

THE WORLD BIOGAS EXPO 2026

Hosted by
ADBA WORLD BIOGAS ASSOCIATION

8-9 JULY, NEC, BIRMINGHAM, UK

THE ENGINE ROOM THEATRE

KEY TAKEAWAYS FROM SPEAKERS AND SESSIONS



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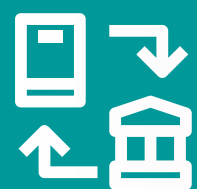
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UK BIOMETHANE SECTOR OUTLOOK



- Biomethane is among the IEA's fastest-growing renewables to 2050; EU capacity grew ~17% in a year (over 1 bcm added)
- UK has stalled at ~7 TWh (~1% of gas demand) as the Green Gas Support Scheme budget ran dry
- Modelled UK potential of 120 TWh by 2050: a £174bn net-zero saving and 56,700 green-gas jobs, with 85% of investment retained in the UK

CROSS-CUTTING THEMES



- Policy gap: real 120 TWh potential versus a stalled ~7 TWh — needs a national target, an extended GGSS and ETS zero-rating
- Value sits in the “waste”: digestate, biogenic CO₂ and certificates await markets and financing, not new technology
- Operational integrity first: safety, monitoring and data maturity protect both the climate benefit and the return



FEEDSTOCKS, TECHNOLOGY & FINANCING AT SCALE



- Over three-quarters of UK growth to 2050 is agricultural feedstock; EU whole-system benefits valued at up to €180bn a year by 2050
- Feedstock can take the UK from ~7 TWh to 50 TWh (2030) and 120 TWh (2050) — the top five feedstocks all agricultural
- Feedstock capacity is under-used: only ~5 of 90 Mt/yr of livestock waste goes to AD; 18% of UK land was uncropped in 2024
- It is important to stop treating digestate as “disposal”; food-waste blending raises unresolved contamination concerns (PFAS, microplastics)

METHANE LEAKAGE AND LDAR



- Methane is ~82× more potent than CO₂ over 20 years — fugitive emissions are both a climate risk and lost revenue
- Digestate storage is the most under-addressed source; upgraders vary from 9.5% leakage to near-zero
- Portfolio LDAR (~1,000 surveys) averaged 8.8 kg/hour; spot surveys badly understate real leakage



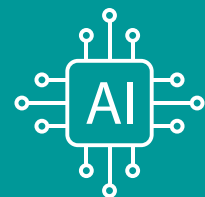
DESIGNING SAFE & RELIABLE PLANTS

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- Incidents come from gradual erosion - drifting sensors, normalised alarms, “temporary” fixes - not one-off failures
- HAZOP reviews surface 100–300 findings per plant; most incidents occur during maintenance, not normal running
- “Safe plants are reliable plants” - a genuine safety culture beats a compliance culture built only to pass audits

DIGITALISATION & AI FOR OPERATIONS



- Plants run “half blind” on fragmented, delayed data - fix the data foundations before investing in AI
- Poor visibility is costly: an undetected process shift can cost ~€1m, and cutting flaring is a £150k–£300k quick win per plant
- Best results pair physics/chemistry models with ML, human-in-the-loop, with client data never pooled





THE ROLE OF ADDITIVES

- Additives' biggest payback is preventing catastrophic digester failure — two Irish failures cost millions last year
- A bioaugmentation trial (500 kWe CHP) lifted energy output +9.5% and BMP conversion +9.6% over 13 weeks
- Biochar (Raft Energy) sharply reduced ammonia and lifted biomethane yield up to +38% in field trials; approaches are synergistic

DIGESTATE AS A HIGH-VALUE PRODUCT



- Value depends on consistent quality, farmer confidence and a functioning market; PAS 110 is “the start, not the finish”
- Volumes could grow 5–6× by 2050 (~24→135 Mt), worth ~£835m in displaced fertiliser by 2030
- Processing technology is mature but unfunded — and NI's draft rules bar “high-phosphorus” digestate from ~50% of grassland

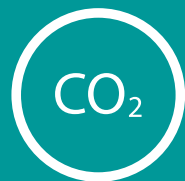
LANDFILL GAS: FROM EMISSIONS TO ENERGY

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- UK landfills keep emitting for 20-30 years; ROC accreditations start expiring at the end of March 2027
- Upgrading captures ~3× more energy to market than CHP; the top-100 landfills hold ~5 TWh, ~80% grid-connectable
- The GGSS excludes landfill gas - RTFCs and the expanded UK ETS are the main routes to market

CO₂ CAPTURE & BIOGENIC CARBON PATHWAYS



- Biogenic CO₂ (around 45% of raw biogas) is worth £20-80/t for industry, up to £400+/t for permanent storage -additionality is the safeguard
- Certificate prices range from ~€10 to €150/MWh; RePowerEU's 35 bcm-by-2030 target looks more like ~10 bcm in practice
- New demand is emerging from Fuel EU Maritime (bio-LNG) and AD-hosted AI “micro data centres”



LET'S MAKE BIOGAS HAPPEN

THE WORLD
BIOGAS **EXPO** 2025
9-10 JULY, NEC, BIRMINGHAM, UK

GLOBAL BIOGAS REGULATORY FRAMEWORK

GLOBAL BIOGAS REGULATORY FRAMEWORK

A biogas-specific framework with all the policies, regulations and standards that are needed to realise a high-performing biogas industry at the national level.



ADCS
INTERNATIONAL

ANAEROBIC DIGESTION CERTIFICATION SCHEME INTERNATIONAL

An independently audited, biogas-specific certification scheme designed to improve health, safety, environmental and operational performance.



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