

The Bioeconomy Consultants

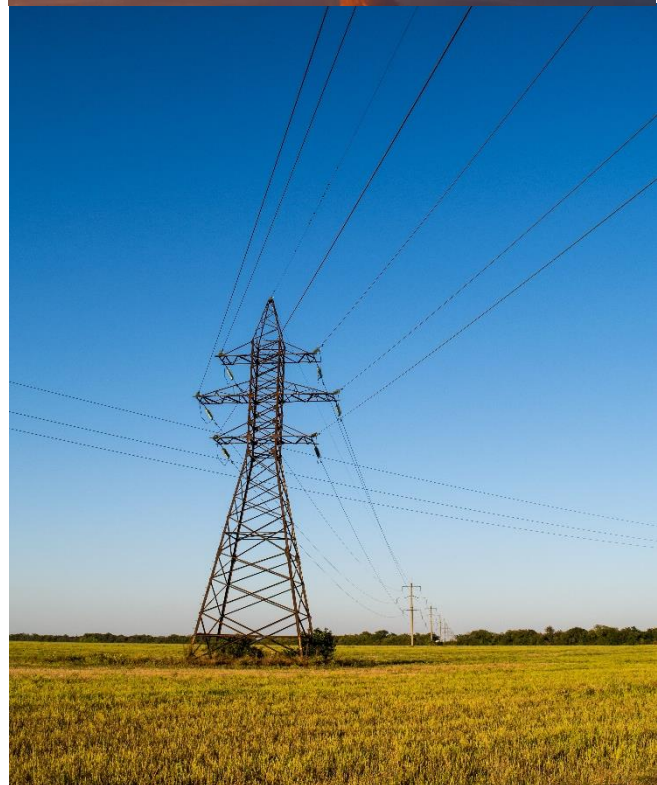
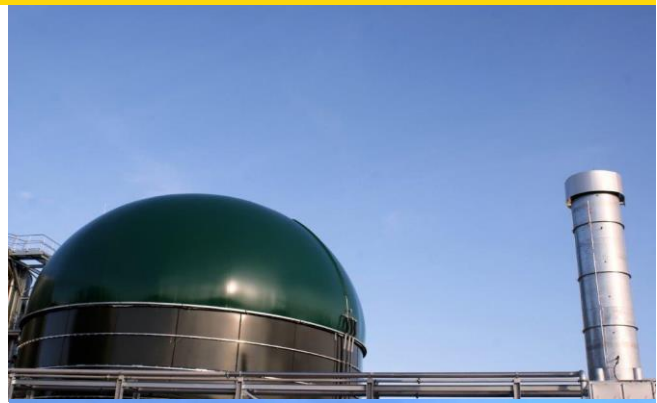


News Review

Issue Fifty-Eight

January 2017

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



Contents

Policy.....	4
Markets	5
Biomass Heat & Power	6
Biogas.....	8
Energy from Waste.....	12
Events.....	13
Prices.....	15

Foreword

A warm welcome to the first NNFCC bioenergy news review of the year (and with 2016 now officially the hottest year on record, make that a *very* warm welcome...)

Dominating the bioenergy related headlines (here in the UK at least) is the resignation of Northern Ireland's deputy first minister Martin McGuinness, with his cited reason being the ongoing scandal with the country's Renewable Heat Incentive. The scheme has been readily exploited by applicants who noticed that there was no limit to the payable subsidy for producing heat, including from biomass and biogas, nor a clause to terminate the payments in the event of the scheme closing – which it was, in February 2016 – resulting in a cost to the country of more than £1bn over the next 20 years. Investigations are underway for why no limit was implemented in the way one was implemented in the rest of the UK (the tariffs will reduce at certain levels of generation as a means of controlling costs). This story certainly puts the spotlight on renewable energy – albeit for the wrong reasons – the focus should not be on renewable energy itself on this occasion, but the mismanagement of such a high-profile and fundamentally important support mechanism.

Nearer the equator, it has been a month of firsts where bioenergy is concerned: the first African biomass system to provide energy to a national grid began doing so in Kenya this month, and Colombia has seen the world's first bi-articulated bus able to be powered by biogas. The former story is particularly significant, as it represents the first small steps on what advocates hope is a journey towards total sustainable energy provision in Kenya, as it is believed that in the future the entire country could be powered by AD-produced biogas using only 1% of the country's organic material as feedstock. If Kenya were to achieve this ambitious target (and it should be noted that its government is yet to get on board with this) then they could set an example not only for the rest of Africa, but for the rest of the world. As for Colombia, the port town of Cartagena has been the site for Scania's first bi-articulated gas-powered bus. The bus can hold over 250 passengers, and it is hoped that by bringing them into circulation, each bus will remove over 100 cars from the city's busy roads, reducing emissions even further on top of the reductions from using gas fuel as opposed to diesel. Scania have not mentioned whether they intend to fuel the buses with biogas, but 3 companies who have made such a commitment are UK retail giants John Lewis, Argos, and Waitrose. These 3 companies have this month pledged to fuel all of their delivery lorries with biomethane sourced from Anaerobic Digestion, in a bid to cut their emissions and save fuel costs. All in all, it's been a great month for biogas, despite what the headlines might have you believe.

Read on for the latest bioenergy news.

Policy

Moldova to receive 49 new biomass heaters

49 new biomass heating systems, including 20 solar collectors, will be installed in 2017 using the European funds of the Energy and Biomass Project. As well, 27 kindergartens - beneficiaries of the first phase of the project - will be equipped with solar water heaters that will operate in conjunction with their biomass heating system. 34 schools and kindergartens with straw bale-fired heating plants will be additionally equipped with tractors for bale transportation and loading in the boiler. These are the plans for 2017 of the Energy and Biomass Project. The project is funded by the European Union and implemented by the United Nations Development Programme.

2017 is the final year of implementation of the Energy and Biomass Project. Launched in 2011, the project has gone through two stages of implementation thanks to the funds disbursed by the European Union. The project succeeded to connect more than 190 schools, kindergartens, community centres, hospitals to biomass heating systems, thus ensuring the access of a total number of over 140,000 people to safe energy produced in the Republic of Moldova. The Energy and Biomass Project laid the foundation for the bioenergy sector development in the Republic of Moldova that was, six years ago, at the starting line. The number of institutions consuming bioenergy led to the increase of the number of companies in briquette and pellet production sector, their total number being estimated at 100. 30 new companies in the bioenergy sector were set up due to the attractive leasing mechanisms developed by the Energy and Biomass Project,

using the European funds. 1,000 families heat their houses with green energy thanks to subsidies of up to 1 300 EURO granted from the European funds.

Click [here](#) for more information.

Northern Ireland's deputy first minister resigns over RHI Scandal

Northern Ireland's deputy first minister, Martin McGuinness, has resigned from his position in the wake of a highly controversial scandal involving the country's Renewable Heat Incentive (RHI) support scheme.

The scheme was originally implemented in 2012 in order to promote uptake of renewable sources of heating, but the scheme was dramatically flawed: the way it was implemented meant that there was no upper limit to the amount of subsidy that would be paid, and so applicants could make a profit simply by running biomass boilers and/or heaters, for example, even if for no practical use. This has resulted in a great cost to the Northern Irish government to the tune of £1bn over 20 years, even though the scheme was closed to new applicants in February 2016.

McGuinness' resignation has triggered a snap election in Northern Ireland.

Click [here](#) for more information.

UK Q3 Energy Statistics released

At the end of 2016, the Department for Business, Energy & Industrial Strategy released their Energy Trends and Energy Prices publications, covering new data for the third quarter of the year. One of the main points to take away from the third

quarter results was the fall of coal's share (3.6 percent) of electricity generation during the quarter due to reduced capacity, including the closures of Ferrybridge C and Longannet in March, with the conversion of a unit at Drax from coal to high-range cofiring (85 percent or more biomass) later in the year.

Total energy production in the third quarter of 2016 was 29.9 million metric tons of oil equivalent, 8 percent higher than in the comparable period in 2015. Bioenergy and waste accounted for 1.9 million metric tons of oil equivalent, 3.2 percent lower than 2015 quarter three. Primary electricity output in the third quarter of 2016 was 14.4 percent higher than in the prior year period.

Renewables share of electricity generation increased from 23.6 percent in the third quarter of 2015 to 25 percent in Q3 2016. However, renewables' share was 0.2 percentage points lower compared to 2016 quarter two results.

Renewables generation was up 4.3 percent in the third quarter, accounting for 18.8 terawatt-hours (TWh) of electricity, mainly due to increased wind and solar capacity. Bioenergy (including cofiring) accounted for 6.1 TWh of the 18.8 TWh in Q3 2016, a decline of 14.5 percent from 7.1 TWh in Q3 2015. This decline is mainly accounted for with maintenance outages at Drax's converted biomass units. Renewable electricity capacity totalled 33.4 gigawatts (GW) at the end of 2016 quarter three, up 11.3 percent (3.4 GW) from 2015. Of the 33.4 GW, bioenergy accounted for 16 percent.

Low-carbon generation—including renewables, nuclear and gas—accounted for half of electricity generation in Q3 of 2016, which is a record high, up 45.3 percent from 2015 Q3. Overall, total electricity generated in Q3 2016 was 1.2 percent lower at 75.4 TWh than a year earlier, and final consumption of electricity was 1.9 percent lower than a year earlier at 68.9 TWh.

Click [here](#) for more information.

Markets

Bioenergy in US to increase in 2018

EIA expects total renewables used in the power sector to decrease by 0.3% in 2017 and then increase by 7.3% in 2018. Forecast electricity generation from hydropower falls by 2.2% in 2017 and increases by 4.2% in 2018. Consumption of renewable energy other than hydropower in the power sector is forecast to grow by 1.3% in 2017 and by 9.8% in 2018.

On November 23, 2016, the U.S. Environmental Protection Agency (EPA) finalized a rule setting Renewable Fuel Standard (RFS) volumes for 2017. EIA used the final volumes to develop the current STEO forecast for 2017 but does not assume any explicit RFS targets for the 2018 forecast. EIA expects that the largest effect of the finalized 2017 RFS targets will be on biomass-based diesel consumption, which includes both biodiesel and renewable diesel and helps to meet the RFS targets for use of biomass-based diesel, advanced biofuel, and total renewable fuel. Biodiesel production averaged 99,000 b/d in 2016, and it is forecast to increase to an average of 104,000 b/d in 2017 and 111,000 b/d in 2018. Net imports of biomass-based diesel are expected to rise from 47,000 b/d in 2016 to 51,000 b/d in 2017 and to 57,000 b/d in 2018.

Ethanol production averaged 1.0 million b/d in 2016, and it is forecast to average around 1.0 million b/d in both 2017 and 2018. Ethanol consumption averaged about 940,000 b/d in 2016, and it is forecast to average about 940,000 b/d in 2017 and 950,000 b/d in 2018. This level of consumption results in the ethanol share of the total gasoline pool averaging about 10% in both 2017 and 2018, as only marginal increases in

higher-level ethanol blends are assumed to occur during the STEO forecast period.

EIA estimates that energy-related emissions of carbon dioxide decreased by 1.6% in 2016. Emissions are forecast to increase by 1.6% in 2017 and by 0.8% in 2018. These forecasts are sensitive to assumptions about weather, economic growth, and fuel prices.

Click [here](#) for more information.

US Department of Energy reports on bioenergy employment

On Jan. 13, the U.S. Department of Energy released its second annual analysis of how changes in America's energy profile are affecting national employment in key sectors of the economy. The report includes data on a wide variety of energy and energy efficiency sectors, including biomass power and biofuels.

According to the report, bioenergy electric generation and biofuel sub-technologies employ a total of 112,642 workers. The generation sector is a relatively small component of the overall bioenergy and biofuel workforce, with only 7,980 individuals working exclusively with bioenergy or biomass electric generation technologies.

The DOE's analysis also shows most employment for bioenergy and biomass generation is encompassed within the construction industry, followed by utilities. Construction accounted for 63.7 percent, with utilities at 18.58 percent, followed by 14.1 percent for professional services and 3.5 percent for manufacturing. According to the report, bioenergy/biomass electric generation technologies employ more women than each of the individual biofuel technologies. In addition, the generation sector is more diverse than each of the component fuels, employing more Hispanic or Latino and Asian individuals.

Click [here](#) for more information.

Biomass Heat & Power

Residential wood burning has greater-than-expected impact on UK emissions



A recent study reviewed the current status of residential solid fuel (RSF) use in the UK and compared it with New Zealand, which has had severe wintertime air quality issues for many years that is directly attributable to domestic wood burning in heating stoves. Results showed that RSF contributed to more than 40 $\mu\text{g m}^{-3}$ PM10 and 10 $\mu\text{g m}^{-3}$ BC in some suburban locations of New Zealand in 2006, with significant air quality and climate impacts. Models predict RSF consumption in New Zealand to decrease slightly from 7 PJ to 6 PJ between 1990 and 2030, whereas consumption in the UK increases by a factor of 14. Emissions are highest from heating stoves and fireplaces, and their calculated contribution to radiative forcing in the UK increases by 23% between 2010 and 2030, with black carbon accounting for more than three quarters of the total warming effect. By 2030, the residential

sector accounts for 44% of total BC emissions in the UK and far exceeds emissions from the traffic sector. Finally, a unique bottom-up emissions inventory was produced for both countries using the latest national survey and census data for the year 2013/14. Fuel- and technology-specific emissions factors were compared between multiple inventories including GAINS, the IPCC, the EMEP/EEA and the NAEI. In the UK, it was found that wood consumption in stoves was within 30% of the GAINS inventory, but consumption in fireplaces was substantially higher and fossil fuel consumption is more than twice the GAINS estimate. As a result, emissions were generally a factor of 2–3 higher for biomass and 2–6 higher for coal. In New Zealand, coal and lignite consumption in stoves is within 24% of the GAINS inventory estimate, but wood consumption is more than 7 times the GAINS estimate. As a result, emissions were generally a factor of 1–2 higher for coal and several times higher for wood. The results of this study indicate that emissions from residential heating stoves and fireplaces may be underestimated in climate models. Emissions are increasing rapidly in the UK which may result in severe wintertime air quality reductions, as seen in New Zealand, and contribute to climate warming unless controls are implemented such as the Ecodesign emissions limits.

Click [here](#) for more information.

St Andrews University opens biomass plant for campus heating

The University of St Andrews' strategic aim to become the UK's first carbon neutral university for energy usage took a major step forward in early December when the biomass plant at the Eden Campus at Guardbridge was officially commissioned.

The £25 million plant on the east side of the former paper mill site produces hot water from a

biomass boiler using clean, natural fuels from sustainable sources across Scotland, which is pumped four miles underground to St Andrews where it heats University buildings.

The energy centre won a major national award at the Scottish Green Energy Awards 2016 defeating strong competition from across Scotland to take the prestigious Sustainable Development Award.

The project is funded by an £11 million loan from the Scottish Partnership for Regeneration in Urban Centres (SPRUCE) Fund, a joint Scottish Government and European Regional Development Fund initiative, managed by Amber Infrastructure Limited and a £10 million grant from the Scottish Funding Council, with the remaining £4 million coming from the University.

At a short commissioning ceremony at Guardbridge, University Principal Professor Sally Mapstone officially lit the biomass boiler.

Click [here](#) for more information.

Drax given go-ahead from European Commission

The third generating unit at Drax Power Station has been given European Commission (EC) approval to be fully powered by sustainable biomass.

Drax can now complete the upgrade of the third of its six units to run on wood pellets. The third unit upgrade started in July 2015 and now half the power station will produce renewable electricity, saving 12 million tonnes of carbon each year.

Drax produces enough renewable electricity to power three million homes. In the first six months of this year 20% of the country's renewable power was provided by Drax.

The government has set out proposals to end coal-fired generation by 2025 as part of its plan to stimulate more clean energy generation. The EC's decision gives approval to the government's support for the upgrade of Drax power station from coal to biomass, and marks the culmination of a £650 million investment.

Drax was awarded a renewable energy subsidy contract by the UK government in 2014 to switch the third unit of its coal power station in North Yorkshire over to biomass. That prompted a state-aid investigation by the European Commission, which was concerned the estimates of the plant's performance were too generous and Drax would be overcompensated.

On Monday, the investigation cleared the subsidy, which sees a guaranteed price paid for electricity generated by the plant. The commission said its analysis found the support would "not result in overcompensation" and would not unduly distort the wood market that will supply the plant with 2.4m tonnes of pellets a year.

Click [here](#) for more information.

Biogas

Major UK shopping chains to fuel delivery fleet with biomethane

Heavy Good Vehicles (HGV) are some of the most polluting modes of transport. Their large gas engines emit 100 times more carbon dioxide than a normal passenger vehicle. Driving approximately 125,000 miles compared to a car travelling around 7,900 miles per year means that more needs to be done to tackle their negative impact on the environment. UK based CNG Fuels have created a biomethane fuel which is approved under the government's Renewable Transport Fuel

Obligation Scheme (RFTO). The governmental body included a range of proposals to encourage the uptake of biomethane in the transport sector in a recent Consultation. Now, retail giants Waitrose, John Lewis and Argos will be using biomethane fuels in their lorries. Waitrose and John Lewis have already invested more than £1 million in CNG trucks.

This decision will not only have a positive impact on the environment but also the retailer's budgets. The cost of fuel is 35-40% cheaper than diesel and emits 70% less carbon dioxide. The launch came just a couple of days after the government published a consultation on changes to the RTFO scheme including proposals to incentivise the uptake of biomethane in the transport sector.

The Solihull-based company is the UK's only dedicated provider of public access CNG (compressed natural gas) refuelling infrastructure. It operates the UK's two highest capacity CNG stations, in Leyland, Lancashire, and Crewe, Cheshire. CNG Fuels is targeting operators of high-mileage HGVs, who stand to make the biggest financial savings and carbon impact. HGVs account for 4.2% of UK carbon emissions and 127,000 articulated vehicles travel an average 49,000 miles a year, with many travelling much further. CNG Fuels has sourced enough biomethane to cover its entire CNG fuel supply. It is made from food waste and is sourced from anaerobic digestion plants which are not supported by the Renewable Heat Incentive or other subsidy schemes.

Click [here](#) for more information.

Unilever claims carbon-neutrality with announcement of biomethane deal

One year after announcing its bold ambition to become carbon positive by 2030, Unilever has

taken another significant step on its renewable energy journey, with the signing of a contract to use biomethane (also known as green gas/biogas) at five of its sites in the UK and Ireland.

Unilever UK & Ireland has signed a deal with a renewable energy company GENeco, which means that from 1 January 2017, its offices in Leatherhead (Surrey) and 100 Victoria Embankment (London), and its food and drink factories in Norwich, Trafford Park and Cork, will use 10,000 MWh of biomethane to provide the sites' heating and significantly reduce their carbon emissions. With electricity already coming from certified renewable sources, the purchase of a certified supply of biomethane means that Unilever has become carbon neutral [from energy sources] at these five sites.

The biomethane – which is fully traceable and certified – is generated by GENeco's anaerobic digester in Avonmouth, which converts inedible food waste and sewage into energy.

This new contract supports the overarching work that Unilever has already undertaken in cutting its greenhouse gas emissions: since the launch of the Sustainable Living Plan in 2010, the global fast moving consumer goods company has cut its manufacturing greenhouse gas footprint by 39% per tonne of production since 2008 – the equivalent of one million tonnes of CO₂ per annum.

Click [here](#) for more information.

Africa's first grid-connected biogas plant comes online

Africa's first biogas-powered electricity producer to sell surplus electricity to a national grid has come online at a Kenyan commercial farm.

The Gorge Farm Energy Park, located in the market town of Naivasha, produces 2MW of

electricity and heat to cultivate 1,740 acres of vegetables and flowers, with enough surplus power to feed 5,000-6,000 rural homes.

Biojoule Kenya, which operates the Gorge Farm plant, signed the agreement to sell surplus electricity to Kenya Power and Lighting Co. (KPLC) for \$0.1/kWh in 2016.

The biogas-based electricity is significantly cheaper than diesel-generated power, which costs \$0.38/kWh to produce.

The plant uses anaerobic digestion (AD) to produce biogas, which is then burned in two cogeneration engines to produce the electricity and heat.

Producing the same amount of energy using diesel would require 5 million litres of fuel annually, plus the extra fuel required to transport the diesel inland from the port of Mombasa.

According to Tropical Power, the new biogas plant reduces annual CO₂ -emissions by nearly 7,300 tonnes, as the farm is not dependent on the oil-based power in the national grid.

Some experts forecast significant growth potential for biogas in the Kenyan renewable energy industry, where 49% of power is currently provided by geothermal installations.

Experts think biogas could provide power anywhere in the area between 29 and 131MW, but its development is hindered by a government that is unwilling to pay for it.

Agricultural and municipal waste, which fuel the AD process at Gorge Farm, are also in high demand to be used as fertiliser, further undermining biogas' possibilities.

It is said biogas in Africa is held back by the belief that it requires large amounts of feedstock to produce any mentionable amount of energy.

But it is claimed that even just 1% of organic material or crops in Kenya would be sufficient to produce 1,800MW of electricity, which is as much as the country's entire current electrical capacity.

The same sources also state that the AD process produces digestate as a by-product, which can then be used as a natural fertiliser.

According to Tropical Power data, the 49,900 tonnes of farm residues Gorge Farm is able to process annually could produce up to 36,300 tonnes of digestate that can then replace synthetic fertilisers.

Click [here](#) for more information.

Edina wins CHP contract for Irish ingredient supplier

Leading supplier, installer and maintenance provider for combined heat and power (CHP) solutions, Edina Group, have recently won a contract to supply and install a 1200kWe CHP plant at one of Ireland's largest, and world leading suppliers of ingredients for the food and pharmaceutical industries.

Following a competitive tender process, the client awarded Edina Group the contract to supply and install the MWM manufactured TCG 2020 V12 reciprocating gas engine as part of the client's energy and sustainability strategy.

Edina is the sole distributor in the UK and Ireland for MWM gas engines. MWM are world renowned for achieving market leading electrical and thermal efficiencies, low operating and servicing costs and high reliability and availability, which is usually well in excess of 95%.

The 1200kWe gas engine will be containerised at Edina's manufacturing facility based in Lisburn, Northern Ireland, and will be delivered to site as a 'plug & play' unit, thus further reducing the

installation time on-site and associated project costs.

The containerised CHP plant will be installed at the client's global production centre for the manufacturing of yeast based flavour ingredients, located in Menstrie, Scotland, and will be housed within an existing energy centre.

The exhaust waste heat and hot water from the engine jacket cooling circuit will be recovered from the CHP process and fed into the sites manufacturing facility and infrastructure. Electricity is generated at 400V and stepped up to 11000V and interfaced into the MV ring. The high efficient use of primary energy in the CHP of 86.9% ensures energy costs and greenhouse emissions are reduced.

Click [here](#) for more information.

First bi-articulated biogas bus can carry 250 passengers



Scania has unveiled the world's first bi-articulated Euro 6 gas bus with an impressive capacity for 250 passengers.

The 26m long, front-engine bi-articulated F340 HA 8x2 bus was developed in collaboration with the Colombian bus bodybuilder Busscar de Colombia.

Scania already has its largest Euro 6 gas bus fleet in the Colombian city of Cartagena, and their capacity for high-altitude operations without loss of power and torque has been verified through independent tests.

Gas operations can significantly reduce particulate matter emissions and, when operated with biogas, carbon emissions can be reduced by up to 90% compared with conventional diesel.

Carbon emissions are also slightly lower when using natural gas, and gas operations have the added advantage of a substantially lower noise level.

Scania is convinced that the bi-articulated bus will be of increasing interest to cities around the world as they now address urban pollution and reducing their carbon footprint.

Click [here](#) for more information.

Fish deaths blamed on AD plant



An anaerobic digestion (AD) plant is being blamed for killing more than 1,000 fish in Wales, UK, according to media reports.

According to a report in UK newspaper The Mail on Sunday, officials are investigating if a fault caused hundreds of thousands of gallons of toxic waste to be discharged from an AD plant and into the River Teifi in West Wales, killing every single fish along an eight-mile stretch.

The report stated that Natural Resources Wales confirmed more than 1,000 fish carcasses had been counted following the spillage, and a source told The Mail on Sunday that investigators were focusing on an anaerobic digester in the area.

This is the second critical report published on AD in the space of two weeks published in The Mail on Sunday. The newspaper and online outlet started a campaign on 1 January, 2017, and labelled AD the 'great green guzzler con', which "coverts slurry from dairy herds into methane" and "has been responsible for 12 serious pollution incidents since 2015".

In response, Anaerobic Digestion and Bioresources Association's (ADBA) chief executive Charlotte Morton wrote an open letter to the editor of UK-based newspaper The Mail on Sunday claiming the article published on AD on 1 January 2017 was misleading.

Click [here](#) for more information.

£8m plant approved to produce biogas from Pig Manure

The manure of 50,000 pigs will be recycled into energy thanks to an £8m funding deal secured by corporate finance specialists, Watersheds.

The finance will enable Farm Renewables Ltd to build an anaerobic digestion plant in Funtington, Sussex. The pioneering process will see manure broken down by micro-organisms in the absence of oxygen, to produce a methane-rich gas that can be used as fertiliser and fuel.

Farm Renewables Ltd is a renewable energy company focused on anaerobic digestion. The business is led by Malcolm McAllister and Nigel Goodhew who together built RidgeWind, a wind energy business, from a standing start and ultimately sold it for £260m.

Some months ago, their new business, Farm Renewables Ltd, needed seed finance to get going.

The project is based at Basil Baird's 2,500-acre farming business in Funtington, Sussex. The Baird

family have built a significant business on the three 'Ps', property, pigs and potatoes, but having recently sold the potato business, they now want to concentrate on property and their 2,000 outdoor sows and are investing significantly in new pig buildings and their own feed mixing unit.

They will then feed and develop 50,000 high welfare, bacon pigs annually and the resulting pig manure creates the opportunity to generate energy to be supplied to the farm and the local grid. They sought a partner with a deep understanding of anaerobic digestion to finance, build and operate an anaerobic digestion plant on their land and share the benefits.

Click [here](#) for more information.

Energy from Waste

North Wales to receive waste-to-energy plant

Wheelabrator Technologies has reached financial close on a new 200,000 tonnes per year energy recovery facility, with construction to commence in January 2017 on the Deeside Industrial Park in Flintshire, North Wales.

Wheelabrator Parc Adfer will be a combined heat and power enabled facility which will generate 18.8 MW (gross) / 16.6 MW (net) of sustainable electricity to meet the needs of over 30,000 UK homes and businesses. The facility will also be capable of providing valuable steam or heat to local industry and housing.

Progress to reach close on this £180 million financing deal follows the award of planning

consent by Flintshire County Council's Planning and Development Control Committee in May 2015 and an Environmental Permit by Natural Resources Wales.

In 2014, Wheelabrator was selected as preferred bidder to build and operate the facility over the next 25 years as a public-private partnership (PPP), with support from the Welsh Government to serve the five local authorities that make up the North Wales Residual Waste Treatment Project (NWRWTP) – Conwy County Borough Council, Denbighshire County Council, Flintshire County Council, Gwynedd Council and the Isle of Anglesey County Council.

Residual waste fuel for the facility will be provided primarily by the five authorities, which initiated the procurement to achieve long-term targets for recycling and diversion of waste from landfill. A further long-term contract is in place with a top tier waste management company, ensuring that over 70 percent of the facility's fuel supply is hedged at fixed prices. The remaining capacity at the facility will be offered to commercial waste collection companies.

Site preparation work will start immediately and full construction of the facility is set to commence in 2017. The construction phase is expected to result in hundreds of additional jobs and create around 35 new, full-time operational roles at the facility when plant operations commence in 2019.

Parc Adfer is Wheelabrator's third energy recovery facility in the UK, which in total represents over 1.3 million tonnes of residual waste treatment capacity.

Click [here](#) for more information.

New AD Facility set to reduce Yorkshire Water's Emissions by 15%

Water and sewerage service provider, Yorkshire Water, has been given approval to build a new £72million state-of-the-art anaerobic digestion (AD) plant at its Knostrop waste water treatment works in the centre of Leeds, West Yorkshire.

Yorkshire Water awarded the Knostrop contract to engineering, consulting and construction company, Black & Veatch. Following a competitive tendering process, Black & Veatch awarded Edina Group, a leading supplier, installer and maintenance provider for combined heat and power (CHP) plants, the contract to supply and install two 2MWe MWM manufactured TCG 2020 V20 CHP generating sets.

The Knostrop waste water treatment works has been treating sewage from domestic properties and industry for approximately 100 years. The new AD facility will replace the existing sludge and bio-solid incinerator constructed in 1993 and enable more efficient and effective sewage treatment as well as the ability to produce energy on-site.

The AD facility will contribute to a 15% reduction in carbon emissions across Yorkshire Water, delivering "significant operational cost savings."

Scheduled for completion in 2019, the AD facility will process 131 tonnes of dry sludge every day, and generate enough renewable energy, using the Edina installed CHP plants, to power 55% of the site's energy requirements, or the equivalent of 8,000 homes, and help to achieve 94% recycling of the regions sludge by 2020.

Click [here](#) for more information.

Events

UK AD Operating & Engineering Course

January 30th to February 2nd, 2017

The Dolphin Hotel, St Ives, Cambridgeshire, UK



The Renewable Energy Association (REA) and the International Biogas and Bioenergy Centre of Competence (IBBK Fachgruppe Biogas) have limited space available on their 4-day long in-depth course for Biogas plant operators & developers. The course will be delivered by biogas experts from Germany and UK who have many years of practical experience in the biogas sector.

NNFCC subscribers can benefit from a reduced registration rate of 1340 € (discounted from 1590 €) - please select the REA Member rate on the registration form to claim this benefit.

Click [here](#) for more information.

Energy Now Expo

8 – 9th February 2017

Telford International Centre



The Energy Now Expo, the renewable energy event organised exclusively for the agricultural and rural communities, returns to the Telford International Centre, Shropshire, on 8th & 9th February 2017. Each year farmers and landowners

from across the UK visit the event to seek out the latest opportunities, see how the technologies continue to evolve and understand the latest in related government policy.

The event will once again be supported by the NNFCC and consist of a large exhibition, an advice clinic, a new product development zone, an education zone and a multi-streamed conference. The main theme of the 2017 conference will be “renewables in a post-subsidy world”, showcasing the benefits a well-chosen renewable energy scheme offers, with or without subsidy support, and examining the ways technologies and the industry as a whole are adapting to offer financially viable, sustainable options.

Click [here](#) for more information.

All-Energy

10 – 11th May 2017

Glasgow, Scotland



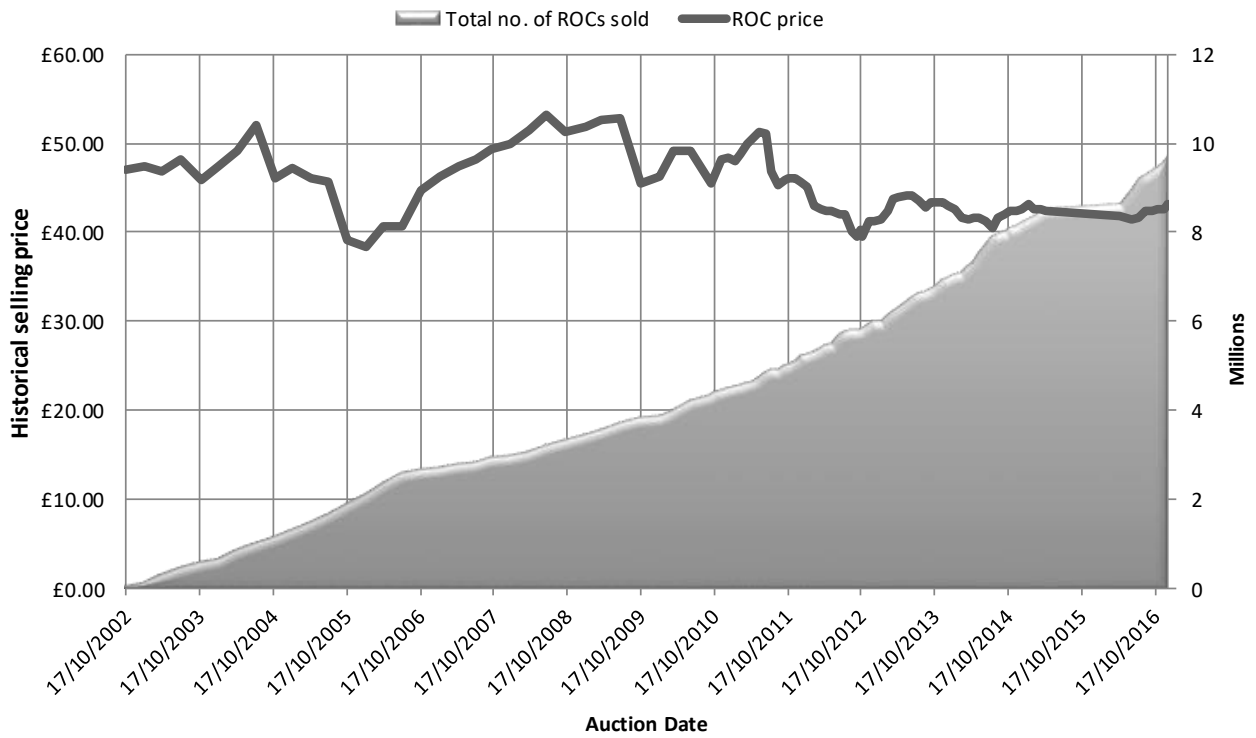
Since its launch in 2001, All-Energy has provided the industry suppliers, experts and thought-leaders from the renewable energy supply chain the opportunity to connect with new customers, increase their sales opportunities and expand business networks in this fast-changing marketplace.

The free-to-attend annual conference and exhibition brings together the UK's largest group of buyers from the bioenergy, solar, offshore and onshore wind, hydropower and wave & tidal sectors, as well as those involved in energy storage, heat, low carbon transport and sustainable cities solutions.

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

Credits and Disclaimer

The NNFCC News Review is edited by Bob Horton for NNFCC subscribers. Feedback is welcome. The Review has been compiled in good faith and NNFCC does not accept responsibility for any inaccuracies or the products or services shown.

The Bioeconomy Consultants



NNFCC
Biocentre, York Science Park
Innovation Way
Heslington, York
YO10 5DG

Phone: +44 (0)1904 435182
Fax: +44 (0)1904 435345
Email: enquiries@nnfcc.co.uk
Web: www.nnfcc.co.uk
Twitter: @NNFCC