

NNFCC News Review

Bioenergy



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

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Foreword

Welcome all subscribers, to our October Bioenergy News Review.

In June of last year, the UK Parliament ratified the country's goal to become Carbon Neutral by 2050. Taking the greenhouse gas emissions recorded in 1990 as a baseline – as they were the highest in the last 30 years – the UK will aim to reduce its emissions from the Industry, Energy Supply and Transport sectors in particular. Furthermore, any unavoidable CO₂ emissions will be balanced out by “carbon sinks” which will trap as much carbon dioxide emissions as possible.

During his latest economic update, the UK Chancellor announced new investments aiming to advance the decarbonisation of parts of the economy. Those projects, worth several billions, will unlock funds destined for housing and public buildings in a bid to render them more environmentally friendly and reduce the CO₂ emissions they contribute. The transportation sector is also joining the national effort and is beginning to unveil new sustainable initiatives which are likely to take the country closer to its 2050 target. This month we report on a new trial that has begun on a HydroFLEX train, running both on electricity and hydrogen. HydroFLEX's success is proof that hydrogen is a viable source of “clean power” and is now part of a greater number of initiatives of this kind. Glasgow for instance, is to receive £6.3 million to develop a fleet of hydrogen-powered refuse trucks.

The North Yorkshire-based power station Drax has taken on board the important and challenging task of establishing machinery capable of capturing CO₂ emissions. The company developed Bioenergy Carbon Capture and Storage (BECCS) technologies able to extract and store the carbon dioxide released while biomass is being burnt. In the next few years, Drax aims to increase its carbon storage capacity with the objective of becoming carbon negative by 2030.

Read on for the latest news.

Policy

Government launches biggest upgrade of nation's buildings in a generation



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Homes, schools and hospitals across England are set to be greener and cheaper to run thanks to a £3 billion plan to upgrade the nation's buildings – the biggest in a generation.

Starting 30th September, homeowners can sign up for big savings on upgrades to their homes under the government's £2 billion Green Homes Grant, with an additional £1 billion announced to improve the energy efficiency of publicly owned buildings.

The Green Homes Grant scheme will see the government fund up to two-thirds of the cost of home improvements up to £5,000. Those homeowners with low-incomes, including those on certain benefits, are eligible for a grant covering up to 100% of the cost of works up to

£10,000. The scheme will improve the energy efficiency of over 600,000 homes.

Grants will be offered to cover green home improvements ranging from insulation of walls, floors and roofs, to the installation of double or triple glazing when replacing single glazing, and low-carbon heating like heat pumps or solar thermal - measures that could help households save up to £600 a year on their energy bills

Click [here](#) for more information.

New plans to make UK world leader in green energy

The Prime Minister has set out new plans to Build Back Greener by making the UK the world leader in clean wind energy – creating jobs, slashing carbon emissions and boosting exports.

£160 million will be made available to upgrade ports and infrastructure initially, to deliver additional offshore wind capacity. Further commitments have been made to ensure that, within the decade, the UK will be at the forefront of the green industrial revolution as we accelerate our progress towards net zero emissions by 2050. These include setting a target to support up to double the capacity of renewable energy in the next Contracts for Difference auction, which will open in late 2021 - providing enough clean, low cost energy to power up to 10 million homes.

Click [here](#) for more information.

Markets

UK Government launched consultation to scale-up biomethane production

The UK Government is planning to scale-up green gas (biomethane) production to heat around 230,000 homes, with more biomethane plants built as a result. Supported by the new Green Gas Levy, the UK Government is helping people across the UK to 'go green' on their energy supplies.

With the potential to prevent as much as 21.6 million tons of carbon dioxide (CO₂) entering the atmosphere, the government's Green Gas Levy will result in only minimal costs for consumers, starting at just 11p per month. The Green Gas Levy was first announced in the 2020 Budget and now a consultation has been launched which invites views on how the final initiative will be designed and implemented.

Charlotte Morton, chief executive of the Anaerobic Digestion and Bioresources Association said that "This new funding will support an ambitious scheme to decarbonise the gas grid – another step towards reaching net-zero by 2050 - at minimal cost to UK bill payers. A fully deployed biomethane industry could deliver a 6% reduction in the UK's greenhouse gas emissions by 2030 and provide heating for 6.4 million homes."

Click [here](#) for more information.

Zero Carbon Humber Partnership submits £75 million bid to advance UK's first net zero industrial cluster



Creative Commons

Twelve leading companies and organisations across the Humber have jointly submitted a public and private sector funded bid worth around £75 million to accelerate decarbonisation in the UK's most intensive industrial region, helping to support clean growth, future-proof vital industries and protect and create new jobs.

Click [here](#) for more information.

EVE to operate Attleborough, Ellough and Holton AD plants

Anaerobic digestion (AD) plants Attleborough Eco Electric, Ellough AD and Holton Renewable Power will be taken over by Eco Verde Energy (EVE) from 1st December 2020. Chris Brown, operations director at the specialist AD operations and advisory company, explains EVE is taking over the contracts from the current operator.

"We're very pleased to be bringing these three plants into the EVE portfolio. Once we take over

their operations later this year, the combined output from EVE-operated plants will be at least 23MW, which includes both gas and electricity," says Brown.

"Our operations, service and back office teams will use their extensive skills and experience to deliver process improvements and optimise outputs from the plants.

"In addition, we are undertaking an expansion project at Attleborough, to enable it to produce biogas for the grid, as well as electricity, with the view to supply the local town of Attleborough with gas for the majority of the 4,000 homes."

Click [here](#) for more information.

New developments in energy from waste industry

An updated renewable energy from waste manifesto has been released by Privilege Finance.

Chris Winward, chief commercial officer at the specialist energy from waste funder, explained that the updated manifesto reviews the industry's progress from social, economic and environmental perspectives, and shares insight on the effect of government policy changes and Covid-19.

Privilege Finance explained that the company remained committed to three key goals; the UK being 100% self-sufficient in energy, zero food waste to be sent to landfill, and to exceed the UK target for net zero carbon emissions by 2050.

Click [here](#) for more information.

Research & Development

UK's First Hydrogen Train takes to the Mainline



Pxfuel

Porterbrook and the University of Birmingham welcomed the Secretary of State for Transport aboard HydroFLEX, Britain's first hydrogen powered train, as it started operational trials on the mainline railway.

The start of mainline testing is the culmination of almost two years development work and more than a million pounds investment in HydroFLEX by both Porterbrook and the University of Birmingham. Porterbrook also announced plans to start putting HydroFLEX into production.

Click [here](#) for more information.

A tour of Drax's innovative CO₂ capture pilot in North Yorkshire



Creative Commons

For the past two years, energy firm Drax has been piloting ground-breaking carbon capture technology at its biomass power plant in North Yorkshire, in a bid to deliver negative emissions - which means removing more CO₂ from the atmosphere than it produces.

Working with C-Capture and other innovative CCS developers, Drax has been successfully capturing CO₂ from the North Yorkshire plant for over a year, and hopes to scale up these efforts in the coming years in pursuit of becoming a carbon negative company by 2030.

Click [here](#) for more information.

The U.S. Environmental Protection Agency funds 12 anaerobic digestion projects

The U.S. Environmental Protection Agency (EPA) announced that the Agency selected 12 recipients expected to receive approximately \$3 million in funding to help reduce food loss and waste and to

divert food waste from landfills by expanding anaerobic digester capacity in the United States. The project types selected for funding include feasibility studies, demonstration projects, as well as technical assistance and training. EPA anticipates that it will make these awards once all legal and administrative requirements are satisfied.

Click [here](#) for more information.

Biomass Heat & Power

Biomass for Heat Statistical Report 2020

Bioenergy Europe has announced the fourth chapter of its Statistical Report 2020 focusing on biomass for heat, highlighting the essential - yet neglected - role of the heating and cooling sector in 2050 European carbon neutrality.

As highlighted in Bioenergy Europe's Bioheat Statistical Report 2020, the National Energy and Climate Plans of European Member States set the average RES share in the sector for 2030 at 40%. While it represents a significant increase from the current share of 19.7%, to achieve carbon neutrality by 2050, the 2030 targets should be revised upwards. The Renewable Energy Directive additionally includes a soft target that aims to drive the penetration of renewables in the heating & cooling sector.

In 2018, 79% of energy sources used in the heating sector continued to come from fossil fuels. Granted, while the phasing out of fossil fuels is daunting, the EU and Member States must implement concrete measures that disincentivize fossil fuel usage, encourage the growth of the renewable sector, and ultimately stimulate the energy transition.

With 49% of bioheat consumed in the residential sector, it is small and medium appliances that dominate, with their modernization, correct maintenance and installation becoming key to curbing air emissions. District heating networks are of equal importance to smart sector integration, as they not only increase energy efficiency but allow access for low carbon sources. Remarkably, 99% of renewable heat in industry comes from biomass, demonstrating that bioenergy is fundamental in aiding industry's transition to carbon neutral energy systems.

Click [here](#) for more information.

Bioenergy Europe's SWITCH4AIR campaign battles better air quality for Europe



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According to the World Health Organisation (WHO), air pollution is attributable to a staggering 4.2 million premature deaths a year. Pollutants, such as particulate matter (PM), nitrogen oxide (NO₂), sulphur dioxide (SO₂), carbon monoxide (CO) and benzo(a)pyrene, can harm human health when high levels of concentration are reached. It is, therefore, crucial to understand the sources of these emissions and tackle them effectively.

With 78.9% of the final energy consumption in the residential sector being used for heating (space & water heating), it is essential to cover this heat demand with decarbonised and clean energy sources.

Whilst wood heating that comes from an existing stock of old and inefficient installations is responsible for some pollutant emissions, modern wood heating installations are quite the contrary. Having closed wood stoves, pellet stoves or boilers are today, highly efficient, with near-to-zero emissions being produced.

As a result, the bioenergy industry is in the driving seat to not only decarbonise heat demand but

also to improve air quality from residential heating, substituting fossil installations and old wood installations with modern biomass heating.

To achieve this objective, four factors play a vital role to decrease emissions from wood heating: replace old appliances with modern ones; improve fuel quality; ensure installers are trained, regular maintenance performed; and raise awareness among users.

Click [here](#) for more information.

Biogas

ESL Shipping first in Finland to use 100% renewable liquefied biogas in maritime transport



Pixabay

ESL Shipping have announced that its vessel m/s Viikki was fuelled in Raahe, Finland with 100% renewable liquefied biogas (LBG) to transport iron ore for the Swedish steel company SSAB. This marks the first time when 100% renewable LBG is used in maritime transport in Finland. LBG reduces

greenhouse gas emissions by up to 85% compared to fossil fuels. The biogas was supplied by Nordic gas sector and energy market expert Gasum.

Click [here](#) for more information.

Glasgow granted £6.3m for hydrogen refuse trucks

Glasgow will receive £6.3m for 19 hydrogen-powered refuse trucks and a hydrogen refuelling station, as part of the UK government's investment into hydrogen power. Glasgow's zero-emission hydrogen lorries will be among the first in the UK, creating green jobs and helping to decarbonise transport.

Click [here](#) for more information.

Households and businesses set to benefit from biomethane boost

Britain's gas grid companies are set to help deliver a biomethane boost, as Energy Networks Association's Gas Goes Green Customer Forum met for the first time recently.

The Forum will bring together all five of Britain's gas networks with gas producers and leading representatives of the biomethane industry, including the Association of Renewable Energy and Clean Technology (REA), and the Anaerobic Digestion & Bioresources Association (ADBA), to agree as a community how they can speed up and simplify the way new sources of green gas connect to Britain's world leading gas networks.

Energy Networks Association's Gas Goes Green programme is forecasting that up to a third of Britain's gas supplies will be sourced from biomethane by 2050 with it working in partnership with hydrogen to replace natural gas, including in those areas of the country where hydrogen production might be more difficult. ADBA estimates that the anaerobic digestion sector could reach its full potential for biomethane production by as soon as 2030.

Click [here](#) for more information.

Ductor to develop 200 biogas and organic fertiliser projects

Finnish-Swiss biotech firm Ductor has closed funding from BW Group to develop 200 new biogas and sustainable organic fertiliser projects over three years.

Ductor will develop the projects in the EU and North America after receiving a significant investment from BW Group.

The new projects, such as biogas plants, will use agricultural or fish waste to create two products: renewable biogas and sustainable organic fertiliser. The circular economy model will help to significantly reduce greenhouse gas emissions from the energy and agriculture sectors.

Click [here](#) for more information.

Buckinghamshire dairy farm unveils cow poo 'fuel station'



Pixabay

A dairy farm in Buckinghamshire has created the UK's first 'fuel station' which transforms cow poo into power in a bid to be more sustainable.

The three month on-farm trial will use manure from around 500 cows to create 27,000kg of biofuel to power dairy delivery trucks. It is part of a sustainability initiative to reduce Arla's carbon footprint by 80 tonnes.

The co-op's farmers will send their cows' poo to anaerobic digestion plants where it will be broken down into different components, including clean bio-methane, and converted into usable fuel. The trial makes the dairy co-operative the first UK business to use waste from its own farms to generate power for its fleet.

Click [here](#) for more information.

Energy from Waste

SSE agrees sale of its 50% share in Ferrybridge and Skelton Grange multifuel assets

SSE plc has entered into an agreement to sell its 50% share in energy-from-waste ventures Multifuel Energy Limited (MEL1) and Multifuel Energy 2 Limited (MEL2) to European Diversified Infrastructure Fund III, an infrastructure fund managed by First Sentier Investors, for a total cash consideration of £995m. The transaction is expected to complete by late 2020 subject to antitrust approval by the European Commission.

Click [here](#) for more information.

Viridor cuts road miles to offer local energy recovery solution to Warrington

Viridor and Warrington Borough Council have agreed a new 52,000 tonnes a year non-recyclable household waste contract supported by the company's Runcorn Energy Recovery Facility (ERF) with an emphasis on a local solution to reduce road miles.

The contract, which started earlier this year, serves Cheshire's largest town (200,000 residents and approximately 90,000 households) for an initial three years with the option of a further two years.

The estimated contract value over a five-year period is £30m.

Viridor Commercial Director Paul Ringham said the contract sees Viridor working with local company, Widnes-based waste transfer station partner, WSR Recycling. WSR turns the waste from kerbside (black bag) collections, community recycling centres and street cleaning waste into fuel and transport it to Viridor's Runcorn Energy Recovery Facility (ERF).

Click [here](#) for more information.

Events

UK Green Gas Day Taster Session *Online, 12th November 2020*

This year's UK Green Gas Day event has been postponed to next year and the new date will be Thursday 22nd April 2021. The organizers are working in conjunction with the REA to hold a Virtual UK Green Gas Day 'taster' Session. This will be held on the 12th November 2020 – the original event day.

Click [here](#) for more information.

European Bioenergy Future *Online, 17th-19th November 2020*

Event moved online due to the Covid-19 outbreak.

The European Green Deal paves the way to transform the EU to become the world's first climate-neutral economy by 2050.

2020 and 2021 are set to become defining years for the energy sector as many key EU legislations will be decided that will strategically frame the future of the industry. So, will the bioenergy industry seize this change and lead the transition?

Click [here](#) for more information.

Decarbonising Yorkshire with Anaerobic Digestion *Online, 15th December 2020*

This online workshop will look at how Yorkshire can make more use of anaerobic digestion (AD) to decarbonise its industry, waste management, farming and transport in order to meet UK targets. It will also consider the implications of the Government's Green Gas Support Scheme expected in 2021 to encourage provision of green gas to the grid.

Click [here](#) for more information.

International Biogas Congress & Expo Brussels, 23rd-24th March 2021

The International Biogas Congress & Expo brings together leading producers, suppliers, regulators and other engaged organisations over a two-day period. High-level speakers, experts in their field, will address a range of topical issues relating to the biogas sector.

Brought to you by Bioenergy Insight, the leading international biogas magazine, this year's conference will be held in Brussels, Belgium and co-located with the International Biomass Congress & Expo as well as the renowned Biofuels

International Conference and Expo, making this series of bio events our largest gathering yet of bio related companies, giving participants unrivalled coverage.

Click [here](#) for more information.

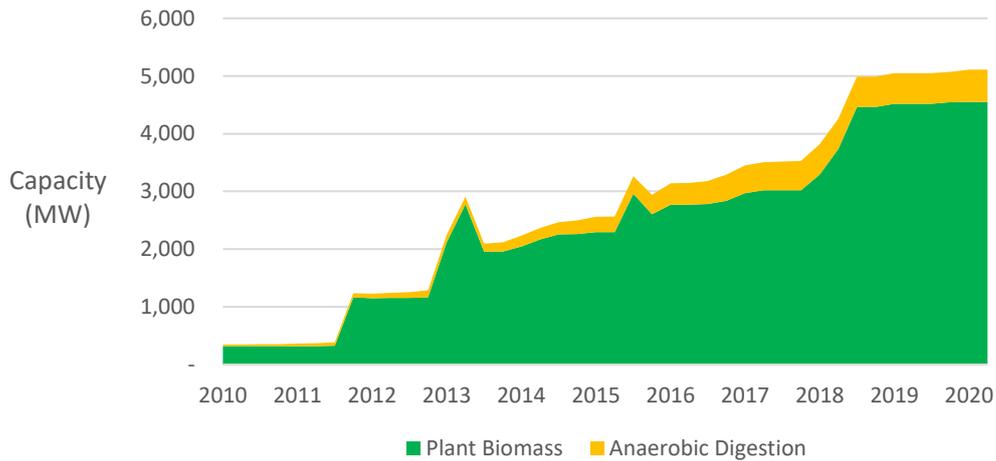
UK Green Gas Day 2021 Birmingham, 22nd April 2021

Come to Green Gas Day to meet project developers and operators, financiers, feedstock providers, waste hauliers, technology providers and government officials. Visit exhibition stands from all of the major suppliers to the biomethane industry. If you interested in Green Gas, this is the one industry event you cannot afford to miss.

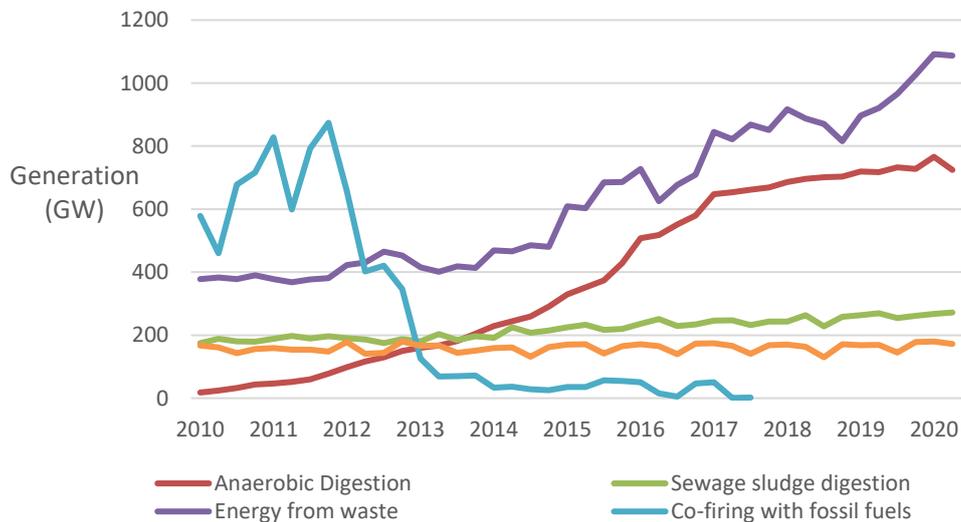
Click [here](#) for more information.

Deployed biopower capacity

Quarterly information on UK renewable electricity capacity



Quarterly information on UK renewable electricity generated, by the Office of National Statistics



Click [here](#) for more information.

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