



SUSTAINABILITY TODAY

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energy | water | waste | recycling | sustainability

Delta and Ropec EV sign DC Rapid Electric Vehicle (EV) charger partnership

Delta, a global leader in power and thermal management solutions, announced it has signed a partnership agreement with Ropec EV, one of Europe's leading EV charge point manufacturers and installers. Under the terms of the agreement, Delta's range of DC EV chargers will be available within the UK with immediate effect from Ropec EV.

Deltas rapid DC EV charging technology can provide energy for up to four EVs simultaneously (up to two DC ports, plus up to two in AC). When multiple EVs are connected, the power of the

charger is automatically and dynamically split among all the charging EVs. When configured to provide 150kW of output, it allows users to charge a range of up to 100 km in less than 15 minutes.

Ropec already boasts the UKs largest and most comprehensive AC EV charging range and this latest announcement with Delta will place Ropec at the forefront of the DC rapid charger industry.

Kieron Alsop, Ropec's MD commented, "After intensive research, which included undertaking a comprehensive due diligence process, we felt

Delta and its high quality DC rapid charger range was the perfect fit for us, complementing our already extensive AC charging range. One of the key factors in choosing Delta as our DC partner was the impressive range of charging speeds and charging capacities they currently offer including 25kW, 50kW, 75kW, 100kW, 125kW and the 150kW Ultra-Fast Charger (UFC) which can accommodate up to 6 x charging outlets and charge 4 x electric vehicles simultaneously."

Contact
www.delta-emea.com



HiETA



45% cost of ownership.

HiETA are developing products in five primary categories:

1. Low Temperature Heat Exchangers for internal combustion engines in cooler applications such as charge-air cooling devices
2. High Temperature Heat Exchangers such as recuperators for micro gas turbine systems
3. Turbo Machinery including lightweight and cooled turbine wheels
4. Combustion and Fuel Delivery such as injectors and combustor cans
5. Lightweight structures for hybrid metal-carbon fibre spaceframe structures and metal-carbon fibre

HiETA are developing small scale distributed power generation systems offering 60% reduction in fuel consumption and

penetrating joints

Micro Power Generation: HiETA has developed a range of products, systems and innovations to deliver efficiency increases and cost of ownership savings to micro-power generation systems. By utilising the teams experience in gas turbines and applying their expertise in AM design and manufacture HiETA have designed, tested and delivered a number of products to customers offering step changes in performance and system efficiency.

For example, HiETA Annular micro gas turbine recuperator is applied to annular architecture micro gas turbine systems. Its key features are: Greater effectiveness than comparable units manufactured by conventional means; annular packaging facilitating eliminating bulky ducting. Its performance versus competition results in a 6% greater effectiveness for same mass and volume plus annular form.

T 0177 370 7733
www.hieta.biz

Delta launches String PV Inverter M125HV Series at Intersolar Europe 2018



Delta, a global leader in power and thermal management solutions is launching its new 1,500 Vdc string solar PV inverter M125HV series alongside a broad portfolio of energy-saving lithium-ion battery energy storage solutions at Intersolar Europe.

The M125HV is designed to optimize the productivity of solar PV power plants as it features industry-leading peak efficiency up to 99%, 125kVA of maximum output power, active cooling, and an electromagnetic interference

(EMI)-proof design.

Technical highlights of the Delta technologies that were on display are listed below.

New M125HV series string inverter for commercial applications

Delta's new flagship inverter model, the 3-phase M125HV series, offers a maximum of 125kVA output power, active cooling, and industry-leading peak efficiencies of up to 99%.

New H4A & H5A FLEX string inverters for residential applications

With its new Flex series, Delta is offering 4kVA and 5kVA single-phase string inverters for residential applications with higher

power densities than the previous model.

The E530 series commercial battery energy storage system
Commercial photovoltaic systems use Delta E530 battery storage systems for peak-shaving and peak-shifting to limit feed-in power to the grid and maximize the portion of their PV power generation.

Hybrid E5 residential battery energy storage system
An E5 hybrid inverter used in combination with an external cabinet equipped with a 6kWh Li-ion battery module, a power meter, and a smart monitor.

Contact
www.delta-emea.com

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To find out more about Prefectrus visit www.Prefectrus.com or call 01787 320 604

Cleverly simple control of energy

Greener energy control at Green Park House



Dr Julian Greaves is the Sustainability manager at Bath Spa University. "When the university took over Green Park House, it became apparent that a control system was needed to ensure efficient use of energy. The 460-bed accommodation uses electric heating and hot water but had no controls apart from a boost button."

"I was looking for a control solution and was recommended Prefectrus. I'm not aware of any similar product. Prefectrus is a single, complete, bespoke solution."

In addition to performance and energy saving criteria, another decider was ease of installation - Prefectrus uses the building's existing electrical wiring to link the controller to room nodes. "The ability to install the system without disruptive building work was definitely an enabler, we didn't want to interfere with infrastructure to install data-cabling, etc."

Energy costs were a primary consideration and with Prefect predicting around 40% savings, Prefectrus became an attractive proposition. "The software package provides such useful information. It's much more than a room heating control."

Another innovation is the window-open detection. Algorithms 'learn' how long pre-determined temperatures take to reach and dissipation rates. Sudden temperature drop means, an aperture is open allowing rapid heat escape, prompting automatic heater switch off.

Contact: Glen Golding
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gleng@prefectcontrols.com

New standards setting a foundation for success



Lanes Utilities is using new international standards to integrate its management systems in a process that is already delivering significant benefits for its teams and clients.

The business, part of Lanes Group plc, the UK's largest independent drainage specialist, is the wastewater network services maintenance partner for Thames Water.

Lanes Utilities has transitioned to new 2015 versions of both ISO 9001 for Quality Management Systems and ISO 14001 for Environmental Management Systems. It hopes to transition from OHAS 18001 to ISO 45001, the new health and safety standard, by the end of 2018.

Hannah Clark, Business Systems and Compliance Manager for Lanes Utilities, said: "Moving to the new ISO standards is already having some significant benefits for us. They are designed specifically to support the sensible integration of management systems documentation required for compliance with individual standards."

"This is reducing our paperwork, streamlining process management, and giving greater clarity and credibility to the way we manage our work both inside and outside the organisation."

Transitioning to the new standards has allowed Lanes to align its standards more closely with those set by Thames Water. Systems have already been tested operationally and have worked well.

New elements in each standard have been embraced by the management team at Lanes Utilities, which has 1,400 people, including contractors, and operates 390 specialist wastewater vehicles to maintain the UK's largest and most complex sewer and drain network.

www.lanesfordrains.co.uk

Alkali Solutions awarded liquid lime contract



Alkali Solutions Ltd (ASL) has secured a three year contract to supply Limesol, the liquid lime suspension, to Southern Water, in the face of strong competition from much larger organisations.

The contract, for five Waste Water Treatment Works stretching from Southampton in the west along the south coast to Hastings and up to Ashford, encompasses delivery of approximately 3k tonnes of Limesol per annum across all sites.

Limesol is used to adjust the pH of the effluent stream ensuring sufficient pathogen kill is realised, and the resultant dewatered sewage cake can then be re-cycled to agriculture as a fertiliser.

This completes the cycle of re-use for municipal waste and, in turn, generates sufficient biogas energy to create substantial cost savings for Southern Water in running its treatment plant.

"We have made significant technical advances in the production of this high-tech milk lime, and this has been recognised by Southern Water," commented Cathie Eberlin, Managing Director at Alkali Solutions.

"The service is complemented by Vendor Managed Inventory (VMI) where ASL has full stock management at all sites. This facilitates economic logistics planning and the re-assurance that stocks will never run out."

The smaller sites have limited storage capacity and ASL offers reduced, more cost-effective delivery options than typical bulk liquid tankers.

T 01299 896825
www.alkalisolutions.co.uk

Sustainability award for water reuse company's technology

One of the UK's leading water re-use companies is celebrating after the announcement that one of its wastewater systems has been recognised in a top award.

Aquabio's anaerobic membrane bioreactor system (AnMBR LE™) treats wastewater at the Glenmorangie distillery in Scotland's Northern Highlands. The plant is part of the Glenmorangie's DEEP, Dornoch Environmental Enhancement Project which has been awarded the Hydro Nation Award – sponsored by the Scottish Government – at last year's 18th annual VIBES – Scottish Environment Business Awards. The anaerobic digestion plant at the Ross-shire

distillery was officially opened earlier last summer, boasting the use of natural biological processes which both reduces chemical oxygen demand (COD) output in distillery wastewater by up to 95% and creates energy in the form of methane rich biogas.

Importantly, the biogas replaces some of the fossil fuels used at the distillery to heat the stills in which the spirit is made.

Terry McCarthy, Managing Director of Aquabio explained: "The low energy Anaerobic Membrane Bioreactor Plant – or AnMBR LE – is designed to improve the quality of the effluent being discharged

into the Dornoch Firth and the resulting biogas is reused as fuel in the site boiler system."

The plant now largely operates automatically and can be remotely monitored on line; this ensures optimum efficiency in both wastewater treatment and power generation.

T 0190 564 1966
www.aquabio.co.uk



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Overcoming the issues of transporting dewatered sludge

The recent Water 2020 report published by the regulator Ofwat encourages sludge trading markets between operators in order to move sludge from a company where it is expensive to treat, to one that is cheaper. Ofwat

modelling suggests that if its proposed changes are implemented, around 30 per cent of all sludge could move between different water companies.

The future of sludge transfer

Wherever it ends up, this sludge will need to be transported and processed. SEEPEX Smart Air Injection (patent pending) combines the advantages of two conveying technologies to transport dewatered sludge with high dry solids content over long distances in an energy-efficient manner. Dewatered sludge (or other highly viscous media) is introduced into the pipeline using a progressive cavity pump, forming compacted material which is split into 'plugs' and pushed down pipelines of up to 1,000 metres using compressed air.

Out with the old

Until now, long distance transfer of dewatered sludge has been carried out by belt and screw conveyors and bucket elevators. These systems are frequently open to the environment, which can result in unpleasant odours and rehydration by rainwater with complications on vertical or inclined transportation. As an alternative, closed piping can be used in conjunction with multi-stage progressive cavity (PC) pumps and piston pumps. However, because of the high discharge pressures, these require comparatively high investment costs for higher pressure-rated pipework and valves (in some cases more than 100 bar).

Plant-specific solution

SEEPEX Smart Air Injection (SAI) uses a combination of progressive cavity pump technology and pneumatic conveying. A solid 'plug' of dewatered sludge is formed by an open hopper pump with auger feed screw, which is then transported



onwards by means of pulsed compressed air injection that is pressure-controlled via an algorithm optimised for the application. The sludge plug is lubricated with boundary layer liquid, for example dilute polymer solution. This reduces friction in the pipework and improves the energy efficiency of the system as a whole.

SAI permanently reduces the pressure in the entire pipeline to below 4 bar which is generated by the pump to set the sludge plug in motion. Once the static friction



force has been overcome, the sludge plug is moved by pulsed controlled compressed air, which again reduces the discharge pressure in the pipework. Adjusting system parameters, such as polymer and air volumes, makes it possible to set a plant-specific, energy-optimised operating point.

Smart systems

The reduction in friction losses and the discharge pressure requirements mean that pumps fitted with Smart Conveying Technology (SCT) can be used for long distance, high viscosity transfer duties. Pump maintenance time is minimal as pipework removal is not required for maintenance. Lower discharge pressure additionally ensures an increased service life for the components, which is further extended by SCT. Additionally, in the automated SAI system, process monitoring can be integrated into existing automation and control systems via conventional interfaces. All functional components, sensors and actuators are part of the scope of supply, and are integrated into the control software, which is optimised for the respective application.

Contact
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Additionally Von Roll UK Ltd, with over 30 years' experience in the UK continues to be a strategic service provider offering full turnkey solutions to the electrical insulation and industrial markets.

SGS SGS SGS

The Energyst Event Review Top 10

The latest in energy developments for businesses

The Energyst Event is a trade show focusing on energy preservation within businesses. Giving the opportunity for businesses to reduce the cost of energy and perform better financially, The Energyst Event creates a platform for professionals to discuss energy solutions.

This year the Energyst Event took place at the Birmingham Motorcycle Museum on

the 17-18 April 2018. Visitors kept up to date with the latest energy developments and discussions, with a series of conference sessions. Topics explored how the market is changing, how to deal with the change in world energy sources and how to target finances in relation to energy within businesses.

Visitors had the opportunity to listen to

a wide range of speakers including Luke Jackson, Energy projects manager from Nottingham City Council and Senior Analyst Thomas Rowlands-Rees from Bloomberg New Energy Finance. Many more speakers gave their latest energy insights and solutions. The biggest sectors in attendance at the event were manufacturers, IT and banking/finance. Energy is becoming a subject that different business areas are

theenergyst event

working together to tackle.

The Energyst Event will be returning to the same venue on the 1-2 May 2019. This is our pick for the best exhibitors from this year's event, listed here: Ecomponney and Energy Good. Further details can be found below.

www.theenergystevent.com

Ensuring the best deal on energy

Energy for Good is a market leading company dedicated to providing the best in class energy price sourcing to public sector organisations.

A 'not for profit' company with over 30 years of experience in the energy sector, the founders have worked with many of the country's largest energy users operating across all sectors, from companies with one site to multiple sites, helping them to find the best supplier for their energy needs.

Always keen to show what Energy for Good can do for businesses and organisations, their recent attendance at The Energyst Event this year at the Motorcycle Museum in Birmingham was the perfect opportunity to promote the benefits of their Dynamic Purchasing System that's fully compliant with Public Contracts Legislation 2015 in providing the best tendering and pricing solutions for all public sector organisations.

Their systems impressed the attendees at this year's event so much so that Energy for Good are now extremely busy (and excited) following through with



new contacts made during the two day exhibition. Being such an ambitious and passionate company; they're also looking forward to the next event and in helping as many organisations throughout the UK with their energy needs as possible.

For more information on how Energy for Good can help your organisation select the right product, services and suppliers for your needs visit the website today, or alternatively give the friendly team a call or email using the following details.

M 07851 751820
info@energyforgood.org.uk
energyforgood.org.uk

aM&T & behavioural change with Elcomponent's MW2

Increasing the awareness of energy consumption at all levels within an organisation is certainly nothing new.

The last few years have seen much debate on the subject. To some, 'behavioural change' is the holy grail of energy management, hard to achieve but a fight worth winning.

The delivery mechanism is the starting point and monitoring and targeting software has been the method of choice for the practitioners so far. Gone are the days when the Energy Manager is the only individual who wanted to log in to the M&T system. Nowadays anyone can do, and we hope everyone wants to.

There have been changes of

course! But of more relevance to the subject of this article are interactive dashboards, realtime building energy displays, multi-platform compatibility and unlimited user profiles. All of these features have appeared relatively recently as customers demand more from their M&T software.

MW2 software is just the tool, and in this instance it's an effective one but it is how it is used that is key to success. At Elcomponent we've seen a great deal of imagination applied to this by our customers but in most cases the software is used to foster competition, best practice and lowering consumption. If all the key ingredients are present, the results tend to back the enthusiasts view of behavioural change.



- What are those ingredients again?
- An attractive presentation (it's an invited audience)
 - Cross-platform compatibility (that audience uses smartphones!)
 - Accurate data (you still need your AMR must work properly!)
 - Correct use of driver data (traditional M&T functionality)
 - The right provider!

So call us on 01279 503173 or visit www.elcomponent.co.uk for more info.

Recycling & Waste Management News

EcoVyn reduce waste by 94% with Bunting Drawer Magnets

EcoVyn Ltd has installed two Bunting Drawer Filter Magnets to remove ferrous metal contamination from plastic waste. Since the installation of the magnetic separators, EcoVyn has reduced their waste by 94%.

Bunting Magnetics is one of the world's leading suppliers of Magnetic Separators and Metal Detectors. EcoVyn Ltd is at the forefront of PVC compounding and brings pioneering new technology to the market place.

EcoVyn first met Bunting at the Interplas international plastics exhibition in September 2017. Presently, EcoVyn processes 1000 tonnes per month of good quality

reclaimed plastic waste. Waste generated during the manufacturing process is also recycled leaving less than 1% being discarded.

However, plastic waste is often highly contaminated with metal. The Bunting team agreed to conduct a site review. During the review it was concluded that easily removable magnetically-susceptible metal could be removed, leaving the metal detectors to detect and separate non-ferrous metals.

After a review of the process, Drawer Filter Magnets were recommended to be installed between the screw

conveyor transporting the 8-10mm sized infeed material and the metal detector. After the installation of Drawer Filter Magnets, the amount of waste was reduced from 60 tonnes to 4 tonnes.

Following the installation of the Bunting Drawer Filter Magnets, controlled laboratory tests indicated that 99.9% of all ferrous metals had been removed.

Contact
press@buntingeurope.com
www.buntingeurope.com
www.e-magnetsuk.com



Recycled Plastic Innovation



Omnia (CS) Ltd have been awarded an Innovate UK IDP14 grant to further develop a unique lightweight sandwich panel core material utilising recycled plastics and

polymers called LiStP. Together with their consortium partners Foresight Innovations Ltd (commercialisation partner), Tata Technologies (computer aided engineering partner), National Composite Centre (process partner), Exeter University and Polymer Industries (recyclate and circular economy partners), the 18 month £1M project will further develop a unique lightweight core material for use in automotive, commercial vehicle and the built environment sectors.

The plastic waste is UK sourced and the project will develop a continuous process for UK manufacture of the multi-application, high compressive resistant, thermoplastic sandwich panel core material. This business model can then be licensed internationally.

"Further to a successful IDP12 project we have built a strong team to ensure end to end supply chain support. We not only want to maximise the use of redundant plastic waste but to lightweight vehicles in support of the Governments zero emission goals", stated Jonathan Richards from Omnia.

For further information contact Dr John Weightman: john@foresight-innovations.com



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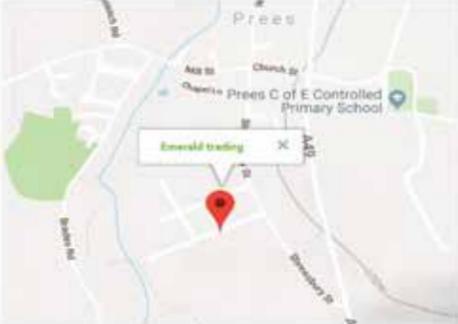


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