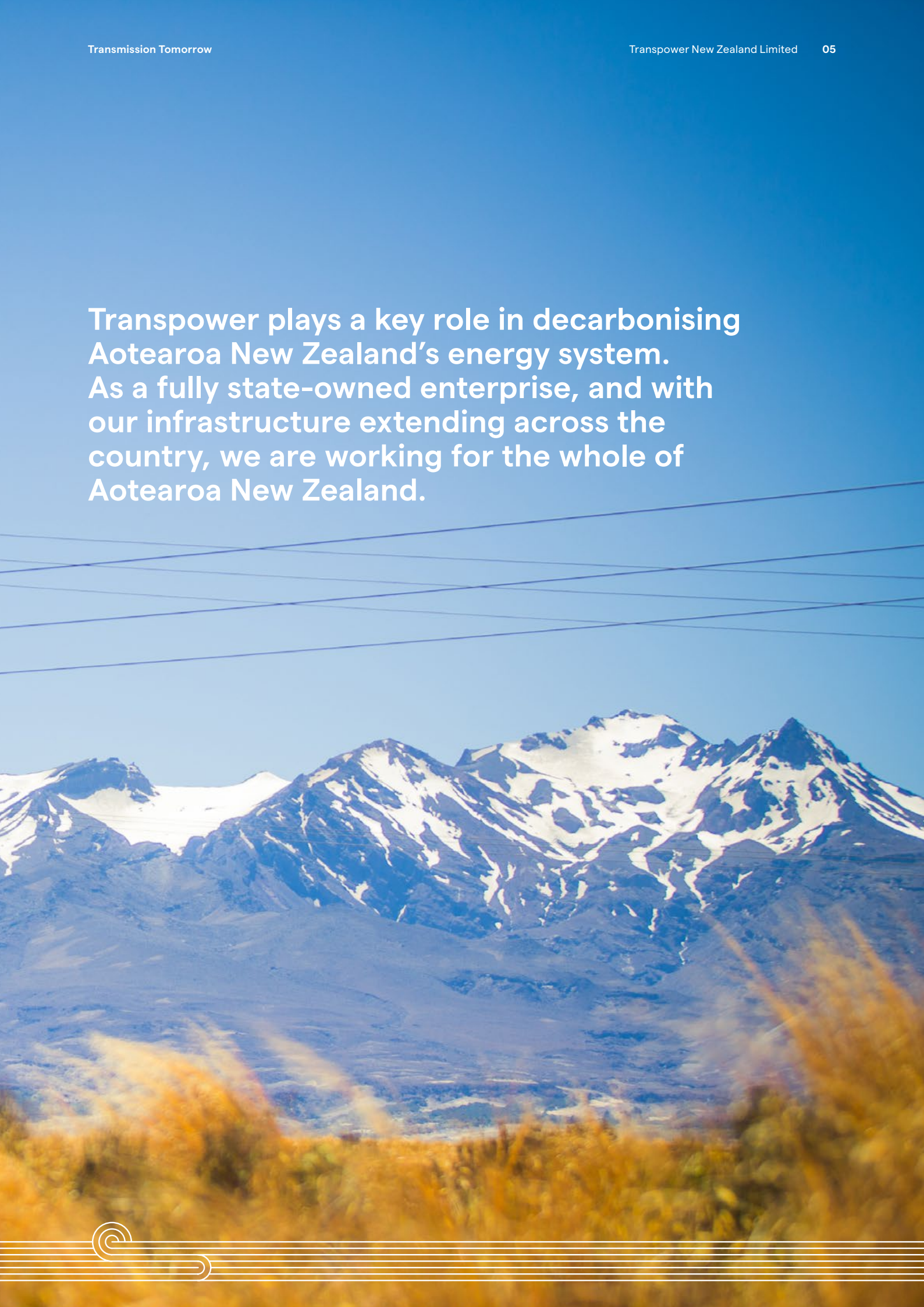
TRANSPOWER

Transmission Tomorrow

2023 Refresh

Contents

Transpower plays a key role in decarbonising Aotearoa New Zealand's energy system. As a fully state-owned enterprise, and with our infrastructure extending across the country, we are working for the whole of Aotearoa New Zealand.



1.0 Foreword

Since we published our last iteration of Transmission Tomorrow in 2018 there have been a number of significant global events with implications for New Zealand.

- Following the COP26 in Glasgow and increasingly tangible impacts from global warming, more countries have taken firm commitments to decarbonise their economies.
- The COVID-19 pandemic has created significant disruptions to supply chains and migration flows from border closures.
- The war between Russia and Ukraine has created deep changes in global energy policies.

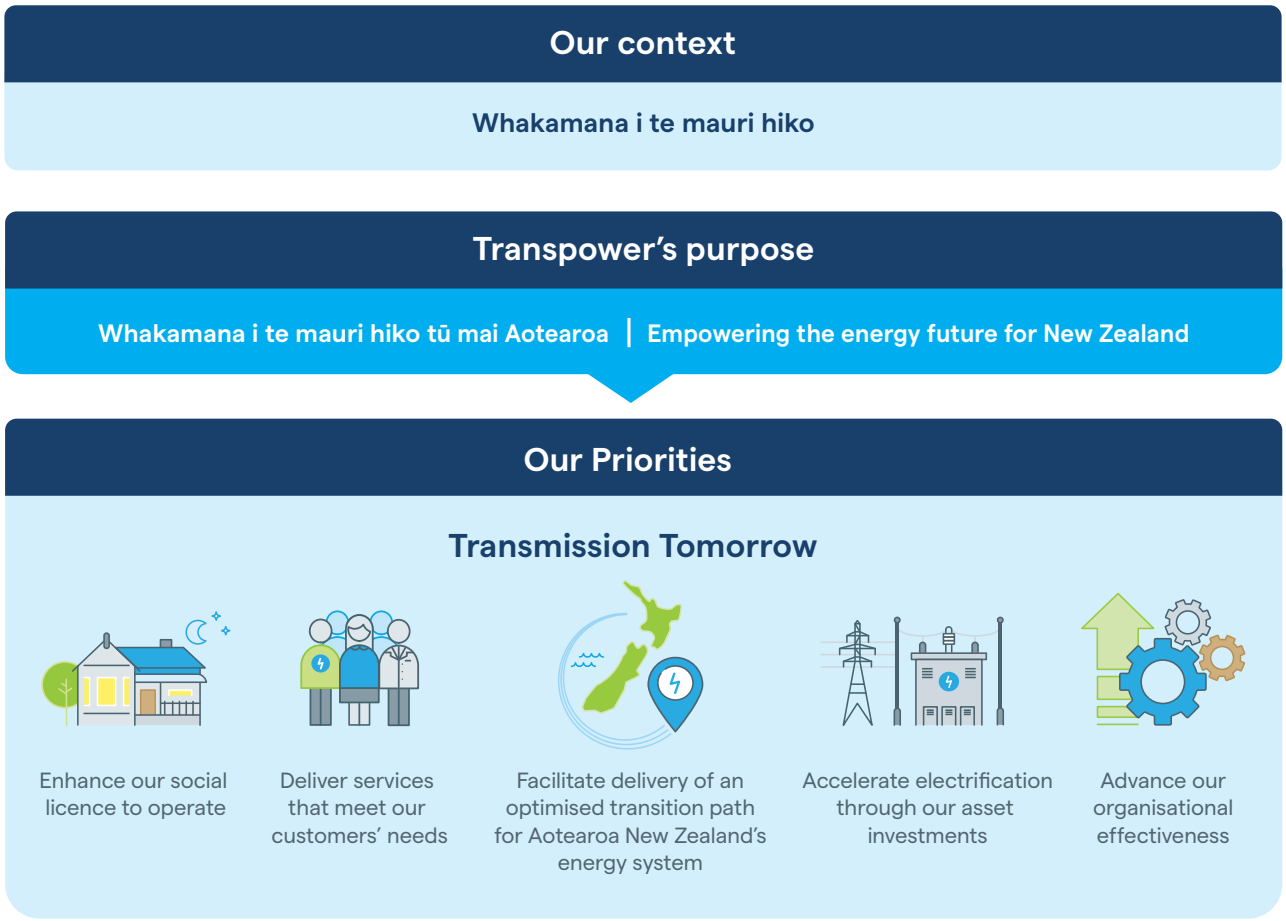
New Zealand has felt the impact of these events in several ways.

- Climate goals and emissions budgets are now embedded in our legislation, making them long-lasting, and potentially less prone to political intervention.
- The nation's first Emissions Reduction Plan has been released and sets out the measures that will allow the country to achieve the climate budgets.
- Supply chains remain disrupted and imports from Asia remain unreliable as parts of the continent remain subject to lockdown. Costs are also increasing across the supply chain as inflationary pressures impact global economies.
- After two years of closed borders, New Zealand is at risk of seeing the population decrease and skilled labour is in high demand.
- Fuel imports in New Zealand are becoming more expensive.

For our local energy industry, these changes have further effects.

- Now more than ever, New Zealand is relying on electrification and renewable energy to meet its decarbonisation goals and reduce its dependence on fuel imports.
- We are competing on a global basis for people, with countries that provide a better immigration value proposition.
- We are competing on a global basis for capital, with so many companies now looking to accelerate their decarbonisation activities.

Figure 1: Our strategy flows from Whakamana i Te Mauri Hiko to our strategic priorities



Transpower has been preparing for the energy future since the publication of Te Mauri Hiko (2018), and subsequently Whakamana i Te Mauri Hiko (2020). Our strategic priorities aim to meet our overarching purpose and responsibility: Whakamana i Te Mauri Hiko tū mai Aotearoa – Empowering the energy future for New Zealand. We do this by developing the electricity grid and operating the electricity market to enable the electrification of Aotearoa.

Our ongoing work and analysis show that the strategy we set out in 2018 continues to serve us well and broadly remains valid. Much of our recent work – including Net Zero Grid Pathways, Renewable Energy Zones, and our Future Security and Resilience programme – has been enabled by this strategy and is already delivering value to Aotearoa New Zealand and Transpower.

In this "refresh", we are capitalising on the successes our strategy has enabled us to deliver by refining our strategic priorities with a language that reflects the need for action and coordination across the industry.

2.0 Our business today

In this section, we describe our business today and identify trends and developments that could materially impact our future plans. We describe:

- Our value proposition – the characteristics that support demand for our services
- Our social licence to operate – how we focus on sustaining public confidence in our operations
- Key trends – the current trends with the potential to impact on our future

2.1 Our value proposition

Transpower plays a fundamental role in the ongoing prosperity of Aotearoa New Zealand. A reliable, safe, efficient supply of electricity is vital to the lives of every New Zealander.

Increasing digitisation and the need for electrification to support emissions reductions goals places even more focus on the effective and efficient delivery of Transpower's services. In particular this will include:

- Enabling highly reliable access to electricity for residences and businesses.
- Efficiently connecting generators to distribution companies and large users over long distances, providing open access and helping to balance supply and demand.
- Facilitating access to sustainable energy sources through a cost-effective grid and well-managed power system.
- Providing a stable and predictable dividend stream to our shareholder (the Crown) to support New Zealand.

We can do this successfully because of our two core functions in New Zealand's electricity market.

- **Grid owner –** We own, build, maintain, replace and enhance the physical infrastructure that connects those who generate and those who need electricity to live, work and play across the country.
- **System operator –** As a service provided under contract to the Electricity Authority under the Electricity Industry Participation Code, we operate the electricity market, managing supply and demand for electricity in real time to ensure that the power system remains stable and secure.

Transpower is focused on the best practice delivery of these two core functions as the greatest drivers of value for our shareholder the Crown, and for the benefit of New Zealanders more broadly. Where there are opportunities outside of these core functions that would create a new value stream for the sector or fill a gap in the market, Transpower will consider whether it can play a development role. Transpower currently runs adjacent activities through our Energy Market Services (EMS) business to support the grid, the electricity and gas markets. We continue to innovate these platforms and deliver better services to our customers.

We have identified key aspects of the value proposition for the electricity system and for our grid and system operator activities as well as the additional value that comes from the combination of these activities. These are the key aspects that underpin our business in the eyes of our customers and end users.

2.11 Electrification is a highly reliable and cost-effective way to decarbonise our economy

New Zealand has committed to decarbonising its economy

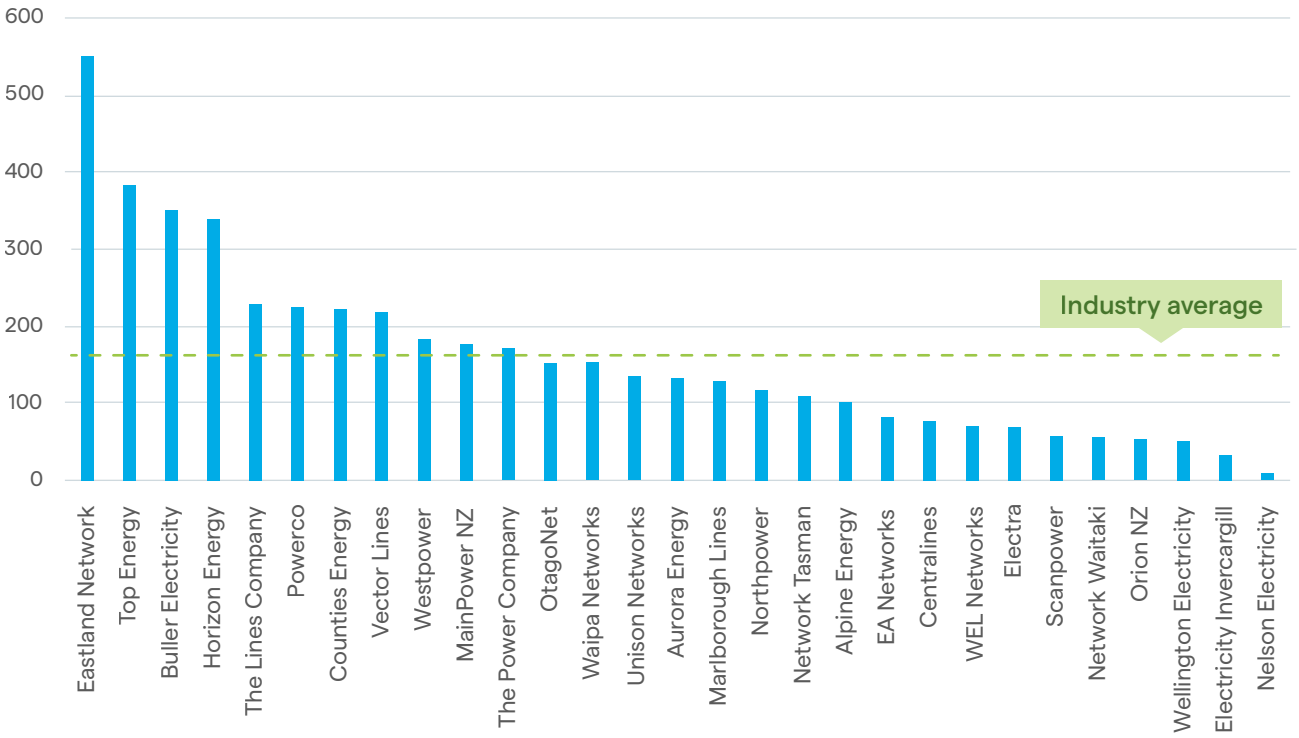
In April 2022, the Intergovernmental Panel for Climate Change (IPCC) published a report calling governments to accelerate their effort against climate change to remain under the 1.5 degree limit. This is in line with the findings of the New Zealand Climate Change Commission (CCC) which released its recommended carbon budgets and accompanying advice to the Government in 2021.

These carbon budgets were passed into legislation in May 2022, committing New Zealand to do its part in reducing its emissions. That same month, the Emissions Reduction Plan (ERP) was released, accompanied by a large funding package through the Climate Emergency Reduction Fund. Together, the plan and the fund will deliver a comprehensive set of policies and actions to contribute to the rapid decarbonisation of New Zealand.

New Zealand's supply of electricity is highly reliable

Our customers benefit from a reliable supply of energy by being connected to the national electricity system. Over the period 2017–2021, an average household would have experienced less than three hours of non-supply per year and around two interruptions per year. For customers who generate their own electricity, having a connection to the national grid provides a highly reliable backup.

Figure 2: Average yearly unplanned SAIDI (caused by a distribution network fault) between 2017 and 2021

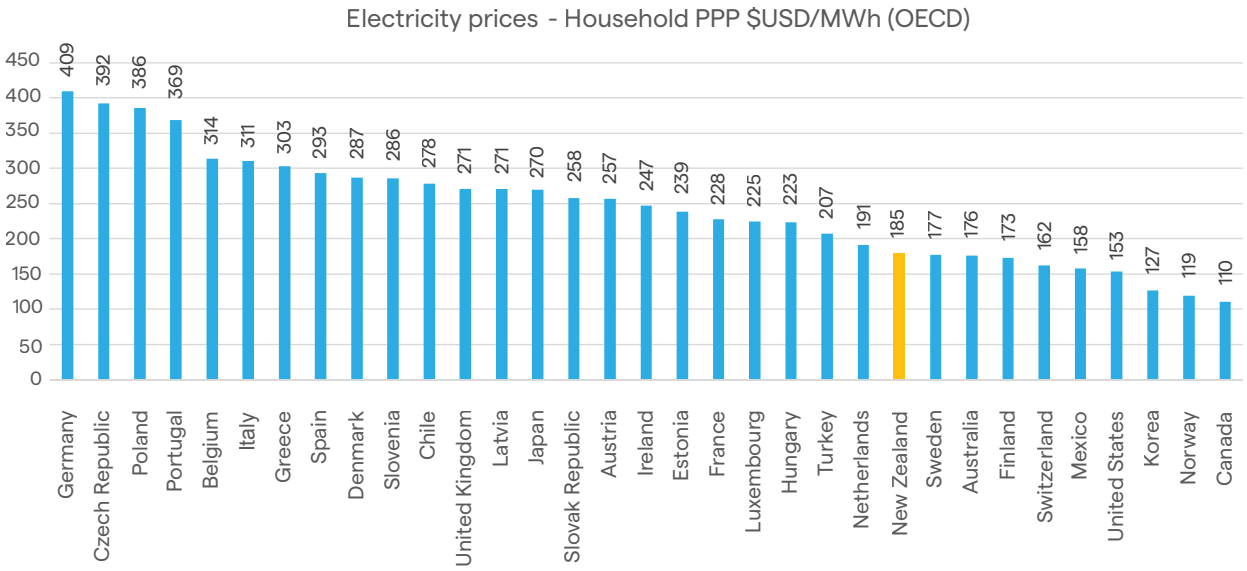


New Zealand electricity costs are highly competitive

The cost of electricity in New Zealand compares favourably to that in other countries. The Electricity Price Review undertaken by MBIE[2] found that New Zealand's average residential price was in the lower half of all OECD countries at $185/MWh. This suggests that the New Zealand electricity system is globally competitive and provides a good foundation to support ongoing economic development.

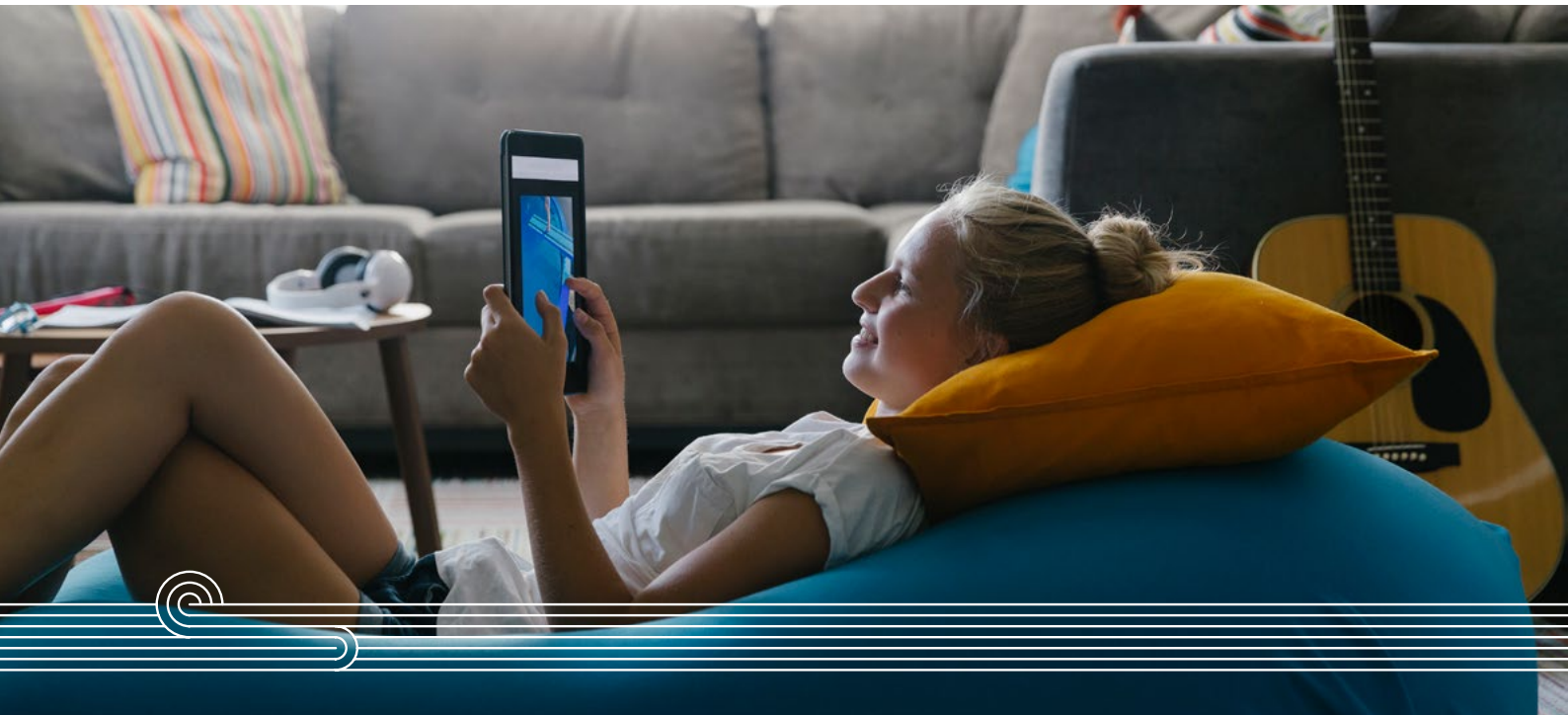
1. SAIDI – System Average Duration Index – is a commonly used metric used by the industry as the average outage duration for each customer served
2. See Ministry for Business, Innovation and Employment Electricity Price Review, 2015. www.mbie.govt.nz

Figure 3: Comparison of global residential electricity prices (IEA, 2021)



With decreasing technology costs, more localised power supply options such as microgrids based on solar panels and batteries may be an economic option for some electricity users.

The central grid, however, will continue to provide reliability through cloudy days and winter. In most cases this will make it a much lower-cost option than the comparable reliability of an off-grid system.

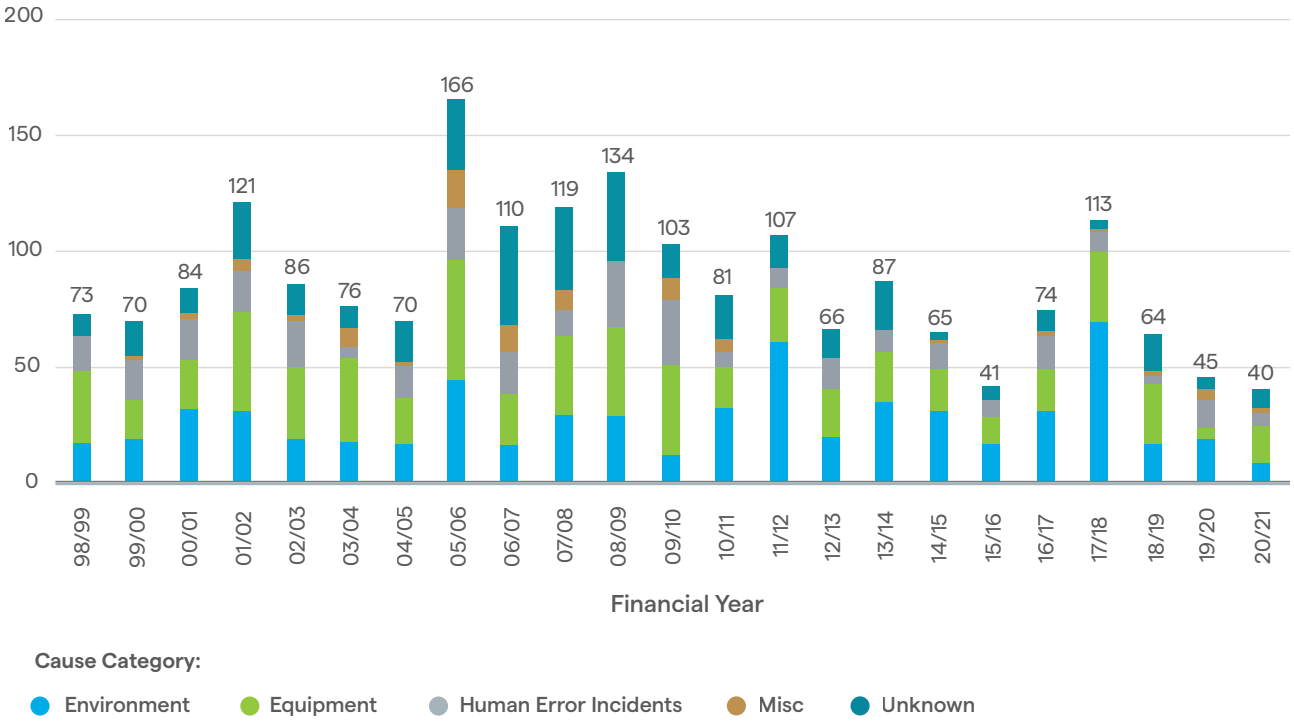


2.12 Driving value from our grid assets

New Zealand's largest energy users connect directly to the grid to power their production. Distribution networks across New Zealand connect in order to source energy for their customers, and large generators connect to provide energy to consumers nationwide. The national grid provides electrical transmission to about 170 locations from Tiwai Point to Kaikohe.

Energy is received at about 55 locations and energy is supplied to about 135 locations[3] . While there are alternatives to grid connection, Transpower focuses on providing a highly attractive value proposition to users of its grid assets.

Figure 4: Count and causes of unplanned interruptions on the grid



Note the chart excludes interruptions that are customer caused, the result of Automatic Underfrequency Load Shedding (AUFLS), and planned interruptions i.e, where there is at least 24 hours' notice of the interruption

3. Some locations have a dual role where they can either receive or supply energy.

- **Our grid is reliable –** As shown in Figure 4 on the previous page, interruptions to transmission are trending down year-on-year. The financial year ending June 2021 saw the best performance in 23 years, with a recording of just 40 interruptions.
- **Being grid connected allows access to competitive energy supply through the wholesale energy market –** New Zealand's wholesale electricity market allows customers to access competitive prices and sophisticated products, to manage their level of risk and flexibility to meet their needs.
- **Our grid is a sustainable choice –** The grid has been built over many generations, and our assets, which are well maintained, will continue to operate for many generations to come. The grid provides access to renewable, low-carbon energy and offers the potential to decarbonise the New Zealand economy by displacing other fuels with a higher carbon footprint.
- **Our grid balances electricity nationwide –** The grid enables regions to export surplus energy or gain access to the lowest-cost sources of energy produced in other regions, in real time, across seasons and into the future.
- **Our costs are efficient –** Under our regulatory framework, we have obligations and incentives to remain efficient. The Commerce Commission sets our annual revenue, whilst the Electricity Authority decides on our pricing methodology. For customer-driven work, we use the same efficiency principles that we apply to our grid work.

2.13 Effectively balancing the electricity system

We provide a single national system operator service, sitting alongside our grid business. In our role as system operator, we operate the high voltage power system and wholesale market to provide secure, economic supply of electricity to meet grid-delivered demand at all times.

Under New Zealand legislation, we perform our system operator function under a contract with the Electricity Authority. Our technical expertise allows us to make this service attractive.

- **We enable competitive access –** The system operator service provides bid-based access to the market. As well as supporting efficient use of resources to meet electricity demand, this enables competitive generation investment (and retirement).
- **We enable effective utilisation –** We continue to evolve our system operation tools, processes and expertise to enable the grid to be pushed hard within defined limits, getting the most value out of the available assets.
- **We ensure reliability –** The system operator service ensures supply continuously matches demand at all points across the grid and assists with ensuring longer-term supply of capacity and energy to meet demand.

2.14 An integrated approach delivers the best outcome for New Zealand

There is value for New Zealand in having a single entity manage and plan the transmission grid as well as balance the supply and demand that flows across that network. The value of providing these services within one entity is only likely to increase with the transition to a more electrified economy supplied by 100% renewable generation sources. In particular:

- **We have the expertise –** Providing both services enable a level of expertise and foresight that can enable New Zealand's energy future. Understanding where and how much renewable generation is coming into the electricity system, as well as the needs of electricity distribution businesses and other large customers from the transmission grid, helps the system operator better understand and prepare for future challenges.
- **We develop New Zealand's capability –** As an integrated business, Transpower can attract top talent and capability to continue the development of New Zealand's electricity system as well as contribute to a broader discussion on New Zealand's energy future. Smaller, less diverse organisations in a small market like New Zealand would find it more difficult to support such extensive capability and capacity build.
- **We leverage synergies –** As a large organisation in the New Zealand context, providing grid and system operator services allows Transpower to benefit from scale, share information, pool resources and systems and integrate support services. This avoids duplicating capability, for example to test thermal or stability constraints and other transient studies required for planning outages and their interactions with the physical system.
- **We offer a better service to the market –** The cooperation between the grid operator and system operator teams that is a result of Transpower running both roles increases the efficiency of the market. For example, when it comes to outage coordination on the grid, the proximity of the teams enables planning outages at times where the impact on the market will be minimised.

We recognise the importance of independence for the system operator and, as such, we have processes and systems in place to provide assurance that this independence remains.

2.2 Enhancing our social licence to operate

In both our roles as grid owner and system operator, we are a monopoly. A number of regulatory safeguards are in place to ensure that we continue to provide a cost-efficient, reliable and safe service to our customers.

Nevertheless, we recognise we can only be successful if we retain and enhance our social licence to operate. As a result, we continuously engage with our customers and stakeholders to ensure we consider their interests, current and future, in our operations.

In this section, we describe the eight dimensions of our social licence to operate, and our specific focus for future investments that will allow us to enhance this licence.

2.21 Our social licence to operate

We articulate our licence to operate around eight areas.

- **Health, safety and wellbeing –** Our activities inherently present significant safety risk to the public and workers. We are increasingly incorporating a health and wellbeing focus into our understanding of safety.
- **Recognition of te Tiriti o Waitangi and the importance of te ao Māori –** We are committed to becoming better Treaty partners and improving our engagement with Māori. Many of our assets are located on iwi-owned land.
- **Corridors –** We have assets on over 10,000 properties, and our network traverses 30,000 properties.
- **Environment –** Our activities have significant visual and other environmental impacts.
- **Incumbency –** We are an established and central player in New Zealand's electricity supply chain.
- **Security and resilience –** Major interruptions or power crises can seriously harm confidence in our services.
- **Corporate scale –** We are a large commercial organisation in New Zealand terms with significant reach.
- **Social policy –** Energy systems balance equity, security and sustainability objectives.

Health, safety and wellbeing

Operating safely is Transpower's number one priority. Given the nature of electricity, our work and our assets, it is crucial that we remain vigilant to ensure the safety of our people, our service providers and the public. We have a rigorous health and safety management policy, with clear procedures, practices and assurance measures.

We have a safety culture, and we aim for continual improvement towards zero harm. It is critical that we demonstrate this priority and maintain our reputation for safety.

In recent years, we have extended our vision of safety to incorporate a broader definition of health and wellbeing as it applies to our staff, the suppliers who work with us, and others affected by our work. Our health, safety and wellbeing approach extends beyond physical health to incorporate mental health and wellbeing. Our goal is to improve people's lives in the workplace and beyond, to ensure we have resilient and capable people.

Transpower is a diverse organization with a large international workforce, and we continue to reassess our health and wellbeing policies and practices in light of this fact. The COVID-19 pandemic is an important example. The closure of New Zealand's borders exacerbated the challenges of the pandemic for employees with friends and family overseas, and was an important factor in how we managed staff wellbeing over this time.

As a Person Conducting a Business or Undertaking (PCBU), Transpower has a legislative requirement to elect health and safety representatives to represent its workers. In 2021, as part of our programme, this role was expanded to include our focus on wellbeing.

Our Health, Safety and Wellbeing Champions play an active role in our organisation. They have led considerable change across Transpower, including guidance for personal protective equipment (PPE) usage, facilitating first aid training and refresher courses, introducing wellbeing resources (particularly around COVID-19 and flexible working spaces), running initiatives to support mental health, bi-monthly safety inspections, and site-based initiatives to improve health and safety.

Te Tiriti o Waitangi and te ao Māori

Aotearoa New Zealand is undergoing significant change in bicultural relations between tangata whenua and tangata Tiriti. We acknowledge mana whenua's connections to the land. We work with iwi to minimise the impact of our work on cultural values. We aim to leave the environment in a better state, by taking a kaitiakitanga approach, with guidance from tikanga Māori. We work collectively with iwi, hapū and other parties to nurture and protect biodiversity for present and future generations.

Our aspiration is that Transpower's workforce mirrors our community, including Māori. In order to attract and retain Māori, our business needs to be one where Māori can be themselves, and our environment is one where they can thrive. This includes helping our people understand and appreciate te ao Māori and support those who identify as Māori. We have set up a Whanaungatanga Transpower Community who support progressing this intent through a programme of celebrations, education, mutual support for Community members, and offering advice and commentary on our continual te ao Māori journey.

Corridors

Ninety-three percent of our 12,000 km network is over land for which our rights exist by virtue of statute (the Electricity Act 1992), with most of the remainder through registered easements (7%) and property owned outright (0.2%). Relying on the Electricity Act for right of entry is not ideal, and we strive to maintain excellent relations with the landowners who host our assets.

The Electricity Act does not prevent inappropriate development near or beneath our assets. In 2009, a National Policy Statement for Electricity Transmission was promulgated under the Resource Management Act 1991. This is driving a long process whereby councils are updating their district plans to provide for the grid and its activities and protect the grid from third-party developments. Alongside this, we have a National Environmental Standard on Electricity Transmission Activities which enables some maintenance and minor upgrade activities. Both these instruments have been reviewed as part of the Resource Management reform underway by Government. Given the strong future demand for electricity it is critical that corridors are protected and available for New Zealand's energy future.

Environment

Our network is highly visible to local communities. Some stakeholders believe our transmission assets reduce the visual appeal of an area, while other groups have concerns about electric and magnetic field (EMF) exposure. In addition, much of what we do in our day-to-day operations and maintenance has the potential for environmental impacts on land and waterways (through, for example, access tracks and vegetation clearance) and on adjacent property owners (through substation noise).

The impacts of our activities are usually local, while their benefits are typically realised nationally or by a wider community and over generations. Historically, New Zealanders were strongly supportive of national or community benefits in terms of their willingness to tolerate local impacts. Commercialisation of the sector together with societal shifts (such as urbanisation) have eroded this goodwill to some extent.

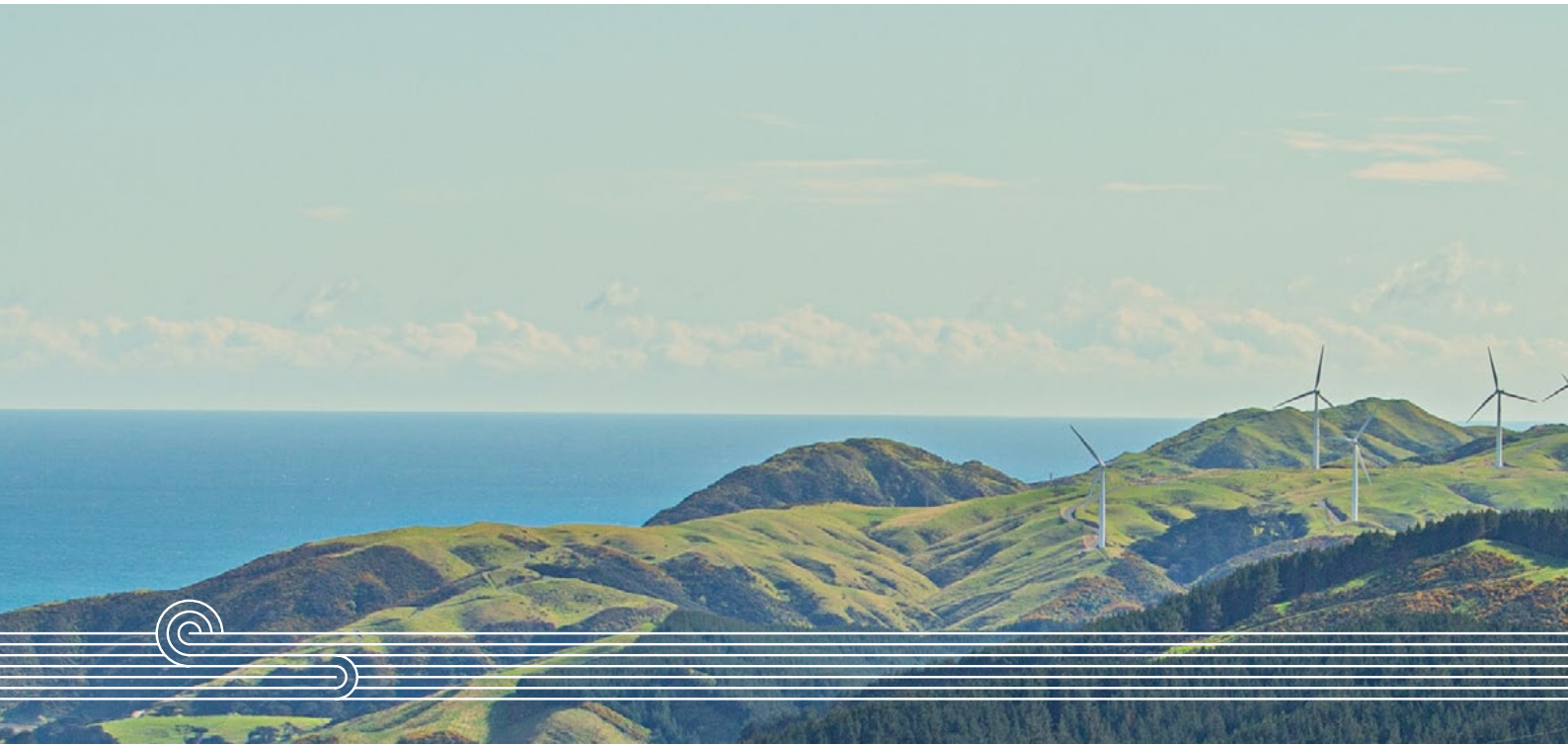
Incumbency

We are an established player in a sector that is experiencing change, with new entrants disrupting existing market structures. It is important that we continue to operate with integrity and transparency.

Although our ownership, central role in the industry, and company purpose put New Zealanders at the heart of our operations, we recognise the need for an appropriate and balanced regulatory framework to bring transparency and oversight to our costs and service levels.

In our grid operator function, regulation supports investment (by setting an allowable return and providing an enforceable pricing methodology). It also provides processes for setting target service and expenditure levels, reliability planning standards and access arrangements. For our system operator function, regulation provides governance arrangements for both market operations and the system operator service, as well as supporting the funding of the system operator service.

Electricity transmission (at least the backbone grid) and system operation are likely to remain monopoly services, with largely the same characteristics that motivate existing regulatory arrangements. As such, our services are likely to remain regulated, and we can expect regulators to continue to focus on alignment between our commercial incentives and long-term national economic objectives.



Security and resilience

Large or prolonged power interruptions severely harm our reputation and credibility and reduce people's confidence in New Zealand's electricity infrastructure more broadly. The 31-hour blackout in the north-eastern United States in 2003, affecting 50 million people, was estimated to have cost $9 billion. The smaller, 6-hour Auckland outage of 2006 affecting 700,000 people was estimated to have cost $70 million, while the 2014 outage at the Penrose substation that affected 73,000 people over more than a day (in some cases) is estimated to have cost some $50–70 million.

More recently, the events of 9 August 2021 impacted around 34,000 customers when there was a shortfall in generation offered to the market, in conjunction with very high demand and the sudden loss of wind and hydro generation.

Power crises can harm confidence in the sector as a whole. Management of New Zealand's hydro resources through dry periods has often motivated community concern and increased the risk of political intervention.

Corporate scale

With equity of about $1.7 billion and an asset base of $6.2 billion, Transpower is a large corporate citizen in New Zealand terms. Transpower employs around 829 people directly, equating to about 1.5 million hours of work a year. Much of our day-to-day work is undertaken by contractors, engineering consultants and subcontractors, who make up an additional 1.6 million hours of work per year. We therefore play a critical role in accessing, supporting and growing the capability and capacity needed in the broader industry to support New Zealand's energy future.

In the year to June 2021, we paid over $533 million to suppliers and contractors, $120 million in salary and wages to our employees and $34 million in income tax. We also paid a dividend to our shareholder, the New Zealand Government, of $147 million.

Our large commercial footprint and community impact means that we must continually act as a socially responsible corporate citizen.

Social policy

The electricity sector has transitioned over the past few decades from a centrally funded and governed model to one that is commercially funded and governed, with a mix of ownership types. Alongside this we have seen the introduction of the electricity market. There remains public concern regarding affordability, reliability, environmental sustainability, and the role of government.

2.22 Our future investment focus sustains our social licence

One key aspect of our social licence to operate relies on our ability to maintain a safe, secure and reliable service to customers and the electricity industry.

Under our regulatory regime, we submit to the Commerce Commission – our economic regulator – an expenditure proposal every five years. This proposal describes the amount of expenditure required to operate, maintain and enhance the transmission grid and continue to meet the demands of our customers, as well as our grid performance outputs.

In 2023, we will submit our RCP4 proposal for the period 2025–2029. This proposal will include a focus on achieving the following four outcomes, which are closely aligned with maintaining our social licence to operate.

- **A reliable and safe network –** we will deliver a transmission service that minimises interruptions at the lowest whole-of-life cost, where assets are maintained and replaced in line with good electricity industry practice, and where the risks to our staff, contractors, customers and general public are minimised.
- **A resilient network –** a resilient grid avoids extended power outages and quickly restores power when major events occur. These major events cover natural hazards, including climate change-related events, common mode failures and cyber threats.
- **Enabling electrification and new (renewable) connections –** our Whakamana i Te Mauri Hiko scenario forecasts that the power system will grow from 9.2 GW to 21.8 GW by 2050. The country is already experiencing a rise in distributed renewable generation. Transport and process heat for industry make up a significant proportion of our emissions. Electrification is happening fast, so capacity and security across the grid needs to be front-footed.
- **Environment and sustainability –** we will reduce our carbon footprint over RCP4 to ensure we can achieve a net zero target by 2050. We will improve our engagement with iwi and hapū, landowners, councils and other stakeholders. We will implement our biodiversity strategy and seek to achieve net biodiversity gains.

2.3 Key influences

In Whakamana i Te Mauri Hiko, we describe the key factors that are expected to have a significant influence on the future of electricity in New Zealand, and five possible resulting electricity scenarios. Every six months, we publish a monitoring report that describes how these factors are tracking against Transpower's forecast scenarios and their potential impact on the electricity industry.

The indicators we track include:

- Climate change and energy policies
- Drivers and evolution of electricity demand
- Utility scale and distributed generation
- Disruptive technologies and behaviour change
- Progress against New Zealand-specific issues, including dry year and renewability of the electricity system

In the interest of readability, we will not elaborate further on these indicators in this document. Instead, we will focus on three current major influences for our industry: the impact of climate change and energy policies, the ongoing effects of the COVID-19 pandemic, and global geopolitical uncertainty.

2.31 Climate change and energy policies

Recent changes in climate change and energy policies influence our business in two ways:

- Decarbonisation policies will drive more electrification
- Adaptation to climate change will drive the need for a more resilient infrastructure.

Decarbonisation efforts are enacted into law

New Zealand continues to take steps towards a net zero carbon economy. In May 2022, New Zealand enacted its emission budgets into law, requiring New Zealand to reduce its emissions by a further 3.1 megatonnes compared to its projected emissions during the first budget period (2022–2025).

This target is supported by an Emissions Reduction Plan (ERP) detailing the additional actions and policy changes required for New Zealand to achieve its targets. In the plan, the transport, energy and industrial sectors will contribute to the biggest carbon reduction, respectively accounting for an annual reduction of 0.7 to 1.3 megatonnes CO_2e and 1.5 to 3.3 megatonnes CO_2e.

Ultimately, the emissions budget and the ERP will result in an increased demand for low-carbon, renewable electricity.

Mitigating the effects of climate change

Despite New Zealand's commitment to reduce its carbon emissions, climate change is a global phenomenon. If about 90% of the world's emissions are covered by net zero carbon targets, the risk of global warming remains high. If New Zealand is on track to meet its targets, it might still be prone to the extreme changes brought by climate change.

New Zealand's National Adaptation Plan, published in August 2022, reiterates the importance of ensuring our core infrastructure is resilient to the effects of climate change. Under the National Adaptation Plan, Transpower is required to develop its own adaptation plan. Currently, this work is well underway through our climate risk scenarios work which will build improved resilience into our asset management plans.

2.32 COVID-19 pandemic

The COVID-19 pandemic has had enduring effects on New Zealand's energy system. Following the reopening of the country's borders, and as the virus moves into the endemic phase, we will begin to assess whether these changes are permanent.

Amongst these changes, a primary impact is the shift to electricity usage patterns from residential customers due to the increase in flexible working arrangements. As more customers work from home, residential electricity consumption is increasing, potentially driving higher demand. We discuss this issue in our monitoring reports and will continue to track it on a regular basis. This pattern also increases a need for reliability, as individuals working from home will not be able to afford the same level of redundancy as a business operating a standby generator, for example.

Secondly, our supply chain is currently limited as it is recovering from the interruptions of the pandemic, and imports from Asia remain unreliable. We expect that supply chain routes will be re-established over time as the global economy recovers. However, continued lockdowns in China are disrupting both international trade routes and the global supply of equipment.

Thirdly, after two years of limited international movement due to the pandemic, New Zealand is now at a high risk of seeing population decrease. With most economies recovering quickly, some experts predict that the global economic situation will encourage people currently based in New Zealand to emigrate to countries with higher economic growth.

2.33 Global geopolitical uncertainty

Global energy policies have evolved very rapidly as global sanctions target Russia following their invasion of Ukraine. The use of Russian oil and gas is being restricted or banned across the world, driving countries to accelerate the deployment of renewables as alternative sources of energy.

As a result, climate security and energy security are being challenged. Global energy prices have increased, as well as the competition for renewable energy technology. In an environment where the global supply chain is already disrupted from the COVID-19 pandemic, this brings more challenges for New Zealand given our small size and geographical remoteness.

2.34 We are monitoring these trends

While COVID-19 and the current global geopolitical uncertainty represent a potential headwind for the electrification of the New Zealand economy, we are nevertheless observing an increased need and appetite for decarbonisation, as reflected in the observed quantity of customer connection enquiries. There may, however, continue to be constraints to the pace at which connections can be achieved. We will continue to track these trends through our six-monthly Whakamana i Te Mauri Hiko monitoring reports.

3.0 Focusing on the future

Section 2 identified our value proposition and the key influences that could impact our future. In this section, we develop scenarios to explore the wide range of possible futures, and discuss how these inform our five key strategic priorities.

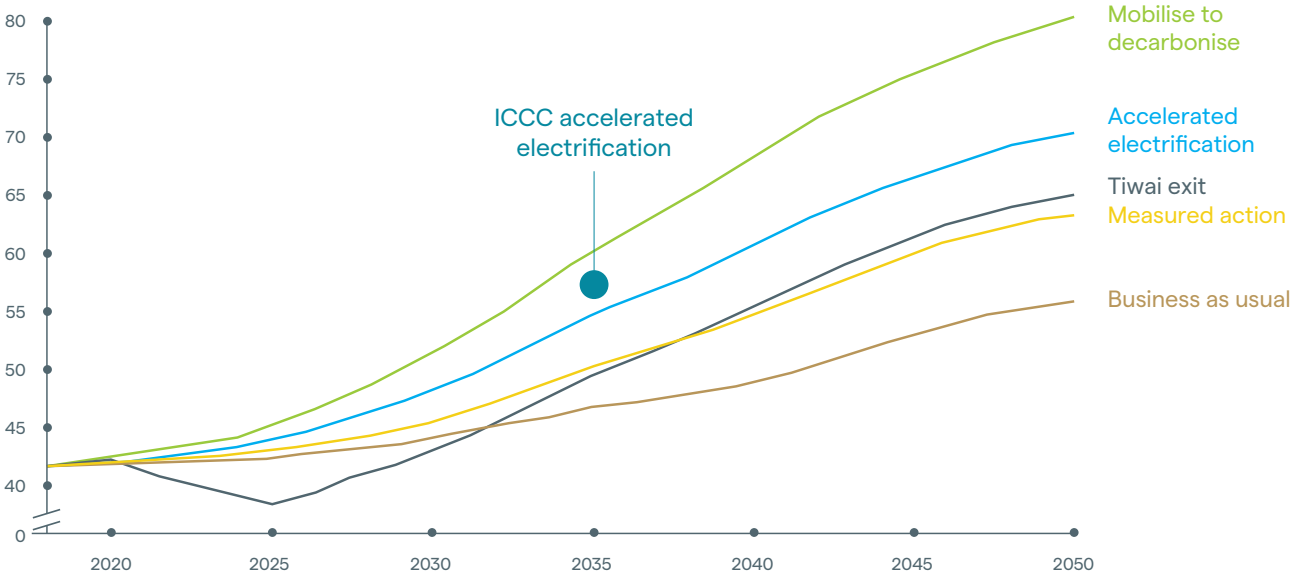
3.1 Whakamana i Te Mauri Hiko – our future scenarios

In Whakamana i Te Mauri Hiko, we describe how our context is evolving. We consider five possible scenarios to guide our strategic priorities and decisions.

In our six-monthly monitoring reports, we identify how we are tracking against each scenario, given the changing economic situation and our industry observations.

The five scenarios, and their impact on overall electricity demand, are shown in Figure 5 below.

Figure 5: Electricity demand assumptions for each scenario (TWh)



Overall, the scenarios highlight a range of possibilities and outcomes that enable Transpower to plan and to take account of uncertainty. Each of these scenarios shares a common characteristic with which we will need to grapple: in the future, the grid and power system operation will become more critical and more complex.

Alongside growing demand from electrification we will also see an increase in disruptive technologies. This is crucial to enabling decarbonisation and will encourage the higher utilisation of our assets and more resilience. However it will also demand new systems and services. Transpower's capability and capacity, and that of the broader energy sector, will need to change substantially to enable this energy future.

Recent years have shown that the history of flat demand growth and stable generation capacity is no longer in play. According to our monitoring reports, we are currently tracking towards the "Accelerated Electrification" scenario, which entails:

- An increase of electricity demand of 68% by 2050
- An increase in installed generation capacity of 137% by 2050.

Figure 6 and Figure 7 summarise the generation mix and installed capacity under this scenario.

Figure 6: Delivered electricity by generation type (TWh Accelerated Electrification)

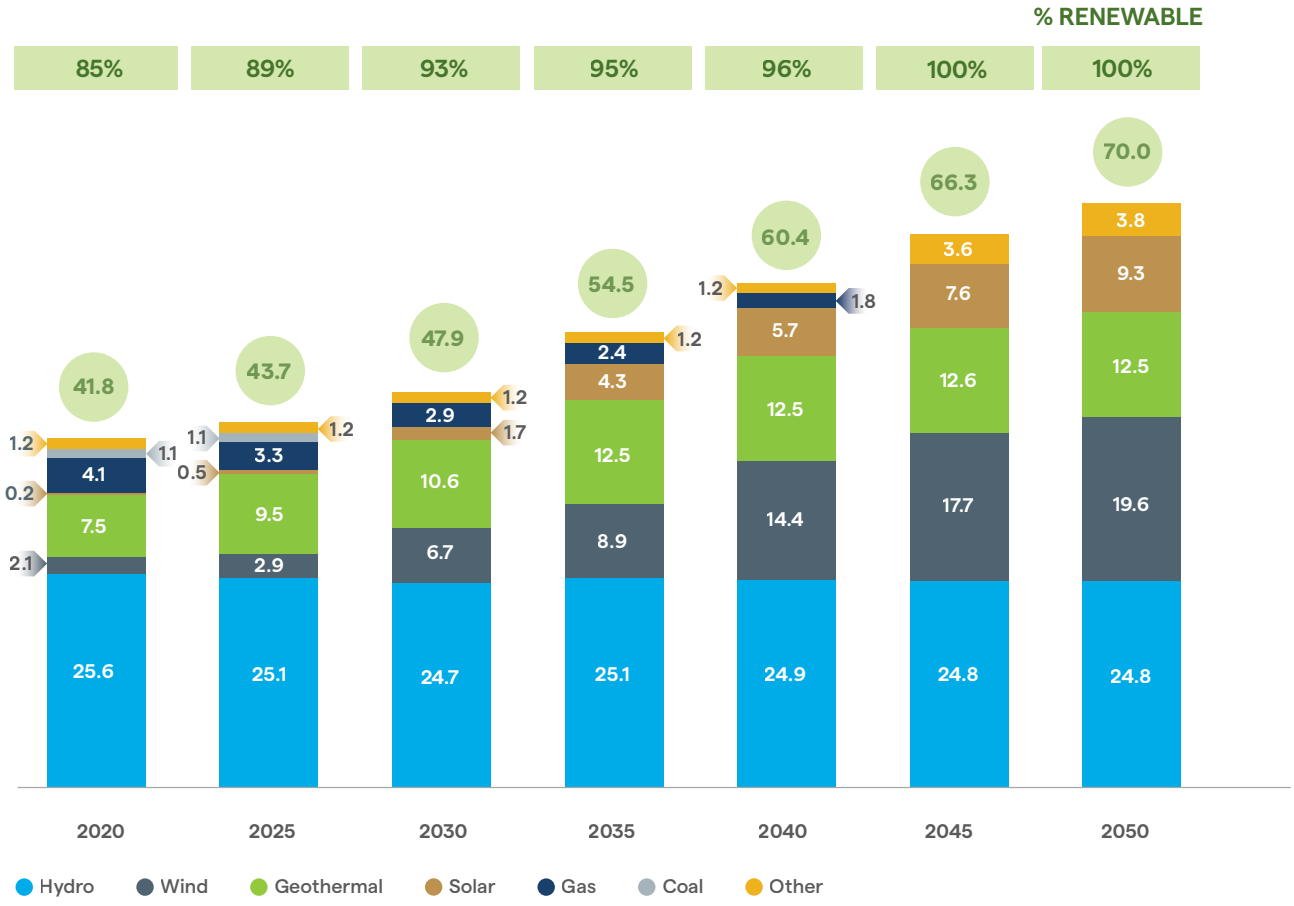
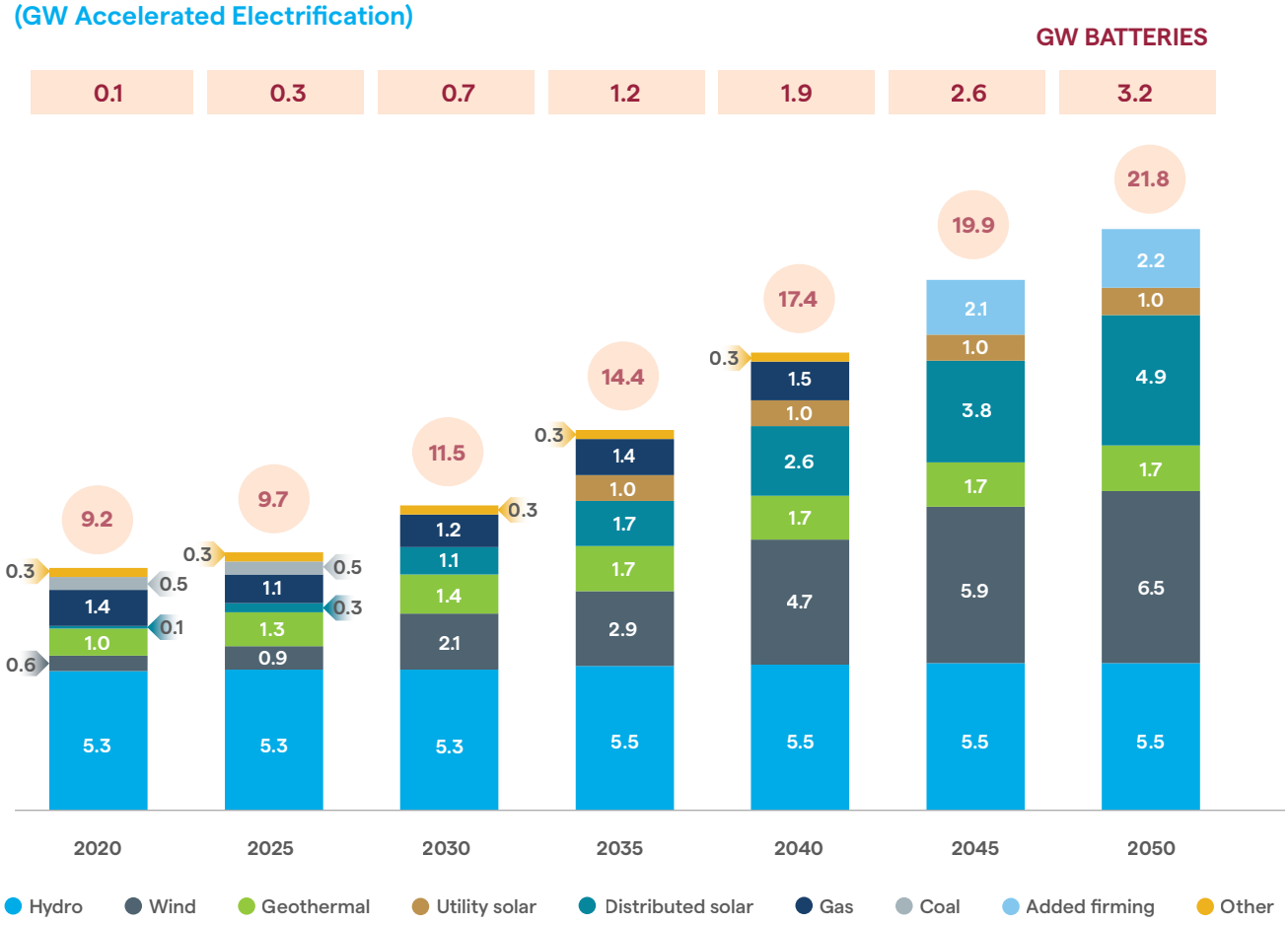
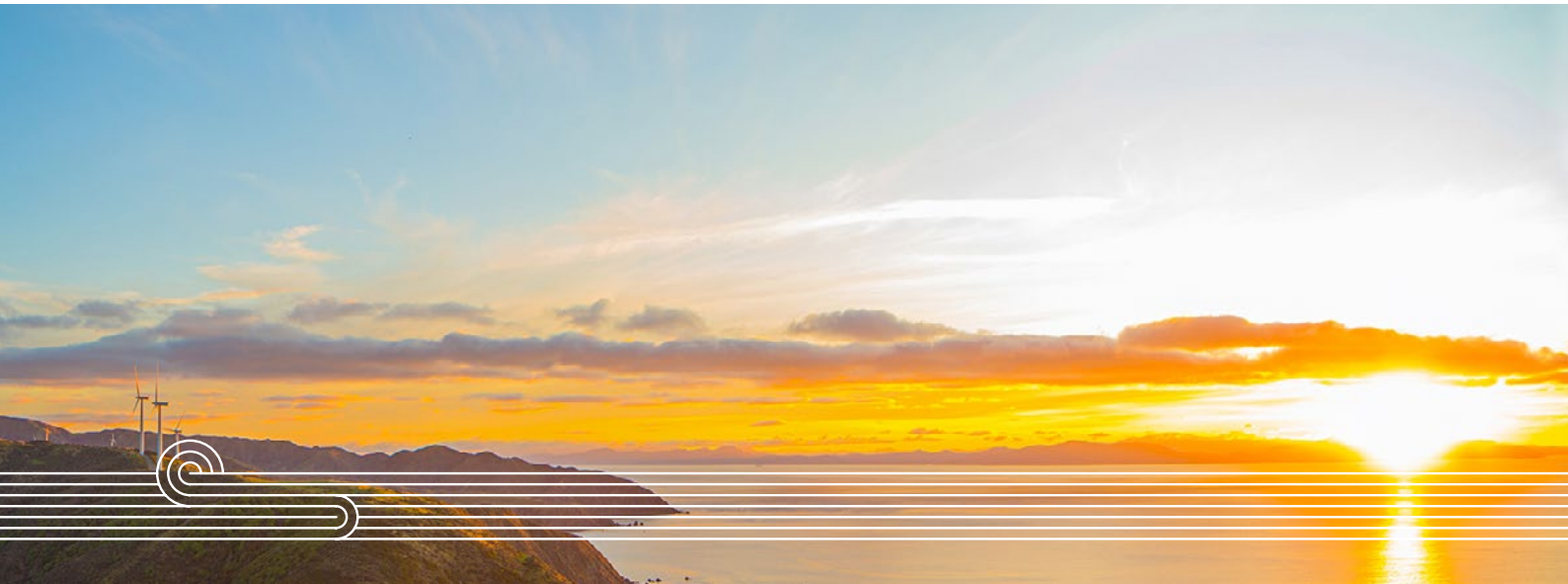


Figure 7: Generation capacity by type (GW Accelerated Electrification)





Our most recent observations confirm that we are on this this trajectory:

- In the winter of 2021, we recorded the three highest-ever demand peaks in New Zealand history. At the time of publication, six of the top peaks had been recorded in 2022 alone.
- In the last three years, we have seen the number of generation enquiries grow exponentially from an average of five per year, to more than 120 in the year ending June 2022.
- Other parts of the industry are also acknowledging the change in dynamics. In our Transmission Planning Report, where we gather electricity forecasts from electricity distributors, we can see a significant increase in demand between now and 2030 by about 700 MW. This is a direct result of the forecasted increase in process heat conversion to electricity and increase in electric vehicle usage.

In this future, we will see more variable renewable electricity resources such as solar and wind generation. Operating the system and the market will become more complex and solving for the intermittency created by variable renewable energy will become key.

The mainstream commercialisation of distributed energy resources, electric vehicles and energy management systems will intensify. These will start to significantly change the profile of demand and operation of the system. Solar, batteries and other distributed energy resources will enable load to be partially flattened within a day but will also add additional intermittency.

Despite growth in distributed supply, there will also be significant growth in grid energy demand. In the short term we do not expect batteries and distributed energy resources to be sufficient to flatten the daily or annual load curve. However, they have an important potential to shave off peaks and it is critically important that that they do not accentuate existing peaks and troughs.

While our main infrastructure assets (e.g., towers and cables) will still have multi-decade lives, our electricity system will increasingly include new technology with shorter renewal cycles (for example, about five years for software, and ten years for telecommunications assets). There will be more remotely controllable devices and more electricity data available. This should increase our scope to manage assets and operate the grid and distribution networks more efficiently.

We will need to consider the sequencing and outage headroom of large transmission investments – some regional investments may be avoidable given new transmission alternatives. However, the scale of demand growth is likely to significantly exceed the opportunity for transmission alternatives and smoothing so additional transmission will likely be required. This is especially true with the changing nature and location of generation and demand.

Many of our existing assets will need significant investment in the next couple of decades. One example is the conductors on some of our key 220 kV lines, a few of which are built over urban areas. We will need to sequence and optimise the arrangement of work carefully to manage our own and our contractors' resources, to avoid volatility in our transmission charges and to ensure sufficient capacity headroom to enable the grid outages required for this work.

Further future opportunities exist. New tools leveraging our data using learning algorithms such as artificial intelligence will increasingly play a role in managing the network as a complement to the distributed energy resources in individual homes and businesses. The increasing storage in the network could eventually create a network with extensive storage in which the grid's role shifts. This would create new opportunities for resilience and redundancy.

Lastly, we will have to work in unison with the rest of the electricity industry to ensure we remain efficient across the whole supply chain. Interaction between transmission and distribution systems operators (DSO) will enable customers to participate in electricity markets, access new services and benefit from an integrated industry.

3.2 Our strategic priorities

In Section 3.1 we discussed scenarios that forecast several possible energy futures. In this section we describe our strategic priorities.

Our priorities reflect the analysis in earlier sections, highlighting how vital the transmission grid will remain in delivering a safe, efficient, affordable supply of electricity. A range of new technologies will be required to deliver on Aotearoa New Zealand's decarbonisation goals.

Business and government will be the major contributors, but some of the investment in these technologies will be made by households. Not all of this investment will require a direct connection to the transmission system. However, the scale of electrification required, and the falling cost of grid-connected renewable technologies, suggest that Transpower's assets will play an increasingly important role in the country's energy future.

Given this, we can define our five key strategic priorities as follows. We will:

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

STRATEGIC PRIORITY 1:

Enhance our social licence to operate

Electrification of the economy will require investment in infrastructure that has not been seen in generations. To successfully deliver such a large transition, Transpower will need the support of its shareholders and wider government, including our regulators, along with the support of communities, iwi and other stakeholders – with the whole of the electricity industry working collaboratively to enable the transition, as and when needed. This support extends to both the ability to build new transmission assets and the cost implications for consumers. We will also sustain our focus on worker and public safety as a top priority, continue to deliver world-class grid security and reliability and continue our constructive and transparent approach to economic regulation.

Our enabling role in the decarbonisation of Aotearoa New Zealand will necessitate increased investment in the development of the grid. However, in all investment decisions, we will focus on the prudent and efficient delivery of that investment to manage the expected growth in our Regulatory Asset Base (RAB). Affordability of investment outcomes are always considered, and investment pathways are determined based on several factors.

The increasing need for secure transmission makes it even more critical that we not only retain but also increase our social licence with landowners, iwi and local communities, as we will continue to need corridors for our transmission assets. We believe in a collaborative approach and will actively engage with our stakeholders.

Supporting this to deliver maximum value to our stakeholders, we will continue to:

- **Improve risk management sophistication.** The majority of our investments are directed at mitigating risks (e.g., asset lifecycle management, delivering service performance, safety, or environmental outcomes) so we will continue to grow our tools and capabilities in this area to ensure investment is well targeted and proportionate (for example through new systems to measure and manage asset health).

- **Improve our ability to make decisions in an uncertain environment.** This includes ensuring that our decisions are informed by richer and more nuanced reading of our external environment, planning further ahead and more holistically and with greater stakeholder engagement. We will increasingly explore preparatory steps or investments that will open our ability to respond rapidly down the line. We will shift our emphasis from 'bottom up' tactical and reactive planning, to 'top down' strategic planning to ensure maximum effectiveness for minimum impact over time.
- **Focus on efficiency gains.** We continuously look for targeted and systematic changes that will reduce our costs and reduce pressure to invest, and we build value for money into our culture.
- **Unlock innovation across our business to help ensure cost-effective delivery of valued services.** This includes innovation in the way we define the services we are delivering; the way we use service targets to drive expenditure; the technologies (including information and analysis) we use to get more value from our assets and to manage investment pressures; assets and systems we deploy to reduce costs and enhance services; commercial partnerships and agreements we use to manage risk, enhance efficiency, and support electrification.

To complement our long-term outlook, we will adopt a balanced stance towards regulatory incentives. Incentive frameworks provide an opportunity to modestly enhance returns if we produce socially desirable outcomes (lower costs, sustainable asset management, valued services). We treat incentives as reinforcing our objectives rather than as objectives in their own right.

We will continue to recognise te ao Māori and the importance of Te Tiriti o Waitangi in our activities with tangata whenua, the whenua, and how we run our business. We will do this in partnership with iwi and by attracting, retaining, and promoting Māori in Transpower.

We will also focus on sustainability and decarbonisation opportunities. In our own business we continue to improve our sustainability with a focus on reducing greenhouse gases, building climate change resilience, managing our impacts, and protecting heritage and culture.

STRATEGIC PRIORITY 2:

Deliver services that meet our customers' needs

The electricity supply chain is intricately interconnected, so Transpower's customers cover a broad range of businesses and organisations. Transpower has the privilege to be at the centre of the energy ecosystem, coordinating players interacting with the power system to ensure the demand for electricity is met with generation at any one time, as well as transporting electricity across the country.

This unique position means that we have developed knowledge and expertise to design, build, maintain and operate the grid, and to operate the electricity market that underpins the reliable supply of electricity to New Zealand. With new generation and storage technologies emerging, households are becoming more active in the consumption of electricity, and new industries are starting up. We see it as an important part of our role that we keep learning from our customers and share our learnings with the rest of the industry.

In terms of specific customer needs, we have been shifting to a more services-driven approach across our business. This approach includes several key features.

- Engaging more closely with our customers to understand their evolving needs.
- Moving from a state where service outcomes emerge indirectly as an outcome of decisions we make, to a state where service targets inform the decisions we make across our business – including in relation to grid asset management, Information and Communication Technology (ICT), asset management and system operations.
- Driving towards least-cost (i.e., least-expenditure) solutions for delivering target service outcomes.
- Taking a holistic view of how we deliver service outcomes – considering options across our business (e.g., grid build, grid services, operations and ICT) and across the supply chain (e.g., considering actions that distributors, end users, generators or others could take).
- Continuously improving our services so that they are valued by customers and end consumers. This includes how we codify service outcomes and set targets, how we demonstrate that service targets are driving our plans, and how we show the trade-off between service targets and prices for customers and end consumers.
- Improving the customer experience of working with Transpower and challenging ourselves to develop new service offerings.

This approach has taught us the importance of engaging with customers to better understand what service they need and their expectations.

We can see that the growth of distributed generation and storage technologies will affect the services demanded from the grid as well as the opportunities to deliver energy. This is a substantial challenge and opportunity, and we need to substantially evolve our services to ensure we can deliver on this.

This involves reshaping the existing services we provide as well as supporting and developing new products and services that meet the demand of our customers. Our existing services need to be reshaped in a programme of service excellence, bringing a stronger customer lens to what we do. This could include delivering faster connection services or providing a breadth of service quality/reliability options, such as a shorter asset life or lower standard of service.

New products and services could include the support or development of new demand response services and platforms to enable energy delivery from batteries and other distributed energy resources. We will consider how we can leverage our insights and expertise to enable New Zealand's energy future, through partnerships and new services with our customers.

OUR STRATEGY IN ACTION:

Connections Management Framework

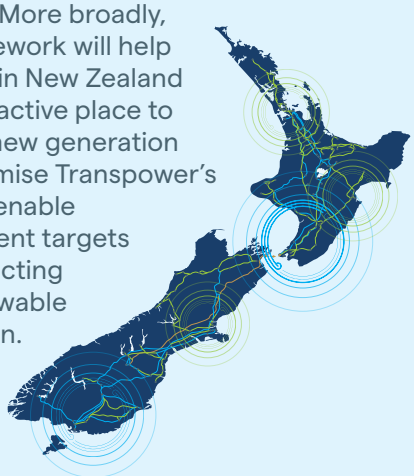
As New Zealand increasingly electrifies its economy, the national grid is critically important in enabling economic growth and potential transformation. Transpower is responsible for the safe, timely connection of new generation projects – regardless of their fuel source – and the reliable delivery of a growing volume of electricity to consumers.

In June 2022 Transpower launched a consultation on a proposed grid connection queue management system. We sought feedback on a proposal to manage applications for new generation connections to the national grid. We proposed a system that would require projects to meet key milestones in order to progress through the connection process.

We found that respondents were broadly in support of a queue system and a mechanism for ensuring the steady and efficient movement of projects through this queue.

On November 7 we launched our Connections Management Framework The Framework will allow us to focus resources on well-developed grid-connection projects and provides greater transparency for developers.

This is particularly vital at grid connection points with limited capacity. More broadly, the Framework will help to maintain New Zealand as an attractive place to invest in new generation and maximise Transpower's ability to enable Government targets for connecting new renewable generation.



STRATEGIC PRIORITY 3:

Facilitate delivery of an optimised transition path for Aotearoa New Zealand's energy system

Transpower plays a key role in enabling electrification. What is increasingly clear, however, is that the current approach to transmission investment will not necessarily lead to the least-cost transition for New Zealand. A more optimised transition process could facilitate electrification at least cost while maintaining a reliable and stable system.

Our Whakamana i Te Mauri Hiko programme is one example of the work we have shared widely with the industry. We have published the underlying data, assumptions and modelling results that led to our future scenarios. Industry players, including electricity distributors and generators, have been able to leverage this work to inform their own scenarios and forecasts.

Through this open approach, we aim to promote whole-of-system optimisation that will ultimately benefit consumers in the long term.

Whakamana i Te Mauri Hiko describes a future vastly different from today, in which electricity decarbonises the economy while meeting and supporting economic and population growth. Demand growth, a strong focus on enabling electrification while reducing electricity sector emissions, and emerging technology uptake are creating new challenges and opportunities for industry participants.

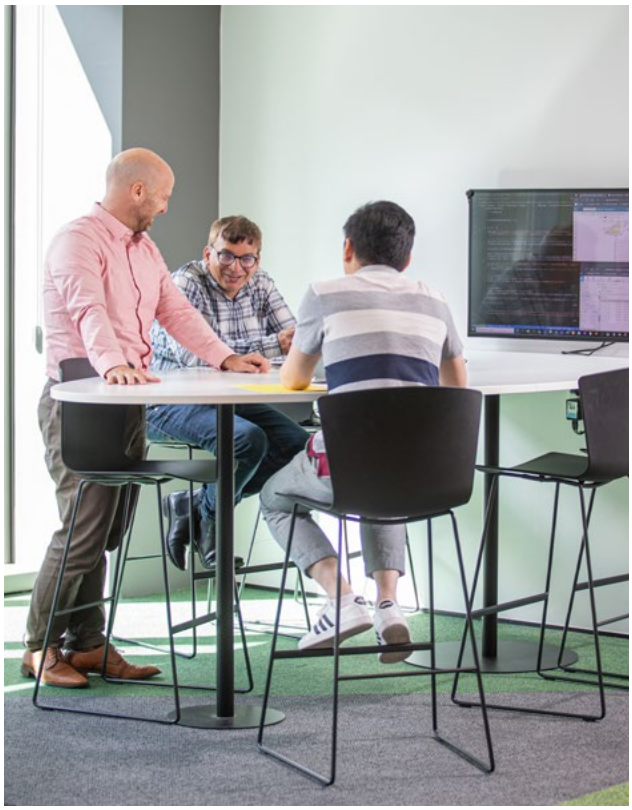
To support this future, successful adaptation by distribution and generation businesses and successful accommodation of new technologies will be important. Overall, there will be a significant and increasing opportunity for the sector to deliver more value for our customers by leveraging information, automation, and storage technologies across the supply chain.

A system-wide view will be required to make the most of these developments, and we are well placed to contribute. We will continue to play an increasingly active role as system operator working with the industry on the evolution of market and security-of-supply arrangements, and we will support successful integration of new consumer and industry technologies into the power system.

A key part of this system-wide view will be our ability to access, process and publish more data gathered from smart connected devices to assist with the operations of the transmission and distribution networks. Our central and independent system operator role gives us the scale and ability to assist the industry in that sense.

We will continue to support the effective design, operation and evolution of regulatory arrangements for our business and for distributors, as well as look for new ways to work with our distribution customers on adapting to the changing environment and taking a longer-term planning horizon.

A key part of our enablement role is effective relationships with our regulators, namely the Commerce Commission and the Electricity Authority (the Authority), and the sector's policymakers, namely the Minister supported by the Ministry of Business, Innovation and Employment. We aim to continue to build trust, credibility and respect with these and other policy and regulatory agencies and assist them in ensuring well-informed and 'joined up' thinking through the transition.



OUR STRATEGY IN ACTION:

Future Security and Resilience programme

Our electricity system needs to remain secure and resilient as Aotearoa New Zealand transitions to a zero carbon future. We know there will be new challenges to meet as well as fresh opportunities to support the transition.

We have been engaged by the Electricity Authority to help develop a shared understanding among New Zealand power system stakeholders about these opportunities and challenges as part of a programme called Future Security and Resilience.

In March 2022, the Electricity Authority published the *Opportunities and Challenges to the Future Security and Resilience of the New Zealand Power System* report, produced by Transpower. This was released alongside a draft 10-year roadmap with guidance on how to meet the report's goals and followed extensive consultation with industry on our earlier November 2021 draft report.

We value the insights we received through the Phase One feedback process and encourage industry participants and other interested parties to engage in the Authority's Phase Two consultation on the draft roadmap.

OUR STRATEGY IN ACTION:

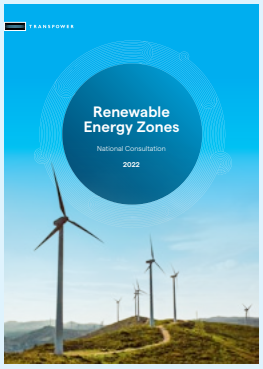
Renewable Energy Zones

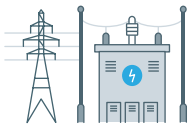
In February 2022, we unveiled and consulted on the concept of Renewable Energy Zones (REZ), following engagement with customers looking for a solution to connect new renewable generation on the fringe of the national grid.

A Renewable Energy Zone is a way of connecting new renewable electricity generation and major electricity users to the electricity network and can quickly increase renewable energy supply and its use.

Data from our pipeline indicates that several GW of wind and solar generation could be built in the next 30 years. A significant proportion of this generation is in regions where there are currently high connection costs or the first mover disadvantage could inhibit investment. REZs could enable access to this generation.

We consulted widely on the concept and published feedback and a summary of the submissions received. It is clear that collaborative commitment from numerous parties will be needed to bring REZ developments to life and we are working with key partners to address these challenges.



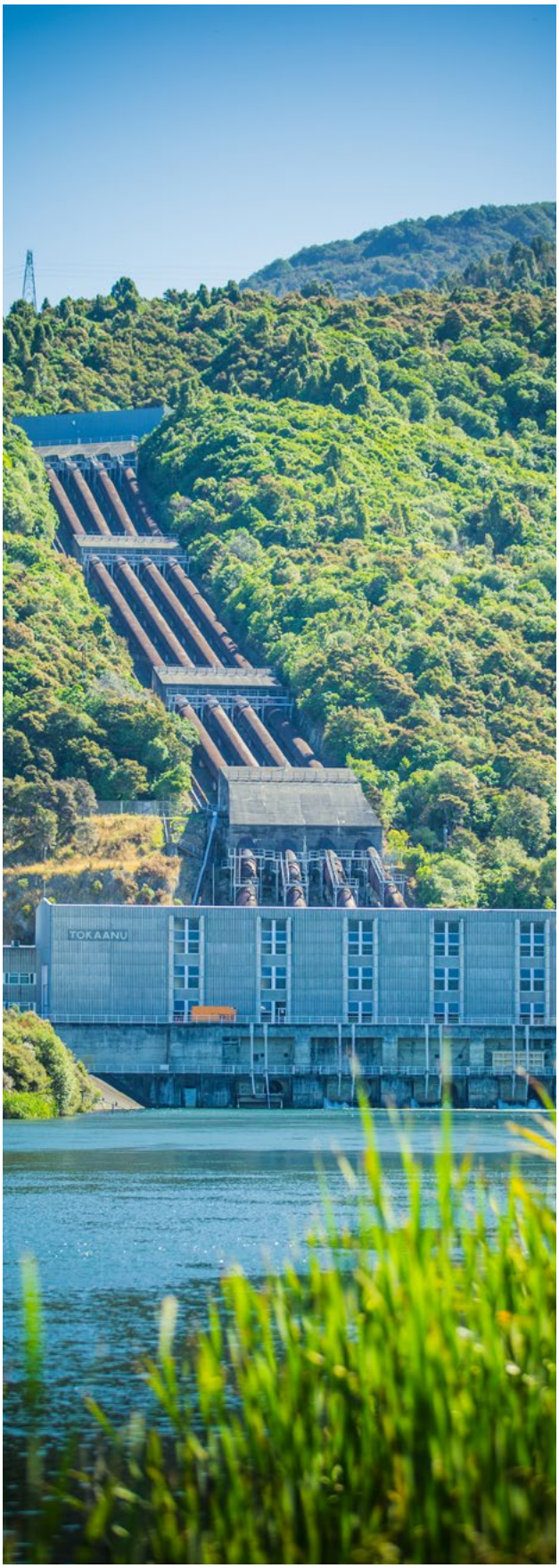


STRATEGIC PRIORITY 4:

Accelerate electrification through our asset investments

Given the anticipated growth in electricity demand and the increasing penetration of renewable generation, we need to ensure we provide sufficient transmission capacity. This involves planning for growth, maintenance and renewal. This works best where we are able to take a total cost perspective (including the balance of opex and capex), take a long-term holistic and strategic view, and engage with communities to coordinate infrastructure and expectations.

Our Whakamana i Te Mauri Hiko vision work set the context, and our Net Zero Grid Pathway and Renewable Energy Zones programmes represent the first steps in a coordinated transmission response to the challenges ahead through moderate, incremental investments. The next phase of our Net Zero Grid Pathways work programme will focus on larger-scale projects (i.e. building new transmission lines) that are expected to be necessary beyond 2035.



OUR STRATEGY IN ACTION:

Net Zero Grid Pathways

Our Net Zero Grid Pathways (NZGP) work covers our plans and investments on the backbone of Aotearoa New Zealand's electricity transmission grid to meet the challenges we face in enabling the electrification of the economy and meeting our nation's decarbonisation targets. This includes connecting new renewable generation and maintaining a secure and reliable supply of electricity.

NZGP has two phases – enhancing the existing grid backbone to 2035, and planning for the larger grid backbone that new interconnections beyond 2035 will likely require.

When we started this work, our focus was on enabling the wider transmission of the renewable energy used by New Zealand's Aluminium Smelter at Tiwai Point, originally tipped for closure in mid-2021. In March 2021 we expanded our focus to include addressing how we would enable new renewables and electrification across all of Aotearoa New Zealand out to 2035 through developments in the grid backbone.

We plan to take a least-regrets approach to identifying the range of upgrade projects needed on the grid. To do this we need industry and customer input. Transpower is only one link in the electricity delivery chain and the most efficient pathway will only be achieved if we can assist in creating a 'joined up' view of grid needs with our industry partners.

OUR STRATEGY IN ACTION:

Encouraging more transmission alternatives

To continue delivering value to customers, Transpower has been looking for transmission alternatives (TAs) to avoid building infrastructure when other solutions exist.

In July 2018, we released a consultation paper seeking feedback on our proposed process to identify and assess potential opportunities for TAs, including new distributed generation.

In 2020, as part of our Transmission Planning Report (TPR), we published an index which summarises information about future grid needs.

The index briefly describes the need, location, and an indicative date of investigation, and potential solutions. Where these grid needs arise on connection assets, distributors are a party to the options investigation and involved in determining the appropriate solution to the grid need. We have also developed an interactive tool to enable easier access to TPR data.

Since then, the consideration of TAs has become an integral part of Transpower's investigation and options analysis to traditional transmission investments. The most recent occurrence is a Request for Information (2021), followed by a Request for Proposal (2022) to procure non-transmission solutions for the investment in voltage management across the Waikato and Upper North Island.

STRATEGIC PRIORITY 5:

Advance our organisational effectiveness

Whakamana i Te Mauri Hiko sets out a future that will demand a different set of skills and capabilities from what we have today. With our breadth of reach and connection in the industry we have a role to play in fostering and preparing capability and capacity to support New Zealand's energy future. At the same time, we need to continue to focus on cost-effectiveness improvements, enable our transformation and deliver organisational development efforts.

We are working to continuously improve our processes, revising our business models and organisational structure where required. Each year, we will shape operational plans and set individual targets that align with our revised priorities and higher aspirations.

Our grid and system operator services are both asset intensive. We manage hundreds of thousands of assets valued at more than $5 billion and requiring over $470 million of maintenance, replacement and enhancement expenditure each year. We need to constantly anticipate and rapidly respond to changes, and asset management must remain a core business competence. Examples of new challenges include accommodating rapid generation connection and commissioning, planning ahead for new renewables developments, and evolving our market systems as more data becomes required to run the market.

We are continuing to grow our asset management capability to optimise our maintenance and renewal plans. This includes improving the way we collect and process information on the condition and criticality of our grid assets and feeding this information into an improved decision process. We are improving our works scheduling, grid outage management, procurement, and management of suppliers. We are also revising our asset management processes for the information systems that support our system operator service.

We recognise that data and analytics play a key role in accelerating our organisational effectiveness. Data and information are becoming more available with the mass adoption of digital devices. We will continue to develop our information systems to support new capabilities such as advanced analytics practices, smart solutions to be used in the field by our service partners, and the efficient integration of distributed devices and new market participants with our operational systems.

We are also continuing our work to improve diversity and inclusion. A diverse and inclusive workforce underpins our performance effectiveness. Our work is focused on engaging our people in the need for greater diversity, building leadership capability to support an inclusive work environment and supporting our diverse communities.

Our organisational effectiveness relies on our ability to identify and build the future workforce capabilities and capacity needed to deliver our work. This will also highlight the critical skills required and potential improvements to ways of working to enable delivery of a ramp up in activity driven by electrification and new renewable generation.


Energy Coordinator

4.0 Our way forward, our plans, and our performance

This section draws key conclusions on Transpower's way forward from the preceding analysis and connects our five strategic priorities to our long-term plans and our performance measures.

4.1 Our way forward

01

We will take a central role within industry to prepare the operation of the grid and the market in a highly renewable world.

New Zealand has a commitment to reduce its carbon emissions. Electricity is a key feature of the government's Emissions Reduction Plan that will enable the country to play its part in decarbonisation while remaining economically competitive.

Transpower will use its knowledge, experience and unique role in the industry to inform and assist policy makers, the Electricity Authority and industry participants as they navigate the challenges the electricity system will encounter as more variable renewable electricity generators connect to the network, and with the entry of new participants such as flexibility traders.

02

We will optimise the interconnected grid to meet the needs of future generation and demand.

Transpower will invest in our existing infrastructure as a cost-efficient way to deliver value for New Zealand now and in the future. We will work with customers and industry to ensure that the national grid remains fit for purpose and to support the efficient operation of the electricity market.

03

We will efficiently build grid connections to support decarbonisation.

The predicted increase in demand, coupled with the falling cost of building renewable generation, is driving a high level of interest for new connections to the grid. Grid-scale solar projects (100 MW and more) are progressing fast, with the first projects expected to export to the grid within the next two years.

Recognising the urgency with which New Zealand seeks to decarbonise, Transpower will continue to work with customers to offer efficient connection solutions to increase renewable energy penetration and support electrification.

04

We will adapt our ways of working to meet this future.

Our organisation will continue to evolve to enable a decarbonised, highly electrified future. We have made great progress since the last iteration of Transmission Tomorrow in 2018, resourcing for, and building capabilities to service our customers now and in the future. This will continue as we continue to build a dynamic organisation capable of enabling the net zero transition.

4.2 Our plans – how we will implement our strategy

Ultimately the success of our strategy will depend on the coordinated implementation of key initiatives that support and progress each priority. Therefore, these are the critical business planning processes that ensure we deliver on our strategy.

The insights we described earlier in this document reinforce the importance of our five strategic priorities. These strategic priorities will require significant focus, attention and initiatives across the whole of Transpower. At the same time, they will be brought to life as part of our key business planning processes, in particular, through our:

- Business Plan
- Operating Plans
- Integrated Transmission Plan
- System Operator ICT Roadmap

Business Plan

Our Business Plan describes Transpower's plans and their financial implications. The Business Plan is developed over six months starting in December and is signed off at the June Board meeting each year. The Business Plan details the forecast revenue, spending, resourcing and investment for each part of our business and the financial targets we plan to meet for the next 10 years. As part of the Business Plan, we also highlight short-term initiatives that will deliver on each of our strategic priorities.

Operating Plans

Our Operating Plans are developed to support the Business Plan. These detail the financial targets for a business area as well as the key initiatives that will be delivered against each strategic priority. The Operating Plans have a single-year focus and are refreshed each year.

Integrated Transmission Plan

Our Integrated Transmission Plan (ITP) describes the plans we have for our transmission network over the coming 15 years. The Integrated Transmission Plan is updated and published each year. Every fifth year it forms our proposal for a Regulatory Control Period. The ITP contains three key supporting documents:

- The Transmission Planning Report (TPR)
- The Grid Outputs Report
- The Asset Management Plan (AMP)

The ITP is the result of consultation and discussion. The Transmission Planning Report focuses on the changing capability of the grid – detailing our plans for transmission line and substation changes, upgrades, additions and enhancements over the coming 15 years. Our Grid Outputs Report outlines all of our service levels and incentives. The Asset Management Plan covers the renewal and refurbishment of our existing assets, including our information systems, and summarizes our future expansion plans.

System Operator ICT Roadmap

Our System Operator ICT Roadmap describes our plans to develop the system operator service. This includes investing in systems to maintain resilience, and investing in functional initiatives to maintain existing system operator service levels in the face of expected changes and evolution of the market.

4.3 Our performance

The five strategic priorities that drive our planning will also ultimately drive our performance, so we have established key targets and areas to track.

We aim to have a mix of forward and current indicators, allowing us to show trajectory as well as results. We have identified six key areas of success that represent the five enabling roles we have: People; Customers; Relationships; Safety; Sustainability; and Financial.

We track each of these areas each month and report on them in our annual report. All Transpower employees also review their own focus areas on a quarterly basis. Our strategy and performance framework is intended to provide line of sight for employees so that they can connect their own individual performance and success to Transpower's performance and success.

People
Diversity in our approach and excellence in our operation

Customers
Ensuring a secure and reliable supply for all connected parties

Relationships
Stakeholder needs are met and relationships are enduring

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

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

Financial
Delivering results that meet expectations and create a sustainable business

Next steps

Transmission Tomorrow is our strategy. It describes our context – Whakamana i Te Mauri Hiko – and the strategic priorities of the organisation as we support New Zealand's electrification.

There are major challenges in our future. Our ongoing work and analysis show that the trajectory we have been on since the last revision of Transmission Tomorrow in 2018 is serving us well and broadly remains valid. Some of our recent work – Net Zero Grid Pathways, Renewable Energy Zones, and the Future Security and Resilience programme – have been enabled by this strategy and are helping to make a positive contribution to New Zealand's decarbonisation journey.

While a lot of this strategy naturally focuses on the assets that we steward and the electricity system we manage, we cannot deliver our strategy without people. Whether you are a Transpower employee or one of our business partners, it is the skills, expertise, passion, and commitment to our purpose that allows Transpower to continue to deliver value to New Zealand.

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