

The Bioeconomy Consultants

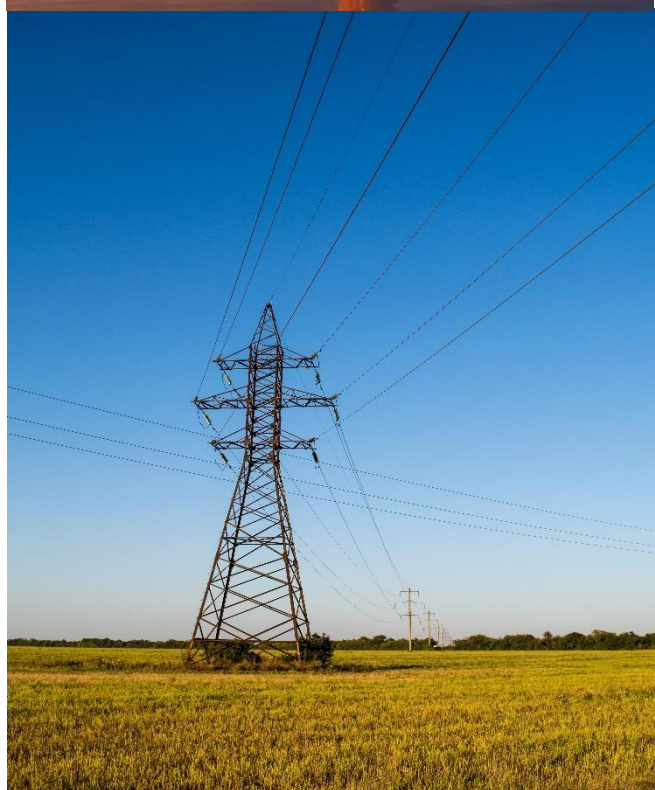


News Review

Issue Seventy-Two

March 2018

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



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Foreword

Hello, and welcome to the March edition of NNFCC's Bioenergy News Review.

We begin with some landmark news from Europe: analysis from Germany has suggested that 2017 was the first year on record that renewable power generation in Europe was higher than power generation from coal. Of the continent's power mix, 20.9% came from renewables (classified as wind, solar, and biomass) as opposed to 20.6% from coal. This is thanks to a 7% decrease in coal generation from 2016, compared with an 8% increase in renewables generation. The significance of this should be celebrated, as it shows how far we have come in changing the energy landscape of Europe to be less carbon emission-intensive. However, it also illustrates how far there is still to go.

Bioenergy's contribution to this transformation should not be understated. As we have previously reported, bioenergy often provides the "baseline" generation of the renewable mix, allowing the more seasonal generation of wind and solar to build on that foundation. Biomass power has also contributed to this shift twofold, in that much of the reduction in coal generation has been down to conversion of coal plants into biomass plants, such as by Ørsted in Denmark, or Drax in the UK, creating a simultaneous reduction in coal and increase in renewables generation. This demonstrates biomass' potential to be the vanguard of wholesale renewables deployment, as it can relatively easily replace coal, if the market allows for it to do so.

Moving away from power and into heat, last month we reported on Ofgem's drive to carry out audits into domestic and non-domestic RHI claimants. The audits are being carried out in order to ensure that all installations under the RHI in the UK are compliant with the rules. Recently, Ofgem held the inaugural RHI Industry Forum, which served as a communication point between Ofgem and RHI claimants. At this Forum, Ofgem discussed the main issues that cropped up throughout the auditing process, of which the main issue among non-domestic installations was insufficient recording of fuel used. This issue cropped up in 70% of installations audited, and several other significant issues, including incorrect meter readings, and incorrect accounting for heat losses. On the domestic front, the most prevalent issue was a lack of evidence of installation, which is an alarming finding.

Read on for the latest news.

Policy

BEIS seeks evidence for future decarbonisation of heating

Building on the commitment in the Governments Clean Growth Strategy to phase out installation of high carbon fossil fuel heating (mainly focussing on discouraging oil and LPG) in new and existing buildings off the gas grid, during the 2020s, UK government department BEIS is now looking for evidence on how this could be implemented.

It would appear any future subsidy would be targeted at low income or vulnerable households.

Click [here](#) for more information.

Auditors share common issues found in RHI audits

The Wood Heat Association recently sat in on the inaugural meeting of the UK Renewable Heat Incentive (RHI) Industry Forum, a new initiative co-ordinated by Ofgem. The meeting included an update on compliance and enforcement and provided information on findings from the auditing programme.

So far, there have been around 500 audits. The number one issue identified by the auditors where an RHI participant was failing to comply with the scheme rules is the lack of fuel records. The Ofgem officials involved said that around 70% of all users audited were found wanting in this capacity.

Other issues that frequently crop up during audits of non-domestic systems are: meter component

installed incorrectly; meter reading/Periodic date submission errors; major errors in the schematic diagram; heat losses are not properly accounted for; external pipework not declared.

The most frequent non-compliances in domestic systems include: evidence of installation not provided; microgeneration Certification Scheme (MCS) Certificate handover pack missing or showing incorrect information; energy Performance Certificate (EPC) contains incorrect information; use of ineligible fuel in biomass projects; Ofgem not informed of a transfer of ownership when a property is sold.

Those worried about not complying with the RHI rules should consult the Non-Domestic RHI Easy Guide to Compliance which provides information on all the things you need to do during the 20 years of their non-domestic RHI agreement. They should also consult the Guide to keeping fuel records. This was produced in 2015 and needs an update but is a useful document as it provides examples of the type of fuel log books that would satisfy the auditors.

Click [here](#) for more information.



Geograph

Ireland publishes bioeconomy policy statement

The Irish Government has published the first National Policy Statement on the Bioeconomy.

The potential benefits for Ireland from the bioeconomy – to contribute to climate change mitigation, promote rural employment and drive economic development – are well recognised. Ireland also has significant strengths and comparative advantages in the bioeconomy including a number of well-established and early stage companies that are promising pioneers in the bioeconomy as well as a growing research capacity. However, there is scope to promote further development to realise the full potential of the bioeconomy for Ireland.

In this context, the National Policy Statement, the outcome of extensive consultation, outlines the key actions needed to expand the bioeconomy, including: promoting greater coherence between the many sectors of the bioeconomy; strengthening the development of promising bio-based products and growing the relevant markets for them; and accessing funding available at EU level as well as leveraging private investment.

These actions can only be progressed by cooperation and collaboration between the public service, industry and the research institutes. The Government has mandated an implementation group jointly chaired by the Departments of Agriculture, Food and Marine and Communications, Climate Action and Environment to take forward a number of major actions, in close collaboration with bioeconomy industries and other partners, and report back to Government within a year.

Click [here](#) for more information.

MPs critical of Green Investment Bank



**Green
Investment
Group**

Green Investment Group

The Green Investment Bank (GIB) 'failed to live up to' its green ambitions and there is little guarantee that it ever will, according to a report by the House of Commons Public Accounts Committee (PAC).

Established in 2012, the GIB was a non-departmental body of the Department for Business, Energy & Industrial Strategy (BEIS) intended to address a lack of private investment in the green economy. The GIB provided public investment (and encouraged private investment) in green infrastructure projects such as offshore wind and waste and bioenergy, and by March 2017, had committed £3.4 billion to 100 projects, along with attracting £8.6 billion of private capital. Over 90 per cent of the Bank's waste sector investment went to energy-from-waste projects.

Only three years after the launch it was announced that the GIB would be sold off to private investors to increase its access to capital, a sale that was completed in August 2017 for £1.6 billion to Australian investment firm Macquarie Group, who rebranded the company as the Green Investment Group (GIG).

The controversial sale process was opposed by MPs and environmental groups amid fears that it would damage low-carbon investment, with Parliament's Environmental Audit Committee (EAC) warning at the time that the process was being 'rushed'. This was corroborated in December 2017 by a report from the National

Audit Office, which stated that the Bank could have been worth more if the government had waited longer for a sale.

The EAC also warned that the sale should not go ahead unless the GIB's environmental aims could be properly safeguarded, and the PAC's report now claims that there is 'no guarantee' that the GIB will ever live up to these aims because 'its green intentions are not sufficiently protected.' In addition, the report accuses the government of choosing to sell the GIB before fully assessing its impact, prioritising the reduction of public debt over the delivery of the organisation's green objectives.

Click [here](#) for more information.

World Bioenergy Association joins IRENA Coalition for Action

The World Bioenergy Association (WBA) is pleased to announce that they have joined the IRENA (International Renewable Energy Agency) Coalition for Action.

In January 2014, the International Renewable Energy Agency (IRENA) and 35 industry and civil society organisations in renewable energy from around the world signed a Joint Statement on Forming a Coalition for Action to Bolster Public Support for Renewable Energy. In 2018, the Coalition for Action has 77 members including private companies, industry associations, civil society, research institutes and international organizations. The Coalition forms a key international network to discuss industry trends, share knowledge and exchange best practices for the global energy transformation.

Click [here](#) for more information.

Markets

Renewables overtake coal generation in Europe

Power generated by wind, solar and biomass in the European Union overtook coal for the first time in 2017, a report by Germany's climate lobbyist Agora Energiewende and U.K. think tank Sandbag showed.

Wind and solar parks and biomass plants dotted from Ireland to Romania raised their share of gross generation in the 28-state trade bloc to 20.9 percent of all power last year, ahead of lignite and hard coal power at 20.6, said the two organizations. A year earlier, electricity from coal was ahead at 21.5 percent of the mix to the clean power group's 18.8 percent.

Utilities like Denmark's Ørsted A/S, Spain's Iberdrola SA and Germany's EON SE are shifting out of coal generation in the EU, joining governments in the U.K., Italy, the Netherlands and Portugal which have pledged to phase out coal power. Germany may announce a phase-out road map in 2019.

Coal-fired power declined 7 percent in the bloc in 2017, led by plant retirements in Germany, the U.K. and the Netherlands, said the report. The shutdowns were partly made on commercial grounds in Germany.

The role of natural gas and hydro power may slow the shift from fossil-fired electricity in the bloc to renewables, the report indicated. Hydro power generation dropped to its lowest in the EU-28 last year while gas-fired power grew.

Click [here](#) for more information.

Research & Development

Assessing US potential for Carbon Capture



Flickr

Bioenergy with carbon capture and storage (BECCS) is a negative-emissions technology that may play a crucial role in climate change mitigation. BECCS relies on the capture and sequestration of carbon dioxide (CO₂) following bioenergy production to remove and reliably sequester atmospheric CO₂. Previous BECCS deployment assessments have largely overlooked the potential lack of spatial collocation of suitable storage basins and biomass availability, in the absence of long-distance biomass and CO₂ transport. These conditions could constrain the near-term technical deployment potential of BECCS due to social and economic barriers that exist for biomass and CO₂ transport. This study leverages biomass production data and site-specific injection and storage capacity estimates at high spatial resolution to assess the near-term deployment opportunities for BECCS in the United States. If the total biomass resource available in the United States was mobilized for BECCS, an estimated 370 Mt CO₂·y⁻¹ of negative emissions could be supplied in 2020. (accounting for approximately 1.5% of total US emissions)

However, the absence of long-distance biomass and CO₂ transport, as well as limitations imposed by unsuitable regional storage and injection capacities, collectively decrease the technical potential of negative emissions to 100 Mt CO₂·y⁻¹. Meeting this technical potential may require large-scale deployment of BECCS technology in more than 1,000 counties, as well as widespread deployment of dedicated energy crops. Specifically, the Illinois basin, Gulf region, and western North Dakota have the greatest potential for near-term BECCS deployment. High-resolution spatial assessment as conducted in this study can inform near-term opportunities that minimize social and economic barriers to BECCS deployment.

Another issue is deciding whether to opt for small scale, local BECCS sites, or creating a transport infrastructure for larger, centralised facilities. The former would save transport costs but be limited to very small-scale projects which would potentially lack the economies of scale needed to contain costs. The latter would need the creation of a pipeline infrastructure which could be expensive, time-consuming and run into local resistance, the authors state.

As of 2017, only one demonstration-scale BECCS project has been deployed globally, with a removal capacity of 1 Mt CO₂·per year.

Click [here](#) for more information.

Biomass Heat and Power

Clarification issued on use of waste wood for heat



Pixabay

Over the last 3-4 years the use of waste wood in biomass systems accredited under the RHI has grown in popularity. However, the guidance for correctly adhering to the rules is confusing and easy to misinterpret. There are guidance documents for both boilers and fuels available from the Environment Agency, Local Authorities, Ofgem and the Biomass Suppliers List (BSL). Unfortunately, some of these documents seem to offer conflicting information and as a result installers and users can easily find themselves treading a fine line between compliance and breaking the law.

The Wood Heat Association has been calling for clarity on the rules relating to waste wood for over three years. As a result of this lobbying, the Environment Agency released a Regulatory Position Statement on waste wood in November 2017. The RPS is relevant to anyone who produces, transports, stores, processes, trades, uses (including burning it in boiler) or disposes of waste wood.

In summary, for the purposes of RHI funded boilers the RPS states that only clean, untreated pre-consumer waste wood can be legitimately used in non-WID (Waste Incineration Directive) boilers.

Many biomass companies have published their own interpretations of the refined rules. However, these are just that – interpretations. There is still no definitive and integrated guidance on the use of waste wood for RHI participants available from Ofgem or the BSL. WHA strongly urge BEIS, the Government department responsible for the RHI to facilitate such a publication as soon as possible.

Click [here](#) for more information.

Five new industrial-scale pellet-burning plants in Europe by 2020

Biomass Magazine reports that according to the European Biomass Association's annual report, of the 21.7 million MT of wood pellets consumed in the EU in 2016, 61.7 percent was used for heat—residential (42.6 percent), commercial (11.8 percent) and heat from combined heat and power (CHP). (7.3 percent). Power plants consumed the remaining 38.3 percent.

Five new industrial-scale pellet-consuming projects are expected to come online between 2018 and 2020, the largest user being EPH in Lynemouth, United Kingdom. The 420-MW, coal-fired power plant is being converted to use up to 1.6 million MT tons of wood pellets, and is due to come online in early 2018. A handful of projects set to come online in the Netherlands this year will create about 1.5 million MT of new demand, and finally, MGT Power's 299-MWe project in the U.K. will consume about 1.1 MT, beginning in 2020.

Click [here](#) for more information.

2017 doubles 2016's biomass deployment in the US



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Biomass magazine reports new data released by the federal government shows the U.S. added 268 MW of biomass power capacity last year, more than double the 110 MW of biomass capacity that was installed in 2016.

The report shows 26 biomass units were placed into service last year, with a combined 268 MW of capacity. In 2016, 57 biomass units were placed into service with a combined 110 MW of capacity.

As of the close of 2017, the FERC estimates the U.S. has 16.68 GW of biomass capacity, which accounts for 1.4 percent of total U.S. installed capacity. The report also indicates that there are proposed capacity additions to be placed into service by January 2021, including 62 biomass units with a combined 890 MW of capacity. In addition, the report shows there are proposed capacity retirements by January 2021, including 21 biomass units with a combined 47 MW of capacity.

Click [here](#) for more information.

Kent Biomass facility close to commissioning

Biomass magazine reports that U.K.-based Kent Renewable Energy Ltd. has released an update of commissioning activities at its facility in southwest England, known as the Kent Renewable Energy CHP plant biomass combined-heat-and-power (CHP) project. The project is beginning the final phase of commissioning and is on track to begin commercial operations in August. Once operational, the plant will generate heat and power for nearby homes and Discovery Park, a centre for science and innovation in Kent, England.

The facility will take in locally sourced wood as fuel. According to Kent Renewable Energy, the facility has created a significant and reliable local market for low grade wood. This market is expected to make woodland management in the region more economic, help local work producers diversify, and help bring more woodland back into active management, while also support supporting the production of higher-quality wood and coppice.

Once the facility opens in August, it will generate more than 27 MW of electricity, enough to supply 50,000 homes while saving more than 100,000 metric tons of carbon dioxide annually.

Approximately 15 to 20 percent of the green energy generated at the Kent Renewable Energy facility will be supplied directly to the tenants of Discovery Park, who will also benefit from the heat generated by steam from the plant.

The project represents an inward investment of approximately £150 million (\$210.03 million). It is expected to support up to 27 new direct jobs, as well as numerous jobs in the supply chain. During construction, up to 400 jobs are expected to be created.

Click [here](#) for more information.

Drax 2017 earnings show growth



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Drax posted its 2017 numbers showing growth in energy output and earnings from renewable energy tariffs.

The growth comes despite a fire in December that reportedly cost the company £10 million (€11.3 million) and as coal is being phased-out of the UK's energy mix.

Energy output was up to 20 TWh in 2017 from 19.6 TWh in 2016, with 65% of this energy coming from renewable biomass. Earnings from Renewable Obligation Certificates totalled £626.7 million and those from the Contracts for Difference totalled £248.2 million, both of these numbers represent an increase from the previous year.

Drax's overall profits were down, however, due to one-off costs related to its acquisition of Opus Energy and depreciation of its coal-related assets.

The company anticipates increased biomass self-supply through the acquisition of Opus and the commissioning of a third biomass pellet plant, LaSalle Bioenergy. Pellet production was up 35% in 2017 compared with 2016.

Click [here](#) for more information.

Montenegro encouraging biomass conversion with loans

With the support of the Luxembourg Development Cooperation Agency and the Government of Norway, Montenegro has introduced an interest free loans scheme to encourage conversion to clean wood fuel systems. So far 775 biomass heating systems have been installed based on the previous 2 rounds of the project.

Over the past three months, in a new third phase of the project, more than 200 interest-free loans have been approved for biomass (pellet and briquettes) heating systems. EUR 10,000 remains from the EUR 85,000 total budget for Energy Wood III, the Ministry of Economy of Montenegro announced. So far, about 90 percent of funds have been spent.

The loans enable citizens to apply for 0% interest rate loans with range up to EUR 3,500 and with a repayment period of 5 years, to purchase and install a heating system based on modern biomass fuels.

The program Energy Wood aims to reduce interest rates for clients, as well as risk for financial institutions, encouraging the development of partnerships between commercial banks and distributors of biomass heating equipment, while reducing total greenhouse gas emissions through the installation of biomass heating systems.

Click [here](#) for more information.

Biogas

REA questions Defra's assumptions about ammonia from digestate spreading

The REA has reported on discussions it has had with Defra officials to discuss their ongoing concerns on ammonia emissions caused by digestate spreading. The Clean Air Quality Strategy is due for publication later this year and will have a heavy focus on ammonia emissions and mitigation.

Defra have said that: The overall emissions data published two weeks ago (of emissions from 2016) reveal that ammonia emissions increased by 3.2% 2015-2016 to 289 kt.

Approximately 9kt of ammonia emissions (3%) come from the spreading of digestate and 0.5kt (0.2%) from digestate storage (assuming all digestate stores are covered). Ammonia emissions from the actual AD process are negligible.

It is understood that they expect emissions from digestate spreading to grow from 3% to 10% by 2020, which is surprising given the slow rate at which the AD industry is now growing. The REA has asked Defra to provide a list of the assumptions used to generate this data.

Click [here](#) for more information.

Energy from Waste

Allerton waste Recovery Park begins operations



Geograph

Allerton Waste Recovery Park has been declared fully operational in North Yorkshire and will set out to transform an annual 320,000 tonnes of waste from households in North Yorkshire and York into enough power for at least 40,000 homes.

This, however, could potentially be as many as 60,000 homes, based on Ofgem's most recent figures for a typical UK household's usage. It will also reduce landfill and increase recycling.

The three-year build programme by infrastructure firm Amey reached its final construction milestone on 1 March when it formally moved into its 25-year operational phase following a period of rigorous independent commissioning and testing.

The complex and high-profile project – built on a former quarry and adjacent to a landfill site near the A1 – was completed within budget by Amey under the Government's Public Private Partnership scheme to finance, design, build and operate the

facility in partnership with North Yorkshire County Council and City of York Council.

Allerton Waste Recovery Park is unique in the UK for combining three state-of-the-art technologies on one site – mechanical treatment, anaerobic digestion and energy from waste (EfW).

Together, the technologies increase recycling from collected “black bag” household waste in both councils’ areas while cutting the amount sent to landfill in the county by at least 90%.

Click [here](#) for more information.

Fiberight EfW plant nears completion

Biomass magazine reports that later this year, a new waste-to-energy plant built by Fiberight LLC in Hampden, Maine, will begin processing trash from 115 communities in the state, marking a milestone in the conversion of municipal solid waste (MSW) into a renewable biofuel source.

If all goes as planned, Fiberight’s new facility will be completed in May and optimized by year’s end, converting more than 180,000 tons of MSW into biogas and other new products. The company expects just 20 percent of the waste to go to landfills, saving the communities involved more than \$2 million a year.

Fiberight relies on a targeted fuel extraction process, which the company says cost-effectively and efficiently converts MSW into biofuel. The system separates, cleans and processes organic and hydrocarbon fractions of the waste stream. The recyclable fraction is sold as feedstock to end markets to make new products. The organic fraction is converted into renewable fuels.

Click [here](#) for more information.

Events

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.

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.

EFIB 2018

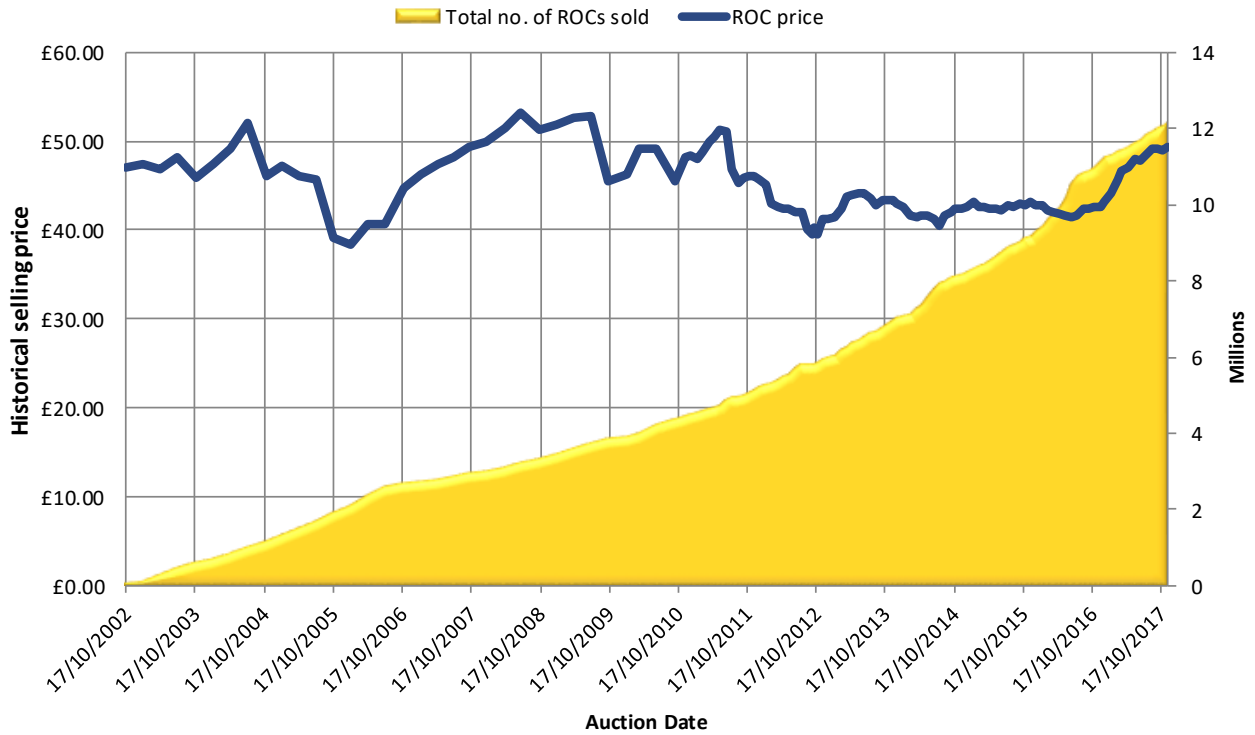
Toulouse, 16th-18th October 2018

Join over 650 bio-based leaders in 2018 for the 11th edition of EFIB in Toulouse, France, on the 16th, 17th and 18th of October.

Click [here](#) for more information.

Prices

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



Click [here](#) for more information

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