correspondingly strong pipeline of new demand-side customer connections.

The path toward decarbonisation will continue to evolve as we move into the future. What is clear is that the coming years will be critical in determining the future of our energy and our environment in Aotearoa New Zealand.

Investing in our grid

To fulfil our enabling role in the energy transition, the transmission backbone needs to be ready to support Aotearoa New Zealand's growing electricity needs. It's our job to build and enhance the transmission grid to ensure we continue to deliver electricity from where it is made to where it is needed. The required increase in generation and the change in generation mix presents some interesting challenges for the grid and its operation.

Luckily, our teams are problem-solvers at heart. Our Net Zero Grid Pathways programme is where much of this problem-solving is taking place. The programme is driven by key tactical decisions informed by our broader long-term planning – such as our Transmission Planning Report and our Asset Management Plan. We consult with industry to garner feedback and ideas from across the energy sector, while factoring in the ample lead times required to approve, consent and build new transmission lines. Drawing on these key data points, we are able to make informed plans for where we think electricity demand and new generation is likely to grow, and how to best support this in a cost-effective manner.

We are currently in the first phase of Net Zero Grid Pathways – which is all about driving the maximum benefit from our existing grid. Our investment in this first phase of the programme is staged to ensure we stay ahead of the growth in demand for electricity.

In November 2022 we submitted a proposal to the Commerce Commission for our first investment package: $393 million to fund three linked projects by 2030. These projects will support grid capacity and flexibility in the central North Island, around the Wairakei area, and the High Voltage Direct Current (HVDC) link between the North and South Islands.

In June 2023, we successfully commissioned a device known as a STATCOM at our Hamilton substation. This device helps us to manage voltage and therefore ensure the stability of the grid in the upper North Island area. Voltage management has become an increasing challenge with the retirement of fossil-fuelled generation over the last ten years, along with accelerating demand from electrification of industry and transport, new datacentres and major new residential developments. As part of the second phase of this project, in February we announced a plan to install another STATCOM at our Ōtāhuhu substation. Two further enabling investments enabling our broader grid have recently come on stream. In April, we completed and commissioned a series reactor at Atiamuri north of Taupō. This is a piece of equipment that will help to achieve smart and efficient use of our transmission capacity in the transmission region we call the Wairakei ring, allowing us to unlock an extra 500-600 MW, for a very cost-efficient $6 million dollars.

Advocating for change

Scan to visit:

Regulatory submissions | Transpower

There are a range of legislative, regulatory and operational changes needed at both national and local Government levels to provide the enabling environment required to achieve the levels of electrification needed to meet decarbonisation targets. We are regular contributors to the many discussions happening at all levels within Government to help shape our net zero carbon future.

Over the past year we have provided regular technical and policy inputs on a range of key planning and policy development projects such as the Energy Strategy, the NZ Battery Project, offshore wind and hydrogen. We continue to support the Market Development Advisory Group in determining the market settings that will be optimal for a 100% renewable electricity system. Among other key infrastructure discussions, we have responded to Ministry of Transport's Charging our Future Strategy for electric vehicle charging, and the Climate Change Commission's consultation on draft advice on the Government's second Emissions Reduction Plan.

Given the unprecedented amount of infrastructure development that is needed to protect our national environment, as well as our population, from global warming, we are also key stakeholders in the Government's resource management reforms. We have followed the development of the Natural and Built Environment Bill and the Spatial Planning Bill introduced to Parliament in November, and provided detailed feedback. We believe the Bills have great potential to achieve transformation, but we also feel they could go further. To meet the country's electrification goals we need to move quickly and responsively, and we will need fast track consenting and other streamlined approvals processes. The future will bring a step change in the number of projects to strengthen and maximise our grid infrastructure. It will also bring potential conflicts when electrification work is required in areas of environmental sensitivity. It's crucial that we ensure these difficult decisions are made early to give clarity and strong outcomes that will best support current and future New Zealanders.

Another way in which we aim to support the wider industry's transition to a net zero emission grid is through our work as a provider of impartial, evidence-based research. Last year, our specialist metering and market services business Energy Market Services (EMS) launched a new grid carbon emissions intensity tracker, published free on EMS' market information dashboard 'em6'. The system works by using real-time electricity production data from every grid-connected generator in the country, and multiplying that by each generator's specific carbon emissions factor. This is a tool for industry, but also empowers consumers of all sizes who wish to track, minimise, offset or report their actual emissions. It also provides a window for energy consumers seeking to track New Zealand's progress towards a fully renewable grid.

Building resilience into our planning

Climate patterns are changing. Extreme weather events are becoming more common. This places growing pressure on our key infrastructure at a time when we are all becoming more reliant on electricity. Transpower is continuing to develop our approach to resilience. We are building on detailed analysis of climate-related risk scenarios to make informed decisions about our asset health and network risk. Over past years we've improved this approach with a number of initiatives, including growing our inventory of spare equipment. The main plank of our approach is our commitment to building back better. When we do major work we bring our sites and lines up to current standards.

Cyclone Gabrielle and the flooding in Auckland highlighted our strength in response and restoration. However, they also showed the scale of the challenge to improve resilience in our network. Our current approach means that some sites are many years away from upgrades. We need to act now to shore up our assets to maintain a resilient grid. Targeted resilience spending is required to ensure our grid infrastructure can weather the challenges of climate change, as well as meet the robust demands of an increasingly electrified population.

Prior to Cyclone Gabrielle our proposed five-year workplan included resilience work – not just for floods, but for a range of major hazards in Aotearoa. This original plan suggested a series of discrete improvements to maximise resilience, such as raising key equipment to avoid flood damage, seismic upgrades to critical buildings, and strengthening vulnerable towers against wind and water impacts. Since Cyclone Gabrielle we have accelerated some of this work. We have also reassessed our needs. We believe our initially proposed resilience spending will need to nearly double to allow us to properly manage risks for a more volatile future.

Water and electricity don't mix – spotlight on flood resilience

Current resilience standards - Wairau Road

As our understanding of risk evolves, we become smarter at future-proofing our assets. To ensure the security of electricity on Auckland's North Shore, we built a new substation at Wairau Road in 2012 with local lines company Vector. We knew there was a potential for flooding at the site and this informed our design. Accounting for levels expected in a one in 450-year storm, all equipment was designed to prevent water ingress and was elevated well above flood levels. During Auckland's flooding events in February 2023, Wairau Road operated exactly as planned. While water entered the substation (flotsam marked the levels at 1.7 m), key gear remained dry and the lights remained on for the approximately 41,000 households and businesses the substation serves. This shows the difference our current resilience standards can make.

Resilience opportunities - Pāuatahanui

Our Pāuatahanui substation is an example of the resilience work already underway. It's also a good case study of how timely adaptation can surface added synergies and opportunities. In 2019 after some local flooding, we carried out a detailed assessment of this substation. The assessment model suggested that 1 in 50-year flood levels could reach 1.15 m, causing permanent damage to equipment. This critical risk prompted a rebuild of Pāuatahanui that has prioritised raising, replacing, and waterproofing many of its assets. The rebuild has been a chance to examine how we can add value through our resilience work. In this case, a cross-laminated timber control room would improve seismic performance while also reducing embodied carbon within the new building. It's also a cheaper solution as the foundations for timber construction are much smaller than for concrete.

Historical challenges – Redclyffe

Redclyffe is an example of the unique history of our New Zealand grid – and its vulnerabilities. It was built in 1927 near the Tutaekuri river, long before an understanding of global warming. In the 1970s it was redeveloped and work relied on the stopbanks as sufficient protection in the event of flooding. The 2012–13 addition of a new control room and switchboard were built to a contemporary standard (and escaped the flooding during Cyclone Gabrielle). In 2020 a desktop assessment identified Redclyffe as one of 12 substations that were both vulnerable to flooding, and critical to the integrity of our national electricity transmission. We were due to begin work on Redclyffe in July 2023. However, Cyclone Gabrielle made landfall in February. Our proactive recovery programmes were crucial in helping us get the power back on so quickly. But the writing is on the wall: to prevent future outages we need strong proactive investment. Acting now means we will pay less over the long term, and that all consumers can benefit from secure and resilient electricity for the long term.

Connecting our customers

Changes in technology and the move towards electrification mean that businesses and households will be using more electricity. As momentum gathers, we expect a period of rapid electrification between 2025 and 2030. In the FY22 financial year there was an exponential increase in enquiries for new renewable generation connections to the grid. Developer interest remains strong, with 71 enquiries to connect new generation in FY23. While generation enquiry numbers are starting to stabilise, what we are now seeing is a reciprocal surge in demand-side connection enquiries, which have almost doubled in the past

year. This includes a number of requests from distributors to increase capacity at grid exit points – a clear sign of maturing growth across our electricity system.

Supporting the swift and efficient connection of both new generation and demand is a crucial element of Transpower's work. In November 2022, we launched a new Connections Management Framework that made some key changes to the connections enquiry process, and increased the visibility and transparency of parts of the connections pipeline itself. The new system supports better-informed decision-making by developers, and a more efficient resourcing and connections process in general.

A key change was the regular publication of top-level information about each generation project that enters the pipeline. By making this information easily available we are allowing for better planning and collaboration across the sector. The information aids visibility and allows customers to easily see where their project sits in the queue. We have recently begun the same process for demand-side connection requests. All of this information is publicly available on our Connection enquiry information site. Since the framework went live, we have seen a strong positive industry response. We have also continued to improve the presentation and accessibility of our interactive enquiries dashboard and optimised this for mobile phone use.

> We think Transpower has developed a robust process that should work well to ensure the timely development of renewable energy projects needed to help the country decarbonise and meet its climate change commitments. This gives a great deal of confidence around our national development programme and reflects several years of work securing some of the best sites for our grid-scale solar developments.
>
> **– Helios Managing Director, Jeff Schlichting (Energy News, 23 December 2022)**

> I'm really liking the way Transpower is highlighting new connection inquiries on its website. Transpower's site shows the good work underway and that which lies ahead in reaching carbon-neutrality before 2050.
>
> **– Graeme Peters, Electricity Networks Association CE (2014–2022)**

Operating the system

A central challenge of the energy transition will be ensuring our electricity system remains secure and reliable as we add more renewable and more intermittent generation. This is a constant consideration for our System Operator and will become more acute as we look toward the retirement of thermal generation in Aotearoa New Zealand. We are working closely with the Electricity Authority on a Future Security and Resilience work programme and have recently provided feedback on the Authority's consultation paper on managing an orderly thermal transition. We also seek to build understanding and awareness of this issue through our own analysis. In 'Working together on winter' on page 49, we discuss how we are collaborating across the sector to meet supply challenges in the short term. Our draft Security of Supply Annual Assessment looks further ahead to the coming decade, with a particular focus on managing winter demand peaks. We kicked off a sector-wide consultation on this paper in May this year.

When it comes to the broader outlook and potential for flexibility over the coming years, the future looks bright. Over the last year, the number of demand response and energy storage resources that could support our system security has expanded significantly. Both large grid-scale and micro-grid batteries are beginning to play an active role in New Zealand's power system. In late 2022, SolarZero entered the reserves market with a 40 MW virtual power plant load from 10,000 household battery systems. Other battery projects are underway, including storage systems from WEL Networks and Meridian, and the Government has moved into Phase 2 of its NZ Battery project, which involves the development of a detailed business case and a final investment decision.

Developments also abound in demand response, systems that allow for the flexing of electricity consumption in line with available supply. Of these, perhaps the most significant are the entry of Meridian and the New Zealand Aluminium Smelter into a demand response agreement for 2023–2024, and the commitment between New Zealand Steel and Contact to manage demand through the future Electric Arc Furnace. Advances such as these will provide an important buffer to support the early years of the energy transition.

Working alongside regulators

The majority of our ongoing expenditure is funded by grid revenue we recover from our customers. This revenue is regulated. Every five years, we submit a work-plan to the Commerce Commission, which sets our spending allowance, our quality targets and our earnings. We are currently midway through RCP3 and working on the proposal for our RCP4 period for 2025–2030. In addition, for projects that cost over $20 million we must make a separate application to the Commerce Commission for funding.

The way Transpower recovers its revenue from customers is set out in the Electricity Authority's Transmission Pricing Methodology (TPM). In 2020 the Electricity Authority decided to implement a new TPM, which took effect on 1 April 2023. Transmission customers were notified of their prices under the new TPM for the 2023/24 pricing year in December 2022. Total transmission charges remain the same, but how these charges are distributed among transmission customers has changed. The main change is a move to a benefit-based approach where customers pay in proportion to the benefit they are expected to receive from some historic and all future interconnection asset investments. The previous methodology spread the cost of the HVDC link connecting the two main islands across South Island generators and spread the cost of all other interconnection assets across local lines companies and major industrial users.

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

Impact	Description	Actions and commitments
Support the transition to a low-carbon economy	Electrification leads to decarbonisation, enabling net zero carbon goals	• Net Zero Grid Pathways programme • Continued thought leadership via WiTMH monitoring • Continued collaboration with the EECA and electricity distribution businesses (EDBs) on process heat electrification
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 customer connections	• Increase in MW of renewable generation connected annually • Delivery of Connections Management Framework • Continued work to improve connection process for demand-side and generation customers • Consistently high customer engagement survey results
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 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 • Risk planning • Work programme preparing for Taskforce on Climate-Related Disclosures (TCFD) framework and Aotearoa NZ Climate Standards reporting
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	• Provided inputs to Emission Reduction Plan 2, Infrastructure Strategy, resource management reform, tree regulations, ETS Forests and Environmental Standards
Long-term planning and integrated thinking	Ensuring longer-term electrification and decarbonisation strategy is placed above short-term financial drivers	• Building electrification, resilience and sustainability commitments into our RCP4 funding proposal to be submitted to the Commerce Commission • Whakamana i Te Mauri Hiko work • Continuing to collaborate with EECA and EDBs on process heat electrification • Refresh of Sustainability Strategy

Building strong **connections**

Making human connections is a significant part of empowering our energy future. Strong relationships across the sector will enable the teamwork the energy transition demands. Whether this means tackling problems as a collective, or building trust through clear communication and delivery – we firmly believe we work better together. Collaboration will allow us to innovate, and to work efficiently. It will let us achieve electrification at lowest cost and enable us to pass these benefits on to all of Aotearoa New Zealand. We are actively building our partnerships now and forging strong connections for the future.

SDG 15, SDG 5, SDG 12

Human capital

Intellectual capital

Financial capital

Our partnership approach

Our work at Transpower has a significant physical footprint. Our high voltage transmission network occupies land the length and breadth of Aotearoa New Zealand, and we cross this land to build, maintain and operate our assets. It is critical that in this work we acknowledge and respect the primacy of the relationship of mana whenua to this land.

Our relationship with iwi is one that has evolved over time, and in which we are actively learning. As a critical utility in Aotearoa New Zealand, the whakapapa of our organisation in many ways tracks the history of bicultural relations in this country. Much of the transmission network we use today was enabled by use of the various public works legislation (now enshrined in the Public Works Act 1981), which gave the Crown power to acquire land from private landowners for public works. For many iwi, these transactions over land acquisition formed the basis of their relationship with Transpower. Our challenge as an organisation today – particularly facing the rapid electrification of our country – is to acknowledge our role in this sometimes troubled history and to attempt redress where possible. We must do this while actively moving forward to forge relationships with meaning and value for both parties.

Our priority is to become better Treaty partners, as formalised in our Māori Partnership Strategy, (2020). This is an easy thing to state; behavioural changes are often slower and more challenging to measure. Our ability to recruit, support and retain Māori in our workforce is an important marker for us. We believe our workforce should reflect the make-up of Aotearoa New Zealand's community, and we need to build our Māori staff numbers to achieve this. To do this we need to strengthen our awareness of tikanga and te ao Māori in our day-to-day work, and we need to keep building the mana of te reo Māori. Over the past year we have become stronger as an organisation in these areas. We continue to provide te reo Māori training, and we have developed additional te ao Māori courses for our staff. In addition to the Wall Walk interactive workshop in New Zealand bicultural history (uptake for which has doubled since FY22), we now also provide an additional Te Tiriti o Waitangi workshop. The number of staff attending a quarterly noho marae has also increased since FY22; we have added a second stream of marae stays that extend awareness of marae tikanga and te ao Māori for those who have already taken part in their first noho.

Our ability to undertake work on our assets with the blessing of mana whenua is another tangible marker of the strength of our relationships with iwi. Our strategy has helped us to clarify our goals here. We need to shift from a transactional relationship with iwi over our projects and works, and build long-term connections. To do so we are actively engaging with iwi much earlier in our projects, and we are prioritising people and relationships over an operational end result. To ensure these changes flow through our whole organisation, and particularly through our project work, we have identified key roles that need further support and competence in te ao Māori and te reo Māori.

In February 2023, a small Transpower delegation travelled to Te Toke marae (near Ohaaki north of Taupō) to sign a relationship agreement with Ngāti Tahu – Ngāti Whaoa. We had initially engaged with the iwi about our work building a series reactor at Ātiamuri (see page 35), and it was clear from our conversations and engagement that they were interested in developing a more formal relationship with Transpower. An agreement of this sort does not set out specific plans, but rather binds the parties together in understanding and aspiration. Our group was welcomed on to the marae with a pōwhiri, followed by whaikōrero and shared kai. Our commitment to the relationship was also commemorated by a contribution of funds.

The iwi has since decided to use these funds to develop a charging station to support their electric vehicle use, as well as that of visitors. We were thrilled to pitch in to support this project and thus the reduction of the carbon footprint at the iwi offices. The final connection happened in mid-June.

> I liked the way you guys were so easy to work with, you looked to understand what our need was, and just worked in seamlessly and in the background to get these EV chargers in. You were there with advice and support as soon as we floated the idea. Transpower have been great to work with and we can't wait to see what other projects we can embark on in the future.
>
> **Evelyn Forrest, General Manager Ngāti Tahu-Ngāti Whaoa.**

> I really enjoyed being a part of this project and helping an iwi with something tangible to help lower their carbon footprint. From the education side of things through to working right on network edge, encouraging this type of electrification adoption. It doesn't really get much better than this.
>
> **Mick Richardson, Flexibility Services Manager, EMS**

Collaborating to re-connect

Cyclone Gabrielle made landfall on 12 February in the North Island. It was a devastating storm causing the loss of life, property and infrastructure and is now recorded as the costliest tropical cyclone ever to have occurred in the Southern Hemisphere. Areas hit by the cyclone will continue to grapple with the impacts of this event for some time. Damage occurred to all infrastructure networks in the area: road, rail, fibre, water and electricity. While the grid held up well in other affected parts of New Zealand, the severe weather led to flooding at our Redclyffe and Whirinaki substations. This caused a loss of supply to approximately 200,000 homes across the Hawke's Bay and Tairāwhiti regions, as well as to our industrial customer Pan Pac Forest Products, with the longest associated interruption to supply and connections we have experienced.

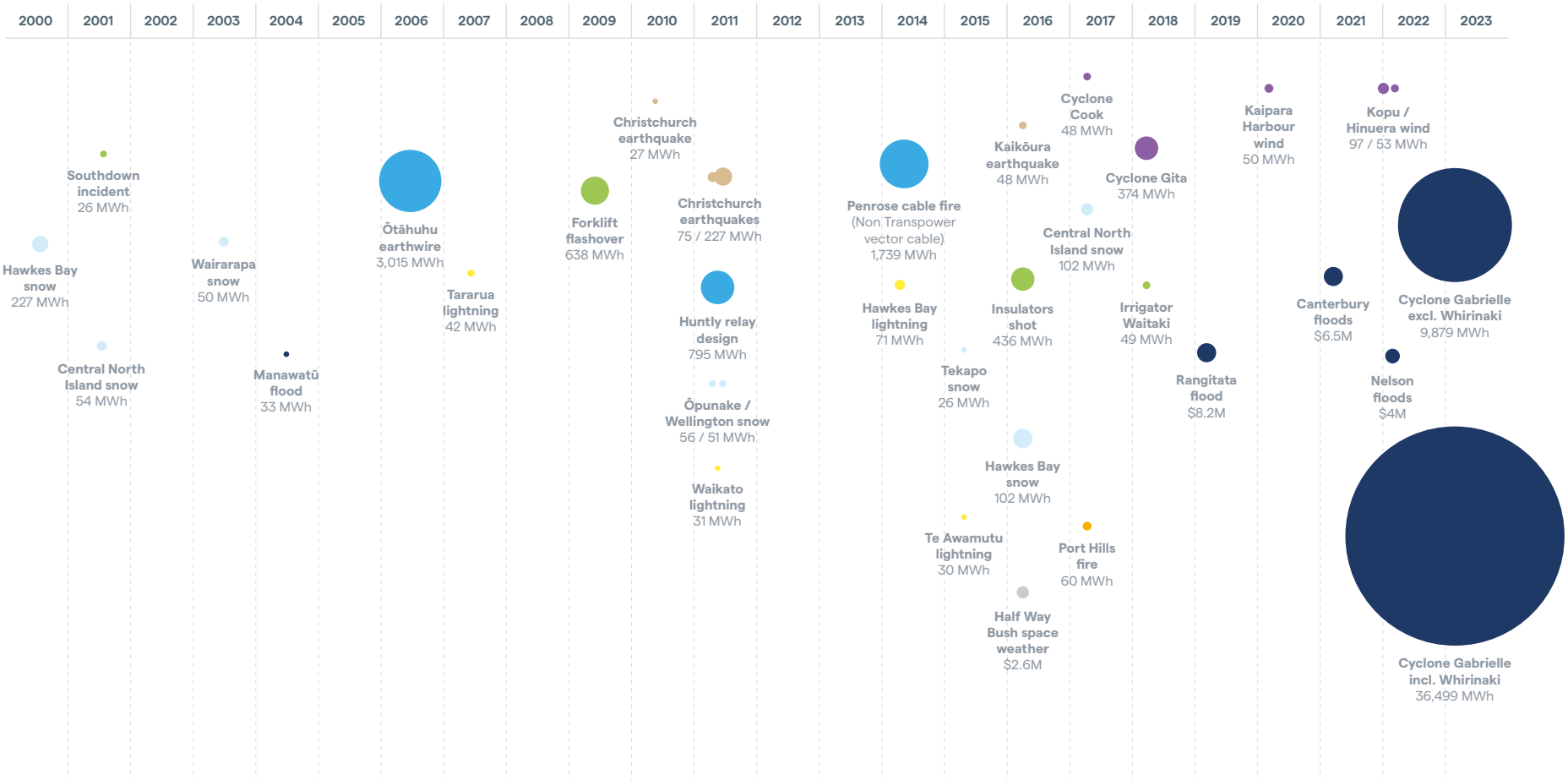
Restoring power to the affected regions was our top priority. All elements of the recovery effort – from medical support to clean water and communications – were reliant on electricity, and our teams set a pace that reflected this urgency. The narrative of the restoration is one of innovation and hard graft, but most significantly it is one of collaboration.

Resilience history

The bubbles indicate the amount of energy unserved, which is a measure of the energy demand that could not be met due to the event. Where there was no loss of service the cost of the impact is shown. The bubble size is made relative using a standard value of lost load of $25,000 per MWh.

Legend

- Earthquake
- Sabotage / third party
- Common mode failure
- Wind
- Space weather
- Lightning
- Bushfire
- Flood
- Snow

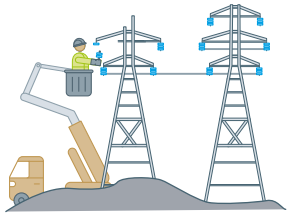


> The fact that we had done this work with Transpower, all the switching plans were in place, all the protections had been engineered and programmed ... it was a multi-year project. It was the difference between having parts of Hastings on within hours or a number of days, had that work not been done. This is testament to the kind of efforts that have been going on to ensure there is resilience between both Transpower and ourselves ... in the event of a major loss of supply to the region.
>
> **Unison General Manager Commercial Jason Larkin, Bay Buzz, June 2023**

> When we really needed [Transpower] they shone. Their creativity to get power back on to Napier was something that most people won't understand.
>
> **Unison General Manager People and Culture Quentin Varcoe, Bay Buzz, June 2023**

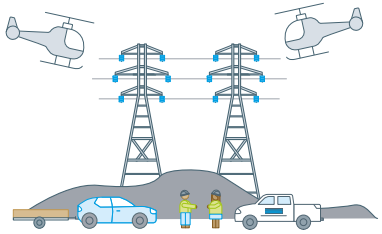
Clear communication

We spoke early and often with local authorities, media and the public via our twice-daily web and social media updates. Many of these relationships were already in place, including our well-established role running the Electricity desk for National Emergency Management Agency. Our first messages made it clear that getting the power back on would be a marathon, rather than a sprint. Setting expectations allowed for good planning and prioritisation, and built trust and understanding.



Prioritising together

Well-established contingency plans were in place with local lines company Unison Networks, which were crucial to our restoration speed. We were also reliant on cooperation from our customers, including Genesis Energy. There were other, more pressing choices to make. Alongside Unison and local authorities, we acted to delay lengthy substation repairs and prioritised getting power to critical sites at lower-than-normal security levels (including hospitals, aged care facilities, petrol stations and supermarkets). This was the difference between central Hawke's Bay going without power for one to two weeks and going without it for up to six.



Strength and selflessness

After the initial focus on human life, local civil defence agencies and aviation providers ensured we had access to helicopters for critical infrastructure assessment and repair. Additional crews from our service providers and other lines companies travelled to Hawke's Bay, from the Bay of Plenty, Waikato and Taranaki. Local seasonal orchard workers, themselves recently rescued, donated their time and muscle to aid with silt removal at our substation. The local RSA fed our teams and gave vital encouragement and support.

Partnering was evident through information sharing, boosts to team numbers and generously provided equipment, which helped us to move more quickly, kept morale high, and improved safety. By the end of Day One, 29% of power was restored. By the end of Day Two, 54% of the region's power had been returned. Nine days after the cyclone hit, we had restored 95% of the region's power. As of 29 June, just before the end of the reporting period, N-1 security was restored in Hawke's Bay to all areas other than those supplied by Redclyffe substation. We could not have done it alone.

A smart and accurate market

Up until November 2022, prices for wholesale electricity were published 48 hours following sale – the equivalent of buying your food then receiving the supermarket bill two days later. On 1 November, Transpower, in close collaboration with the Electricity Authority and the NZX, launched real-time pricing. Electricity prices are now available online in thirty-minute increments. This is arguably the biggest change to the electricity market since it went live in 1996, and the impacts are considerable.

How does this help electricity users? With up-to-date information on electricity prices, those in the market can respond with much more flexibility. If prices rise, for example, an energy consumer can flex to accommodate this by managing their own demand, turning off unnecessary equipment or ceasing power use. This response would benefit both a large-scale energy consumer as much as an individual domestic consumer exposed to the spot price.

In turn, consumer response will have a much more marked impact on the market. In real time, spot prices will decline if enough consumers reduce their consumption. This significant change to the way people interact with the power system will help to drive uptake and investment in new technologies like battery storage and smart appliances, which are reliant on accurate and timely prices. It also opens up a low-cost path for small-scale providers to bid and offer their resources into the wholesale market. This will in turn help to unlock innovation across the electricity system.

The market design for this new tool was developed and overseen by the Electricity Authority. Operationalising it required complex cooperation drawing on 130,000 hours of effort across the organisations involved including Transpower, QualIT, DXC Red Rock and NZX.

While we know the grid will need to grow to cater for increased electrification, projects like this one do an exceptional job of assisting us to minimise the construction of transmission infrastructure, enabling us to keep electricity affordable for all New Zealanders.

Powering decarbonisation

In delivering on the Government's decarbonisation goals, Waka Kotahi NZ Transport Agency has been working to drive the electrification of the transport sector through the Clean Car Discount while the EECA has been driving the electrification of process heat through the Government Investment in Decarbonising Industry (GIDI) fund. Process heat remains a vital opportunity for decarbonisation, as it is responsible for 10% of gross emissions and 27% of energy-related emissions. The GIDI fund has driven some big wins already, and as of April 2023 had enabled the lifetime abatement of 8.12 million tonnes of emissions. However, the latest funding round has seen the Marginal Abatement Costs increase, meaning that decarbonisation is becoming more complex so the next phase of the process heat transition will require a more targeted and collaborative approach.

One of the key enablers for this next phase is the new Regional Energy Transition Accelerator programme (RETA). In October 2022, EECA released its first RETA report. This was an analysis of the barriers and opportunities for decarbonisation in the Southland region, with attention to this region's particular infrastructure. The report highlighted the need for information sharing and regional coordination to support decarbonisation decisions. The analysis involved extensive collaboration with key energy users and suppliers – including Transpower. It asks how the region can harness intelligence from both the demand and supply side of the energy ecosystem to encourage local process heat users to transition to renewable energy.

Since 2021 we have co-funded studies with EECA and local lines companies to identify all large fossil-fuel boilers (over 500KW) around the country. At the beginning of July we had completed the South Island and were well on the way to completing the North Island inventory.

2023 presented another significant milestone in the electrification of process heat. In May, New Zealand Steel announced the replacement of their existing coal-powered furnace with one powered by electricity. The Government is investing $140 million from their GIDI fund towards the project, with New Zealand Steel covering the remaining $160 million. The furnace will be replaced within three years and will singlehandedly achieve about 5.3% of the emissions reductions needed under New Zealand's 2026–2030 emission budget. This is a huge step towards New Zealand's net zero targets – the equivalent of taking 300,000 cars off the roads. We look forward to working closely with New Zealand Steel to ensure the smooth connection of this significant new equipment and its stable incorporation into our broader electricity system.

Another example of collaboration and further ventures in this area is the partnership that Fonterra and MAN Energy Solutions have entered into to reduce CO_2 emissions in dairy production using industrial-scale heat pump technology for steam generation. The project could result in a reduction of 60,000 metric tons of CO_2 annually for Fonterra, the equivalent of taking 25,000 cars off the roads.

Working together on winter

Over the past two years, the System Operator has seen clear signs that peak electricity demand in Aotearoa New Zealand is growing. When we talk about 'peak demand', we're referring to those periods in the day when our national electricity usage surges. In New Zealand this usually happens in winter and follows a relatively predictable pattern: our electricity use rises each weekday morning when we're getting ready for work and school, and then peaks again in the evening when we return home to cook dinner and heat our homes. This peak demand growth corresponds with growing electrification and increases in the density of population in key areas.

We have been mindful of these challenges for some time. In November last year we published a detailed analysis of winter capacity challenges in an industry paper. In April we expanded on our review with further modelling. We also sought to build awareness of the issue in the draft Security of Supply Annual Assessment that went out for consultation in May.

While we already have a highly renewable electricity supply, we still rely on back-up generation to 'firm' intermittent generation and make sure there's a buffer in the system if anything goes wrong. New Zealand has plenty of thermal generation as a back-up; however, these plants are slow to start (they typically take 6–12 hours to warm up and start generating). This means they're not ideal for managing the short-term peaks of winter mornings and evenings. As we move further into the energy transition, we're expecting to get better at storing energy for later use, and developing more sophisticated methods of managing demand. However, in the interim period we need to take steps to ensure that our energy system is secure and reliable, even if the sun isn't shining or the wind isn't blowing.

In these years – our best solution is collaboration. Over the past year we have taken several clear steps. The System Operator has improved its oversight of potential risk periods, drawing on improved meteorological forecasting to help predict cold periods with low wind – two key risk factors for security of supply. We are sharing these forecasts proactively with industry so that we all have clear sight of tight periods. We are also improving how we send messages to industry partners and building in checks to ensure these messages trigger the needed result. We have strengthened our communication channels with lines companies and large industrial users so that, if needed, we can ask them to manage how much electricity they are using. A key part of our efforts was our May Industry Exercise which drew together control room representatives from almost every local lines company around the country. Our Wellington office was the hub of a scenario that put all of these new initiatives to the test. While a more highly renewable electricity system may require more collaboration and awareness from all New Zealanders in the short term, it's also an obvious benefit for our planet, our country and for all New Zealanders' electricity security and affordability long term. By ensuring we work together smoothly and cohesively across the industry, we will make sure that the lights and heaters stay on for the country.

Conducting change

Transpower's role at the centre of an interconnected electricity system gives us a unique perspective, and a unique responsibility. Working in this space is a privilege – one that in the past we have honoured by just quietly getting on with things. Our engineers are often more comfortable behind the scenes than in front of a camera. However, the electricity sector is changing. We will need to communicate more, and we will need to engage the whole team of five million in Aotearoa New Zealand in the decarbonisation pathway that lies ahead. With that in mind, we are beginning to share our challenges more publicly and to build awareness of the complexity and rewards of the energy system and the transition. Over the past year, we have become more proactive in how we communicate our challenges. We have spoken openly to the media about issues including instances of low buffers of 'reserve' in our system, our Hawke's Bay response, and our collaborative work on winter security. This approach informed how we communicated the risk and challenge involved in bypassing two slip-affected towers in Northland, following torrential rain to the region from Cyclone Gabrielle. We have been pleased by the level of engagement and interest around such discussions.

We are seizing opportunities to drive these messages alongside others in the sector also – as a prompt to conversation and dialogue. In 2023 we joined Powering Change, a group of New Zealand energy companies, including generators, EDBs and other industry parties, who have made a joint commitment to reducing emissions and building a sustainable future. The goal is to drive discussion, and collective action, as well as to develop targets that will allow the sector to evaluate its progress.

The group has agreed on six key principles to help guide its actions, innovation, affordability, reliability, collaboration, and care for the environment. In May the initial Powering Change platform went live. We will continue to provide news and stories where we can, to ensure we remain strong partners in this discussion and to support sector collaboration on New Zealand's climate change goals.

We have also recently contributed to Humanising Energy, a series produced for the World Energy Council by BBC StoryWorks Commercial Productions. The series is made up of a collection of films and articles that highlight the human stories, and the communities, behind the energy sector's innovation to solve problems. We were proud to take part in this powerful series and draw attention to the work that is being done in our part of the world.

Scan to visit:

BBC Humanising Energy

Protecting our systems

The cybersecurity environment is continually evolving. Over the last year, several intelligence agencies – both domestic and abroad – have reported an increase in vulnerability disclosures, active threat actors, and geopolitical tension between nations.

Transpower relies on many information, communications, and technology systems to support our critical national infrastructure. We invest appropriately into our security measures to protect these systems from increasing external threats, while simultaneously building relationships with agencies that provide valuable information on cyber security events and trends.

We continue to be proactive in our engagement with United States and New Zealand security entities so that we remain well informed on known threats and emerging trends. As well as monitoring the landscape closely, we actively participate in exercises that deal with physical and cyber threats. Such exercises allow us to increase our capabilities and develop best-practice responses.

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

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 WiTMH monitoring • Connections Management Framework • Continued work to improve connection process services for demand-side customers • Building electrification, resilience and sustainability commitments into our RCP4 funding proposal to be submitted to the Commerce Commission • Resilience and climate change adaptation planning • Climate-risk reporting for Aotearoa NZ Climate Standards
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 • Refreshed our transformer standards to optimise longer-term performance • Introduced real-time pricing
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 • Continued thought leadership via WiTMH monitoring • 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
Long-term planning and integrated thinking	Ensuring longer-term electrification and decarbonisation strategy is placed above 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 • New 10 year grid services contracts investing in our service providers to deliver our decarbonisation commitments • Supporting the development of Aotearoa NZ's Energy Strategy • Implementation of our Sustainability in Design guidelines to influence future grid infrastructure
Risks to the electricity grid and market as a result of cyber attacks	Planning for potential cyber attacks on our network and assets	• Cybersecurity initiatives including engagement with security entities and exercises dealing with cyber threats

An **interconnected** world

Electrifying Aotearoa New Zealand's economy is the key to reducing our greenhouse gas emissions as a country. The biggest contribution Transpower can make to mitigating climate change is the enabling role we play in this transition. But, to ensure present growth doesn't borrow from future generations, we also need to think sustainably across everything we do. Operating a sustainable business means actively supporting a diverse workforce and inclusive organisation culture. It means building opportunities to give back to the communities that host or are affected by our towers, lines and substations. It also means that we tread lightly in our building work and protect the health of our heritage and native ecosystems. Becoming sustainable in our thinking and planning is a journey, and we continue to build our depth of understanding and expertise as we make progress.

SDG15, SDG5, SDG12

Human capital

Intellectual capital

Financial capital

Leading, sustainably

In 2020 Transpower developed a new Sustainability Strategy with goals that lined up with our Whakamana i Te Mauri Hiko vision of Aotearoa New Zealand's energy future. As we tackle the big picture of New Zealand's decarbonisation, we believe it's critical to be accountable for sustainability across all our operations. Our Sustainability Strategy holds us to this commitment. As we move toward 2030, we have a set of strong targets as well as broader goals and aspirations. Each year we check that we have delivered on what we promised. You can see how we measure up with our Sustainability Strategy score card on page 56.

We have made substantial progress on our Scope 3 reporting, our SF_6 work programme and our work to understand our transmission losses (see Our Carbon Footprint on page 60). Beyond this, we are ensuring that sustainability is built into the funding strategy that supports our work. Our RCP4 proposal designates part of our grid refurbishment budget to ensuring we meet our commitment to be a 'fast follower' of best sustainability practice. Following the development of our Green Bond Financing Framework in FY22, the past financial year has seen $740 million in funds raised through our accredited green bonds enabled by strong demand across both New Zealand and Australian markets. We have also made strong progress in readying our business to report under the Aotearoa NZ Climate Standards.

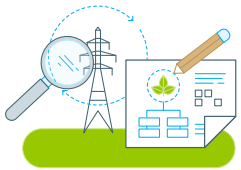
In FY22 we finalised our Biodiversity Strategy, in recognition of Aotearoa New Zealand's biodiversity crisis and the potential impact on the environment from the operation and maintenance of our assets. The Strategy sets our goal of achieving a net gain in biodiversity for future projects. This year we have been hard at work on a solid and science-informed approach for measuring net biodiversity gain. We are beginning to test the methodology out in practical terms with specialist ecologists through pilot projects for our Central North Island Upgrade and Hautapu Grid Exit Point projects. We have also furthered our stewardship and community partnership goals with more successful plantings at our pilot ecological restoration project at Takapu Road substation.

During the coming financial year we will continue to assess our Sustainability Strategy to ensure our goals are both sufficiently ambitious and practically minded, and that they continue to hold firm to our broader Transmission Tomorrow Strategy.

Sustainability Strategy 2022/23

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

Challenge	Focus	Strategic Outcome	KPI	Indicator
Climate change				
	**Enabling renewable and electrification connections**	We integrate new renewable supply and electrification load from process heat and transport Advocate for a net zero emission grid with our customers	Increase MW of renewable generation connected annually	✓
			Demonstrate energy sector leadership by driving electrification of transport and process heat	◕
			Reporting on sector's progress towards net zero carbon to inform industry decarbonisation	◕
	Planning networks	We ensure the grid is resilient to climate change, reporting to TCFD framework	Undertake a detailed assessment of climate-related transition risks, physical risk and liability risks by June 2023	◕
			Climate risk scenarios fully integrated into asset planning decision framework and asset health and network risk framework by June 2023	✓
		Ensure the grid backbone is enhanced, through Net Zero Grid Pathways, to enable electrification and new renewable generation	Implementation of Net Zero Grid Pathways programme	✓
	Carbon footprint	Our carbon footprint is reduced 60% by 2030, on track to achieve a net zero grid by 2050 (Controllable Scope 1 and 2 emissions from 2005 baseline)	Reducing SF_6 losses through improved handling and management and implementation of a SF_6 reduction plan to 2030	◑
			Promoting EV use and charging at Transpower operational sites	✓
			Reducing carbon emissions from our buildings through energy efficiency, building design and renewable energy opportunities	◕
			Reduce Scope 3 GHG emissions from service providers by June 2024 based on actual emissions	✓
			Improve Scope 3 reporting through focus on capture of high carbon intensity suppliers	◕
			Reduce carbon intensity of operations through innovation	✓

Challenge	Focus	Strategic Outcome	KPI	Indicator
Environmental stewardship				
	**Natural environment**	Using a kaitiakitanga approach, we restore the environment, creating a net gain in biodiversity	Delivering a net biodiversity gain for new Transpower projects from July 2023	
		Measurable improvement of our pollutants and discharges by 2030	Improve water quality and reduce run-off and contamination risks through improved management of Transpower activities across all of our operational sites	
		The environmental impact of materials is minimised throughout the lifecycle Use resources efficiently, and minimise waste with measurable improvements by 2030	Implementation of waste minimisation plan	
Sustainable business				
	**Good governance**	Decision frameworks consider social and environmental impact through asset life cycle	Inclusion of carbon and sustainability impacts in core Transpower decision making frameworks by June 2023	
			Embed sustainable procurement framework with suppliers	
			Development of a Green Finance Framework	
		Transparent reporting of our impacts, aspirations and progress	Publishing of annual Transpower Greenhouse Gas emissions inventory and Integrated Report	
	Our people	Our people are highly engaged, skilled and capable. Our diversity and inclusion is leveraged Our people are enabled through development and health and safety	Maintain progress against gender diversity target (40/40/20)	
			Employee engagement survey results in top quartile for Energy and Utilities sector	
			Total Recordable Injury Frequency Rate (TRIFR) >6.0 and High Profile Frequency (HPIFR) rate >3.0	
Our communities				
	**Iwi relations**	We acknowledge mana whenua's connections to the land and partner to remediate the natural environment, minimising the impact of our work on sites of cultural significance	Honouring tikanga through implementation of new Maori Partnership Strategy	
	Community relations	Connected to our communities and trusted by them Responding to opportunities to minimise our physical presence	Implementation of refreshed community funding programme to deliver on Whakamana i Te Mauri Hiko strategic context	
	Landowner relations	We work with landowners to minimise impact on their land and reduce our footprint Ensure the public are safe around our assets	Maintaining positive relationships with landowners that facilitate operating, maintaining and enhancing the National Grid	

Locking in sustainability gains

When it comes to our infrastructure and asset management, a key piece of the sustainability puzzle is improving oversight over the emissions and waste produced from our supply chain (Scope 3). We work closely with our highly skilled service provider teams to complete operational and maintenance work on the national grid. Historically we have had limited overview and influence on the emissions and waste created in carrying out work on the grid. However, this all changed in August last year. After a lot of hard work and intricate planning, we implemented the new grid service contracts. In last year's report we discussed the grid contracts reset project in terms of its impact on sustaining and supporting the workforce pipeline. Almost one year in, we are pleased to report on another quiet revolution powered by the shift. The new contracts broke ground by incorporating several new sustainability requirements into the work that service providers perform for us. Service providers are now expected to align their sustainability and carbon plans with Transpower's own sustainability aspirations (refreshed annually) and how they apply this to our everyday work. The contracts now include KPIs for service providers to prepare annual carbon reports and sustainability plans specific to the activities undertaken for Transpower. We also require service providers to report on the monthly volume and ultimate destination of all waste resulting from our work. By building accountable practices into the contracts, we're seeing proactive thinking around design, material use and waste incorporated into each stage of project work, from toolbox talks to final wrap-up.

When we identify assets that have approached end of life, our current practice is to advertise these to other users, typically electricity distribution businesses. This is how circuit breakers from our Wilton substation came to find a new home in Firstlight Network's (formerly Eastland Network) substation in Gisborne. Meridian Energy's Harapaki project also provided some great case studies of a re-use, recycle mentality at work. The Transpower project team and service provider Omexom (formerly Electrix) re-purposed timber packaging straight to PanPac Forest Products' factory at Whirinaki where it was chipped and used in their process heat production. Scrap metal has been sold for reuse. The profits will go to purchase plants for environmental remediation at the end of the project.

Sustainability in design

Much of our project work at Transpower involves building new assets. We construct new buildings and infrastructure to support the generation, transmission and distribution of electricity. As the grid is developed, to support Aotearoa New Zealand's decarbonisation, this work is only going to increase. This is both a challenge and a significant opportunity for us as a sustainable business. Over the past year we kicked off a project to look carefully at the full environmental impacts of each part of our project workflow, and to explore possible options for minimising these through the way we design our assets. It was important that we systematise this process and begin to incorporate it into 'the way we work' – both to maximise the benefits, and to keep our workflow efficient and smooth. The answer to this is our Sustainability in Design guidelines.

Building our Sustainability in Design guidelines meant careful and thoughtful planning. It drew on the know-how and skill of a number of different teams, from Tactical Engineering, to Planning and Procurement, to Grid Works Delivery. We're proud of what we have achieved. We now have a set of guidelines that will act as a checklist to ensure we are maximising sustainability in all stages of our asset design, development and delivery.

What sustainability looks like in design practice will differ from project to project. This flexibility is central to our thinking. It might mean designing out unnecessary materials or activities, or removing or phasing out assets that create emissions. It might mean prioritising the use of energy-efficient equipment, or choosing materials that have a longer life-cycle, or can be reused or recycled at end of life. It might mean the substitution of energy sources for renewable options as we are exploring at our Bunnythorpe warehouse, or the ongoing use of cross-laminated timber, as at our Pāuatahanui substation.

The guidelines also ensure clear governance for sustainable design across our projects. We know that sustainability is not the responsibility of any one person on a project. Rather, it's a collaborative and multi-disciplinary approach. This is about changing the way we think about how we design and build, and it's a clear investment in our future. We look forward to reporting progress in the coming years.

Supporting communities

Transpower is committed to giving back to our local communities. Our CommunityCare Fund provides one-off donations to support projects within a geographical radius of our assets, supporting schools, sports associations, marae and other community groups. Over the past year we've been delighted to support a number of regional projects. Among other targeted funding, we've provided funds to the Charleston-Westport Coast Trail Trust to enhance an area of coastal trail from Bradshaws Road to McKay Road to make it more user friendly for all ages and abilities. We've supported the relocation of Central Otago Riding School for the Disabled, and we've worked with the Waitara Initiatives Supporting Employment (WISE) Charitable Trust to kick start a curtain bank for the Taranaki area. You can read more about our CommunityCare work on our website.

Over the past year, we've also been exploring a new approach to our community funding that will allow more flexibility and more responsiveness,

helping us to get money or resources to where they're most needed. An example of this new funding model at work has been our effort to send support to Hawke's Bay and Tairāwhiti communities most affected by Cyclone Gabrielle. After talking to councils in the region, we donated $150,000 to organisations who were active in the area providing support that was most needed. We were able to supply funds directly to The Salvation Army, Nourished for Nil, and the East Coast Rural Support Trust, and after discussion with Gisborne District Council we provided Four Square supermarket vouchers to be distributed where they were needed most. We were honoured to be able to play a small part in making a positive difference in this region.

We are progressing the development of long term partnerships and in June 2023 we signed an agreement with Nau Mai Rā, the first power company in Aotearoa New Zealand based on kaupapa Māori principles. In the first year we have provided financial support for Nau Mai Rā's whānau fund which supports vulnerable consumers to keep their lights on. The partnership will further our *Sustainability Strategy* and Māori Partnership Strategy goals. It also builds on our awareness, as outlined in WiTMH, that the broad electrification of our economy will only be possible by maintaining electricity affordability. We intend to continue to work with Nau Mai Rā to identify the best way for us to support its work and its goal of lifting its most vulnerable customers out of energy poverty.

> We believe that power is a right not a privilege, that people are more important than profits and that through the spirit of manaakitanga we can eliminate energy hardship.
>
> **Nau Mai Rā**

Clear skies over Whenuapai

Transpower transports electricity to communities around Aotearoa New Zealand. We often describe our network as a backbone – it spans the length of a long and narrow island nation. As the electricity we use to decarbonise our country grows, our grid will need to grow also. However, we remain mindful of the impact our transmission lines and towers have as a physical presence in the landscape. As part of our long-term strategy to support the electrification of Auckland we recently took a hard look at the value of our Albany–Henderson (ALB-HEN) 110 KV line. The cost to maintain the line (which needed reconductoring and tower strengthening) was not balanced by the benefits it represented to the network. Its removal, on the other hand, would have a clear benefit to local communities, and would open the skies above populated urban areas, several schools, a golf course, and several ecologically important estuarial inlets. It also meant landowners would not have to work around the 'corridors' or constraints our towers and lines require, thus opening the door for future housing projects.

It's not often that we get the chance to remove transmission lines, but here the decision was straightforward. Line removal is a sizeable and complex project. The ALB-HEN line is approximately 17 km long, with 53 towers. There are 44 landowners with towers on their properties, and another 229 properties beneath line spans. It was vital that landowners and communities were safe and well informed, and that disruption to their lives and properties was kept to a minimum during the removal. We ran to a tightly coordinated communications plan to ensure we were talking to the right people at the right time. Our meetings drew in local landowners, iwi groups, Auckland Council, businesses, MPs, Auckland Transport, Waka Kotahi, and media, among others. Work started in early 2022 and as at publication we've removed all the conductor (the lines themselves), and around 80% of the towers. We're tackling foundation removal at present, and though there's a lot of concrete to shift, locals are already enthusiastic about the changes they are seeing, and invested in a project that will allow them a different perspective on their community.

Our carbon footprint

We are on track to achieve a net zero grid by 2050 and reduce our carbon footprint.

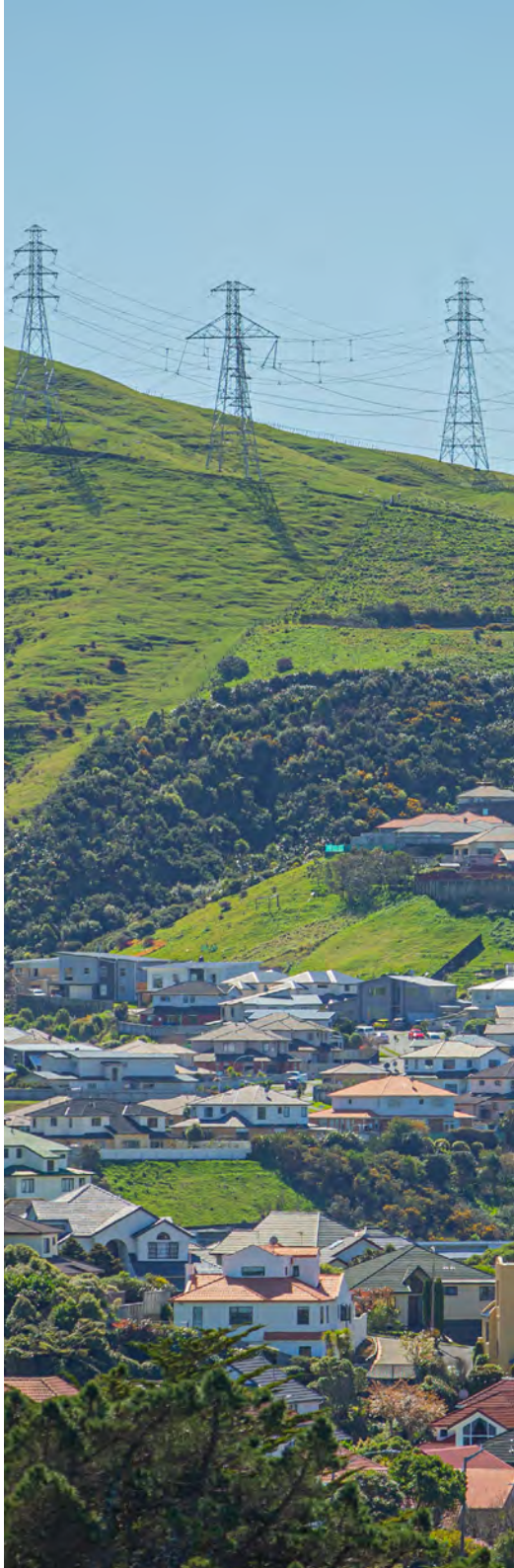
We have been monitoring and reporting on our progress for more than five years now. This includes publishing an annual GHG emissions report, which is an important part of our Sustainability Strategy and includes emissions from our operations (Scope 1), emissions from electricity usage (Scope 2), and emissions from the supply chain (Scope 3).

We produce our GHG emissions report in accordance with the GHG Protocol and ISO 14046, which includes assurance from EY in accordance with the International Standard on Assurance Engagements (New Zealand) 3000 and 3410 Assurance Engagements on Greenhouse Gas Statements.

In 2021 we set an ambitious goal to achieve a 60% reduction of our controllable Scope 1 and 2 GHG 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.

In FY23, we saw a 23% decrease in our controllable Scope 1 and 2 GHG emissions against our 2005 baseline. We have also continued to improve the accuracy of our Scope 3 emissions reporting.

In addition to GHG emissions reporting, we regularly assess our climate-related risks in accordance with the Task Force on Climate-related Financial Disclosures (TCFD) framework. We are preparing to meet the Aotearoa New Zealand Climate Standard requirements by the end of FY24.



FY23 emissions

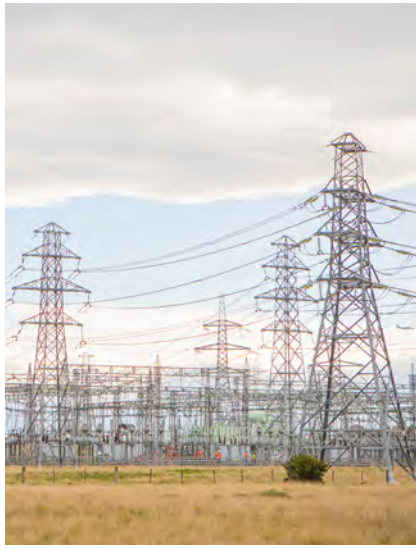
Enabling the transition to a renewable electricity system is the biggest contribution Transpower can make to reduce emissions for Aotearoa New Zealand. However, as we enable the electrification of our economy, including through building new connection points and upgrading the national grid, our own carbon footprint is set to increase substantially. This increase will be a result of transmission losses and an increase in embodied carbon as part of the physical construction and upgrade of network infrastructure. However, an increase in Transpower's carbon footprint will ultimately be offset by the net benefit of electrification nationwide.

The GHG emissions associated with transmission losses are tied to the electricity required to compensate for them and are calculated according to the relative carbon intensity of the electricity generation mix. Transpower, as transporter of electricity from generation sites to distributors and large consumers, bears losses on behalf of the sector. As we grow the grid, we expect transmission loss emissions to grow initially and then eventually decline as renewable electricity generation increases.

During this phase of our electrification journey, we are working with the wider transmission sector to explore how best to minimise and manage transmission losses.

We are also playing our part by advocating for more co-location of load and generation in regions, although we do not control generation investment decisions. In addition, we are considering innovative ways to minimise the need for additional transmission infrastructure and our approach is to design, construct, and operate new energy sources in the most carbon efficient manner possible. We also continually evaluate how best to reduce Scope 3 impacts of increased infrastructure build.

Our total GHG emissions for FY23 are down 25% from FY22. Our total emissions are estimated at 162,883 tonnes of carbon dioxide equivalent (tCO_2-e), a decrease of 55,410 tCO_2-e.



Scope 1 – Emissions from our operations

Scope 1 GHG emissions are those that arise directly from our operations. They include emissions from our use of gases and fuel usage in vehicles.

Transpower is Aotearoa New Zealand's largest holder of SF_6, which we use as an insulating gas in our essential high-voltage switchgear. It is our biggest challenge in this emissions category.

In 2021 we developed our SF_6 management strategy. It prioritises proactive leak detection and maintenance across our assets. 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.

In FY23 we continued our SF_6 management strategy work programme and shared our approach to SF_6 best practice with other electricity distribution businesses and generators. Unfortunately, our SF_6 emissions increased by 44%, largely due to losses from a small number of large single failure events. These events are relatively unusual, with one event arising from a vandalism incident on a mobile substation.

During the year, we also continued our programme to increase the number of battery and plug-in hybrid vehicles in our passenger fleet, with 92% of our fleet now battery and plug-in hybrid (from 15% in FY18). We expect to meet our 100% battery and plug-in hybrid vehicles target in FY24, with the remainder of our replacement fleet ordered in November 2022. Our emissions from fuel use in vehicles and emergency generators were up 13% in FY23.

Scope 2 - Emissions from electricity usage

Transpower's Scope 2 GHG emissions relate to electricity usage in our buildings and substations. Scope 2 also includes non-controllable transmission losses associated with operating the national grid. Scope 2 emissions make up the majority of our carbon footprint, with transmission losses by far the largest contributor within this category (68% of all our GHG emissions in FY23).

During FY23 we engaged with and learned from international transmission operators with similar renewable electricity network challenges, including the National Grid (United Kingdom), Scottish and Southern Electricity Networks (Scotland) and Landsnet (Iceland). We continued to evolve our approaches to reporting GHG emissions from electricity usage, and updated our transformer specifications to further minimise losses.

We have also continued our work to minimise the carbon footprint of our operations in other areas of the organisation, including implementing energy efficiency recommendations at our offices. We have installed EV fast chargers at our higher use operating sites to promote the use of EVs for staff and our service providers. This includes at Wilton, Brunswick, Twizel, Timaru, and Huirangi substations in FY23.

In FY23 we reported a 34% decrease in emissions from transmission losses from FY22, largely due to the increased volume of hydro electricity generation.

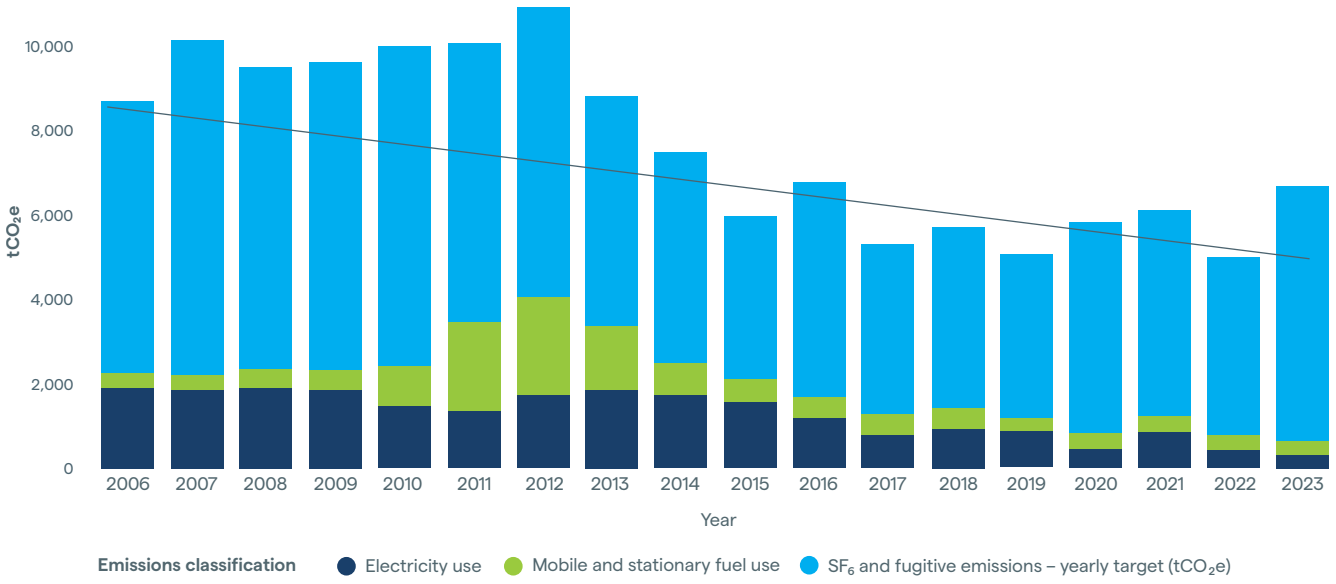
Scope 3 – Emissions from the supply chain

We made good progress on our approach to reducing emissions across our supply chain this year. This includes significantly improving the accuracy of our Scope 3 emissions from estimated to actual emissions, particularly from our larger and more carbon-intensive suppliers. Improving oversight of our supply chain is an ongoing piece of work. At the end of FY23, 47% of our suppliers and service providers by expenditure were reporting their actual GHG emissions data to Transpower. In May, our service providers submitted GHG emission reports specifically for work undertaken for Transpower under the first year of the new grid service contracts, enabling us to significantly increase our oversight of our Scope 3 GHG emissions data. For more about our grid service contracts reset, please see page 58.

With the substantial transmission network infrastructure construction and upgrade work planned over the coming years, we do expect to see an increase in our Scope 3 GHG emissions. However, changes to our new grid service contracts and other larger supplier contracts will ensure we take the necessary steps to account for and reduce our supply chain emissions wherever possible.

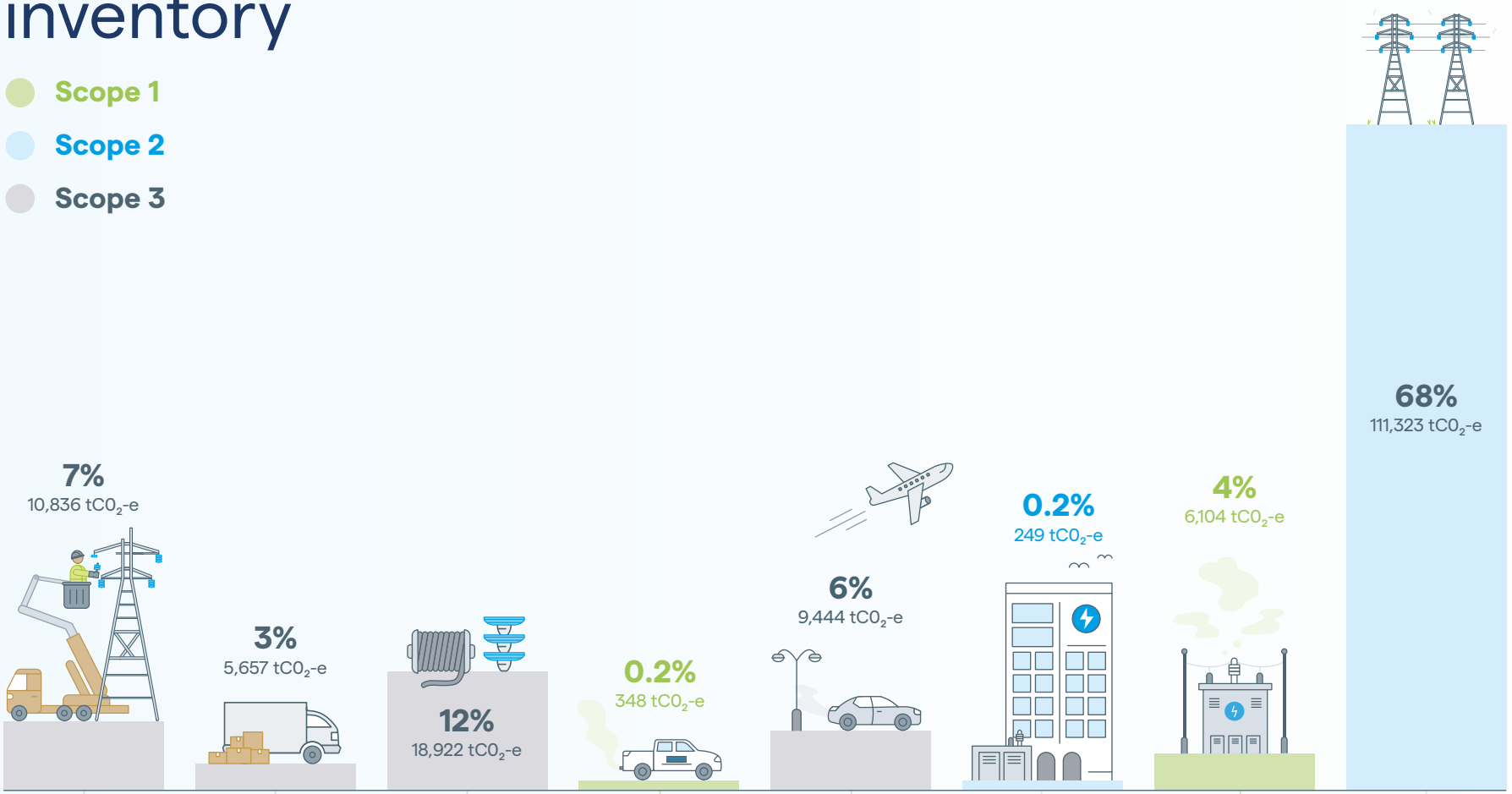
We have also advanced our embodied (construction) carbon work to explore how best to minimise embodied carbon for new sites and buildings. As one of the initial projects arising from our Sustainability in Design standard work, the construction of a new timber control room at our Pāuatahanui substation will ensure the substation has a much lower carbon footprint than typical concrete structures, as well as reducing overall project costs.

Controllable Scope 1 and 2 GHG emissions against reduction target



GHG emissions inventory

- Scope 1
- Scope 2
- Scope 3



Our safety and reporting

Owners and operators of electricity transmission assets are required by statute to have a public safety management system that operates to safeguard members of the public or property of members of the public from safety-related risks arising from the presence or operation of these assets.

In FY23 Telarc conducted its Public Safety Audit of our public safety management practices and processes. The auditor visited our mid-Canterbury substations and found our practices and processes to be effective and in accordance with NZS 790:2008. They noted that public safety was well managed at both senior and middle management levels, as well as by field service providers.

In August 2022, we made an update to our Transpower Critical Risks. Our Critical Risk programme helps us to monitor and improve how we work in situations that have been identified as potentially causing life-altering injuries or fatality. We have 11 Critical Risks across our business. Over the past year we have merged two of these, and identified two new risks that reflect the changing nature of our work. The two new risks are Aerial and Marine. Including these reflects the work we have undertaken in the Cook Strait and our increasing use of drones. Working groups are established for the new risks and critical controls have been developed. Critical controls ensure we are focused on the right measures to keep our people, those we work with, and the public, safe.

Future workforce

One of the biggest challenges in electrifying and decarbonising the New Zealand economy is securing the skilled labour the electricity industry will need. Both the Transpower and industry workforces will need to grow substantially. By 2030 we expect to see a 60–100% increase in the number of service provider staff needed to conduct our essential grid infrastructure work. Within Transpower we will need to increase our workforce by more than 30% by 2030 and likewise our engineering consultants will need to increase their workforces to accommodate our work.

We will need a wide range of people from different backgrounds and disciplines to support the planning, development and execution of the work needed to electrify our economy. We are working closely with our service providers and with others in the industry to ensure that together we can attract and develop the workforce we need, and that we retain our existing people.

Our journey to grow the workforce has already started – we have expanded our graduate programme and are taking on an additional 16 in 2024, bringing the total in the two year programme to 30 (up from 12 in 2022).

Scan to visit:

Search Jobs - Transpower

Shift to support workforce growth

Grid Skills is a registered private training establishment that provides training to support the development of our service provider staff. Courses ensure our service provider workforces have the required skills for the work they do on Transpower assets and work sites. In FY23, 1,674 staff from 88 organisations participated in training.

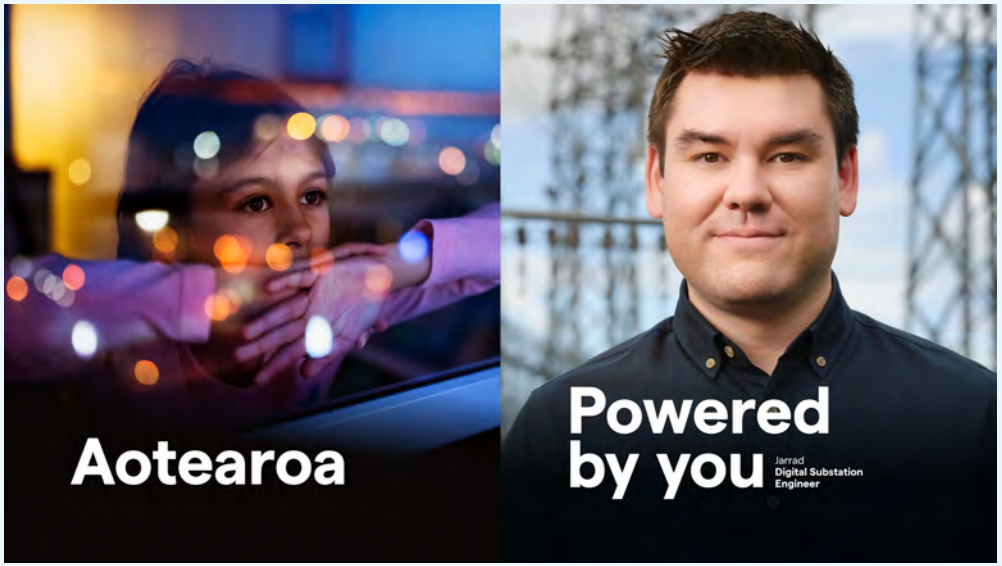
Approximately 89% of the courses delivered last year were compliance based; the remaining 11% were for transmission trades training. We now deliver most of our compliance courses online, to enable greater throughput, while maintaining the quality of training. In the past 12 months we have had a 42% increase in face-to-face course attendance for trade training programmes, as COVID-19 driven disruptions waned.

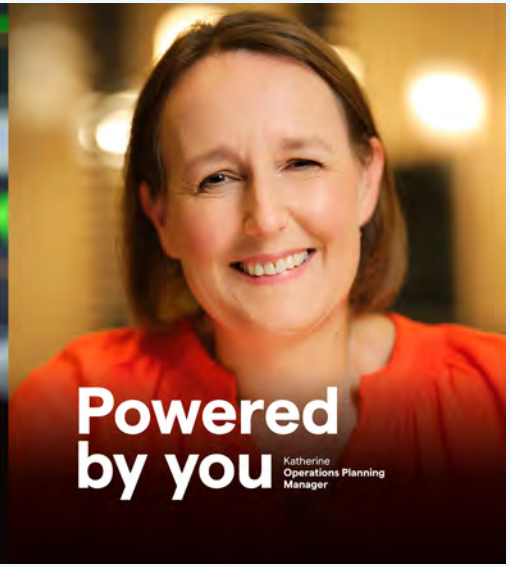
This year, Grid Skills has been approved by the New Zealand Qualifications Authority to award the National Certificate in Electricity Supply (Transmission Line Maintenance) – a Level 4 qualification. In addition, we are developing a number of short course micro-credentials and other qualifications aimed at ensuring Grid Skills is well positioned to deliver training for the expected workforce growth to enable Aotearoa to achieve its net zero carbon targets.

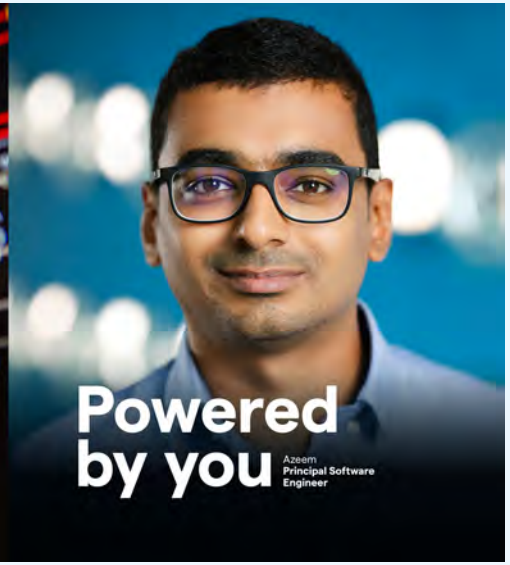
Attracting people to the sector and Transpower

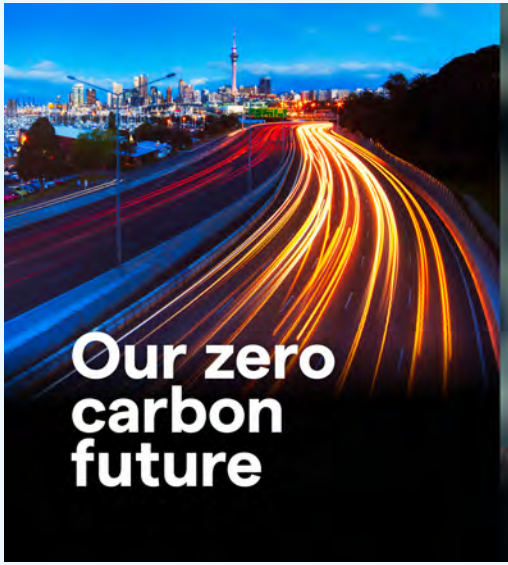
We want to inspire the science, technology, engineering and maths (STEM) workforce of the future. In early August 2022 we agreed to continue our partnership with Engineering New Zealand to support the Wonder Project Power Challenge. This is a school-age programme aimed at educating students on how renewable electricity is generated and distributed to light a city. 75 Transpower employee ambassadors worked with teachers in their classroom to guide young minds through the challenge and excite them about the energy future for New Zealand and the role they could play in that.

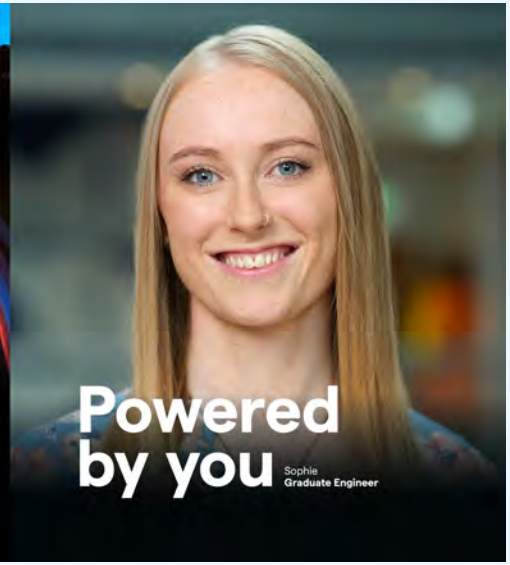
We know that people come to work for Transpower because they want to play their part in decarbonising Aotearoa. We wanted to share this story widely, to attract more passionate and skilled people. This year we asked our people their “why” to crystalise what was important to them about working at Transpower. Their message was clear, and was captured as our employee value proposition “when Transpower’s your mahi (work), Aotearoa New Zealand is powered by you”. Powered By You, provides the foundation for communication about what we do, and the opportunities for working with us. We’re sharing these messages and images through a number of channels, including our LinkedIn and Career pages, as well as at industry events around the country.











Celebrating sector success

Our people work together, and with others to solve difficult problems and take on ambitious challenges. Our achievements are quietly reflected upon, and we move swiftly on to the next challenge. This makes it all the more important to take time to pause, reflect and celebrate our achievements.

Transpower's inaugural biennial Engineering and Technology Excellence Awards was developed in recognition for the need to share our stories of pride and celebrate our achievements.

In November 2022, Transpower hosted the inaugural Engineering and Technology Excellence Awards at the Public Trust Hall in Wellington. Our industry leaders and champions turned out in their best, to see a range of projects recognised and awarded. Innovation and excellence were shown by all the winners from Transpower and a range of organisations that we work with. The next event will be held in 2024.

Engineering by design	Transpower Generator reactive capability modelling
Investment in our industry future	Northpower Attracting and growing talent for New Zealand's new energy future
Collaboration	Transpower Improving community wellbeing by researching and controlling noise from new overhead transmission line conductors
Sustainability	Beca Future proofing the New Zealand grid through sustainable innovations – Clutha Upper Waitaki Lines Project (CUWLP)
Value engineering	ElectroNet Speeding up electrification – the ElectroNet Modular Switchroom Solution
Complex and challenging	Transpower The ICON life extension defect model


TRANSPOWER
Engineering
and Technology
Excellence Awards 2022


Transpower
Improving community wellbeing by researching and controlling noise from new overhead transmission line conductors
Collaboration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TRANSPOWER
Engineering
and Technology
Excellence Awards


TRANSPOWER
Engineering
and Technology
Excellence Awards 2022
Complex and challenging
Transpower

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

Impact	Description	Actions and commitments
Responsibility for greenhouse gas emissions	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 • Roll-out of our low emissions fleet and fast charging EV infrastructure across our assets
Visual impact of towers and transmission lines	Communities are affected by the physical presence of transmission lines and associated structures	• Taking opportunities to consult with affected communities and landowners • Implementation of refreshed community investment programme • Iwi partnerships • Working with landowners to minimise impact on their land when completing our work • Biennial Landowner Satisfaction Survey
Insufficient talent attraction	A lack of structured career development leads to an inability to attract potential employees affecting organisational culture and success	• Development of our Employee Value Proposition • Career pathways programme • Communities of Transpower, representing diverse groups and interests
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	• Reducing carbon emissions from our operations and supply chain • Site oil containment and ester oil transformer work programmes • Delivering a net biodiversity gain for new assets through our Biodiversity Strategy • Implementation of waste minimisation and contaminated land plans • Our Sustainability Strategy, which outlines our commitments and initiatives in more detail
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	• Our Health Safety and Wellbeing Management System and Public Safety Management System, which ensure we discharge our duties as set out in the Health and Safety at Work Act. • 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
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 • Career pathways activity • Graduate development programme • Internship programme • Specialist training in technical domain areas
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) • Employee engagement survey results in top quartile for energy and utilities sector • Commitment to training and development opportunities available for all staff

Our business

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

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

Targets and outcomes

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

Statement of Corporate Intent 2022/23

Performance area	Measure	2022/23	2021/22	2020/21	Target 2022/23	Comments
Safety and our people	Number of fatalities or injuries causing permanent disability	0	0	1	0	
	Total recordable injury frequency rate (TRIFR) rolling 12 months	5.45	4.17	7.50	≤ 6	
	High potential incident frequency rate (HPIFR) rolling 12 months[1]	3.22	2.61	2.04	≤ 3	1. HPIFR is above target due to a change in high potential incidents classification. We now include vehicle overspeed within this measure.
	Staff engagement	Top 25%	'Top 25%	8.1	Top 25% percentile score for energy and utilities sectors (12 month rolling average)	
Sustainability	Deliver milestones according to the Task Force on Climate related Financial Disclosures (TCFD) framework	Achieved	Achieved	Achieved	Meet target	
	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]	2	5	5	≥ 4 out of 6	2. Full year GP2 including Cyclone Gabrielle impact is 2; GP2 excluding Cyclone Gabrielle impact is 5 which is within the target.
	Grid availability:					
	AP1 HVDC energy availability	97.89%	97.18%	98.67%	> 96.75%	
	AP2 Key HVAC assets availability [3]	98.21%	97.57%	97.94%	> 98.6%	3. 2023 AP2 measure including Cyclone Gabrielle impact is 98.21%; AP2 measure excluding Cyclone Gabrielle impact of 98.68% is above target. The 2022 figure includes the Commerce Commission approved Turangi normalisation event.
	Achieve system operation targets	Achieved	Achieved	Achieved	Meet target	
Asset health measures	Power transformers	3.18%	3.46%	1.97%	≤ 5.37%	
	Outdoor circuit breakers	0.37%	0.96%	1.09%	≤ 5.65%	
Financial performance	Free funds from operations (FFO) interest coverage	5.4	6.2	6.8	5.2	
	FFO/debt	13.3%	14.7%	14.5%	13.9%	
	Return on equity	6.3%	8.1%	7.4%	6.1%	
	Return on capital employed	3.4%	3.8%	3.5%	3.5%	

Environmental

		Unit	Change (up/down)	2022/23	2021/22	2020/21	Comments
Sustainability	**Environmental management**						
	Significant/severe incidents	Number		-	-	-	
	Moderate incidents	Number	↓	-	2	3	
	Minor incidents	Number	↓	18	22	26	
	Carbon emissions						
	Scope 1 emissions (emissions arising directly from our operations)	Tonnes CO_2e (equivalents)	↑	6,452	4,534	5,300	
	Scope 2 emissions (emissions associated with electricity usage, including transmission losses)	Tonnes CO_2e (equivalents)	↓	111,572	169,318	204,699	
	Scope 3 emissions (emissions arising from activities in our supply chain)	Tonnes CO_2e (equivalents)	↑	44,859	44,440	46,519	
	Total carbon emissions	Tonnes CO_2e (equivalents)	↓	162,883	218,293	256,518	
	Emission to air						
	SF_6 and other fugitive gases	kg	↑	267.0	194.0	208.8	
	Energy consumption						
	Progress towards 2030 GHG emissions reduction target	% reduction achieved	↓	38	72	50	
	Total gas consumption in non-operational buildings	GJ	↑	760	759	740	
	Total energy consumption in non-operational buildings	kWh	↑	2,318,605	2,226,672	2.643,972	
	Total energy consumption in operational buildings	kWh	↓	1,037,407	1,069,324	2,514,611	
	Business travel						
	Fuel used in operational plant and vehicles	Litres	↑	111,159	102,863	127,391	This reflects increased rates of travel after the COVID-19 pandemic.
	Flights – distance travelled	pkm	↑	3,391,001	1,430,785	1,891,059	
	Distance travelled company vehicles	km	↑	1,458,570	1,203,319	1,233,514	
	Distance travelled in rental vehicles	km	↑	317,649	161,181	232,265	
Safety	**Safety**						
	High potential incident frequency rate (HPIFR) (employees and contractors)	per million hours	↑	3.2	2.6	2.0	This includes vehicle overspeeds from FY23.
	Total recordable injury frequency rate (TRIFR) (employees and contractors)	per million hours	↑	5.5	4.2	7.5	
	Number of fatalities or injuries causing permanent disability (employees and contractors)	Number	—	0	0	1	


TRANSPOWER

Social

People

		Unit	Change (up/down)	2022/23	2021/22	2020/21	Comments
	Workforce composition						
	Total Transpower employees	Number	↑	884	829	803	
	Median age of employees	Years	↑	46	44	45	
	Mean length of service	Years	↓	8.25	8.65	8.68	
	Average employee earnings	$	↑	142.1k	136.4k	132.9k	
	Gender balance						
	Gender identity by role – All	% female/male/gender diverse	↓	31/68/1	32/67/1	32/66/1	
	Gender identity by role – People leaders	% female/male/gender diverse	–	30/70/0	30/69/0	27/72/0	
	Gender identity by role – General management	% female/male/gender diverse	↑	50/50/0	40/60/0	30/70/0	
	Gender identity by role – Board	% female/male/gender diverse	↑	57/43/0	38/62/0	43/57/0	
	Gender pay gap	%	–	17.0	16.7	17.5	
	Ethnicity (All)						
	% staff providing ethnicity data	%	↑	72	67	62	
	European (Incl New Zealanders)	%	↓	74	76	82	
	Māori	%	↓	5	6	6	
	Middle Eastern/Latin America/African	%	↓	4	8	7	
	Asian	%	↑	24	21	20	
	Pacific	%	–	3	3	2	
	Other ethnicity	%	–	4	4	4	
	Employee engagement						
	Employee engagement survey participation	%	↓	96	97	97	
	Employee engagement survey results – % Peakon quartile for Energy and Utilities sector	%	→	Top 25%	Top 25%	Top 25%	
	Workforce stability and wellbeing						
	Total staff turnover	%	↓	11.3	16.4	14.4	
	Voluntary turnover	% retention/% turnover	↓	10.7	15.4	12.5	
	Average number of sick days per employee	Days per employee	↑	6.0	5.0	4.5	This reflects the impact of the COVID-19 pandemic.
	Employees skill and capability						
	Learning and development expenditure (technical training inclusive)	$	↑	2.0m	1.9m	1.6m	
	Investment in pipeline training (graduate programme)	$	↑	1220k	708k	791k	
	Internal hires to total hires	%	↑	29	28	33.5	

Social

		Unit	Change (up/down)	2022/23	2021/22	2020/21	Comments
People	**Skill and capability of wider industry**						
	Training of industry/service providers	$	^	4.1m	3.4m	4.0m	FY22 was impacted by COVID-19 disruptions to course delivery.
Relationships	**Business ethics**						
	Speak up contacts made (number contacts to fair call service)	Number	—	nil	nil	nil	
	Notifiable privacy breaches	Number	—	nil	nil	nil	
Customers	**Community**						
	Number of voluntary days used	Number	^	284	258	290	
	Matching gift programme	$	v	13k	14k	14k	The matching gift programme was discontinued in December 2022.
	Investments in communities	$	v	620k	761k	724k	The amount varies year to year depending on the level of project works undertaken with associated community investment.
	Stakeholder satisfaction						
	Percentage of customers who agree or strongly agree to the seven customer engagement statements	%	v	66.6	71.4	71.1	ResearchNZ, which completed the survey, notes that 2023 result is not significantly different from the previous two years. All three years are higher than 2020's result of 57.4.
	Satisfaction from Electricity Authority and customers of System Operator performance	%	v	89	95	84	
	Landowner Satisfaction – Landowner satisfaction survey	%	—	-	94	-	
	Landowner Satisfaction – Number of claims against Transpower to utility disputes	Number	—	0	0	0	

Economic

Financial

	Unit	Change	2022/23	2021/22	2020/21	Comments
Financial performance						
Net profit after tax (after fair value changes)	$ million	↓	127.0	166.6	155.6	
Return on capital employed	%	↓	3.4	3.8	3.5	
Return on equity	%	↓	6.3	8.1	7.4	
Dividends paid per year	$ million	—	120	120	147	
Taxation						
Current tax paid	$ million	↓	31.8	33.7	35.1	
Capital investment and supply chain						
Total capital expenditure	$ million	↑	379	323	352	
Total procurement spend	$ million	↑	741	634	651	This represents total opex and capex spending.
Asset value	$ million	↑	6,417	6,055	6,168	
Network performance						
Number of loss of supply events greater than 0.05 system minutes	Number	↑	13	9	12	
Number of loss of supply events greater than 1 system minute	Number	↑	1	0	0	The only unplanned event greater than one system minute was flooding at Redclyffe as a result of Cyclone Gabrielle.
Unplanned HVAC circuit unavailability (%)	%	↑	0.962	0.34	0.13	This was due to the impact of Cyclone Gabrielle on our Redclyffe substation.
Unplanned HVDC bi-pole unavailability (%)	%	↓	0.05	1.26	0.10	
Total impact of interruptions (measured in system minutes)	Number	↑	334.46	6.04	5.89	This was due to the impact of Cyclone Gabrielle on our Redclyffe substation.
Generators (Injection)	GWh	↑	37,945	37,621	37,924	
GXP-EDBs (offtake)	GWh	↑	31,115	30,876	31,000	
GXP-direct connects (offtake)	GWh	↓	6,541	6,698	6,975	
HVDC flows north	GWh	↑	3,445	3,206	2,043	
HVDC flows south	GWh	↑	208	171	315	
HVDC losses	GWh	↑	136	122	73	
AC system losses	GWh	↑	1,361	1,314	1,218	

General Management Team

Alison Andrew
Chief Executive

Alison joined Transpower in 2014. She has held a number of senior executive roles across various industry sectors, most recently as Global Head of Chemicals for Orica PLC. She is a Director for Port of Tauranga and has been a Director for Genesis Energy. Prior to these roles, she held a number of 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.

Catherine Shaw
Chief Financial Officer

Catherine was appointed Chief Financial Officer in February 2022. She joined Transpower from Todd Corporation where she held the role of Group Manager, Treasury, Tax and Insurance and was also a director of Todd Generation Taranaki. Prior to joining Todd, Catherine spent six years as a Partner at EY. Catherine holds a BCom and an LLB from the University of Otago and is a Chartered Accountant.

Chantelle Bramley
General Manager Strategy and Customer

Prior to joining Transpower, Chantelle was Executive General Manager of Corporate Affairs at Essential Energy, a state-owned distribution network owner and operator in New South Wales. An economist by training with more than fifteen years of international energy and electricity experience, Chantelle was the Executive General Manager Strategy and Economics at the Australia Energy Market Commission prior to joining Essential Energy.

John Clarke
General Manager Grid Development

John was reappointed General Manager Grid Development in 2020, following a period as General Manager Operations which he held from 2014. John was General Manager Grid Development from 2008 to 2014 and had previously spent 10 years in senior roles within our System Operator division. His earlier career in the New Zealand electricity sector has included roles in distribution and electrical engineering consulting. John holds a BE in Electrical Engineering.

Stephen Jay
General Manager Operations

Stephen was appointed to this role in 2020, having previously held the role of General Manager Grid Development since 2014. Stephen was previously General Manager with Mitton ElectroNet, and has also worked for CEGB, National Power, Nuclear Electric, Midlands Electricity Plc, Parsons Brinckerhoff Power and Meridian Energy. He is a Chartered Electrical Engineer.

David Knight
General Counsel and Company Secretary

David was appointed General Counsel and Company Secretary in August 2007. Prior to joining Transpower, David was General Counsel at Telecom NZ. David holds an LLB (Hons) from the University of Auckland, and an LLM from Harvard Law School which he attended as a Fulbright scholar. Prior to his career in law, David was involved in the wine industry, including periods as a winemaker, wine merchant and wine judge.

Cobus Nel
General Manager Information Services and Technology

Cobus joined Transpower in 2011, and has held senior roles including IST Strategy and Architecture Manager. Prior to joining Transpower, Cobus was the Network Solutions Manager at Alcatel-Lucent and the Technical Lead for Transpower's Telecommunications and Networking Programme. Cobus has experience in defence, enterprise, telecommunications and utilities organisations. He holds a Master's degree in Project Management and Engineering (Electronics) from the University of Pretoria.

Brighid Kelly
General Manager People

Brighid joined Transpower in March 2018 and was previously General Manager People at Tourism New Zealand. Prior to this, she held senior executive and line management positions at Te Papa, Telecom, BNZ and Fletcher Challenge Forests. Brighid brings diverse industry and functional experience across a number of sectors, and has helped transform several organisations to successfully meet their future challenges.

Raewyn Moss
General Manager External Affairs

Raewyn was appointed General Manager External Affairs in 2018, having previously headed the Transformation and Auckland Strategy division. Raewyn has a background in environmental, regulatory and relationship management, and has worked in consultancy within industry and for a regulator. She has worked in the electricity sector for 20 years, both at Transpower and Meridian Energy. She holds a BSc from Victoria University and a Diploma in Business from Henley Management College.

Mark Ryall
General Manager Grid Delivery

Mark has been with Transpower since 2006, working in a variety of senior roles, including Regional Service Delivery Manager for the Upper North Island, before moving into general management. Previously, Mark worked in project management and consultant roles in New Zealand and the United Kingdom. Further to his degree from Lincoln University, Mark completed the University of Virginia Darden School of Business Executive Programme.

The Board

The Board is a collective unit directing and guiding Transpower's strategic focus and business activities, and accountable to the shareholding Ministers for the performance of Transpower. Appointed by the shareholding Ministers following an independent appointment process, the Directors collectively bring skills and expertise to support the General Management Team to set and deliver on the strategic objectives and direction of the business to empower our energy future (as outlined in Whakamana i Te Mauri Hiko (WiTMH)) 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 General Management 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 organisations in New Zealand and offshore, as well as extending their knowledge and understanding of our stakeholders, customers and end-consumers.

As 2022/23 drew to an end, two of our directors retired, with two new directors joining the Board from 1 July 2023. Our new directors have been undertaking a comprehensive induction programme through July and August. This list reflects our Board of Directors as at 31 August 2023.

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. Since 2008, he has held directorships on a range of major boards in New Zealand and Australia including Fisher and Paykel Appliances and Auckland International Airport. Keith has a PhD in engineering, is a Distinguished Fellow of Engineering New Zealand and holds the Sir William Pickering Medal for Engineering Leadership.

Whaimutu Dewes: Deputy Chair

Whaimutu (Ngāti Porou and Ngāti Rangitihi) has an extensive governance background, having held directorships at organisations including Housing New Zealand, Television New Zealand, Māori Television, Ngāti Porou Holding Company, and Contact Energy. He is a former Chair of Sealord Group and Ngāti Porou Forests Limited. He has established himself as a leader in Māori business organisations, with particular expertise in fisheries having also served as a member of the Treaty of Waitangi Fisheries Commission in its first 10 years. Whaimutu holds an LLB and a BA from Victoria University and a Master in Public Administration from Harvard University.

Owen Coppage

Owen has over 45 years of energy industry experience from roles at organisations such as NGC and Southpower. He is a seasoned Chief Information Officer and held the role for AGL Energy for almost 10 years. Owen Coppage currently provides thought leadership, partnering strategy and technology solution assurance to the Tata Consultancy Services globally, industry players in the Australia New Zealand region and various companies directly.

Michele Embling

Michele has over 10 years' experience as a Chair and Board Member for private, not for profit, and public sector entities, including her current appointments as Chair of the External Reporting Board (XRB) and Board Member of Toitū Tahua – The Centre for Sustainable Finance. Michele served as Chair of PwC in New Zealand from 2016 to 2020. She was Co-Chair of Champions for Change and Deputy Chair of Global Women from 2018 to 2020. Other Board roles include the Australian Financial Reporting Council and Deputy Chair of the University of Auckland's Business School Advisory Board. She is a fellow of Chartered Accountants Australia and New Zealand and a former member of their Nominations and Governance Committee.

Parekawhia McLean

Parekawhia (Ngāti Mahanga, Waikato, Ngāti Maniapoto) has over 20 years of public sector policy and management experience, including advisory roles in the Department of Prime Minister and Cabinet. She is the inaugural Chief Executive of Te Kaahui Taatari Ture – Criminal Cases Review Commission and has previously held executive leadership roles at Counties Manakau DHB and Waka Kotahi. She was CEO of Waikato-Tainui between 2010 and 2016. Parekawhia is current Chair of Te Whakakitenga o Waikato (TWOW). She holds an MSocSc from the University of Waikato and a Masters in Public Administration and Development Policy from the University of Wisconsin.

Vanessa Oakley

Vanessa has extensive experience in regulated industries, particularly in infrastructure and utilities, including governance, strategic and operational experience across a range of sectors. Vanessa has operational and executive experience in corporate and public sector organisations in Aotearoa New Zealand and in the United Kingdom. Vanessa has previously held executive roles as Chief Operating Officer, New Zealand for FNZ Group, Chief General Counsel of ACC, General Manager Strategy and Business Operations for Chorus Limited, and Assistant General Counsel for the Commerce Commission as well as a period working for a United Kingdom regulatory authority. She holds an LLB (Hons) from Otago University.

Heather Simpson

Heather has extensive Government and policy experience, including roles as Chief of Staff for the Prime Minister and Special Advisor to the United Nations Development programme. She has led a range of Government reviews and groups, including a review of the New Zealand health and disability system and a new group to support the Ministry of Health in improving COVID-19 border security. Heather holds a BA (Hons) in Economics.

This year we bid farewell to Richard Aitken, Dean Carroll and Roger Blakeley.

Corporate governance

Board Committees

Transpower has four regular Board Committees. Each Board Committee has terms of reference that outline the role, rights, responsibilities, and membership requirements for that Committee.

1. **Audit & Risk Committee (Kāhui tātari kaute me tūraru).**

   As of 1 May 2023, this Committee merges responsibilities from the Board's prior Audit and Finance Committee and Risk Committee. The Audit & Risk Committee is responsible for ensuring that Management has established a risk management framework that includes policy, procedures and assessment methodologies that enable Transpower to effectively manage and monitor organisational risks. It also recommends the appointment of internal auditors and manages the internal and external audit process (including for financial matters), including reviewing, monitoring, and approving internal and external audit reviews, annual audit plans and internal and external audit and management reports. This Committee directs internal and external audit activities or material to the Health, Safety and Wellbeing Committee, People and Performance Committee or System Operator Committee where the subject matter is within the expertise of the respective Committee. The primary objective of these internal audits and external audits is to assist the Board and executive team in exercising good governance by providing independent assurance. This Committee is also responsible for monitoring the financial performance and reporting of Transpower and its subsidiaries, emsTradepoint Limited and Risk Reinsurance Limited. It reviews the appointment of external auditors (subject to the authority of the Auditor-General), noting the external auditor is subject to the independence rules of the Auditor-General. The Auditor-General has appointed Sam Nicolle of EY (formerly Ernst & Young) to carry out the audit on his behalf.

   Membership (as at 30 June 2023): Michele Embling (Chair), Heather Simpson, Vanessa Oakley and Keith Turner.

2. People & Performance Committee (Kāhui whakahaere tangata me te mahi)

This Committee performs the functions of a remuneration committee. It oversees Transpower's culture and performance and approves recruitment, remuneration, retention and termination decisions, and policies and procedures regarding executive management. It reviews and recommends to the Board the Chief Executive's remuneration, terms, annual key performance indicators and performance recommendations.

Membership (as at 30 June 2023): Heather Simpson (Chair), Parekawhia McLean, and Keith Turner.

3. Health, Safety & Wellbeing Committee (Kāhui hauora me te marutau)

This Committee was established with effect from 1 May 2023, taking on the health, safety and wellbeing responsibilities carried out under the prior Risk Committee. With a focus solely on health, safety and wellbeing, this Committee is responsible for reviewing health, safety and wellbeing matters on the Board's behalf and for ensuring that Management has established a health, safety and wellbeing management and assurance framework that includes policy, procedures and assessment methodologies that enable Transpower to effectively manage and monitor health, safety and wellbeing risks. The Health, Safety and Wellbeing Committee also oversees the three levels of Transpower's assurance system for health, safety and wellbeing.

Membership (as at 30 June 2023): Keith Turner (Acting Chair), Michele Embling and Parekawhia McLean.

4. System Operator Committee (Kāhui whakamahi pūnaha)

This Committee was formed in FY20 to oversee and provide guidance on all business activities related to Transpower's role as System Operator and reporting requirements to the Electricity Authority. During the year, the Committee provided recommendations to the business on System Operator business assurance audits, software audits and major project assurance, real-time pricing management and risk, and structure.

Membership (as at 30 June 2023): Heather Simpson (Acting Chair), Vanessa Oakley and Keith Turner.

5. TPM Committee (Kāhui tikanga pūtea whakawhiti)

This Committee was formed on 30 June 2020 to oversee and provide guidance on Transpower's activities on the new pricing system which is responsible for 90% of Transpower's revenue. With the new pricing system live from April 2023, this Committee was disestablished from 30 April 2023.

Membership at disestablishment: Roger Blakeley (Chair), Vanessa Oakley, Dean Carroll and Keith Turner.

Meeting attendance

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

The General Counsel and Company Secretary attends all meetings as Secretary.

During the 2022/23 financial year, there was a change to the Board Committees to move from five Board Committees of Audit & Finance, Risk, People & Performance, System Operator, and TPM to four Board Committees of Audit & Risk, Health, Safety & Wellbeing, People & Performance, and System Operator. Attendance records below reflect changes within the Board of Directors over the last financial year, and subsequent changes in Board Committees and movement within the relevant Board Committees.

			Board*	Audit & Risk	Audit & Finance	Risk	Health, Safety & Wellbeing	People & Performance	System Operator	TPM
Director	**Commenced**	**Ceased**								
Dean Carroll	1 November 2016	31 May 2023	6/7			3/3	1/1	2/3	1/1	2/2
Roger Blakeley	1 June 2020	30 April 2023	6/6			3/3	1/1			2/2
Heather Simpson	1 December 2021		8/8	1/1	3/3			4/4	2/2	
Keith Turner	1 December 2021		8/8	1/1	3/3	3/3	2/2	4/4	2/2	2/2
Michele Embling	1 March 2022		8/8	1/1	3/3		2/2	3/3		
Parekawhia McLean	8 July 2022		8/8			3/3	2/2	3/3		
Vanessa Oakley	8 July 2022		8/8	1/1	3/3				2/2	2/2

*Excludes special meetings

Director skills matrix

*As at 4 July 2023

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.

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 in using data, AI, conversion to digital and security of systems to support 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 29 June 2023*) 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.

Name	Description	Date
Keith Turner	Chair – Queenstown Lakes Spatial Plan Governance Group and Steering Committee	29 June 2023
	Board Member – Energy Corporation of NSW Advisory Board	
	Red Phase Technologies Limited	
Heather Simpson		29 June 2023
Michele Embling	Chair – External Reporting Board	29 June 2023
	Board Member – Toitū Tahua | The Centre for Sustainable Finance	
	Board Member – Australian Government Financial Reporting Council	
	Committee Member – Chartered Accountants Australia and New Zealand, Nominations and Governance Committee	
	Deputy Chair of the University of Auckland Business School Advisory Board	
Vanessa Oakley	Chief Operating Officer – New Zealand for FNZ Group	29 June 2023
	Director/Shareholder of VJO NZ Limited	
Parekawhia McLean	Chair, Hauora Maori Advisory Committee to the Minister of Health	29 June 2023
	Trustee, Bridge Housing Charitable Trust	
	Chair, Te Roopu Manukura, University of Waikato Council	
	Chair, Te Whakakitenga o Waikato	
	Tumu Whakarae I CEO, To Kahui Tatari Ture I Criminal Cases Review Commission	
	Director, Sports Waikato	
Owen Coppage	Independent Advisor – Genesis Energy Retail Platform Transformation	1 July 2023
Whaimutu Dewes	Director/Material Shareholder – Whainho Developments Ltd	1 July 2023
	Director – Ngati Porou Whanui Forests Ltd	
	Director – Ngati Porou Forests Ltd	
	Director – High Value Nutrition (NSC) Ltd	
	Trustee – Whanaketanga Trust	
	Trustee – Te Kapunga & Parekura Dewes Whanau Trust	
	Trustee – Ngati Porou Landowners Trust	
	Trustee – Te Kopara (Bellbird) Trust	

* New directors interests are as at their start date - 1 July 2023

Note: Some directors hold shares in energy companies either directly or through Trusts and these are disclosed in accordance with the Company's interests policy.

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 FY23 is shown in the table.

Director	Date commenced in office	Date ceased in office	FY23 $000	FY22 $000
Dean Carroll (Deputy chair from 1 January 2019 to 31 May 2023)	1 November 2016	31 May 2023	73.03	81.21
Richard Aitken	1 November 2019	31 August 2022	9.10	58.17
Bill Osborne	1 May 2016	30 June 2022	0.00	58.17
Roger Blakeley	1 June 2020	30 April 2023	51.82	58.17
Heather Simpson	1 December 2021		60.92	22.74
Keith Turner (Chair from 1 May 2022)	1 December 2021		121.13	40.93
Michele Embling	1 March 2022		59.17	18.19
Parekawhia McLean	8 July 2022		56.14	
Vanessa Oakley	8 July 2022		56.14	
Whaimutu Dewes	1 July 2023			
Owen Coppage	1 July 2023			

During FY23, 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 2023.

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

CE and CFO remuneration

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

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

Members of the executive 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% of the company performance component of the incentive where the company meets or exceeds 100% of plan EBITDAIF. Executive team salaries are informed by performance achievement as assessed by the Chief Executive against objectives. Incentives can be 20–25% of their salary. In relation to their FY22 performance objectives, executive management received an average of 95% of their available incentives. Changes to executive team salaries are subject to consultation with the Chair and reviewed by the People and Performance Committee, annually.

Company component - 70%

Category	Weighting	Performance driver	Indicator	Target
Safety	15%	Zero fatalities	Number of fatalities or injuries causing permanent disability	Zero
		High potential incident frequency rate (HPIFR)	Number of Level One and Level Two incidents per million hours worked (includes injuries and near misses)	≤ 3.0 (rolling 12-month average)
		Total recordable incident frequency rate (TRIFR)	Number of recordable injuries/illnesses per million hours worked	≤ 6.0 (rolling 12-month average)
People	10%	Engagement	Transpower targeted engagement score	Top 25% percentile score (rolling 12 month average)
		Diversity and inclusion	Increase in the percentage of our permanent staff that are female or male toward 40/40/20	Progression towards 40/40/20
Relationships	5%	Customer Engagement Plan	Complete customer engagement plan to Commerce Commission satisfaction	Complete customer engagement plan to Commerce Commission satisfaction
		Landowner	Landowner Satisfaction Survey	≥ 85%
		Public safety	Delivery of initiatives in Public Safety Annual Plan	Deliver to plan and satisfactory audit of our Public Safety Management System
		Satisfaction from the Electricity Authority	Satisfaction from the Authority and customers of System Operator customer engagement plan	80% of participants surveyed considered out performance to be good or better
Sustainability	5%	Environment and land	Climate change reporting according to TCFD framework (carbon footprint)	Deliver Year Three milestones to implement TCFD framework
		Environment and land	Environment and heritage-related incidents	<5 moderate environmental or heritage incidents and zero convictions
		ESG Reporting	ESG Reporting	Deliver Year Three milestones to position Transpower in upper quartile on ESG reporting framework.

Table continues on following page

Chief Executive individual objectives*

Company objectives				
Customers	15%	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
			AP1 Grid HVAC energy availability	>96.75%
			AP2 Grid HVDC energy availability	>98.6%
			Asset health: Power transformer percentage of assets with an Asset Health Index of 8 of higher	≤ 5.37%
			Asset health: Outdoor circuit breakers percentage of assets with an Asset Health Index of 8 of higher	≤ 5.65%
Financial	20%	Operating profit	EBITDAIF	Achieve plan EBITDAIF (+/-2%)
		Grid works	Deliver 21/22 base capex plan (spend basis)	Deliver 95%–105% of 21/22 base capex plan (spend basis)

* The Board may vary target areas for exceptional circumstances

Strategic component – 30%		
Company focus area	**Strategic initiative**	**Key performance indicators**
Play an active role in enabling New Zealand's energy future	Building the future grid – evolving our regulatory settings and advancing our advocacy efforts to support policy agenda for Net Zero Carbon	Contributing effectively in sector reviews and engaging constructively in dialogue with our stakeholders on changes that may alter our operating environment, e.g., integration of NZ Battery Project with Ministry of Business, Innovation and Employment; TPM stakeholder management and industry advocacy in the interpretation and application; and influencing proposed RMA reforms to address key barriers
Evolve our services to meet customers' needs	Positioning Transpower to further unlock electrification and renewable energy potential	Implementing improvements in our connections process and developing commercial options for enabling transmission investment
Accelerate our organisational effectiveness	Preparing for the capability and culture required in the workforce to support New Zealand's energy future.	Repositioning our People Strategy in a *Whakamana i te Mauri Hiko* context and operationalise the Grid Contracting Strategy. Ensuring organisational effectiveness while navigating continuing challenges around supply chain and skills shortages.

The details of the Chief Executive 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]	Short-term incentive $000[5]	Total remuneration $000	% Incentive achieved
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
2018/19	970	46	1,017	-	288	1,305	97

1. The Chief Executive agreed to a 20% reduction in base salary for four months of FY21 and two months of FY20, reflecting the financial impact of COVID-19
2. Benefits include KiwiSaver, insurance and carpark
3. Fixed remuneration is the total of base salary and benefits
4. One-off payment of 4% to align the Chief Executive remuneration with market movement, in accordance with the Remuneration Policy
5. Includes Kiwisaver paid on incentive

The details of the Chief Financial Officer remuneration are set out below. Figures include KiwiSaver. Incentives are based on company and individual 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	Benefits[1]	Fixed remuneration[2]	Total incentive	Total remuneration	% Incentive achieved	Comments
2022/23	435	28	463	42	504	94	Incentive payment pro-rated (February–June 2022)
2021/22	148	13	161	0	161	-	Catherine Shaw joined on 8 February 2022 so not eligible for an incentive payment paid in 2021/2022 year.
2021/22	160	14	174	102	276	94	Gordon Davidson left on 12 October 2021
2020/20	420	25	445	106	551	97	
2019/20	420	25	445	0	445	-	Gordon Davidson joined on 29 April 2019 so was not eligible for an incentive payment.
2018/19	65	10	75	0	75	-	Gordon Davidson joined on 29 April 2019
2018/19	238	11	249	124	373	94	

1. Benefits includes Kiwisaver, insurances and carpark
2. Fixed remuneration is the total of base salary and benefits

Remuneration of Transpower employees including executives

The performance management framework is designed to provide line of sight between the company performance objectives and individual performance objectives. Our remuneration framework ensures we provide market comparable salaries to staff in order 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 and Performance Committee. Any increase is informed by data from independent remuneration specialists. Employee fixed remuneration is based on a matrix of their performance and how their salary compares to the market of a comparable position. Aside from the Chief Executive and Chief Financial officer, Transpower employees who received total remuneration of greater than $100,000 were in the following bands:

Remuneration $000	2023	2022
610–620	1	-
570–579	1	1
560–569	1	1
530–539	1	1
500–510	1	-
490–500	1	-
480–490	1	-
470–479	1	1
460–469	1	1
450–459	-	1
430–439	-	1
400–409	-	1
390–399	-	-
380–389	-	1
340–349	1	*1
330–339	2	1
320–329	1	-
310–319	-	1
300–309	4	3
290–299	2	-
280–289	1	6
270–279	10	*2
260–269	6	7
250–259	8	11
240–249	7	13
230–239	9	8
220–229	6	7
210–219	16	7
200–209	*22	*16

Remuneration $000	2023	2022
190–199	*30	23
180–189	35	18
170–179	40	36
160–169	*75	*50
150–159	82	73
140–149	83	84
130–139	57	*81
120–129	67	61
110–119	58	69
100–109	48	*59
	680	645

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

* The asterisk indicates those remuneration bands that include at least one former employee 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 with 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 2023 Transpower has securities listed on the NZX Debt Market quoted under the ticker codes TRP050, TRP060, 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 bondholders as at 31 July 2023:

	TRP050		TRP060		TRP070		TRP080		TRP090		TRP0100	
	No. of bond holders	No. of bonds	No. of bond holders	No. of bonds	No. of bond holders	No. of bonds	No. of bond holders	No. of bonds	No. of bond holders	No. of bonds	No. of bond holders	No. of bonds
1,001–5,000	4	20,000	1	5,000	2	10,000	0	0	13	65,000	11	55,000
5,001–10,000	25	237,000	3	26,000	23	202,000	3	30,000	21	191,000	34	326,000
10,001–100,000	90	3,309,000	26	1,187,000	189	7,231,000	19	858,000	85	3,137,000	151	5,268,000
>100,001	37	121,434,000	43	148,782,000	75	442,557,000	39	149,112,000	42	196,607,000	40	194,351,000
Total	**156**	**125,000,000**	**73**	**150,000,000**	**289**	**450,000,000**	**61**	**150,000,000**	**161**	**200,000,000**	**236**	**200,000,000**

Top 20 largest listed bondholders (as at 30 June 2023)
BNP Paribas Nominees NZ
Custodial Services Limited
FNZ Custodians Limited
New Zealand Local Government
Westpac New Zealand Limited
HSBC Nominees (New Zealand)
TSB Bank Ltd (Associate)
Tea Custodians Limited
Forsyth Barr Custodians
JBWERE (NZ) Nominees Limited
ASB Bank Limited
Cogent Nominees Limited
Kiwibank Limited
Citibank Nominees (NZ) Ltd

Top 20 largest listed bondholders (as at 30 June 2023)
National Nominees New Zealand
Investment Custodial Services
ANZ Wholesale NZ Fixed
Premier Nominees Ltd
JPMORGAN Chase Bank
Southland Building Society

Climate-related disclosures

Background

In 2020, Transpower initiated a three-year programme to prepare its first disclosure of climate-related risks and opportunities in accordance with the Taskforce on Climate-related Financial Disclosures (TCFD) framework. Since then, Te Kāwai Ārahi Pūrongo Mōwaho | External Reporting Board has published the Aotearoa New Zealand Climate Standards, a climate-related disclosure framework for Climate Reporting Entities under the Financial Markets Conduct Act 2013.

Given the scale of risk that climate change presents to our assets across Aotearoa, Transpower has made substantial progress with understanding our climate-related risks to ensure we are prepared for the 1 July 2024 disclosure requirements.

We are a signatory to the Climate Leaders Coalition and have been publicly reporting our GHG emissions since 2005, setting emissions reduction targets, and working with our suppliers to reduce their emissions. As a debt issuer under the NZX, transparency of reporting and governance responsibility are of significant importance to our bondholders.

The reference table provides a summary of the climate-related disclosures requirements including where our disclosures have been made available.

Thematic area	Description	Disclosures	Location*
Governance 	Disclose Transpower's governance around climate-related risks and opportunities.	Describe the Board's oversight of climate-related risks and opportunities	CRD 1.a (website)
		Describe management's role in assessing and managing climate-related risks and opportunities	CRD 1.b (website))
Strategy 	Disclose the actual and potential impacts of climate-related risks and opportunities on Transpower's business, strategy and financial planning.	Describe the current climate-related impacts	CRD 2.a (website)
		Describe the scenario analysis undertaken	CRD 2.b (website)
		Describe the climate-related risks and opportunities Transpower has identified over the short term, medium term and long term	CRD 2.c (website)
		Describe the anticipated impacts of climate-related risks and opportunities	CRD 2.c (website)
		Describe the transition plan aspects of Transpower's strategy	CRD 2.d (website)
Risk Management 	Disclose how Transpower identifies, assesses and manages climate-related risks, and how those processes are integrated into existing risk management processes.	Describe the processes for identifying, assessing and managing climate-related risks	CRD 3.a, 3.b (website)
		Describe how these processes are integrated into existing risk management practices	CRD 3.c (website)
Metrics and Targets 	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities.	Describe the metrics and other key performance indicators that are relevant for the management of climate-related risks and opportunities	CRD 4.a, 4.c (website)
		Describe the targets used to measure and manage climate-related risks and opportunities, and performance against those targets	CRD 4.b, 4.c (website)
		Describe Transpower's GHG emissions.	GHG report (website)

* Visit the sustainability section on our website for our Climate-related disclosures (CRD) document and our GHG report.

Transpower's 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.

	Materiality issues addressed							
Key risks	**Climate change mitigation and adaptation**	**Customers and consumers**	**Community and landowner relationships**	**Advocacy**	**Good governance**	**Environmental stewardship**	**Future workforce**	**Cybersecurity**
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		●			●		●	●

Further context for each of the key risks including what Transpower is doing to mitigate the risk is available on our website.

Transpower's key risks are reviewed and re-assessed on a quarterly basis by management and the Audit and Risk Committee. In addition to these key risks, and in alignment with the top materiality issue 'climate change mitigation and adaptation', Transpower has articulated its climate-related risks as part of the work undertaken to prepare for full climate disclosures by 30 June 2024. Further information on Transpower's climate risks can be found at page 96 and on our website.

Financial performance

For the year ended 30 June 2023

Contents

Consolidated financial statements

Notes to the consolidated financial statements

Statement of comprehensive income

As at 30 June 2023

Group ($m)	Notes	2023	2022
Operating revenue	A1	**913**	**885**
Operating expenses	A3	**362**	**311**
Earnings before interest, tax, depreciation, amortisation, asset write-offs, impairment and changes in the fair value of financial instruments (EBITDAIF)		**551**	**574**
Depreciation, amortisation, asset write-offs and impairment	B2	307	291
Net interest expense	C6	93	86
Net profit before tax and changes in the fair value of financial instruments		**151**	**197**
Gain / (loss) in the fair value of financial instruments	D7	23	34
Net profit before tax		**174**	**231**
Income tax expense	A5	47	64
Net profit		**127**	**167**
Attributable to:			
Non-controlling interest		(2)	-
Owners of the parent		129	167

Group ($m)	Notes	2023	2022
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	(15)	7
Items that may be reclassified to profit or loss			
Net gain/(loss) on cash flow hedges	D7	(4)	142
Other comprehensive income / (expenses)		**(19)**	**149**
Attributable to:			
Non-controlling interest		-	-
Owners of the parent		(19)	149
Total comprehensive income / (expense)		**108**	**316**
Attributable to:			
Non-controlling interest		(2)	-
Owners of the parent		110	316

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

Statement of financial position

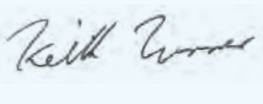
As at 30 June 2023

Group ($m)	Notes	2023	2022
Current assets			
Cash and cash equivalents		396	58
Investments	E2	35	73
Trade receivables and other assets	E4	81	95
Derivative financial instruments	D6	150	90
		662	**316**
Non-current assets			
Trade receivables and other assets	E4	7	5
Derivative financial instruments	D6	137	207
NZPCL investment	E1	82	84
Property, plant and equipment	B1	5,135	5,048
Intangible assets	B2	394	395
		5,755	**5,739**
Total assets		**6,417**	**6,055**
Current liabilities			
Trade and other payables	E5	117	137
Tax payable		8	9
Deferred income	A2	1	1
Derivative financial instruments	D6	68	30
Provisions	E3	27	14
Borrowings	C4	609	395
Lease liabilities	C5	8	8
		838	**594**

Group ($m)	Notes	2023	2022
Non-current liabilities			
Deferred income	A2	187	169
Derivative financial instruments	D6	56	93
Provisions	E3	44	44
Borrowings	C4	2,683	2,533
NZPCL debt	E1	85	86
Lease liabilities	C5	83	91
Deferred tax	A5	594	586
		3,732	**3,602**
Total liabilities		**4,570**	**4,196**
Equity			
Capital	C1	1,200	1,200
Retained earnings		516	522
Cash flow hedge reserve	D7	134	138
Non-controlling interest	E1	(3)	(1)
Total equity		**1,847**	**1,859**
Total funds employed		**6,417**	**6,055**

The Board of Directors of Transpower New Zealand Limited authorised these financial statements for issue on 22 August 2023.

For, and on behalf of, the Board



Dr Keith Turner
Chair

Michele Embling
Chair of Audit and 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 2023

Group ($m)	Notes	Ordinary shares	Retained earnings	Cash flow hedge reserve	Owners of the Parent	Non controlling interest	Total
Equity at 1 July 2021		1,200	468	(4)	1,664	(1)	1,663
Net profit		-	167	-	167	-	167
Other comprehensive income		-	7	142	149	-	149
Total comprehensive income		**-**	**174**	**142**	**316**	**-**	**316**
Dividends paid	C3	-	(120)	-	(120)	-	(120)
Total equity at 30 June 2022		**1,200**	**522**	**138**	**1,860**	**(1)**	**1,859**
Net profit		-	129	-	129	(2)	127
Other comprehensive income		-	(15)	(4)	(19)	-	(19)
Total comprehensive income		**-**	**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**

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

Cash flow statement

For the year ended 30 June 2023

Group ($m)	Notes	2023	2022
Receipts from customers		928	902
Interest received		8	5
Payments to suppliers and employees		(355)	(295)
Tax payments		(32)	(34)
Interest paid		(111)	(93)
Operating cash flows		**438**	**485**
Sale of property, plant and equipment		3	2
Sale of investments		53	33
Purchase of property, plant and equipment and intangibles		(383)	(304)
Purchase of investments		(15)	(10)
Investing cash flows		**(342)**	**(279)**
Proceeds from bonds, term debt and commercial paper		742	614
Collateral received / (paid)		(17)	26
Dividends paid	C3	(120)	(120)
Payment of lease liabilities		(8)	(9)
Repayment of bonds, term debt and commercial paper		(355)	(889)
Financing cash flows		**242**	**(378)**
Net increase/(decrease) in cash flow		338	(172)
Cash at the beginning of year		58	230
Cash at the end of year		396	58
Cash comprises:			
Bank balances and on-call deposits		66	53
Short-term deposits with original maturity less than three months		330	5

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	2023	2022
Net profit		127	167
Add / (deduct) non-cash items:			
Gain in the fair value of financial instruments		(23)	(34)
Depreciation, amortisation, asset write-offs and impairment		307	291
Deferred tax		16	34
Capitalised interest	C6	(6)	(5)
Movements in working capital items:			
(Increase)/decrease in trade and other receivables		13	9
(Increase)/decrease in prepayments		(3)	1
(Decrease)/increase in trade and other payables, interest payable and deferred income		4	29
(Decrease)/increase in taxation payable		(1)	(3)
(Decrease)/increase in provisions		4	(4)
Operating cash flows		**438**	**485**

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.

Significant 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 Transpower.

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 net interest expense, depreciation, amortisation, asset write-offs and impairment to earnings before tax and changes in the fair value of financial instruments.

A: Financial Performance

A1. Operating revenue

Group ($m)	2023	2022
Transmission revenue		
Interconnection	711	700
Connection	122	121
EV (rebate)	(25)	(23)
Other regulated transmission	3	3
Customer investment contracts	33	23
Undergrounding and transmission realignment	8	5
Other transmission	3	1
Total transmission revenue	**855**	**830**
Other revenue		
System Operator	46	42
Other	12	13
Total other revenue	**58**	**55**
Total operating revenue	**913**	**885**

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).

The Electricity Authority (the Authority) regulates the electricity market and set the rules on how Transpower's recoverable revenue is allocated to designated transmission customers through transmission charges. Pricing under the new Transmission Pricing Methodology (TPM) commenced on 1 April 2023. The revised methodology does not impact Transpower's recoverable revenue as set under part 4 of the Commerce Act 1986. However, revenue, and therefore charges, are no longer split between HVAC and 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 revenue relates to payments received to operate the electricity market to dispatch generation.

Included in "Other revenue" is $3m (2022: $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, who 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, natural gas and carbon market operations	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.

A2. Deferred income

Group ($m)	2023	2022
Customer investment contracts	143	125
Undergrounding and transmission realignment	40	40
Other	5	5
Total deferred income	**188**	**170**
Current portion	1	1
Non-current portion	187	169
Total deferred income	**188**	**170**

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

	2023		2022	
Group ($m)	Customer investment contracts	Undergrounding and transmission realignment	Customer investment contracts	Undergrounding and transmission realignment
As at 1 July	125	41	105	42
Advance payments from customers	39	3	37	1
Net revenue recognised in the year from				
Amounts included in the contract liability at the beginning of the year	(1)	(1)	-	(2)
Advance payments applied to current year	(20)	(3)	(17)	-
As at 30 June	**143**	**40**	**125**	**41**

A3. Operating expenses

Group ($m)	2023	2022
Grid maintenance		
Substations maintenance - HVAC	58	41
Substations and cables maintenance - HVDC	13	12
Lines maintenance - HVAC	49	47
Lines maintenance - HVDC	5	2
Transmission-related rates	7	7
Other	8	6
	140	**115**
IST maintenance and operations		
Support and maintenance	16	17
Outsourced services	15	13
Licences	12	11
Other IST	2	2
	45	**43**
Other operating expenses		
Investigations	24	20
Ancillary service costs	8	6
Employee benefits	135	125
Capitalised salary costs	(27)	(28)
Salary transferred to investigations	(8)	(8)
Contractors and consultants	12	11
Industry levies	10	12
Insurance	7	6
Travel and vehicle costs	3	1
Other business support costs	13	8
	177	**153**
Total operating expenses	**362**	**311**

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, 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 $1,103,000 (2022: $992,000).

Group ($000)	2023	2022
Audit and review of the statutory financial statements		
Year-end audit	525	483
Review of the half year financial statements	61	61
	586	**544**
Audit or review related services required by legislation to be provided by the auditors		
Trust deed requirements[1]	7	11
Annual regulatory disclosure review	150	139
	157	**150**
Other assurance services where there is discretion as to whether the service is provided by the auditor or another firm		
Assurance engagement		
Independent review of TPM development[2]	195	195
Independent review of Green Bond framework	40	38
Independent review of Carbon footprint report	42	33
Independent review of Independent Price-Quality Path (IPP) reopener	45	-
Independent review of MAR / SMAR forecast	20	-
Independent review of financial model	11	-
Agreed - upon procedure engagement		
Independent review of the data-processing procedure for market model	-	27
	353	**293**
Other services		
Acquisition of remuneration benchmarking reports[3]	7	5
	7	**5**
Total auditor's remuneration	**1,103**	**992**

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 for Transpower, is not considered to impact on auditor independence.

A5. Taxation

Reconciliation to profit before tax

Group ($m)	2023	2022
Net profit before tax	174	231
Income tax at 28%	49	64
Tax effect of:		
Research and development tax credit	(2)	-
Total income tax expense	**47**	**64**
Comprising		
Current	31	30
Deferred	16	34

Description

There are no unrecognised deferred tax balances (2022: nil).

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 2023 is $11 million (2022: $31 million).

Deferred tax

Group ($m)	As at 1 July 2021	Recognised in profit or loss	Recognised in OCI	As at 30 June 2022	Recognised in profit or loss	Recognised in OCI	As at 30 June 2023
Property, plant and equipment	548	22	-	570	9	-	579
Fair value of net debt and derivatives	(31)	11	58	38	7	(8)	37
Deferred income	(3)	1	-	(2)	1	-	(1)
Dismantling provision	(7)	-	-	(7)	1	-	(6)
Other	(13)	-	-	(13)	(2)	-	(15)
Total deferred tax	494	**34**	**58**	586	**16**	**(8)**	594

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** - the material portion includes Risk Reinsurance Limited (RRL), which provides insurance services for the group.

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		Adjustments *		Total	
Group ($m)	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**
External revenue	855	830	46	42	12	13	-	-	913	885
Capex	366	309	13	14	-	-	-	1	379	323

** Adjustments in 2022 related to capital work on a customer funded transmission line undergrounding project.*

Major customers

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

Customer	% of Group Revenue	Segment
Vector Limited	20 (2022: 20)	Transmission
Powerco Limited	11 (2022: 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 2023									
Cost	3,060	178	3,091	905	474	221	147	161	8,237
Accumulated depreciation	(988)	(73)	(1,046)	(486)	(305)	(164)	(40)	-	(3,102)
Net book value	**2,072**	**105**	**2,045**	**419**	**169**	**57**	**107**	**161**	**5,135**
Comprising									
Opening net book value	2,042	106	1,939	435	170	58	118	180	5,048
Additions	1	-	2	-	1	-	1	379	384
Transfers from work in progress	115	5	196	8	24	9	-	(357)	-
Transfers to intangible assets	-	-	-	-	-	-	-	(33)	(33)
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**	**161**	**5,135**
At 30 June 2022									
Cost	2,963	175	2,913	900	452	213	147	180	7,943
Accumulated depreciation	(921)	(69)	(974)	(465)	(282)	(155)	(29)	-	(2,895)
Net book value	**2,042**	**106**	**1,939**	**435**	**170**	**58**	**118**	**180**	**5,048**
Comprising									
Opening net book value	2,019	105	1,929	459	179	64	110	139	5,004
Additions	-	-	-	-	-	-	-	323	323
Transfers from work in progress	106	7	94	6	20	5	-	(238)	-
Transfers to intangible assets	-	-	-	-	-	-	-	(41)	(41)
Adjustments to existing right-of-use assets	-	-	-	-	-	-	18	-	18
Disposals	(2)	(1)	(5)	(1)	-	-	-	(3)	(12)
Depreciation	(80)	(5)	(79)	(29)	(29)	(11)	(10)	-	(243)
(Impairment) / reversal	(1)	-	-	-	-	-	-	-	(1)
Closing net book value	**2,042**	**106**	**1,939**	**435**	**170**	**58**	**118**	**180**	**5,048**

Land and buildings are contained within the above classes and have a net book value of $273 million (2022: $265 million).
The lease 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)	2023	2022
Depreciation	245	243
Amortisation	33	30
Impairment / (impairment reversal)	(1)	1
Net loss on disposal	18	13
Dismantling expense	12	4
	307	**291**

Work in progress is split into the following classes:

Group ($m)	2023	2022
HVAC transmission lines	30	27
HVAC substations	106	126
Communications	4	4
Other	21	23
	161	**180**

Capital Commitments

At 30 June 2023, Transpower has $223 million of property, plant and equipment commitments (2022: $179 million), of which $222 million 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, or intangible assets 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 2023 (2022: 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 2023, there was an impairment reversal of $2 million in relation to unregulated assets (2022: $1 million expense).

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-to-use assets	9-20 years

The Group is reviewing the useful lives of all assets as part of its review of climate-related risks (refer D1).

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 coast line 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	Total intangible assets
At 30 June 2023			
Cost	311	487	798
Accumulated amortisation	(7)	(397)	(404)
Net book value	**304**	**90**	**394**
Comprising			
Opening net book value	304	91	395
Transfers from work in progress	1	32	33
Impairment	-	(1)	(1)
Amortisation	(1)	(32)	(33)
Closing net book value	**304**	**90**	**394**
At 30 June 2022			
Cost	311	455	766
Accumulated amortisation	(7)	(364)	(371)
Net book value	**304**	**91**	**395**
Comprising			
Opening net book value	304	80	384
Transfers from work in progress	-	41	41
Amortisation	-	(30)	(30)
Closing net book value	**304**	**91**	**395**

Capital commitments

At 30 June 2023, Transpower has $1 million of intangible asset commitments (2022: $1 million), all of which is 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.

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 2023, an impairment loss of $1 million was recognised in relation to emissions units (2022: nil).

C: Funding

C1. Share capital

Transpower has 1,200,000,000 issued and fully paid $1 ordinary shares (2022: same). All shares rank equally and confer on the holders the right to vote at any annual general meeting of Transpower.

C2. Net tangible assets per share

Group ($m)	Note	2023	2022
Net assets / (equity)		1,847	1,859
Less intangible assets	B2	(394)	(395)
Total net tangible assets		**1,453**	**1,464**
Net tangible assets per share ($)		**1.21**	**1.22**

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

C3. Dividends

	2023		2022	
Dividends declared and paid	**($m)**	**cents per share**	**($m)**	**cents per share**
Final dividend paid (2022:2021)	72	6	72	6
Interim dividend paid (2023:2022)	48	4	48	4
	120	**10**	**120**	**10**
Final dividend declared	**72**	**6**	**72**	**6**

On 22 August 2023, the Directors approved the payment of the final dividend of $72 million. The dividend will be partially imputed and is expected to be paid on 20 September 2023.

C4. Borrowings

Facilities

The Group has three borrowing 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	1,550
Australian medium term note programme	AUD	1,000	1,088	883
Domestic commercial paper programme	NZD	-	500	-

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 borrowing 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 (%)	2023	2022
Domestic Bonds					
Bonds 2022	NZ$100	16-Sep-22	4.07	-	101
Bonds 2023	NZ$50	15-Mar-23	5.45	-	51
Bonds 2024	NZ$150	14-Mar-24	2.73	148	148
Bonds 2025	NZ$125	6-Mar-25	3.82	123	125
Bonds 2025	NZ$175	9-Jun-25	BKBM + 0.32	176	175
Bonds 2025	NZ$450	4-Sep-25	1.74	417	417
Bonds 2026	NZ$150	8-Apr-26	1.52	135	135
Bonds 2026	NZ$200	8-Sep-26	2.05	182	183
Bonds 2027	NZ$200	16-Sep-27	4.63	198	-
Bonds 2028	NZ$100	15-Mar-28	5.89	105	108
Australian Medium Term Notes					
AUD MTN 2023	AU$300	28-Aug-23	5.75	333	346
AUD MTN 2028	AU$200	29-Nov-28	4.98	218	-
AUD MTN 2030	AU$300	30-Jun-30	5.23	325	-
Swiss Bonds					
CHF MTN 2027	CHF125	16-Dec-27	0.02	208	190
CHF MTN 2029	CHF160	16-Mar-29	0.04	260	234
US Private Placement					
USPP 2022	US$150	15-Dec-22	3.60	-	242
USPP 2023	US$78	13-Oct-23	3.58	128	127
USPP 2026	US$75	28-Jun-26	2.81	114	117
USPP 2026	US$70	13-Oct-26	3.83	111	114
USPP 2028	US$75	28-Jun-28	2.91	111	115
Carrying value of borrowings				**3,292**	**2,928**
Comprising					
Current				609	395
Non-current				2,683	2,533

The effective interest rate on debt including the effect of all derivative financial instruments was 3.0% (2022: 2.7%). Group debt, net of cash, maturing in the 12 month period is $213 million (2022: $337 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	2023	2022
As at 1 July	2,928	3,394
Net cash borrowed/(repaid)	387	(275)
Non-cash change in fair value adjustment through P&L	(51)	(170)
Non-cash change in fair value adjustment through OCI	21	(10)
Other	7	(11)
As at 30 June	**3,292**	**2,928**

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 a decrease of $1 million (2022: a decrease of $22 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)	2023	2022
As at 1 July	99	91
Additions	1	-
Accretion of interest	3	3
Payments	(12)	(13)
Remeasurement / (write-off)	-	18
As at 30 June	**91**	**99**
Comprising		
Current	8	8
Non-current	83	91

For the year ended 30 June 2023, $2 million (2022: $2 million) is included in operating expenses relating to short-term leases and low-value assets.

Total cash outflow for leases was $14 million (2022: $15 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. Net interest expense

Group ($m)	2023	2022
Interest revenue		
Interest received	8	5
	8	**5**
Interest expense		
Interest expense and associated fees	93	84
Capitalised interest	(6)	(5)
Lease interest	3	3
Imputed interest	11	9
	101	**91**
Total net interest expense	**93**	**86**

Description

Capitalised interest is based on Transpower's forecast weighted average cost of borrowing, being 3.00% for the year-ended 30 June 2023 (2022: 2.75%)

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 (2022: 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 2023 and 7 December 2024. These facilities have been undrawn since inception (2022: 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 NZD. ***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:*** High quality credit is acquired 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 methodology. 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:*** Sets Transpower's allowed revenue and required service quality levels, including determining the rate of return that applies to the Group's 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 and 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.		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 has completed an initial desktop assessment of its 170 substations for impacts from climate change. This analysis has identified 29 substations which have a likelihood of a credible flood event based on a 2-degrees or lower scenario (RCP2.6). Without climate change, it is estimated that 20 flood events will occur "on average" between now and 2090. Transpower continues to assess other climate-related risks and will disclose its exposure to climate-related risks and opportunities in accordance with the XRB Aotearoa New Zealand Climate Standard in 2024.

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.

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**

2022

Group ($m)	<1 year	1 - 2 years	2 - 5 years	>5 years	Total
Borrowings	470	667	1,417	708	3,262
Borrowings - related derivatives	9	34	78	(23)	98
Interest rate swap (portfolio) - liabilities	10	7	11	-	28
Interest rate swap (portfolio) - assets	(54)	(80)	(76)	-	(210)
Trade and other payables	137	-	-	-	137
Leases	11	11	34	67	123
Total contractual cash flows	**583**	**639**	**1,464**	**752**	**3,438**

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:

			2023		2022	
Group ($m)	**Currency**	**Maturity Date**	**Notional value**	**Fair value**	**Notional value**	**Fair value**
Borrowings associated derivatives						
IRS	NZD	2024-2028	1,375	86	1,325	73
CCIRS	AUD	2023-2030	883	16	341	2
	CHF	2027-2029	438	(22)	438	11
	USD	2023-2028	402	(49)	606	(90)
Portfolio IRS						
IRS	NZD	2024-2026	3,450	(194)	3,550	(170)
Total derivatives fair value (assets) / liabilities				**(163)**		**(174)**

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)	**2023**		**2022**	
Movement in yield curve	+100bp	-100bp	+100bp	-100bp
Impact on pre-tax profit and loss				
Net interest expense (annual impact)	(6)	6	(2)	2
Fair value adjustments	6	(6)	5	(5)
Impact on other comprehensive income				
Fair value increase/(decrease)	41	(42)	63	(65)

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)	2023	2022
CCIRS	67	79
IRS	163	145
Foreign exchange forward contracts	1	1
Total	**231**	**225**

The movement in IRS is due to higher New Zealand interest rates.

Regulated customers

Transpower's customers comprise electricity generators, distribution companies and some large industrial users. There is a high concentration of credit risk due to the small number of significant customers. Collateral is held against some of these customers. At 30 June 2023, collateral held was $0.2 million (2022: $0.2 million).

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

	2023		2022	
Group	($m)	(%)	($m)	(%)
Vector Limited	18	20	18	22
Powerco Limited	9	10	10	12

Unregulated customers

The majority of unregulated credit exposure relates to Electricity Lines companies and Electricity Generators, most of whom remain financially stable. The largest credit risk in this category relates to an organisation with a net present value of receivables of $2.5 million through to 2046. Transpower has considered the likely default risk based on the latest information available and has provided an impairment provision for the customer assets associated with this organisation.

There have been no customer defaults in 2023 (2022: nil).

D5. Insurance Coverage

The Group maintains insurance cover through its captive insurance company RRL and external insurance companies. These policies will next be renewed in September 2023.

Insurance policy

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

D6. Derivative financial instruments

Group ($m)	2023 Asset	2023 Liabilities	2022 Asset	2022 Liabilities
Borrowings related derivatives				
Interest rate swaps (portfolio) - cash flow hedge accounted	210	-	193	-
Interest rate swaps (portfolio)	1	(103)	11	(107)
Cross-currency interest rate swaps	73	(18)	90	(13)
Purchasing related derivatives and hedge commitment				
Foreign exchange forward contracts	1	(2)	2	(1)
Commitment on fair value hedges	2	(1)	1	(2)
Total derivatives and hedge commitment	**287**	**(124)**	**297**	**(123)**
Comprising				
Current	150	(68)	90	(30)
Non-current	137	(56)	207	(93)

The interest rate swaps (portfolio) have an average contracted fixed interest rate of 1.31% (2022: 1.32%).

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 cashflows 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 estimations

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)	2023	2022
Change in fair value of financial instruments:		
Hedged foreign currency purchase commitment	(1)	(1)
Foreign exchange forward contracts	1	1
Fair value hedges - gain/(loss)	**-**	**-**
Borrowings	51	170
NZPCL debt and investment	(2)	(1)
Cross-currency interest rate swaps	(23)	(22)
Interest rate swaps	(3)	(107)
Investments	-	(6)
Derivatives not designated as hedges - gain/(loss)	**23**	**34**
Total change in fair value of financial instruments in the income statement	**23**	**34**

The change in fair value of investment that is attributable to changes in the credit risk is a gain of $1 million (2022: nil)
The fair value movements in the table above do not include interest.

Credit risk components in other comprehensive income

Group ($m)	2023	2022
Credit spread on debt		
Foreign debt	(17)	10
NZD debt	(4)	-
Gross fair value gain / (loss)	**(21)**	**10**
less income tax benefit / (expense)	6	(3)
Total change in fair value of financial instruments in other comprehensive income	**(15)**	**7**
Reconciliation of movements in the cashflow hedge reserve		
As at 1 July	138	(4)
Effective gain/(loss) on cash flow hedges recognised directly in the cash flow hedge reserve account	(6)	198
Income tax benefit / (expense)	2	(56)
As at 30 June	**134**	**138**

E: Other disclosures

E1. NZPCL debt and investment

Group ($m)	2023	2022
NZPCL - non-current investment	82	84
NZPCL - non-current debt	85	86
Net investment / (debt)	**(3)**	**(2)**

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

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

The difference between the asset and liability is due to the yield curves that have been applied to the cash flows. Gains or losses on the NZPCL debt (including the effects of changes in the credit risk of the debt) is recognized in profit or loss to avoid accounting mismatch.

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

E2. Investments

Group ($m)	2023	2022
Deposits - RRL	14	11
Corporate bonds - RRL	21	62
Total current investment	**35**	**73**

The cumulative change in fair value of investments attributable to changes in the credit risk is nil (2022: decrease of $1 million).

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	38	13	2	58
Provisions made during the year	4	13	6	2	25
Provisions used during the year	(4)	(5)	(1)	(2)	(12)
As at 30 June	**5**	**46**	**18**	**2**	**71**
Comprising					
Current	4	18	3	2	27
Non-current	1	28	15	-	44

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 3.7% to 5.28% (2022: 2.96% to 3.86%).

E4. Trade receivables and other assets

Group ($m)	2023	2022
Trade receivables	68	81
Prepayments	17	14
Inventory	3	5
Total trade receivables and other assets	**88**	**100**
Comprising		
Current	81	95
Non-current	7	5

Ageing of trade receivables

Current	67	81
Past 31 days	1	-
	68	**81**

Description

No expected credit losses have been recognized during the year (2022: 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)	2023	2022
Trade creditors and accruals	91	96
Employee entitlements	17	15
Collateral posted by counterparties	9	26
Total trade and other payables	**117**	**137**
Comprising		
Current	117	137
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 E1 NZPCL debt and investment for more detail.

Effective 3 April 2023 the registration and incorporation of Risk Reinsurance Limited has been transferred to New Zealand.

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 business with key management personnel was conducted.

Key management personnel compensation

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

Group ($m)	2023	2022
Directors' fees	1	1
Chief executive officer and senior management team	6	5
Short-term employee remuneration	**7**	**6**
Defined contribution schemes	-	-

There were no termination payments or long-term compensation paid to key management personnel in 2023 (2022: 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)	2023	2022
Meridian Energy Limited - revenue	79	82
Electricity Authority - revenue	48	42

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.

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 annual undiscounted amount to be returned by Transpower to its customers in RCP3 at $18 million 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.

Group ($m)	HVAC	HVDC	Total
Opening EV account balance*	(40)	10	(30)
Interest on opening balance	(2)	1	(1)
Returned / (recovered) during year	18	-	18
To be recovered from / (paid to) customers in RCP4	52	2	54
Closing EV account balance	**28**	**13**	**41**

**The opening EV account balance for year 2021/22 has been restated by $0.5m following a change in Transpower's grid output incentive calculation for 2021/22.*

In 2023, Transpower spent $6 million (2022: $6 million) on developing a new transmission pricing methodology (TPM). In years 2020/21 and 2021/22, the Commission approved revenue reopeners for TPM expenditure. It is anticipated the Commission will approve a revenue reopener for prudent and efficient TPM expenditure in 2022/23 in the same manner. The reopeners will allow Transpower to recover TPM costs in RCP4. The mechanism for this, if allowed, is for approved TPM expenditure to be added to the closing EV account balance in RCP3 which will then be applied to revenue in RCP4.

(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 22 August 2023 (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 2023

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 103 to 130, that comprise the consolidated statement of financial position as at 30 June 2023, 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 a summary of significant accounting policies.

In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at 30 June 2023, 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.

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.

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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 86% of total assets at 30 June 2023. 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. Disclosures regarding regulated assets are included in Notes B1 and B2 to the consolidated financial statements.	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*. - 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 2023. - 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 2023 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*. - 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.

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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 2023 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 2023. - Performed our own independent valuations for a sample of 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.

Other information

The Directors are responsible on behalf of the Group for the other information. The other information comprises the information that does not include 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.

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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.

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.

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- 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 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.

Sam Nicolle
Ernst & Young
Chartered Accountants
On behalf of the Auditor-General
Wellington, New Zealand
28 August 2023

Directory

Board of Directors

Dr Keith Turner – *Chair*

Whaimutu Dewes – *Deputy Chair*

Heather Simpson

Michele Embling

Parekawhia McLean

Vanessa Oakley

Owen Coppage

General Management Team

Alison Andrew
Chief Executive

Catherine Shaw
Chief Financial Officer

John Clarke
General Manager Grid Development

Chantelle Bramley
General Manager Strategy and Customer

Stephen Jay
General Manager Operations

Brighid Kelly
General Manager People

David Knight
General Counsel and Company Secretary

Raewyn Moss
General Manager External Affairs

Cobus Nel
General Manager Information Services and Technology

Mark Ryall
General Manager Grid Delivery

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Ngā mihi
Thank you

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