

Annual Report

2022/23



1 July 2022 – 30 June 2023

**ELECTRICITY
AUTHORITY**
TE MANA HIKO



Contents

Purpose of this Annual Report

This Annual Report is the Electricity Authority Te Mana Hiko's formal report to Parliament on its results for the period 1 July 2022 to 30 June 2023.

The report contains information required by sections 150–155 of the Crown Entities Act 2004. Further information about the Authority and its work is available from www.ea.govt.nz

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Frequently used terms and abbreviations

There are many technical terms used in the electricity sector and some of these occur in this report. To assist readers, frequently used terms and a list of abbreviations are provided at the end of the report.



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Our year in review

Consumers' best interests are at the heart of everything we do. This year we worked on enhancing our monitoring, compliance and policy work to develop the electricity market and improve long-term outcomes for New Zealanders.

MONITOR, INFORM AND EDUCATE

New website

www.ea.govt.nz launched with clear journeys for the public and industry to improve understanding of the industry and regulation

March 2022



922,495

website views up 37% from 2021/22

23

Eye on electricity articles published to provide insights on what's happening in the industry

New compliance portal launched

Making it quick and easy for industry to report breaches, view their breach reports and join investigations.

Two industry simulation exercises

To help the industry test communications and operational processes for electricity system events

May 2023

OPERATE THE ELECTRICITY SYSTEM AND MARKETS



New commercial market-making scheme agreed

To enhance the wholesale electricity futures market

September 2022

Real-time pricing implemented

The biggest change to the wholesale electricity market since it started in 1996

November 2022

Removal of requirement for distributors to make payments for avoided cost of transmission to reduce the overall cost of electricity for consumers

January 2023

Dispatch notification and dispatchable demand enhancements

Implemented to help increase renewable generation

April 2023

New transmission pricing methodology

Implemented to encourage more efficient use of the grid and more efficient investment in transmission and generation assets

April 2023

4

Initiatives implemented to better manage peak winter electricity demand

March 2023

FINALIST

For the Innovation in Energy Award for the Energy Excellence Awards for our work on real-time pricing

June 2023

ENFORCE COMPLIANCE

160 compliance decisions
up 29% from 2021/22

2

Two compliance cases referred to the Rulings Panel, an independent body that helps enforce the Electricity Industry Participation Code 2010

PROMOTE MARKET DEVELOPMENT



Competition in the wholesale market

A suite of initiatives chosen to promote competition in the wholesale market to constrain the exercise of market power and facilitate investment in new renewable generation

May 2023

15
Code amendments

To improve market design and operation

Two Code exemptions and Code amendments were approved to enable an energy sharing trial to give consumers more choice about how to use the electricity they produce and consume

Common Quality Technical Group

Established to provide independent advice to our review of common quality requirements of the Code. This helps ensure our decisions are well informed and reflect the needs of the industry

June 2023

PROTECT THE INTERESTS OF CONSUMERS

New statutory objective

Under the Electricity Industry Amendment Act 2022 (together with the Electricity Industry Act 2010 referred to as "the Act") expanded our role to protect the interests of domestic consumers and small businesses about their supply of electricity

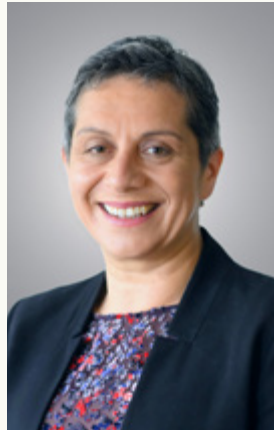
December 2022

Review of retailers' self-assessment with the Consumer Care Guidelines completed

August 2022

486,000
results sessions

Generated for the Powerswitch price comparison website that is part-funded by the Electricity Authority. Users of Powerswitch typically save between \$300 and \$400 per year when they change power plans



Message from our Chair and Chief Executive

Tēnā koutou katoa. On behalf of the Electricity Authority Te Mana Hiko, the Board and kaimahi, we are pleased to present our Annual Report for 2022/23.

The Electricity Authority has been through significant change at the governance and leadership levels over the past year. The previous Chief Executive James Stevenson-Wallace left in October 2022 after four years at the helm and in early July 2023, we farewelled Dr Nicola (Nicki) Crauford, after nearly three years as Chair.

Both James and Nicki made a significant contribution to the Authority and have paved the way for the organisation to continue working alongside others to achieve the Authority's work. Our thanks to them both, for their leadership and commitment to the success of both the Authority and the wider sector.

In addition to a new Chair and new Chief Executive, we welcomed new Board members and new senior leaders. Paula Rose, Erik Westergaard, and Dr Cristiano Marantes have joined the Board. They have all hit the ground running and are collectively making a significant contribution to the Authority's governance work.

Special mention and thanks must go to Lana Stockman and Allan Dawson for their ongoing service and wise counsel through our own transition.

Around the leadership table, we are pleased Airihi Mahuika, Andrew Millar and Sally Aitken have joined the organisation

as general managers. They bring an invaluable mix of skills and experience that will help us to progress our key priorities for now and in the future.

As we look ahead, we must take with us lessons from the past. This Annual Report allows us to pause and reflect on our 2022/23 performance, the work we've delivered and feedback from stakeholders. We have been working hard to stay across and ahead of the transformation to electrification that is already underway in the electricity sector.

The opportunities of electrification are significant, as are the immediate and emerging challenges. The Authority is focused on ensuring the transition is as efficient as possible, while maintaining energy security, system adaptability and affordability for consumers.

We recognise that existing regulation needs to keep up with a system that is fundamentally changing and we no longer have the benefit of time or a steady environment in which to develop and implement incremental reform. We also have areas that we need to improve on.

The Authority is responding by working differently, ensuring market rules enable, rather than hinder, better outcomes. We are working to shift gear, move faster, collaborate more and provide regulatory certainty through increased transparency,

engagement and fit-for-purpose regulation. And we need to do all this while still making sure consumers enjoy a reliable supply of electricity.

This shift in gear requires an uplift in capacity and capability. The Authority has been funded for an electricity industry of the past and we are not currently resourced to deliver to the expectations of industry, Government and the people of New Zealand. We've been running on a budget with only incremental increases since 2010, facing increasing costs for our critical service providers, while delivering against our functions and towards New Zealand's strategic ambitions. We've been managing by making trade-offs, but there's a lot of complexity and important mahi to do – and not a lot of time.

Acting now is a priority.

With great change comes the opportunity to reset expectations and chart the course of the organisation for the next few years. Our statutory objectives and strategic ambitions continue to drive our work with our kaimahi working alongside stakeholder groups to ensure consumers have the benefit of competition and innovation, a reliable electricity supply at least cost, and the interests of small consumers are protected.

Our new Board and new leadership team are eager to work alongside industry, agencies and groups to keep up the pace of change and to support the electrification of New Zealand and ensure a resilient system at the least cost to all consumers.

Thanks to our stakeholders for welcoming in the new leadership team and Board – and for your active participation, valuable insights, and challenging conversations. We can't and won't regulate in isolation – your engagement ensures we are placing our focus in the right places and builds our understanding of what is happening on the ground, supporting us to make the right decisions at the right time.


And we acknowledge and thank all our kaimahi for all the mahi that has been achieved in this past year – reading through this Annual Report, you will see there is a lot. And while there is still much to do, we can take a moment to celebrate the progress made over the past year.

HE WHAKATAUKĪ

**Ko te pae tawhiti,
whāia kia tata,
ko te pae tata,
whakamaua kia tina.**

**Seek out the
distant horizons,
while cherishing
those achievements
at hand.**

This whakataukī describes the process and intention of this report as it lifts our view to the future but keeps us focused on the changes we need to make today. It recognises the skills and knowledge we have gained and how we use that as a foundation for the path forward.



**Our purpose is to enhance
New Zealanders' lives, prosperity
and environment through electricity.**

Keeping the power on through winter

All consumers should be able to keep warm in the middle of winter and not worry about power cuts.

Managing electricity supply in the middle of winter can be tricky and supply can be tight at certain peak times of the day when everyone is using power.

In 2022, Transpower, as the system operator, indicated supply conditions in winter 2023 could be tight. The Authority responded quickly to help ensure the power would stay on for New Zealanders.

We developed 11 options to better manage the risk in winter 2023 and invited public feedback. The options ranged from the relatively simple, such as improved information on resource availability and wind forecasting,

through to the more complex, such as new market products and ancillary services. The Authority was focused on agreeing on options that would provide the most benefit for consumers – now and in the future. In March 2023, we decided to

- make better information available on headroom in the supply stack
- provide forecast spot prices under demand sensitivity cases
- get a system operator review of wind offers based on external forecasts
- clarify the availability and use of discretionary demand control.

Thanks to the system operator and the support of the industry, all four actions

were implemented, and the benefits are already being realised. For example, the system operator has greater visibility of available discretionary demand for lines companies during a low residual situation. If needed, they can call on this discretionary demand and reduce the likelihood of consumers being disconnected.

This work has improved the management of potential tight supply situations for winter 2023 and for years to come. The changes have improved certainty and decision making to efficiently manage situations in advance and ultimately improve the reliability of the system for consumers.



About us

The Electricity Authority Te Mana Hiko (Authority) is the independent Crown entity responsible for the governance and regulation of New Zealand's electricity industry.

Our role and wider context

We regulate the electricity industry, set the market rules and conduct operational activities to ensure the electricity system and markets run effectively. We work to create a competitive, reliable and efficient electricity industry for the long-term benefit of consumers and New Zealand. In December 2022, an additional objective was added to protect the interests of domestic consumers and small business consumers in relation to the supply of electricity to those consumers.

We operate in the wider government context. The Authority has regard to the Government's expectations communicated in the enduring letter of expectations for Crown entities and in the annual letter of expectations from the Minister of Energy and Resources.

New Zealand has committed to achieving net zero greenhouse gas emissions by 2050.

Electricity has a key role to play in achieving New Zealand's climate ambitions. The changes required, and the speed at which these changes must be implemented, is unprecedented. The Minister's letter of expectations 2022/23 to the Authority emphasised the importance of the transition and the Authority's role:

“ The Authority will play an important role in this transition, enabling consumers to benefit from a competitive, reliable and efficient electricity industry. This role requires the Authority to be agile in considering and fostering innovative approaches to the issues of tomorrow as well as today, such as multiple trading relationships and virtual power plants.

Our strategic direction

In our Statement of Intent 2021–2025, we set out the Authority's strategic framework along with impact measures and targets for our strategic intentions.

As the regulator of New Zealand's electricity system, our work provides a platform for the country to achieve its aspirations for enhanced quality of life, prosperity, the environment, and the transition to a low-emissions economy.

We're working with the sector to enable the transition, electrify the economy and achieve a net zero carbon future.

Our strategic framework sets out five ambitions for the sector that guide how we prioritise our work. These strategic ambitions focus us on progressing and achieving our statutory objectives and purpose to ensure we create wide long-term benefit for New Zealand.

Our purpose

To enhance New Zealanders' lives, prosperity and environment through electricity.

Statutory objectives

To promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers.

To protect the interests of domestic consumers and small business consumers in relation to the supply of electricity to those consumers.

Strategic ambitions

- We want **consumer centricity** to guide regulation and the industry.
- We want **low-emissions energy** to electrify the economy.
- We want to build **trust and confidence** in the industry for all stakeholders.
- We want to see **thriving competition** delivering better outcomes for New Zealanders.
- We want to see **innovation flourishing**.

Our desired impact

- Electrification enables New Zealand's transition to a net zero carbon economy.
- Market competition enables a better energy future driving progress, affordability, efficiency and better outcomes for New Zealand.
- The electricity system evolves through innovation and disruption, by industry participants and the Authority thinking beyond the status quo.

Our future-focused priorities

Our Annual Corporate Plan 2023/24 sets out our priorities:

- **System security and resilience** – Making sure market rules enable innovation and investment in generation while ensuring a reliable electricity system.
- **Enabling investment and innovation** – Promoting investment and supporting the uptake of new technologies for more dynamic management of the power system.
- **Consumer protection** – Improving protections for consumers and small businesses, improving how we monitor the retail market and the conduct of retailers.
- **Monitoring, compliance, education and enforcement** – Promoting a stable regulatory environment by strengthening our compliance activities and improving data disclosure to support decision making.
- **Building trust and confidence** – Improving our capability and capacity to deliver.

Protection of small consumers

As of 31 December 2022, the protection of small consumers was added to our statutory objectives. In June 2023, we amended our Statement of Intent 2021–2025, introducing interim outcome measures to reflect our performance in this area. We will begin reporting results of these in 2023/24. However, the baselines taken in 2022/23 are included in Appendix C.

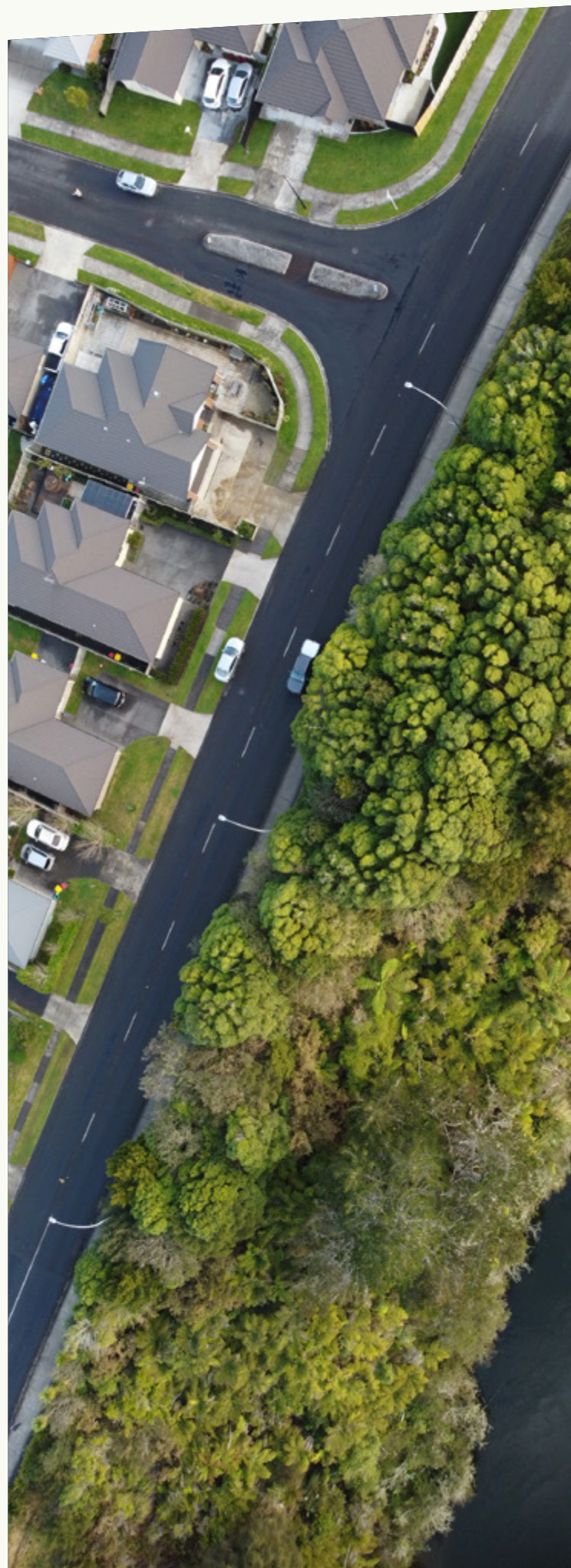
Working in partnership

An important part of delivering our mahi is working with and through others. Our relationship and work with our monitoring agency, the Ministry of Business, Innovation and Employment, is important and we value productive working relationships with all other government partners. By working better together we can deliver better outcomes for all New Zealanders at least cost.

Our stakeholders gave a clear and loud message in our perception survey in 2022/23 that they wanted certainty and pragmatism from us as well as leadership and future focus. They also told us they want to work more with us – more collaboration and more engagement out in the field.

We will continue to build productive relationships with all our stakeholders, including industry and consumer groups, as we work together towards a low-emissions future.

This Annual Report should be read alongside our Statement of Intent 2021–2025, Statement of Performance Expectations 2022/23, Annual Corporate Plan 2022/23 and the Minister's letter of expectations 2022/23.



Our performance: impacts and outcomes

Assessing our performance

As set out in our Statement of intent 2021–2025, we measure our performance against how we progress our strategic ambitions and statutory objectives using impact and outcome measures.

We have impact measures for each strategic ambition to measure how our work achieves our strategy. We then have outcome measures for our main statutory objective to measure how successful our work has been at achieving competition, reliability and efficiency for the long-term benefit of consumers.

Measuring our impact and outcomes

We measure our impacts and outcomes against the following ratings and criteria.

Rating	Criteria
Achieved	Result is heading in the direction of the desired trend
Maintained	Result remains stable compared to the previous year
Not achieved	Result is not heading in the direction of the desired trend

We seek to continuously improve our performance year on year to contribute to improved long-term benefits for consumers. We have desired trends to confirm the direction we want to see the results move towards. Due to the long-term nature of our ambitions and outcomes, it may take several years for measurable change or trends to become clear.

We take an evaluative approach to measuring our progress. Each year we collect qualitative and quantitative information via the following methods:

- **Authority data** – Information collected or held by the Authority, for example, website analytics, monitoring data and database statistics.
- **Industry participant survey** – An online survey of electricity industry participants and stakeholders. The survey focuses on respondents' perceptions, as a representative of their organisation, about the Authority's strategic ambitions and statutory objectives. About 400 randomly selected people were invited to take part and 118 people responded in 2022/23.
- **Consumer survey** – An online survey of a nationally representative sample of about 1,000 New Zealanders on electricity consumers' perceptions of the Authority's statutory objectives. This survey had 1,006 respondents in 2022/23.
- **Independent assessment** – An independent assessment of the Authority's impact measures against its strategic ambitions. This involves desk research, reviews of project documentation and interviews with 15 Authority staff.

These sources work together to paint an overall picture of our performance that we use in our reporting.

The full survey results and MartinJenkins' independent assessment will be available on our website in December 2023 at www.ea.govt.nz/about-us/corporate-documents/

Our performance against our strategic ambitions



Low-emissions energy

The Authority has a critical role to play in supporting New Zealand's transition to net zero greenhouse gas emissions by 2050. Our work programmes are focused on supporting an efficient transition in which reliability is maintained at least cost to consumers.

In 2022/23, we achieved two significant milestones to support the transition:

- **Real-time pricing (RTP)** came into effect on 1 November 2022. This changed how spot prices for electricity are calculated to better reflect real-time market conditions. It's the biggest change to the wholesale electricity market since it started in October 1996. We also introduced dispatch notification and dispatchable demand enhancements to facilitate renewable generation for the low-emissions transition.
- **New transmission pricing methodology (TPM)** came into effect on 1 April 2023. The completion of the Authority's transmission pricing review improves certainty for investment in new renewable generation. Better transmission pricing signals support the right investments being made at the right time and in the right places and deliver long-term benefits for consumers.

The Authority is acutely aware of its role to provide certainty for the industry and for all consumers as Aotearoa's electricity system transforms to support the transition. The scale and rapid pace of technological change means we need to provide regulatory certainty through increased transparency, engagement, predictability and collaboration. We have heard the request for more certainty from across all our stakeholders, and we will be working hard to respond over the next year.

The independent assessment carried out by MartinJenkins found that:

“...the Authority is rapidly streamlining their processes to maintain a level of flexibility with their future work programme. We've seen evidence of a greater sense of adaptability through the prioritisation and deprioritising of work programmes, especially in the 'Future security and resilience indicators', which monitor changes in the opportunities and challenges of the power system.

This is a great step forward in facilitating an efficient transition to a low-emissions economy. On the other hand, there is an opportunity here to amplify engagement in order to get the most efficient and impactful outcomes that are realistic, consumer-centric, and market-centric. The level of engagement in such a rapidly transformative area of work directly impacts the level of trust and confidence and reliability the Authority holds in the sector.¹

¹ MartinJenkins independent assessment p.22

Our impact measures for low-emissions energy

Impact	Measure	Desired trend	2020/21 result	2021/22 result	2022/23 result
Our electricity market settings enable an efficient transition to reliable low-emissions energy in New Zealand	Improved participant confidence in settings to facilitate efficient transition	Increasing	37%	33%	Achieved. 36% of participants surveyed agreed that market settings will support an efficient transition.
	Improved participant confidence in reliability as NZ transitions to low-emissions energy	Increasing	48%	52%	Not achieved. 37% of participants surveyed agreed that the electricity system will maintain reliability through the transition.*
	Assessment of the ability of market settings to facilitate an efficient transition to low-emissions energy	Increasing	New measure introduced in 2021/22	4.2 out of 5	Achieved. An independent assessment rated 4.3 out of 5 for the Authority's impact on enabling an efficient transition to reliable low-emissions energy.
Network and market price signals support the lowest overall cost to consumers	Level of implementation of cost-reflective network prices, transmission pricing and real-time pricing	Increasing	Network pricing average score: 3.0 out of 5 TPM is on track. RTP project is on track.	The network pricing annual scorecard assessments were on hold in 2021/22. TPM is on track. RTP project is on track.	Achieved. Network pricing: The average score for 2023 distribution pricing scorecards was 3.9 out of 5. Distributors are moving towards more cost-reflective pricing in their pricing methodologies. 28 out of 29 distributors improved their score between the 2021 and 2023 assessments. Transmission pricing: The new TPM came into effect on schedule on 1 April 2023. RTP: Real-time pricing came into effect on schedule during 2022/23.
A suite of statistics shows overall improvement**	Overall improvement in the following statistics: <ul style="list-style-type: none"> Increased occurrence of demand bids setting spot prices Capacity and energy margins are within efficient bounds or are moving towards those bounds, as measured by the annual security assessment Investigation of reliability events does not identify systemic issues, as measured by case-by-case analysis 	Increasing	New measure introduced in 2021/22	Two of the three statistics improved or maintained	Maintained. Two of the three statistics improved or maintained. <ul style="list-style-type: none"> To date, there have been no dispatchable demand bids to set spot prices. The latest security of supply annual assessment (2023) indicates energy margins are within efficient bounds. There were no reliability events in 2022/23.

Notes:

* Survey respondents' confidence in reliability during the transition to low-emissions energy was impacted by increased uncertainty as thermal generation is retired and more intermittent generation is brought online. There were concerns about the pace of change required to maintain reliability during the transition, especially as electricity demand increases. We will take these views into consideration as we continue to support the transition to low-emissions energy.

** These statistics are also used to measure against one or more of our outcomes: competition, reliability, efficiency. Further details are included in Appendix A.

Our related outcome measures for low-emissions energy

The outcome measures below are used to assess performance against our statutory objectives and support the delivery of our low-emissions energy ambition. Further information on the results is included in *Our performance against our statutory objectives* on page 30.

Outcome	Related outcome measure	Desired trend	2022/23 high level result
Competition	Improved participant perceptions of the competitiveness in electricity markets	Increasing	Maintained
Reliability	Improved participant perceptions on the efficiency of supply reliability	Increasing	Not achieved*
Reliability	Overall improvement across a suite of statistics on efficient levels of reliable electricity supply	Improving	Achieved
Efficiency	Improved participant perceptions of the efficiency in electricity markets and transmission and distribution arrangements	Increasing	Maintained
Efficiency	Overall improvement across a suite of statistics on electricity system and market efficiency	Improving	Achieved

* More detail is available in our outcome measures for reliability on page 31.

Ensuring the future security and resilience of the electricity system

Our future security and resilience multi-year work programme focuses on ensuring Aotearoa's power system remains stable, secure and resilient during the transition at the least cost to consumers.

This year, we prioritised a review of the common quality requirements of Part 8 of the Electricity Industry Participation Code 2010 (Code), which was identified as high priority by industry. The existing requirements could disadvantage some evolving technologies over others, particularly inverter-based resources such as wind and solar. This could undermine the ability to achieve a competitive, reliable and efficient industry.

We established a technical group of 11 industry representatives to provide independent advice. This group helps ensure our decisions on common quality are well informed, reflects the needs of the industry and supports future innovation.

Stakeholder engagement is critical to the success of regulatory reform. This year, we consulted on:

- the key issues identified with Part 8 of the Code
- our roadmap of activities to address the opportunities and challenges affecting security and resilience
- the key issues, underlying causes and potential options to ensure an orderly thermal transition.

The feedback received was valuable to our work and continues to inform our work programme.

In May 2023, we developed a set of indicators to support us and industry participants to monitor changes that could affect the security and resilience of the power system. The indicators are designed to be a low-cost tool to help inform the prioritisation of our activities. The indicators will be reviewed every six months to ensure they remain fit for purpose and to add new indicators as different data sources become available.



Consumer centricity

At the Authority, we put consumers front and centre of what we do and how we do it. Consumer centricity is central to the development of New Zealand's energy system to drive competition and increase consumers' ability to manage their electricity.

The Authority has been working hard to educate a wider audience about the electricity industry and our role as the regulator. This was noted as an area of improvement in the independent assessment.

“ The Authority has made significant strides in building availability of educational resources over the last year, which should be applauded. They have begun leveraging these resources through actively linking users through interconnected topics, allowing users to explore this educational content in a natural and engaging manner, for instance in ‘The forward electricity market explained’. This represents an impressive step forward for solidifying the Authority’s role in the industry as not only a regulator, but an educator.²

Uncertainty about the future, the cost of living crisis and major weather events contributed to survey participants questioning the electricity system’s ability to meet their needs. Survey respondents noted the challenge for regulation to keep up with change and the importance of innovation to respond to changing needs, increased electrification and energy hardship.

We know we need to better communicate and engage with all consumers to capture the diverse voices necessary for well-informed decision making.

The independent assessment shows we are working hard in this area, but we are keen to do better.

“ The Electricity Authority clearly has an intentional focus on consumers when making decisions. In the evaluated documents, the trend of impacts on retail consumers being noted and considered in New Zealand is evident, and the decisions being made from these projects indicate that it is front of mind for the Authority right through the decision-making process.³

The independent assessment also found opportunities for improvement, including working closer with consumer advocacy groups and engaging with a broader consumer audience to educate and encourage consumer feedback that we can incorporate into our work.

The Authority has recently signed a memorandum of understanding with the Consumer Advocacy Council (15 August 2023), and we will continue to explore different ways to capture consumer voice and evidence to inform our decisions.

“ Understanding domestic consumer preferences and risk appetite does not necessarily have to be conducted as part of specific projects. There is an opportunity to engage with consumers through focus groups or surveys, to better understand preferences and behaviour, and use that as the evidence base with which the Authority can confidently speak on their behalf across a variety of projects.⁴

² MartinJenkins independent assessment p.3

³ MartinJenkins independent assessment p.11

⁴ MartinJenkins independent assessment p.4

Our impact measures for consumer centricity

Impact	Measure	Desired trend	2020/21 result	2021/22 result	2022/23 result
Our decisions improve the way the sector meets consumers' needs	Improved participant perceptions in the electricity system's ability to meet consumers' ongoing needs	Increasing	44%	48%	Not achieved. 41% of participants surveyed agreed with the range of statements on the electricity system's ability to meet consumers' ongoing needs.*
	Assessment of the quality of our decision-making processes on meeting consumers' needs	Increasing	3.9 out of 5	4.25 out of 5	Not achieved. An independent assessment rated 4.1 out of 5 for the quality of the Authority's decision-making processes on meeting consumers' needs.**
	The customer transfer process works effectively in the event of retailer default	Improving	Achieved	Achieved	Achieved. Although the event process has not transferred customers in the 2022/23 financial year, the trader default processes have been reviewed and the system audited (as part of the service provider's annual audit).
Consumers are engaged with through our decision-making processes	Assessment of the quality of our engagement with consumers in our decision-making processes	Increasing	3.7 out of 5	4.1 out of 5	Achieved. An independent assessment rated 4.3 out of 5 for the quality of engagement with consumers in the Authority's decision-making processes.
	Increased consumer awareness of the impact of the Authority's role and the benefit our work has on them	Increasing	N/A (new measure in 2021/22)	2021/22: The Authority appeared in 222 media items with 18 positive, 38 negative and 166 neutral. 77 social media items were published across LinkedIn and Twitter. These had 54,424 impressions (views) with a 3.94% engagement rate.	Achieved. The Authority was mentioned in 574 media items. 297 social media items were published across LinkedIn (154; 4.5% engagement rate) and Twitter (143; 3.4% engagement rate).

Notes:

* Survey respondents mentioned high electricity prices, the cost-of-living crisis, future uncertainty and weather events as impacting the electricity systems' ability to meet consumer needs, and noted that some of these were external factors. Others felt the pace of regulatory change hampers the sector's ability to keep up with changing needs, and noted that innovation was critical to meet changing needs, and address energy hardship and increased electricity demand. Conversely, some noted that the general reliability of electricity showed that the basic need of keeping the lights on was being met. We will take these views into consideration as we continue to promote consumer centricity within the electricity industry.

** Although this measure was lower than the previous year, a 4.1 rating out of 5 is still a strong result. The MartinJenkins independent assessment report notes that, while the result was very good, there are further opportunities to improve how we recognise the needs of, and potential impacts on, consumer groups in our decision-making process. We will take these recommendations into consideration as part of continuous improvement for our decision-making.

Our related outcome measures for consumer centricity

The outcome measures below are used to assess performance against our statutory objectives and support the delivery of our consumer centricity ambition. Further information on the results is included in *Our performance against our statutory objectives* on page 30.

Outcome	Related outcome measure	Desired trend	2022/23 high-level result
Competition	Improved participant perceptions of the competitiveness in electricity markets	Increasing	Maintained
Competition	Improved consumer perceptions of the competitiveness of electricity markets	Increasing	Achieved
Reliability	Improved consumer perceptions of the reliability of electricity in New Zealand	Increasing	Maintained
Reliability	Overall improvement across a suite of statistics on efficient levels of reliable electricity supply	Improving	Achieved
Efficiency	Improved participant perceptions of the efficiency in electricity markets and transmission and distribution arrangements	Increasing	Maintained
Efficiency	Improved consumer perceptions of the efficiency of electricity in New Zealand	Increasing	Achieved

Amending regulation to improve outcomes for consumers

In March 2021, the Authority observed there was the potential for electricity contracts of a certain size to have adverse impacts on some consumers.

The arrangements announced in January 2021 to extend operations by the New Zealand Aluminium Smelter (NZAS) at Tiwai Point was used to highlight the potential issue of inefficient price discrimination.

We estimated the impact of the contract could lead to households paying up to \$200 extra on their electricity bills each year. This was because the electricity deal negotiated to keep the smelter operating could have been less than the cost of producing the electricity. This could effectively maintain demand and keep prices high in the wholesale market. It was estimated that it enabled a wealth transfer from consumers, not parties to the contract, to generators of \$850 million a year.

We carried out a public consultation on the key issues of materially large contracts and concluded that a timely and targeted intervention was required. This issue was made more urgent by an announcement in July 2022 that NZAS sought to negotiate a new deal with generators when its current contract expires at the end of 2024.

We acted quickly to make an urgent amendment to the Code to prohibit generators giving effect to materially large contracts unless one of two tests is passed. This Code amendment protects consumers from the potential of financial impacts from contracts of a size that can shift market prices and demonstrates our commitment to protect the long-term interests of consumers.



Trust and confidence

We work to build trust and confidence in the industry and regulation through greater transparency and improved understanding. Consumers expect industry participants to be held to account to industry rules that are designed to provide long-term benefit. Participants require a stable investment framework and regulatory environment so that they operate on a level playing field and decision making benefits New Zealand.

“ The Authority’s commitment of creating a network of easily accessible links for a range of different resources has been a standout from our perspective.⁵

The areas affecting the level of trust and confidence the Authority has in the industry are more foundational and appear to be systematic.⁶

In the industry participant survey, only 53% of respondents agreed with the range of statements about the electricity sector’s reliability and operational efficiency. The respondents commented that more could be done to improve reliability and operational efficiency by making the sector more future-focused. There were suggestions to hold participants to account for infrastructure investment, and for the Authority to progress decisions and Code amendments faster to meet the fast pace of change in the industry. We will take these views into consideration as we plan future work and how we build better trust and confidence in the sector.

“ Articles designed for domestic consumers were exemplary, with detail allowing for improved understanding of the electricity industry and sector. We noticed in some of these articles that any terms that were slightly more difficult were regularly linked to other articles that explained them. This gave agency to domestic consumers to learn about the electricity industry in an easy format, with a network of information available to them. At a more detailed level, the key focus seemed to be considering how to improve understanding of the electricity sector, and it showed through the good content that had been created.⁷

In terms of building trust and confidence through our communications, the independent assessment found that, overall, there was a lot of work to improve the quality of the Authority’s publications this year. However, work was needed to make the publications clearer, with less detail and complexity, to improve understanding of the Authority, industry and sector.

One of the documents reviewed “did not appear to meet the Authority’s standards” due to under-resourcing (from Covid-19 absences and staff turnover). Such work impacts trust and confidence, and we are determined to do better. We have taken on board this feedback and developed new document templates and a new writing and style guide to improve the quality and consistency of our publications.

We have also introduced staff training on the plain language standard to support staff to write more clearly and effectively and improve our brand. We will continue to work on improving the quality of our communications to support consumer and industry education and to encourage diverse voices to engage in our decision-making processes.

5 MartinJenkins independent assessment p.18

6 MartinJenkins independent assessment p.18

7 MartinJenkins independent assessment p.19

Our impact measures for trust and confidence

Impact	Measure	Desired trend	2020/21 result	2021/22 result	2022/23 result
The EA and our actions promote trust and confidence	Improved participant perceptions of trust and confidence in us and how we are fulfilling our role	Increasing	37%	23%	Achieved. 28% of participants surveyed agreed that they have confidence in the role the Authority plays as kaitiaki of the electricity sector.
	Assessment of the quality of material produced (e.g. EMI reports, thought pieces)	Increasing	4.2 out of 5	4.3 out of 5	Not achieved. An independent assessment rated 3.9 out of 5 for the quality of material produced to promote trust and confidence.*
We are active regulators who enhance operational efficiency and reliability	Improved participant perceptions of reliability and operational efficiency	Increasing	63%	59%	Not achieved. 54% of participants surveyed agreed with the range of statements on the electricity sector's reliability and operational efficiency.**
	Market services are resilient to adverse events (as measured on a case-by-case basis)	Improving	Achieved	Achieved	Achieved. Market services continue to be resilient to adverse events.***
We improve compliance and sector conduct	Improved participant perceptions of the quality of our monitoring	Increasing	50%	52%	Maintained. 52% of participants surveyed agreed with the range of statements on the quality of our monitoring.
A suite of statistics shows overall improvement ****	Overall improvement in the following statistics: <ul style="list-style-type: none"> Pricing in scarcity events reflects opportunity cost, as measured by case-by-case analysis Effective management of dry years or emergency events, as measured by case-by-case analysis Dry year prices reflect storage levels, as assessed by case-by-case analysis 	Increasing	New measure introduced in 2021/22	Two of three statistics improved or maintained.	Achieved. All three statistics improved or maintained.

Notes:

* The independent assessment found that, in general, we did a lot of work to improve the quality of material we produced. However, the results were impacted by the level of detail and complexity and the likelihood of the material to improve target audiences' understanding of the Authority, industry or sector. One of the documents selected by MartinJenkins to evaluate "did not appear to meet the Authority's standards" due to under-resourcing caused by Covid-19 related absences and staff turnover. The Authority is addressing these issues and putting processes in place to ensure our published documentation meets a high standard.

** Survey respondents commented that more could be done to improve reliability and operational efficiency by changing how the sector works to be more future-focused. This included suggestions to hold participants to account for infrastructure investment and to progress Code amendments and decisions more quickly to meet the required pace of change for increased electrification. We will take these views into consideration as we continue to build trust and confidence in the sector.

*** Market operation service providers must regularly test their business continuity plans and disaster recovery processes. This enables them to address any required improvements before an adverse event occurs.

**** These statistics are also used to measure against one or more of our outcomes: competition, reliability, efficiency. Further details are included in Appendix A.

Our related outcome measures for trust and confidence

The outcome measures below are used to assess performance against our statutory objectives but also support the delivery of our trust and confidence ambition. Further information on the results is included in *Our performance against our statutory objectives* on page 30.

Outcome	Related outcome measure	Desired trend	2022/23 high-level result
Competition	Improved participant perceptions of the competitiveness in electricity markets	Increasing	Maintained
Reliability	Improved participant perceptions on the efficiency of supply reliability	Increasing	Not achieved*
Reliability	Improved participant perceptions of the balance between the cost and reliability trade-offs	Increasing	Not achieved*
Reliability	Improved consumer perceptions of the reliability of electricity in New Zealand	Increasing	Maintained
Reliability	Overall improvement across a suite of statistics on efficient levels of reliable electricity supply	Improving	Achieved
Efficiency	Improved participant perceptions of the efficiency in electricity markets and transmission and distribution arrangements	Increasing	Maintained
Efficiency	Improved consumer perceptions of the efficiency of electricity in New Zealand	Increasing	Achieved
Efficiency	Overall improvement across a suite of statistics on electricity system and market efficiency	Improving	Achieved

* More details are in our outcome measures for reliability on page 31.

New website: increasing transparency, information and education

This year, the Authority developed and launched a new website www.ea.govt.nz with clear and easily digestible content for a broad audience.

The website is designed to improve consumer and industry engagement, clearly communicate the Code and industry regulations for a fair market, and better present the intent, impact and evidence of our work.

People are at the heart of everything we do, and their experience with our website matters. We have transformed the website from a platform with 4,500 detailed pages to a modern refined site with less than 300 pages. This work shows how committed we are to making our work more transparent, engaging and accessible to build trust and confidence with a broader audience.

The section on our work programme has been reimagined to enable easy stakeholder input and provide transparency. There is a new dedicated news section, and news and market insights are published regularly to improve understanding of the Authority, the industry and the impact of regulation.

We are proud this work has been recognised by the Designers Institute of New Zealand. Our website was a finalist in the 2023 Best Design Awards for the 'large-scale websites category'. This category is for websites that demonstrate complexity of structure, functionality and design at scale as well as for high variety and volume of content. The winners were announced in October 2023.⁸

⁸ A full list of winners and finalists in the 'large scale websites' category is available on the Best Awards website: <https://bestawards.co.nz/digital/large-scale-websites/2023/>



Enforcing compliance with electricity industry regulations and the Code

As the regulator, we educate, monitor and enforce compliance with the Electricity Industry Act 2010, its regulations and the Code. Our compliance work helps build trust and confidence as industry participants operate on a level playing field and consumers are treated fairly.

The Rulings Panel is an independent body that helps enforce the Code. It determines breaches, hears appeals against certain decisions and resolves certain disputes under the Code. In 2022/23, our Board laid formal complaints with the Rulings Panel for the following two cases.

Transpower – 9 August 2021

We lodged a formal complaint in April 2022 alleging four breaches of the Code by the system operator about its management of the grid emergency on 9 August 2021.

The Authority and the system operator reached an agreement early in 2023 on the alleged breaches, which

led to Transpower accepting two of the breaches and the Authority withdrawing the other two allegations.

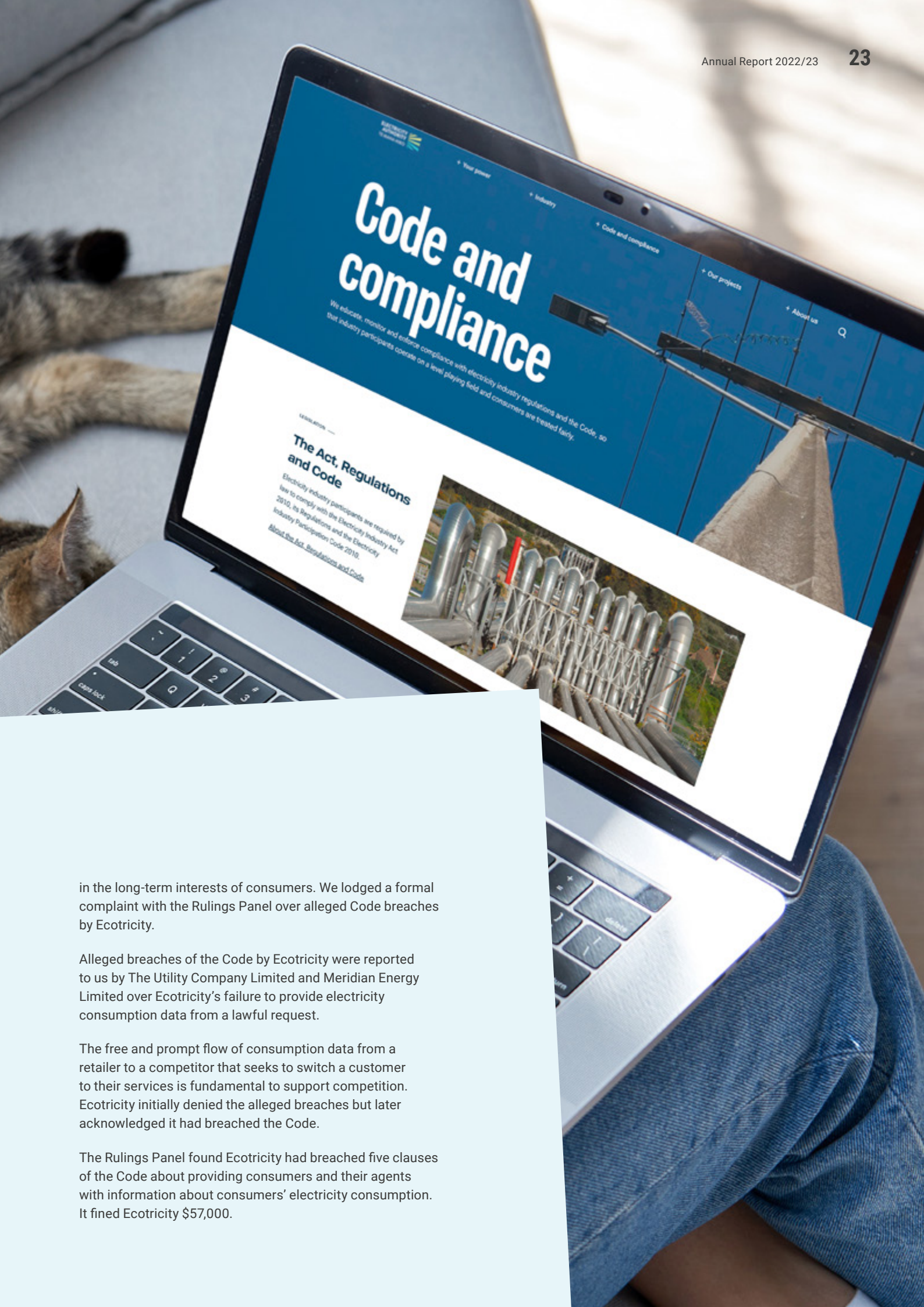
The two Code breaches accepted related to the reasonable and prudent operator standard and the Policy Statement that is incorporated into the Code. The agreement included admissions from the system operator of its failings in respect of demand allocation, communication failures and the issuing of an Island Shortfall Situation Notice.

The Rulings Panel ordered the system operator to pay a fine of \$150,000 and pay the Authority's costs.

Since the events of 9 August 2021, we have seen a series of improvements made by Transpower to apply the lessons learned during the event, and subsequent grid emergency events have been managed far more effectively.

Ecotricity – provision of consumption data

Retailers deliberately breaching their Code obligations is not



in the long-term interests of consumers. We lodged a formal complaint with the Rulings Panel over alleged Code breaches by Ecotricity.

Alleged breaches of the Code by Ecotricity were reported to us by The Utility Company Limited and Meridian Energy Limited over Ecotricity's failure to provide electricity consumption data from a lawful request.

The free and prompt flow of consumption data from a retailer to a competitor that seeks to switch a customer to their services is fundamental to support competition. Ecotricity initially denied the alleged breaches but later acknowledged it had breached the Code.

The Rulings Panel found Ecotricity had breached five clauses of the Code about providing consumers and their agents with information about consumers' electricity consumption. It fined Ecotricity \$57,000.



Thriving competition

The Authority is focused on enabling a thriving competitive market in which innovation drives progress, efficiency and better outcomes for New Zealand. Competition helps ensure New Zealanders have plenty of choice about the retailers and brands they can buy electricity from at the lowest cost.

This year, we completed a review into competition in the wholesale market and decided to implement a suite of actions to constrain the exercise of market power and facilitate investment in new renewable generation. These actions will help promote wholesale market competition in the low-emissions transition and deliver better long-term outcomes for consumers.

In the industry participant survey, only 24% of participants surveyed agreed that new entrant retailers and generators can compete on a level playing field with established retailers or generators. Survey respondents expressed concerns around the vertical integration of gentailers and their internal transfer prices, which they felt disadvantaged retailers who didn't have a generation limb.

Some survey respondents noted that prices on the ASX made it difficult to operate in the hedge market. Conversely, other respondents noted that they would expect accumulated experience to tilt the playing field towards incumbents, and they wouldn't expect new entrants to be on the same level. We will take all the survey responses into consideration as we continue to work on how to address and improve competition within the electricity system.

We acknowledge that we have more work to do to give confidence in the market and the level of competition. We will continue to focus on improvements, including increased access to information and transparency, as the power system continues to transform. We have work underway to focus on regulatory settings for distribution networks and are working with the Commerce Commission to enable transformation in this space.

Our impact measures for thriving competition

Impact	Measure	Desired trend	2020/21 result	2021/22 result	2022/23 result
New entrants can compete on a level playing field with established participants	Improved participant perceptions of ability for new entrants to compete with established participants	Increasing	18.5%	27%	Not achieved. 24% of participants surveyed agreed that new entrant retailers and generators can compete on a level playing field with established retailers or generators.*
Market settings enable competition between distributed energy resources (DER's) and established technology solutions	Number of network companies seeking to procure non-network services on a competitive basis	Increasing	Three out of 19 of the network companies surveyed (16%)	17 out of 26 network companies surveyed (65%)	Not achieved. 13 out of 26 network companies surveyed seek to procure non-network services on a competitive basis (50%),**
	Number of participants providing non-network services to network companies	Increasing	One out of 19 of the network companies surveyed (5%)	Four of the 26 network companies surveyed (15%)	Not achieved. Of the network companies surveyed, two are receiving non-network services from a participant (8%).**
	Improved participation in a range of electricity markets, for example, demand-side participation in a range of markets	Improving	Partially achieved	On track	Achieved. Progress continues with release of consultation document in December 2022 largely confirming the range of issues and asked stakeholders for feedback on priorities and tentative options relating to the most pressing issues. Reported to the Board with a summary of submissions in June 2023.

Notes:

* Survey respondents expressed concerns around the vertical integration of gentailers and the potential for internal transfer prices to disadvantage retailers who didn't have a generation limb. They also noted that prices on the ASX made it difficult to operate in the hedge market. Conversely, other respondents noted that they would expect accumulated experience to tilt the playing field towards incumbents, and they wouldn't expect new entrants to be on the same level. We will take these views into consideration as we continue to address competition within the electricity system.

** The result is based on self-reported business practices of the survey respondents. It's an indicator of behaviour across network companies in the sector and their current practices for innovation. Due to the nature of random sampling from the participant register, the survey sample will include varying numbers of different groups of participants each year. Survey recipients are invited to respond, but it is not mandatory. The decrease seen is based on the self-reported business practices of the survey respondents.

Our related outcome measures for thriving competition

The outcome measures below are used to assess performance against our statutory objectives but also support the delivery of our thriving competition ambition. Further information on the results is included in *Our performance against our statutory objectives* on page 30.

Outcome	Related outcome measure	Desired trend	2022/23 high-level result
Competition	Improved participant perceptions of the competitiveness in electricity markets	Increasing	Maintained
Competition	Improved consumer perceptions of the competitiveness of electricity markets	Increasing	Achieved
Competition	Overall improvement across a suite of statistics on electricity market competition	Improving	Achieved
Efficiency	Improved participant perceptions of the efficiency in electricity markets and transmission and distribution arrangements	Increasing	Maintained
Efficiency	Overall improvement across a suite of statistics on electricity system and market efficiency	Improving	Achieved

Multiple trading relationships trial: enabling competition and innovation

We work to unlock the benefits of innovation for consumers by making sure regulatory settings are conducive to innovation and industry success. To do this, we need to be proactive, agile and forward-looking as a regulator, matching the pace of change and helping innovation flourish.

The transition of the electricity system will be achieved through innovation and disruption, with both participants and the Authority thinking beyond the status quo to meet consumer needs and deliver a low-emissions energy system. New technologies and the pace of change are shifting how electricity is generated, distributed and consumed, beginning the change to the costs and competitive structure of the industry.

The Authority has worked with Kāinga Ora and Ara Ake to facilitate small-scale trials below the level of the Code. This year, we stepped up the level of innovation—collaboration to enable a significant multiple trading trial by approving two exemptions and amendments to the Code.

This trial focuses on energy sharing across selected Kāinga Ora housing, and if successful, it could demonstrate how solar could be used to reduce energy hardship. In completing the work to approve these exemptions in a short period of time, we not only enabled the trial to go ahead as needed but also ensured the likelihood of unintended consequences for consumers and industry are carefully factored in to any future Code changes.

We're looking forward to seeing how Wellington Electricity Lines Limited as the distributor and Intellihub Limited as the metering equipment provider along with retail participants soon to be procured by Kāinga Ora will form up this new multiple trading model.

It's a great opportunity to assess and learn more about this model of energy sharing using multiple trading relationships alongside industry. We anticipate what we learn will be used to develop a more enduring solution for all New Zealanders, continuing to enable innovation and foster alternatives to traditional single buyer and seller electricity models.



Innovation flourishing

The Authority's role is to help unlock the full benefits of innovation for consumers by making sure the settings are conducive to innovation and industry success.

Technological change means more solar panels, electric vehicles and batteries will be connected, creating new challenges and opportunities for distribution networks. This year, we focused on updating the regulatory settings to encourage and enable distribution networks to support the low-emissions economy transition at the lowest cost to consumers. This is a large work programme that will continue over the next year. Innovation in the distribution networks will be critical to supporting an electrified economy.

Regulation can struggle to keep up with innovation. As seen in the industry participant survey, only 17% of participants surveyed agreed the regulatory environment supports new business models and technology. An example of how we can promote innovation is through exemptions and Code amendments assisting participants in carrying out innovative trials such as the Kāinga Ora and Ara Ake energy sharing trial mentioned earlier. If the trial is successful in showing how energy sharing can reduce energy hardship, it can help pave the way for future Code amendments or larger-scale trials.

We know we need to focus on fit-for-purpose regulation over the next few years while moving forward and potentially considering exemptions in the interests of supporting the transition and positive outcomes for consumers.

Some respondents noted concerns about our ability to adapt the Code, rules and market settings at a pace that would support innovation. Others wanted to see more standardisation for distributed generation, which would provide an environment for innovation. Some felt innovation was happening with independent retailers but that gentailers lacked incentives to be more innovative in their approaches.

We acknowledge and appreciate this feedback. We know we need to move faster to ensure regulation enables innovation and new technology in the industry for the benefit of consumers. This will require additional resource to shift a gear and meet expectations.

Our impact measures for innovation flourishing

Impact	Measure	Desired trend	2020/21 result	2021/22 result	2022/23 result
The regulatory system accommodates new business models	Improved participant perceptions of the ability of the system to support rapid change	Increasing	18%	28%	Not achieved. 17% of participants surveyed agreed that the regulatory environment supports new business models and technology.*
	Improved participant perceptions of the current market settings' ability to encourage innovation	Increasing	23%	23%	Not achieved. 21% of participants surveyed agreed with the range of statements on the current market settings' ability to encourage innovation.*
	Number of sandboxes, trials, pilots in play across the network	Increasing	Two small-scale trials in play	At 30 June 2022, there were two small-scale trials in play.	Not achieved. As at 30 June 2023, there was one small-scale trial in play. Kāinga Ora's energy sharing trial has been enabled by way of Code changes and exemptions with conditions, although another exemption is needed once a generation retailer is appointed. It is expected that the trial will commence in late 2023 or early 2024.**
	Increased number of participants providing new services to consumers	Increasing	New measure introduced in 2021/22	37%	Achieved. 42% of participants surveyed reported providing new services to consumers.
The availability and transparency of industry data is continuously improved	Number of data transactions we have facilitated	Increasing	1,367,765	843,455 data transactions were facilitated in 2021/22.	Achieved. Almost 1.5 million EMI report views or datasets downloaded by external parties. Over 4 million internal data transactions associated with Delta Lakehouse – a combination of data ingested to update tables by the data engineers and tables queried by analysts.
	Number of new datasets we have provided access to	Increasing	10	We provided access to 6 new datasets in 2021/22.	Achieved. 17 new datasets were published this year.

Notes:

* Survey respondents had concerns about the ability to adapt the Code, rules and market settings at a pace that would support innovation. Meanwhile, others felt that consent processes took too long and noted that this sits outside of the electricity regulatory environment. Others wanted to see more standardisation for distributed generation, which would provide an environment for innovation. Some felt that innovation was happening with independent retailers but that gentailers lacked incentives to be more innovative in their approaches. We will take these views into consideration as we continue to promote innovation in the electricity system.

** The energy sharing trial led by Kāinga Ora and Ara Ake focuses on demonstrating the potential for improving competition by allowing consumers to engage multiple electricity retailers for different purposes. In 2022/23, we approved two exemptions and technical and non-controversial Code amendments to facilitate the trial. This new trial supersedes our involvement in the two small-scale trials from the previous financial years. This trial will work alongside industry participants to test an energy sharing model using multiple trading relationships. If successful, it could be used to develop a larger and enduring solution, reducing the likelihood of unintended consequences for consumers and industry in any future Code changes. Trials are intended to be flexible in nature as this allows people to test new ideas and initiatives and adopt as they go.

Our related outcome measures for innovation flourishing

The outcome measures below are used to assess performance against our statutory objectives but also support the delivery of our innovation flourishing ambition. Further information on the results is included in *Our performance against our statutory objectives* on page 30.

Outcome	Related outcome measure	Desired trend	2022/23 high-level result
Competition	Improved participant perceptions of the competitiveness in electricity markets	Increasing	Maintained
Reliability	Improved participant perceptions of the balance between the cost and reliability trade-offs	Increasing	Not achieved*
Efficiency	Improved participant perceptions of the efficiency in electricity markets and transmission and distribution arrangements	Increasing	Maintained
Efficiency	Improved consumer perceptions of the efficiency of electricity in New Zealand	Increasing	Achieved

* More details are available in our outcome measures for reliability on page 31.

Real-time pricing transforms the wholesale market

This year, we changed the way wholesale prices for electricity are calculated to better reflect real-time market conditions. This is the biggest change to the wholesale electricity market since it started in October 1996.

Prior to November 2022, spot prices were indicative only, with the final prices confirmed two days later. Under real-time pricing, spot price information is updated at the end of each half-hour trading period. A time-weighted average of prices is published as the final price for that trading period.

Real-time pricing has made the spot market simpler – what you see is what you pay. It gives retailers and consumers accurate information for short-term decisions about when to supply or use electricity. This encourages more participation as people have the information to respond to high or low prices and removes any guesswork.

With real-time pricing, we introduced new tools on 27 April 2023 for participants to bid and offer their demand flexibility and distributed energy resources into the wholesale market. Large industrial customers can now manage their exposure

to high spot prices by having part of their electricity load on a fixed price and the other part on demand response. They can bid demand response into the spot market – saving money and helping support the electricity system by managing their demand differently.

Other businesses and residential consumers could be compensated when they allow their distributed energy resources, such as solar and battery systems, to be bid into the market on their behalf with a product called dispatch notification.

Helping these distributed energy resources to interact with the market will contribute to displacing gas-powered peaking plants and encourage the use of more renewable sources of energy. For example, in June 2023, Ara Ake and solarZero announced a pilot integrating distributed energy resources for about 11,000 homes with Virtual Power Plant technology to help manage winter peak demand. This is the first example of dispatch notification being used and will pave the way to an increasingly renewable future.

Our performance against our statutory objectives

Competition

Competition helps ensure New Zealanders have plenty of choice about the retailers and brands they can buy electricity from at the lowest cost. We encourage competition in all electricity-related markets, right across the supply chain, taking into account long-term opportunities that will lead to better outcomes for consumers.

Our outcome measures for competition

Outcome measure	How we measure results	Desired trend	2020/21 result	2021/22 result	2022/23 result
Improved participant perceptions of the competitiveness in electricity markets	Percentage of participants who agree with a range of statements on electricity market competitiveness	Increasing	36%	36%	Maintained. 35% of participants surveyed agreed with a range of statements on electricity market competitiveness.
	Percentage of participants who agree that prices in the following electricity markets reflect the outcomes expected in a workably competitive market	Increasing	29%	30%	Maintained. 29% of participants surveyed agreed that prices in a range of electricity markets reflect the outcomes expected in a workably competitive market.
Improved consumer perceptions of the competitiveness of electricity markets	Percentage of consumers who agree with a range of statements on electricity market competitiveness	Increasing	75%	73%	Achieved. 75% of residential consumers surveyed agreed with the range of statements on electricity market competitiveness.
Overall improvement across a suite of statistics on electricity market competition	Overall improvement in the following statistics: <ul style="list-style-type: none"> Retail market concentration (HHI statistic)* Retail market share (CR4 statistic) Net pivotal analysis Hedge market concentration (HHI statistic) Concentration in the ancillary services market (HHI of reserves statistic) Number of retailers' approaches to consumers with offers to induce switching (measured by survey) 	Improving	Five of the six statistics either improved (3) or remained stable (2) over the year.	Three of the six statistics remained low and stable over the year.	Achieved. Five of the six statistics either improved (3) or remained stable (2) over the year. Net pivotal analysis wasn't completed in 2022/23 due to implementation of real-time pricing. In 2021/22 the most net pivotal generator was net pivotal for less than 1% of the time.

Notes:

* Herfindahl-Hirschman Index. The HHI measures the market concentration, where decreasing HHI indicates decreasing market concentration, which can indicate greater competition.

Further details are in Appendix A: Competition.

Reliability

The Authority works to achieve reliable and affordable day-to-day and long-term security of electricity supply for consumers. As the regulator, we aim to anticipate and respond to the changing dynamics of the electricity system and markets as New Zealand transitions to a low-emissions economy.

External factors such as climate change will have an impact on the transition. The increased occurrence of extreme weather events will test the electricity system's resilience, and increased risk from cyber attacks will challenge the system's operational security and integrity. We acknowledge there is increasing volatility in our regulatory context and concern about the reliability of electricity in the face of these challenges. The survey results reflect that increasing concern.

Thirty-two percent of participants surveyed agreed with the range of statements on the balance between cost

and reliability trade-offs, compared to 36% in the two previous years. Survey respondents commented on the impacts increased electricity demand would have on medium- to long-term reliability, noting that the current levels of electricity generation are not sufficient to meet increasing demand. Some respondents believed that increased reliability would come at a cost. Investment is required to decarbonise, upgrade aging infrastructure and improve the resilience of networks and generation. Others noted reliability would be a trade-off as more intermittent renewable generation is introduced.

The Authority has a variety of workstreams underway to address these challenges and ensure a reliable electricity supply now and in the future at the least cost to consumers, including our work to manage peak winter electricity demand (see case study *Keeping the power on through winter* on page 9).

Our outcome measures for reliability

Outcome measure	How we measure results	Desired trend	2020/21 result	2021/22 result	2022/23 result
Improved participant perceptions on the efficiency of supply reliability	Percentage of participants who agree with a range of statements on electricity supply reliability	Increasing	72%	71%	Not achieved. 60% of participants surveyed agreed with the range of statements on electricity supply reliability.*
Improved participant perceptions of the balance between the cost and reliability trade-offs	Percentage of participants who agree with a range of statements on the balance between the cost and reliability trade-offs	Increasing	36%	36%	Not achieved. 32% of participants surveyed agreed with the range of statements on the balance between cost and reliability trade-offs.*
Improved consumer perceptions of the reliability of electricity in New Zealand	Percentage of consumers who agree with a range of statements on electricity reliability	Increasing	64%	62%	Maintained. 61% of domestic consumers surveyed agreed with the range of statements on electricity reliability.
Overall improvement across a suite of statistics on efficient levels of reliable electricity supply	Overall improvement in the following statistics: <ul style="list-style-type: none"> Pricing in scarcity events reflects opportunity cost, as measured by case-by-case analysis Effective management of dry years or emergency events, as measured by case-by-case analysis Capacity and energy margins are within efficient bounds or are moving towards those bounds, as measured by the annual security assessment Investigation of reliability events does not identify systemic issues, as measured by case-by-case analysis 	Improving	Initial reviews suggest the statistics performed as expected.	Three of the four statistics performed as expected.	Achieved. All four statistics performed as expected.

Notes:

* Survey respondents commented on the impacts increased electricity demand would have on medium- to long-term reliability noting that the current levels of electricity generation are not sufficient to meet increasing demand. Some believed that increased reliability would come at a cost with investment required to decarbonise, upgrade aging infrastructure and improve the resilience of networks and generation. Others noted that reliability would be a trade-off as more intermittent renewable generation comes online (eg, solar, wind, etc.). We will take these views into consideration as we continue our work to promote a reliable electricity supply.

Further details are in Appendix A: Reliability.

Efficiency

The Authority is working hard to provide a predictable regulatory environment with robust rules and clear price signals to support increased electrification of heat and transport and the development of renewable generation.

The electricity market has worked well for New Zealand for over 20 years and provides a solid foundation to both enable and support the transition to an electrified economy.

The market will continue to play a critical role with price signals attracting the right investment in the right place at the right time at the least cost to consumers. The 2022/23 results demonstrate we need to do more to communicate the importance of price signals and what we mean when we talk about the efficient operation of the industry. We will continue to work on educating participants and the public over the next year.

Our outcome measures for efficiency

Outcome measure	How we measure results	Desired trend	2020/21 result	2021/22 result	2022/23 result
Improved participant perceptions of the efficiency in electricity markets and transmission and distribution arrangements	Percentage of participants who agree with a range of statements on the efficiency in electricity markets and transmission and distribution arrangements	Increasing	37%	39%	Maintained. 39% of participants surveyed agreed with the range of statements on efficiency in electricity markets and transmission and distribution arrangements.
Improved consumer perceptions of the efficiency of electricity in New Zealand	Percentage of consumers who agree with a range of statements on the efficiency of electricity in New Zealand	Increasing	65%	59%	Achieved. 63% of domestic consumers surveyed agreed with the range of statements on the efficiency of electricity in New Zealand.
Overall improvement across a suite of statistics on electricity system and market efficiency	Overall improvement in the following statistics: <ul style="list-style-type: none"> • Robust futures prices • Dry year prices reflect storage levels, as assessed by case-by-case analysis • Exceptional prices are justified by underlying fundamentals, as assessed by case-by-case analysis • Reducing constrained-on compensation 	Improving	Three of the four statistics performed as expected.	Four of the four statistics performed as expected.	Achieved. All four statistics performed as expected.

Further details are in Appendix A: Efficiency.

Our performance: measuring our outputs

The Authority is an independent Crown entity and receives funding from the Crown each financial year from three appropriations within Vote Business, Science and Innovation.

The Crown funds the Authority through appropriations of public money. The Crown recovers the cost of this funding, up to the level of actual expenditure incurred, through a levy on electricity industry participants. Levies are charged to industry participants in accordance with the Electricity Industry (Levy of Industry Participants) Regulations 2010. These regulations are made on the recommendation of the Minister and are administered by MBIE.

As set out in our Statement of Performance Expectations 2022/23, we measure these three appropriations against 13 output measures.

Our appropriations		Our functions
Operating appropriation	Electricity industry governance and market operations	Promote market development
		Monitor, inform and educate
		Operate the electricity system and markets
		Enforce compliance
Contingent appropriations	Managing the security of New Zealand's electricity supply	Addressing funding requests from the system operator for the management of security of supply events
	Electricity litigation fund	Defending cases against the Authority and taking enforcement action

This section sets out our performance for each appropriation, including:

- what was intended to be achieved
- the scope of each appropriation
- the functions provided under each appropriation
- the 2022/23 performance measures, including desired results and targets
- the status and result for each performance measure as at 30 June 2023.

Statement of service performance

From 2022/23, we have aligned to the reporting standard PBE FRS 48, which sets out the required standard for our non-financial performance information and reporting.

For the purposes of this standard, service performance refers to the information set out in this section on pages 33–44. The statement of service performance relates to the measures and targets set out in our Statement of Performance Expectations 2022/23. However, we have also included disclosures on our impact and outcome measures from our Statement of Intent 2021–2025, which are detailed in the previous section on pages 12–32.

Our service performance reporting disclosures are included later in this section, on pages 43–44.

Performance measures used in the Estimates of Appropriations 2022/23

Some performance measures used in the Statement of Performance Expectations are also used in the Estimates of Appropriations for 2022/23. These measures are identified in **bold**.

How we report results for our output performance measures

Our Statement of Performance Expectations 2022/23 sets out the performance targets for the outputs we will deliver in the year. Assessment of our performance targets is based on the following rating system:

Rating	Criteria	2022/23 result
Achieved	On target or better	11
Substantially achieved	Within 5% of the target	1
Not achieved	More than 5% below the target	1

This year, 11 out of our 13 output performance measures were achieved, one was substantially achieved and one was not achieved. More information on the measure that did not achieve its targets is included in the results for *2. Monitor, inform and educate*.

Electricity industry governance and market operations

What is intended to be achieved

The main objective of the Authority is to promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers. The additional objective of the Authority is to protect the interests of domestic consumers and small business consumers in relation to the supply of electricity to those consumers.

Scope of appropriation

This appropriation is limited to formulating, monitoring and enforcing compliance with the regulations and Code governing the electricity industry and other outputs in accordance with the statutory functions under the Act, and delivery of core electricity system and market operation functions carried out under service provider contracts.

Our functions under this appropriation

This appropriation funds our operations, including Board members' costs, the Rulings Panel, Security and Reliability Council, advisory groups and the operation of the electricity system and market operations. This includes our four main functions:

- Promote market development:** We promote development of the electricity markets by making amendments to the Code and through market facilitation measures.⁹
- Monitor, inform and educate:** We monitor market behaviour, make data, information and tools available and educate consumers and participants.
- Operate the electricity system and markets:** We are responsible for the day-to-day operation of the electricity system and markets, delivered through contracts with service providers.
- Enforce compliance:** We monitor, investigate and enforce compliance with the Act, its regulations and the Code.

⁹ Market facilitation measures are actions we can take short of amending the Code or recommending changes to regulations or legislation. This can include working directly with participants to develop desired results, education programmes, publication of guidelines and publication of model agreements.

1. Promote market development

Our market development work promotes competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers.

We have two key tools at our disposal to develop the market: amending the Code and adopting market facilitation measures. We use these tools to ensure market arrangements are appropriate for today's needs and flexible enough to enable tomorrow's innovations. Our market development cycle ensures market improvement initiatives are effectively implemented and the results assessed.

Over the 2022/23 financial year, we achieved many milestones in our work to promote market development,

meeting the published annual outcomes for eight of our nine key activity areas in our Annual Corporate Plan.

We renewed our commercial market-making contract to 30 June 2024, implemented real-time pricing in November 2022 and implemented the new transmission pricing methodology in April 2023.

We implemented measures to ensure a reliable power supply for all consumers during the coldest winter nights when demand was very high. We will continue to work on additional measures to give greater support to the power system when it is under pressure.

Performance measures

Measure	2022/23 target	2021/22 result	2022/23 result
Planned activities that promote market development achieve published annual outcomes.*	80%	Not achieved. 75% (9 out of 12).	Achieved. 89% (8 out of 9) planned activities achieved their published annual outcomes.
Our market development decisions and processes are lawful and appropriate.**	Zero (0) legal challenges that result in an Authority market development decision being overturned.	Achieved. There were zero successful challenges in 2021/22	Achieved. There were zero successful challenges in 2022/23
Transparent, rigorous post-implementation reviews are conducted to establish whether Code amendments or market facilitation measures deliver intended benefits and impacts on market behaviour.	One review completed	Achieved. The Board has approved the post-implementation review of the trading conduct provisions.	Achieved. We have published a review into the wholesale market information disclosure provisions, we reviewed wind offering, and we have reviewed the trading conduct provisions in a quarterly report for quarter one 2023

Notes:

* Planned activities that promote market development are published in our Annual Corporate Plan. We report on the progress of the activities in four-monthly increments throughout the year. The Annual Corporate Plan and progress reports are available on our website at www.ea.govt.nz/about-us/corporate-documents/

** Our decisions include market development decisions to implement Code amendments or market facilitation measures. These decisions can be disallowed, appealed or judicially reviewed on the process used to reach the decision and/or on the lawfulness, reasonableness or appropriateness of the decision itself.

An appeal or judicial review can overturn a market development decision by directing us to reconsider a decision or re-run a process. The House may also overturn a Code amendment if it accepts a Regulations Review Committee recommendation for it to be 'disallowed' – meaning the Code amendment decision will no longer have force. The Authority responded to three appeals in 2022/23. The Court of Appeal dismissed Nova Energy Limited's challenge on the new Transmission Pricing Methodology on 3 July 2023. Decisions on the remaining two appeals are pending. For more information, see the Electricity litigation fund appropriation within this section.

2. Monitor, inform and educate

Our market monitoring, information and education work focuses on improving the availability of data, information and tools and improving awareness and understanding of how electricity markets function. Transparency and understanding are vital to give regulatory certainty and build trust and confidence in the market, the industry and the Authority.

Our monitoring function improves understanding by identifying behaviours that are potentially inconsistent with our objective. It also provides appropriate feedback into policy development.

We track and monitor all aspects of the sector.

For example we:

- assess offers and prices to check participants' compliance with the trading conduct rules and provide weekly trading conduct reports and quarterly market performance reviews.
- conduct in-depth reviews and studies of particular topics.

- track and report on final prices, retail market share and consumer switching on the Electricity Market Information (EMI) website.
- maintain databases and make analytical tools available (such as vSPD and JADE) to improve industry participants' own monitoring capacity.
- proactively monitor areas of the Code where non-compliance is difficult to detect and could result in the greatest harm.

In 2022/23, we supported consumers' understanding of the electricity industry through new *Eye on electricity* articles. We implemented a new consumer-centric website that seeks to increase awareness of our role and the impact of our decisions. Our new website went live in March 2023, and engagement is increasing with higher website traffic and social media followers. We developed and released new public dashboards on the Electricity Market Information (EMI) website to improve the data available for industry and interested parties.

Performance measures

Measure	2022/23 target	2021/22 result	2022/23 result
The Authority regularly publishes robust monitoring reports.*	4 quarterly reviews published. Regular trading conduct reports published.	Achieved. We have published 3 quarterly reports, Phase 1 and 2 reviews of the 9 August 2021 event and the wholesale market review.	Achieved. We have published 23 <i>Eye on electricity</i> articles, 4 quarterly reports (including the Q4 report for 2021/22) and weekly trading conduct reports.
The Authority actively promotes understanding of its work and the electricity system to a wide audience.**	Increase in activity across all public-facing channels.	Total website views: 671,431 views. Total social media followers (Twitter and LinkedIn): 2,776	Achieved. Total website views: 922,495. Total social media followers: 3,842 (Twitter and LinkedIn)
Content on EMI is reviewed and revised as needed to maintain relevance.***	Increase on prior year	Five pieces of EMI content were reviewed and revised.	Achieved. Five new EMI reports were published.**** Nine Tableau Public dashboards released for first time or substantially updated. Relevance of EMI is maintained as evidenced by 87,500 unique users in the 2022/23 year.
Data and analytical tools are made available to support the Authority's decision-making process.*****	Increase on prior year	38 items of data or analytical tools were made available to support the Authority's decision-making processes.*****	Not achieved. 24 new data tables published for use by analysts in Delta Lakehouse.

Notes:

- * Due to the newness of the trading conduct reports (first published in August 2021), the ongoing regularity is yet to be determined (eg, weekly, fortnightly, monthly, quarterly, etc.). Trading conduct reports are published weekly however there may be periods where this is not the case, such as the December holiday period. The quarterly report for April–June 2023 was published in September 2023.
- ** The Authority's public-facing channels include the Authority website (ea.govt.nz), general media and social media. An increase in activity includes an increase in website views and social media followers.
- *** The Electricity Market Information website (EMI) is the Authority's channel for publishing data, market performance metrics and analytical tools to facilitate effective decision making within the New Zealand electricity industry.
- **** The five new EMI reports were on dispatch energy price, dispatch reserve price, scheduled generation outage, unaccounted for electricity and load price sensitivity.
- ***** Data and analytical tools includes the use of tools such as Tableau and Delta to provide information in a way that supports decision making at the Authority.
- ***** The 2021/22 result was an outlier due to the new Delta Lakehouse being implemented, where a large number of data and analytical tools were made available as the result of migrating data from SQL Server data warehouse to Databricks Delta Lakehouse.

3. Operate the electricity system and markets

We are responsible for the day-to-day, real-time, efficient and reliable operation of the electricity system and markets. We contract a range of market operation service providers to operate the electricity markets efficiently.¹⁰ We focus on creating fit-for-purpose services that increase market efficiency, ensure effective market operation and facilitate market development.

We carefully manage these contracts to ensure services are delivered to the high standard expected by us and the users of the services. The Authority is committed to working closely alongside all service providers, including the system operator. We meet with service providers regularly and closely monitor performance.

Performance measures

Measure	2022/23 target	2021/22 result	2022/23 result
Market operation service providers' (MOSPs) performance meets agreed standards and contract requirements, or a remedial plan is agreed and actioned by specified date.*	Achieved	Achieved. Not all relevant performance standards were met (most significantly, the Authority notes issues with the delivery of the system operator service in relation to the electricity outages of 9 August 2021) but remediation actions or processes have been agreed or are underway in all cases.	Achieved. Not all relevant performance standards were met, but remediation actions or processes have been agreed or are underway. A further end-of-year review will be conducted in August 2023.
Any significant issues in MOSP systems, as identified in audit processes, have a remedial plan agreed and actioned by specified date.**	Achieved	Achieved. Audits of MOSPs have not raised issues of substantial concern, and remedial plans are or will be in place for those issues that were raised (noting that some audits have only been received in the final few weeks of the 2021/22 financial year).	Achieved. Audits of MOSPs have not raised issues of substantial concern, and remedial plans are or will be in place for those issues that were raised.

Notes:

* MOSPs include the system operator and other service providers. Performance in this measure is focused on processes and procedures (measured through the system operator annual performance assessment and regular monitoring and reviews).

** Performance in this measure is focused on MOSP software systems (measured through audits of the systems). For example, significant service provision issues identified in audit processes may include breaches of the Code and/or issues that have affected market confidence and/or issues that have resulted in multiple complaints and/or a warning letter to the CEO.

¹⁰ For more information about our market operation service providers, see www.ea.govt.nz/industry/mosp/

4. Enforce compliance

We monitor, investigate and enforce compliance with the Act, its regulations and the Code. The Authority's compliance and enforcement functions are critical for building trust and confidence in the sector.

Our compliance function aims to improve the performance of the industry through education of participants and helps us identify and resolve ongoing or systemic issues.

Our enforcement function aims to take appropriate and proportionate action where necessary to ensure the Act, its regulations and the Code are followed by electricity industry participants.

Increasing our compliance capability has been a main priority for the Authority in recent years. We introduced a new compliance strategy in June 2022, which structures our compliance approach and focuses our resources on

the most serious and highest-priority risks. Our focus on compliance has seen us close 160 investigations in 2022/23, a 29% increase from 2021/22 (123 investigations).

The outcome of an investigation ranges from educating and assisting a participant to comply where the risk presented is minor to our Board laying a formal complaint with the independent Rulings Panel.

Having a range of compliance tools enables us to respond proportionately to the risk posed by the non-compliance and to adjust our response in an individual case by escalating or de-escalating the level of its approach as necessary.

Performance measures

Measure	2022/23 target	2021/22 result	2022/23 result
Percentage of investigations decided within 12 months of the investigation being opened.*	100%	Not achieved. During 2021/22, 123 investigations were closed. 10 of those cases were older than 12 months by 1 July 2021. Of the remaining 113 cases, 89% were decided within 12 months of the investigation being opened	Substantially achieved. 99% (158/160) cases were closed within 12 months.**
Our compliance decisions are lawful and appropriate.***	Zero (0) legal challenges that result in a compliance decision being overturned.	Achieved. Decisions made follow delegated decision authority	Achieved. Decisions made follow delegated decision authority.

Notes:

* Investigations in this context include all fact-finding enquiries as well as formal investigations of alleged breaches of the Code.

In 2021/22 the Authority reviewed the methodology used to calculate this measure, which relied on reporting investigations as they were closed. Going forward, this measure will include any open investigations that have exceeded the 12-month timeframe in the relevant financial year. This change in methodology will help to provide a more current assessment of the Authority's performance in this area.

The Authority is also working to close a backlog of historic investigations following the Covid-19 lockdowns and subsequent disruptions.

** Of the two cases that exceeded this target, one case progressed to formal investigation on 29 June 2022, and we were unable to close the investigation by the 12-month timeframe. The Authority made a decision on that case on 13 October 2022. The second case was missed due to a database entry error. This case was reported to the Authority on 20 October 2021, but was incorrectly entered into the compliance database as 16 August 2022. This error has been corrected, but the case is still open with investigation progressing.

There were also 10 cases closed in 2022/23 that exceeded the 12-month timeframe in 2021/22. These cases contribute to, and were reported in, the 2021/22 results.

*** The Compliance Committee makes decisions on alleged breaches of the Act, various regulations and the Code. The committee determines appropriate enforcement responses whether settlements should be approved, or further investigation undertaken and makes recommendations to the Board regarding the laying of formal complaints with the Rulings Panel and instigating prosecutions with the Courts. These decisions can be appealed or judicially reviewed on the process used to reach the decision and/or on the lawfulness, reasonableness or appropriateness of the decision itself. A successful appeal or judicial review could overturn a compliance decision.

How much it cost

Actual 2021/22 \$000	Electricity industry governance and market operations appropriation	**Actual 2022/23 \$000	*Budget 2022/23 \$000
77,372	Revenue from the Crown	92,073	95,452
77,372	Expenditure	92,073	95,452

Notes:

- * The budget for 2022/23 corresponds to the Main Estimates of Appropriations for the year ending 30 June 2023.
 ** An in-principle expense transfer of \$1.702 million from 2021/22 to 2022/23 was confirmed at the October 2022 baseline update. A \$0.5 million increase for the appropriation was confirmed in the 2022/23 financial year at the March 2023 baseline update.

How we spent it

Actual 2021/22 \$000	Electricity industry governance and market operations appropriation	Actual 2022/23 \$000	*Budget 2022/23 \$000
27,088	System operator – operating expenses	28,776	28,309
13,735	System operator – capital related expenses	16,797	13,961
40,823	System operator expenses	45,573	42,270
-	Service provider – market making	9,130	14,400
2,383	Service provider – clearing manager	2,821	2,526
1,696	Service provider – wholesale information and trading system	1,875	2,052
736	Service provider – pricing manager	256	781
894	Service provider – reconciliation manager	956	947
739	Service provider – registry manager	753	795
820	Service provider – financial transmission right manager	877	869
1,144	Service provider – depreciation and amortisation	1,673	1,800
6	Service provider – IT costs	2	24
8,418	Other service provider expenses	18,343	24,194
-	Real Time Pricing	3,179	4,116
28,131	Authority operating expenses	24,978	24,872
77,372	Total expenses	92,073	95,452

Note:

- * The budget for 2022/23 corresponds to the Main Estimates of Appropriations for the year ending 30 June 2023.

Breakdown of operating costs by regulatory function	Actual 2022/23 \$000	Actual 2021/22 \$000
Appropriation income	92,073	77,372
Function costs		
Promote market development	14,350	11,482
Monitor, inform and educate	9,178	8,558
Operate the electricity system and markets	65,429	54,186
Enforce compliance	3,116	3,146
Total function costs	92,073	77,372

Notes:

The Authority's costs have been attributed to its core regulatory functions as detailed above. The underlying methodology allocates personnel and external costs that can be directly attributed to the appropriate function, but where this is not possible, those costs are treated as overheads, e.g. office rent costs or support staff costs. Overheads are then allocated across our functions based on an appropriate underlying measure eg full-time equivalent employee numbers.

For 2022/23 the new function to protect the interests of small consumers is included across the other four functions and will be reported separately from 2023/24.

Managing the security of New Zealand's electricity supply

What is intended to be achieved

This appropriation is intended to achieve enhanced security of supply in the electricity system during periods of emerging or actual security situations.

Scope of appropriation

This appropriation is limited to the management by the system operator (Transpower) of actual or emerging emergency events relating to the security of New Zealand's electricity supply.

The system operator can request funding from this appropriation to:

- increase monitoring and management responsibilities in the event of an emerging or actual security situation
- plan and run an official conservation campaign.

Managing the security of New Zealand's electricity supply is a multi-year appropriation for the period 2022/23 to 2026/27. Expenses under this appropriation can only be incurred by the system operator. We cannot incur any expenses of our own under this appropriation.

Our functions under this appropriation

The system operator is responsible for ongoing security monitoring and emergency management.¹¹ The security management functions of the system operator include the preparation of the emergency management policy, which is incorporated into the Code by reference following our review and approval. The policy sets out the steps the system operator will take and encourage industry participants to undertake during an extended emergency.

Our primary role in respect to security of electricity supply is to ensure the Code promotes an efficient level of supply reliability. This includes specifying the functions of the system operator, how the functions are to be performed and setting the requirements for transparency and performance. We also monitor the system operator's performance. This work is covered under the promoting market development

and operating the electricity system and markets functions, respectively, of the electricity industry governance and market operations appropriation.

Our role in respect to this appropriation is limited to addressing requests from the system operator to use these funds. Our approval of any request is subject to an agreed process and criteria. The process requires the system operator to provide evidence of an actual or emerging security event and to describe the actions it intends to take using the funds and how the use of these funds will be monitored. Agreeing this information in advance can help us to assess the effectiveness of the actions and the funding during and after the event.

The system operator would seek our approval for funding from this appropriation on a case-by-case basis when it considers increased monitoring or security management actions are justified. However, the system operator can, acting on a good faith basis, incur up to \$300,000 of costs in this area without prior approval if it is not reasonably practicable to seek that approval.

Performance measures

Managing the security of New Zealand's electricity supply contributes to our reliability outcome (see pages 15 and 36 of the Statement of Intent 2021–2025 amendment). The effective management of dry years and emergency events, as measured by case-by-case analysis, is one of a suite of statistics we use to measure whether there are efficient levels of reliable electricity supply.

If the system operator seeks funding under this appropriation to manage a dry year or emergency event, how it uses that funding would be reviewed as part of the subsequent analysis. The results of the review would be published on our website and a summary reported in our Annual Report.

Given that the relevant outcome and function performance measures are already captured elsewhere, the measures below are limited to those that demonstrate we have fulfilled our obligations for this appropriation.

¹¹ Section 8(2) of the Act states that, as well as acting as system operator for the electricity industry, the system operator must (a) provide information and short- to medium-term forecasting on all aspects of security of supply and (b) manage supply emergencies. Information about the system operator's security management role is available on its website at www.transpower.co.nz/system-operator/security-supply

Performance measures

Measure	2022/23 target	2021/22 result	2022/23 result
Electricity Authority decisions relating to system operator requests for access to funding are made in accordance with the agreed process and criteria.	Achieved	N/A. The Authority did not receive any applications for funding during the 2021/22 year.	N/A. The Authority did not receive any applications for funding during the 2022/23 year.

Note:

We have an agreed process and criteria for the system operator to follow. For example, correct documentation is provided, appropriate sig-off by system operator management, evidence that there is an actual or emerging security event, intended actions are clearly described and monitoring and reporting are specified.

How much it cost

Actual 2021/22 \$000	Managing the security of New Zealand's electricity supply appropriation*	Actual 2022/23 \$000	**Budget 2022/23 \$000
-	Revenue from the Crown	-	1,200
-	Expenditure	-	1,200

Notes:

* This is a multi-year appropriation of \$6 million over five years. This appropriation is contingent in nature and is not routinely used. To provide consistency with the appropriations contained in the Government's Estimates documents for Vote Business, Science and Innovation, annual budgeted amounts have been included in the above appropriation table. However, as it is not routinely used, no amounts in relation to this appropriation have been included in the 2022/23 budgets within the other financial statements contained in this Annual Report.

** The budget for 2022/23 corresponds to the Main Estimates of Appropriations for the year ending 30 June 2023.

Electricity litigation fund

What is intended to be achieved

This appropriation is intended to achieve assurance that the Authority is able to participate in litigation effectively and without delay.

Scope of appropriation

This appropriation is limited to meeting the cost of litigation activity undertaken by the Authority arising from it carrying out its functions under the Act.

Our functions under this appropriation

Our functions under this appropriation include defending judicial review and appeal cases taken against us and taking enforcement action against participants under our compliance function.

Performance measures

Measure	2022/23 target	2021/22 result	2022/23 result
The electricity litigation fund is used in accordance with the agreed criteria.*	Achieved	Achieved. During 2021/22, the fund was used in accordance with agreed criteria for the costs and expenses.	Achieved. During 2022/23, the fund was used in accordance with agreed criteria for the costs and expenses.

Notes:

* The criteria are set out in our output agreement with the Minister of Energy and Resources.

In 2022/23 the fund was primarily used to respond to three applications for judicial review or appeals of Electricity Authority decisions:

- Nova Energy Limited challenged the Authority's decision regarding treatment of embedded co-generation plants within the new Transmission Pricing Methodology (TPM). The Court of Appeal hearing ran from 19 to 20 April 2023. The Court of Appeal decision to dismiss Nova's application was made on 3 July 2023. A small portion of the costs incurred by the Authority were offset by court-awarded costs from Nova of \$28,033.17.
- Buller Electricity Limited lodged a statement of claim on 31 January 2023 challenging the Authority's decision to include in the TPM a discretion for Transpower to reclassify interconnection assets as connection assets. The High Court hearing of Buller Electricity's judicial review application ran from 31 July to 2 August 2023 and a decision is pending.
- Haast Energy Trading Limited and Electric Kiwi Limited claimed the Authority erred in deciding not to intervene in the setting of prices on the electricity wholesale market for 9 August 2021. The High Court hearing ran from 27 to 28 February 2023 and a decision is pending.

The fund was also used to retain external counsel to:

- advise and appear in respect of a formal complaint to the Rulings Panel relating to breaches by the system operator of the System Operator's Policy Statement and Clause 7.1A(1) of the Code on 9 August 2021 – this complaint was upheld by the Rulings Panel on 2 May 2023 with the system operator fined \$150,000 and paying the Authority's costs.
- advise and appear in respect of a formal complaint to the Rulings Panel relating to a breach by Ecotricity Limited of the Code provisions relating to disclosure of consumption information – this complaint was upheld by the Rulings Panel on 1 June 2023 with Ecotricity Limited fined \$57,000 and paying the Authority's costs.
- provide an independent legal opinion for the Board when considering a potential prosecution.

How much it cost

Actual 2021/22 \$000	Electricity litigation fund appropriation*	Actual 2022/23 \$000	**Budget 2022/23 \$000
132	Funded by revenue from the Crown	869	1,500
132	Total litigation Expenditure	869	1,500

Notes:

* This appropriation is contingent in nature, and to provide consistency with the appropriations contained in the Government's Estimates documents for Vote Business, Science and Innovation, annual budgeted amounts have been included in the above appropriation table. No amounts in relation to this appropriation have been included in the 2022/23 budgets within the other financial statements contained in this Annual Report.

** The budget for 2022/23 corresponds to the Main Estimates of Appropriations for the year ending 30 June 2023.

Service performance reporting disclosures

Statement of compliance

The service performance statements of the Authority have been prepared in accordance with the requirements of the Crown Entities Act 2004, which includes the requirement to comply with New Zealand generally accepted accounting practice (NZ GAAP).

The Authority is a Tier 1 entity and the service performance statements have been prepared in accordance with PBE reporting standards, including PBE FRS 48, which applies to non-financial performance reporting.

Selecting performance measures

The Authority's performance measures are selected to reflect the work we do to deliver our statutory functions alongside our strategic ambitions and statutory objective.

We regularly review our performance measures to ensure they are fit for purpose and align to our strategic framework. For 2022/23, we reviewed the measures in our Statement of Performance Expectations to ensure they were relevant, understandable, timely, comparable, and verifiable and faithfully represented our performance. This review meant that some previous performance measures were removed or amended to better represent the Authority's performance going forward.¹²

For our service performance information, we have organised our service performance information by operating function and selected measures for each that build a picture of our performance within that function. Together, these measures contribute to our overall performance story.

Where new performance measures have been added, these were selected to provide a more robust assessment of our performance and to reduce duplication across our suite of performance measures.

Judgements and assumptions made in our output performance measures

Content-based performance measures

The number of content-based items the Authority produces in a year (eg, content on our websites, publications, data and analytical tools) may fluctuate from year to year depending on our activities. For example, the number of analytical tools made available was higher in 2021/22 than 2022/23 because we upgraded our data warehousing system and had to create new tools as part of the data migration.

Contract management for market operation service providers (MOSPs)

Agreed levels of performance are included in our contracts with MOSPs. Performance metrics are reported monthly or quarterly, with an end-of-year review as part of the contract management plans. Where performance is not at the agreed levels, remedial plans and actions are put in place and reviewed at monthly MOSP meetings.

Similarly, audits of MOSPs are conducted by approved Authority auditors (such as the annual software audits) or procured by specialist auditors (such as cyber security audits). Audit recommendations and/or remedial plans and actions are reviewed at monthly MOSP meetings.

Percentage of investigations decided within 12 months of being opened

From 2021/22, this measure includes any open investigations that have exceeded the 12-month timeframe in the relevant financial year. It excludes any investigations that exceeded 12 months before the start of the financial year – these are reported towards the percentage in the year they exceeded 365 days.

This allows us to provide a more current assessment of the Authority's performance in this area each year by reporting

¹² Details on this review are included in the Statement of Performance Expectations 2022/23 at https://www.ea.govt.nz/documents/496/Statement_of_Performance_Expectations_2022-23.pdf

the cases in the financial year they exceeded the timeframe rather than automatically failing in a new year based on a previous year's performance.

In 2022/23, we closed 10 cases that exceeded the 12-month timeframe in 2021/22. These cases contribute to and were reported in the 2021/22 results.

Judgements and assumptions made in our impact and outcome measures

Survey-based measures

Participant perception survey measures: To support open and honest feedback, the survey is independently administered by an external provider, AK Research (AKR), who receives the responses in confidence and anonymises the data before providing the results to the Authority.

We use a random sample of participants and stakeholders to remove bias from our survey sample. The survey is voluntary, which means there is a level of self-selection in the survey results. We target a response rate of approximately 25%, which aligns with survey best practice.

Results reflect the perception of the respondents from their perspective as a representative of their organisation. These perceptions may not necessarily align with the views of the Authority and are considered in a balance with quantitative data. Perceptions can also be influenced by external factors, such as media interest, political views, weather events, etc.

Consumer perception survey measures: The survey is independently administered by external provider AKR, who receives the responses in confidence and anonymise the data before providing the results to the Authority. AKR uses their existing database to survey a nationally representative sample of domestic electricity consumers in New Zealand over the age of 18.

For both consumer and participant perception surveys, we assume that responses from within the sample are reflective of the broader population. It is not practicable or realistic to survey the entire population sample or to expect a 100% response rate.

Perception surveys are run during May and June each year.

Distribution pricing scorecards

The 2023 distribution pricing scorecards are scored using a weighted average across eight categories: circumstances, principles, strategy, roadmap, roadmap implementation, customer impact, focus areas and efficiency. However, this year's assessment places extra emphasis on efficiency and focus areas, which are given double weight in the evaluation process.

In 2021, distribution pricing methodologies were scored using a weighted average across five categories: circumstances, principles, strategy, roadmap, customer

impact and efficiency. The annual scorecard assessment was not carried out on the 2022 pricing methodologies to allow distributors time to implement updated guidance in the Distribution Pricing Practice Note.

Process-based measures

We have some measures that rely on a specific process being carried out if a certain event happens (eg, the customer transfer process in the event of a trader default or market services being resilient to adverse events). Where the event doesn't happen in the relevant year, we may use process reviews, service provider audits and system or business continuity testing to determine the result for the measure. If this is the case, we provide commentary on this alongside the measure result.

External factors impacting results

From time to time, external factors may impact performance measure results. These can range from changes in government policy, domestic and international economic shifts, extreme weather and climate change-related events and more. Where relevant, we note these external factors alongside the performance results.

Covid-19 related staff absences put additional pressure on staff capacity in 2022/23, however there was no material impact on the Authority's performance as a result. Business as usual functions were able to continue largely unaffected, although internal timeframes and priorities were adjusted as needed.

Linkages between financial and non-financial information

Financial and non-financial information work together to create a complete picture of our overall performance in the year. To be able to deliver our core functions and achieve our outcomes and ambitions, the Authority relies on our appropriation funding through the levy on electricity industry participants.

Delivery of our core functions supports the progression of our long-term strategic ambitions and statutory objectives.

One of our core functions – operate the electricity system and markets – makes up a significant proportion of our annual expenditure. Market operation service providers and the system operator make up 67 percent of our main operational appropriation (electricity industry governance and market operations). The remaining 33 percent funds the Authority's day-to-day operations to promote market development; monitor, inform and educate; enforce compliance.

This split is included in the appropriation breakdown for the electricity industry governance and market operations on page 39.

Our governance

Our Board

The Authority is governed by a Board of up to seven members, each appointed by the Minister of Energy and Resources. The Board has the authority to exercise the Authority's statutory powers and perform its functions. In addition, the Board sets the Authority's strategic direction and is responsible for the effective governance, accountability and performance of the Authority. This includes:

- setting and monitoring strategic direction and priorities
- delivery of and conformance with our accountability documents
- ensuring compliance with the law, internal policies and governance documents
- overseeing our work programme and outputs
- ensuring we operate in a financially responsible manner
- informing the Minister and our monitoring department of performance, progress, issues and risks
- managing risk and mitigating risks.

The Board delegates the day-to-day management of the Authority to the Chief Executive and senior leadership team.

Formal reporting processes are in place to inform the Board of the use of any delegated powers (Delegations Policy) and related schedules set out in the corporate (financial and non-financial), legislative, and market design delegations.

The Board is accountable to Parliament and reports to our responsible minister, the Minister of Energy and Resources. To hold itself to account, the Board undertakes an annual self-evaluation of its performance and shares the results with our Minister's representatives.

Our Board in 2022/23

Our Board members bring a wealth of experience and expertise across regulation and the electricity sector.

Members of the Board on 30 June 2023 were Dr Nicola Crauford (Chair), Allan Dawson, Paula Rose, Lana Stockman and Erik Westergaard, with a 60% female and 40% male gender split. All Board members are based in New Zealand.¹³

This year has seen change in the Authority's governance with two new Board members, Paula Rose and Erik Westergaard. For 2023/24, there are two new Board appointments, Dr Cristiano Marantes and Anna Kominik, who was appointed as Chair from 13 July 2023.

Board member	Term start	Term expiry	Term ends
Allan Dawson	11 April 2017	17 April 2022*	-
Sandra Gamble	11 April 2017	17 April 2022	23 December 2023
Mark Sandelin	1 June 2017	5 June 2022	1 April 2023
Lana Stockman	1 June 2017	5 June 2022*	-
Nicola Crauford (Chair)	1 November 2020	31 October 2021	13 July 2023
Paula Rose	16 January 2023	15 January 2028	-
Erik Westergaard	16 January 2023	15 January 2028	-

* In October 2023, Allan Dawson and Lana Stockman were reappointed by the Governor-General for a one-year term commencing on 9 October 2023.

Board sub-committees

The Board has three sub-committees – the Audit and Finance Committee, Compliance Committee and System Operations Committee.

Committee	Description
Audit and Finance Committee	Advises on the quality and integrity of our financial reporting. The committee considers whether appropriate governance, policies and operating processes are in place to identify and manage risk. They oversee and assess our internal audit process and manage the relationship with our external auditor.
Compliance Committee	Makes decisions on alleged breaches of the Act, regulations and Code. The committee determines appropriate enforcement responses and whether settlements should be approved or further investigation undertaken. They make recommendations to our Board regarding the laying of formal complaints with the Rulings Panel and instigation of prosecutions.
System Operations Committee	Oversees the performance monitoring of the system operator. They identify any emerging system security risks and address any other matters relating to the system operator's obligations under the Code. The Systems Operations Committee was replaced by the Market Operations Committee during 2022/23. The first meeting of the new committee was in August 2023.

¹³ More information on our Board, including member profiles, is available at www.ea.govt.nz/about-us/our-people/

Board and sub-committee attendance

In 2022/23, the Board held 19 meetings (12 Board meetings, two strategy days, and five meetings to respond to various matters), and two stakeholder engagement days.

Member	Regular Board meetings	Additional Board meetings	Strategy days	Stakeholder engagement days	Audit and Finance Committee	Compliance Committee	System Operations Committee
Nicola Crauford	11/12	5/5	2/2	2/2	2/3		1/2
Allan Dawson	12/12	5/5	2/2	2/2		4/4 (Chair)	2/2
Sandra Gamble	7/7	1/2*	1/1	1/1		2/2	2/2 (Chair)
Mark Sandelin	6.5/8	2/4	1/2	1/2	1/3 (Chair)	4/4	
Lana Stockman	12/12	5/5	2/2	2/2	3/3		1/2
Paula Rose	5/5	2/2	1/1	1/1	1/1		
Erik Westergaard	5/5	1/1	1/1	1/1		2/2	

Actual attendance/eligible to attend.

* Member is recused from all discussion and decision making on transmission pricing methodology (TPM) matters, including litigation and implementation of the TPM guidelines. In 2022/23, one additional Board meeting related to TPM matters.

Board interests

Board members are required to disclose any interests under the Crown Entities Act 2004 as well as any conflicts caused by their background or other interests. At 30 June 2023, no members held permissions to act despite being interested in a matter.

Board self-evaluation

The Board regularly undertakes a self-evaluation of its performance. Results of these evaluations are shared with the responsible Minister's representatives.

Advisory and technical groups

Advisory and technical groups provide additional support to our Board.

The Act sets a requirement to establish the Security and Reliability Council and other advisory groups. The Act also requires the Authority to publish a Charter for Advisory Groups.

The Authority is currently reviewing its advisory groups as part of a review of its Consultation Charter. Several options are under discussion with industry and consumer groups and we expect to make a decision in 2023/24.

Advisory and technical group	Description
Security and Reliability Council	Provides advice on the performance of the electricity system and the system operator, and on reliability of supply issues.
Innovation and Participation Advisory Group	Provides advice and recommendations on the development of the Code and market facilitation measures. The group focuses its advice on matters relating to evolving technology and business models, and competition and consumer choice.
Market Development Advisory Group	Provides advice on the development of the Code and market facilitation measures. The group focuses its advice on matters relating to the evolution of the 'machinery' of the electricity market.
Common Quality Technical Group	Provides advice on common quality requirements contained in Part 8 of the Code. The group provides advice on a range of technical matters from the operation of the power system at both the transmission and distribution levels, to the operation of generation and demand-side management technologies.
Standing Data Formats Group	Provides advice on new file formats and any changes to file formats required for the exchange of information.
Switch Technical Group	Provides advice on amendments that should be made to the switching process to ensure that it remains fit for purpose.

The Rulings Panel

There is an independent dispute resolution and disciplinary body for the electricity sector, the Rulings Panel. The Act sets out its membership, functions and funding arrangements.

The Rulings Panel was established under the Electricity Governance Regulations 2003. Members are appointed by the Governor-General in accordance with a recommendation from the Minister of Energy and Resources after consultation with the Minister of Justice and the Authority.

Members of the Rulings Panel in 2022/23 were Mel Orange (Chair), Geraldine Baumann (Deputy Chair) and Lee Wilson.

Our operational processes

Planning and reporting

The Crown Entities Act 2004 sets out our major planning and reporting requirements, including preparing and publishing the *Statement of Intent*, *Statement of Performance Expectations* and *Annual Report*.

Each year, we seek input from our stakeholders to assist with developing our statutory plans. Under section 129 of the Act, we consult levy payers on our proposed appropriations. This generally takes place over the October to December period. We use feedback received to develop appropriations recommendations to the Minister and inform our strategic planning for the year.

We also publish an *Annual Corporate Plan*, which identifies the key initiatives and development activities we intend to undertake for the year. Progress against the *Annual Corporate Plan* is reported in four-monthly increments throughout the year.

Value for money

We carefully manage our funding, balancing efforts to restrain our spending with the need to progress important work in a timely and robust fashion. We continue to work with our service providers to ensure value for money.

Improving effectiveness and efficiency crosses all functional areas. We ensure the cost-effectiveness of our work through:

- appropriation consultation – our appropriations are scrutinised through public consultation in accordance with section 129 of the Act
- robust use of planning and procurement disciplines
- assessment of proposed Code amendments and market facilitation measures – benefits and costs of proposed Code amendments and market facilitation measures are scrutinised through public consultation in accordance with our *Consultation Charter*
- joint procurement – where practicable and cost-effective, we work with other agencies on joint procurement and shared services
- taking up All-of-Government procurement offerings, where applicable.

Risk management

Everybody at the Authority is responsible for managing risk. We are committed to managing our risks and ensuring effective risk management in everything we do. This is to enable better coordinated, informed planning and decisions, enabling performance and improvement.

The Board is responsible for establishing and overseeing the risk management framework (RMF), which is supported by underlying systems, structures, policies, procedures, processes and people.

The Authority is developing a risk appetite statement (RAS) that will set out the Board's expectations regarding, for each material risk, the maximum level of risk the Authority is willing to accept in pursuing its strategic objectives and operating plans. The RAS is expected to be in place in 2023/24.

The Board has delegated authority to the Audit and Finance Committee to develop and monitor compliance with the financial reporting and risk management. The committee reports regularly to the Board on its activities.

The Authority operates a three-lines-of-defence model to help embed a culture where everyone is responsible for risk management:

1. The business is responsible for day-to-day ownership of risks and controls and accountability for implementation and ongoing adherence to the RMF.
2. The Operational Risk and Assurance team provides independent oversight of the Authority's risk profile and RMF.
3. Internal Audit provides independent assessment and assurance on the appropriateness, effectiveness and adequacy of the RMF and the effectiveness of the control environment.

Directions issued by the Minister

The Minister for the Public Service and Minister of Finance have communicated the following directions to the Authority under section 107 of the Crown Entities Act 2004:

- Support for a whole-of government approach to the New Zealand Business Number (New Zealand Gazette, 14 July 2016). The Authority is compliant with this direction.
- In April 2023, the Public Service Commissioner released updated Public Service Pay Guidance under the Public Service Act 2020. This is guidance in relation to the Government Workforce Policy Statement on the Government's expectations for employment relations in the public sector. As an independent Crown entity, the Authority must have regard to the Workforce Policy and related Pay Guidance. The expectation 'remains that agencies will fund any increases from within existing baselines, and those increases will be affordable and sustainable'.

Our people and organisational capability

Designing and operating New Zealand's electricity system takes great people. Our team is made up of passionate kaimahi who are led by our Board, Chief Executive and senior leadership team.

Our strategic capabilities

Our work demands a high level of capability in areas such as policy and market analysis, compliance management, communications and engagement, and other corporate functions. These capabilities ensure the setting and enforcement of rules that effectively govern New Zealand's electricity industry.

We have five strategic capabilities that provide the foundation for our internal priorities and reflect what we want to be known for.

Listening and empathy

To deliver value and the best outcomes for the breadth of different electricity consumers, we need to understand who they are and their experiences, perspectives and needs. This understanding can only come from increased curiosity and genuine, open listening. We also need to exercise this capability with the regulated community. We will adopt a customer-centred approach to ensure the regulatory platform better serves people, businesses and the nation.

Purposeful connection

To grow trust and confidence, build knowledge and progress the electricity sector, we will deepen our connection to those we serve – electricity consumers, tangata whenua, the regulated community and agencies we must collaborate with and can learn from. We also need to broaden our networks internationally. We will be clear about who we engage with and why and actively build relationships. We need to listen and demonstrate we've heard, and better communicate sector success.

Inspired culture

To achieve great outcomes for New Zealand, our internal talent needs to grow and thrive. We will invest in our culture, diversity and capability and provide opportunities for collaboration and progression so our people feel fulfilled and are empowered to do their best work. Their valued experience and commitment are the foundation from which the Authority will change, grow its professional maturity and enhance the craft of our regulation.

Transformative mindset

To meet the pace of change and drive innovation, we need to be creative, fast, bold, practical and flexible – choosing processes and methodologies that support responsiveness, agility and better solutions. We will improve our governance,

be more pragmatic, experiment, iterate and scan horizons both within and outside energy, domestically and internationally.

Impactful delivery

To achieve our intended outcomes, we need to be more efficient and strategic – prioritising and aligning our efforts and using more streamlined, transparent processes. We will invest in systems and tools for success, better leverage internal knowledge, resources, data and technology and apply a continuous improvement mindset to all.

Our people

Our people are the key to our success. The Authority places strong emphasis on attracting and retaining a diverse workforce that can deliver against its strategic ambitions. Our workforce strategy focuses on diversity, equity, inclusion, flexible and hybrid working options and individual development plans.

This past year, we developed a Kia Toipoto Pay Equity plan, demonstrating our commitment to help close pay gaps across the public service.¹⁴

We value and embrace diversity. This year, guidance from Diversity Works and Pride Pledge has assisted us on a journey of respectful inclusion as we have built a more cultural, age and gender-diverse workforce and knowledge base.

We place high importance on developing staff to their potential. Staff have taken advantage of their individual training budgets, and leadership training was provided for current and emerging people leaders. People leaders also received regular support and guidance to better support and lead our people.

For the year ahead, our goals are to embed our 12 organisational behaviours that build a positive workplace culture and to roll out the next stages of our leadership framework to encourage diversity and develop our emerging leaders.

People profile

As of 30 June 2023, the Authority has 105 permanent and four fixed-term employees. At management level (senior leadership team and people managers), the gender split was 65% male and 35% female (see Figure 1).

Employer of choice

Our people and capability processes are based on the principles of being an equal opportunity and good employer. We regularly review our internal processes and policies to ensure we are providing an equal opportunity to prospective employees and support the physical and mental wellbeing of our people.

¹⁴ The Kia Toipoto Pay Equity plan is available at www.ea.govt.nz/documents/3480/Pay_equity_plan_2023.pdf

To help build a positive culture, this year we ran a number of social events aligned with national events, such as Pink Shirt Day, Pink Ribbon, Samoan Language week and New Zealand Sign Language week. We also had monthly staff awards to recognise staff achievements and celebrate success.

We continue to ask for feedback through an annual Ask Your Team engagement survey to determine areas of improvement and opportunity.

Leadership, accountability and culture

Accountability for ensuring we have the best possible people capability sits with our senior leadership team and people managers, supported by our People and Capability team.

Our focus on the respectful sharing and exchange of views within and across teams has provided an environment

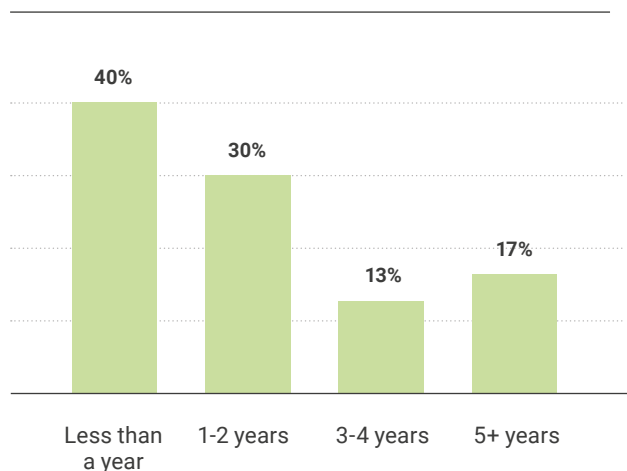
where people feel better equipped to contribute to the important decisions that deliver outcomes for consumers and the sector. Our staff contributed to the development of 12 organisational behaviours. These underpin our desired culture, drive how we engage and collaborate as an organisation and are aligned with our values of integrity, openness, excellence, boldness and our people.

Capability, structure and agility

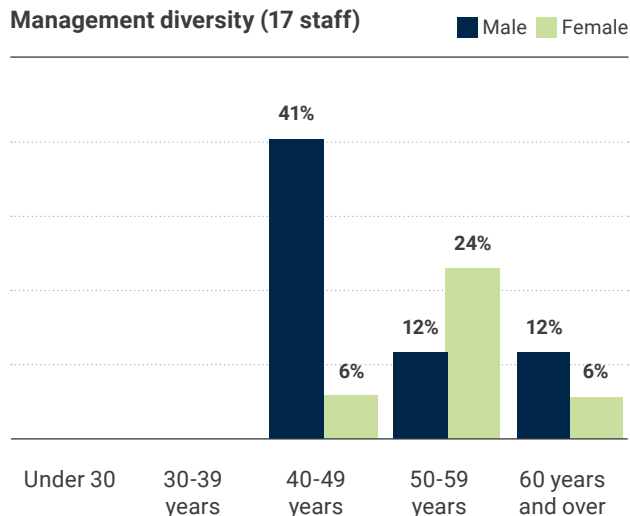
Ensuring we achieve our outcomes requires organisational structures that are fit for purpose. During the second half of 2022/23, we increased capability in the policy function by adding the Future Security and Resilience and Operations teams. This has enhanced our ability to have the right people in the right places at the right time.

Figure 1: Our people profile

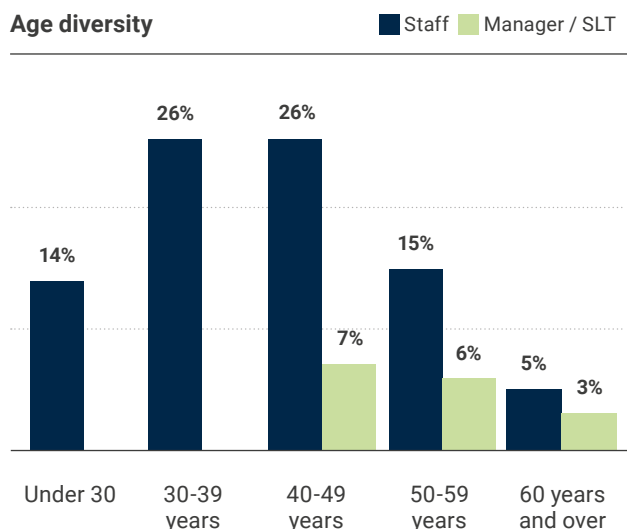
Length of service



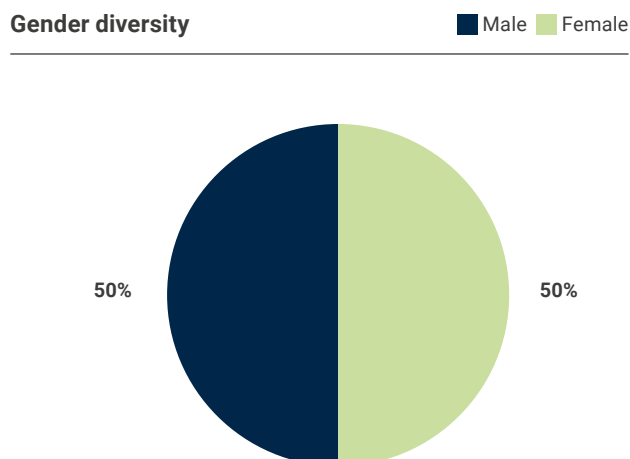
Management diversity (17 staff)



Age diversity



Gender diversity



Retention

The Authority's turnover rate was 29% in 2022/23, down from 39% in 2021/22.

We work hard to manage staff retention and have several initiatives underway to retain our kaimahi, including:

- increasing leadership capabilities
- development pathways and progression as well as succession planning
- improving our office working environment.

Climate change and greenhouse gas emissions

As an independent Crown entity, the Authority intends to lead by example and take active steps to measure and reduce our greenhouse gas (GHG) emissions.¹⁵

We have identified two areas as our main sources of GHG emissions – travel and the energy we purchase.

Air travel accounted for 70 percent of the Authority's emissions for the year. Air travel is considered a Scope 3 or indirect emission ie, it is an emission that occurs because of the activities of the organisation, but generated from sources that it does not own or control.

All GHG emissions are expressed as tonnes of carbon dioxide equivalent (tCO₂-e) and have been calculated using the Ministry for the Environment's Measuring Emissions: A Guide for Organisations.¹⁶

Overall in 2022/23, the Authority had 67.69 tCO₂-e of Scope 2 (purchased energy) and Scope 3 emissions. This was up from a total of 32.65 tCO₂-e in 2021/22 due to a significant increase in air travel (Figure 2).

Our intention is to see a reduction in our emissions over time. However, due to Covid-19 and subsequent alert level changes, 2020/21 does not represent a 'normal' year. This means there may be some variation in our baselining process as New Zealand moves into a post Covid-19 world.

Purchased energy

Our purchased energy is in the form of electricity used to power our offices. In 2022/23, we purchased 56,074 kilowatt hours of energy, emitting 6.73tCO₂-e representing 10% of our total emissions.

In July 2022, the Authority moved to Level 7, Aon Centre, 1 Willis Street. Our emissions for purchased energy reduced as we moved from renting two floors to one.

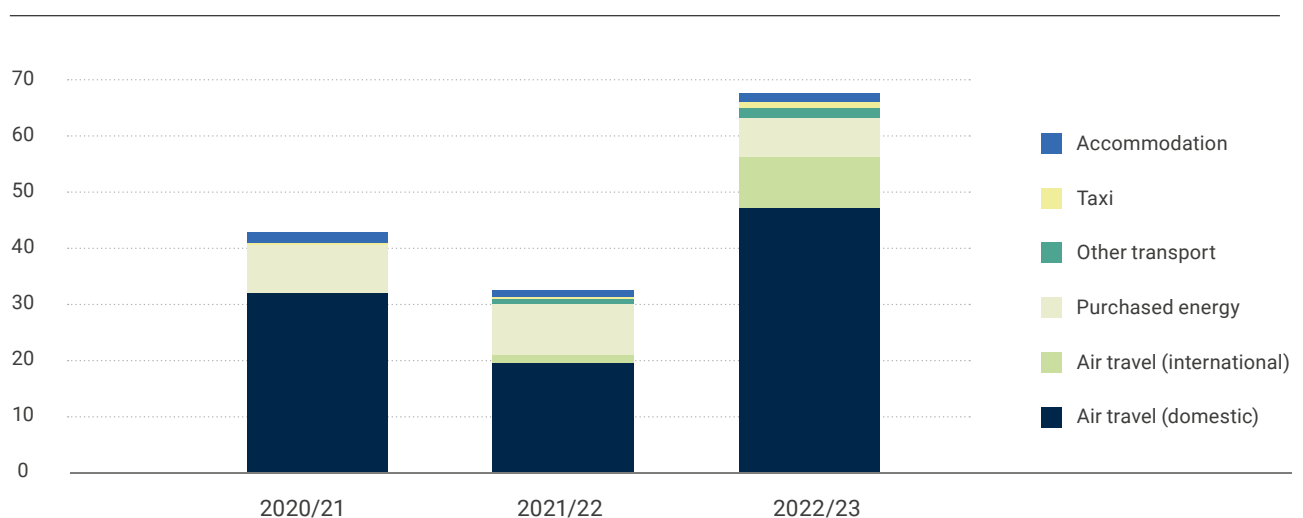
Air travel

The Authority flew approximately 154,834km domestically and 51,132km internationally in 2022/23. Emissions from air travel in 2022/23 were 47.38tCO₂-e for domestic air travel and 9.17tCO₂-e. Emissions from air travel have increased significantly as business has returned to normal conditions in the post Covid-19 period. This increase may reflect a more typical pattern for the Authority. We anticipate our emissions from international flights to decrease in 2023/24 as all Board members are now based in New Zealand.¹⁷

Other travel

Hotel accommodation, taxi use and other travel-related emissions comprised 7% of measured emissions in 2022/23 (4.40tCO₂-e).

Figure 2: Total greenhouse gas emissions per year (tCO₂-e)



¹⁵ As an independent Crown entity, the Authority is not mandated under the Carbon Neutral Government Programme. However, we are committed to measuring and reporting our greenhouse gas emissions. As we grow our capability in this area, we may identify further emissions sources. Where practicable we will include these in future reporting.

¹⁶ Ministry for the Environment, Measuring emissions: A guide for organisations: 2022 detailed guide, 16 August 2022, <https://environment.govt.nz/publications/measuring-emissions-a-guide-for-organisations-2022-detailed-guide/> accessed June 2023.

¹⁷ The Authority has recalculated its air travel emissions for the last two years based on updated guidance from the Ministry for the Environment. Therefore, the figures in this Annual Report are different to our previous two years' reports.

Financial statements

These financial statements report actual results against budget information in the Authority's *Statement of Performance Expectations 2022/23*.

These financial statements are provided in accordance with section 151 of the Crown Entities Act 2004.

Statement of comprehensive revenue and expense

for the year ended 30 June 2023

Actual 2021/22 \$000		Note	Actual 2022/23 \$000	Budget 2022/23 \$000
77,504	Funding from the Crown	2	92,942	95,452
154	Interest revenue		973	130
77,658	Total revenue		93,915	95,582
14,800	Personnel costs	3	16,162	15,363
1,351	Depreciation, amortisation and impairment	7,8	1,952	2,459
48,096	Service provider contracts		62,242	64,664
13,257	Other expenses	4	12,586	12,966
77,504	Total expenditure		92,942	95,452
154	Total comprehensive revenue and expense		973	130

The Authority's Prospective Statement of comprehensive income and expense in its Statement of Performance Expectations 2022/23 included the Market making budget of \$14,400,000 within Other expenses however the Market making budget has been classified within Service provider contracts for the purposes of the Statement of comprehensive revenue and expense above.

Statement of changes in equity

for the year ended 30 June 2023

Actual 2021/22 \$000		Note	Actual 2022/23 \$000	Budget 2022/23 \$000
12,814	Balance at 1 July		12,968	13,950
154	Total comprehensive revenue and expense	5	973	130
12,968	Balance at 30 June		13,941	14,080

The accompanying notes form part of these financial statements. Explanations for major variances to budget are provided in **Note 23**.

Statement of financial position

as at 30 June 2023

Actual 2021/22 \$000		Note	Actual 2022/23 \$000	Budget 2022/23 \$000
ASSETS				
Current assets				
18,661	Cash and cash equivalents	6	20,987	15,959
944	Receivables and prepayments		160	80
19,605	Total current assets		21,147	16,039
Non-current assets				
1,136	Property, plant and equipment	7	1,245	1,478
6,901	Intangible assets	8	8,192	4,481
8,037	Total non-current assets		9,437	5,959
27,642	Total assets		30,584	21,998
LIABILITIES				
Current liabilities				
6,911	Creditors and other payables	9	10,581	6,800
1,224	Employee entitlements	10	1,550	1,000
442	GST payable		38	100
5,670	Appropriation repayable to the Crown	11	4,212	-
305	Provisions	12	-	-
14,552	Total current liabilities		16,381	7,900
Non-current liabilities				
20	Employee entitlements	10	71	18
102	Provisions	12	191	-
122	Total non-current liabilities		262	18
14,674	Total liabilities		16,643	7,918
12,968	Net assets		13,941	14,080
Equity				
9,011	Contributed capital		9,011	9,011
3,957	Accumulated surplus		4,930	5,069
12,968	Total equity		13,941	14,080

The accompanying notes form part of these financial statements. Explanations for major variances to budget are provided in **Note 23**.

Statement of cash flows

for the year ended 30 June 2023

Actual 2021/22 \$000	Note	Actual 2022/23 \$000	Budget 2022/23 \$000
Cash flows from operating activities			
83,174	Receipts from the Crown	97,154	95,452
154	Interest from investments	973	130
(644)	Repayment of appropriation to the Crown	(5,670)	-
(63,487)	Payments to suppliers	(70,884)	(76,811)
(14,386)	Payments to personnel	(15,785)	(15,345)
501	Goods and services tax (net)	(98)	-
5,312	Net cash flows from operating activities	5,690	3,426
Cash flows from investing activities			
(1,078)	Purchase of property, plant and equipment	(286)	(1,408)
(2,656)	Purchase of intangible assets	(3,078)	(1,539)
(3,734)	Net cash flows from investing activities	(3,364)	(2,947)
1,578	Net increase in cash and cash equivalents	2,326	479
17,083	Cash and cash equivalents at beginning of year	18,661	15,480
18,661	Cash and cash equivalents at end of year	20,987	15,959

The accompanying notes form part of these financial statements. Explanations for major variances to budget are provided in **Note 23**.

Statement of commitments

as at 30 June 2023

Service provider agreements exist for the clearing manager, pricing manager, reconciliation manager, registry manager, wholesale and information trading system (WITS) manager, financial transmission rights (FTR) manager, system operator and market maker.

The commitments included below represent the minimum payments due under the contracts' notice periods for termination, or the contract expiry date. The system operator agreement has no fixed expiry date and has a three-year notice period for termination. The other market operator service provider agreements are due to expire on 30 June 2024. Replacement market operator service provider contracts are expected to be put in place at the expiry of the existing contracts. The operating commitments noted below only include existing contractual commitments at 30 June 2023.

The reconciliation manager agreement includes upgrade and improvement services to the market systems and is represented in the capital commitments.

Actual 2021/22 \$000		Actual 2022/23 \$000
OPERATING COMMITMENTS		
Service providers		
52,221	Not later than one year	67,003
101,550	Later than one year but not later than five years	50,134
153,771		117,137
Building lease		
450	Not later than one year	441
1,837	Later than one year but not later than five years	1,881
3,588	Later than five years	2,662
5,875		4,984
Other operating commitments		
1,946	Not later than one year	2,153
2,121	Later than one year but not later than five years	1,605
4,067		3,758
163,713	Total operating commitments	125,879
CAPITAL COMMITMENTS		
Intangible assets		
466	Not later than one year	480
480	Later than one year but not later than five years	-
946		480
946	Total capital commitments	480

The accompanying notes form part of these financial statements.

Notes to the financial statements

1. Accounting policies

Reporting entity

The Electricity Authority (Authority) is an independent Crown entity as defined by the Crown Entities Act 2004 and is domiciled and operates in New Zealand. The relevant legislation governing the Authority's operations includes the Crown Entities Act 2004 and Electricity Industry Act 2010 (Act). The Authority's ultimate parent is the New Zealand Crown.

The Authority's primary role is to provide services to the New Zealand public, and it does not operate to make a financial return. Accordingly, it has designated itself a public benefit entity (PBE) for financial reporting purposes.

The financial statements for the Authority are for the period 1 July 2022 to 30 June 2023 and were approved by the Board on 24 October 2023.

Basis of preparation

The financial statements have been prepared on a going concern basis and the accounting policies have been applied consistently throughout the period.

Statement of compliance

The financial statements of the Authority have been prepared in accordance with the requirements of the Crown Entities Act 2004, which includes the requirement to comply with New Zealand generally accepted accounting practice (NZ GAAP).

The Authority is a Tier 1 entity and the financial statements have been prepared in accordance with PBE accounting standards.

Presentation currency and rounding

The financial statements are presented in New Zealand dollars rounded to the nearest thousand dollars (\$000), except where otherwise stated.

New or amended standards adopted

PBE IPSAS 41 Financial Instruments

In March 2019, the External Reporting Board (XRB) issued PBE IPSAS 41 Financial Instruments, which supersedes both PBE IFRS 9 Financial Instruments and PBE IPSAS 29 Financial Instruments: Recognition and Measurement. The Authority has adopted PBE IPSAS 41 for the first time this year. There has been little change as a result of adopting the new standard.

PBE FRS 48 Service Performance Reporting establishes new requirements for the selection and presentation of service performance information. The Authority has adopted PBE FRS 48. The main change between PBE FRS 48 and PBE IPSAS 1 Presentation of Financial Statements is that PBE

FRS 48 requires additional information to be disclosed on the judgements that have the most significant effect on the selection, measurement, aggregation, and presentation of service performance information. This is disclosed on pages 43–44 of the service performance information.

Other changes in accounting policies

There have been no other changes in the Authority's accounting policies since the date of the last audited financial statements.

Standards issued and not yet effective and not early adopted

Standards and amendments that have been issued but are not yet effective and that have not been early adopted and that are relevant to the Authority are:

2022 Omnibus Amendment to PBE Standards

This Standard has been issued to amend the relevant Tier 1 and Tier 2 PBE Standards PBE IPSAS 16, 17, 19 and 30. The changes are for financial statements covering periods beginning on or after 1 January 2023 and little change is expected upon the adoption of the new standard.

Summary of significant accounting policies

Revenue

The specific accounting policies for significant revenue items are explained below.

Funding from the Crown

The Authority is primarily funded by the Crown. This funding is restricted in its use for the purpose of the Authority meeting the objectives specified in its founding legislation and the scope of the relevant appropriations of the funder.

The Authority considers there are no conditions attached to the funding and it is recognised as non-exchange revenue at the point of entitlement. Appropriations received from the Crown are recognised as revenue to the extent that expenditure has been incurred. Appropriations received but not spent are treated as a Crown creditor and shown in the Statement of financial position as a provision for refund of appropriations to the Crown.

Levies

The Authority administers a levy on industry participants under the Electricity Industry (Levy of Industry Participants) Regulations 2010 (Regulations). Levies are paid directly to the Crown for reimbursement of funding provided to the Authority. Levies are not recognised as revenue in the Authority's financial statements.

Interest

Interest is earned on bank deposits and is recognised in the period to which it relates.

Operating leases

An operating lease is a lease that does not transfer substantially all the risks and rewards incidental to ownership of an asset to the lessee.

Lease payments under an operating lease are recognised as an expense on a straight-line basis over the lease term.

Cash and cash equivalents

Cash and cash equivalents include cash on hand, deposits held on call with banks and other short-term highly liquid investments with original maturities of normally three months or less.

Receivables and prepayments

Short-term receivables are recorded at the amount due, less an allowance for expected credit losses.

The Authority applies the simplified expected credit loss model of recognising lifetime expected credit losses for receivables. In measuring expected credit losses, short-term receivables have been assessed on a collective basis as they possess shared credit risk characteristics. They have been grouped based on the days past due. Short-term receivables are written off when there is no reasonable expectation of recovery. Indicators that there is no reasonable expectation of recovery include the debtor being in liquidation.

No expected credit losses have been recognised as there has been no significant history of debtors past due.

Property, plant and equipment

Property, plant and equipment consist of the following asset classes: computer hardware, furniture and fittings, office equipment and leasehold improvements.

Property, plant and equipment are shown at cost, less any accumulated depreciation and impairment losses.

Additions

The cost of an item of property, plant and equipment is recognised as an asset only when it is probable that future economic benefits or service potential associated with the item will flow to the Authority and the cost of the item can be measured reliably.

Disposals

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount of the asset. Gains and losses on disposals are reported net in the surplus or deficit.

Depreciation

Depreciation is provided on a straight-line basis on all property, plant and equipment at rates that will write-off the cost (or valuation) of the assets to their estimated residual

values over their useful lives. The useful lives and associated depreciation rates of each asset class have been estimated as follows:

Computer hardware	3–5 years	20%–33%
Furniture and fittings	5 years	20%
Office equipment	5 years	20%
Leasehold improvements	Shorter of the unexpired lease term and useful life	

Intangible assets

Software acquisition and development

Acquired software licences are capitalised on the basis of the costs incurred to acquire and bring to use the specific software.

Costs that are directly associated with the development of software are recognised as an intangible asset when the software becomes operational. Work in progress is recognised at cost less impairment.

Staff training costs are recognised as an expense when incurred.

Costs associated with maintaining software are recognised as an expense when incurred.

Costs associated with the development and maintenance of the Authority's corporate website are recognised as an expense when incurred.

Costs associated with the implementation of software as a service products are treated as an expense.

Amortisation

The carrying value of an intangible asset with a finite life is amortised on a straight-line basis over its useful life. Amortisation begins when the asset is available for use and ceases at the date that the asset is derecognised. The amortisation charge for each financial year is recognised in the surplus or deficit. The value of additions made to an existing asset are amortised over the remaining useful life of the existing asset.

The useful lives and associated amortisation rates of each asset class are estimated as follows:

Computer software	3–17 years	6%–33%
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Impairment of capital assets

The Authority does not hold any cash generating assets. Assets are considered cash generating where their primary objective is to generate a commercial return.

Non-cash generating assets

Property, plant and equipment and intangible assets that have a finite useful life are assessed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss would be recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of the asset's fair value less costs to sell and value in use.

Value in use is determined using an approach based on either depreciated replacement cost, restoration cost or service units. The most appropriate approach depends on the nature of the impairment and availability of information.

If an asset's carrying amount exceeds its recoverable service amount, the asset is regarded as impaired and the carrying amount is written down to the recoverable amount. The total impairment loss is recognised in the surplus or deficit.

The reversal of an impairment loss is recognised in the surplus or deficit.

Payables and accruals

Short-term payables and accruals are recorded as exchange transactions at their face value.

Employee entitlements

Short-term employee entitlements

Employee benefits that are due to be settled within 12 months after the end of the period in which the employee renders the related service are measured based on accrued entitlements at current rates of pay.

These include salaries and wages accrued up to balance date, annual leave earned but not yet taken at balance date and sick leave.

Sick leave is recognised to the extent that compensated absences in the coming year are expected to be greater than the sick leave entitlements earned in the coming year. The amount is calculated based on the unused sick leave entitlement that can be carried forward at balance date to the extent that the Authority anticipates it likely to be used by staff to cover those future absences.

A liability and an expense are recognised for bonuses where there is a contractual obligation or a past practice that has created a constructive obligation and a reliable estimate of the obligation can be made.

Long-term employee entitlements

Employee benefits that are due to be settled beyond 12 months after the end of period in which the employee

renders the related service, such as long-service leave, have been calculated on an actuarial basis. The calculations are based on:

- likely future entitlements accruing to staff, based on years of service, years to entitlement, the likelihood that staff will reach the point of entitlement, and contractual entitlement information; and
- the present value of the estimated future cash flows.

Presentation of employee entitlements

Sick leave, annual leave and vested long-service leave are classified as a current liability. Non-vested long-service leave and retirement gratuities expected to be settled within 12 months of balance date are classified as a current liability. All other employee entitlements are classified as a non-current liability.

Superannuation schemes

Defined contribution schemes

Obligations for contributions to KiwiSaver and the State Sector Retirement Savings Scheme are accounted for as defined contribution superannuation schemes and are recognised as an expense in the surplus or deficit as incurred.

Provisions

A provision is recognised for future expenditure of uncertain timing when there is a present obligation (either legal or constructive) as a result of a past event, it is probable that expenditure will be required to settle the obligation and a reliable estimate of the amount of the obligation can be made.

Equity

Equity is measured as the difference between total assets and total liabilities. Equity is disaggregated and classified into the following components:

- contributed capital
- accumulated surplus/(deficit).

Goods and services tax (GST)

All items in the financial statements are presented exclusive of GST, except for receivables and payables, which are presented on a GST-inclusive basis. Where GST is not recoverable as input tax, it is recognised as part of the related asset or expense.

The net amount of GST recoverable from, or payable to, the Inland Revenue Department (IRD) at balance date is included as part of receivables, current assets, or payables, current liabilities, in the Statement of financial position.

The net GST paid to, or received from, the IRD, including the GST relating to investing and financing activities, is classified as a net operating cash flow in the Statement of cash flows.

Commitments and contingencies are disclosed exclusive of GST.

Income tax

The Authority is a public authority and consequently is exempt from the payment of income tax. Accordingly, no provision has been made for income tax.

Budget figures

The budget is derived from the *Statement of Performance Expectations 2022/23*, as approved by the Authority's Board.

The budget figures have been prepared in accordance with Tier 1 PBE accounting standards using accounting policies that are consistent with those adopted by the Board in preparation of the financial statements. All budget figures are unaudited.

Measurement base

The financial statements have been prepared on a historical cost basis. The accounting policies that materially affect the measurement of financial performance, financial position and cash flows are set out below and have been applied consistently to all periods presented in these financial statements.

Critical accounting estimates and assumptions

In preparing these financial statements, the Authority has made estimates and assumptions concerning the future. These estimates and assumptions may differ from the subsequent actual results. Estimates and assumptions are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year or future financial years, are discussed below.

Impairment of intangible assets

At each balance date, the impairment of intangible assets is reviewed. Assessing the appropriateness of an asset impairment requires a number of factors to be considered such as an asset's value in use and its carrying amount versus its recoverable amount.

Impairment will affect the amortisation or impairment expense recognised in the surplus or deficit and the carrying amount of the asset in the Statement of financial position.

Estimating useful lives and residual values of intangible assets

At each balance date, the estimates of useful lives and residual values of intangible assets are reviewed. Assessing the appropriateness of these estimates requires several factors to be considered, such as the condition of the assets, expected period of use of the assets by the Authority and expected disposal proceeds from the future sale of the assets.

A revision to the estimate of the useful life or residual value of an asset will affect the amortisation expense recognised

in the surplus or deficit and carrying amount of the asset in the Statement of financial position.

For internally generated software that the Authority developed, the useful life is based on historical experience with similar systems as well as anticipation of future events that might affect the useful life such as changes in technology.

2. Crown appropriations

The Authority has been provided with funding from the Crown for specific purposes as set out in the Act and in the scope of the appropriations as set out in Vote Business, Science and Innovation. Appropriations are recognised as revenue to the extent that they are spent.

	Actual 2022/23 \$000	Actual 2021/22 \$000
Electricity industry governance and market operations	92,073	77,372
Electricity litigation fund	869	132
	92,942	77,504

3. Personnel costs

	Actual 2022/23 \$000	Actual 2021/22 \$000
Salaries and contractors	15,416	14,188
Contributions to defined contribution plans	581	528
Increase in annual, sick and long-service leave provisions	165	84
	16,162	14,800

Contributions to defined contribution plans include contributions to KiwiSaver and the State Sector Retirement Savings Scheme.

A total of \$4,903 was paid during the financial year as compensation relating to cessation of employment (2021/22: \$150,873).

4. Other expenses

	Actual 2022/23 \$000	Actual 2021/22 \$000
External work programme support	5,897	7,737
Litigation fund	869	132
Auditor fees for external audit	67	56
Auditor fees for other services	56	5
Advisory and working group fees (Note 17)	44	93
Board member remuneration (Note 15)	689	574
Rulings Panel remuneration (Note 16)	66	56
Operating lease expenses	606	898
Travel expenses	195	68
Other operating expenses	4,097	3,638
	12,586	13,257

5. Total comprehensive revenue and expense

The Authority may elect to retain interest revenue and other revenue in order to maintain an appropriate level of working capital. The Authority has exercised this option for the periods ended 30 June 2022 and 30 June 2023.

	Actual 2022/23 \$000	Actual 2021/22 \$000
Interest revenue	973	154
	973	154

6. Cash and cash equivalents

The carrying value of cash at bank and short-term deposits, with maturities of normally three months or less approximates their fair value.

	Actual 2022/23 \$000	Actual 2021/22 \$000
Cash in current account	2,287	461
Cash on call in interest-bearing money market account	3,200	1,700
Short-term deposits*	15,500	16,500
	20,987	18,661

* A term deposit of \$2,500,000 with an original maturity of 109 days with 80 days to maturity as at 30 June 2022 was considered to be highly liquid and included as a short-term deposit.

7. Property, plant and equipment

There are no restrictions over the title of the Authority's plant, property and equipment, and no items of plant, property and equipment have been pledged as security for liabilities.

	Computer hardware \$000	Office equipment \$000	Furniture and fittings \$000	Leasehold improvements \$000	Total \$000
COST OR VALUATION					
Balance at 1 July 2021	711	192	477	786	2,166
Additions	133	22	254	669	1,078
Disposals	(694)	(156)	(307)	(786)	(1,943)
Balance at 30 June 2022	150	58	424	669	1,301
Balance at 1 July 2022	150	58	424	669	1,301
Additions	-	47	54	234	335
Disposals	(49)	(4)	(22)	-	(75)
Balance at 30 June 2023	101	101	456	903	1,561
ACCUMULATED DEPRECIATION					
Balance at 1 July 2021	623	116	392	718	1,849
Depreciation expense	37	27	21	50	135
Eliminate on disposal	(636)	(118)	(297)	(768)	(1,819)
Balance at 30 June 2022	24	25	116	-	165
Balance at 1 July 2022	24	25	116	-	165
Depreciation expense	21	16	72	56	165
Eliminate on disposal	-	(2)	(12)	-	(14)
Balance at 30 June 2023	45	39	176	56	316
NET CARRYING VALUE					
At 1 July 2021	88	76	85	68	317
At 30 June 2022 and 1 July 2022	126	33	308	669	1,136
At 30 June 2023	56	62	280	847	1,245

8. Intangible assets

There are no restrictions over the title of the Authority's intangible assets, and no intangible assets have been pledged as security for liabilities.

	Work in progress \$000	Software and systems \$000	Total \$000
COST OR VALUATION			
Balance at 1 July 2021	2,551	30,342	32,893
Additions	2,656	-	2,656
Transfers	(1,007)	1,007	-
Disposals	-	(624)	(624)
Balance at 30 June 2022	4,200	30,725	34,925
Balance at 1 July 2022	4,200	30,725	34,925
Additions	3,078	-	3,078
Transfers	(6,133)	6,133	-
Balance at 30 June 2023	1,145	36,858	38,003
ACCUMULATED AMORTISATION			
Balance at 1 July 2021		27,432	27,432
Amortisation expense		1,216	1,216
Eliminate on disposal		(624)	(624)
Balance at 30 June 2022		28,024	28,024
Balance at 1 July 2022		28,024	28,024
Amortisation expense		1,787	1,787
Balance at 30 June 2023		29,811	29,811
NET CARRYING VALUE			
At 1 July 2021	2,551	2,910	5,461
At 30 June 2022 and 1 July 2022	4,200	2,701	6,901
At 30 June 2023	1,145	7,047	8,192

The Authority's intangible assets comprise acquired and developed software, systems and associated licences, the most significant of which is the software used in the operation of the electricity market. As at 30 June 2023, this software had a cost of \$33.500 million (2021/22: \$28.640 million), net carrying value of \$5.427 million (2021/22 \$2.241 million), and an estimated remaining useful life of between three and five years.

9. Creditors and other payables

Payables and accruals are non-interest bearing and are normally settled on 30-day terms, therefore the carrying value of payables and accruals approximates their fair value.

	Actual 2022/23 \$000	Actual 2021/22 \$000
Creditors	3,392	1,042
Accrued expenses	7,189	5,869
	10,581	6,911

10. Employee entitlements

	Actual 2022/23 \$000	Actual 2021/22 \$000
CURRENT PORTION		
Annual leave	747	688
Accrued salary	749	536
Sick leave and long-service leave	54	-
Total current portion	1,550	1,224
NON-CURRENT PORTION		
Long-service leave	71	20
Total non-current portion	71	20
	1,621	1,244

11. Appropriation repayable to the Crown

The Authority receives funding by way of appropriations from the Crown. The Crown is reimbursed for this funding by levies collected from industry participants.

The Authority receives its appropriations monthly according to a funding profile agreed at the start of the financial year. At the end of the year, the difference between funding drawn down and total Authority expenditure is recorded as a payable or receivable with the Crown. If all appropriations are fully drawn down, the amount will be a payable representing unspent funding to be returned to the Crown.

	Actual 2022/23 \$000	Actual 2021/22 \$000
Net Crown appropriations drawn down	97,154	83,174
Less total Authority expenditure	(92,942)	(77,504)
Appropriation repayable to the Crown	4,212	5,670

12. Provisions

	Actual 2022/23 \$000	Actual 2021/22 \$000
CURRENT		
Lease make-good	-	130
Onerous lease	-	175
Total current	-	305
NON-CURRENT		
Lease incentive	191	102
Total non-current	191	102
	191	407

The lease make-good provision was for the removal of leasehold improvements or additions at termination of a previous tenancy in September 2022.

The onerous lease provision related to lease payments due up until the expiry of the Harbour Tower lease in September 2022 for offices at 2 Hunter Street, Wellington.

The non-current lease liability is the pro rata portion of the lease incentive for office space at Level 7, Aon Centre, 1 Willis Street over the life of the lease.

13. Reconciliation of net operating surplus to net cash flows

	Actual 2022/23 \$000	Actual 2021/22 \$000
Net operating surplus	973	154
Add non-cash items		
Depreciation, amortisation and impairment	1,952	1,351
Disposal of fixed assets	12	127
Non-current employee entitlements	51	2
Total non-cash items	2,015	1,480
Add movements in working capital items		
(Increase)/decrease in receivables and prepayments	784	(923)
Increase/(decrease) in GST payables	(404)	501
Increase/(decrease) in payables and accruals	3,670	(1,615)
Increase in employee entitlements	326	412
Increase/(decrease) in provisions	(216)	277
Increase/(decrease) in provision for refund of appropriation	(1,458)	5,026
Net working capital movements	2,702	3,678
Net cash flow from operating activities	5,690	5,312

14. Employee remuneration

	Actual 2022/23 \$000	Actual 2021/22 \$000
\$100,000–\$109,999	6	8
\$110,000–\$119,999	3	4
\$120,000–\$129,999	7	5
\$130,000–\$139,999	4	3
\$140,000–\$149,999	4	2
\$150,000–\$159,999	5	4
\$160,000–\$169,999	4	5
\$170,000–\$179,999	5	3
\$180,000–\$189,999	3	2
\$190,000–\$199,999	2	1
\$200,000–\$209,999	3	5
\$210,000–\$219,999	3	2
\$220,000–\$229,999	2	1
\$230,000–\$239,999	3	-
\$250,000–\$259,999	2	-
\$260,000–\$269,999	-	2
\$270,000–\$279,999	-	1
\$280,000–\$289,999	-	1
\$360,000–\$369,999	1	-
\$370,000–\$379,999	-	1
	57	50

15. Board member remuneration

	Actual 2022/23 \$000	Actual 2021/22 \$000
Dr Nicola Crauford (Chair)	244	235
Allan Dawson	115	88
Paula Rose	44	-
Lana Stockman	102	103
Erik Westergaard	39	-
Susan Paterson (resigned 30 June 2021)	-	(11)
Sandra Gamble (resigned 23 December 2022)	76	89
Mark Sandelin (resigned 31 March 2023)	69	70
	689	574

The Remuneration Authority, an independent body set up by Parliament, determines the remuneration received by Board members.

No Board members received compensation or other benefits in relation to cessation (2021/22: nil). The Authority has directors' and officers' liability and professional indemnity insurance cover in respect of the liability or costs of Board members and employees.

A negative amount is shown for Susan Paterson in 2021/22 due to her final fees being less than the estimated amount.

16. Rulings Panel remuneration

	Actual 2022/23 \$000	Actual 2021/22 \$000
Mel Orange (Chair)	45	33
Geraldine Baumann	10	7
Lee Wilson	14	9
Denis O'Rourke (resigned 1 March 2023)	(3)	7
	66	56

A negative amount indicates the final fees being less than the estimated amount.

17. Advisory group and working group fees

Advisory groups and working groups comprise members paid by the Authority and members working in the industry who are paid by their own organisation. The members' fees listed below are those paid by the Authority and do not represent the complete membership of each group.

		Actual 2022/23 \$000	Actual 2021/22 \$000
Security and Reliability Council	Heather Roy (Chair)	19	25
	Barbara Elliston	5	4
	Nanette Moreau Hammond	5	6
	Allan Miller (appointed 1 April 2023)	2	-
Market Development Advisory Group	Tony Baldwin (Chair)	12	18
	Ann Whitfield	-	2
Innovation and Participation Advisory Group	John Hancock (Chair)	1	18
	Allan Miller	-	5
	Tim Rudkin	-	6
	Scott Willis	-	7
	Roxanne Salton	-	2
		44	93

18. Related party transactions

The Authority is a wholly owned entity of the Crown and receives funding by way of appropriations from the Crown.

Related party disclosures have not been made for transactions with related parties that are within a normal supplier or client/recipient relationship on terms and conditions no more or less favourable than those that it is reasonable to expect the Authority would have adopted in dealing with the party at arm's length in the same circumstances. Further, transactions with other government agencies (for example, government departments and Crown entities) are not disclosed as related party transactions when they are consistent with the normal operating arrangements between government agencies and undertaken on the normal terms and conditions for such transactions.

Government-related entities

The Authority purchased system operator and technical advisory services from Transpower New Zealand Limited, as well as the provision of FTR manager services and market support services from their division Energy Market Services (EMS) for a total of \$47.6 million (2021/22: \$42.2 million).

Key management personnel compensation

Key management personnel include the Board and Senior Leadership Team (Chief Executive, Chief Operating Officer, Chief Strategy Officer, Director – Communications and Engagement, Director – Network Pricing, General Manager – Legal, Monitoring and Compliance and General Manager – Market Policy). Their remuneration and full-time equivalents were as follows:

	Actual 2022/23	Actual 2021/22
BOARD MEMBERS		
Remuneration (\$000)	689	574
<i>Full-time equivalent members</i>	<i>1.73</i>	<i>1.54</i>
SENIOR LEADERSHIP TEAM		
Remuneration (\$000)	2,149	2,155
<i>Full-time equivalent members</i>	<i>6.76</i>	<i>7.50</i>
Total key management personnel remuneration (\$000)	2,838	2,729
Total full-time equivalent personnel	8.49	9.04

The full-time equivalent for Board members has been determined based on actual hours spent attending Board meetings, events or meetings representing the Authority and time spent preparing for meetings.

19. Financial instruments

The Authority is party to financial instrument arrangements as part of its everyday operations. These financial instruments include bank accounts, term deposits, accounts receivable classified as financial assets at amortised cost, and accounts payable classified as financial liability at amortised cost. The Authority does not have any other financial instruments.

Financial instrument risks

Interest rate risk

Interest rate risk is the risk that the return on funds invested and the cost of borrowed funds fluctuate due to changes in market interest rates.

The Authority's exposure to interest rate risk on funds invested is limited to on-call bank deposits and term deposits, which are subject to variable interest rates.

Under the Crown Entities Act 2004, the Authority requires Ministerial approval to enter into a borrowing arrangement. The Authority has no borrowings and accordingly there is no interest rate exposure on borrowed funds.

Credit risk

Credit risk is the risk that a third-party defaults on its obligations to the Authority, causing the Authority to incur a loss. The Authority only invests in financial institutions that have high credit ratings.

Liquidity risk

Liquidity risk is the risk that the Authority encounters difficulties raising liquid funds to meet commitments as they fall due. The Authority has a low exposure to liquidity risk as it does not enter into credit arrangements except those available from suppliers as part of normal operating agreements and aims to maintain sufficient funds available on call to meet its liquidity requirements.

As at 30 June 2023, the expected cash outflows from payables maturing within six months is \$10,581,000 (2021/22: \$6,911,000). These amounts are the contractual undiscounted cash flows.

Currency risk

Currency risk is the risk that debtors and creditors due in foreign currency fluctuate because of changes in foreign exchange rates. The Authority has no significant exposure to currency risk on its financial instruments.

20. Equity

The Authority's equity comprises its contributed capital and accumulated surplus.

The Authority is subject to the financial management and accountability provisions of the Crown Entities Act 2004, which impose restrictions in relation to borrowings, acquisition of securities, issuing guarantees and indemnities and the use of derivatives.

The Authority prudently manages its revenues, expenses, assets, liabilities and general financial dealings to ensure it effectively achieves the objectives and purpose while remaining a going concern.

21. Contingencies

As at 30 June 2023, there were three applications for judicial review of Authority decisions but the outcomes of those appeals had not been released. There may be costs awarded for or against the Authority as a result of the outcomes. The Authority is disclosing these three appeals as contingent events as there was no possibility of predicting the outcome at balance date.

There are no known contingent assets or liabilities (2021/22: nil) and no guarantees under the Crown Entities Act 2004 (2021/22: nil).

22. Post balance date events

On 1 July 2023, Dr Cristiano Marantes was appointed to the Board of the Authority.

On 3 July 2023, an application for judicial review of a decision by the Authority by Nova Energy Limited was dismissed and costs of \$28,033 were awarded to the Authority. This application for judicial review is also disclosed in Note 21.

On 13 July 2023, Dr Nicola Crauford's tenure as Chair of the Authority ceased and she was replaced by Anna Kominik.

On 6 October 2023, the Authority was required to pay costs of \$10,860 relating to one component of an appeal for judicial review by Haast Energy Trading Limited and Electric Kiwi Limited. The substantive part of this appeal is ongoing.

No other significant events that would materially affect the financial statements have occurred between 30 June 2023 and the date of signing the financial statements.

23. Explanation of major variances against budget

Expenditure against appropriations

Appropriations and output classes	Actual 2022/23 \$000	Budget 2022/23 \$000	Variance \$000
OPERATIONAL APPROPRIATION			
Electricity industry governance and market operations	92,073	95,452	3,379
CONTINGENT APPROPRIATIONS			
Electricity litigation fund	869	-	(869)
Total	92,942	95,452	2,510

Electricity industry governance and market operations

This appropriation provides funding for the general operations of the Authority and the operation of the electricity system and market. Expenditure in 2022/23 was \$3.4 million less than budget, with the most significant component of this variance arising from the market making function commencing later than anticipated, resulting in these costs being lower than originally budgeted. Funding conditions prevent the Authority utilising this market making underspend on alternative initiatives.

Managing the security of New Zealand's electricity supply

This appropriation is contingent in nature and provides funding to allow the management of emergency events by the system operator, if required, including increased monitoring and management responsibilities in the event of an emerging security situation and planning and running an emergency conservation campaign. No expenditure was incurred under this appropriation in 2022/23.

Electricity litigation fund

This appropriation provides funding to ensure that the regulatory body for the electricity industry is able to participate in litigation effectively and without delay. The appropriation is contingent in nature, and expenditure is only incurred if litigation arises. The cost of litigation in 2022/23 was \$0.9 million which was funded by the appropriation.

The costs for 2022/23 have been spent primarily on the Transmission Pricing Methodology litigation and the Undesirable Trading Situation that came out of the 9 August 2021 event. The Electricity litigation fund has an appropriation of \$1.500 million.

Statement of comprehensive revenue and expense

Crown appropriations

The revenue recognised from Crown appropriations was \$2.5 million lower than budgeted principally due to the underspend in market making costs, offset by \$0.9 million of unbudgeted Electricity litigation fund appropriation being recognised (both as detailed above).

Depreciation, amortisation and impairment

Depreciation, amortisation and impairment expenses were \$0.5 million lower than budget. This was mainly due to changes in scope and timing of various projects since the budget was set.

Personnel

Personnel costs were \$0.8 million higher than budget. This is mainly due to the mix of contract and permanent personnel engaged during 2022/23 reflecting the tight labour market and also some increases in employee entitlement costs.

Service provider contracts

Costs associated with the system operator and market service providers were \$2.4 million lower than budget,

principally due to market making commencing later than expected and costs therefore being lower than budgeted. Funding conditions prevent the Authority from utilising this underspend on alternative initiatives.

Statement of financial position

Cash and cash equivalents

Cash and cash equivalents were \$4.9 million higher than budget largely due to unspent appropriation funding being held in our accounts. Funding conditions relating to the market making budget underspend prevented the use of these funds on other initiatives, so the funding is included in our cash position at year end awaiting repayment. Other contributing factors in the increase in cash and cash equivalents were a new market making bank account with a balance of \$1.1 million being set up during the year, interest income being \$0.8 million above budget and an increased level of payables as at 30 June 2023.

Intangible assets

Intangible assets were \$3.7 million higher than budget due to further investment in service provider software and the development and implementation of Authority compliance software and its website.

Payables and accruals

Payables and accruals were \$3.7 million higher than budget primarily due to higher system operator and market making costs being recognised in the last month of the year.

Refund of appropriation to the Crown

The Authority incurred expenditure that was \$4.2 million less than the amount of appropriation funding received from the Crown. This unspent funding will be returned to the Crown.

Statement of cash flows

Receipts from the Crown

The variation from budget in Crown funding of \$1.7 million is due to an in-principle expense transfer from 2021/22 not being included in the Authority's original 2022/23 budget.

Payments to suppliers

Payments to suppliers were \$6.2 million lower than budget mainly due to lower than anticipated service provider costs during the year and higher levels of payables at 30 June 2023 compared to 30 June 2022.

Statement of electricity levy of industry participants

Levies collected from industry participants during the financial year are deposited into a Crown bank account administered by MBIE. A reconciliation is carried out after the end of the financial year between levies collected and expenditure to be recovered by the levy. The Crown will either provide a refund to, or request additional payment from, individual industry levy payers based on this reconciliation. Any over or under recovery of the Energy Efficiency and Conservation Authority portion of the levy is applied as an adjustment to the levy rate in future years rather than being refunded or collected through the reconciliation process.

For the year 1 July 2022 to 30 June 2023, the levies collected were 3.5 percent higher than the expenditure to be recovered due to the aforementioned underspend on market making services which commenced later than budgeted. The difference is expected to be \$3.483 million, which will be refunded to levy payers. The final amount owed may vary from this amount, and some levy payers may still be required to pay additional levies while others receive a refund, depending on whether they are generators, retailers or distributors and based on variations from estimated volumes of dispatches, sales and customer connections.

	Actual 2022/23 \$000	Actual 2021/22 \$000
Total levies collected by the Crown	101,725	83,205
Electricity Authority expenditure	92,942	77,504
Energy Efficiency and Conservation Authority (EECA operations)	5,300	5,500
Total expenditure to be recovered by levies	98,242	83,004
Total owed to levy payers by the Crown	3,483	201



Statement of responsibility

The Board is responsible for the preparation of the Electricity Authority's financial statements and statement of performance and for the judgements made in them.

It is responsible for any end-of-year performance information provided by the Electricity Authority under section 19A of the Public Finance Act 1989.

It has the responsibility for establishing and maintaining a system of internal control designed to provide reasonable assurance as to the integrity and reliability of financial and performance reporting.

In the Board's opinion, these financial statements and statement of performance fairly reflect the financial position and operations of the Electricity Authority for the year ended 30 June 2023.

Signed on behalf of the Board:



Anna Kominik
Board Chair

24 October 2023



Paula Rose, QSO
Board member
Audit and Finance Committee Chair

24 October 2023

Independent Auditor's Report

To the readers of the Electricity Authority's financial statements and performance information for the year ended 30 June 2023

The Auditor-General is the auditor of the Electricity Authority (the Authority). The Auditor-General has appointed me, Fiona Elkington, using the staff and resources of Audit New Zealand, to carry out the audit of the financial statements and the performance information, including the performance information for appropriations, of the Authority on his behalf.

Opinion

We have audited:

- the financial statements of the Authority on pages 54 to 72, that comprise the statement of financial position as at 30 June 2023, the statement of comprehensive revenue and expenses, statement of changes in equity and statement of cash flows for the year ended on that date and the notes to the financial statements including a summary of significant accounting policies and other explanatory information; and
- the performance information which reports against the Authority's statement of performance expectations and appropriations for the year ended 30 June 2023 on pages 12 to 44.

In our opinion:

- the financial statements of the Authority:
 - present fairly, in all material respects:
 - its financial position as at 30 June 2023; and
 - its financial performance and cash flows for the year then ended; and
 - comply with generally accepted accounting practice in New Zealand in accordance with the Public Benefit Entity Reporting Standards; and
- the Authority's performance information for the year ended 30 June 2023:
 - presents fairly, in all material respects, for each class of reportable outputs:
 - its standards of delivery performance achieved as compared with forecasts included in the statement of performance expectations for the financial year; and
 - its actual revenue and output expenses as compared with the forecasts included in the statement of performance expectations for the financial year;
 - presents fairly, in all material respects, for the appropriations:
 - what has been achieved with the appropriations; and
 - the actual expenses or capital expenditure incurred as compared with the expenses or capital expenditure appropriated or forecast to be incurred; and
 - complies with generally accepted accounting practice in New Zealand.

Our audit was completed on 24 October 2023. This is the date at which our opinion is expressed.

The basis for our opinion is explained below. In addition, we outline the responsibilities of the Board and our responsibilities relating to the financial statements and the performance information, we comment on other information, and we explain our independence.

Basis for our opinion

We carried out 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 Responsibilities of the auditor section of our report.

We have fulfilled our responsibilities in accordance with the Auditor-General's Auditing Standards.

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

Responsibilities of the Board for the financial statements and the performance information

The Board is responsible on behalf of the Authority for preparing financial statements and performance information that are fairly presented and comply with generally accepted accounting practice in New Zealand. The Board is responsible for such internal control as they determine is necessary to enable them to prepare financial statements and performance information that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements and the performance information, the Board is responsible on behalf of the Authority for assessing the Authority's ability to continue as a going concern. The Board is also responsible for disclosing, as applicable, matters related to going concern and using the going concern basis of accounting, unless there is an intention to merge or to terminate the activities of the Authority, or there is no realistic alternative but to do so.

The Board's responsibilities arise from the Crown Entities Act 2004 and the Public Finance Act 1989.

Responsibilities of the auditor for the audit of the financial statements and the performance information

Our objectives are to obtain reasonable assurance about whether the financial statements and the performance information, 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 carried out in accordance with the Auditor-General's Auditing Standards will always detect a material misstatement when it exists. Misstatements are differences or omissions of amounts or disclosures and can arise from fraud or error. Misstatements are considered material if, individually or in the aggregate, they could reasonably be expected to influence the decisions of readers, taken on the basis of these financial statements and the performance information.

For the budget information reported in the financial statements and the performance information, our procedures were limited to checking that the information agreed to the Authority's statement of performance expectations.

We did not evaluate the security and controls over the electronic publication of the financial statements and the performance information.

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. Also:

- We identify and assess the risks of material misstatement of the financial statements and the performance information, 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.
- We 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 Authority's internal control.
- We evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board.
- We evaluate the appropriateness of the performance information which reports against the Authority's statement of performance expectations and appropriations.
- We conclude on the appropriateness of the use of the going concern basis of accounting by the Board and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Authority'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 financial statements and the performance information 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 Authority to cease to continue as a going concern.

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

We communicate with the Board 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.

Our responsibilities arise from the Public Audit Act 2001.

Other information

The Board is responsible for the other information. The other information comprises the information included on pages 2 to 11, 45 to 52 and 74 to 101, but does not include the financial statements and the performance information, and our auditor's report thereon.

Our opinion on the financial statements and the performance information 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 financial statements and the performance information, our responsibility is to read the other information. In doing so, we consider whether the other information is materially inconsistent with the financial statements and the performance information, or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on our work, 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.

Independence

We are independent of the Authority in accordance with the independence requirements of the Auditor-General's Auditing Standards, which incorporate the independence requirements of Professional and Ethical Standard 1: International Code of Ethics for Assurance Practitioners (including International Independence Standards) (New Zealand) (PES 1) issued by the New Zealand Auditing and Assurance Standards Board.

In addition to the audit, we are completing probity assurance engagements for the Authority, which are compatible with those independence requirements. Other than the audit and these engagements we have no relationship with, or interests, in the Authority.



Fiona Elkington
Audit New Zealand
On behalf of the Auditor-General
Wellington, New Zealand

Appendix A

Outcome measures

This appendix provides detailed information to support the Authority's high-level progress against the outcome measures used to assess the competition, reliability, and efficiency parts of our statutory objective.

Many statistics in this section relate to calendar years. This is because of the software used to generate the data for the statistics. When a year is referred to that is not in the 20XX/XX format (eg, 2022/23), it can be assumed that is referring to the calendar year.

Competition

Measure: Improved participant perceptions of the competitiveness in electricity markets

Percentage of participants who agree with a range of statements on electricity market competitiveness:

Measure	Year	Disagree or strongly disagree	Neither agree nor disagree	Agree or strongly agree	N/A	Count (n=) ¹⁸
Competition between electricity generators ensures wholesale market prices are set at an efficient level	2022/23	41%	10%	41%	8%	118
	2021/22	46%	11%	32%	11%	114
Competition between electricity generators ensures they build the most efficient power stations	2022/23	32%	21%	38%	8%	118
	2021/22	39%	12%	36%	13%	114
Competition between retailers ensures that consumer prices only rise in line with costs to the electricity companies	2022/23	45%	21%	27%	7%	118
	2021/22	39%	15%	40%	6%	114

Percentage of participants who agree that prices in the following electricity markets reflect the outcomes expected in a workably competitive market:

Measure	Year	Disagree or strongly disagree	Neither agree nor disagree	Agree or strongly agree	N/A	Count (n=)
Retail market	2022/23	36%	20%	33%	11%	118
	2021/22	30%	19%	41%	10%	114
Spot market	2022/23	29%	17%	37%	17%	118
	2021/22	34%	14%	34%	18%	114
Hedge market, including ASX and OTC	2022/23	32%	19%	23%	26%	118
	2021/22	27%	22%	23%	28%	114
Ancillary service markets	2022/23	13%	35%	24%	28%	118
	2021/22	9%	33%	22%	36%	114

¹⁸ The participant perception survey is sent to a random sample of ~400 industry participants and stakeholders. Count (n=) refers to the number of those survey recipients who completed the survey each year.

Measure: Improved consumer perceptions of the competitiveness of electricity markets

Percentage of consumers who agree with a range of statements on electricity market competitiveness:

Measure	Year	Disagree or strongly disagree	Neither agree nor disagree	Agree or strongly agree	N/A	Count (n=) ¹⁹
I have a choice in my electricity provider	2022/23	4%	10%	83%	3%	1,006
	2021/22	5%	10%	82%	3%	1,030
I can find a power company that meets my needs	2022/23	7%	17%	73%	3%	1,006
	2021/22	5%	20%	72%	3%	1,030
Having a choice of power companies means I can find a fair price	2022/23	8%	20%	69%	3%	1,006
	2021/22	10%	23%	64%	3%	1,030

Measure: Overall improvement across a suite of statistics

Statistics		
Retail market concentration (HHI statistic)	Retail market share (CR4 statistic)	Net pivotal analysis
Retail market concentration is trending down following a spike in 2022.	Retail market concentration is trending down following a spike in 2022.	Net pivotal analysis wasn't completed in 2022/23 due to implementation of real-time pricing. In 2021/22, the most net pivotal generator was net pivotal for less than 1% of the time.
Hedge market concentration (HHI statistic)	Concentration in the ancillary services market (HHI of reserves statistic)	Number of retailers' approaches to consumers with offers to induce switching
The HHI remains relatively stable. Most contracts had HHIs between 2,000 and 3,000.	The HHI remains low and stable long-term.	In 2023, 49% of survey respondents had been approached one or more times in the past 24 months. Up from 45% in 2022.

The Herfindahl-Hirschman Index (HHI) is referred to throughout this section. An HHI provides a measure of market concentration. A decreasing HHI indicates decreasing market concentration, which can indicate greater competition. The HHI is calculated as the sum of the squares of the market share of all participants.

Further explanations of these statistics are included in *Frequently used terms and abbreviations* on page 99.

¹⁹ The consumer perception survey is sent to a nationally representative sample of ~1,000 New Zealanders over the age of 18. Count (n=) refers to the number of survey recipients who completed the survey each year.

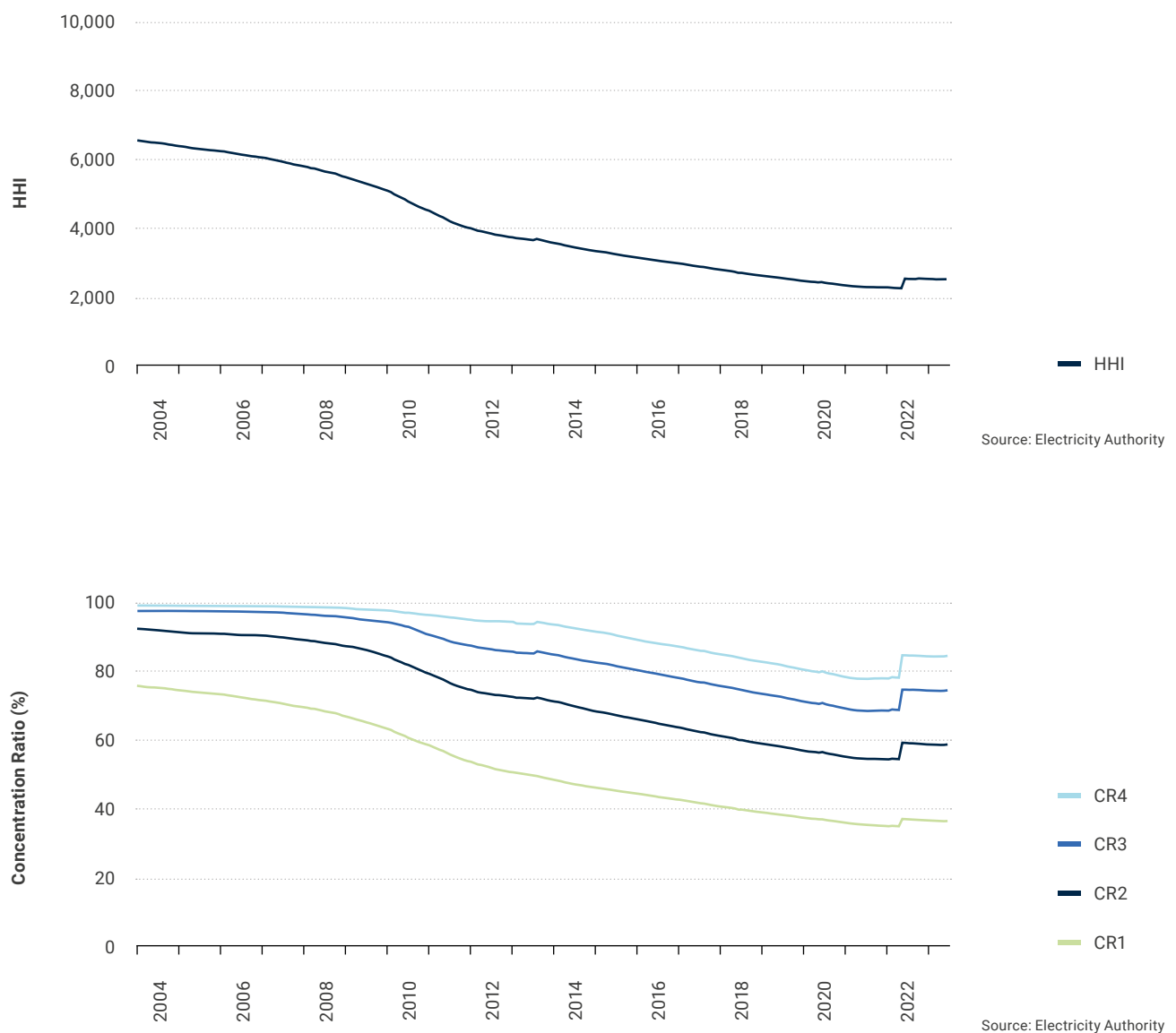
Retail market concentration (HHI statistics)/share (CR4 statistic)

We take a structure-conduct-performance approach to assessing competition. We use HHI (statistic 1) and concentration ratio statistics (statistic 2) as measures of concentration.

These measures help to assess the structure of the market. Figure 3 shows these measures are falling in the residential retail market. This indicates the structure of the market is improving.

In 2022 Mercury NZ Limited, bought Trustpower Limited’s retail business, which accounts for the change in the downward trend. Since then, the measures are again showing a descent tendency.

Figure 3: Retail market concentration/share (residential only)



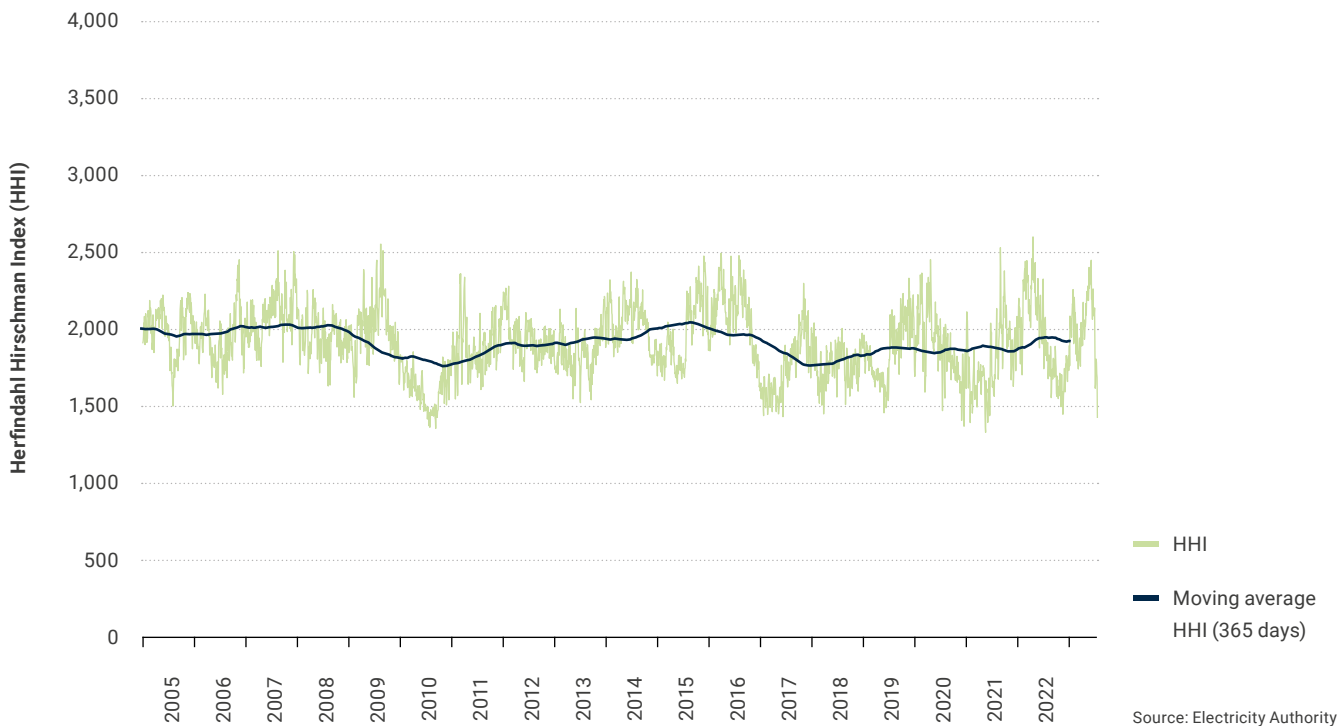
Generation market concentration

We also look at HHI in electricity generation. Figure 4 shows the HHI is trending downward over the long term, although there is some seasonality with the HHI falling during periods when water is scarce and climbing when water is abundant. Low inflows during 2019 and 2021 have meant the HHI has decreased as large hydro generators produce less. This

increases the market share of these hydro generators, creating an increase in the HHI.

The chart shows that, while relatively stable, concentration is decreasing over the long term.

Figure 4: Generation market concentration



Net pivotal analysis

Net pivotal analysis wasn't completed in 2022/23 due to the implementation of real-time pricing. The net pivotal measure requires a simulation using vSPD, which is a simulation tool for the spot market. vSPD needed to be rebuilt to account for real-time price. This was not completed in time to produce this measure for 2022/23.

Hedge market concentration (HHI statistic)

We monitor the hedge market's HHI (statistic 4). Figure 5 – Figure 8 show the HHI for hedge sellers and buyers for both monthly and quarterly ASX contracts. We monitor both buy and sell HHIs because it is possible to take a position in either direction in a hedge market. The HHI in this context

is more a measure of conduct than structure. The HHI in future periods helps us monitor how positions are changing in the market.

Most contracts have HHIs between 2,000 and 3,000. Monthly contracts exhibit more volatile HHIs than quarterly contracts. This indicates that there are generally more traders within the quarterly market (seen by a more stable HHI), whereas traders move in and out of the monthly market.

Long-dated futures contracts (as seen in the quarterly HHIs) are thinly traded and at times show higher HHI than the long-term mean.

Figure 5: Hedge market concentration for monthly buyers

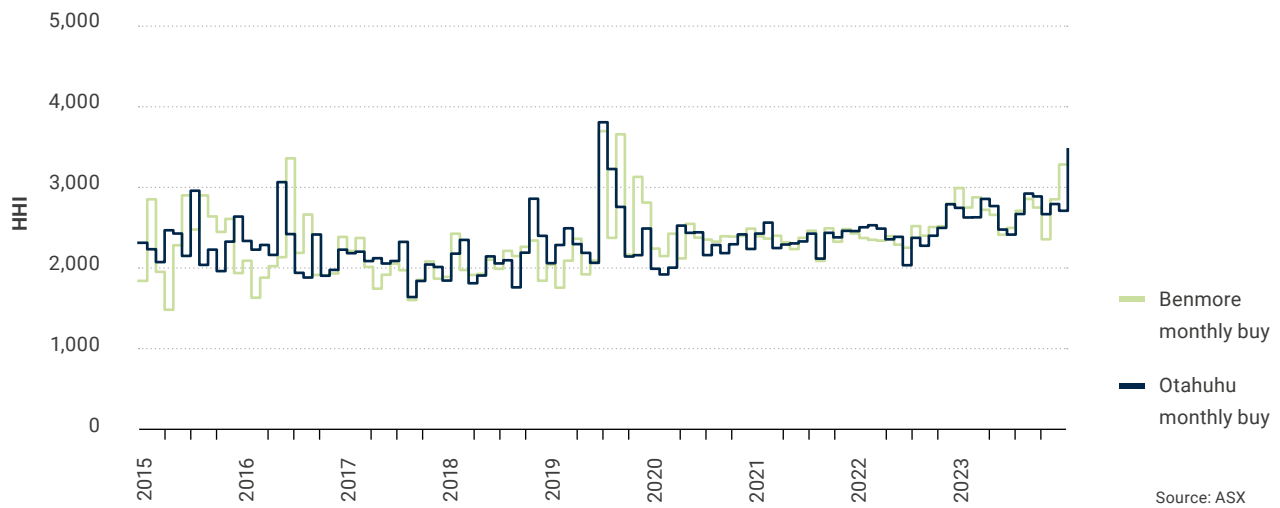


Figure 6: Hedge market concentration for quarterly buyers



Figure 7: Hedge market concentration for monthly sellers

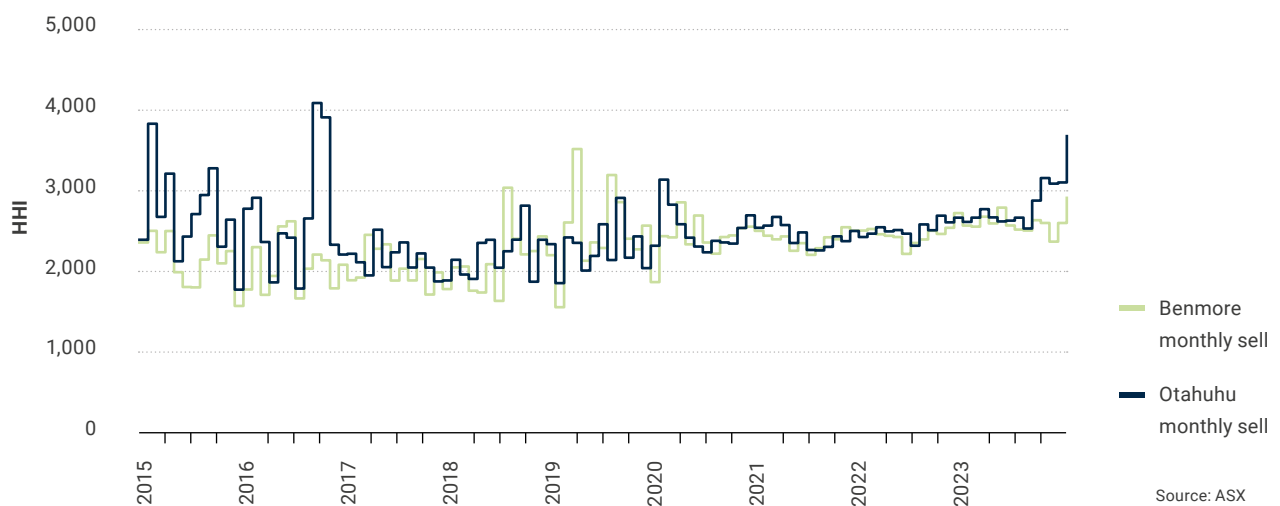


Figure 8: Hedge market concentration for quarterly sellers

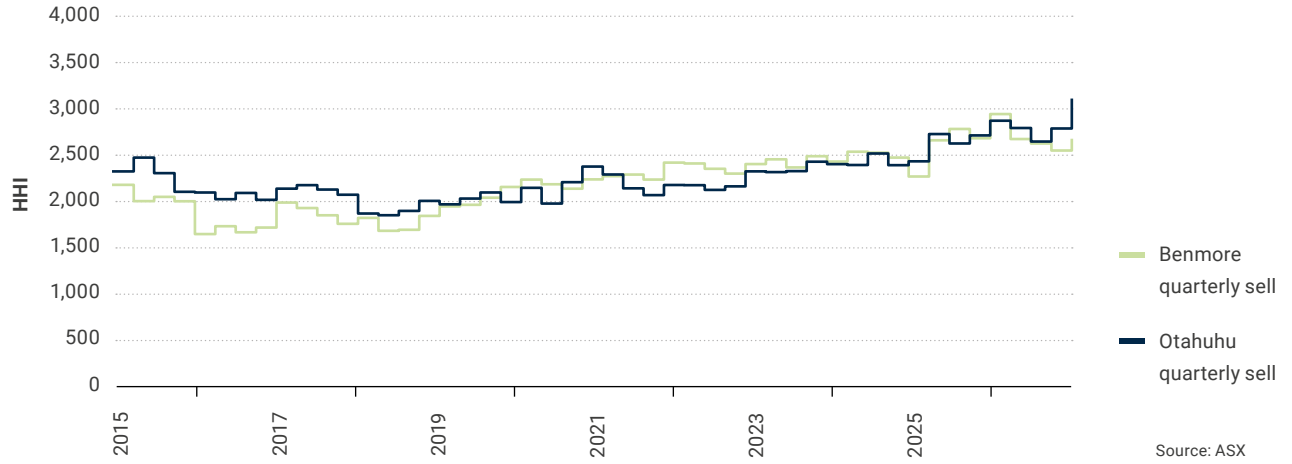
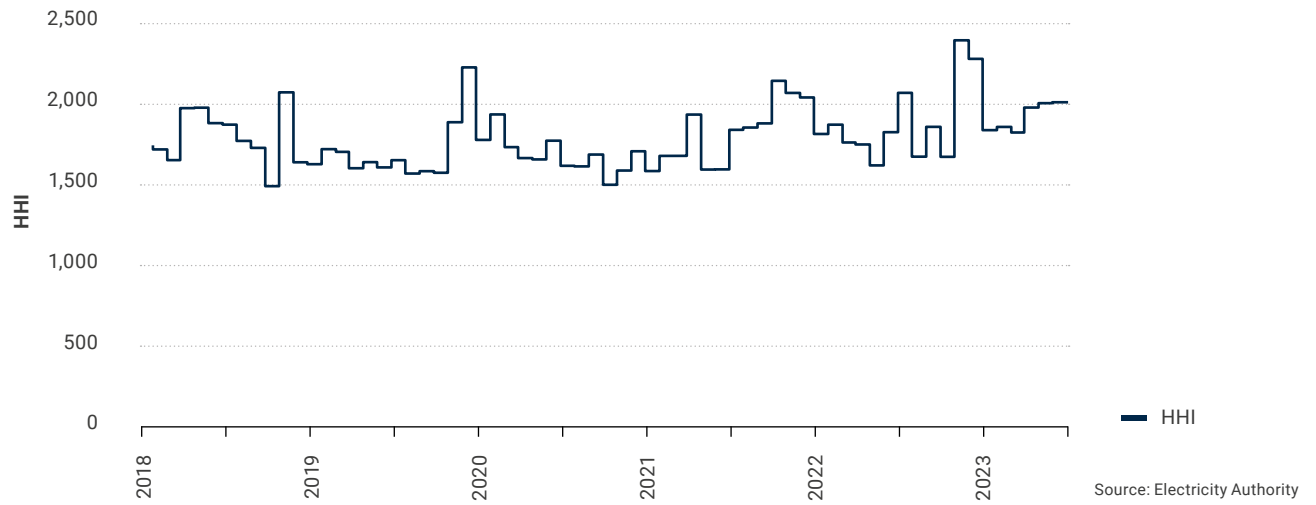


Figure 9: Reserves market concentration



Concentration in the ancillary services market (HHI of reserves statistic)

The structure of the reserves market is shown in Figure 9, which tracks the monthly HHI for the reserve markets in both islands (statistic 5).

Concentration in the reserves market has remained relatively stable long term, with the HHI sitting between 1,500 and 2,000 for most of the 2022/23 year. In November and December 2022, HHI peaked at over 2,000, reaching higher levels compared to the peaks seen in 2019/20.

This is likely due to an Australian Stock Exchange (ASX) clearing broker closing its ASX New Zealand energy positions meaning there were fewer participants able to access the ASX. This increased the importance of the over-the-counter (OTC) market, which resulted in the Authority working with the sector to develop a code of conduct for the OTC market.

Number of retailers' approaches to consumers with offers to induce switching

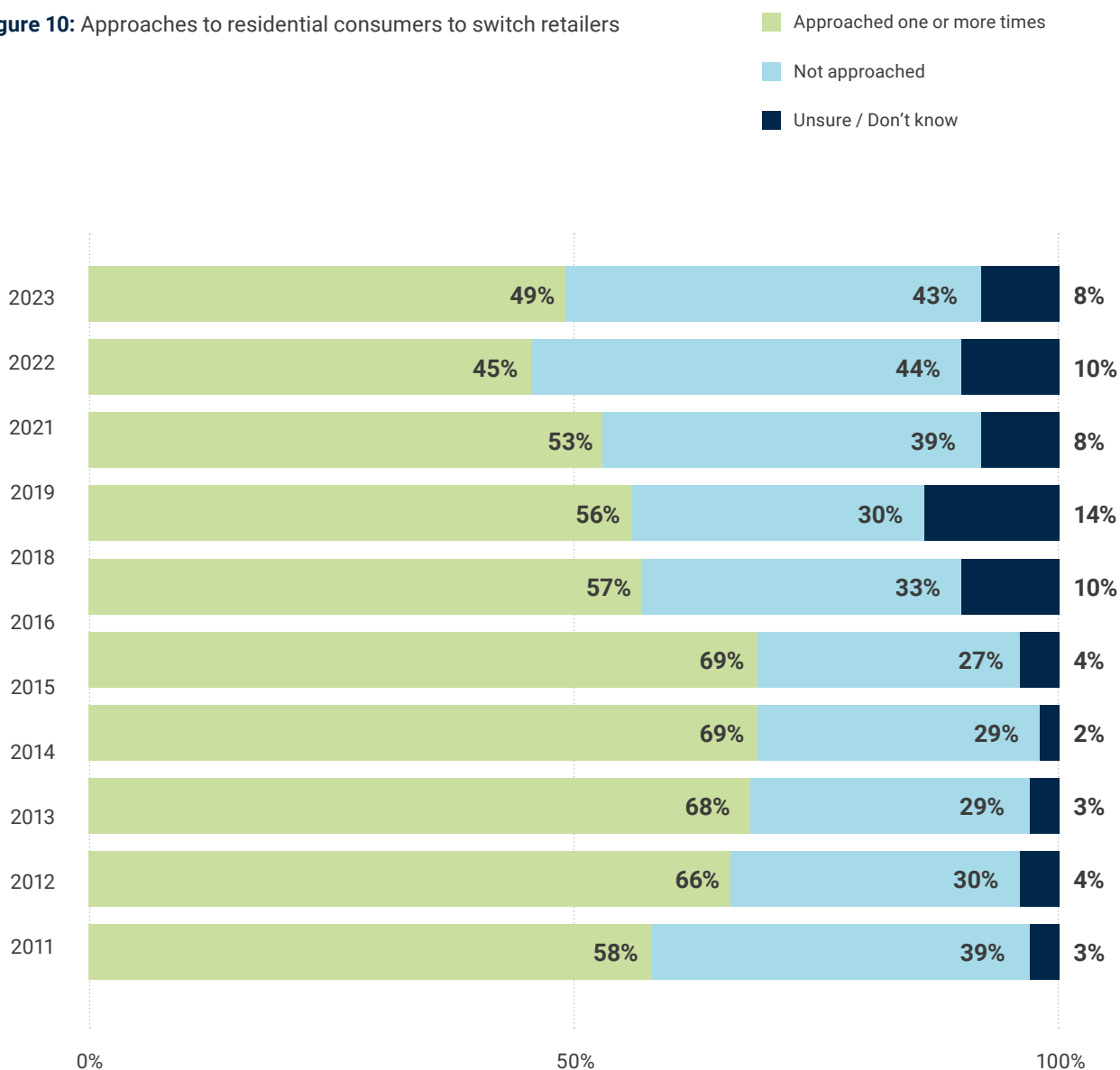
Figure 10 shows the number of consumers who have been approached by retailers from 2011 to 2023, whether by phone or door knocking (statistic 6). This measure indicates retailer conduct in the market.

In 2023, 49% of survey respondents indicated they had been approached at least one time in the past 24 months. This was an increase from the 2022 survey, where 45% of respondents had been approached.

The chart shows the number of consumers being approached to switch retailers has decreased from

a peak of 69% in 2014 and 2015. Since 2016, there has been a downward trend in the number of approaches made to consumers. This may be associated with changes in retailers' approach to promoting switching, particularly post Covid-19, with fewer cold calls and less door knocking being done. Instead, retailers are likely to have been relying more on advertisement through other media channels and online engagement to promote switching to their services. However, further research is required to determine ongoing retailer methods of generating new business and how this impacts consumer switching levels.

Figure 10: Approaches to residential consumers to switch retailers



Reliability

Measure: Improved participant perceptions on the efficiency of supply reliability

Percentage of participants who agree with a range of statements on electricity supply reliability:

Measure	Year	Disagree or strongly disagree	Neither agree nor disagree	Agree or strongly agree	N/A	Count (n=)
There is a reliable supply of electricity each day	2022/23	10%	14%	75%	1%	118
	2021/22	4%	10%	85%	1%	114
There is enough electricity to meet ongoing needs	2022/23	37%	17%	44%	2%	118
	2021/22	21%	20%	57%	2%	114

Measure: Improved participant perceptions of the balance between the cost and reliability trade-offs

Percentage of participants who agree with a range of statements on the balance between the cost and reliability trade-offs:

Measure	Year	Disagree or strongly disagree	Neither agree nor disagree	Agree or strongly agree	N/A	Count (n=)
The current electricity market arrangements ensure an appropriate balance between reliability and cost	2022/23	31%	31%	35%	3%	118
	2021/22	28%	24%	40%	8%	114
Over the next 10 years the electricity system will strike a balance between reliability and cost	2022/23	39%	28%	28%	5%	118
	2021/22	36%	24%	31%	9%	114

Measure: Improved consumer perceptions of the reliability of electricity in New Zealand

Percentage of consumers who agree with a range of statements on electricity reliability:

Measure	Year	Disagree or strongly disagree	Neither agree nor disagree	Agree or strongly agree	N/A	Count (n=)
It's rare to experience an unplanned power cut	2022/23	12%	15%	71%	2%	1,006
	2021/22	11%	15%	72%	2%	1,030
If there is an unplanned power cut, it gets fixed quickly	2022/23	11%	22%	63%	4%	1,006
	2021/22	8%	23%	64%	5%	1,030
There is enough electricity to keep New Zealand homes and business powered in the future	2022/23	17%	22%	49%	12%	1,006
	2021/22	14%	25%	50%	11%	1,030

Measure: Overall improvement across a suite of statistics

Pricing in scarcity events reflects opportunity costs	Effective management of dry years or emergency events
<p>The Authority actively monitors trading conduct to ensure prices reflect competitive outcomes, including during low residual situations.</p>	<p>There were no dry year or emergency events in 2022/23.</p> <p>Despite a few drier months (January–March 2023), the hydro storage levels never fell below historic average levels.</p>
Capacity and energy margins are within efficient bounds or are moving towards those bounds	Investigation of reliability events does not identify systemic issues
<p>The latest security of supply annual assessment (2023) indicates energy margins are within efficient bounds.</p>	<p>There were no reliability events in 2022/23.</p> <p>We continued to implement recommendations from reviews into the 9 August 2021 event.</p>

Further explanations of these statistics are included in the *Frequently used terms and abbreviations* on page 99.

Pricing in scarcity events reflects opportunity costs

The Authority monitors trading conduct and publishes reports. The objective is to ensure prices reflect competitive outcomes, including during low residual situations.

Low residual situations did not impact the electricity supply in 2022/23.

From July 2022 to June 2023, there were 20 events when residual levels dropped below 200MW. This led the system operator to publish Customer Advice Notices (CANs) informing the market participants of the low residual situation and often requesting them to take actions to ensure there is enough generation to cover demand. While these events are relatively routine, they do demonstrate the resilience of the power system and improved management of these situations.

The number of events represents a slight increase compared to the same period in 2021/22 when there were 18 such events. Despite the increase, however, the notices were released, on average, more than 15 hours in advance in 2022/23 versus 7.5 hours in advance, on average, for the same period of the previous year.

Also, from the 20 events in 2022/23, only one escalated, demanding the system operator to publish a Warning Notice (WRN) followed by a Grid Emergency Notice (GEN) informing the market participants of insufficient generation levels. The escalation was caused by an extenuating circumstance – a fault in the high voltage direct current filter 4B at Haywards station. The exceptional event, as well as the other 19 events, was managed well by the system operator and did not cause an impact on the electricity supply. In comparison, a few of the events in 2021/22 either escalated or triggered the use of WRN or GEN notices without extenuating circumstances being present (eg, 9 August 2021).

In summary, the management of low residual situations improved in 2022/23 compared to 2021/22, contributing to the reliability of the electricity system. Note that this finding does not constitute an investigation into the system operator's compliance with its service provider obligations.

Effective management of dry years or emergency events

The 2022/23 year is a transition period between La Niña and El Niño weather events. The first contributed to the increase in the hydro storage levels, reaching well above average levels for several starting in August 2022 until June 2023. Despite a few drier months (January to March 2023), the hydro storage levels never fell below historic average levels.

There were no dry year or emergency events in 2022/23.

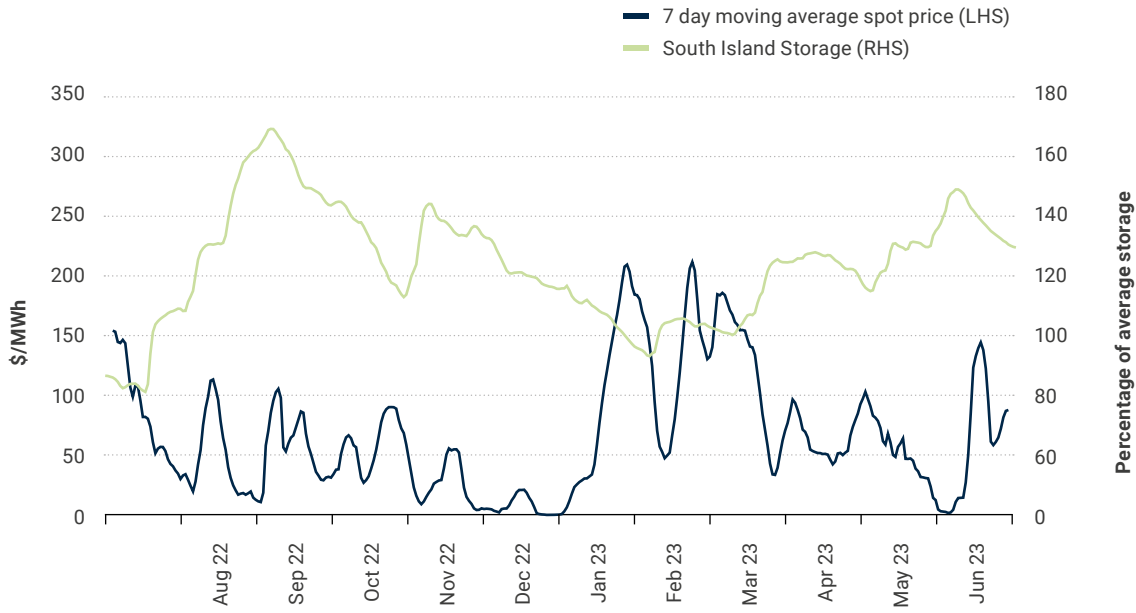
Figure 11 shows the spot price and South Island storage as a percentage of mean storage. Prices during 2022/23 remained below \$100/MWh for most of the period, crossing that mark when storage levels decreased during summer 2023 (January to March).

Prices spiked in June 2023 because of a combination of factors including temperature, wind generation and thermal generation. While most of the prices for the month were low, a few situations of high demand (caused by low temperatures) combined with low wind generation created very high prices (and increased volatility in the market), especially when additional thermal generation was needed to cover demand.

December 2022 saw low prices across multiple days due to the mild temperatures across the country combined with only a few instances of low wind generation (below 100MW). The end-of-year holidays also contributed to the low prices.

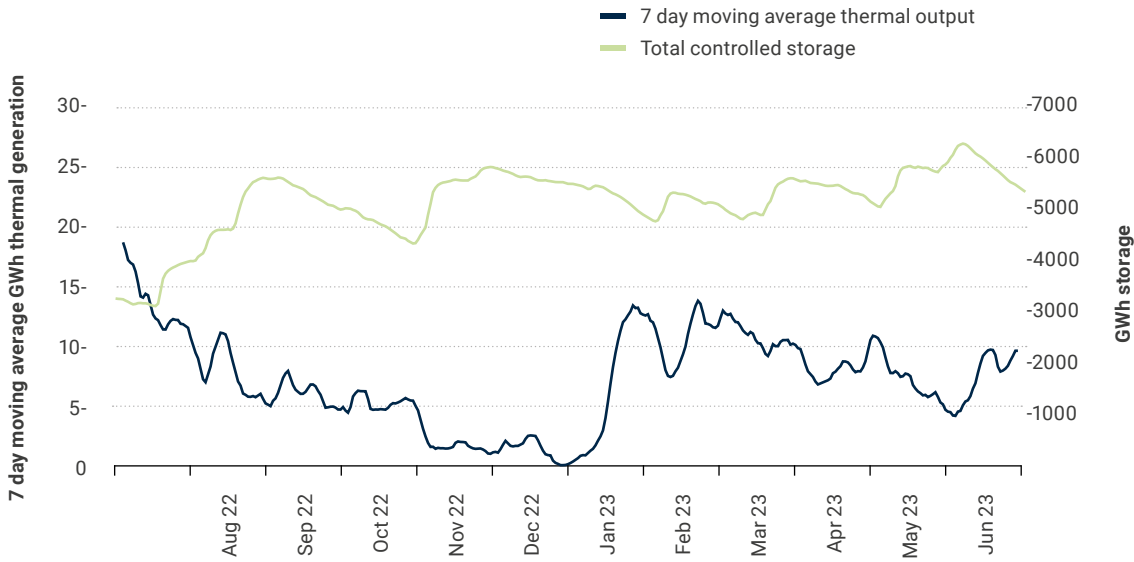
Figure 12 shows thermal generation and total New Zealand hydro storage. It has a strong inverse relationship where prices increase as storage falls to make it economical for thermal generators to run.

Figure 11: Management of dry years



Source: Electricity Authority and NZX Hydro

Figure 12: Thermal generation and storage



Source: Electricity Authority and NZX Hydro

Capacity and energy margins are within efficient bounds or are moving towards those bounds

Statistic 9 relates to capacity and energy margins. These are assessed and reported annually by the system operator.²⁰ The latest security of supply annual assessment (2023) indicates energy margins are within the efficient bounds set by the Board whilst capacity margins can be impacted by the large amount of intermittent generation expected to be commissioned in the next 10 years.

²⁰ The system operator’s annual security of supply assessments are available at <https://www.transpower.co.nz/system-operator/planning-future/security-supply-annual-assessment>

Investigation of reliability events does not identify systemic issues

There were no reliability events in 2022/23.

We discuss low residual situations and events that were close to scarcity events in the pricing in scarcity events measure above. Any low residual situation could potentially deteriorate into a reliability event, however, this did not happen in 2022/23, in part because of improved management of these situations by the system operator.

In 2021/22, we carried out a two-phase review into the 9 August 2021 reliability event.²¹ We have since completed

the immediate recommendations from this review as well as other reviews on the event. Long-term recommendations to manage peak winter electricity demand are underway or have been incorporated into our business-as-usual functions. Actions taken to address the recommendations contributed to improved management of the low residual situations mentioned above.

While not a reliability event, we closely monitored the industry response to Cyclone Gabrielle and took steps to alleviate any additional pressure on the system for participants as they worked to restore power and repair networks.

Efficiency

Measure: Improved participant perceptions of the efficiency in electricity markets and transmission and distribution arrangements

Percentage of participants who agree with a range of statements on the efficiency in electricity markets and transmission and distribution arrangements:

Measure	Year	Disagree or strongly disagree	Neither agree nor disagree	Agree or strongly agree	N/A	Count (n=)
The New Zealand electricity market ensures electricity is generated efficiently	2022/23	26%	18%	51%	5%	118
	2021/22	28%	11%	55%	6%	114
The New Zealand electricity market ensures electricity is transmitted efficiently	2022/23	10%	27%	54%	9%	118
	2021/22	14%	21%	53%	12%	114
The New Zealand electricity market ensures electricity is distributed efficiently	2022/23	27%	25%	40%	8%	118
	2021/22	21%	22%	45%	12%	114
New Zealand's wholesale market efficiently coordinates electricity production and consumption	2022/23	22%	14%	55%	9%	118
	2021/22	19%	17%	51%	13%	114
New Zealand's hedge market efficiently coordinates electricity production and consumption	2022/23	21%	23%	21%	24%	118
	2021/22	27%	25%	21%	27%	114
New Zealand's wholesale market efficiently facilitates timely investment in the electricity system	2022/23	43%	23%	24%	10%	118
	2021/22	37%	17%	25%	21%	114
New Zealand's hedge market efficiently facilitates timely investment in the electricity system	2022/23	30%	25%	22%	23%	118
	2021/22	30%	23%	15%	32%	114
Competition between electricity retailers promotes efficiency within retail operations	2022/23	39%	15%	41%	5%	118
	2021/22	28%	17%	50%	5%	114

²¹ The 9 August 2021 review can be found at www.ea.govt.nz/projects/all/review-of-9-august-2021-event/

Measure: Improved consumer perceptions of the efficiency of electricity in New Zealand

Percentage of consumers who agree with a range of statements on the efficiency of electricity in New Zealand:

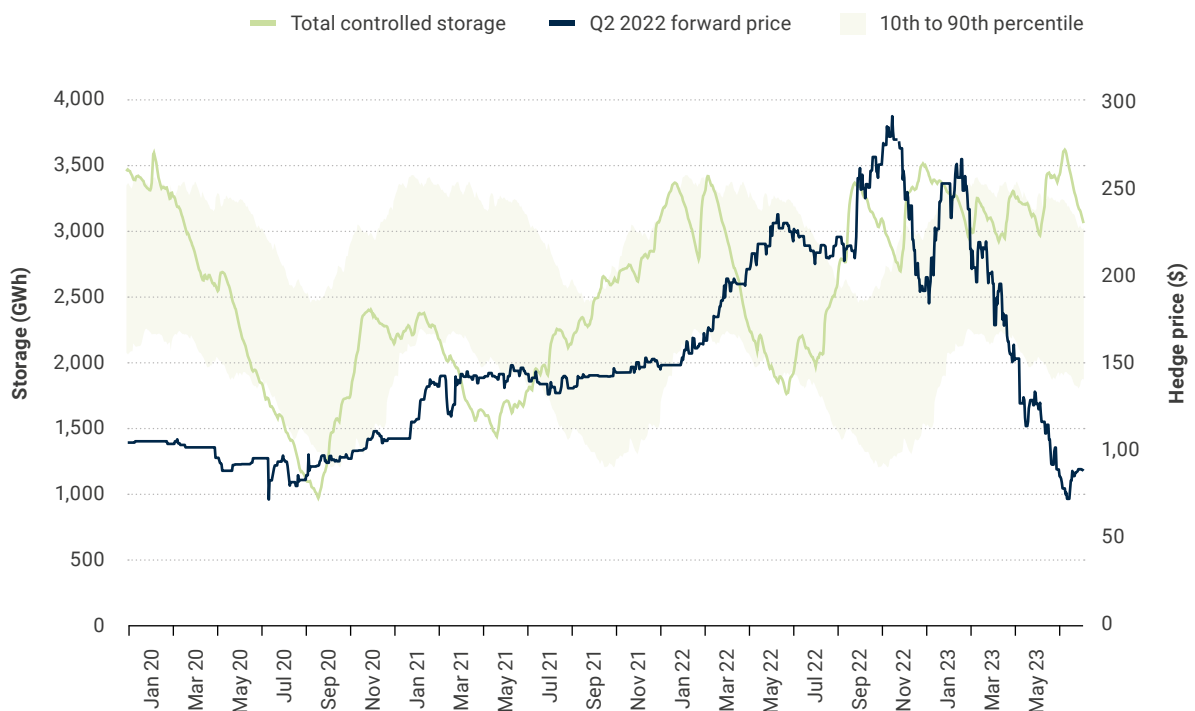
Measure	Year	Disagree or strongly disagree	Neither agree nor disagree	Agree or strongly agree	N/A	Count (n=)
I can easily find and connect with an electricity provider	2022/23	4%	14%	79%	3%	1,006
	2021/22	5%	17%	74%	4%	1,030
Prices on my electricity bill fairly represent the actual cost of my electricity use	2022/23	21%	27%	46%	6%	1,006
	2021/22	21%	28%	44%	7%	1,030

Measure: Overall improvement across a suite of statistics

Robust Futures prices	Dry year prices reflect storage levels
Hedge prices reflected market fundamentals, suggesting Futures prices are robust.	High prices due to low inflows seen in winter 2022 were impacted by falling output from the Pohokura gas field and high international coal prices.
Exceptional prices are justified by underlying fundamentals	Reducing constrained-on compensation
The prices and bids during low-residual events aligned with expected market behaviour.	Overall constrained-on costs have fallen since the 2012 peak. The 2022 costs have fallen below 2018 levels.

Further explanations of these statistics are included in *Frequently used terms and abbreviations* on page 99.

Figure 13: Futures prices



Source: Electricity Authority and NZX Hydro

Robust Futures prices

Figure 13 shows the hedge price (statistic 11) for the ASX June 2023 quarterly baseload hedge at Benmore and total national hydro-controlled storage. The chart demonstrates how the hedge price reflects market fundamentals.

The chart shows the 2023 quarter 1 and quarter 2 hedge prices decreased after reaching a peak of almost \$300 in quarter 3 2022. The price reflects the underlying fundamentals where prices spike closer to the time as there is more information on the potential supply.

Dry year prices reflect storage levels

High prices due to low inflows were seen in winter 2022 and were impacted by falling output from the Pohokura gas field and high international coal prices.

The Authority has reviewed competition in the wholesale market and is undertaking work to address the observations made. Higher competition in the market means there can be more confidence in the spot price.

The Authority continues to monitor electricity prices through the weekly trading conduct reports, undertaking and documenting further analysis on any unusual events.

Exceptional prices are justified by underlying fundamentals

As mentioned previously, there were 20 low residual events in 2022/23, and although they were managed and resolved properly, their effect on spot prices is noticeable. For instance, in the first semester of 2023 (January–June), there were 12 such events, and the average prices at Benmore and Otahuhu were \$958.27/MW and \$1,218.56/MW respectively. The average prices for the entire period, on the other hand were at \$97.28/MW at Benmore and \$114.19/MW at Otahuhu. Even considering the average prices during times

of peak consumption in 2023, respectively \$118.71/MW and \$143.24/MW at Benmore and Otahuhu, it is still clear the impact that low residual situation events have on spot prices.

Beyond spot prices, low residual situation events can affect energy bids. For instance, several bids posted by electricity distribution businesses fell into the scarcity price range (\$9,000/MW) during the low residual situation events.

The prices and bids during the low residual events are, however, in accordance with the expected market behaviour. The Authority continues to monitor electricity prices through the weekly trading conduct reports, undertaking and documenting further analysis of any unusual events.

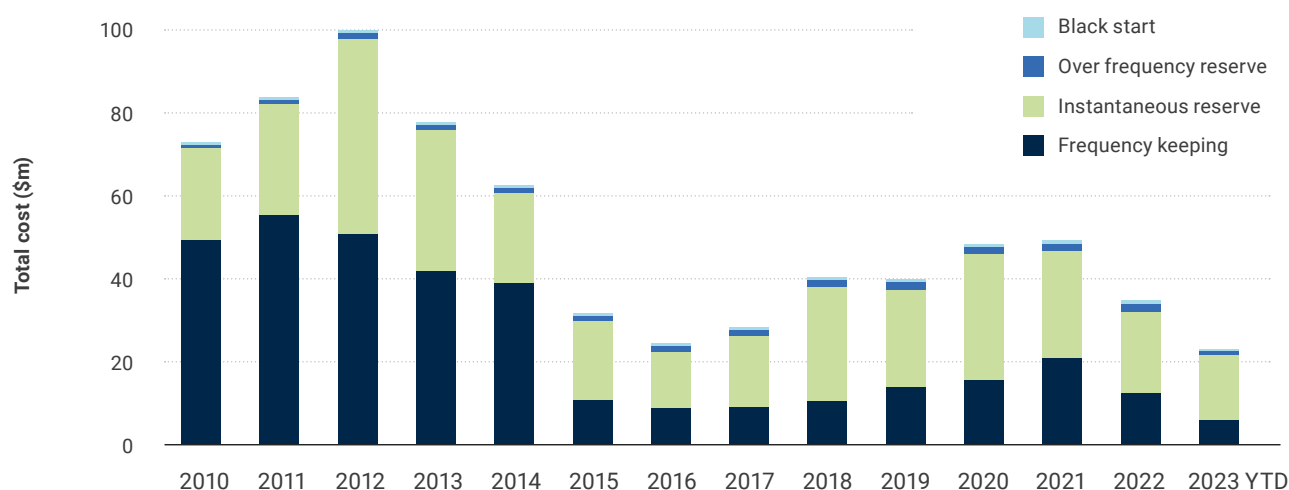
Reducing constrained-on compensation

Figure 14 shows the total ancillary services costs (statistic 14) from 2010 to 2022 calendar years and to June 2023. It shows overall costs have fallen since 2012 with increases seen from 2018 to 2021. The 2022 costs broke the trend as the costs have fallen below 2018 levels.

The two main components of ancillary services are frequency keeping and instantaneous reserves. These costs are affected by energy costs. The constrained-on and -off costs of these ancillary services have been falling since 2013.

Constrained-on costs are also paid in the spot market to out of merit generators in certain circumstances. This occurs when the system operator requires generators to generate during a trading period where the final price is less than the generators' offer price. The Authority introduced new Electricity Industry Participation Code 2010 changes in March 2020 that removed these payments for ramping generation.

Figure 14: Ancillary services and constrained costs



Source: System Operator (Transpower New Zealand Limited)

Appendix B

Survey-based impact measures

Low-emissions energy

Measure: Improved participant confidence in setting to facilitate an efficient transition

Percentage of participants who agree with the following statement:

Measure	Year	Disagree or strongly disagree	Neither agree nor disagree	Agree or strongly agree	N/A	Count (n=)
Electricity market settings will support an efficient transition of the energy sector to low-emissions	2022/23	42%	18%	36%	3%	118
	2021/22	33%	27%	33%	7%	114

Measure: Improved participant confidence in reliability as New Zealand transitions to low-emissions energy

Percentage of participants who agree with the following statement:

Measure	Year	Disagree or strongly disagree	Neither agree nor disagree	Agree or strongly agree	N/A	Count (n=)
The electricity system will maintain reliability through the transition to low-emissions energy	2022/23	35%	25%	37%	3%	118
	2021/22	21%	21%	52%	6%	114

Consumer centricity

Measure: Improved participant perceptions in the electricity system's ability to meet consumers' ongoing needs

Percentage of participants who agree with the following statements:

Measure	Year	Disagree or strongly disagree	Neither agree nor disagree	Agree or strongly agree	N/A	Count (n=)
The electricity industry is meeting consumers' needs	2022/23	41%	15%	43%	2%	118
	2021/22	41%	9%	50%	0%	114
The electricity industry will meet consumers' evolving needs in the future	2022/23	31%	28%	39%	3%	118
	2021/22	32%	23%	45%	0%	114

Trust and confidence

Measure: Improved participant perceptions of trust and confidence in us and how we are fulfilling our role

Percentage of participants who agree with the following statement:

Measure	Year	Disagree or strongly disagree	Neither agree nor disagree	Agree or strongly agree	N/A	Count (n=)
I have confidence in the role the EA plays as kaitiaki of the electricity sector	2022/23	37%	32%	28%	3%	118
	2021/22	40%	32%	23%	5%	114

Measure: Improved participant perceptions of reliability and operational efficiency

Percentage of participants who agree with the following statements:

Measure	Year	Disagree or strongly disagree	Neither agree nor disagree	Agree or strongly agree	N/A	Count (n=)
The electricity sector operates efficiently	2022/23	34%	26%	38%	2%	118
	2021/22	38%	18%	40%	4%	114
The electricity system delivers a high level of reliability	2022/23	11%	19%	69%	1%	118
	2021/22	8%	11%	78%	3%	114

Measure: Improved participant perceptions of the quality of our monitoring

Percentage of participants who agree with the following statements:

Measure	Year	Disagree or strongly disagree	Neither agree nor disagree	Agree or strongly agree	N/A	Count (n=)
The EA actively monitors market outcomes	2022/23	18%	19%	60%	3%	118
	2021/22	17%	23%	54%	6%	114
The EA actively monitors participant behaviour	2022/23	18%	23%	57%	3%	118
	2021/22	16%	23%	56%	5%	114
The EA holds participants to account for their actions	2022/23	34%	25%	38%	3%	118
	2021/22	29%	20%	45%	6%	114

Thriving competition

Measure: Improved participant perceptions of ability for new entrants to compete with established participants

Percentage of participants who agree with the following statements:

Measure	Year	Disagree or strongly disagree	Neither agree nor disagree	Agree or strongly agree	N/A	Count (n=)
New entrant retailers can operate on a level playing field with established retailers	2022/23	52%	14%	20%	14%	118
	2021/22	52%	12%	25%	11%	114
New entrant generators can operate on a level playing field with established generators	2022/23	35%	21%	28%	16%	118
	2021/22	42%	16%	29%	13%	114

Innovation flourishing

Measure: Improved participant perceptions of the ability of the system to support rapid change

Percentage of participants who agree with the following statement:

Measure	Year	Disagree or strongly disagree	Neither agree nor disagree	Agree or strongly agree	N/A	Count (n=)
The electricity regulatory environment supports incorporation of new business models and technology in a timely manner	2022/23	55%	25%	17%	3%	118
	2021/22	42%	21%	28%	9%	114

Measure: Improved participant perceptions of the current market settings' ability to encourage innovation

Percentage of participants who agree with the following statements:

Measure	Year	Disagree or strongly disagree	Neither agree nor disagree	Agree or strongly agree	N/A	Count (n=)
The current market settings encourage innovation in generation	2022/23	38%	31%	21%	10%	118
	2021/22	38%	22%	27%	13%	114
The current market setting encourage innovation in distribution network management	2022/23	49%	31%	15%	5%	118
	2021/22	44%	30%	16%	10%	114
The current market setting encourage innovation in consumer-facing services	2022/23	33%	28%	31%	8%	118
	2021/22	30%	27%	34%	9%	114
The current market setting encourage innovation in transmission network management	2022/23	27%	38%	16%	19%	118
	2021/22	27%	35%	13%	25%	114

Measure: Increased number of participants providing new services to consumers

Percentage of participants who report providing new services to consumers:

Measure	Year	No	Yes	Unsure	Count (n=)
In the past 24 months, has your organisation provided new products or services to consumers?	2022/23	45%	42%	13%	118
	2021/22	51%	37%	12%	114

Appendix C

Additional reporting

Protection of small consumers outcome measures

The following measures are interim measures and may change as the Authority grows our focus on protecting the interests of domestic and small business consumers.

There is ongoing work to identify where and how the new objective applies (for example, in small businesses, and the relationship between electricity retailers and their customers), and to expand our monitoring of the retail market to ensure consumer interests are protected. As we progress this work, we will establish baselines to measure future performance against.

Outcome	Measure	Source	Desired trend	2022/23 baselined result
Consumers are empowered to make informed decisions about their electricity supply [interim]	Increased consumer awareness of the independent services that support consumers to make choices and act in relation to their electricity supply	Consumer survey	Increasing	38% baseline for percentage of consumers who have heard of the services.
	<ul style="list-style-type: none"> Percentage of consumers who have heard of the Powerswitch or Utilities Disputes services Percentage of consumers who have heard of the Powerswitch or Utilities Disputes services that also used those services 			33% baseline for percentage of consumers who have heard of and used the services.
	Increased consumer access to independent information relating to their electricity supply	Authority data	Increasing	486,000 Powerswitch pages sessions progressed to a results page.
	<ul style="list-style-type: none"> Number of Powerswitch sessions that progress to a results page Number of energy enquiries raised with Utilities Disputes 			9,665 energy enquiries were raised with Utilities Disputes.
	A sustained number of consumers switch electricity providers	Authority data	Maintain at 20% or higher	19% of residential consumers switched electricity providers during the year.**
	<ul style="list-style-type: none"> Percentage of residential consumers that switch electricity providers during the year 			
Electricity retailers provide a consistent and supportive standard of service to domestic consumers [interim]	Increased number of electricity retailers align to the Consumer Care Guidelines, covering a greater proportion of consumers	Authority data	Increasing	For 2021/22, 20 of 38 retail brands or 53% of retail brands self-assessed as fully aligning to the Consumer Care Guidelines. The retailer brands who self-assessed as fully aligning covered 67% of residential ICPs.***
	<ul style="list-style-type: none"> Percentage of retailers self-assessed as aligning to the Consumer Care Guidelines* Percentage of residential ICPs covered by retailers' alignment to the Consumer Care Guidelines 			

Notes:

* The Consumer Care Guidelines describe actions that should be taken by retailers as needed to create safeguards for consumers. Although alignment to the guidelines is voluntary, the Authority considers there are significant benefits from wide industry alignment. Retailers are encouraged to undertake an annual self-assessment of their alignment with the guidelines and report this to the Authority.

** The percentage of switches includes trader switches where the customer at the connection point has an existing contract with a trader (ie, they change retailers), and move in switches where the customer at the connection point does not have an existing contract (ie, they have moved into a new residence and set up a new contract).

*** It is unclear the exact point in time the residential ICP percentage of market data was collected, as this was not noted in the self-assessment report and EMI numbers have since been updated/backdated – the result reflects what the publicly available report states. Note the assessment only includes type 1 retailers.

Protect the interests of small electricity consumers output measures

We undertake actions to protect the interests of domestic and small business consumers in relation to the electricity supply to those consumers.

The work we do under this function also contributes to our additional statutory objective and protection of small consumers outcome, which came into effect in December 2022 (see pages 6 and 15 of the Statement of Intent 2021–2025 amendment).

Measure	2021/22 result	2022/23 target	2023/24 target	2022/23 baselined result
Increased monitoring of and reporting on retail competition [interim]	New	Baseline to be established*	Establish regular monitoring and reporting of retail competition	Consultation paper written, awaiting policy updates and Board approval.

Notes:

* Where there is a new measure without an existing baseline, this will be collected alongside the performance measures used in the Annual Report 2022/23.

Frequently used terms and abbreviations

Term	Definition
Act	The Electricity Industry Act 2010.
Ancillary services	The system operator contracts individual participants to provide five services essential to maintaining the common quality of electricity supply. These ancillary services are black start, over-frequency reserve, frequency keeping reserve, instantaneous reserve and voltage support. Improving the ability and willingness of participants to compete in these markets will improve reliability and efficiency.
ASX	Australian Securities Exchange.
CEA	Crown Entities Act 2004.
Code	Electricity Industry Participation Code 2010.
Constrained-on compensation	An amount paid to generators, if they are required by the system operator to generate during a trading period when the final price is less than the generator's offer price. The payment is calculated by the clearing manager and is payable by purchasers and the system operator.
Consumer	Any person who is supplied with electricity other than for resupply.
DER	Distributed energy resources are a controllable energy resource located in the distribution network. Examples include small-scale generation, batteries and electric vehicles.
Efficiency	<p>Efficiency (or economic efficiency) is a measure that indicates the optimal production and use of goods and services and the minimisation of cost and waste. In the context of the electricity system, efficiency reflects resources and investments being made in the right areas, the cost of operating the system kept to a minimum and consumers obtaining more affordable electricity and services. Efficiency can be broken into three dimensions:</p> <ul style="list-style-type: none"> • Allocative efficiency is an outcome when businesses allocate resources to produce the products that meet consumers' demand. • Productive efficiency is the outcome in which goods and services are provided at lowest possible cost. • Dynamic efficiency refers to production processes, technology and investment changing over time to achieve greater productive and allocative efficiency.

Emergency event	An emergency event is one where there is a persistent shortage situation (weeks or months) and would include rolling outages or supply shortage declarations (both in Part 9 of the Code).
EMI	Electricity Market Information website – see www.emi.ea.govt.nz
FTR	Financial transmission right.
Gentailer	An organisation that is both an electricity generator and an electricity retailer.
Hedge market	A market through which hedge contracts are bought and sold. A hedge contract is a financial risk management product or contract for sale and purchase of electricity that shifts the price risks associated with the spot price of electricity.
HHI	Herfindahl-Hirschman Index. HHI is a measure of market concentration and the relationship with competition occurs because less concentrated markets are likely to be more competitive. It is calculated as the sum of the squares of the market share of all participants.
Instantaneous reserves	Generation capacity and interruptible load that is made available to be used in the event of a sudden failure of a generation or transmission facility to maintain system frequency at 50 hertz. Fast instantaneous reserve is available within six seconds and must be able to operate for one minute. Sustained instantaneous reserve is available within 60 seconds and must be available for 15 minutes.
Kaitiaki	Te reo Māori word meaning trustee, guardian or steward. As the kaitiaki of electricity in New Zealand, we guide the nation's electricity system on behalf of all New Zealanders – promoting positive outcomes today and ensuring continued enhancement and reliability for future generations.
Market making / Market makers	A service where market makers are required to offer cash-settled contracts for difference on the New Zealand electricity derivatives futures market. Market making services are currently provided by Contact, Genesis, Mercury and Meridian.
MOSPs / service providers	Market operation service providers. We contract third parties to manage the electricity system (system operator) and market services, as described in Part 3 of the Code.
Net pivotal	A net pivotal generator can profitably and unilaterally raise prices ie, a generator is net pivotal when its generation is greater than its own retail and hedge sales in the relevant area. When a supplier is net pivotal, it has incentives to raise prices because its hedge position, including retail, provides no financial constraint or it lacks competitive pressure on prices (ie, it has market power).
Non-network services	The use of controllable flexibility resources (eg, batteries, hot water load, EV chargers or other demand response) to manage congestion on a network, typically by third parties under contract with (or otherwise incentivised by) the network owner. The use of these resources is intended to de-risk, defer or avoid completely the need for additional investment in traditional network infrastructure (eg, poles, wires and transformers).
NZX	The New Zealand stock exchange.
OTC	Over-the-counter hedges. These are hedges traded off an organised exchange.

Outcome, impact and output	<p>Accountability terms used in the public sector that link the work we do with the results we are contributing to.</p> <ul style="list-style-type: none"> • Outcome: a state or condition of society, the economy or the environment and includes a change in that state or condition. For us, this is expressed through the competition, reliability and efficiency limbs of our statutory objective. • Impact: the contribution made to an outcome by a specified set of outputs or actions or both. We use our strategic priorities and specific changes we seek through our projects and business-as-usual functions to assess the impact we are making. • Output: the goods or services that we supply. We refer to these as our functions in this report.
Participant	A person or a person belonging to a class of persons identified in section 7 of the Act as being a participant in the electricity industry. These include generators, Transpower, distributors, retailers, other lines owners, consumers directly connected to the national grid, buyers of electricity from the clearing manager and service providers.
Powerswitch	A free and independent service that helps residential consumers work out which power company and pricing plan is the cheapest for them. It is run by Consumer NZ and receives funding from the Electricity Authority – see www.powerswitch.org.nz/
Reliability event	A reliability event is one where something has gone bang. Some power system asset has broken (with some risk to system security) and there may be lessons to be learned from the experience.
Sandbox	A sandbox is a testing environment, similar to User Acceptance Testing (UAT) environments.
Scarcity event	A scarcity event is one where the power system didn't (or nearly didn't) have enough generation and/or transmission assets available to meet demand for some short period (hours).
Spot market	The buying and selling of wholesale electricity is done via a 'pool' for each half-hour for each grid point of connection where electricity generators offer electricity to the market and retailers bid to buy electricity. This market is called the spot or physical wholesale market.
TPM	Transmission pricing methodology – see www.ea.govt.nz/projects/all/tpm/
Trading conduct rules	A set of rules under the Code. Trading conduct rules are designed to ensure appropriate behaviour in the wholesale electricity market.

