

Waikato Affordable Energy Webinar Series

June-November 2026



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Storytelling.

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Wellbeing Waikato

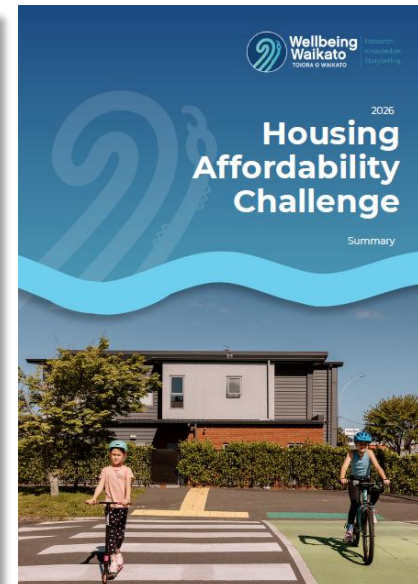
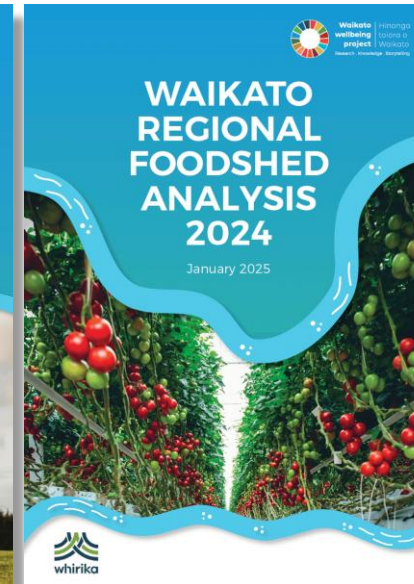
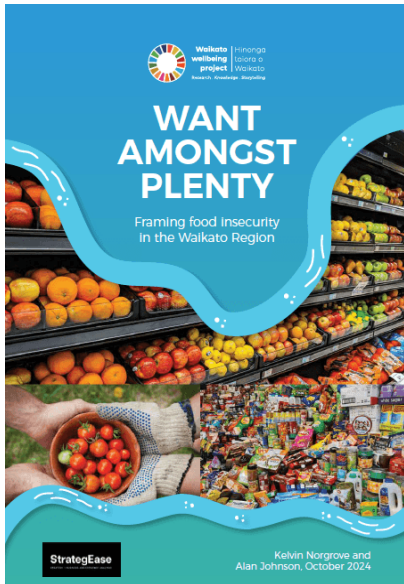


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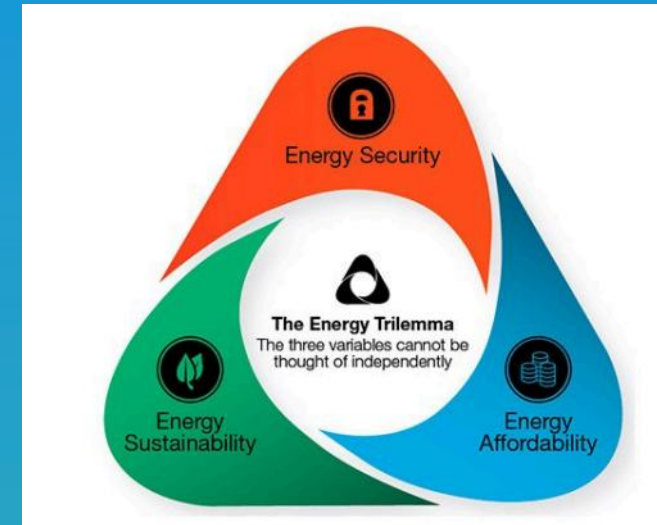
Independent Charitable Trust focused on:

- Regional intelligence about what's most important to households and whanau
- Identifying emerging risks early
- Surfacing underlying drivers, not just symptoms
- Convening government, iwi, councils, community organisations and the private sector around decision-useful insights.



Electricity systems need to be:

- Affordable
- Reliable
- Sustainable



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4 Big Questions

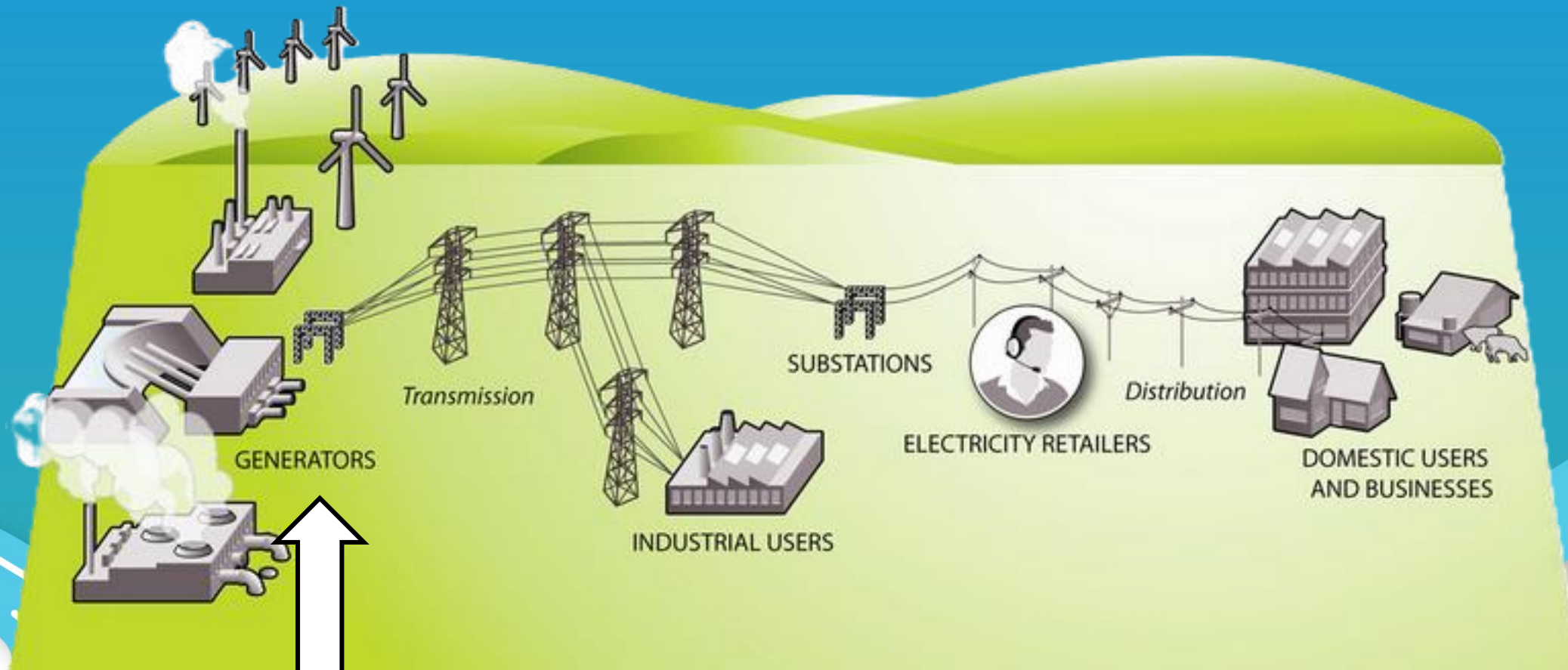
1. How does the electricity system actually work—and why is it designed this way?
2. What drives power prices, and how could they be made more affordable?
3. How does energy affordability affect household and community wellbeing?
4. What would a better system look like—and how do we get there?



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The Current Model

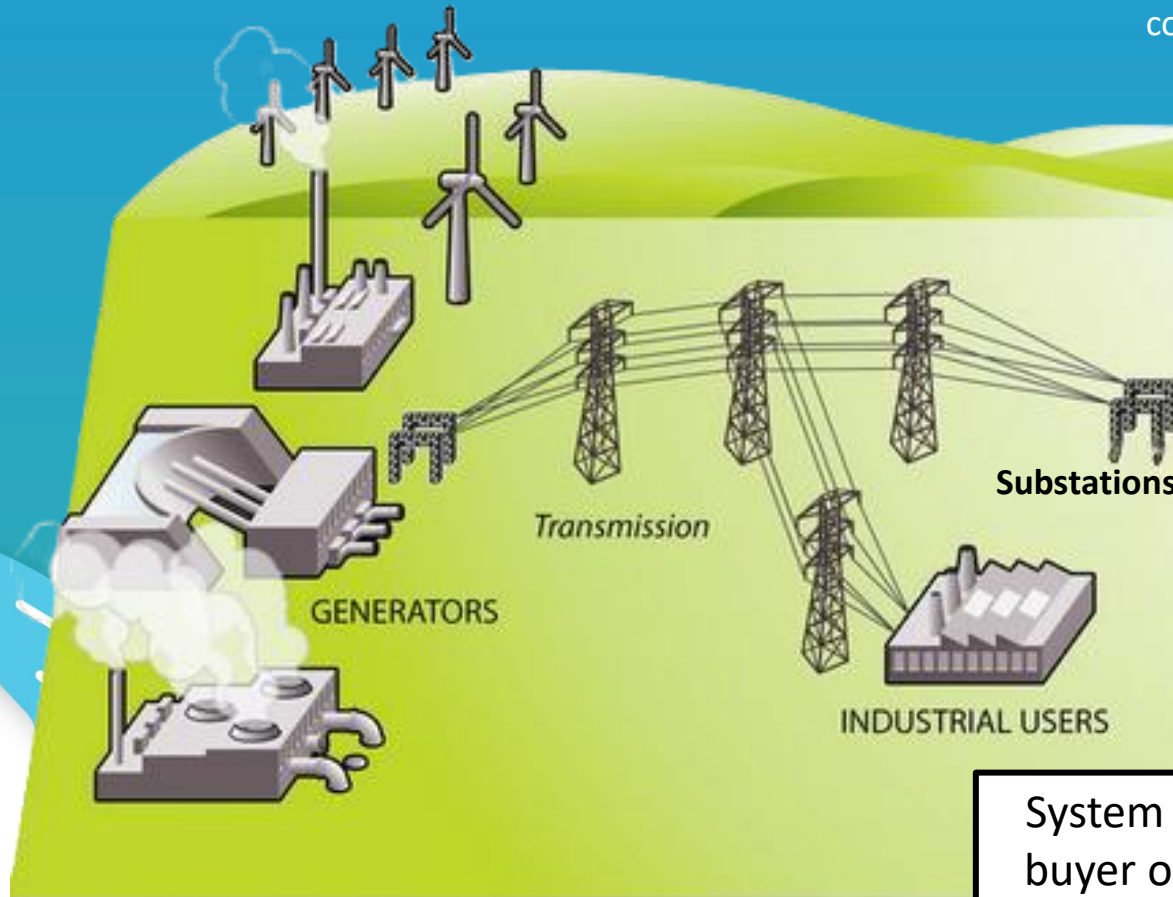


The system operator is here



Bertram's Proposed Model

Central/Remote Generation and Transmission



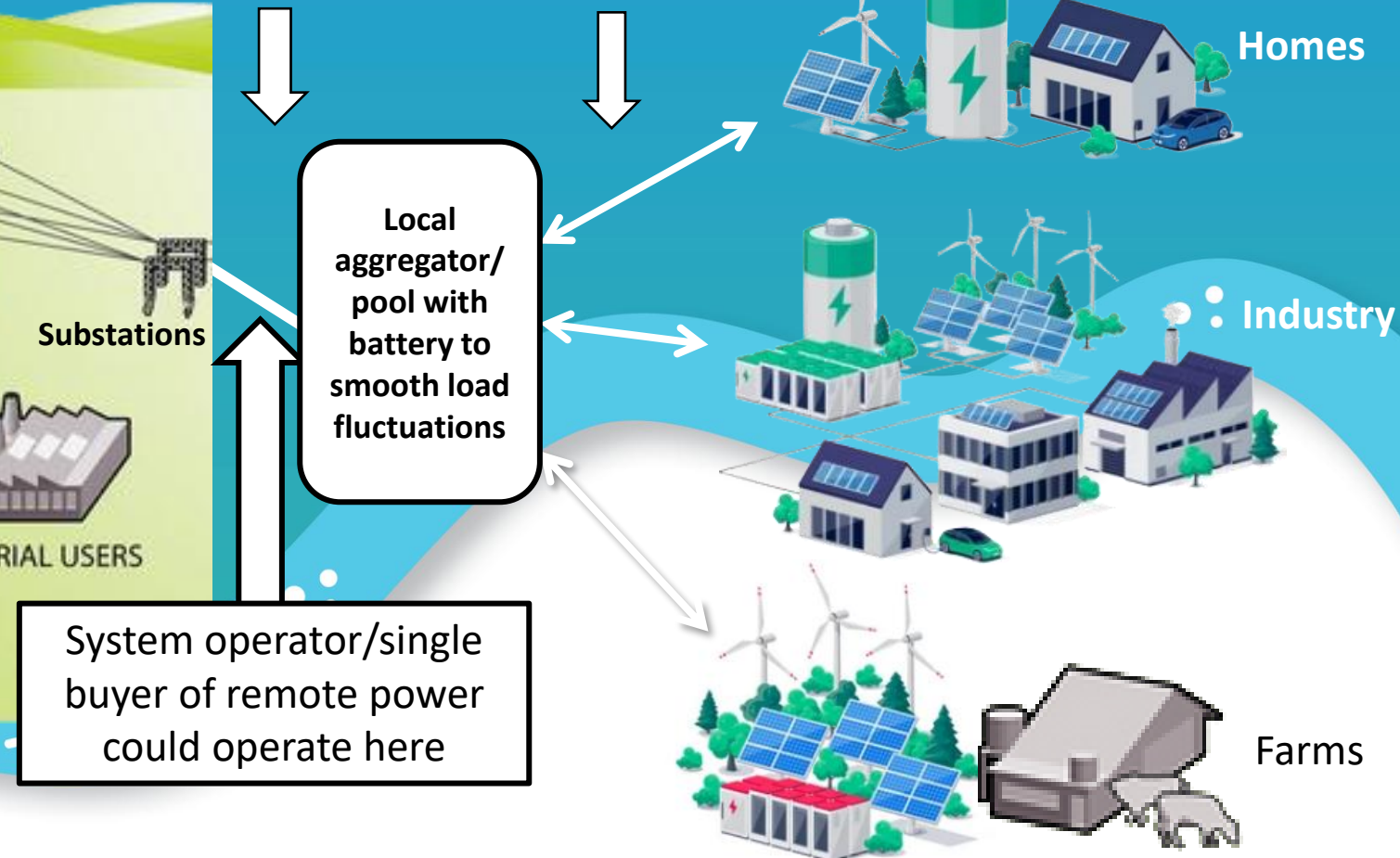
Energy Community

Wholesale
traders
compete here

Local distribution
network &
independent
retailers

Distributed Generation

Domestic Users & Businesses
With Net Meters



From

Remote generation

Retail Market

Distributed Generation

Transmission

To

Remote Generation
& Transmission

Retail Market

Distributed Generation



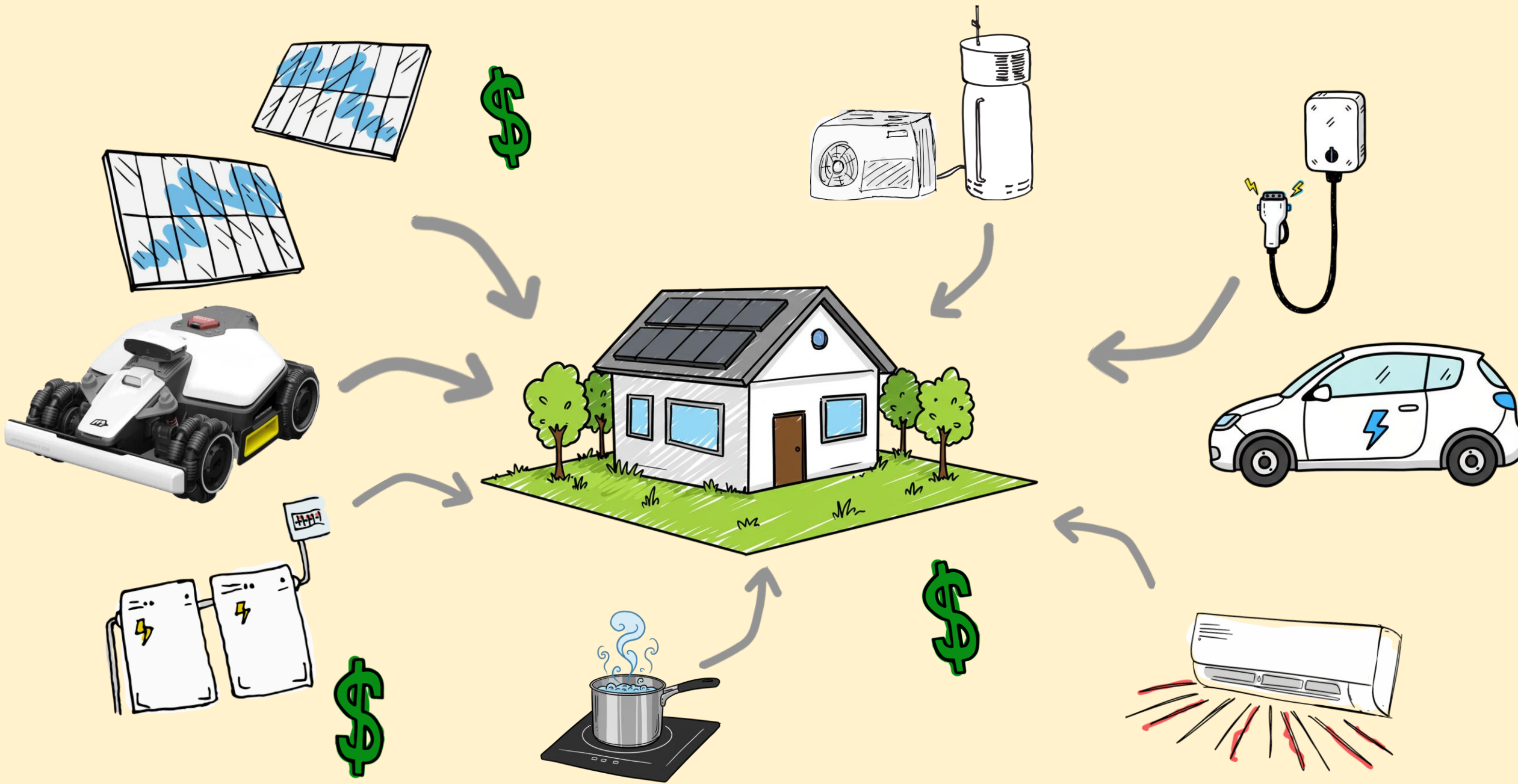
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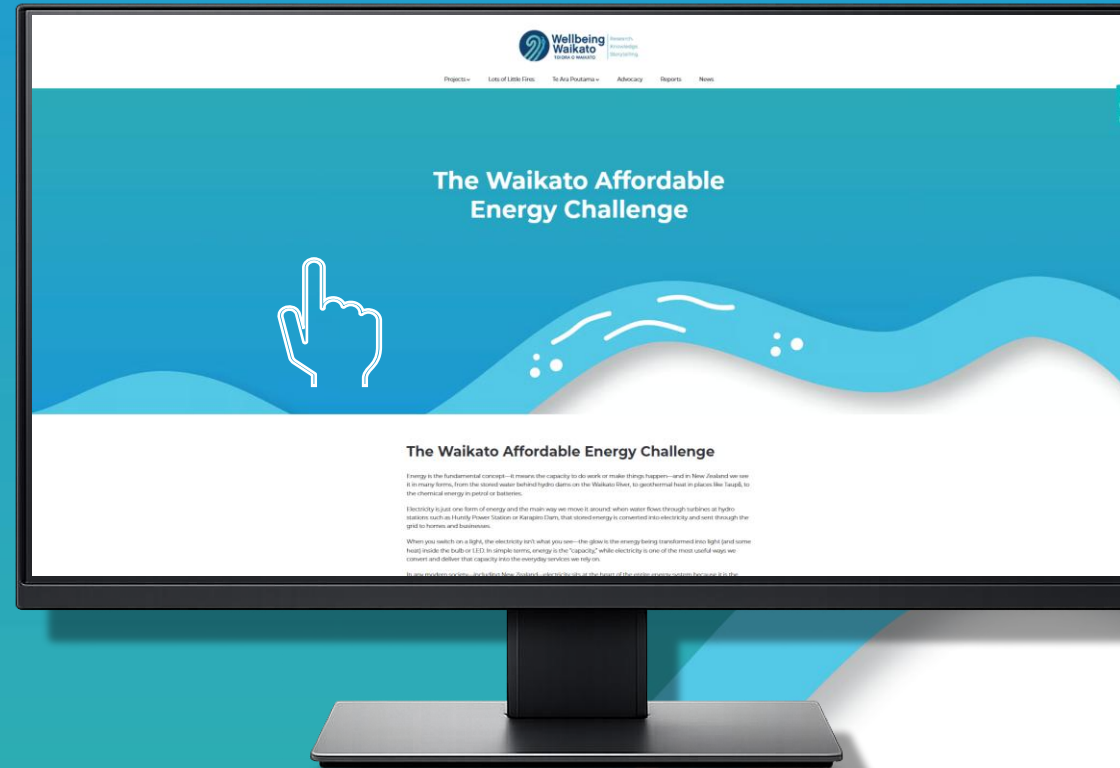


“Make 6 7 good decisions over the
next 10 years.”





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Shifting Currents: Energy Infrastructure in Transition



Graham Campbell & Pippa Player
Te Waihanga | New Zealand
Infrastructure Commission ∴



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Shifting currents: Energy infrastructure in transition

Why?

Context

What has happened to prices?

The long-term view

Key observations

Questions



A unique, long-term, all sector focus

We've been on a journey

Provide a baseline, for monitoring progress and offering independent, sector-wide analysis as the energy transition unfolds



We look to the long term

Identifying issues and the actions New Zealand can take to improve.



We help find solutions to today's challenges

Providing guidance and insights to inform and improve delivery.



We work across sectors

Putting NZ's infrastructure needs at the centre of the conversation.

Infrastructure and services that improve the wellbeing of New Zealanders

Develop broad public agreement

National Infrastructure Plan

Accelerate electricity investment for growth and emissions reduction

- Energy is foundational
- The sector is under real pressure
- Electricity use is projected to grow to achieve emissions goals
- Significant investment in new electricity generation, storage and networks
- Risk of constraining growth and progressing decarbonisation



Priorities

Take a predictable approach to electrify the economy

Recommendation #14

Establish clear, consistent and coordinated Government strategies and policies to accelerate electricity infrastructure investment that supports economic growth and emissions reduction

Shifting currents: Energy infrastructure in transition

Affordable energy, reliable supply, and lower emissions

1



Stable policy to give confidence for long-term investment

2



Building more, lower-cost generation to bring prices down

3



System adaptability + flexibility are key to reliability and keeping costs down

4



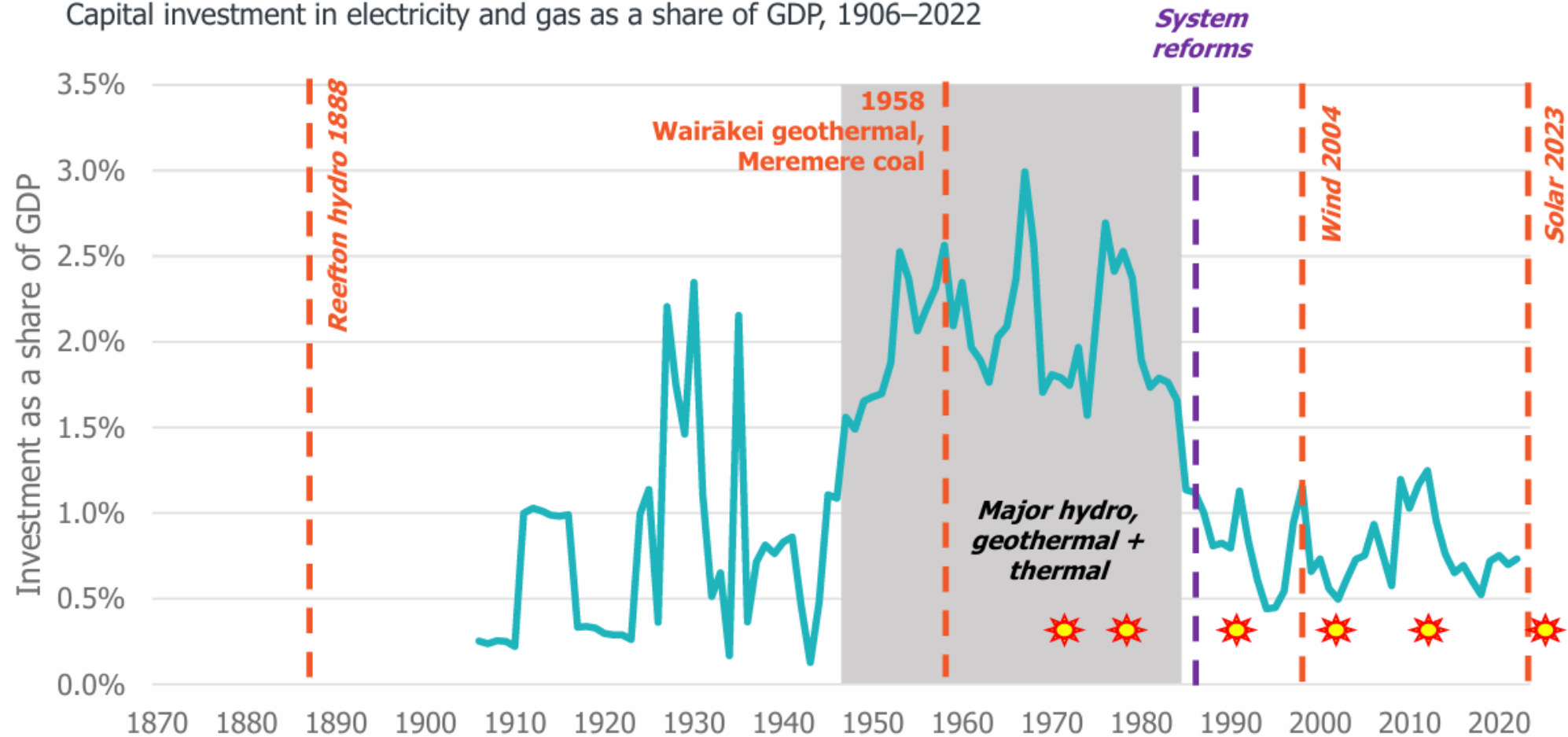
Adapt and coordinate as the energy transition progresses



**A long history
in renewable energy**

We have a long history in renewable electricity

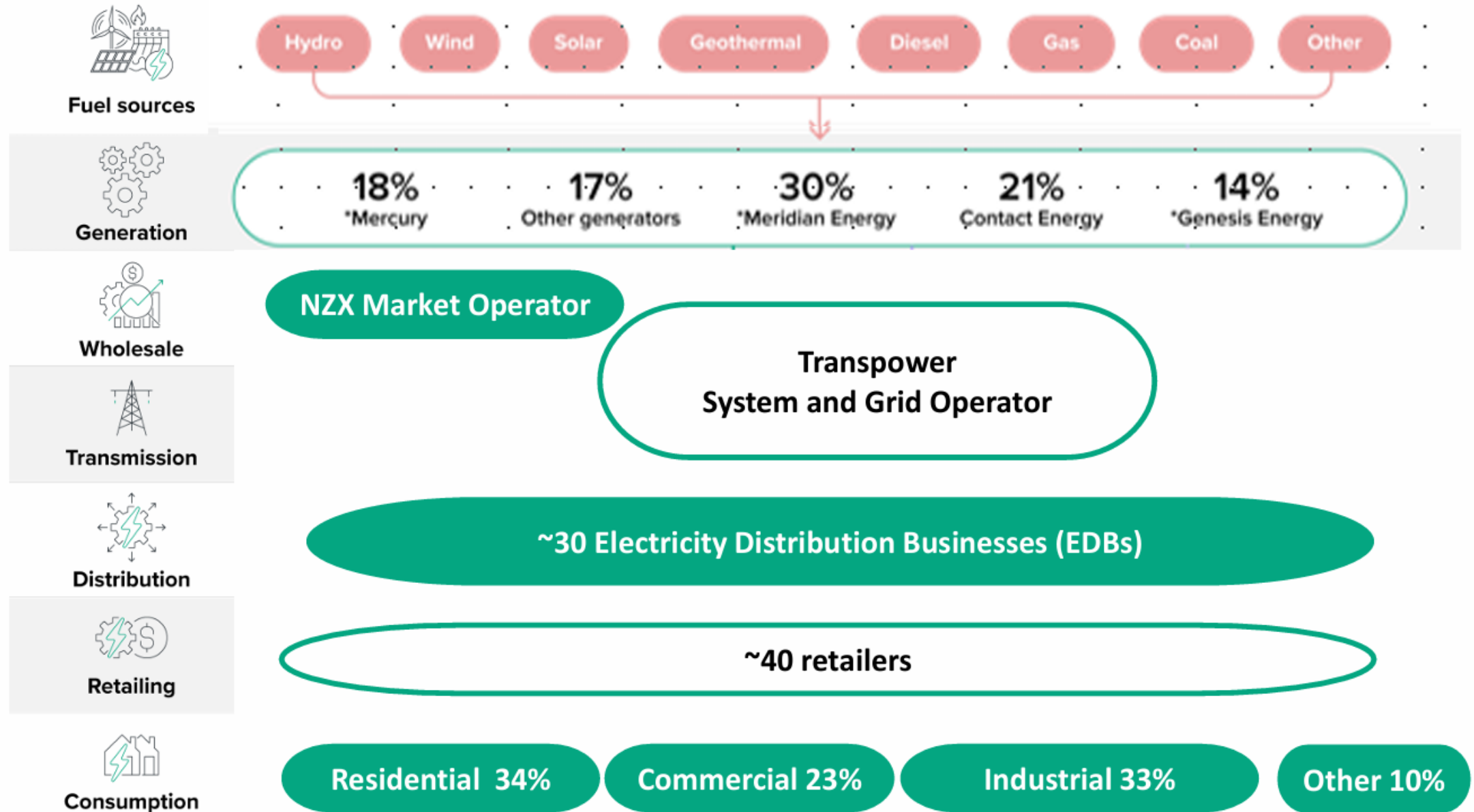
Capital investment in electricity and gas as a share of GDP, 1906–2022



Source: New Zealand Infrastructure Commission, [Nation Building: A Century and a Half of Infrastructure Investment in New Zealand](#) (2025).

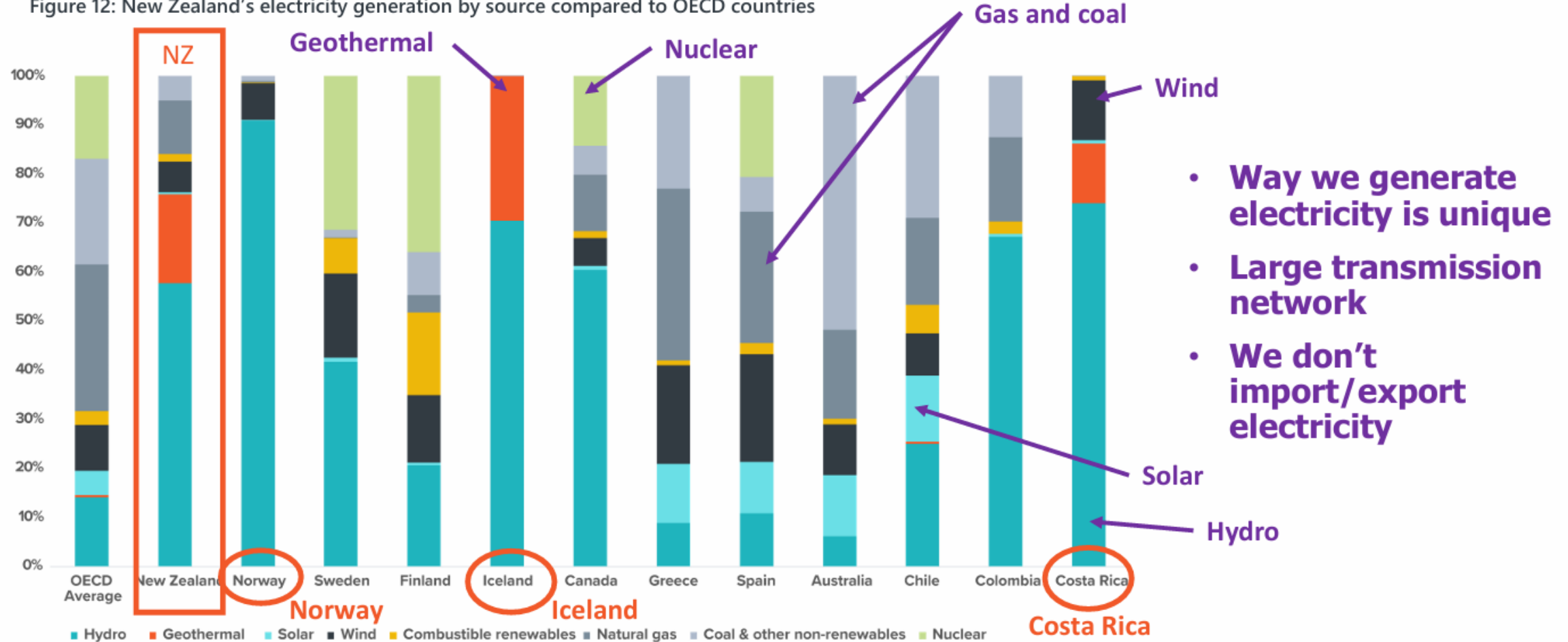
Note: Grey periods denote a boom period in investment, where investment was more than 0.5% of GDP higher than its historical average. Electricity and gas sector does not include “upstream” investment in extraction and refinery equipment.

The electricity sector is complex, with lots of players



A long, skinny, sparsely populated country

Figure 12: New Zealand's electricity generation by source compared to OECD countries



Source: New Zealand Infrastructure Commission, [Benchmarking our infrastructure: Technical Report](#) (2026), based on data from the International Energy Administration.
Note: Includes the average for the last five years of data.

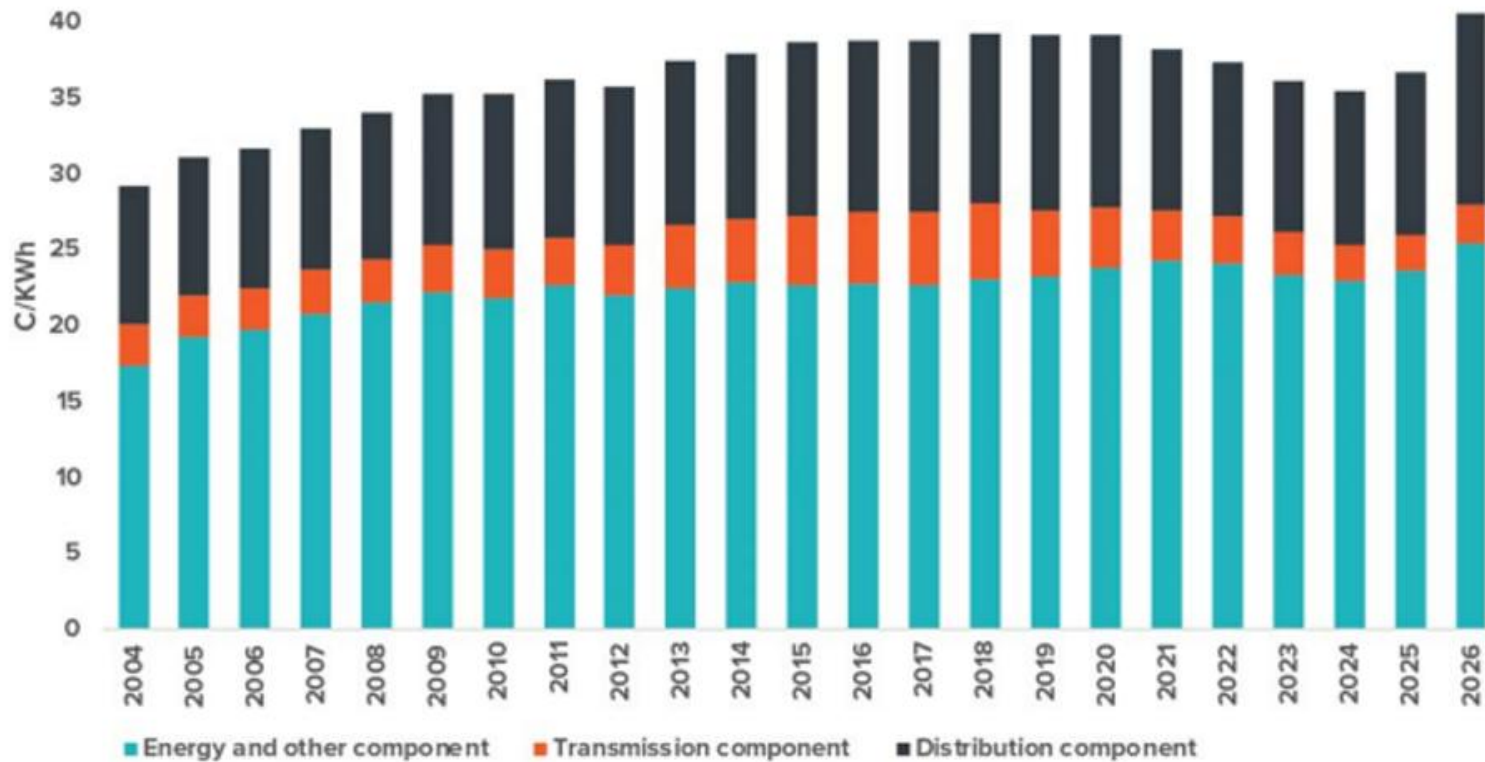
An aerial photograph of a large hydroelectric dam and its reservoir. The dam is a concrete structure with multiple spillways, situated in a valley. The reservoir is a large body of water that fills the valley floor. In the background, there are steep, rugged mountains with some snow patches. The foreground shows the dam's powerhouse and some surrounding infrastructure. The text is overlaid on the lower left portion of the image.

**What's been driving prices recently?
And what can we do about it?**

How have household prices changed?

Increasing prices after a decade of flat prices in real terms

Inflation adjusted household electricity changes by component, 2004-2026



- Household electricity charges have risen recently

- Some of this is due to increases in generation costs and some is due to regulated increases on distribution

← A lot of commentary focuses on this component

Source: MBIE, [Quarterly Survey of Domestic Electricity Prices \(QSDEP\)](#) and Stats NZ, [Consumers Price Index \(CPI\)](#).

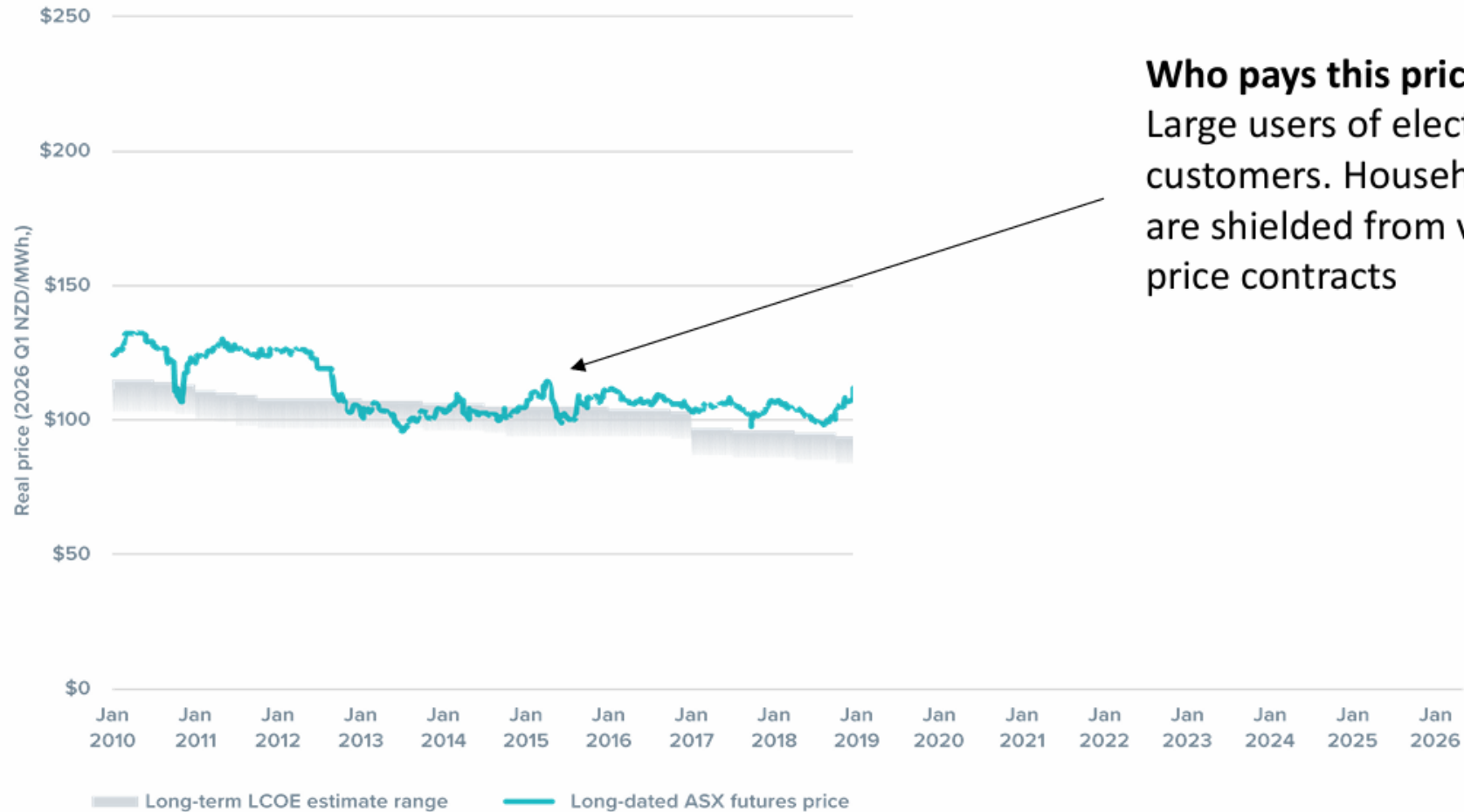
Note: Prices are as of February in a given year, adjusted to 2026Q1 prices using the CPI. Prices include GST, which is spread proportionately across all three components.

Source: MBIE, Quarterly Survey of Domestic Electricity Prices (QSDEP) and Stats NZ, Consumers Price Index (CPI).

How have wholesale prices changed

Since 1995, prices have closely tracked costs

Long-dated ASX futures prices relative to the cost to build and operate new generation

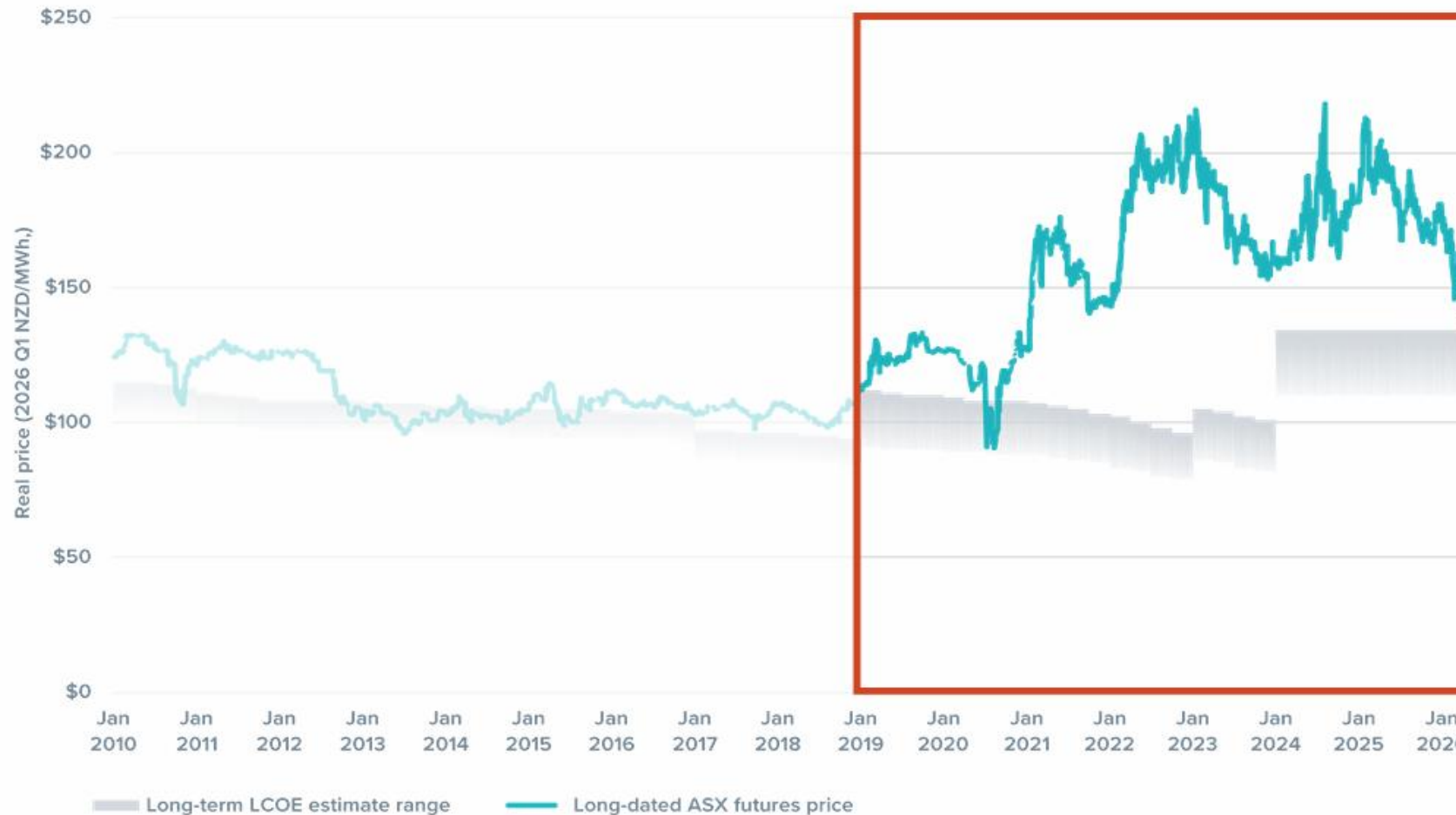


Source: Chart recreated from futures contract price data and long-run LCOE estimates published by the [Electricity Authority](#). Futures prices and LCOE estimates are inflation-adjusted using Stats NZ's CPI.

How have wholesale prices changed

Starting in 2019, prices have been stubbornly high

Long-dated ASX futures prices relative to the cost to build and operate new generation



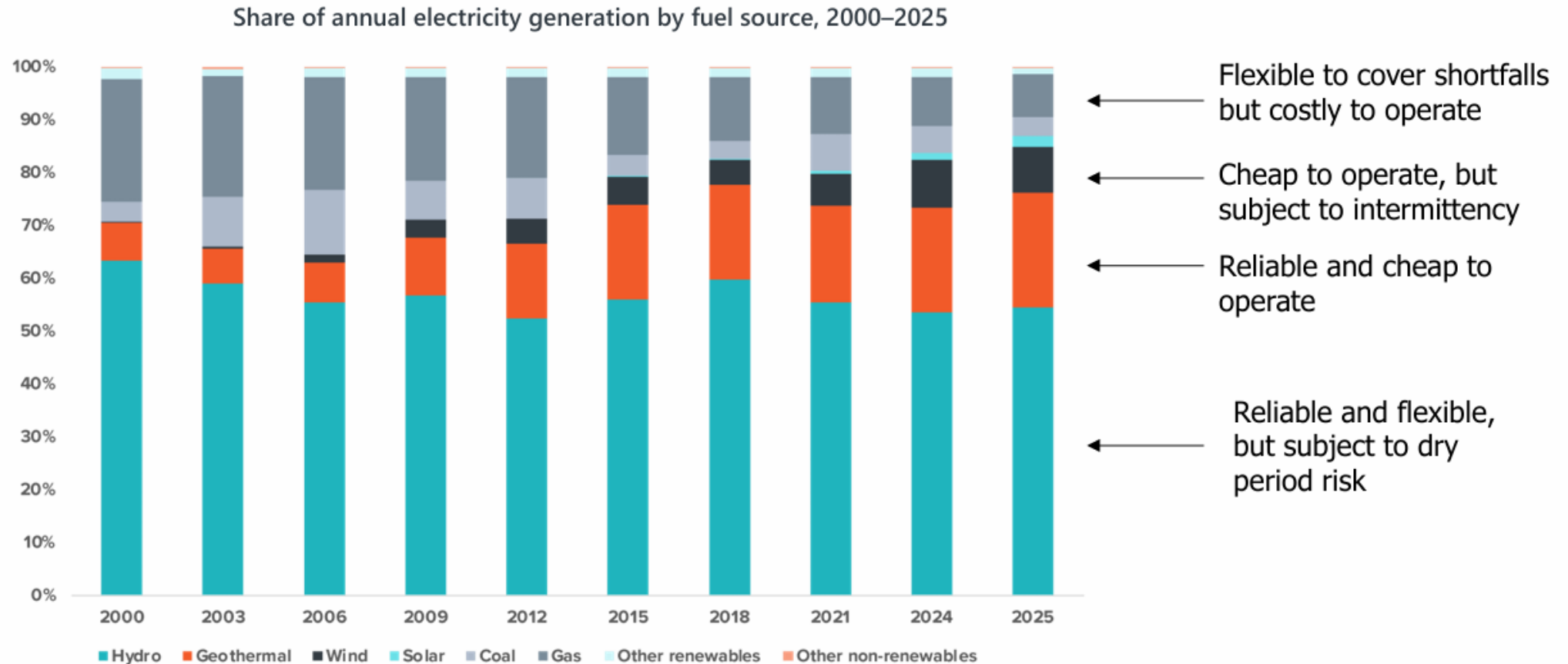
Prices for electricity have been well above costs to build and operate

What's been going on?

Source: Chart recreated from futures contract price data and long-run LCOE estimates published by the [Electricity Authority](#). Futures prices and LCOE estimates are inflation-adjusted using Stats NZ's CPI.

Background and context

How this country generates electricity



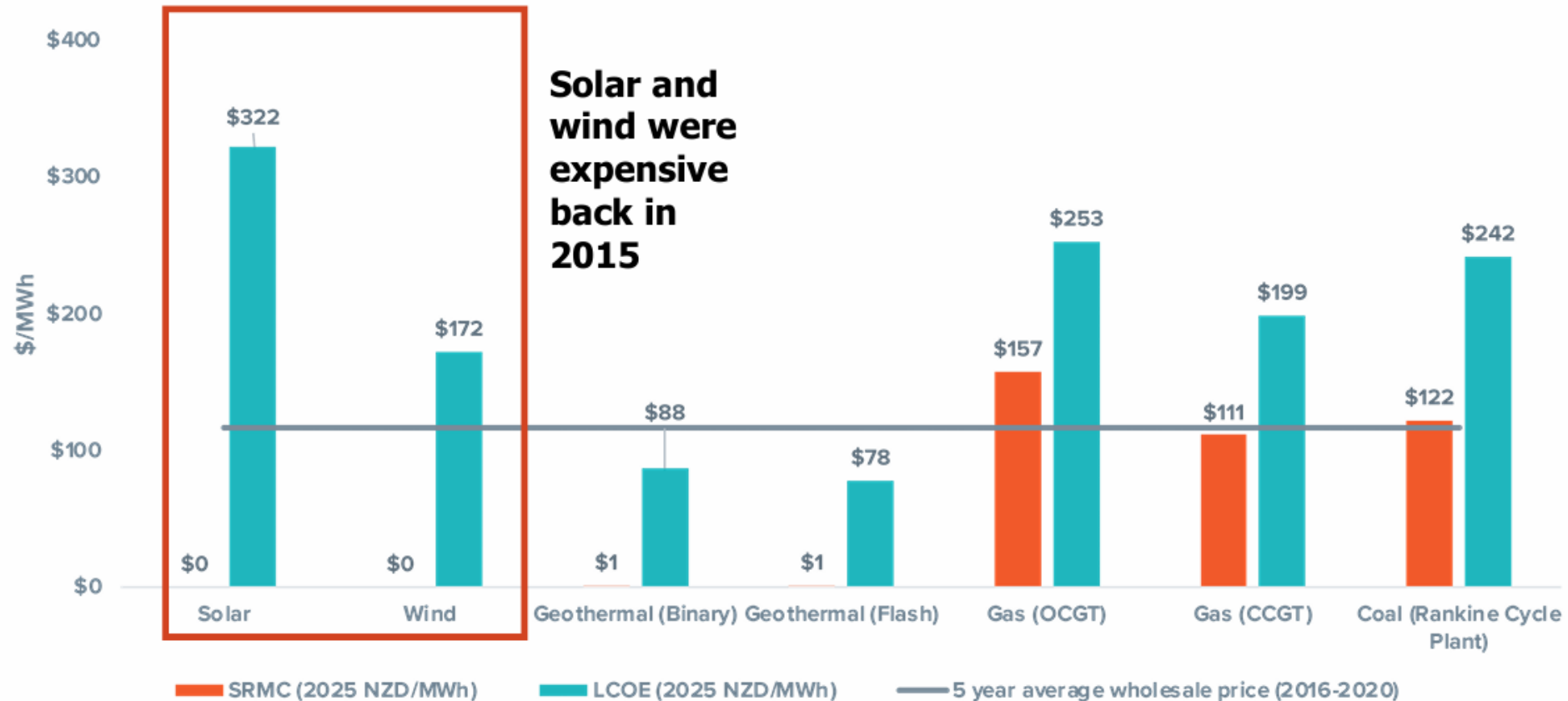
Source: MBIE, [Electricity data tables](#).

Note: Data is displayed as snapshots of specific years, rather than period averages.

Why have prices been high recently

Flexible firming generation has become uncompetitive

Estimates and projections of short-run marginal cost and levelised cost of electricity, by type of plant. 2015

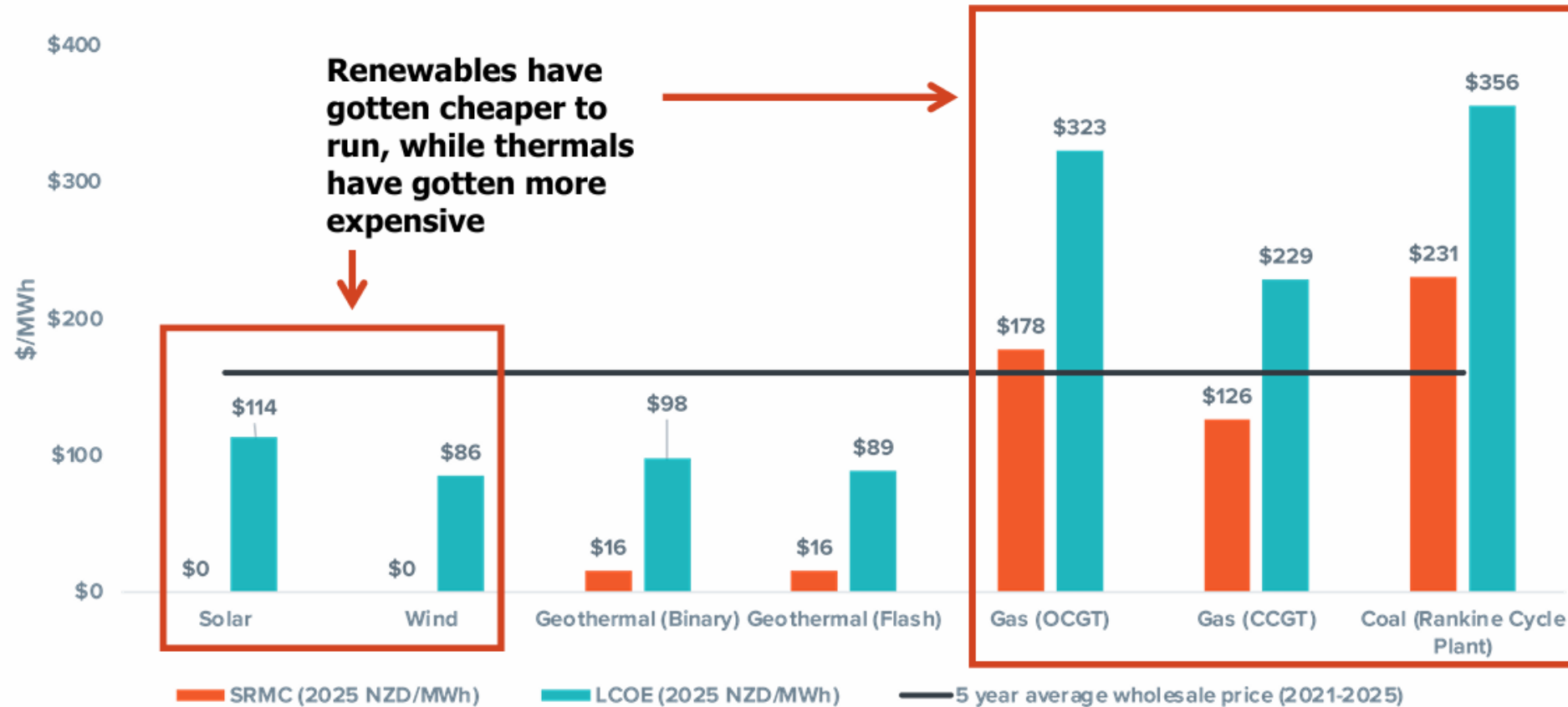


Source: New Zealand Infrastructure Commission analysis.

Why have prices been high recently

Flexible firming generation has become uncompetitive

Estimates and projections of short-run marginal cost and levelised cost of electricity, by type of plant. 2025



Source: New Zealand Infrastructure Commission analysis.

Why have prices been high recently?

Flexible firming generation has become uneconomic

Thermal power station closures since 2007

Power Station	Type	Capacity (MW)	Date Closed
Te Awamutu	Gas turbine	54	2007
New Plymouth	Gas/oil turbine	600	2008
Huntly 3	Coal/gas steam turbine	250	2012
Otahuhu B	Gas combined cycle	404	2015
Southdown	Gas combined cycle/cogeneration	170	2015
Te Rapa	Gas cogeneration	44	2023
Stratford	Gas combined cycle	377	2026

Source: Electricity Authority, [Existing generation plant](#).

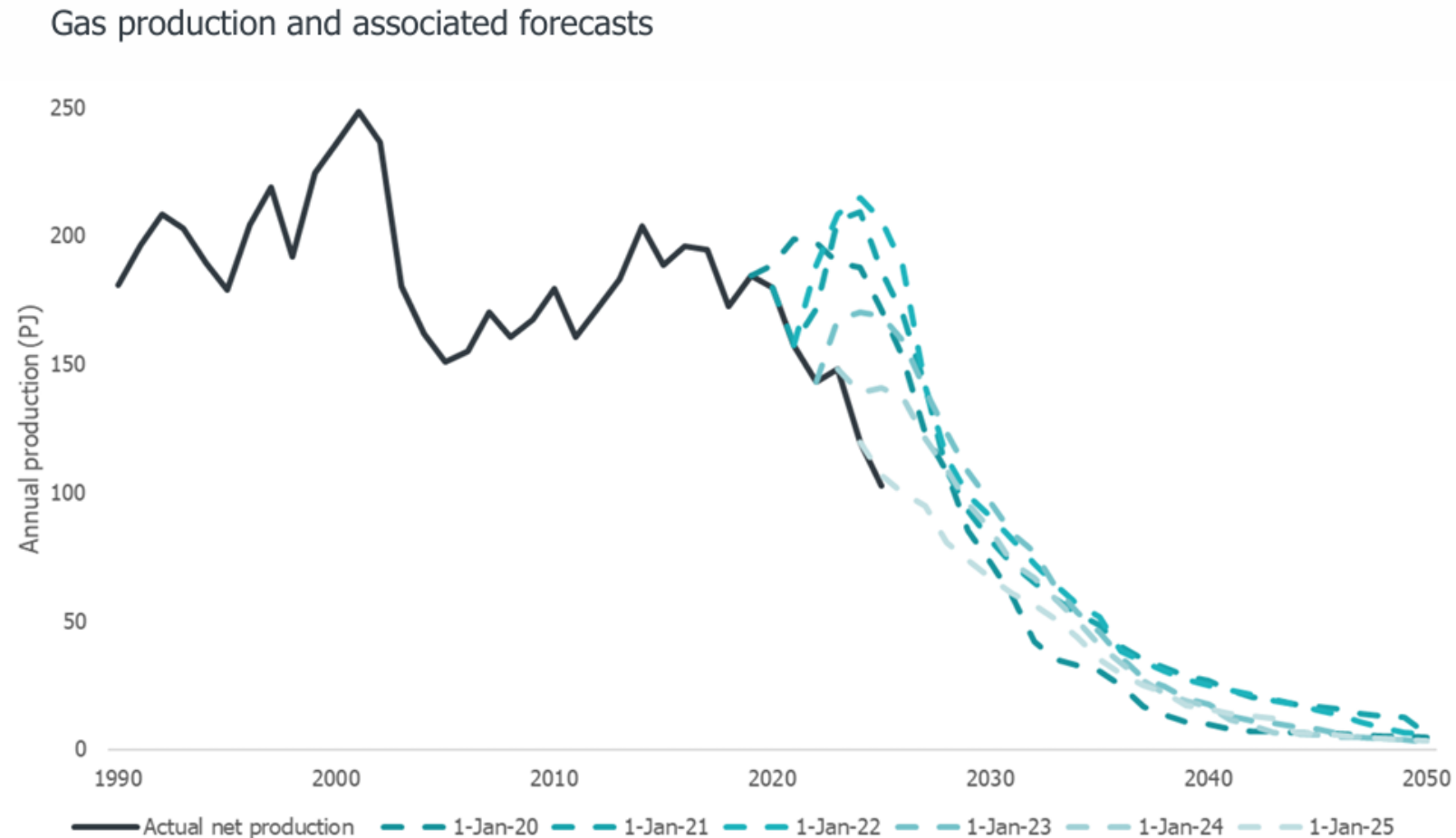
In dry years, to mitigate price spikes,

- Prices need to be high enough to let thermal generators produce return.
- Capacity needs to exist to come online.

By 2019, this capacity was markedly less available than it was in 2001 or 2008 (previous dry years)

Why have prices been so high?

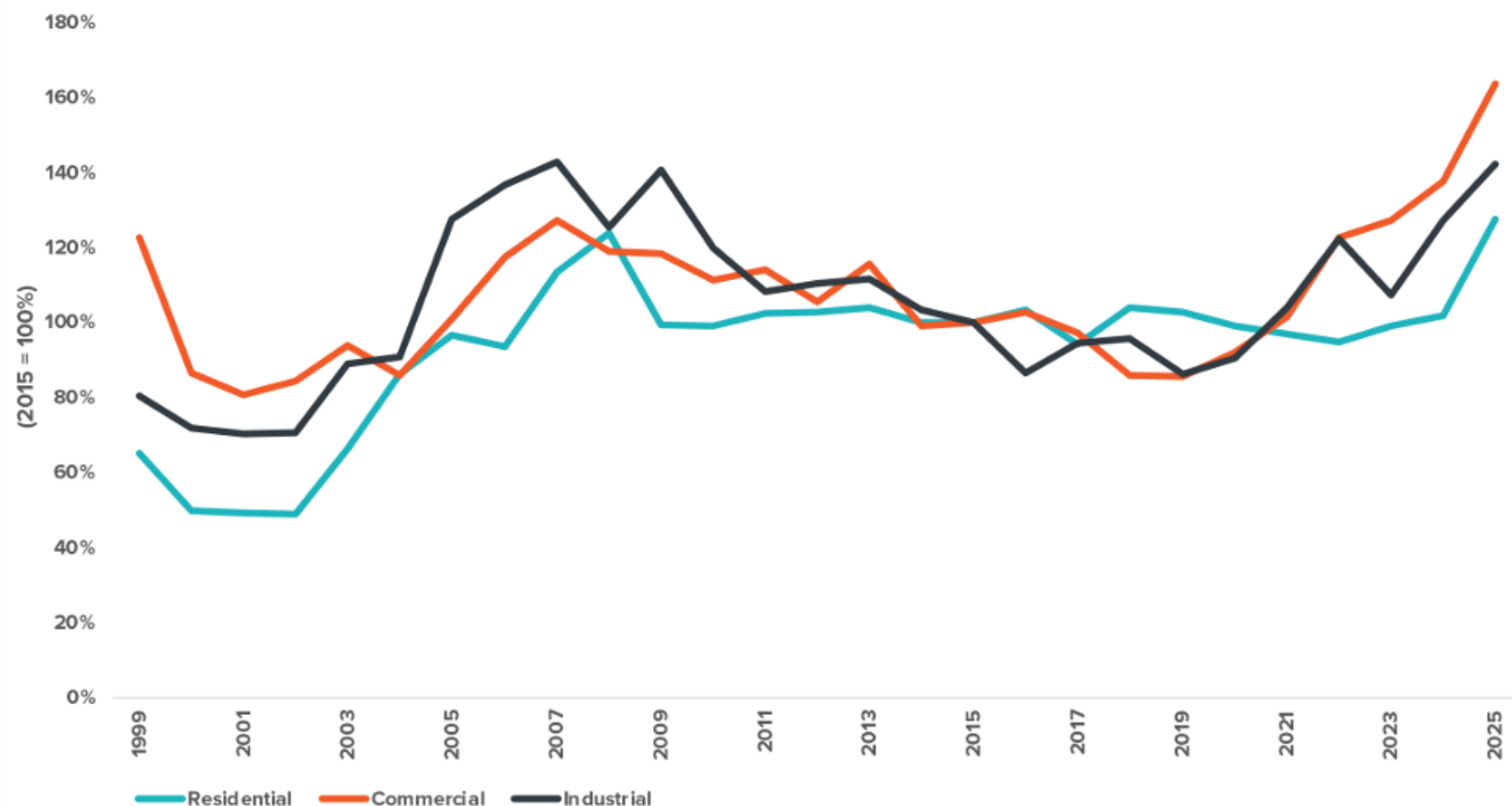
Declining gas supply and production has pushed up prices



Why have prices been high recently?

Cost of powering thermal generation has increased

Changes in real average annual gas prices by sector (2015 baseline)



4



Adapt and coordinate to as the energy transition progresses

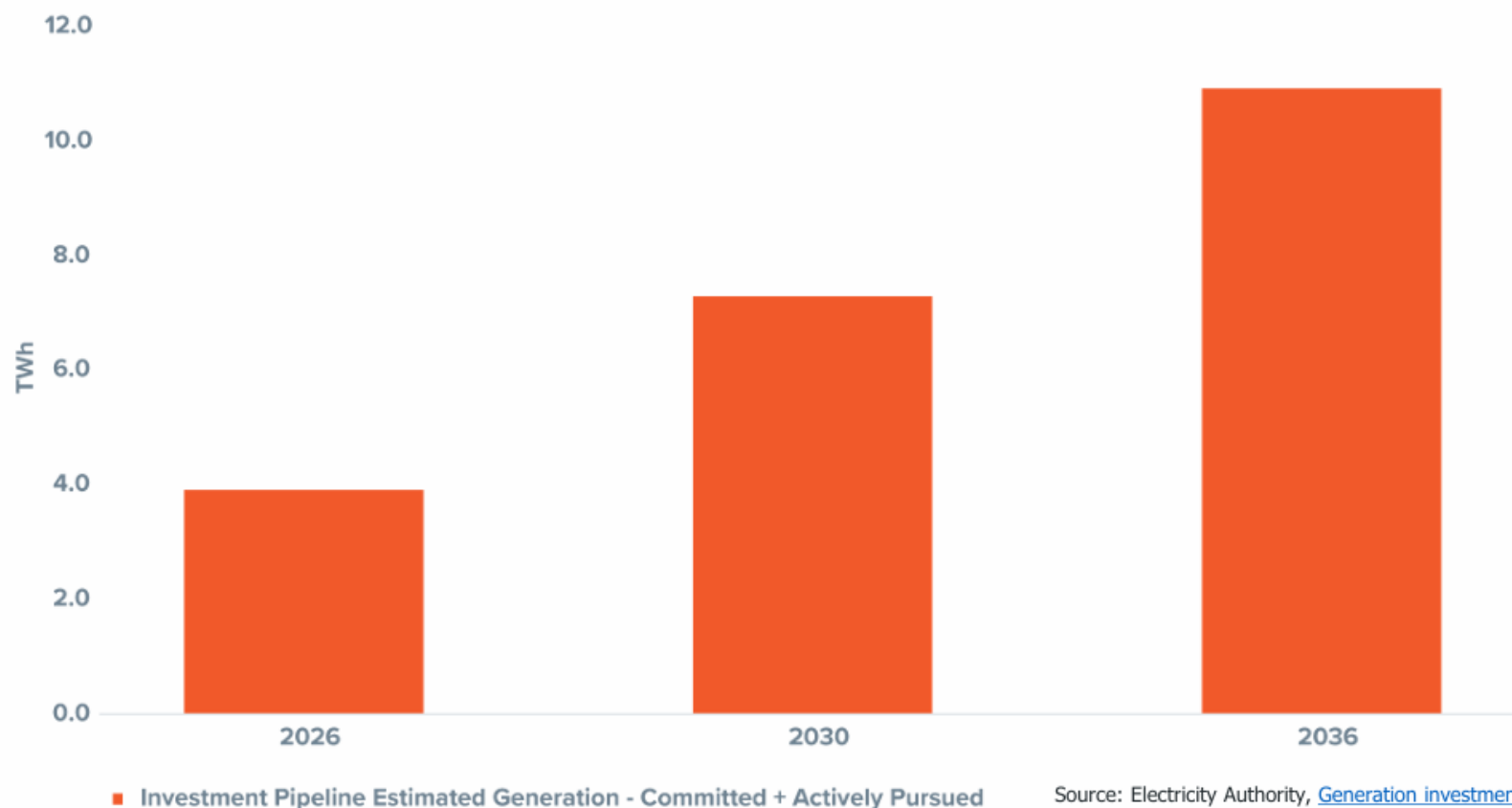
Source: MBIE, [Energy price data tables](#).

Note: Prices are excluding goods and services tax (GST), 2015 was used as the base year.

The path back to lower prices

More supply is planned

New cumulative electricity generation supply committed and actively pursued, 2026, 2030, 2036



Source: Electricity Authority, [Generation investment pipeline](#), (March 2026)

What can we do to make sure there are limited barriers to bringing on new supply?

1

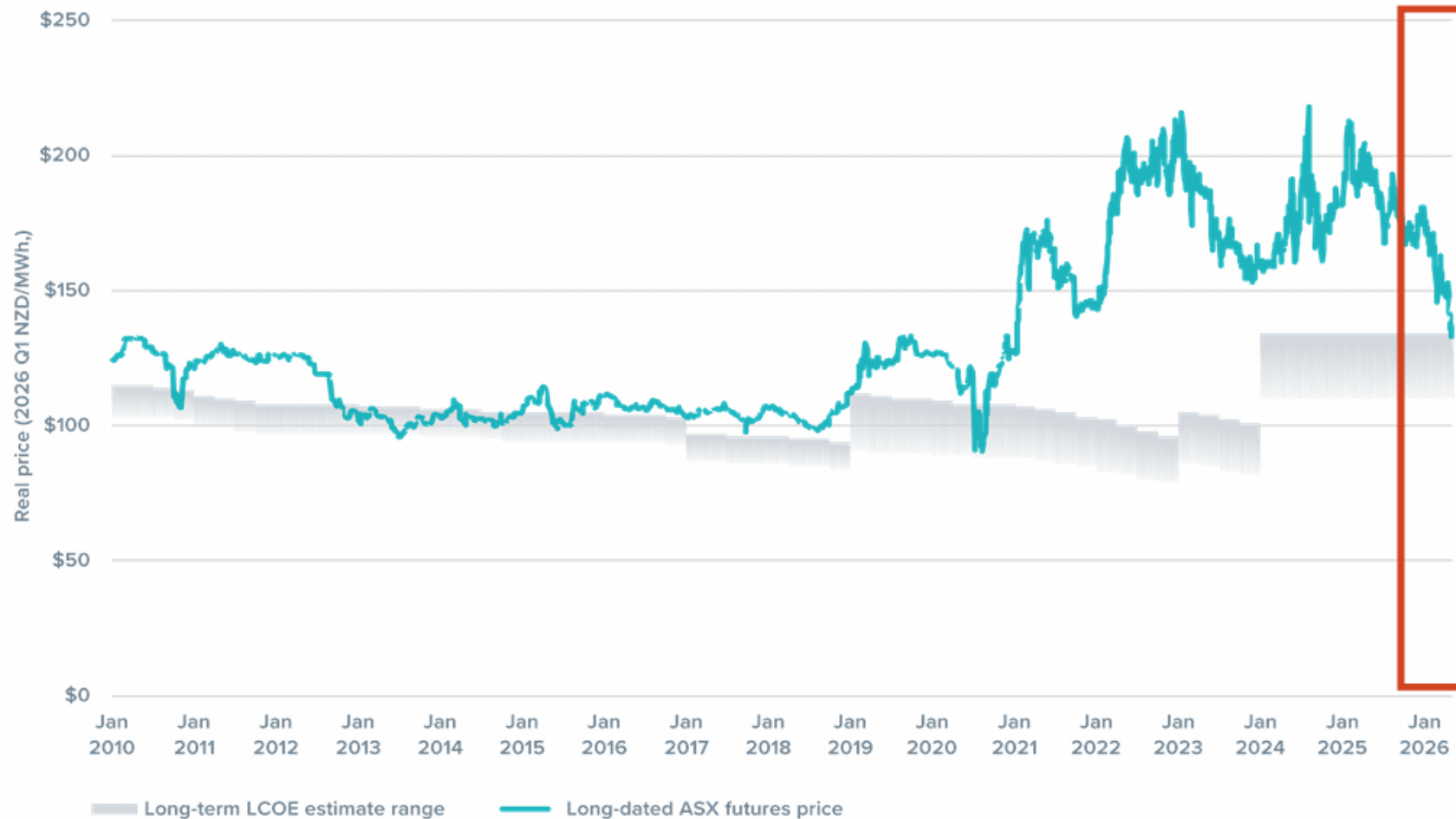


Stable policy to give confidence for long-term investment

The path back to lower prices

Future prices suggest a return to normalcy

Long-dated ASX futures prices relative to the cost to build and operate new generation



Source: Chart recreated from futures contract price data and long-run LCOE estimates published by the [Electricity Authority](#). Futures prices and LCOE estimates are inflation-adjusted using Stats NZ's CPI.

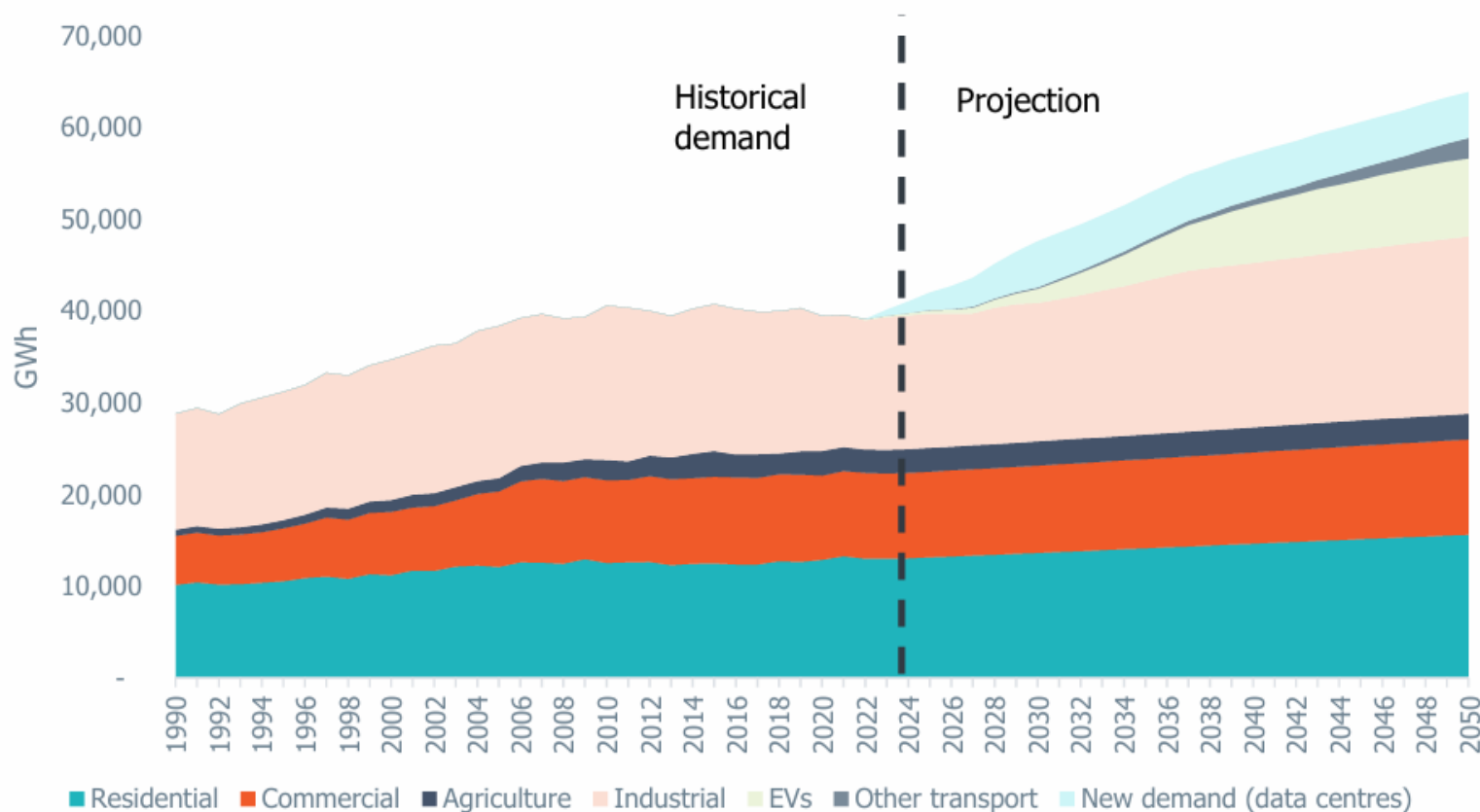
A photograph of a wind farm with four large white wind turbines situated on a rolling green hill. A dense line of dark green trees runs across the middle of the hill. The sky is a clear, vibrant blue with a few wispy white clouds. In the foreground, a curved road or path is visible, bordered by a green mesh fence. The overall scene conveys a sense of clean, renewable energy in a natural setting.

The transition to net zero

Background and context

Net zero is expected to drive electricity demand

Forecasted electricity used by sector in the Climate Change Commission's Fourth Emissions Budget Pathway, 1990 to 2050



- Climate Change Response Act 2002 requires the country to achieve net zero emissions by 2050
- Electricity is the most heavily affected sector, as it is expected to replace energy from fossil fuels and coal
- Growth in demand is largely led by move to electric vehicles and new demand from data centres.

Source: He Pou a Rangi Climate Change Commission, [Modelling and data: Final reports on the fourth emissions budget and 2050 target review](#) (November 2024).

The Commission's Forward Guidance

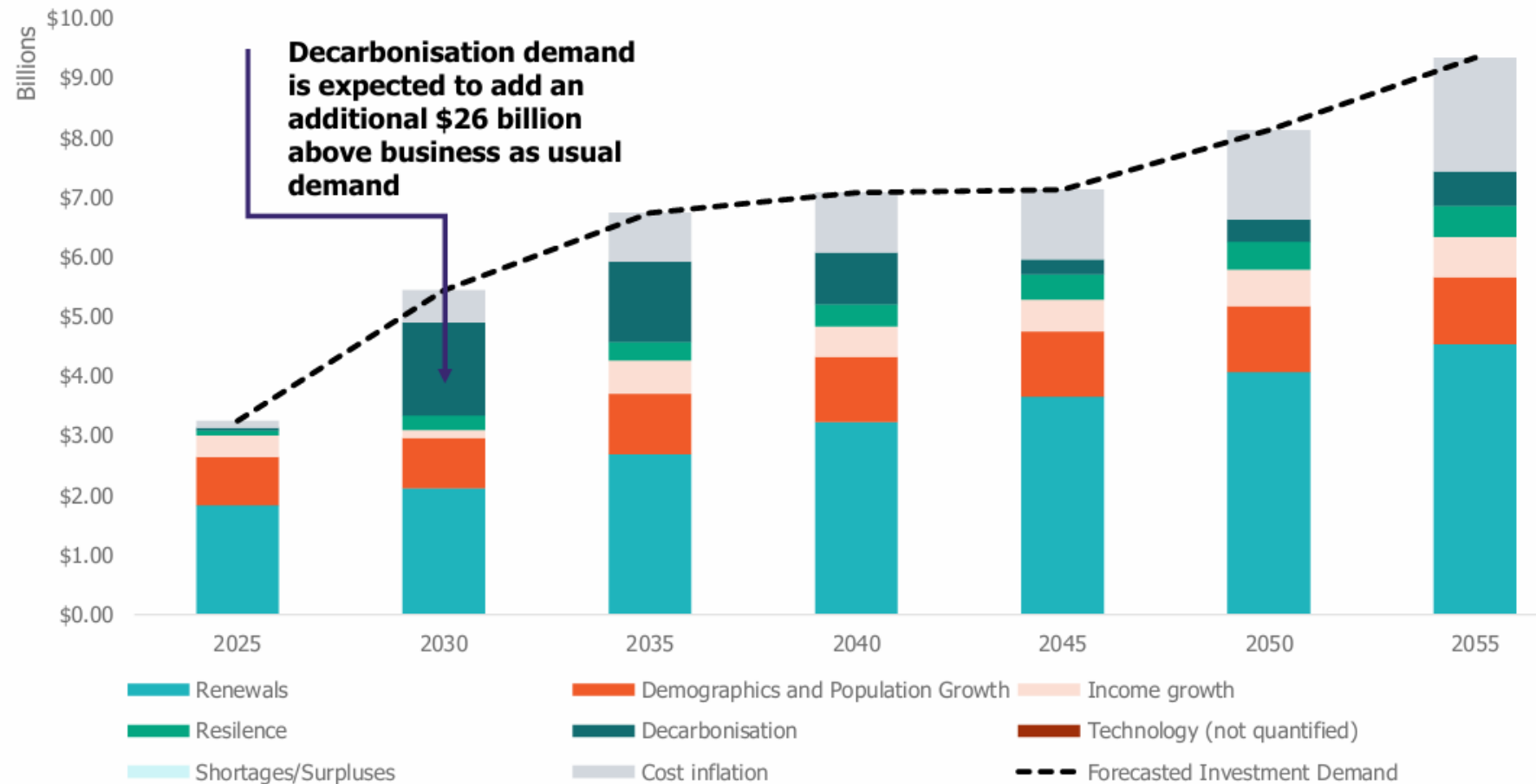
Long run forecasts for investment need

- Chapter 3 of the National Infrastructure Plan lays out our forecasts of investment to meet long run infrastructure needs in a sustainable way.
- These forecasts are based upon long run macro drivers that lead to more (or less) infrastructure demand
 - E.g. population growth, income growth, technology, decarbonisation
- We produce a forecast for the overall system, and the individual sectors

How will this affect infrastructure?

Forward Guidance for electricity and gas

Forward Guidance investment forecast for electricity and gas, 2025 to 2055, in 2025 NZD

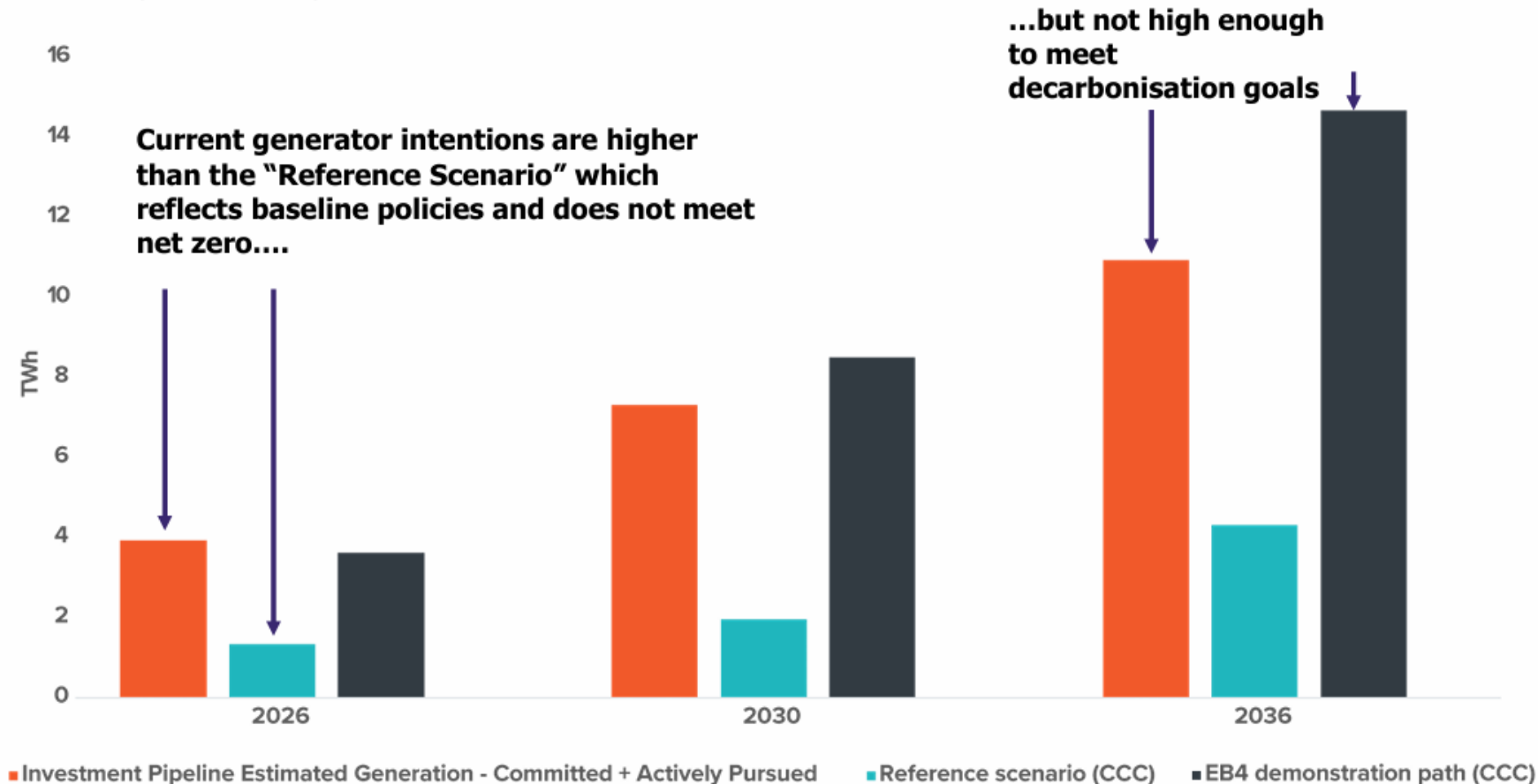


Source: New Zealand Infrastructure Commission modelling and analysis.

How are we progressing?

Developers waiting to jump head first

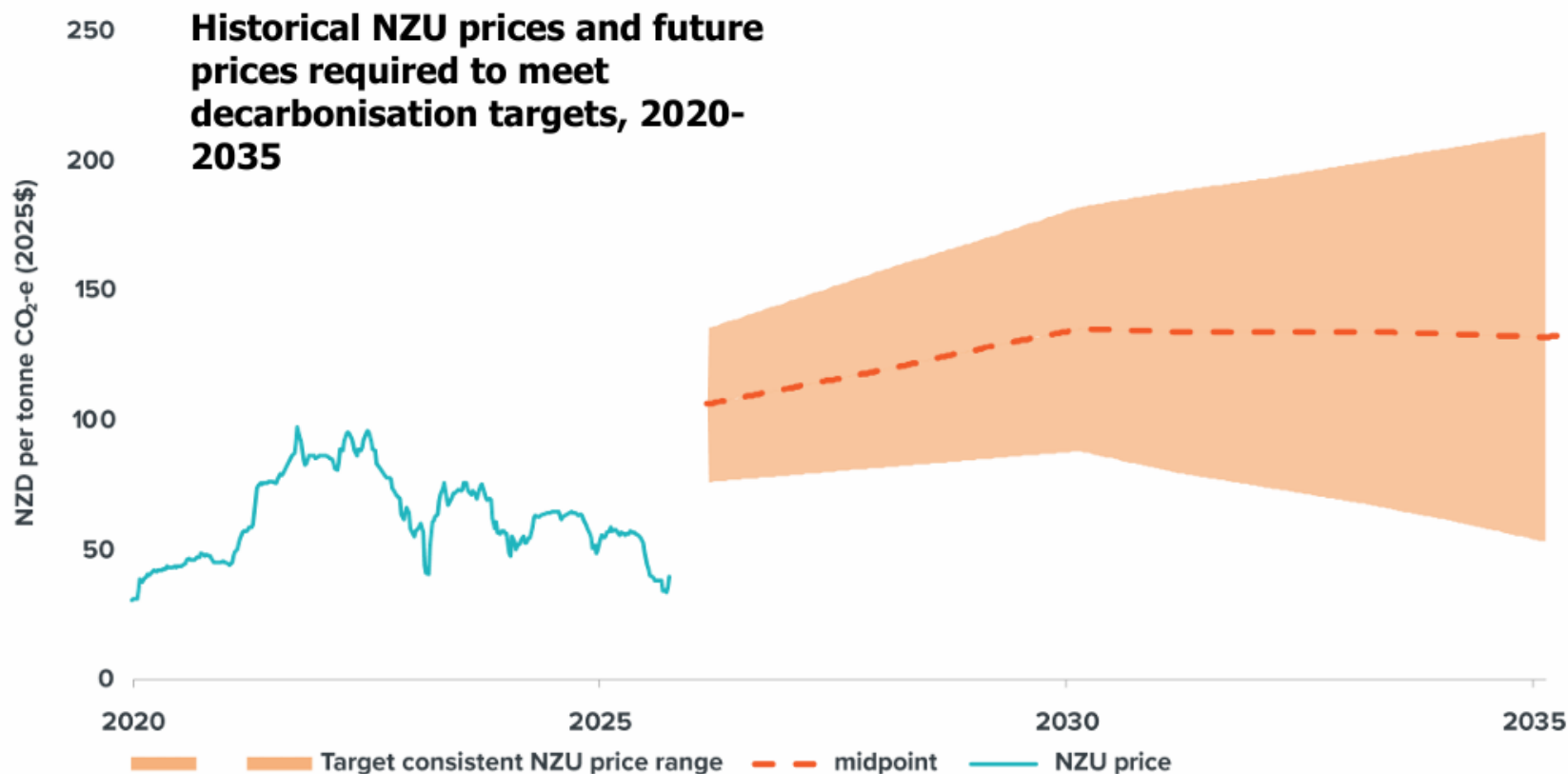
Electricity generation investment intentions versus requirements to achieve CCC scenarios for demand, as at 2026, 2030 and 2036.



Source: Electricity Authority, [Generation investment pipeline](#), (March 2026), He Pou a Rangi Climate Change Commission, [Modelling and data: Final reports on the fourth emissions budget and 2050 target review](#) (November 2024), Infrastructure Commission Analysis.

The challenges ahead

Policy certainty and coherence



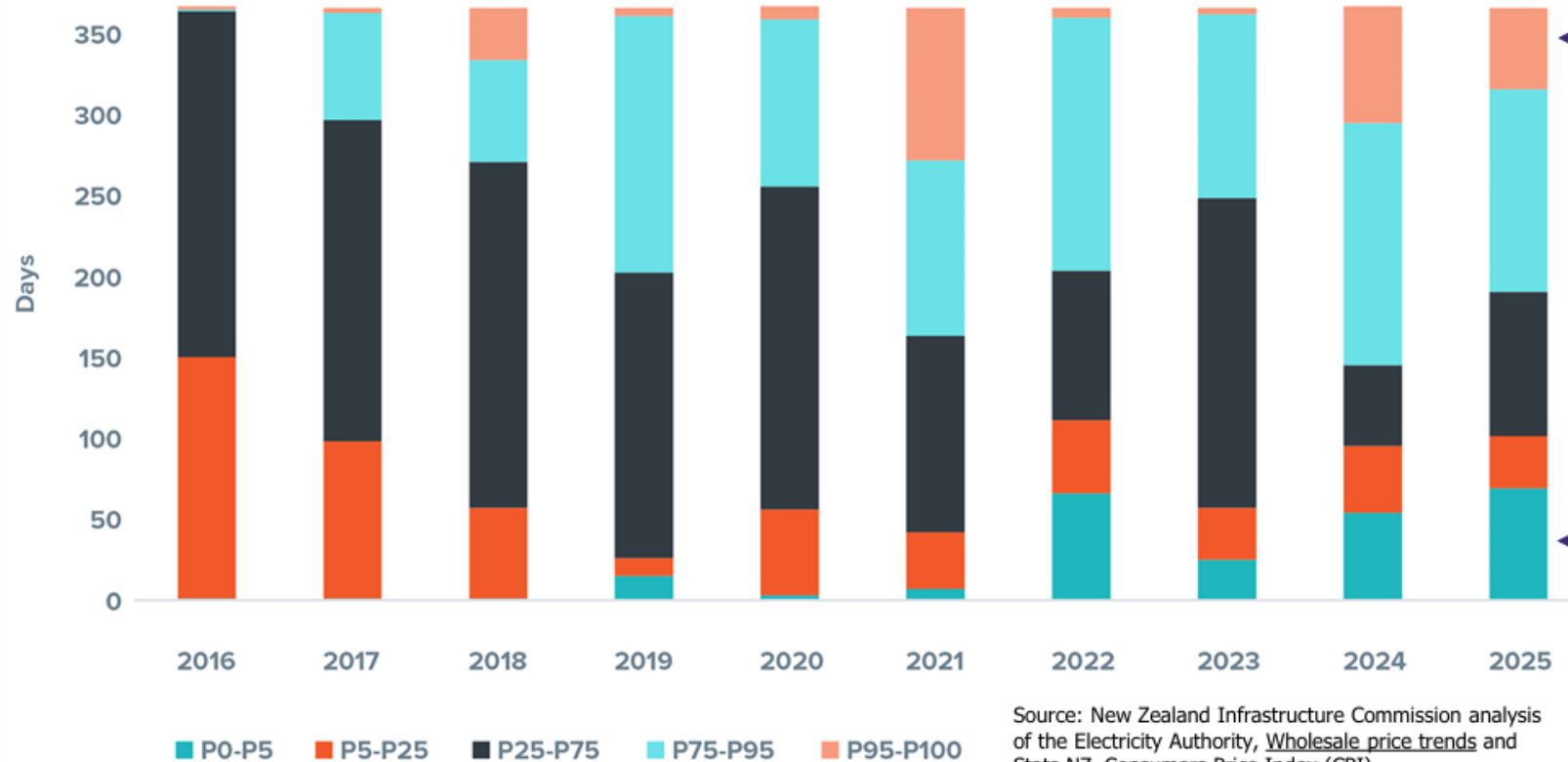
Source: Theecanmole, [New Zealand Emission Unit Prices in the NZ Emissions Trading Scheme 2010 to date](#); New Zealand Treasury, [Assessing climate change and environmental impacts in the CBAX tool](#) (October 2025).

- Policy certainty has significant impacts on demand for electricity
- Examples:
 - Electric vehicle take-up
 - NZ Emissions Trading Scheme to incentivise fuel switching
- If the incentive to switch is not working properly, it creates uncertainty about future demand

The challenges ahead

Dry-year risk and peak demand situations

Distribution of inflation adjusted demand-weighted wholesale prices



Source: New Zealand Infrastructure Commission analysis of the Electricity Authority, [Wholesale price trends](#) and Stats NZ, [Consumers Price Index \(CPI\)](#).

As cheaper (but sometimes intermittent) renewables come online, wholesale prices are more likely to zero or very low more frequently, but also very high more frequently

3



System adaptability + flexibility are key to reliability and keeping costs down



Key observations

Shifting currents: Energy infrastructure in transition

Affordable energy, reliable supply, and lower emissions



Stable policy to give confidence for long-term investment

- Flat electricity demand
- Government supply interventions
- Alignment of climate + energy policy
- Regulatory settings



Building more, lower-cost generation to bring prices down

- Cheaper renewables displacing thermals
- High prices since 2019
- Price volatility a feature
- Regulatory + market barriers



System adaptability + flexibility are key to reliability and keeping costs down

- Balancing supply to demand
- Demand flexibility tools
- Hedging, purchase agreements + financial markets



Adapt and coordinate as the energy transition progresses

- Monitor progress + emerging risks
- Clear signals
- Visibility market data
- Well-developed business cases



Shifting currents: Energy infrastructure in transition

www.tewaihanga.govt.nz

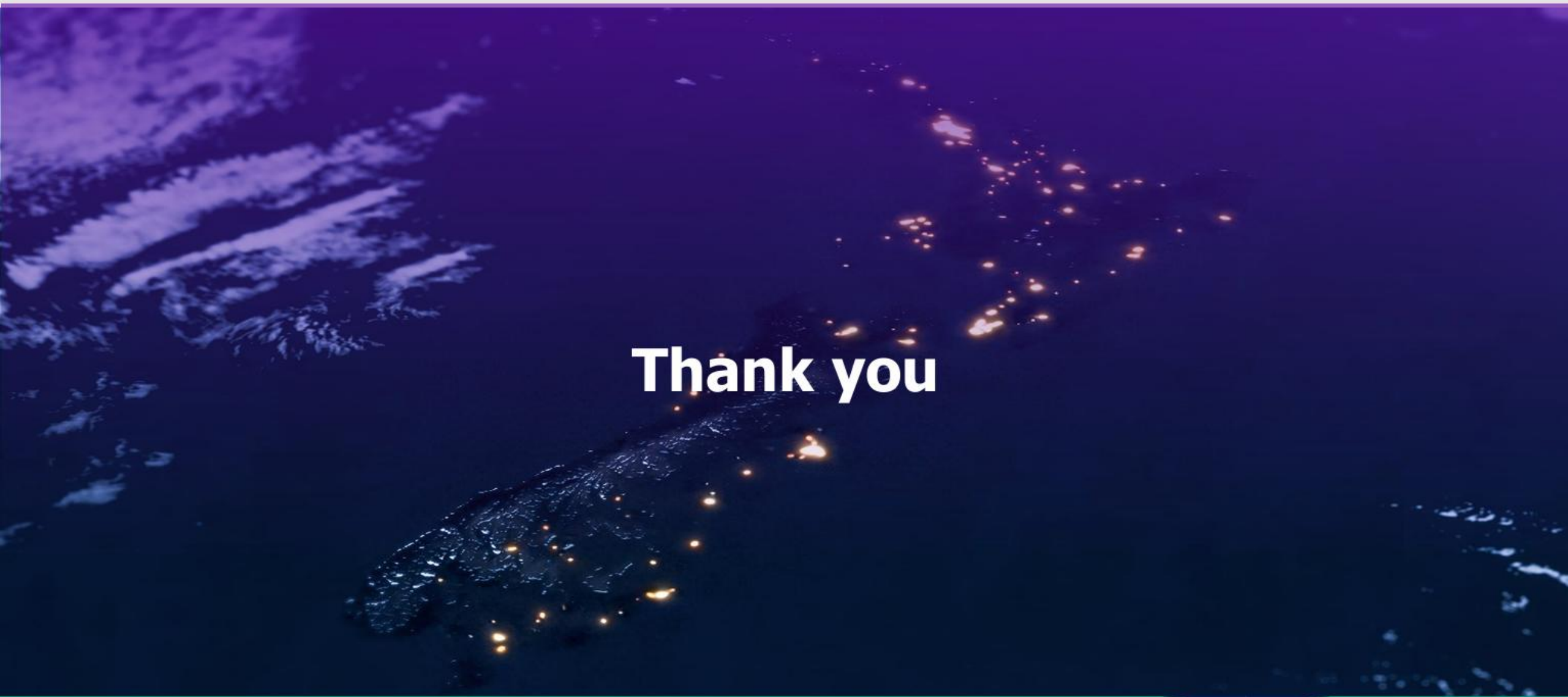
[Shifting currents: Energy infrastructure in transition | Research & insights | Te Waihanga](#)

What's next?

Ongoing: input to policy; and role in project assurance



Questions?



Thank you

Q&A



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The Affordable Energy Webinar Series

June-November 2026



Jonathan Kay

Chair, Waipa Networks

Director: Network Waitaki Ltd, Counties
Energy, Horizon Energy Group

22 July, 11am

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Upcoming Speakers:

•	Manu Barrett	Solar Sense	5 August
•	Quilae Wong	The Opportunity Party	19 August
•	Simon Bridges	Ak Chamber of Commerce	2 September
•	Rob Johnson, Ezra Hirawani	Nau Mai Ra	16 September
•	John Campbell	Our Energy	23 September
•	Kelli Pike	GoEco	30 September
•	Gareth Cartwright	Community Energy	14 October
•	David Wilson	NZ First MP	28 October
•	Blair Dickie	Waikato Regional Council	4 November

...and more



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Thank you!

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