The Bioeconomy Consultants

NNFCC

Bioenergy

News Review

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

Contents

Foreword

Welcome to February's Bioenergy News Review.

There is a lot of news this month concerning the Renewable Heat Incentive here in the UK. Ofgem have announced the draft versions of the final reforms to the scheme following the 2016 consultation. The new legislation is expected to come into force from April 1st, 2018, and will include new tariff levels and feedstock restrictions for AD. One of the most significant changes will be that the scheme will no longer support digestate drying as an eligible heat use under the scheme, in addition to other applications such as the drying of wood fuel and waste. This policy change has been implemented to ensure that RHI support is provided to legitimate heat uses, and that the unnecessary use of heat is minimised. Removing support for digestate drying is likely to be a major blow for many renewable installations that are struggling to receive funding under the ever-decreasing tariff system. This is an area that NNFCC has experience with, having produced a report for the old DECC government department on the subject in 2016.

This news comes alongside the release of the latest RHI deployment statistics, which have shown an overall drop in uptake for the final quarter 2017. This, however, is not being considered a failure, and is being putdown to the success of the scheme in recent years, with high uptake due to higher available tariffs. The overall 2017 statistics showed a decrease in the number of applications, but an increase in the overall capacity deployed.

In other UK energy market news; the most recent capacity auction resulted in a much lower clearing price than forecast, showing a drop of nearly 63% on the clearing price of a comparable capacity auction in December 2016. This is a good sign for both consumers and the renewables industry, with the high level of competition forcing down capacity subsidies for competing fossil generation, ultimately reducing consumer costs. The primary concern with this auction is that 96% of the capacity agreements allocated were to existing capacity, potentially suggesting that new plants may be unable to establish themselves, increasing the risk of a generation shortfall if demand increases over the coming years.

Read on for the latest news.

Policy

Final RHI reforms drafted

Wikimedia Commons

Draft legislation, that will implement the last reform package of the 2016 RHI consultation, has been laid in Parliament.

These draft regulations will implement the last part of the RHI reform from the 2016 reform. It includes among other: biomethane and biogas tariff changes, feedstock restrictions for AD, tariff guarantees, assignment of rights, degression mechanism update, 20% power efficiency requirements for CHP systems, and changes to eligible heat use.

In the case of the last point, drying of digestate, woodfuel (except where there is an existing fossil-fuelled drying process in place) and drying cleaning or processing wastes will no longer be eligible uses for heat.

It is expected that the legislation will be implemented sometime after 1st April 2018.

Click here for more information.

Ofgem announces targeted RHI audits

In its quarterly Non-Domestic RHI newsletter (Jan 2018), Ofgem reports that as part of its inspection regime for the RHI, two separate targeted audit campaigns were carried out in response to the June tariff degression for biomass installations and regulatory changes to tariffs in September 2017. This included 90 unannounced site visits.

Ofgem found evidence of boilers yet to be commissioned or installed and the submission of false commissioning evidence. As a result of this Ofgem are carrying out fraud investigations and have rejected some applications.

As part of these campaigns and other audit checks Ofgem are also investigating participants using heat for drying to ensure compliance with eligibility requirements.

Click here for more information.

Japan halts set-priced FiT over cost fears

Canadian Biomass reports that at the end of 2017, Japanese regulators announced plans to halt the issuance of set price Feed-in-Tariff (FiT) subsidies for most biomass power plants. Instead, the Ministry of Economy Trade and Industry (METI) will offer a set amount (in MWs of capacity) of FiT contracts for potential suppliers to bid on under a new tendering system.

The announcement comes after the government received an overwhelming response to the FiT subsidy, which was first introduced in 2012. As of September 2017, METI had already issued contracts for more than 16 GW of biomass capacity, far greater than the agency's target of 6-7 GW in 2030. METI has already taken the step of reducing the fixed FiT price for "general wood," which includes pellets, imported woodchips, and palm kernel shell (PKS), from 24 ¥/kWh to 21 ¥/kWh, starting in the fourth quarter of 2017.

METI estimates that the FiT contracts it has issued would put a burden of 1.8 trillion yen ($16.2 billion) on electricity providers, which has prompted it to scale back support for future development.

Japanese wood pellet demand will increase from 500,000 tonnes in 2017 to 9.5 million tonnes in 2025. Total biomass demand in Japan is expected to increase from 7.6 million tonnes in 2017 to 23 million tonnes in 2025.

Click here for more information.

Enquiry continues into Northern Ireland RHI scandal

BBC News reports that a senior finance official who had an important role in approving a botched green energy heating scheme in Northern Ireland said he thought the fund had "a big red button".

Trevor Cooper was head of finance at the Department for Trade and Investment and chaired a key departmental scrutiny committee in March 2012 which reviewed arrangements for the project.

His evidence was read out at the inquiry into the Renewable Heating Incentive (RHI) on Friday (2 January), where it emerged that he did not ask for details of the stop mechanism and he had simply accepted reassurances from officials who were "selling the scheme".

The inquiry was set up to investigate the circumstances surrounding the energy initiative after its costs spiralled. The RHI scheme offered financial incentives to encourage businesses to switch to using renewable fuels to generate heat. But critical flaws meant that its claimants could earn substantial returns, far greater than intended.

That came at the taxpayer's expense and the most recent estimate put the projected overspend at £700m over 20 years, up from an original figure of £490m. The scandal generated significant public concern and the fallout surrounding it led to the collapse of Northern Ireland's devolved administration.

Click here for more information.

Geograph

Markets

UK among furthest from 2020 renewables objective

Eurostat, the statistical office of the European Union, has figures on Renewable Energy use in 2016. The newly published data reveal that the share of renewables (primary production of energy) reached 17% in 2016, with the biggest contributor to that being from wood biomass (44.7%).

The statistics show that renewable use has grown significantly, more than doubling from the 8.5% share of the energy mix of 2004. Overall, the EU is on target to meet its 2020 targets, with some countries having already met their 2020 renewable requirements. The Netherlands, France, Ireland, UK and Luxembourg are apparently the furthest away from their 2020 objectives.

Although their levels of production remained relatively low, there was a particularly rapid expansion in the output of wind and solar power, accounting for 12.4 and 6.3 % share of the EU-28's renewable energy produced in 2016.

Click here for more information.

UK Capacity Auction clears well below forecasts

Geograph

Britain's latest auction for back-up electricity cleared well below expectations but without many new gas projects securing agreements, which are thought to be needed to help bridge the gap when coal and nuclear plants come offline next decade.

The auction for 2021/22 supply cleared at 8.40 pounds ($11.71) per kilowatt (kW) per year, National Grid's website showed, well below the 15 to 25 pounds range which analysts had forecast.

In December 2016, a similar auction for supply four years in advance (2020/21) cleared at 22.50 pounds/kW/year.

Out of the 50.4 GW of capacity agreements awarded, 48.4 GW was existing capacity and interconnectors. Medium and large-sized new gas projects exited the auction above the clearing price.

Britain began capacity auctions in 2014, looking to head off future power shortages as coal plants close and as low electricity prices dissuade investors from building new capacity.

Drax Group said it secured capacity market agreements to provide more than 1.2 GW of capacity from its two existing coal units at its Yorkshire coal and biomass plant. Two new open-cycle gas turbine (OCGT) projects participated in the auction but exited above the clearing price. Drax expects these projects to participate in the next auction for supply four years ahead.

A record amount of capacity, almost 10 percent, was secured by interconnectors which transport power to and from Britain and Europe. Three existing power links, connecting Britain with France, the Netherlands and Northern Ireland won a total of around 2.4 GW.

Three links yet to be built - one connecting Britain with Belgium and two new links with France including Eurotunnel Group's Eleclink - won contracts totalling 2.2 GW.

Click here for more information.

Drop-off in RHI deployment

Latest data from BEIS on the domestic and non-domestic RHI have been released.

In Q4 2017, 169.9 MW of new capacity applied to the scheme. This is lower than the average of the prior 12 months. Over half of the new capacity in Q4 2017 came from a small number of Large Biomass installations.

The general trend on the non-domestic scheme over the last 12 months has been for smaller volumes of larger installations in comparison to previous years. The volume of applications in 2017 (2,077) is lower than 2016 (2,400), but the total capacity of new installations in 2017 (1,142 MW) is higher than 2016 (927.2 MW).

To date, non-domestic applications account for almost 4,600 MW capacity. Almost 90% of the capacity of full applications comes from biomass (Small, Medium or Large).

In total, installations on the non-domestic scheme have generated almost 20 TWh since November 2011. Slightly over 60% of heat generated has been from Small or Medium Biomass, the two technologies with the highest volume of applications. However, over 20% of heat generated to date has been from a relatively small volume of biomethane installations injecting gas into the grid.

In contrast, following early deployment success there is now relatively low interest in biomass within the domestic RHI scheme - but its early impact is still being felt in actual heat delivery

In total, installations on the domestic scheme have generated over 2 TWh of heat since April 2014. Although almost half of the installations that have received payment are ASHPs, only approximately a third of heat generated to date has been from ASHPs. Biomass, by contrast, accounts for less than a quarter of installations that have received payment but over half of heat generated to date. This is partly because biomass installations are, on average, larger than heat pumps. The relative popularity of biomass in the first two years of the scheme means that a large number of biomass installations have been in payment for several years.

Click here for more information.

UK Energy Sector's GHG emissions continue to fall

UK's BEIS has released the final figures on 2016 greenhouse gas reporting. GHG emissions have fallen by 5% overall since 2015, mainly due to the fall in use of coal for electricity generation. Total GHG emissions in 2016 amounted to 468 MtCO2e, which represents a 41% reduction from emission levels in 1990, the baseline reporting year. The UK is deemed to be on track to meet the second carbon budget (covering the period 2013-2017), though these figures will not be finalised until 2019.

Transport is now the largest source of emissions (26%), with energy generation responsible for 25%. The UK transport sector remains a stubborn sector to decarbonise, with emissions only 2% below those of 1990 levels, while emissions from energy supply have fallen by 57% since 1990.

Click here for more information.

Biomass Heat and Power

re:heat to provide advice to Scottish energy users

Scottish energy users will receive advice on low-carbon, environmentally friendly energy alternatives from biomass specialists re:heat.

The Scottish Government and Forestry Commission Scotland have appointed the Northumberland based company to provide "impartial technical and specialist commercial" information to consumers through the Wood Fuel Support Service (WFSS). They will also operate an associated email and telephone enquiry service.

WFSS was set up in the wake of rapid growth in the biomass sector. It aims to offer support and ensure both aspiring and well-established biomass businesses, as well as end-users, have access to the most current, accurate and relevant information available.

Click here for more information.

Eggborough coal power station to close

Eggborough coal-fired power station in East Yorkshire is to close.

The Goole station has announced that it was not successful in the Capacity Market auction for the period 2018-19. Around 200 people are understood to work at the site.

Eggborough Power Limited said it will continue to meet its obligations under the current Capacity Market contract, which runs through to the end of September 2018, but said that without a contract for future years it will cease to be economically viable to continue operations at the station.

The power station was built in 1970 with an expected life-span of 25 years. It comprises four units and supplies 5% of the power in the UK, equivalent to powering around two million homes.

A planning application is currently being progressed to develop a new 2,500-megawatt gas-fired power station (CCGT) at the site, capable of supplying the electricity needs of around 2 million homes but it is anticipated that this would not be operational until the early 2020s.

Click here for more information.

Geograph

Glennmont seeks 500MW in renewables projects to fund

After establishing a third fund, London-based fund manager Glennmont Partners is looking for opportunities to create a new 500-MW portfolio of clean energy infrastructure projects in Europe.

Glennmont says it will continue to invest in solar photovoltaic (PV), offshore and onshore wind, bioenergy and small-scale hydropower assets across the European Economic Area (EEA), targeting both planned and completed plants.

The assets Glennmont seeks should have stable, predictable cash yields underpinned by regulated and contracted revenues. It stressed that the reduction of government support schemes is not so scary now that the cost of renewable power is falling.

Glennmont operates a portfolio of renewable energy generation assets with a combined capacity of more than 840 MW.

Click here for more information.

Delays in Wrexham biomass plant result in court order

A bust up over lack of progress with construction of a £25m Wrexham biomass plant in North Wales has seen the High Court order the contractor to repay nearly £10m.

Liverpool-based Green Plan Energy, with backing from funder Equitix and the Green Energy Bank, appointed Bester Generación UK, part of the global Bester Group, to build the project in May 2016.

The project was designed to generate 34 GWh of green energy a year, enough to power 2,400 homes. As a combined heat and power plant it also had the potential to provide heat to nearby manufacturing businesses.

But works never progressed much beyond the preparatory phase and by July 2017 the developer terminated the EPC contract.

Two weeks later Bester Generación UK told the client it would no longer proceed with the job.

A previous adjudication found that the contractor had not been entitled to an extension of time and was to blame for the delays. And a later adjudication ordered that the contractor repay £9.8m with a further sum of £4,948.45 per day of interest.

Click here for more information.

Biogas

Tamar Energy acquired by Biogen

Biomass Magazine reports that Biogen has expanded its food waste recycling network through the acquisition of Tamar Energy, one of the largest anaerobic digestion (AD) owners and operators in the U.K. The acquisition creates one of the largest independent AD operators in the U.K.

The combined group operates a network of 13 AD plants and six composting sites located across England, Scotland and Wales that provide low carbon, food and organic waste management solutions. Working with supermarkets, the hospitality industry, food manufacturers and local authorities across the U.K., the AD sites recycle over half a million metric tons of food waste each year and provide green electricity generation of 25 MW.

Click here for more information.

AD will assist Scotland in reaching 50% renewables

Geograph

Farming UK reports that The Scottish Government's Energy Strategy, the first of its kind in Scotland, sets a new target for at least 50% of all Scotland's heat, transport, and electricity consumption to be supplied from renewable sources by 2030.

The Strategy notes that biogas and biomethane produced through anaerobic digestion (AD) will have a role to play in helping to decarbonise Scotland's energy system. Charlotte Morton, Chief Executive of the Anaerobic Digestion & Bioresources Association (ADBA), said the creation of more AD plants could boost rural jobs

Existing biomethane sites in Scotland already produce enough gas to supply the equivalent of 85,000 homes, with over 50 operational AD plants spread across Scotland, recycling a range of wastes including animal slurries and manures, food waste, grass silage, sugar beet, and various grains and wheats from Scotland's famous distilleries.

AD is currently delivering 45 MWe of power and 11,000 m3/hr of heat in Scotland, with AD plants across the UK now having enough capacity to power over a million homes.

Click here for more information.

Project aims to produce biomethane from solid biomass

To develop the sustainable production of this green gas at a local level, ENGIE has been developing the Gaya project for several years – a platform for producing biomethane from dry biomass (wood, straw, agricultural and food waste, etc.). Inaugurated in October 2017 at Saint-Fons in Chemical Valley, south of Lyon, Gaya is a key milestone in the development of so-called 2G (2nd Generation) biomethane.

Jointly financed by ENGIE and Ademe (the French agency for the environment and energy management), the Gaya project aims to help meet France's dual objective of cutting greenhouse gas emissions (40% reduction by 2030) and raising the share of renewable gas in overall gas consumption to 10% by 2030.

Gaya is a cutting-edge technological platform that produces biomethane in four stages from the dry biomass that is delivered there.

The biomass is first introduced into a gasifier, in which it is converted to syngas by a thermo-chemical conversion process.

This gas contains impurities; it is purified to remove tars and inorganic compounds. The clean gas thus obtained is fed into a methanation reactor, to increase its methane content. The biomethane is then made compliant with the standard specifications for network natural gas. Covering the whole second generation biomethane production chain, the Gaya platform is designed to trial the efficiency of the complete process.

Click here for more information.

Biofertiliser Certification Scheme's 10th Anniversary

Biofertiliser Certification Scheme reports record membership at the end of its tenth year. The Biofertiliser Certification Scheme is available to assure the safety and quality of digestate and assist operators in raising their profile within the environment sector

The Scheme was set up in 2007 and celebrated its tenth anniversary by announcing a record 67 UK AD plants registered as of December 2017.

BCS certified digestate is widely recognised as high quality and safe by environmental regulators. It thus offers an opportunity for AD operators looking for a reliable market for the digestate they produce. The BCS assures the quality of anaerobic digestion processes and anaerobic digestate. It is an independent certification scheme based on the BSI PAS110:2014 quality standard for all types of AD operations.

It is essential that farmers, land managers, farm assurance schemes, retailers, and consumers can be certain that anaerobic digestate spread to land is consistently safe and of good quality. The BCS quality assurance standards provide all stakeholders with these essential guarantees by certifying that the production process is appropriate and well-managed, based on a robust quality management system, that it is sourced only from permitted feedstocks, and that it has been produced in a hygienic manner.

Click here for more information.

Events

Energy from Waste Conference London, 28th February-1st March 2018

Now in its 14th year, Energy from Waste is the premier conference in the UK and Europe driving new technology discussion, operational efficiency, best practice and compliance in the global energy from waste sector.

With the sector facing many challenges, join industry leaders and peers on 28th February – 1st March in London to explore and debate key issues in waste to energy, and identify growth opportunities.

Click here for more information.

Eco-Bio Dublin, 4th-7th March 2018

ECO-BIO 2018 will highlight the latest research and innovation towards developing industrially viable, safe and ecologically friendly biobased solutions to build a sustainable society.

A topical and comprehensive programme will include plenary and invited speakers, forum discussions, contributed oral presentations, a large poster session and exhibition.

The conference will bring together all concerned with the biobased economy to review industrial, academic, environment and societal approaches, discuss the latest research and progress, and encourage new research partnerships to enable new cascaded biobased value chains.

Click here for more information.

MBRE 2018
Glasgow, 5th-6th March 2018

One source of biofuels has been identified as marine biomass or marine algae. Many researchers are working on the feasibility of using algae as a feedstock for producing bio-fuels. One example of biofuel from marine algae would be the conversion of Marine biomass to methane via anaerobic digestion, which can generate electricity. Another potential for algae is its potential for biodiesel.

The conference aims to explore the challenges and opportunities in the area of marine algae as a source of biofuel. It will highlight the recent developments in research areas such as cultivation of marine algae and research & development of algal—biofuel production.

Click here for more information.

BIOKET
Strasbourg, 6th-8th March 2018

Biomass is a wonderful resource to be transformed into chemicals, biobased materials, food and feed ingredients or energy. Still, adaptation and optimisation of transformation processes and technologies is a real challenge in order to valorise all biomass fraction in a circular approach.

In the context of Industry 4.0, Key Enabling Technologies (KETs) provide the basis for innovation in a range of products across all industrial sectors. BIOKET, the BIOeconomy's Key Enabling Technologies conference, aims to contribute to the rise of KETs by promoting emerging KETs applied in the Bioeconomy's sector.

Click here for more information.

Gasification 2018
Frankfurt, 28th-29th March 2018

ACI's 7th Annual Gasification Summit, taking place on first quarter of 2018 in Frankfurt, Germany, will comprise two days of formal presentations, interactive roundtable discussions and excellent networking opportunities, providing an ideal setting to convene with your peers to discuss both current operational & future planned gasification plants, end product markets, potential barriers & support policies as well as project economics & finance.

Click here for more information.

Global Bioeconomy Summit
Berlin, 19th-20th April 2018

The first Global Bioeconomy Summit was held in 2015 and brought together more than 700 bioeconomy stakeholders from over 80 countries. Since then, Bioeconomy has taken a steep and exciting way forward. Many notable initiatives and collaborative efforts have been initiated by the bioeconomy community in order to drive the development of sustainable bioeconomies in their countries and regions.

The 2nd GBS will focus on emerging concepts and future trends in bioeconomy, the latest on challenges and opportunities related to ecosystems, climate action and sustainable development along with the bioeconomy innovation agendas and global governance initiatives to manage them.

Click here for more information.

All-Energy
Glasgow, 2nd-3rd May 2018

All-Energy, the UK's largest renewable energy event, will take place in Glasgow on 2nd & 3rd May 2018. Join us to hear from 400+ experts from across all sectors of the renewable industry in 50+ FREE conference sessions. Network with 7,500+ renewable energy professionals at one of the many networking events happening over the two days.

Click here for more information.

EUBCE 2018
Copenhagen, 14th-18th May 2018

We look forward to the 26th EUBCE in 2018 in Denmark and to the many vibrant topics that will be included in the agenda. The core of the traditional EUBCE conference will be held over 4 days.

There will however be an extension to the core conference and exhibition in order to showcase the many achievements in the field of full scale biomass utilisation in Denmark that are an integral and major part of the country becoming fossil-free by 2050. Members of the national organising committee will organise special technical visits to sites in the centre of the country where biomass is the key renewable feedstock into processes producing renewable energy, biofuels, biochemicals and biomaterials as well as integrating bioproducts into traditional established fossil-based systems.

Click here for more information.

World Waste to Energy and Resources Summit
London, 23rd-24th May 2018

The World Waste to Energy and Resources Summit brings together its best ever faculty of international waste management CEOs, developers, bankers, private equity financiers, technology providers and industrial end users for two days of intensive networking.

With a firm focus on advanced conversion technologies, the summit addresses the need for innovation – not just in technology, but in policy, finance and partnership models – in order to accelerate the growth of the industry worldwide.

Click here for more information.

RRB 14
Ghent, 30th May - 1st June 2018

The 14th edition of the International Conference on Renewable Resources & Biorefineries will take place in Ghent, Belgium from Wednesday 30 May until Friday 1 June 2018. Based on the previous RRB conferences, this conference is expected to welcome about 350 international participants from over 30 countries.

The conference will provide a forum for leading political, corporate, academic and financial people to discuss recent developments and set up collaborations.

The three-day international conference will consist of plenary lectures, oral presentations, poster sessions and an exhibition. Companies and research organizations are offered the opportunity to organize a satellite symposium.

Click here for more information.

UK AD & World Biogas Expo
Birmingham, 11th-12th July 2018

UK AD and World Biogas Expo, the largest international trade show dedicated solely to the anaerobic digestion and biogas industry, returns in 2018 to provide the latest market and technology news, sector by sector, as well as a platform for industry professionals from the UK and overseas to network, share experiences and do business.

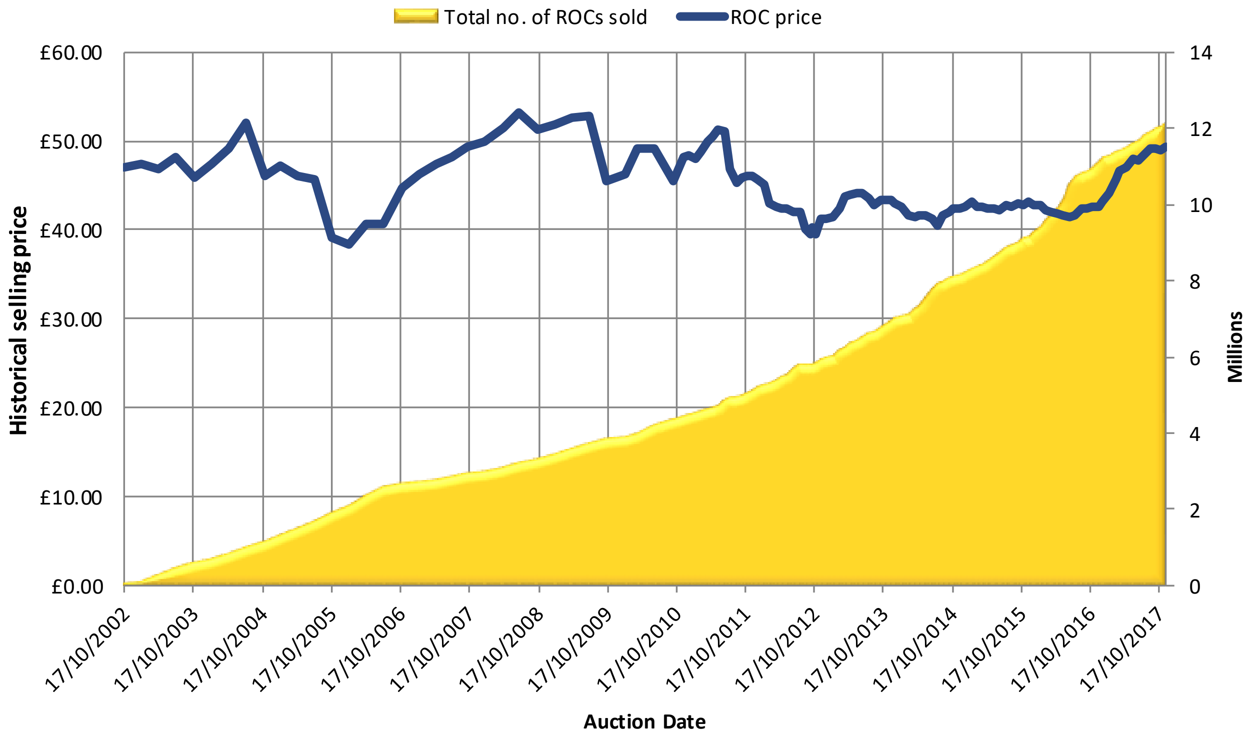
Anaerobic digestion (AD) is a rapidly-expanding sector, with the potential to become a £1 trillion global industry making a significant contribution to the development of a green, circular economy. AD plays a critical part in meeting nine of the UN Sustainable Development Goals, providing solutions applicable to agriculture, urbanisation, waste and water management, transport and energy generation. This creates exceptional opportunities for the AD market to grow, both in the UK and abroad.

UK AD and World Biogas Expo 2018 is unique in bringing together an international gathering of new and existing players in this game-changing sector. Over two full days, it will provide a dynamic platform for them to engage with each other.

Click here for more information.

Prices

Historical auctioned prices of ROCs in sterling pounds, and total amounts of ROCs historically sold.



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