

March 2023

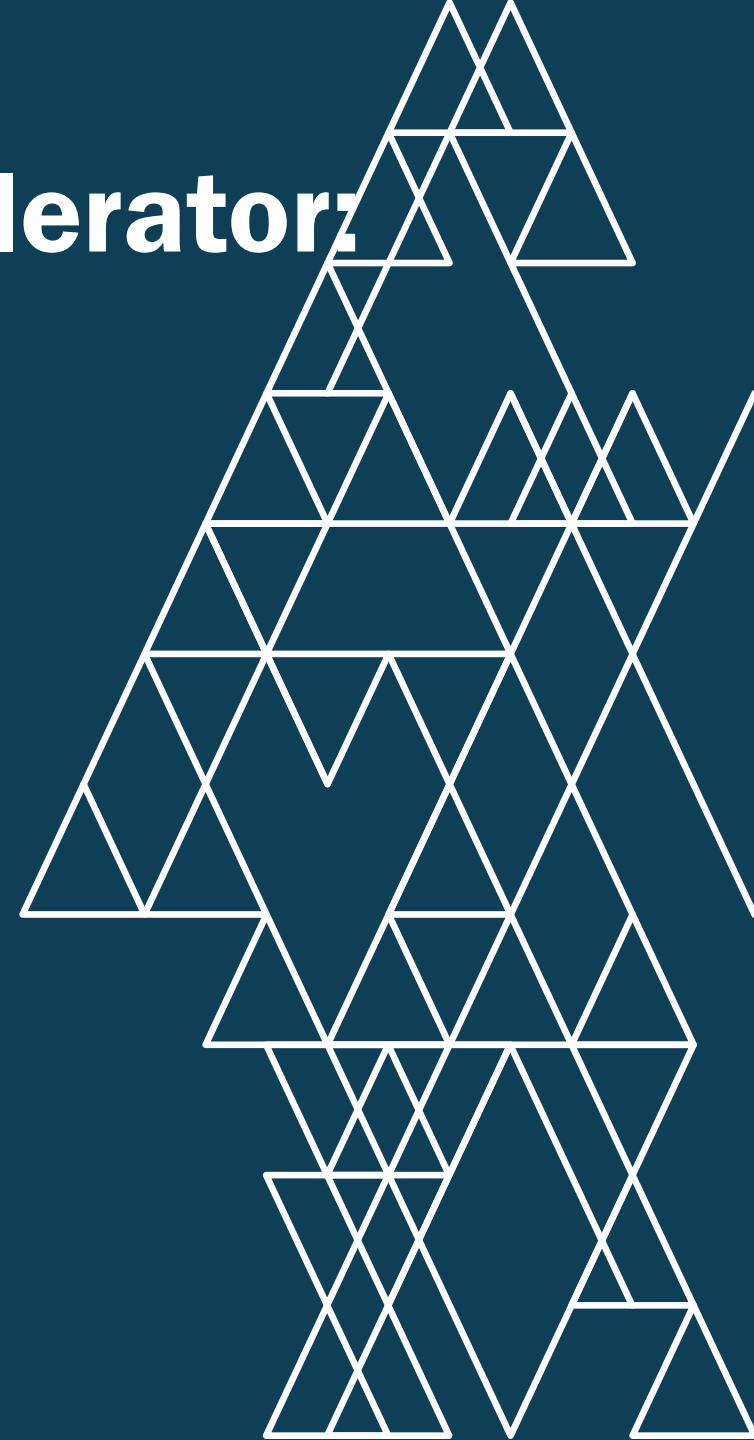
Regional Energy Transition Accelerator (RETA) – Bay of Plenty



Regional Energy Transition Accelerator

We need to do more, faster and together

- Bay of Connections & Welcome (15 mins)
 - Mihi whakatua
 - Welcome and introduction
- EECA Introduction and new Government investment support (15 mins)
- RETA Programme overview (30 mins)
- What's your motivation for being here? Stakeholder discussion (55 mins)
- Closing remarks (5 min)
- Lunch and networking



EECA Introduction:

New Government investment support

EECA



We are advocates for clean and clever energy use. Enablers. We approach our task with passion and enthusiasm.

We're talking to everyone in New Zealand, across the generations. It will take all of us to make this work.

To be clean and clever, first we must change. This is a journey of growth, to adopt new technologies, to use our power as consumers, and to create the system change necessary to sustain our future.



Mobilise New Zealanders to be world leaders in clean and clever energy use.



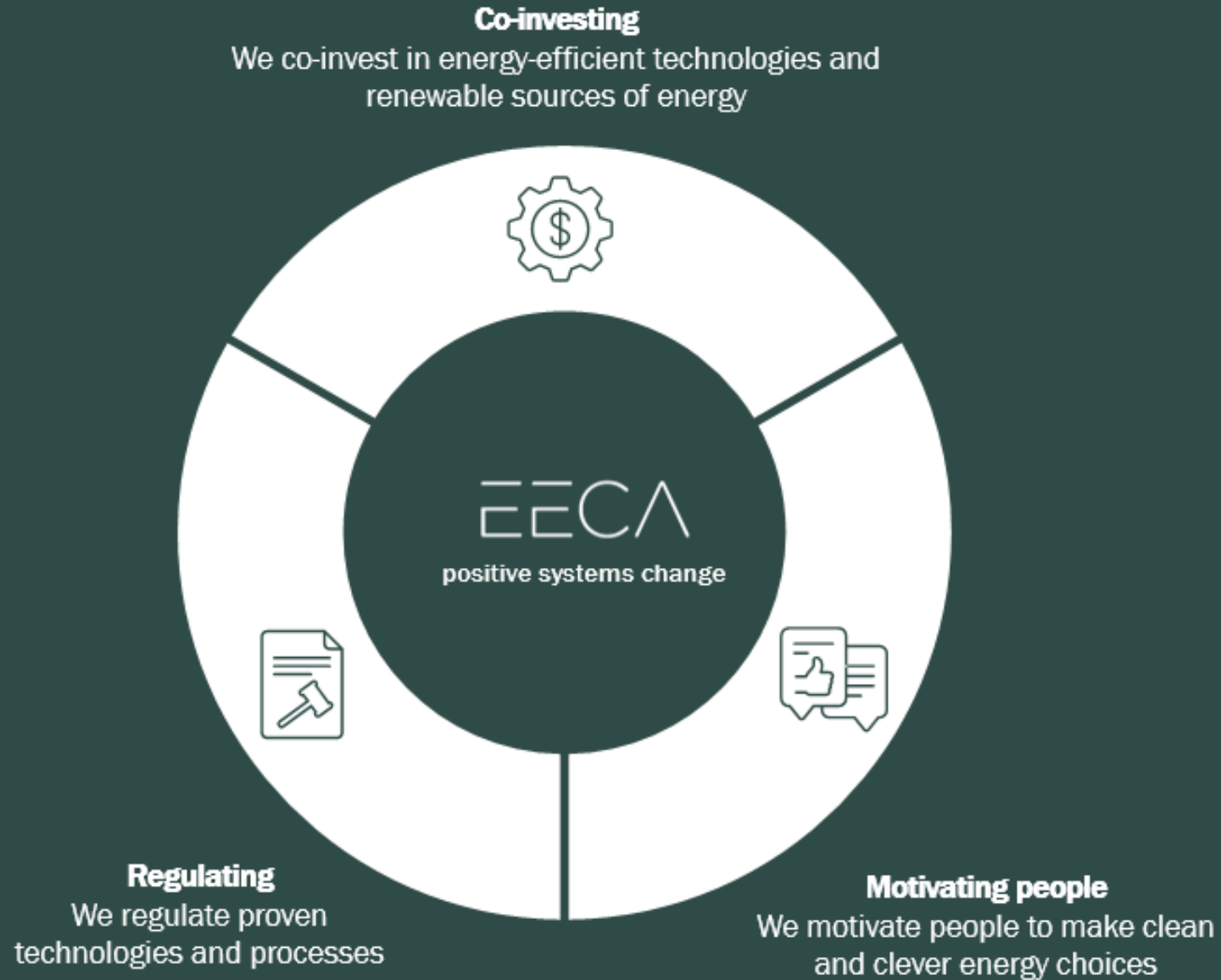
We are a small, but nimble country. We have a role on the global stage to show what can be done – taking a leadership position, so others will follow suit.

Clean energy is renewable, low emissions energy. It balances human wellbeing with the needs of our ecosystem.

Anything that gives you more, while using less energy, is clever. We advocate for smart, adaptable, conscious, reliable ways to make and use energy.

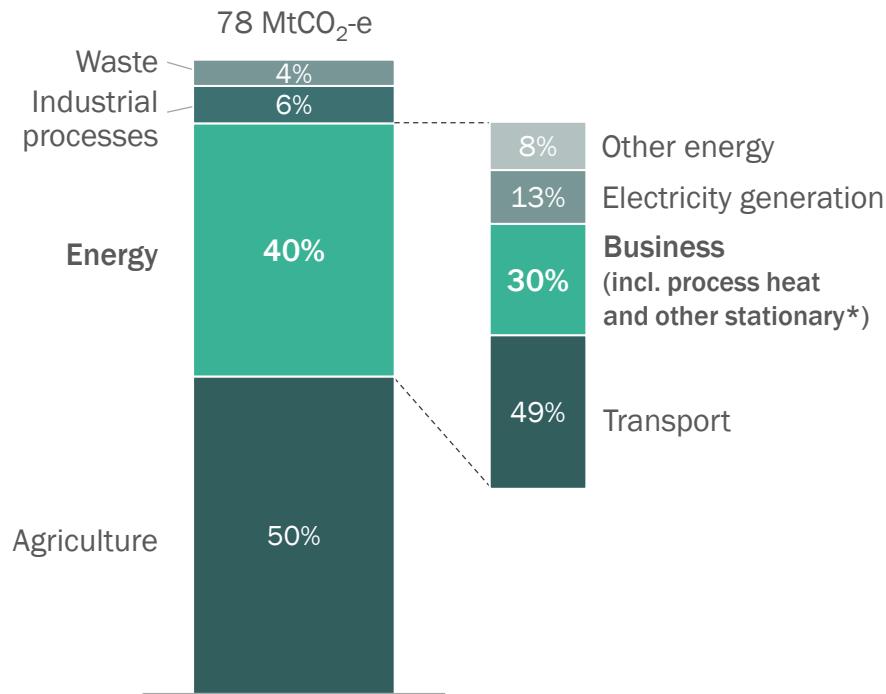
Energy is in everything. If making, moving, using or throwing it away produces energy-related greenhouse gas emissions, then it's in our lane.

EECA's three levers

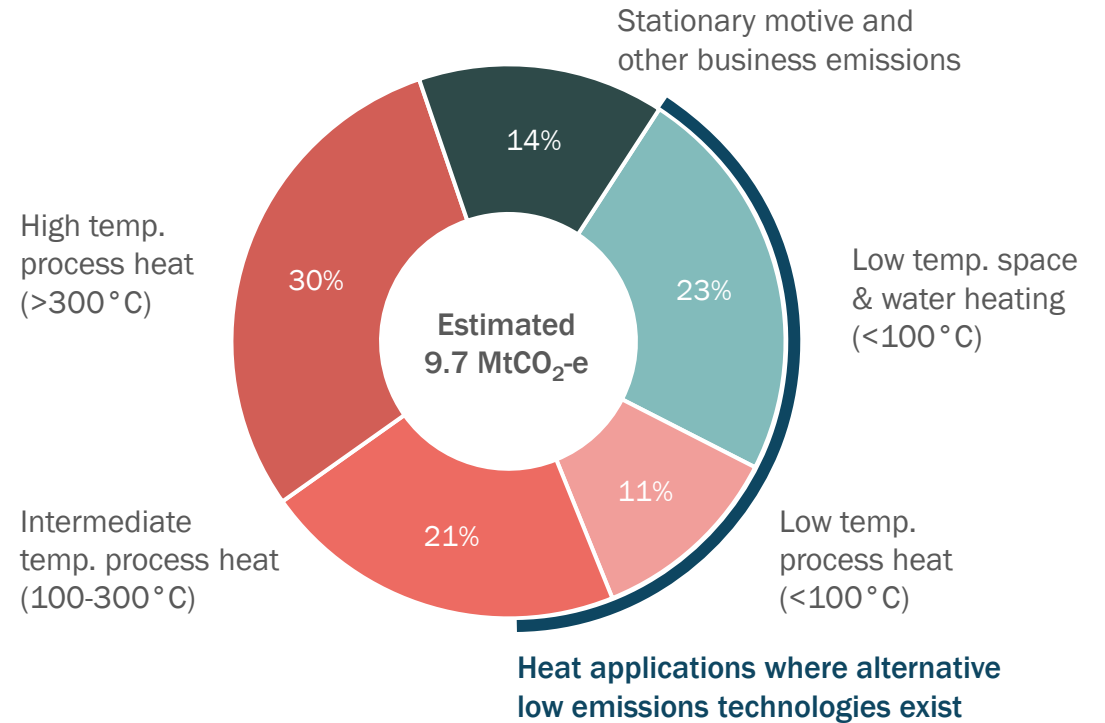


A well-known truth: decarbonising process heat and other stationary business emissions is a priority for New Zealand.

New Zealand's Emissions Breakdown
(2020)



Business Emissions Breakdown
(2020 excl. Electricity)



*Excluding business emissions from electricity use, which is included in 'Electricity generation'
Sources: Ministry of Business, Innovation and Employment, Ministry for the Environment and EECA analysis.

The response to GIDI Fund 1.0 has been strong

A TOTAL OF
53
Projects

A TOTAL OF
\$116,712,643
Private Funding

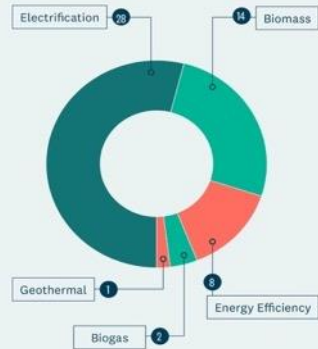
A TOTAL OF
\$68,783,030
EECA Co-Investment

A TOTAL OF
7.5 million
tonnes of CO₂ lifetime abatements

Projects By Sector

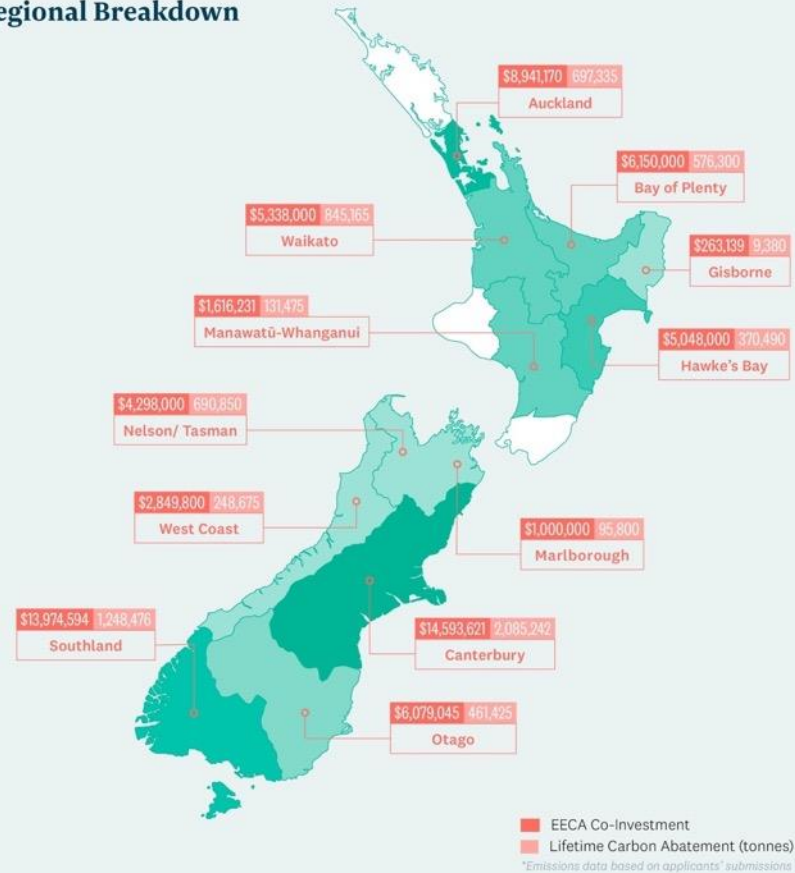


Projects By Technology Type



April 2022

Regional Breakdown



Project Breakdown

ROUND 1

16 PROJECTS
\$27,792,958 EECA CO-INVESTMENT
3,807,845 LIFETIME ABATEMENTS IN TONNES

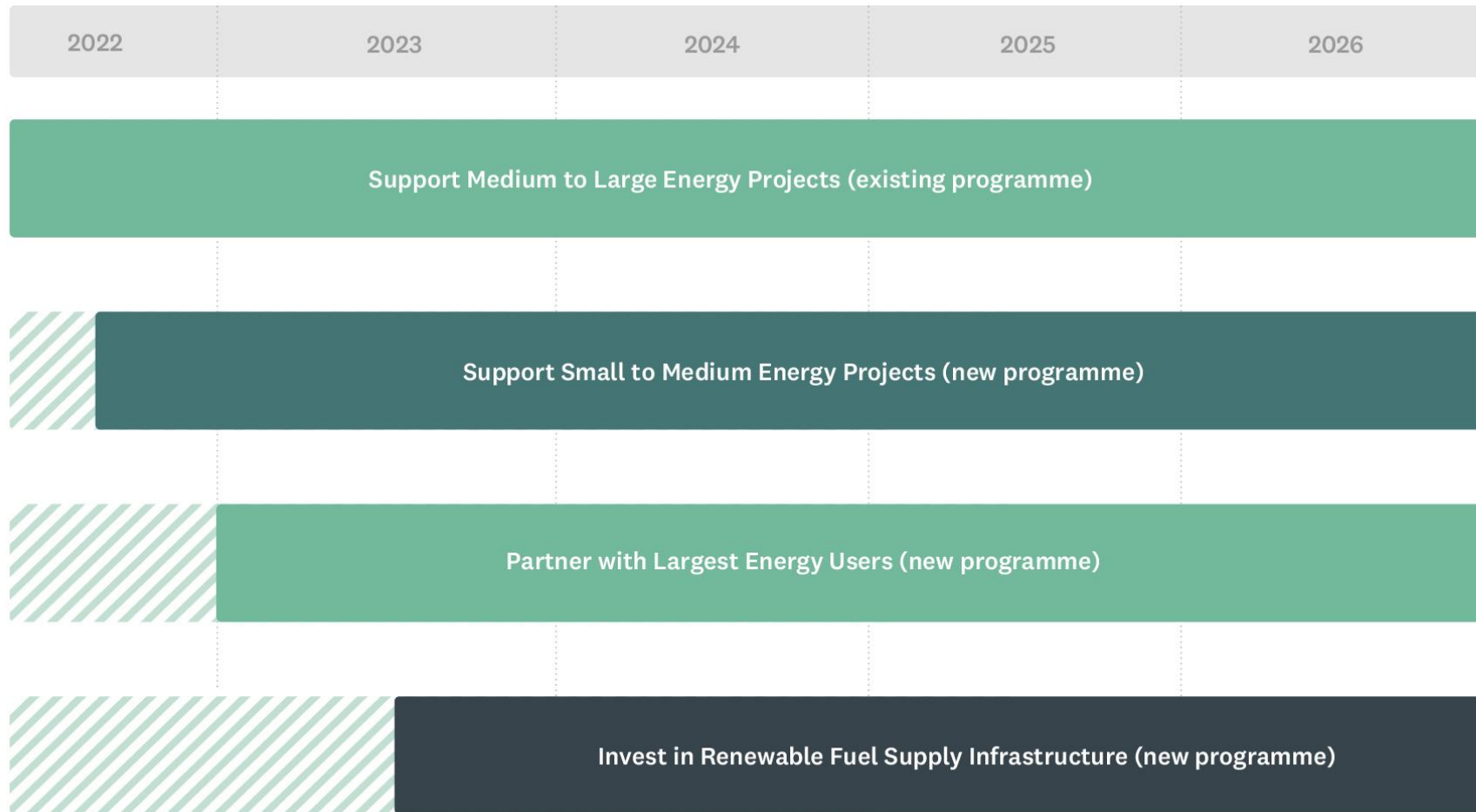
ROUND 2

22 PROJECTS
\$27,989,769 EECA CO-INVESTMENT
2,752,137 LIFETIME ABATEMENTS IN TONNES

ROUND 3

15 PROJECTS
\$13,000,303 EECA CO-INVESTMENT
900,631 LIFETIME ABATEMENTS IN TONNES

GIDI 2.0 programme



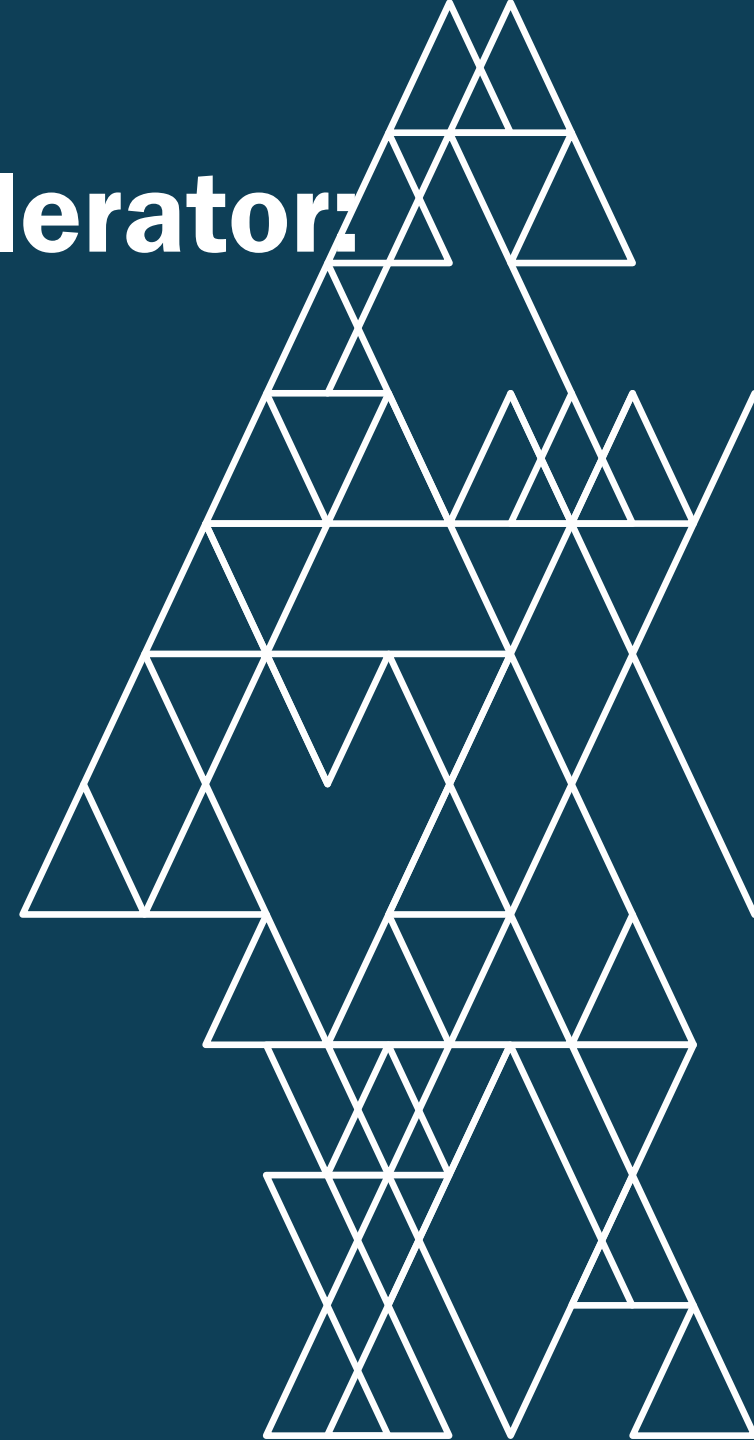
EECA Enabler Programmes

- Energy Transition Accelerator (ETA)
- Regional ETA
- Technology Demonstration
- Sector Decarbonisation
- Research

Regional Energy Transition Accelerator

A programme building a regional, systems view

Introduction to RETA programme



Six RETAs are already underway across the country

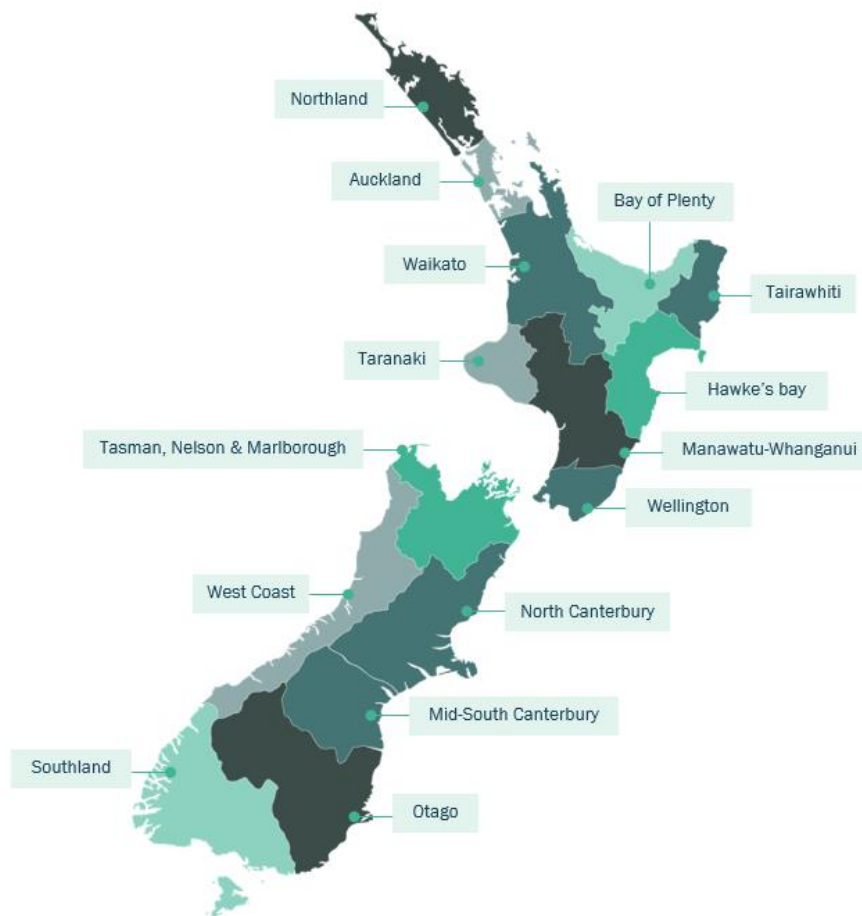
RETA – a new programme designed to develop, and share, an understanding of what is needed to decarbonise process heat use in the region.

The planning stage results in a report to:

- Provide process heat users with coordinated information specific to the region to make more informed decisions on fuel choice and timing;
- Improve fuel supplier confidence to invest on supply side infrastructure, and;
- Surface issues, opportunities and recommendations.

The implementation stage aims, through collaboration with regional stakeholders, to:

- Identify and address the regional barriers or opportunities which could benefit from government support (e.g. the GIDI Fund), and;
- Identify and commit opportunities to fast-track decarbonisation projects.



Because, information sharing and collaboration supports decision making and provides confidence

- The need to decarbonise is a **wholesale problem** – that will benefit from a **coordinated system approach**
- **Information and guidance is not readily available**
- Need to **understand energy demand** and ensure **sufficient supply**
- **Information sharing** would increase efficiency and optimise output, instead of businesses individually exploring decarbonisation
- **Coordination or shared visibility** is needed to overcome challenges (e.g. investment in shared infrastructure or new supply)



Six workstreams provide a mix of skills and insight

- **Regional process heat demand assessment**
 - Process heat demand and demand characteristics
 - Process heat emission reduction opportunities with timeline
 - Demand load profiles and characteristics
- **Electricity availability assessment**
- **Biomass availability assessment**
- **Biomass cost forecast/Electricity cost/price forecast**
- **Region specific opportunities (e.g. organic waste to energy, geothermal)**
- **Regional decarbonisation pathway modelling** - Electricity, Biomass Centric/Optimal/Optimal and Diversified
- **Main report**



EECA Approach

Regional ETA provides a platform for:

- Stakeholder workshops
- Sharing of information
- Targeted co-investment by government (e.g. through GIDI) and potentially private investors
- Regional commitment to implementation
- Opportunities for clusters for procurement, innovation, staging of construction, and investment in skills and capability

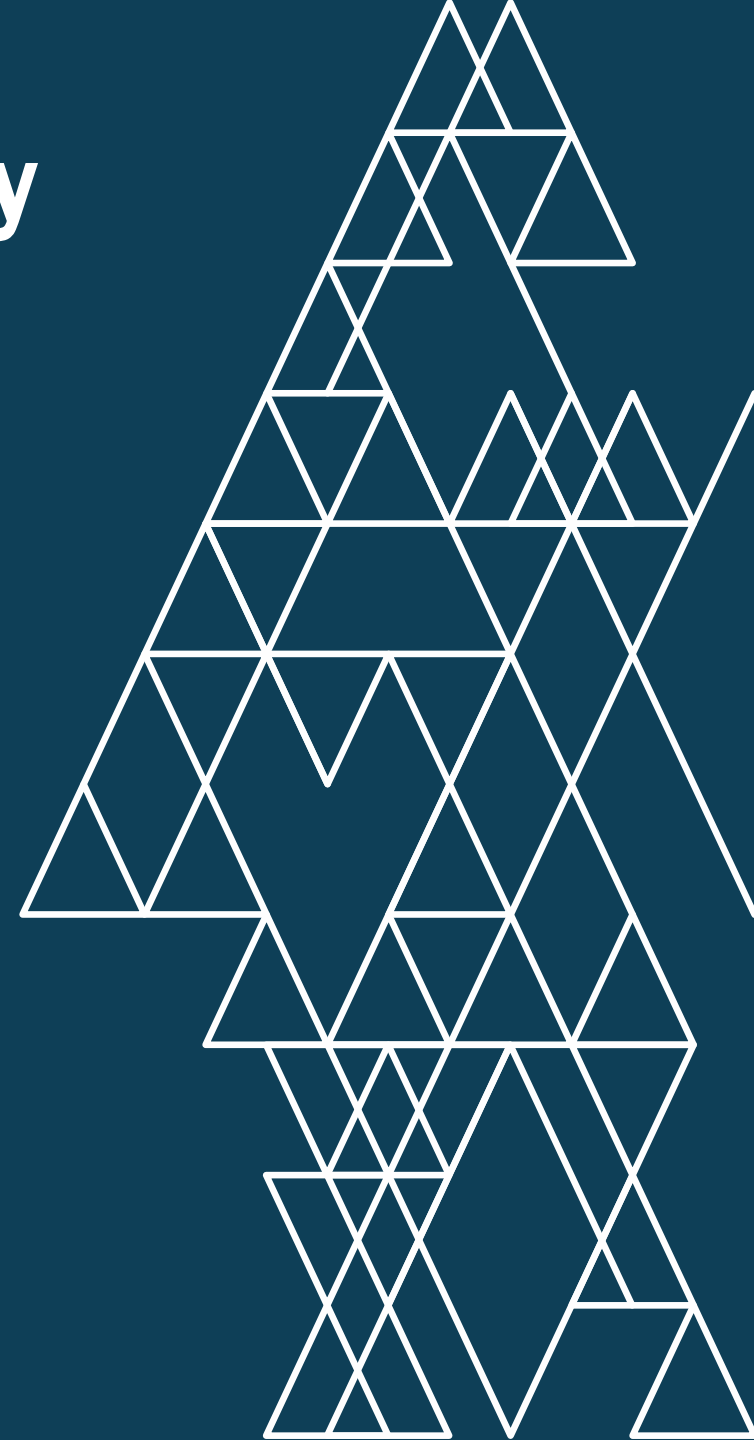


Southland, Mid-South Canterbury

RETA:

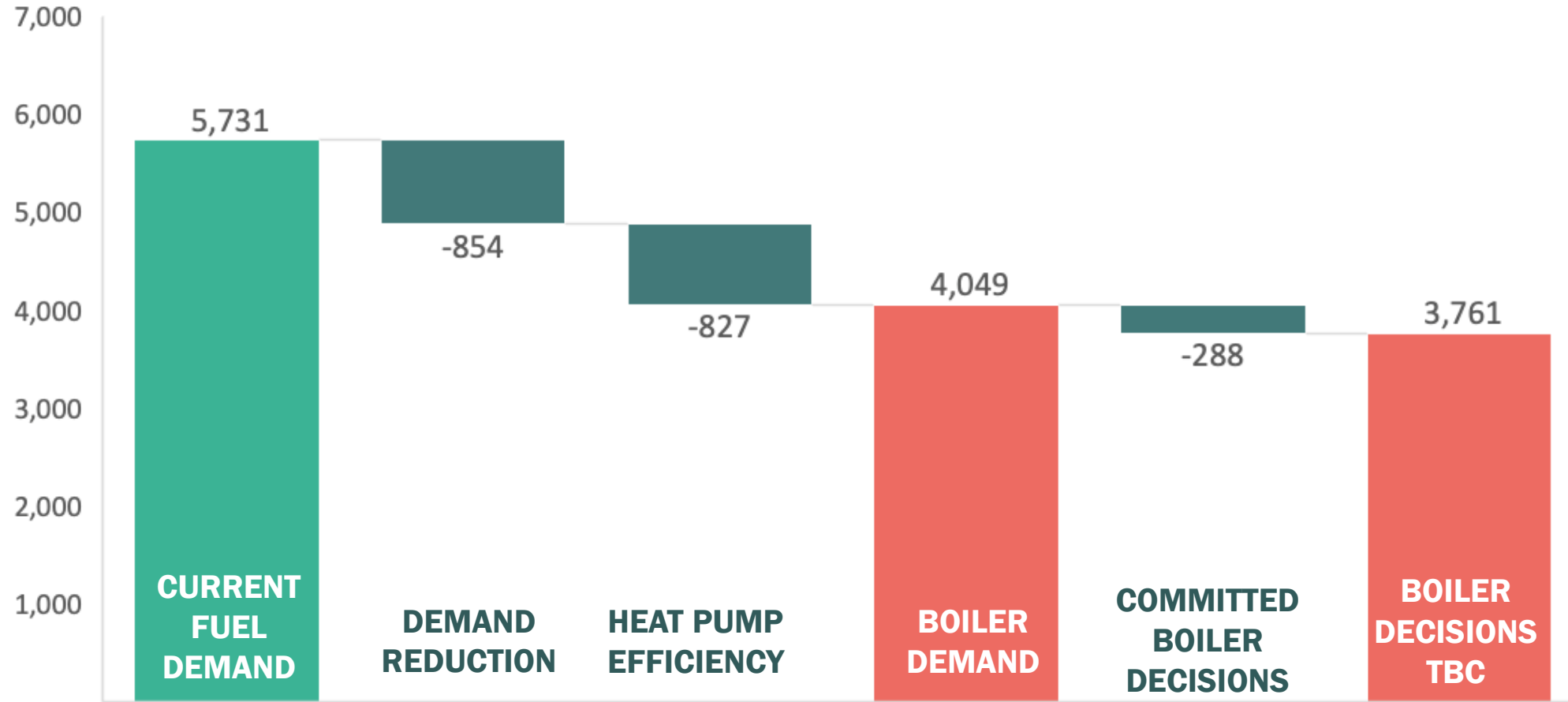
Key learnings

- Key findings
- Learnings to date
- Related EECA programmes



Getting process heat emissions down

How RETA projects impact demand for fuels (TJ per annum)

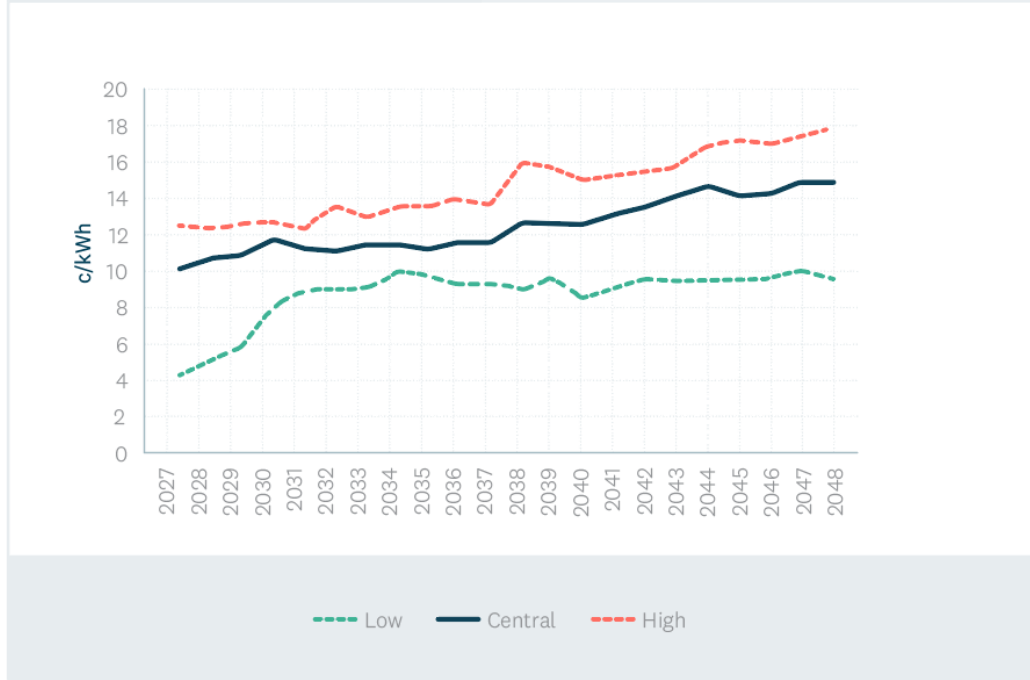


Solutions needed to support electrification are varied

Site	Transpower GXP	Network	Peak site demand (MW)	Total cost (\$m) ⁶⁵	Timing	
Alliance Matura	GOR	TPC	4	\$0.12	2-4 months	
Ascot Park Motels	INV	EIL	1.6	\$0.57	3-6 months	
Balclutha swimming pool	BAL	OJV	0.6	\$0.20	3-4 months	
Blue Sky Meats	EDN	TPC	4.1	\$3.70	12-18 months	
Downers Roding Invercargill	INV	EIL	1.4	\$0.40	3-6 months	
Fiordland Hotel	NMA	TPC	0.13	\$0.08	2-4 months	
Great Southern Invercargill	INV	EIL	0.9	\$1.08	3-6 months	
Great Southern Milton	BAL	OJV	0.9	\$0.20	3-4 months	
ILT Stadium Southland	INV	EIL	0.9	\$0.99	12-18 months	
Invercargill Prison	INV	EIL	1.3	\$0.40	3-6 months	
Fonterra Edendale	EDN	TPC	85	\$54.50	36-48 months	36-48 months
Silver Fern Farms Finegand	BAL	OJV	8	\$12.65	24-36 months	24-36 months
Matura Valley Milk	GOR	TPC	15	Investment already committed		

EnergyLink retail electricity price forecast

Annual average prices; Real \$2022



Biomass will also be part of the answer for future demand

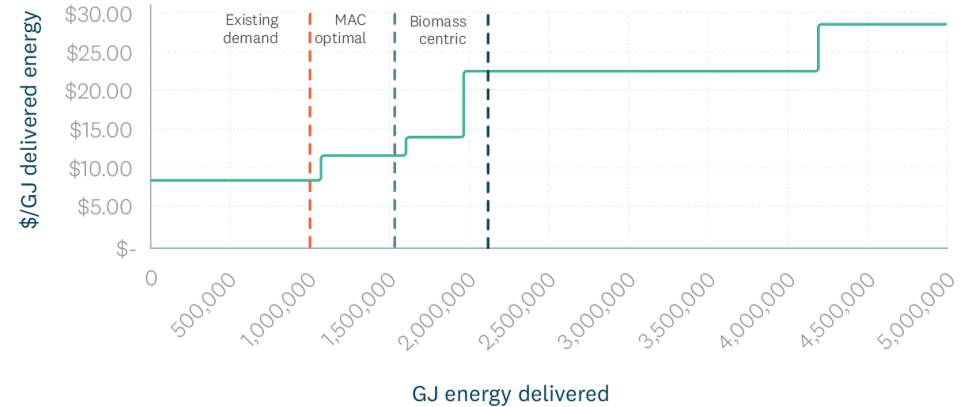
Near-term availability of woody biomass for process heat in Southland

Radiata pine, Douglas fir and eucalyptus, 2023-2037, interview-based



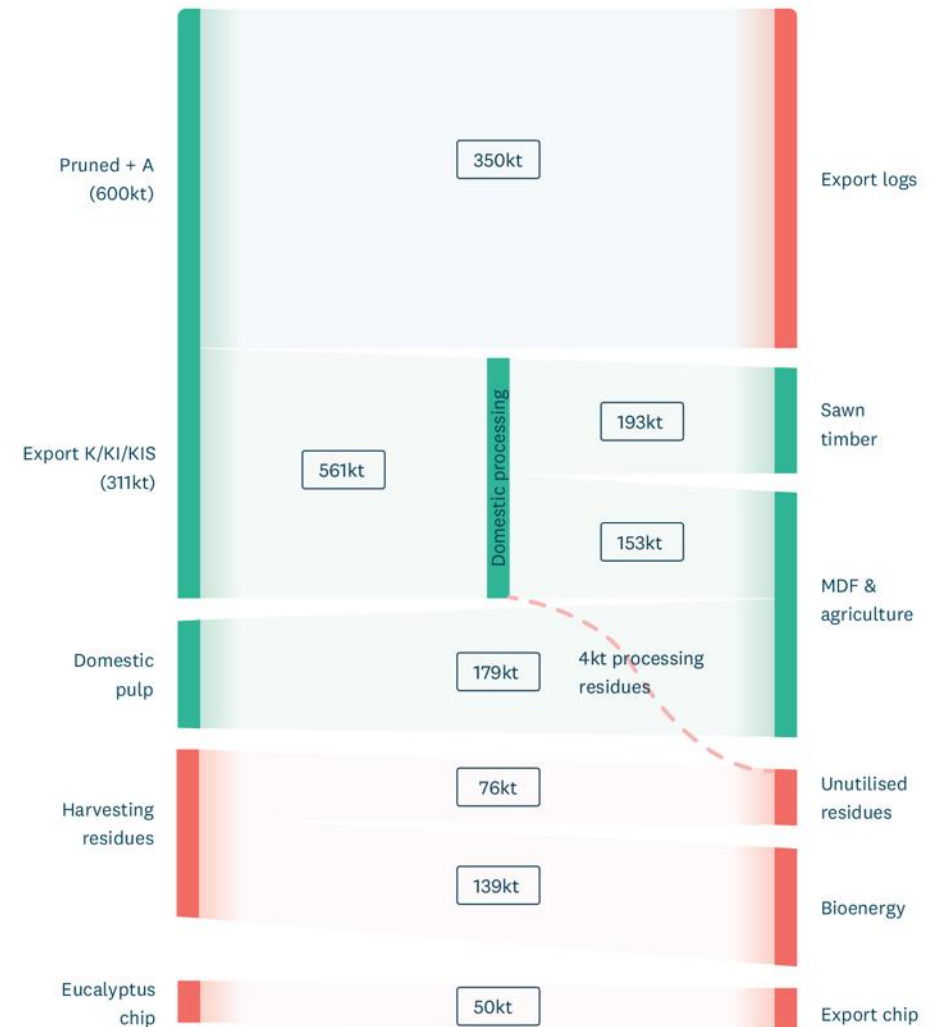
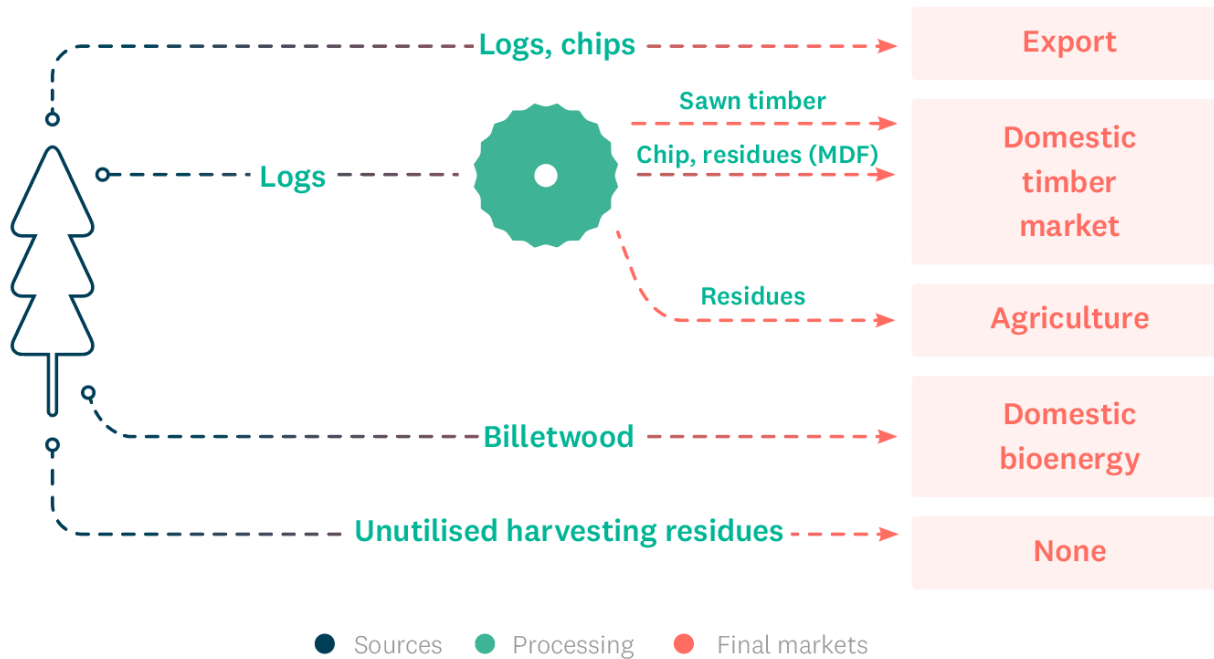
Biomass supply and demand

2023-2037



— Supply — Existing demand — +New Biomass Centric demand by 2027
 - - +New MAC Optimal demand by 2027

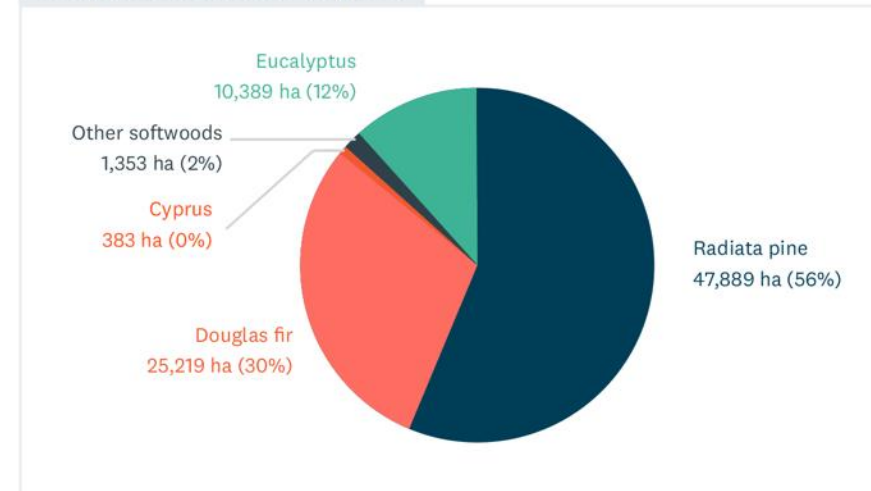
Defining true biomass availability highlights gaps but also opportunities in long term supply



More biomass infrastructure is needed in Southland



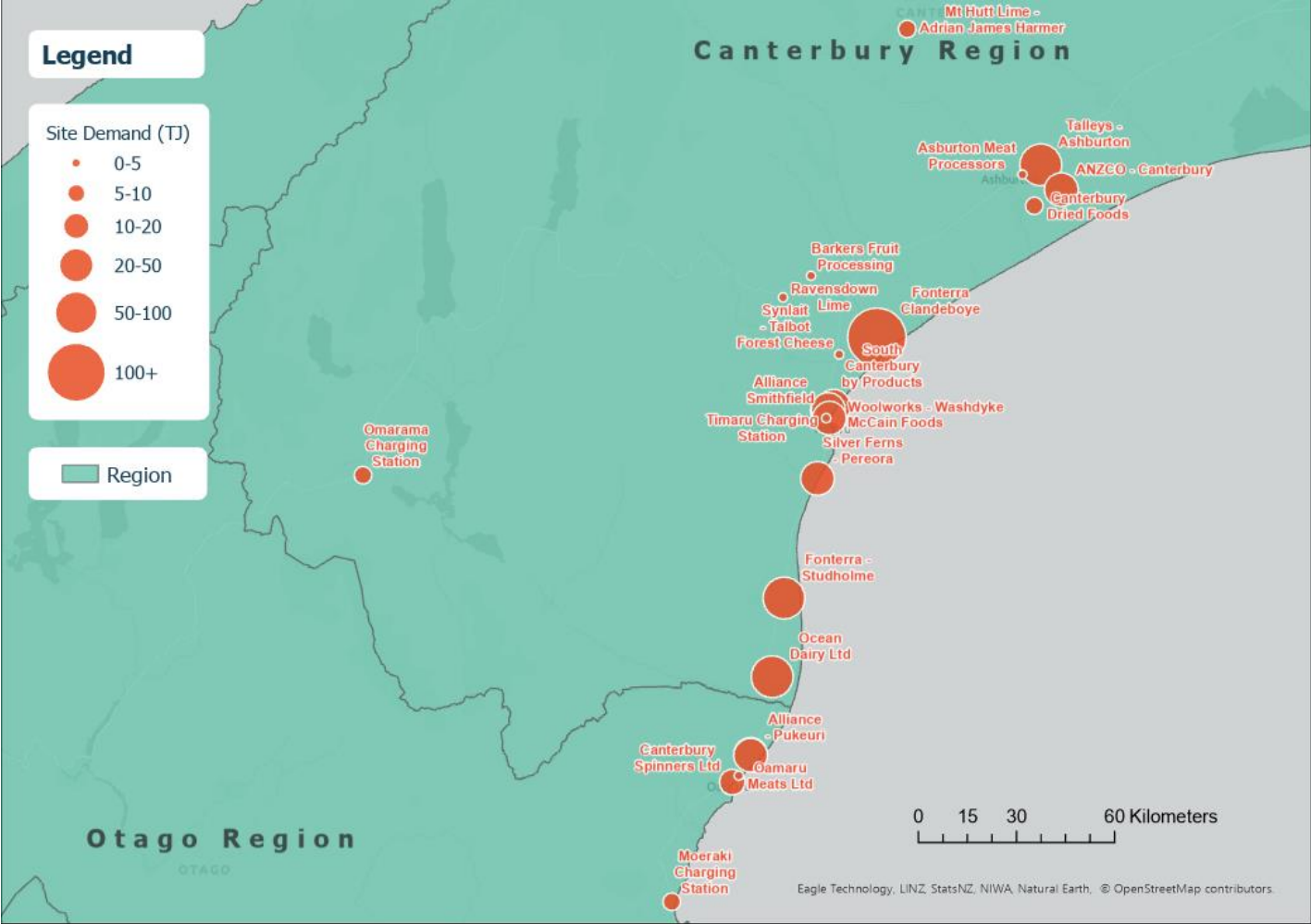
Area planted in Southland - all species



Legend Site consumption (GWh)



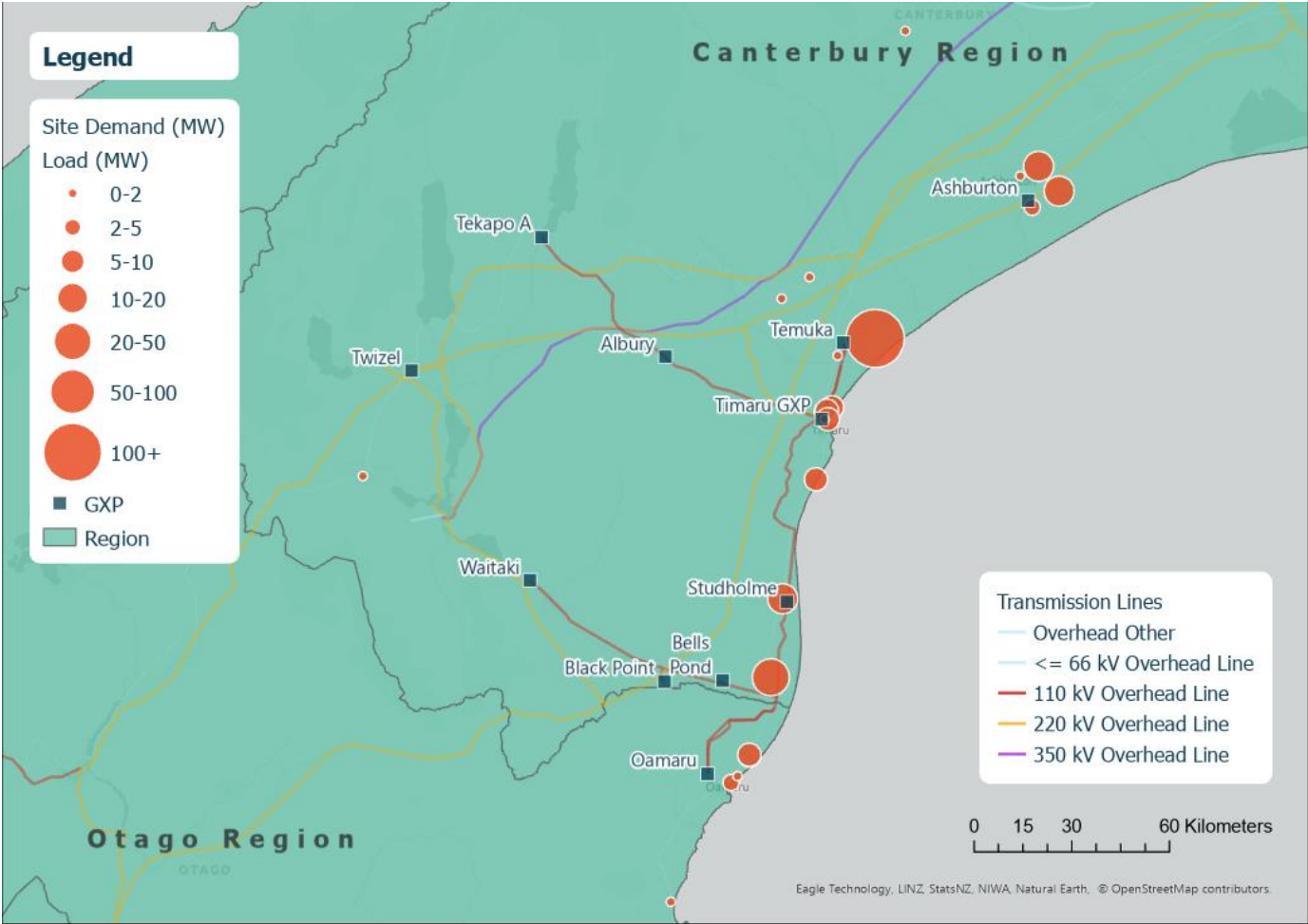
Sizeable opportunity for biomass if all convert



475,000t
new
demand
for biomass



Significant growth in demand for electricity...and network capacity



12% increase in MSC electricity consumption.

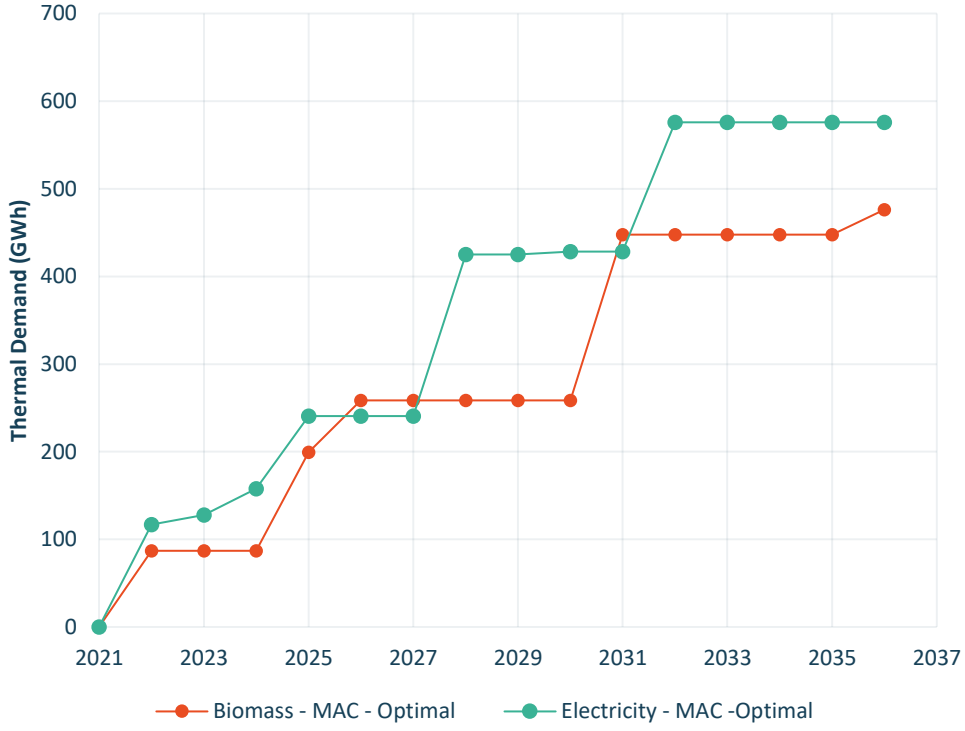
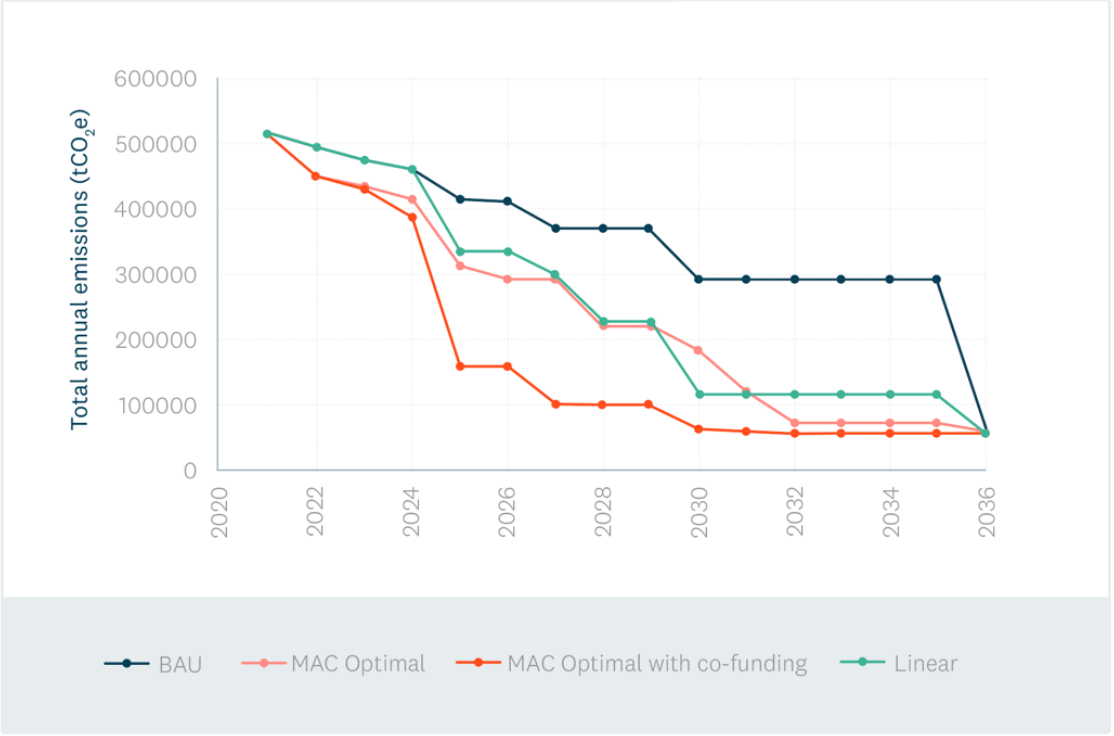
... and ...

Up to 240MW increase in peak demand



Co-funding can significantly accelerate decarbonisation

Southland RETA simulated emissions reduction pathways



Project economics shows the acceleration opportunity

MAC values for preferred fuel
\$/t CO₂-e; N=22 sites

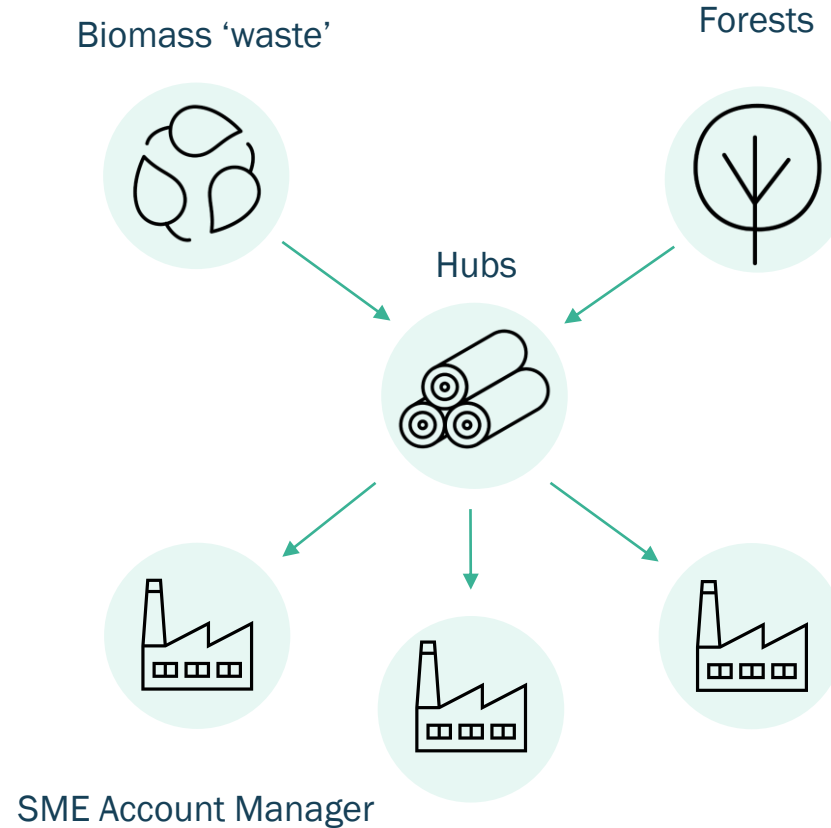


MAC values for preferred fuel - co-funding
\$/t CO₂-e; N=22 sites



We are also supporting biomass industry development and SME's

- RETA Implementation
- Support to SME's
- Forester's, aggregators, processors, innovators
- Biomass Fuel Supply Side Opportunities
- GIDI infrastructure funding opportunities



Rob McBrearty, Biomass IDL



SME Account Manager



The EECA team would love to hear from you

Further information:

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Ngā mihi

