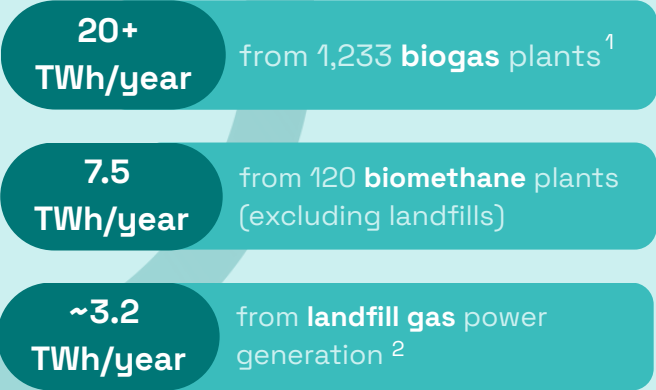


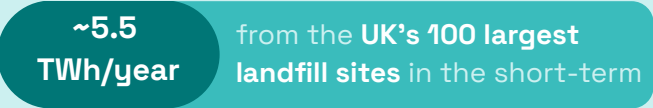
LANDFILL BIOMETHANE POTENTIAL IN THE UNITED KINGDOM

The UK has been at the forefront of biogas development driven by a series of supportive policy frameworks. Despite its strong position in the biogas sector, landfill biomethane remains under-supported and requires greater attention from policy makers to realize its full potential. Worldwide, landfill gas biomethane production is growing fast with many successful projects in Europe and North America.

The UK's Biogas & Biomethane Landscape



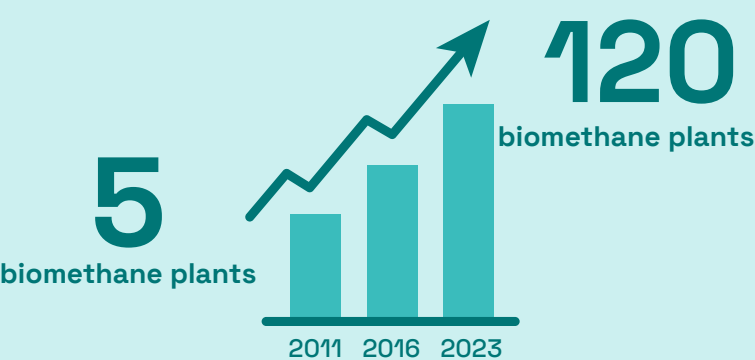
By shifting support from landfill electricity production to landfill biomethane, could be produced



¹ European Biogas Association (EBA). (2024). Statistical Report 2024. Retrieved from European Biogas Association

² UK Department for Energy Security and Net Zero (DESNZ). (2024). Contracts for Difference: Proposed Amendments for Allocation Round 7 and Future Rounds. Retrieved from UK Government.

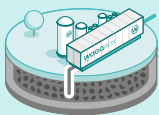
The UK biomethane sector has grown significantly over the past decade.



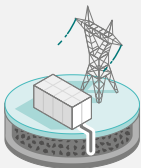
Growth of the UK Biomethane Sector (2011–2023)
Source: Waga Energy

Landfill biomethane projects use the same downstream technology and supply chains as anaerobic digestion projects, and will contribute to increasing the UK's home-grown expertise and job creation in the sector.

LANDFILL GAS
UPGRADED
INTO BIOMETHANE
USING WAGA BOX[®]
TECHNOLOGY



VS



LANDFILL GAS
CONVERTED TO
ELECTRICITY

3x

more renewable
energy to
market

Energy
Delivered

Lower
energy
output due
to
conversion
losses

2x

more CO₂ savings
per unit of
energy

CO₂
Reduction

Less
effective in
reducing
emissions

90%

grid injection &
direct use

Energy
Efficiency

35%
electricity
conversion

10%

non-recoverable
energy

Energy
Wasted

60 to 70%
lost as heat

Emerging Opportunities and Strategic Outlook

The focus on biomethane grid injection aligns with the UK government's energy security strategy, and biomethane plays a lead role in decarbonising heavy transport and supply chains. This sector exhibits year on year growth in gas-fuelled Heavy Goods Vehicle registrations. Landfill biomethane presents a strategic opportunity to enhance sustainability while maximizing the use of existing renewable energy resources.

How to increase energy efficiency?



End support for electricity production from landfill gas and redirect financial incentives towards higher-efficiency landfill gas biomethane projects when technically and economically feasible.

Leverage upcoming biomethane support mechanisms developed by DESNZ, ensuring landfill biomethane can compete fairly in the market.

Include landfill biomethane in the UK ETS, enabling emissions exemptions for sustainably produced biomethane.

Ensure policy clarity—current uncertainty around landfill power generation prevents landfill operators and gas rights owners from making informed long-term investments.

Policy Evolution and Future Outlook

The Renewables Obligation (RO) scheme, which has supported landfill electricity generation since 2002, currently creates competitive disadvantages for biomethane projects. Unlike power generation, landfill biomethane receives no direct financial support from government.

The Renewable Transport Fuels Obligation (RTFO) mechanism is available to landfill biomethane, although this is market-led and has no floor price, which can be a barrier to investment. Biomethane production is a competitive solution for large landfill sites due to economies of scale.

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