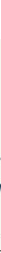


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Insights



Foreword

Mā te pohewa mā te auaha hoki, ka whakapuaki ngā kura e huna ana With imagination and creativity, a hidden jewel can be revealed

Summary

Our priorities at the Electricity Authority Te Mana Hiko are all about ensuring everyone in Aotearoa New Zealand has access to reliable electricity at affordable prices.

Innovation is crucial for the future of Aotearoa, as we move towards a more sustainable energy system, increasingly reliant on renewable electricity.

At the Authority, we foster innovation, encourage investment and promote competition. We know an electrified future will strengthen our economy and benefit New Zealanders.

The Power Innovation Pathway is a transformative approach to energy regulation in Aotearoa New Zealand, directly addressing the challenges and opportunities of our rapidly evolving electricity system.

In the first year of the Pathway, we have listened and learnt from key players about the regulatory barriers that may be holding innovation back. We have brought innovative thinking into the Authority, using the insights to inform our work programme and change how we work together. In this report, we share the key insights from the innovation community and actions we will take to address them.

The Pathway has strengthened our relationships with energy innovators, creating a community where industry, regulators and government agencies collaborate to unlock innovation.

Over the last year, we engaged with over 80 innovators, helping them to navigate the electricity sector's regulatory landscape. We supported eight high-value initiatives, which showcase how innovative solutions could be scaled for the benefit of electricity consumers across Aotearoa.

The innovators supported through the Pathway bring bold ideas, together with the expertise and vision, to shape the solutions our energy system demands. Our role is to clear the path, remove regulatory barriers and enable a more efficient, resilient and competitive electricity sector where innovation can thrive to benefit New Zealanders.

It was a privilege to meet the Pathway innovators and share the excitement about what we can achieve together. It's inspiring to witness the progress and I look forward to building on this momentum in year two of the Pathway.

Tēnā koutou,

Anna Kominik

Chair, Electricity Authority Te Mana Hiko

Electricity Authority

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Summary



Executive summary

The Electricity Authority Te Mana Hiko launched the Power Innovation Pathway in September 2024 to provide regulatory support to energy innovators and identify regulatory barriers to innovation.

In its first year, the Power Innovation Pathway (Pathway) has established a foundation to enable the Electricity Authority (Authority) to support innovation and help innovators, and the wider innovation community, navigate New Zealand's regulatory environment more easily for the benefit of electricity consumers.

The Pathway has identified regulatory barriers and is informing broader regulatory development by working with stakeholders across more than 80 applications for support. It has built collaborative relationships between innovators, regulators and industry that is generating new opportunities for consumer-focused innovation.

After a year of the Pathway, the Authority is committed to take the following actions to better enable innovation and remove regulatory barriers for the benefit of the electricity sector and consumers. Several of these initiatives are already underway.

Action 1. Support new ways of regulating a rapidly evolving electricity sector, by:

- exploring how regulatory sandboxing could enable multiple parties to test ideas in a safe, closely monitored environment
- expanding the Pathway to better support innovators and the innovation community
- adapting how we work so innovators' feedback continues to shape our policy work, including the scoping of a new flexibility work programme.

Action 2. Work more closely with other electricity regulators to identify and remove barriers, including:

 collaborations with the Commerce Commission and Energy Efficiency and Conservation Authority (EECA).

Action 3. Speed up key work programmes that enable innovation, including:

- Consumer Mobility (better access to energy data, more choice for consumers, and greater use of digital tools)
- Future Networks (improving network connections, increasing network visibility, and exploring future system operation)

Action 4. Continue to explore making consultations more open and inclusive such as:

• increasing access to verbal submissions, surveys and wānanga.

These actions are just the beginning. The Authority has made the Pathway part of its business-as-usual and designed it to evolve as the sector grows to support more innovators.

The Pathway remains open and we welcome applications. The sooner the Authority hears from innovators – large and small – about their regulatory challenges, the sooner we can provide clarity and support to help innovation thrive for the long-term benefit of consumers.

Establishing the Power Innovation Pathway

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Establishing the Power Innovation Pathway

Innovators and new market entrants can find the electricity sector and its rules complex at times.

This experience is shared with other countries around the world – where electricity market rules reflect the complexity of the underlying physical power system and rely on market mechanisms to allocate resources efficiently – and means these players can face challenges when bringing new ideas to the sector.

The Authority is responsible for the Electricity Industry Participation

Code 2010 (the Code) – the rules that have evolved over decades,
that govern most aspects of New Zealand's electricity market, from
generation to the supply and connection of electricity to each property.

Beyond this the:

- Commerce Commission sets information disclosure requirements for all 29 distributors, along with quality standards and how much revenue Transpower and the 16 price-quality regulated distribution businesses can collect from consumers. The Commission also has a role in ensuring fair trading practices and preventing misuse of market power
- Energy Efficiency and Conservation Authority promotes clean and clever energy use in New Zealand by regulating the minimum energy performance standards of energy product technologies and works alongside energy users, providing support, insights and targeted project co-investment
- Ministry of Business, Innovation and Employment and WorkSafe oversee the safety of the physical system and the requirements on electrical workers
- Ara Ake accelerates the demonstration and commercialisation of energy innovation in New Zealand, supporting innovators through connections, co-funding and project governance.

The volume and complexity of regulations, and more generally, the electricity ecosystem and its key players, can lead to barriers – real or perceived – to those wanting to try something new.

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The Authority, as a regulator, asked itself:

How can we prepare for, and better understand, New Zealand's energy future, and proactively enable progress?

How can we provide clarity around potential barriers to innovation and, in some cases, remove them?

How can we support new entrants and promote innovation to better deliver benefits to electricity consumers?

Establishing the Power Innovation Pathway Summary Establishment Year one Case studies Insights Next steps

The Power Innovation Pathway is the Authority's response. It's our 'open front door' for innovators wanting easy access to regulatory information and support, to accelerate the introduction of new products and services to market that can deliver significant benefits to electricity consumers.

The Pathway is a free service for innovators and the wider innovation community to:

- help navigate and better innovate in the existing regulatory environment, and
- identify regulatory barriers, within the Code or other regulations, which are inhibiting innovation in the electricity sector.

Through the Pathway, the Authority aims to foster innovation and promote a dynamic electricity market to proactively enable change for the benefit of consumers. We are providing:

- An 'open front door' for innovators: providing easy access for innovators to engage with the Authority for regulatory support
- Regulatory clarity: helping innovators overcome real or perceived barriers by offering clear regulatory guidance
- Routes to accelerate innovation: supporting the progress of high-value ideas that have the potential to positively impact the electricity market and consumers
- Improved understanding: gaining insights into emerging innovation trends, enabling the Authority to refine regulations that promote market evolution.

The Pathway is more than just a service to help innovators accelerate novel offerings which have potential to provide new solutions to deliver consumers affordable, secure and resilient electricity that meets their needs. It is a mechanism that is accelerating the Authority's work more broadly to achieve its vision – where consumers have choices in accessing the energy they need now, and in the future, to ensure they and New Zealand prosper – and by bringing new perspectives, ideas, and ways of working into our role as a regulator.



Want to find out more? Go to www.ea.govt.nz/industry/power-innovation-pathway



A year of supporting innovators

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A year of supporting innovators

The Power Innovation Pathway's inaugural year has been a journey of identifying regulatory challenges and building a community of innovators to implement practical solutions.

What began as recognition that traditional regulatory approaches were insufficient for the rapidly changing energy system has evolved into a collaborative process that brings together regulators, innovators, and industry participants to shape the future of energy in Aotearoa.

From applications to support

The Pathway is a streamlined process for innovators to engage with the Authority and receive regulatory clarity and support. It was established at pace, and within a year, we delivered:

- Pathway launch (17 September 2024): with applications invited from energy innovators to share ideas that could benefit electricity consumers.
- **Priority round 1 (17 September 18 October 2024):** 44 submissions received from a diverse set of applicants with a wide range of solutions to improve flexibility, system resilience and consumer choice in the energy market.
- Review & responses: to all applicants, from providing regulatory clarification to connecting innovators with relevant organisations.
- Clarity through conversation: Authority staff met with a quarter of applicants to clarify needs and next steps.
- Eight enhanced support initiatives selected (February 2025): to support scalable business models, products and services that can deliver significant benefits for electricity consumers.
- Continued support and trials (September 2025): over 80 innovators supported, helping bring consumer-focused solutions to market faster with insights informing more effective and adaptive regulation.

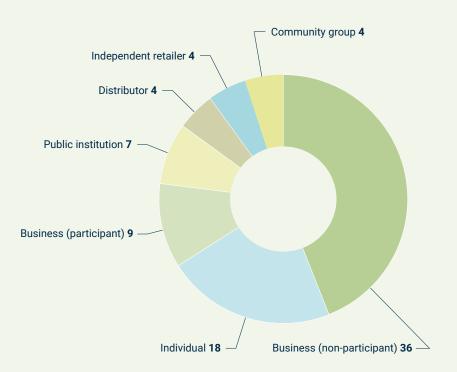


A year of supporting innovators Summary Establishment Year one Case studies Insights Next steps

Innovator diversity

The Authority received 82 applications in the first year of the Pathway from a diverse range of applicants, including electricity market participants, businesses, individuals, the public sector and community organisations.

Most applicants had not previously engaged with the Authority through formal channels.



Innovator pathways

Every applicant to the Pathway recieved a tailored response, however their continued engagement with the Authority varied depending on their specific needs.

This included whether or not regulatory barriers were slowing their progress, as well as their initiative's alignment with our strategic priorities and work programme.

53%

of applicants continued to engage with the Authority after our initial response; the rest had no regulatory barriers, highlighting the importance of the Pathway to provide regulatory clarity and understanding.

24%

of applicants met with Authority subject matter experts to discuss real or perceived regulatory barriers.

8

applicants were matched with Authority experts for ongoing enhanced regulatory support (continuing into 2025/26).

Innovator themes

There were a wide range of applications, from cutting-edge technologies, proposed regulatory advancements, and market-driven initiatives to make New Zealand's electricity sector more efficient, affordable and resilient.

Applications can be divided into the following four categories, each addressing critical aspects of how innovators can be supported and inform regulations.

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Code specific support

Helping innovators interpret the Code.

18

Learn-by-doing

Demonstrating novel ways to deliver consumer benefits.

30

Innovative idea, no aditional support required

Where applicants are providing visibility to the Authority.

32

Innovator cohort

To provide perspectives and inform the Authority's workplan.

Summary

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Enabling innovation through collaboration

Through the Pathway, the Authority has worked more proactively and collaboratively to deliver its regulatory functions and create clear routes to support innovators.

This has included:

- Active engagement with innovators: comprehensive insights and feedback gathered from Pathway applicants, not previously provided to the Authority
- Identifying regulatory barriers: regular touchpoints with innovators to understand regulatory challenges that are slowing innovation
- Facilitating knowledge sharing: connecting and sharing information across applicants with similar challenges.

This event exceeded expectations. The level of discussion and knowledge in the room was impressive, and each innovator pitch was well targeted. This is how we can weed out the issues the sector is facing.

Innovation events

Over the first year, we organised a number of events to encourage collaboration on electricity innovation and regulation, including:

- Power Innovation Pathway Day: to share innovative solutions and collaborate on identifying regulatory barriers and opportunities for innovation in the electricity sector.
- Innovator breakfasts: to build the community of innovators in Wellington and Christchurch.
- Industry workshops and events: to share the Pathway's progress and discuss approaches to regulatory engagement eg, at the Future Networks Forum (Electricity Networks Aotearoa), New Zealand Energy Trader Forum and the 'Investing in our Energy Future' event (Ara Ake/Motion Capital).



The fact that the regulator is driving this says a lot about the commitment to systemic change and gives me hope - and as an innovator it feels like a supportive environment.



Spotlight on Power Innovation Pathway Day

The Power Innovation Pathway Day brought together regulators, innovators, and industry participants, to discuss regulatory barriers to innovation in the electricity sector and collaboratively explore potential solutions.

- 70 attendees: a cross-section of energy companies, technology providers, community groups and regulatory bodies.
- Eight presentations: from innovators benefiting from enhanced regulatory support from the first priority round of the Pathway.
- Three practical workshops: to brainstorm solutions to enabling flexibility, improving competition and empowering consumers.
- Outcomes: it identified key regulatory barriers and innovator insights; participants collaborated on solutions to inform the Authority's work programme; the Authority made new connections with previously disconnected innovators.



50 people in the room talking about innovation in the power sector. I can't recall ever being in a room full of people talking about electricity sector innovation. A first for NZ?



Summary

Providing enhanced regulatory support

The Authority selected eight high-value initiatives for enhanced regulatory support from the first priority round of the Pathway (17 September – 18 October 2024). We chose these projects because they strongly align with the Authority's strategic outcomes and have the potential to reduce regulatory barriers for all participants, unlocking value for the electricity system and consumers.

The support we offered these projects was tailored to the innovator's needs. It typically involved assigning a subject matter expert, or experts, from the Authority to work with the project.

Examples of enhanced regulatory support provided include:

- giving specific support to help innovators understand certain clauses or parts of the Electricity Industry Participation Code 2010
- supporting the scoping of a trial to ensure the project's outcomes inform regulatory activities
- acting as an observer to trials to connect the findings and perspectives to relevant Authority workstreams
- helping identify barriers in the Code and providing information on the process for any exemption applications that may be required.

How the Pathway supports our strategic outcomes



A secure and resilient system, through supporting innovators to test solutions that encourage industry participants and flexibility service providers to offer demand response.



A more affordable electricity system, by trialling energy sharing in communities and showcasing how demand-side flexibility and distribution system operation can help defer network investment.



More efficient use of system and consumer resources, by increasing network visibility and trialling coordination of distributed energy resources (like solar and batteries).



Interested in support? Apply for priority round two of the Pathway – open 29 September to 31 October 2025 www.ea.govt.nz/industry/power-innovation-pathway



Case studies

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The Authority selected eight initiatives for enhanced regulatory support that strongly align with the Authority's focus on achieving a secure and resilient, affordable and efficient electricity system. You can learn more about these initiatives in the case studies in the next section.

Innovator/s	Enhanced support project	Strategic outcomes		
		Secure and resilient	Affordable	Efficient
Aotearoa Energy	Electronic derivatives platform Developing an electronic derivatives trading platform to efficiently offer hedging products to support investment in intermittent generation and monetise demand response.		(4)	
Basis	Smart panel demand flexibility trial Establishing a trial that demonstrates a new model for demand-side visibility and management, empowering consumer choice and unlocking savings on electricity bills.		4	
Counties Energy	Distribution system operation pilot Demonstrating distribution system operator functions to optimise network capacity and potentially preventing significant household bill increases by avoiding/deferring network investment.		4	()
Franklin Energy project partners	Energy sharing pilot Exploring how a multiple trading relationships pilot can enable the donation of excess solar with whānau experiencing energy hardship.			(\mathcal{L})
Our Energy and Cortexo	End-to-end flexibility platform pilot Creating an independent flexibility market platform to trade demand-side flexibility locally with distributors and nationally with the System Operator.		4	()
Rewiring Aotearoa	Queenstown Electrification Accelerator Showcasing how an electrified energy system, using smart demand-side flexibility, can increase affordability, defer distribution and transmission investment and boost regional resilience.		4	(\mathcal{A})
Simply Energy	Dispatchable demand pilot Investigating how an existing demand-side market mechanism, Dispatchable Demand, can be tailored to attract industry participants to offer demand flexibility, supporting security of supply.			(\mathcal{A})
The Lines Company	Voluntary network tariff pilot Enabling the sharing of excess solar with vulnerable consumers through innovative tariffs, without the need for regulatory exemptions.			()

Power Innovation Pathway | Year One Insights Electricity Authority Te Mana Hiko

Case Studies / Aotearoa Energy Summary Establishment Year one Case studies Insights Next steps 12

Revolutionising electricity trading with the Prompt Electricity Market

The challenge

New Zealand's electricity derivatives market operates under regulations which require derivative purchasers to phone or email brokers who manually seek counterparties, despite other physical commodities being allowed to be traded electronically. This prevents the opportunity for more effective short-term hedging for intermittent generators, reduces demand response incentives, and creates shorter-term pricing uncertainty.

The project

The Prompt Electricity Market is New Zealand's first electronic platform for short-term electricity derivatives trading, using digital auction mechanisms to enable immediate execution. The platform allows generators to secure short-term price certainty, enables demand response providers to lock in revenue, and provides intermittent generators with near real-time flexible hedging. It can also rapidly list new products to meet market needs much faster than existing licensed markets.



About the innovator - their 'why'

Aotearoa Energy recognises that without flexible hedging tools, generators struggle to confidently commit capacity, intermittent renewables lack price certainty, and medium to large electricity users can't monetise demand response. Their vision is to create a modern trading platform that brings transparency, efficiency and flexibility to New Zealand's electricity derivatives market.

Power Innovation Pathway support

In 2023, Aotearoa Energy applied for a statutory exemption through the Ministry of Business, Innovation and Employment, but this was not progressed. The Authority has been advocating for electronic trading, and while the Authority has been providing support, an exemption from the requirement to hold a financial product market licence was sought and granted by the Financial Markets Authority.

Informing the Authority's work programme

Experts from the Authority's Wholesale Markets team are observing the operation of the Prompt Electricity Market as it supports the trading of <u>standardised flexibility</u> <u>products</u>. The lessons learned will inform the Authority's market development work to improve access to shaped hedges and strengthen the over-the-counter contracts market, including our approach to <u>regulating standardised super-peak hedge contracts</u>.

^{22.43.11}

¹ The Financial Markets Conduct Act 2013 requires anyone operating a financial product market (a facility where financial products - such as derivatives - are bought or sold or where offers or invitations to buy or sell financial products are made) to be licensed unless the market is exempt.

Case Studies / Basis Summary Establishment Year one Case studies Insights Next steps 13

Reimagining home energy management with smart panel technology

The challenge

New Zealand's electricity system is facing a need for significant investment in critical infrastructure to support changes in demand and supply. Increased flexibility could save billions in network investment, but consumers have few practical tools to participate, missing opportunities to reduce their electricity bills and overall system costs for all consumers.

The project

Basis has developed a residential smart panel to transform how households understand and manage electricity, while also solving demand flexibility and network constraints through their flexibility platform. To demonstrate the product's capability, Basis is establishing a multi-household trial to develop a new approach for demand-side visibility and management while ensuring consumers stay in control of their energy choices.



About the innovator - their 'why'

Basis is tackling a problem constraining the electricity industry – minimal data and visibility into low voltage networks.

Through their product, industry can access insights to enable flexibility and deliver a more affordable electricity system.

Power Innovation Pathway support

The Authority is providing guidance and information on regulatory processes to provide clarity as Basis navigates various regulations and regulatory complexity to reduce barriers to deploying their demand-flexibility hardware. We are also providing information on the process for any exemption applications that may be required.

Informing the Authority's work programme

The Authority's Network Policy and Retail and Consumer teams are supporting the scoping of this trial to inform the Authority's work (eg, network visibility, flexibility markets and digitalisation). The trial supports the development of demand-side flexibility protocols as recommended by the Market Development Advisory. Group, as well as the objectives of the Authority's consumer mobility work programme, which aims to create an electricity system where solutions are consumer-centric and consumers have the choice of being active participants.



Case Studies / Counties Energy Summary Establishment Year one Case studies Insights Next steps 14

Piloting New Zealand's first Distribution System Operator

The challenge

Electricity networks are traditionally designed around infrequent demand peaks and one-way power flow from centralised generators to consumers. Now, distributed energy resources (like solar and batteries) mean electricity is flowing in both directions and demand is changing more often. If New Zealand keeps building infrastructure to handle peak demand, there is a risk of spending too much too soon and pushing up costs for consumers, instead of letting them play a more active role in the energy transition.

The project

With funding and support from EECA, Counties Energy is developing innovative Distribution System Operator (DSO) capabilities for a 2025 Karaka Harbourside pilot.² Working with flexibility service providers and the Transmission System Operator (TSO), they will provide flexibility traders with dynamic, real-time capacity signals. This will deliver consumer benefits through maximising network capacity, enhancing resilience and minimising costs.



About the innovator - their 'why'

As a 100% community-owned distributor,
Counties Energy recognises that rapid
electrification is fundamentally changing
how electricity flows through networks.
Rather than simply building larger
infrastructure to meet increasing peak
demand (ultimately paid for by consumers),
Counties Energy is exploring innovative
solutions that aim to keep power bills
stable as the community electrifies.

Power Innovation Pathway support

Counties Energy faces complex regulatory challenges around introducing new market participants, along with queries around DSO neutrality, data and wholesale/local market coordination. To support, the Authority is leveraging its work on Future System Operation to help clarify any potential Code barriers to TSO/DSO coordination and regulatory frameworks for the emerging flexibility market.

Informing the Authority's work programme

The Authority's Future Security and Resilience team is observing this pilot to ensure the results can inform broader regulatory development for distribution system operation across New Zealand due to the potential for this operating model to lead to greater system efficiency and affordability for consumers. The learnings from this pilot are also informing the Authority's Future System Operation programme.



² Distributors are traditionally Distribution Network Operators, responsible for maintaining safe, reliable electricity networks.
DSOs are energy orchestrators, operating an open and inclusive participatory service (see <u>Our Vision for our DSO Transition - Counties Energy</u>).

Case Studies / Ara Ake, Climate Connect Actearoa, Counties Energy Summary Establishment Year one Case studies Insights Next steps

Enabling community energy sharing in Franklin

The challenge

Under existing regulations, New Zealand households and organisations investing in solar cannot easily share, donate or trade their excess generation. This is due to the Code specifying a one-to-one relationship between a retailer and a consumer of power, regardless of whether they have embedded generation installed.

The project

The Franklin Energy Sharing pilot will demonstrate a new multiple trading relationships framework for local energy sharing,³ where Counties Energy will donate excess generation from their Pukekohe office's solar and battery system to three local charities.







About the innovator - their 'why'

Ara Ake, Climate Connect Aotearoa and Counties Energy are collaborating to pilot how homes and communities could benefit from local sharing of solar-generated energy, leading to a smarter, more resilient and affordable energy system.

Power Innovation Pathway support

Enabling energy sharing models is highly complex eg, technical and regulatory requirements for off-market settlement and multiple trading relationship-associated regulatory exemptions. The Authority is providing regulatory guidance for the newly proposed framework and information on the process for any exemption applications that may be required.

Informing the Authority's work programme

The Authority's Compliance and Network Policy teams are helping this project navigate peer-to-peer trading. If the exemptions are granted, the Authority will use the learnings from the trial to inform future multiple trading relationships policy (the Evolving multiple retailing and switching project) and broader energy sharing frameworks across New Zealand.



³ The Authority granted <u>multiple trading relationships exemptions</u> in 2024 to facilitate a Käinga Ora trial which enables the monetary benefits of solar to be shared across a range of tenants (including those without solar). This new trial will demonstrate a different, more complex model where energy is given directly to other parties using off-market trades (closer to peer-to-peer trading).

Case Studies / Our Energy & Cortexo Summary Establishment Year one Case studies Insights Next steps 16

Pioneering New Zealand's first end-to-end flexibility market

The challenge

New Zealand's electricity system faces new challenges as intermittent renewable generation, electrification and distributed energy resources (like solar and batteries) reshape how power flows through networks. There is no structured and consistent way for distributors to efficiently procure flexibility from flexibility service providers, which makes it difficult to seek alternatives to traditional network infrastructure upgrades.

The project

Our Energy and Cortexo are creating New Zealand's first end-to-end flexibility market offering, via an integration between the Localflex platform (owned by EPEX SPOT and distributed in New Zealand by Our Energy) and Cortexo's real-time visibility and dispatch technology. This integration aims to provide a seamless experience for distributors to procure flexibility, enabling greater participation from distributed energy resources and establishing consistent ways of transacting and delivering local flexibility.





About the innovator - their 'why'

Our Energy and Cortexo share a vision of transforming how New Zealand's electricity system operates in an era of rapid change. Their solutions can help scale flexibility and make it easier for everyone – households, businesses and communities – to participate in the electricity system more actively, and benefit from doing so.

Power Innovation Pathway support

This project is exploring what Our Energy and Cortexo believe could be a new end-to-end flexibility market category in New Zealand with no existing regulatory blueprint. The Authority is providing regulatory guidance to identify and address barriers early to support the pace of learning and deployment.

Informing the Authority's work programme

The Authority's Wholesale Markets, Operations Policy and Networks Policy teams are working with this project to help ensure the solution aligns with existing regulatory frameworks. The lessons learned are informing new policy development (such as the Authority's flexibility markets workstream) that could benefit the electricity system and consumers.



Case Studies / Rewiring Aotearoa Summary Establishment Year one Case studies Insights Next steps 17

Building tomorrow's energy system today

The challenge

Queenstown is facing a significant increase in demand for electricity, which means the power network is considering major upgrades. At the same time, there is a risk of a significant earthquake that could damage power lines and disrupt fuel supplies. To tackle these issues, Queenstown needs to rapidly evolve its energy system into an electrified and distributed one that can be managed smartly to increase affordability and regional resilience to external events.

The project

The Queenstown Electrification Accelerator is a community-led electrification project with the goal of building an example of the 2050 energy system by 2030. The project is pioneering a smart approach to electrification, using demand-side flexibility and innovative pricing to save consumers money. Working with local networks and technology partners, the Accelerator aims to create a model that can be replicated in other regions.



About the innovator - their 'why'

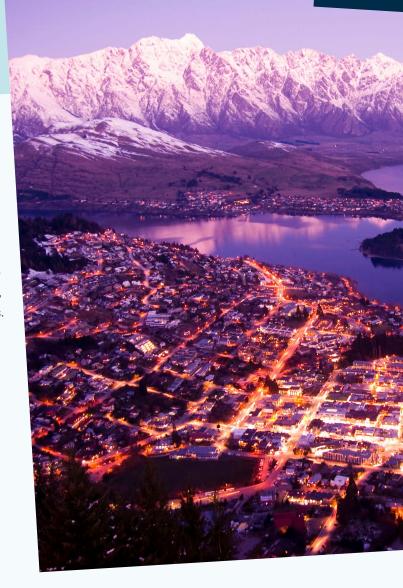
Rewiring Aotearoa is an independent non-profit advocacy organisation. It researches, communicates and demonstrates how to electrify the economy to deliver power bill savings, increased resilience and decreased emissions. Rewiring Aotearoa is working on various projects across New Zealand and is using Queenstown to showcase its vision for the 2050 energy system – built by 2030 and tested in real-world conditions.

Power Innovation Pathway support

This project aims to identify and overcome commercial, technological and regulatory barriers to the deployment of innovative flexibility solutions at scale. The Authority is providing regulatory guidance to help identify and remove barriers as they emerge eg, around import and export tariffs, demand response mechanisms and new pricing structures.

Informing the Authority's work programme

The Authority's Network Policy and Pricing teams are working with this project to make Queenstown a testing ground for flexible energy solutions and accelerate electrification for households and businesses. The Authority will use lessons learned to inform future regulatory frameworks that will benefit electrification across New Zealand eg, in network connections and flexibility markets.



Case Studies / Simply Energy Summary Establishment Year one Case studies Insights Next steps 18

Breaking new ground in Dispatchable Demand

The challenge

New Zealand's electricity market currently operates with no load participants in Dispatchable Demand, one of the market mechanisms designed for demand-side participation. As a result, consumer responses to price signals can be reactive and uncoordinated, leading to less accurate price forecasts, increased real-time wholesale price volatility and ultimately, reduced efficiency.

The project

Simply Energy is leading a pilot to explore Dispatchable Demand and how to increase participation in the mechanism, or one similar, that delivers value to both consumers and the electricity market. The pilot aims to launch a minimum viable product before winter 2026. The project will 'learn by doing' to build the tools, processes, and systems needed for reliable demand response. It aims to empower industrial consumers to participate in the electricity market, while also delivering benefits to consumers through supporting security of supply.



About the innovator – their 'why'

Simply Energy is rethinking how electricity works for New Zealand's commercial and industrial sectors. As the only energy retailer and solutions provider focused solely on commercial and industrial consumers, Simply Energy believes consumers should play an active role in the electricity system and are working hard to enable that.

Power Innovation Pathway support

Large industrial consumers who could offer valuable flexibility often avoid active participation in the market due to challenges. For example, complex metering requirements and System Operator integration audits, alongside operational concerns associated with notice periods and ramp rates. The Authority is providing regulatory support to clarify compliance requirements related to this pilot and other barriers.

Informing the Authority's work programme

Experts from the Authority's Operations Policy team and <u>Energy Competition Task Force</u> are supporting the scoping of this pilot. The lessons learned will shape future market rules being developed in the Authority's <u>rewarding industrial demand flexibility</u> and Dispatchable Demand work.



Case Studies / The Lines Company

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Empowering communities through solar credit sharing

The challenge

People in the community want to share the benefits of solar energy, but current rules make this difficult. If a consumer wants to donate their surplus solar credits to others, they must use the same electricity retailer. This is a barrier to sharing the benefits of solar energy that is generated behind the meter.

The project

The Lines Company (TLC) is developing an innovative voluntary network tariff that enables customers with solar panels to donate excess energy to vulnerable community members, regardless of which retailer either uses.

The proposed mechanism would allow TLC to directly collect the value of any surplus solar and redistribute it to those in need. This retailer-agnostic approach unlocks the benefits of peer-to-peer energy sharing, fostering community collaboration while providing a practical pathway for energy equity within their network.



About the innovator - their 'why'

TLC is focused on supporting its owners, the Te Kūiti community. After working closely with Te Nehenehenui Trust to gift solar credits to Kuia and Kaumātua, TLC saw firsthand the strong community spirit around sharing energy and the practical challenges that make it hard to do so on a larger scale.

Power Innovation Pathway support

TLC is navigating complex regulations that could increase its customer codes from 26 to 260, creating potentially inefficient administrative costs. There is also a two-month advance notices period that distributors have to provide retailers which is slowing down implementation. The Pathway is providing TLC with regulatory clarity and advocating for simpler processes.

Informing the Authority's work programme

The Authority's Compliance and Network Policy teams are supporting this pilot to identify potential changes to the Code to streamline a solution for all participants. We are also understanding how peer-to-peer energy sharing can be enabled, and scaled, under existing regulations without the need for complex multiple trading exemptions (see Evolving multiple retailing and switching).



Innovator insights informing Authority actions

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Innovator insights informing Authority actions

The Authority has gained valuable insights through its first year of the Pathway by engaging with innovators, change makers and parties it hasn't typically heard from in the past.

We want to share these lessons and how we're putting them into action – to foster collaboration and help accelerate innovation for the benefit of the sector and consumers.

Here is a summary of what we heard from innovators and our proposed actions to address these insights, several of which are already underway.

INNOVATOR INSIGHT 1

Some regulatory barriers to innovation are due to the need for regulation

Some innovators experience barriers due to regulatory gaps that are a result of rapidly evolving technologies and new business models. This restricts them to operate under the status quo, rather than creating, or adapting to better enable innovations that benefit consumers.

Examples of opportunities suggested by innovators include:

- a flexibility market that defines the value proposition for flexibility and surfaces supply and demand
- a wholesale market mechanism better suited to dispatching small-scale flexibility
- demand-side flexibility protocols, as well as standardised processes and system interfaces, to enable cross-sector coordination of flexibility resources
- regulation preventing consumers from being able to negotiate:
 - cost-reflective network pricing with distributors when sharing energy across short physical distances
 - ICP aggregation on rural or commercial properties to gain the self-consumption benefits of distributed generation.



Innovator insights informing Authority actions

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AUTHORITY ACTION 1: Continue to explore new and innovative approaches to regulatory support for a rapidly evolving sector

Enabling innovation is central to the Authority's ability to deliver on its strategic outcomes. To reflect this, we are increasing our innovation-focused roles and services to help accelerate sector progress.



For example, we are:

- increasing the resourcing of the Power Innovation Pathway to broaden its service offering. This will allow for more innovators to gain enhanced support and will increase the number of innovationfocused workshops and networking events. These initiatives help grow the community of innovators and enable regulatory barriers to be identified faster to ensure consumers have access to innovative products and services which can reduce their electricity costs and increase security of supply. Other improvements will include providing more 'self-serve' information, so that innovators can access common regulatory answers more easily to accelerate new offerings for the benefit of consumers.
- increasing resourcing to enable innovator insights to be formally captured in policy work. This includes onboarding a new Flexibility Lead in the Networks & System Change team to conduct the initial scoping of a work programme by June 2026 to better enable flexibility and non-traditional solutions across the sector, as well as better defining flexibility, as barriers differ depending upon application.
- exploring the concept of regulatory sandboxing to enable
 multiple innovators to test innovative products, services and
 business models in a flexible regulatory environment. We already
 offer alternatives to regulatory sandboxing through our exemption
 process eg, the Kāinga Ora pilot, which enabled multiple trading
 relationships to be trialled.

We will investigate the concept of regulatory sandboxes to expedite the speed and volume that innovations can be tested to remove barriers and bring innovative products and business models to market faster for the benefit of consumers.

By March 2026, we will conduct a feasibility study on regulatory sandboxing to understand:

- What other regulators, both locally and overseas, offer electricity sector regulatory sandboxing?
- How do these regulators define a regulatory sandbox and how does it work in practice?
- What should the Authority consider using as its working definition for a regulatory sandbox?
- Would a regulatory sandboxing service where the need for certain Code requirements can be tested – be of good value to consumers and lead to long-term consumer benefits?
- Does the Authority's legislative framework constrain the kind of sandboxing service that could be offered (eg, the exemption mechanism in the Act) and, if so, should we consider asking for a change to the Act or Regulations?
- Considering all the factors above, should a regulatory sandboxing service be prioritised by the Authority and, if so, what should the service look like in practice?

Using this information, we will consider trialling regulatory sandboxing in 2026/27, subject to sufficient resourcing.

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INNOVATOR INSIGHT 2

Electricity sector regulation is complex with a number of regulatory barriers, real or perceived, sitting in the mandate of different regulators

Innovators raised a number of barriers that sit with different regulators, including solar installation, data access and strategy barriers (Ministry of Business, Innovation and Employment); perceptions of capital expenditure bias in the electricity transmission and distribution pricequality path regime (Commerce Commission); and electronic trading and green loan access barriers (Financial Markets Authority).

AUTHORITY ACTION 2: Work more closely with other sector regulators to remove regulatory barriers, real or perceived, to enable innovation for the benefit of consumers

The Authority's statutory objectives aim to promote the long-term benefits of consumers and protect the interests of domestic and small business consumers. To do this effectively, the Authority works closely with other sector regulators (including the Commerce Commission, EECA and MBIE) and following feedback from innovators, we will work to expand this collaboration to address regulatory barriers outside of the Authority's mandate.

We are currently working alongside the Commerce Commission and EECA on informal and formal activities to better enable innovation, ranging from information sharing and workshops (eg, to remove perceptions of bias in the Commission's price-quality regime), collaborating on the Pathway's enhanced support projects (including the Queenstown Electrification Accelerator and the Dispatchable Demand pilot), and exploring a regulatory sandboxing service (see Authority action 1). We are also supporting MBIE with the development of a consumer data right for electricity. They are concurrently making changes to the Electrical (Safety) Regulations 2010 and working on a wider energy strategy, all of which have the potential to enable innovation in the electricity sector.

These efforts build on existing links between regulators and will strengthen the foundations for future collaboration and innovation.

INNOVATOR INSIGHT 3

The Authority's exemptions process can be restrictive for some stakeholders. It could be changed to better enable consumer-focused innovation to be tested and brought to market faster

Innovators told us that applying for regulatory exemptions to test new ideas and business models can be challenging. Innovators have shared a perception that exemptions granted to specific parties and pilots limits the sharing of benefits, as it is believed the same exemption won't be granted to a second party if a pilot is already underway.

Authority action 1 will help address this by exploring how regulatory sandboxing and enhancing the Pathway might further support innovators.

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The Authority will also communicate to participants that it will consider all exemption requests and decisions to grant or decline an exemption made on the basis of the statutory test in section 11 of the Electricity Industry Act 2010.



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INNOVATOR INSIGHT 4

The Authority is aware of most of the real barriers to innovation in the Code but has not had sufficient information to prioritise addressing these ahead of other market changes

In most cases, the Authority has plans to address regulatory barriers raised by innovators in its work programme, but this will take some time. Examples include:

- Significant compliance requirements to provide demand-side flexibility and a lack of Code provisions for flexibility service providers to become participants.
 - To be reviewed as part of Flexibility markets, a programme of work running from 2025-27.
- Various Code clauses limiting the uptake, and consumer and system benefits, of rooftop solar and other distributed generation.
 This includes network export limits and high compliance requirements for medium-sized installations.
 - To be reviewed as part of stage 2 of Network connections, which is currently expected to be consulted on Q4 2025 and Q2 2026.

- Various clauses preventing true peer-to-peer trading and energy sharing, despite initial Code changes proposed to enable multiple trading relationships.
 - To be reviewed as part of Evolving multiple trading and switching, following the decision on whether to implement the proposed Code changes (expected late 2025).

AUTHORITY ACTION 3: Accelerate work programmes that enable innovation for the benefit of the electricity sector and consumers

Regulating the electricity sector is challenging due to dynamic priorities. The Authority is continually assessing its work programme based on what can have the biggest impact on consumers. The insights from the Pathway have been a valuable input to our work programme already, reinforcing priorities that accelerate work to address known barriers to innovation including the Consumer Mobility and Future Networks programmes.

The Authority will continue to bring barriers identified through the Pathway into its assessment and prioritisation of its work programme under Authority action 1.

INNOVATOR INSIGHT 5

The way the Authority engages is not always accessible for small businesses and innovators, limiting their input when developing electricity sector policy

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When the Authority seeks feedback, it typically asks for written responses to consultation papers. This approach does not suit smaller market participants, energy innovators, community advocacy groups or consumers who do not have dedicated regulatory resources to read, analyse and respond.

AUTHORITY ACTION 4: Expand and embed alternative consultation approaches to ensure greater accessibility to a wider range of stakeholders

The Authority is committed to engage a diverse range of voices in its consultations and we have started to be more proactive in our engagement approach and consultation channels. This includes accepting verbal responses, holding workshops and consumer wānanga, however we acknowledge that this does not happen for all consultations.

We are reviewing elements of our consultation process to ensure we use a wide range of communication channels (including surveys, interviews, open forums, workshops and structured discussions) to reach the stakeholders who want to connect to our work, while maintaining the pace of change the sector demands.

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Next steps for the Pathway

A year ago, the Authority began a journey to engage better with energy innovators to help them navigate regulations to bring new technologies and business models to market faster for the benefit of electricity consumers.

Today, the Power Innovation Pathway is a thriving service that has helped over 80 innovators with regulatory challenges. It has also resourced Authority subject matter experts to support eight high-value initiatives with pilots that have the potential to inform current and future energy policy.

The Pathway started as a pilot itself, but the Authority has incorporated it into business-as-usual, demonstrating its commitment to facilitating innovation to drive positive consumer outcomes. It has been designed to evolve with innovator needs and insights, and this evolution is evident through the actions the Authority will take as next steps.

The Authority is well-positioned to support and prioritise innovation, to engage in new and meaningful ways with a wider range of stakeholders, and to strengthen collaboration with other electricity sector regulators to drive collective change.

The Power Innovation Pathway remains open to applications, with a priority round for enhanced regulatory support available from 29 September – 31 October 2025.

We are excited about the year ahead to continue enabling and supporting innovation and innovators – taking bold and transformative action to test and iterate our approach to regulation, creating long-term benefit for the electricity sector and consumers.



Feedback on the Pathway? Get in touch with innovate@ea.govt.nz



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