

Sustainable organic waste-to-renewable energy platforms

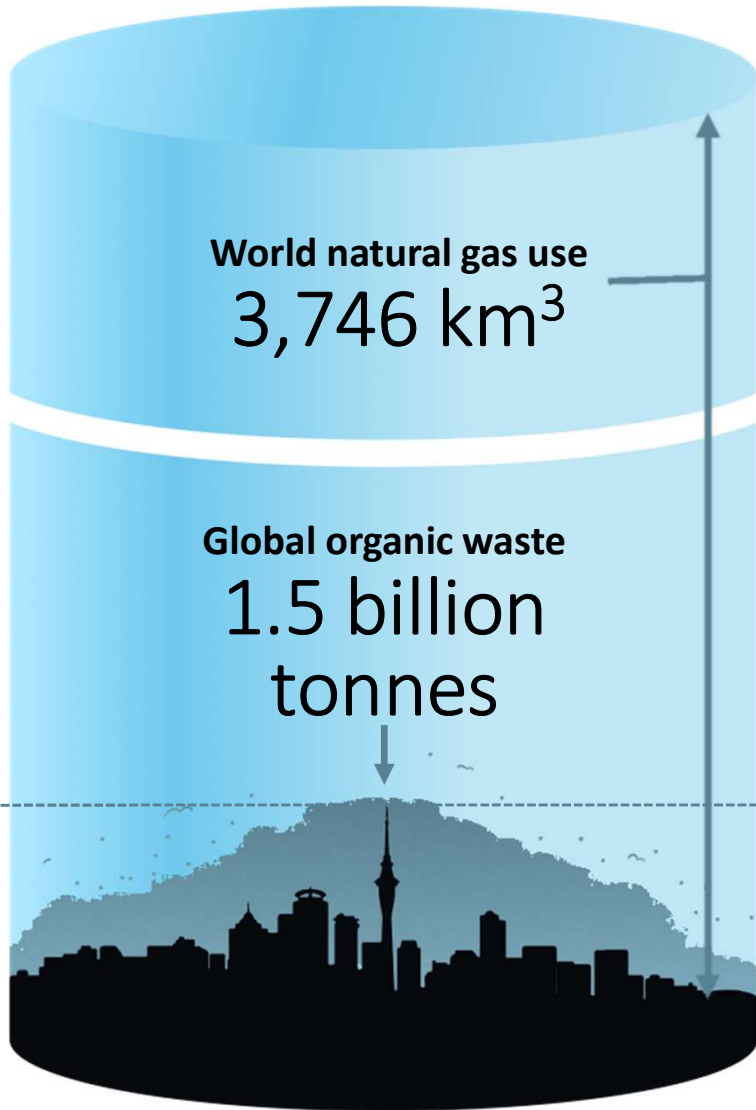
Trevor Stuthridge



CETOGENIX

Building Renewable Futures

129 km



International
Space Station

328 m

Sky Tower

Eden Park

Global problem



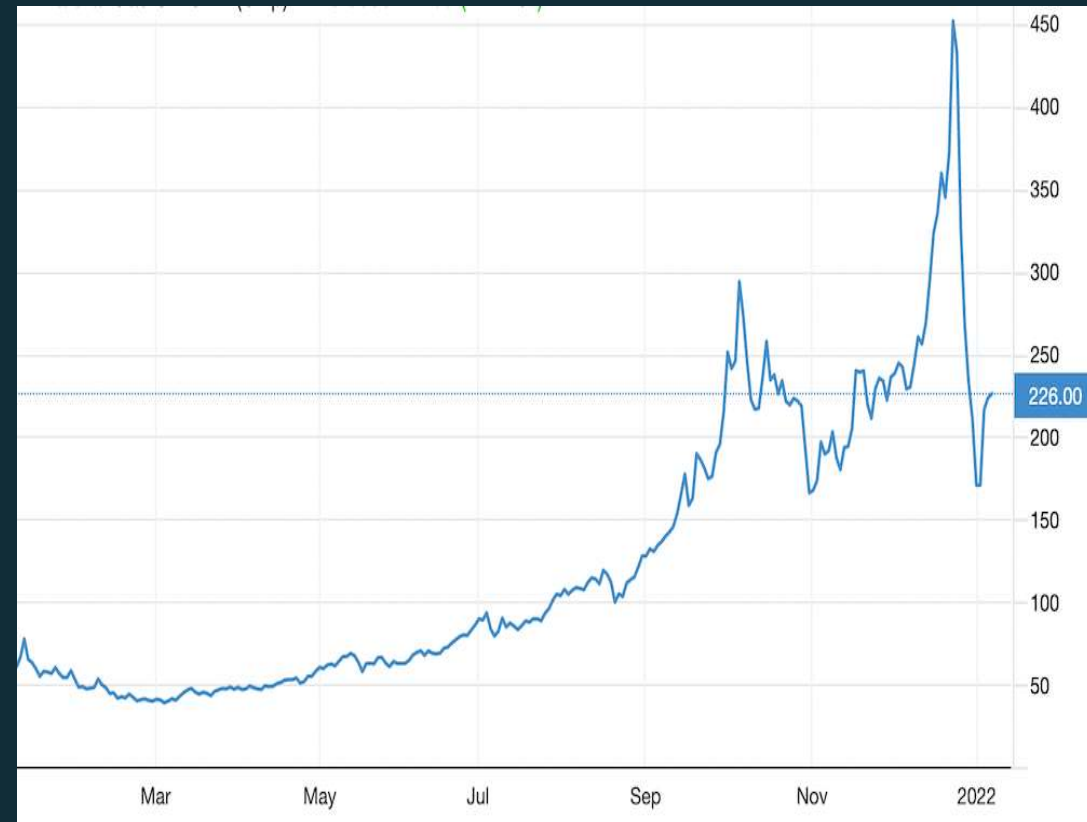
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Growing energy problem

Natural gas supply



Natural gas price



Decarbonization and energy security via RNG

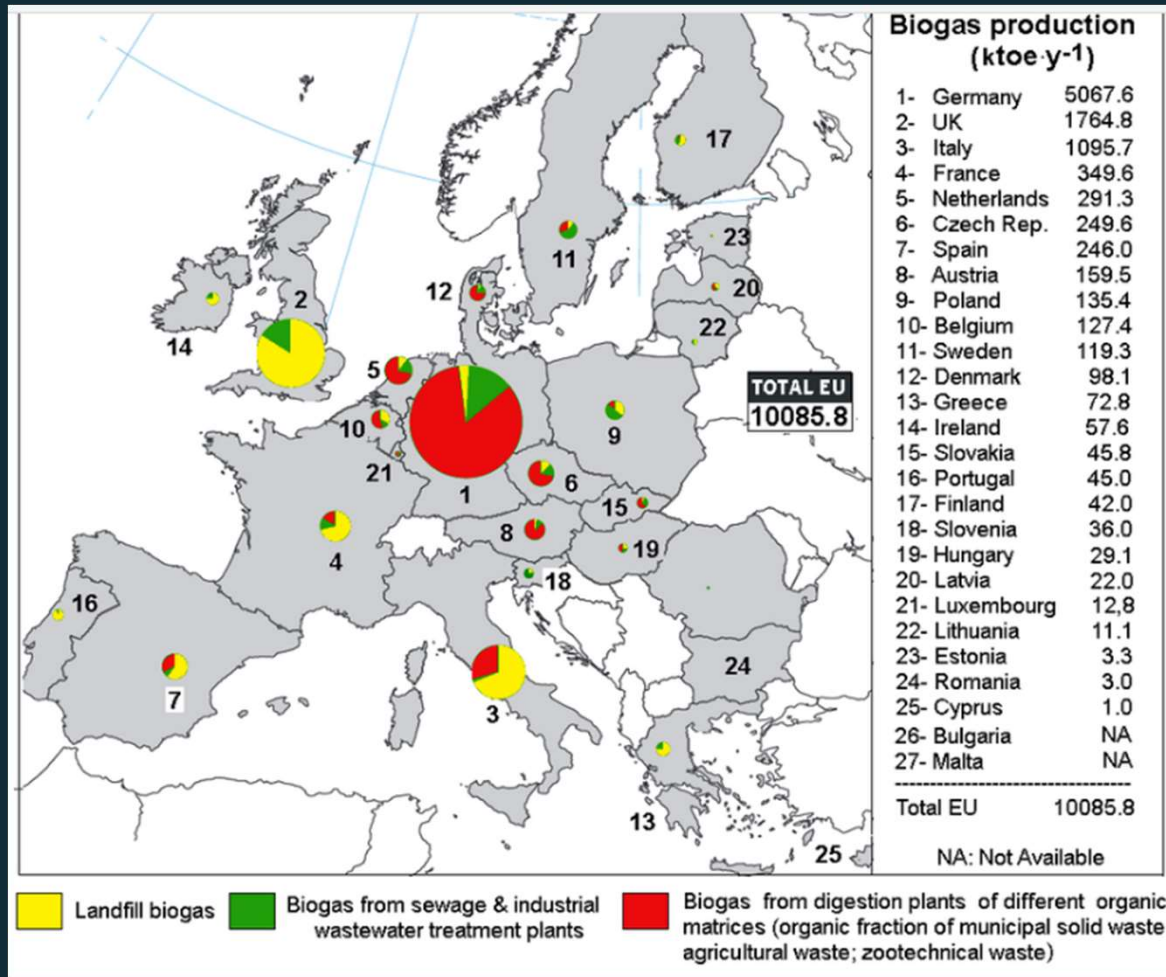
Renewable Natural Gas

Zero-carbon

Existing distribution network

Local production

Local feedstocks



Decarbonization and energy security via AD



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Driving performance. Sustaining life.

Biomethane could be an answer to the EU gas price crisis, says EBA

By Anthony Wright | 19 February 2022

As energy prices continue to soar across Europe, biomethane could – once scaled-up – cover 30-40% of the EU gas demand at considerably lower cost, according to a report by the European Biogas Association (EBA).

CLEAN & SUSTAINABLE CHART

European as market exemplar:

- Current AD plants
 - 10% focused on RNG
- New-build AD plants
 - 60% focused on RNG
 - 10x increased AD capacity



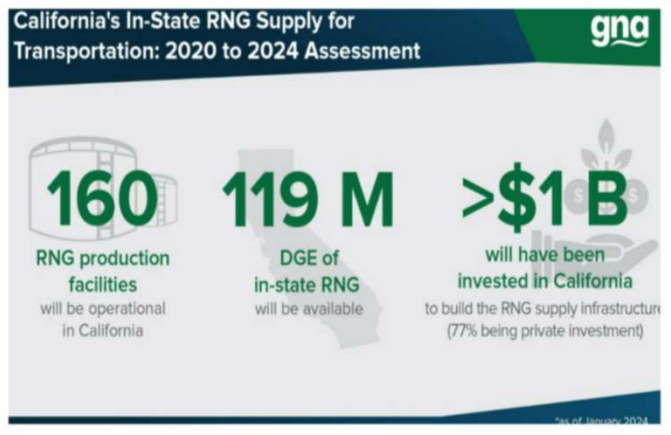
THE CANADIAN PRESS

'Renewable natural gas' boom coming, advocates say, as companies turn waste into fuel

2 days ago

CALGARY — Chase Edgelow is on a mission to acquire vast quantities of garbage.

His company, Vancouver-based EverGen Infrastructure Corp., was founded just two years ago and has already snapped up two organic waste processing facilities in B.C. (the Net Zero Waste compost facility in Abbotsford, and the Sea to Sky Soils facility near Pemberton.) It also has plans to pursue similar acquisitions in Alberta and Quebec at some point in the future.



California's In-State RNG Supply for Transportation: 2020 to 2024 Assessment

gna

160 RNG production facilities will be operational in California

119 M DGE of in-state RNG will be available

>\$1 B will have been invested in California to build the RNG supply infrastructure (77% being private investment)

As of January 2024

Anaerobic digestion

Microbial fermentation of organic waste to biogas

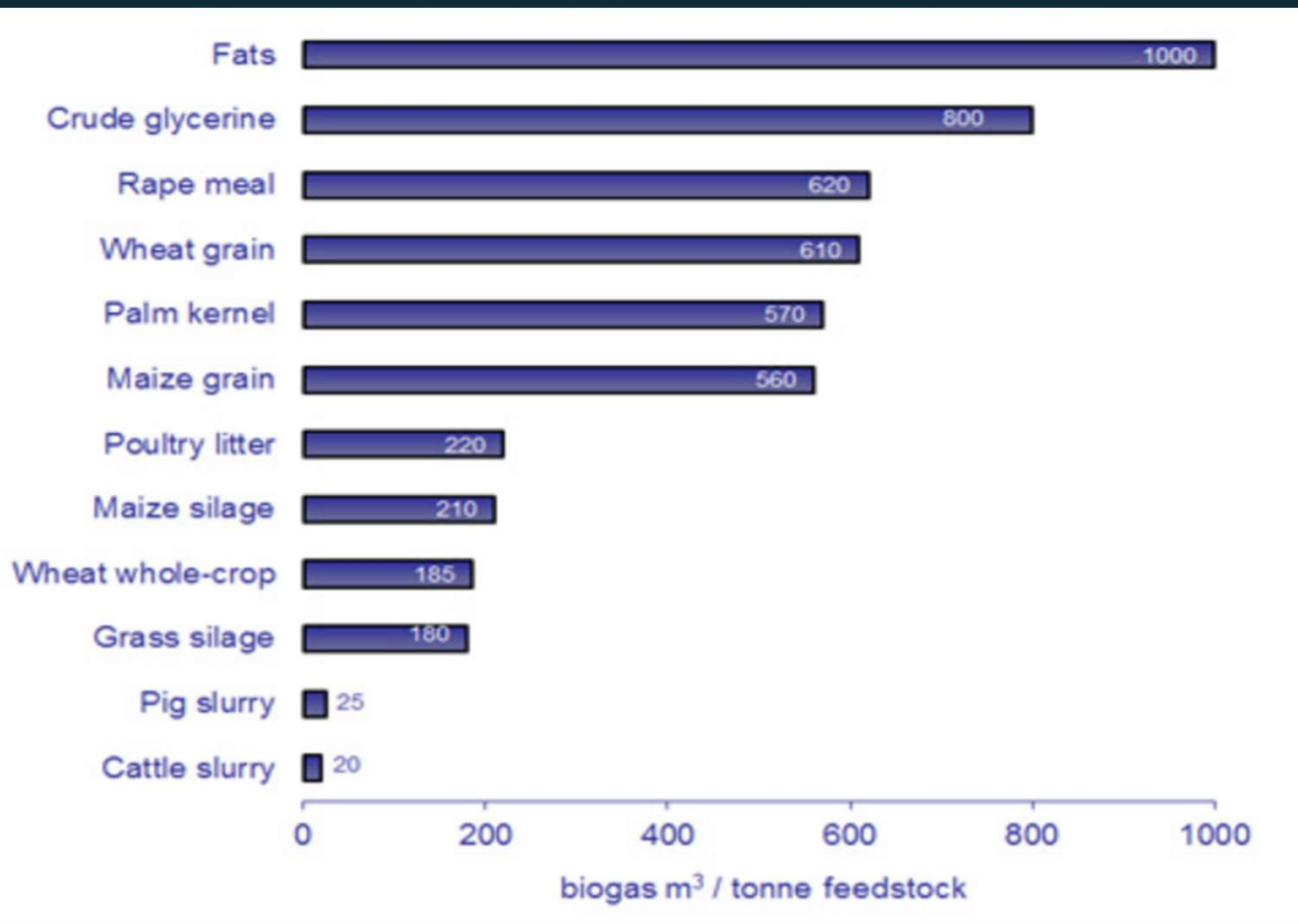
Two value add routes

Combined heat and power

Gas upgrading to RNG



Decarbonization and energy security via AD



Anaerobic digestion

Preferred RNG platform

BUT

inefficient gas production

AND

generates waste digestate





Ceto-Boost technology

breaks down AD digestate

AND

generates renewable energy

AND

recovers by-products



Unit Economics – Alpha adopter exemplars



Digestate
tonnes/yr

RNG revenue
NZ\$/yr

Revenue gain
%

Payback
yr

New build - Canada

-41,793

+2,703,169

+44

4 (vs 7)

Retro-fit - Europe

-93,220


+1,597,442


+48


3.7


Strong market and technology differentiation


	Feedstock Capability	Technical complexity	Product value	AD Retrofit	Residual disposal	Contaminant destruction	By-product dependency	Payback period
AD only	1	4	1	n/a	1	1	1	1
AD+TH*	2	3	2	4	2	2	2	2
AD+HTC*	3	1	3	4	3	3	3	3
AD + CetoBoost	4	2	4	4	4	4	4	4














* Competitor platforms: TH – Thermal hydrolysis
HTC – Hydrothermal carbonization

Relative attractiveness: 1 Low
4 High



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Ceto-Boost market

Retrofit existing AD plants

15,572 retrofit sites

AND

Greenfield installations

Small footprint integrated AD systems



Current Anaerobic
Digester market

2018 US\$7.5 billion

2025 US\$15.3 billion



New Zealand opportunity



stuff business
green business

Biogas could supply 20pc of NZ's gas needs by 2050, says Beca

Tom Pullar-Strecker · 15:11, Jul 06 2021

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Focus on tech development

- Technical resources and grants
- Emergent policy drivers
- Microcosm for AD opportunities
- Fast follower market



Investment runway

IP Strategy



Technical recruitment



Ceto-Boost plant design



Secure new-build partner



Expand manufacturing capacity and IP



Today

2022

2023

2024



First generation proof of concept



NZ\$4.5M seed round



Second generation proof of concept



Capital Raise \$10 million



Go-to-Market

Current technical deliverables



Validate
Ceto-Boost



Continuous
Pilot-scale



Demonstration-scale
design



Build IP
portfolio

Building a commercial pathway



Manufacturing partner



Business model and sales channels

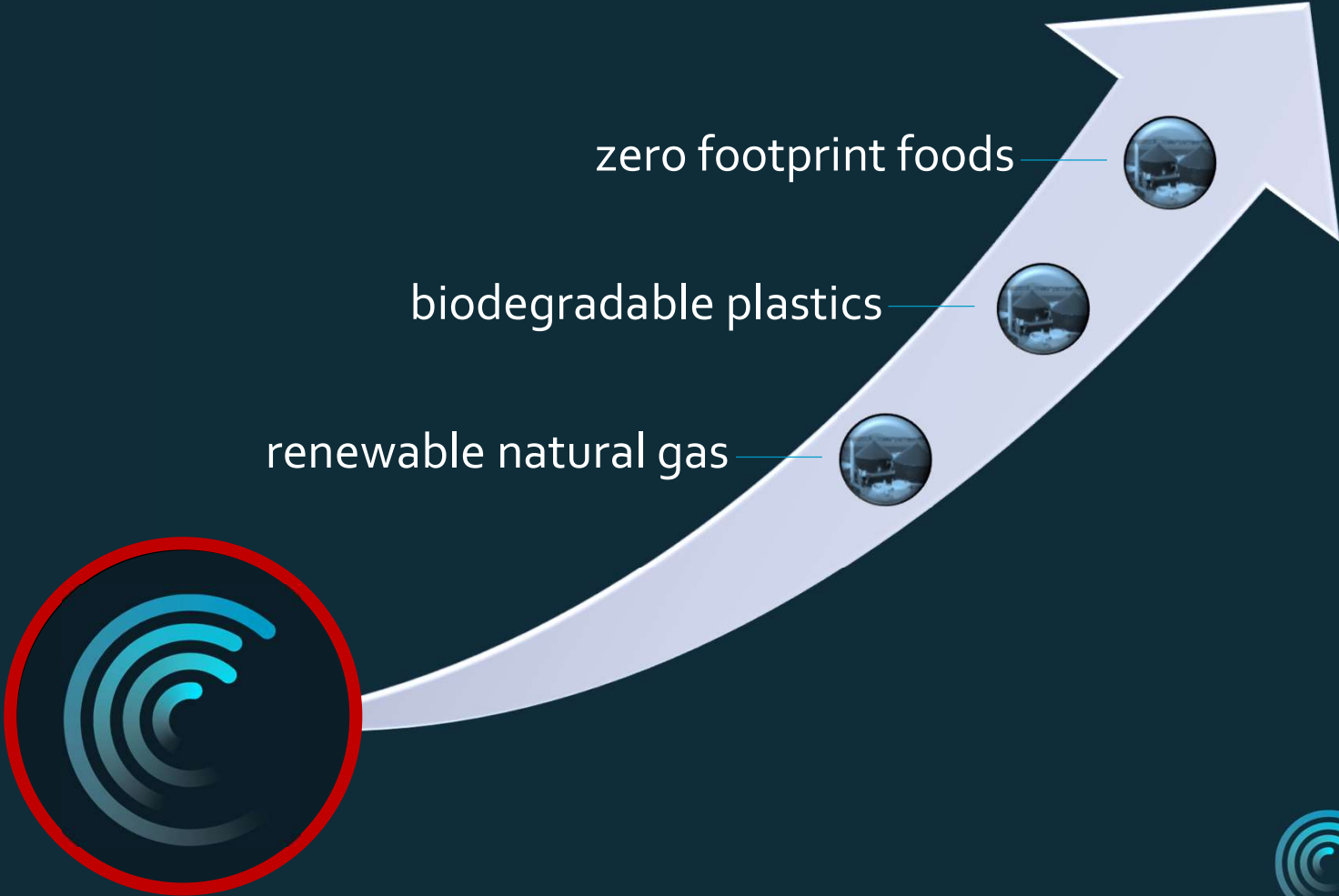


Strategic end-user investor(s)



Secure alpha adopter site(s)

Our IP unlocks new biorefinery pathways



zero footprint foods

biodegradable plastics

renewable natural gas

Looking to build our innovation ecosystem



R&D Providers & Funders



End Users & Advocacy



Market Intelligence



Go to Market Partners



Leveraging multiple benefits



Feedstock agnostic



Next-generation products



No waste left behind



Dual IP strategy



Modular & scalable



Hybrid business model



*Unlock the hidden potential
of organic waste...to fix this!*



Repurpose organic waste



Mitigate climate change



Decarbonize energy supply



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Building Renewable Futures

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