

Biogas: A Renewable Energy Opportunity for Aotearoa

A story of collaboration

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Powerco & Wood Beca

27-28 May 2025 – CEP Conference



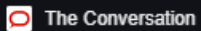
A Different Energy Story for New Zealand



Gas supply shrinkage sparks fears of suburban shortages

Gas supplies may be cut off to some Auckland suburbs, if gas use dwindles and it is no longer economic to maintain old pipelines.

26 Nov 2024



NZ energy crisis: electricity demand will jump as NZ decarbonises – can renewable generation keep up?

The prime minister has called it an “energy security crisis” and signalled a review of New Zealand’s electricity market as wholesale prices spike and...

27 Aug 2024



Consent for Southland Wind Farm declined due to potential impact on local environment

Contact Energy said it was an important project to support energy security of supply for all New Zealanders.

3 weeks ago



News Headlines

- Rising costs
- Supply concerns
- Environmental challenges

We are here to tell a different story.

Key Takeaways

- ***Commercial, industrial, and residential customers need gas.***
- ***Renewable natural gas is a direct, low-emissions substitute for conventional natural gas.***
- ***New Zealand has a 24 PJ renewable gas opportunity.***

Currently, NZ residential and commercial gas customers consume around 15 Petajoules (PJ) of natural gas each year

And the key to unlocking it?

Collaboration

Why hasn't this happened before?

And why now?

For a long time, the odds were stacked against biogas:



Abundant fossil gas supply (e.g. Maui field)



Fossil fuels were cheap – investment in biogas didn't stack up



Emissions weren't as big of a concern

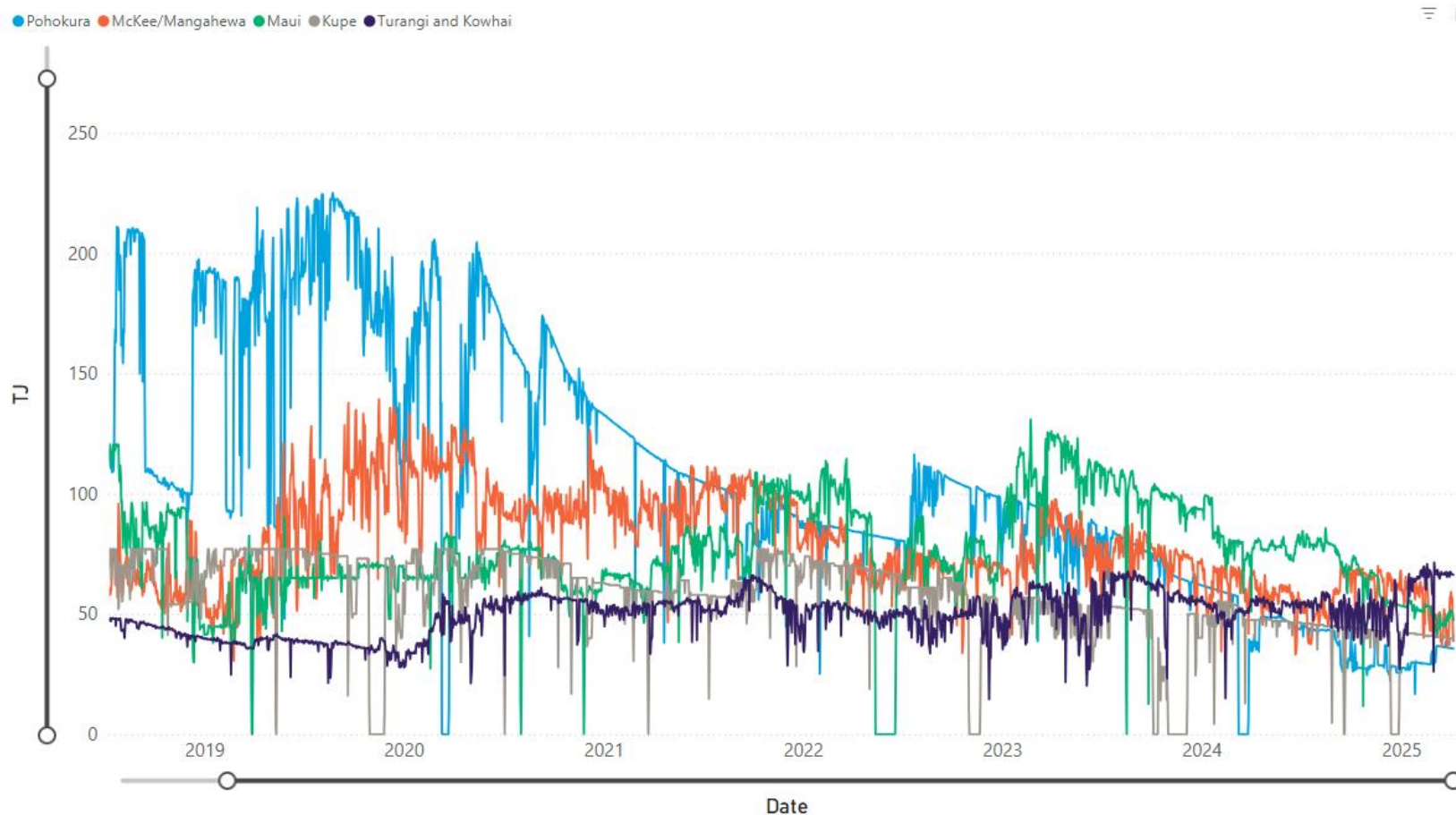
But times have changed.

Why Now? What's changed?



Fossil gas supply is declining

Daily Gas Production by Major Fields



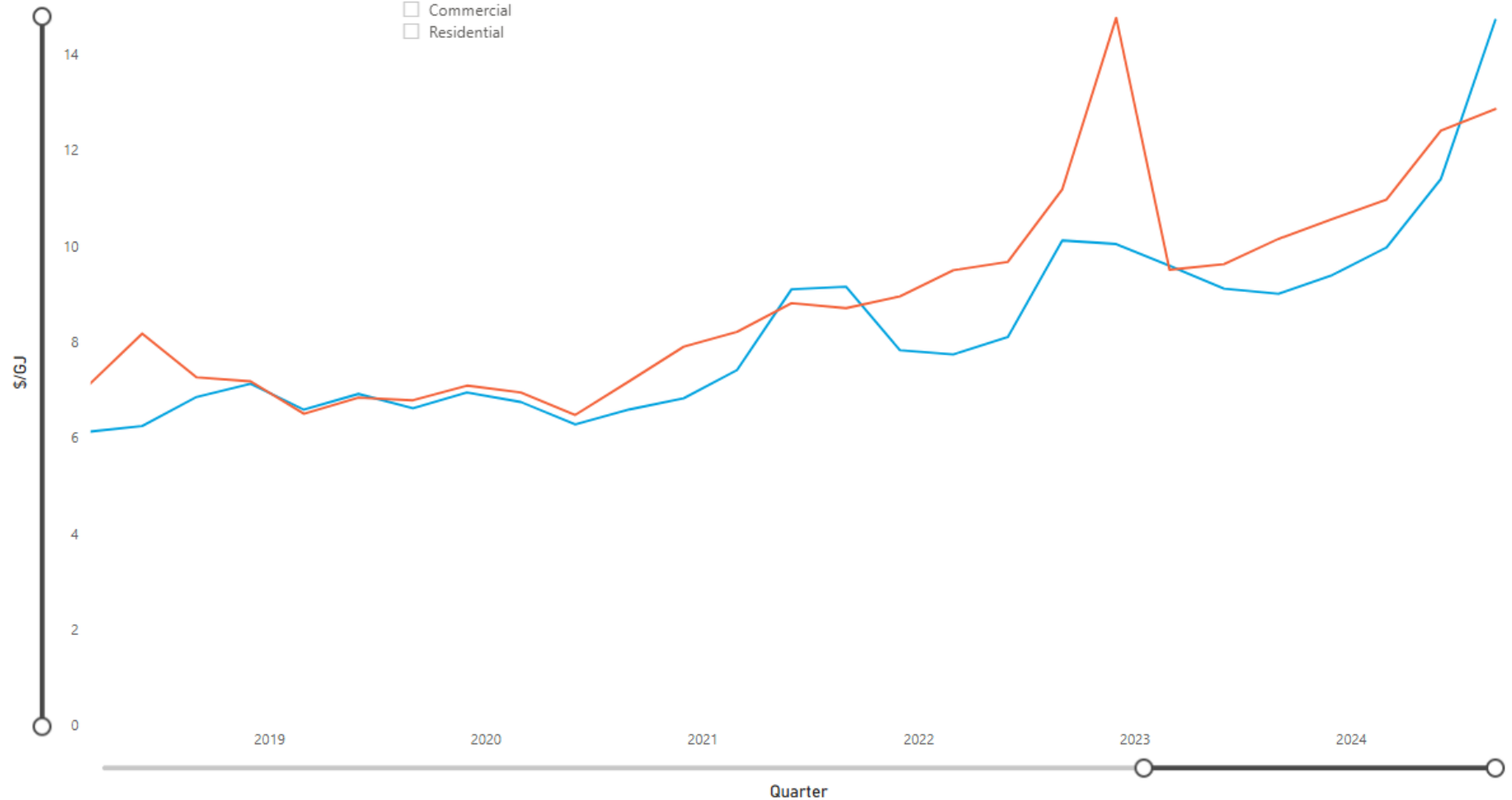


Gas prices have increased

Average Quarterly Natural Gas Prices

● Wholesale ● Industrial ● Commercial ● Residential

☑ Wholesale
☑ Industrial
☐ Commercial
☐ Residential





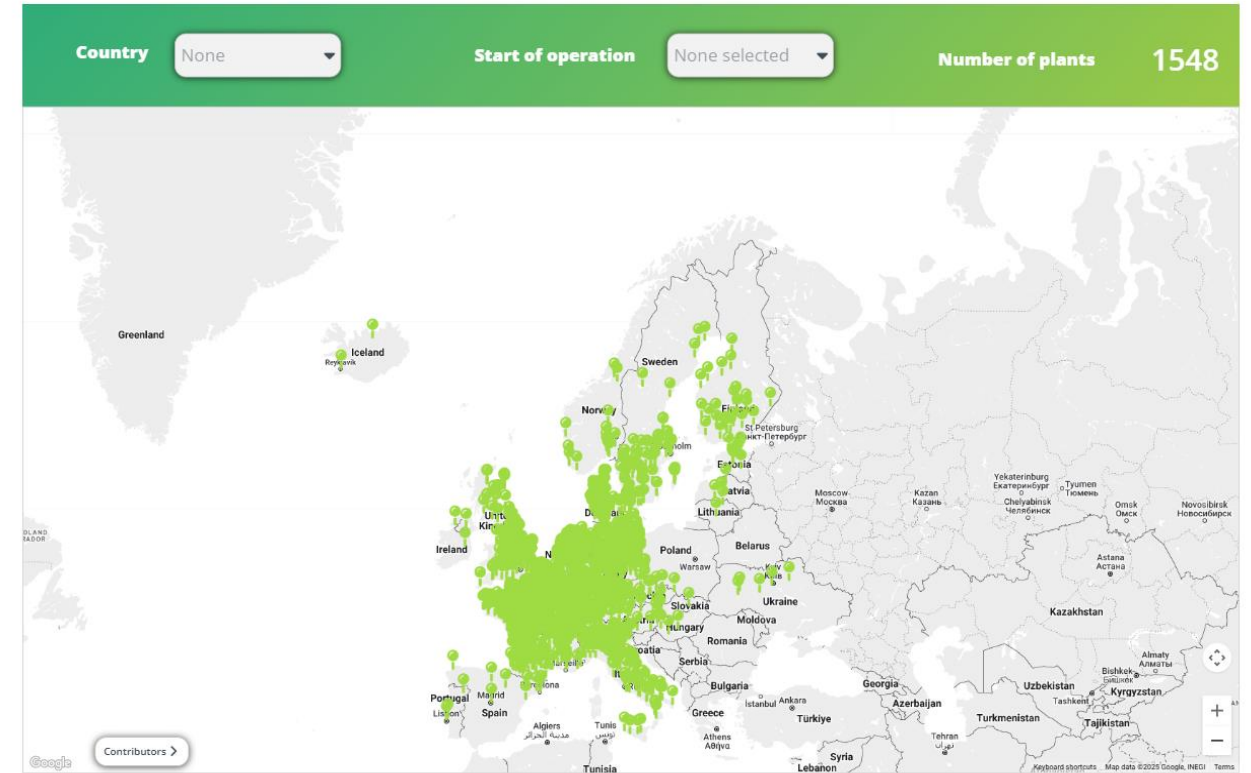
Net-zero carbon by 2050



Biogas technology
advances

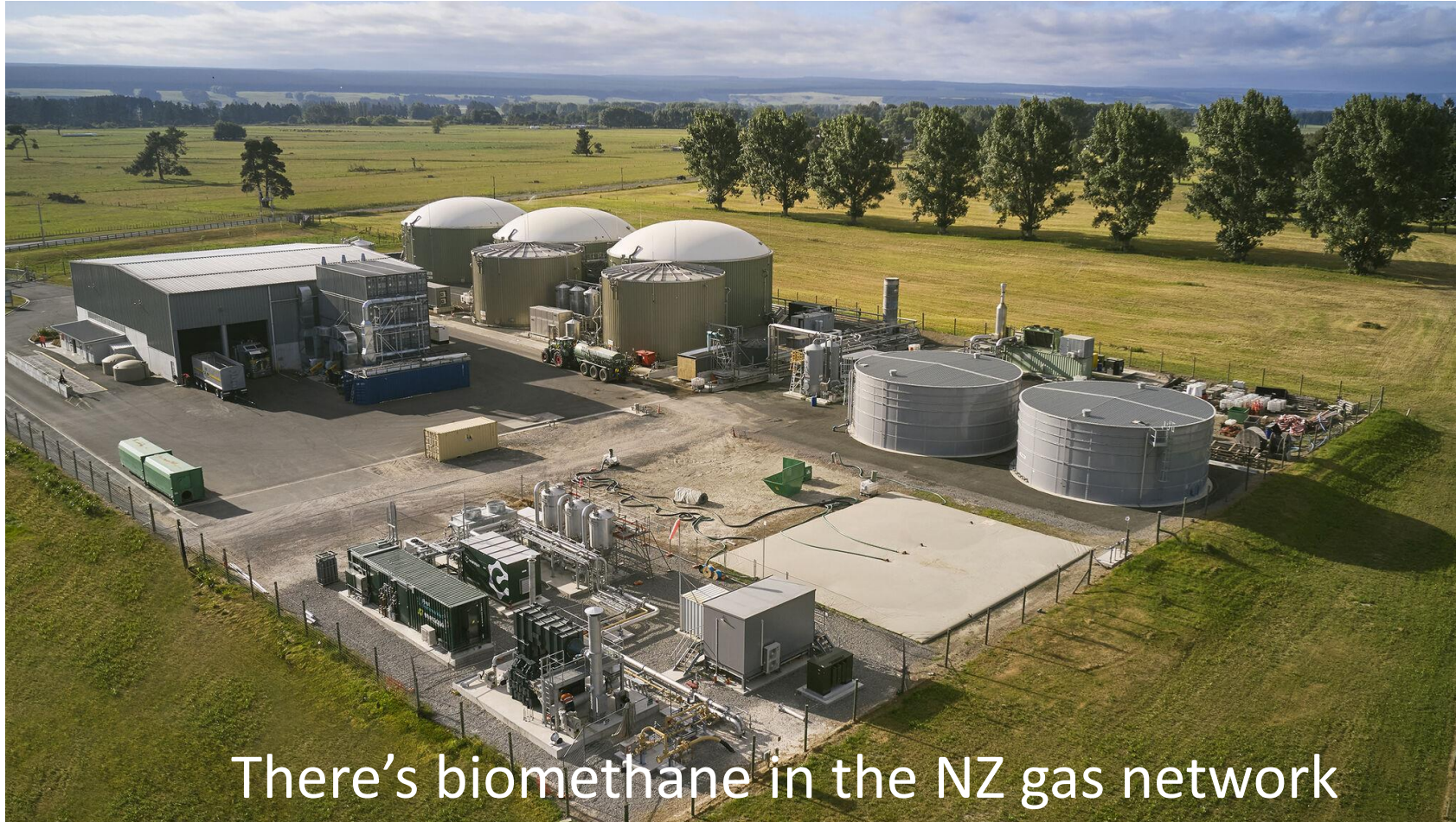


Overseas momentum



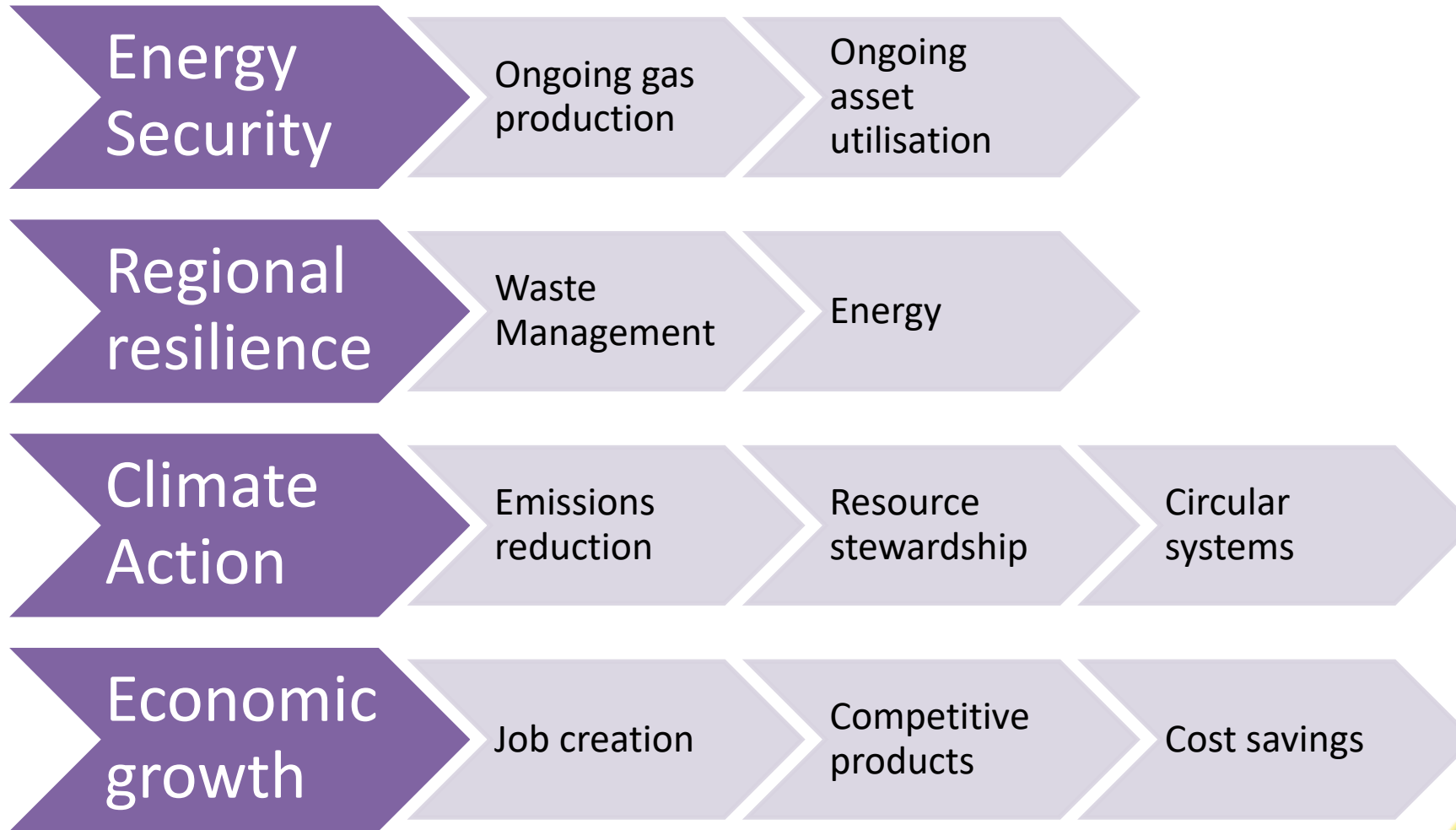
The result? **The equation has flipped.**

We are at the start line!



There's biomethane in the NZ gas network

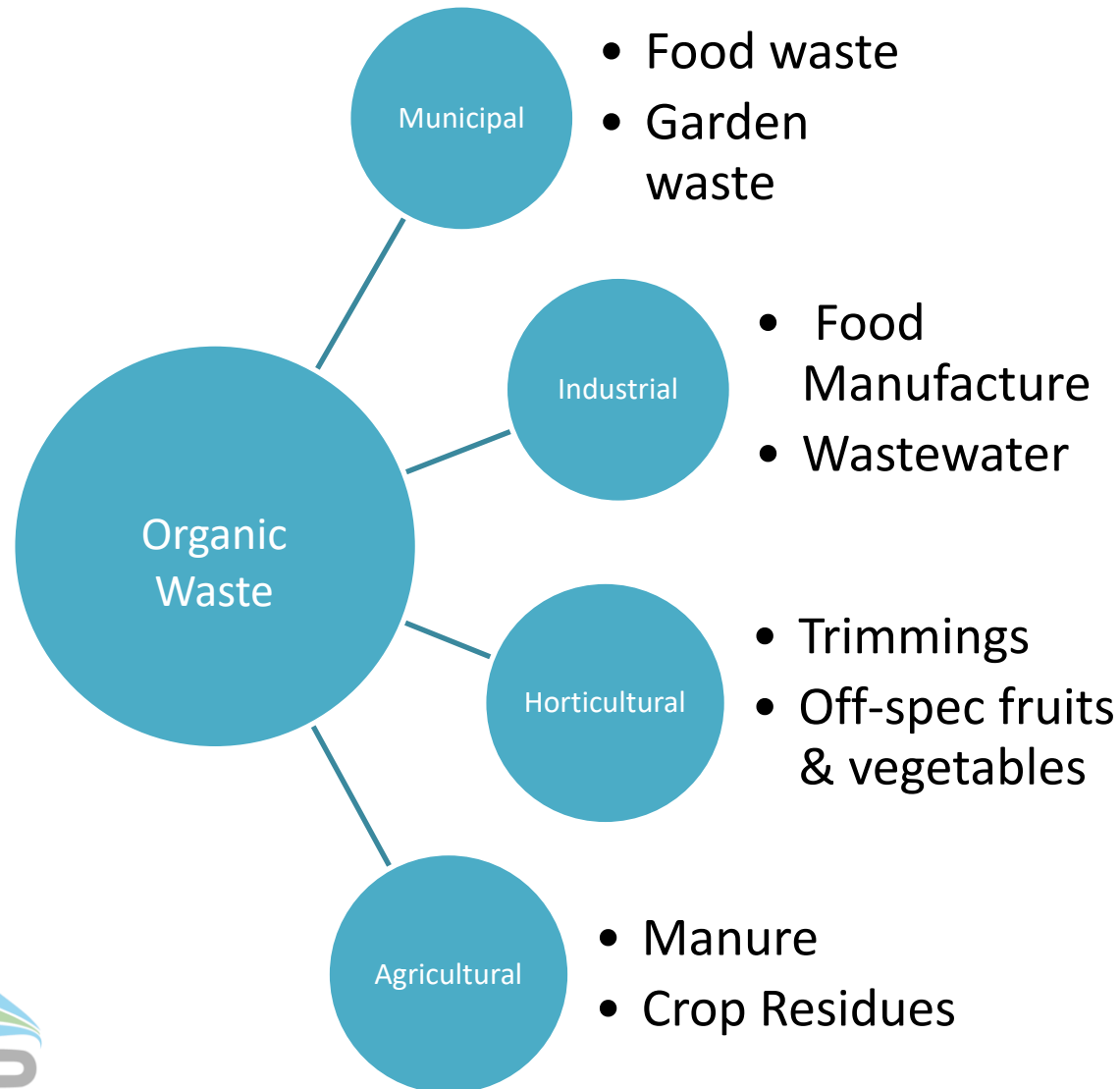
Why is this a good idea?



What it takes to make biogas work in New Zealand

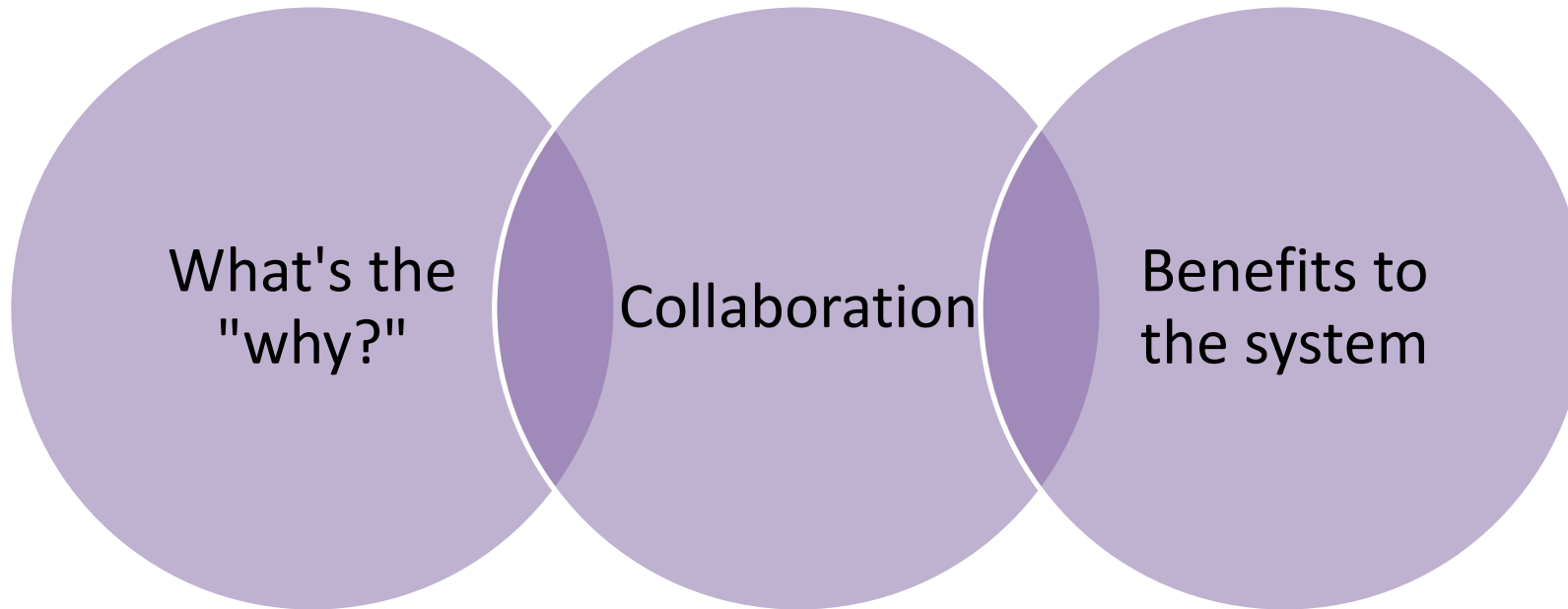
Ingredient	Challenge?	Notes
Consumer demand	No	Energy users—govt, households, businesses, and industries—are looking for low-carbon alternatives to fossil fuels.
Equipment	No	Available, but procurement takes time
Technical knowledge	No	Proven here and overseas
Skilled builders	No	Capability exists
Investment	Sometimes – it depends on the financial returns	If the returns are there, the money will follow
Adequate financial returns + affordable energy	Sometimes	Location and feedstock volumes matter. More biomethane = better returns & lower prices. And better returns mean more projects get built.
Large volumes of feedstock – the big challenge	Yes	Without sufficient feedstock, the numbers don't add up.

Feedstock – the big challenge



- What feedstock is available?
- What does it take to aggregate large volumes of it?
- And how can we ensure a year-round supply?

Stakeholders



So, what have Powerco and Wood Beca been doing about it

The opportunity is sitting there. **We are trying to bring it all together.**



AD
Experience

Range
of Projects

Range of
Clients



Powerco: our actions today

- 5-person team focused on renewable gas daily
- Engagement with councils, feedstock providers, commercial partners
- Brownfield projects
 - Often lower capital costs and faster to develop, but maybe limited in scale
- Large scale regional greenfield projects being planned
 - Developed on a completely new site with no prior biogas or waste infrastructure.
 - Often higher capital costs and time consuming to develop, but allow greater scalability and custom-design.
 - **These projects will deliver the greatest impact**
- Tackling commercial complexity

Summary

NZ has a real renewable gas opportunity, ready now

And the key to unlocking it?

Collaboration

We are interested in talking to you

If you think you can contribute to the development of the NZ biogas market please reach to us.

To find out more about how we can work with you, contact our renewable gas team via
renewable.gas@powerco.co.nz

