NEWS REVIEW

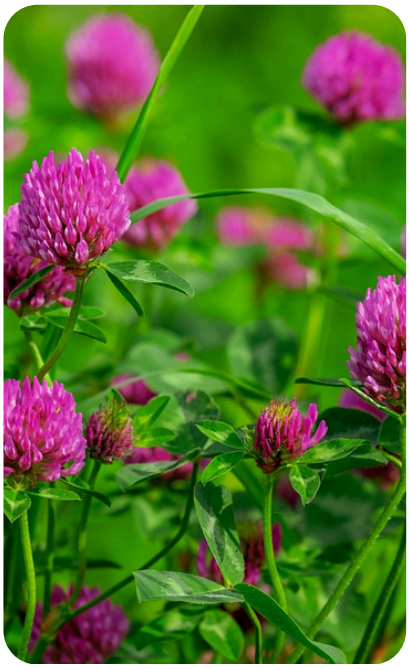
Alder BioInsights

February 2026

Bioenergy

Each month we review the latest news and select key announcements and commentary from across the bioenergy sector.

Announcements & Commentary



Research & Development

Providing clients with a strategic view of feedstock, technology, policy and marketing opportunity across the bioeconomy.

FOREWORD

Welcome readers, to this month's Bioenergy News Review.

Across the globe, the narrative of "livestock waste disposal" is gradually being replaced by the concept of "energy recovery". This month, we specifically highlight several landmark projects that demonstrate the global deployment of energy projects utilising animal wastes.

In Penang, Malaysia, the recently launched Kampung Valdor Centralised Biogas Facility is already demonstrating what scaled, professionally managed livestock waste-to-energy can deliver in practice. Serving 20 pig farms with around 30,000 pigs, the plant processes roughly 132 tonnes of pig waste per day and has produced up to 0.6 MW of power under intermittent operation, with a design capacity of 1.2 MW and about 1 MW available for export to the national grid. The privately financed, £4.9 million investment has created skilled jobs, reduced odour, and improved the local environment, illustrating how centralised infrastructure can underpin both environmental compliance and rural economic development.

Further east in Vietnam, livestock operations are being redesigned through the widespread on-farm adoption of biogas digesters and generators. The Bio-energy for Circular Agriculture project, supported by the Australian Government and implemented by Netherlands Development Organisation (SNV), had by end-2024 installed 120 biogas generators by Chinh Phat Company at 98 farms across 24 provinces, processing more than 3.2 million tonnes of livestock waste per year and generating over 16,800 MWh of clean electricity. The scheme has not only benefited Chinh Phat Company, with 70% of its revenue coming from such installations, but it has been a success for farmers who have reported more stable power supplies, lower emissions and energy cost savings of up to 25%, while also benefiting from additional jobs and income for local workers.

In South Korea, ambition is being codified into policy. The Ministry of Agriculture, Food and Rural Affairs has finalised a comprehensive plan to convert up to 1.18 million tonnes of livestock manure per year into solid fuel by 2030 - generating enough electricity for 38,000 households annually and cutting greenhouse gas emissions by 500,000 tonnes, the equivalent of removing 360,000 cars from the roads. To achieve sufficient supply, the ministry said it will aim to construct 25 production facilities by 2030 and increase funding to provide installation support. It also said it will intensify R&D to ensure reduced cost and emissions tied to producing the fuel.

In Africa, Egypt is also investing in biogas technologies. The opening of the country's first pilot biogas unit for collecting and recycling slaughterhouse waste at Kafr Shukr in Qalyubia this February is a milestone in a broader national strategy. The unit was established by the Bioenergy for Sustainable Development Foundation under the Ministry of Environment, which also reports that a medium-sized biogas unit model is being implemented at the Khanka slaughterhouse in Qalyubia Governorate. Further, they also made public that a feasibility study is underway to establish a large-scale biogas plant in the New Valley at an estimated cost of around £200k. This project will utilise waste from a 3,000-head cattle farm and is expected to generate approximately quarter a million pounds in its first year through the production of organic fertiliser and renewable energy.

Read on for the latest news

Policy

Alicia Newton, Senior Scientific Officer at Drax: "Here comes the science bit – concentrate!"

@ibreakstock via Canva.com

As Senior Scientist at Drax, it's my job to bring the latest science into our business. My team and I are the "science bit".

We take the latest scientific thinking on everything from sustainable biomass sourcing to electricity grid resilience and make sure it shapes how we think and operate as a business.

Science, by its nature, is dynamic and keeping a business at the leading edge is a full-time endeavour, requiring collaboration with the science and academic community, as well as Government and regulators.

This month we held our inaugural science summit, Positively Net Zero, which brought together these groups to assess the underpinning science and future science needed to deliver positive outcomes for people, climate, and nature in Yorkshire, the Humber and beyond.

One key takeaways from the event was the fact that the right policy frameworks unlock private investment. The UK's consultation on a common biomass sustainability framework was highlighted as a particularly welcome example of policy enabling industrial investment...

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EU sets world's first voluntary standard for permanent carbon removals

The Commission adopted the first set of methodologies under the carbon removals and carbon farming (CRCF) Regulation to certify activities that permanently remove CO_2 from the atmosphere. By adopting these first voluntary certification methodologies, the EU is setting clear rules and creating new opportunities for climate innovation, investments in carbon removal technologies and addressing greenwashing. This milestone positions the European Union as a global leader in carbon removals, helping to create an emerging market for both innovative start-ups and a major EU bioeconomy while supporting the EU's objective of becoming climate-neutral by 2050.

The new rules cover three types of permanent carbon removal activities, selected for their technological maturity and potential contribution to the EU's climate objectives:

- Direct air capture with carbon storage (`DACCS')
- Biogenic emissions capture with carbon storage (`BioCCS')
- Biochar carbon removal (`BCR').

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Circular economies - residual waste policy & international learnings

WRAP's "Circular Economies" report explores how residual waste policy fits into the UK's circular economy ambition, flagging opportunities to strengthen the national residual waste policy framework.

Even in a circular 'design-make-reuse' economy, there will be residual waste, although much less than in the current linear economy. "Circular Economies" outlines the policy framework needed to minimise this residual waste and assesses the UK policy mix. It compares this mix with other policies, finding key opportunities where the UK could strengthen its policy framework.

Key findings

- Best-practice residual waste management complements, rather than competes with, upstream circular activities such as reuse, repair, and recycling.
- On face value, the UK has a high-class waste management system.
- Based on all international cases reviewed, the largest opportunity for improvement in the UK remains diversion of waste from landfill.
- Ensuring maximum value retention of residual material through EfW is an option to support the CE with the inevitable remaining residual waste.

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Contribution of biogases to achieving the Sustainable Development Goals

Biogas is already a significant contributor to reducing greenhouse gas emissions and plays a crucial role in advancing the Sustainable Development Goals (SDGs).

Often upgraded to biomethane, biogas shares the same physical properties and heating value as natural gas, enabling it to directly replace fossil fuels in sectors such as electricity generation, transportation, and industrial processes.

Biogas can enhance agricultural productivity by improving crop yields while replacing fossil-based alternatives. In rural communities, it can transform women's roles in society, promote gender equality, and strengthen water management systems by increasing resilience and reducing water stress...

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Markets

EBA Statistical report 2025

@Carla Tomulescu's via Canva.com

The EBA Statistical Report offers the most comprehensive overview of the current status and future potential of Europe's biogas and biomethane sectors. It covers all the EU-27 Member States as well as Iceland, Serbia, Norway, Switzerland, the UK and Ukraine.

The report features in-depth analysis of the European energy landscape, the diverse applications of biogases, digestate and bio-CO_2 production, and the sectors' economic contribution to Europe. It also includes detailed country-by-country profiles...

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Bioenergy Europe's Report: Europe's energy security starts with renewables

Bioenergy remains Europe's largest renewable energy source, providing around half of the EU's renewable energy supply and supporting the defossilisation of the European economy. In 2023, bioenergy represented 51% of the EU renewable energy mix, underlining its role in reducing emissions and reinforcing energy independence through the use of local resources.

The Landscape Report also highlights why system integration matters as fossil fuels are phased out: combining renewable solutions is essential to manage seasonal demand, ensure flexibility, and keep energy affordable for citizens and businesses.

Heating is one of Europe's most fossil-dependent sectors. Fossil fuels still account for 73% of heating in the EU, generating around 1.5 billion tonnes of CO_2 emissions per year, a trajectory incompatible with the EU's long-term climate objectives. In 2023, renewables covered only about a quarter of heating and cooling demand, but within renewable heat around 81% came from biomass...

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Biomass, an energy that is still undervalued

In an interview with Les Affaires, Roberta Dagher explains why, despite the availability of a lot of biomass residues, it does not play the key role it could play in the transition to a carbon-neutral economy. In particular, it is not clear to "create the winning conditions at each stage of the value chain", which would ensure optimal use of biomass.

To help companies and other stakeholders decide whether the use of biomass is relevant for their activities, they can refer to the tool developed by the EIT, the Biomass System Perspective, which allows them to compare the resources and uses of biomass. Roberta Dagher recalls that the tool, available in open access, offers "a multi-scale and multi-sector perspective" and allows you to make a "wise and informed" investment choice.

Click here for more information.

Research and Development

Teagasc unveils new study on agricultural feedstocks for Ireland's emerging biomethane industry

@leightrail via Canva.com

Teagasc announced the publication of a landmark research report assessing the potential for agriculture-based anaerobic digestion (AD) to support Ireland's growing biomethane industry.

The report, produced under the FLEET Project (Farm Level Economic, Environmental and Transport Modelling of Alternative Feedstocks for Regional Anaerobic Digestion), delivers the most comprehensive assessment to date of the economic viability, environmental impact, and logistical challenges involved in using grass and animal waste as a feedstock for biomethane production at a national scale...

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Grass2Gas: A USDA-NIFA sustainable agricultural systems project

@153photostudio via Canva.com

C-CHANGE: Grass2Gas is advancing research, education, and extension to support development of a new biobased value chain. The multi-institutional team from Iowa State University, Penn State University, and Roeslein Alternative Energy is assessing ways to increase the use of perennials and winter crops as feedstock for anaerobic digestion. The novelty of the project lies in leveraging a successful business model based on the digestion of manure to encompass new agricultural feedstocks, more diverse products, and increased value throughout the supply chain...

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Enhancing anaerobic digestion of food waste using cauliflower stem-banana peel

The volatile fatty acids (VFAs) build-up impedes the anaerobic digestion of food waste by lowering reactor pH and causing system instability. To address this, an abundant agricultural byproduct, banana peel (BP), and cruciferous vegetable waste (CL–cauliflower stem waste) were evaluated as co-substrates for food waste. Their alkaline nature offers buffering capacity, enhancing pH stability and mitigating acidification during digestion...

Click here for more information.

Biomass Heat & Power

Croatia to build biomass-powered data centre using olive oil waste

@xoxostd via Canva.com

A Croatian engineering firm is developing a data centre that will run on biomass energy generated from waste material produced by the country's olive oil industry.

Inovapro plans to construct what it describes as a "green AI data centre" in Čaporice, near Trilj, approximately 30 miles northeast of Split. The €20 million facility will have a capacity of around 3MW and is expected to be completed in the first half of 2027.

The project's key feature is its integration with an adjacent energy park that will convert olive production waste and discarded materials from Croatia's tourism and hospitality sectors into biomass power.

After olive oil extraction, most of the fruit becomes waste, and the leftover material — known as pomace — poses disposal challenges due to its acidity and toxicity.

The two facilities will operate symbiotically. Excess heat from the data centre will be redirected to the energy park, where it will help dry olive pomace. The park is designed to process up to 12,900 tonnes of bio-waste each year across a five-hectare site, effectively transforming a disposal problem into an energy resource...

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Elridge Energy expands Thai footprint with 100k-tonne biomass supply deal

Elridge Energy Holdings Bhd is expanding its regional biomass fuel footprint by securing a one-year biomass fuel supply agreement with Thailand-based Berkana Power Company Ltd.

Under a memorandum of understanding signed on Wednesday (Jan 21), Elridge's wholly owned Bio Eneco Sdn Bhd will deliver an estimated 100,000 tonnes of biomass fuel for a year to Berkana Power via 10 shipments. The deal comes with an automatic renewal option, subject to mutually agreed terms.

Elridge Energy CEO Oliver Yeo said the agreement reflects Bio Eneco's ability to support regular, high-volume biomass fuel deliveries for regional power generation demand, adding that Thailand remains an important market for biomass energy.

Yeo added the following:

> 'Beyond the annual volume, the shipment cadence and renewal structure provide operational visibility and flexibility for both parties. This aligns well with our strategy of building a balanced contract portfolio across long-term and shorter-cycle supply arrangements in the region'

Click here for more information.

Read the MoU here.

Energy from Waste

enfinium agrees 25-year bulk heat supply with SSE for Aire Valley Heat Network

@Truecreatives via Canva.com

enfinium, a leading UK energy from waste operator, today announces a 25-year agreement with SSE to become the anchor supplier of low-carbon heat from its Skelton Grange energy from waste (EfW) facility into the Aire Valley Heat Network. The deal will support local industry and future growth in low-carbon heat across Leeds.

Under the long-term agreement, enfinium will provide an initial 6MWth of bulk heat from Skelton Grange. This will enable SSE to expand the heat network to serve more local businesses and, over time, potentially homes in the surrounding area. The bulk heat supply is expected to become operational from Q1 2027, with phased expansion thereafter in line with growth of the Aire Valley Heat Network and demand from local users.

Over its lifetime, the initiative will help to anchor a circular economy approach in the Aire Valley: unrecyclable waste diverted from landfill, turned into reliable local energy, and used to support essential infrastructure on the doorstep of the facility.

The agreement builds on SSE's role in developing phase one of the Aire Valley Heat and Power Network, which has received £10.81m from the Government's Green Heat Network Fund...

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South Korea to power 38,000 homes from livestock manure by 2030

South Korea's Agriculture Ministry said Monday it plans to generate enough electricity for about 38,000 households a year by 2030 by converting livestock manure into solid fuel, a project aimed at expanding renewable energy use in rural areas while reducing odor complaints.

The Ministry of Agriculture, Food and Rural Affairs said it finalized a promotion plan built around three tracks: improving fuel quality, expanding demand and increasing production capacity.

To raise output and cut costs, the ministry said it will support farms with bedding materials such as rice husks to help lower moisture, odor and chloride levels. It said it will also consider carbon reductions from faster manure collection and alternatives to composting and link them to low-carbon support programs.

The ministry said it will ease the moisture requirement for manure-based solid fuel to below 50% from below 20%. An official said the tighter standard required costly drying equipment and energy, while the 50% level would allow use of existing composting facilities for drying...

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Wangneng Environment to Build $173 Mln Waste-to-Energy Facility in Uzbekistan

Chinese company Wangneng Environment plans to invest $173 mln in the construction of a waste-to-energy plant in Uzbekistan's Bukhara region, according to Yicai Global.

The facility is expected to process up to 1,500 tonnes of waste per day, with construction scheduled for completion in 2028. Revenue is projected to come mainly from waste disposal services and the sale of electricity...

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Biogas

New biogas plant begins operation at Svalbard airport

@Joerg Mangelsen via Canva.com

A new biogas plant has begun operation at Svalbard Airport, providing a fossil-free solution for both electricity and heating.

Utilising liquefied biogas (LBG) as its energy carrier, the modular energy plant has been designed to cover all of Svalbard Airport's electricity and heating demands.

The facility is made up of three micro gas turbines for power generation, which are used in tandem with heat recovery and a biogast boiler for more efficient production of thermal energy for heating purposes...

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Engie inks sector-first biomethane supply deal with PepsiCo UK

Engie, has won a 10-year deal to supply biomethane for PepsiCo UK, the French utility said on Wednesday, marking the first such deal between a biomethane producer and a food industry player in Britain.

PepsiCo UK will buy 60 gigawatt hours of biomethane a year from Engie's newly-built anaerobic digestion plant in Northern England, the utility firm said.

The facility is expected to start up in the second half of 2027 and will supply renewable gas equivalent to the annual consumption of about 5,000 households, it added...

Click here for more information.

Penang launches biogas plant to turn pig waste into renewable energy

Penang has implemented a long-term solution to address a long-standing environmental challenge in managing livestock waste with the launch of the Kampung Valdor Centralised Biogas Facility in South Seberang Perai here.

Penang Chief Minister Chow Kon Yeow said the Valdor facility has been operational since March 2024 and centralises treatment while converting livestock waste into renewable energy within a regulated and professionally managed system...

Click here for more information.

Taurus RNG awarded $10M to build world's first integrated anaerobic digestion & carbon sequestration facility

Taurus Canada Renewable Natural Gas (RNG) Corp. announced today the company has been awarded $10 million in funding through the Government of Alberta's Technology Innovation and Emissions Reduction (TIER) program to construct a fully integrated anaerobic digestion and carbon sequestration facility that will produce natural gas (RNG) exclusively from livestock manure in partnership with with KCL Cattle Company and Kasko Cattle Co.

The announcement was made at a press conference at Kasko Farms Headquarters attended by Honourable Grant Hunter, Minister of Environment and Protected Areas, Government of Alberta; Kelly Ogle, Board Chair, Emissions Reduction Alberta; Phillip Abrary, Chairman & CEO, Taurus RNG; and, Ryan Kasko, CEO, Kasko Cattle Company.

At the press conference, Alberta's government announced it is investing $28 million from the industry-funded Technology Innovation and Emissions Reduction (TIER) program to support six new technology projects designed to reduce costs, improve efficiency, and lower environmental impacts. The funding will be delivered through Emissions Reduction Alberta's Industrial Transformation Challenge.

Click here for more information.

Egypt opens first biogas unit utilizing slaughterhouse waste

@snowflock via Canva.com

The Minister of Local Development and Environment Manal Awad inspected the biogas unit at the Kafr Shukr slaughterhouse in Qalyubia, affirming the government's commitment to maximizing the use of animal waste from slaughterhouses to produce organic fertilizer and renewable energy, preserve the environment, and support economic development.

Dr. Manal Awad stated that a medium-sized biogas unit model is being implemented at the Khanka slaughterhouse in Qalyubia. She also noted that a feasibility study is underway to establish a large-scale biogas plant in the New Valley at an estimated cost of EGP 13 million...

Click here for more information.

From waste to watts: Biogas power reshapes Vietnam's livestock farms

Tran Xuan Phong's farm in Pho Yen Commune of the northern province of Thai Nguyen appears calm, orderly and carefully balanced, presenting a sweeping landscape of green fruit orchards and still fish ponds spread across a gentle hillside.

The scene contrasts sharply with common images of a 4,000-head pig farm, with none of the clutter, odor, or heavy industrial feel often associated with large-scale livestock operations.

Covering about six hectares near the upper reaches of the Cong River, it follows a closed-loop garden - pond - livestock model, where waste is recycled within the system and becomes part of a sustainable green production chain rather than an environmental burden.

Phong raises 4,000 pigs per batch, with two production cycles a year, producing around 1,000 tons of pork annually.

Since establishing the farm in 2018, his biggest challenge has been managing waste and odors from large-scale livestock production. Previously, waste was discharged directly into the environment, or methane was flared to control odors, creating risks of pollution and greenhouse gas emissions.

Click here for more information.

Carbon Capture

The Vicat Group awarded a "Grand Projets Industriels de Décarbonation" (GPID) grant for its VAIA project

@natalyadanko via Canva.com

This new grant marks a key milestone in the development of the VAIA project. Studies are ongoing and the final investment decision is scheduled for 2027. The VAIA project aims to capture and store 1.2 million tons of CO_2 per year at the Montalieu-Vercieu cement plant, the largest in France. It also enables the creation of a unique value chain, serving as the initial anchor point in the Rhône Valley for a complete sector covering the capture, transport, use, and liquefaction of CO_2 for storage.

The GPID grant is part of the French government's Major Investment Plans to accelerate the country's ecological and industrial transition. This program aims to support innovative and structuring projects, particularly those that contribute to the decarbonization of industry, the modernization of infrastructure, and the competitiveness of strategic sectors...

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Malaysia and Japan plan major cross-border carbon capture project, despite climate benefit doubts

@BeholdingEye via Canva.com

Japan wants to ship carbon emissions to Malaysia in a first-of-its-kind project in Southeast Asia for carbon capture and storage, a widely debated process that critics say is more symbolic than effective in curbing climate change.

Despite such doubts, Malaysia is positioning itself as Southeast Asia's hub for the alternative technology, a three-step process that captures, transports and buries carbon dioxide which contributes to climate change. With about 81% of Malaysia's electricity generated from fossil fuels, climate activists say carbon capture is an expensive distraction from proven emissions-reducing actions such as transitioning to renewable energy.

Japan, one of the world's top carbon emitters, plans to ship emissions from its heavily polluting industries –– spanning electric power, oil refining, cement, shipping and steel –– to Malaysia within the next few years. If the project succeeds, experts say it may blaze a path for other Southeast Asian nations with carbon storage potential, like Indonesia and Thailand...

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Octopus Energy Generation invests $1bn in cutting-edge Californian clean tech to boost UK growth

Octopus Energy Generation, one of Europe's leading investors in renewable energy, is injecting nearly $1 billion in California's next-gen tech scene – deepening its foothold in one of the world's most advanced clean energy markets.

Through its funds, Octopus will back two Californian carbon removal companies pioneering grassland restoration and reforestation to transform degraded land into high-quality CO2-absorbing assets – with several Big Tech companies already lined up as carbon credit offtakers.

The newly unlocked funding will also invest in heat batteries to fast-track the decarbonisation of hard-to-electrify industries. Developed in the innovation-driven Bay Area, the tech allows swapping polluting fossil-fuel boilers with systems powered by renewable energy.

Additionally, Octopus will acquire a solar and battery project in California, aiming to help turn the state's abundant sunshine into clean, cheap power. The project is expected to become fully operational by July 2026.

This builds on Octopus's previous investments in state-side clean tech infrastructure, with the company aiming to deploy a total $2 billion in the U.S. energy transition by 2030.

The UK and California are true leaders in the clean energy space. In 2024, Britain's clean energy economy grew three times faster than its overall economy.

Click here for more information.

Events

3rd - 4th March 2026
Carbon Capture Summit 2026

CONFERENCE

London, UK

Click here for more information.

4th - 5th March 2026
Energy from Waste Conference 2026

CONFERENCE

London, UK

Click here for more information.

10th - 11th March 2026
From Projects to Market: Scale Up CCUS, Connect Europe

CONFERENCE

Rotterdam, Netherlands

Click here for more information.

4th March 2026
2026 Europe Forum on Carbon Capture and Storage

FORUM

Brussels, Belgium

Click here for more information.

25th - 26th March 2026
Future of BioLNG: Europe 2026

CONFERENCE

Turin, Italy

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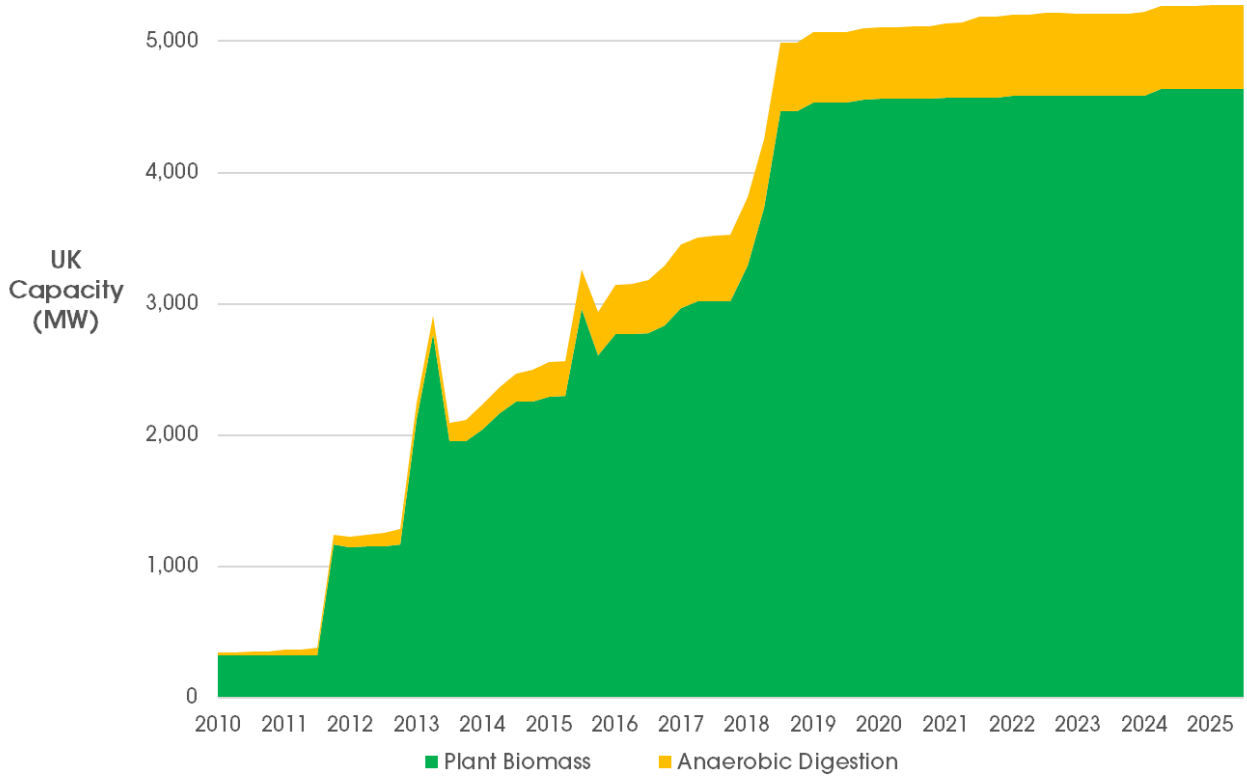
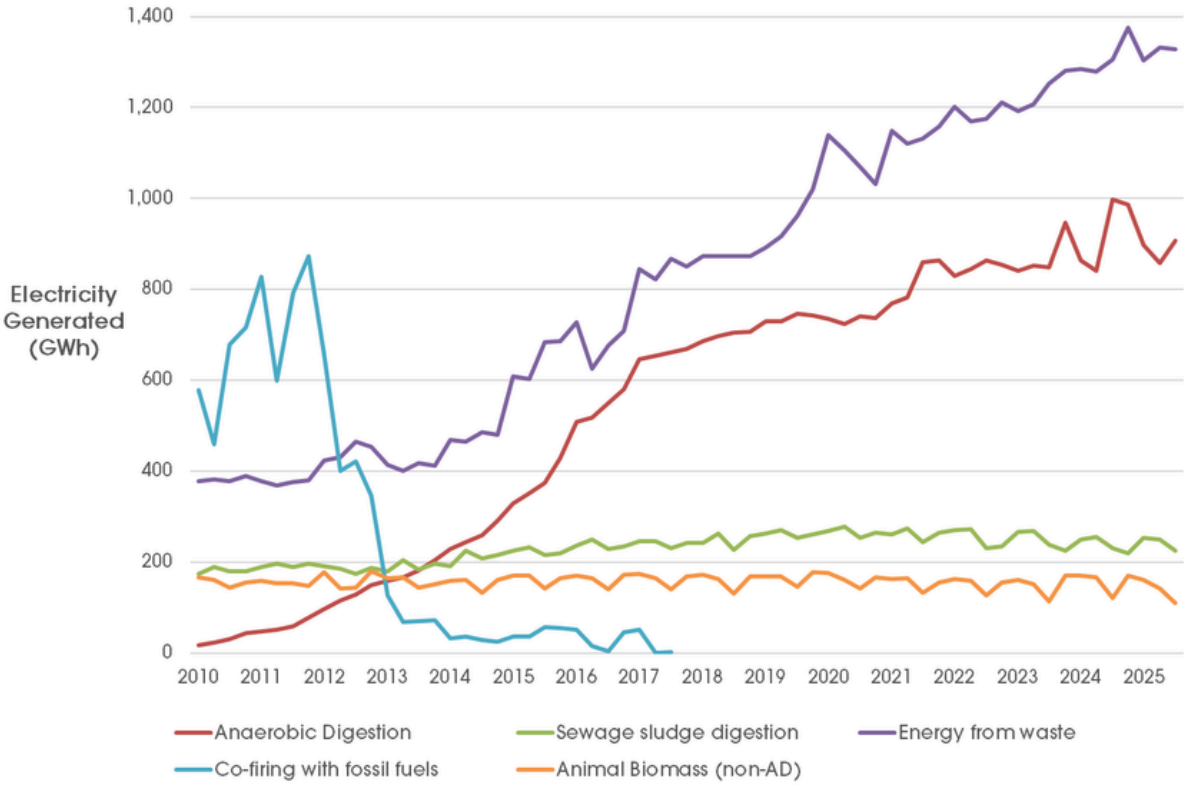
Deployed biopower capacity

Quarterly information on installed electricity generation capacity from plant biomass and AD (Office for National Statistics)



Quarterly information on UK renewable electricity generated from various bioenergy resources (Office for National Statistics)



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Alder Bio Insights is a leading international consultancy with expertise on the conversion of biomass to bioenergy, biofuels and biobased products.

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