ENIAN, the UK’s leading software developer for the renewable energy sector, has this week been awarded a £500,000 Smart Grant by Innovate UK to develop a new cost predicting algorithm set to accelerate the uptake of renewable energy across the country.

The company will collaborate with the University of Edinburgh School of Engineering and The Data Lab over 19 months to develop and test the cost-of-interconnection prediction algorithm (CIPA), with the aim to digitise, automate and enhance the way that project planners estimate the cost of connecting a new power plant to the nearest available grid.

Currently grid connection costs are some of the most difficult to predict but make up a significant share of the total costs for generating new power. However grid owners and operators must adapt to a more flexible energy mix to accommodate more renewable energy sources, so they need to be able to provide rapid, data-driven estimates to project managers to give them confidence in their decision-making, improve cost efficiency and strengthen the resilience of the energy system from a planning point of view.

Phillip Bruner, CEO of ENIAN, says, “The highly variable but also significant costs of interconnection are some of the most critical to understand from an early stage. “We’ve done a lot of research on what causes commercial solar and wind power plants to fail. It’s often the case that developers get caught off guard by grid constraints or runaway costs. Thanks to Innovate UK, with machine learning and open access data, we can unlock a new cost-saving capability for the UK energy sector that will help accelerate the path to net zero.”

Daniel Friedrich from the University of Edinburgh School of Engineering commented: “We’re excited to continue the successful collaboration with ENIAN in this cutting-edge Innovate UK funded project which can make a real difference for the drive to net zero. This transition requires a massive increase in distributed renewable generation which needs to be fed into the grid and transported to the demand centres. We will use our expertise in network power flow models, geographic information-based systems and data-driven algorithms to streamline this process and to help unlock the full potential of the renewable energy sector in the UK.”

Gillian Docherty, CEO at The Data Lab commented: “Never before has it been more pertinent for data-informed solutions to be brought to the energy market. With the ever-increasing need for energy supply as global populations rise, it is incredibly important that we scale our supplies in a clean and clever way, leveraging cutting edge data science to guide our approach.”

The project will start in early December and will run until May, 2022. Innovate UK awards Smart Grants to the best commercially viable innovative or disruptive ideas.

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BSW acquires UK’s leading timber harvesting company Dick Brothers Forestry Ltd

The BSW Group has acquired Dick Brothers Forestry Ltd, the UK’s largest timber harvesting company.

Established over 25 years ago and headquartered in the Scottish Borders, the business boasts state-of-the-art forestry equipment and market leading capabilities to harvest some of the largest and most complex forests in the UK.

Dick Brothers represents a cornerstone acquisition for the BSW Group, strengthening its vertical integration of the timber supply chain and securing in-house harvesting capabilities for its forestry and harvesting management division Tilhill.

Davey Dick, Managing Director of Dick Brothers, said: “We are delighted to be joining the BSW family. Whilst it is very much business as usual, we are excited to be working with the BSW team to continue the growth of the business and enhance the services we can bring our customers. We would also like to thank our previous owners, Faro Capital, for their support and investment in the business over recent years.”

Tony Hackney, CEO of BSW, commented: “This is fantastic news for BSW. Dick Brothers is a business with strong heritage, fantastic prospects and one that we believe will bring huge value to BSW. “The acquisition enables BSW to become a streamlined stump to sawmill operation, utilising the experience of Dick Brothers to develop smart solutions to timber breakout from the forest and match to sawmill and ultimately customer demands. This places us in a unique position within the UK domestic wood supply sector.

“Whilst operations at Dick Brothers and BSW will remain largely the same, there will be a number of areas for our businesses to support each other. We look forward to working with the Dick family to grow the business as part of the wider BSW Group.”

Tony Hackney, CEO Alan Milne, CFO Tony added that it was important that the new acquisition also maintained and grew business with other players in the sector.

“The sector is very interdependent and what might be one of our division’s customers might be another division’s supplier, so it is critical that Dick Brothers will retain the flexibility to trade across the industry.”

For further media information or to arrange an interview, contact: Tori Lynn, Head of PR & Media at Narrative
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UPM joins the Renewable Carbon Initiative

UPM has joined the Renewable Carbon Initiative (RCI) which was founded in September 2020 by twelve leading companies in the chemical industry. The aim of the initiative is to support and speed up the transition from fossil carbon to renewable carbon for all organic chemicals and materials.

“This is about a fundamental change in the chemical industry. Just as the energy industry is converting to renewable sources, renewable carbon will become the new foundation of chemical and material industries in the future. We want to accelerate the change,” says Michael Carus, CEO of nova-Institute in Germany and the head of the Renewable Carbon Initiative.

The Renewable Carbon Initiative addresses the core problem of climate change, which is largely related to extracting and using additional fossil carbon from the ground. The vision is stated clearly: By 2050, fossil carbon shall be completely substituted by renewable carbon, which is carbon from alternative sources: biomass, direct CO2 utilisation and recycling. The founding companies are convinced that this is the only way for chemicals, plastics and other organic materials to become more sustainable, more climate-friendly and part of the circular economy – part of the future.

“Renewable carbon from sustainable sources like woody biomass will accelerate the transformation of the chemical industry and offer brand owners and material producers exciting new opportunities for improving their environmental performance,” says Michael Duetsch, Vice President, Biochemicals Business at UPM.

Along with UPM, the first pioneer companies to become a member of the RCI and to form the Core Advisory Board for the initiative include Beiersdorf (Germany), Cosun Beet Company (The Netherlands), Covestro (Germany), Henkel (Germany), LanzaTech (USA), Lenzing (Austria), Neste (Finland), SHV Energy (The Netherlands), Stahl (The Netherlands) and Unilever (UK).

Visit the RCI website at renewable-carbon-initiative.com

More information: Okko Ringena, Senior Manager Sustainability, Biochemicals Business at UPM, +49 151 628 28 430
WRA Chair to Stand Down

Andy Hill.

Classification Project.

"FPP was a test of our strength and resilience, as well as our combined expertise, and together we managed to work with our members and the regulators to reach a conclusion which everyone was satisfied with," said Andy.

"The blood, sweat and tears that was put into that project by the WRA’s Board and surrounding support team was all worth the effort because as well as resolving the issue of FPPs, it did a huge amount to raise the profile of the WRA with all the right audiences, as well as create many positive and beneficial relationships with our key stakeholders."

On the back of the FPP work, the WRA was tasked by the Environment Agency to lead on the Waste Wood Classification Project, which aims to ensure that waste wood in the UK is properly classified at its origin and is processed into appropriate end markets, as well as clarify which waste wood items are hazardous and which aren’t. Andy added: “I look forward to continuing as Chair until the springtime and then taking a step back to allow Richard to take over the reins. I will be sitting in the wings and supporting wherever I can as deputy Chair going forward.”

The WRA has seven Board members who are elected by WRA members to serve for a term of three years. They can then stand for re-election at the end of that term. Elections are held every March at the trade association’s AGM. The Board members are: Andy Hill (Chair), Richard Coulson (Deputy Chair), Geoff Hadfield, Jamie Plevin, Alan Webb, Mark Hayton and Paul Caldwell. In addition, the WRA’s Executive Director Julia Webb is also on the Board.

For further information contact Gayle Whittaker On 07766 701479 or email gayle.whittaker@woodrecyclers.org

Sweden receives first bulk shipment of RDF from Poland

A cargo of 3,000 tonnes of Polish refuse-derived fuel (RDF) reached the Swedish port of Hargsmann in early November. This is the first RDF bulk import from Eastern Europe to Sweden.

The first shipment of baled and wrapped Polish RDF is part of an annual 18,000 tonnes contract with Swedish district heating plants. The opening cargo of 3,145 tonnes left Gdansk harbour on 4th November and arrived on the Swedish east coast harbour of Hargsmann two days later.

The coming shipments from Poland will be delivered to Hargsmann and to the port of Norrköping – both on the east coast of Sweden. The new stream constitutes a milestone for Geminor in Sweden, explains Geminor Country Manager Per Mernelius.

The first vessel with RDF from Poland opens a new and significant import route to Sweden. Having access to a new market is important for many reasons, but mainly it will help stabilizing and securing deliveries to our national off-takers, and partially compensate for the loss of volumes from the UK during COVID, says Mernelius.

Presently, the national tax on waste incineration is affecting the heating plants with reduced gross margins on waste incineration. Swedish district heating is under severe economic pressure in view of low electricity prices and increased charges for CO2-emissions, and it has therefore been necessary to find new markets for combustible waste in cooperation with the heating plants, says Mernelius.

Europe is next

The RDF export from Poland to Sweden and other Scandinavian countries could soon reach several hundred thousand tonnes annually, says Geminor Country Manager in Poland, Andrzej Zientarski.

Geminor becomes the first mover of big scale waste streams from Poland to the Nordics, but our goal is to deliver sustainable and reliable solutions for alternative fuels all over Europe. All existing TF’s to the Nordics give us the possibility to export over 300,000 tonnes per year – where Sweden will be our biggest import market.

Both the volumes and the quality of the Polish waste so far makes Poland a very promising market as we enter 2021, concludes Andrzej Zientarski.

11.6% fall in biofuel output caused by Covid-19

The Biofuture Platform, the global multi-stakeholder initiative designed to promote action on climate change through promoting international coordination on the sustainable low-carbon bioeconomy – has today called for policymakers to urgently address the 11.6% fall in biofuel output which has occurred as a direct result of the Covid-19 pandemic.

The Platform which is facilitated by the International Energy Agency (IEA) has made this call following a report this week showing that renewables generally are experiencing growth, meaning the biofuel industry must catch up following its first decline in two decades.

I would like to offer you a conversation with Paolo Frankl, the Head of the IEA’s renewables division to discuss the urgent action that must be taken as well as provide insights on the industries that could stand to benefit from new bioeconomy policies and funding. Long described by the IEA as an ‘overlooked giant of renewables’ bioenergy has a number of uses in the real economy with transport biofuels seen as a pressing concern. The IEA had previously highlighted that transport biofuel consumption needs to almost triple by 2030 (to 298 Mtce) to be on track with the Sustainable Development Scenario (SDS).

Dow Jones listing for UPM

UPM has been listed as the forest and paper industry leader in the Dow Jones European and World Sustainability Indices (DJSI) for 2020-2021. "Population growth, climate change and the scarcity of natural resources call for companies to take proactive actions. Finding alternatives to fossil materials and meeting global challenges is at the core of UPM's Biofore strategy," says Sami Lundgren, VP, UPM Responsibility.

"In 2020, we have taken significant steps to advance our responsibility agenda. In January, we became one of the world's first forest industry companies that committed to the UN’s Business Ambition for 1.5°C and to science-based measures to mitigate global warming. Furthermore, we have established a Green Finance Framework and integrated our responsibility targets of sustainable forest management, emission reductions and innovative bioeconomy products into the company's long-term financing," said Sami Lundgren.

"We congratulate UPM for being included in the world DJSI. DJSI distinction is a reflection of being a sustainability leader in your industry. With a record number of companies participating in the 2020 Corporate Sustainability Assessment and more stringent rules for inclusion this year, this sets your company apart and rewards your continued commitment to people and planet," says Manjit Jus, Global Head of ESG Research and Data, S&P Global.

"We have set ambitious sustainability targets and worked hard to reach them. We are very proud of this recognition," Sami Lundgren concludes.
KPA Unicon delivers biomass boiler plant to Russia

Unicon Biograte steam boiler plant for Sokol Timber Company, city of Sokol in Vologda region.

KPA Unicon, the daughter company of KPA Unicon Group Ltd., and Sokol Timber Company JSC (“S-DDK” JSC), have signed a turnkey delivery agreement for the design and construction of Unicon Biograte steam boiler plant in the city of Sokol. The plant capacity is 20 t/h and it will generate steam for the sawmill’s process. The project is funded by Segezha Group, which KPA Timber Company JSC is also a part of. The delivery of the boiler plant will take place in autumn 2021.

The boiler plant will utilize bark biomass as fuel, which is produced as a waste stream at the sawmill, approx. 60 000 cubic meters annually.

“It is good to see that the Russian market is showing signs of cheering up. Our activity with the customers during the quiet period is now bearing fruit and we see that Finnish energy technology is still valued in Russia,” says Sergei Krylov, Russian Business Development Manager at KPA Unicon.

“The environmentally friendly Biograte boiler has high efficiency of approximately 90% and is therefore an excellent choice for burning bark and biomass with varying humidity and calorific values. Unicon Biograte boiler will be manufactured in Kluuvresi workshop in Finland,” Krylov continues.

“...the production of biofuels from renewable energy sources and the improvement of energy efficiency are important elements for the sustainable development of the company,” says Alexander Patarushin, Director of the Modernization Project at Sokol Timber Company JSC.

Sokol Timber Company produces glued wooden structures such as houses and beams and is one of the largest producers in Russia. https://segezha-group.com/en/

Segezha Group is one of the largest companies in the Russian wood industry. There are more than 13,000 employees in 12 different countries.

UK leading energy firm Hive Energy invests in South Africa’s clean growth potential

Hive Energy (United Kingdom), iLive Sustainable Development (South Africa) and Partners for Innovation (Netherlands) have joined forces to establish Coega Biomass Centre, Africa’s largest wood pellet export plant.

The company funded by Hive Energy has taken over and will restore the existing non-operational plant which will deliver 100 jobs directly with another 700 jobs indirectly. The plant will produce high quality wood pellets resulting in environmental benefits and will replace dirty coal, charcoal and anthracite. The factory is expected to be operational in July 2021, with full capacity being reached before the end of 2021.

The Coega Biomass Centre, located in Port Elizabeth, will bring socio economic and environmental benefits to the local area. The plant, requiring 160 thousand tons of feedstock each year, will be fed by sustainable pellets produced using biomass residues, non-indigenous forest and destructive invasive vegetation, restoring indigenous vegetation and improving water supplies. The project is in one of South Africa’s Special Economic Zones (SEZs), which are designed to attract foreign investment to boost local economic growth.

The venture between British green energy developer Hive Energy and South African sustainable development firm iLive and their project developer Partners for Innovation purchased the plant from business rescue. In total, the partners will invest 50 million ZAR (3 million euros) in the first phase; the refurbishment and recommissioning of the factory. Further investments in the factory are expected in the near future. The partners will undertake a full refurbishment of the biomass plant, expected to take between 6 and 9 months.

For Hive Energy, the venture is one of the first in its mission to deliver beyond solar, Hive Energy are developing over 2.8GW of solar project globally and are committed to tackling global climate change by delivering green and sustainable solutions across the circular economy.

Hive Energy have long term investment plans in South Africa’s clean growth programme. Company CEO Giles Redpath has labelled South Africa as: “the best place on Earth to produce green hydrogen”, owing to the country’s high onshore wind load factors and strong solar radiation levels. Hive Energy are pursuing opportunities in green hydrogen and continue to grow an ambitious pipeline of solar generation to power South Africa’s local municipalities. Hive are also seeking to invest in opportunities across the circular economy including energy from waste and recycling projects.

The Coega Biomass Centre is both a locally and globally sustainable green energy solution for Hive Energy as they continue their vision to develop world-class assets that generate benefits for the environment, investors, landowners and local economies.

Hive Energy’s South Africa manager Colin Loubser said: “This project is an excellent opportunity for Hive Energy to show how a just green transition can take place, because not only will we create thousands of jobs for local residents in an area of massive unemployment, but also it will also vastly benefit local ecosystems. Beyond the local benefits, this project will help deliver clean energy to create transformational change to help deliver a cleaner future for all. This is a true win for the local circular economy and for Hive’s international green mission”.

Major new study backs biomethane for road transport

The findings of the new Low Emissions Freight Trial (LEFT) report published today, 18th November, 2020, by the Low CVP acknowledges that Heavy Goods Vehicles, HGVs, fuelled by biomethane (gas) can provide significant carbon reductions. Further confirmation that they should be a key technology for transport decarbonisation says industry trade association the Gas Vehicle Network, GVN.

The report outlines that biomethane gas fuelled HGVs could reduce carbon emissions by up to 85% on a well to wheel basis. It also notes that additional capital improvements and maintenance costs in gas vehicles compared to diesel, pay back in 2 years at 160,000 km/year.

Another key finding was that methane slip was not an issue for the gas trial trucks.

Isaac Occhhipinti, Head of External Affairs for GVN said that: “Biomethane (gas) fuelled HGVs represent a ‘no regrets solution available today’. The LEF report provides definitive evidence that biomethane trucks will help the UK meet its decarbonisation goals. The Department for Transport, DfT, must now recognise this in their upcoming ‘Transport Decarbonisation Plan’.

“This would provide logistics managers and haulage companies with a clear message that they need to begin decarbonising their fleets now. Biomethane fuelled HGVs are the logical choice. They are cheaper to run, and as the new report says, they emit significantly lower levels of carbon as well.”

“There is no other sector of the UK economy where large CO₂ emissions cuts can be so quickly and cost effectively implemented as in the HGV, and in particular the long-distance truck sector.”

GVN recently published a paper ‘A Green Recovery- Delivering a rapid & cost-effective CO₂ reduction for Heavy Goods Vehicles (HGVs)’ to demonstrate the carbon saving potential of biomethane HGVs.

The campaign has received the support of a number of stakeholders in the past few days. The Low CVP LEFT report reinforces our message; clean, low carbon, renewable gas-powered vehicles are an obvious, sustainable solution for the freight and transport industry.

For more information about gas vehicles visit www.gvnetwork.co.uk
**€11 Million biomethane plant project goes live**

In November 2020, a biomethane plant contracted by the German energy manufacturer Weltec Biopower went live in Papillonnière near the town of Vire in Normandie, France.

The operator of the 11 million euro project, which was rolled out by Weltec and its project partner Agripower France, is Agrigaz Vire, a local company that comprises 40 operations along the agricultural value chain. The plant has created three permanent jobs and digests a yearly amount of about 70,000 t of substrates to biogas, which is then processed to biomethane.

The raw material mix that comes from a 7 kilometer radius largely consists of inexpensive waste and other by-products from agriculture and the food industry. The regional, sustainable nature of the biomethane project is underlined by the fact that the operations belong to the agricultural company and the substrates come from the region. Two thirds of the 200 tons of input substances needed every day consist of animal waste such as cattle and pig manure and liquid slurry. Whey, sludge and abattoir waste from food operations and from a pet food manufacturer located to Agrigaz account for another 20%. The rest of the substances is made up of maize, grass, whole plant silage, straw and grass silage.

The use of biomethane plays a key role in reducing greenhouse gases: “Every hour, 270 standard m³ of the green biomethane are fed into the public gas grid for use as an energy source or as alternative fuel throughout France. With this amount, some 5,300 tons of CO₂ can be saved every year,” explains Alain Priser, who is in charge of Weltec Biopower’s business in France. He added, “Used as a natural gas equivalent, the biomethane could cover as much as 20% of the gas demand of Vire (population: 18,500). In the mobility sector, this quantity would be sufficient for driving a climate-neutral distance of 35 million km by car or circling the equator 890 times every year.”

The solid input substances are introduced to the system with the help of two moving floor feeders (140 m³ and 98 m³) and a vertical screw feeder (30 m³). Additionally, some of these substrates are shredded in two MULTIMix units and mixed to ensure optimum digestion. The liquid substrates are first buffered in seven upstream tanks. Following the hygienisation of some input substances, the substrates are transported to three 4,436 m³ stainless-steel digesters. Two storage units are used solely for the purpose of storing the digestate for use as high-quality fertiliser by the agricultural company’s farmers. “Our farmers thus also benefit from this by-product in that they save chemical fertiliser. Ultimately, this too is a key to reducing greenhouse gases,” underlines Yves Lebaudy, the Managing Director of Agrigaz Vire.

A rather exceptional heat concept is used in Vire: The biomethane plant is supplied with the exhaust heat from a pet food manufacturer located at a distance of only 500 m, whose production process delivers enough heat for the hygienisation procedure of the biogas plant. For this purpose, Agrigaz Vire has connected the two locations with a hot water pipe. Through the use of heat pumps, part of the energy from the exhaust heat can be recovered and used to produce heat at a higher temperature level. Thanks to this thermodynamic system consisting of 24 heat pumps with a capacity of 50 kW each, all substrates except for the regrowing raw materials can be treated for one hour at 70°C in three hygienisation tanks of 15 m³ each. By contrast, the digesters do not need to be heated very much, as the hygienised input substances already have the temperature level required for the digestion process.

The sustainable cycle has resulted in a high level of acceptance by the entire population. “We are proud of our innovative joint project, which enjoys the backing of our farmers, politicians, entrepreneurs and residents alike,” says Yves Lebaudy. “Especially the inhabitants of Vire are eager to participate. They can deposit their waste in a new recycling centre with waste handover docks. In this way, they are able to actively support the operation of the biomethane plant with their own raw material, thereby contributing to the success of the project as a whole.”

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**Technical equipment has been put together individually for the AD plant. Heat pumps (rear) ensure efficient use of waste heat and the MULTIMix (front left) shreds the substrates in advance.**
Plans have been unveiled to construct a large-scale renewable energy park in the north east of Scotland, designed to deliver between 150 – 200 megawatts of green energy to supply to the Scottish grid, with the capacity to power tens of thousands of homes across the north-east of Scotland.

It is estimated that 1500 jobs will be created to build the energy park while a further 250 permanent jobs will be created in the operation. The developers, Edinburgh-based Holistic Energy hopes to commence in building in 2023 and be operational by 2026.

The ambitious, large-scale development is earmarked to be built on a purchased 40-hectare (99 acre) site close to the existing Peterhead Power Station, Aberdeenshire. It has attracted overseas interest from investment group, North China Power Engineering (NCPE), who has pledged £800million for the build-out phase.

Holistic Energy has completed a feasibility and evaluation study of what will be the UK’s first Holistic Low Carbon Energy Facility. The feasibility study has produced an outline layout of the facility, the range of technologies to be used and how these will interact, to ensure the best possible efficiency and the lower environmental impact.

Concepts have already drawn up to encompass and integrate several different energy generation technologies. These include a mixed fuel gasification and biomass plant, a green biodiesel production facility and an aerobic digestion (AD) plant. These will be housed alongside solar PV, wind energy, and supported by a green hydrogen production facility and large-scale battery storage facilities.

As a phase two to the project, Holistic Energy will explore the deep geothermal potential of the site. Holistic Energy will work with several partners in the design, civil engineering and construction phases, including Aberdeen-based companies Wood Group and XL Group, Will Rudd Davidson and Bell Ingram Design.

Dr Gen Cannibal, director of Holistic Energy, believes the complex systems approach to engineering a new renewable energy village will both showcase and utilise the capabilities of interlinked renewable technologies. This will create a multiple technology power station fit for the electricity consumption to usher in a new era designed to consign a dependence on fossil fuel energy to history.

Dr Cannibal comments; “The facility will have three primary purposes - to produce a local renewable power station in Peterhead which can approach the most commonly identified barriers to renewable uptake, to form a major R&D facility for new technologies that have reached the marketable stage but have not, as of yet, attained large scale market application in the UK and thirdly, to provide a significant replacement to gas-powered plants in satisfying Scottish electricity demands and, hence, decarbonising the Scottish Economy.

The ambitions for the development of the Renewable Energy Village are to showcase Scotland and the UK as a world leader in energy transition projects and enhance our delivery timeline to low or zero carbon energy sources.”

Support for Holistic Energy’s proposed Renewable Energy Village has come locally from Aberdeenshire Council Economic Development Service, and Opportunity North East, a private sector catalyst driving transformational change in north east Scotland’s economy.

Holistic Energy has been planning and developing renewable and conventional petrochemical energy facilities for a number of years. The new Renewable Energy Village is its most ambitious project to date.
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