

Unlocking the potential of landfill gas

Gavin Hedley, PhD

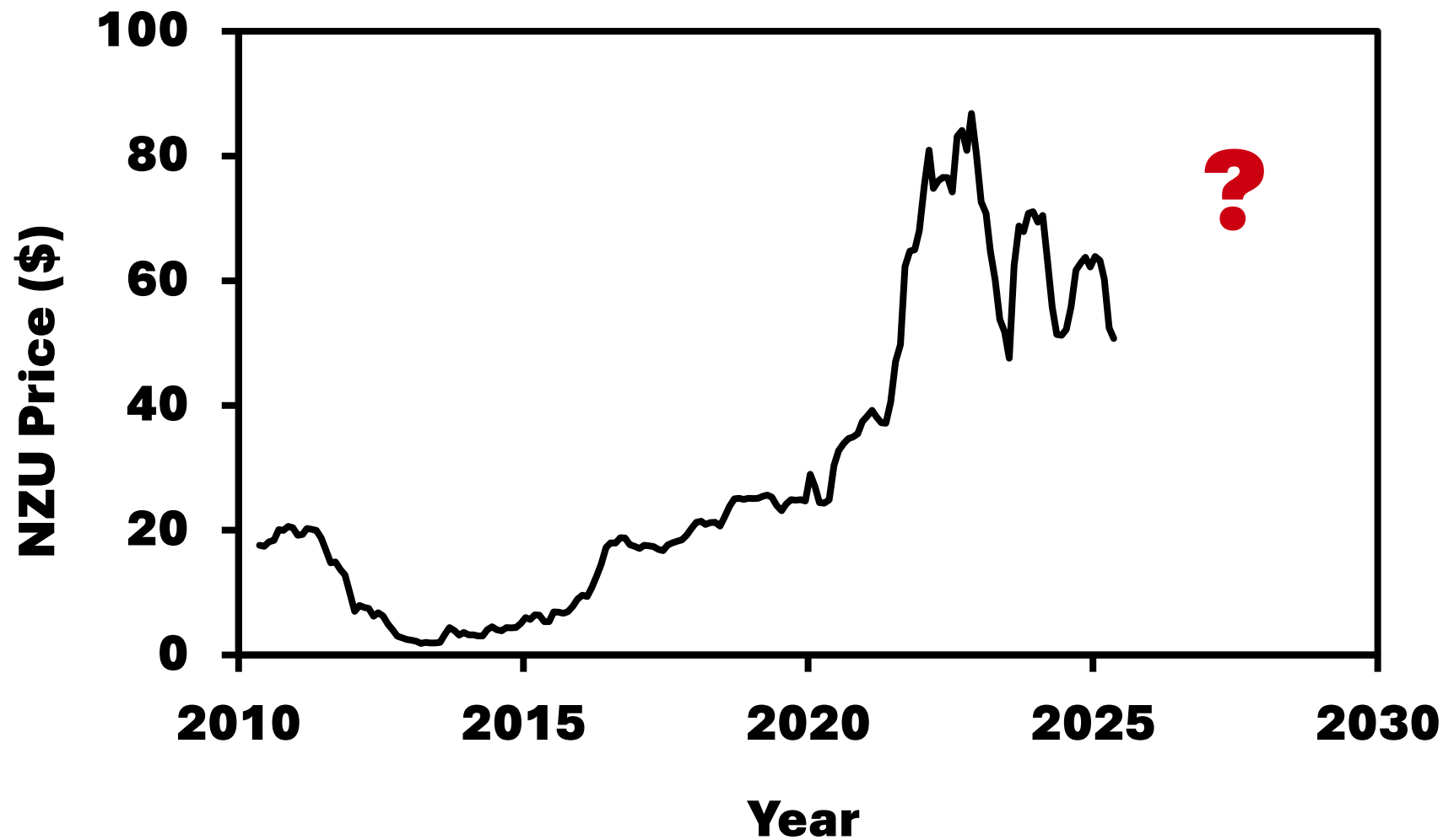
Department of Chemical and Process Engineering

University of Canterbury

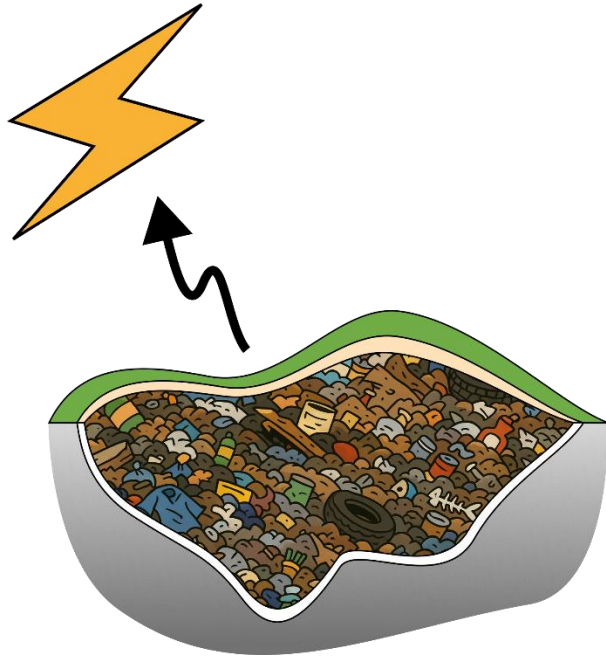
**5% of
global GHG
emissions**



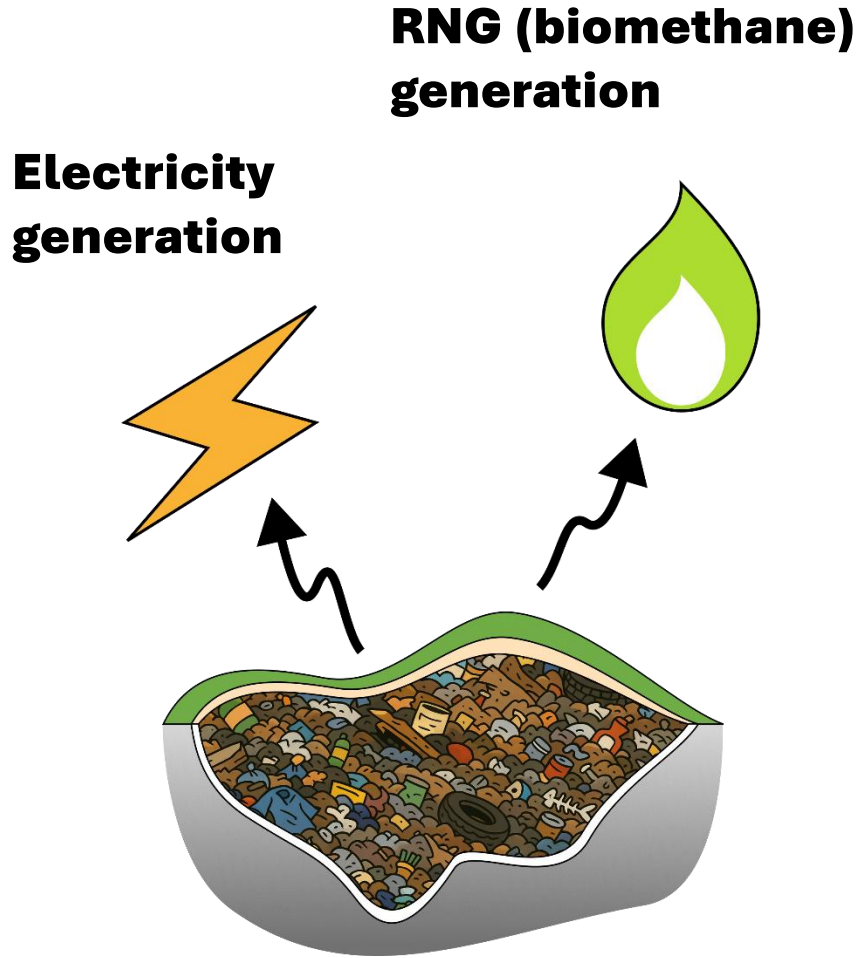
Landfills



**Electricity
generation**



**Landfills
are a
powerful
renewable
energy
resource**



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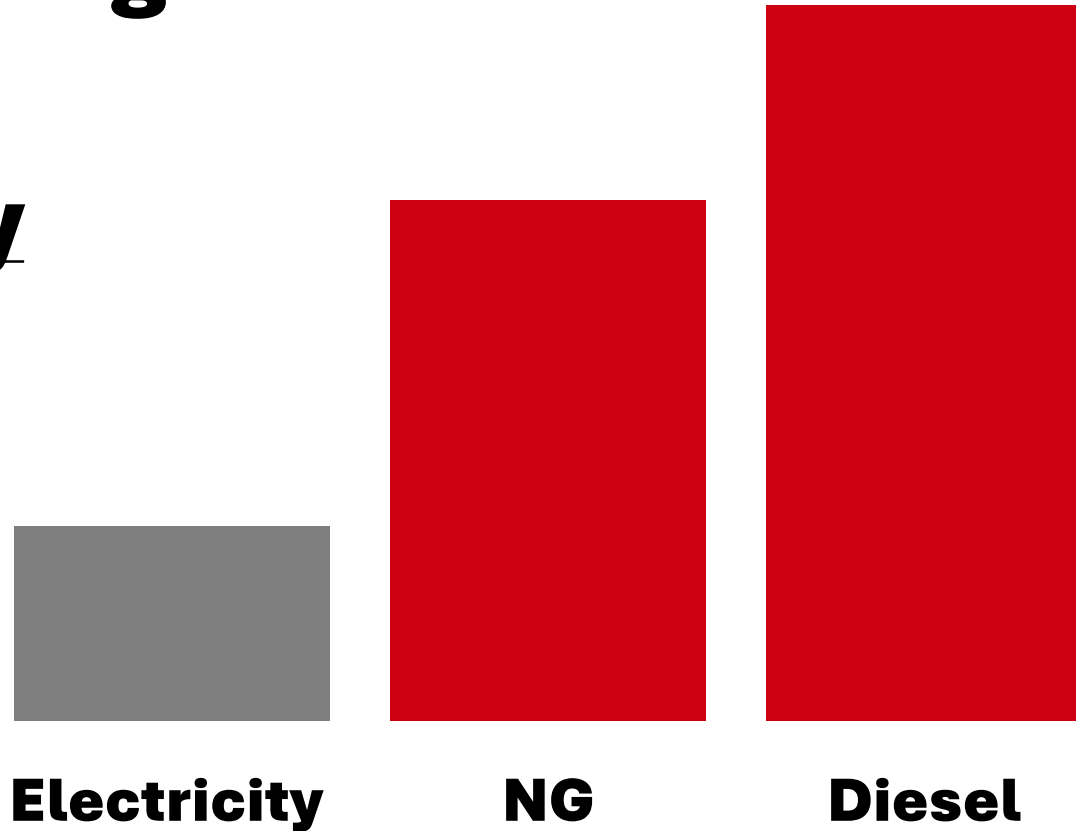
Electricity



RNG

**2-3x more
energy
yield**

Replace high carbon intensity fuels

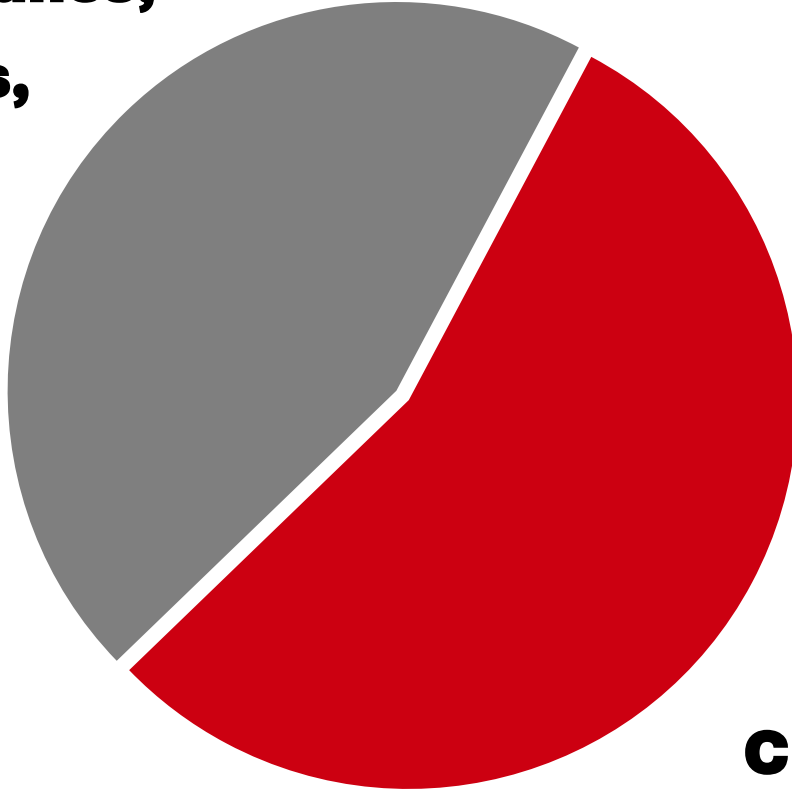




**Up to 10x
green
premium
(USA)**

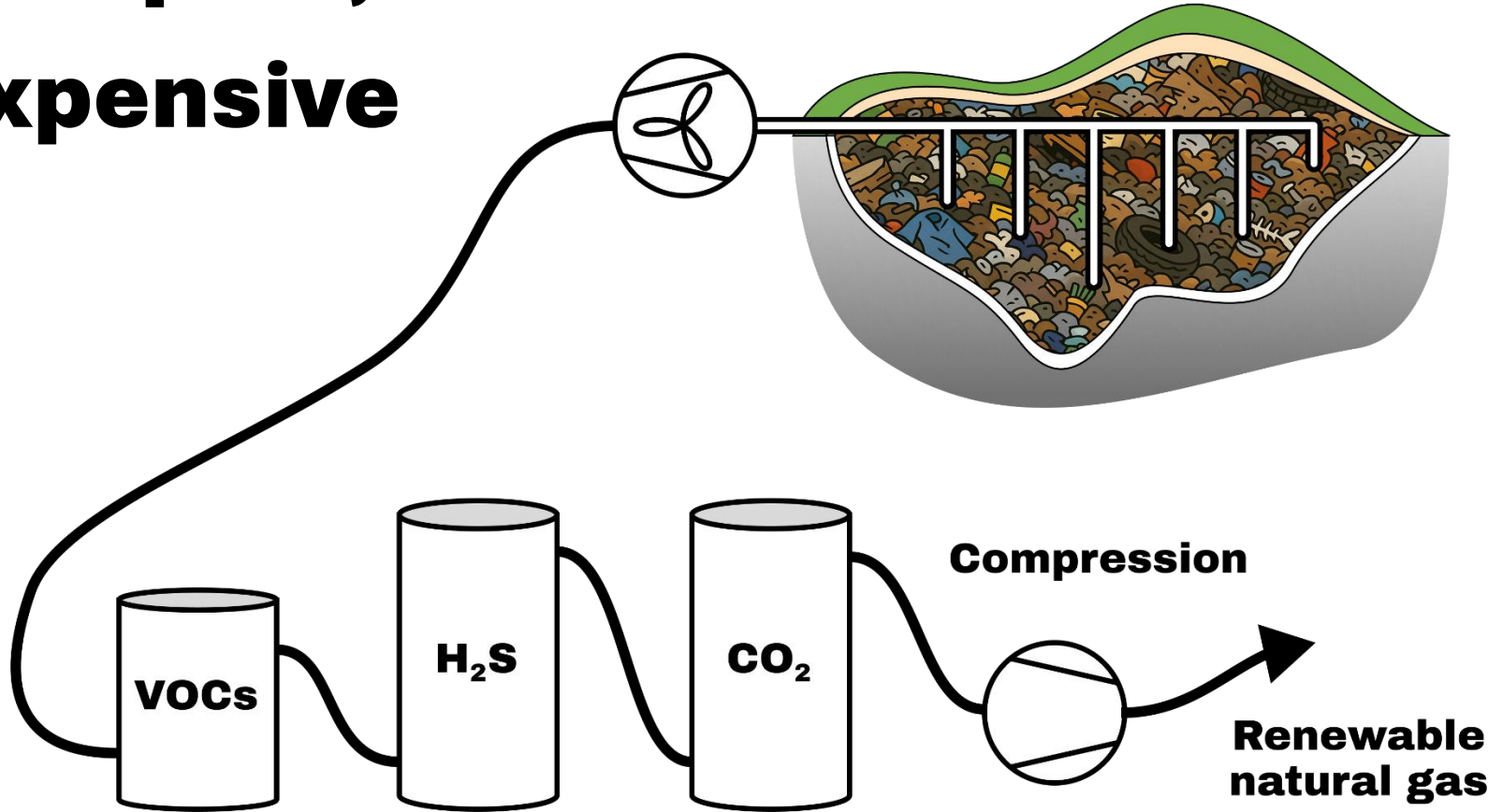
**Landfill gas
is full of
impurities**

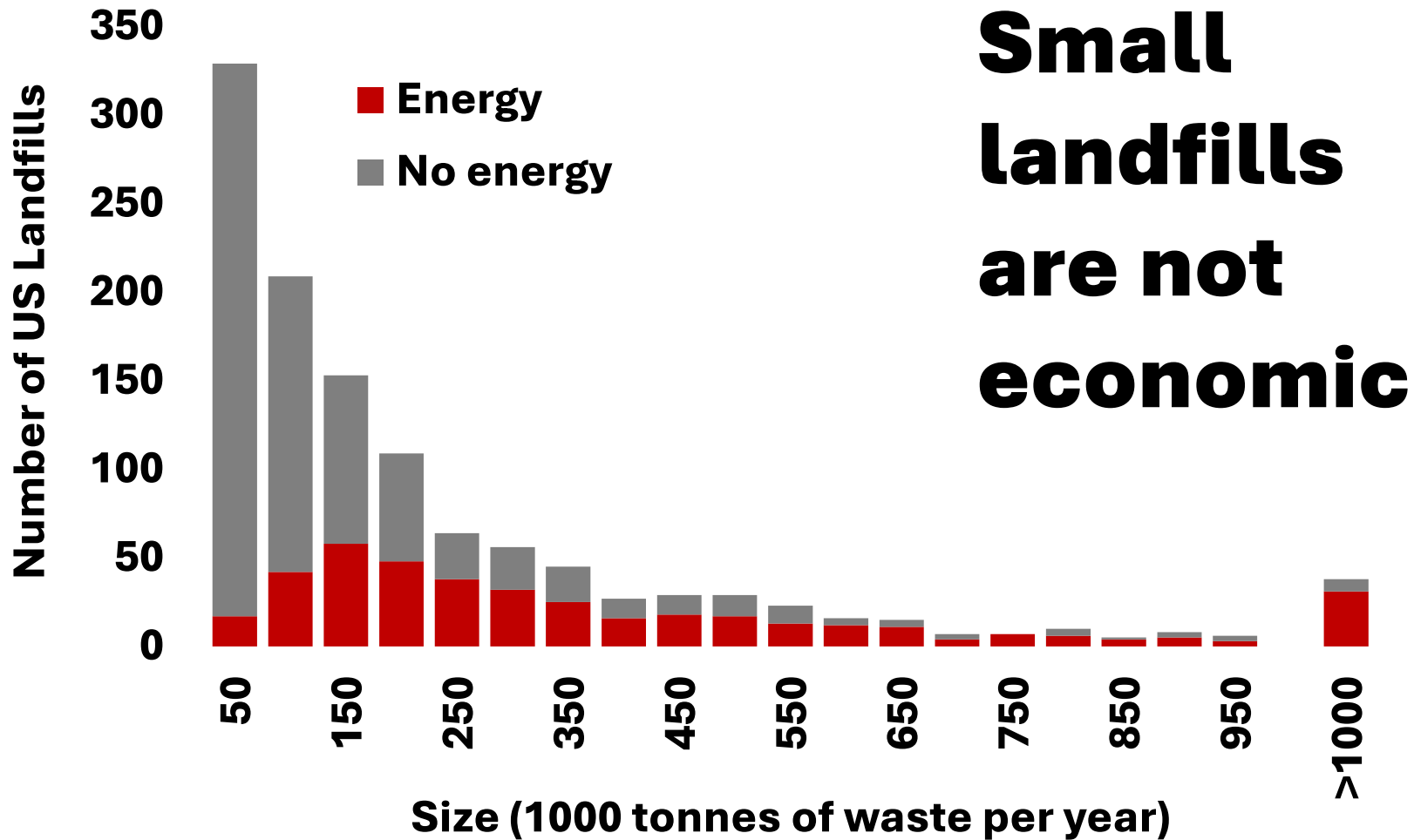
**CO₂, H₂S,
siloxanes,
VOCs,
N₂,
O₂**



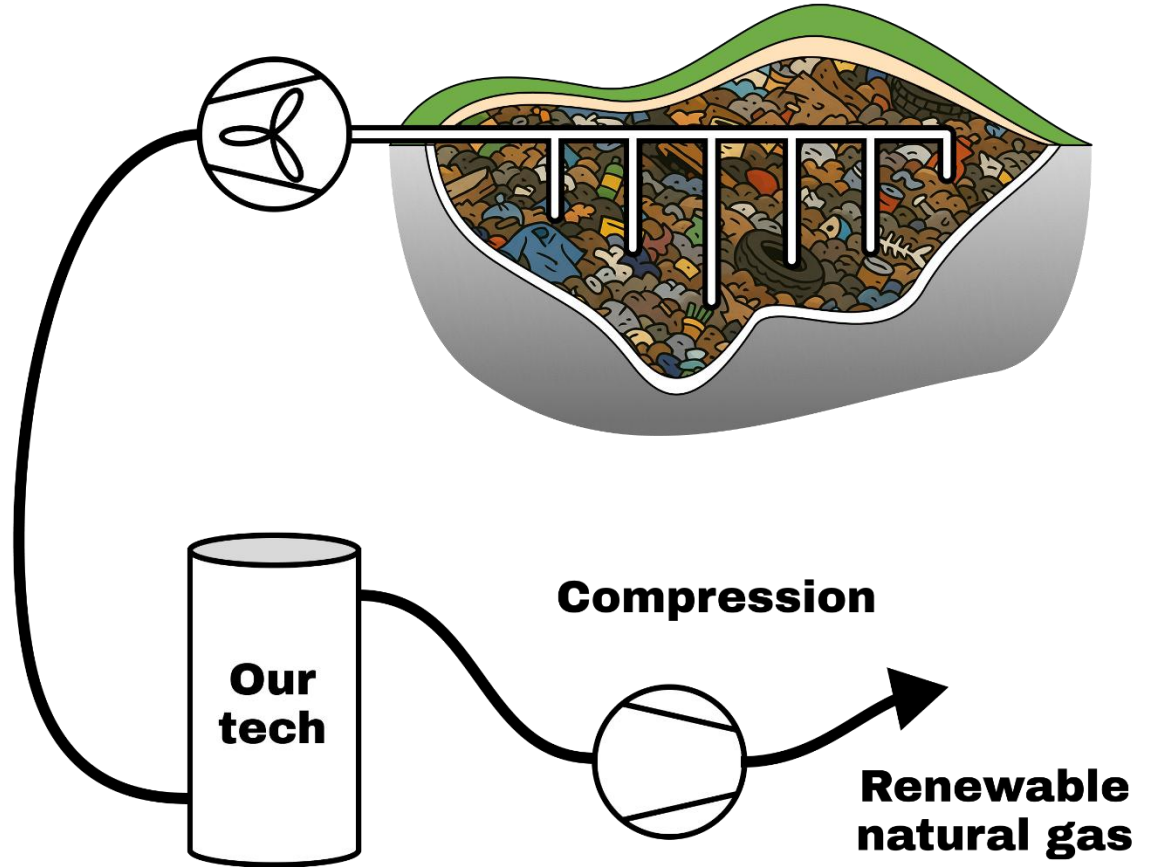
CH₄

**Complex,
expensive**

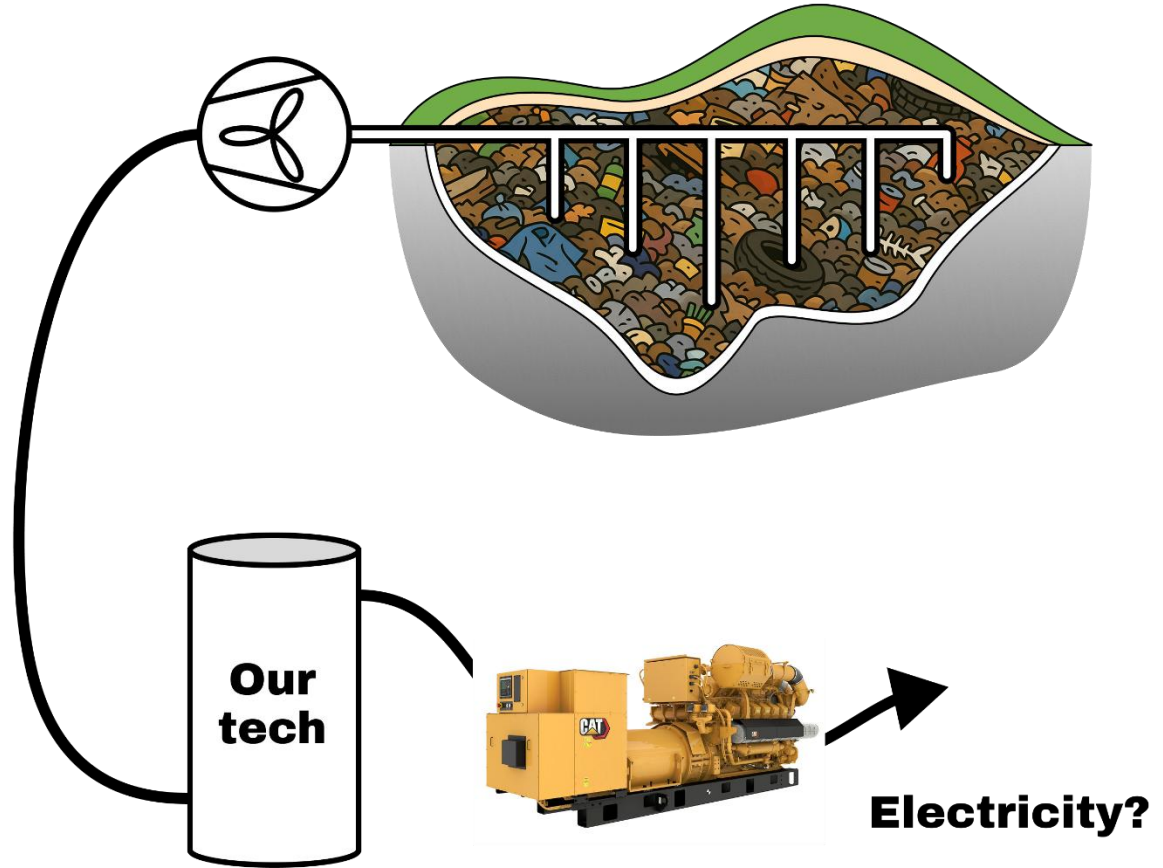


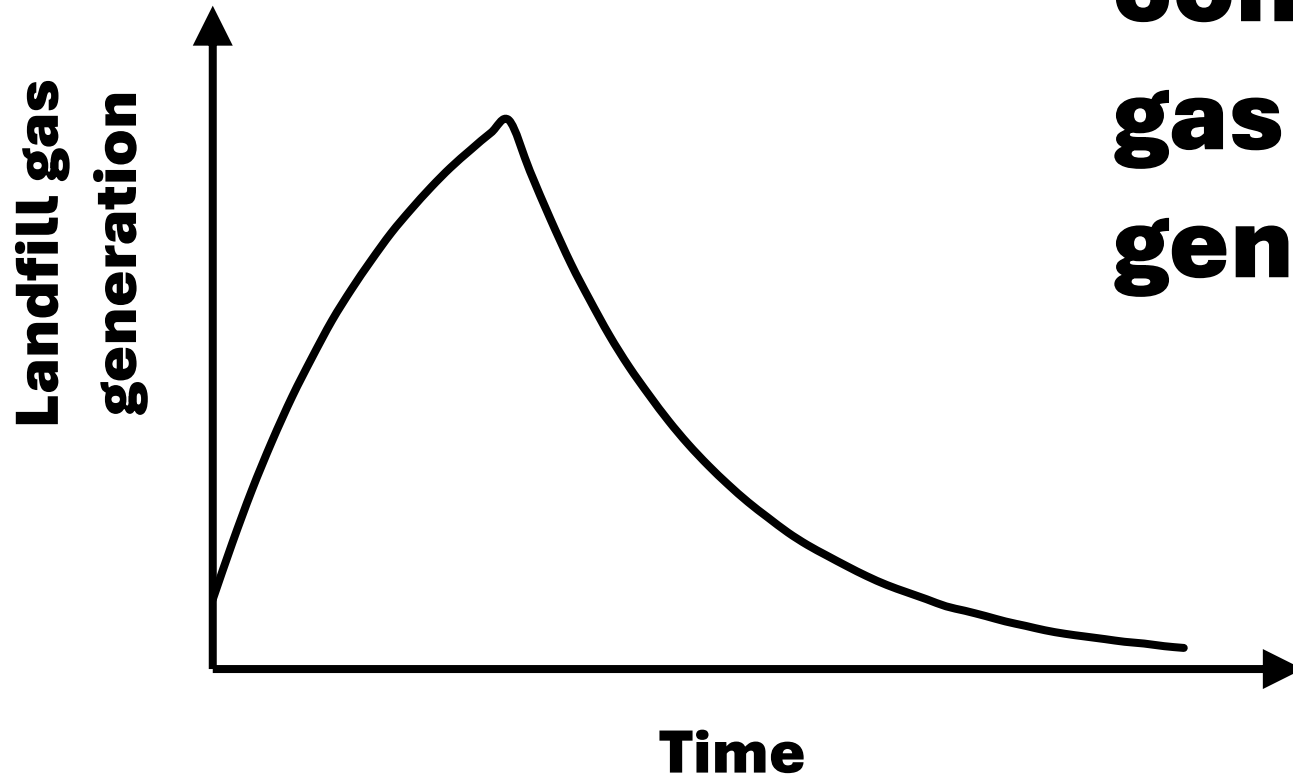


**Simple,
robust,
modular**

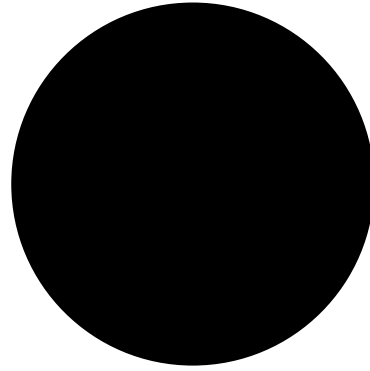


**Simple,
robust,
modular**

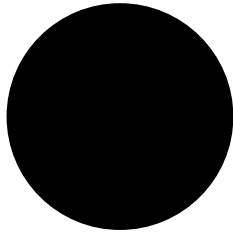




**Non-
constant
gas
generation**



Commercial
2027



Pilot
Q1 2026

Prototype
Operational

We need your help:

- **How can we work together to unlock the potential of landfill gas?**



Gavin Hedley



Matthew Cowan

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